

## Pantheon Report

Generated at 2019-01-25 11:24:49 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

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

### System info:

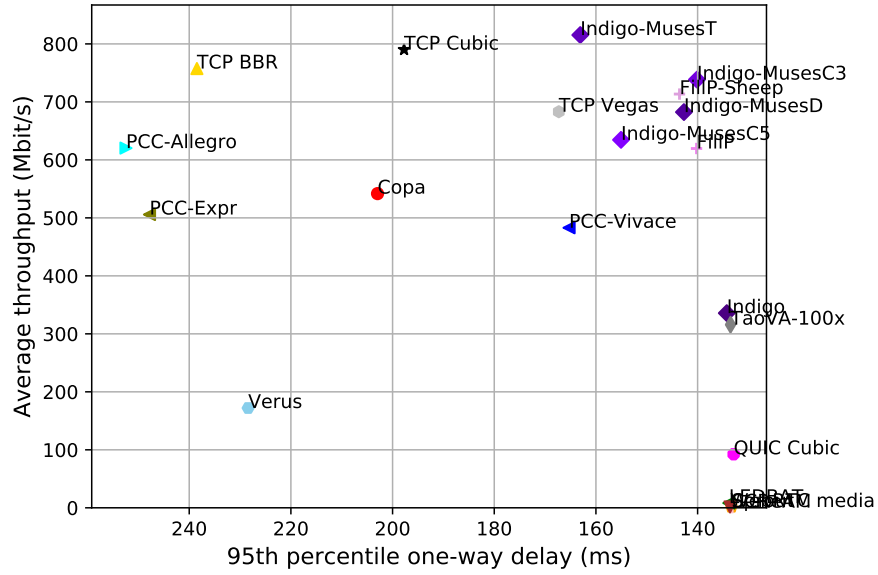
```
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

### Git summary:

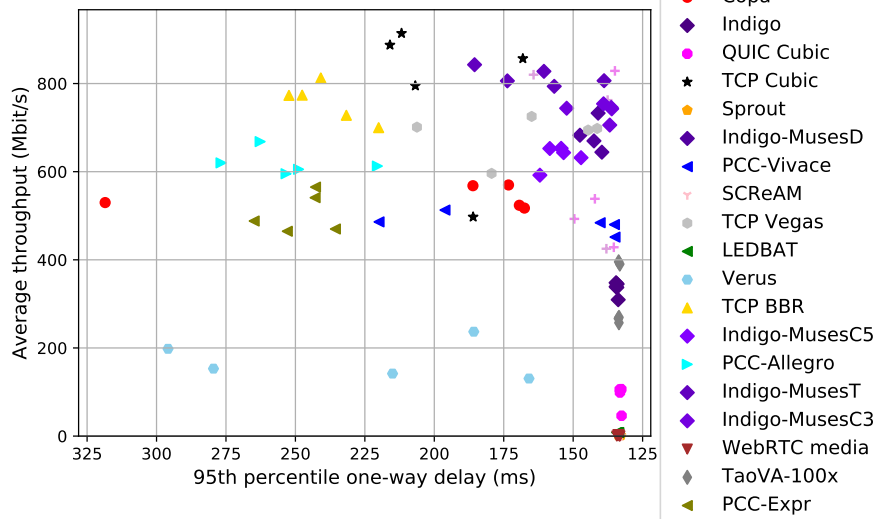
```
branch: muses @ 0b8e9a949603c3842368430acf469eec3b941f9f
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdf58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecd90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ d9c5ea33091330aca25ecd105ab2db6d34d5c40d
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
M receiver/src/buffer.h
M receiver/src/core.cpp
M sender/src/buffer.h
M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quick @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
M src/ScreamClient
M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
M src/examples/cellsim.cc
M src/examples/sproutbt2.cc
M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
M src/verus.hpp
M tools/plot.py
```

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

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



test from GCE Sydney to GCE London, 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	413.39	367.48	299.18	240.48	223.13	205.21	0.64	0.96	1.27
Copa	5	288.76	268.57	223.19	172.84	168.35	211.24	0.03	0.11	0.72
TCP Cubic	5	426.90	414.10	262.94	213.49	160.22	160.04	0.42	0.02	0.46
FillP	5	318.60	333.16	239.95	145.33	135.22	135.31	0.00	0.00	0.00
FillP-Sheep	5	420.22	323.44	235.56	148.42	137.78	136.70	0.09	0.00	0.00
Indigo	5	179.57	165.25	145.41	133.97	134.29	136.63	0.00	0.00	0.00
Indigo-MusesC3	5	435.23	364.65	272.39	142.86	136.08	135.61	0.05	0.09	0.38
Indigo-MusesC5	5	391.89	327.71	110.95	155.15	156.92	133.76	0.00	0.09	0.00
Indigo-MusesD	4	441.23	354.27	63.72	143.93	141.56	133.33	0.12	0.00	0.00
Indigo-MusesT	5	495.97	402.60	226.94	168.66	149.03	137.05	0.07	0.01	0.02
LEDBAT	5	5.28	3.49	1.69	133.90	133.78	133.64	0.00	0.00	0.00
PCC-Allegro	5	343.54	295.62	244.65	243.87	237.65	245.56	3.03	2.61	2.50
PCC-Expr	5	287.50	238.66	180.16	249.10	202.35	207.62	3.77	1.84	1.82
QUIC Cubic	5	42.98	51.12	48.24	132.81	132.66	132.86	0.00	0.00	0.00
SCReAM	5	0.14	0.16	0.16	132.69	133.15	133.06	0.00	0.00	0.00
Sprout	5	0.64	0.67	0.65	133.22	133.25	133.27	0.00	0.00	0.00
TaoVA-100x	5	198.05	85.31	183.55	133.30	133.06	133.59	0.02	0.00	0.00
TCP Vegas	5	394.08	300.83	266.49	157.98	159.38	200.96	0.02	0.08	1.65
Verus	5	85.13	99.95	65.54	202.87	187.64	192.31	1.74	0.44	1.05
PCC-Vivace	5	305.89	196.11	141.32	175.49	136.02	181.35	0.22	0.00	0.37
WebRTC media	5	0.80	0.48	0.11	133.62	133.45	133.50	0.00	0.04	0.00



Run 1: Statistics of TCP BBR

Start at: 2019-01-25 05:45:09

End at: 2019-01-25 05:45:39

Local clock offset: -0.24 ms

Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-01-25 09:10:31

# Datalink statistics

-- Total of 3 flows:

Average throughput: 699.92 Mbit/s

95th percentile per-packet one-way delay: 220.039 ms

Loss rate: 0.54%

-- Flow 1:

Average throughput: 407.92 Mbit/s

95th percentile per-packet one-way delay: 221.520 ms

Loss rate: 0.51%

-- Flow 2:

Average throughput: 317.98 Mbit/s

95th percentile per-packet one-way delay: 225.563 ms

Loss rate: 0.79%

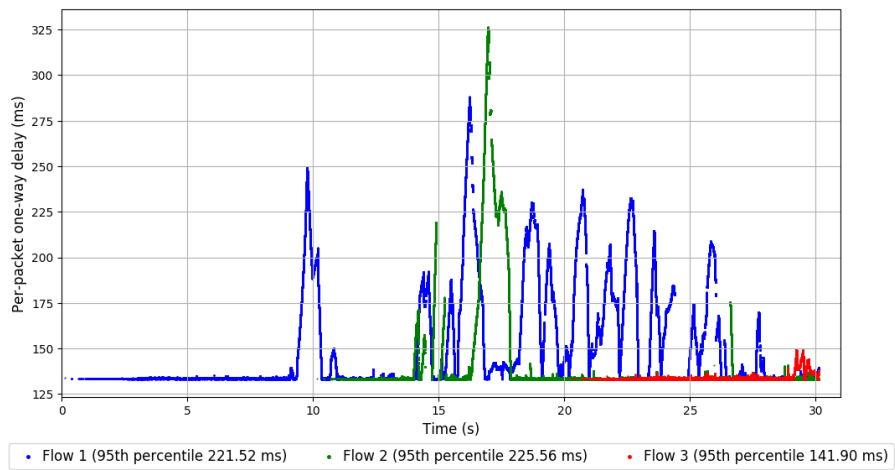
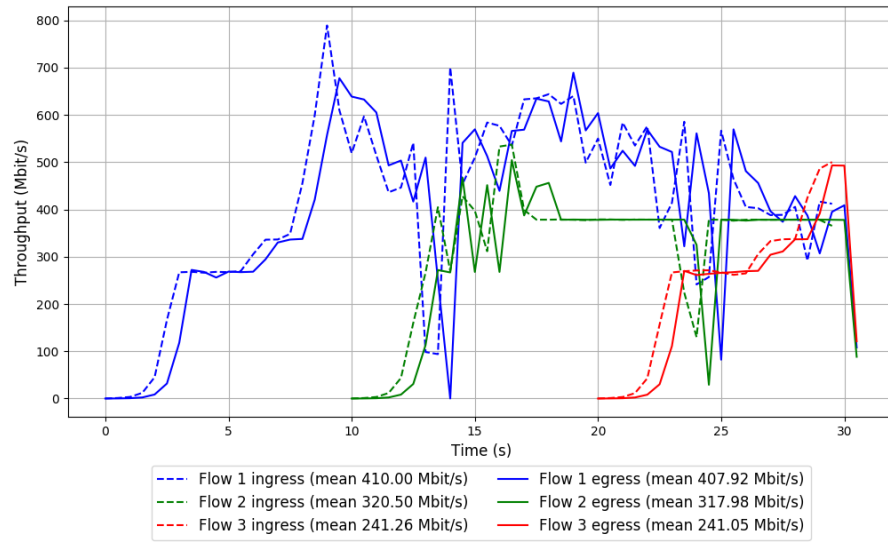
-- Flow 3:

Average throughput: 241.05 Mbit/s

95th percentile per-packet one-way delay: 141.898 ms

Loss rate: 0.07%

# Run 1: Report of TCP BBR — Data Link

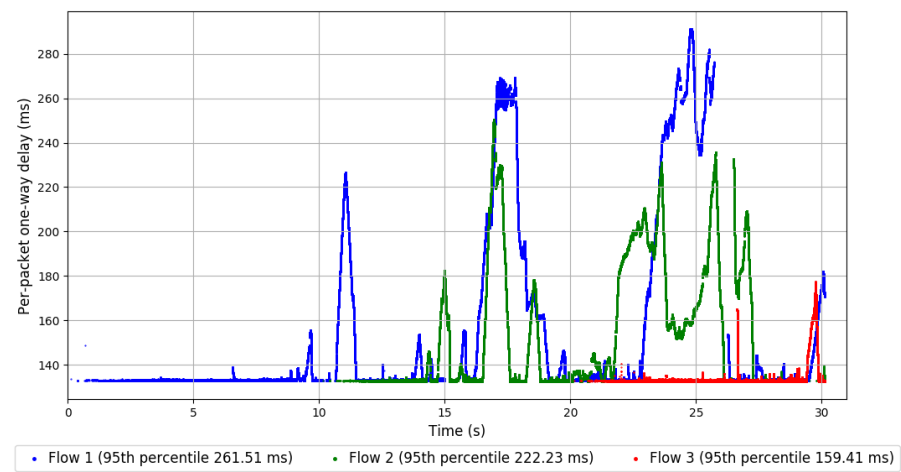
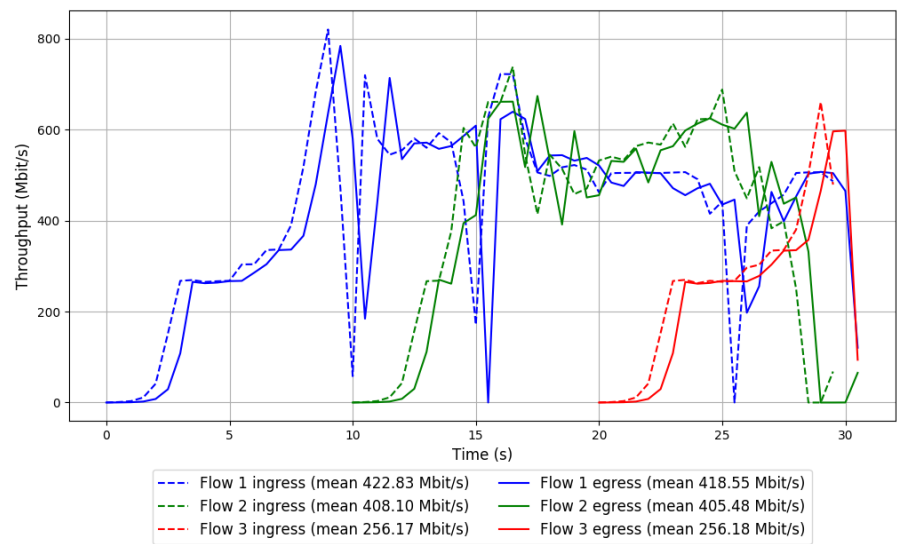


Run 2: Statistics of TCP BBR

Start at: 2019-01-25 06:27:14  
End at: 2019-01-25 06:27:44  
Local clock offset: 0.075 ms  
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-01-25 09:12:59  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 773.72 Mbit/s  
95th percentile per-packet one-way delay: 247.555 ms  
Loss rate: 0.77%  
-- Flow 1:  
Average throughput: 418.55 Mbit/s  
95th percentile per-packet one-way delay: 261.510 ms  
Loss rate: 1.01%  
-- Flow 2:  
Average throughput: 405.48 Mbit/s  
95th percentile per-packet one-way delay: 222.234 ms  
Loss rate: 0.64%  
-- Flow 3:  
Average throughput: 256.18 Mbit/s  
95th percentile per-packet one-way delay: 159.412 ms  
Loss rate: 0.00%

Run 2: Report of TCP BBR — Data Link

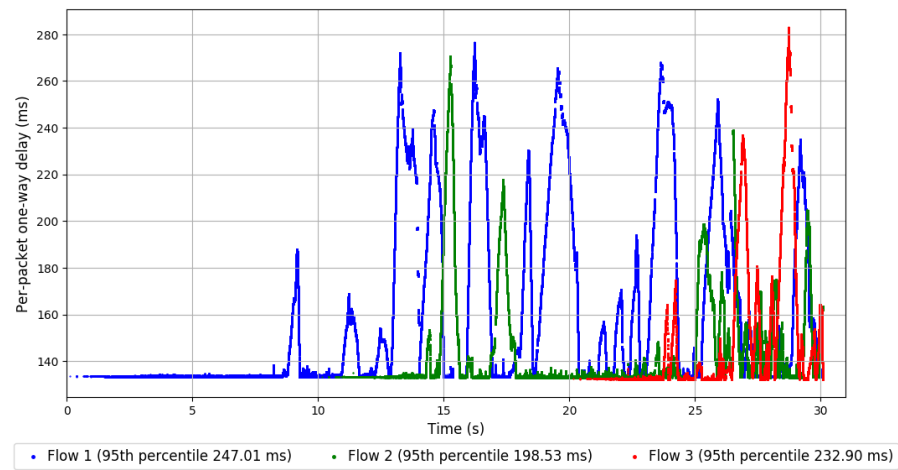
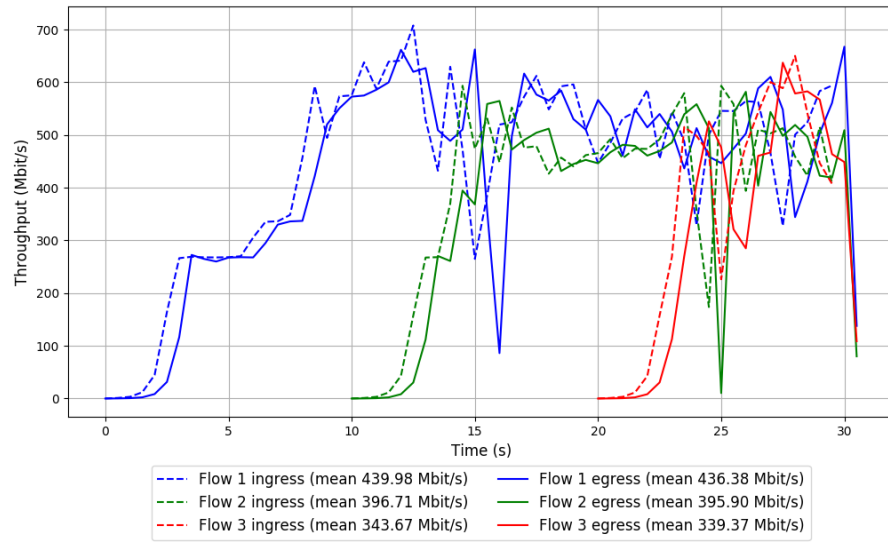


Run 3: Statistics of TCP BBR

Start at: 2019-01-25 07:09:42  
End at: 2019-01-25 07:10:12  
Local clock offset: -0.315 ms  
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-01-25 09:13:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 812.72 Mbit/s  
95th percentile per-packet one-way delay: 240.856 ms  
Loss rate: 0.68%  
-- Flow 1:  
Average throughput: 436.38 Mbit/s  
95th percentile per-packet one-way delay: 247.009 ms  
Loss rate: 0.82%  
-- Flow 2:  
Average throughput: 395.90 Mbit/s  
95th percentile per-packet one-way delay: 198.528 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 339.37 Mbit/s  
95th percentile per-packet one-way delay: 232.896 ms  
Loss rate: 1.25%

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

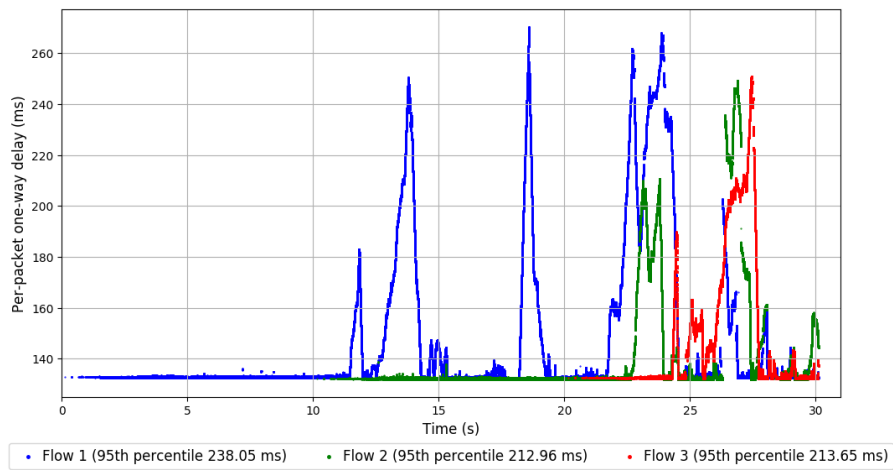
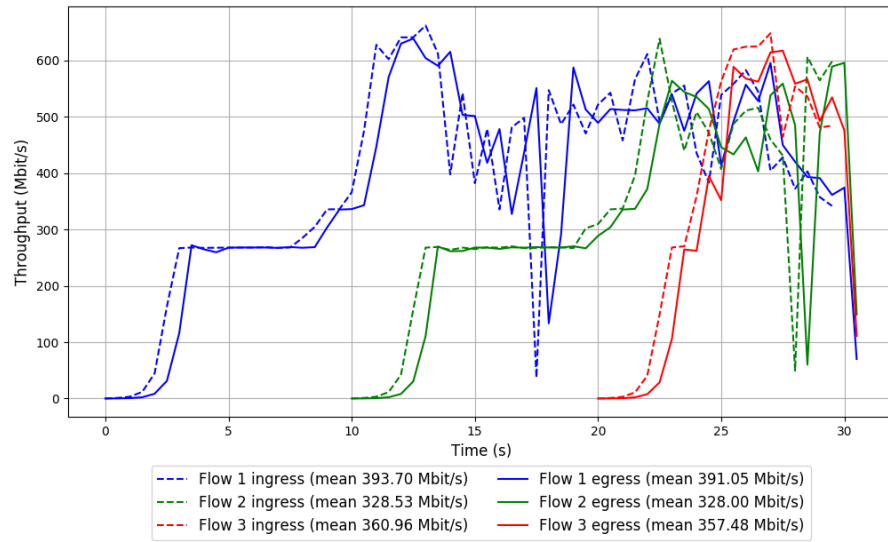


Run 4: Statistics of TCP BBR

Start at: 2019-01-25 07:51:19  
End at: 2019-01-25 07:51:49  
Local clock offset: 0.189 ms  
Remote clock offset: -0.177 ms

# Below is generated by plot.py at 2019-01-25 09:13:40  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 728.00 Mbit/s  
95th percentile per-packet one-way delay: 231.659 ms  
Loss rate: 0.57%  
-- Flow 1:  
Average throughput: 391.05 Mbit/s  
95th percentile per-packet one-way delay: 238.052 ms  
Loss rate: 0.67%  
-- Flow 2:  
Average throughput: 328.00 Mbit/s  
95th percentile per-packet one-way delay: 212.957 ms  
Loss rate: 0.16%  
-- Flow 3:  
Average throughput: 357.48 Mbit/s  
95th percentile per-packet one-way delay: 213.651 ms  
Loss rate: 0.96%

# Run 4: Report of TCP BBR — Data Link





Run 5: Statistics of TCP BBR

Start at: 2019-01-25 08:32:18

End at: 2019-01-25 08:32:48

Local clock offset: 0.164 ms

Remote clock offset: 0.057 ms

# Below is generated by plot.py at 2019-01-25 09:13:40

# Datalink statistics

-- Total of 3 flows:

Average throughput: 773.16 Mbit/s

95th percentile per-packet one-way delay: 252.325 ms

Loss rate: 1.67%

-- Flow 1:

Average throughput: 413.06 Mbit/s

95th percentile per-packet one-way delay: 234.310 ms

Loss rate: 0.21%

-- Flow 2:

Average throughput: 390.06 Mbit/s

95th percentile per-packet one-way delay: 256.381 ms

Loss rate: 2.99%

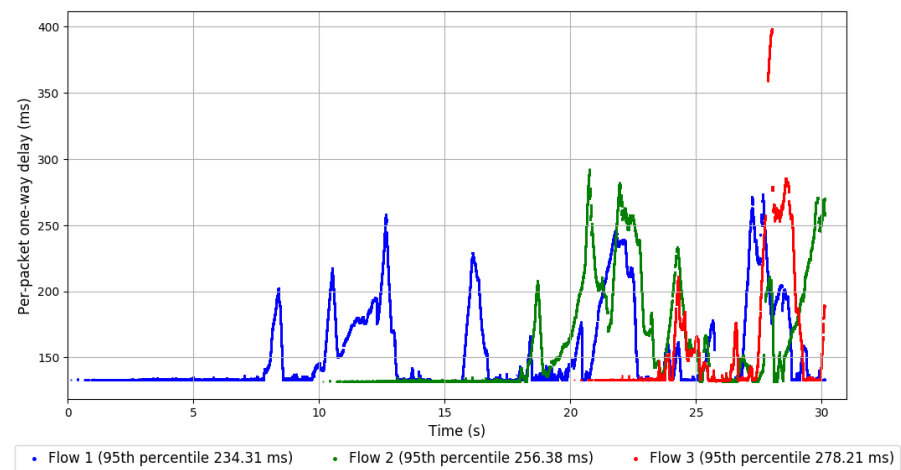
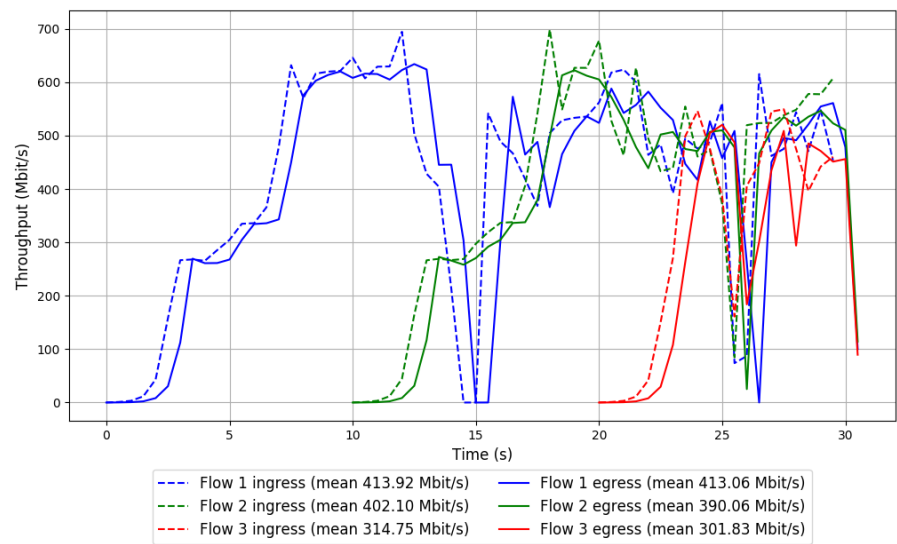
-- Flow 3:

Average throughput: 301.83 Mbit/s

95th percentile per-packet one-way delay: 278.214 ms

Loss rate: 4.09%

Run 5: Report of TCP BBR — Data Link

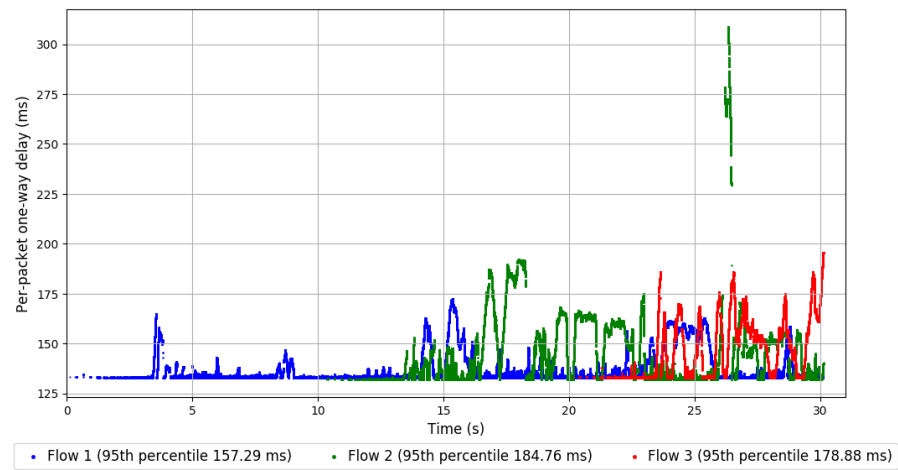
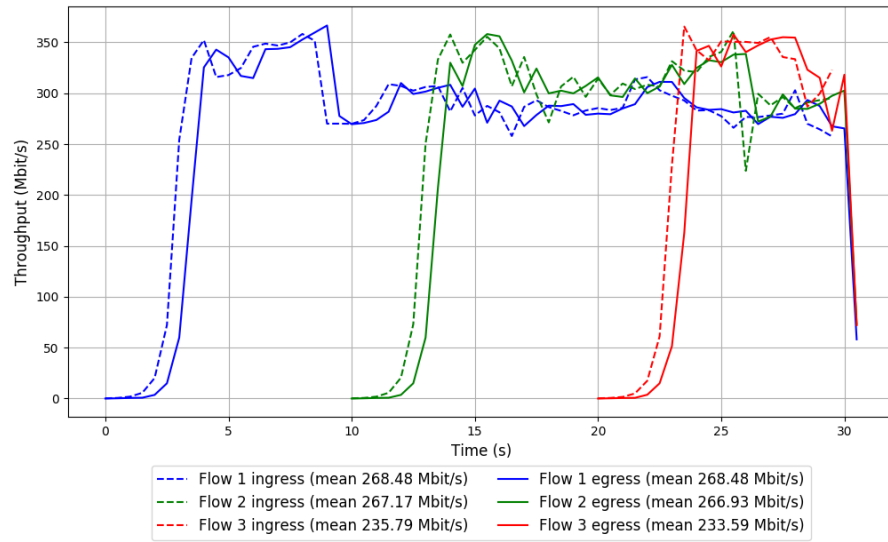


Run 1: Statistics of Copa

Start at: 2019-01-25 05:51:17  
End at: 2019-01-25 05:51:47  
Local clock offset: -0.116 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-01-25 09:16:43  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 523.77 Mbit/s  
95th percentile per-packet one-way delay: 169.373 ms  
Loss rate: 0.16%  
-- Flow 1:  
Average throughput: 268.48 Mbit/s  
95th percentile per-packet one-way delay: 157.295 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 266.93 Mbit/s  
95th percentile per-packet one-way delay: 184.765 ms  
Loss rate: 0.08%  
-- Flow 3:  
Average throughput: 233.59 Mbit/s  
95th percentile per-packet one-way delay: 178.877 ms  
Loss rate: 0.91%

# Run 1: Report of Copa — Data Link

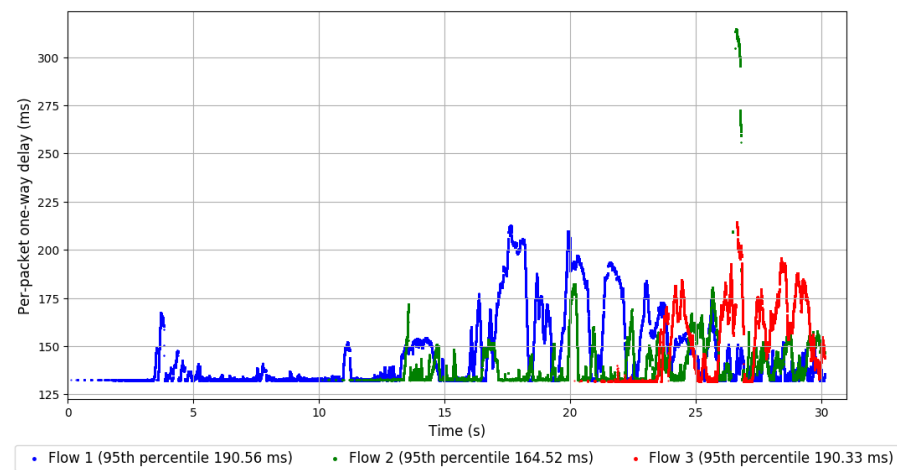
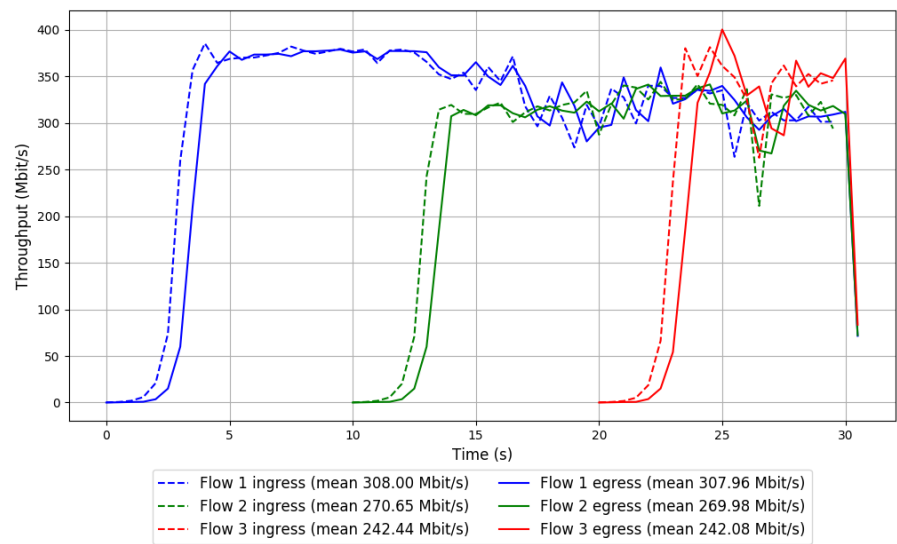


Run 2: Statistics of Copa

Start at: 2019-01-25 06:33:20  
End at: 2019-01-25 06:33:50  
Local clock offset: 0.409 ms  
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-01-25 09:17:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 568.18 Mbit/s  
95th percentile per-packet one-way delay: 186.087 ms  
Loss rate: 0.10%  
-- Flow 1:  
Average throughput: 307.96 Mbit/s  
95th percentile per-packet one-way delay: 190.557 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 269.98 Mbit/s  
95th percentile per-packet one-way delay: 164.517 ms  
Loss rate: 0.24%  
-- Flow 3:  
Average throughput: 242.08 Mbit/s  
95th percentile per-packet one-way delay: 190.329 ms  
Loss rate: 0.13%

Run 2: Report of Copa — Data Link

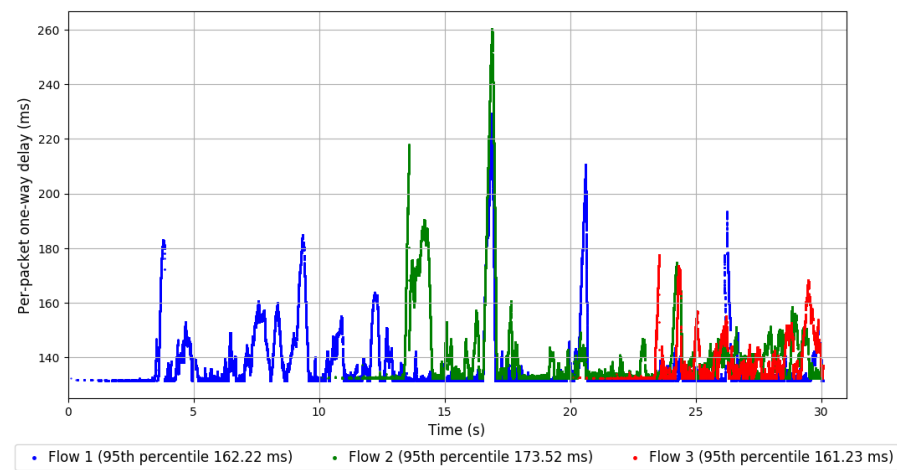
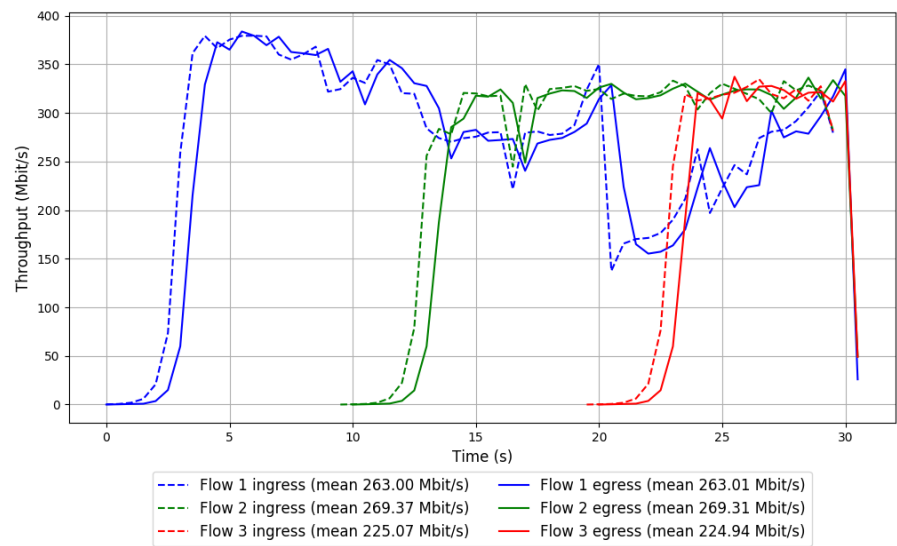


Run 3: Statistics of Copa

Start at: 2019-01-25 07:16:02  
End at: 2019-01-25 07:16:32  
Local clock offset: 0.217 ms  
Remote clock offset: -0.435 ms

# Below is generated by plot.py at 2019-01-25 09:17:57  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 517.41 Mbit/s  
95th percentile per-packet one-way delay: 167.550 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 263.01 Mbit/s  
95th percentile per-packet one-way delay: 162.218 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 269.31 Mbit/s  
95th percentile per-packet one-way delay: 173.524 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 224.94 Mbit/s  
95th percentile per-packet one-way delay: 161.232 ms  
Loss rate: 0.04%

Run 3: Report of Copa — Data Link



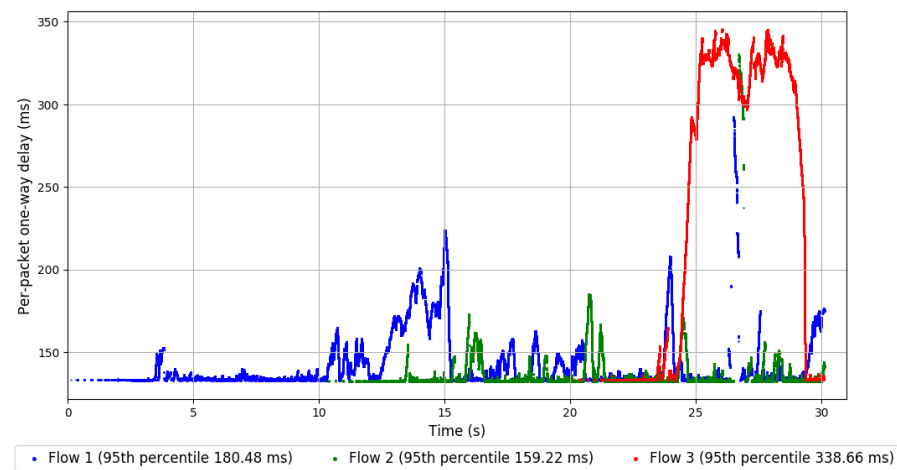
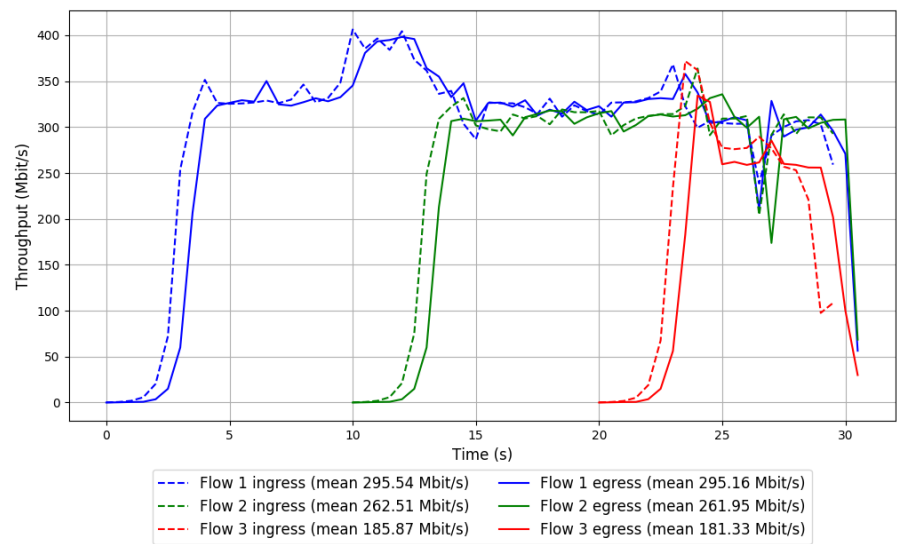


Run 4: Statistics of Copa

Start at: 2019-01-25 07:57:09  
End at: 2019-01-25 07:57:39  
Local clock offset: -0.379 ms  
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-01-25 09:30:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 529.91 Mbit/s  
95th percentile per-packet one-way delay: 318.501 ms  
Loss rate: 0.42%  
-- Flow 1:  
Average throughput: 295.16 Mbit/s  
95th percentile per-packet one-way delay: 180.477 ms  
Loss rate: 0.12%  
-- Flow 2:  
Average throughput: 261.95 Mbit/s  
95th percentile per-packet one-way delay: 159.224 ms  
Loss rate: 0.20%  
-- Flow 3:  
Average throughput: 181.33 Mbit/s  
95th percentile per-packet one-way delay: 338.656 ms  
Loss rate: 2.44%

Run 4: Report of Copa — Data Link

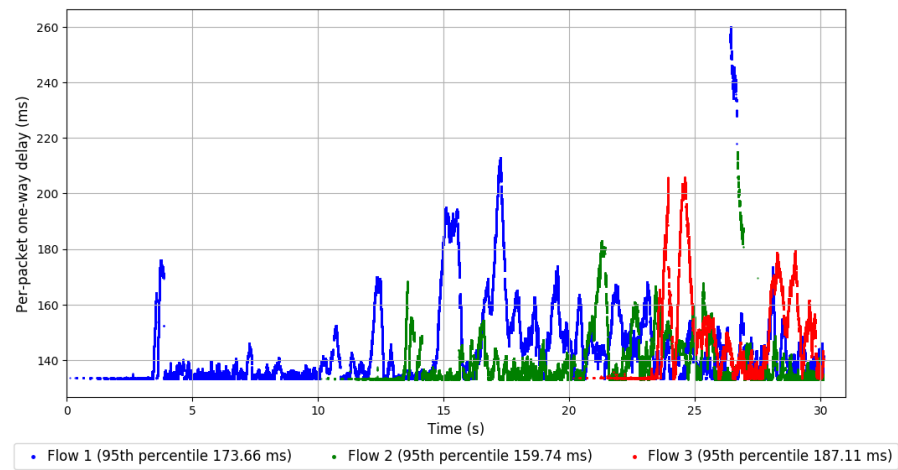
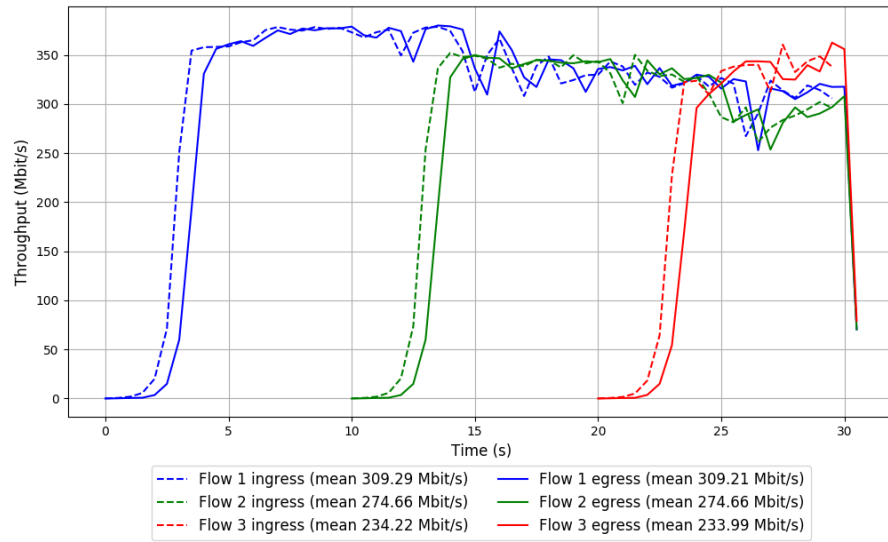


Run 5: Statistics of Copa

Start at: 2019-01-25 08:38:21  
End at: 2019-01-25 08:38:51  
Local clock offset: -0.469 ms  
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2019-01-25 09:33:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 569.85 Mbit/s  
95th percentile per-packet one-way delay: 173.278 ms  
Loss rate: 0.03%  
-- Flow 1:  
Average throughput: 309.21 Mbit/s  
95th percentile per-packet one-way delay: 173.662 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 274.66 Mbit/s  
95th percentile per-packet one-way delay: 159.738 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 233.99 Mbit/s  
95th percentile per-packet one-way delay: 187.108 ms  
Loss rate: 0.10%

## Run 5: Report of Copa — Data Link



Run 1: Statistics of TCP Cubic

Start at: 2019-01-25 05:16:10

