

## Pantheon Report

Generated at 2019-01-25 00:19:22 (UTC).

Data path: GCE Sydney on `ens4` (*local*) → GCE Iowa 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:

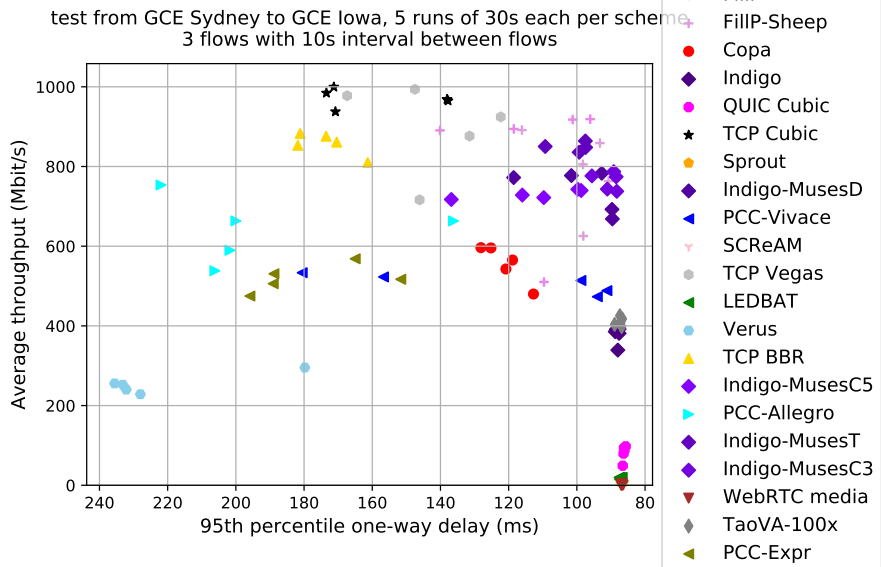
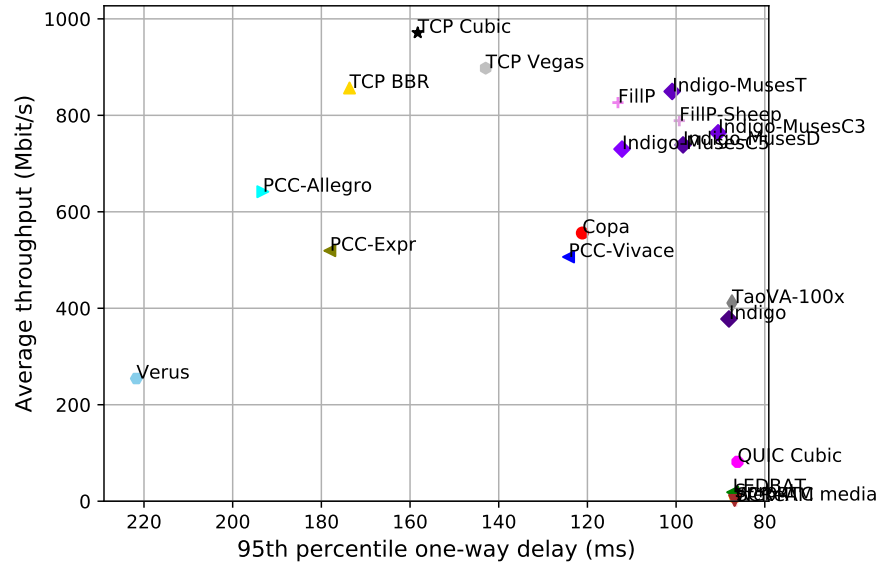
```
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

```
branch: muses @ 0b8e9a949603c3842368430acf469eec3b941f9f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ d9c5ea33091330aca25ecd105ab2db6d34d5c40d
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 Iowa, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	452.81	424.44	365.31	174.51	152.15	157.96	0.76	0.29	1.14
Copa	5	281.67	289.18	245.27	116.00	119.51	127.08	0.01	0.02	0.07
TCP Cubic	5	523.86	473.24	397.42	142.61	159.87	127.63	0.06	0.20	0.15
FillP	5	485.64	372.39	280.87	123.96	90.91	91.44	0.69	0.00	0.27
FillP-Sheep	5	480.27	336.20	256.23	104.88	89.54	88.84	0.28	0.00	0.00
Indigo	5	198.17	192.13	162.10	87.96	88.22	87.98	0.00	0.00	0.00
Indigo-MusesC3	5	454.67	370.98	277.52	91.41	89.75	89.01	0.00	0.00	0.00
Indigo-MusesC5	5	448.61	387.07	119.22	113.69	110.36	86.98	0.06	0.00	0.00
Indigo-MusesD	5	458.28	389.49	111.76	102.30	91.74	87.97	0.03	0.00	0.14
Indigo-MusesT	4	503.02	406.03	297.19	105.28	96.90	90.46	0.06	0.02	0.00
LEDBAT	5	11.64	8.37	4.11	87.37	86.94	86.94	0.00	0.00	0.00
PCC-Allegro	5	337.18	338.25	242.20	191.56	182.66	189.45	4.12	2.56	1.77
PCC-Expr	5	292.06	248.56	187.77	163.39	166.50	137.34	1.01	1.16	0.93
QUIC Cubic	5	38.48	50.11	30.44	85.93	85.89	86.18	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	86.43	86.37	86.45	0.00	0.00	0.00
Sprout	5	4.40	4.20	2.95	86.84	86.72	86.43	0.00	0.00	0.00
TaoVA-100x	5	212.90	202.52	190.16	86.94	87.42	88.87	0.00	0.00	0.00
TCP Vegas	5	468.83	453.93	380.74	133.24	140.36	138.26	0.03	0.09	0.21
Verus	5	150.21	105.58	105.77	199.36	150.09	159.87	3.33	1.16	0.42
PCC-Vivace	5	333.74	215.50	88.81	132.92	106.36	88.11	0.18	0.15	0.01
WebRTC media	5	0.82	0.50	0.20	86.71	86.53	86.68	0.00	0.01	0.00

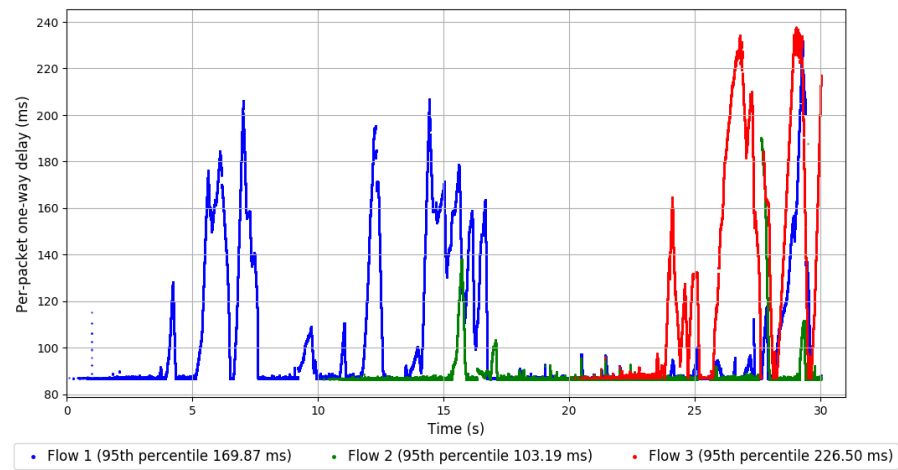
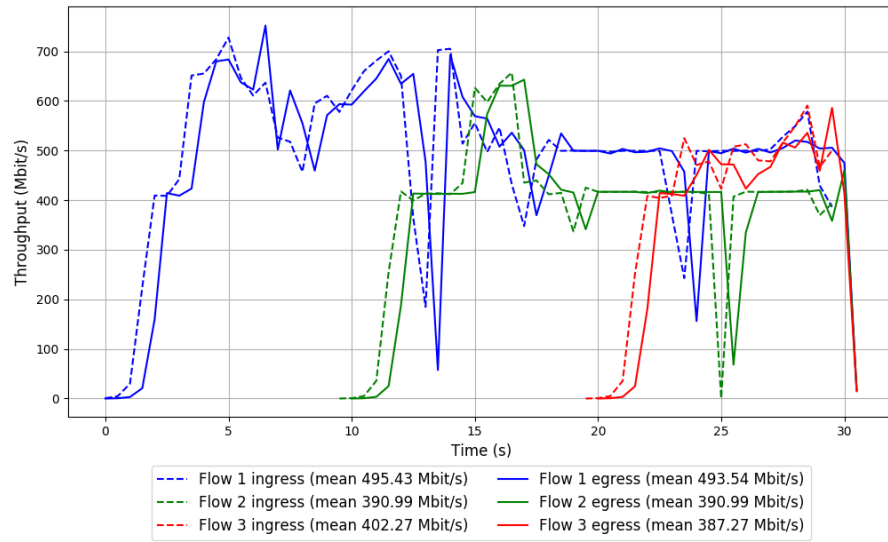


Run 1: Statistics of TCP BBR

Start at: 2019-01-24 18:03:53  
End at: 2019-01-24 18:04:23  
Local clock offset: -0.589 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-24 21:48:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 883.04 Mbit/s  
95th percentile per-packet one-way delay: 181.125 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 493.54 Mbit/s  
95th percentile per-packet one-way delay: 169.873 ms  
Loss rate: 0.38%  
-- Flow 2:  
Average throughput: 390.99 Mbit/s  
95th percentile per-packet one-way delay: 103.195 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 387.27 Mbit/s  
95th percentile per-packet one-way delay: 226.501 ms  
Loss rate: 3.72%

# Run 1: Report of TCP BBR — Data Link

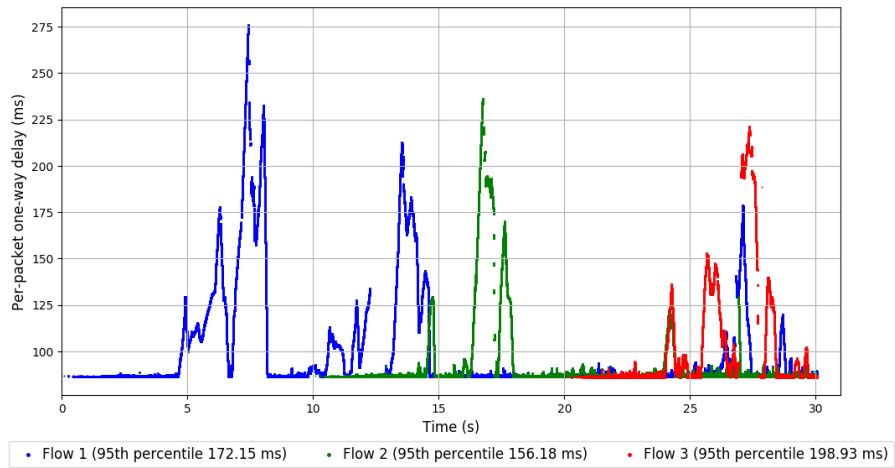
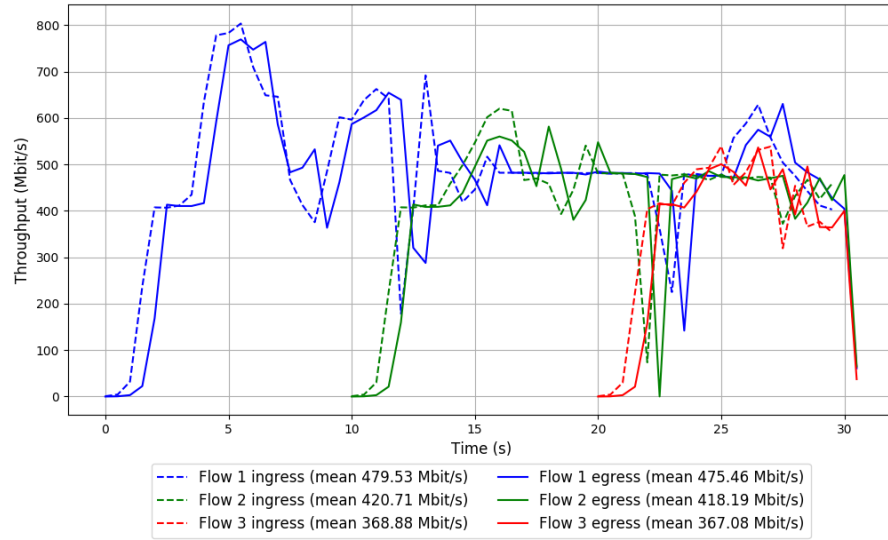


Run 2: Statistics of TCP BBR

Start at: 2019-01-24 18:41:38  
End at: 2019-01-24 18:42:08  
Local clock offset: -0.208 ms  
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-01-24 21:48:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 875.96 Mbit/s  
95th percentile per-packet one-way delay: 173.536 ms  
Loss rate: 0.72%  
-- Flow 1:  
Average throughput: 475.46 Mbit/s  
95th percentile per-packet one-way delay: 172.152 ms  
Loss rate: 0.85%  
-- Flow 2:  
Average throughput: 418.19 Mbit/s  
95th percentile per-packet one-way delay: 156.179 ms  
Loss rate: 0.60%  
-- Flow 3:  
Average throughput: 367.08 Mbit/s  
95th percentile per-packet one-way delay: 198.927 ms  
Loss rate: 0.49%

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



Run 3: Statistics of TCP BBR

Start at: 2019-01-24 19:20:22

End at: 2019-01-24 19:20:52

Local clock offset: -0.179 ms

Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-01-24 21:48:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 810.03 Mbit/s

95th percentile per-packet one-way delay: 161.316 ms

Loss rate: 0.43%

-- Flow 1:

Average throughput: 400.34 Mbit/s

95th percentile per-packet one-way delay: 178.189 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 448.72 Mbit/s

95th percentile per-packet one-way delay: 151.745 ms

Loss rate: 0.10%

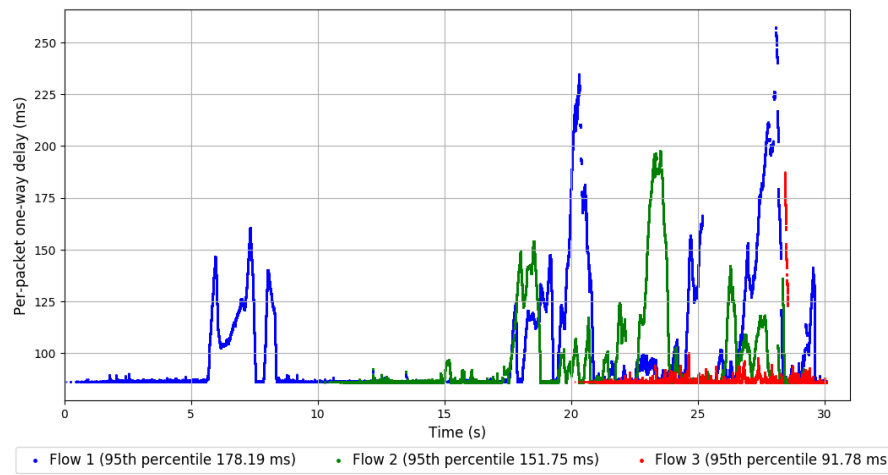
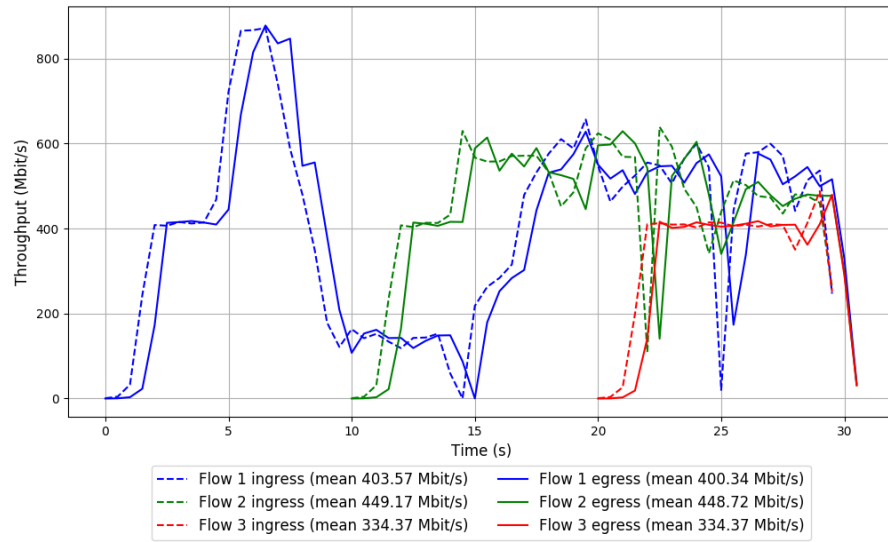
-- Flow 3:

Average throughput: 334.37 Mbit/s

95th percentile per-packet one-way delay: 91.775 ms

Loss rate: 0.00%

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

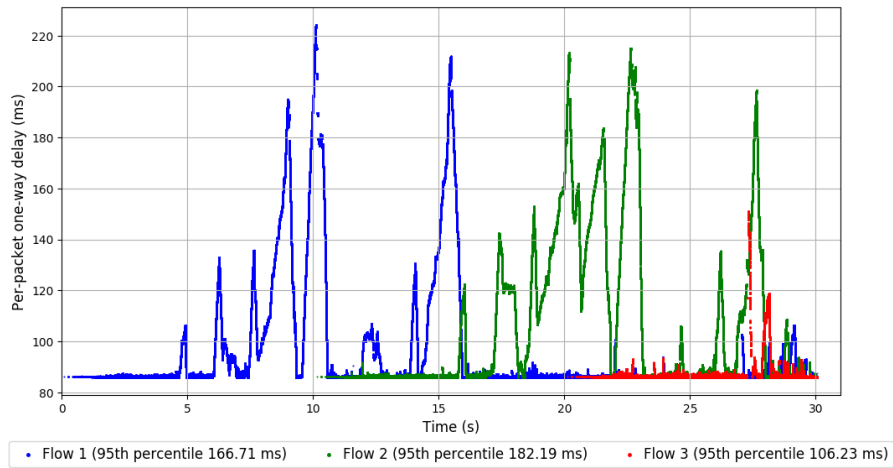
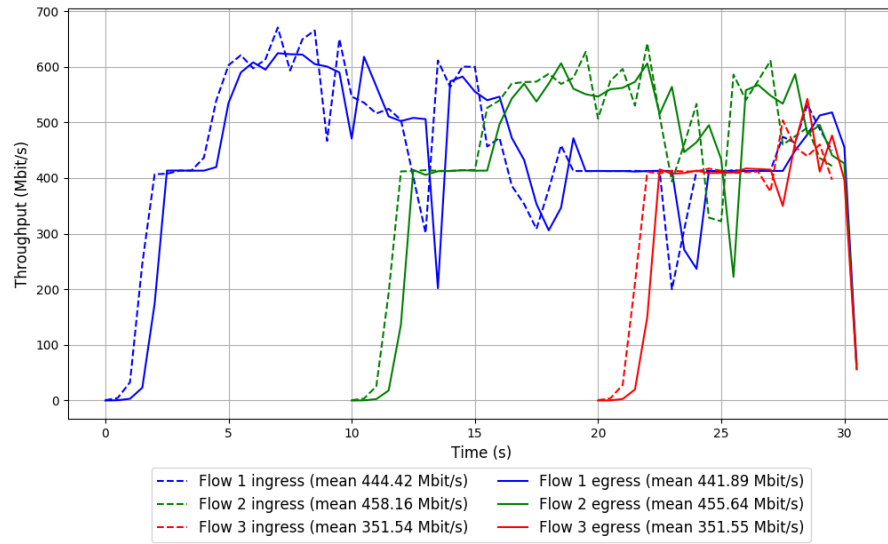


Run 4: Statistics of TCP BBR

Start at: 2019-01-24 19:58:22  
End at: 2019-01-24 19:58:52  
Local clock offset: -0.172 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-01-24 21:48:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 861.20 Mbit/s  
95th percentile per-packet one-way delay: 170.433 ms  
Loss rate: 0.49%  
-- Flow 1:  
Average throughput: 441.89 Mbit/s  
95th percentile per-packet one-way delay: 166.713 ms  
Loss rate: 0.57%  
-- Flow 2:  
Average throughput: 455.64 Mbit/s  
95th percentile per-packet one-way delay: 182.189 ms  
Loss rate: 0.55%  
-- Flow 3:  
Average throughput: 351.55 Mbit/s  
95th percentile per-packet one-way delay: 106.231 ms  
Loss rate: 0.00%

# Run 4: Report of TCP BBR — Data Link





Run 5: Statistics of TCP BBR

Start at: 2019-01-24 20:37:06

End at: 2019-01-24 20:37:36

Local clock offset: -0.094 ms

Remote clock offset: 0.21 ms

# Below is generated by plot.py at 2019-01-24 21:48:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 853.24 Mbit/s

95th percentile per-packet one-way delay: 181.831 ms

Loss rate: 0.92%

-- Flow 1:

Average throughput: 452.80 Mbit/s

95th percentile per-packet one-way delay: 185.631 ms

Loss rate: 1.18%

-- Flow 2:

Average throughput: 408.65 Mbit/s

95th percentile per-packet one-way delay: 167.439 ms

Loss rate: 0.20%

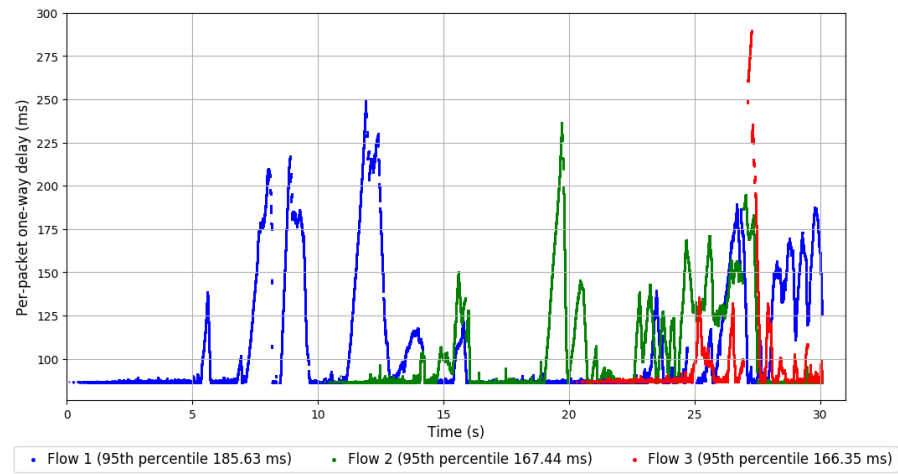
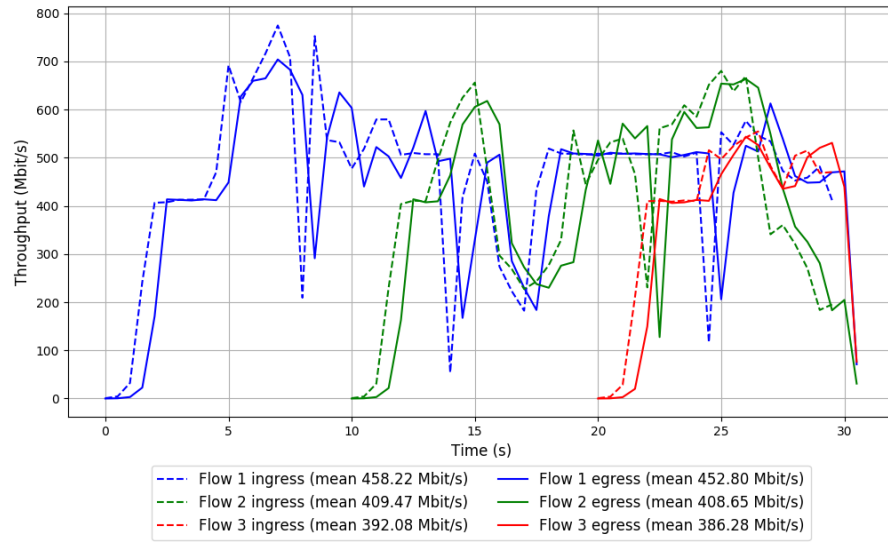
-- Flow 3:

Average throughput: 386.28 Mbit/s

95th percentile per-packet one-way delay: 166.349 ms

Loss rate: 1.48%

# Run 5: Report of TCP BBR — Data Link



Run 1: Statistics of Copa

Start at: 2019-01-24 18:11:06

End at: 2019-01-24 18:11:36

Local clock offset: 0.091 ms

Remote clock offset: 0.087 ms

# Below is generated by plot.py at 2019-01-24 21:50:57

# Datalink statistics

-- Total of 3 flows:

Average throughput: 542.76 Mbit/s

95th percentile per-packet one-way delay: 120.807 ms

Loss rate: 0.05%

-- Flow 1:

Average throughput: 259.71 Mbit/s

95th percentile per-packet one-way delay: 116.373 ms

Loss rate: 0.05%

-- Flow 2:

Average throughput: 306.55 Mbit/s

95th percentile per-packet one-way delay: 121.184 ms

Loss rate: 0.07%

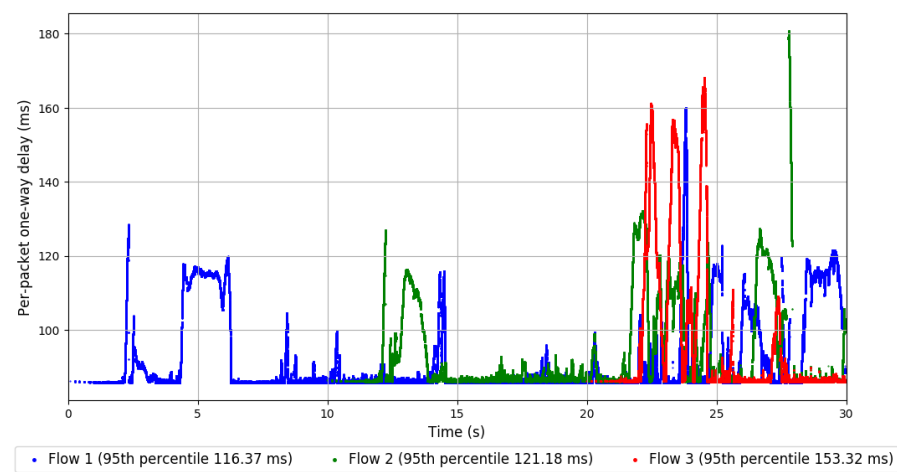
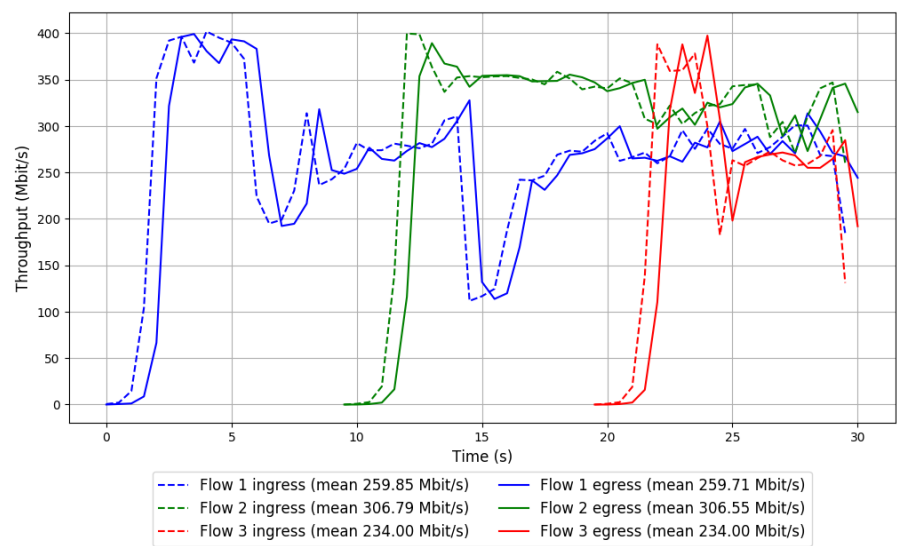
-- Flow 3:

Average throughput: 234.00 Mbit/s

95th percentile per-packet one-way delay: 153.323 ms

Loss rate: 0.00%

Run 1: Report of Copa — Data Link

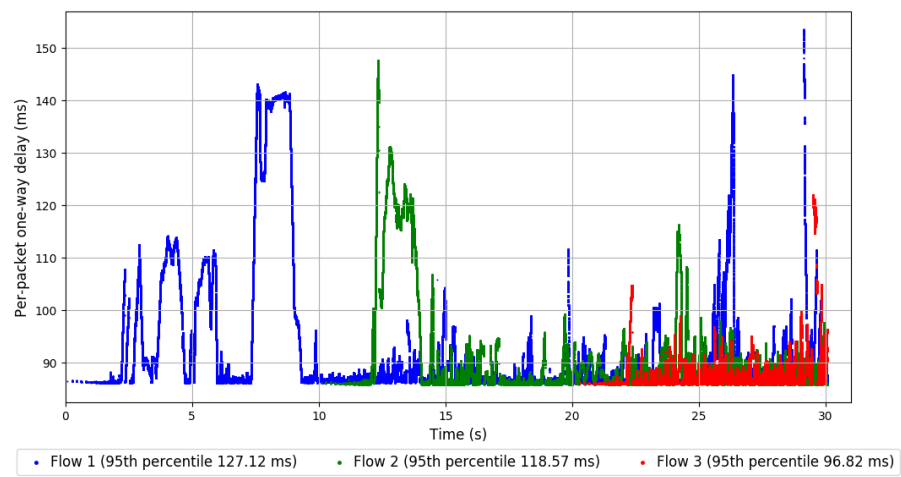
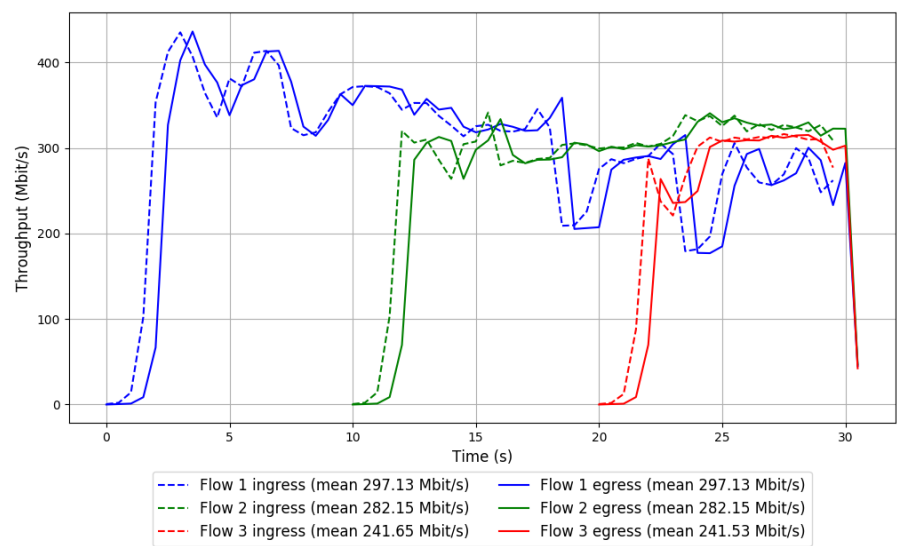


Run 2: Statistics of Copa

Start at: 2019-01-24 18:48:48  
End at: 2019-01-24 18:49:18  
Local clock offset: -0.165 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-01-24 21:51:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 565.27 Mbit/s  
95th percentile per-packet one-way delay: 118.863 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 297.13 Mbit/s  
95th percentile per-packet one-way delay: 127.124 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 282.15 Mbit/s  
95th percentile per-packet one-way delay: 118.569 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 241.53 Mbit/s  
95th percentile per-packet one-way delay: 96.820 ms  
Loss rate: 0.04%

Run 2: Report of Copa — Data Link



Run 3: Statistics of Copa

Start at: 2019-01-24 19:27:34

End at: 2019-01-24 19:28:04

Local clock offset: -0.17 ms

Remote clock offset: -0.04 ms

# Below is generated by plot.py at 2019-01-24 21:52:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 596.35 Mbit/s

95th percentile per-packet one-way delay: 128.136 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 312.97 Mbit/s

95th percentile per-packet one-way delay: 115.289 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 297.36 Mbit/s

95th percentile per-packet one-way delay: 116.768 ms

Loss rate: 0.00%

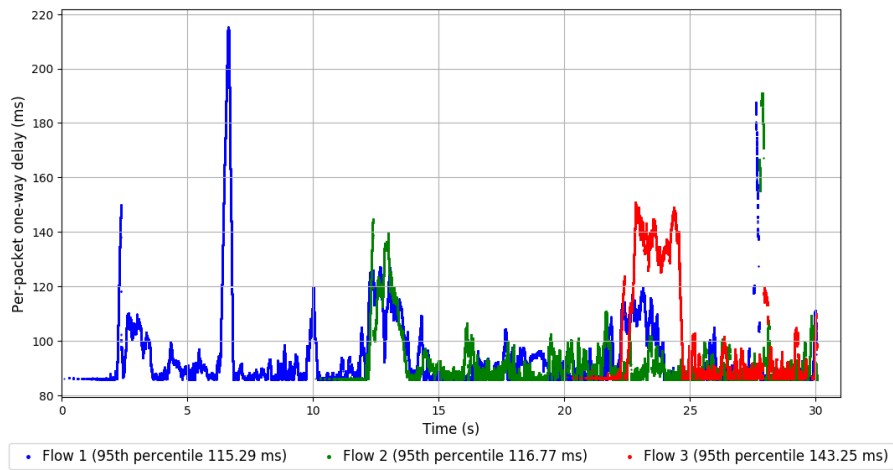
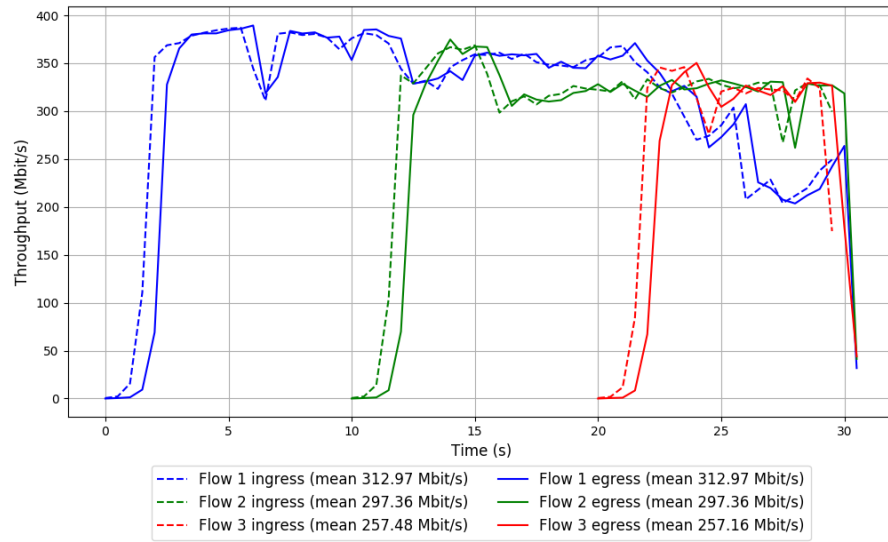
-- Flow 3:

Average throughput: 257.16 Mbit/s

95th percentile per-packet one-way delay: 143.253 ms

Loss rate: 0.13%

### Run 3: Report of Copa — Data Link





Run 4: Statistics of Copa

Start at: 2019-01-24 20:05:50

End at: 2019-01-24 20:06:20

Local clock offset: -0.124 ms

Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2019-01-24 22:09:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 595.65 Mbit/s

95th percentile per-packet one-way delay: 125.194 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 318.58 Mbit/s

95th percentile per-packet one-way delay: 106.423 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 291.97 Mbit/s

95th percentile per-packet one-way delay: 131.521 ms

Loss rate: 0.00%

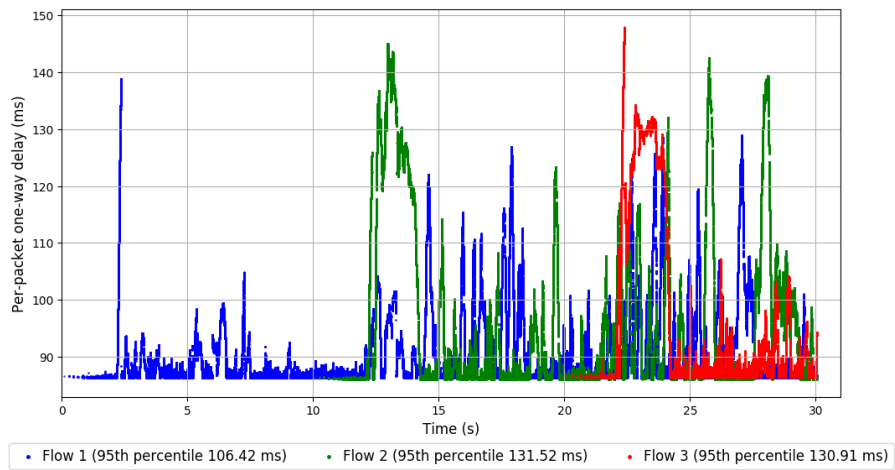
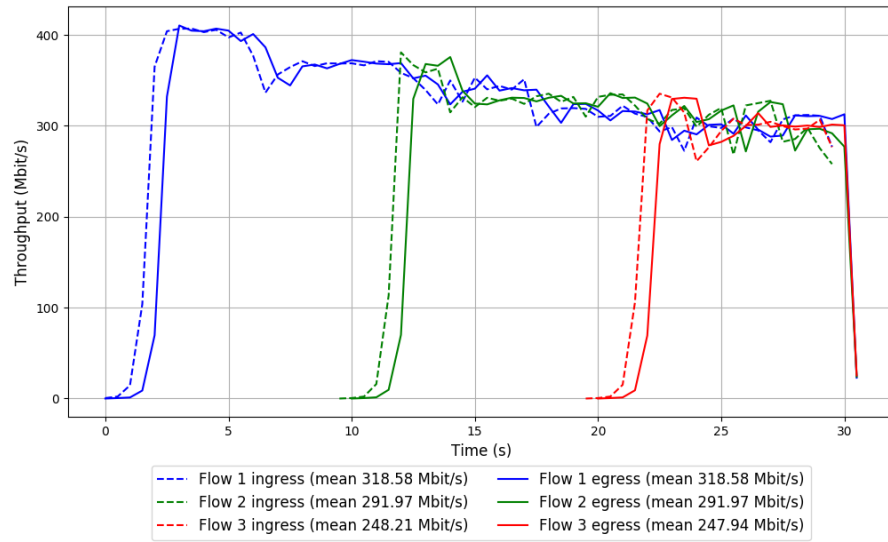
-- Flow 3:

Average throughput: 247.94 Mbit/s

95th percentile per-packet one-way delay: 130.914 ms

Loss rate: 0.10%

#### Run 4: Report of Copa — Data Link

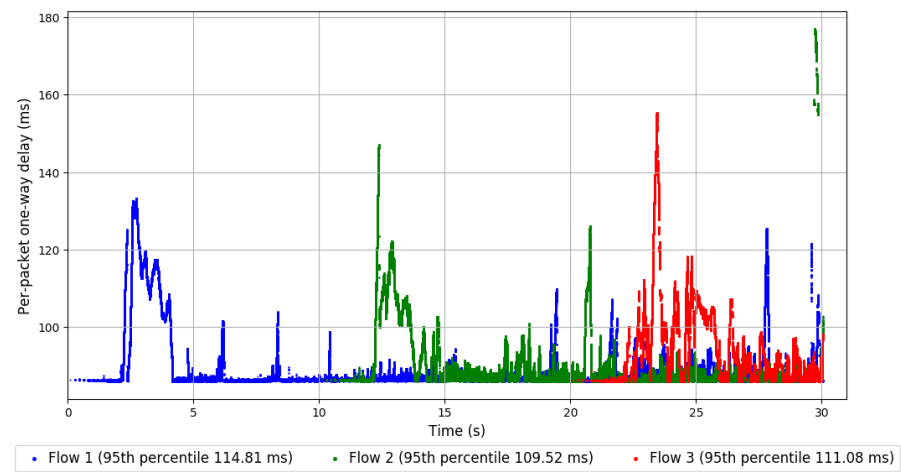
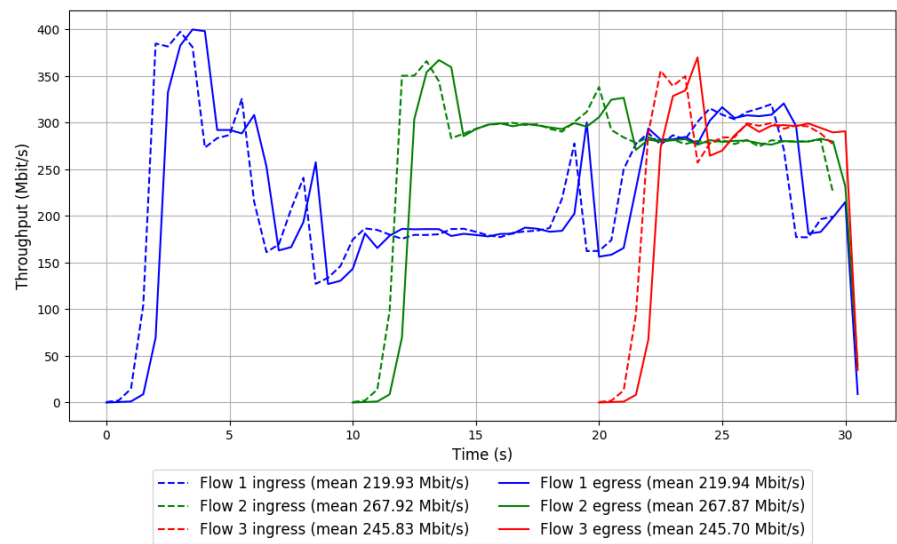


Run 5: Statistics of Copa

Start at: 2019-01-24 20:44:16  
End at: 2019-01-24 20:44:46  
Local clock offset: -0.296 ms  
Remote clock offset: -0.012 ms

```
# Below is generated by plot.py at 2019-01-24 22:09:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.00 Mbit/s
95th percentile per-packet one-way delay: 112.733 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 219.94 Mbit/s
95th percentile per-packet one-way delay: 114.805 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 267.87 Mbit/s
95th percentile per-packet one-way delay: 109.522 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 245.70 Mbit/s
95th percentile per-packet one-way delay: 111.085 ms
Loss rate: 0.06%
```

Run 5: Report of Copa — Data Link

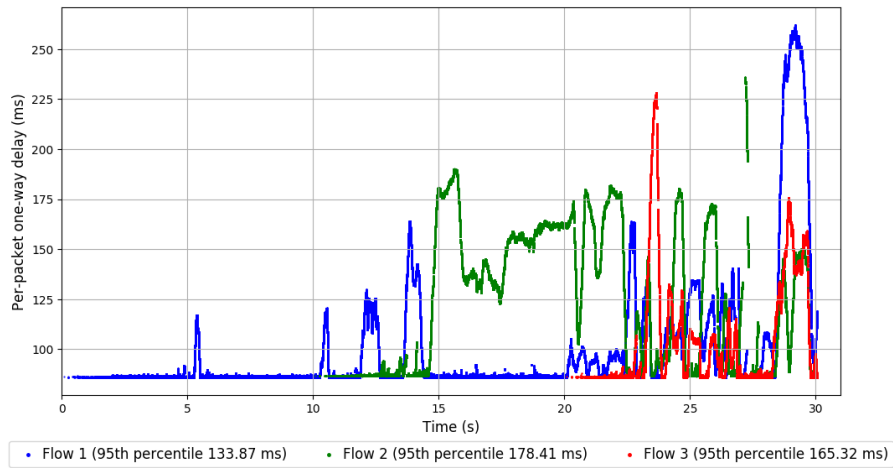
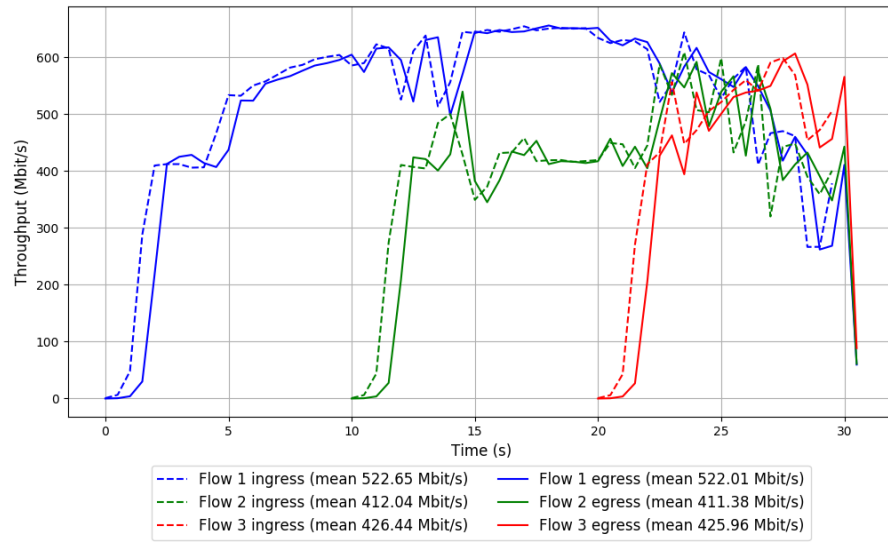


Run 1: Statistics of TCP Cubic

Start at: 2019-01-24 18:13:15  
End at: 2019-01-24 18:13:45  
Local clock offset: -0.13 ms  
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-01-24 22:09:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 937.60 Mbit/s  
95th percentile per-packet one-way delay: 170.800 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 522.01 Mbit/s  
95th percentile per-packet one-way delay: 133.873 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 411.38 Mbit/s  
95th percentile per-packet one-way delay: 178.407 ms  
Loss rate: 0.16%  
-- Flow 3:  
Average throughput: 425.96 Mbit/s  
95th percentile per-packet one-way delay: 165.321 ms  
Loss rate: 0.11%

# Run 1: Report of TCP Cubic — Data Link

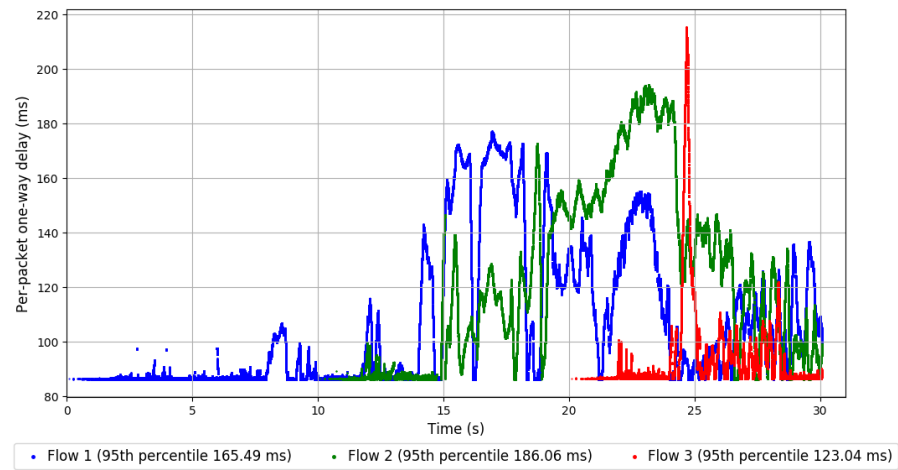
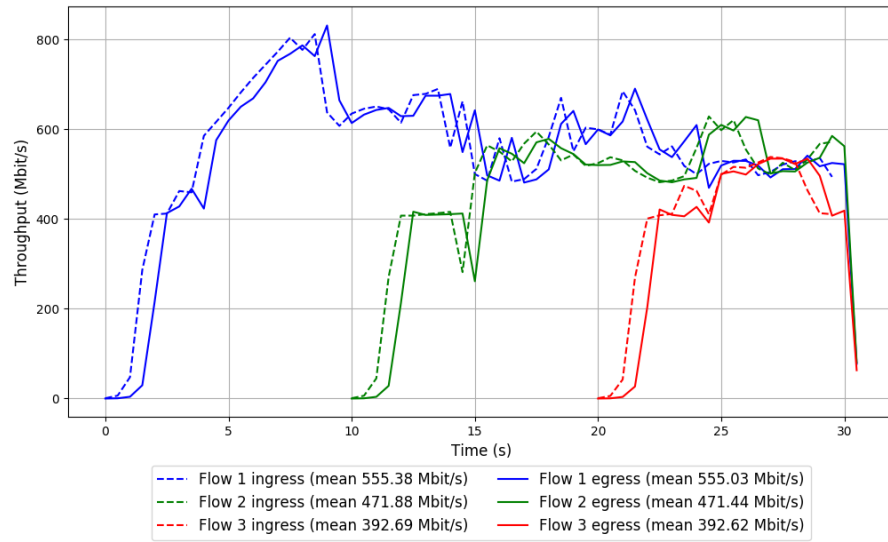


