Pantheon Report

Generated at 2019-06-28 04:13:22 (UTC).

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

Repeated the test of 22 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.
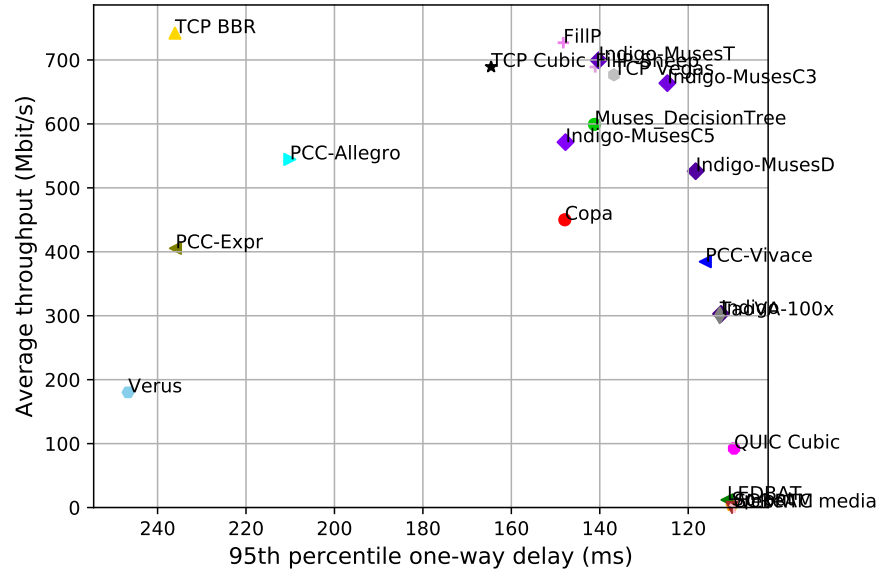
```
System info:
Linux 4.15.0-1032-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ c3953d08f32ec7ebbdede2d2f0cbdeed262571ef
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/muses_dtree @ 11c9498ecb1596b02ccd896791a02d03172af7ed
 M helpers/__init__.pyc
 M helpers/context.pyc
 M helpers/utils.pyc
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
```
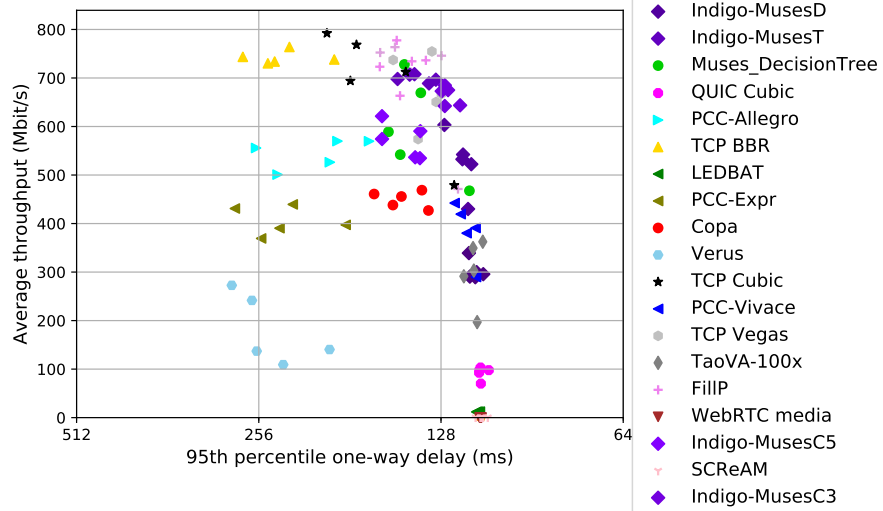
```
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

3

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	405.82	359.26	298.51	237.38	231.65	193.01	2.37	3.26	4.60
Copa	5	251.81	220.48	158.81	143.83	146.27	155.11	0.85	1.31	2.63
TCP Cubic	5	402.85	289.29	288.11	150.54	175.21	152.13	0.86	1.38	3.64
FillP	5	434.94	326.79	231.59	157.92	121.48	112.43	1.26	1.05	2.78
FillP-Sheep	5	402.40	320.01	228.60	148.64	114.09	113.12	0.90	0.96	2.55
Indigo	5	163.16	145.84	131.43	111.78	111.97	114.19	0.77	1.22	2.85
Indigo-MusesC3	5	400.42	326.29	231.79	131.72	119.07	113.62	0.70	1.36	4.55
Indigo-MusesC5	5	360.19	298.43	85.85	148.85	141.52	109.21	0.49	1.42	4.48
Indigo-MusesD	5	332.34	267.05	98.42	118.15	119.83	111.46	0.78	1.83	4.20
Indigo-MusesT	5	432.98	346.60	188.30	143.51	131.40	117.89	0.62	1.09	5.09
LEDBAT	5	7.75	5.21	2.46	110.70	108.95	110.54	1.47	2.20	4.45
Muses_DecisionTree	5	366.98	248.82	219.30	145.40	117.30	115.72	0.79	1.35	2.99
PCC-Allegro	5	304.86	251.86	224.92	209.24	181.95	235.66	3.61	2.94	5.43
PCC-Expr	5	224.58	199.30	150.38	242.02	206.04	175.49	3.21	2.85	3.04
QUIC Cubic	5	51.11	45.62	32.17	108.87	109.55	109.13	0.93	1.84	4.64
SCReAM	5	0.20	0.22	0.20	109.03	108.47	108.63	0.74	1.25	2.10
Sprout	5	1.52	1.66	1.57	108.78	109.32	109.52	0.70	0.87	3.31
TaoVA-100x	5	181.32	142.84	75.02	112.50	113.14	109.01	0.86	1.08	2.29
TCP Vegas	5	352.99	335.82	308.22	131.98	129.47	154.29	0.66	1.11	2.72
Verus	5	104.96	88.69	51.65	237.26	214.69	164.02	4.01	1.78	3.74
PCC-Vivace	5	213.68	192.09	134.00	117.93	111.88	118.42	1.00	1.48	3.84
WebRTC media	5	0.05	0.05	0.05	109.57	108.33	114.99	0.00	0.01	0.00

4

```
Run 1: Statistics of TCP BBR

Start at: 2019-06-27 22:55:12
End at: 2019-06-27 22:55:42
Local clock offset: -0.008 ms
Remote clock offset: 0.026 ms