End at: 2019-01-25 05:16:40

Local clock offset: -0.174 ms

Remote clock offset: 0.355 ms

# Below is generated by plot.py at 2019-01-25 09:33:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 497.33 Mbit/s

95th percentile per-packet one-way delay: 186.013 ms

Loss rate: 0.35%

-- Flow 1:

Average throughput: 126.83 Mbit/s

95th percentile per-packet one-way delay: 224.842 ms

Loss rate: 1.34%

-- Flow 2:

Average throughput: 452.71 Mbit/s

95th percentile per-packet one-way delay: 169.182 ms

Loss rate: 0.00%

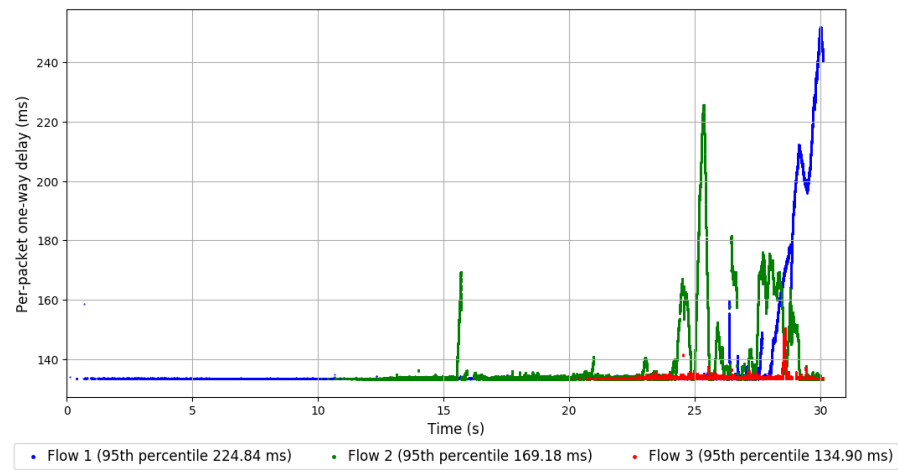
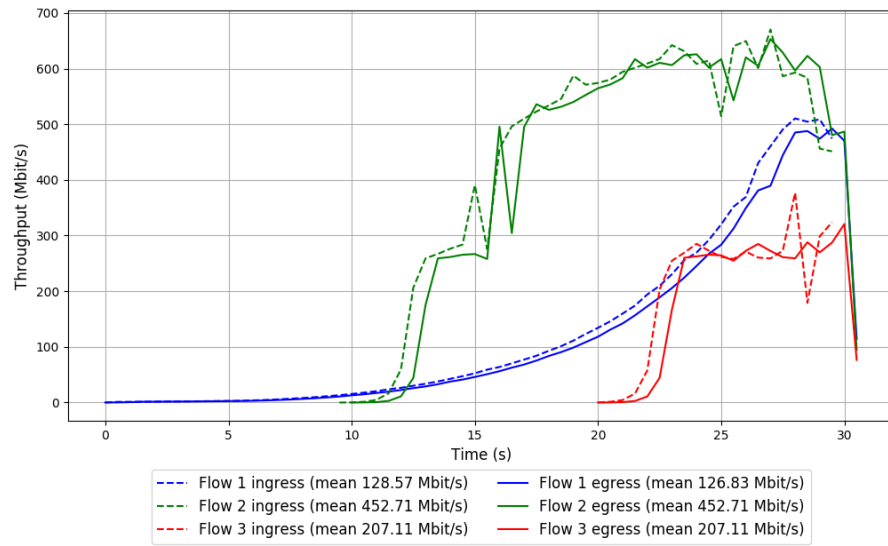
-- Flow 3:

Average throughput: 207.11 Mbit/s

95th percentile per-packet one-way delay: 134.899 ms

Loss rate: 0.00%

# Run 1: Report of TCP Cubic — Data Link

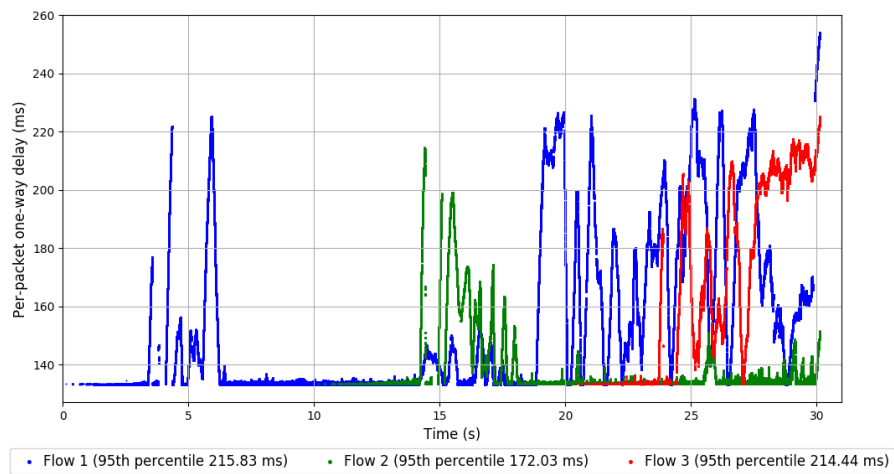
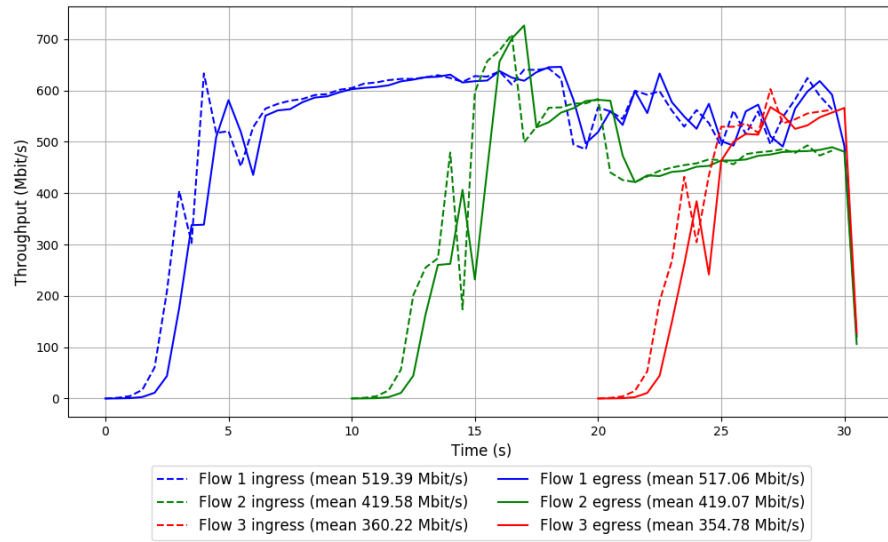


Run 2: Statistics of TCP Cubic

Start at: 2019-01-25 05:58:02  
End at: 2019-01-25 05:58:32  
Local clock offset: -0.508 ms  
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2019-01-25 09:33:01  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 914.02 Mbit/s  
95th percentile per-packet one-way delay: 211.795 ms  
Loss rate: 0.48%  
-- Flow 1:  
Average throughput: 517.06 Mbit/s  
95th percentile per-packet one-way delay: 215.828 ms  
Loss rate: 0.44%  
-- Flow 2:  
Average throughput: 419.07 Mbit/s  
95th percentile per-packet one-way delay: 172.034 ms  
Loss rate: 0.12%  
-- Flow 3:  
Average throughput: 354.78 Mbit/s  
95th percentile per-packet one-way delay: 214.435 ms  
Loss rate: 1.50%

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





Run 3: Statistics of TCP Cubic

Start at: 2019-01-25 06:40:32

End at: 2019-01-25 06:41:02

Local clock offset: -0.092 ms

Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-01-25 09:33:01

# Datalink statistics

-- Total of 3 flows:

Average throughput: 887.48 Mbit/s

95th percentile per-packet one-way delay: 215.962 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 508.96 Mbit/s

95th percentile per-packet one-way delay: 230.088 ms

Loss rate: 0.25%

-- Flow 2:

Average throughput: 420.73 Mbit/s

95th percentile per-packet one-way delay: 181.094 ms

Loss rate: 0.00%

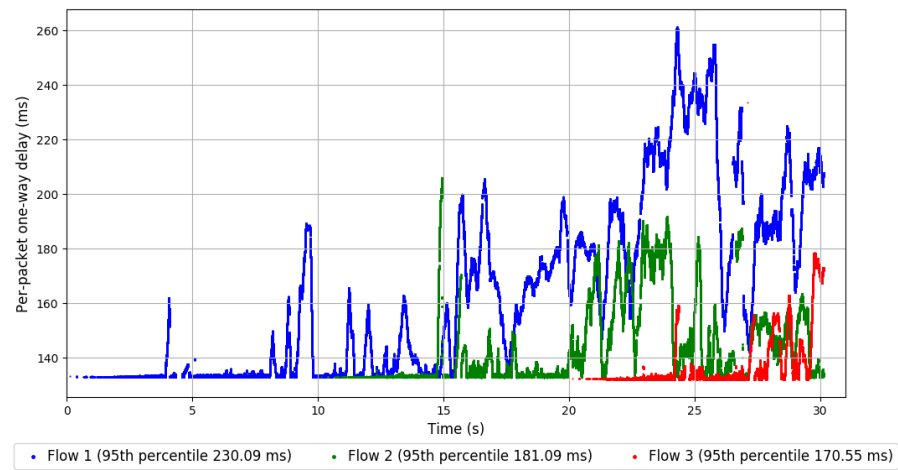
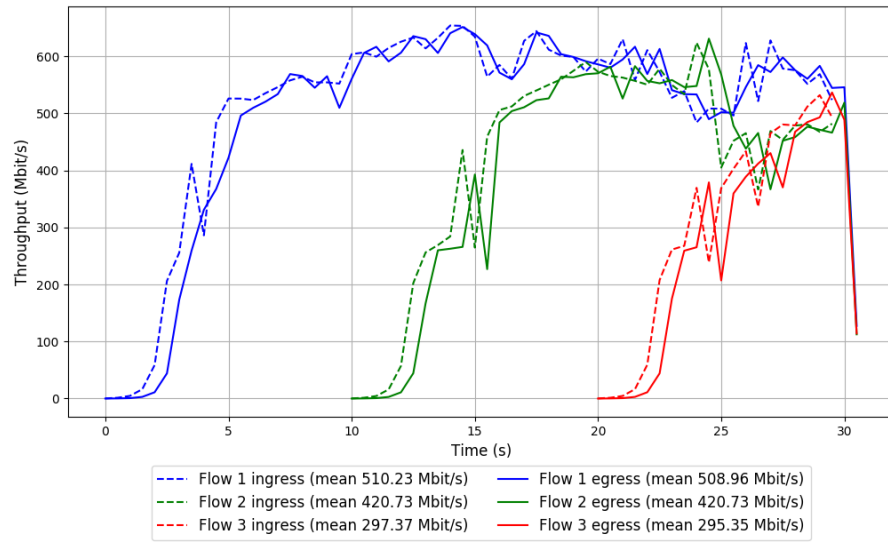
-- Flow 3:

Average throughput: 295.35 Mbit/s

95th percentile per-packet one-way delay: 170.552 ms

Loss rate: 0.66%

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

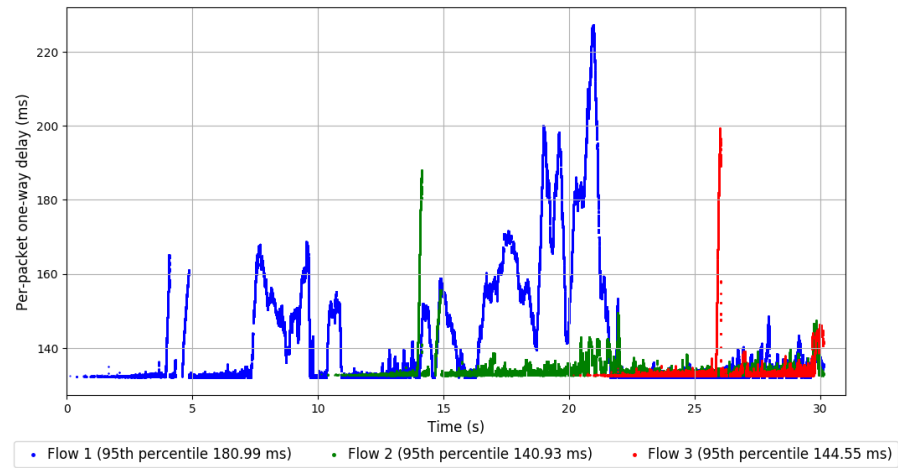
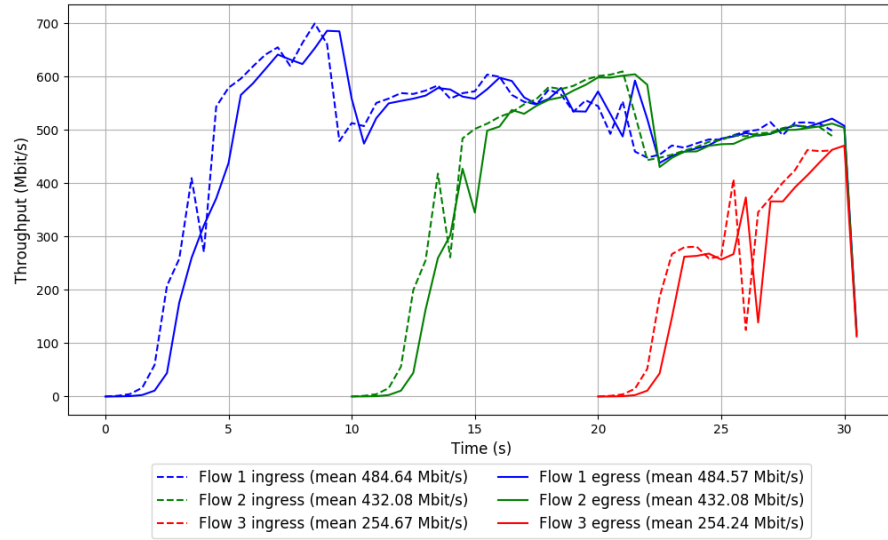


Run 4: Statistics of TCP Cubic

Start at: 2019-01-25 07:22:51  
End at: 2019-01-25 07:23:21  
Local clock offset: -0.112 ms  
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2019-01-25 09:33:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 856.70 Mbit/s  
95th percentile per-packet one-way delay: 168.118 ms  
Loss rate: 0.02%  
-- Flow 1:  
Average throughput: 484.57 Mbit/s  
95th percentile per-packet one-way delay: 180.992 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 432.08 Mbit/s  
95th percentile per-packet one-way delay: 140.925 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 254.24 Mbit/s  
95th percentile per-packet one-way delay: 144.551 ms  
Loss rate: 0.16%

# Run 4: Report of TCP Cubic — Data Link

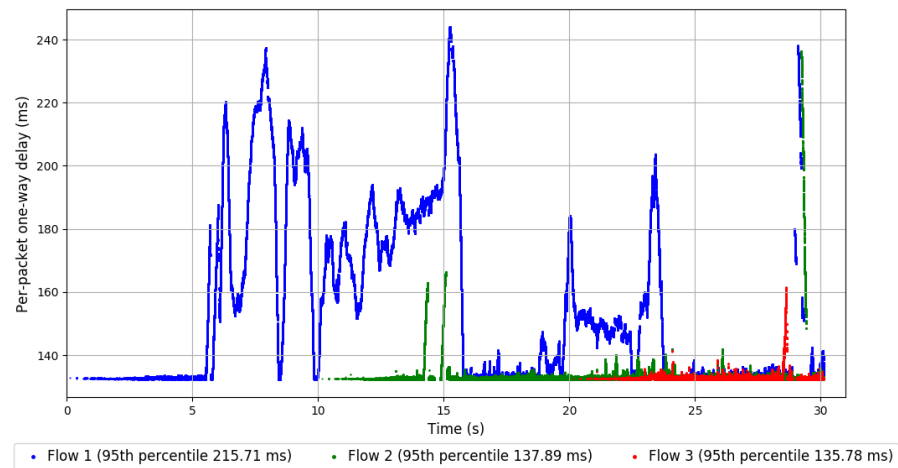
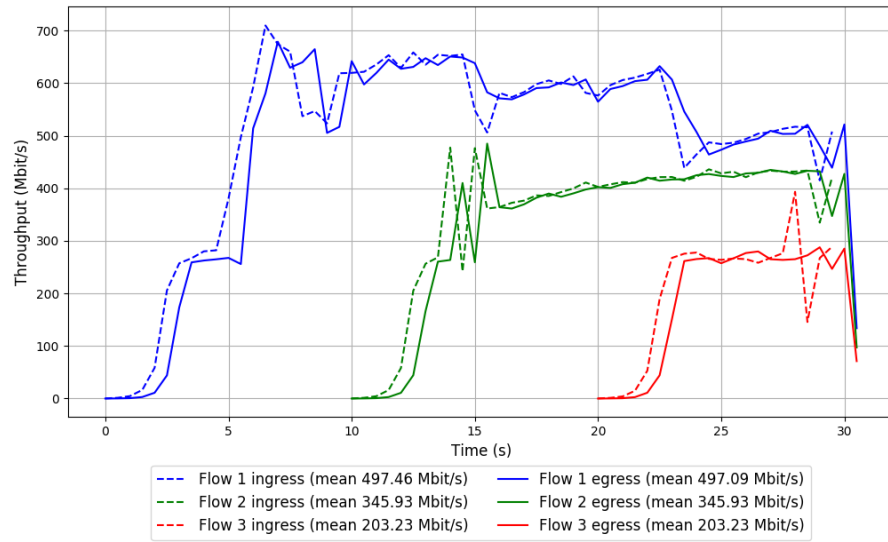


Run 5: Statistics of TCP Cubic

Start at: 2019-01-25 08:03:41  
End at: 2019-01-25 08:04:11  
Local clock offset: 0.329 ms  
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-01-25 09:33:34  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 794.93 Mbit/s  
95th percentile per-packet one-way delay: 206.823 ms  
Loss rate: 0.04%  
-- Flow 1:  
Average throughput: 497.09 Mbit/s  
95th percentile per-packet one-way delay: 215.708 ms  
Loss rate: 0.07%  
-- Flow 2:  
Average throughput: 345.93 Mbit/s  
95th percentile per-packet one-way delay: 137.889 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 203.23 Mbit/s  
95th percentile per-packet one-way delay: 135.784 ms  
Loss rate: 0.00%

# Run 5: Report of TCP Cubic — Data Link

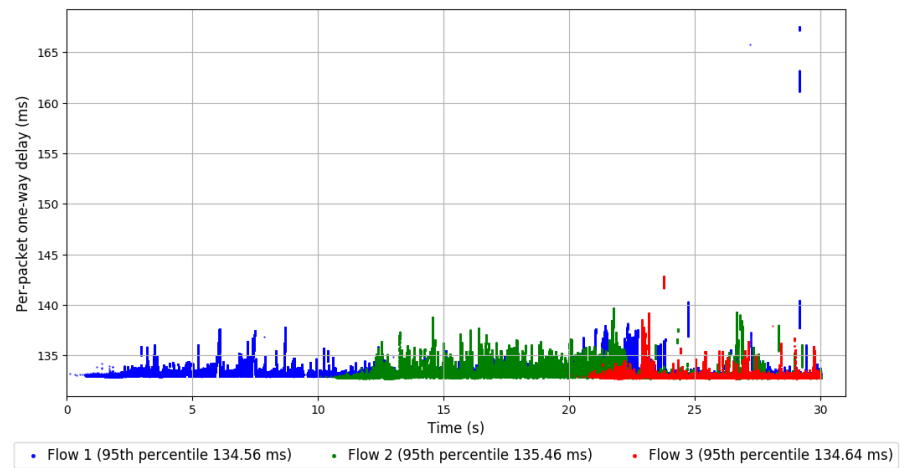
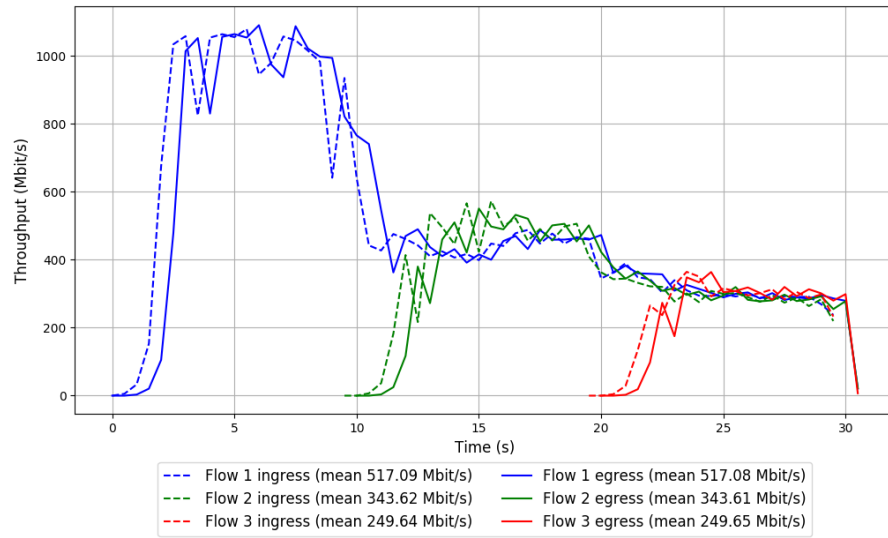


Run 1: Statistics of FillP

Start at: 2019-01-25 05:19:27  
End at: 2019-01-25 05:19:57  
Local clock offset: -0.009 ms  
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-01-25 09:37:13  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 828.77 Mbit/s  
95th percentile per-packet one-way delay: 134.962 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 517.08 Mbit/s  
95th percentile per-packet one-way delay: 134.561 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 343.61 Mbit/s  
95th percentile per-packet one-way delay: 135.455 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 249.65 Mbit/s  
95th percentile per-packet one-way delay: 134.641 ms  
Loss rate: 0.00%

# Run 1: Report of FillP — Data Link



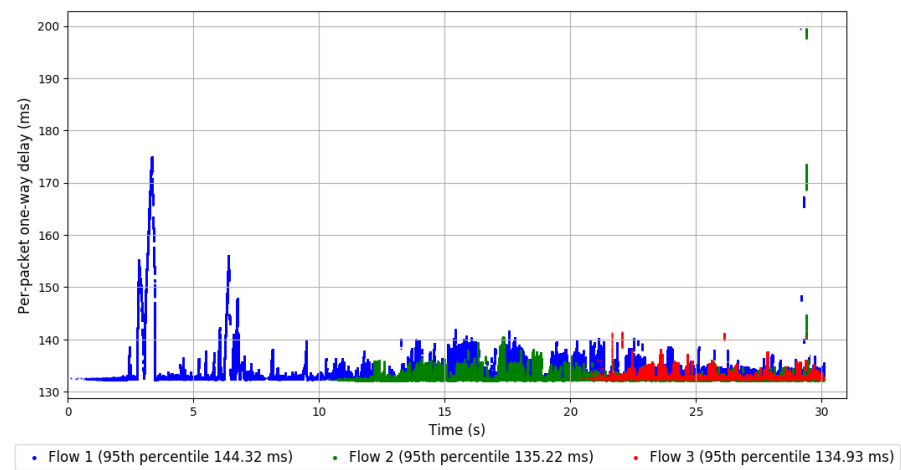
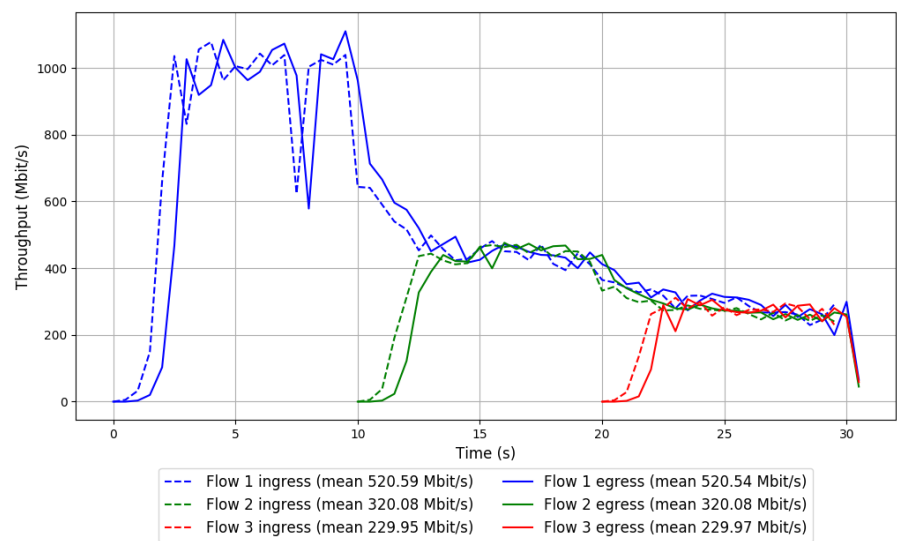


Run 2: Statistics of FillP

Start at: 2019-01-25 06:01:54  
End at: 2019-01-25 06:02:24  
Local clock offset: 0.139 ms  
Remote clock offset: -0.486 ms

# Below is generated by plot.py at 2019-01-25 09:41:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 809.34 Mbit/s  
95th percentile per-packet one-way delay: 138.972 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 520.54 Mbit/s  
95th percentile per-packet one-way delay: 144.325 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 320.08 Mbit/s  
95th percentile per-packet one-way delay: 135.221 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 229.97 Mbit/s  
95th percentile per-packet one-way delay: 134.928 ms  
Loss rate: 0.00%

Run 2: Report of FillP — Data Link

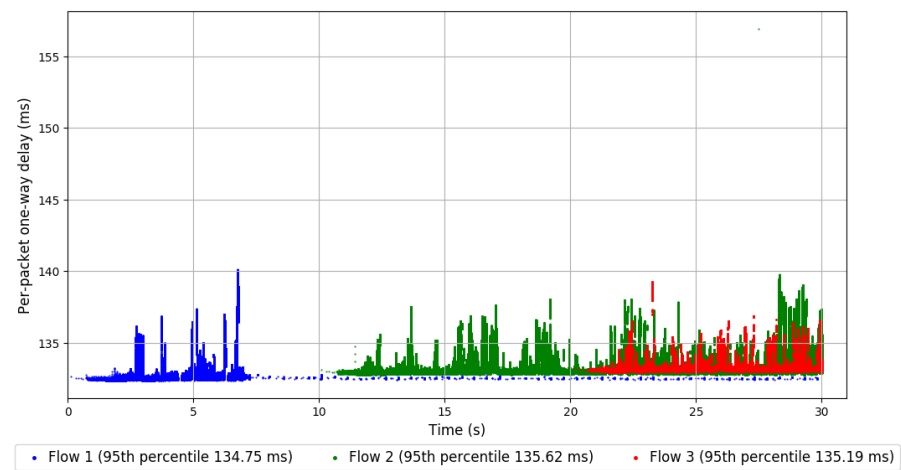
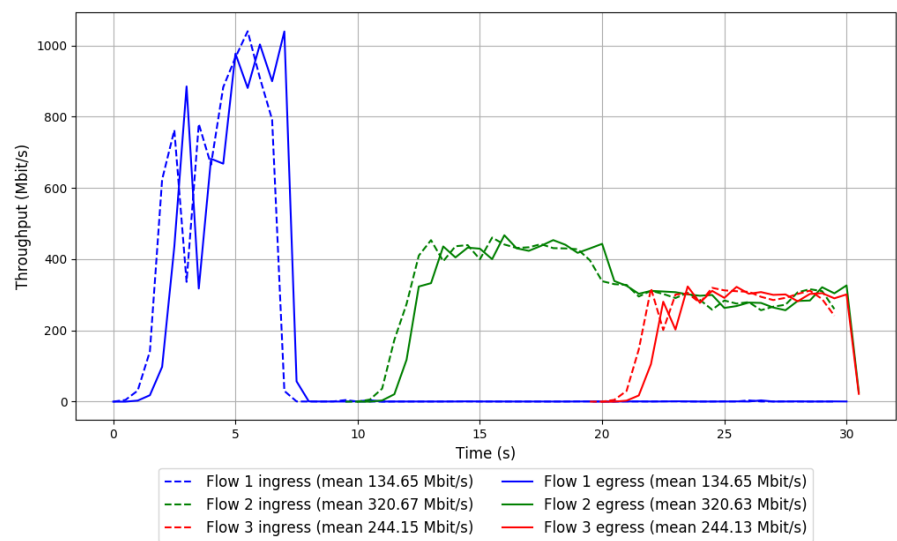


Run 3: Statistics of FillP

Start at: 2019-01-25 06:44:13  
End at: 2019-01-25 06:44:43  
Local clock offset: -0.12 ms  
Remote clock offset: -0.011 ms

# Below is generated by plot.py at 2019-01-25 09:41:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 428.51 Mbit/s  
95th percentile per-packet one-way delay: 135.365 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 134.65 Mbit/s  
95th percentile per-packet one-way delay: 134.750 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 320.63 Mbit/s  
95th percentile per-packet one-way delay: 135.621 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 244.13 Mbit/s  
95th percentile per-packet one-way delay: 135.187 ms  
Loss rate: 0.00%

Run 3: Report of FillP — Data Link

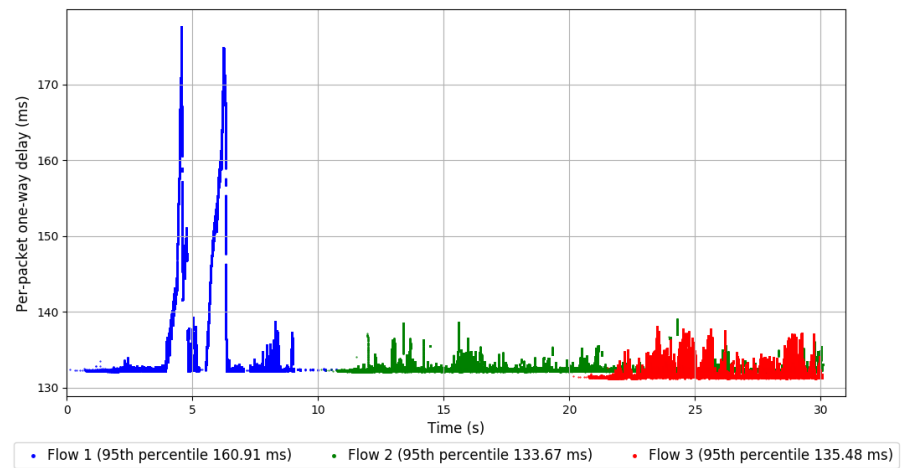
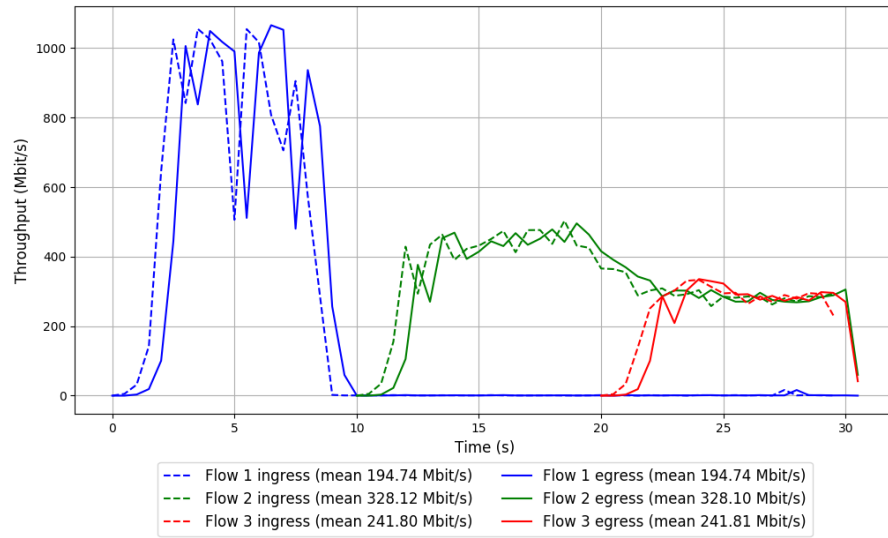


Run 4: Statistics of FillP

Start at: 2019-01-25 07:26:52  
End at: 2019-01-25 07:27:22  
Local clock offset: 0.328 ms  
Remote clock offset: -0.512 ms

# Below is generated by plot.py at 2019-01-25 09:42:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 492.87 Mbit/s  
95th percentile per-packet one-way delay: 149.569 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 194.74 Mbit/s  
95th percentile per-packet one-way delay: 160.911 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 328.10 Mbit/s  
95th percentile per-packet one-way delay: 133.666 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 241.81 Mbit/s  
95th percentile per-packet one-way delay: 135.478 ms  
Loss rate: 0.00%

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



Run 5: Statistics of FillP

Start at: 2019-01-25 08:07:43

End at: 2019-01-25 08:08:13

Local clock offset: -0.408 ms

Remote clock offset: 0.124 ms

# Below is generated by plot.py at 2019-01-25 09:43:27

# Datalink statistics

-- Total of 3 flows:

Average throughput: 538.44 Mbit/s

95th percentile per-packet one-way delay: 142.178 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 226.00 Mbit/s

95th percentile per-packet one-way delay: 152.094 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 353.37 Mbit/s

95th percentile per-packet one-way delay: 136.149 ms

Loss rate: 0.00%

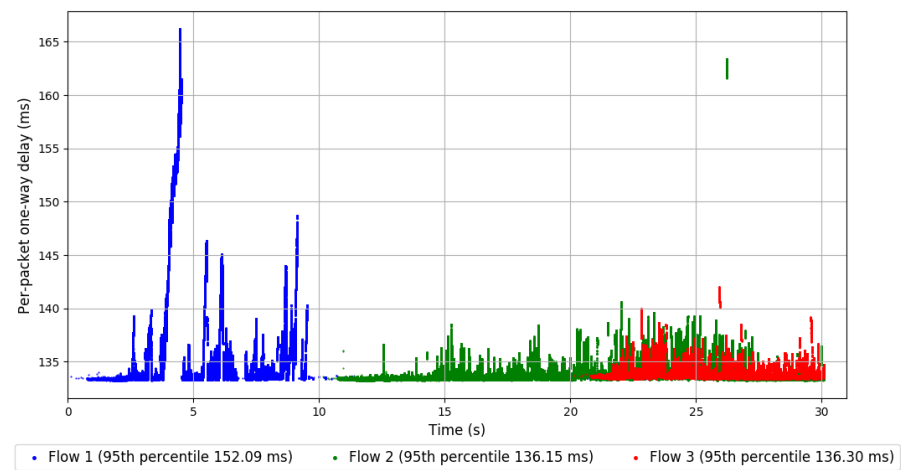
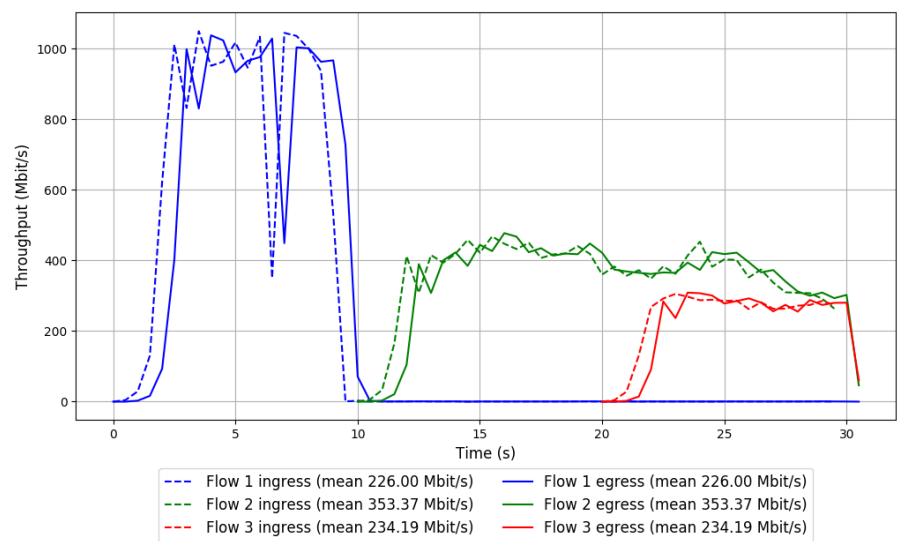
-- Flow 3:

Average throughput: 234.19 Mbit/s

95th percentile per-packet one-way delay: 136.303 ms

Loss rate: 0.00%

Run 5: Report of FillP — Data Link



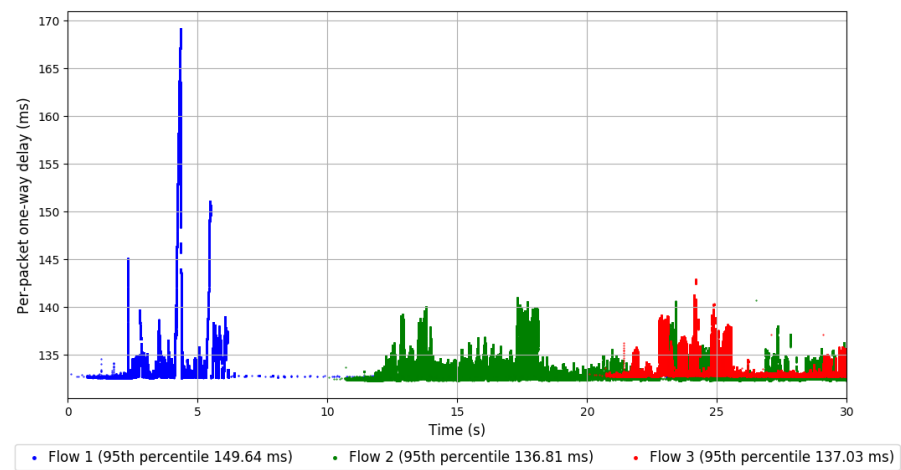
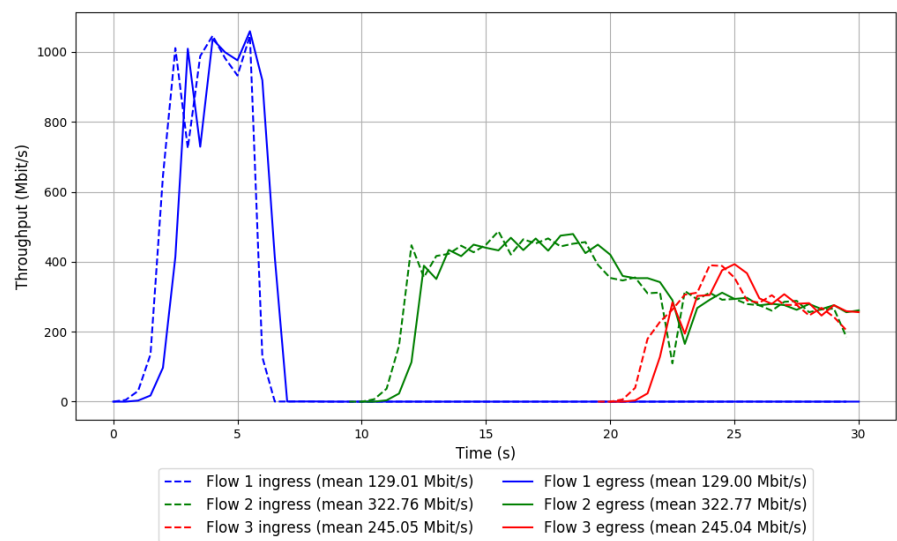


Run 1: Statistics of FillP-Sheep

Start at: 2019-01-25 05:36:20  
End at: 2019-01-25 05:36:50  
Local clock offset: 0.204 ms  
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-01-25 09:43:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 425.15 Mbit/s  
95th percentile per-packet one-way delay: 138.033 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 129.00 Mbit/s  
95th percentile per-packet one-way delay: 149.636 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 322.77 Mbit/s  
95th percentile per-packet one-way delay: 136.813 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 245.04 Mbit/s  
95th percentile per-packet one-way delay: 137.028 ms  
Loss rate: 0.01%

Run 1: Report of FillP-Sheep — Data Link

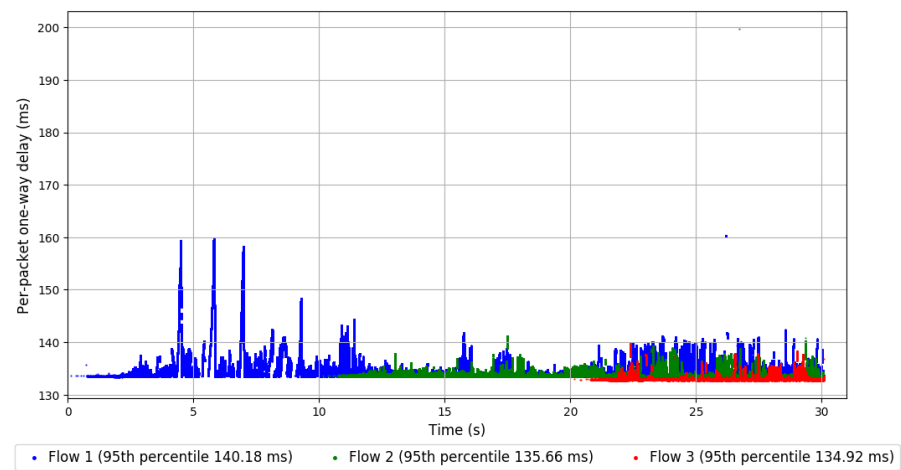
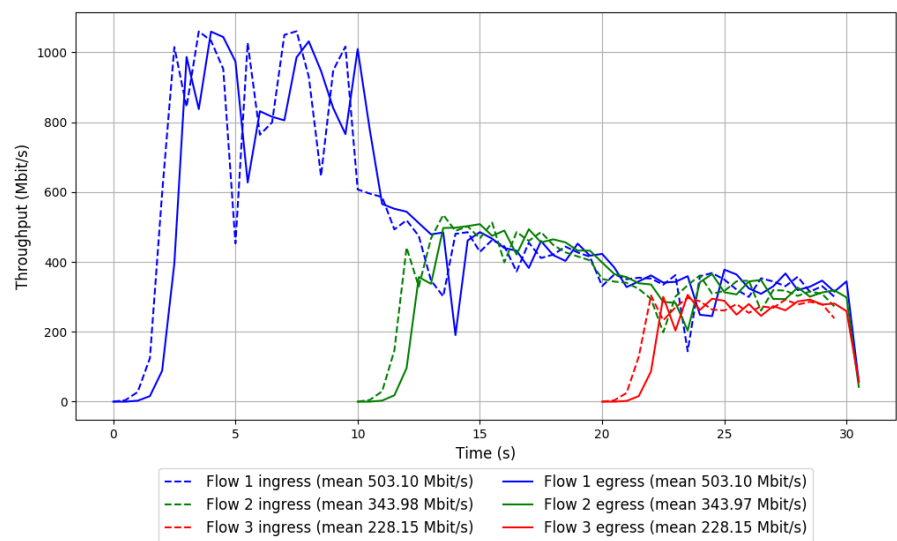


Run 2: Statistics of FillP-Sheep

Start at: 2019-01-25 06:18:27  
End at: 2019-01-25 06:18:57  
Local clock offset: -0.519 ms  
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-01-25 09:51:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 807.38 Mbit/s  
95th percentile per-packet one-way delay: 138.876 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 503.10 Mbit/s  
95th percentile per-packet one-way delay: 140.182 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 343.97 Mbit/s  
95th percentile per-packet one-way delay: 135.664 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 228.15 Mbit/s  
95th percentile per-packet one-way delay: 134.917 ms  
Loss rate: 0.00%

Run 2: Report of FillP-Sheep — Data Link

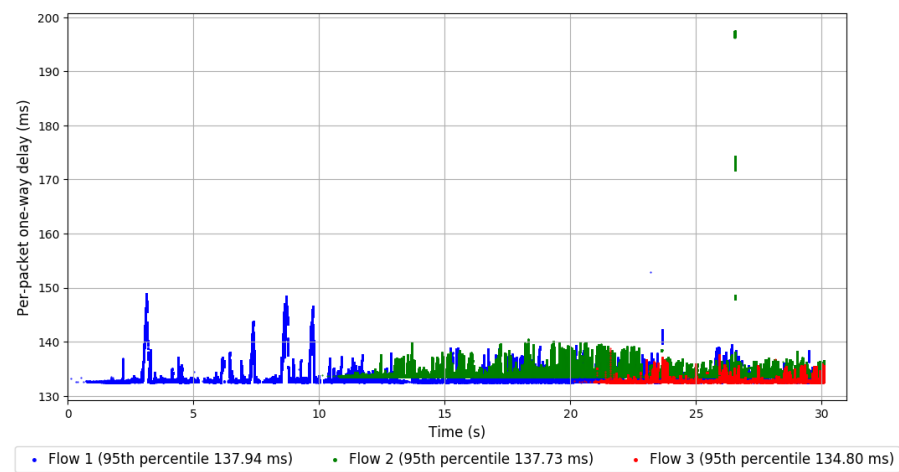
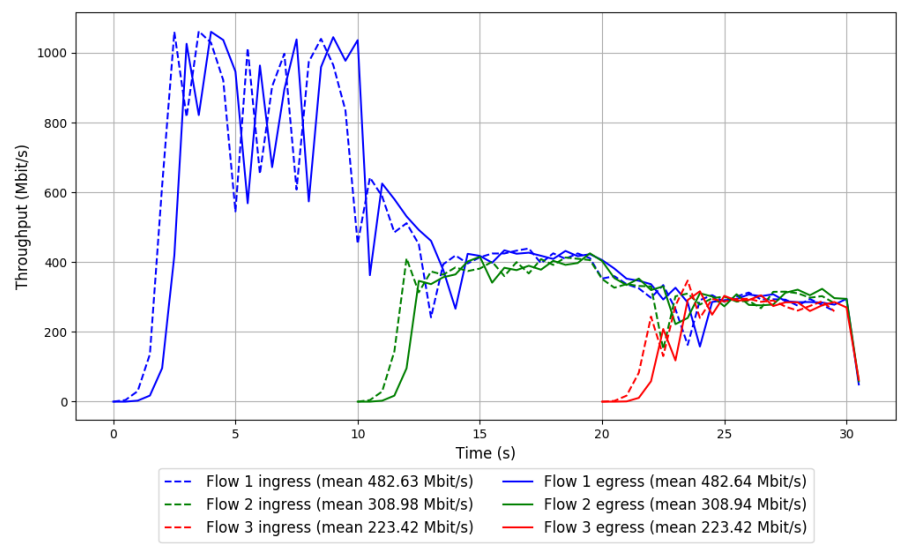


Run 3: Statistics of FillP-Sheep

Start at: 2019-01-25 07:00:53  
End at: 2019-01-25 07:01:23  
Local clock offset: -0.527 ms  
Remote clock offset: -0.037 ms

# Below is generated by plot.py at 2019-01-25 09:51:56  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 762.37 Mbit/s  
95th percentile per-packet one-way delay: 137.593 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 482.64 Mbit/s  
95th percentile per-packet one-way delay: 137.937 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 308.94 Mbit/s  
95th percentile per-packet one-way delay: 137.728 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 223.42 Mbit/s  
95th percentile per-packet one-way delay: 134.797 ms  
Loss rate: 0.00%

Run 3: Report of FillP-Sheep — Data Link

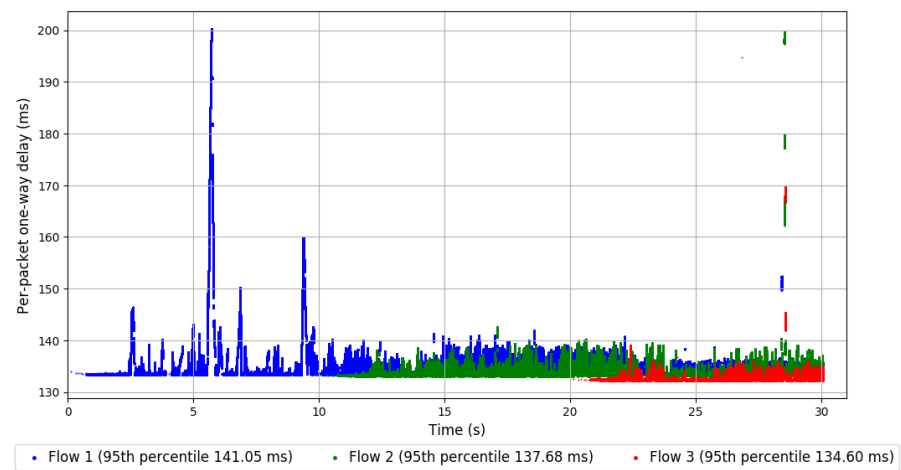
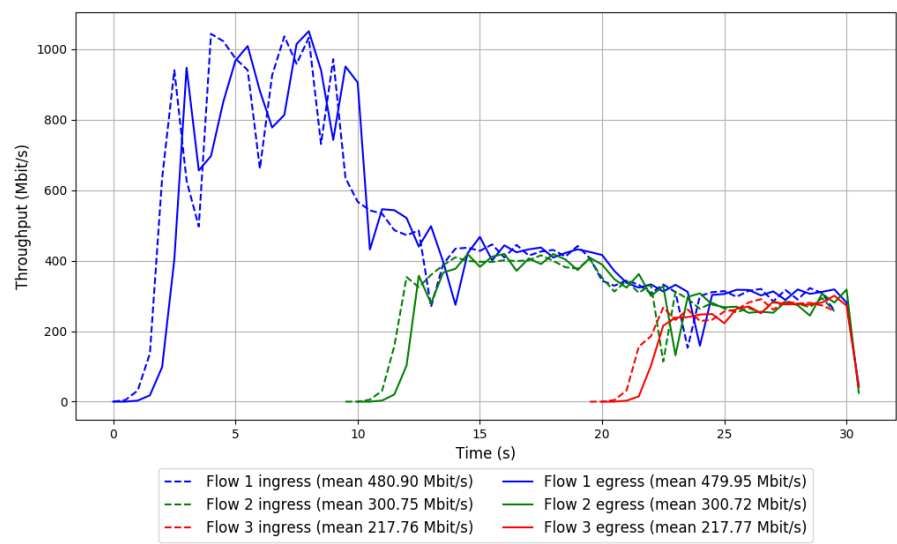


Run 4: Statistics of FillP-Sheep

Start at: 2019-01-25 07:43:02  
End at: 2019-01-25 07:43:32  
Local clock offset: -0.321 ms  
Remote clock offset: -0.113 ms

