

## Pantheon Report

Generated at 2019-03-19 14:44:01 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

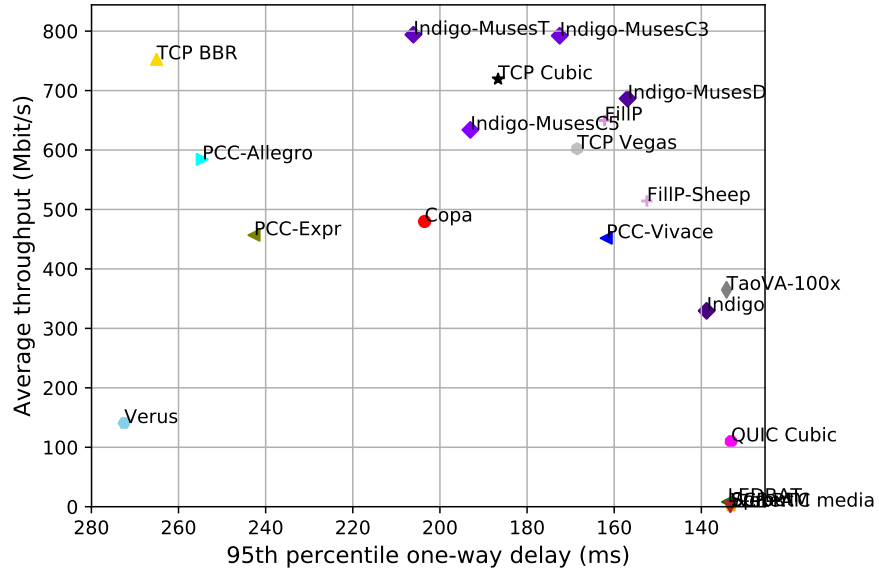
```
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

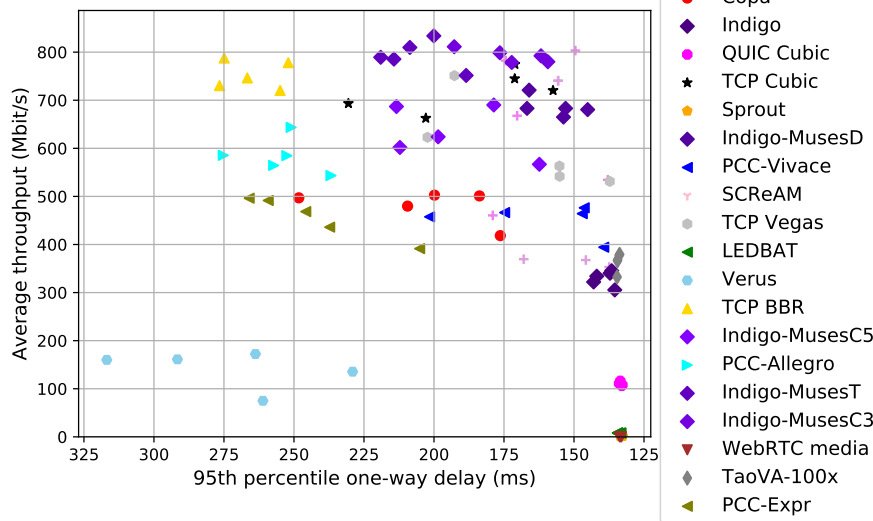
```
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

third\_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4  
third\_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851

test from GCE London to GCE Sydney, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows (mean of all runs by scheme)



test from GCE London to GCE Sydney, 5 runs of 30s each per scheme  
3 flows with 10s interval between flows



scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	439.14	347.77	253.76	264.69	266.86	180.76	3.33	4.63	5.55
Copa	5	251.07	248.11	196.71	188.56	217.92	184.57	0.96	1.54	3.95
TCP Cubic	5	417.32	329.37	255.79	173.01	175.13	183.27	1.03	1.49	4.29
FillP	5	357.36	327.79	231.29	168.11	138.18	136.38	1.26	1.19	3.37
FillP-Sheep	5	228.81	317.44	231.71	161.90	137.89	139.94	0.59	1.11	3.14
Indigo	5	175.08	157.74	154.14	137.33	142.62	143.09	0.81	1.34	3.01
Indigo-MusesC3	5	469.52	385.72	283.39	178.65	157.82	139.33	0.75	1.44	4.51
Indigo-MusesC5	5	380.87	339.49	135.30	205.41	163.58	135.47	0.89	1.32	6.52
Indigo-MusesD	5	413.36	366.62	141.97	159.19	162.79	136.16	0.86	1.49	4.69
Indigo-MusesT	5	506.54	409.63	94.59	215.33	172.01	134.01	0.95	1.41	4.33
LEDBAT	5	5.25	3.44	1.66	133.83	133.73	133.65	1.78	2.69	5.41
PCC-Allegro	5	333.25	270.63	225.23	258.53	225.71	245.24	3.56	3.49	5.96
PCC-Expr	5	264.25	213.72	157.45	232.44	204.29	255.35	2.80	5.59	8.93
QUIC Cubic	5	61.10	53.77	39.76	132.91	132.97	133.02	1.20	1.54	4.11
SCReAM	5	0.17	0.15	0.16	133.13	133.16	132.65	0.88	1.39	2.45
Sprout	5	0.68	0.67	0.67	133.10	133.10	133.09	1.17	1.29	2.92
TaoVA-100x	5	197.47	188.06	130.63	134.04	134.46	133.89	0.96	1.55	3.35
TCP Vegas	5	342.08	269.32	249.23	156.64	182.75	173.54	0.71	1.42	3.70
Verus	5	89.66	65.17	25.75	267.98	255.89	173.08	5.65	4.55	1.03
PCC-Vivace	5	272.25	213.87	117.08	156.23	150.07	185.55	1.22	1.70	4.35
WebRTC media	5	0.05	0.05	0.05	133.14	133.65	132.80	0.01	0.00	0.00

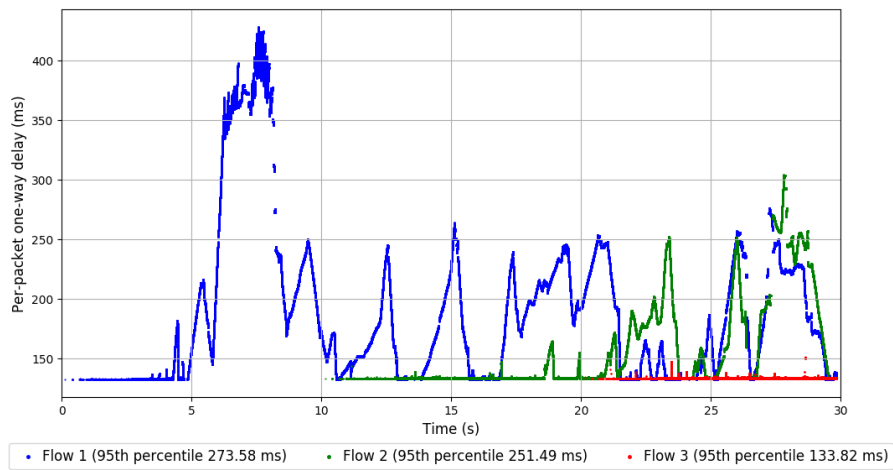
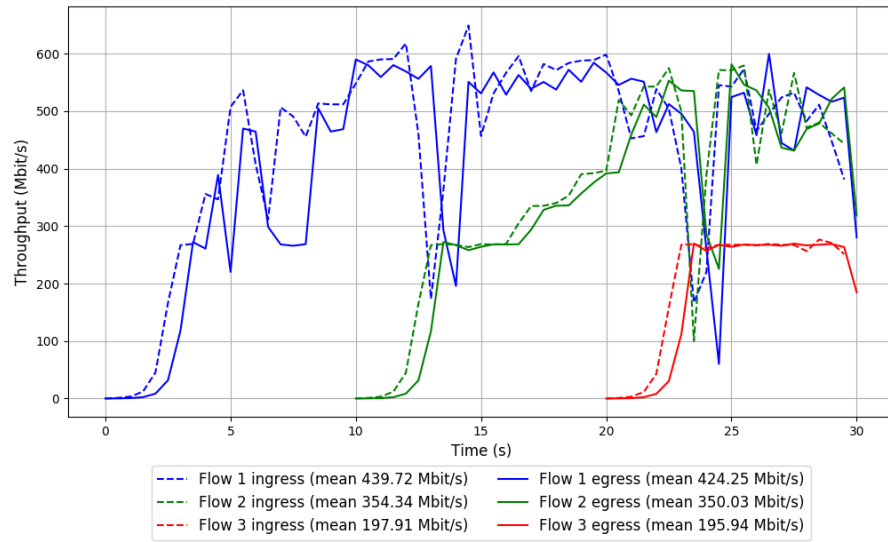


Run 1: Statistics of TCP BBR

Start at: 2019-03-19 09:13:30  
End at: 2019-03-19 09:14:00  
Local clock offset: 0.306 ms  
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-03-19 12:42:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 720.40 Mbit/s  
95th percentile per-packet one-way delay: 254.929 ms  
Loss rate: 3.72%  
-- Flow 1:  
Average throughput: 424.25 Mbit/s  
95th percentile per-packet one-way delay: 273.579 ms  
Loss rate: 4.37%  
-- Flow 2:  
Average throughput: 350.03 Mbit/s  
95th percentile per-packet one-way delay: 251.490 ms  
Loss rate: 2.52%  
-- Flow 3:  
Average throughput: 195.94 Mbit/s  
95th percentile per-packet one-way delay: 133.820 ms  
Loss rate: 3.61%

# Run 1: Report of TCP BBR — Data Link

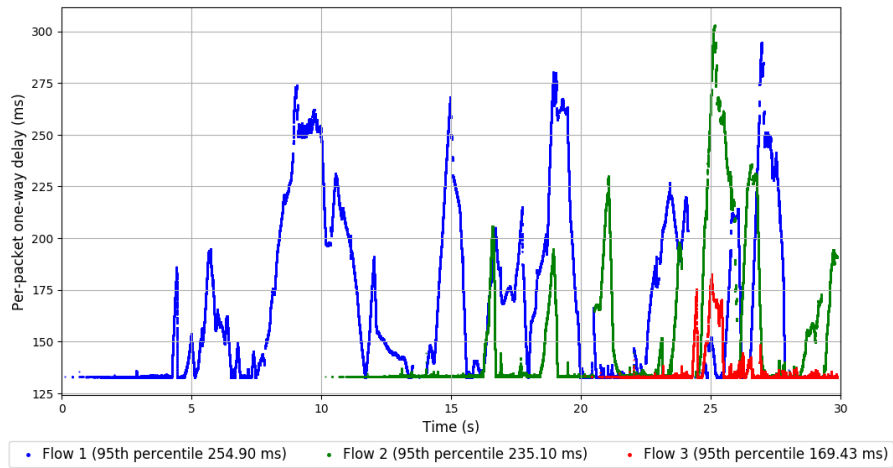
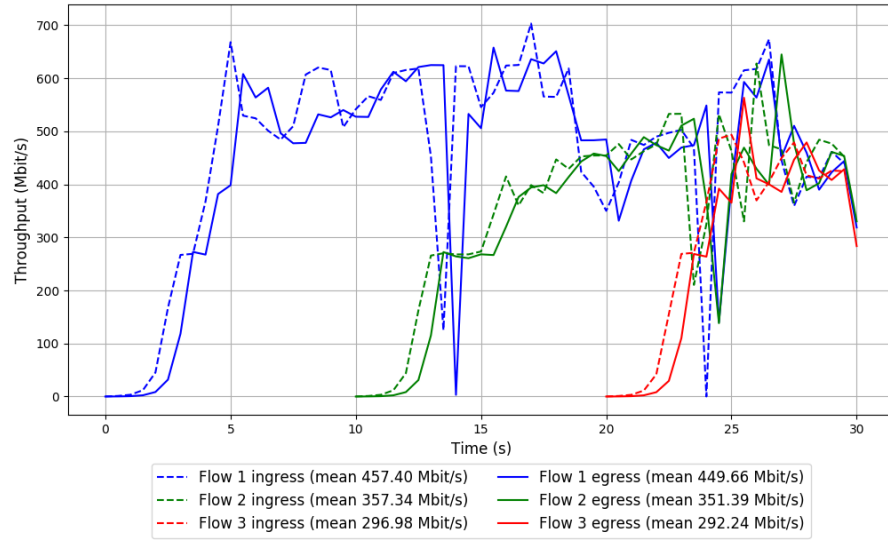


Run 2: Statistics of TCP BBR

Start at: 2019-03-19 09:55:07  
End at: 2019-03-19 09:55:37  
Local clock offset: -0.26 ms  
Remote clock offset: -4.378 ms

# Below is generated by plot.py at 2019-03-19 12:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 778.13 Mbit/s  
95th percentile per-packet one-way delay: 252.032 ms  
Loss rate: 2.89%  
-- Flow 1:  
Average throughput: 449.66 Mbit/s  
95th percentile per-packet one-way delay: 254.897 ms  
Loss rate: 2.56%  
-- Flow 2:  
Average throughput: 351.39 Mbit/s  
95th percentile per-packet one-way delay: 235.096 ms  
Loss rate: 2.97%  
-- Flow 3:  
Average throughput: 292.24 Mbit/s  
95th percentile per-packet one-way delay: 169.432 ms  
Loss rate: 4.22%

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

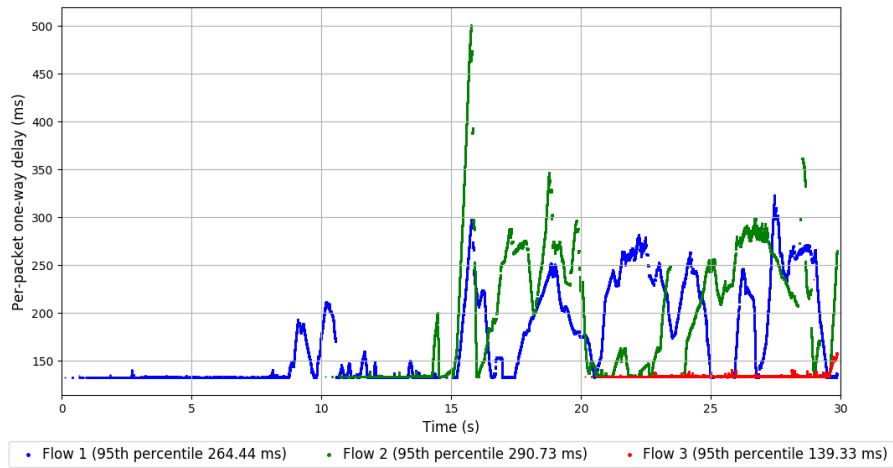
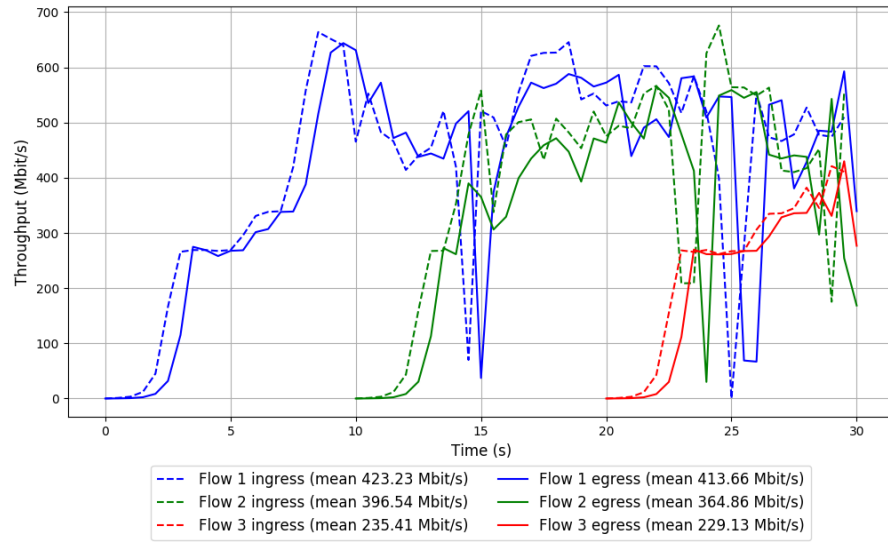


Run 3: Statistics of TCP BBR

Start at: 2019-03-19 10:37:47  
End at: 2019-03-19 10:38:17  
Local clock offset: 0.124 ms  
Remote clock offset: -1.308 ms

# Below is generated by plot.py at 2019-03-19 12:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 730.41 Mbit/s  
95th percentile per-packet one-way delay: 276.585 ms  
Loss rate: 5.45%  
-- Flow 1:  
Average throughput: 413.66 Mbit/s  
95th percentile per-packet one-way delay: 264.438 ms  
Loss rate: 3.13%  
-- Flow 2:  
Average throughput: 364.86 Mbit/s  
95th percentile per-packet one-way delay: 290.727 ms  
Loss rate: 9.21%  
-- Flow 3:  
Average throughput: 229.13 Mbit/s  
95th percentile per-packet one-way delay: 139.329 ms  
Loss rate: 5.26%

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

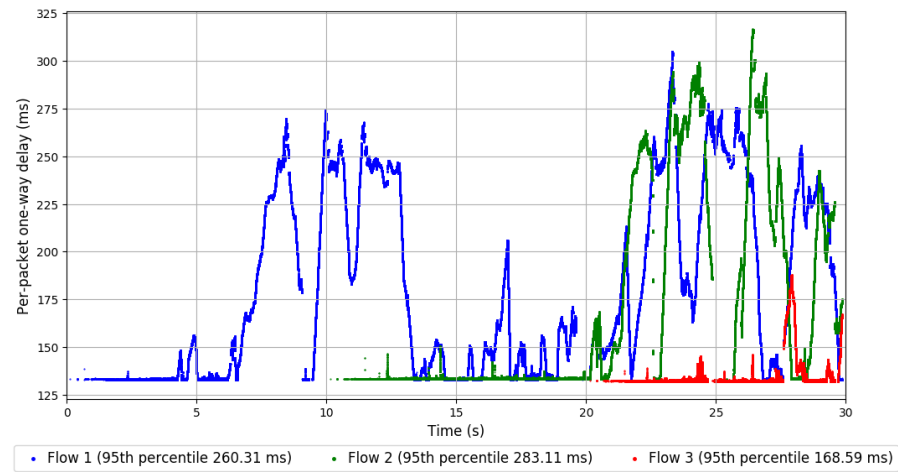
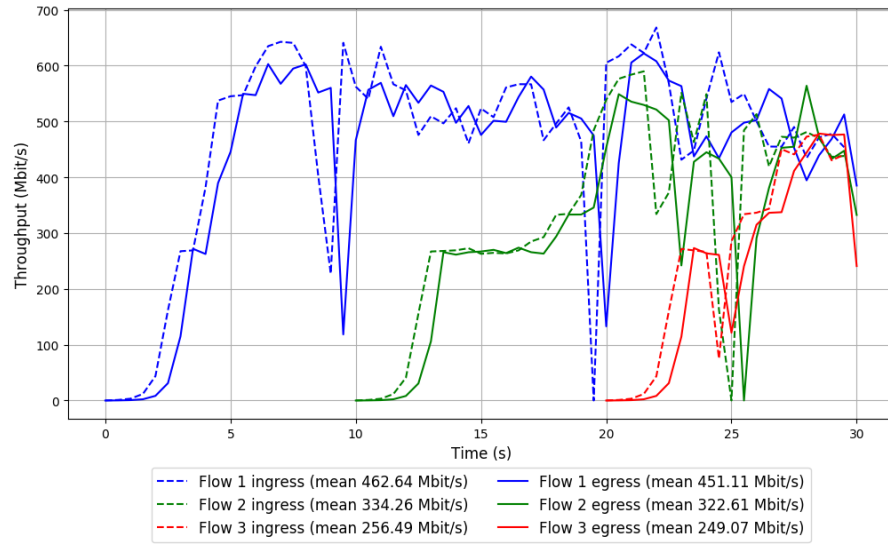


Run 4: Statistics of TCP BBR

Start at: 2019-03-19 11:18:44  
End at: 2019-03-19 11:19:14  
Local clock offset: -0.116 ms  
Remote clock offset: -0.585 ms

# Below is generated by plot.py at 2019-03-19 12:43:52  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 746.37 Mbit/s  
95th percentile per-packet one-way delay: 266.656 ms  
Loss rate: 4.00%  
-- Flow 1:  
Average throughput: 451.11 Mbit/s  
95th percentile per-packet one-way delay: 260.306 ms  
Loss rate: 3.35%  
-- Flow 2:  
Average throughput: 322.61 Mbit/s  
95th percentile per-packet one-way delay: 283.110 ms  
Loss rate: 4.77%  
-- Flow 3:  
Average throughput: 249.07 Mbit/s  
95th percentile per-packet one-way delay: 168.591 ms  
Loss rate: 5.47%

# Run 4: Report of TCP BBR — Data Link



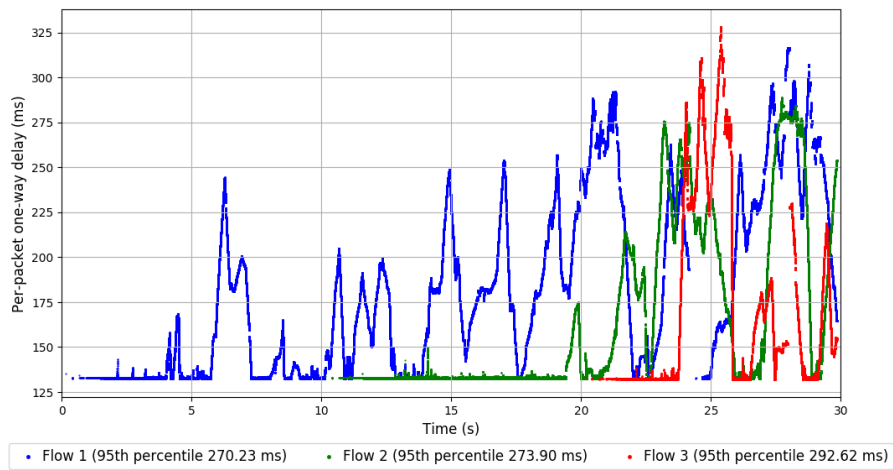
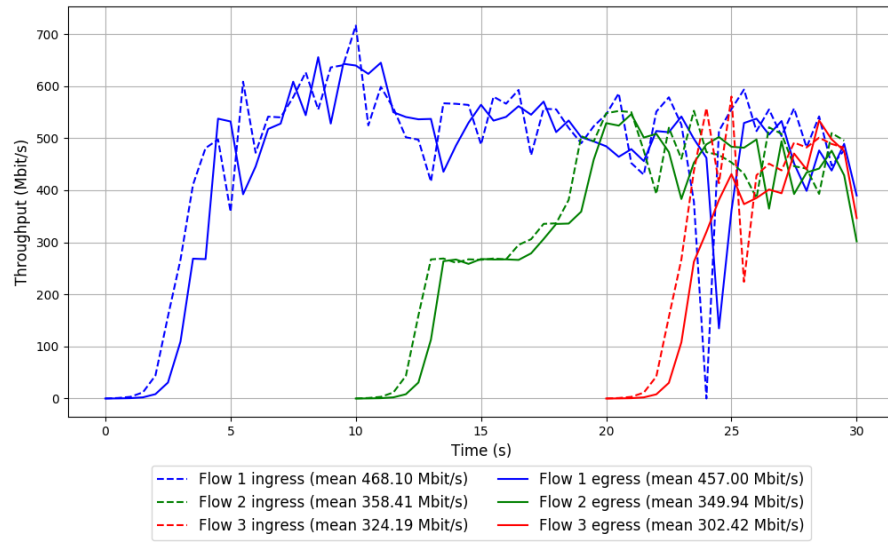


Run 5: Statistics of TCP BBR

Start at: 2019-03-19 12:00:12  
End at: 2019-03-19 12:00:42  
Local clock offset: -0.373 ms  
Remote clock offset: -0.384 ms

# Below is generated by plot.py at 2019-03-19 12:44:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 787.75 Mbit/s  
95th percentile per-packet one-way delay: 274.922 ms  
Loss rate: 4.16%  
-- Flow 1:  
Average throughput: 457.00 Mbit/s  
95th percentile per-packet one-way delay: 270.234 ms  
Loss rate: 3.25%  
-- Flow 2:  
Average throughput: 349.94 Mbit/s  
95th percentile per-packet one-way delay: 273.900 ms  
Loss rate: 3.67%  
-- Flow 3:  
Average throughput: 302.42 Mbit/s  
95th percentile per-packet one-way delay: 292.616 ms  
Loss rate: 9.21%

# Run 5: Report of TCP BBR — Data Link

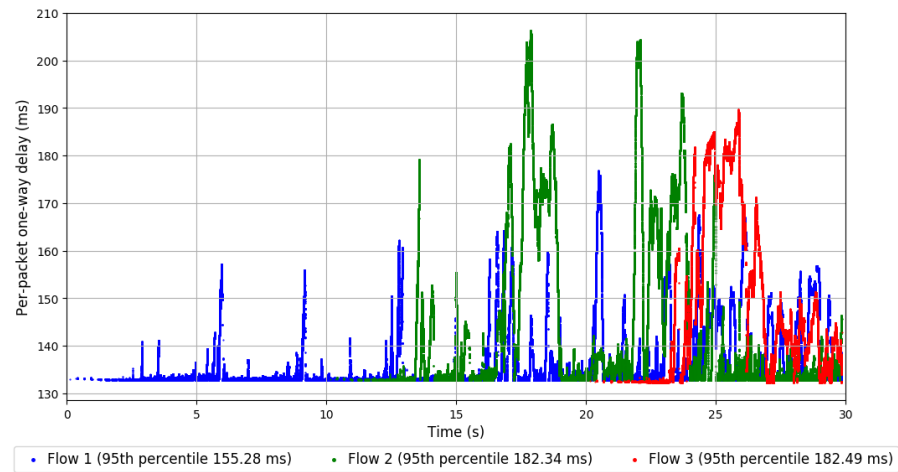
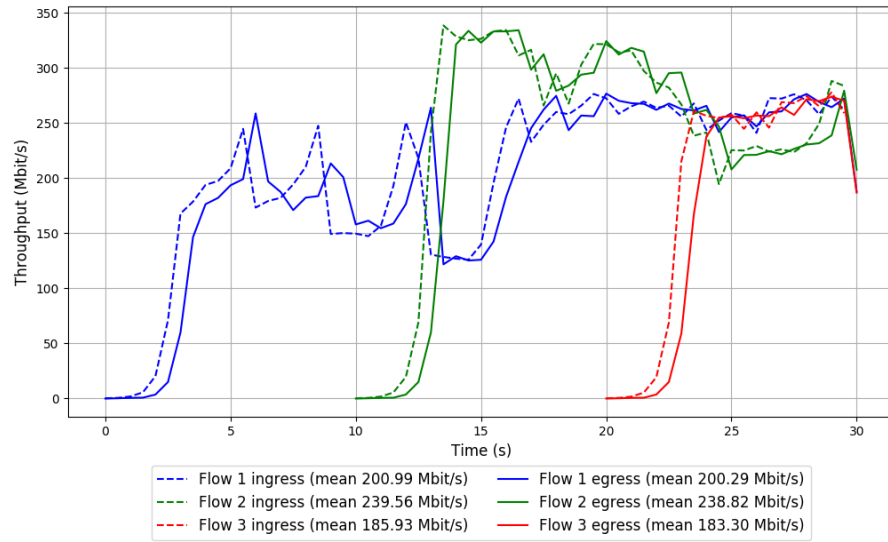


Run 1: Statistics of Copa

Start at: 2019-03-19 09:11:23  
End at: 2019-03-19 09:11:53  
Local clock offset: -0.03 ms  
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-03-19 12:44:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 418.45 Mbit/s  
95th percentile per-packet one-way delay: 176.310 ms  
Loss rate: 1.78%  
-- Flow 1:  
Average throughput: 200.29 Mbit/s  
95th percentile per-packet one-way delay: 155.282 ms  
Loss rate: 1.23%  
-- Flow 2:  
Average throughput: 238.82 Mbit/s  
95th percentile per-packet one-way delay: 182.337 ms  
Loss rate: 1.61%  
-- Flow 3:  
Average throughput: 183.30 Mbit/s  
95th percentile per-packet one-way delay: 182.487 ms  
Loss rate: 4.00%

# Run 1: Report of Copa — Data Link

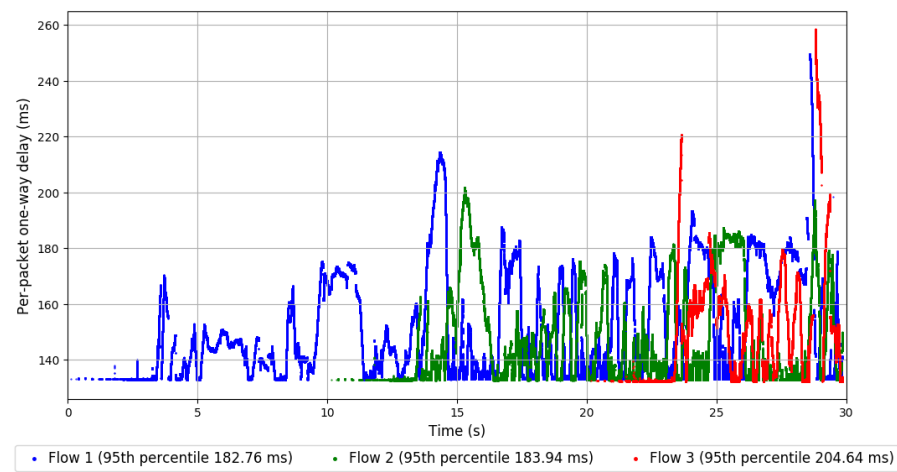
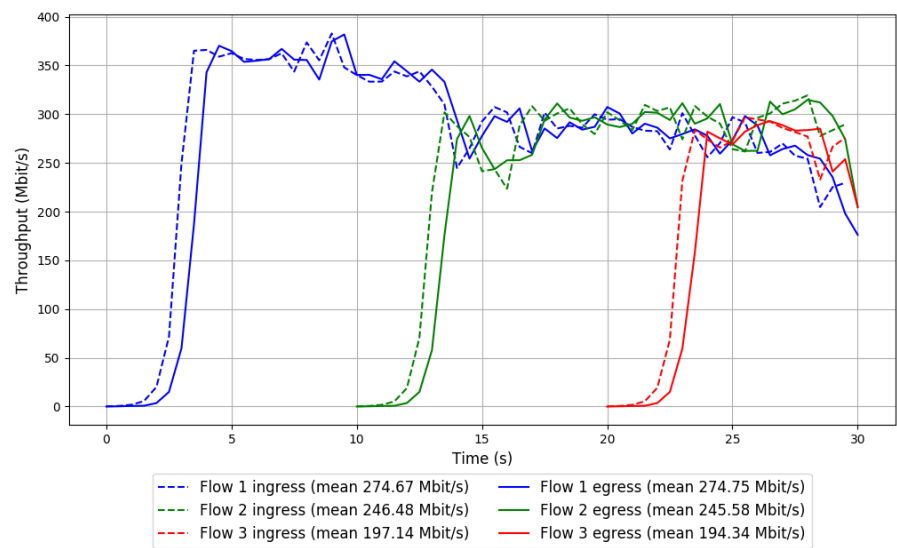


Run 2: Statistics of Copa

Start at: 2019-03-19 09:52:39  
End at: 2019-03-19 09:53:09  
Local clock offset: -0.206 ms  
Remote clock offset: -4.878 ms

# Below is generated by plot.py at 2019-03-19 12:46:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 501.01 Mbit/s  
95th percentile per-packet one-way delay: 183.765 ms  
Loss rate: 1.54%  
-- Flow 1:  
Average throughput: 274.75 Mbit/s  
95th percentile per-packet one-way delay: 182.761 ms  
Loss rate: 0.86%  
-- Flow 2:  
Average throughput: 245.58 Mbit/s  
95th percentile per-packet one-way delay: 183.935 ms  
Loss rate: 1.69%  
-- Flow 3:  
Average throughput: 194.34 Mbit/s  
95th percentile per-packet one-way delay: 204.641 ms  
Loss rate: 4.04%

Run 2: Report of Copa — Data Link

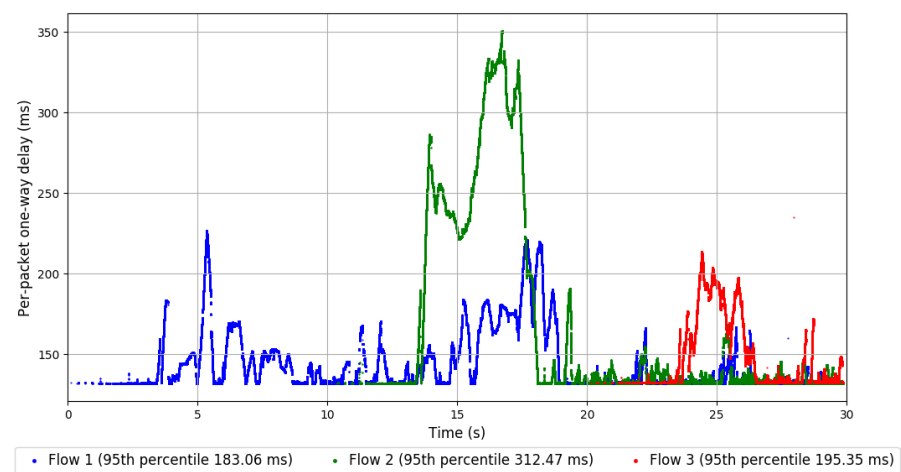
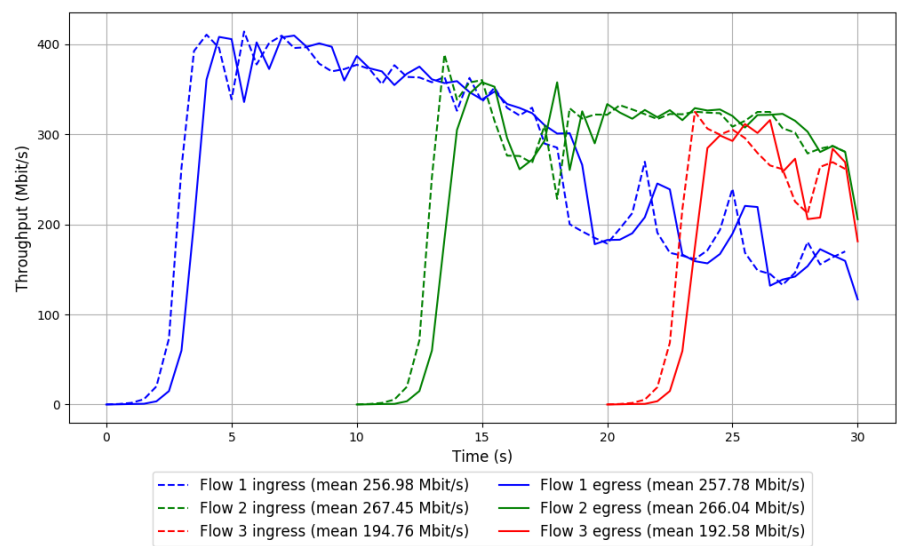


Run 3: Statistics of Copa

Start at: 2019-03-19 10:34:58  
End at: 2019-03-19 10:35:28  
Local clock offset: -0.311 ms  
Remote clock offset: -1.486 ms

# Below is generated by plot.py at 2019-03-19 12:46:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 497.03 Mbit/s  
95th percentile per-packet one-way delay: 248.271 ms  
Loss rate: 1.44%  
-- Flow 1:  
Average throughput: 257.78 Mbit/s  
95th percentile per-packet one-way delay: 183.059 ms  
Loss rate: 0.58%  
-- Flow 2:  
Average throughput: 266.04 Mbit/s  
95th percentile per-packet one-way delay: 312.473 ms  
Loss rate: 1.85%  
-- Flow 3:  
Average throughput: 192.58 Mbit/s  
95th percentile per-packet one-way delay: 195.351 ms  
Loss rate: 3.75%

Run 3: Report of Copa — Data Link



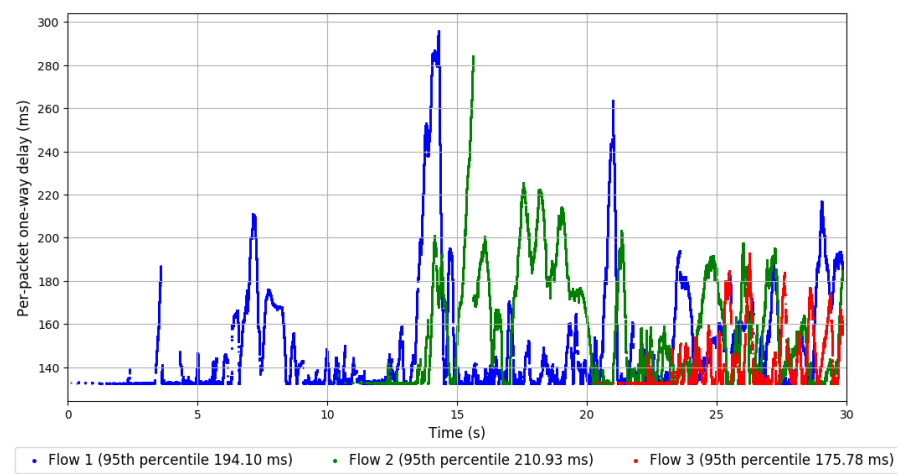
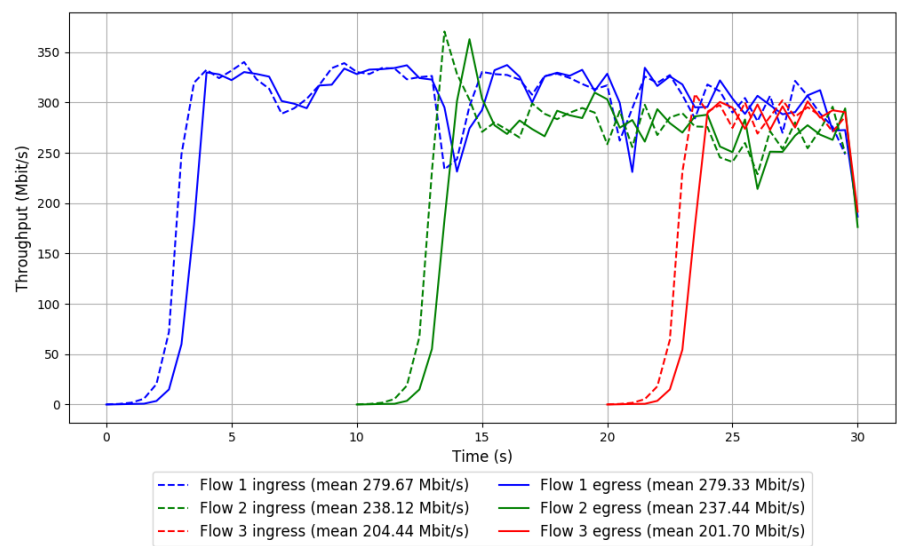


Run 4: Statistics of Copa

Start at: 2019-03-19 11:16:08  
End at: 2019-03-19 11:16:38  
Local clock offset: -0.424 ms  
Remote clock offset: -0.535 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 502.60 Mbit/s  
95th percentile per-packet one-way delay: 199.818 ms  
Loss rate: 1.60%  
-- Flow 1:  
Average throughput: 279.33 Mbit/s  
95th percentile per-packet one-way delay: 194.098 ms  
Loss rate: 1.01%  
-- Flow 2:  
Average throughput: 237.44 Mbit/s  
95th percentile per-packet one-way delay: 210.934 ms  
Loss rate: 1.61%  
-- Flow 3:  
Average throughput: 201.70 Mbit/s  
95th percentile per-packet one-way delay: 175.783 ms  
Loss rate: 3.97%

Run 4: Report of Copa — Data Link



Run 5: Statistics of Copa

Start at: 2019-03-19 11:57:59

End at: 2019-03-19 11:58:29

Local clock offset: 0.337 ms

Remote clock offset: -0.36 ms

# Below is generated by plot.py at 2019-03-19 13:00:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 479.82 Mbit/s

95th percentile per-packet one-way delay: 209.430 ms

Loss rate: 1.49%

-- Flow 1:

Average throughput: 243.19 Mbit/s

95th percentile per-packet one-way delay: 227.585 ms

Loss rate: 1.13%

-- Flow 2:

Average throughput: 252.68 Mbit/s

95th percentile per-packet one-way delay: 199.934 ms

Loss rate: 0.96%

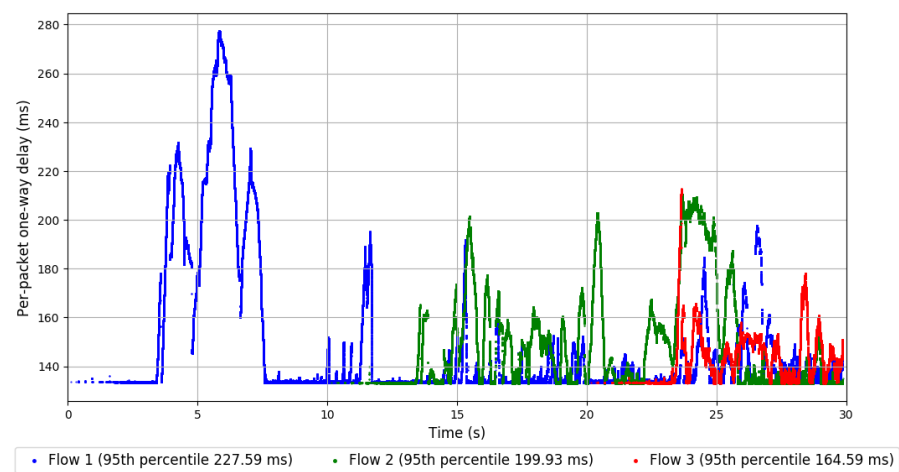
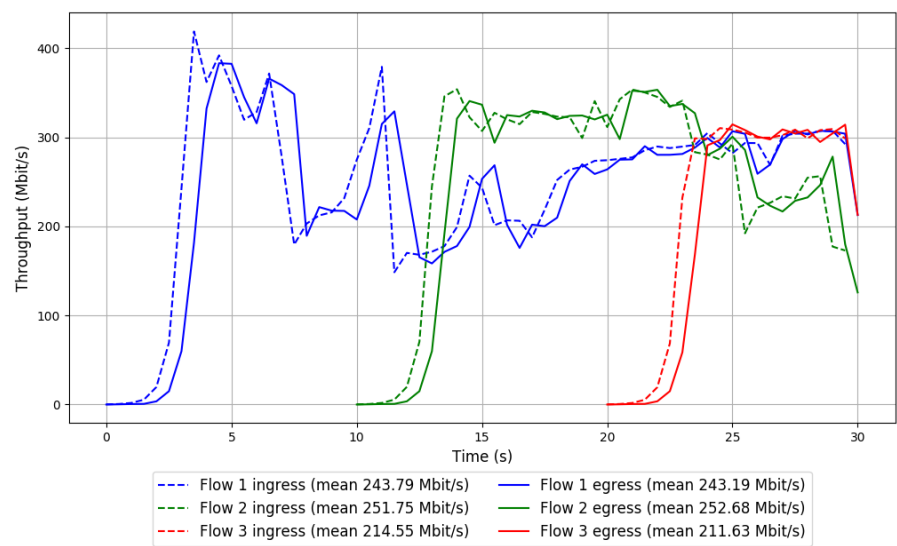
-- Flow 3:

Average throughput: 211.63 Mbit/s

95th percentile per-packet one-way delay: 164.592 ms

Loss rate: 3.99%

Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-03-19 08:58:20

End at: 2019-03-19 08:58:50

Local clock offset: -0.545 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-03-19 13:00:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 774.80 Mbit/s

95th percentile per-packet one-way delay: 171.112 ms

Loss rate: 1.52%

-- Flow 1:

Average throughput: 429.68 Mbit/s

95th percentile per-packet one-way delay: 155.922 ms

Loss rate: 1.01%

-- Flow 2:

Average throughput: 388.03 Mbit/s

95th percentile per-packet one-way delay: 187.509 ms

Loss rate: 1.31%

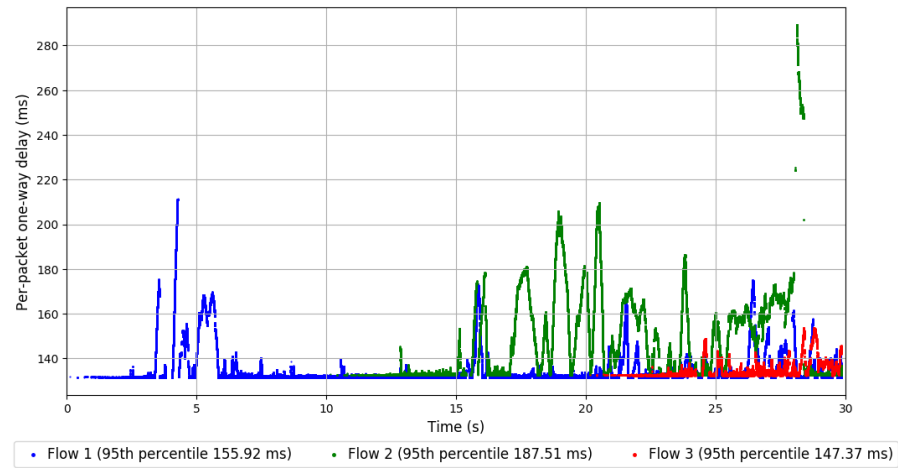
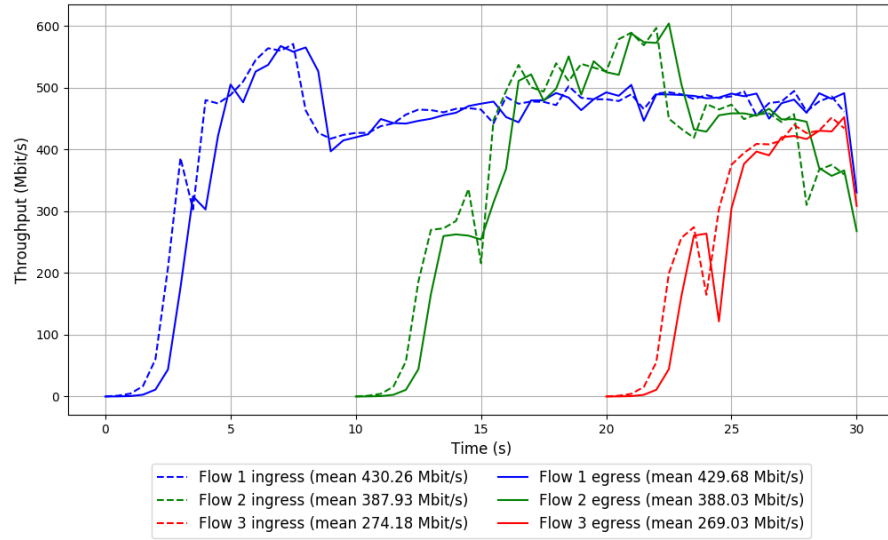
-- Flow 3:

Average throughput: 269.03 Mbit/s

95th percentile per-packet one-way delay: 147.366 ms

Loss rate: 4.50%

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

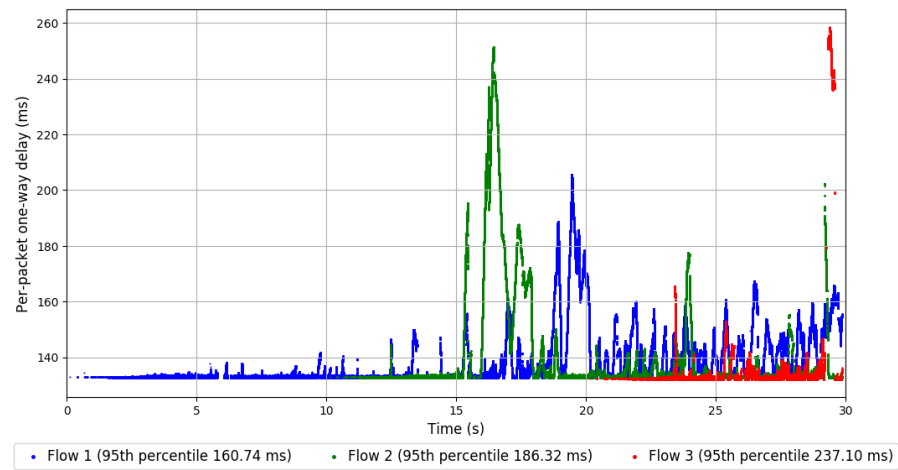
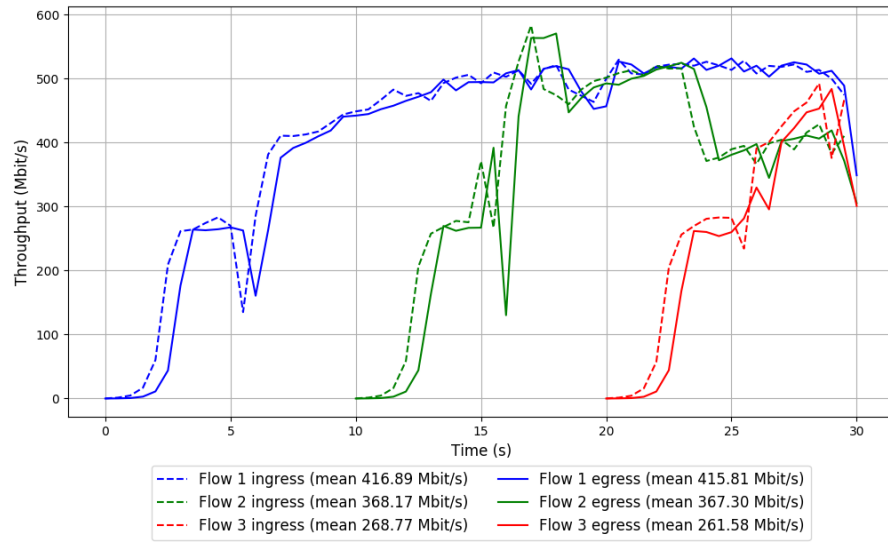


