

Pantheon Report

Generated at 2019-01-22 03:07:46 (UTC).

Data path: GCE Sydney on **ens4** (*local*) → GCE London on **ens4** (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

System info:

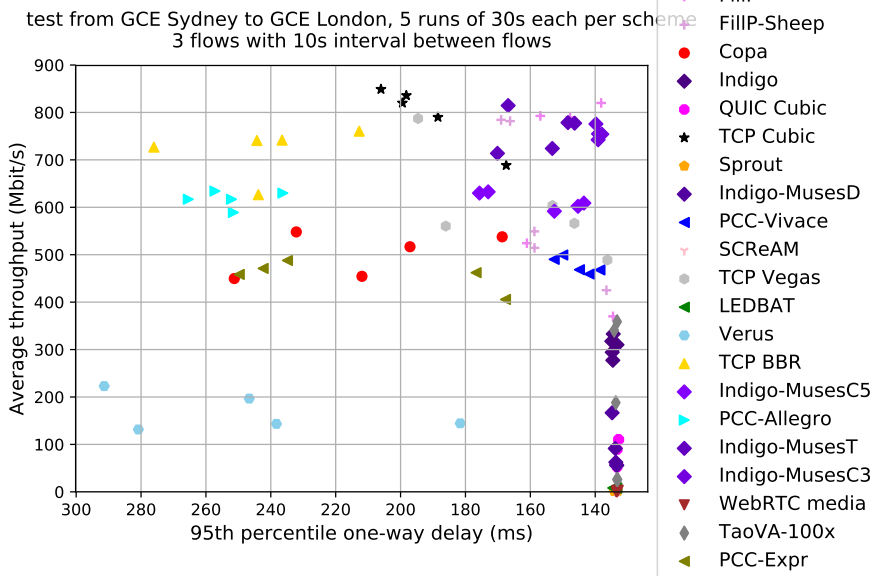
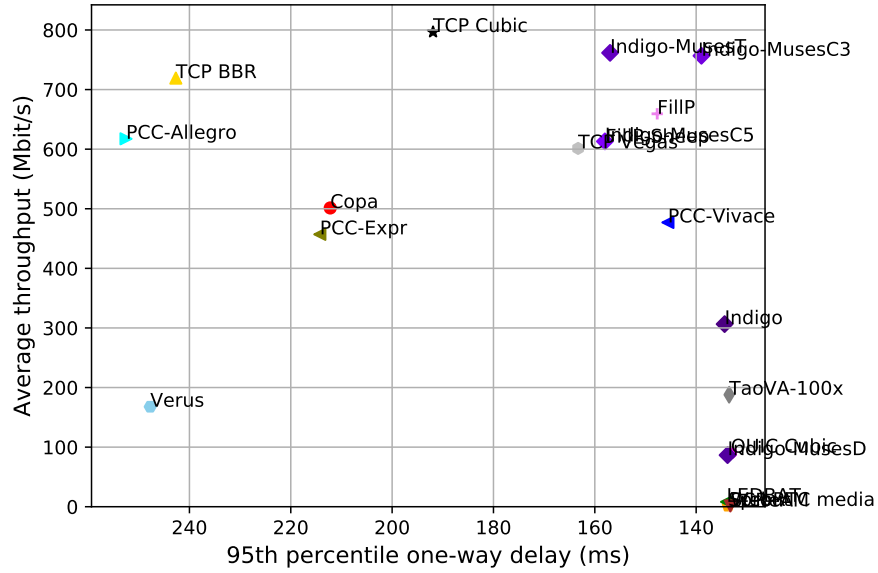
```
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

Git summary:

```
branch: muses @ 89d24e57783e7fbfec537a619071de937b639e38
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf5e58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 1ddcff131048c6962f123bcd22b4d166a422adde
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

test from GCE Sydney to GCE London, 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	391.35	360.28	264.51	238.56	254.03	212.33	0.82	0.97	0.81
Copa	5	272.43	239.54	208.79	226.42	165.44	184.61	0.03	0.05	0.10
TCP Cubic	5	449.55	381.56	280.21	194.50	172.29	163.03	0.04	0.13	0.18
FillP	5	357.79	329.01	249.95	153.68	136.34	136.49	0.47	0.01	0.01
FillP-Sheep	5	335.30	309.65	211.52	163.36	136.51	136.22	0.23	0.01	0.00
Indigo	5	159.96	153.21	141.09	134.10	134.46	135.40	0.00	0.00	0.00
Indigo-MusesC3	4	446.26	368.37	261.22	139.78	138.41	136.85	0.00	0.00	0.05
Indigo-MusesC5	5	378.42	329.35	89.95	161.27	146.12	133.40	0.06	0.00	0.00
Indigo-MusesD	5	50.70	50.42	12.47	133.68	133.41	133.28	0.01	0.00	0.00
Indigo-MusesT	5	483.63	388.21	119.15	161.37	151.06	134.01	0.03	0.01	0.00
LEDBAT	5	5.28	3.47	1.71	134.06	133.95	133.78	0.00	0.00	0.00
PCC-Allegro	5	351.01	287.16	229.22	257.48	203.39	236.81	3.87	1.60	3.33
PCC-Expr	5	272.79	188.84	177.35	225.67	152.43	189.10	2.46	0.48	1.17
QUIC Cubic	5	40.51	53.75	46.03	133.17	132.86	133.05	0.00	0.00	0.00
SCReAM	5	0.16	0.16	0.17	133.19	133.15	133.19	0.00	0.00	0.00
Sprout	5	0.62	0.61	0.64	133.35	133.56	133.55	0.00	0.00	0.00
TaoVA-100x	5	81.26	108.35	103.88	133.37	133.44	133.68	0.00	0.00	0.00
TCP Vegas	5	318.70	288.52	272.26	157.73	148.43	195.04	0.01	0.05	0.09
Verus	5	97.59	82.64	48.99	215.43	217.42	178.13	0.31	2.01	0.01
PCC-Vivace	5	304.10	200.03	121.16	149.69	164.68	141.39	0.24	0.26	0.00
WebRTC media	5	0.80	0.48	0.11	133.05	133.14	133.30	0.01	0.00	0.00

Run 1: Statistics of TCP BBR

Start at: 2019-01-21 20:55:52

End at: 2019-01-21 20:56:22

Local clock offset: 0.04 ms

Remote clock offset: 0.369 ms

Below is generated by plot.py at 2019-01-22 00:38:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 740.86 Mbit/s

95th percentile per-packet one-way delay: 244.278 ms

Loss rate: 0.76%

-- Flow 1:

Average throughput: 373.80 Mbit/s

95th percentile per-packet one-way delay: 234.195 ms

Loss rate: 0.56%

-- Flow 2:

Average throughput: 375.18 Mbit/s

95th percentile per-packet one-way delay: 241.777 ms

Loss rate: 0.46%

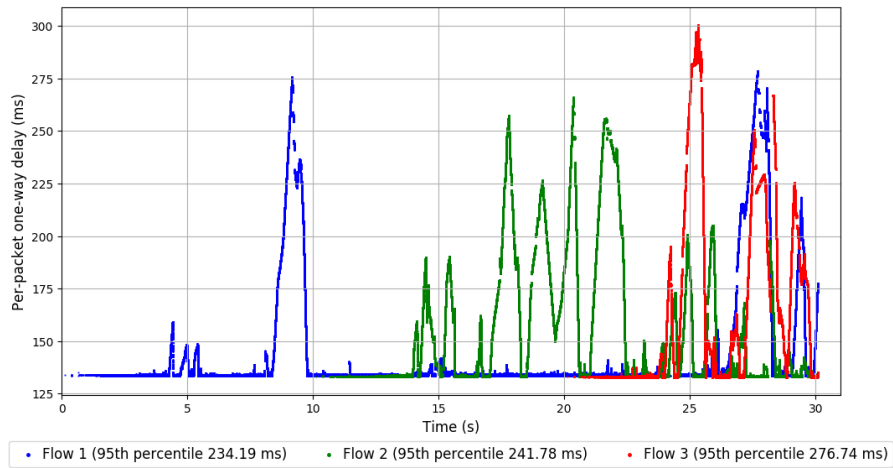
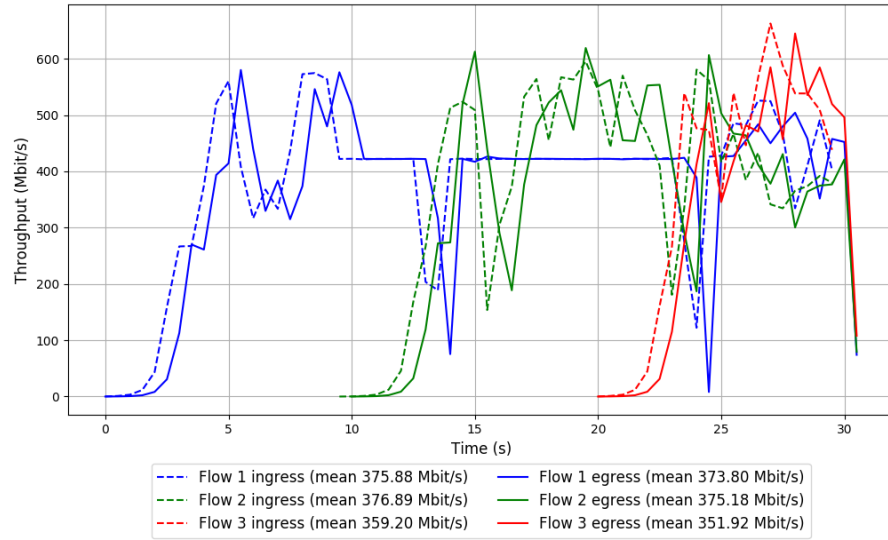
-- Flow 3:

Average throughput: 351.92 Mbit/s

95th percentile per-packet one-way delay: 276.738 ms

Loss rate: 2.03%

Run 1: Report of TCP BBR — Data Link



Run 2: Statistics of TCP BBR

Start at: 2019-01-21 21:35:18

End at: 2019-01-21 21:35:48

Local clock offset: -0.294 ms

Remote clock offset: 0.409 ms

Below is generated by plot.py at 2019-01-22 00:38:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 741.59 Mbit/s

95th percentile per-packet one-way delay: 236.526 ms

Loss rate: 0.81%

-- Flow 1:

Average throughput: 399.98 Mbit/s

95th percentile per-packet one-way delay: 237.874 ms

Loss rate: 0.78%

-- Flow 2:

Average throughput: 383.45 Mbit/s

95th percentile per-packet one-way delay: 246.017 ms

Loss rate: 1.13%

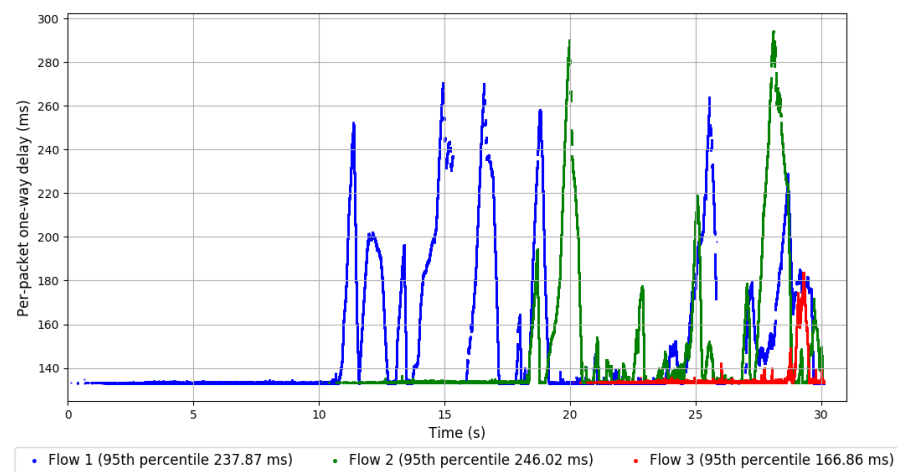
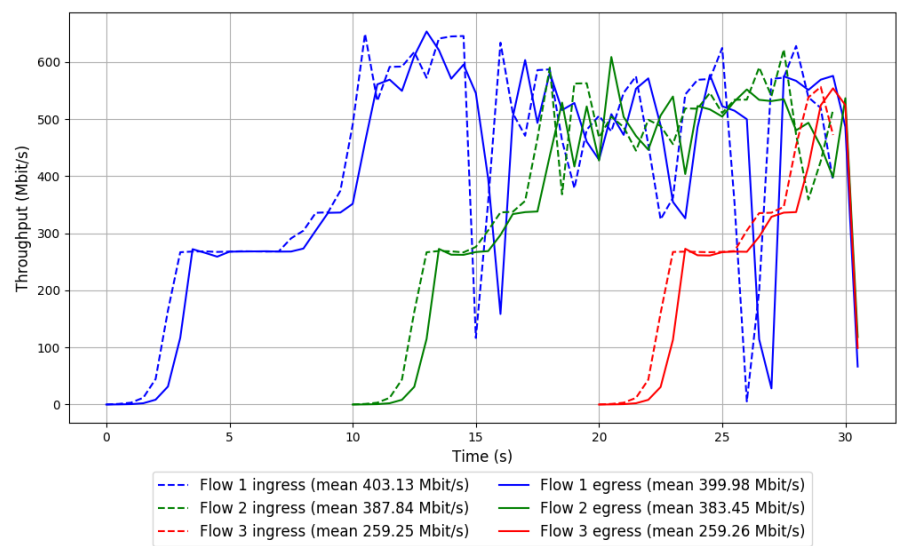
-- Flow 3:

Average throughput: 259.26 Mbit/s

95th percentile per-packet one-way delay: 166.856 ms

Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link

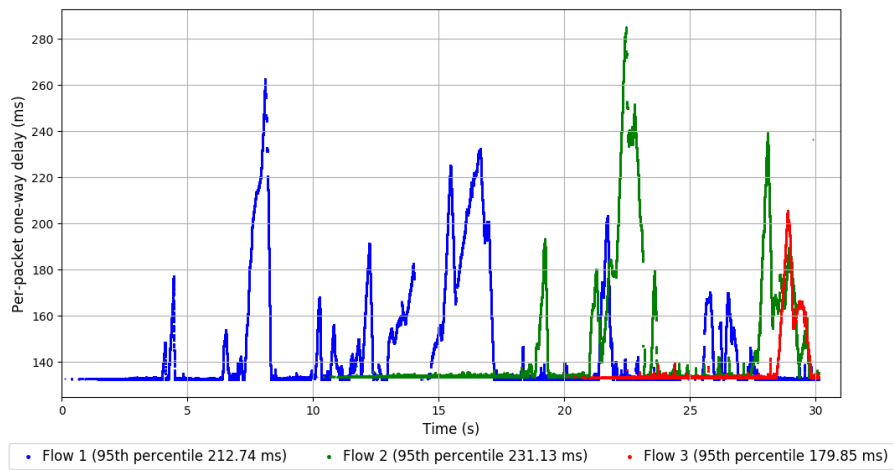
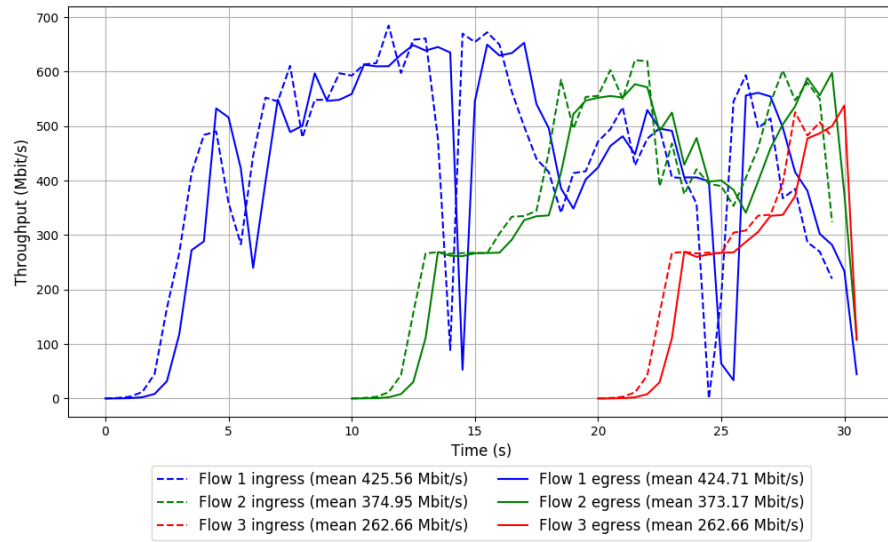


Run 3: Statistics of TCP BBR

Start at: 2019-01-21 22:14:54
End at: 2019-01-21 22:15:24
Local clock offset: -0.164 ms
Remote clock offset: -0.059 ms

Below is generated by plot.py at 2019-01-22 00:38:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 760.47 Mbit/s
95th percentile per-packet one-way delay: 212.748 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 424.71 Mbit/s
95th percentile per-packet one-way delay: 212.738 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 373.17 Mbit/s
95th percentile per-packet one-way delay: 231.126 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 262.66 Mbit/s
95th percentile per-packet one-way delay: 179.849 ms
Loss rate: 0.00%

Run 3: Report of TCP BBR — Data Link

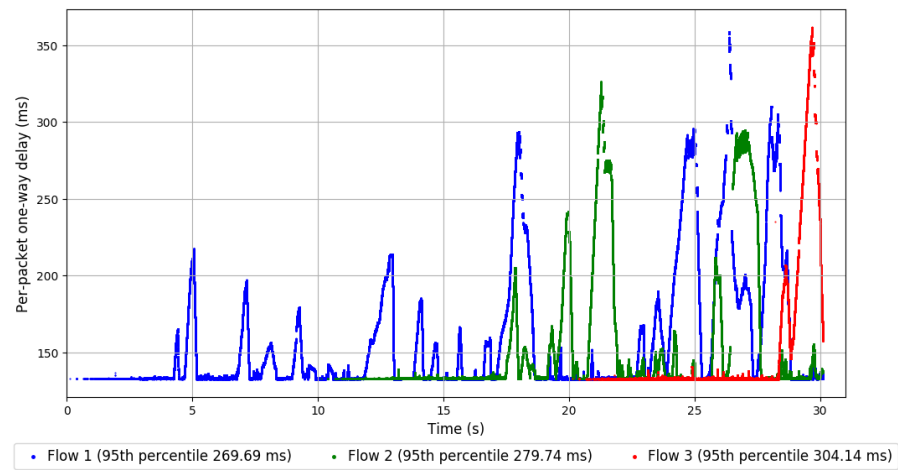
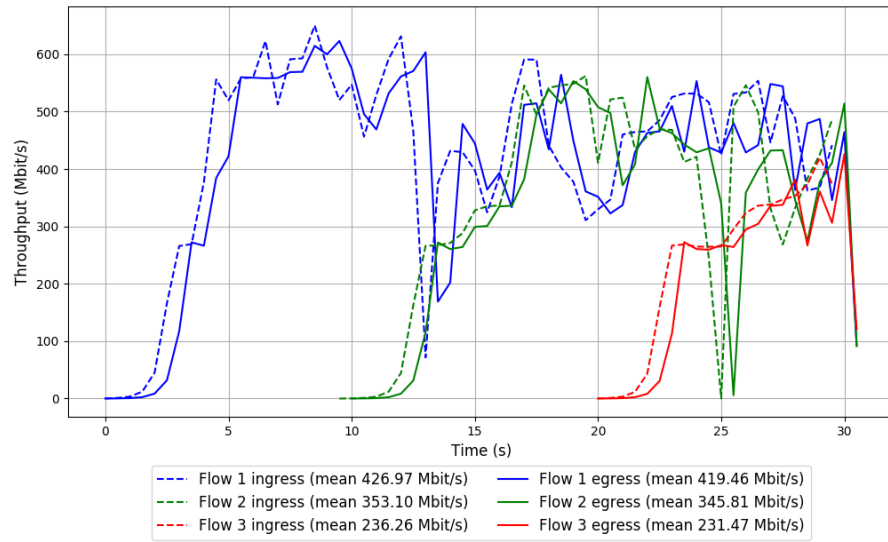


Run 4: Statistics of TCP BBR

Start at: 2019-01-21 22:54:11
End at: 2019-01-21 22:54:41
Local clock offset: -0.176 ms
Remote clock offset: -0.091 ms

Below is generated by plot.py at 2019-01-22 00:38:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 726.84 Mbit/s
95th percentile per-packet one-way delay: 276.034 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 419.46 Mbit/s
95th percentile per-packet one-way delay: 269.689 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 345.81 Mbit/s
95th percentile per-packet one-way delay: 279.739 ms
Loss rate: 2.06%
-- Flow 3:
Average throughput: 231.47 Mbit/s
95th percentile per-packet one-way delay: 304.141 ms
Loss rate: 2.02%

Run 4: Report of TCP BBR — Data Link

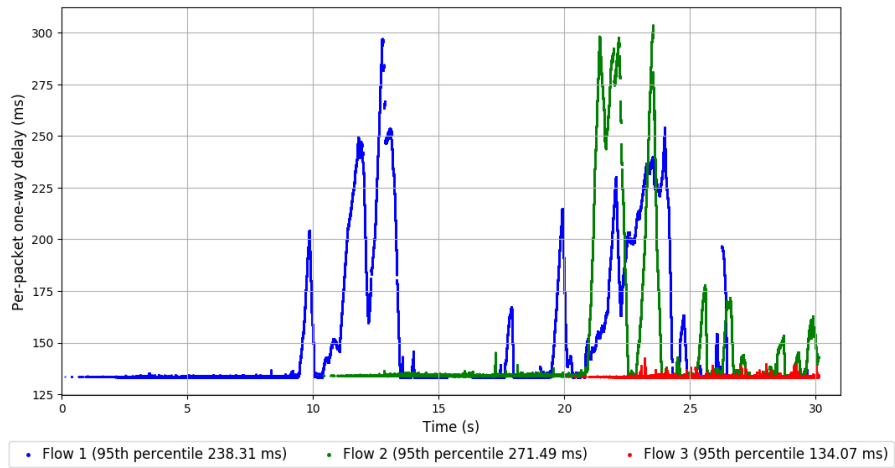
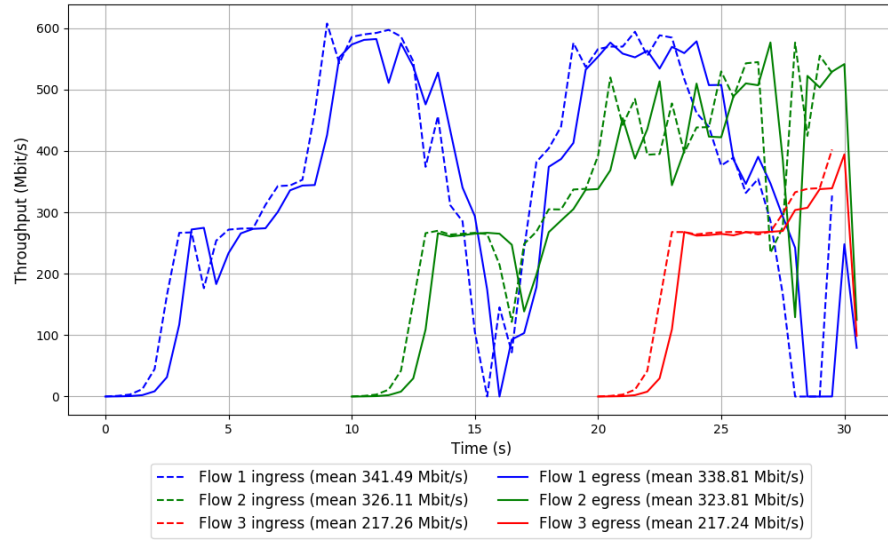


Run 5: Statistics of TCP BBR

Start at: 2019-01-21 23:35:06
End at: 2019-01-21 23:35:36
Local clock offset: -0.514 ms
Remote clock offset: -0.027 ms

Below is generated by plot.py at 2019-01-22 00:38:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 626.55 Mbit/s
95th percentile per-packet one-way delay: 243.843 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 338.81 Mbit/s
95th percentile per-packet one-way delay: 238.308 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 323.81 Mbit/s
95th percentile per-packet one-way delay: 271.491 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 217.24 Mbit/s
95th percentile per-packet one-way delay: 134.074 ms
Loss rate: 0.00%

Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-21 21:06:07

End at: 2019-01-21 21:06:37

Local clock offset: -0.02 ms

Remote clock offset: 0.257 ms

Below is generated by plot.py at 2019-01-22 00:43:10

Datalink statistics

-- Total of 3 flows:

Average throughput: 516.78 Mbit/s

95th percentile per-packet one-way delay: 197.094 ms

Loss rate: 0.04%

-- Flow 1:

Average throughput: 291.83 Mbit/s

95th percentile per-packet one-way delay: 222.650 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 235.42 Mbit/s

95th percentile per-packet one-way delay: 183.512 ms

Loss rate: 0.00%

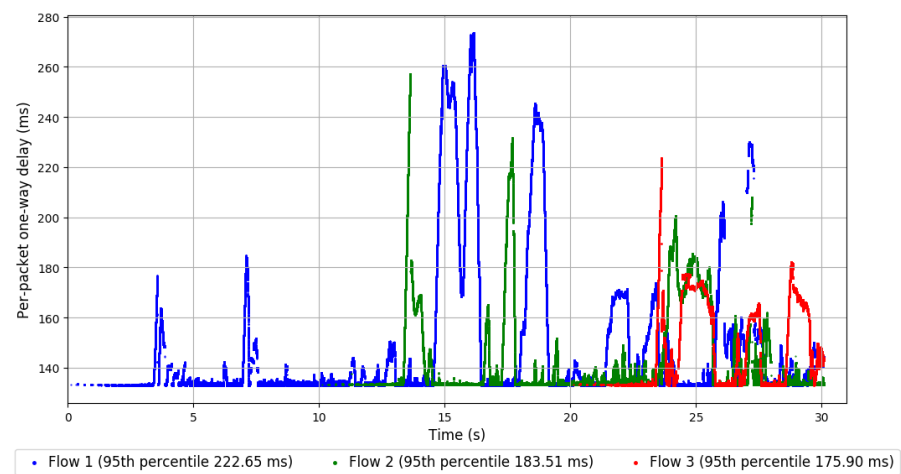
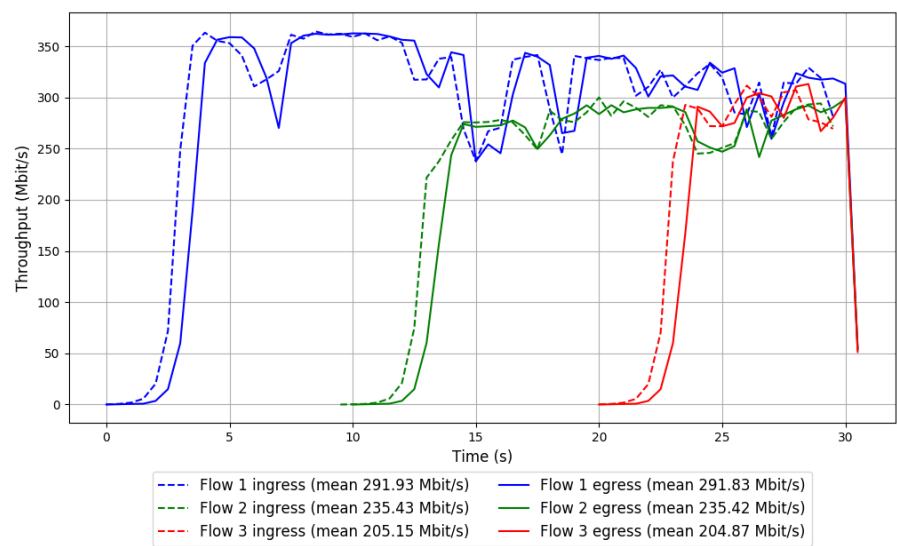
-- Flow 3:

Average throughput: 204.87 Mbit/s

95th percentile per-packet one-way delay: 175.899 ms

Loss rate: 0.13%

Run 1: Report of Copa — Data Link



Run 2: Statistics of Copa

Start at: 2019-01-21 21:45:52

End at: 2019-01-21 21:46:22

Local clock offset: -0.11 ms

Remote clock offset: 0.148 ms

Below is generated by plot.py at 2019-01-22 00:44:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 537.74 Mbit/s

95th percentile per-packet one-way delay: 168.667 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 303.44 Mbit/s

95th percentile per-packet one-way delay: 166.180 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 249.75 Mbit/s

95th percentile per-packet one-way delay: 168.724 ms

Loss rate: 0.00%

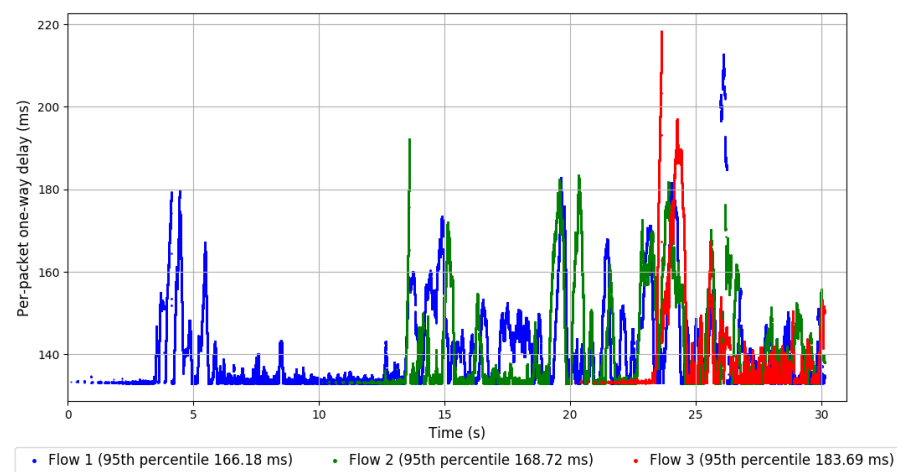
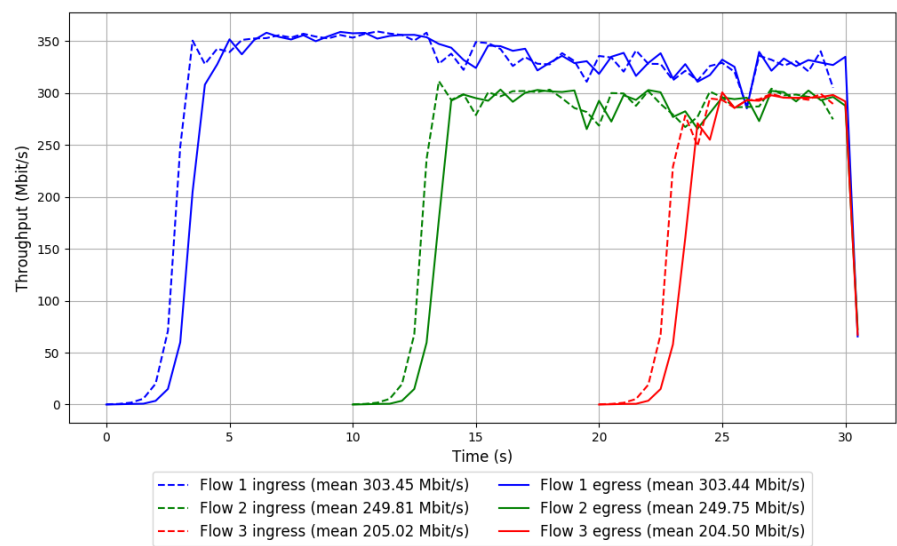
-- Flow 3:

Average throughput: 204.50 Mbit/s

95th percentile per-packet one-way delay: 183.685 ms

Loss rate: 0.25%

Run 2: Report of Copa — Data Link

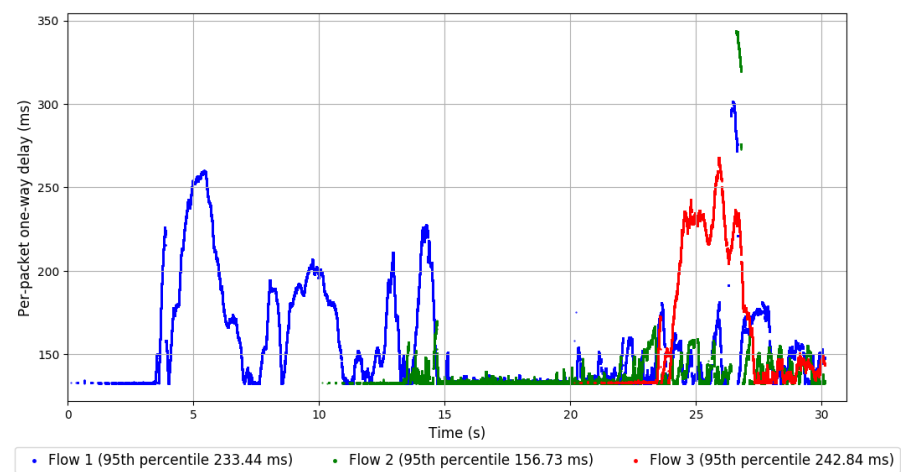
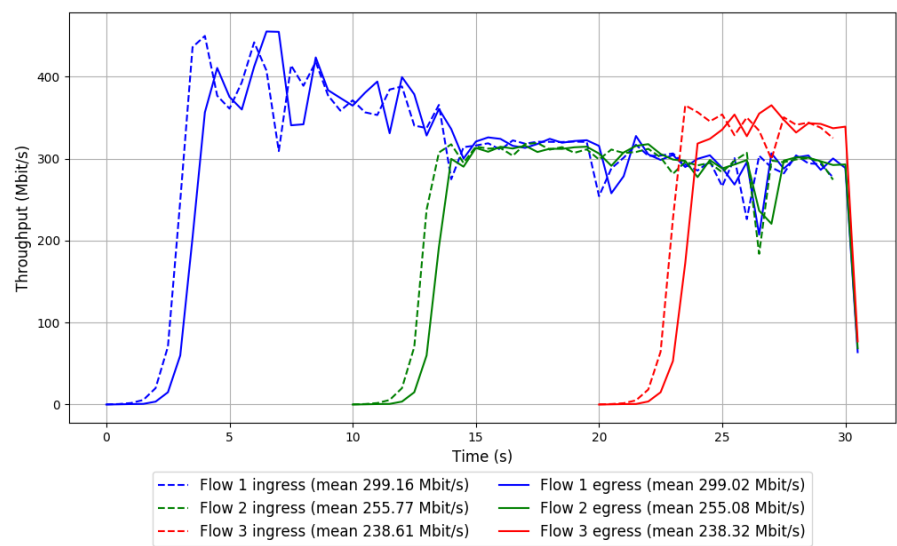


Run 3: Statistics of Copa

Start at: 2019-01-21 22:25:19
End at: 2019-01-21 22:25:49
Local clock offset: 0.232 ms
Remote clock offset: -0.063 ms

Below is generated by plot.py at 2019-01-22 00:44:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 548.05 Mbit/s
95th percentile per-packet one-way delay: 232.141 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 299.02 Mbit/s
95th percentile per-packet one-way delay: 233.440 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 255.08 Mbit/s
95th percentile per-packet one-way delay: 156.733 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 238.32 Mbit/s
95th percentile per-packet one-way delay: 242.845 ms
Loss rate: 0.12%

Run 3: Report of Copa — Data Link

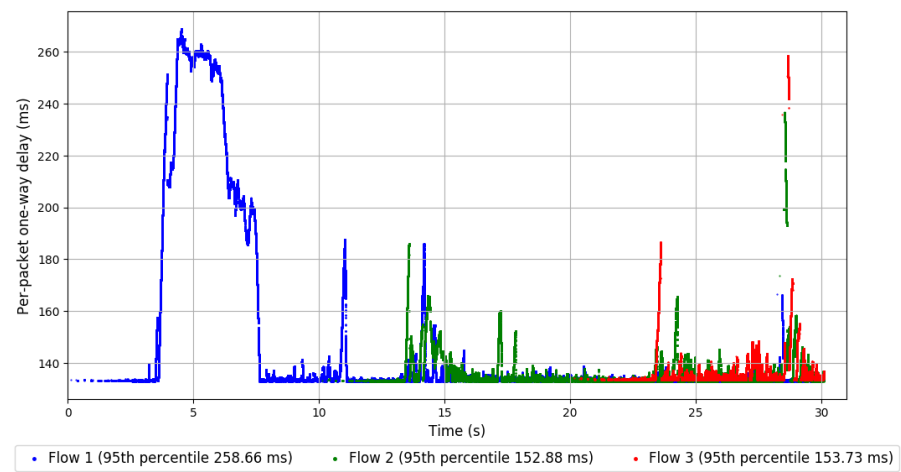
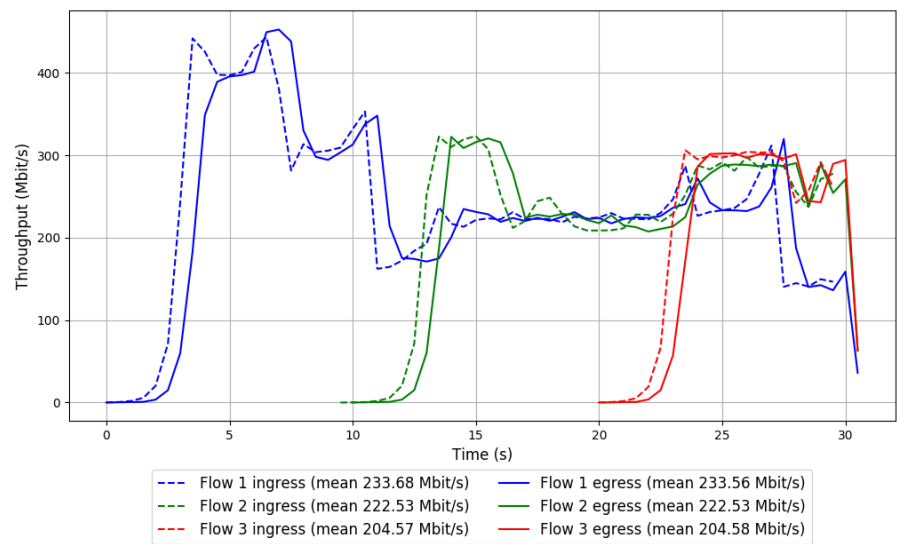


Run 4: Statistics of Copa

Start at: 2019-01-21 23:04:53
End at: 2019-01-21 23:05:23
Local clock offset: -0.152 ms
Remote clock offset: -0.076 ms

Below is generated by plot.py at 2019-01-22 00:55:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 449.76 Mbit/s
95th percentile per-packet one-way delay: 251.257 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 233.56 Mbit/s
95th percentile per-packet one-way delay: 258.663 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 222.53 Mbit/s
95th percentile per-packet one-way delay: 152.878 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 204.58 Mbit/s
95th percentile per-packet one-way delay: 153.732 ms
Loss rate: 0.00%

Run 4: Report of Copa — Data Link

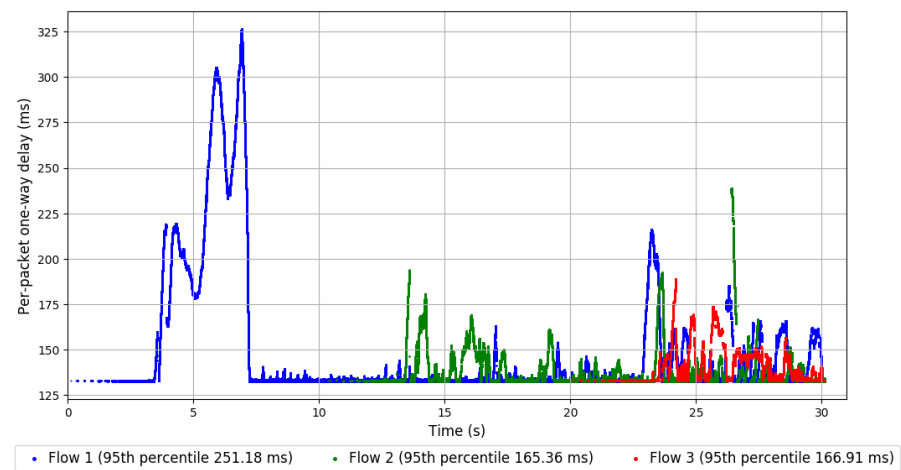
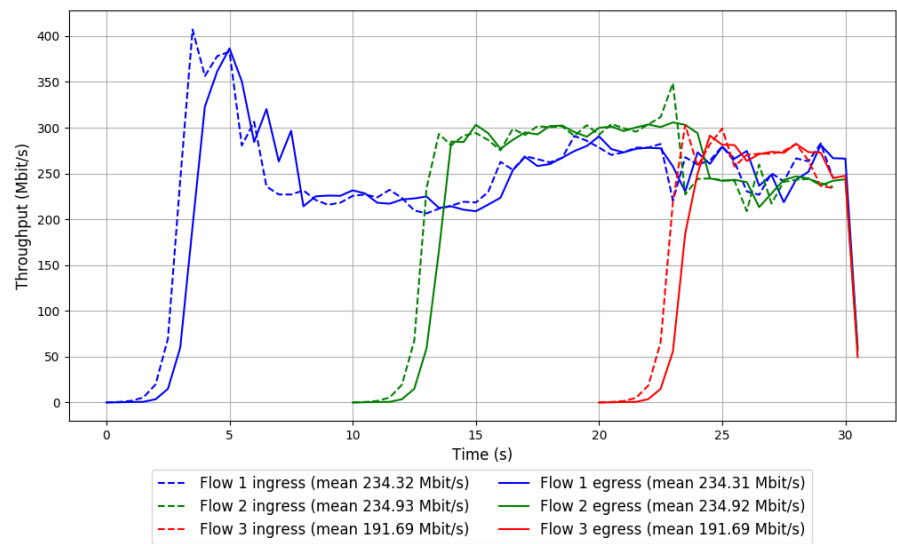


Run 5: Statistics of Copa

Start at: 2019-01-21 23:45:34
End at: 2019-01-21 23:46:04
Local clock offset: -0.122 ms
Remote clock offset: -0.172 ms

```
# Below is generated by plot.py at 2019-01-22 00:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.43 Mbit/s
95th percentile per-packet one-way delay: 211.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 234.31 Mbit/s
95th percentile per-packet one-way delay: 251.178 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 234.92 Mbit/s
95th percentile per-packet one-way delay: 165.364 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.69 Mbit/s
95th percentile per-packet one-way delay: 166.914 ms
Loss rate: 0.00%
```

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-21 21:24:07

End at: 2019-01-21 21:24:37

Local clock offset: 0.251 ms

Remote clock offset: 0.378 ms

Below is generated by plot.py at 2019-01-22 00:59:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 835.74 Mbit/s

95th percentile per-packet one-way delay: 198.217 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 494.10 Mbit/s

95th percentile per-packet one-way delay: 201.641 ms

Loss rate: 0.15%

-- Flow 2:

Average throughput: 368.55 Mbit/s

95th percentile per-packet one-way delay: 177.868 ms

Loss rate: 0.08%

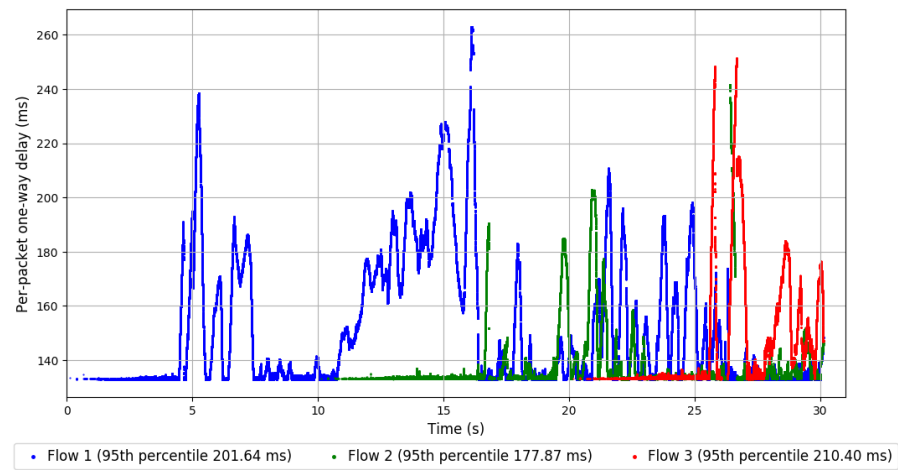
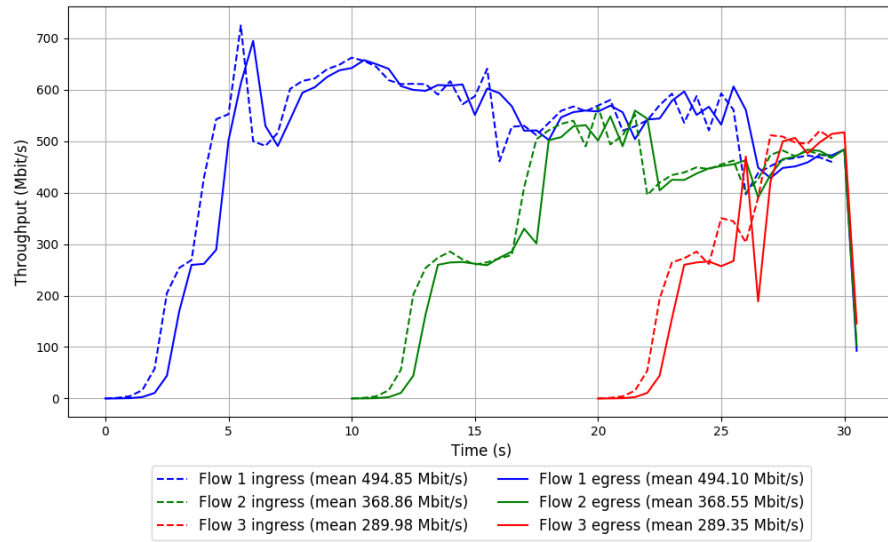
-- Flow 3:

Average throughput: 289.35 Mbit/s

95th percentile per-packet one-way delay: 210.401 ms

Loss rate: 0.21%

Run 1: Report of TCP Cubic — Data Link



Run 2: Statistics of TCP Cubic

Start at: 2019-01-21 22:03:47

End at: 2019-01-21 22:04:17

Local clock offset: 0.386 ms

Remote clock offset: 0.623 ms

Below is generated by plot.py at 2019-01-22 00:59:42

Datalink statistics

-- Total of 3 flows:

Average throughput: 688.56 Mbit/s

95th percentile per-packet one-way delay: 167.430 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 358.46 Mbit/s

95th percentile per-packet one-way delay: 170.474 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 378.56 Mbit/s