# Below is generated by plot.py at 2019-06-28 02:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 763.95 Mbit/s
95th percentile per-packet one-way delay: 227.838 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 387.45 Mbit/s
95th percentile per-packet one-way delay: 216.526 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 402.95 Mbit/s
95th percentile per-packet one-way delay: 243.161 ms
Loss rate: 3.41%
-- Flow 3:
Average throughput: 332.99 Mbit/s
95th percentile per-packet one-way delay: 146.429 ms
Loss rate: 4.53%
```
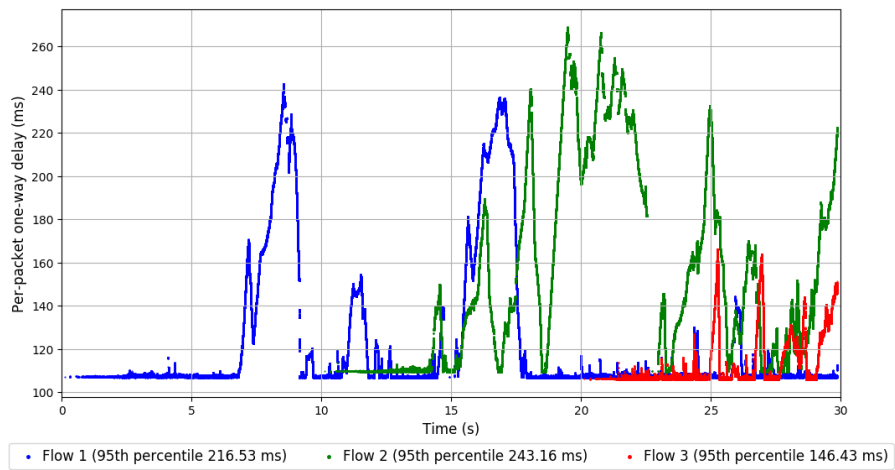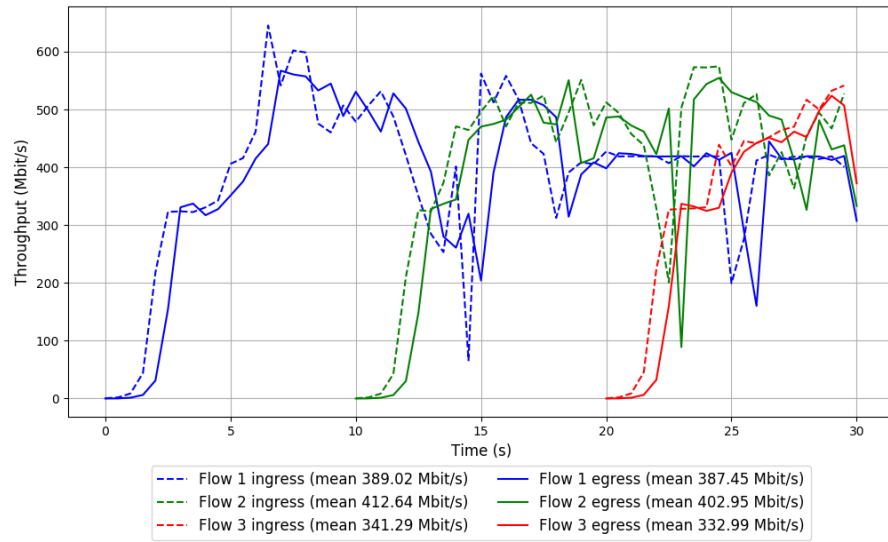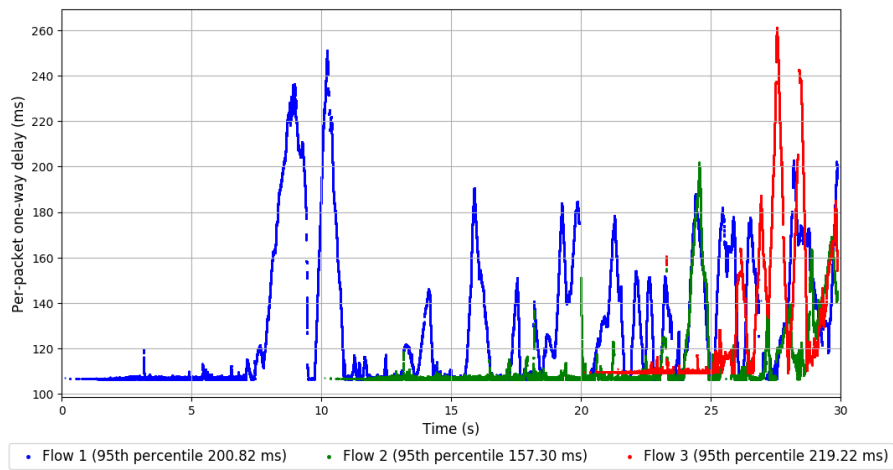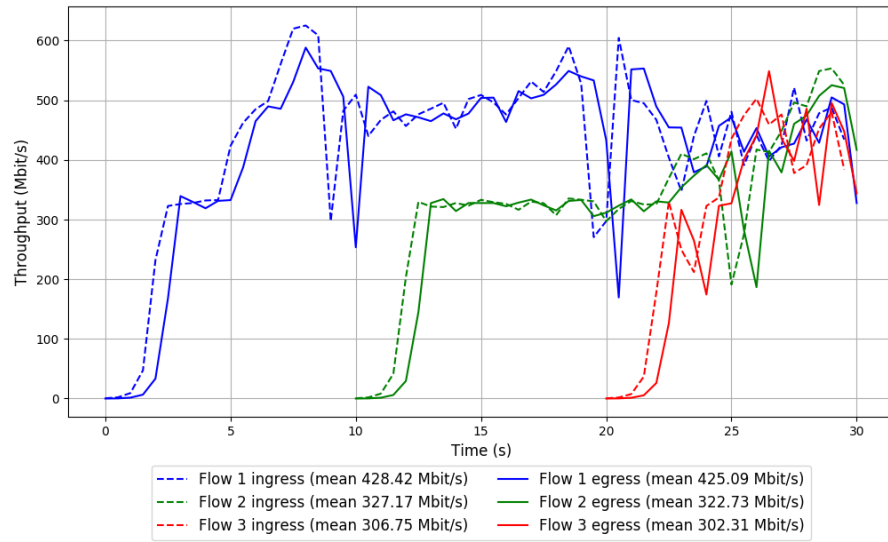
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-06-27 23:34:03
End at: 2019-06-27 23:34:33
Local clock offset: -0.169 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2019-06-28 02:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 738.16 Mbit/s
95th percentile per-packet one-way delay: 192.106 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 425.09 Mbit/s
95th percentile per-packet one-way delay: 200.820 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 322.73 Mbit/s
95th percentile per-packet one-way delay: 157.296 ms
Loss rate: 2.43%
-- Flow 3:
Average throughput: 302.31 Mbit/s
95th percentile per-packet one-way delay: 219.216 ms
Loss rate: 3.63%
```