Run 2: Statistics of TCP Cubic

Start at: 2019-03-19 09:39:43  
End at: 2019-03-19 09:40:13  
Local clock offset: -0.075 ms  
Remote clock offset: -6.934 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 744.79 Mbit/s  
95th percentile per-packet one-way delay: 171.178 ms  
Loss rate: 1.77%  
-- Flow 1:  
Average throughput: 415.81 Mbit/s  
95th percentile per-packet one-way delay: 160.741 ms  
Loss rate: 1.14%  
-- Flow 2:  
Average throughput: 367.30 Mbit/s  
95th percentile per-packet one-way delay: 186.320 ms  
Loss rate: 1.56%  
-- Flow 3:  
Average throughput: 261.58 Mbit/s  
95th percentile per-packet one-way delay: 237.096 ms  
Loss rate: 5.25%

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



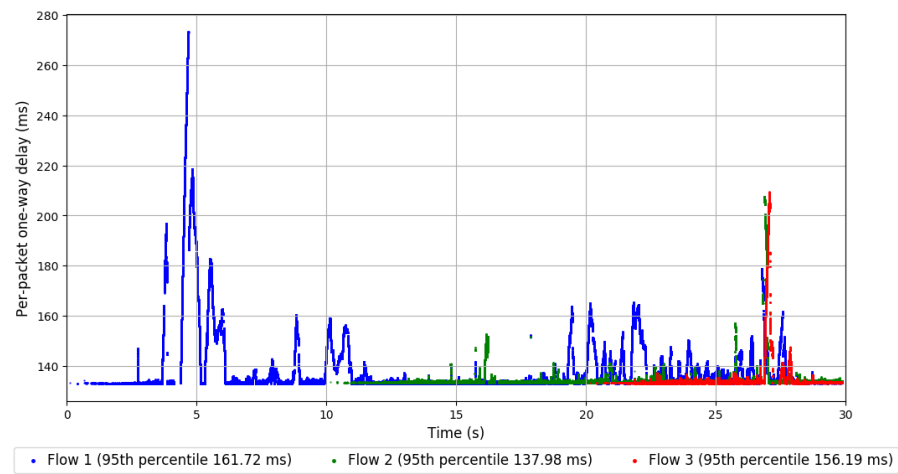
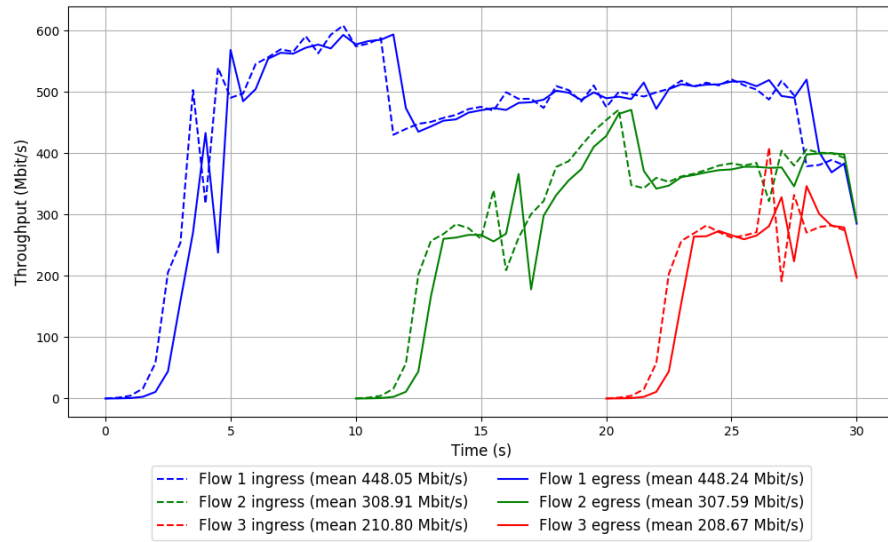


Run 3: Statistics of TCP Cubic

Start at: 2019-03-19 10:21:58  
End at: 2019-03-19 10:22:28  
Local clock offset: 0.007 ms  
Remote clock offset: -4.403 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 720.31 Mbit/s  
95th percentile per-packet one-way delay: 157.478 ms  
Loss rate: 1.37%  
-- Flow 1:  
Average throughput: 448.24 Mbit/s  
95th percentile per-packet one-way delay: 161.721 ms  
Loss rate: 0.84%  
-- Flow 2:  
Average throughput: 307.59 Mbit/s  
95th percentile per-packet one-way delay: 137.978 ms  
Loss rate: 1.75%  
-- Flow 3:  
Average throughput: 208.67 Mbit/s  
95th percentile per-packet one-way delay: 156.189 ms  
Loss rate: 3.64%

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

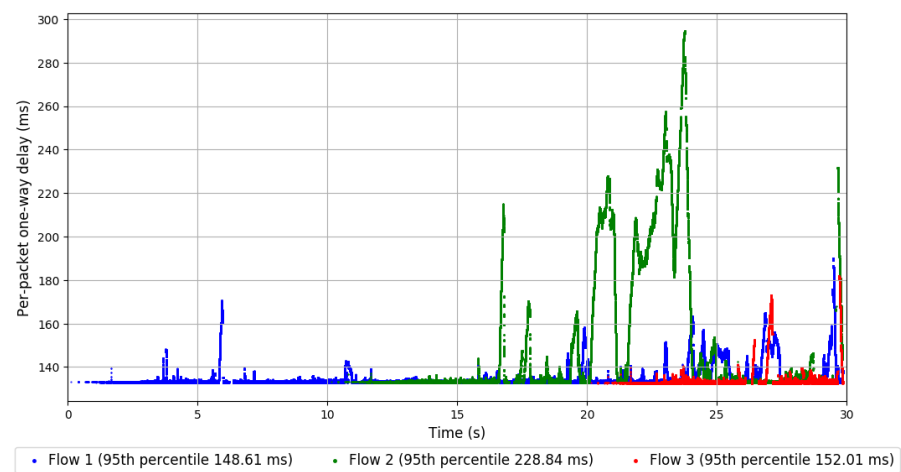
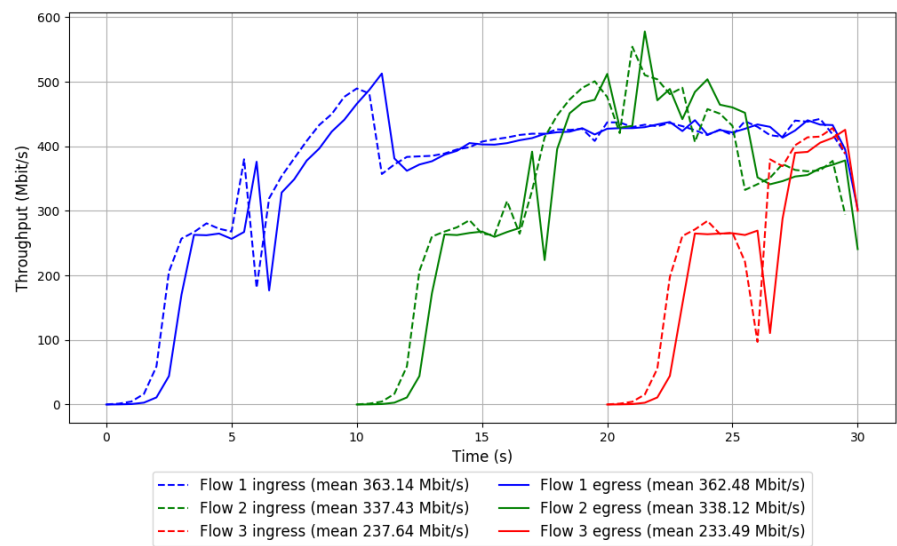


Run 4: Statistics of TCP Cubic

Start at: 2019-03-19 11:03:45  
End at: 2019-03-19 11:04:15  
Local clock offset: 0.005 ms  
Remote clock offset: -0.645 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 662.71 Mbit/s  
95th percentile per-packet one-way delay: 202.923 ms  
Loss rate: 1.51%  
-- Flow 1:  
Average throughput: 362.48 Mbit/s  
95th percentile per-packet one-way delay: 148.607 ms  
Loss rate: 1.07%  
-- Flow 2:  
Average throughput: 338.12 Mbit/s  
95th percentile per-packet one-way delay: 228.836 ms  
Loss rate: 1.23%  
-- Flow 3:  
Average throughput: 233.49 Mbit/s  
95th percentile per-packet one-way delay: 152.014 ms  
Loss rate: 4.36%

Run 4: Report of TCP Cubic — Data Link

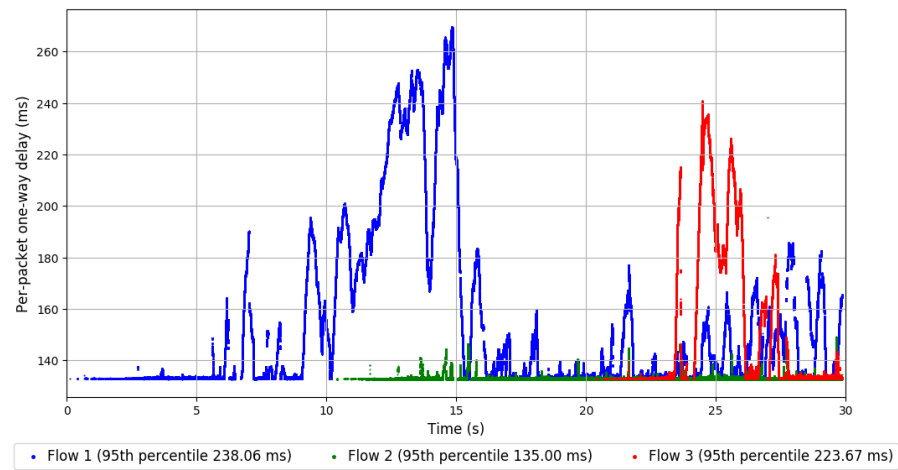
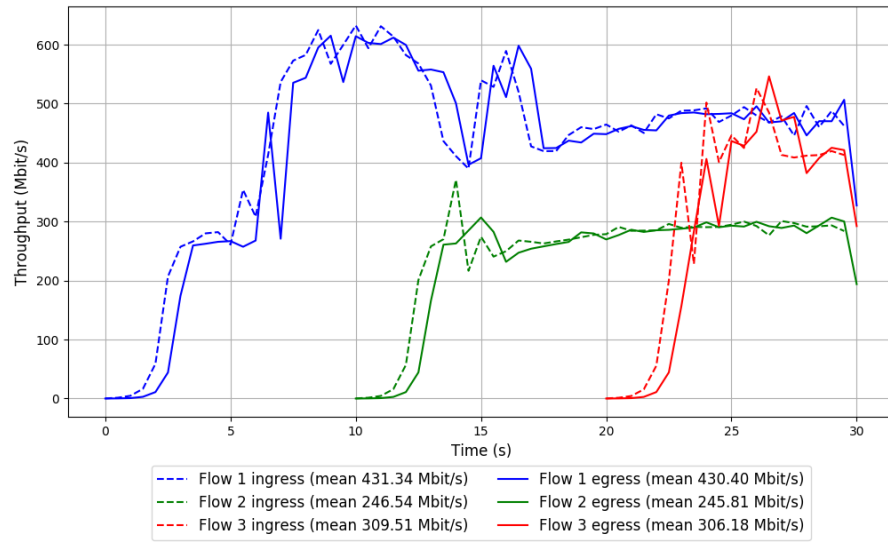


Run 5: Statistics of TCP Cubic

Start at: 2019-03-19 11:45:23  
End at: 2019-03-19 11:45:53  
Local clock offset: -0.089 ms  
Remote clock offset: -0.308 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 693.30 Mbit/s  
95th percentile per-packet one-way delay: 230.556 ms  
Loss rate: 1.61%  
-- Flow 1:  
Average throughput: 430.40 Mbit/s  
95th percentile per-packet one-way delay: 238.058 ms  
Loss rate: 1.10%  
-- Flow 2:  
Average throughput: 245.81 Mbit/s  
95th percentile per-packet one-way delay: 135.005 ms  
Loss rate: 1.61%  
-- Flow 3:  
Average throughput: 306.18 Mbit/s  
95th percentile per-packet one-way delay: 223.670 ms  
Loss rate: 3.72%

# Run 5: Report of TCP Cubic — Data Link

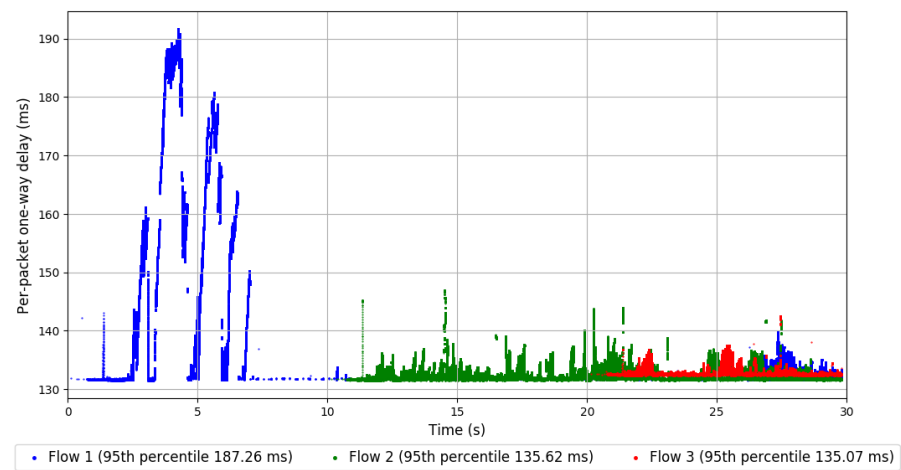
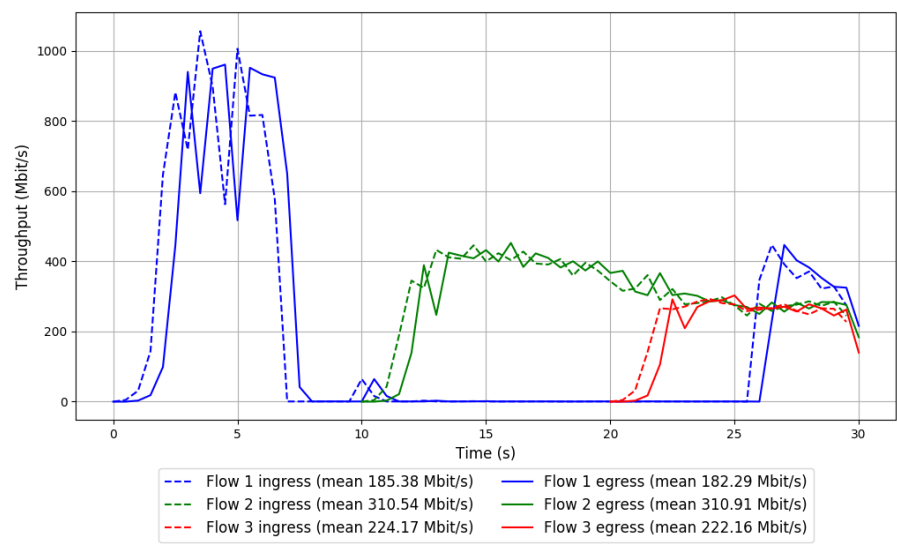


Run 1: Statistics of FillP

Start at: 2019-03-19 08:55:06  
End at: 2019-03-19 08:55:36  
Local clock offset: -0.519 ms  
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-03-19 13:00:10  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 460.55 Mbit/s  
95th percentile per-packet one-way delay: 179.004 ms  
Loss rate: 2.08%  
-- Flow 1:  
Average throughput: 182.29 Mbit/s  
95th percentile per-packet one-way delay: 187.263 ms  
Loss rate: 2.57%  
-- Flow 2:  
Average throughput: 310.91 Mbit/s  
95th percentile per-packet one-way delay: 135.618 ms  
Loss rate: 1.15%  
-- Flow 3:  
Average throughput: 222.16 Mbit/s  
95th percentile per-packet one-way delay: 135.071 ms  
Loss rate: 3.49%

Run 1: Report of FillP — Data Link



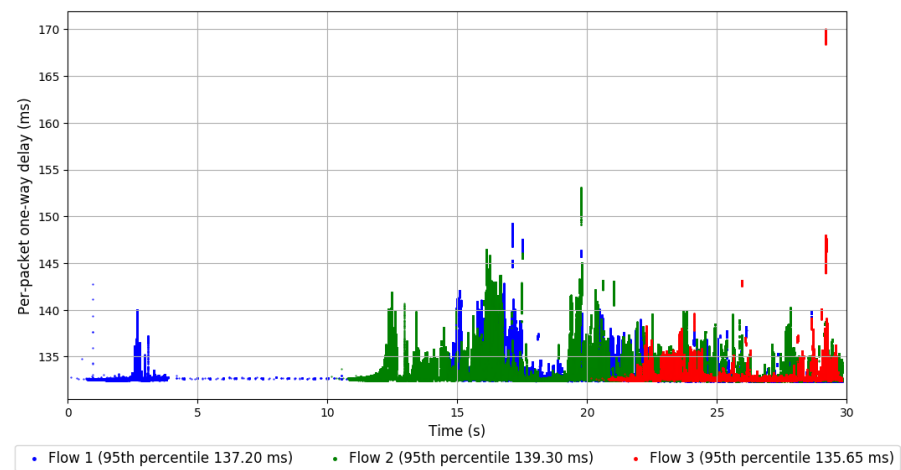
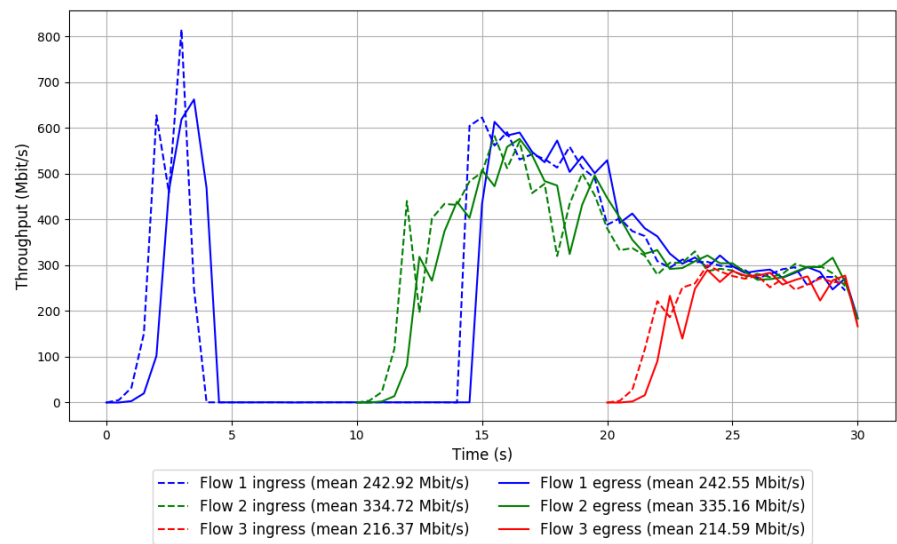


Run 2: Statistics of FillP

Start at: 2019-03-19 09:36:23  
End at: 2019-03-19 09:36:53  
Local clock offset: -0.283 ms  
Remote clock offset: -6.037 ms

# Below is generated by plot.py at 2019-03-19 13:07:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 534.48 Mbit/s  
95th percentile per-packet one-way delay: 137.930 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 242.55 Mbit/s  
95th percentile per-packet one-way delay: 137.198 ms  
Loss rate: 0.99%  
-- Flow 2:  
Average throughput: 335.16 Mbit/s  
95th percentile per-packet one-way delay: 139.299 ms  
Loss rate: 1.16%  
-- Flow 3:  
Average throughput: 214.59 Mbit/s  
95th percentile per-packet one-way delay: 135.650 ms  
Loss rate: 3.66%

Run 2: Report of FillP — Data Link

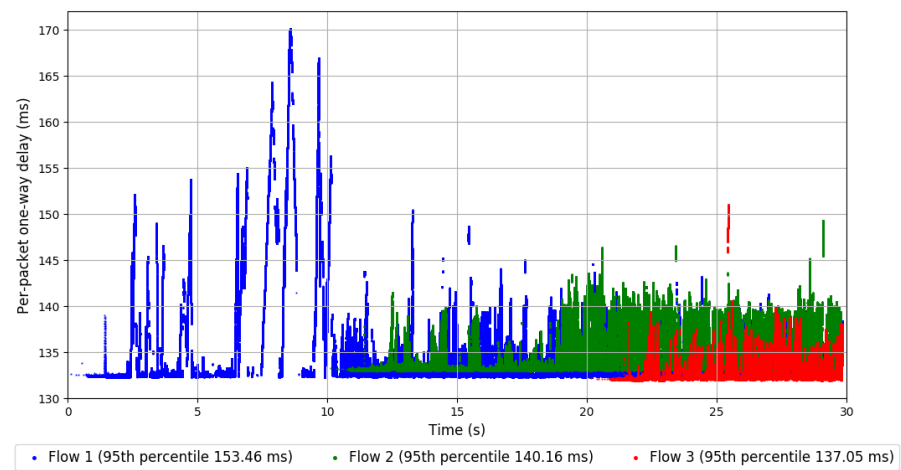
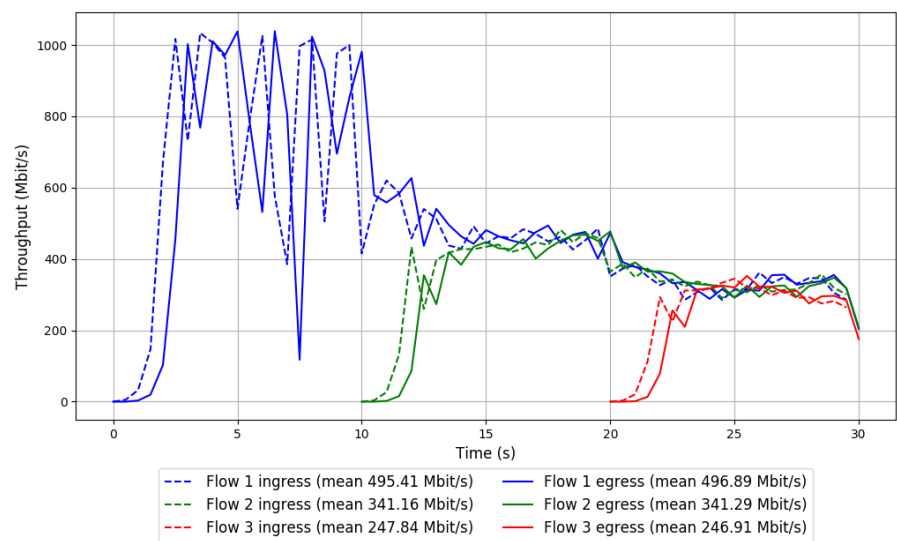


Run 3: Statistics of FillP

Start at: 2019-03-19 10:18:02  
End at: 2019-03-19 10:18:32  
Local clock offset: -0.0 ms  
Remote clock offset: -5.441 ms

# Below is generated by plot.py at 2019-03-19 13:14:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 803.30 Mbit/s  
95th percentile per-packet one-way delay: 149.504 ms  
Loss rate: 1.05%  
-- Flow 1:  
Average throughput: 496.89 Mbit/s  
95th percentile per-packet one-way delay: 153.460 ms  
Loss rate: 0.56%  
-- Flow 2:  
Average throughput: 341.29 Mbit/s  
95th percentile per-packet one-way delay: 140.160 ms  
Loss rate: 1.38%  
-- Flow 3:  
Average throughput: 246.91 Mbit/s  
95th percentile per-packet one-way delay: 137.051 ms  
Loss rate: 3.03%

Run 3: Report of FillP — Data Link

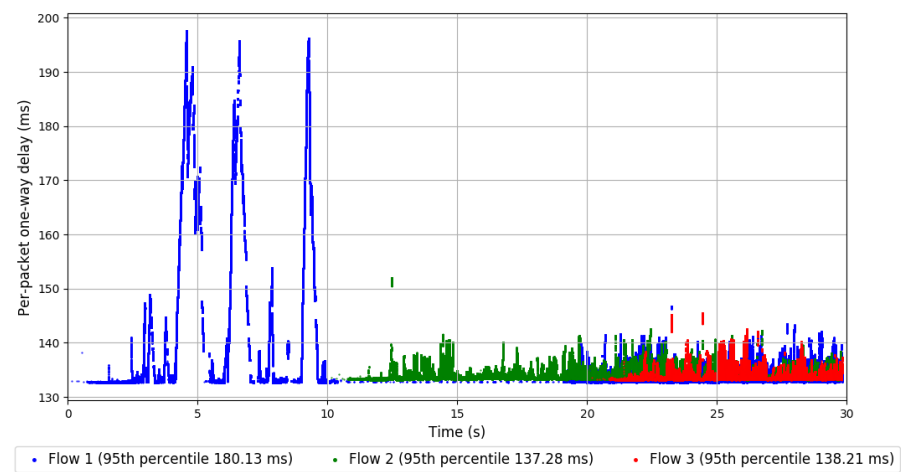
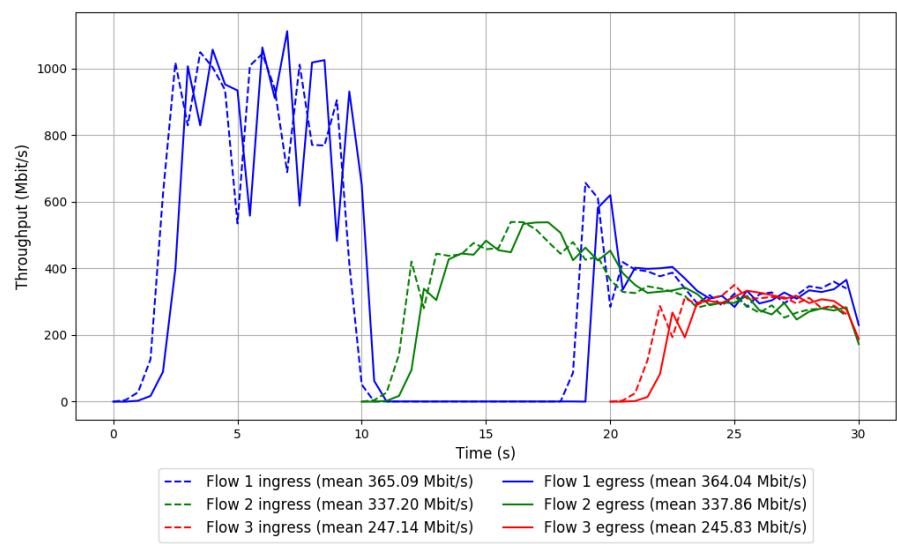


Run 4: Statistics of FillP

Start at: 2019-03-19 11:00:19  
End at: 2019-03-19 11:00:49  
Local clock offset: 0.099 ms  
Remote clock offset: -0.792 ms

# Below is generated by plot.py at 2019-03-19 13:14:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 667.75 Mbit/s  
95th percentile per-packet one-way delay: 170.290 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 364.04 Mbit/s  
95th percentile per-packet one-way delay: 180.133 ms  
Loss rate: 1.17%  
-- Flow 2:  
Average throughput: 337.86 Mbit/s  
95th percentile per-packet one-way delay: 137.285 ms  
Loss rate: 1.22%  
-- Flow 3:  
Average throughput: 245.83 Mbit/s  
95th percentile per-packet one-way delay: 138.209 ms  
Loss rate: 3.11%

Run 4: Report of FillP — Data Link

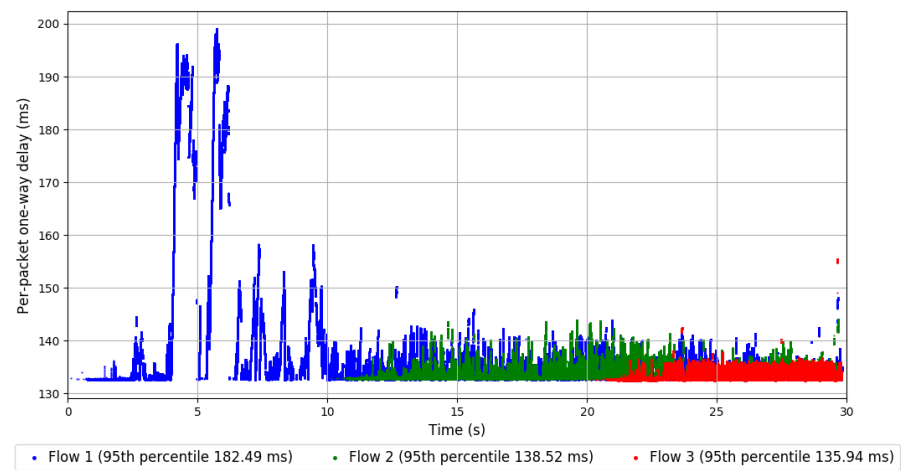
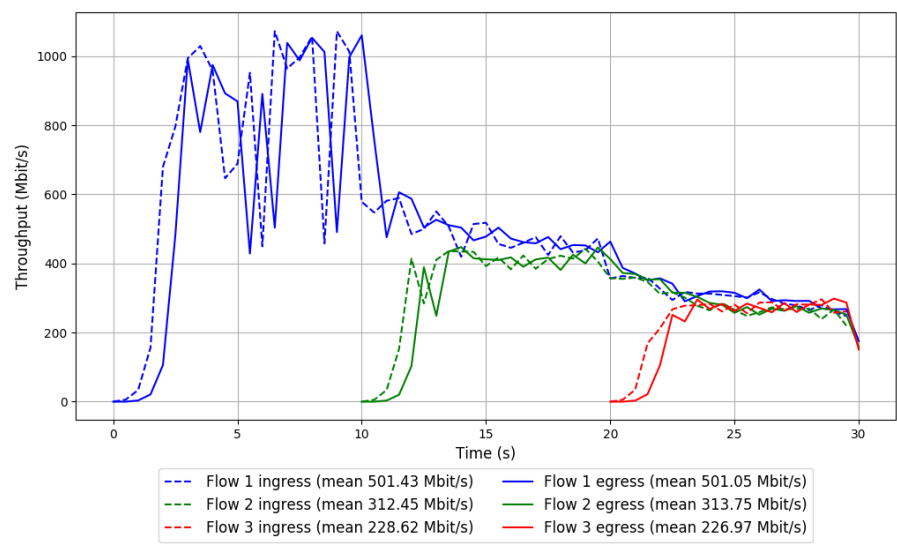


Run 5: Statistics of FillP

Start at: 2019-03-19 11:41:46  
End at: 2019-03-19 11:42:16  
Local clock offset: -0.418 ms  
Remote clock offset: -0.313 ms

# Below is generated by plot.py at 2019-03-19 13:14:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 782.49 Mbit/s  
95th percentile per-packet one-way delay: 174.362 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 501.05 Mbit/s  
95th percentile per-packet one-way delay: 182.485 ms  
Loss rate: 1.00%  
-- Flow 2:  
Average throughput: 313.75 Mbit/s  
95th percentile per-packet one-way delay: 138.524 ms  
Loss rate: 1.02%  
-- Flow 3:  
Average throughput: 226.97 Mbit/s  
95th percentile per-packet one-way delay: 135.936 ms  
Loss rate: 3.57%

Run 5: Report of FillP — Data Link



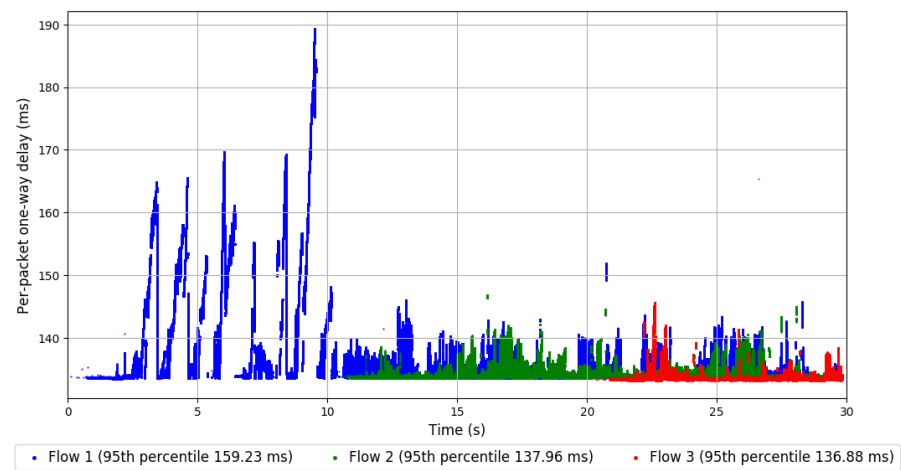
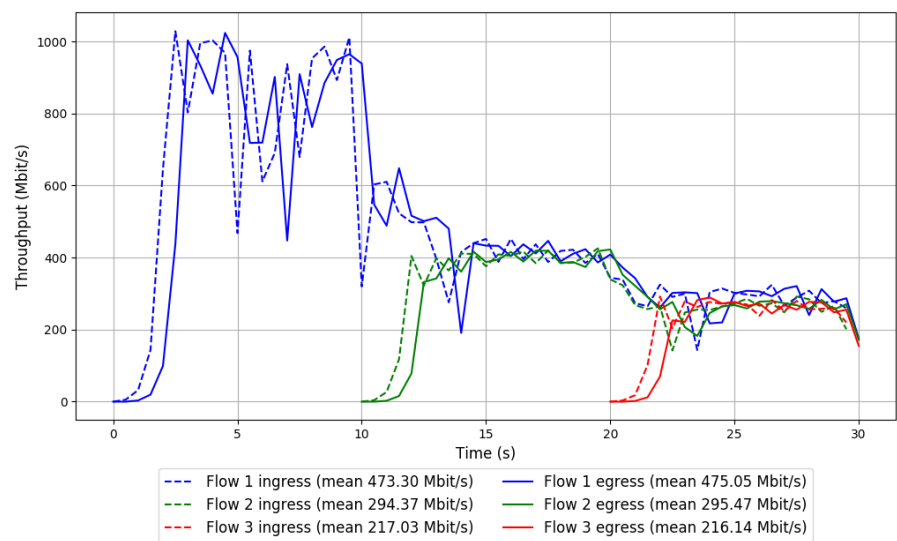


Run 1: Statistics of FillP-Sheep

Start at: 2019-03-19 08:50:38  
End at: 2019-03-19 08:51:08  
Local clock offset: 0.388 ms  
Remote clock offset: -0.096 ms

# Below is generated by plot.py at 2019-03-19 13:14:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 740.59 Mbit/s  
95th percentile per-packet one-way delay: 155.716 ms  
Loss rate: 0.91%  
-- Flow 1:  
Average throughput: 475.05 Mbit/s  
95th percentile per-packet one-way delay: 159.231 ms  
Loss rate: 0.60%  
-- Flow 2:  
Average throughput: 295.47 Mbit/s  
95th percentile per-packet one-way delay: 137.959 ms  
Loss rate: 0.89%  
-- Flow 3:  
Average throughput: 216.14 Mbit/s  
95th percentile per-packet one-way delay: 136.876 ms  
Loss rate: 3.08%

Run 1: Report of FillP-Sheep — Data Link

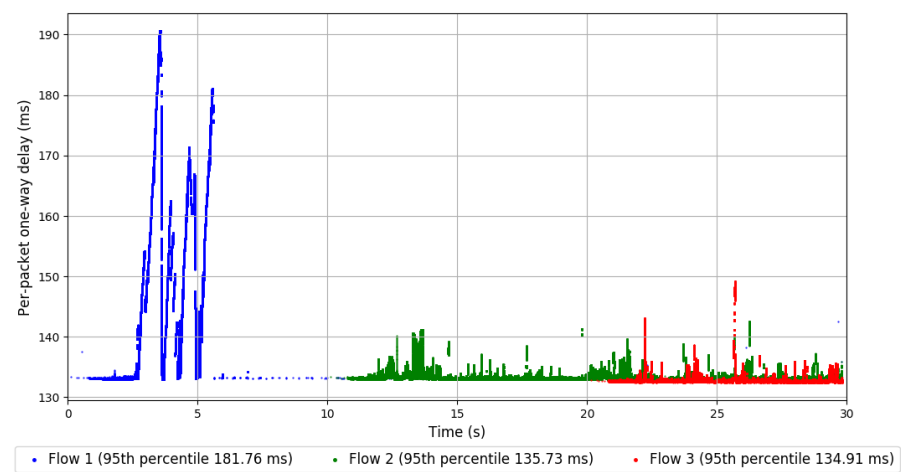
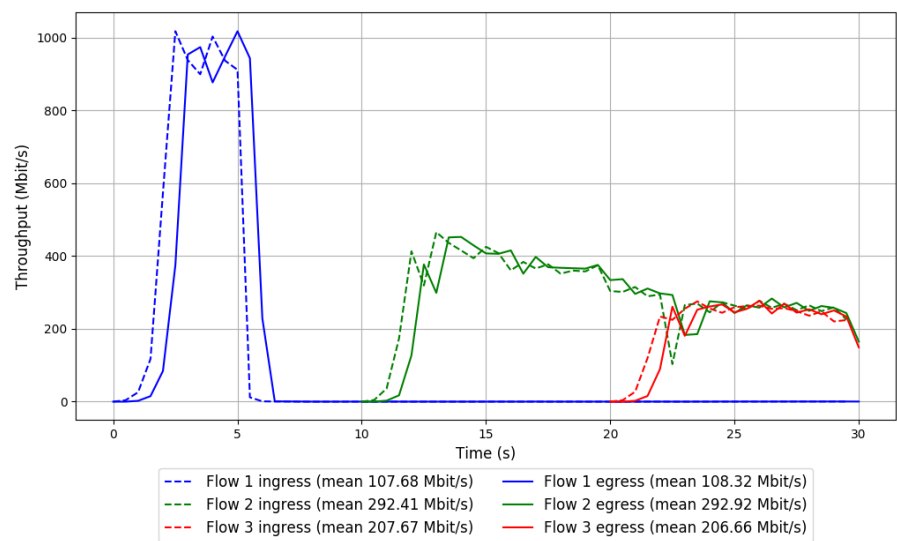


Run 2: Statistics of FillP-Sheep

Start at: 2019-03-19 09:32:29  
End at: 2019-03-19 09:32:59  
Local clock offset: 0.147 ms  
Remote clock offset: -4.933 ms

# Below is generated by plot.py at 2019-03-19 13:14:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 369.49 Mbit/s  
95th percentile per-packet one-way delay: 167.956 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 108.32 Mbit/s  
95th percentile per-packet one-way delay: 181.765 ms  
Loss rate: 0.32%  
-- Flow 2:  
Average throughput: 292.92 Mbit/s  
95th percentile per-packet one-way delay: 135.729 ms  
Loss rate: 1.14%  
-- Flow 3:  
Average throughput: 206.66 Mbit/s  
95th percentile per-packet one-way delay: 134.914 ms  
Loss rate: 3.03%

Run 2: Report of FillP-Sheep — Data Link

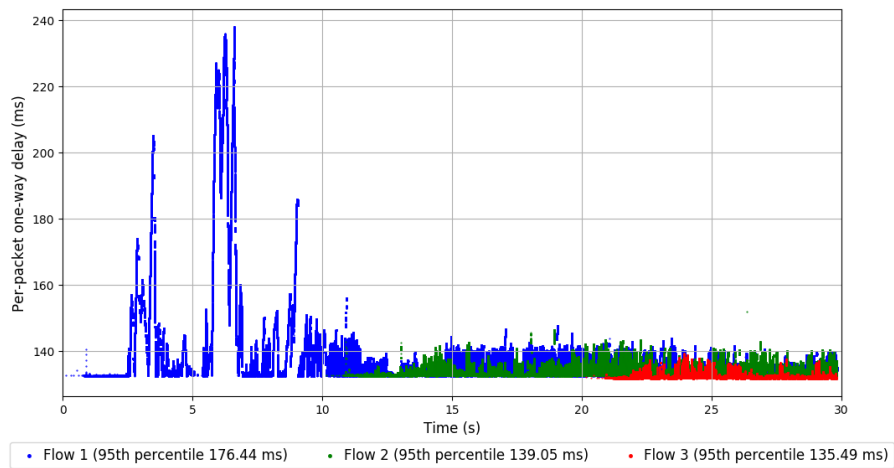
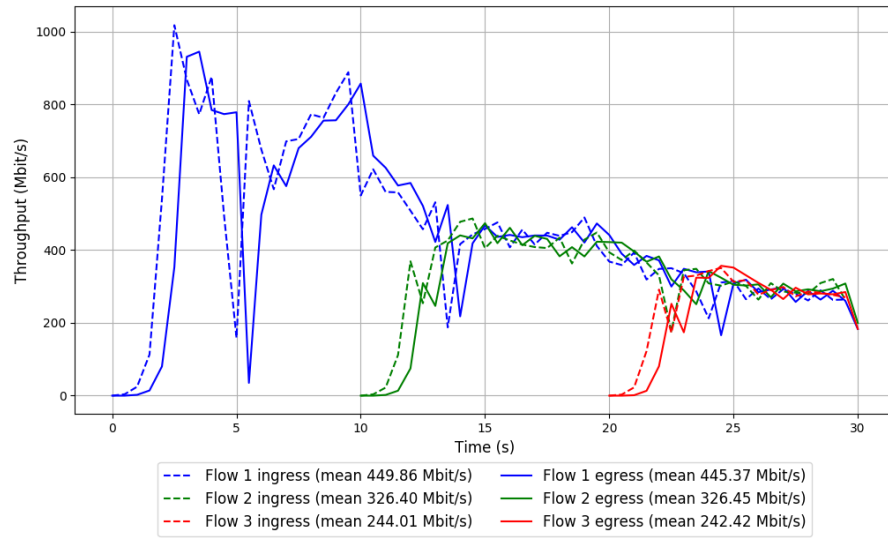


Run 3: Statistics of FillP-Sheep

Start at: 2019-03-19 10:13:48  
End at: 2019-03-19 10:14:18  
Local clock offset: -0.236 ms  
Remote clock offset: -4.915 ms

# Below is generated by plot.py at 2019-03-19 13:16:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 740.46 Mbit/s  
95th percentile per-packet one-way delay: 155.623 ms  
Loss rate: 1.85%  
-- Flow 1:  
Average throughput: 445.37 Mbit/s  
95th percentile per-packet one-way delay: 176.438 ms  
Loss rate: 1.84%  
-- Flow 2:  
Average throughput: 326.45 Mbit/s  
95th percentile per-packet one-way delay: 139.053 ms  
Loss rate: 1.24%  
-- Flow 3:  
Average throughput: 242.42 Mbit/s  
95th percentile per-packet one-way delay: 135.490 ms  
Loss rate: 3.49%

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

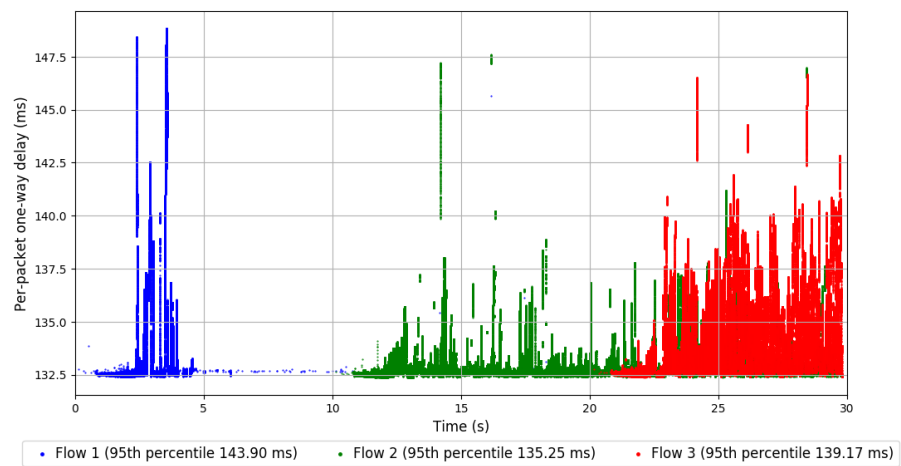
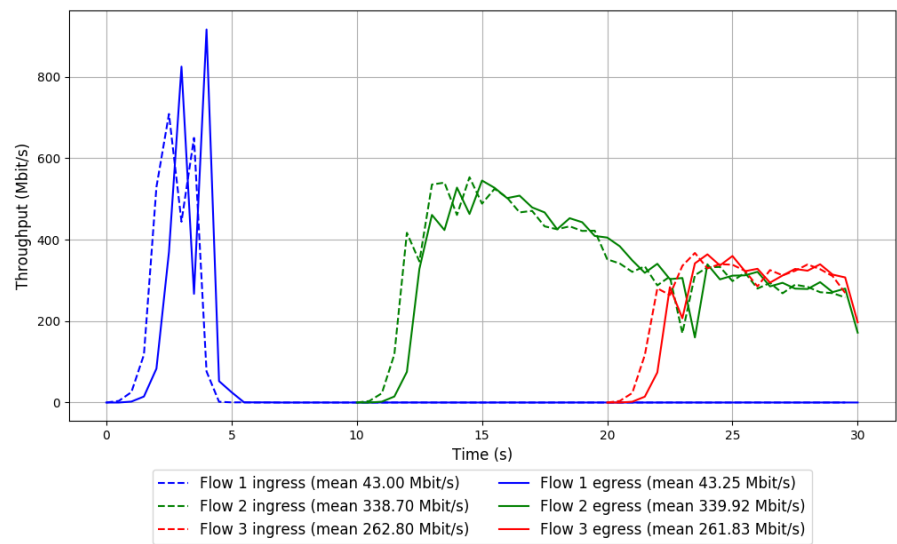


Run 4: Statistics of FillP-Sheep

Start at: 2019-03-19 10:56:32  
End at: 2019-03-19 10:57:02  
Local clock offset: -0.567 ms  
Remote clock offset: -1.039 ms

# Below is generated by plot.py at 2019-03-19 13:16:21  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 353.29 Mbit/s  
95th percentile per-packet one-way delay: 137.445 ms  
Loss rate: 1.47%  
-- Flow 1:  
Average throughput: 43.25 Mbit/s  
95th percentile per-packet one-way delay: 143.897 ms  
Loss rate: 0.03%  
-- Flow 2:  
Average throughput: 339.92 Mbit/s  
95th percentile per-packet one-way delay: 135.245 ms  
Loss rate: 1.08%  
-- Flow 3:  
Average throughput: 261.83 Mbit/s  
95th percentile per-packet one-way delay: 139.169 ms  
Loss rate: 3.16%

Run 4: Report of FillP-Sheep — Data Link





Run 5: Statistics of FillP-Sheep

Start at: 2019-03-19 11:37:59

End at: 2019-03-19 11:38:29

Local clock offset: 0.14 ms

Remote clock offset: -0.69 ms

# Below is generated by plot.py at 2019-03-19 13:16:21

# Datalink statistics

-- Total of 3 flows:

Average throughput: 367.64 Mbit/s

95th percentile per-packet one-way delay: 145.780 ms

Loss rate: 1.37%

-- Flow 1:

Average throughput: 72.08 Mbit/s

95th percentile per-packet one-way delay: 148.183 ms

Loss rate: 0.14%

-- Flow 2:

Average throughput: 332.45 Mbit/s

95th percentile per-packet one-way delay: 141.464 ms

Loss rate: 1.22%

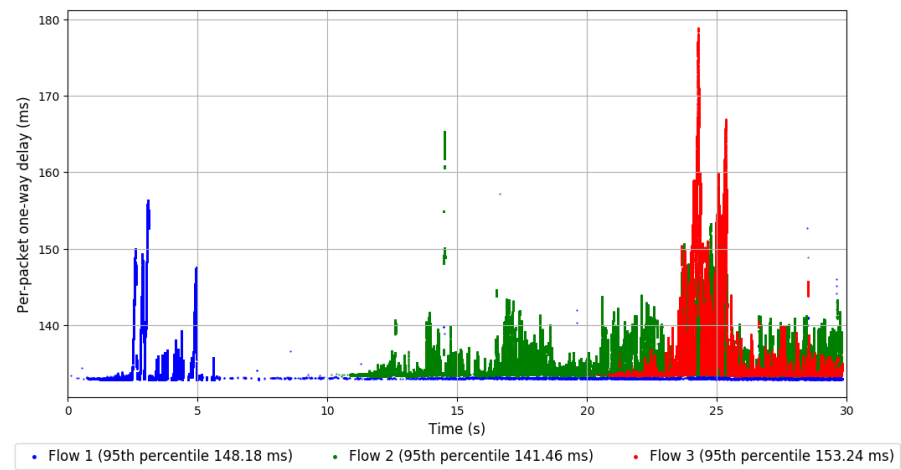
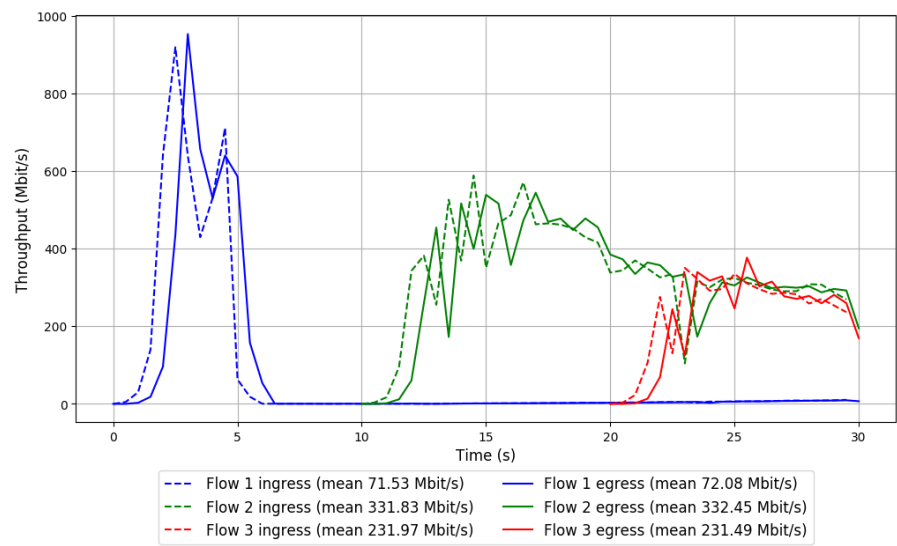
-- Flow 3:

Average throughput: 231.49 Mbit/s

95th percentile per-packet one-way delay: 153.244 ms

Loss rate: 2.95%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-03-19 09:24:25

End at: 2019-03-19 09:24:55

Local clock offset: -0.446 ms

Remote clock offset: -2.68 ms

# Below is generated by plot.py at 2019-03-19 13:19:35

# Datalink statistics

-- Total of 3 flows:

Average throughput: 345.47 Mbit/s

95th percentile per-packet one-way delay: 136.540 ms

Loss rate: 1.34%

-- Flow 1:

Average throughput: 180.72 Mbit/s

95th percentile per-packet one-way delay: 135.504 ms

Loss rate: 0.85%

-- Flow 2:

Average throughput: 166.64 Mbit/s

95th percentile per-packet one-way delay: 137.860 ms

Loss rate: 1.24%

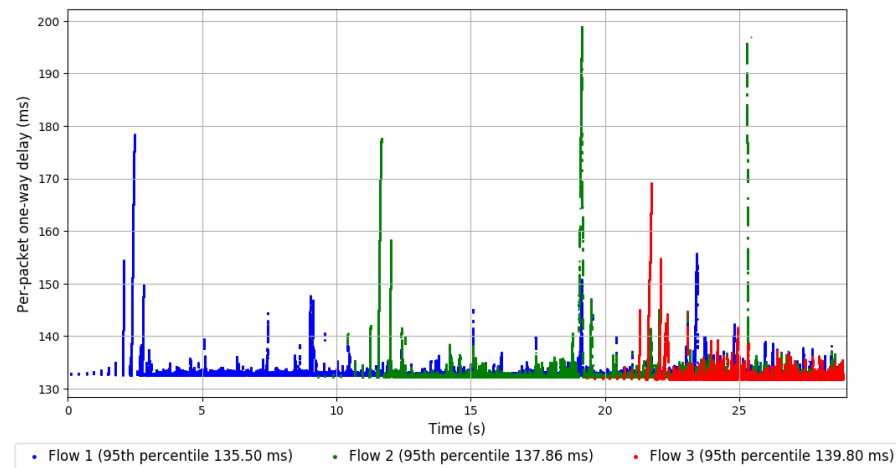
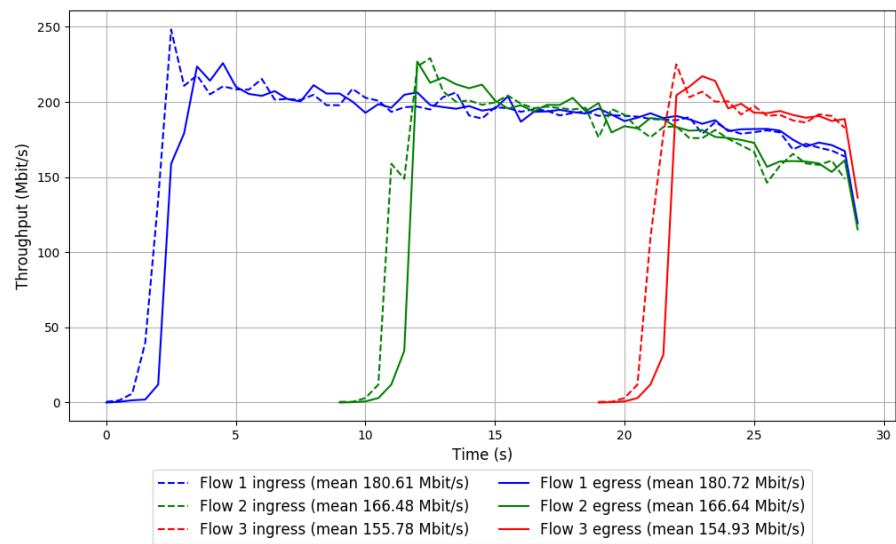
-- Flow 3:

Average throughput: 154.93 Mbit/s

95th percentile per-packet one-way delay: 139.803 ms

Loss rate: 3.23%

Run 1: Report of Indigo — Data Link

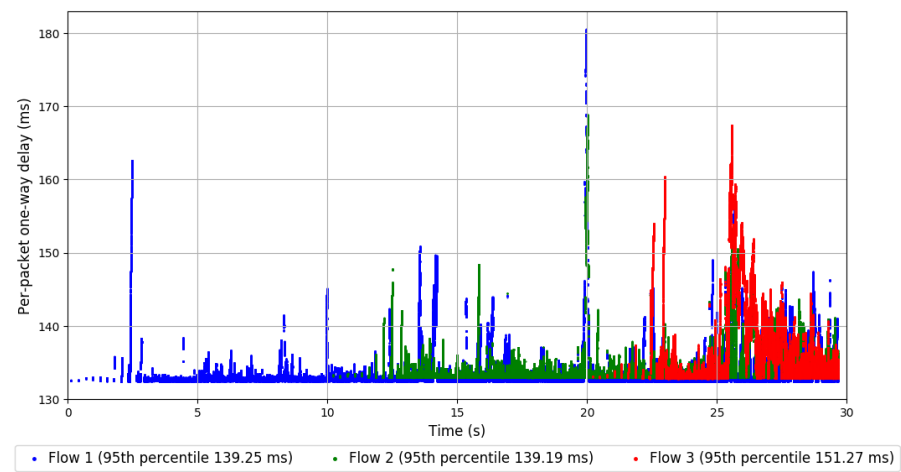
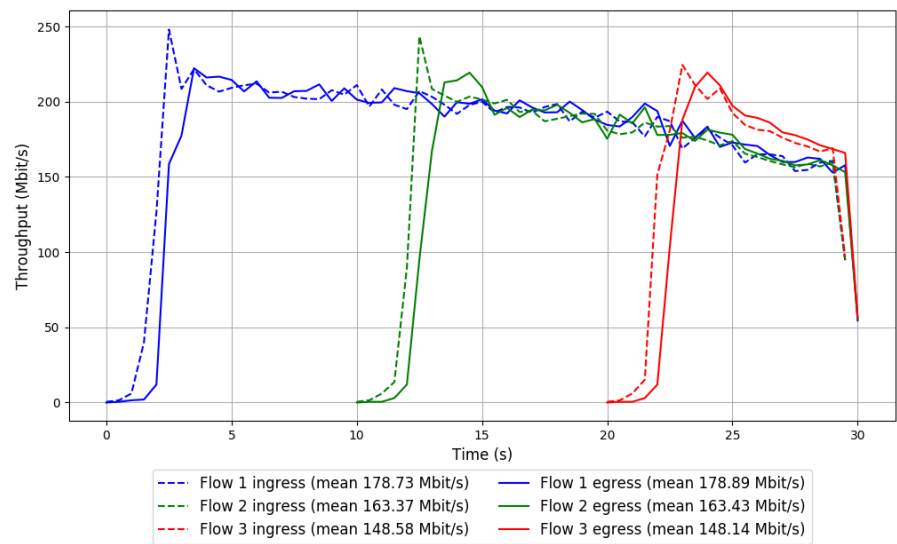


Run 2: Statistics of Indigo

Start at: 2019-03-19 10:05:58  
End at: 2019-03-19 10:06:28  
Local clock offset: 0.123 ms  
Remote clock offset: -4.073 ms

# Below is generated by plot.py at 2019-03-19 13:19:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 334.04 Mbit/s  
95th percentile per-packet one-way delay: 141.871 ms  
Loss rate: 1.28%  
-- Flow 1:  
Average throughput: 178.89 Mbit/s  
95th percentile per-packet one-way delay: 139.246 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 163.43 Mbit/s  
95th percentile per-packet one-way delay: 139.192 ms  
Loss rate: 1.30%  
-- Flow 3:  
Average throughput: 148.14 Mbit/s  
95th percentile per-packet one-way delay: 151.270 ms  
Loss rate: 3.01%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-03-19 10:48:44

End at: 2019-03-19 10:49:14

Local clock offset: -0.542 ms

Remote clock offset: -1.24 ms

# Below is generated by plot.py at 2019-03-19 13:23:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 340.18 Mbit/s

95th percentile per-packet one-way delay: 137.134 ms

Loss rate: 1.21%

-- Flow 1:

Average throughput: 172.89 Mbit/s

95th percentile per-packet one-way delay: 135.615 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 176.14 Mbit/s

95th percentile per-packet one-way delay: 137.639 ms

Loss rate: 1.31%

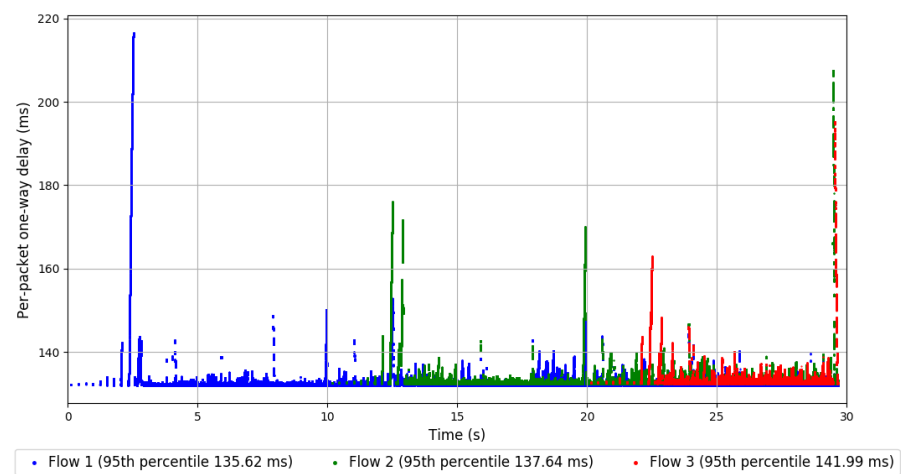
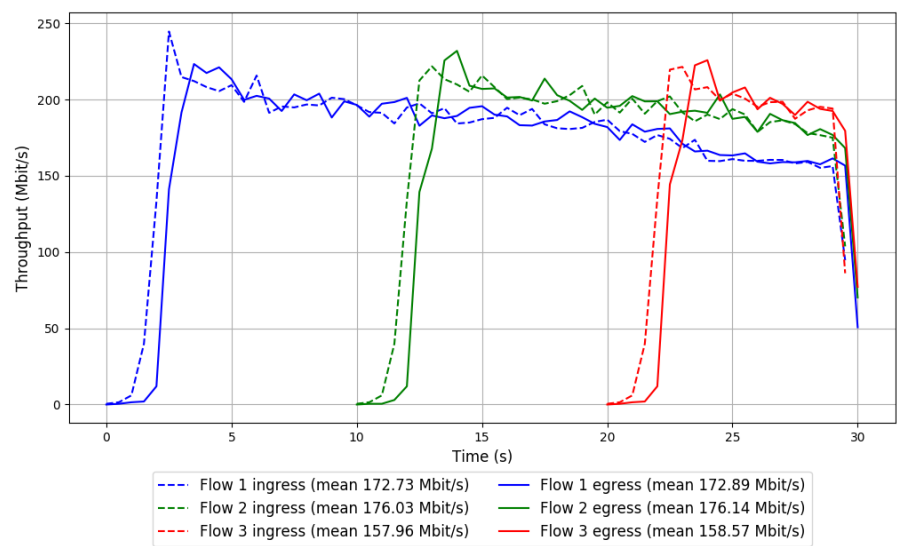
-- Flow 3:

Average throughput: 158.57 Mbit/s

95th percentile per-packet one-way delay: 141.994 ms

Loss rate: 2.38%

Run 3: Report of Indigo — Data Link



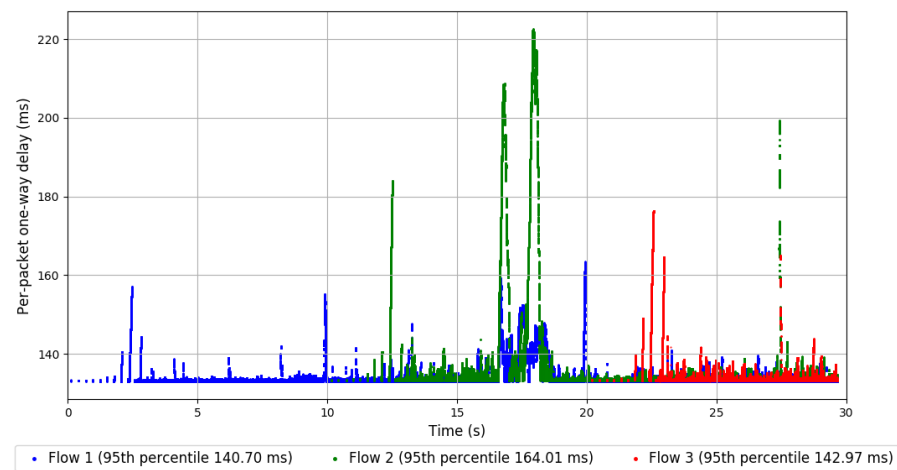
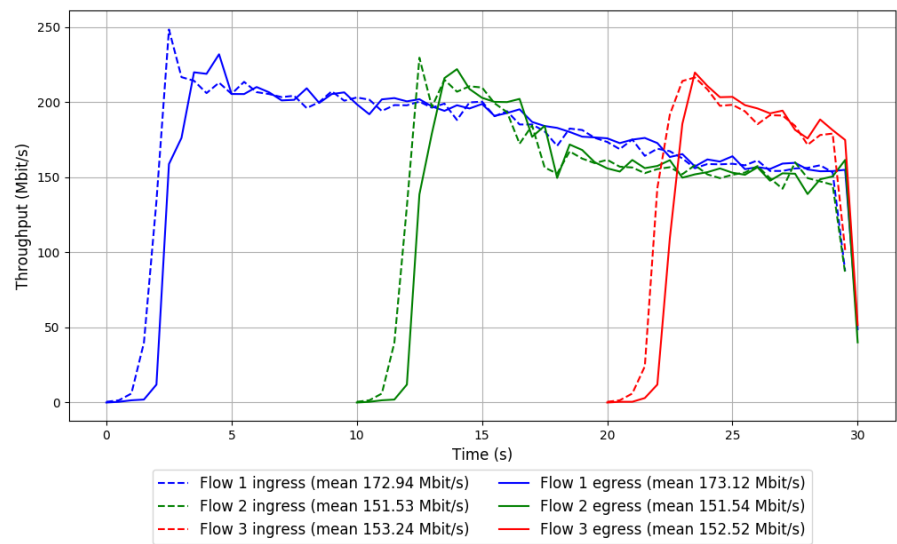


Run 4: Statistics of Indigo

Start at: 2019-03-19 11:30:02  
End at: 2019-03-19 11:30:32  
Local clock offset: 0.199 ms  
Remote clock offset: -0.561 ms

# Below is generated by plot.py at 2019-03-19 13:25:07  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 322.04 Mbit/s  
95th percentile per-packet one-way delay: 142.996 ms  
Loss rate: 1.33%  
-- Flow 1:  
Average throughput: 173.12 Mbit/s  
95th percentile per-packet one-way delay: 140.703 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 151.54 Mbit/s  
95th percentile per-packet one-way delay: 164.010 ms  
Loss rate: 1.34%  
-- Flow 3:  
Average throughput: 152.52 Mbit/s  
95th percentile per-packet one-way delay: 142.965 ms  
Loss rate: 3.18%

Run 4: Report of Indigo — Data Link

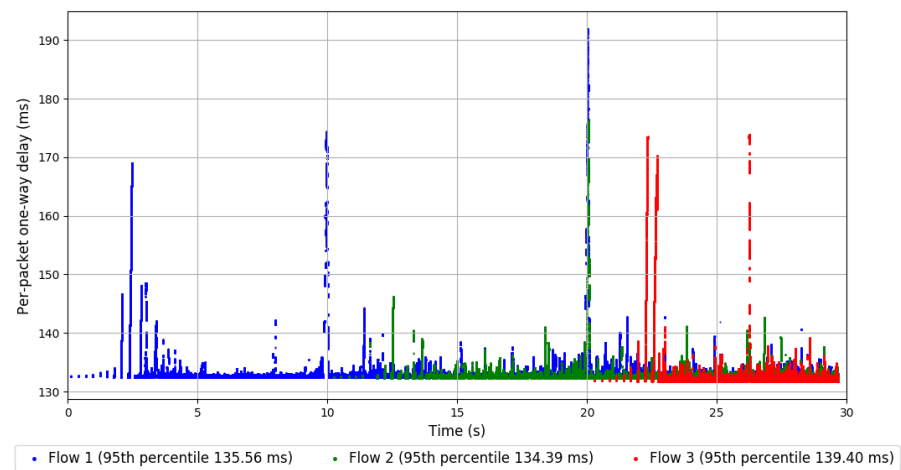
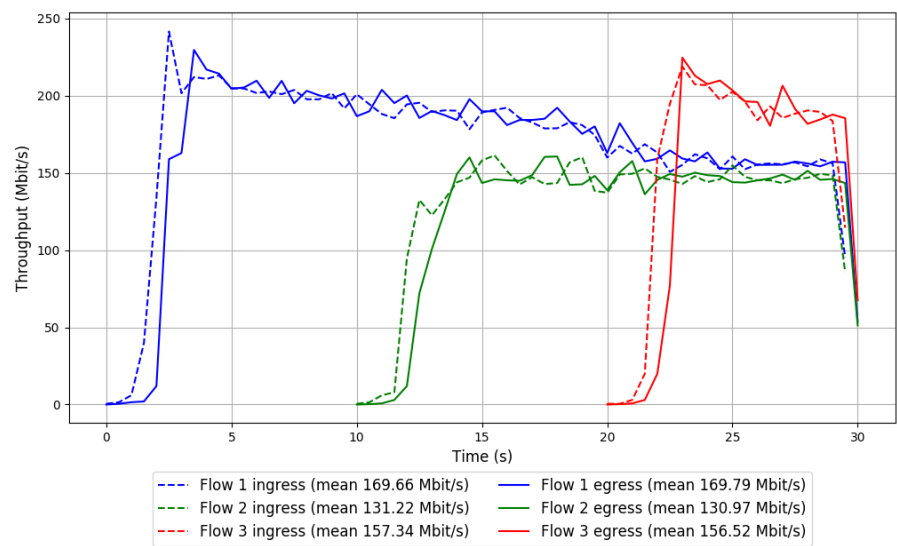


Run 5: Statistics of Indigo

Start at: 2019-03-19 12:10:43  
End at: 2019-03-19 12:11:13  
Local clock offset: -0.426 ms  
Remote clock offset: -0.236 ms

# Below is generated by plot.py at 2019-03-19 13:25:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 305.55 Mbit/s  
95th percentile per-packet one-way delay: 135.440 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 169.79 Mbit/s  
95th percentile per-packet one-way delay: 135.563 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 130.97 Mbit/s  
95th percentile per-packet one-way delay: 134.390 ms  
Loss rate: 1.51%  
-- Flow 3:  
Average throughput: 156.52 Mbit/s  
95th percentile per-packet one-way delay: 139.401 ms  
Loss rate: 3.26%

Run 5: Report of Indigo — Data Link

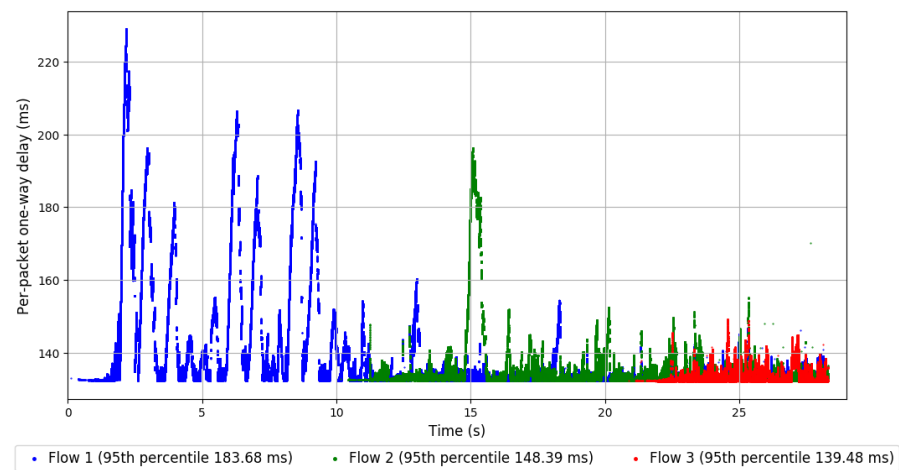
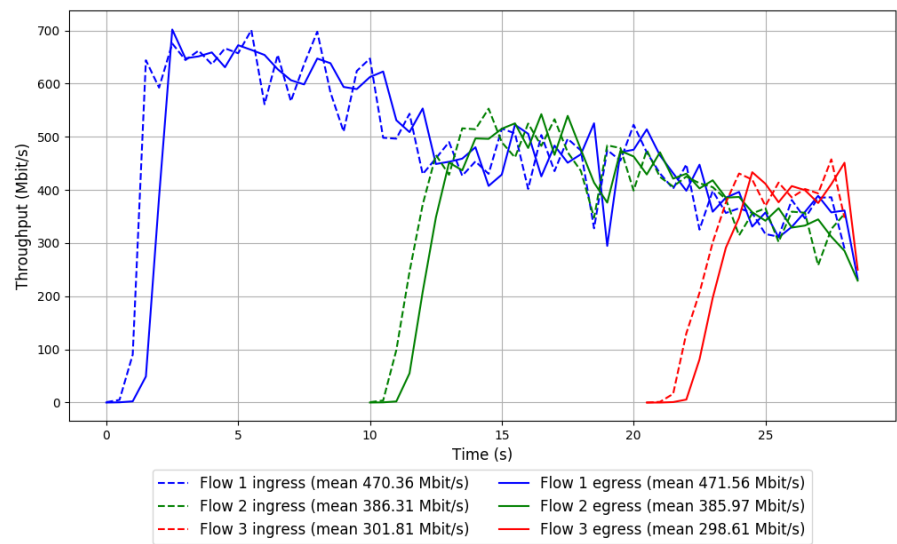


Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-19 09:15:47  
End at: 2019-03-19 09:16:17  
Local clock offset: -0.429 ms  
Remote clock offset: -0.255 ms

# Below is generated by plot.py at 2019-03-19 13:29:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 798.75 Mbit/s  
95th percentile per-packet one-way delay: 176.477 ms  
Loss rate: 1.38%  
-- Flow 1:  
Average throughput: 471.56 Mbit/s  
95th percentile per-packet one-way delay: 183.678 ms  
Loss rate: 0.73%  
-- Flow 2:  
Average throughput: 385.97 Mbit/s  
95th percentile per-packet one-way delay: 148.388 ms  
Loss rate: 1.56%  
-- Flow 3:  
Average throughput: 298.61 Mbit/s  
95th percentile per-packet one-way delay: 139.481 ms  
Loss rate: 4.58%

Run 1: Report of Indigo-MusesC3 — Data Link

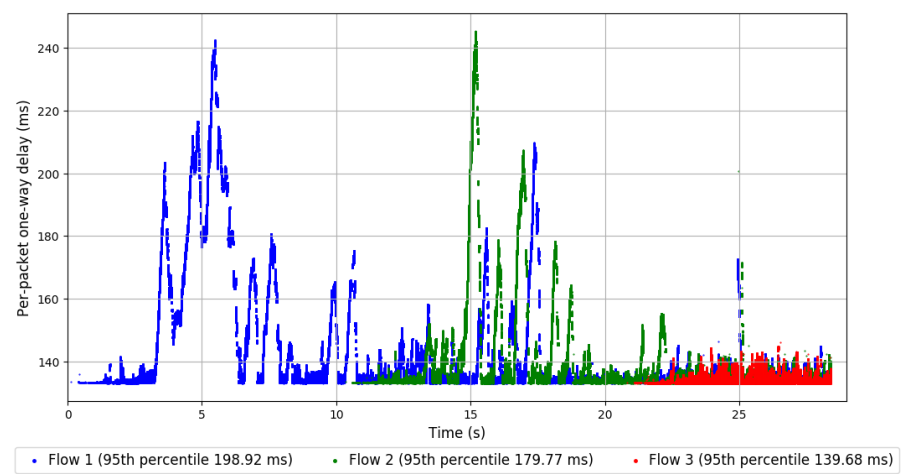
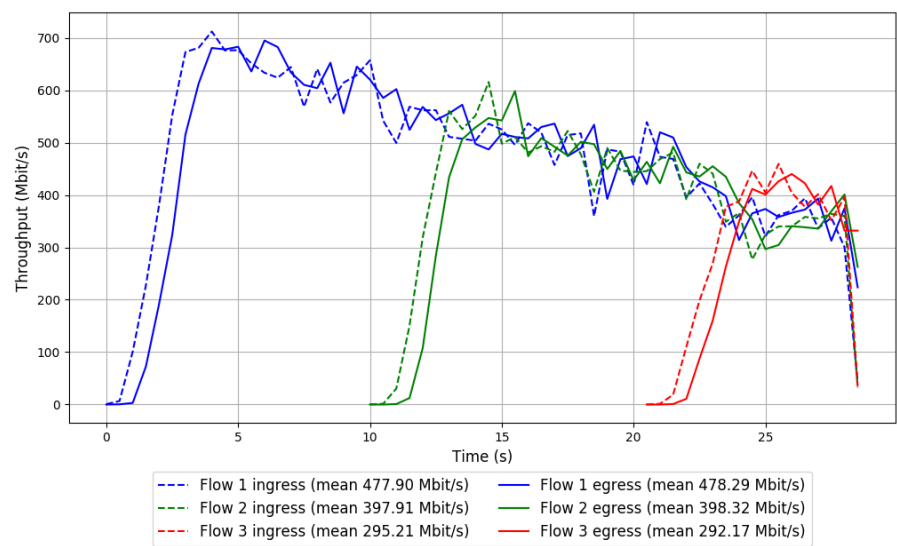


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-19 09:57:26  
End at: 2019-03-19 09:57:56  
Local clock offset: 0.362 ms  
Remote clock offset: -4.084 ms

# Below is generated by plot.py at 2019-03-19 13:31:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 811.29 Mbit/s  
95th percentile per-packet one-way delay: 192.764 ms  
Loss rate: 1.36%  
-- Flow 1:  
Average throughput: 478.29 Mbit/s  
95th percentile per-packet one-way delay: 198.917 ms  
Loss rate: 0.85%  
-- Flow 2:  
Average throughput: 398.32 Mbit/s  
95th percentile per-packet one-way delay: 179.768 ms  
Loss rate: 1.35%  
-- Flow 3:  
Average throughput: 292.17 Mbit/s  
95th percentile per-packet one-way delay: 139.678 ms  
Loss rate: 4.38%

Run 2: Report of Indigo-MusesC3 — Data Link



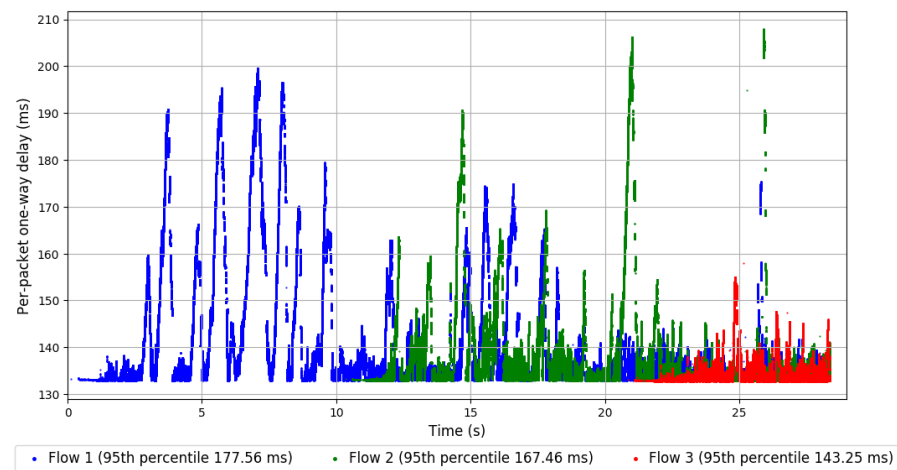
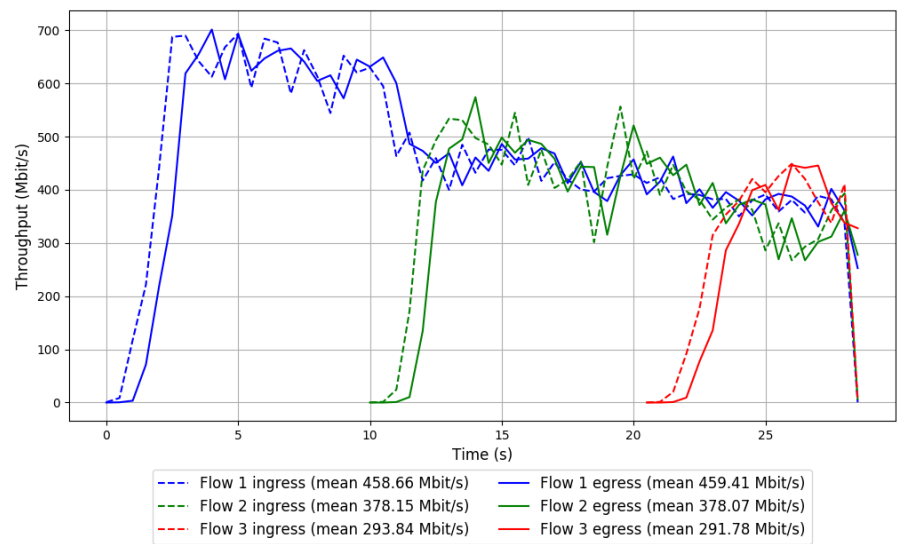


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-19 10:40:23  
End at: 2019-03-19 10:40:53  
Local clock offset: -0.287 ms  
Remote clock offset: -1.253 ms

# Below is generated by plot.py at 2019-03-19 13:31:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 778.58 Mbit/s  
95th percentile per-packet one-way delay: 172.234 ms  
Loss rate: 1.33%  
-- Flow 1:  
Average throughput: 459.41 Mbit/s  
95th percentile per-packet one-way delay: 177.561 ms  
Loss rate: 0.77%  
-- Flow 2:  
Average throughput: 378.07 Mbit/s  
95th percentile per-packet one-way delay: 167.463 ms  
Loss rate: 1.48%  
-- Flow 3:  
Average throughput: 291.78 Mbit/s  
95th percentile per-packet one-way delay: 143.255 ms  
Loss rate: 4.09%

Run 3: Report of Indigo-MusesC3 — Data Link

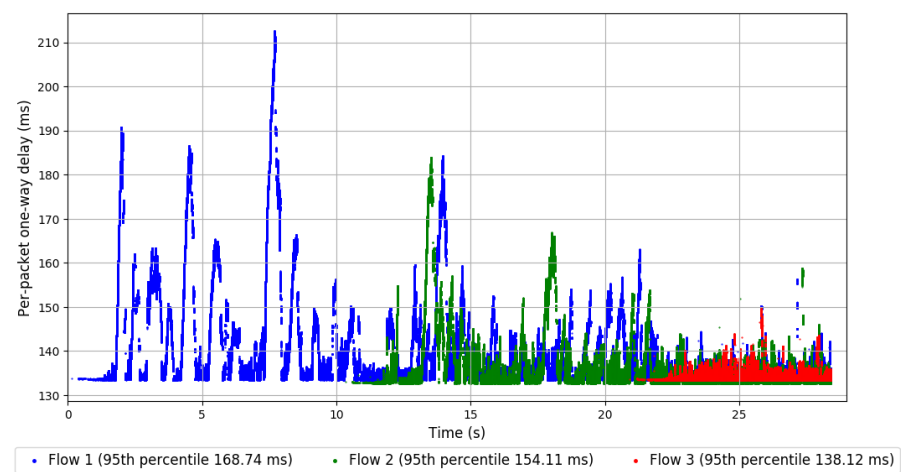
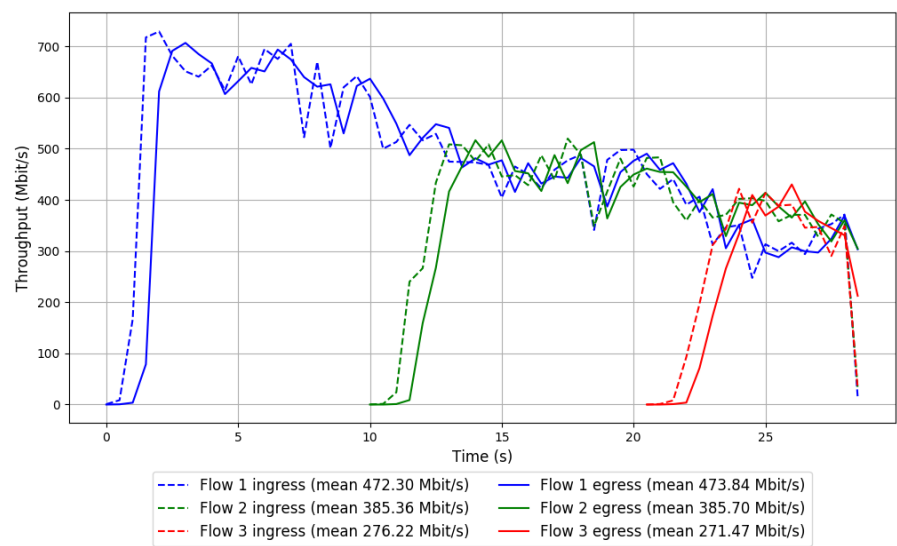


Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-19 11:21:11  
End at: 2019-03-19 11:21:41  
Local clock offset: 0.169 ms  
Remote clock offset: -0.628 ms

# Below is generated by plot.py at 2019-03-19 13:34:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 792.39 Mbit/s  
95th percentile per-packet one-way delay: 161.789 ms  
Loss rate: 1.27%  
-- Flow 1:  
Average throughput: 473.84 Mbit/s  
95th percentile per-packet one-way delay: 168.740 ms  
Loss rate: 0.61%  
-- Flow 2:  
Average throughput: 385.70 Mbit/s  
95th percentile per-packet one-way delay: 154.114 ms  
Loss rate: 1.37%  
-- Flow 3:  
Average throughput: 271.47 Mbit/s  
95th percentile per-packet one-way delay: 138.117 ms  
Loss rate: 5.10%

Run 4: Report of Indigo-MusesC3 — Data Link

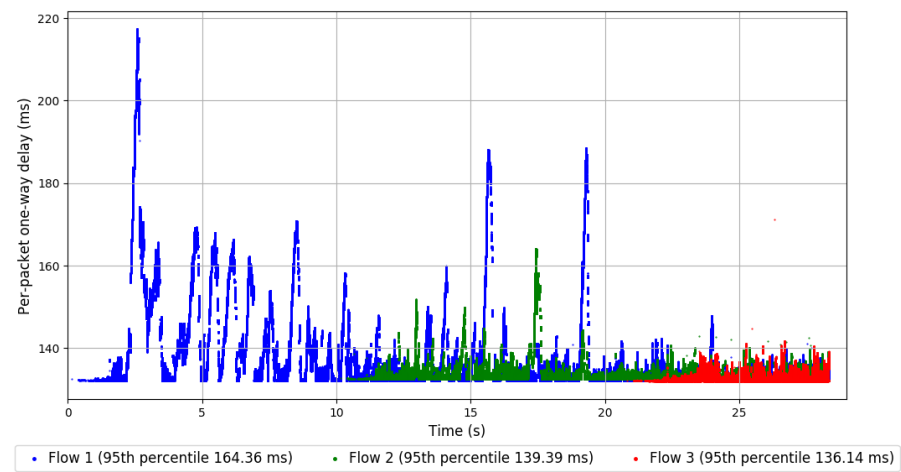
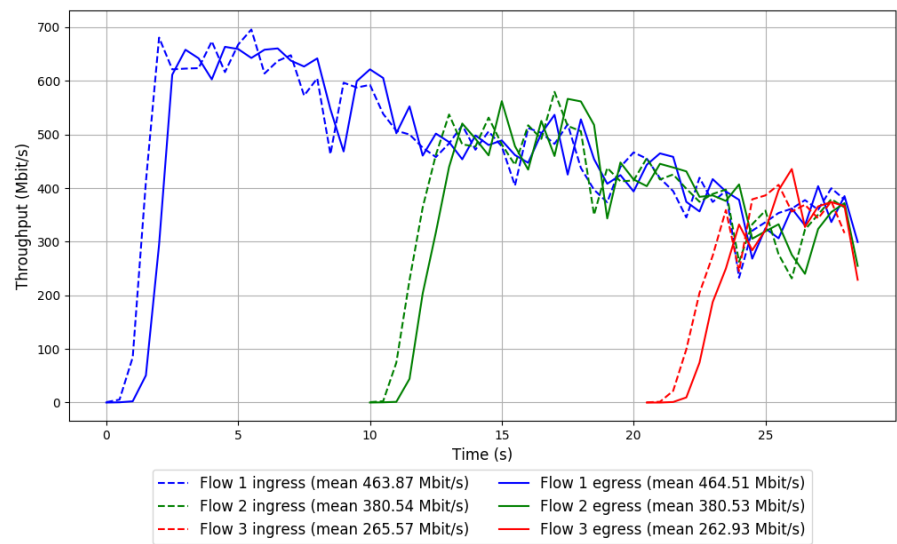


Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-19 12:02:30  
End at: 2019-03-19 12:03:00  
Local clock offset: -0.371 ms  
Remote clock offset: -0.344 ms

# Below is generated by plot.py at 2019-03-19 13:34:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 780.04 Mbit/s  
95th percentile per-packet one-way delay: 159.341 ms  
Loss rate: 1.33%  
-- Flow 1:  
Average throughput: 464.51 Mbit/s  
95th percentile per-packet one-way delay: 164.363 ms  
Loss rate: 0.79%  
-- Flow 2:  
Average throughput: 380.53 Mbit/s  
95th percentile per-packet one-way delay: 139.392 ms  
Loss rate: 1.43%  
-- Flow 3:  
Average throughput: 262.93 Mbit/s  
95th percentile per-packet one-way delay: 136.140 ms  
Loss rate: 4.41%

Run 5: Report of Indigo-MusesC3 — Data Link

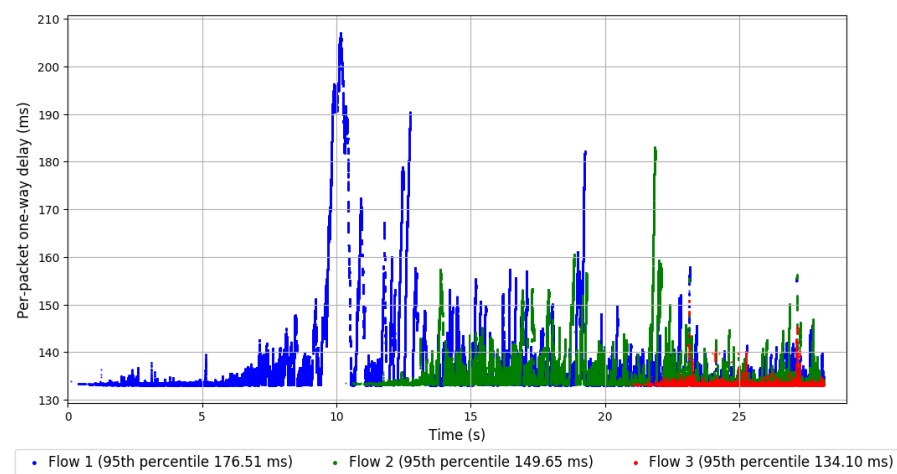
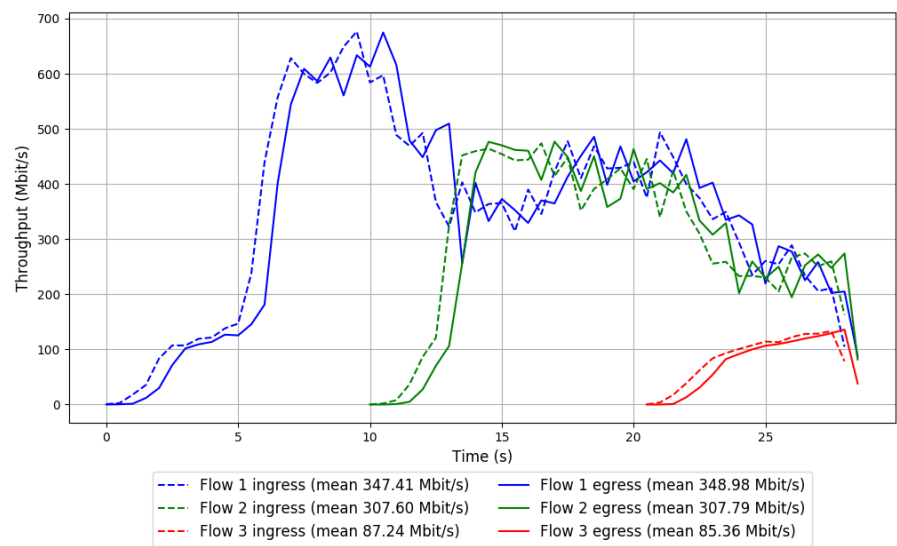


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-19 08:48:46  
End at: 2019-03-19 08:49:16  
Local clock offset: 0.306 ms  
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-03-19 13:35:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 566.74 Mbit/s  
95th percentile per-packet one-way delay: 162.365 ms  
Loss rate: 1.01%  
-- Flow 1:  
Average throughput: 348.98 Mbit/s  
95th percentile per-packet one-way delay: 176.510 ms  
Loss rate: 0.49%  
-- Flow 2:  
Average throughput: 307.79 Mbit/s  
95th percentile per-packet one-way delay: 149.647 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 85.36 Mbit/s  
95th percentile per-packet one-way delay: 134.096 ms  
Loss rate: 5.61%

Run 1: Report of Indigo-MusesC5 — Data Link



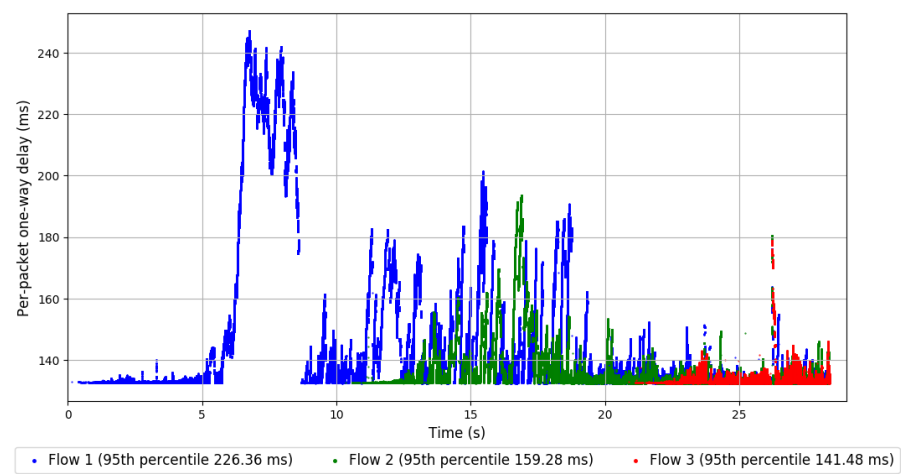
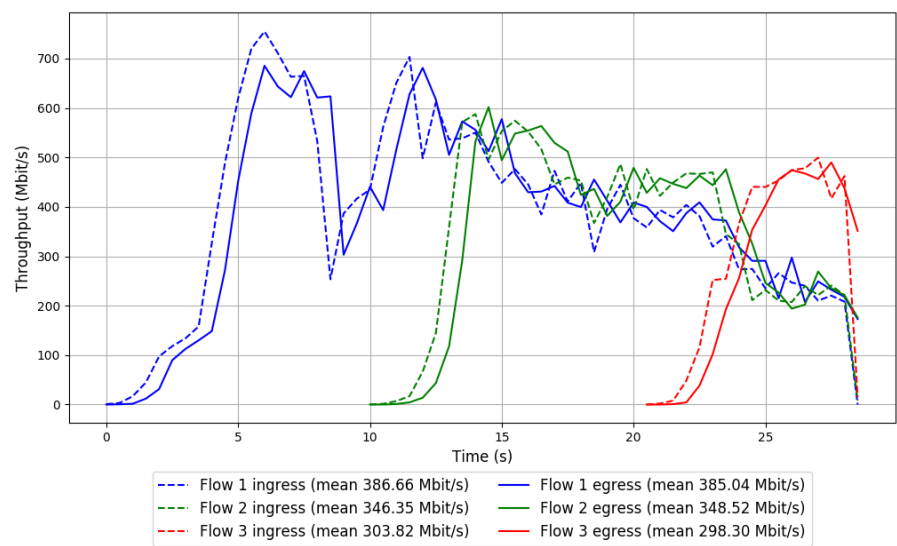


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-19 09:30:16  
End at: 2019-03-19 09:30:46  
Local clock offset: -0.125 ms  
Remote clock offset: -3.904 ms

# Below is generated by plot.py at 2019-03-19 13:38:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 686.91 Mbit/s  
95th percentile per-packet one-way delay: 213.403 ms  
Loss rate: 1.64%  
-- Flow 1:  
Average throughput: 385.04 Mbit/s  
95th percentile per-packet one-way delay: 226.358 ms  
Loss rate: 1.33%  
-- Flow 2:  
Average throughput: 348.52 Mbit/s  
95th percentile per-packet one-way delay: 159.280 ms  
Loss rate: 0.86%  
-- Flow 3:  
Average throughput: 298.30 Mbit/s  
95th percentile per-packet one-way delay: 141.478 ms  
Loss rate: 5.18%

Run 2: Report of Indigo-MusesC5 — Data Link

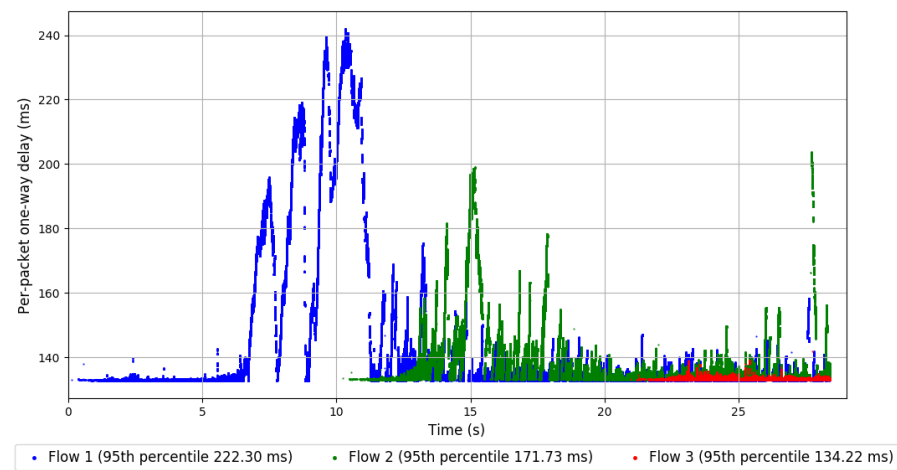
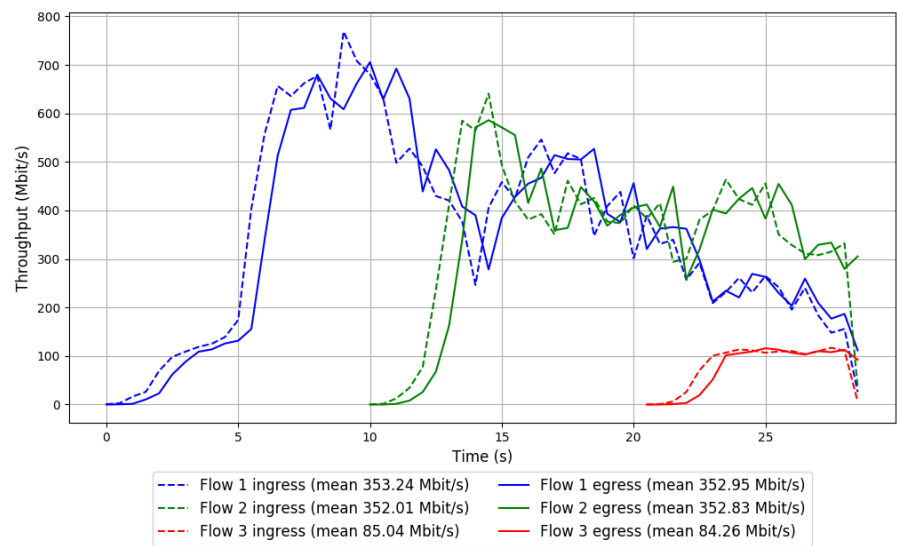