95th percentile per-packet one-way delay: 168.990 ms

Loss rate: 0.00%

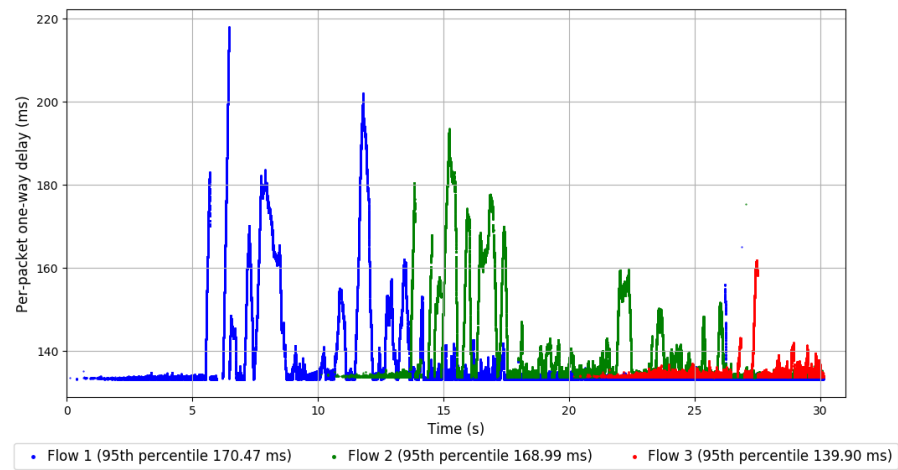
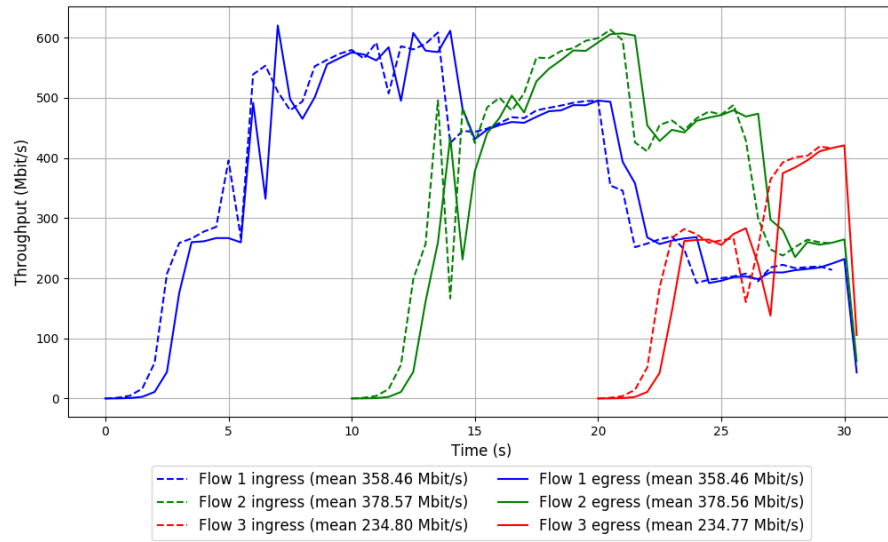
-- Flow 3:

Average throughput: 234.77 Mbit/s

95th percentile per-packet one-way delay: 139.904 ms

Loss rate: 0.01%

Run 2: Report of TCP Cubic — Data Link

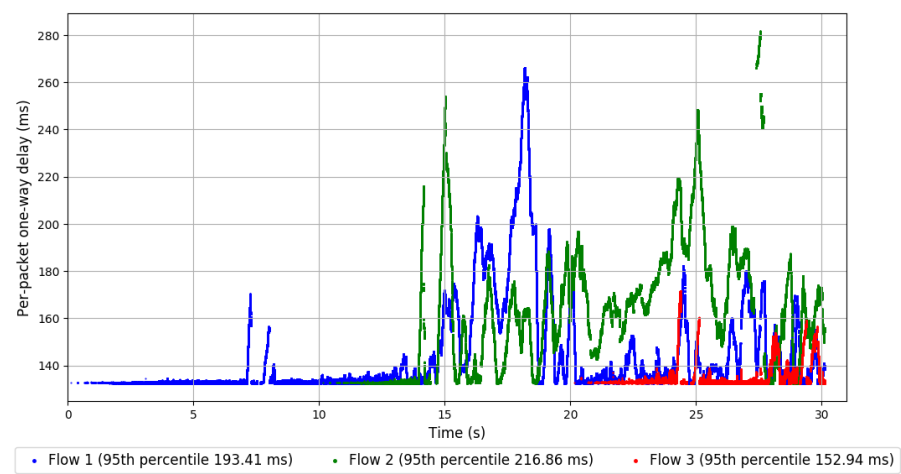
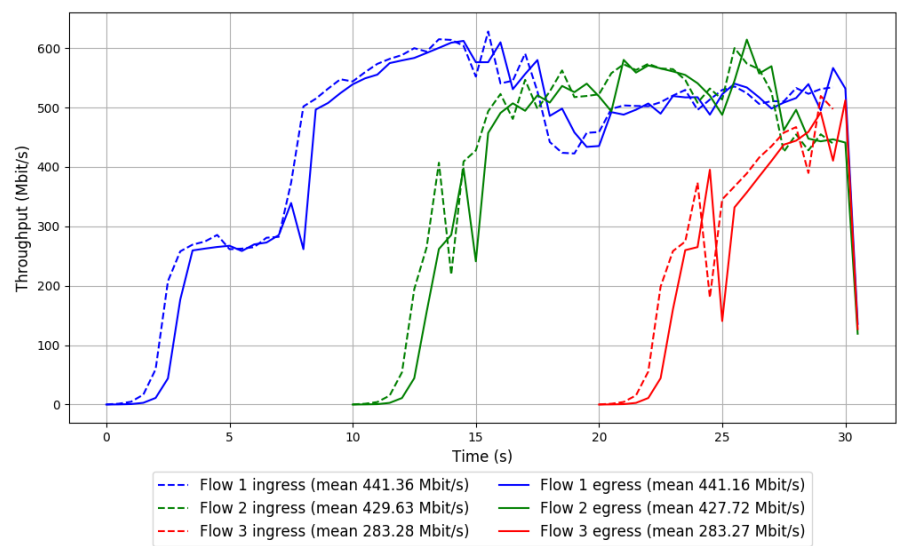


Run 3: Statistics of TCP Cubic

Start at: 2019-01-21 22:43:10
End at: 2019-01-21 22:43:40
Local clock offset: -0.211 ms
Remote clock offset: -0.059 ms

Below is generated by plot.py at 2019-01-22 00:59:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 819.96 Mbit/s
95th percentile per-packet one-way delay: 199.439 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 441.16 Mbit/s
95th percentile per-packet one-way delay: 193.413 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 427.72 Mbit/s
95th percentile per-packet one-way delay: 216.859 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 283.27 Mbit/s
95th percentile per-packet one-way delay: 152.943 ms
Loss rate: 0.00%

Run 3: Report of TCP Cubic — Data Link

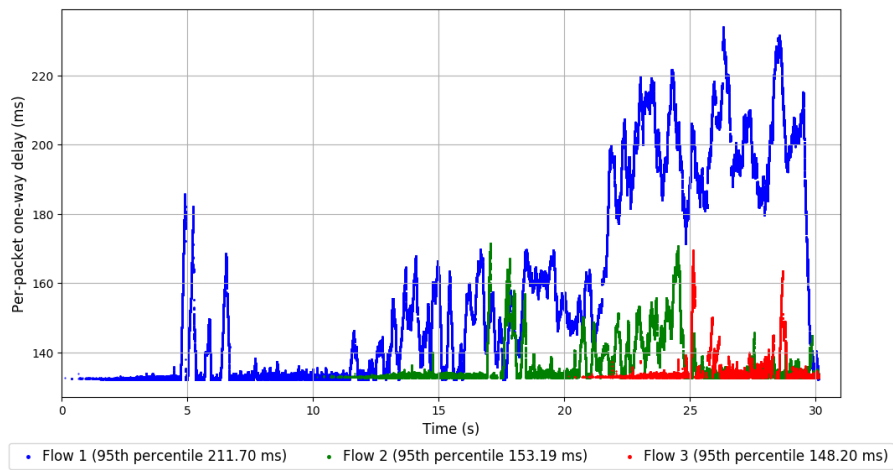
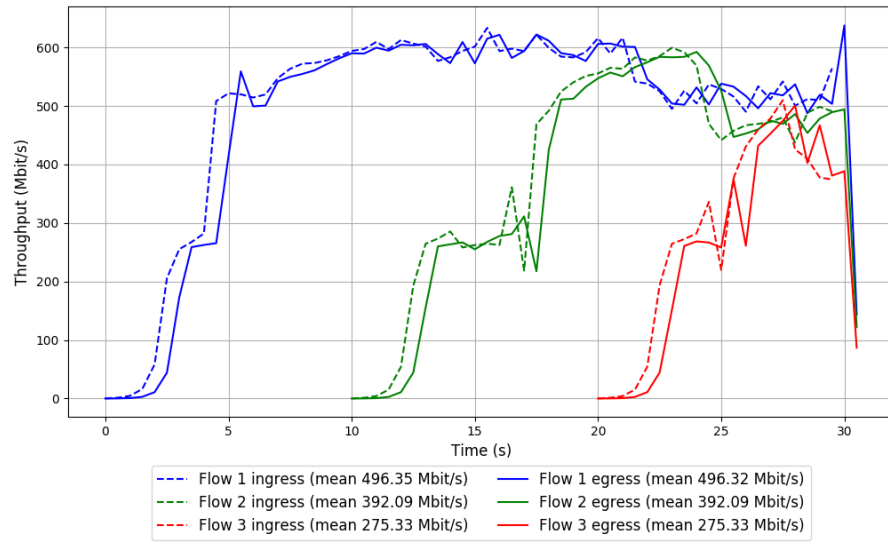


Run 4: Statistics of TCP Cubic

Start at: 2019-01-21 23:23:46
End at: 2019-01-21 23:24:16
Local clock offset: 0.0 ms
Remote clock offset: -0.029 ms

Below is generated by plot.py at 2019-01-22 01:04:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 848.91 Mbit/s
95th percentile per-packet one-way delay: 206.048 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 496.32 Mbit/s
95th percentile per-packet one-way delay: 211.698 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 392.09 Mbit/s
95th percentile per-packet one-way delay: 153.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 275.33 Mbit/s
95th percentile per-packet one-way delay: 148.196 ms
Loss rate: 0.00%

Run 4: Report of TCP Cubic — Data Link



Run 5: Statistics of TCP Cubic

Start at: 2019-01-22 00:04:31

End at: 2019-01-22 00:05:01

Local clock offset: -0.225 ms

Remote clock offset: 0.083 ms

Below is generated by plot.py at 2019-01-22 01:04:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 790.00 Mbit/s

95th percentile per-packet one-way delay: 188.473 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 457.69 Mbit/s

95th percentile per-packet one-way delay: 195.262 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 340.86 Mbit/s

95th percentile per-packet one-way delay: 144.534 ms

Loss rate: 0.13%

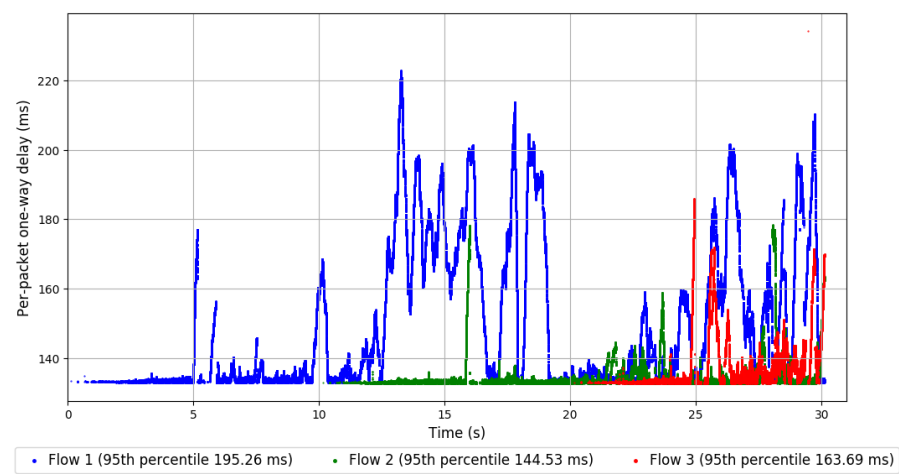
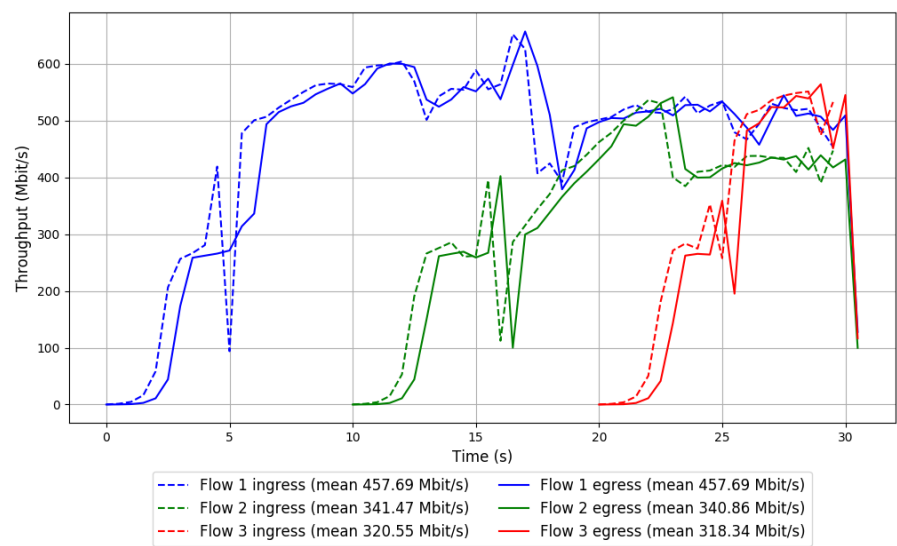
-- Flow 3:

Average throughput: 318.34 Mbit/s

95th percentile per-packet one-way delay: 163.695 ms

Loss rate: 0.67%

Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-21 21:13:07

End at: 2019-01-21 21:13:37

Local clock offset: 0.119 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2019-01-22 01:04:24

Datalink statistics

-- Total of 3 flows:

Average throughput: 370.02 Mbit/s

95th percentile per-packet one-way delay: 134.520 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 72.47 Mbit/s

95th percentile per-packet one-way delay: 135.209 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 323.27 Mbit/s

95th percentile per-packet one-way delay: 132.916 ms

Loss rate: 0.00%

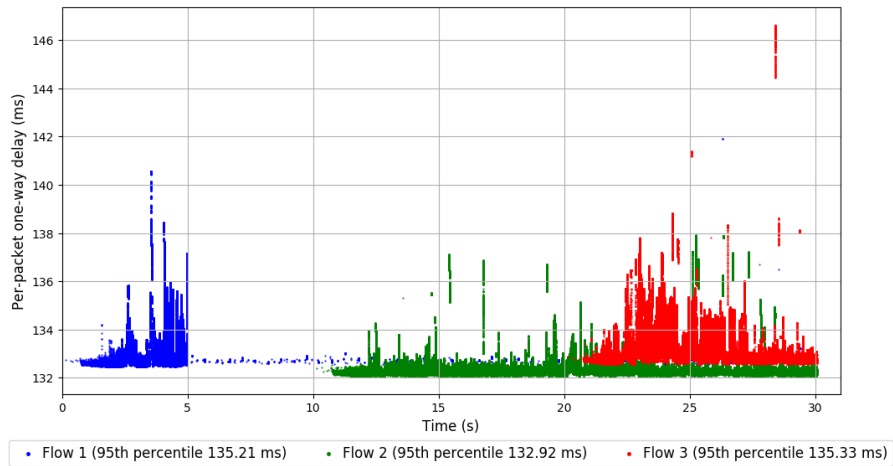
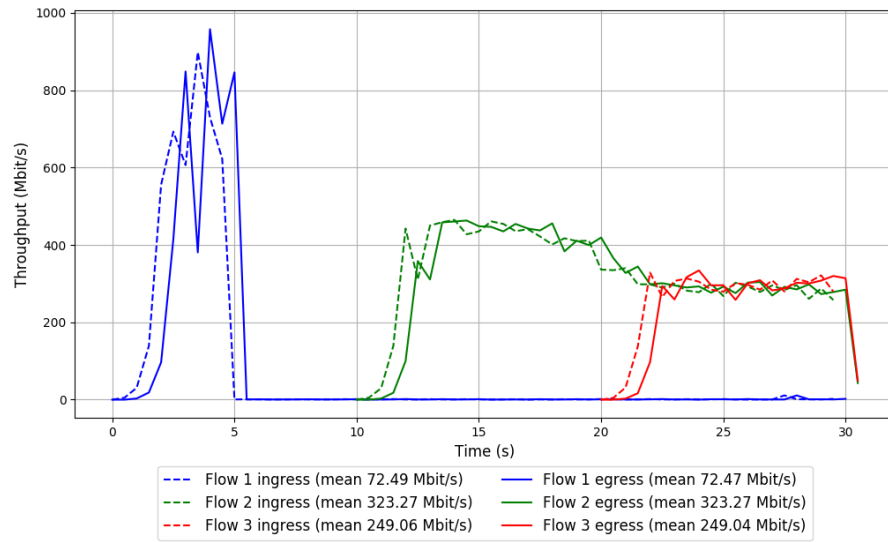
-- Flow 3:

Average throughput: 249.04 Mbit/s

95th percentile per-packet one-way delay: 135.329 ms

Loss rate: 0.01%

Run 1: Report of FillP — Data Link

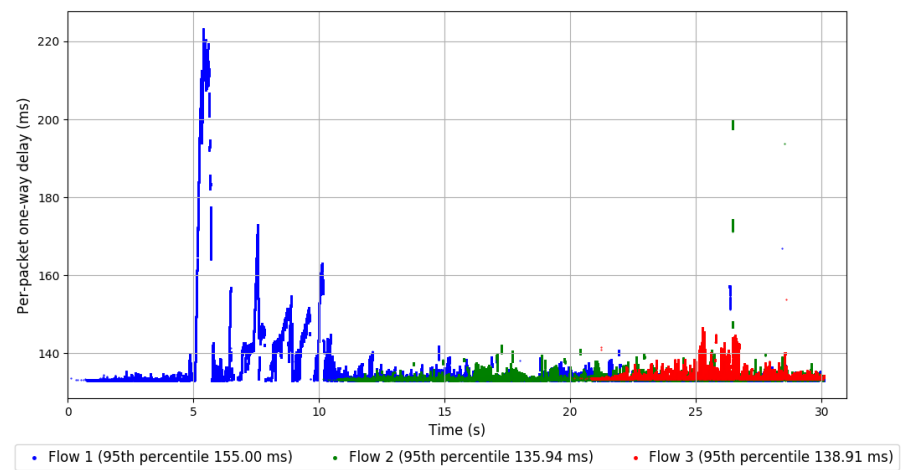
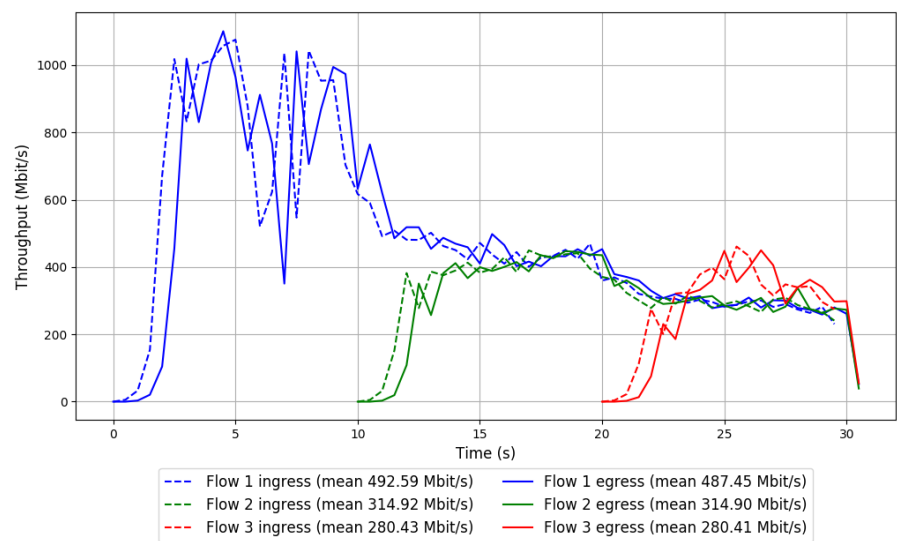


Run 2: Statistics of FillP

Start at: 2019-01-21 21:52:44
End at: 2019-01-21 21:53:14
Local clock offset: -0.422 ms
Remote clock offset: -0.016 ms

Below is generated by plot.py at 2019-01-22 01:19:40
Datalink statistics
-- Total of 3 flows:
Average throughput: 789.66 Mbit/s
95th percentile per-packet one-way delay: 147.751 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 487.45 Mbit/s
95th percentile per-packet one-way delay: 155.004 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 314.90 Mbit/s
95th percentile per-packet one-way delay: 135.938 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 280.41 Mbit/s
95th percentile per-packet one-way delay: 138.914 ms
Loss rate: 0.00%

Run 2: Report of FillP — Data Link



Run 3: Statistics of FillP

Start at: 2019-01-21 22:32:12

End at: 2019-01-21 22:32:42

Local clock offset: 0.297 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2019-01-22 01:21:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 819.98 Mbit/s

95th percentile per-packet one-way delay: 138.172 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 527.23 Mbit/s

95th percentile per-packet one-way delay: 139.873 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 320.00 Mbit/s

95th percentile per-packet one-way delay: 136.095 ms

Loss rate: 0.04%

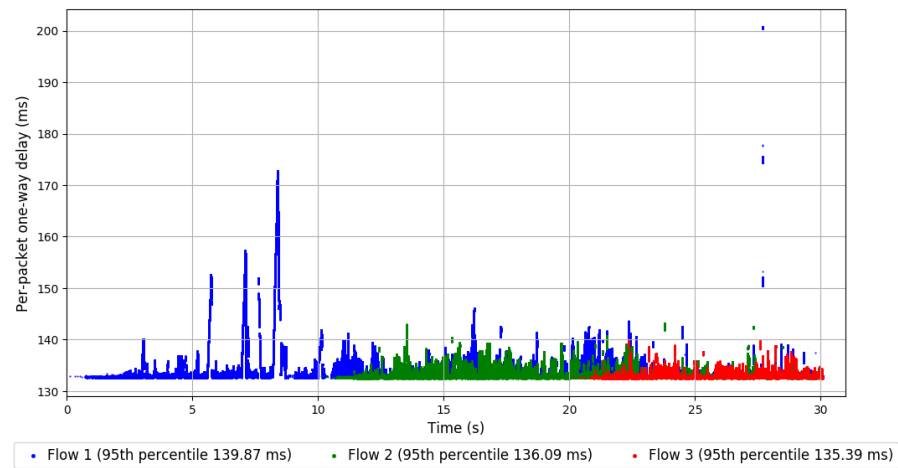
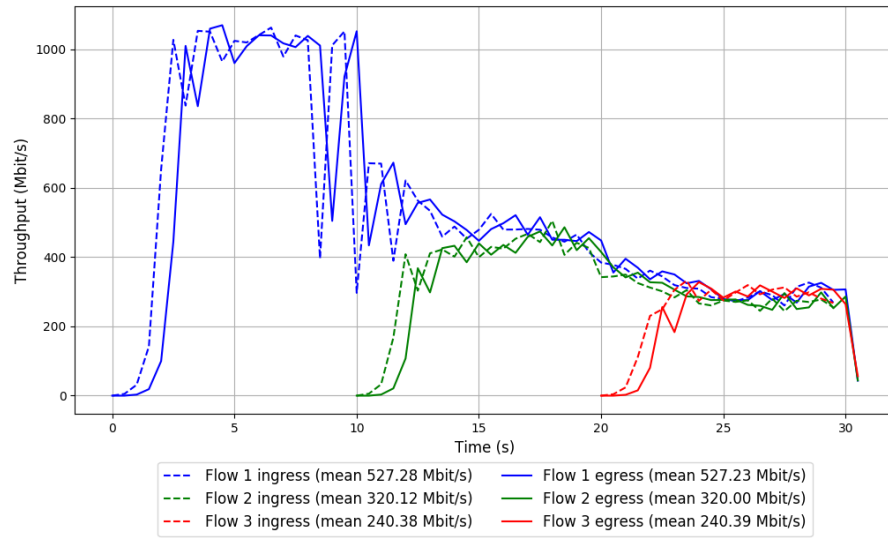
-- Flow 3:

Average throughput: 240.39 Mbit/s

95th percentile per-packet one-way delay: 135.387 ms

Loss rate: 0.00%

Run 3: Report of FillP — Data Link

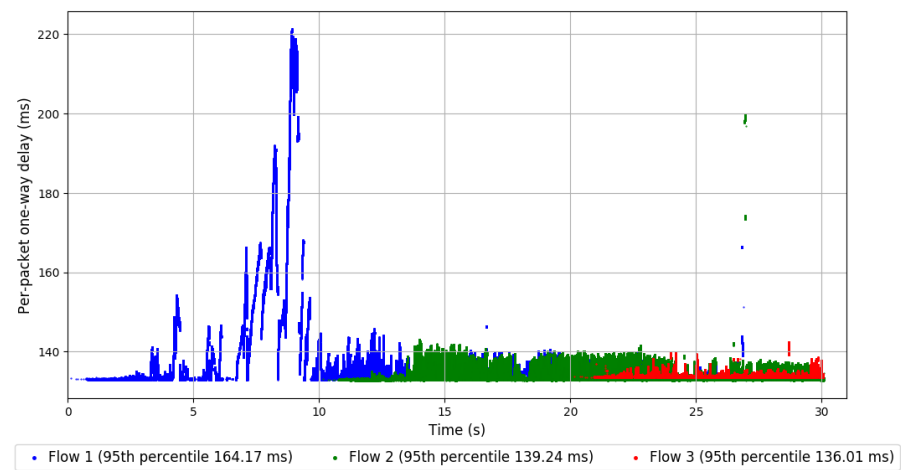
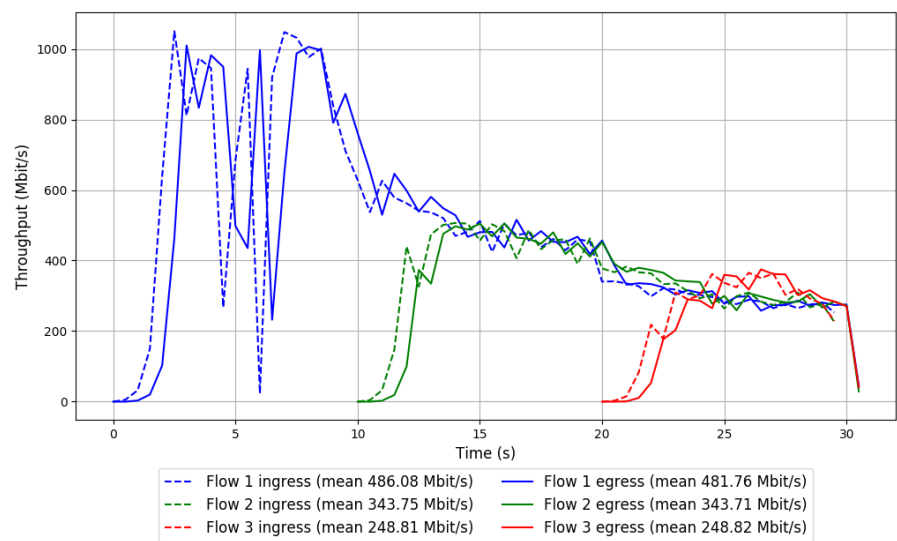


Run 4: Statistics of FillP

Start at: 2019-01-21 23:12:03
End at: 2019-01-21 23:12:33
Local clock offset: -0.143 ms
Remote clock offset: -0.027 ms

Below is generated by plot.py at 2019-01-22 01:21:25
Datalink statistics
-- Total of 3 flows:
Average throughput: 792.67 Mbit/s
95th percentile per-packet one-way delay: 156.911 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 481.76 Mbit/s
95th percentile per-packet one-way delay: 164.171 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 343.71 Mbit/s
95th percentile per-packet one-way delay: 139.241 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 248.82 Mbit/s
95th percentile per-packet one-way delay: 136.008 ms
Loss rate: 0.00%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-21 23:52:58

End at: 2019-01-21 23:53:28

Local clock offset: -0.378 ms

Remote clock offset: 0.07 ms

Below is generated by plot.py at 2019-01-22 01:21:25

Datalink statistics

-- Total of 3 flows:

Average throughput: 524.24 Mbit/s

95th percentile per-packet one-way delay: 161.066 ms

Loss rate: 0.15%

-- Flow 1:

Average throughput: 220.03 Mbit/s

95th percentile per-packet one-way delay: 174.140 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 343.16 Mbit/s

95th percentile per-packet one-way delay: 137.501 ms

Loss rate: 0.00%

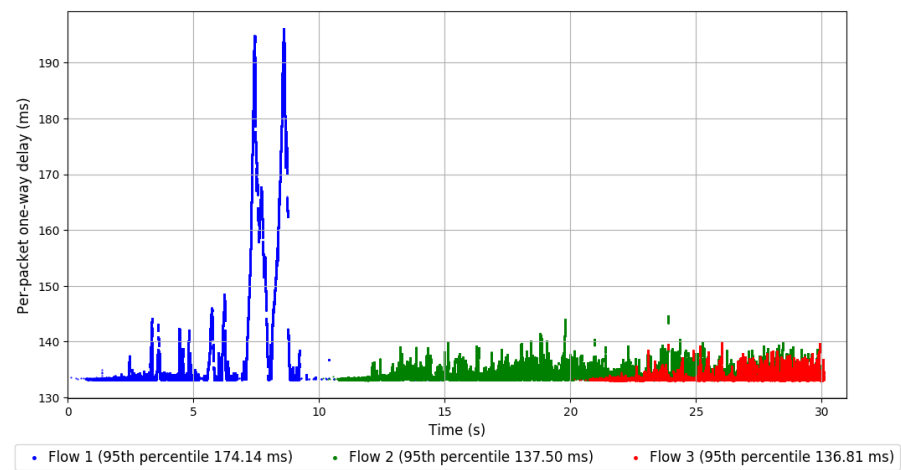
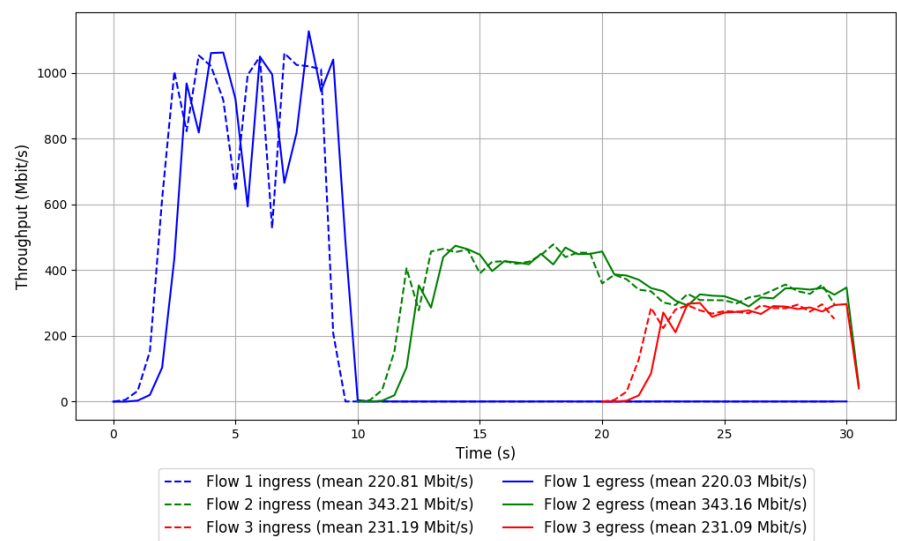
-- Flow 3:

Average throughput: 231.09 Mbit/s

95th percentile per-packet one-way delay: 136.808 ms

Loss rate: 0.04%

Run 5: Report of FillP — Data Link



Run 1: Statistics of FillP-Sheep

Start at: 2019-01-21 21:18:19

End at: 2019-01-21 21:18:49

Local clock offset: -0.128 ms

Remote clock offset: 0.207 ms

Below is generated by plot.py at 2019-01-22 01:22:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 784.32 Mbit/s

95th percentile per-packet one-way delay: 168.994 ms

Loss rate: 0.39%

-- Flow 1:

Average throughput: 498.26 Mbit/s

95th percentile per-packet one-way delay: 175.035 ms

Loss rate: 0.62%

-- Flow 2:

Average throughput: 314.86 Mbit/s

95th percentile per-packet one-way delay: 136.335 ms

Loss rate: 0.00%

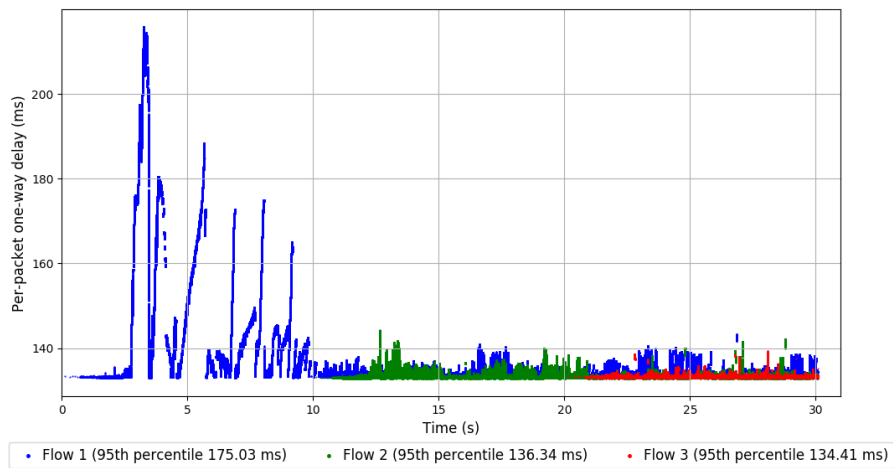
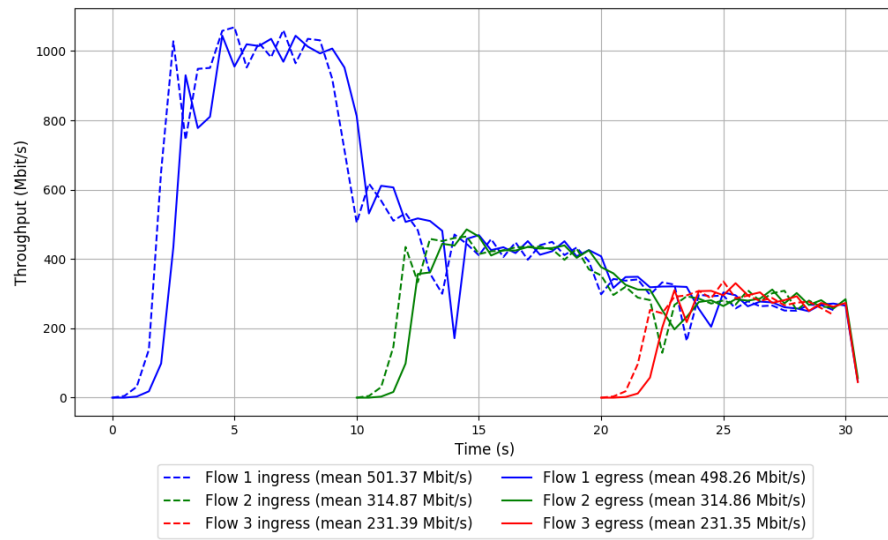
-- Flow 3:

Average throughput: 231.35 Mbit/s

95th percentile per-packet one-way delay: 134.410 ms

Loss rate: 0.00%

Run 1: Report of FillP-Sheep — Data Link



Run 2: Statistics of FillP-Sheep

Start at: 2019-01-21 21:58:30

End at: 2019-01-21 21:59:00

Local clock offset: -0.107 ms

Remote clock offset: 0.041 ms

Below is generated by plot.py at 2019-01-22 01:22:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 549.15 Mbit/s

95th percentile per-packet one-way delay: 158.746 ms

Loss rate: 0.11%

-- Flow 1:

Average throughput: 271.32 Mbit/s

95th percentile per-packet one-way delay: 166.380 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 307.02 Mbit/s

95th percentile per-packet one-way delay: 136.705 ms

Loss rate: 0.01%

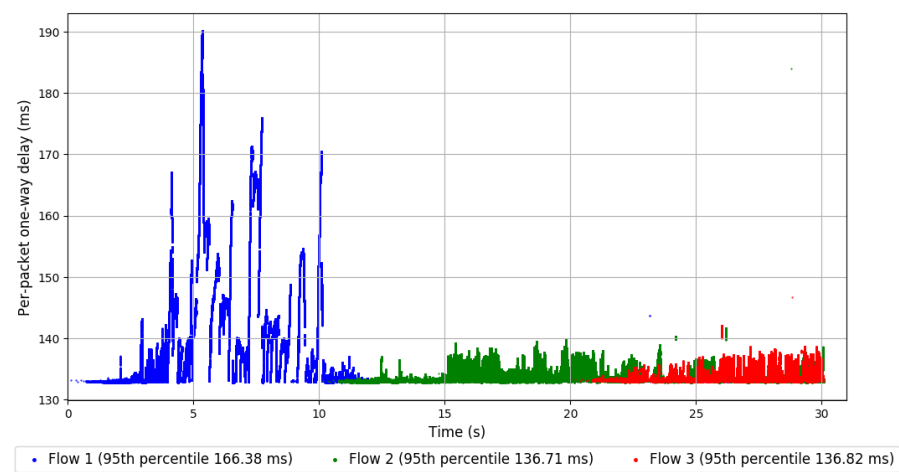
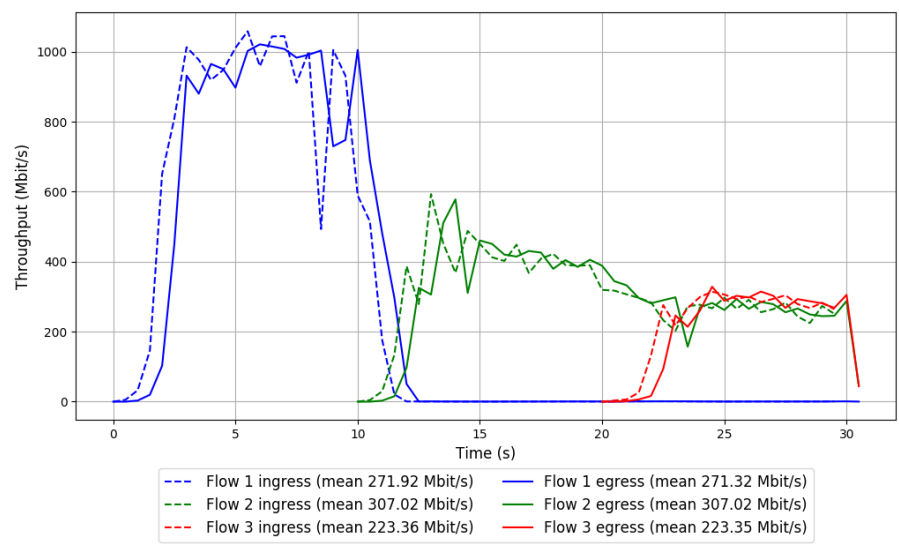
-- Flow 3:

Average throughput: 223.35 Mbit/s

95th percentile per-packet one-way delay: 136.821 ms

Loss rate: 0.00%

Run 2: Report of FillP-Sheep — Data Link

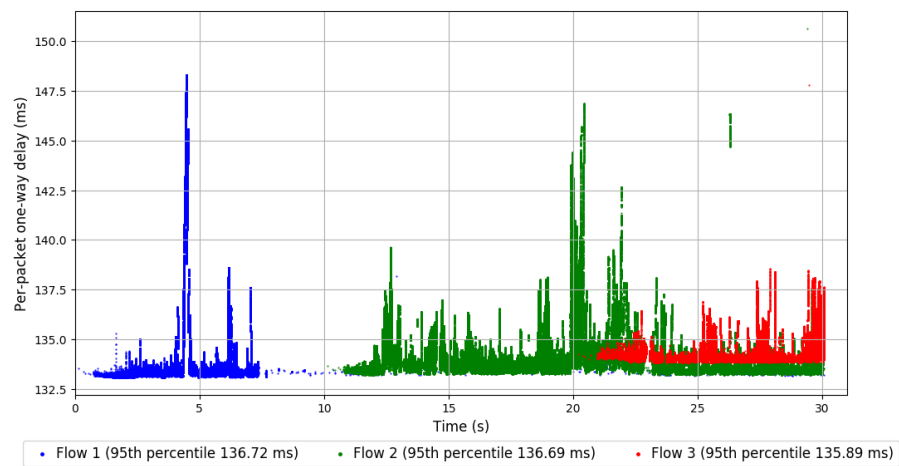
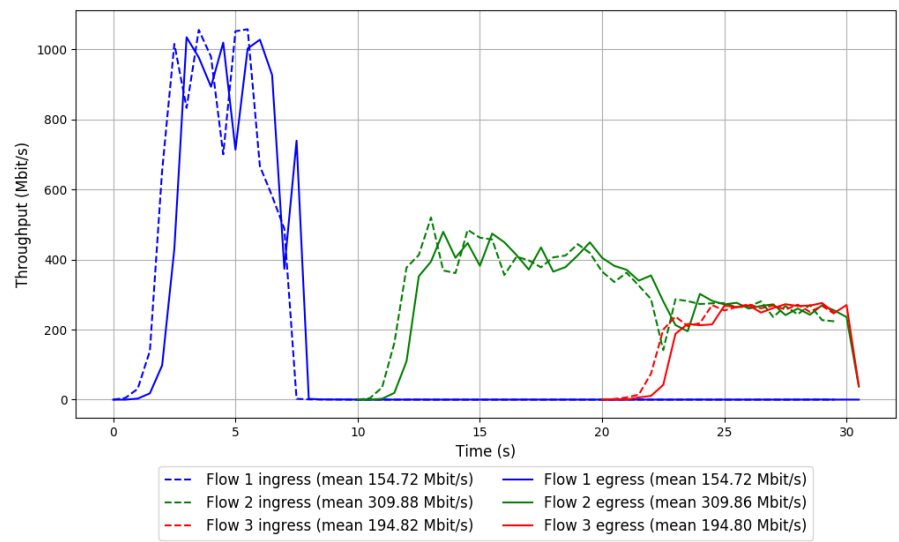


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-21 22:38:00
End at: 2019-01-21 22:38:30
Local clock offset: -0.555 ms
Remote clock offset: -0.065 ms

Below is generated by plot.py at 2019-01-22 01:22:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 425.07 Mbit/s
95th percentile per-packet one-way delay: 136.536 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 154.72 Mbit/s
95th percentile per-packet one-way delay: 136.720 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 309.86 Mbit/s
95th percentile per-packet one-way delay: 136.687 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 194.80 Mbit/s
95th percentile per-packet one-way delay: 135.889 ms
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link



Run 4: Statistics of FillP-Sheep

Start at: 2019-01-21 23:17:40

End at: 2019-01-21 23:18:10

Local clock offset: -0.08 ms

Remote clock offset: -0.42 ms

Below is generated by plot.py at 2019-01-22 01:22:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 514.43 Mbit/s

95th percentile per-packet one-way delay: 158.719 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 245.37 Mbit/s

95th percentile per-packet one-way delay: 168.716 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 302.06 Mbit/s

95th percentile per-packet one-way delay: 135.177 ms

Loss rate: 0.00%

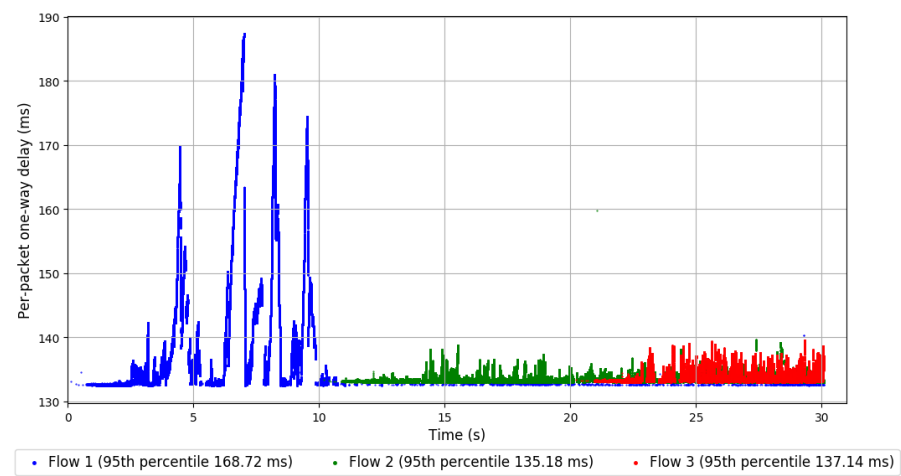
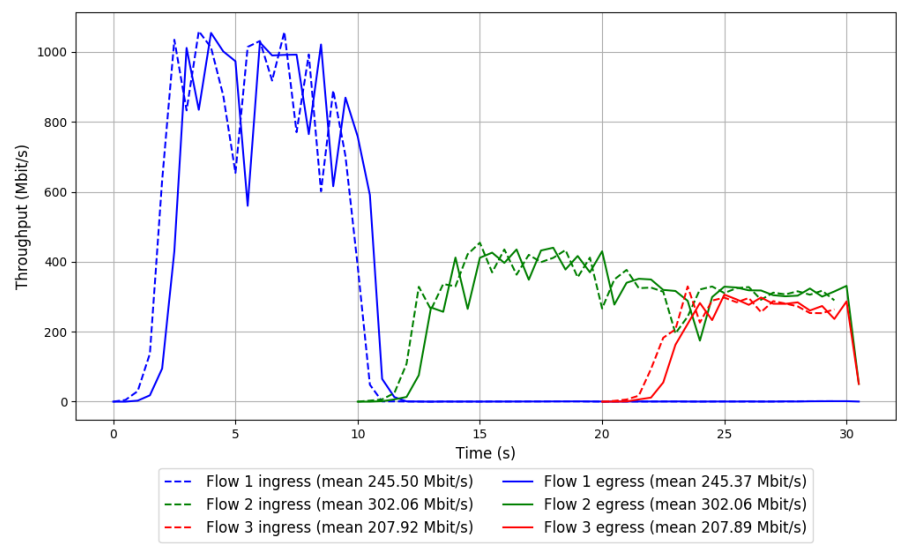
-- Flow 3:

Average throughput: 207.89 Mbit/s

95th percentile per-packet one-way delay: 137.137 ms

Loss rate: 0.00%

Run 4: Report of FillP-Sheep — Data Link



Run 5: Statistics of FillP-Sheep

Start at: 2019-01-21 23:58:17

End at: 2019-01-21 23:58:47

Local clock offset: -0.24 ms

Remote clock offset: 0.1 ms

Below is generated by plot.py at 2019-01-22 01:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 781.65 Mbit/s

95th percentile per-packet one-way delay: 166.240 ms

Loss rate: 0.17%

-- Flow 1:

Average throughput: 506.82 Mbit/s

95th percentile per-packet one-way delay: 169.940 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 314.46 Mbit/s

95th percentile per-packet one-way delay: 137.659 ms

Loss rate: 0.01%

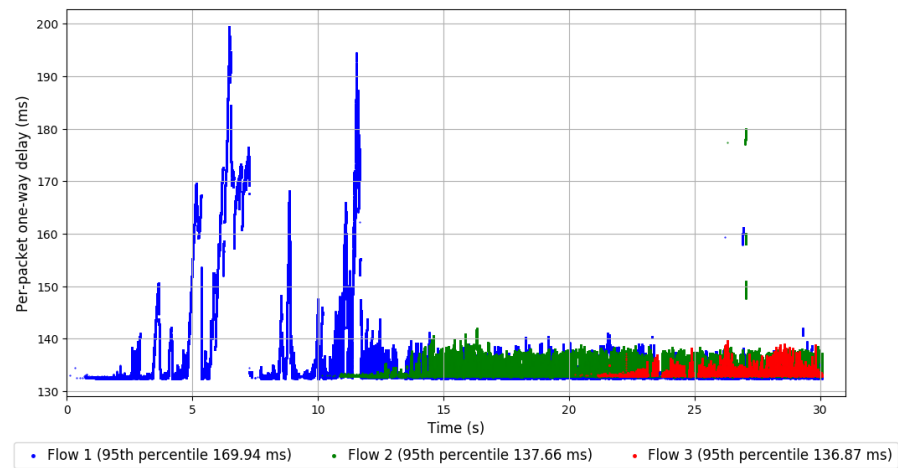
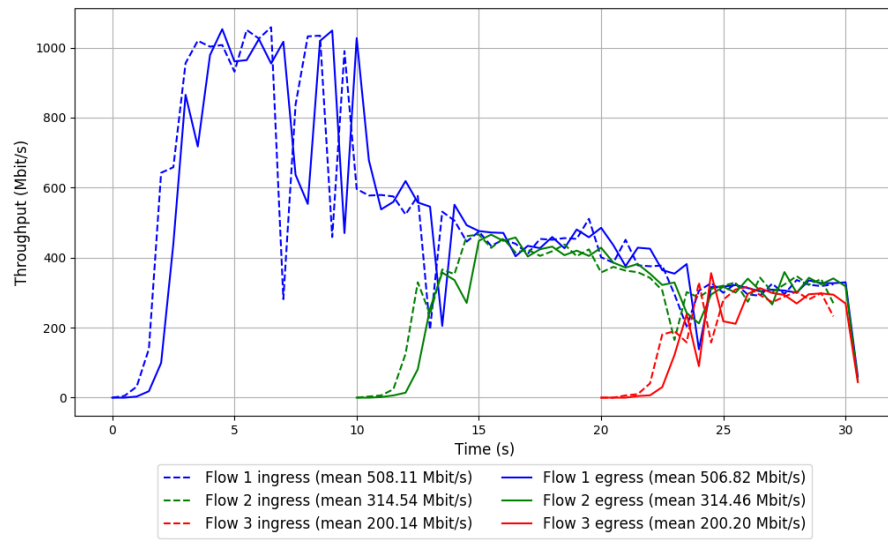
-- Flow 3:

Average throughput: 200.20 Mbit/s

95th percentile per-packet one-way delay: 136.868 ms

Loss rate: 0.00%

Run 5: Report of FillP-Sheep — Data Link

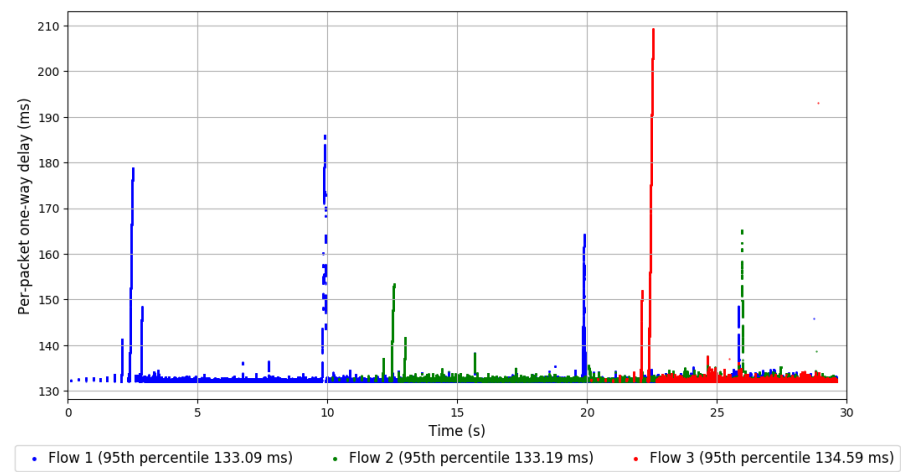
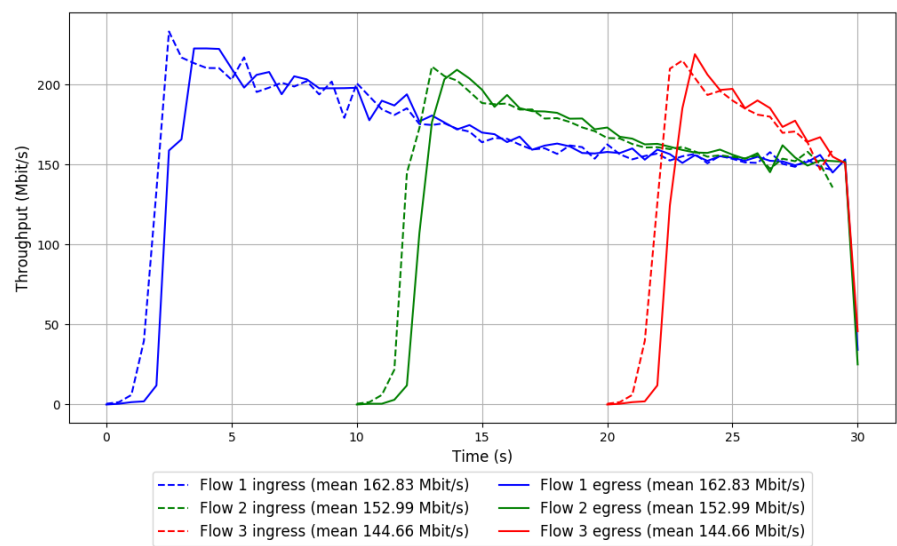


Run 1: Statistics of Indigo

Start at: 2019-01-21 21:02:43
End at: 2019-01-21 21:03:13
Local clock offset: 0.309 ms
Remote clock offset: -0.309 ms

Below is generated by plot.py at 2019-01-22 01:38:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 310.12 Mbit/s
95th percentile per-packet one-way delay: 133.279 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 162.83 Mbit/s
95th percentile per-packet one-way delay: 133.089 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 152.99 Mbit/s
95th percentile per-packet one-way delay: 133.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 144.66 Mbit/s
95th percentile per-packet one-way delay: 134.585 ms
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

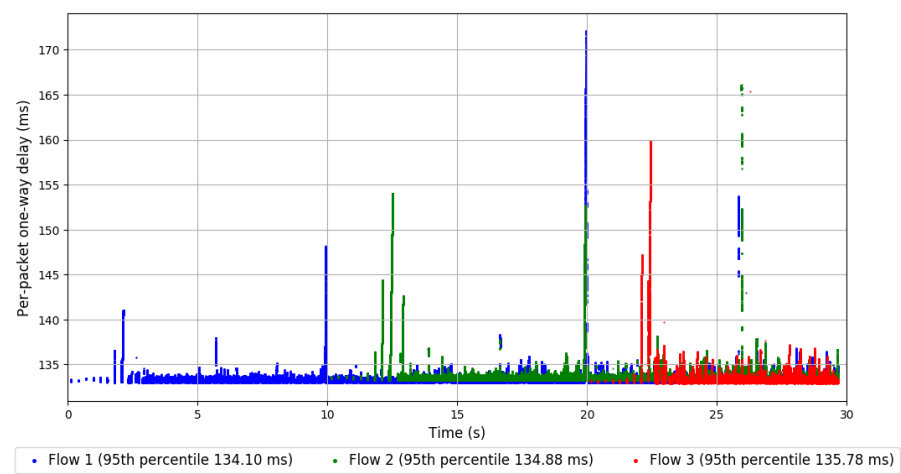
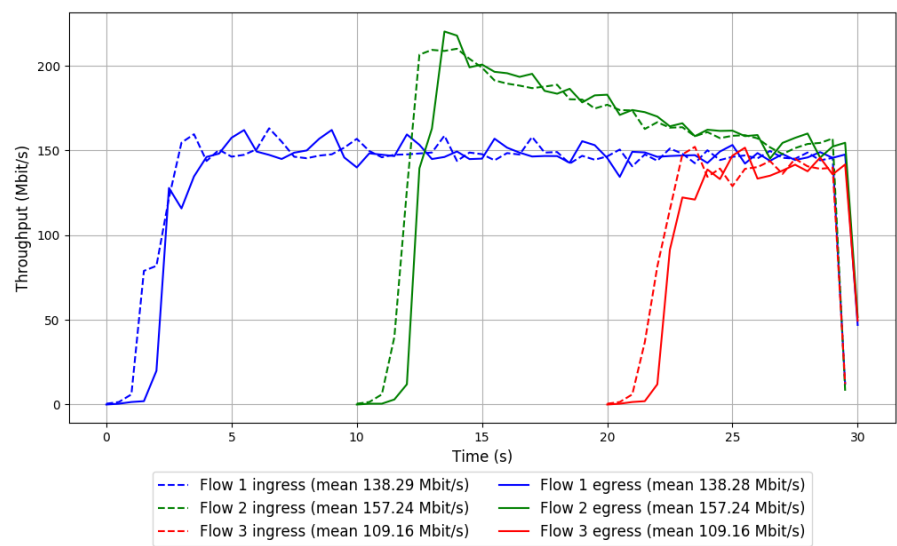


Run 2: Statistics of Indigo

Start at: 2019-01-21 21:42:27
End at: 2019-01-21 21:42:57
Local clock offset: -0.563 ms
Remote clock offset: -0.188 ms

Below is generated by plot.py at 2019-01-22 01:38:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 277.36 Mbit/s
95th percentile per-packet one-way delay: 134.575 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 138.28 Mbit/s
95th percentile per-packet one-way delay: 134.103 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 157.24 Mbit/s
95th percentile per-packet one-way delay: 134.876 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 109.16 Mbit/s
95th percentile per-packet one-way delay: 135.782 ms
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

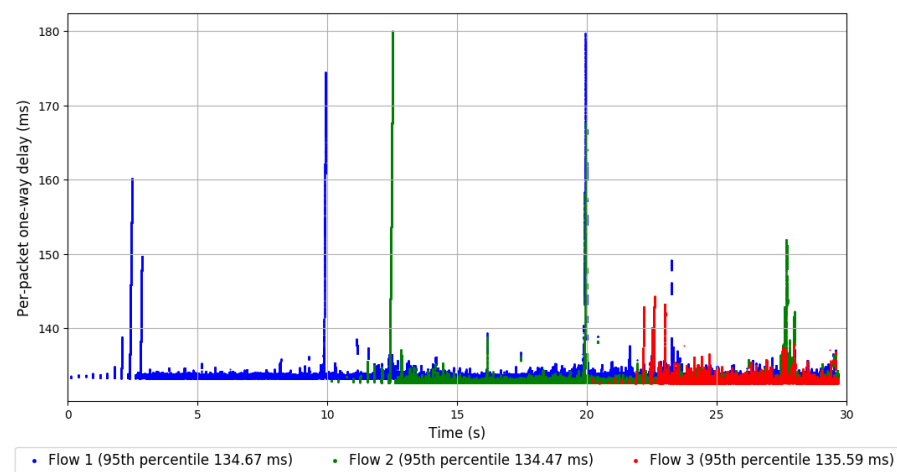
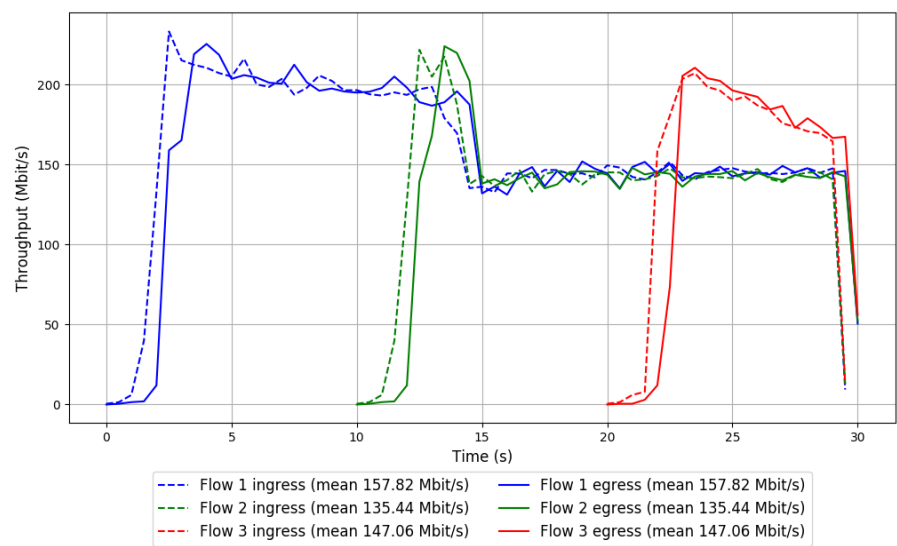


Run 3: Statistics of Indigo

Start at: 2019-01-21 22:21:51
End at: 2019-01-21 22:22:21
Local clock offset: 0.162 ms
Remote clock offset: -0.0 ms

Below is generated by plot.py at 2019-01-22 01:38:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 294.35 Mbit/s
95th percentile per-packet one-way delay: 134.750 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 157.82 Mbit/s
95th percentile per-packet one-way delay: 134.669 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 135.44 Mbit/s
95th percentile per-packet one-way delay: 134.466 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 147.06 Mbit/s
95th percentile per-packet one-way delay: 135.593 ms
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link

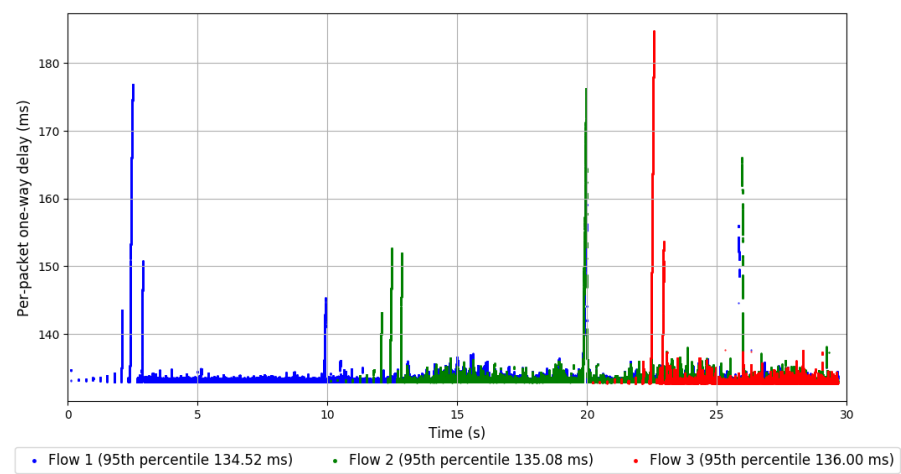
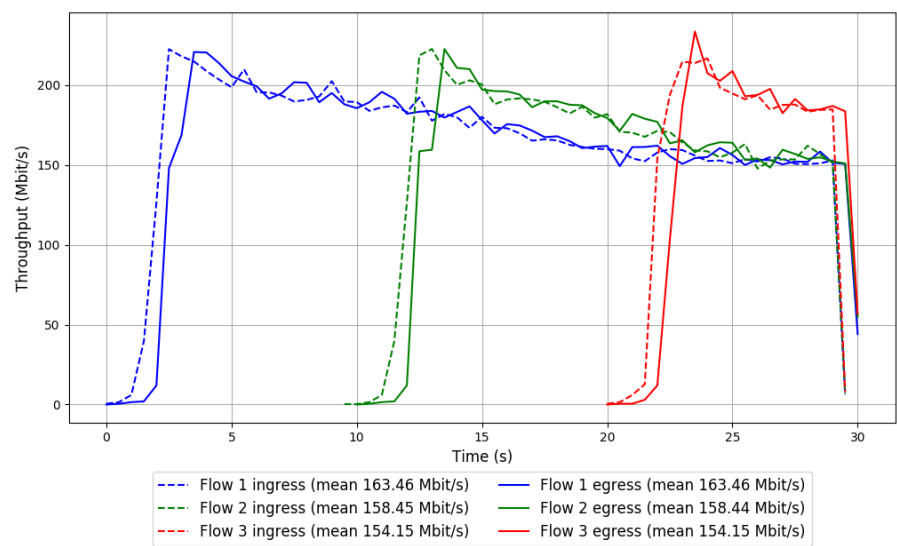


Run 4: Statistics of Indigo

Start at: 2019-01-21 23:01:25
End at: 2019-01-21 23:01:55
Local clock offset: -0.192 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2019-01-22 01:38:37
Datalink statistics
-- Total of 3 flows:
Average throughput: 317.58 Mbit/s
95th percentile per-packet one-way delay: 134.879 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 163.46 Mbit/s
95th percentile per-packet one-way delay: 134.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 158.44 Mbit/s
95th percentile per-packet one-way delay: 135.079 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 154.15 Mbit/s
95th percentile per-packet one-way delay: 136.003 ms
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link



Run 5: Statistics of Indigo

Start at: 2019-01-21 23:41:51

End at: 2019-01-21 23:42:21

Local clock offset: -0.139 ms

Remote clock offset: 0.069 ms

Below is generated by plot.py at 2019-01-22 01:38:37

Datalink statistics

-- Total of 3 flows:

Average throughput: 332.86 Mbit/s

95th percentile per-packet one-way delay: 134.443 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 177.39 Mbit/s

95th percentile per-packet one-way delay: 134.130 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 161.92 Mbit/s

95th percentile per-packet one-way delay: 134.676 ms

Loss rate: 0.00%

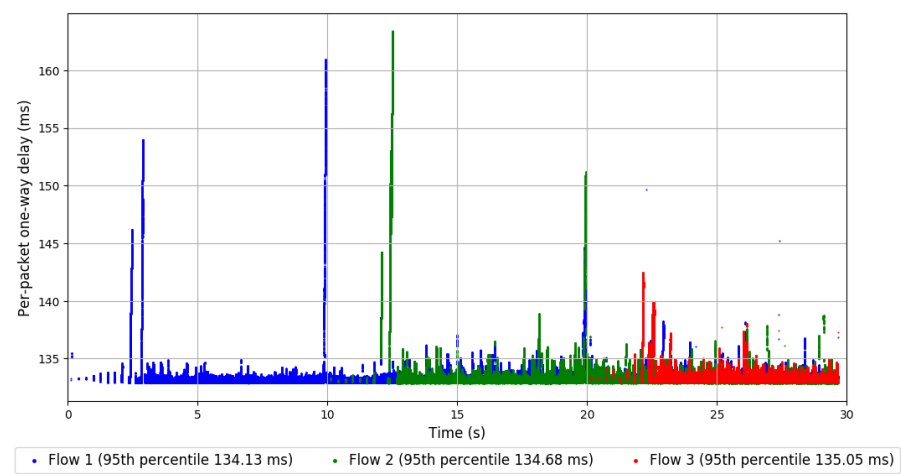
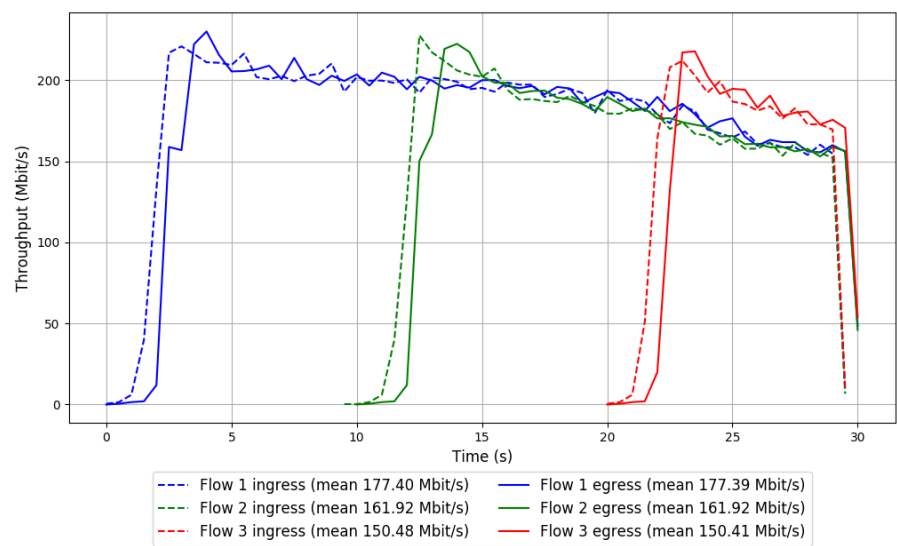
-- Flow 3:

Average throughput: 150.41 Mbit/s

95th percentile per-packet one-way delay: 135.054 ms

Loss rate: 0.00%

Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

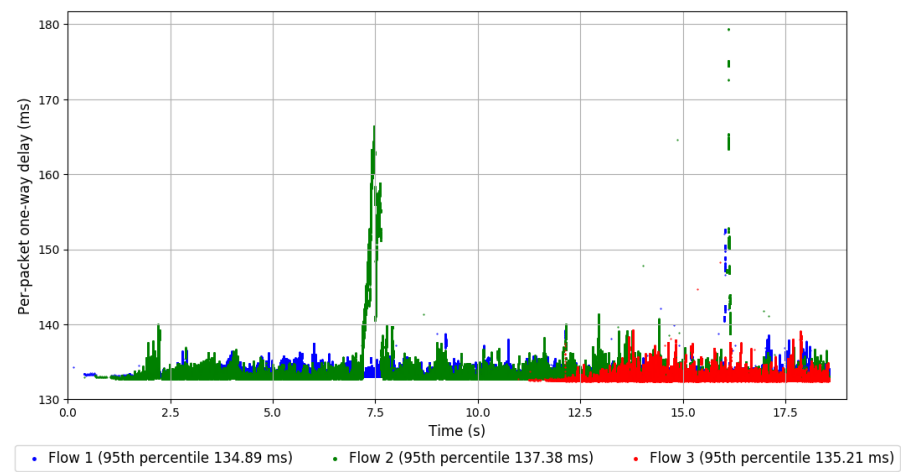
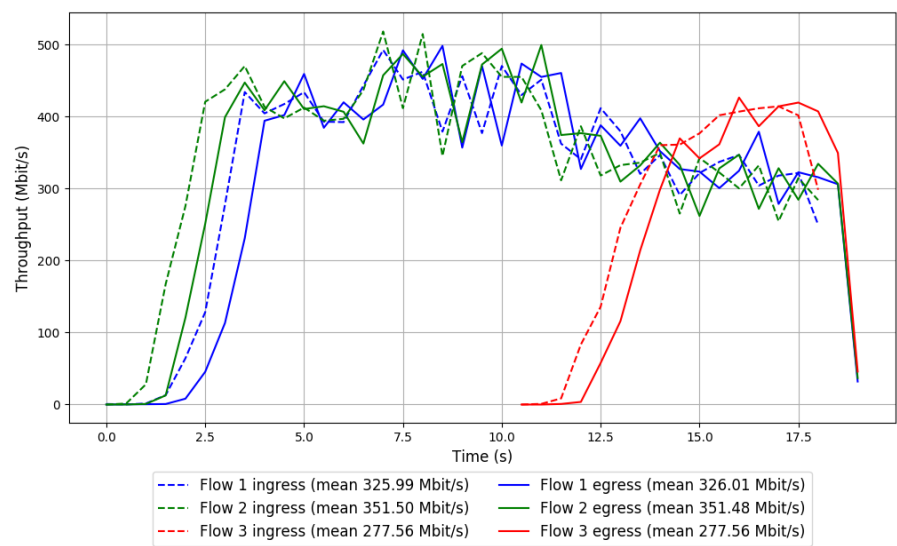
Start at: 2019-01-21 21:00:52

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

Local clock offset: 0.262 ms

Remote clock offset: 0.045 ms

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

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

End at: 2019-01-21 21:40:31

Local clock offset: 0.055 ms

Remote clock offset: 0.005 ms

Below is generated by plot.py at 2019-01-22 01:40:45

Datalink statistics

-- Total of 3 flows:

Average throughput: 754.12 Mbit/s

95th percentile per-packet one-way delay: 137.968 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 449.71 Mbit/s

95th percentile per-packet one-way delay: 140.496 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 364.20 Mbit/s

95th percentile per-packet one-way delay: 136.136 ms

Loss rate: 0.01%

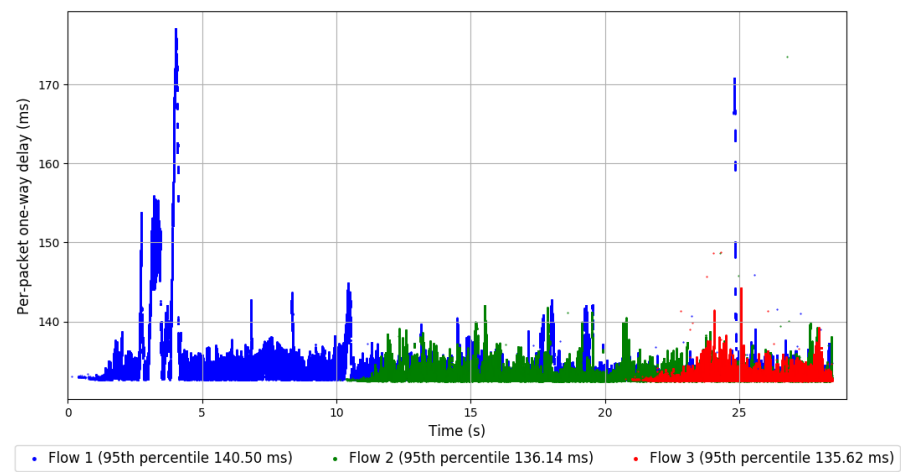
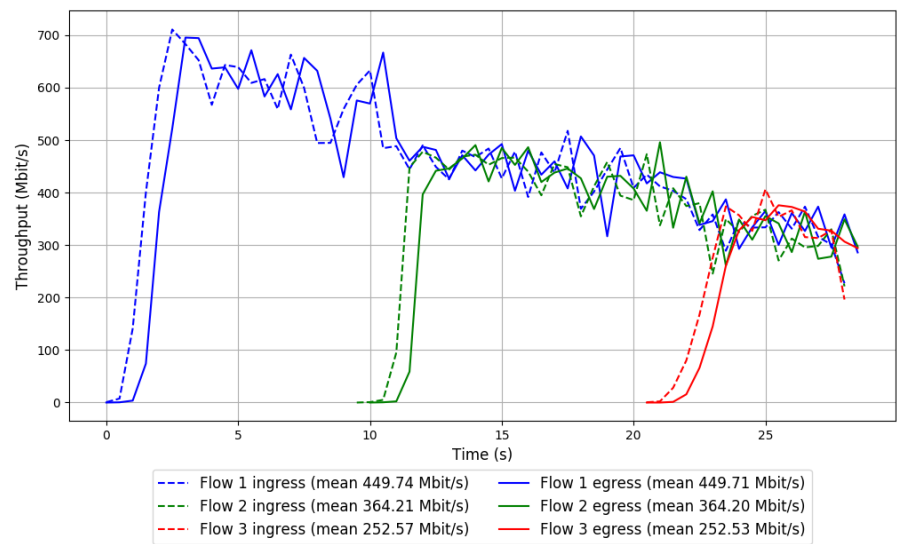
-- Flow 3:

Average throughput: 252.53 Mbit/s

95th percentile per-packet one-way delay: 135.618 ms

Loss rate: 0.03%

Run 2: Report of Indigo-MusesC3 — Data Link

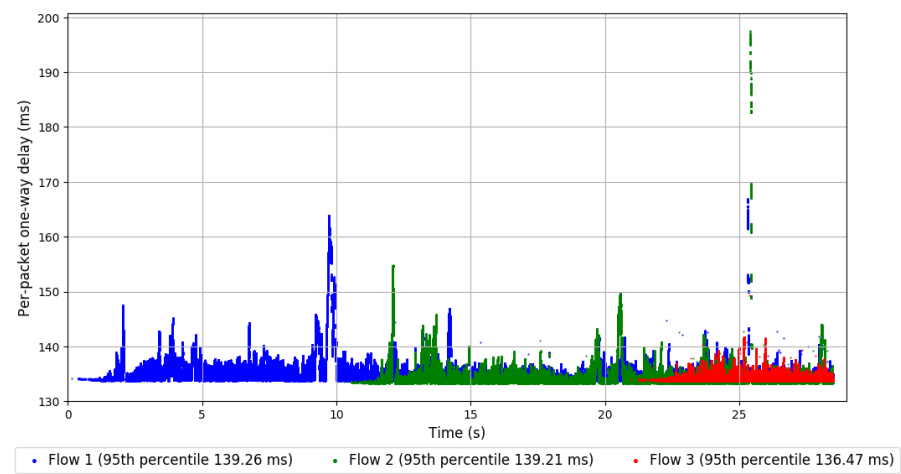
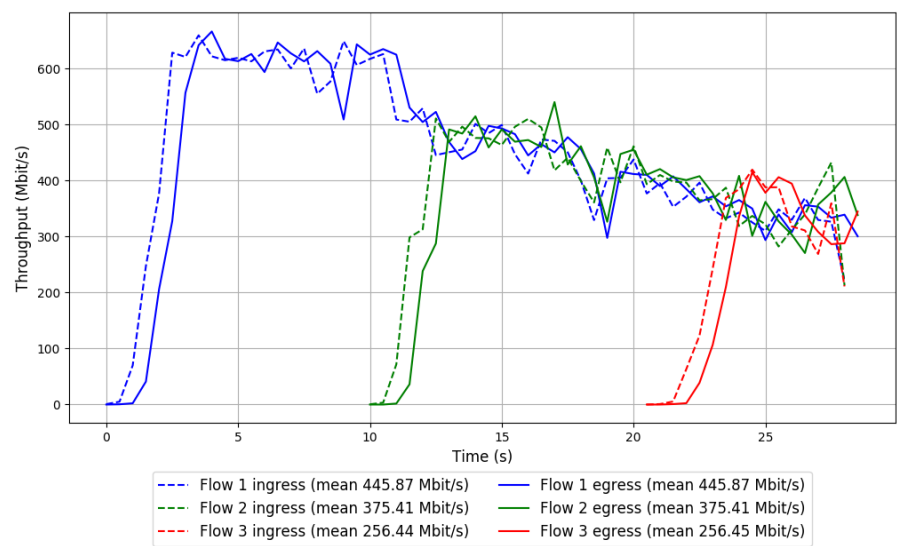


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-21 22:19:40
End at: 2019-01-21 22:20:10
Local clock offset: -0.336 ms
Remote clock offset: -0.021 ms

Below is generated by plot.py at 2019-01-22 01:48:53
Datalink statistics
-- Total of 3 flows:
Average throughput: 754.83 Mbit/s
95th percentile per-packet one-way delay: 138.986 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 445.87 Mbit/s
95th percentile per-packet one-way delay: 139.261 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 375.41 Mbit/s
95th percentile per-packet one-way delay: 139.211 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 256.45 Mbit/s
95th percentile per-packet one-way delay: 136.471 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-21 22:59:16

End at: 2019-01-21 22:59:46

Local clock offset: -0.427 ms

Remote clock offset: 0.277 ms

Below is generated by plot.py at 2019-01-22 01:49:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 775.64 Mbit/s

95th percentile per-packet one-way delay: 139.772 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 454.56 Mbit/s

95th percentile per-packet one-way delay: 141.587 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 371.51 Mbit/s

95th percentile per-packet one-way delay: 137.242 ms

Loss rate: 0.00%

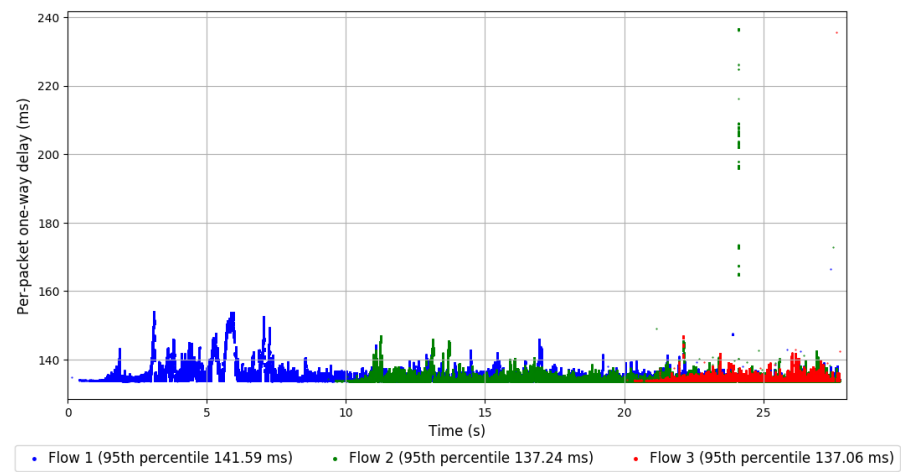
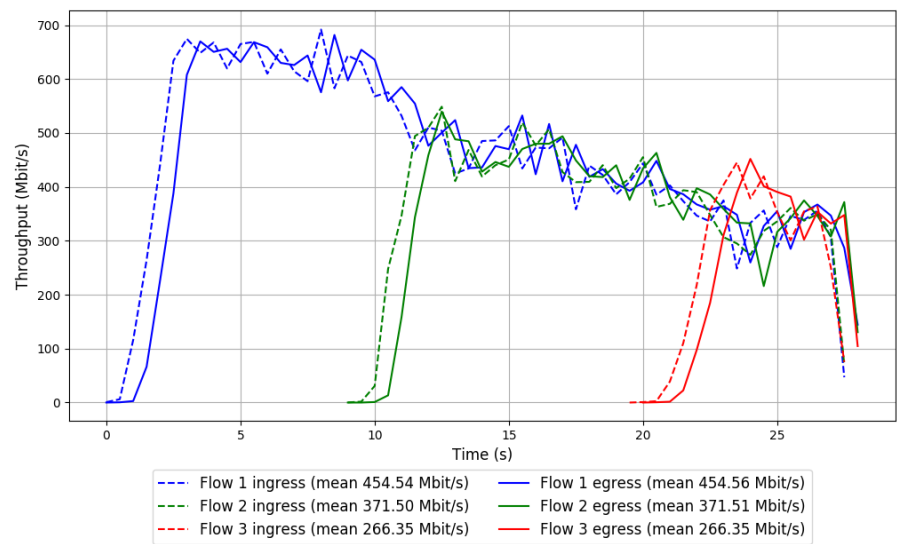
-- Flow 3:

Average throughput: 266.35 Mbit/s

95th percentile per-packet one-way delay: 137.055 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-21 23:39:37

End at: 2019-01-21 23:40:07

Local clock offset: -0.127 ms

Remote clock offset: 0.055 ms

Below is generated by plot.py at 2019-01-22 01:52:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 742.34 Mbit/s

95th percentile per-packet one-way delay: 139.102 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 434.91 Mbit/s

95th percentile per-packet one-way delay: 137.796 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 362.37 Mbit/s

95th percentile per-packet one-way delay: 141.059 ms

Loss rate: 0.00%

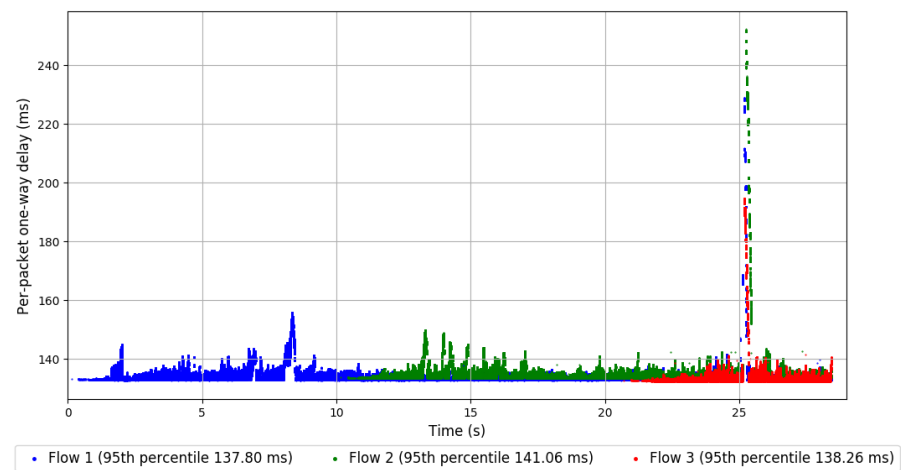
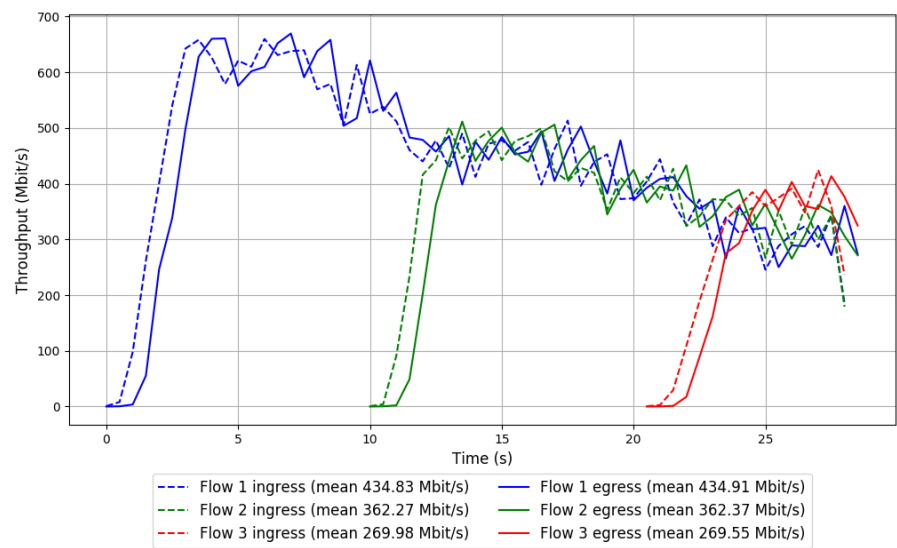
-- Flow 3:

Average throughput: 269.55 Mbit/s

95th percentile per-packet one-way delay: 138.265 ms

Loss rate: 0.16%

Run 5: Report of Indigo-MusesC3 — Data Link



Run 1: Statistics of Indigo-MusesC5

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

End at: 2019-01-21 21:10:22

Local clock offset: -0.342 ms

Remote clock offset: 0.077 ms

Below is generated by plot.py at 2019-01-22 01:52:20

Datalink statistics

-- Total of 3 flows:

Average throughput: 591.67 Mbit/s

95th percentile per-packet one-way delay: 152.592 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 368.96 Mbit/s

95th percentile per-packet one-way delay: 151.176 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 310.24 Mbit/s

95th percentile per-packet one-way delay: 160.735 ms

Loss rate: 0.01%

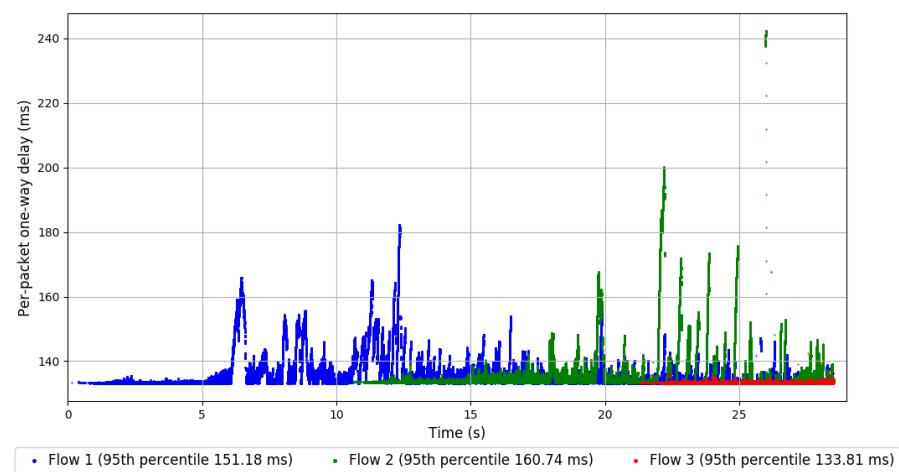
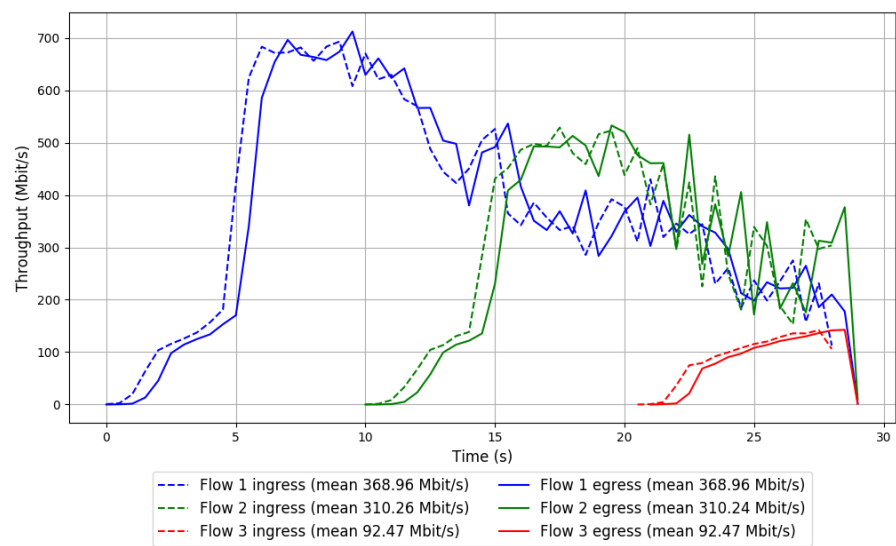
-- Flow 3:

Average throughput: 92.47 Mbit/s

95th percentile per-packet one-way delay: 133.809 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link

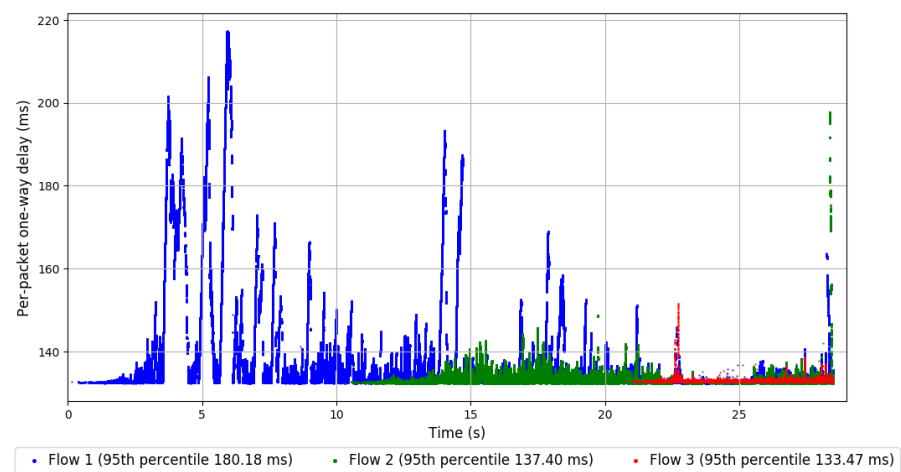
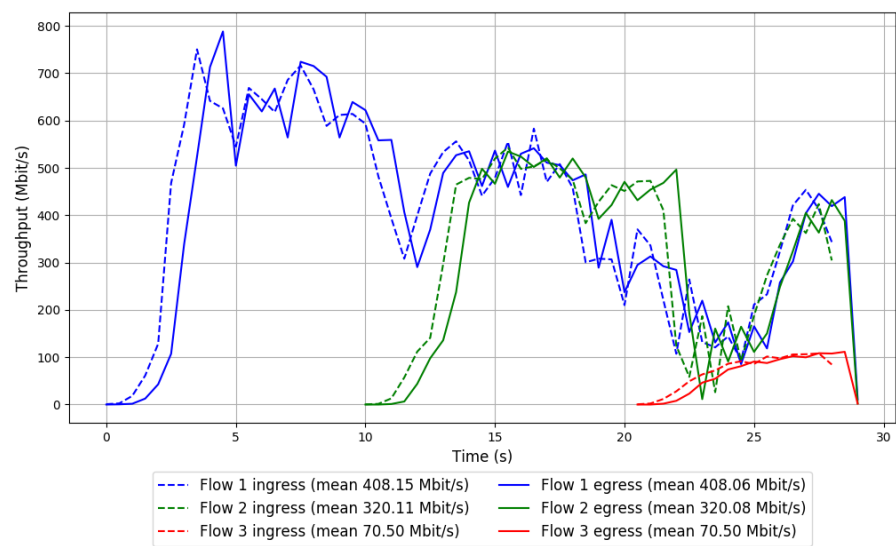


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-21 21:49:29
End at: 2019-01-21 21:49:59
Local clock offset: -0.187 ms
Remote clock offset: -0.405 ms

Below is generated by plot.py at 2019-01-22 01:52:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 632.60 Mbit/s
95th percentile per-packet one-way delay: 172.992 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 408.06 Mbit/s
95th percentile per-packet one-way delay: 180.181 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 320.08 Mbit/s
95th percentile per-packet one-way delay: 137.397 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.50 Mbit/s
95th percentile per-packet one-way delay: 133.470 ms
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

