

Pantheon Report

Generated at 2019-04-24 14:26:04 (UTC).

Data path: GCE Tokyo on *ens4 (remote)* → GCE Iowa on *ens4 (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 `time.google.com` and have been applied to correct the timestamps in logs.

System info:

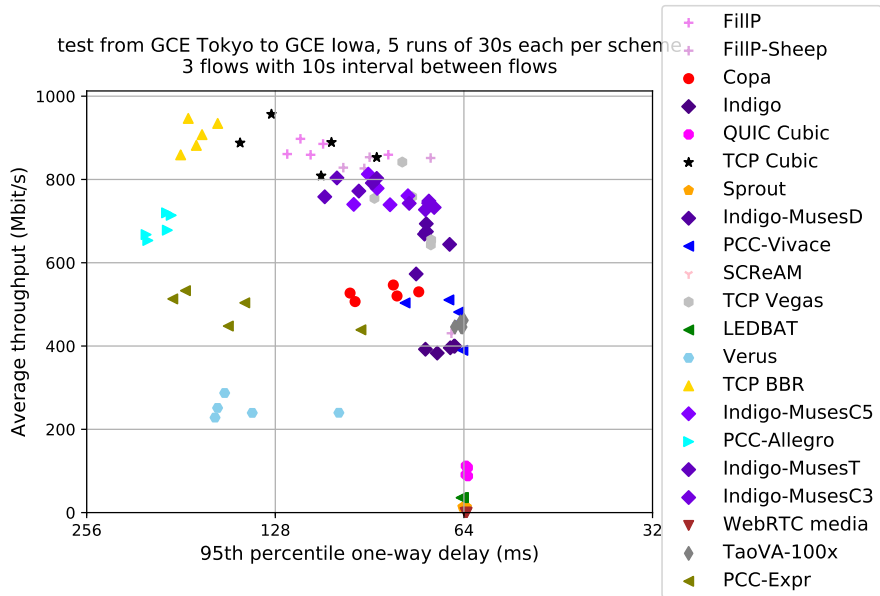
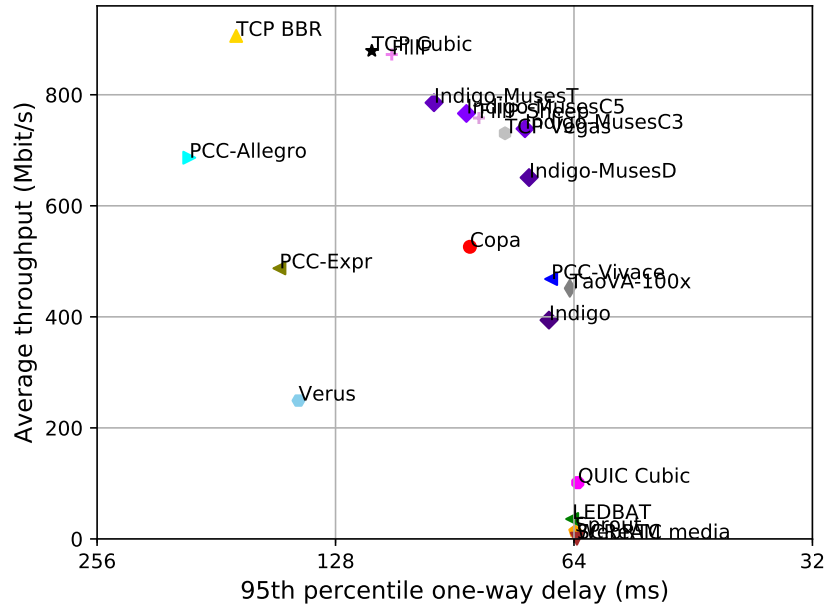
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

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 GCE Tokyo to GCE Iowa, 5 runs of 30s each per scheme
 3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	469.45	450.17	416.87	163.65	177.06	160.68	0.89	1.36	2.31
Copa	5	288.67	242.79	231.07	84.91	85.01	94.11	0.40	0.63	1.37
TCP Cubic	5	448.48	452.13	394.55	103.42	100.68	104.36	0.41	0.58	1.63
FillP	5	542.39	363.02	271.11	116.30	68.10	67.22	1.34	0.59	1.42
FillP-Sheep	5	454.91	332.18	251.59	90.60	67.25	66.04	0.49	0.60	1.37
Indigo	5	210.54	191.19	167.17	68.84	71.67	67.08	0.44	0.66	1.47
Indigo-MusesC3	5	438.85	364.90	245.30	75.36	70.70	69.49	0.27	0.66	2.41
Indigo-MusesC5	5	460.69	397.99	181.54	88.68	84.06	66.26	0.28	0.61	1.91
Indigo-MusesD	5	374.72	329.21	239.01	75.31	69.61	67.46	0.26	0.57	2.05
Indigo-MusesT	5	478.78	388.62	215.61	105.65	73.68	67.01	0.32	0.57	1.96
LEDBAT	5	23.19	15.45	7.57	64.49	64.17	63.91	0.84	1.27	2.58
PCC-Allegro	5	405.98	301.58	247.08	197.71	118.38	154.52	5.91	1.22	2.42
PCC-Expr	5	277.16	238.99	157.81	153.04	129.45	90.22	1.58	2.31	1.71
QUIC Cubic	5	53.84	46.51	45.54	63.19	63.11	63.26	0.58	1.26	0.64
SCReAM	5	0.22	0.22	0.22	63.43	63.32	63.43	0.38	0.61	1.16
Sprout	5	6.80	6.71	6.51	63.80	63.85	63.65	0.41	0.67	1.49
TaoVA-100x	5	229.41	225.58	218.96	64.08	64.95	66.32	0.44	0.68	1.41
TCP Vegas	5	360.06	366.65	384.92	70.53	75.92	85.99	0.32	0.56	1.44
Verus	5	128.53	141.89	80.13	113.26	165.70	101.06	0.49	0.98	1.97
PCC-Vivace	5	291.21	223.37	87.77	68.67	70.07	63.55	0.45	0.77	1.84
WebRTC media	5	0.30	0.05	0.05	63.21	63.33	63.33	0.17	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-04-24 08:32:23

End at: 2019-04-24 08:32:53

Local clock offset: -0.059 ms

Remote clock offset: -0.49 ms

Below is generated by plot.py at 2019-04-24 12:08:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 907.76 Mbit/s

95th percentile per-packet one-way delay: 167.545 ms

Loss rate: 1.01%

-- Flow 1:

Average throughput: 474.53 Mbit/s

95th percentile per-packet one-way delay: 152.517 ms

Loss rate: 0.58%

-- Flow 2:

Average throughput: 433.97 Mbit/s

95th percentile per-packet one-way delay: 183.751 ms

Loss rate: 1.22%

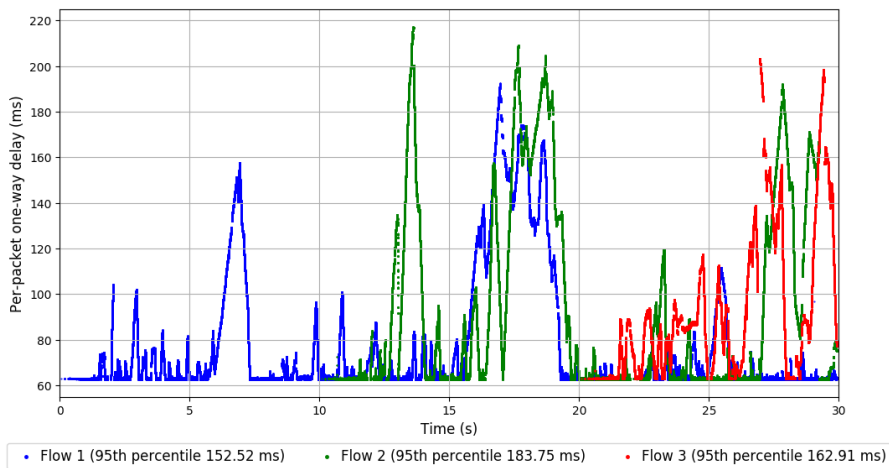
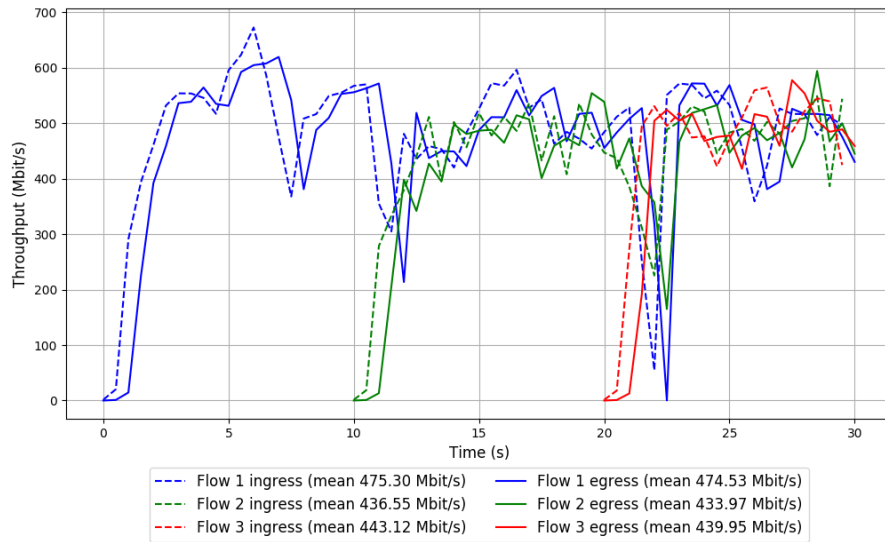
-- Flow 3:

Average throughput: 439.95 Mbit/s

95th percentile per-packet one-way delay: 162.911 ms

Loss rate: 1.98%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-04-24 09:08:20
End at: 2019-04-24 09:08:50
Local clock offset: 0.0 ms
Remote clock offset: -0.448 ms

Below is generated by plot.py at 2019-04-24 12:08:26

Datalink statistics

-- Total of 3 flows:

Average throughput: 881.94 Mbit/s
95th percentile per-packet one-way delay: 171.083 ms
Loss rate: 1.22%

-- Flow 1:

Average throughput: 454.98 Mbit/s
95th percentile per-packet one-way delay: 148.469 ms
Loss rate: 0.79%

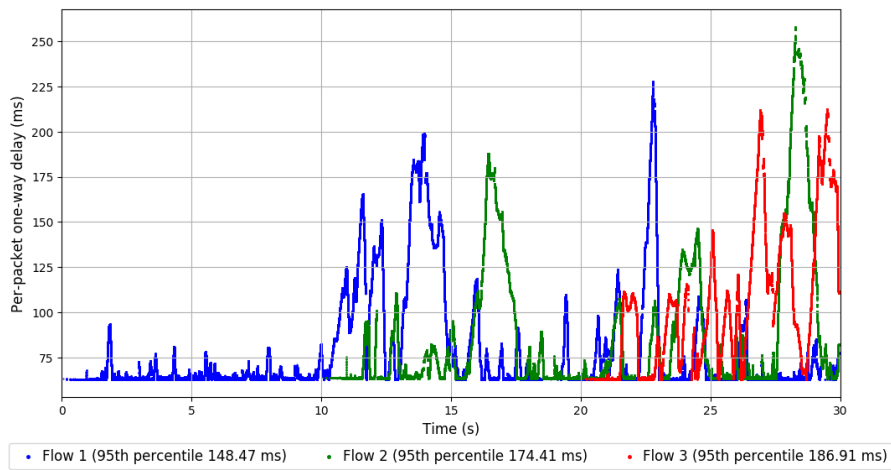
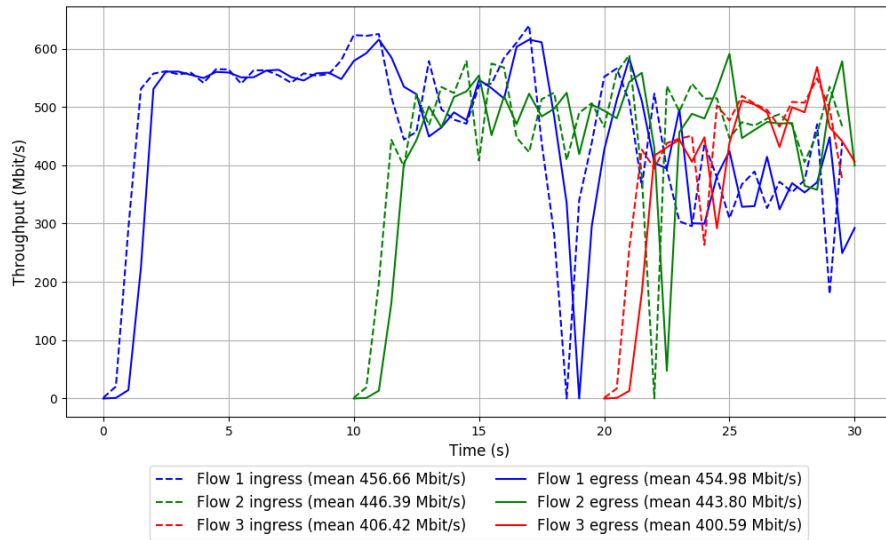
-- Flow 2:

Average throughput: 443.80 Mbit/s
95th percentile per-packet one-way delay: 174.414 ms
Loss rate: 1.22%

-- Flow 3:

Average throughput: 400.59 Mbit/s
95th percentile per-packet one-way delay: 186.914 ms
Loss rate: 2.69%

Run 2: Report of TCP BBR — Data Link



Run 3: Statistics of TCP BBR

Start at: 2019-04-24 09:44:34
End at: 2019-04-24 09:45:04
Local clock offset: -0.073 ms
Remote clock offset: -0.456 ms

Below is generated by plot.py at 2019-04-24 12:08:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 934.61 Mbit/s
95th percentile per-packet one-way delay: 158.181 ms
Loss rate: 1.30%

-- Flow 1:

Average throughput: 486.38 Mbit/s
95th percentile per-packet one-way delay: 156.148 ms
Loss rate: 0.93%

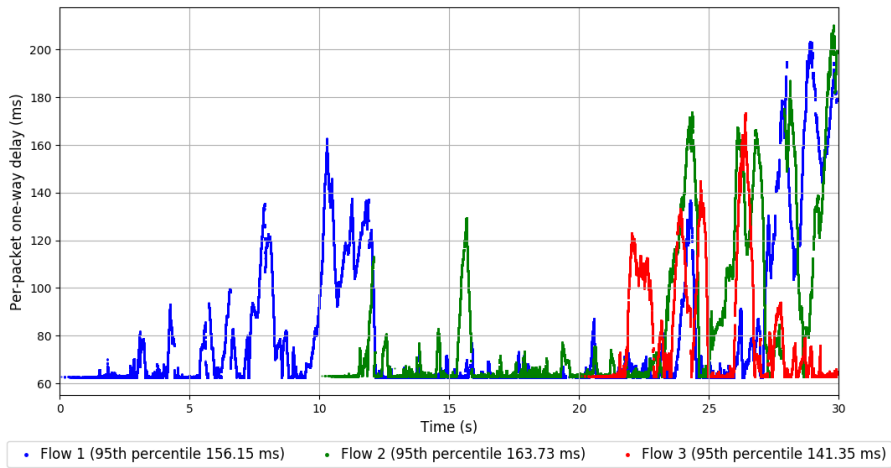
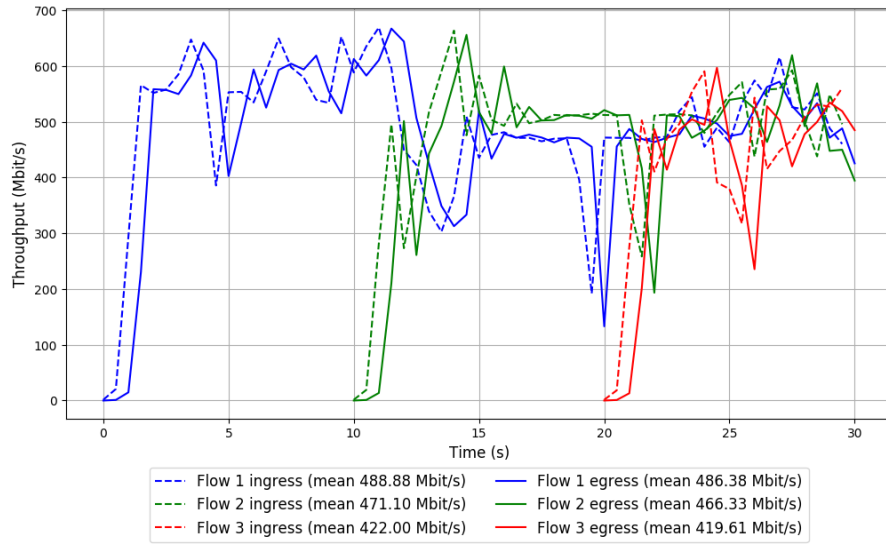
-- Flow 2:

Average throughput: 466.33 Mbit/s
95th percentile per-packet one-way delay: 163.731 ms
Loss rate: 1.64%

-- Flow 3:

Average throughput: 419.61 Mbit/s
95th percentile per-packet one-way delay: 141.347 ms
Loss rate: 1.83%

Run 3: Report of TCP BBR — Data Link



Run 4: Statistics of TCP BBR

Start at: 2019-04-24 10:20:54
End at: 2019-04-24 10:21:24
Local clock offset: -0.041 ms
Remote clock offset: -0.514 ms

Below is generated by plot.py at 2019-04-24 12:08:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 859.15 Mbit/s
95th percentile per-packet one-way delay: 181.244 ms
Loss rate: 1.27%

-- Flow 1:

Average throughput: 453.83 Mbit/s
95th percentile per-packet one-way delay: 181.819 ms
Loss rate: 1.01%

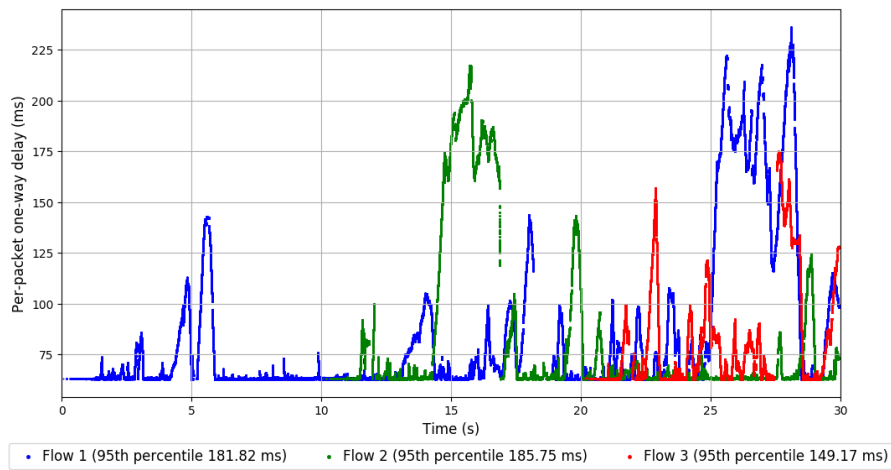
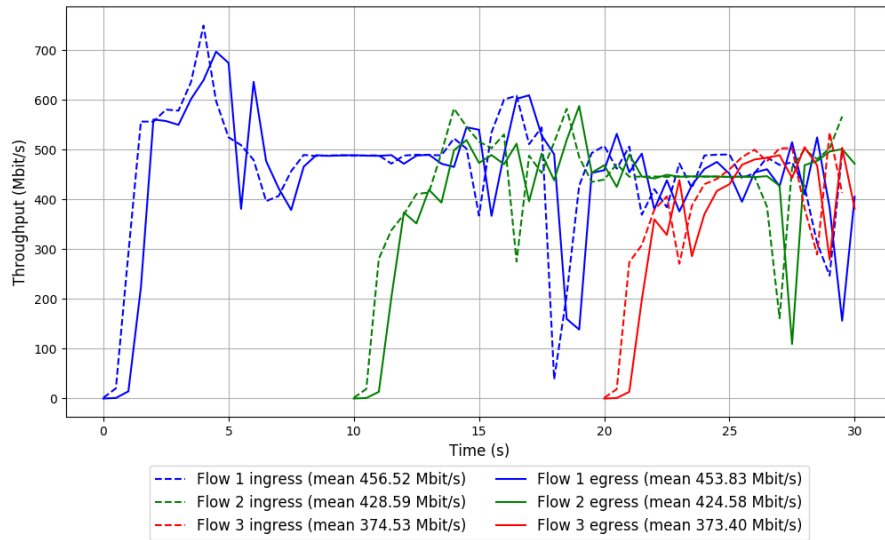
-- Flow 2:

Average throughput: 424.58 Mbit/s
95th percentile per-packet one-way delay: 185.754 ms
Loss rate: 1.57%

-- Flow 3:

Average throughput: 373.40 Mbit/s
95th percentile per-packet one-way delay: 149.167 ms
Loss rate: 1.57%

Run 4: Report of TCP BBR — Data Link

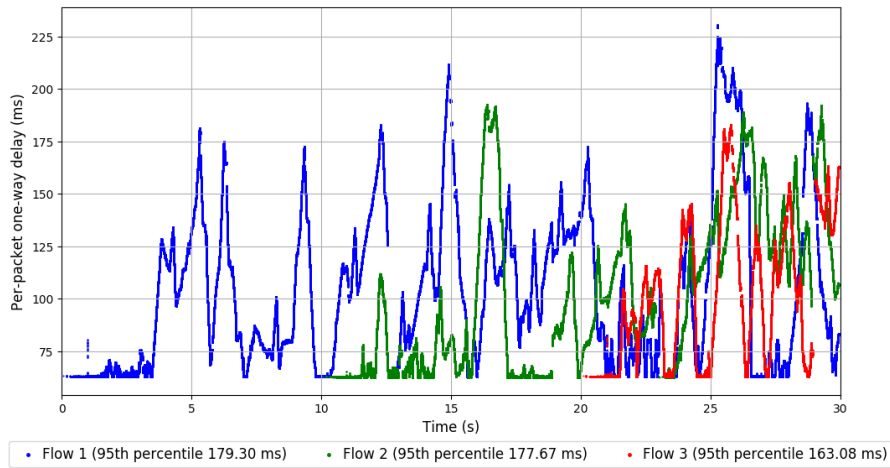
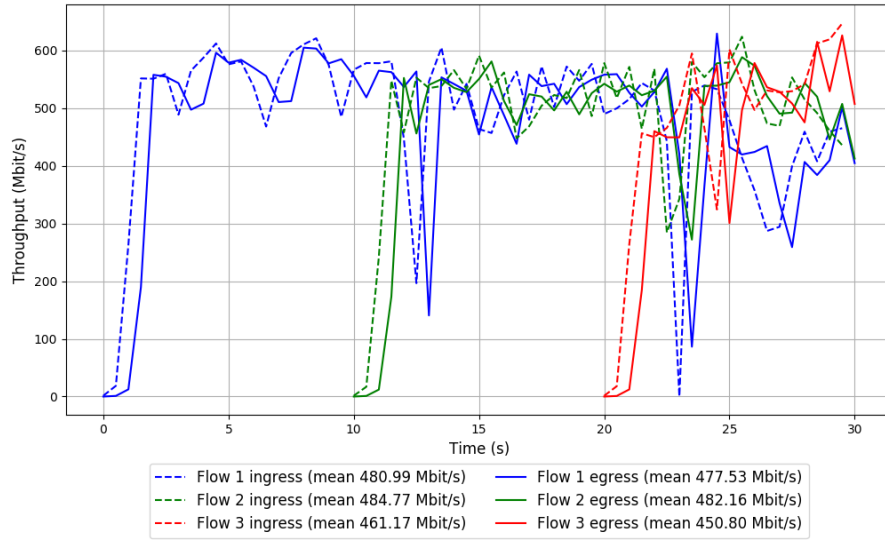


Run 5: Statistics of TCP BBR

Start at: 2019-04-24 10:57:08
End at: 2019-04-24 10:57:38
Local clock offset: -0.032 ms
Remote clock offset: -0.035 ms

```
# Below is generated by plot.py at 2019-04-24 12:09:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 946.65 Mbit/s
95th percentile per-packet one-way delay: 176.239 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 477.53 Mbit/s
95th percentile per-packet one-way delay: 179.301 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 482.16 Mbit/s
95th percentile per-packet one-way delay: 177.669 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 450.80 Mbit/s
95th percentile per-packet one-way delay: 163.083 ms
Loss rate: 3.49%
```

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-04-24 08:54:43
End at: 2019-04-24 08:55:13
Local clock offset: -0.045 ms
Remote clock offset: -0.317 ms

Below is generated by plot.py at 2019-04-24 12:09:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 520.19 Mbit/s
95th percentile per-packet one-way delay: 81.836 ms
Loss rate: 0.61%

-- Flow 1:

Average throughput: 271.40 Mbit/s
95th percentile per-packet one-way delay: 80.965 ms
Loss rate: 0.38%

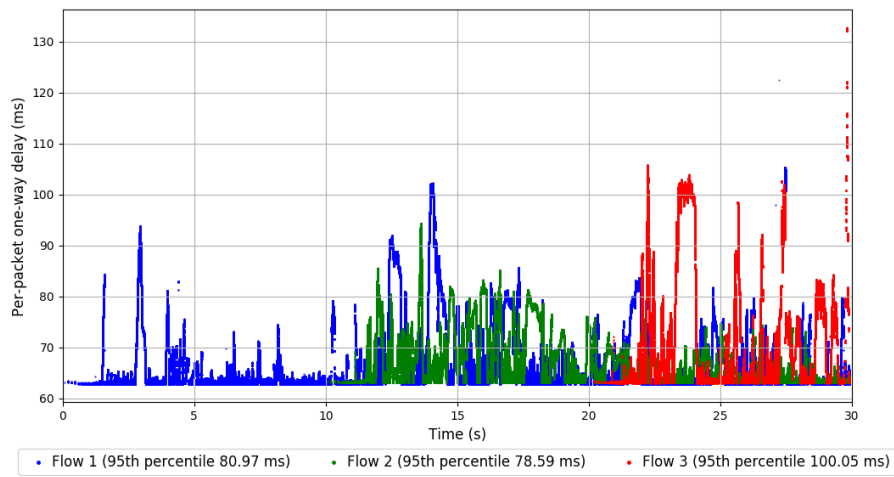
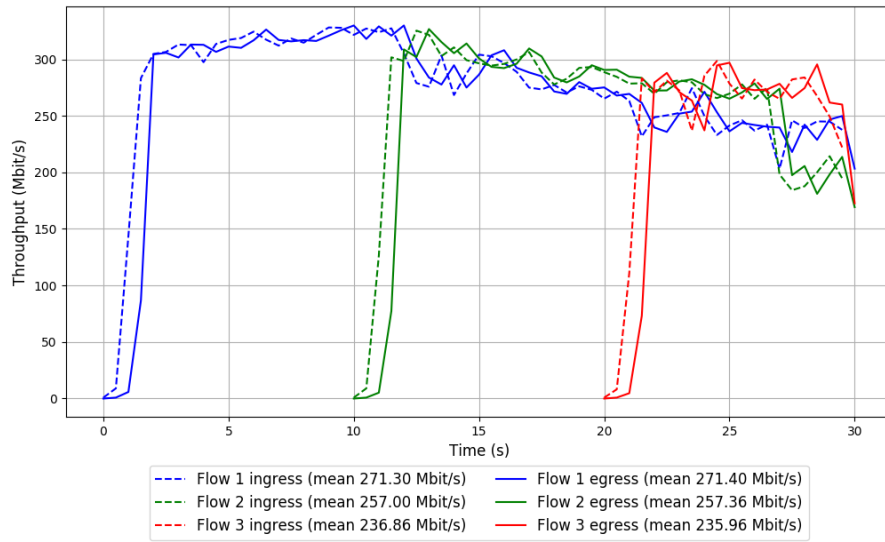
-- Flow 2:

Average throughput: 257.36 Mbit/s
95th percentile per-packet one-way delay: 78.592 ms
Loss rate: 0.49%

-- Flow 3:

Average throughput: 235.96 Mbit/s
95th percentile per-packet one-way delay: 100.051 ms
Loss rate: 1.65%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-04-24 09:30:50
End at: 2019-04-24 09:31:20
Local clock offset: -0.06 ms
Remote clock offset: -0.514 ms

Below is generated by plot.py at 2019-04-24 12:09:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 506.74 Mbit/s
95th percentile per-packet one-way delay: 95.467 ms
Loss rate: 0.48%

-- Flow 1:

Average throughput: 271.84 Mbit/s
95th percentile per-packet one-way delay: 98.576 ms
Loss rate: 0.33%

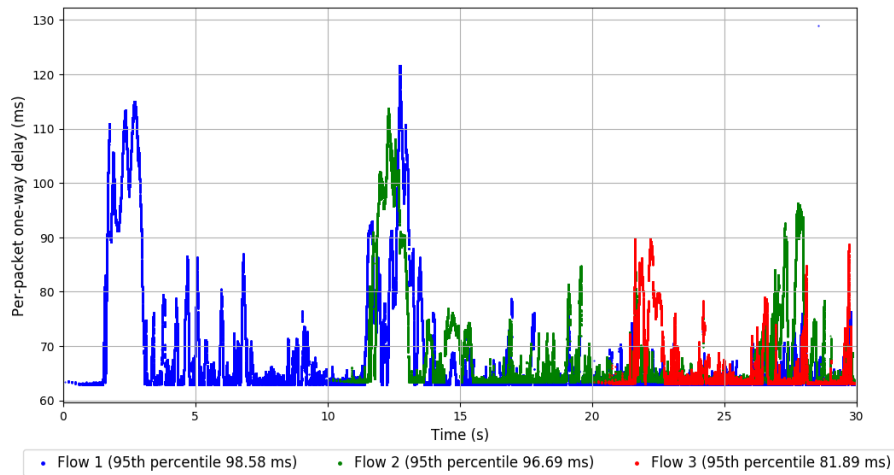
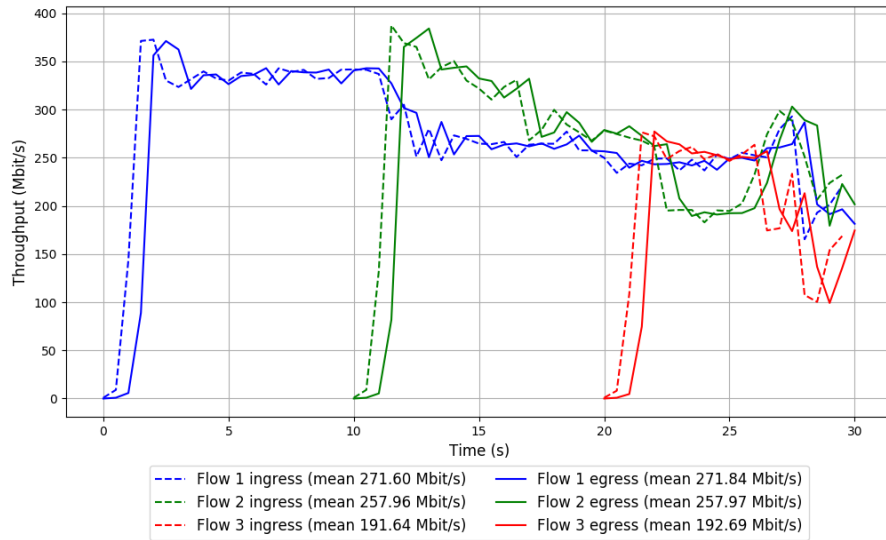
-- Flow 2:

Average throughput: 257.97 Mbit/s
95th percentile per-packet one-way delay: 96.685 ms
Loss rate: 0.63%

-- Flow 3:

Average throughput: 192.69 Mbit/s
95th percentile per-packet one-way delay: 81.895 ms
Loss rate: 0.73%

Run 2: Report of Copa — Data Link

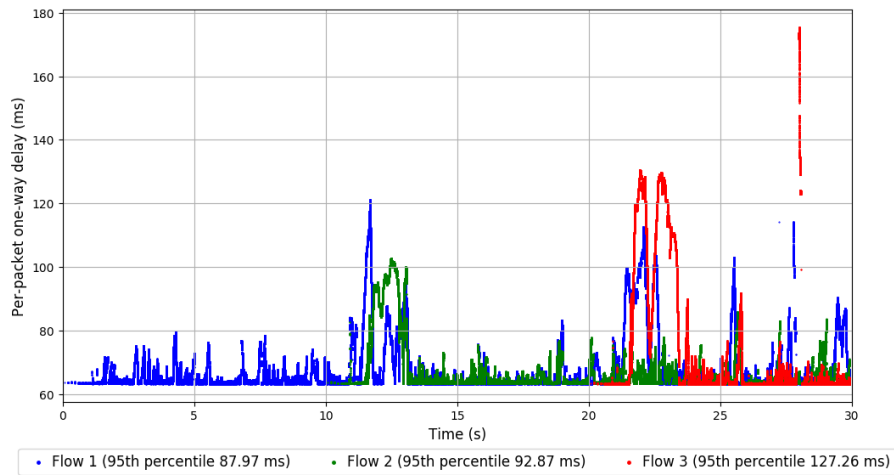
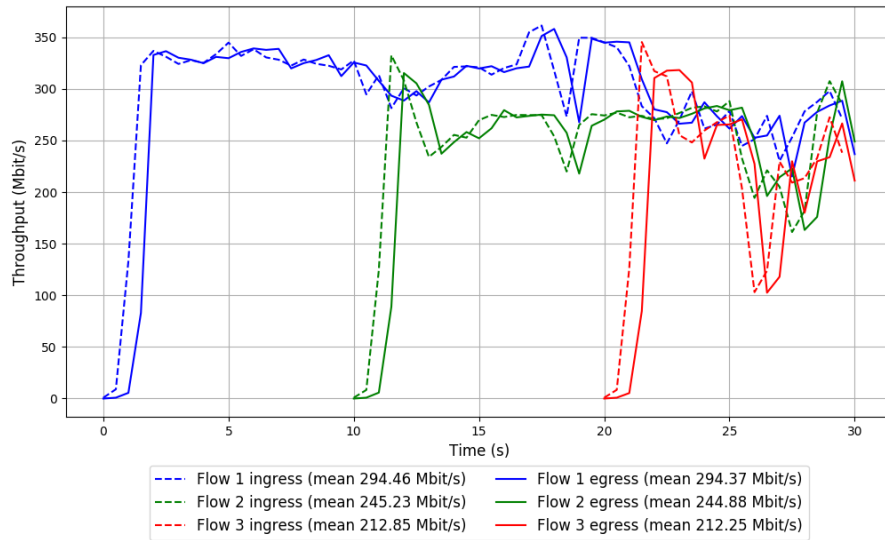


Run 3: Statistics of Copa

Start at: 2019-04-24 10:07:10
End at: 2019-04-24 10:07:40
Local clock offset: -0.052 ms
Remote clock offset: -0.815 ms

```
# Below is generated by plot.py at 2019-04-24 12:10:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 527.12 Mbit/s
95th percentile per-packet one-way delay: 97.248 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 294.37 Mbit/s
95th percentile per-packet one-way delay: 87.971 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 244.88 Mbit/s
95th percentile per-packet one-way delay: 92.868 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 212.25 Mbit/s
95th percentile per-packet one-way delay: 127.263 ms
Loss rate: 1.54%
```

Run 3: Report of Copa — Data Link



Run 4: Statistics of Copa

Start at: 2019-04-24 10:43:37

End at: 2019-04-24 10:44:07

Local clock offset: 0.009 ms

Remote clock offset: 0.035 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 546.55 Mbit/s

95th percentile per-packet one-way delay: 82.955 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 310.21 Mbit/s

95th percentile per-packet one-way delay: 83.765 ms

Loss rate: 0.36%

-- Flow 2:

Average throughput: 227.62 Mbit/s

95th percentile per-packet one-way delay: 80.288 ms

Loss rate: 0.85%

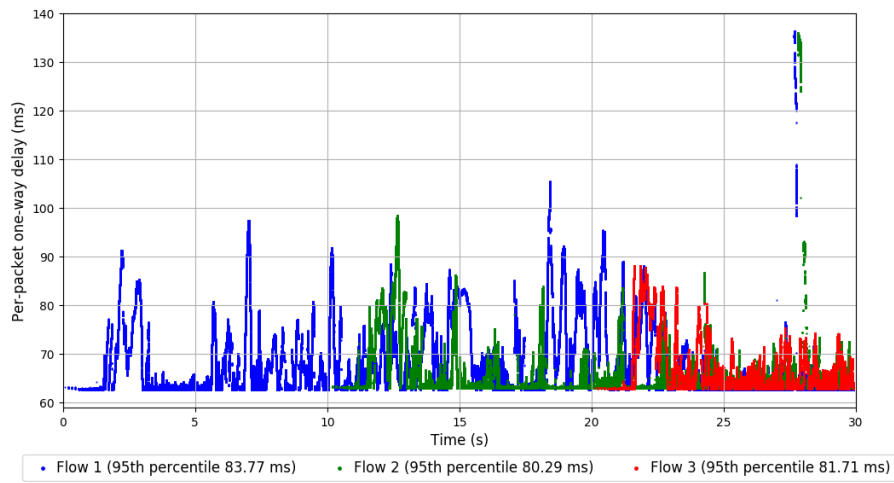
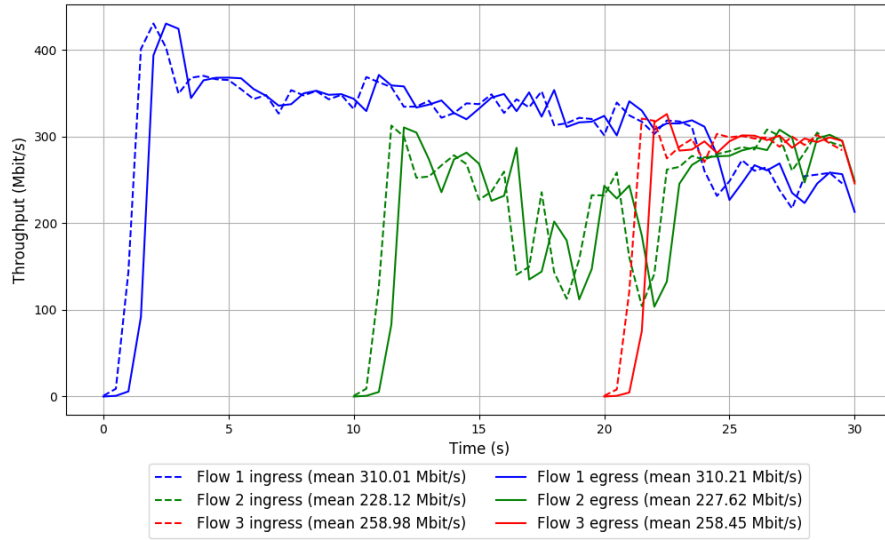
-- Flow 3:

Average throughput: 258.45 Mbit/s

95th percentile per-packet one-way delay: 81.707 ms

Loss rate: 1.47%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-04-24 11:19:48
End at: 2019-04-24 11:20:18
Local clock offset: -0.075 ms
Remote clock offset: -0.187 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 530.17 Mbit/s
95th percentile per-packet one-way delay: 75.557 ms
Loss rate: 0.61%

-- Flow 1:

Average throughput: 295.55 Mbit/s
95th percentile per-packet one-way delay: 73.269 ms
Loss rate: 0.46%

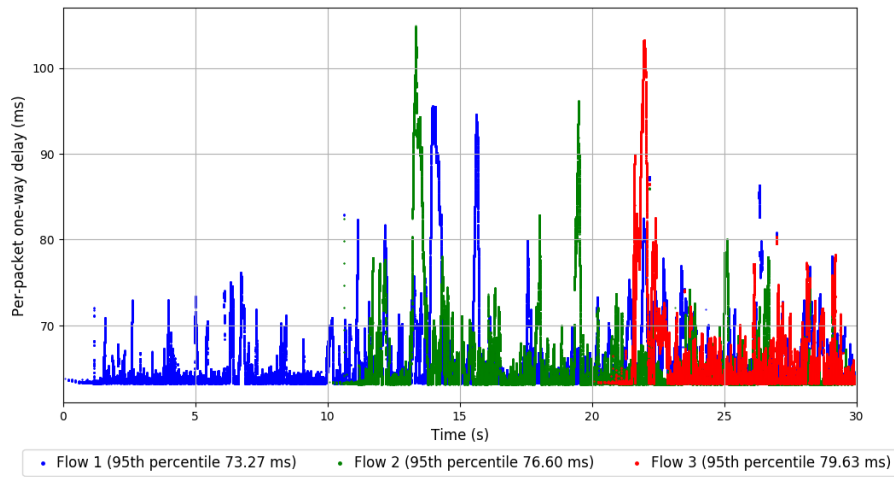
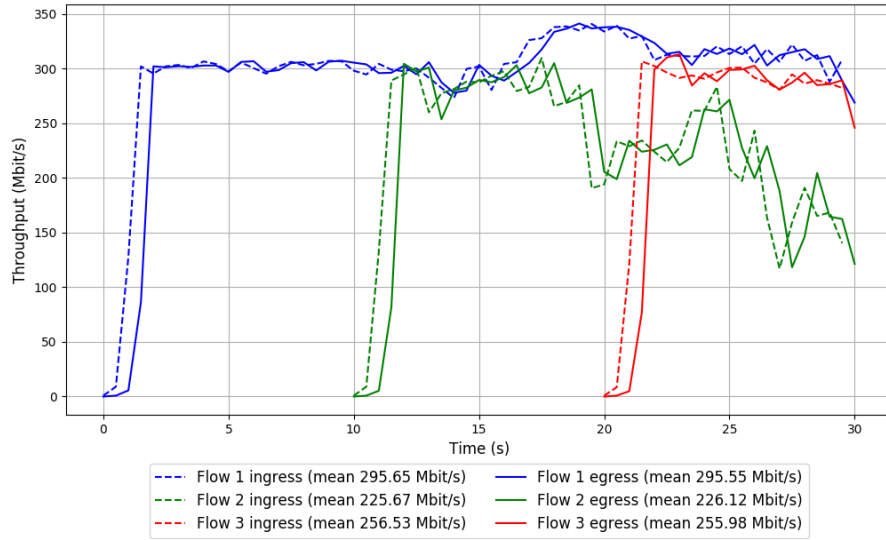
-- Flow 2:

Average throughput: 226.12 Mbit/s
95th percentile per-packet one-way delay: 76.602 ms
Loss rate: 0.43%

-- Flow 3:

Average throughput: 255.98 Mbit/s
95th percentile per-packet one-way delay: 79.629 ms
Loss rate: 1.47%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-04-24 08:47:26
End at: 2019-04-24 08:47:56
Local clock offset: -0.036 ms
Remote clock offset: -0.446 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 808.69 Mbit/s
95th percentile per-packet one-way delay: 108.156 ms
Loss rate: 0.81%

-- Flow 1:

Average throughput: 340.39 Mbit/s
95th percentile per-packet one-way delay: 64.845 ms
Loss rate: 0.44%

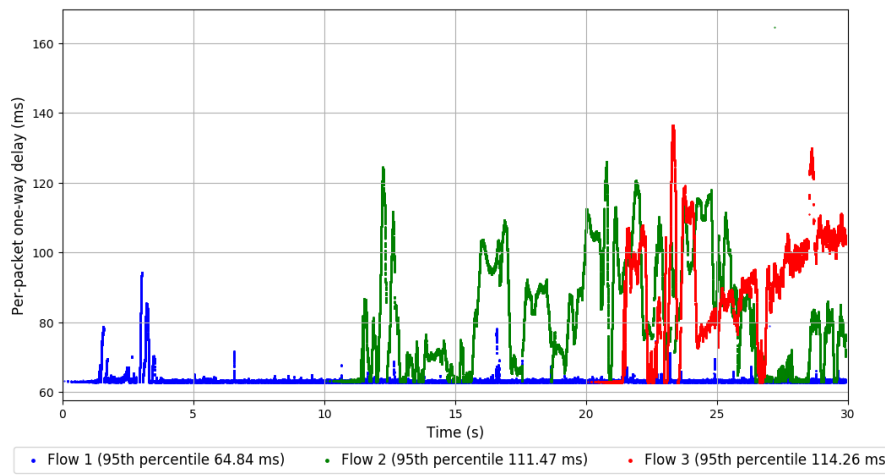
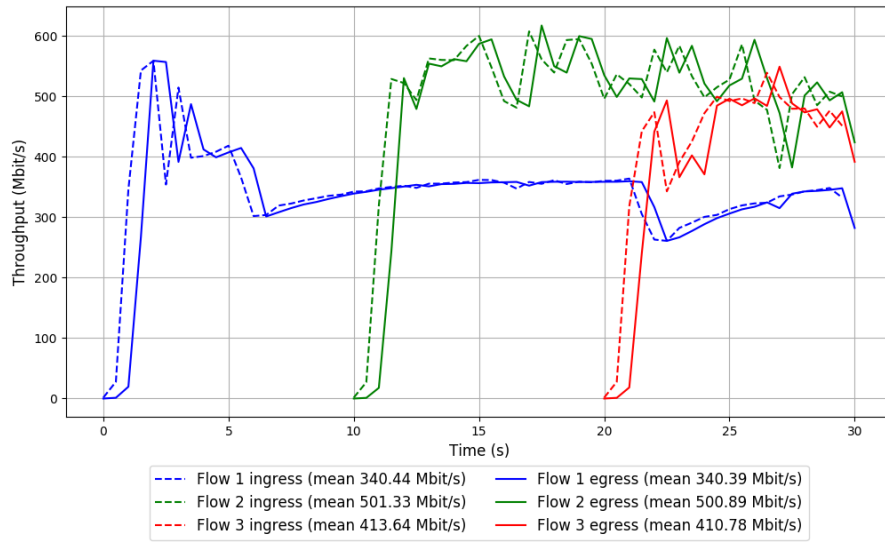
-- Flow 2:

Average throughput: 500.89 Mbit/s
95th percentile per-packet one-way delay: 111.471 ms
Loss rate: 0.72%

-- Flow 3:

Average throughput: 410.78 Mbit/s
95th percentile per-packet one-way delay: 114.262 ms
Loss rate: 1.95%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-04-24 09:23:20
End at: 2019-04-24 09:23:50
Local clock offset: -0.092 ms
Remote clock offset: -0.151 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 889.06 Mbit/s
95th percentile per-packet one-way delay: 104.127 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 485.21 Mbit/s
95th percentile per-packet one-way delay: 82.456 ms
Loss rate: 0.40%

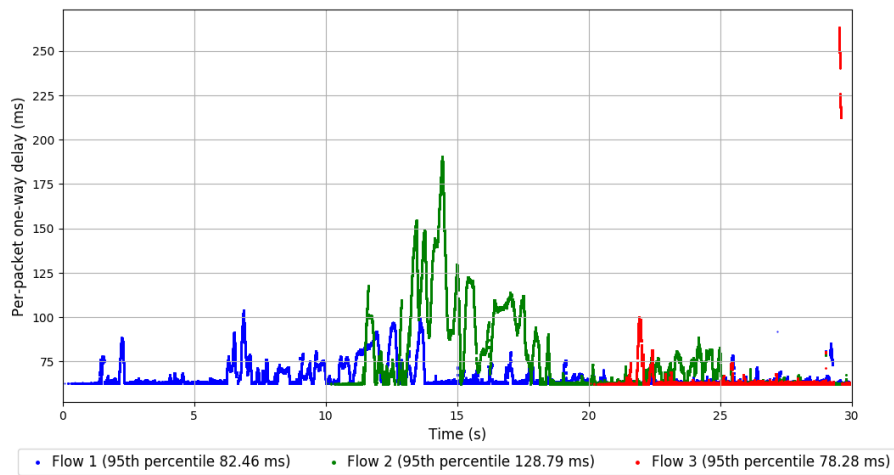
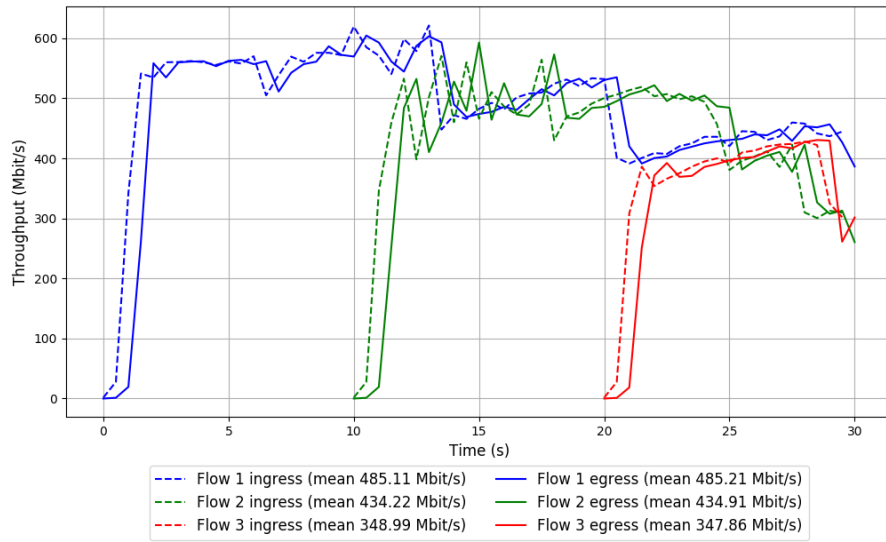
-- Flow 2:

