Pantheon Report

Generated at 2019-03-19 03:54:10 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
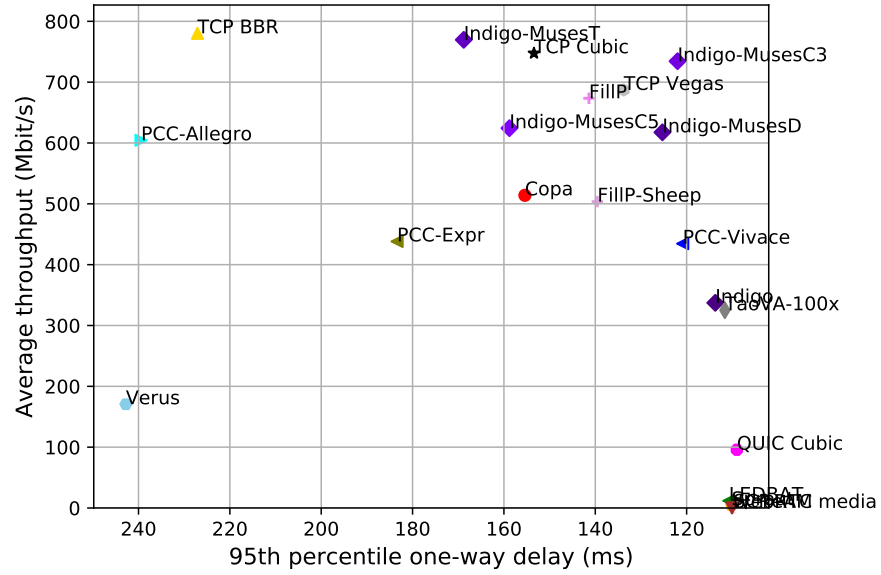
```
System info:
Linux 4.15.0-1028-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```
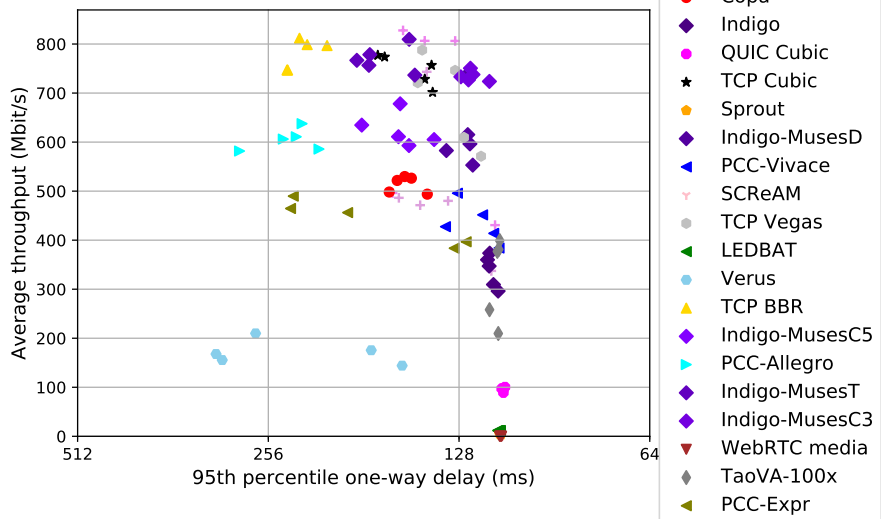
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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

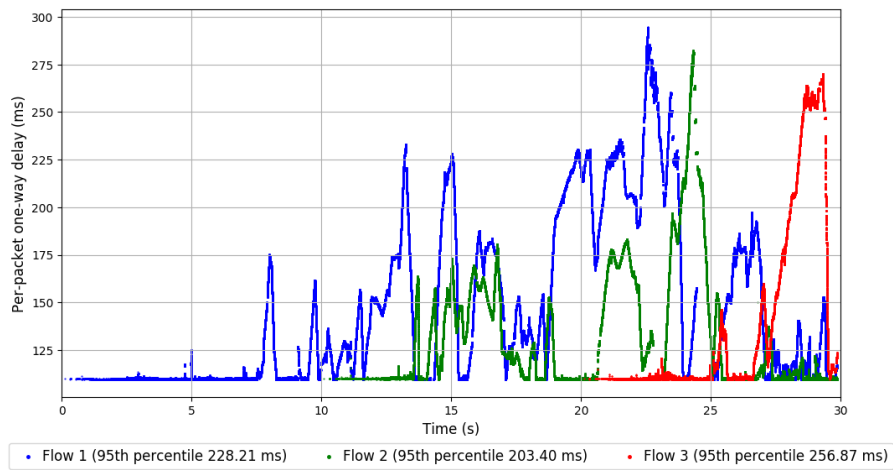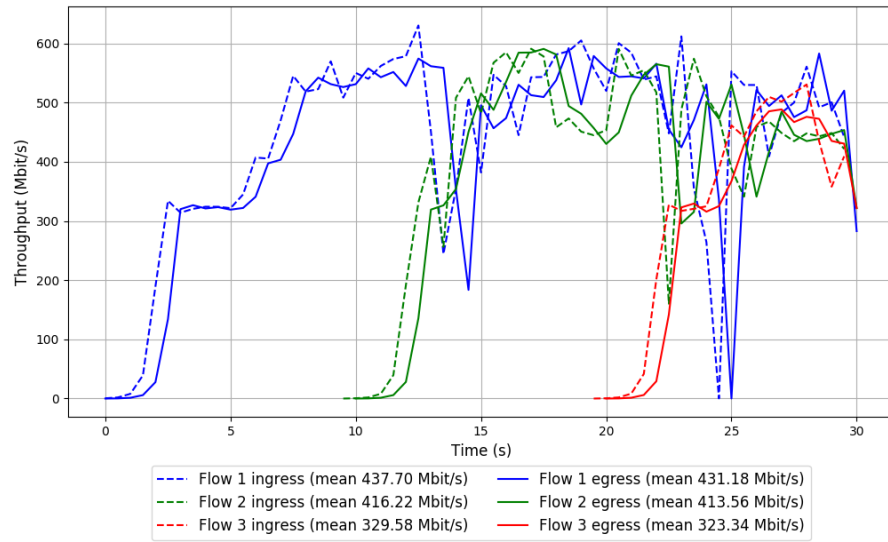| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	420.80	389.92	308.72	232.96	211.41	207.20	2.30	2.11	4.61
Copa	5	276.63	253.80	210.91	151.38	150.70	157.18	0.71	1.08	2.81
TCP Cubic	5	414.44	354.97	298.00	158.68	151.00	149.33	0.73	1.05	3.16
FillP	5	370.24	341.76	235.14	144.90	121.23	113.26	0.70	0.94	2.65
FillP-Sheep	5	219.07	318.57	225.03	152.52	112.86	111.89	0.76	0.94	2.75
Indigo	5	188.75	157.21	135.20	113.14	112.39	119.04	0.70	1.16	2.70
Indigo-MusesC3	5	429.54	364.73	271.66	123.25	120.66	116.57	0.62	1.00	3.43
Indigo-MusesC5	5	378.15	338.89	108.50	163.55	145.21	110.88	0.58	1.27	4.61
Indigo-MusesD	5	384.09	320.94	103.11	125.18	126.86	110.29	0.77	1.44	4.30
Indigo-MusesT	5	479.36	397.21	130.78	178.03	132.84	112.30	0.82	1.23	3.51
LEDBAT	5	7.67	5.08	2.48	110.69	110.52	110.07	1.47	2.22	4.44
PCC-Allegro	5	328.68	304.13	230.50	245.10	202.17	234.39	2.76	3.76	4.42
PCC-Expr	5	252.83	204.34	153.73	186.47	144.68	165.84	2.60	1.49	3.30
QUIC Cubic	5	52.57	48.15	33.21	108.74	109.01	108.87	0.93	1.77	2.03
SCReAM	5	0.22	0.22	0.22	109.54	109.70	109.27	0.66	1.24	2.15
Sprout	5	2.14	2.91	1.62	109.67	110.28	109.84	0.81	0.58	3.15
TaoVA-100x	5	163.23	159.11	171.96	110.58	110.79	114.29	0.76	1.28	2.54
TCP Vegas	5	374.47	329.50	287.27	137.82	136.61	137.47	0.84	1.42	2.69
Verus	5	97.16	90.33	43.61	226.46	214.22	170.69	4.37	3.91	2.00
PCC-Vivace	5	266.82	187.83	133.17	120.51	133.54	123.97	0.95	1.60	3.23
WebRTC media	5	0.05	0.05	0.05	109.77	109.90	109.60	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-03-18 22:46:51
End at: 2019-03-18 22:47:21
Local clock offset: -0.063 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-03-19 01:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.81 Mbit/s
95th percentile per-packet one-way delay: 228.572 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 431.18 Mbit/s
95th percentile per-packet one-way delay: 228.208 ms
Loss rate: 2.25%
-- Flow 2:
Average throughput: 413.56 Mbit/s
95th percentile per-packet one-way delay: 203.397 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 323.34 Mbit/s
95th percentile per-packet one-way delay: 256.871 ms
Loss rate: 4.19%
```
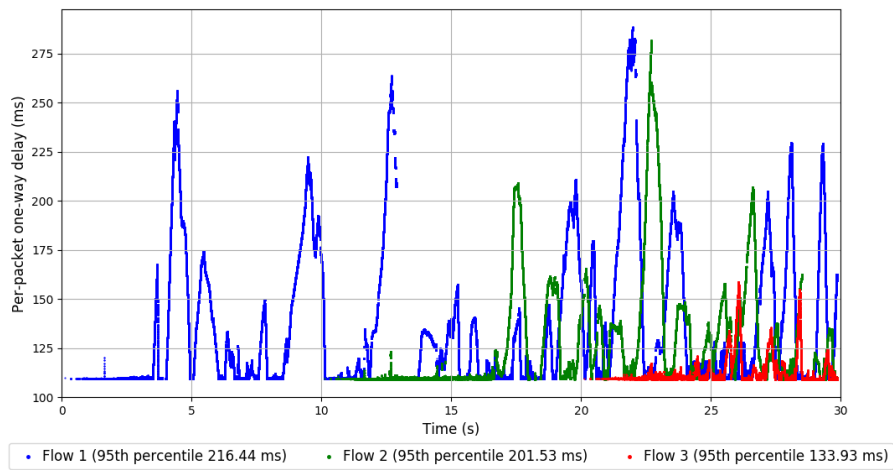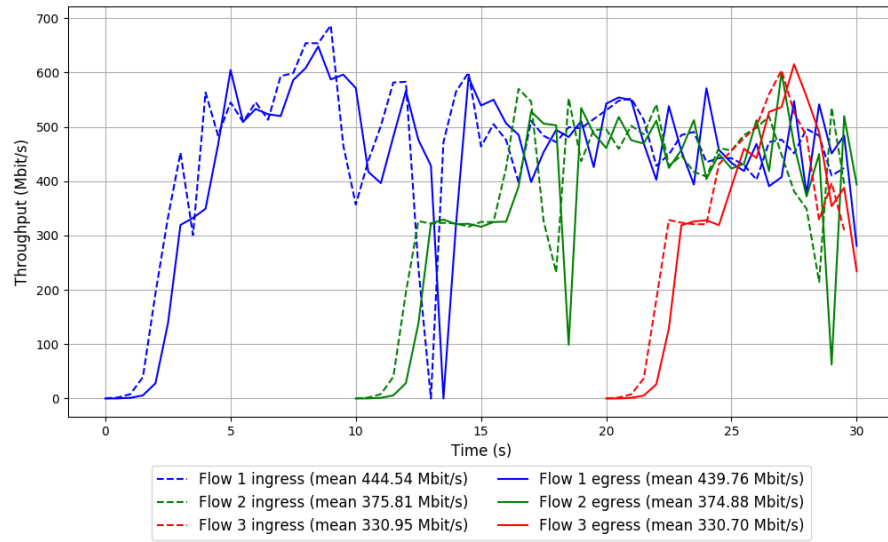
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-03-18 23:23:54
End at: 2019-03-18 23:24:24
Local clock offset: -0.136 ms
Remote clock offset: 0.15 ms


# Below is generated by plot.py at 2019-03-19 01:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 796.91 Mbit/s
95th percentile per-packet one-way delay: 206.795 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 439.76 Mbit/s
95th percentile per-packet one-way delay: 216.441 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 374.88 Mbit/s
95th percentile per-packet one-way delay: 201.525 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 330.70 Mbit/s
95th percentile per-packet one-way delay: 133.928 ms
Loss rate: 2.29%
```

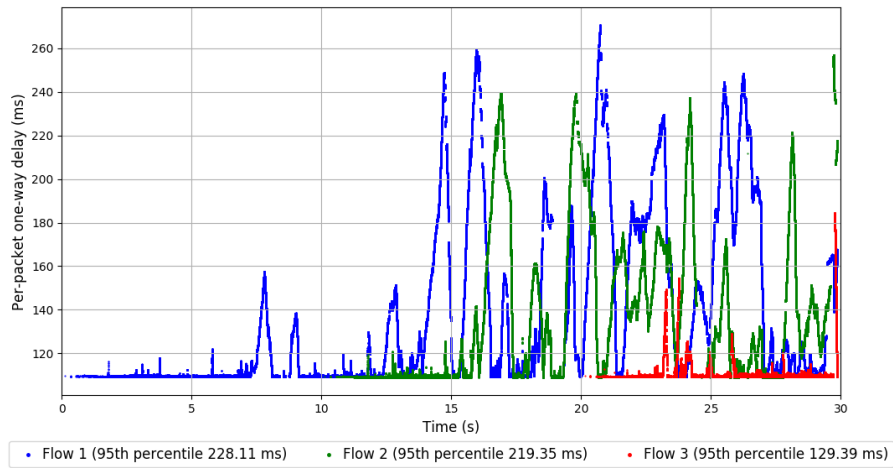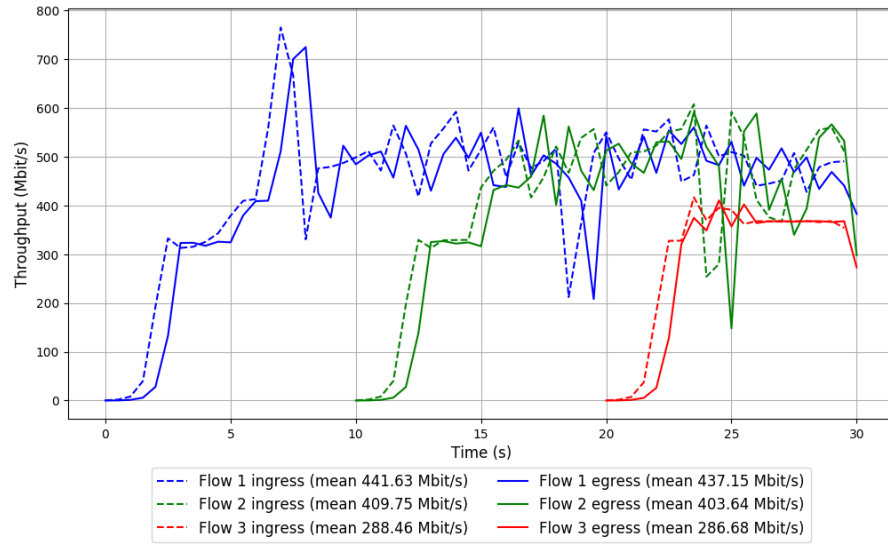Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-03-19 00:01:36
End at: 2019-03-19 00:02:06
Local clock offset: -0.178 ms
Remote clock offset: -0.184 ms


# Below is generated by plot.py at 2019-03-19 01:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 798.85 Mbit/s
95th percentile per-packet one-way delay: 222.276 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 437.15 Mbit/s
95th percentile per-packet one-way delay: 228.107 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 403.64 Mbit/s
95th percentile per-packet one-way delay: 219.353 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 286.68 Mbit/s
95th percentile per-packet one-way delay: 129.393 ms
Loss rate: 2.81%
```

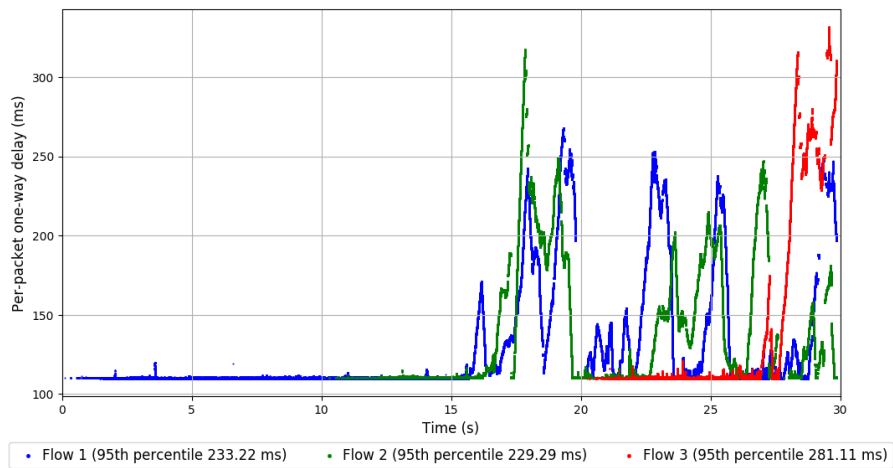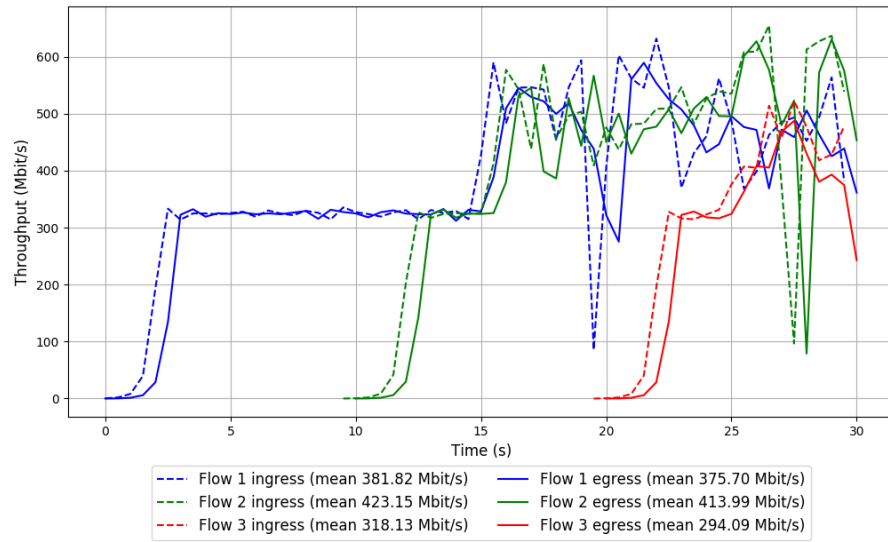Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 441.63 Mbit/s)   Flow 1 egress (mean 437.15 Mbit/s)
Flow 2 ingress (mean 409.75 Mbit/s)   Flow 2 egress (mean 403.64 Mbit/s)
Flow 3 ingress (mean 288.46 Mbit/s)   Flow 3 egress (mean 286.68 Mbit/s)

Flow 1 (95th percentile 228.11 ms)   Flow 2 (95th percentile 219.35 ms)   Flow 3 (95th percentile 129.39 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2019-03-19 00:38:30
End at: 2019-03-19 00:39:00
Local clock offset: 0.702 ms
Remote clock offset: -0.009 ms


# Below is generated by plot.py at 2019-03-19 01:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 747.05 Mbit/s
95th percentile per-packet one-way delay: 239.159 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 375.70 Mbit/s
95th percentile per-packet one-way delay: 233.221 ms
Loss rate: 2.32%
-- Flow 2:
Average throughput: 413.99 Mbit/s
95th percentile per-packet one-way delay: 229.294 ms
Loss rate: 3.24%
-- Flow 3:
Average throughput: 294.09 Mbit/s
95th percentile per-packet one-way delay: 281.106 ms
Loss rate: 9.59%
```

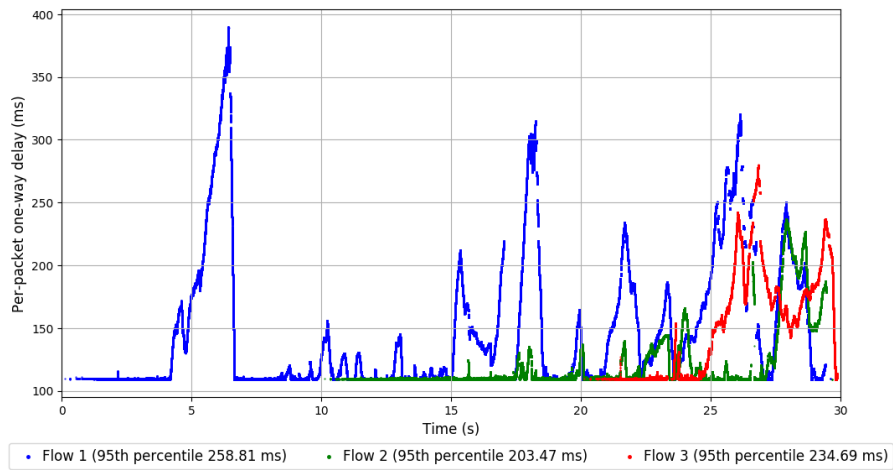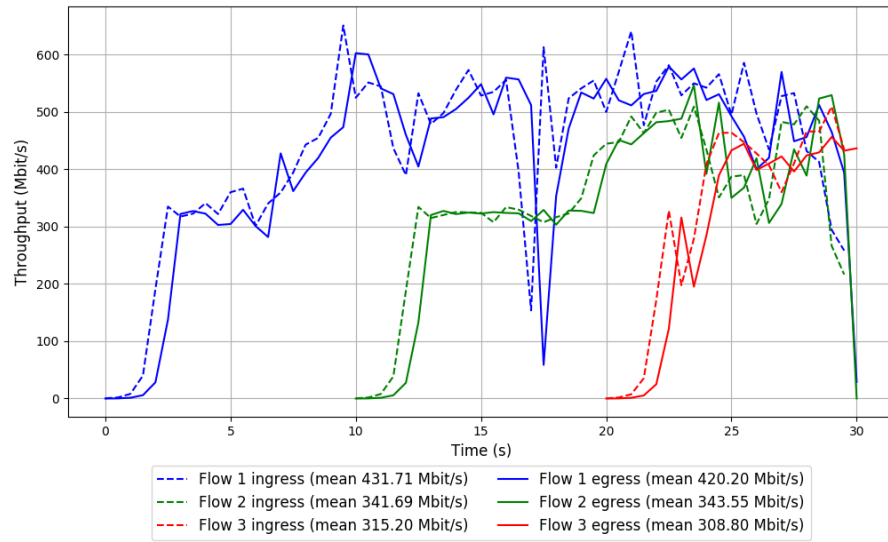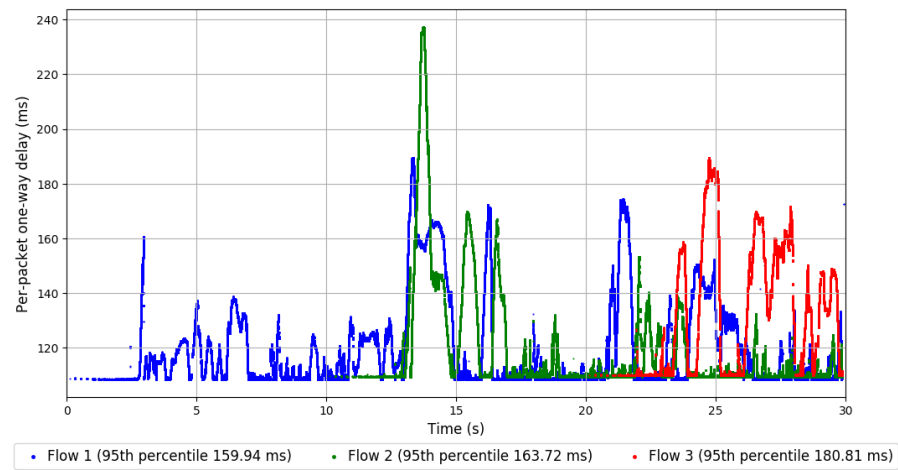# Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 381.82 Mbit/s) — Flow 1 egress (mean 375.70 Mbit/s)
Flow 2 ingress (mean 423.15 Mbit/s) — Flow 2 egress (mean 413.99 Mbit/s)
Flow 3 ingress (mean 318.13 Mbit/s) — Flow 3 egress (mean 294.09 Mbit/s)

Flow 1 (95th percentile 233.22 ms) • Flow 2 (95th percentile 229.29 ms) • Flow 3 (95th percentile 281.11 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-03-19 01:16:19
End at: 2019-03-19 01:16:49
Local clock offset: 0.012 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2019-03-19 01:56:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 746.97 Mbit/s
95th percentile per-packet one-way delay: 238.668 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 420.20 Mbit/s
95th percentile per-packet one-way delay: 258.807 ms
Loss rate: 3.38%
-- Flow 2:
Average throughput: 343.55 Mbit/s
95th percentile per-packet one-way delay: 203.474 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 308.80 Mbit/s
95th percentile per-packet one-way delay: 234.687 ms
Loss rate: 4.19%
```

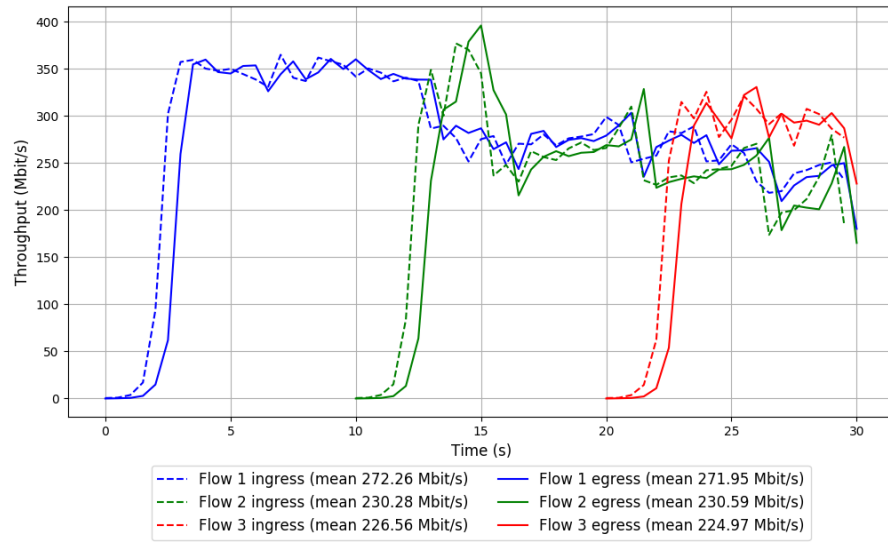Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 431.71 Mbit/s) --- Flow 1 egress (mean 420.20 Mbit/s)
Flow 2 ingress (mean 341.69 Mbit/s) --- Flow 2 egress (mean 343.55 Mbit/s)
Flow 3 ingress (mean 315.20 Mbit/s) --- Flow 3 egress (mean 308.80 Mbit/s)

Flow 1 (95th percentile 258.81 ms) • Flow 2 (95th percentile 203.47 ms) • Flow 3 (95th percentile 234.69 ms)

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```
Run 1: Statistics of Copa

Start at: 2019-03-18 22:44:41
End at: 2019-03-18 22:45:11
Local clock offset: -0.356 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2019-03-19 01:58:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.18 Mbit/s
95th percentile per-packet one-way delay: 164.965 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 271.95 Mbit/s
95th percentile per-packet one-way delay: 159.941 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 230.59 Mbit/s
95th percentile per-packet one-way delay: 163.723 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 224.97 Mbit/s
95th percentile per-packet one-way delay: 180.808 ms
Loss rate: 2.90%
```
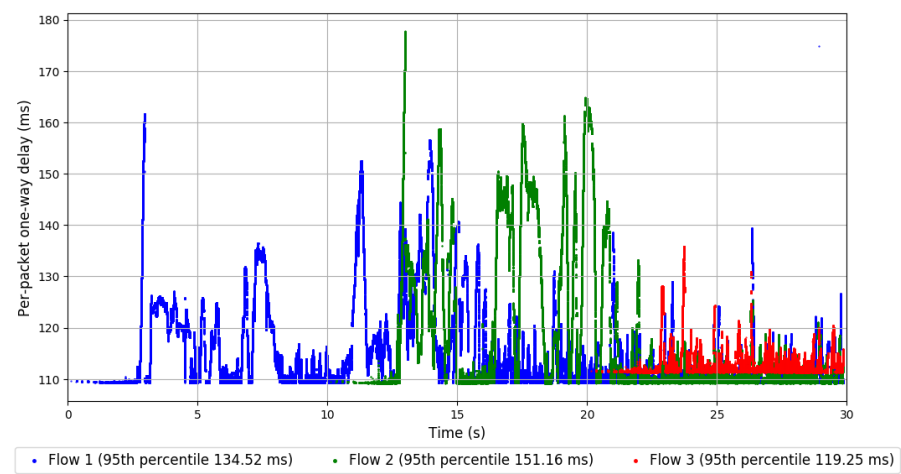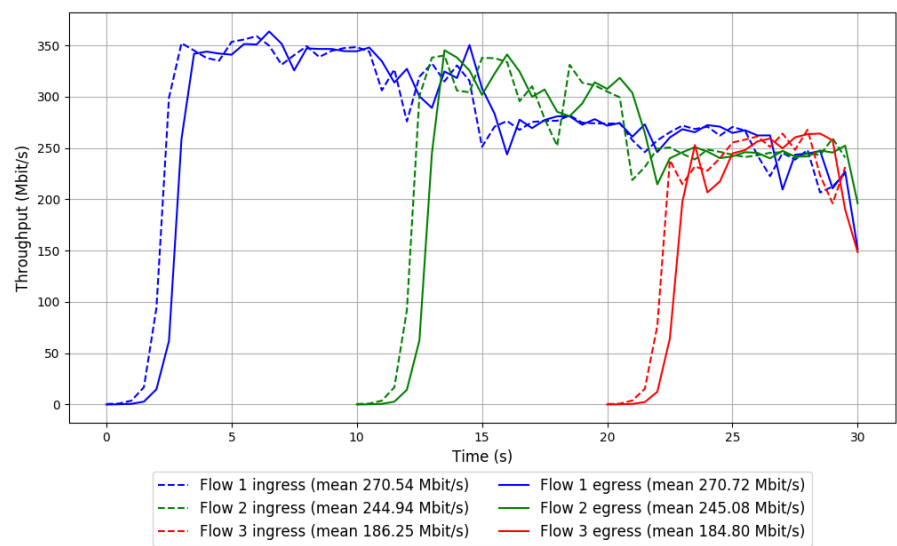
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 272.26 Mbit/s)   Flow 1 egress (mean 271.95 Mbit/s)
Flow 2 ingress (mean 230.28 Mbit/s)   Flow 2 egress (mean 230.59 Mbit/s)
Flow 3 ingress (mean 226.56 Mbit/s)   Flow 3 egress (mean 224.97 Mbit/s)

Flow 1 (95th percentile 159.94 ms)   Flow 2 (95th percentile 163.72 ms)   Flow 3 (95th percentile 180.81 ms)

```
Run 2: Statistics of Copa

Start at: 2019-03-18 23:21:44
End at: 2019-03-18 23:22:14
Local clock offset: -0.207 ms
Remote clock offset: 0.157 ms


# Below is generated by plot.py at 2019-03-19 01:58:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 493.82 Mbit/s
95th percentile per-packet one-way delay: 143.651 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 270.72 Mbit/s
95th percentile per-packet one-way delay: 134.521 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 245.08 Mbit/s
95th percentile per-packet one-way delay: 151.156 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 184.80 Mbit/s
95th percentile per-packet one-way delay: 119.249 ms
Loss rate: 2.98%
```
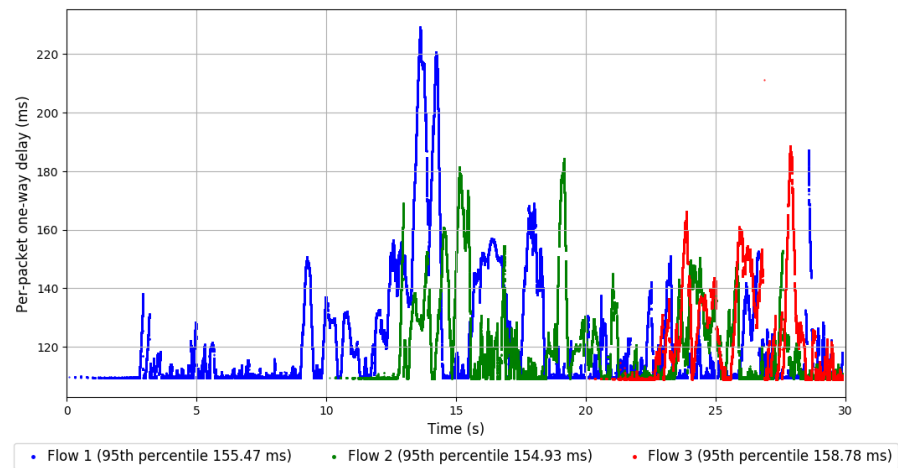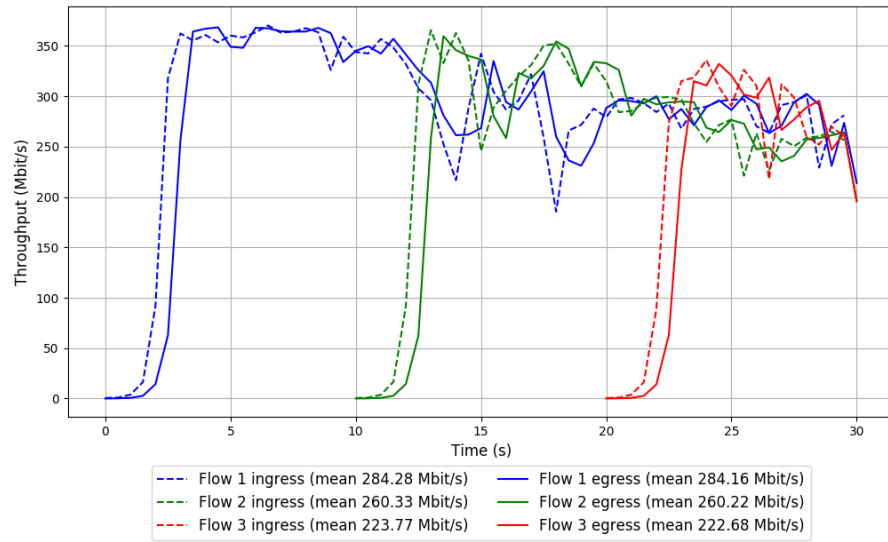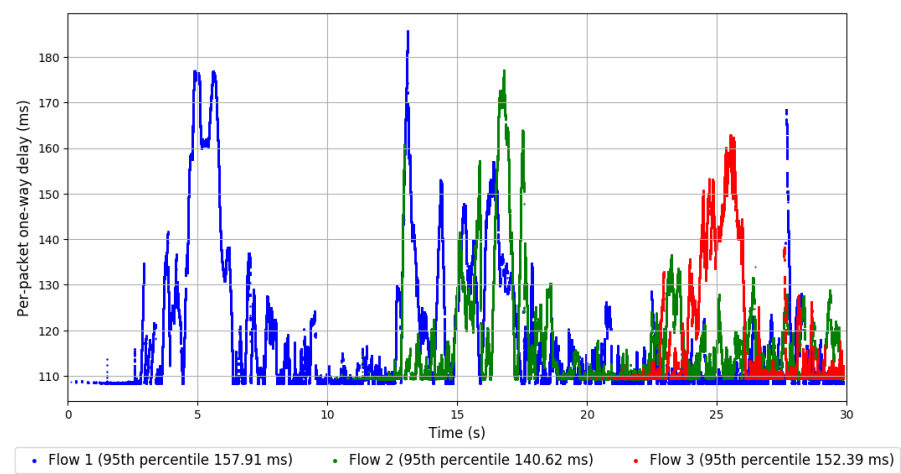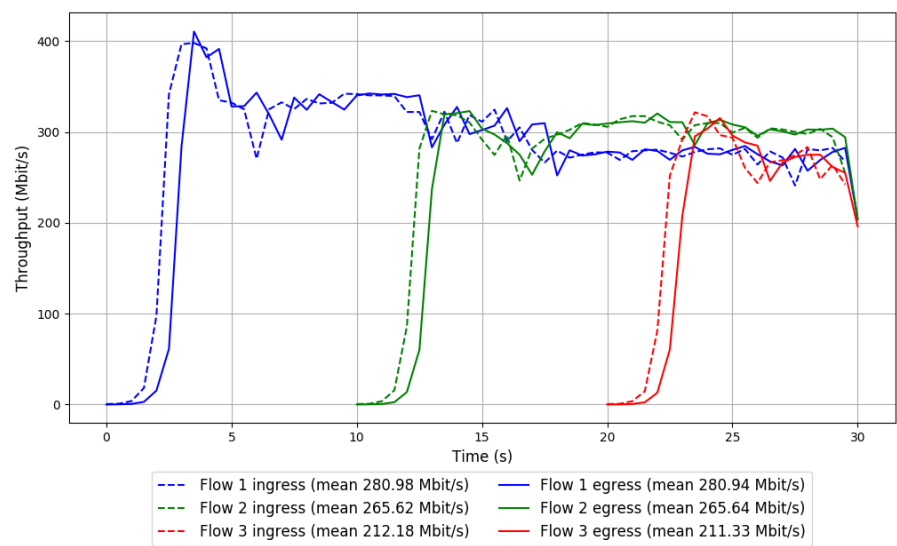
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-03-18 23:59:22
End at: 2019-03-18 23:59:52
Local clock offset: -0.041 ms
Remote clock offset: -0.136 ms


# Below is generated by plot.py at 2019-03-19 01:59:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.76 Mbit/s
95th percentile per-packet one-way delay: 155.941 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 284.16 Mbit/s
95th percentile per-packet one-way delay: 155.469 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 260.22 Mbit/s
95th percentile per-packet one-way delay: 154.933 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 222.68 Mbit/s
95th percentile per-packet one-way delay: 158.782 ms
Loss rate: 2.68%
```
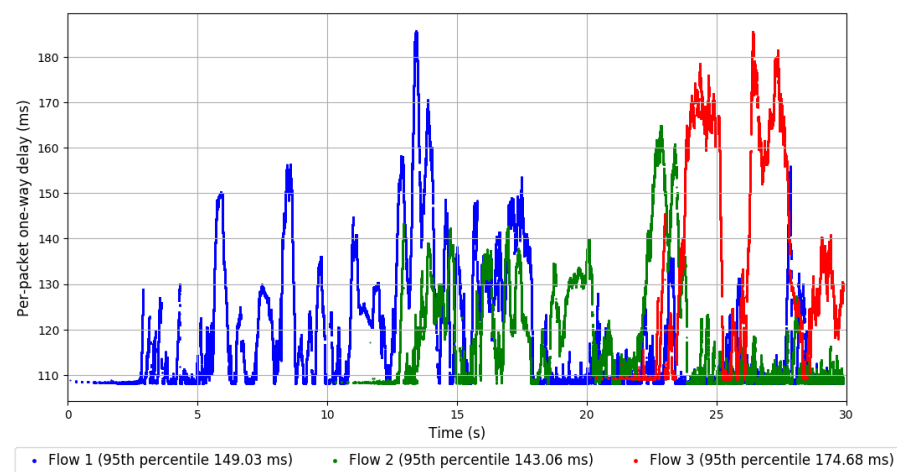
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-03-19 00:36:16
End at: 2019-03-19 00:36:46
Local clock offset: 0.017 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 526.41 Mbit/s
95th percentile per-packet one-way delay: 152.211 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 280.94 Mbit/s
95th percentile per-packet one-way delay: 157.911 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 265.64 Mbit/s
95th percentile per-packet one-way delay: 140.615 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 211.33 Mbit/s
95th percentile per-packet one-way delay: 152.392 ms
Loss rate: 2.60%
```
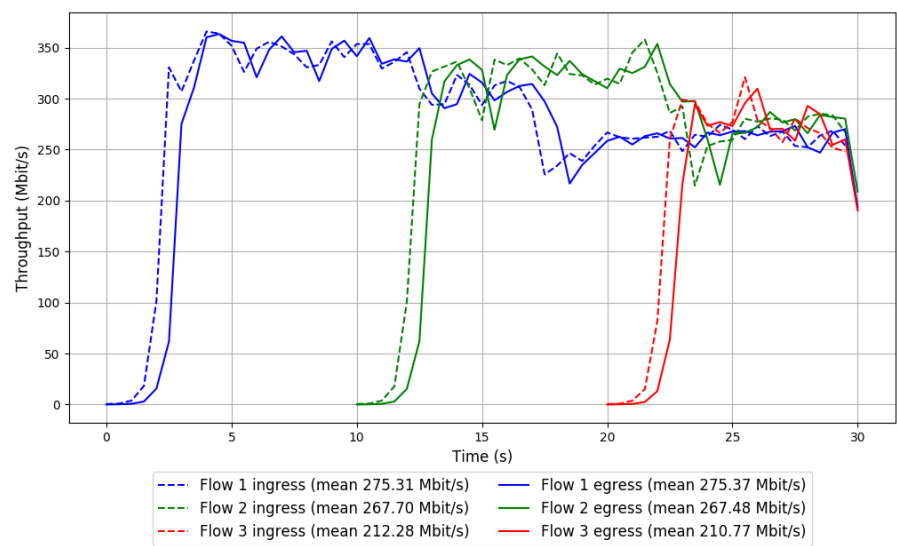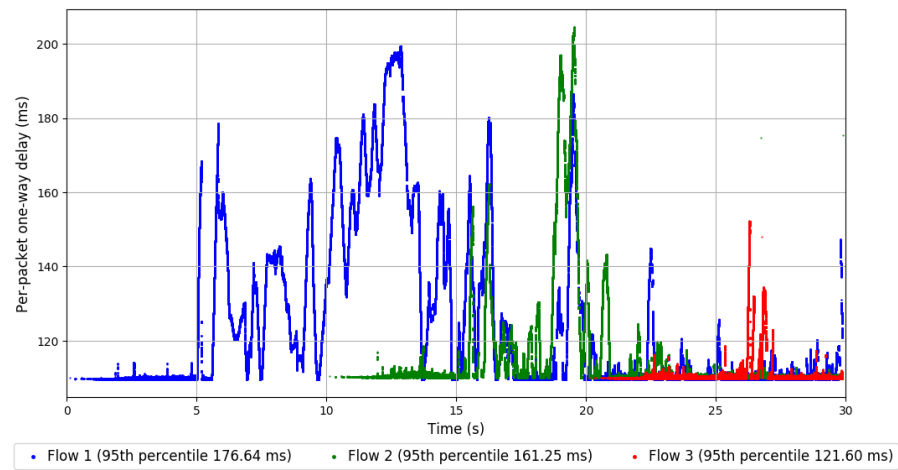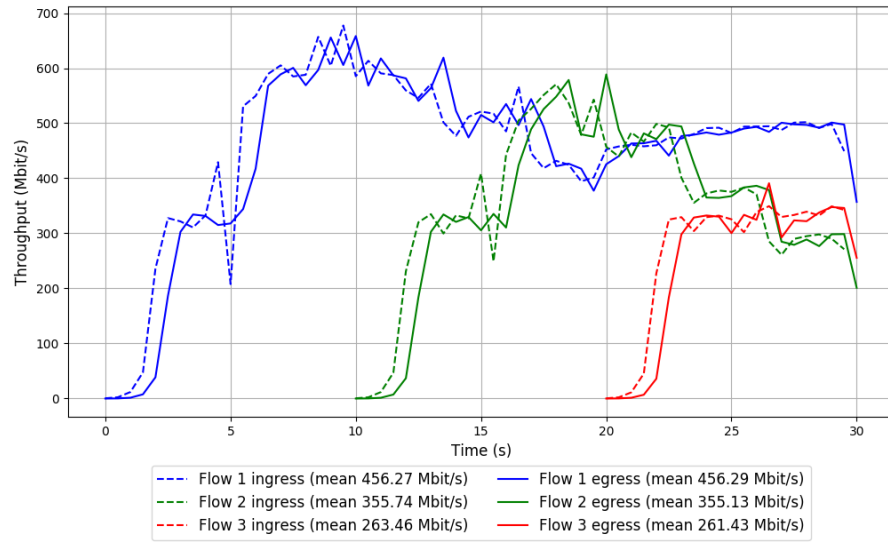
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 280.98 Mbit/s)   Flow 1 egress (mean 280.94 Mbit/s)
Flow 2 ingress (mean 265.62 Mbit/s)   Flow 2 egress (mean 265.64 Mbit/s)
Flow 3 ingress (mean 212.18 Mbit/s)   Flow 3 egress (mean 211.33 Mbit/s)

Flow 1 (95th percentile 157.91 ms)   Flow 2 (95th percentile 140.62 ms)   Flow 3 (95th percentile 152.39 ms)