Run 2: Statistics of TCP Cubic

Start at: 2019-01-24 18:51:01  
End at: 2019-01-24 18:51:31  
Local clock offset: -0.172 ms  
Remote clock offset: 0.052 ms

# Below is generated by plot.py at 2019-01-24 22:09:02  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 999.58 Mbit/s  
95th percentile per-packet one-way delay: 171.272 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 555.03 Mbit/s  
95th percentile per-packet one-way delay: 165.485 ms  
Loss rate: 0.06%  
-- Flow 2:  
Average throughput: 471.44 Mbit/s  
95th percentile per-packet one-way delay: 186.057 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 392.62 Mbit/s  
95th percentile per-packet one-way delay: 123.042 ms  
Loss rate: 0.01%

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





Run 3: Statistics of TCP Cubic

Start at: 2019-01-24 19:29:51

End at: 2019-01-24 19:30:21

Local clock offset: -0.176 ms

Remote clock offset: 0.133 ms

# Below is generated by plot.py at 2019-01-24 22:09:02

# Datalink statistics

-- Total of 3 flows:

Average throughput: 968.64 Mbit/s

95th percentile per-packet one-way delay: 138.063 ms

Loss rate: 0.09%

-- Flow 1:

Average throughput: 519.99 Mbit/s

95th percentile per-packet one-way delay: 143.635 ms

Loss rate: 0.02%

-- Flow 2:

Average throughput: 498.70 Mbit/s

95th percentile per-packet one-way delay: 114.116 ms

Loss rate: 0.18%

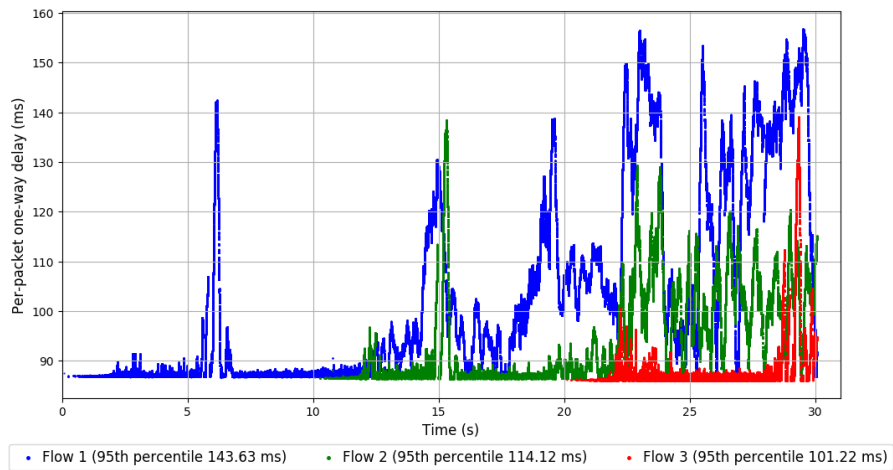
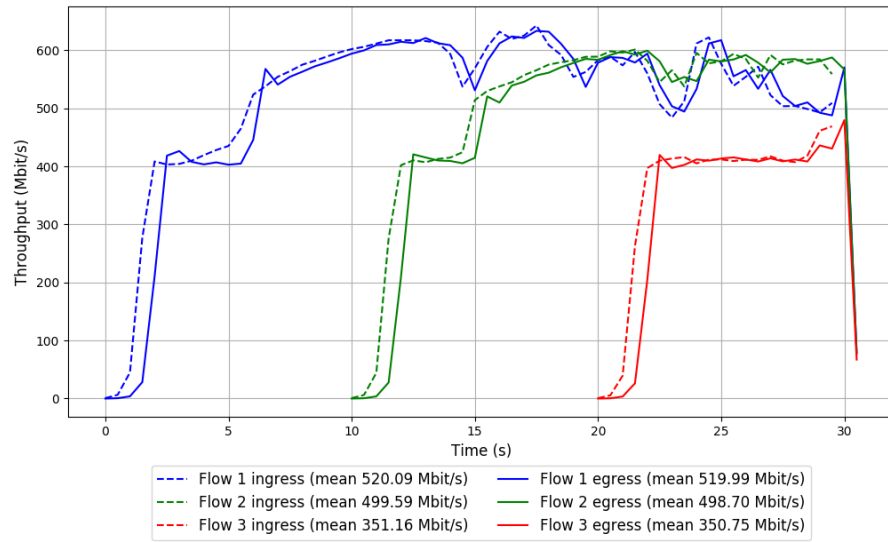
-- Flow 3:

Average throughput: 350.75 Mbit/s

95th percentile per-packet one-way delay: 101.219 ms

Loss rate: 0.11%

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

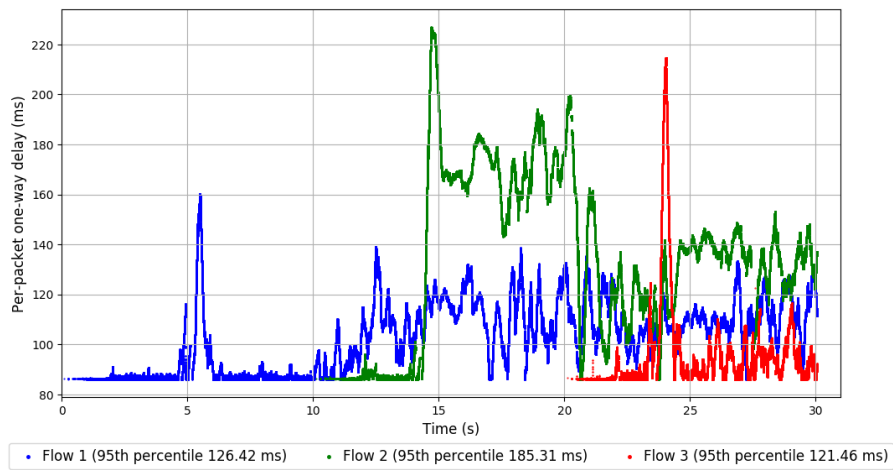
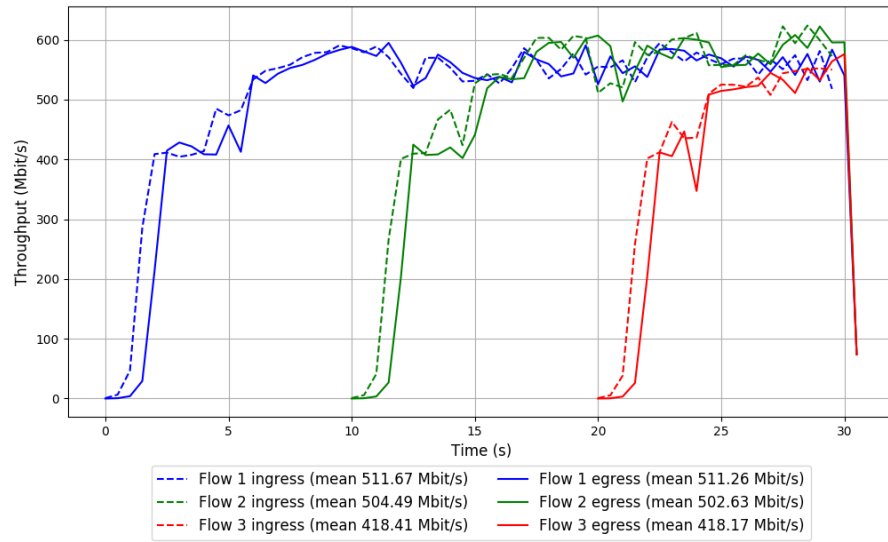


Run 4: Statistics of TCP Cubic

Start at: 2019-01-24 20:08:06  
End at: 2019-01-24 20:08:36  
Local clock offset: -0.142 ms  
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-01-24 22:10:24  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 984.57 Mbit/s  
95th percentile per-packet one-way delay: 173.446 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 511.26 Mbit/s  
95th percentile per-packet one-way delay: 126.415 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 502.63 Mbit/s  
95th percentile per-packet one-way delay: 185.308 ms  
Loss rate: 0.37%  
-- Flow 3:  
Average throughput: 418.17 Mbit/s  
95th percentile per-packet one-way delay: 121.464 ms  
Loss rate: 0.06%

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



Run 5: Statistics of TCP Cubic

Start at: 2019-01-24 20:46:20

End at: 2019-01-24 20:46:50

Local clock offset: -0.098 ms

Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-01-24 22:10:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 964.98 Mbit/s

95th percentile per-packet one-way delay: 137.774 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 511.02 Mbit/s

95th percentile per-packet one-way delay: 143.660 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 482.06 Mbit/s

95th percentile per-packet one-way delay: 135.445 ms

Loss rate: 0.19%

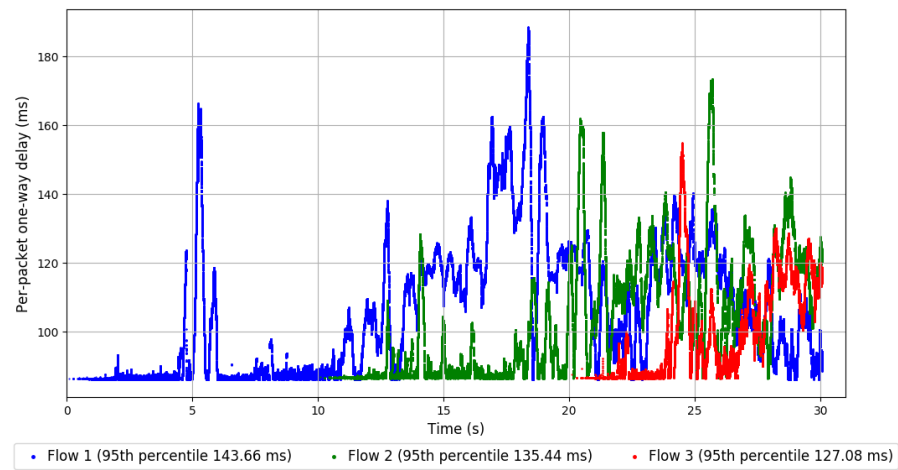
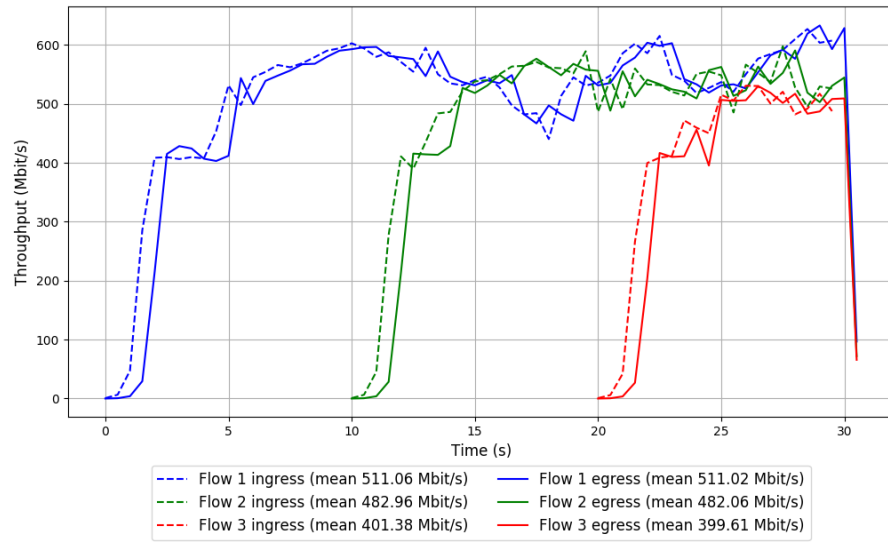
-- Flow 3:

Average throughput: 399.61 Mbit/s

95th percentile per-packet one-way delay: 127.083 ms

Loss rate: 0.45%

# Run 5: Report of TCP Cubic — Data Link



Run 1: Statistics of FillP

Start at: 2019-01-24 18:06:10

End at: 2019-01-24 18:06:40

Local clock offset: -0.228 ms

Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2019-01-24 22:10:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 510.26 Mbit/s

95th percentile per-packet one-way delay: 109.640 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 183.94 Mbit/s

95th percentile per-packet one-way delay: 125.827 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 351.96 Mbit/s

95th percentile per-packet one-way delay: 88.672 ms

Loss rate: 0.00%

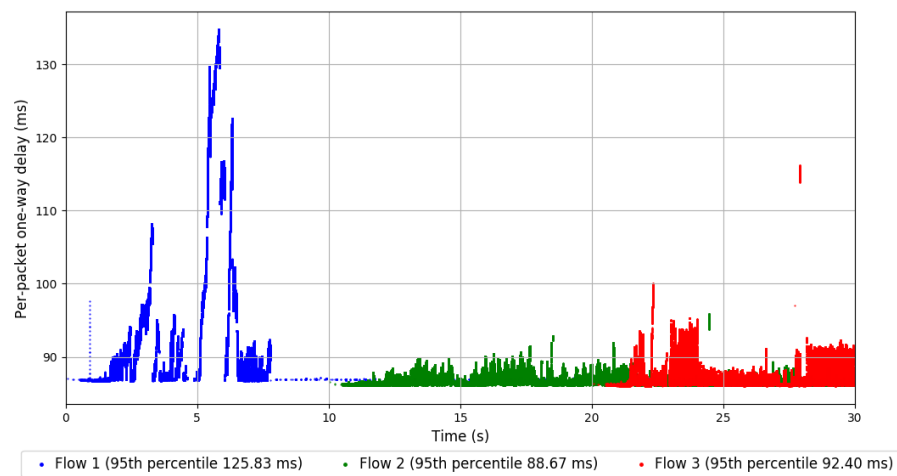
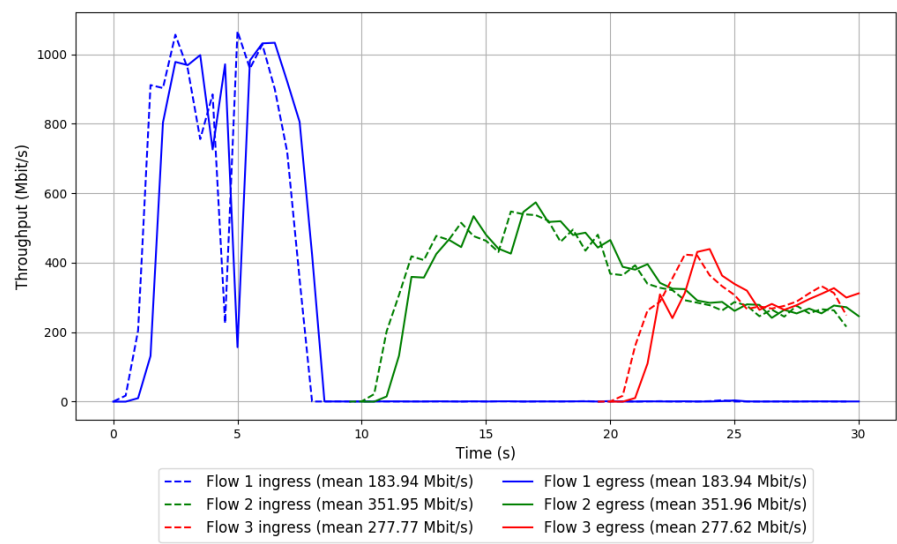
-- Flow 3:

Average throughput: 277.62 Mbit/s

95th percentile per-packet one-way delay: 92.400 ms

Loss rate: 0.05%

Run 1: Report of FillP — Data Link



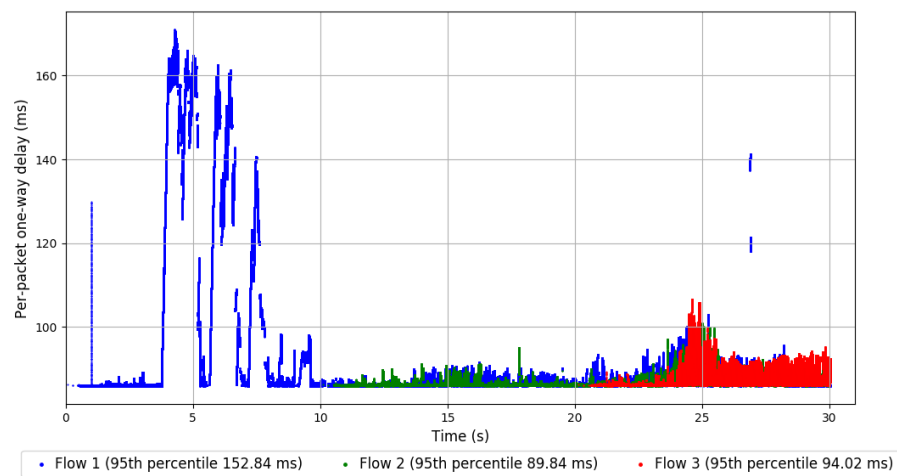
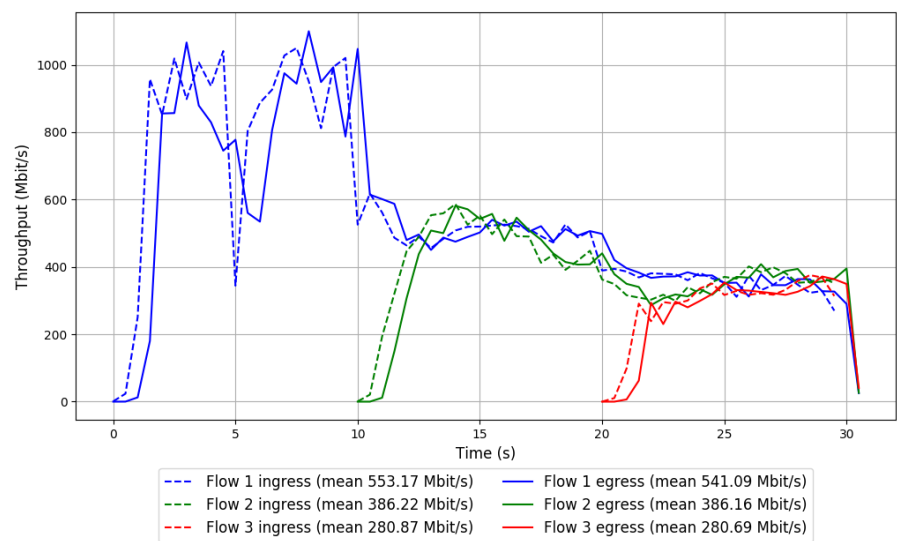


Run 2: Statistics of FillP

Start at: 2019-01-24 18:43:45  
End at: 2019-01-24 18:44:15  
Local clock offset: -0.182 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-01-24 22:26:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 890.57 Mbit/s  
95th percentile per-packet one-way delay: 140.131 ms  
Loss rate: 1.34%  
-- Flow 1:  
Average throughput: 541.09 Mbit/s  
95th percentile per-packet one-way delay: 152.845 ms  
Loss rate: 2.19%  
-- Flow 2:  
Average throughput: 386.16 Mbit/s  
95th percentile per-packet one-way delay: 89.844 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 280.69 Mbit/s  
95th percentile per-packet one-way delay: 94.022 ms  
Loss rate: 0.00%

Run 2: Report of FillP — Data Link

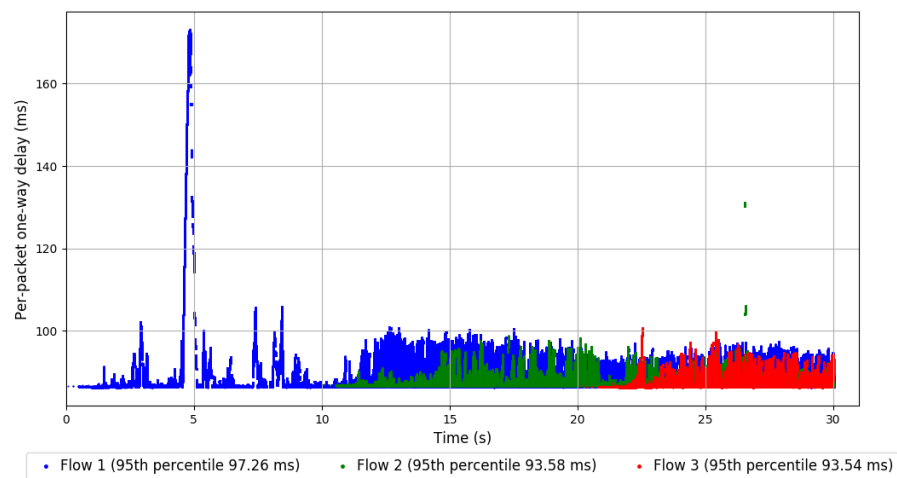
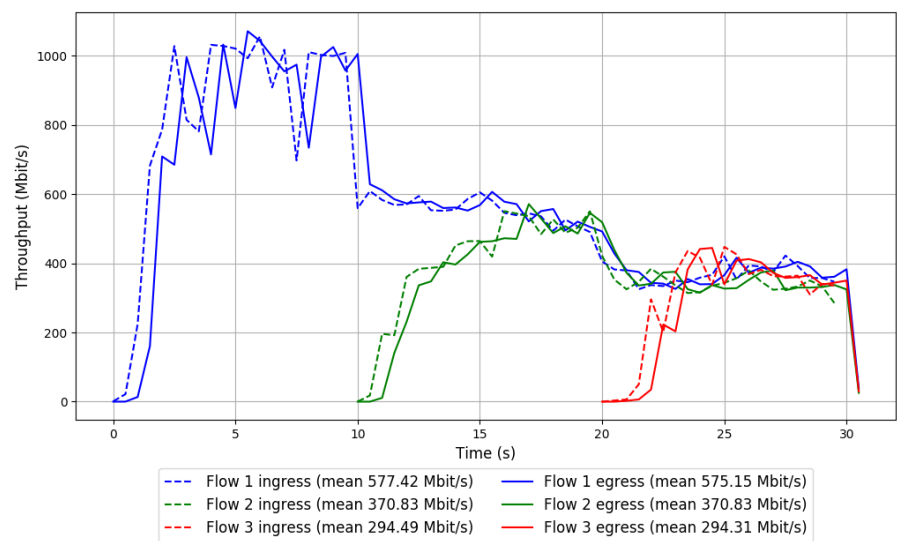


Run 3: Statistics of FillP

Start at: 2019-01-24 19:22:27  
End at: 2019-01-24 19:22:57  
Local clock offset: -0.554 ms  
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-01-24 22:27:29  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 918.86 Mbit/s  
95th percentile per-packet one-way delay: 96.086 ms  
Loss rate: 0.24%  
-- Flow 1:  
Average throughput: 575.15 Mbit/s  
95th percentile per-packet one-way delay: 97.261 ms  
Loss rate: 0.39%  
-- Flow 2:  
Average throughput: 370.83 Mbit/s  
95th percentile per-packet one-way delay: 93.585 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 294.31 Mbit/s  
95th percentile per-packet one-way delay: 93.541 ms  
Loss rate: 0.00%

Run 3: Report of FillP — Data Link

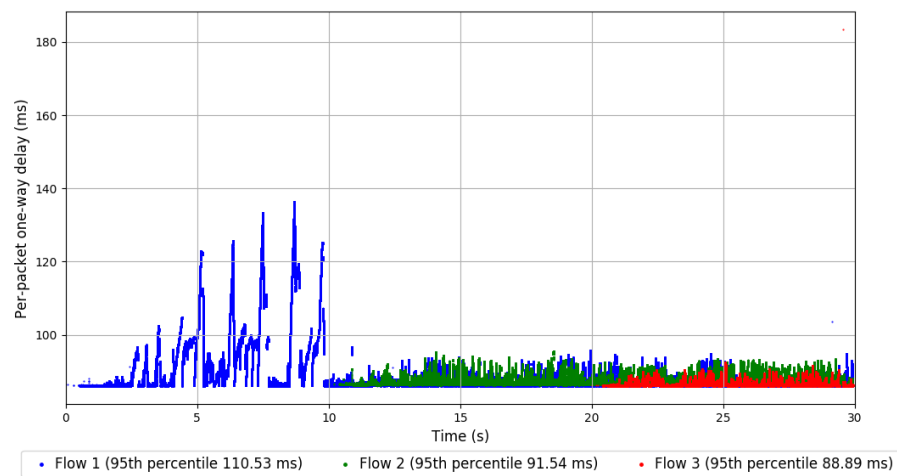
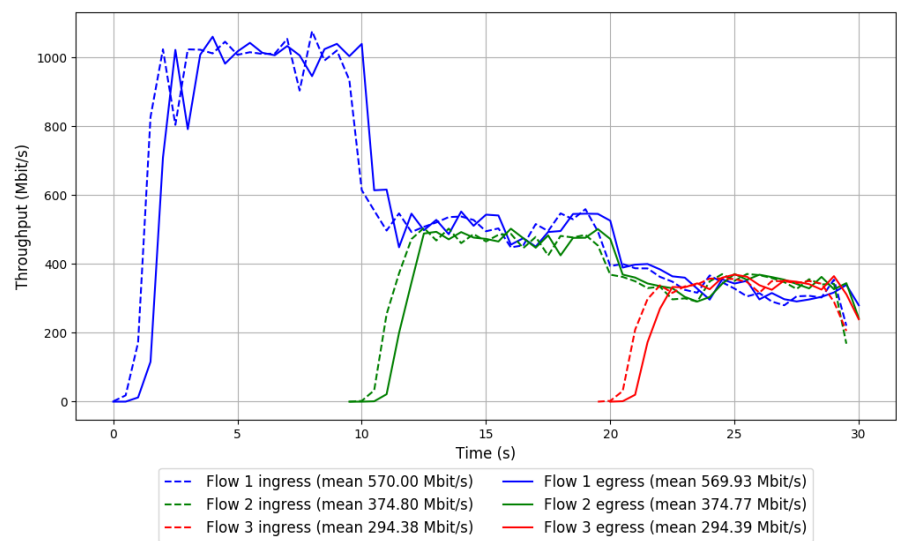


Run 4: Statistics of FillP

Start at: 2019-01-24 20:00:36  
End at: 2019-01-24 20:01:06  
Local clock offset: -0.155 ms  
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-01-24 22:28:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 917.73 Mbit/s  
95th percentile per-packet one-way delay: 101.223 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 569.93 Mbit/s  
95th percentile per-packet one-way delay: 110.529 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 374.77 Mbit/s  
95th percentile per-packet one-way delay: 91.544 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 294.39 Mbit/s  
95th percentile per-packet one-way delay: 88.892 ms  
Loss rate: 0.00%

Run 4: Report of FillP — Data Link



Run 5: Statistics of FillP

Start at: 2019-01-24 20:39:12

End at: 2019-01-24 20:39:42

Local clock offset: -0.131 ms

Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-01-24 22:29:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 894.26 Mbit/s

95th percentile per-packet one-way delay: 118.485 ms

Loss rate: 0.66%

-- Flow 1:

Average throughput: 558.08 Mbit/s

95th percentile per-packet one-way delay: 133.323 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 378.23 Mbit/s

95th percentile per-packet one-way delay: 90.890 ms

Loss rate: 0.00%

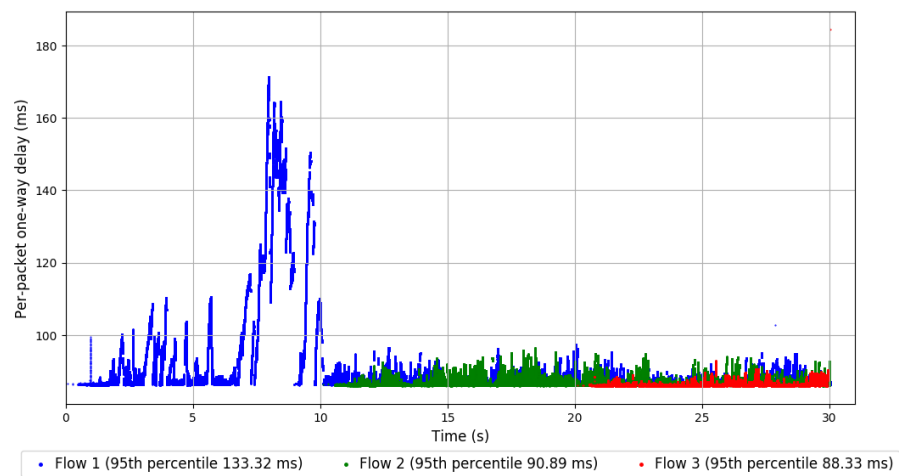
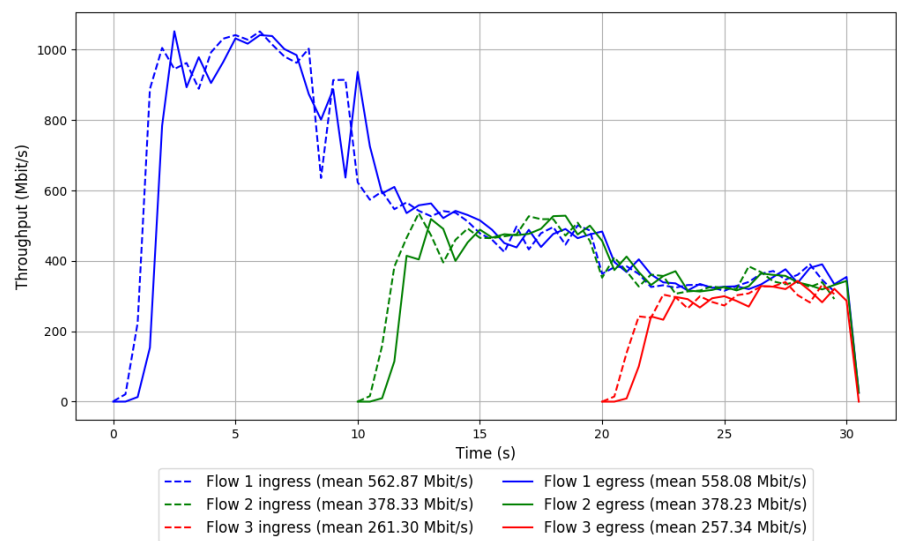
-- Flow 3:

Average throughput: 257.34 Mbit/s

95th percentile per-packet one-way delay: 88.332 ms

Loss rate: 1.32%

Run 5: Report of FillP — Data Link



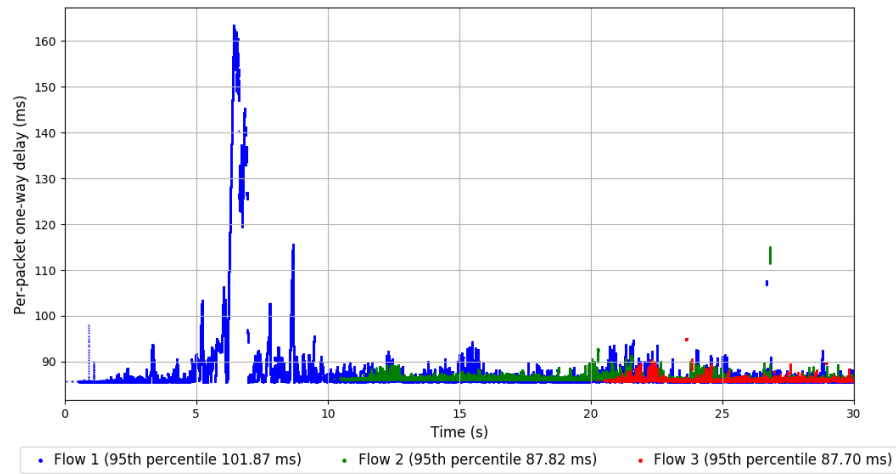
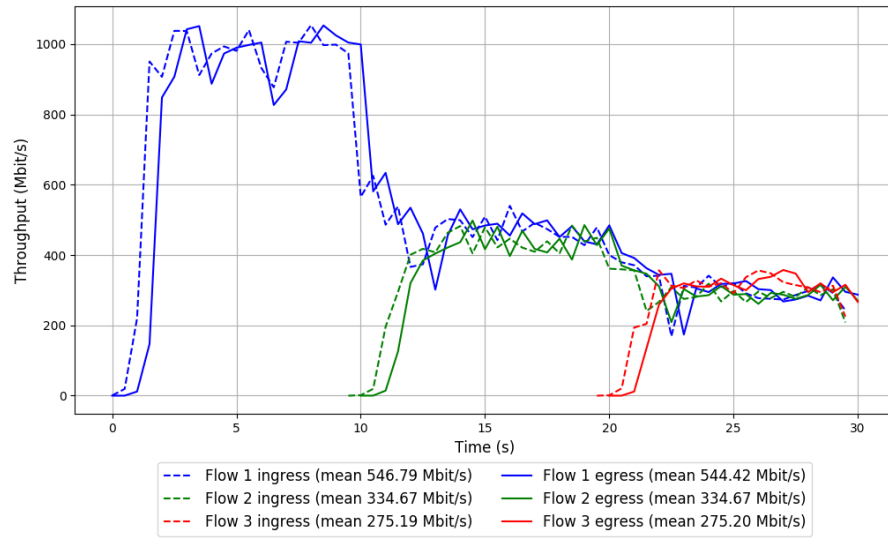


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-24 18:30:09  
End at: 2019-01-24 18:30:39  
Local clock offset: 0.29 ms  
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-01-24 22:29:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 858.79 Mbit/s  
95th percentile per-packet one-way delay: 93.233 ms  
Loss rate: 0.27%  
-- Flow 1:  
Average throughput: 544.42 Mbit/s  
95th percentile per-packet one-way delay: 101.873 ms  
Loss rate: 0.43%  
-- Flow 2:  
Average throughput: 334.67 Mbit/s  
95th percentile per-packet one-way delay: 87.816 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 275.20 Mbit/s  
95th percentile per-packet one-way delay: 87.702 ms  
Loss rate: 0.00%

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

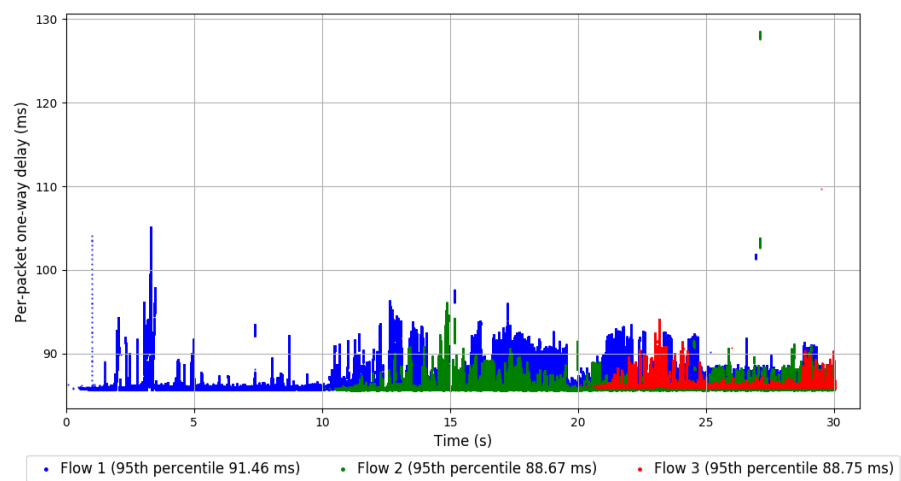
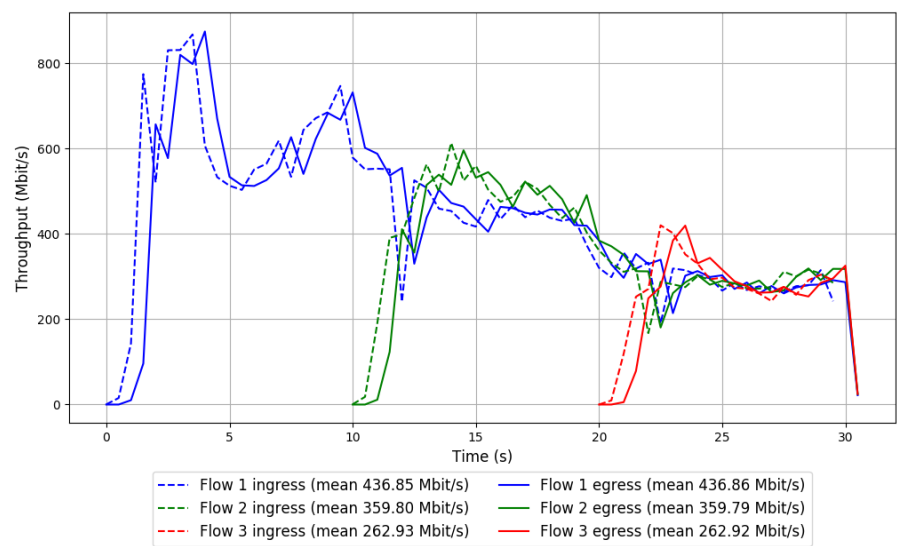


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-24 19:08:37  
End at: 2019-01-24 19:09:07  
Local clock offset: 0.091 ms  
Remote clock offset: -0.046 ms

# Below is generated by plot.py at 2019-01-24 22:29:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 763.24 Mbit/s  
95th percentile per-packet one-way delay: 90.731 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 436.86 Mbit/s  
95th percentile per-packet one-way delay: 91.460 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 359.79 Mbit/s  
95th percentile per-packet one-way delay: 88.674 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 262.92 Mbit/s  
95th percentile per-packet one-way delay: 88.751 ms  
Loss rate: 0.00%

Run 2: Report of FillP-Sheep — Data Link

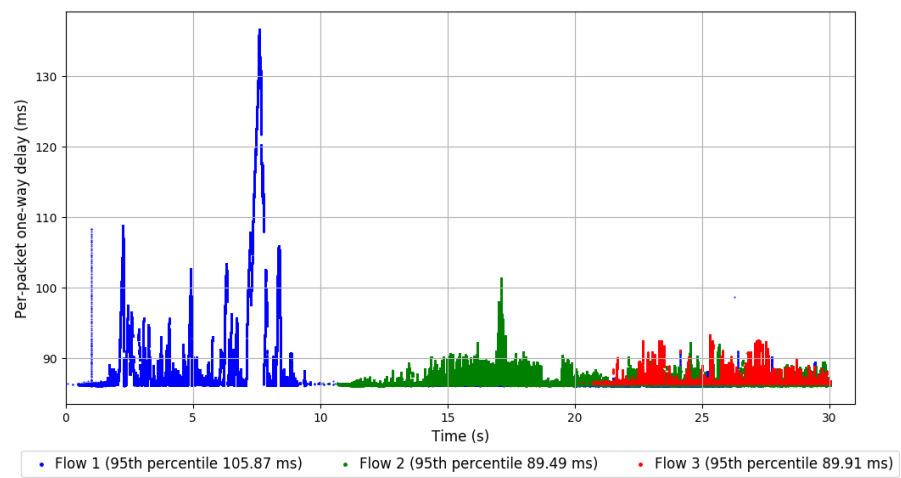
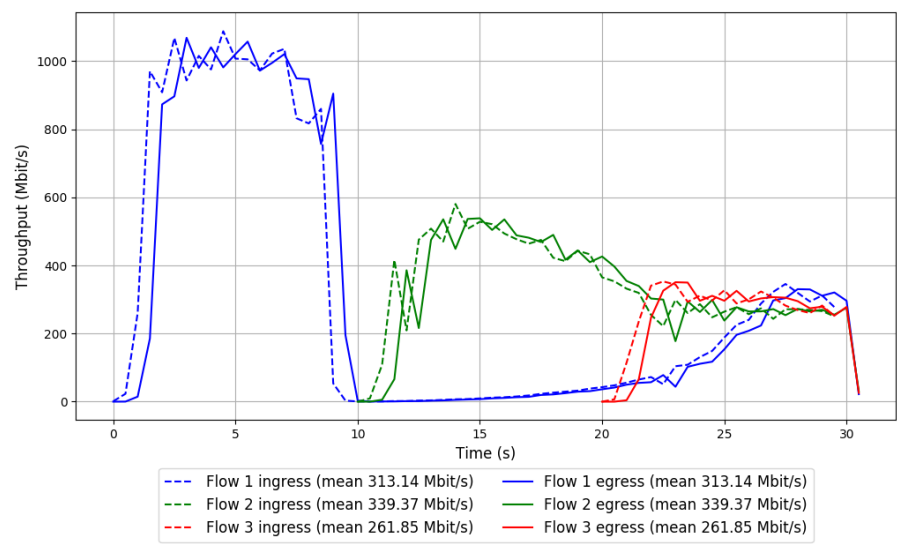


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-24 19:47:24  
End at: 2019-01-24 19:47:54  
Local clock offset: -0.444 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-24 22:29:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 625.51 Mbit/s  
95th percentile per-packet one-way delay: 98.123 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 313.14 Mbit/s  
95th percentile per-packet one-way delay: 105.870 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 339.37 Mbit/s  
95th percentile per-packet one-way delay: 89.487 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 261.85 Mbit/s  
95th percentile per-packet one-way delay: 89.905 ms  
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link

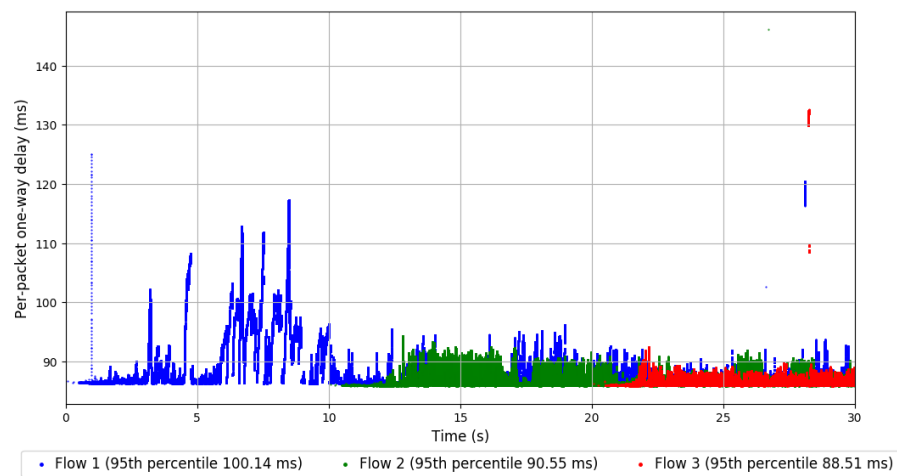
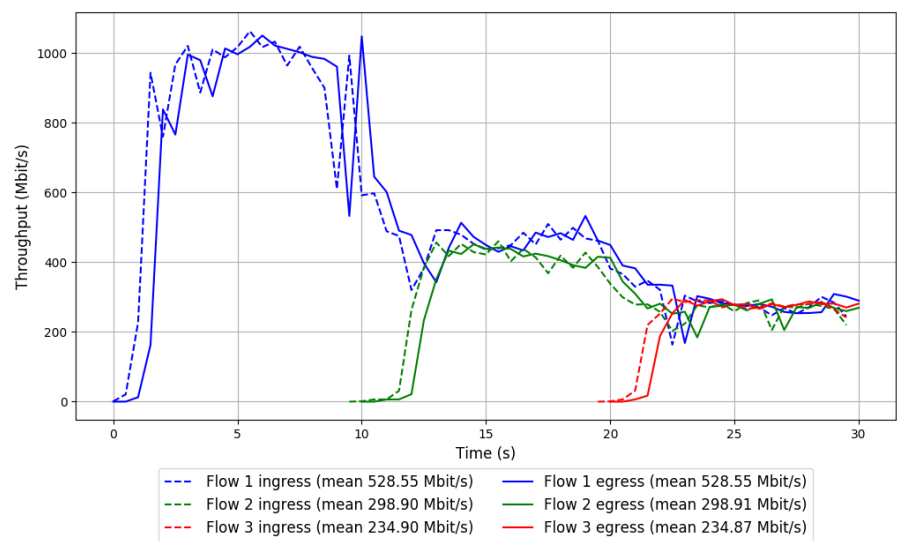


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-24 20:25:48  
End at: 2019-01-24 20:26:18  
Local clock offset: -0.125 ms  
Remote clock offset: -0.009 ms

```
# Below is generated by plot.py at 2019-01-24 22:29:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 805.37 Mbit/s
95th percentile per-packet one-way delay: 98.223 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 528.55 Mbit/s
95th percentile per-packet one-way delay: 100.143 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 298.91 Mbit/s
95th percentile per-packet one-way delay: 90.546 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 234.87 Mbit/s
95th percentile per-packet one-way delay: 88.513 ms
Loss rate: 0.00%
```

Run 4: Report of FillP-Sheep — Data Link



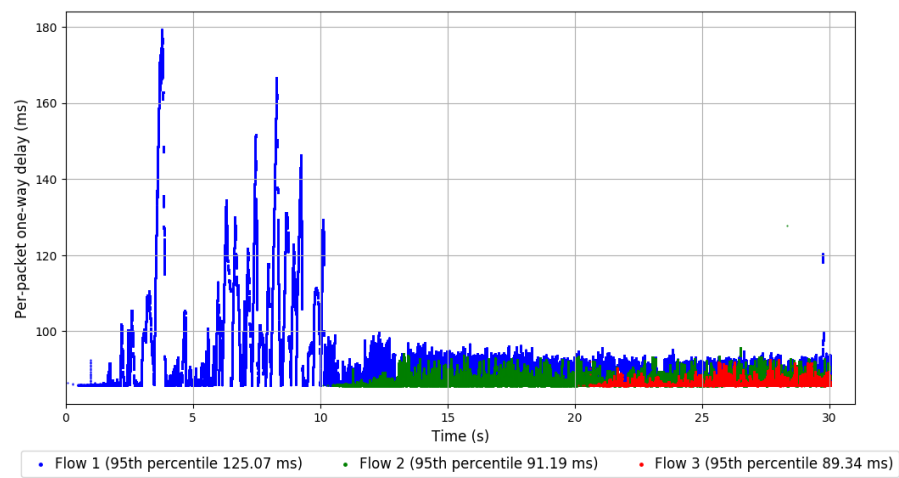
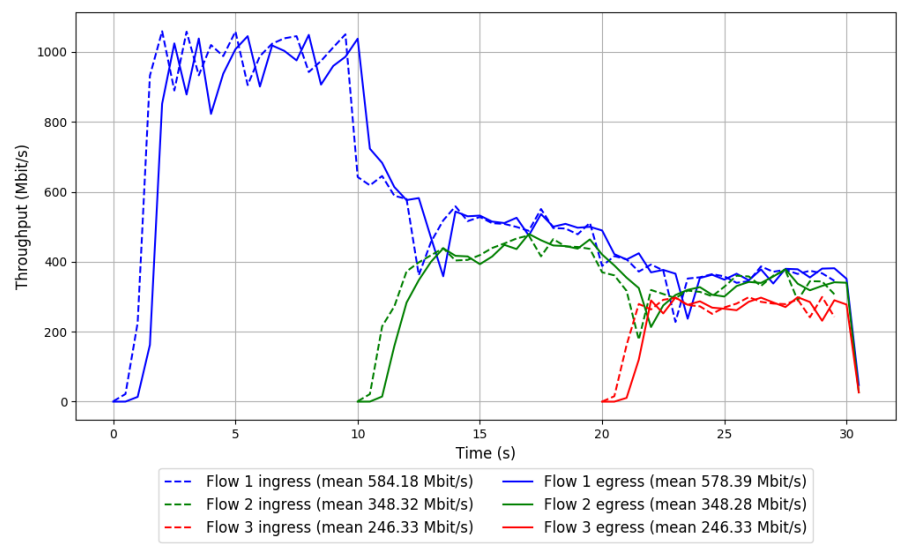