Average throughput: 434.91 Mbit/s
95th percentile per-packet one-way delay: 128.793 ms
Loss rate: 0.47%

-- Flow 3:

Average throughput: 347.86 Mbit/s
95th percentile per-packet one-way delay: 78.275 ms
Loss rate: 1.58%

Run 2: Report of TCP Cubic — Data Link



Run 3: Statistics of TCP Cubic

Start at: 2019-04-24 09:59:44
End at: 2019-04-24 10:00:14
Local clock offset: -0.075 ms
Remote clock offset: -0.682 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 887.80 Mbit/s
95th percentile per-packet one-way delay: 145.665 ms
Loss rate: 0.55%

-- Flow 1:

Average throughput: 472.10 Mbit/s
95th percentile per-packet one-way delay: 157.054 ms
Loss rate: 0.37%

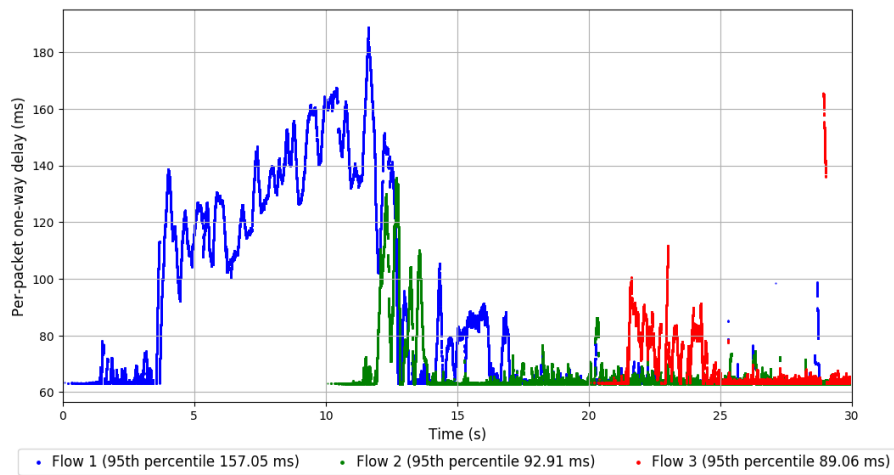
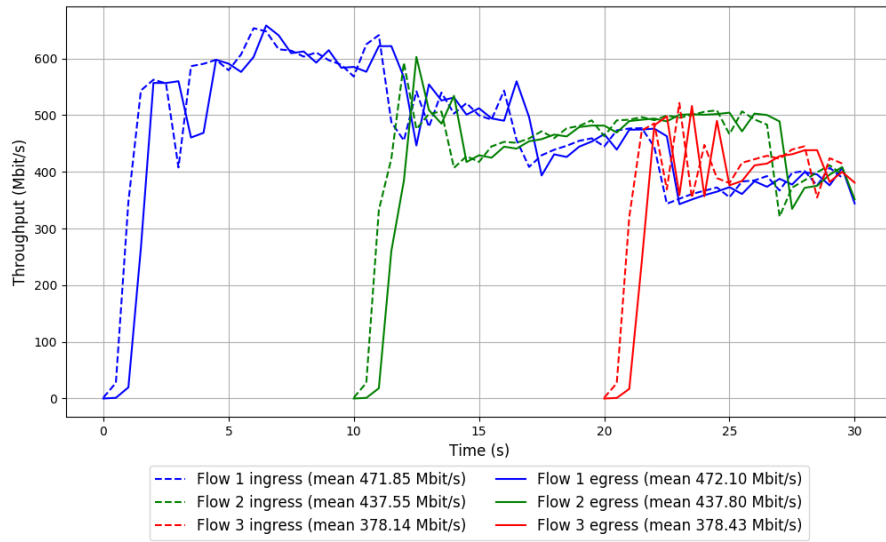
-- Flow 2:

Average throughput: 437.80 Mbit/s
95th percentile per-packet one-way delay: 92.913 ms
Loss rate: 0.58%

-- Flow 3:

Average throughput: 378.43 Mbit/s
95th percentile per-packet one-way delay: 89.064 ms
Loss rate: 1.20%

Run 3: Report of TCP Cubic — Data Link



Run 4: Statistics of TCP Cubic

Start at: 2019-04-24 10:36:08

End at: 2019-04-24 10:36:38

Local clock offset: -0.046 ms

Remote clock offset: -0.2 ms

Below is generated by plot.py at 2019-04-24 12:26:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 853.03 Mbit/s

95th percentile per-packet one-way delay: 88.179 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 449.49 Mbit/s

95th percentile per-packet one-way delay: 76.460 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 413.39 Mbit/s

95th percentile per-packet one-way delay: 92.851 ms

Loss rate: 0.72%

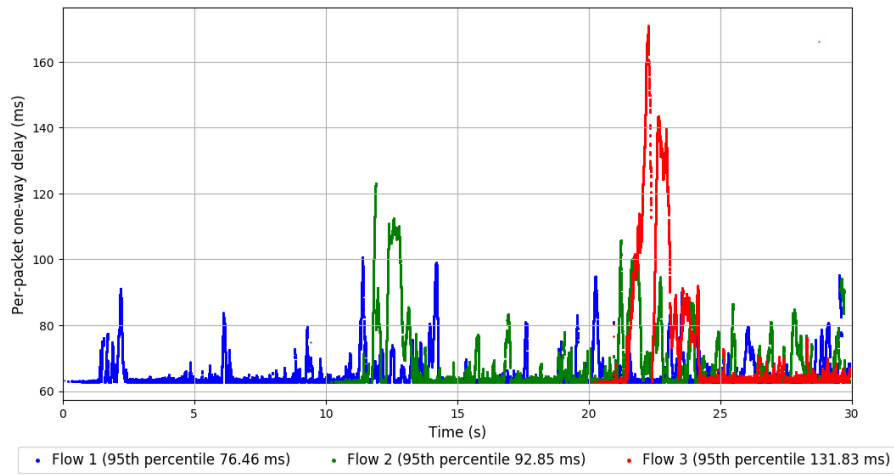
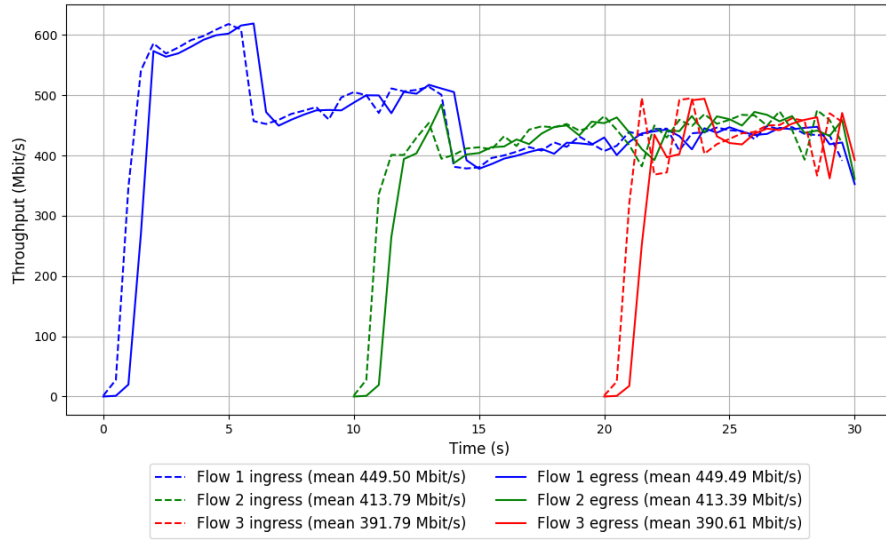
-- Flow 3:

Average throughput: 390.61 Mbit/s

95th percentile per-packet one-way delay: 131.828 ms

Loss rate: 1.57%

Run 4: Report of TCP Cubic — Data Link

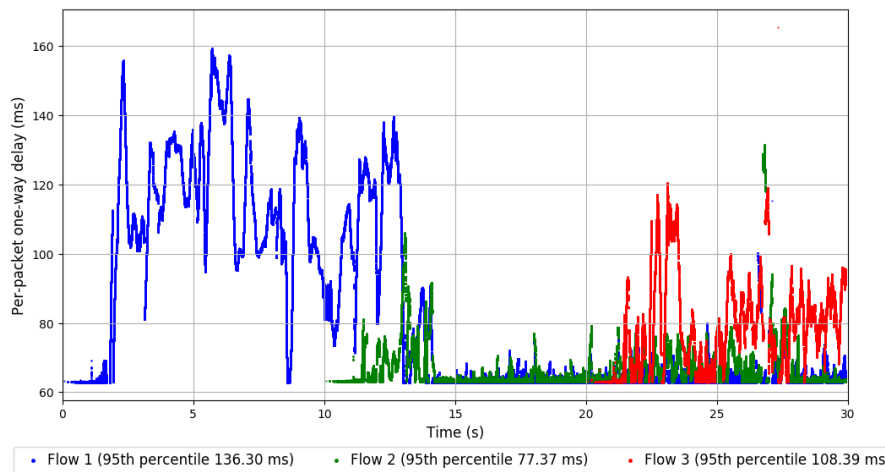
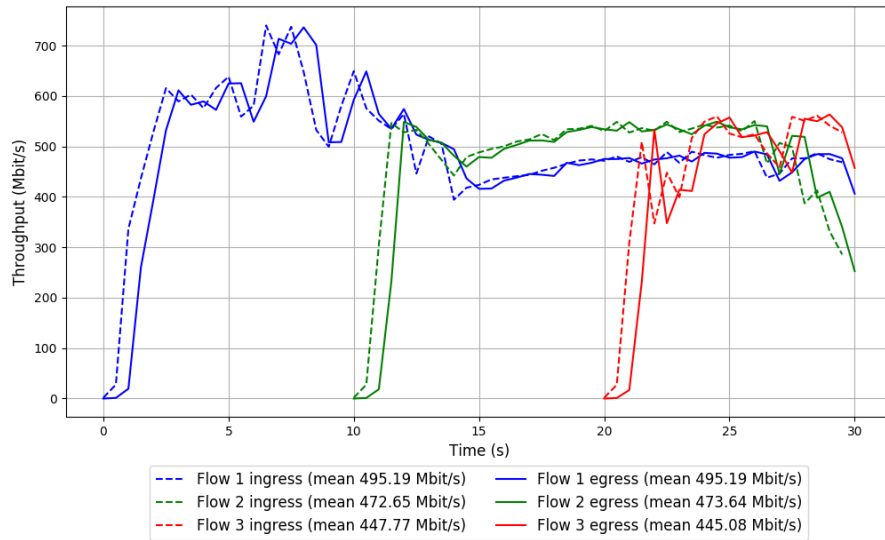


Run 5: Statistics of TCP Cubic

Start at: 2019-04-24 11:12:22
End at: 2019-04-24 11:12:52
Local clock offset: -0.061 ms
Remote clock offset: -0.185 ms

```
# Below is generated by plot.py at 2019-04-24 12:26:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 956.66 Mbit/s
95th percentile per-packet one-way delay: 129.821 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 495.19 Mbit/s
95th percentile per-packet one-way delay: 136.304 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 473.64 Mbit/s
95th percentile per-packet one-way delay: 77.367 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 445.08 Mbit/s
95th percentile per-packet one-way delay: 108.386 ms
Loss rate: 1.85%
```

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-04-24 09:05:18
End at: 2019-04-24 09:05:48
Local clock offset: -0.017 ms
Remote clock offset: -0.435 ms

Below is generated by plot.py at 2019-04-24 12:28:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 859.23 Mbit/s
95th percentile per-packet one-way delay: 112.422 ms
Loss rate: 1.15%

-- Flow 1:

Average throughput: 539.80 Mbit/s
95th percentile per-packet one-way delay: 123.359 ms
Loss rate: 1.33%

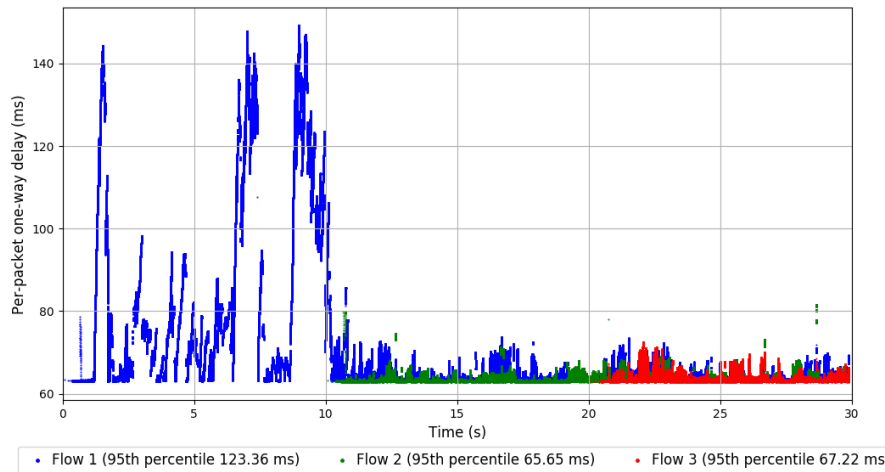
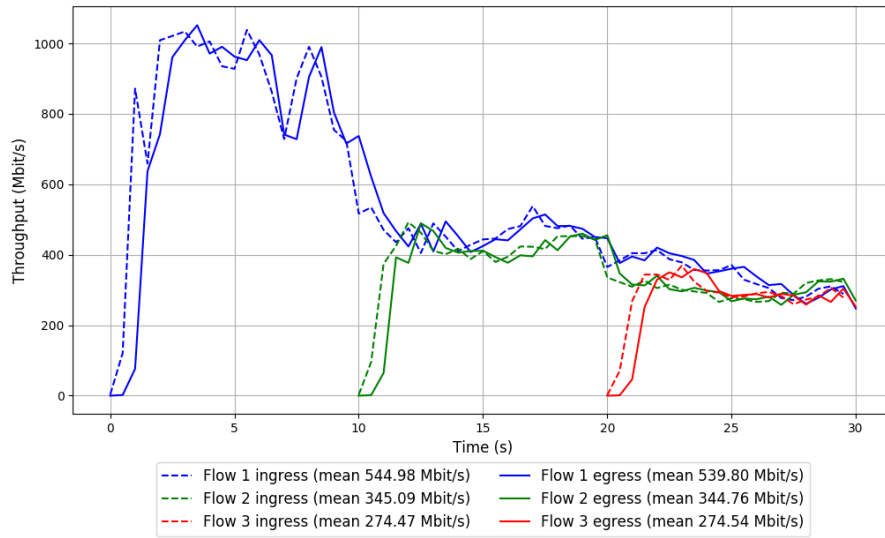
-- Flow 2:

Average throughput: 344.76 Mbit/s
95th percentile per-packet one-way delay: 65.654 ms
Loss rate: 0.64%

-- Flow 3:

Average throughput: 274.54 Mbit/s
95th percentile per-packet one-way delay: 67.224 ms
Loss rate: 1.31%

Run 1: Report of FillP — Data Link



Run 2: Statistics of FillP

Start at: 2019-04-24 09:41:32
End at: 2019-04-24 09:42:02
Local clock offset: -0.081 ms
Remote clock offset: -0.624 ms

Below is generated by plot.py at 2019-04-24 12:41:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 861.03 Mbit/s
95th percentile per-packet one-way delay: 122.500 ms
Loss rate: 1.47%

-- Flow 1:

Average throughput: 521.26 Mbit/s
95th percentile per-packet one-way delay: 130.556 ms
Loss rate: 1.89%

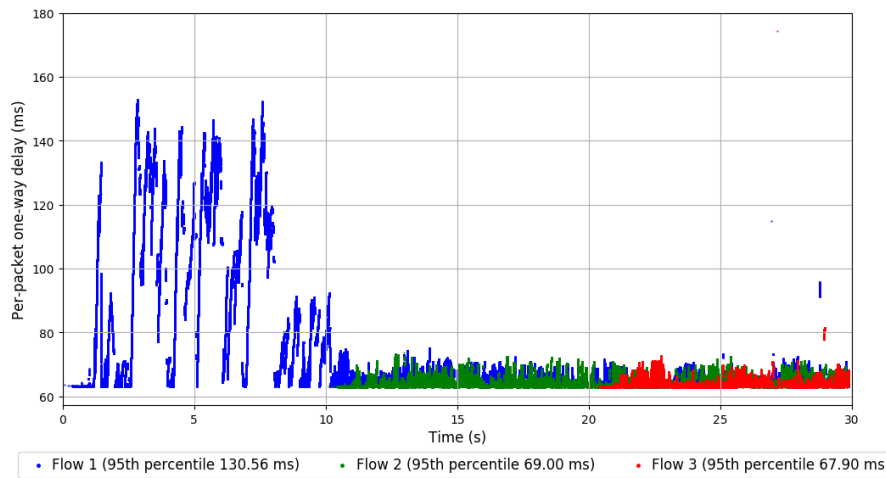
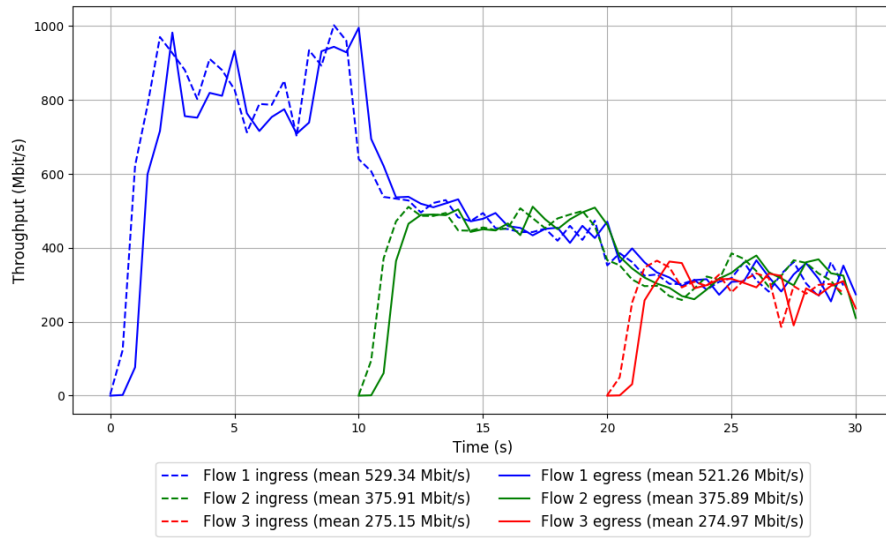
-- Flow 2:

Average throughput: 375.89 Mbit/s
95th percentile per-packet one-way delay: 69.001 ms
Loss rate: 0.61%

-- Flow 3:

Average throughput: 274.97 Mbit/s
95th percentile per-packet one-way delay: 67.903 ms
Loss rate: 1.42%

Run 2: Report of FillP — Data Link

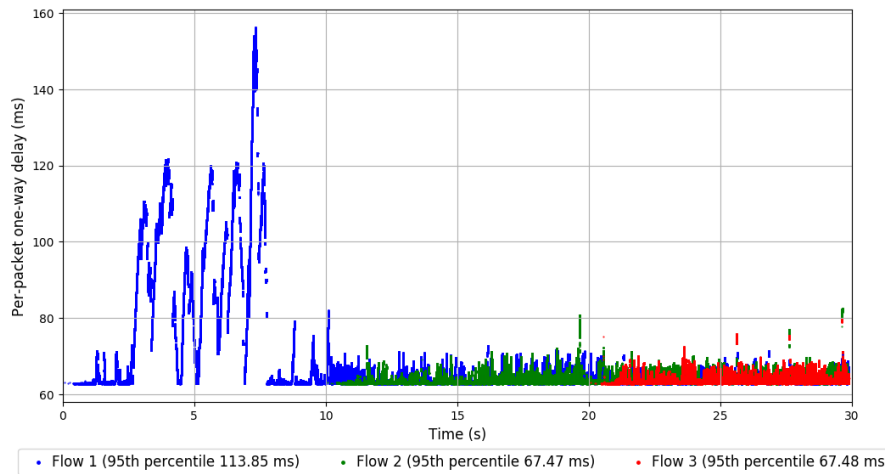
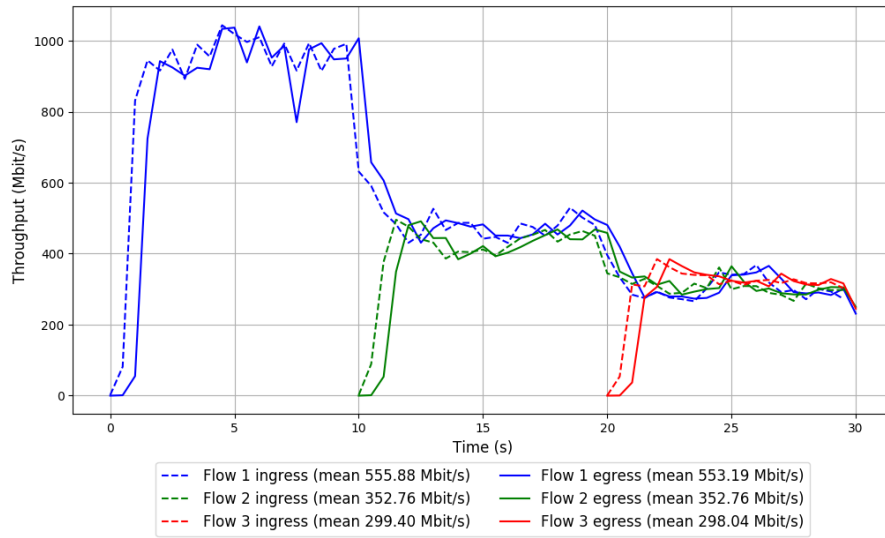


Run 3: Statistics of FillP

Start at: 2019-04-24 10:17:51
End at: 2019-04-24 10:18:21
Local clock offset: -0.068 ms
Remote clock offset: -0.617 ms

```
# Below is generated by plot.py at 2019-04-24 12:44:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.38 Mbit/s
95th percentile per-packet one-way delay: 107.384 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 553.19 Mbit/s
95th percentile per-packet one-way delay: 113.850 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 352.76 Mbit/s
95th percentile per-packet one-way delay: 67.475 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 298.04 Mbit/s
95th percentile per-packet one-way delay: 67.476 ms
Loss rate: 1.62%
```

Run 3: Report of FillP — Data Link



Run 4: Statistics of FillP

Start at: 2019-04-24 10:54:03

End at: 2019-04-24 10:54:33

Local clock offset: -0.03 ms

Remote clock offset: 0.086 ms

Below is generated by plot.py at 2019-04-24 12:44:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 897.53 Mbit/s

95th percentile per-packet one-way delay: 116.700 ms

Loss rate: 1.62%

-- Flow 1:

Average throughput: 555.66 Mbit/s

95th percentile per-packet one-way delay: 122.517 ms

Loss rate: 2.12%

-- Flow 2:

Average throughput: 383.52 Mbit/s

95th percentile per-packet one-way delay: 69.802 ms

Loss rate: 0.54%

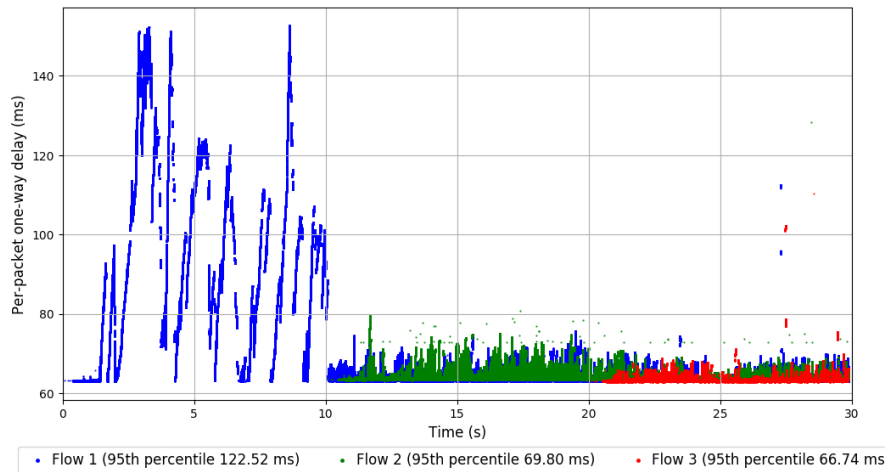
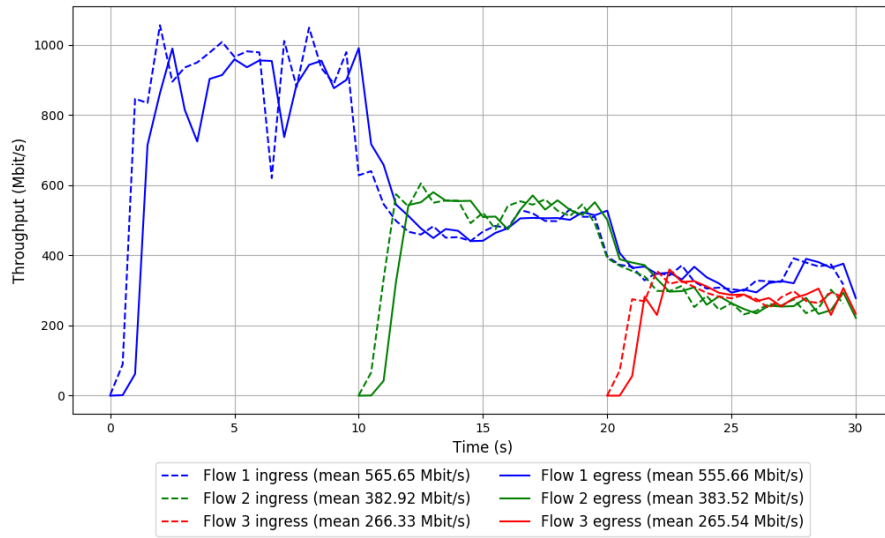
-- Flow 3:

Average throughput: 265.54 Mbit/s

95th percentile per-packet one-way delay: 66.742 ms

Loss rate: 1.48%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-04-24 11:30:31
End at: 2019-04-24 11:31:01
Local clock offset: -0.046 ms
Remote clock offset: -0.015 ms

Below is generated by plot.py at 2019-04-24 12:44:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 859.35 Mbit/s
95th percentile per-packet one-way delay: 84.494 ms
Loss rate: 0.57%

-- Flow 1:

Average throughput: 542.05 Mbit/s
95th percentile per-packet one-way delay: 91.233 ms
Loss rate: 0.44%

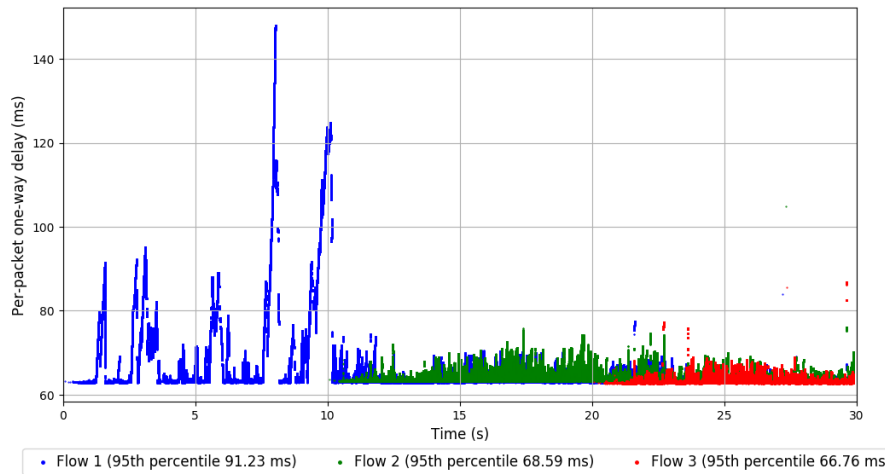
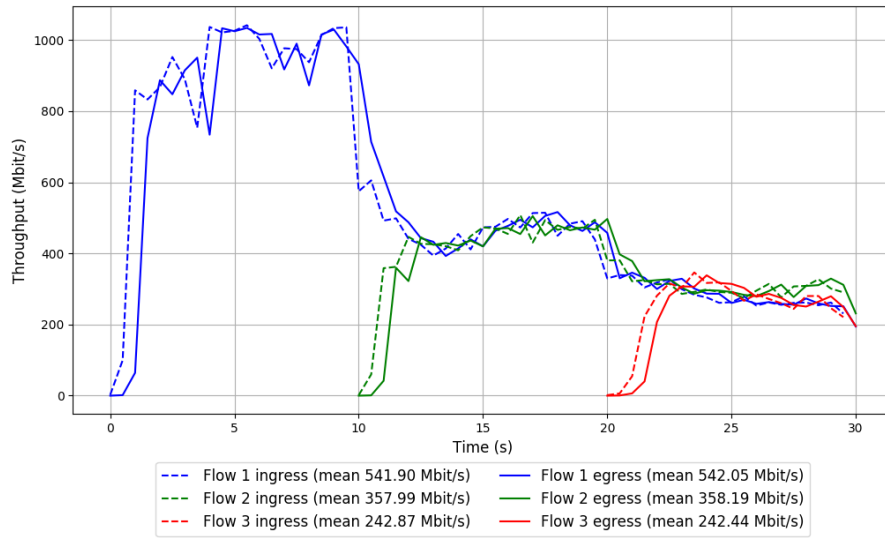
-- Flow 2:

Average throughput: 358.19 Mbit/s
95th percentile per-packet one-way delay: 68.592 ms
Loss rate: 0.61%

-- Flow 3:

Average throughput: 242.44 Mbit/s
95th percentile per-packet one-way delay: 66.758 ms
Loss rate: 1.28%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-04-24 09:03:31

End at: 2019-04-24 09:04:01

Local clock offset: -0.072 ms

Remote clock offset: -0.51 ms

Below is generated by plot.py at 2019-04-24 12:44:33

Datalink statistics

-- Total of 3 flows:

Average throughput: 828.41 Mbit/s

95th percentile per-packet one-way delay: 99.691 ms

Loss rate: 0.63%

-- Flow 1:

Average throughput: 531.06 Mbit/s

95th percentile per-packet one-way delay: 109.714 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 317.71 Mbit/s

95th percentile per-packet one-way delay: 67.422 ms

Loss rate: 0.64%

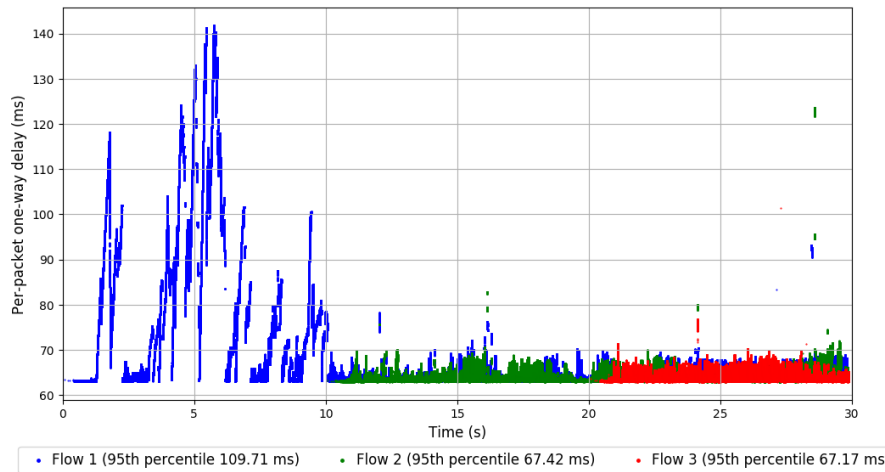
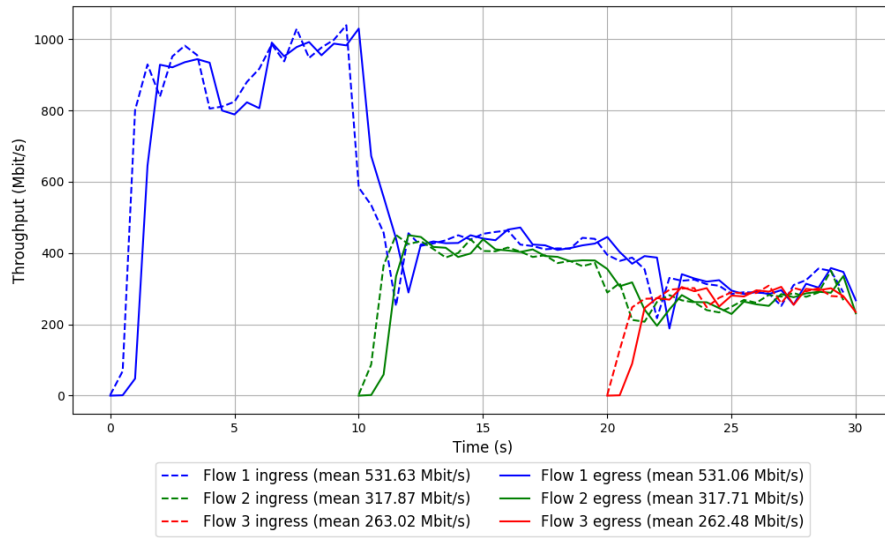
-- Flow 3:

Average throughput: 262.48 Mbit/s

95th percentile per-packet one-way delay: 67.166 ms

Loss rate: 1.65%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-04-24 09:39:43
End at: 2019-04-24 09:40:13
Local clock offset: -0.071 ms
Remote clock offset: -0.451 ms

Below is generated by plot.py at 2019-04-24 12:44:50

Datalink statistics

-- Total of 3 flows:

Average throughput: 853.49 Mbit/s
95th percentile per-packet one-way delay: 90.511 ms
Loss rate: 0.59%

-- Flow 1:

Average throughput: 549.99 Mbit/s
95th percentile per-packet one-way delay: 95.926 ms
Loss rate: 0.45%

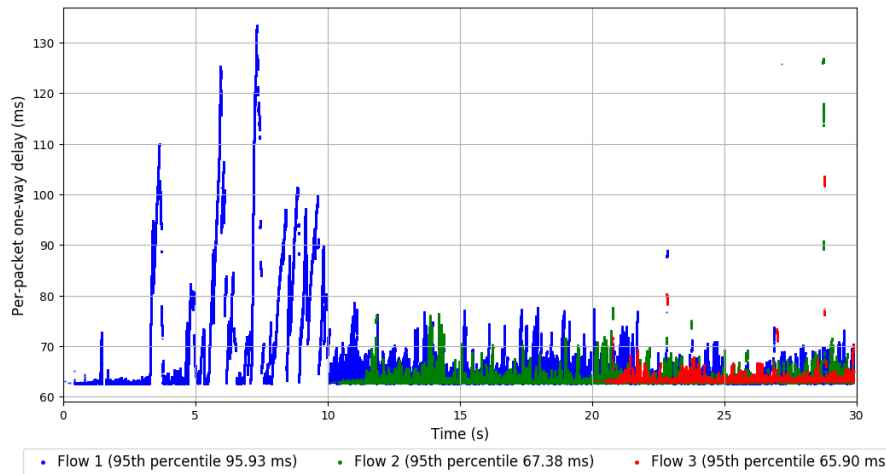
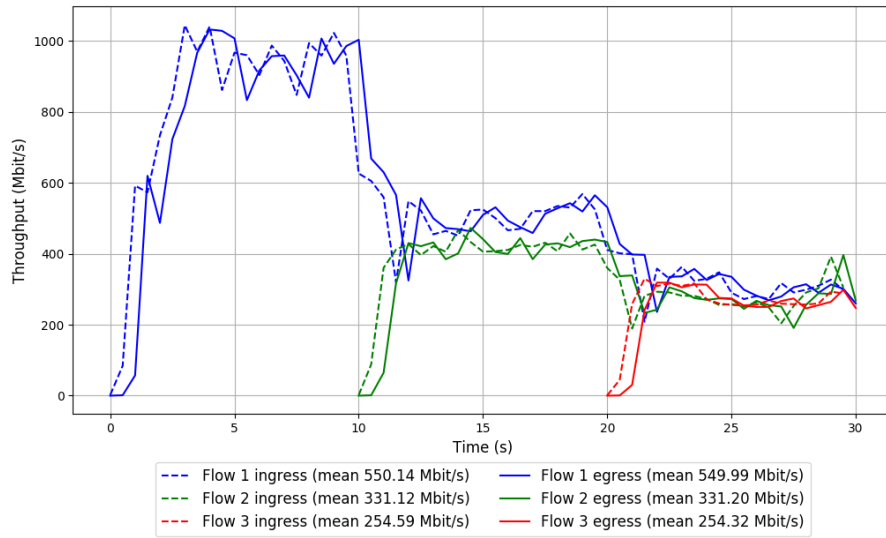
-- Flow 2:

Average throughput: 331.20 Mbit/s
95th percentile per-packet one-way delay: 67.379 ms
Loss rate: 0.65%

-- Flow 3:

Average throughput: 254.32 Mbit/s
95th percentile per-packet one-way delay: 65.901 ms
Loss rate: 1.38%

Run 2: Report of FillP-Sheep — Data Link



Run 3: Statistics of FillP-Sheep

Start at: 2019-04-24 10:16:02
End at: 2019-04-24 10:16:32
Local clock offset: -0.069 ms
Remote clock offset: -0.677 ms

Below is generated by plot.py at 2019-04-24 12:45:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 851.54 Mbit/s
95th percentile per-packet one-way delay: 72.326 ms
Loss rate: 0.44%

-- Flow 1:

Average throughput: 547.31 Mbit/s
95th percentile per-packet one-way delay: 75.442 ms
Loss rate: 0.19%

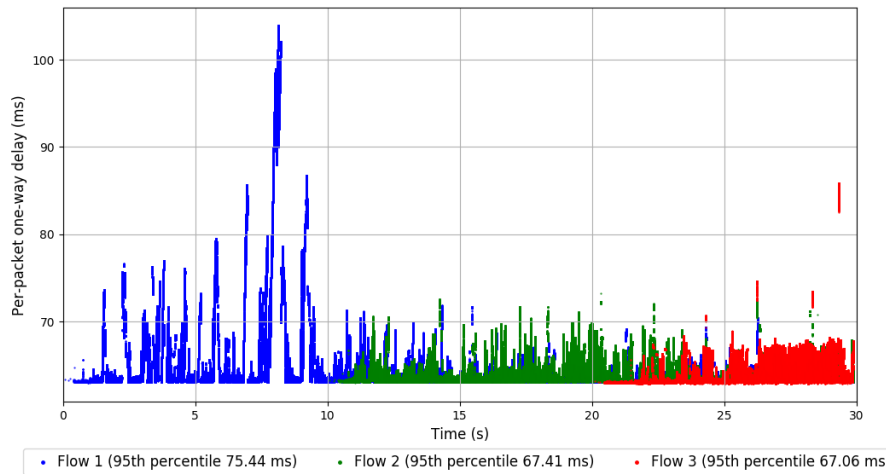
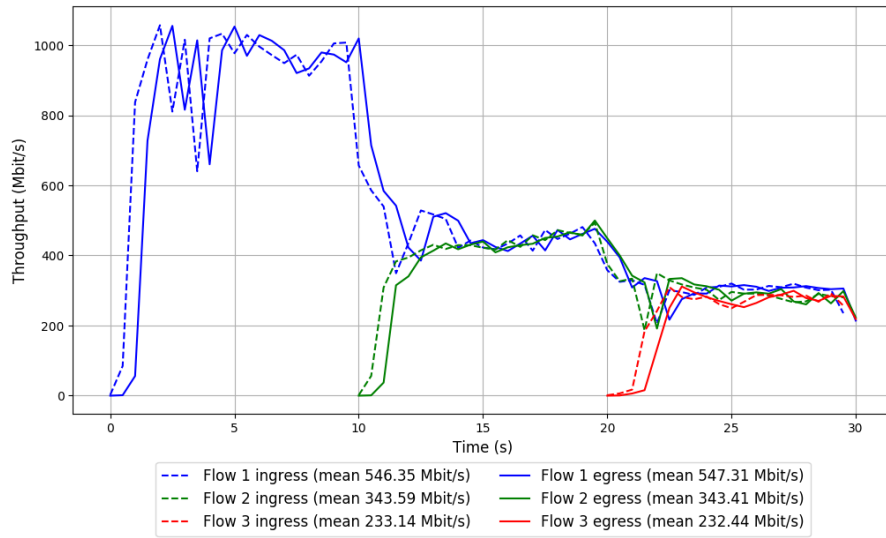
-- Flow 2:

Average throughput: 343.41 Mbit/s
95th percentile per-packet one-way delay: 67.409 ms
Loss rate: 0.62%

-- Flow 3:

Average throughput: 232.44 Mbit/s
95th percentile per-packet one-way delay: 67.061 ms
Loss rate: 1.68%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-04-24 10:52:32

End at: 2019-04-24 10:53:02

Local clock offset: -0.001 ms

Remote clock offset: 0.117 ms

Below is generated by plot.py at 2019-04-24 12:45:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 430.71 Mbit/s

95th percentile per-packet one-way delay: 67.010 ms

Loss rate: 0.74%

-- Flow 1:

Average throughput: 127.60 Mbit/s

95th percentile per-packet one-way delay: 70.454 ms

Loss rate: 0.97%

-- Flow 2:

Average throughput: 326.93 Mbit/s

95th percentile per-packet one-way delay: 66.902 ms

Loss rate: 0.58%

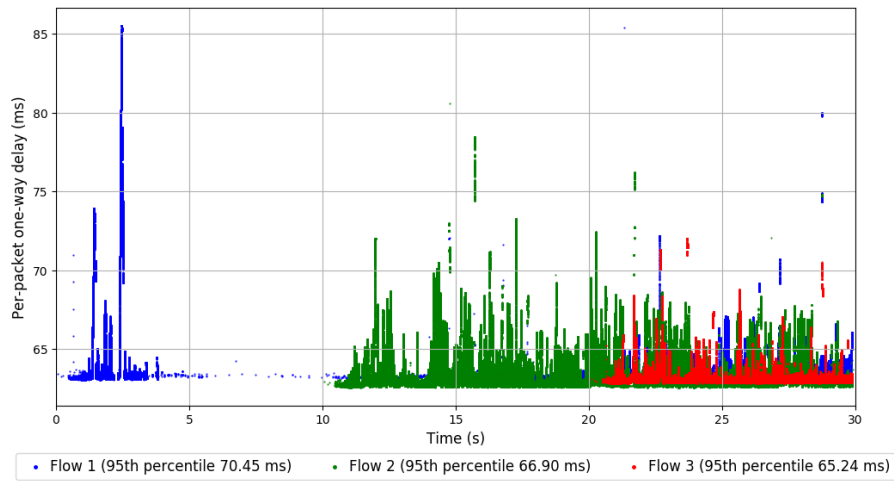
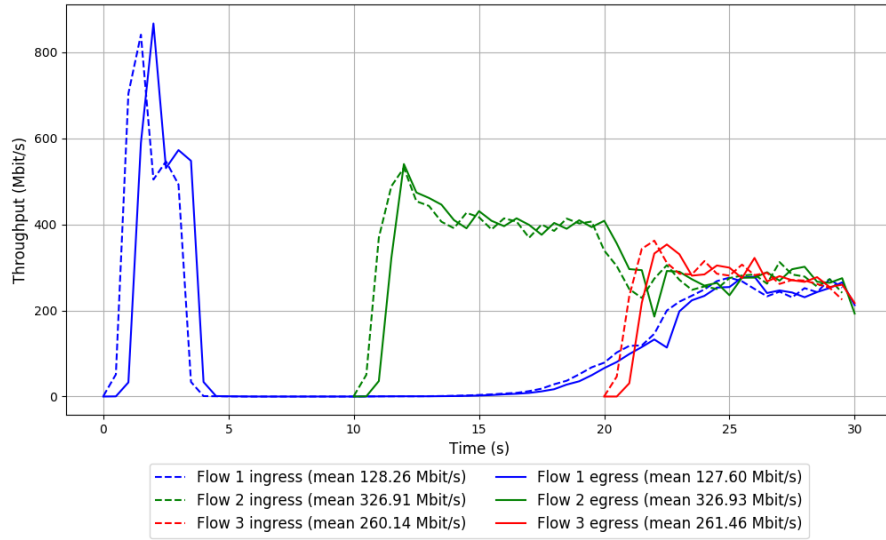
-- Flow 3:

Average throughput: 261.46 Mbit/s

95th percentile per-packet one-way delay: 65.239 ms

Loss rate: 0.78%

Run 4: Report of FillP-Sheep — Data Link

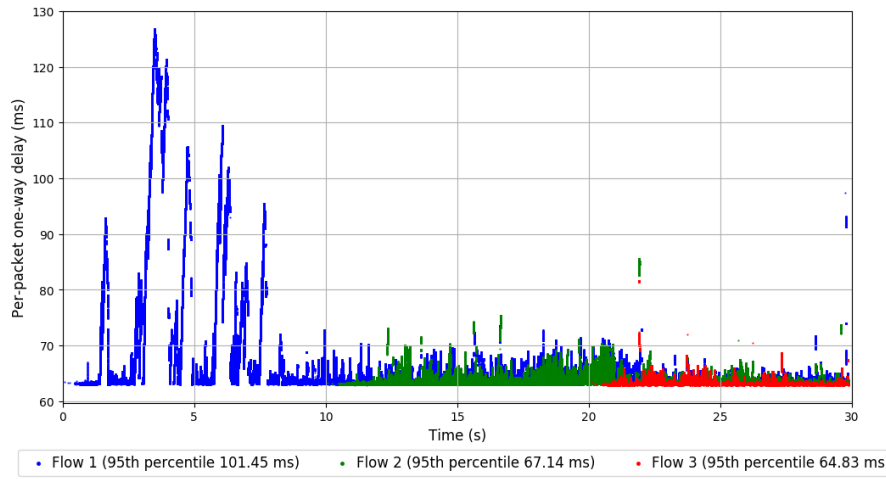
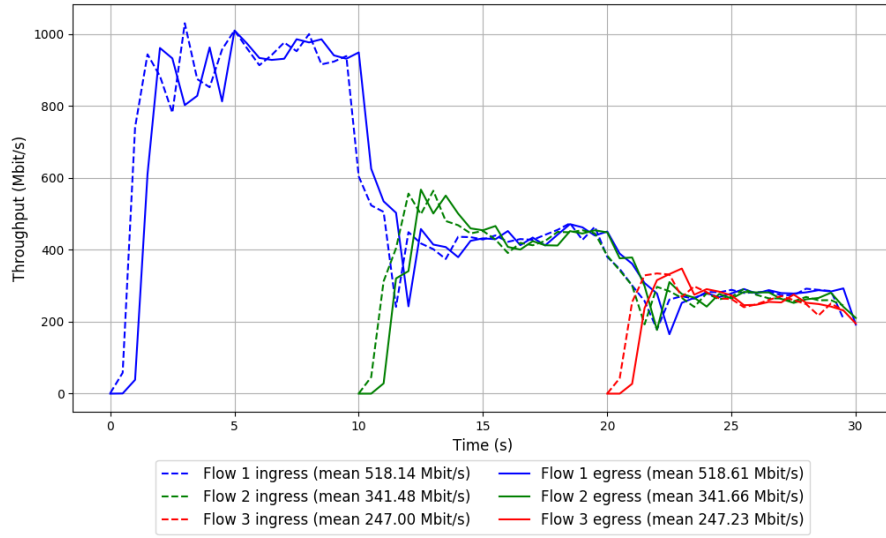