```
Run 5: Statistics of Copa

Start at: 2019-03-19 01:14:05
End at: 2019-03-19 01:14:35
Local clock offset: -0.234 ms
Remote clock offset: -0.115 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 521.81 Mbit/s
95th percentile per-packet one-way delay: 160.257 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 275.37 Mbit/s
95th percentile per-packet one-way delay: 149.034 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 267.48 Mbit/s
95th percentile per-packet one-way delay: 143.064 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 210.77 Mbit/s
95th percentile per-packet one-way delay: 174.679 ms
Loss rate: 2.89%
```

Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 275.31 Mbit/s) ---- Flow 1 egress (mean 275.37 Mbit/s) ——
Flow 2 ingress (mean 267.70 Mbit/s) ---- Flow 2 egress (mean 267.48 Mbit/s) ——
Flow 3 ingress (mean 212.28 Mbit/s) ---- Flow 3 egress (mean 210.77 Mbit/s) ——

Flow 1 (95th percentile 149.03 ms) • Flow 2 (95th percentile 143.06 ms) • Flow 3 (95th percentile 174.68 ms)

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```
Run 1: Statistics of TCP Cubic

Start at: 2019-03-18 22:27:32
End at: 2019-03-18 22:28:02
Local clock offset: 0.243 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.09 Mbit/s
95th percentile per-packet one-way delay: 171.989 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 456.29 Mbit/s
95th percentile per-packet one-way delay: 176.638 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 355.13 Mbit/s
95th percentile per-packet one-way delay: 161.253 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 261.43 Mbit/s
95th percentile per-packet one-way delay: 121.596 ms
Loss rate: 2.97%
```
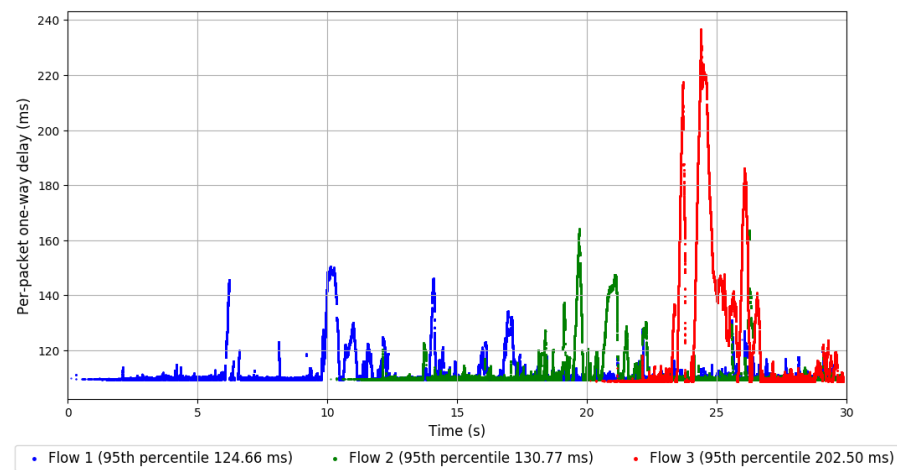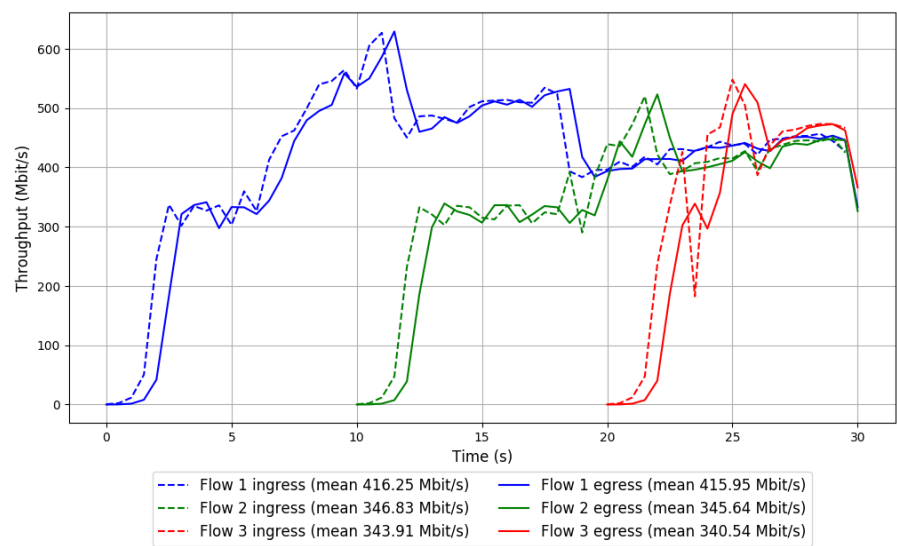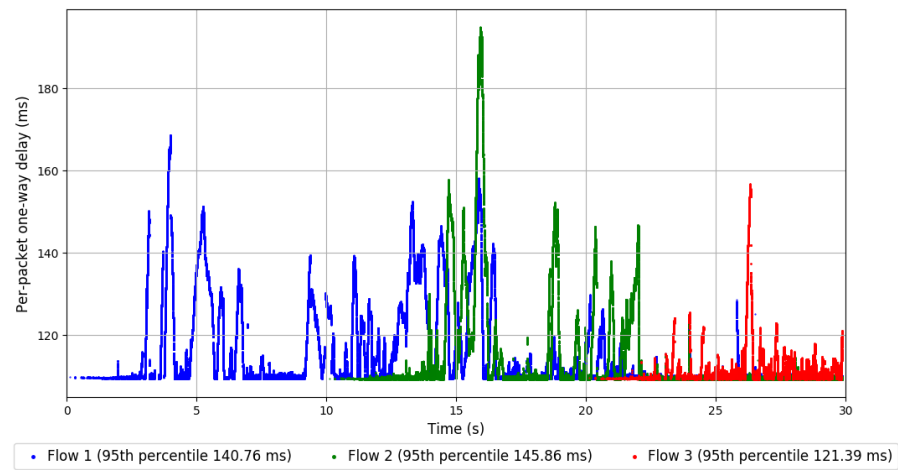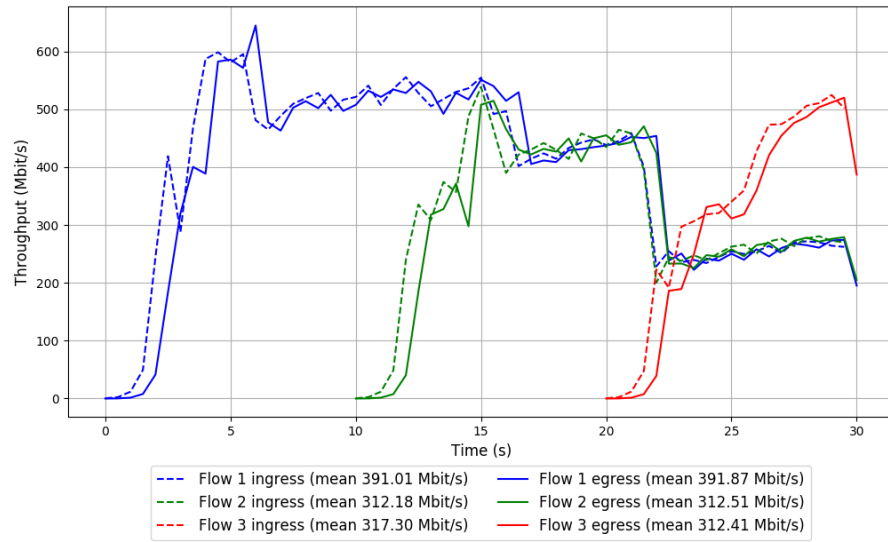
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-03-18 23:04:29
End at: 2019-03-18 23:04:59
Local clock offset: -0.258 ms
Remote clock offset: 0.078 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.81 Mbit/s
95th percentile per-packet one-way delay: 141.455 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 415.95 Mbit/s
95th percentile per-packet one-way delay: 124.657 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 345.64 Mbit/s
95th percentile per-packet one-way delay: 130.770 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 340.54 Mbit/s
95th percentile per-packet one-way delay: 202.503 ms
Loss rate: 3.14%
```
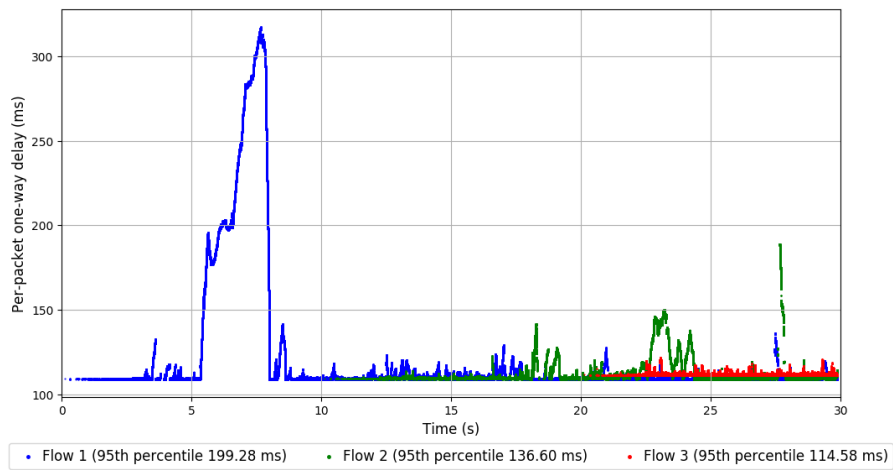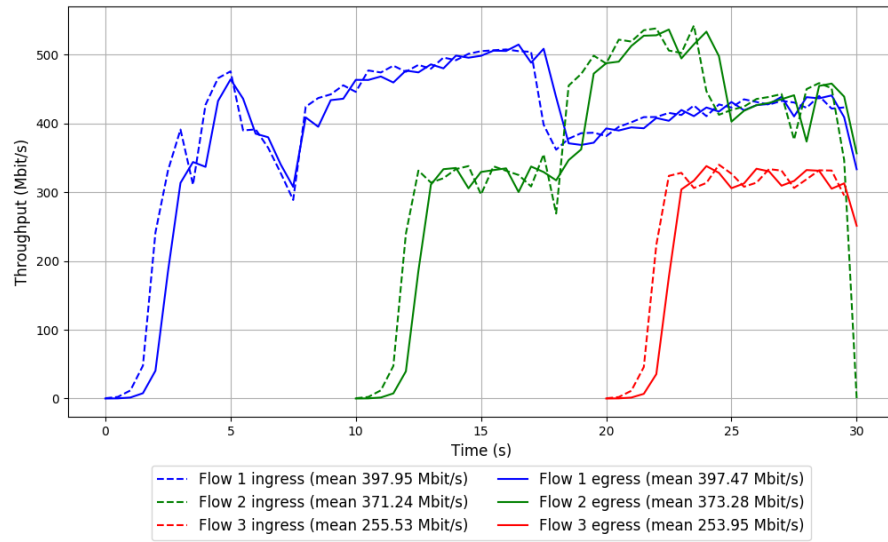
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 416.25 Mbit/s) -----   Flow 1 egress (mean 415.95 Mbit/s)
Flow 2 ingress (mean 346.83 Mbit/s) -----   Flow 2 egress (mean 345.64 Mbit/s)
Flow 3 ingress (mean 343.91 Mbit/s) -----   Flow 3 egress (mean 340.54 Mbit/s)

Flow 1 (95th percentile 124.66 ms)   Flow 2 (95th percentile 130.77 ms)   Flow 3 (95th percentile 202.50 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-03-18 23:42:06
End at: 2019-03-18 23:42:36
Local clock offset: -0.008 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 701.65 Mbit/s
95th percentile per-packet one-way delay: 140.897 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 391.87 Mbit/s
95th percentile per-packet one-way delay: 140.763 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 312.51 Mbit/s
95th percentile per-packet one-way delay: 145.858 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 312.41 Mbit/s
95th percentile per-packet one-way delay: 121.395 ms
Loss rate: 3.71%
```

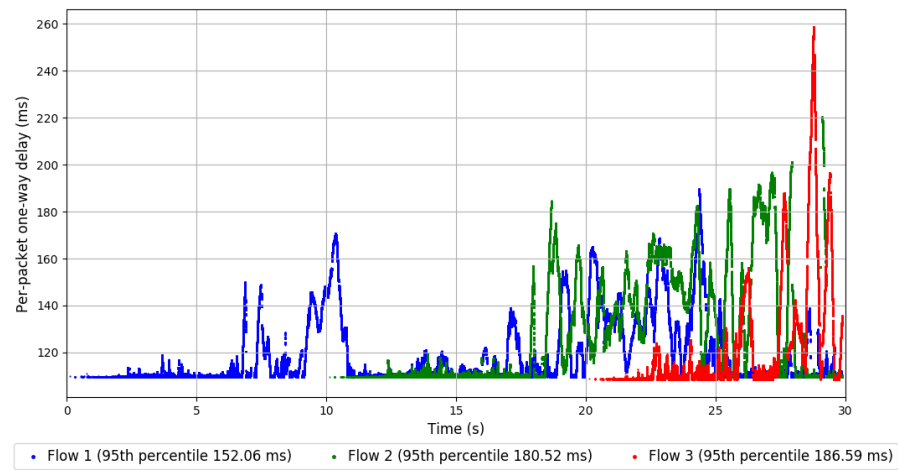Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 391.01 Mbit/s)   Flow 1 egress (mean 391.87 Mbit/s)
Flow 2 ingress (mean 312.18 Mbit/s)   Flow 2 egress (mean 312.51 Mbit/s)
Flow 3 ingress (mean 317.30 Mbit/s)   Flow 3 egress (mean 312.41 Mbit/s)

Flow 1 (95th percentile 140.76 ms)   Flow 2 (95th percentile 145.86 ms)   Flow 3 (95th percentile 121.39 ms)
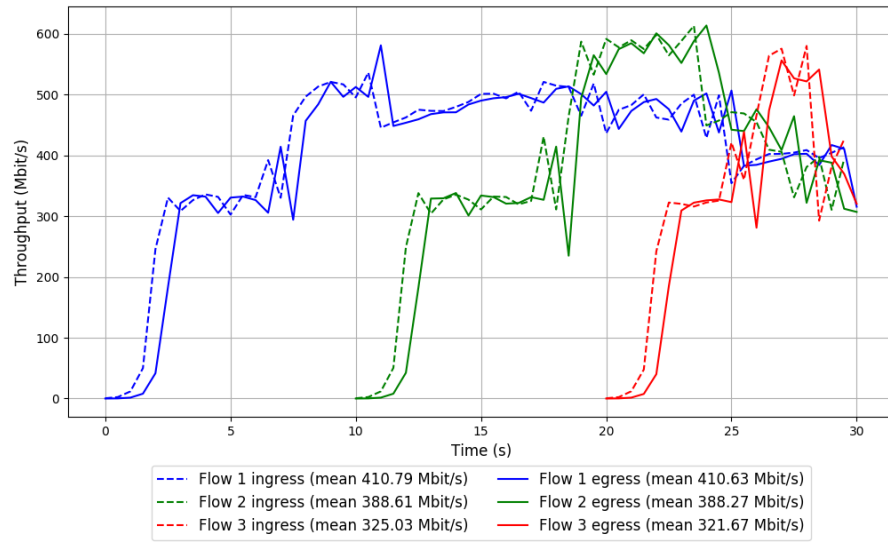
```
Run 4: Statistics of TCP Cubic

Start at: 2019-03-19 00:19:18
End at: 2019-03-19 00:19:48
Local clock offset: -0.133 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 728.37 Mbit/s
95th percentile per-packet one-way delay: 145.021 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 397.47 Mbit/s
95th percentile per-packet one-way delay: 199.277 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 373.28 Mbit/s
95th percentile per-packet one-way delay: 136.600 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 253.95 Mbit/s
95th percentile per-packet one-way delay: 114.580 ms
Loss rate: 2.80%
```

Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-03-19 00:56:30
End at: 2019-03-19 00:57:00
Local clock offset: 0.051 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-03-19 02:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 773.69 Mbit/s
95th percentile per-packet one-way delay: 167.760 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 410.63 Mbit/s
95th percentile per-packet one-way delay: 152.065 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 388.27 Mbit/s
95th percentile per-packet one-way delay: 180.516 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 321.67 Mbit/s
95th percentile per-packet one-way delay: 186.590 ms
Loss rate: 3.19%
```
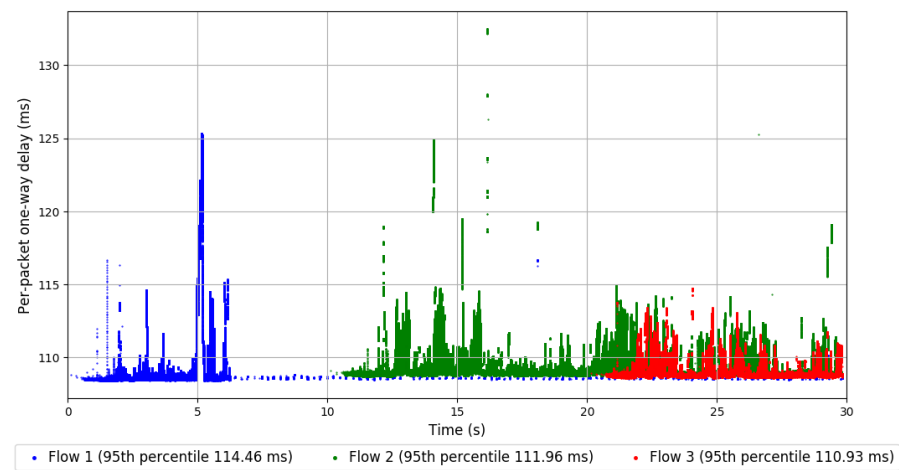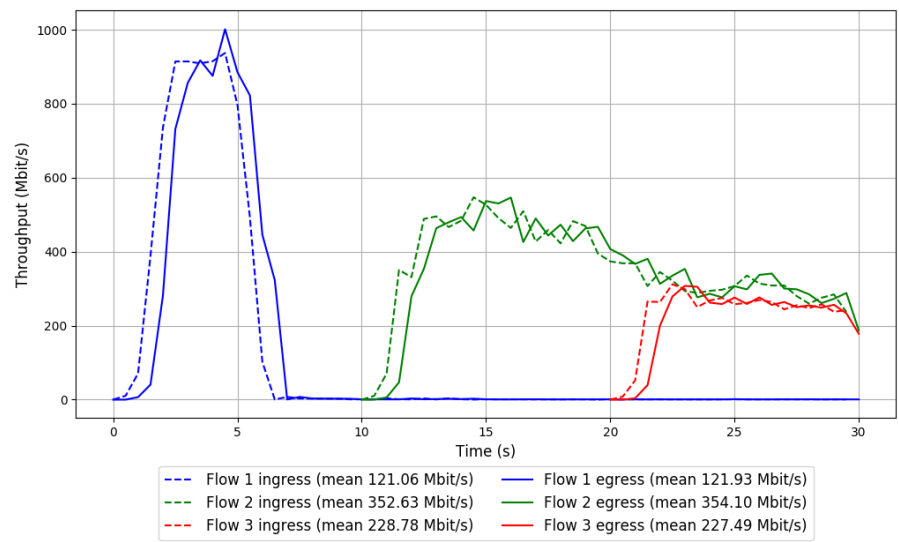
Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-03-18 22:55:32
End at: 2019-03-18 22:56:02
Local clock offset: -0.3 ms
Remote clock offset: 0.025 ms

# Below is generated by plot.py at 2019-03-19 02:13:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.70 Mbit/s
95th percentile per-packet one-way delay: 112.296 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 121.93 Mbit/s
95th percentile per-packet one-way delay: 114.462 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 354.10 Mbit/s
95th percentile per-packet one-way delay: 111.963 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 227.49 Mbit/s
95th percentile per-packet one-way delay: 110.933 ms
Loss rate: 2.70%
```
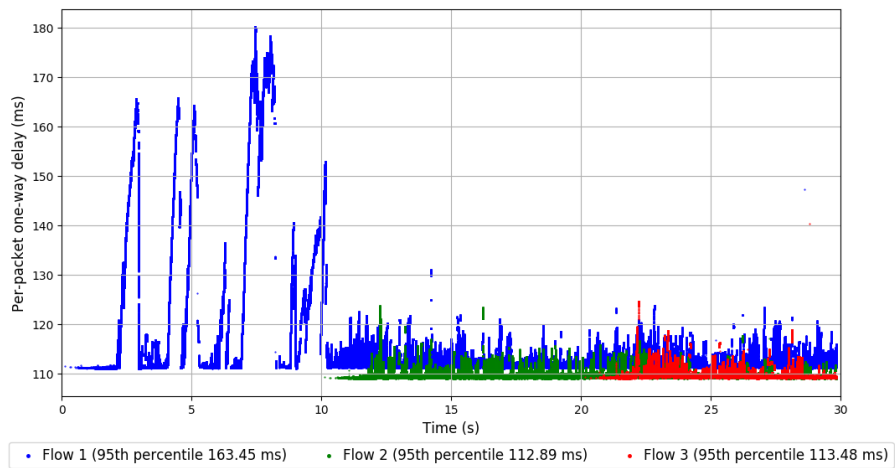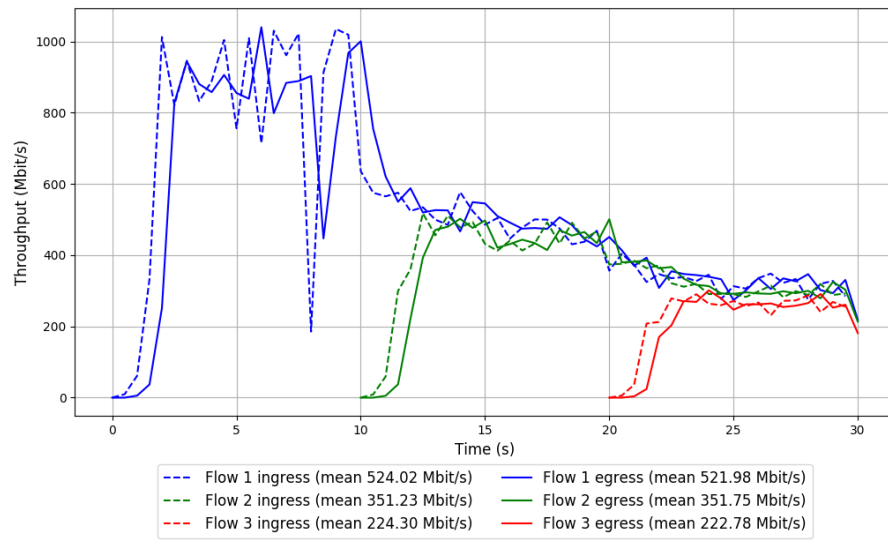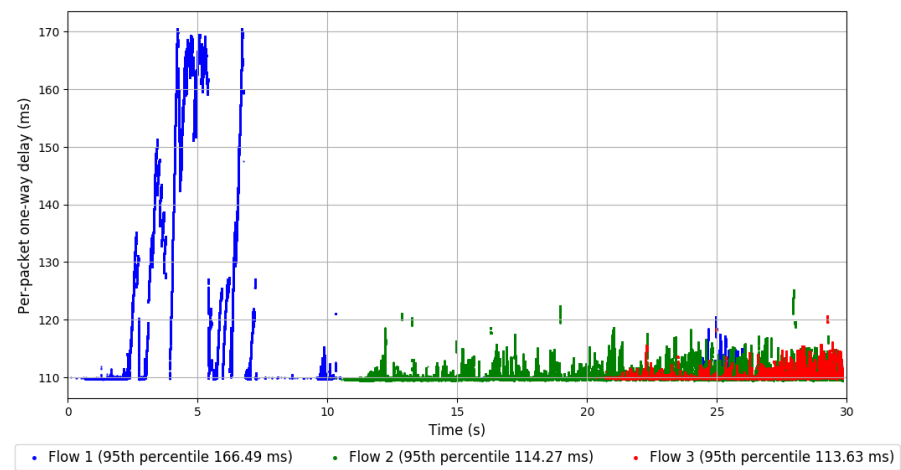
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-03-18 23:32:45
End at: 2019-03-18 23:33:15
Local clock offset: -0.161 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-03-19 02:27:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 827.75 Mbit/s
95th percentile per-packet one-way delay: 156.882 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 521.98 Mbit/s
95th percentile per-packet one-way delay: 163.452 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 351.75 Mbit/s
95th percentile per-packet one-way delay: 112.885 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 222.78 Mbit/s
95th percentile per-packet one-way delay: 113.477 ms
Loss rate: 2.88%
```
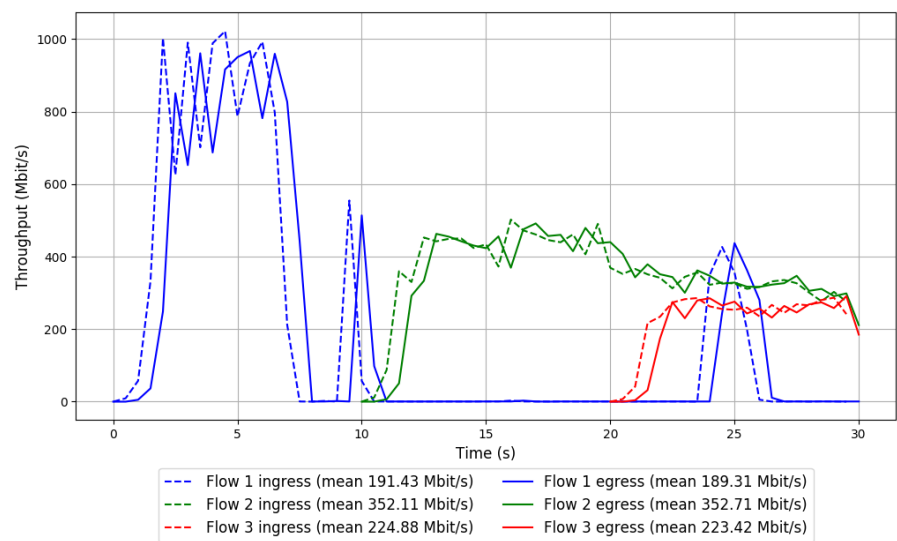
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 524.02 Mbit/s)   Flow 1 egress (mean 521.98 Mbit/s)
Flow 2 ingress (mean 351.23 Mbit/s)   Flow 2 egress (mean 351.75 Mbit/s)
Flow 3 ingress (mean 224.30 Mbit/s)   Flow 3 egress (mean 222.78 Mbit/s)

Flow 1 (95th percentile 163.45 ms)   Flow 2 (95th percentile 112.89 ms)   Flow 3 (95th percentile 113.48 ms)
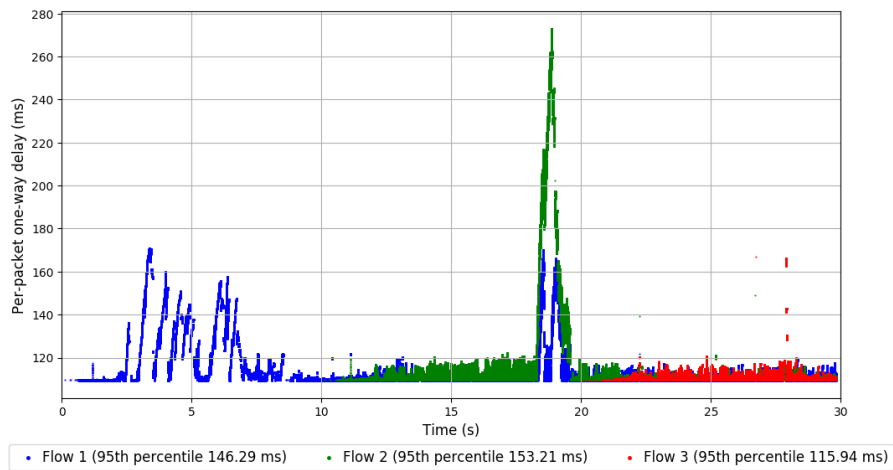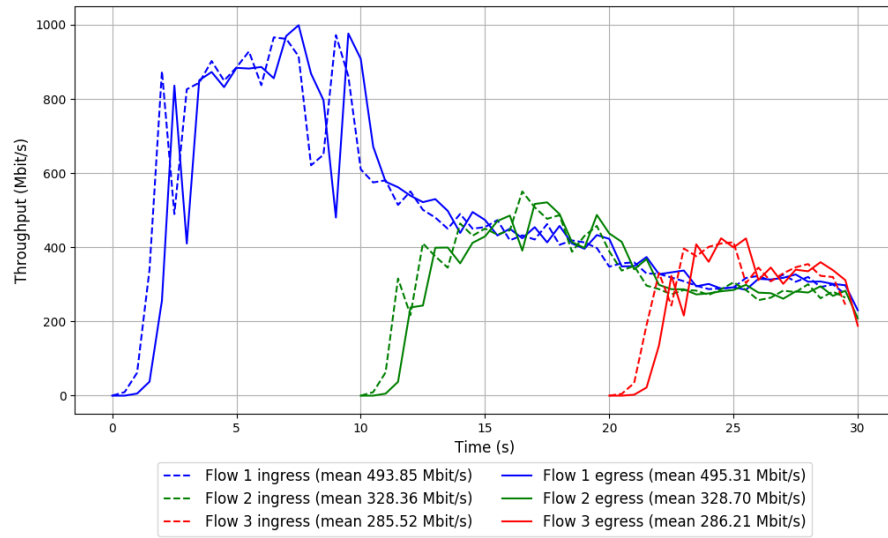
```
Run 3: Statistics of FillP

Start at: 2019-03-19 00:10:18
End at: 2019-03-19 00:10:48
Local clock offset: -0.086 ms
Remote clock offset: -0.426 ms


# Below is generated by plot.py at 2019-03-19 02:27:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 496.21 Mbit/s
95th percentile per-packet one-way delay: 162.957 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 189.31 Mbit/s
95th percentile per-packet one-way delay: 166.493 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 352.71 Mbit/s
95th percentile per-packet one-way delay: 114.271 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 223.42 Mbit/s
95th percentile per-packet one-way delay: 113.633 ms
Loss rate: 2.81%
```
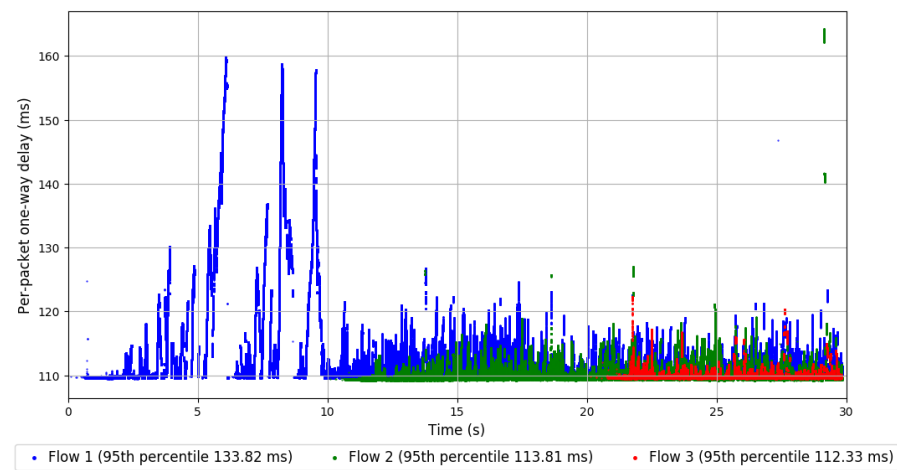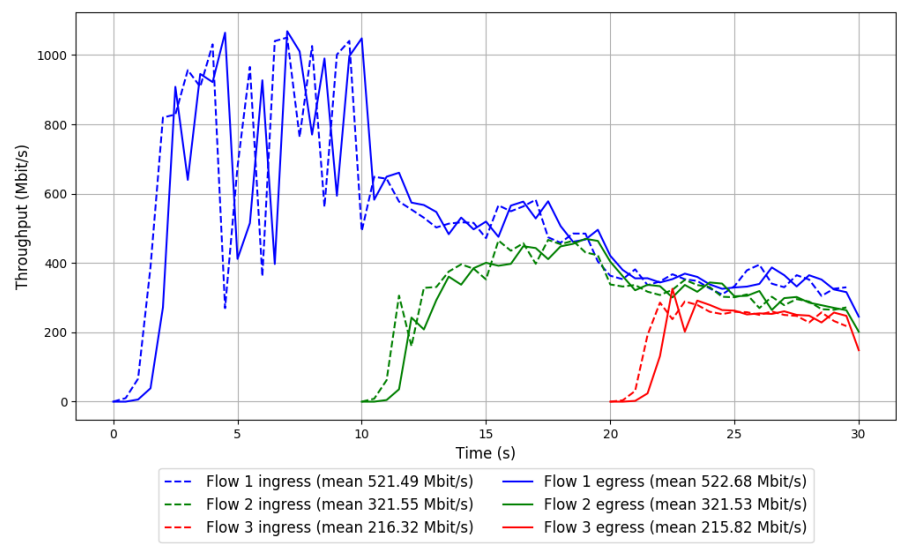
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 191.43 Mbit/s) --- Flow 1 egress (mean 189.31 Mbit/s)
Flow 2 ingress (mean 352.11 Mbit/s) --- Flow 2 egress (mean 352.71 Mbit/s)
Flow 3 ingress (mean 224.88 Mbit/s) --- Flow 3 egress (mean 223.42 Mbit/s)

Flow 1 (95th percentile 166.49 ms) • Flow 2 (95th percentile 114.27 ms) • Flow 3 (95th percentile 113.63 ms)

```
Run 4: Statistics of FillP

Start at: 2019-03-19 00:47:16
End at: 2019-03-19 00:47:46
Local clock offset: 0.08 ms
Remote clock offset: -0.056 ms


# Below is generated by plot.py at 2019-03-19 02:27:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 806.50 Mbit/s
95th percentile per-packet one-way delay: 145.002 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 495.31 Mbit/s
95th percentile per-packet one-way delay: 146.286 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 328.70 Mbit/s
95th percentile per-packet one-way delay: 153.207 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 286.21 Mbit/s
95th percentile per-packet one-way delay: 115.945 ms
Loss rate: 2.28%
```
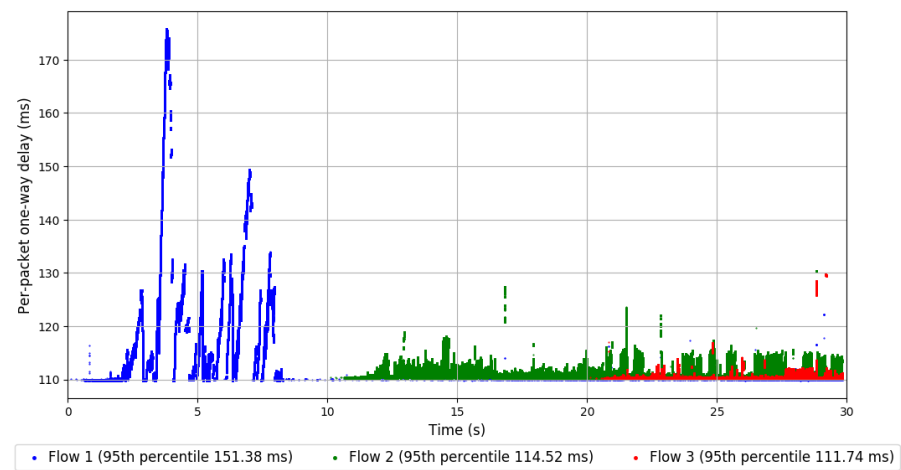
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 493.85 Mbit/s)   Flow 1 egress (mean 495.31 Mbit/s)
Flow 2 ingress (mean 328.36 Mbit/s)   Flow 2 egress (mean 328.70 Mbit/s)
Flow 3 ingress (mean 285.52 Mbit/s)   Flow 3 egress (mean 286.21 Mbit/s)

Flow 1 (95th percentile 146.29 ms)   Flow 2 (95th percentile 153.21 ms)   Flow 3 (95th percentile 115.94 ms)

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```
Run 5: Statistics of FillP

Start at: 2019-03-19 01:25:08
End at: 2019-03-19 01:25:38
Local clock offset: -0.005 ms
Remote clock offset: -0.166 ms

# Below is generated by plot.py at 2019-03-19 02:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 806.30 Mbit/s
95th percentile per-packet one-way delay: 129.819 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 522.68 Mbit/s
95th percentile per-packet one-way delay: 133.817 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 321.53 Mbit/s
95th percentile per-packet one-way delay: 113.808 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 215.82 Mbit/s
95th percentile per-packet one-way delay: 112.325 ms
Loss rate: 2.56%
```
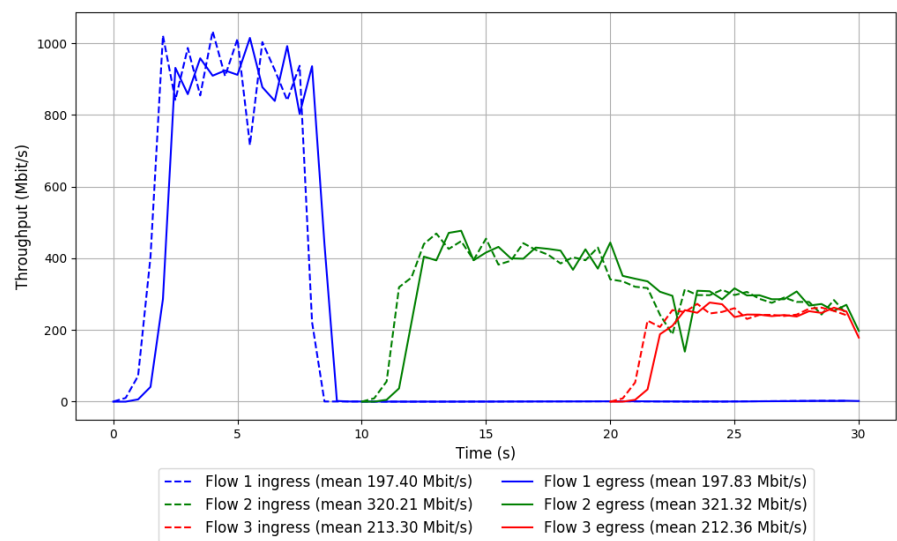
Run 5: Report of FillP — Data Link

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```
Run 1: Statistics of FillP-Sheep

Start at: 2019-03-18 22:39:06
End at: 2019-03-18 22:39:36
Local clock offset: 0.039 ms
Remote clock offset: -0.04 ms


# Below is generated by plot.py at 2019-03-19 02:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 480.13 Mbit/s
95th percentile per-packet one-way delay: 133.208 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 197.83 Mbit/s
95th percentile per-packet one-way delay: 151.383 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 321.32 Mbit/s
95th percentile per-packet one-way delay: 114.515 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 212.36 Mbit/s
95th percentile per-packet one-way delay: 111.739 ms
Loss rate: 2.88%
```
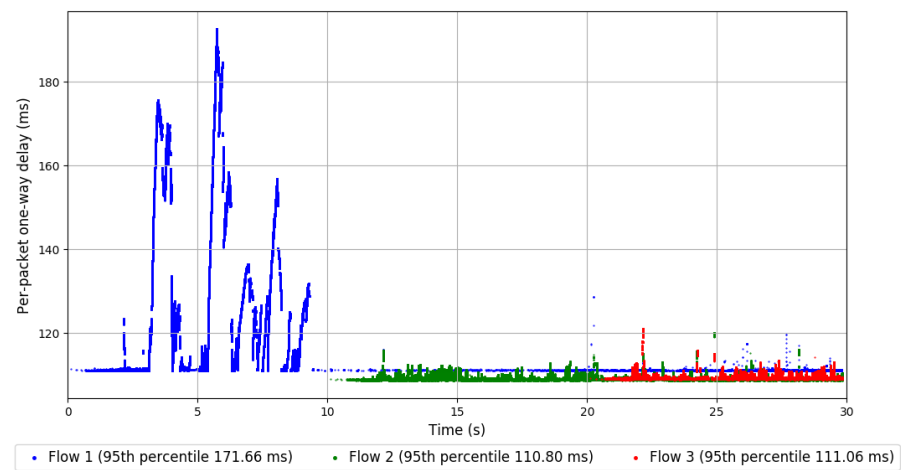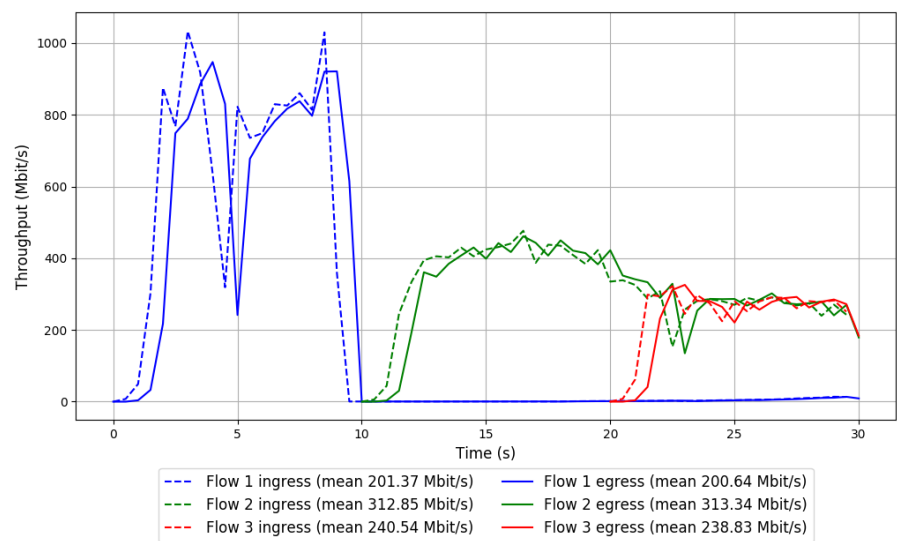
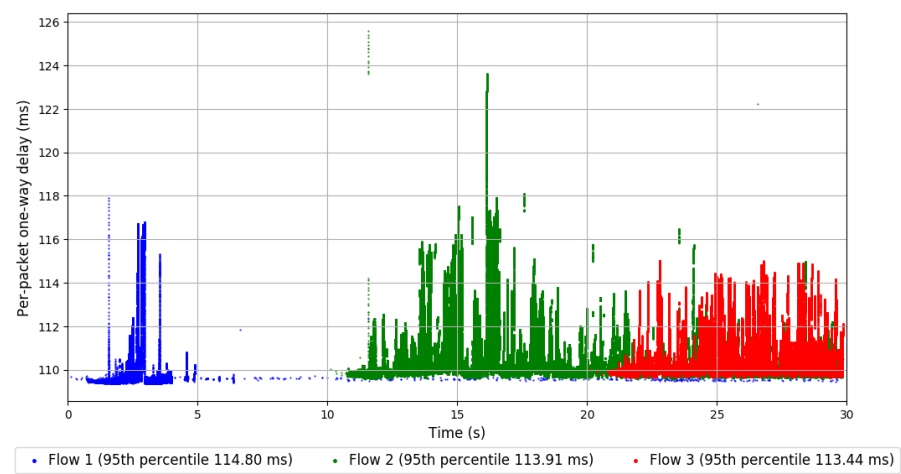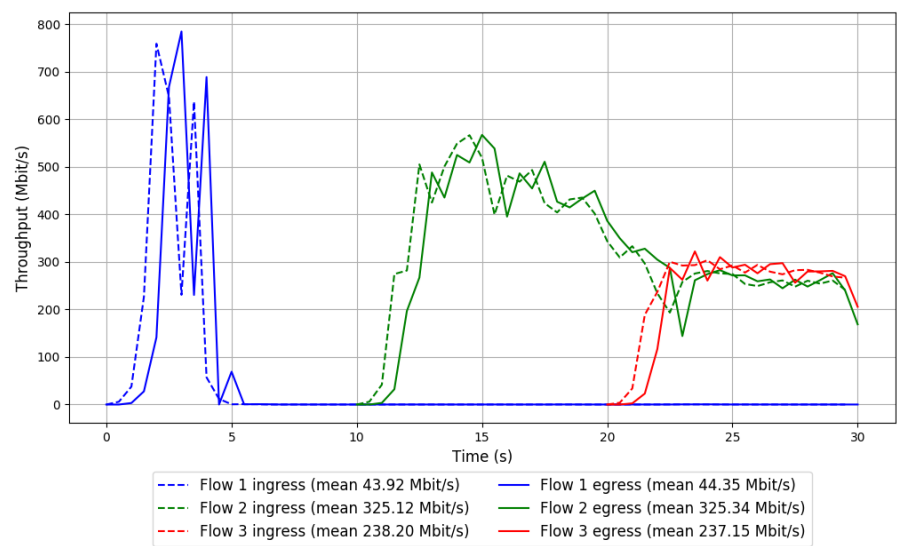Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-03-18 23:16:08
End at: 2019-03-18 23:16:38
Local clock offset: -0.261 ms
Remote clock offset: 0.146 ms


# Below is generated by plot.py at 2019-03-19 02:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.35 Mbit/s
95th percentile per-packet one-way delay: 159.283 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 200.64 Mbit/s
95th percentile per-packet one-way delay: 171.657 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 313.34 Mbit/s
95th percentile per-packet one-way delay: 110.802 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 238.83 Mbit/s
95th percentile per-packet one-way delay: 111.064 ms
Loss rate: 2.76%
```
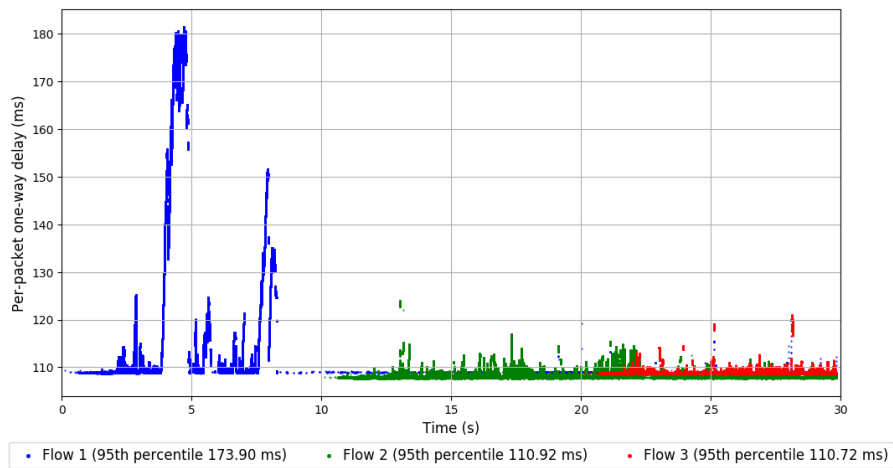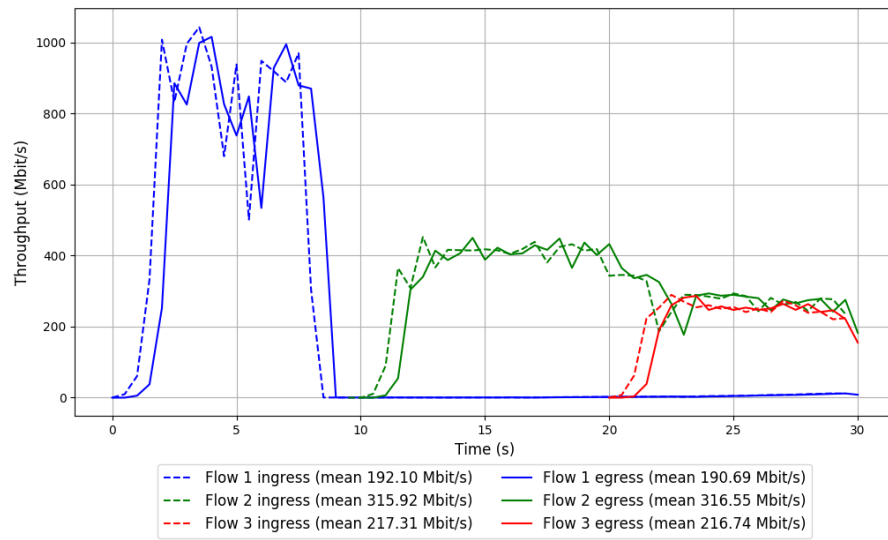
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 201.37 Mbit/s) --- Flow 1 egress (mean 200.64 Mbit/s)
Flow 2 ingress (mean 312.85 Mbit/s) --- Flow 2 egress (mean 313.34 Mbit/s)
Flow 3 ingress (mean 240.54 Mbit/s) --- Flow 3 egress (mean 238.83 Mbit/s)

Flow 1 (95th percentile 171.66 ms) · Flow 2 (95th percentile 110.80 ms) · Flow 3 (95th percentile 111.06 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-03-18 23:53:52
End at: 2019-03-18 23:54:22
Local clock offset: 0.124 ms
Remote clock offset: -0.157 ms


# Below is generated by plot.py at 2019-03-19 02:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 337.32 Mbit/s
95th percentile per-packet one-way delay: 113.827 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 44.35 Mbit/s
95th percentile per-packet one-way delay: 114.802 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 325.34 Mbit/s
95th percentile per-packet one-way delay: 113.906 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 237.15 Mbit/s
95th percentile per-packet one-way delay: 113.440 ms
Loss rate: 2.64%
```
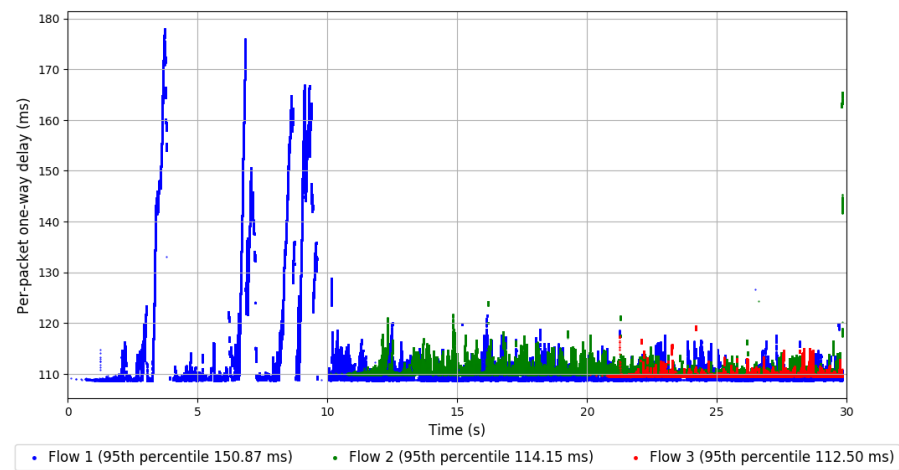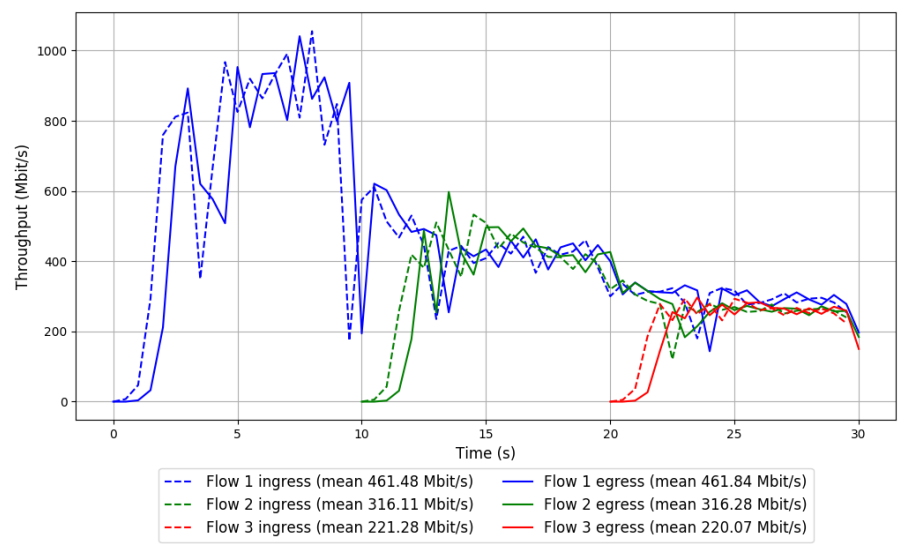
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-03-19 00:30:45
End at: 2019-03-19 00:31:15
Local clock offset: -0.672 ms
Remote clock offset: -0.006 ms


# Below is generated by plot.py at 2019-03-19 02:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.37 Mbit/s
95th percentile per-packet one-way delay: 147.423 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 190.69 Mbit/s
95th percentile per-packet one-way delay: 173.897 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 316.55 Mbit/s
95th percentile per-packet one-way delay: 110.923 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 216.74 Mbit/s
95th percentile per-packet one-way delay: 110.722 ms
Loss rate: 2.72%
```
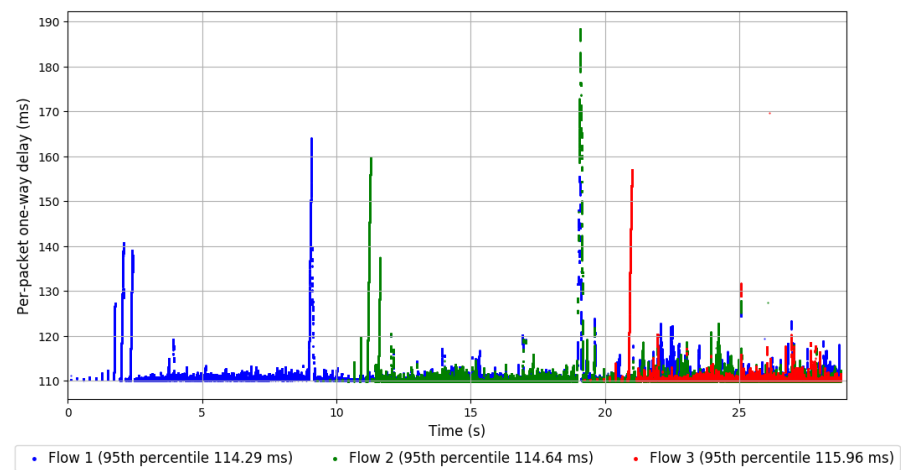
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-03-19 01:08:13
End at: 2019-03-19 01:08:43
Local clock offset: -0.127 ms
Remote clock offset: -0.452 ms