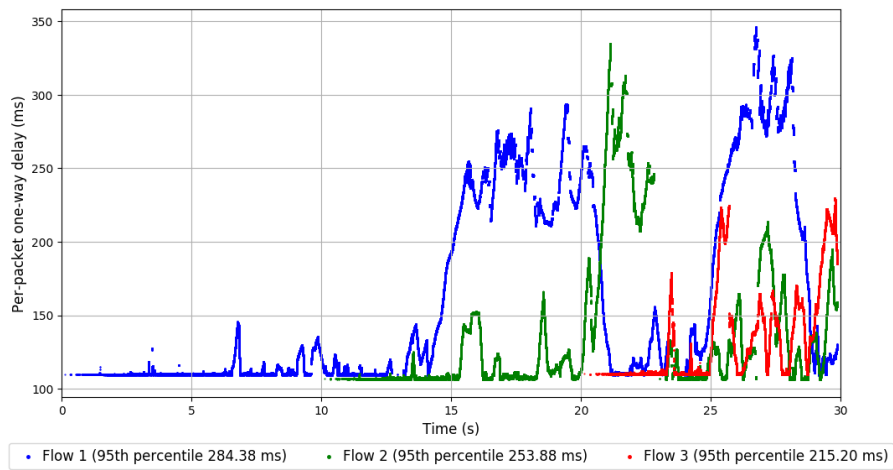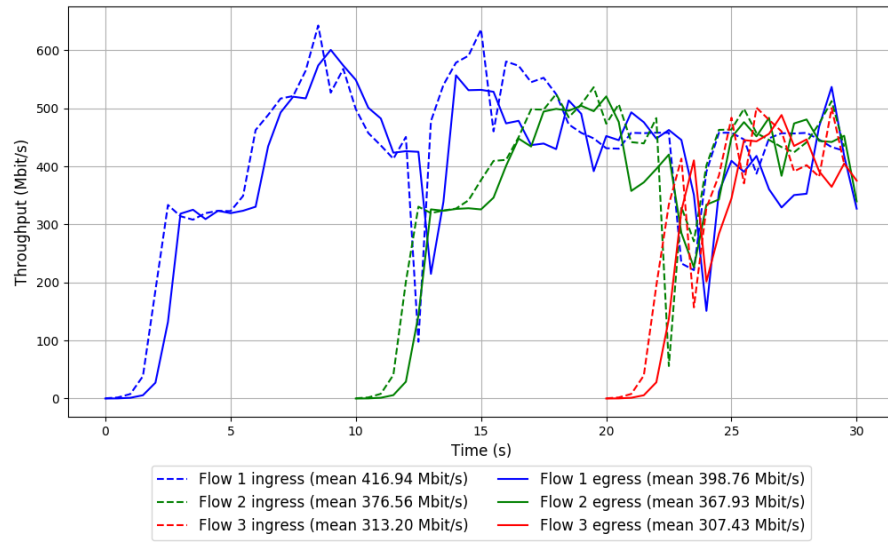Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-06-28 00:12:57
End at: 2019-06-28 00:13:27
Local clock offset: -0.09 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-06-28 02:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 743.54 Mbit/s
95th percentile per-packet one-way delay: 272.032 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 398.76 Mbit/s
95th percentile per-packet one-way delay: 284.377 ms
Loss rate: 5.07%
-- Flow 2:
Average throughput: 367.93 Mbit/s
95th percentile per-packet one-way delay: 253.885 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 307.43 Mbit/s
95th percentile per-packet one-way delay: 215.198 ms
Loss rate: 4.02%
```

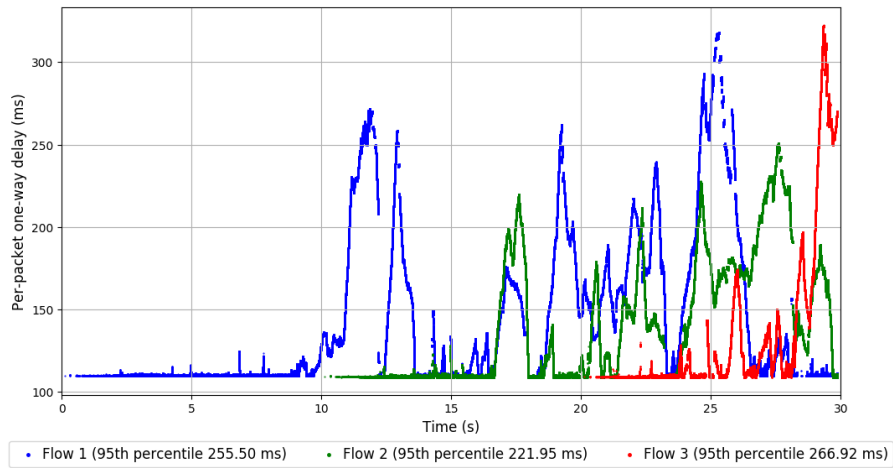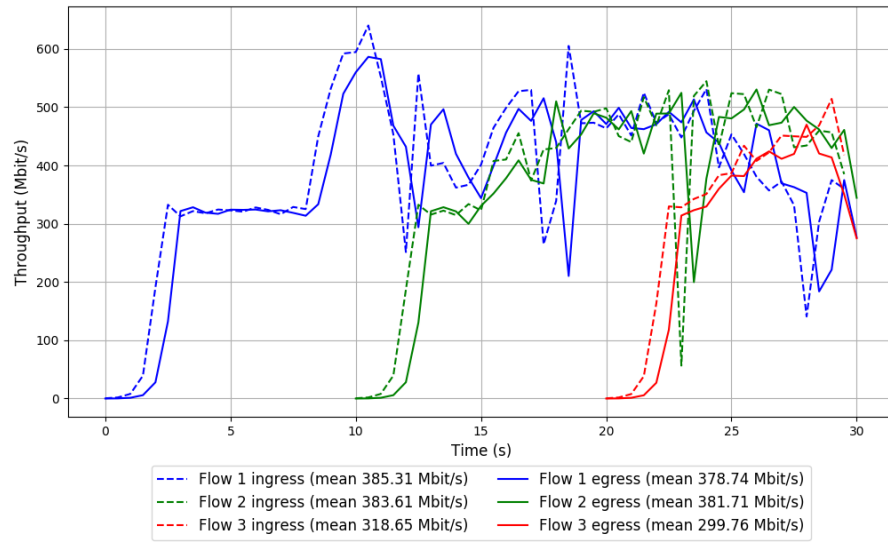Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 416.94 Mbit/s) --- Flow 1 egress (mean 398.76 Mbit/s)
Flow 2 ingress (mean 376.56 Mbit/s) --- Flow 2 egress (mean 367.93 Mbit/s)
Flow 3 ingress (mean 313.20 Mbit/s) --- Flow 3 egress (mean 307.43 Mbit/s)

Flow 1 (95th percentile 284.38 ms)   Flow 2 (95th percentile 253.88 ms)   Flow 3 (95th percentile 215.20 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-06-28 00:51:29
End at: 2019-06-28 00:51:59
Local clock offset: 0.046 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-06-28 02:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 730.23 Mbit/s
95th percentile per-packet one-way delay: 247.310 ms
Loss rate: 2.93%
-- Flow 1:
Average throughput: 378.74 Mbit/s
95th percentile per-packet one-way delay: 255.498 ms
Loss rate: 2.43%
-- Flow 2:
Average throughput: 381.71 Mbit/s
95th percentile per-packet one-way delay: 221.951 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 299.76 Mbit/s
95th percentile per-packet one-way delay: 266.918 ms
Loss rate: 8.00%
```
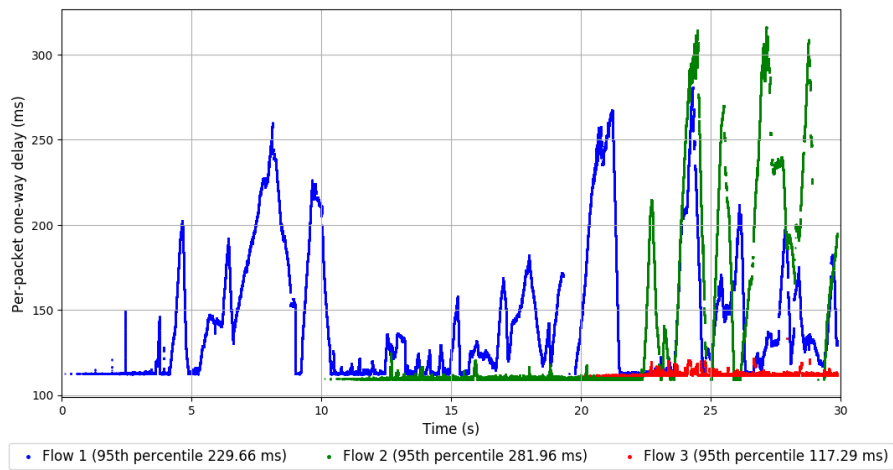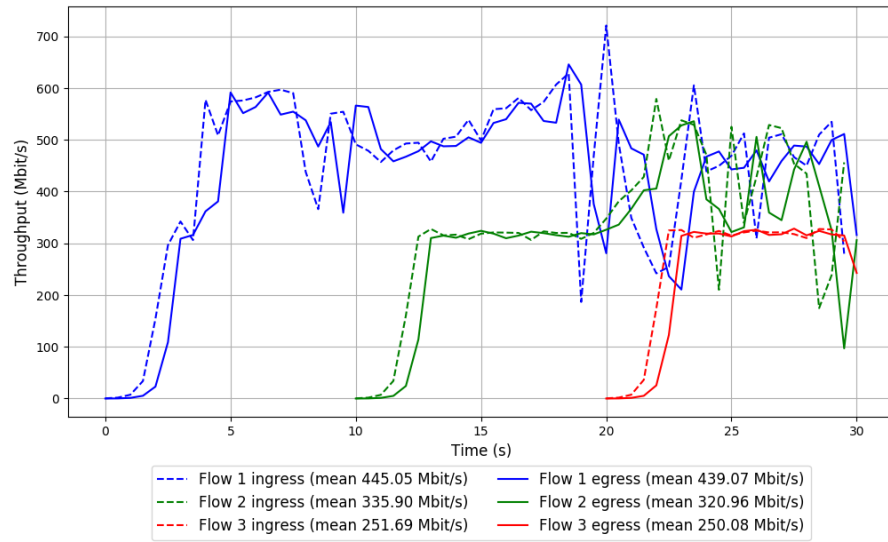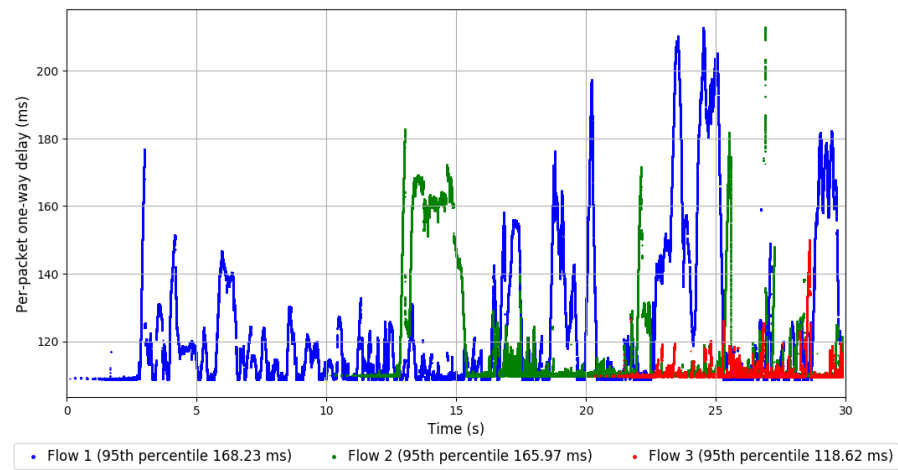
Run 4: Report of TCP BBR — Data Link

- - - - Flow 1 ingress (mean 385.31 Mbit/s) ——— Flow 1 egress (mean 378.74 Mbit/s)
- - - - Flow 2 ingress (mean 383.61 Mbit/s) ——— Flow 2 egress (mean 381.71 Mbit/s)
- - - - Flow 3 ingress (mean 318.65 Mbit/s) ——— Flow 3 egress (mean 299.76 Mbit/s)