# Below is generated by plot.py at 2019-01-25 09:56:19  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 752.52 Mbit/s  
95th percentile per-packet one-way delay: 139.044 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 479.95 Mbit/s  
95th percentile per-packet one-way delay: 141.051 ms  
Loss rate: 0.19%  
-- Flow 2:  
Average throughput: 300.72 Mbit/s  
95th percentile per-packet one-way delay: 137.683 ms  
Loss rate: 0.01%  
-- Flow 3:  
Average throughput: 217.77 Mbit/s  
95th percentile per-packet one-way delay: 134.597 ms  
Loss rate: 0.00%

Run 4: Report of FillP-Sheep — Data Link



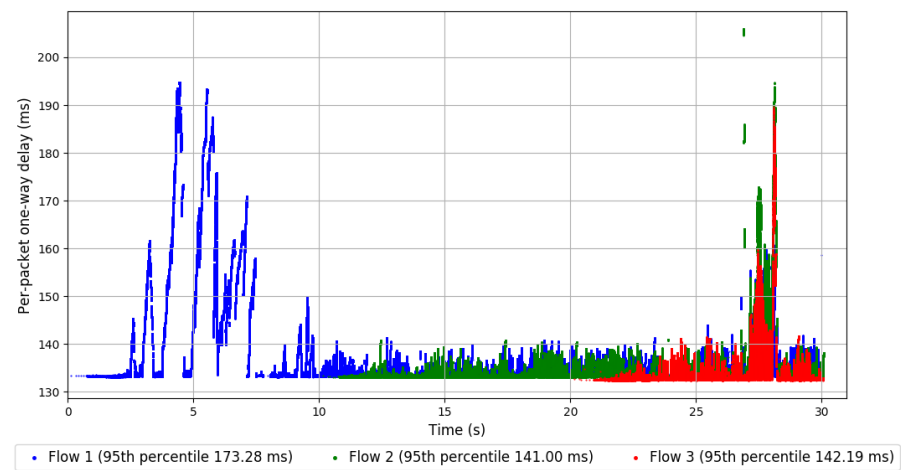
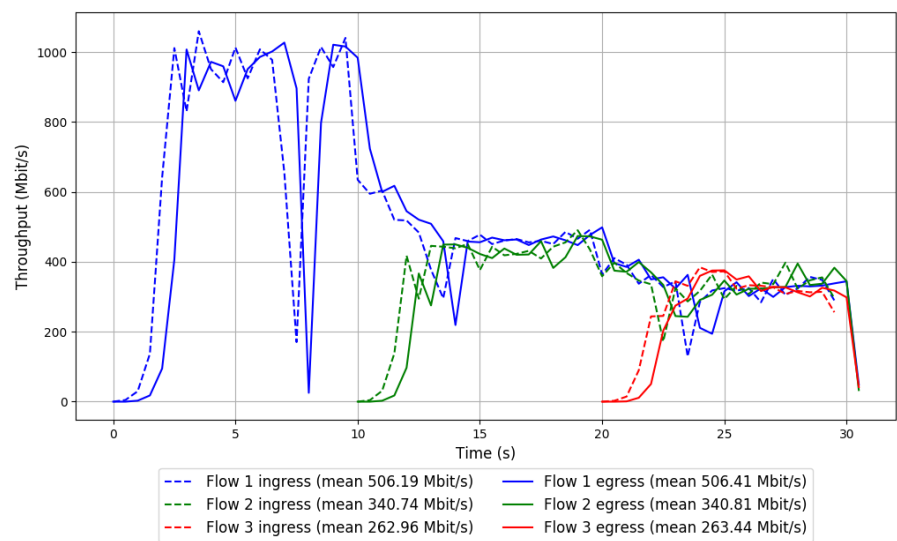


Run 5: Statistics of FillP-Sheep

Start at: 2019-01-25 08:23:59  
End at: 2019-01-25 08:24:29  
Local clock offset: -0.102 ms  
Remote clock offset: -0.029 ms

# Below is generated by plot.py at 2019-01-25 09:59:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 820.02 Mbit/s  
95th percentile per-packet one-way delay: 164.257 ms  
Loss rate: 0.15%  
-- Flow 1:  
Average throughput: 506.41 Mbit/s  
95th percentile per-packet one-way delay: 173.277 ms  
Loss rate: 0.24%  
-- Flow 2:  
Average throughput: 340.81 Mbit/s  
95th percentile per-packet one-way delay: 140.995 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 263.44 Mbit/s  
95th percentile per-packet one-way delay: 142.186 ms  
Loss rate: 0.00%

Run 5: Report of FillP-Sheep — Data Link



Run 1: Statistics of Indigo

Start at: 2019-01-25 05:38:14

End at: 2019-01-25 05:38:44

Local clock offset: 0.004 ms

Remote clock offset: 0.048 ms

# Below is generated by plot.py at 2019-01-25 09:59:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 344.97 Mbit/s

95th percentile per-packet one-way delay: 134.151 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 177.95 Mbit/s

95th percentile per-packet one-way delay: 133.477 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 176.22 Mbit/s

95th percentile per-packet one-way delay: 134.101 ms

Loss rate: 0.00%

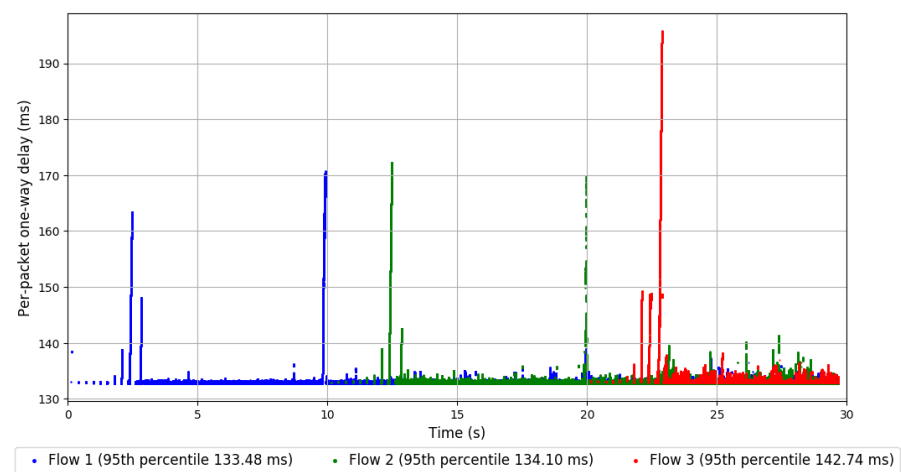
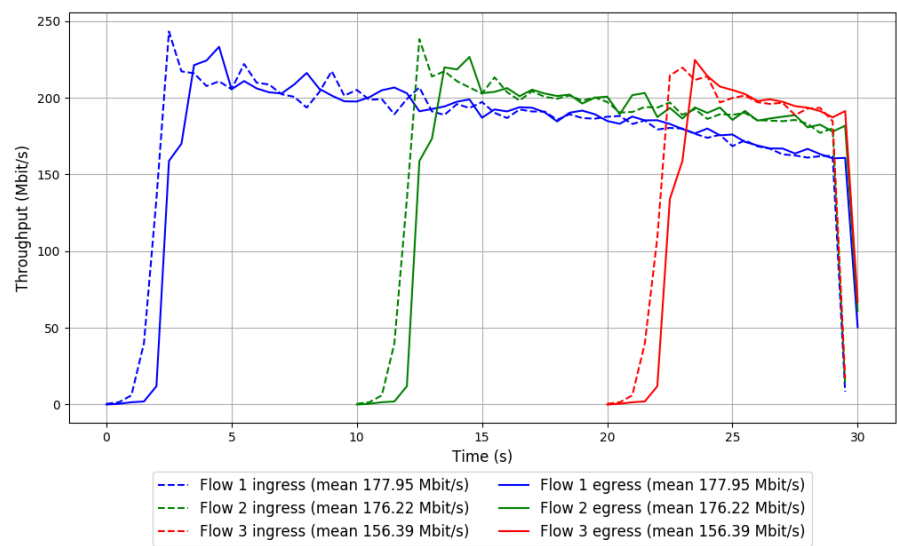
-- Flow 3:

Average throughput: 156.39 Mbit/s

95th percentile per-packet one-way delay: 142.736 ms

Loss rate: 0.00%

Run 1: Report of Indigo — Data Link

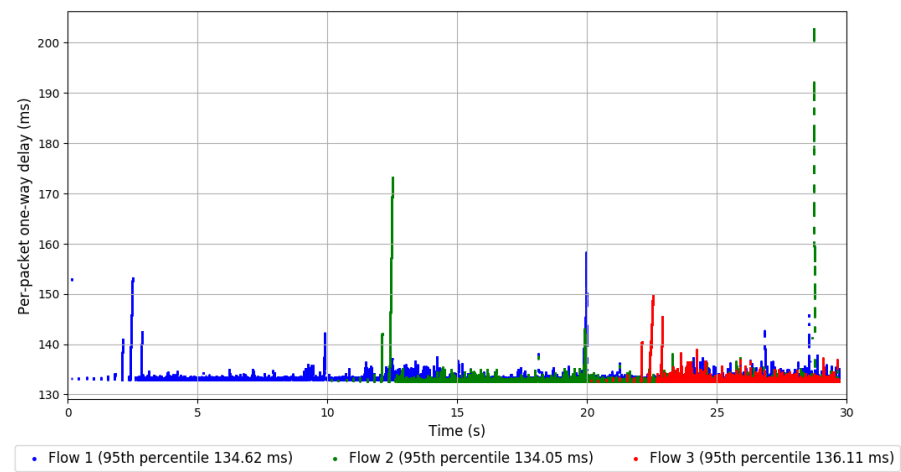
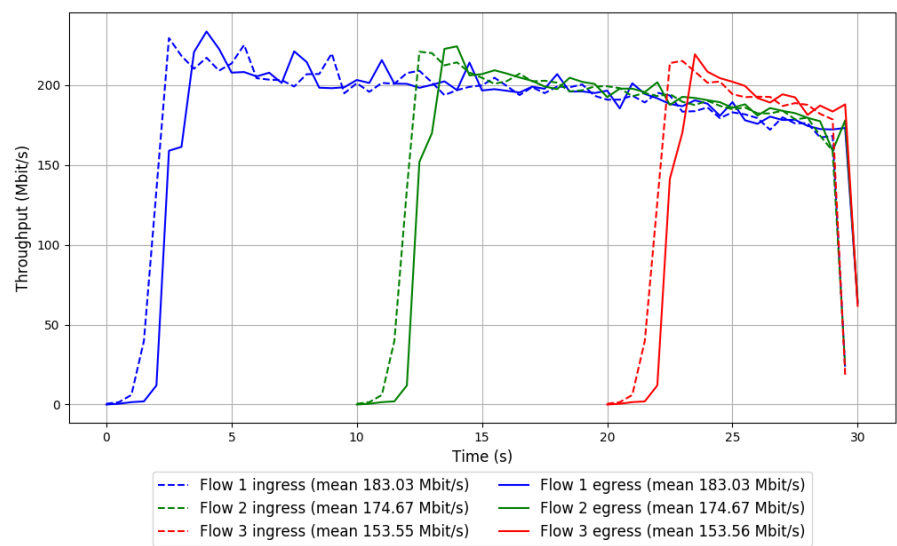


Run 2: Statistics of Indigo

Start at: 2019-01-25 06:20:38  
End at: 2019-01-25 06:21:08  
Local clock offset: 0.054 ms  
Remote clock offset: -0.017 ms

# Below is generated by plot.py at 2019-01-25 09:59:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 348.03 Mbit/s  
95th percentile per-packet one-way delay: 134.547 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 183.03 Mbit/s  
95th percentile per-packet one-way delay: 134.615 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 174.67 Mbit/s  
95th percentile per-packet one-way delay: 134.049 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 153.56 Mbit/s  
95th percentile per-packet one-way delay: 136.108 ms  
Loss rate: 0.00%

Run 2: Report of Indigo — Data Link



Run 3: Statistics of Indigo

Start at: 2019-01-25 07:02:51

End at: 2019-01-25 07:03:21

Local clock offset: 0.05 ms

Remote clock offset: 0.066 ms

# Below is generated by plot.py at 2019-01-25 09:59:58

# Datalink statistics

-- Total of 3 flows:

Average throughput: 337.20 Mbit/s

95th percentile per-packet one-way delay: 134.282 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 177.30 Mbit/s

95th percentile per-packet one-way delay: 134.051 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 167.15 Mbit/s

95th percentile per-packet one-way delay: 134.555 ms

Loss rate: 0.00%

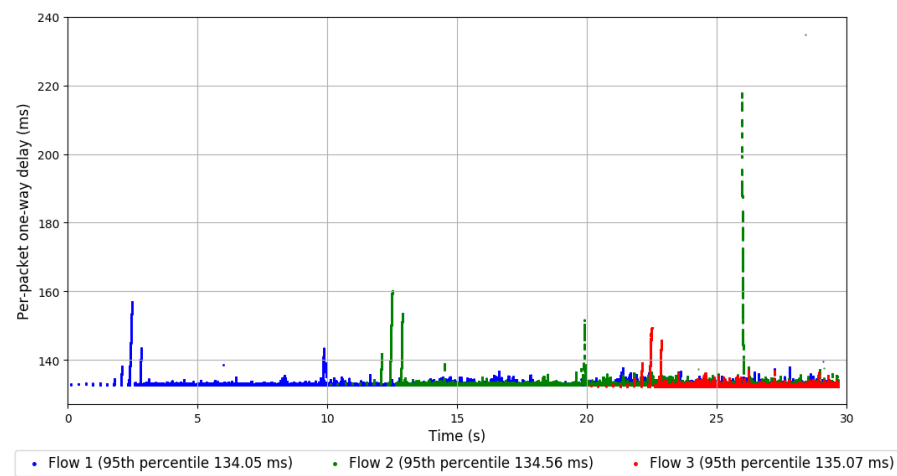
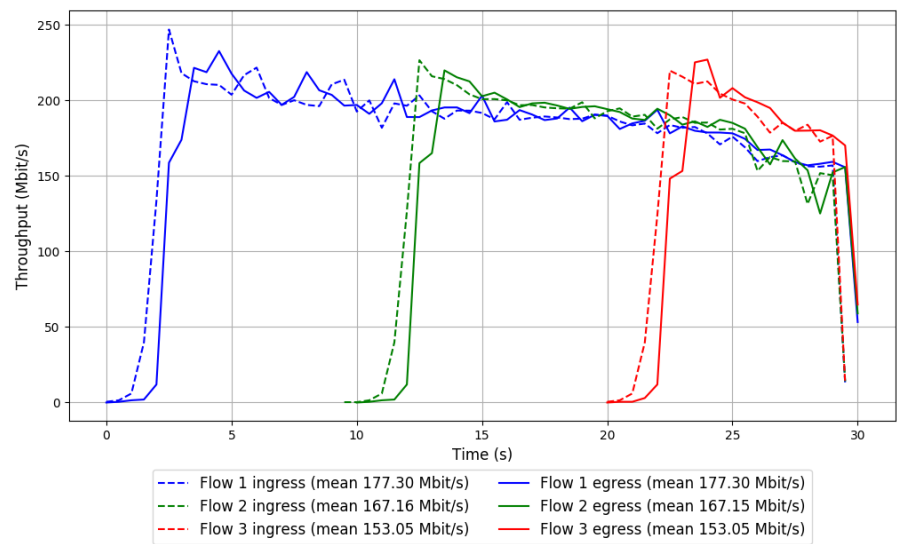
-- Flow 3:

Average throughput: 153.05 Mbit/s

95th percentile per-packet one-way delay: 135.069 ms

Loss rate: 0.00%

Run 3: Report of Indigo — Data Link



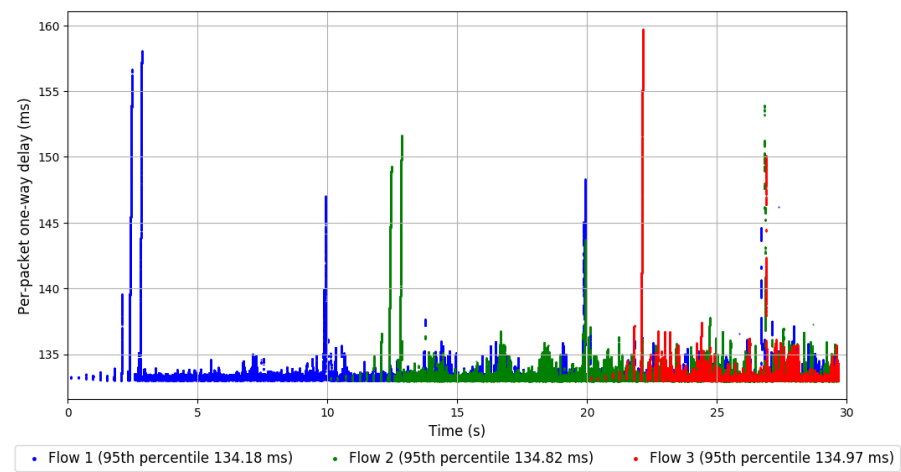
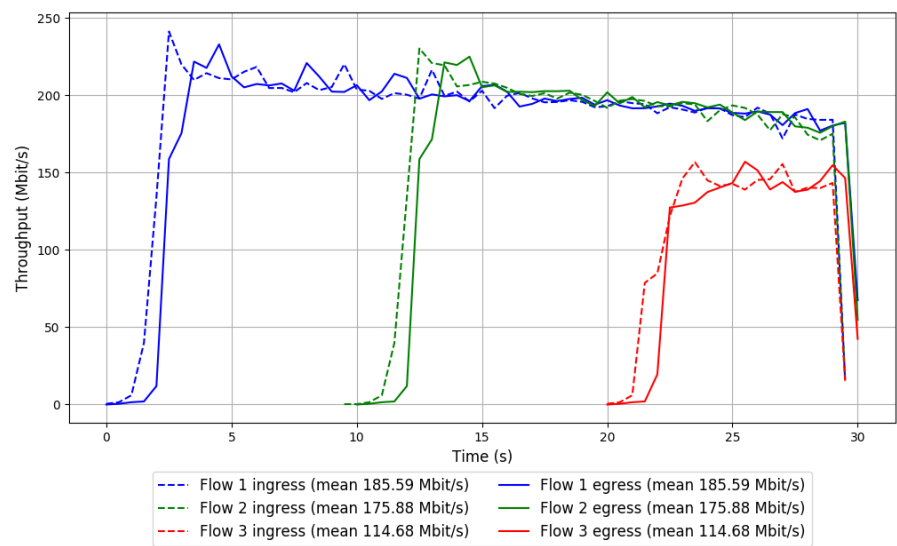


Run 4: Statistics of Indigo

Start at: 2019-01-25 07:45:00  
End at: 2019-01-25 07:45:30  
Local clock offset: -0.293 ms  
Remote clock offset: -0.137 ms

# Below is generated by plot.py at 2019-01-25 09:59:58  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 339.02 Mbit/s  
95th percentile per-packet one-way delay: 134.536 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 185.59 Mbit/s  
95th percentile per-packet one-way delay: 134.179 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 175.88 Mbit/s  
95th percentile per-packet one-way delay: 134.820 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 114.68 Mbit/s  
95th percentile per-packet one-way delay: 134.965 ms  
Loss rate: 0.00%

Run 4: Report of Indigo — Data Link

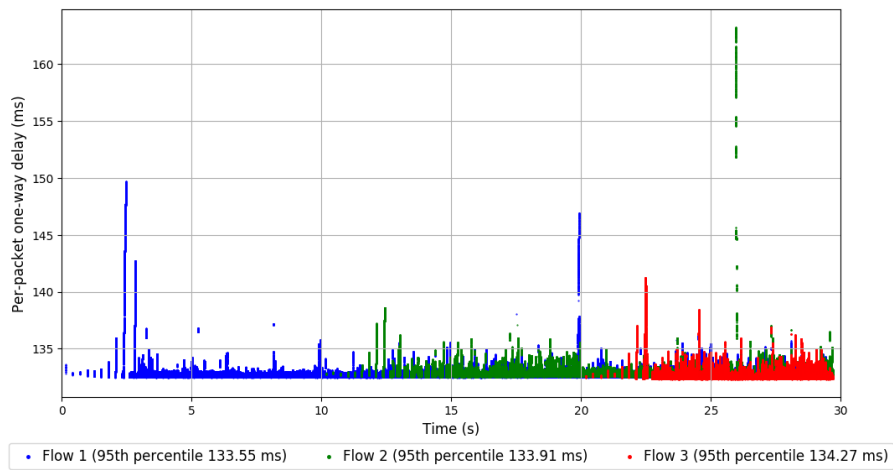
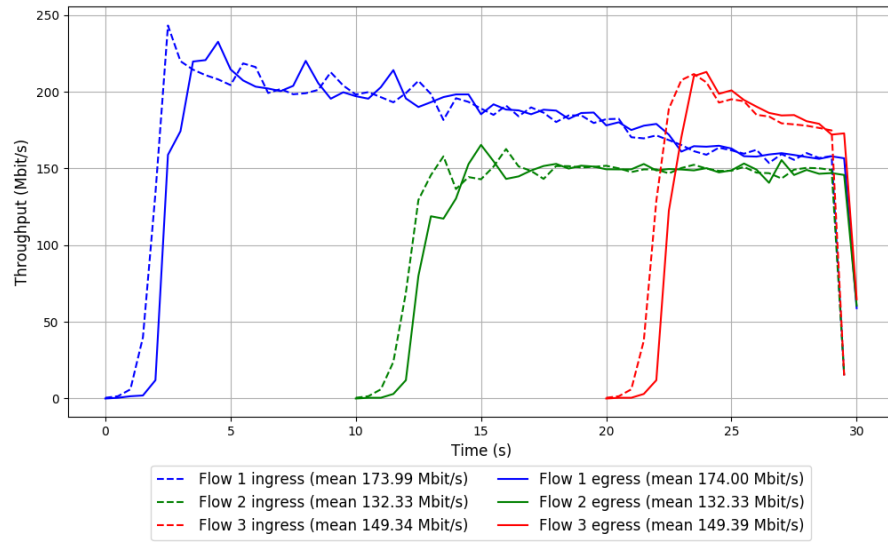


Run 5: Statistics of Indigo

Start at: 2019-01-25 08:26:00  
End at: 2019-01-25 08:26:30  
Local clock offset: 0.235 ms  
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-01-25 10:02:27  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 309.46 Mbit/s  
95th percentile per-packet one-way delay: 133.782 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 174.00 Mbit/s  
95th percentile per-packet one-way delay: 133.549 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 132.33 Mbit/s  
95th percentile per-packet one-way delay: 133.912 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 149.39 Mbit/s  
95th percentile per-packet one-way delay: 134.269 ms  
Loss rate: 0.00%

## Run 5: Report of Indigo — Data Link



Run 1: Statistics of Indigo-MusesC3

Start at: 2019-01-25 05:53:51

End at: 2019-01-25 05:54:21

Local clock offset: -0.338 ms

Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-01-25 10:06:32

# Datalink statistics

-- Total of 3 flows:

Average throughput: 742.61 Mbit/s

95th percentile per-packet one-way delay: 136.127 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 448.80 Mbit/s

95th percentile per-packet one-way delay: 137.015 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 351.60 Mbit/s

95th percentile per-packet one-way delay: 135.450 ms

Loss rate: 0.00%

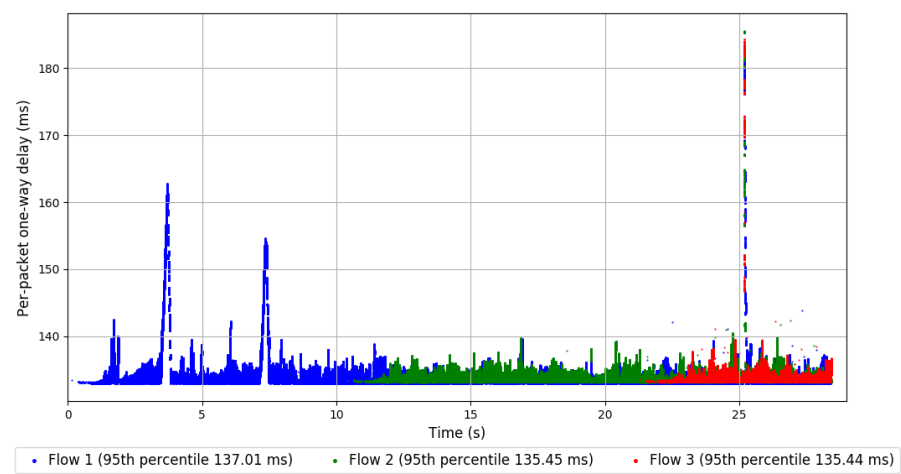
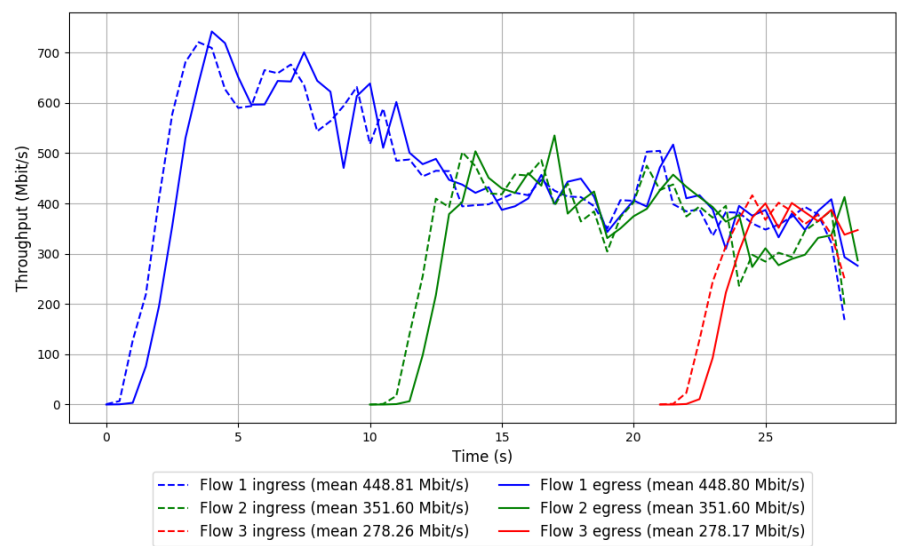
-- Flow 3:

Average throughput: 278.17 Mbit/s

95th percentile per-packet one-way delay: 135.438 ms

Loss rate: 0.03%

Run 1: Report of Indigo-MusesC3 — Data Link

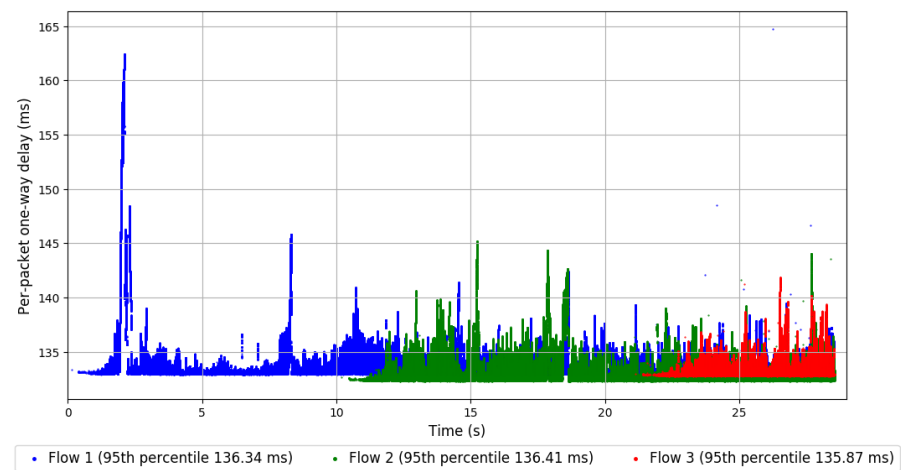
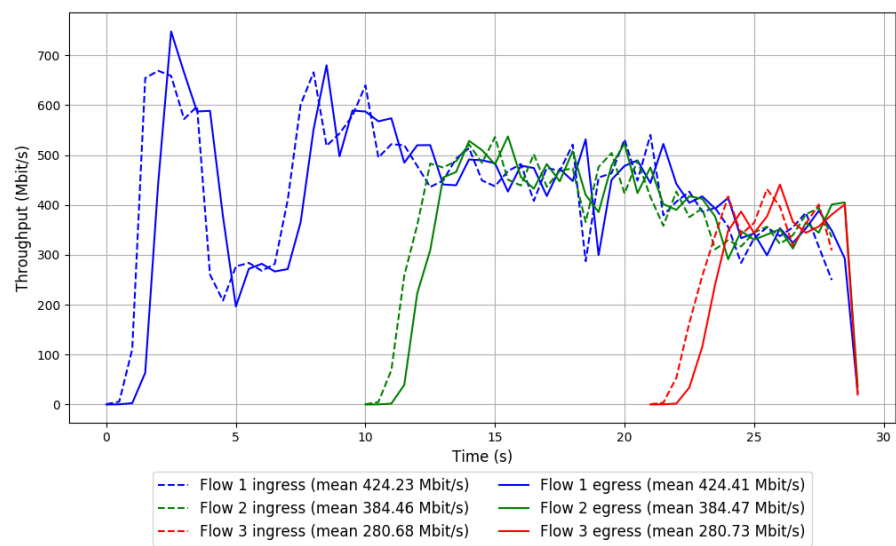


Run 2: Statistics of Indigo-MusesC3

Start at: 2019-01-25 06:36:06  
End at: 2019-01-25 06:36:36  
Local clock offset: -0.089 ms  
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2019-01-25 10:09:00  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 745.64 Mbit/s  
95th percentile per-packet one-way delay: 136.304 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 424.41 Mbit/s  
95th percentile per-packet one-way delay: 136.342 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 384.47 Mbit/s  
95th percentile per-packet one-way delay: 136.408 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 280.73 Mbit/s  
95th percentile per-packet one-way delay: 135.867 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC3 — Data Link



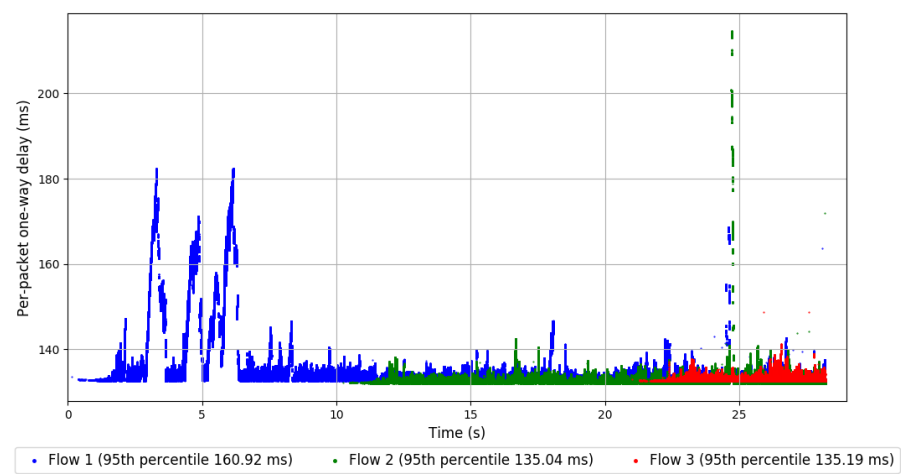
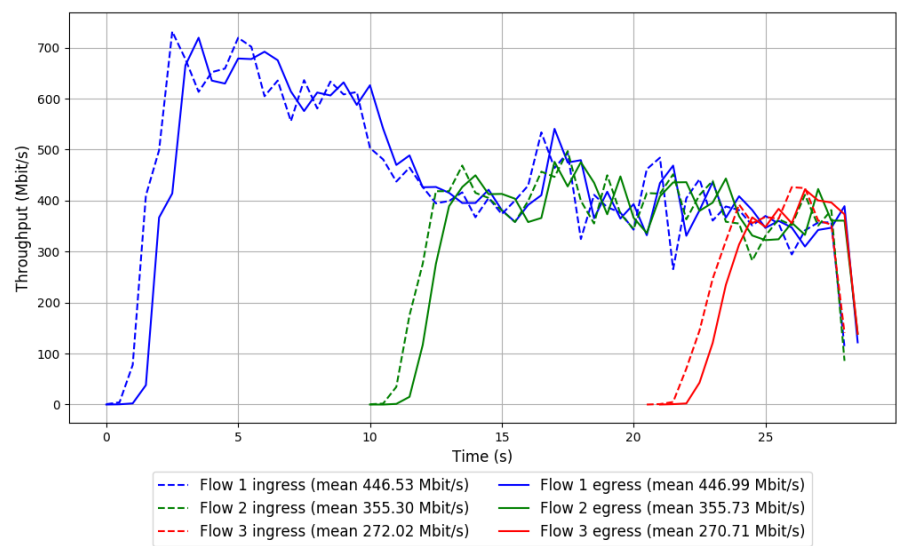


Run 3: Statistics of Indigo-MusesC3

Start at: 2019-01-25 07:18:39  
End at: 2019-01-25 07:19:09  
Local clock offset: 0.245 ms  
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-01-25 10:09:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 744.00 Mbit/s  
95th percentile per-packet one-way delay: 152.342 ms  
Loss rate: 0.46%  
-- Flow 1:  
Average throughput: 446.99 Mbit/s  
95th percentile per-packet one-way delay: 160.917 ms  
Loss rate: 0.26%  
-- Flow 2:  
Average throughput: 355.73 Mbit/s  
95th percentile per-packet one-way delay: 135.043 ms  
Loss rate: 0.43%  
-- Flow 3:  
Average throughput: 270.71 Mbit/s  
95th percentile per-packet one-way delay: 135.190 ms  
Loss rate: 1.86%

Run 3: Report of Indigo-MusesC3 — Data Link



Run 4: Statistics of Indigo-MusesC3

Start at: 2019-01-25 07:59:28

End at: 2019-01-25 07:59:58

Local clock offset: -0.122 ms

Remote clock offset: 0.299 ms

# Below is generated by plot.py at 2019-01-25 10:10:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 754.03 Mbit/s

95th percentile per-packet one-way delay: 139.063 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 450.40 Mbit/s

95th percentile per-packet one-way delay: 142.908 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 368.85 Mbit/s

95th percentile per-packet one-way delay: 136.896 ms

Loss rate: 0.01%

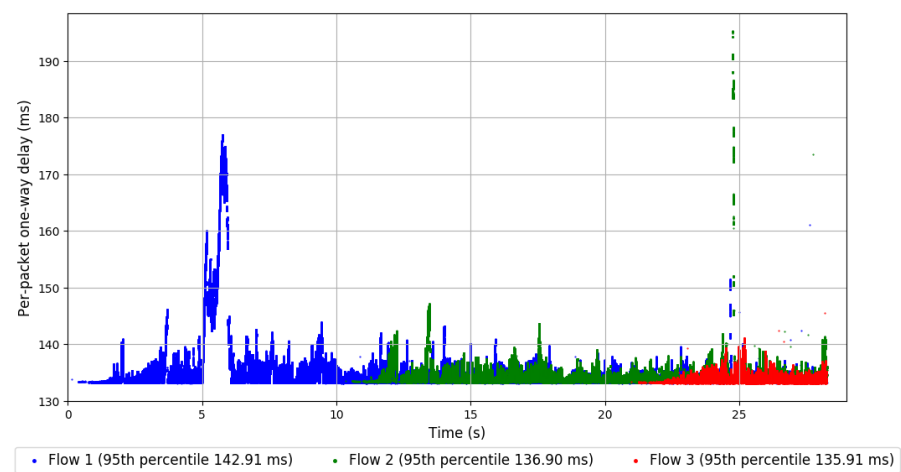
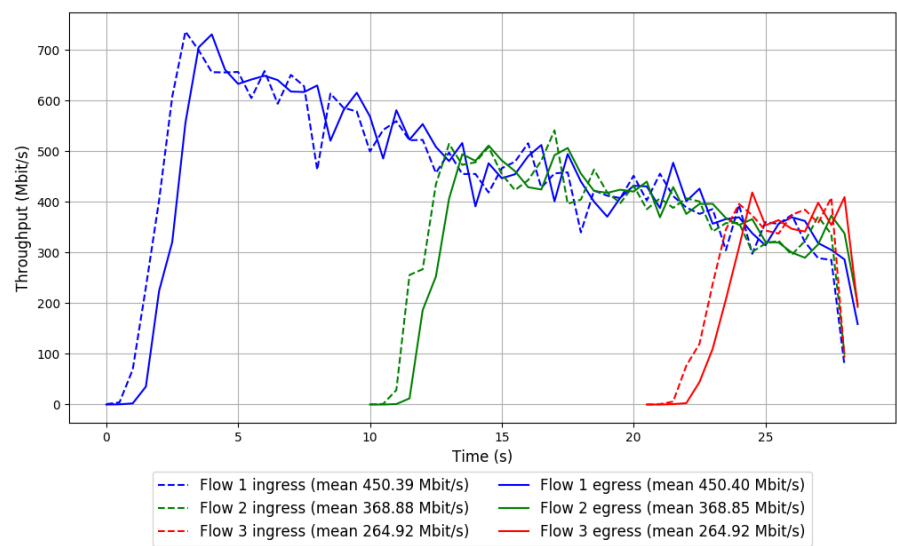
-- Flow 3:

Average throughput: 264.92 Mbit/s

95th percentile per-packet one-way delay: 135.915 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC3 — Data Link



Run 5: Statistics of Indigo-MusesC3

Start at: 2019-01-25 08:40:51

End at: 2019-01-25 08:41:21

Local clock offset: 0.143 ms

Remote clock offset: 0.007 ms

# Below is generated by plot.py at 2019-01-25 10:10:17

# Datalink statistics

-- Total of 3 flows:

Average throughput: 705.77 Mbit/s

95th percentile per-packet one-way delay: 136.829 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 405.53 Mbit/s

95th percentile per-packet one-way delay: 137.108 ms

Loss rate: 0.01%

-- Flow 2:

Average throughput: 362.61 Mbit/s

95th percentile per-packet one-way delay: 136.614 ms

Loss rate: 0.00%

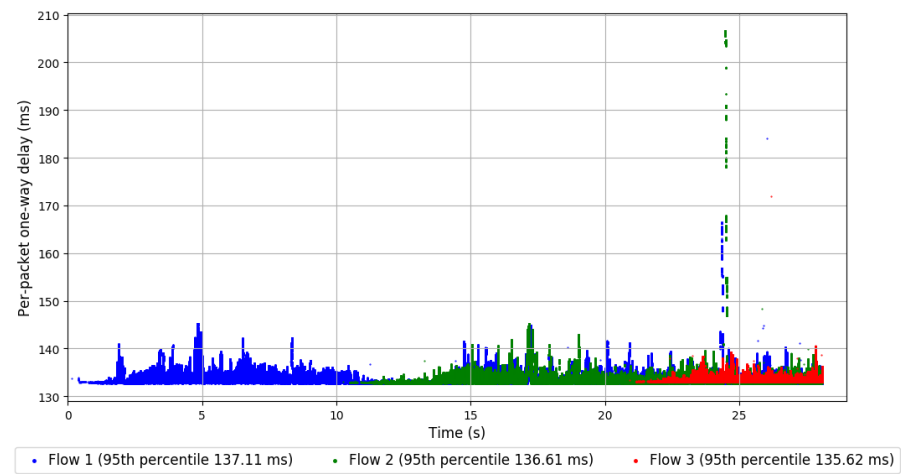
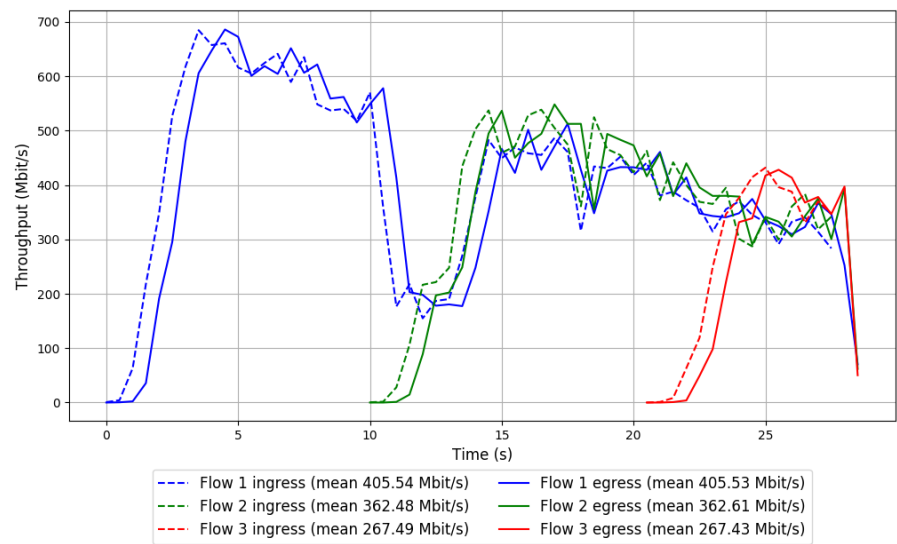
-- Flow 3:

Average throughput: 267.43 Mbit/s

95th percentile per-packet one-way delay: 135.623 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesC3 — Data Link

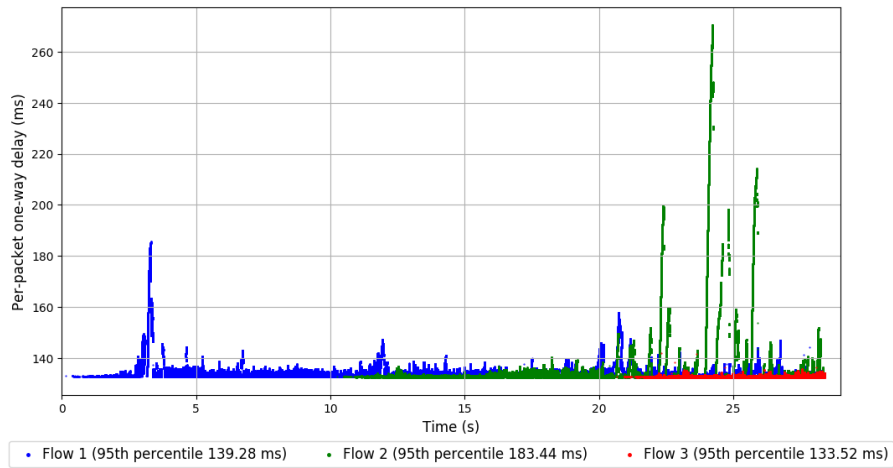
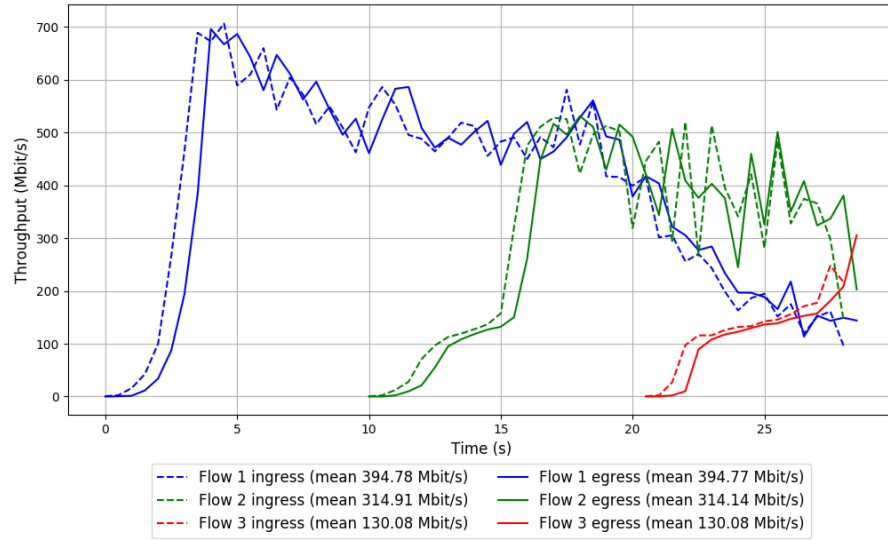


Run 1: Statistics of Indigo-MusesC5

Start at: 2019-01-25 05:24:40  
End at: 2019-01-25 05:25:10  
Local clock offset: 0.198 ms  
Remote clock offset: -0.021 ms

# Below is generated by plot.py at 2019-01-25 10:10:17  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 631.77 Mbit/s  
95th percentile per-packet one-way delay: 147.167 ms  
Loss rate: 0.13%  
-- Flow 1:  
Average throughput: 394.77 Mbit/s  
95th percentile per-packet one-way delay: 139.284 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 314.14 Mbit/s  
95th percentile per-packet one-way delay: 183.441 ms  
Loss rate: 0.41%  
-- Flow 3:  
Average throughput: 130.08 Mbit/s  
95th percentile per-packet one-way delay: 133.524 ms  
Loss rate: 0.00%

# Run 1: Report of Indigo-MusesC5 — Data Link



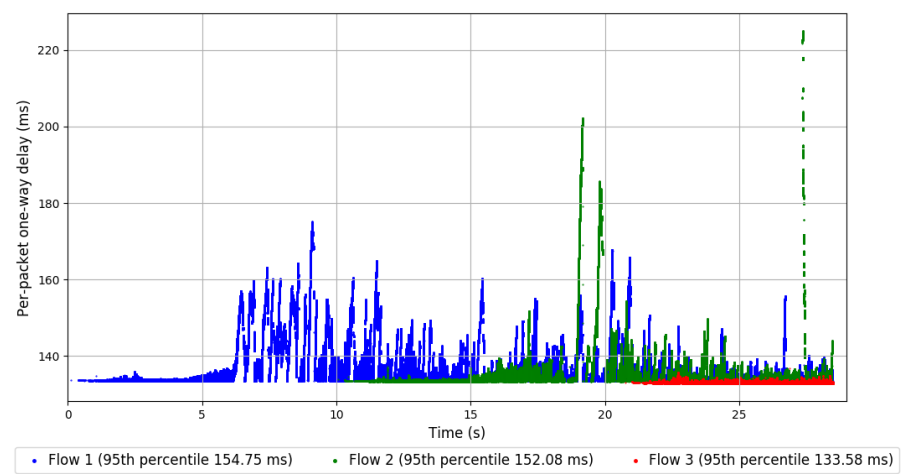
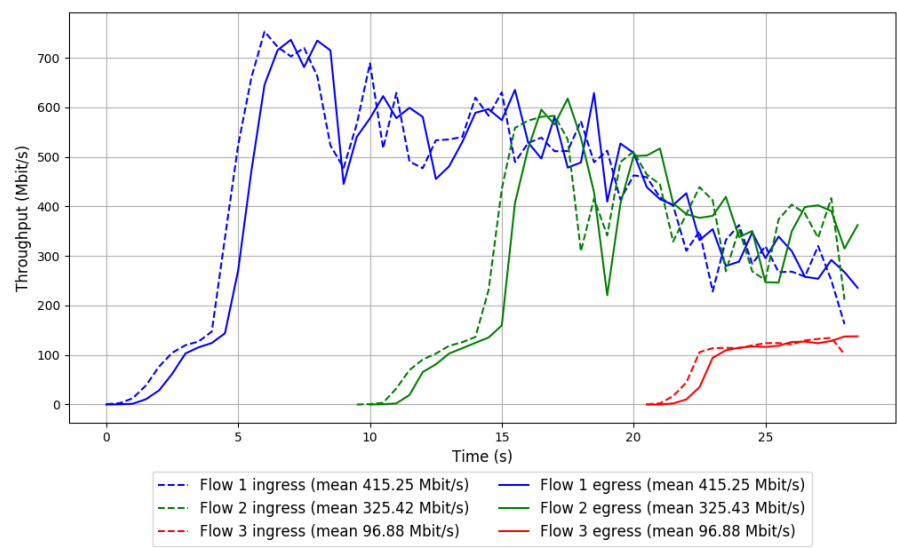


Run 2: Statistics of Indigo-MusesC5

Start at: 2019-01-25 06:07:01  
End at: 2019-01-25 06:07:31  
Local clock offset: -0.518 ms  
Remote clock offset: -0.143 ms