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-19 10:11:34  
End at: 2019-03-19 10:12:04  
Local clock offset: 0.004 ms  
Remote clock offset: -4.675 ms

# Below is generated by plot.py at 2019-03-19 13:38:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 601.78 Mbit/s  
95th percentile per-packet one-way delay: 212.161 ms  
Loss rate: 1.21%  
-- Flow 1:  
Average throughput: 352.95 Mbit/s  
95th percentile per-packet one-way delay: 222.304 ms  
Loss rate: 1.01%  
-- Flow 2:  
Average throughput: 352.83 Mbit/s  
95th percentile per-packet one-way delay: 171.733 ms  
Loss rate: 1.20%  
-- Flow 3:  
Average throughput: 84.26 Mbit/s  
95th percentile per-packet one-way delay: 134.219 ms  
Loss rate: 4.35%

Run 3: Report of Indigo-MusesC5 — Data Link

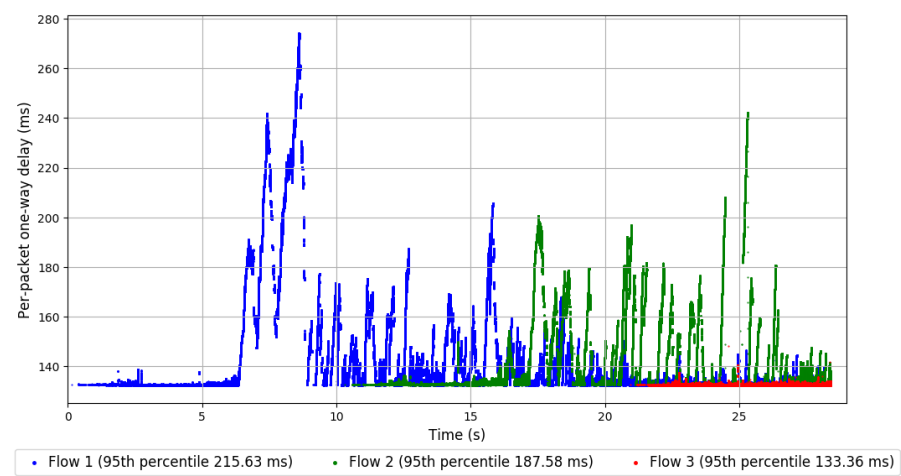
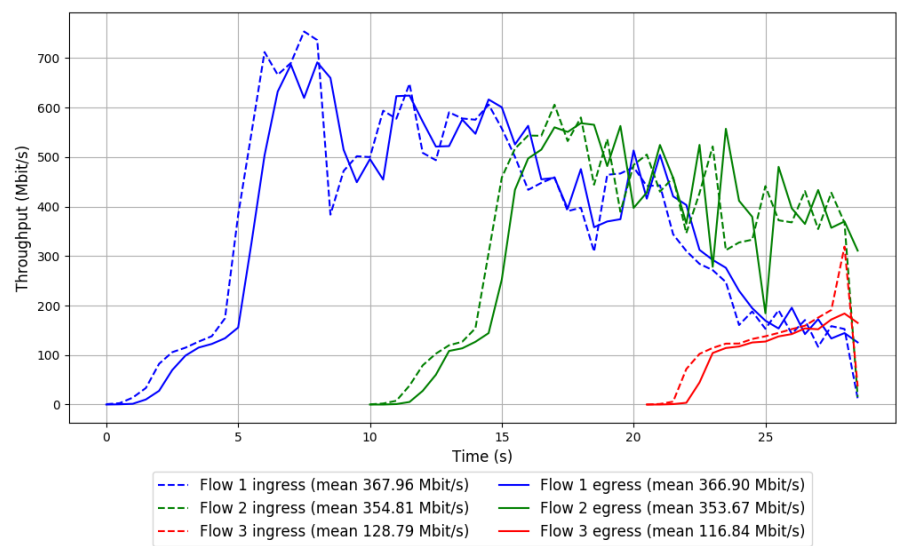


Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-19 10:54:32  
End at: 2019-03-19 10:55:02  
Local clock offset: -0.563 ms  
Remote clock offset: -1.198 ms

# Below is generated by plot.py at 2019-03-19 13:40:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 623.92 Mbit/s  
95th percentile per-packet one-way delay: 198.506 ms  
Loss rate: 2.01%  
-- Flow 1:  
Average throughput: 366.90 Mbit/s  
95th percentile per-packet one-way delay: 215.627 ms  
Loss rate: 1.24%  
-- Flow 2:  
Average throughput: 353.67 Mbit/s  
95th percentile per-packet one-way delay: 187.584 ms  
Loss rate: 1.65%  
-- Flow 3:  
Average throughput: 116.84 Mbit/s  
95th percentile per-packet one-way delay: 133.357 ms  
Loss rate: 12.40%

Run 4: Report of Indigo-MusesC5 — Data Link

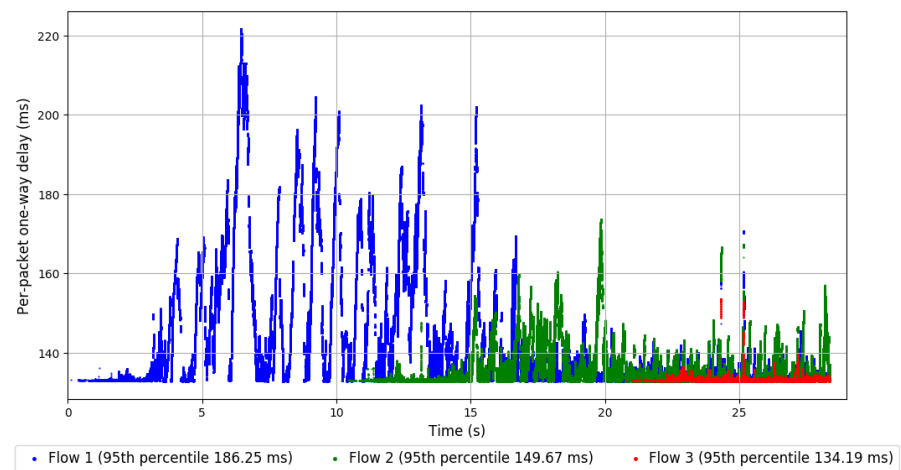
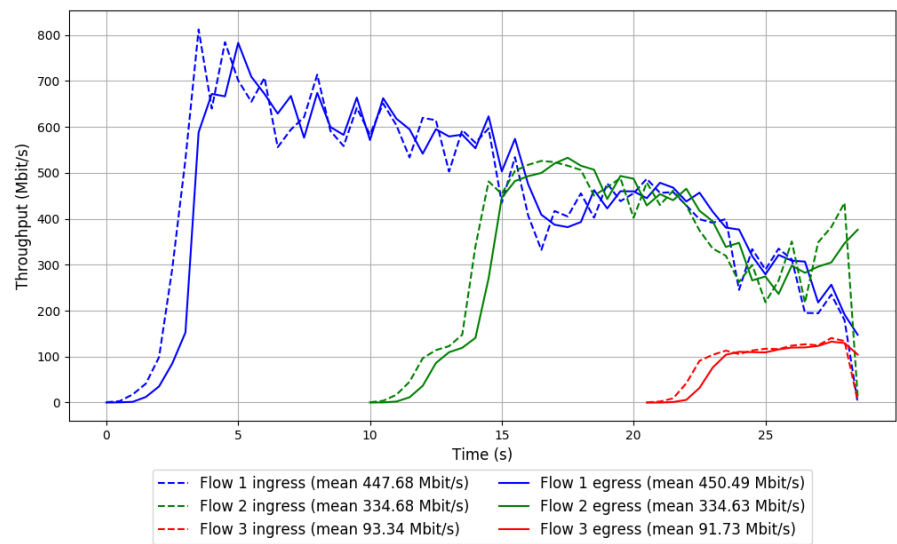


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-19 11:35:43  
End at: 2019-03-19 11:36:13  
Local clock offset: -0.331 ms  
Remote clock offset: -0.378 ms

# Below is generated by plot.py at 2019-03-19 13:42:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 690.11 Mbit/s  
95th percentile per-packet one-way delay: 178.648 ms  
Loss rate: 0.89%  
-- Flow 1:  
Average throughput: 450.49 Mbit/s  
95th percentile per-packet one-way delay: 186.253 ms  
Loss rate: 0.36%  
-- Flow 2:  
Average throughput: 334.63 Mbit/s  
95th percentile per-packet one-way delay: 149.666 ms  
Loss rate: 1.48%  
-- Flow 3:  
Average throughput: 91.73 Mbit/s  
95th percentile per-packet one-way delay: 134.185 ms  
Loss rate: 5.04%

Run 5: Report of Indigo-MusesC5 — Data Link



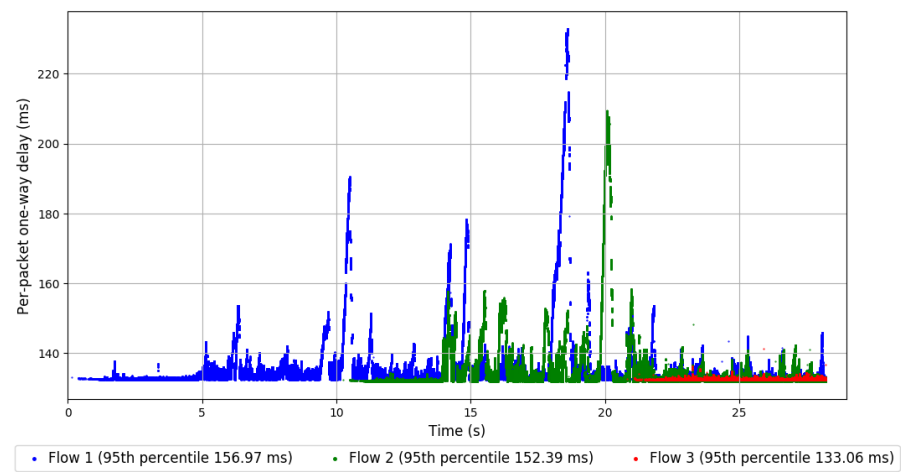
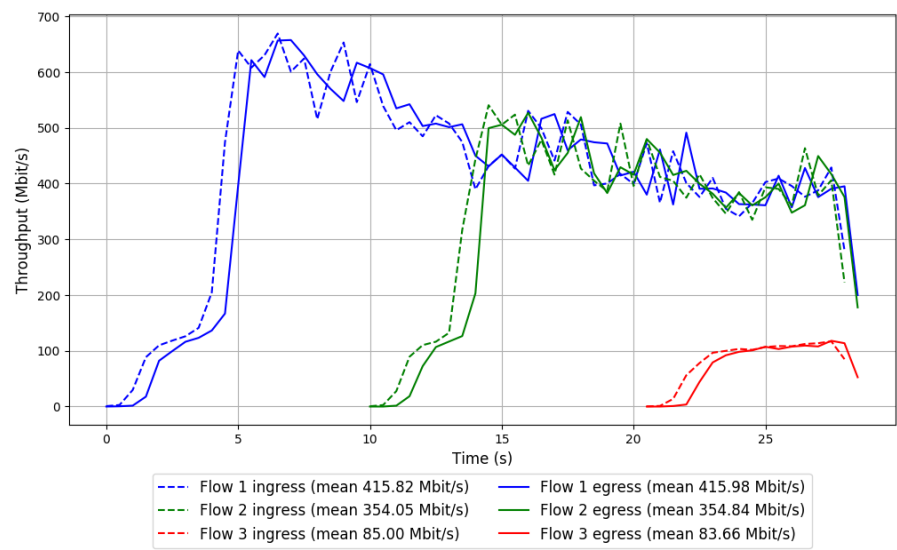


Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-19 09:09:14  
End at: 2019-03-19 09:09:44  
Local clock offset: -0.321 ms  
Remote clock offset: -0.043 ms

# Below is generated by plot.py at 2019-03-19 13:42:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 664.97 Mbit/s  
95th percentile per-packet one-way delay: 153.751 ms  
Loss rate: 1.16%  
-- Flow 1:  
Average throughput: 415.98 Mbit/s  
95th percentile per-packet one-way delay: 156.973 ms  
Loss rate: 0.90%  
-- Flow 2:  
Average throughput: 354.84 Mbit/s  
95th percentile per-packet one-way delay: 152.390 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 83.66 Mbit/s  
95th percentile per-packet one-way delay: 133.061 ms  
Loss rate: 4.93%

Run 1: Report of Indigo-MusesD — Data Link

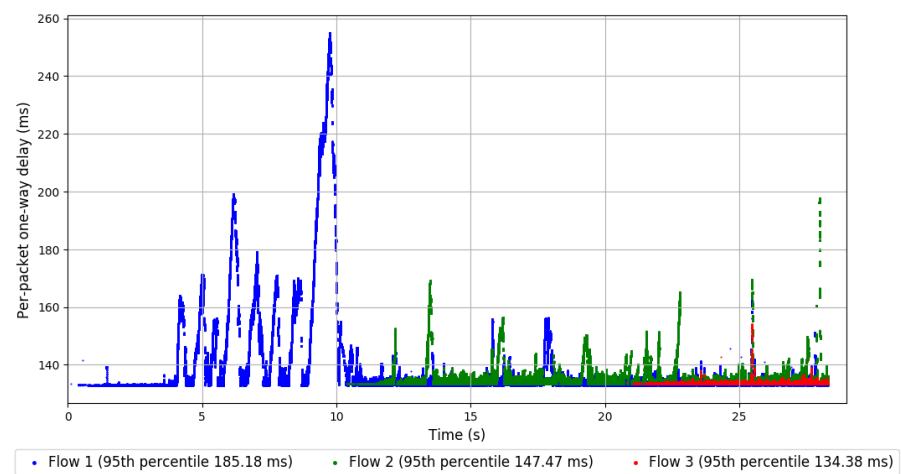
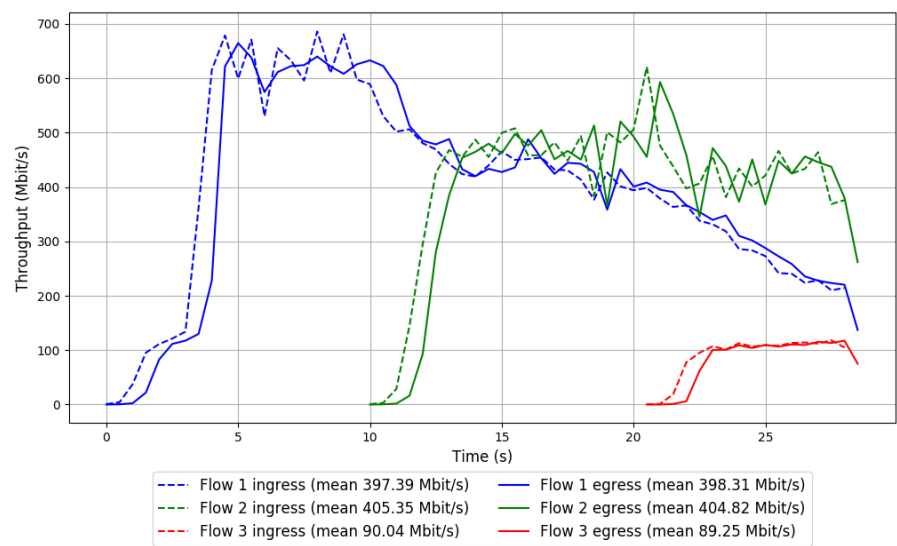


Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-19 09:50:24  
End at: 2019-03-19 09:50:54  
Local clock offset: 0.356 ms  
Remote clock offset: -5.591 ms

# Below is generated by plot.py at 2019-03-19 13:47:06  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 683.06 Mbit/s  
95th percentile per-packet one-way delay: 166.778 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 398.31 Mbit/s  
95th percentile per-packet one-way delay: 185.181 ms  
Loss rate: 0.72%  
-- Flow 2:  
Average throughput: 404.82 Mbit/s  
95th percentile per-packet one-way delay: 147.471 ms  
Loss rate: 1.57%  
-- Flow 3:  
Average throughput: 89.25 Mbit/s  
95th percentile per-packet one-way delay: 134.379 ms  
Loss rate: 4.30%

Run 2: Report of Indigo-MusesD — Data Link

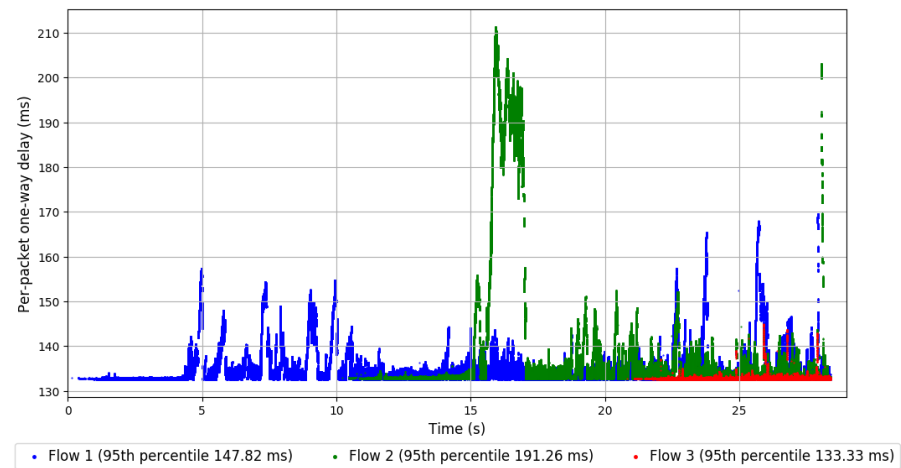
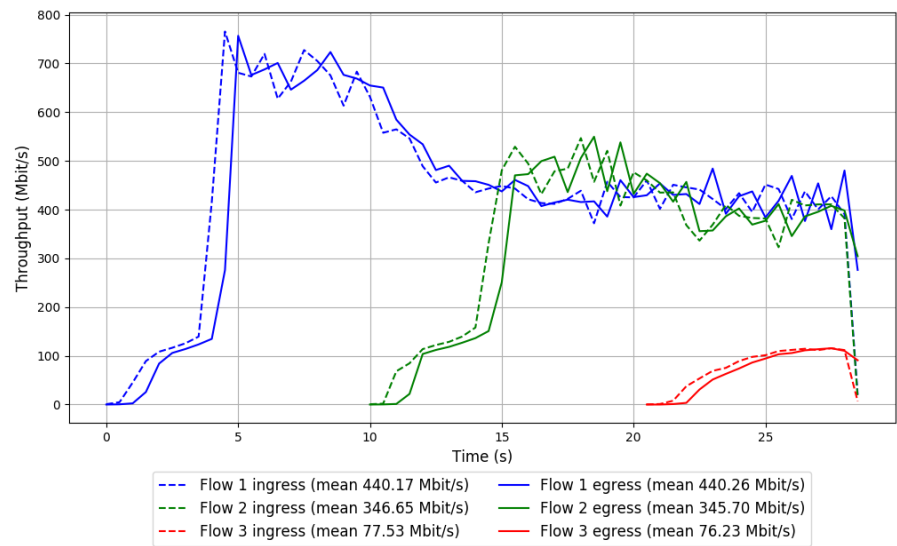


Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-19 10:32:51  
End at: 2019-03-19 10:33:21  
Local clock offset: -0.165 ms  
Remote clock offset: -1.669 ms

# Below is generated by plot.py at 2019-03-19 13:47:14  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 683.14 Mbit/s  
95th percentile per-packet one-way delay: 153.003 ms  
Loss rate: 1.31%  
-- Flow 1:  
Average throughput: 440.26 Mbit/s  
95th percentile per-packet one-way delay: 147.819 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 345.70 Mbit/s  
95th percentile per-packet one-way delay: 191.263 ms  
Loss rate: 1.73%  
-- Flow 3:  
Average throughput: 76.23 Mbit/s  
95th percentile per-packet one-way delay: 133.328 ms  
Loss rate: 4.99%

Run 3: Report of Indigo-MusesD — Data Link

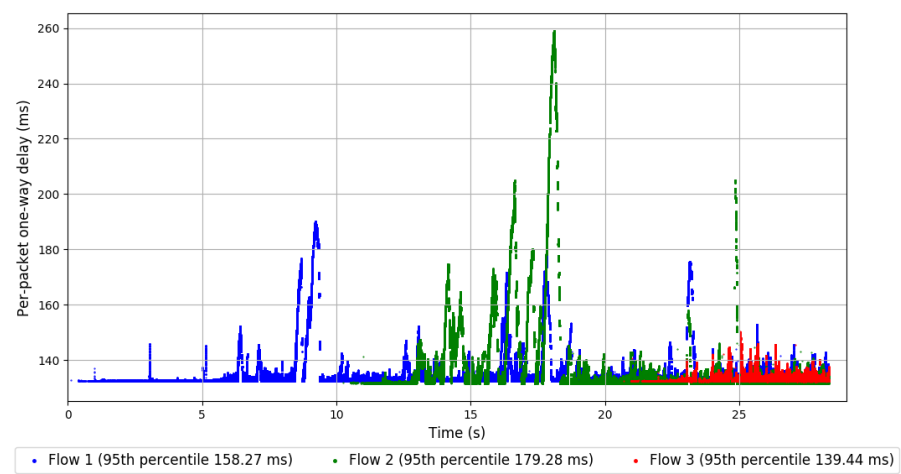
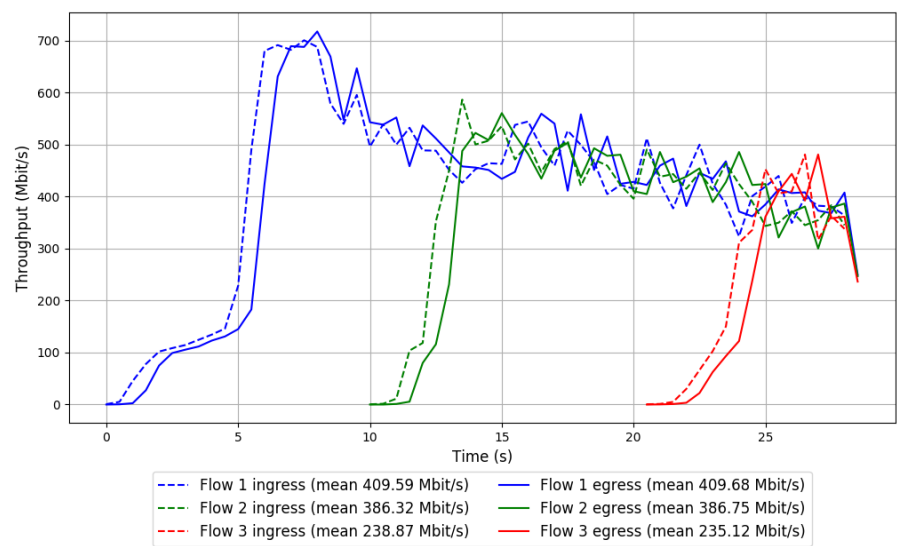


Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-19 11:14:04  
End at: 2019-03-19 11:14:34  
Local clock offset: -0.586 ms  
Remote clock offset: -0.535 ms

# Below is generated by plot.py at 2019-03-19 13:48:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 720.99 Mbit/s  
95th percentile per-packet one-way delay: 166.019 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 409.68 Mbit/s  
95th percentile per-packet one-way delay: 158.269 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 386.75 Mbit/s  
95th percentile per-packet one-way delay: 179.278 ms  
Loss rate: 1.34%  
-- Flow 3:  
Average throughput: 235.12 Mbit/s  
95th percentile per-packet one-way delay: 139.439 ms  
Loss rate: 4.89%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-19 11:55:57

End at: 2019-03-19 11:56:27

Local clock offset: 0.196 ms

Remote clock offset: -0.72 ms

# Below is generated by plot.py at 2019-03-19 13:49:22

# Datalink statistics

-- Total of 3 flows:

Average throughput: 680.48 Mbit/s

95th percentile per-packet one-way delay: 145.118 ms

Loss rate: 1.39%

-- Flow 1:

Average throughput: 402.58 Mbit/s

95th percentile per-packet one-way delay: 147.698 ms

Loss rate: 0.84%

-- Flow 2:

Average throughput: 340.98 Mbit/s

95th percentile per-packet one-way delay: 143.550 ms

Loss rate: 1.56%

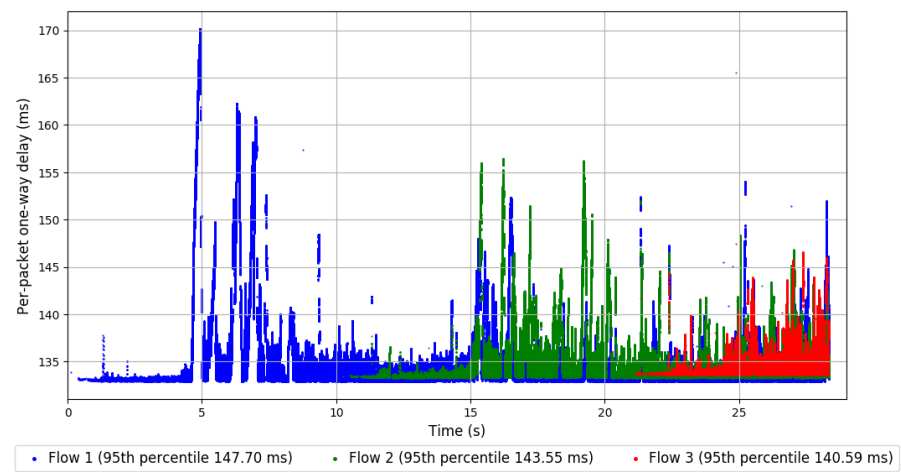
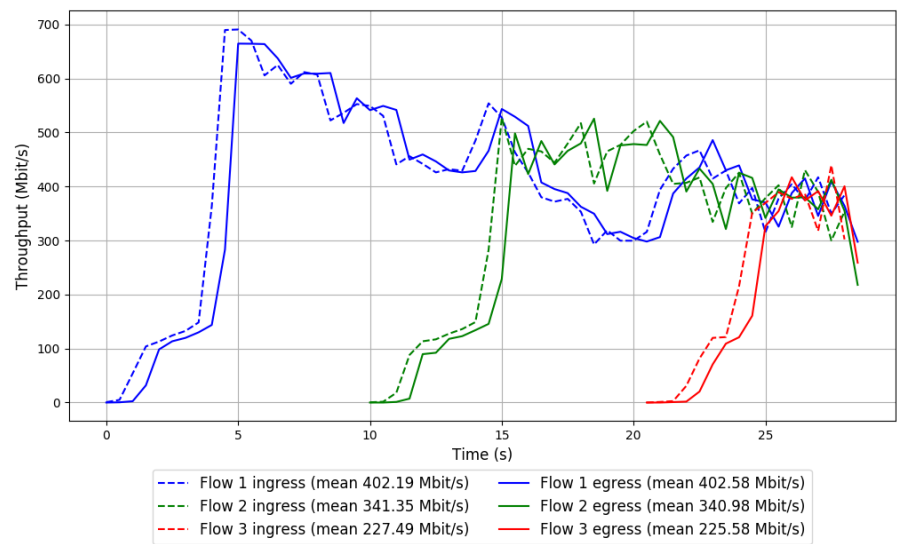
-- Flow 3:

Average throughput: 225.58 Mbit/s

95th percentile per-packet one-way delay: 140.591 ms

Loss rate: 4.34%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-19 09:04:32

End at: 2019-03-19 09:05:02

Local clock offset: 0.004 ms

Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-03-19 13:51:50

# Datalink statistics

-- Total of 3 flows:

Average throughput: 751.54 Mbit/s

95th percentile per-packet one-way delay: 188.509 ms

Loss rate: 1.07%

-- Flow 1:

Average throughput: 484.26 Mbit/s

95th percentile per-packet one-way delay: 204.777 ms

Loss rate: 0.80%

-- Flow 2:

Average throughput: 377.87 Mbit/s

95th percentile per-packet one-way delay: 141.507 ms

Loss rate: 1.25%

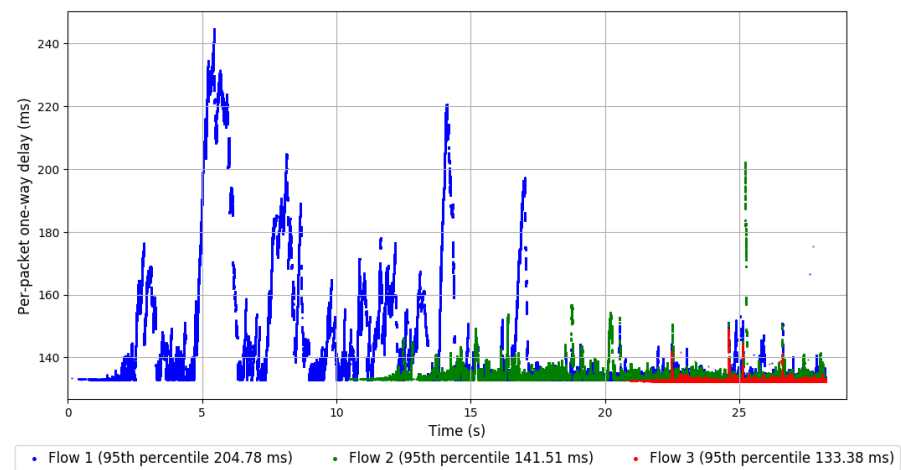
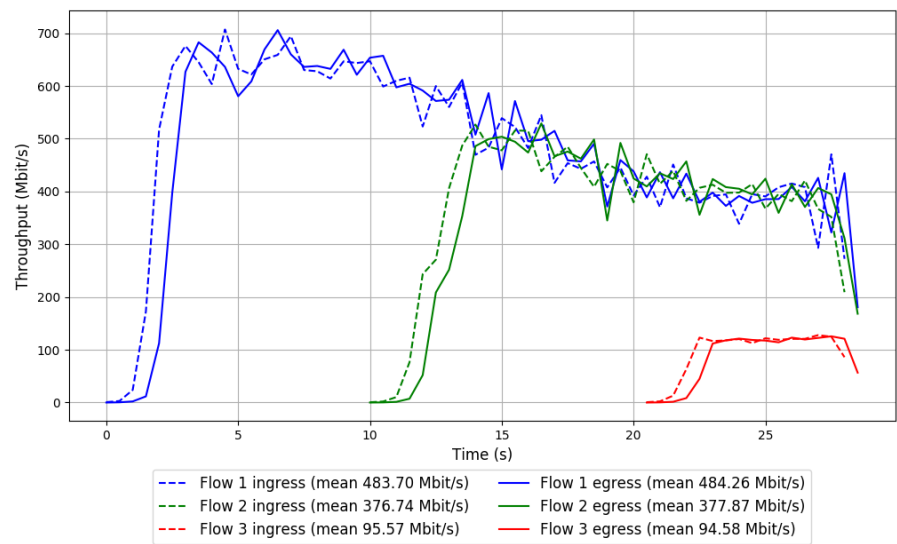
-- Flow 3:

Average throughput: 94.58 Mbit/s

95th percentile per-packet one-way delay: 133.382 ms

Loss rate: 4.42%

Run 1: Report of Indigo-MusesT — Data Link

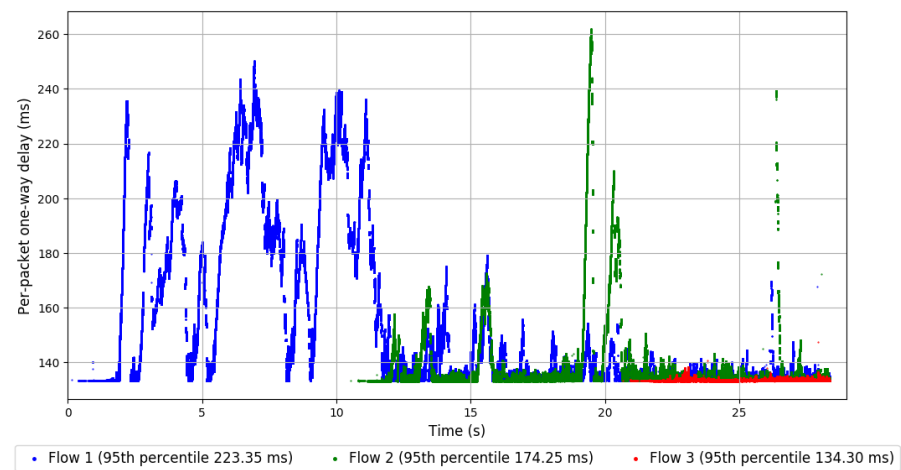
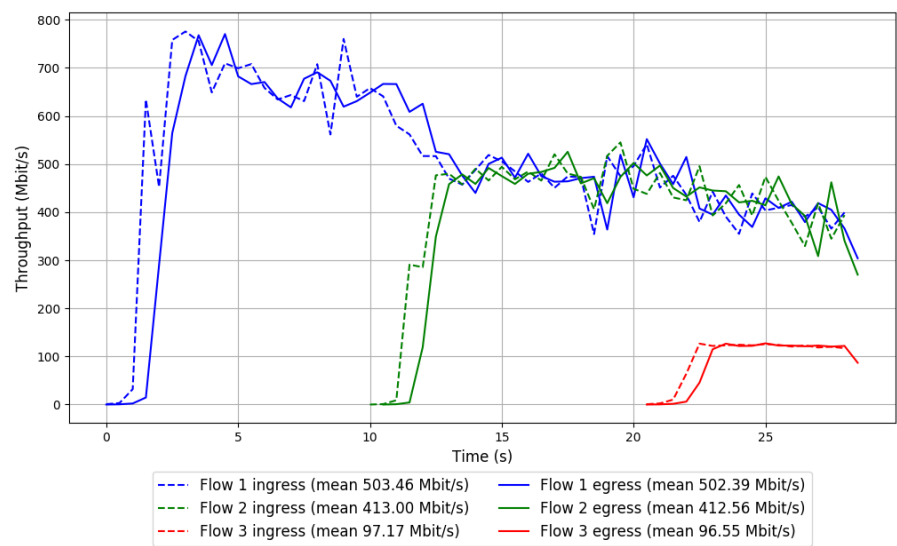


Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-19 09:45:46  
End at: 2019-03-19 09:46:16  
Local clock offset: -0.234 ms  
Remote clock offset: -8.406 ms

# Below is generated by plot.py at 2019-03-19 13:55:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 789.30 Mbit/s  
95th percentile per-packet one-way delay: 219.029 ms  
Loss rate: 1.39%  
-- Flow 1:  
Average throughput: 502.39 Mbit/s  
95th percentile per-packet one-way delay: 223.355 ms  
Loss rate: 1.15%  
-- Flow 2:  
Average throughput: 412.56 Mbit/s  
95th percentile per-packet one-way delay: 174.255 ms  
Loss rate: 1.58%  
-- Flow 3:  
Average throughput: 96.55 Mbit/s  
95th percentile per-packet one-way delay: 134.304 ms  
Loss rate: 3.97%

Run 2: Report of Indigo-MusesT — Data Link

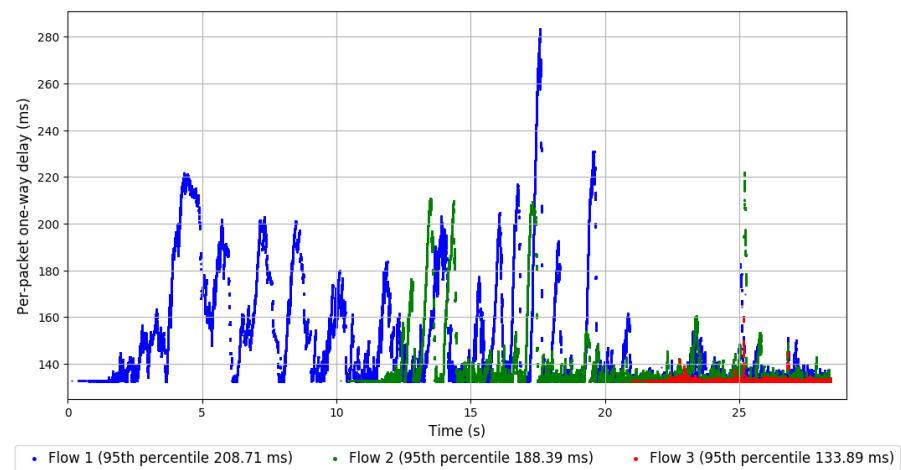
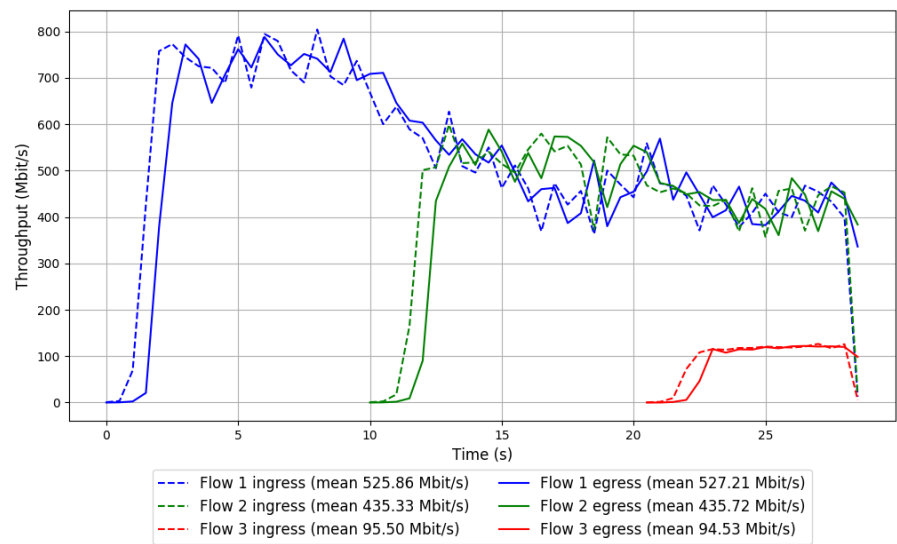


Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-19 10:27:59  
End at: 2019-03-19 10:28:29  
Local clock offset: -0.324 ms  
Remote clock offset: -2.446 ms

# Below is generated by plot.py at 2019-03-19 13:58:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 833.83 Mbit/s  
95th percentile per-packet one-way delay: 200.058 ms  
Loss rate: 1.02%  
-- Flow 1:  
Average throughput: 527.21 Mbit/s  
95th percentile per-packet one-way delay: 208.706 ms  
Loss rate: 0.68%  
-- Flow 2:  
Average throughput: 435.72 Mbit/s  
95th percentile per-packet one-way delay: 188.393 ms  
Loss rate: 1.34%  
-- Flow 3:  
Average throughput: 94.53 Mbit/s  
95th percentile per-packet one-way delay: 133.888 ms  
Loss rate: 4.34%

Run 3: Report of Indigo-MusesT — Data Link



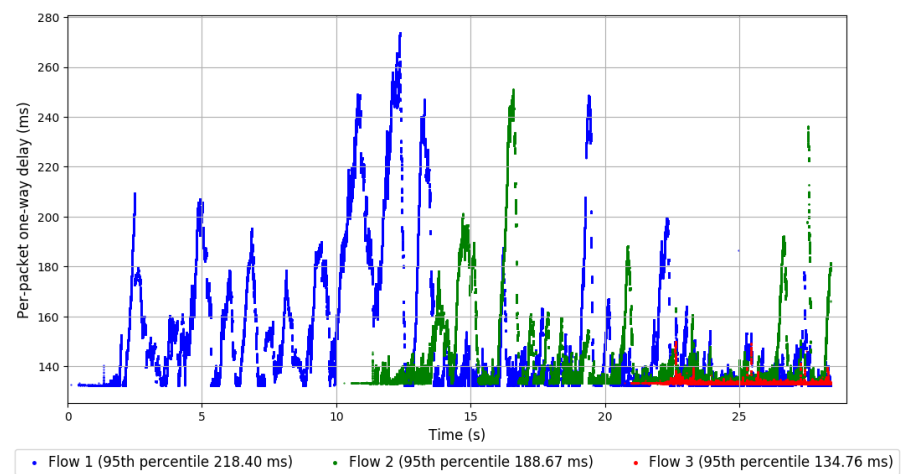
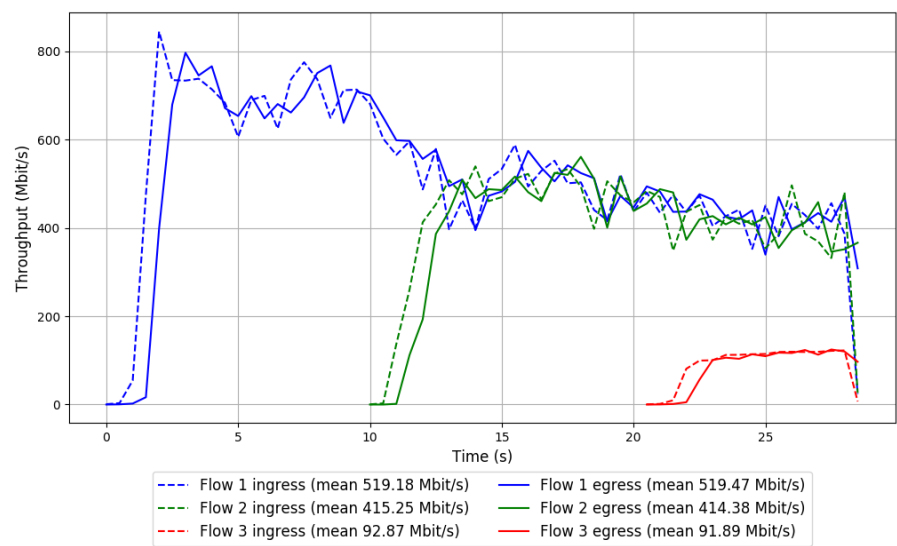


Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-19 11:09:37  
End at: 2019-03-19 11:10:07  
Local clock offset: 0.157 ms  
Remote clock offset: -0.548 ms

# Below is generated by plot.py at 2019-03-19 13:58:12  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 809.75 Mbit/s  
95th percentile per-packet one-way delay: 208.615 ms  
Loss rate: 1.24%  
-- Flow 1:  
Average throughput: 519.47 Mbit/s  
95th percentile per-packet one-way delay: 218.399 ms  
Loss rate: 0.87%  
-- Flow 2:  
Average throughput: 414.38 Mbit/s  
95th percentile per-packet one-way delay: 188.666 ms  
Loss rate: 1.64%  
-- Flow 3:  
Average throughput: 91.89 Mbit/s  
95th percentile per-packet one-way delay: 134.765 ms  
Loss rate: 4.39%

Run 4: Report of Indigo-MusesT — Data Link

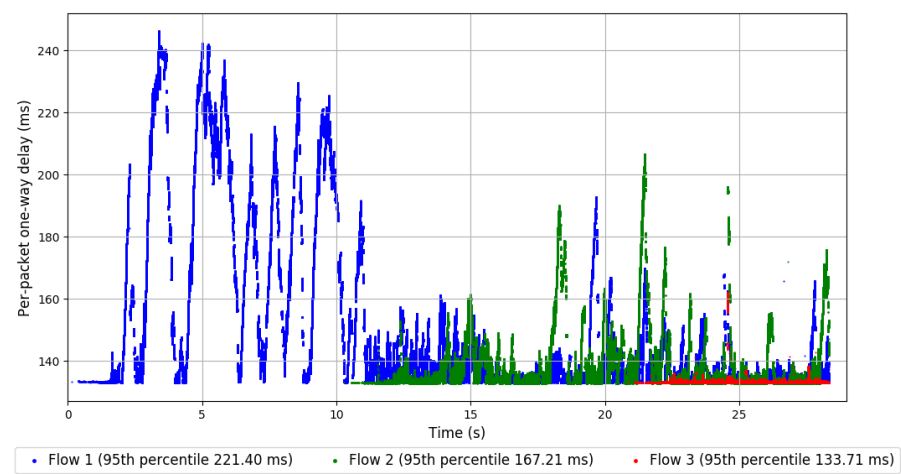
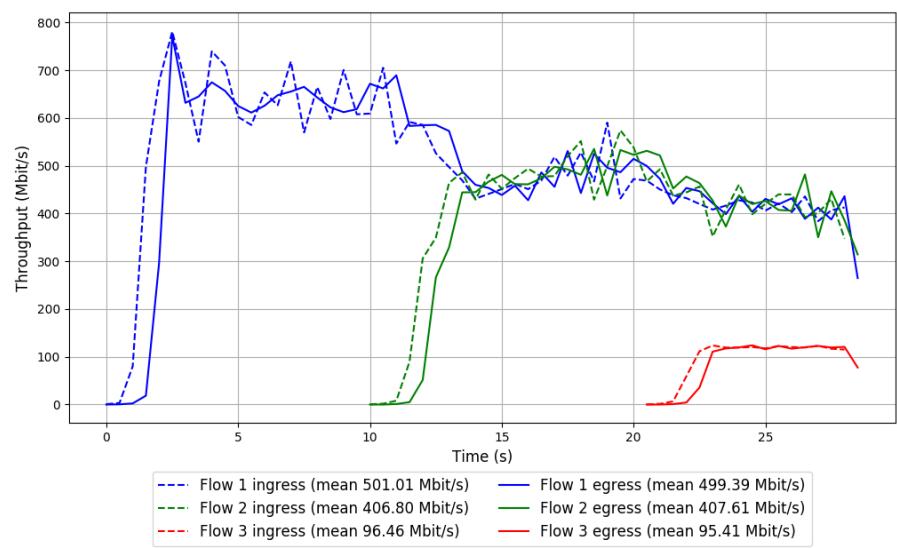


Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-19 11:51:12  
End at: 2019-03-19 11:51:42  
Local clock offset: -0.035 ms  
Remote clock offset: -0.321 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 785.54 Mbit/s  
95th percentile per-packet one-way delay: 214.303 ms  
Loss rate: 1.35%  
-- Flow 1:  
Average throughput: 499.39 Mbit/s  
95th percentile per-packet one-way delay: 221.398 ms  
Loss rate: 1.24%  
-- Flow 2:  
Average throughput: 407.61 Mbit/s  
95th percentile per-packet one-way delay: 167.214 ms  
Loss rate: 1.25%  
-- Flow 3:  
Average throughput: 95.41 Mbit/s  
95th percentile per-packet one-way delay: 133.712 ms  
Loss rate: 4.52%

Run 5: Report of Indigo-MusesT — Data Link

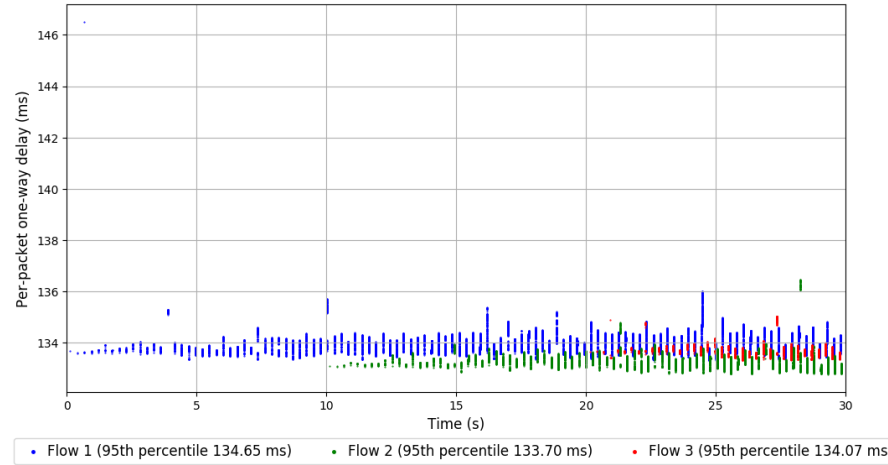
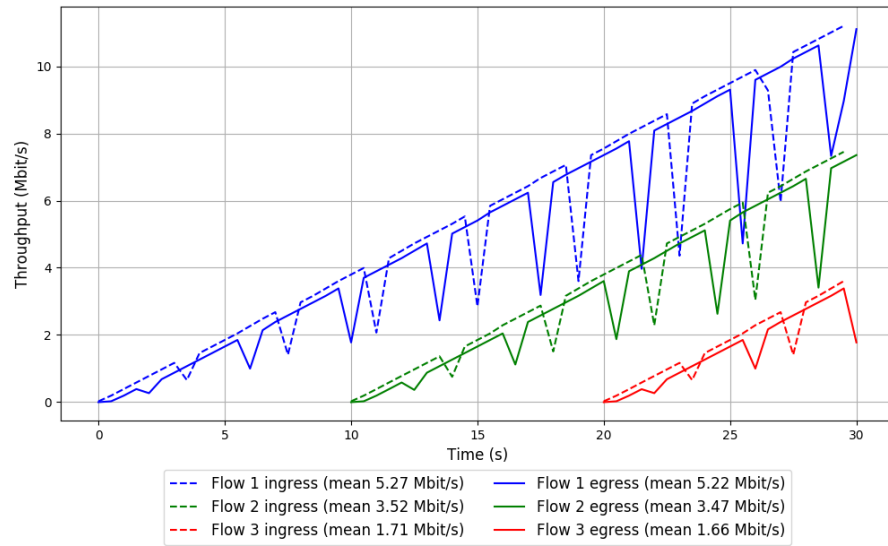