• Flow 1 (95th percentile 255.50 ms)   • Flow 2 (95th percentile 221.95 ms)   • Flow 3 (95th percentile 266.92 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-06-28 01:29:51
End at: 2019-06-28 01:30:21
Local clock offset: -0.052 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-06-28 02:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 733.92 Mbit/s
95th percentile per-packet one-way delay: 241.034 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 439.07 Mbit/s
95th percentile per-packet one-way delay: 229.657 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 320.96 Mbit/s
95th percentile per-packet one-way delay: 281.962 ms
Loss rate: 5.50%
-- Flow 3:
Average throughput: 250.08 Mbit/s
95th percentile per-packet one-way delay: 117.286 ms
Loss rate: 2.84%
```

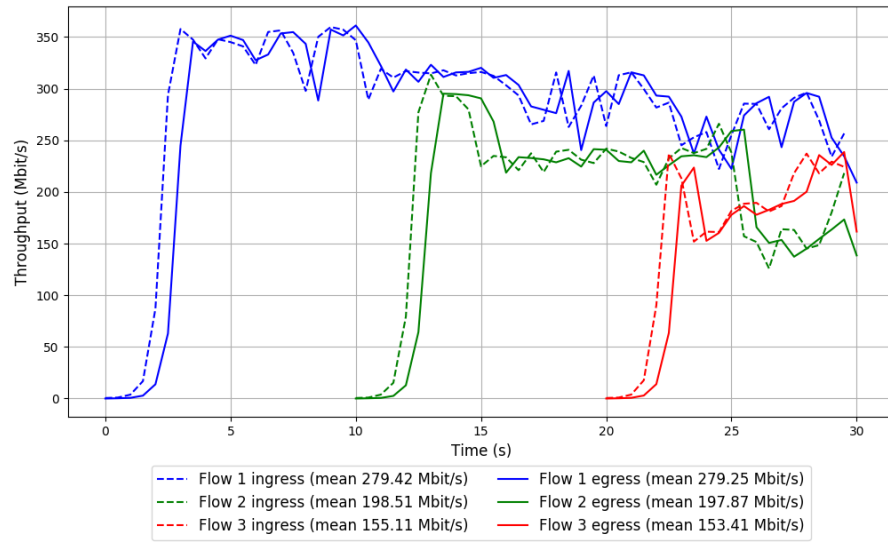Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-06-27 22:36:17
End at: 2019-06-27 22:36:47
Local clock offset: -0.018 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2019-06-28 02:03:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.83 Mbit/s
95th percentile per-packet one-way delay: 165.091 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 279.25 Mbit/s
95th percentile per-packet one-way delay: 168.234 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 197.87 Mbit/s
95th percentile per-packet one-way delay: 165.972 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 153.41 Mbit/s
95th percentile per-packet one-way delay: 118.618 ms
Loss rate: 3.29%
```

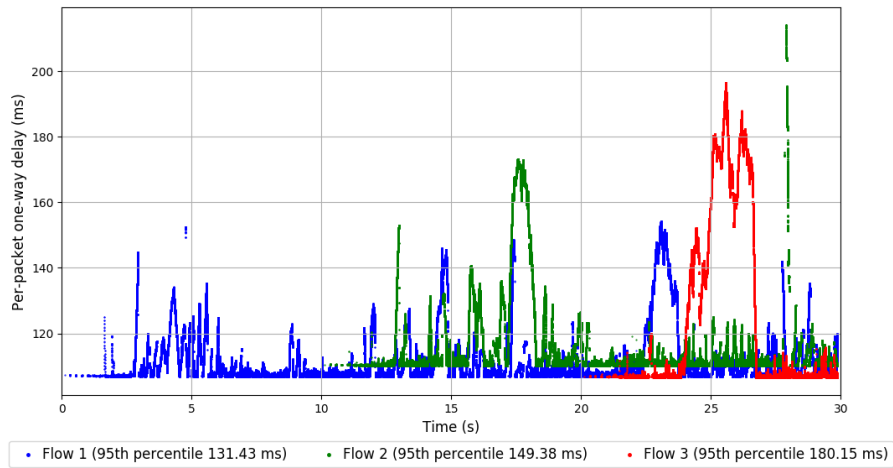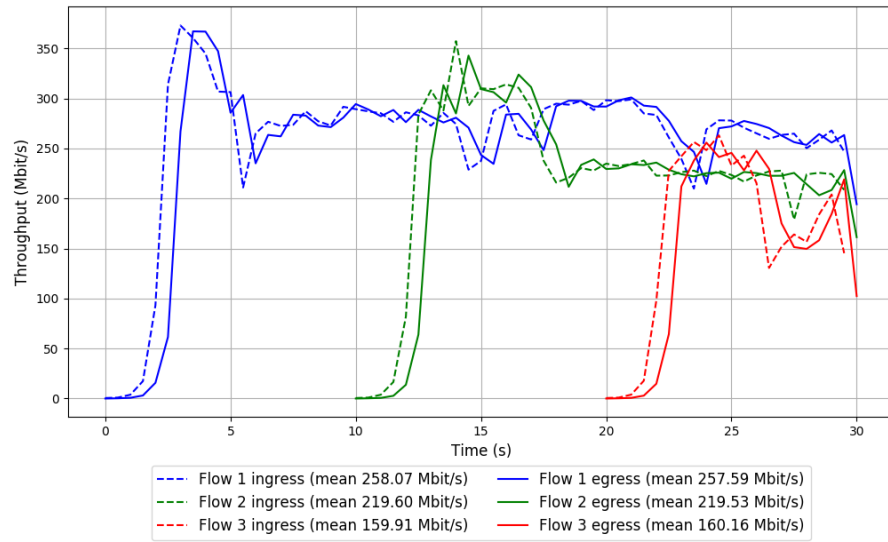Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-06-27 23:14:52
End at: 2019-06-27 23:15:22
Local clock offset: 0.035 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-06-28 02:03:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.76 Mbit/s
95th percentile per-packet one-way delay: 148.801 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 257.59 Mbit/s
95th percentile per-packet one-way delay: 131.434 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 219.53 Mbit/s
95th percentile per-packet one-way delay: 149.376 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 160.16 Mbit/s
95th percentile per-packet one-way delay: 180.145 ms
Loss rate: 2.03%
```
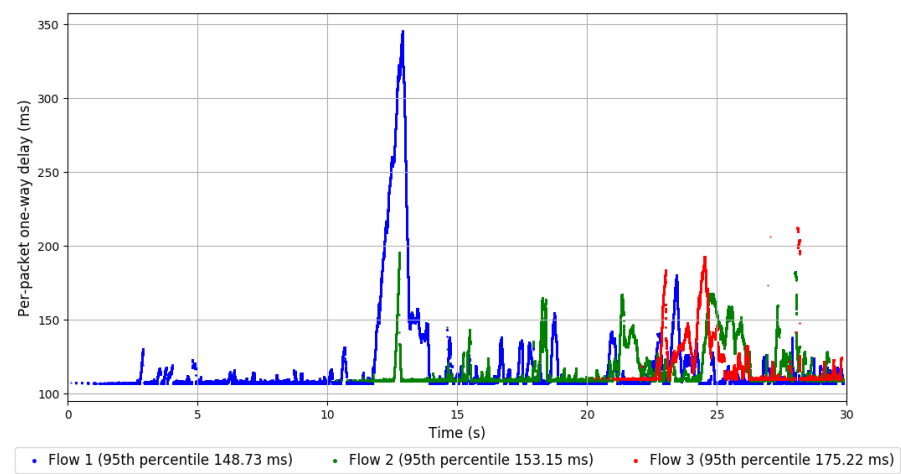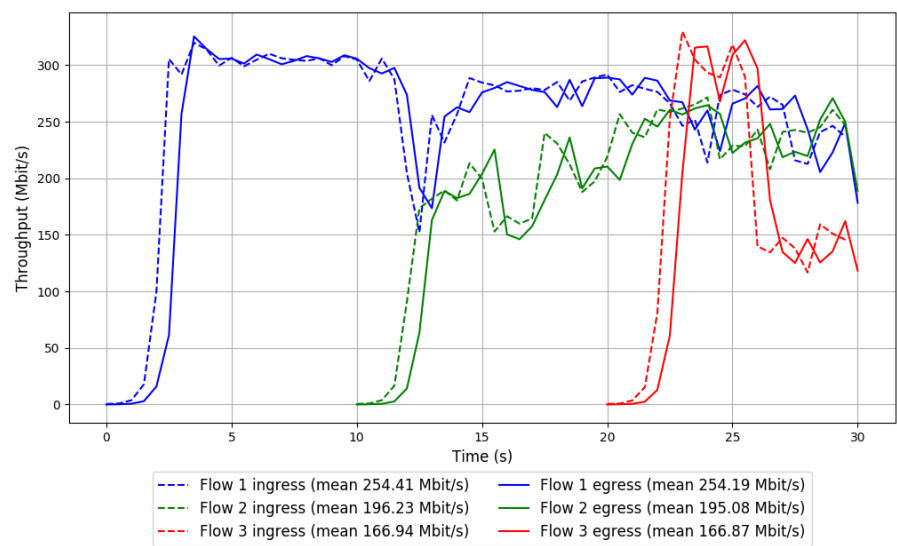
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 258.07 Mbit/s)   Flow 1 egress (mean 257.59 Mbit/s)
Flow 2 ingress (mean 219.60 Mbit/s)   Flow 2 egress (mean 219.53 Mbit/s)
Flow 3 ingress (mean 159.91 Mbit/s)   Flow 3 egress (mean 160.16 Mbit/s)

Flow 1 (95th percentile 131.43 ms)   Flow 2 (95th percentile 149.38 ms)   Flow 3 (95th percentile 180.15 ms)

```
Run 3: Statistics of Copa

Start at: 2019-06-27 23:54:09
End at: 2019-06-27 23:54:39
Local clock offset: 0.154 ms
Remote clock offset: -0.1 ms