# Below is generated by plot.py at 2019-03-19 02:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 743.36 Mbit/s
95th percentile per-packet one-way delay: 143.953 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 461.84 Mbit/s
95th percentile per-packet one-way delay: 150.874 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 316.28 Mbit/s
95th percentile per-packet one-way delay: 114.147 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 220.07 Mbit/s
95th percentile per-packet one-way delay: 112.505 ms
Loss rate: 2.73%
```

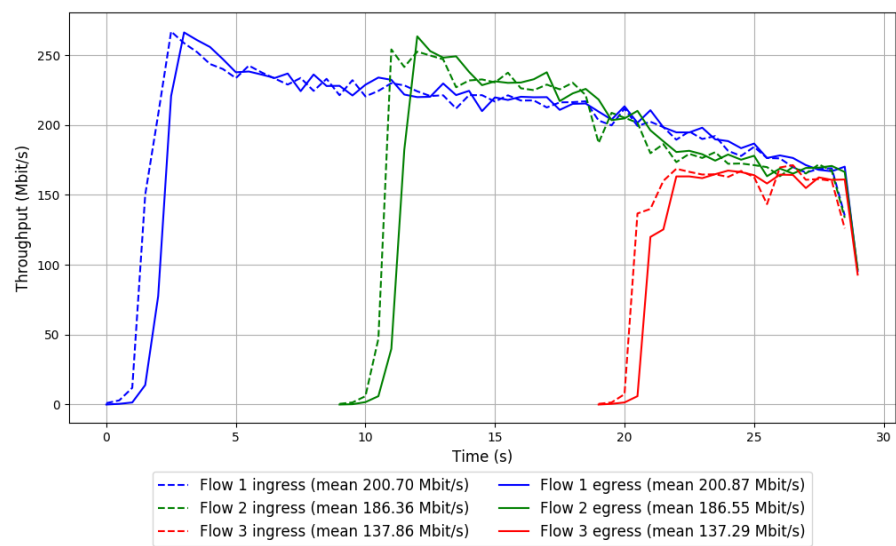# Run 5: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 461.48 Mbit/s)
- Flow 1 egress (mean 461.84 Mbit/s)
- Flow 2 ingress (mean 316.11 Mbit/s)
- Flow 2 egress (mean 316.28 Mbit/s)
- Flow 3 ingress (mean 221.28 Mbit/s)
- Flow 3 egress (mean 220.07 Mbit/s)

- Flow 1 (95th percentile 150.87 ms)
- Flow 2 (95th percentile 114.15 ms)
- Flow 3 (95th percentile 112.50 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-03-18 22:21:20
End at: 2019-03-18 22:21:50
Local clock offset: 0.68 ms
Remote clock offset: 0.071 ms


# Below is generated by plot.py at 2019-03-19 02:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.47 Mbit/s
95th percentile per-packet one-way delay: 114.505 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 200.87 Mbit/s
95th percentile per-packet one-way delay: 114.292 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 186.55 Mbit/s
95th percentile per-packet one-way delay: 114.641 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 137.29 Mbit/s
95th percentile per-packet one-way delay: 115.956 ms
Loss rate: 2.69%
```
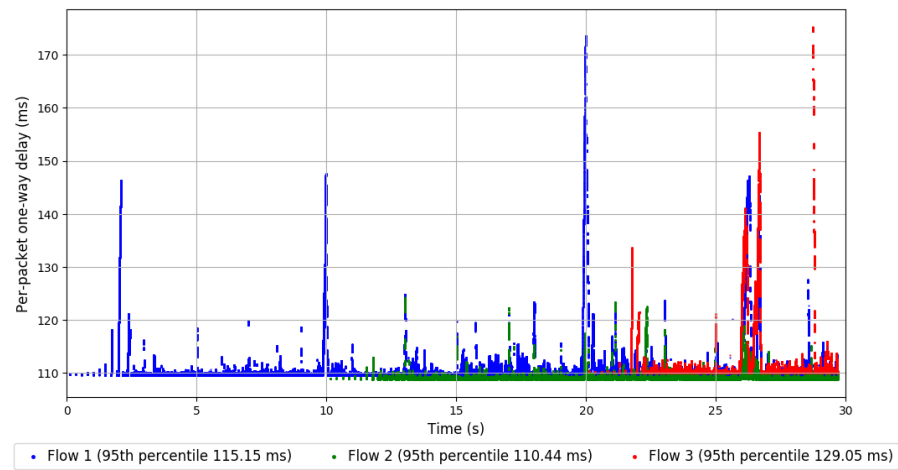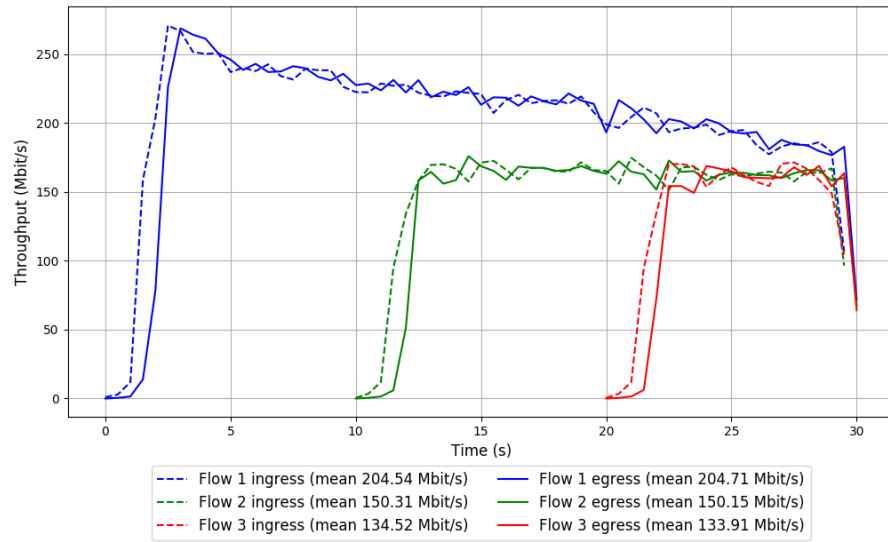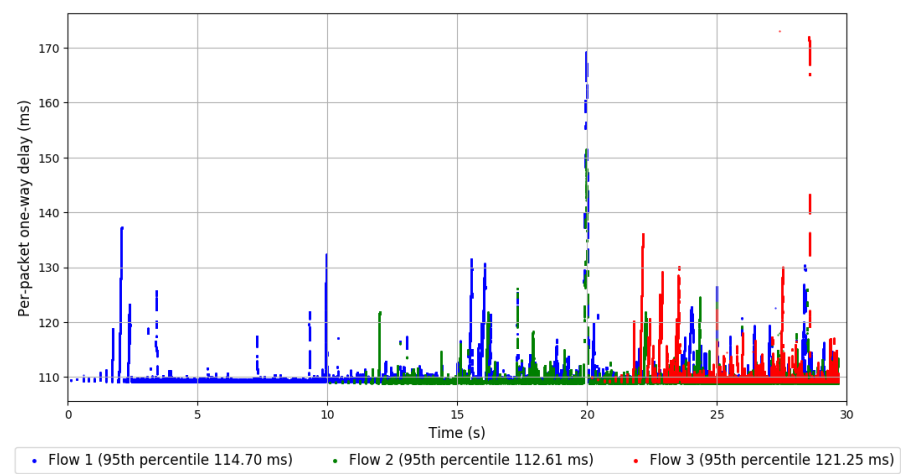
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-03-18 22:58:27
End at: 2019-03-18 22:58:57
Local clock offset: -0.166 ms
Remote clock offset: 0.048 ms


# Below is generated by plot.py at 2019-03-19 02:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.12 Mbit/s
95th percentile per-packet one-way delay: 114.725 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 204.71 Mbit/s
95th percentile per-packet one-way delay: 115.147 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 150.15 Mbit/s
95th percentile per-packet one-way delay: 110.445 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 133.91 Mbit/s
95th percentile per-packet one-way delay: 129.053 ms
Loss rate: 2.71%
```

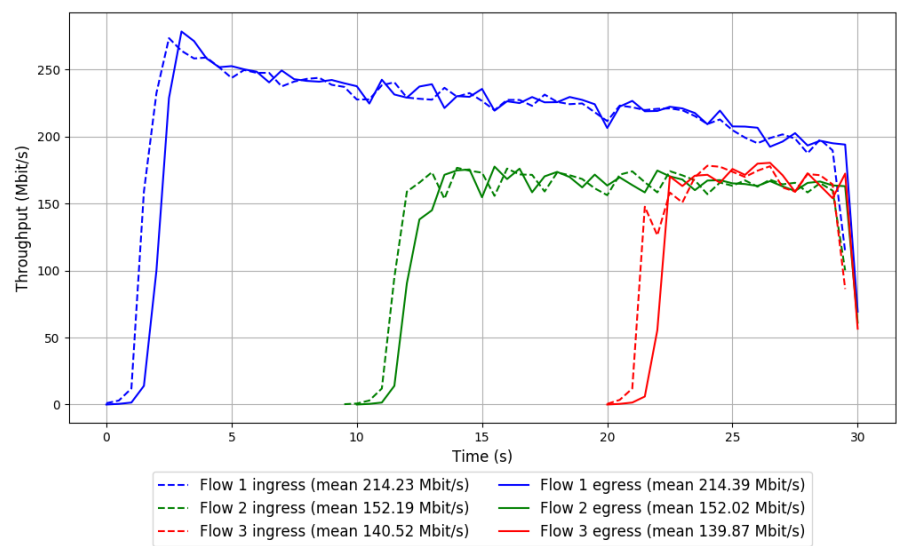Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-03-18 23:35:58
End at: 2019-03-18 23:36:28
Local clock offset: -0.134 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-03-19 02:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.03 Mbit/s
95th percentile per-packet one-way delay: 115.419 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 214.39 Mbit/s
95th percentile per-packet one-way delay: 114.700 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 152.02 Mbit/s
95th percentile per-packet one-way delay: 112.610 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 139.87 Mbit/s
95th percentile per-packet one-way delay: 121.250 ms
Loss rate: 2.71%
```

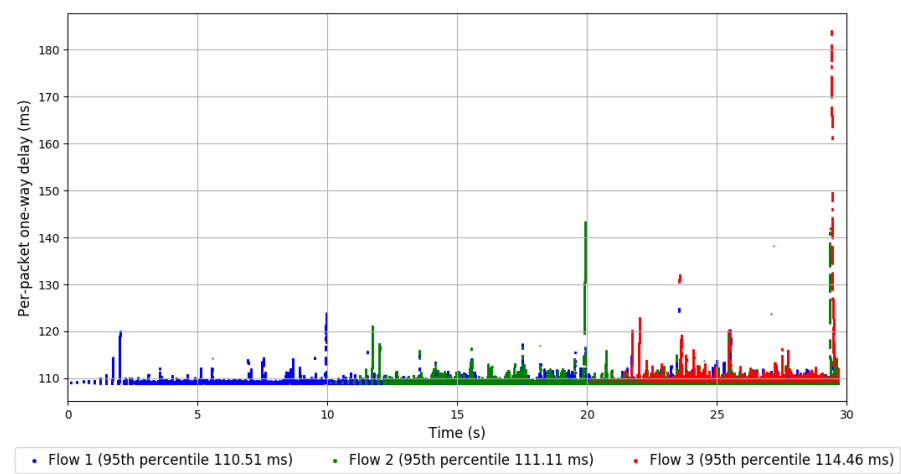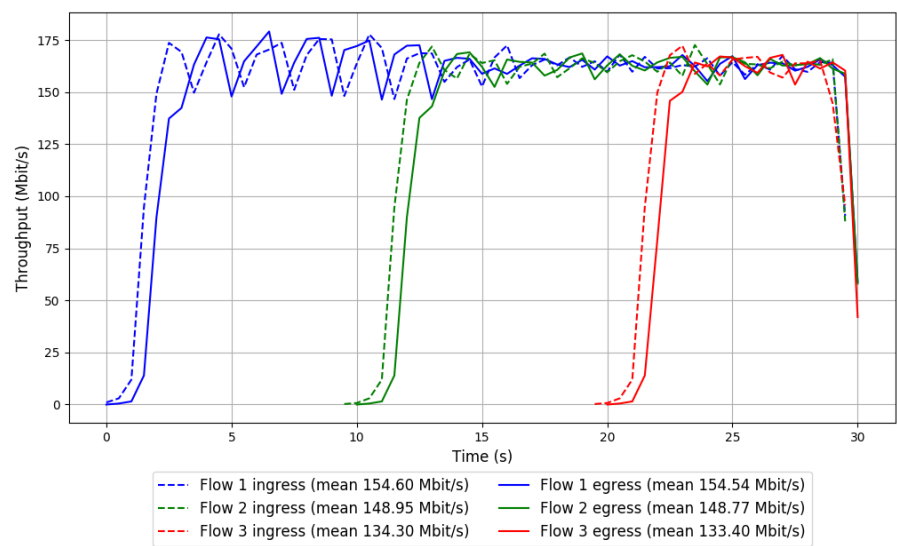# Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-03-19 00:13:17
End at: 2019-03-19 00:13:47
Local clock offset: -0.096 ms
Remote clock offset: -0.055 ms


# Below is generated by plot.py at 2019-03-19 02:37:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 296.18 Mbit/s
95th percentile per-packet one-way delay: 111.048 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 154.54 Mbit/s
95th percentile per-packet one-way delay: 110.514 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 148.77 Mbit/s
95th percentile per-packet one-way delay: 111.106 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 114.456 ms
Loss rate: 2.90%
```
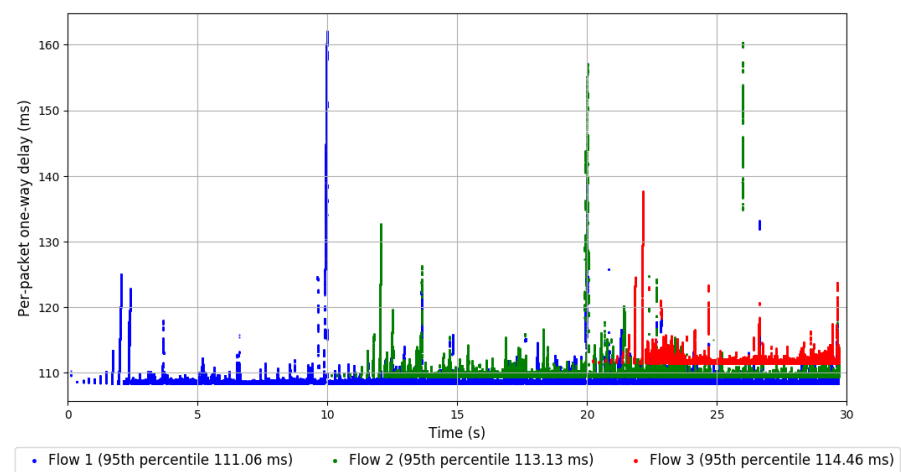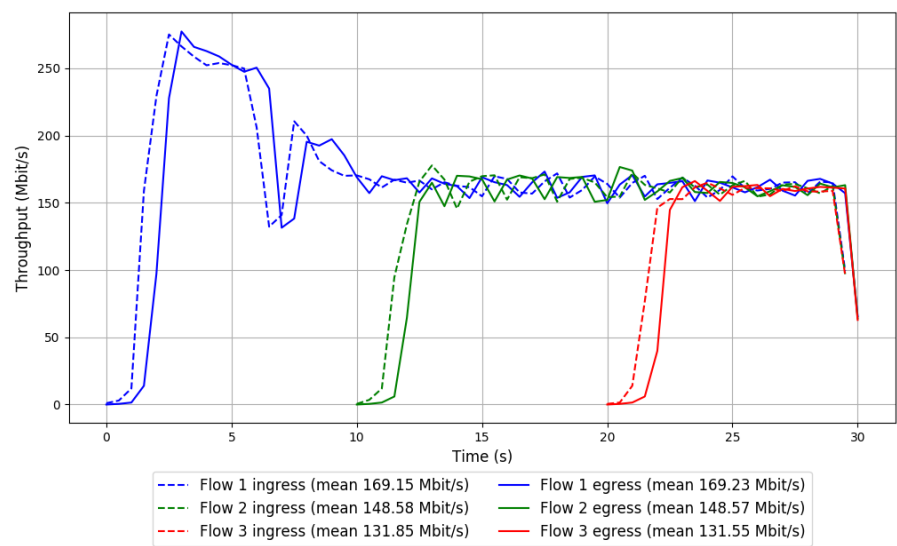
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 154.60 Mbit/s) ---- Flow 1 egress (mean 154.54 Mbit/s) ——
Flow 2 ingress (mean 148.95 Mbit/s) ---- Flow 2 egress (mean 148.77 Mbit/s) ——
Flow 3 ingress (mean 134.30 Mbit/s) ---- Flow 3 egress (mean 133.40 Mbit/s) ——

• Flow 1 (95th percentile 110.51 ms)   • Flow 2 (95th percentile 111.11 ms)   • Flow 3 (95th percentile 114.46 ms)

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```
Run 5: Statistics of Indigo

Start at: 2019-03-19 00:50:29
End at: 2019-03-19 00:50:59
Local clock offset: -0.093 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-03-19 02:38:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 309.50 Mbit/s
95th percentile per-packet one-way delay: 112.958 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 169.23 Mbit/s
95th percentile per-packet one-way delay: 111.065 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 148.57 Mbit/s
95th percentile per-packet one-way delay: 113.127 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 131.55 Mbit/s
95th percentile per-packet one-way delay: 114.464 ms
Loss rate: 2.50%
```

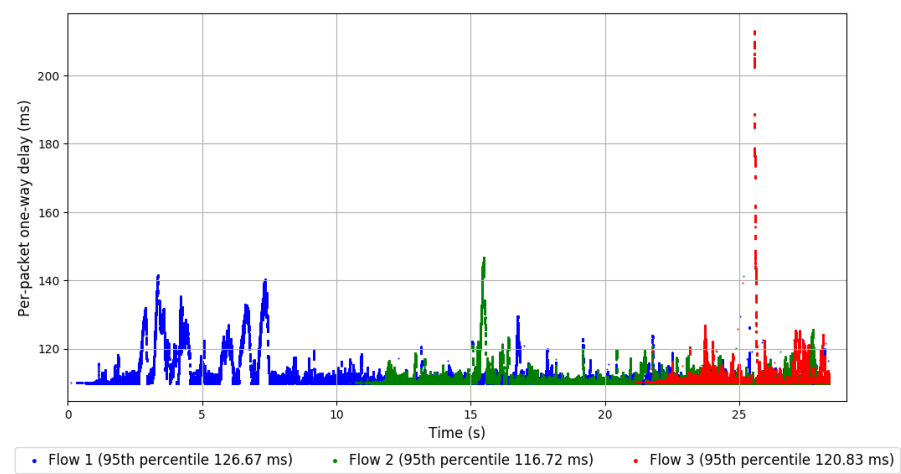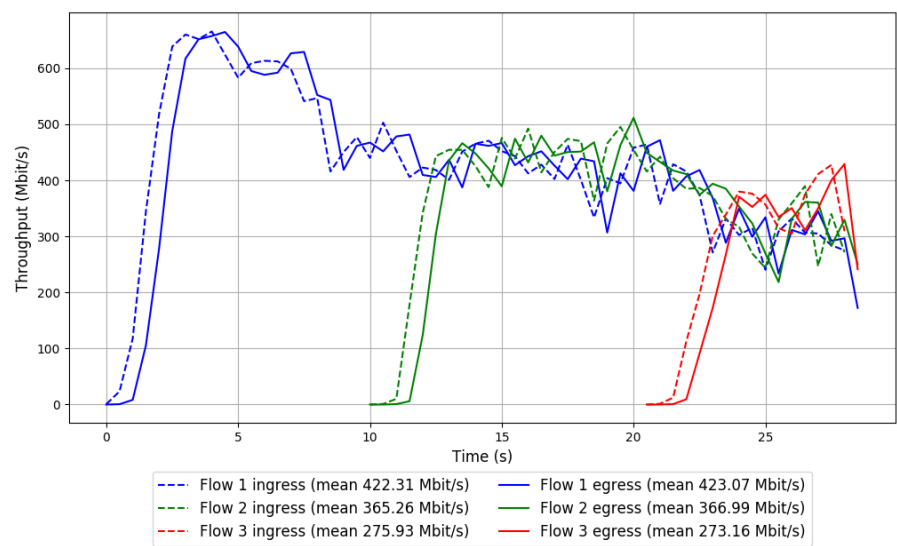Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-18 22:37:09
End at: 2019-03-18 22:37:39
Local clock offset: 0.031 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-03-19 02:40:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 726.81 Mbit/s
95th percentile per-packet one-way delay: 123.689 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 423.07 Mbit/s
95th percentile per-packet one-way delay: 126.666 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 366.99 Mbit/s
95th percentile per-packet one-way delay: 116.718 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 273.16 Mbit/s
95th percentile per-packet one-way delay: 120.830 ms
Loss rate: 3.88%
```

Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-18 23:14:11
End at: 2019-03-18 23:14:41
Local clock offset: -0.262 ms
Remote clock offset: 0.058 ms


# Below is generated by plot.py at 2019-03-19 02:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 723.78 Mbit/s
95th percentile per-packet one-way delay: 114.621 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 423.12 Mbit/s
95th percentile per-packet one-way delay: 113.884 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 361.88 Mbit/s
95th percentile per-packet one-way delay: 115.851 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 262.27 Mbit/s
95th percentile per-packet one-way delay: 116.799 ms
Loss rate: 3.17%
```
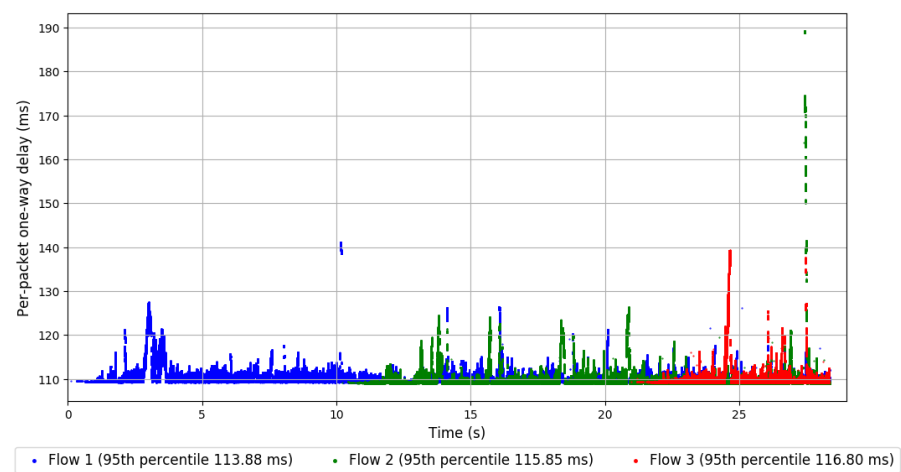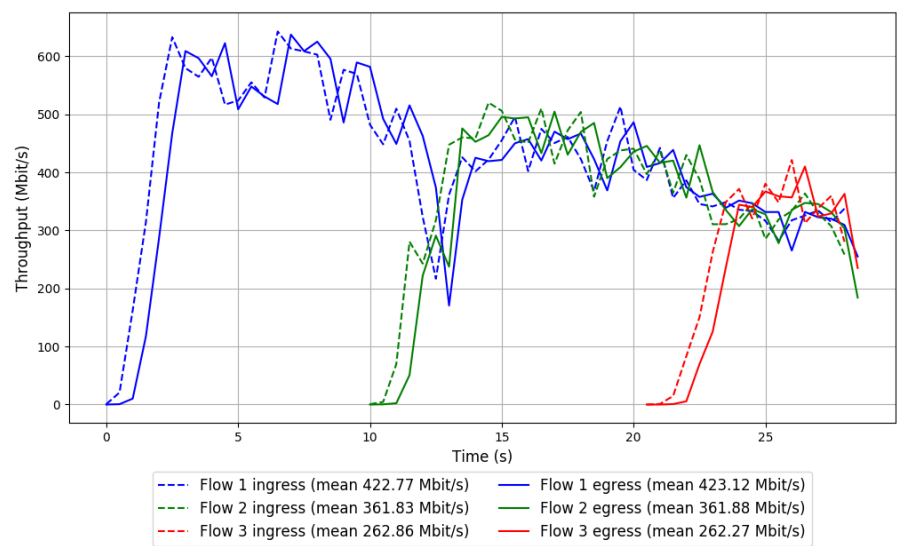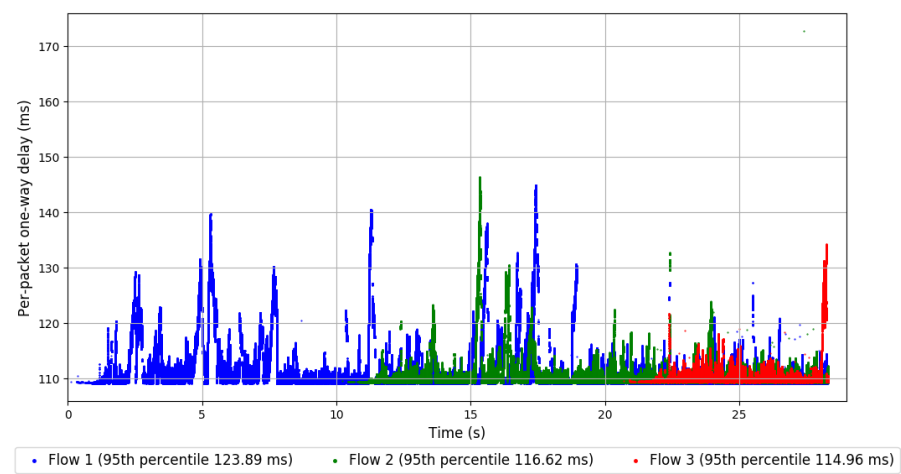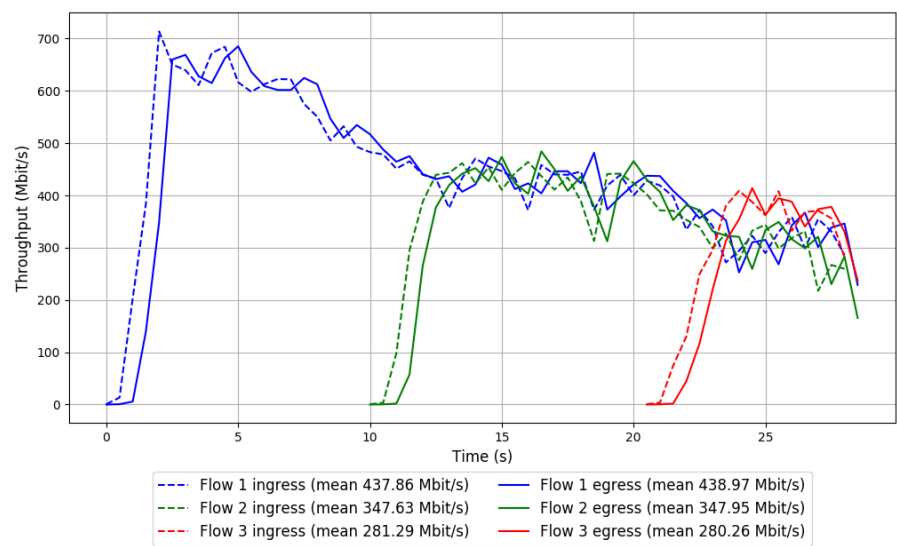
Run 2: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 422.77 Mbit/s) Flow 1 egress (mean 423.12 Mbit/s)
Flow 2 ingress (mean 361.83 Mbit/s) Flow 2 egress (mean 361.88 Mbit/s)
Flow 3 ingress (mean 262.86 Mbit/s) Flow 3 egress (mean 262.27 Mbit/s)

Flow 1 (95th percentile 113.88 ms)   Flow 2 (95th percentile 115.85 ms)   Flow 3 (95th percentile 116.80 ms)

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-18 23:51:54
End at: 2019-03-18 23:52:24
Local clock offset: -0.133 ms
Remote clock offset: -0.163 ms


# Below is generated by plot.py at 2019-03-19 02:46:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 737.81 Mbit/s
95th percentile per-packet one-way delay: 121.665 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 438.97 Mbit/s
95th percentile per-packet one-way delay: 123.889 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 347.95 Mbit/s
95th percentile per-packet one-way delay: 116.618 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 280.26 Mbit/s
95th percentile per-packet one-way delay: 114.958 ms
Loss rate: 3.13%
```
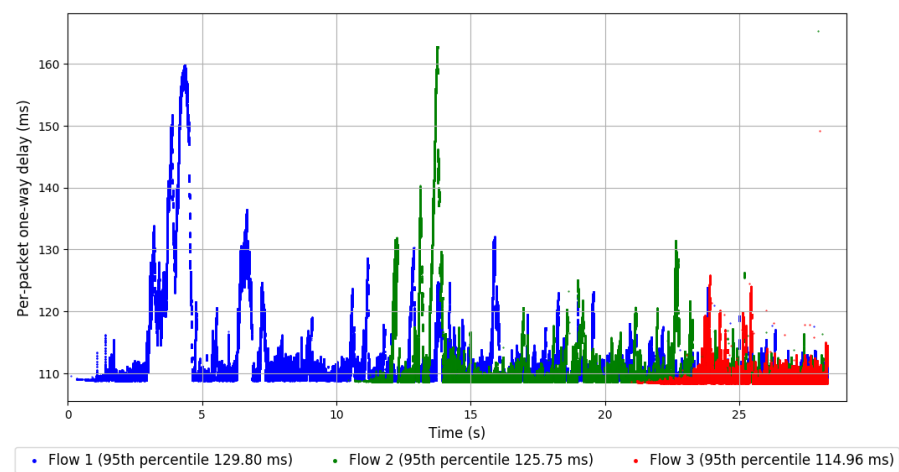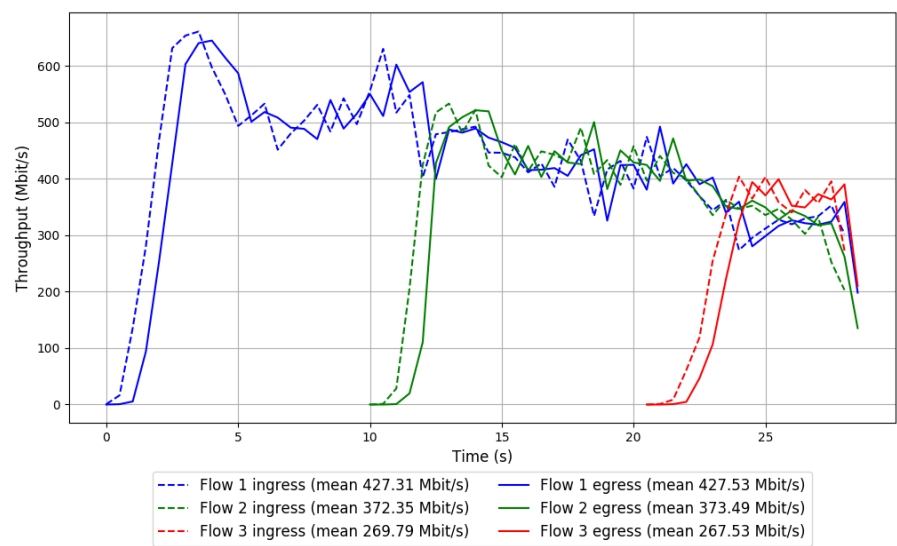
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 437.86 Mbit/s) — — —   Flow 1 egress (mean 438.97 Mbit/s)
Flow 2 ingress (mean 347.63 Mbit/s) — — —   Flow 2 egress (mean 347.95 Mbit/s)
Flow 3 ingress (mean 281.29 Mbit/s) — — —   Flow 3 egress (mean 280.26 Mbit/s)

Flow 1 (95th percentile 123.89 ms)   Flow 2 (95th percentile 116.62 ms)   Flow 3 (95th percentile 114.96 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-19 00:28:48
End at: 2019-03-19 00:29:18
Local clock offset: -0.599 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2019-03-19 02:47:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 733.14 Mbit/s
95th percentile per-packet one-way delay: 127.164 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 427.53 Mbit/s
95th percentile per-packet one-way delay: 129.799 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 373.49 Mbit/s
95th percentile per-packet one-way delay: 125.751 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 267.53 Mbit/s
95th percentile per-packet one-way delay: 114.958 ms
Loss rate: 3.69%
```
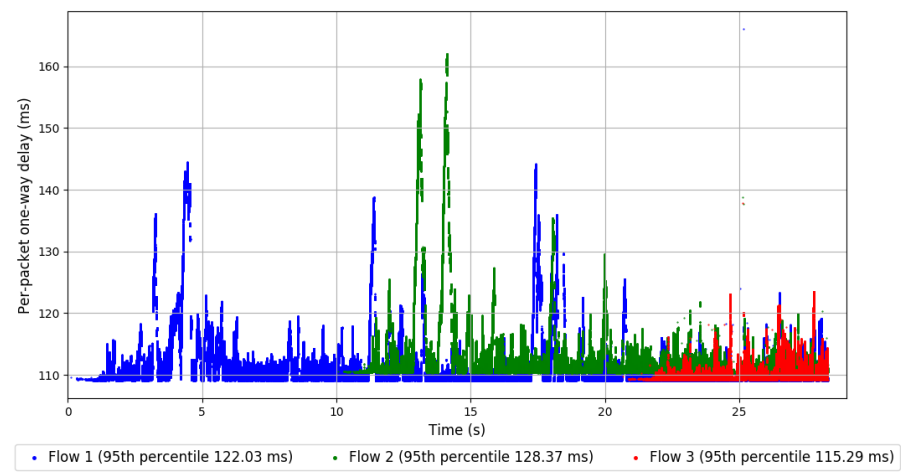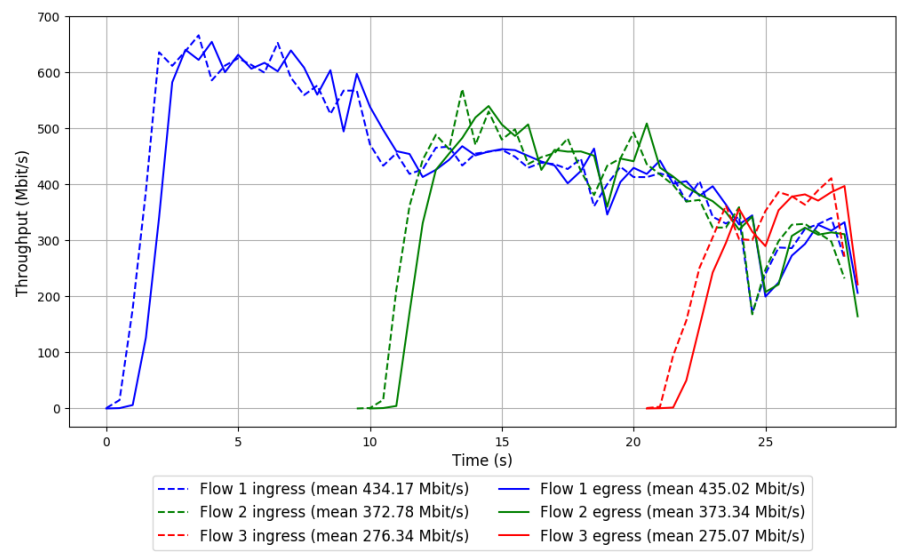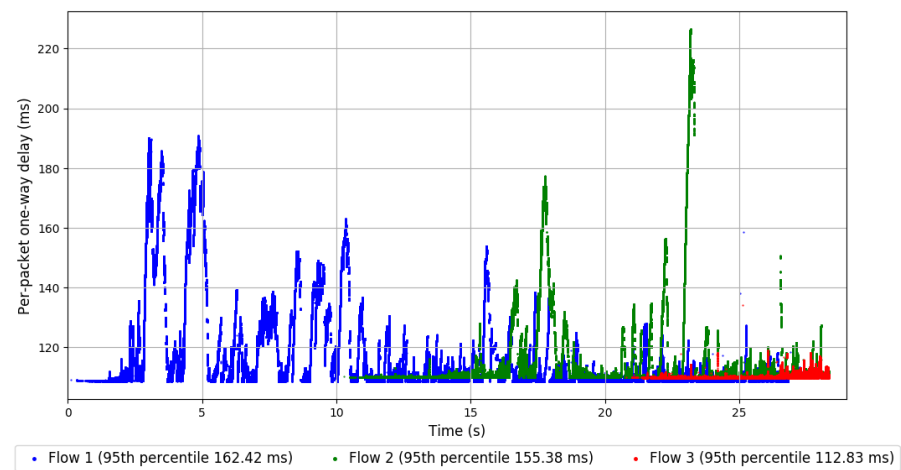
Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 427.31 Mbit/s)   Flow 1 egress (mean 427.53 Mbit/s)
Flow 2 ingress (mean 372.35 Mbit/s)   Flow 2 egress (mean 373.49 Mbit/s)
Flow 3 ingress (mean 269.79 Mbit/s)   Flow 3 egress (mean 267.53 Mbit/s)

Flow 1 (95th percentile 129.80 ms)   Flow 2 (95th percentile 125.75 ms)   Flow 3 (95th percentile 114.96 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-19 01:06:14
End at: 2019-03-19 01:06:44
Local clock offset: -0.129 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-03-19 02:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.66 Mbit/s
95th percentile per-packet one-way delay: 122.812 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 435.02 Mbit/s
95th percentile per-packet one-way delay: 122.033 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 373.34 Mbit/s
95th percentile per-packet one-way delay: 128.370 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 275.07 Mbit/s
95th percentile per-packet one-way delay: 115.294 ms
Loss rate: 3.28%
```
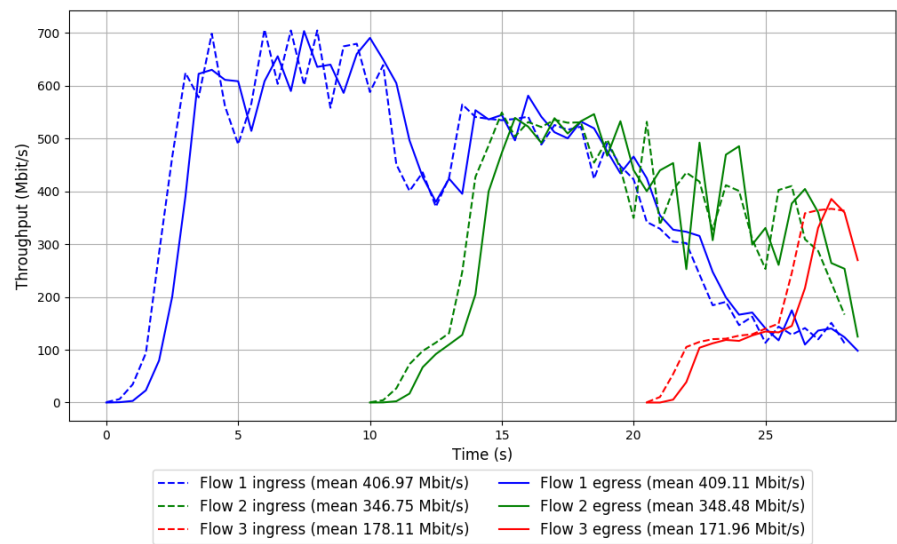
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 434.17 Mbit/s) — — — Flow 1 egress (mean 435.02 Mbit/s)
Flow 2 ingress (mean 372.78 Mbit/s) — — — Flow 2 egress (mean 373.34 Mbit/s)
Flow 3 ingress (mean 276.34 Mbit/s) — — — Flow 3 egress (mean 275.07 Mbit/s)

Flow 1 (95th percentile 122.03 ms)   Flow 2 (95th percentile 128.37 ms)   Flow 3 (95th percentile 115.29 ms)

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```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-18 22:31:38
End at: 2019-03-18 22:32:08
Local clock offset: -0.007 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-03-19 02:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.12 Mbit/s
95th percentile per-packet one-way delay: 158.527 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 409.11 Mbit/s
95th percentile per-packet one-way delay: 162.420 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 348.48 Mbit/s
95th percentile per-packet one-way delay: 155.381 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 171.96 Mbit/s
95th percentile per-packet one-way delay: 112.835 ms
Loss rate: 6.20%
```
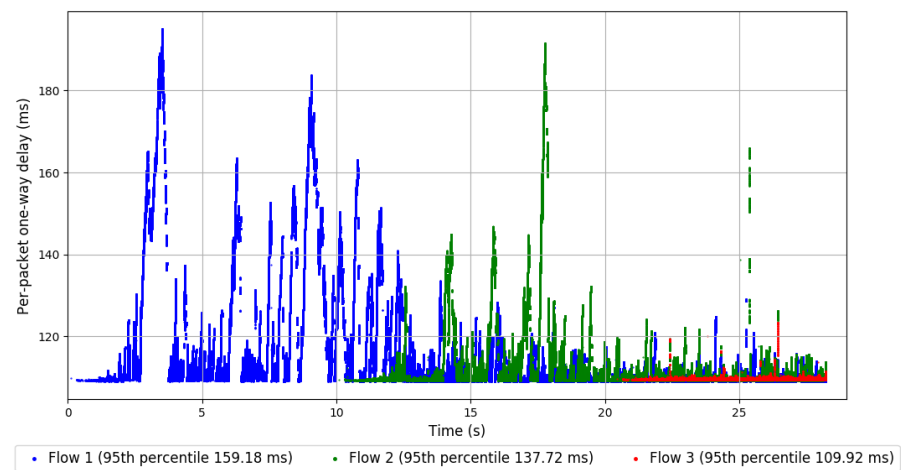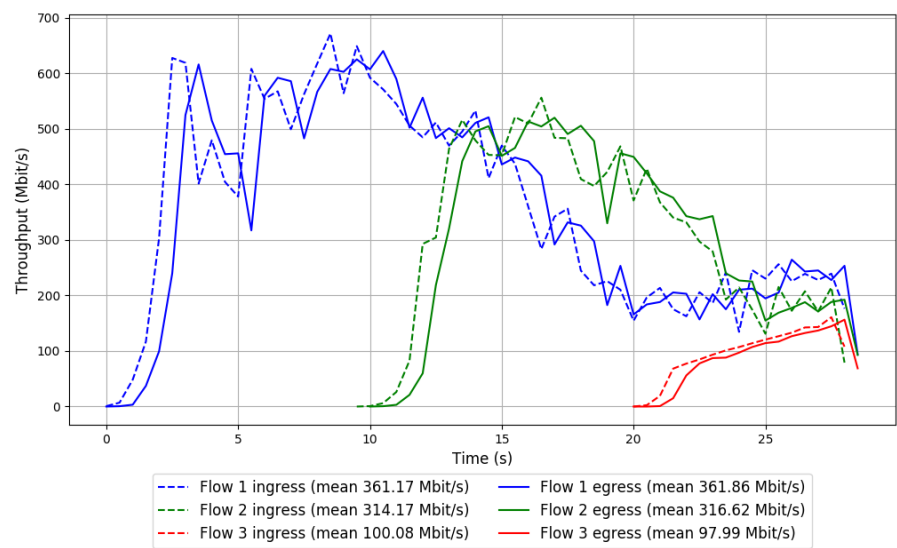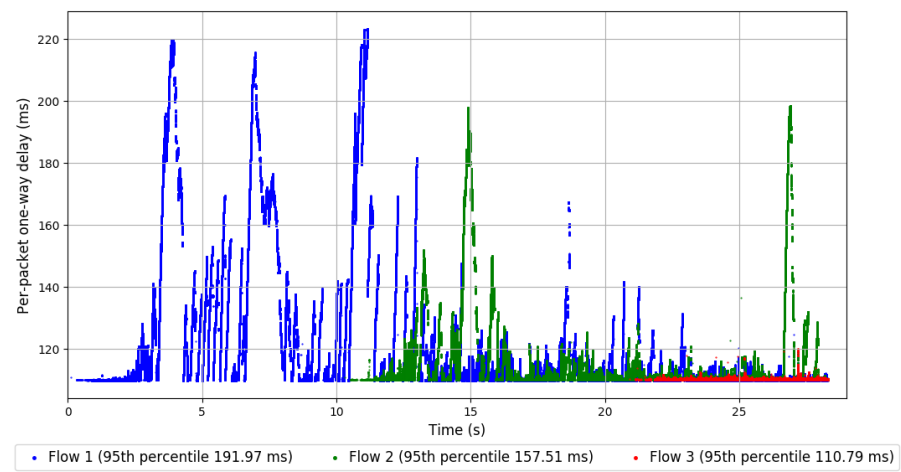
Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 406.97 Mbit/s) --- Flow 1 egress (mean 409.11 Mbit/s)
Flow 2 ingress (mean 346.75 Mbit/s) --- Flow 2 egress (mean 348.48 Mbit/s)
Flow 3 ingress (mean 178.11 Mbit/s) --- Flow 3 egress (mean 171.96 Mbit/s)