Run 1: Statistics of LEDBAT

Start at: 2019-03-19 09:00:45  
End at: 2019-03-19 09:01:15  
Local clock offset: 0.359 ms  
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.06 Mbit/s  
95th percentile per-packet one-way delay: 134.550 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 5.22 Mbit/s  
95th percentile per-packet one-way delay: 134.649 ms  
Loss rate: 1.78%  
-- Flow 2:  
Average throughput: 3.47 Mbit/s  
95th percentile per-packet one-way delay: 133.701 ms  
Loss rate: 2.67%  
-- Flow 3:  
Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 134.066 ms  
Loss rate: 5.41%

# Run 1: Report of LEDBAT — Data Link

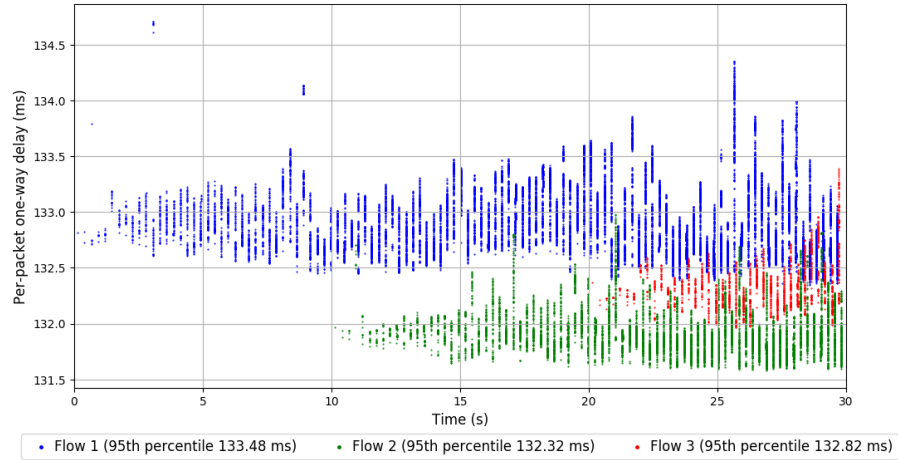
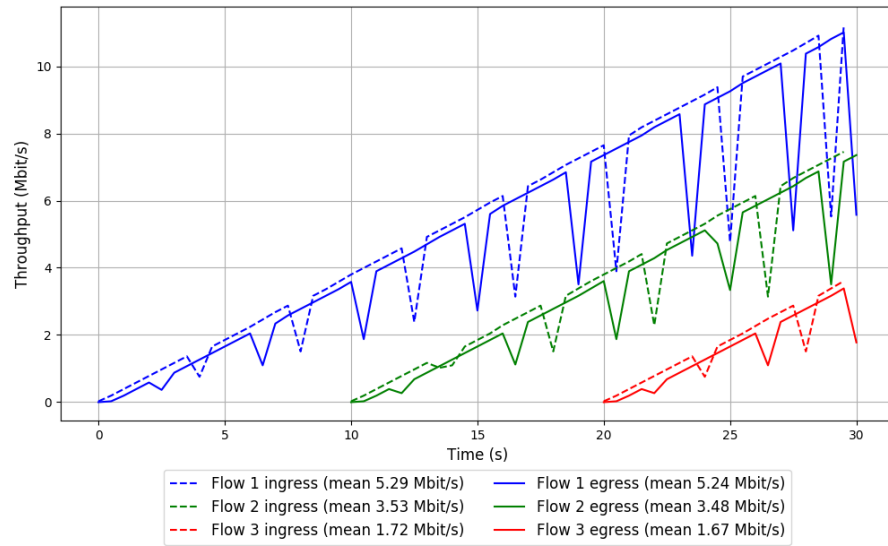


Run 2: Statistics of LEDBAT

Start at: 2019-03-19 09:42:06  
End at: 2019-03-19 09:42:36  
Local clock offset: -0.295 ms  
Remote clock offset: -7.603 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.05 Mbit/s  
95th percentile per-packet one-way delay: 133.376 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 5.24 Mbit/s  
95th percentile per-packet one-way delay: 133.477 ms  
Loss rate: 1.79%  
-- Flow 2:  
Average throughput: 3.48 Mbit/s  
95th percentile per-packet one-way delay: 132.316 ms  
Loss rate: 2.66%  
-- Flow 3:  
Average throughput: 1.67 Mbit/s  
95th percentile per-packet one-way delay: 132.819 ms  
Loss rate: 5.41%

## Run 2: Report of LEDBAT — Data Link



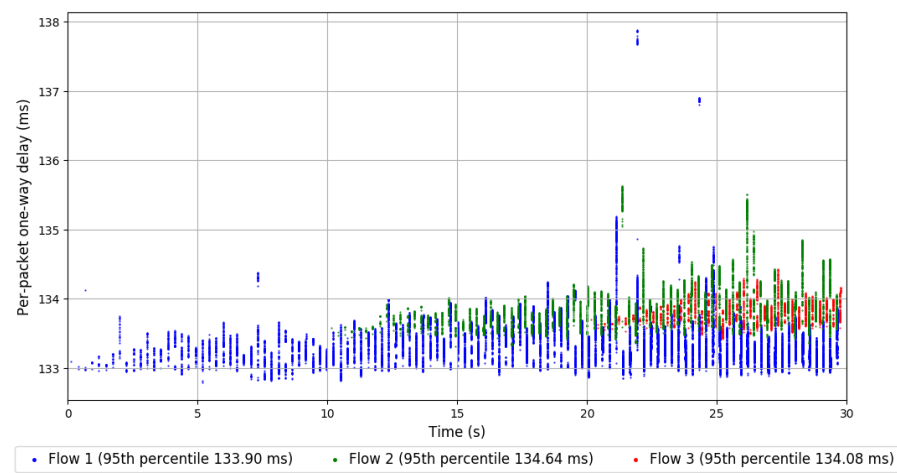
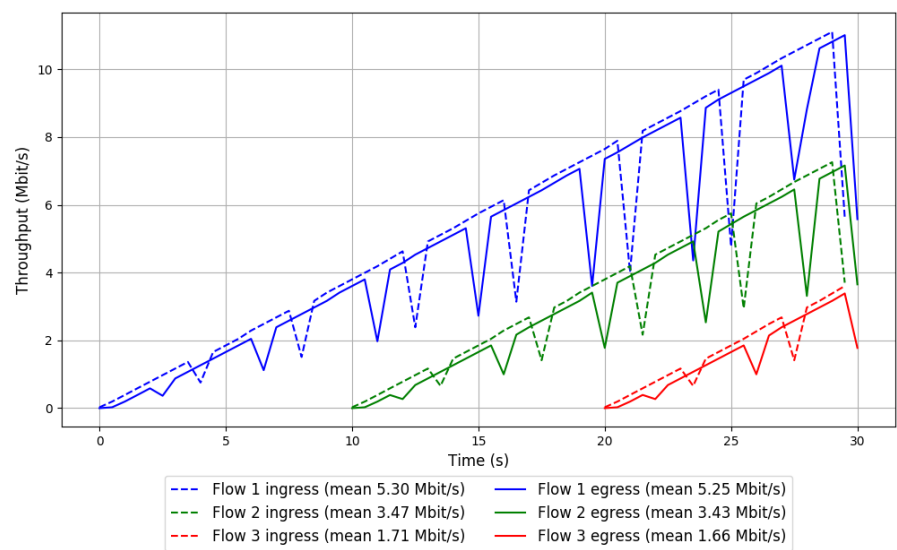


Run 3: Statistics of LEDBAT

Start at: 2019-03-19 10:24:07  
End at: 2019-03-19 10:24:37  
Local clock offset: 0.294 ms  
Remote clock offset: -3.528 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.02 Mbit/s  
95th percentile per-packet one-way delay: 134.279 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 5.25 Mbit/s  
95th percentile per-packet one-way delay: 133.904 ms  
Loss rate: 1.78%  
-- Flow 2:  
Average throughput: 3.43 Mbit/s  
95th percentile per-packet one-way delay: 134.640 ms  
Loss rate: 2.70%  
-- Flow 3:  
Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 134.076 ms  
Loss rate: 5.41%

Run 3: Report of LEDBAT — Data Link

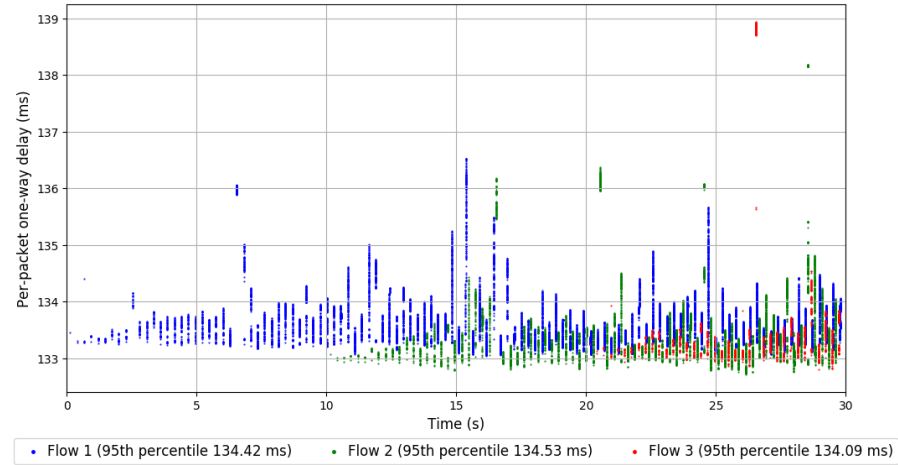
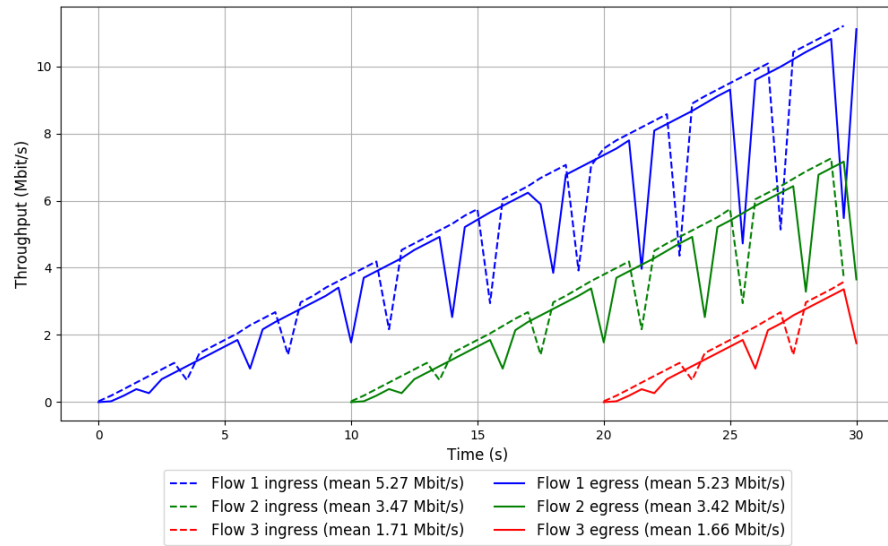


Run 4: Statistics of LEDBAT

Start at: 2019-03-19 11:05:56  
End at: 2019-03-19 11:06:26  
Local clock offset: -0.171 ms  
Remote clock offset: -0.567 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.01 Mbit/s  
95th percentile per-packet one-way delay: 134.469 ms  
Loss rate: 2.29%  
-- Flow 1:  
Average throughput: 5.23 Mbit/s  
95th percentile per-packet one-way delay: 134.421 ms  
Loss rate: 1.78%  
-- Flow 2:  
Average throughput: 3.42 Mbit/s  
95th percentile per-packet one-way delay: 134.525 ms  
Loss rate: 2.70%  
-- Flow 3:  
Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 134.093 ms  
Loss rate: 5.43%

# Run 4: Report of LEDBAT — Data Link

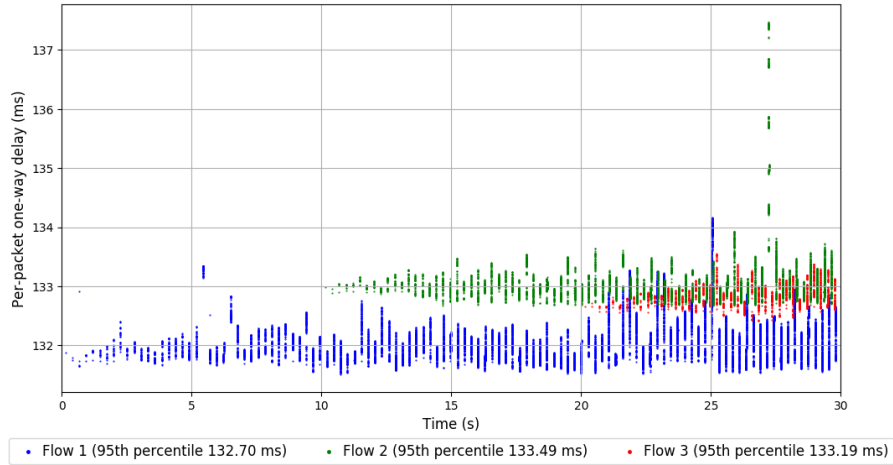
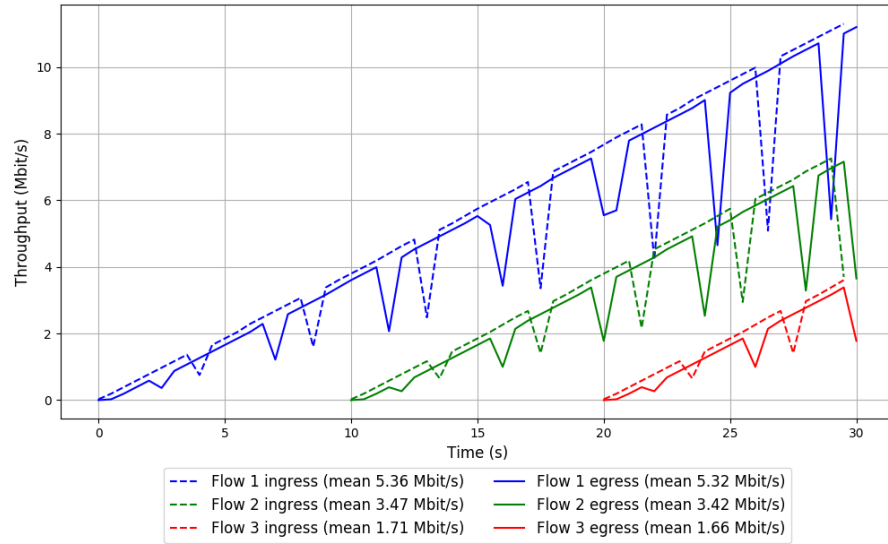


Run 5: Statistics of LEDBAT

Start at: 2019-03-19 11:47:41  
End at: 2019-03-19 11:48:11  
Local clock offset: -0.416 ms  
Remote clock offset: -0.323 ms

# Below is generated by plot.py at 2019-03-19 14:00:47  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.10 Mbit/s  
95th percentile per-packet one-way delay: 133.251 ms  
Loss rate: 2.28%  
-- Flow 1:  
Average throughput: 5.32 Mbit/s  
95th percentile per-packet one-way delay: 132.702 ms  
Loss rate: 1.77%  
-- Flow 2:  
Average throughput: 3.42 Mbit/s  
95th percentile per-packet one-way delay: 133.492 ms  
Loss rate: 2.70%  
-- Flow 3:  
Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 133.190 ms  
Loss rate: 5.41%

# Run 5: Report of LEDBAT — Data Link

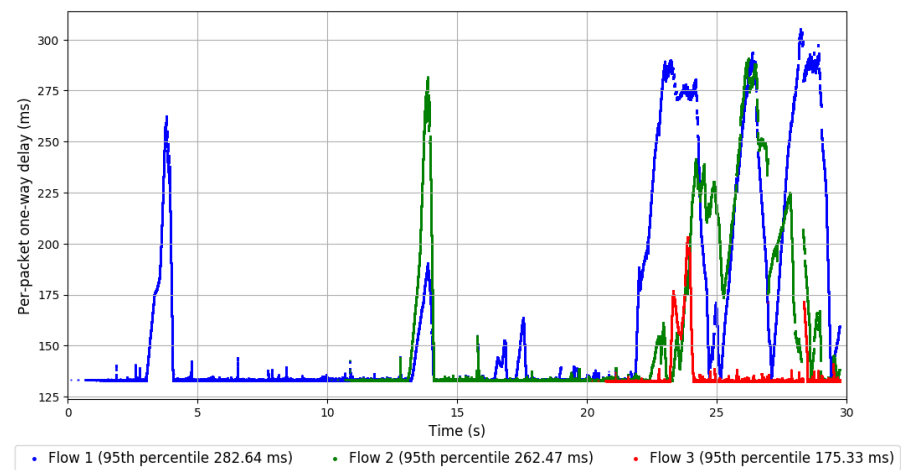
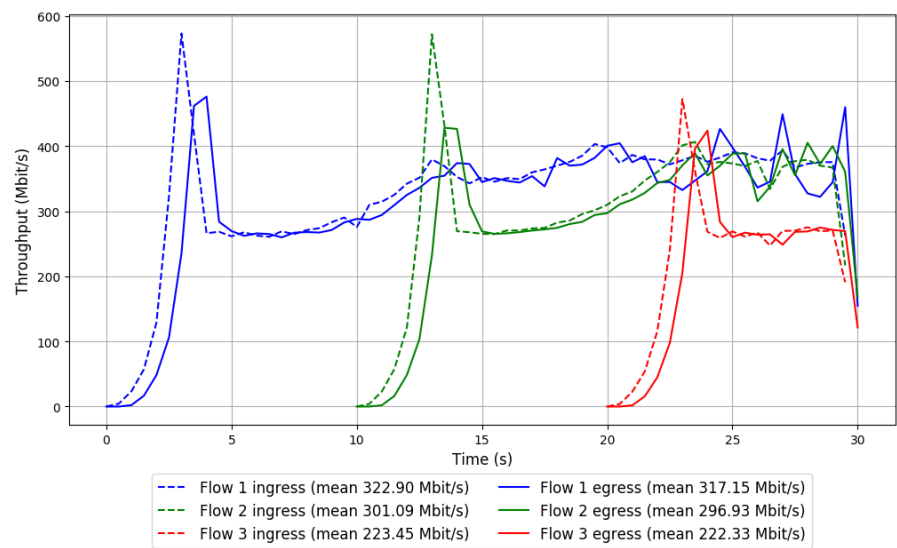


Run 1: Statistics of PCC-Allegro

Start at: 2019-03-19 09:06:51  
End at: 2019-03-19 09:07:21  
Local clock offset: 0.197 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-03-19 14:09:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 585.41 Mbit/s  
95th percentile per-packet one-way delay: 275.241 ms  
Loss rate: 2.76%  
-- Flow 1:  
Average throughput: 317.15 Mbit/s  
95th percentile per-packet one-way delay: 282.638 ms  
Loss rate: 2.67%  
-- Flow 2:  
Average throughput: 296.93 Mbit/s  
95th percentile per-packet one-way delay: 262.473 ms  
Loss rate: 2.73%  
-- Flow 3:  
Average throughput: 222.33 Mbit/s  
95th percentile per-packet one-way delay: 175.327 ms  
Loss rate: 3.24%

Run 1: Report of PCC-Allegro — Data Link





Run 2: Statistics of PCC-Allegro

Start at: 2019-03-19 09:48:03

End at: 2019-03-19 09:48:33

Local clock offset: -0.004 ms

Remote clock offset: -6.81 ms

# Below is generated by plot.py at 2019-03-19 14:09:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 584.73 Mbit/s

95th percentile per-packet one-way delay: 252.528 ms

Loss rate: 4.76%

-- Flow 1:

Average throughput: 333.59 Mbit/s

95th percentile per-packet one-way delay: 253.444 ms

Loss rate: 4.71%

-- Flow 2:

Average throughput: 267.46 Mbit/s

95th percentile per-packet one-way delay: 212.122 ms

Loss rate: 4.23%

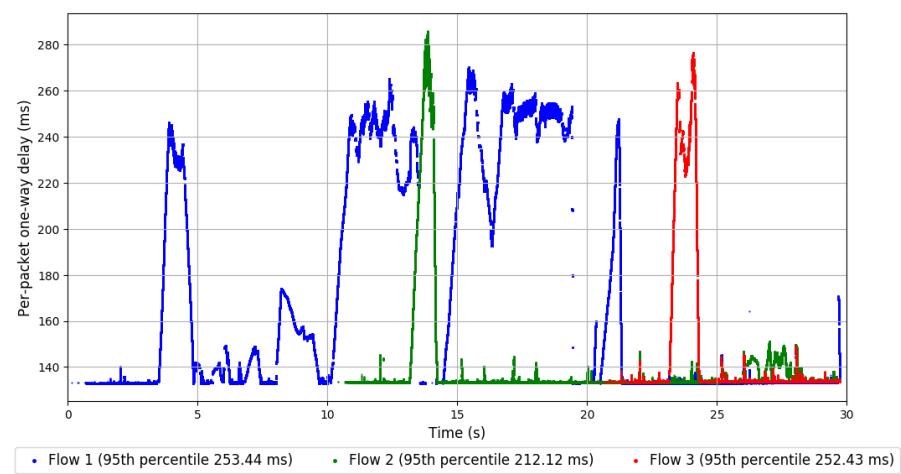
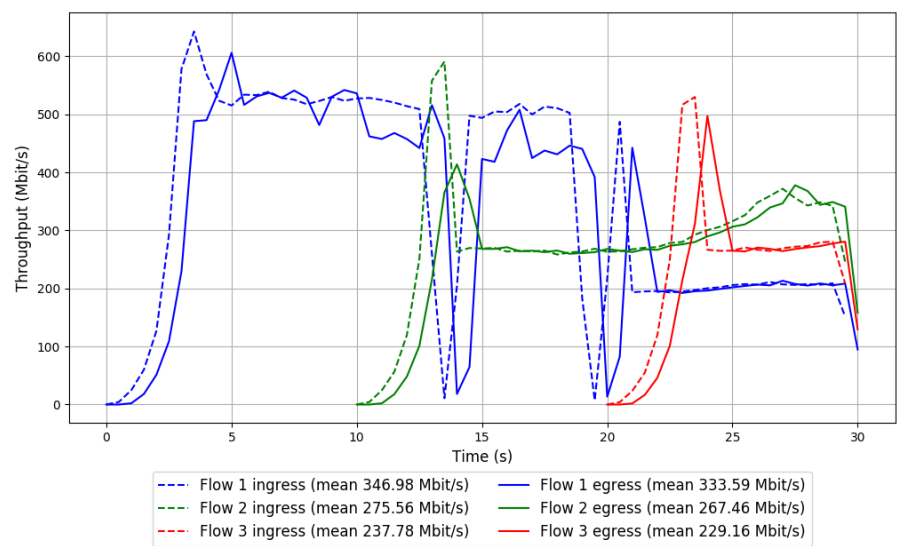
-- Flow 3:

Average throughput: 229.16 Mbit/s

95th percentile per-packet one-way delay: 252.426 ms

Loss rate: 6.22%

Run 2: Report of PCC-Allegro — Data Link

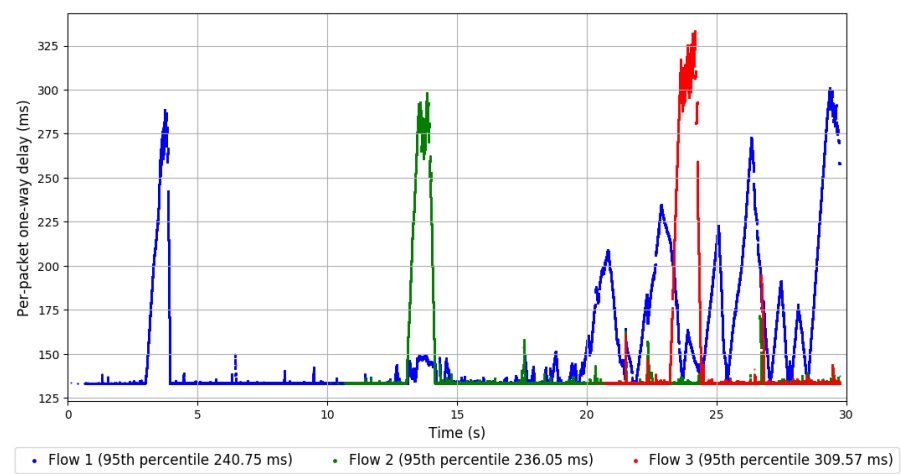
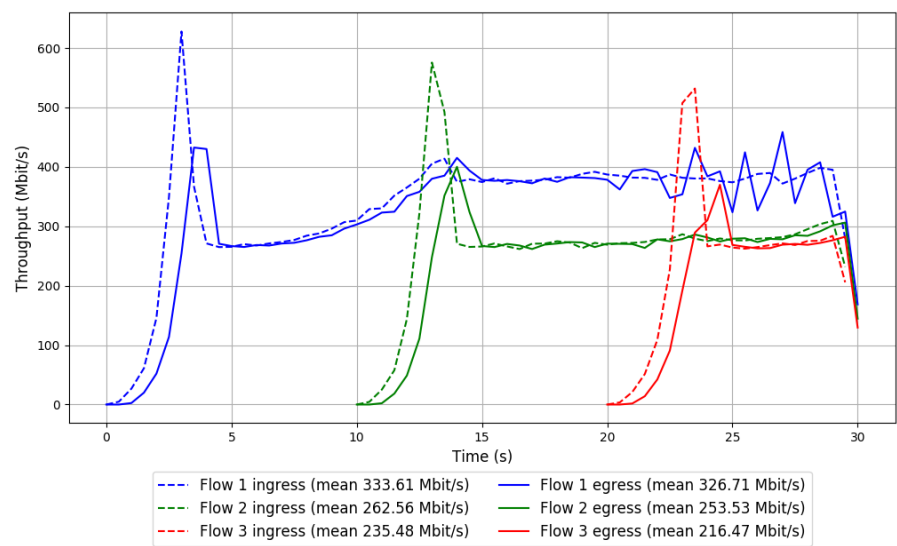


Run 3: Statistics of PCC-Allegro

Start at: 2019-03-19 10:30:29  
End at: 2019-03-19 10:30:59  
Local clock offset: 0.181 ms  
Remote clock offset: -1.946 ms

# Below is generated by plot.py at 2019-03-19 14:09:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 564.42 Mbit/s  
95th percentile per-packet one-way delay: 257.240 ms  
Loss rate: 4.48%  
-- Flow 1:  
Average throughput: 326.71 Mbit/s  
95th percentile per-packet one-way delay: 240.746 ms  
Loss rate: 2.94%  
-- Flow 2:  
Average throughput: 253.53 Mbit/s  
95th percentile per-packet one-way delay: 236.052 ms  
Loss rate: 4.72%  
-- Flow 3:  
Average throughput: 216.47 Mbit/s  
95th percentile per-packet one-way delay: 309.568 ms  
Loss rate: 10.55%

Run 3: Report of PCC-Allegro — Data Link

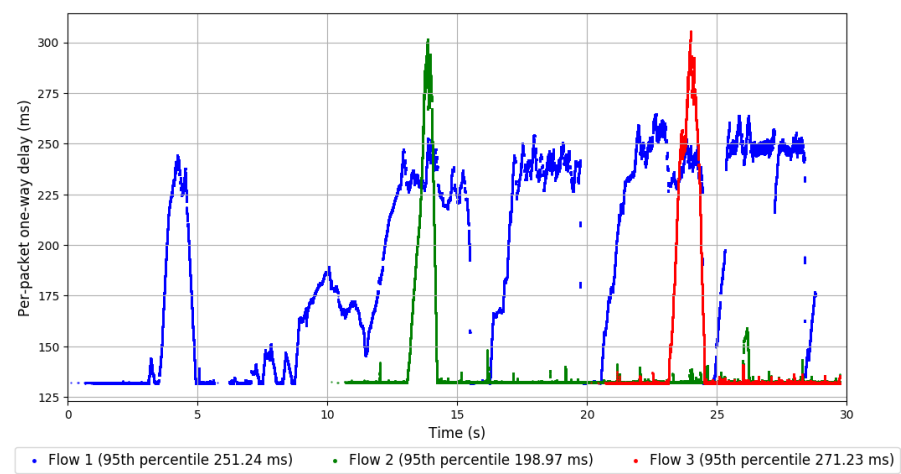
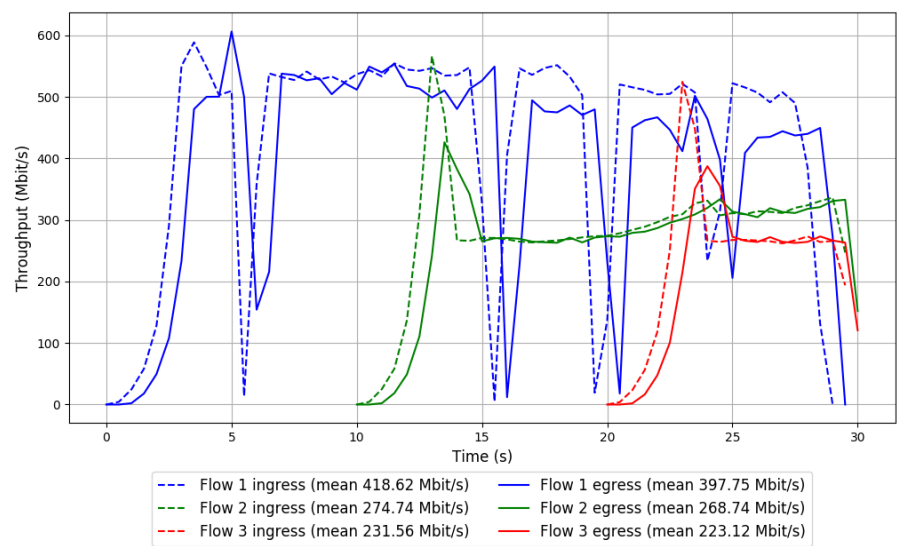


Run 4: Statistics of PCC-Allegro

Start at: 2019-03-19 11:11:49  
End at: 2019-03-19 11:12:19  
Local clock offset: -0.341 ms  
Remote clock offset: -0.533 ms

# Below is generated by plot.py at 2019-03-19 14:15:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 643.55 Mbit/s  
95th percentile per-packet one-way delay: 250.995 ms  
Loss rate: 4.73%  
-- Flow 1:  
Average throughput: 397.75 Mbit/s  
95th percentile per-packet one-way delay: 251.244 ms  
Loss rate: 4.99%  
-- Flow 2:  
Average throughput: 268.74 Mbit/s  
95th percentile per-packet one-way delay: 198.970 ms  
Loss rate: 3.49%  
-- Flow 3:  
Average throughput: 223.12 Mbit/s  
95th percentile per-packet one-way delay: 271.226 ms  
Loss rate: 6.26%

Run 4: Report of PCC-Allegro — Data Link

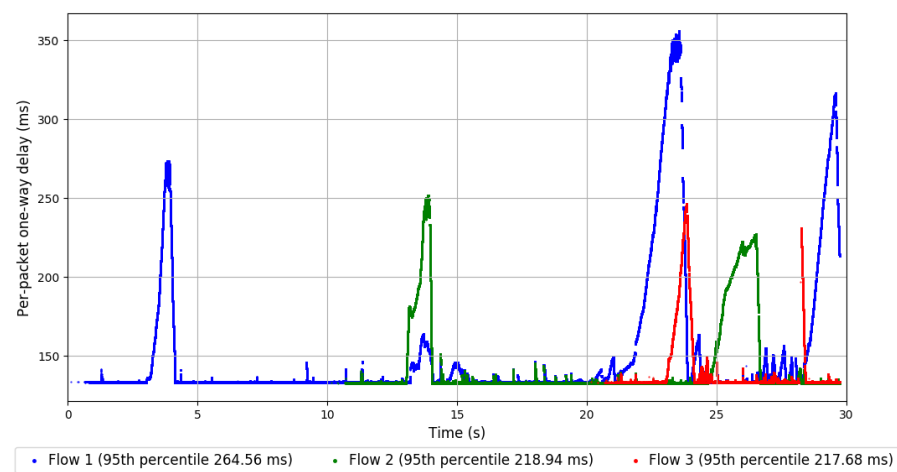
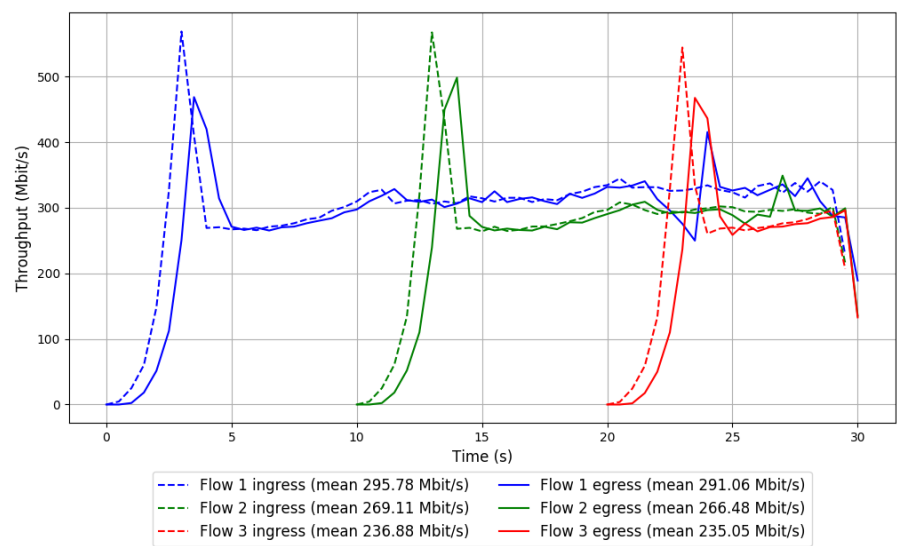


Run 5: Statistics of PCC-Allegro

Start at: 2019-03-19 11:53:34  
End at: 2019-03-19 11:54:04  
Local clock offset: 0.062 ms  
Remote clock offset: -0.324 ms

# Below is generated by plot.py at 2019-03-19 14:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 543.37 Mbit/s  
95th percentile per-packet one-way delay: 236.786 ms  
Loss rate: 2.57%  
-- Flow 1:  
Average throughput: 291.06 Mbit/s  
95th percentile per-packet one-way delay: 264.558 ms  
Loss rate: 2.47%  
-- Flow 2:  
Average throughput: 266.48 Mbit/s  
95th percentile per-packet one-way delay: 218.942 ms  
Loss rate: 2.30%  
-- Flow 3:  
Average throughput: 235.05 Mbit/s  
95th percentile per-packet one-way delay: 217.675 ms  
Loss rate: 3.52%

Run 5: Report of PCC-Allegro — Data Link



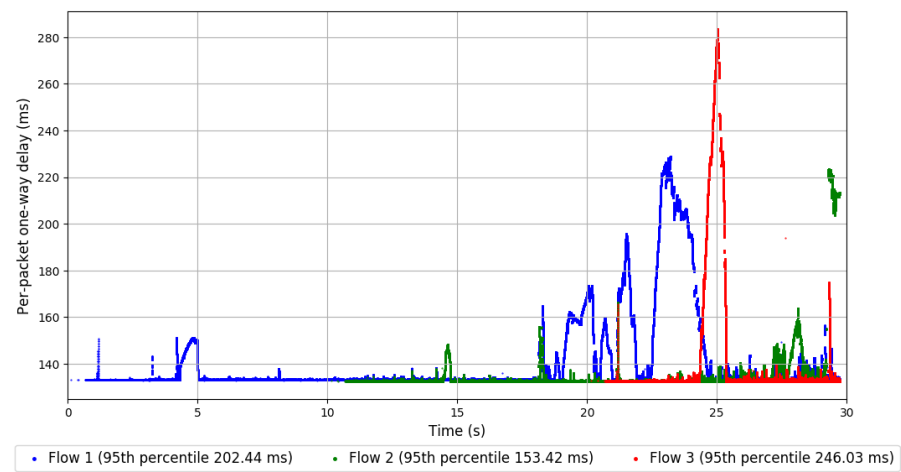
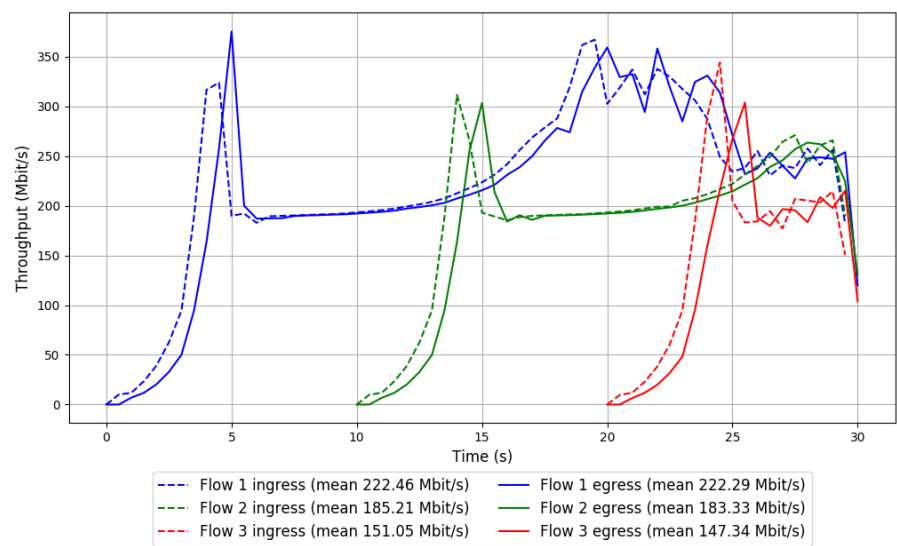


Run 1: Statistics of PCC-Expr

Start at: 2019-03-19 09:02:05  
End at: 2019-03-19 09:02:35  
Local clock offset: 0.098 ms  
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-03-19 14:15:44  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 391.42 Mbit/s  
95th percentile per-packet one-way delay: 205.125 ms  
Loss rate: 1.91%  
-- Flow 1:  
Average throughput: 222.29 Mbit/s  
95th percentile per-packet one-way delay: 202.438 ms  
Loss rate: 0.97%  
-- Flow 2:  
Average throughput: 183.33 Mbit/s  
95th percentile per-packet one-way delay: 153.420 ms  
Loss rate: 2.33%  
-- Flow 3:  
Average throughput: 147.34 Mbit/s  
95th percentile per-packet one-way delay: 246.034 ms  
Loss rate: 5.07%

Run 1: Report of PCC-Expr — Data Link



Run 2: Statistics of PCC-Expr

Start at: 2019-03-19 09:43:26

End at: 2019-03-19 09:43:56

Local clock offset: -0.338 ms

Remote clock offset: -8.02 ms

# Below is generated by plot.py at 2019-03-19 14:16:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 491.51 Mbit/s

95th percentile per-packet one-way delay: 259.204 ms

Loss rate: 8.20%

-- Flow 1:

Average throughput: 247.98 Mbit/s

95th percentile per-packet one-way delay: 237.957 ms

Loss rate: 3.27%

-- Flow 2:

Average throughput: 267.62 Mbit/s

95th percentile per-packet one-way delay: 264.746 ms

Loss rate: 12.40%

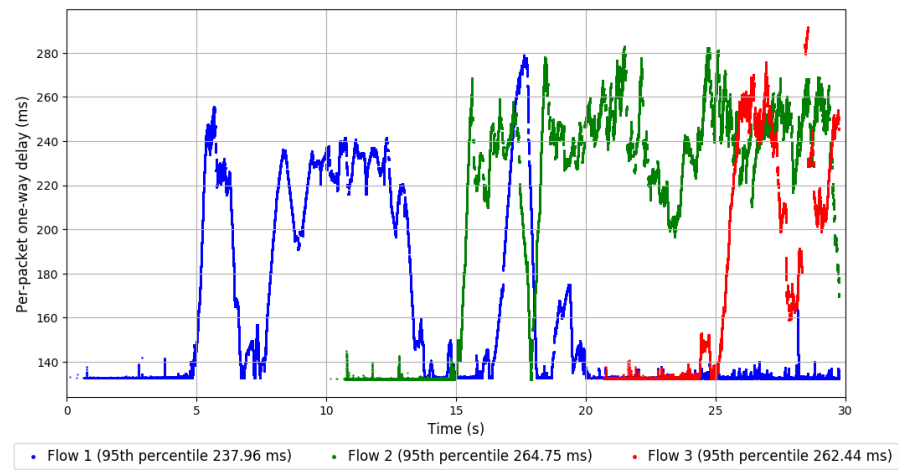
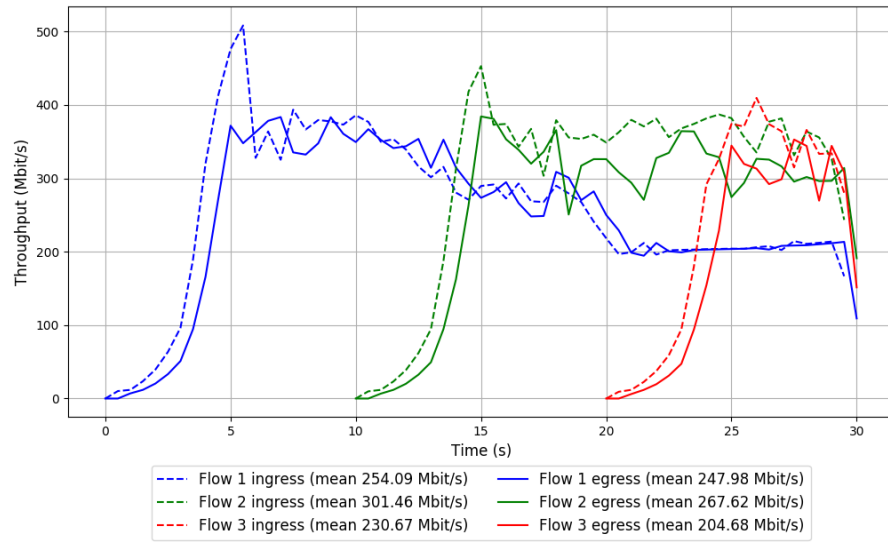
-- Flow 3:

Average throughput: 204.68 Mbit/s

95th percentile per-packet one-way delay: 262.436 ms

Loss rate: 13.64%

## Run 2: Report of PCC-Expr — Data Link

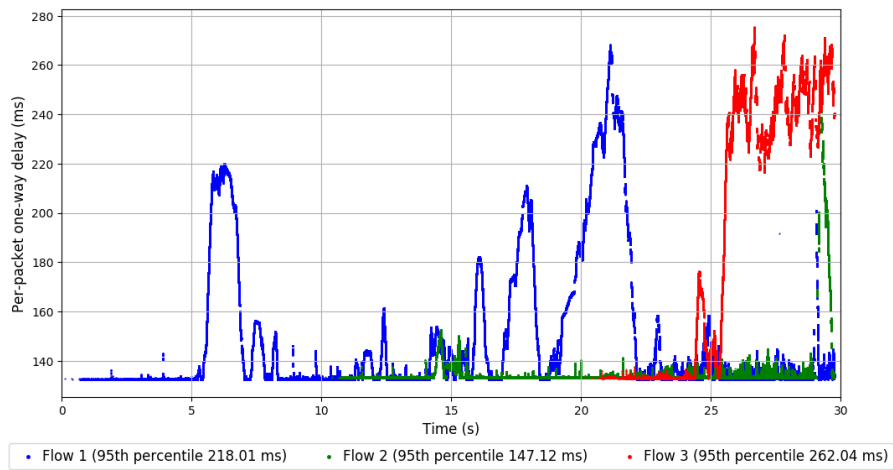
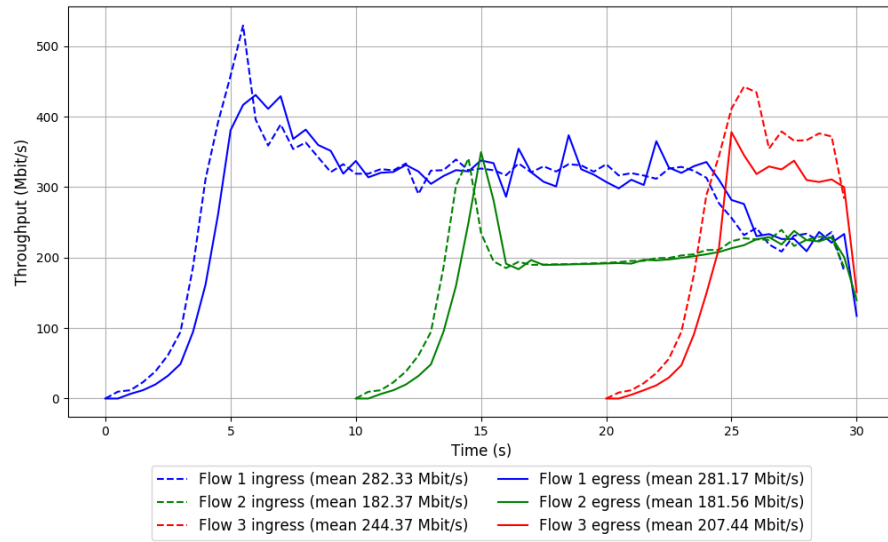


Run 3: Statistics of PCC-Expr

Start at: 2019-03-19 10:25:27  
End at: 2019-03-19 10:25:57  
Local clock offset: -0.056 ms  
Remote clock offset: -3.072 ms

# Below is generated by plot.py at 2019-03-19 14:18:50  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 468.44 Mbit/s  
95th percentile per-packet one-way delay: 245.794 ms  
Loss rate: 4.16%  
-- Flow 1:  
Average throughput: 281.17 Mbit/s  
95th percentile per-packet one-way delay: 218.010 ms  
Loss rate: 1.34%  
-- Flow 2:  
Average throughput: 181.56 Mbit/s  
95th percentile per-packet one-way delay: 147.115 ms  
Loss rate: 1.86%  
-- Flow 3:  
Average throughput: 207.44 Mbit/s  
95th percentile per-packet one-way delay: 262.043 ms  
Loss rate: 17.51%

### Run 3: Report of PCC-Expr — Data Link

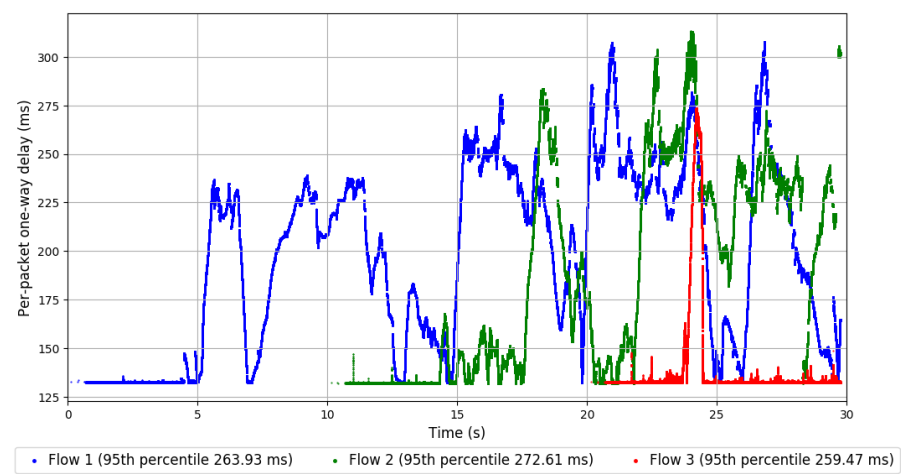
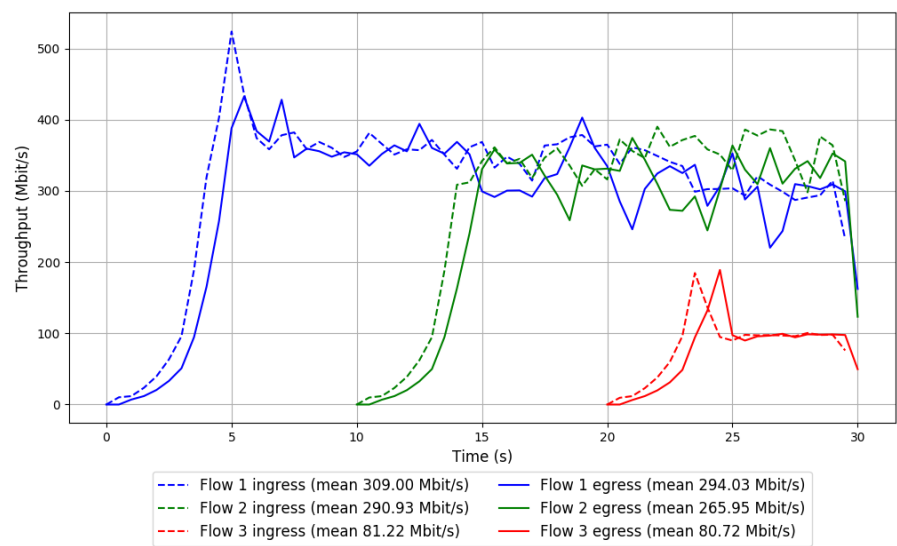


Run 4: Statistics of PCC-Expr

Start at: 2019-03-19 11:07:16  
End at: 2019-03-19 11:07:46  
Local clock offset: -0.568 ms  
Remote clock offset: -0.529 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 496.26 Mbit/s  
95th percentile per-packet one-way delay: 266.010 ms  
Loss rate: 7.07%  
-- Flow 1:  
Average throughput: 294.03 Mbit/s  
95th percentile per-packet one-way delay: 263.930 ms  
Loss rate: 5.69%  
-- Flow 2:  
Average throughput: 265.95 Mbit/s  
95th percentile per-packet one-way delay: 272.612 ms  
Loss rate: 9.81%  
-- Flow 3:  
Average throughput: 80.72 Mbit/s  
95th percentile per-packet one-way delay: 259.466 ms  
Loss rate: 3.29%