# Below is generated by plot.py at 2019-06-28 02:03:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 438.11 Mbit/s
95th percentile per-packet one-way delay: 153.700 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 254.19 Mbit/s
95th percentile per-packet one-way delay: 148.734 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 195.08 Mbit/s
95th percentile per-packet one-way delay: 153.147 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 166.87 Mbit/s
95th percentile per-packet one-way delay: 175.216 ms
Loss rate: 2.20%
```
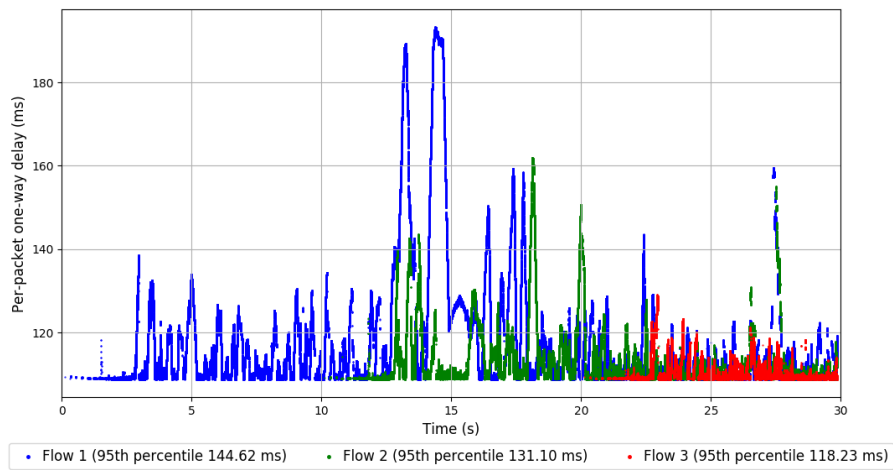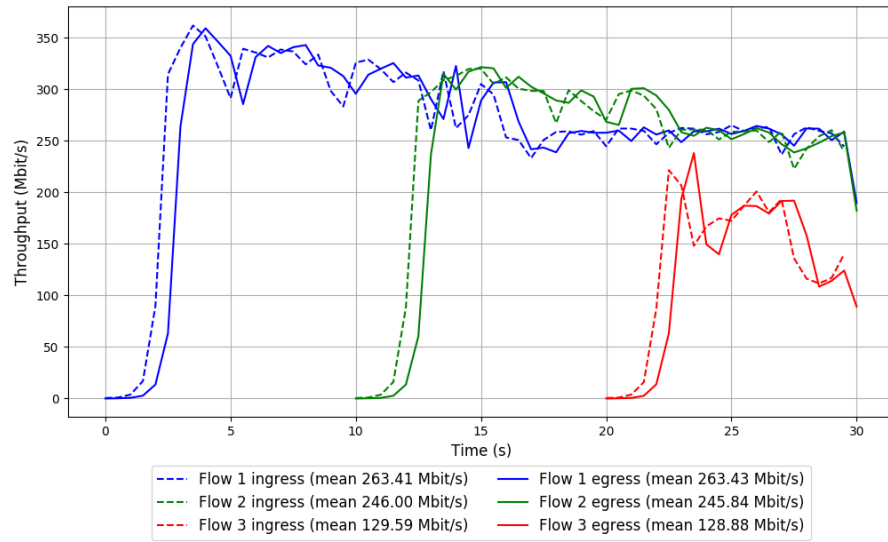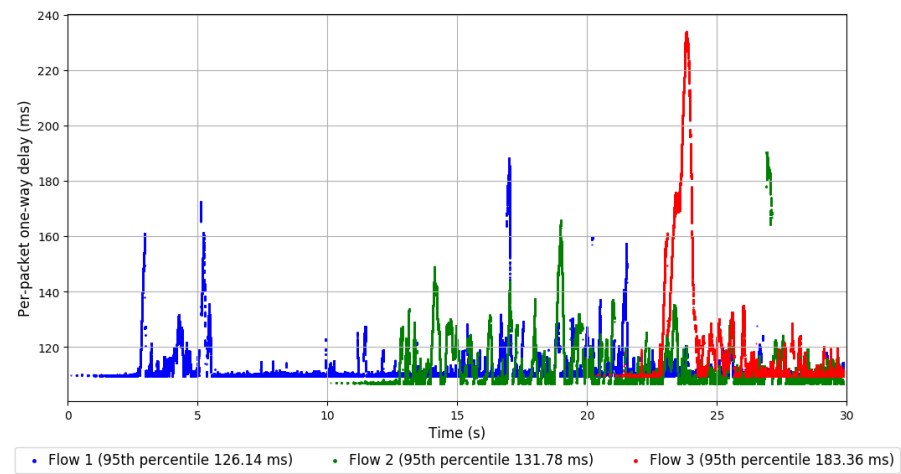
Run 3: Report of Copa — Data Link

Legend:
- Flow 1 ingress (mean 254.41 Mbit/s) — Flow 1 egress (mean 254.19 Mbit/s)
- Flow 2 ingress (mean 196.23 Mbit/s) — Flow 2 egress (mean 195.08 Mbit/s)
- Flow 3 ingress (mean 166.94 Mbit/s) — Flow 3 egress (mean 166.87 Mbit/s)

Legend:
- Flow 1 (95th percentile 148.73 ms)
- Flow 2 (95th percentile 153.15 ms)
- Flow 3 (95th percentile 175.22 ms)

```
Run 4: Statistics of Copa

Start at: 2019-06-28 00:32:47
End at: 2019-06-28 00:33:17
Local clock offset: -0.067 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-06-28 02:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.78 Mbit/s
95th percentile per-packet one-way delay: 137.658 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 263.43 Mbit/s
95th percentile per-packet one-way delay: 144.625 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 245.84 Mbit/s
95th percentile per-packet one-way delay: 131.096 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 128.88 Mbit/s
95th percentile per-packet one-way delay: 118.232 ms
Loss rate: 2.74%
```
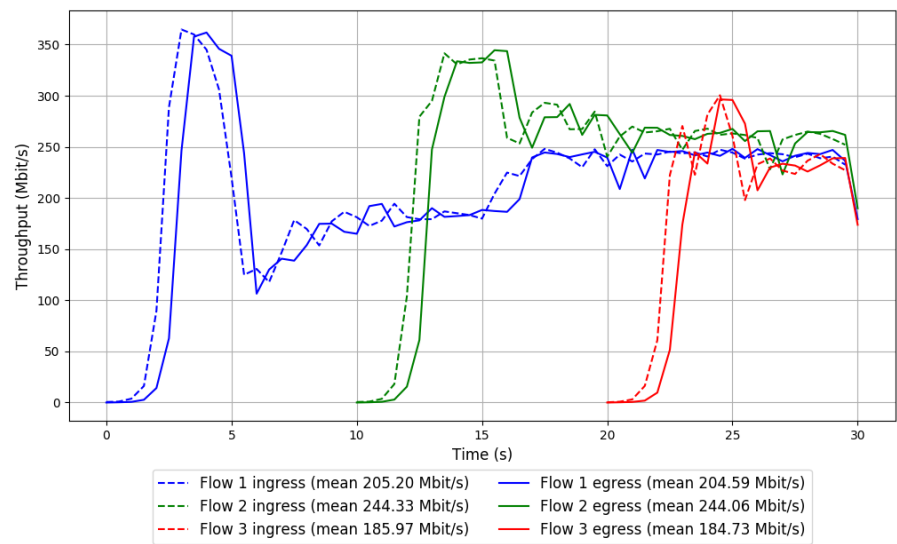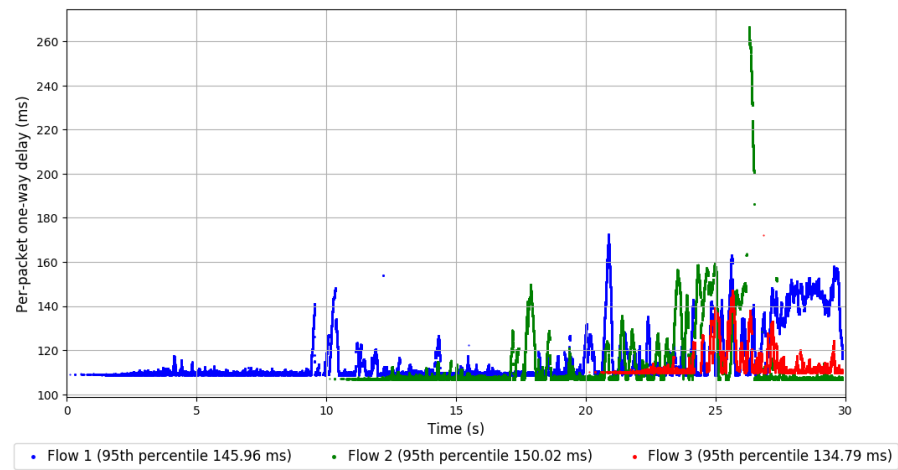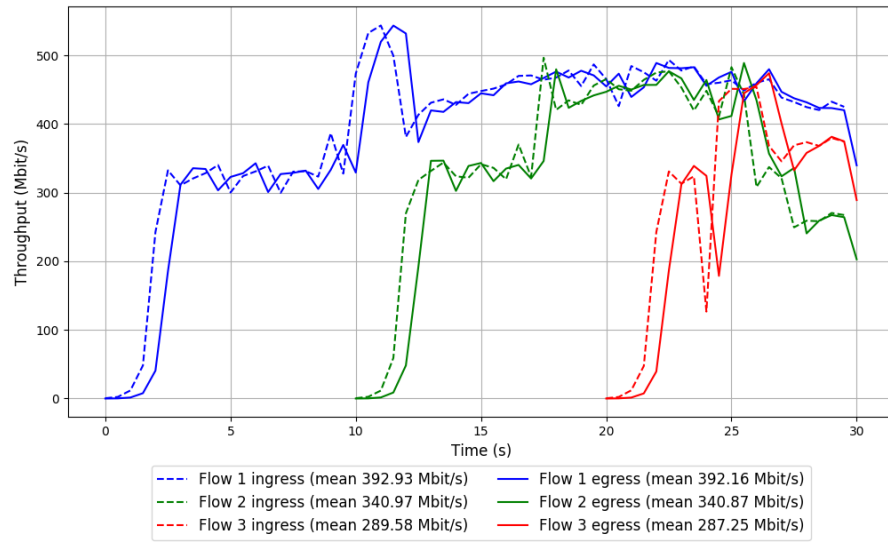
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 263.41 Mbit/s)   Flow 1 egress (mean 263.43 Mbit/s)
Flow 2 ingress (mean 246.00 Mbit/s)   Flow 2 egress (mean 245.84 Mbit/s)
Flow 3 ingress (mean 129.59 Mbit/s)   Flow 3 egress (mean 128.88 Mbit/s)

Flow 1 (95th percentile 144.62 ms)   Flow 2 (95th percentile 131.10 ms)   Flow 3 (95th percentile 118.23 ms)