Flow 1 (95th percentile 162.42 ms)   Flow 2 (95th percentile 155.38 ms)   Flow 3 (95th percentile 112.83 ms)
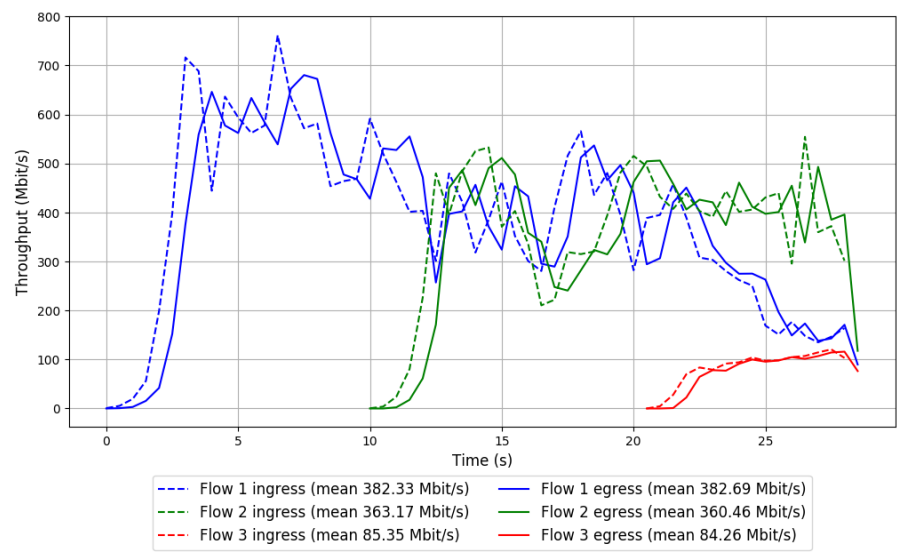
```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-18 23:08:33
End at: 2019-03-18 23:09:03
Local clock offset: 0.013 ms
Remote clock offset: 0.113 ms

# Below is generated by plot.py at 2019-03-19 02:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 592.93 Mbit/s
95th percentile per-packet one-way delay: 153.546 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 361.86 Mbit/s
95th percentile per-packet one-way delay: 159.183 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 316.62 Mbit/s
95th percentile per-packet one-way delay: 137.718 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 97.99 Mbit/s
95th percentile per-packet one-way delay: 109.923 ms
Loss rate: 4.76%
```

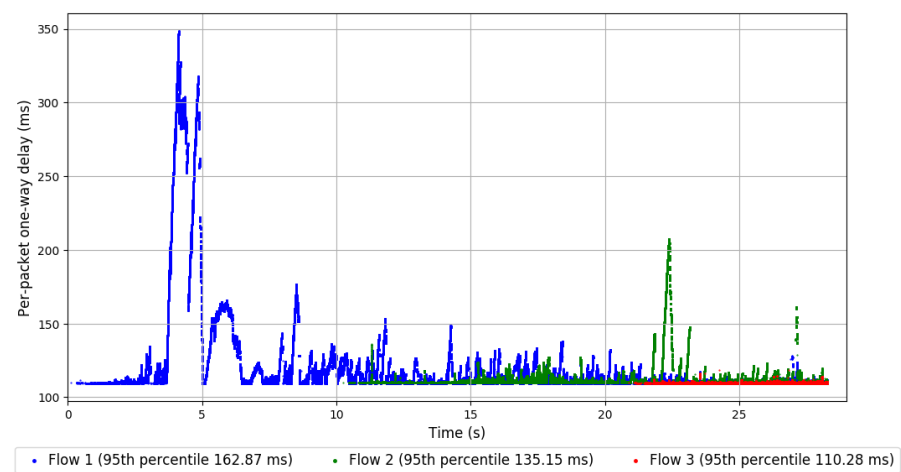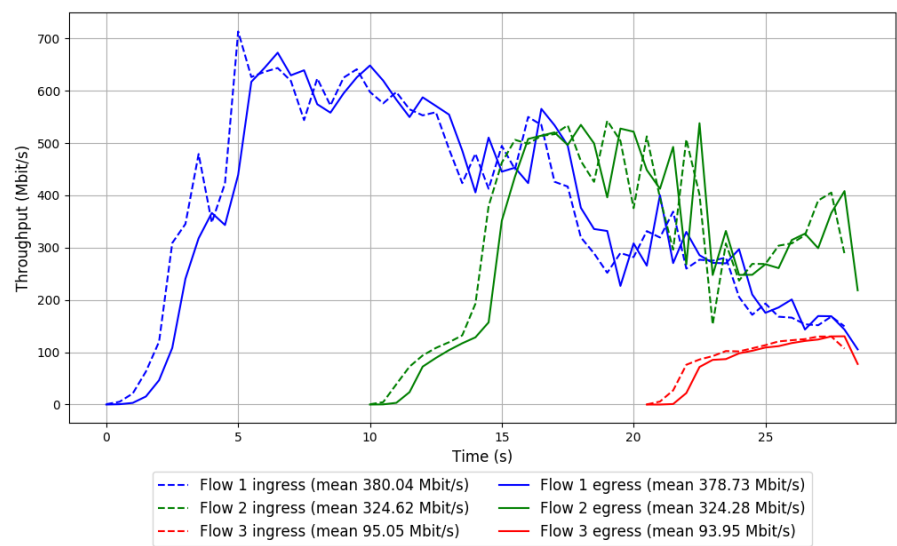Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 361.17 Mbit/s)   Flow 1 egress (mean 361.86 Mbit/s)
Flow 2 ingress (mean 314.17 Mbit/s)   Flow 2 egress (mean 316.62 Mbit/s)
Flow 3 ingress (mean 100.08 Mbit/s)   Flow 3 egress (mean 97.99 Mbit/s)

Flow 1 (95th percentile 159.18 ms)   Flow 2 (95th percentile 137.72 ms)   Flow 3 (95th percentile 109.92 ms)

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```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-18 23:46:10
End at: 2019-03-18 23:46:40
Local clock offset: 0.576 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-03-19 02:50:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 634.66 Mbit/s
95th percentile per-packet one-way delay: 182.295 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 382.69 Mbit/s
95th percentile per-packet one-way delay: 191.970 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 360.46 Mbit/s
95th percentile per-packet one-way delay: 157.506 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 84.26 Mbit/s
95th percentile per-packet one-way delay: 110.787 ms
Loss rate: 4.13%
```
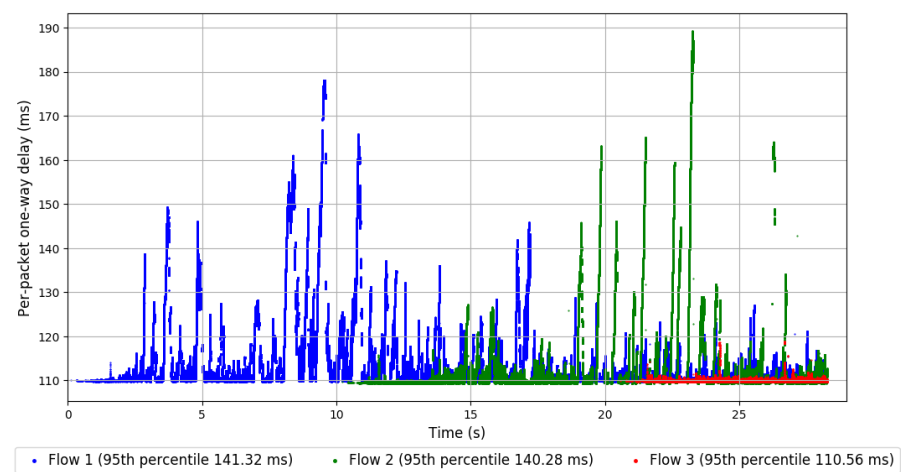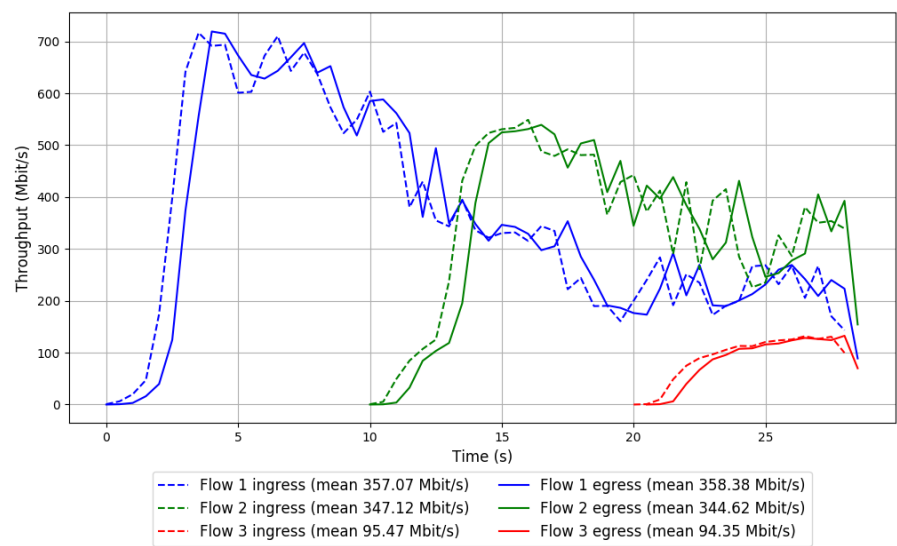
Run 3: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 382.33 Mbit/s) ———— Flow 1 egress (mean 382.69 Mbit/s)
- - - - Flow 2 ingress (mean 363.17 Mbit/s) ———— Flow 2 egress (mean 360.46 Mbit/s)
- - - - Flow 3 ingress (mean 85.35 Mbit/s) ———— Flow 3 egress (mean 84.26 Mbit/s)

• Flow 1 (95th percentile 191.97 ms)   • Flow 2 (95th percentile 157.51 ms)   • Flow 3 (95th percentile 110.79 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-19 00:23:21
End at: 2019-03-19 00:23:51
Local clock offset: 0.23 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-03-19 02:51:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 611.04 Mbit/s
95th percentile per-packet one-way delay: 159.517 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 378.73 Mbit/s
95th percentile per-packet one-way delay: 162.873 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 324.28 Mbit/s
95th percentile per-packet one-way delay: 135.153 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 93.95 Mbit/s
95th percentile per-packet one-way delay: 110.282 ms
Loss rate: 4.02%
```
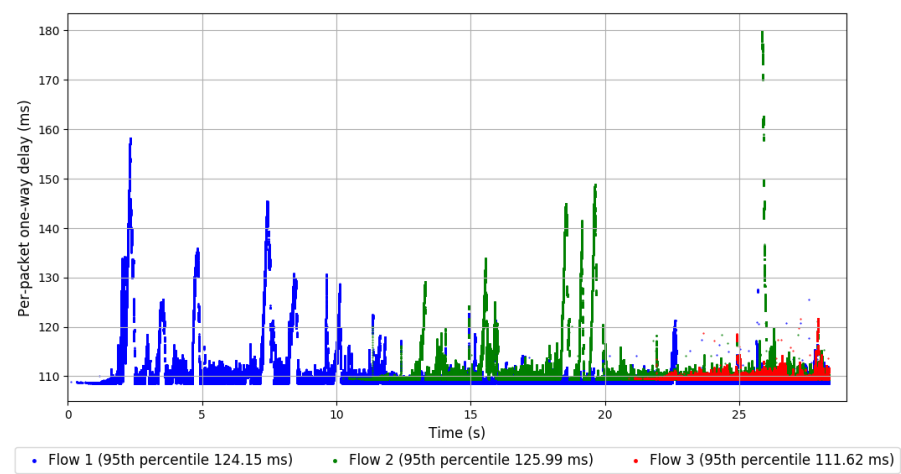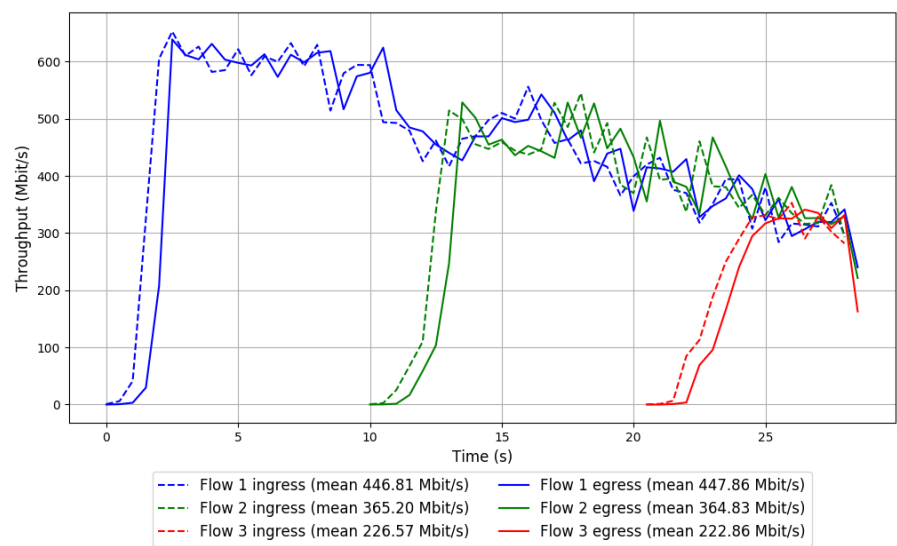
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-19 01:00:35
End at: 2019-03-19 01:01:05
Local clock offset: 0.208 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2019-03-19 02:52:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 605.17 Mbit/s
95th percentile per-packet one-way delay: 140.138 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 358.38 Mbit/s
95th percentile per-packet one-way delay: 141.325 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 344.62 Mbit/s
95th percentile per-packet one-way delay: 140.284 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 94.35 Mbit/s
95th percentile per-packet one-way delay: 110.564 ms
Loss rate: 3.92%
```
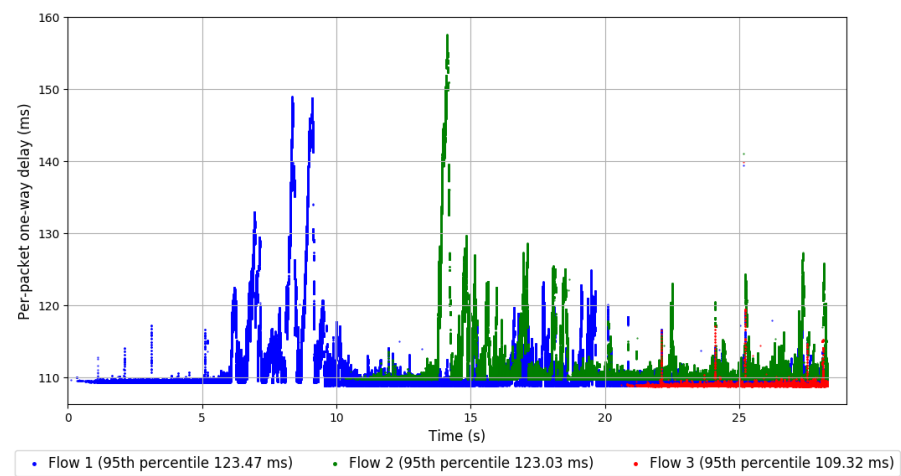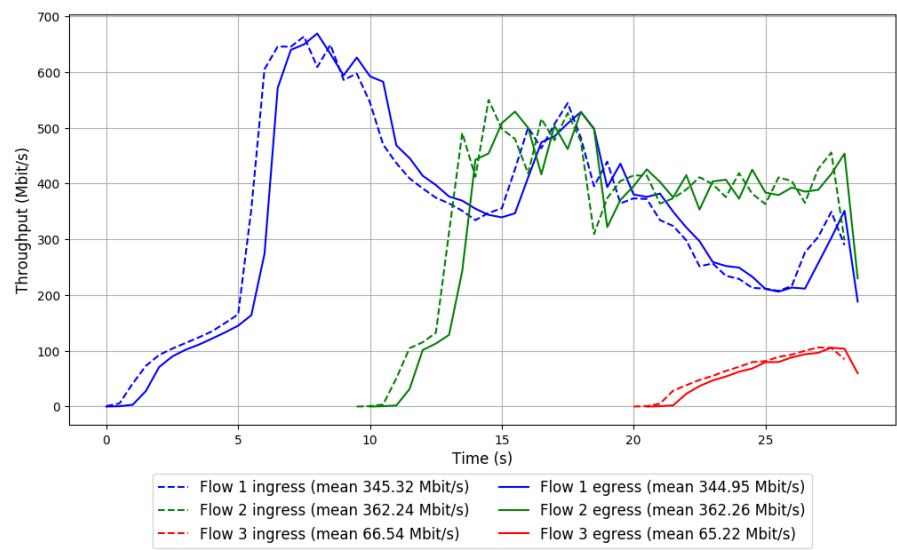
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 357.07 Mbit/s) --- Flow 1 egress (mean 358.38 Mbit/s)
Flow 2 ingress (mean 347.12 Mbit/s) --- Flow 2 egress (mean 344.62 Mbit/s)
Flow 3 ingress (mean 95.47 Mbit/s) --- Flow 3 egress (mean 94.35 Mbit/s)

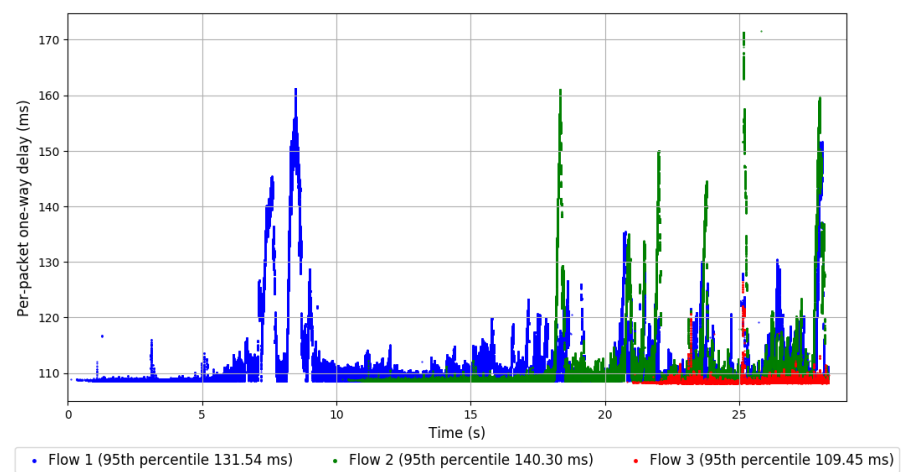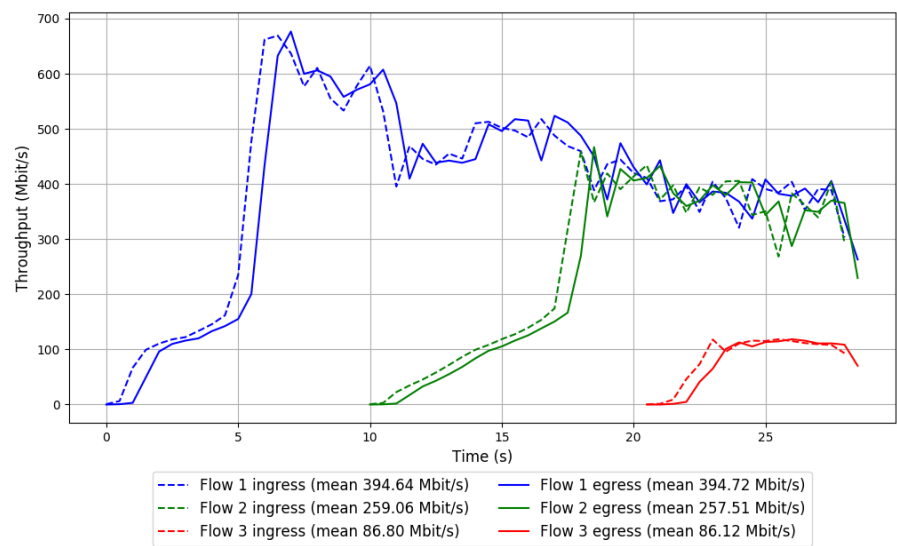Flow 1 (95th percentile 141.32 ms) Flow 2 (95th percentile 140.28 ms) Flow 3 (95th percentile 110.56 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-18 22:33:32
End at: 2019-03-18 22:34:02
Local clock offset: 0.063 ms
Remote clock offset: 0.266 ms


# Below is generated by plot.py at 2019-03-19 02:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 740.26 Mbit/s
95th percentile per-packet one-way delay: 123.669 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 447.86 Mbit/s
95th percentile per-packet one-way delay: 124.153 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 364.83 Mbit/s
95th percentile per-packet one-way delay: 125.990 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 222.86 Mbit/s
95th percentile per-packet one-way delay: 111.621 ms
Loss rate: 4.49%
```

Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-18 23:10:22
End at: 2019-03-18 23:10:52
Local clock offset: -0.335 ms
Remote clock offset: 0.096 ms


# Below is generated by plot.py at 2019-03-19 02:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.36 Mbit/s
95th percentile per-packet one-way delay: 123.038 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 344.95 Mbit/s
95th percentile per-packet one-way delay: 123.469 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 362.26 Mbit/s
95th percentile per-packet one-way delay: 123.026 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 65.22 Mbit/s
95th percentile per-packet one-way delay: 109.324 ms
Loss rate: 4.72%
```

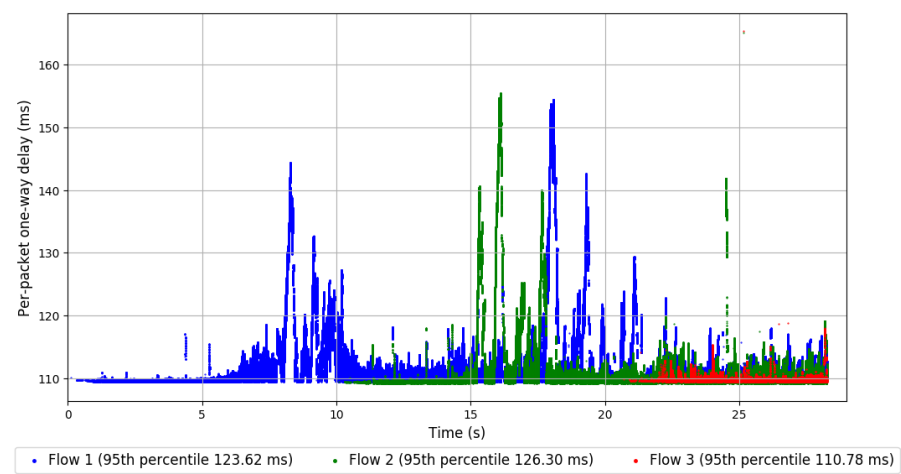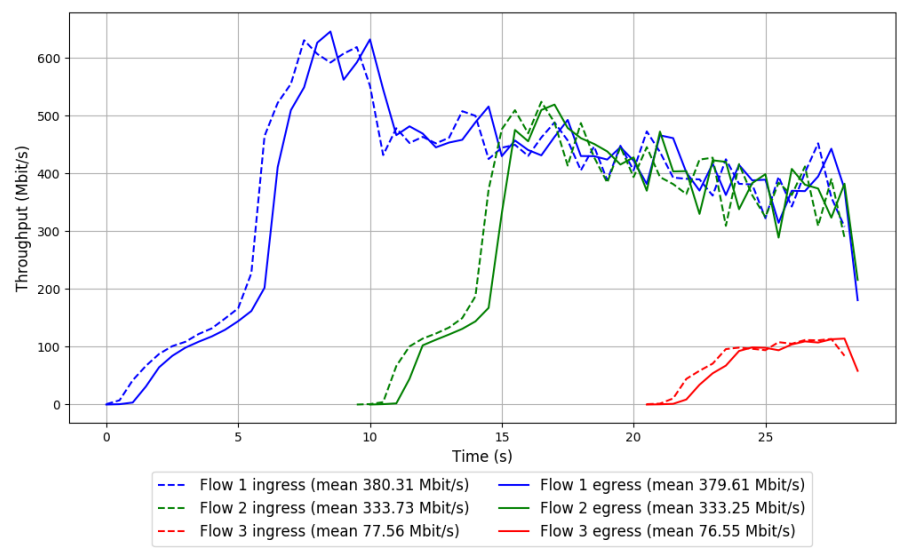Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-18 23:48:02
End at: 2019-03-18 23:48:32
Local clock offset: -0.869 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-03-19 02:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.76 Mbit/s
95th percentile per-packet one-way delay: 134.033 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 394.72 Mbit/s
95th percentile per-packet one-way delay: 131.542 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 257.51 Mbit/s
95th percentile per-packet one-way delay: 140.304 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 86.12 Mbit/s
95th percentile per-packet one-way delay: 109.447 ms
Loss rate: 3.55%
```
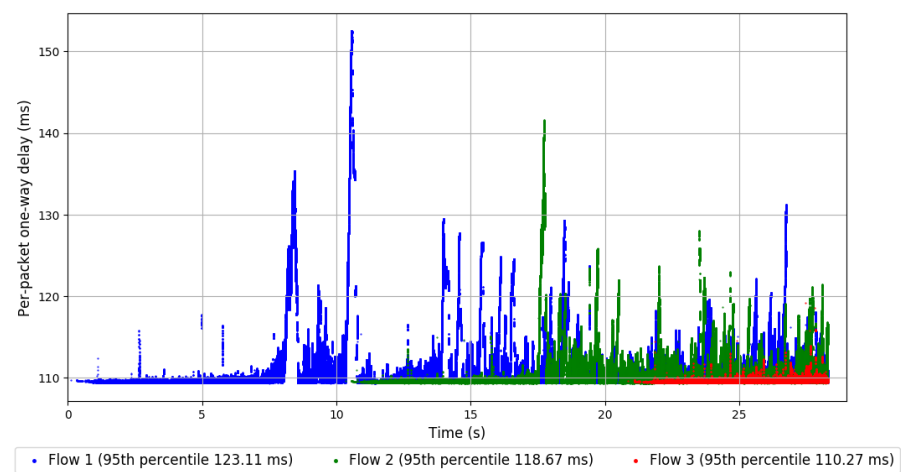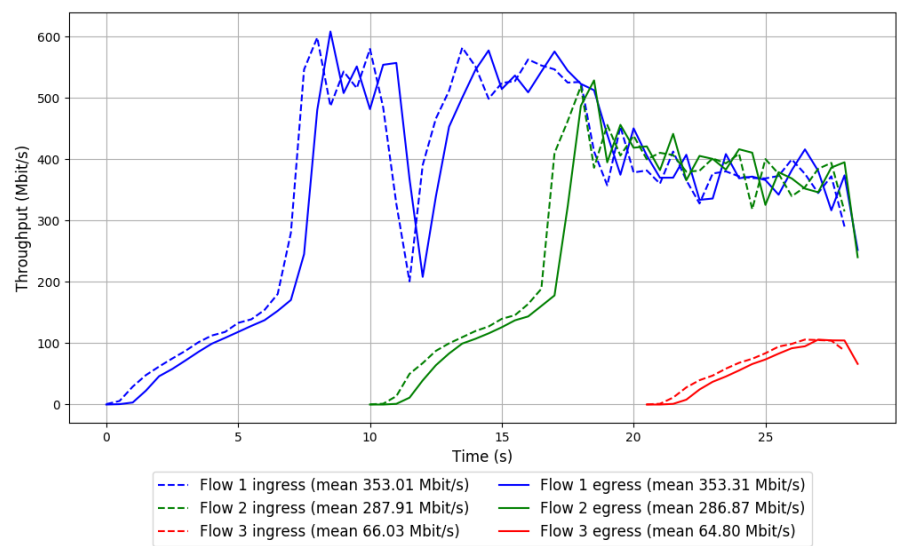
Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 394.64 Mbit/s)
Flow 1 egress (mean 394.72 Mbit/s)
Flow 2 ingress (mean 259.06 Mbit/s)
Flow 2 egress (mean 257.51 Mbit/s)
Flow 3 ingress (mean 86.80 Mbit/s)
Flow 3 egress (mean 86.12 Mbit/s)

Flow 1 (95th percentile 131.54 ms)
Flow 2 (95th percentile 140.30 ms)
Flow 3 (95th percentile 109.45 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-19 00:25:12
End at: 2019-03-19 00:25:42
Local clock offset: 0.042 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2019-03-19 02:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 615.23 Mbit/s
95th percentile per-packet one-way delay: 124.004 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 379.61 Mbit/s
95th percentile per-packet one-way delay: 123.624 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 333.25 Mbit/s
95th percentile per-packet one-way delay: 126.298 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 76.55 Mbit/s
95th percentile per-packet one-way delay: 110.780 ms
Loss rate: 4.11%
```
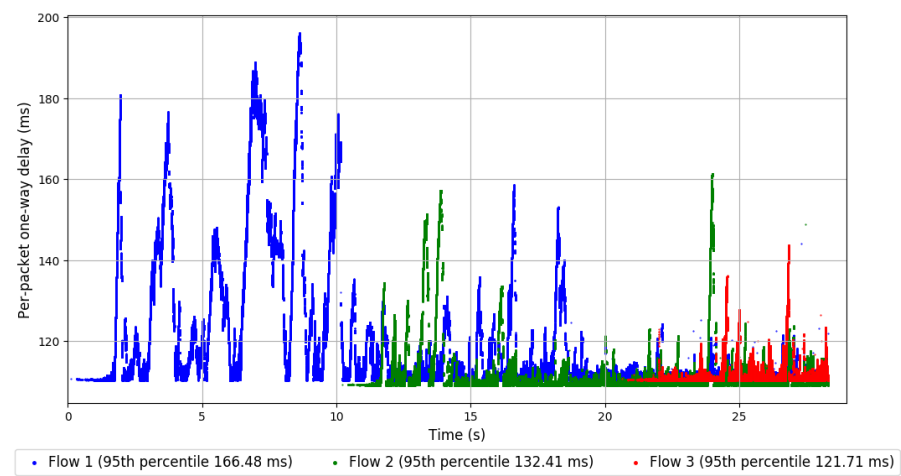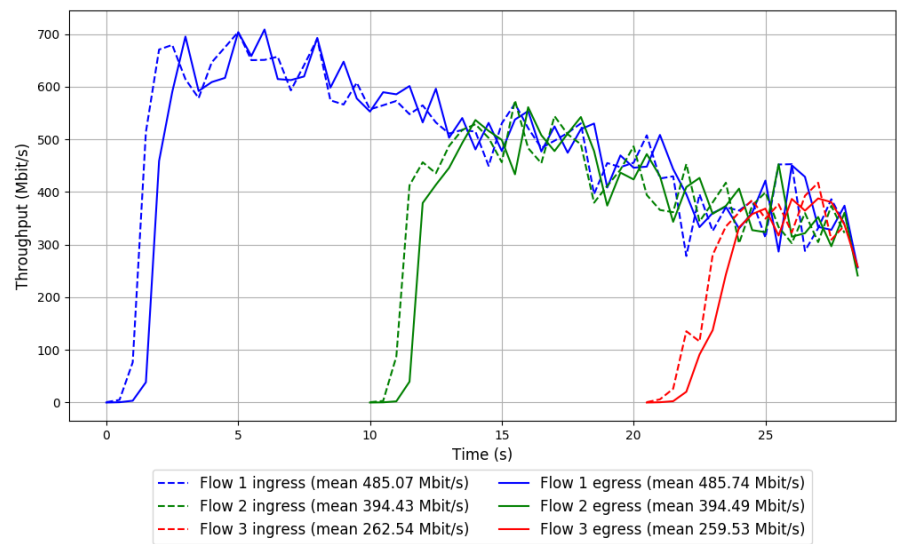
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 380.31 Mbit/s) --- Flow 1 egress (mean 379.61 Mbit/s)
Flow 2 ingress (mean 333.73 Mbit/s) --- Flow 2 egress (mean 333.25 Mbit/s)
Flow 3 ingress (mean 77.56 Mbit/s) --- Flow 3 egress (mean 76.55 Mbit/s)

Flow 1 (95th percentile 123.62 ms) • Flow 2 (95th percentile 126.30 ms) • Flow 3 (95th percentile 110.78 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-19 01:02:26
End at: 2019-03-19 01:02:56
Local clock offset: -0.149 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-03-19 02:59:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 553.04 Mbit/s
95th percentile per-packet one-way delay: 121.786 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 353.31 Mbit/s
95th percentile per-packet one-way delay: 123.108 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 286.87 Mbit/s
95th percentile per-packet one-way delay: 118.667 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 64.80 Mbit/s
95th percentile per-packet one-way delay: 110.273 ms
Loss rate: 4.61%
```
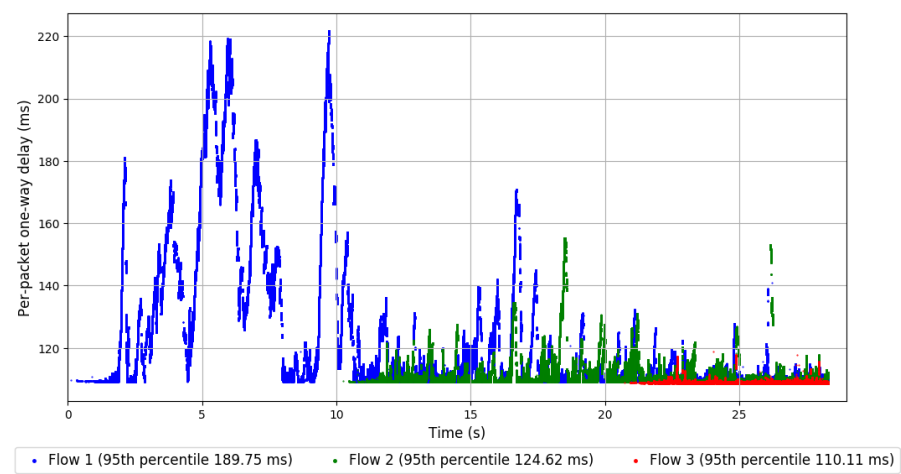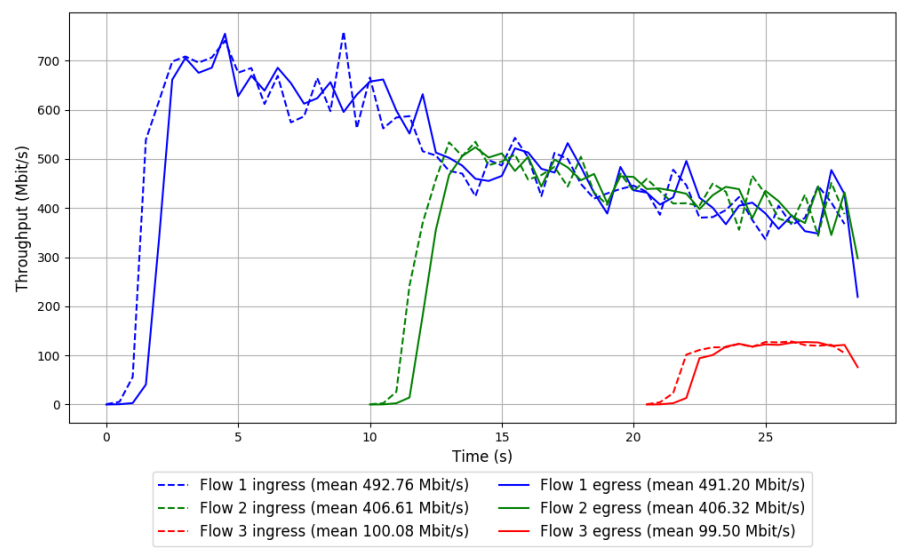
Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-18 22:50:17
End at: 2019-03-18 22:50:47
Local clock offset: 0.103 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-03-19 03:04:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 809.63 Mbit/s
95th percentile per-packet one-way delay: 153.435 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 485.74 Mbit/s
95th percentile per-packet one-way delay: 166.483 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 394.49 Mbit/s
95th percentile per-packet one-way delay: 132.408 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 259.53 Mbit/s
95th percentile per-packet one-way delay: 121.708 ms
Loss rate: 3.92%
```
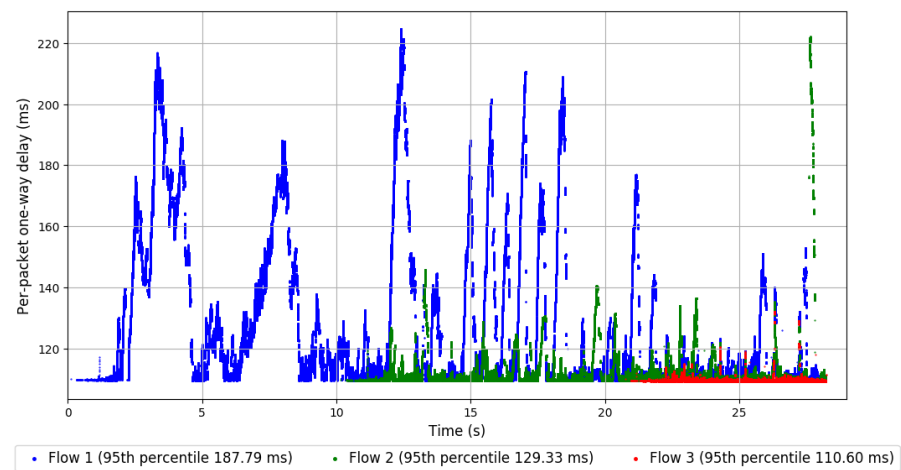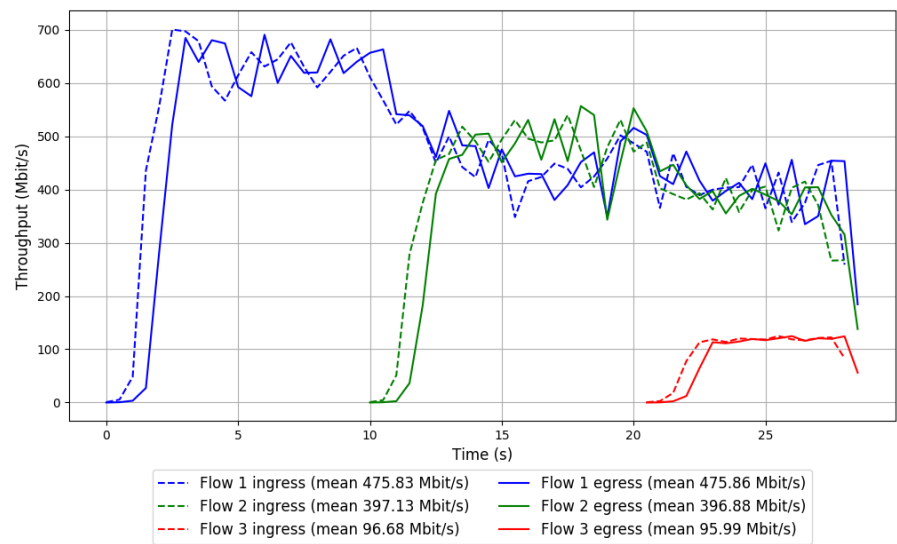
Run 1: Report of Indigo-MusesT — Data Link

- - - - Flow 1 ingress (mean 485.07 Mbit/s) ——— Flow 1 egress (mean 485.74 Mbit/s)
- - - - Flow 2 ingress (mean 394.43 Mbit/s) ——— Flow 2 egress (mean 394.49 Mbit/s)
- - - - Flow 3 ingress (mean 262.54 Mbit/s) ——— Flow 3 egress (mean 259.53 Mbit/s)

• Flow 1 (95th percentile 166.48 ms)   • Flow 2 (95th percentile 132.41 ms)   • Flow 3 (95th percentile 121.71 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-18 23:27:23
End at: 2019-03-18 23:27:53
Local clock offset: -0.253 ms
Remote clock offset: 0.179 ms


# Below is generated by plot.py at 2019-03-19 03:05:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 778.36 Mbit/s
95th percentile per-packet one-way delay: 177.021 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 491.20 Mbit/s
95th percentile per-packet one-way delay: 189.755 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 406.32 Mbit/s
95th percentile per-packet one-way delay: 124.624 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 99.50 Mbit/s
95th percentile per-packet one-way delay: 110.105 ms
Loss rate: 3.37%
```

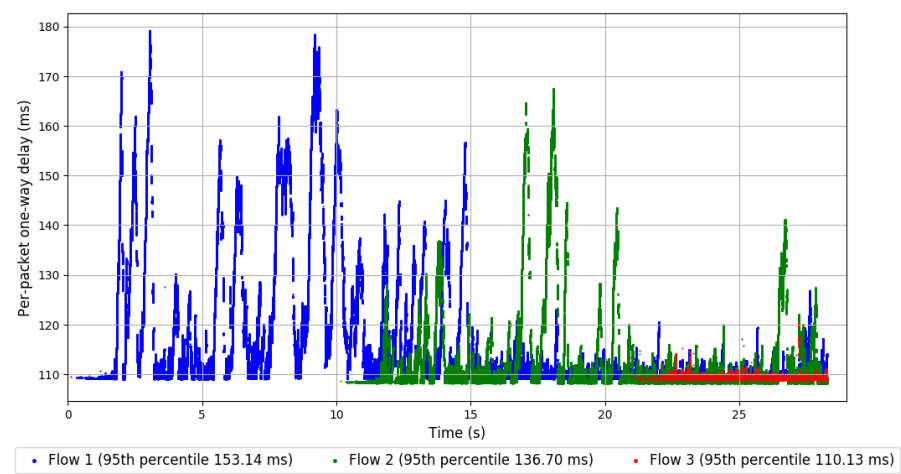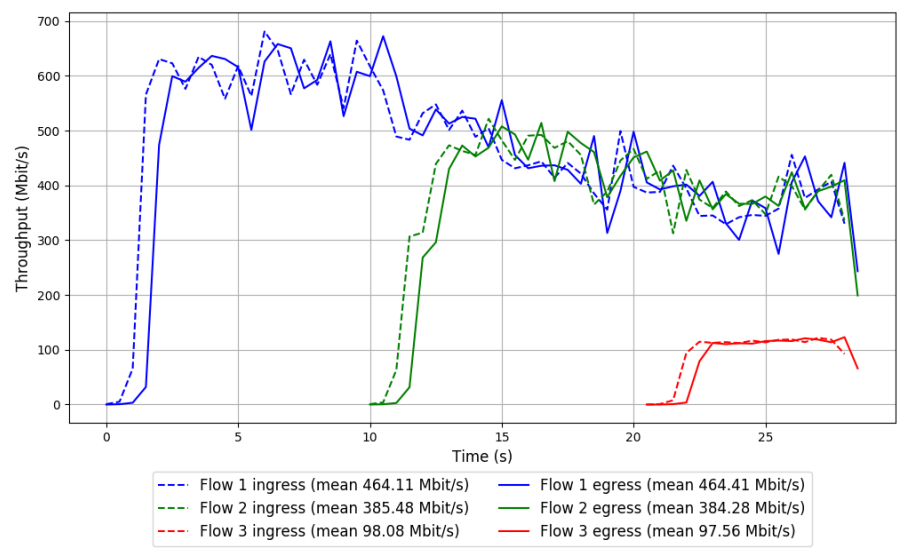# Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 492.76 Mbit/s) --- Flow 1 egress (mean 491.20 Mbit/s)
Flow 2 ingress (mean 406.61 Mbit/s) --- Flow 2 egress (mean 406.32 Mbit/s)
Flow 3 ingress (mean 100.08 Mbit/s) --- Flow 3 egress (mean 99.50 Mbit/s)

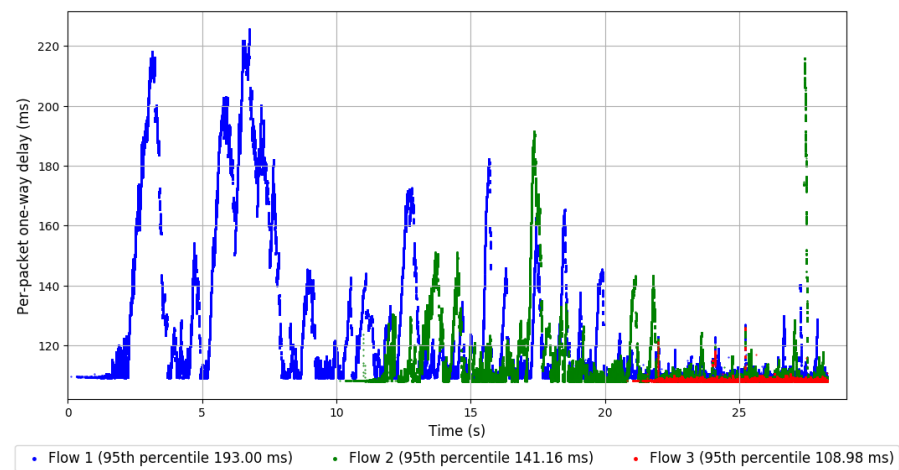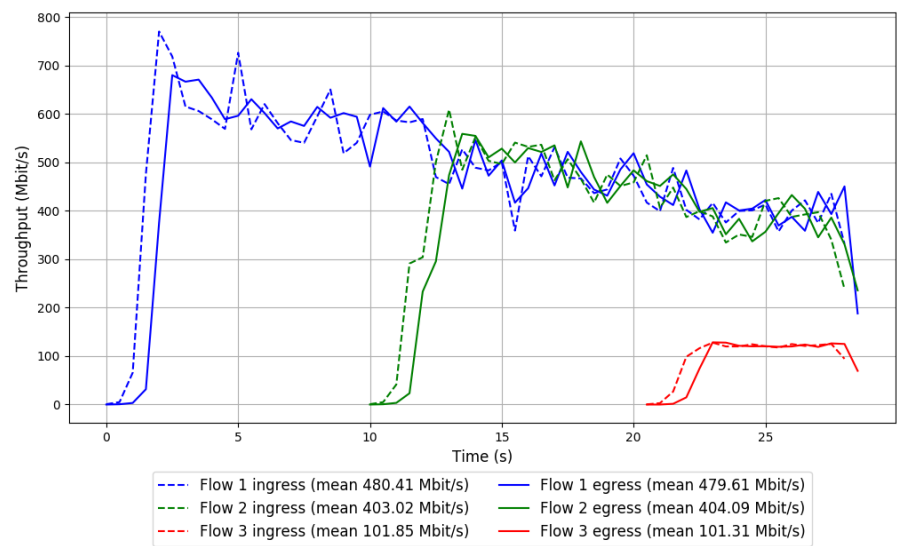Flow 1 (95th percentile 189.75 ms) Flow 2 (95th percentile 124.62 ms) Flow 3 (95th percentile 110.11 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-19 00:05:03
End at: 2019-03-19 00:05:33
Local clock offset: 0.061 ms
Remote clock offset: -0.11 ms


# Below is generated by plot.py at 2019-03-19 03:05:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.55 Mbit/s
95th percentile per-packet one-way delay: 177.619 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 475.86 Mbit/s
95th percentile per-packet one-way delay: 187.787 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 396.88 Mbit/s
95th percentile per-packet one-way delay: 129.328 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 95.99 Mbit/s
95th percentile per-packet one-way delay: 110.602 ms
Loss rate: 3.53%
```
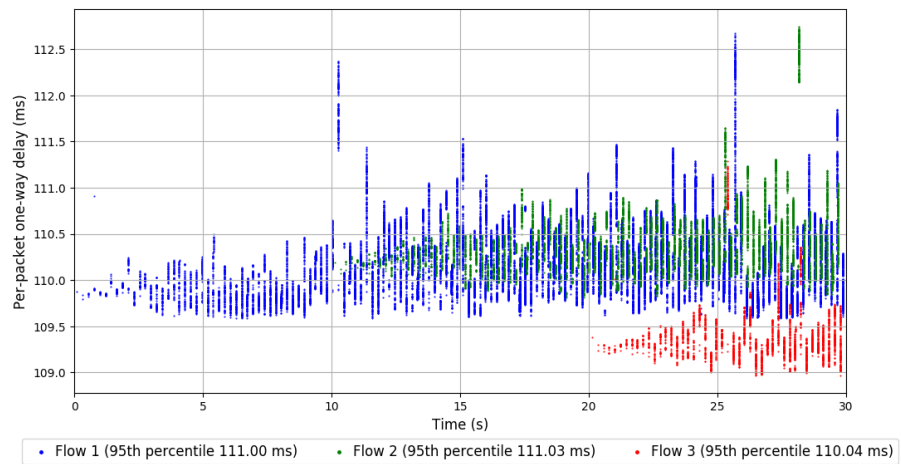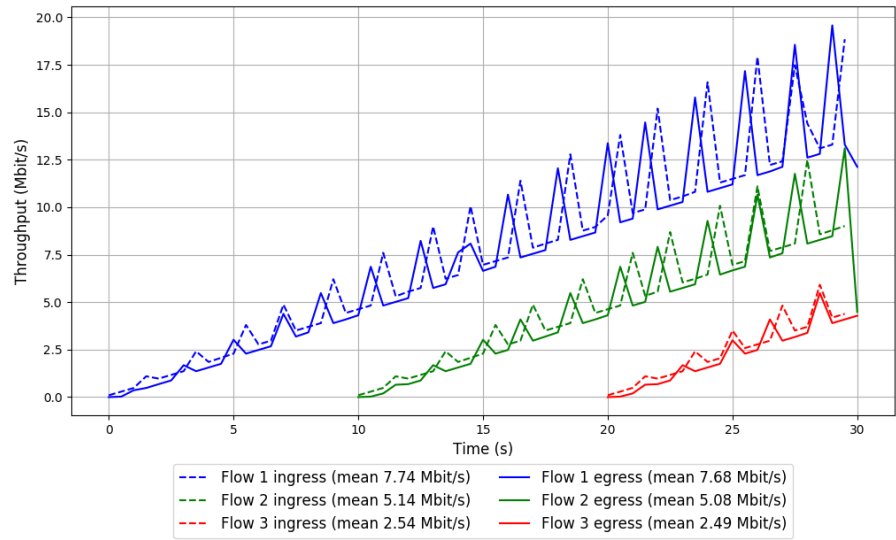
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 475.83 Mbit/s) --- Flow 1 egress (mean 475.86 Mbit/s)
Flow 2 ingress (mean 397.13 Mbit/s) --- Flow 2 egress (mean 396.88 Mbit/s)
Flow 3 ingress (mean 96.68 Mbit/s) --- Flow 3 egress (mean 95.99 Mbit/s)

Flow 1 (95th percentile 187.79 ms)   Flow 2 (95th percentile 129.33 ms)   Flow 3 (95th percentile 110.60 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-19 00:41:54
End at: 2019-03-19 00:42:24
Local clock offset: -0.226 ms
Remote clock offset: -0.059 ms


# Below is generated by plot.py at 2019-03-19 03:09:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.61 Mbit/s
95th percentile per-packet one-way delay: 150.326 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 464.41 Mbit/s
95th percentile per-packet one-way delay: 153.137 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 384.28 Mbit/s
95th percentile per-packet one-way delay: 136.700 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 97.56 Mbit/s
95th percentile per-packet one-way delay: 110.130 ms
Loss rate: 3.42%
```

Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 464.11 Mbit/s)   Flow 1 egress (mean 464.41 Mbit/s)
Flow 2 ingress (mean 385.48 Mbit/s)   Flow 2 egress (mean 384.28 Mbit/s)
Flow 3 ingress (mean 98.08 Mbit/s)   Flow 3 egress (mean 97.56 Mbit/s)

Flow 1 (95th percentile 153.14 ms)   Flow 2 (95th percentile 136.70 ms)   Flow 3 (95th percentile 110.13 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-19 01:19:43
End at: 2019-03-19 01:20:13
Local clock offset: -0.35 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-03-19 03:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 766.79 Mbit/s
95th percentile per-packet one-way delay: 185.586 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 479.61 Mbit/s
95th percentile per-packet one-way delay: 193.000 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 404.09 Mbit/s
95th percentile per-packet one-way delay: 141.162 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 101.31 Mbit/s
95th percentile per-packet one-way delay: 108.977 ms
Loss rate: 3.30%
```
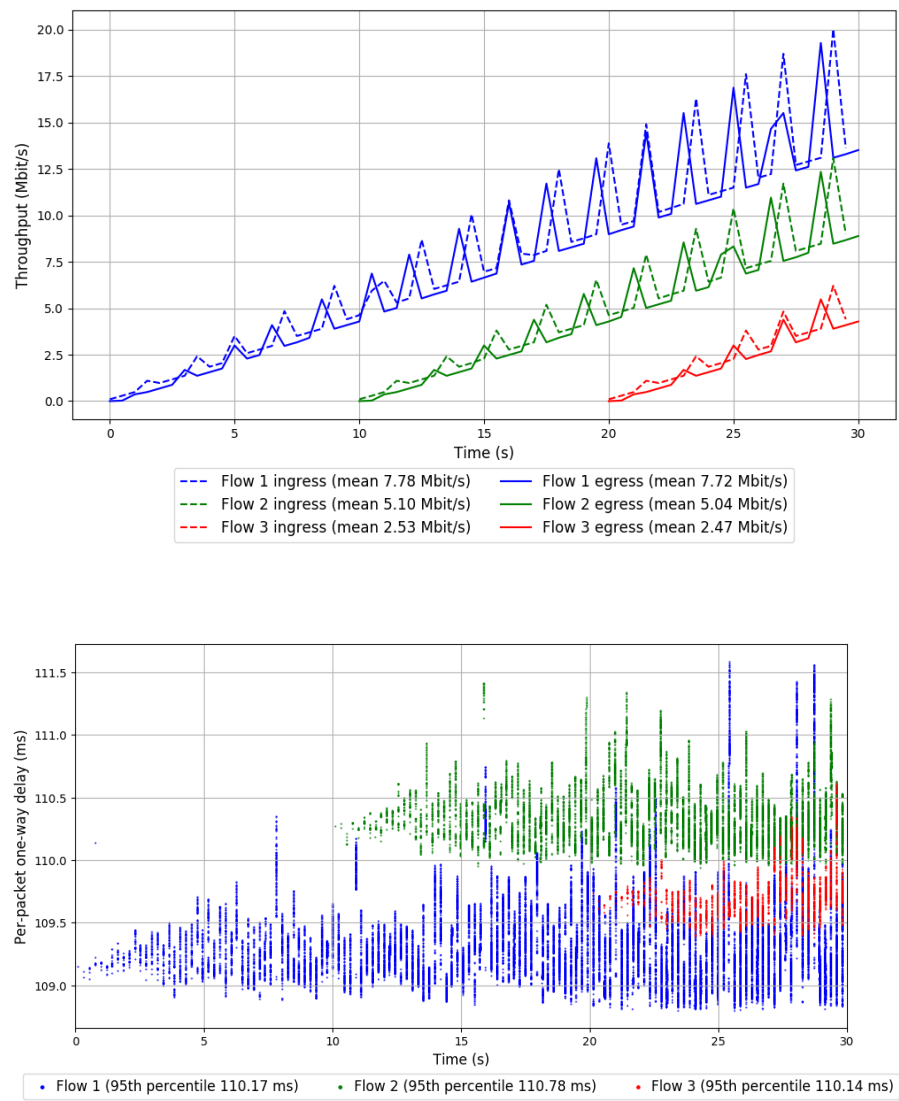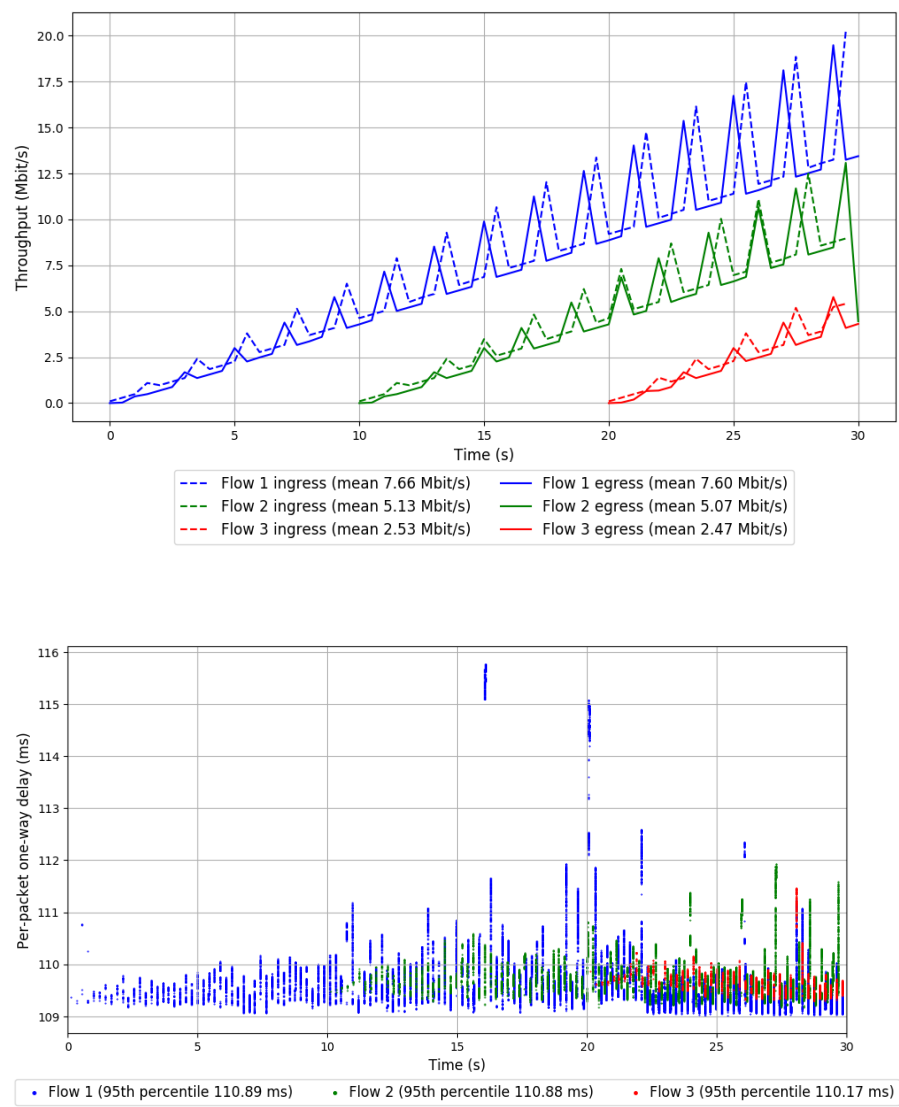
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-03-18 22:24:57
End at: 2019-03-18 22:25:27
Local clock offset: 0.452 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-03-19 03:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 110.991 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 110.997 ms
Loss rate: 1.45%
-- Flow 2:
Average throughput: 5.08 Mbit/s
95th percentile per-packet one-way delay: 111.028 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 110.043 ms
Loss rate: 4.42%
```
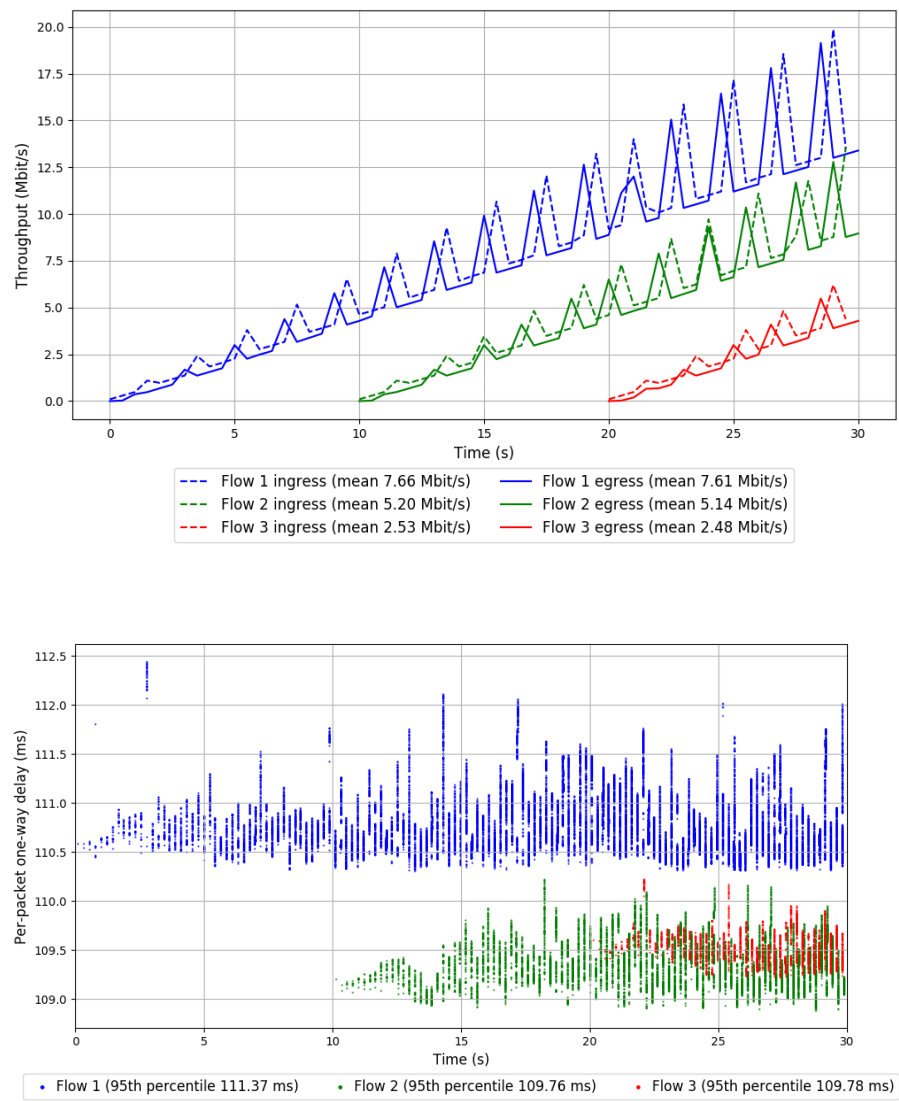
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-03-18 23:01:55
End at: 2019-03-18 23:02:25
Local clock offset: -0.163 ms
Remote clock offset: 0.087 ms


# Below is generated by plot.py at 2019-03-19 03:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 110.587 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 110.172 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 5.04 Mbit/s
95th percentile per-packet one-way delay: 110.780 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 110.137 ms
Loss rate: 4.47%
```
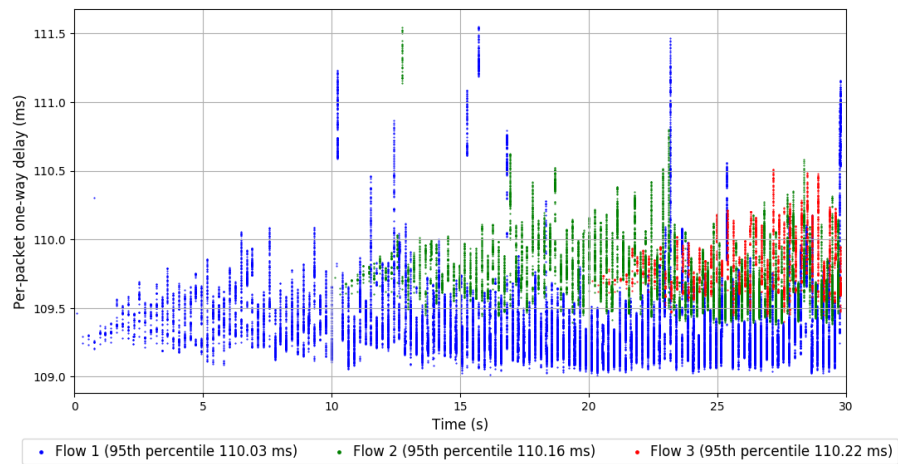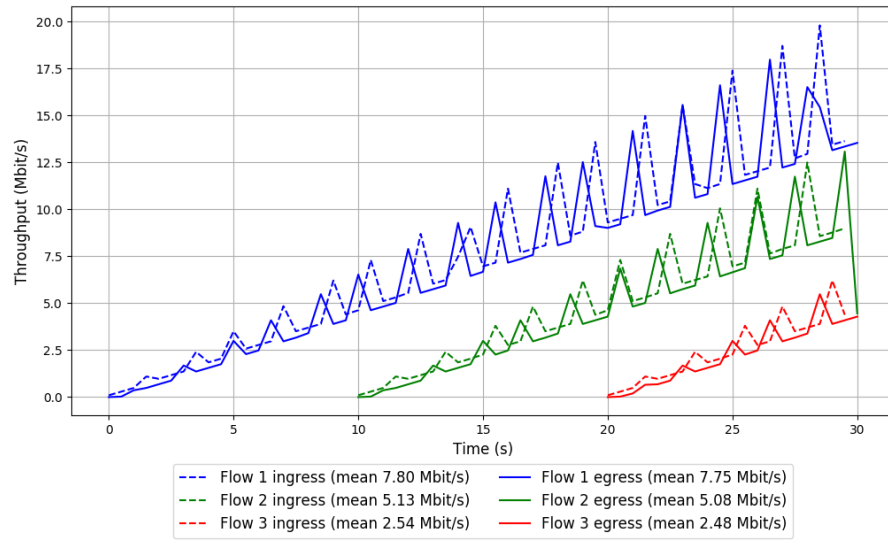
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-03-18 23:39:32
End at: 2019-03-18 23:40:02
Local clock offset: -0.198 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-03-19 03:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 110.844 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 7.60 Mbit/s
95th percentile per-packet one-way delay: 110.885 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 110.880 ms
Loss rate: 2.22%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 110.170 ms
Loss rate: 4.46%
```
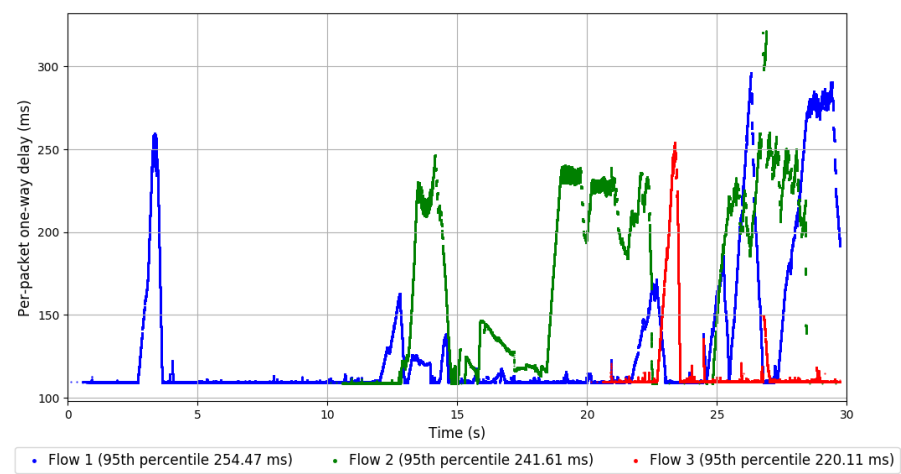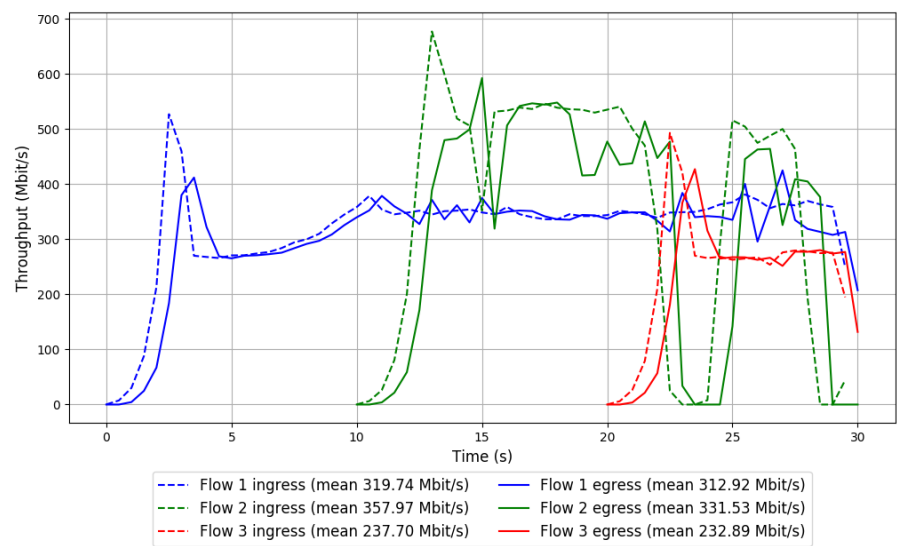
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-03-19 00:16:44
End at: 2019-03-19 00:17:14
Local clock offset: -0.166 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-03-19 03:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 111.240 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 111.370 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 109.764 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 109.784 ms
Loss rate: 4.42%
```

Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-03-19 00:53:56
End at: 2019-03-19 00:54:26
Local clock offset: -0.105 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-03-19 03:10:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 110.138 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 110.028 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 5.08 Mbit/s
95th percentile per-packet one-way delay: 110.161 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 110.222 ms
Loss rate: 4.42%
```
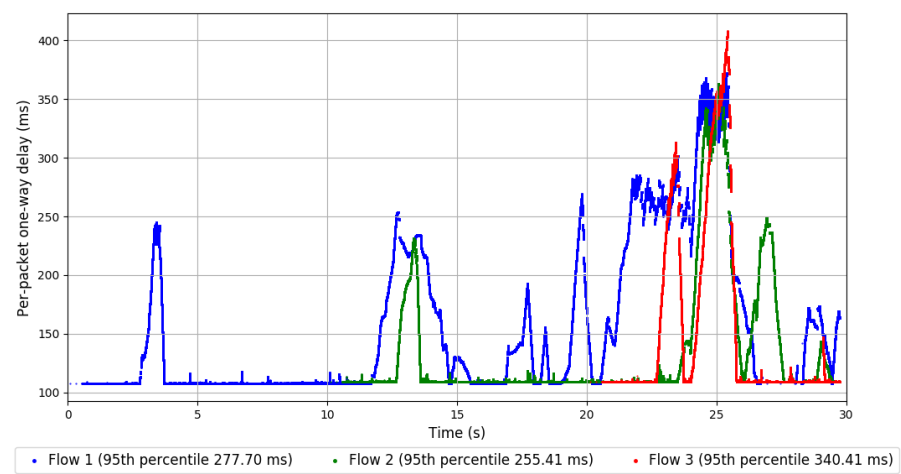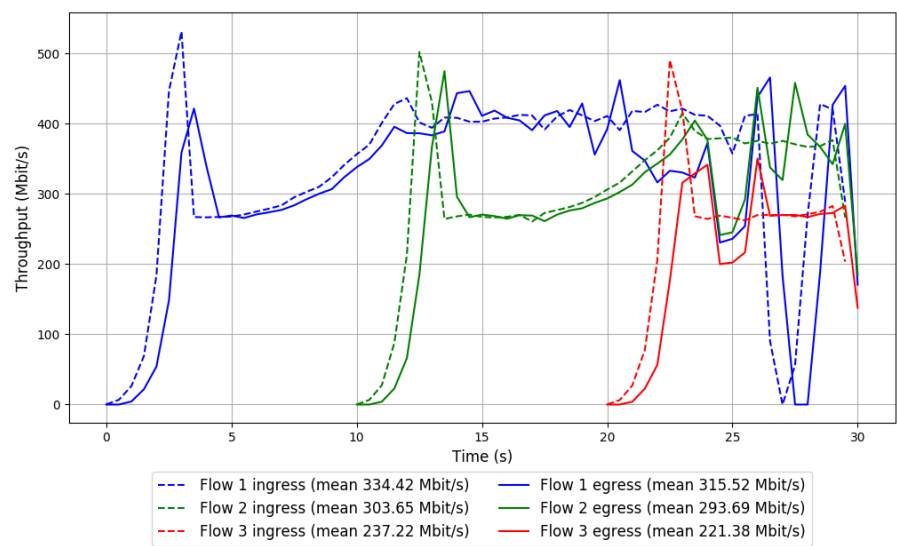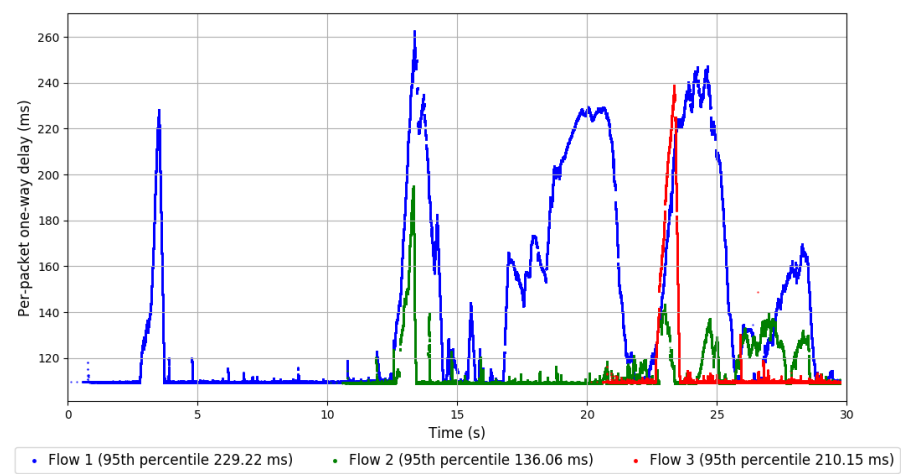
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-03-18 22:29:34
End at: 2019-03-18 22:30:04
Local clock offset: 0.093 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-03-19 03:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 606.16 Mbit/s
95th percentile per-packet one-way delay: 242.432 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 312.92 Mbit/s
95th percentile per-packet one-way delay: 254.465 ms
Loss rate: 2.86%
-- Flow 2:
Average throughput: 331.53 Mbit/s
95th percentile per-packet one-way delay: 241.606 ms
Loss rate: 8.58%
-- Flow 3:
Average throughput: 232.89 Mbit/s
95th percentile per-packet one-way delay: 220.111 ms
Loss rate: 4.23%
```

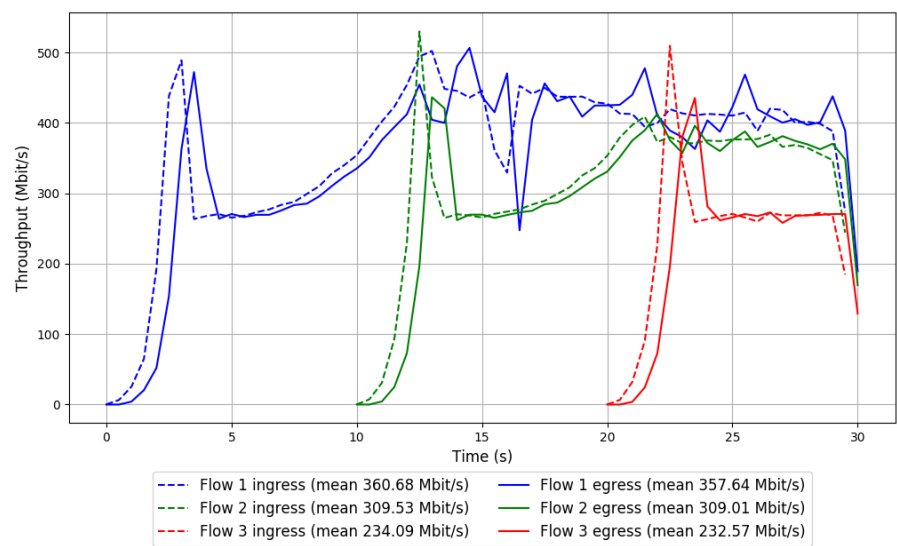Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-03-18 23:06:31
End at: 2019-03-18 23:07:01
Local clock offset: -1.376 ms
Remote clock offset: 0.08 ms


# Below is generated by plot.py at 2019-03-19 03:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 581.79 Mbit/s
95th percentile per-packet one-way delay: 284.208 ms
Loss rate: 6.00%
-- Flow 1:
Average throughput: 315.52 Mbit/s
95th percentile per-packet one-way delay: 277.699 ms
Loss rate: 6.35%
-- Flow 2:
Average throughput: 293.69 Mbit/s
95th percentile per-packet one-way delay: 255.409 ms
Loss rate: 4.35%
-- Flow 3:
Average throughput: 221.38 Mbit/s
95th percentile per-packet one-way delay: 340.409 ms
Loss rate: 8.78%
```

Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-03-18 23:44:05
End at: 2019-03-18 23:44:35
Local clock offset: -0.198 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2019-03-19 03:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 637.63 Mbit/s
95th percentile per-packet one-way delay: 226.404 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 357.64 Mbit/s
95th percentile per-packet one-way delay: 229.219 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 309.01 Mbit/s
95th percentile per-packet one-way delay: 136.065 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 232.57 Mbit/s
95th percentile per-packet one-way delay: 210.153 ms
Loss rate: 2.86%
```
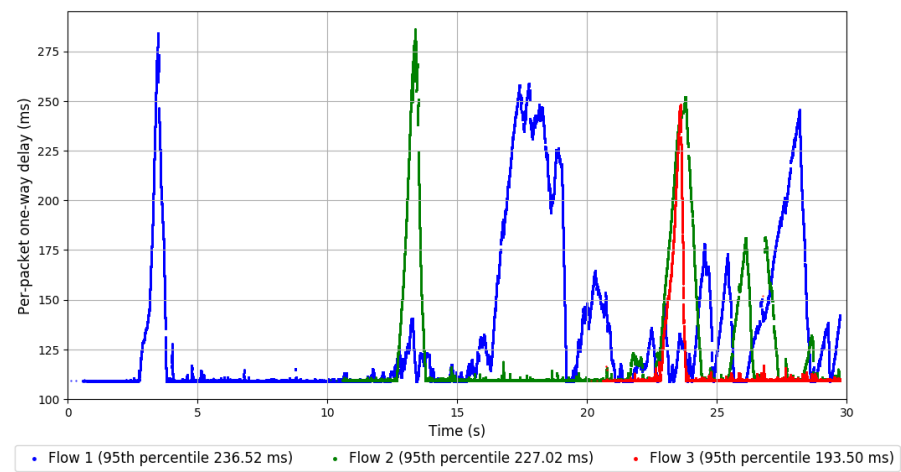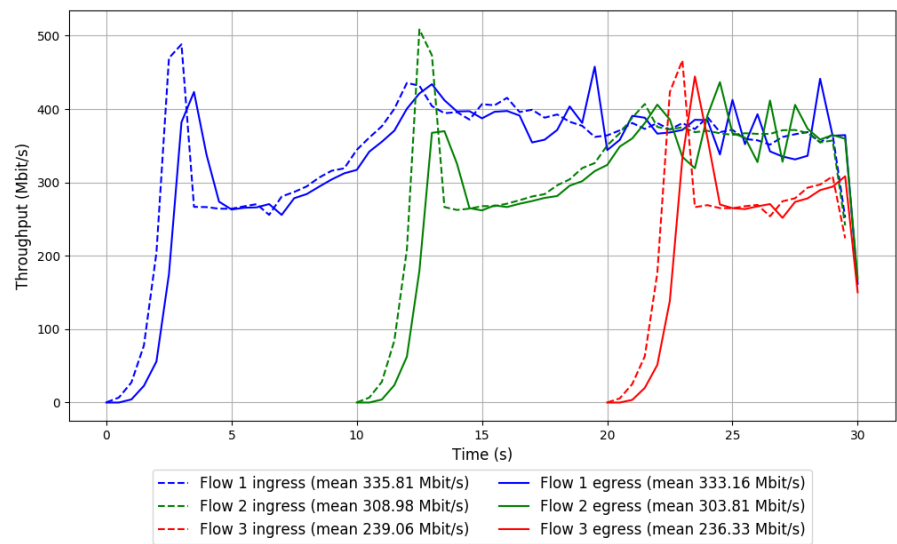
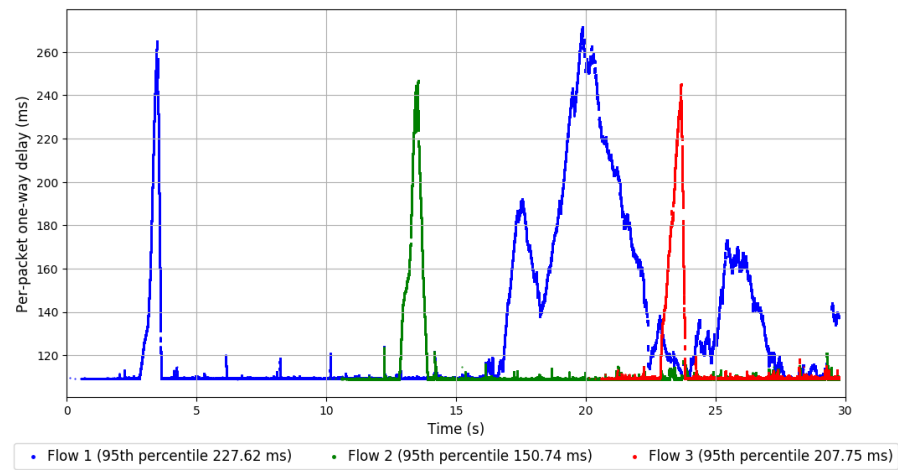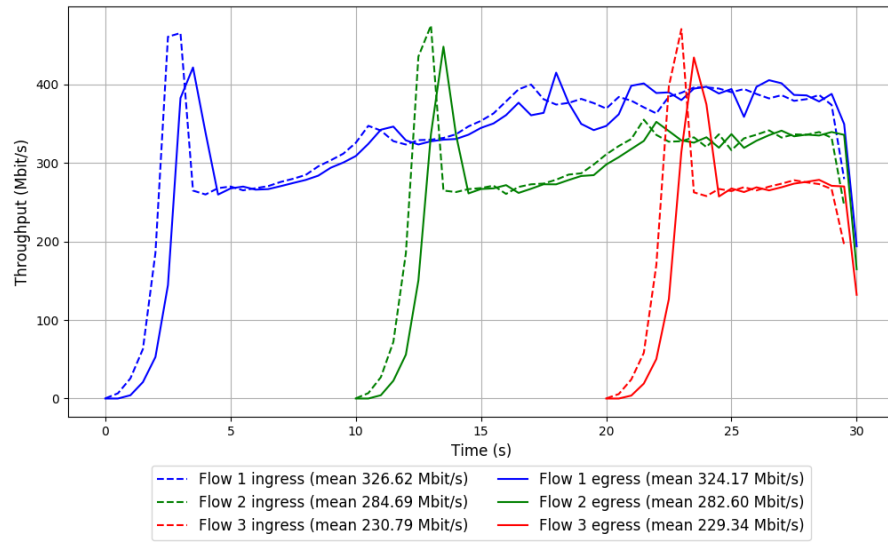# Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 360.68 Mbit/s) --- Flow 1 egress (mean 357.64 Mbit/s)
Flow 2 ingress (mean 309.53 Mbit/s) --- Flow 2 egress (mean 309.01 Mbit/s)
Flow 3 ingress (mean 234.09 Mbit/s) --- Flow 3 egress (mean 232.57 Mbit/s)

Flow 1 (95th percentile 229.22 ms)   Flow 2 (95th percentile 136.06 ms)   Flow 3 (95th percentile 210.15 ms)

120

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-03-19 00:21:18
End at: 2019-03-19 00:21:48
Local clock offset: -0.193 ms
Remote clock offset: -0.05 ms


# Below is generated by plot.py at 2019-03-19 03:26:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 610.90 Mbit/s
95th percentile per-packet one-way delay: 231.270 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 333.16 Mbit/s
95th percentile per-packet one-way delay: 236.523 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 303.81 Mbit/s
95th percentile per-packet one-way delay: 227.024 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 236.33 Mbit/s
95th percentile per-packet one-way delay: 193.505 ms
Loss rate: 3.36%
```

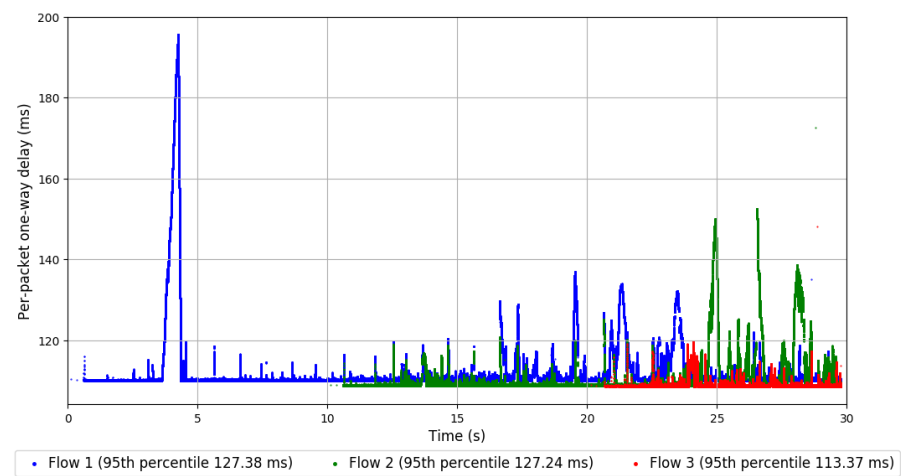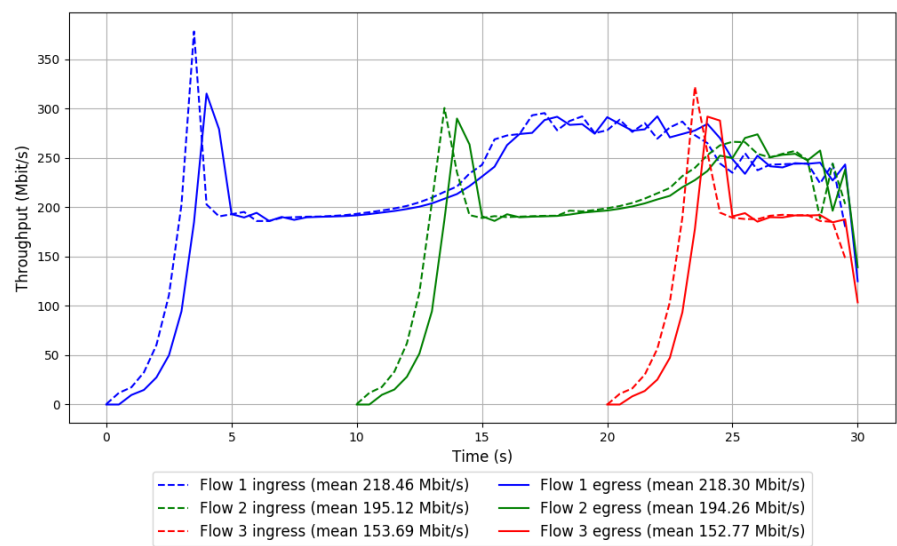# Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 335.81 Mbit/s) --- Flow 1 egress (mean 333.16 Mbit/s)
Flow 2 ingress (mean 308.98 Mbit/s) --- Flow 2 egress (mean 303.81 Mbit/s)
Flow 3 ingress (mean 239.06 Mbit/s) --- Flow 3 egress (mean 236.33 Mbit/s)

Flow 1 (95th percentile 236.52 ms)   Flow 2 (95th percentile 227.02 ms)   Flow 3 (95th percentile 193.50 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-03-19 00:58:34
End at: 2019-03-19 00:59:04
Local clock offset: -0.275 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-03-19 03:27:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 585.79 Mbit/s
95th percentile per-packet one-way delay: 212.917 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 324.17 Mbit/s
95th percentile per-packet one-way delay: 227.618 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 282.60 Mbit/s
95th percentile per-packet one-way delay: 150.740 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 229.34 Mbit/s
95th percentile per-packet one-way delay: 207.750 ms
Loss rate: 2.85%
```
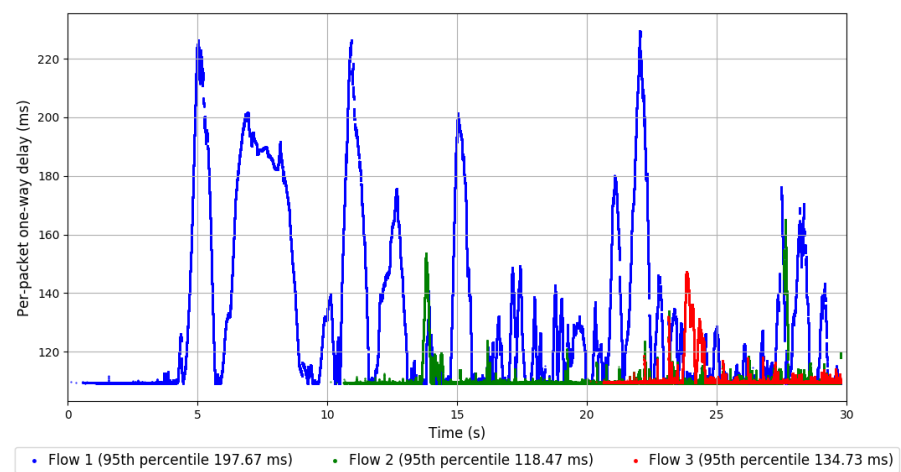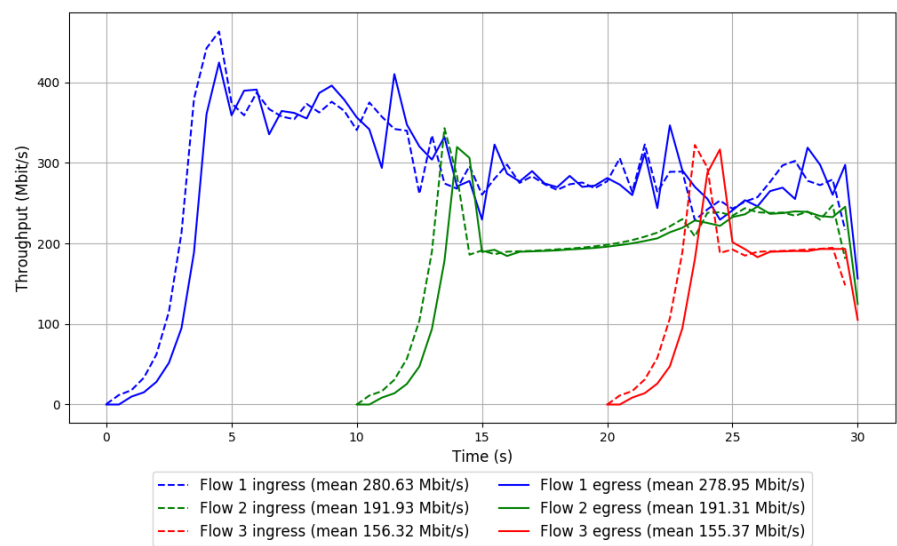
Run 5: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 326.62 Mbit/s) —— Flow 1 egress (mean 324.17 Mbit/s)
- - - Flow 2 ingress (mean 284.69 Mbit/s) —— Flow 2 egress (mean 282.60 Mbit/s)
- - - Flow 3 ingress (mean 230.79 Mbit/s) —— Flow 3 egress (mean 229.34 Mbit/s)

• Flow 1 (95th percentile 227.62 ms)   • Flow 2 (95th percentile 150.74 ms)   • Flow 3 (95th percentile 207.75 ms)
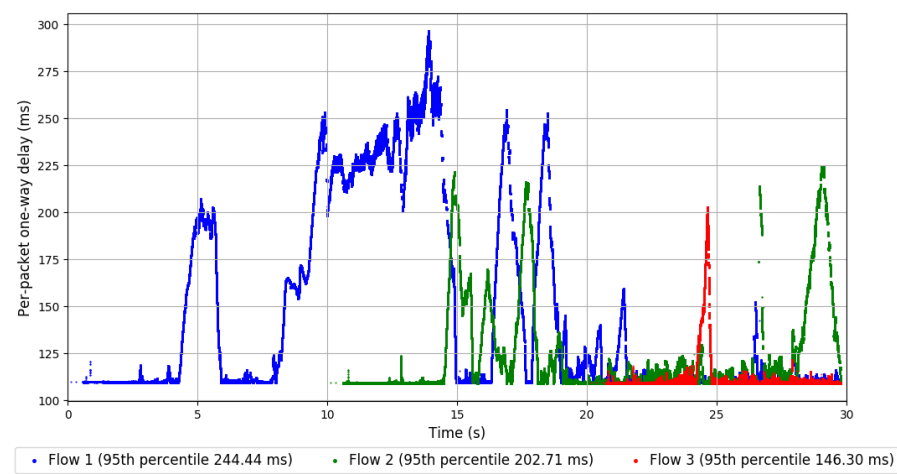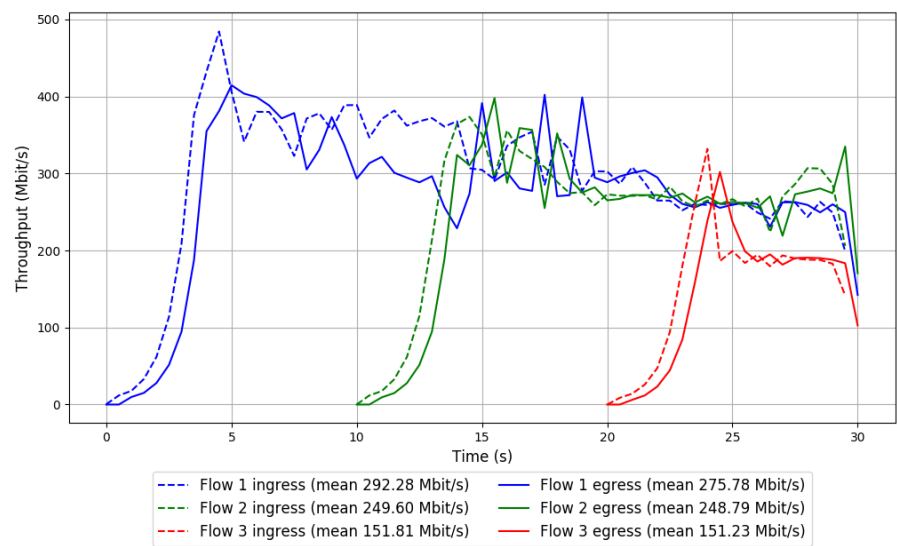
```
Run 1: Statistics of PCC-Expr

Start at: 2019-03-18 22:40:46
End at: 2019-03-18 22:41:16
Local clock offset: -0.104 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2019-03-19 03:27:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.73 Mbit/s
95th percentile per-packet one-way delay: 124.751 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 218.30 Mbit/s
95th percentile per-packet one-way delay: 127.383 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 194.26 Mbit/s
95th percentile per-packet one-way delay: 127.243 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 152.77 Mbit/s
95th percentile per-packet one-way delay: 113.366 ms
Loss rate: 2.82%
```

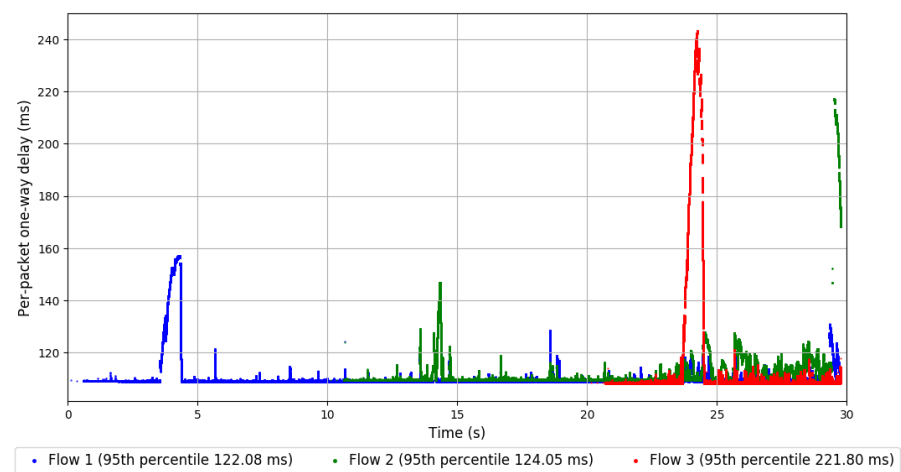# Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-03-18 23:17:49
End at: 2019-03-18 23:18:19
Local clock offset: -0.176 ms
Remote clock offset: 0.131 ms


# Below is generated by plot.py at 2019-03-19 03:27:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 456.26 Mbit/s
95th percentile per-packet one-way delay: 191.909 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 278.95 Mbit/s
95th percentile per-packet one-way delay: 197.674 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 191.31 Mbit/s
95th percentile per-packet one-way delay: 118.474 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 155.37 Mbit/s
95th percentile per-packet one-way delay: 134.731 ms
Loss rate: 2.81%
```
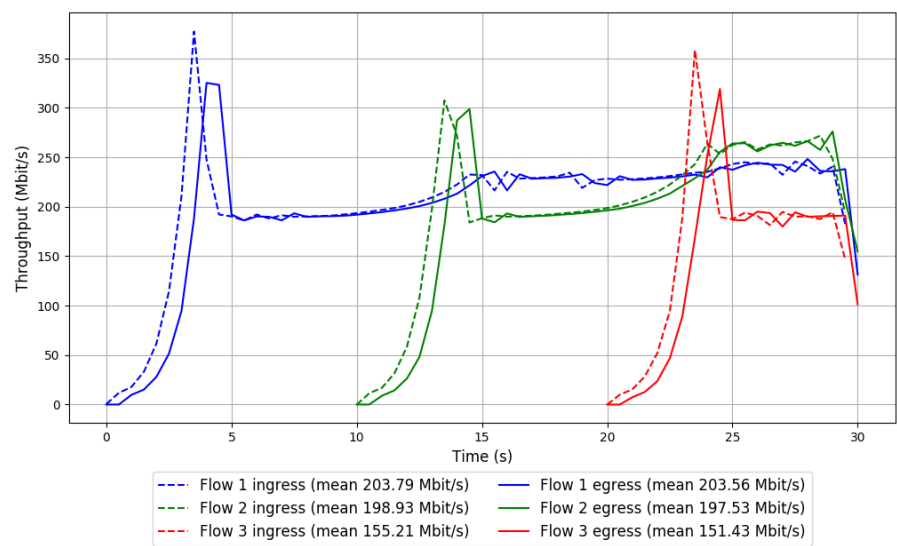
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-03-18 23:55:26
End at: 2019-03-18 23:55:56
Local clock offset: -0.132 ms
Remote clock offset: -0.165 ms