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-24 21:03:48  
End at: 2019-01-24 21:04:18  
Local clock offset: 0.047 ms  
Remote clock offset: -0.092 ms

```
# Below is generated by plot.py at 2019-01-24 22:46:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 891.43 Mbit/s
95th percentile per-packet one-way delay: 116.107 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 578.39 Mbit/s
95th percentile per-packet one-way delay: 125.073 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 348.28 Mbit/s
95th percentile per-packet one-way delay: 91.186 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.33 Mbit/s
95th percentile per-packet one-way delay: 89.339 ms
Loss rate: 0.00%
```

Run 5: Report of FillP-Sheep — Data Link

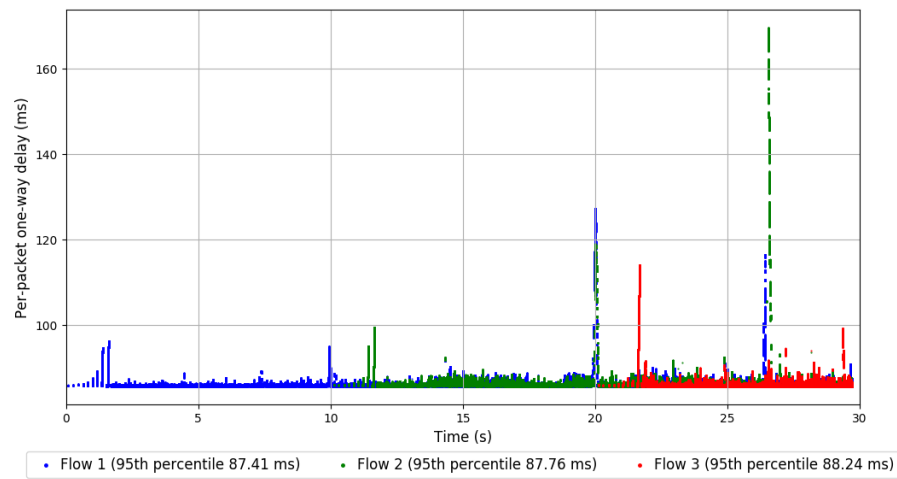
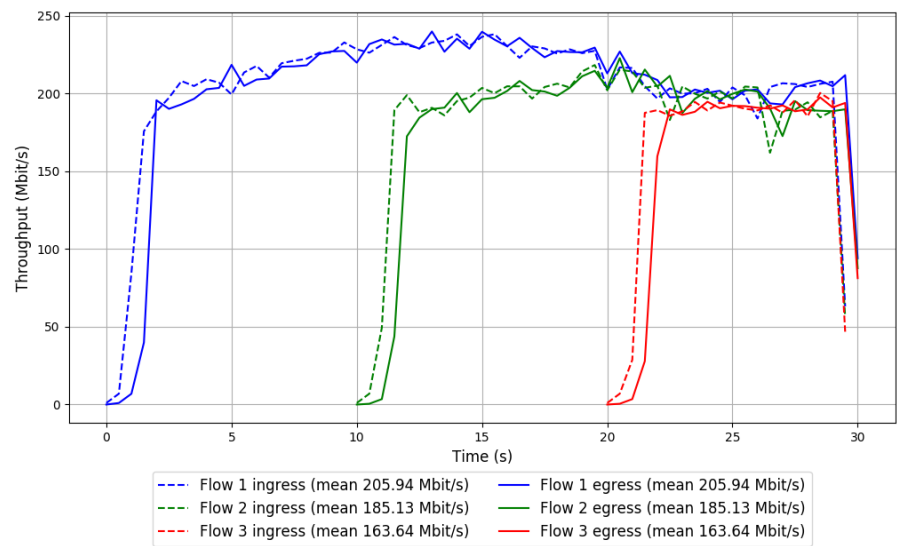


Run 1: Statistics of Indigo

Start at: 2019-01-24 18:38:05  
End at: 2019-01-24 18:38:35  
Local clock offset: -0.02 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-01-24 22:46:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 381.30 Mbit/s  
95th percentile per-packet one-way delay: 87.608 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 205.94 Mbit/s  
95th percentile per-packet one-way delay: 87.407 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 185.13 Mbit/s  
95th percentile per-packet one-way delay: 87.756 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 163.64 Mbit/s  
95th percentile per-packet one-way delay: 88.244 ms  
Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

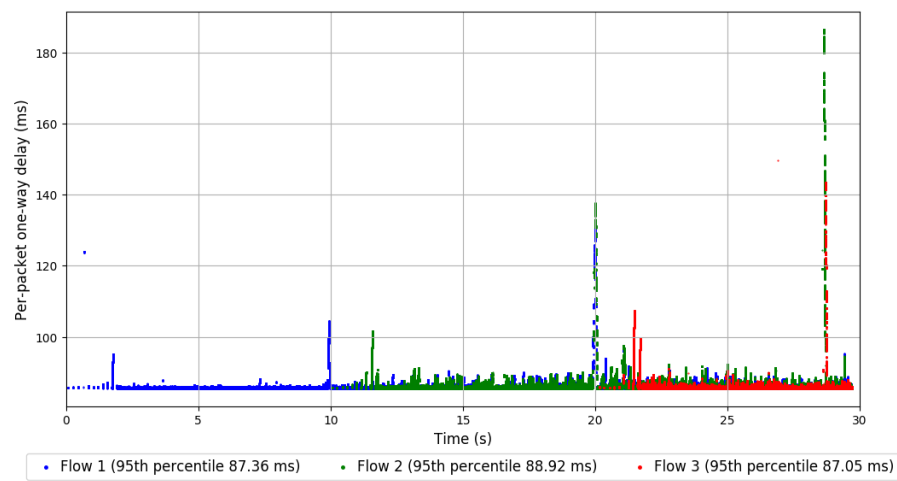
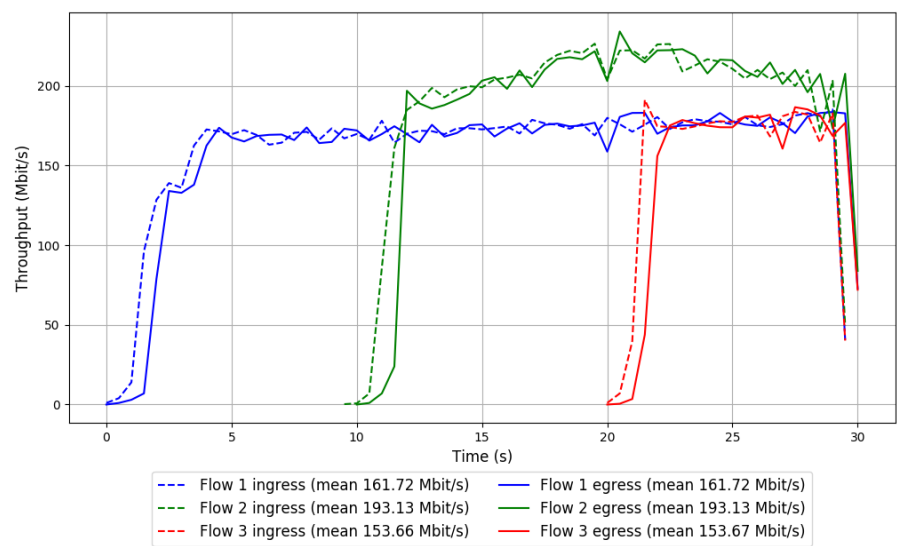


Run 2: Statistics of Indigo

Start at: 2019-01-24 19:16:47  
End at: 2019-01-24 19:17:17  
Local clock offset: 0.223 ms  
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-01-24 22:46:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 339.26 Mbit/s  
95th percentile per-packet one-way delay: 87.994 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 161.72 Mbit/s  
95th percentile per-packet one-way delay: 87.356 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 193.13 Mbit/s  
95th percentile per-packet one-way delay: 88.925 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 153.67 Mbit/s  
95th percentile per-packet one-way delay: 87.048 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link

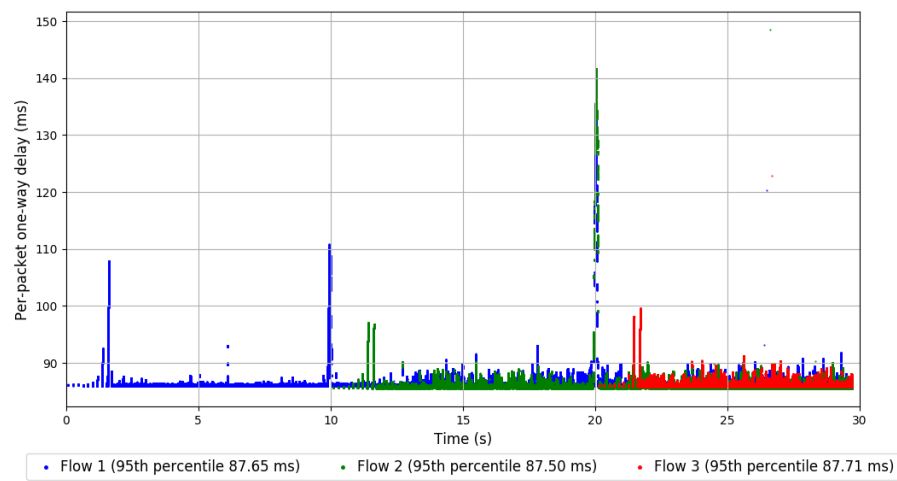
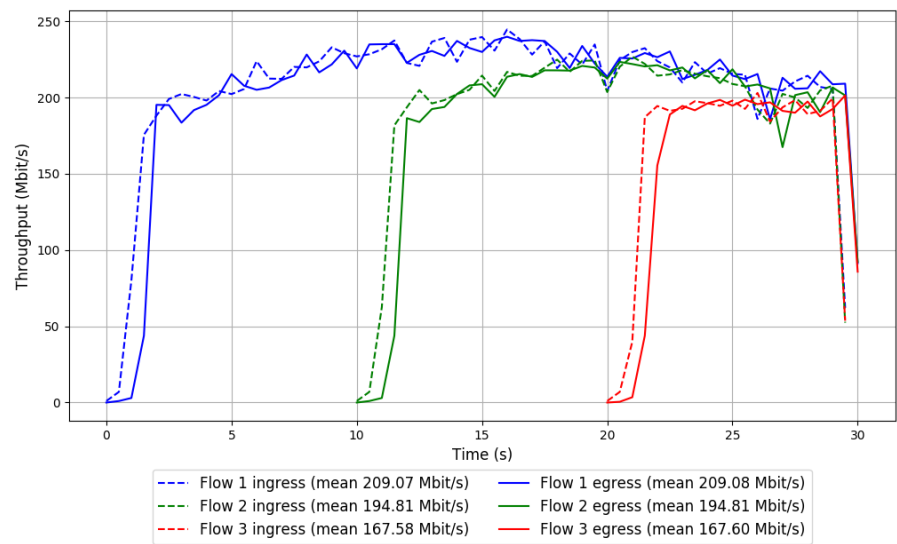


Run 3: Statistics of Indigo

Start at: 2019-01-24 19:54:46  
End at: 2019-01-24 19:55:16  
Local clock offset: 0.259 ms  
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-01-24 22:46:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 392.01 Mbit/s  
95th percentile per-packet one-way delay: 87.612 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 209.08 Mbit/s  
95th percentile per-packet one-way delay: 87.647 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 194.81 Mbit/s  
95th percentile per-packet one-way delay: 87.502 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 167.60 Mbit/s  
95th percentile per-packet one-way delay: 87.714 ms  
Loss rate: 0.00%

Run 3: Report of Indigo — Data Link





Run 4: Statistics of Indigo

Start at: 2019-01-24 20:33:30

End at: 2019-01-24 20:34:00

Local clock offset: -0.239 ms

Remote clock offset: 0.139 ms

# Below is generated by plot.py at 2019-01-24 22:46:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 391.10 Mbit/s

95th percentile per-packet one-way delay: 88.436 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 209.70 Mbit/s

95th percentile per-packet one-way delay: 88.504 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 194.41 Mbit/s

95th percentile per-packet one-way delay: 88.336 ms

Loss rate: 0.00%

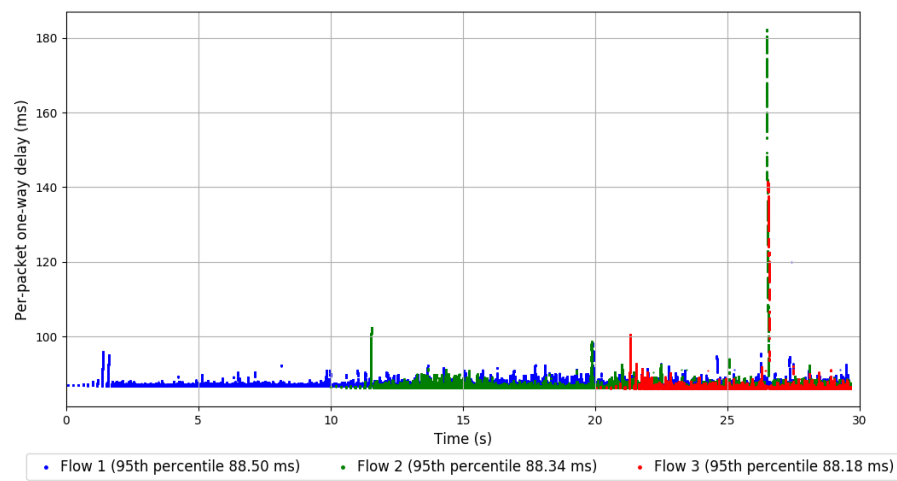
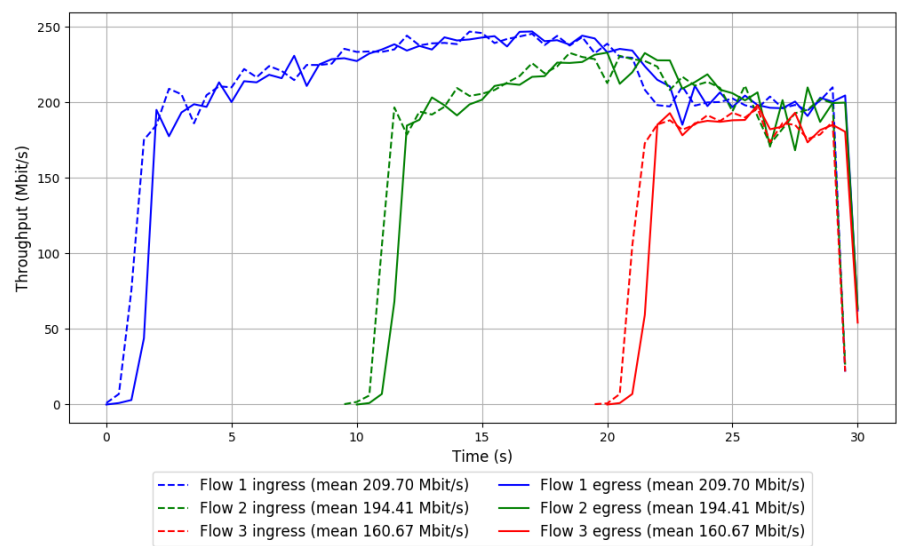
-- Flow 3:

Average throughput: 160.67 Mbit/s

95th percentile per-packet one-way delay: 88.178 ms

Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

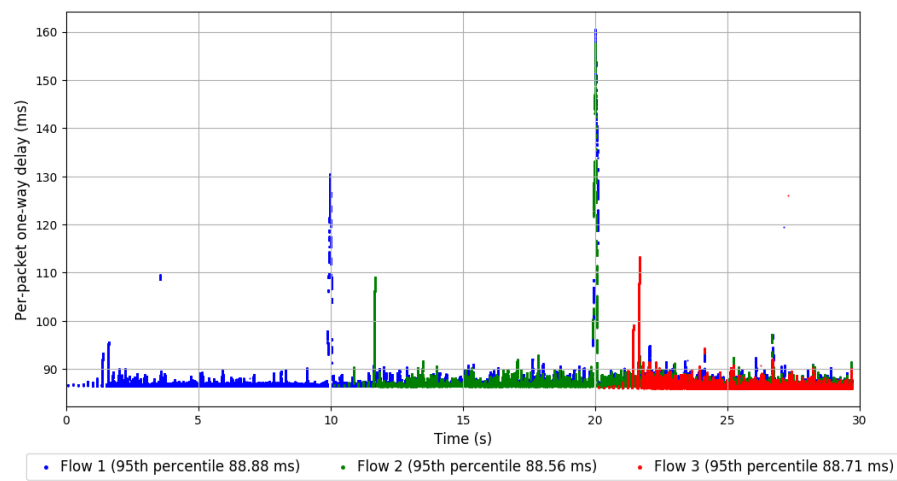
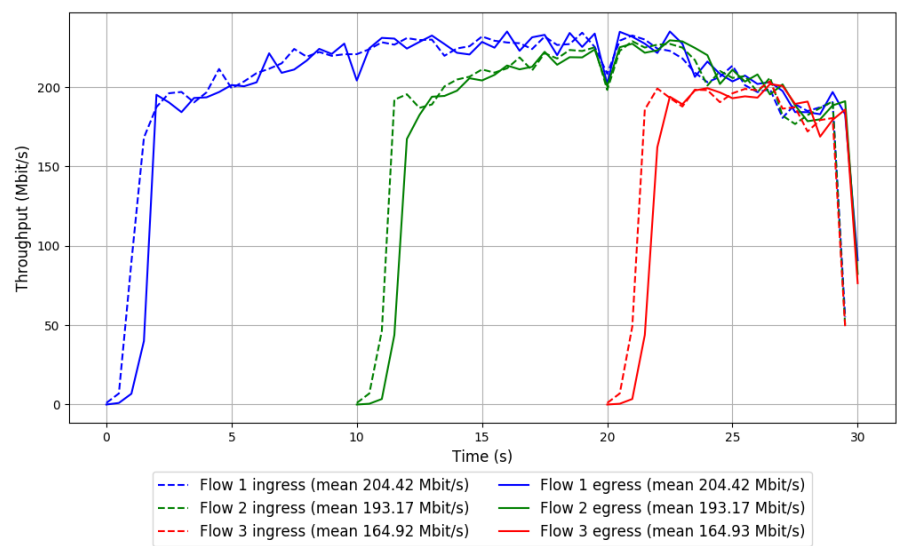


Run 5: Statistics of Indigo

Start at: 2019-01-24 21:11:53  
End at: 2019-01-24 21:12:23  
Local clock offset: -0.272 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-24 22:46:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 385.41 Mbit/s  
95th percentile per-packet one-way delay: 88.755 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 204.42 Mbit/s  
95th percentile per-packet one-way delay: 88.875 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 193.17 Mbit/s  
95th percentile per-packet one-way delay: 88.562 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 164.93 Mbit/s  
95th percentile per-packet one-way delay: 88.710 ms  
Loss rate: 0.00%

Run 5: Report of Indigo — Data Link

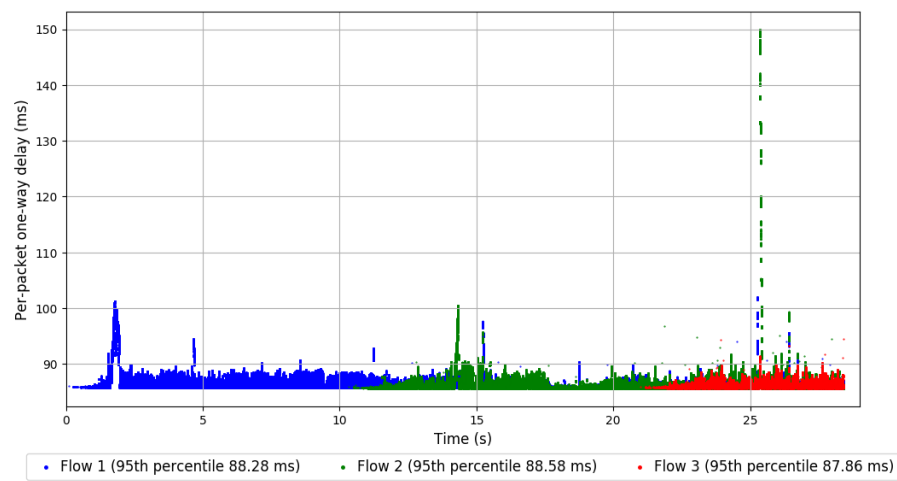
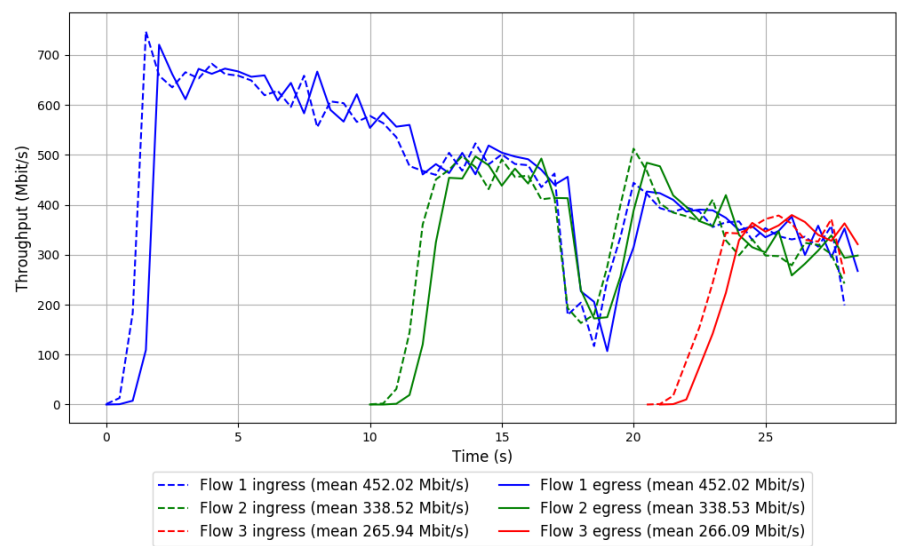


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-24 18:36:12  
End at: 2019-01-24 18:36:42  
Local clock offset: 0.033 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-01-24 22:46:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 737.67 Mbit/s  
95th percentile per-packet one-way delay: 88.304 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 452.02 Mbit/s  
95th percentile per-packet one-way delay: 88.283 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 338.53 Mbit/s  
95th percentile per-packet one-way delay: 88.578 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 266.09 Mbit/s  
95th percentile per-packet one-way delay: 87.862 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC3 — Data Link



Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-24 19:14:51

End at: 2019-01-24 19:15:21

Local clock offset: 0.052 ms

Remote clock offset: 0.051 ms

# Below is generated by plot.py at 2019-01-24 22:46:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 774.18 Mbit/s

95th percentile per-packet one-way delay: 88.482 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 448.39 Mbit/s

95th percentile per-packet one-way delay: 88.913 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 380.37 Mbit/s

95th percentile per-packet one-way delay: 87.443 ms

Loss rate: 0.00%

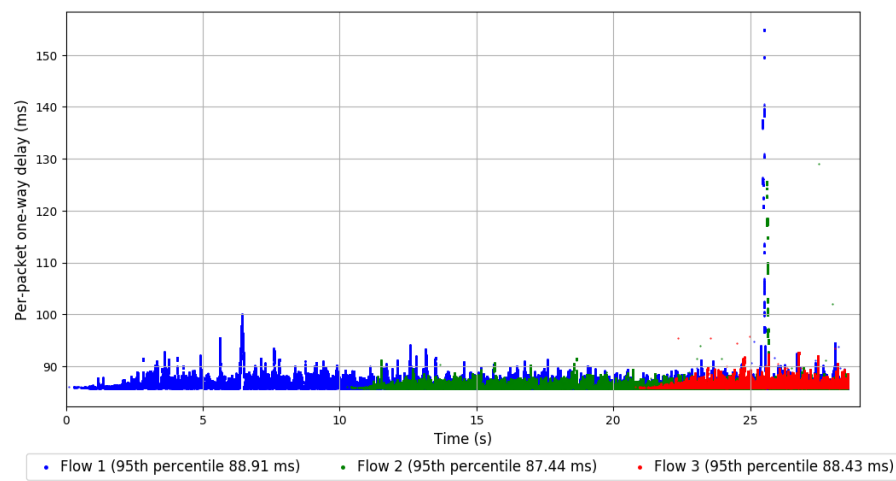
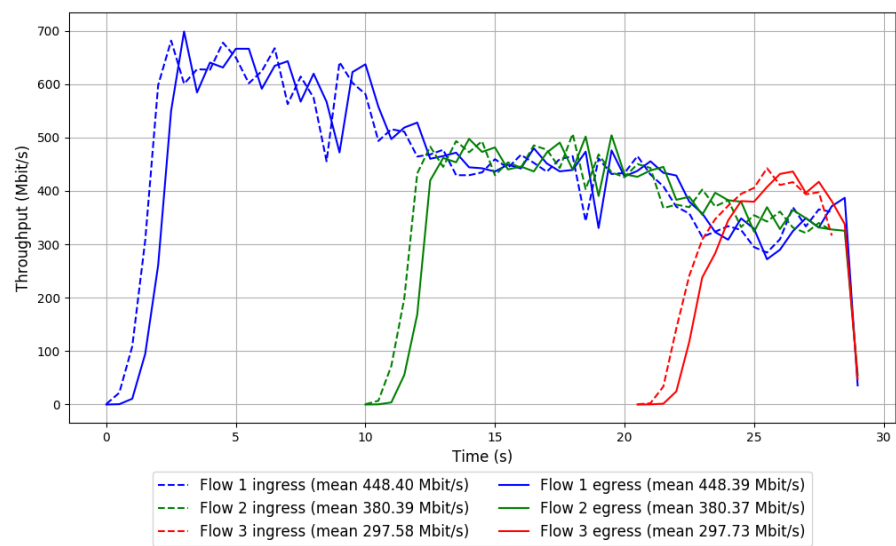
-- Flow 3:

Average throughput: 297.73 Mbit/s

95th percentile per-packet one-way delay: 88.433 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link



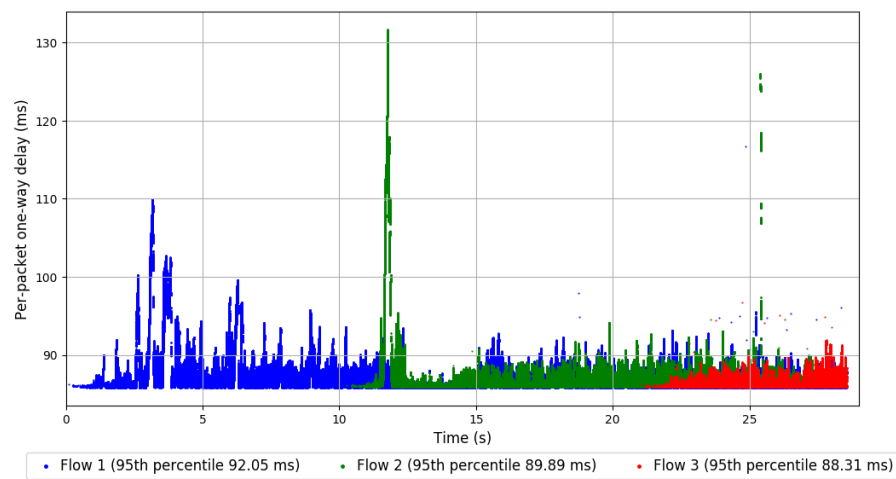
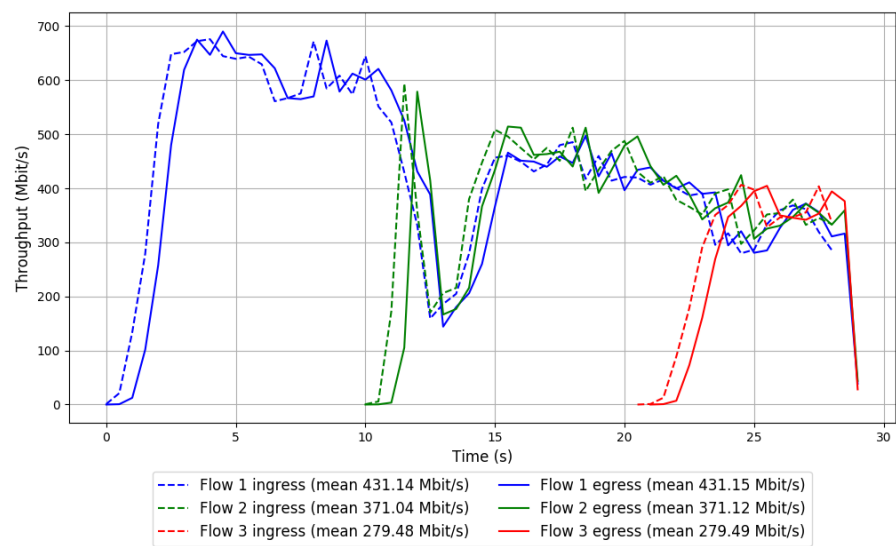


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-24 19:52:53  
End at: 2019-01-24 19:53:23  
Local clock offset: -0.164 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-24 22:53:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 743.37 Mbit/s  
95th percentile per-packet one-way delay: 91.071 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 431.15 Mbit/s  
95th percentile per-packet one-way delay: 92.049 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 371.12 Mbit/s  
95th percentile per-packet one-way delay: 89.888 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 279.49 Mbit/s  
95th percentile per-packet one-way delay: 88.313 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-24 20:31:35

End at: 2019-01-24 20:32:05

Local clock offset: -0.105 ms

Remote clock offset: 0.017 ms

# Below is generated by plot.py at 2019-01-24 22:55:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 776.47 Mbit/s

95th percentile per-packet one-way delay: 95.588 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 469.13 Mbit/s

95th percentile per-packet one-way delay: 98.839 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 380.99 Mbit/s

95th percentile per-packet one-way delay: 93.436 ms

Loss rate: 0.00%

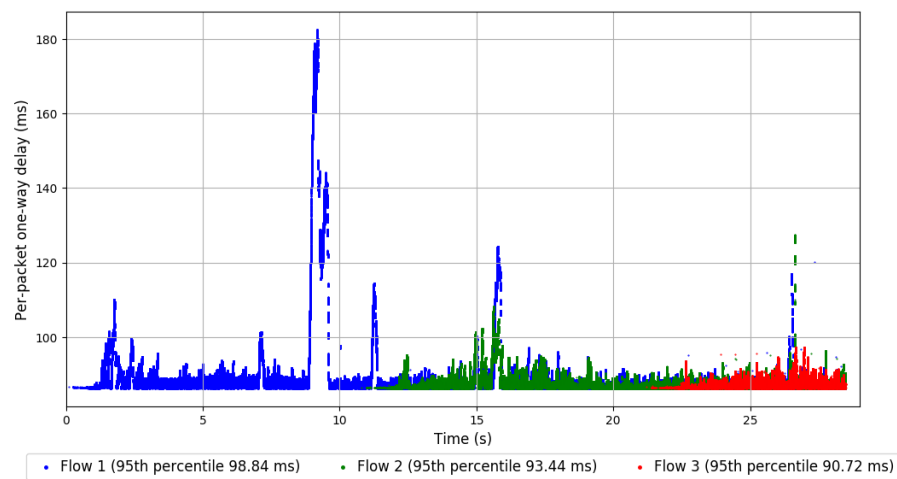
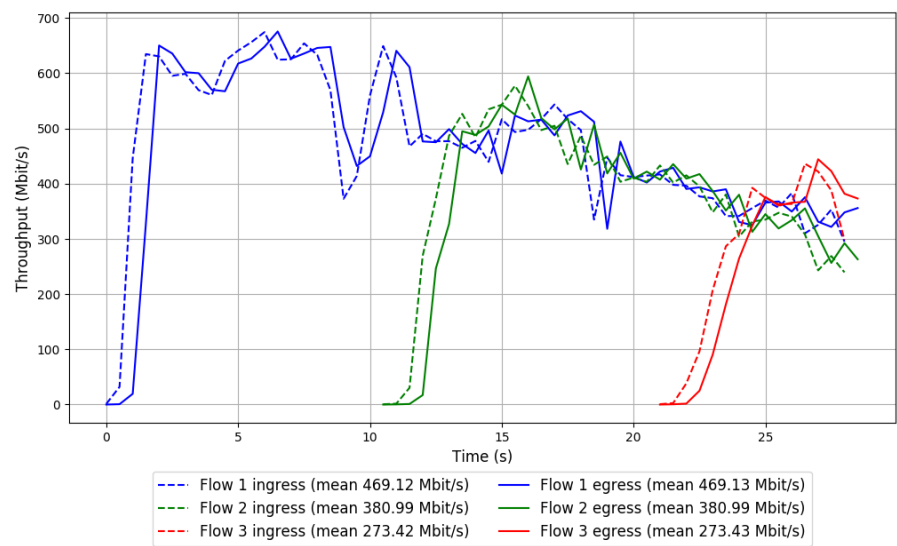
-- Flow 3:

Average throughput: 273.43 Mbit/s

95th percentile per-packet one-way delay: 90.721 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link

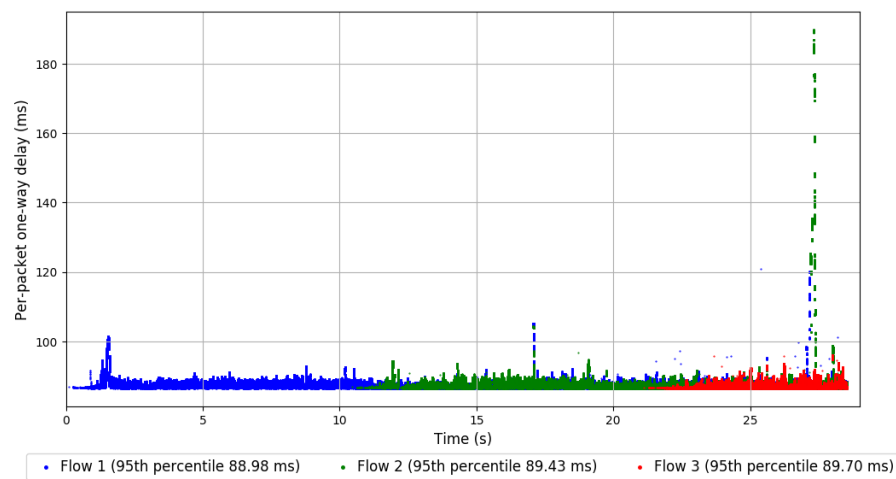
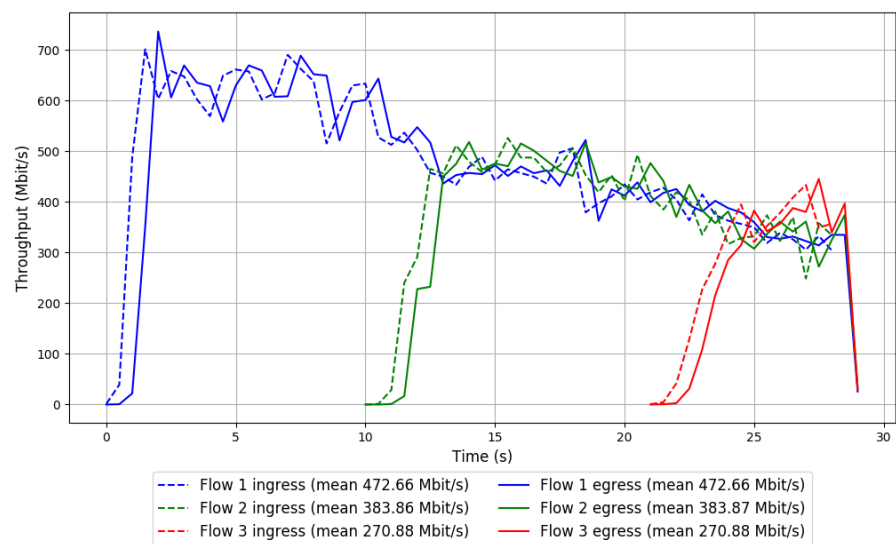


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-24 21:09:49  
End at: 2019-01-24 21:10:19  
Local clock offset: -0.349 ms  
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-01-24 22:57:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 787.17 Mbit/s  
95th percentile per-packet one-way delay: 89.183 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 472.66 Mbit/s  
95th percentile per-packet one-way delay: 88.984 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 383.87 Mbit/s  
95th percentile per-packet one-way delay: 89.427 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 270.88 Mbit/s  
95th percentile per-packet one-way delay: 89.704 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link

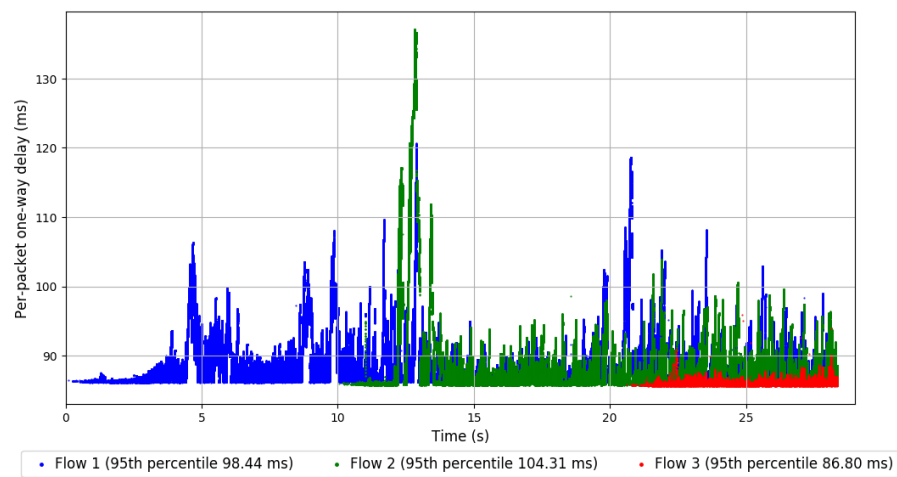
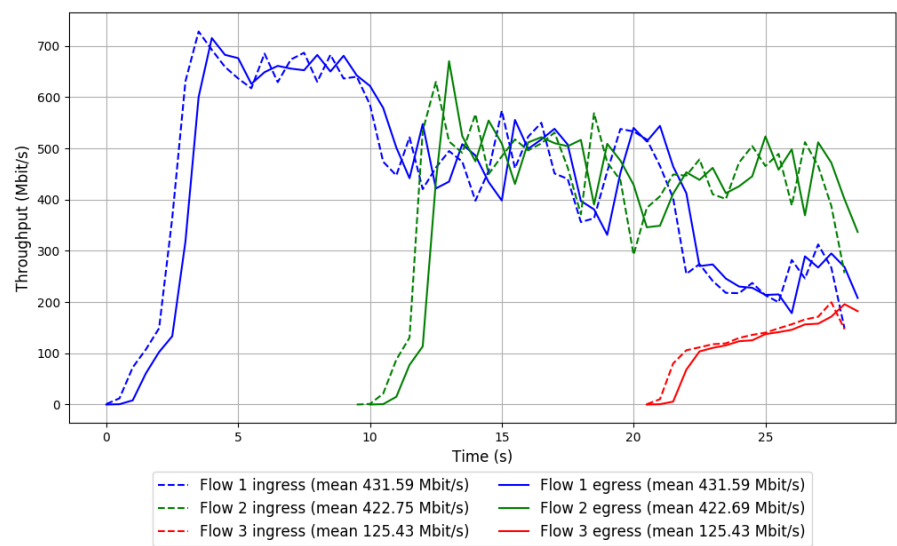


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-24 18:25:00  
End at: 2019-01-24 18:25:30  
Local clock offset: 0.294 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-01-24 22:57:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 739.77 Mbit/s  
95th percentile per-packet one-way delay: 98.740 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 431.59 Mbit/s  
95th percentile per-packet one-way delay: 98.441 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 422.69 Mbit/s  
95th percentile per-packet one-way delay: 104.312 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 125.43 Mbit/s  
95th percentile per-packet one-way delay: 86.800 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesC5 — Data Link



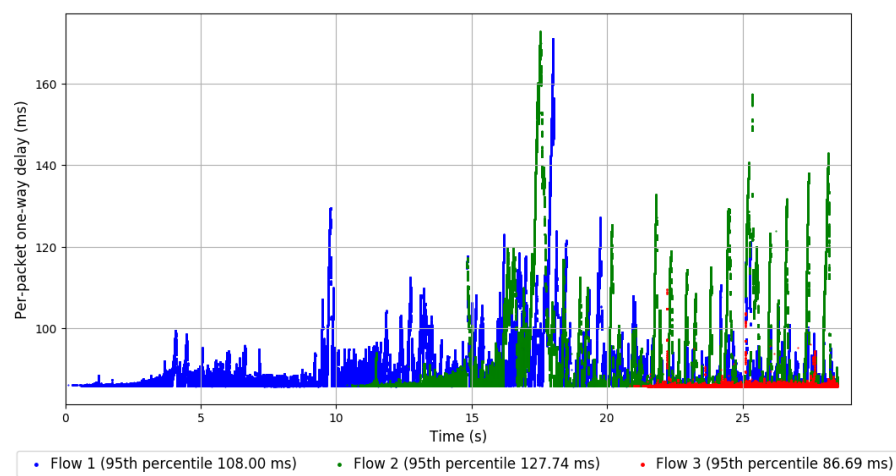
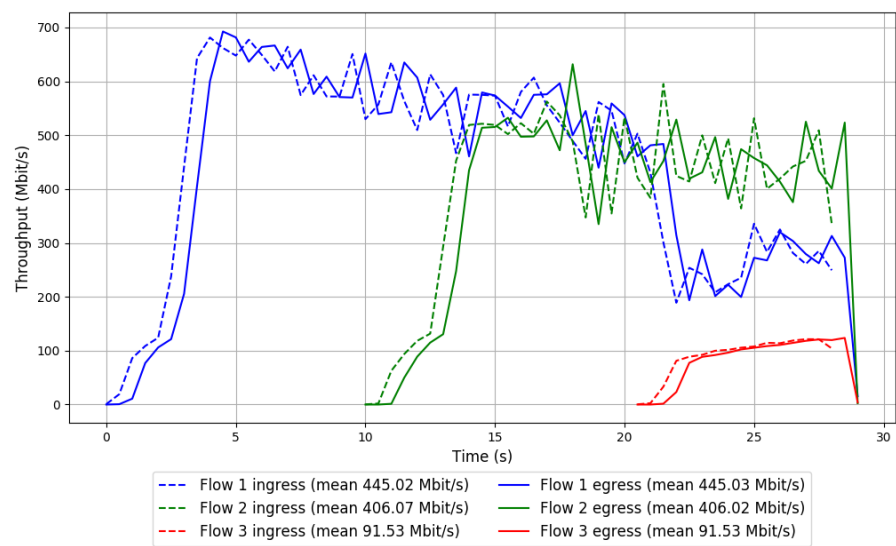


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-24 19:03:17  
End at: 2019-01-24 19:03:47  
Local clock offset: -0.241 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-24 22:57:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 728.29 Mbit/s  
95th percentile per-packet one-way delay: 115.996 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 445.03 Mbit/s  
95th percentile per-packet one-way delay: 107.996 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 406.02 Mbit/s  
95th percentile per-packet one-way delay: 127.743 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 91.53 Mbit/s  
95th percentile per-packet one-way delay: 86.691 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

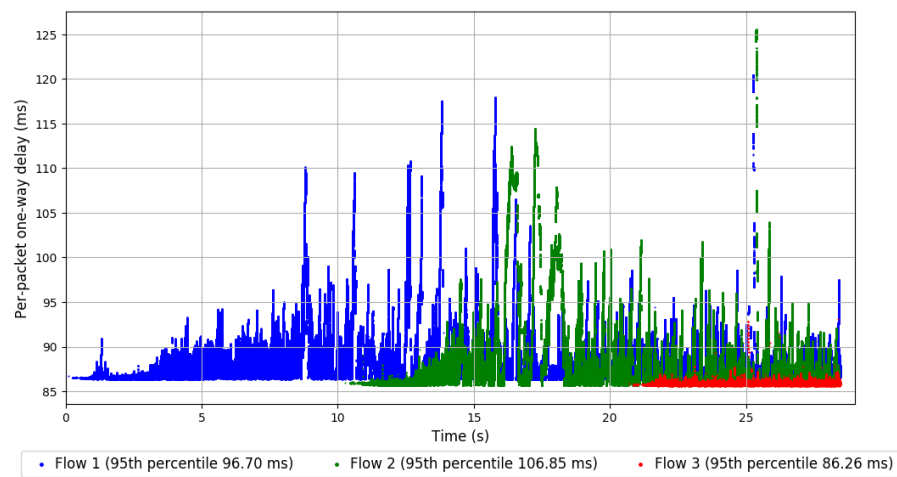
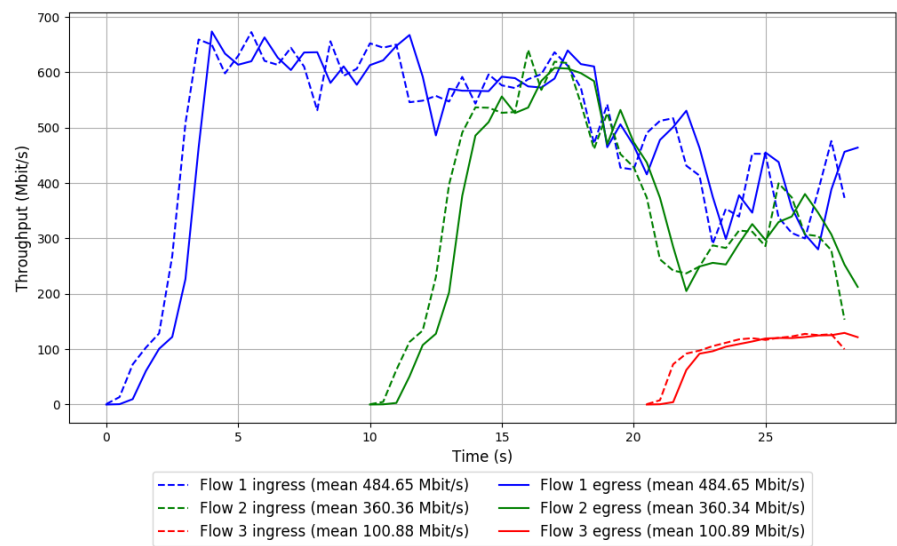


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-24 19:42:07  
End at: 2019-01-24 19:42:37  
Local clock offset: 0.061 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-24 22:57:48  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 742.68 Mbit/s  
95th percentile per-packet one-way delay: 99.723 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 484.65 Mbit/s  
95th percentile per-packet one-way delay: 96.700 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 360.34 Mbit/s  
95th percentile per-packet one-way delay: 106.854 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 100.89 Mbit/s  
95th percentile per-packet one-way delay: 86.259 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link