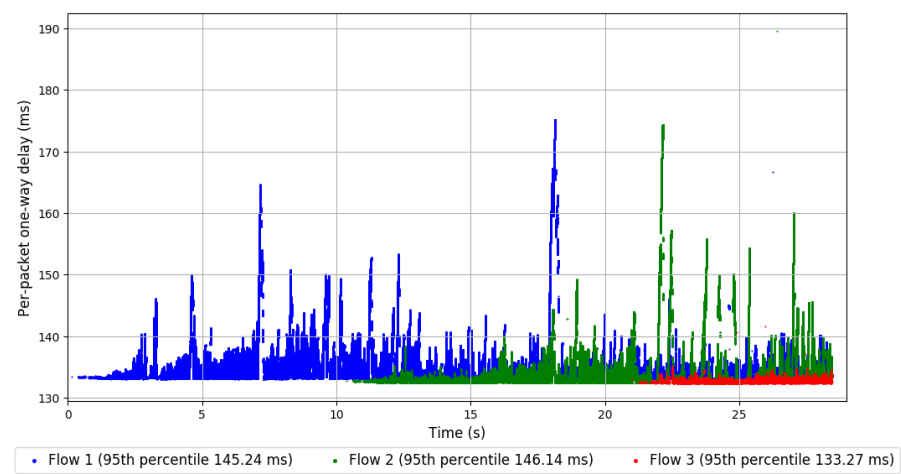
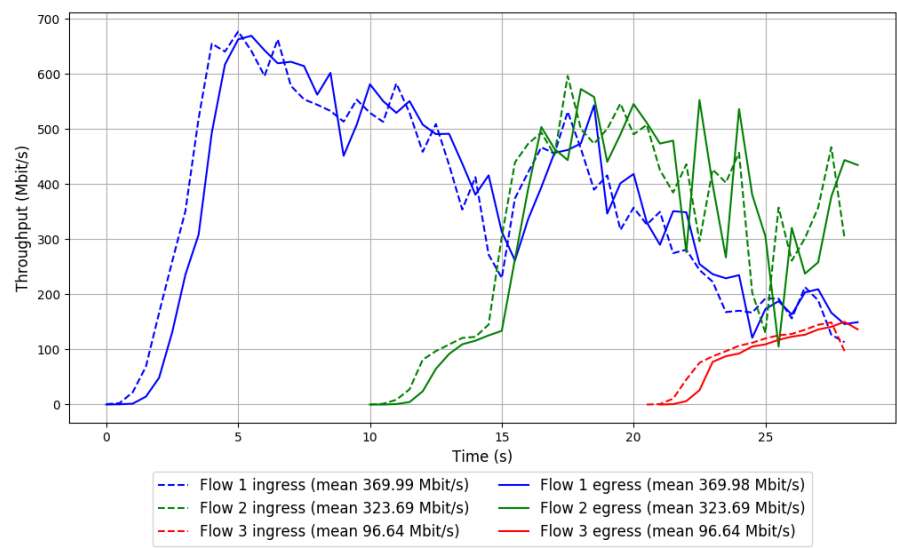


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-21 22:28:58
End at: 2019-01-21 22:29:28
Local clock offset: 0.206 ms
Remote clock offset: -0.046 ms

Below is generated by plot.py at 2019-01-22 01:52:20
Datalink statistics
-- Total of 3 flows:
Average throughput: 602.04 Mbit/s
95th percentile per-packet one-way delay: 145.308 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 369.98 Mbit/s
95th percentile per-packet one-way delay: 145.240 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 323.69 Mbit/s
95th percentile per-packet one-way delay: 146.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.64 Mbit/s
95th percentile per-packet one-way delay: 133.269 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link

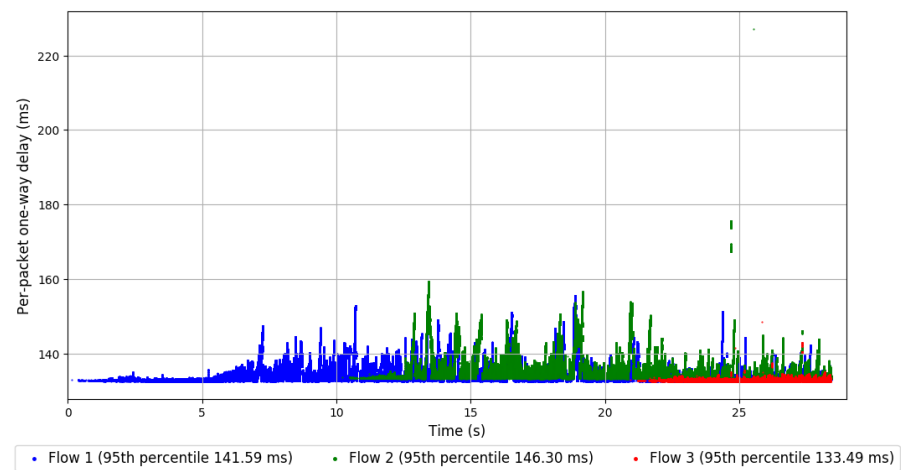
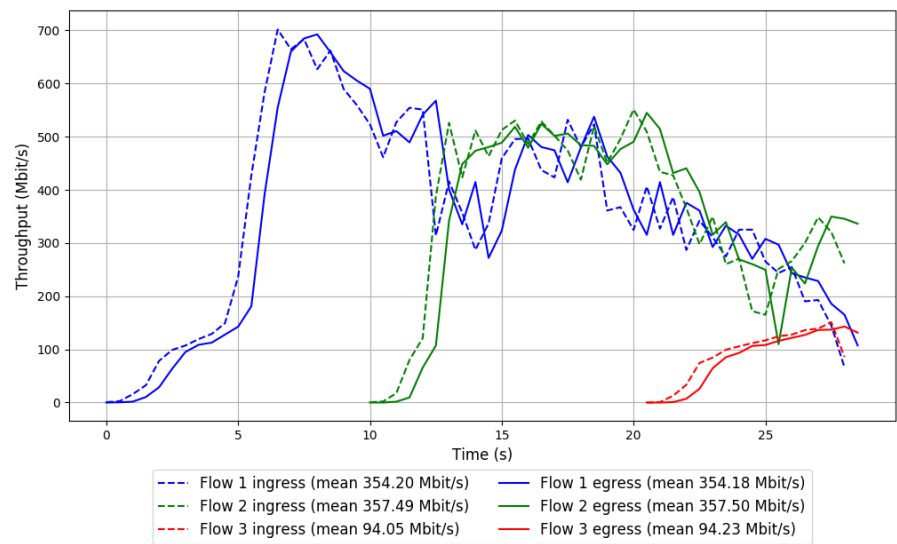


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-21 23:08:46
End at: 2019-01-21 23:09:16
Local clock offset: -0.333 ms
Remote clock offset: -0.089 ms

Below is generated by plot.py at 2019-01-22 01:54:35
Datalink statistics
-- Total of 3 flows:
Average throughput: 608.86 Mbit/s
95th percentile per-packet one-way delay: 143.493 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 354.18 Mbit/s
95th percentile per-packet one-way delay: 141.593 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 357.50 Mbit/s
95th percentile per-packet one-way delay: 146.297 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 94.23 Mbit/s
95th percentile per-packet one-way delay: 133.494 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link



Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-21 23:49:31

End at: 2019-01-21 23:50:01

Local clock offset: -0.042 ms

Remote clock offset: 0.075 ms

Below is generated by plot.py at 2019-01-22 01:57:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 629.94 Mbit/s

95th percentile per-packet one-way delay: 175.674 ms

Loss rate: 0.16%

-- Flow 1:

Average throughput: 390.94 Mbit/s

95th percentile per-packet one-way delay: 188.178 ms

Loss rate: 0.26%

-- Flow 2:

Average throughput: 335.26 Mbit/s

95th percentile per-packet one-way delay: 140.010 ms

Loss rate: 0.00%

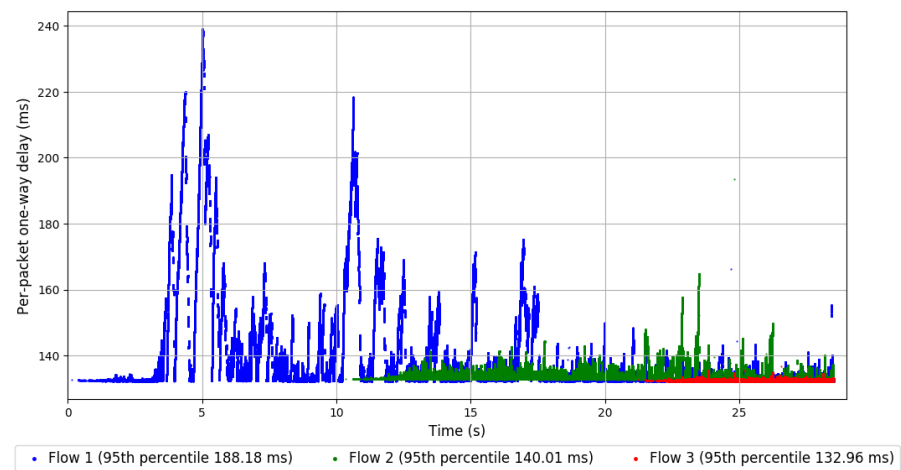
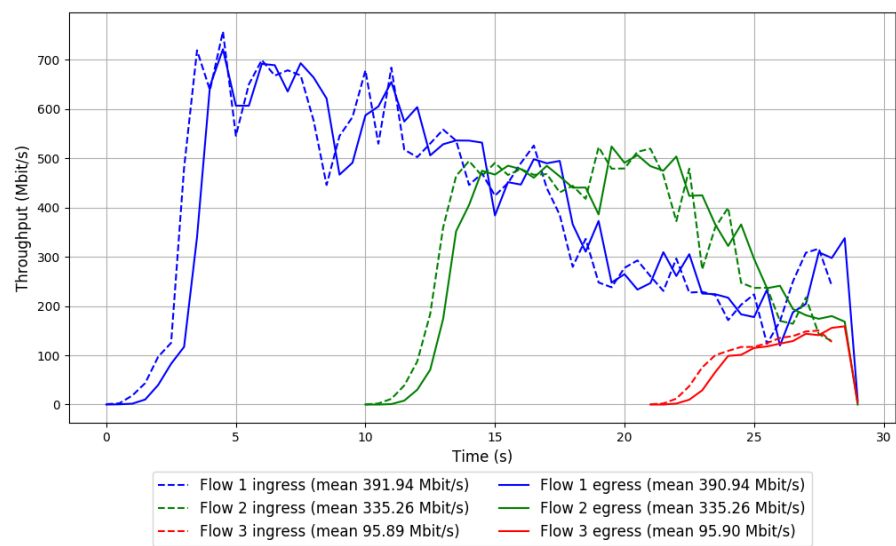
-- Flow 3:

Average throughput: 95.90 Mbit/s

95th percentile per-packet one-way delay: 132.962 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link



Run 1: Statistics of Indigo-MusesD

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

End at: 2019-01-21 21:05:14

Local clock offset: -0.099 ms

Remote clock offset: 0.03 ms

Below is generated by plot.py at 2019-01-22 01:57:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 56.72 Mbit/s

95th percentile per-packet one-way delay: 133.402 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 15.56 Mbit/s

95th percentile per-packet one-way delay: 133.060 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 58.66 Mbit/s

95th percentile per-packet one-way delay: 133.443 ms

Loss rate: 0.00%

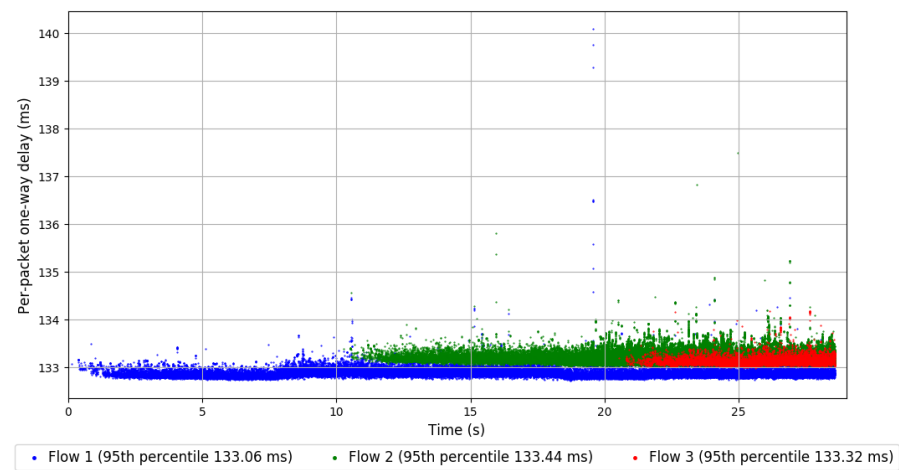
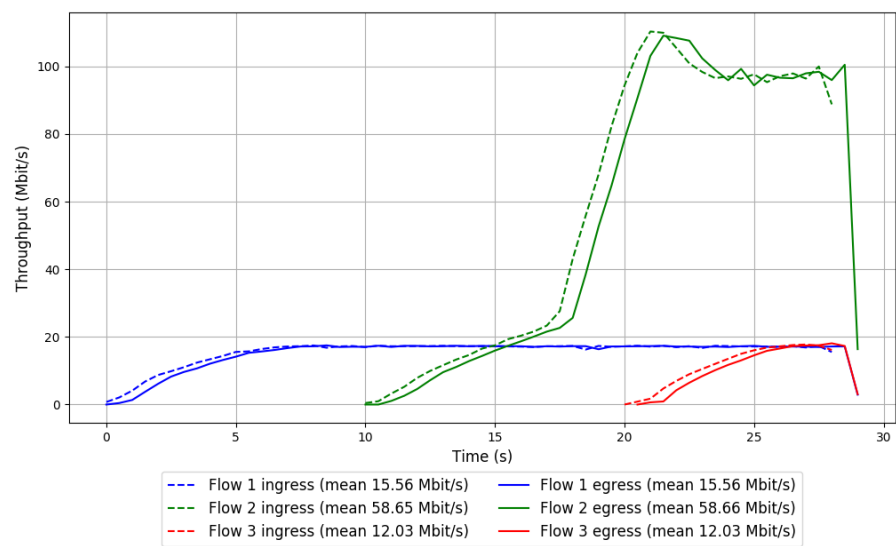
-- Flow 3:

Average throughput: 12.03 Mbit/s

95th percentile per-packet one-way delay: 133.317 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-21 21:44:29

End at: 2019-01-21 21:44:59

Local clock offset: -0.322 ms

Remote clock offset: 0.037 ms

Below is generated by plot.py at 2019-01-22 01:57:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 55.60 Mbit/s

95th percentile per-packet one-way delay: 133.359 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 15.53 Mbit/s

95th percentile per-packet one-way delay: 133.155 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.49 Mbit/s

95th percentile per-packet one-way delay: 132.954 ms

Loss rate: 0.00%

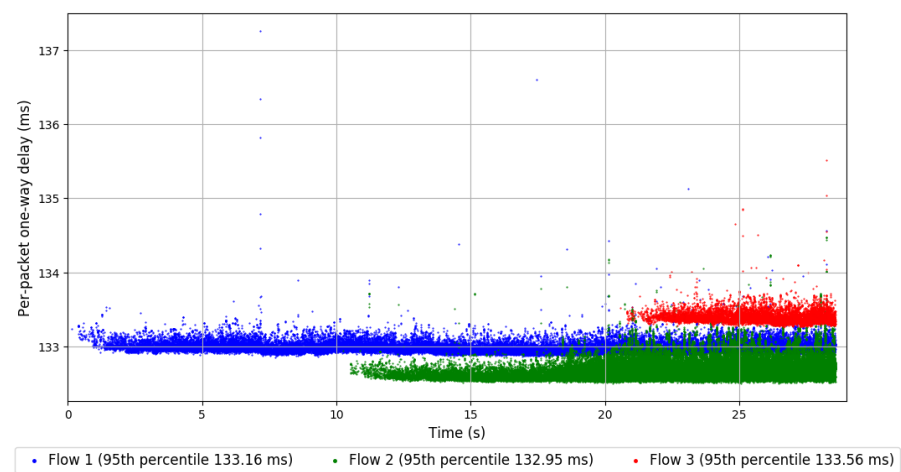
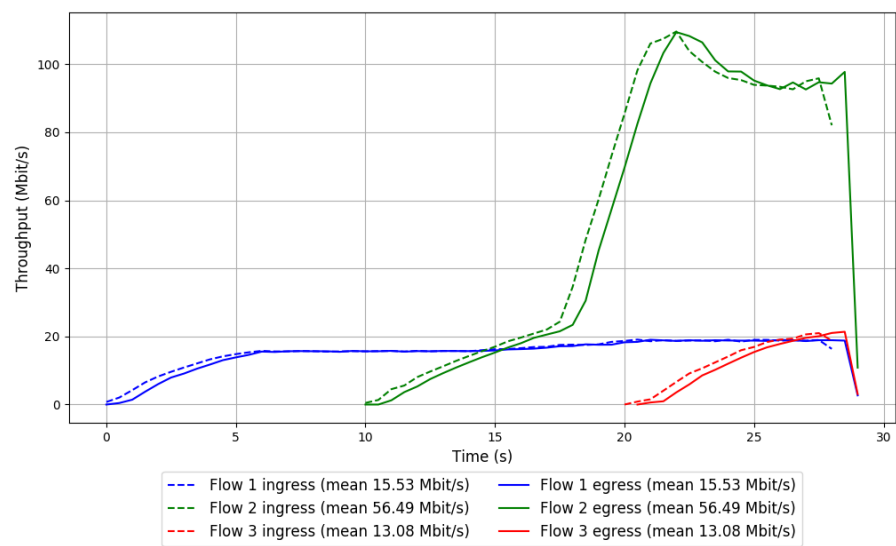
-- Flow 3:

Average throughput: 13.08 Mbit/s

95th percentile per-packet one-way delay: 133.561 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

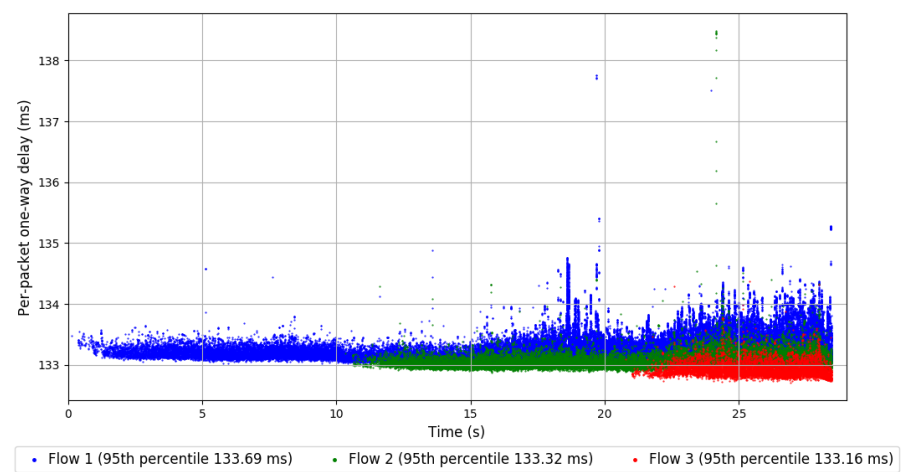
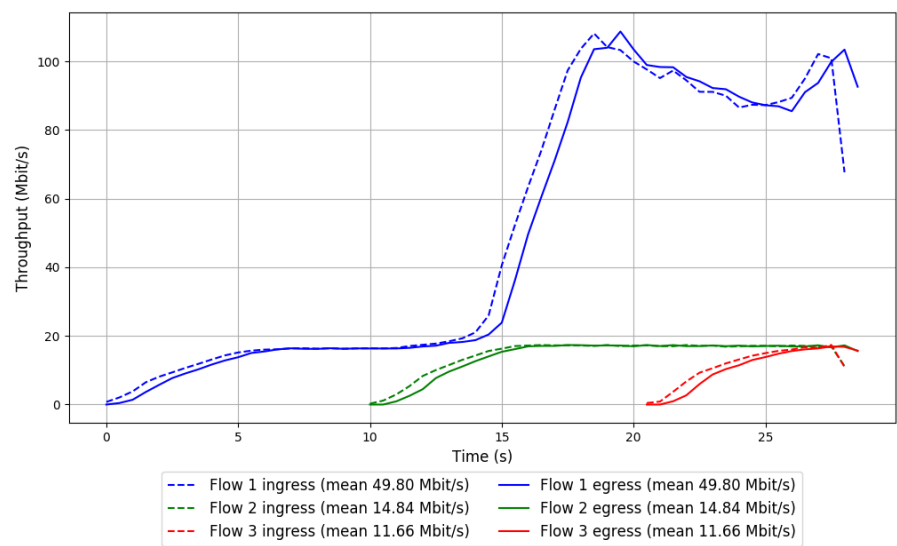


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-21 22:23:55
End at: 2019-01-21 22:24:25
Local clock offset: -0.012 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2019-01-22 01:57:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 62.45 Mbit/s
95th percentile per-packet one-way delay: 133.644 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.80 Mbit/s
95th percentile per-packet one-way delay: 133.688 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 133.320 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 133.158 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

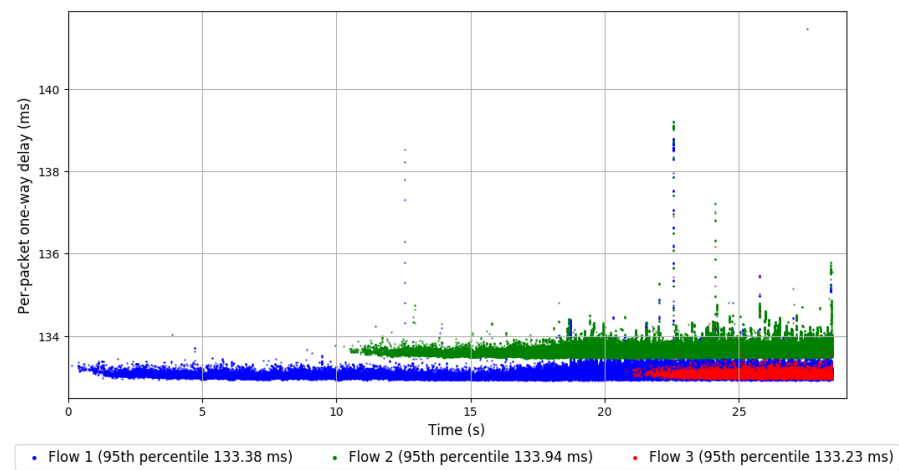
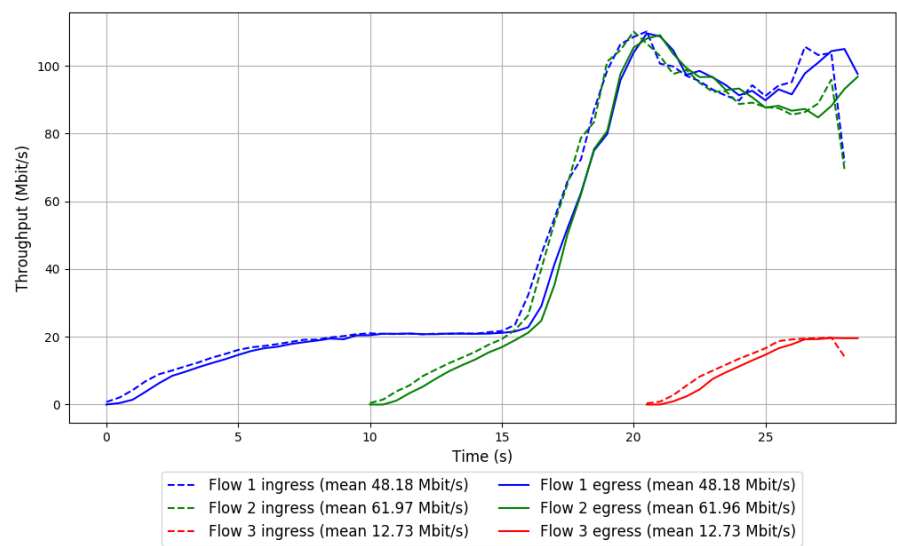


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-21 23:03:28
End at: 2019-01-21 23:03:58
Local clock offset: -0.181 ms
Remote clock offset: -0.068 ms

Below is generated by plot.py at 2019-01-22 01:57:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.45 Mbit/s
95th percentile per-packet one-way delay: 133.826 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.18 Mbit/s
95th percentile per-packet one-way delay: 133.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.96 Mbit/s
95th percentile per-packet one-way delay: 133.935 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 133.229 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link



Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-21 23:44:00

End at: 2019-01-21 23:44:30

Local clock offset: -0.13 ms

Remote clock offset: 0.037 ms

Below is generated by plot.py at 2019-01-22 01:57:13

Datalink statistics

-- Total of 3 flows:

Average throughput: 166.68 Mbit/s

95th percentile per-packet one-way delay: 134.789 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 124.42 Mbit/s

95th percentile per-packet one-way delay: 135.133 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 60.17 Mbit/s

95th percentile per-packet one-way delay: 133.396 ms

Loss rate: 0.01%

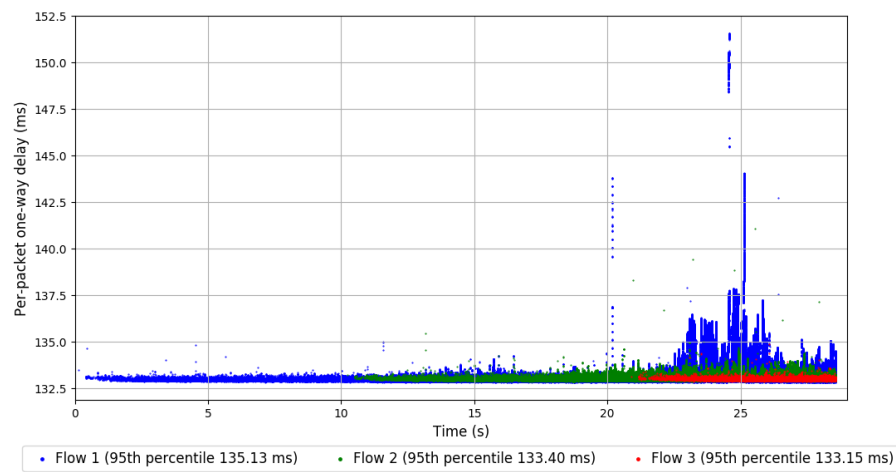
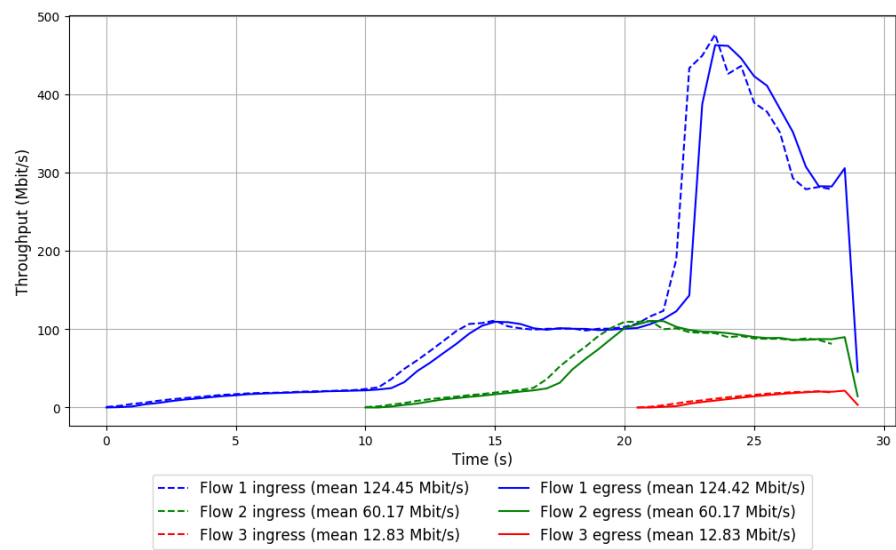
-- Flow 3:

Average throughput: 12.83 Mbit/s

95th percentile per-packet one-way delay: 133.150 ms

Loss rate: 0.02%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-21 21:16:06

End at: 2019-01-21 21:16:36

Local clock offset: -0.097 ms

Remote clock offset: 0.048 ms

Below is generated by plot.py at 2019-01-22 02:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 814.48 Mbit/s

95th percentile per-packet one-way delay: 166.834 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 502.54 Mbit/s

95th percentile per-packet one-way delay: 178.560 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 390.05 Mbit/s

95th percentile per-packet one-way delay: 157.238 ms

Loss rate: 0.01%

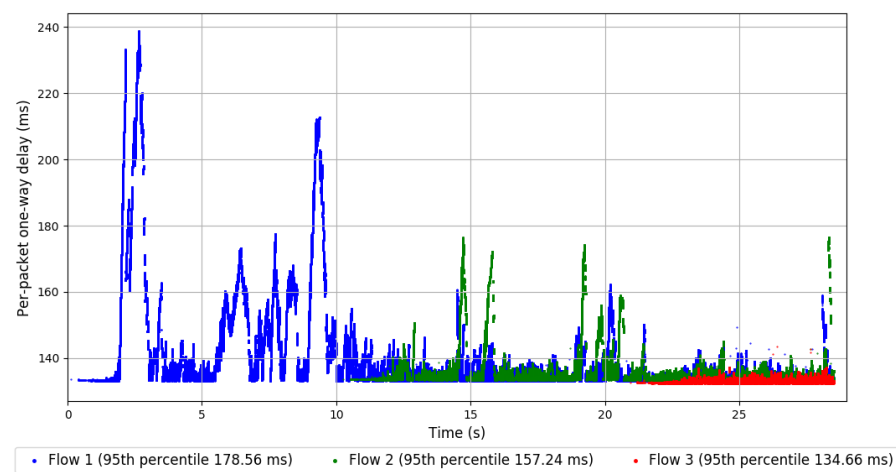
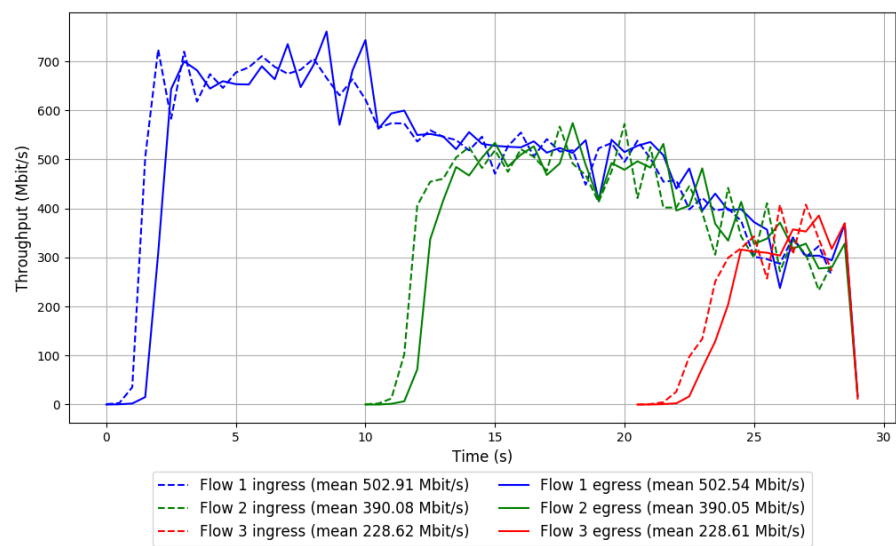
-- Flow 3:

Average throughput: 228.61 Mbit/s

95th percentile per-packet one-way delay: 134.664 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesT — Data Link

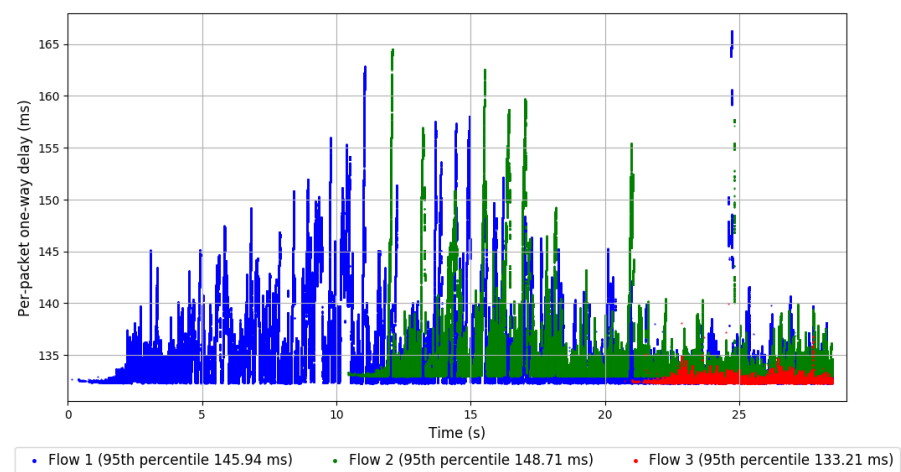
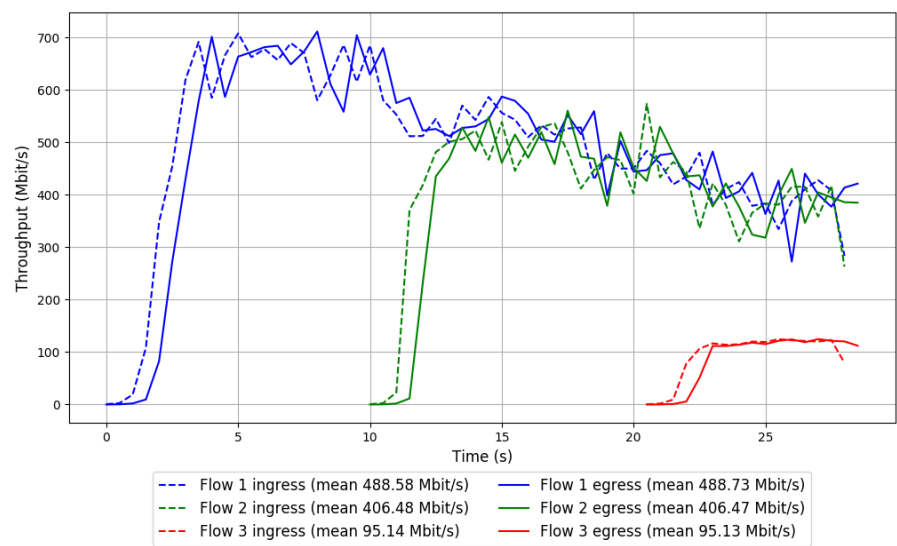


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-21 21:56:11
End at: 2019-01-21 21:56:41
Local clock offset: 0.38 ms
Remote clock offset: -0.008 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 777.30 Mbit/s
95th percentile per-packet one-way delay: 146.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 488.73 Mbit/s
95th percentile per-packet one-way delay: 145.942 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 406.47 Mbit/s
95th percentile per-packet one-way delay: 148.708 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 133.209 ms
Loss rate: 0.01%

Run 2: Report of Indigo-MusesT — Data Link

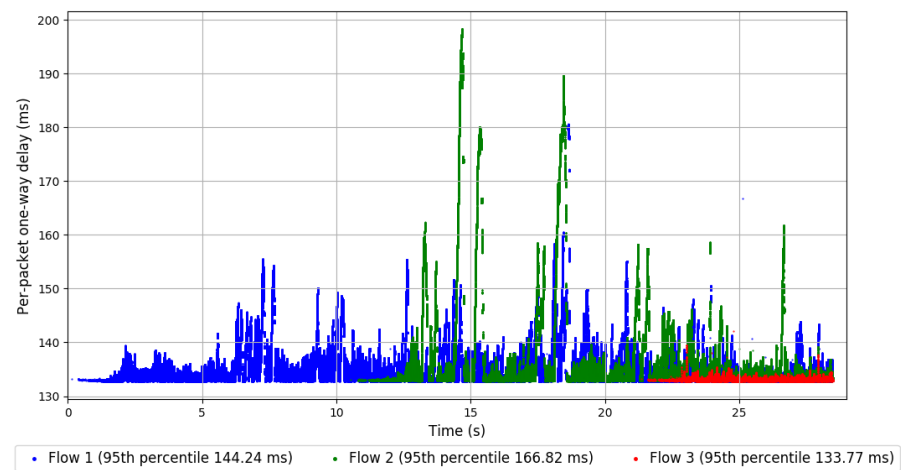
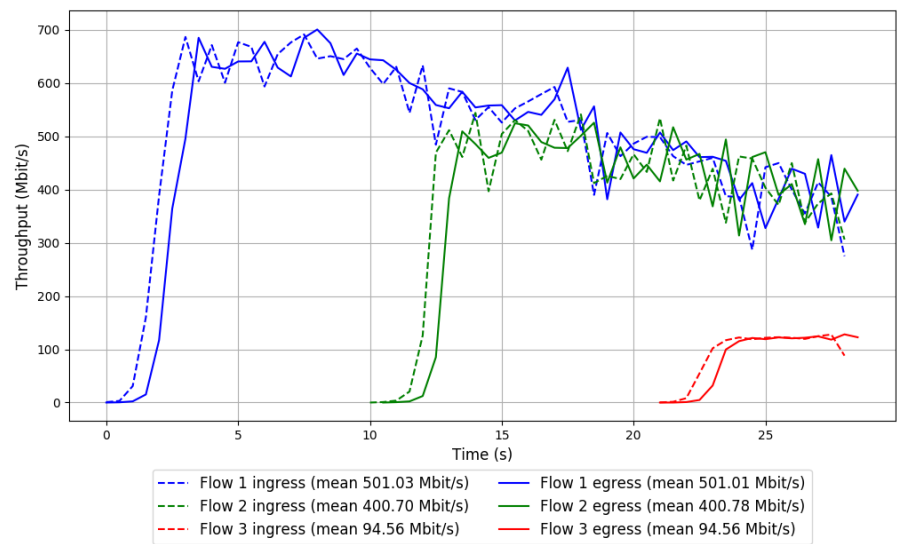


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-21 22:35:43
End at: 2019-01-21 22:36:13
Local clock offset: -0.117 ms
Remote clock offset: -0.059 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 778.52 Mbit/s
95th percentile per-packet one-way delay: 148.396 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 501.01 Mbit/s
95th percentile per-packet one-way delay: 144.240 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 400.78 Mbit/s
95th percentile per-packet one-way delay: 166.823 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 133.771 ms
Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link

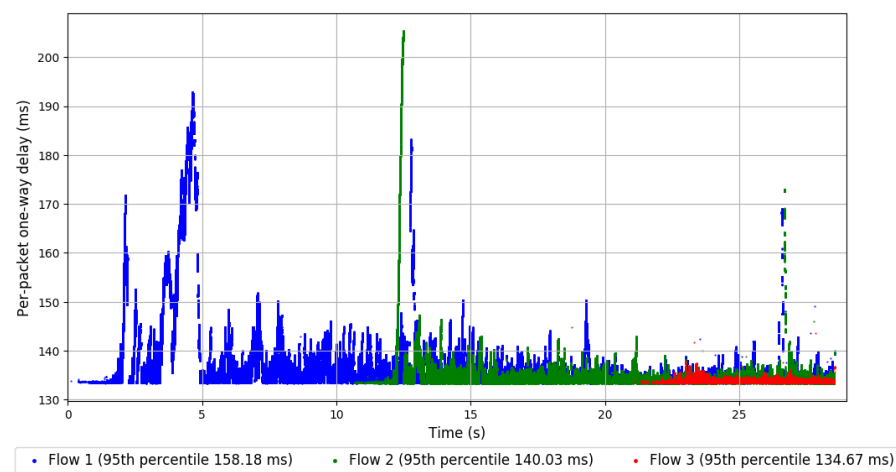
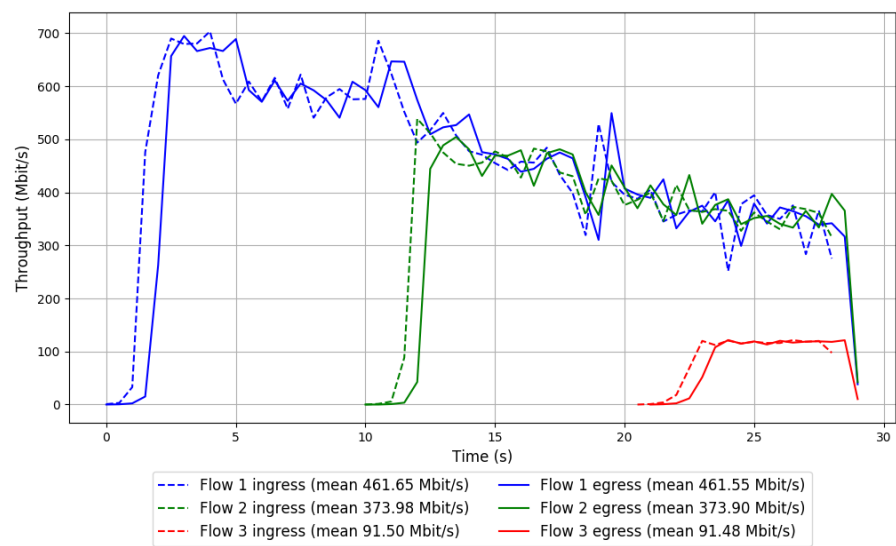


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-21 23:15:29
End at: 2019-01-21 23:15:59
Local clock offset: -0.519 ms
Remote clock offset: -0.008 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 724.03 Mbit/s
95th percentile per-packet one-way delay: 153.227 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 461.55 Mbit/s
95th percentile per-packet one-way delay: 158.177 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 373.90 Mbit/s
95th percentile per-packet one-way delay: 140.034 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 91.48 Mbit/s
95th percentile per-packet one-way delay: 134.673 ms
Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-21 23:56:16

End at: 2019-01-21 23:56:46

Local clock offset: -0.196 ms

Remote clock offset: 0.074 ms

Below is generated by plot.py at 2019-01-22 02:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 713.71 Mbit/s

95th percentile per-packet one-way delay: 170.138 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 464.30 Mbit/s

95th percentile per-packet one-way delay: 179.941 ms

Loss rate: 0.04%

-- Flow 2:

Average throughput: 369.83 Mbit/s

95th percentile per-packet one-way delay: 142.495 ms

Loss rate: 0.00%

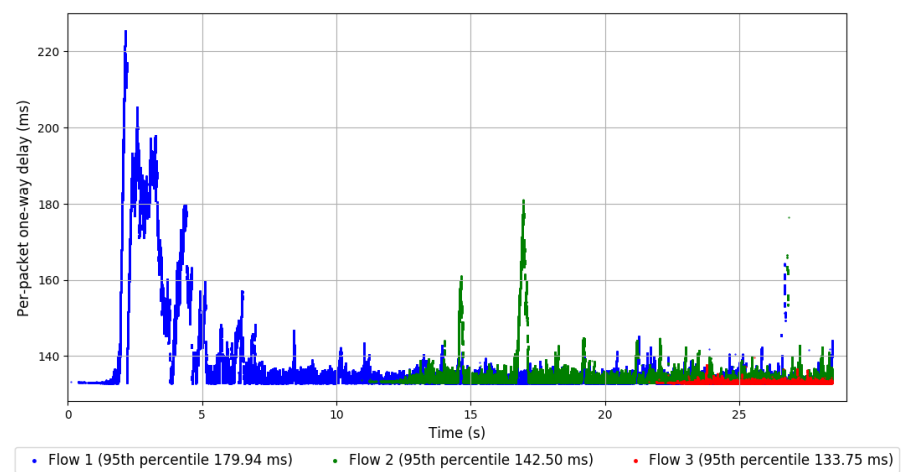
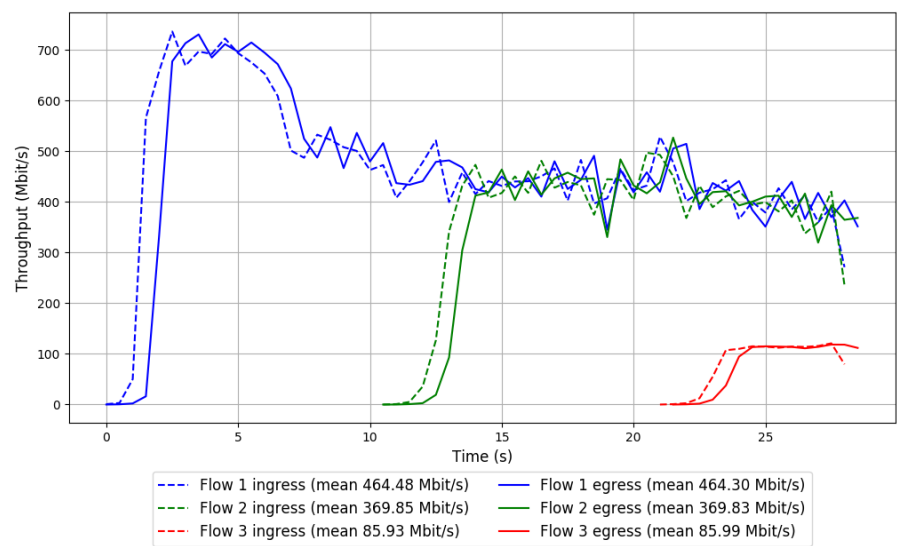
-- Flow 3:

Average throughput: 85.99 Mbit/s

95th percentile per-packet one-way delay: 133.754 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

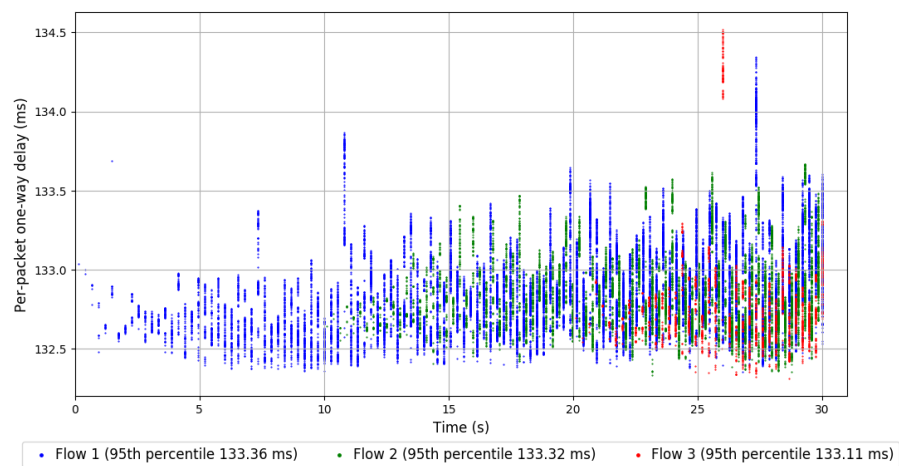
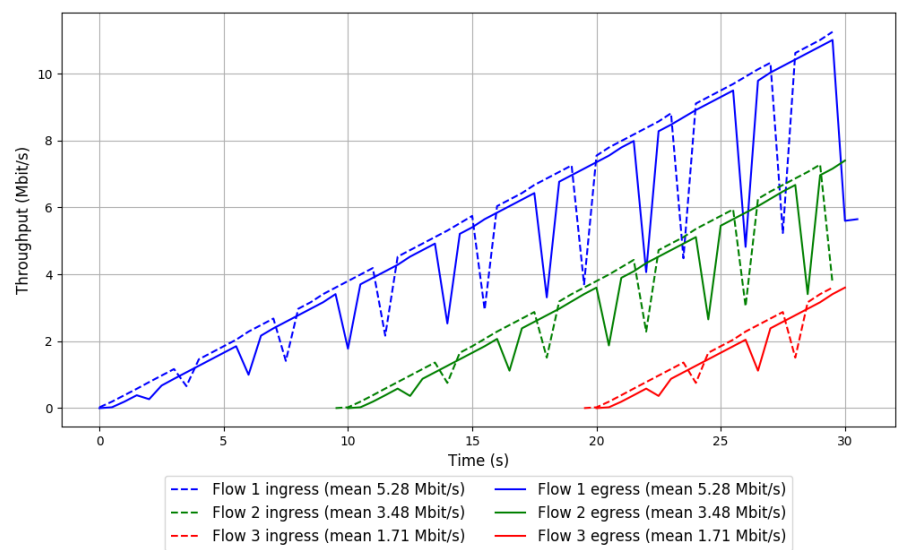