# Below is generated by plot.py at 2019-03-19 03:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 489.76 Mbit/s
95th percentile per-packet one-way delay: 233.844 ms
Loss rate: 4.36%
-- Flow 1:
Average throughput: 275.78 Mbit/s
95th percentile per-packet one-way delay: 244.443 ms
Loss rate: 6.34%
-- Flow 2:
Average throughput: 248.79 Mbit/s
95th percentile per-packet one-way delay: 202.712 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 151.23 Mbit/s
95th percentile per-packet one-way delay: 146.299 ms
Loss rate: 2.60%
```

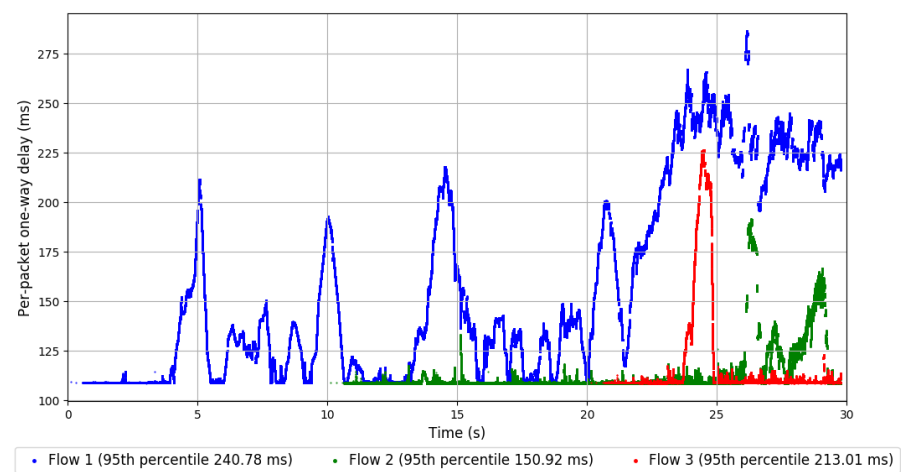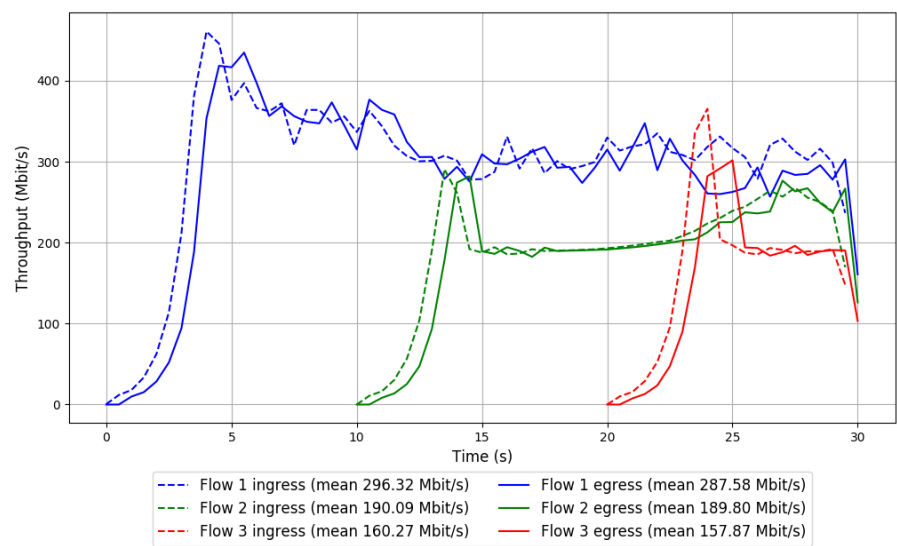# Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 292.28 Mbit/s)   Flow 1 egress (mean 275.78 Mbit/s)
Flow 2 ingress (mean 249.60 Mbit/s)   Flow 2 egress (mean 248.79 Mbit/s)
Flow 3 ingress (mean 151.81 Mbit/s)   Flow 3 egress (mean 151.23 Mbit/s)

Flow 1 (95th percentile 244.44 ms)   Flow 2 (95th percentile 202.71 ms)   Flow 3 (95th percentile 146.30 ms)

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```
Run 4: Statistics of PCC-Expr

Start at: 2019-03-19 00:32:27
End at: 2019-03-19 00:32:57
Local clock offset: -0.131 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2019-03-19 03:32:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.52 Mbit/s
95th percentile per-packet one-way delay: 130.298 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 203.56 Mbit/s
95th percentile per-packet one-way delay: 122.085 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 197.53 Mbit/s
95th percentile per-packet one-way delay: 124.052 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 151.43 Mbit/s
95th percentile per-packet one-way delay: 221.802 ms
Loss rate: 4.57%
```
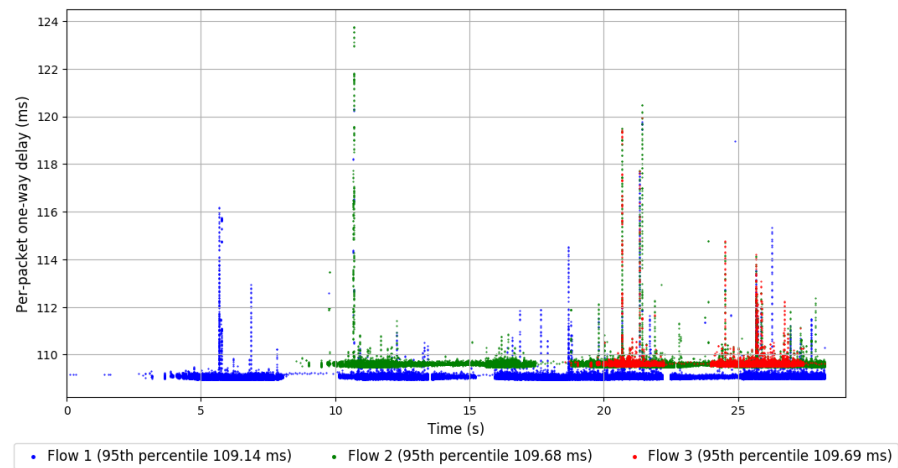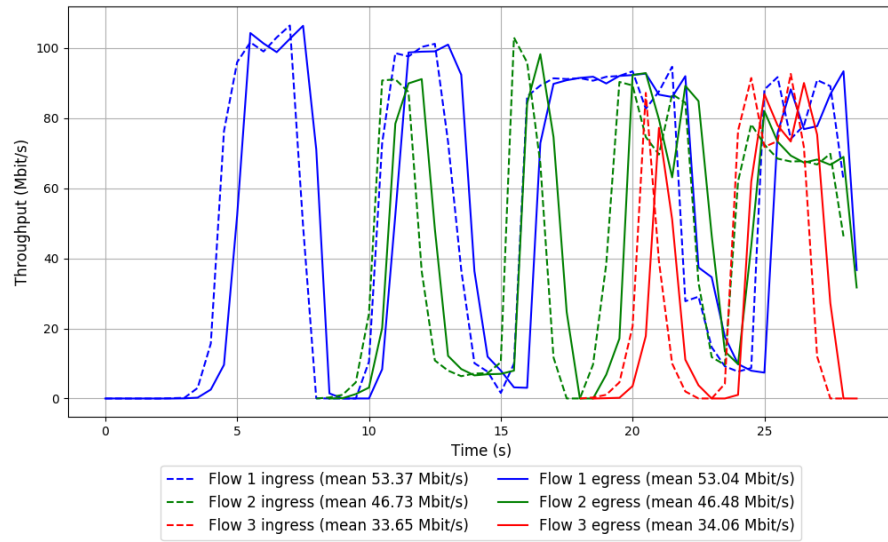
Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 203.79 Mbit/s)   Flow 1 egress (mean 203.56 Mbit/s)
Flow 2 ingress (mean 198.93 Mbit/s)   Flow 2 egress (mean 197.53 Mbit/s)
Flow 3 ingress (mean 155.21 Mbit/s)   Flow 3 egress (mean 151.43 Mbit/s)

Flow 1 (95th percentile 122.08 ms)   Flow 2 (95th percentile 124.05 ms)   Flow 3 (95th percentile 221.80 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-03-19 01:10:06
End at: 2019-03-19 01:10:36
Local clock offset: -0.784 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 464.58 Mbit/s
95th percentile per-packet one-way delay: 236.172 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 287.58 Mbit/s
95th percentile per-packet one-way delay: 240.780 ms
Loss rate: 3.66%
-- Flow 2:
Average throughput: 189.80 Mbit/s
95th percentile per-packet one-way delay: 150.920 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 157.87 Mbit/s
95th percentile per-packet one-way delay: 213.006 ms
Loss rate: 3.69%
```
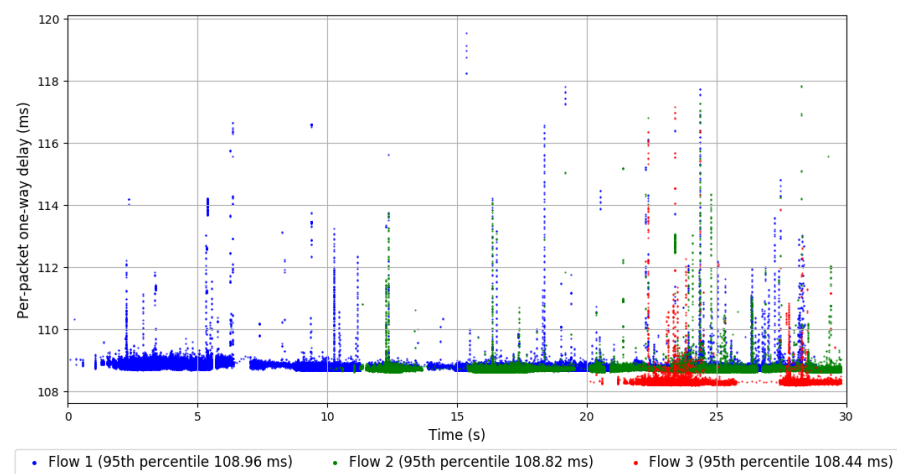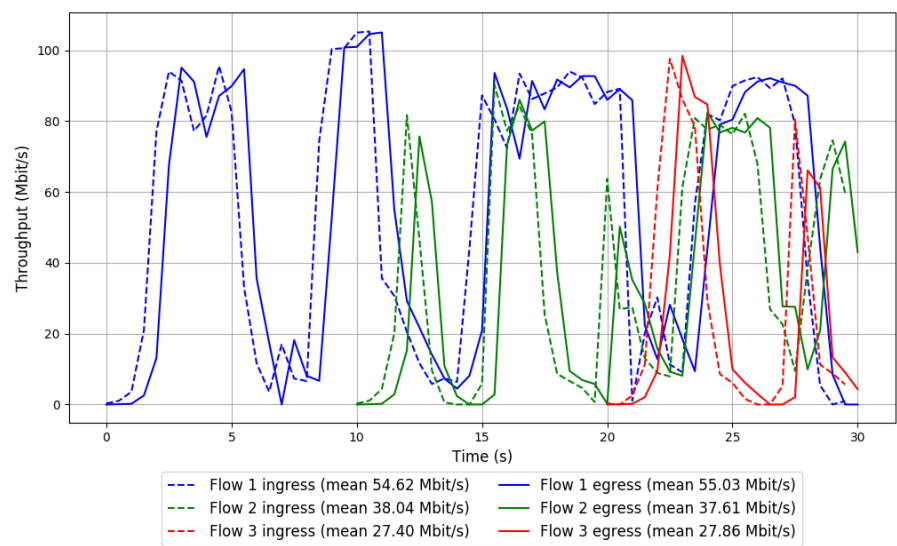
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 296.32 Mbit/s) — Flow 1 egress (mean 287.58 Mbit/s)
Flow 2 ingress (mean 190.09 Mbit/s) — Flow 2 egress (mean 189.80 Mbit/s)
Flow 3 ingress (mean 160.27 Mbit/s) — Flow 3 egress (mean 157.87 Mbit/s)

Flow 1 (95th percentile 240.78 ms) — Flow 2 (95th percentile 150.92 ms) — Flow 3 (95th percentile 213.01 ms)
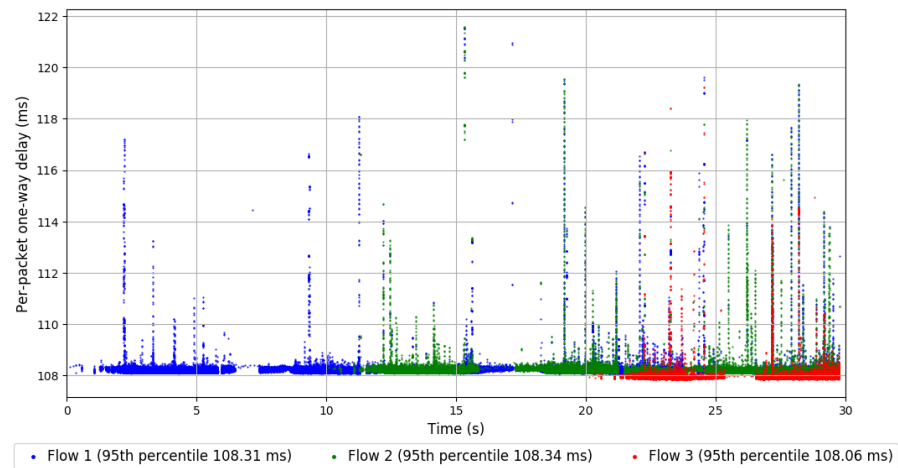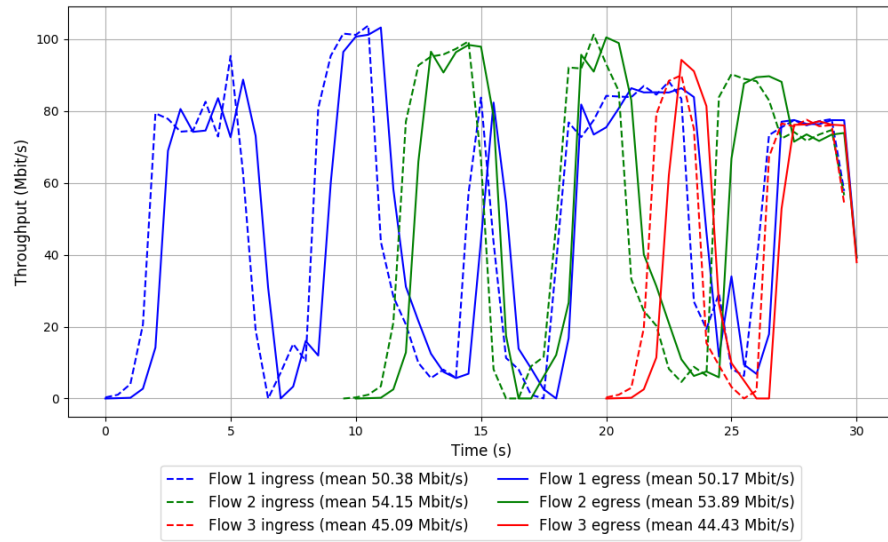
```
Run 1: Statistics of QUIC Cubic

Start at: 2019-03-18 22:52:18
End at: 2019-03-18 22:52:48
Local clock offset: -0.176 ms
Remote clock offset: -0.02 ms

# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 109.647 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 53.04 Mbit/s
95th percentile per-packet one-way delay: 109.143 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 46.48 Mbit/s
95th percentile per-packet one-way delay: 109.683 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 34.06 Mbit/s
95th percentile per-packet one-way delay: 109.694 ms
Loss rate: 0.00%
```

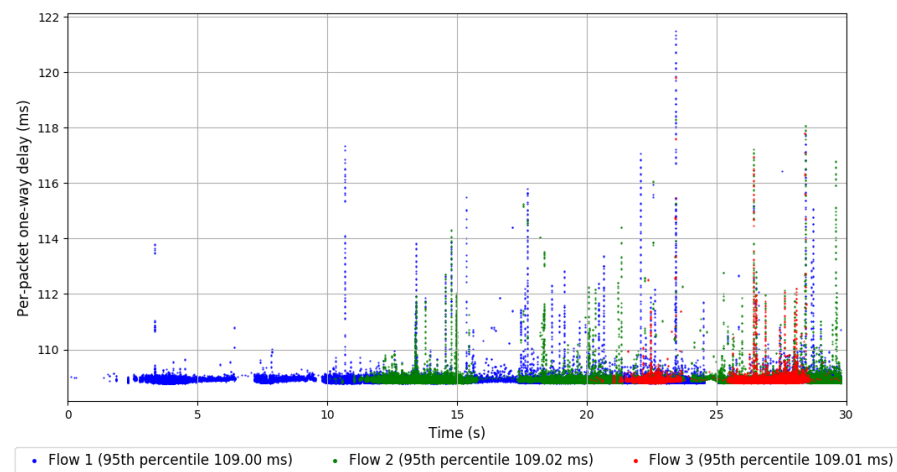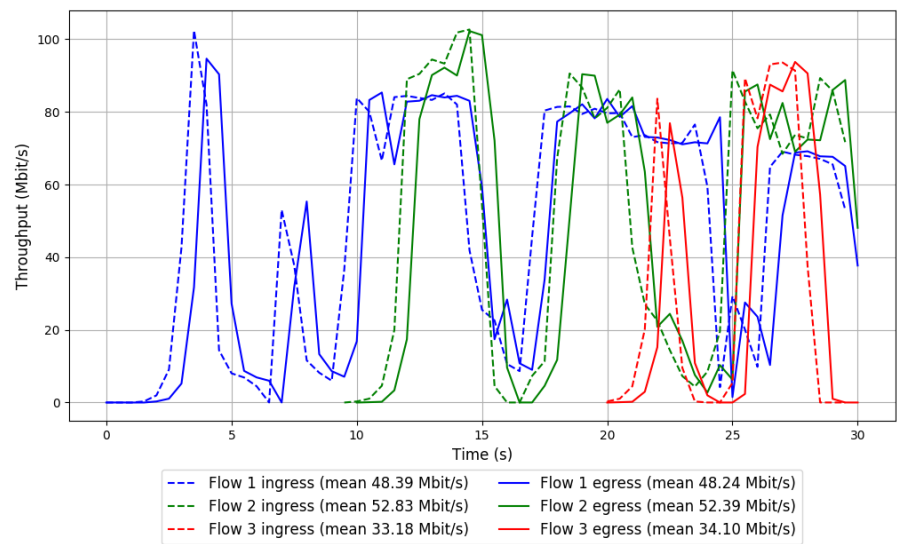Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-03-18 23:29:23
End at: 2019-03-18 23:29:53
Local clock offset: -0.799 ms
Remote clock offset: 0.053 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.99 Mbit/s
95th percentile per-packet one-way delay: 108.936 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 55.03 Mbit/s
95th percentile per-packet one-way delay: 108.963 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.61 Mbit/s
95th percentile per-packet one-way delay: 108.822 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 27.86 Mbit/s
95th percentile per-packet one-way delay: 108.439 ms
Loss rate: 0.56%
```

Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 54.62 Mbit/s) — Flow 1 egress (mean 55.03 Mbit/s)
Flow 2 ingress (mean 38.04 Mbit/s) — Flow 2 egress (mean 37.61 Mbit/s)
Flow 3 ingress (mean 27.40 Mbit/s) — Flow 3 egress (mean 27.86 Mbit/s)

Flow 1 (95th percentile 108.96 ms) — Flow 2 (95th percentile 108.82 ms) — Flow 3 (95th percentile 108.44 ms)
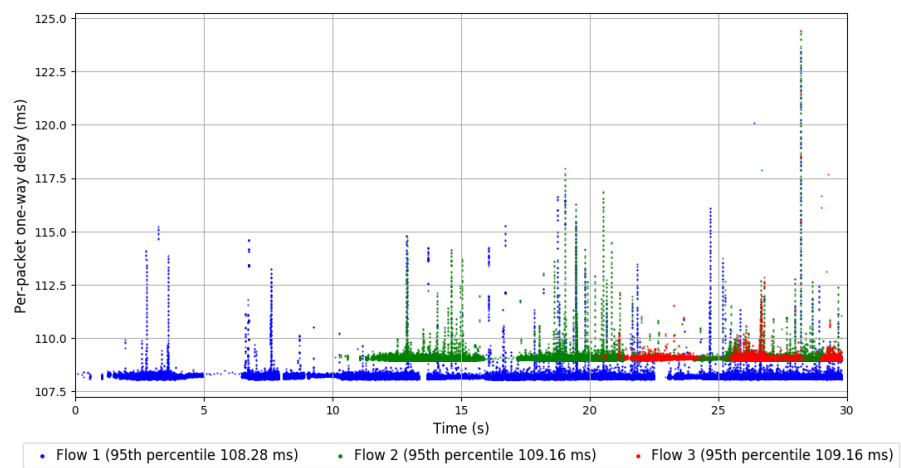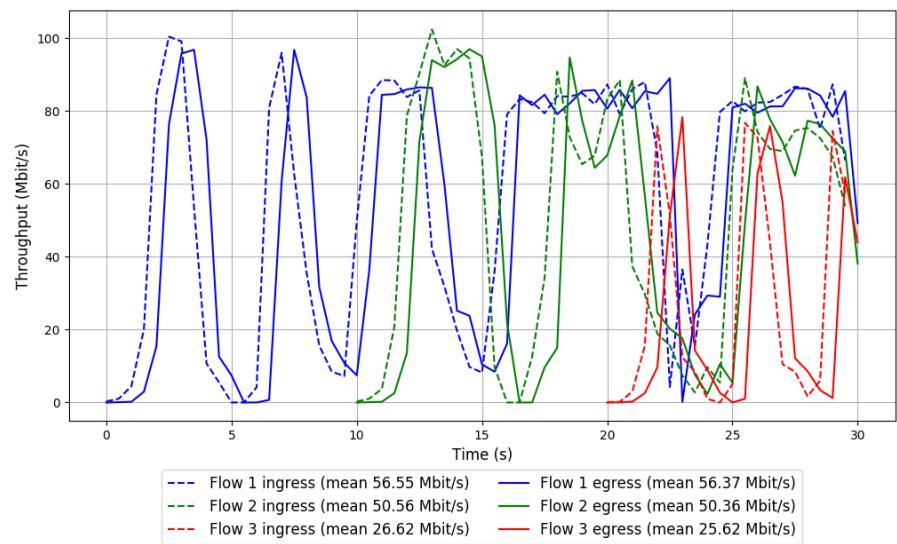
```
Run 3: Statistics of QUIC Cubic

Start at: 2019-03-19 00:07:01
End at: 2019-03-19 00:07:31
Local clock offset: -1.329 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.37 Mbit/s
95th percentile per-packet one-way delay: 108.316 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 50.17 Mbit/s
95th percentile per-packet one-way delay: 108.314 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 53.89 Mbit/s
95th percentile per-packet one-way delay: 108.337 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 44.43 Mbit/s
95th percentile per-packet one-way delay: 108.061 ms
Loss rate: 3.70%
```

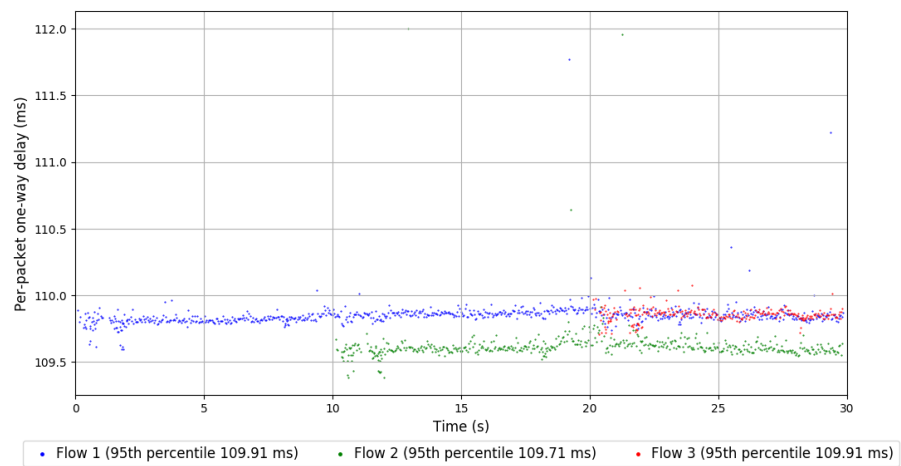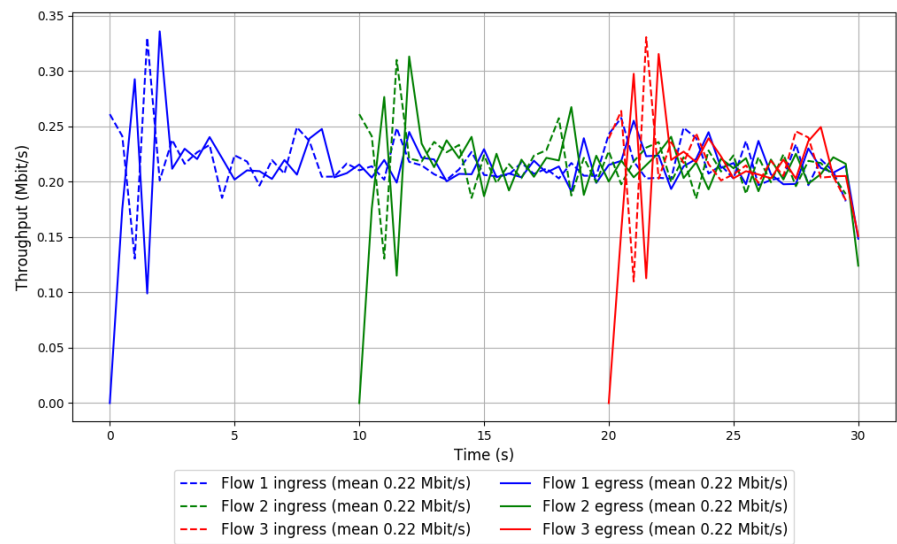# Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 50.38 Mbit/s) — Flow 1 egress (mean 50.17 Mbit/s)
Flow 2 ingress (mean 54.15 Mbit/s) — Flow 2 egress (mean 53.89 Mbit/s)
Flow 3 ingress (mean 45.09 Mbit/s) — Flow 3 egress (mean 44.43 Mbit/s)

Flow 1 (95th percentile 108.31 ms)   Flow 2 (95th percentile 108.34 ms)   Flow 3 (95th percentile 108.06 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-03-19 00:43:52
End at: 2019-03-19 00:44:22
Local clock offset: -0.192 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.99 Mbit/s
95th percentile per-packet one-way delay: 109.006 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 48.24 Mbit/s
95th percentile per-packet one-way delay: 108.995 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 52.39 Mbit/s
95th percentile per-packet one-way delay: 109.023 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 109.008 ms
Loss rate: 0.00%
```

Run 4: Report of QUIC Cubic — Data Link
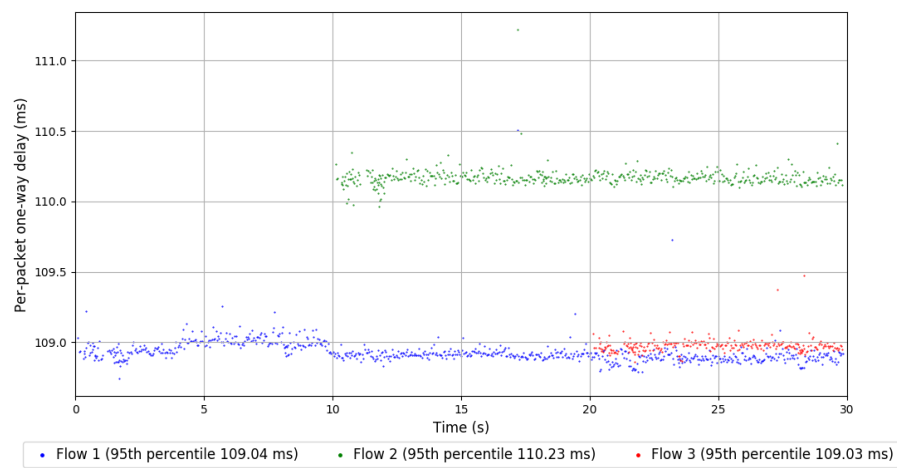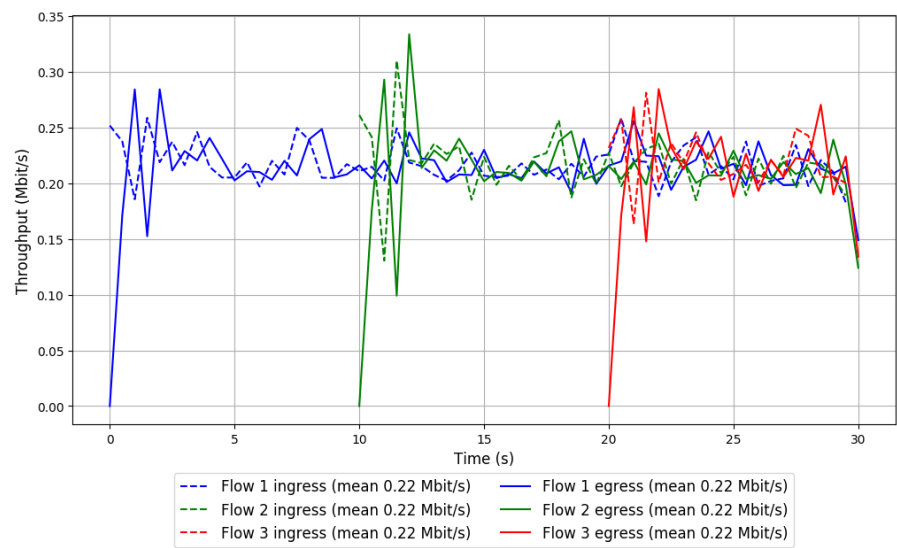
```
Run 5: Statistics of QUIC Cubic

Start at: 2019-03-19 01:21:42
End at: 2019-03-19 01:22:12
Local clock offset: -0.263 ms
Remote clock offset: -0.118 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.07 Mbit/s
95th percentile per-packet one-way delay: 109.103 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 108.282 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 50.36 Mbit/s
95th percentile per-packet one-way delay: 109.164 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 25.62 Mbit/s
95th percentile per-packet one-way delay: 109.159 ms
Loss rate: 5.89%
```

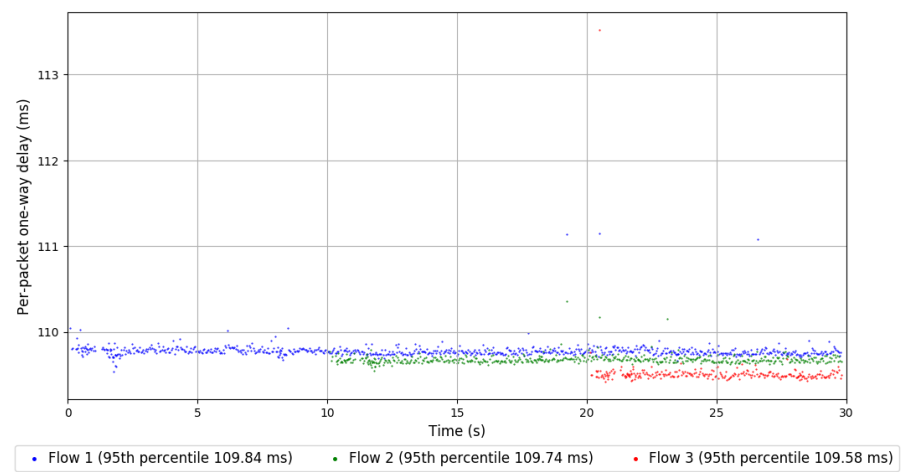# Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-03-18 22:20:04
End at: 2019-03-18 22:20:34
Local clock offset: 0.705 ms
Remote clock offset: 0.073 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 109.902 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.911 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.706 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.914 ms
Loss rate: 1.87%
```
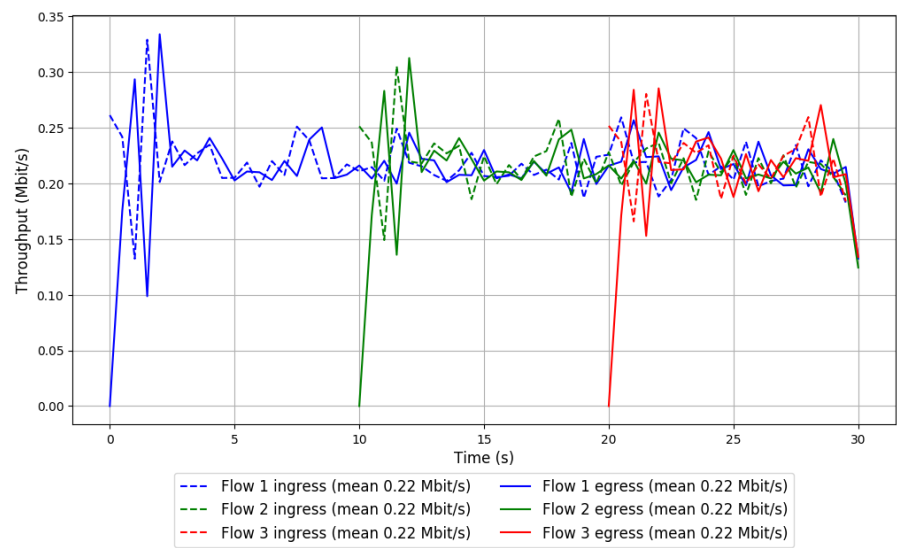
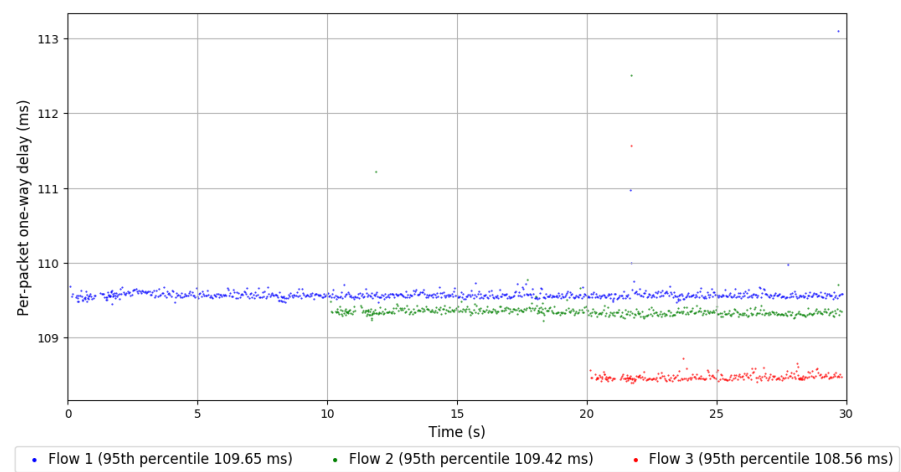# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-03-18 22:57:11
End at: 2019-03-18 22:57:41
Local clock offset: -0.226 ms
Remote clock offset: 0.044 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 110.204 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.043 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.235 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.031 ms
Loss rate: 2.22%
```
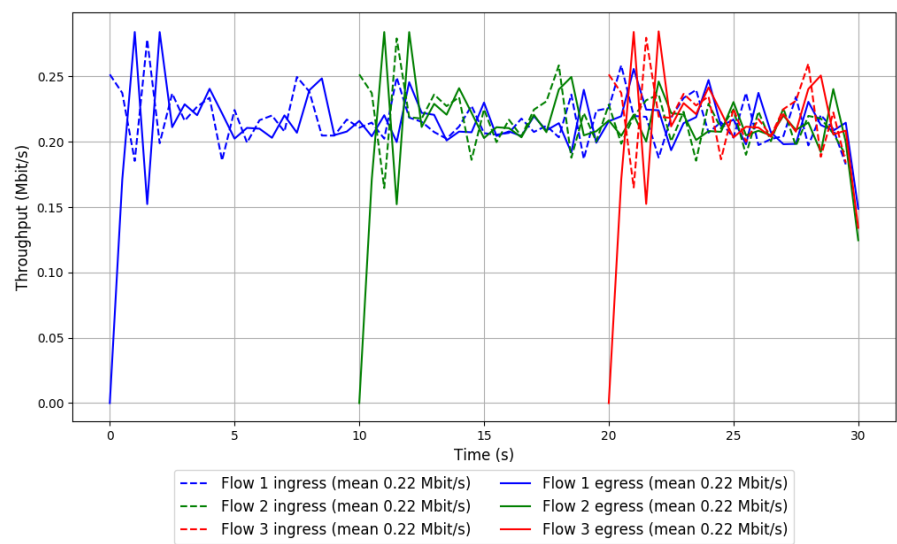
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-03-18 23:34:42
End at: 2019-03-18 23:35:12
Local clock offset: 0.017 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 109.825 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.844 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.736 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.575 ms
Loss rate: 2.22%
```

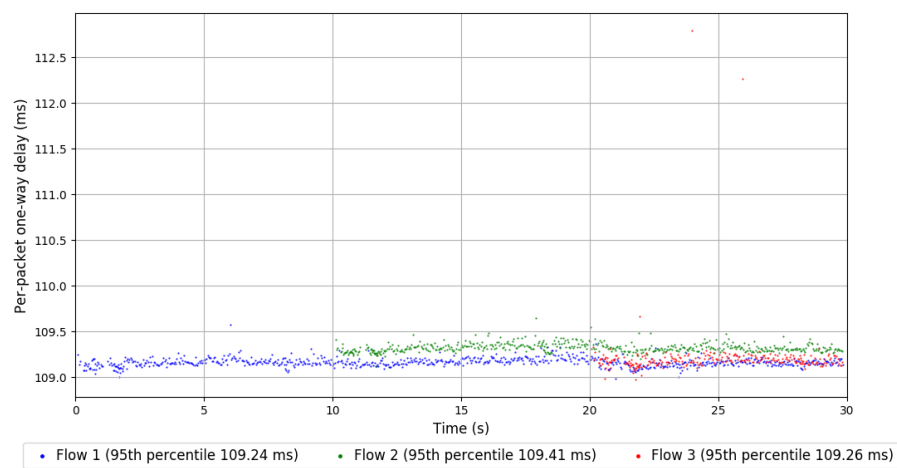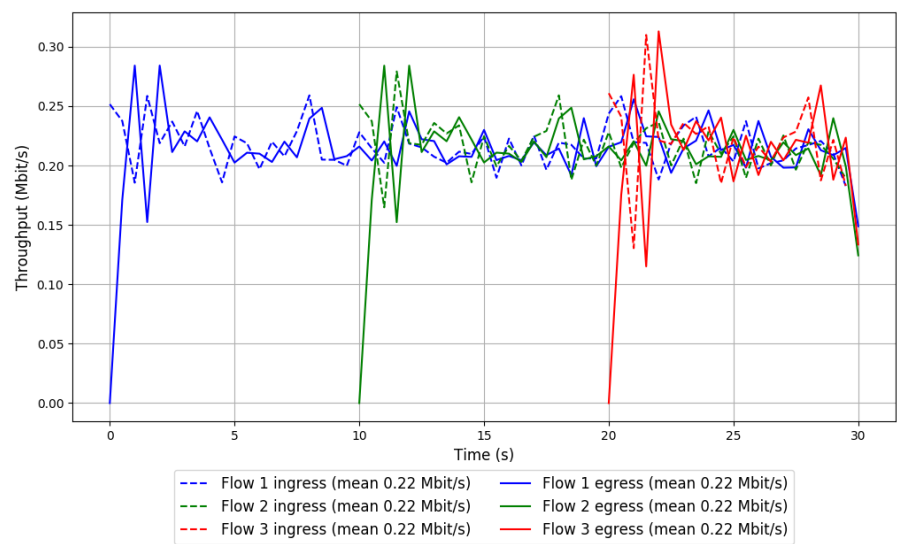## Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-03-19 00:12:01
End at: 2019-03-19 00:12:31
Local clock offset: -0.079 ms
Remote clock offset: -0.053 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 109.620 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.647 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.419 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.556 ms
Loss rate: 2.22%
```
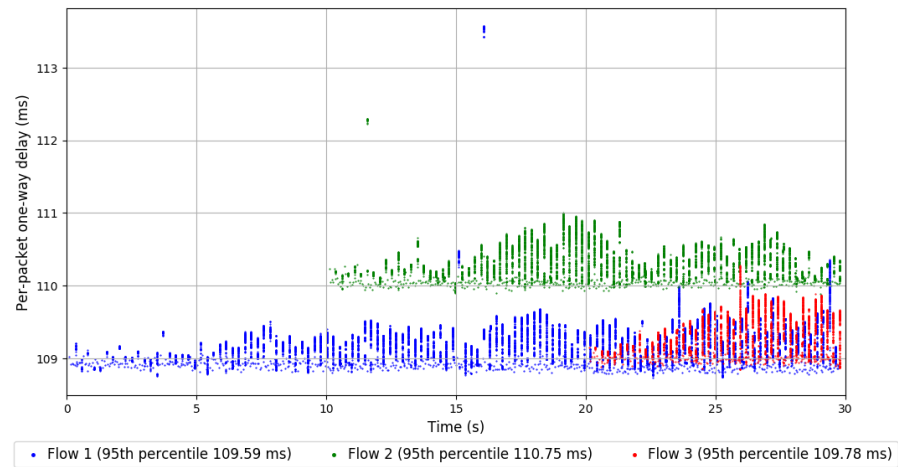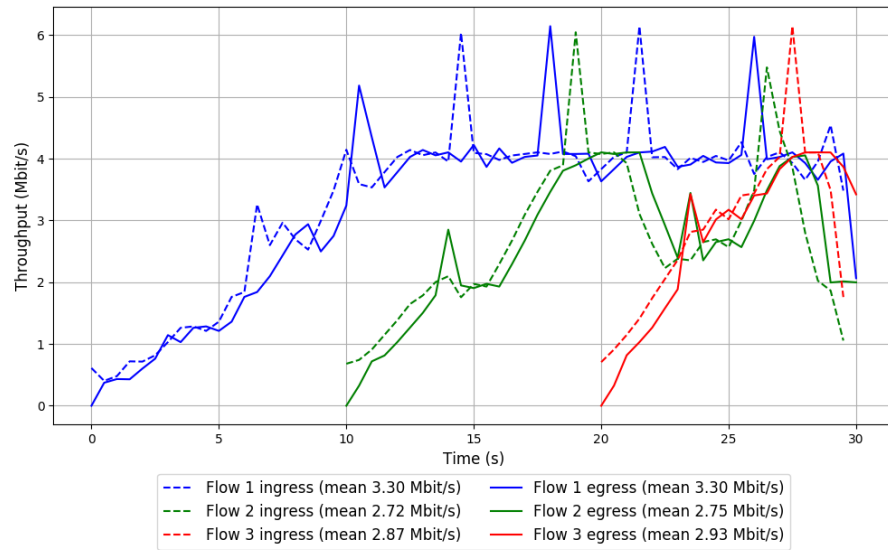
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-03-19 00:49:13
End at: 2019-03-19 00:49:43
Local clock offset: -0.239 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 109.367 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.237 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.412 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.262 ms
Loss rate: 2.21%
```

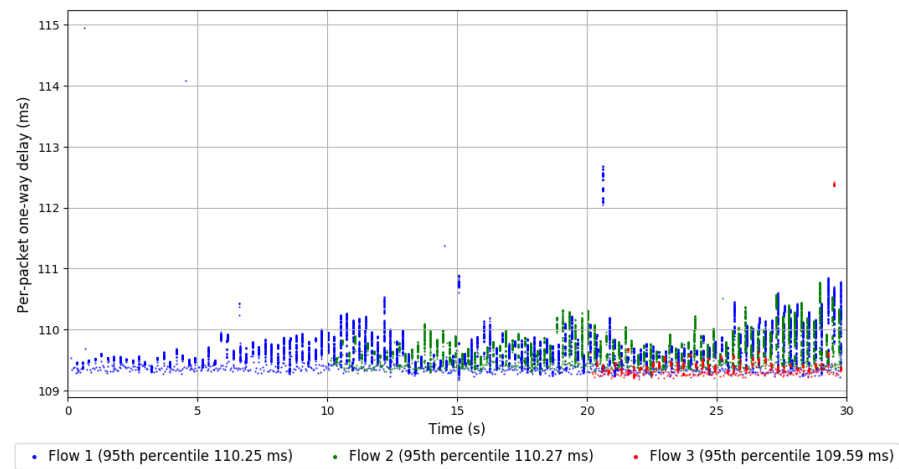# Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-03-18 22:48:59
End at: 2019-03-18 22:49:29
Local clock offset: -0.332 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 110.561 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 109.588 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 110.755 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 109.777 ms
Loss rate: 0.01%
```

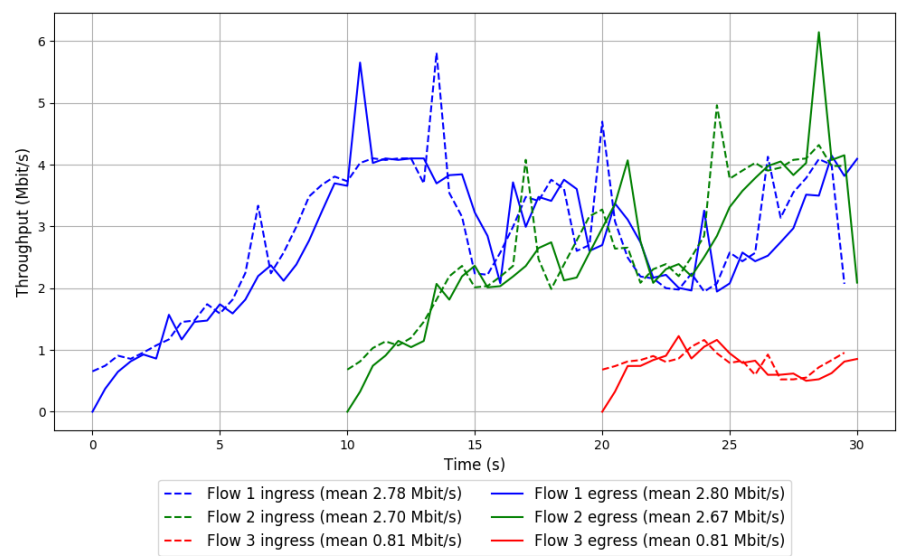Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-03-18 23:26:06
End at: 2019-03-18 23:26:36
Local clock offset: -0.172 ms
Remote clock offset: 0.157 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 110.247 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 110.246 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 110.268 ms
Loss rate: 1.83%
-- Flow 3:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 109.594 ms
Loss rate: 3.13%
```
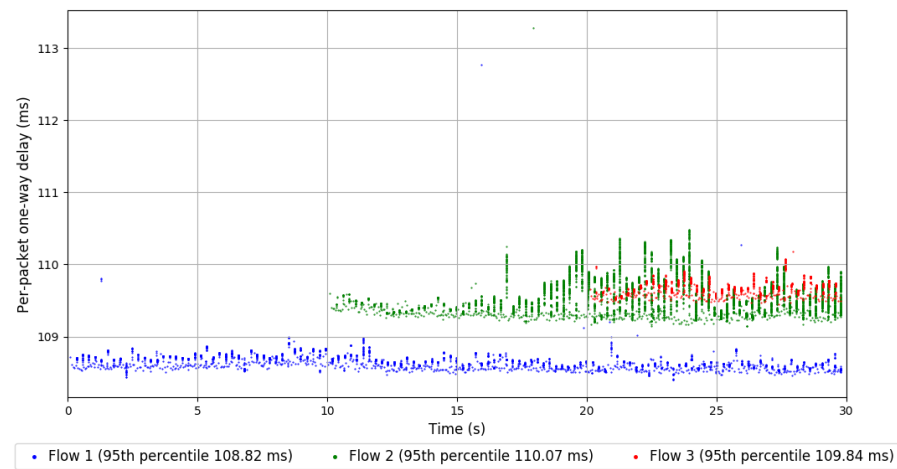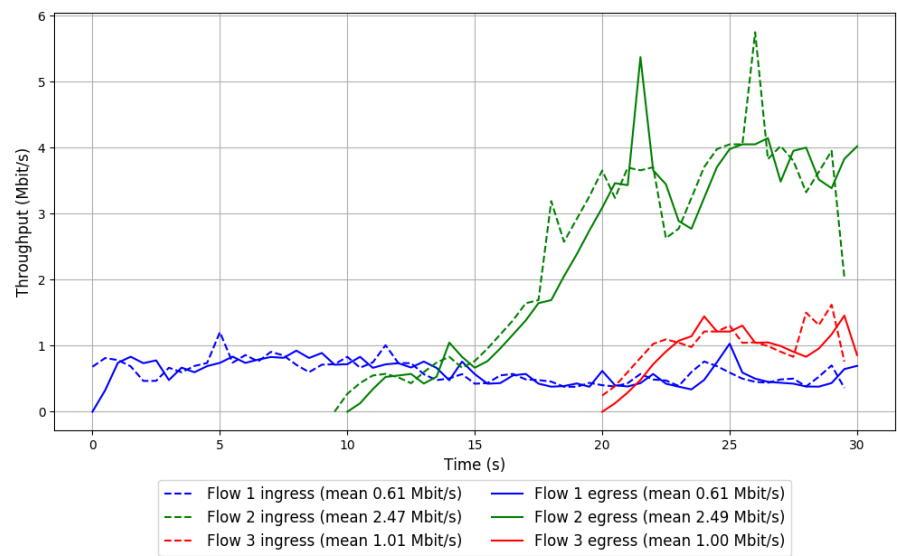
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-03-19 00:03:46
End at: 2019-03-19 00:04:16
Local clock offset: -0.15 ms
Remote clock offset: -0.114 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 109.970 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 108.822 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 110.068 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 109.839 ms
Loss rate: 3.78%
```
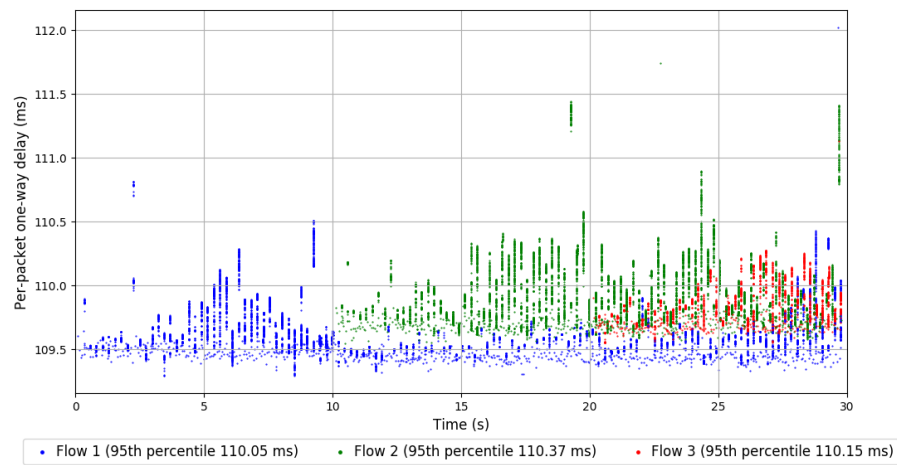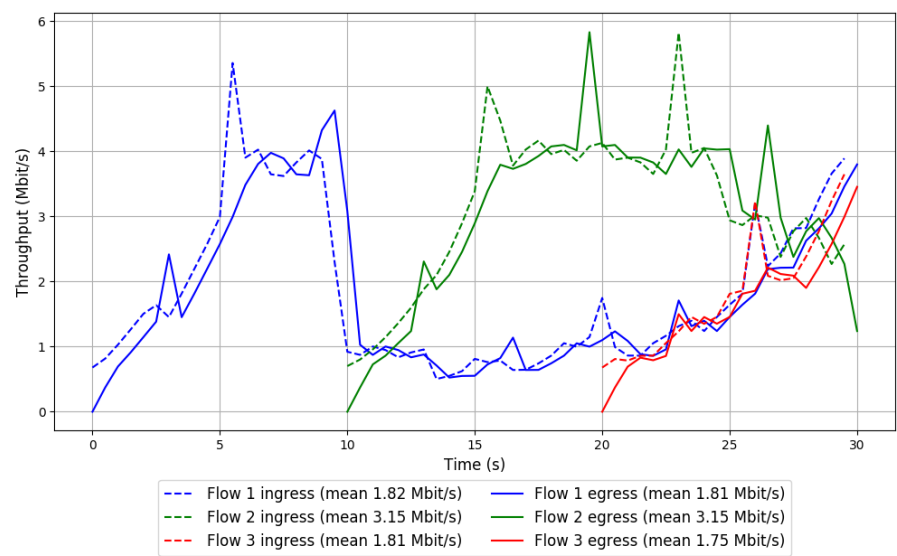
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-03-19 00:40:36
End at: 2019-03-19 00:41:06
Local clock offset: 0.009 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 110.274 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 110.053 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 3.15 Mbit/s
95th percentile per-packet one-way delay: 110.372 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 110.154 ms
Loss rate: 5.24%
```