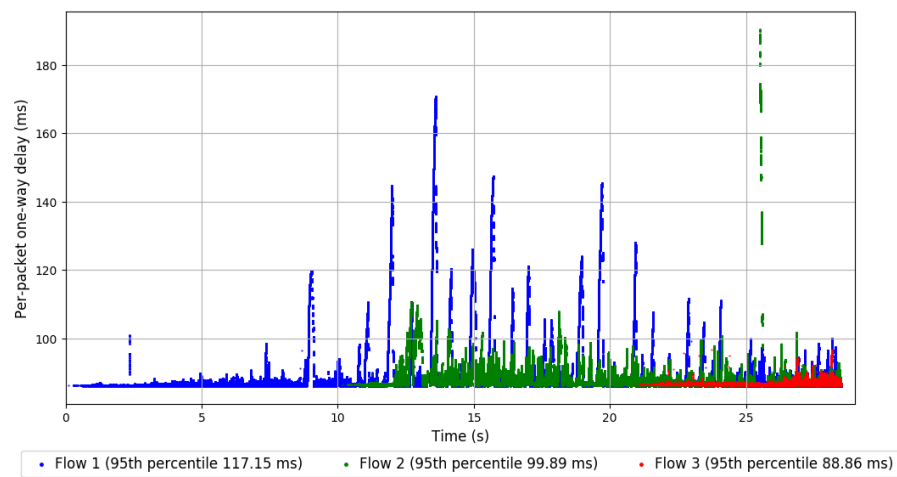
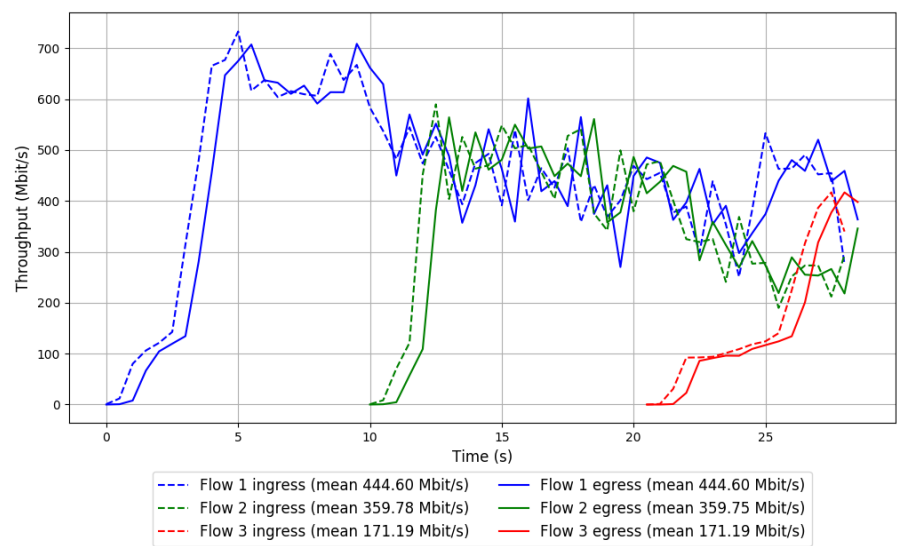


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-24 20:20:17  
End at: 2019-01-24 20:20:47  
Local clock offset: -0.283 ms  
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-01-24 22:58:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 721.98 Mbit/s  
95th percentile per-packet one-way delay: 109.710 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 444.60 Mbit/s  
95th percentile per-packet one-way delay: 117.150 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 359.75 Mbit/s  
95th percentile per-packet one-way delay: 99.891 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 171.19 Mbit/s  
95th percentile per-packet one-way delay: 88.859 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

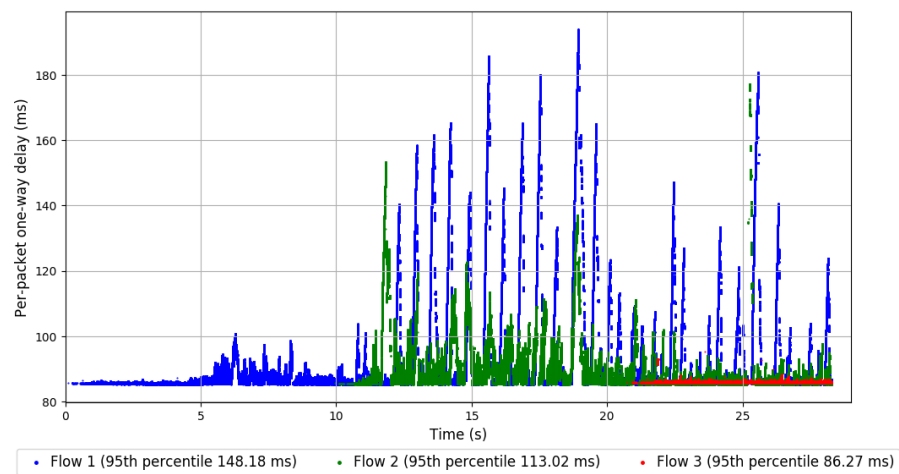
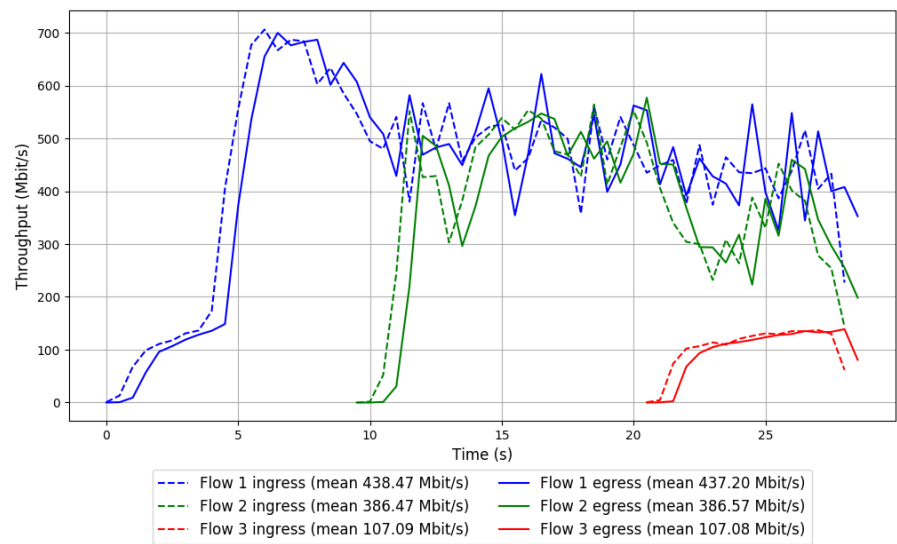


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-24 20:58:19  
End at: 2019-01-24 20:58:50  
Local clock offset: 0.502 ms  
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-01-24 23:00:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 717.23 Mbit/s  
95th percentile per-packet one-way delay: 136.824 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 437.20 Mbit/s  
95th percentile per-packet one-way delay: 148.181 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 386.57 Mbit/s  
95th percentile per-packet one-way delay: 113.015 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 107.08 Mbit/s  
95th percentile per-packet one-way delay: 86.274 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link



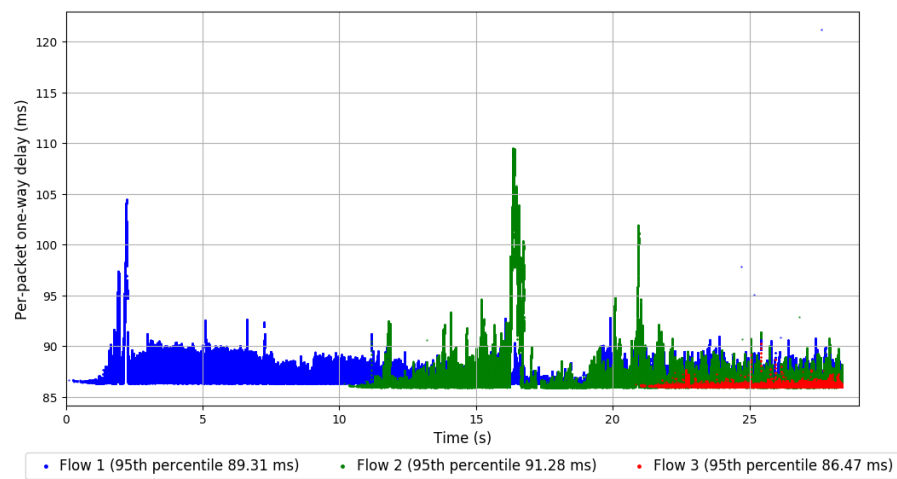
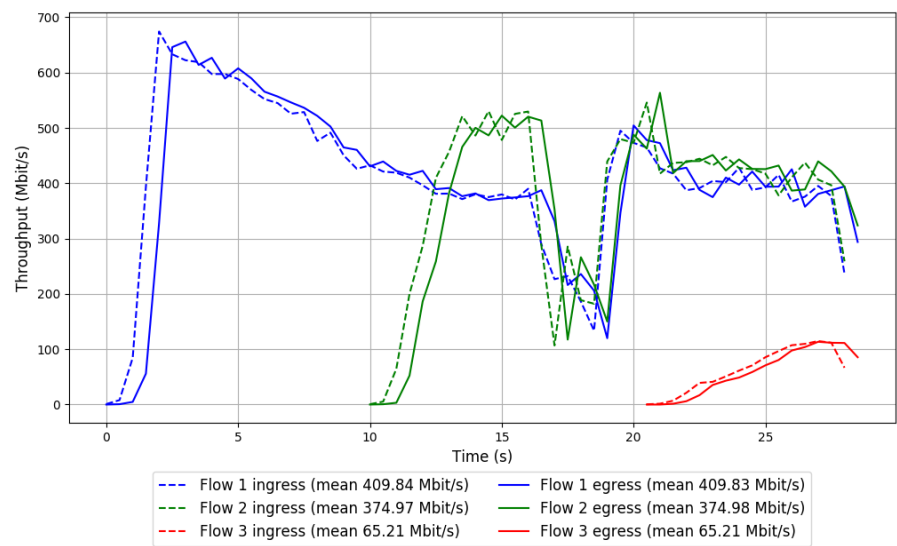


Run 1: Statistics of Indigo-MusesD

Start at: 2019-01-24 18:32:10  
End at: 2019-01-24 18:32:40  
Local clock offset: -0.242 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-01-24 23:06:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 668.46 Mbit/s  
95th percentile per-packet one-way delay: 89.591 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 409.83 Mbit/s  
95th percentile per-packet one-way delay: 89.312 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 374.98 Mbit/s  
95th percentile per-packet one-way delay: 91.285 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 65.21 Mbit/s  
95th percentile per-packet one-way delay: 86.471 ms  
Loss rate: 0.00%

Run 1: Report of Indigo-MusesD — Data Link

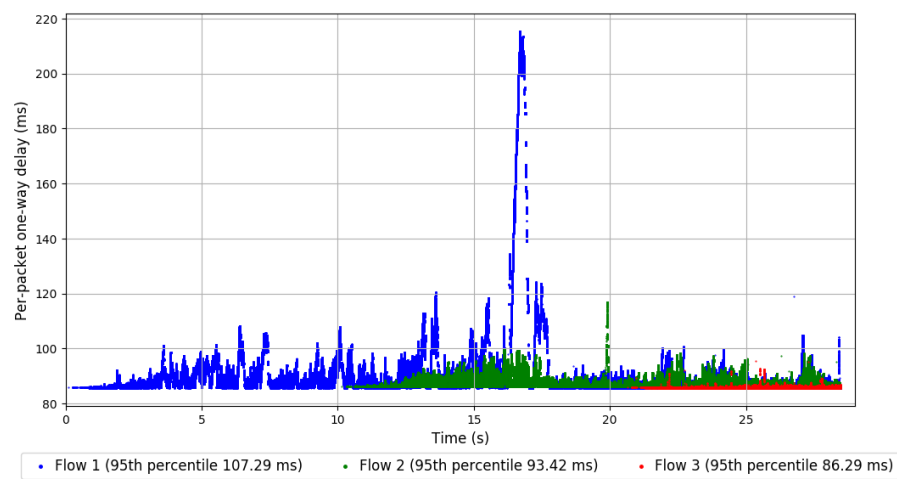
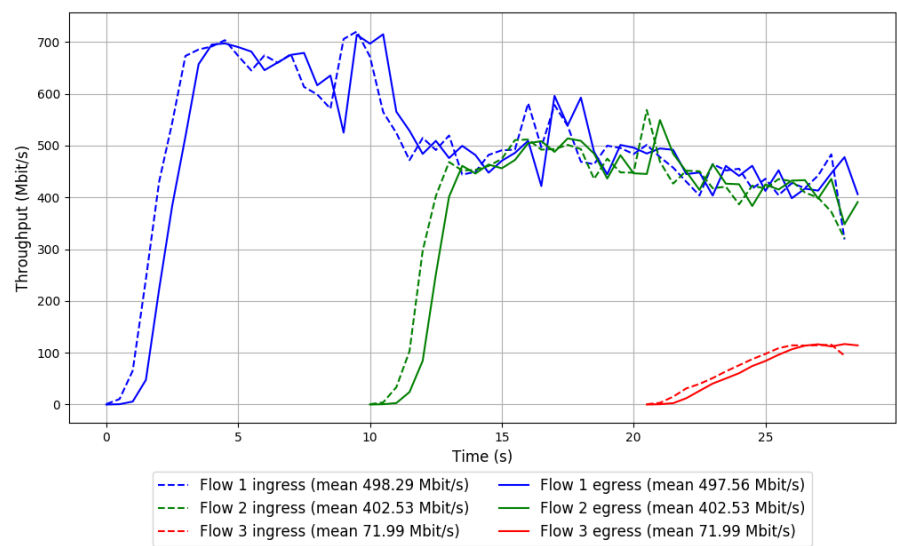


Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-24 19:10:27  
End at: 2019-01-24 19:10:57  
Local clock offset: 0.037 ms  
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-01-24 23:10:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 777.28 Mbit/s  
95th percentile per-packet one-way delay: 101.607 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 497.56 Mbit/s  
95th percentile per-packet one-way delay: 107.292 ms  
Loss rate: 0.16%  
-- Flow 2:  
Average throughput: 402.53 Mbit/s  
95th percentile per-packet one-way delay: 93.422 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 71.99 Mbit/s  
95th percentile per-packet one-way delay: 86.288 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

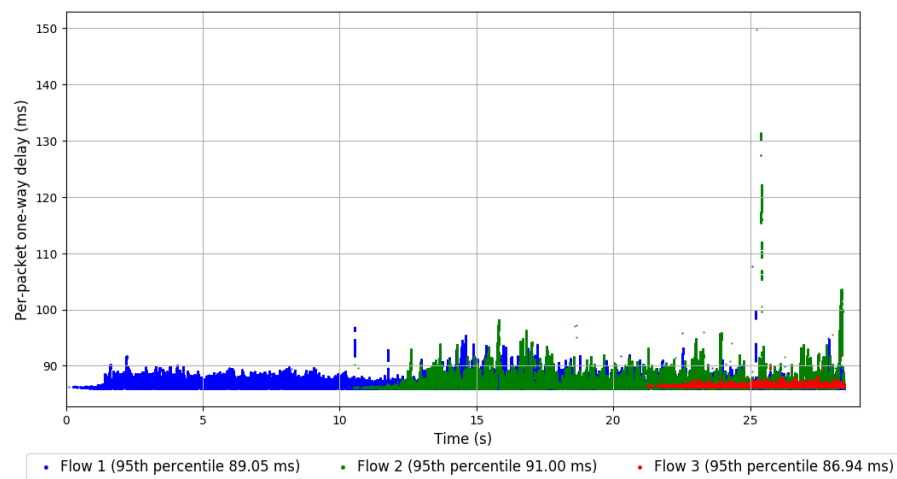
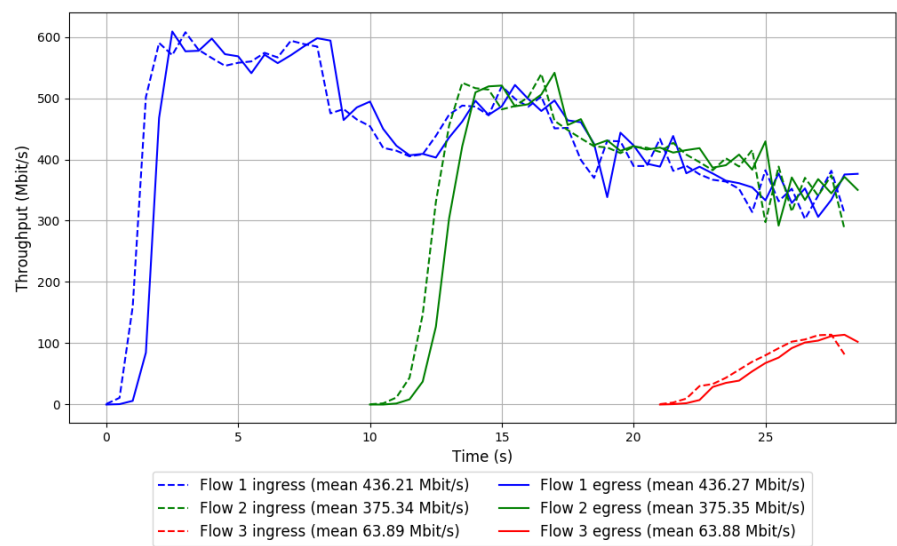


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-24 19:49:07  
End at: 2019-01-24 19:49:37  
Local clock offset: -0.209 ms  
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-01-24 23:10:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 692.44 Mbit/s  
95th percentile per-packet one-way delay: 89.699 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 436.27 Mbit/s  
95th percentile per-packet one-way delay: 89.054 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 375.35 Mbit/s  
95th percentile per-packet one-way delay: 91.003 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 63.88 Mbit/s  
95th percentile per-packet one-way delay: 86.938 ms  
Loss rate: 0.01%

Run 3: Report of Indigo-MusesD — Data Link



Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-24 20:27:38

End at: 2019-01-24 20:28:08

Local clock offset: -0.093 ms

Remote clock offset: 0.22 ms

# Below is generated by plot.py at 2019-01-24 23:11:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 772.24 Mbit/s

95th percentile per-packet one-way delay: 118.545 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 461.03 Mbit/s

95th percentile per-packet one-way delay: 132.389 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 378.39 Mbit/s

95th percentile per-packet one-way delay: 91.412 ms

Loss rate: 0.00%

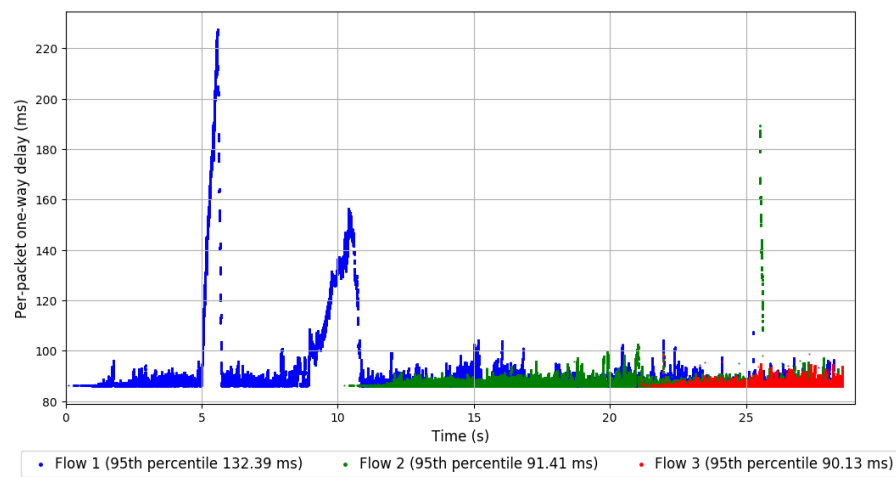
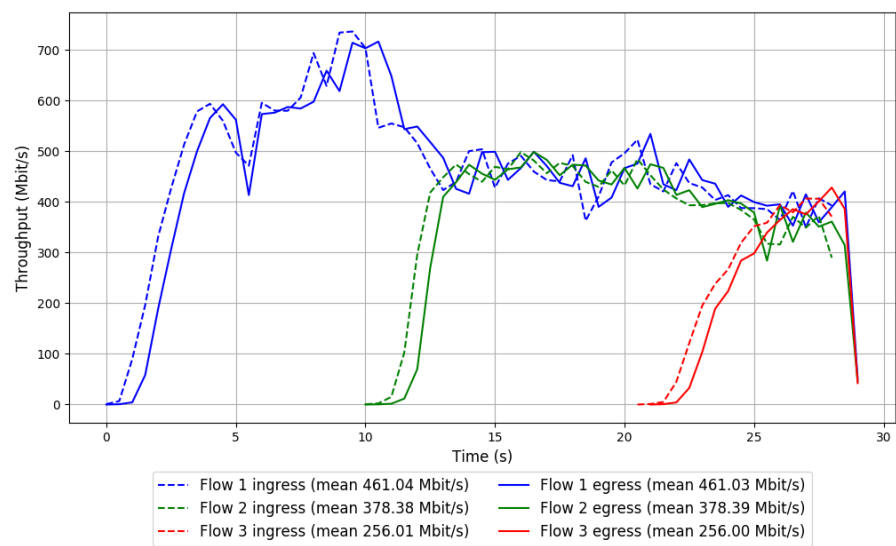
-- Flow 3:

Average throughput: 256.00 Mbit/s

95th percentile per-packet one-way delay: 90.132 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-24 21:05:49

End at: 2019-01-24 21:06:19

Local clock offset: -0.203 ms

Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-01-24 23:12:24

# Datalink statistics

-- Total of 3 flows:

Average throughput: 783.06 Mbit/s

95th percentile per-packet one-way delay: 92.711 ms

Loss rate: 0.02%

-- Flow 1:

Average throughput: 486.71 Mbit/s

95th percentile per-packet one-way delay: 93.429 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 416.22 Mbit/s

95th percentile per-packet one-way delay: 91.579 ms

Loss rate: 0.00%

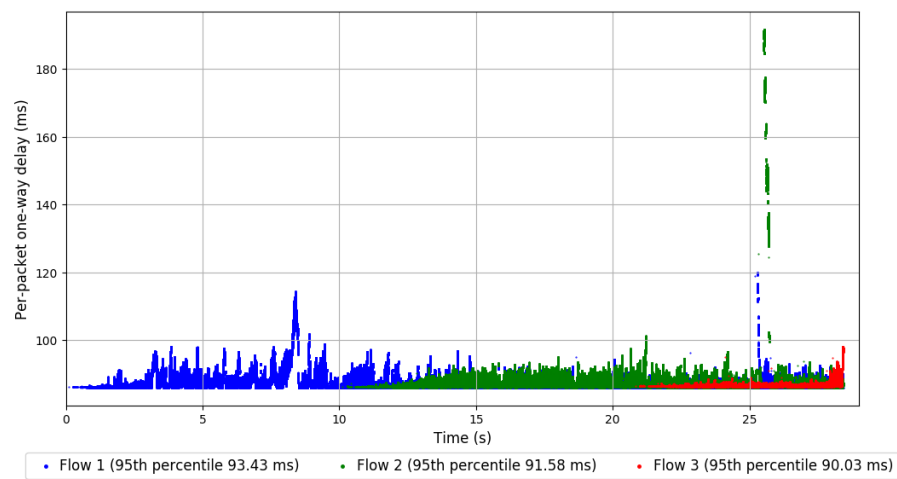
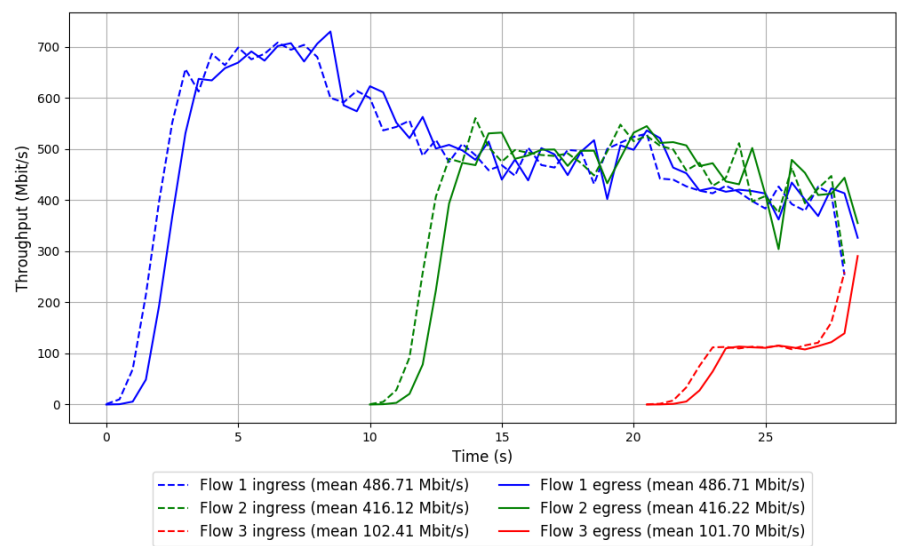
-- Flow 3:

Average throughput: 101.70 Mbit/s

95th percentile per-packet one-way delay: 90.033 ms

Loss rate: 0.68%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

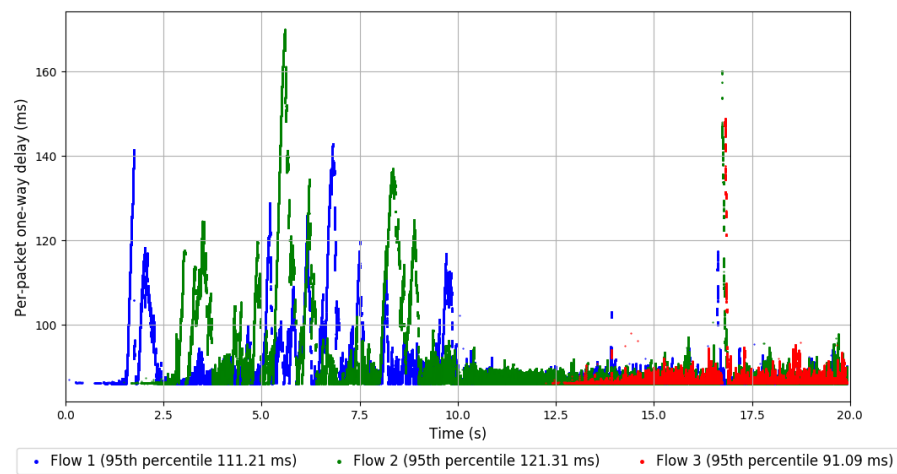
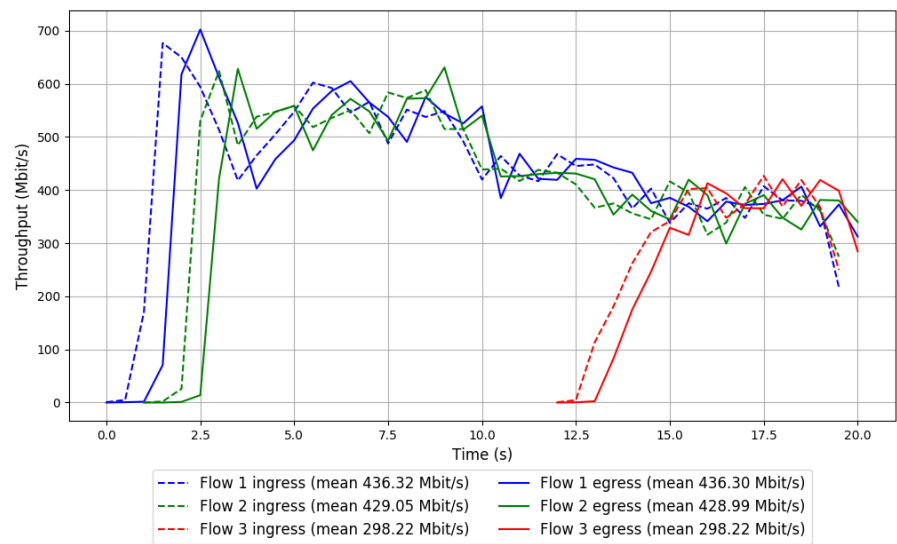
Start at: 2019-01-24 18:23:10

End at: 2019-01-24 18:23:40

Local clock offset: -0.15 ms

Remote clock offset: 0.043 ms

Run 1: Report of Indigo-MusesT — Data Link



Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-24 19:01:18

End at: 2019-01-24 19:01:48

Local clock offset: -0.41 ms

Remote clock offset: 0.118 ms

# Below is generated by plot.py at 2019-01-24 23:14:56

# Datalink statistics

-- Total of 3 flows:

Average throughput: 850.25 Mbit/s

95th percentile per-packet one-way delay: 109.283 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 516.55 Mbit/s

95th percentile per-packet one-way delay: 121.839 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 396.68 Mbit/s

95th percentile per-packet one-way delay: 95.314 ms

Loss rate: 0.00%

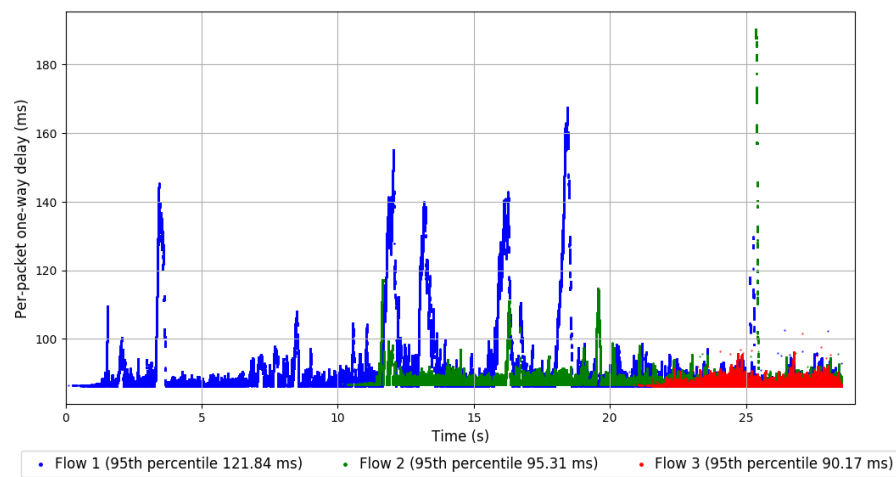
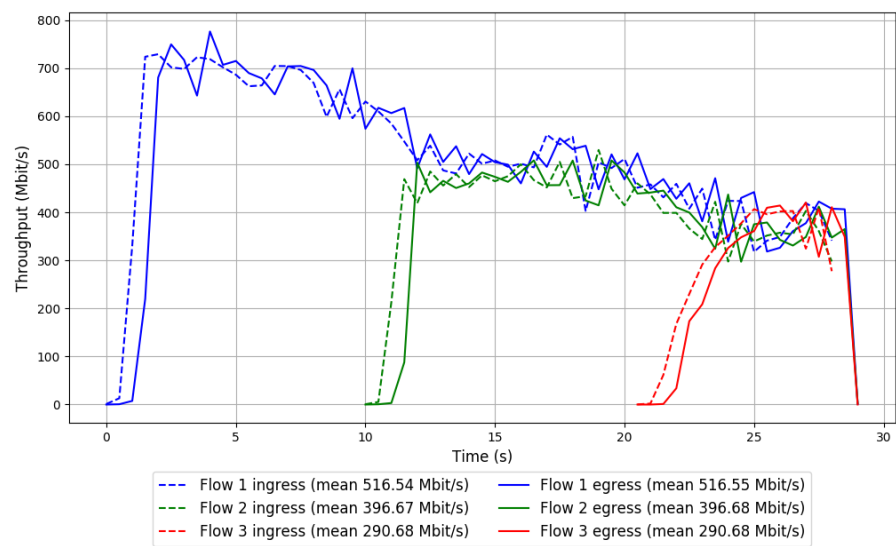
-- Flow 3:

Average throughput: 290.68 Mbit/s

95th percentile per-packet one-way delay: 90.167 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link

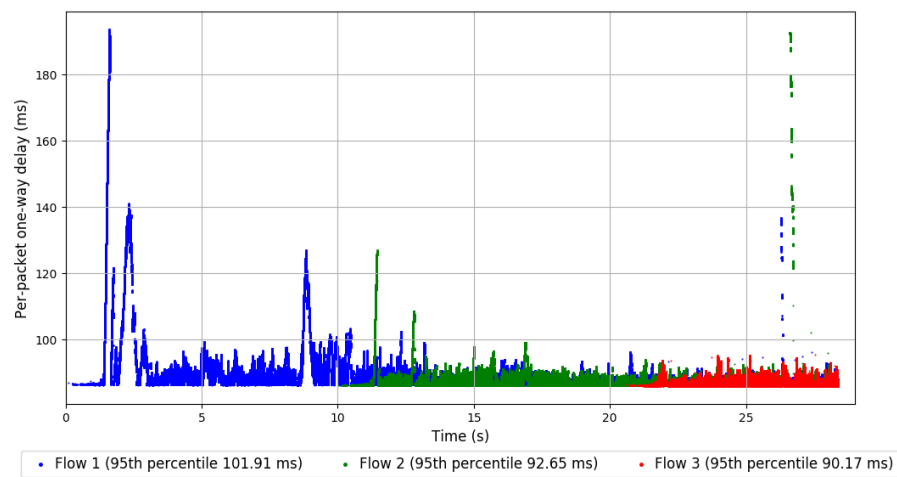
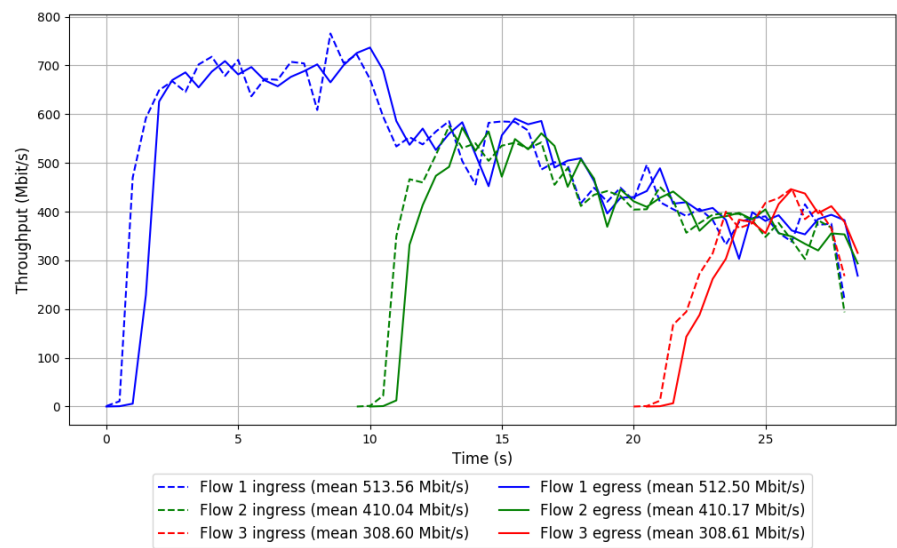


Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-24 19:40:09  
End at: 2019-01-24 19:40:39  
Local clock offset: -0.175 ms  
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-01-24 23:16:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 864.07 Mbit/s  
95th percentile per-packet one-way delay: 97.508 ms  
Loss rate: 0.12%  
-- Flow 1:  
Average throughput: 512.50 Mbit/s  
95th percentile per-packet one-way delay: 101.907 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 410.17 Mbit/s  
95th percentile per-packet one-way delay: 92.647 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 308.61 Mbit/s  
95th percentile per-packet one-way delay: 90.168 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link





Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-24 20:18:12

End at: 2019-01-24 20:18:42

Local clock offset: -0.507 ms

Remote clock offset: 0.086 ms

# Below is generated by plot.py at 2019-01-24 23:21:04

# Datalink statistics

-- Total of 3 flows:

Average throughput: 847.91 Mbit/s

95th percentile per-packet one-way delay: 97.423 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 485.03 Mbit/s

95th percentile per-packet one-way delay: 97.399 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 415.05 Mbit/s

95th percentile per-packet one-way delay: 98.913 ms

Loss rate: 0.00%

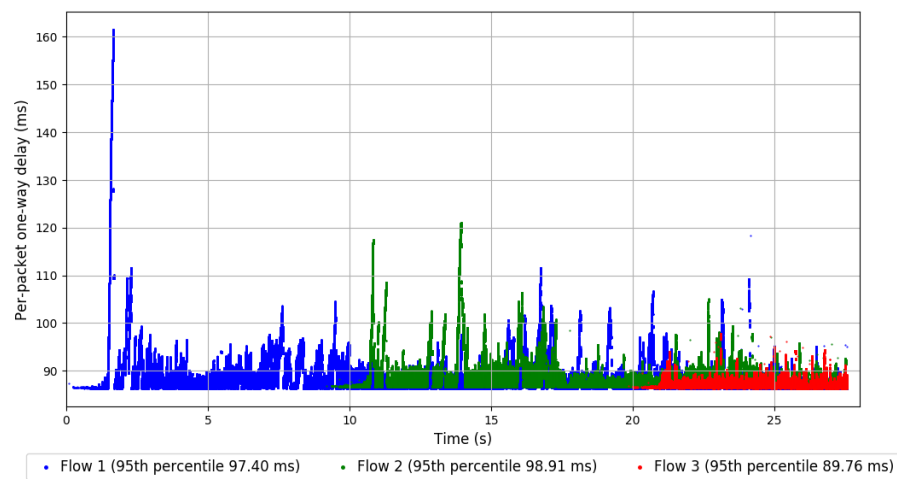
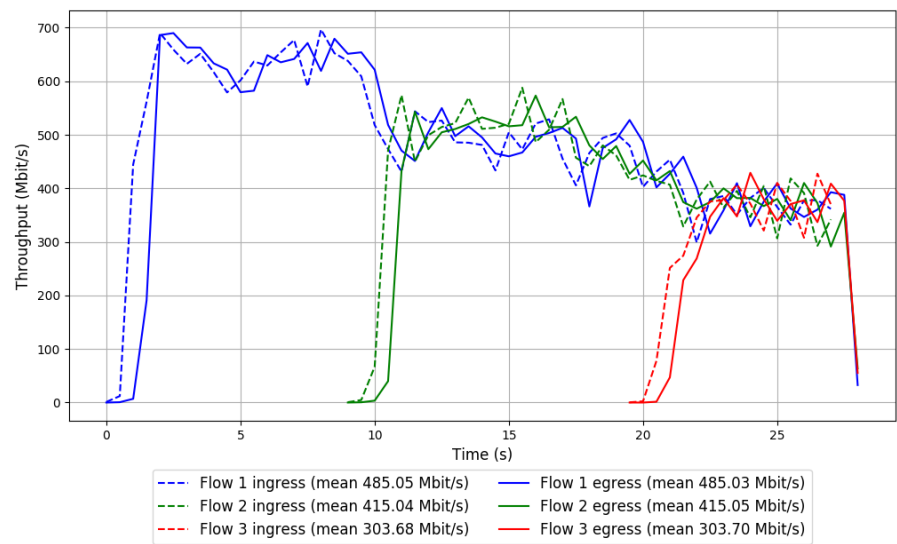
-- Flow 3:

Average throughput: 303.70 Mbit/s

95th percentile per-packet one-way delay: 89.756 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesT — Data Link

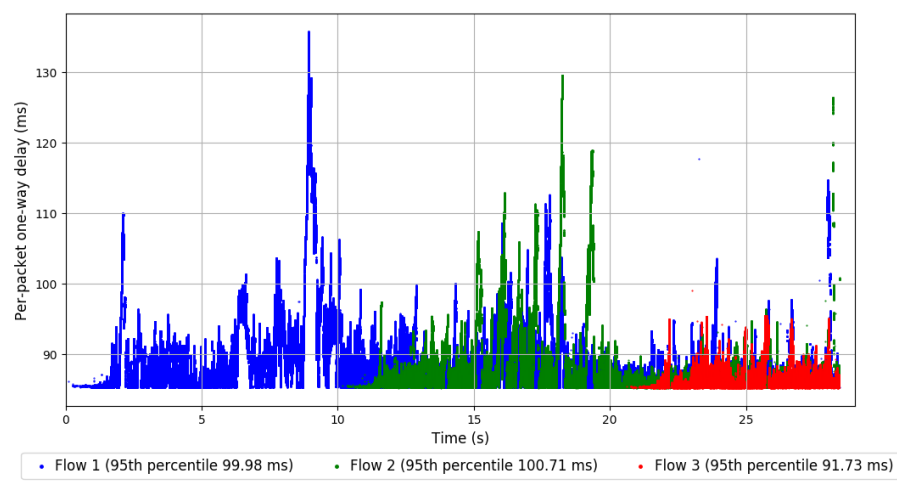
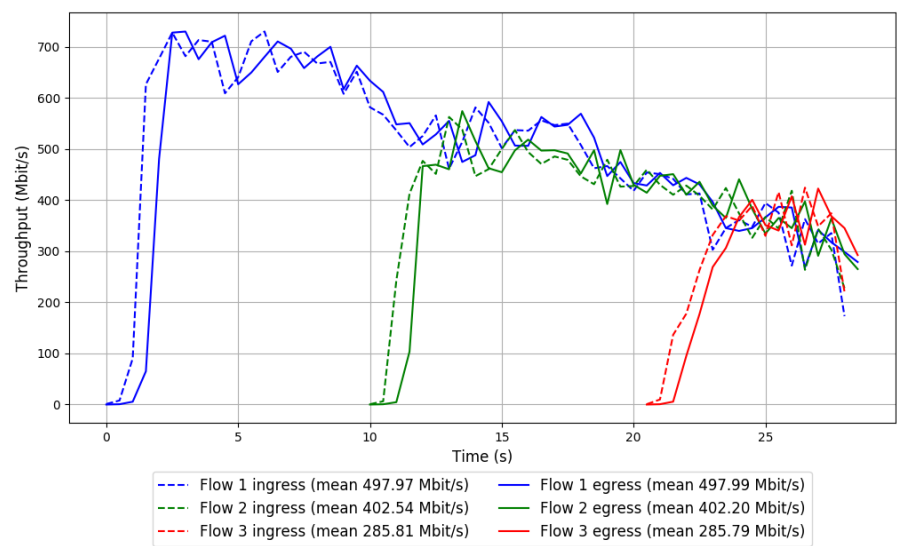


Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-24 20:56:21  
End at: 2019-01-24 20:56:51  
Local clock offset: 0.492 ms  
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-01-24 23:23:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 835.71 Mbit/s  
95th percentile per-packet one-way delay: 99.334 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 497.99 Mbit/s  
95th percentile per-packet one-way delay: 99.984 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 402.20 Mbit/s  
95th percentile per-packet one-way delay: 100.711 ms  
Loss rate: 0.07%  
-- Flow 3:  
Average throughput: 285.79 Mbit/s  
95th percentile per-packet one-way delay: 91.731 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

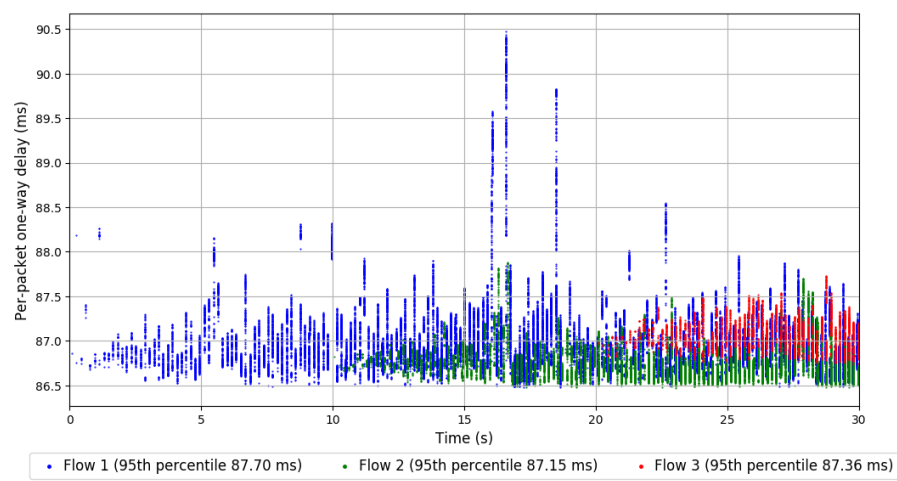
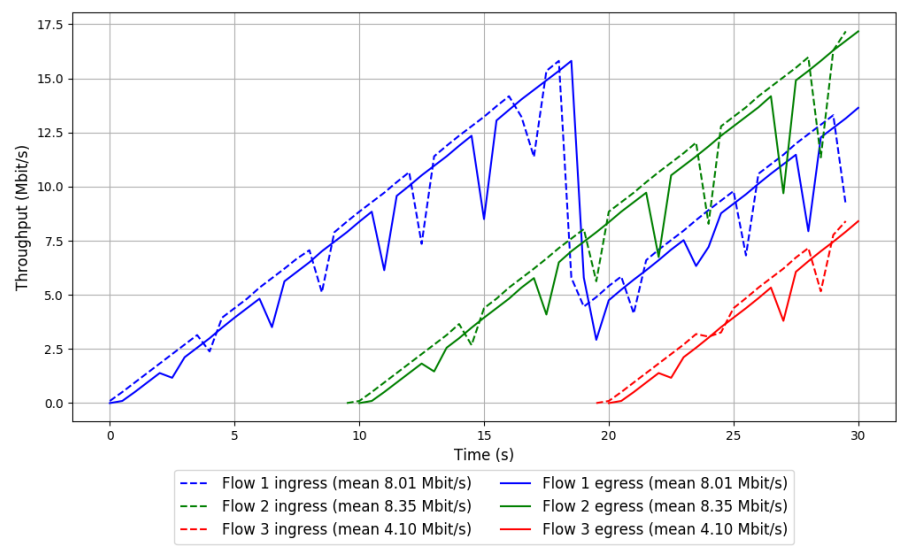


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-24 18:28:52
End at: 2019-01-24 18:29:22
Local clock offset: -0.429 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-01-24 23:23:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 87.494 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 87.697 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 87.154 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 87.364 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

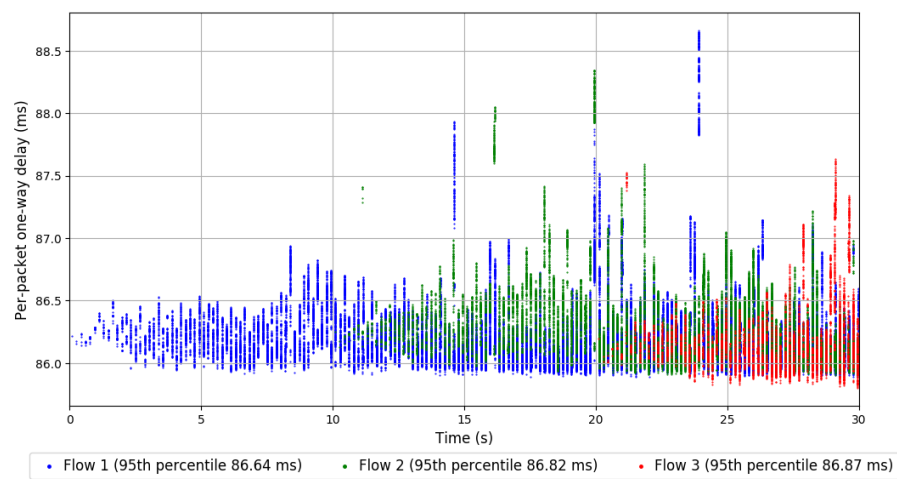
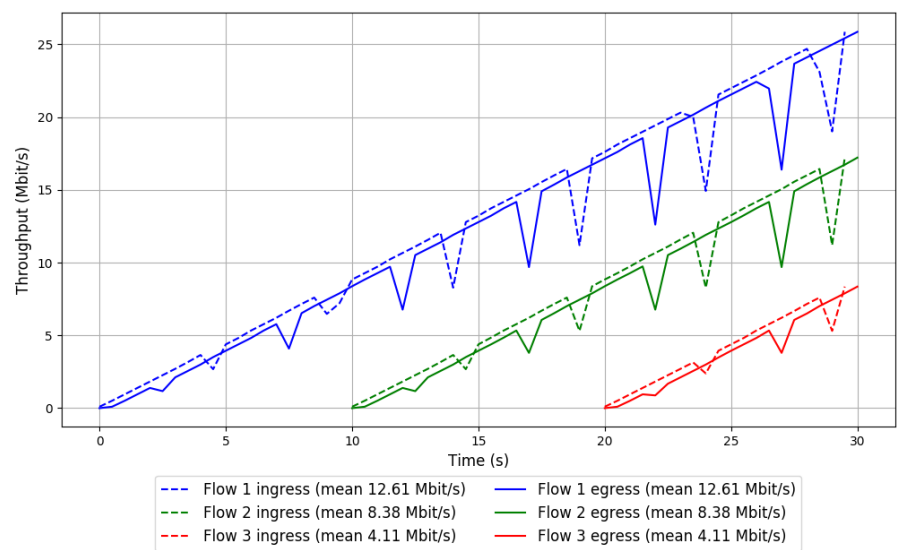