# Below is generated by plot.py at 2019-01-25 10:12:55  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 653.03 Mbit/s  
95th percentile per-packet one-way delay: 154.331 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 415.25 Mbit/s  
95th percentile per-packet one-way delay: 154.749 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 325.43 Mbit/s  
95th percentile per-packet one-way delay: 152.080 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 96.88 Mbit/s  
95th percentile per-packet one-way delay: 133.576 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesC5 — Data Link

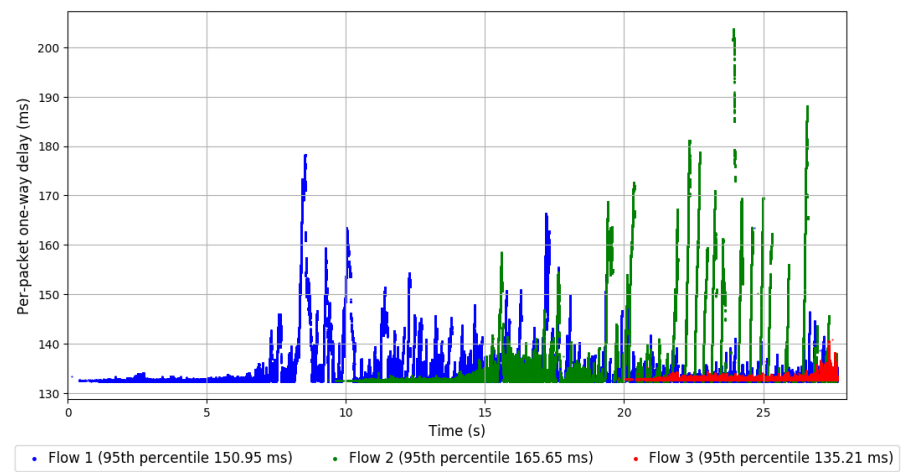
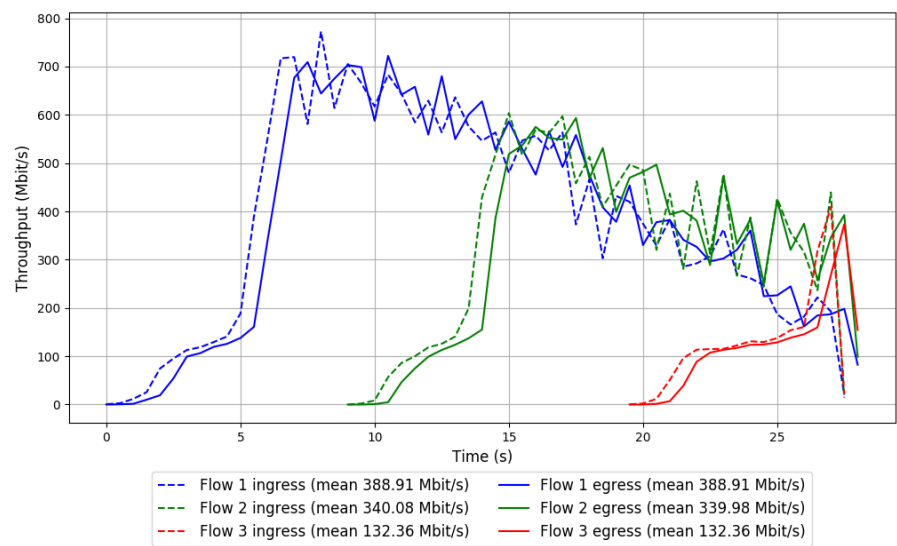


Run 3: Statistics of Indigo-MusesC5

Start at: 2019-01-25 06:49:07  
End at: 2019-01-25 06:49:37  
Local clock offset: 0.274 ms  
Remote clock offset: -0.038 ms

# Below is generated by plot.py at 2019-01-25 10:15:28  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 652.59 Mbit/s  
95th percentile per-packet one-way delay: 158.409 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 388.91 Mbit/s  
95th percentile per-packet one-way delay: 150.954 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 339.98 Mbit/s  
95th percentile per-packet one-way delay: 165.653 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 132.36 Mbit/s  
95th percentile per-packet one-way delay: 135.212 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesC5 — Data Link



Run 4: Statistics of Indigo-MusesC5

Start at: 2019-01-25 07:31:49

End at: 2019-01-25 07:32:19

Local clock offset: -0.104 ms

Remote clock offset: 0.035 ms

# Below is generated by plot.py at 2019-01-25 10:18:28

# Datalink statistics

-- Total of 3 flows:

Average throughput: 643.18 Mbit/s

95th percentile per-packet one-way delay: 153.443 ms

Loss rate: 0.01%

-- Flow 1:

Average throughput: 396.91 Mbit/s

95th percentile per-packet one-way delay: 158.424 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 340.07 Mbit/s

95th percentile per-packet one-way delay: 141.920 ms

Loss rate: 0.03%

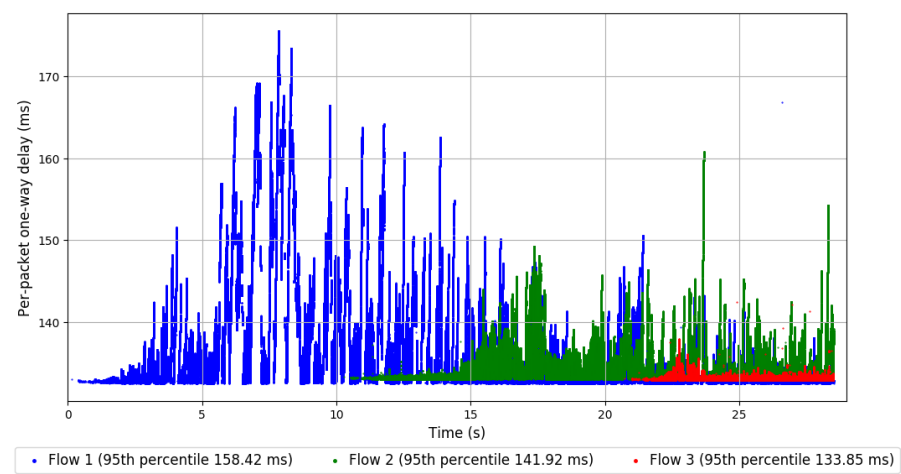
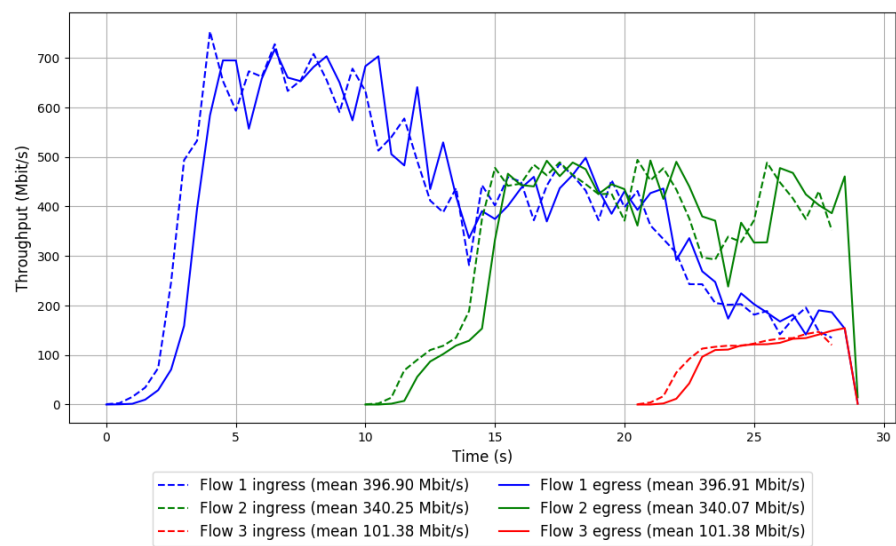
-- Flow 3:

Average throughput: 101.38 Mbit/s

95th percentile per-packet one-way delay: 133.851 ms

Loss rate: 0.00%

Run 4: Report of Indigo-MusesC5 — Data Link

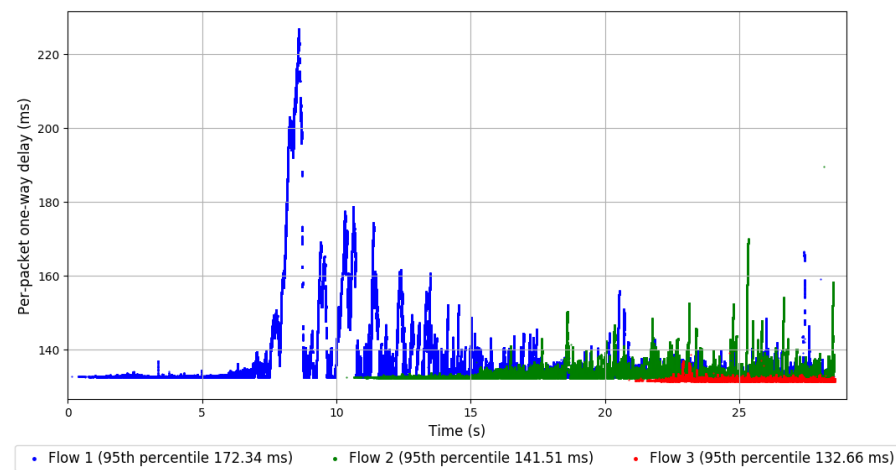
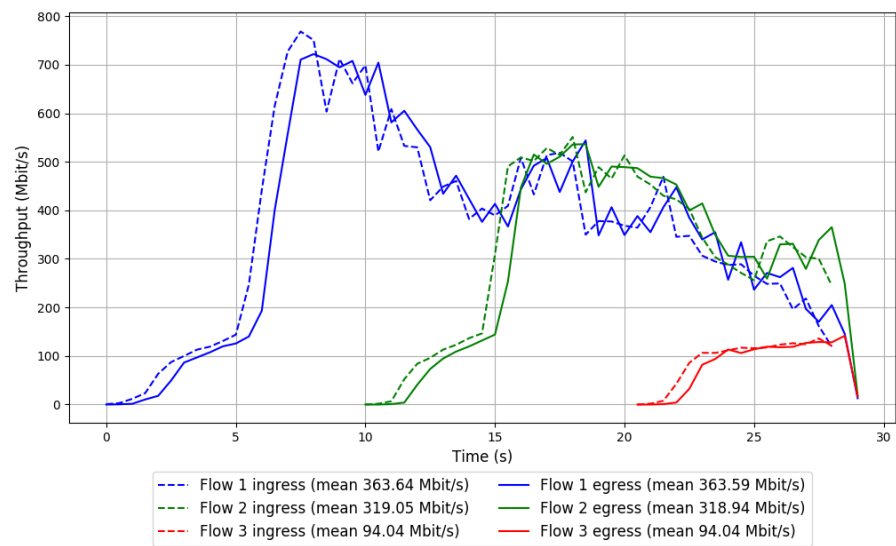


Run 5: Statistics of Indigo-MusesC5

Start at: 2019-01-25 08:12:47  
End at: 2019-01-25 08:13:17  
Local clock offset: 0.255 ms  
Remote clock offset: -0.243 ms

# Below is generated by plot.py at 2019-01-25 10:20:15  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 592.06 Mbit/s  
95th percentile per-packet one-way delay: 161.985 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 363.59 Mbit/s  
95th percentile per-packet one-way delay: 172.341 ms  
Loss rate: 0.01%  
-- Flow 2:  
Average throughput: 318.94 Mbit/s  
95th percentile per-packet one-way delay: 141.514 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 94.04 Mbit/s  
95th percentile per-packet one-way delay: 132.660 ms  
Loss rate: 0.00%

Run 5: Report of Indigo-MusesC5 — Data Link





Run 1: Statistics of Indigo-MusesD

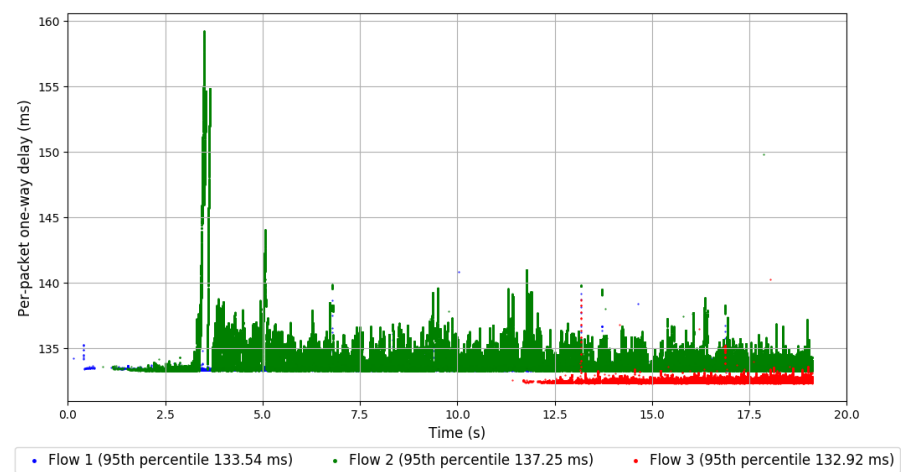
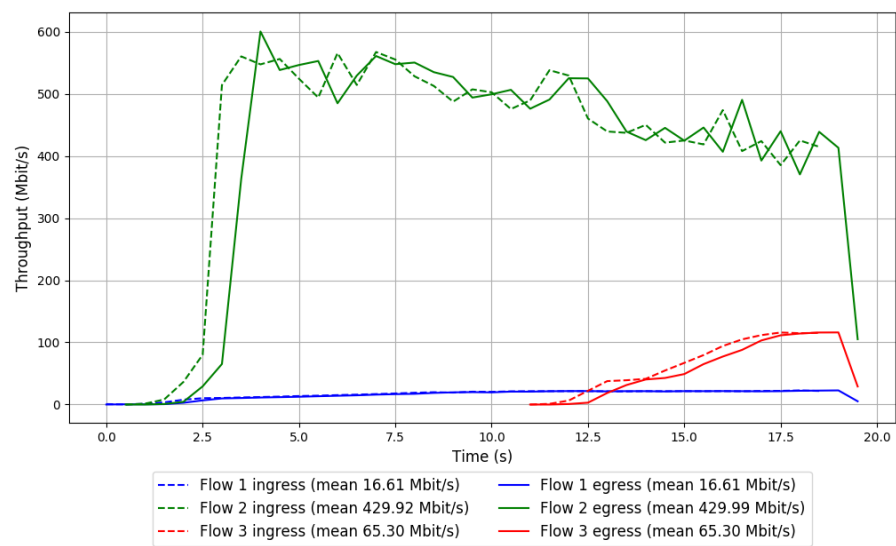
Start at: 2019-01-25 05:14:32

End at: 2019-01-25 05:15:02

Local clock offset: -0.52 ms

Remote clock offset: -0.02 ms

Run 1: Report of Indigo-MusesD — Data Link



Run 2: Statistics of Indigo-MusesD

Start at: 2019-01-25 05:55:56

End at: 2019-01-25 05:56:26

Local clock offset: -0.26 ms

Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-01-25 10:22:13

# Datalink statistics

-- Total of 3 flows:

Average throughput: 682.74 Mbit/s

95th percentile per-packet one-way delay: 147.565 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 412.70 Mbit/s

95th percentile per-packet one-way delay: 146.520 ms

Loss rate: 0.47%

-- Flow 2:

Average throughput: 392.09 Mbit/s

95th percentile per-packet one-way delay: 150.803 ms

Loss rate: 0.00%

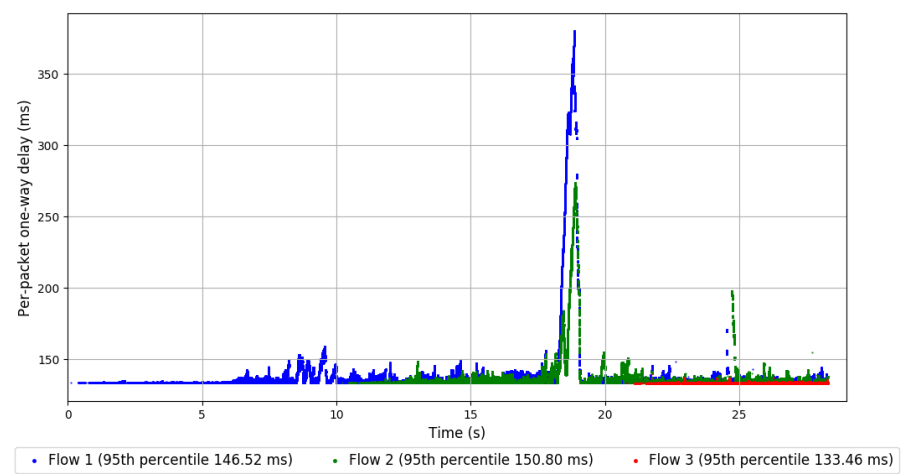
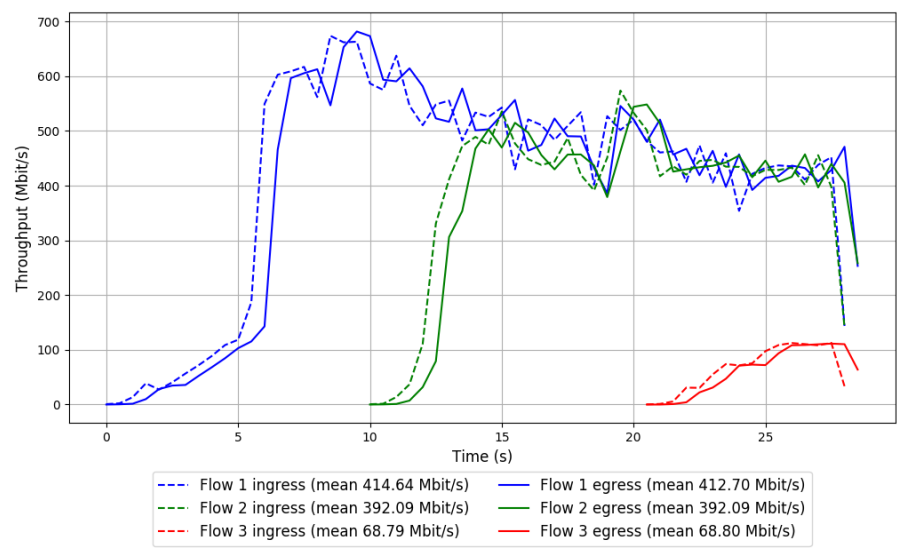
-- Flow 3:

Average throughput: 68.80 Mbit/s

95th percentile per-packet one-way delay: 133.459 ms

Loss rate: 0.00%

Run 2: Report of Indigo-MusesD — Data Link

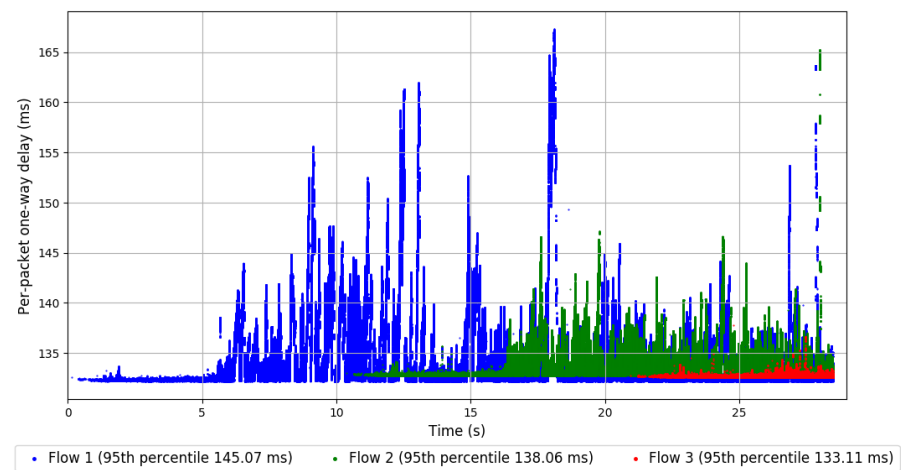
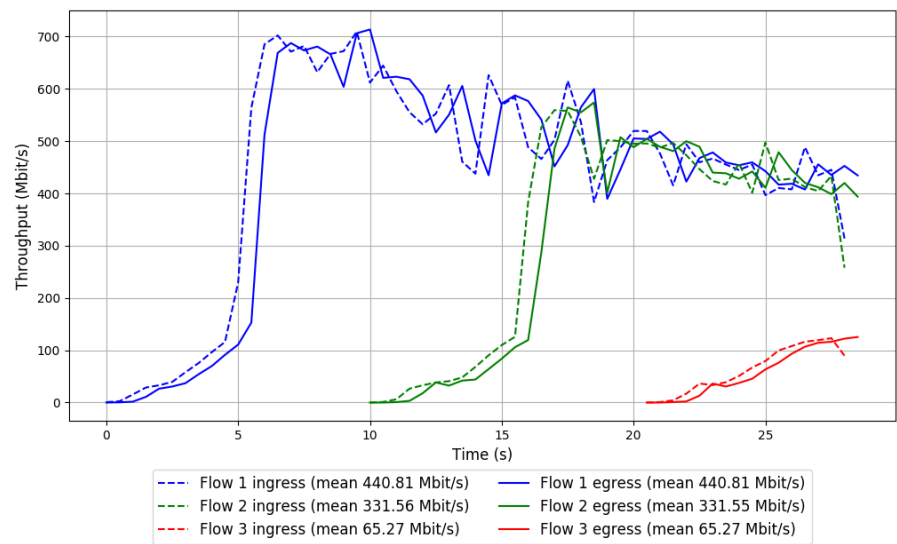


Run 3: Statistics of Indigo-MusesD

Start at: 2019-01-25 06:38:21  
End at: 2019-01-25 06:38:51  
Local clock offset: 0.046 ms  
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-01-25 10:22:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 669.82 Mbit/s  
95th percentile per-packet one-way delay: 142.515 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 440.81 Mbit/s  
95th percentile per-packet one-way delay: 145.075 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 331.55 Mbit/s  
95th percentile per-packet one-way delay: 138.058 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 65.27 Mbit/s  
95th percentile per-packet one-way delay: 133.114 ms  
Loss rate: 0.00%

Run 3: Report of Indigo-MusesD — Data Link

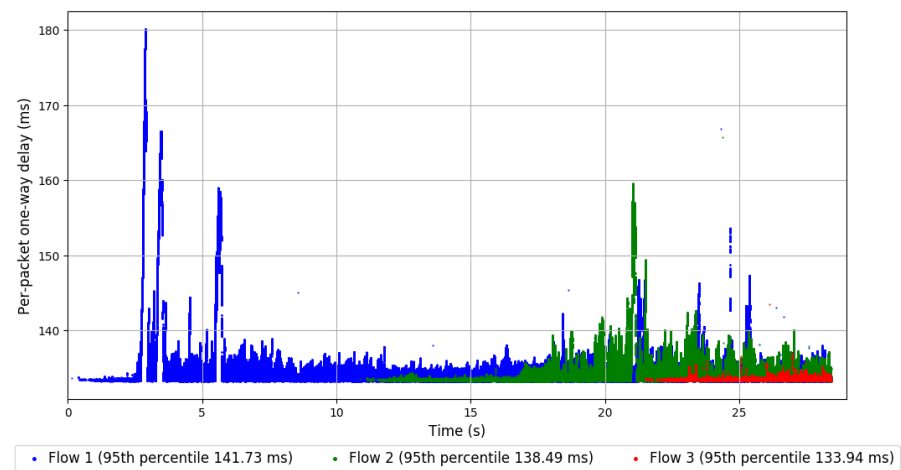
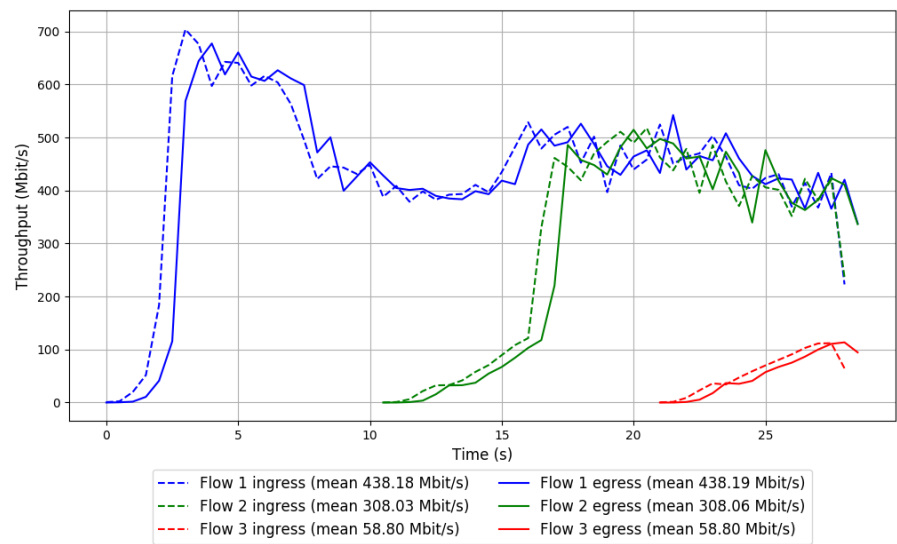


Run 4: Statistics of Indigo-MusesD

Start at: 2019-01-25 07:20:42  
End at: 2019-01-25 07:21:12  
Local clock offset: -0.486 ms  
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-01-25 10:22:16  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 644.25 Mbit/s  
95th percentile per-packet one-way delay: 139.668 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 438.19 Mbit/s  
95th percentile per-packet one-way delay: 141.730 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 308.06 Mbit/s  
95th percentile per-packet one-way delay: 138.486 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 58.80 Mbit/s  
95th percentile per-packet one-way delay: 133.940 ms  
Loss rate: 0.00%

Run 4: Report of Indigo-MusesD — Data Link





Run 5: Statistics of Indigo-MusesD

Start at: 2019-01-25 08:01:35

End at: 2019-01-25 08:02:05

Local clock offset: 0.005 ms

Remote clock offset: 0.027 ms

# Below is generated by plot.py at 2019-01-25 10:26:48

# Datalink statistics

-- Total of 3 flows:

Average throughput: 732.83 Mbit/s

95th percentile per-packet one-way delay: 141.012 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 473.20 Mbit/s

95th percentile per-packet one-way delay: 142.413 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 385.37 Mbit/s

95th percentile per-packet one-way delay: 138.874 ms

Loss rate: 0.00%

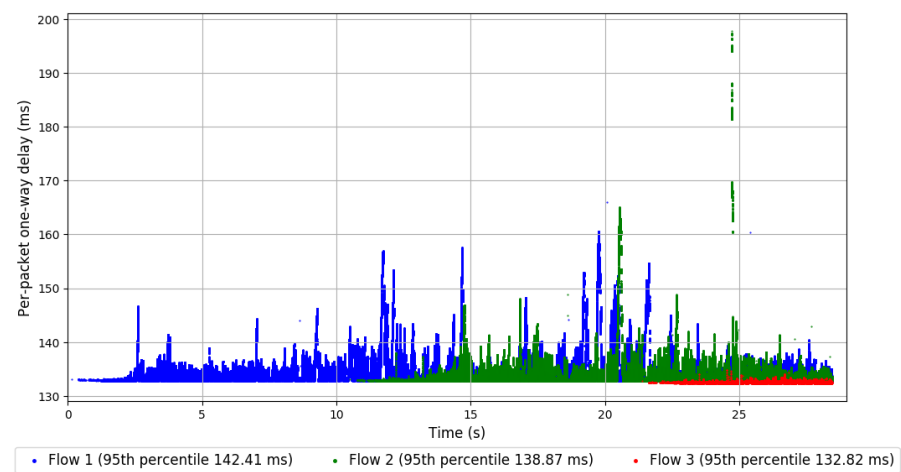
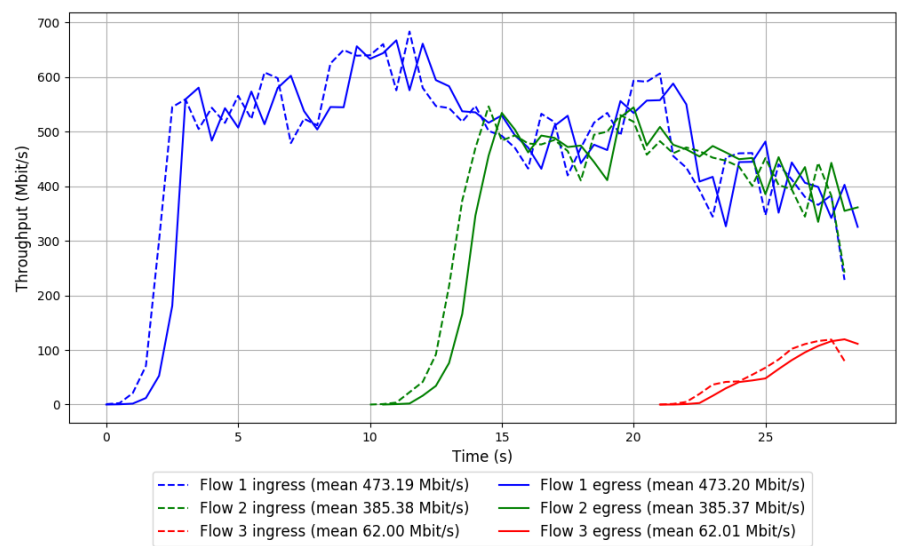
-- Flow 3:

Average throughput: 62.01 Mbit/s

95th percentile per-packet one-way delay: 132.821 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesD — Data Link



Run 1: Statistics of Indigo-MusesT

Start at: 2019-01-25 05:32:14

End at: 2019-01-25 05:32:44

Local clock offset: -0.443 ms

Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2019-01-25 10:29:33

# Datalink statistics

-- Total of 3 flows:

Average throughput: 793.69 Mbit/s

95th percentile per-packet one-way delay: 156.811 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 510.31 Mbit/s

95th percentile per-packet one-way delay: 161.929 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 401.57 Mbit/s

95th percentile per-packet one-way delay: 148.415 ms

Loss rate: 0.00%

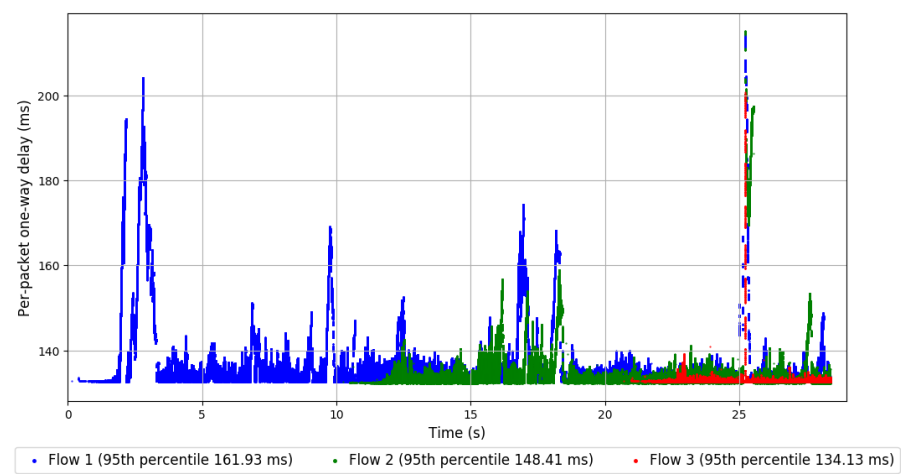
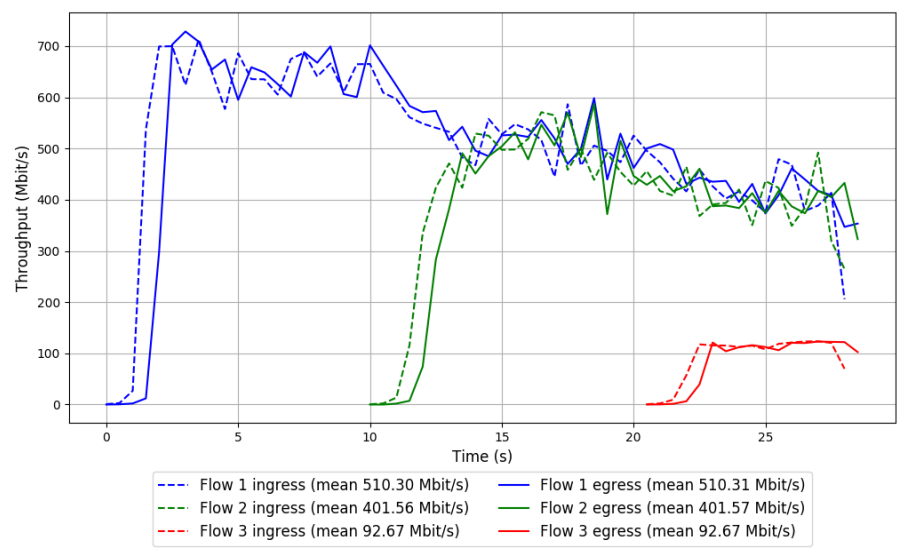
-- Flow 3:

Average throughput: 92.67 Mbit/s

95th percentile per-packet one-way delay: 134.131 ms

Loss rate: 0.00%

Run 1: Report of Indigo-MusesT — Data Link

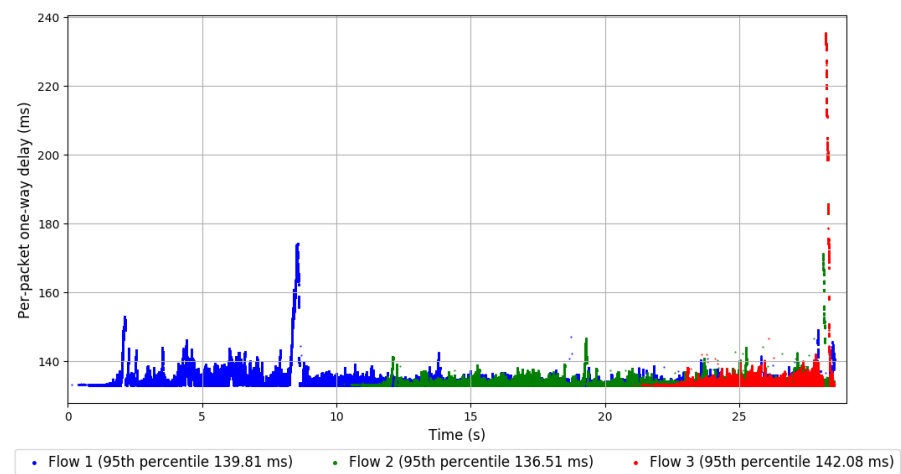
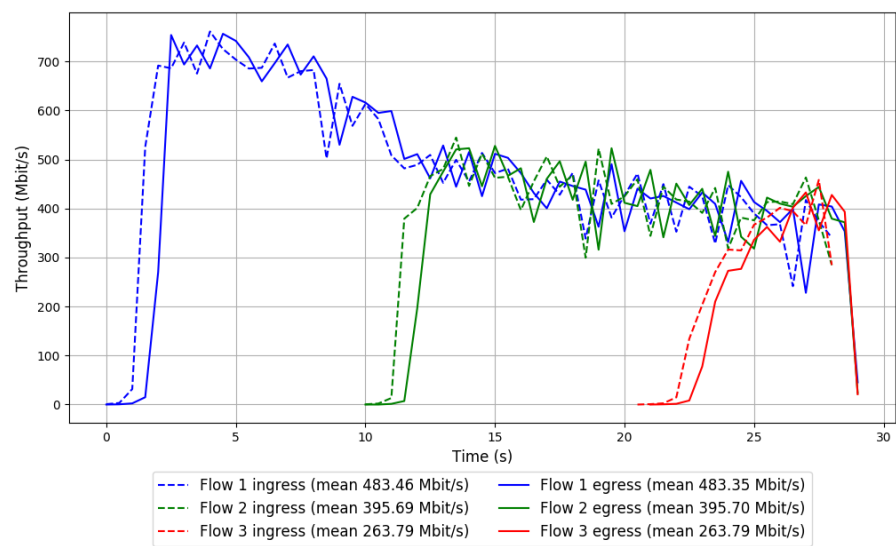


Run 2: Statistics of Indigo-MusesT

Start at: 2019-01-25 06:14:14  
End at: 2019-01-25 06:14:44  
Local clock offset: -0.093 ms  
Remote clock offset: -0.107 ms

# Below is generated by plot.py at 2019-01-25 10:30:25  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 806.45 Mbit/s  
95th percentile per-packet one-way delay: 138.867 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 483.35 Mbit/s  
95th percentile per-packet one-way delay: 139.814 ms  
Loss rate: 0.02%  
-- Flow 2:  
Average throughput: 395.70 Mbit/s  
95th percentile per-packet one-way delay: 136.508 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 263.79 Mbit/s  
95th percentile per-packet one-way delay: 142.081 ms  
Loss rate: 0.00%

Run 2: Report of Indigo-MusesT — Data Link



Run 3: Statistics of Indigo-MusesT

Start at: 2019-01-25 06:56:13

End at: 2019-01-25 06:56:43

Local clock offset: -0.518 ms

Remote clock offset: 0.269 ms

# Below is generated by plot.py at 2019-01-25 10:33:29

# Datalink statistics

-- Total of 3 flows:

Average throughput: 806.08 Mbit/s

95th percentile per-packet one-way delay: 173.690 ms

Loss rate: 0.22%

-- Flow 1:

Average throughput: 473.12 Mbit/s

95th percentile per-packet one-way delay: 183.680 ms

Loss rate: 0.35%

-- Flow 2:

Average throughput: 412.49 Mbit/s

95th percentile per-packet one-way delay: 158.852 ms

Loss rate: 0.04%

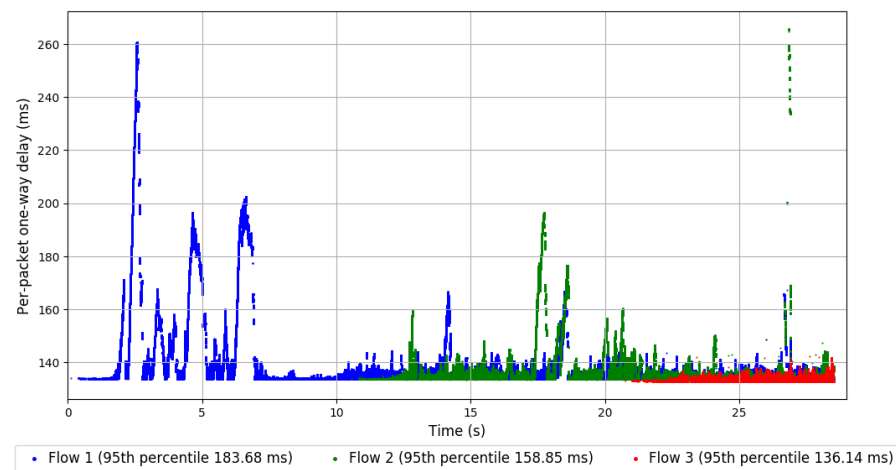
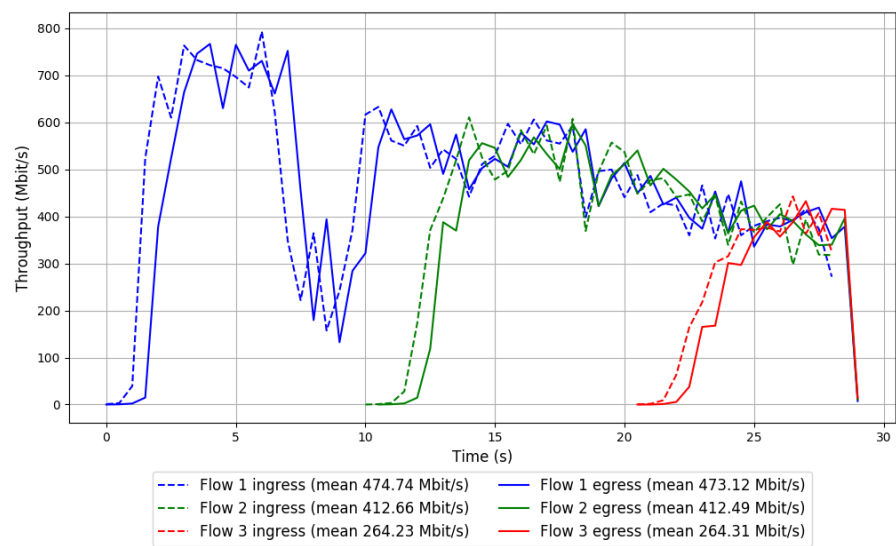
-- Flow 3:

Average throughput: 264.31 Mbit/s

95th percentile per-packet one-way delay: 136.140 ms

Loss rate: 0.00%

Run 3: Report of Indigo-MusesT — Data Link



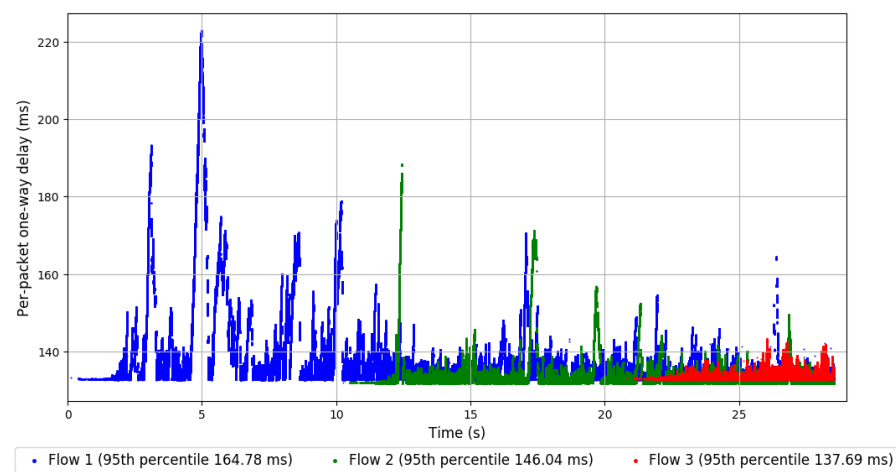
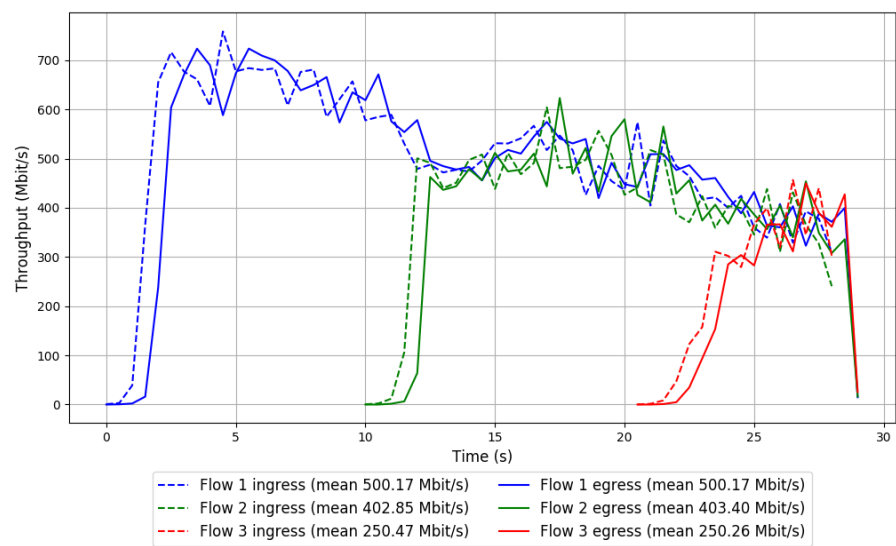


Run 4: Statistics of Indigo-MusesT

Start at: 2019-01-25 07:38:39  
End at: 2019-01-25 07:39:09  
Local clock offset: 0.11 ms  
Remote clock offset: -0.148 ms

# Below is generated by plot.py at 2019-01-25 10:35:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 827.69 Mbit/s  
95th percentile per-packet one-way delay: 160.527 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 500.17 Mbit/s  
95th percentile per-packet one-way delay: 164.777 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 403.40 Mbit/s  
95th percentile per-packet one-way delay: 146.044 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 250.26 Mbit/s  
95th percentile per-packet one-way delay: 137.687 ms  
Loss rate: 0.08%

Run 4: Report of Indigo-MusesT — Data Link



Run 5: Statistics of Indigo-MusesT

Start at: 2019-01-25 08:19:53

End at: 2019-01-25 08:20:23

Local clock offset: -0.106 ms

Remote clock offset: 0.09 ms

# Below is generated by plot.py at 2019-01-25 10:36:41

# Datalink statistics

-- Total of 3 flows:

Average throughput: 842.76 Mbit/s

95th percentile per-packet one-way delay: 185.499 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 512.91 Mbit/s

95th percentile per-packet one-way delay: 193.088 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 399.86 Mbit/s

95th percentile per-packet one-way delay: 155.339 ms

Loss rate: 0.00%

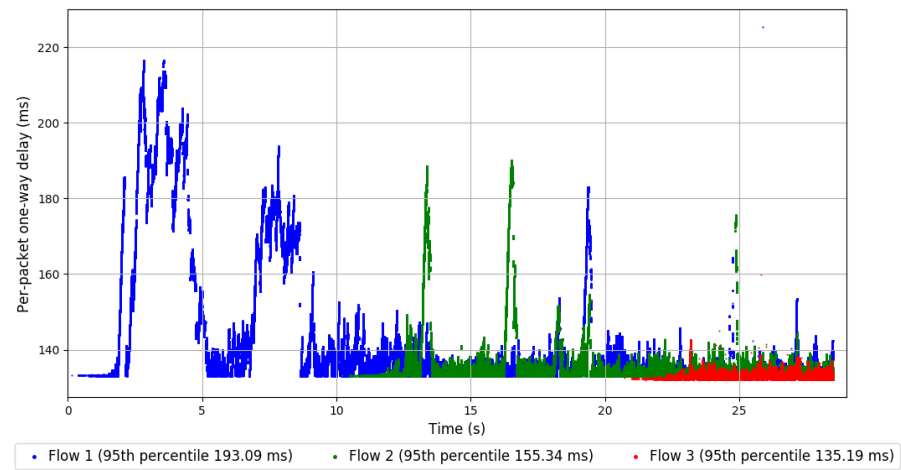
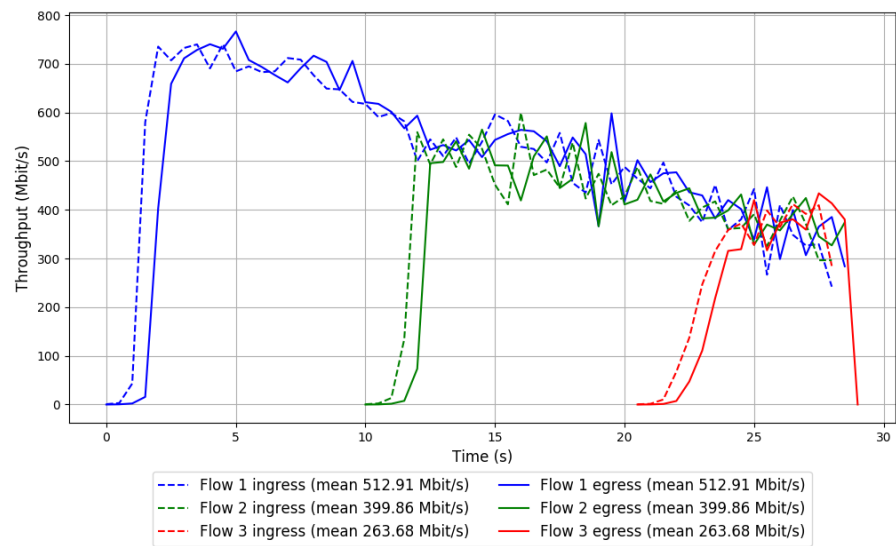
-- Flow 3:

Average throughput: 263.68 Mbit/s

95th percentile per-packet one-way delay: 135.195 ms

Loss rate: 0.00%

Run 5: Report of Indigo-MusesT — Data Link

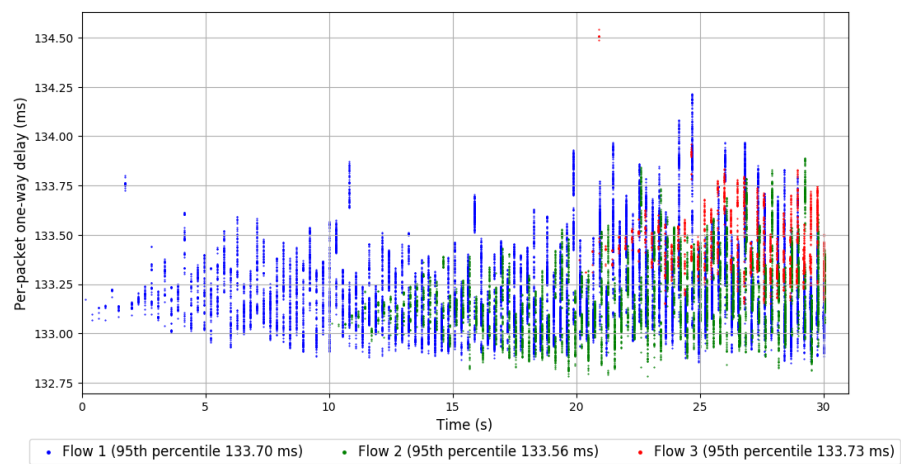
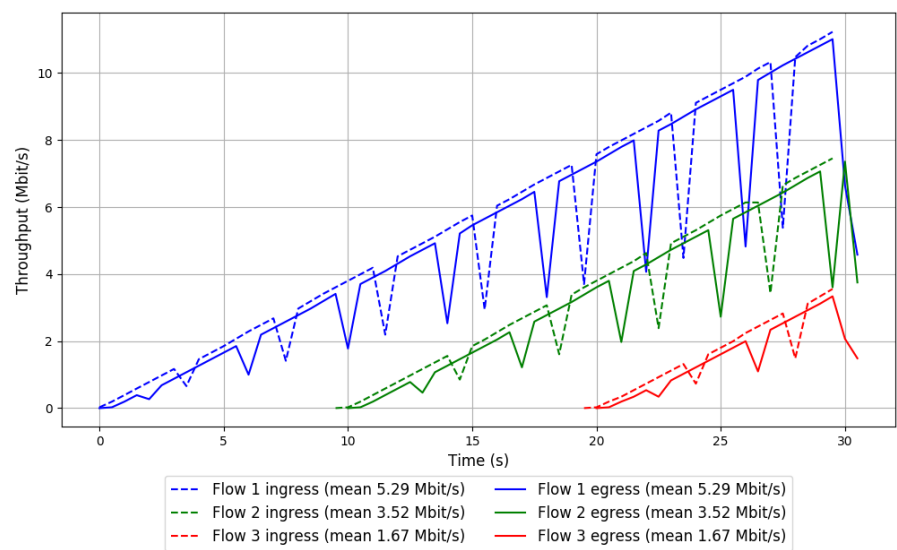