```
Run 5: Statistics of Copa

Start at: 2019-06-28 01:11:06
End at: 2019-06-28 01:11:36
Local clock offset: -0.144 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2019-06-28 02:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.94 Mbit/s
95th percentile per-packet one-way delay: 134.275 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 204.59 Mbit/s
95th percentile per-packet one-way delay: 126.141 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 244.06 Mbit/s
95th percentile per-packet one-way delay: 131.779 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 184.73 Mbit/s
95th percentile per-packet one-way delay: 183.357 ms
Loss rate: 2.87%
```
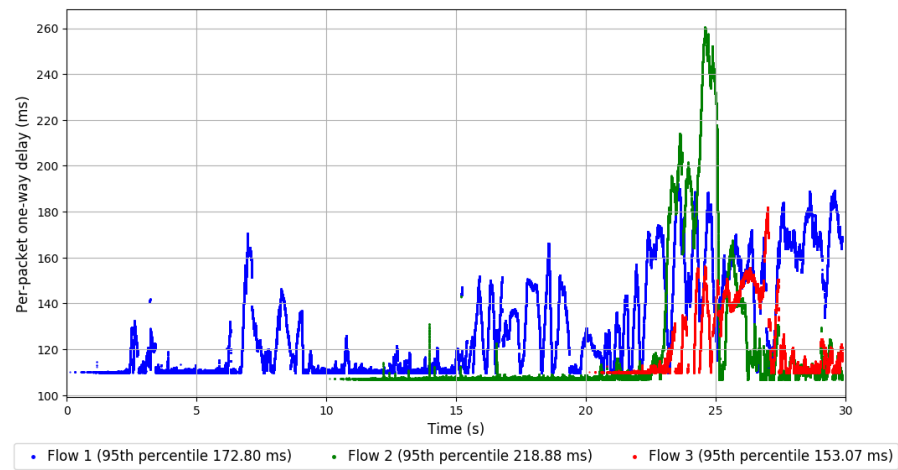
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-06-27 22:20:59
End at: 2019-06-27 22:21:29
Local clock offset: -0.095 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-06-28 02:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 712.39 Mbit/s
95th percentile per-packet one-way delay: 146.377 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 392.16 Mbit/s
95th percentile per-packet one-way delay: 145.956 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 340.87 Mbit/s
95th percentile per-packet one-way delay: 150.016 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 287.25 Mbit/s
95th percentile per-packet one-way delay: 134.792 ms
Loss rate: 2.97%
```

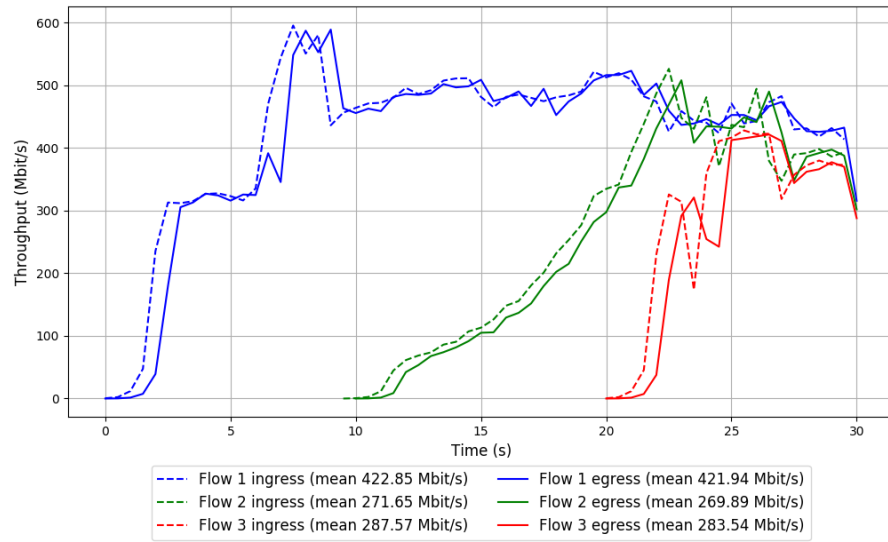Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 392.93 Mbit/s)   Flow 1 egress (mean 392.16 Mbit/s)
Flow 2 ingress (mean 340.97 Mbit/s)   Flow 2 egress (mean 340.87 Mbit/s)
Flow 3 ingress (mean 289.58 Mbit/s)   Flow 3 egress (mean 287.25 Mbit/s)