Run 2: Statistics of LEDBAT

Start at: 2019-01-24 19:07:20  
End at: 2019-01-24 19:07:50  
Local clock offset: -0.182 ms  
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-01-24 23:23:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.54 Mbit/s  
95th percentile per-packet one-way delay: 86.729 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.61 Mbit/s  
95th percentile per-packet one-way delay: 86.635 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 8.38 Mbit/s  
95th percentile per-packet one-way delay: 86.819 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 4.11 Mbit/s  
95th percentile per-packet one-way delay: 86.866 ms  
Loss rate: 0.00%

Run 2: Report of LEDBAT — Data Link



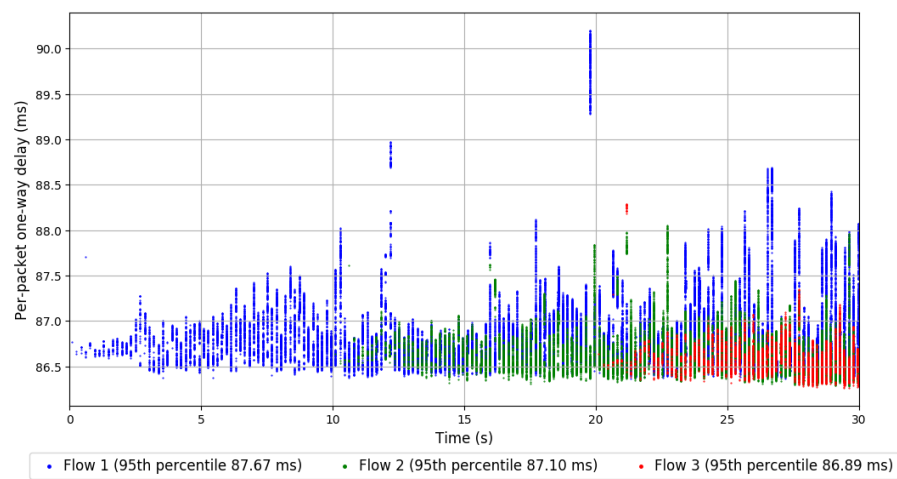
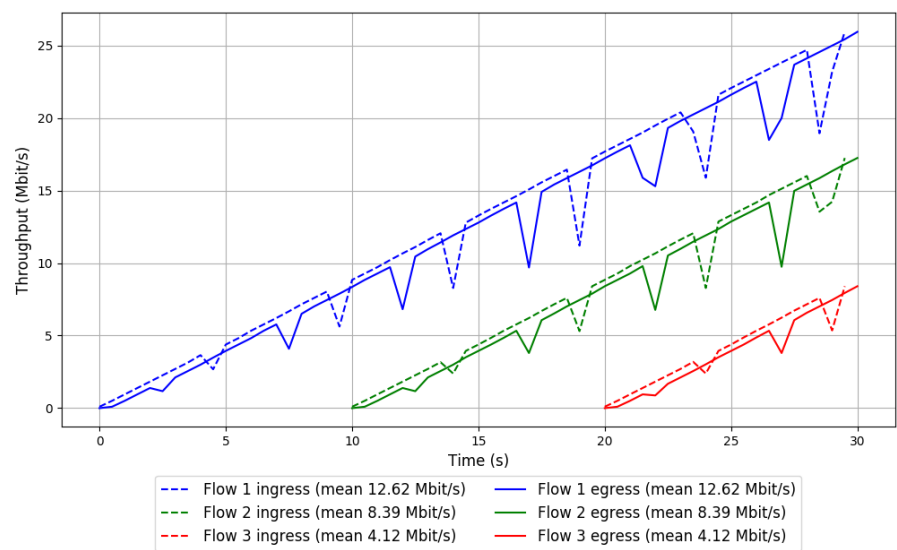


Run 3: Statistics of LEDBAT

Start at: 2019-01-24 19:46:07  
End at: 2019-01-24 19:46:37  
Local clock offset: -0.612 ms  
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-01-24 23:23:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.55 Mbit/s  
95th percentile per-packet one-way delay: 87.488 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.62 Mbit/s  
95th percentile per-packet one-way delay: 87.665 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 8.39 Mbit/s  
95th percentile per-packet one-way delay: 87.100 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 4.12 Mbit/s  
95th percentile per-packet one-way delay: 86.890 ms  
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link



Run 4: Statistics of LEDBAT

Start at: 2019-01-24 20:24:31

End at: 2019-01-24 20:25:01

Local clock offset: -0.516 ms

Remote clock offset: 0.069 ms

# Below is generated by plot.py at 2019-01-24 23:23:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 19.37 Mbit/s

95th percentile per-packet one-way delay: 87.640 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 12.47 Mbit/s

95th percentile per-packet one-way delay: 87.834 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 8.36 Mbit/s

95th percentile per-packet one-way delay: 86.981 ms

Loss rate: 0.00%

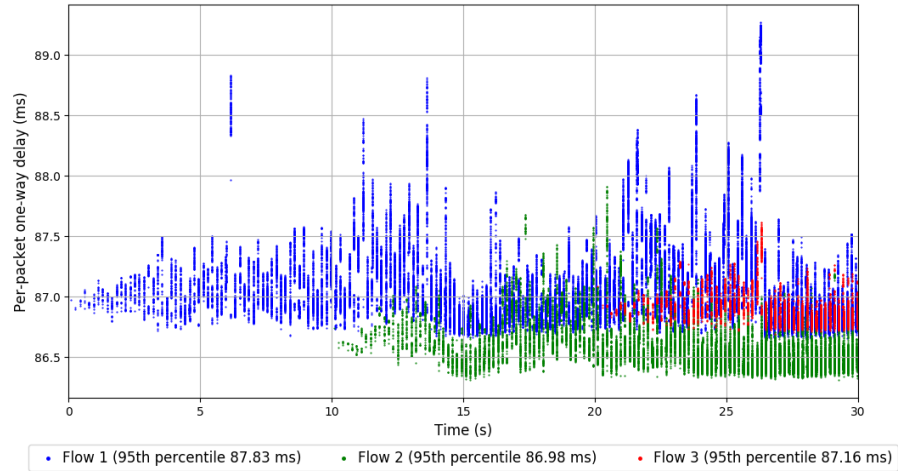
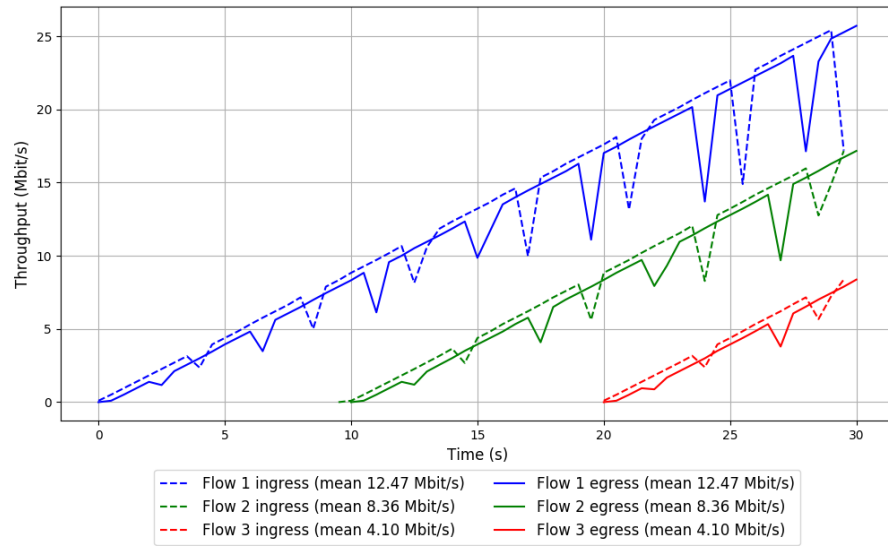
-- Flow 3:

Average throughput: 4.10 Mbit/s

95th percentile per-packet one-way delay: 87.156 ms

Loss rate: 0.00%

#### Run 4: Report of LEDBAT — Data Link

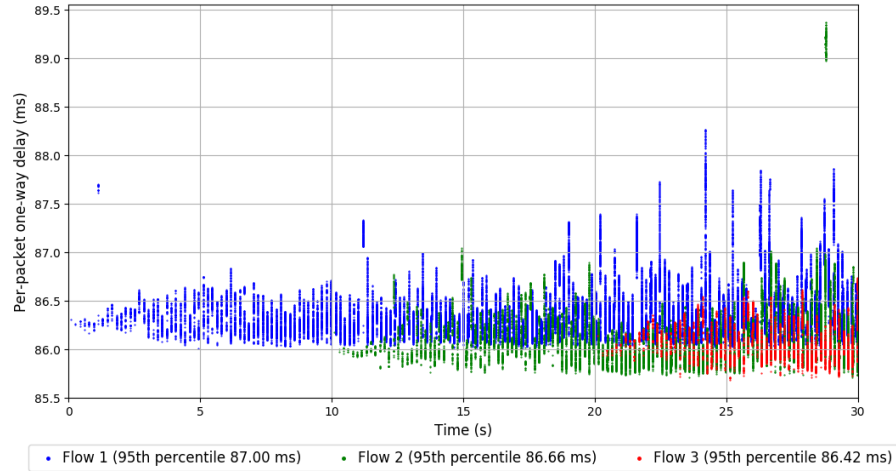
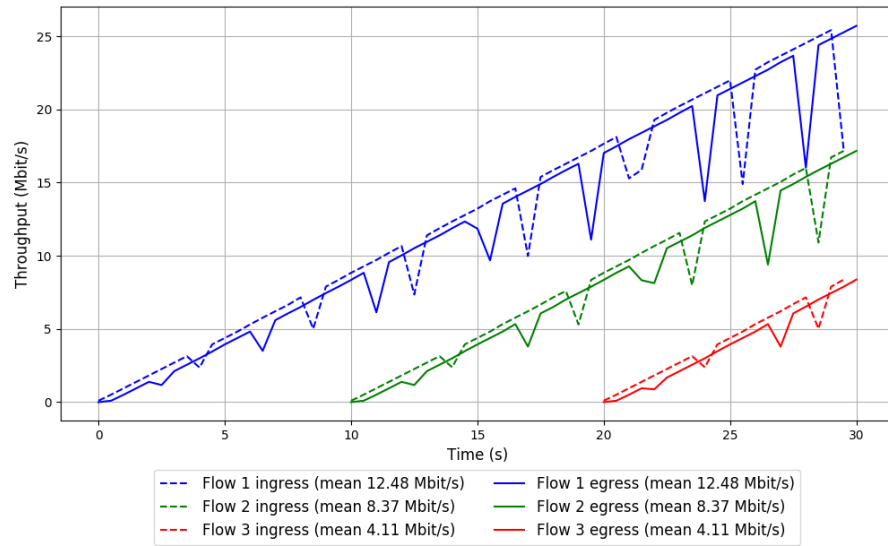


Run 5: Statistics of LEDBAT

Start at: 2019-01-24 21:02:31  
End at: 2019-01-24 21:03:01  
Local clock offset: 0.106 ms  
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2019-01-24 23:23:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 19.38 Mbit/s  
95th percentile per-packet one-way delay: 86.890 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 12.48 Mbit/s  
95th percentile per-packet one-way delay: 87.004 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 8.37 Mbit/s  
95th percentile per-packet one-way delay: 86.663 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 4.11 Mbit/s  
95th percentile per-packet one-way delay: 86.418 ms  
Loss rate: 0.00%

# Run 5: Report of LEDBAT — Data Link



Run 1: Statistics of PCC-Allegro

Start at: 2019-01-24 18:34:01

End at: 2019-01-24 18:34:31

Local clock offset: -0.032 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-01-24 23:40:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 753.51 Mbit/s

95th percentile per-packet one-way delay: 221.952 ms

Loss rate: 6.90%

-- Flow 1:

Average throughput: 404.76 Mbit/s

95th percentile per-packet one-way delay: 220.675 ms

Loss rate: 6.26%

-- Flow 2:

Average throughput: 409.73 Mbit/s

95th percentile per-packet one-way delay: 236.236 ms

Loss rate: 9.39%

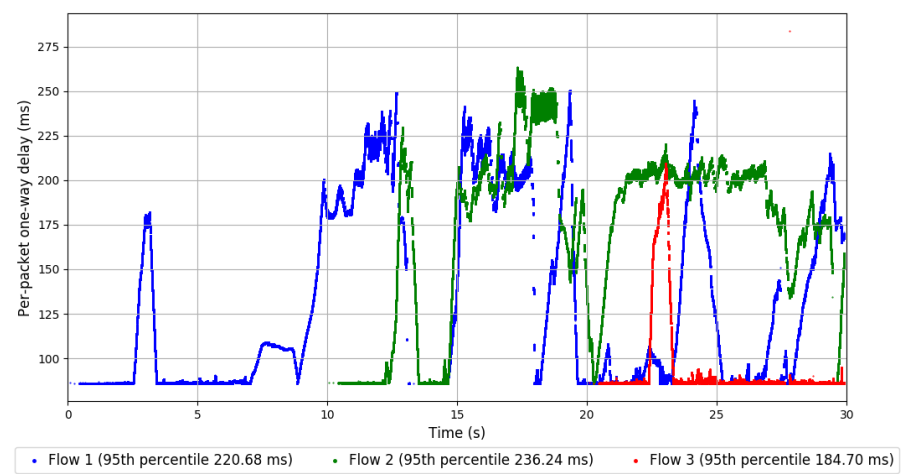
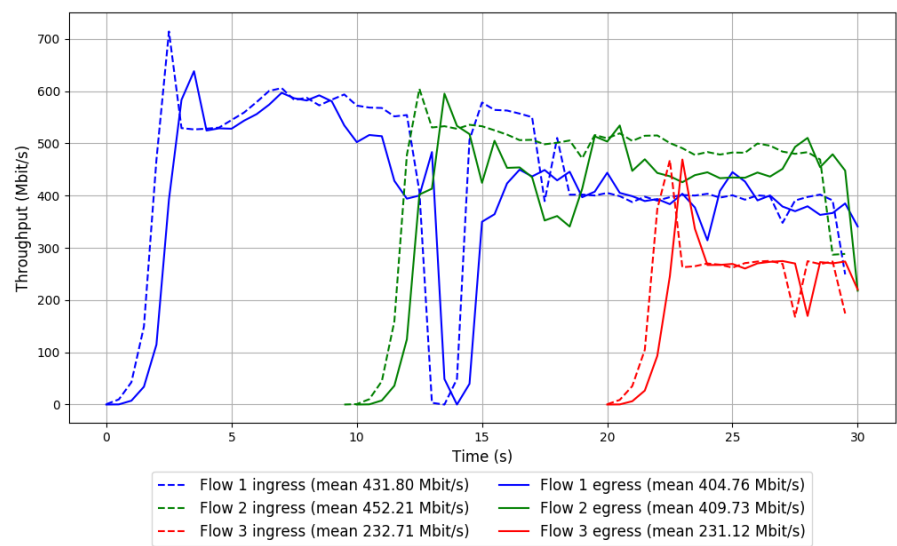
-- Flow 3:

Average throughput: 231.12 Mbit/s

95th percentile per-packet one-way delay: 184.702 ms

Loss rate: 0.69%

Run 1: Report of PCC-Allegro — Data Link





Run 2: Statistics of PCC-Allegro

Start at: 2019-01-24 19:12:37

End at: 2019-01-24 19:13:07

Local clock offset: -0.232 ms

Remote clock offset: 0.123 ms

# Below is generated by plot.py at 2019-01-24 23:40:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 589.64 Mbit/s

95th percentile per-packet one-way delay: 201.730 ms

Loss rate: 2.33%

-- Flow 1:

Average throughput: 295.62 Mbit/s

95th percentile per-packet one-way delay: 204.027 ms

Loss rate: 3.39%

-- Flow 2:

Average throughput: 321.24 Mbit/s

95th percentile per-packet one-way delay: 172.786 ms

Loss rate: 0.64%

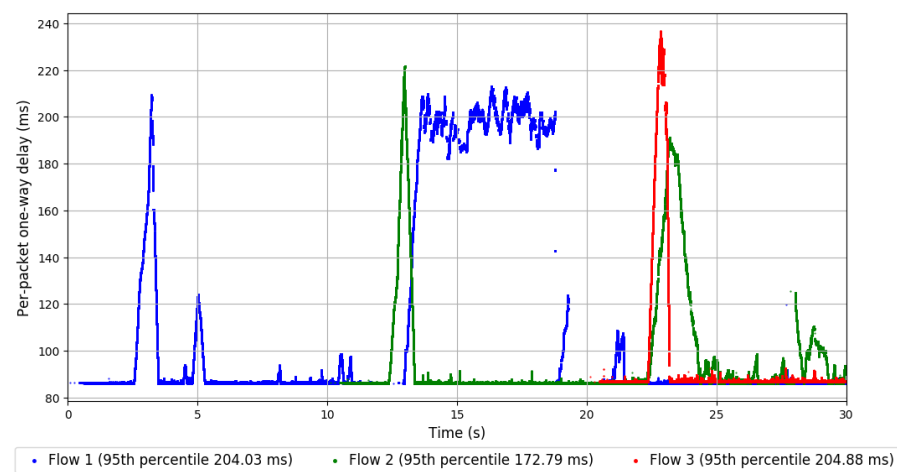
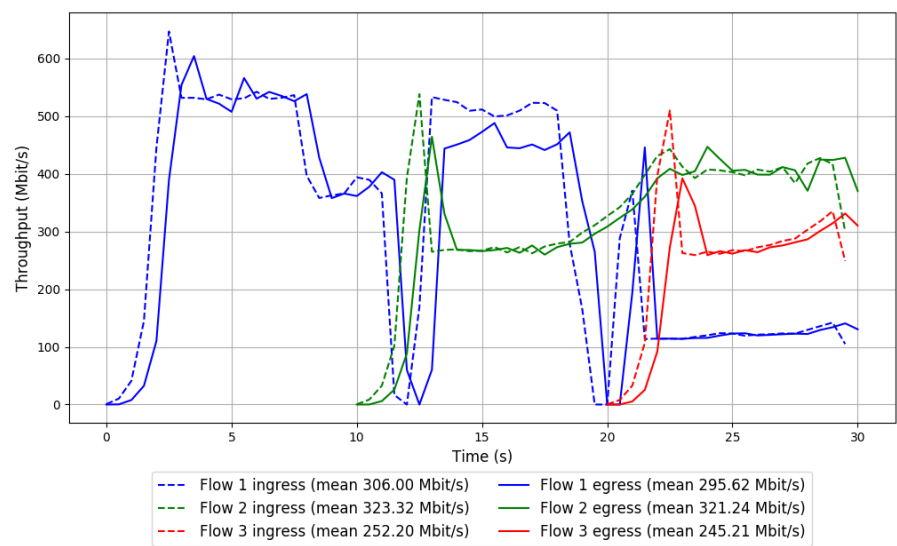
-- Flow 3:

Average throughput: 245.21 Mbit/s

95th percentile per-packet one-way delay: 204.876 ms

Loss rate: 2.79%

Run 2: Report of PCC-Allegro — Data Link

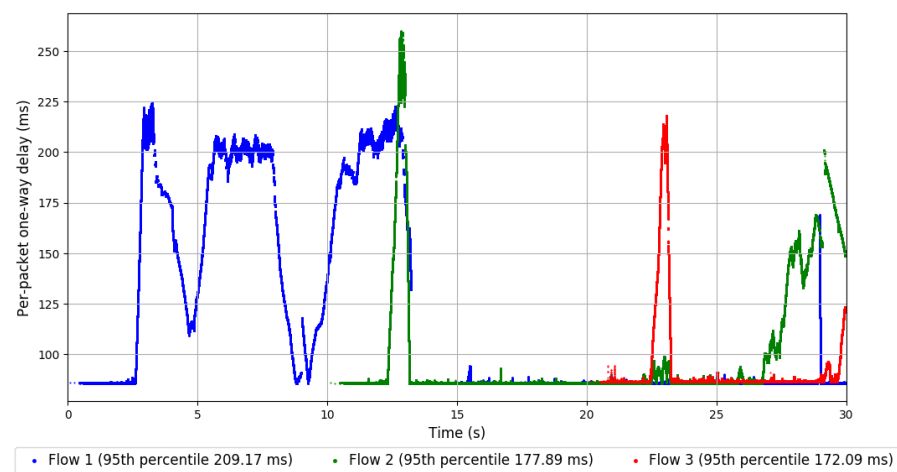
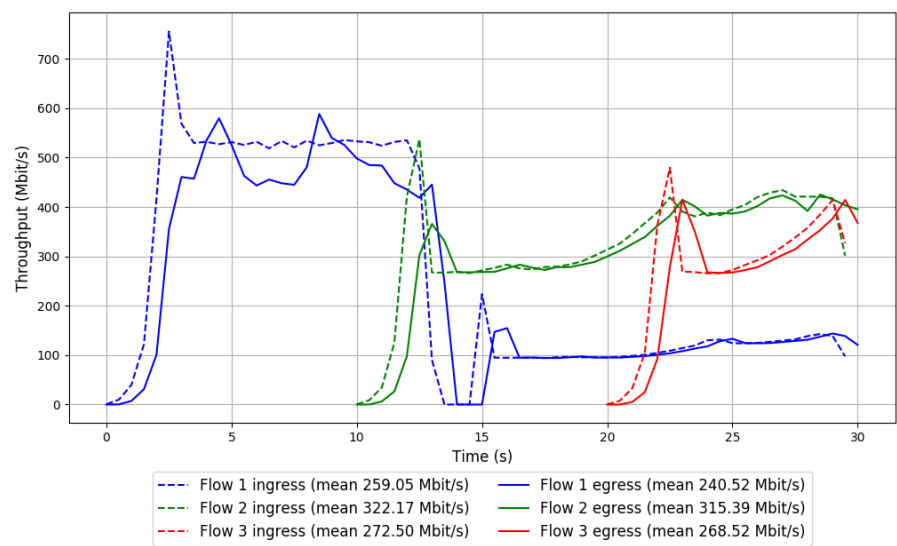


Run 3: Statistics of PCC-Allegro

Start at: 2019-01-24 19:50:58  
End at: 2019-01-24 19:51:28  
Local clock offset: 0.079 ms  
Remote clock offset: -0.114 ms

# Below is generated by plot.py at 2019-01-24 23:40:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 538.28 Mbit/s  
95th percentile per-packet one-way delay: 206.160 ms  
Loss rate: 4.33%  
-- Flow 1:  
Average throughput: 240.52 Mbit/s  
95th percentile per-packet one-way delay: 209.170 ms  
Loss rate: 7.15%  
-- Flow 2:  
Average throughput: 315.39 Mbit/s  
95th percentile per-packet one-way delay: 177.889 ms  
Loss rate: 2.10%  
-- Flow 3:  
Average throughput: 268.52 Mbit/s  
95th percentile per-packet one-way delay: 172.092 ms  
Loss rate: 1.47%

Run 3: Report of PCC-Allegro — Data Link



Run 4: Statistics of PCC-Allegro

Start at: 2019-01-24 20:29:32

End at: 2019-01-24 20:30:02

Local clock offset: 0.151 ms

Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-01-24 23:40:54

# Datalink statistics

-- Total of 3 flows:

Average throughput: 663.39 Mbit/s

95th percentile per-packet one-way delay: 199.988 ms

Loss rate: 2.25%

-- Flow 1:

Average throughput: 369.94 Mbit/s

95th percentile per-packet one-way delay: 201.746 ms

Loss rate: 3.73%

-- Flow 2:

Average throughput: 326.31 Mbit/s

95th percentile per-packet one-way delay: 171.981 ms

Loss rate: 0.26%

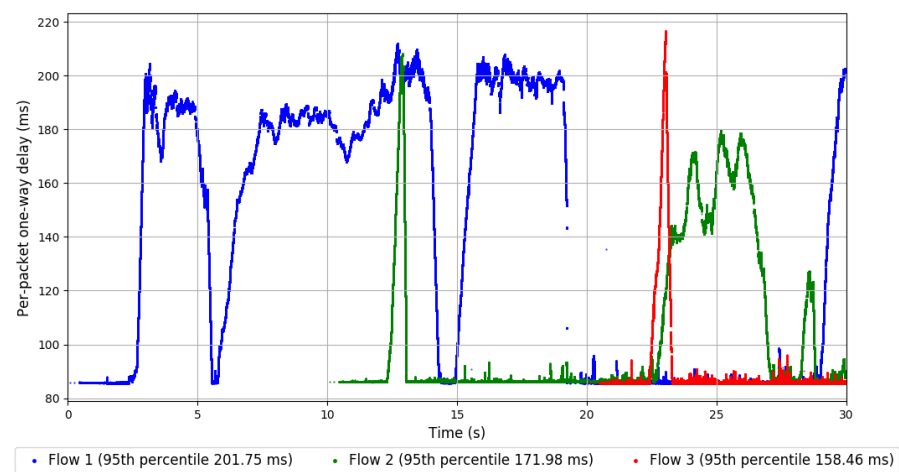
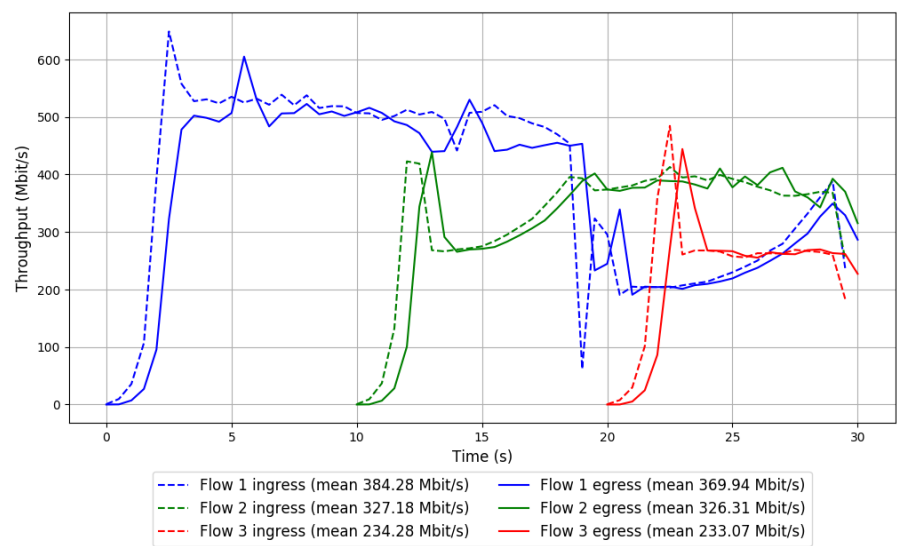
-- Flow 3:

Average throughput: 233.07 Mbit/s

95th percentile per-packet one-way delay: 158.459 ms

Loss rate: 0.52%

Run 4: Report of PCC-Allegro — Data Link

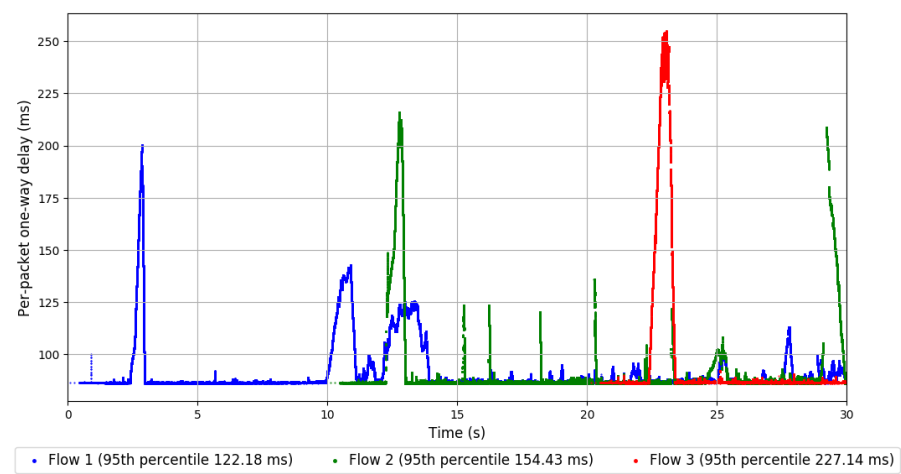
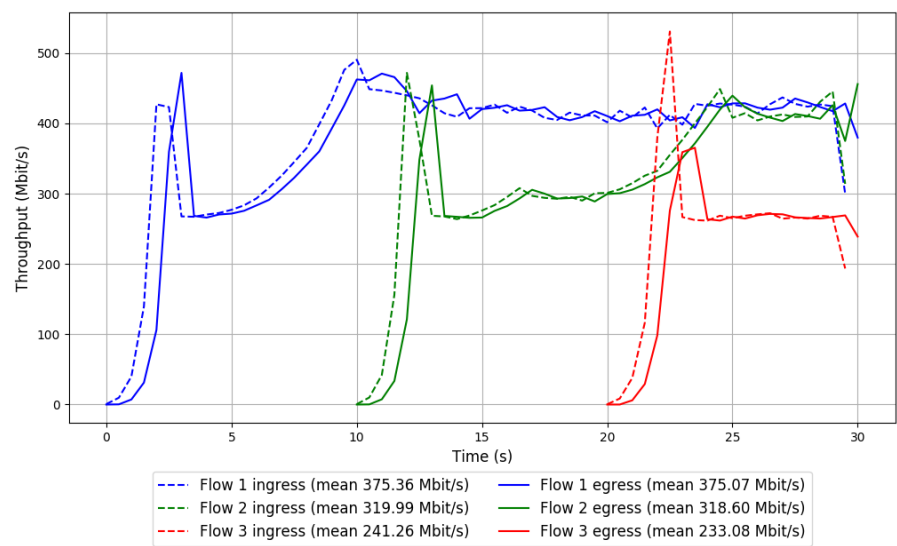


Run 5: Statistics of PCC-Allegro

Start at: 2019-01-24 21:07:45  
End at: 2019-01-24 21:08:15  
Local clock offset: -0.134 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-01-24 23:40:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 663.33 Mbit/s  
95th percentile per-packet one-way delay: 136.178 ms  
Loss rate: 0.59%  
-- Flow 1:  
Average throughput: 375.07 Mbit/s  
95th percentile per-packet one-way delay: 122.181 ms  
Loss rate: 0.08%  
-- Flow 2:  
Average throughput: 318.60 Mbit/s  
95th percentile per-packet one-way delay: 154.431 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 233.08 Mbit/s  
95th percentile per-packet one-way delay: 227.137 ms  
Loss rate: 3.39%

Run 5: Report of PCC-Allegro — Data Link



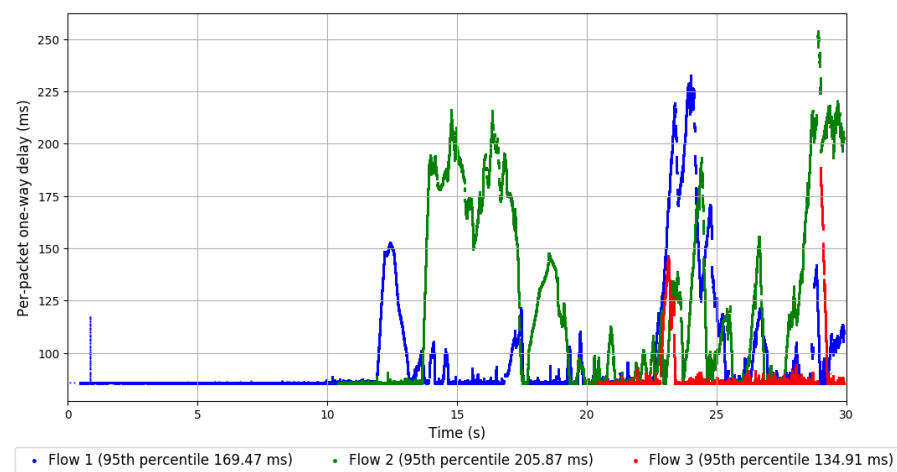
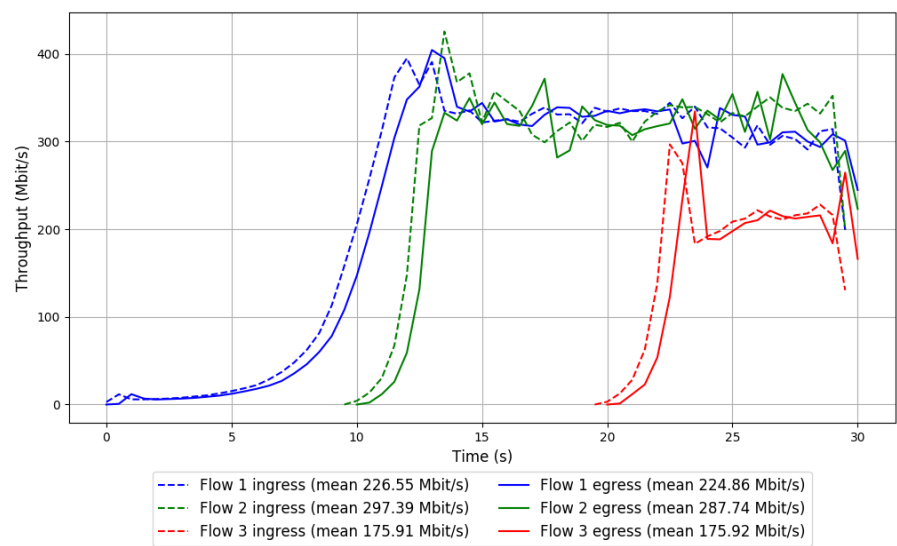


Run 1: Statistics of PCC-Expr

Start at: 2019-01-24 18:21:08  
End at: 2019-01-24 18:21:38  
Local clock offset: 0.126 ms  
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-01-24 23:40:54  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 474.84 Mbit/s  
95th percentile per-packet one-way delay: 195.889 ms  
Loss rate: 1.69%  
-- Flow 1:  
Average throughput: 224.86 Mbit/s  
95th percentile per-packet one-way delay: 169.468 ms  
Loss rate: 0.75%  
-- Flow 2:  
Average throughput: 287.74 Mbit/s  
95th percentile per-packet one-way delay: 205.872 ms  
Loss rate: 3.25%  
-- Flow 3:  
Average throughput: 175.92 Mbit/s  
95th percentile per-packet one-way delay: 134.914 ms  
Loss rate: 0.01%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-01-24 18:59:05

End at: 2019-01-24 18:59:35

Local clock offset: 0.216 ms

Remote clock offset: 0.101 ms

# Below is generated by plot.py at 2019-01-24 23:42:16

# Datalink statistics

-- Total of 3 flows:

Average throughput: 530.80 Mbit/s

95th percentile per-packet one-way delay: 188.849 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 334.53 Mbit/s

95th percentile per-packet one-way delay: 194.773 ms

Loss rate: 2.35%

-- Flow 2:

Average throughput: 211.11 Mbit/s

95th percentile per-packet one-way delay: 98.927 ms

Loss rate: 0.00%

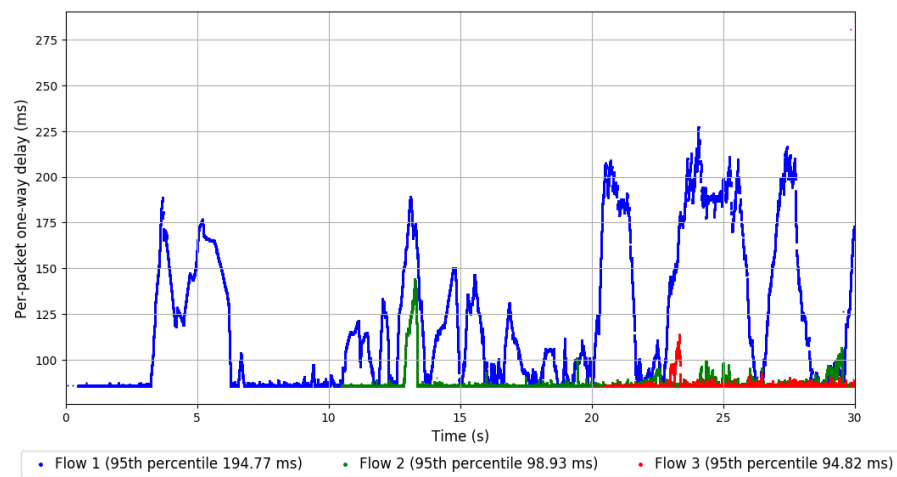
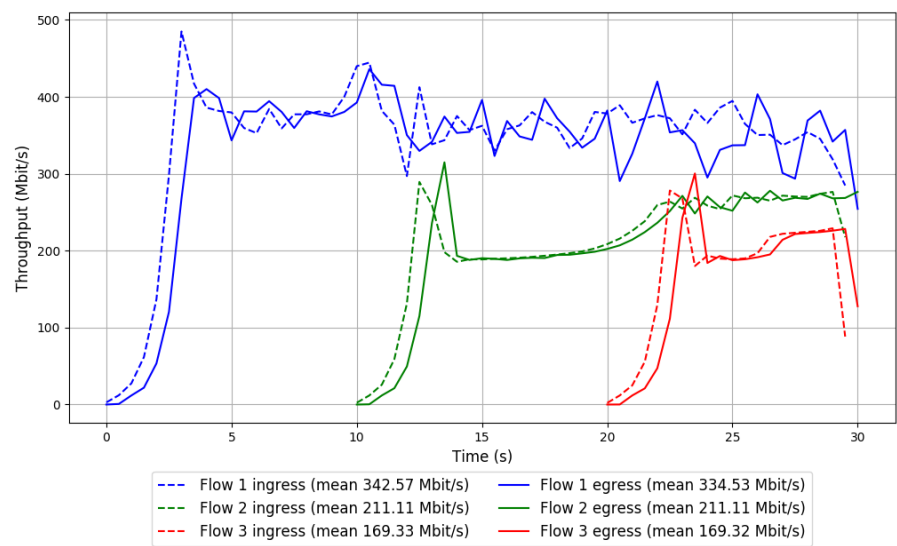
-- Flow 3:

Average throughput: 169.32 Mbit/s

95th percentile per-packet one-way delay: 94.823 ms

Loss rate: 0.00%

Run 2: Report of PCC-Expr — Data Link



Run 3: Statistics of PCC-Expr

Start at: 2019-01-24 19:37:56

End at: 2019-01-24 19:38:26

Local clock offset: -0.105 ms

Remote clock offset: 0.038 ms

# Below is generated by plot.py at 2019-01-24 23:46:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 568.36 Mbit/s

95th percentile per-packet one-way delay: 165.010 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 303.46 Mbit/s

95th percentile per-packet one-way delay: 129.297 ms

Loss rate: 0.71%

-- Flow 2:

Average throughput: 268.27 Mbit/s

95th percentile per-packet one-way delay: 167.277 ms

Loss rate: 0.34%

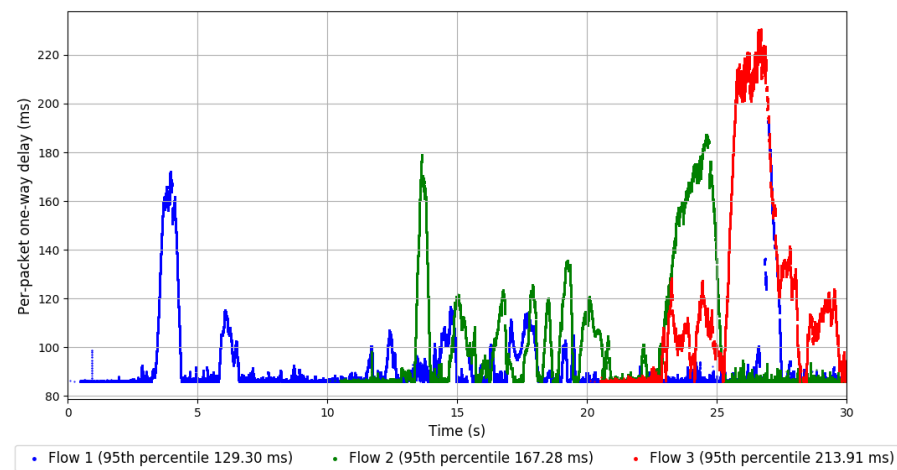
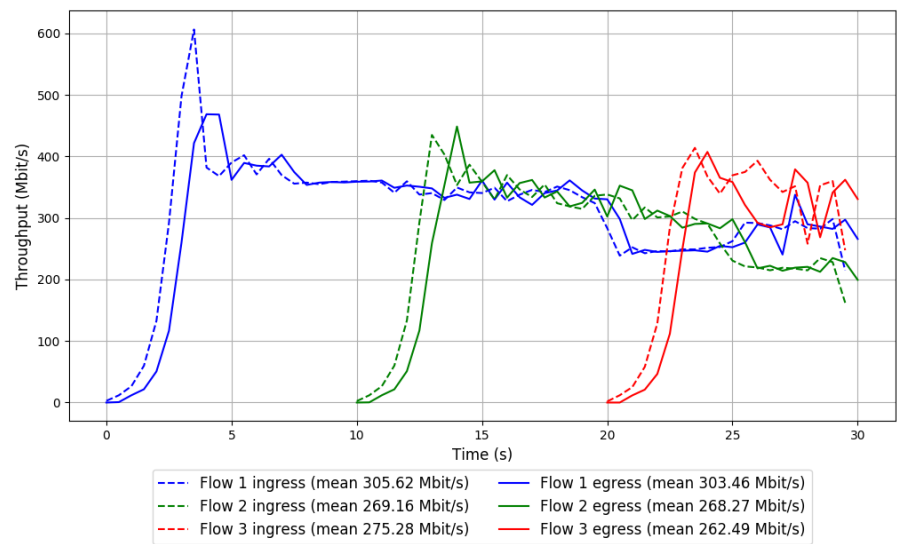
-- Flow 3:

Average throughput: 262.49 Mbit/s

95th percentile per-packet one-way delay: 213.909 ms

Loss rate: 4.64%

Run 3: Report of PCC-Expr — Data Link

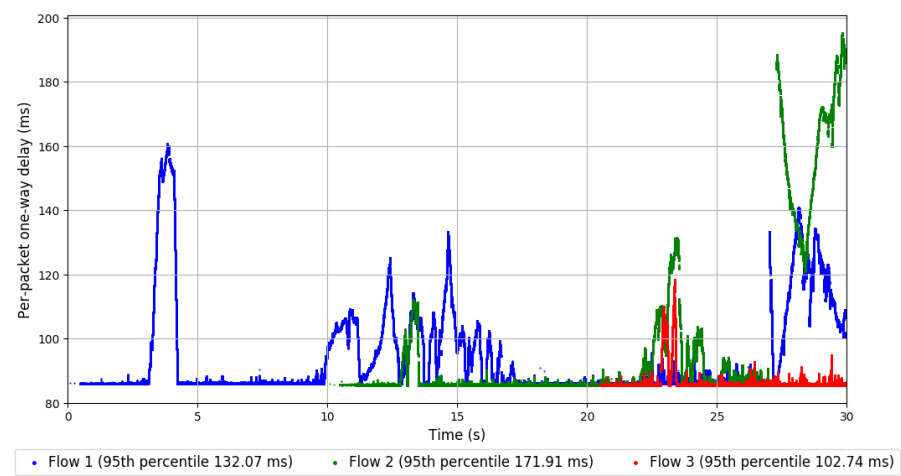
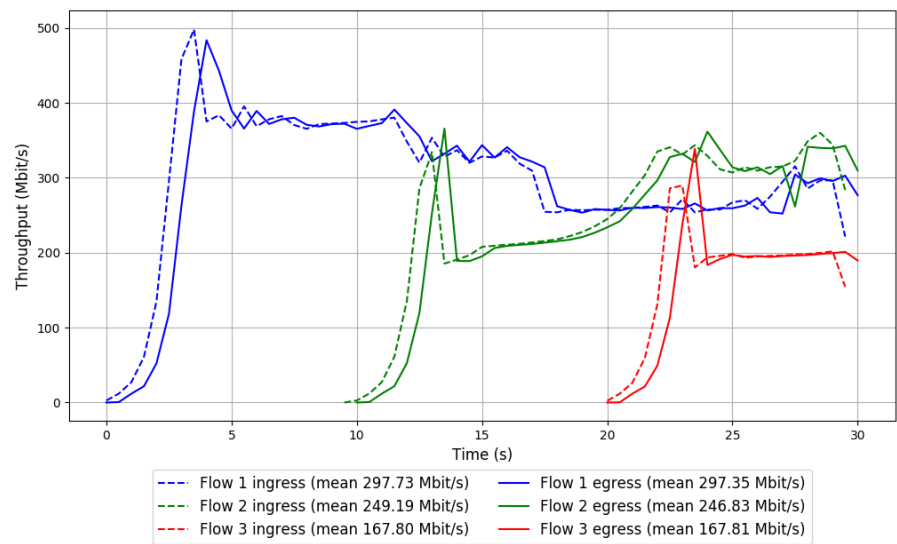


Run 4: Statistics of PCC-Expr

Start at: 2019-01-24 20:16:05  
End at: 2019-01-24 20:16:35  
Local clock offset: 0.286 ms  
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2019-01-24 23:51:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 516.93 Mbit/s  
95th percentile per-packet one-way delay: 151.653 ms  
Loss rate: 0.38%  
-- Flow 1:  
Average throughput: 297.35 Mbit/s  
95th percentile per-packet one-way delay: 132.066 ms  
Loss rate: 0.13%  
-- Flow 2:  
Average throughput: 246.83 Mbit/s  
95th percentile per-packet one-way delay: 171.913 ms  
Loss rate: 0.95%  
-- Flow 3:  
Average throughput: 167.81 Mbit/s  
95th percentile per-packet one-way delay: 102.743 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link