```
Run 1: Statistics of LEDBAT

Start at: 2019-01-25 05:30:53
End at: 2019-01-25 05:31:23
Local clock offset: -0.208 ms
Remote clock offset: 0.054 ms

# Below is generated by plot.py at 2019-01-25 10:36:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 133.679 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 133.702 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 133.562 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 133.728 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

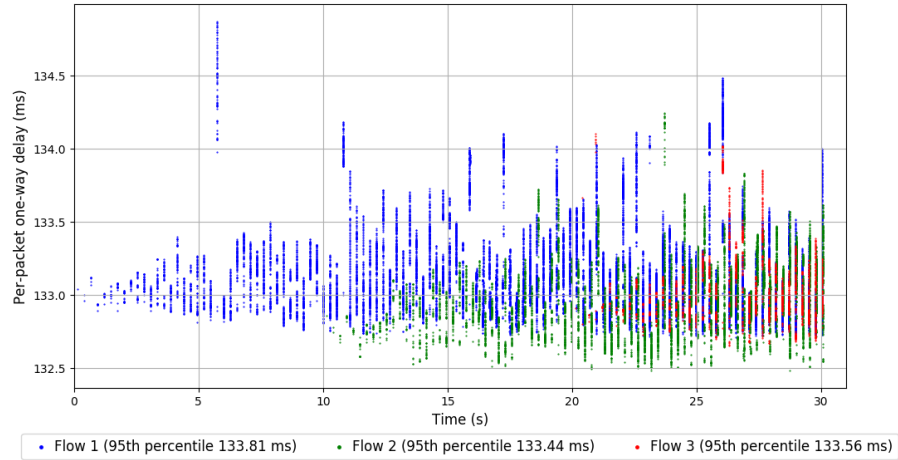
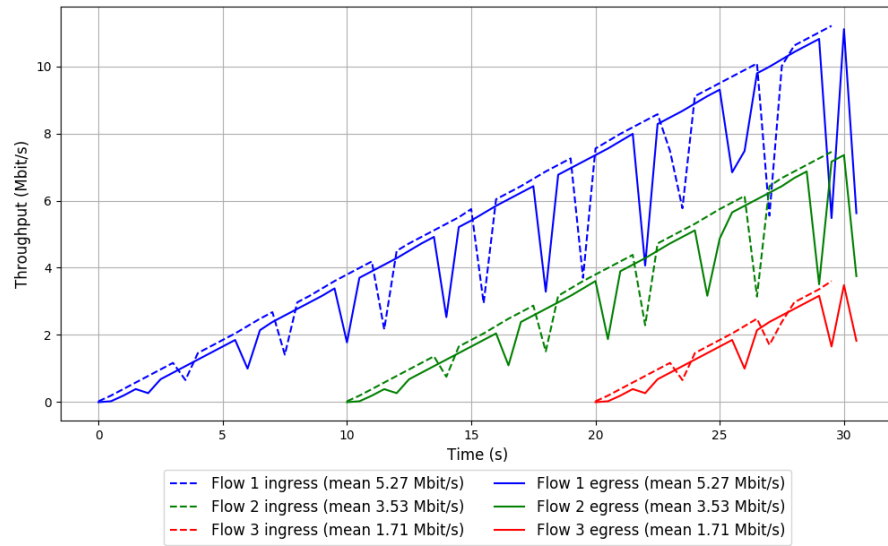


Run 2: Statistics of LEDBAT

Start at: 2019-01-25 06:12:54  
End at: 2019-01-25 06:13:24  
Local clock offset: -0.106 ms  
Remote clock offset: -0.427 ms

# Below is generated by plot.py at 2019-01-25 10:36:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.18 Mbit/s  
95th percentile per-packet one-way delay: 133.684 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 5.27 Mbit/s  
95th percentile per-packet one-way delay: 133.813 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 3.53 Mbit/s  
95th percentile per-packet one-way delay: 133.435 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 1.71 Mbit/s  
95th percentile per-packet one-way delay: 133.565 ms  
Loss rate: 0.00%

## Run 2: Report of LEDBAT — Data Link



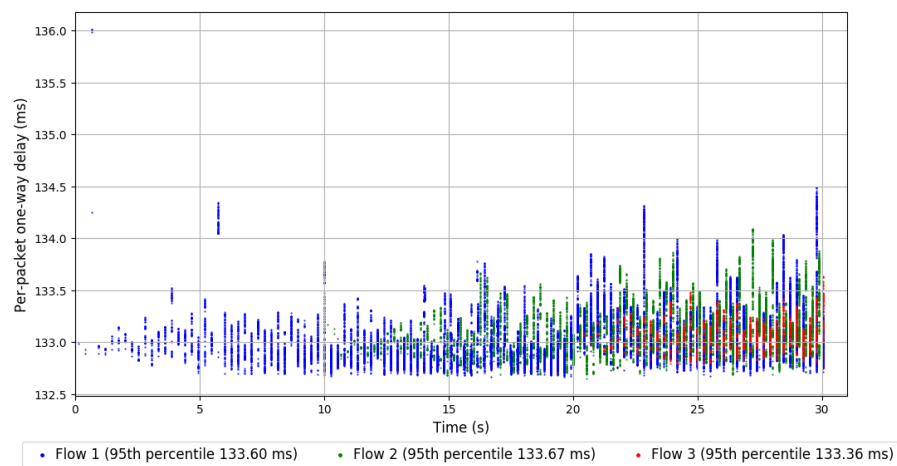
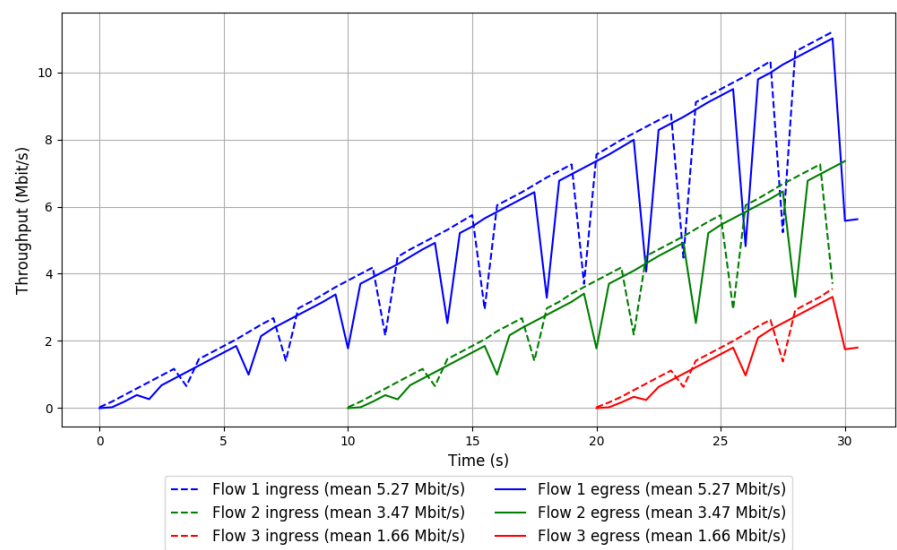


Run 3: Statistics of LEDBAT

Start at: 2019-01-25 06:54:53  
End at: 2019-01-25 06:55:23  
Local clock offset: 0.038 ms  
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-01-25 10:36:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.12 Mbit/s  
95th percentile per-packet one-way delay: 133.609 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 5.27 Mbit/s  
95th percentile per-packet one-way delay: 133.597 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 3.47 Mbit/s  
95th percentile per-packet one-way delay: 133.667 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 1.66 Mbit/s  
95th percentile per-packet one-way delay: 133.364 ms  
Loss rate: 0.00%

Run 3: Report of LEDBAT — Data Link

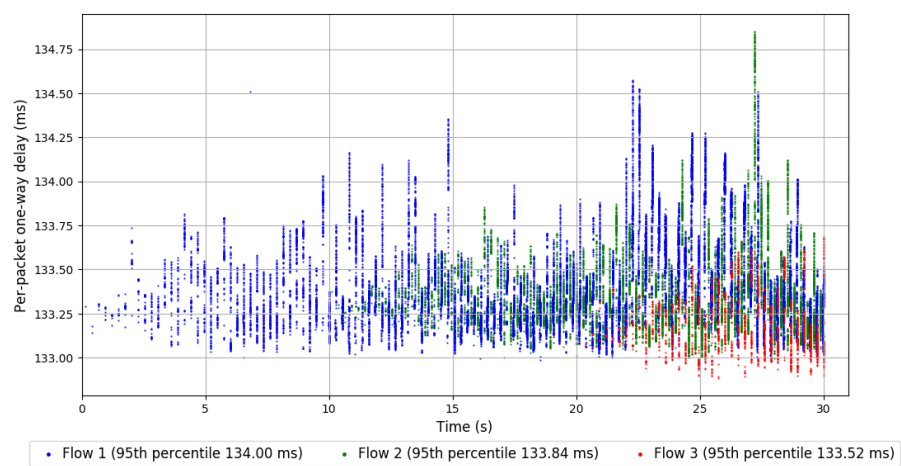
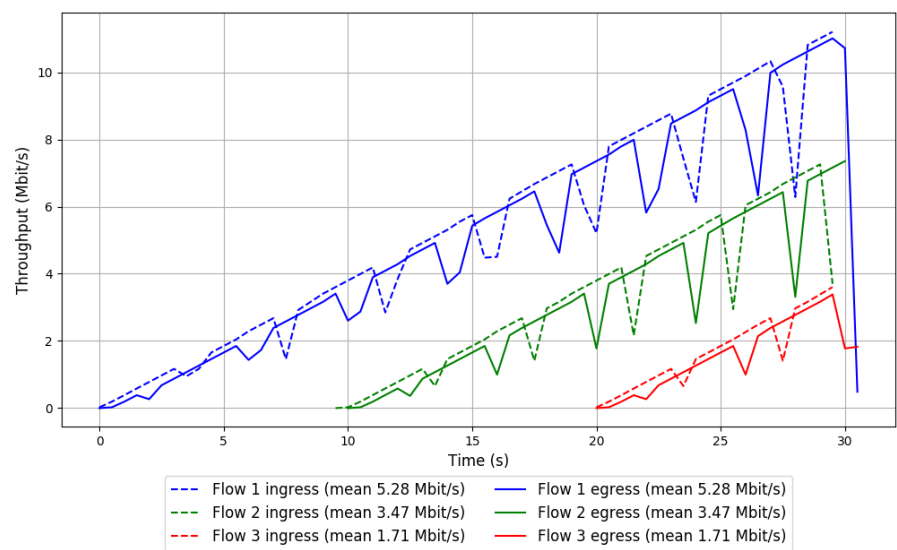


Run 4: Statistics of LEDBAT

Start at: 2019-01-25 07:37:19  
End at: 2019-01-25 07:37:49  
Local clock offset: -0.12 ms  
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-01-25 10:36:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.14 Mbit/s  
95th percentile per-packet one-way delay: 133.931 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 5.28 Mbit/s  
95th percentile per-packet one-way delay: 133.997 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 3.47 Mbit/s  
95th percentile per-packet one-way delay: 133.842 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 1.71 Mbit/s  
95th percentile per-packet one-way delay: 133.524 ms  
Loss rate: 0.00%

Run 4: Report of LEDBAT — Data Link

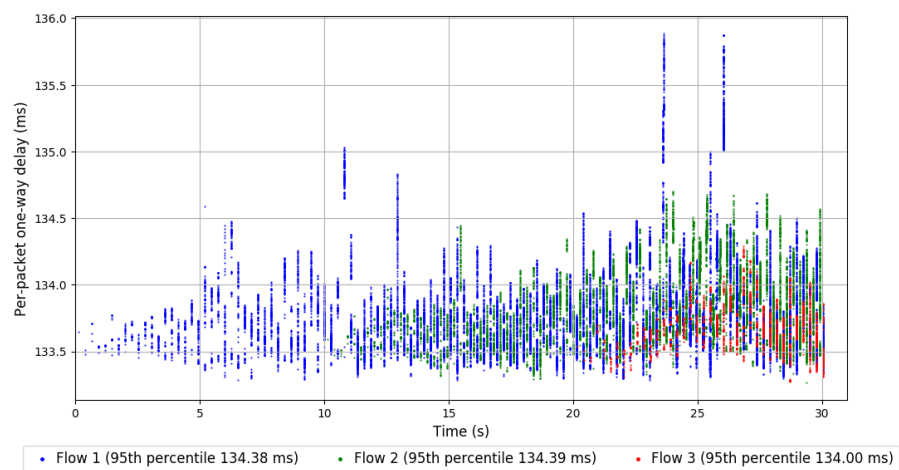
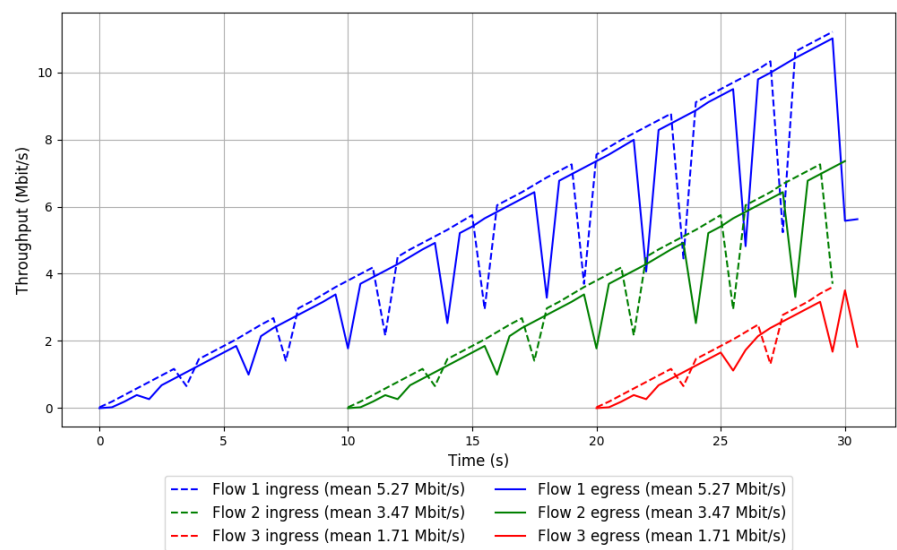


Run 5: Statistics of LEDBAT

Start at: 2019-01-25 08:18:33  
End at: 2019-01-25 08:19:03  
Local clock offset: -0.477 ms  
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-01-25 10:36:41  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 8.12 Mbit/s  
95th percentile per-packet one-way delay: 134.363 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 5.27 Mbit/s  
95th percentile per-packet one-way delay: 134.375 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 3.47 Mbit/s  
95th percentile per-packet one-way delay: 134.390 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 1.71 Mbit/s  
95th percentile per-packet one-way delay: 134.004 ms  
Loss rate: 0.00%

Run 5: Report of LEDBAT — Data Link

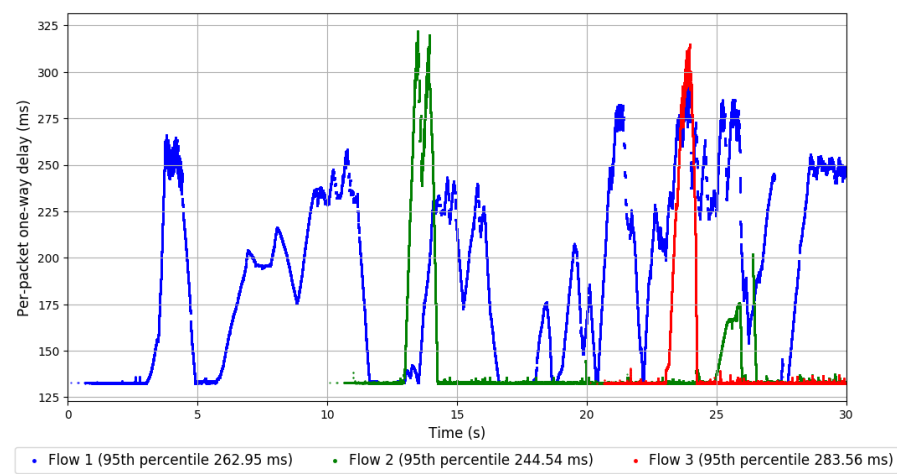
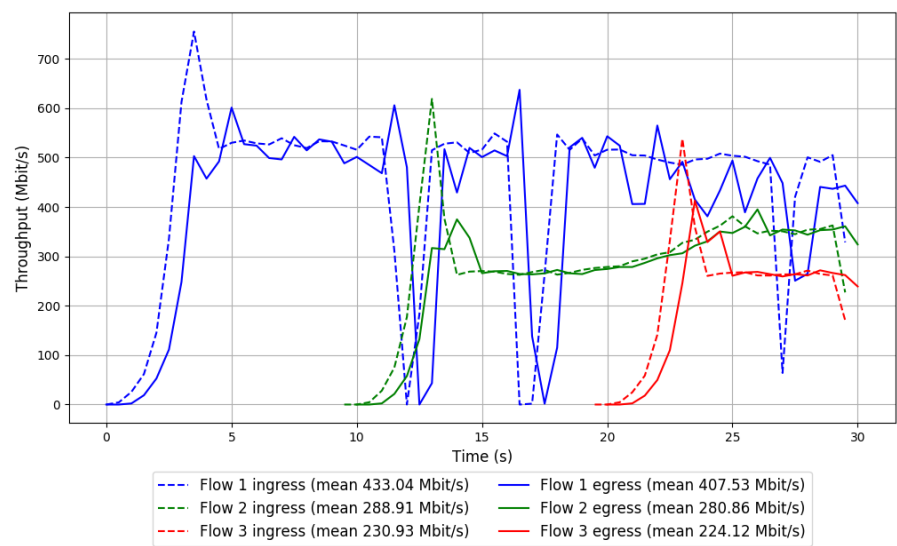


Run 1: Statistics of PCC-Allegro

Start at: 2019-01-25 05:42:44  
End at: 2019-01-25 05:43:14  
Local clock offset: 0.109 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-25 10:48:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 668.25 Mbit/s  
95th percentile per-packet one-way delay: 262.696 ms  
Loss rate: 4.72%  
-- Flow 1:  
Average throughput: 407.53 Mbit/s  
95th percentile per-packet one-way delay: 262.955 ms  
Loss rate: 5.88%  
-- Flow 2:  
Average throughput: 280.86 Mbit/s  
95th percentile per-packet one-way delay: 244.543 ms  
Loss rate: 2.79%  
-- Flow 3:  
Average throughput: 224.12 Mbit/s  
95th percentile per-packet one-way delay: 283.565 ms  
Loss rate: 2.95%

Run 1: Report of PCC-Allegro — Data Link



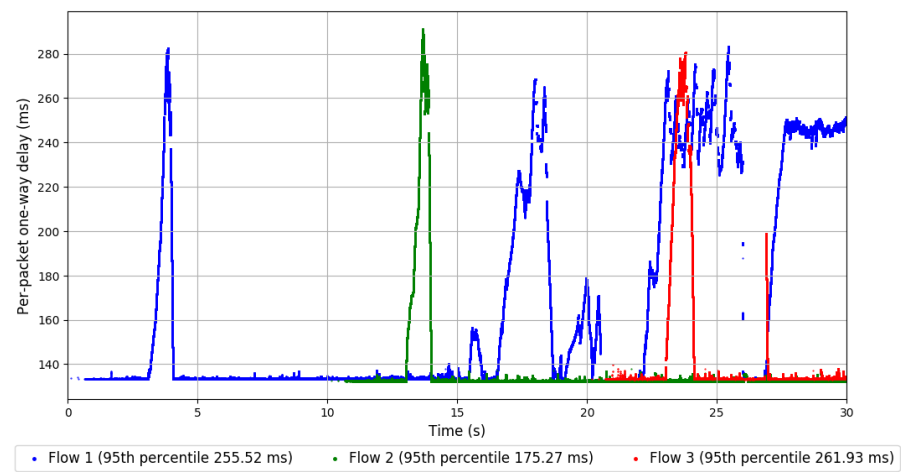
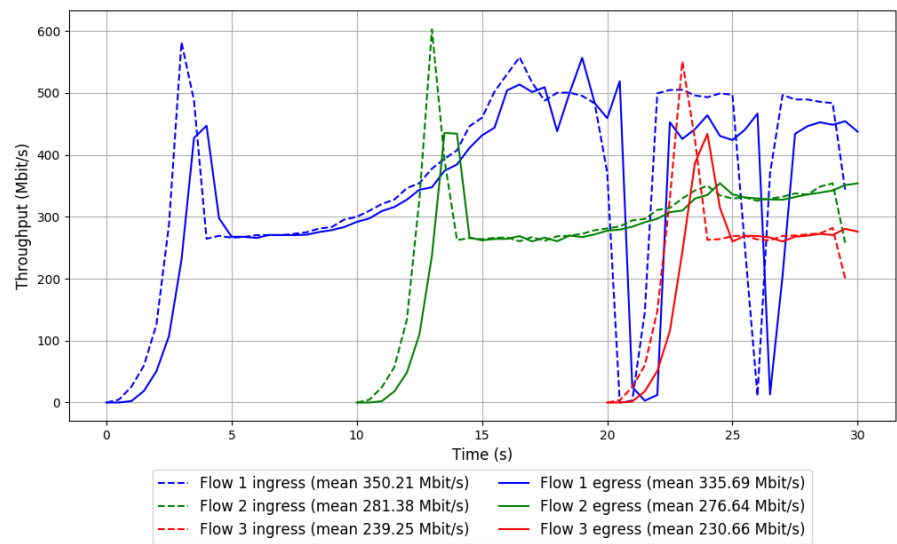


Run 2: Statistics of PCC-Allegro

Start at: 2019-01-25 06:25:02  
End at: 2019-01-25 06:25:32  
Local clock offset: -0.385 ms  
Remote clock offset: -0.026 ms

# Below is generated by plot.py at 2019-01-25 10:48:03  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 595.36 Mbit/s  
95th percentile per-packet one-way delay: 253.360 ms  
Loss rate: 3.34%  
-- Flow 1:  
Average throughput: 335.69 Mbit/s  
95th percentile per-packet one-way delay: 255.521 ms  
Loss rate: 4.14%  
-- Flow 2:  
Average throughput: 276.64 Mbit/s  
95th percentile per-packet one-way delay: 175.267 ms  
Loss rate: 1.69%  
-- Flow 3:  
Average throughput: 230.66 Mbit/s  
95th percentile per-packet one-way delay: 261.927 ms  
Loss rate: 3.67%

Run 2: Report of PCC-Allegro — Data Link



Run 3: Statistics of PCC-Allegro

Start at: 2019-01-25 07:07:20

End at: 2019-01-25 07:07:50

Local clock offset: 0.06 ms

Remote clock offset: 0.021 ms

# Below is generated by plot.py at 2019-01-25 10:50:14

# Datalink statistics

-- Total of 3 flows:

Average throughput: 620.01 Mbit/s

95th percentile per-packet one-way delay: 276.777 ms

Loss rate: 3.69%

-- Flow 1:

Average throughput: 317.94 Mbit/s

95th percentile per-packet one-way delay: 279.641 ms

Loss rate: 2.89%

-- Flow 2:

Average throughput: 341.91 Mbit/s

95th percentile per-packet one-way delay: 257.753 ms

Loss rate: 5.95%

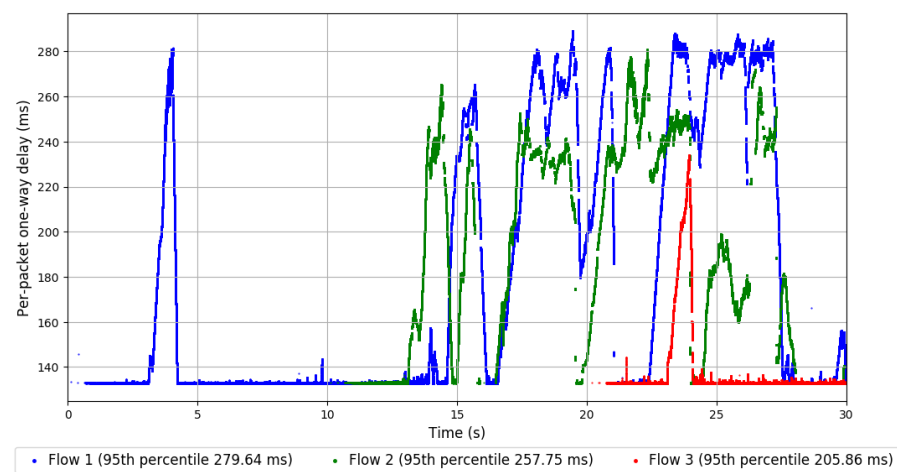
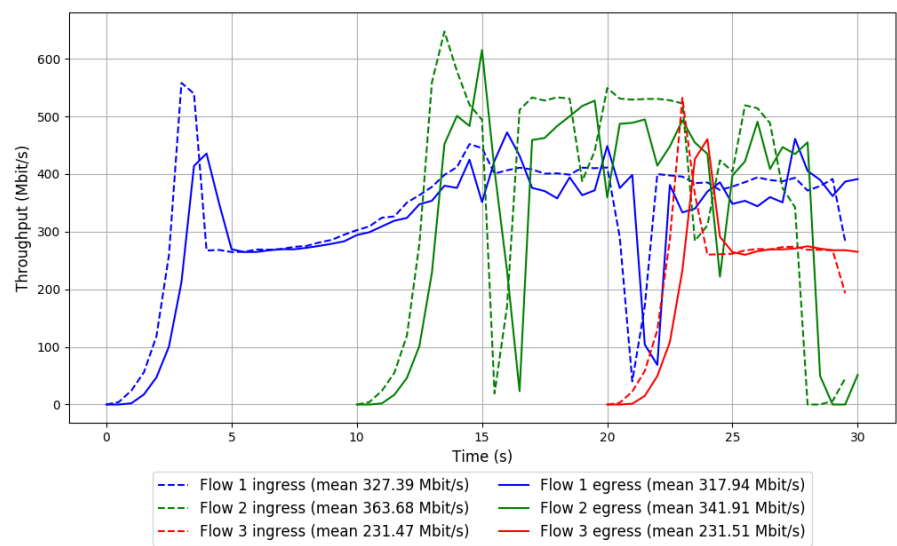
-- Flow 3:

Average throughput: 231.51 Mbit/s

95th percentile per-packet one-way delay: 205.860 ms

Loss rate: 0.00%

Run 3: Report of PCC-Allegro — Data Link

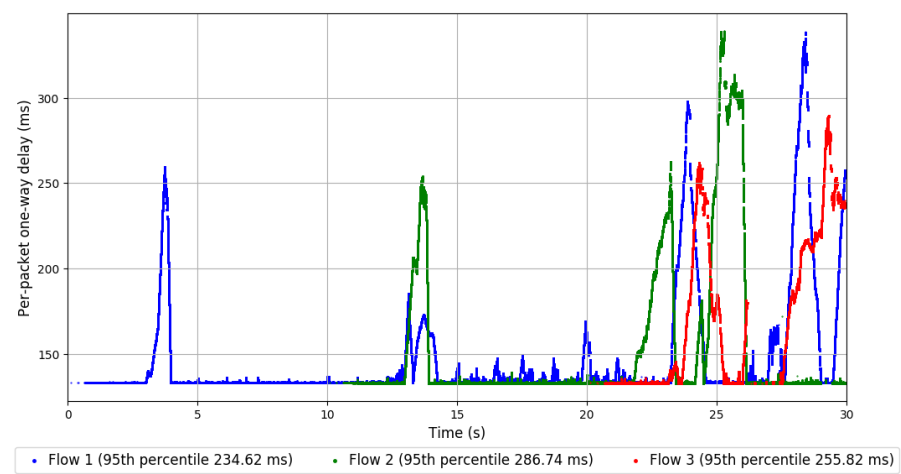
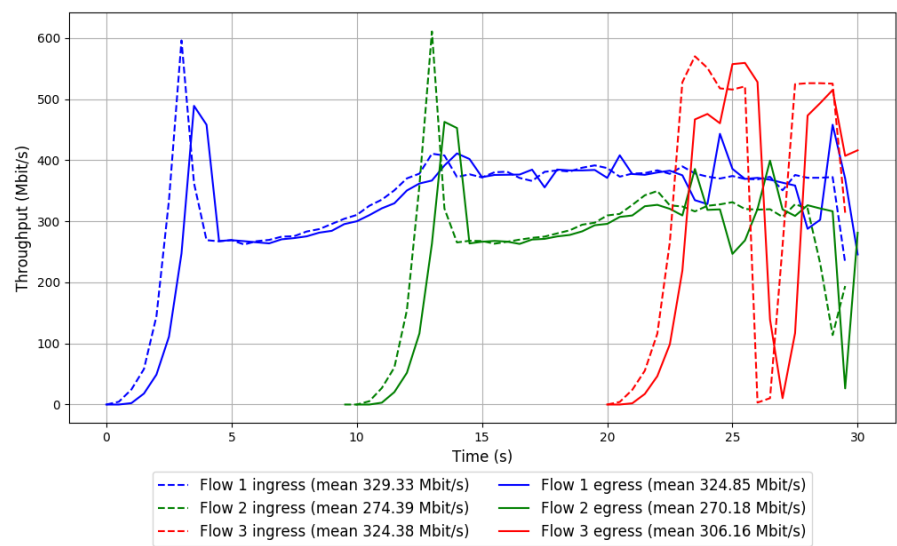


Run 4: Statistics of PCC-Allegro

Start at: 2019-01-25 07:49:04  
End at: 2019-01-25 07:49:34  
Local clock offset: -0.122 ms  
Remote clock offset: -0.138 ms

# Below is generated by plot.py at 2019-01-25 10:52:53  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 605.38 Mbit/s  
95th percentile per-packet one-way delay: 248.865 ms  
Loss rate: 2.14%  
-- Flow 1:  
Average throughput: 324.85 Mbit/s  
95th percentile per-packet one-way delay: 234.622 ms  
Loss rate: 1.36%  
-- Flow 2:  
Average throughput: 270.18 Mbit/s  
95th percentile per-packet one-way delay: 286.739 ms  
Loss rate: 1.53%  
-- Flow 3:  
Average throughput: 306.16 Mbit/s  
95th percentile per-packet one-way delay: 255.821 ms  
Loss rate: 5.59%

Run 4: Report of PCC-Allegro — Data Link

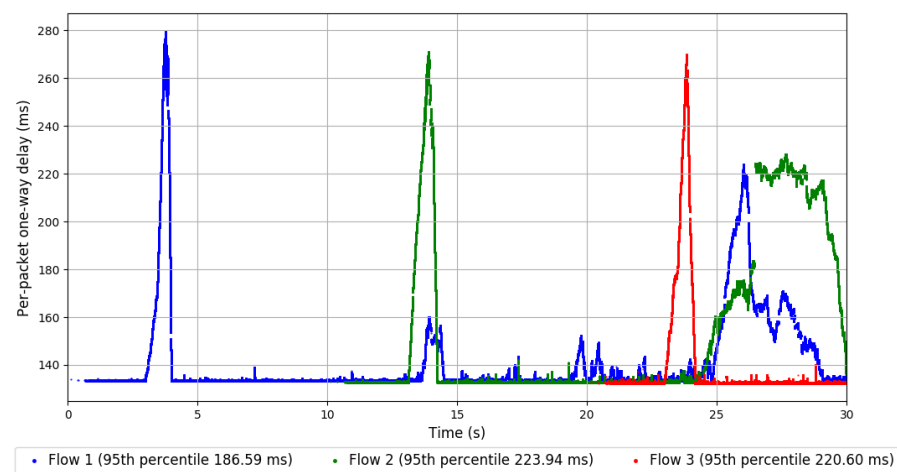
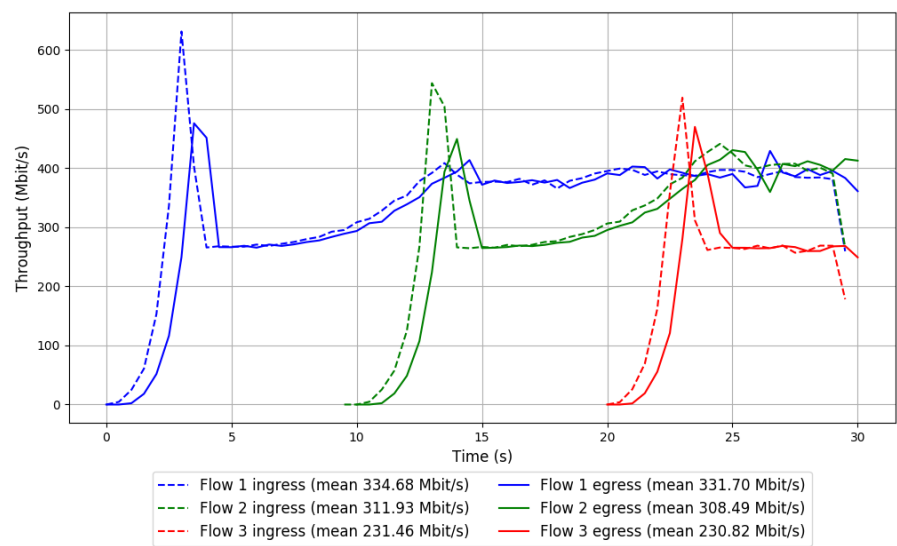


Run 5: Statistics of PCC-Allegro

Start at: 2019-01-25 08:30:00  
End at: 2019-01-25 08:30:30  
Local clock offset: -0.224 ms  
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-01-25 10:54:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 612.73 Mbit/s  
95th percentile per-packet one-way delay: 220.484 ms  
Loss rate: 0.88%  
-- Flow 1:  
Average throughput: 331.70 Mbit/s  
95th percentile per-packet one-way delay: 186.590 ms  
Loss rate: 0.89%  
-- Flow 2:  
Average throughput: 308.49 Mbit/s  
95th percentile per-packet one-way delay: 223.942 ms  
Loss rate: 1.09%  
-- Flow 3:  
Average throughput: 230.82 Mbit/s  
95th percentile per-packet one-way delay: 220.605 ms  
Loss rate: 0.28%

Run 5: Report of PCC-Allegro — Data Link



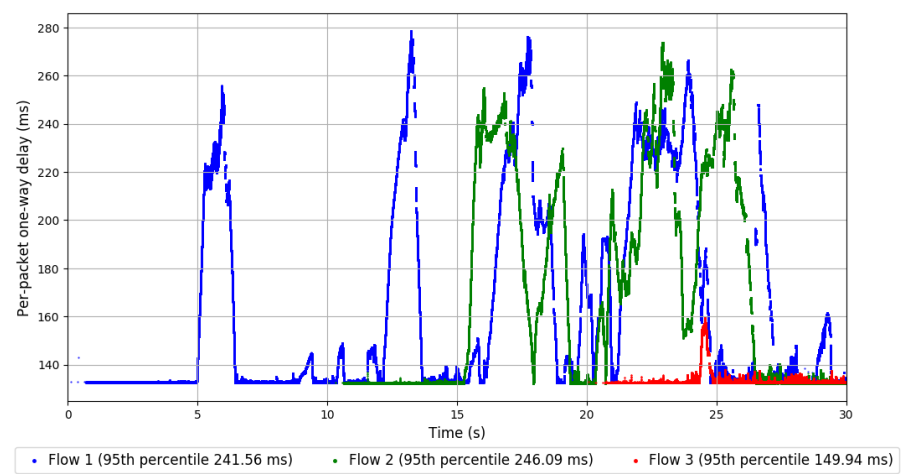
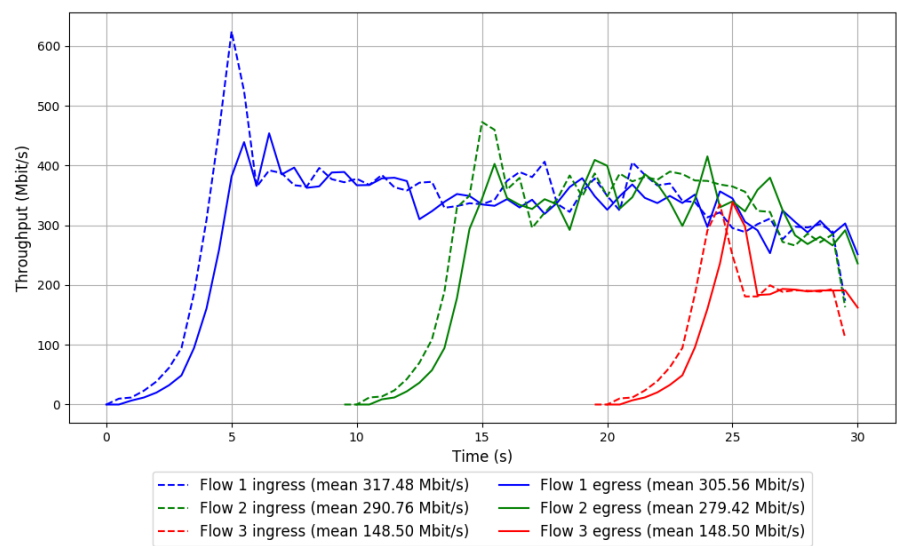


```
Run 1: Statistics of PCC-Expr

Start at: 2019-01-25 05:26:58
End at: 2019-01-25 05:27:28
Local clock offset: 0.236 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-01-25 10:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 541.01 Mbit/s
95th percentile per-packet one-way delay: 242.916 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 305.56 Mbit/s
95th percentile per-packet one-way delay: 241.565 ms
Loss rate: 3.75%
-- Flow 2:
Average throughput: 279.42 Mbit/s
95th percentile per-packet one-way delay: 246.090 ms
Loss rate: 3.90%
-- Flow 3:
Average throughput: 148.50 Mbit/s
95th percentile per-packet one-way delay: 149.941 ms
Loss rate: 0.00%
```

Run 1: Report of PCC-Expr — Data Link

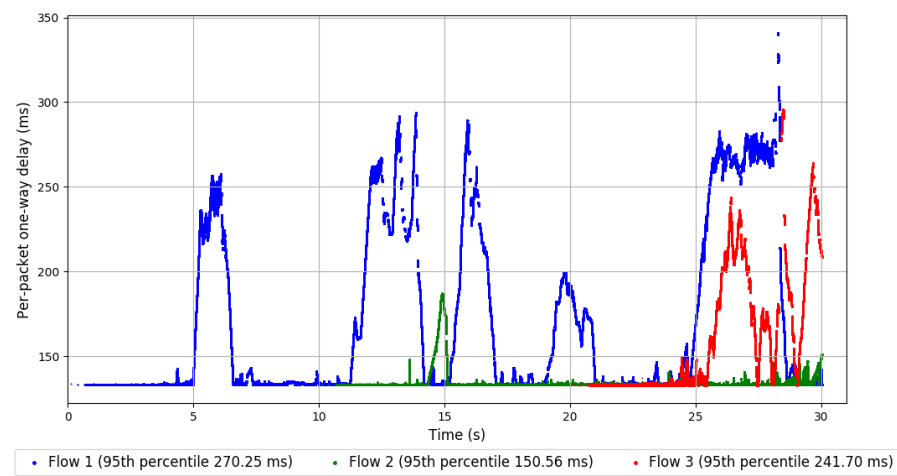
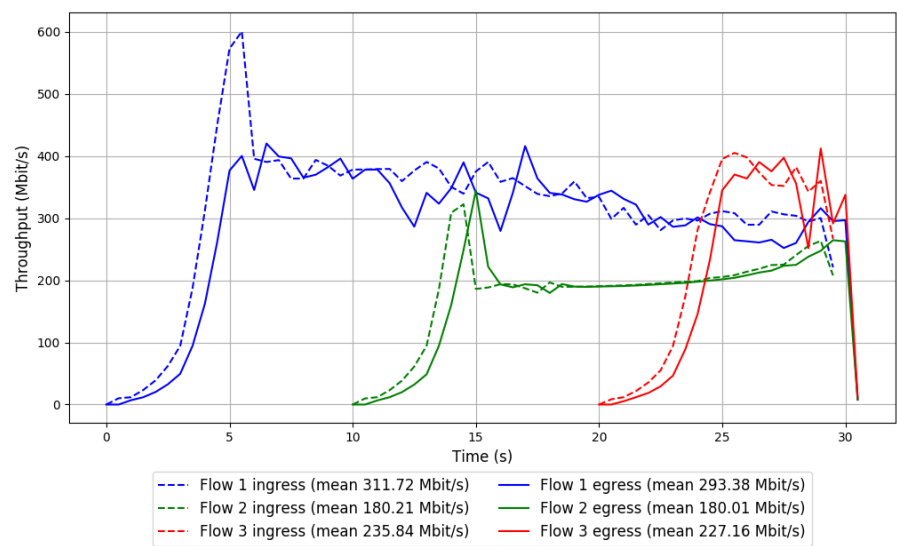


Run 2: Statistics of PCC-Expr

Start at: 2019-01-25 06:09:06  
End at: 2019-01-25 06:09:36  
Local clock offset: -0.164 ms  
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-01-25 10:54:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 488.05 Mbit/s  
95th percentile per-packet one-way delay: 264.856 ms  
Loss rate: 4.19%  
-- Flow 1:  
Average throughput: 293.38 Mbit/s  
95th percentile per-packet one-way delay: 270.247 ms  
Loss rate: 5.89%  
-- Flow 2:  
Average throughput: 180.01 Mbit/s  
95th percentile per-packet one-way delay: 150.557 ms  
Loss rate: 0.11%  
-- Flow 3:  
Average throughput: 227.16 Mbit/s  
95th percentile per-packet one-way delay: 241.702 ms  
Loss rate: 3.68%

Run 2: Report of PCC-Expr — Data Link

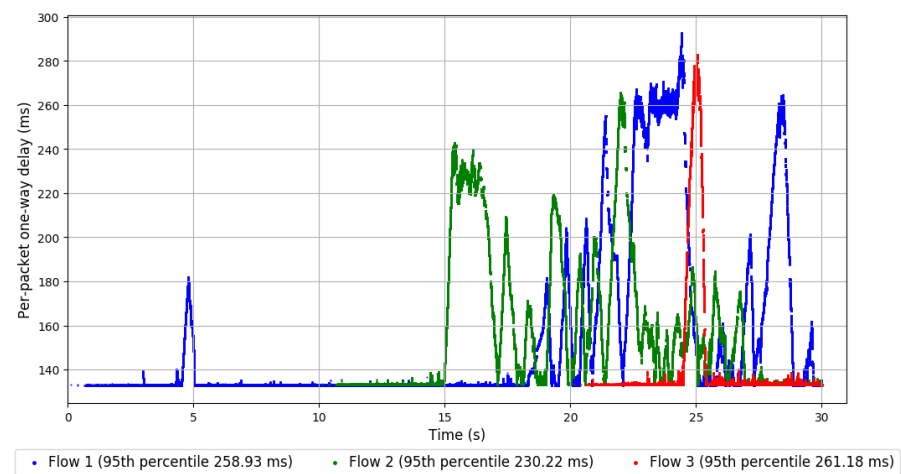
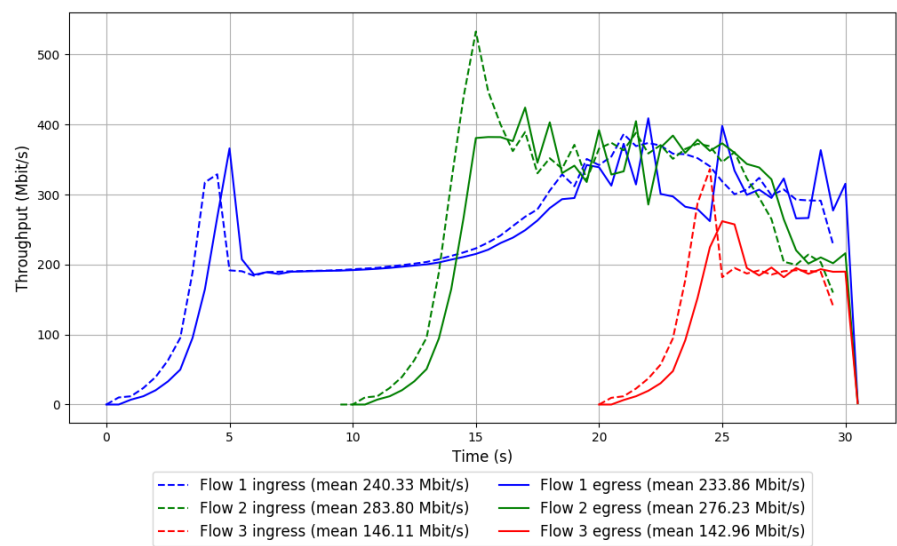


Run 3: Statistics of PCC-Expr

Start at: 2019-01-25 06:51:09  
End at: 2019-01-25 06:51:40  
Local clock offset: -0.518 ms  
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-01-25 10:55:42  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 464.79 Mbit/s  
95th percentile per-packet one-way delay: 252.927 ms  
Loss rate: 2.63%  
-- Flow 1:  
Average throughput: 233.86 Mbit/s  
95th percentile per-packet one-way delay: 258.932 ms  
Loss rate: 2.69%  
-- Flow 2:  
Average throughput: 276.23 Mbit/s  
95th percentile per-packet one-way delay: 230.219 ms  
Loss rate: 2.67%  
-- Flow 3:  
Average throughput: 142.96 Mbit/s  
95th percentile per-packet one-way delay: 261.180 ms  
Loss rate: 2.16%

Run 3: Report of PCC-Expr — Data Link

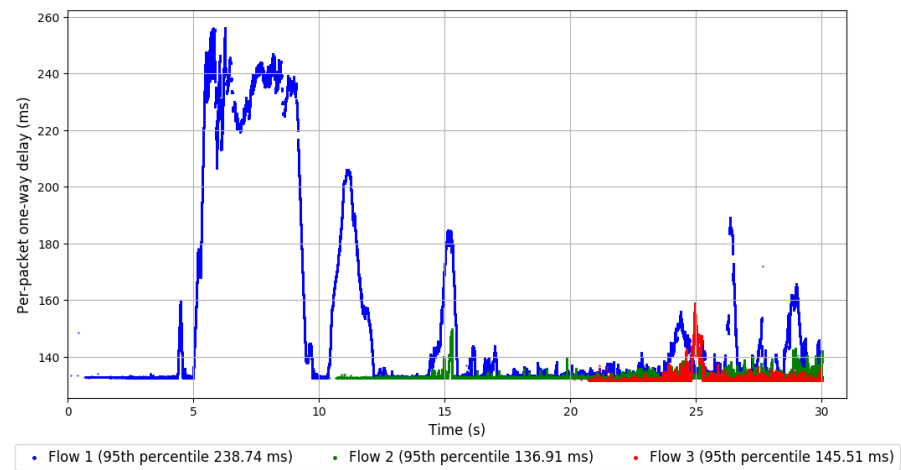
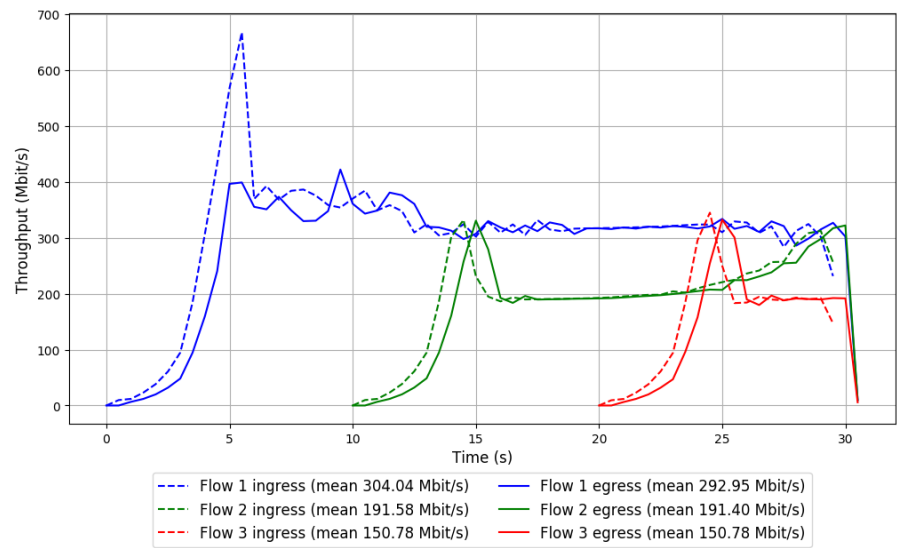


Run 4: Statistics of PCC-Expr

Start at: 2019-01-25 07:33:49  
End at: 2019-01-25 07:34:19  
Local clock offset: 0.151 ms  
Remote clock offset: -0.092 ms

# Below is generated by plot.py at 2019-01-25 11:02:31  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 469.95 Mbit/s  
95th percentile per-packet one-way delay: 235.613 ms  
Loss rate: 2.34%  
-- Flow 1:  
Average throughput: 292.95 Mbit/s  
95th percentile per-packet one-way delay: 238.741 ms  
Loss rate: 3.66%  
-- Flow 2:  
Average throughput: 191.40 Mbit/s  
95th percentile per-packet one-way delay: 136.912 ms  
Loss rate: 0.09%  
-- Flow 3:  
Average throughput: 150.78 Mbit/s  
95th percentile per-packet one-way delay: 145.511 ms  
Loss rate: 0.00%