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-03-19 01:18:25
End at: 2019-03-19 01:18:55
Local clock offset: -0.246 ms
Remote clock offset: -0.136 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 109.899 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 109.628 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 109.956 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 109.841 ms
Loss rate: 3.60%
```
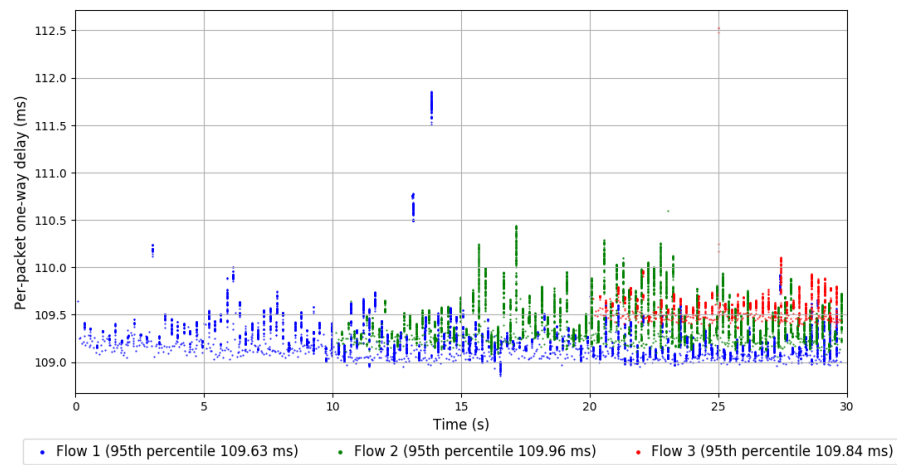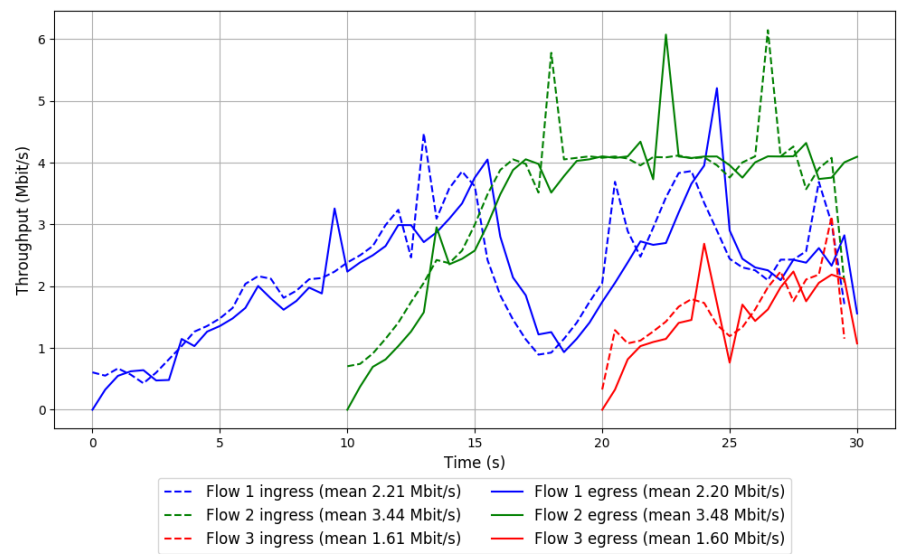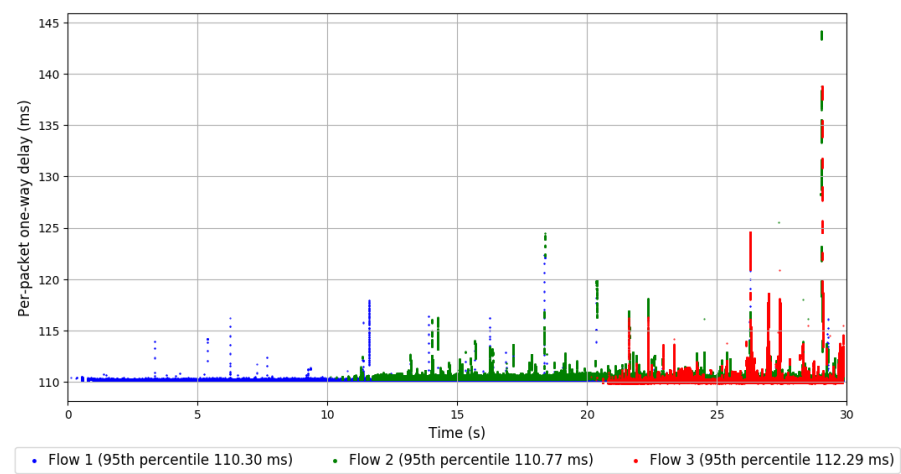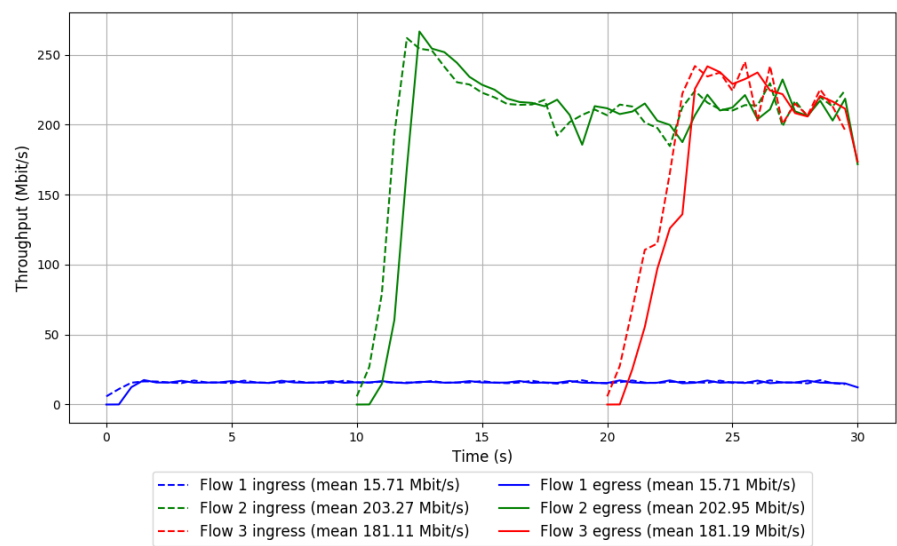
Run 5: Report of Sprout — Data Link

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

Start at: 2019-03-18 22:35:29
End at: 2019-03-18 22:35:59
Local clock offset: 0.182 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-03-19 03:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.62 Mbit/s
95th percentile per-packet one-way delay: 110.985 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 15.71 Mbit/s
95th percentile per-packet one-way delay: 110.301 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 202.95 Mbit/s
95th percentile per-packet one-way delay: 110.769 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 181.19 Mbit/s
95th percentile per-packet one-way delay: 112.293 ms
Loss rate: 2.04%
```

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

Flow 1 ingress (mean 15.71 Mbit/s) — Flow 1 egress (mean 15.71 Mbit/s)
Flow 2 ingress (mean 203.27 Mbit/s) — Flow 2 egress (mean 202.95 Mbit/s)
Flow 3 ingress (mean 181.11 Mbit/s) — Flow 3 egress (mean 181.19 Mbit/s)

Flow 1 (95th percentile 110.30 ms) — Flow 2 (95th percentile 110.77 ms) — Flow 3 (95th percentile 112.29 ms)

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

Start at: 2019-03-18 23:12:11
End at: 2019-03-18 23:12:41
Local clock offset: -0.27 ms
Remote clock offset: 0.112 ms


# Below is generated by plot.py at 2019-03-19 03:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.13 Mbit/s
95th percentile per-packet one-way delay: 110.409 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 208.07 Mbit/s
95th percentile per-packet one-way delay: 109.924 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 197.20 Mbit/s
95th percentile per-packet one-way delay: 110.475 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 183.75 Mbit/s
95th percentile per-packet one-way delay: 111.349 ms
Loss rate: 2.71%
```
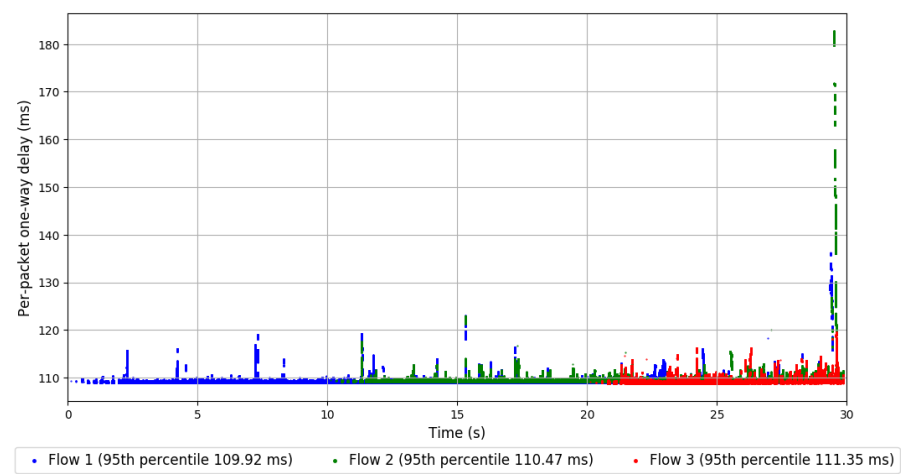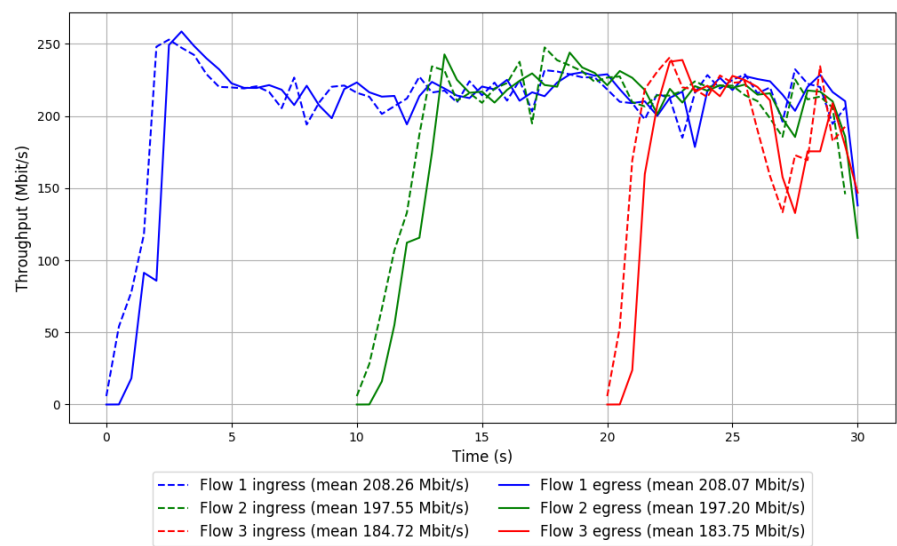
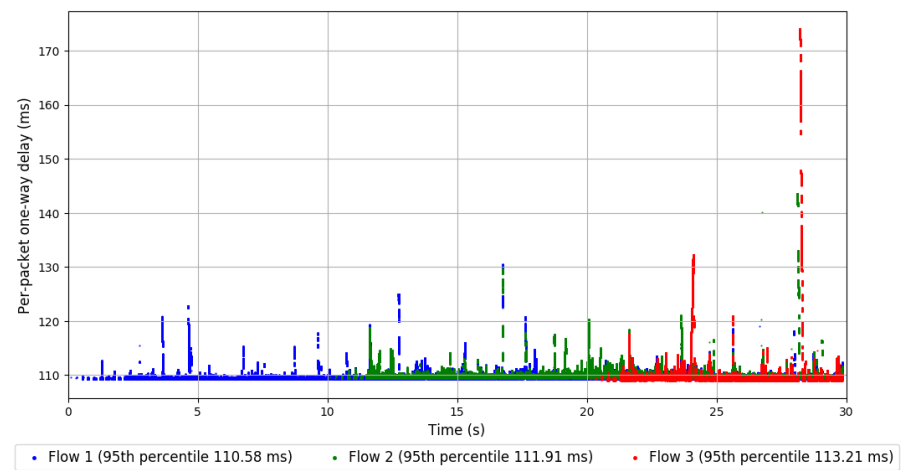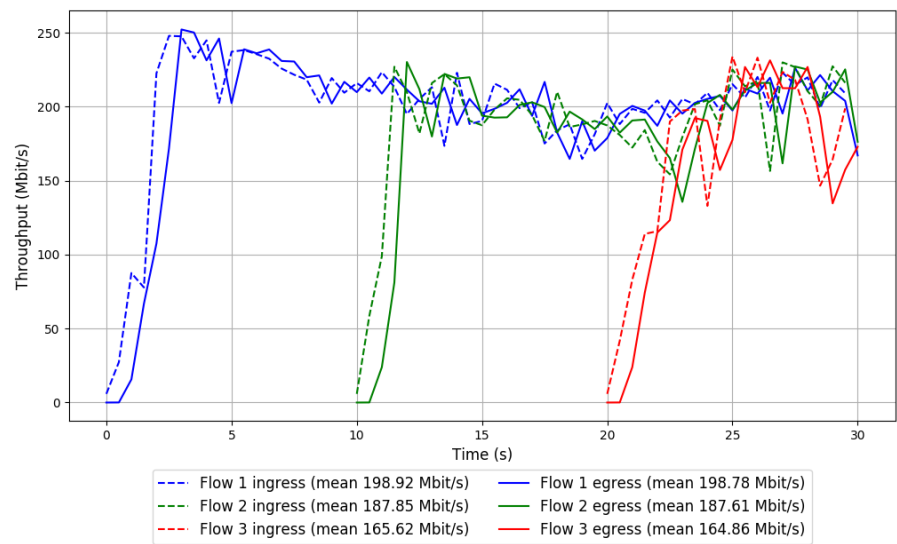# Run 2: Report of TaoVA-100x — Data Link

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```
Run 3: Statistics of TaoVA-100x

Start at: 2019-03-18 23:49:54
End at: 2019-03-18 23:50:24
Local clock offset: -0.151 ms
Remote clock offset: -0.132 ms


# Below is generated by plot.py at 2019-03-19 03:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.17 Mbit/s
95th percentile per-packet one-way delay: 111.374 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 198.78 Mbit/s
95th percentile per-packet one-way delay: 110.584 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 187.61 Mbit/s
95th percentile per-packet one-way delay: 111.907 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 164.86 Mbit/s
95th percentile per-packet one-way delay: 113.214 ms
Loss rate: 2.62%
```

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

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```
Run 4: Statistics of TaoVA-100x

Start at: 2019-03-19 00:27:03
End at: 2019-03-19 00:27:33
Local clock offset: 0.075 ms
Remote clock offset: 0.001 ms


# Below is generated by plot.py at 2019-03-19 03:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 258.21 Mbit/s
95th percentile per-packet one-way delay: 114.574 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 202.32 Mbit/s
95th percentile per-packet one-way delay: 111.417 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 15.66 Mbit/s
95th percentile per-packet one-way delay: 109.747 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 138.92 Mbit/s
95th percentile per-packet one-way delay: 124.073 ms
Loss rate: 2.95%
```
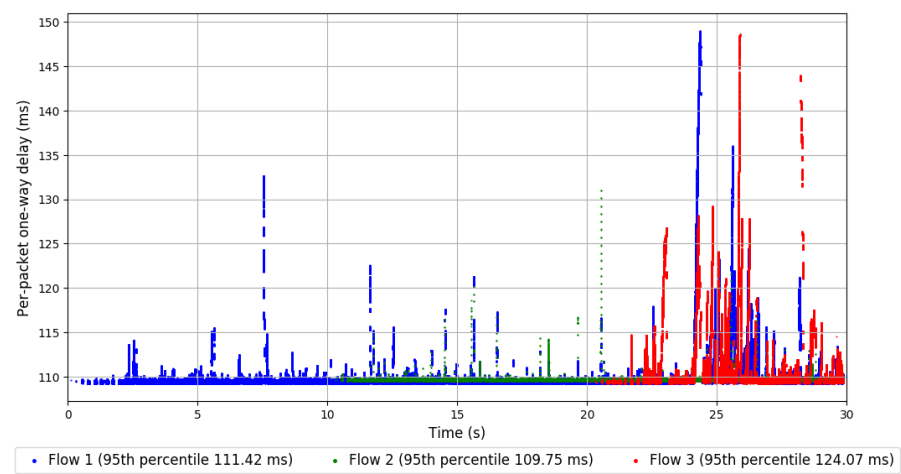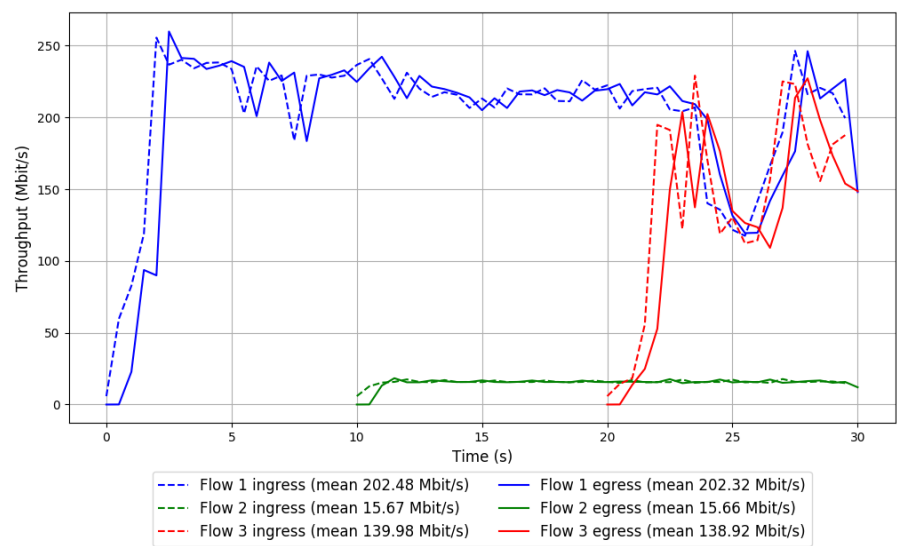
Run 4: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 202.48 Mbit/s)   —— Flow 1 egress (mean 202.32 Mbit/s)
- - - Flow 2 ingress (mean 15.67 Mbit/s)   —— Flow 2 egress (mean 15.66 Mbit/s)
- - - Flow 3 ingress (mean 139.98 Mbit/s)   —— Flow 3 egress (mean 138.92 Mbit/s)

- Flow 1 (95th percentile 111.42 ms)   • Flow 2 (95th percentile 109.75 ms)   • Flow 3 (95th percentile 124.07 ms)

```
Run 5: Statistics of TaoVA-100x

Start at: 2019-03-19 01:04:15
End at: 2019-03-19 01:04:45
Local clock offset: -0.008 ms
Remote clock offset: -0.08 ms


# Below is generated by plot.py at 2019-03-19 03:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.07 Mbit/s
95th percentile per-packet one-way delay: 110.796 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 191.26 Mbit/s
95th percentile per-packet one-way delay: 110.695 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 192.15 Mbit/s
95th percentile per-packet one-way delay: 111.072 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 191.06 Mbit/s
95th percentile per-packet one-way delay: 110.534 ms
Loss rate: 2.36%
```
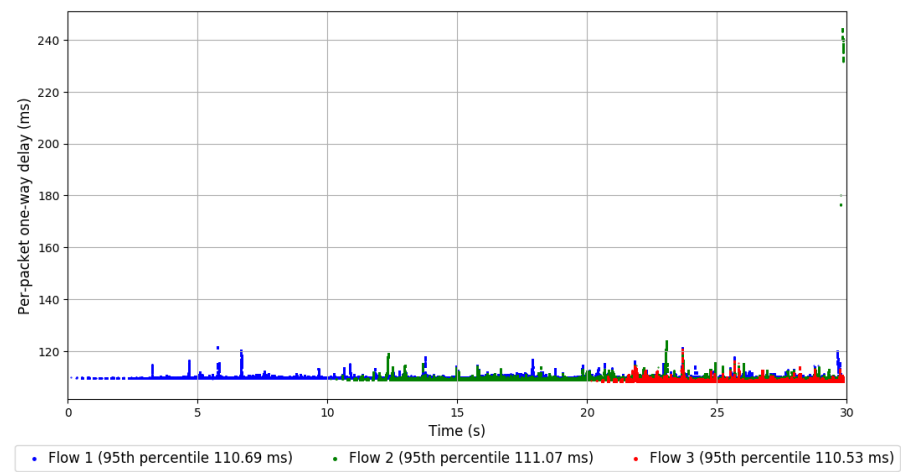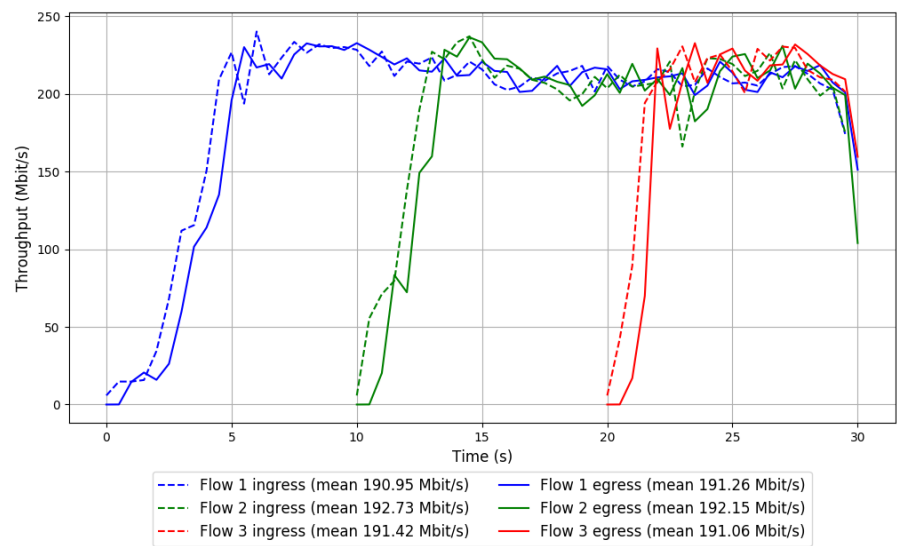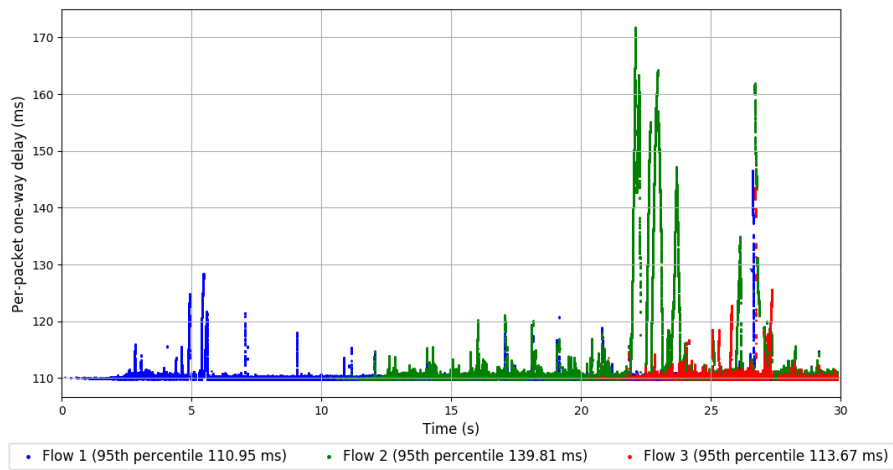
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 190.95 Mbit/s)   Flow 1 egress (mean 191.26 Mbit/s)
Flow 2 ingress (mean 192.73 Mbit/s)   Flow 2 egress (mean 192.15 Mbit/s)
Flow 3 ingress (mean 191.42 Mbit/s)   Flow 3 egress (mean 191.06 Mbit/s)

Flow 1 (95th percentile 110.69 ms)   Flow 2 (95th percentile 111.07 ms)   Flow 3 (95th percentile 110.53 ms)

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```
Run 1: Statistics of TCP Vegas

Start at: 2019-03-18 22:53:41
End at: 2019-03-18 22:54:11
Local clock offset: -0.34 ms
Remote clock offset: -0.02 ms


# Below is generated by plot.py at 2019-03-19 03:40:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.17 Mbit/s
95th percentile per-packet one-way delay: 118.161 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 279.46 Mbit/s
95th percentile per-packet one-way delay: 110.953 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 323.98 Mbit/s
95th percentile per-packet one-way delay: 139.815 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 234.28 Mbit/s
95th percentile per-packet one-way delay: 113.667 ms
Loss rate: 2.53%
```
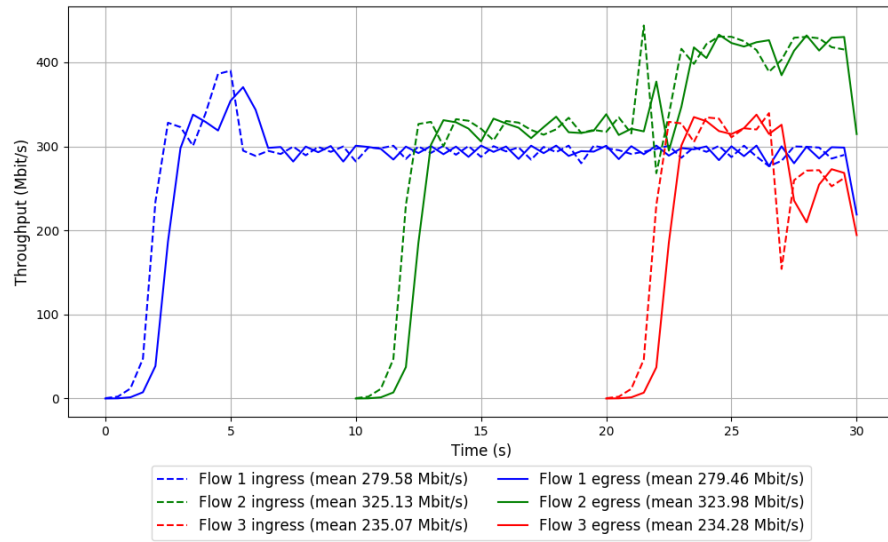
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-03-18 23:30:46
End at: 2019-03-18 23:31:16
Local clock offset: -0.11 ms
Remote clock offset: 0.041 ms


# Below is generated by plot.py at 2019-03-19 03:47:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.12 Mbit/s
95th percentile per-packet one-way delay: 148.735 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 411.90 Mbit/s
95th percentile per-packet one-way delay: 193.784 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 311.20 Mbit/s
95th percentile per-packet one-way delay: 141.699 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 313.66 Mbit/s
95th percentile per-packet one-way delay: 138.444 ms
Loss rate: 2.99%
```
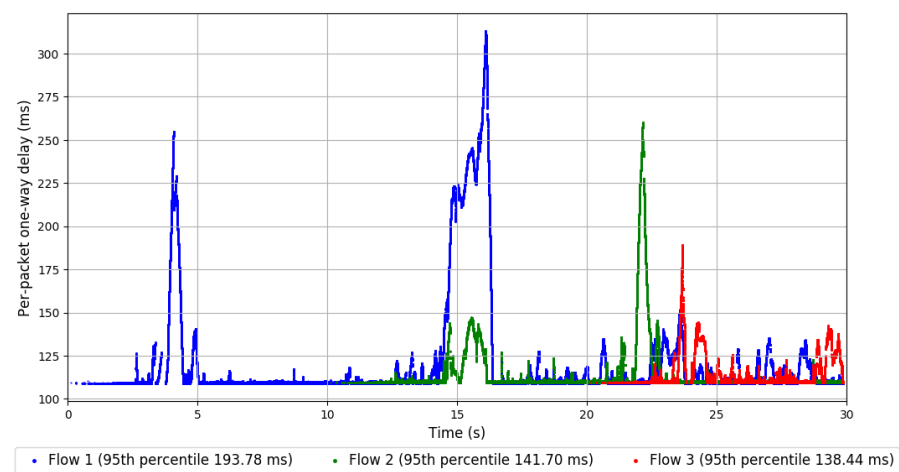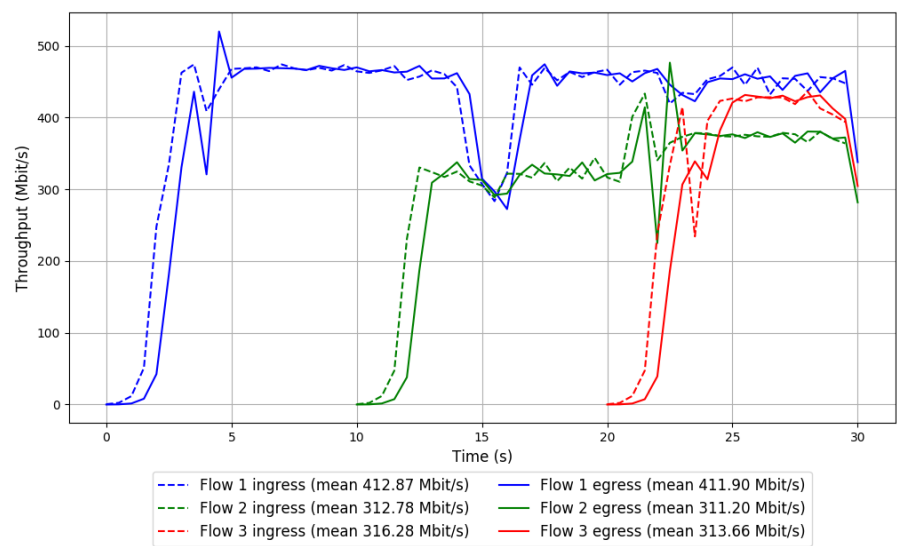
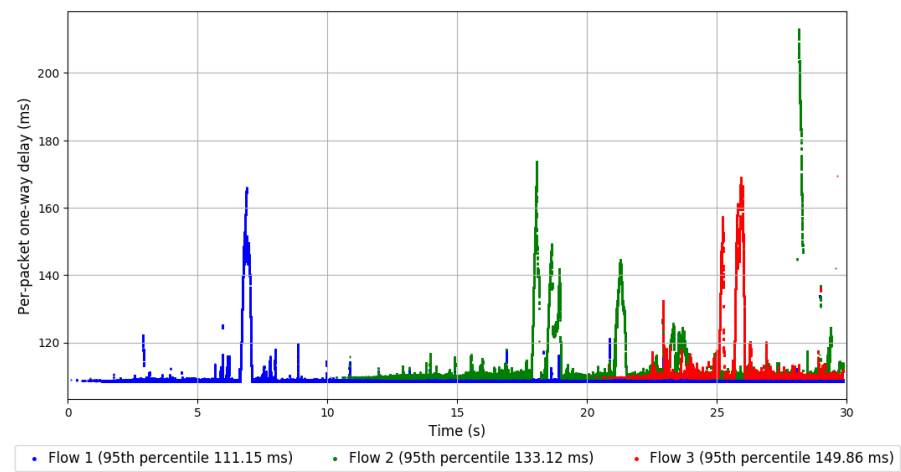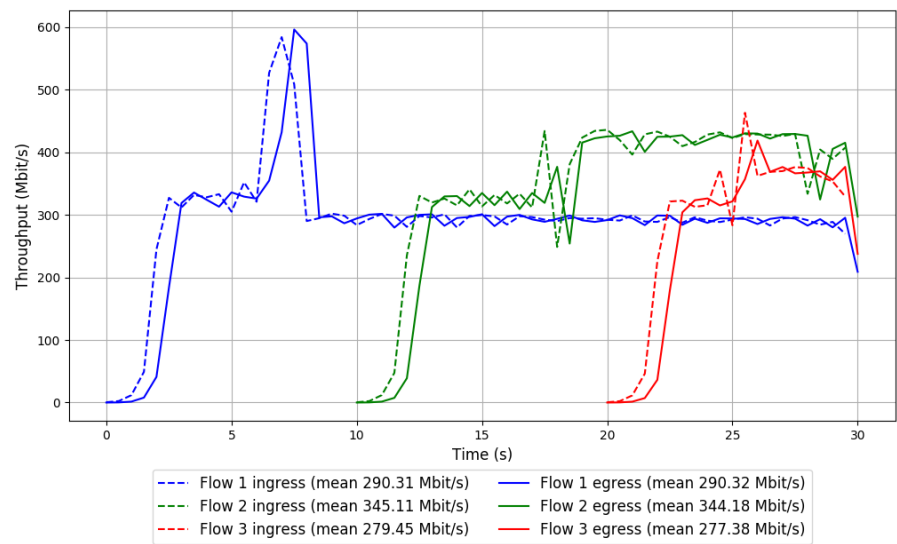## Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-03-19 00:08:25
End at: 2019-03-19 00:08:55
Local clock offset: 0.046 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-03-19 03:47:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 609.63 Mbit/s
95th percentile per-packet one-way delay: 125.726 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 290.32 Mbit/s
95th percentile per-packet one-way delay: 111.152 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 344.18 Mbit/s
95th percentile per-packet one-way delay: 133.116 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 277.38 Mbit/s
95th percentile per-packet one-way delay: 149.860 ms
Loss rate: 2.93%
```
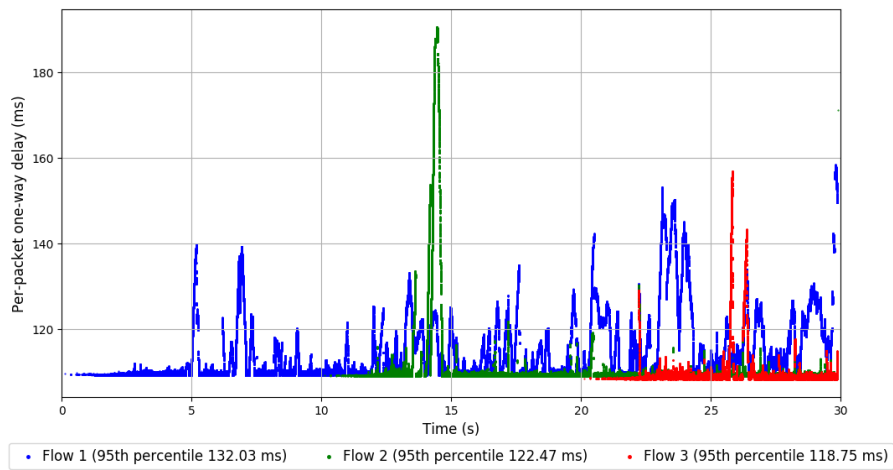
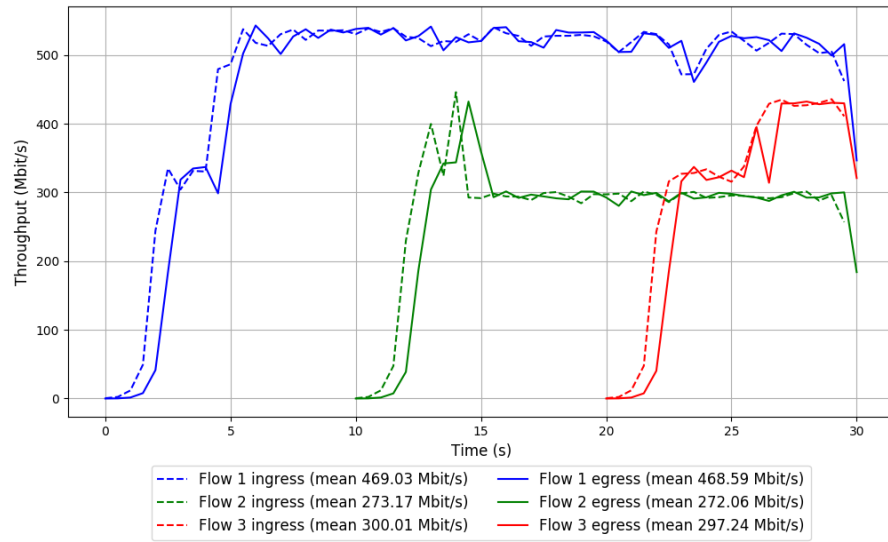## Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-03-19 00:45:15
End at: 2019-03-19 00:45:45
Local clock offset: -0.104 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-03-19 03:50:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 746.27 Mbit/s
95th percentile per-packet one-way delay: 129.839 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 468.59 Mbit/s
95th percentile per-packet one-way delay: 132.030 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 272.06 Mbit/s
95th percentile per-packet one-way delay: 122.468 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 297.24 Mbit/s
95th percentile per-packet one-way delay: 118.745 ms
Loss rate: 3.10%
```

Run 4: Report of TCP Vegas — Data Link

- - - - Flow 1 ingress (mean 469.03 Mbit/s)   —— Flow 1 egress (mean 468.59 Mbit/s)
- - - - Flow 2 ingress (mean 273.17 Mbit/s)   —— Flow 2 egress (mean 272.06 Mbit/s)
- - - - Flow 3 ingress (mean 300.01 Mbit/s)   —— Flow 3 egress (mean 297.24 Mbit/s)

• Flow 1 (95th percentile 132.03 ms)   • Flow 2 (95th percentile 122.47 ms)   • Flow 3 (95th percentile 118.75 ms)
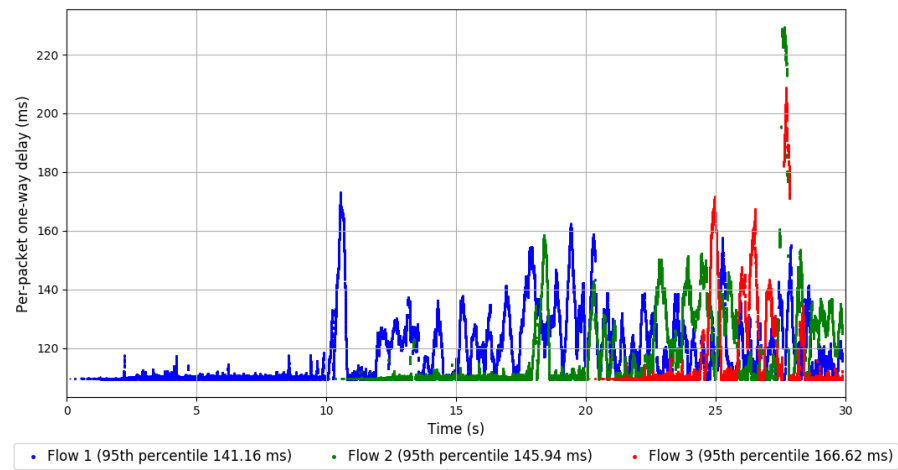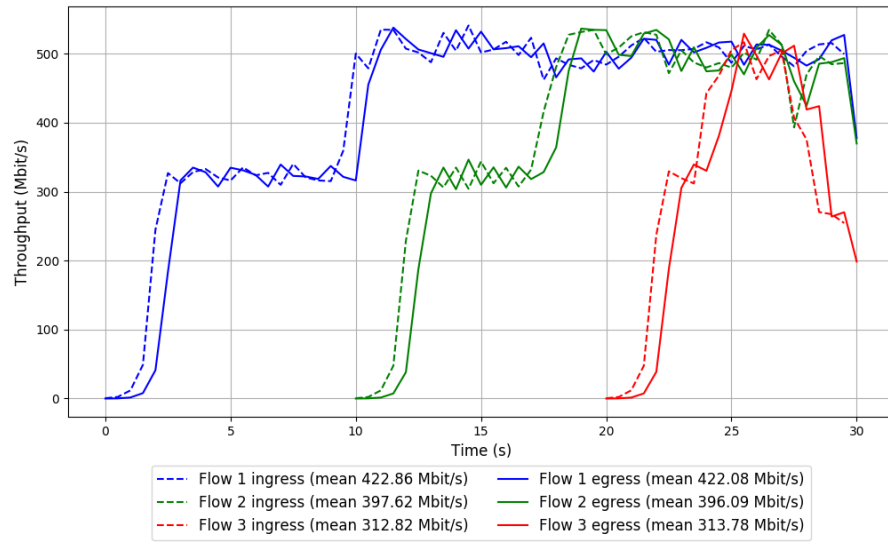
```
Run 5: Statistics of TCP Vegas

Start at: 2019-03-19 01:23:05
End at: 2019-03-19 01:23:35
Local clock offset: 0.071 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 787.68 Mbit/s
95th percentile per-packet one-way delay: 146.362 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 422.08 Mbit/s
95th percentile per-packet one-way delay: 141.164 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 396.09 Mbit/s
95th percentile per-packet one-way delay: 145.942 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 313.78 Mbit/s
95th percentile per-packet one-way delay: 166.620 ms
Loss rate: 1.89%
```

Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-03-18 22:23:16
End at: 2019-03-18 22:23:46
Local clock offset: 0.817 ms
Remote clock offset: 0.036 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 209.91 Mbit/s
95th percentile per-packet one-way delay: 268.105 ms
Loss rate: 6.81%
-- Flow 1:
Average throughput: 128.33 Mbit/s
95th percentile per-packet one-way delay: 262.736 ms
Loss rate: 8.05%
-- Flow 2:
Average throughput: 114.26 Mbit/s
95th percentile per-packet one-way delay: 275.101 ms
Loss rate: 5.20%
-- Flow 3:
Average throughput: 19.82 Mbit/s
95th percentile per-packet one-way delay: 148.920 ms
Loss rate: 0.01%
```
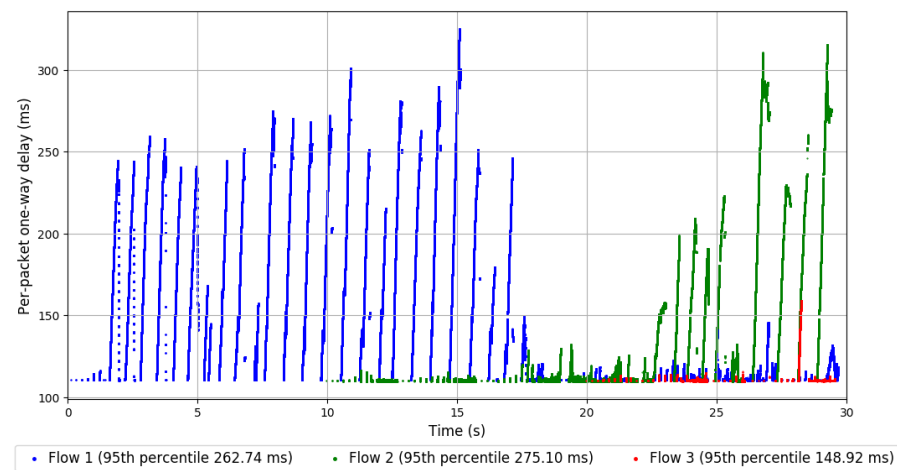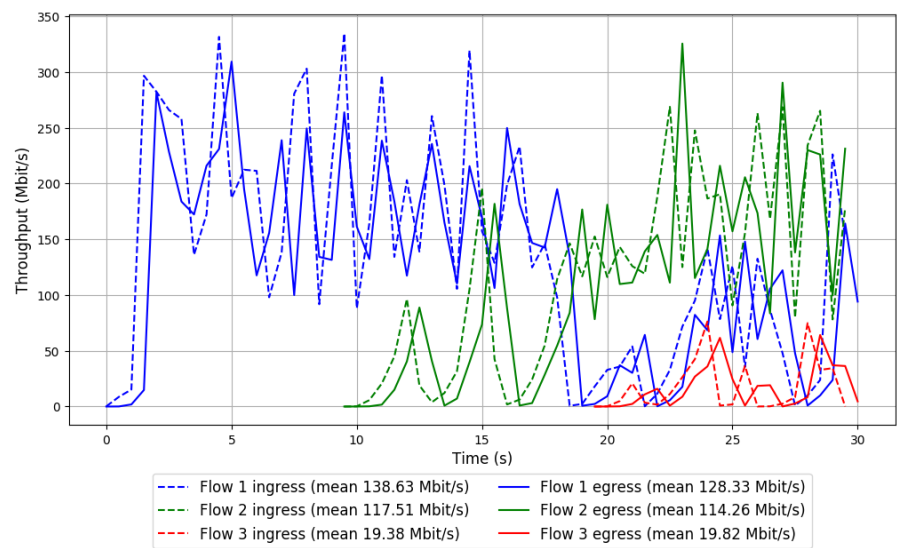
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 138.63 Mbit/s) — — — Flow 1 egress (mean 128.33 Mbit/s)
Flow 2 ingress (mean 117.51 Mbit/s) — — — Flow 2 egress (mean 114.26 Mbit/s)
Flow 3 ingress (mean 19.38 Mbit/s) — — — Flow 3 egress (mean 19.82 Mbit/s)