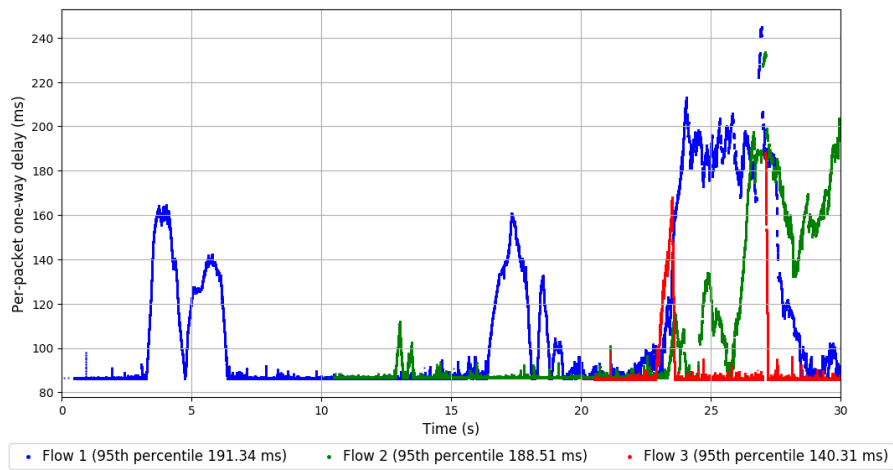
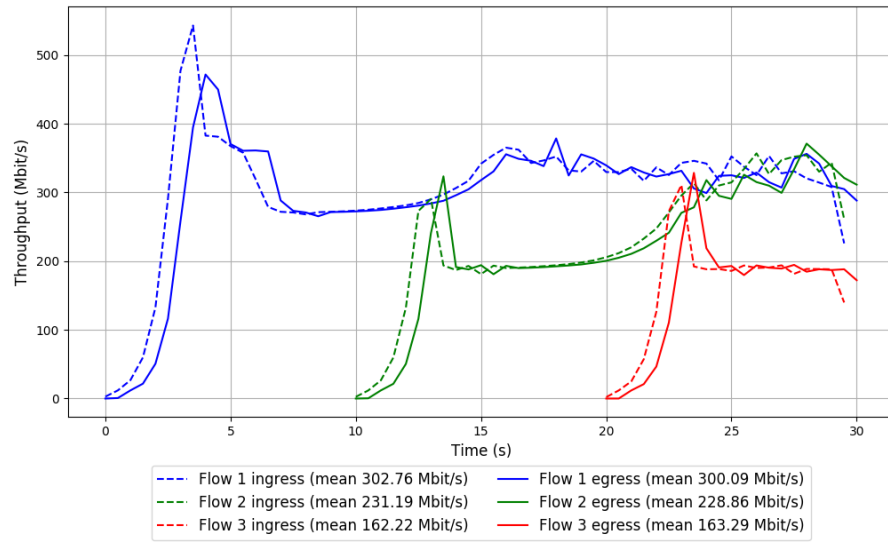


Run 5: Statistics of PCC-Expr

Start at: 2019-01-24 20:54:16  
End at: 2019-01-24 20:54:46  
Local clock offset: -0.116 ms  
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2019-01-24 23:53:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 505.91 Mbit/s  
95th percentile per-packet one-way delay: 189.050 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 300.09 Mbit/s  
95th percentile per-packet one-way delay: 191.335 ms  
Loss rate: 1.09%  
-- Flow 2:  
Average throughput: 228.86 Mbit/s  
95th percentile per-packet one-way delay: 188.506 ms  
Loss rate: 1.24%  
-- Flow 3:  
Average throughput: 163.29 Mbit/s  
95th percentile per-packet one-way delay: 140.307 ms  
Loss rate: 0.00%

# Run 5: Report of PCC-Expr — Data Link



Run 1: Statistics of QUIC Cubic

Start at: 2019-01-24 18:15:22

End at: 2019-01-24 18:15:52

Local clock offset: -0.187 ms

Remote clock offset: 0.107 ms

# Below is generated by plot.py at 2019-01-24 23:53:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 49.02 Mbit/s

95th percentile per-packet one-way delay: 86.551 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.01 Mbit/s

95th percentile per-packet one-way delay: 86.370 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 56.98 Mbit/s

95th percentile per-packet one-way delay: 86.562 ms

Loss rate: 0.00%

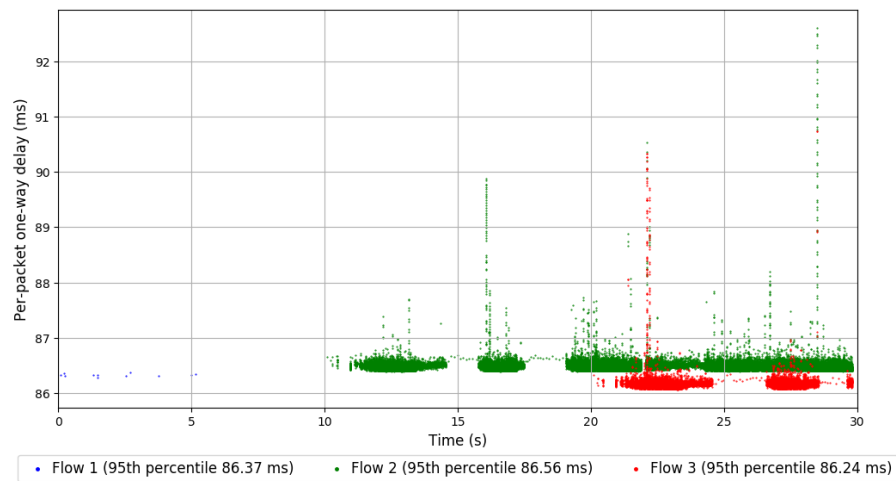
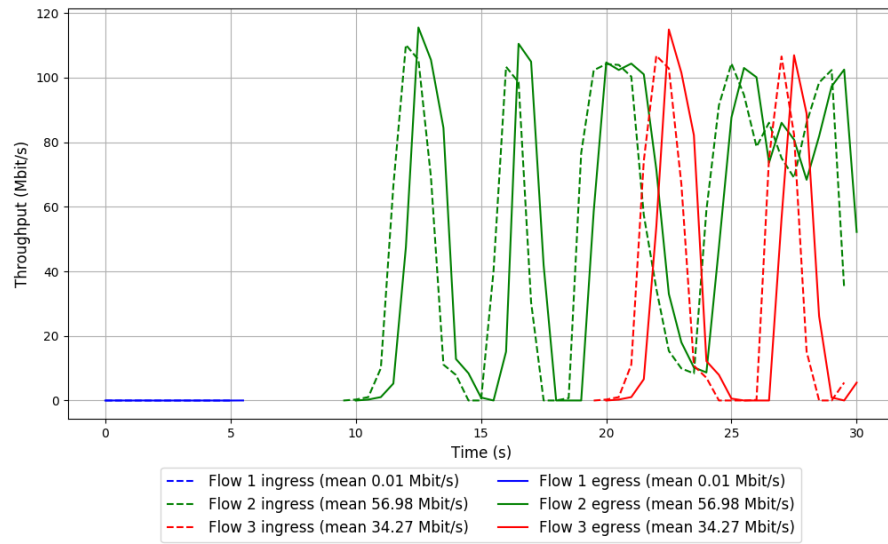
-- Flow 3:

Average throughput: 34.27 Mbit/s

95th percentile per-packet one-way delay: 86.236 ms

Loss rate: 0.00%

# Run 1: Report of QUIC Cubic — Data Link



Run 2: Statistics of QUIC Cubic

Start at: 2019-01-24 18:53:14

End at: 2019-01-24 18:53:44

Local clock offset: 0.476 ms

Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2019-01-24 23:53:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 94.16 Mbit/s

95th percentile per-packet one-way delay: 86.169 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 49.36 Mbit/s

95th percentile per-packet one-way delay: 85.523 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 50.57 Mbit/s

95th percentile per-packet one-way delay: 85.521 ms

Loss rate: 0.00%

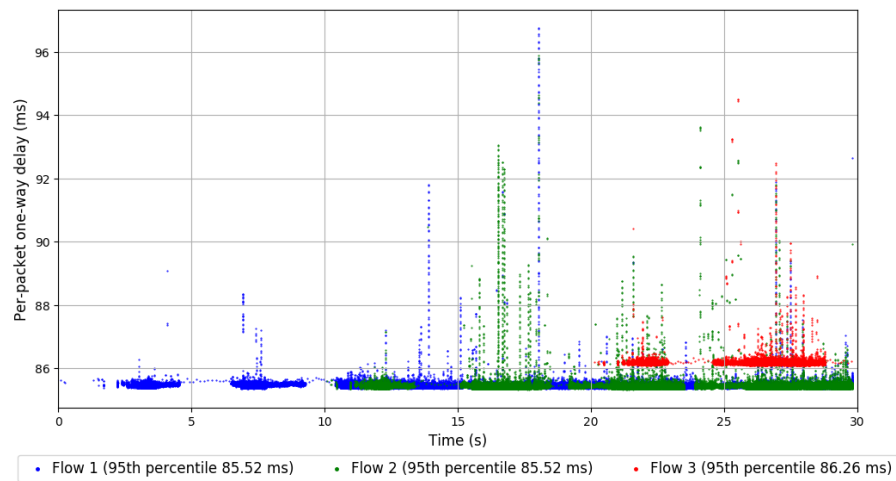
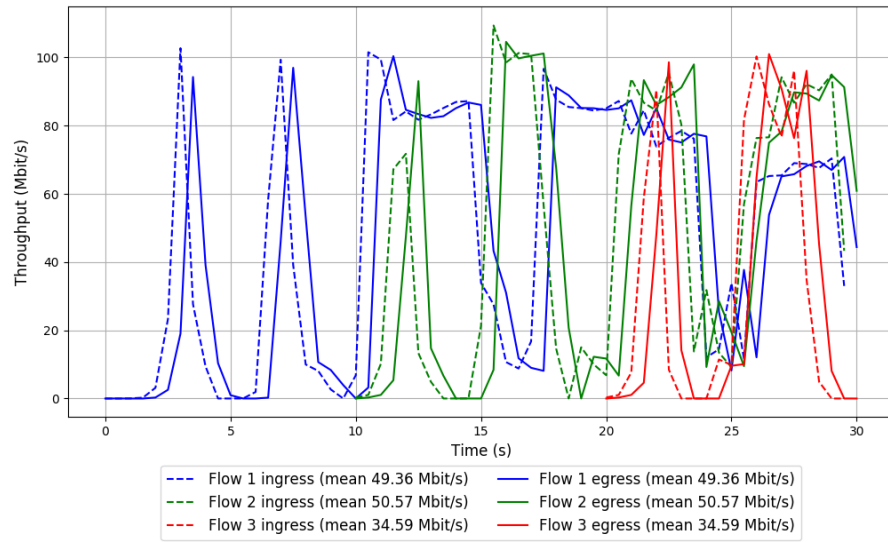
-- Flow 3:

Average throughput: 34.59 Mbit/s

95th percentile per-packet one-way delay: 86.256 ms

Loss rate: 0.00%

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

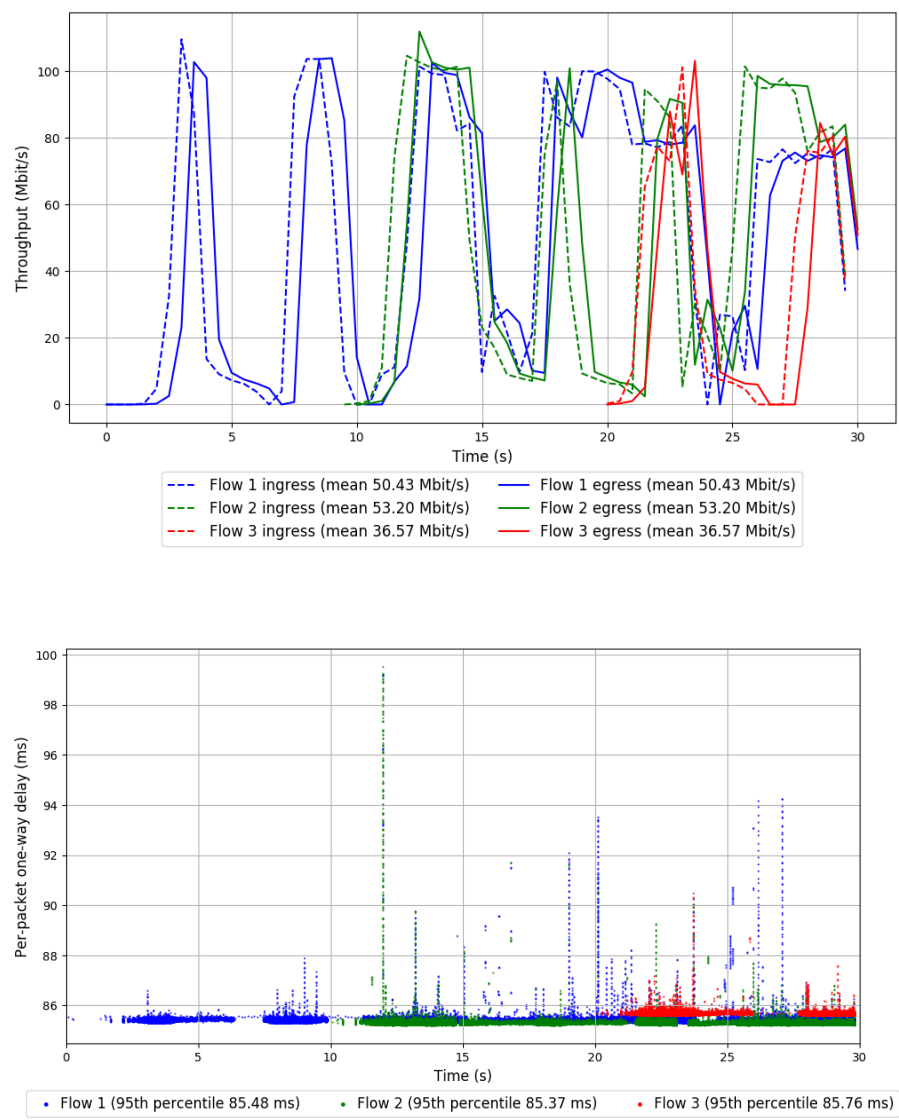


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-24 19:32:09  
End at: 2019-01-24 19:32:39  
Local clock offset: 0.406 ms  
Remote clock offset: -0.087 ms

# Below is generated by plot.py at 2019-01-24 23:53:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 97.69 Mbit/s  
95th percentile per-packet one-way delay: 85.680 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 50.43 Mbit/s  
95th percentile per-packet one-way delay: 85.481 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 53.20 Mbit/s  
95th percentile per-packet one-way delay: 85.372 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 36.57 Mbit/s  
95th percentile per-packet one-way delay: 85.763 ms  
Loss rate: 0.00%

Run 3: Report of QUIC Cubic — Data Link



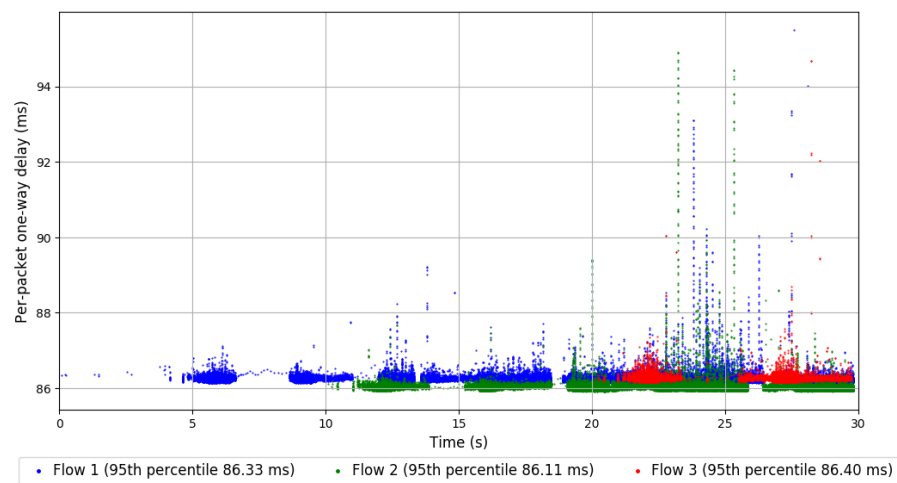
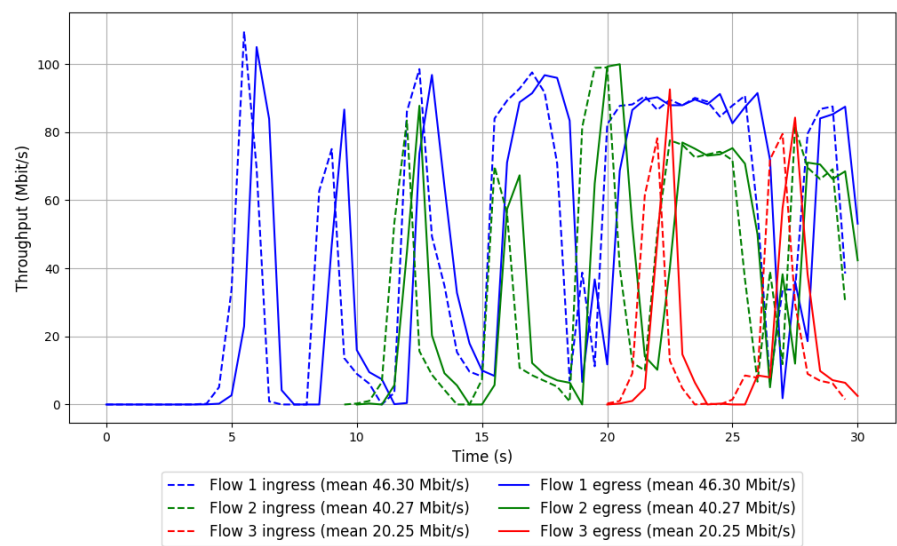


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-24 20:10:16  
End at: 2019-01-24 20:10:46  
Local clock offset: -0.144 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-24 23:53:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 79.60 Mbit/s  
95th percentile per-packet one-way delay: 86.315 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 46.30 Mbit/s  
95th percentile per-packet one-way delay: 86.328 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 40.27 Mbit/s  
95th percentile per-packet one-way delay: 86.109 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 20.25 Mbit/s  
95th percentile per-packet one-way delay: 86.398 ms  
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link



Run 5: Statistics of QUIC Cubic

Start at: 2019-01-24 20:48:29

End at: 2019-01-24 20:48:59

Local clock offset: 0.107 ms

Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-01-24 23:53:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 87.80 Mbit/s

95th percentile per-packet one-way delay: 86.041 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 46.32 Mbit/s

95th percentile per-packet one-way delay: 85.949 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 49.51 Mbit/s

95th percentile per-packet one-way delay: 85.897 ms

Loss rate: 0.00%

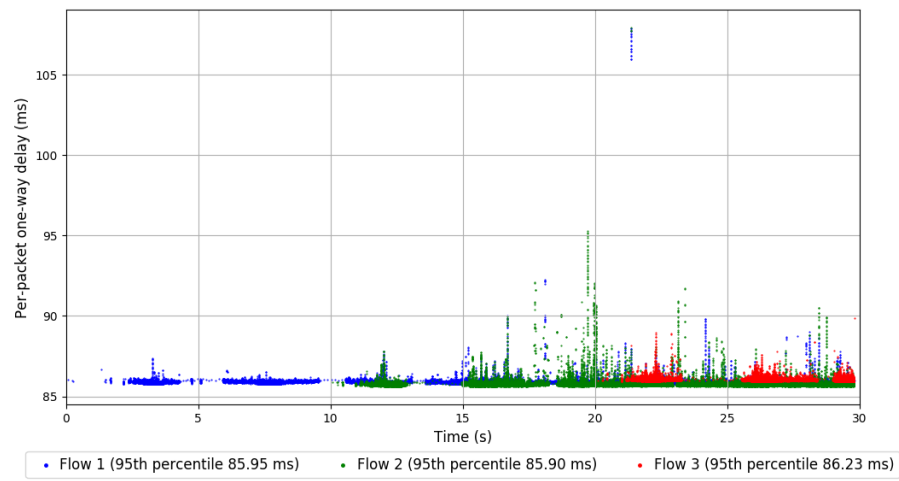
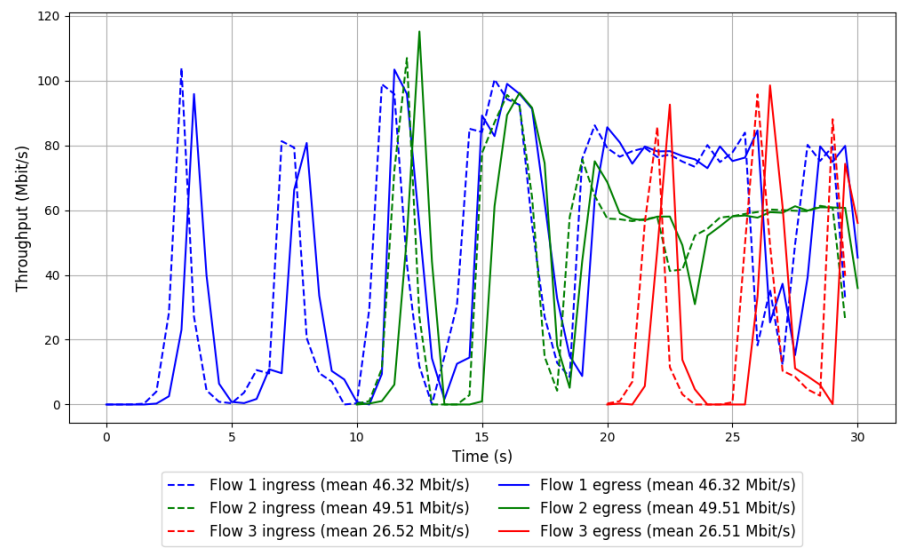
-- Flow 3:

Average throughput: 26.51 Mbit/s

95th percentile per-packet one-way delay: 86.232 ms

Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

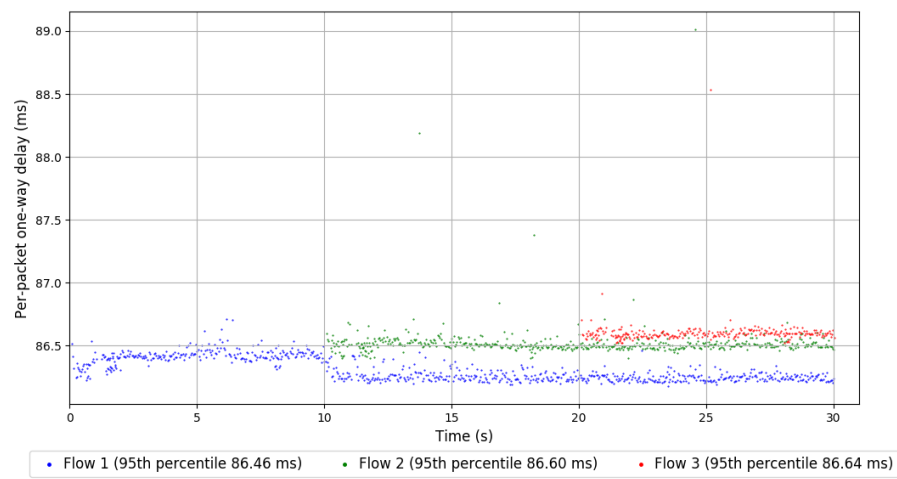
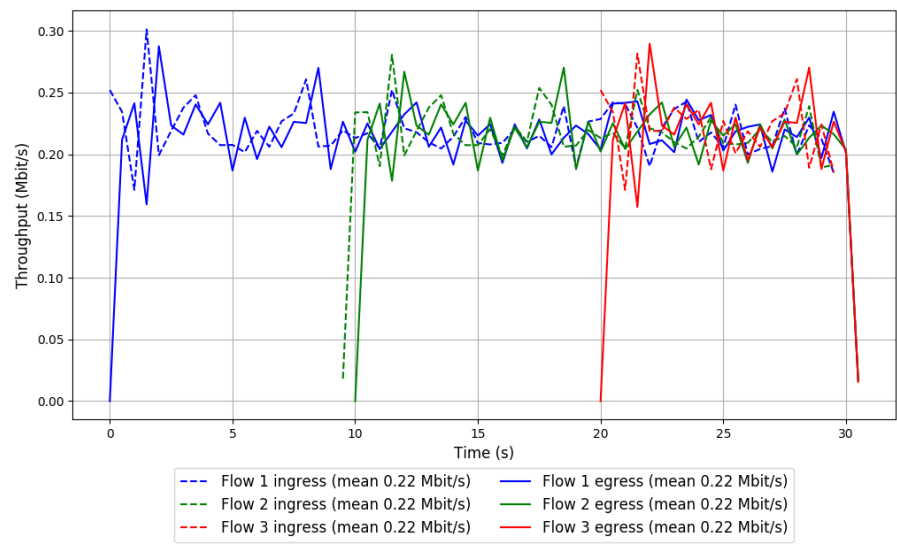


```
Run 1: Statistics of SReAM

Start at: 2019-01-24 18:09:52
End at: 2019-01-24 18:10:22
Local clock offset: -0.358 ms
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-01-24 23:53:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.463 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.597 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.644 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link



Run 2: Statistics of SReAM

Start at: 2019-01-24 18:47:34

End at: 2019-01-24 18:48:04

Local clock offset: -0.145 ms

Remote clock offset: 0.125 ms

# Below is generated by plot.py at 2019-01-24 23:53:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.365 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.380 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.336 ms

Loss rate: 0.00%

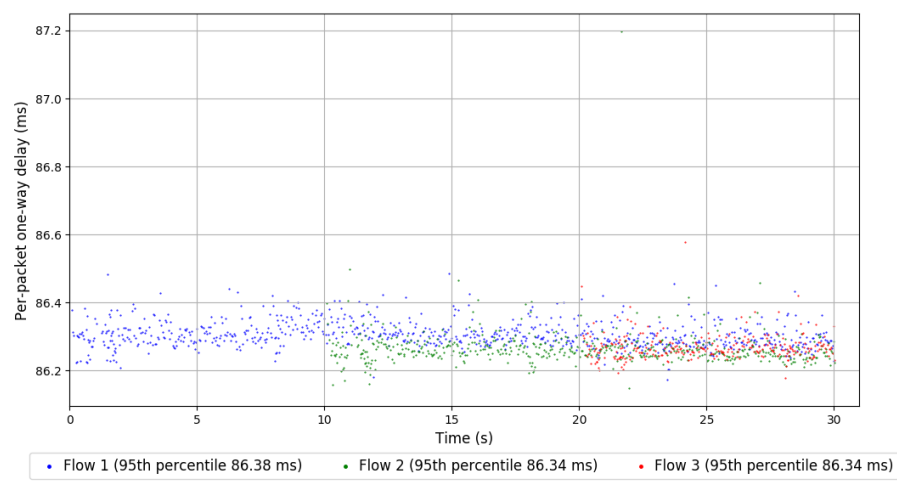
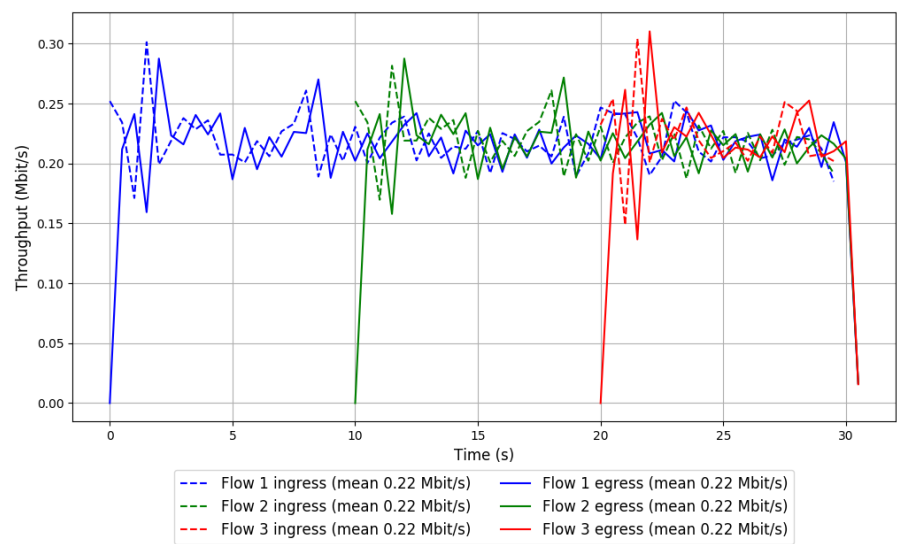
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.338 ms

Loss rate: 0.00%

Run 2: Report of SReAM — Data Link





Run 3: Statistics of SReAM

Start at: 2019-01-24 19:26:19

End at: 2019-01-24 19:26:49

Local clock offset: -0.414 ms

Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-01-24 23:53:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.529 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.548 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.447 ms

Loss rate: 0.00%

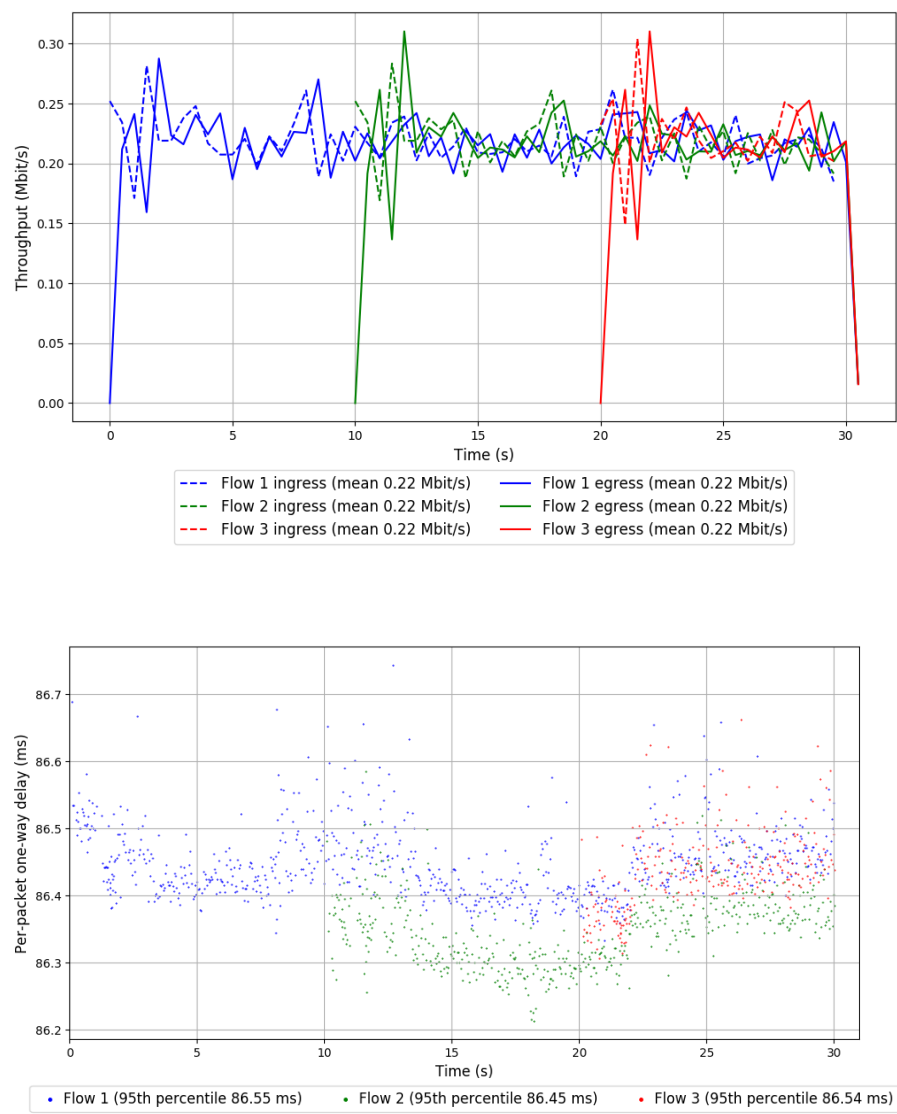
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.544 ms

Loss rate: 0.00%

Run 3: Report of SReAM — Data Link

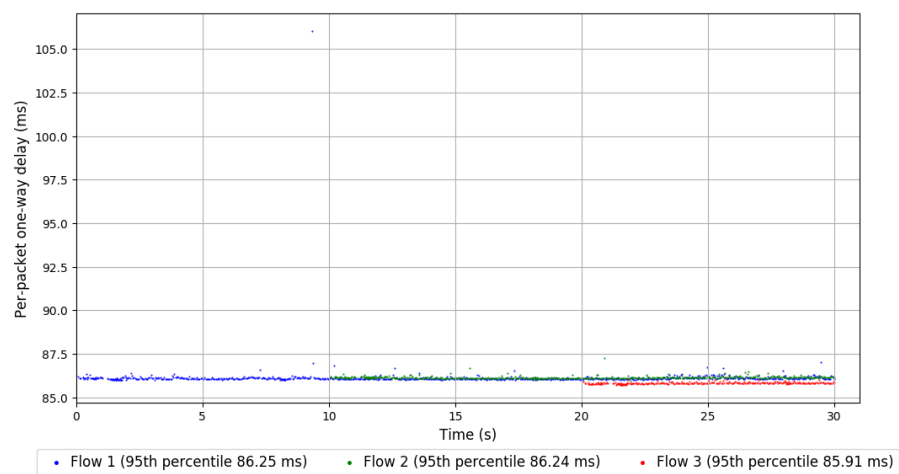
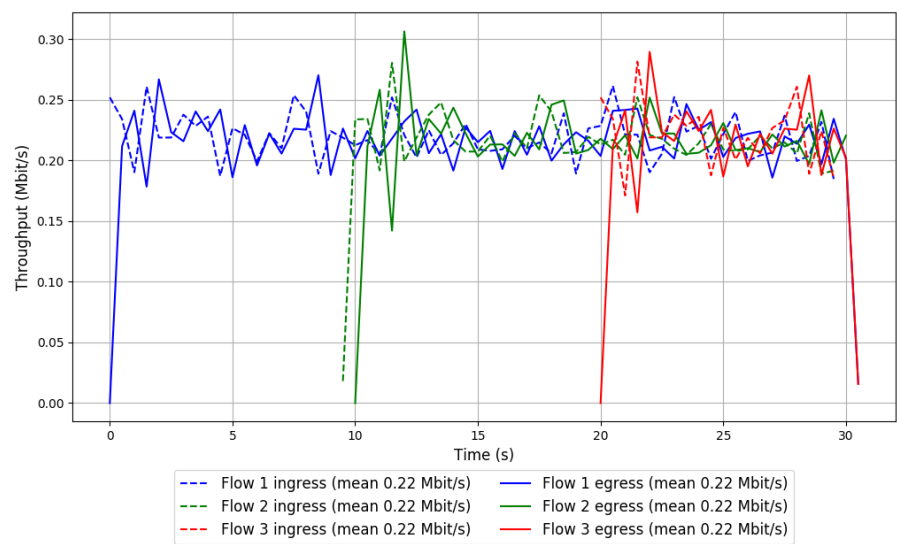


Run 4: Statistics of SReAM

Start at: 2019-01-24 20:04:36  
End at: 2019-01-24 20:05:06  
Local clock offset: 0.143 ms  
Remote clock offset: -0.097 ms

# Below is generated by plot.py at 2019-01-24 23:53:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.44 Mbit/s  
95th percentile per-packet one-way delay: 86.233 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 86.247 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 86.244 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.22 Mbit/s  
95th percentile per-packet one-way delay: 85.906 ms  
Loss rate: 0.00%

Run 4: Report of SReAM — Data Link



Run 5: Statistics of SReAM

Start at: 2019-01-24 20:43:02

End at: 2019-01-24 20:43:32

Local clock offset: -0.052 ms

Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-01-24 23:53:18

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.44 Mbit/s

95th percentile per-packet one-way delay: 86.775 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.489 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.207 ms

Loss rate: 0.00%

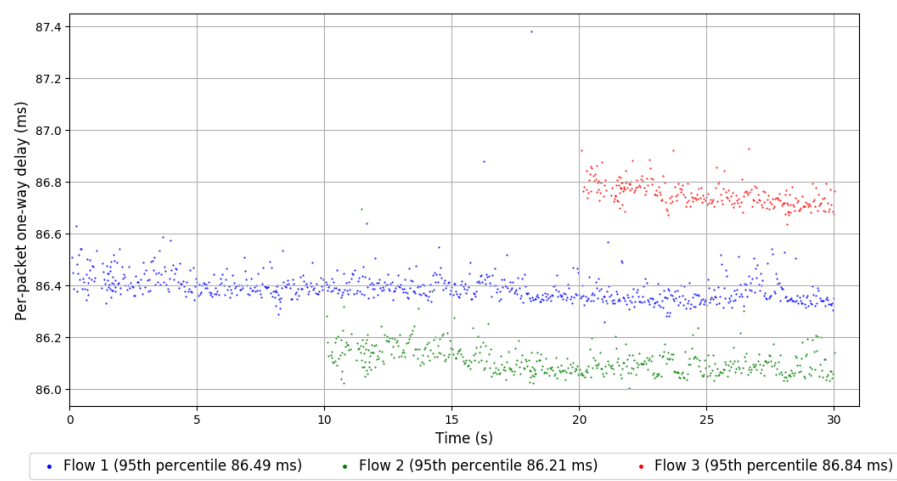
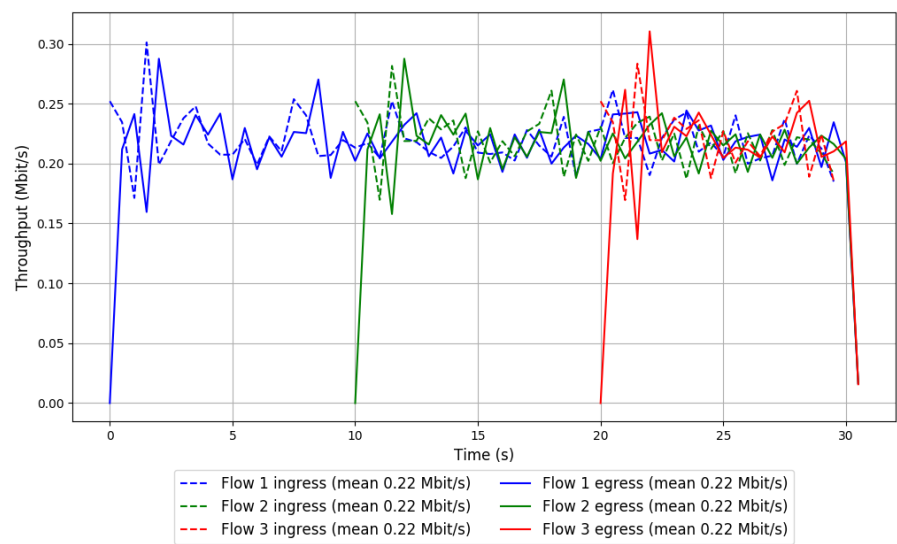
-- Flow 3:

Average throughput: 0.22 Mbit/s

95th percentile per-packet one-way delay: 86.842 ms

Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

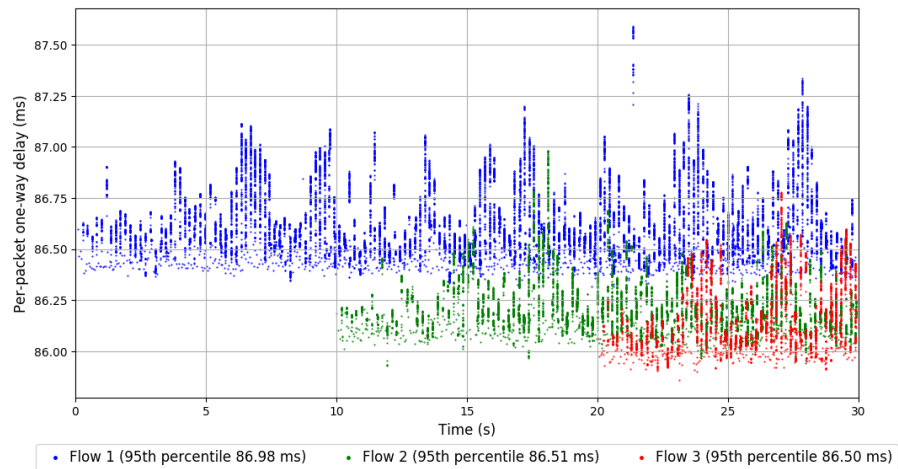
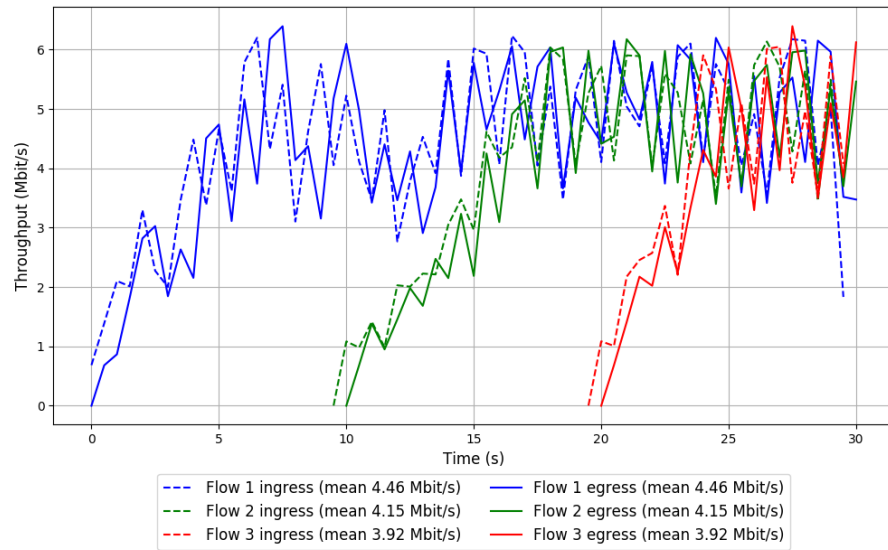


Run 1: Statistics of Sprout

Start at: 2019-01-24 18:16:40  
End at: 2019-01-24 18:17:10  
Local clock offset: -0.142 ms  
Remote clock offset: -0.041 ms

# Below is generated by plot.py at 2019-01-24 23:53:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.52 Mbit/s  
95th percentile per-packet one-way delay: 86.908 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 4.46 Mbit/s  
95th percentile per-packet one-way delay: 86.983 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 4.15 Mbit/s  
95th percentile per-packet one-way delay: 86.513 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 3.92 Mbit/s  
95th percentile per-packet one-way delay: 86.500 ms  
Loss rate: 0.00%

## Run 1: Report of Sprout — Data Link



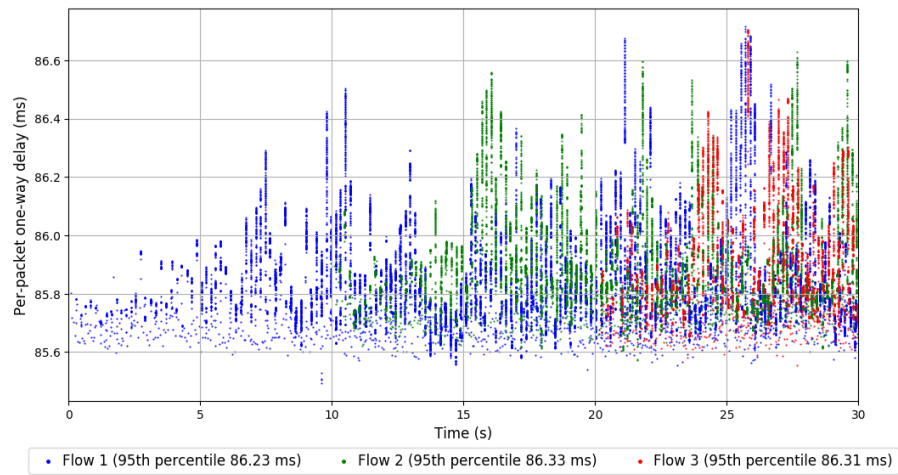
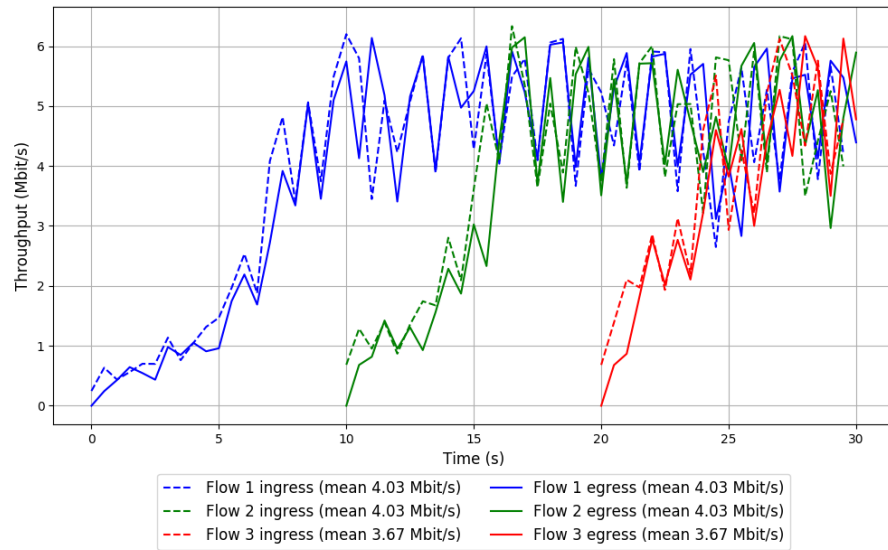


Run 2: Statistics of Sprout

Start at: 2019-01-24 18:54:35  
End at: 2019-01-24 18:55:05  
Local clock offset: 0.242 ms  
Remote clock offset: -0.056 ms

```
# Below is generated by plot.py at 2019-01-24 23:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 86.287 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 86.233 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 86.328 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 86.308 ms
Loss rate: 0.00%
```

## Run 2: Report of Sprout — Data Link

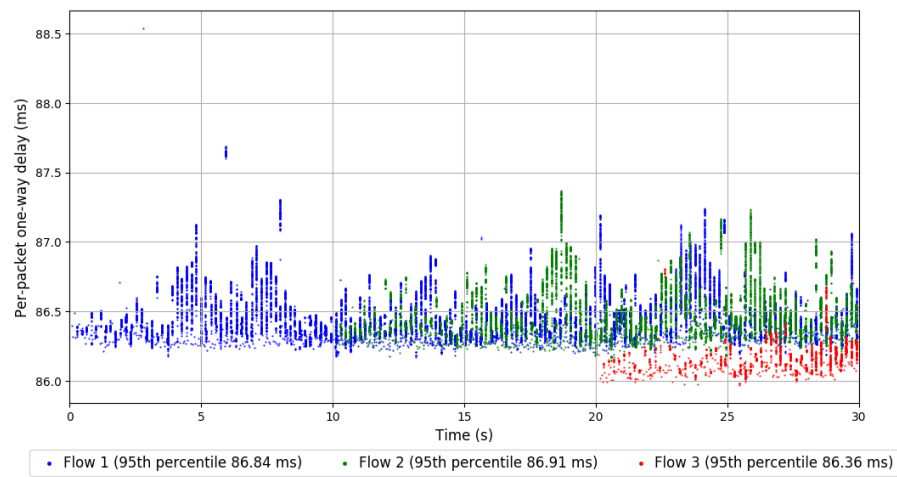
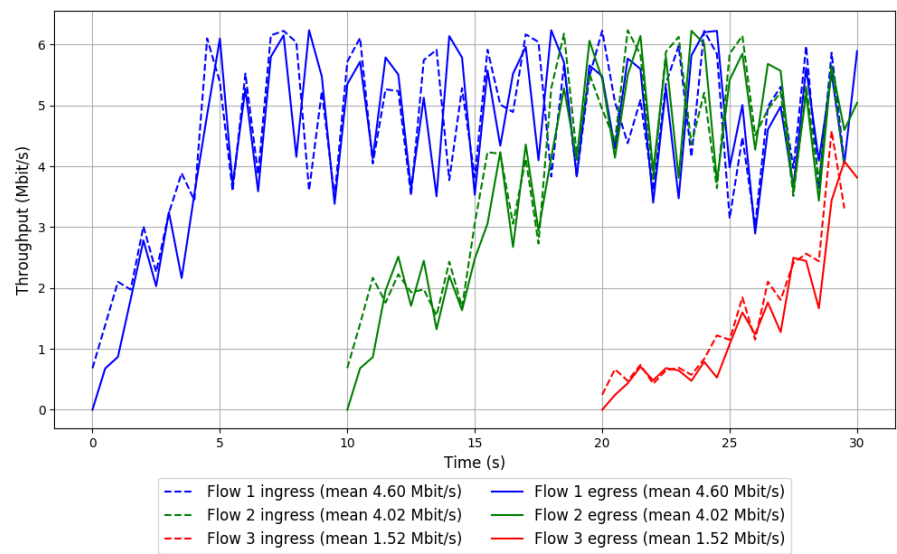


### Run 3: Statistics of Sprout

Start at: 2019-01-24 19:33:30  
End at: 2019-01-24 19:34:00  
Local clock offset: -0.168 ms  
Remote clock offset: -0.052 ms