Run 4: Report of PCC-Expr — Data Link



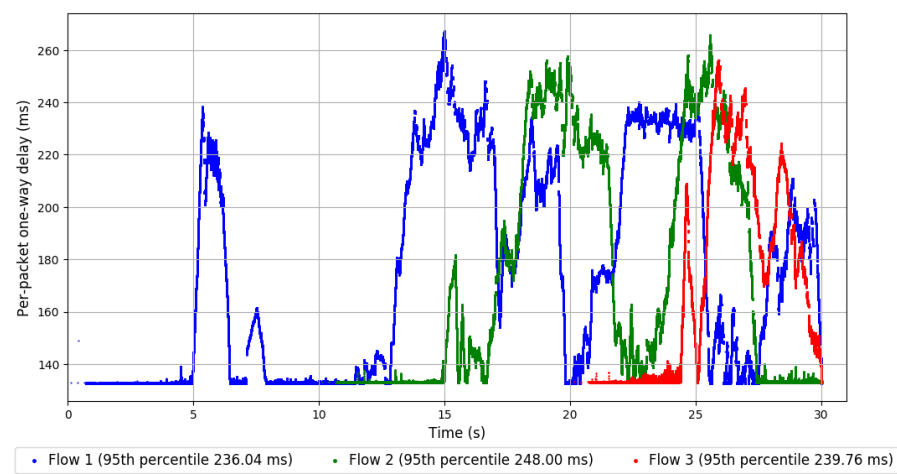
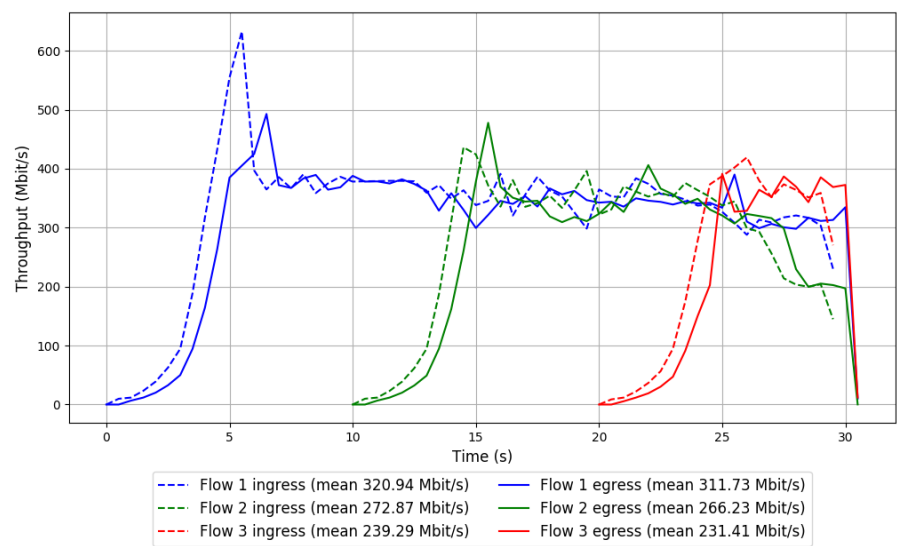


Run 5: Statistics of PCC-Expr

Start at: 2019-01-25 08:14:44  
End at: 2019-01-25 08:15:14  
Local clock offset: -0.346 ms  
Remote clock offset: -0.051 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 565.03 Mbit/s  
95th percentile per-packet one-way delay: 242.775 ms  
Loss rate: 2.79%  
-- Flow 1:  
Average throughput: 311.73 Mbit/s  
95th percentile per-packet one-way delay: 236.036 ms  
Loss rate: 2.87%  
-- Flow 2:  
Average throughput: 266.23 Mbit/s  
95th percentile per-packet one-way delay: 247.995 ms  
Loss rate: 2.43%  
-- Flow 3:  
Average throughput: 231.41 Mbit/s  
95th percentile per-packet one-way delay: 239.757 ms  
Loss rate: 3.28%

Run 5: Report of PCC-Expr — Data Link

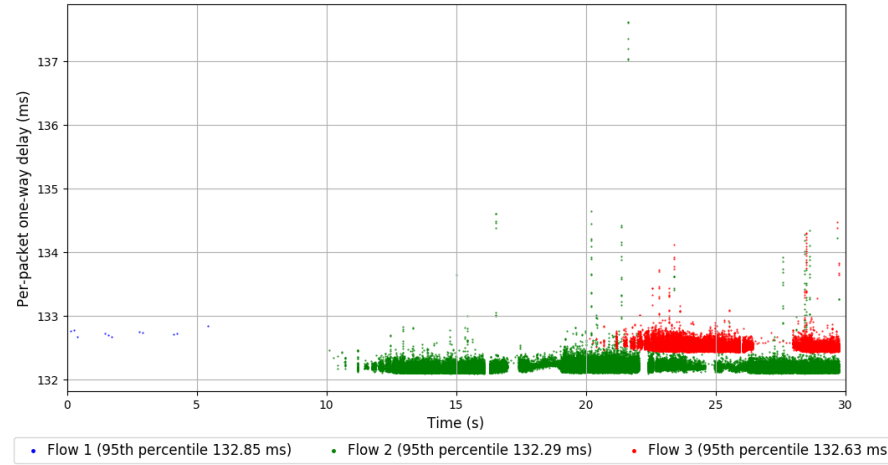
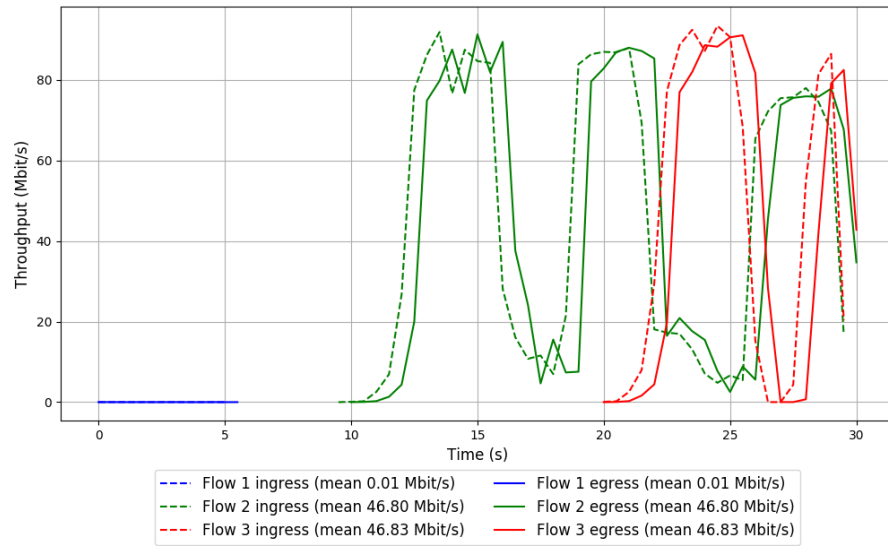


Run 1: Statistics of QUIC Cubic

Start at: 2019-01-25 05:18:04  
End at: 2019-01-25 05:18:34  
Local clock offset: 0.088 ms  
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 46.22 Mbit/s  
95th percentile per-packet one-way delay: 132.573 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.01 Mbit/s  
95th percentile per-packet one-way delay: 132.848 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 46.80 Mbit/s  
95th percentile per-packet one-way delay: 132.295 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 46.83 Mbit/s  
95th percentile per-packet one-way delay: 132.627 ms  
Loss rate: 0.00%

# Run 1: Report of QUIC Cubic — Data Link

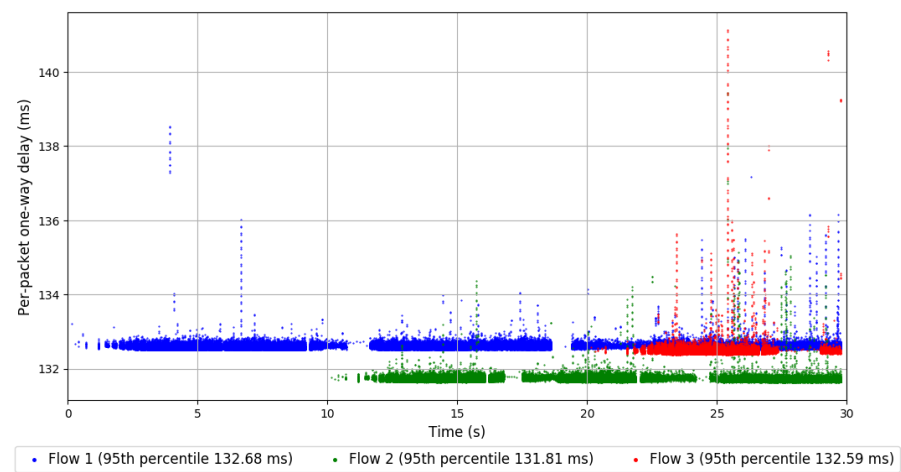
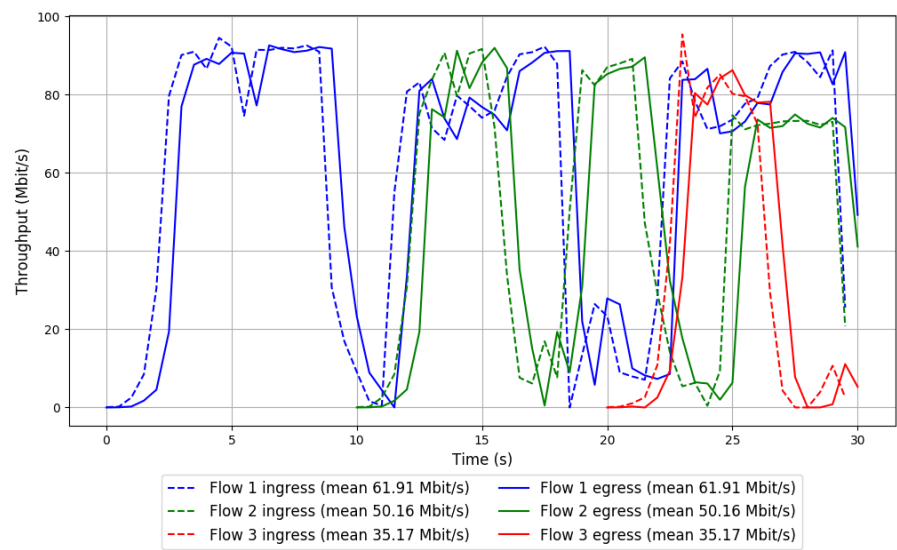


Run 2: Statistics of QUIC Cubic

Start at: 2019-01-25 06:00:24  
End at: 2019-01-25 06:00:54  
Local clock offset: 0.299 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 106.55 Mbit/s  
95th percentile per-packet one-way delay: 132.661 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 61.91 Mbit/s  
95th percentile per-packet one-way delay: 132.683 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 50.16 Mbit/s  
95th percentile per-packet one-way delay: 131.810 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 35.17 Mbit/s  
95th percentile per-packet one-way delay: 132.589 ms  
Loss rate: 0.00%

Run 2: Report of QUIC Cubic — Data Link

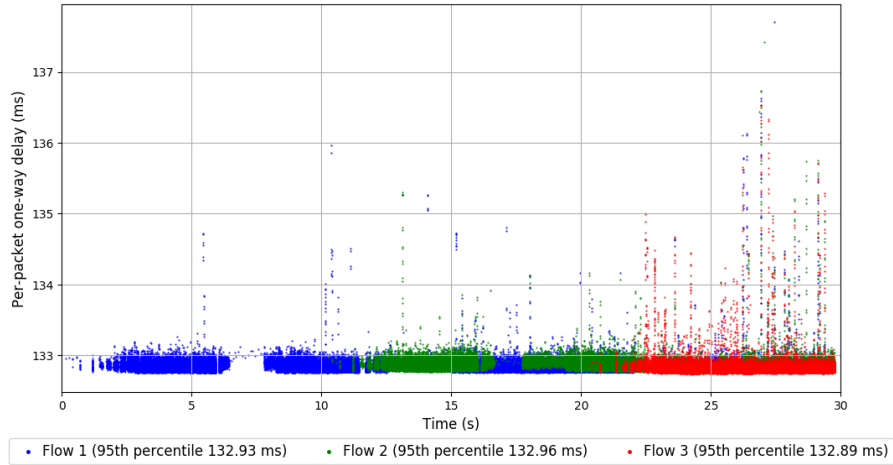
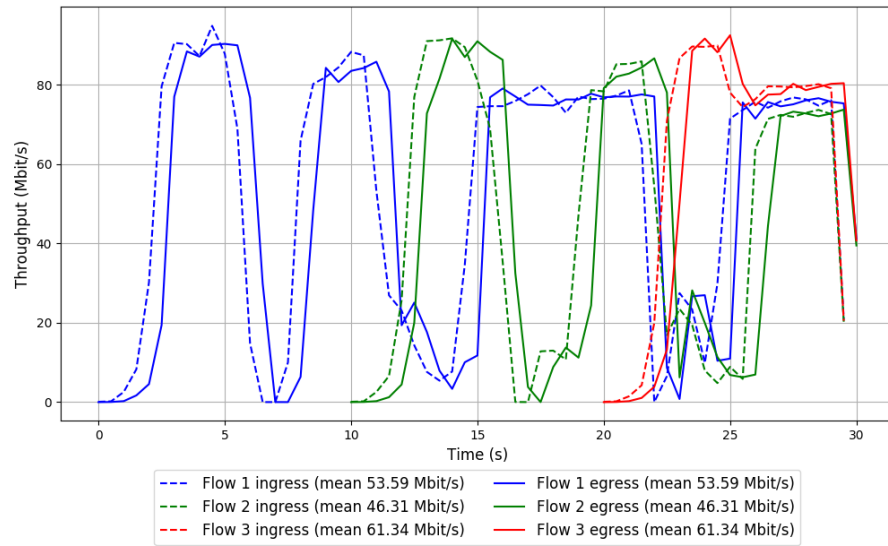


Run 3: Statistics of QUIC Cubic

Start at: 2019-01-25 06:42:46  
End at: 2019-01-25 06:43:16  
Local clock offset: -0.012 ms  
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 104.16 Mbit/s  
95th percentile per-packet one-way delay: 132.938 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 53.59 Mbit/s  
95th percentile per-packet one-way delay: 132.927 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 46.31 Mbit/s  
95th percentile per-packet one-way delay: 132.964 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 61.34 Mbit/s  
95th percentile per-packet one-way delay: 132.891 ms  
Loss rate: 0.00%

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



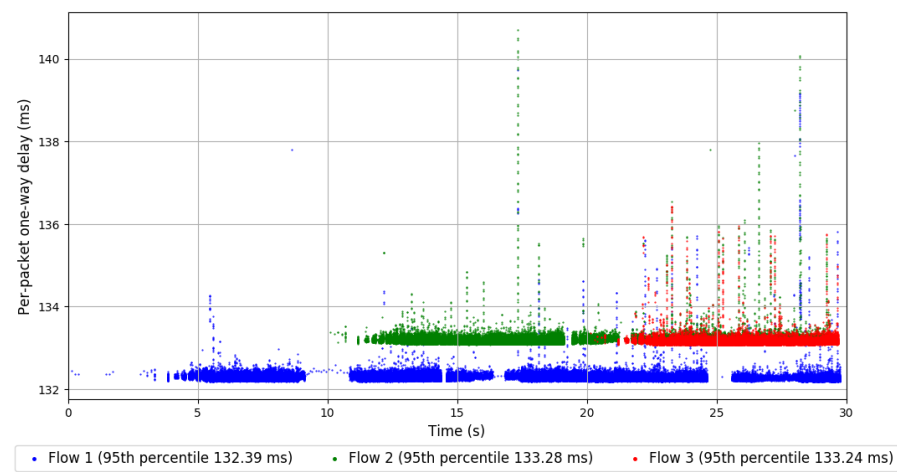
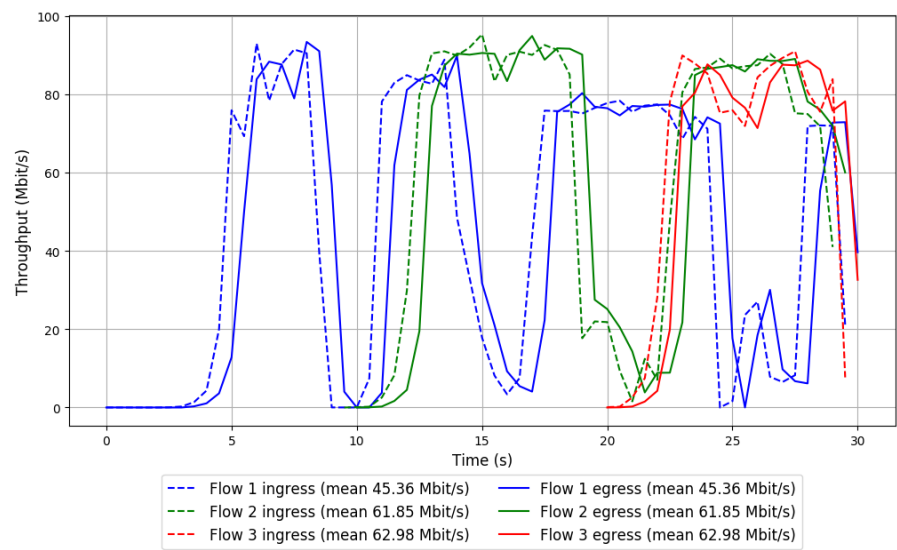


Run 4: Statistics of QUIC Cubic

Start at: 2019-01-25 07:25:24  
End at: 2019-01-25 07:25:54  
Local clock offset: -0.306 ms  
Remote clock offset: -0.126 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 105.93 Mbit/s  
95th percentile per-packet one-way delay: 133.239 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 45.36 Mbit/s  
95th percentile per-packet one-way delay: 132.392 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 61.85 Mbit/s  
95th percentile per-packet one-way delay: 133.276 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 62.98 Mbit/s  
95th percentile per-packet one-way delay: 133.241 ms  
Loss rate: 0.00%

Run 4: Report of QUIC Cubic — Data Link

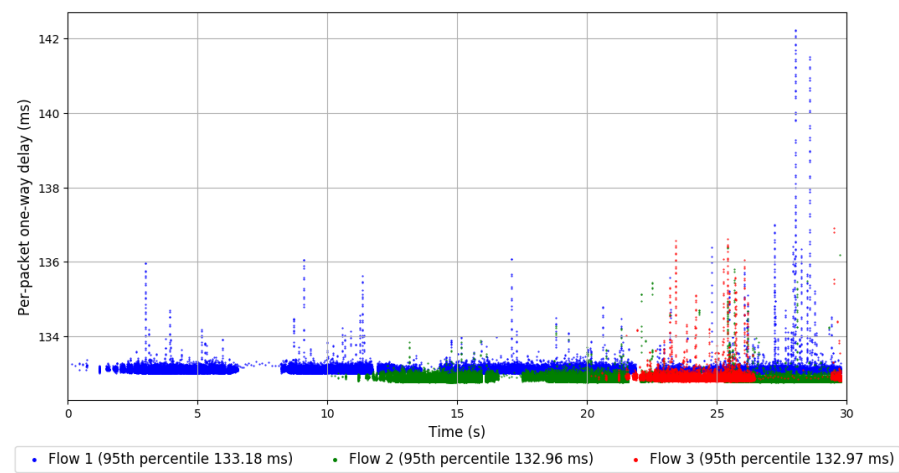
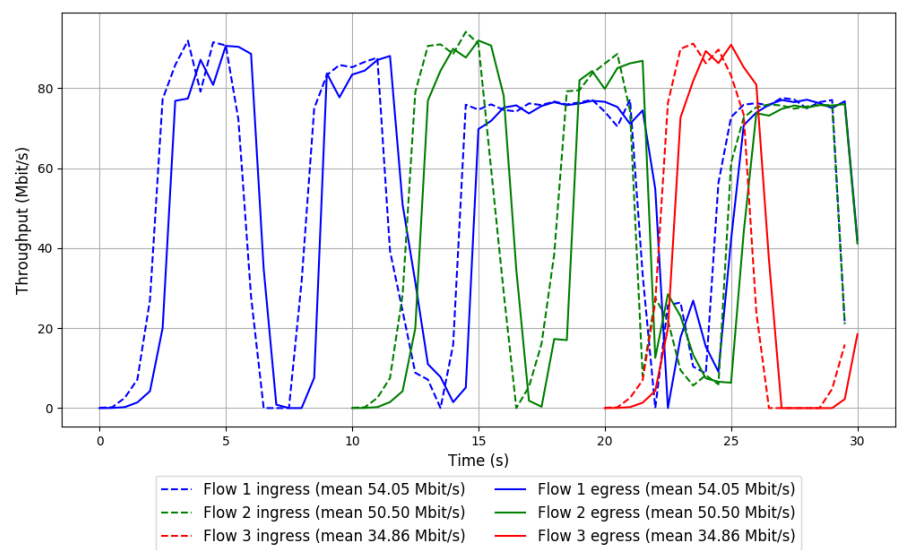


Run 5: Statistics of QUIC Cubic

Start at: 2019-01-25 08:06:14  
End at: 2019-01-25 08:06:44  
Local clock offset: -0.118 ms  
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 98.82 Mbit/s  
95th percentile per-packet one-way delay: 133.153 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 54.05 Mbit/s  
95th percentile per-packet one-way delay: 133.178 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 50.50 Mbit/s  
95th percentile per-packet one-way delay: 132.956 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 34.86 Mbit/s  
95th percentile per-packet one-way delay: 132.974 ms  
Loss rate: 0.00%

Run 5: Report of QUIC Cubic — Data Link

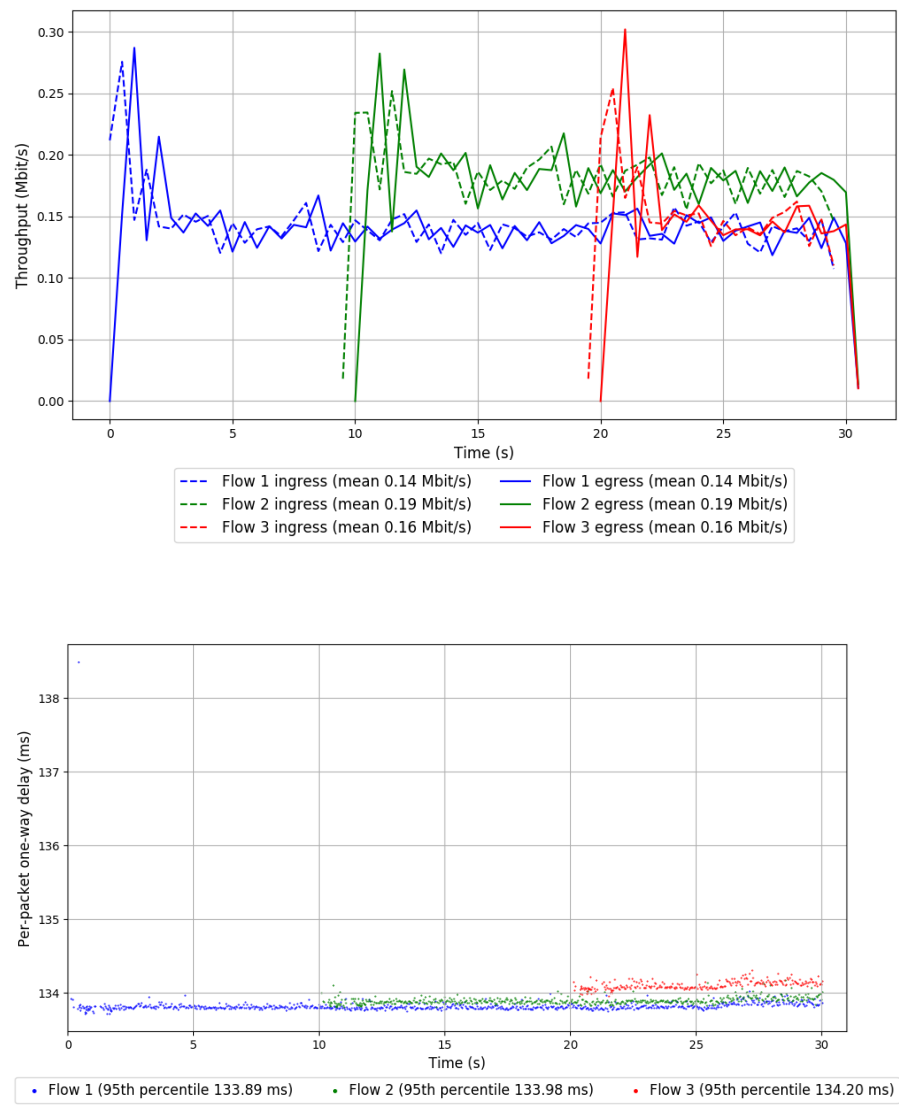


```
Run 1: Statistics of SCReAM

Start at: 2019-01-25 05:47:39
End at: 2019-01-25 05:48:09
Local clock offset: -0.528 ms
Remote clock offset: 0.264 ms

# Below is generated by plot.py at 2019-01-25 11:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 134.134 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 133.890 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 133.981 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 134.198 ms
Loss rate: 0.00%
```

Run 1: Report of SReAM — Data Link

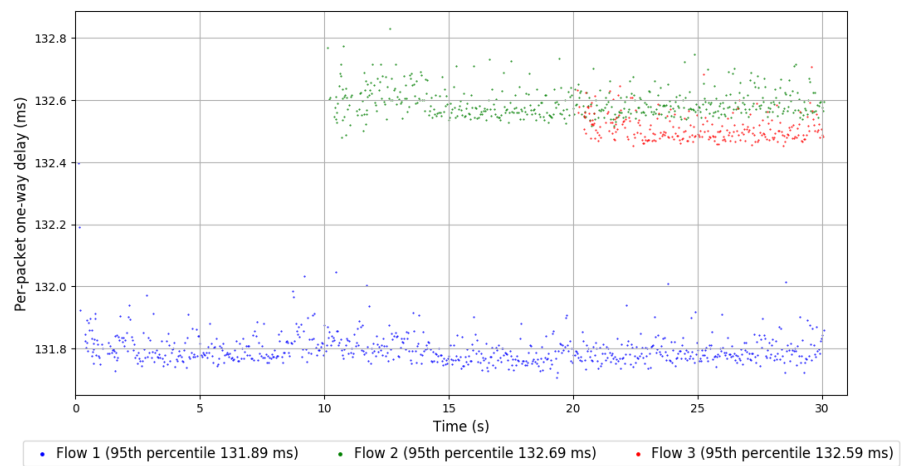
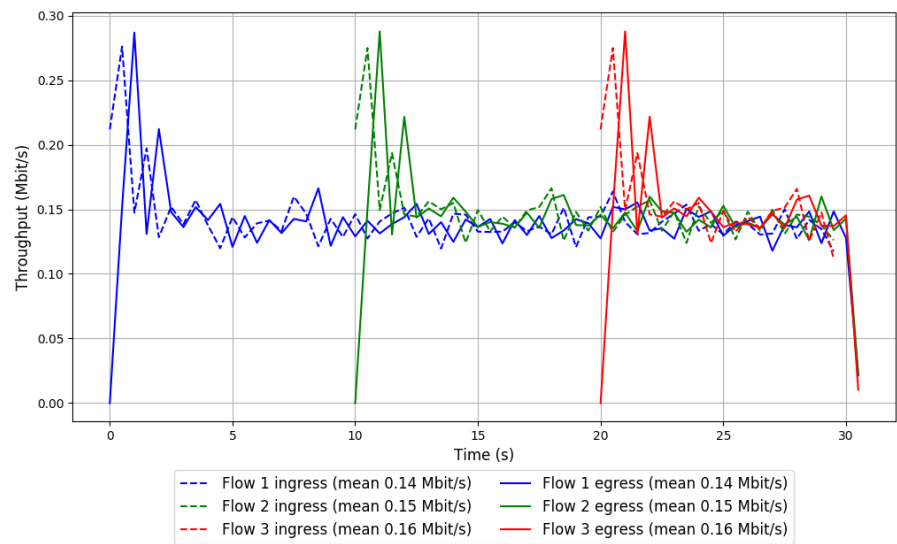


Run 2: Statistics of SCReAM

Start at: 2019-01-25 06:29:41  
End at: 2019-01-25 06:30:11  
Local clock offset: -0.086 ms  
Remote clock offset: -0.405 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 132.639 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 131.888 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 132.685 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 132.590 ms  
Loss rate: 0.00%

Run 2: Report of SReAM — Data Link



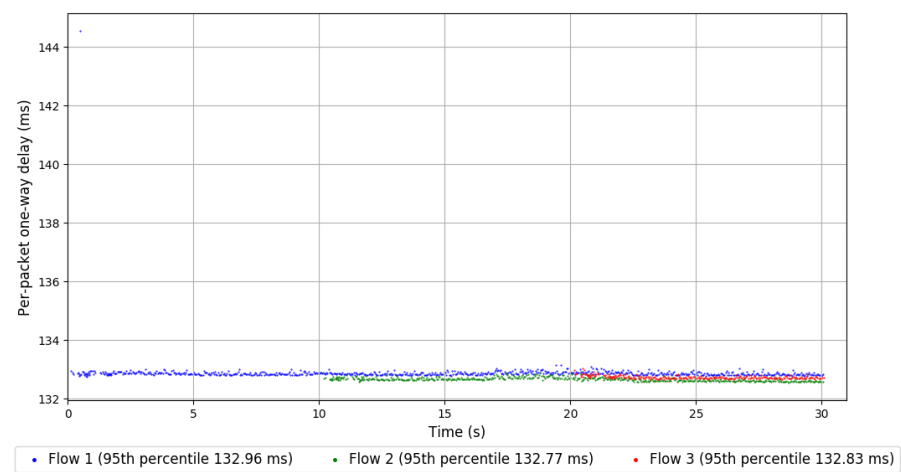
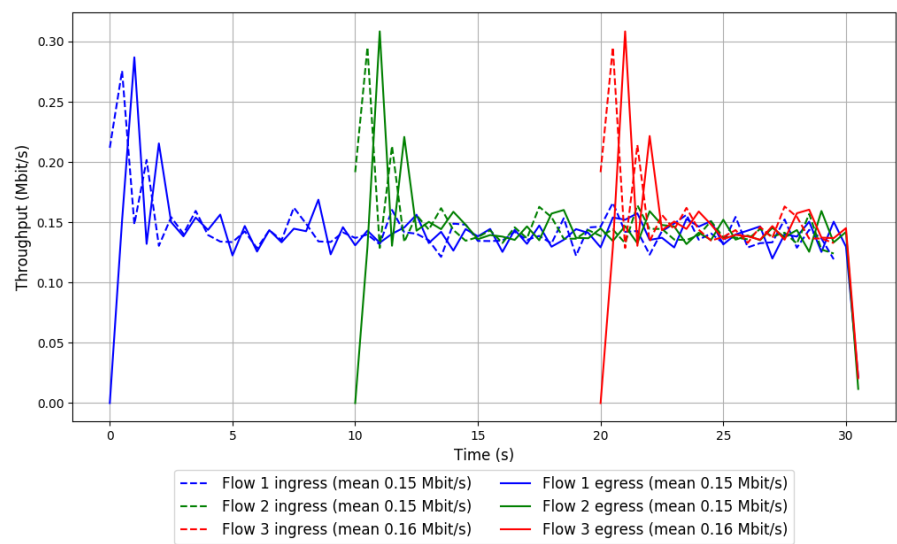


Run 3: Statistics of SCReAM

Start at: 2019-01-25 07:12:21  
End at: 2019-01-25 07:12:51  
Local clock offset: 0.294 ms  
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.30 Mbit/s  
95th percentile per-packet one-way delay: 132.923 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 132.956 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 132.770 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 132.827 ms  
Loss rate: 0.00%

Run 3: Report of SReAM — Data Link



Run 4: Statistics of SCReAM

Start at: 2019-01-25 07:53:38

End at: 2019-01-25 07:54:08

Local clock offset: 0.131 ms

Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-01-25 11:09:45

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.30 Mbit/s

95th percentile per-packet one-way delay: 132.798 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 132.087 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.15 Mbit/s

95th percentile per-packet one-way delay: 132.828 ms

Loss rate: 0.00%

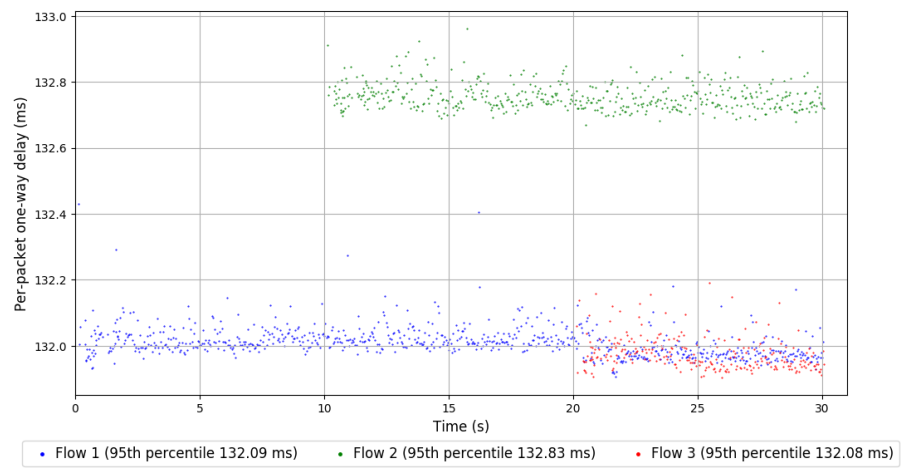
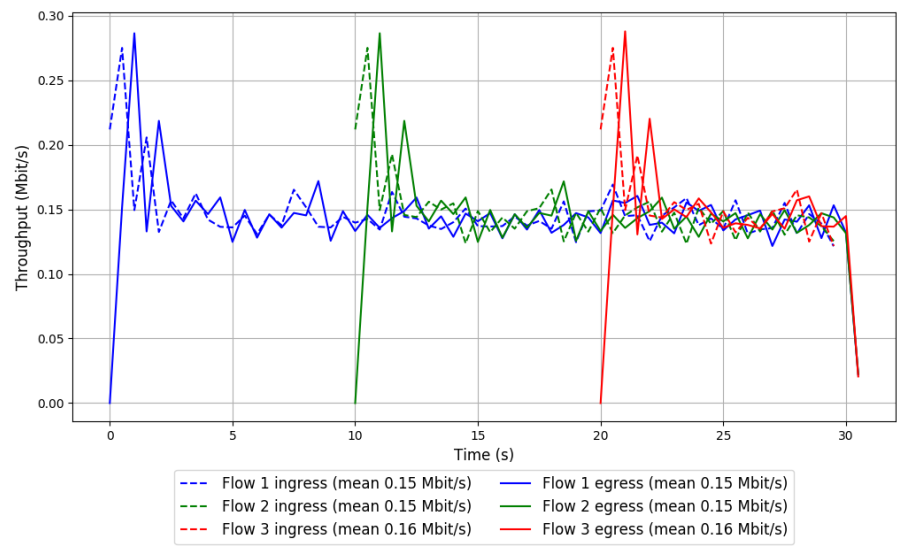
-- Flow 3:

Average throughput: 0.16 Mbit/s

95th percentile per-packet one-way delay: 132.076 ms

Loss rate: 0.00%

Run 4: Report of SReAM — Data Link

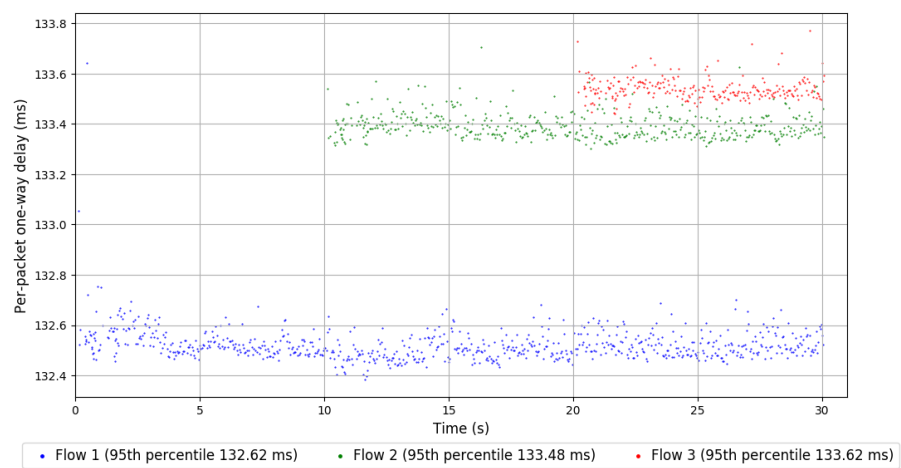
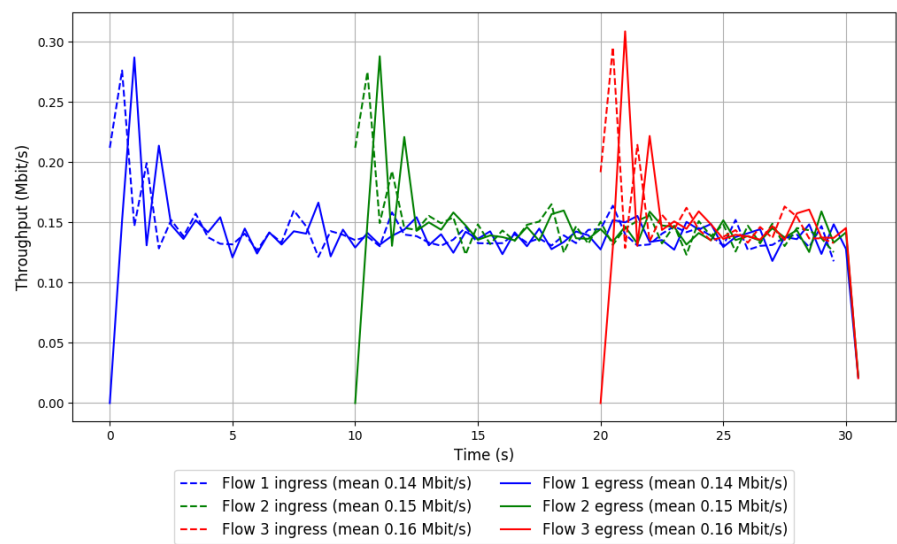


Run 5: Statistics of SCReAM

Start at: 2019-01-25 08:34:42  
End at: 2019-01-25 08:35:12  
Local clock offset: -0.35 ms  
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.29 Mbit/s  
95th percentile per-packet one-way delay: 133.555 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.14 Mbit/s  
95th percentile per-packet one-way delay: 132.620 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.15 Mbit/s  
95th percentile per-packet one-way delay: 133.483 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.16 Mbit/s  
95th percentile per-packet one-way delay: 133.621 ms  
Loss rate: 0.00%

Run 5: Report of SReAM — Data Link

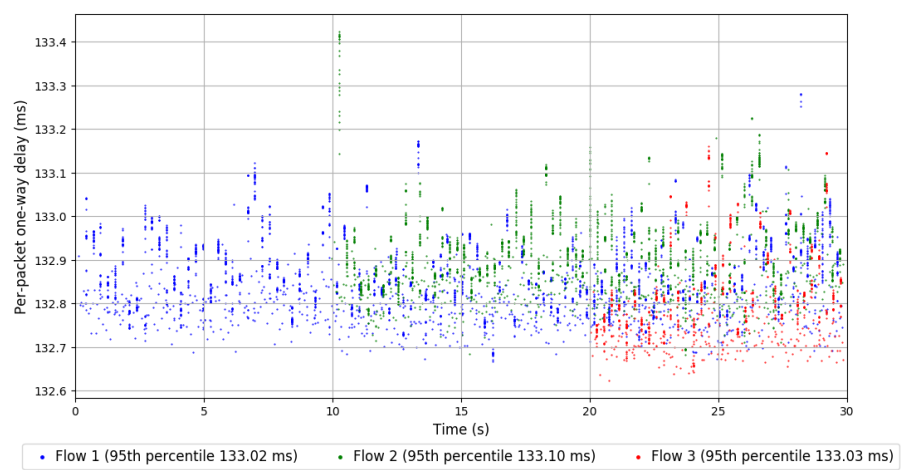
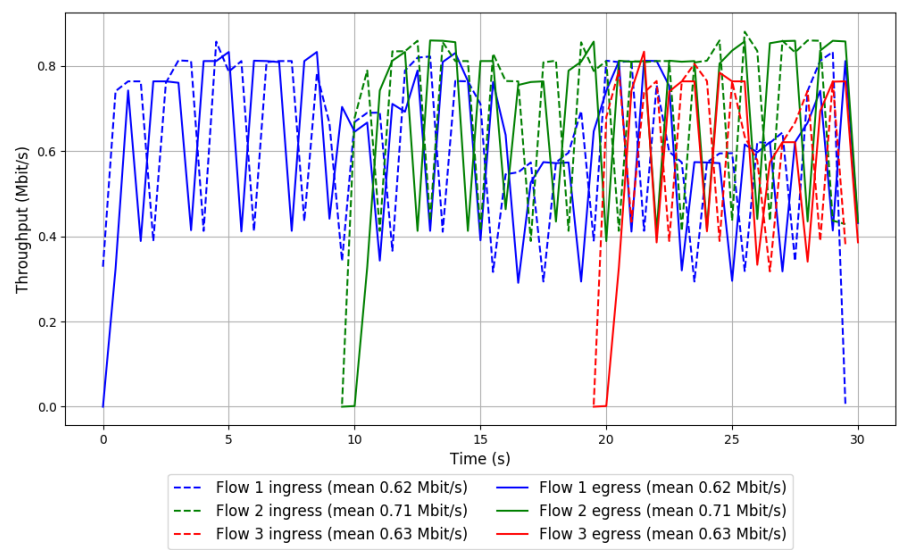


Run 1: Statistics of Sprout

Start at: 2019-01-25 05:29:34  
End at: 2019-01-25 05:30:04  
Local clock offset: -0.024 ms  
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.31 Mbit/s  
95th percentile per-packet one-way delay: 133.049 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.62 Mbit/s  
95th percentile per-packet one-way delay: 133.018 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.71 Mbit/s  
95th percentile per-packet one-way delay: 133.096 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.63 Mbit/s  
95th percentile per-packet one-way delay: 133.029 ms  
Loss rate: 0.00%

Run 1: Report of Sprout — Data Link



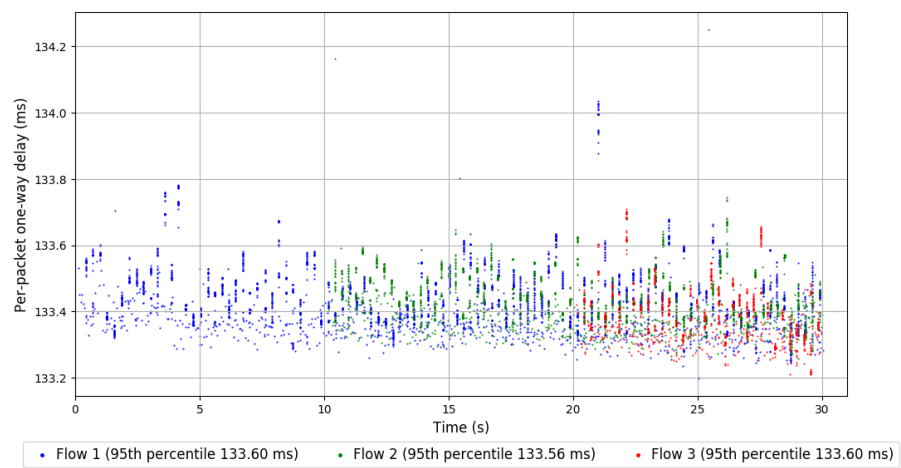
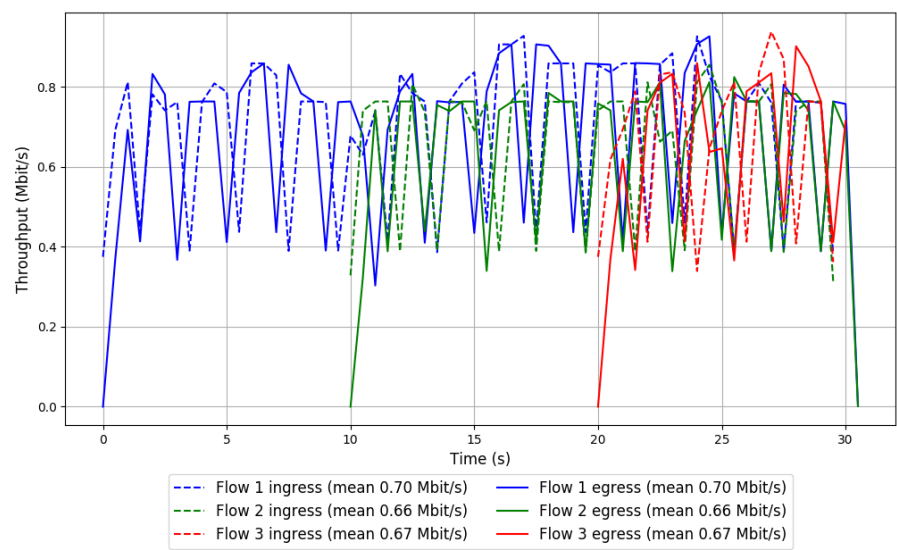


Run 2: Statistics of Sprout

Start at: 2019-01-25 06:11:35  
End at: 2019-01-25 06:12:05  
Local clock offset: 0.011 ms  
Remote clock offset: 0.28 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 1.36 Mbit/s  
95th percentile per-packet one-way delay: 133.592 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.70 Mbit/s  
95th percentile per-packet one-way delay: 133.604 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.66 Mbit/s  
95th percentile per-packet one-way delay: 133.563 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.67 Mbit/s  
95th percentile per-packet one-way delay: 133.600 ms  
Loss rate: 0.00%

Run 2: Report of Sprout — Data Link

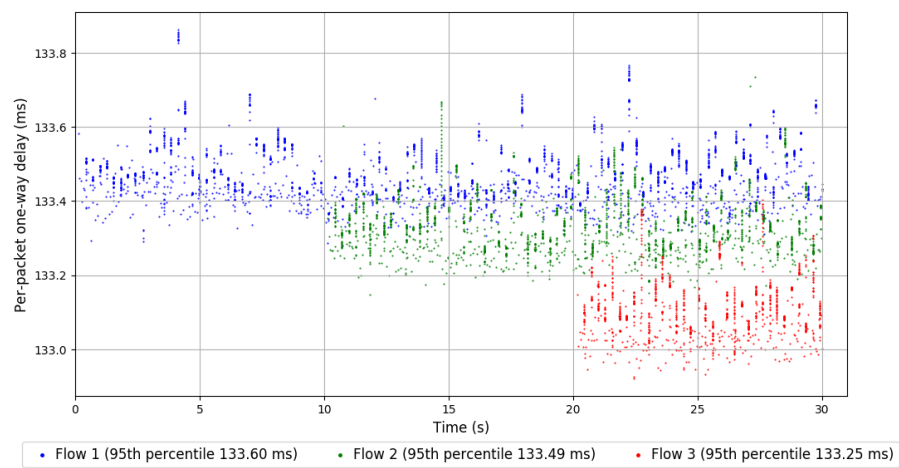
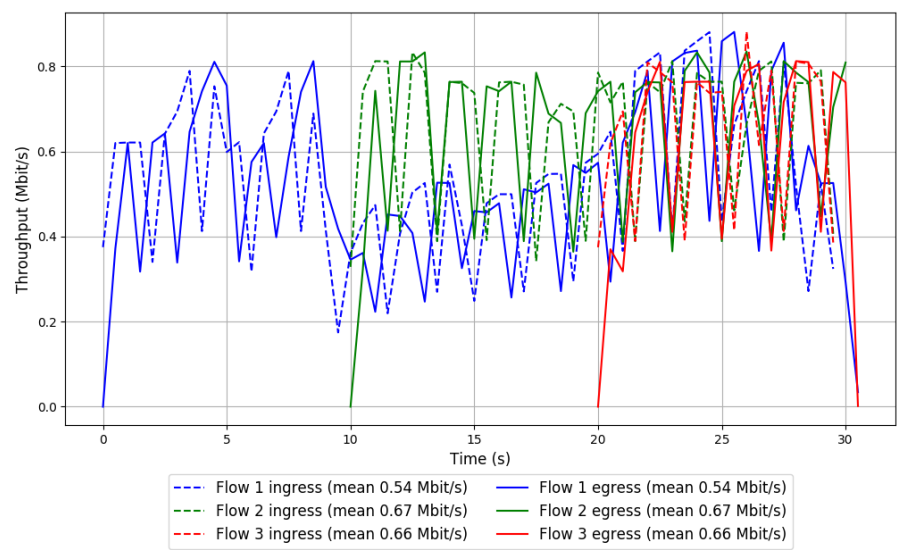