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-21 21:14:46
End at: 2019-01-21 21:15:16
Local clock offset: 0.003 ms
Remote clock offset: -0.272 ms

# Below is generated by plot.py at 2019-01-22 02:09:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 133.351 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 133.363 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 133.321 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 133.107 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

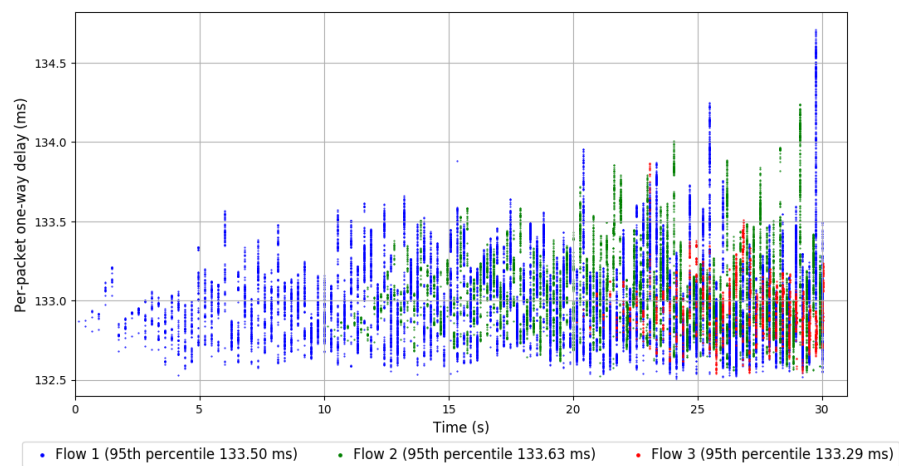
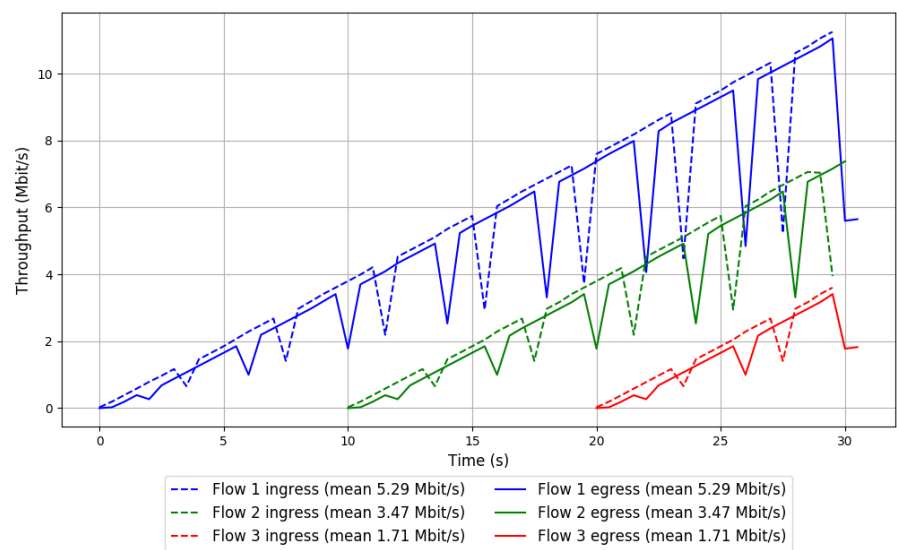


Run 2: Statistics of LEDBAT

Start at: 2019-01-21 21:54:51
End at: 2019-01-21 21:55:21
Local clock offset: -0.112 ms
Remote clock offset: -0.334 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 133.535 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 133.501 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 133.626 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 133.289 ms
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link

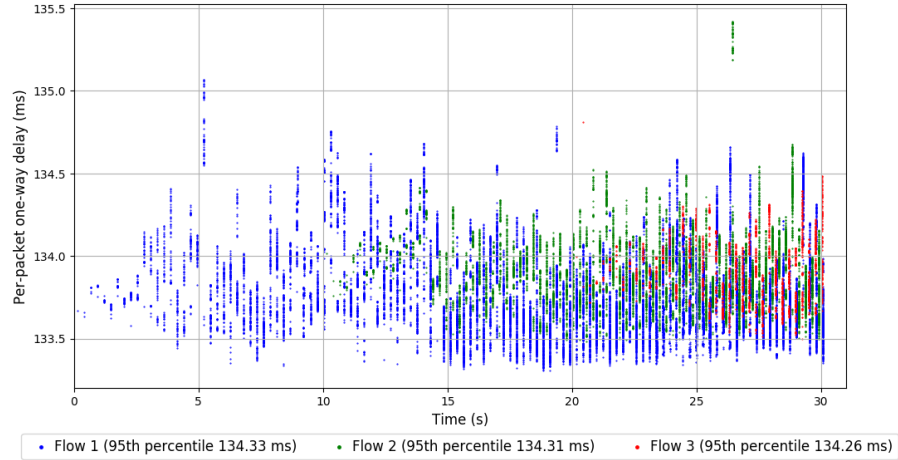
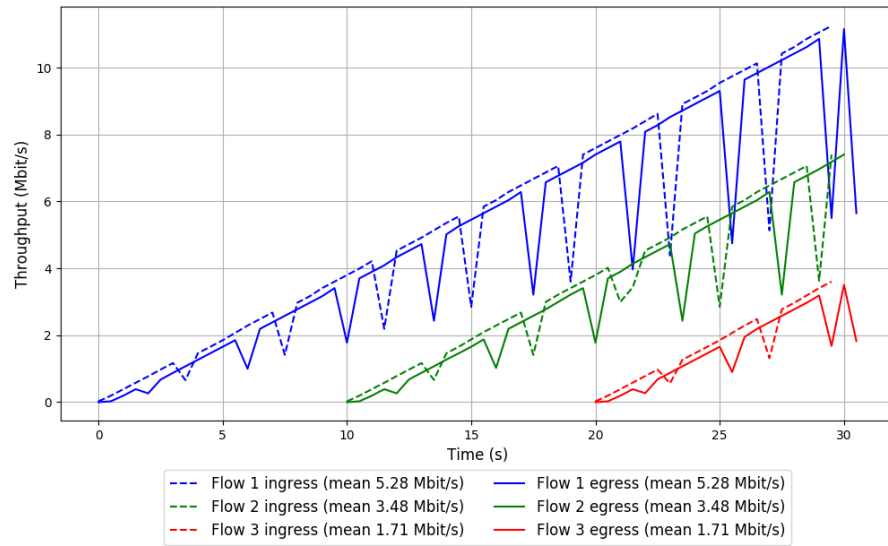


Run 3: Statistics of LEDBAT

Start at: 2019-01-21 22:34:23
End at: 2019-01-21 22:34:53
Local clock offset: -0.546 ms
Remote clock offset: -0.079 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 134.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.28 Mbit/s
95th percentile per-packet one-way delay: 134.326 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 134.311 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 134.264 ms
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

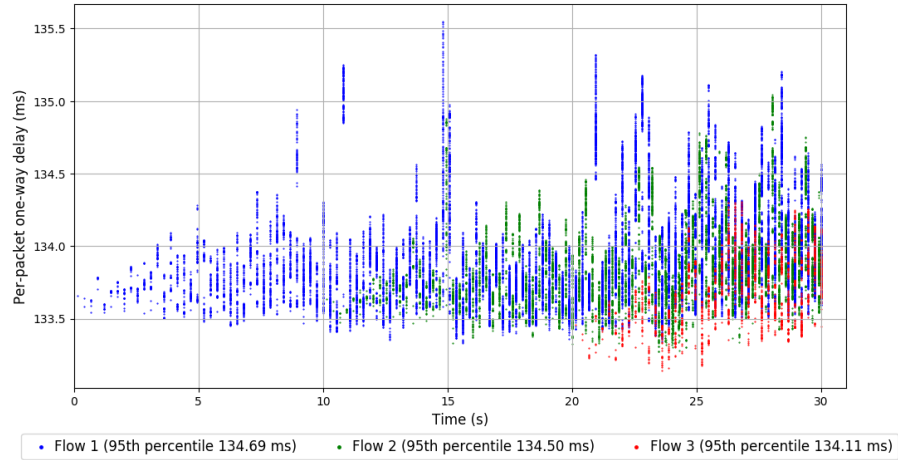
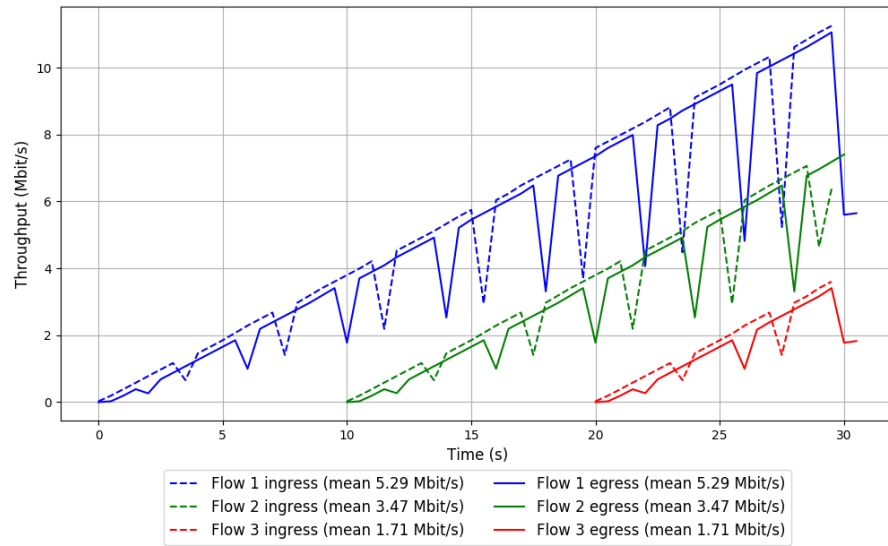


Run 4: Statistics of LEDBAT

Start at: 2019-01-21 23:14:09
End at: 2019-01-21 23:14:39
Local clock offset: -0.493 ms
Remote clock offset: -0.034 ms

Below is generated by plot.py at 2019-01-22 02:09:52
Datalink statistics
-- Total of 3 flows:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 134.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 134.687 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 134.498 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 134.113 ms
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link



Run 5: Statistics of LEDBAT

Start at: 2019-01-21 23:54:55

End at: 2019-01-21 23:55:25

Local clock offset: -0.396 ms

Remote clock offset: 0.102 ms

Below is generated by plot.py at 2019-01-22 02:09:52

Datalink statistics

-- Total of 3 flows:

Average throughput: 8.14 Mbit/s

95th percentile per-packet one-way delay: 134.214 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 5.28 Mbit/s

95th percentile per-packet one-way delay: 134.400 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 3.47 Mbit/s

95th percentile per-packet one-way delay: 133.971 ms

Loss rate: 0.00%

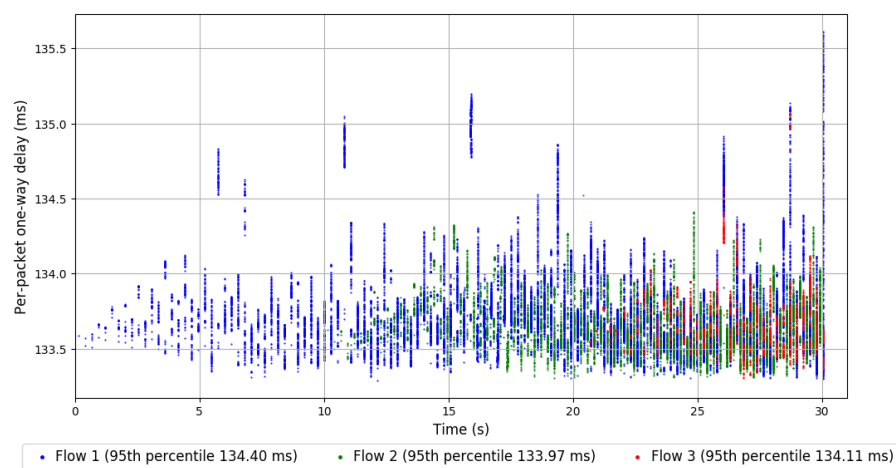
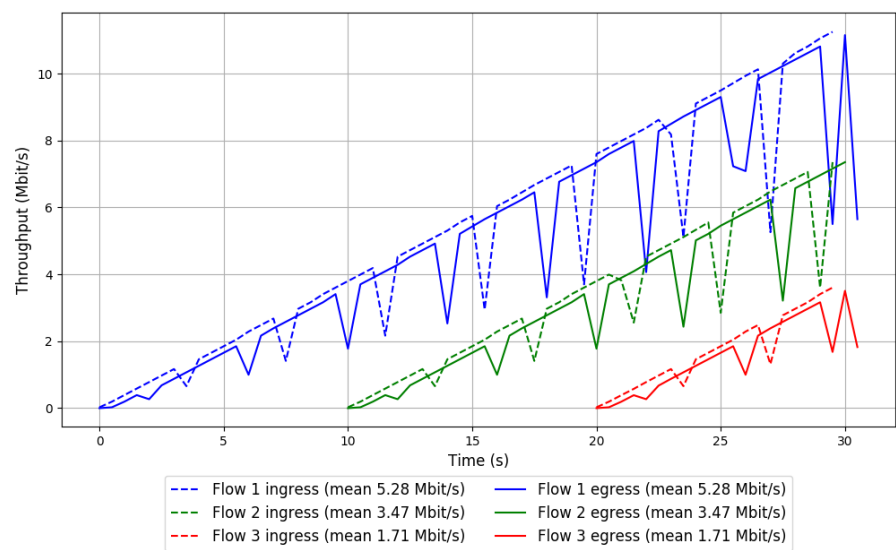
-- Flow 3:

Average throughput: 1.71 Mbit/s

95th percentile per-packet one-way delay: 134.109 ms

Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

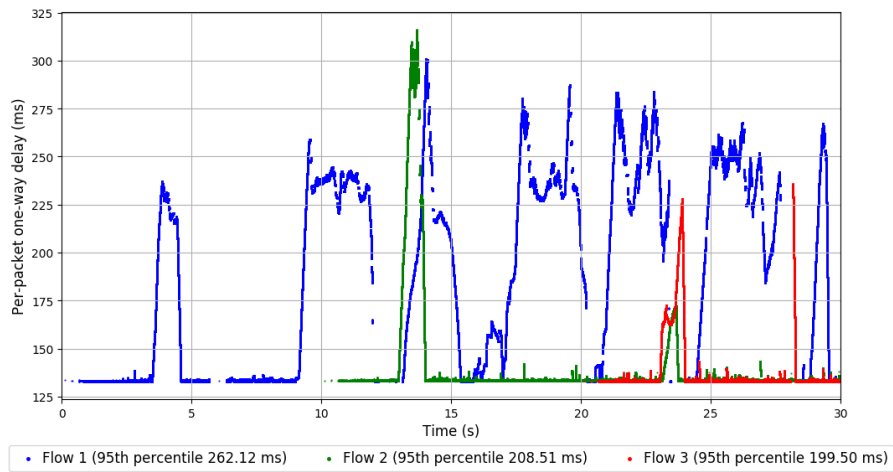
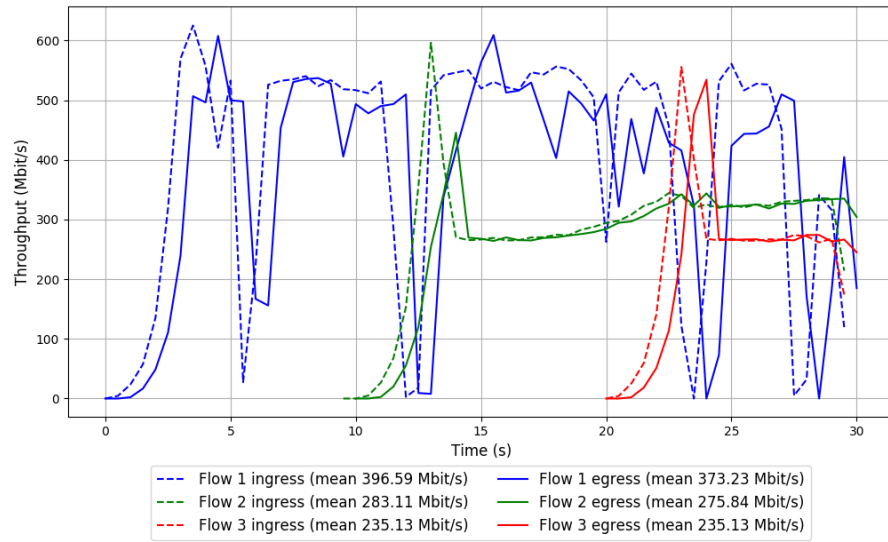


```
Run 1: Statistics of PCC-Allegro

Start at: 2019-01-21 20:58:16
End at: 2019-01-21 20:58:46
Local clock offset: -0.27 ms
Remote clock offset: 0.397 ms

# Below is generated by plot.py at 2019-01-22 02:24:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 634.17 Mbit/s
95th percentile per-packet one-way delay: 257.216 ms
Loss rate: 4.26%
-- Flow 1:
Average throughput: 373.23 Mbit/s
95th percentile per-packet one-way delay: 262.120 ms
Loss rate: 5.89%
-- Flow 2:
Average throughput: 275.84 Mbit/s
95th percentile per-packet one-way delay: 208.515 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 235.13 Mbit/s
95th percentile per-packet one-way delay: 199.501 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Allegro — Data Link



Run 2: Statistics of PCC-Allegro

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

End at: 2019-01-21 21:38:07

Local clock offset: 0.01 ms

Remote clock offset: 0.013 ms

Below is generated by plot.py at 2019-01-22 02:24:15

Datalink statistics

-- Total of 3 flows:

Average throughput: 589.09 Mbit/s

95th percentile per-packet one-way delay: 251.528 ms

Loss rate: 2.47%

-- Flow 1:

Average throughput: 325.30 Mbit/s

95th percentile per-packet one-way delay: 261.265 ms

Loss rate: 3.68%

-- Flow 2:

Average throughput: 285.05 Mbit/s

95th percentile per-packet one-way delay: 136.931 ms

Loss rate: 0.07%

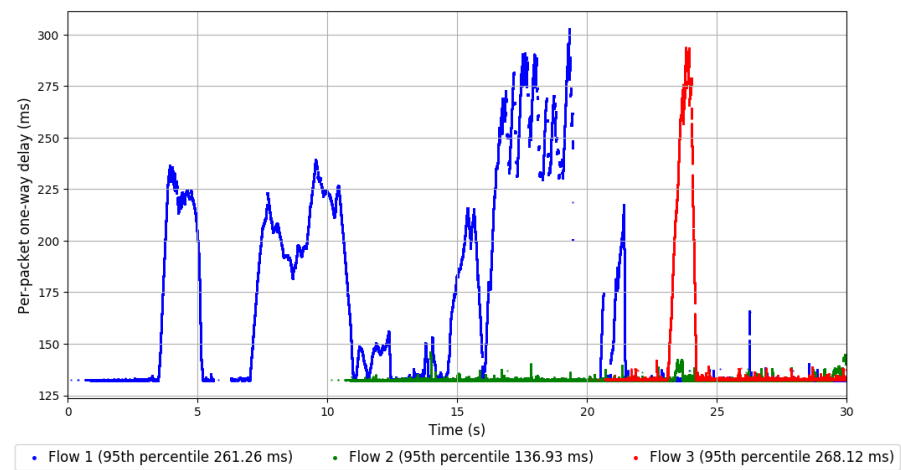
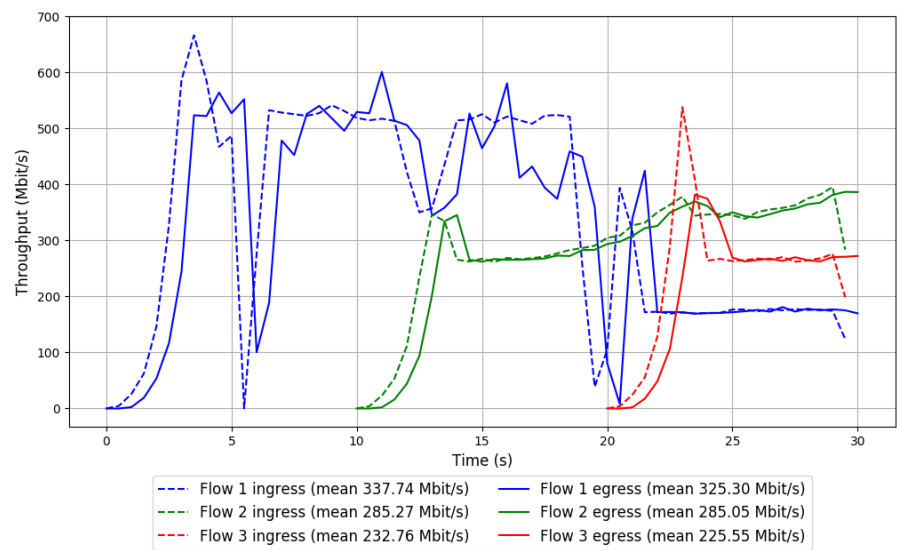
-- Flow 3:

Average throughput: 225.55 Mbit/s

95th percentile per-packet one-way delay: 268.125 ms

Loss rate: 3.10%

Run 2: Report of PCC-Allegro — Data Link

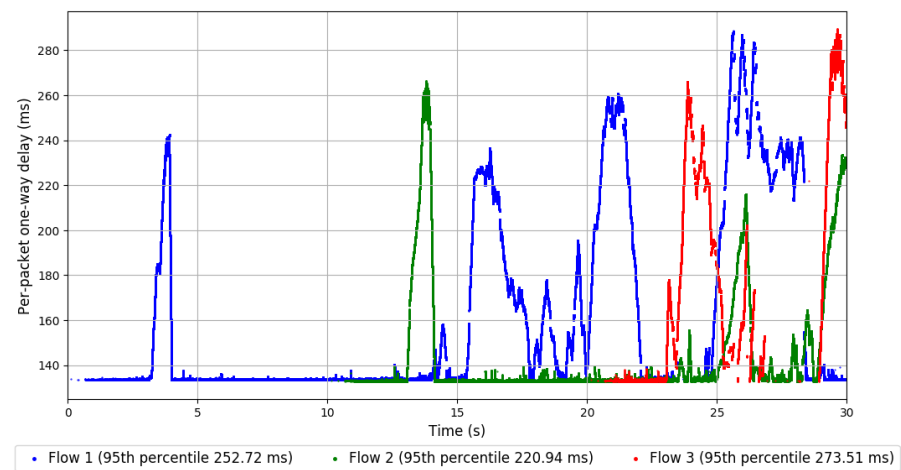
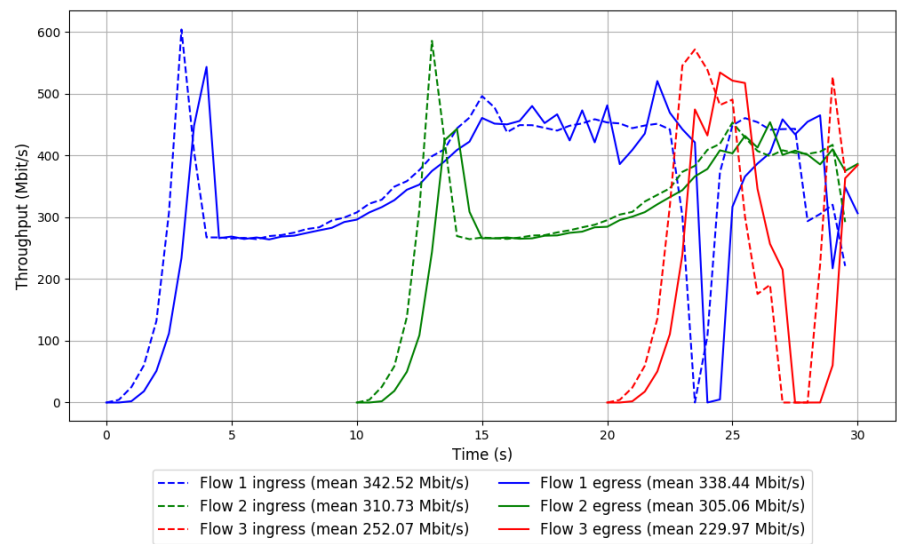


Run 3: Statistics of PCC-Allegro

Start at: 2019-01-21 22:17:10
End at: 2019-01-21 22:17:40
Local clock offset: -0.021 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2019-01-22 02:26:22
Datalink statistics
-- Total of 3 flows:
Average throughput: 616.91 Mbit/s
95th percentile per-packet one-way delay: 252.118 ms
Loss rate: 2.40%
-- Flow 1:
Average throughput: 338.44 Mbit/s
95th percentile per-packet one-way delay: 252.720 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 305.06 Mbit/s
95th percentile per-packet one-way delay: 220.936 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 229.97 Mbit/s
95th percentile per-packet one-way delay: 273.509 ms
Loss rate: 8.77%

Run 3: Report of PCC-Allegro — Data Link

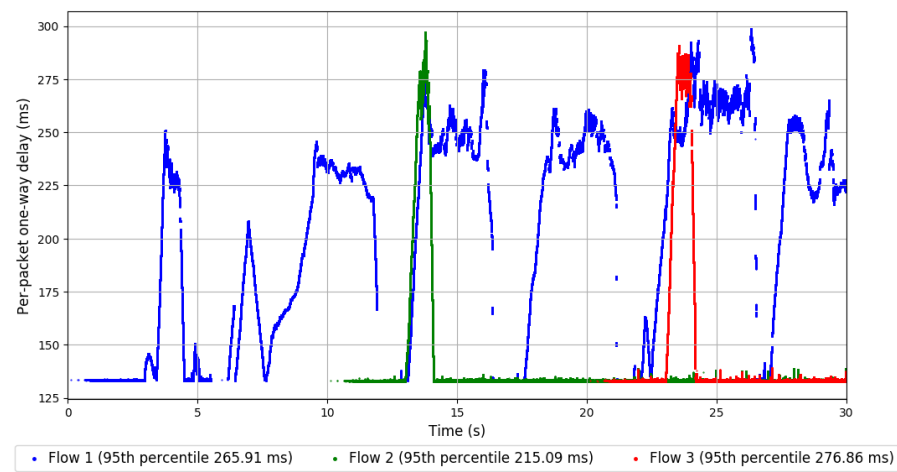
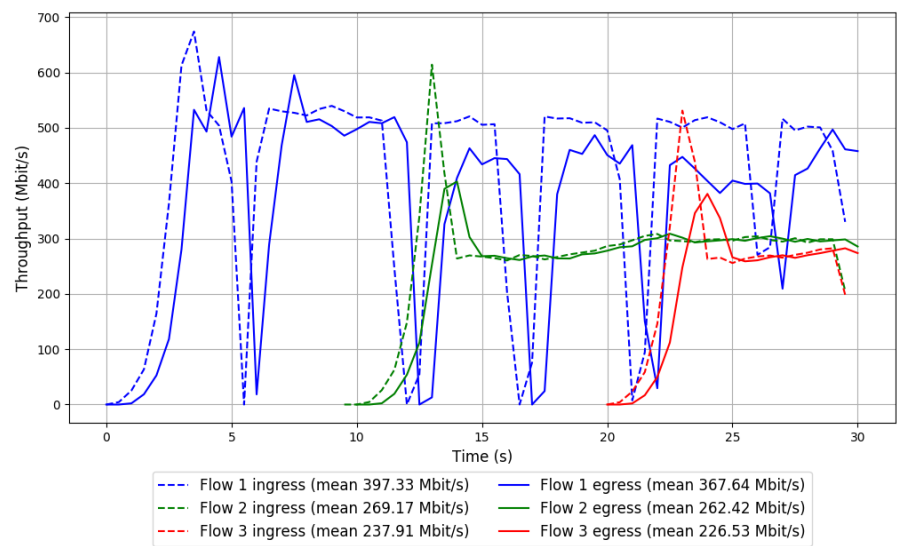


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-21 22:56:45
End at: 2019-01-21 22:57:15
Local clock offset: -0.339 ms
Remote clock offset: -0.478 ms

Below is generated by plot.py at 2019-01-22 02:39:30
Datalink statistics
-- Total of 3 flows:
Average throughput: 616.87 Mbit/s
95th percentile per-packet one-way delay: 265.428 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 367.64 Mbit/s
95th percentile per-packet one-way delay: 265.907 ms
Loss rate: 7.47%
-- Flow 2:
Average throughput: 262.42 Mbit/s
95th percentile per-packet one-way delay: 215.094 ms
Loss rate: 2.54%
-- Flow 3:
Average throughput: 226.53 Mbit/s
95th percentile per-packet one-way delay: 276.857 ms
Loss rate: 4.78%

Run 4: Report of PCC-Allegro — Data Link



Run 5: Statistics of PCC-Allegro

Start at: 2019-01-21 23:37:18

End at: 2019-01-21 23:37:48

Local clock offset: 0.254 ms

Remote clock offset: 0.043 ms

Below is generated by plot.py at 2019-01-22 02:40:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 629.92 Mbit/s

95th percentile per-packet one-way delay: 236.276 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 350.46 Mbit/s

95th percentile per-packet one-way delay: 245.410 ms

Loss rate: 1.08%

-- Flow 2:

Average throughput: 307.44 Mbit/s

95th percentile per-packet one-way delay: 235.452 ms

Loss rate: 0.99%

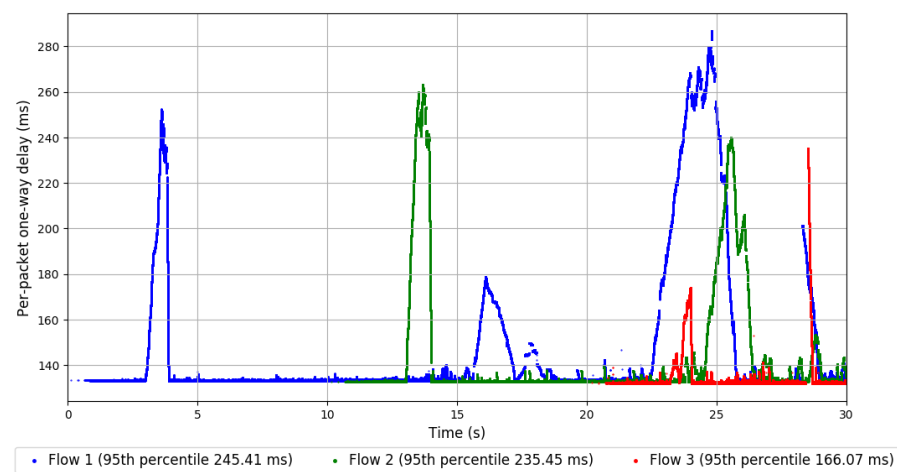
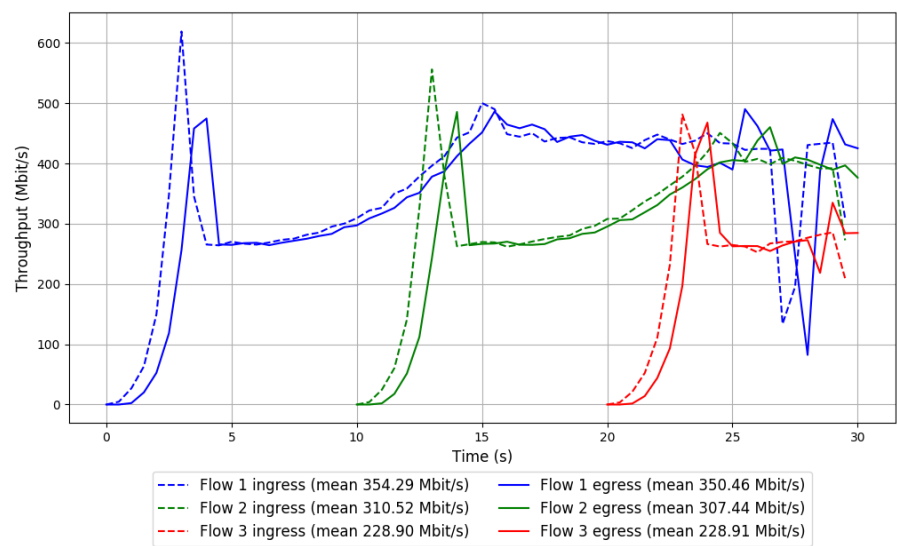
-- Flow 3:

Average throughput: 228.91 Mbit/s

95th percentile per-packet one-way delay: 166.075 ms

Loss rate: 0.00%

Run 5: Report of PCC-Allegro — Data Link

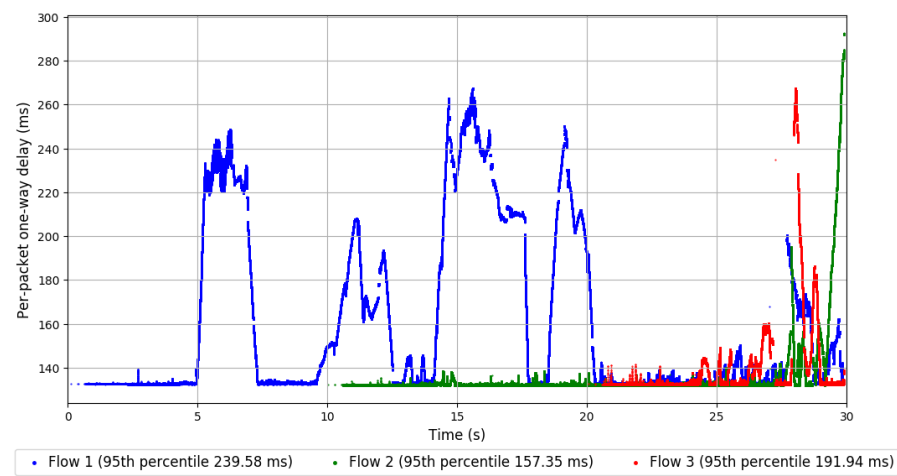
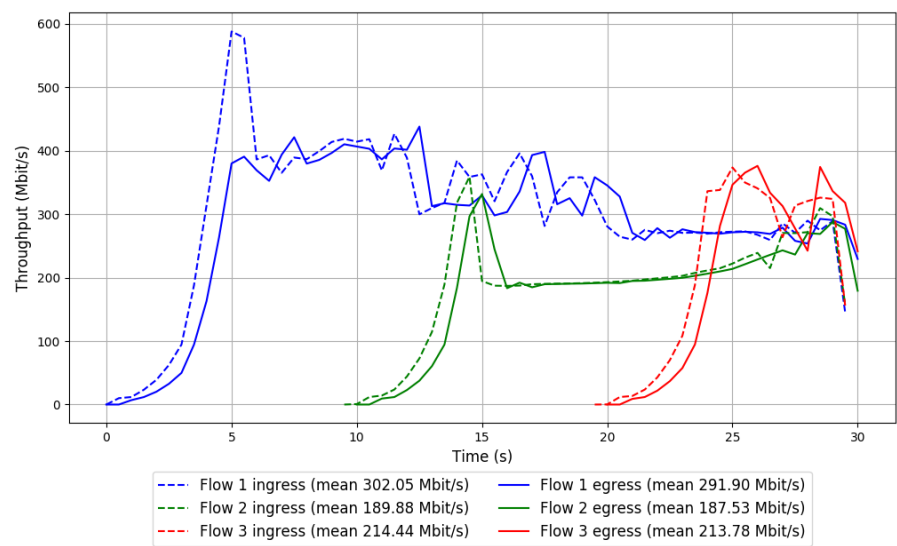



```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-21 20:53:20
End at: 2019-01-21 20:53:50
Local clock offset: -0.151 ms
Remote clock offset: -0.377 ms