Run 4: Report of PCC-Expr — Data Link



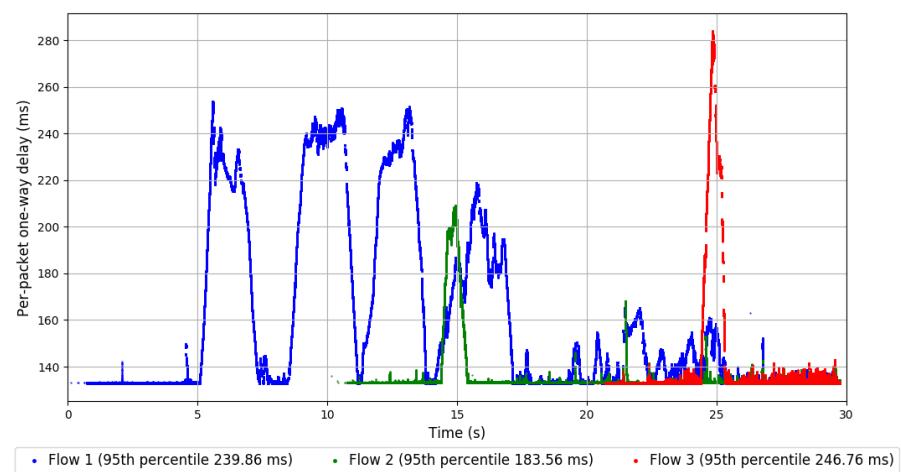
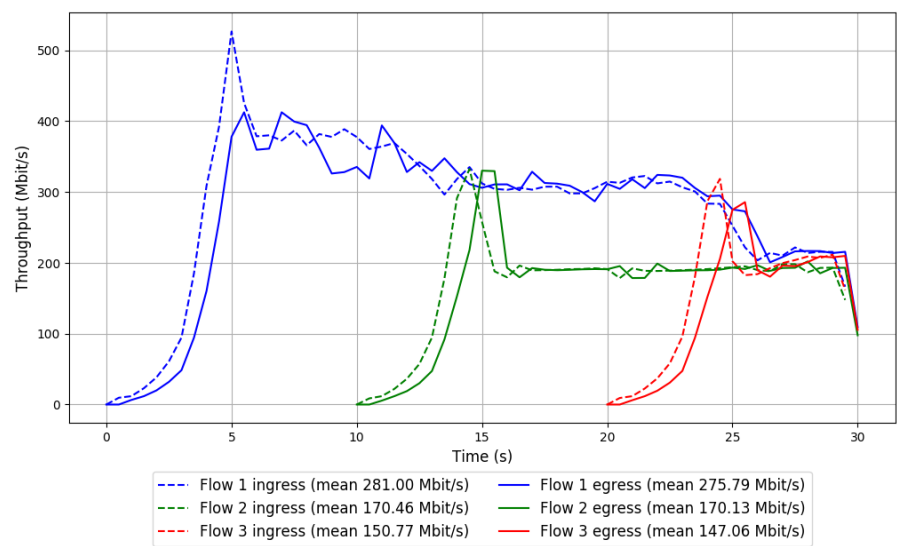


Run 5: Statistics of PCC-Expr

Start at: 2019-03-19 11:49:01  
End at: 2019-03-19 11:49:31  
Local clock offset: -0.023 ms  
Remote clock offset: -0.331 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 436.07 Mbit/s  
95th percentile per-packet one-way delay: 237.260 ms  
Loss rate: 2.69%  
-- Flow 1:  
Average throughput: 275.79 Mbit/s  
95th percentile per-packet one-way delay: 239.864 ms  
Loss rate: 2.72%  
-- Flow 2:  
Average throughput: 170.13 Mbit/s  
95th percentile per-packet one-way delay: 183.559 ms  
Loss rate: 1.54%  
-- Flow 3:  
Average throughput: 147.06 Mbit/s  
95th percentile per-packet one-way delay: 246.756 ms  
Loss rate: 5.12%

Run 5: Report of PCC-Expr — Data Link

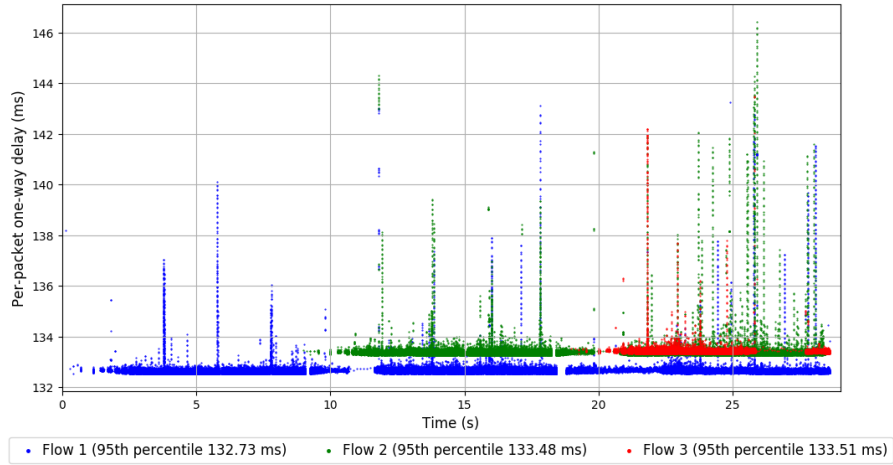
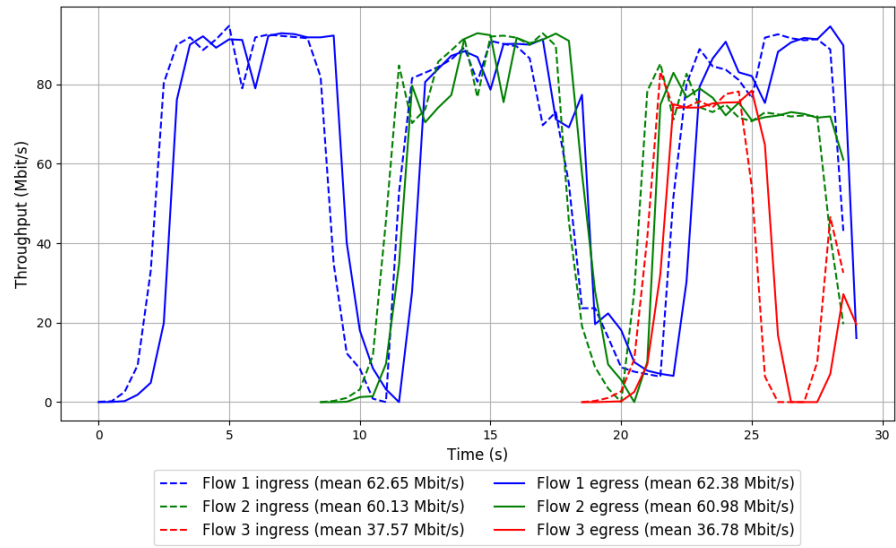


Run 1: Statistics of QUIC Cubic

Start at: 2019-03-19 08:56:51  
End at: 2019-03-19 08:57:21  
Local clock offset: -0.18 ms  
Remote clock offset: -0.436 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 116.43 Mbit/s  
95th percentile per-packet one-way delay: 133.448 ms  
Loss rate: 1.54%  
-- Flow 1:  
Average throughput: 62.38 Mbit/s  
95th percentile per-packet one-way delay: 132.731 ms  
Loss rate: 1.35%  
-- Flow 2:  
Average throughput: 60.98 Mbit/s  
95th percentile per-packet one-way delay: 133.483 ms  
Loss rate: 0.82%  
-- Flow 3:  
Average throughput: 36.78 Mbit/s  
95th percentile per-packet one-way delay: 133.510 ms  
Loss rate: 4.76%

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

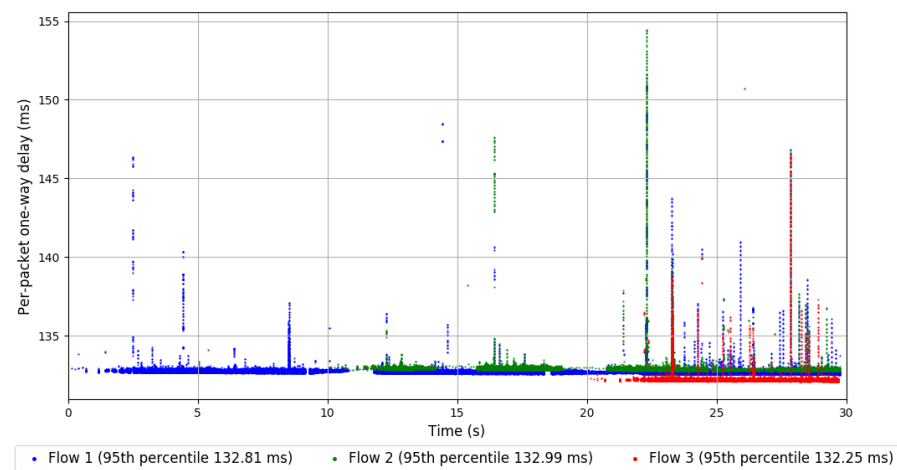
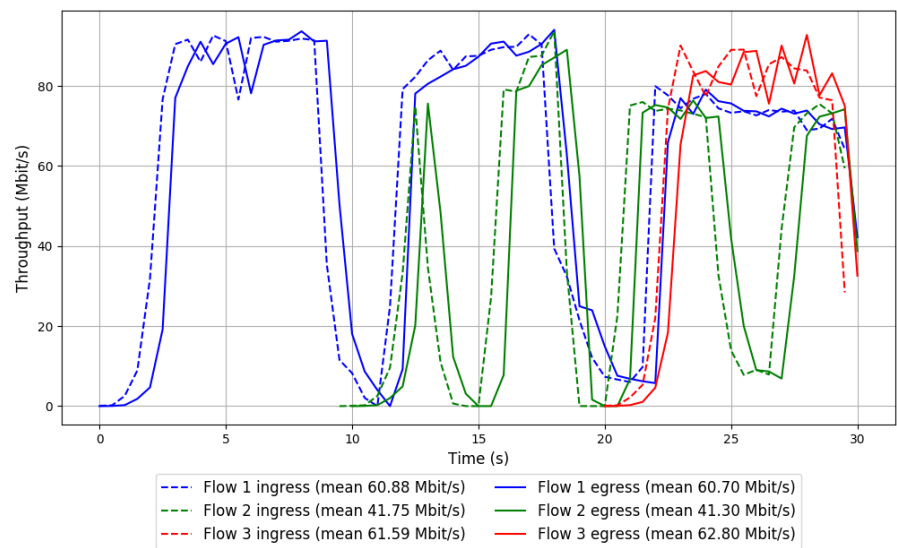


Run 2: Statistics of QUIC Cubic

Start at: 2019-03-19 09:38:14  
End at: 2019-03-19 09:38:44  
Local clock offset: -0.057 ms  
Remote clock offset: -6.497 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 108.35 Mbit/s  
95th percentile per-packet one-way delay: 132.926 ms  
Loss rate: 1.52%  
-- Flow 1:  
Average throughput: 60.70 Mbit/s  
95th percentile per-packet one-way delay: 132.806 ms  
Loss rate: 1.17%  
-- Flow 2:  
Average throughput: 41.30 Mbit/s  
95th percentile per-packet one-way delay: 132.985 ms  
Loss rate: 2.41%  
-- Flow 3:  
Average throughput: 62.80 Mbit/s  
95th percentile per-packet one-way delay: 132.254 ms  
Loss rate: 1.35%

Run 2: Report of QUIC Cubic — Data Link

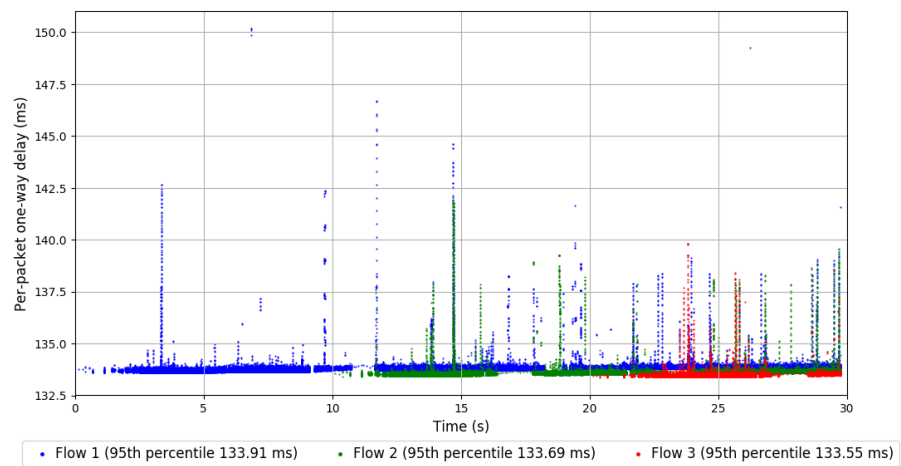
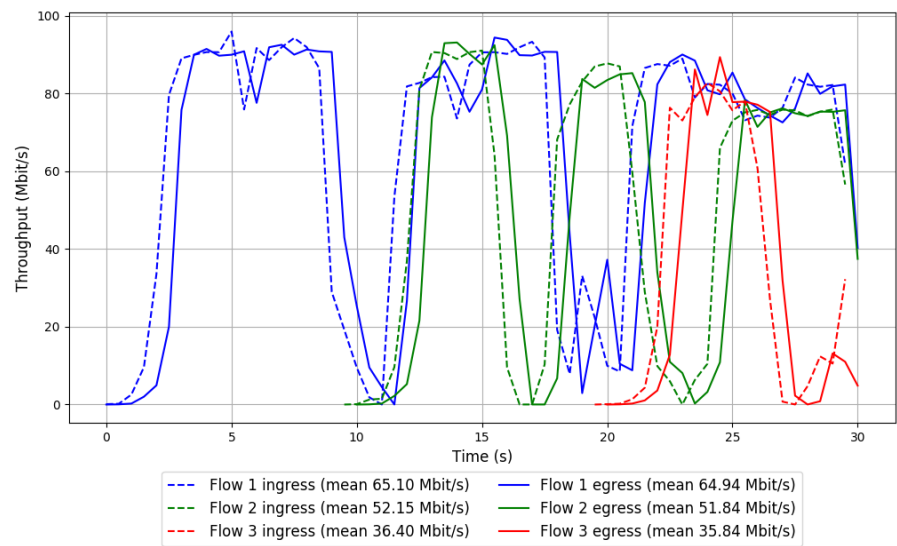


Run 3: Statistics of QUIC Cubic

Start at: 2019-03-19 10:20:22  
End at: 2019-03-19 10:20:52  
Local clock offset: -0.008 ms  
Remote clock offset: -5.616 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 110.93 Mbit/s  
95th percentile per-packet one-way delay: 133.899 ms  
Loss rate: 1.69%  
-- Flow 1:  
Average throughput: 64.94 Mbit/s  
95th percentile per-packet one-way delay: 133.915 ms  
Loss rate: 1.11%  
-- Flow 2:  
Average throughput: 51.84 Mbit/s  
95th percentile per-packet one-way delay: 133.688 ms  
Loss rate: 1.90%  
-- Flow 3:  
Average throughput: 35.84 Mbit/s  
95th percentile per-packet one-way delay: 133.553 ms  
Loss rate: 4.17%

Run 3: Report of QUIC Cubic — Data Link



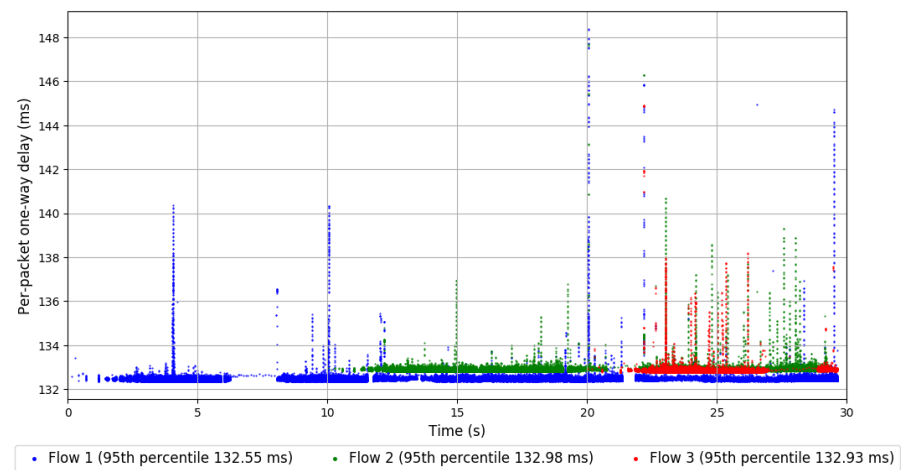
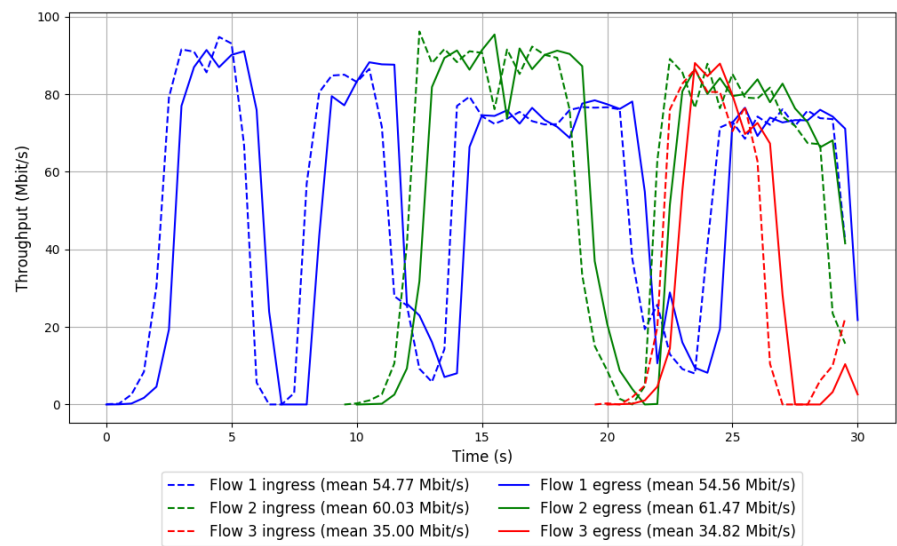


Run 4: Statistics of QUIC Cubic

Start at: 2019-03-19 11:02:16  
End at: 2019-03-19 11:02:46  
Local clock offset: -0.182 ms  
Remote clock offset: -0.712 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 106.12 Mbit/s  
95th percentile per-packet one-way delay: 132.939 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 54.56 Mbit/s  
95th percentile per-packet one-way delay: 132.549 ms  
Loss rate: 1.26%  
-- Flow 2:  
Average throughput: 61.47 Mbit/s  
95th percentile per-packet one-way delay: 132.978 ms  
Loss rate: 0.66%  
-- Flow 3:  
Average throughput: 34.82 Mbit/s  
95th percentile per-packet one-way delay: 132.934 ms  
Loss rate: 3.21%

Run 4: Report of QUIC Cubic — Data Link

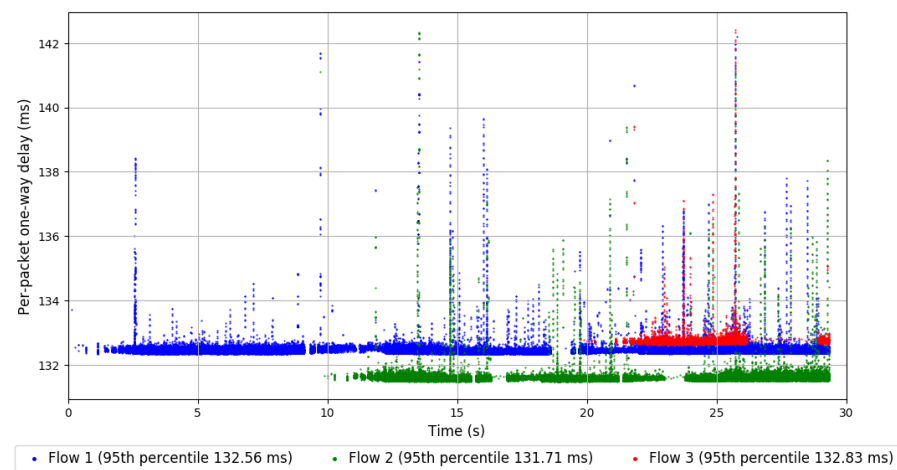
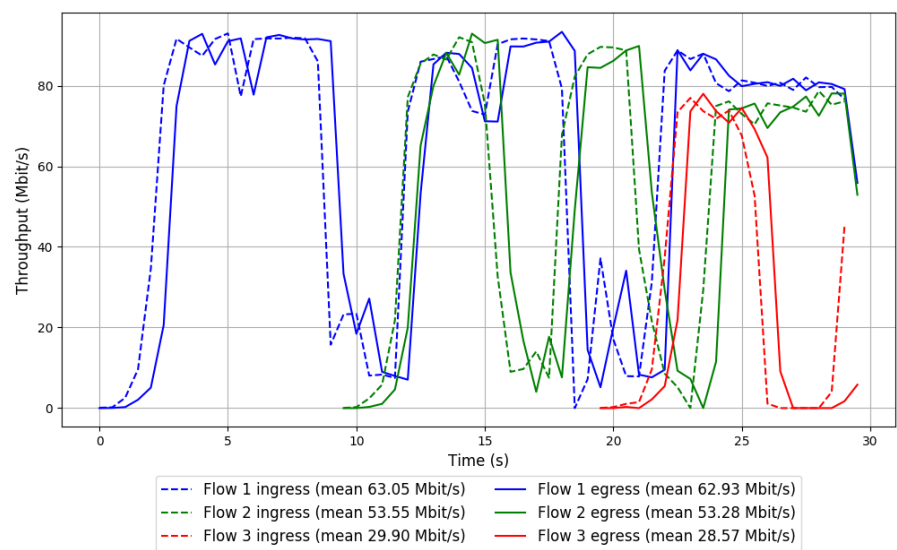


Run 5: Statistics of QUIC Cubic

Start at: 2019-03-19 11:43:56  
End at: 2019-03-19 11:44:26  
Local clock offset: -0.458 ms  
Remote clock offset: -0.325 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 108.09 Mbit/s  
95th percentile per-packet one-way delay: 132.716 ms  
Loss rate: 1.93%  
-- Flow 1:  
Average throughput: 62.93 Mbit/s  
95th percentile per-packet one-way delay: 132.556 ms  
Loss rate: 1.13%  
-- Flow 2:  
Average throughput: 53.28 Mbit/s  
95th percentile per-packet one-way delay: 131.712 ms  
Loss rate: 1.90%  
-- Flow 3:  
Average throughput: 28.57 Mbit/s  
95th percentile per-packet one-way delay: 132.826 ms  
Loss rate: 7.08%

Run 5: Report of QUIC Cubic — Data Link

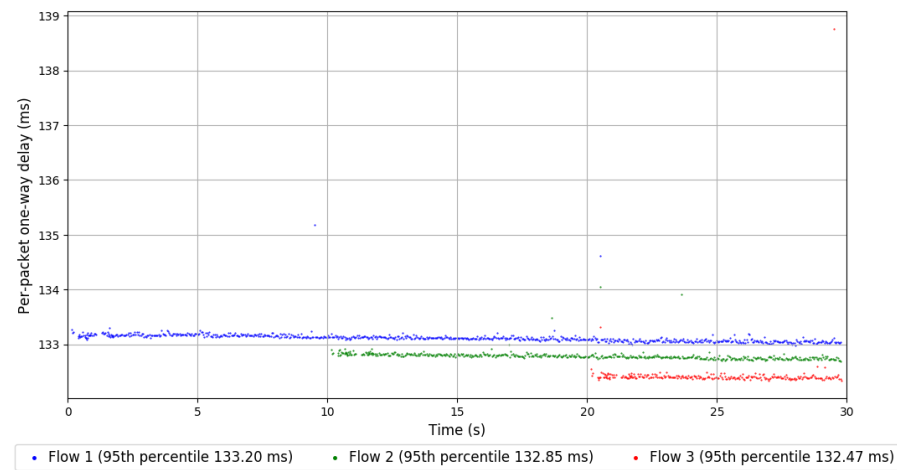
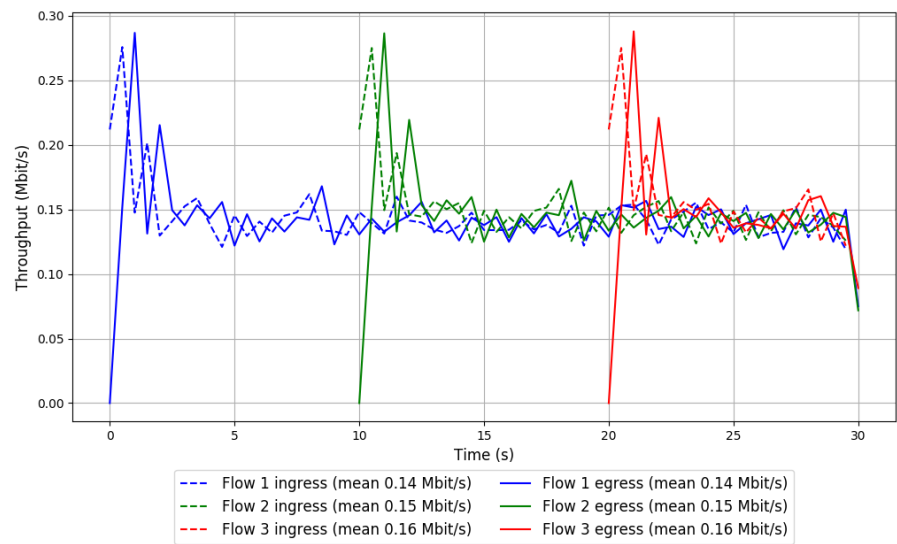


Run 1: Statistics of SCReAM

Start at: 2019-03-19 09:23:07  
End at: 2019-03-19 09:23:37  
Local clock offset: -0.057 ms  
Remote clock offset: -2.298 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 133.182 ms  
Loss rate: 1.33%  
-- Flow 1:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 133.200 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 132.848 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 132.472 ms  
Loss rate: 2.45%

Run 1: Report of SReAM — Data Link

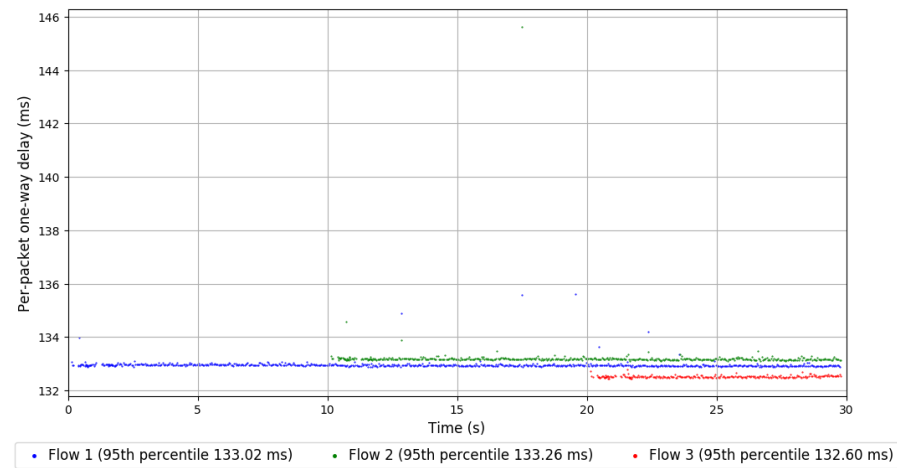
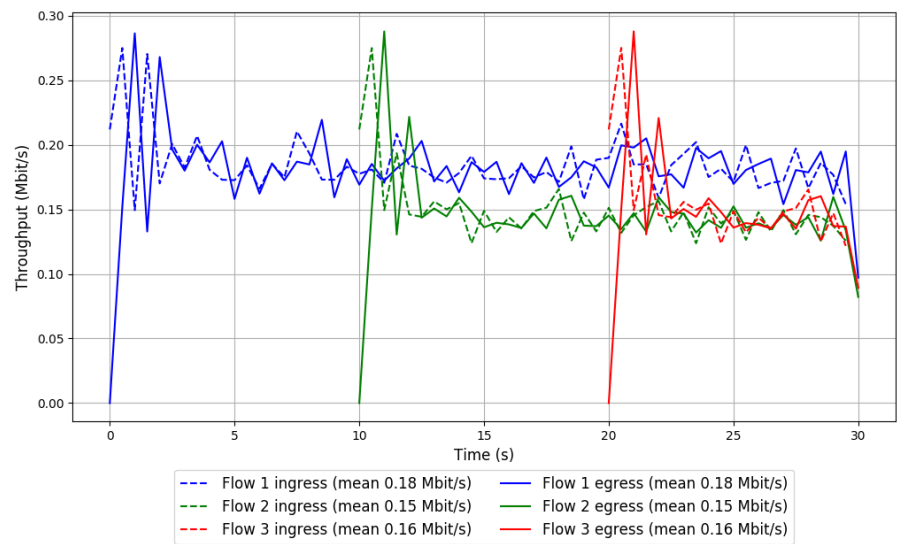


Run 2: Statistics of SReAM

Start at: 2019-03-19 10:04:40  
End at: 2019-03-19 10:05:10  
Local clock offset: -0.021 ms  
Remote clock offset: -4.056 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.34 Mbit/s  
95th percentile per-packet one-way delay: 133.212 ms  
Loss rate: 1.28%  
-- Flow 1:  
Average throughput: 0.18 Mbit/s  
95th percentile per-packet one-way delay: 133.024 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.258 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 132.598 ms  
Loss rate: 2.45%

Run 2: Report of SReAM — Data Link



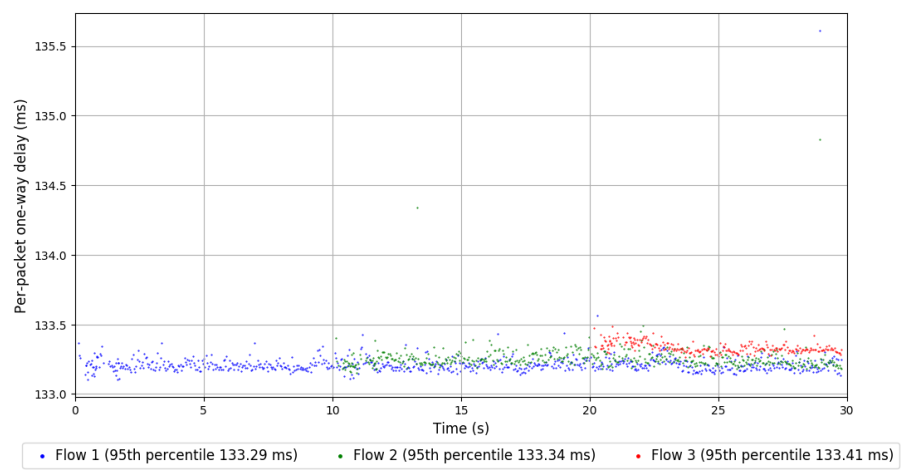
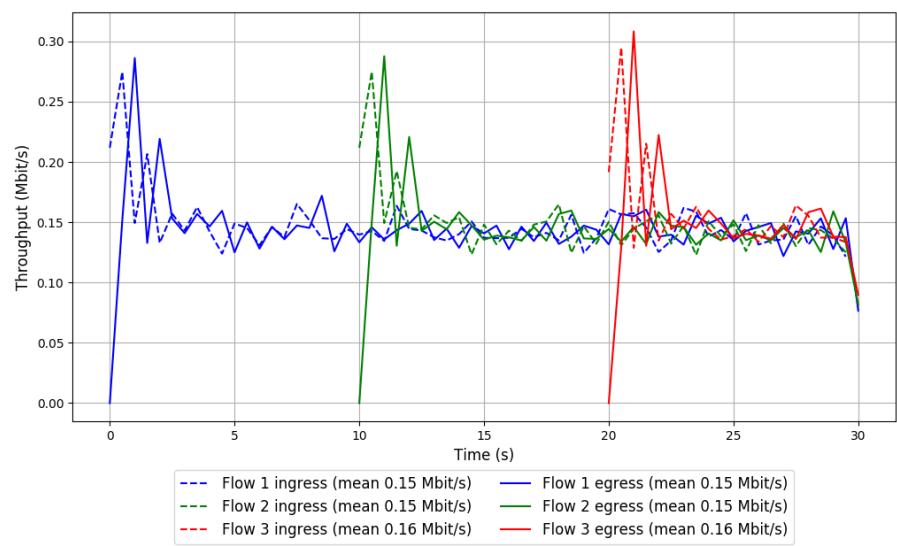


Run 3: Statistics of SCReAM

Start at: 2019-03-19 10:47:26  
End at: 2019-03-19 10:47:56  
Local clock offset: 0.159 ms  
Remote clock offset: -1.192 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.30 Mbit/s  
95th percentile per-packet one-way delay: 133.361 ms  
Loss rate: 1.32%  
-- Flow 1:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.291 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.337 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 133.407 ms  
Loss rate: 2.45%

Run 3: Report of SReAM — Data Link

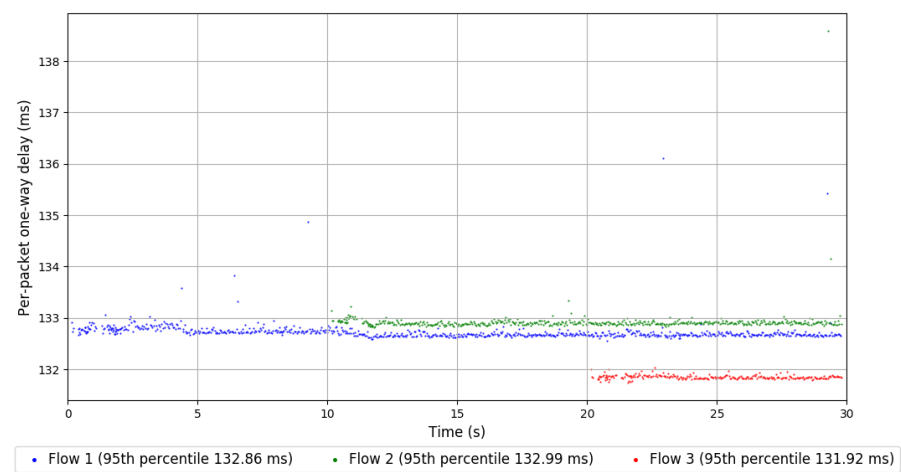
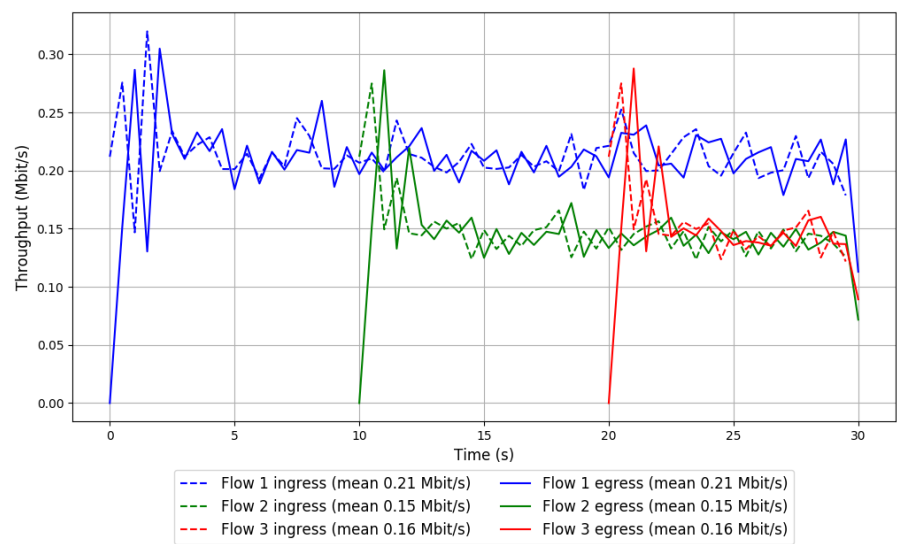


Run 4: Statistics of SCReAM

Start at: 2019-03-19 11:28:44  
End at: 2019-03-19 11:29:14  
Local clock offset: -0.59 ms  
Remote clock offset: -0.662 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.36 Mbit/s  
95th percentile per-packet one-way delay: 132.945 ms  
Loss rate: 1.25%  
-- Flow 1:  
Average throughput: 0.21 Mbit/s  
95th percentile per-packet one-way delay: 132.863 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 132.988 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 131.923 ms  
Loss rate: 2.45%

Run 4: Report of SReAM — Data Link

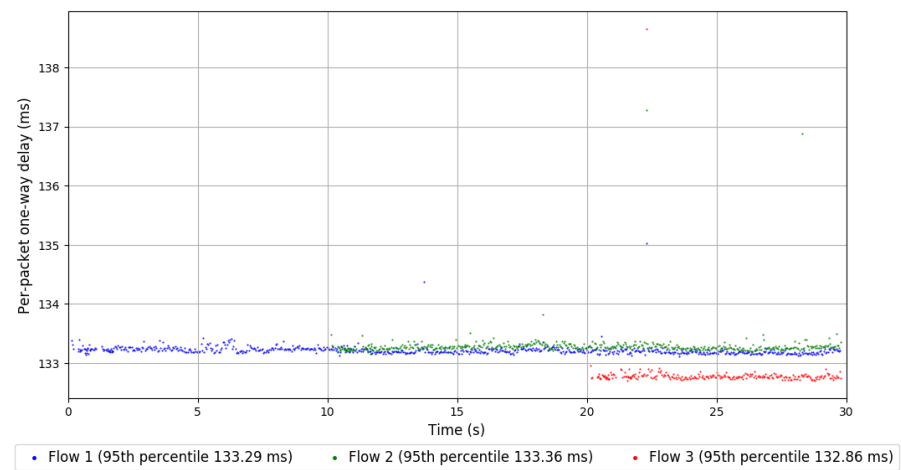
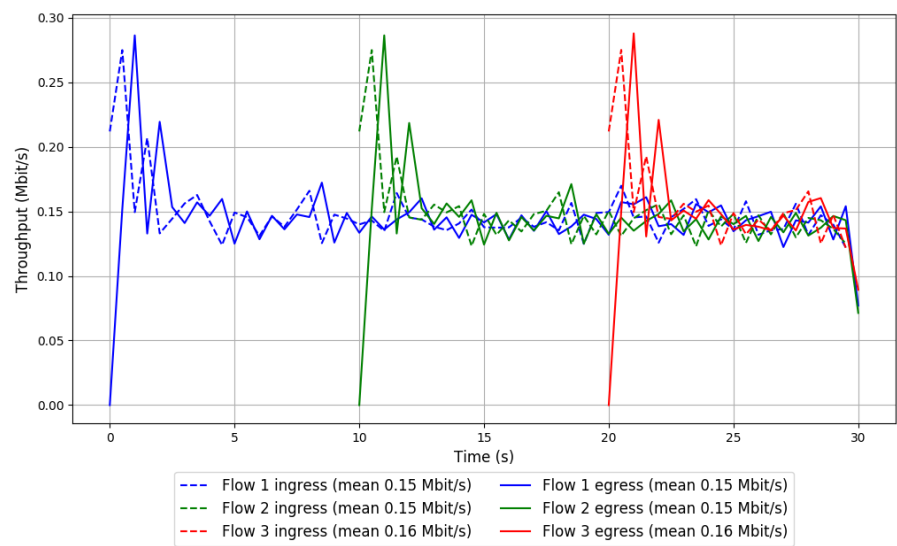


Run 5: Statistics of SCReAM

Start at: 2019-03-19 12:09:25  
End at: 2019-03-19 12:09:55  
Local clock offset: 0.207 ms  
Remote clock offset: -0.275 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.30 Mbit/s  
95th percentile per-packet one-way delay: 133.335 ms  
Loss rate: 1.32%  
-- Flow 1:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.294 ms  
Loss rate: 0.88%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.364 ms  
Loss rate: 1.39%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 132.857 ms  
Loss rate: 2.45%

Run 5: Report of SReAM — Data Link

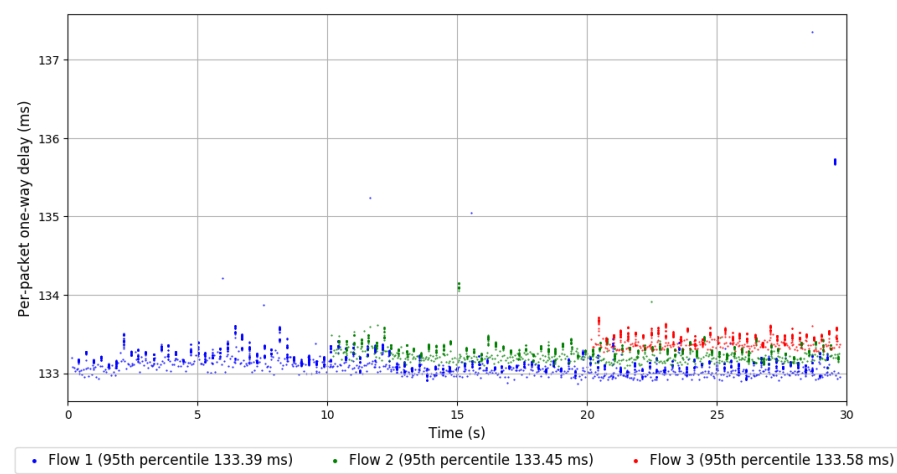
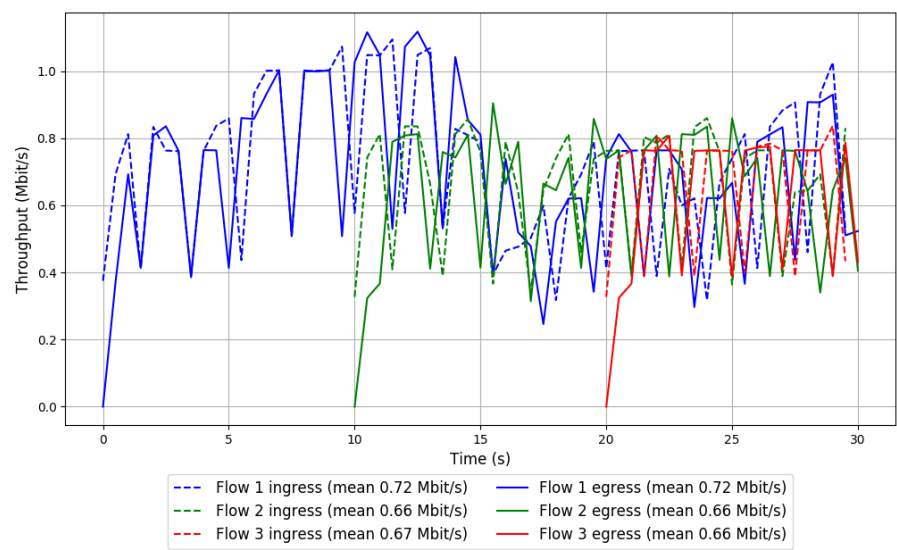


Run 1: Statistics of Sprout

Start at: 2019-03-19 08:47:27  
End at: 2019-03-19 08:47:57  
Local clock offset: -0.336 ms  
Remote clock offset: -0.427 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.38 Mbit/s  
95th percentile per-packet one-way delay: 133.517 ms  
Loss rate: 1.67%  
-- Flow 1:  
Average throughput: 0.72 Mbit/s  
95th percentile per-packet one-way delay: 133.394 ms  
Loss rate: 1.21%  
-- Flow 2:  
Average throughput: 0.66 Mbit/s  
95th percentile per-packet one-way delay: 133.449 ms  
Loss rate: 1.63%  
-- Flow 3:  
Average throughput: 0.66 Mbit/s  
95th percentile per-packet one-way delay: 133.582 ms  
Loss rate: 3.27%

Run 1: Report of Sprout — Data Link



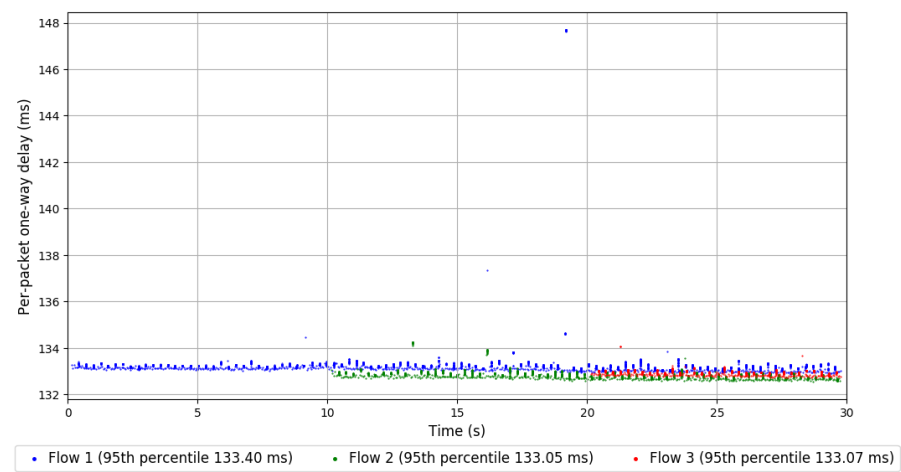
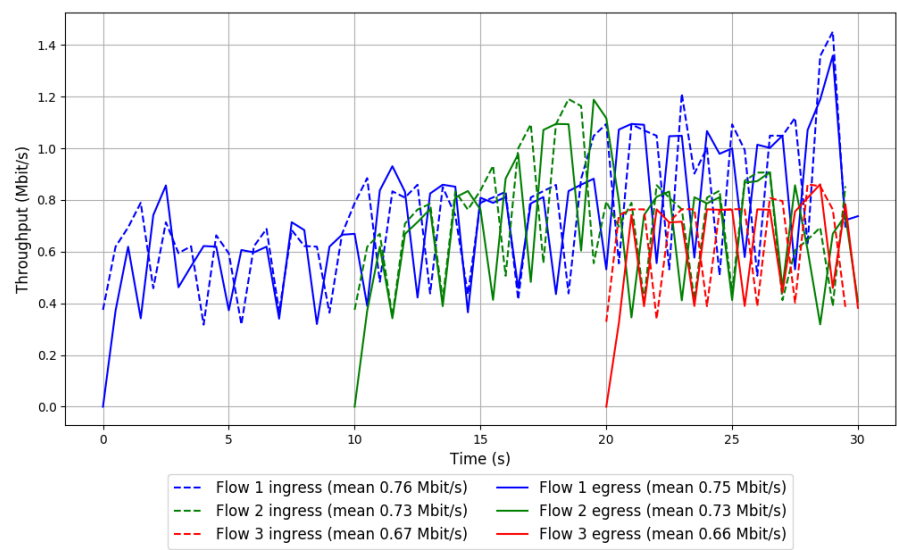


## Run 2: Statistics of Sprout

Start at: 2019-03-19 09:28:57  
End at: 2019-03-19 09:29:27  
Local clock offset: -0.081 ms  
Remote clock offset: -3.935 ms

```
# Below is generated by plot.py at 2019-03-19 14:27:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 133.373 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 133.404 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 133.050 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.068 ms
Loss rate: 2.91%
```

Run 2: Report of Sprout — Data Link

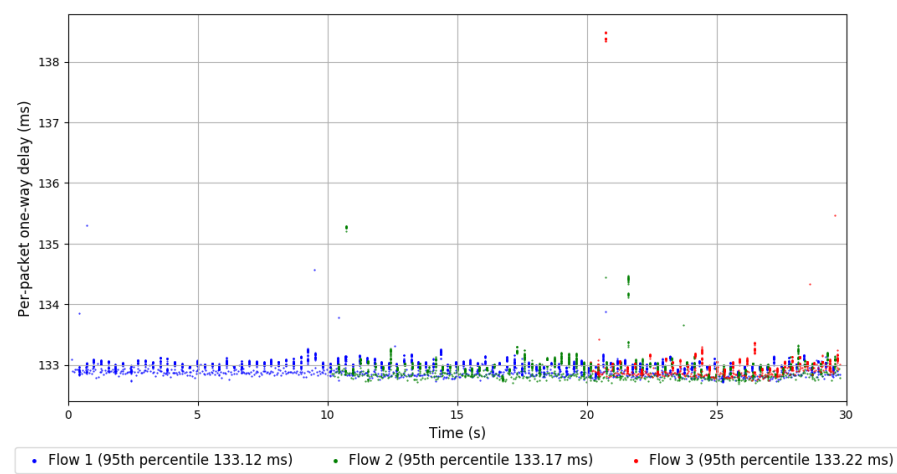
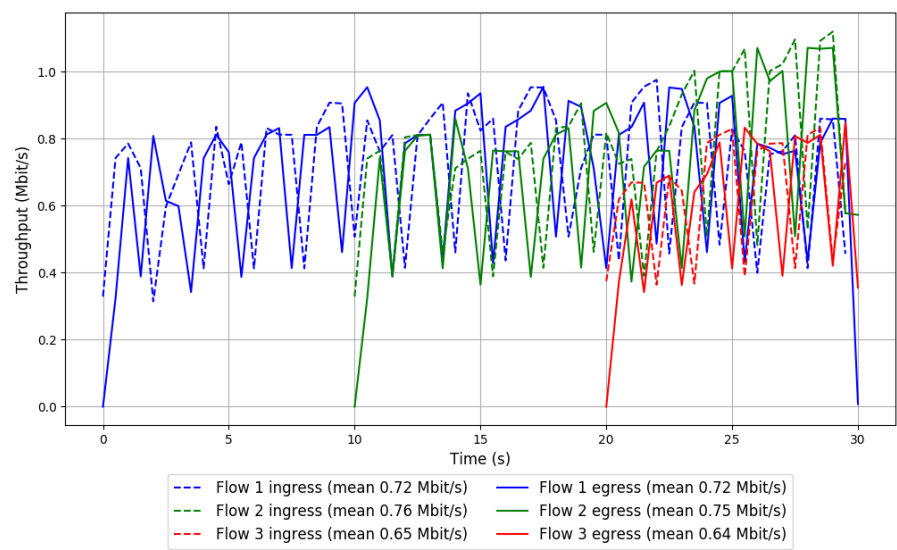