### Run 3: Statistics of Sprout

Start at: 2019-01-25 06:53:34  
End at: 2019-01-25 06:54:04  
Local clock offset: -0.258 ms  
Remote clock offset: -0.068 ms

```
# Below is generated by plot.py at 2019-01-25 11:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 133.568 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 133.605 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.67 Mbit/s
95th percentile per-packet one-way delay: 133.493 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 133.251 ms
Loss rate: 0.00%
```

Run 3: Report of Sprout — Data Link

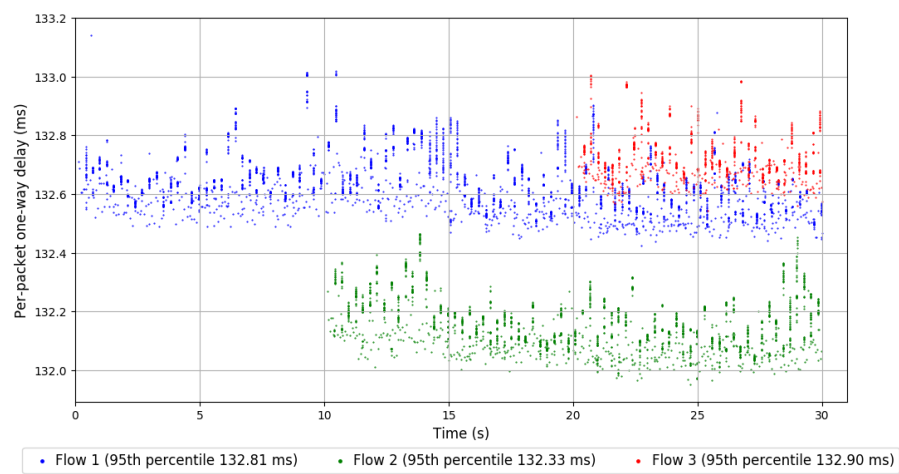
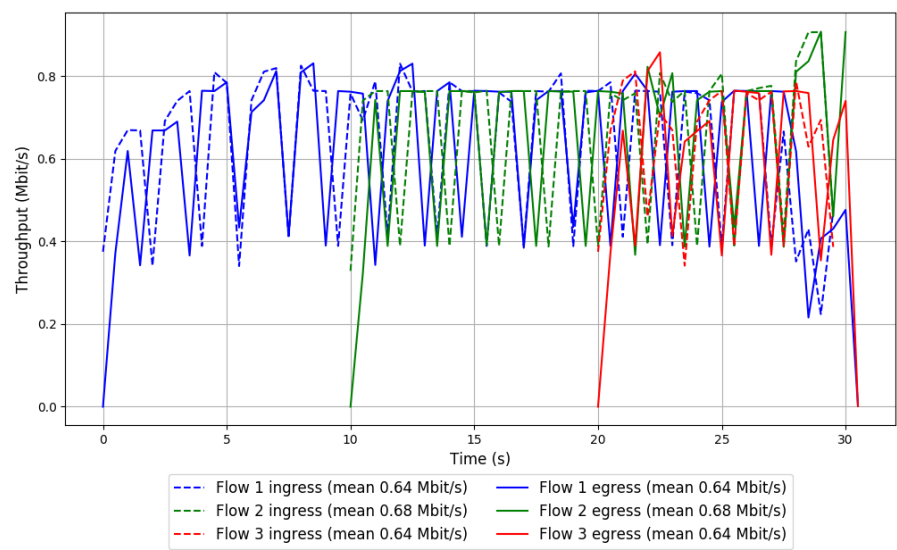


#### Run 4: Statistics of Sprout

Start at: 2019-01-25 07:36:00  
End at: 2019-01-25 07:36:30  
Local clock offset: 0.328 ms  
Remote clock offset: -0.119 ms

```
# Below is generated by plot.py at 2019-01-25 11:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 132.815 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 132.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 132.327 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 132.899 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

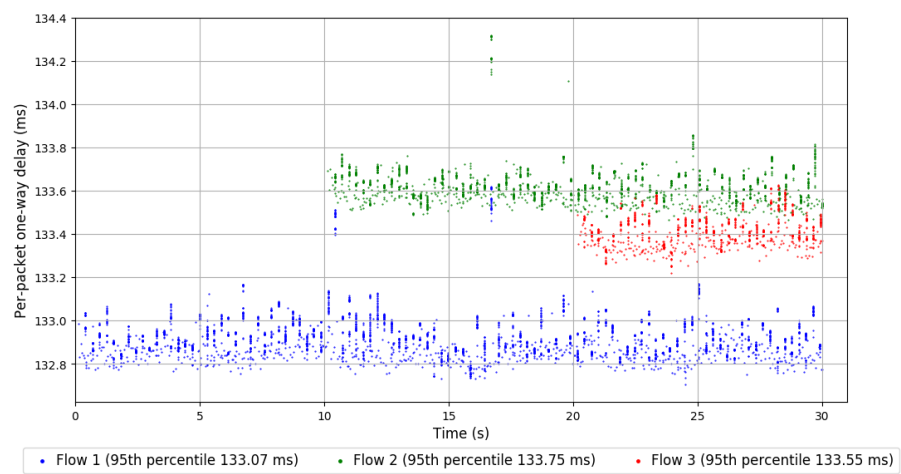
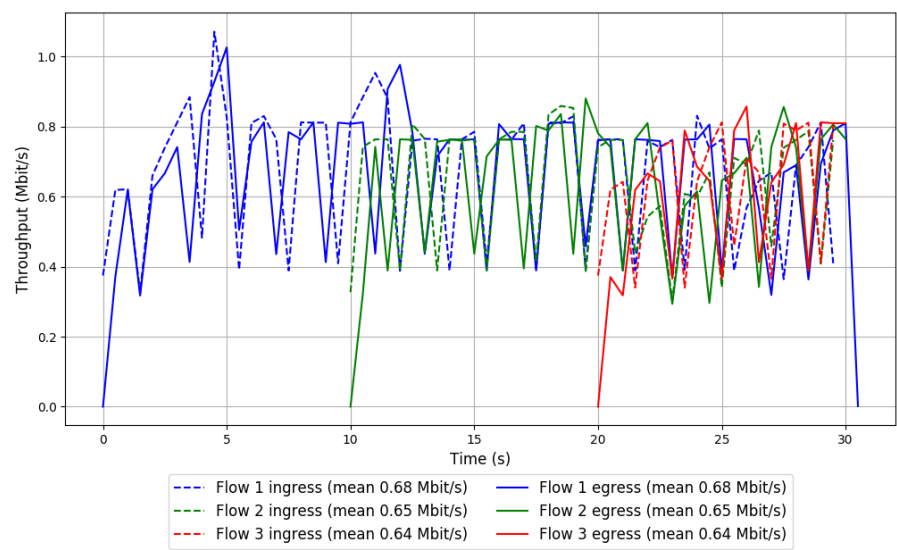


Run 5: Statistics of Sprout

Start at: 2019-01-25 08:17:14  
End at: 2019-01-25 08:17:44  
Local clock offset: -0.283 ms  
Remote clock offset: 0.093 ms

```
# Below is generated by plot.py at 2019-01-25 11:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 133.689 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 133.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 133.749 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 133.553 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link



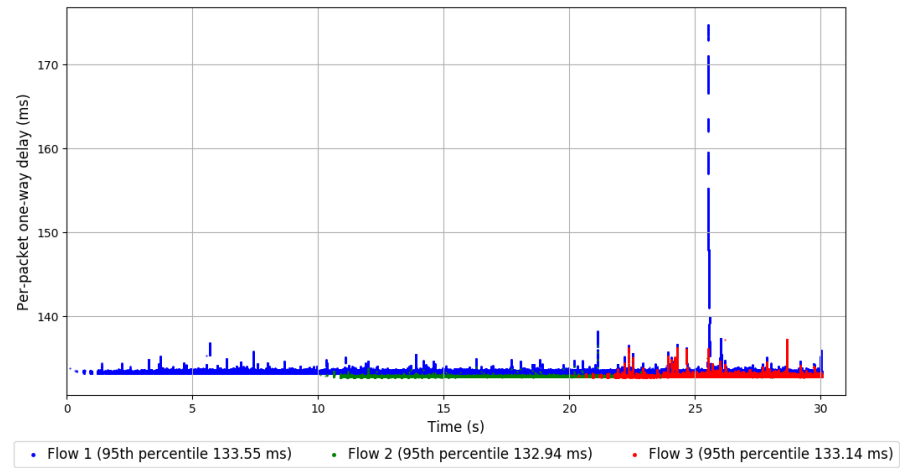
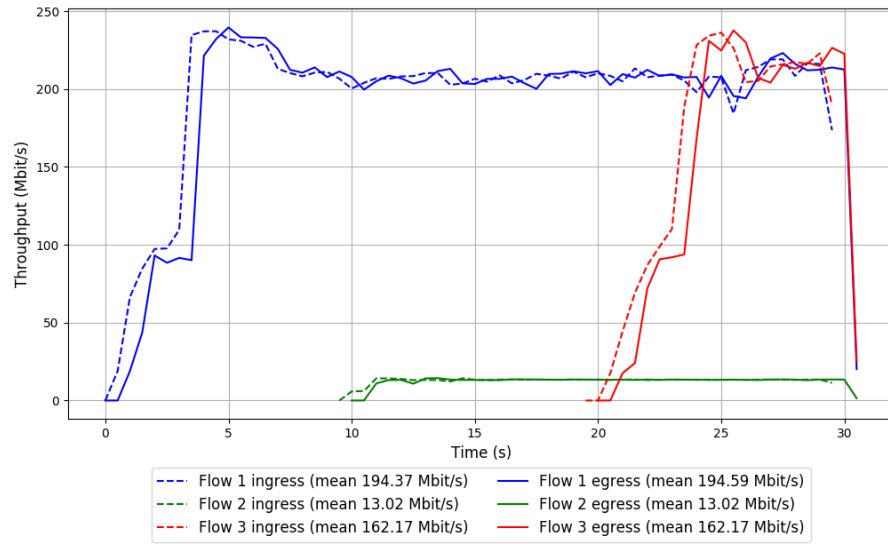


```
Run 1: Statistics of TaoVA-100x

Start at: 2019-01-25 05:34:23
End at: 2019-01-25 05:34:53
Local clock offset: -0.586 ms
Remote clock offset: -0.007 ms

# Below is generated by plot.py at 2019-01-25 11:09:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 257.15 Mbit/s
95th percentile per-packet one-way delay: 133.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 194.59 Mbit/s
95th percentile per-packet one-way delay: 133.552 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.02 Mbit/s
95th percentile per-packet one-way delay: 132.938 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 162.17 Mbit/s
95th percentile per-packet one-way delay: 133.136 ms
Loss rate: 0.00%
```

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

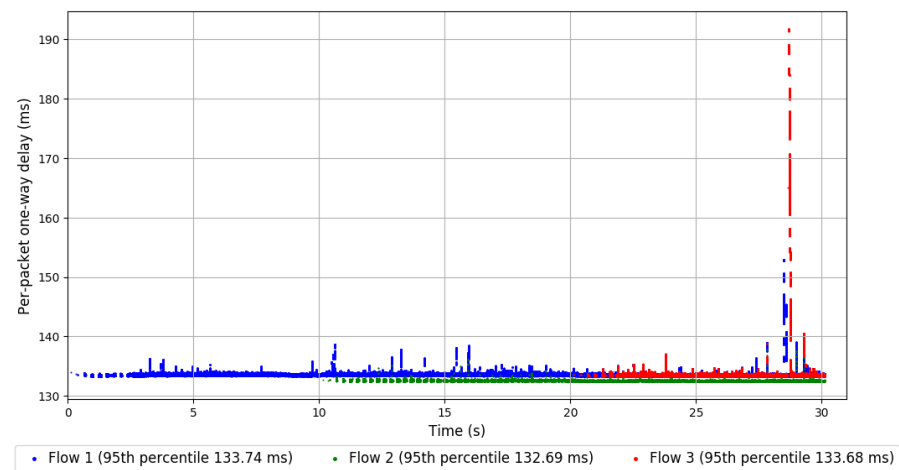
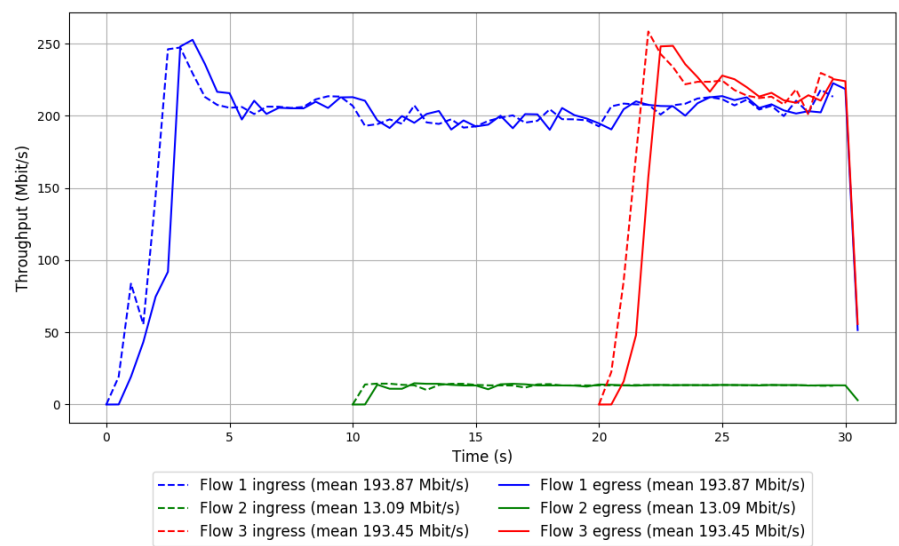


Run 2: Statistics of TaoVA-100x

Start at: 2019-01-25 06:16:30  
End at: 2019-01-25 06:17:00  
Local clock offset: -0.531 ms  
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-01-25 11:09:45  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 266.79 Mbit/s  
95th percentile per-packet one-way delay: 133.733 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 193.87 Mbit/s  
95th percentile per-packet one-way delay: 133.744 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 13.09 Mbit/s  
95th percentile per-packet one-way delay: 132.686 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 193.45 Mbit/s  
95th percentile per-packet one-way delay: 133.682 ms  
Loss rate: 0.00%

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

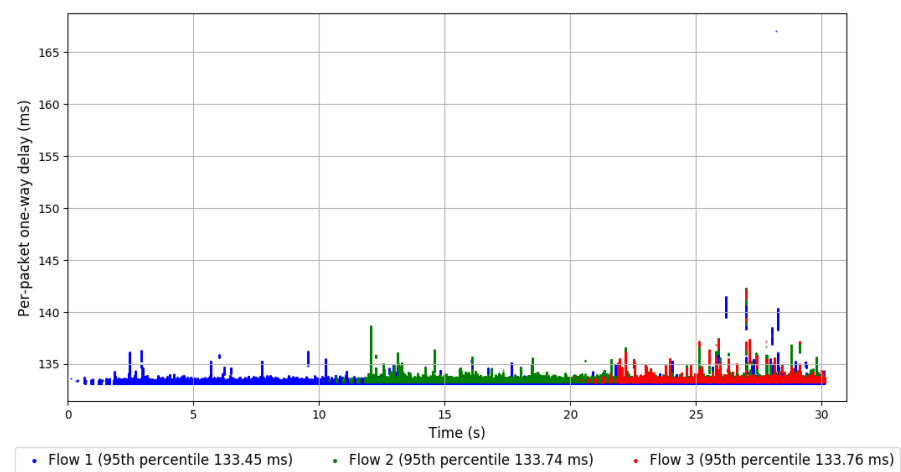
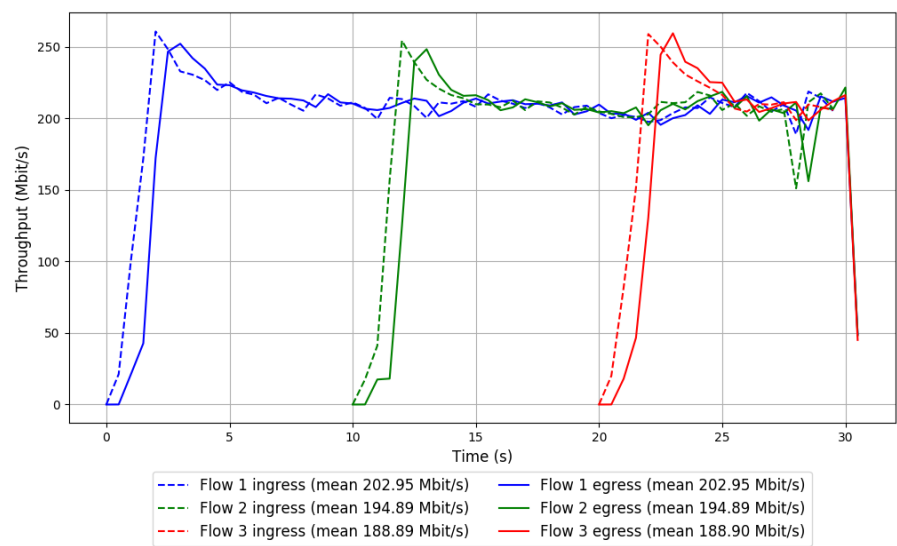


Run 3: Statistics of TaoVA-100x

Start at: 2019-01-25 06:58:33  
End at: 2019-01-25 06:59:03  
Local clock offset: -0.516 ms  
Remote clock offset: -0.108 ms

# Below is generated by plot.py at 2019-01-25 11:10:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 395.52 Mbit/s  
95th percentile per-packet one-way delay: 133.632 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 202.95 Mbit/s  
95th percentile per-packet one-way delay: 133.447 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 194.89 Mbit/s  
95th percentile per-packet one-way delay: 133.744 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 188.90 Mbit/s  
95th percentile per-packet one-way delay: 133.759 ms  
Loss rate: 0.00%

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

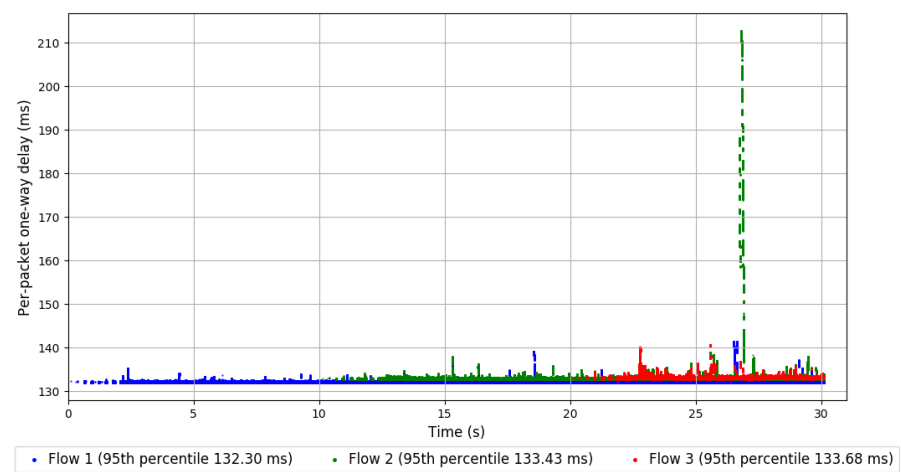
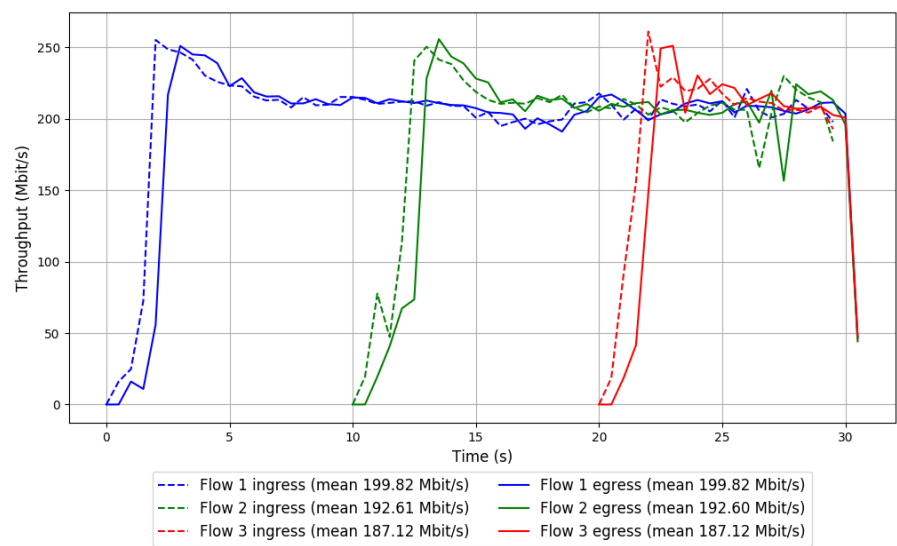


Run 4: Statistics of TaoVA-100x

Start at: 2019-01-25 07:40:49  
End at: 2019-01-25 07:41:19  
Local clock offset: -0.051 ms  
Remote clock offset: -0.159 ms

# Below is generated by plot.py at 2019-01-25 11:10:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 390.28 Mbit/s  
95th percentile per-packet one-way delay: 133.218 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 199.82 Mbit/s  
95th percentile per-packet one-way delay: 132.300 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 192.60 Mbit/s  
95th percentile per-packet one-way delay: 133.432 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 187.12 Mbit/s  
95th percentile per-packet one-way delay: 133.679 ms  
Loss rate: 0.00%

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



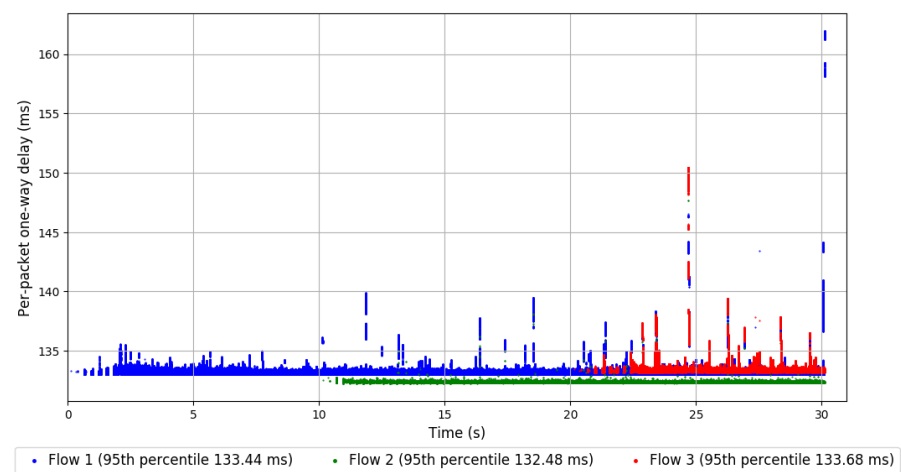
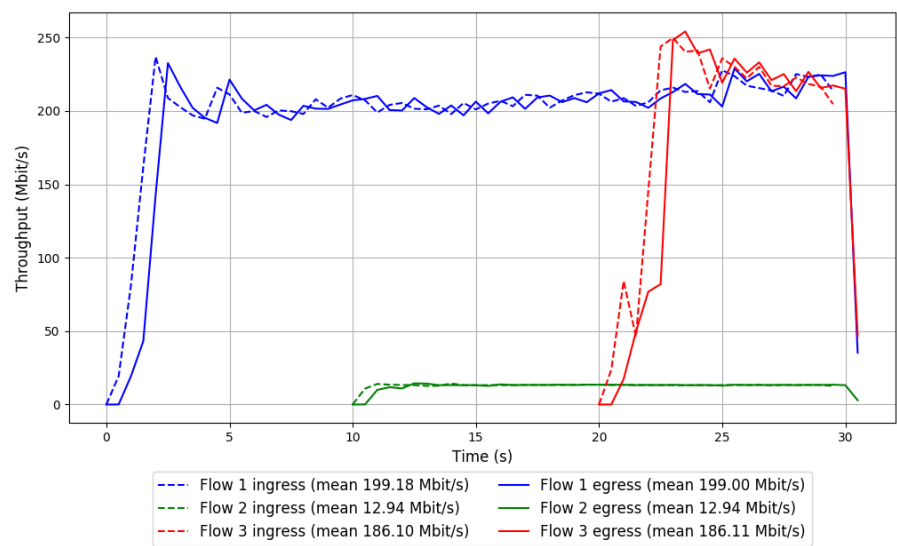


Run 5: Statistics of TaoVA-100x

Start at: 2019-01-25 08:22:03  
End at: 2019-01-25 08:22:33  
Local clock offset: -0.408 ms  
Remote clock offset: -0.045 ms

# Below is generated by plot.py at 2019-01-25 11:10:05  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 269.41 Mbit/s  
95th percentile per-packet one-way delay: 133.508 ms  
Loss rate: 0.06%  
-- Flow 1:  
Average throughput: 199.00 Mbit/s  
95th percentile per-packet one-way delay: 133.445 ms  
Loss rate: 0.09%  
-- Flow 2:  
Average throughput: 12.94 Mbit/s  
95th percentile per-packet one-way delay: 132.483 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 186.11 Mbit/s  
95th percentile per-packet one-way delay: 133.679 ms  
Loss rate: 0.00%

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

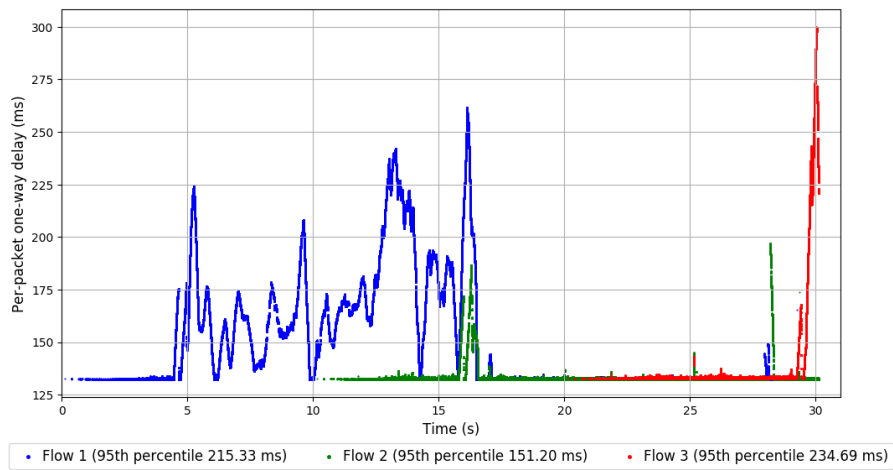
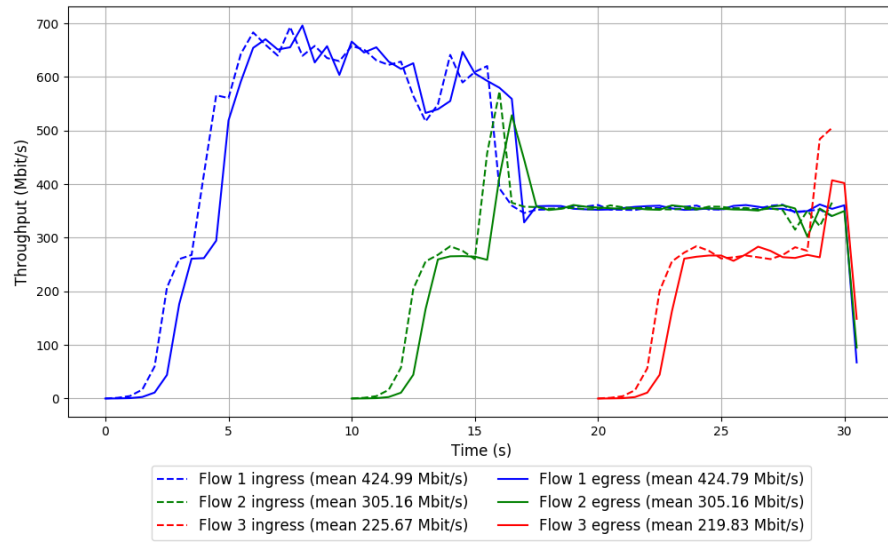


Run 1: Statistics of TCP Vegas

Start at: 2019-01-25 05:48:57  
End at: 2019-01-25 05:49:27  
Local clock offset: -0.02 ms  
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-01-25 11:10:18  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 701.09 Mbit/s  
95th percentile per-packet one-way delay: 206.244 ms  
Loss rate: 0.30%  
-- Flow 1:  
Average throughput: 424.79 Mbit/s  
95th percentile per-packet one-way delay: 215.331 ms  
Loss rate: 0.05%  
-- Flow 2:  
Average throughput: 305.16 Mbit/s  
95th percentile per-packet one-way delay: 151.196 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 219.83 Mbit/s  
95th percentile per-packet one-way delay: 234.695 ms  
Loss rate: 2.57%

# Run 1: Report of TCP Vegas — Data Link



Run 2: Statistics of TCP Vegas

Start at: 2019-01-25 06:30:59

End at: 2019-01-25 06:31:29

Local clock offset: 0.071 ms

Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-01-25 11:15:08

# Datalink statistics

-- Total of 3 flows:

Average throughput: 596.16 Mbit/s

95th percentile per-packet one-way delay: 179.366 ms

Loss rate: 0.28%

-- Flow 1:

Average throughput: 307.97 Mbit/s

95th percentile per-packet one-way delay: 138.176 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 299.51 Mbit/s

95th percentile per-packet one-way delay: 184.058 ms

Loss rate: 0.38%

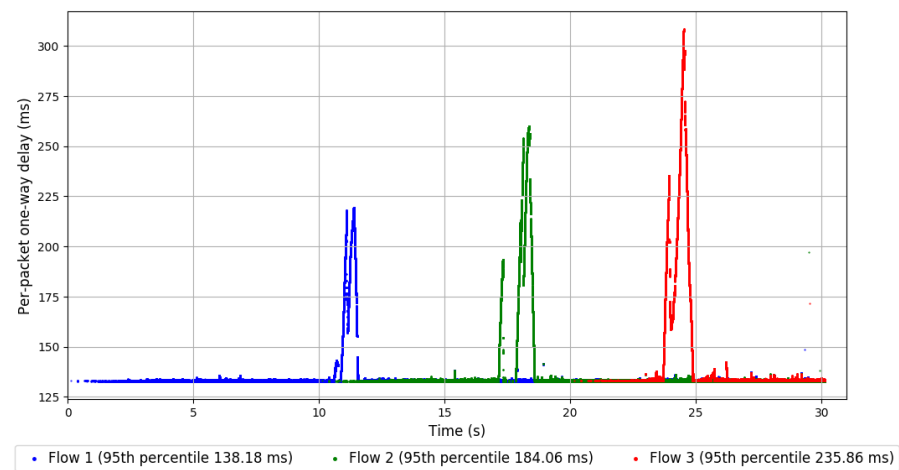
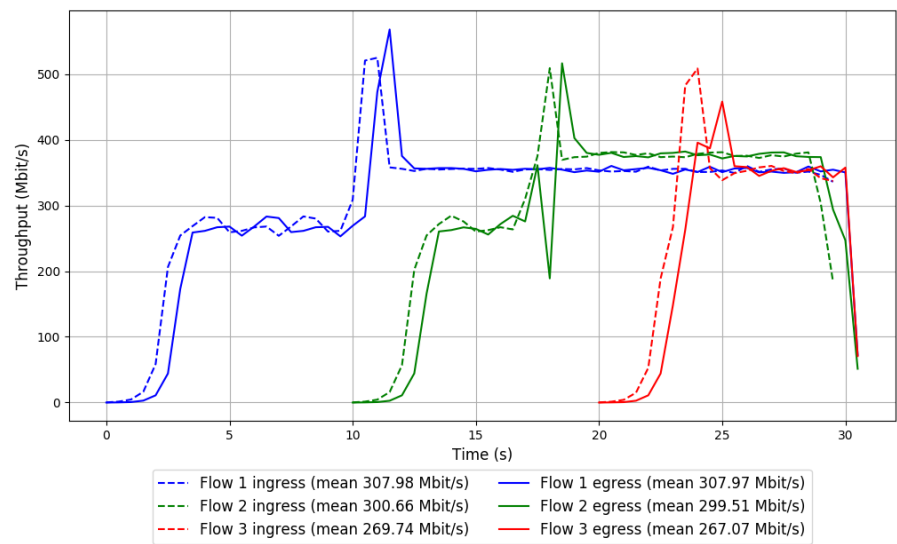
-- Flow 3:

Average throughput: 267.07 Mbit/s

95th percentile per-packet one-way delay: 235.857 ms

Loss rate: 0.99%

Run 2: Report of TCP Vegas — Data Link

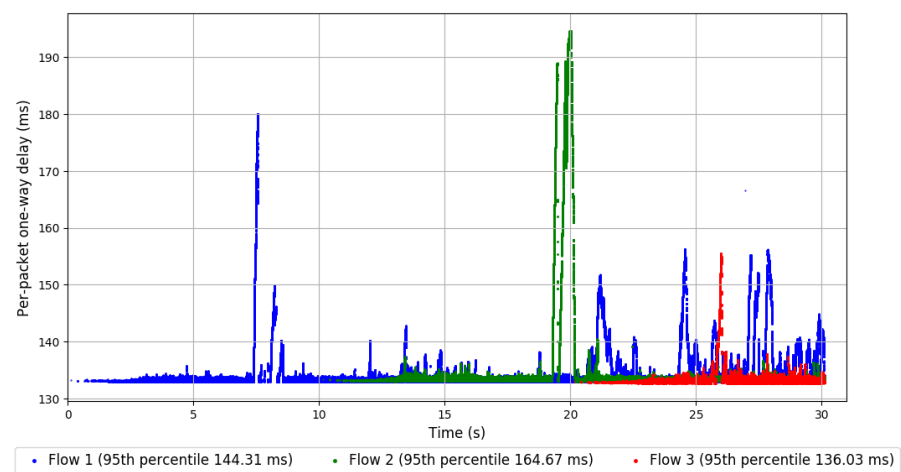
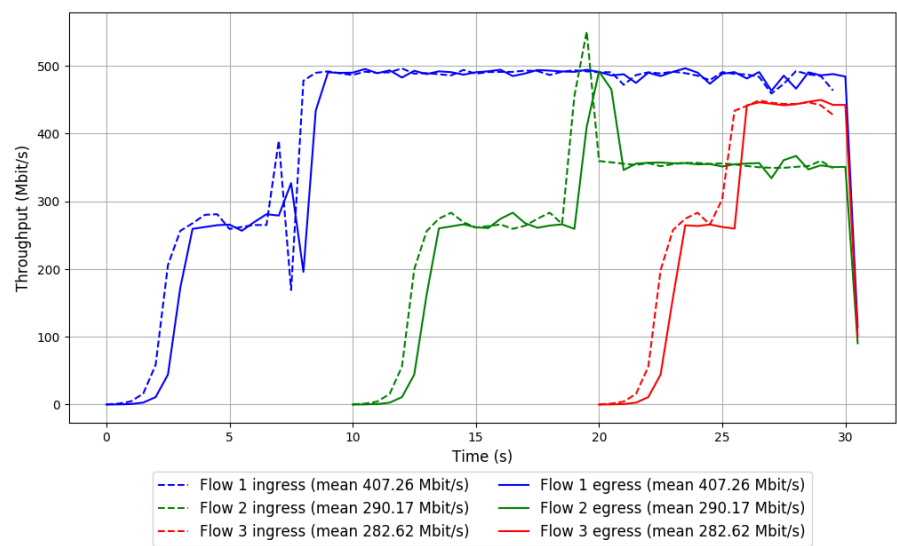


Run 3: Statistics of TCP Vegas

Start at: 2019-01-25 07:13:40  
End at: 2019-01-25 07:14:10  
Local clock offset: -0.076 ms  
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-01-25 11:18:36  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 694.47 Mbit/s  
95th percentile per-packet one-way delay: 144.613 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 407.26 Mbit/s  
95th percentile per-packet one-way delay: 144.308 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 290.17 Mbit/s  
95th percentile per-packet one-way delay: 164.670 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 282.62 Mbit/s  
95th percentile per-packet one-way delay: 136.027 ms  
Loss rate: 0.00%

Run 3: Report of TCP Vegas — Data Link



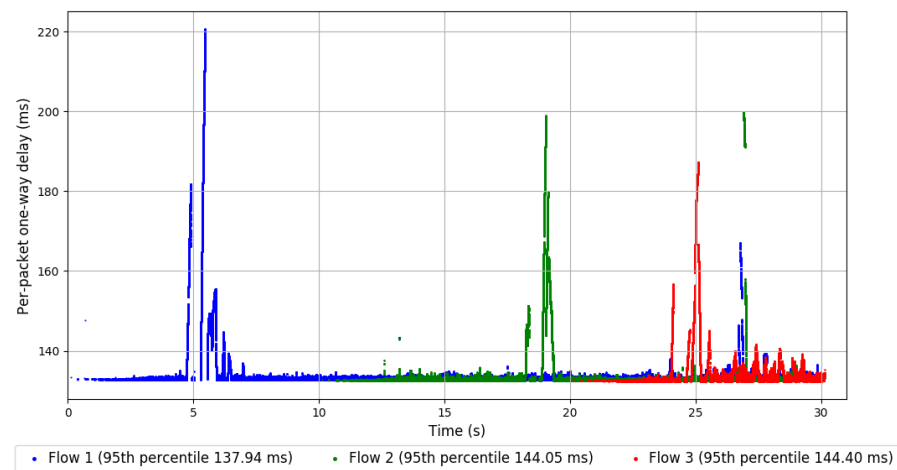
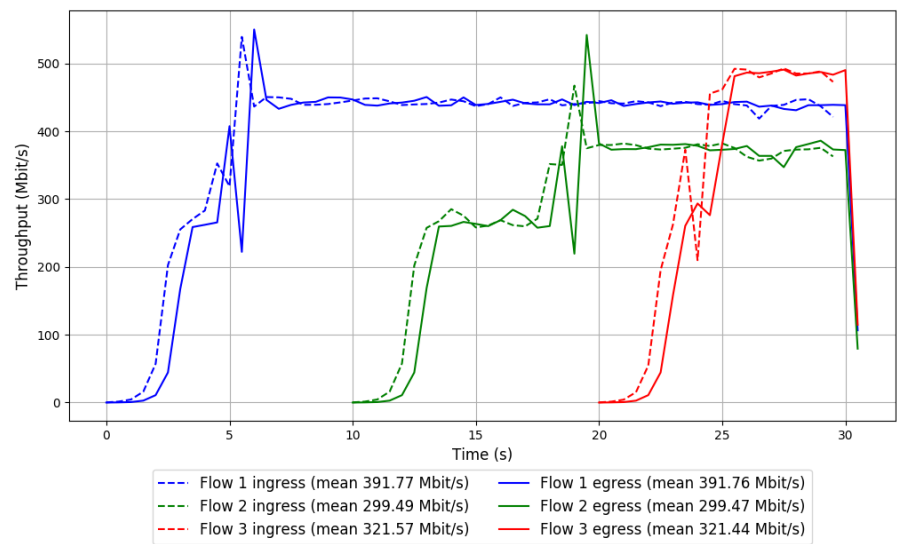


Run 4: Statistics of TCP Vegas

Start at: 2019-01-25 07:54:56  
End at: 2019-01-25 07:55:26  
Local clock offset: 0.242 ms  
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-01-25 11:19:04  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 698.09 Mbit/s  
95th percentile per-packet one-way delay: 141.356 ms  
Loss rate: 0.01%  
-- Flow 1:  
Average throughput: 391.76 Mbit/s  
95th percentile per-packet one-way delay: 137.935 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 299.47 Mbit/s  
95th percentile per-packet one-way delay: 144.046 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 321.44 Mbit/s  
95th percentile per-packet one-way delay: 144.398 ms  
Loss rate: 0.03%

Run 4: Report of TCP Vegas — Data Link



Run 5: Statistics of TCP Vegas

Start at: 2019-01-25 08:36:00

End at: 2019-01-25 08:36:30

Local clock offset: -0.259 ms

Remote clock offset: 0.055 ms

# Below is generated by plot.py at 2019-01-25 11:20:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 725.37 Mbit/s

95th percentile per-packet one-way delay: 164.942 ms

Loss rate: 0.55%

-- Flow 1:

Average throughput: 438.64 Mbit/s

95th percentile per-packet one-way delay: 154.147 ms

Loss rate: 0.03%

-- Flow 2:

Average throughput: 309.84 Mbit/s

95th percentile per-packet one-way delay: 152.950 ms

Loss rate: 0.00%

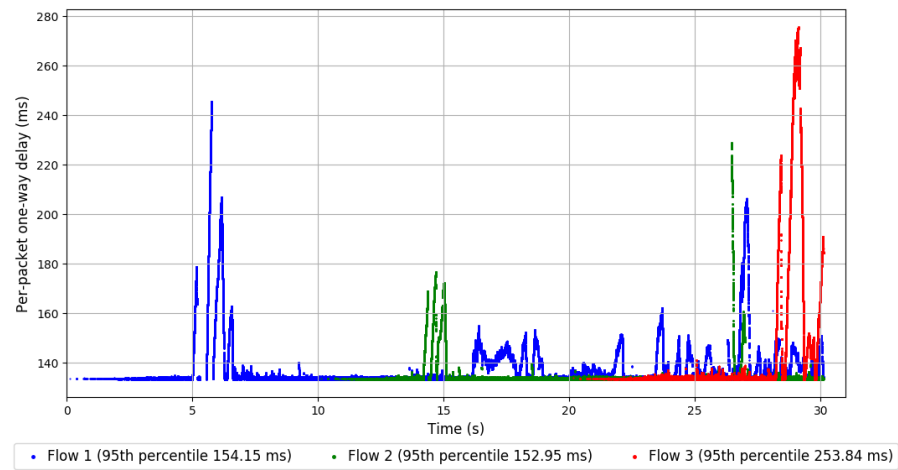
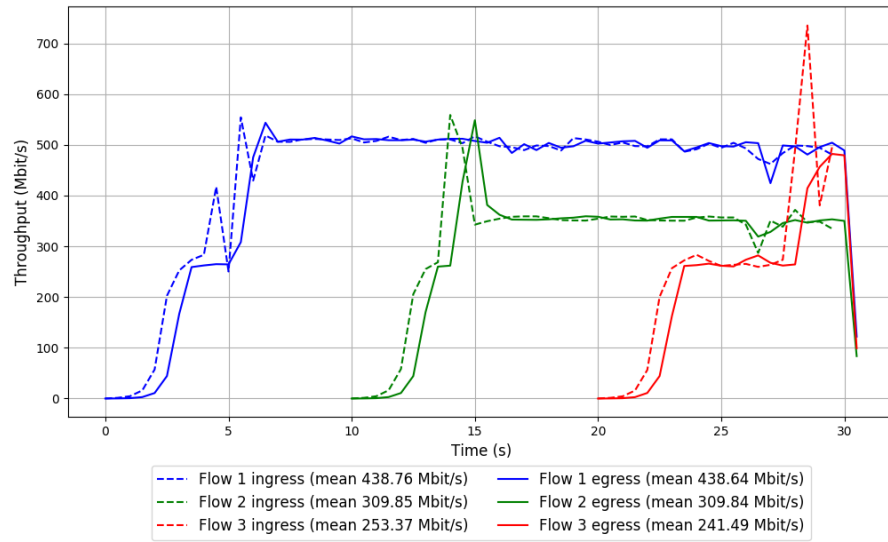
-- Flow 3:

Average throughput: 241.49 Mbit/s

95th percentile per-packet one-way delay: 253.837 ms

Loss rate: 4.67%

# Run 5: Report of TCP Vegas — Data Link

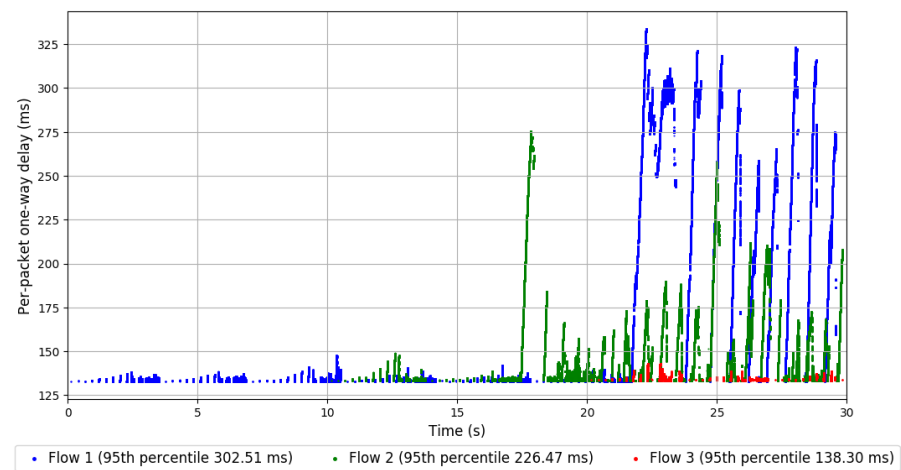
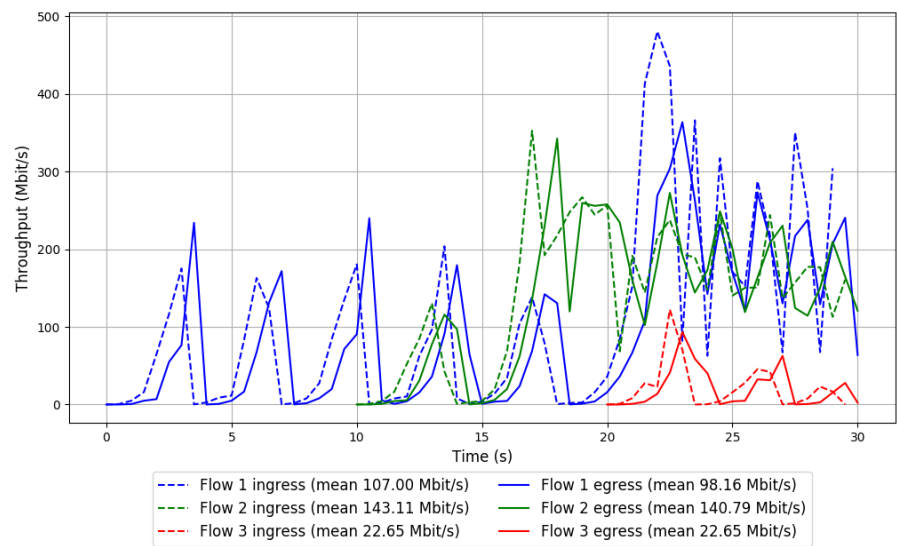


Run 1: Statistics of Verus

Start at: 2019-01-25 05:21:34  
End at: 2019-01-25 05:22:04  
Local clock offset: -0.613 ms  
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2019-01-25 11:20:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 198.04 Mbit/s  
95th percentile per-packet one-way delay: 295.854 ms  
Loss rate: 4.90%  
-- Flow 1:  
Average throughput: 98.16 Mbit/s  
95th percentile per-packet one-way delay: 302.507 ms  
Loss rate: 8.18%  
-- Flow 2:  
Average throughput: 140.79 Mbit/s  
95th percentile per-packet one-way delay: 226.466 ms  
Loss rate: 1.62%  
-- Flow 3:  
Average throughput: 22.65 Mbit/s  
95th percentile per-packet one-way delay: 138.300 ms  
Loss rate: 0.00%