# Below is generated by plot.py at 2019-01-22 02:40:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 487.88 Mbit/s
95th percentile per-packet one-way delay: 234.873 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 291.90 Mbit/s
95th percentile per-packet one-way delay: 239.576 ms
Loss rate: 3.36%
-- Flow 2:
Average throughput: 187.53 Mbit/s
95th percentile per-packet one-way delay: 157.350 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 213.78 Mbit/s
95th percentile per-packet one-way delay: 191.945 ms
Loss rate: 0.31%
```

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-21 21:32:57

End at: 2019-01-21 21:33:27

Local clock offset: -0.148 ms

Remote clock offset: 0.045 ms

Below is generated by plot.py at 2019-01-22 02:40:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 458.45 Mbit/s

95th percentile per-packet one-way delay: 249.727 ms

Loss rate: 2.74%

-- Flow 1:

Average throughput: 285.65 Mbit/s

95th percentile per-packet one-way delay: 257.696 ms

Loss rate: 4.33%

-- Flow 2:

Average throughput: 182.41 Mbit/s

95th percentile per-packet one-way delay: 153.827 ms

Loss rate: 0.00%

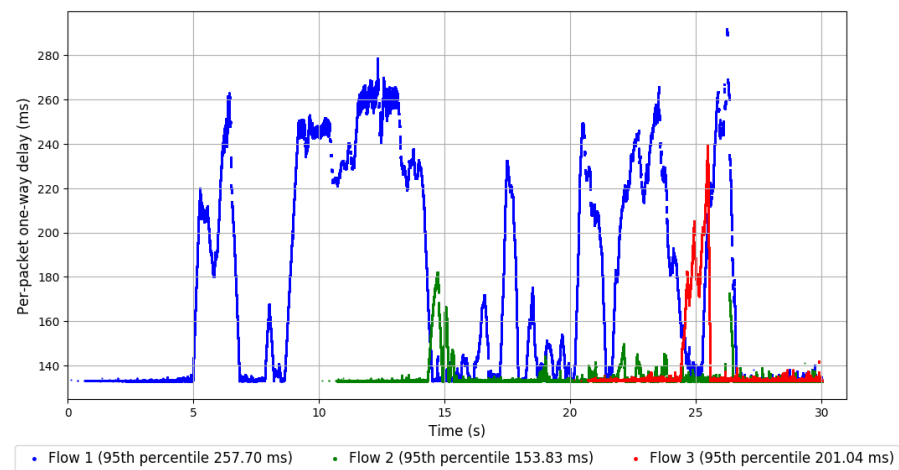
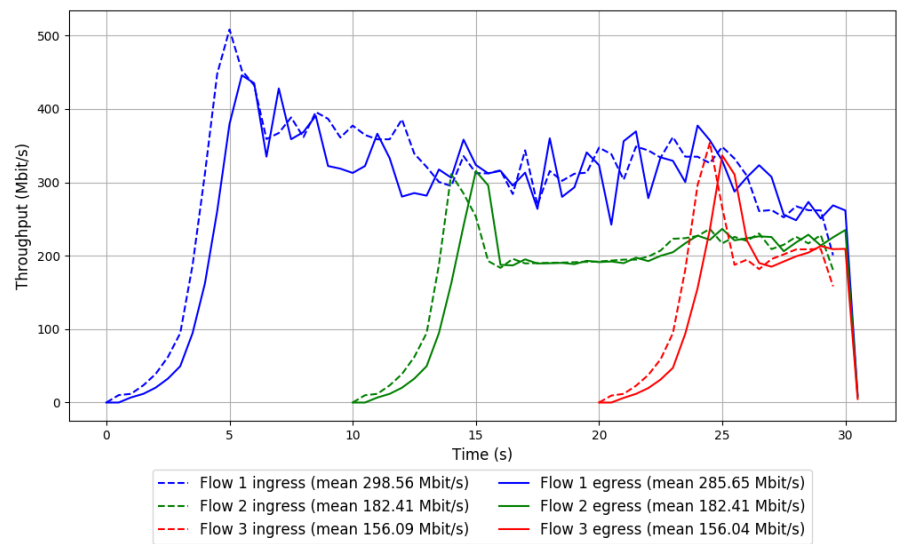
-- Flow 3:

Average throughput: 156.04 Mbit/s

95th percentile per-packet one-way delay: 201.040 ms

Loss rate: 0.04%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-21 22:12:40

End at: 2019-01-21 22:13:10

Local clock offset: 0.442 ms

Remote clock offset: 0.024 ms

Below is generated by plot.py at 2019-01-22 02:40:14

Datalink statistics

-- Total of 3 flows:

Average throughput: 471.08 Mbit/s

95th percentile per-packet one-way delay: 242.363 ms

Loss rate: 3.15%

-- Flow 1:

Average throughput: 272.96 Mbit/s

95th percentile per-packet one-way delay: 244.822 ms

Loss rate: 3.77%

-- Flow 2:

Average throughput: 189.62 Mbit/s

95th percentile per-packet one-way delay: 146.784 ms

Loss rate: 0.35%

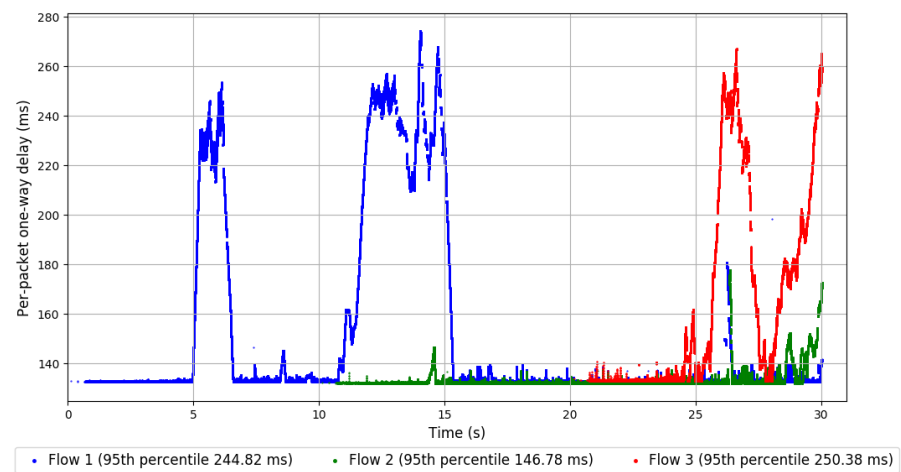
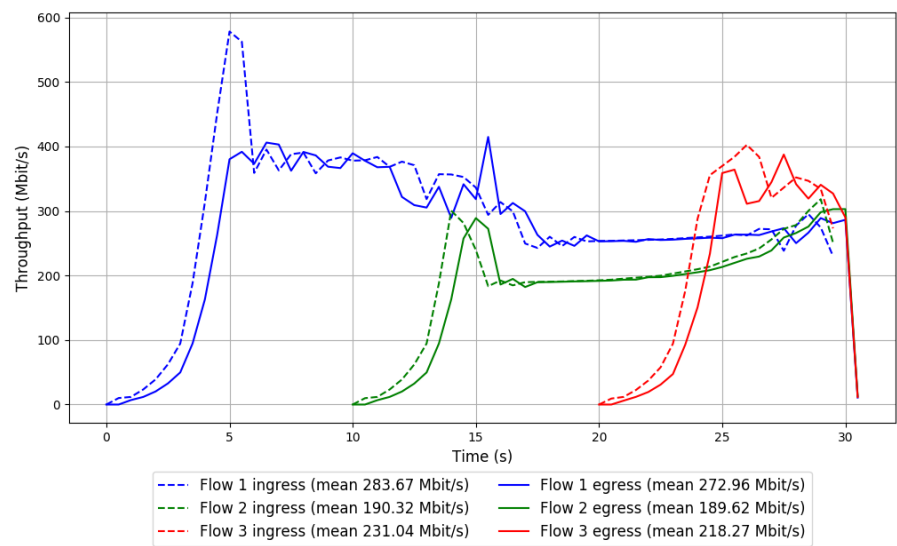
-- Flow 3:

Average throughput: 218.27 Mbit/s

95th percentile per-packet one-way delay: 250.379 ms

Loss rate: 5.51%

Run 3: Report of PCC-Expr — Data Link

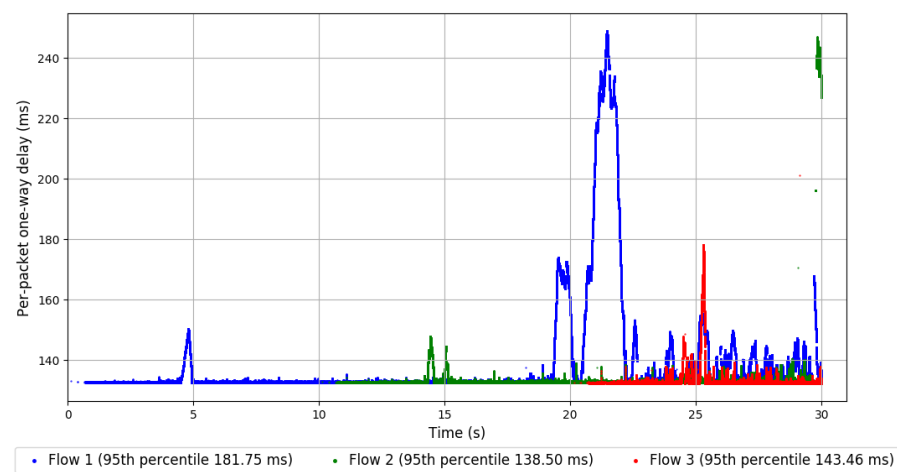
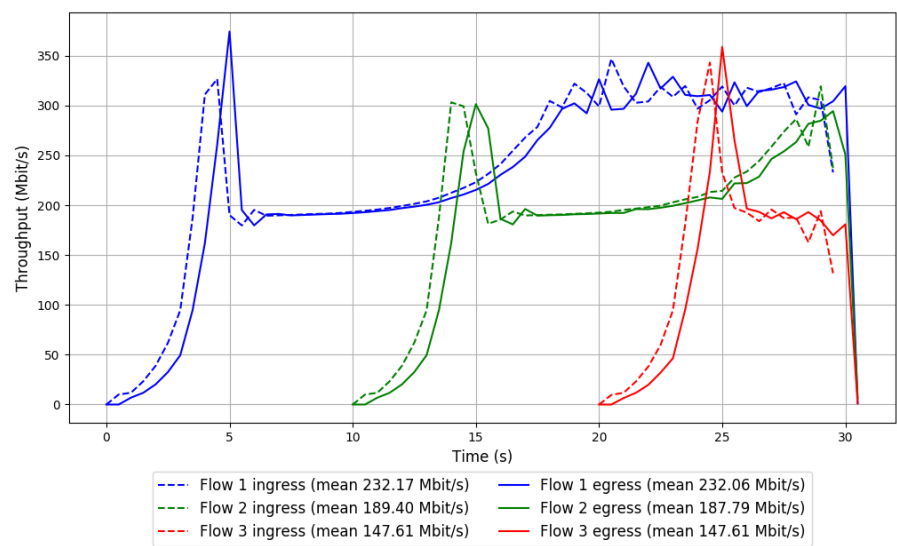


Run 4: Statistics of PCC-Expr

Start at: 2019-01-21 22:52:05
End at: 2019-01-21 22:52:35
Local clock offset: 0.14 ms
Remote clock offset: -0.106 ms

Below is generated by plot.py at 2019-01-22 02:43:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 405.64 Mbit/s
95th percentile per-packet one-way delay: 167.659 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 232.06 Mbit/s
95th percentile per-packet one-way delay: 181.745 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 187.79 Mbit/s
95th percentile per-packet one-way delay: 138.496 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 147.61 Mbit/s
95th percentile per-packet one-way delay: 143.458 ms
Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link



Run 5: Statistics of PCC-Expr

Start at: 2019-01-21 23:32:51

End at: 2019-01-21 23:33:21

Local clock offset: 0.047 ms

Remote clock offset: 0.042 ms

Below is generated by plot.py at 2019-01-22 02:48:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 462.15 Mbit/s

95th percentile per-packet one-way delay: 176.721 ms

Loss rate: 0.49%

-- Flow 1:

Average throughput: 281.38 Mbit/s

95th percentile per-packet one-way delay: 204.532 ms

Loss rate: 0.81%

-- Flow 2:

Average throughput: 196.86 Mbit/s

95th percentile per-packet one-way delay: 165.676 ms

Loss rate: 0.00%

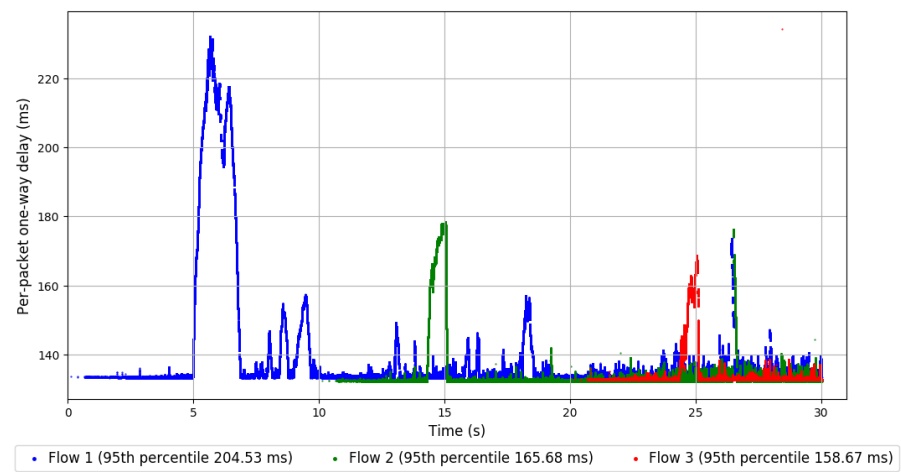
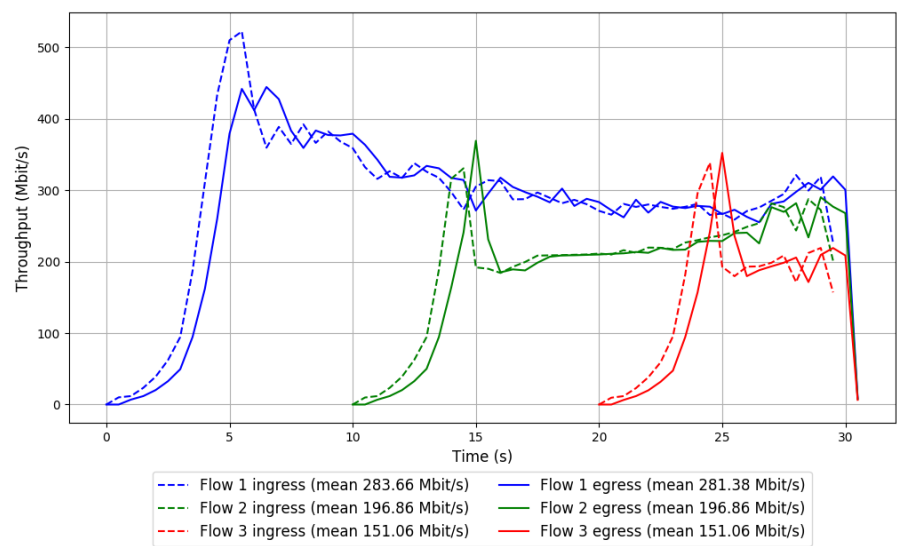
-- Flow 3:

Average throughput: 151.06 Mbit/s

95th percentile per-packet one-way delay: 158.666 ms

Loss rate: 0.00%

Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-21 20:50:38

End at: 2019-01-21 20:51:08

Local clock offset: -0.348 ms

Remote clock offset: -0.04 ms

Below is generated by plot.py at 2019-01-22 02:48:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 51.94 Mbit/s

95th percentile per-packet one-way delay: 133.256 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 133.357 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 48.72 Mbit/s

95th percentile per-packet one-way delay: 133.281 ms

Loss rate: 0.00%

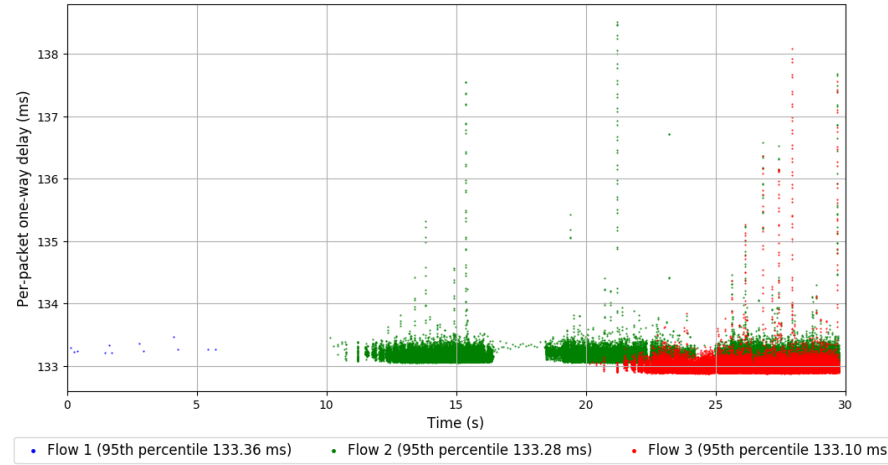
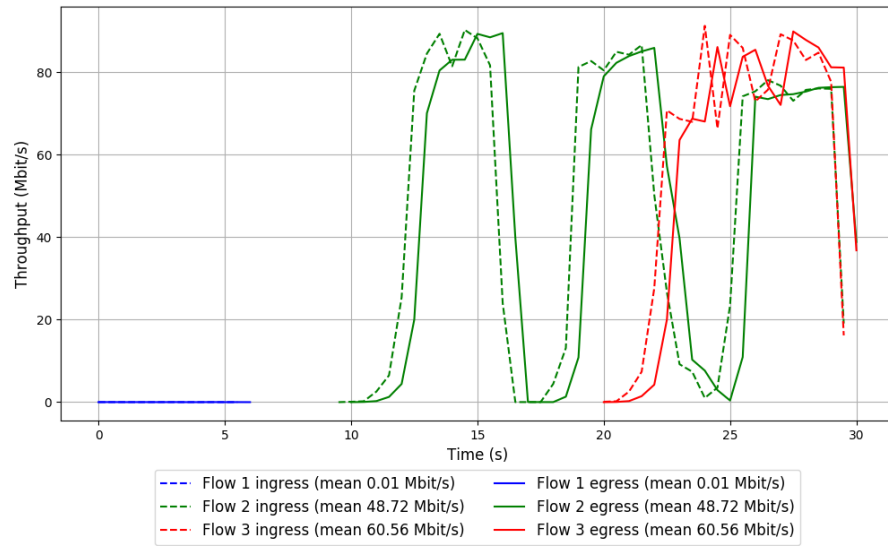
-- Flow 3:

Average throughput: 60.56 Mbit/s

95th percentile per-packet one-way delay: 133.097 ms

Loss rate: 0.00%

Run 1: Report of QUIC Cubic — Data Link

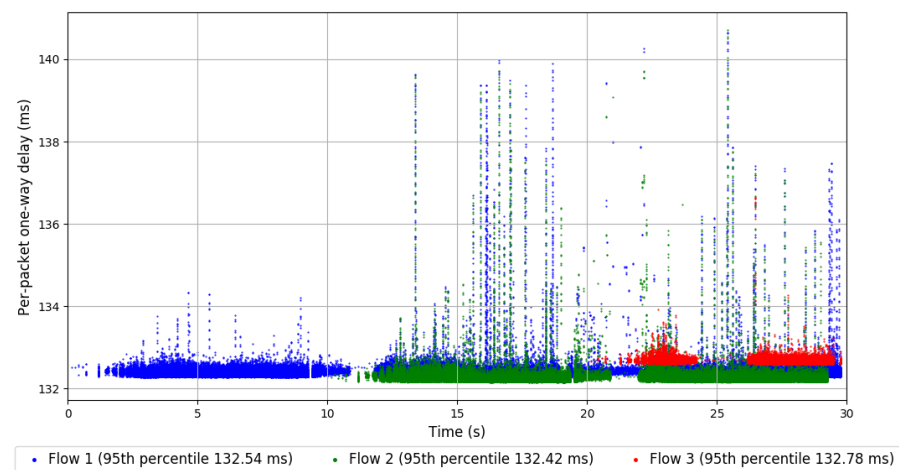
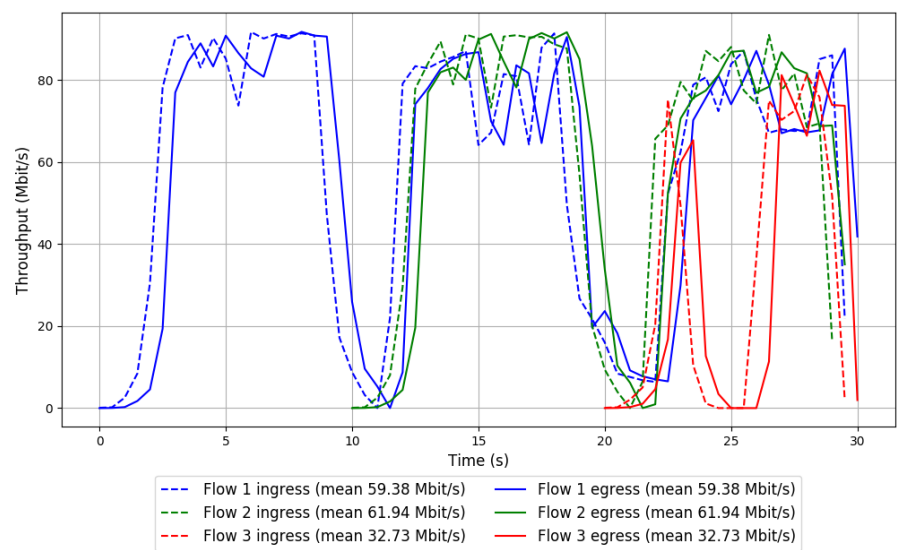


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-21 21:30:10
End at: 2019-01-21 21:30:40
Local clock offset: 0.01 ms
Remote clock offset: -0.306 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 109.94 Mbit/s
95th percentile per-packet one-way delay: 132.684 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.38 Mbit/s
95th percentile per-packet one-way delay: 132.539 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 61.94 Mbit/s
95th percentile per-packet one-way delay: 132.423 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.73 Mbit/s
95th percentile per-packet one-way delay: 132.784 ms
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

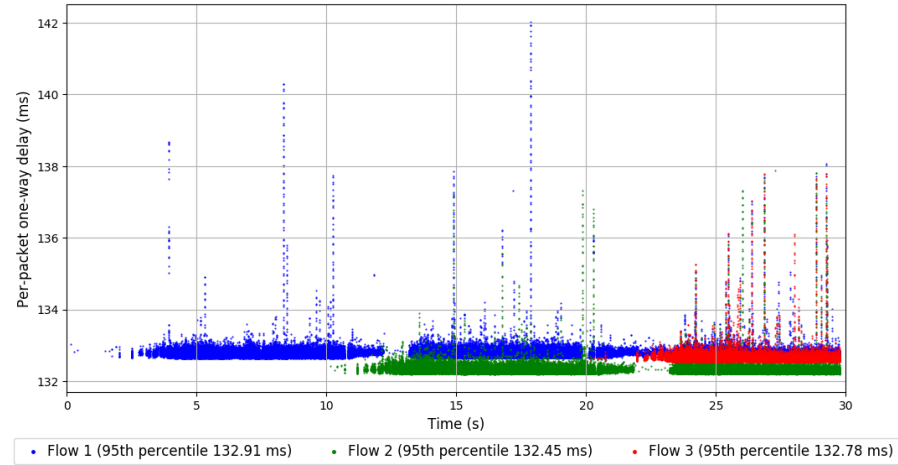
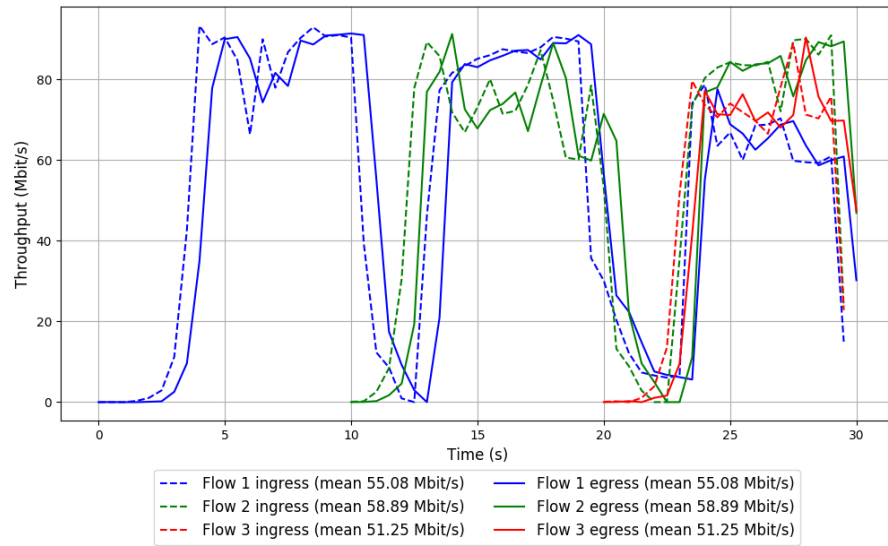


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-21 22:09:54
End at: 2019-01-21 22:10:24
Local clock offset: 0.125 ms
Remote clock offset: -0.013 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 110.68 Mbit/s
95th percentile per-packet one-way delay: 132.870 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.08 Mbit/s
95th percentile per-packet one-way delay: 132.914 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 58.89 Mbit/s
95th percentile per-packet one-way delay: 132.453 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 132.781 ms
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link

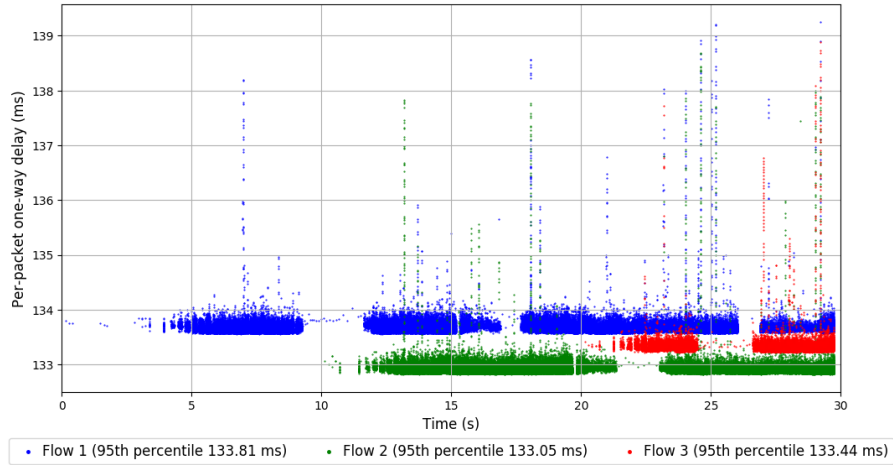
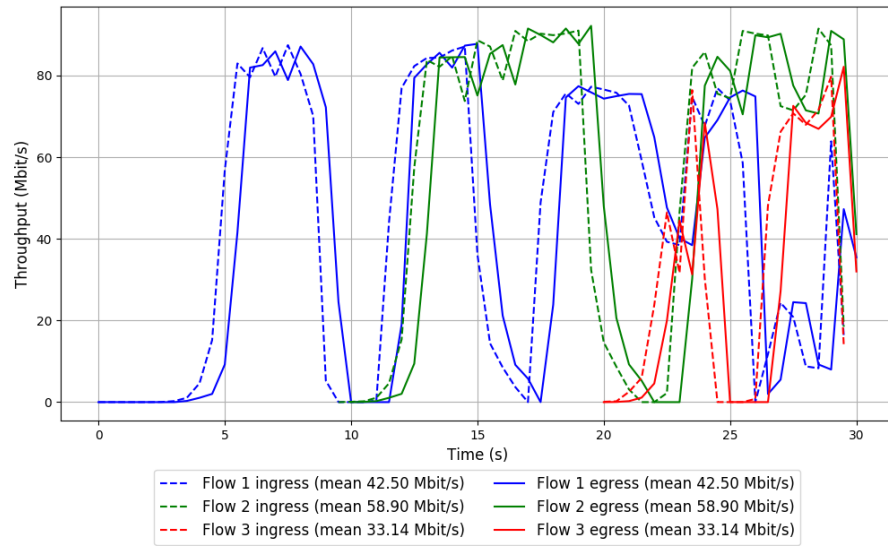


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-21 22:49:20
End at: 2019-01-21 22:49:50
Local clock offset: -0.33 ms
Remote clock offset: -0.075 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 92.27 Mbit/s
95th percentile per-packet one-way delay: 133.765 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.50 Mbit/s
95th percentile per-packet one-way delay: 133.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 58.90 Mbit/s
95th percentile per-packet one-way delay: 133.047 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.14 Mbit/s
95th percentile per-packet one-way delay: 133.440 ms
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

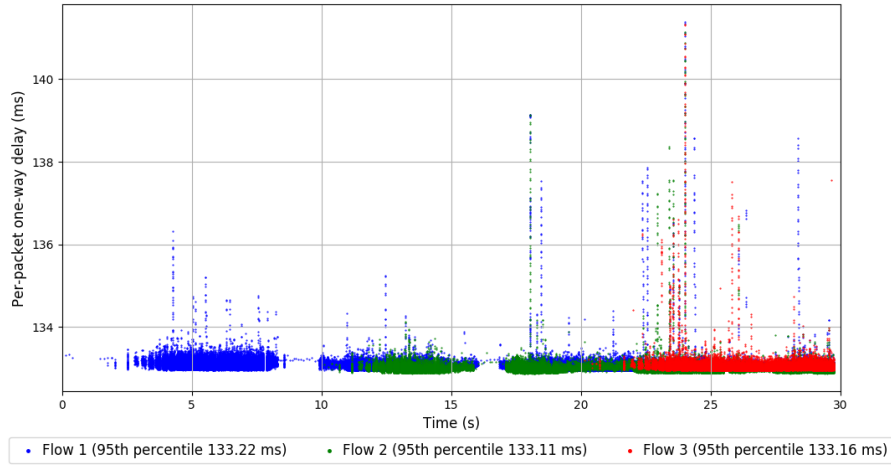
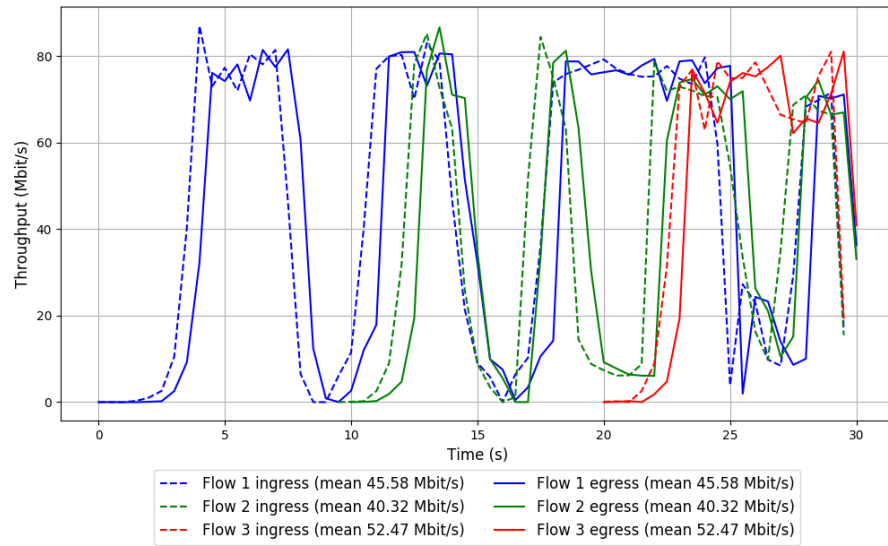


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-21 23:30:06
End at: 2019-01-21 23:30:36
Local clock offset: -0.124 ms
Remote clock offset: -0.035 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.31 Mbit/s
95th percentile per-packet one-way delay: 133.188 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.58 Mbit/s
95th percentile per-packet one-way delay: 133.219 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.32 Mbit/s
95th percentile per-packet one-way delay: 133.110 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.47 Mbit/s
95th percentile per-packet one-way delay: 133.164 ms
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

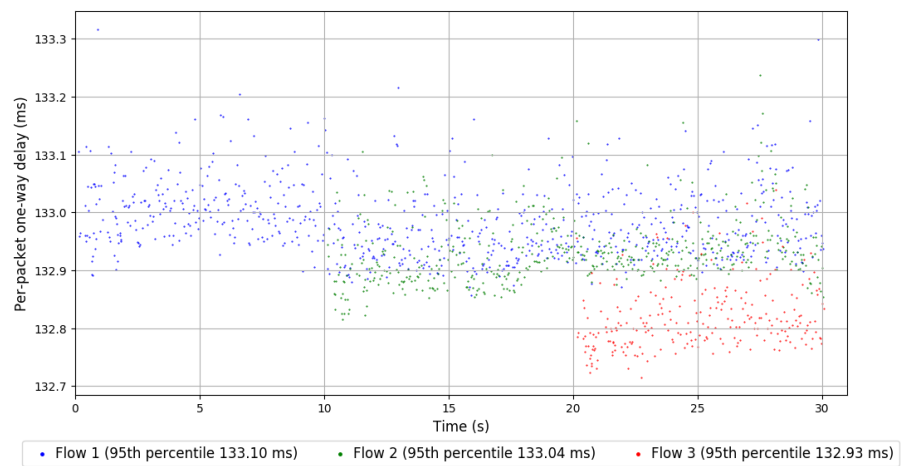
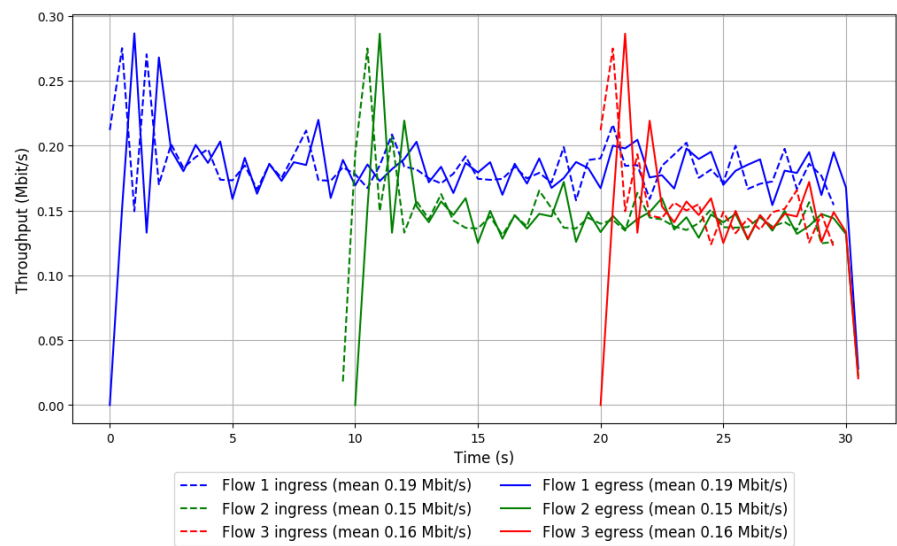


```
Run 1: Statistics of SCReAM

Start at: 2019-01-21 21:08:34
End at: 2019-01-21 21:09:04
Local clock offset: 0.042 ms
Remote clock offset: 0.034 ms

# Below is generated by plot.py at 2019-01-22 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 133.077 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 133.105 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.041 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 132.930 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

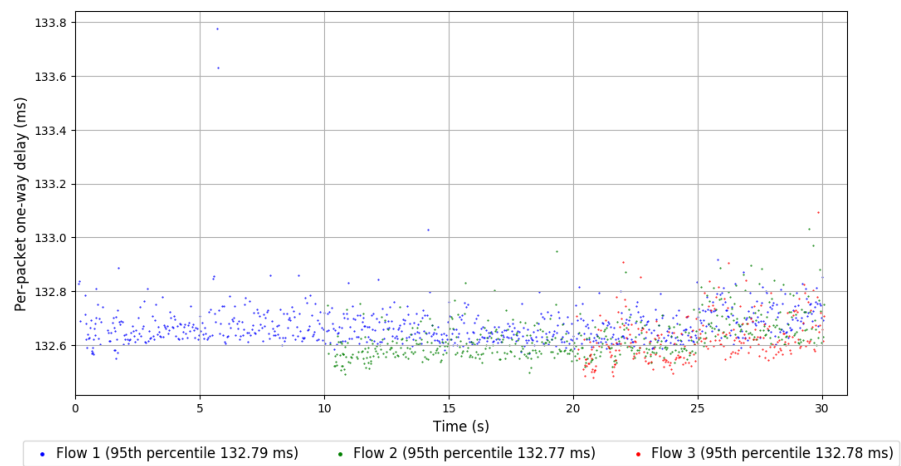
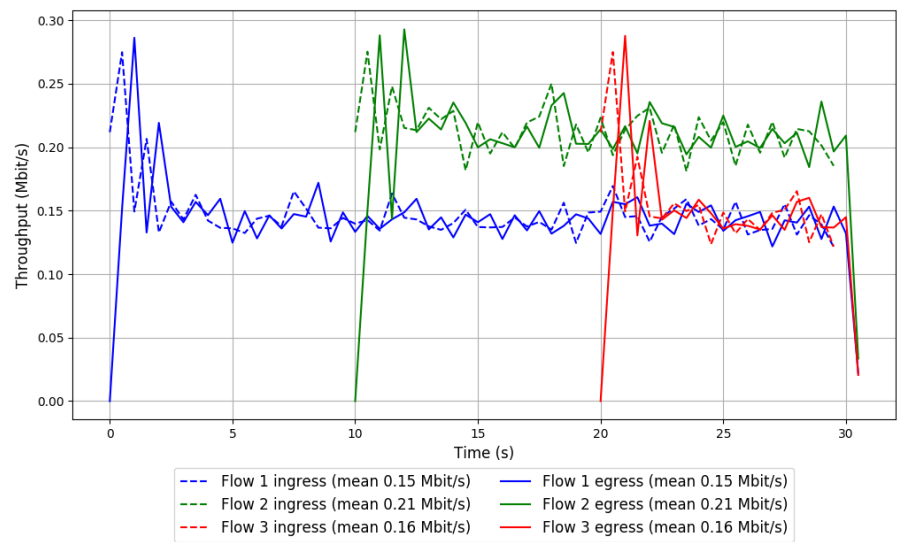


Run 2: Statistics of SReAM

Start at: 2019-01-21 21:48:11
End at: 2019-01-21 21:48:41
Local clock offset: 0.194 ms
Remote clock offset: -0.033 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 132.783 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 132.787 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 132.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 132.780 ms
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link

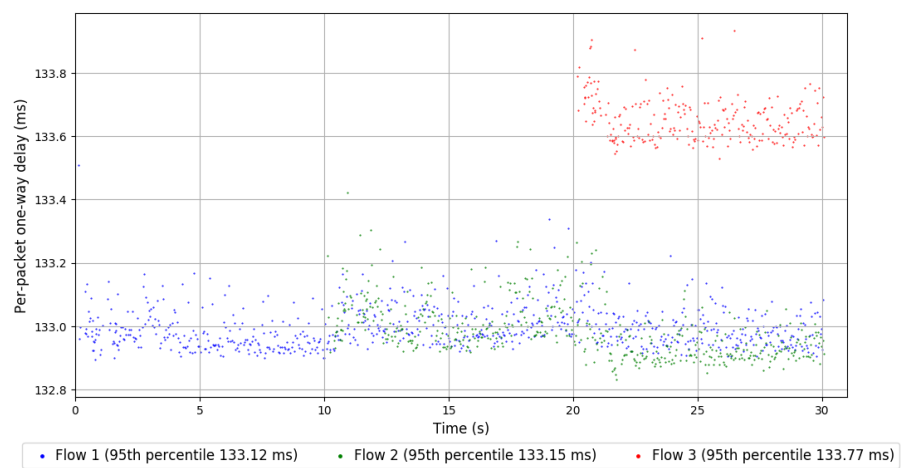
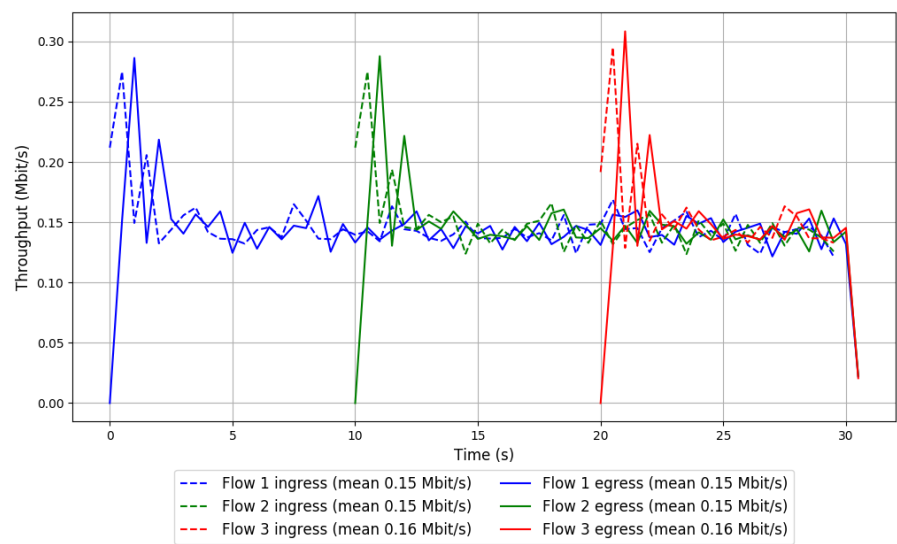


Run 3: Statistics of SReAM

Start at: 2019-01-21 22:27:40
End at: 2019-01-21 22:28:10
Local clock offset: -0.023 ms
Remote clock offset: -0.024 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 133.683 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.123 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 133.768 ms
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

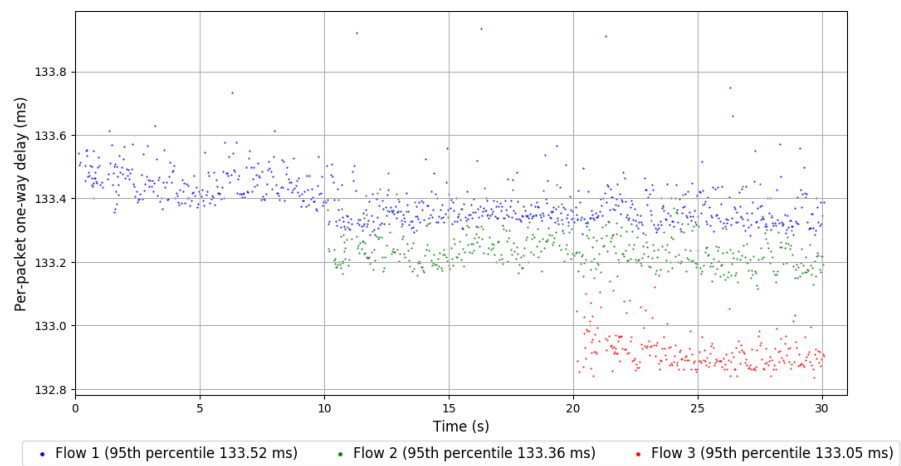
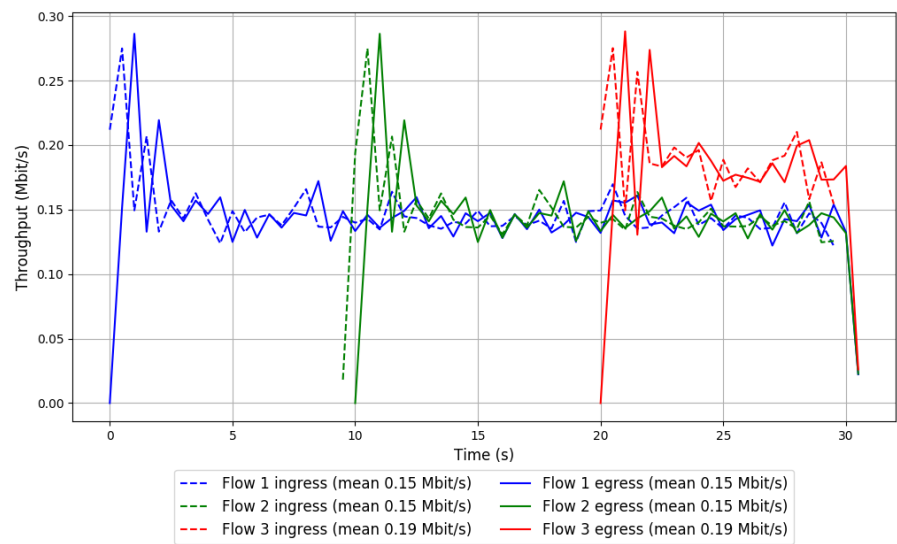


Run 4: Statistics of SCReAM

Start at: 2019-01-21 23:07:28
End at: 2019-01-21 23:07:58
Local clock offset: -0.357 ms
Remote clock offset: -0.013 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 133.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.524 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 133.361 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 133.054 ms
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SCReAM

Start at: 2019-01-21 23:48:13

End at: 2019-01-21 23:48:43

Local clock offset: -0.56 ms

Remote clock offset: 0.04 ms

Below is generated by plot.py at 2019-01-22 02:48:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 133.430 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.430 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 133.439 ms

Loss rate: 0.00%

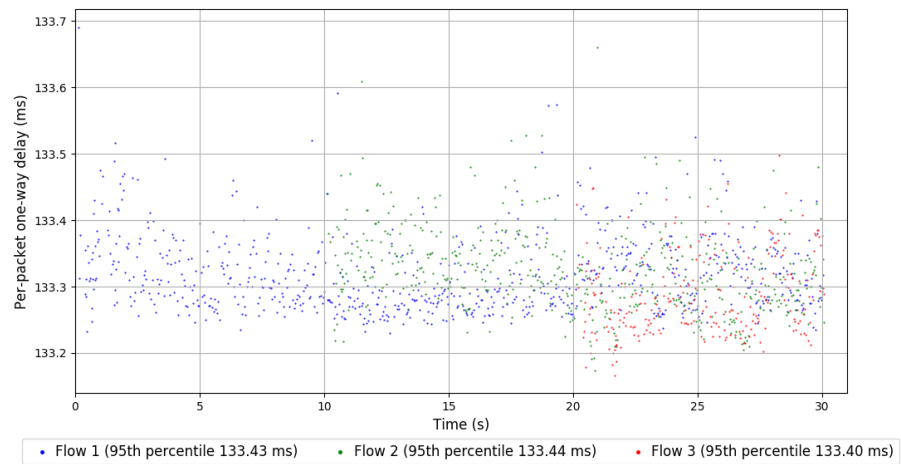
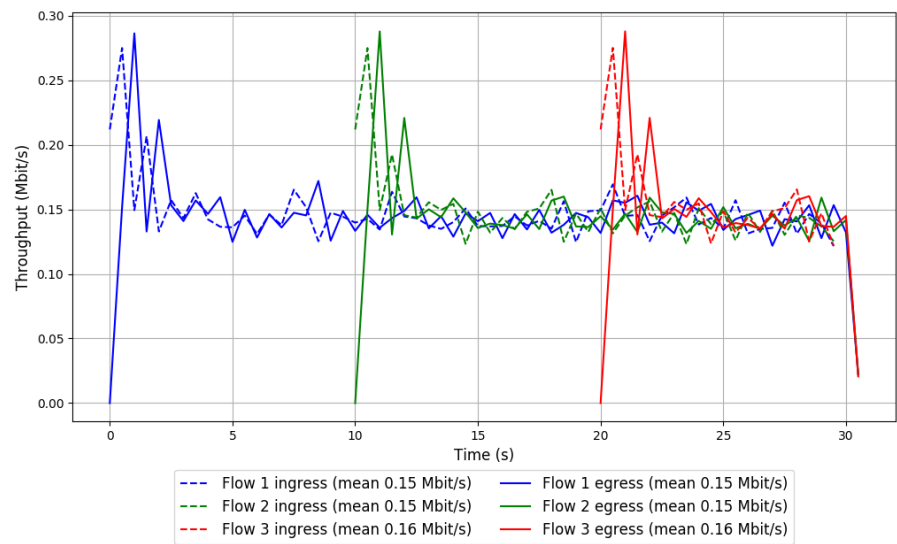
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 133.396 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link



Run 1: Statistics of Sprout

Start at: 2019-01-21 20:52:01

End at: 2019-01-21 20:52:31

Local clock offset: 0.154 ms

Remote clock offset: 0.03 ms

Below is generated by plot.py at 2019-01-22 02:48:02

Datalink statistics

-- Total of 3 flows:

Average throughput: 1.34 Mbit/s

95th percentile per-packet one-way delay: 133.081 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.69 Mbit/s

95th percentile per-packet one-way delay: 133.126 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.63 Mbit/s

95th percentile per-packet one-way delay: 133.035 ms

Loss rate: 0.00%

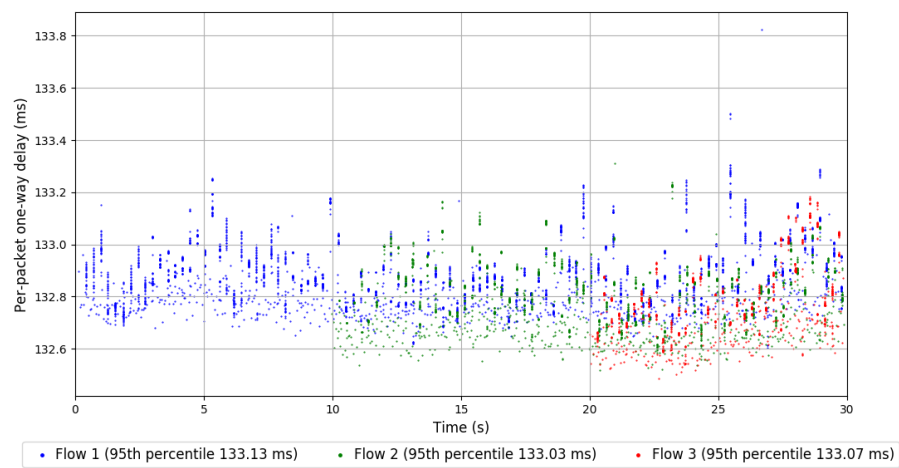
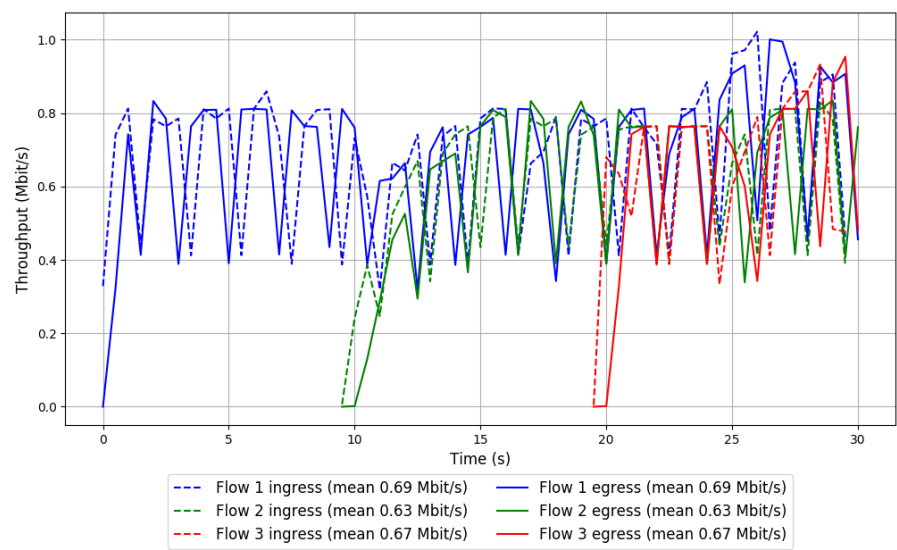
-- Flow 3:

Average throughput: 0.67 Mbit/s

95th percentile per-packet one-way delay: 133.074 ms

Loss rate: 0.00%

Run 1: Report of Sprout — Data Link

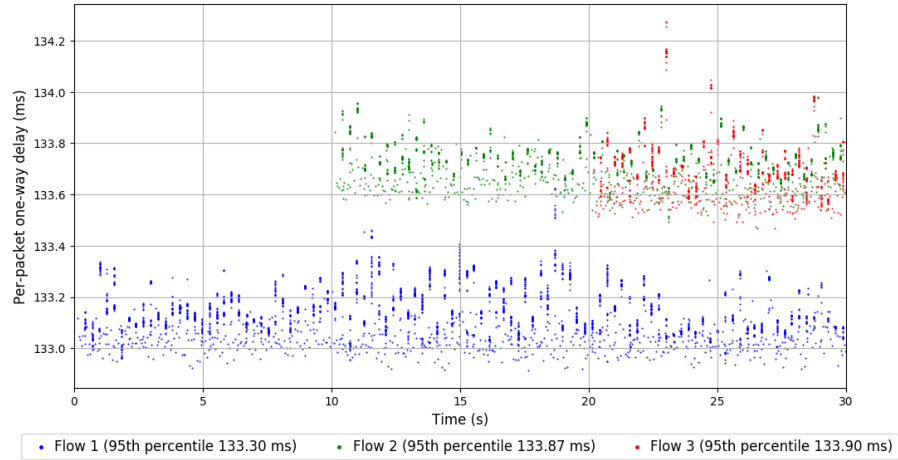
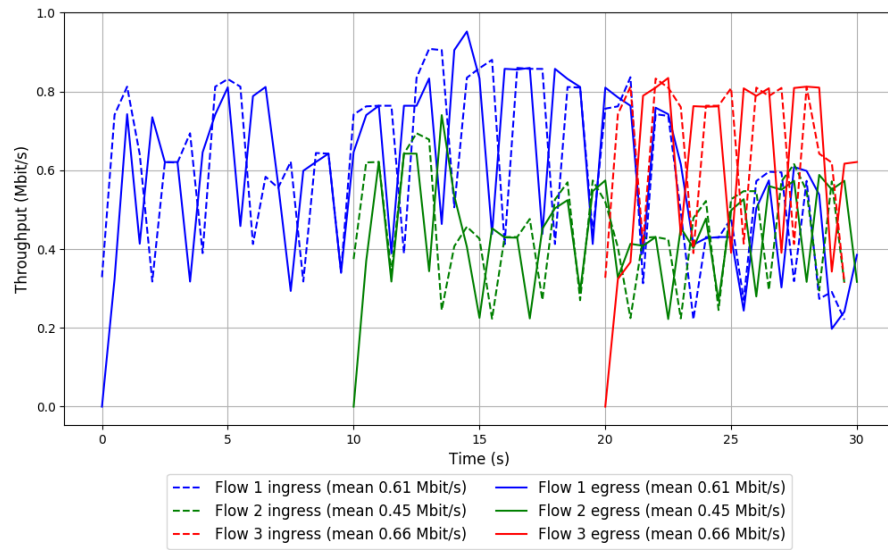


Run 2: Statistics of Sprout

Start at: 2019-01-21 21:31:38
End at: 2019-01-21 21:32:08
Local clock offset: -0.166 ms
Remote clock offset: 0.017 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 133.830 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 133.304 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 133.872 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.900 ms
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

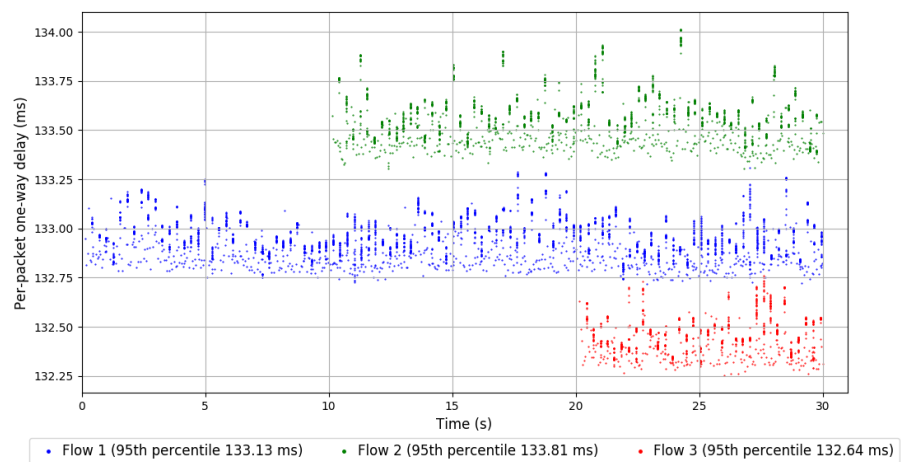
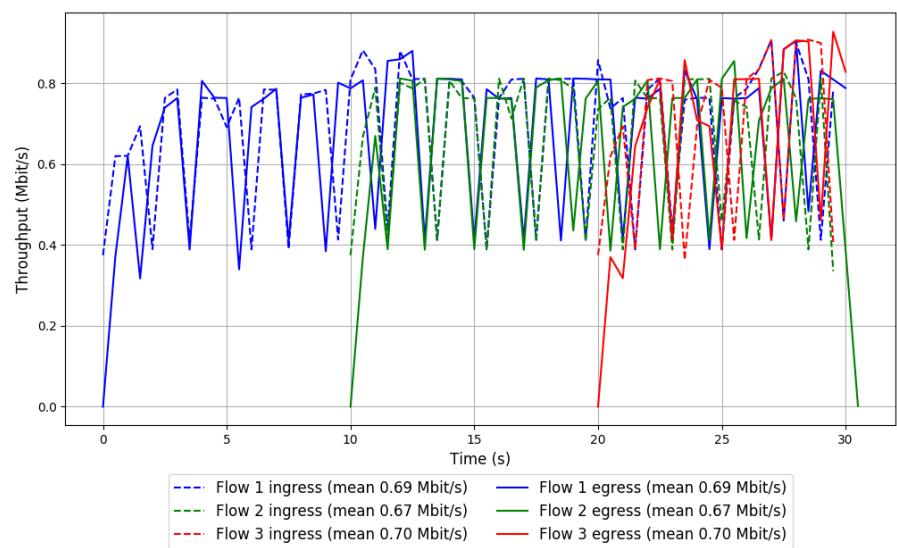