### Run 3: Statistics of Sprout

Start at: 2019-03-19 10:10:15  
End at: 2019-03-19 10:10:45  
Local clock offset: -0.042 ms  
Remote clock offset: -4.472 ms

```
# Below is generated by plot.py at 2019-03-19 14:27:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 133.150 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 133.121 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 133.173 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 133.221 ms
Loss rate: 2.99%
```

Run 3: Report of Sprout — Data Link

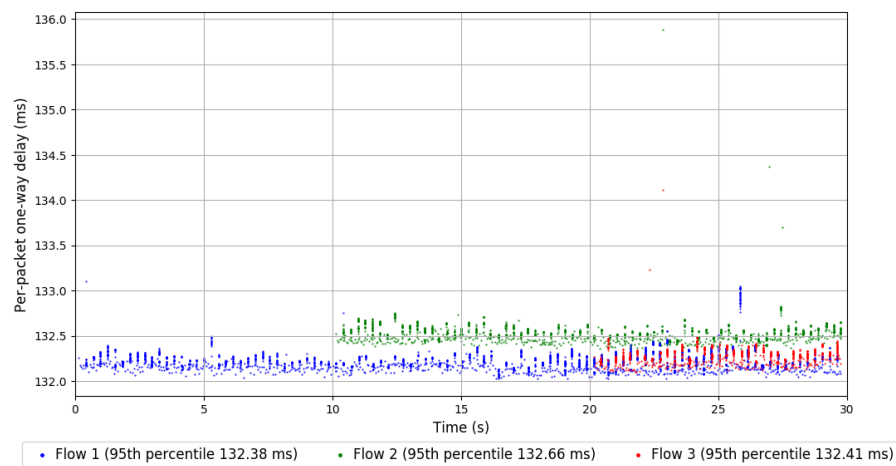
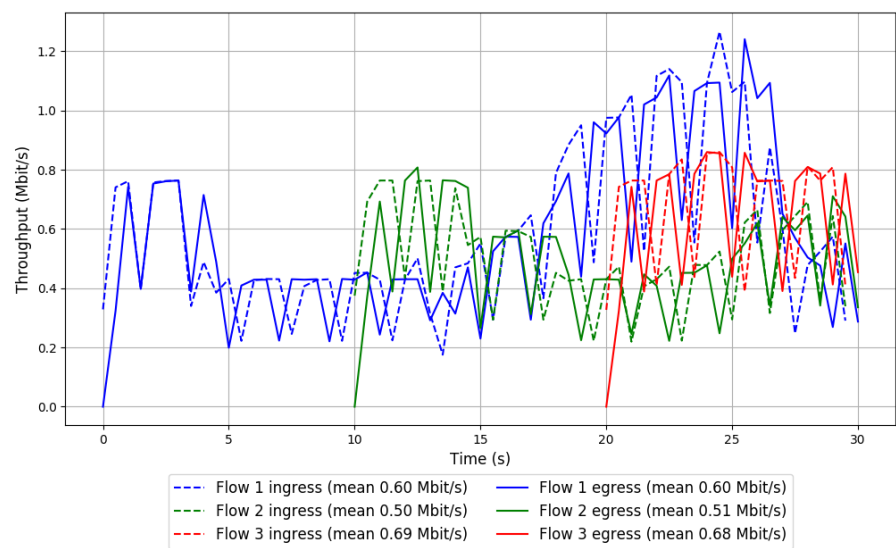


Run 4: Statistics of Sprout

Start at: 2019-03-19 10:53:14  
End at: 2019-03-19 10:53:44  
Local clock offset: -0.566 ms  
Remote clock offset: -0.943 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.15 Mbit/s  
95th percentile per-packet one-way delay: 132.612 ms  
Loss rate: 0.94%  
-- Flow 1:  
Average throughput: 0.60 Mbit/s  
95th percentile per-packet one-way delay: 132.376 ms  
Loss rate: 0.80%  
-- Flow 2:  
Average throughput: 0.51 Mbit/s  
95th percentile per-packet one-way delay: 132.658 ms  
Loss rate: 0.04%  
-- Flow 3:  
Average throughput: 0.68 Mbit/s  
95th percentile per-packet one-way delay: 132.405 ms  
Loss rate: 2.63%

Run 4: Report of Sprout — Data Link

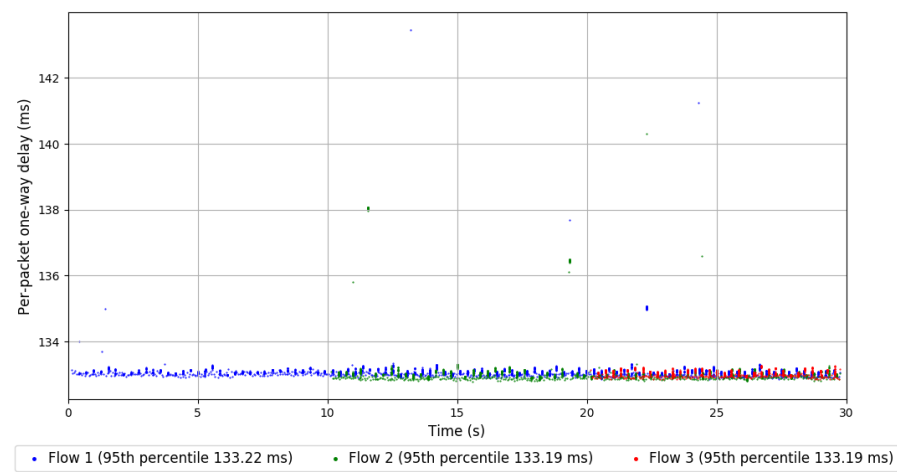
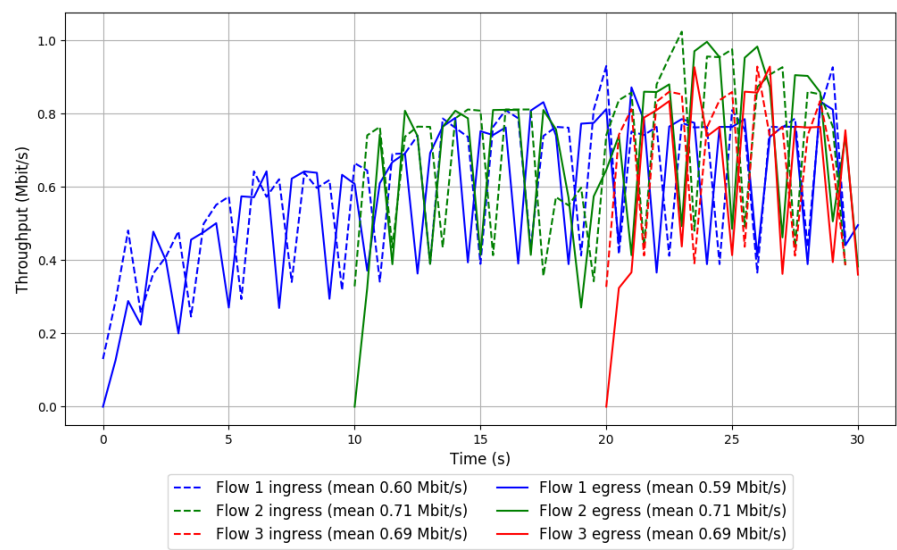


Run 5: Statistics of Sprout

Start at: 2019-03-19 11:34:24  
End at: 2019-03-19 11:34:54  
Local clock offset: -0.115 ms  
Remote clock offset: -0.403 ms

# Below is generated by plot.py at 2019-03-19 14:27:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.29 Mbit/s  
95th percentile per-packet one-way delay: 133.206 ms  
Loss rate: 1.57%  
-- Flow 1:  
Average throughput: 0.59 Mbit/s  
95th percentile per-packet one-way delay: 133.216 ms  
Loss rate: 1.27%  
-- Flow 2:  
Average throughput: 0.71 Mbit/s  
95th percentile per-packet one-way delay: 133.193 ms  
Loss rate: 1.35%  
-- Flow 3:  
Average throughput: 0.69 Mbit/s  
95th percentile per-packet one-way delay: 133.191 ms  
Loss rate: 2.81%

Run 5: Report of Sprout — Data Link



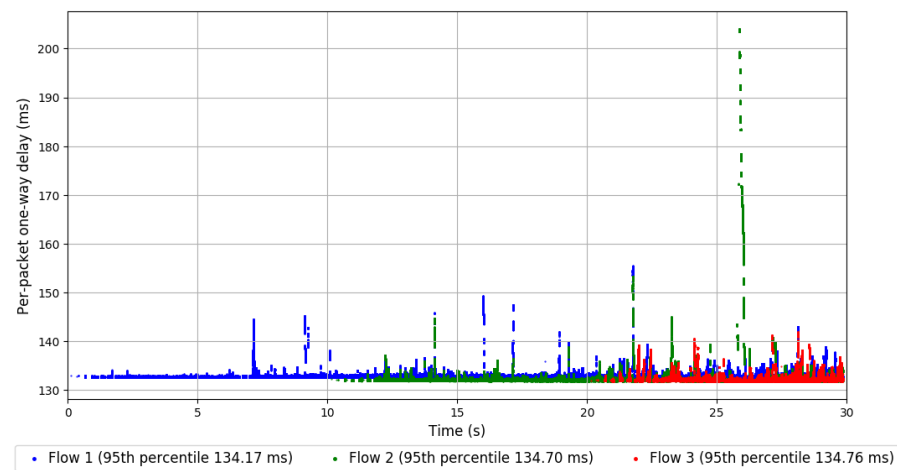
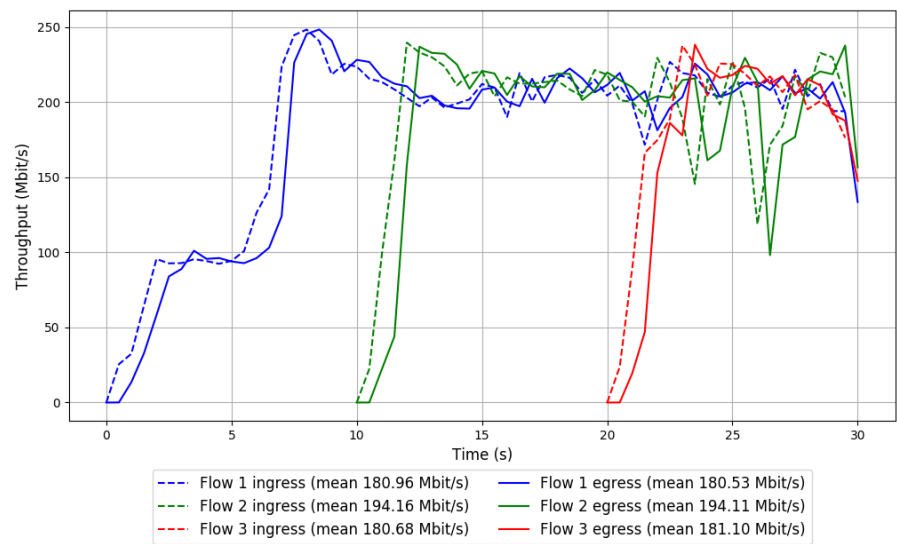


Run 1: Statistics of TaoVA-100x

Start at: 2019-03-19 09:26:39  
End at: 2019-03-19 09:27:09  
Local clock offset: -0.027 ms  
Remote clock offset: -3.226 ms

# Below is generated by plot.py at 2019-03-19 14:29:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 368.37 Mbit/s  
95th percentile per-packet one-way delay: 134.431 ms  
Loss rate: 1.42%  
-- Flow 1:  
Average throughput: 180.53 Mbit/s  
95th percentile per-packet one-way delay: 134.173 ms  
Loss rate: 1.12%  
-- Flow 2:  
Average throughput: 194.11 Mbit/s  
95th percentile per-packet one-way delay: 134.704 ms  
Loss rate: 1.35%  
-- Flow 3:  
Average throughput: 181.10 Mbit/s  
95th percentile per-packet one-way delay: 134.764 ms  
Loss rate: 2.43%

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

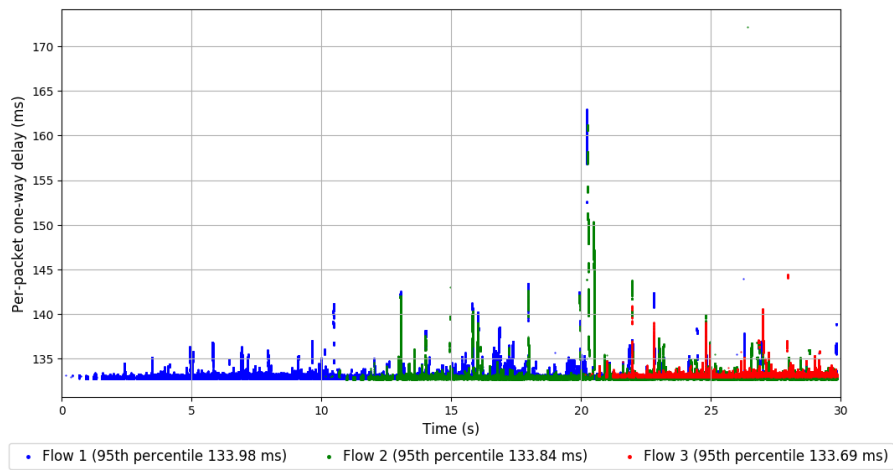
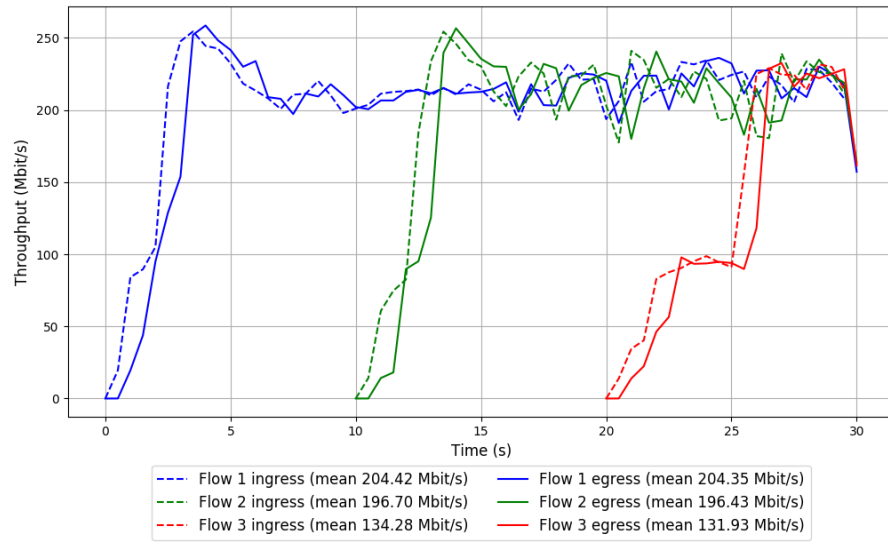


Run 2: Statistics of TaoVA-100x

Start at: 2019-03-19 10:08:11  
End at: 2019-03-19 10:08:41  
Local clock offset: -0.005 ms  
Remote clock offset: -4.281 ms

# Below is generated by plot.py at 2019-03-19 14:29:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 377.69 Mbit/s  
95th percentile per-packet one-way delay: 133.888 ms  
Loss rate: 1.52%  
-- Flow 1:  
Average throughput: 204.35 Mbit/s  
95th percentile per-packet one-way delay: 133.983 ms  
Loss rate: 0.92%  
-- Flow 2:  
Average throughput: 196.43 Mbit/s  
95th percentile per-packet one-way delay: 133.842 ms  
Loss rate: 1.46%  
-- Flow 3:  
Average throughput: 131.93 Mbit/s  
95th percentile per-packet one-way delay: 133.686 ms  
Loss rate: 4.38%

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

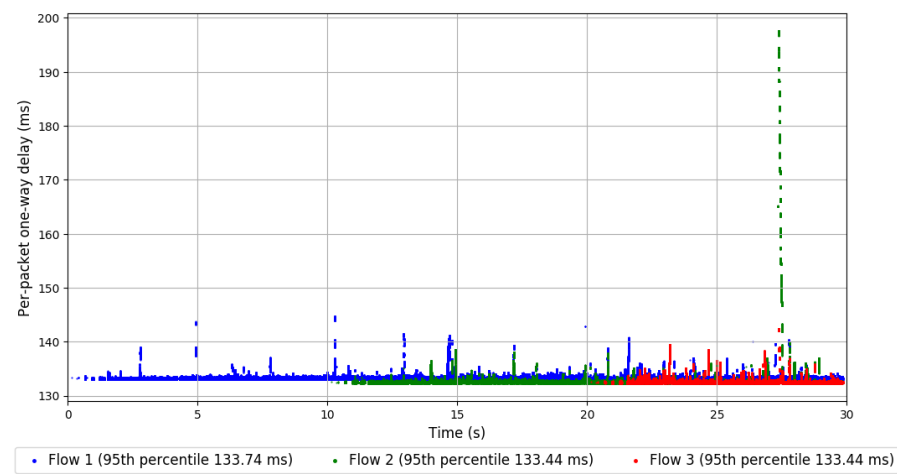
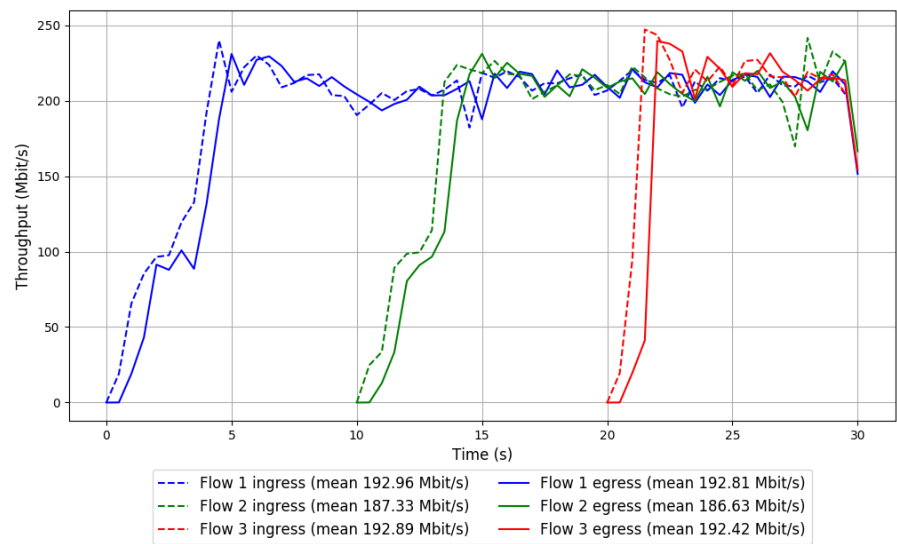


Run 3: Statistics of TaoVA-100x

Start at: 2019-03-19 10:50:56  
End at: 2019-03-19 10:51:26  
Local clock offset: -0.128 ms  
Remote clock offset: -1.251 ms

# Below is generated by plot.py at 2019-03-19 14:30:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 379.40 Mbit/s  
95th percentile per-packet one-way delay: 133.680 ms  
Loss rate: 1.53%  
-- Flow 1:  
Average throughput: 192.81 Mbit/s  
95th percentile per-packet one-way delay: 133.739 ms  
Loss rate: 0.97%  
-- Flow 2:  
Average throughput: 186.63 Mbit/s  
95th percentile per-packet one-way delay: 133.440 ms  
Loss rate: 1.69%  
-- Flow 3:  
Average throughput: 192.42 Mbit/s  
95th percentile per-packet one-way delay: 133.444 ms  
Loss rate: 2.90%

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



Run 4: Statistics of TaoVA-100x

Start at: 2019-03-19 11:32:13

End at: 2019-03-19 11:32:43

Local clock offset: -0.181 ms

Remote clock offset: -0.54 ms

# Below is generated by plot.py at 2019-03-19 14:30:30

# Datalink statistics

-- Total of 3 flows:

Average throughput: 366.12 Mbit/s

95th percentile per-packet one-way delay: 134.477 ms

Loss rate: 1.56%

-- Flow 1:

Average throughput: 202.38 Mbit/s

95th percentile per-packet one-way delay: 133.876 ms

Loss rate: 0.90%

-- Flow 2:

Average throughput: 180.49 Mbit/s

95th percentile per-packet one-way delay: 135.057 ms

Loss rate: 1.67%

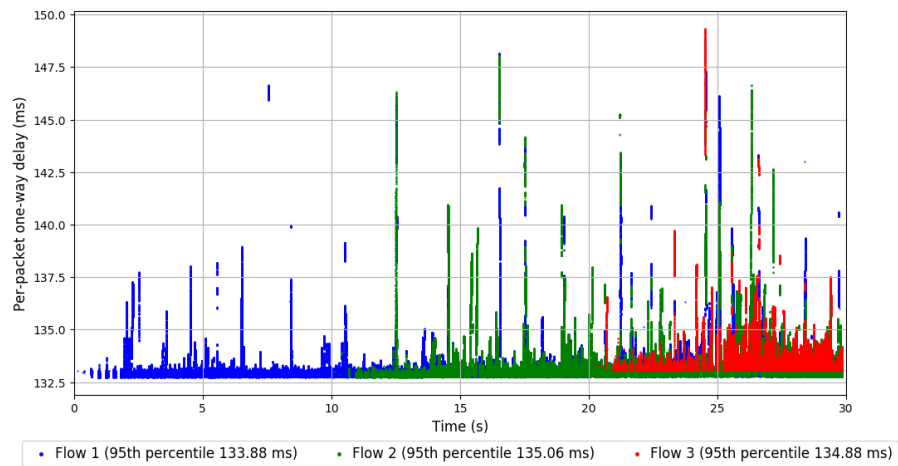
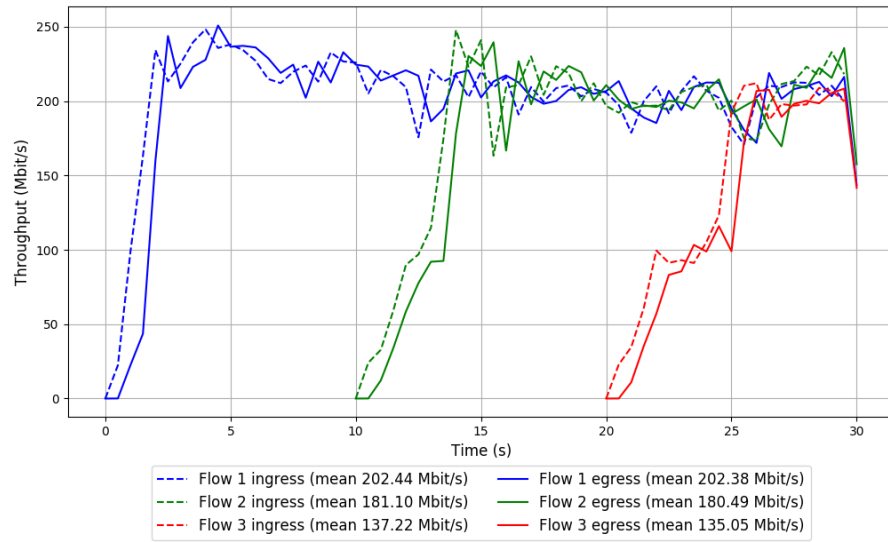
-- Flow 3:

Average throughput: 135.05 Mbit/s

95th percentile per-packet one-way delay: 134.880 ms

Loss rate: 4.20%

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



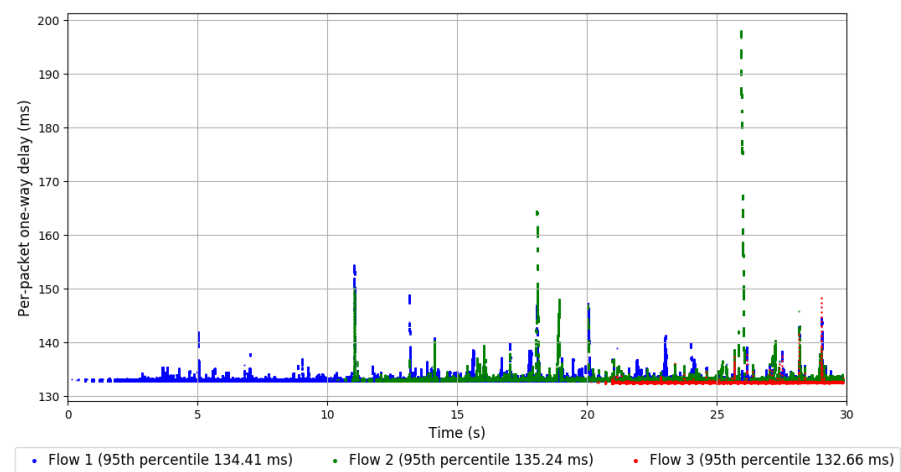
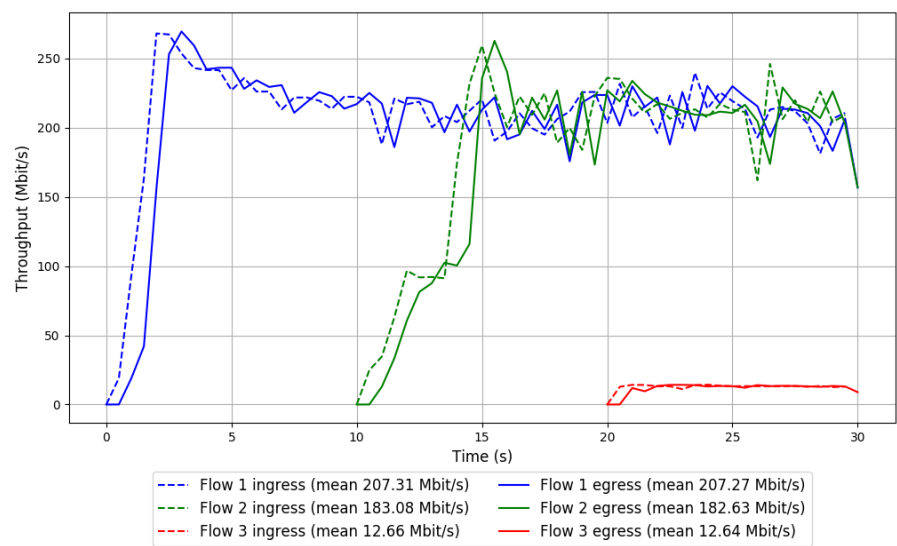


Run 5: Statistics of TaoVA-100x

Start at: 2019-03-19 12:12:47  
End at: 2019-03-19 12:13:17  
Local clock offset: 0.157 ms  
Remote clock offset: -0.266 ms

# Below is generated by plot.py at 2019-03-19 14:30:30  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 332.48 Mbit/s  
95th percentile per-packet one-way delay: 134.601 ms  
Loss rate: 1.17%  
-- Flow 1:  
Average throughput: 207.27 Mbit/s  
95th percentile per-packet one-way delay: 134.409 ms  
Loss rate: 0.90%  
-- Flow 2:  
Average throughput: 182.63 Mbit/s  
95th percentile per-packet one-way delay: 135.239 ms  
Loss rate: 1.57%  
-- Flow 3:  
Average throughput: 12.64 Mbit/s  
95th percentile per-packet one-way delay: 132.658 ms  
Loss rate: 2.82%

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

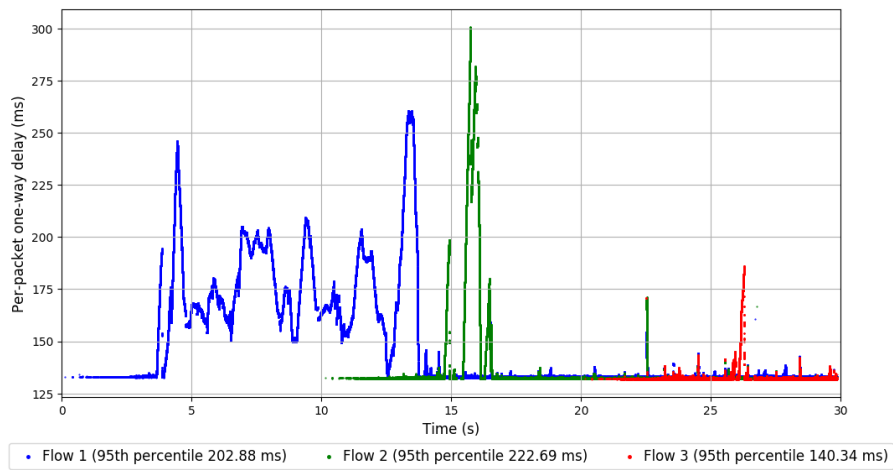
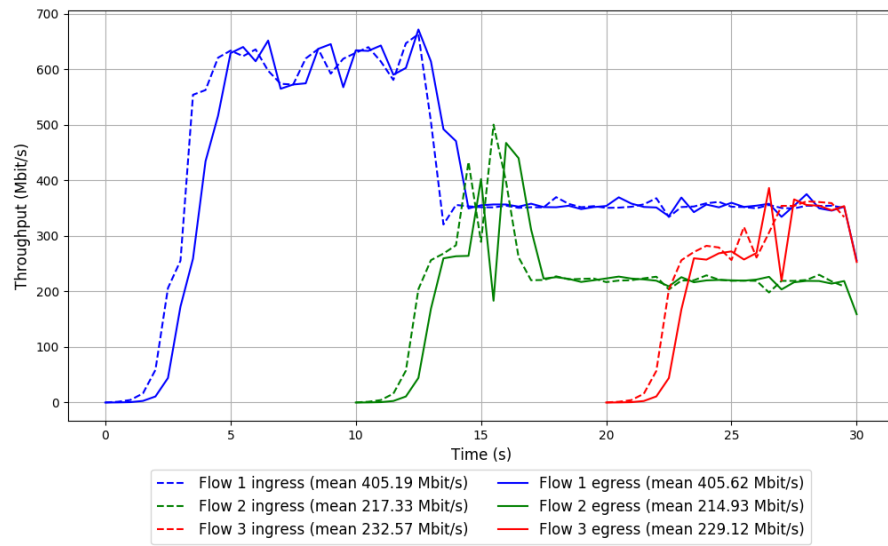


Run 1: Statistics of TCP Vegas

Start at: 2019-03-19 09:20:55  
End at: 2019-03-19 09:21:25  
Local clock offset: -0.068 ms  
Remote clock offset: -1.668 ms

# Below is generated by plot.py at 2019-03-19 14:31:33  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 622.91 Mbit/s  
95th percentile per-packet one-way delay: 202.306 ms  
Loss rate: 1.56%  
-- Flow 1:  
Average throughput: 405.62 Mbit/s  
95th percentile per-packet one-way delay: 202.885 ms  
Loss rate: 0.78%  
-- Flow 2:  
Average throughput: 214.93 Mbit/s  
95th percentile per-packet one-way delay: 222.692 ms  
Loss rate: 2.41%  
-- Flow 3:  
Average throughput: 229.12 Mbit/s  
95th percentile per-packet one-way delay: 140.337 ms  
Loss rate: 4.08%

# Run 1: Report of TCP Vegas — Data Link

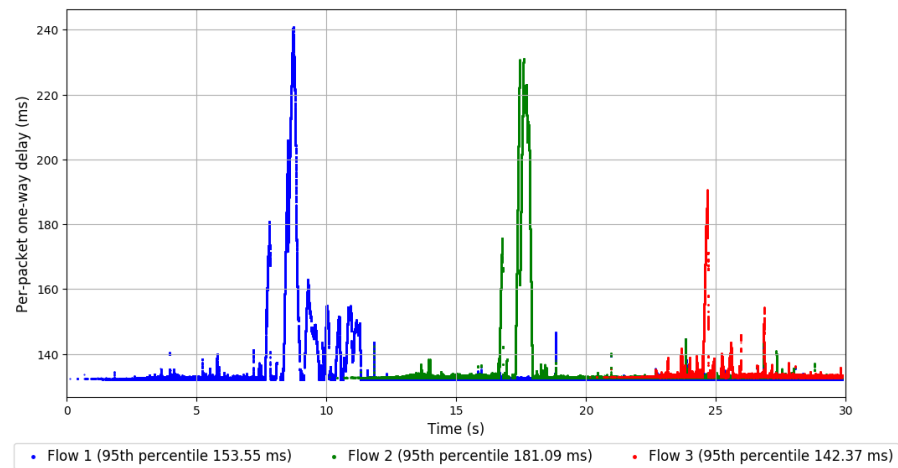
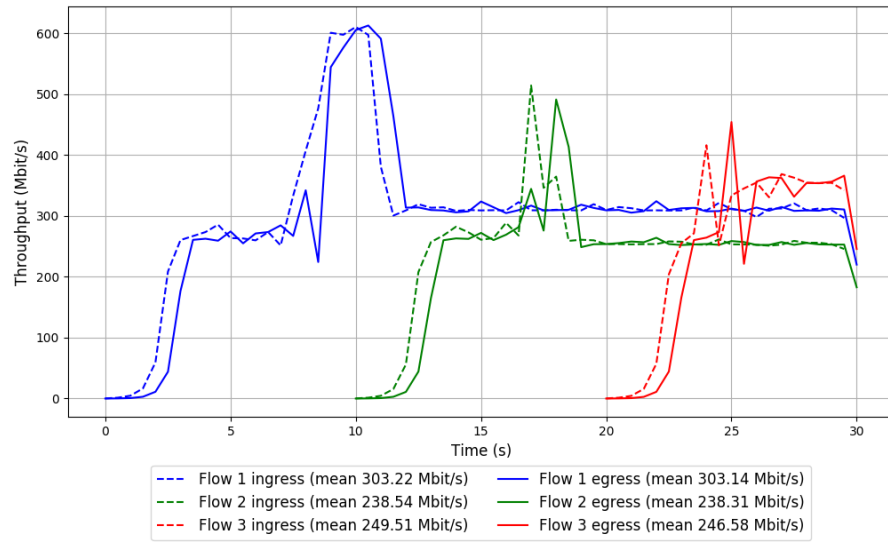


Run 2: Statistics of TCP Vegas

Start at: 2019-03-19 10:02:45  
End at: 2019-03-19 10:03:15  
Local clock offset: -0.233 ms  
Remote clock offset: -3.991 ms

# Below is generated by plot.py at 2019-03-19 14:36:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 541.75 Mbit/s  
95th percentile per-packet one-way delay: 155.127 ms  
Loss rate: 1.50%  
-- Flow 1:  
Average throughput: 303.14 Mbit/s  
95th percentile per-packet one-way delay: 153.550 ms  
Loss rate: 0.91%  
-- Flow 2:  
Average throughput: 238.31 Mbit/s  
95th percentile per-packet one-way delay: 181.086 ms  
Loss rate: 1.42%  
-- Flow 3:  
Average throughput: 246.58 Mbit/s  
95th percentile per-packet one-way delay: 142.366 ms  
Loss rate: 3.82%

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

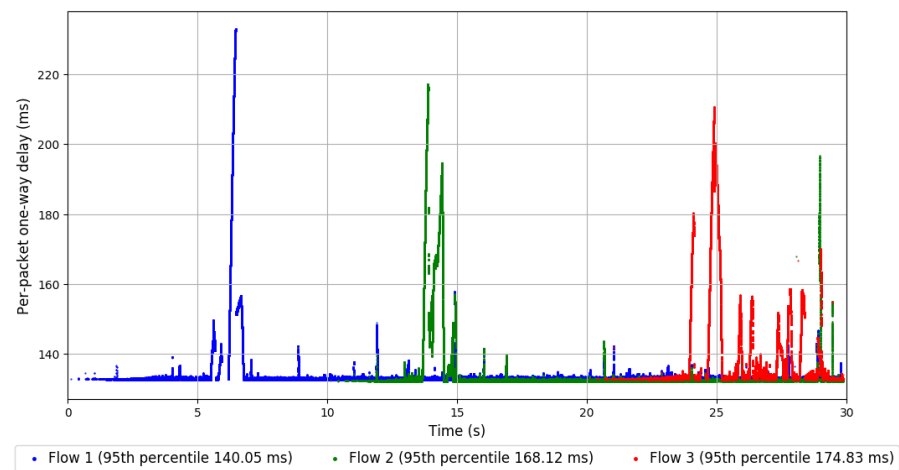
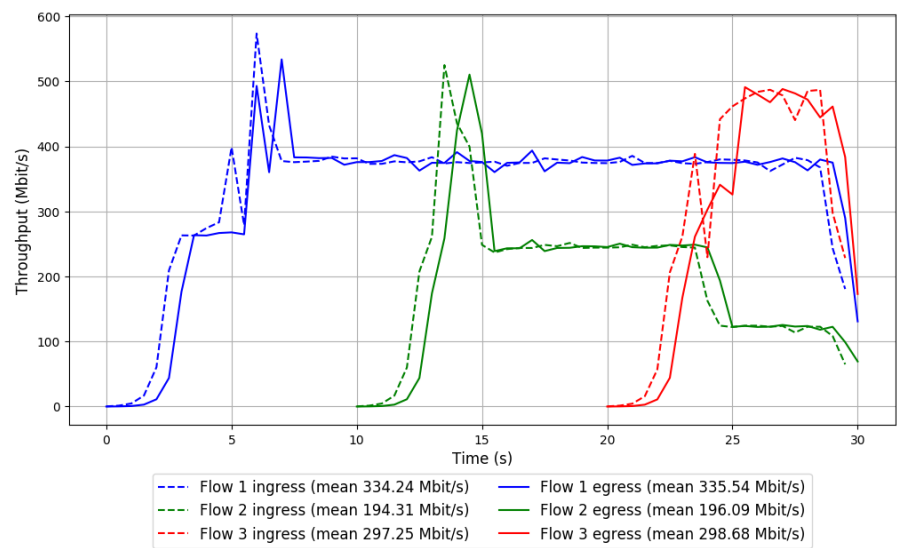


Run 3: Statistics of TCP Vegas

Start at: 2019-03-19 10:45:25  
End at: 2019-03-19 10:45:55  
Local clock offset: -0.161 ms  
Remote clock offset: -1.172 ms

# Below is generated by plot.py at 2019-03-19 14:38:35  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 563.19 Mbit/s  
95th percentile per-packet one-way delay: 155.201 ms  
Loss rate: 0.78%  
-- Flow 1:  
Average throughput: 335.54 Mbit/s  
95th percentile per-packet one-way delay: 140.051 ms  
Loss rate: 0.50%  
-- Flow 2:  
Average throughput: 196.09 Mbit/s  
95th percentile per-packet one-way delay: 168.115 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 298.68 Mbit/s  
95th percentile per-packet one-way delay: 174.832 ms  
Loss rate: 2.19%

Run 3: Report of TCP Vegas — Data Link





Run 4: Statistics of TCP Vegas

Start at: 2019-03-19 11:26:27

End at: 2019-03-19 11:26:57

Local clock offset: -0.171 ms

Remote clock offset: -0.67 ms

# Below is generated by plot.py at 2019-03-19 14:42:23

# Datalink statistics

-- Total of 3 flows:

Average throughput: 751.17 Mbit/s

95th percentile per-packet one-way delay: 192.690 ms

Loss rate: 1.17%

-- Flow 1:

Average throughput: 405.33 Mbit/s

95th percentile per-packet one-way delay: 148.300 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 412.18 Mbit/s

95th percentile per-packet one-way delay: 207.666 ms

Loss rate: 1.18%

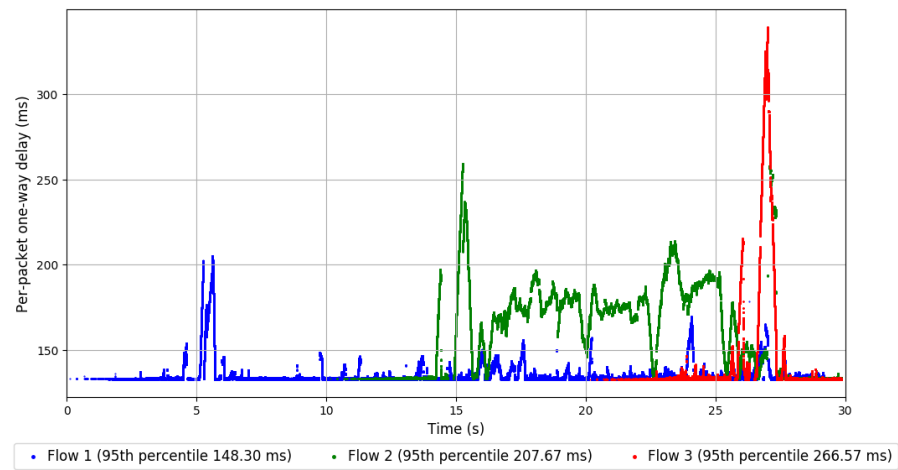
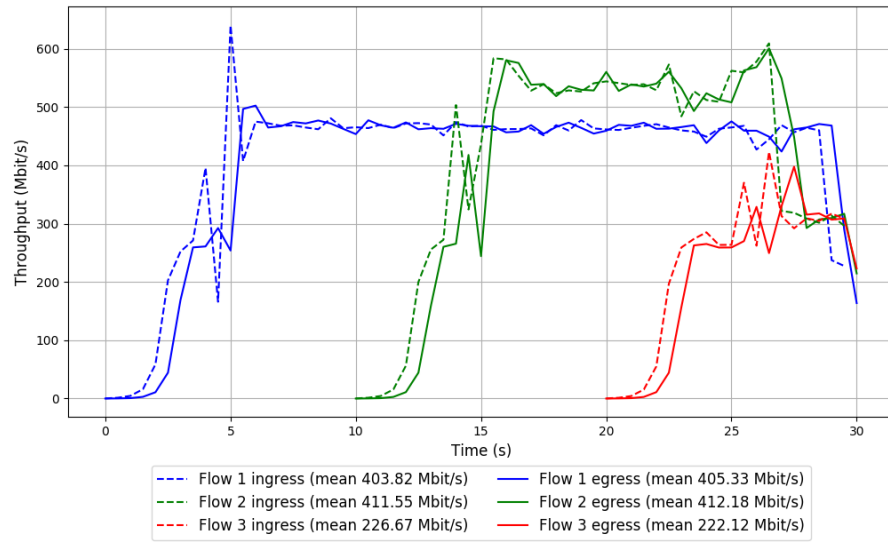
-- Flow 3:

Average throughput: 222.12 Mbit/s

95th percentile per-packet one-way delay: 266.571 ms

Loss rate: 4.62%

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

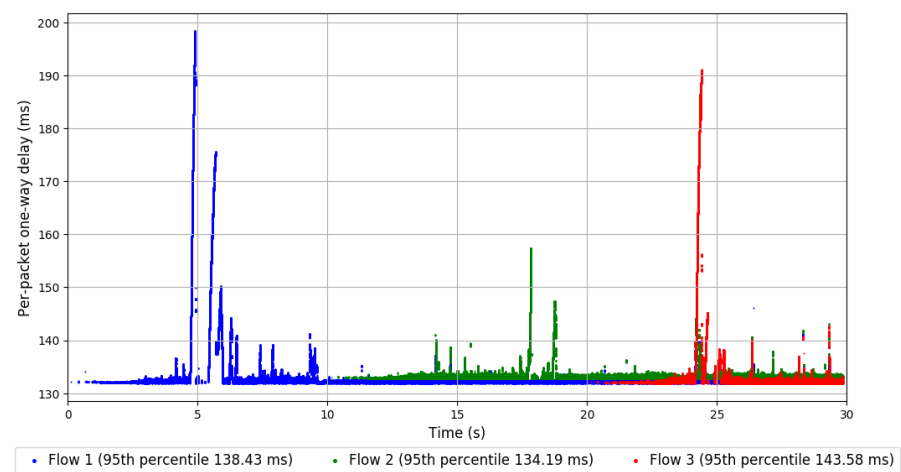
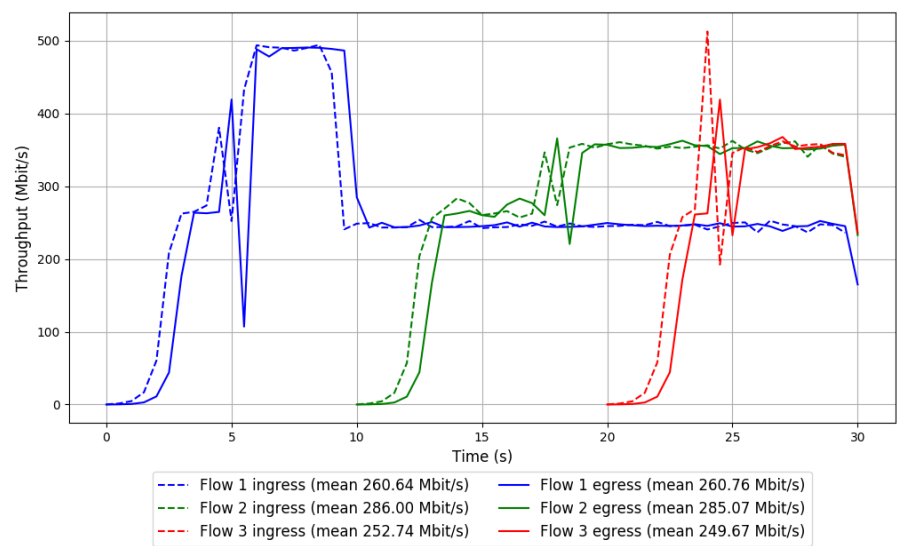


Run 5: Statistics of TCP Vegas

Start at: 2019-03-19 12:07:29  
End at: 2019-03-19 12:07:59  
Local clock offset: -0.037 ms  
Remote clock offset: -0.277 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 531.24 Mbit/s  
95th percentile per-packet one-way delay: 137.213 ms  
Loss rate: 1.59%  
-- Flow 1:  
Average throughput: 260.76 Mbit/s  
95th percentile per-packet one-way delay: 138.430 ms  
Loss rate: 0.84%  
-- Flow 2:  
Average throughput: 285.07 Mbit/s  
95th percentile per-packet one-way delay: 134.187 ms  
Loss rate: 1.65%  
-- Flow 3:  
Average throughput: 249.67 Mbit/s  
95th percentile per-packet one-way delay: 143.583 ms  
Loss rate: 3.79%

Run 5: Report of TCP Vegas — Data Link

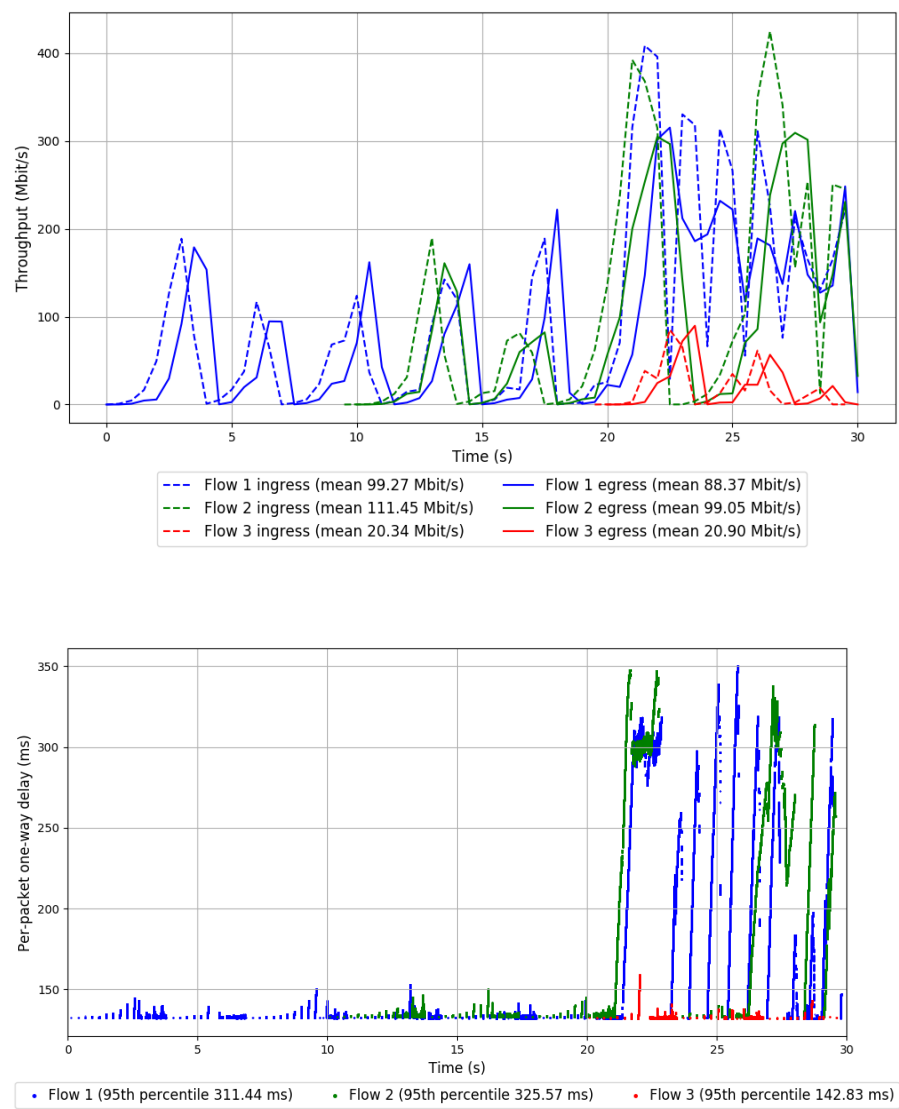


Run 1: Statistics of Verus

Start at: 2019-03-19 09:19:10  
End at: 2019-03-19 09:19:40  
Local clock offset: -0.469 ms  
Remote clock offset: -1.188 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 160.07 Mbit/s  
95th percentile per-packet one-way delay: 316.844 ms  
Loss rate: 11.98%  
-- Flow 1:  
Average throughput: 88.37 Mbit/s  
95th percentile per-packet one-way delay: 311.435 ms  
Loss rate: 11.77%  
-- Flow 2:  
Average throughput: 99.05 Mbit/s  
95th percentile per-packet one-way delay: 325.574 ms  
Loss rate: 13.32%  
-- Flow 3:  
Average throughput: 20.90 Mbit/s  
95th percentile per-packet one-way delay: 142.831 ms  
Loss rate: 0.06%