Flow 1 (95th percentile 145.96 ms)   Flow 2 (95th percentile 150.02 ms)   Flow 3 (95th percentile 134.79 ms)
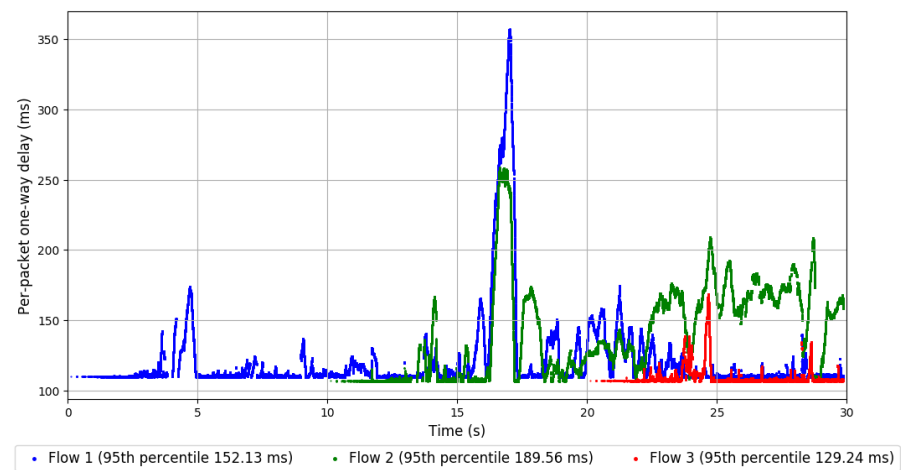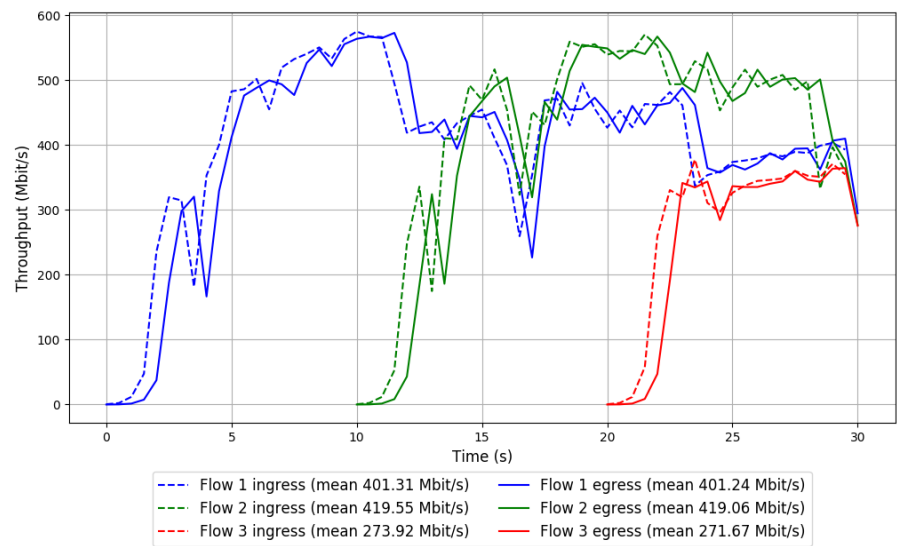
26

```
Run 2: Statistics of TCP Cubic

Start at: 2019-06-27 23:00:00
End at: 2019-06-27 23:00:30
Local clock offset: -0.009 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-06-28 02:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 694.09 Mbit/s
95th percentile per-packet one-way delay: 180.672 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 421.94 Mbit/s
95th percentile per-packet one-way delay: 172.800 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 269.89 Mbit/s
95th percentile per-packet one-way delay: 218.882 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 283.54 Mbit/s
95th percentile per-packet one-way delay: 153.068 ms
Loss rate: 3.58%
```
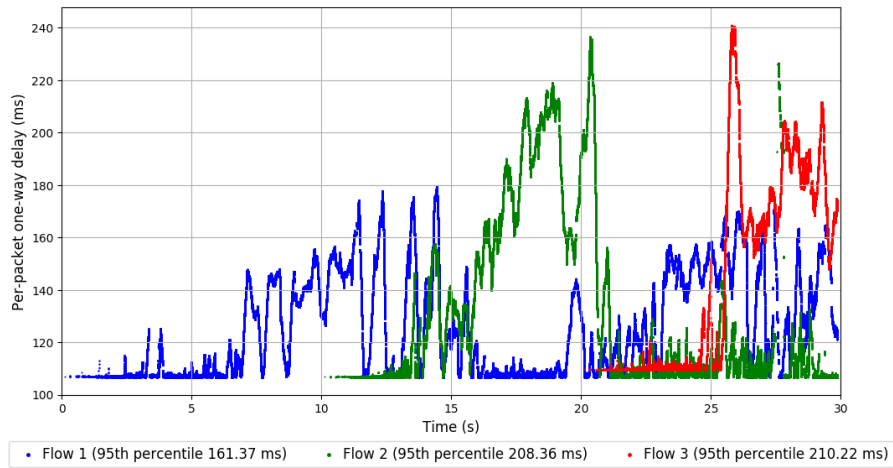
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-06-27 23:38:50
End at: 2019-06-27 23:39:20
Local clock offset: -0.058 ms
Remote clock offset: -0.141 ms


# Below is generated by plot.py at 2019-06-28 02:18:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 768.40 Mbit/s
95th percentile per-packet one-way delay: 176.543 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 401.24 Mbit/s
95th percentile per-packet one-way delay: 152.130 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 419.06 Mbit/s
95th percentile per-packet one-way delay: 189.555 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 271.67 Mbit/s
95th percentile per-packet one-way delay: 129.243 ms
Loss rate: 2.96%
```

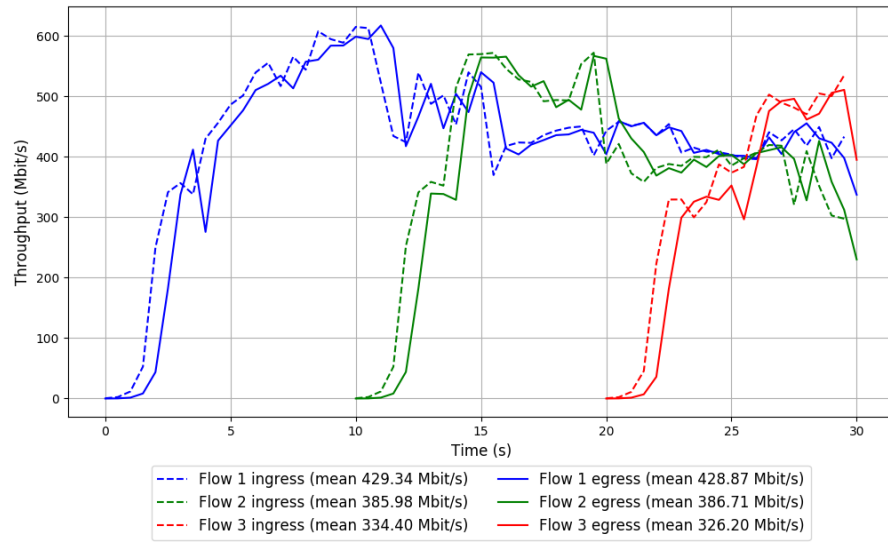Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-06-28 00:17:45
End at: 2019-06-28 00:18:15
Local clock offset: -0.109 ms
Remote clock offset: -0.086 ms


# Below is generated by plot.py at 2019-06-28 02:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 792.27 Mbit/s
95th percentile per-packet one-way delay: 197.544 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 428.87 Mbit/s
95th percentile per-packet one-way delay: 161.366 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 386.71 Mbit/s
95th percentile per-packet one-way delay: 208.361 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 326.20 Mbit/s
95th percentile per-packet one-way delay: 210.224 ms
Loss rate: 4.61%
```

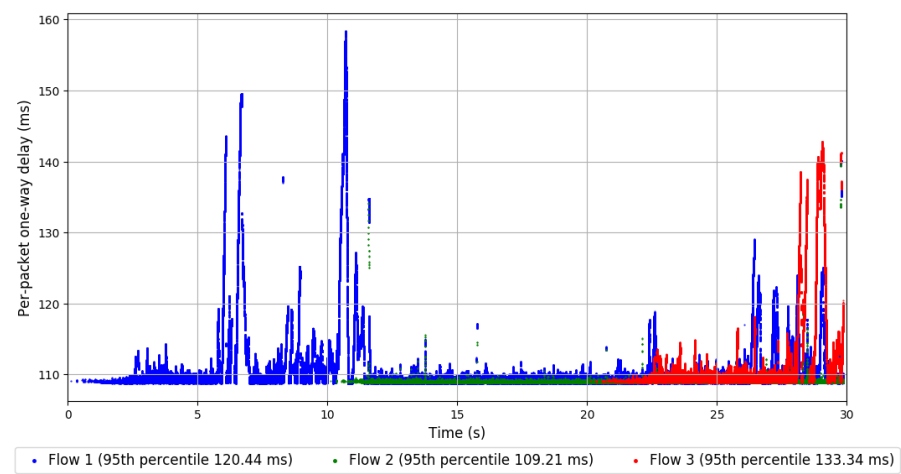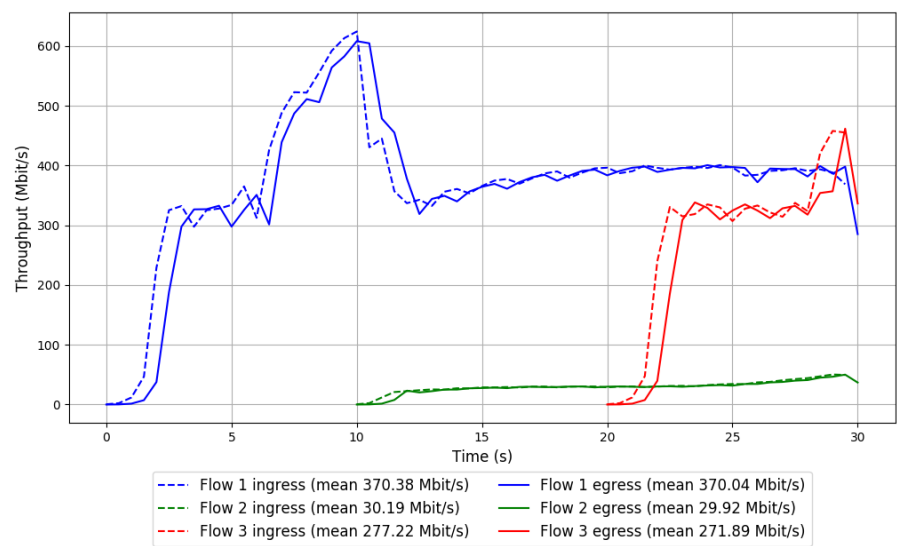## Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 429.34 Mbit/s) ---- Flow 1 egress (mean 428.87 Mbit/s) ——
Flow 2 ingress (mean 385.98 Mbit/s) ---- Flow 2 egress (mean 386.71 Mbit/s) ——
Flow 3 ingress (mean 334.40 Mbit/s) ---- Flow 3 egress (mean 326.20 Mbit/s) ——