Run 3: Statistics of Sprout

Start at: 2019-01-21 22:11:21
End at: 2019-01-21 22:11:51
Local clock offset: 0.19 ms
Remote clock offset: 0.022 ms

```
# Below is generated by plot.py at 2019-01-22 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 133.666 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 133.133 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.809 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 132.644 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

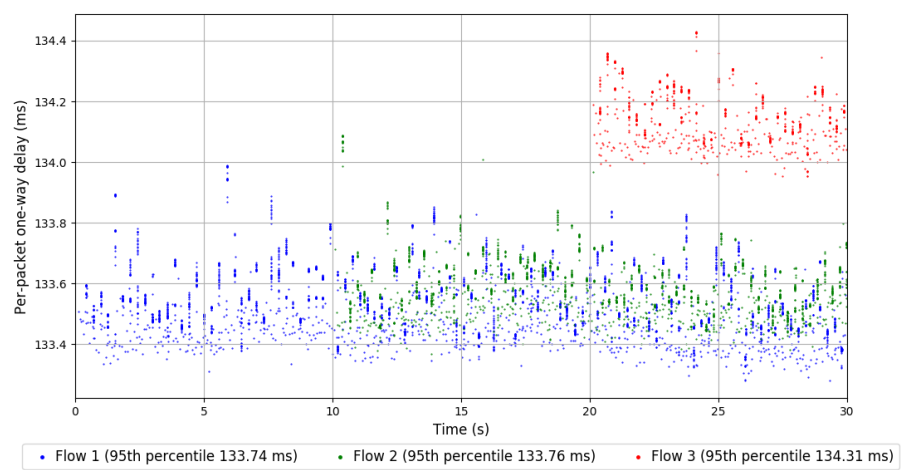
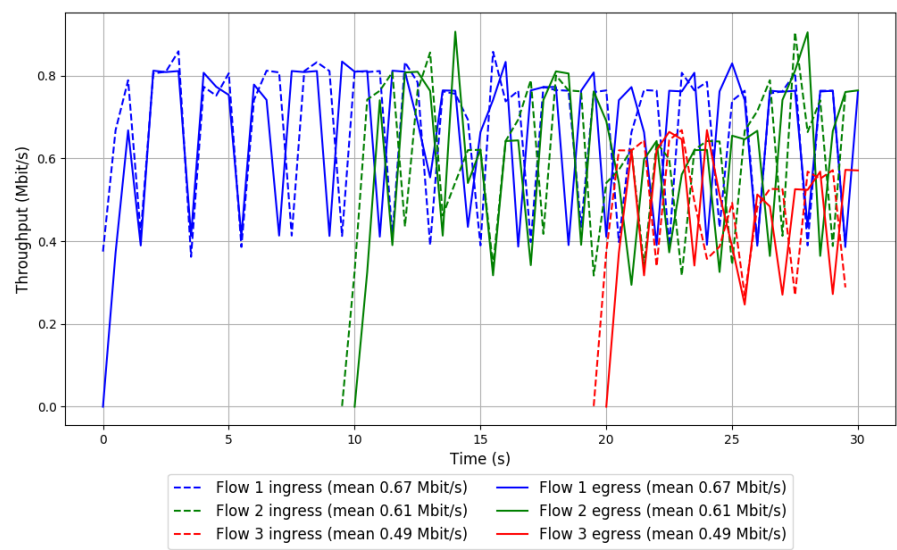


Run 4: Statistics of Sprout

Start at: 2019-01-21 22:50:47
End at: 2019-01-21 22:51:17
Local clock offset: -0.611 ms
Remote clock offset: -0.089 ms

```
# Below is generated by plot.py at 2019-01-22 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 134.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.738 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 133.758 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 134.309 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

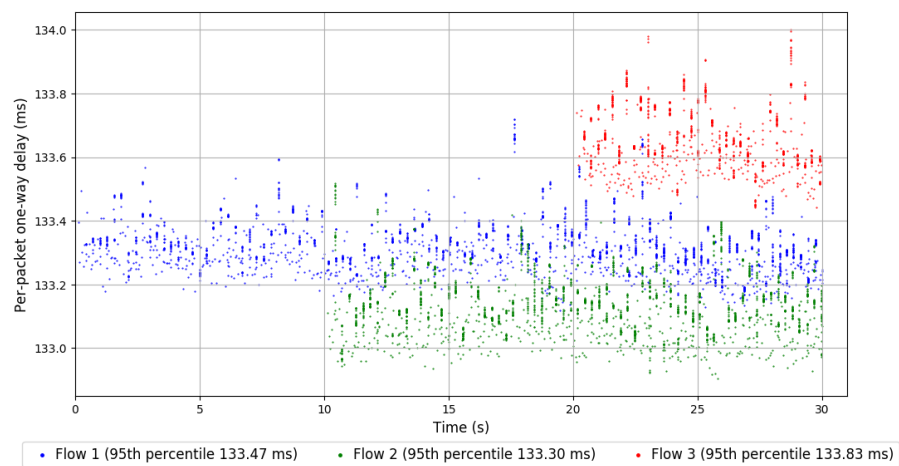
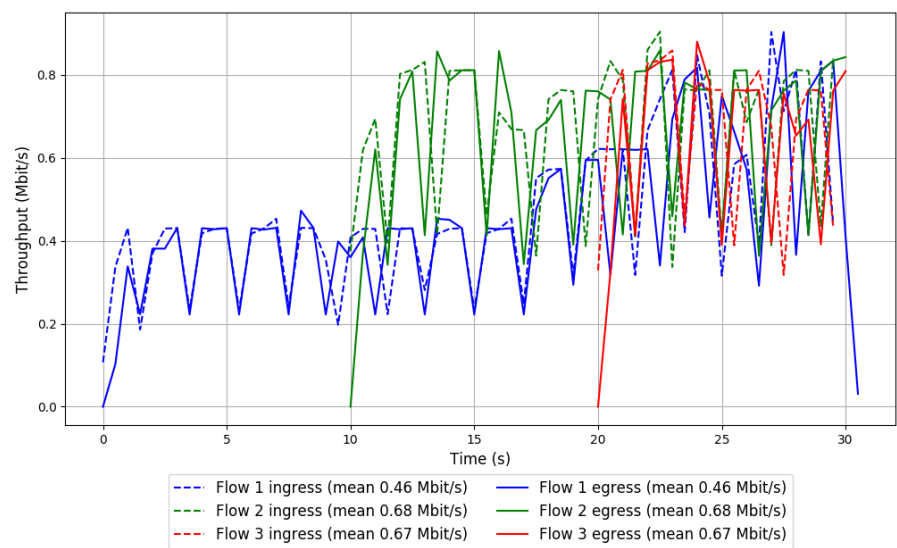


Run 5: Statistics of Sprout

Start at: 2019-01-21 23:31:32
End at: 2019-01-21 23:32:02
Local clock offset: -0.053 ms
Remote clock offset: -0.064 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 133.729 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 133.469 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 133.303 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.830 ms
Loss rate: 0.00%

Run 5: Report of Sprout — Data Link

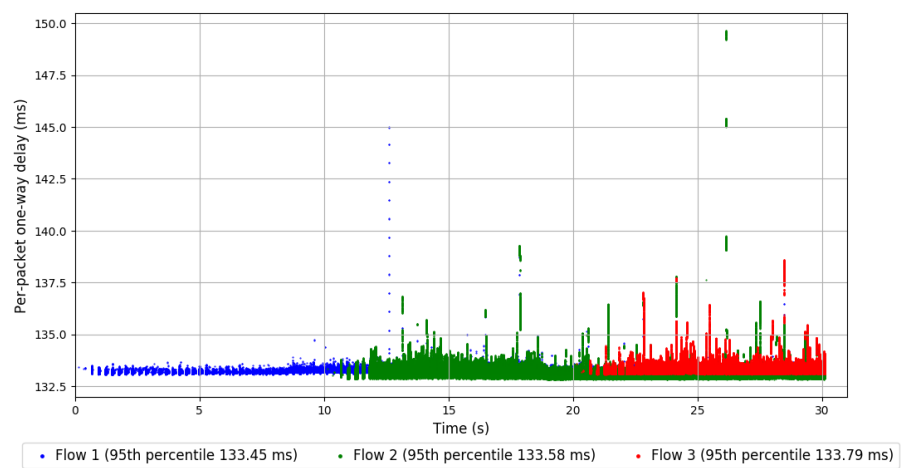
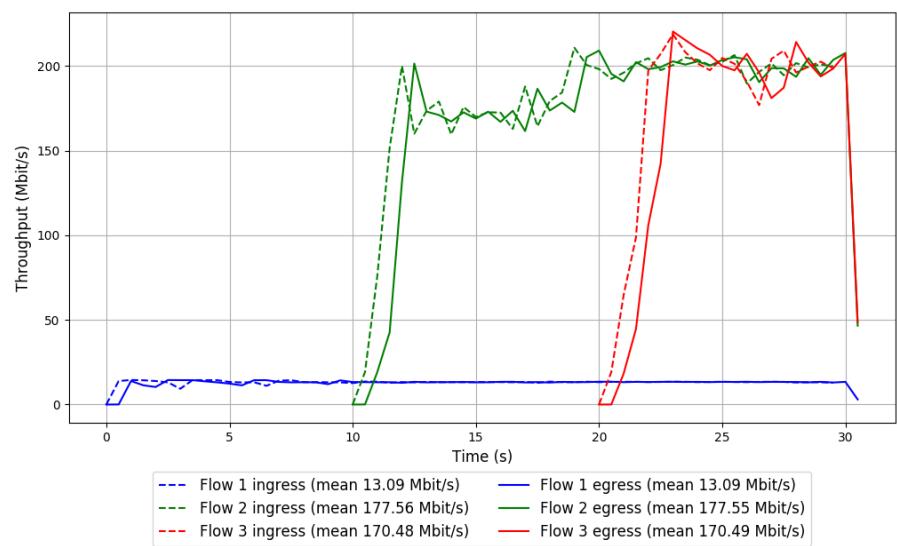



```
Run 1: Statistics of TaoVA-100x

Start at: 2019-01-21 21:20:18
End at: 2019-01-21 21:20:48
Local clock offset: -0.143 ms
Remote clock offset: 0.046 ms

# Below is generated by plot.py at 2019-01-22 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 188.00 Mbit/s
95th percentile per-packet one-way delay: 133.645 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.09 Mbit/s
95th percentile per-packet one-way delay: 133.447 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 177.55 Mbit/s
95th percentile per-packet one-way delay: 133.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 170.49 Mbit/s
95th percentile per-packet one-way delay: 133.791 ms
Loss rate: 0.00%
```

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

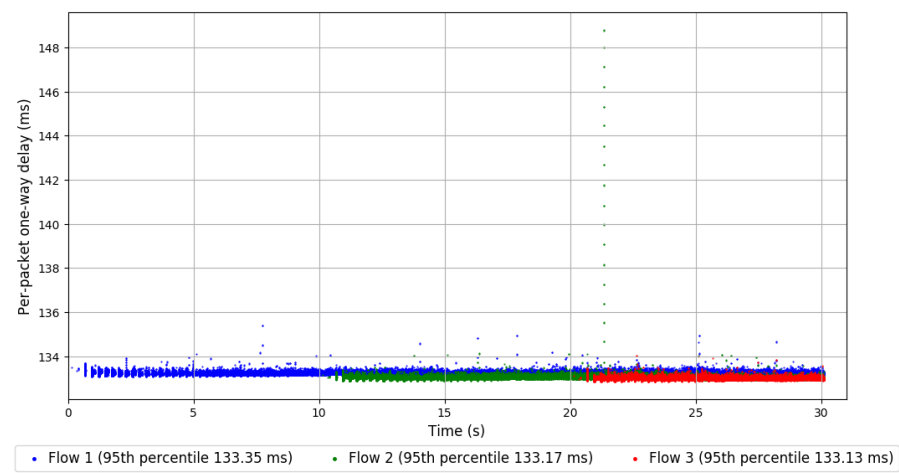
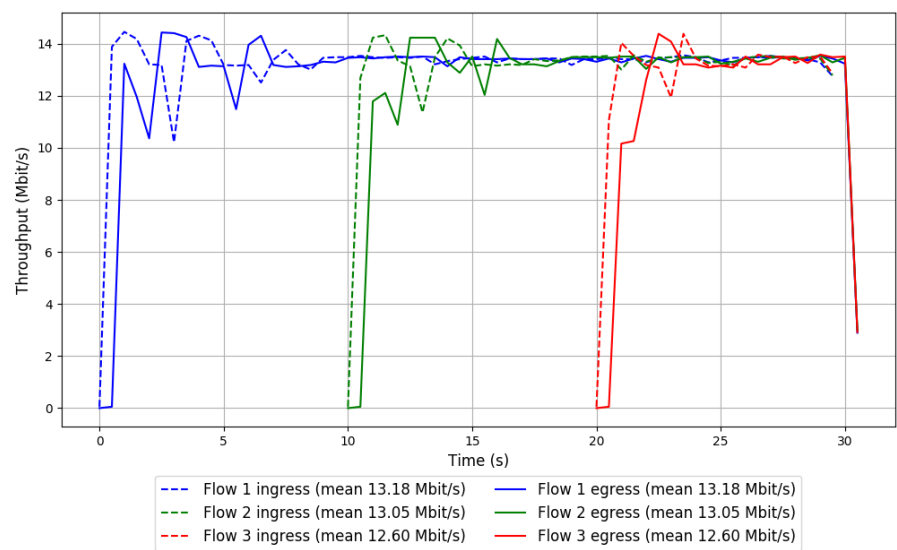


```
Run 2: Statistics of TaoVA-100x

Start at: 2019-01-21 22:00:25
End at: 2019-01-21 22:00:55
Local clock offset: -0.258 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-01-22 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.05 Mbit/s
95th percentile per-packet one-way delay: 133.317 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.18 Mbit/s
95th percentile per-packet one-way delay: 133.355 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 133.169 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 133.133 ms
Loss rate: 0.00%
```

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

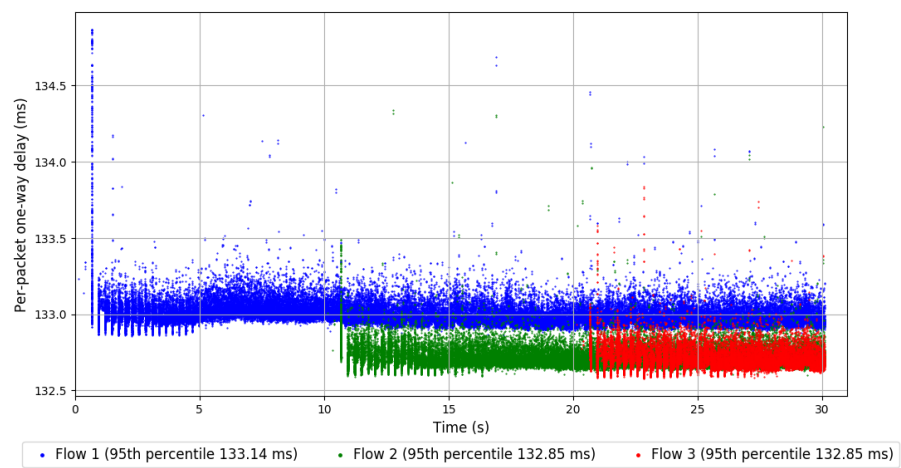
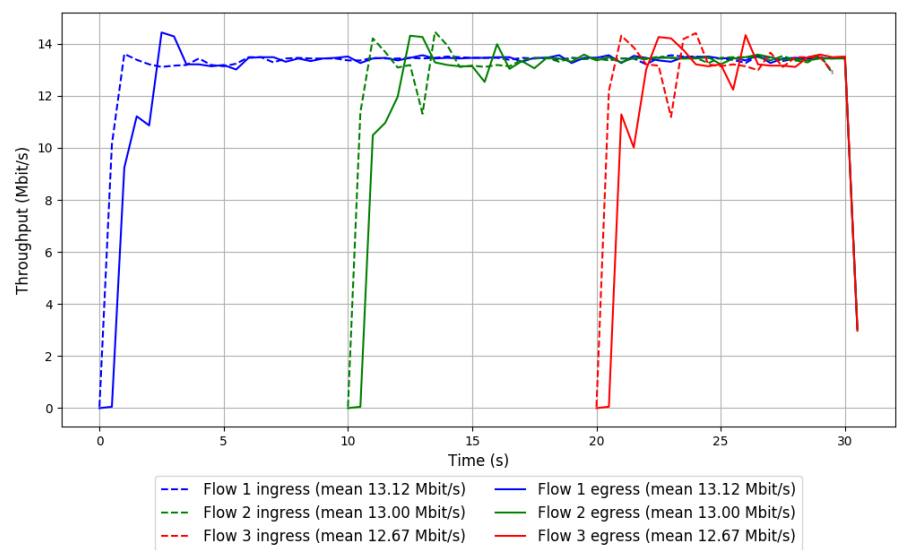


Run 3: Statistics of TaoVA-100x

Start at: 2019-01-21 22:39:44
End at: 2019-01-21 22:40:14
Local clock offset: 0.1 ms
Remote clock offset: -0.051 ms

Below is generated by plot.py at 2019-01-22 02:48:02
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.99 Mbit/s
95th percentile per-packet one-way delay: 133.098 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 133.141 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 132.848 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 132.847 ms
Loss rate: 0.00%

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

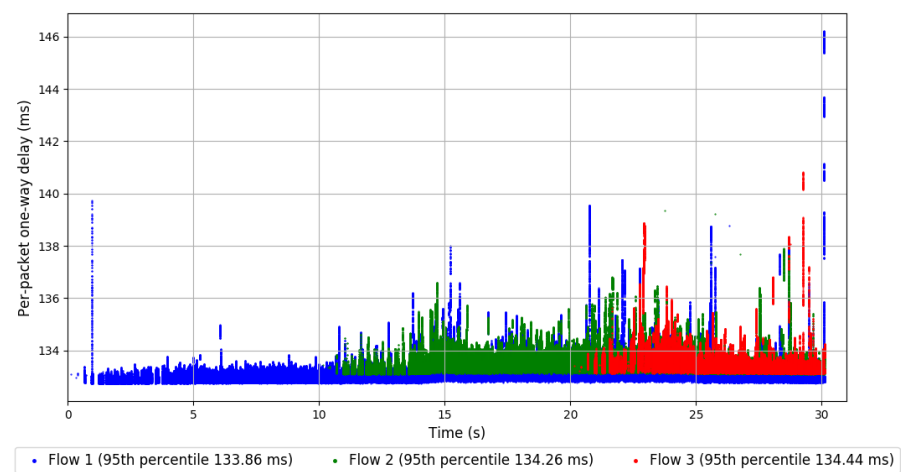
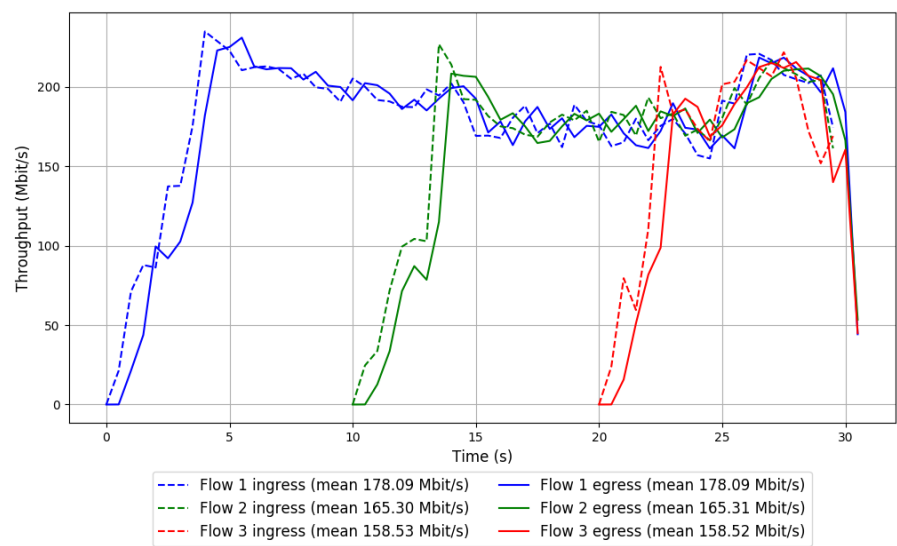


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-21 23:19:28
End at: 2019-01-21 23:19:58
Local clock offset: -0.091 ms
Remote clock offset: -0.348 ms

Below is generated by plot.py at 2019-01-22 02:51:39
Datalink statistics
-- Total of 3 flows:
Average throughput: 340.84 Mbit/s
95th percentile per-packet one-way delay: 134.155 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 178.09 Mbit/s
95th percentile per-packet one-way delay: 133.860 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 165.31 Mbit/s
95th percentile per-packet one-way delay: 134.261 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 158.52 Mbit/s
95th percentile per-packet one-way delay: 134.444 ms
Loss rate: 0.01%

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



Run 5: Statistics of TaoVA-100x

Start at: 2019-01-22 00:00:23

End at: 2019-01-22 00:00:54

Local clock offset: 0.369 ms

Remote clock offset: 0.116 ms

Below is generated by plot.py at 2019-01-22 02:53:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 358.79 Mbit/s

95th percentile per-packet one-way delay: 133.229 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 188.82 Mbit/s

95th percentile per-packet one-way delay: 133.024 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 172.83 Mbit/s

95th percentile per-packet one-way delay: 133.360 ms

Loss rate: 0.00%

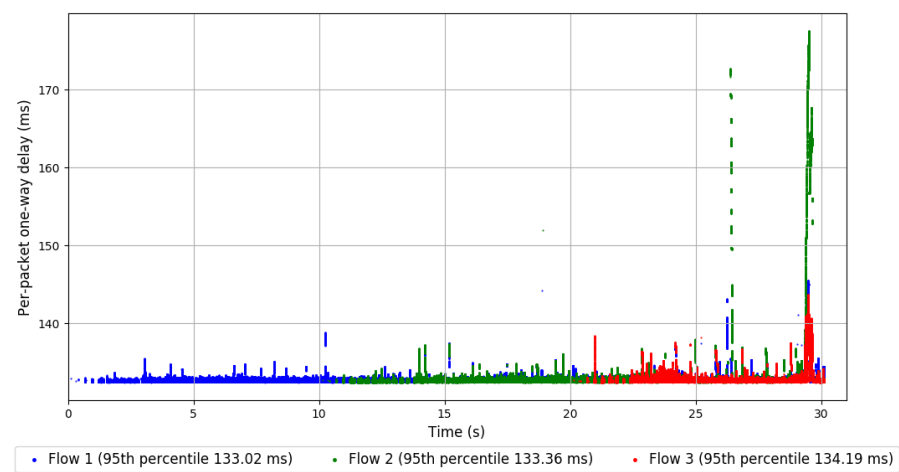
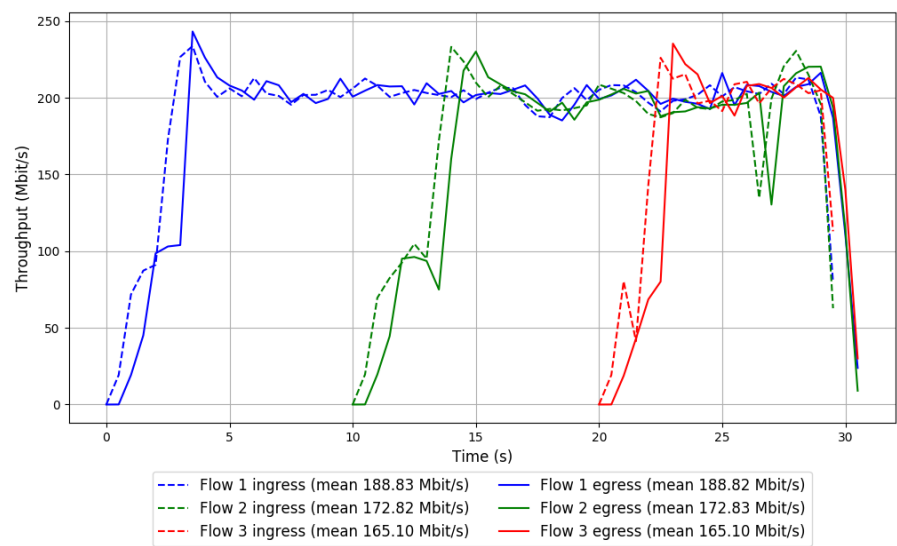
-- Flow 3:

Average throughput: 165.10 Mbit/s

95th percentile per-packet one-way delay: 134.192 ms

Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

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

End at: 2019-01-21 21:22:29

Local clock offset: 0.042 ms

Remote clock offset: 0.399 ms

Below is generated by plot.py at 2019-01-22 02:53:09

Datalink statistics

-- Total of 3 flows:

Average throughput: 603.73 Mbit/s

95th percentile per-packet one-way delay: 153.162 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 327.67 Mbit/s

95th percentile per-packet one-way delay: 136.325 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 298.48 Mbit/s

95th percentile per-packet one-way delay: 173.380 ms

Loss rate: 0.11%

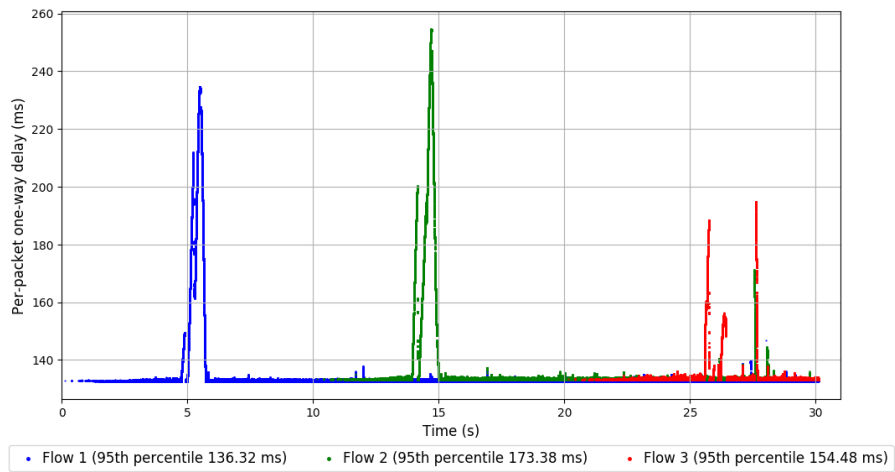
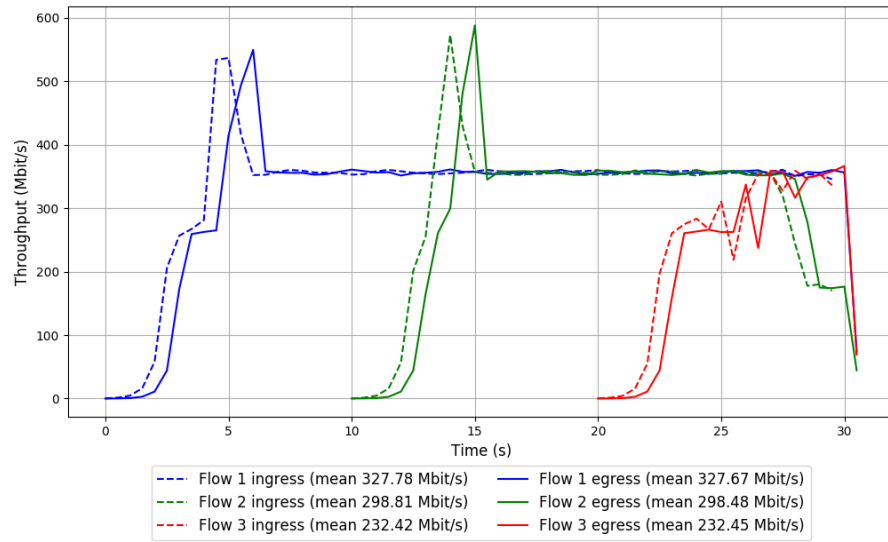
-- Flow 3:

Average throughput: 232.45 Mbit/s

95th percentile per-packet one-way delay: 154.477 ms

Loss rate: 0.00%

Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-21 22:01:48

End at: 2019-01-21 22:02:18

Local clock offset: 0.112 ms

Remote clock offset: 0.488 ms

Below is generated by plot.py at 2019-01-22 02:54:16

Datalink statistics

-- Total of 3 flows:

Average throughput: 560.31 Mbit/s

95th percentile per-packet one-way delay: 186.064 ms

Loss rate: 0.03%

-- Flow 1:

Average throughput: 230.28 Mbit/s

95th percentile per-packet one-way delay: 171.116 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 353.23 Mbit/s

95th percentile per-packet one-way delay: 136.312 ms

Loss rate: 0.00%

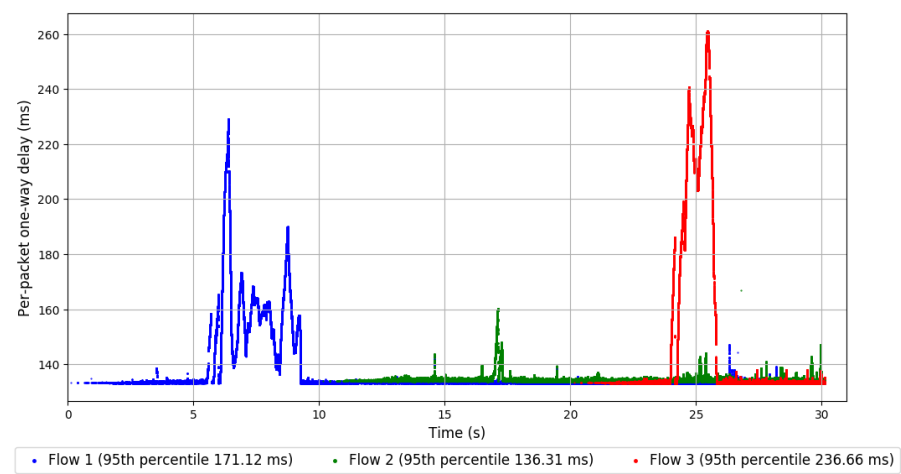
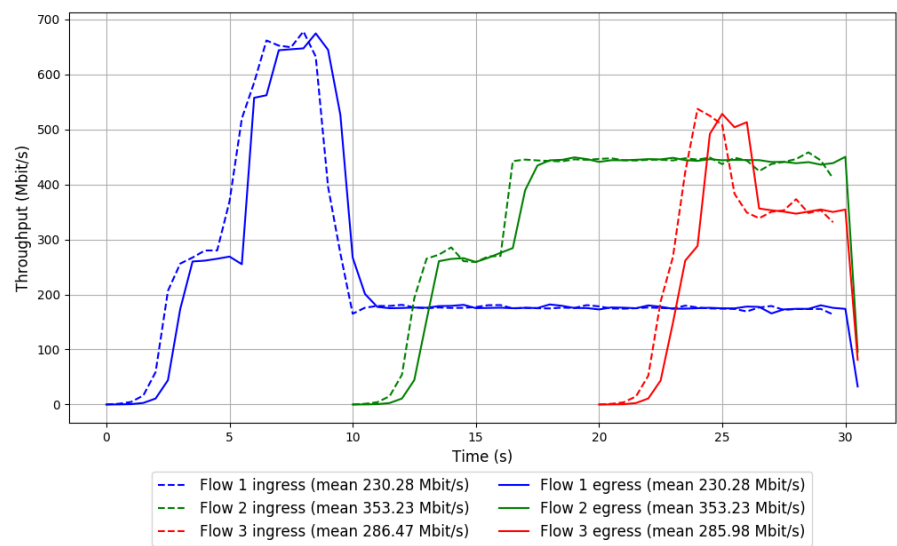
-- Flow 3:

Average throughput: 285.98 Mbit/s

95th percentile per-packet one-way delay: 236.657 ms

Loss rate: 0.17%

Run 2: Report of TCP Vegas — Data Link

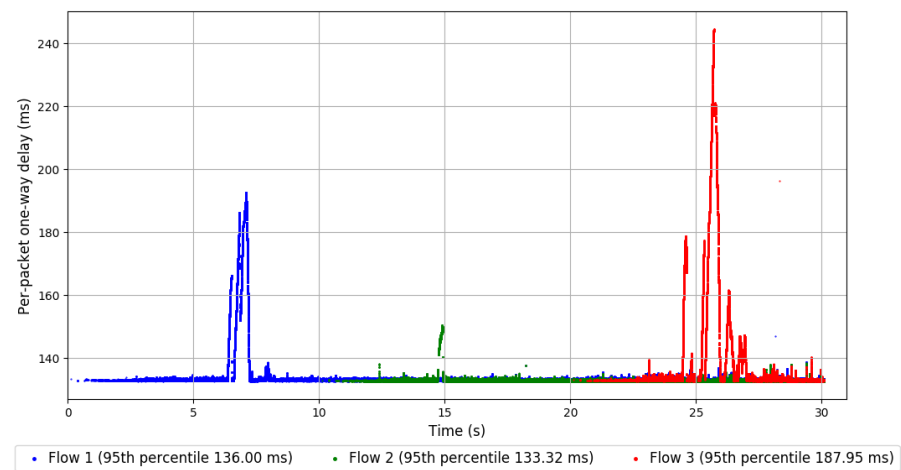
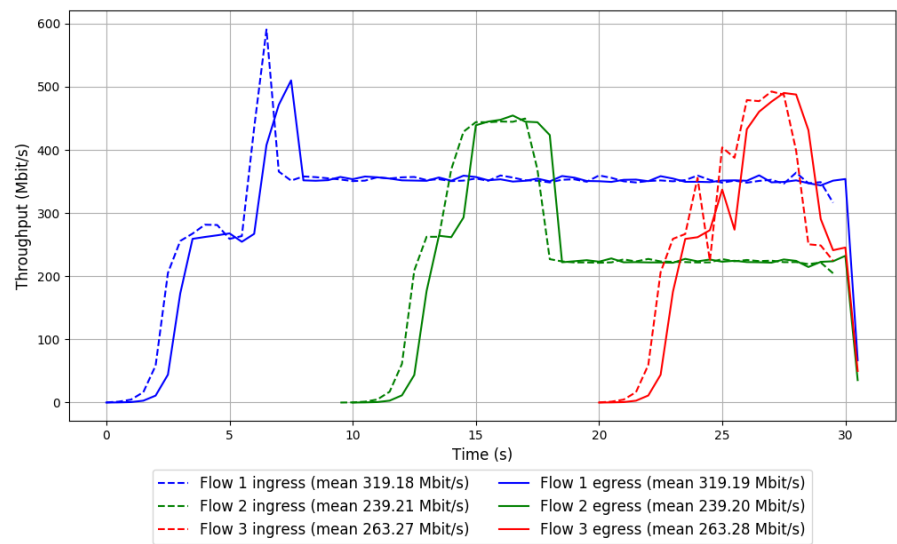


Run 3: Statistics of TCP Vegas

Start at: 2019-01-21 22:41:06
End at: 2019-01-21 22:41:36
Local clock offset: 0.1 ms
Remote clock offset: -0.037 ms

```
# Below is generated by plot.py at 2019-01-22 02:55:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.13 Mbit/s
95th percentile per-packet one-way delay: 146.423 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 319.19 Mbit/s
95th percentile per-packet one-way delay: 135.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 239.20 Mbit/s
95th percentile per-packet one-way delay: 133.319 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 263.28 Mbit/s
95th percentile per-packet one-way delay: 187.954 ms
Loss rate: 0.00%
```

Run 3: Report of TCP Vegas — Data Link

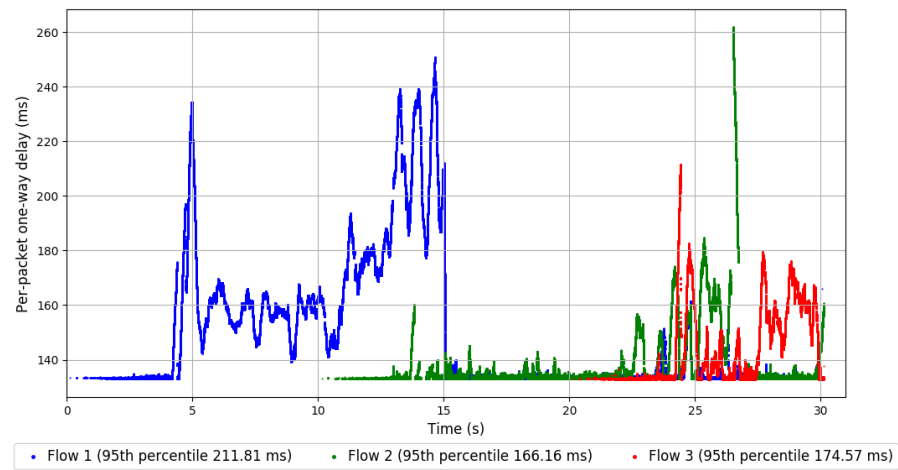
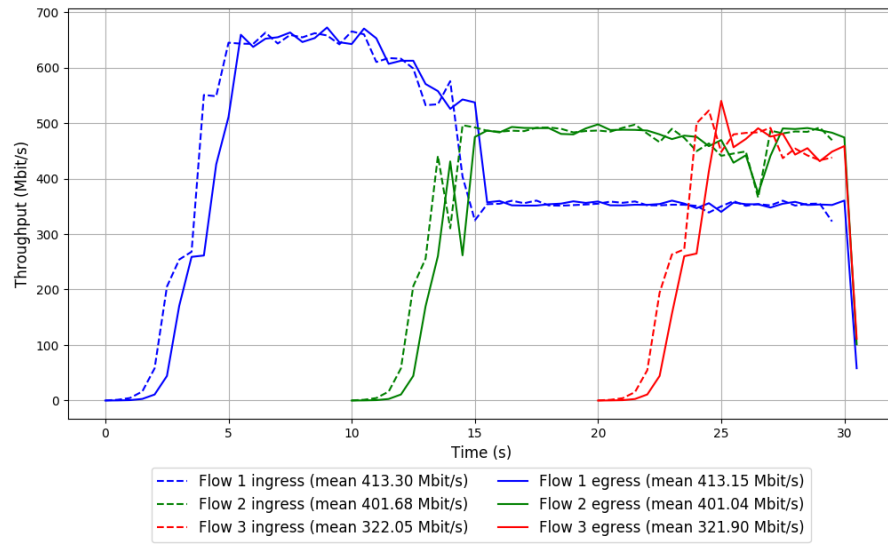


Run 4: Statistics of TCP Vegas

Start at: 2019-01-21 23:21:28
End at: 2019-01-21 23:21:58
Local clock offset: -0.256 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-01-22 03:03:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 787.17 Mbit/s
95th percentile per-packet one-way delay: 194.600 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 413.15 Mbit/s
95th percentile per-packet one-way delay: 211.813 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 401.04 Mbit/s
95th percentile per-packet one-way delay: 166.160 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 321.90 Mbit/s
95th percentile per-packet one-way delay: 174.570 ms
Loss rate: 0.00%

Run 4: Report of TCP Vegas — Data Link

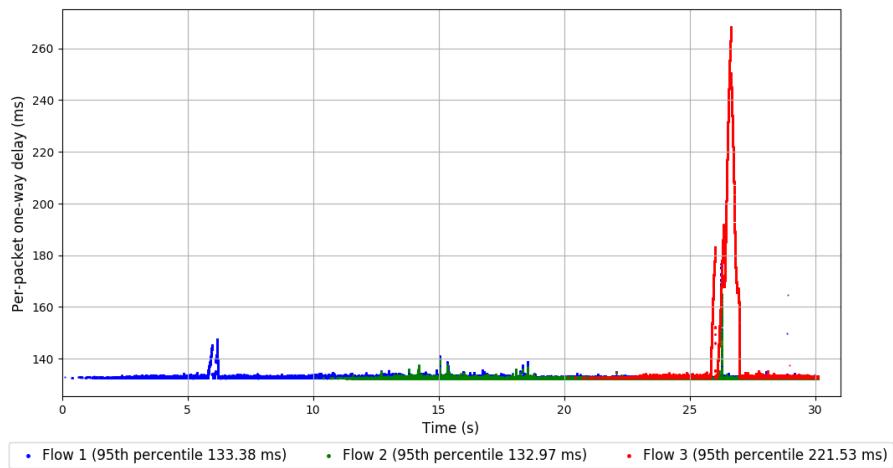
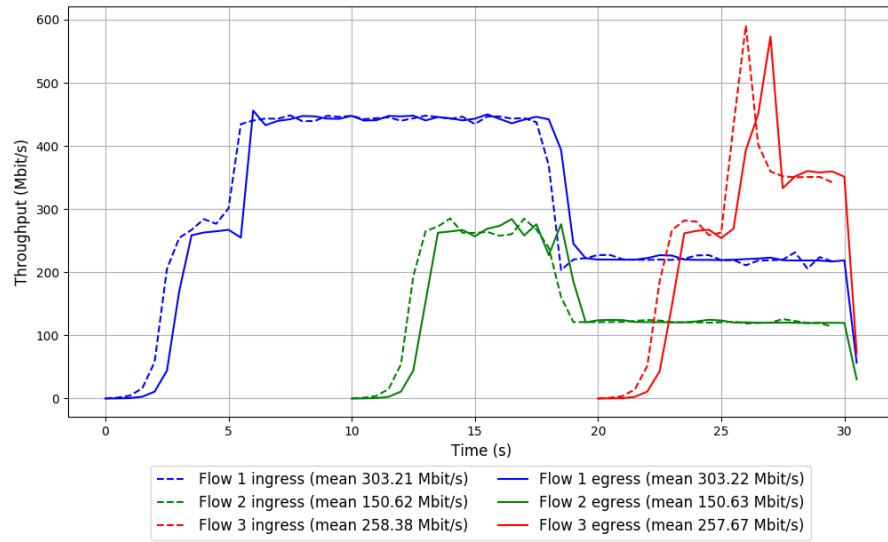


Run 5: Statistics of TCP Vegas

Start at: 2019-01-22 00:02:33
End at: 2019-01-22 00:03:03
Local clock offset: -0.147 ms
Remote clock offset: -0.297 ms

Below is generated by plot.py at 2019-01-22 03:03:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 488.95 Mbit/s
95th percentile per-packet one-way delay: 136.249 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 303.22 Mbit/s
95th percentile per-packet one-way delay: 133.377 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 150.63 Mbit/s
95th percentile per-packet one-way delay: 132.972 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 257.67 Mbit/s
95th percentile per-packet one-way delay: 221.533 ms
Loss rate: 0.27%

Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-21 20:46:39

End at: 2019-01-21 20:47:09

Local clock offset: -0.549 ms

Remote clock offset: -0.0 ms

Below is generated by plot.py at 2019-01-22 03:03:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 223.01 Mbit/s

95th percentile per-packet one-way delay: 291.361 ms

Loss rate: 2.40%

-- Flow 1:

Average throughput: 142.33 Mbit/s

95th percentile per-packet one-way delay: 218.138 ms

Loss rate: 0.06%

-- Flow 2:

Average throughput: 109.77 Mbit/s

95th percentile per-packet one-way delay: 311.587 ms

Loss rate: 6.90%

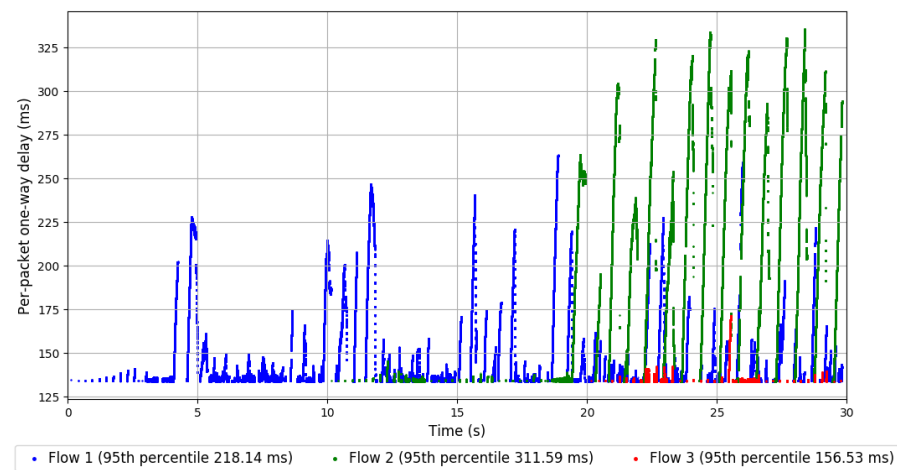
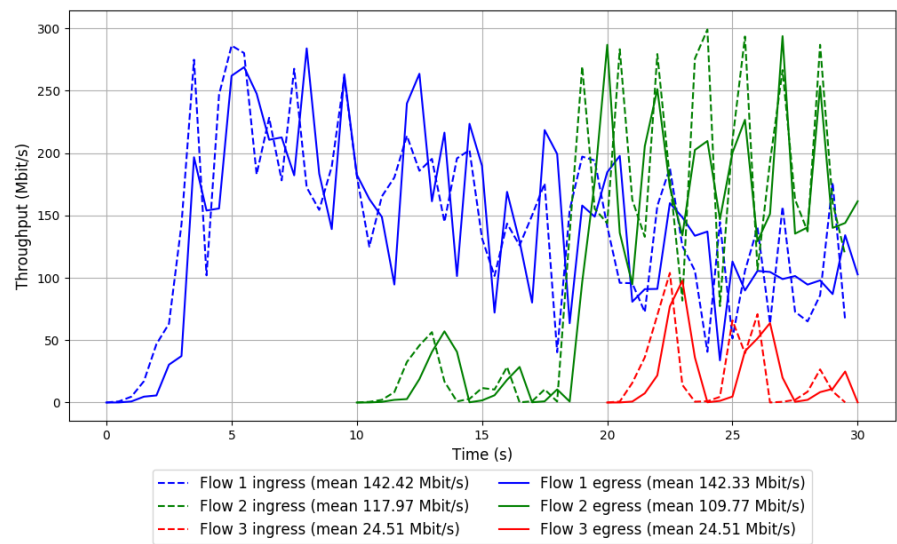
-- Flow 3:

Average throughput: 24.51 Mbit/s

95th percentile per-packet one-way delay: 156.534 ms

Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

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

End at: 2019-01-21 21:26:51

Local clock offset: 0.126 ms

Remote clock offset: 0.022 ms

Below is generated by plot.py at 2019-01-22 03:03:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 196.67 Mbit/s

95th percentile per-packet one-way delay: 246.648 ms

Loss rate: 1.26%

-- Flow 1:

Average throughput: 163.94 Mbit/s

95th percentile per-packet one-way delay: 254.347 ms

Loss rate: 1.50%

-- Flow 2:

Average throughput: 36.18 Mbit/s

95th percentile per-packet one-way delay: 135.524 ms

Loss rate: 0.02%

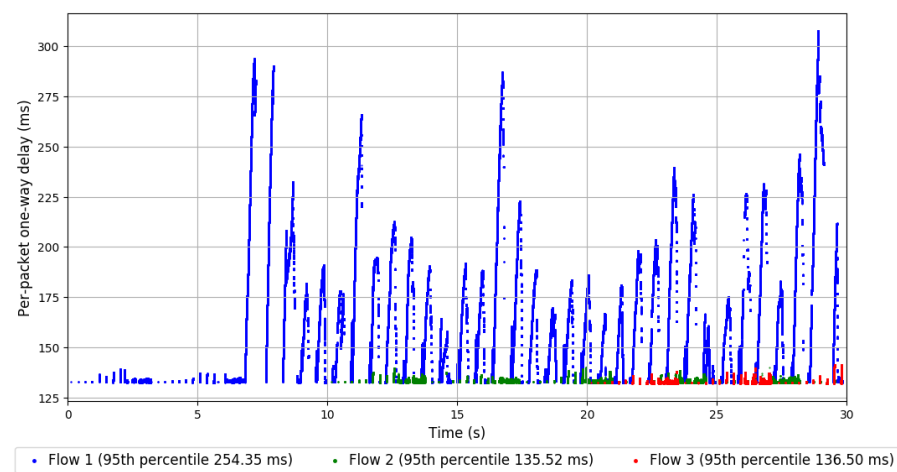
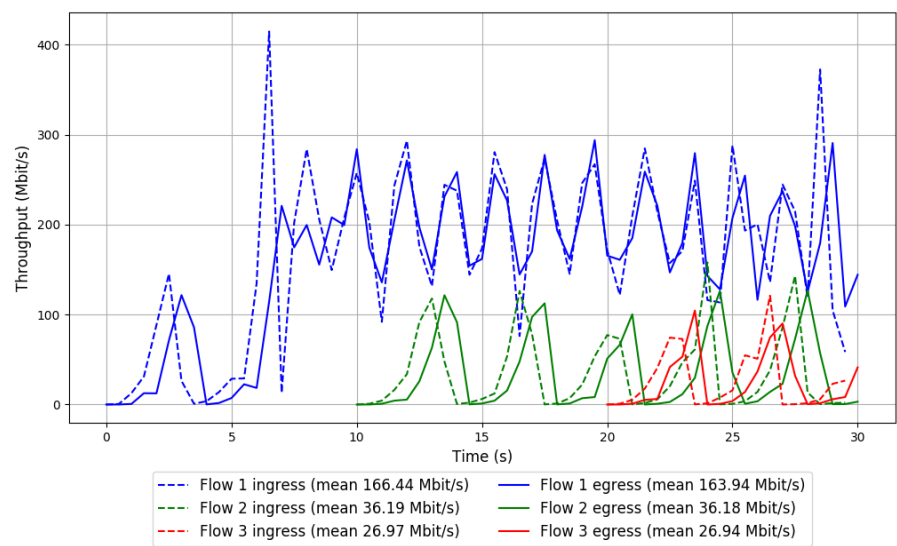
-- Flow 3:

Average throughput: 26.94 Mbit/s

95th percentile per-packet one-way delay: 136.502 ms

Loss rate: 0.00%

Run 2: Report of Verus — Data Link



Run 3: Statistics of Verus

Start at: 2019-01-21 22:05:56

End at: 2019-01-21 22:06:26

Local clock offset: 0.215 ms

Remote clock offset: 0.13 ms

Below is generated by plot.py at 2019-01-22 03:03:00

Datalink statistics

-- Total of 3 flows:

Average throughput: 144.49 Mbit/s

95th percentile per-packet one-way delay: 181.612 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 80.66 Mbit/s

95th percentile per-packet one-way delay: 208.099 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 43.53 Mbit/s

95th percentile per-packet one-way delay: 144.957 ms

Loss rate: 0.00%

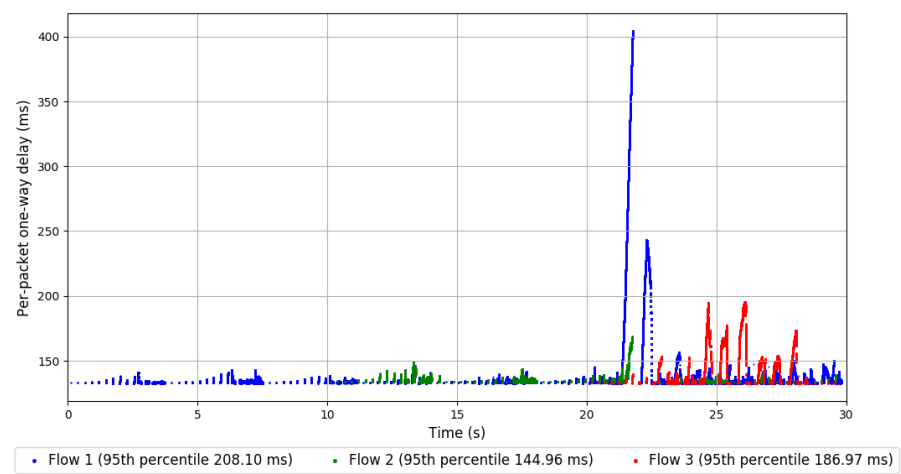
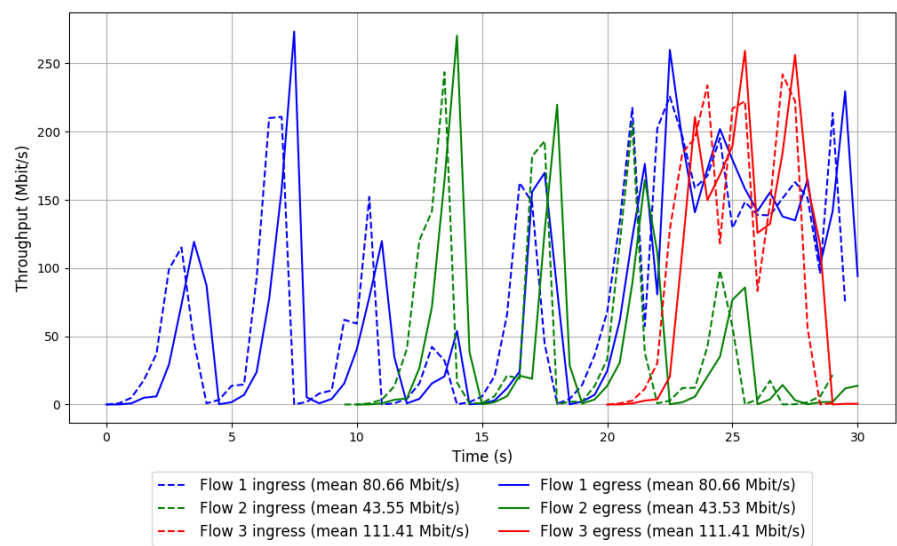
-- Flow 3:

Average throughput: 111.41 Mbit/s

95th percentile per-packet one-way delay: 186.972 ms

Loss rate: 0.00%

Run 3: Report of Verus — Data Link

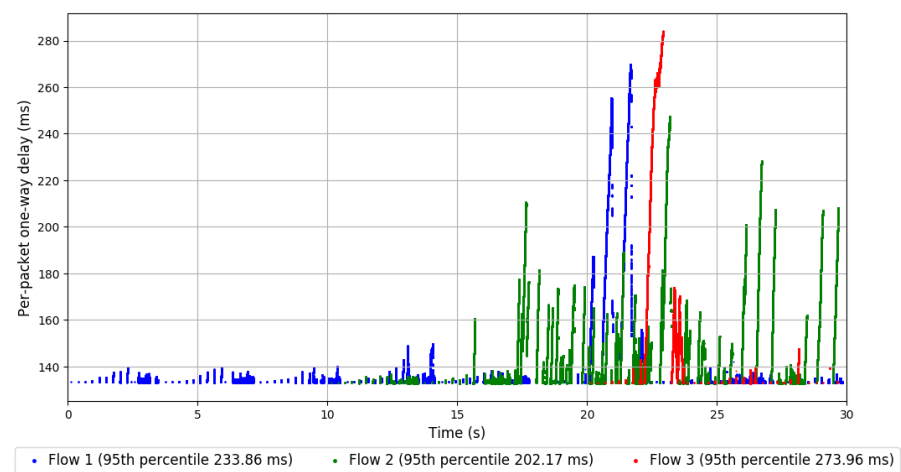
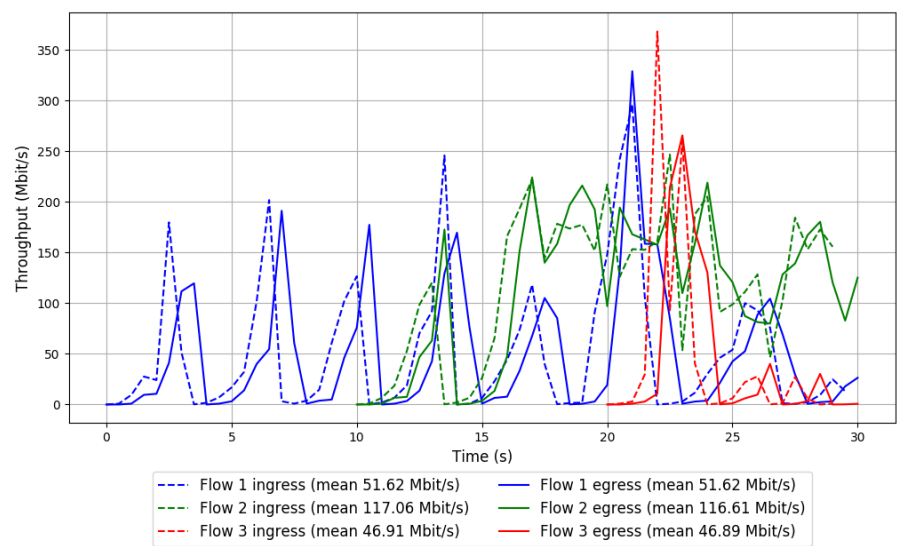


Run 4: Statistics of Verus

Start at: 2019-01-21 22:45:33
End at: 2019-01-21 22:46:03
Local clock offset: -0.189 ms
Remote clock offset: -0.112 ms

Below is generated by plot.py at 2019-01-22 03:03:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 143.33 Mbit/s
95th percentile per-packet one-way delay: 238.260 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.62 Mbit/s
95th percentile per-packet one-way delay: 233.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 116.61 Mbit/s
95th percentile per-packet one-way delay: 202.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.89 Mbit/s
95th percentile per-packet one-way delay: 273.962 ms
Loss rate: 0.04%

Run 4: Report of Verus — Data Link

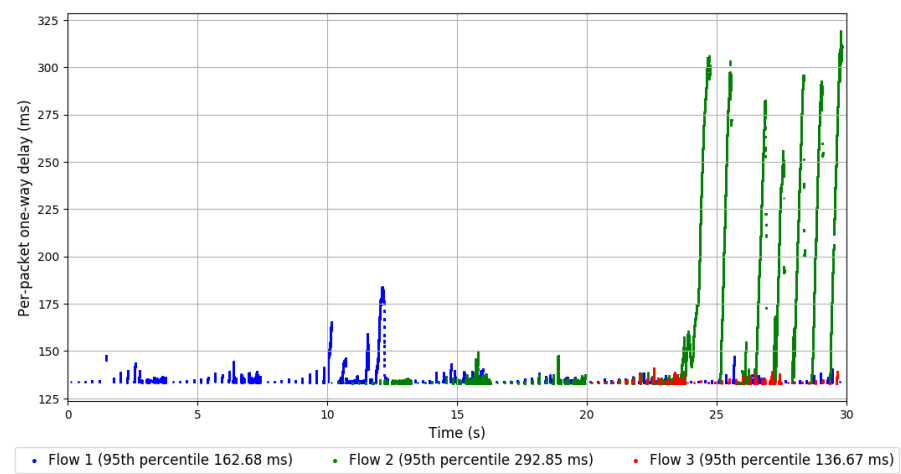
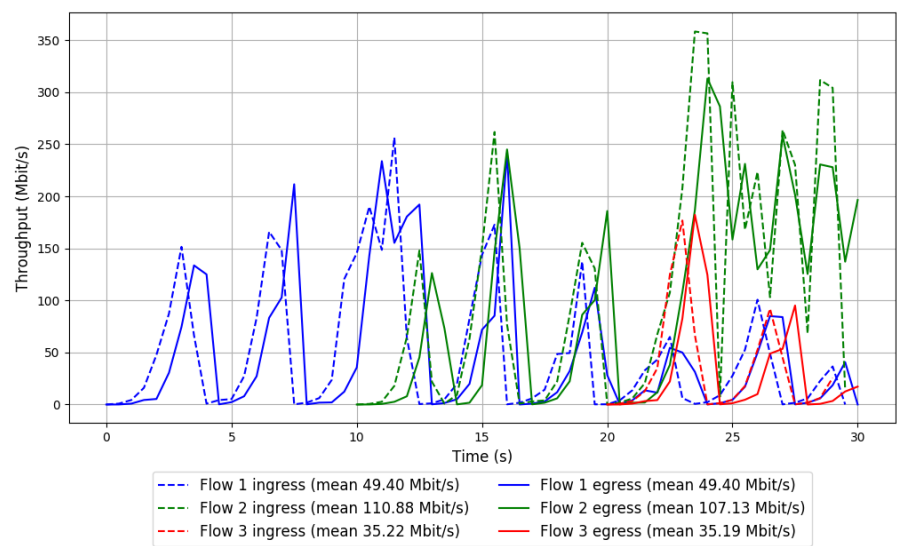


Run 5: Statistics of Verus

Start at: 2019-01-21 23:26:26
End at: 2019-01-21 23:26:56
Local clock offset: -0.063 ms
Remote clock offset: -0.044 ms

Below is generated by plot.py at 2019-01-22 03:03:00
Datalink statistics
-- Total of 3 flows:
Average throughput: 131.49 Mbit/s
95th percentile per-packet one-way delay: 280.824 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 162.682 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 107.13 Mbit/s
95th percentile per-packet one-way delay: 292.845 ms
Loss rate: 3.13%
-- Flow 3:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 136.672 ms
Loss rate: 0.01%

Run 5: Report of Verus — Data Link

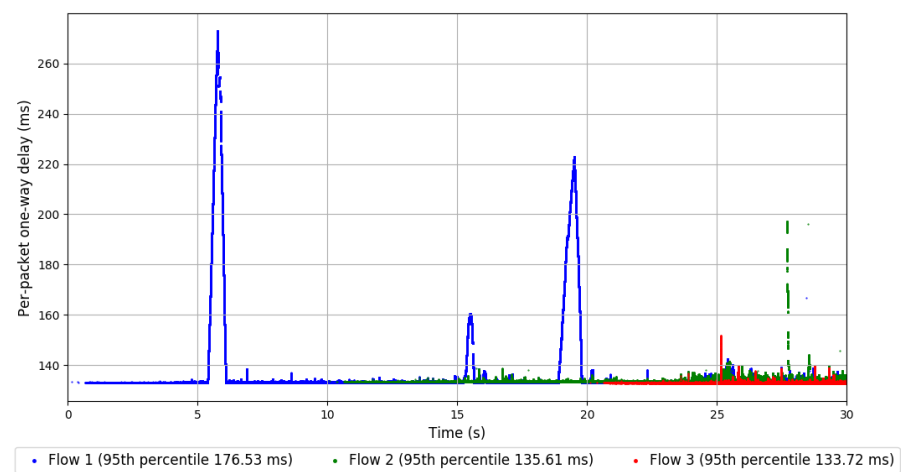
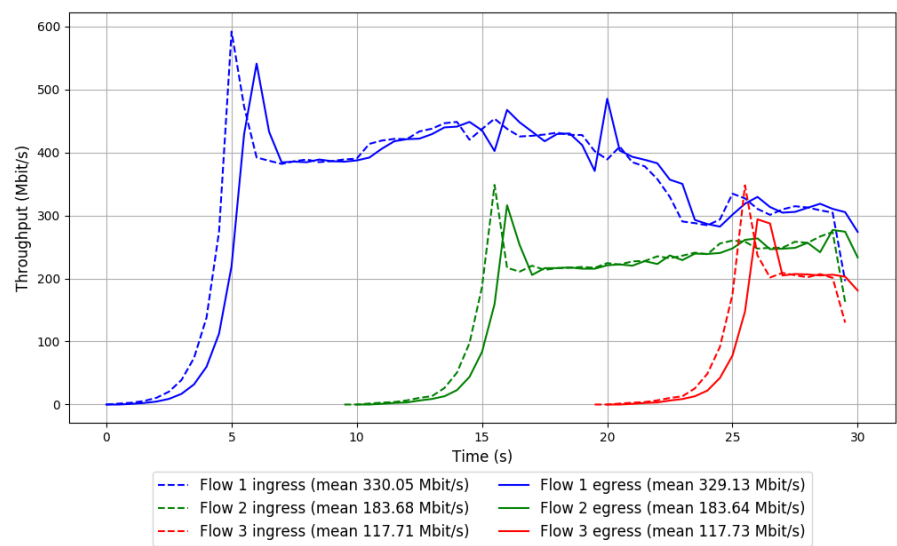


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-21 20:48:31
End at: 2019-01-21 20:49:01
Local clock offset: -0.113 ms
Remote clock offset: -0.015 ms

Below is generated by plot.py at 2019-01-22 03:05:51
Datalink statistics
-- Total of 3 flows:
Average throughput: 490.22 Mbit/s
95th percentile per-packet one-way delay: 152.655 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 329.13 Mbit/s
95th percentile per-packet one-way delay: 176.527 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 183.64 Mbit/s
95th percentile per-packet one-way delay: 135.608 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 117.73 Mbit/s
95th percentile per-packet one-way delay: 133.717 ms
Loss rate: 0.01%

Run 1: Report of PCC-Vivace — Data Link



Run 2: Statistics of PCC-Vivace

Start at: 2019-01-21 21:28:06

End at: 2019-01-21 21:28:36

Local clock offset: -0.141 ms

Remote clock offset: 0.072 ms

Below is generated by plot.py at 2019-01-22 03:05:51

Datalink statistics

-- Total of 3 flows:

Average throughput: 468.38 Mbit/s

95th percentile per-packet one-way delay: 144.867 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 303.25 Mbit/s

95th percentile per-packet one-way delay: 137.394 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 186.68 Mbit/s

95th percentile per-packet one-way delay: 215.706 ms

Loss rate: 0.32%

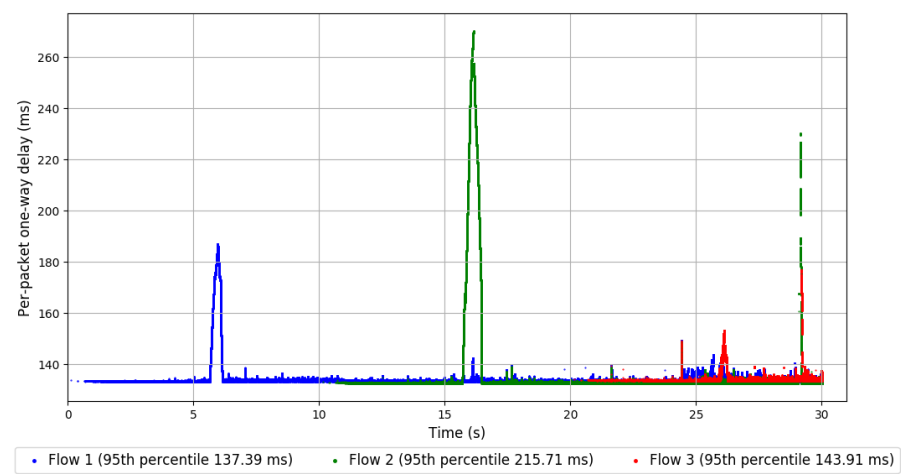
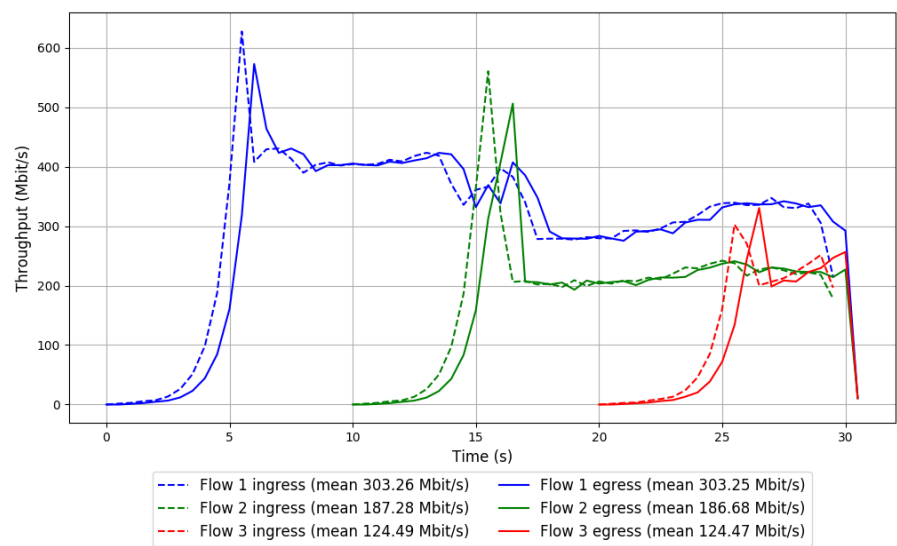
-- Flow 3:

Average throughput: 124.47 Mbit/s

95th percentile per-packet one-way delay: 143.913 ms

Loss rate: 0.01%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-01-21 22:07:34

End at: 2019-01-21 22:08:04

Local clock offset: 0.354 ms

Remote clock offset: 0.006 ms

Below is generated by plot.py at 2019-01-22 03:07:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 499.35 Mbit/s

95th percentile per-packet one-way delay: 149.998 ms

Loss rate: 0.33%

-- Flow 1:

Average throughput: 292.60 Mbit/s

95th percentile per-packet one-way delay: 147.457 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 254.55 Mbit/s

95th percentile per-packet one-way delay: 202.718 ms

Loss rate: 0.96%

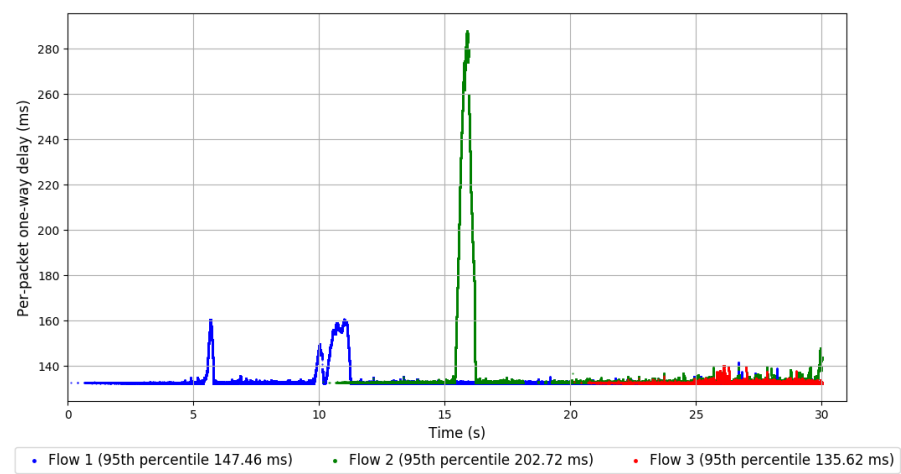
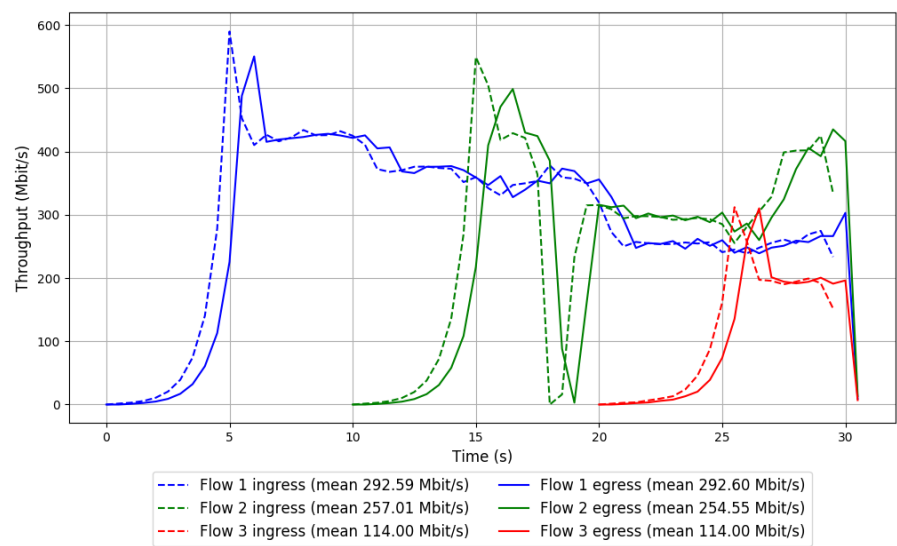
-- Flow 3:

Average throughput: 114.00 Mbit/s

95th percentile per-packet one-way delay: 135.624 ms

Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-21 22:47:13

End at: 2019-01-21 22:47:43

Local clock offset: 0.243 ms

Remote clock offset: 0.015 ms

Below is generated by plot.py at 2019-01-22 03:07:41

Datalink statistics

-- Total of 3 flows:

Average throughput: 459.23 Mbit/s

95th percentile per-packet one-way delay: 141.825 ms

Loss rate: 0.25%

-- Flow 1:

Average throughput: 297.39 Mbit/s

95th percentile per-packet one-way delay: 146.891 ms

Loss rate: 0.39%

-- Flow 2:

Average throughput: 184.73 Mbit/s

95th percentile per-packet one-way delay: 134.474 ms

Loss rate: 0.00%

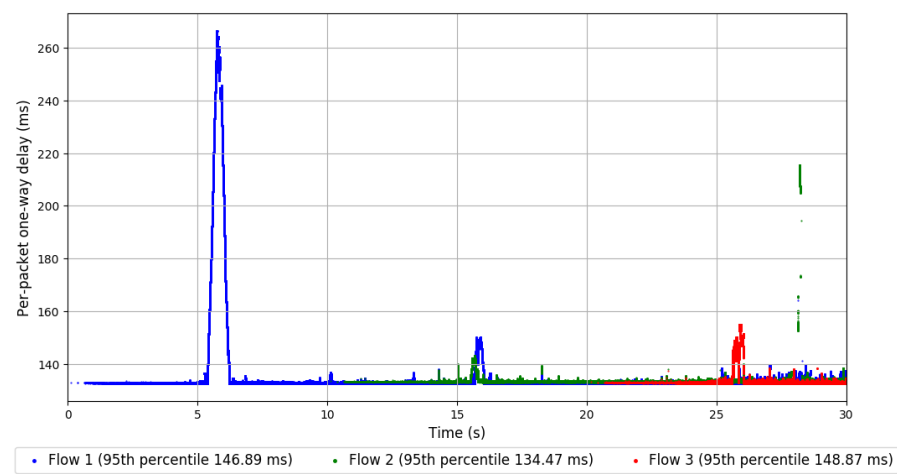
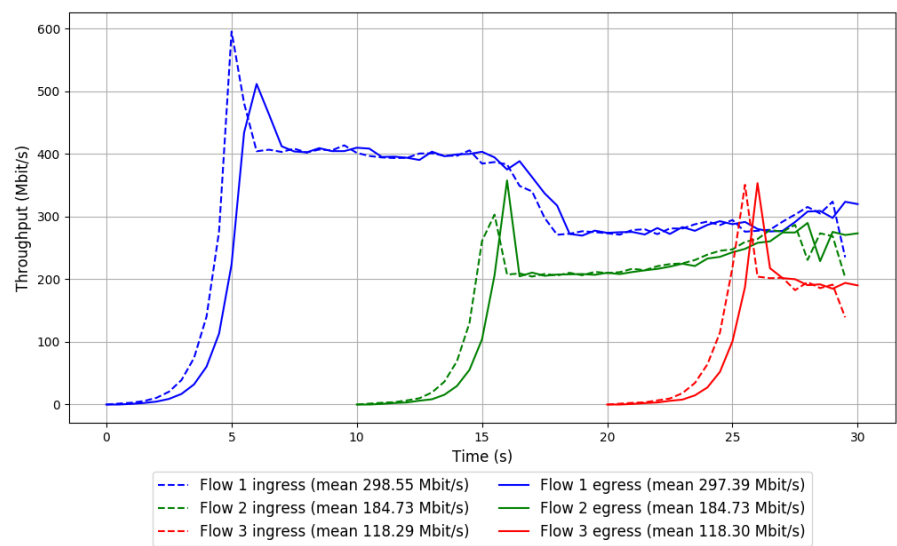
-- Flow 3:

Average throughput: 118.30 Mbit/s

95th percentile per-packet one-way delay: 148.868 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

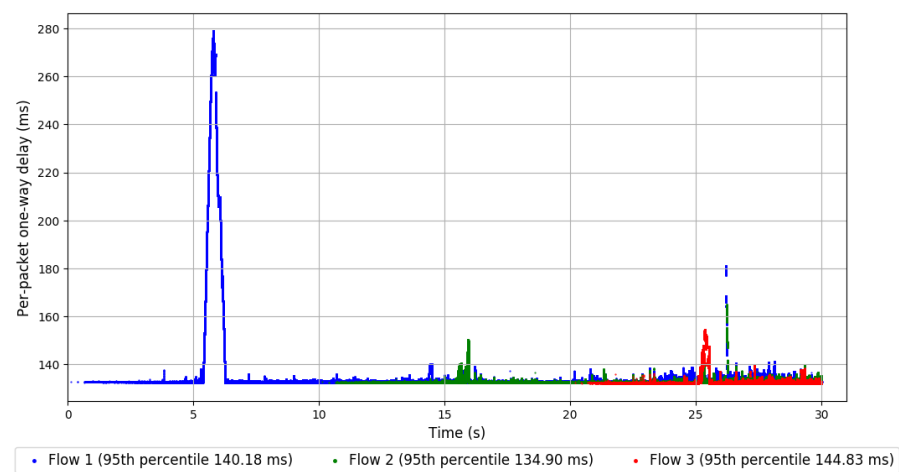
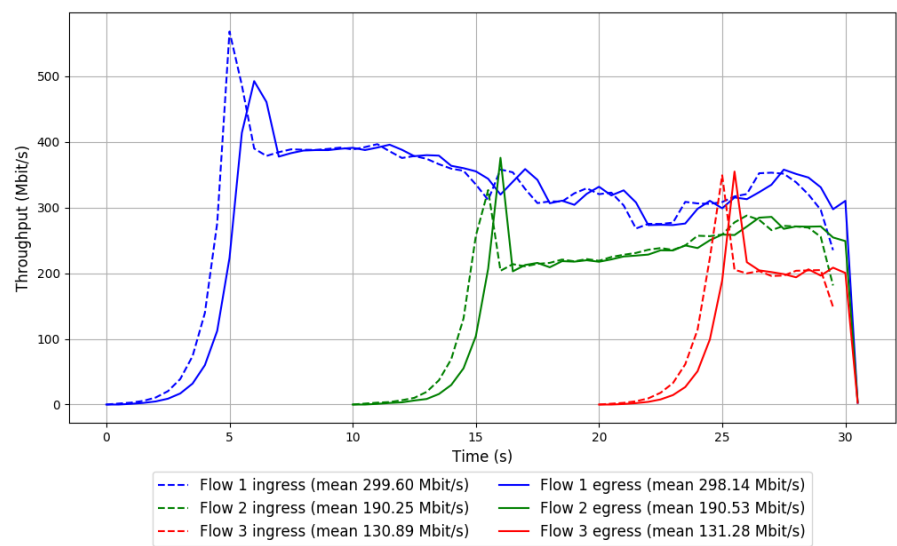


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-21 23:28:02
End at: 2019-01-21 23:28:32
Local clock offset: 0.353 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2019-01-22 03:07:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 467.91 Mbit/s
95th percentile per-packet one-way delay: 138.545 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 298.14 Mbit/s
95th percentile per-packet one-way delay: 140.181 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 190.53 Mbit/s
95th percentile per-packet one-way delay: 134.903 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 131.28 Mbit/s
95th percentile per-packet one-way delay: 144.829 ms
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link

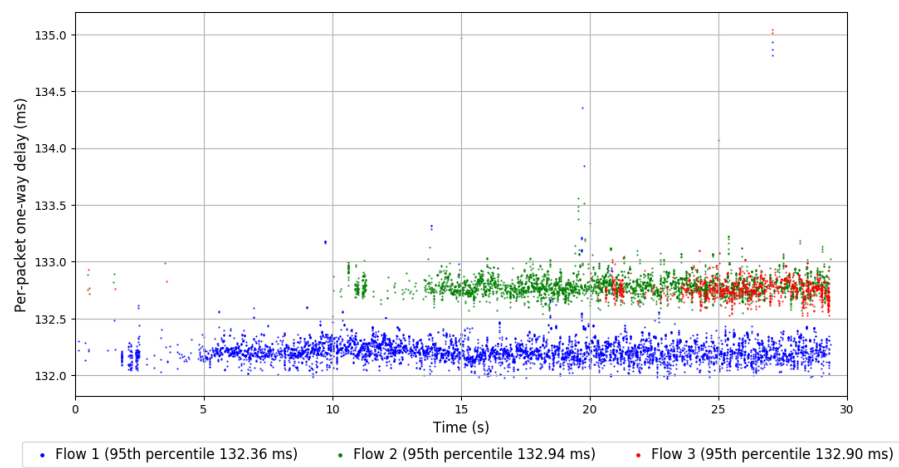
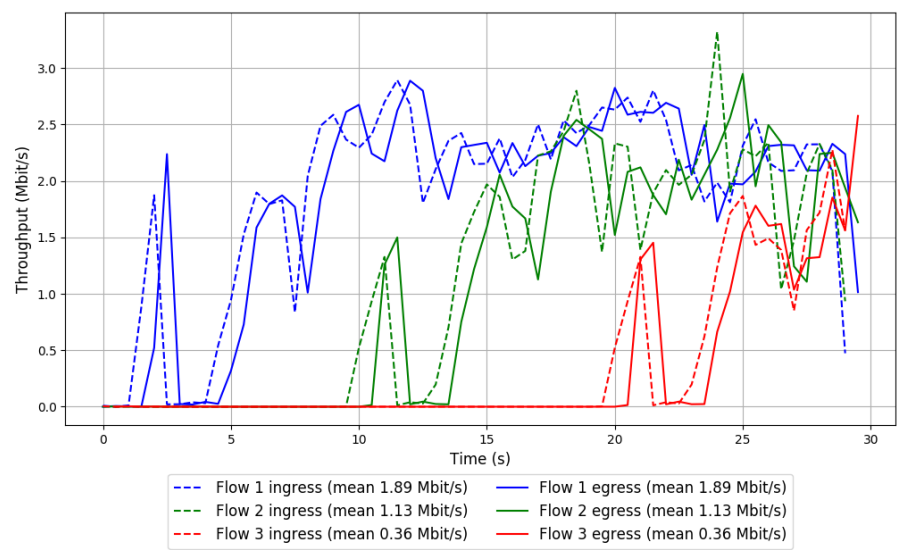



```
Run 1: Statistics of WebRTC media

Start at: 2019-01-21 21:11:47
End at: 2019-01-21 21:12:17
Local clock offset: 0.235 ms
Remote clock offset: 0.067 ms

# Below is generated by plot.py at 2019-01-22 03:07:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 132.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 132.363 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.13 Mbit/s
95th percentile per-packet one-way delay: 132.945 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 132.900 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-21 21:51:26

End at: 2019-01-21 21:51:56

Local clock offset: 0.083 ms

Remote clock offset: 0.02 ms

Below is generated by plot.py at 2019-01-22 03:07:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.227 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.228 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.096 ms

Loss rate: 0.00%

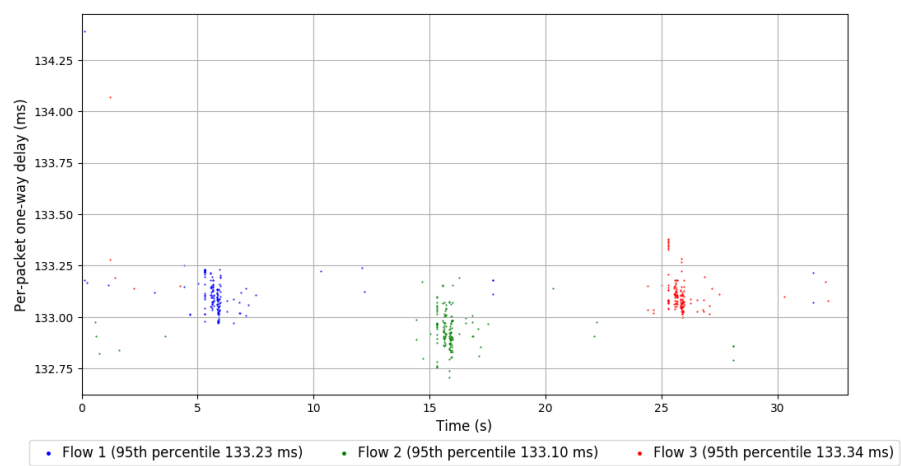
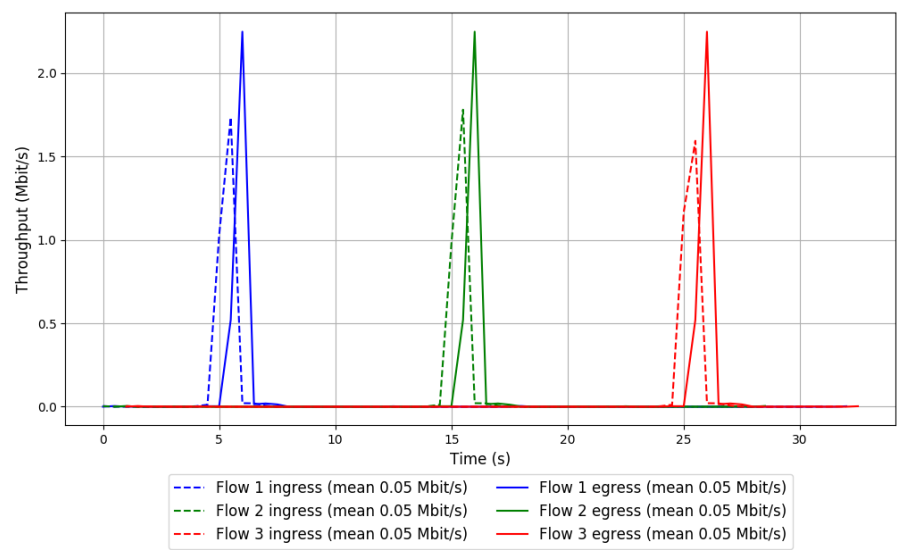
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.342 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

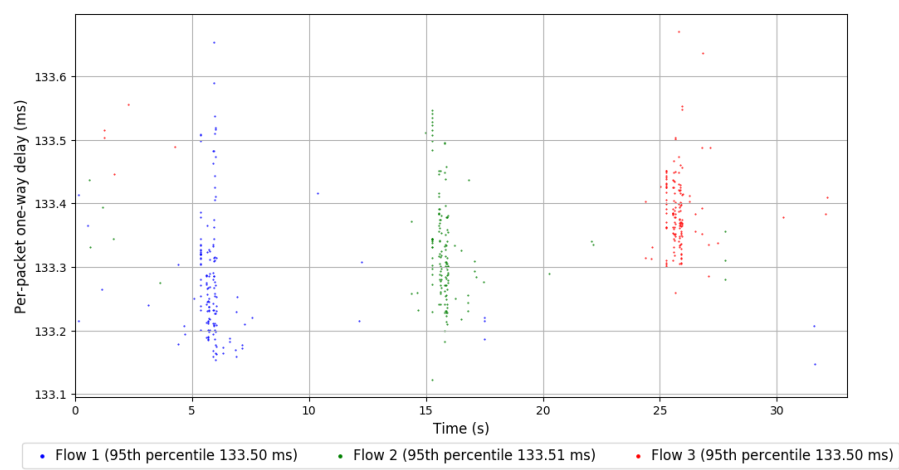
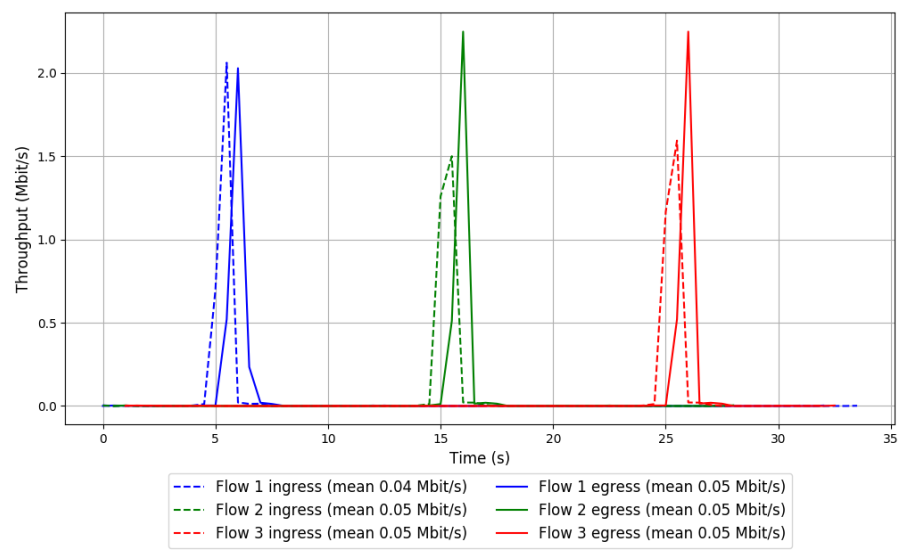


Run 3: Statistics of WebRTC media

Start at: 2019-01-21 22:30:54
End at: 2019-01-21 22:31:24
Local clock offset: -0.379 ms
Remote clock offset: -0.019 ms

Below is generated by plot.py at 2019-01-22 03:07:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 133.504 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.499 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.507 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.504 ms
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

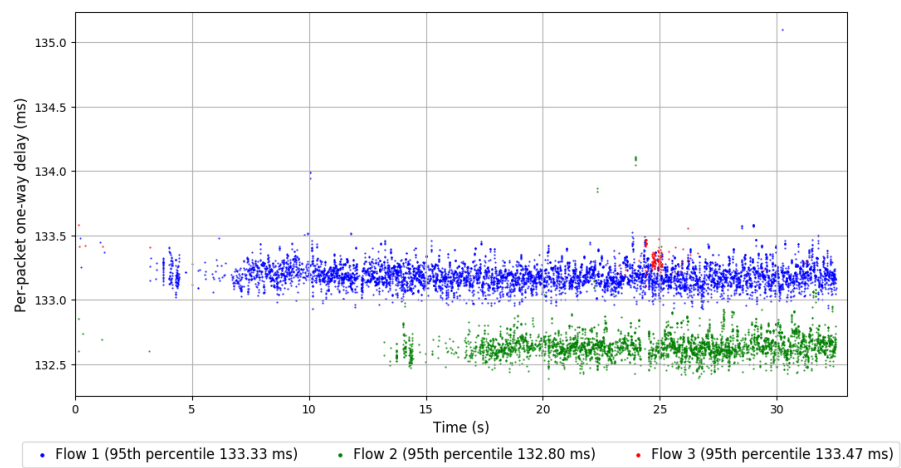
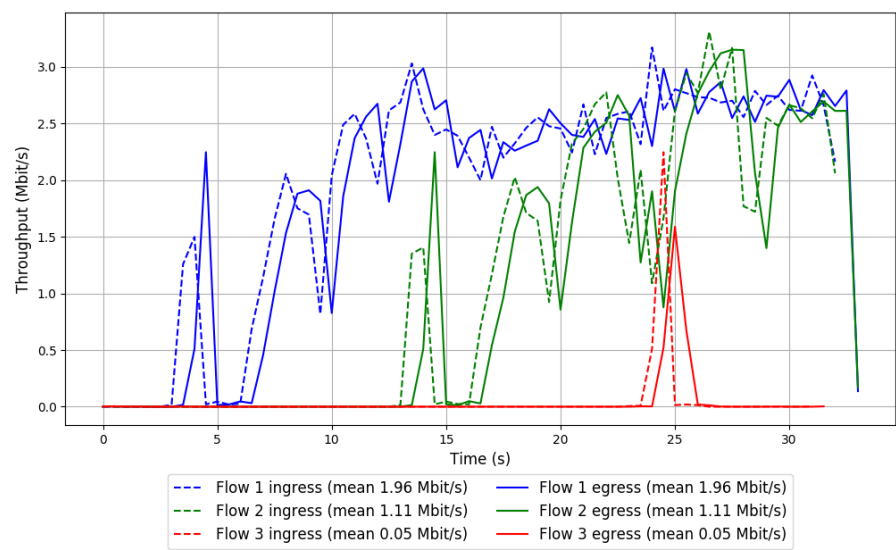


Run 4: Statistics of WebRTC media

Start at: 2019-01-21 23:10:43
End at: 2019-01-21 23:11:13
Local clock offset: -0.091 ms
Remote clock offset: -0.009 ms

Below is generated by plot.py at 2019-01-22 03:07:44
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 133.315 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 133.334 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 132.800 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 133.465 ms
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link



Run 5: Statistics of WebRTC media

Start at: 2019-01-21 23:51:40

End at: 2019-01-21 23:52:10

Local clock offset: 0.272 ms

Remote clock offset: 0.44 ms

Below is generated by plot.py at 2019-01-22 03:07:44

Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.329 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.846 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.367 ms

Loss rate: 0.00%

-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.270 ms

Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