Flow 1 (95th percentile 262.74 ms)   Flow 2 (95th percentile 275.10 ms)   Flow 3 (95th percentile 148.92 ms)

```
Run 2: Statistics of Verus

Start at: 2019-03-18 23:00:22
End at: 2019-03-18 23:00:52
Local clock offset: -0.086 ms
Remote clock offset: 0.028 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.11 Mbit/s
95th percentile per-packet one-way delay: 157.405 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 96.92 Mbit/s
95th percentile per-packet one-way delay: 165.102 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 57.61 Mbit/s
95th percentile per-packet one-way delay: 124.439 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.00 Mbit/s
95th percentile per-packet one-way delay: 112.865 ms
Loss rate: 0.11%
```
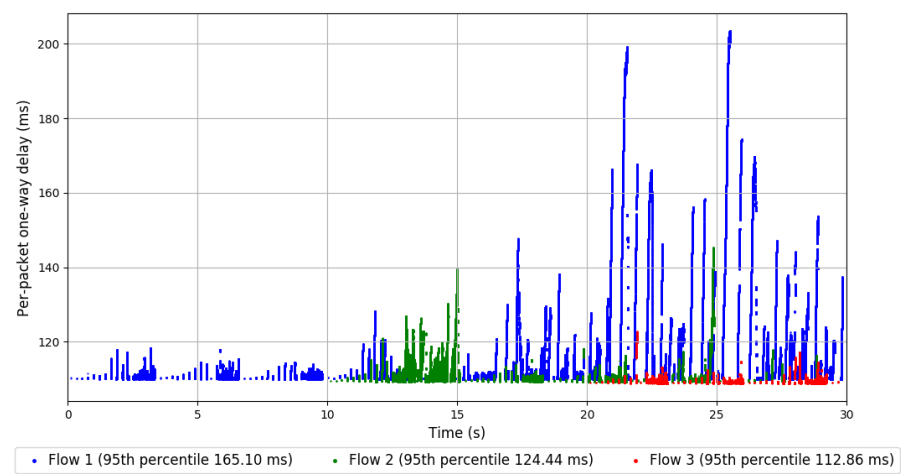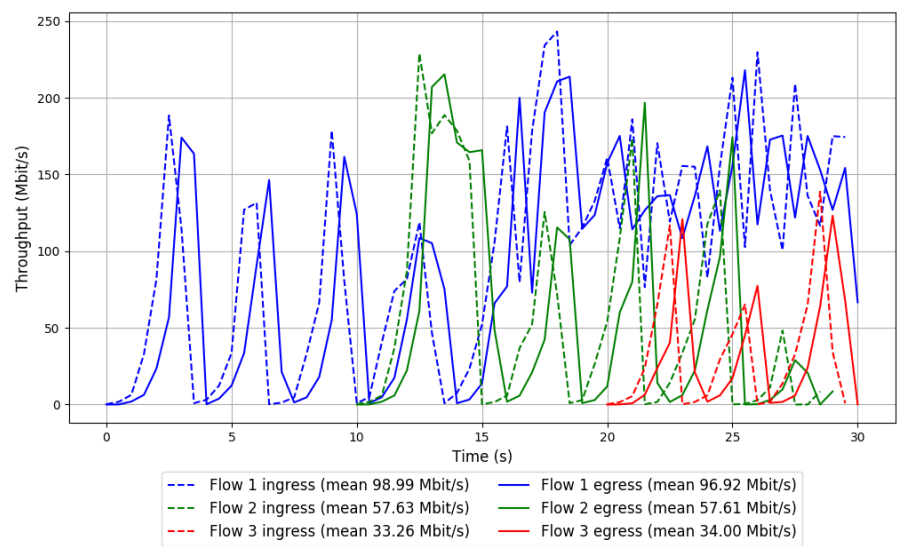
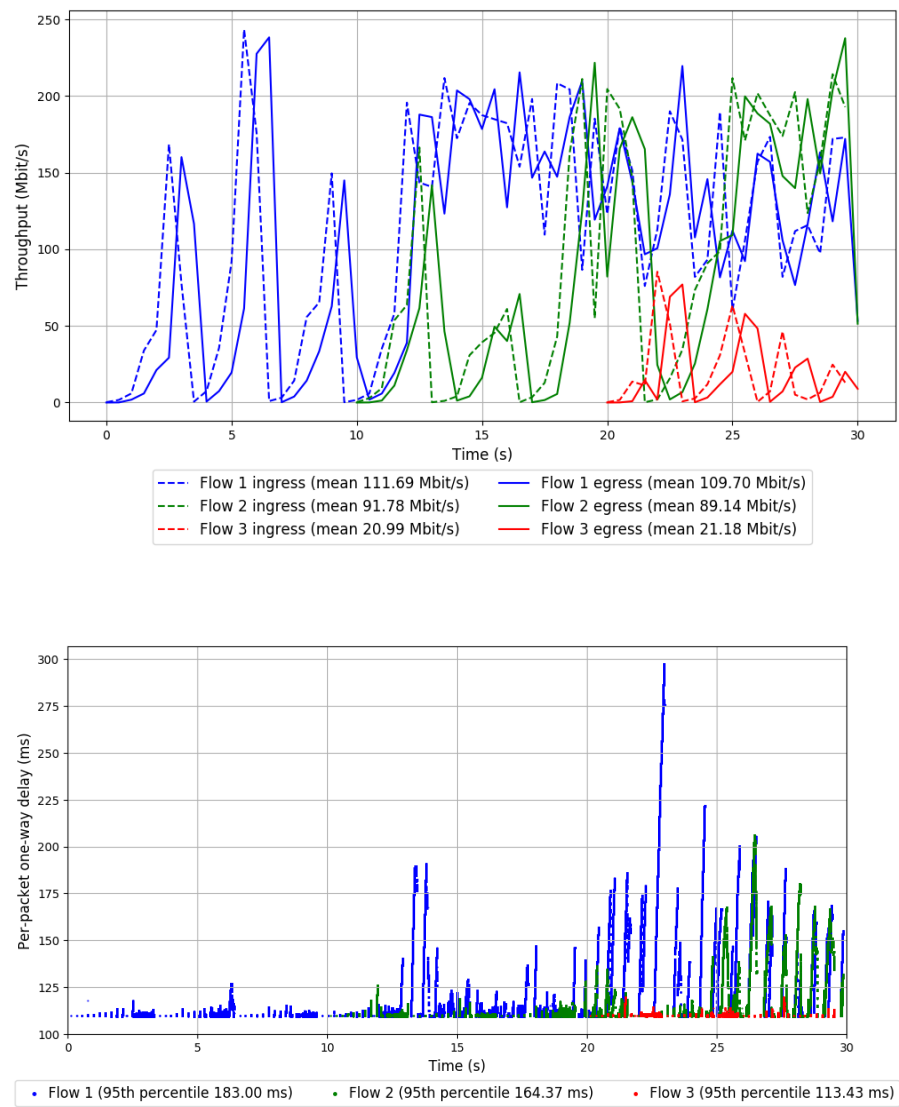Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-03-18 23:37:54
End at: 2019-03-18 23:38:24
Local clock offset: -0.018 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.53 Mbit/s
95th percentile per-packet one-way delay: 176.115 ms
Loss rate: 2.72%
-- Flow 1:
Average throughput: 109.70 Mbit/s
95th percentile per-packet one-way delay: 183.000 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 89.14 Mbit/s
95th percentile per-packet one-way delay: 164.367 ms
Loss rate: 3.95%
-- Flow 3:
Average throughput: 21.18 Mbit/s
95th percentile per-packet one-way delay: 113.433 ms
Loss rate: 3.18%
```

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 111.69 Mbit/s)   Flow 1 egress (mean 109.70 Mbit/s)
Flow 2 ingress (mean 91.78 Mbit/s)   Flow 2 egress (mean 89.14 Mbit/s)
Flow 3 ingress (mean 20.99 Mbit/s)   Flow 3 egress (mean 21.18 Mbit/s)

Flow 1 (95th percentile 183.00 ms)   Flow 2 (95th percentile 164.37 ms)   Flow 3 (95th percentile 113.43 ms)
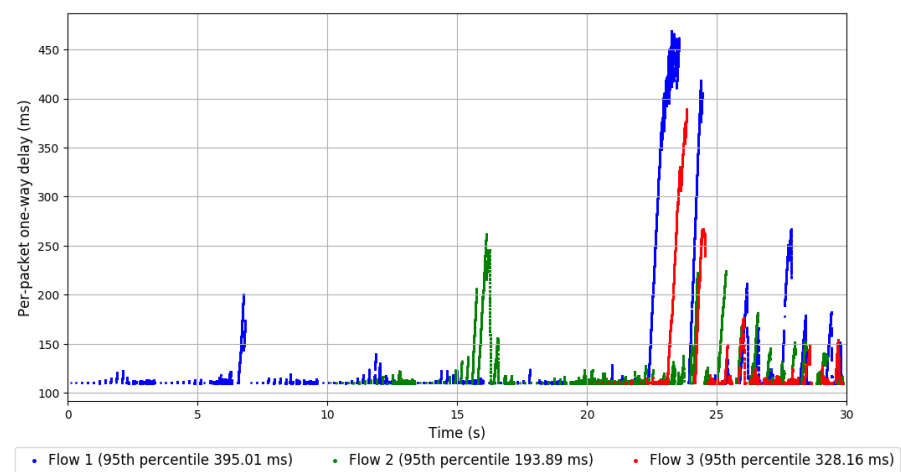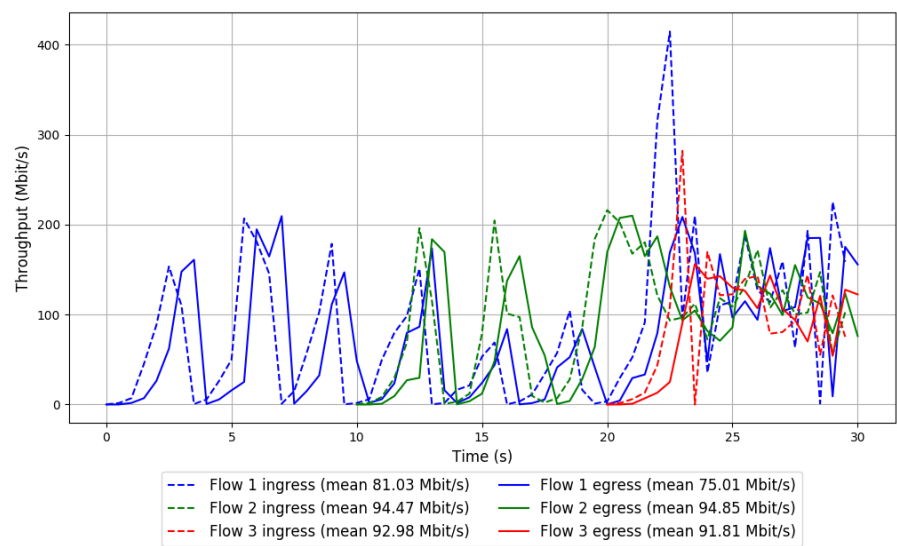
190

```
Run 4: Statistics of Verus

Start at: 2019-03-19 00:15:07
End at: 2019-03-19 00:15:37
Local clock offset: 0.722 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.80 Mbit/s
95th percentile per-packet one-way delay: 309.559 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 75.01 Mbit/s
95th percentile per-packet one-way delay: 395.011 ms
Loss rate: 8.11%
-- Flow 2:
Average throughput: 94.85 Mbit/s
95th percentile per-packet one-way delay: 193.891 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 91.81 Mbit/s
95th percentile per-packet one-way delay: 328.159 ms
Loss rate: 1.26%
```

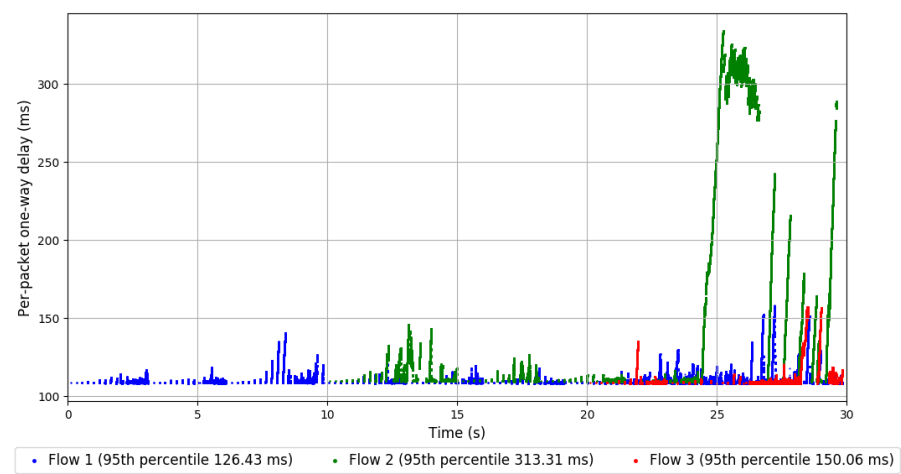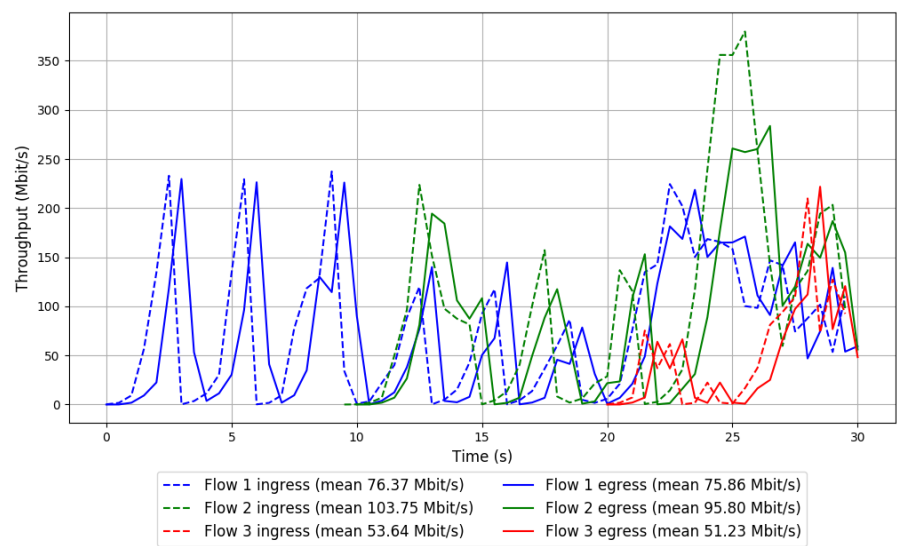Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-03-19 00:52:20
End at: 2019-03-19 00:52:50
Local clock offset: -0.03 ms
Remote clock offset: -0.108 ms


# Below is generated by plot.py at 2019-03-19 03:51:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.54 Mbit/s
95th percentile per-packet one-way delay: 302.671 ms
Loss rate: 5.35%
-- Flow 1:
Average throughput: 75.86 Mbit/s
95th percentile per-packet one-way delay: 126.429 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 95.80 Mbit/s
95th percentile per-packet one-way delay: 313.311 ms
Loss rate: 9.69%
-- Flow 3:
Average throughput: 51.23 Mbit/s
95th percentile per-packet one-way delay: 150.062 ms
Loss rate: 5.45%
```
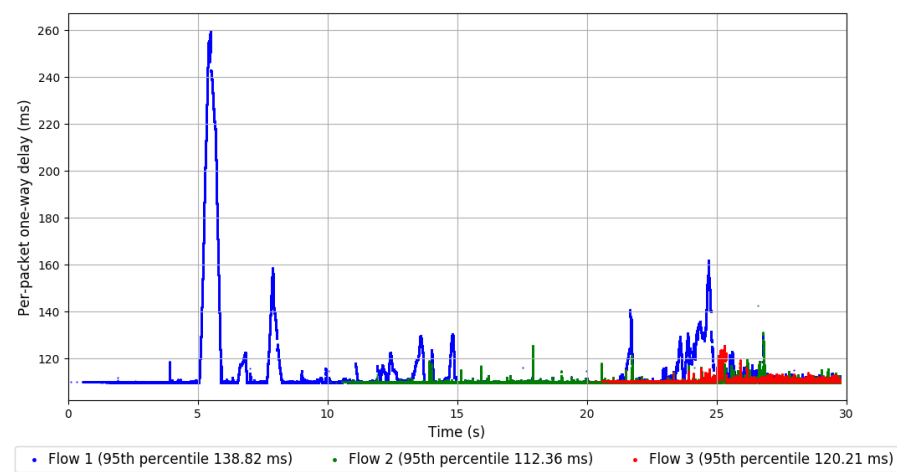
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 76.37 Mbit/s)   Flow 1 egress (mean 75.86 Mbit/s)
Flow 2 ingress (mean 103.75 Mbit/s)   Flow 2 egress (mean 95.80 Mbit/s)
Flow 3 ingress (mean 53.64 Mbit/s)   Flow 3 egress (mean 51.23 Mbit/s)

Flow 1 (95th percentile 126.43 ms)   Flow 2 (95th percentile 313.31 ms)   Flow 3 (95th percentile 150.06 ms)
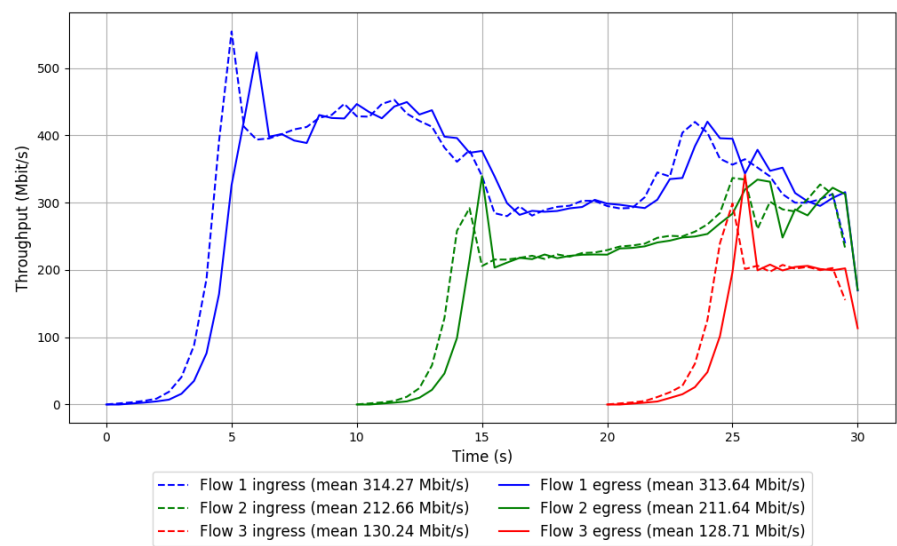
```
Run 1: Statistics of PCC-Vivace

Start at: 2019-03-18 22:42:44
End at: 2019-03-18 22:43:15
Local clock offset: -0.108 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-03-19 03:53:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 495.74 Mbit/s
95th percentile per-packet one-way delay: 128.773 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 313.64 Mbit/s
95th percentile per-packet one-way delay: 138.823 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 211.64 Mbit/s
95th percentile per-packet one-way delay: 112.364 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 128.71 Mbit/s
95th percentile per-packet one-way delay: 120.214 ms
Loss rate: 3.40%
```
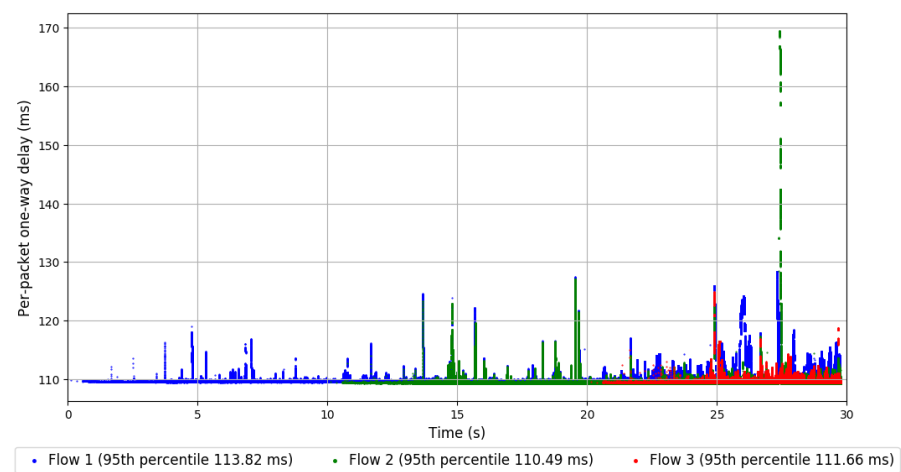
Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 314.27 Mbit/s) --- Flow 1 egress (mean 313.64 Mbit/s)
Flow 2 ingress (mean 212.66 Mbit/s) --- Flow 2 egress (mean 211.64 Mbit/s)
Flow 3 ingress (mean 130.24 Mbit/s) --- Flow 3 egress (mean 128.71 Mbit/s)

Flow 1 (95th percentile 138.82 ms)   Flow 2 (95th percentile 112.36 ms)   Flow 3 (95th percentile 120.21 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-03-18 23:19:54
End at: 2019-03-18 23:20:24
Local clock offset: 0.062 ms
Remote clock offset: 0.139 ms


# Below is generated by plot.py at 2019-03-19 03:53:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 413.85 Mbit/s
95th percentile per-packet one-way delay: 112.852 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 254.41 Mbit/s
95th percentile per-packet one-way delay: 113.818 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 174.89 Mbit/s
95th percentile per-packet one-way delay: 110.489 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 134.56 Mbit/s
95th percentile per-packet one-way delay: 111.659 ms
Loss rate: 3.79%
```
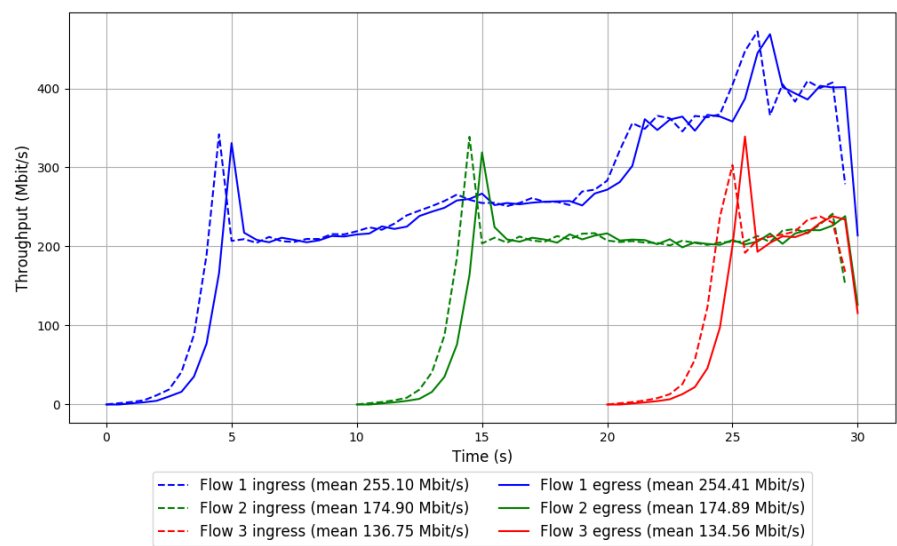
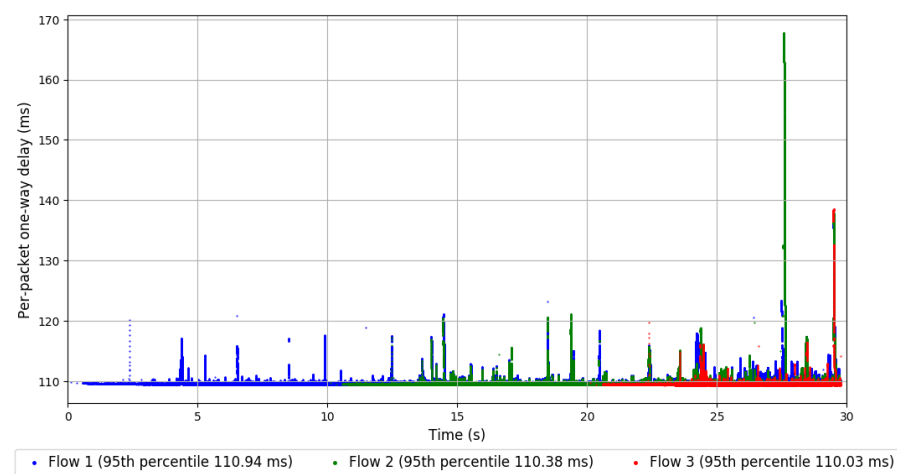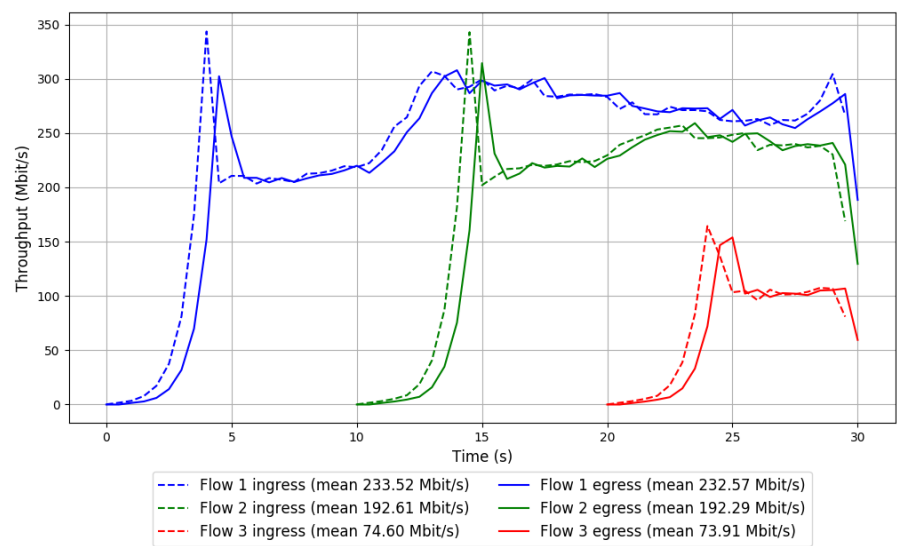# Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-03-18 23:57:34
End at: 2019-03-18 23:58:04
Local clock offset: 0.078 ms
Remote clock offset: -0.155 ms


# Below is generated by plot.py at 2019-03-19 03:53:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.95 Mbit/s
95th percentile per-packet one-way delay: 110.699 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 232.57 Mbit/s
95th percentile per-packet one-way delay: 110.939 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 192.29 Mbit/s
95th percentile per-packet one-way delay: 110.378 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 73.91 Mbit/s
95th percentile per-packet one-way delay: 110.028 ms
Loss rate: 3.08%
```

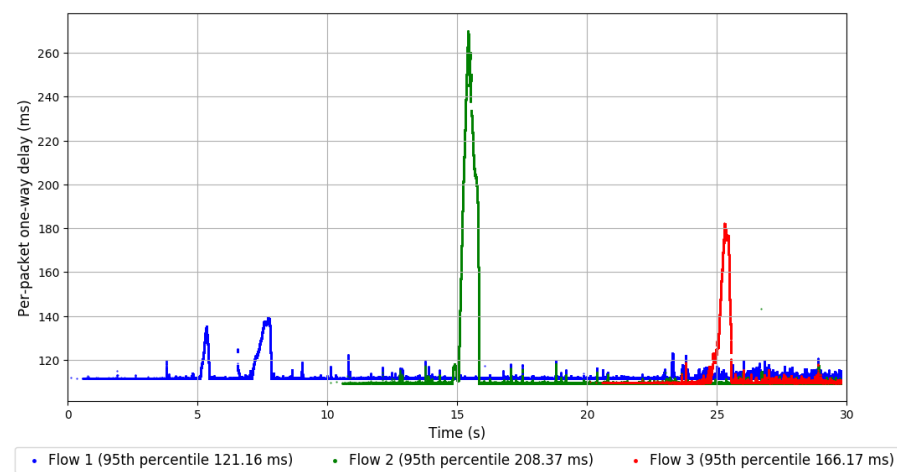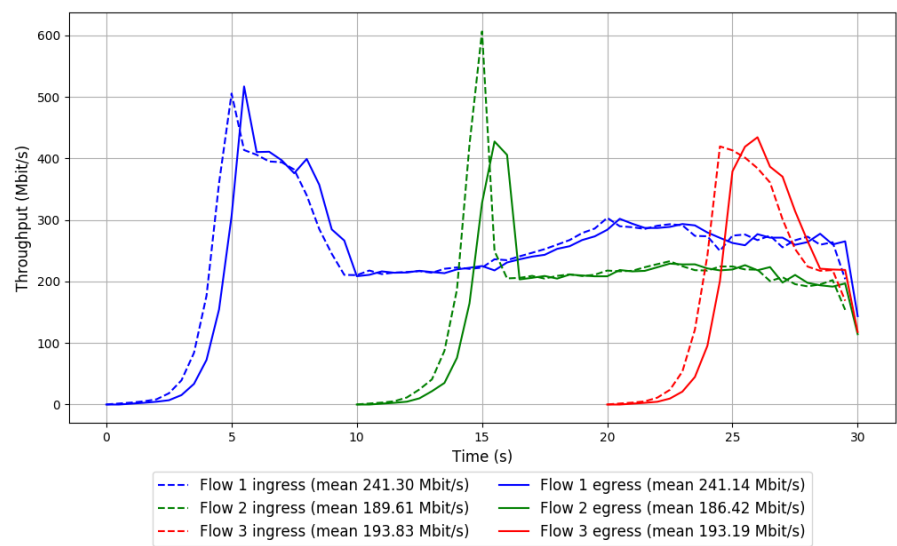## Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 233.52 Mbit/s) — Flow 1 egress (mean 232.57 Mbit/s)
Flow 2 ingress (mean 192.61 Mbit/s) — Flow 2 egress (mean 192.29 Mbit/s)
Flow 3 ingress (mean 74.60 Mbit/s) — Flow 3 egress (mean 73.91 Mbit/s)

Flow 1 (95th percentile 110.94 ms)   Flow 2 (95th percentile 110.38 ms)   Flow 3 (95th percentile 110.03 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-03-19 00:34:25
End at: 2019-03-19 00:34:55
Local clock offset: 0.041 ms
Remote clock offset: -0.034 ms


# Below is generated by plot.py at 2019-03-19 03:53:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 427.51 Mbit/s
95th percentile per-packet one-way delay: 134.495 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 241.14 Mbit/s
95th percentile per-packet one-way delay: 121.157 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 186.42 Mbit/s
95th percentile per-packet one-way delay: 208.370 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 193.19 Mbit/s
95th percentile per-packet one-way delay: 166.174 ms
Loss rate: 2.55%
```

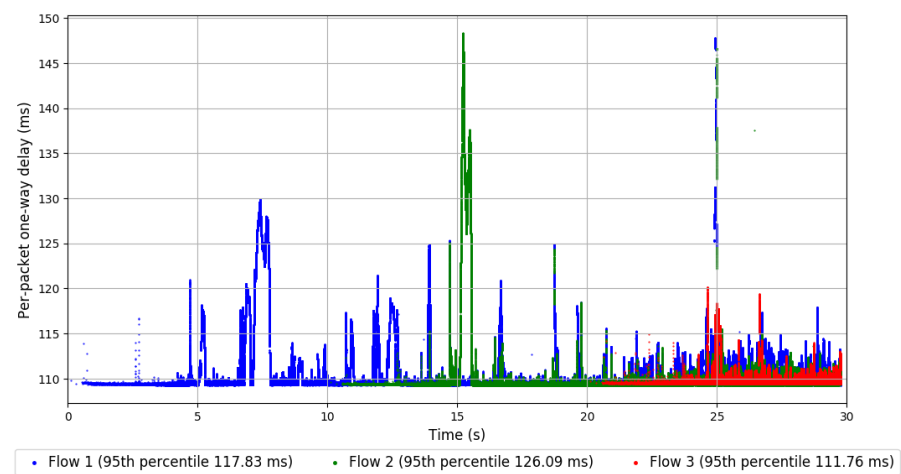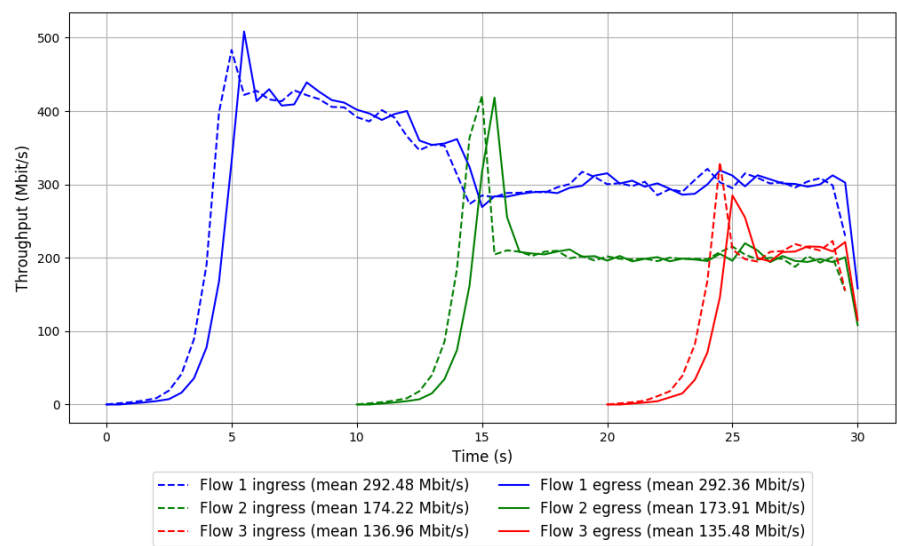Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-03-19 01:12:12
End at: 2019-03-19 01:12:42
Local clock offset: 0.0 ms
Remote clock offset: -0.118 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.58 Mbit/s
95th percentile per-packet one-way delay: 117.503 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 292.36 Mbit/s
95th percentile per-packet one-way delay: 117.826 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 173.91 Mbit/s
95th percentile per-packet one-way delay: 126.087 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 135.48 Mbit/s
95th percentile per-packet one-way delay: 111.760 ms
Loss rate: 3.31%
```

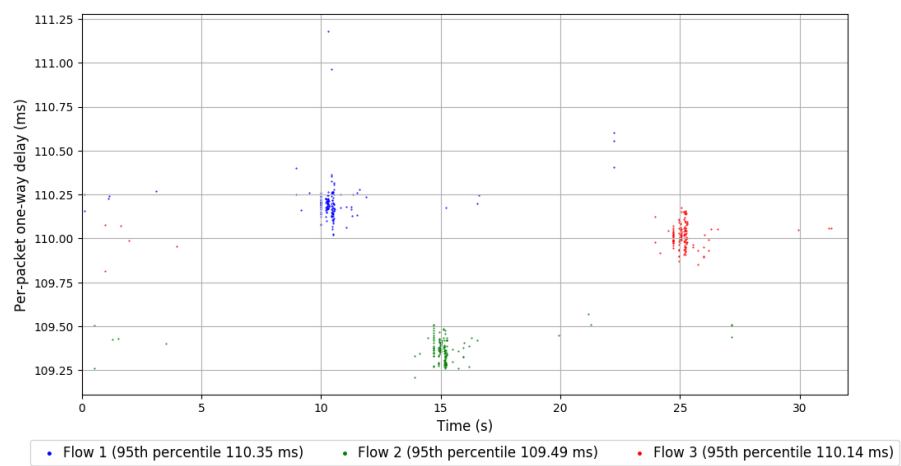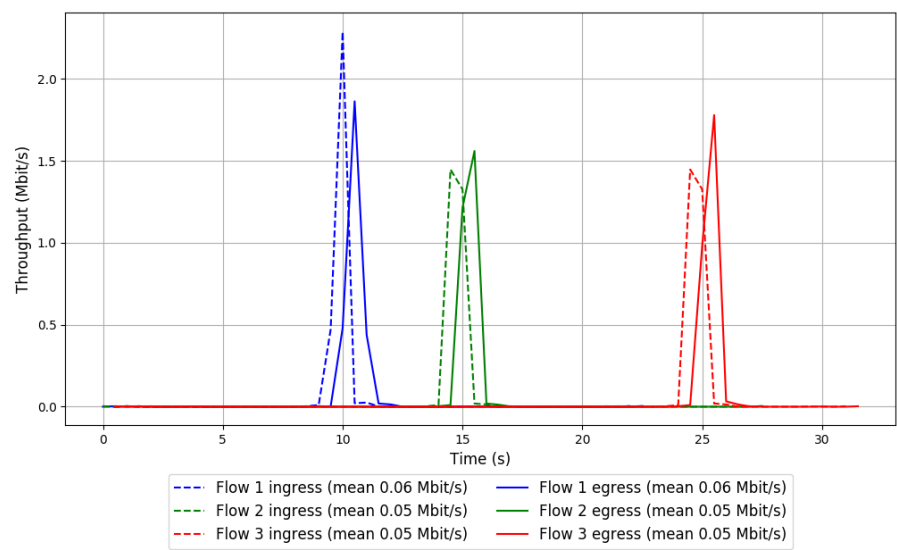# Run 5: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 292.48 Mbit/s) —— Flow 1 egress (mean 292.36 Mbit/s)
- - - - Flow 2 ingress (mean 174.22 Mbit/s) —— Flow 2 egress (mean 173.91 Mbit/s)
- - - - Flow 3 ingress (mean 136.96 Mbit/s) —— Flow 3 egress (mean 135.48 Mbit/s)

- Flow 1 (95th percentile 117.83 ms)　　• Flow 2 (95th percentile 126.09 ms)　　• Flow 3 (95th percentile 111.76 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-03-18 22:26:16
End at: 2019-03-18 22:26:46
Local clock offset: 0.635 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 110.258 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 110.354 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.489 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.142 ms
Loss rate: 0.00%
```

Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-03-18 23:03:14
End at: 2019-03-18 23:03:44
Local clock offset: -0.039 ms
Remote clock offset: 0.066 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 110.456 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.249 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.543 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.195 ms
Loss rate: 0.00%
```
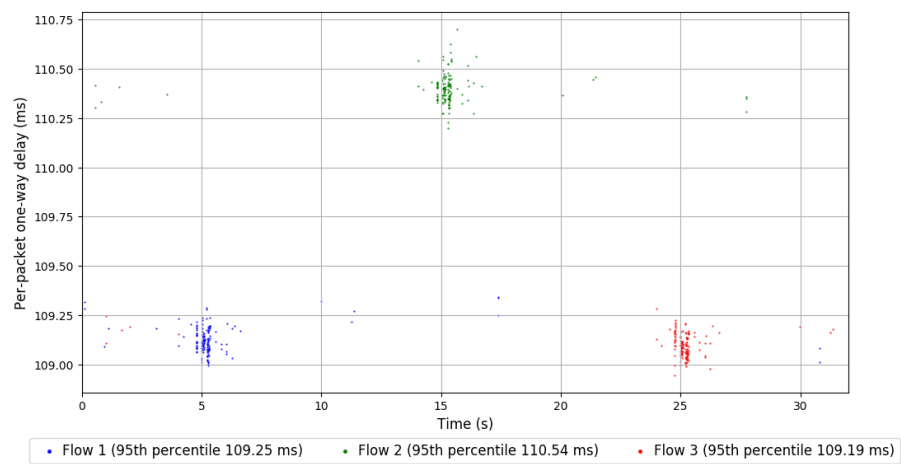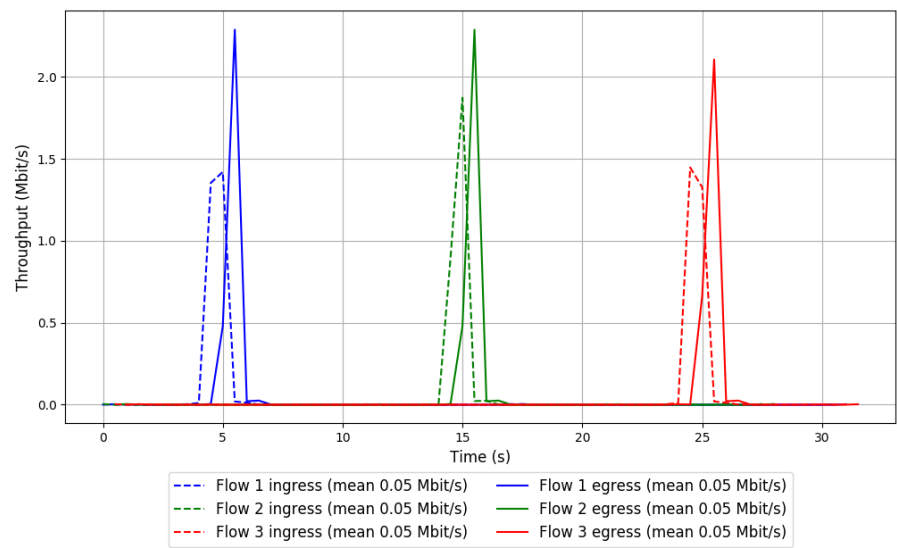
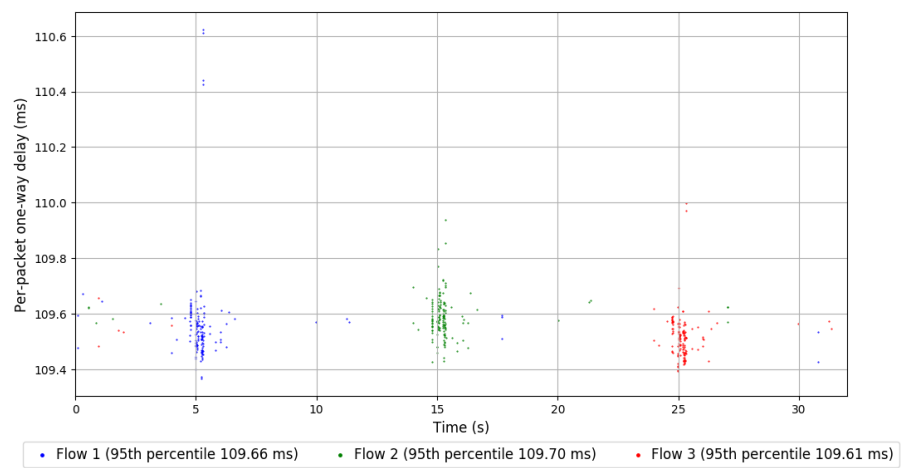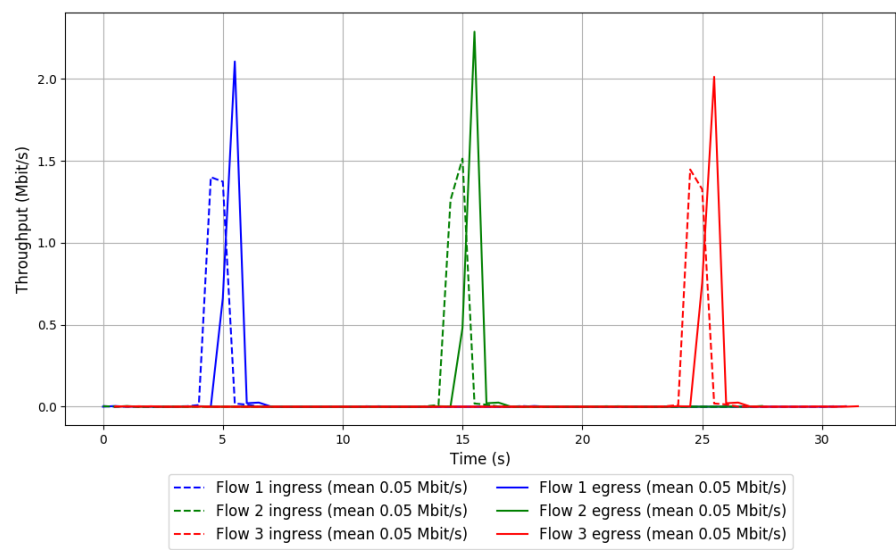## Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-03-18 23:40:50
End at: 2019-03-18 23:41:20
Local clock offset: -0.105 ms
Remote clock offset: -0.074 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 109.676 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.664 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.608 ms
Loss rate: 0.00%
```

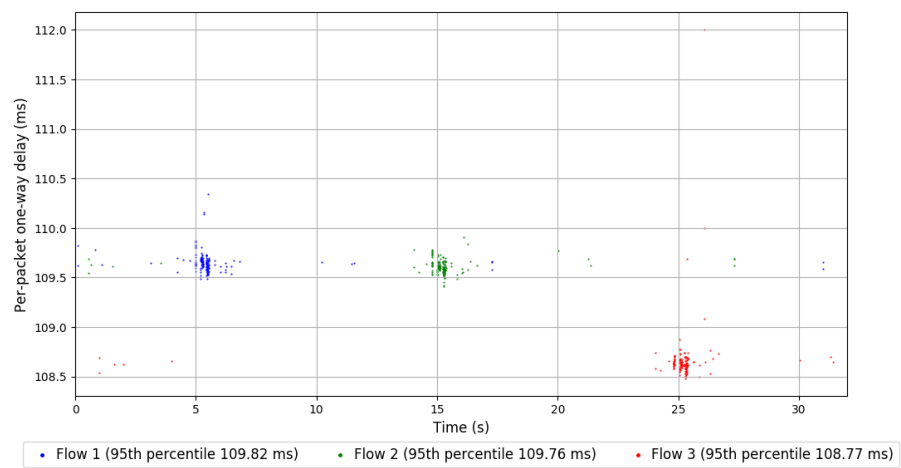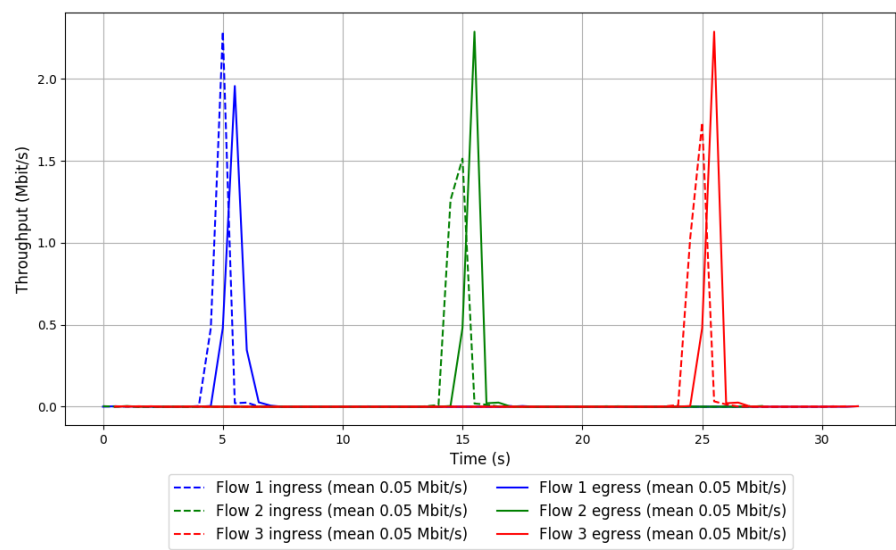## Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-03-19 00:18:02
End at: 2019-03-19 00:18:32
Local clock offset: -0.031 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 109.764 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.820 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.757 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 108.765 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-03-19 00:55:14
End at: 2019-03-19 00:55:44
Local clock offset: 0.077 ms
Remote clock offset: -0.427 ms


# Below is generated by plot.py at 2019-03-19 03:54:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 110.217 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.000 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.288 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link