Run 5: Statistics of FillP-Sheep

Start at: 2019-04-24 11:28:43
End at: 2019-04-24 11:29:13
Local clock offset: -0.069 ms
Remote clock offset: -0.208 ms

```
# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 826.50 Mbit/s
95th percentile per-packet one-way delay: 92.298 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 518.61 Mbit/s
95th percentile per-packet one-way delay: 101.453 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 341.66 Mbit/s
95th percentile per-packet one-way delay: 67.139 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 247.23 Mbit/s
95th percentile per-packet one-way delay: 64.828 ms
Loss rate: 1.37%
```

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-04-24 09:01:42
End at: 2019-04-24 09:02:12
Local clock offset: -0.064 ms
Remote clock offset: -0.061 ms

Below is generated by plot.py at 2019-04-24 12:58:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.67 Mbit/s
95th percentile per-packet one-way delay: 66.376 ms
Loss rate: 0.69%

-- Flow 1:

Average throughput: 208.67 Mbit/s
95th percentile per-packet one-way delay: 66.833 ms
Loss rate: 0.46%

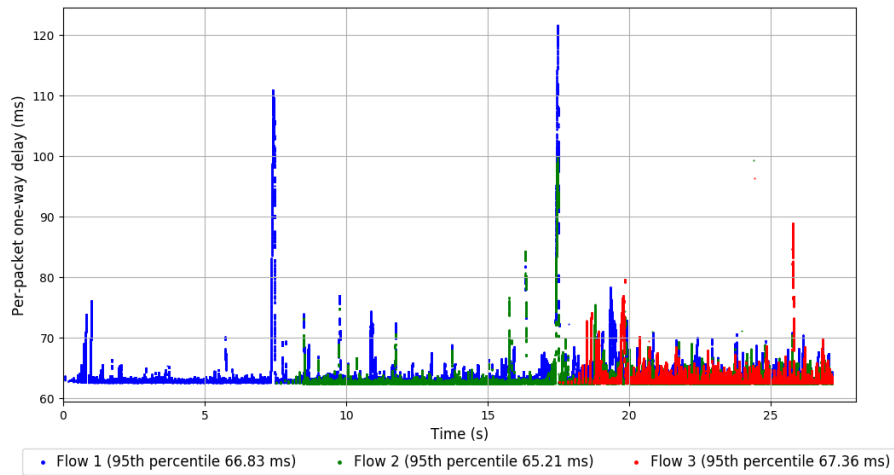
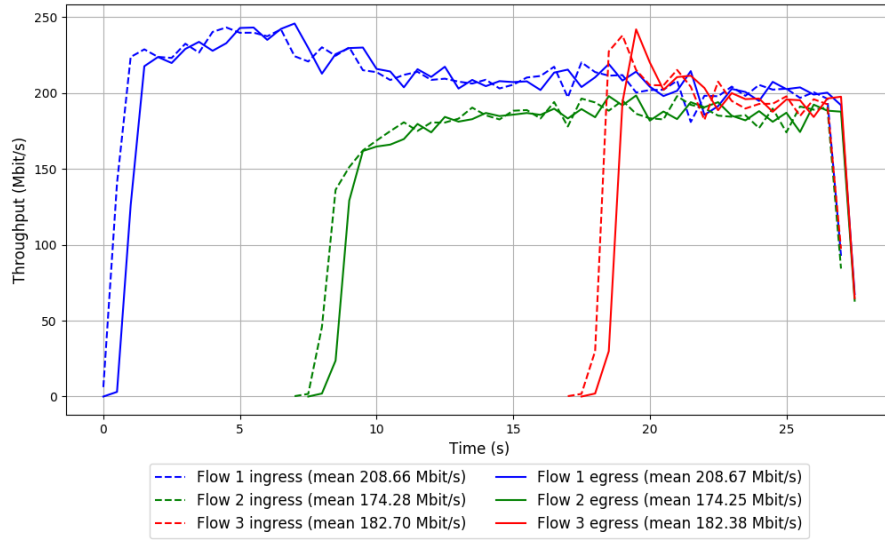
-- Flow 2:

Average throughput: 174.25 Mbit/s
95th percentile per-packet one-way delay: 65.208 ms
Loss rate: 0.65%

-- Flow 3:

Average throughput: 182.38 Mbit/s
95th percentile per-packet one-way delay: 67.356 ms
Loss rate: 1.48%

Run 1: Report of Indigo — Data Link



Run 2: Statistics of Indigo

Start at: 2019-04-24 09:37:50
End at: 2019-04-24 09:38:20
Local clock offset: -0.077 ms
Remote clock offset: -0.475 ms

Below is generated by plot.py at 2019-04-24 12:58:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 399.81 Mbit/s
95th percentile per-packet one-way delay: 66.177 ms
Loss rate: 0.63%

-- Flow 1:

Average throughput: 212.37 Mbit/s
95th percentile per-packet one-way delay: 65.897 ms
Loss rate: 0.40%

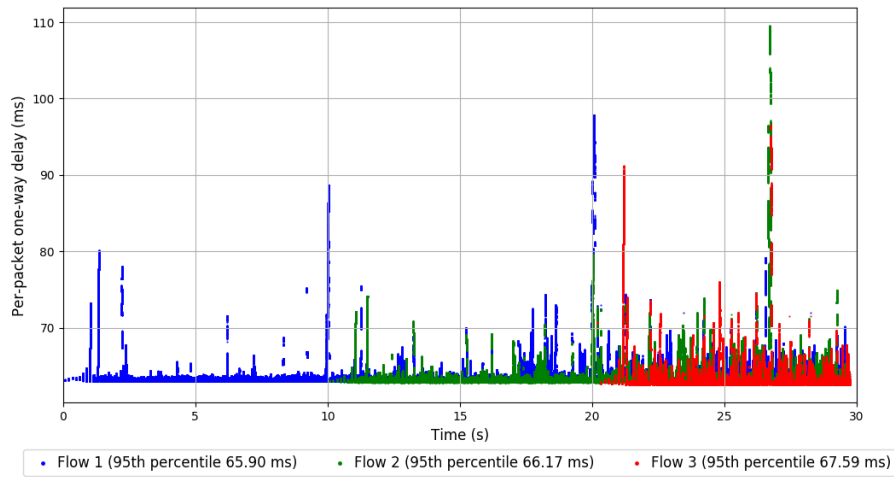
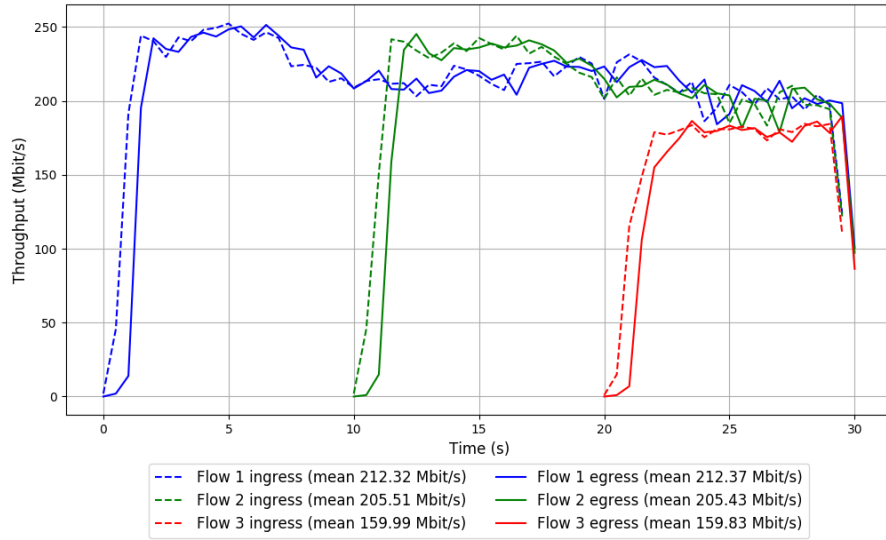
-- Flow 2:

Average throughput: 205.43 Mbit/s
95th percentile per-packet one-way delay: 66.166 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 159.83 Mbit/s
95th percentile per-packet one-way delay: 67.590 ms
Loss rate: 1.49%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-04-24 10:14:11

End at: 2019-04-24 10:14:41

Local clock offset: -0.071 ms

Remote clock offset: -0.7 ms

Below is generated by plot.py at 2019-04-24 12:58:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 395.75 Mbit/s

95th percentile per-packet one-way delay: 67.286 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 207.31 Mbit/s

95th percentile per-packet one-way delay: 66.834 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 203.77 Mbit/s

95th percentile per-packet one-way delay: 68.118 ms

Loss rate: 0.68%

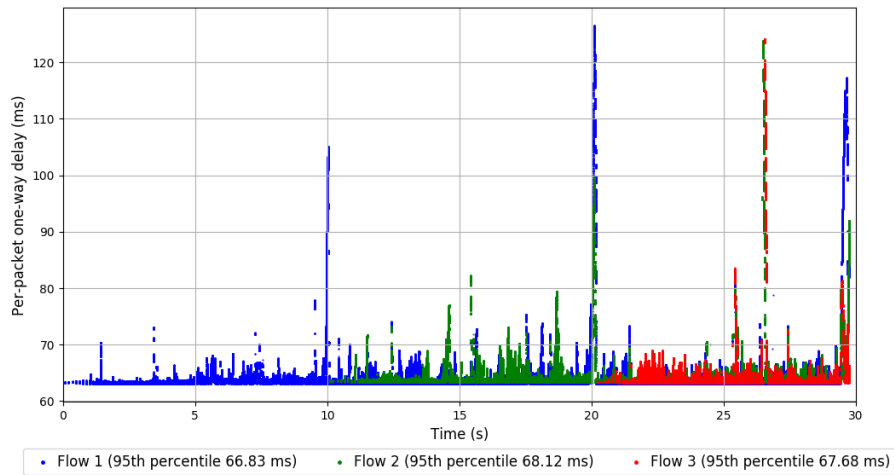
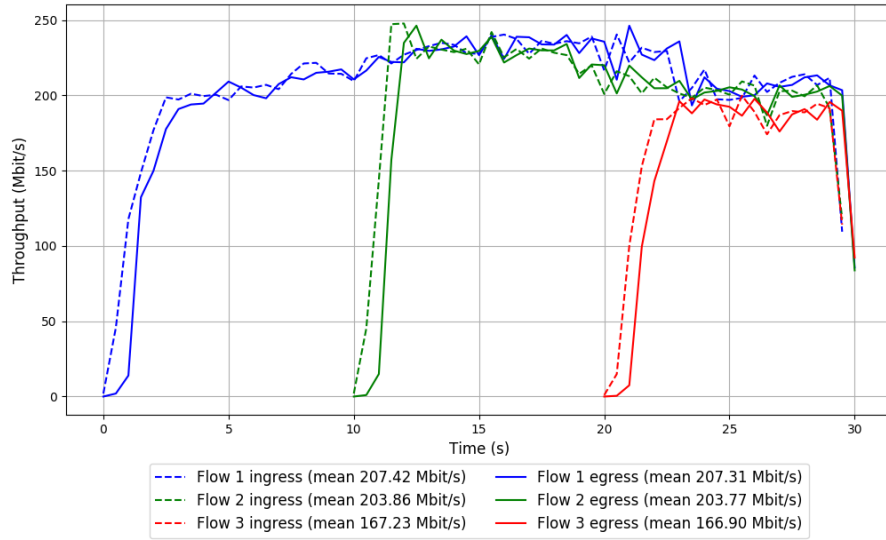
-- Flow 3:

Average throughput: 166.90 Mbit/s

95th percentile per-packet one-way delay: 67.681 ms

Loss rate: 1.52%

Run 3: Report of Indigo — Data Link



Run 4: Statistics of Indigo

Start at: 2019-04-24 10:50:41

End at: 2019-04-24 10:51:11

Local clock offset: -0.011 ms

Remote clock offset: 0.145 ms

Below is generated by plot.py at 2019-04-24 12:58:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 392.32 Mbit/s

95th percentile per-packet one-way delay: 73.717 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 214.03 Mbit/s

95th percentile per-packet one-way delay: 73.630 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 192.04 Mbit/s

95th percentile per-packet one-way delay: 84.175 ms

Loss rate: 0.66%

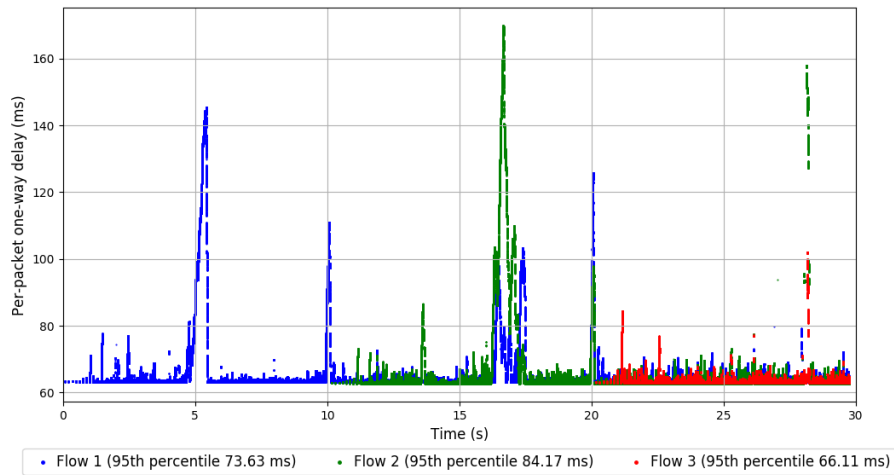
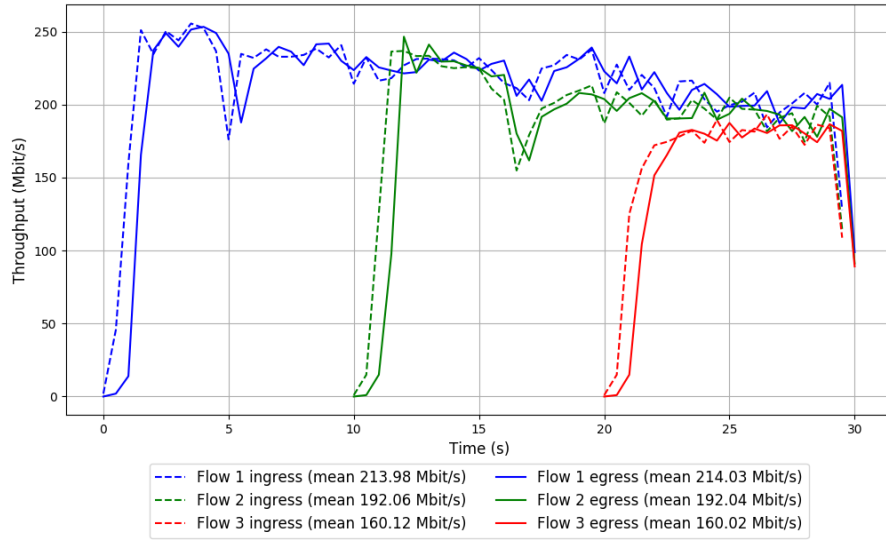
-- Flow 3:

Average throughput: 160.02 Mbit/s

95th percentile per-packet one-way delay: 66.105 ms

Loss rate: 1.38%

Run 4: Report of Indigo — Data Link

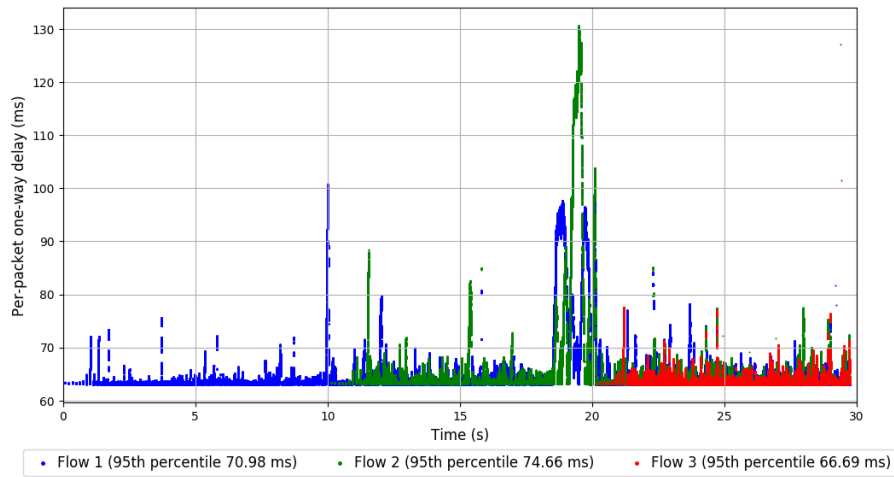
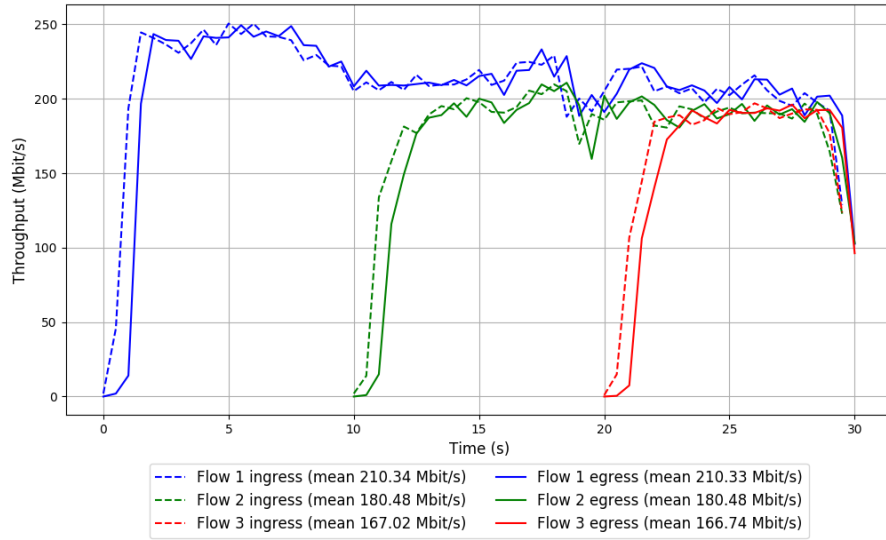


Run 5: Statistics of Indigo

Start at: 2019-04-24 11:26:53
End at: 2019-04-24 11:27:23
Local clock offset: -0.043 ms
Remote clock offset: -0.209 ms

```
# Below is generated by plot.py at 2019-04-24 12:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.07 Mbit/s
95th percentile per-packet one-way delay: 70.592 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 210.33 Mbit/s
95th percentile per-packet one-way delay: 70.984 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 180.48 Mbit/s
95th percentile per-packet one-way delay: 74.660 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 166.74 Mbit/s
95th percentile per-packet one-way delay: 66.687 ms
Loss rate: 1.49%
```

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-04-24 08:51:08
End at: 2019-04-24 08:51:38
Local clock offset: -0.042 ms
Remote clock offset: -0.522 ms

Below is generated by plot.py at 2019-04-24 12:58:21

Datalink statistics

-- Total of 3 flows:

Average throughput: 732.79 Mbit/s
95th percentile per-packet one-way delay: 71.389 ms
Loss rate: 0.55%

-- Flow 1:

Average throughput: 433.85 Mbit/s
95th percentile per-packet one-way delay: 72.486 ms
Loss rate: 0.22%

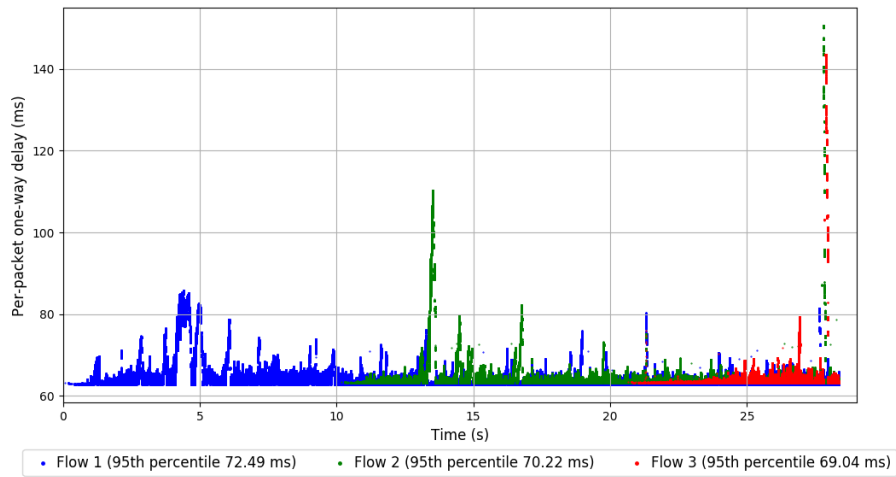
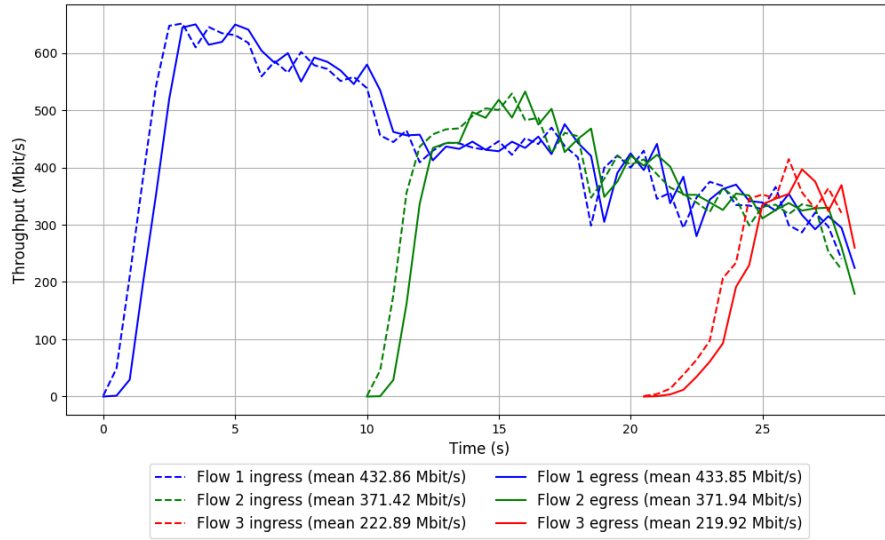
-- Flow 2:

Average throughput: 371.94 Mbit/s
95th percentile per-packet one-way delay: 70.216 ms
Loss rate: 0.55%

-- Flow 3:

Average throughput: 219.92 Mbit/s
95th percentile per-packet one-way delay: 69.038 ms
Loss rate: 2.91%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-04-24 09:27:03
End at: 2019-04-24 09:27:33
Local clock offset: -0.055 ms
Remote clock offset: -0.621 ms

Below is generated by plot.py at 2019-04-24 12:58:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 727.39 Mbit/s
95th percentile per-packet one-way delay: 73.727 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 430.11 Mbit/s
95th percentile per-packet one-way delay: 75.972 ms
Loss rate: 0.29%

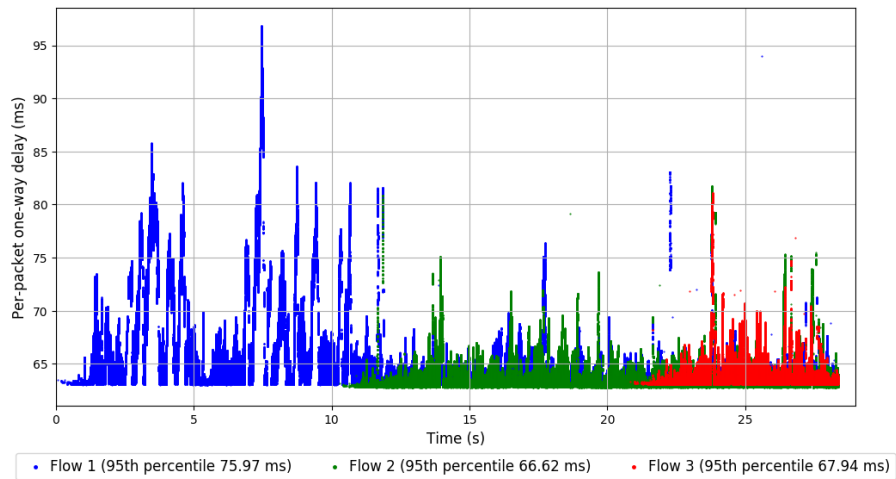
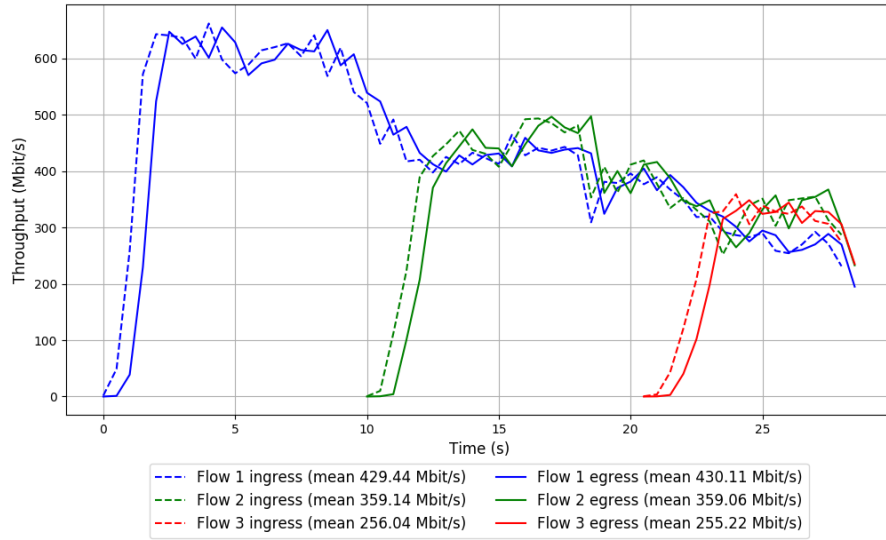
-- Flow 2:

Average throughput: 359.06 Mbit/s
95th percentile per-packet one-way delay: 66.618 ms
Loss rate: 0.72%

-- Flow 3:

Average throughput: 255.22 Mbit/s
95th percentile per-packet one-way delay: 67.945 ms
Loss rate: 1.97%

Run 2: Report of Indigo-MusesC3 — Data Link



Run 3: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:03:33
End at: 2019-04-24 10:04:03
Local clock offset: -0.077 ms
Remote clock offset: -0.626 ms

Below is generated by plot.py at 2019-04-24 13:09:08

Datalink statistics

-- Total of 3 flows:

Average throughput: 743.27 Mbit/s
95th percentile per-packet one-way delay: 72.856 ms
Loss rate: 0.59%

-- Flow 1:

Average throughput: 438.44 Mbit/s
95th percentile per-packet one-way delay: 73.643 ms
Loss rate: 0.25%

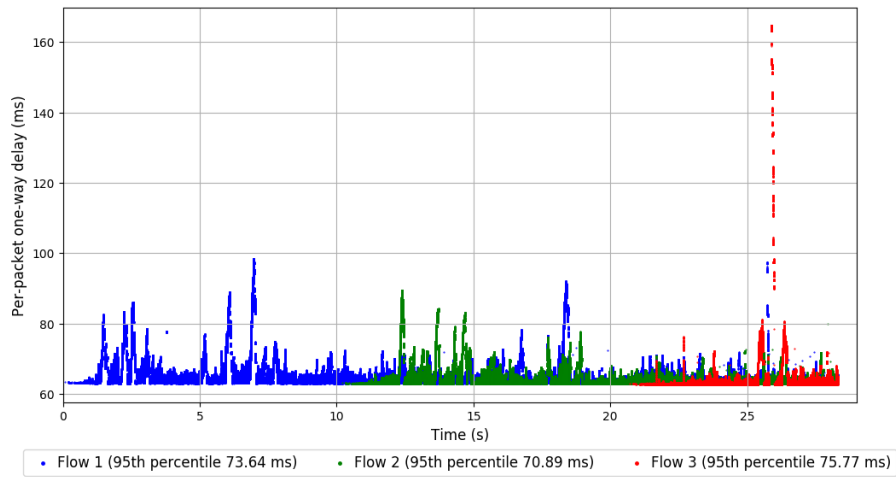
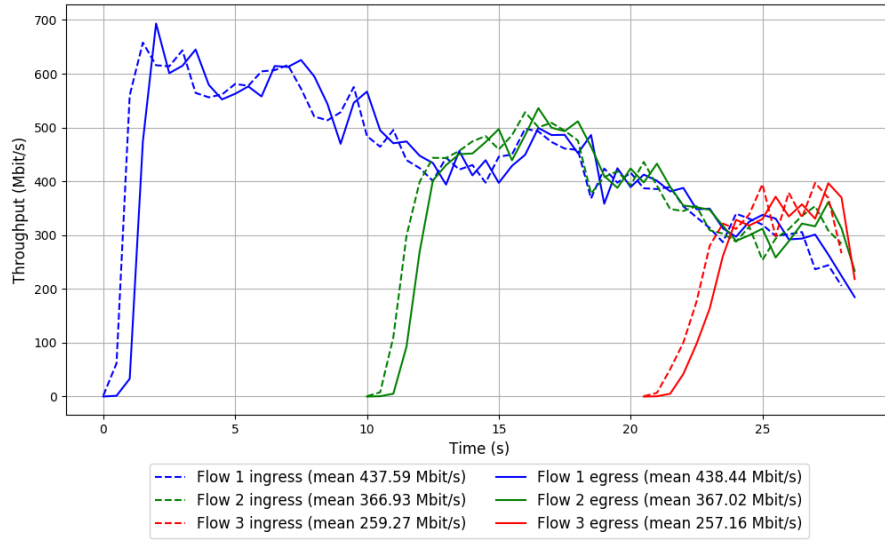
-- Flow 2:

Average throughput: 367.02 Mbit/s
95th percentile per-packet one-way delay: 70.892 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 257.16 Mbit/s
95th percentile per-packet one-way delay: 75.766 ms
Loss rate: 2.43%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-04-24 10:39:53
End at: 2019-04-24 10:40:23
Local clock offset: -0.048 ms
Remote clock offset: -0.223 ms

Below is generated by plot.py at 2019-04-24 13:11:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 748.11 Mbit/s
95th percentile per-packet one-way delay: 72.799 ms
Loss rate: 0.60%

-- Flow 1:

Average throughput: 451.24 Mbit/s
95th percentile per-packet one-way delay: 72.943 ms
Loss rate: 0.31%

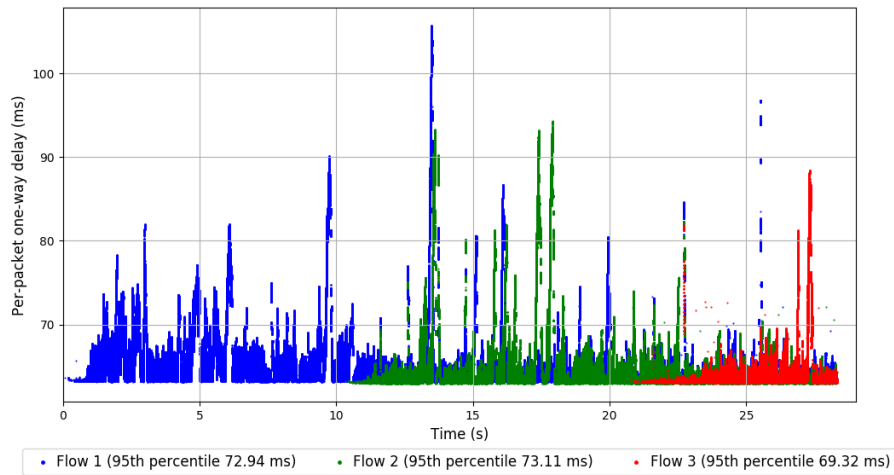
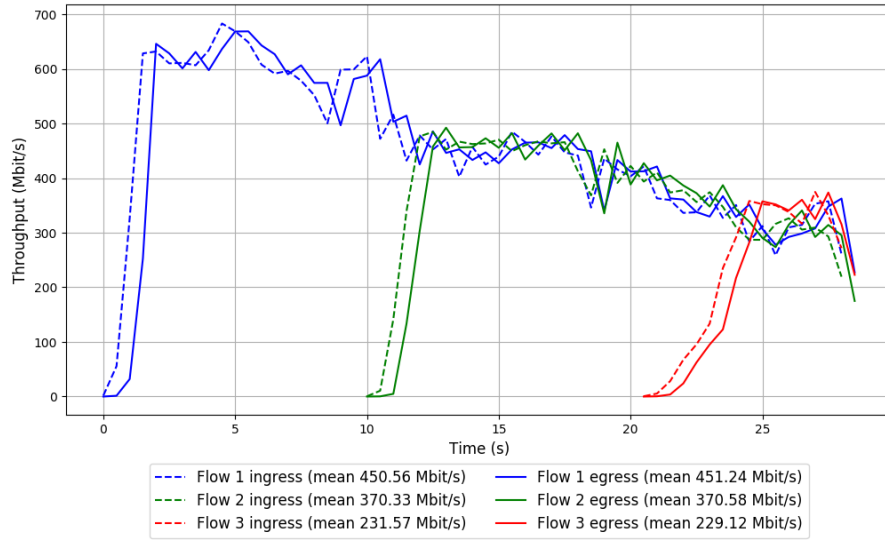
-- Flow 2:

Average throughput: 370.58 Mbit/s
95th percentile per-packet one-way delay: 73.107 ms
Loss rate: 0.62%

-- Flow 3:

Average throughput: 229.12 Mbit/s
95th percentile per-packet one-way delay: 69.320 ms
Loss rate: 2.69%

Run 4: Report of Indigo-MusesC3 — Data Link

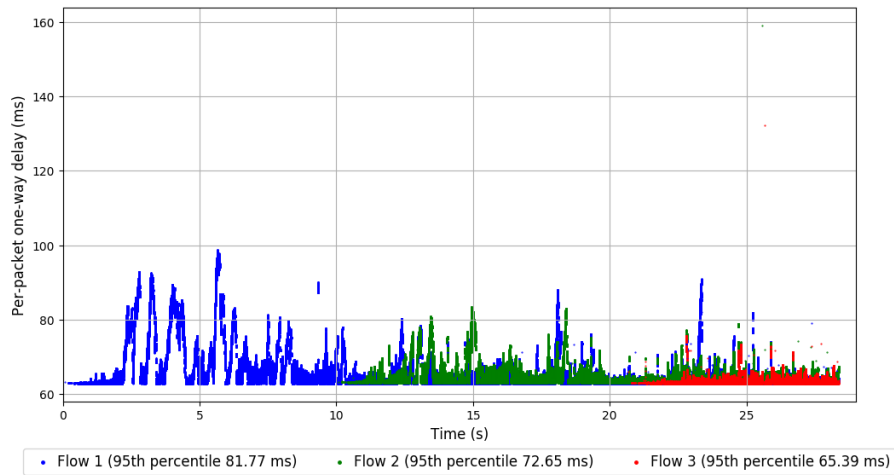
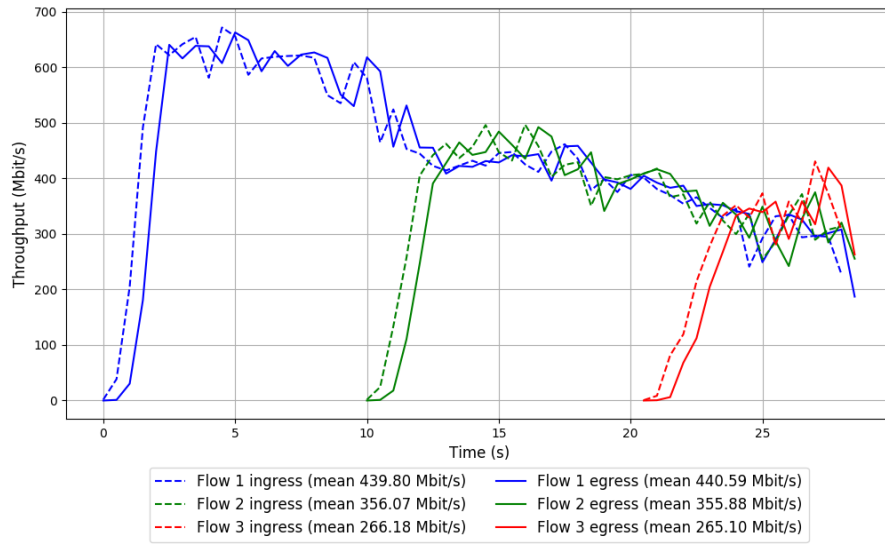


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-04-24 11:16:04
End at: 2019-04-24 11:16:34
Local clock offset: -0.083 ms
Remote clock offset: -0.105 ms

```
# Below is generated by plot.py at 2019-04-24 13:11:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 742.62 Mbit/s
95th percentile per-packet one-way delay: 78.249 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 440.59 Mbit/s
95th percentile per-packet one-way delay: 81.771 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 355.88 Mbit/s
95th percentile per-packet one-way delay: 72.646 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 265.10 Mbit/s
95th percentile per-packet one-way delay: 65.387 ms
Loss rate: 2.05%
```

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

Start at: 2019-04-24 08:59:52
End at: 2019-04-24 09:00:22
Local clock offset: -0.03 ms
Remote clock offset: -0.402 ms

Below is generated by plot.py at 2019-04-24 13:12:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 778.63 Mbit/s
95th percentile per-packet one-way delay: 88.035 ms
Loss rate: 0.45%

-- Flow 1:

Average throughput: 443.29 Mbit/s
95th percentile per-packet one-way delay: 92.083 ms
Loss rate: 0.19%

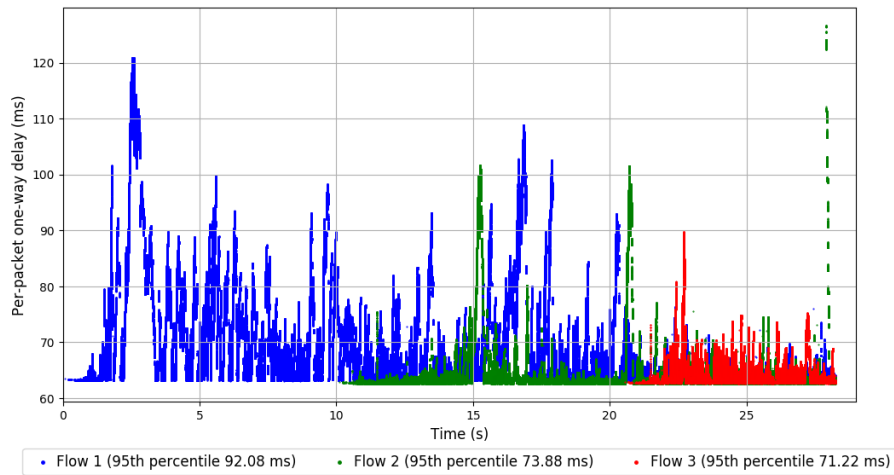
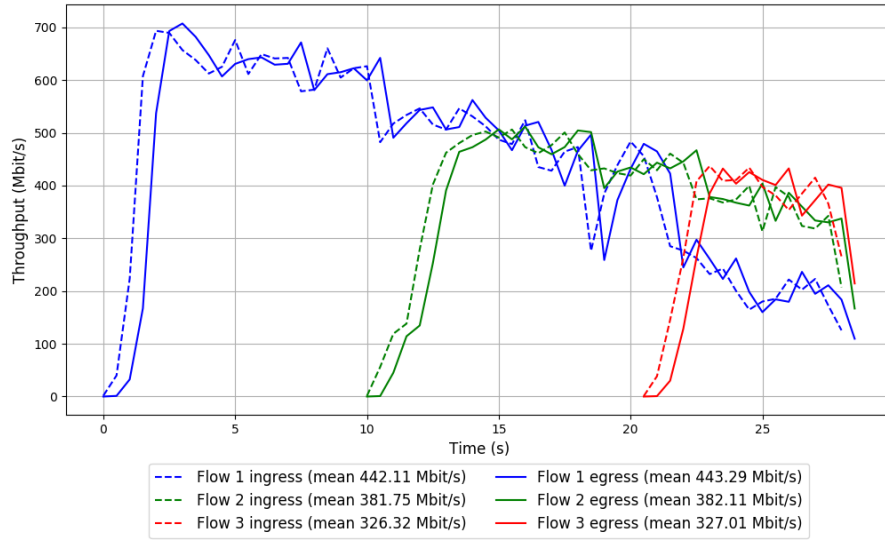
-- Flow 2:

Average throughput: 382.11 Mbit/s
95th percentile per-packet one-way delay: 73.879 ms
Loss rate: 0.60%

-- Flow 3:

Average throughput: 327.01 Mbit/s
95th percentile per-packet one-way delay: 71.219 ms
Loss rate: 1.35%

Run 1: Report of Indigo-MusesC5 — Data Link



Run 2: Statistics of Indigo-MusesC5

Start at: 2019-04-24 09:36:01
End at: 2019-04-24 09:36:31
Local clock offset: -0.096 ms
Remote clock offset: -0.504 ms

Below is generated by plot.py at 2019-04-24 13:12:11

Datalink statistics

-- Total of 3 flows:

Average throughput: 740.14 Mbit/s
95th percentile per-packet one-way delay: 95.945 ms
Loss rate: 0.47%

-- Flow 1:

Average throughput: 465.83 Mbit/s
95th percentile per-packet one-way delay: 100.305 ms
Loss rate: 0.24%

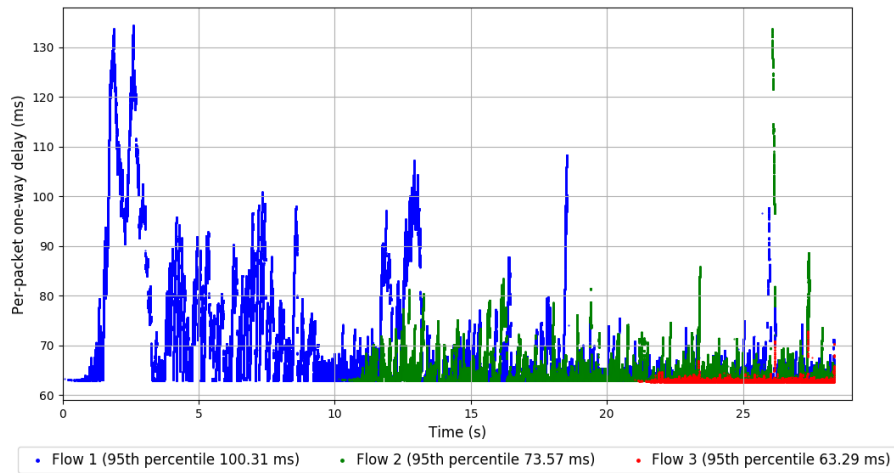
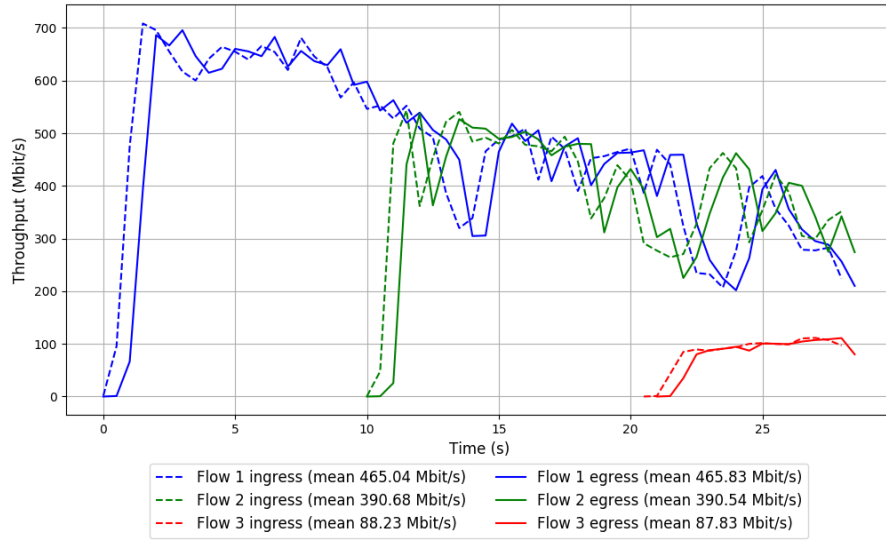
-- Flow 2:

Average throughput: 390.54 Mbit/s
95th percentile per-packet one-way delay: 73.568 ms
Loss rate: 0.74%

-- Flow 3:

Average throughput: 87.83 Mbit/s
95th percentile per-packet one-way delay: 63.286 ms
Loss rate: 2.14%

Run 2: Report of Indigo-MusesC5 — Data Link



Run 3: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:12:19
End at: 2019-04-24 10:12:49
Local clock offset: -0.08 ms
Remote clock offset: -0.684 ms

Below is generated by plot.py at 2019-04-24 13:13:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 812.78 Mbit/s
95th percentile per-packet one-way delay: 90.926 ms
Loss rate: 0.51%

-- Flow 1:

Average throughput: 462.59 Mbit/s
95th percentile per-packet one-way delay: 85.182 ms
Loss rate: 0.31%

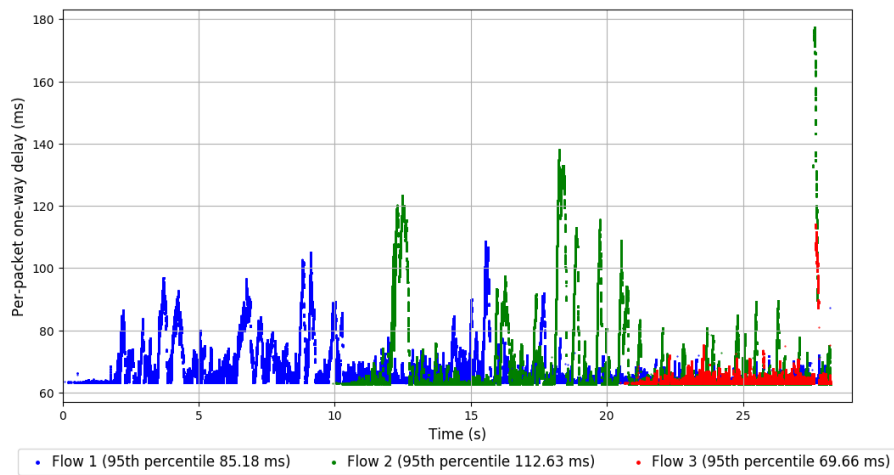
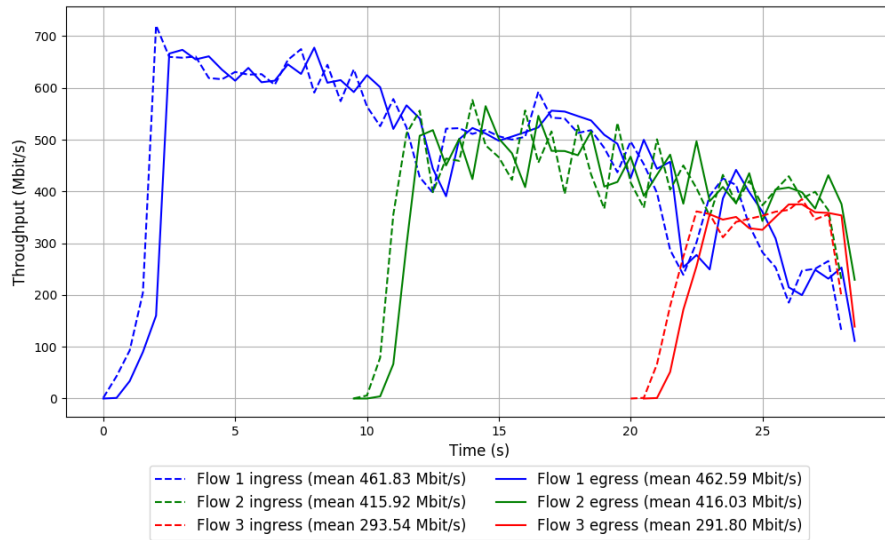
-- Flow 2:

Average throughput: 416.03 Mbit/s
95th percentile per-packet one-way delay: 112.632 ms
Loss rate: 0.34%

-- Flow 3:

Average throughput: 291.80 Mbit/s
95th percentile per-packet one-way delay: 69.659 ms
Loss rate: 2.20%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-04-24 10:48:52

End at: 2019-04-24 10:49:22

Local clock offset: -0.026 ms

Remote clock offset: 0.125 ms

Below is generated by plot.py at 2019-04-24 13:13:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 739.28 Mbit/s

95th percentile per-packet one-way delay: 83.960 ms

Loss rate: 0.52%

-- Flow 1:

Average throughput: 464.97 Mbit/s

95th percentile per-packet one-way delay: 86.561 ms

Loss rate: 0.40%

-- Flow 2:

Average throughput: 385.29 Mbit/s

95th percentile per-packet one-way delay: 83.753 ms

Loss rate: 0.58%

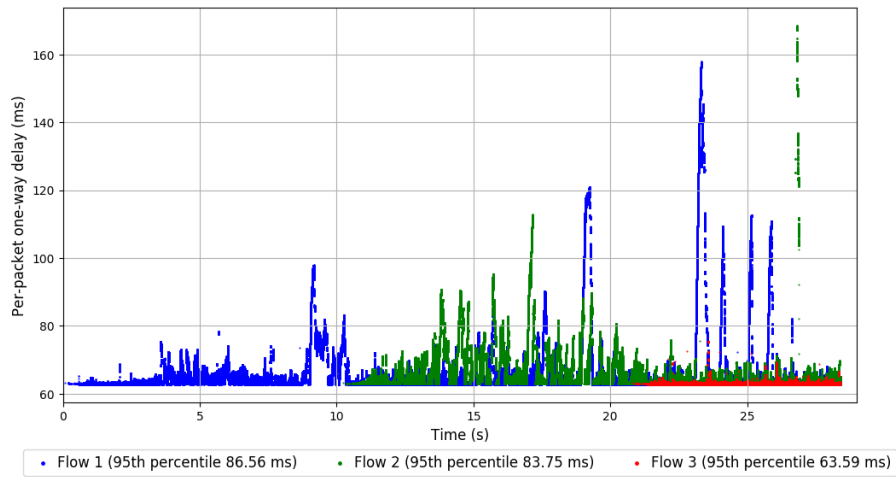
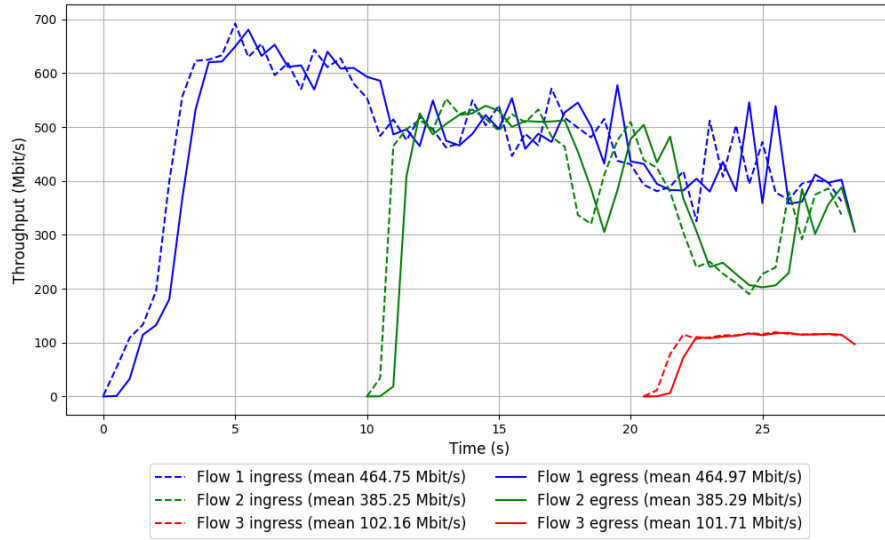
-- Flow 3:

Average throughput: 101.71 Mbit/s

95th percentile per-packet one-way delay: 63.595 ms

Loss rate: 2.06%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-04-24 11:25:02

End at: 2019-04-24 11:25:32

Local clock offset: -0.063 ms

Remote clock offset: 0.011 ms

Below is generated by plot.py at 2019-04-24 13:13:07

Datalink statistics

-- Total of 3 flows:

Average throughput: 760.90 Mbit/s

95th percentile per-packet one-way delay: 78.609 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 466.77 Mbit/s

95th percentile per-packet one-way delay: 79.266 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 415.99 Mbit/s

95th percentile per-packet one-way delay: 76.472 ms

Loss rate: 0.80%

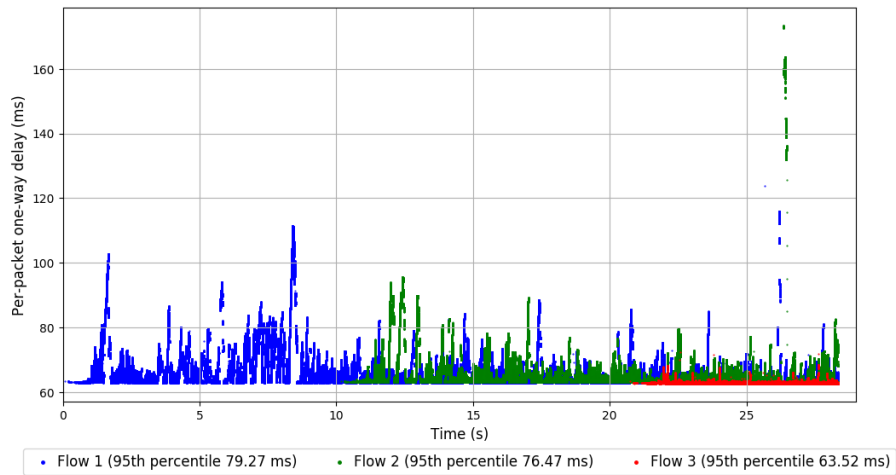
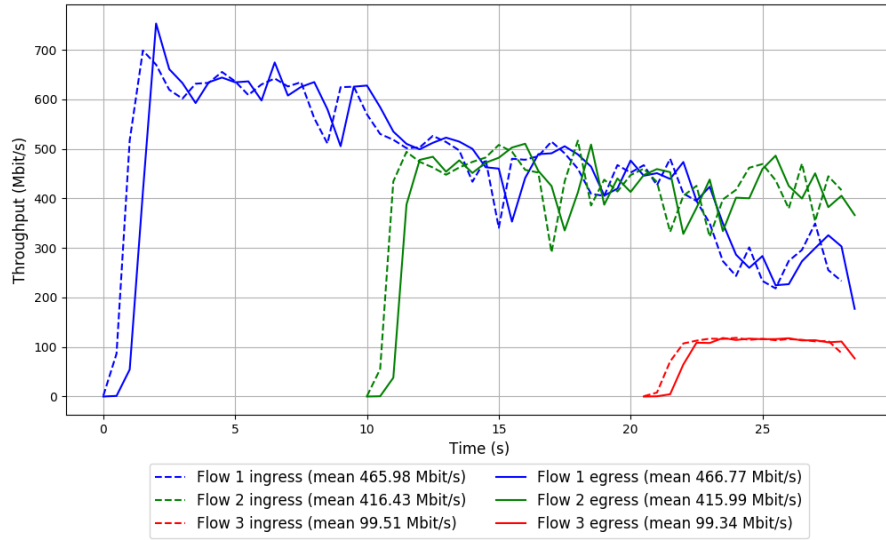
-- Flow 3:

Average throughput: 99.34 Mbit/s

95th percentile per-packet one-way delay: 63.521 ms

Loss rate: 1.82%

Run 5: Report of Indigo-MusesC5 — Data Link

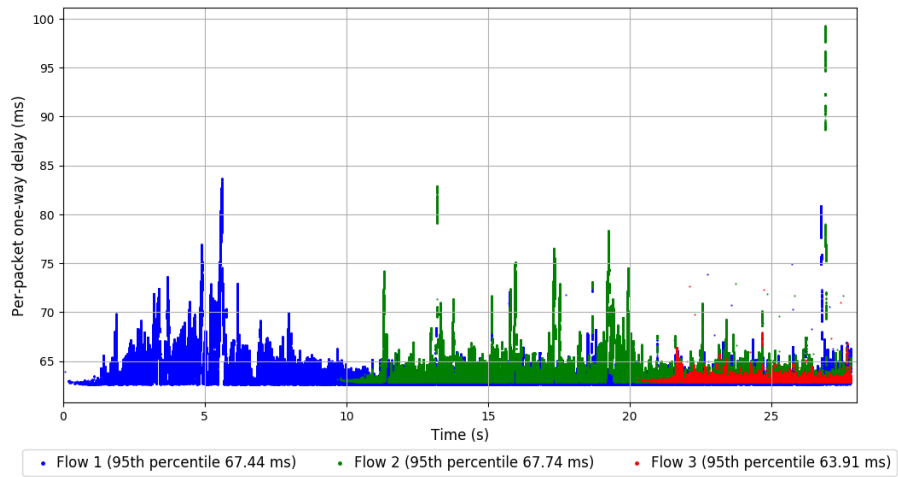
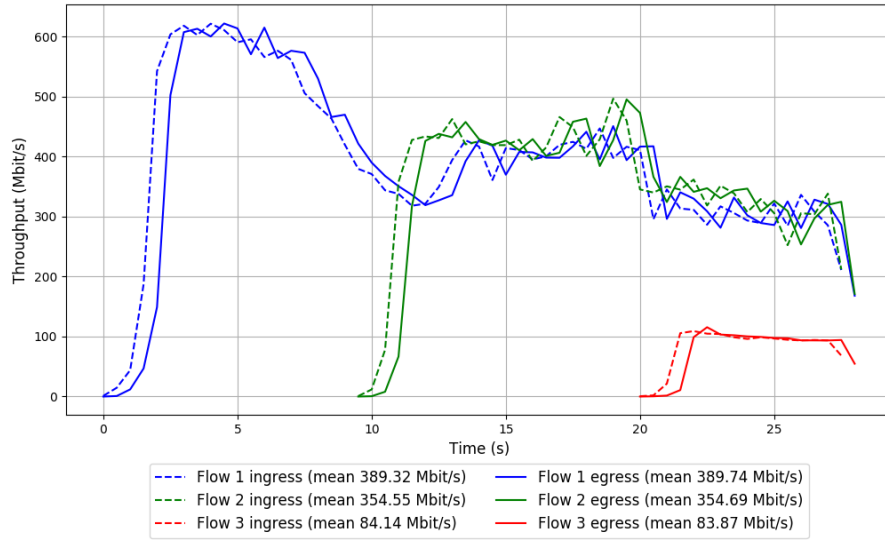


Run 1: Statistics of Indigo-MusesD

Start at: 2019-04-24 08:42:31
End at: 2019-04-24 08:43:01
Local clock offset: -0.034 ms
Remote clock offset: -0.376 ms

```
# Below is generated by plot.py at 2019-04-24 13:20:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 644.10 Mbit/s
95th percentile per-packet one-way delay: 67.450 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 389.74 Mbit/s
95th percentile per-packet one-way delay: 67.437 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 354.69 Mbit/s
95th percentile per-packet one-way delay: 67.740 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 83.87 Mbit/s
95th percentile per-packet one-way delay: 63.908 ms
Loss rate: 1.98%
```

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:18:23

End at: 2019-04-24 09:18:53

Local clock offset: -0.09 ms

Remote clock offset: 0.233 ms

Below is generated by plot.py at 2019-04-24 13:23:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 668.74 Mbit/s

95th percentile per-packet one-way delay: 73.973 ms

Loss rate: 0.46%

-- Flow 1:

Average throughput: 386.76 Mbit/s

95th percentile per-packet one-way delay: 79.582 ms

Loss rate: 0.10%

-- Flow 2:

Average throughput: 306.04 Mbit/s

95th percentile per-packet one-way delay: 65.019 ms

Loss rate: 0.62%

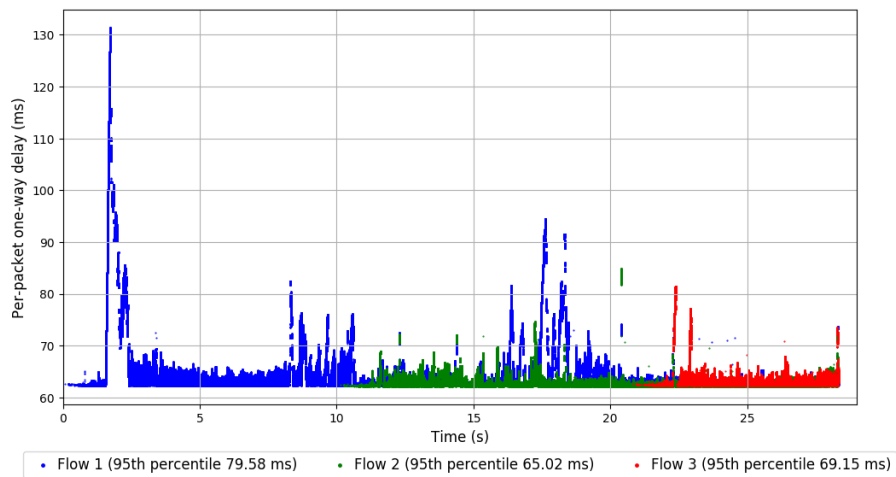
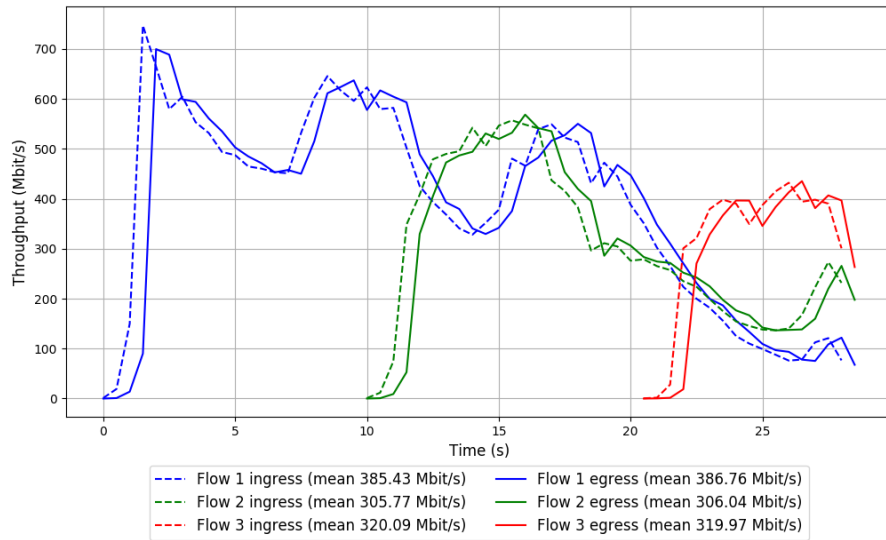
-- Flow 3:

Average throughput: 319.97 Mbit/s

95th percentile per-packet one-way delay: 69.150 ms

Loss rate: 1.70%

Run 2: Report of Indigo-MusesD — Data Link



Run 3: Statistics of Indigo-MusesD

Start at: 2019-04-24 09:54:41

End at: 2019-04-24 09:55:11

Local clock offset: -0.087 ms

Remote clock offset: -0.79 ms

Below is generated by plot.py at 2019-04-24 13:23:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 674.71 Mbit/s

95th percentile per-packet one-way delay: 73.457 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 363.29 Mbit/s

95th percentile per-packet one-way delay: 74.256 ms

Loss rate: 0.41%

-- Flow 2:

Average throughput: 372.46 Mbit/s

95th percentile per-packet one-way delay: 73.860 ms

Loss rate: 0.68%

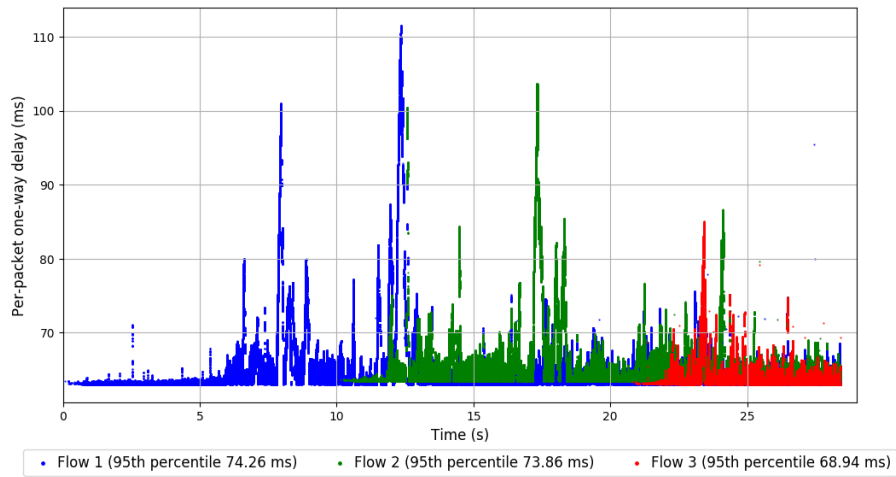
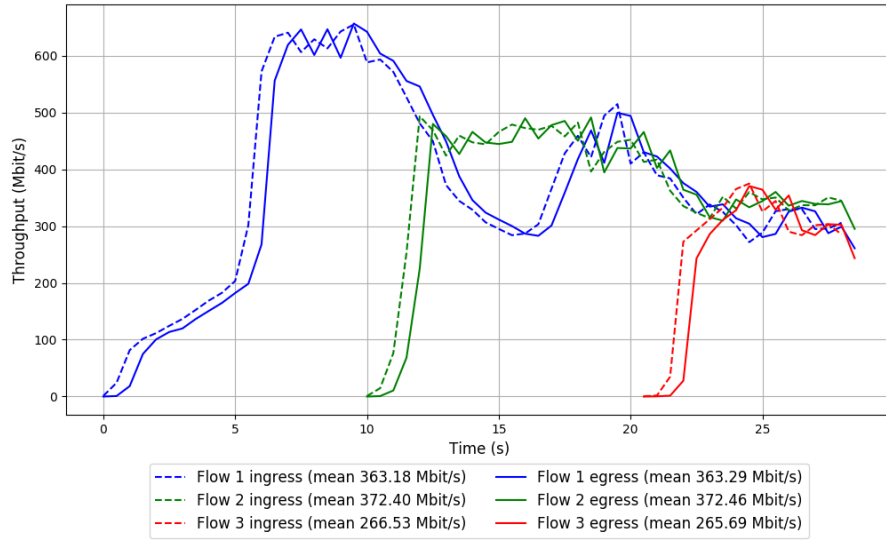
-- Flow 3:

Average throughput: 265.69 Mbit/s

95th percentile per-packet one-way delay: 68.941 ms

Loss rate: 1.95%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-04-24 10:31:09
End at: 2019-04-24 10:31:39
Local clock offset: -0.044 ms
Remote clock offset: -0.274 ms

Below is generated by plot.py at 2019-04-24 13:23:46

Datalink statistics

-- Total of 3 flows:

Average throughput: 573.04 Mbit/s
95th percentile per-packet one-way delay: 76.276 ms
Loss rate: 0.45%

-- Flow 1:

Average throughput: 319.71 Mbit/s
95th percentile per-packet one-way delay: 79.501 ms
Loss rate: 0.16%

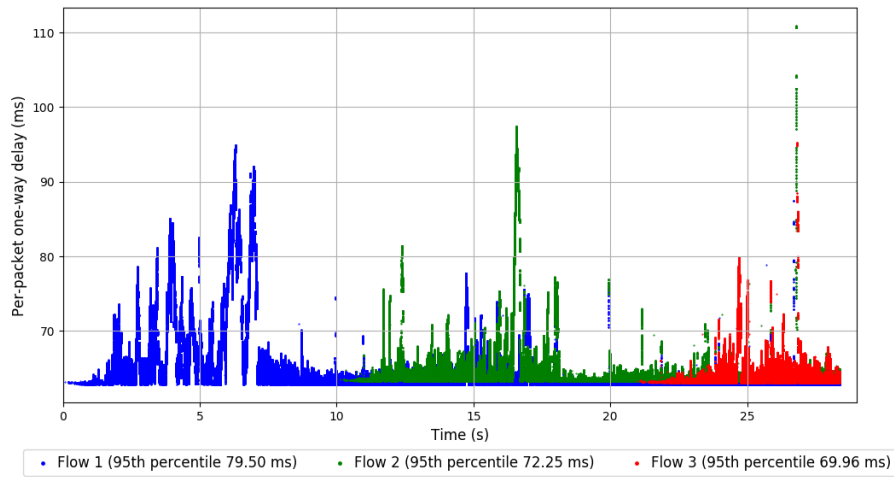
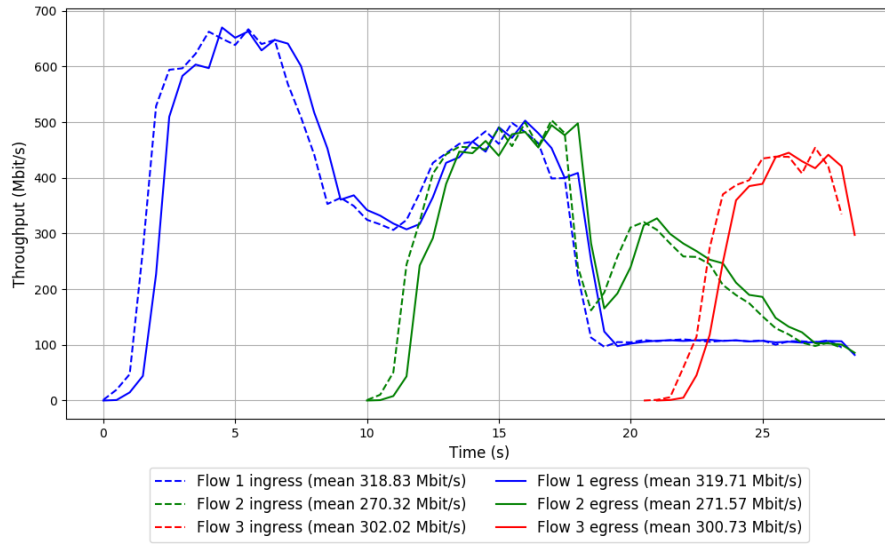
-- Flow 2:

Average throughput: 271.57 Mbit/s
95th percentile per-packet one-way delay: 72.247 ms
Loss rate: 0.23%

-- Flow 3:

Average throughput: 300.73 Mbit/s
95th percentile per-packet one-way delay: 69.961 ms
Loss rate: 2.11%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-04-24 11:07:21
End at: 2019-04-24 11:07:51
Local clock offset: -0.03 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2019-04-24 13:24:28

Datalink statistics

-- Total of 3 flows:

Average throughput: 693.65 Mbit/s
95th percentile per-packet one-way delay: 73.492 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 414.12 Mbit/s
95th percentile per-packet one-way delay: 75.773 ms
Loss rate: 0.26%

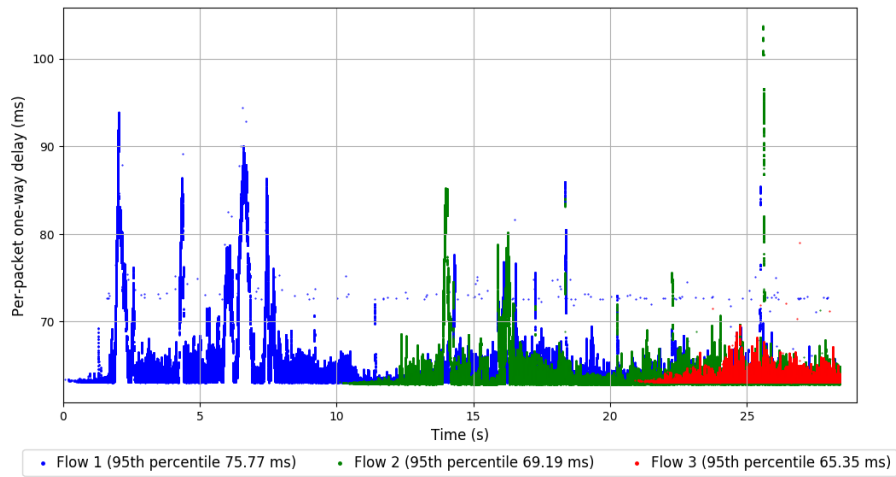
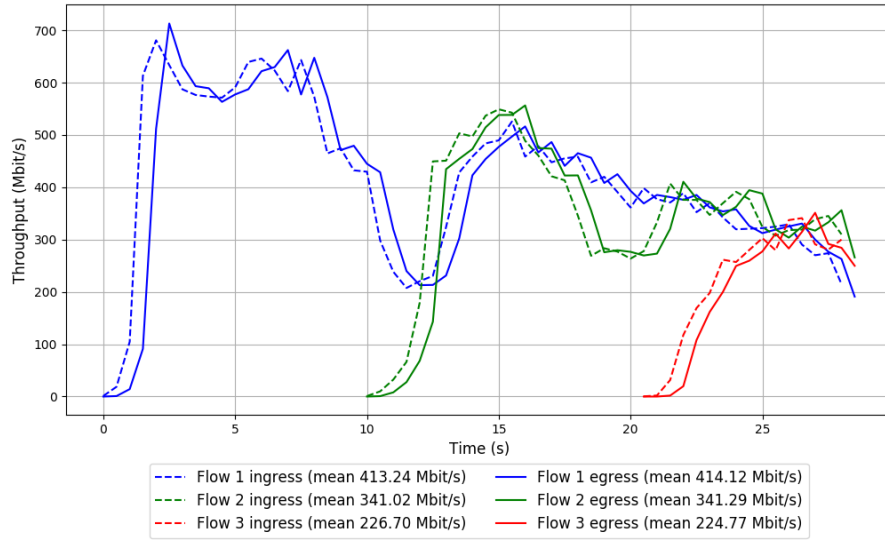
-- Flow 2:

Average throughput: 341.29 Mbit/s
95th percentile per-packet one-way delay: 69.186 ms
Loss rate: 0.67%

-- Flow 3:

Average throughput: 224.77 Mbit/s
95th percentile per-packet one-way delay: 65.348 ms
Loss rate: 2.49%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MuseST

Start at: 2019-04-24 08:58:01
End at: 2019-04-24 08:58:31
Local clock offset: -0.038 ms
Remote clock offset: -0.702 ms

Below is generated by plot.py at 2019-04-24 13:26:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 772.13 Mbit/s
95th percentile per-packet one-way delay: 94.165 ms
Loss rate: 0.37%

-- Flow 1:

Average throughput: 488.21 Mbit/s
95th percentile per-packet one-way delay: 98.579 ms
Loss rate: 0.24%

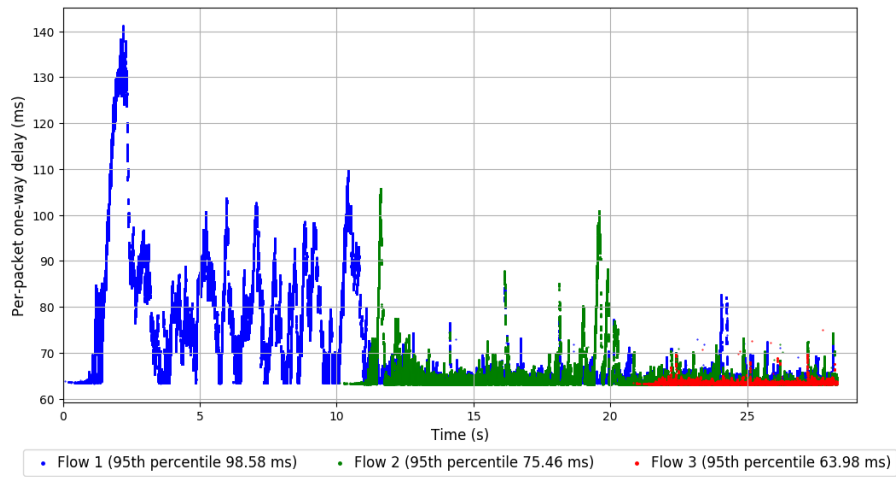
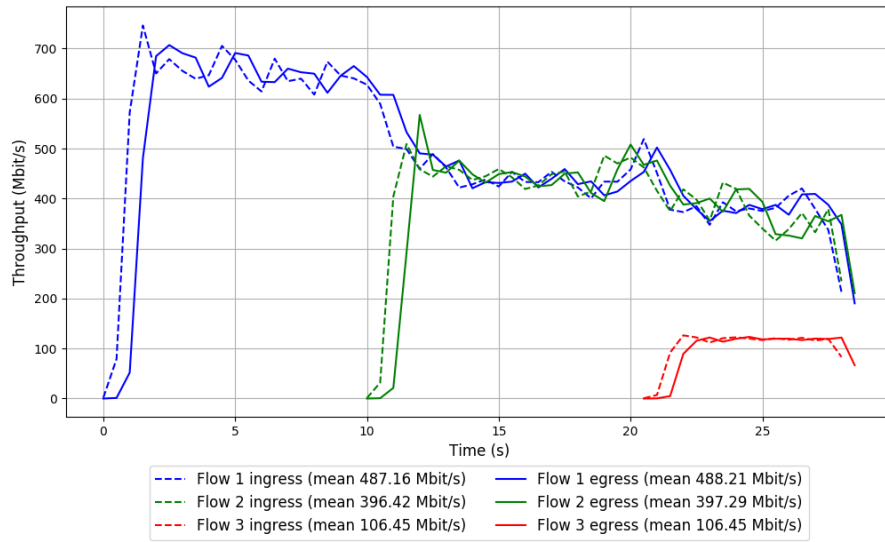
-- Flow 2:

Average throughput: 397.29 Mbit/s
95th percentile per-packet one-way delay: 75.458 ms
Loss rate: 0.48%

-- Flow 3:

Average throughput: 106.45 Mbit/s
95th percentile per-packet one-way delay: 63.980 ms
Loss rate: 1.70%

Run 1: Report of Indigo-MusesT — Data Link

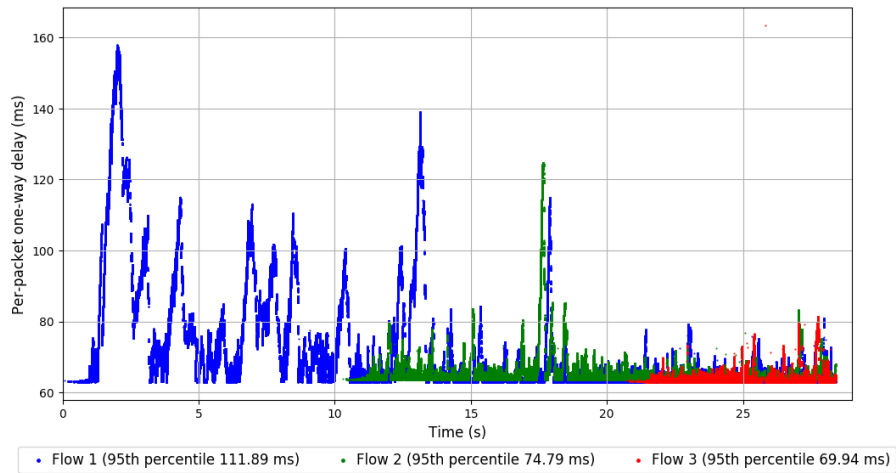
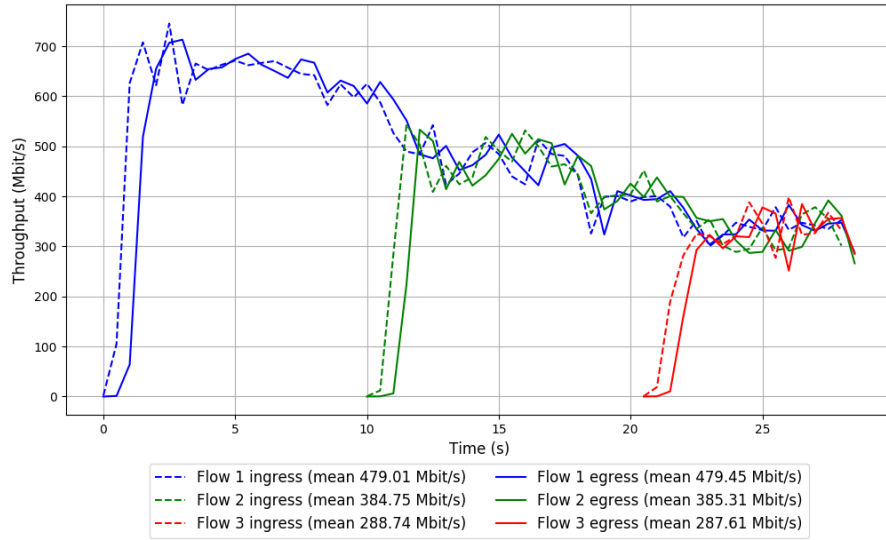


Run 2: Statistics of Indigo-MuseST

Start at: 2019-04-24 09:34:08
End at: 2019-04-24 09:34:38
Local clock offset: -0.104 ms
Remote clock offset: -0.707 ms

```
# Below is generated by plot.py at 2019-04-24 13:27:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 803.68 Mbit/s
95th percentile per-packet one-way delay: 102.059 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 479.45 Mbit/s
95th percentile per-packet one-way delay: 111.889 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 385.31 Mbit/s
95th percentile per-packet one-way delay: 74.788 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 287.61 Mbit/s
95th percentile per-packet one-way delay: 69.941 ms
Loss rate: 2.02%
```

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MuseST

Start at: 2019-04-24 10:10:29
End at: 2019-04-24 10:10:59
Local clock offset: -0.051 ms
Remote clock offset: -0.753 ms

Below is generated by plot.py at 2019-04-24 13:27:40

Datalink statistics

-- Total of 3 flows:

Average throughput: 758.40 Mbit/s
95th percentile per-packet one-way delay: 106.729 ms
Loss rate: 0.53%

-- Flow 1:

Average throughput: 472.66 Mbit/s
95th percentile per-packet one-way delay: 131.439 ms
Loss rate: 0.37%

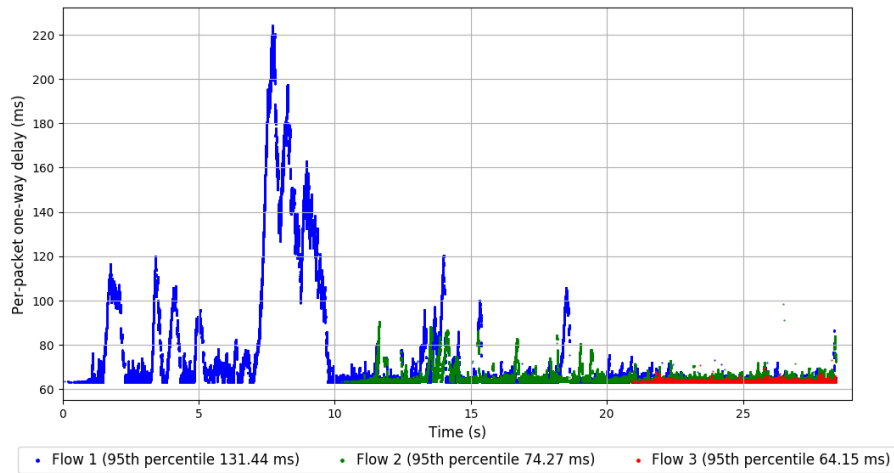
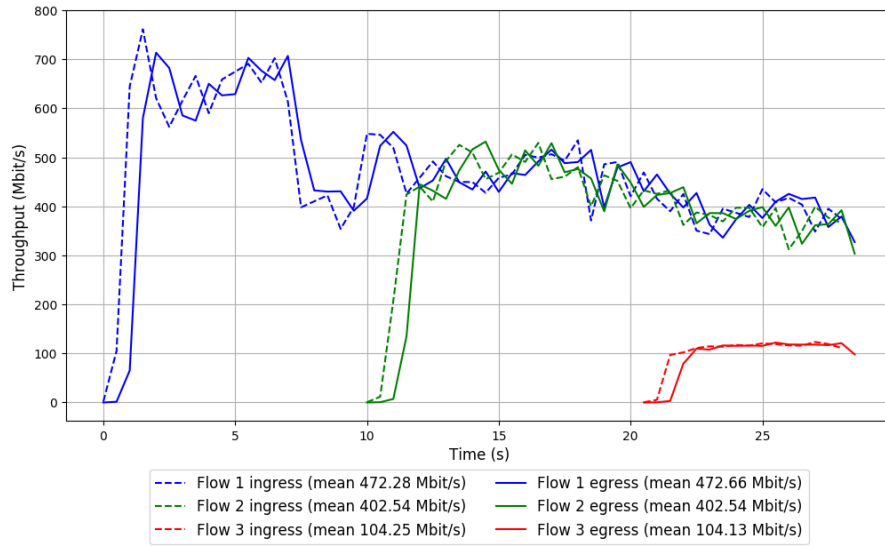
-- Flow 2:

Average throughput: 402.54 Mbit/s
95th percentile per-packet one-way delay: 74.265 ms
Loss rate: 0.70%

-- Flow 3:

Average throughput: 104.13 Mbit/s
95th percentile per-packet one-way delay: 64.153 ms
Loss rate: 1.71%

Run 3: Report of Indigo-MusesT — Data Link



Run 4: Statistics of Indigo-MuseST

Start at: 2019-04-24 10:46:59
End at: 2019-04-24 10:47:29
Local clock offset: -0.003 ms
Remote clock offset: -0.551 ms

Below is generated by plot.py at 2019-04-24 13:34:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 802.62 Mbit/s
95th percentile per-packet one-way delay: 88.169 ms
Loss rate: 0.62%

-- Flow 1:

Average throughput: 489.54 Mbit/s
95th percentile per-packet one-way delay: 90.678 ms
Loss rate: 0.34%

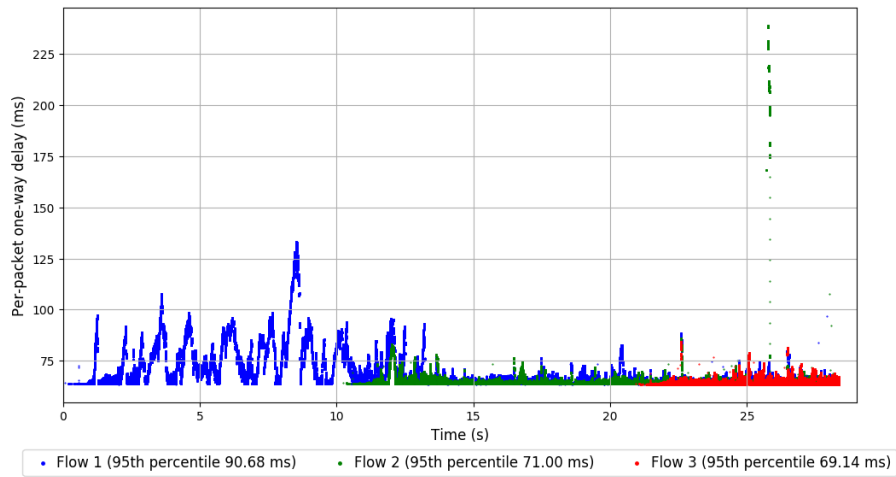
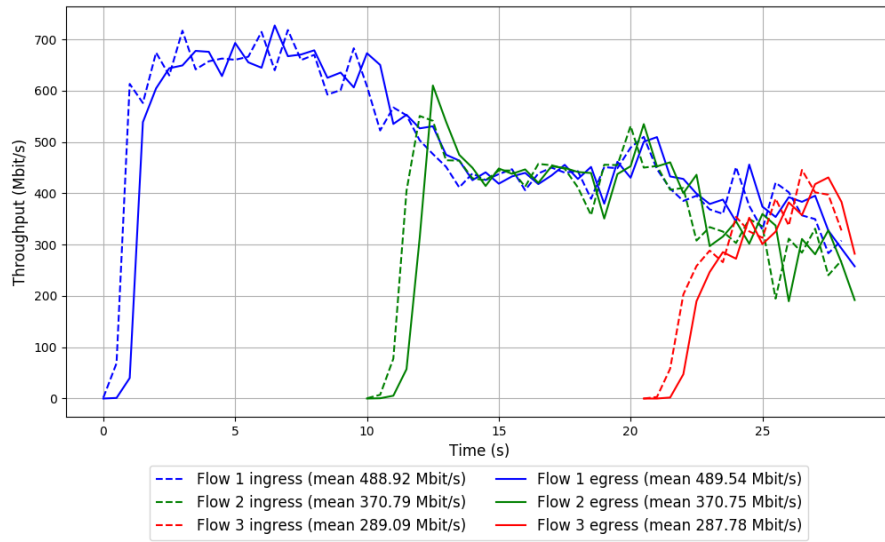
-- Flow 2:

Average throughput: 370.75 Mbit/s
95th percentile per-packet one-way delay: 71.002 ms
Loss rate: 0.71%

-- Flow 3:

Average throughput: 287.78 Mbit/s
95th percentile per-packet one-way delay: 69.137 ms
Loss rate: 2.12%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MuseST

Start at: 2019-04-24 11:23:10
End at: 2019-04-24 11:23:40
Local clock offset: -0.065 ms
Remote clock offset: -0.226 ms

Below is generated by plot.py at 2019-04-24 13:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 791.52 Mbit/s
95th percentile per-packet one-way delay: 89.609 ms
Loss rate: 0.52%

-- Flow 1:

Average throughput: 464.03 Mbit/s
95th percentile per-packet one-way delay: 95.641 ms
Loss rate: 0.28%

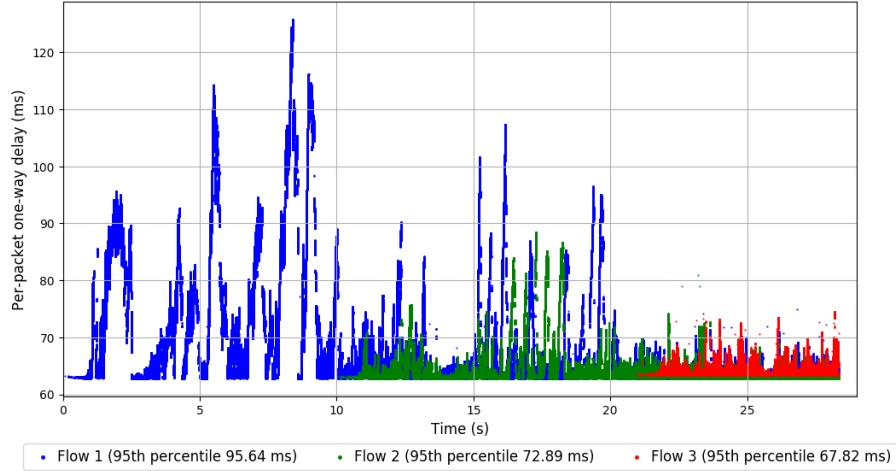
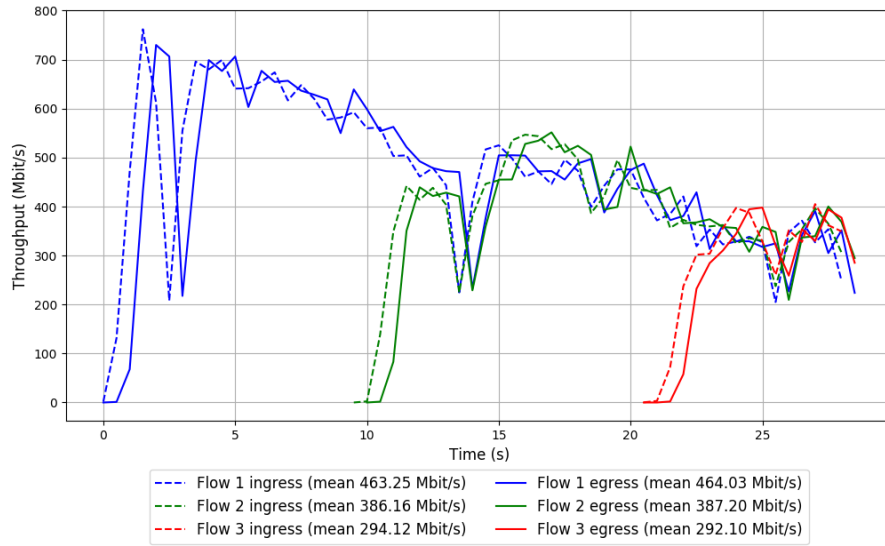
-- Flow 2:

Average throughput: 387.20 Mbit/s
95th percentile per-packet one-way delay: 72.886 ms
Loss rate: 0.42%

-- Flow 3:

Average throughput: 292.10 Mbit/s
95th percentile per-packet one-way delay: 67.823 ms
Loss rate: 2.24%

Run 5: Report of Indigo-MusesT — Data Link



Run 1: Statistics of LEDBAT

Start at: 2019-04-24 08:56:45
End at: 2019-04-24 08:57:15
Local clock offset: -0.043 ms
Remote clock offset: -0.443 ms

Below is generated by plot.py at 2019-04-24 13:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.85 Mbit/s
95th percentile per-packet one-way delay: 64.487 ms
Loss rate: 1.08%

-- Flow 1:

Average throughput: 23.10 Mbit/s
95th percentile per-packet one-way delay: 64.837 ms
Loss rate: 0.84%

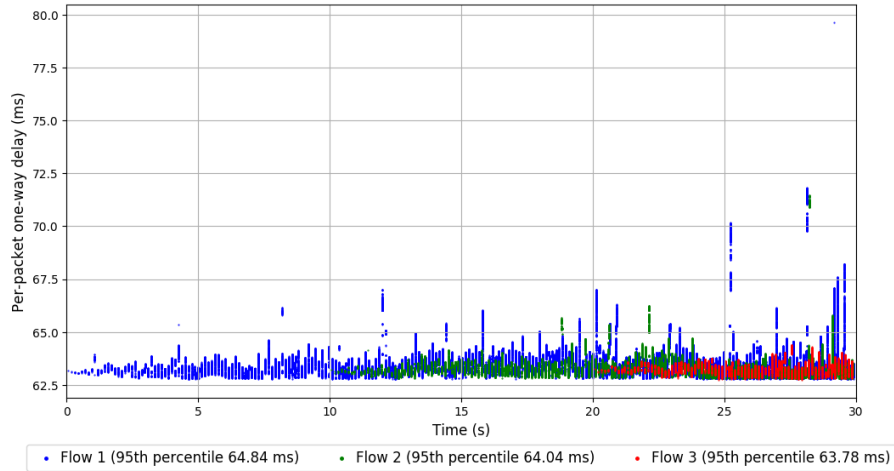
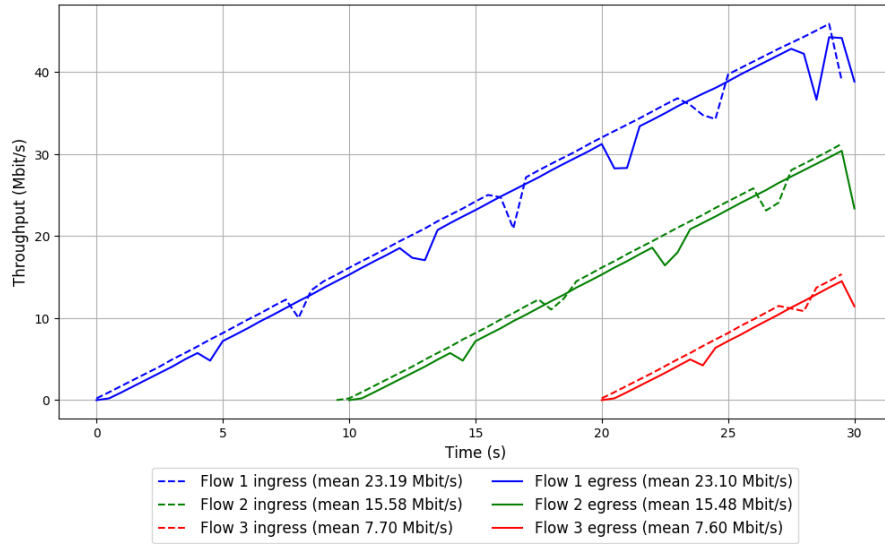
-- Flow 2:

Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 64.041 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 63.776 ms
Loss rate: 2.57%

Run 1: Report of LEDBAT — Data Link



Run 2: Statistics of LEDBAT

Start at: 2019-04-24 09:32:51
End at: 2019-04-24 09:33:21
Local clock offset: -0.114 ms
Remote clock offset: -0.631 ms

Below is generated by plot.py at 2019-04-24 13:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 64.664 ms
Loss rate: 1.09%

-- Flow 1:

Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 64.905 ms
Loss rate: 0.85%

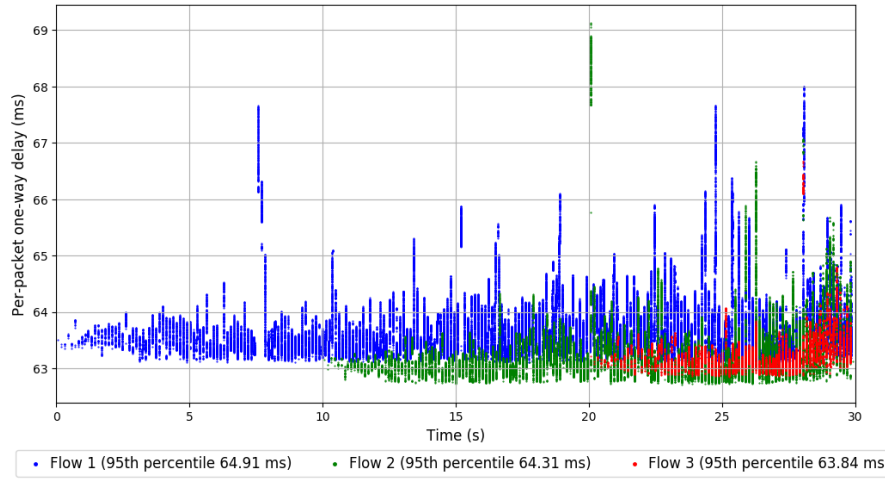
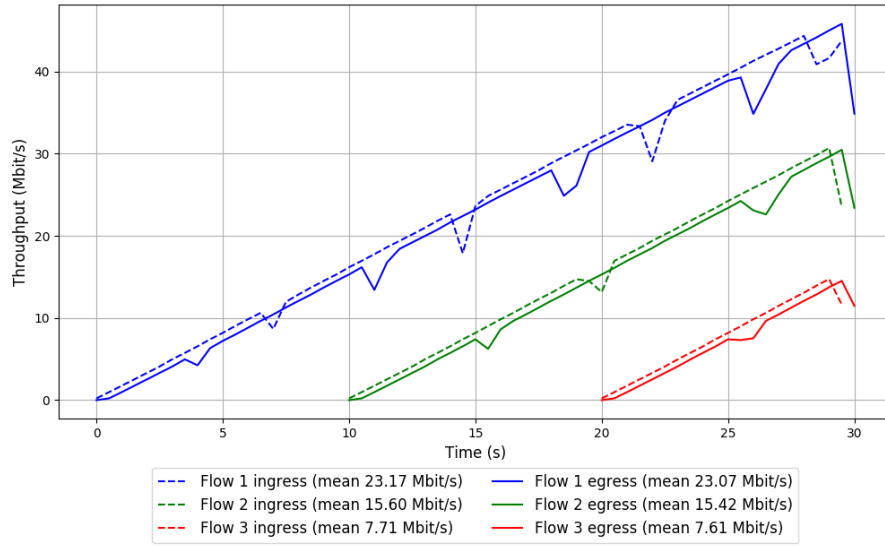
-- Flow 2:

Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 64.314 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 63.838 ms
Loss rate: 2.58%

Run 2: Report of LEDBAT — Data Link



Run 3: Statistics of LEDBAT

Start at: 2019-04-24 10:09:13
End at: 2019-04-24 10:09:43
Local clock offset: -0.06 ms
Remote clock offset: -0.392 ms

Below is generated by plot.py at 2019-04-24 13:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 64.193 ms
Loss rate: 1.09%

-- Flow 1:

Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 64.274 ms
Loss rate: 0.84%

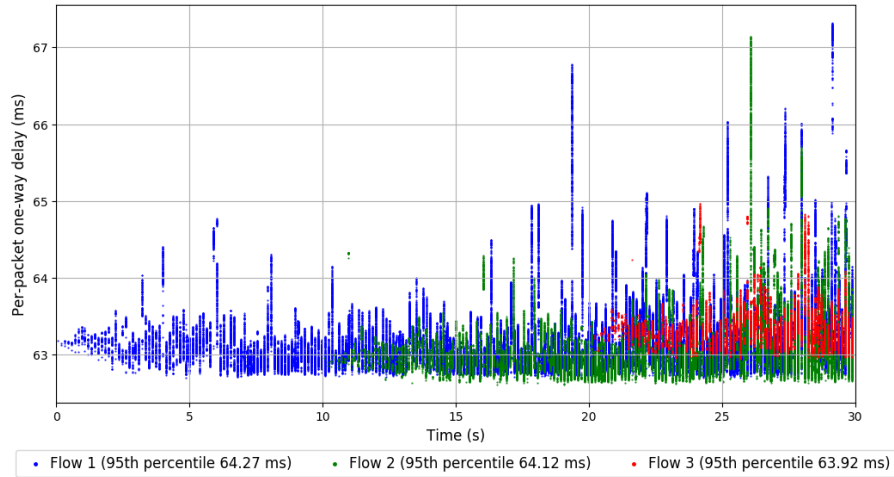
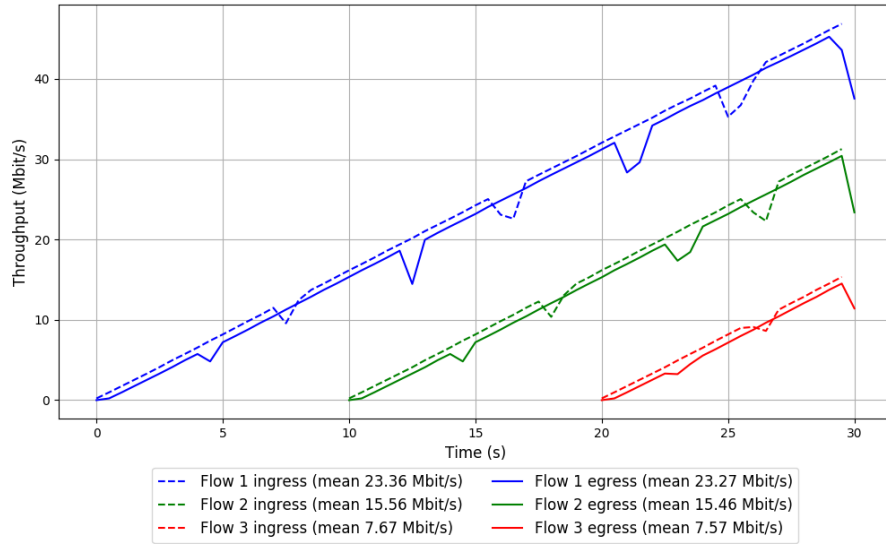
-- Flow 2:

Average throughput: 15.46 Mbit/s
95th percentile per-packet one-way delay: 64.123 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 63.923 ms
Loss rate: 2.58%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-04-24 10:45:42

End at: 2019-04-24 10:46:12

Local clock offset: -0.017 ms

Remote clock offset: 0.116 ms

Below is generated by plot.py at 2019-04-24 13:34:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 35.94 Mbit/s

95th percentile per-packet one-way delay: 64.236 ms

Loss rate: 1.09%

-- Flow 1:

Average throughput: 23.25 Mbit/s

95th percentile per-packet one-way delay: 64.378 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 15.40 Mbit/s

95th percentile per-packet one-way delay: 64.101 ms

Loss rate: 1.27%

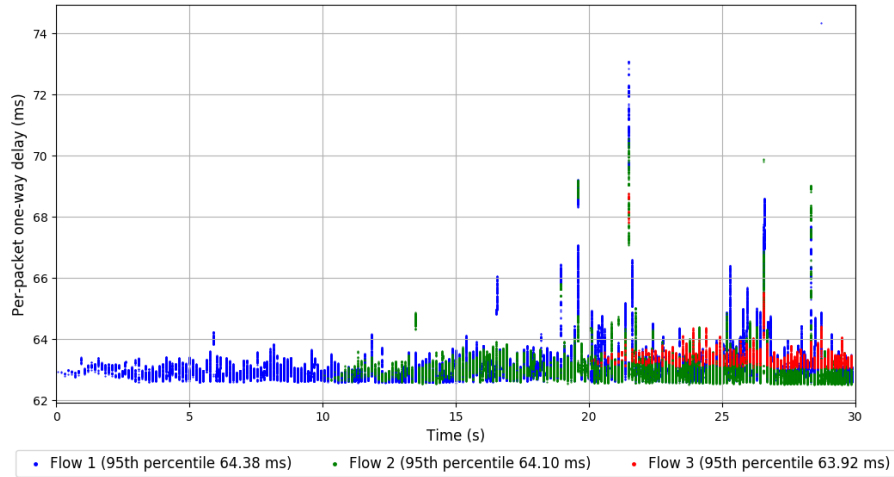
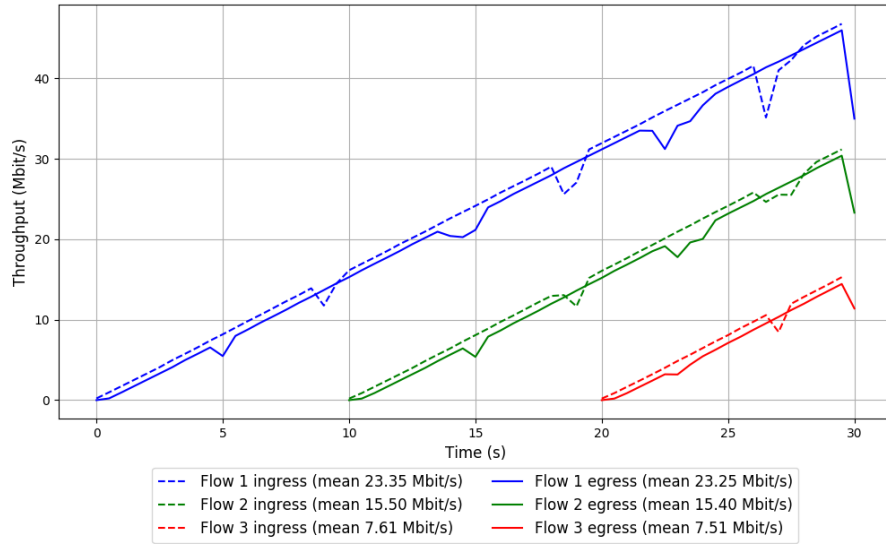
-- Flow 3:

Average throughput: 7.51 Mbit/s

95th percentile per-packet one-way delay: 63.919 ms

Loss rate: 2.59%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-04-24 11:21:53
End at: 2019-04-24 11:22:23
Local clock offset: -0.059 ms
Remote clock offset: -0.123 ms

Below is generated by plot.py at 2019-04-24 13:34:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 36.04 Mbit/s
95th percentile per-packet one-way delay: 64.128 ms
Loss rate: 1.09%

-- Flow 1:

Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 64.063 ms
Loss rate: 0.84%

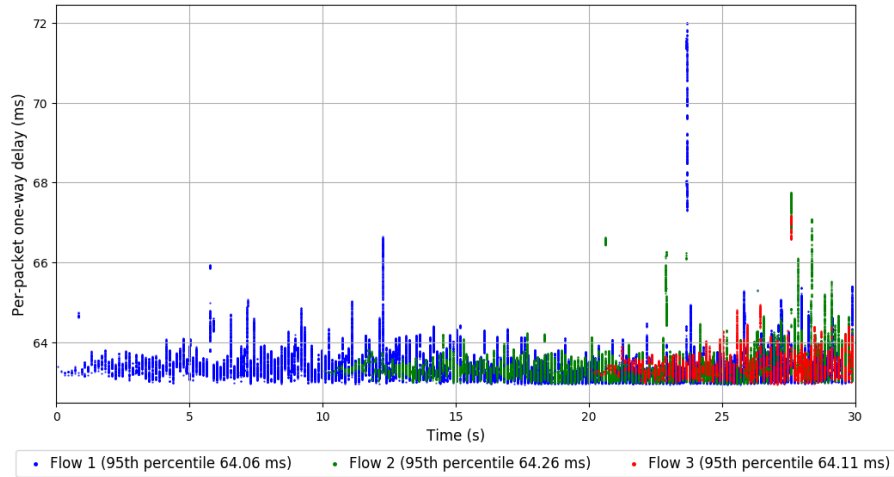
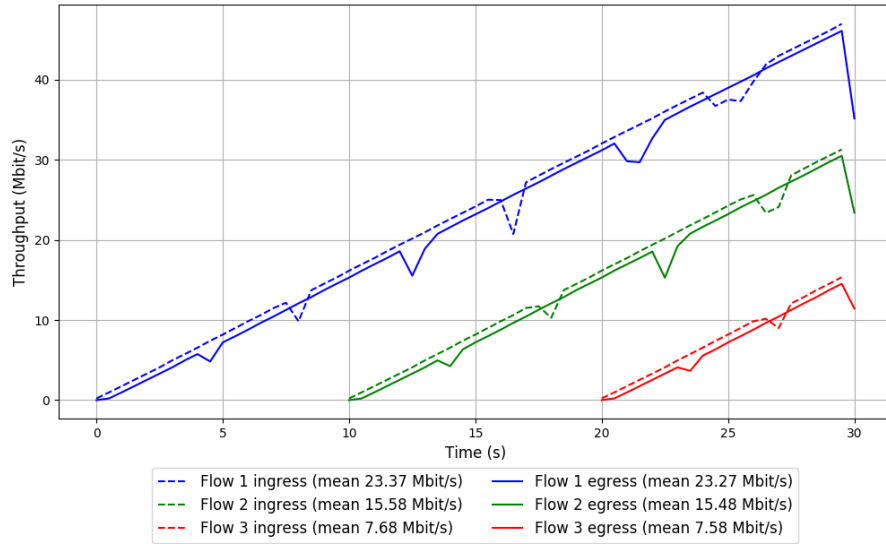
-- Flow 2:

Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 64.263 ms
Loss rate: 1.27%

-- Flow 3:

Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 64.113 ms
Loss rate: 2.58%

Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-04-24 08:45:28
End at: 2019-04-24 08:45:58
Local clock offset: -0.067 ms
Remote clock offset: -0.654 ms

Below is generated by plot.py at 2019-04-24 13:49:18

Datalink statistics

-- Total of 3 flows:

Average throughput: 653.53 Mbit/s
95th percentile per-packet one-way delay: 204.468 ms
Loss rate: 3.05%

-- Flow 1:

Average throughput: 374.13 Mbit/s
95th percentile per-packet one-way delay: 208.603 ms
Loss rate: 4.46%

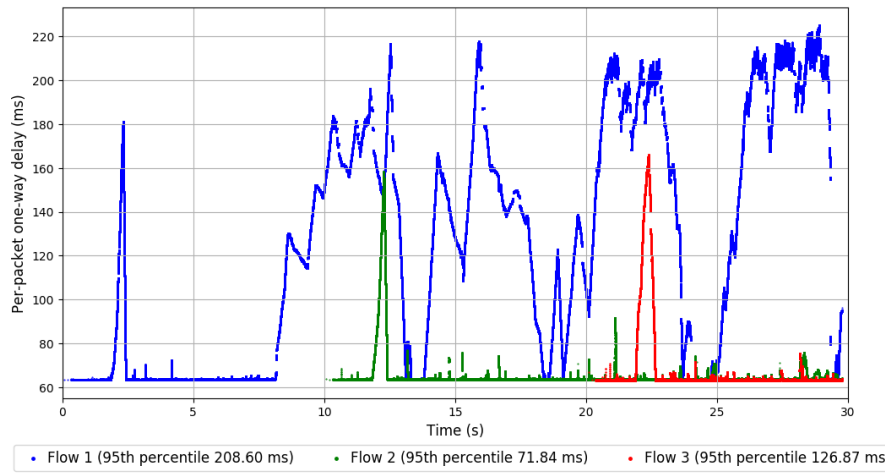
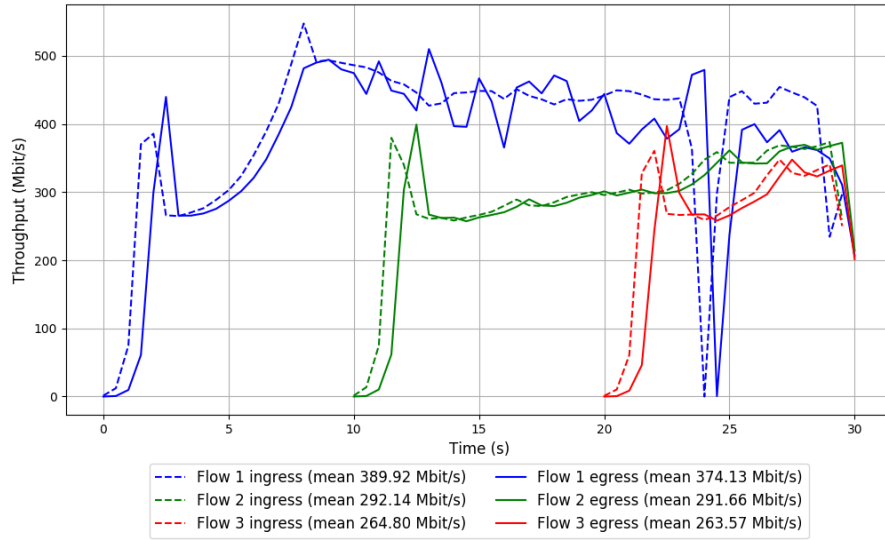
-- Flow 2:

Average throughput: 291.66 Mbit/s
95th percentile per-packet one-way delay: 71.839 ms
Loss rate: 0.80%

-- Flow 3:

Average throughput: 263.57 Mbit/s
95th percentile per-packet one-way delay: 126.872 ms
Loss rate: 1.79%

Run 1: Report of PCC-Allegro — Data Link

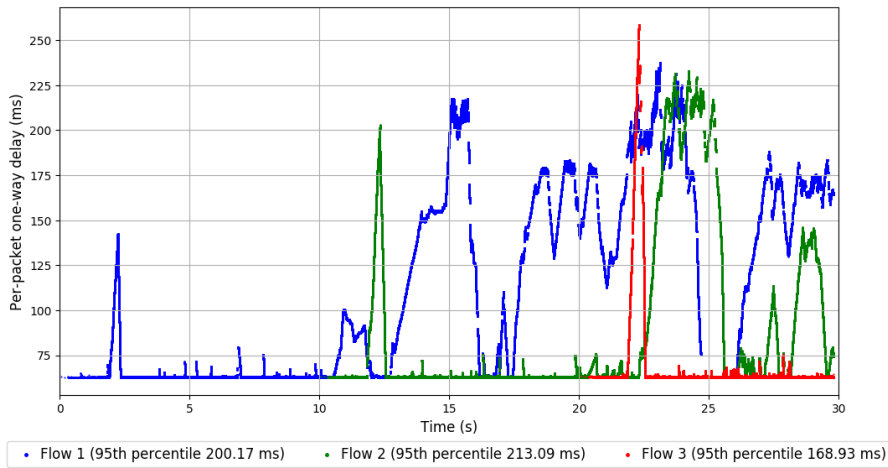
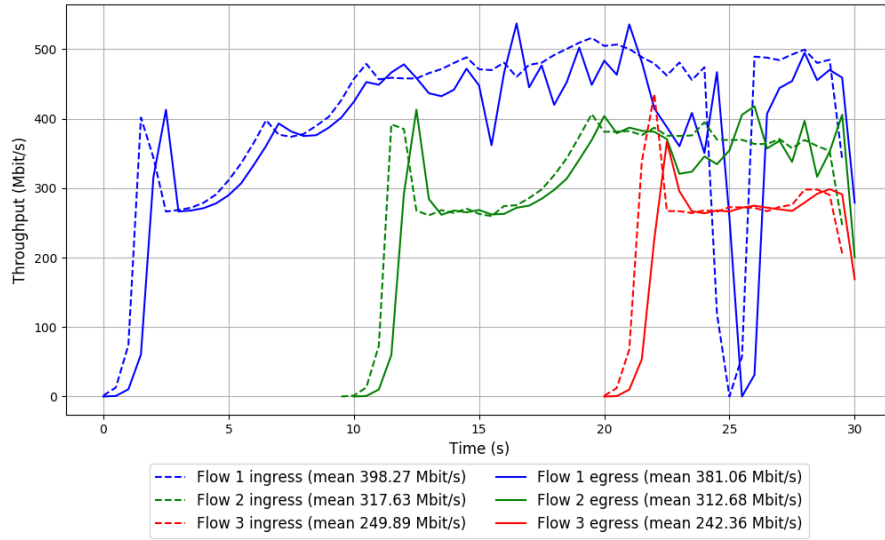


Run 2: Statistics of PCC-Allegro

Start at: 2019-04-24 09:21:22
End at: 2019-04-24 09:21:52
Local clock offset: -0.046 ms
Remote clock offset: -0.486 ms

Below is generated by plot.py at 2019-04-24 13:49:43
Datalink statistics
-- Total of 3 flows:
Average throughput: 667.63 Mbit/s
95th percentile per-packet one-way delay: 205.775 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 381.06 Mbit/s
95th percentile per-packet one-way delay: 200.174 ms
Loss rate: 4.73%
-- Flow 2:
Average throughput: 312.68 Mbit/s
95th percentile per-packet one-way delay: 213.089 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 242.36 Mbit/s
95th percentile per-packet one-way delay: 168.925 ms
Loss rate: 4.25%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-04-24 09:57:41

End at: 2019-04-24 09:58:11

Local clock offset: -0.084 ms

Remote clock offset: 0.084 ms

Below is generated by plot.py at 2019-04-24 13:51:36

Datalink statistics

-- Total of 3 flows:

Average throughput: 713.90 Mbit/s

95th percentile per-packet one-way delay: 187.641 ms

Loss rate: 5.13%

-- Flow 1:

Average throughput: 436.11 Mbit/s

95th percentile per-packet one-way delay: 191.483 ms

Loss rate: 7.35%

-- Flow 2:

Average throughput: 301.07 Mbit/s

95th percentile per-packet one-way delay: 101.298 ms

Loss rate: 0.98%

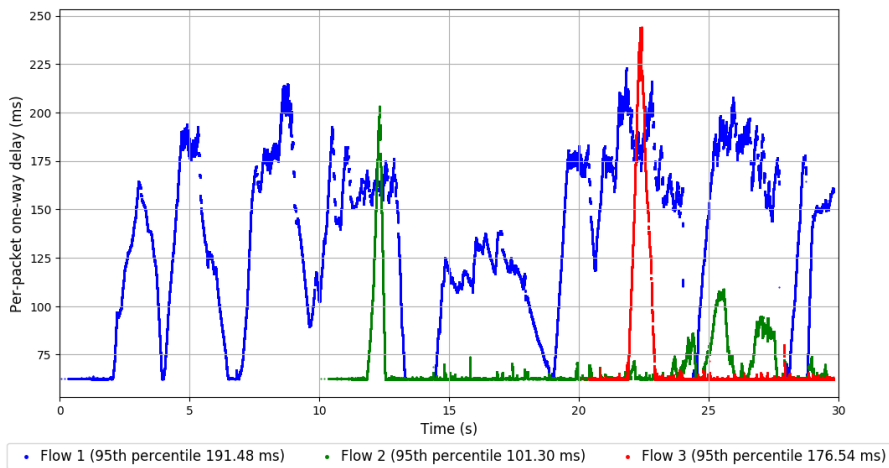
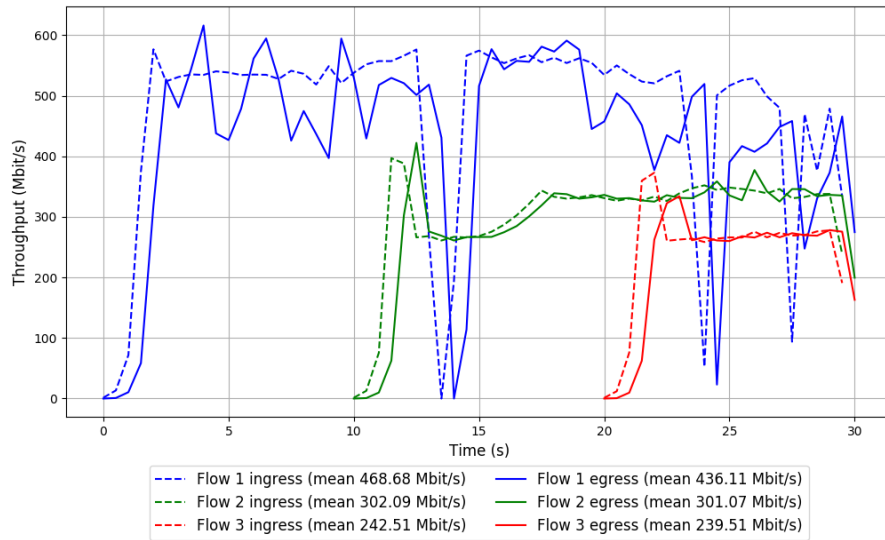
-- Flow 3:

Average throughput: 239.51 Mbit/s

95th percentile per-packet one-way delay: 176.545 ms

Loss rate: 2.51%

Run 3: Report of PCC-Allegro — Data Link

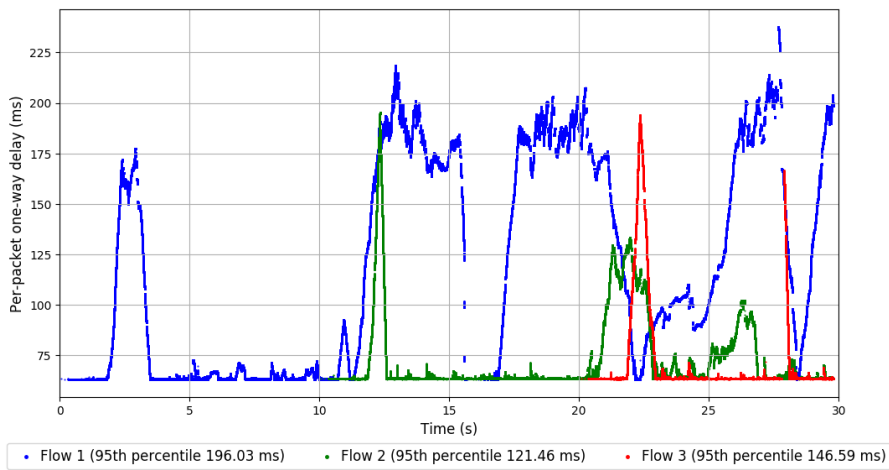
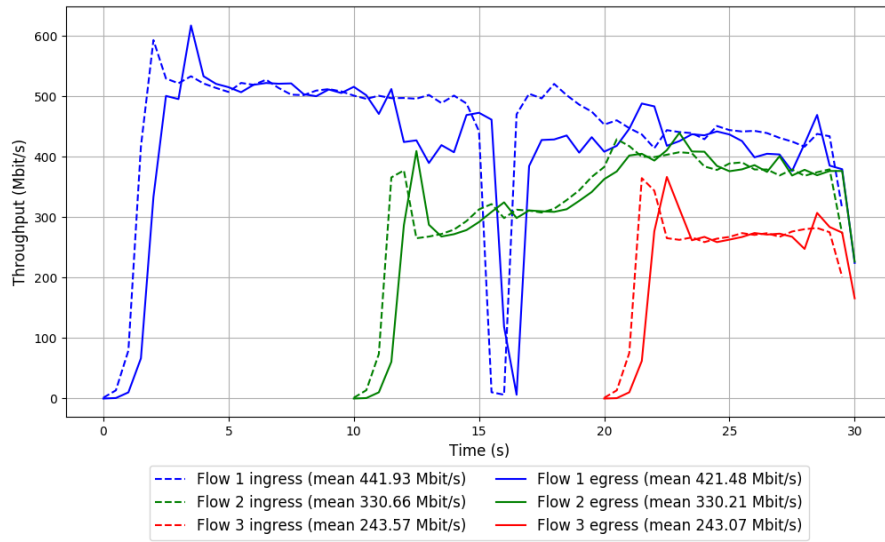


Run 4: Statistics of PCC-Allegro

Start at: 2019-04-24 10:34:04
End at: 2019-04-24 10:34:34
Local clock offset: -0.026 ms
Remote clock offset: -0.417 ms

```
# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 719.82 Mbit/s
95th percentile per-packet one-way delay: 190.872 ms
Loss rate: 3.39%
-- Flow 1:
Average throughput: 421.48 Mbit/s
95th percentile per-packet one-way delay: 196.035 ms
Loss rate: 5.03%
-- Flow 2:
Average throughput: 330.21 Mbit/s
95th percentile per-packet one-way delay: 121.463 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 243.07 Mbit/s
95th percentile per-packet one-way delay: 146.587 ms
Loss rate: 1.49%
```

Run 4: Report of PCC-Allegro — Data Link

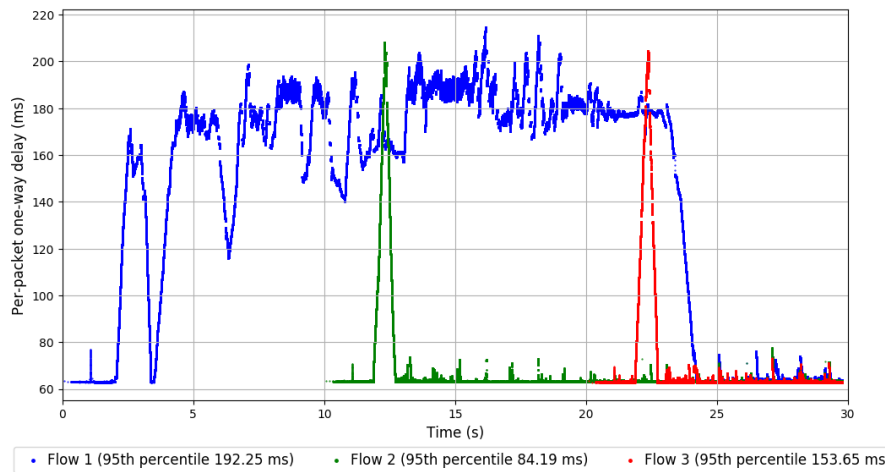
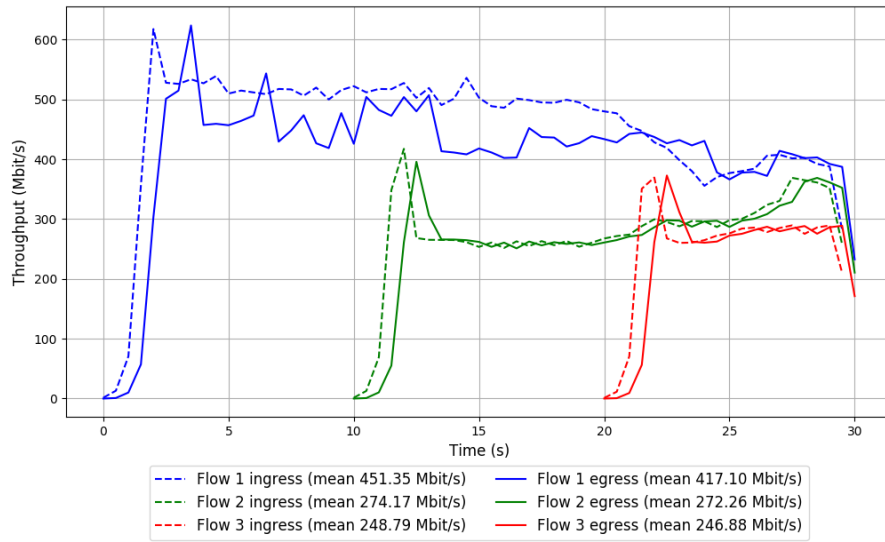


Run 5: Statistics of PCC-Allegro

Start at: 2019-04-24 11:10:22
End at: 2019-04-24 11:10:52
Local clock offset: -0.022 ms
Remote clock offset: -0.061 ms

```
# Below is generated by plot.py at 2019-04-24 13:51:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.20 Mbit/s
95th percentile per-packet one-way delay: 190.327 ms
Loss rate: 5.61%
-- Flow 1:
Average throughput: 417.10 Mbit/s
95th percentile per-packet one-way delay: 192.247 ms
Loss rate: 7.98%
-- Flow 2:
Average throughput: 272.26 Mbit/s
95th percentile per-packet one-way delay: 84.194 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 246.88 Mbit/s
95th percentile per-packet one-way delay: 153.650 ms
Loss rate: 2.05%
```

Run 5: Report of PCC-Allegro — Data Link



Run 1: Statistics of PCC-Expr

Start at: 2019-04-24 08:37:38
End at: 2019-04-24 08:38:08
Local clock offset: -0.06 ms
Remote clock offset: -0.616 ms

Below is generated by plot.py at 2019-04-24 13:51:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.76 Mbit/s
95th percentile per-packet one-way delay: 143.206 ms
Loss rate: 1.37%

-- Flow 1:

Average throughput: 264.95 Mbit/s
95th percentile per-packet one-way delay: 146.825 ms
Loss rate: 1.30%

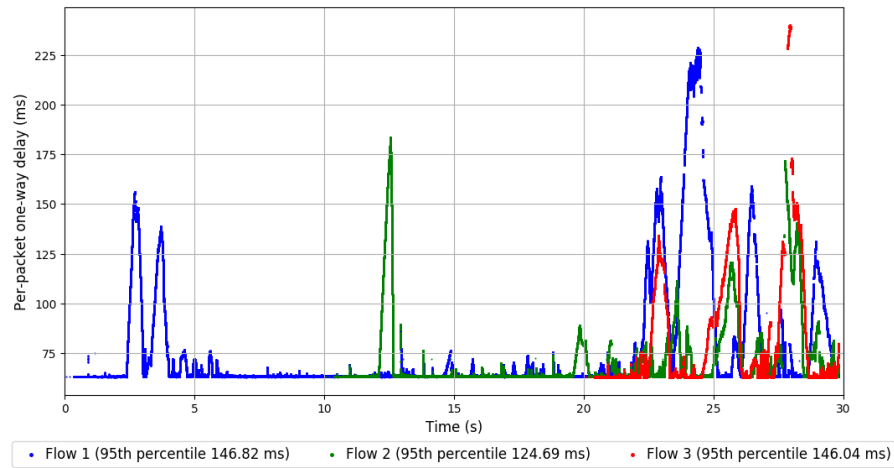
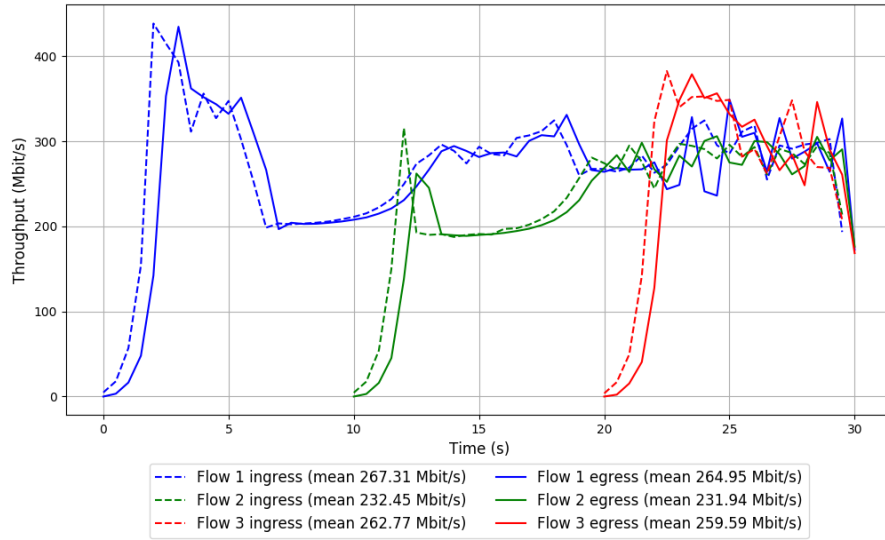
-- Flow 2:

Average throughput: 231.94 Mbit/s
95th percentile per-packet one-way delay: 124.691 ms
Loss rate: 0.85%

-- Flow 3:

Average throughput: 259.59 Mbit/s
95th percentile per-packet one-way delay: 146.038 ms
Loss rate: 2.47%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-04-24 09:13:33

End at: 2019-04-24 09:14:03

Local clock offset: -0.04 ms

Remote clock offset: 0.277 ms

Below is generated by plot.py at 2019-04-24 13:51:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 438.91 Mbit/s

95th percentile per-packet one-way delay: 93.450 ms

Loss rate: 0.67%

-- Flow 1:

Average throughput: 259.24 Mbit/s

95th percentile per-packet one-way delay: 102.950 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 223.91 Mbit/s

95th percentile per-packet one-way delay: 80.262 ms

Loss rate: 0.80%

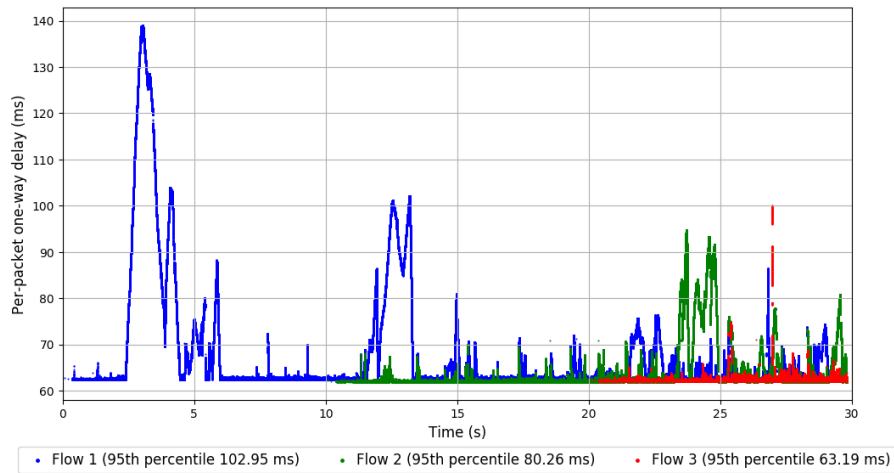
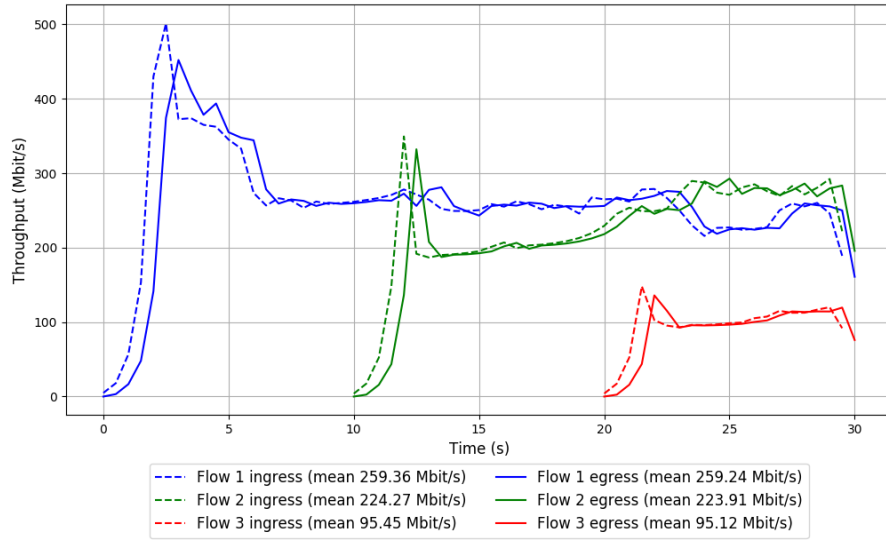
-- Flow 3:

Average throughput: 95.12 Mbit/s

95th percentile per-packet one-way delay: 63.191 ms

Loss rate: 1.65%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-04-24 09:49:49
End at: 2019-04-24 09:50:19
Local clock offset: -0.073 ms
Remote clock offset: -0.418 ms

Below is generated by plot.py at 2019-04-24 13:51:48

Datalink statistics

-- Total of 3 flows:

Average throughput: 447.99 Mbit/s
95th percentile per-packet one-way delay: 152.125 ms
Loss rate: 1.24%

-- Flow 1:

Average throughput: 279.74 Mbit/s
95th percentile per-packet one-way delay: 165.407 ms
Loss rate: 1.45%

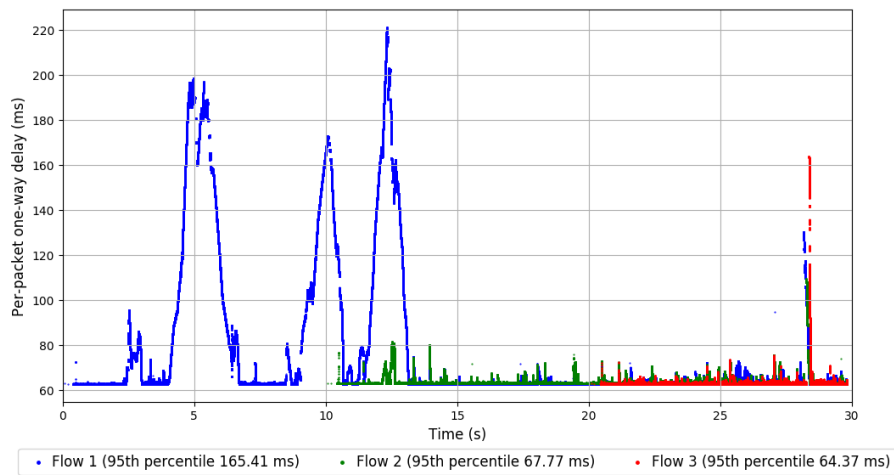
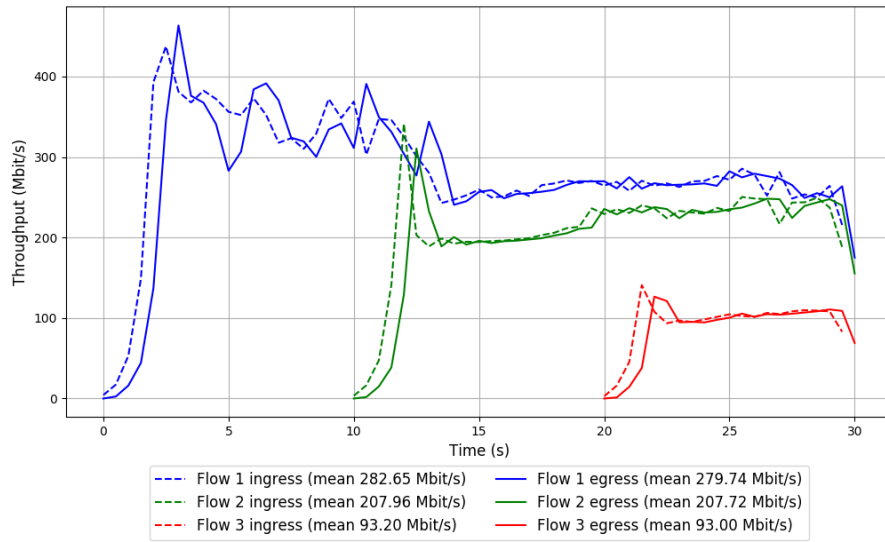
-- Flow 2:

Average throughput: 207.72 Mbit/s
95th percentile per-packet one-way delay: 67.770 ms
Loss rate: 0.75%

-- Flow 3:

Average throughput: 93.00 Mbit/s
95th percentile per-packet one-way delay: 64.371 ms
Loss rate: 1.50%

Run 3: Report of PCC-Expr — Data Link



Run 4: Statistics of PCC-Expr

Start at: 2019-04-24 10:26:06
End at: 2019-04-24 10:26:36
Local clock offset: -0.074 ms
Remote clock offset: -0.278 ms

Below is generated by plot.py at 2019-04-24 14:03:29

Datalink statistics

-- Total of 3 flows:

Average throughput: 532.97 Mbit/s
95th percentile per-packet one-way delay: 178.092 ms
Loss rate: 2.52%

-- Flow 1:

Average throughput: 313.93 Mbit/s
95th percentile per-packet one-way delay: 176.226 ms
Loss rate: 2.81%

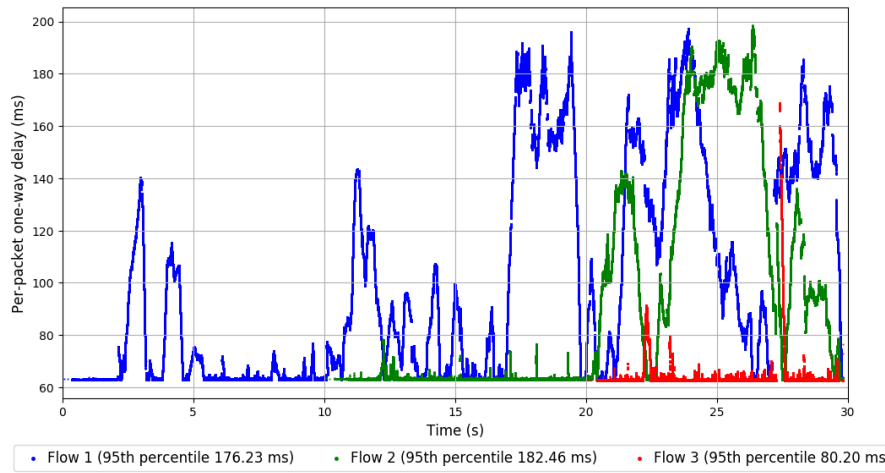
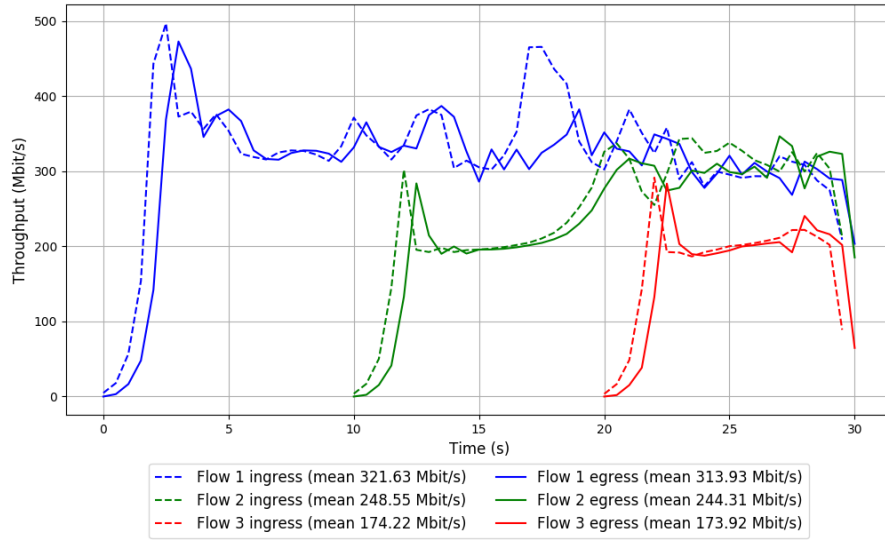
-- Flow 2:

Average throughput: 244.31 Mbit/s
95th percentile per-packet one-way delay: 182.458 ms
Loss rate: 2.33%

-- Flow 3:

Average throughput: 173.92 Mbit/s
95th percentile per-packet one-way delay: 80.199 ms
Loss rate: 1.45%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-04-24 11:02:24

End at: 2019-04-24 11:02:54

Local clock offset: -0.042 ms

Remote clock offset: 0.025 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 513.16 Mbit/s

95th percentile per-packet one-way delay: 186.583 ms

Loss rate: 3.72%

-- Flow 1:

Average throughput: 267.93 Mbit/s

95th percentile per-packet one-way delay: 173.792 ms

Loss rate: 1.86%

-- Flow 2:

Average throughput: 287.06 Mbit/s

95th percentile per-packet one-way delay: 192.070 ms

Loss rate: 6.81%

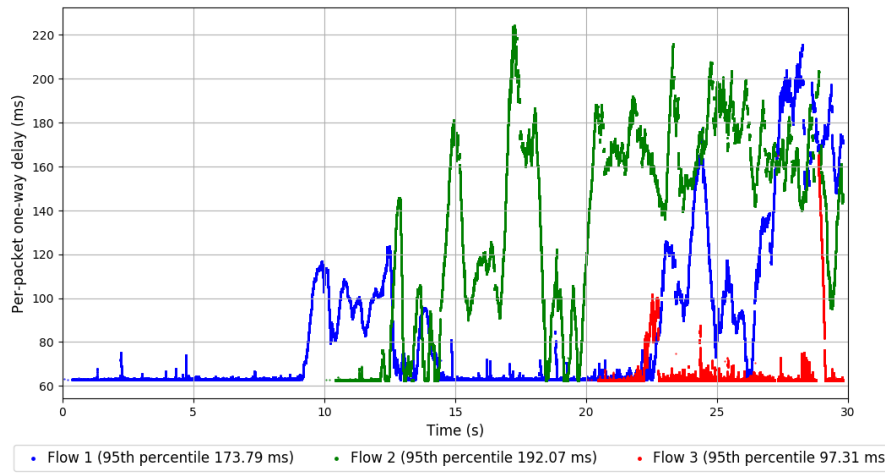
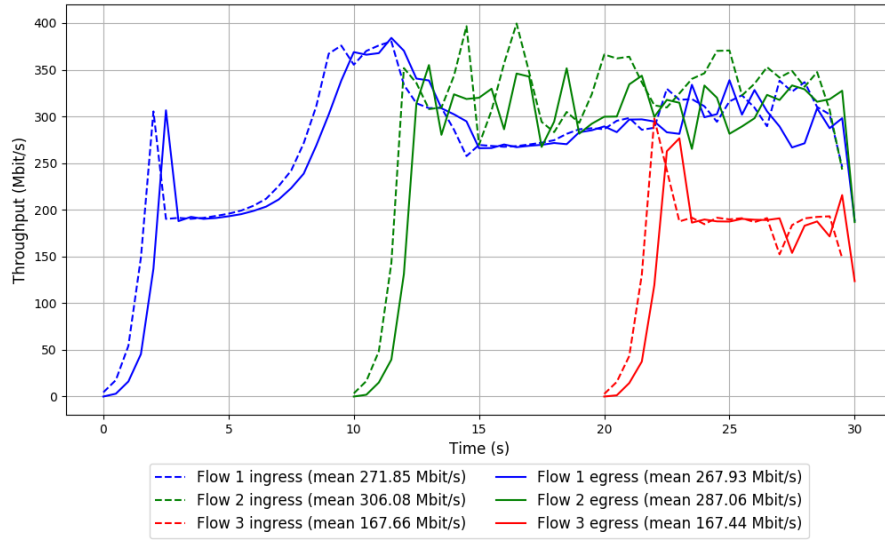
-- Flow 3:

Average throughput: 167.44 Mbit/s

95th percentile per-packet one-way delay: 97.312 ms

Loss rate: 1.49%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-04-24 08:39:37
End at: 2019-04-24 08:40:07
Local clock offset: -0.028 ms
Remote clock offset: -0.473 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 90.89 Mbit/s
95th percentile per-packet one-way delay: 63.577 ms
Loss rate: 0.85%

-- Flow 1:

Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 63.096 ms
Loss rate: 0.62%

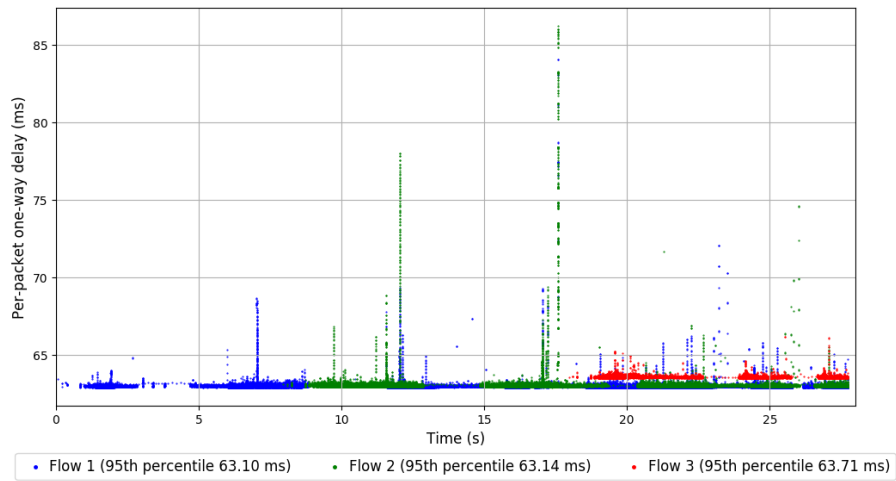
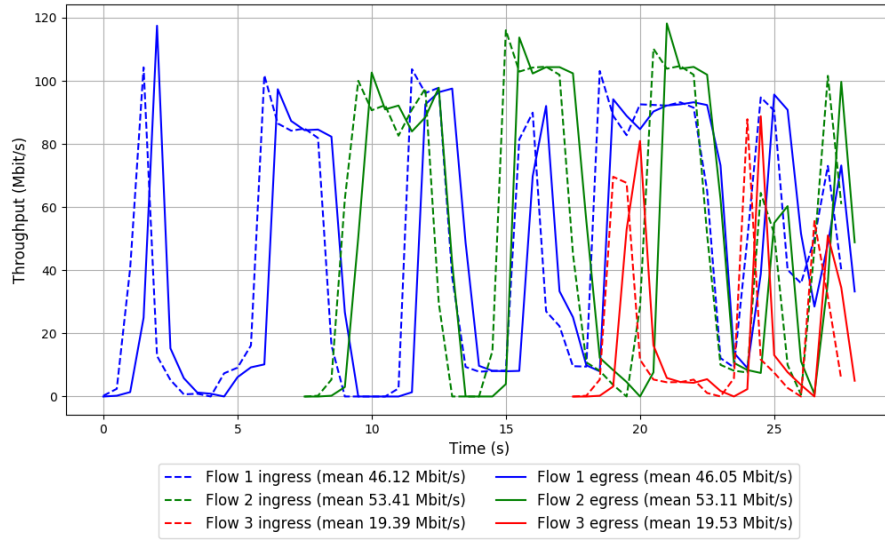
-- Flow 2:

Average throughput: 53.11 Mbit/s
95th percentile per-packet one-way delay: 63.140 ms
Loss rate: 1.19%

-- Flow 3:

Average throughput: 19.53 Mbit/s
95th percentile per-packet one-way delay: 63.711 ms
Loss rate: 0.54%

Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-04-24 09:15:27
End at: 2019-04-24 09:15:57
Local clock offset: -0.042 ms
Remote clock offset: -0.546 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 106.73 Mbit/s
95th percentile per-packet one-way delay: 63.161 ms
Loss rate: 0.74%

-- Flow 1:

Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 63.183 ms
Loss rate: 0.53%

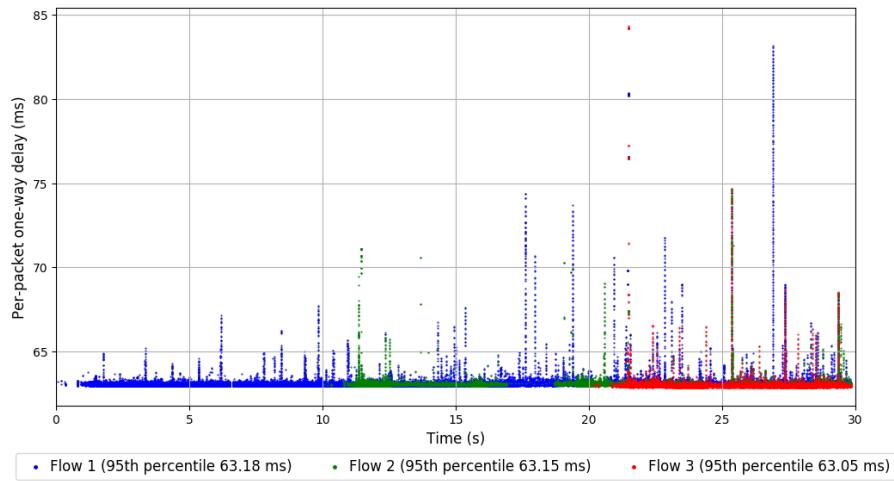
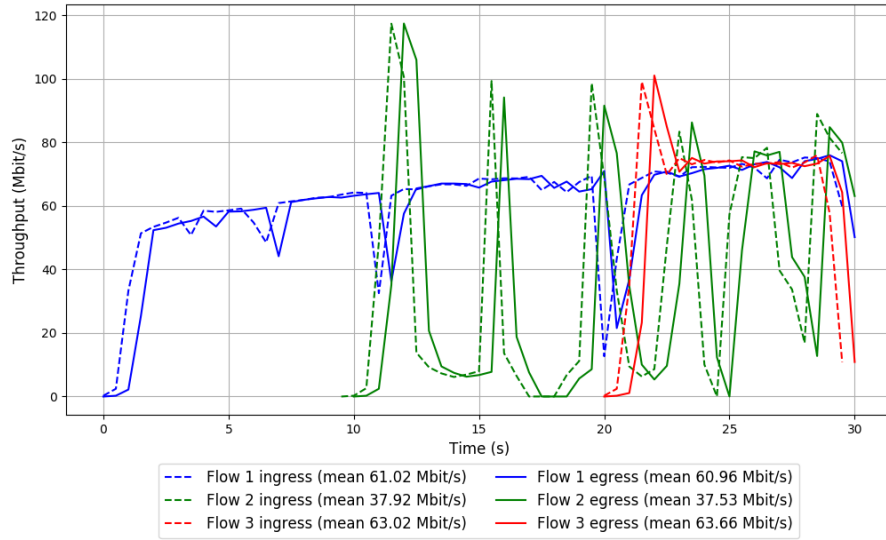
-- Flow 2:

Average throughput: 37.53 Mbit/s
95th percentile per-packet one-way delay: 63.151 ms
Loss rate: 1.66%

-- Flow 3:

Average throughput: 63.66 Mbit/s
95th percentile per-packet one-way delay: 63.053 ms
Loss rate: 0.25%

Run 2: Report of QUIC Cubic — Data Link



Run 3: Statistics of QUIC Cubic

Start at: 2019-04-24 09:51:44
End at: 2019-04-24 09:52:14
Local clock offset: -0.062 ms
Remote clock offset: -0.541 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 109.07 Mbit/s
95th percentile per-packet one-way delay: 63.145 ms
Loss rate: 0.82%

-- Flow 1:

Average throughput: 56.64 Mbit/s
95th percentile per-packet one-way delay: 63.181 ms
Loss rate: 0.59%

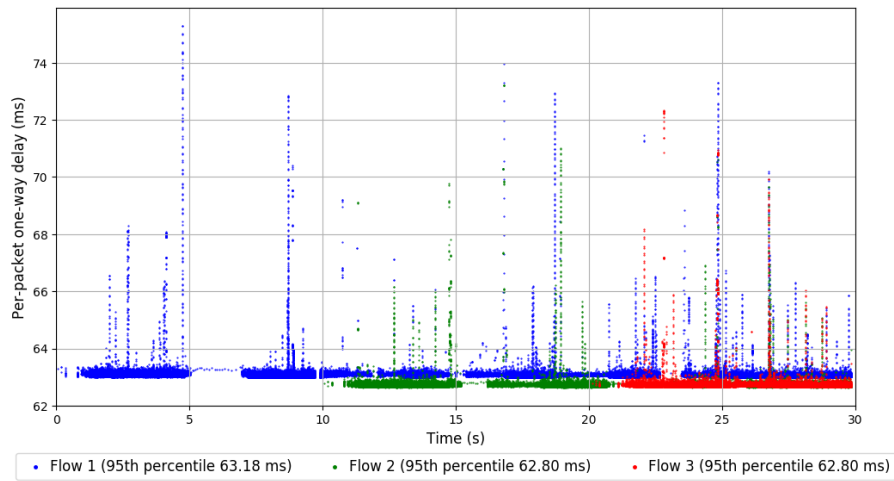
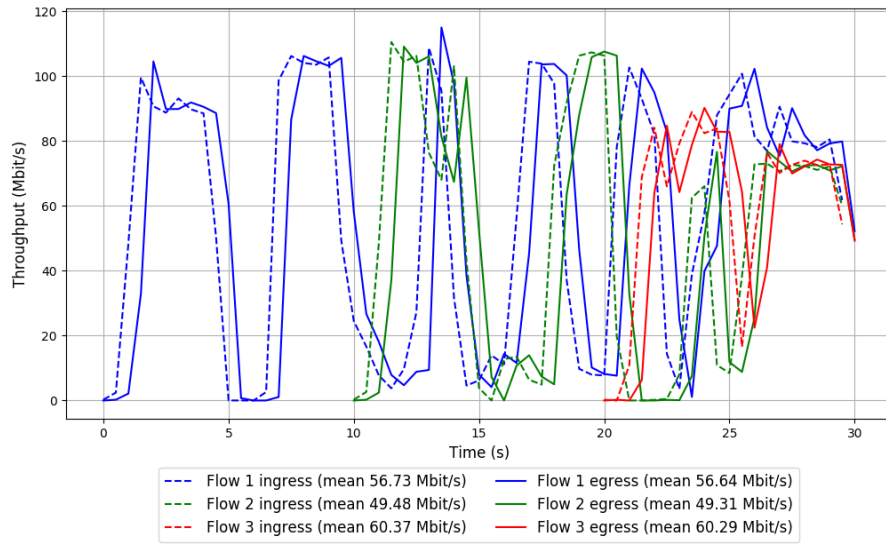
-- Flow 2:

Average throughput: 49.31 Mbit/s
95th percentile per-packet one-way delay: 62.799 ms
Loss rate: 0.99%

-- Flow 3:

Average throughput: 60.29 Mbit/s
95th percentile per-packet one-way delay: 62.804 ms
Loss rate: 1.18%

Run 3: Report of QUIC Cubic — Data Link



Run 4: Statistics of QUIC Cubic

Start at: 2019-04-24 10:28:09
End at: 2019-04-24 10:28:39
Local clock offset: -0.047 ms
Remote clock offset: -0.671 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 112.44 Mbit/s
95th percentile per-packet one-way delay: 63.526 ms
Loss rate: 0.75%

-- Flow 1:

Average throughput: 52.90 Mbit/s
95th percentile per-packet one-way delay: 63.537 ms
Loss rate: 0.61%

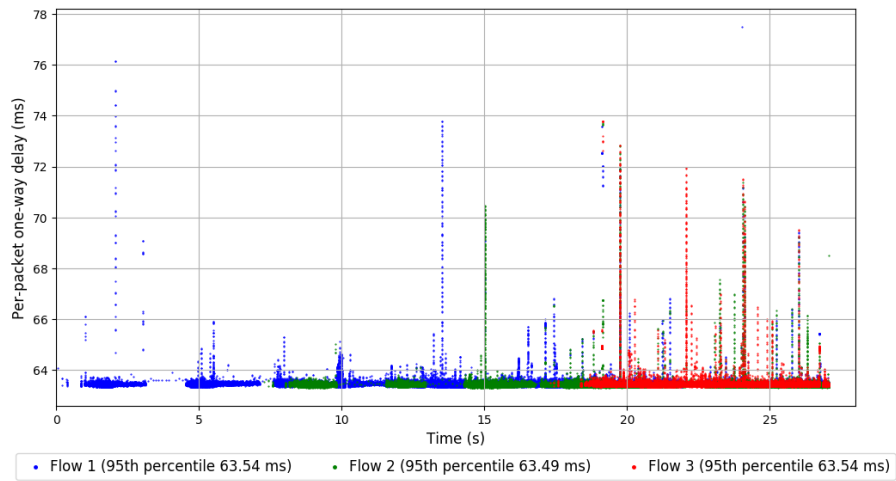
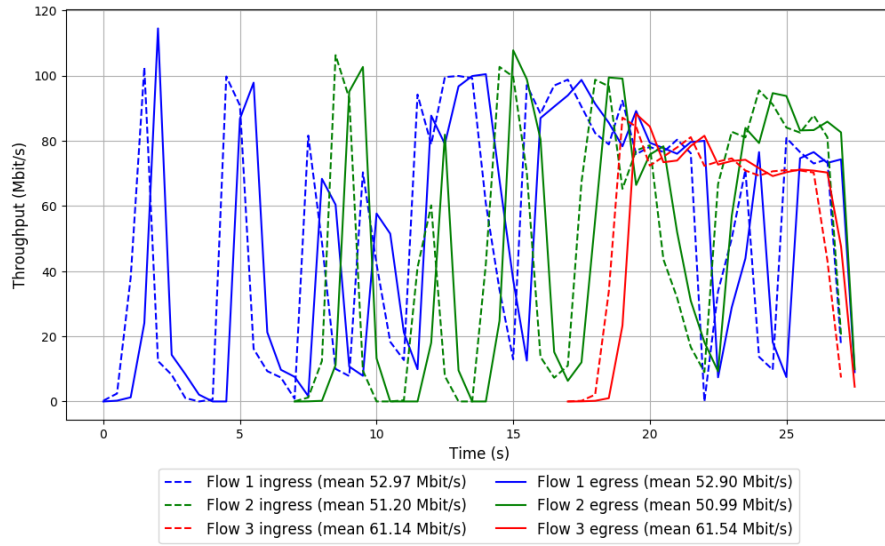
-- Flow 2:

Average throughput: 50.99 Mbit/s
95th percentile per-packet one-way delay: 63.494 ms
Loss rate: 1.03%

-- Flow 3:

Average throughput: 61.54 Mbit/s
95th percentile per-packet one-way delay: 63.537 ms
Loss rate: 0.62%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-04-24 11:04:26
End at: 2019-04-24 11:04:56
Local clock offset: -0.057 ms
Remote clock offset: -0.171 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 87.68 Mbit/s
95th percentile per-packet one-way delay: 63.082 ms
Loss rate: 0.83%

-- Flow 1:

Average throughput: 52.63 Mbit/s
95th percentile per-packet one-way delay: 62.955 ms
Loss rate: 0.54%

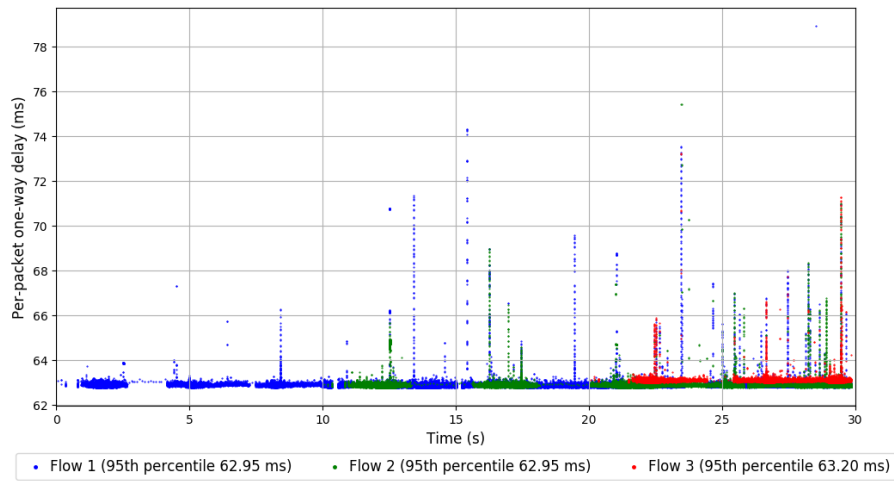
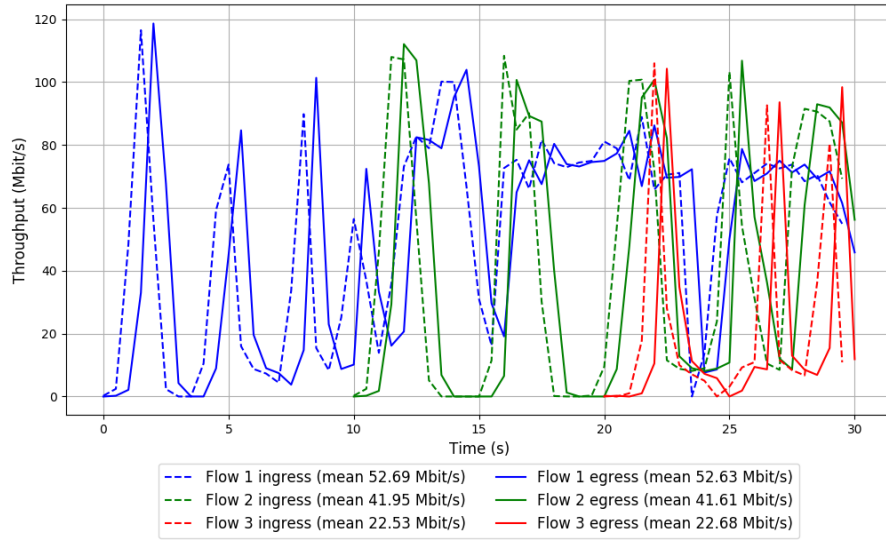
-- Flow 2:

Average throughput: 41.61 Mbit/s
95th percentile per-packet one-way delay: 62.951 ms
Loss rate: 1.44%

-- Flow 3:

Average throughput: 22.68 Mbit/s
95th percentile per-packet one-way delay: 63.200 ms
Loss rate: 0.60%

Run 5: Report of QUIC Cubic — Data Link



Run 1: Statistics of SCReAM

Start at: 2019-04-24 09:07:08
End at: 2019-04-24 09:07:38
Local clock offset: -0.028 ms
Remote clock offset: -0.503 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.616 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.650 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.334 ms

Loss rate: 0.61%

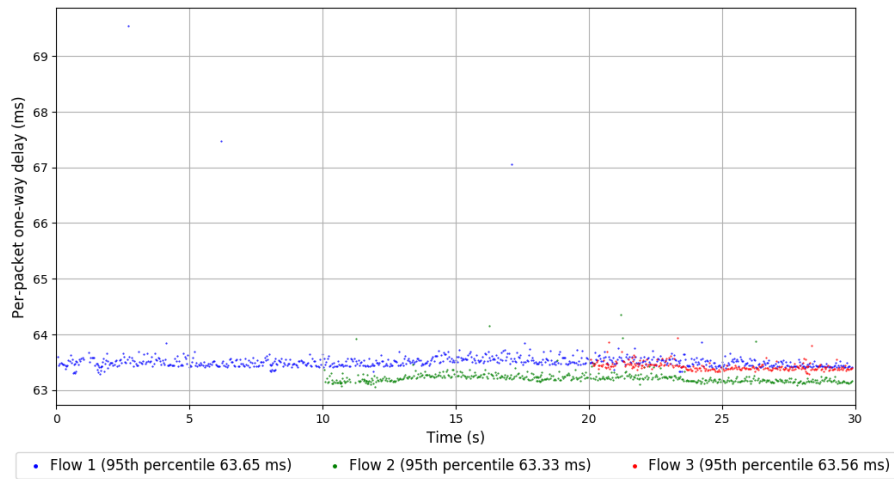
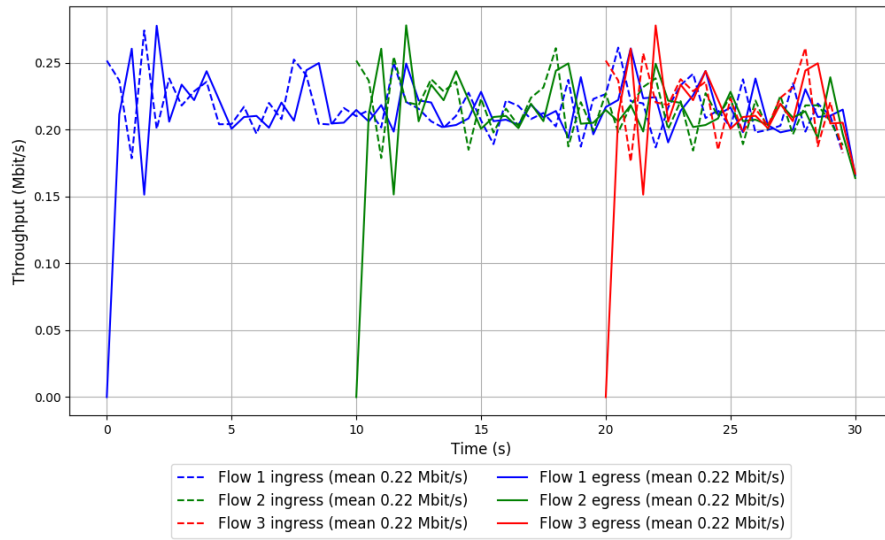
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.560 ms

Loss rate: 1.08%

Run 1: Report of SCReAM — Data Link



Run 2: Statistics of SCReAM

Start at: 2019-04-24 09:43:22
End at: 2019-04-24 09:43:52
Local clock offset: -0.07 ms
Remote clock offset: -0.647 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.422 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.456 ms
Loss rate: 0.38%

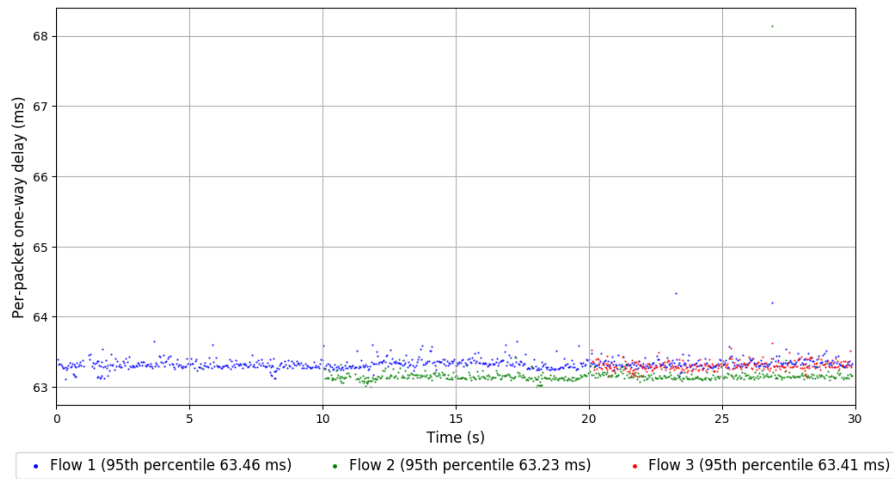
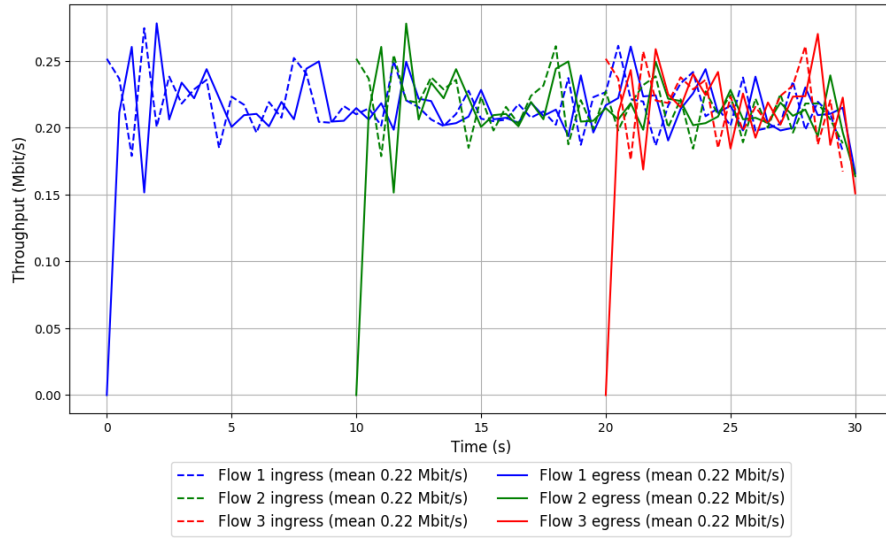
-- Flow 2:

Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.235 ms
Loss rate: 0.61%

-- Flow 3:

Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.411 ms
Loss rate: 1.10%

Run 2: Report of SCReAM — Data Link



Run 3: Statistics of SCReAM

Start at: 2019-04-24 10:19:42
End at: 2019-04-24 10:20:12
Local clock offset: -0.047 ms
Remote clock offset: -0.452 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.396 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.424 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.076 ms

Loss rate: 0.61%

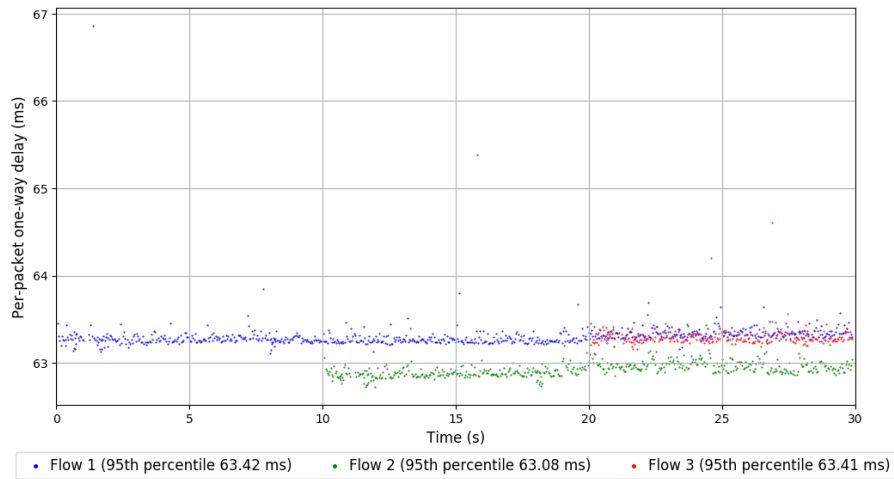
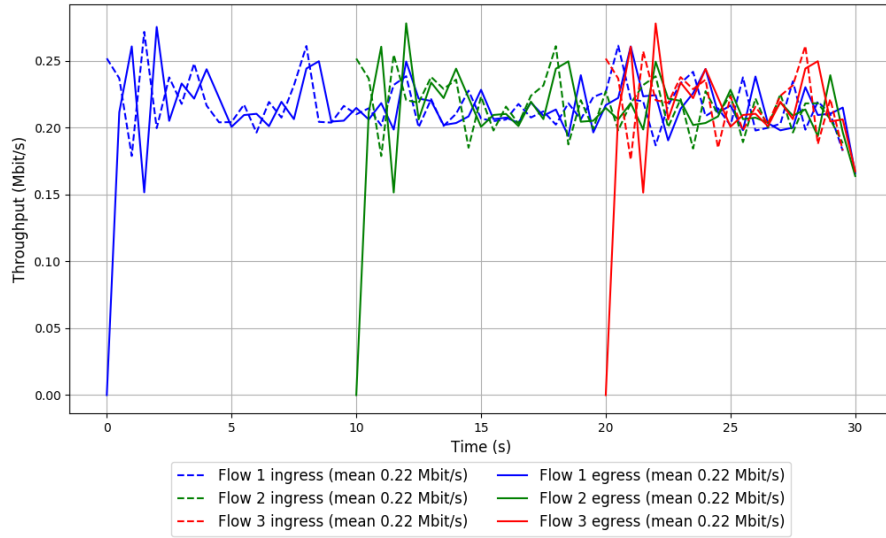
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.406 ms

Loss rate: 1.08%

Run 3: Report of SCReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-04-24 10:55:55

End at: 2019-04-24 10:56:25

Local clock offset: -0.014 ms

Remote clock offset: 0.028 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.401 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.262 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.469 ms

Loss rate: 0.61%

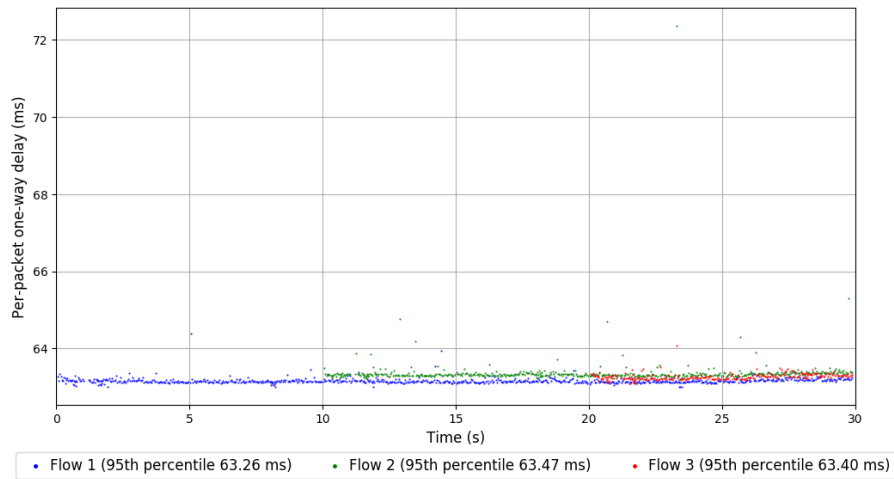
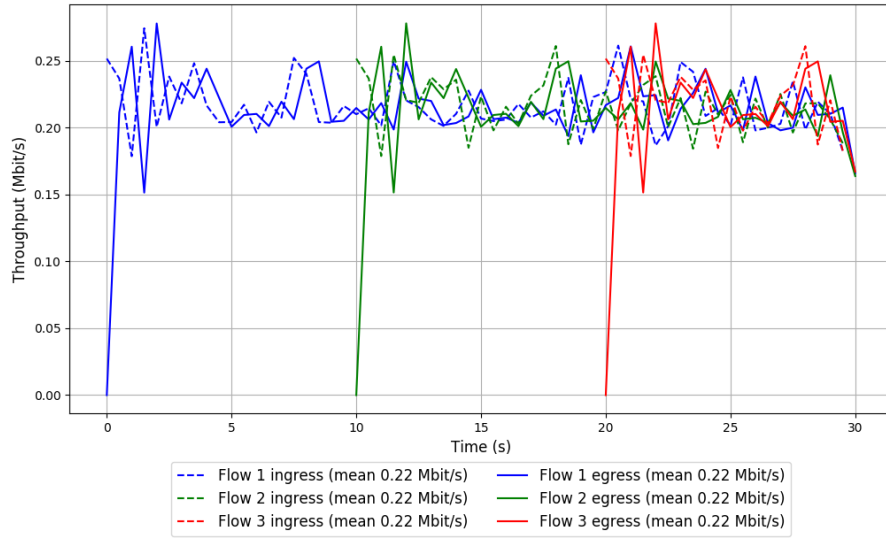
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.404 ms

Loss rate: 1.08%

Run 4: Report of SCReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-04-24 11:32:21
End at: 2019-04-24 11:32:51
Local clock offset: -0.061 ms
Remote clock offset: -0.076 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.43 Mbit/s

95th percentile per-packet one-way delay: 63.449 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.379 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.503 ms

Loss rate: 0.61%

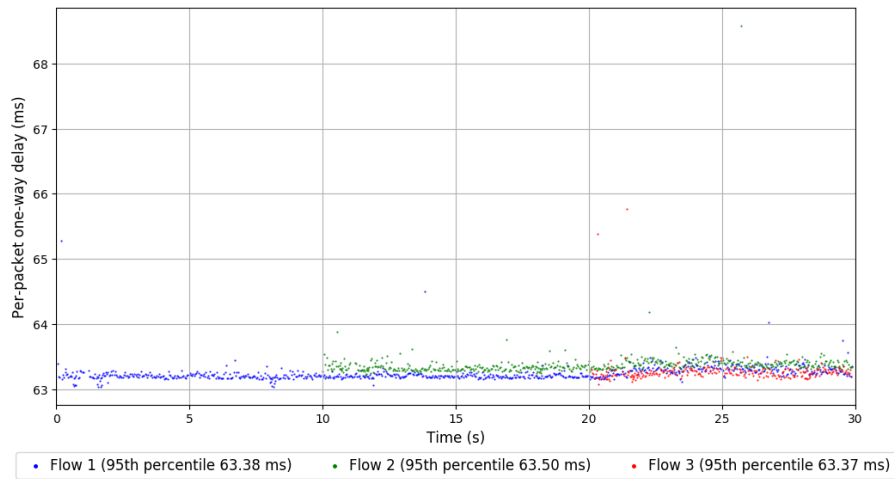
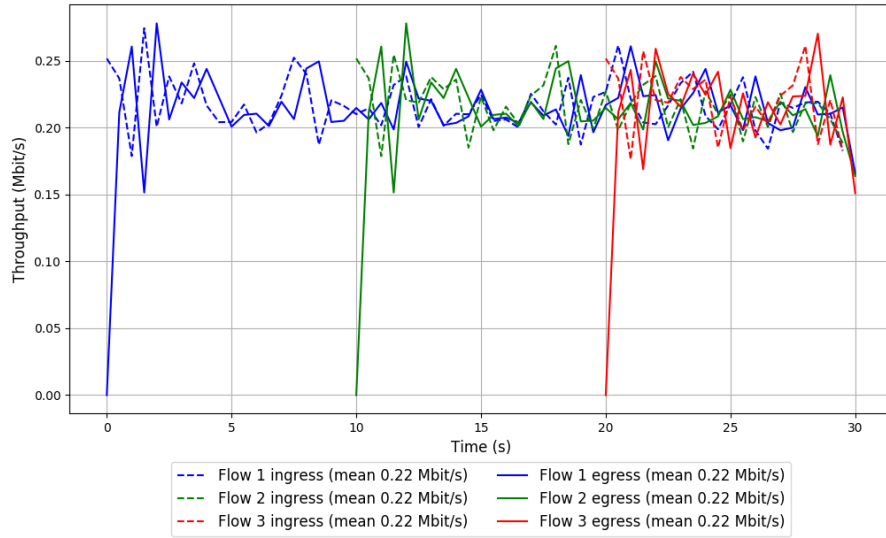
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 63.368 ms

Loss rate: 1.45%

Run 5: Report of SCReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-04-24 08:44:15
End at: 2019-04-24 08:44:45
Local clock offset: -0.019 ms
Remote clock offset: -0.654 ms

Below is generated by plot.py at 2019-04-24 14:06:56

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 64.201 ms
Loss rate: 0.79%

-- Flow 1:

Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 64.257 ms
Loss rate: 0.59%

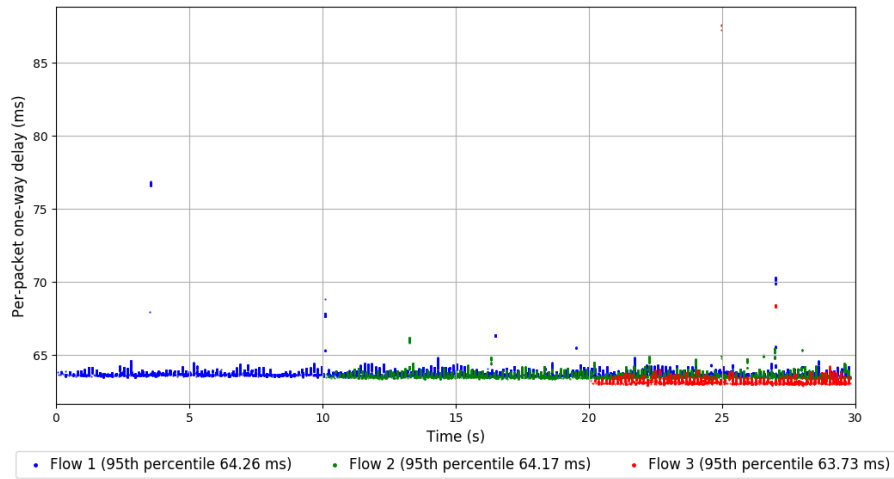
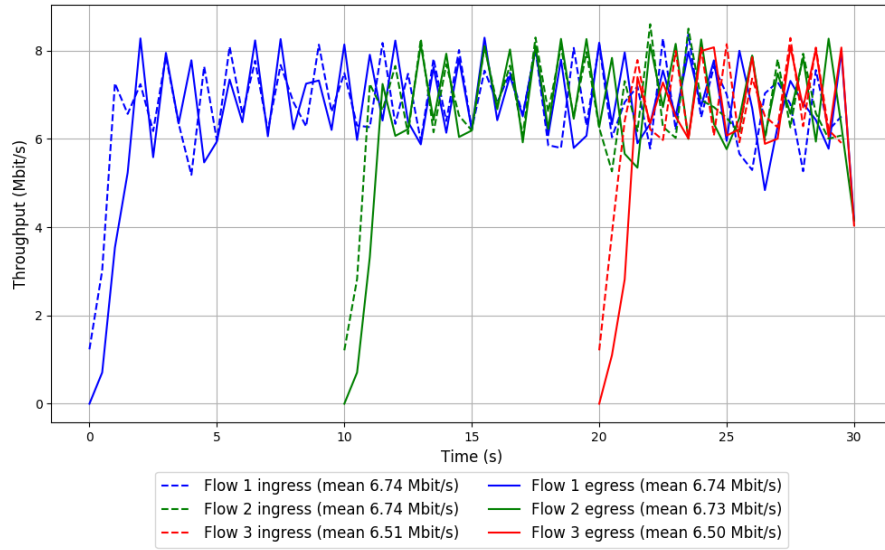
-- Flow 2:

Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 64.170 ms
Loss rate: 0.72%

-- Flow 3:

Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 63.727 ms
Loss rate: 1.57%

Run 1: Report of Sprout — Data Link



Run 2: Statistics of Sprout

Start at: 2019-04-24 09:20:08
End at: 2019-04-24 09:20:38
Local clock offset: -0.08 ms
Remote clock offset: -0.528 ms

Below is generated by plot.py at 2019-04-24 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.39 Mbit/s
95th percentile per-packet one-way delay: 63.746 ms
Loss rate: 0.73%

-- Flow 1:

Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 63.702 ms
Loss rate: 0.51%

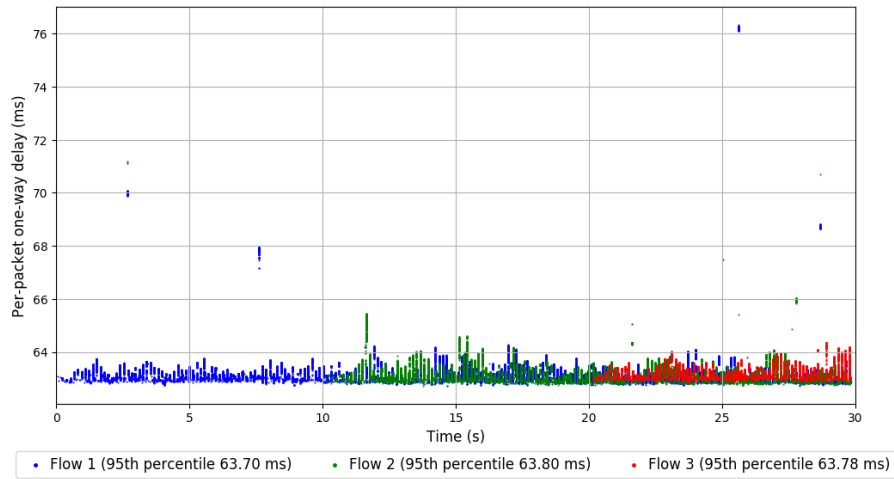
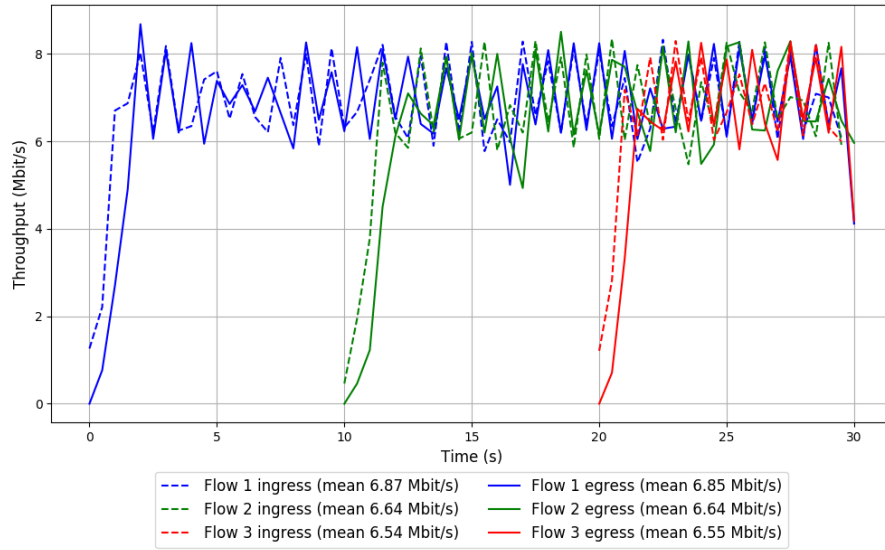
-- Flow 2:

Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 63.795 ms
Loss rate: 0.66%

-- Flow 3:

Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 63.784 ms
Loss rate: 1.56%

Run 2: Report of Sprout — Data Link



Run 3: Statistics of Sprout

Start at: 2019-04-24 09:56:27
End at: 2019-04-24 09:56:57
Local clock offset: -0.071 ms
Remote clock offset: -0.001 ms

Below is generated by plot.py at 2019-04-24 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.62%

-- Flow 1:

Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 63.426 ms
Loss rate: 0.50%

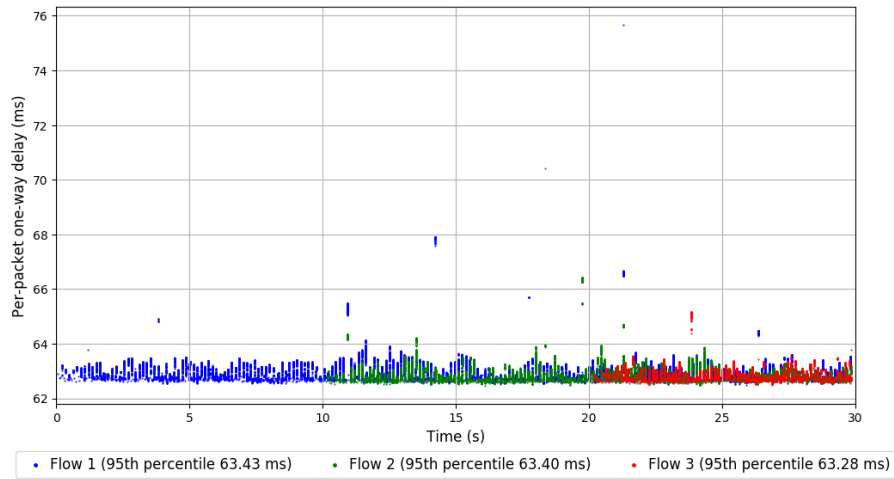
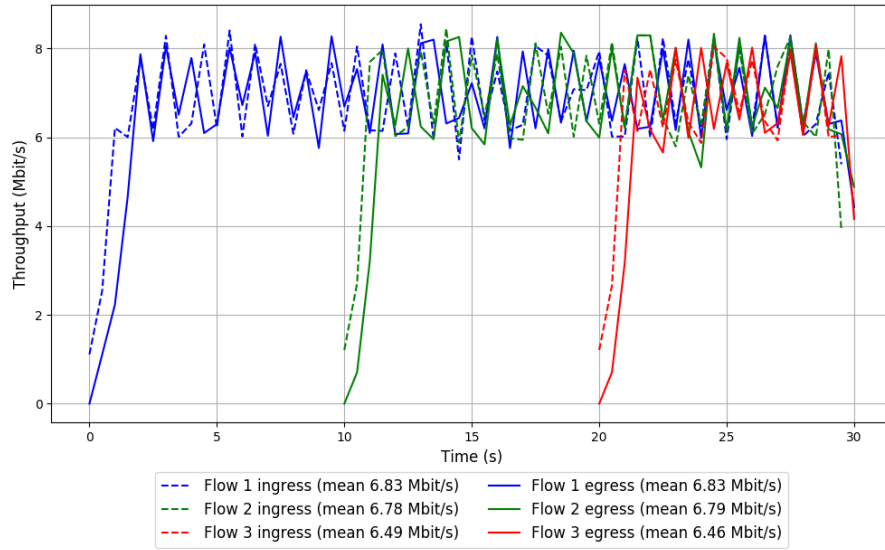
-- Flow 2:

Average throughput: 6.79 Mbit/s
95th percentile per-packet one-way delay: 63.397 ms
Loss rate: 0.38%

-- Flow 3:

Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 63.277 ms
Loss rate: 1.48%

Run 3: Report of Sprout — Data Link



Run 4: Statistics of Sprout

Start at: 2019-04-24 10:32:51
End at: 2019-04-24 10:33:21
Local clock offset: -0.036 ms
Remote clock offset: -0.483 ms

Below is generated by plot.py at 2019-04-24 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.29 Mbit/s
95th percentile per-packet one-way delay: 64.299 ms
Loss rate: 0.73%

-- Flow 1:

Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 64.283 ms
Loss rate: 0.46%

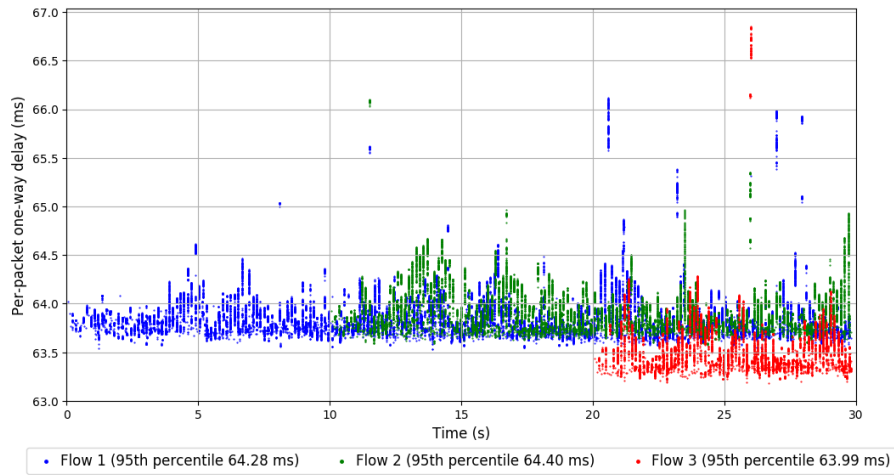
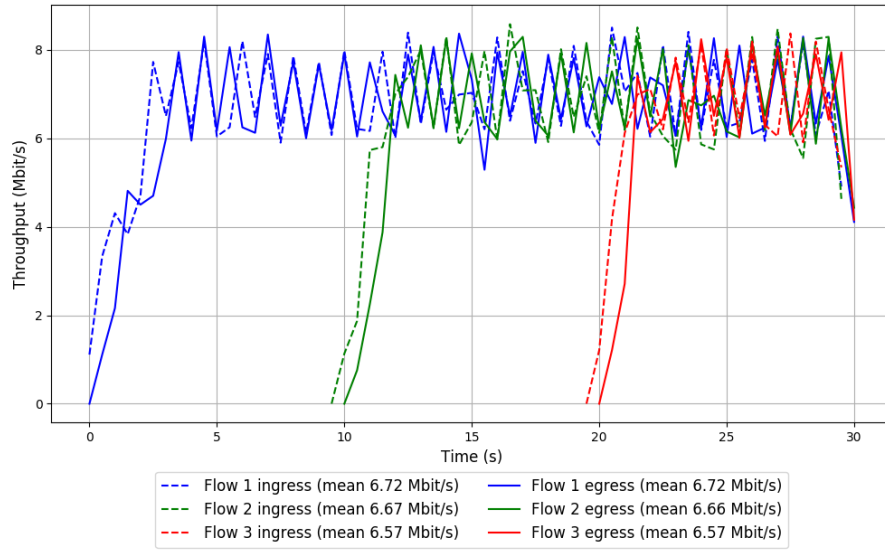
-- Flow 2:

Average throughput: 6.66 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 0.85%

-- Flow 3:

Average throughput: 6.57 Mbit/s
95th percentile per-packet one-way delay: 63.988 ms
Loss rate: 1.29%

Run 4: Report of Sprout — Data Link



Run 5: Statistics of Sprout

Start at: 2019-04-24 11:09:08

End at: 2019-04-24 11:09:38

Local clock offset: -0.049 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2019-04-24 14:06:57

Datalink statistics

-- Total of 3 flows:

Average throughput: 13.47 Mbit/s

95th percentile per-packet one-way delay: 63.426 ms

Loss rate: 0.50%

-- Flow 1:

Average throughput: 6.88 Mbit/s

95th percentile per-packet one-way delay: 63.312 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 6.74 Mbit/s

95th percentile per-packet one-way delay: 63.508 ms

Loss rate: 0.74%

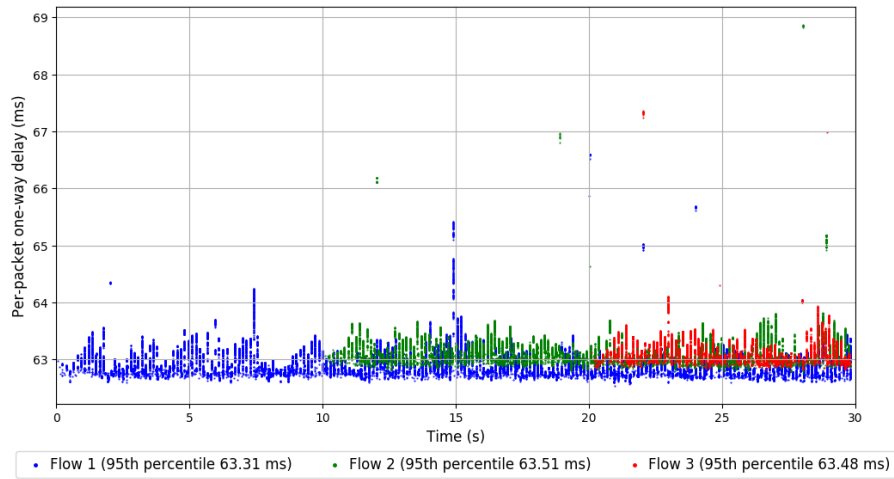
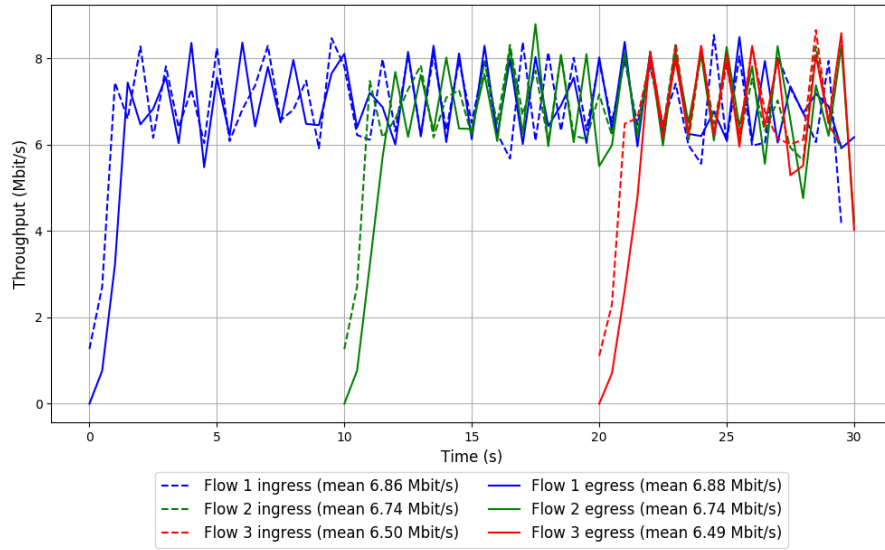
-- Flow 3:

Average throughput: 6.49 Mbit/s

95th percentile per-packet one-way delay: 63.485 ms

Loss rate: 1.57%

Run 5: Report of Sprout — Data Link



Run 1: Statistics of TaoVA-100x

Start at: 2019-04-24 08:35:41
End at: 2019-04-24 08:36:11
Local clock offset: -0.018 ms
Remote clock offset: -0.438 ms

Below is generated by plot.py at 2019-04-24 14:08:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 461.63 Mbit/s
95th percentile per-packet one-way delay: 63.987 ms
Loss rate: 0.56%

-- Flow 1:

Average throughput: 231.96 Mbit/s
95th percentile per-packet one-way delay: 63.262 ms
Loss rate: 0.39%

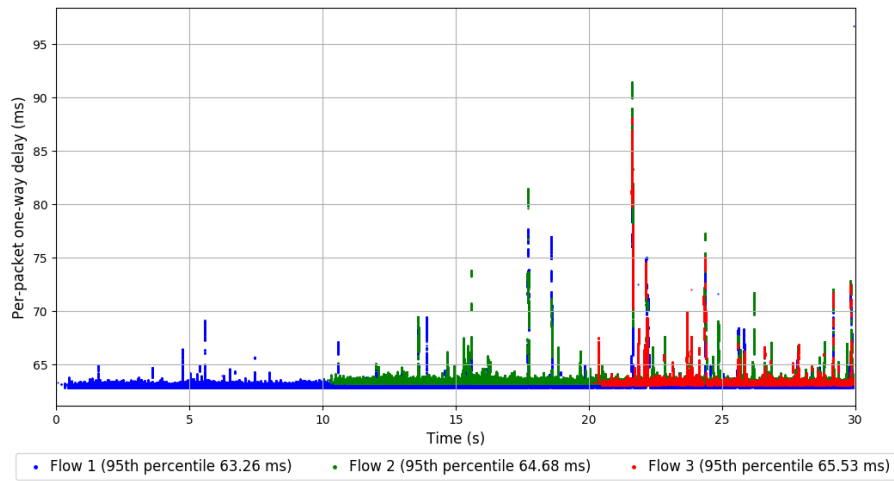
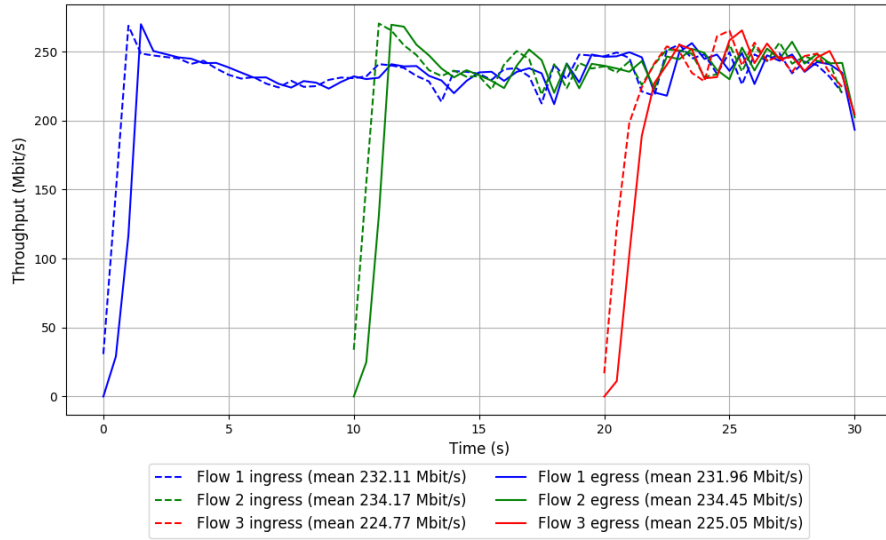
-- Flow 2:

Average throughput: 234.45 Mbit/s
95th percentile per-packet one-way delay: 64.679 ms
Loss rate: 0.52%

-- Flow 3:

Average throughput: 225.05 Mbit/s
95th percentile per-packet one-way delay: 65.528 ms
Loss rate: 1.16%

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-04-24 09:11:36
End at: 2019-04-24 09:12:06
Local clock offset: -0.037 ms
Remote clock offset: -0.561 ms

Below is generated by plot.py at 2019-04-24 14:08:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 457.86 Mbit/s
95th percentile per-packet one-way delay: 64.792 ms
Loss rate: 0.72%

-- Flow 1:

Average throughput: 233.95 Mbit/s
95th percentile per-packet one-way delay: 64.697 ms
Loss rate: 0.43%

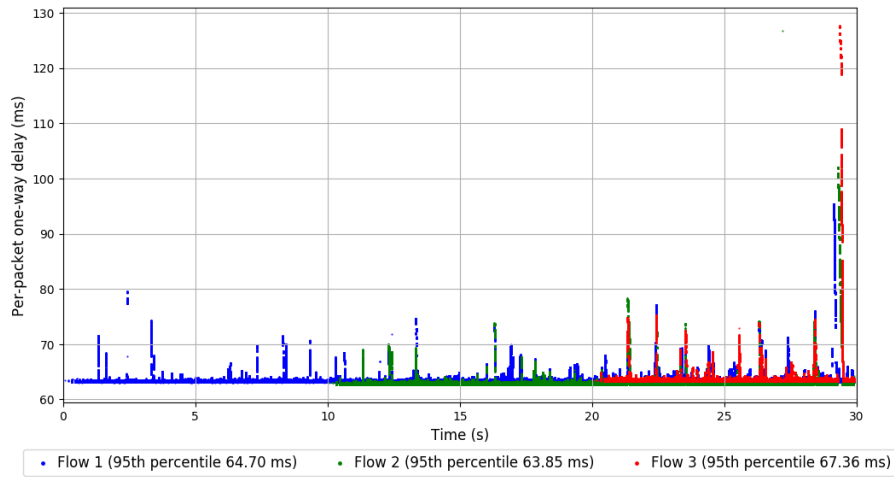
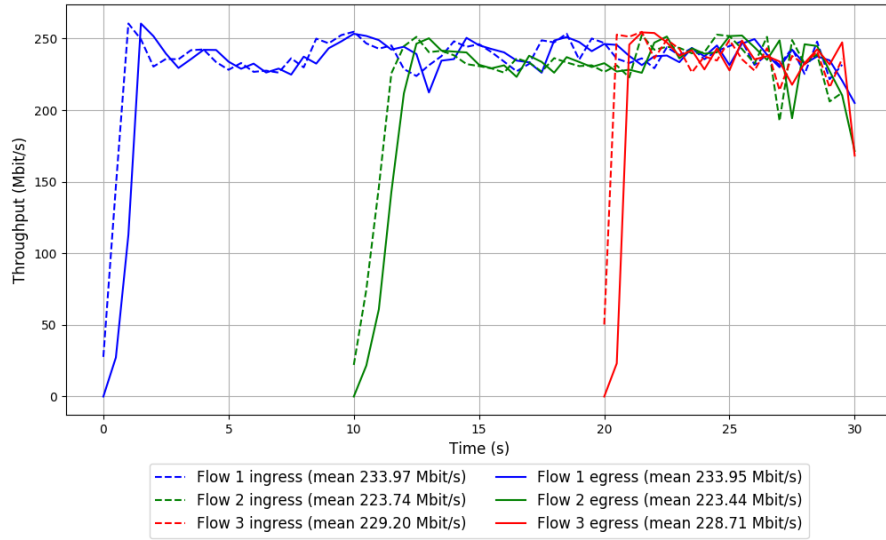
-- Flow 2:

Average throughput: 223.44 Mbit/s
95th percentile per-packet one-way delay: 63.849 ms
Loss rate: 0.76%

-- Flow 3:

Average throughput: 228.71 Mbit/s
95th percentile per-packet one-way delay: 67.359 ms
Loss rate: 1.49%

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



Run 3: Statistics of TaoVA-100x

Start at: 2019-04-24 09:47:53

End at: 2019-04-24 09:48:23

Local clock offset: -0.054 ms

Remote clock offset: -0.65 ms

Below is generated by plot.py at 2019-04-24 14:08:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.97 Mbit/s

95th percentile per-packet one-way delay: 64.629 ms

Loss rate: 0.70%

-- Flow 1:

Average throughput: 227.80 Mbit/s

95th percentile per-packet one-way delay: 64.615 ms

Loss rate: 0.46%

-- Flow 2:

Average throughput: 218.07 Mbit/s

95th percentile per-packet one-way delay: 64.016 ms

Loss rate: 0.72%

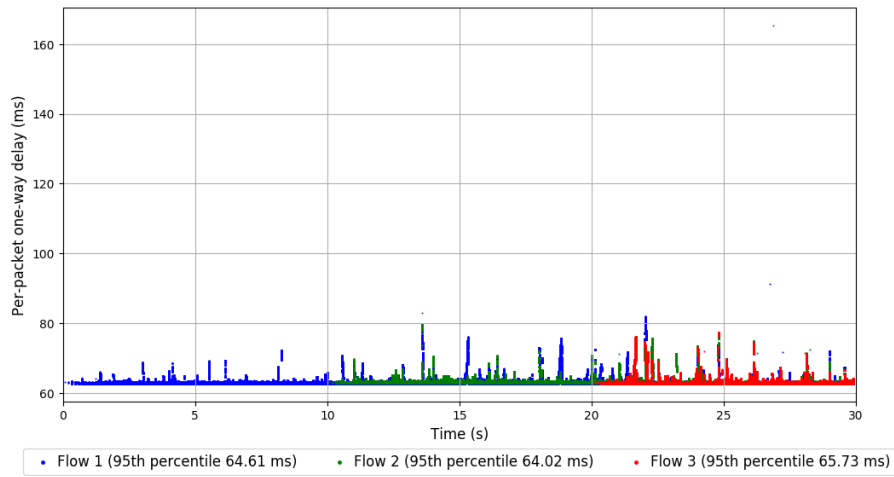
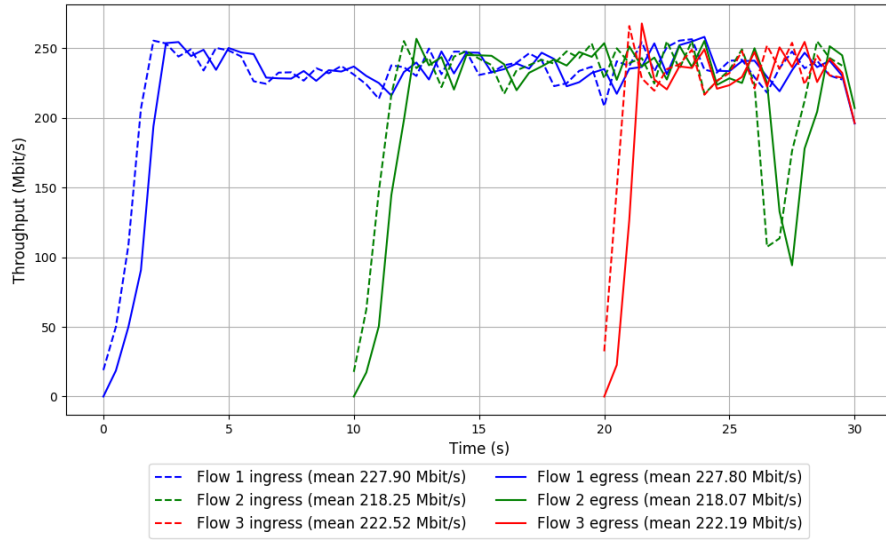
-- Flow 3:

Average throughput: 222.19 Mbit/s

95th percentile per-packet one-way delay: 65.732 ms

Loss rate: 1.41%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-04-24 10:24:09
End at: 2019-04-24 10:24:39
Local clock offset: -0.053 ms
Remote clock offset: -0.289 ms

Below is generated by plot.py at 2019-04-24 14:08:49

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.90 Mbit/s
95th percentile per-packet one-way delay: 66.179 ms
Loss rate: 0.69%

-- Flow 1:

Average throughput: 229.95 Mbit/s
95th percentile per-packet one-way delay: 63.826 ms
Loss rate: 0.43%

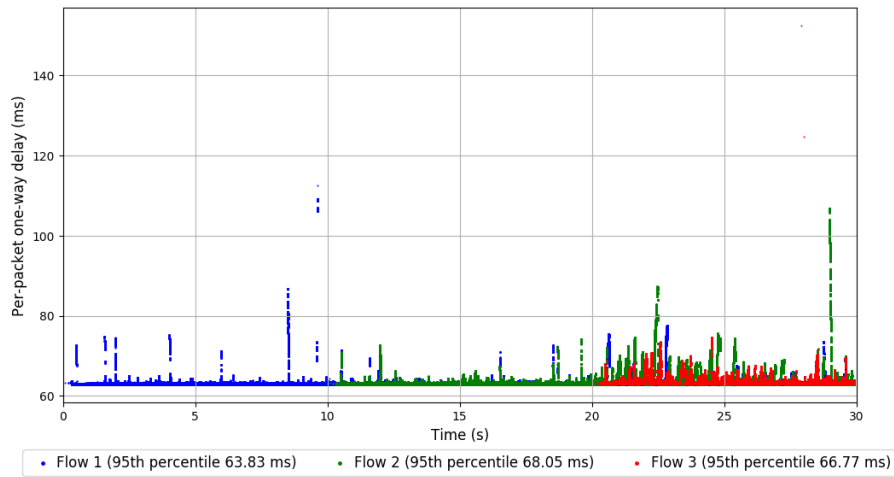
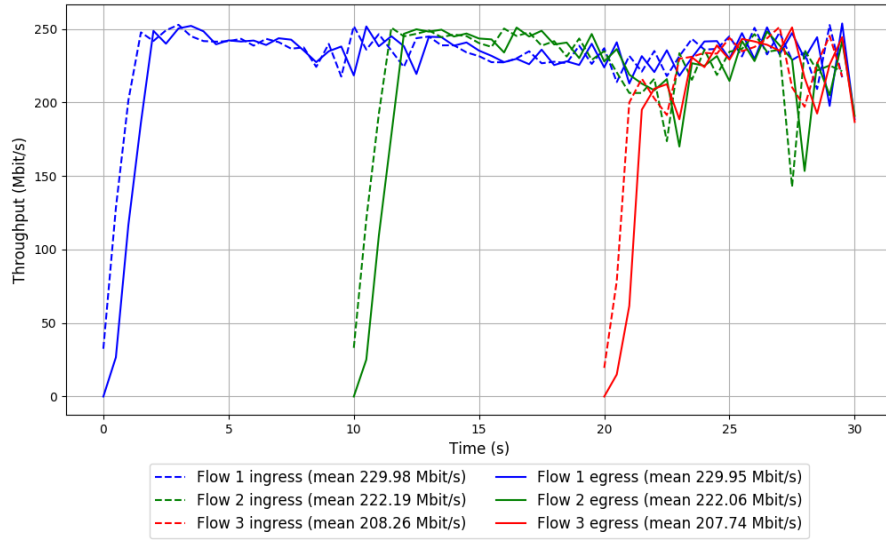
-- Flow 2:

Average throughput: 222.06 Mbit/s
95th percentile per-packet one-way delay: 68.047 ms
Loss rate: 0.70%

-- Flow 3:

Average throughput: 207.74 Mbit/s
95th percentile per-packet one-way delay: 66.770 ms
Loss rate: 1.52%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-04-24 11:00:27
End at: 2019-04-24 11:00:57
Local clock offset: -0.037 ms
Remote clock offset: -0.104 ms

Below is generated by plot.py at 2019-04-24 14:08:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 445.70 Mbit/s
95th percentile per-packet one-way delay: 64.284 ms
Loss rate: 0.71%

-- Flow 1:

Average throughput: 223.41 Mbit/s
95th percentile per-packet one-way delay: 63.979 ms
Loss rate: 0.47%

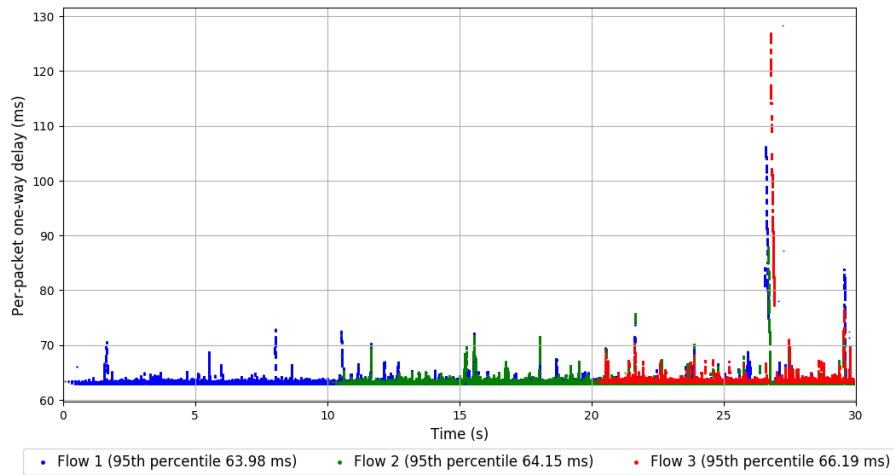
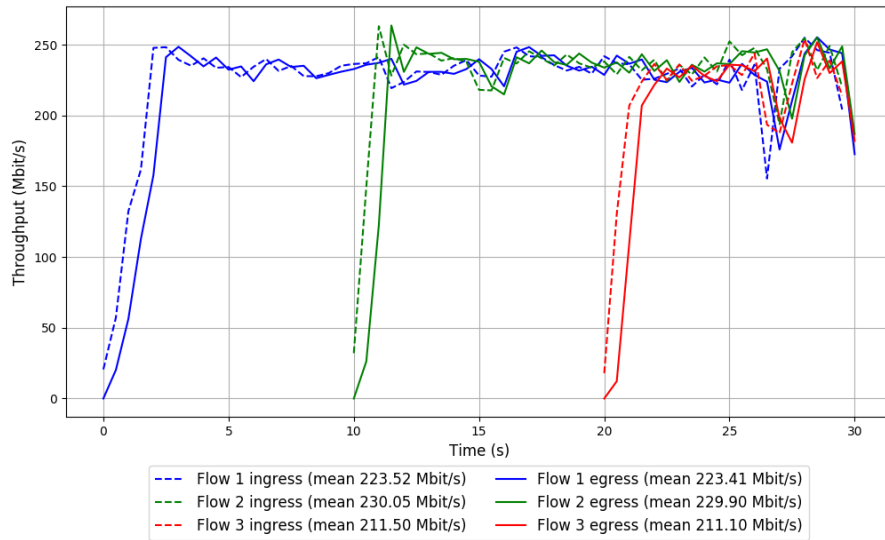
-- Flow 2:

Average throughput: 229.90 Mbit/s
95th percentile per-packet one-way delay: 64.148 ms
Loss rate: 0.70%

-- Flow 3:

Average throughput: 211.10 Mbit/s
95th percentile per-packet one-way delay: 66.195 ms
Loss rate: 1.46%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-04-24 08:52:57

End at: 2019-04-24 08:53:27

Local clock offset: -0.018 ms

Remote clock offset: -0.64 ms

Below is generated by plot.py at 2019-04-24 14:08:54

Datalink statistics

-- Total of 3 flows:

Average throughput: 642.95 Mbit/s

95th percentile per-packet one-way delay: 72.274 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 292.73 Mbit/s

95th percentile per-packet one-way delay: 65.203 ms

Loss rate: 0.31%

-- Flow 2:

Average throughput: 331.07 Mbit/s

95th percentile per-packet one-way delay: 71.818 ms

Loss rate: 0.44%

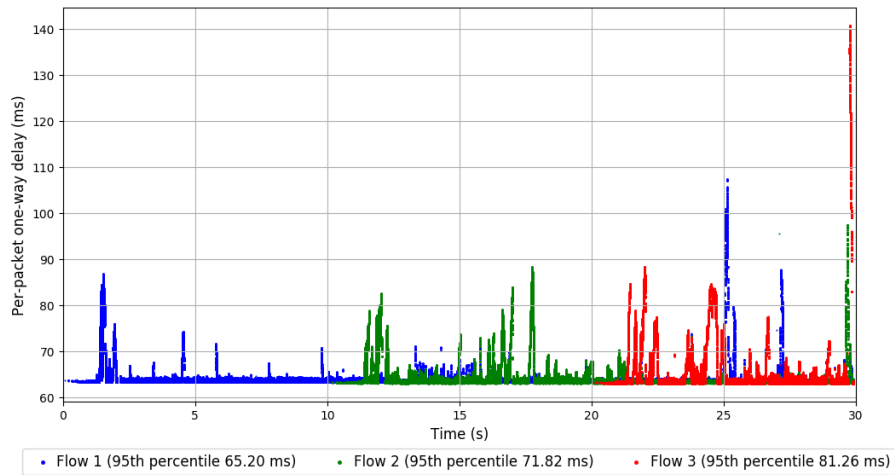
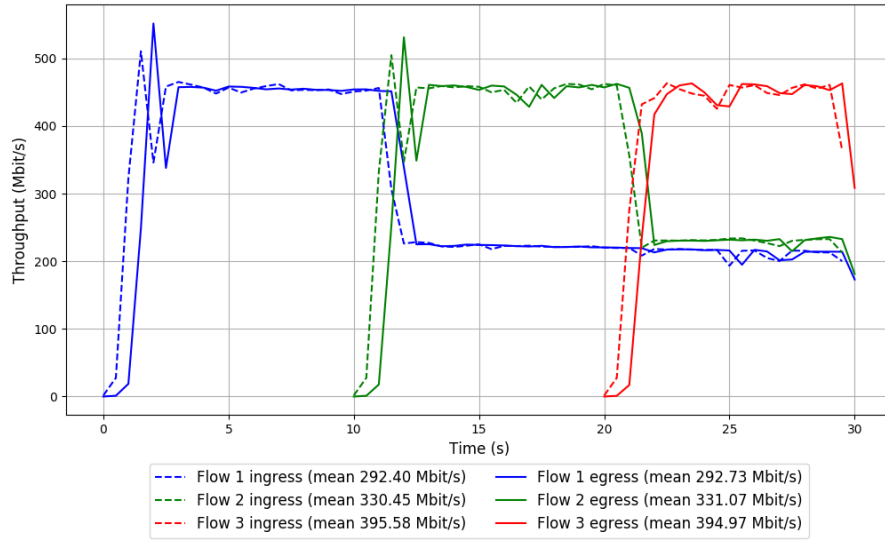
-- Flow 3:

Average throughput: 394.97 Mbit/s

95th percentile per-packet one-way delay: 81.258 ms

Loss rate: 1.43%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-04-24 09:28:53
End at: 2019-04-24 09:29:23
Local clock offset: -0.067 ms
Remote clock offset: -0.434 ms

Below is generated by plot.py at 2019-04-24 14:19:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 841.80 Mbit/s
95th percentile per-packet one-way delay: 80.264 ms
Loss rate: 0.57%

-- Flow 1:

Average throughput: 422.09 Mbit/s
95th percentile per-packet one-way delay: 74.963 ms
Loss rate: 0.22%

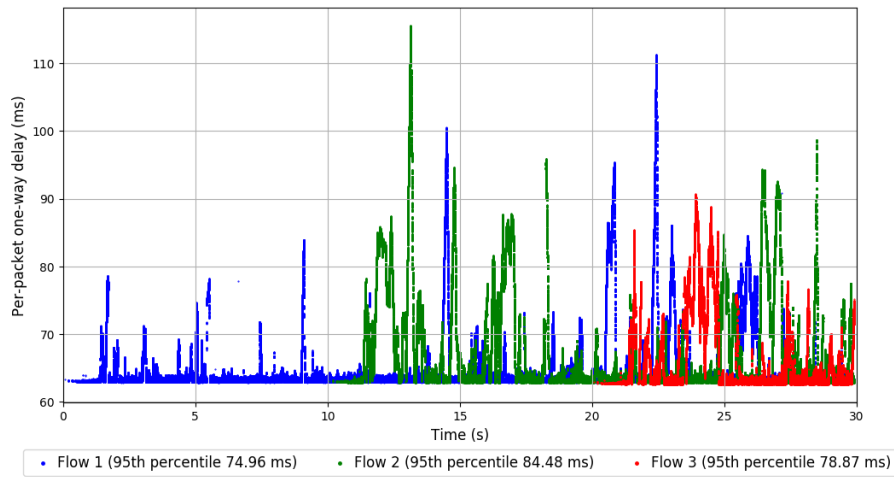
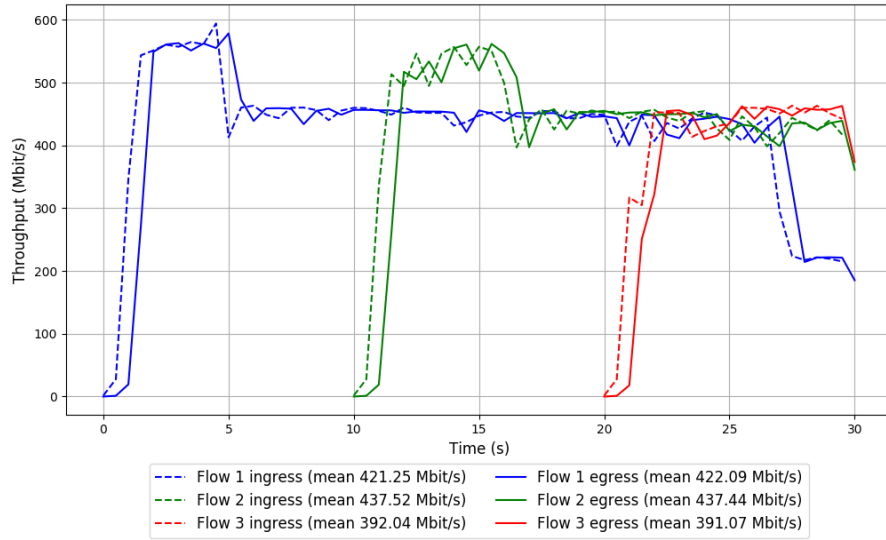
-- Flow 2:

Average throughput: 437.44 Mbit/s
95th percentile per-packet one-way delay: 84.482 ms
Loss rate: 0.65%

-- Flow 3:

Average throughput: 391.07 Mbit/s
95th percentile per-packet one-way delay: 78.872 ms
Loss rate: 1.50%

Run 2: Report of TCP Vegas — Data Link



Run 3: Statistics of TCP Vegas

Start at: 2019-04-24 10:05:23
End at: 2019-04-24 10:05:53
Local clock offset: -0.058 ms
Remote clock offset: -0.455 ms

Below is generated by plot.py at 2019-04-24 14:19:55

Datalink statistics

-- Total of 3 flows:

Average throughput: 655.05 Mbit/s
95th percentile per-packet one-way delay: 72.181 ms
Loss rate: 0.53%

-- Flow 1:

Average throughput: 359.93 Mbit/s
95th percentile per-packet one-way delay: 65.049 ms
Loss rate: 0.26%

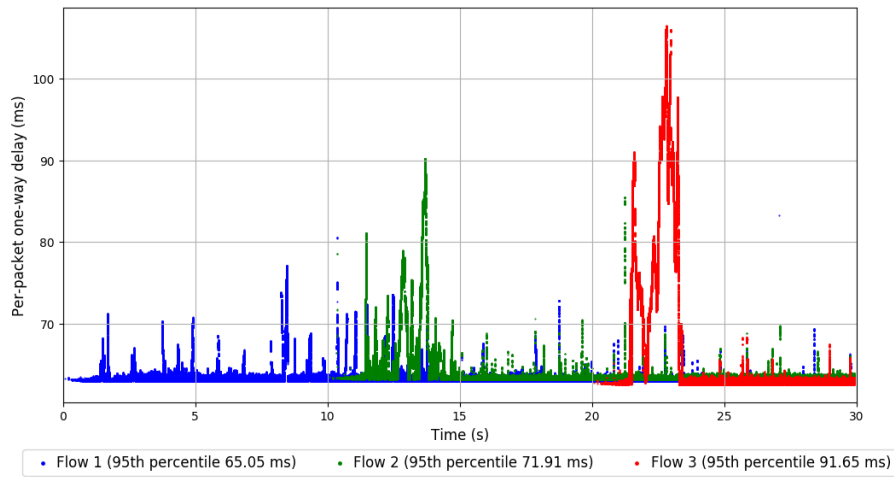
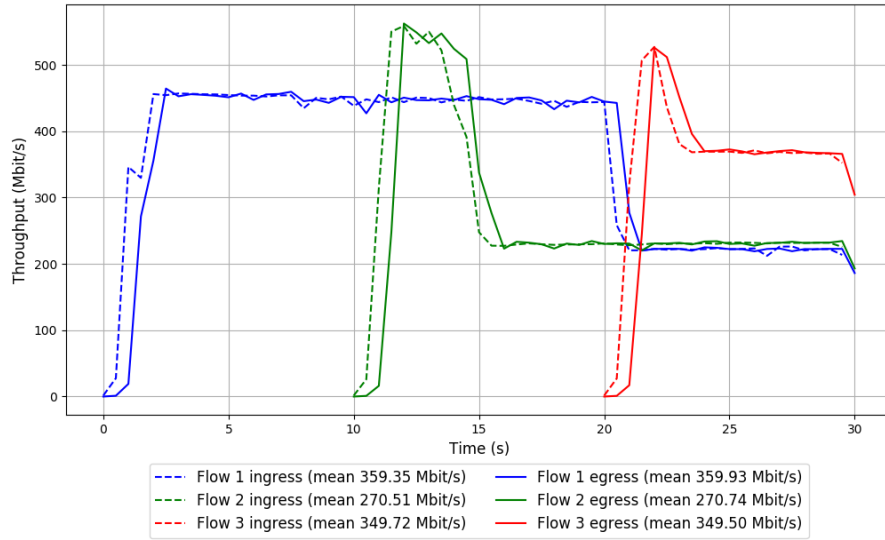
-- Flow 2:

Average throughput: 270.74 Mbit/s
95th percentile per-packet one-way delay: 71.906 ms
Loss rate: 0.55%

-- Flow 3:

Average throughput: 349.50 Mbit/s
95th percentile per-packet one-way delay: 91.648 ms
Loss rate: 1.33%

Run 3: Report of TCP Vegas — Data Link



Run 4: Statistics of TCP Vegas

Start at: 2019-04-24 10:41:44

End at: 2019-04-24 10:42:14

Local clock offset: -0.045 ms

Remote clock offset: 0.068 ms

Below is generated by plot.py at 2019-04-24 14:20:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 754.66 Mbit/s

95th percentile per-packet one-way delay: 88.916 ms

Loss rate: 0.62%

-- Flow 1:

Average throughput: 385.66 Mbit/s

95th percentile per-packet one-way delay: 84.073 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 353.06 Mbit/s

95th percentile per-packet one-way delay: 68.000 ms

Loss rate: 0.52%

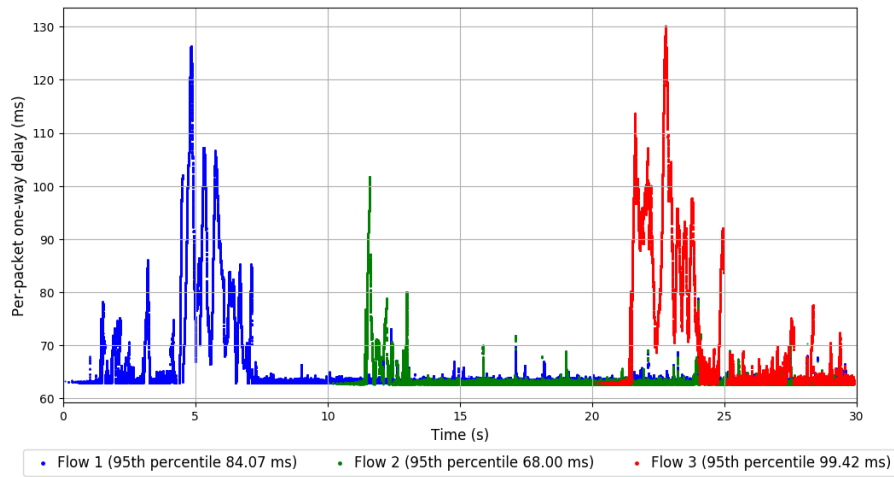
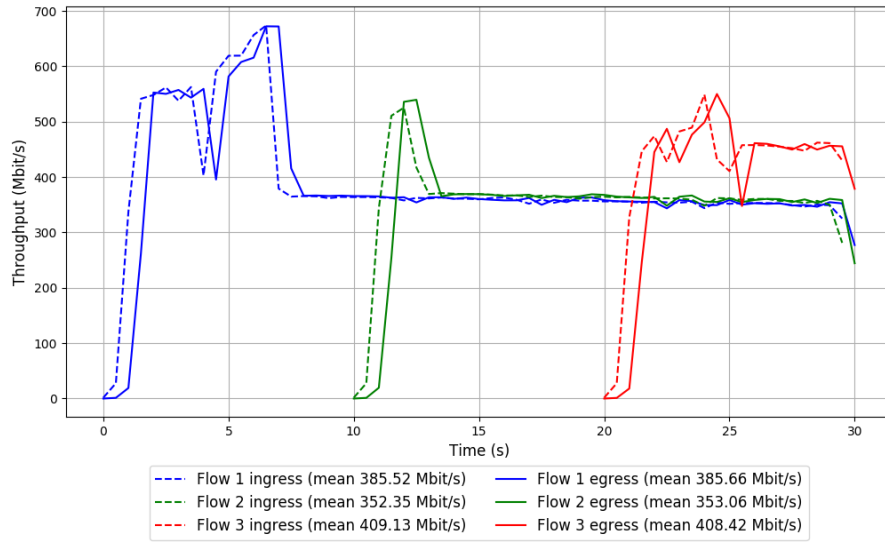
-- Flow 3:

Average throughput: 408.42 Mbit/s

95th percentile per-packet one-way delay: 99.417 ms

Loss rate: 1.44%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-04-24 11:17:55

End at: 2019-04-24 11:18:25

Local clock offset: -0.062 ms

Remote clock offset: 0.059 ms

Below is generated by plot.py at 2019-04-24 14:22:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 758.52 Mbit/s

95th percentile per-packet one-way delay: 77.396 ms

Loss rate: 0.69%

-- Flow 1:

Average throughput: 339.91 Mbit/s

95th percentile per-packet one-way delay: 63.381 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 440.95 Mbit/s

95th percentile per-packet one-way delay: 83.372 ms

Loss rate: 0.65%

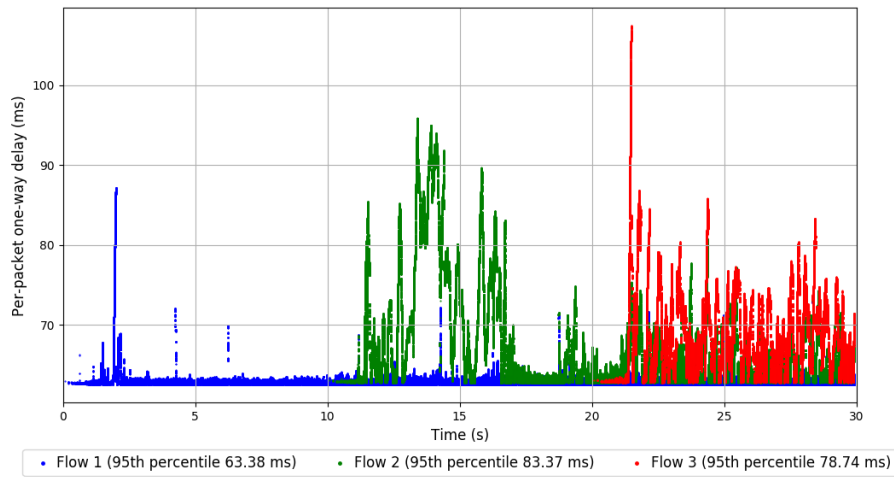
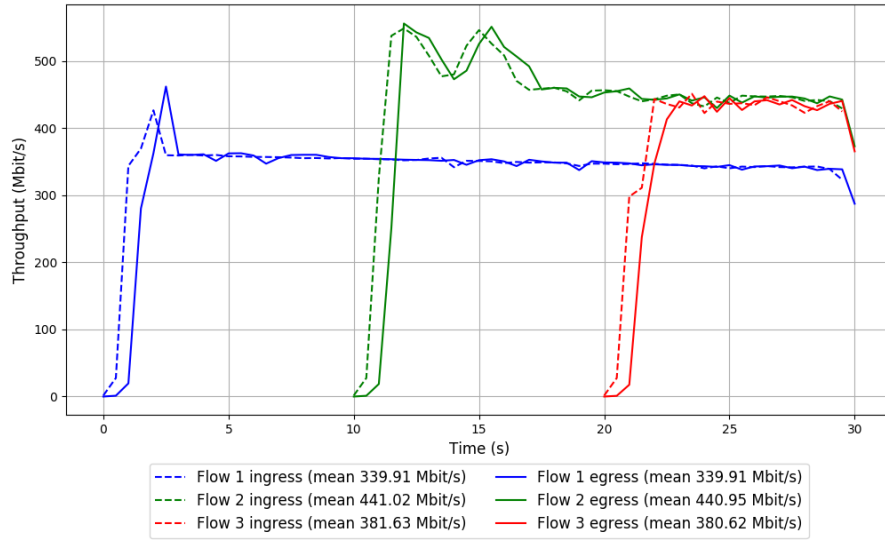
-- Flow 3:

Average throughput: 380.62 Mbit/s

95th percentile per-packet one-way delay: 78.742 ms

Loss rate: 1.52%

Run 5: Report of TCP Vegas — Data Link

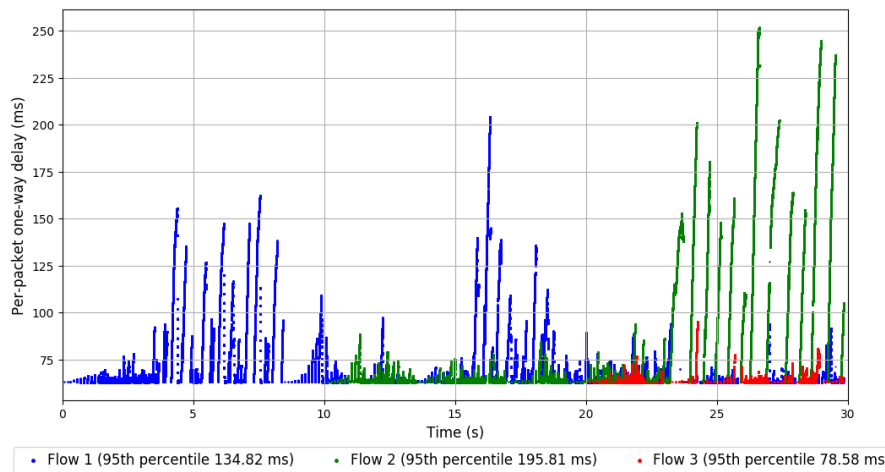
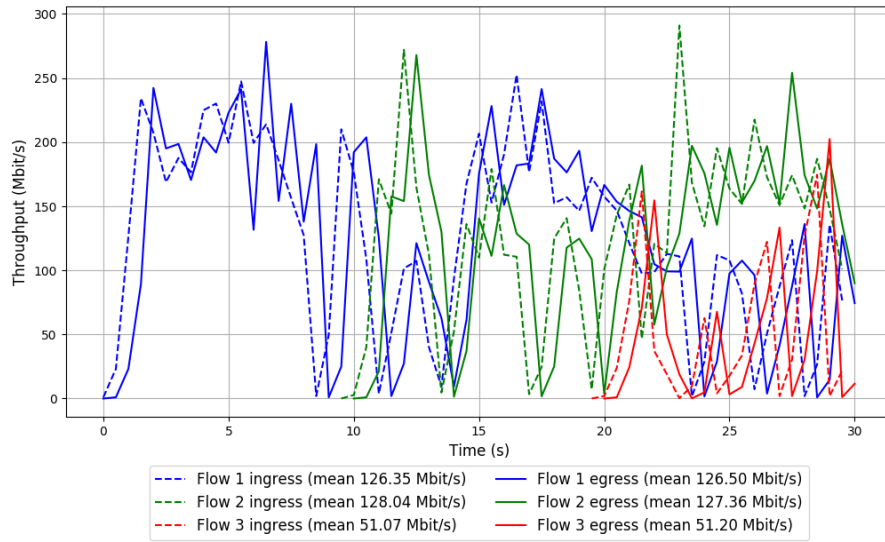