```
# Below is generated by plot.py at 2019-01-24 23:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 86.854 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 86.838 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 86.905 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.52 Mbit/s
95th percentile per-packet one-way delay: 86.356 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

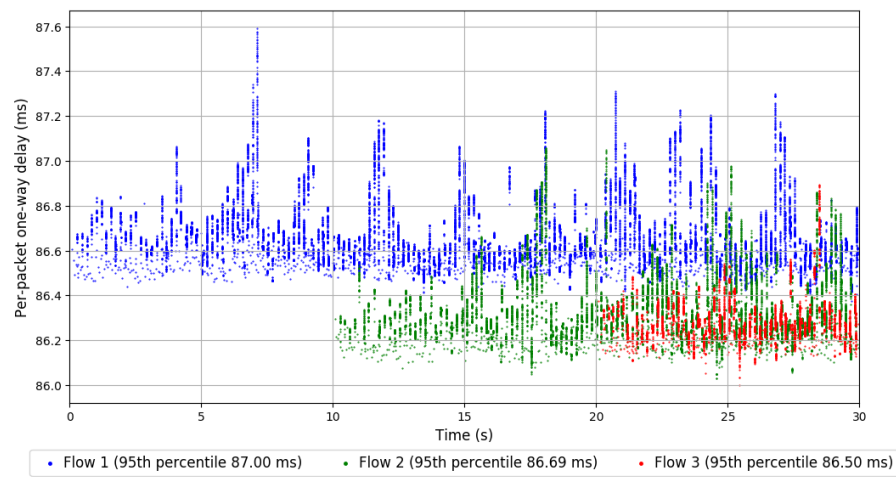
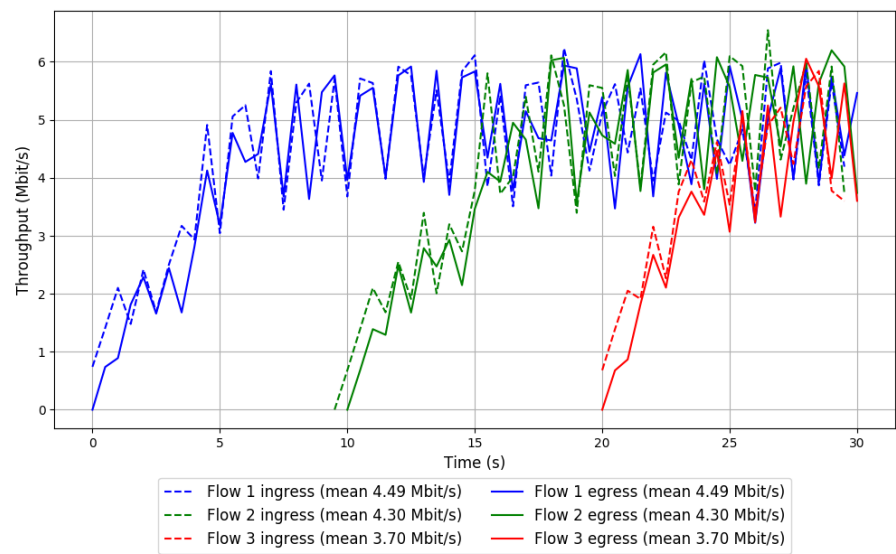


#### Run 4: Statistics of Sprout

Start at: 2019-01-24 20:11:36  
End at: 2019-01-24 20:12:06  
Local clock offset: -0.105 ms  
Remote clock offset: 0.061 ms

```
# Below is generated by plot.py at 2019-01-24 23:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 86.909 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.30 Mbit/s
95th percentile per-packet one-way delay: 86.691 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 86.495 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

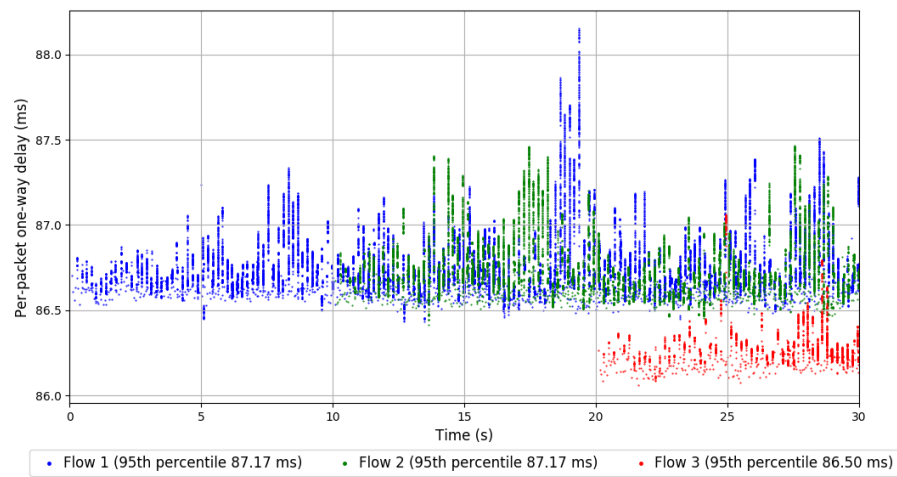
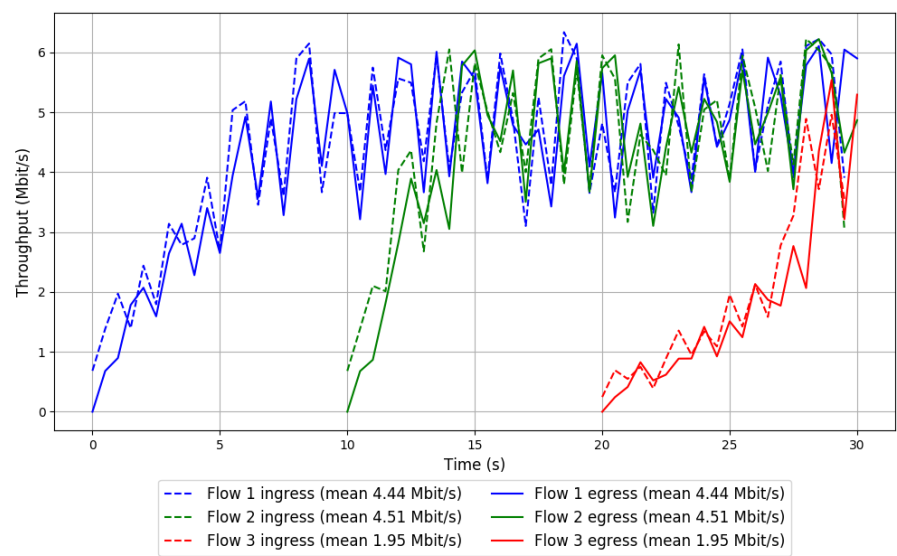


Run 5: Statistics of Sprout

Start at: 2019-01-24 20:49:49  
End at: 2019-01-24 20:50:19  
Local clock offset: -0.236 ms  
Remote clock offset: -0.038 ms

```
# Below is generated by plot.py at 2019-01-24 23:53:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 87.159 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.44 Mbit/s
95th percentile per-packet one-way delay: 87.166 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 87.175 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 86.501 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



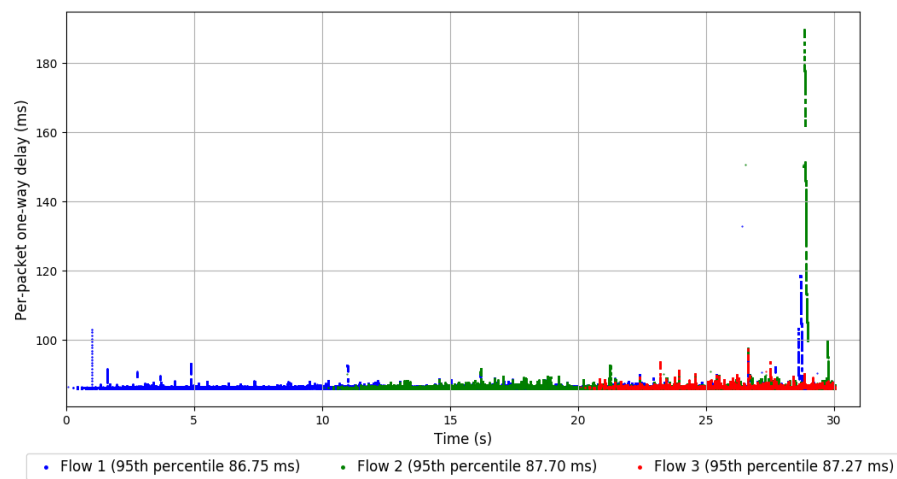
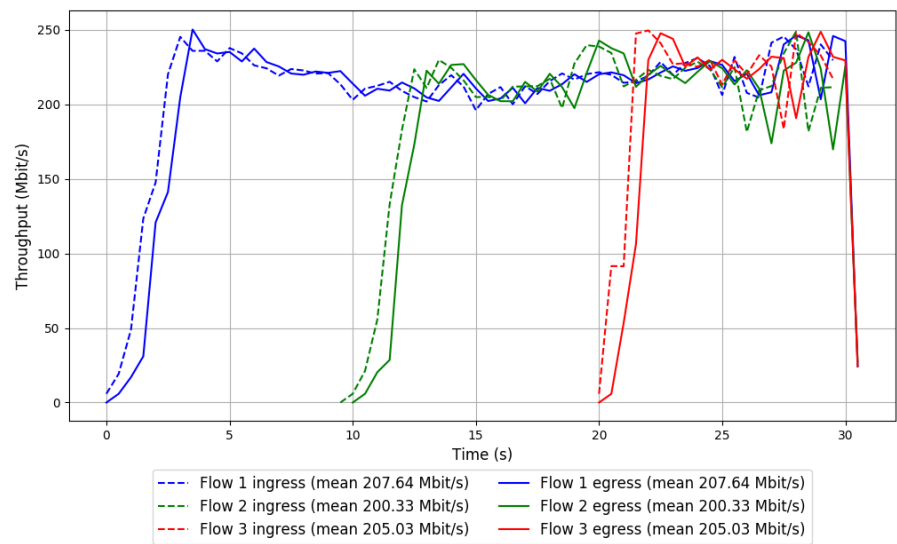


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-01-24 18:19:11
End at: 2019-01-24 18:19:41
Local clock offset: -0.185 ms
Remote clock offset: 0.118 ms