Run 1: Report of Verus — Data Link

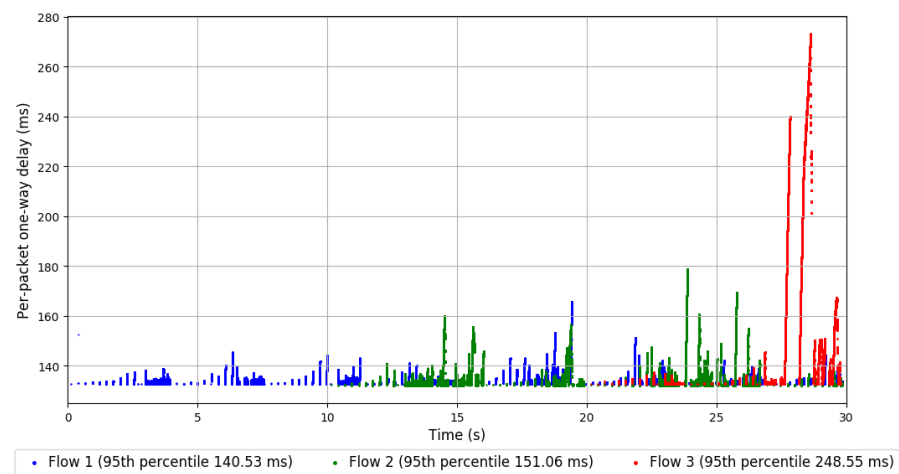
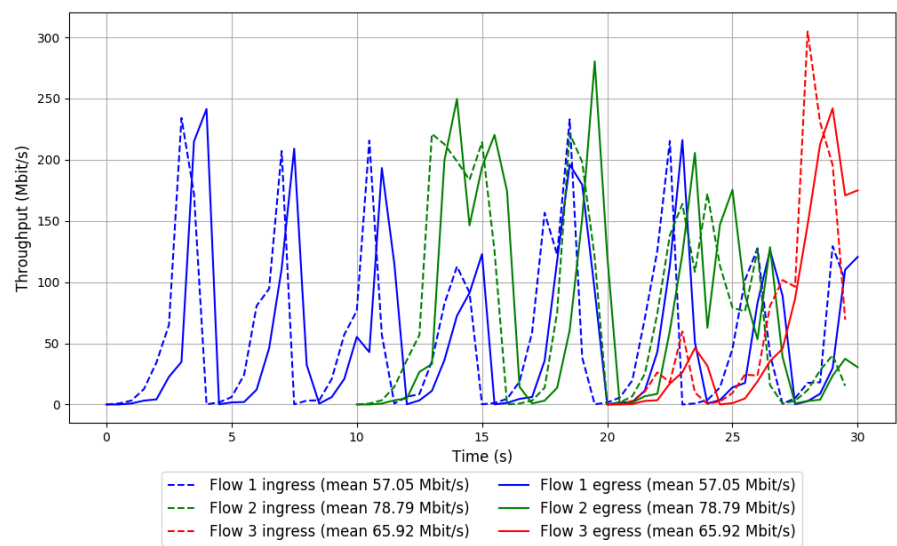


Run 2: Statistics of Verus

Start at: 2019-01-25 06:04:07  
End at: 2019-01-25 06:04:37  
Local clock offset: 0.1 ms  
Remote clock offset: -0.212 ms

# Below is generated by plot.py at 2019-01-25 11:20:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 130.62 Mbit/s  
95th percentile per-packet one-way delay: 165.897 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 57.05 Mbit/s  
95th percentile per-packet one-way delay: 140.532 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 78.79 Mbit/s  
95th percentile per-packet one-way delay: 151.064 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 65.92 Mbit/s  
95th percentile per-packet one-way delay: 248.548 ms  
Loss rate: 0.00%

Run 2: Report of Verus — Data Link





Run 3: Statistics of Verus

Start at: 2019-01-25 06:45:57

End at: 2019-01-25 06:46:27

Local clock offset: -0.585 ms

Remote clock offset: 0.105 ms

# Below is generated by plot.py at 2019-01-25 11:20:49

# Datalink statistics

-- Total of 3 flows:

Average throughput: 236.88 Mbit/s

95th percentile per-packet one-way delay: 185.782 ms

Loss rate: 0.12%

-- Flow 1:

Average throughput: 140.34 Mbit/s

95th percentile per-packet one-way delay: 193.875 ms

Loss rate: 0.20%

-- Flow 2:

Average throughput: 131.51 Mbit/s

95th percentile per-packet one-way delay: 169.189 ms

Loss rate: 0.00%

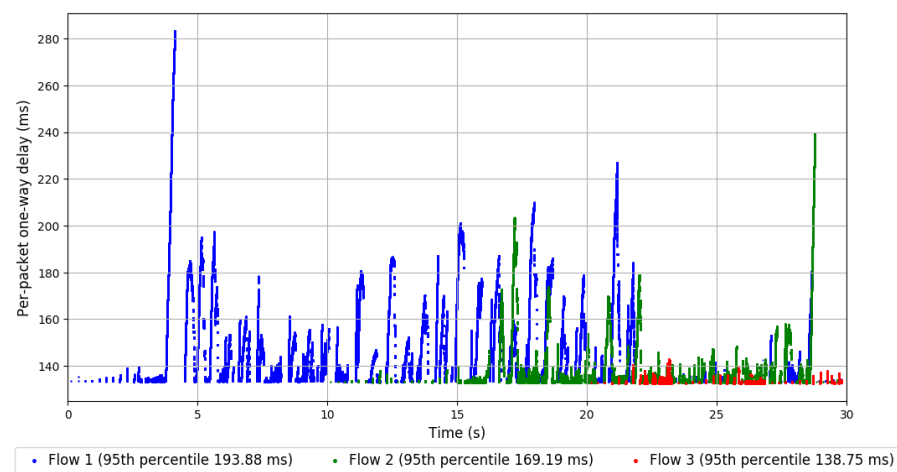
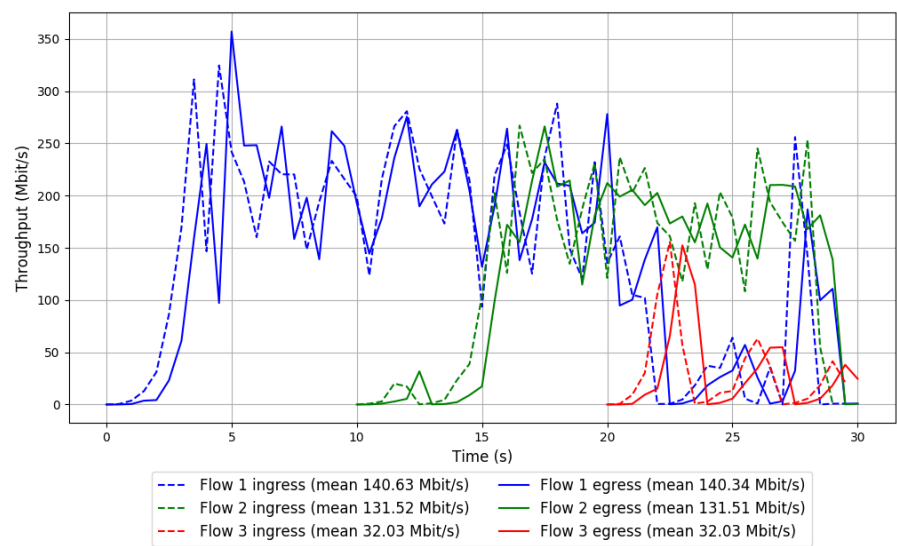
-- Flow 3:

Average throughput: 32.03 Mbit/s

95th percentile per-packet one-way delay: 138.754 ms

Loss rate: 0.00%

Run 3: Report of Verus — Data Link

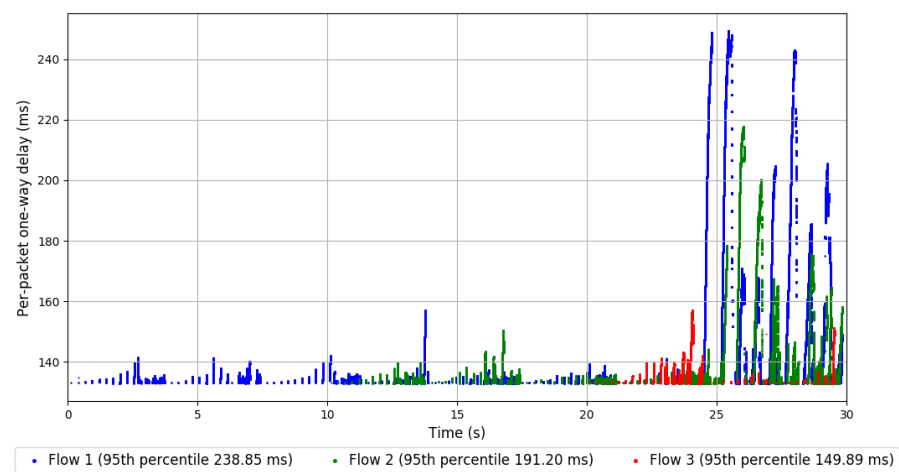
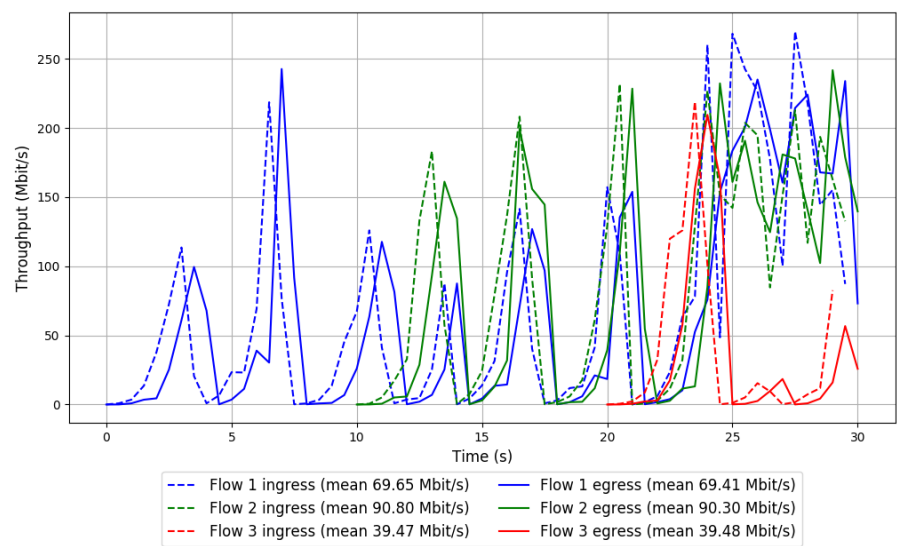


Run 4: Statistics of Verus

Start at: 2019-01-25 07:28:41  
End at: 2019-01-25 07:29:11  
Local clock offset: 0.066 ms  
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-01-25 11:20:49  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 141.83 Mbit/s  
95th percentile per-packet one-way delay: 215.022 ms  
Loss rate: 0.40%  
-- Flow 1:  
Average throughput: 69.41 Mbit/s  
95th percentile per-packet one-way delay: 238.852 ms  
Loss rate: 0.34%  
-- Flow 2:  
Average throughput: 90.30 Mbit/s  
95th percentile per-packet one-way delay: 191.200 ms  
Loss rate: 0.56%  
-- Flow 3:  
Average throughput: 39.48 Mbit/s  
95th percentile per-packet one-way delay: 149.891 ms  
Loss rate: 0.00%

Run 4: Report of Verus — Data Link



Run 5: Statistics of Verus

Start at: 2019-01-25 08:09:48

End at: 2019-01-25 08:10:18

Local clock offset: 0.064 ms

Remote clock offset: 0.095 ms

# Below is generated by plot.py at 2019-01-25 11:20:53

# Datalink statistics

-- Total of 3 flows:

Average throughput: 153.06 Mbit/s

95th percentile per-packet one-way delay: 279.497 ms

Loss rate: 1.91%

-- Flow 1:

Average throughput: 60.67 Mbit/s

95th percentile per-packet one-way delay: 138.587 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 58.37 Mbit/s

95th percentile per-packet one-way delay: 200.277 ms

Loss rate: 0.00%

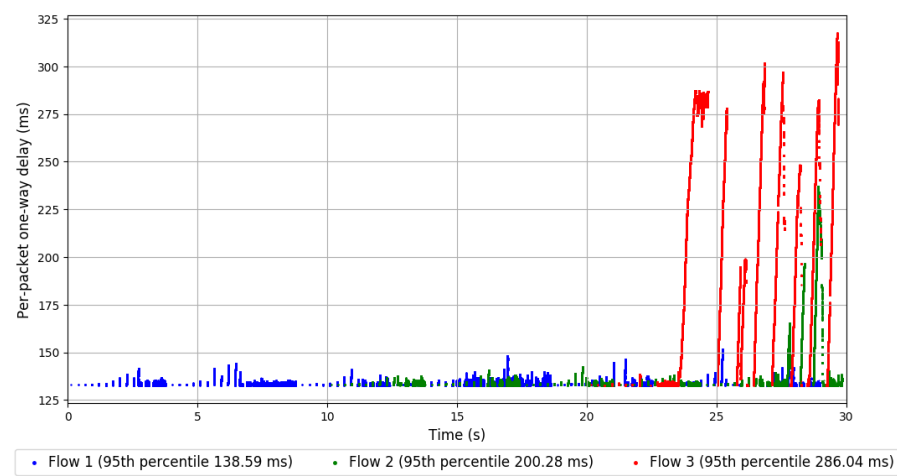
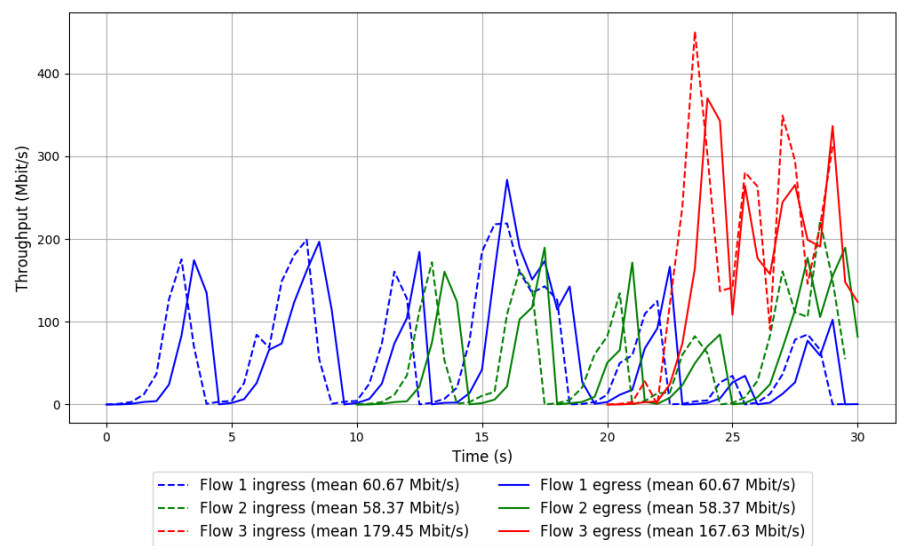
-- Flow 3:

Average throughput: 167.63 Mbit/s

95th percentile per-packet one-way delay: 286.037 ms

Loss rate: 5.23%

Run 5: Report of Verus — Data Link

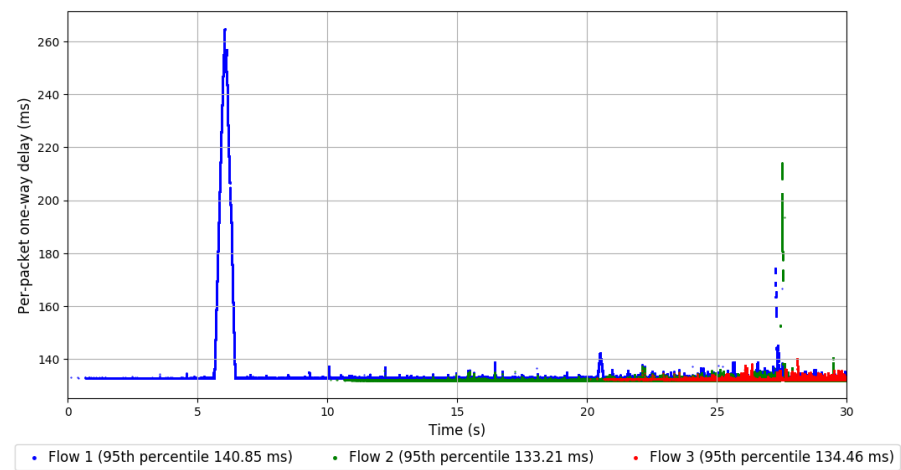
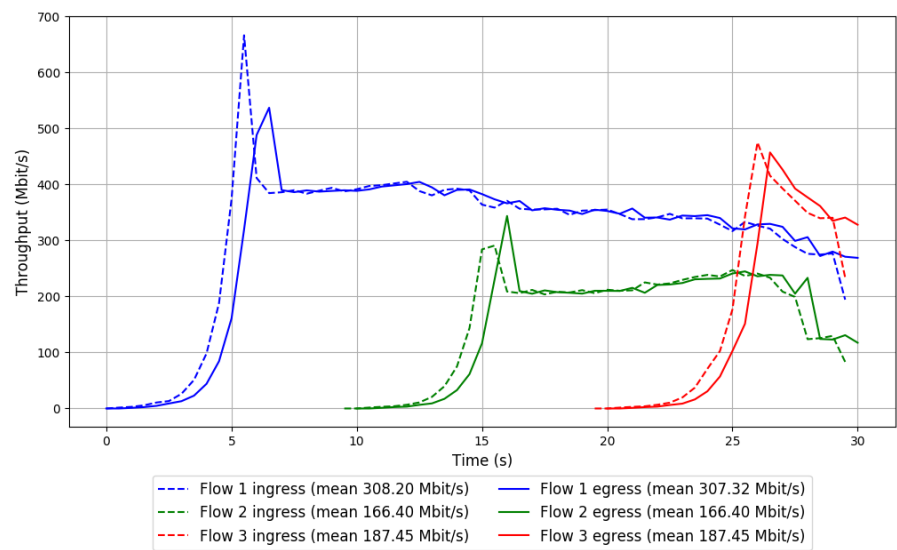


Run 1: Statistics of PCC-Vivace

Start at: 2019-01-25 05:40:32  
End at: 2019-01-25 05:41:02  
Local clock offset: -0.428 ms  
Remote clock offset: -0.435 ms

# Below is generated by plot.py at 2019-01-25 11:23:09  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 479.99 Mbit/s  
95th percentile per-packet one-way delay: 135.147 ms  
Loss rate: 0.18%  
-- Flow 1:  
Average throughput: 307.32 Mbit/s  
95th percentile per-packet one-way delay: 140.848 ms  
Loss rate: 0.29%  
-- Flow 2:  
Average throughput: 166.40 Mbit/s  
95th percentile per-packet one-way delay: 133.205 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 187.45 Mbit/s  
95th percentile per-packet one-way delay: 134.462 ms  
Loss rate: 0.00%

Run 1: Report of PCC-Vivace — Data Link





Run 2: Statistics of PCC-Vivace

Start at: 2019-01-25 06:22:47

End at: 2019-01-25 06:23:17

Local clock offset: -0.388 ms

Remote clock offset: 0.083 ms

# Below is generated by plot.py at 2019-01-25 11:24:10

# Datalink statistics

-- Total of 3 flows:

Average throughput: 512.89 Mbit/s

95th percentile per-packet one-way delay: 196.163 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 293.78 Mbit/s

95th percentile per-packet one-way delay: 196.995 ms

Loss rate: 0.22%

-- Flow 2:

Average throughput: 257.60 Mbit/s

95th percentile per-packet one-way delay: 143.973 ms

Loss rate: 0.00%

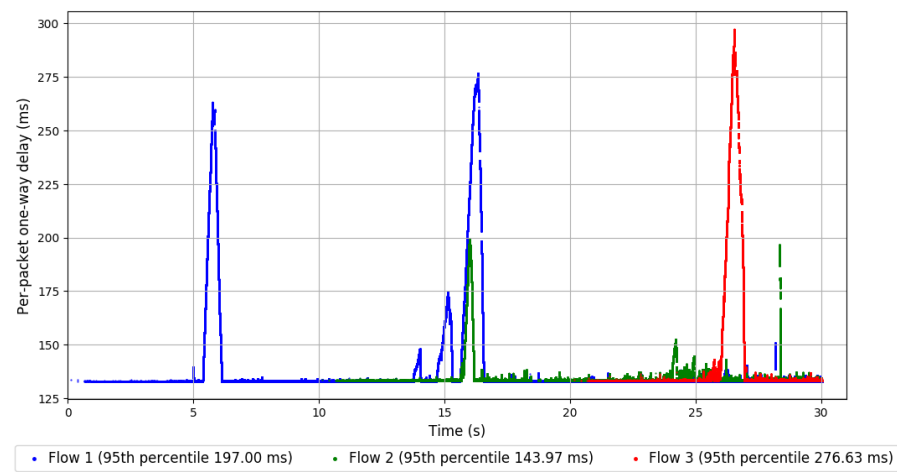
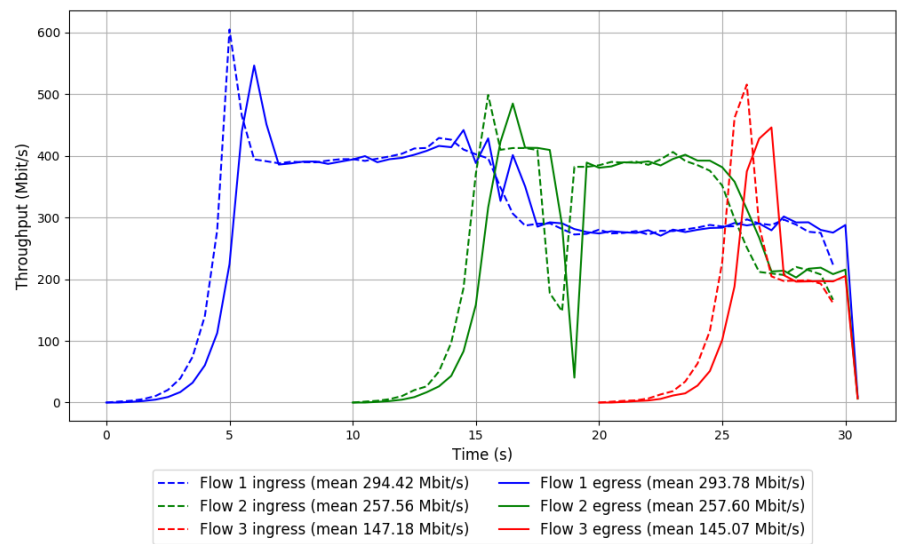
-- Flow 3:

Average throughput: 145.07 Mbit/s

95th percentile per-packet one-way delay: 276.629 ms

Loss rate: 1.44%

Run 2: Report of PCC-Vivace — Data Link

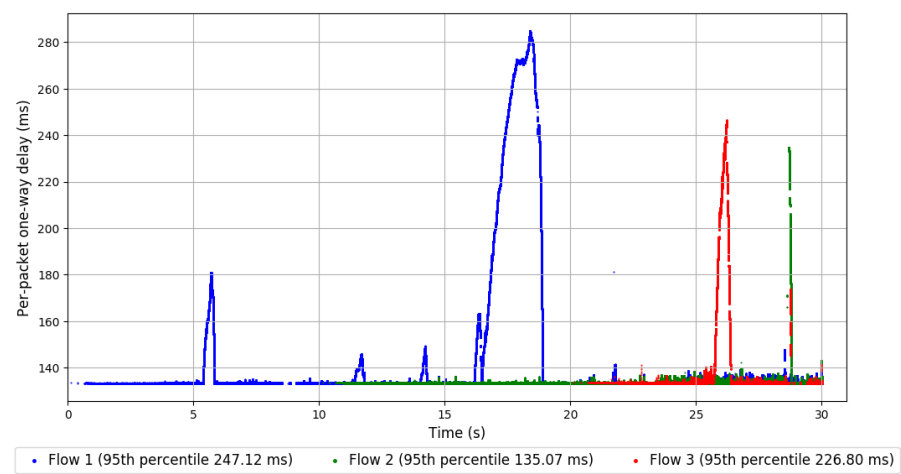
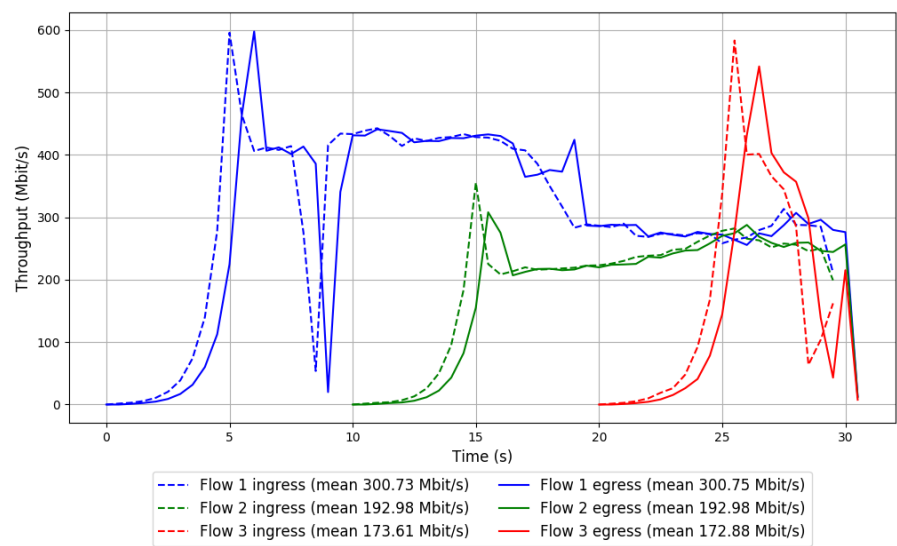


Run 3: Statistics of PCC-Vivace

Start at: 2019-01-25 07:05:02  
End at: 2019-01-25 07:05:32  
Local clock offset: -0.538 ms  
Remote clock offset: -0.069 ms

# Below is generated by plot.py at 2019-01-25 11:24:39  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 486.07 Mbit/s  
95th percentile per-packet one-way delay: 219.901 ms  
Loss rate: 0.05%  
-- Flow 1:  
Average throughput: 300.75 Mbit/s  
95th percentile per-packet one-way delay: 247.122 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 192.98 Mbit/s  
95th percentile per-packet one-way delay: 135.066 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 172.88 Mbit/s  
95th percentile per-packet one-way delay: 226.796 ms  
Loss rate: 0.42%

Run 3: Report of PCC-Vivace — Data Link



Run 4: Statistics of PCC-Vivace

Start at: 2019-01-25 07:47:01

End at: 2019-01-25 07:47:31

Local clock offset: -0.098 ms

Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-01-25 11:24:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 484.18 Mbit/s

95th percentile per-packet one-way delay: 140.292 ms

Loss rate: 0.26%

-- Flow 1:

Average throughput: 327.87 Mbit/s

95th percentile per-packet one-way delay: 152.274 ms

Loss rate: 0.38%

-- Flow 2:

Average throughput: 170.32 Mbit/s

95th percentile per-packet one-way delay: 134.104 ms

Loss rate: 0.00%

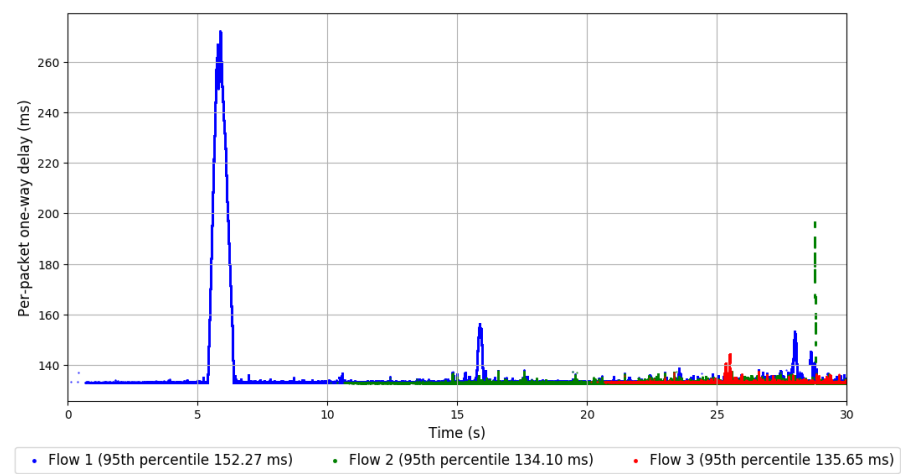
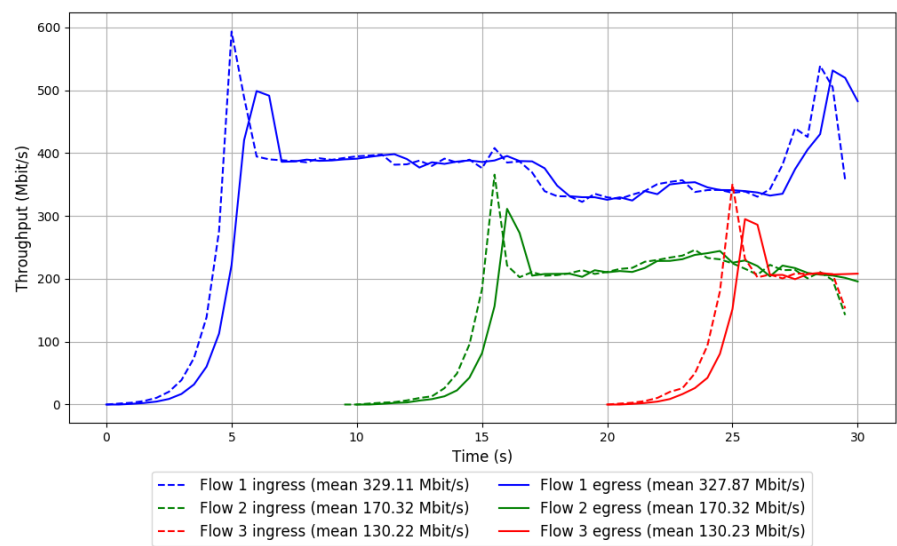
-- Flow 3:

Average throughput: 130.23 Mbit/s

95th percentile per-packet one-way delay: 135.646 ms

Loss rate: 0.00%

Run 4: Report of PCC-Vivace — Data Link

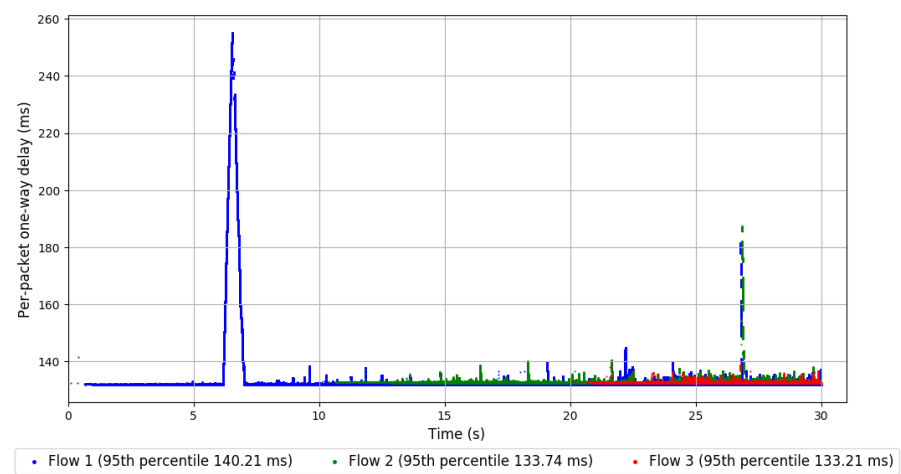
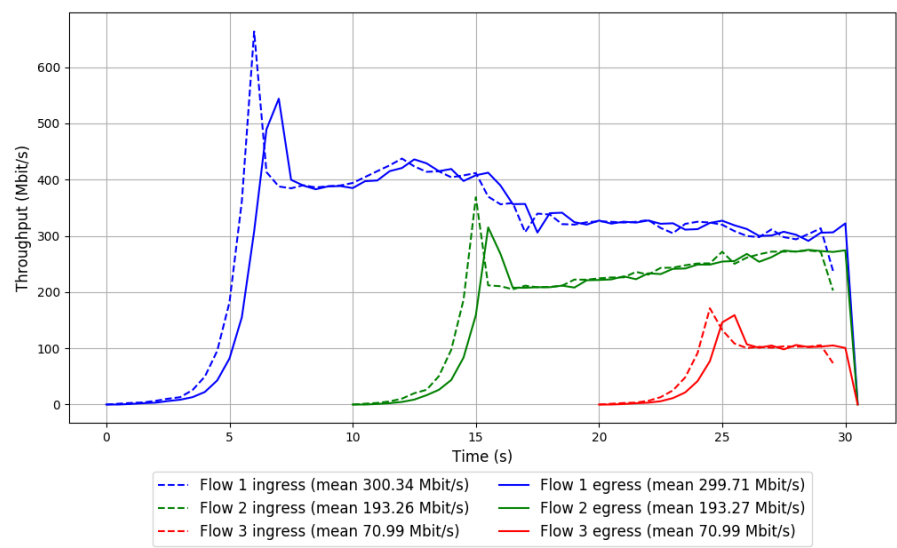


Run 5: Statistics of PCC-Vivace

Start at: 2019-01-25 08:27:58  
End at: 2019-01-25 08:28:28  
Local clock offset: 0.343 ms  
Remote clock offset: -0.076 ms

# Below is generated by plot.py at 2019-01-25 11:24:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 451.59 Mbit/s  
95th percentile per-packet one-way delay: 134.941 ms  
Loss rate: 0.14%  
-- Flow 1:  
Average throughput: 299.71 Mbit/s  
95th percentile per-packet one-way delay: 140.213 ms  
Loss rate: 0.21%  
-- Flow 2:  
Average throughput: 193.27 Mbit/s  
95th percentile per-packet one-way delay: 133.738 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 70.99 Mbit/s  
95th percentile per-packet one-way delay: 133.212 ms  
Loss rate: 0.00%

Run 5: Report of PCC-Vivace — Data Link



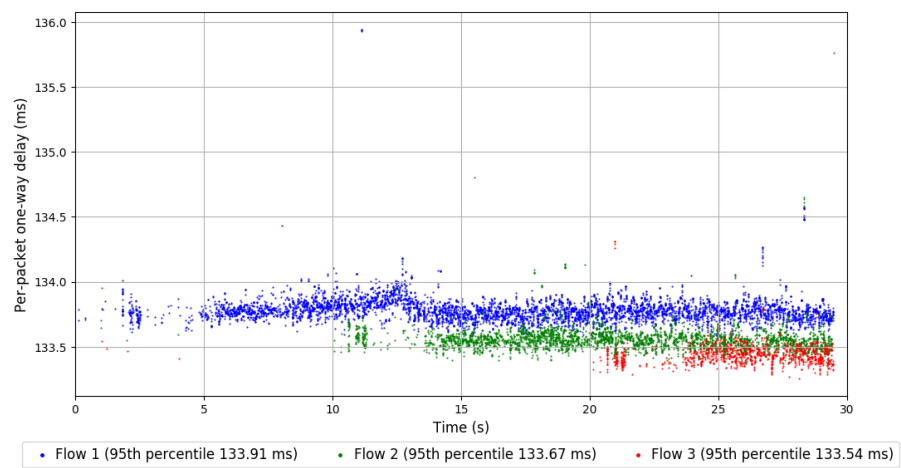
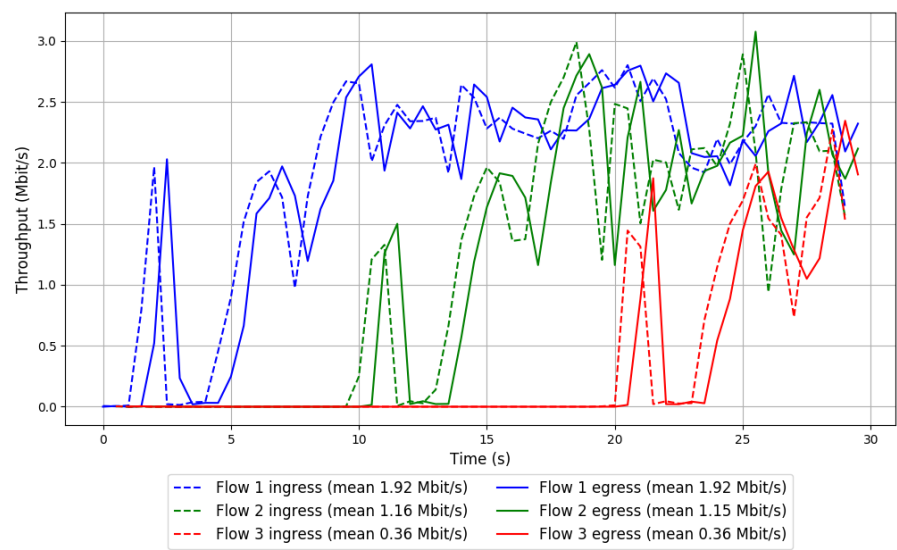


```
Run 1: Statistics of WebRTC media

Start at: 2019-01-25 05:23:21
End at: 2019-01-25 05:23:51
Local clock offset: -0.31 ms
Remote clock offset: 0.351 ms

# Below is generated by plot.py at 2019-01-25 11:24:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 133.878 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 133.907 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 133.666 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 133.540 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link



Run 2: Statistics of WebRTC media

Start at: 2019-01-25 06:05:43

End at: 2019-01-25 06:06:13

Local clock offset: -0.367 ms

Remote clock offset: -0.13 ms

# Below is generated by plot.py at 2019-01-25 11:24:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 133.386 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.470 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 132.874 ms

Loss rate: 0.00%

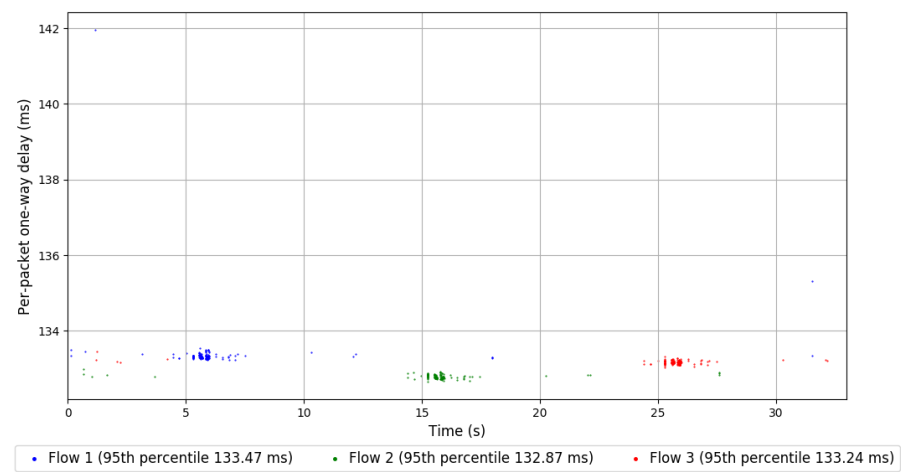
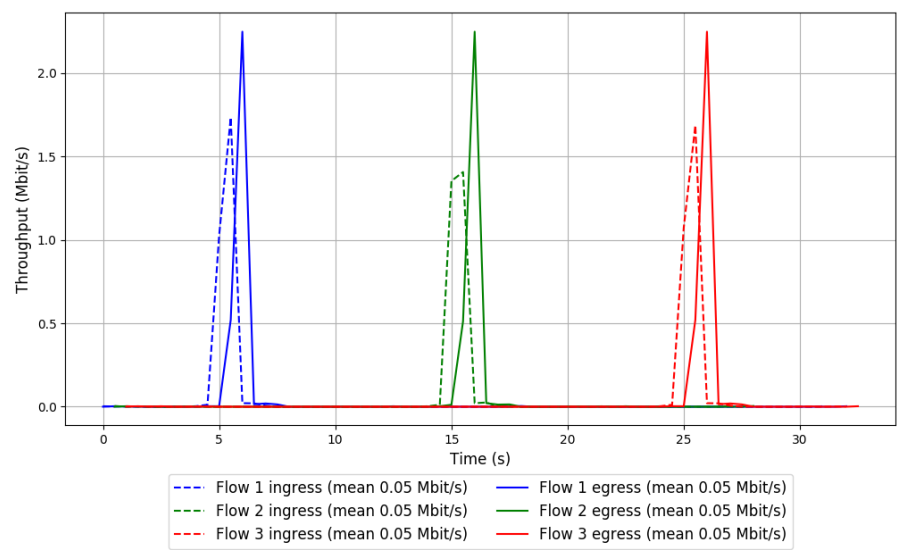
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 133.241 ms

Loss rate: 0.00%

Run 2: Report of WebRTC media — Data Link

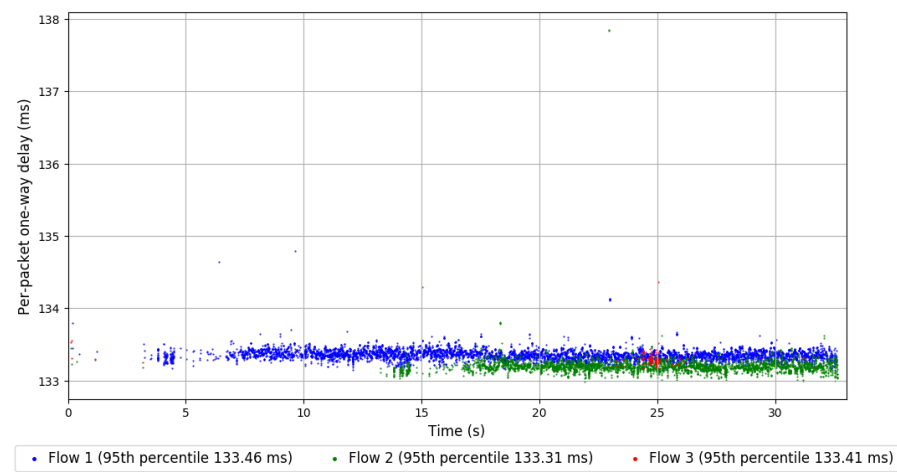
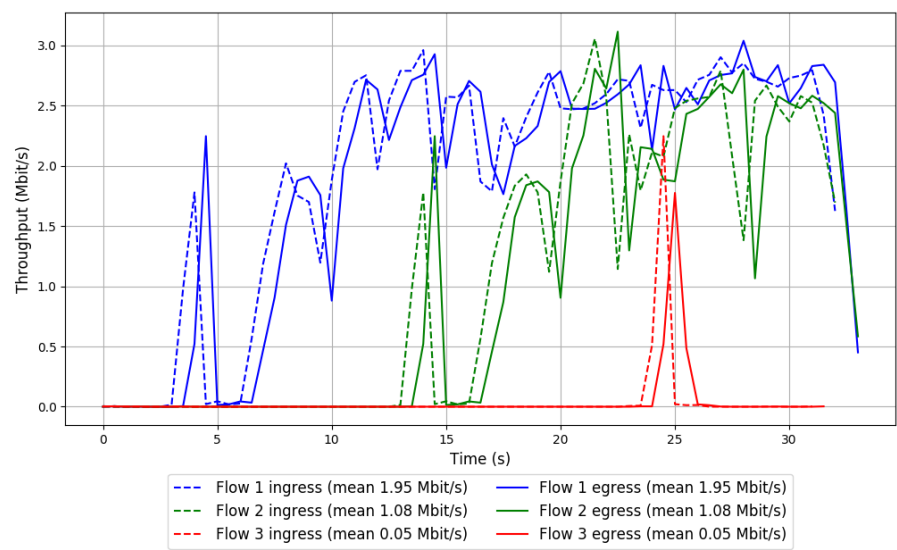


Run 3: Statistics of WebRTC media

Start at: 2019-01-25 06:47:48  
End at: 2019-01-25 06:48:18  
Local clock offset: -0.356 ms  
Remote clock offset: -0.067 ms

# Below is generated by plot.py at 2019-01-25 11:24:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 3.07 Mbit/s  
95th percentile per-packet one-way delay: 133.445 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 1.95 Mbit/s  
95th percentile per-packet one-way delay: 133.461 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 1.08 Mbit/s  
95th percentile per-packet one-way delay: 133.308 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.411 ms  
Loss rate: 0.00%

Run 3: Report of WebRTC media — Data Link



Run 4: Statistics of WebRTC media

Start at: 2019-01-25 07:30:31

End at: 2019-01-25 07:31:01

Local clock offset: -0.578 ms

Remote clock offset: 0.291 ms

# Below is generated by plot.py at 2019-01-25 11:24:46

# Datalink statistics

-- Total of 3 flows:

Average throughput: 0.13 Mbit/s

95th percentile per-packet one-way delay: 134.259 ms

Loss rate: 0.00%

-- Flow 1:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 134.082 ms

Loss rate: 0.00%

-- Flow 2:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 134.260 ms

Loss rate: 0.00%

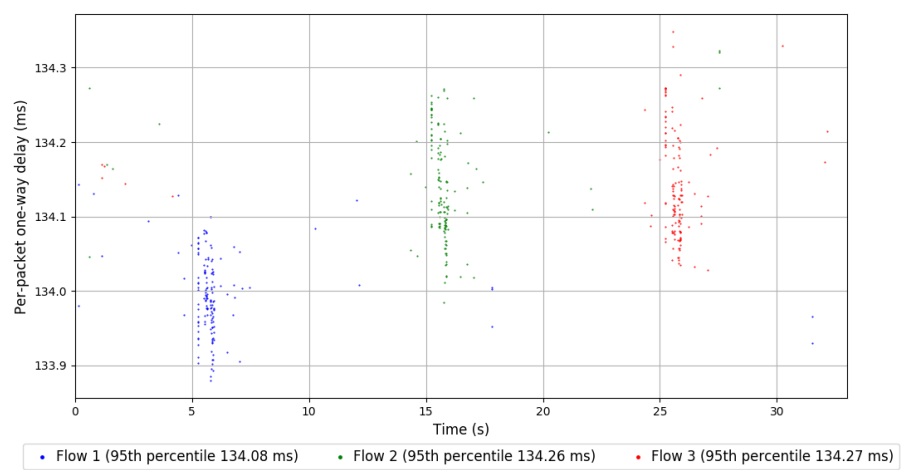
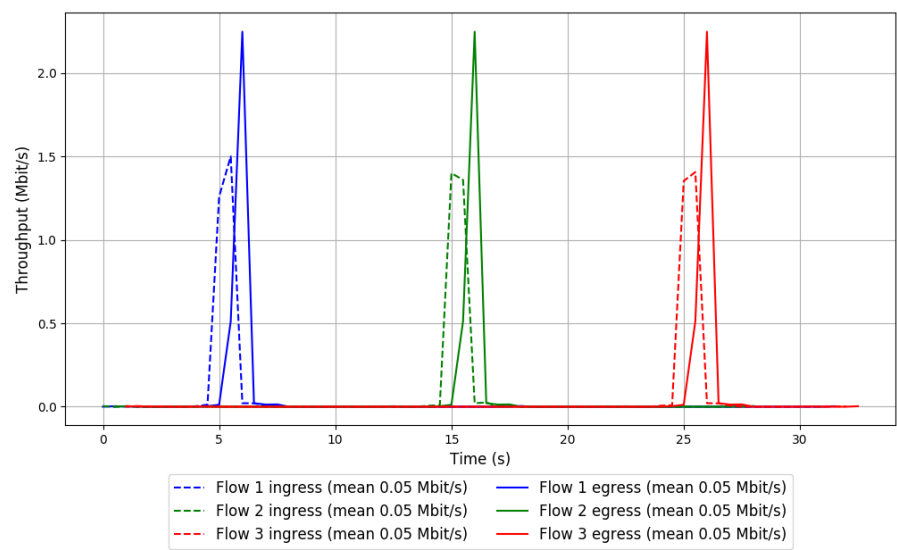
-- Flow 3:

Average throughput: 0.05 Mbit/s

95th percentile per-packet one-way delay: 134.271 ms

Loss rate: 0.00%

Run 4: Report of WebRTC media — Data Link





Run 5: Statistics of WebRTC media

Start at: 2019-01-25 08:11:29  
End at: 2019-01-25 08:11:59  
Local clock offset: -0.125 ms  
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-01-25 11:24:46  
# Datalink statistics  
-- Total of 3 flows:  
Average throughput: 0.13 Mbit/s  
95th percentile per-packet one-way delay: 133.172 ms  
Loss rate: 0.00%  
-- Flow 1:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.202 ms  
Loss rate: 0.00%  
-- Flow 2:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.130 ms  
Loss rate: 0.00%  
-- Flow 3:  
Average throughput: 0.05 Mbit/s  
95th percentile per-packet one-way delay: 133.055 ms  
Loss rate: 0.00%

Run 5: Report of WebRTC media — Data Link