Run 1: Statistics of Verus

Start at: 2019-04-24 08:40:55
End at: 2019-04-24 08:41:25
Local clock offset: -0.023 ms
Remote clock offset: -0.425 ms

```
# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 228.20 Mbit/s
95th percentile per-packet one-way delay: 159.724 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 126.50 Mbit/s
95th percentile per-packet one-way delay: 134.820 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 127.36 Mbit/s
95th percentile per-packet one-way delay: 195.810 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 51.20 Mbit/s
95th percentile per-packet one-way delay: 78.575 ms
Loss rate: 1.09%
```

Run 1: Report of Verus — Data Link

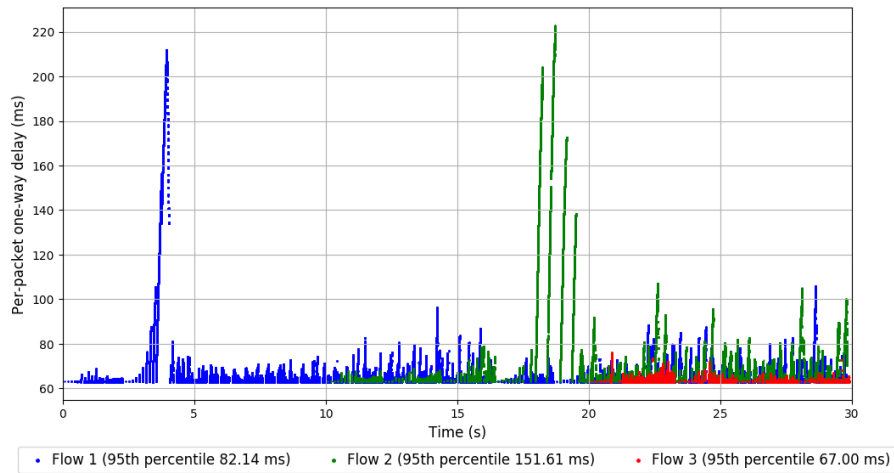
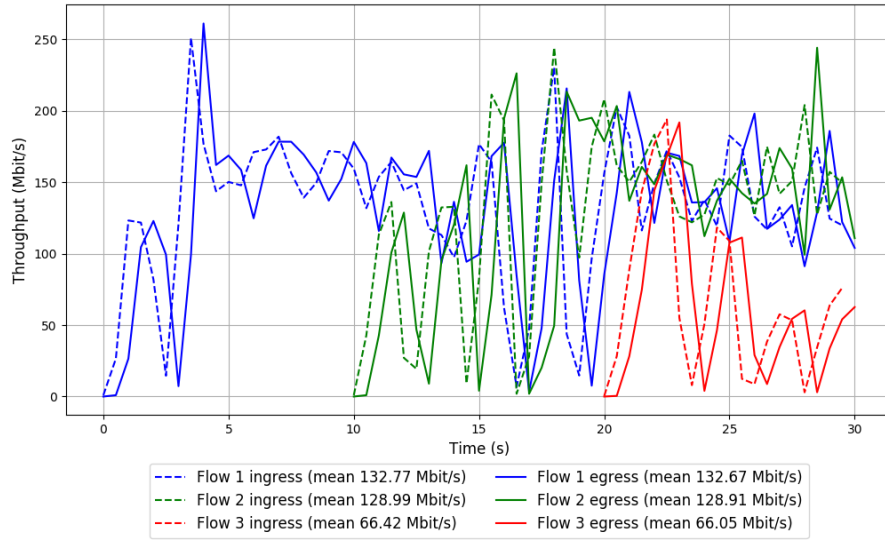


Run 2: Statistics of Verus

Start at: 2019-04-24 09:16:46
End at: 2019-04-24 09:17:16
Local clock offset: -0.034 ms
Remote clock offset: -0.463 ms

```
# Below is generated by plot.py at 2019-04-24 14:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.74 Mbit/s
95th percentile per-packet one-way delay: 101.337 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 132.67 Mbit/s
95th percentile per-packet one-way delay: 82.145 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 128.91 Mbit/s
95th percentile per-packet one-way delay: 151.614 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 66.999 ms
Loss rate: 1.80%
```

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-04-24 09:53:03

End at: 2019-04-24 09:53:33

Local clock offset: -0.077 ms

Remote clock offset: -0.63 ms

Below is generated by plot.py at 2019-04-24 14:22:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 251.35 Mbit/s

95th percentile per-packet one-way delay: 158.246 ms

Loss rate: 0.90%

-- Flow 1:

Average throughput: 140.42 Mbit/s

95th percentile per-packet one-way delay: 157.270 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 138.65 Mbit/s

95th percentile per-packet one-way delay: 166.813 ms

Loss rate: 0.97%

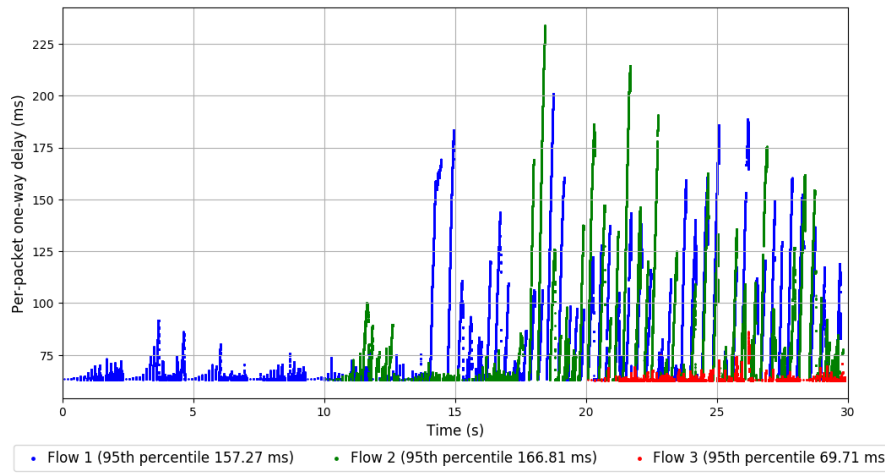
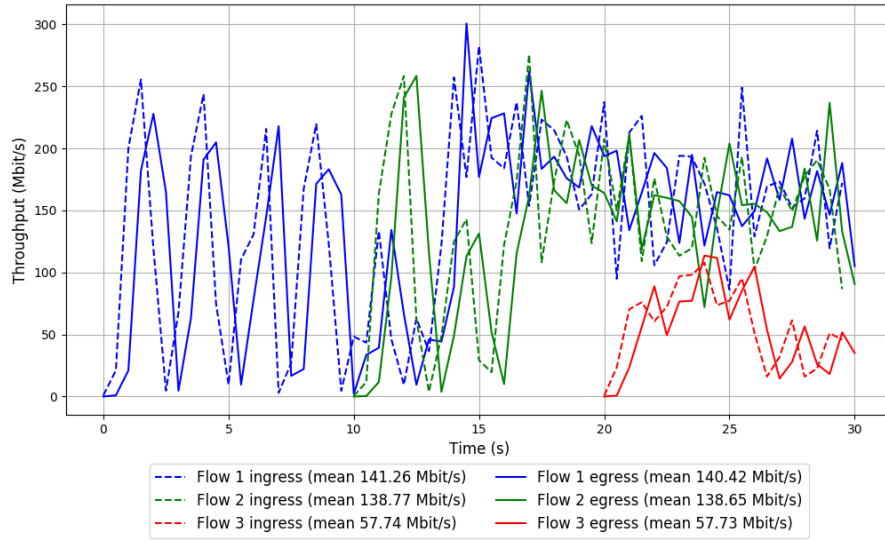
-- Flow 3:

Average throughput: 57.73 Mbit/s

95th percentile per-packet one-way delay: 69.707 ms

Loss rate: 1.33%

Run 3: Report of Verus — Data Link



Run 4: Statistics of Verus

Start at: 2019-04-24 10:29:28

End at: 2019-04-24 10:29:58

Local clock offset: -0.018 ms

Remote clock offset: 0.536 ms

Below is generated by plot.py at 2019-04-24 14:22:34

Datalink statistics

-- Total of 3 flows:

Average throughput: 287.21 Mbit/s

95th percentile per-packet one-way delay: 154.172 ms

Loss rate: 0.99%

-- Flow 1:

Average throughput: 143.70 Mbit/s

95th percentile per-packet one-way delay: 116.458 ms

Loss rate: 0.45%

-- Flow 2:

Average throughput: 170.99 Mbit/s

95th percentile per-packet one-way delay: 170.225 ms

Loss rate: 1.16%

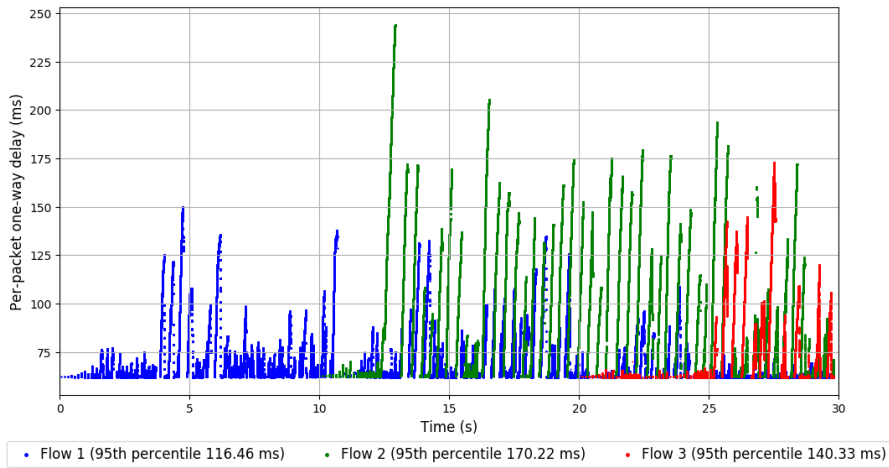
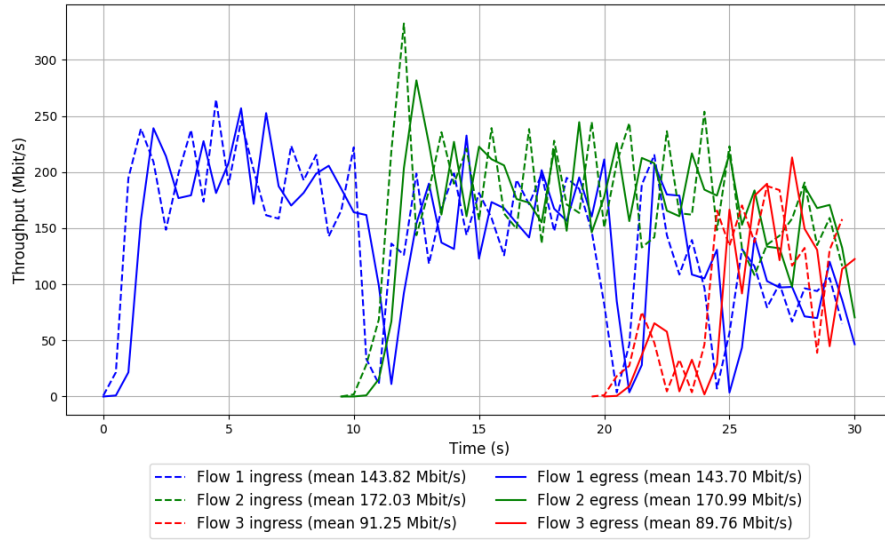
-- Flow 3:

Average throughput: 89.76 Mbit/s

95th percentile per-packet one-way delay: 140.333 ms

Loss rate: 2.90%

Run 4: Report of Verus — Data Link

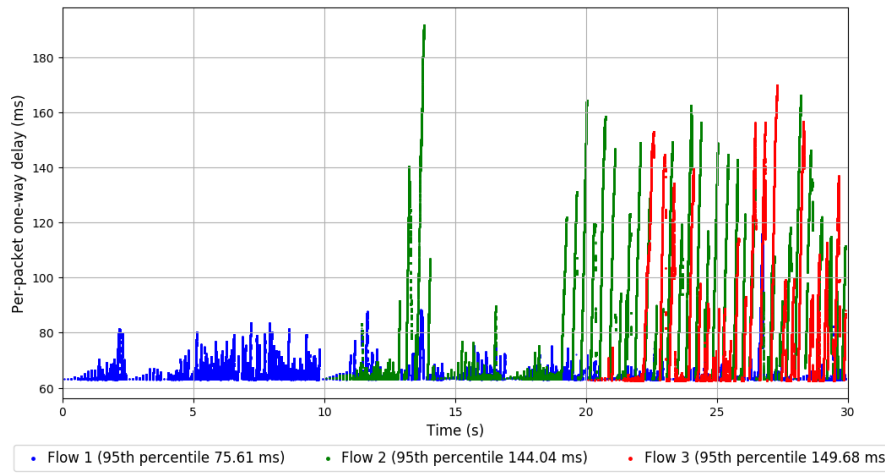
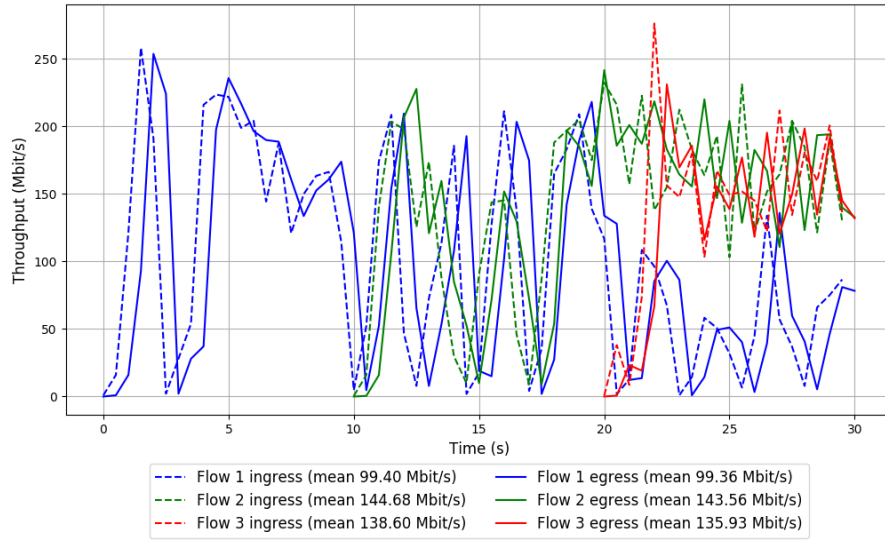


Run 5: Statistics of Verus

Start at: 2019-04-24 11:05:44
End at: 2019-04-24 11:06:14
Local clock offset: -0.053 ms
Remote clock offset: -0.138 ms

```
# Below is generated by plot.py at 2019-04-24 14:24:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 239.47 Mbit/s
95th percentile per-packet one-way delay: 139.309 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 99.36 Mbit/s
95th percentile per-packet one-way delay: 75.613 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 143.56 Mbit/s
95th percentile per-packet one-way delay: 144.041 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 135.93 Mbit/s
95th percentile per-packet one-way delay: 149.680 ms
Loss rate: 2.71%
```

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-04-24 08:49:21
End at: 2019-04-24 08:49:51
Local clock offset: -0.052 ms
Remote clock offset: -0.486 ms

Below is generated by plot.py at 2019-04-24 14:25:23

Datalink statistics

-- Total of 3 flows:

Average throughput: 481.54 Mbit/s
95th percentile per-packet one-way delay: 65.263 ms
Loss rate: 0.76%

-- Flow 1:

Average throughput: 284.62 Mbit/s
95th percentile per-packet one-way delay: 65.963 ms
Loss rate: 0.52%

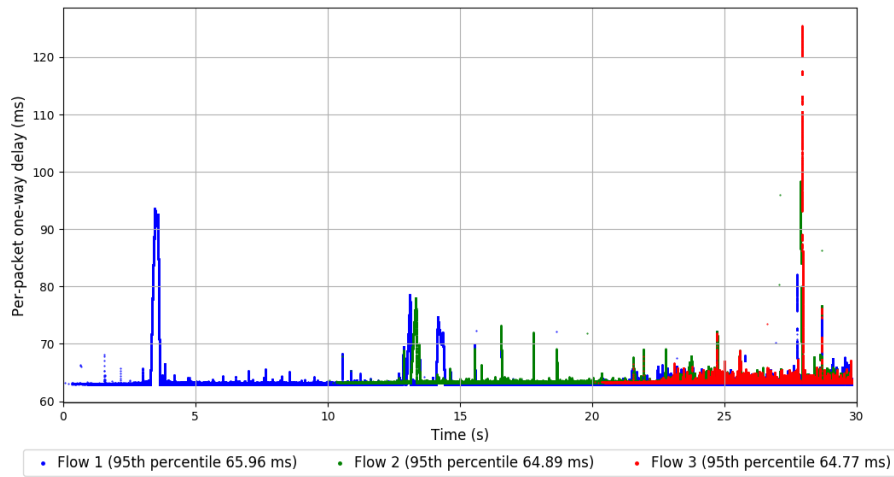
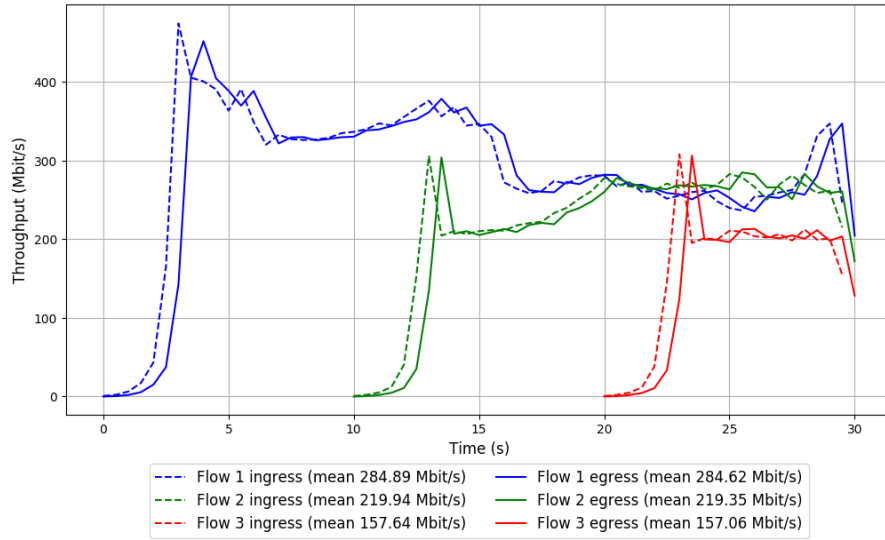
-- Flow 2:

Average throughput: 219.35 Mbit/s
95th percentile per-packet one-way delay: 64.890 ms
Loss rate: 0.90%

-- Flow 3:

Average throughput: 157.06 Mbit/s
95th percentile per-packet one-way delay: 64.774 ms
Loss rate: 1.65%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-04-24 09:25:19

End at: 2019-04-24 09:25:49

Local clock offset: -0.024 ms

Remote clock offset: -0.57 ms

Below is generated by plot.py at 2019-04-24 14:25:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 455.28 Mbit/s

95th percentile per-packet one-way delay: 65.393 ms

Loss rate: 0.58%

-- Flow 1:

Average throughput: 309.57 Mbit/s

95th percentile per-packet one-way delay: 65.468 ms

Loss rate: 0.48%

-- Flow 2:

Average throughput: 204.41 Mbit/s

95th percentile per-packet one-way delay: 65.452 ms

Loss rate: 0.65%

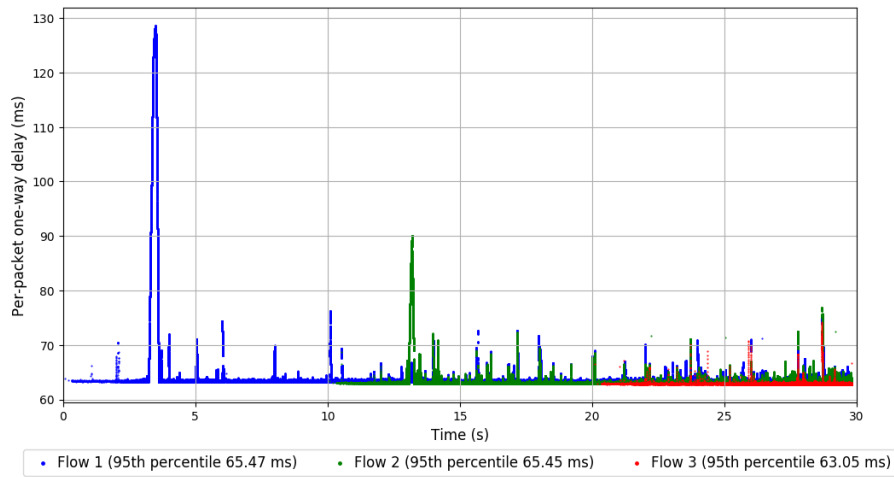
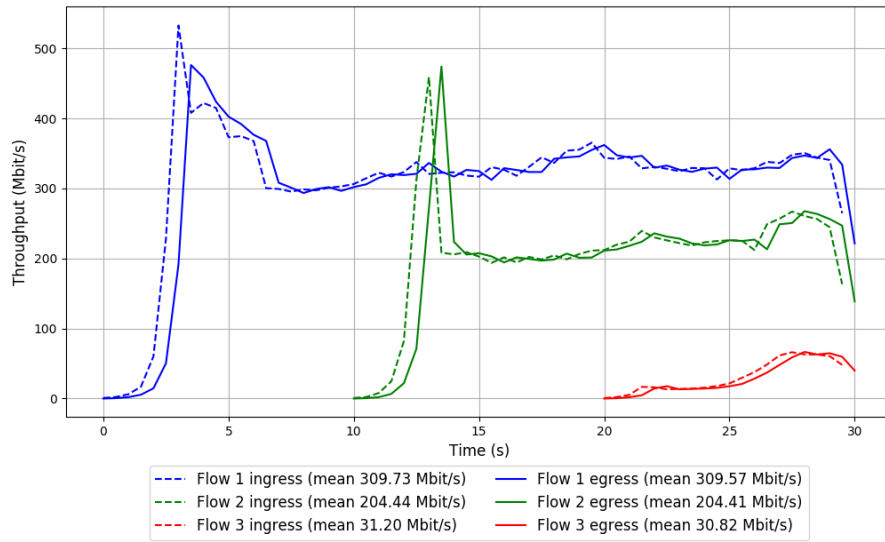
-- Flow 3:

Average throughput: 30.82 Mbit/s

95th percentile per-packet one-way delay: 63.055 ms

Loss rate: 2.50%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-04-24 10:01:43
End at: 2019-04-24 10:02:13
Local clock offset: -0.038 ms
Remote clock offset: -0.538 ms

Below is generated by plot.py at 2019-04-24 14:25:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 510.73 Mbit/s
95th percentile per-packet one-way delay: 67.635 ms
Loss rate: 0.58%

-- Flow 1:

Average throughput: 308.00 Mbit/s
95th percentile per-packet one-way delay: 65.337 ms
Loss rate: 0.32%

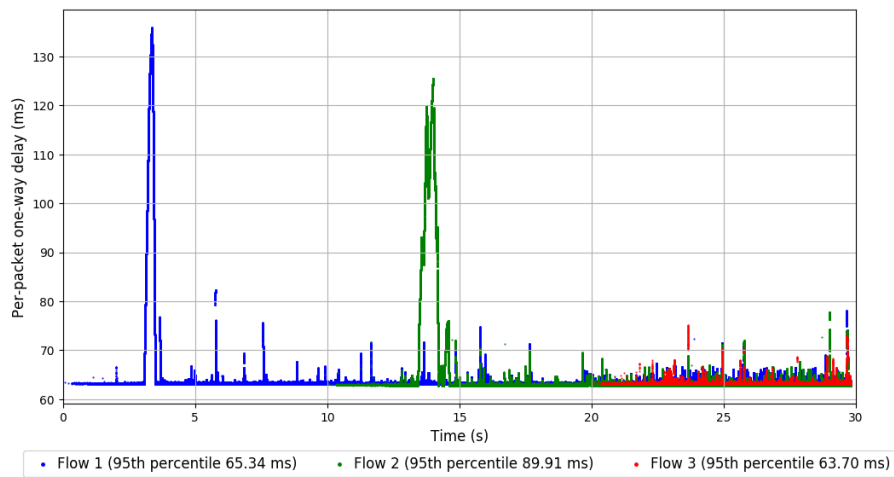
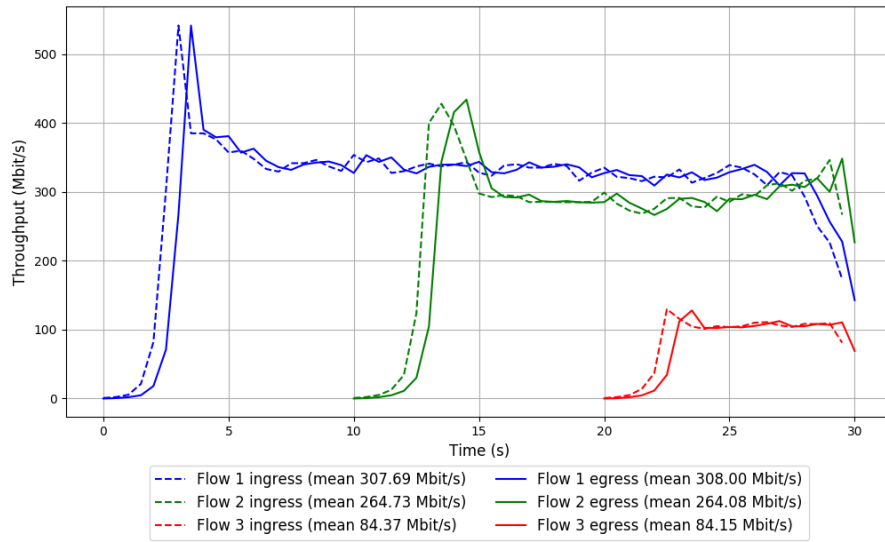
-- Flow 2:

Average throughput: 264.08 Mbit/s
95th percentile per-packet one-way delay: 89.914 ms
Loss rate: 0.88%

-- Flow 3:

Average throughput: 84.15 Mbit/s
95th percentile per-packet one-way delay: 63.698 ms
Loss rate: 1.54%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-04-24 10:38:05

End at: 2019-04-24 10:38:35

Local clock offset: -0.043 ms

Remote clock offset: -0.73 ms

Below is generated by plot.py at 2019-04-24 14:25:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 503.48 Mbit/s

95th percentile per-packet one-way delay: 79.450 ms

Loss rate: 0.61%

-- Flow 1:

Average throughput: 321.84 Mbit/s

95th percentile per-packet one-way delay: 81.675 ms

Loss rate: 0.42%

-- Flow 2:

Average throughput: 232.75 Mbit/s

95th percentile per-packet one-way delay: 67.133 ms

Loss rate: 0.81%

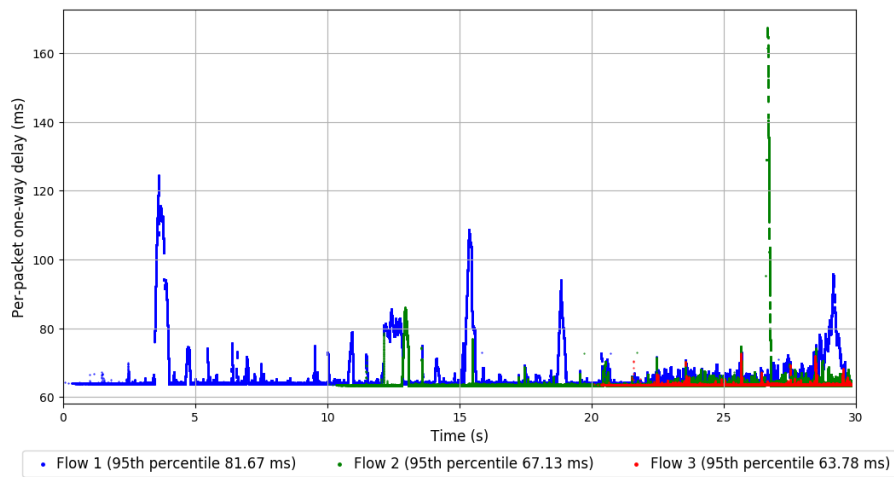
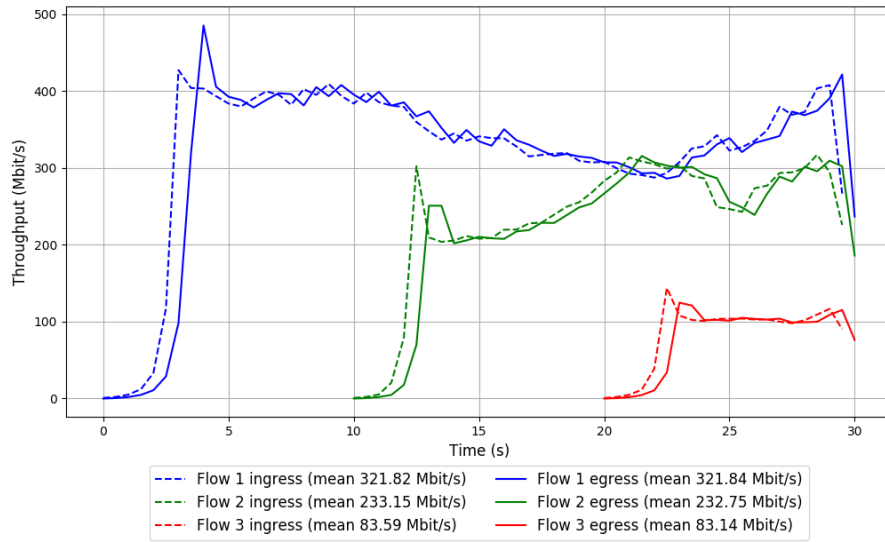
-- Flow 3:

Average throughput: 83.14 Mbit/s

95th percentile per-packet one-way delay: 63.779 ms

Loss rate: 1.81%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-04-24 11:14:24

End at: 2019-04-24 11:14:54

Local clock offset: -0.069 ms

Remote clock offset: 0.654 ms

Below is generated by plot.py at 2019-04-24 14:25:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 389.62 Mbit/s

95th percentile per-packet one-way delay: 64.252 ms

Loss rate: 0.64%

-- Flow 1:

Average throughput: 232.04 Mbit/s

95th percentile per-packet one-way delay: 64.885 ms

Loss rate: 0.53%

-- Flow 2:

Average throughput: 196.27 Mbit/s

95th percentile per-packet one-way delay: 62.977 ms

Loss rate: 0.63%

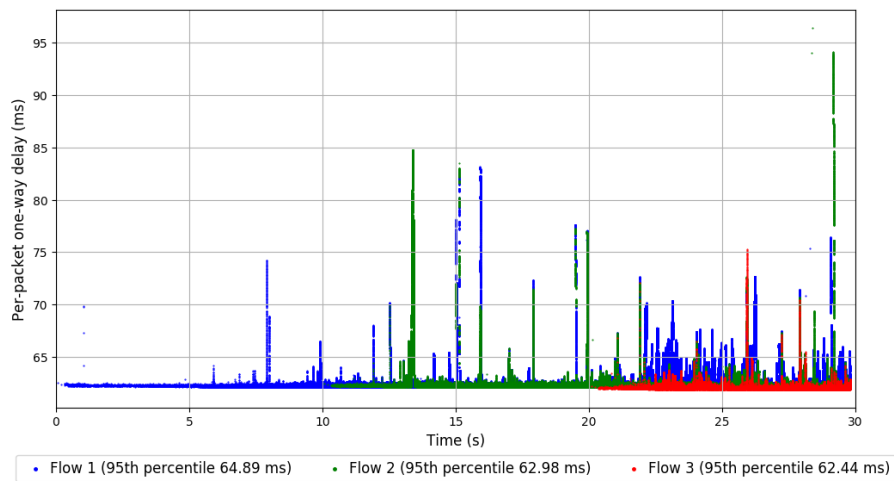
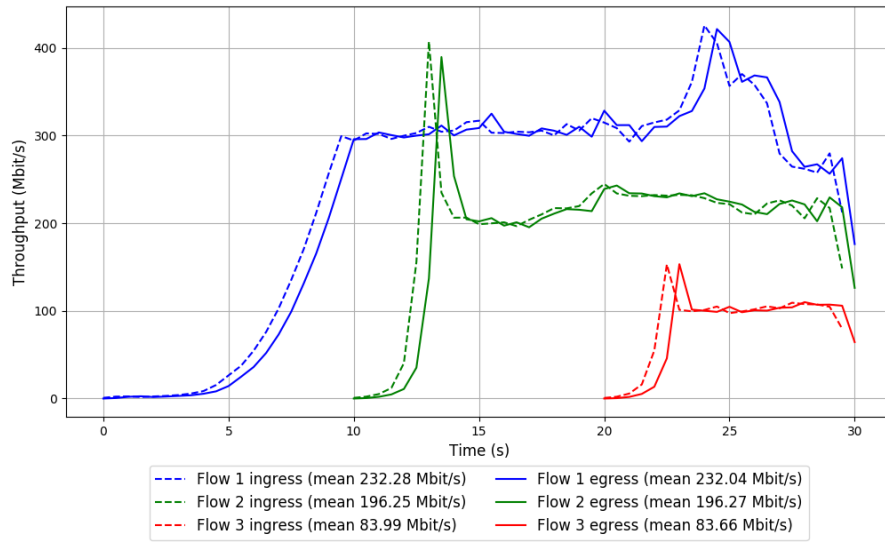
-- Flow 3:

Average throughput: 83.66 Mbit/s

95th percentile per-packet one-way delay: 62.437 ms

Loss rate: 1.68%

Run 5: Report of PCC-Vivace — Data Link



Run 1: Statistics of WebRTC media

Start at: 2019-04-24 08:34:29
End at: 2019-04-24 08:34:59
Local clock offset: -0.021 ms
Remote clock offset: -0.514 ms

Below is generated by plot.py at 2019-04-24 14:25:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 63.360 ms
Loss rate: 0.75%

-- Flow 1:

Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 63.305 ms
Loss rate: 0.80%

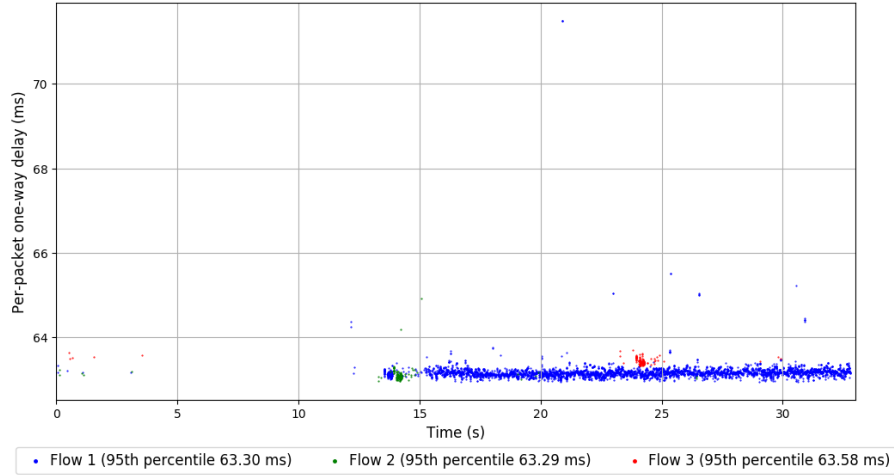
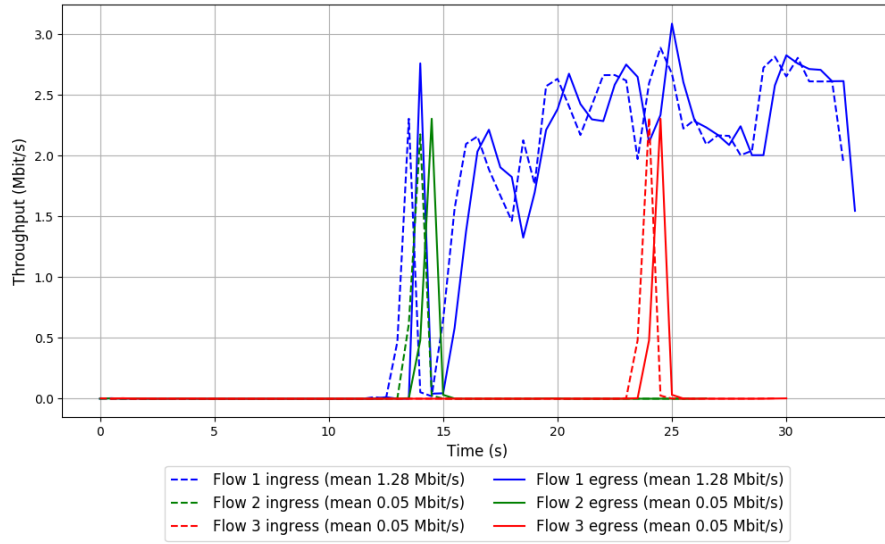
-- Flow 2:

Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.287 ms
Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.581 ms
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-04-24 09:10:24

End at: 2019-04-24 09:10:54

Local clock offset: -0.03 ms

Remote clock offset: -0.6 ms

Below is generated by plot.py at 2019-04-24 14:25:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.598 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.265 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.327 ms

Loss rate: 0.00%

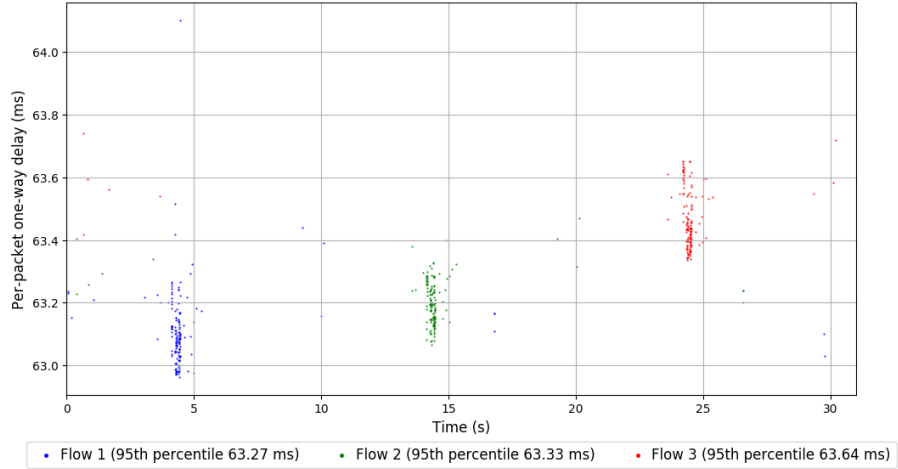
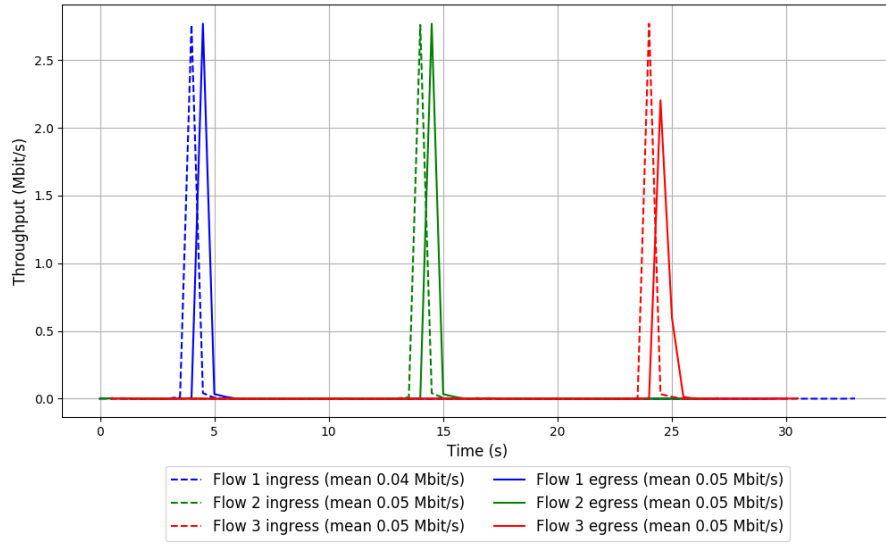
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.636 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-04-24 09:46:41
End at: 2019-04-24 09:47:11
Local clock offset: -0.065 ms
Remote clock offset: -0.386 ms

Below is generated by plot.py at 2019-04-24 14:25:58

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 63.322 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 62.974 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 63.376 ms

Loss rate: 0.00%

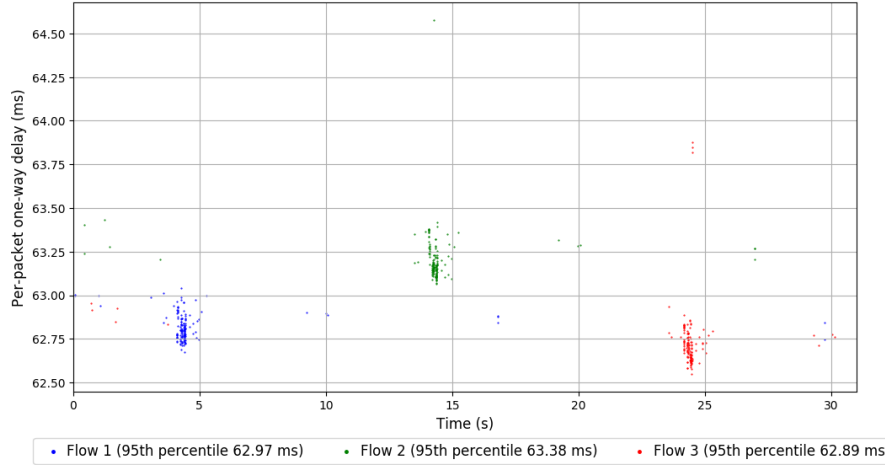
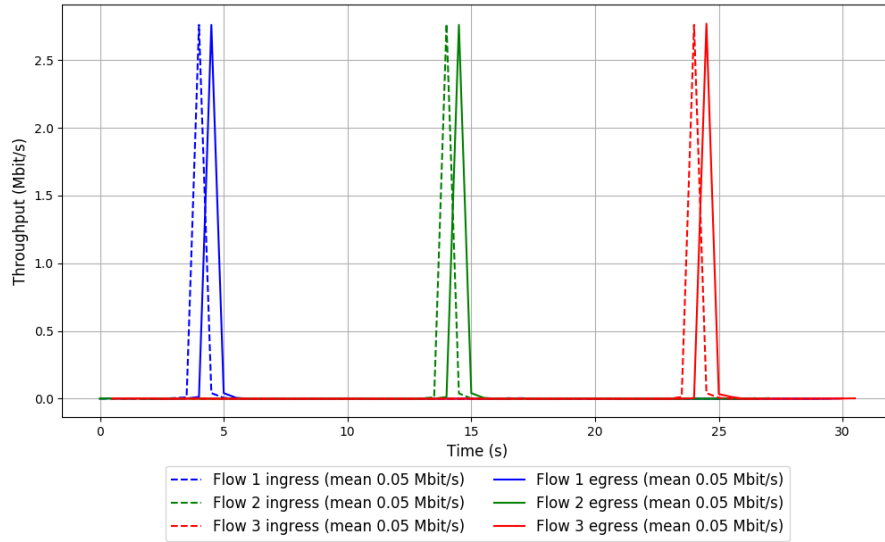
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 62.887 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

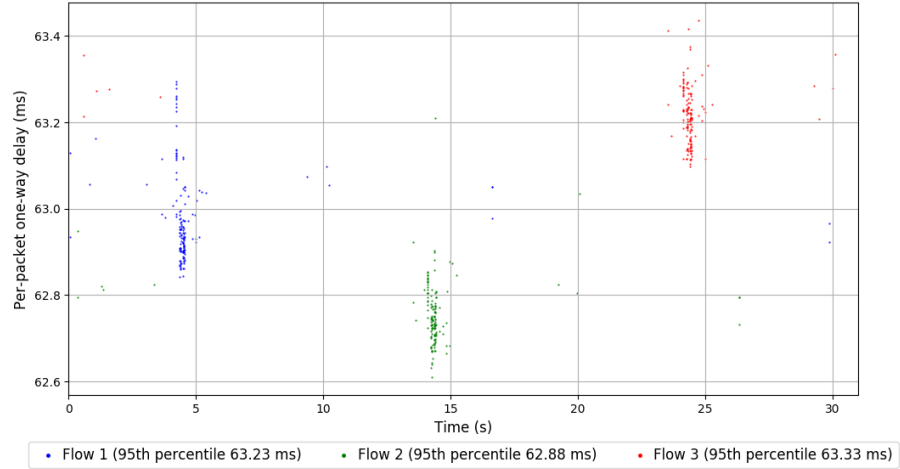
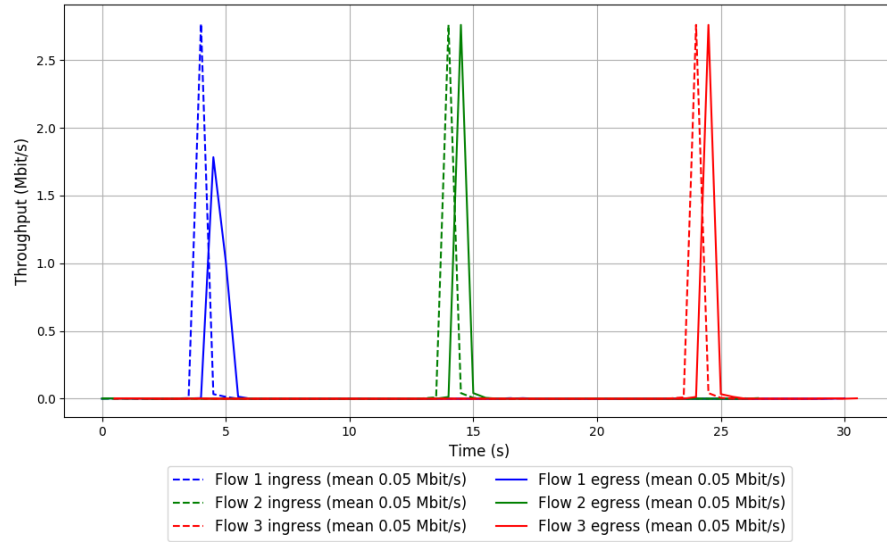


Run 4: Statistics of WebRTC media

Start at: 2019-04-24 10:22:57
End at: 2019-04-24 10:23:27
Local clock offset: -0.05 ms
Remote clock offset: -0.267 ms

```
# Below is generated by plot.py at 2019-04-24 14:25:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 63.285 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.225 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 62.878 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.332 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-04-24 10:59:15
End at: 2019-04-24 10:59:45
Local clock offset: -0.015 ms
Remote clock offset: -0.237 ms

```
# Below is generated by plot.py at 2019-04-24 14:25:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 63.721 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.289 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.791 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 63.199 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link