# Below is generated by plot.py at 2019-01-24 23:56:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.23 Mbit/s
95th percentile per-packet one-way delay: 87.126 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 207.64 Mbit/s
95th percentile per-packet one-way delay: 86.751 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.33 Mbit/s
95th percentile per-packet one-way delay: 87.700 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 205.03 Mbit/s
95th percentile per-packet one-way delay: 87.267 ms
Loss rate: 0.00%
```

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



Run 2: Statistics of TaoVA-100x

Start at: 2019-01-24 18:57:05

End at: 2019-01-24 18:57:35

Local clock offset: -0.144 ms

Remote clock offset: 0.05 ms

# Below is generated by plot.py at 2019-01-24 23:57:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 425.54 Mbit/s

95th percentile per-packet one-way delay: 87.411 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 220.31 Mbit/s

95th percentile per-packet one-way delay: 86.604 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 220.48 Mbit/s

95th percentile per-packet one-way delay: 87.823 ms

Loss rate: 0.00%

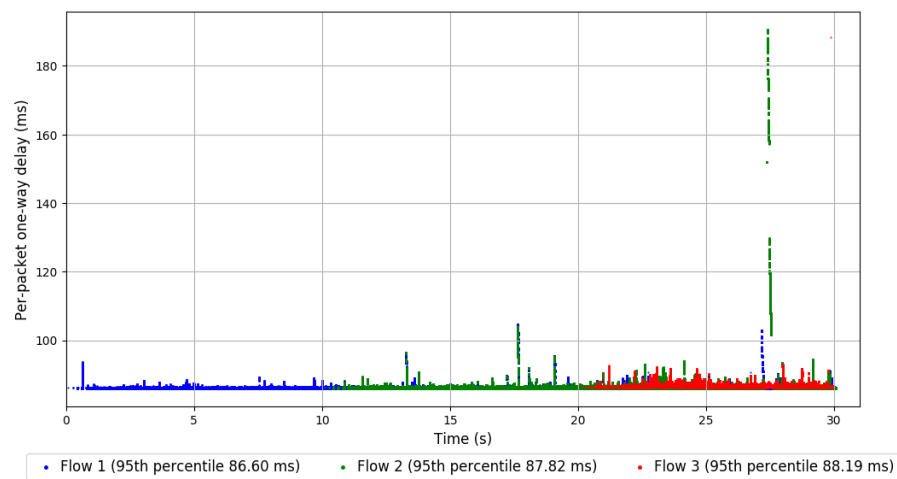
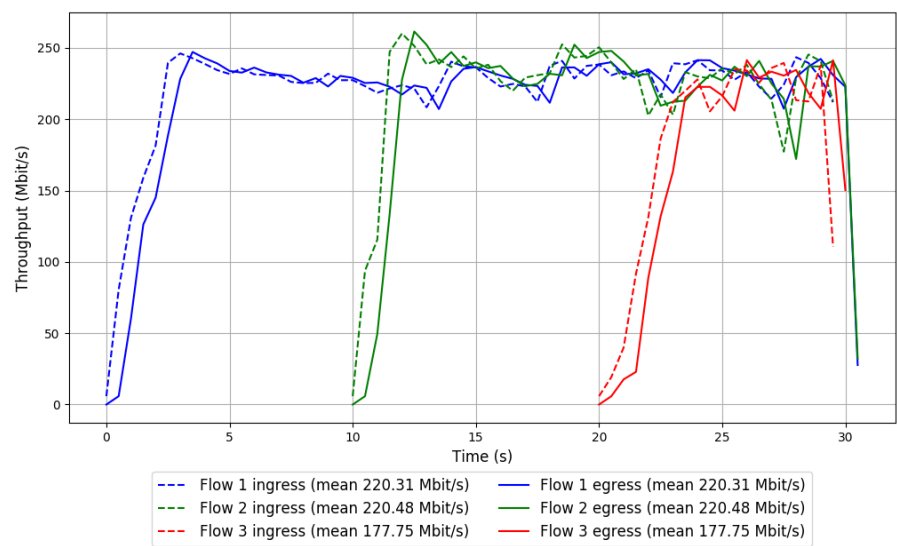
-- Flow 3:

Average throughput: 177.75 Mbit/s

95th percentile per-packet one-way delay: 88.185 ms

Loss rate: 0.00%

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

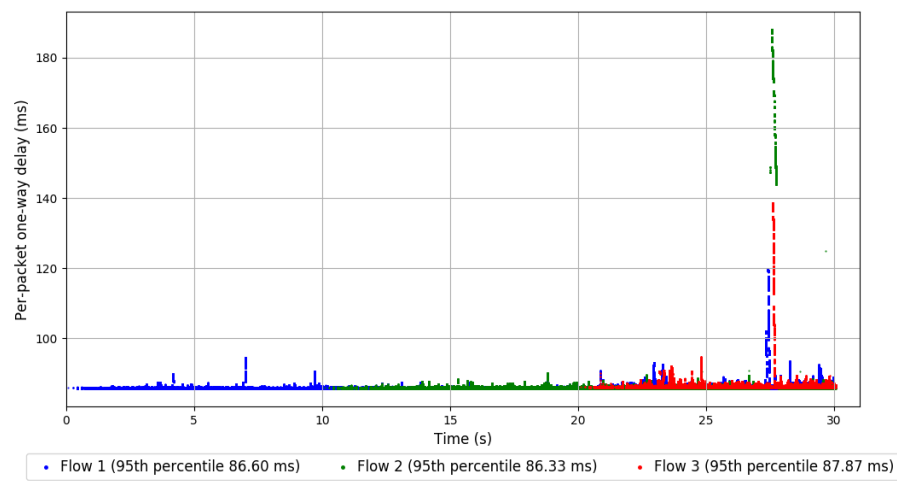
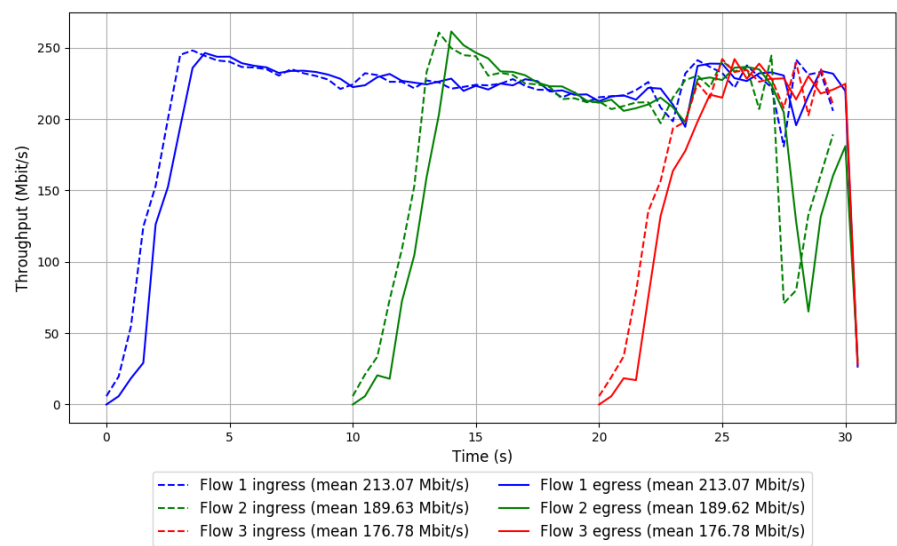


Run 3: Statistics of TaoVA-100x

Start at: 2019-01-24 19:36:00  
End at: 2019-01-24 19:36:30  
Local clock offset: 0.06 ms  
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-01-24 23:57:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 398.11 Mbit/s  
95th percentile per-packet one-way delay: 86.865 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 213.07 Mbit/s  
95th percentile per-packet one-way delay: 86.597 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 189.62 Mbit/s  
95th percentile per-packet one-way delay: 86.325 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 176.78 Mbit/s  
95th percentile per-packet one-way delay: 87.874 ms  
Loss rate: 0.00%

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

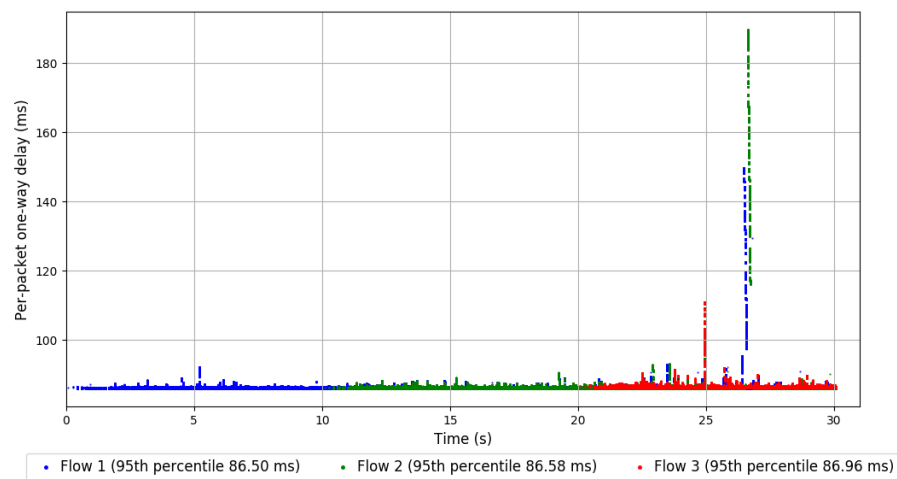
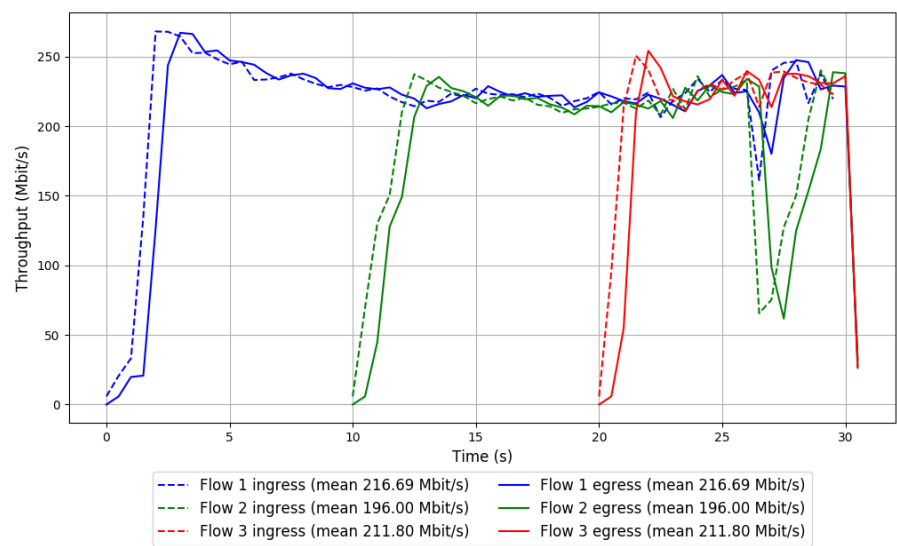


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-24 20:14:07  
End at: 2019-01-24 20:14:37  
Local clock offset: -0.271 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-01-24 23:57:22  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 417.61 Mbit/s  
95th percentile per-packet one-way delay: 86.665 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 216.69 Mbit/s  
95th percentile per-packet one-way delay: 86.502 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 196.00 Mbit/s  
95th percentile per-packet one-way delay: 86.577 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 211.80 Mbit/s  
95th percentile per-packet one-way delay: 86.958 ms  
Loss rate: 0.00%

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





Run 5: Statistics of TaoVA-100x

Start at: 2019-01-24 20:52:19

End at: 2019-01-24 20:52:49

Local clock offset: -0.052 ms

Remote clock offset: 0.089 ms

# Below is generated by plot.py at 2019-01-24 23:57:47

# Datalink statistics

-- Total of 3 flows:

Average throughput: 403.70 Mbit/s

95th percentile per-packet one-way delay: 88.928 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 206.78 Mbit/s

95th percentile per-packet one-way delay: 88.224 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 206.16 Mbit/s

95th percentile per-packet one-way delay: 88.661 ms

Loss rate: 0.00%

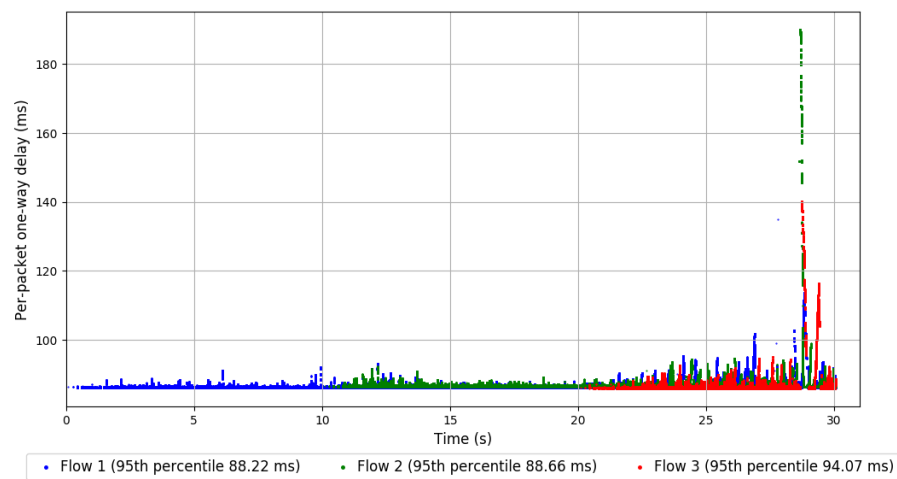
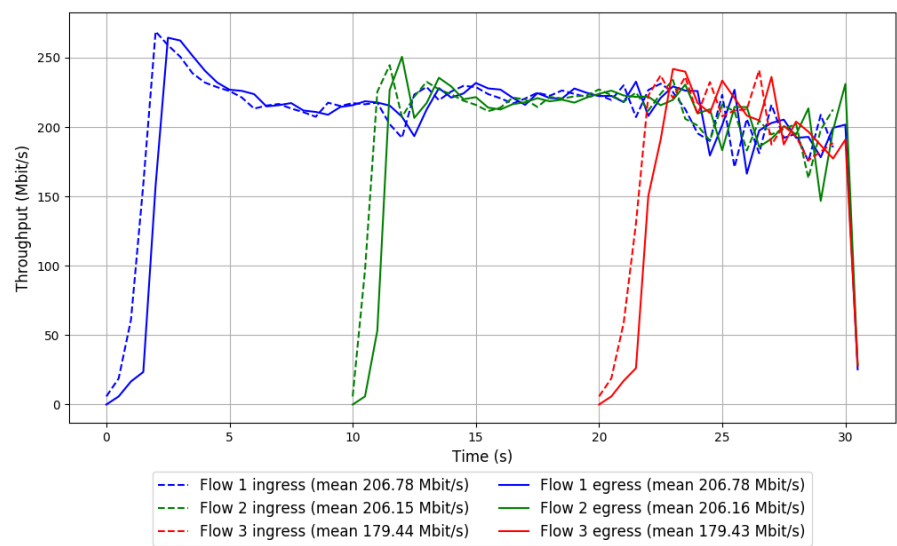
-- Flow 3:

Average throughput: 179.43 Mbit/s

95th percentile per-packet one-way delay: 94.074 ms

Loss rate: 0.00%

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



Run 1: Statistics of TCP Vegas

Start at: 2019-01-24 18:26:53

End at: 2019-01-24 18:27:23

Local clock offset: -0.051 ms

Remote clock offset: 0.06 ms

# Below is generated by plot.py at 2019-01-25 00:00:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 716.35 Mbit/s

95th percentile per-packet one-way delay: 146.115 ms

Loss rate: 0.14%

-- Flow 1:

Average throughput: 325.26 Mbit/s

95th percentile per-packet one-way delay: 86.476 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 411.97 Mbit/s

95th percentile per-packet one-way delay: 156.466 ms

Loss rate: 0.00%

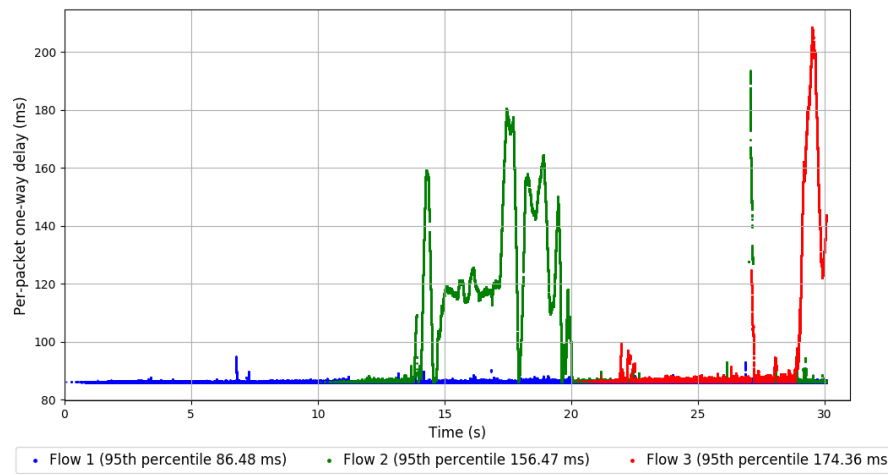
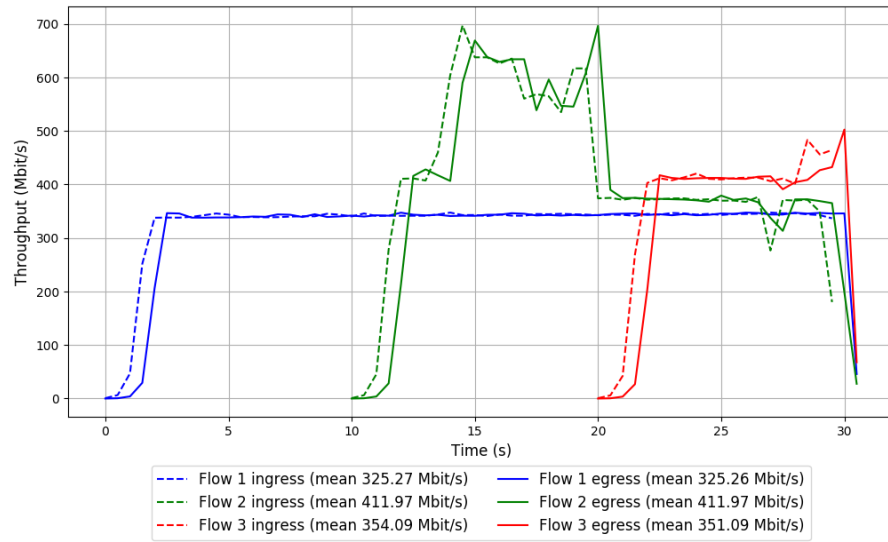
-- Flow 3:

Average throughput: 351.09 Mbit/s

95th percentile per-packet one-way delay: 174.360 ms

Loss rate: 0.84%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-24 19:05:09

End at: 2019-01-24 19:05:39

Local clock offset: -0.205 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-01-25 00:12:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 977.68 Mbit/s

95th percentile per-packet one-way delay: 167.363 ms

Loss rate: 0.07%

-- Flow 1:

Average throughput: 519.15 Mbit/s

95th percentile per-packet one-way delay: 166.033 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 476.43 Mbit/s

95th percentile per-packet one-way delay: 166.006 ms

Loss rate: 0.13%

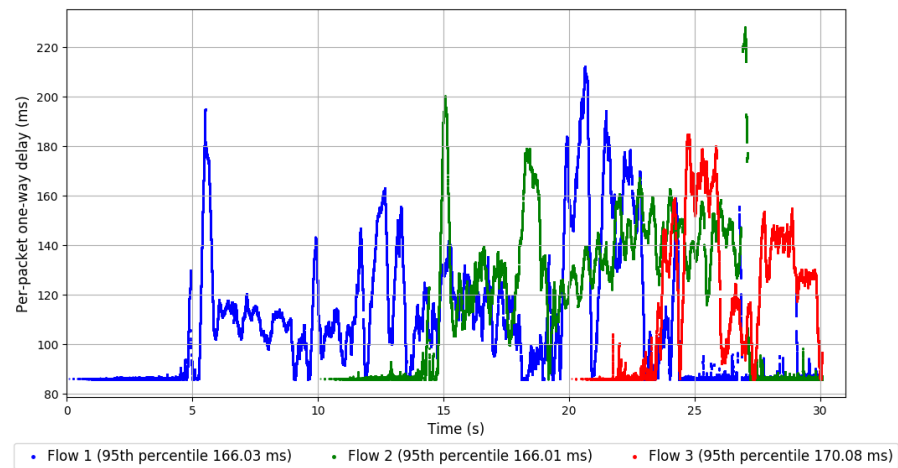
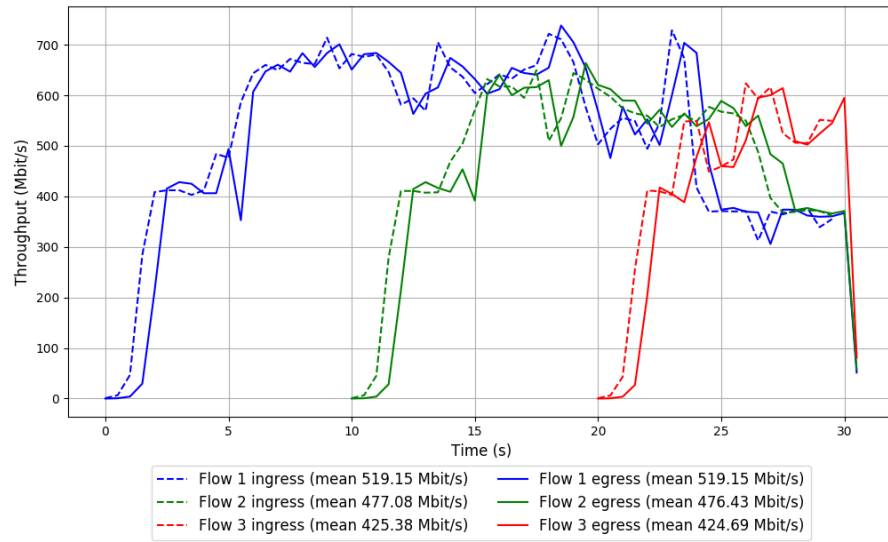
-- Flow 3:

Average throughput: 424.69 Mbit/s

95th percentile per-packet one-way delay: 170.081 ms

Loss rate: 0.16%

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

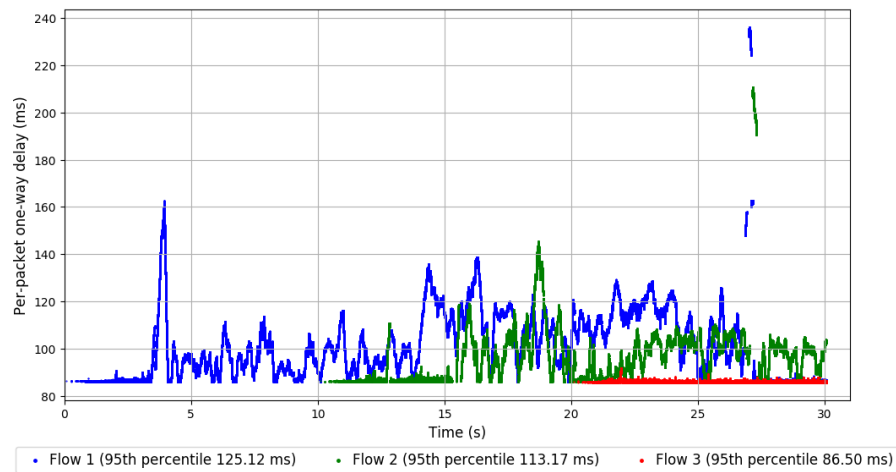
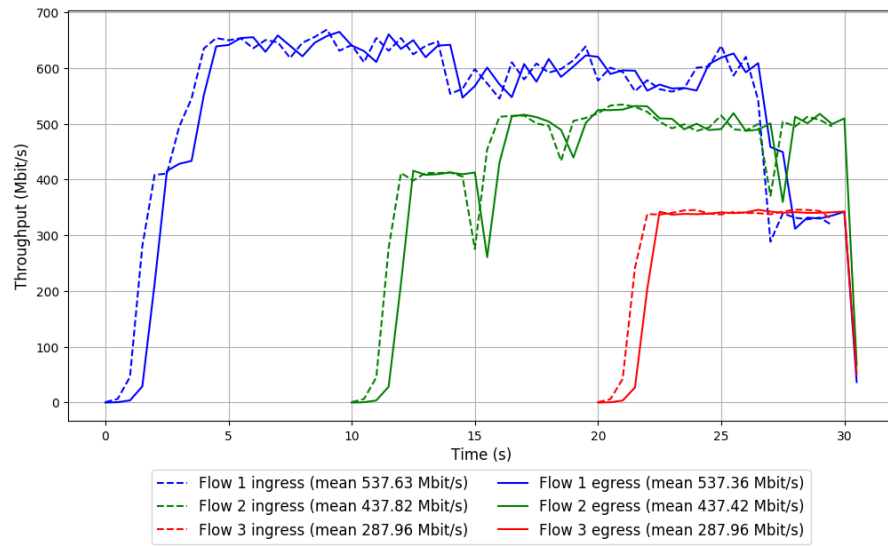


Run 3: Statistics of TCP Vegas

Start at: 2019-01-24 19:44:01  
End at: 2019-01-24 19:44:31  
Local clock offset: -0.035 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-25 00:12:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 924.47 Mbit/s  
95th percentile per-packet one-way delay: 122.313 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 537.36 Mbit/s  
95th percentile per-packet one-way delay: 125.117 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 437.42 Mbit/s  
95th percentile per-packet one-way delay: 113.165 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 287.96 Mbit/s  
95th percentile per-packet one-way delay: 86.497 ms  
Loss rate: 0.00%

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





Run 4: Statistics of TCP Vegas

Start at: 2019-01-24 20:22:22

End at: 2019-01-24 20:22:52

Local clock offset: 0.143 ms

Remote clock offset: 0.14 ms

# Below is generated by plot.py at 2019-01-25 00:16:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 993.73 Mbit/s

95th percentile per-packet one-way delay: 147.488 ms

Loss rate: 0.13%

-- Flow 1:

Average throughput: 535.38 Mbit/s

95th percentile per-packet one-way delay: 143.993 ms

Loss rate: 0.08%

-- Flow 2:

Average throughput: 474.21 Mbit/s

95th percentile per-packet one-way delay: 163.828 ms

Loss rate: 0.25%

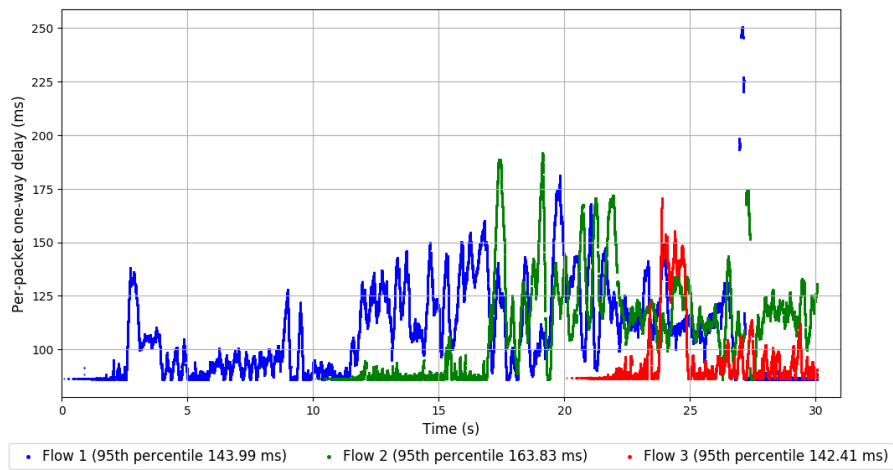
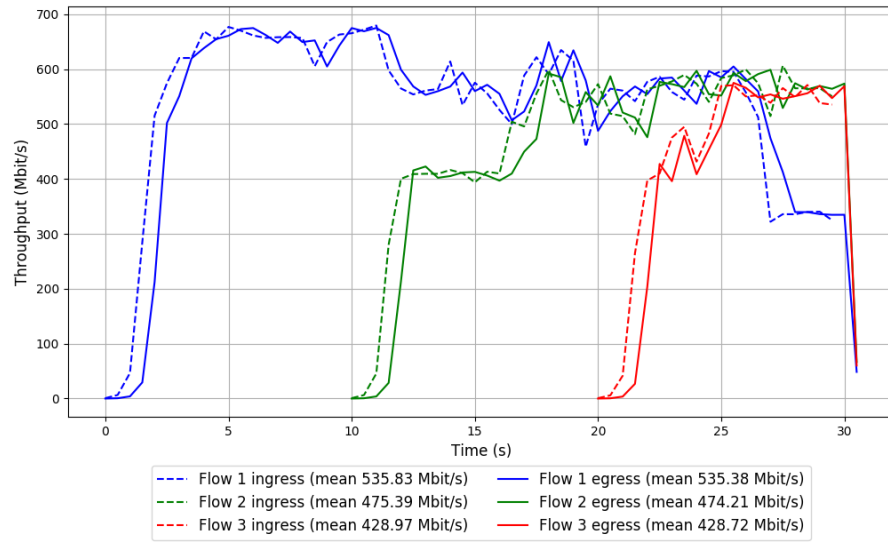
-- Flow 3:

Average throughput: 428.72 Mbit/s

95th percentile per-packet one-way delay: 142.406 ms

Loss rate: 0.06%

# Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-24 21:00:21

End at: 2019-01-24 21:00:51

Local clock offset: -0.08 ms

Remote clock offset: 0.037 ms

# Below is generated by plot.py at 2019-01-25 00:16:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 876.48 Mbit/s

95th percentile per-packet one-way delay: 131.464 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 426.99 Mbit/s

95th percentile per-packet one-way delay: 144.578 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 469.60 Mbit/s

95th percentile per-packet one-way delay: 102.329 ms

Loss rate: 0.00%

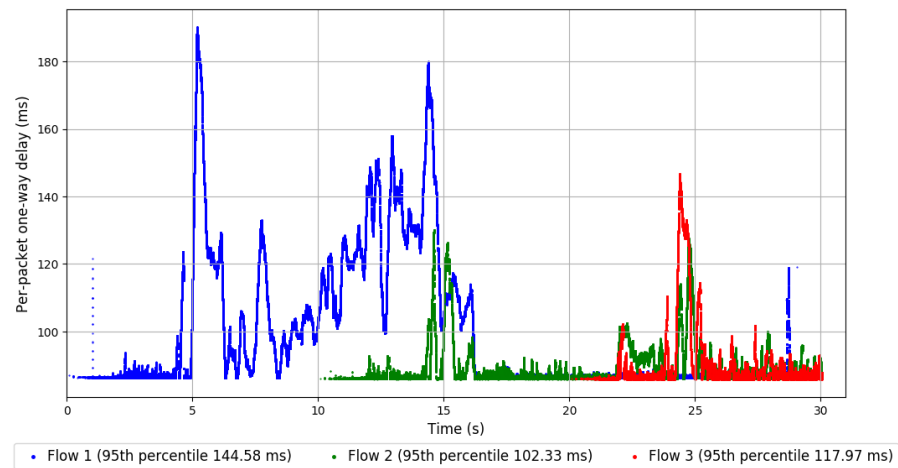
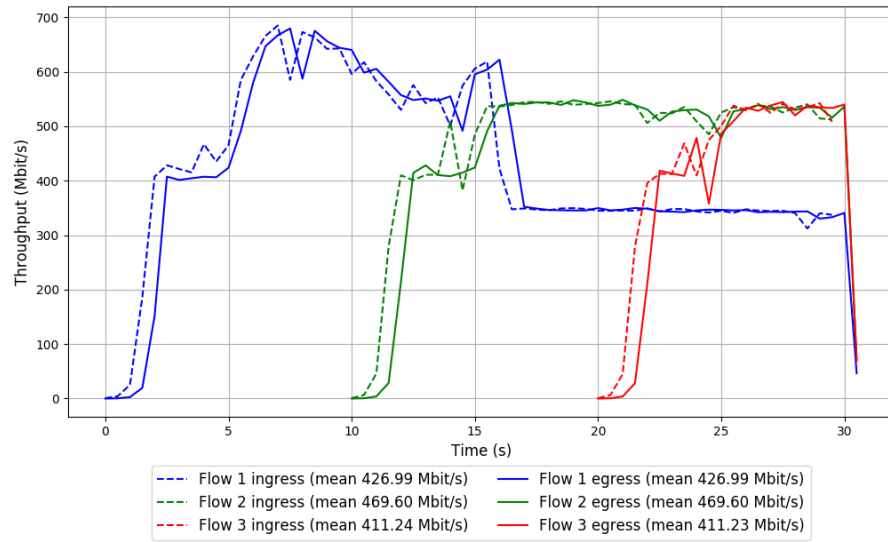
-- Flow 3:

Average throughput: 411.23 Mbit/s

95th percentile per-packet one-way delay: 117.975 ms

Loss rate: 0.00%

# Run 5: Report of TCP Vegas — Data Link



Run 1: Statistics of Verus

Start at: 2019-01-24 18:02:12

End at: 2019-01-24 18:02:42

Local clock offset: -0.207 ms

Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-01-25 00:16:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 240.04 Mbit/s

95th percentile per-packet one-way delay: 232.135 ms

Loss rate: 2.29%

-- Flow 1:

Average throughput: 167.18 Mbit/s

95th percentile per-packet one-way delay: 240.844 ms

Loss rate: 3.25%

-- Flow 2:

Average throughput: 56.68 Mbit/s

95th percentile per-packet one-way delay: 99.419 ms

Loss rate: 0.00%

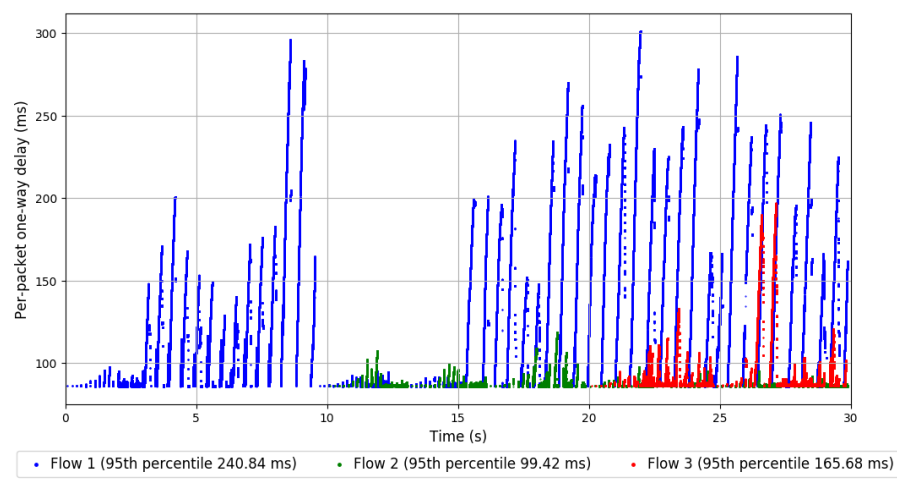
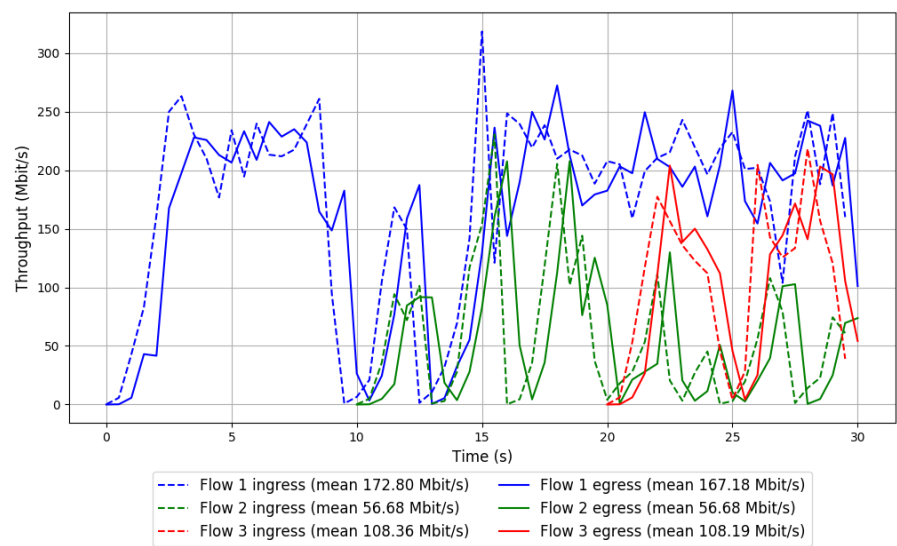
-- Flow 3:

Average throughput: 108.19 Mbit/s

95th percentile per-packet one-way delay: 165.684 ms

Loss rate: 0.00%

Run 1: Report of Verus — Data Link



Run 2: Statistics of Verus

Start at: 2019-01-24 18:39:59

End at: 2019-01-24 18:40:29

Local clock offset: -0.14 ms

Remote clock offset: 0.045 ms

# Below is generated by plot.py at 2019-01-25 00:16:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 228.45 Mbit/s

95th percentile per-packet one-way delay: 227.999 ms

Loss rate: 3.91%

-- Flow 1:

Average throughput: 162.59 Mbit/s

95th percentile per-packet one-way delay: 233.447 ms

Loss rate: 5.40%

-- Flow 2:

Average throughput: 54.78 Mbit/s

95th percentile per-packet one-way delay: 109.407 ms

Loss rate: 0.00%

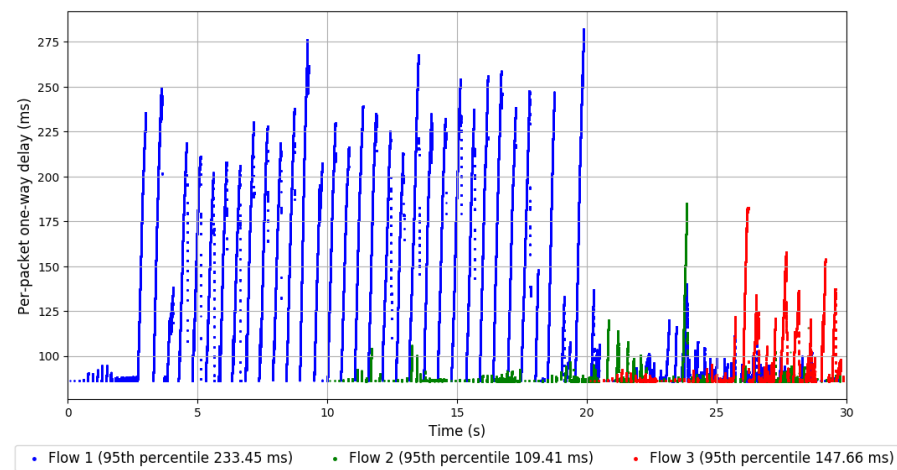
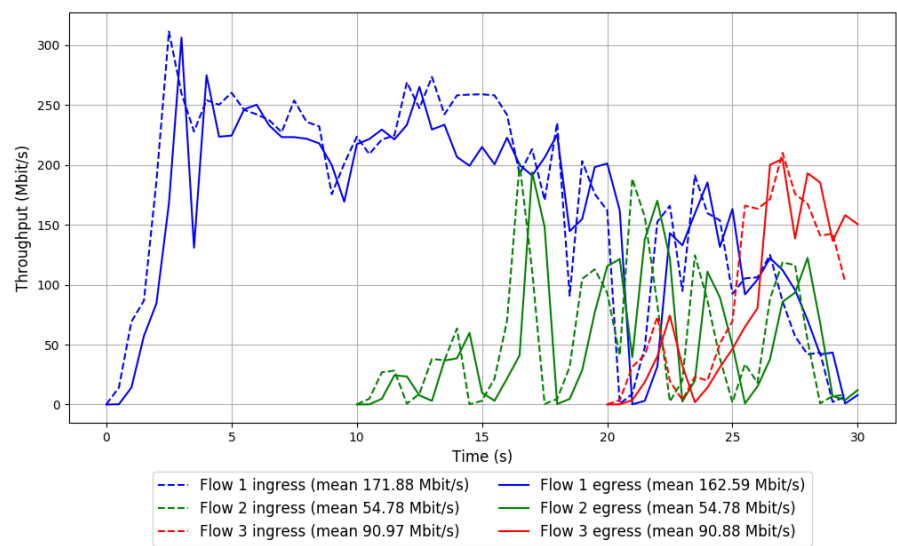
-- Flow 3:

Average throughput: 90.88 Mbit/s

95th percentile per-packet one-way delay: 147.661 ms

Loss rate: 0.11%

Run 2: Report of Verus — Data Link



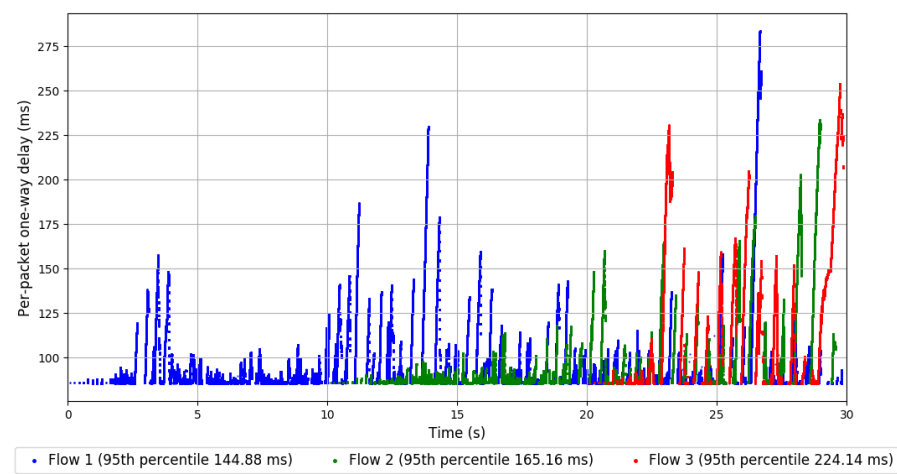
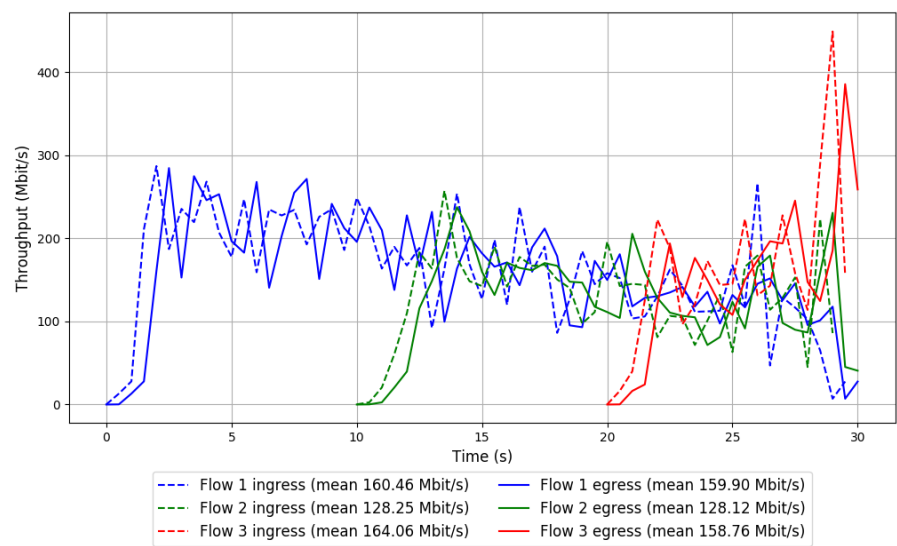


Run 3: Statistics of Verus

Start at: 2019-01-24 19:18:36  
End at: 2019-01-24 19:19:06  
Local clock offset: -0.014 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-01-25 00:16:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 295.39 Mbit/s  
95th percentile per-packet one-way delay: 179.780 ms  
Loss rate: 0.54%  
-- Flow 1:  
Average throughput: 159.90 Mbit/s  
95th percentile per-packet one-way delay: 144.875 ms  
Loss rate: 0.33%  
-- Flow 2:  
Average throughput: 128.12 Mbit/s  
95th percentile per-packet one-way delay: 165.156 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 158.76 Mbit/s  
95th percentile per-packet one-way delay: 224.144 ms  
Loss rate: 2.01%

Run 3: Report of Verus — Data Link

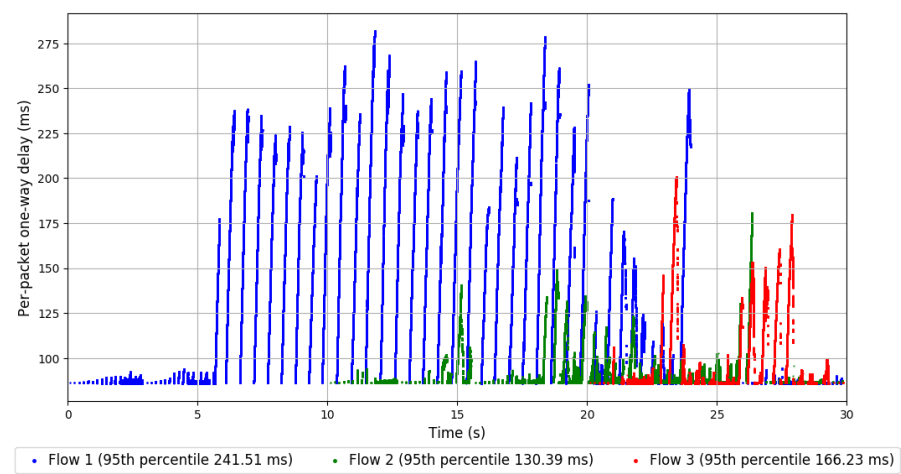
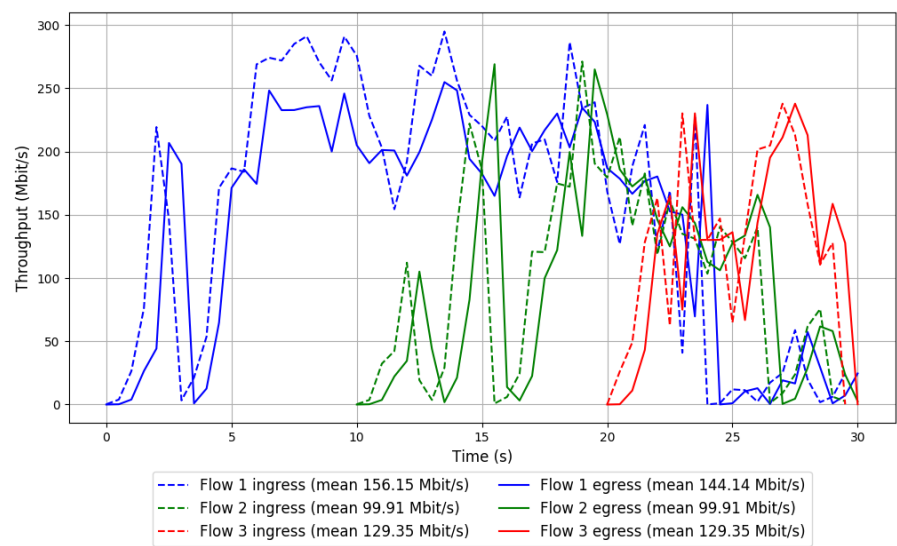


Run 4: Statistics of Verus

Start at: 2019-01-24 19:56:40  
End at: 2019-01-24 19:57:10  
Local clock offset: -0.141 ms  
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-01-25 00:16:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 252.28 Mbit/s  
95th percentile per-packet one-way delay: 233.134 ms  
Loss rate: 4.53%  
-- Flow 1:  
Average throughput: 144.14 Mbit/s  
95th percentile per-packet one-way delay: 241.513 ms  
Loss rate: 7.68%  
-- Flow 2:  
Average throughput: 99.91 Mbit/s  
95th percentile per-packet one-way delay: 130.394 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 129.35 Mbit/s  
95th percentile per-packet one-way delay: 166.227 ms  
Loss rate: 0.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-24 20:35:24

End at: 2019-01-24 20:35:54

Local clock offset: 0.318 ms

Remote clock offset: 0.018 ms

# Below is generated by plot.py at 2019-01-25 00:16:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 255.57 Mbit/s

95th percentile per-packet one-way delay: 235.569 ms

Loss rate: 2.94%

-- Flow 1:

Average throughput: 117.24 Mbit/s

95th percentile per-packet one-way delay: 136.106 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 188.42 Mbit/s

95th percentile per-packet one-way delay: 246.058 ms

Loss rate: 5.82%

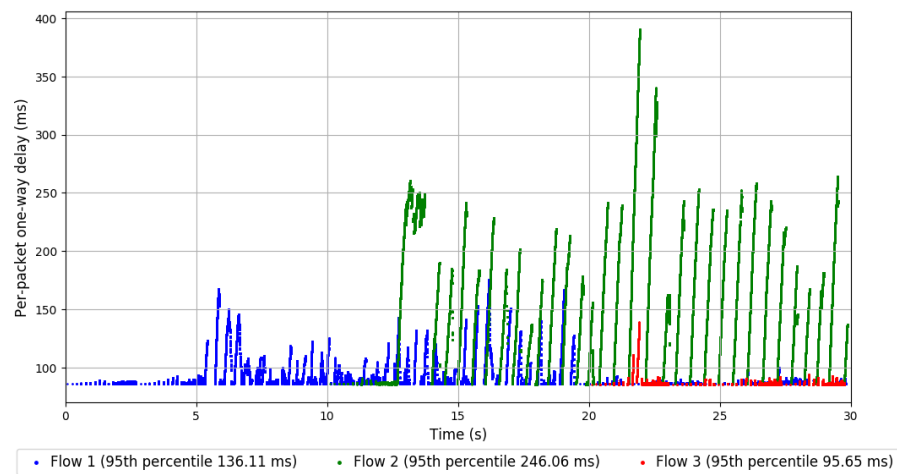
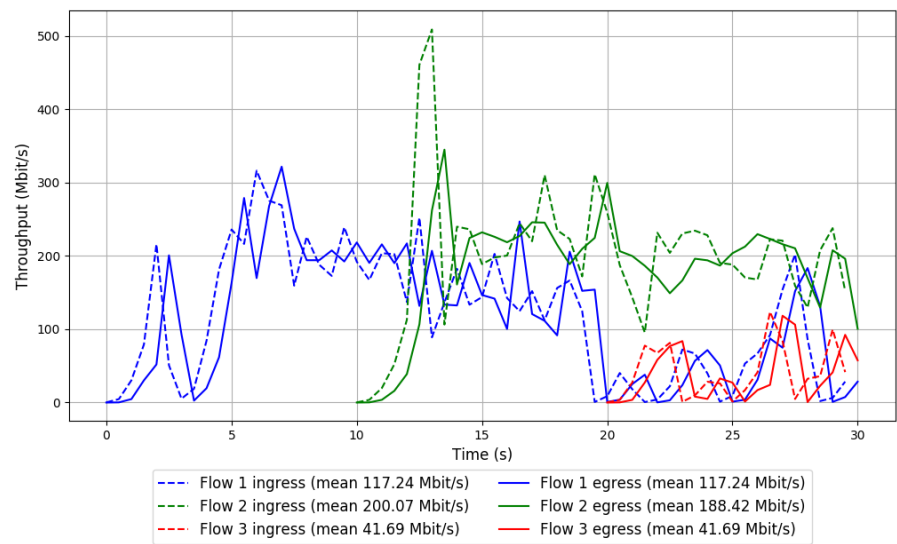
-- Flow 3:

Average throughput: 41.69 Mbit/s

95th percentile per-packet one-way delay: 95.654 ms

Loss rate: 0.00%

Run 5: Report of Verus — Data Link



Run 1: Statistics of PCC-Vivace

Start at: 2019-01-24 18:07:58

End at: 2019-01-24 18:08:28

Local clock offset: 0.006 ms

Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-01-25 00:16:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 488.47 Mbit/s

95th percentile per-packet one-way delay: 91.191 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 298.88 Mbit/s

95th percentile per-packet one-way delay: 88.061 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 261.81 Mbit/s

95th percentile per-packet one-way delay: 96.895 ms

Loss rate: 0.00%

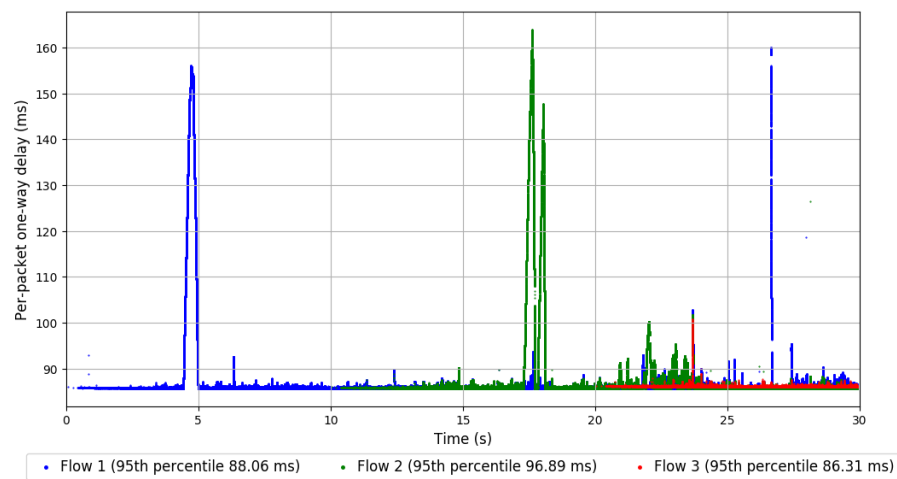
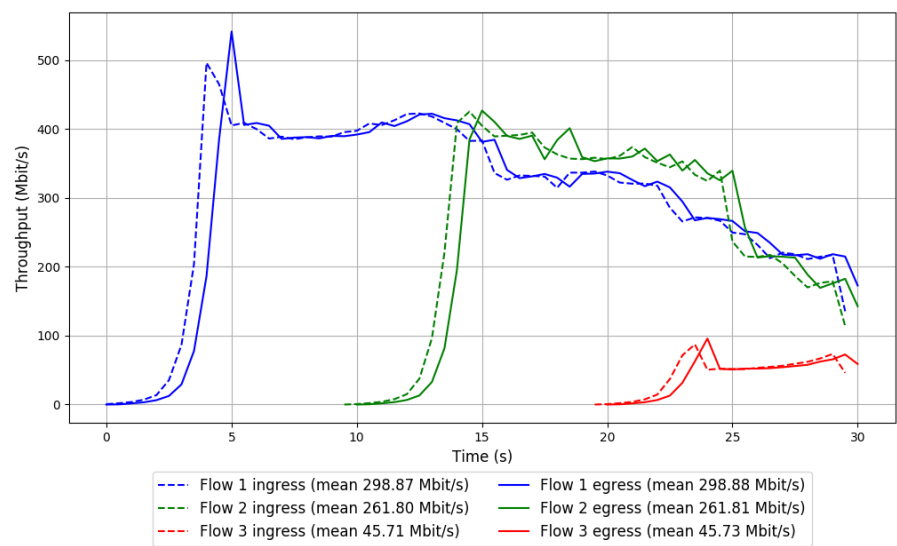
-- Flow 3:

Average throughput: 45.73 Mbit/s

95th percentile per-packet one-way delay: 86.309 ms

Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-01-24 18:45:41

End at: 2019-01-24 18:46:11

Local clock offset: 0.231 ms

Remote clock offset: 0.058 ms

# Below is generated by plot.py at 2019-01-25 00:18:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 514.00 Mbit/s

95th percentile per-packet one-way delay: 98.820 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 336.38 Mbit/s

95th percentile per-packet one-way delay: 97.374 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 196.14 Mbit/s

95th percentile per-packet one-way delay: 162.071 ms

Loss rate: 0.74%

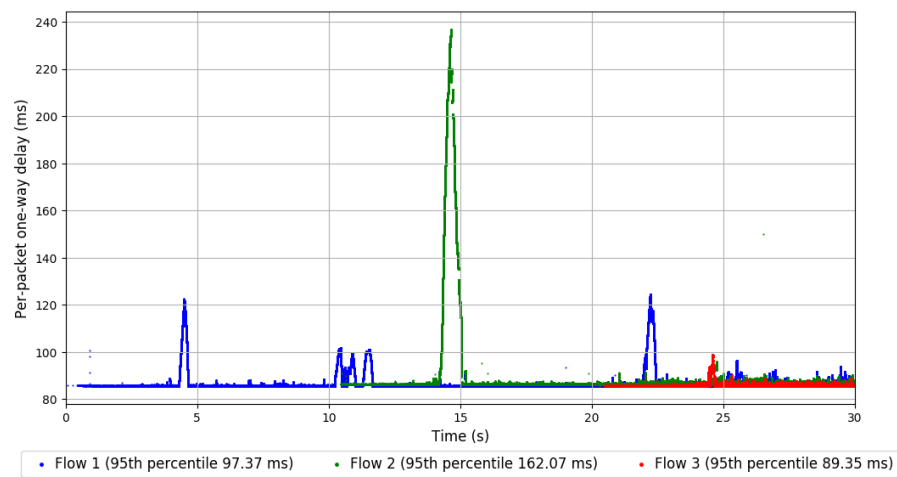
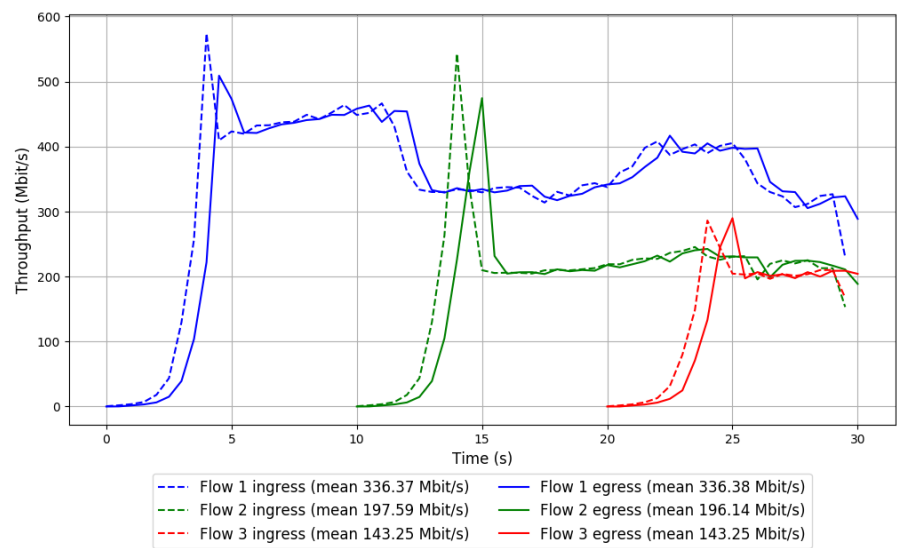
-- Flow 3:

Average throughput: 143.25 Mbit/s

95th percentile per-packet one-way delay: 89.346 ms

Loss rate: 0.00%

Run 2: Report of PCC-Vivace — Data Link

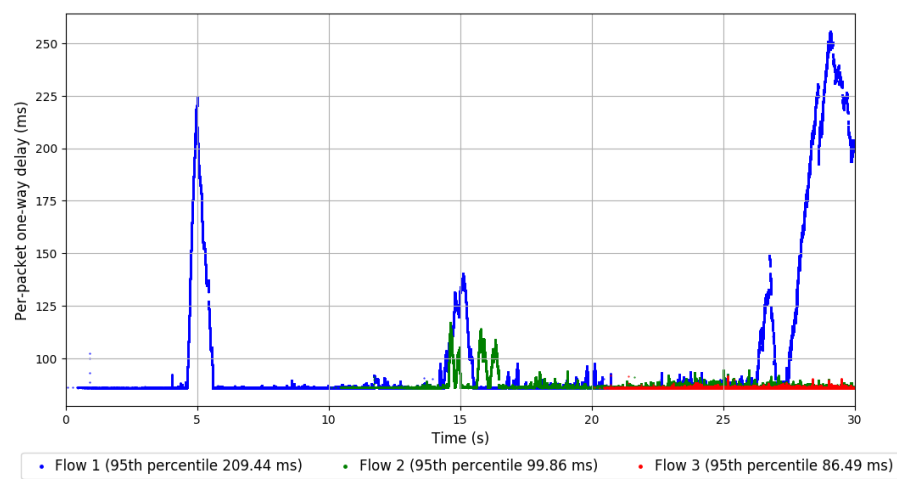
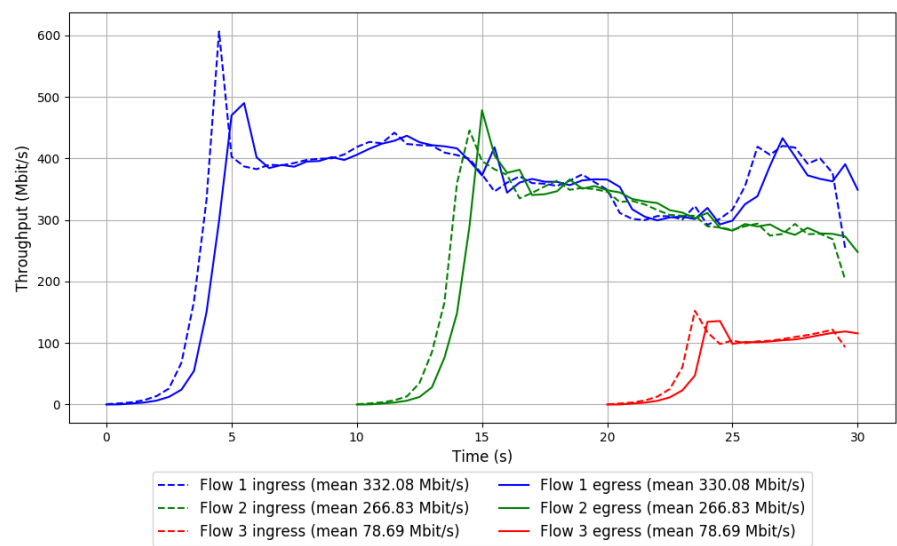


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-24 19:24:23  
End at: 2019-01-24 19:24:53  
Local clock offset: -0.183 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-01-25 00:19:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 533.48 Mbit/s  
95th percentile per-packet one-way delay: 180.558 ms  
Loss rate: 0.37%  
-- Flow 1:  
Average throughput: 330.08 Mbit/s  
95th percentile per-packet one-way delay: 209.441 ms  
Loss rate: 0.60%  
-- Flow 2:  
Average throughput: 266.83 Mbit/s  
95th percentile per-packet one-way delay: 99.859 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 78.69 Mbit/s  
95th percentile per-packet one-way delay: 86.493 ms  
Loss rate: 0.00%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-24 20:02:44

End at: 2019-01-24 20:03:14

Local clock offset: 0.077 ms

Remote clock offset: -0.1 ms

# Below is generated by plot.py at 2019-01-25 00:19:15

# Datalink statistics

-- Total of 3 flows:

Average throughput: 473.22 Mbit/s

95th percentile per-packet one-way delay: 94.011 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 347.70 Mbit/s

95th percentile per-packet one-way delay: 98.432 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 175.11 Mbit/s

95th percentile per-packet one-way delay: 86.643 ms

Loss rate: 0.01%

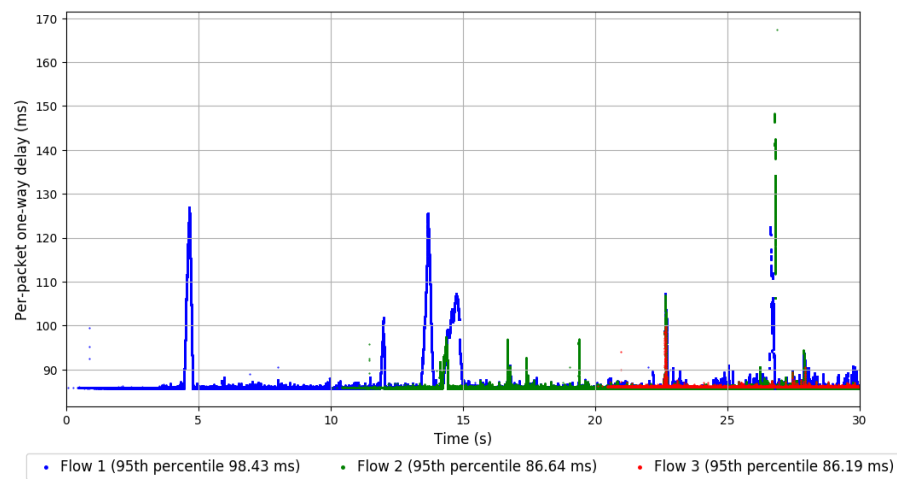
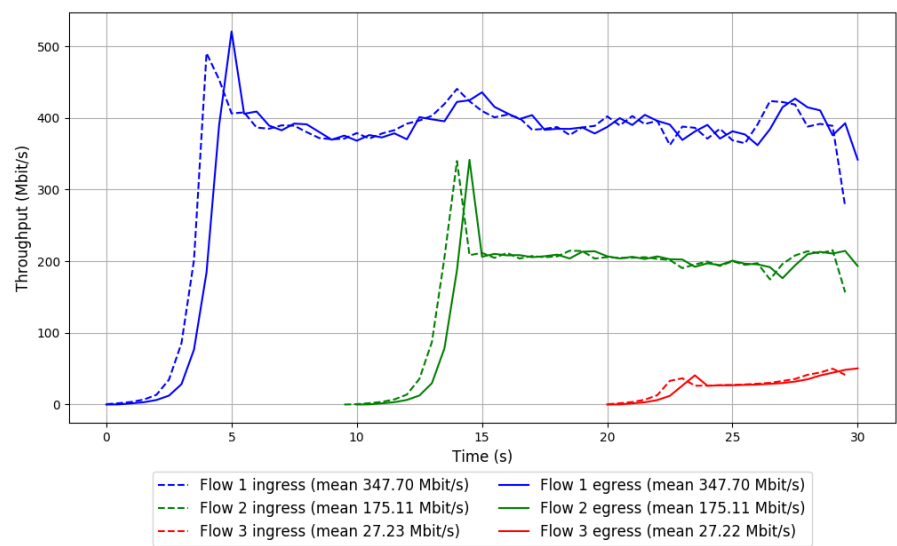
-- Flow 3:

Average throughput: 27.22 Mbit/s

95th percentile per-packet one-way delay: 86.192 ms

Loss rate: 0.06%

Run 4: Report of PCC-Vivace — Data Link



Run 5: Statistics of PCC-Vivace

Start at: 2019-01-24 20:41:08

End at: 2019-01-24 20:41:38

Local clock offset: 0.297 ms

Remote clock offset: 0.03 ms

# Below is generated by plot.py at 2019-01-25 00:19:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 522.88 Mbit/s

95th percentile per-packet one-way delay: 156.707 ms

Loss rate: 0.19%

-- Flow 1:

Average throughput: 355.66 Mbit/s

95th percentile per-packet one-way delay: 171.300 ms

Loss rate: 0.28%

-- Flow 2:

Average throughput: 177.62 Mbit/s

95th percentile per-packet one-way delay: 86.338 ms

Loss rate: 0.00%

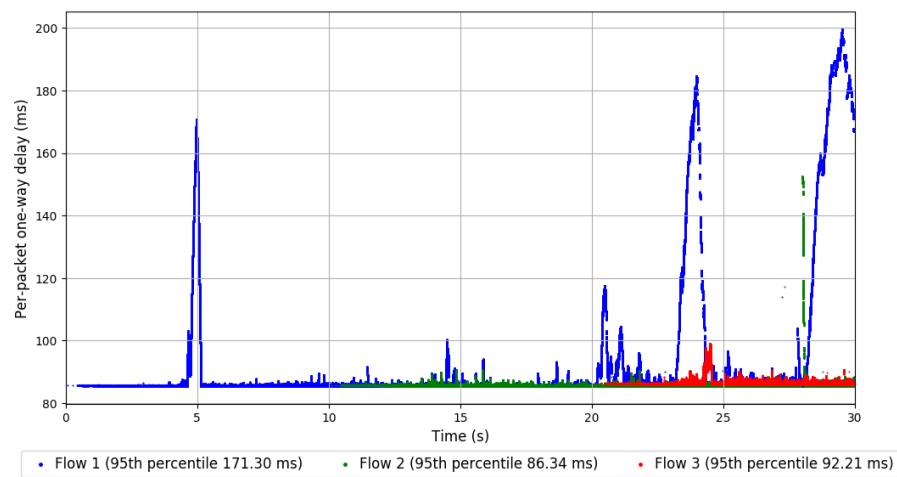
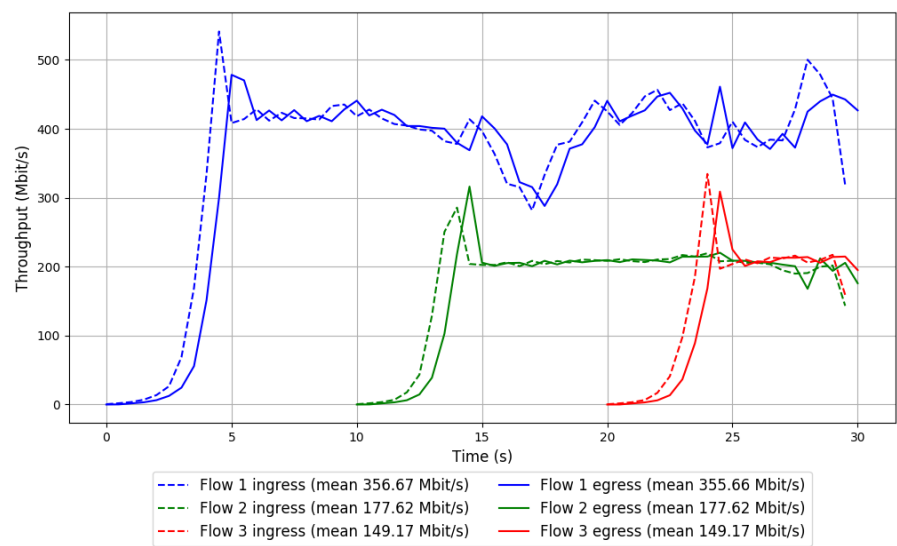
-- Flow 3:

Average throughput: 149.17 Mbit/s

95th percentile per-packet one-way delay: 92.207 ms

Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link





Run 1: Statistics of WebRTC media

Start at: 2019-01-24 18:17:55

End at: 2019-01-24 18:18:25

Local clock offset: -0.201 ms

Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2019-01-25 00:19:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 3.64 Mbit/s

95th percentile per-packet one-way delay: 87.018 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 2.00 Mbit/s

95th percentile per-packet one-way delay: 86.415 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 1.25 Mbit/s

95th percentile per-packet one-way delay: 86.446 ms

Loss rate: 0.00%

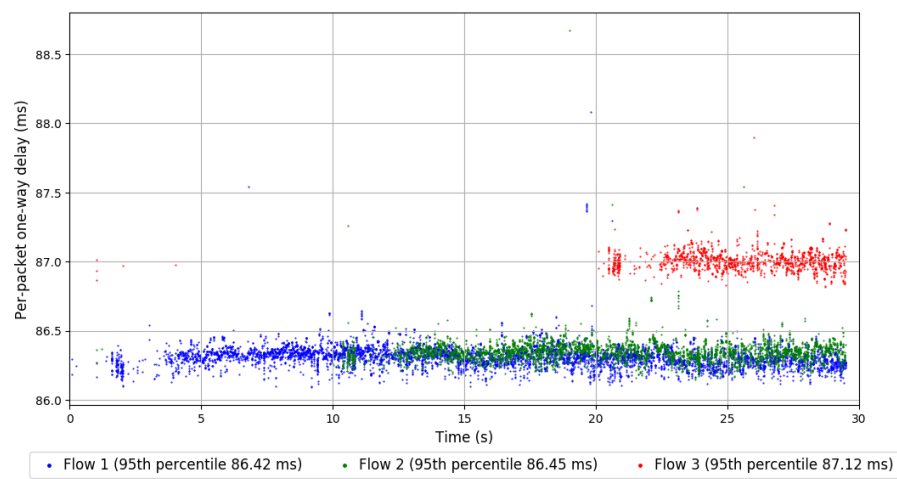
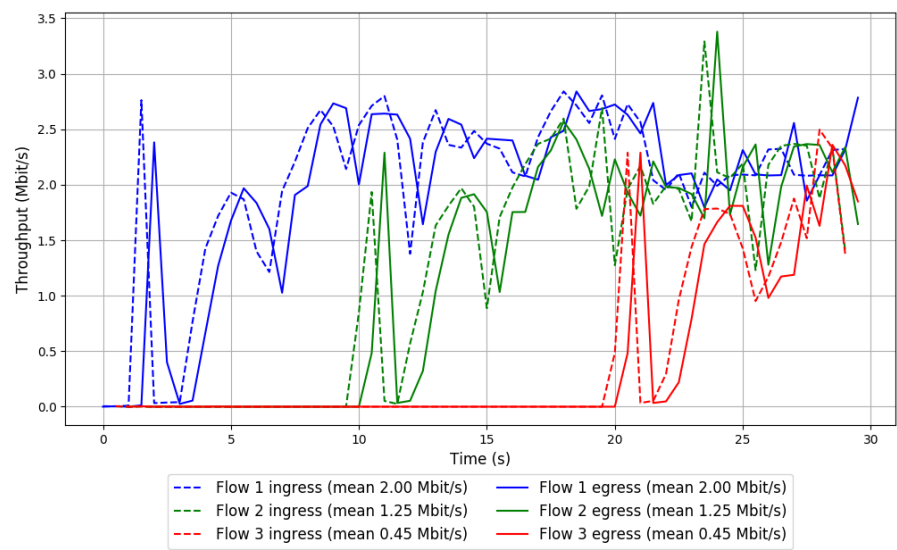
-- Flow 3:

Average throughput: 0.45 Mbit/s

95th percentile per-packet one-way delay: 87.117 ms

Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

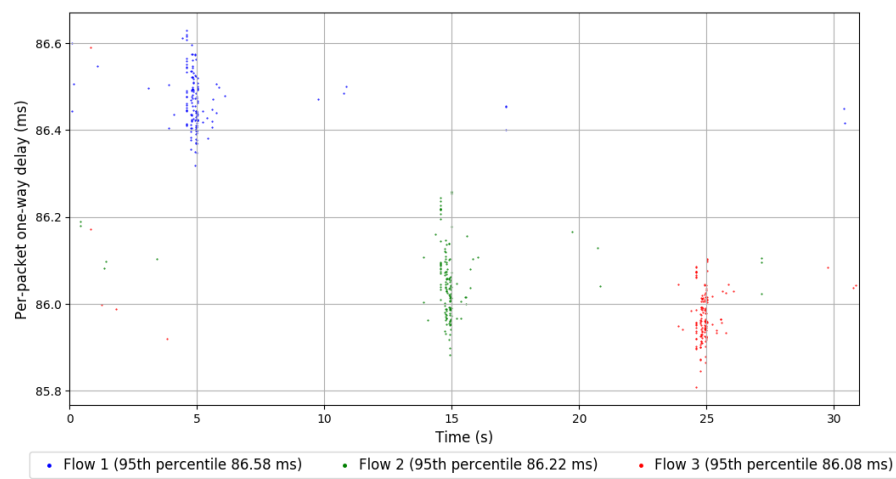
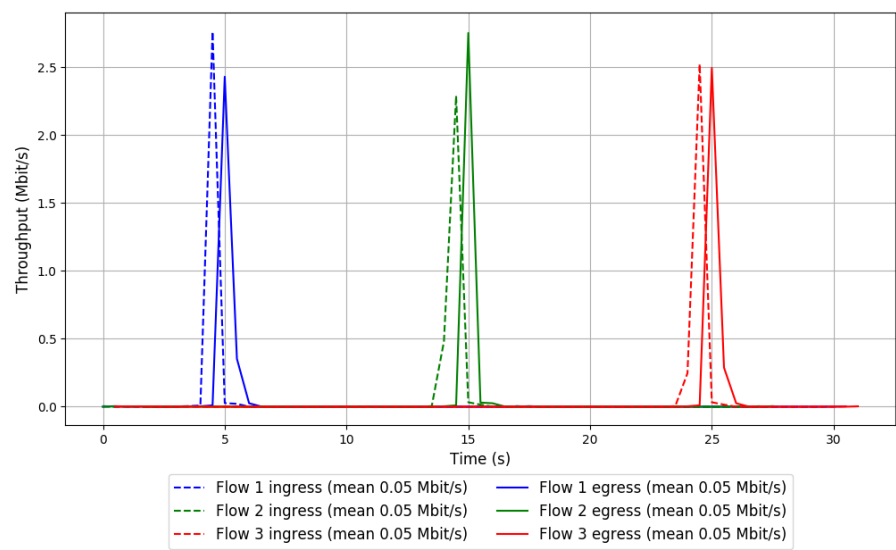


Run 2: Statistics of WebRTC media

Start at: 2019-01-24 18:55:51  
End at: 2019-01-24 18:56:21  
Local clock offset: -0.153 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-25 00:19:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 86.535 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.576 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.218 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.083 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link



Run 3: Statistics of WebRTC media

Start at: 2019-01-24 19:34:46

End at: 2019-01-24 19:35:16

Local clock offset: -0.502 ms

Remote clock offset: 0.081 ms

# Below is generated by plot.py at 2019-01-25 00:19:19

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.14 Mbit/s

95th percentile per-packet one-way delay: 86.917 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.964 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.575 ms

Loss rate: 0.00%

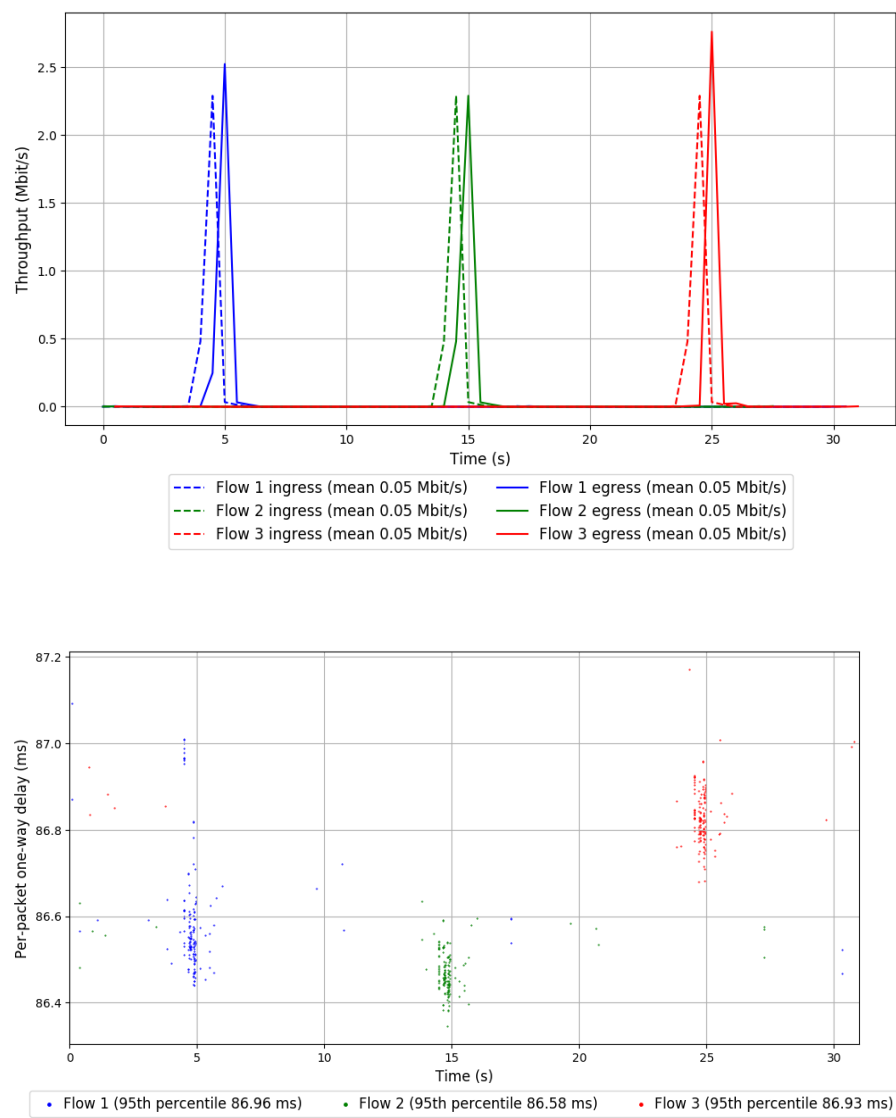
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 86.926 ms

Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

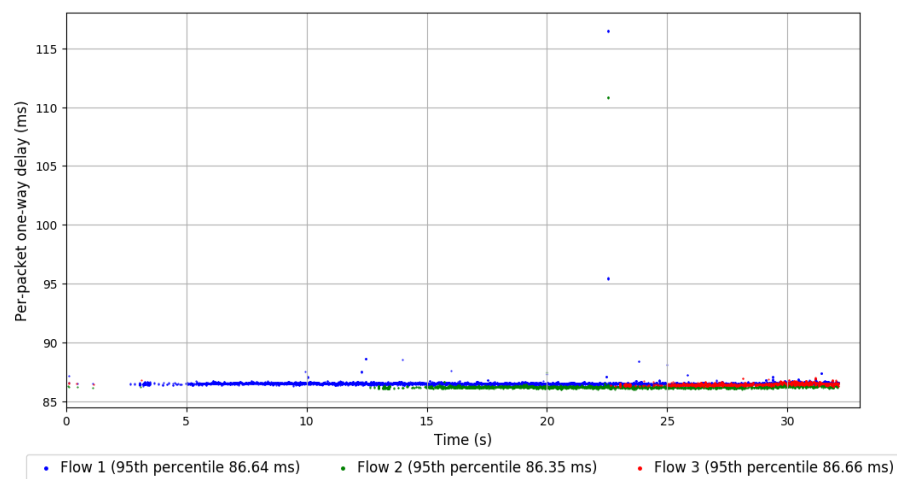
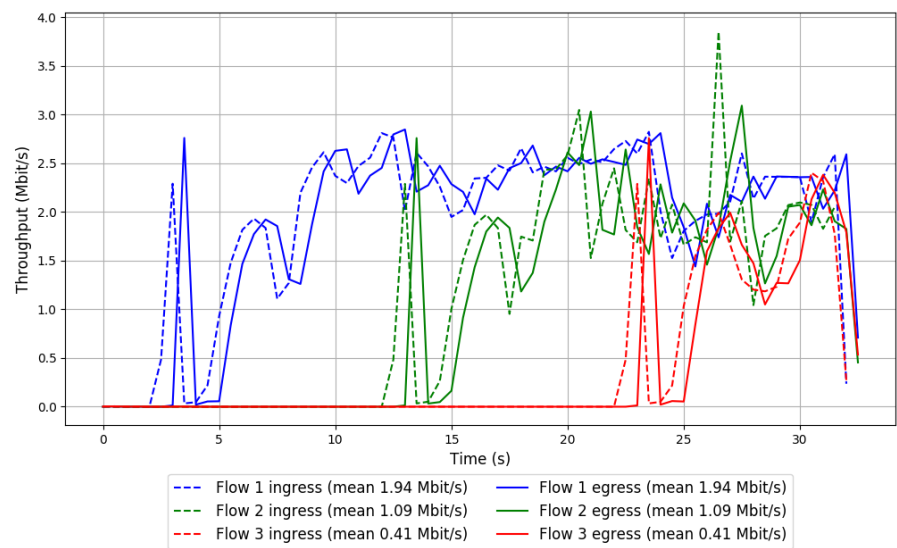


Run 4: Statistics of WebRTC media

Start at: 2019-01-24 20:12:52  
End at: 2019-01-24 20:13:22  
Local clock offset: -0.158 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-01-25 00:19:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.44 Mbit/s  
95th percentile per-packet one-way delay: 86.615 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.94 Mbit/s  
95th percentile per-packet one-way delay: 86.636 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.09 Mbit/s  
95th percentile per-packet one-way delay: 86.347 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.41 Mbit/s  
95th percentile per-packet one-way delay: 86.657 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-24 20:51:05  
End at: 2019-01-24 20:51:35  
Local clock offset: -0.476 ms  
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-01-25 00:19:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 86.987 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.976 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 87.058 ms  
Loss rate: 0.05%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 86.642 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