Run 1: Report of Verus — Data Link

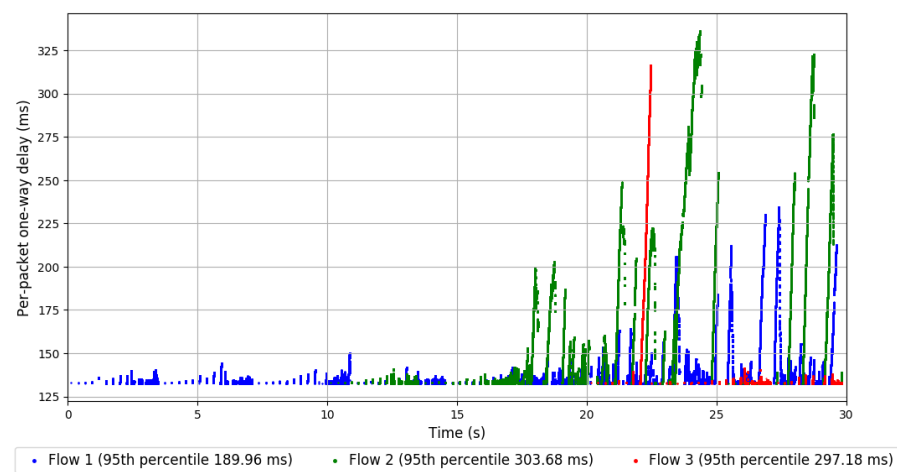
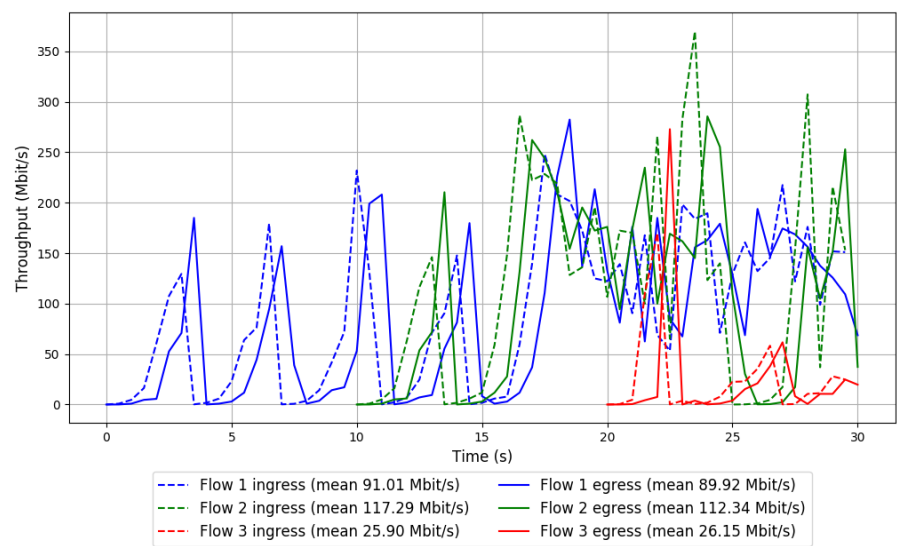


Run 2: Statistics of Verus

Start at: 2019-03-19 10:01:04  
End at: 2019-03-19 10:01:34  
Local clock offset: -0.247 ms  
Remote clock offset: -3.968 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 172.24 Mbit/s  
95th percentile per-packet one-way delay: 263.754 ms  
Loss rate: 3.92%  
-- Flow 1:  
Average throughput: 89.92 Mbit/s  
95th percentile per-packet one-way delay: 189.963 ms  
Loss rate: 2.77%  
-- Flow 2:  
Average throughput: 112.34 Mbit/s  
95th percentile per-packet one-way delay: 303.675 ms  
Loss rate: 5.50%  
-- Flow 3:  
Average throughput: 26.15 Mbit/s  
95th percentile per-packet one-way delay: 297.180 ms  
Loss rate: 1.76%

Run 2: Report of Verus — Data Link



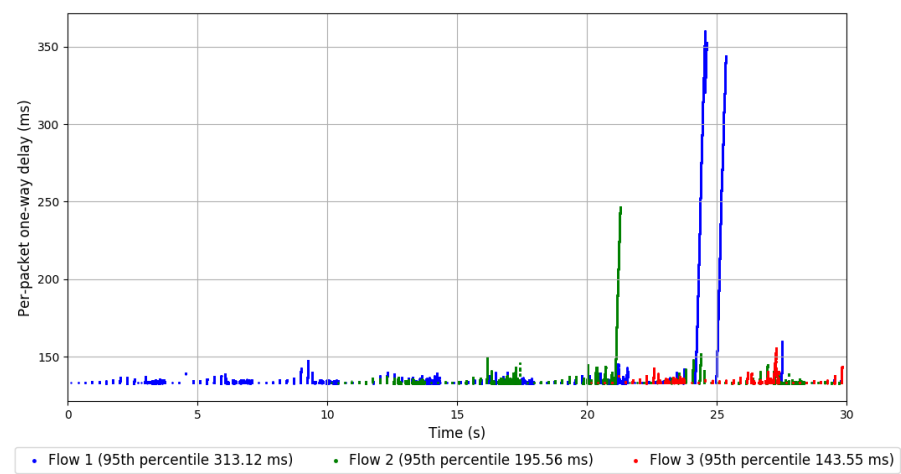
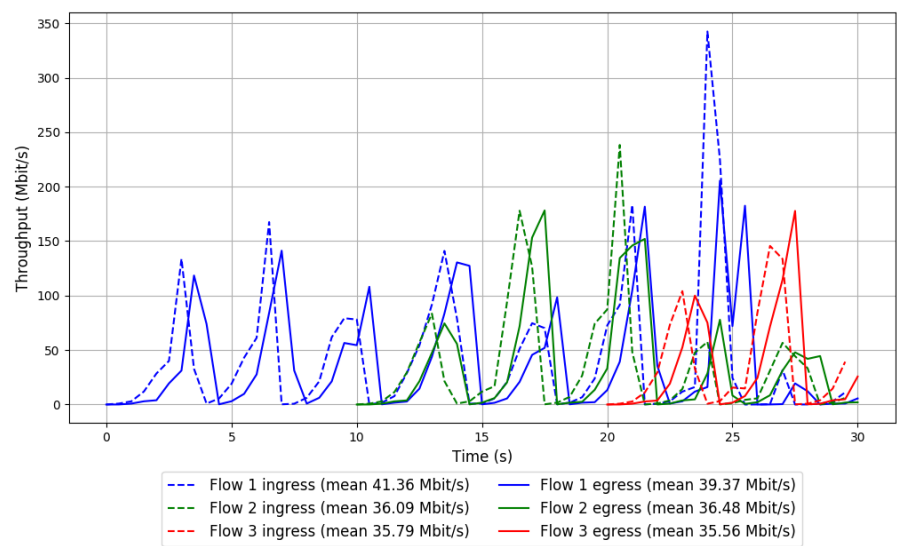


Run 3: Statistics of Verus

Start at: 2019-03-19 10:43:54  
End at: 2019-03-19 10:44:24  
Local clock offset: -0.148 ms  
Remote clock offset: -1.196 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 74.94 Mbit/s  
95th percentile per-packet one-way delay: 261.084 ms  
Loss rate: 3.63%  
-- Flow 1:  
Average throughput: 39.37 Mbit/s  
95th percentile per-packet one-way delay: 313.122 ms  
Loss rate: 5.67%  
-- Flow 2:  
Average throughput: 36.48 Mbit/s  
95th percentile per-packet one-way delay: 195.558 ms  
Loss rate: 0.28%  
-- Flow 3:  
Average throughput: 35.56 Mbit/s  
95th percentile per-packet one-way delay: 143.554 ms  
Loss rate: 3.28%

Run 3: Report of Verus — Data Link

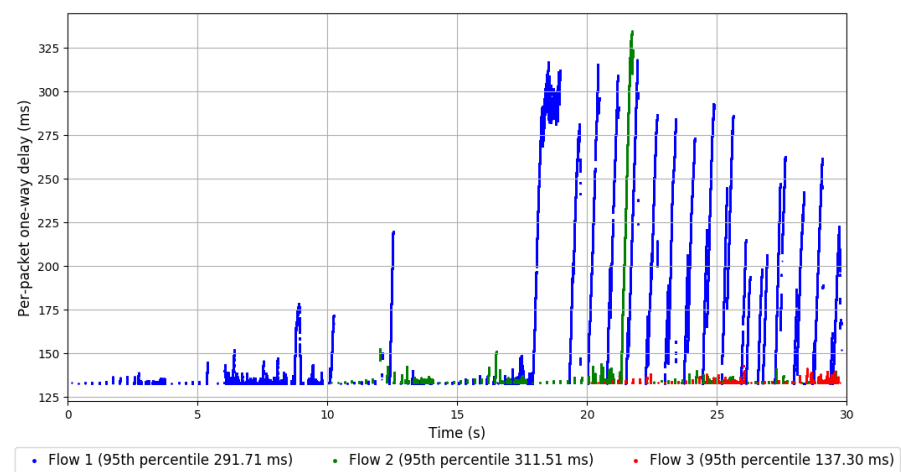
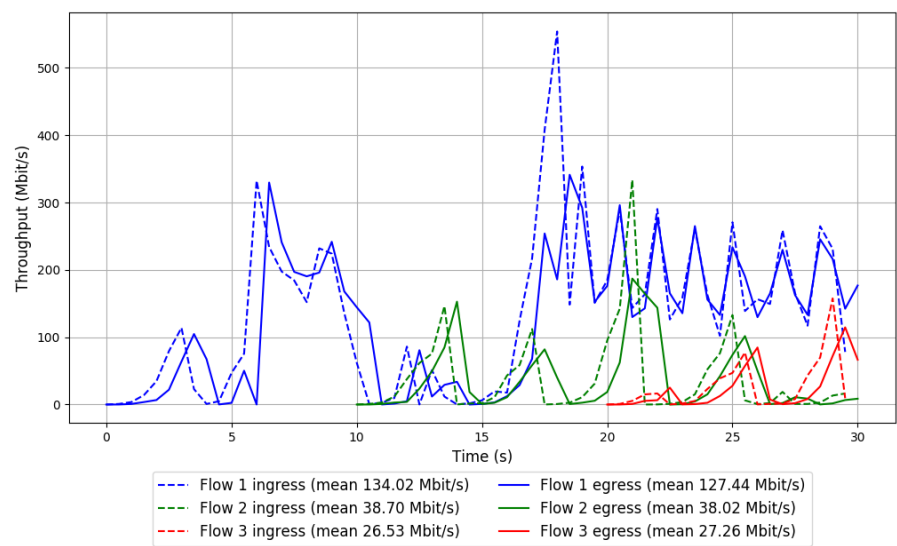


Run 4: Statistics of Verus

Start at: 2019-03-19 11:24:43  
End at: 2019-03-19 11:25:13  
Local clock offset: -0.337 ms  
Remote clock offset: -1.028 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 161.19 Mbit/s  
95th percentile per-packet one-way delay: 291.615 ms  
Loss rate: 5.17%  
-- Flow 1:  
Average throughput: 127.44 Mbit/s  
95th percentile per-packet one-way delay: 291.708 ms  
Loss rate: 5.90%  
-- Flow 2:  
Average throughput: 38.02 Mbit/s  
95th percentile per-packet one-way delay: 311.512 ms  
Loss rate: 3.11%  
-- Flow 3:  
Average throughput: 27.26 Mbit/s  
95th percentile per-packet one-way delay: 137.300 ms  
Loss rate: 0.01%

Run 4: Report of Verus — Data Link

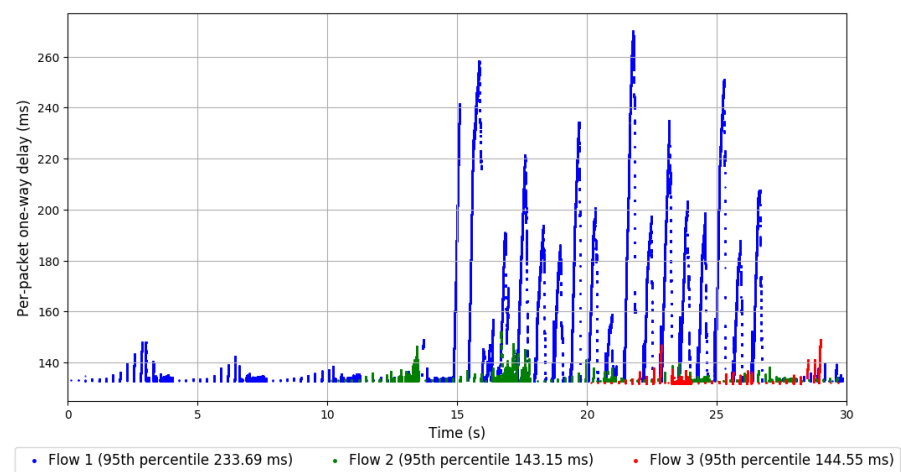
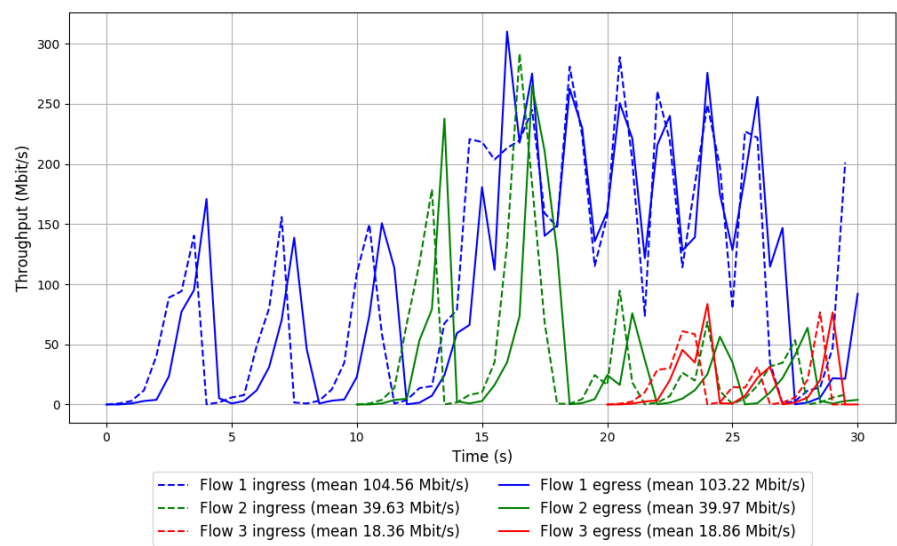


Run 5: Statistics of Verus

Start at: 2019-03-19 12:05:52  
End at: 2019-03-19 12:06:22  
Local clock offset: -0.078 ms  
Remote clock offset: -0.337 ms

# Below is generated by plot.py at 2019-03-19 14:42:23  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 135.49 Mbit/s  
95th percentile per-packet one-way delay: 229.051 ms  
Loss rate: 1.75%  
-- Flow 1:  
Average throughput: 103.22 Mbit/s  
95th percentile per-packet one-way delay: 233.686 ms  
Loss rate: 2.16%  
-- Flow 2:  
Average throughput: 39.97 Mbit/s  
95th percentile per-packet one-way delay: 143.149 ms  
Loss rate: 0.52%  
-- Flow 3:  
Average throughput: 18.86 Mbit/s  
95th percentile per-packet one-way delay: 144.549 ms  
Loss rate: 0.04%

Run 5: Report of Verus — Data Link

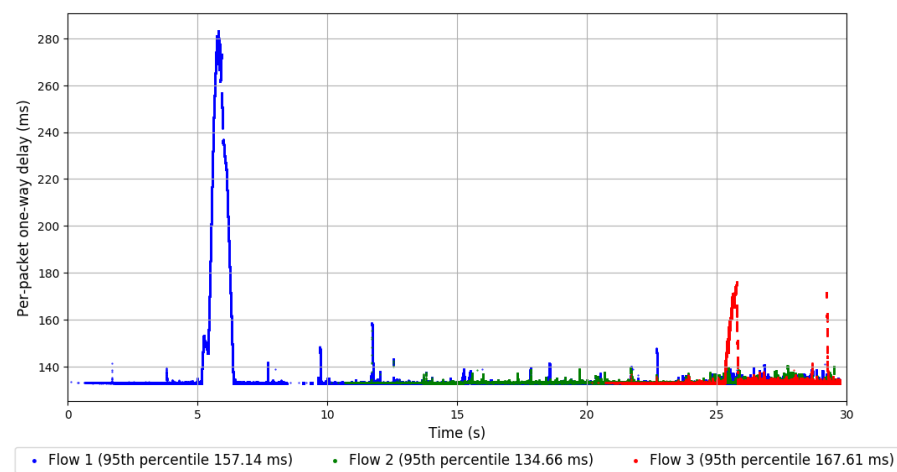
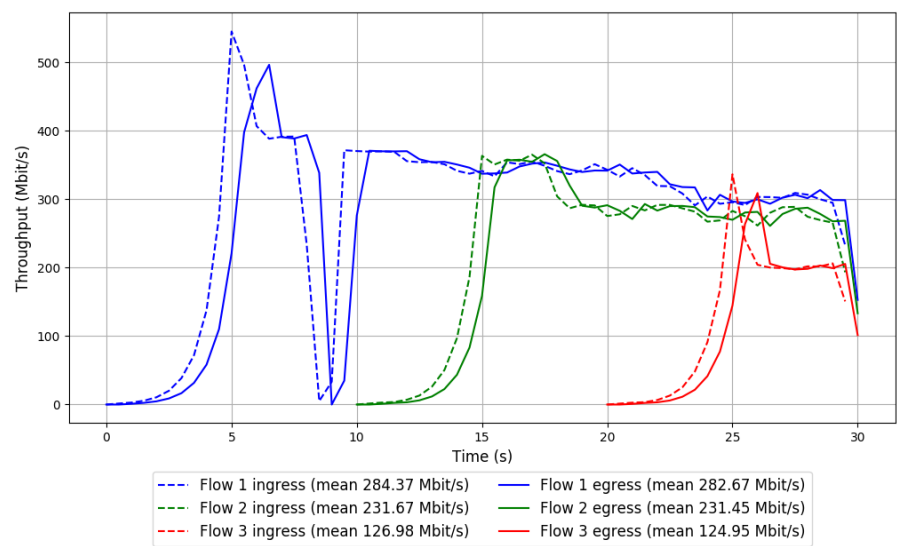


Run 1: Statistics of PCC-Vivace

Start at: 2019-03-19 08:52:45  
End at: 2019-03-19 08:53:15  
Local clock offset: -0.036 ms  
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-03-19 14:43:32  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 476.30 Mbit/s  
95th percentile per-packet one-way delay: 146.361 ms  
Loss rate: 1.71%  
-- Flow 1:  
Average throughput: 282.67 Mbit/s  
95th percentile per-packet one-way delay: 157.140 ms  
Loss rate: 1.48%  
-- Flow 2:  
Average throughput: 231.45 Mbit/s  
95th percentile per-packet one-way delay: 134.656 ms  
Loss rate: 1.44%  
-- Flow 3:  
Average throughput: 124.95 Mbit/s  
95th percentile per-packet one-way delay: 167.609 ms  
Loss rate: 4.24%

Run 1: Report of PCC-Vivace — Data Link



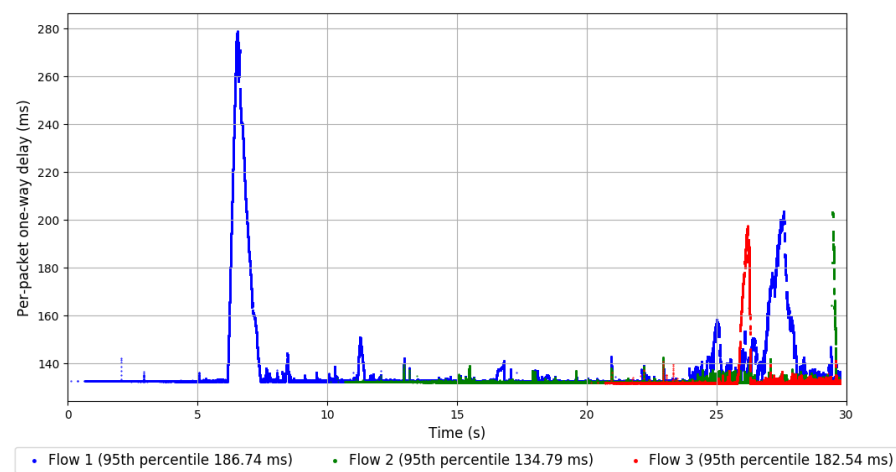
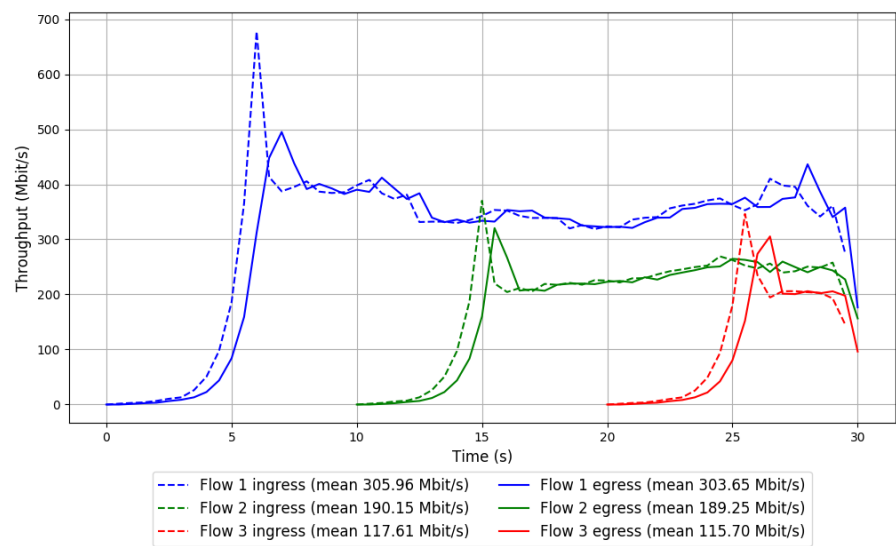


Run 2: Statistics of PCC-Vivace

Start at: 2019-03-19 09:34:13  
End at: 2019-03-19 09:34:43  
Local clock offset: -0.09 ms  
Remote clock offset: -5.337 ms

# Below is generated by plot.py at 2019-03-19 14:43:37  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 466.42 Mbit/s  
95th percentile per-packet one-way delay: 174.776 ms  
Loss rate: 1.90%  
-- Flow 1:  
Average throughput: 303.65 Mbit/s  
95th percentile per-packet one-way delay: 186.736 ms  
Loss rate: 1.64%  
-- Flow 2:  
Average throughput: 189.25 Mbit/s  
95th percentile per-packet one-way delay: 134.793 ms  
Loss rate: 1.80%  
-- Flow 3:  
Average throughput: 115.70 Mbit/s  
95th percentile per-packet one-way delay: 182.539 ms  
Loss rate: 4.26%

Run 2: Report of PCC-Vivace — Data Link



Run 3: Statistics of PCC-Vivace

Start at: 2019-03-19 10:15:59

End at: 2019-03-19 10:16:29

Local clock offset: 0.181 ms

Remote clock offset: -5.14 ms

# Below is generated by plot.py at 2019-03-19 14:43:37

# Datalink statistics

-- Total of 3 flows:

Average throughput: 394.32 Mbit/s

95th percentile per-packet one-way delay: 139.388 ms

Loss rate: 1.65%

-- Flow 1:

Average throughput: 240.10 Mbit/s

95th percentile per-packet one-way delay: 142.133 ms

Loss rate: 1.10%

-- Flow 2:

Average throughput: 176.67 Mbit/s

95th percentile per-packet one-way delay: 133.862 ms

Loss rate: 1.76%

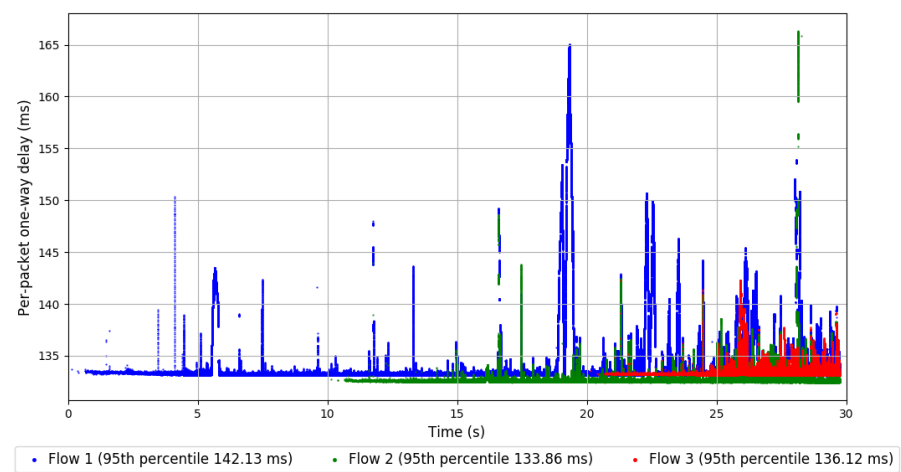
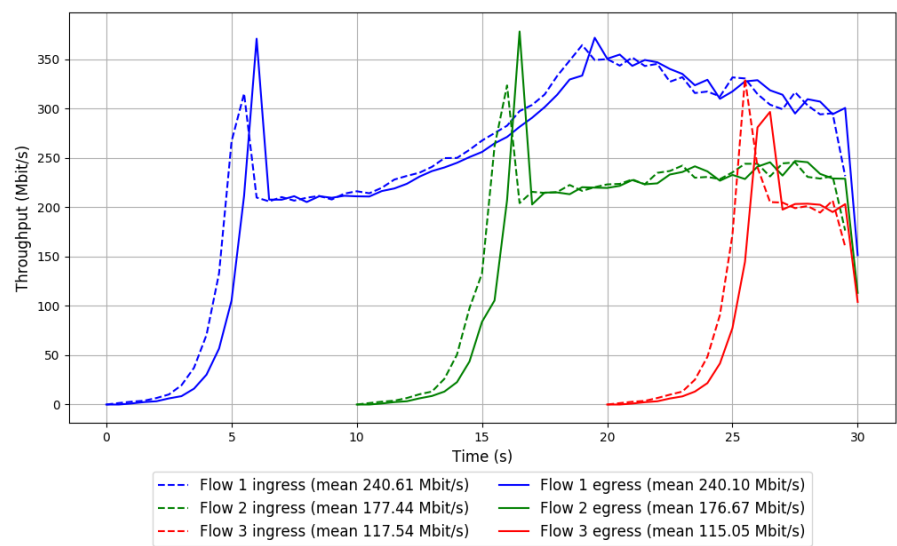
-- Flow 3:

Average throughput: 115.05 Mbit/s

95th percentile per-packet one-way delay: 136.115 ms

Loss rate: 4.76%

Run 3: Report of PCC-Vivace — Data Link

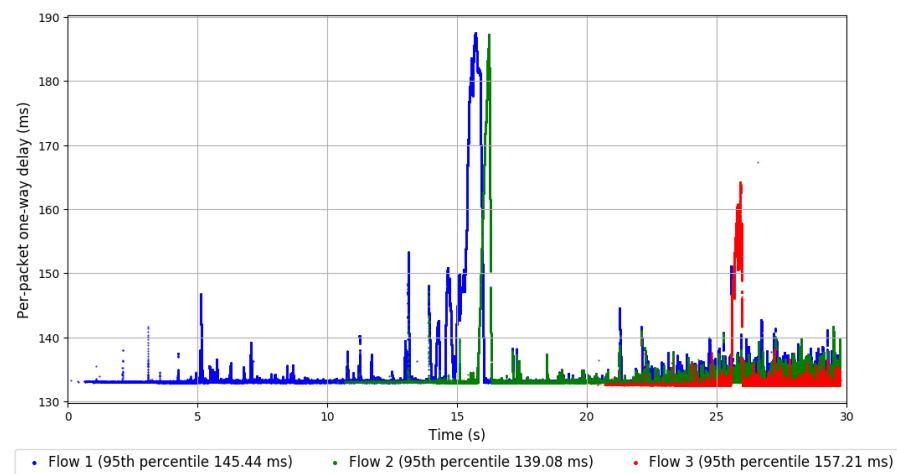
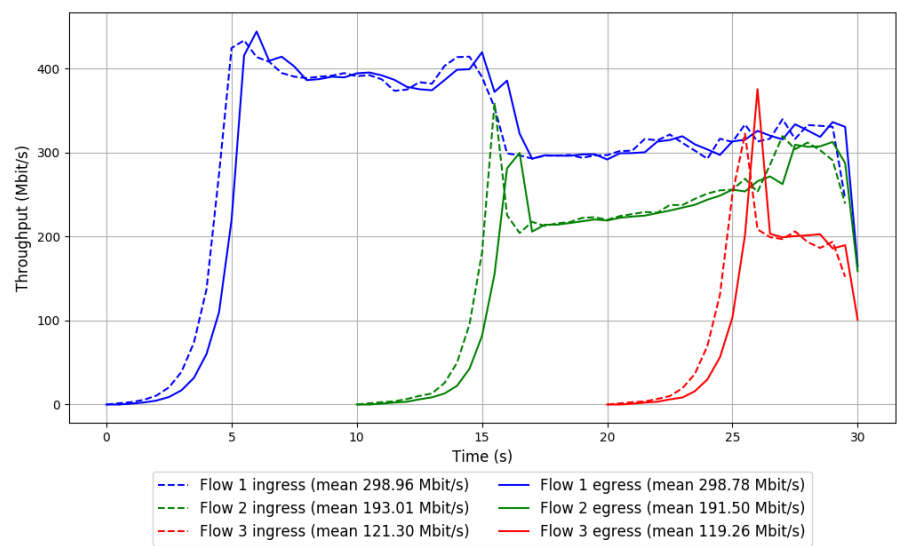


Run 4: Statistics of PCC-Vivace

Start at: 2019-03-19 10:58:14  
End at: 2019-03-19 10:58:44  
Local clock offset: 0.032 ms  
Remote clock offset: -0.876 ms

# Below is generated by plot.py at 2019-03-19 14:43:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 464.17 Mbit/s  
95th percentile per-packet one-way delay: 147.060 ms  
Loss rate: 1.56%  
-- Flow 1:  
Average throughput: 298.78 Mbit/s  
95th percentile per-packet one-way delay: 145.442 ms  
Loss rate: 0.95%  
-- Flow 2:  
Average throughput: 191.50 Mbit/s  
95th percentile per-packet one-way delay: 139.076 ms  
Loss rate: 2.11%  
-- Flow 3:  
Average throughput: 119.26 Mbit/s  
95th percentile per-packet one-way delay: 157.210 ms  
Loss rate: 4.32%

Run 4: Report of PCC-Vivace — Data Link

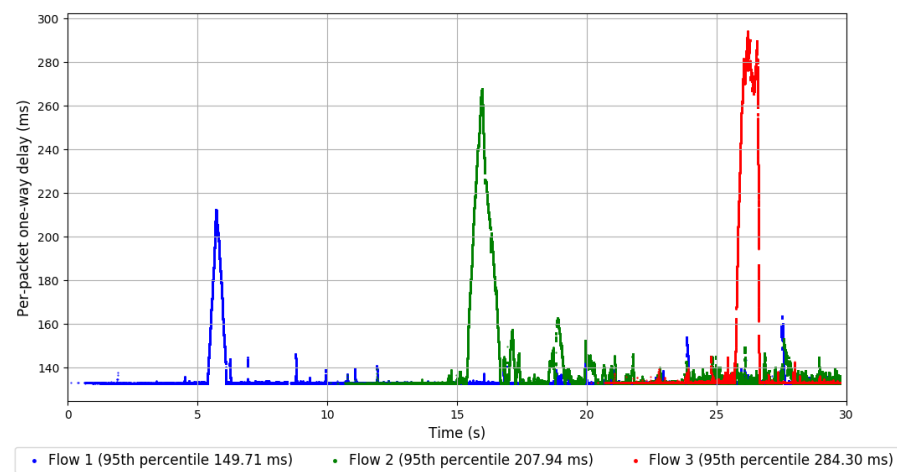
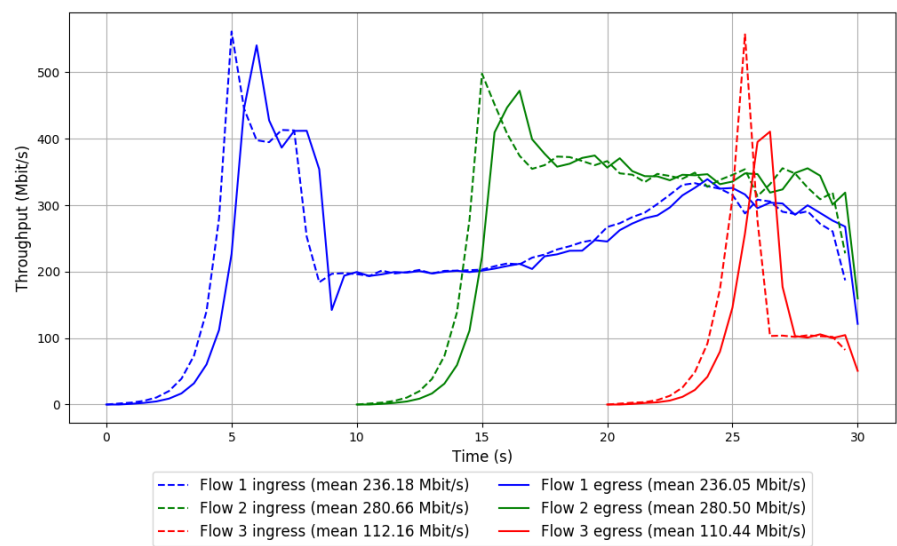


Run 5: Statistics of PCC-Vivace

Start at: 2019-03-19 11:39:39  
End at: 2019-03-19 11:40:09  
Local clock offset: -0.324 ms  
Remote clock offset: -0.325 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 457.52 Mbit/s  
95th percentile per-packet one-way delay: 201.577 ms  
Loss rate: 1.38%  
-- Flow 1:  
Average throughput: 236.05 Mbit/s  
95th percentile per-packet one-way delay: 149.708 ms  
Loss rate: 0.94%  
-- Flow 2:  
Average throughput: 280.50 Mbit/s  
95th percentile per-packet one-way delay: 207.943 ms  
Loss rate: 1.40%  
-- Flow 3:  
Average throughput: 110.44 Mbit/s  
95th percentile per-packet one-way delay: 284.295 ms  
Loss rate: 4.19%

Run 5: Report of PCC-Vivace — Data Link



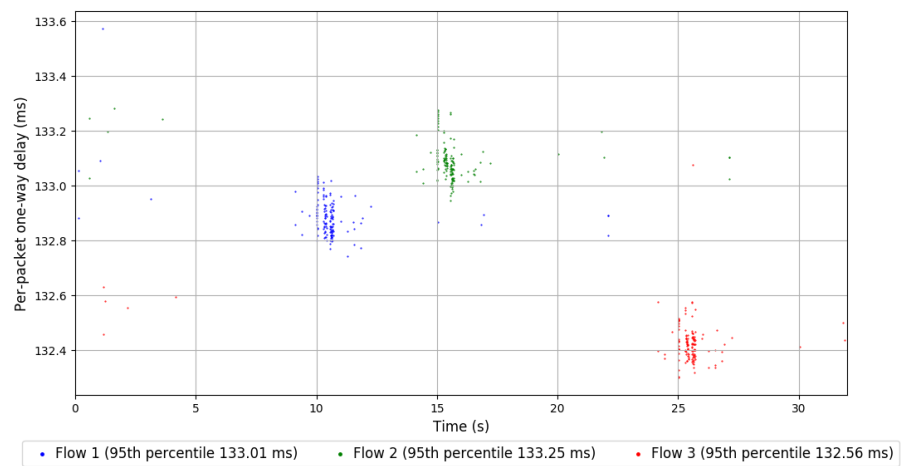
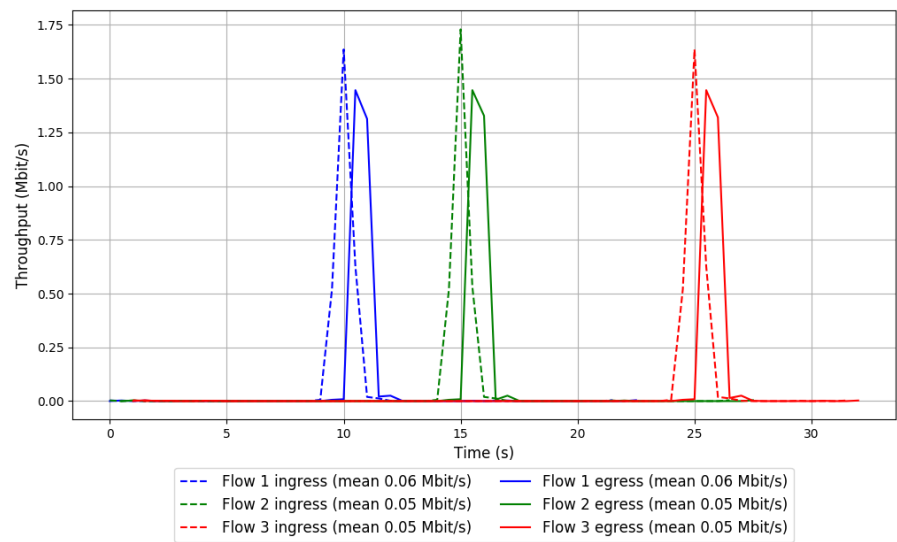


Run 1: Statistics of WebRTC media

Start at: 2019-03-19 09:17:52  
End at: 2019-03-19 09:18:22  
Local clock offset: -0.034 ms  
Remote clock offset: -0.799 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.156 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.06 Mbit/s  
95th percentile per-packet one-way delay: 133.011 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.246 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.555 ms  
Loss rate: 0.00%

Run 1: Report of WebRTC media — Data Link

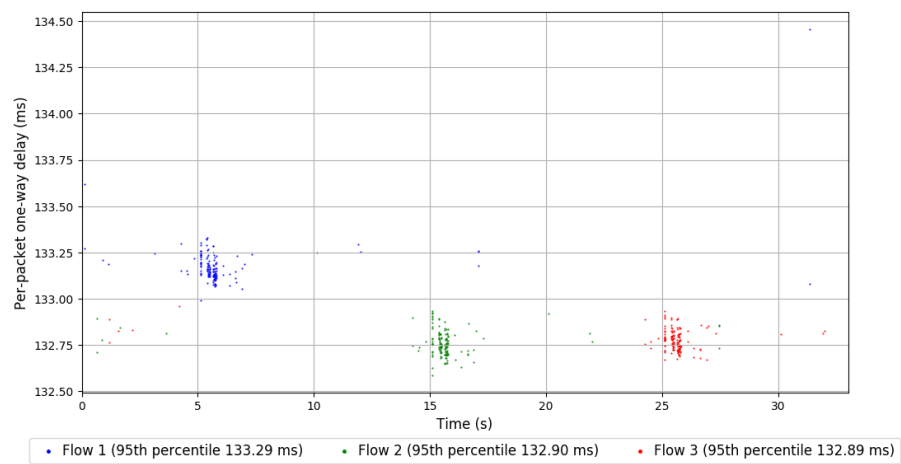
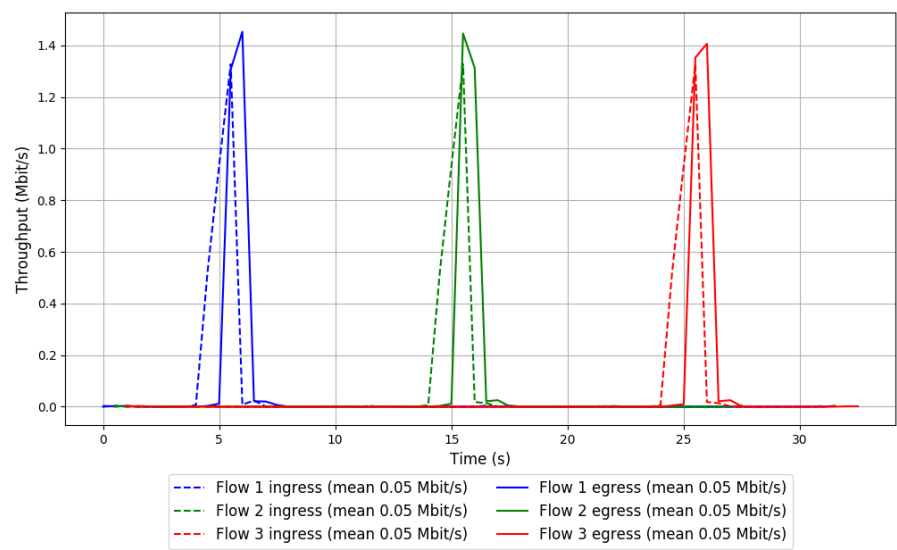


Run 2: Statistics of WebRTC media

Start at: 2019-03-19 09:59:46  
End at: 2019-03-19 10:00:16  
Local clock offset: 0.198 ms  
Remote clock offset: -3.967 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.248 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.289 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.895 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.890 ms  
Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

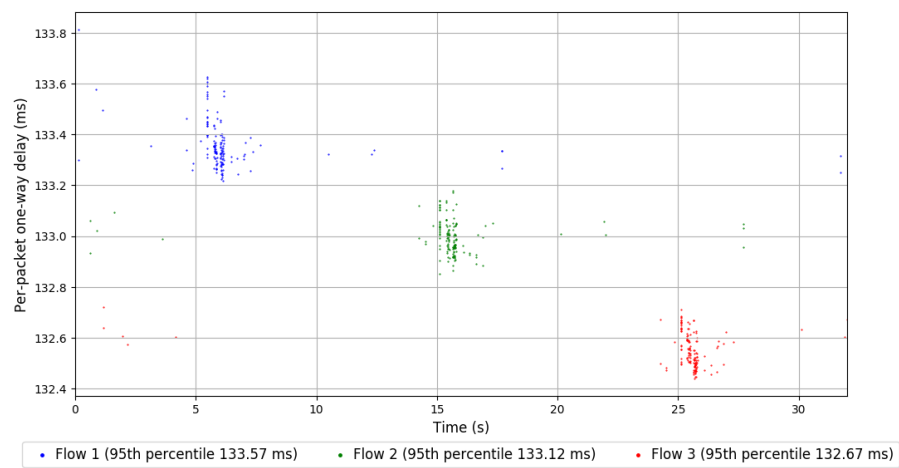
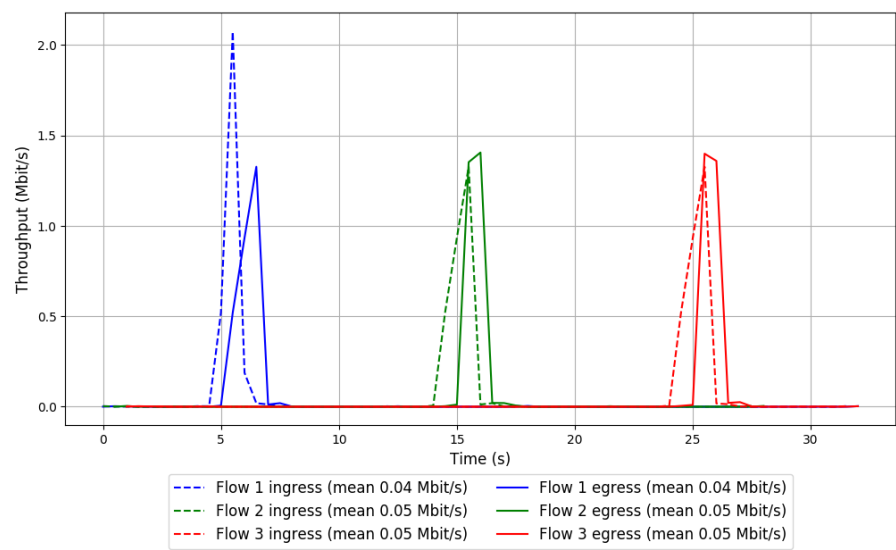


Run 3: Statistics of WebRTC media

Start at: 2019-03-19 10:42:36  
End at: 2019-03-19 10:43:06  
Local clock offset: -0.115 ms  
Remote clock offset: -1.222 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.450 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.04 Mbit/s  
95th percentile per-packet one-way delay: 133.567 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.124 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.670 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link

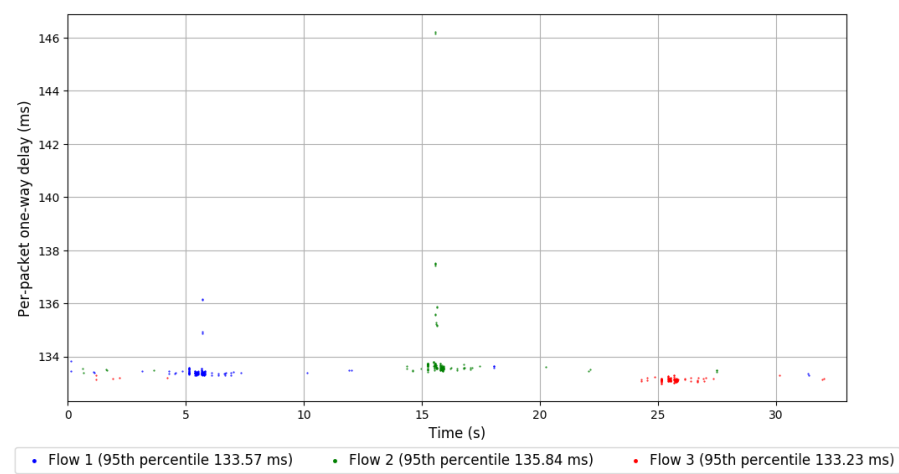
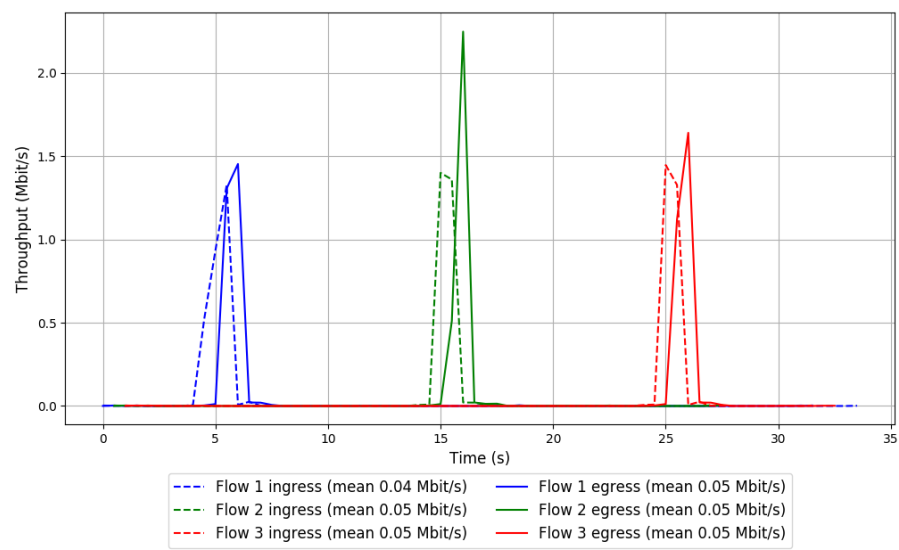


Run 4: Statistics of WebRTC media

Start at: 2019-03-19 11:23:26  
End at: 2019-03-19 11:23:56  
Local clock offset: -0.008 ms  
Remote clock offset: -0.595 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.740 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.568 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 135.845 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.230 ms  
Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-03-19 12:04:34  
End at: 2019-03-19 12:05:04  
Local clock offset: 0.02 ms  
Remote clock offset: -0.336 ms

# Below is generated by plot.py at 2019-03-19 14:43:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.117 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.276 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.158 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 132.648 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