Flow 1 (95th percentile 161.37 ms)   Flow 2 (95th percentile 208.36 ms)   Flow 3 (95th percentile 210.22 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-06-28 00:56:15
End at: 2019-06-28 00:56:45
Local clock offset: -0.088 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-06-28 02:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.98 Mbit/s
95th percentile per-packet one-way delay: 121.741 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 370.04 Mbit/s
95th percentile per-packet one-way delay: 120.444 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 29.92 Mbit/s
95th percentile per-packet one-way delay: 109.213 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 271.89 Mbit/s
95th percentile per-packet one-way delay: 133.344 ms
Loss rate: 4.08%
```
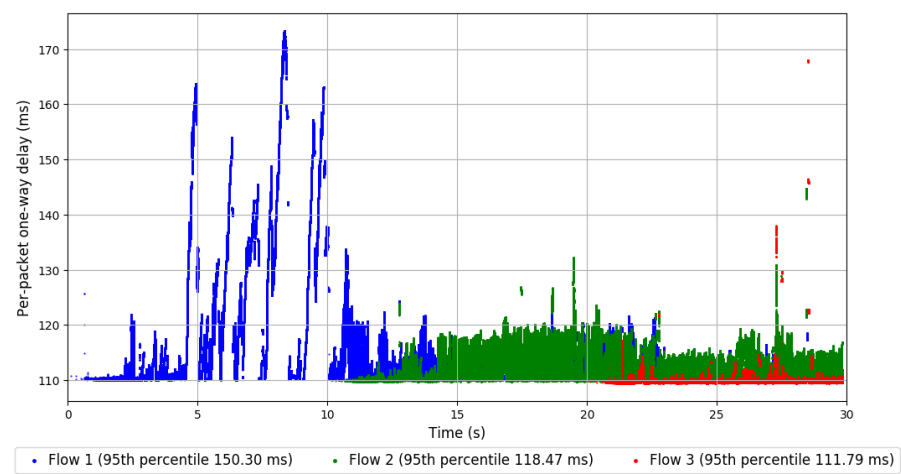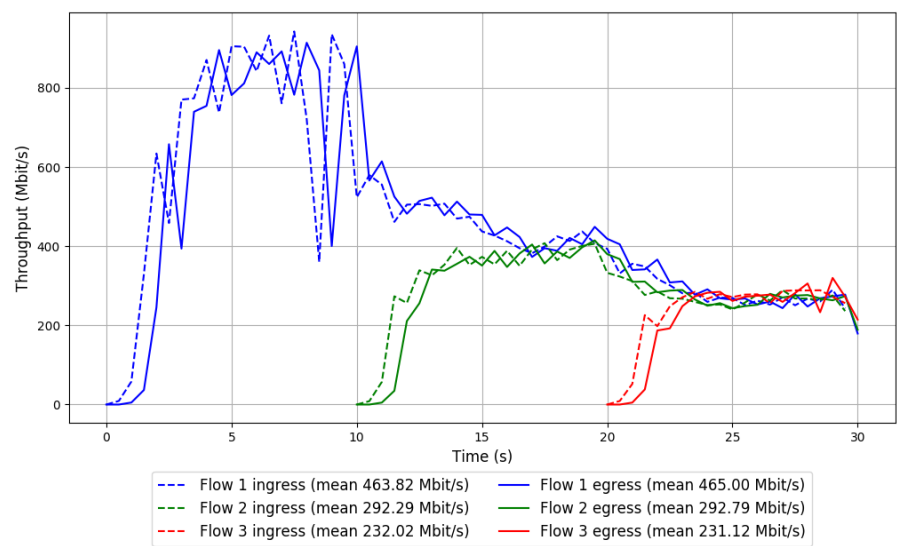
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 370.38 Mbit/s) --- Flow 1 egress (mean 370.04 Mbit/s)
Flow 2 ingress (mean 30.19 Mbit/s) --- Flow 2 egress (mean 29.92 Mbit/s)
Flow 3 ingress (mean 277.22 Mbit/s) --- Flow 3 egress (mean 271.89 Mbit/s)

Flow 1 (95th percentile 120.44 ms) Flow 2 (95th percentile 109.21 ms) Flow 3 (95th percentile 133.34 ms)
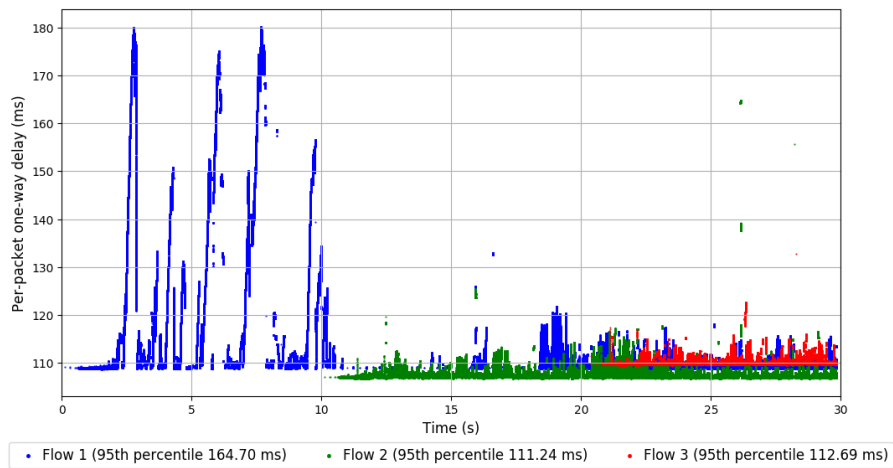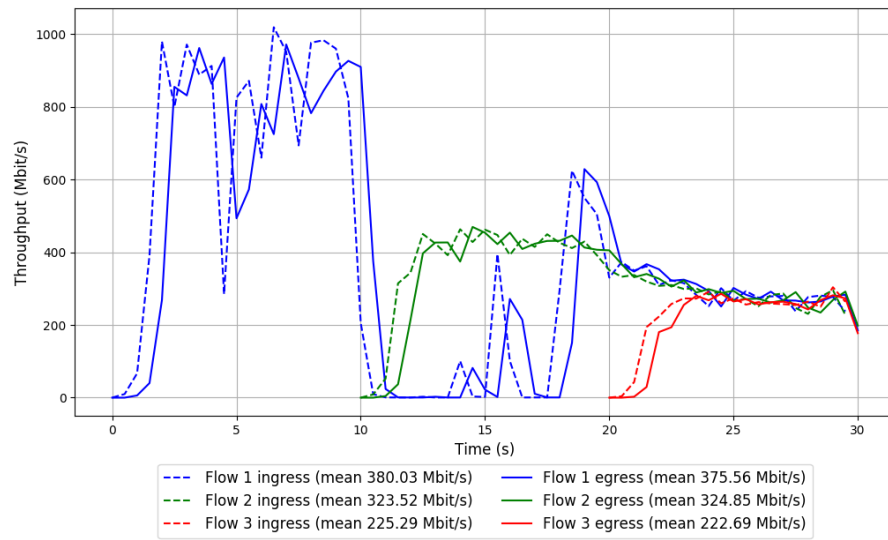
```
Run 1: Statistics of FillP

Start at: 2019-06-27 22:51:26
End at: 2019-06-27 22:51:56
Local clock offset: -0.045 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-06-28 02:20:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.39 Mbit/s
95th percentile per-packet one-way delay: 143.012 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 465.00 Mbit/s
95th percentile per-packet one-way delay: 150.297 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 292.79 Mbit/s
95th percentile per-packet one-way delay: 118.466 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 231.12 Mbit/s
95th percentile per-packet one-way delay: 111.790 ms
Loss rate: 2.49%
```
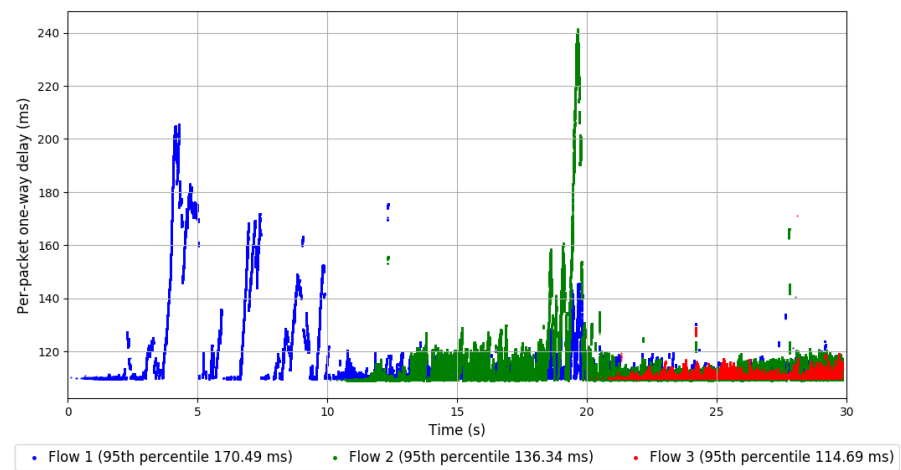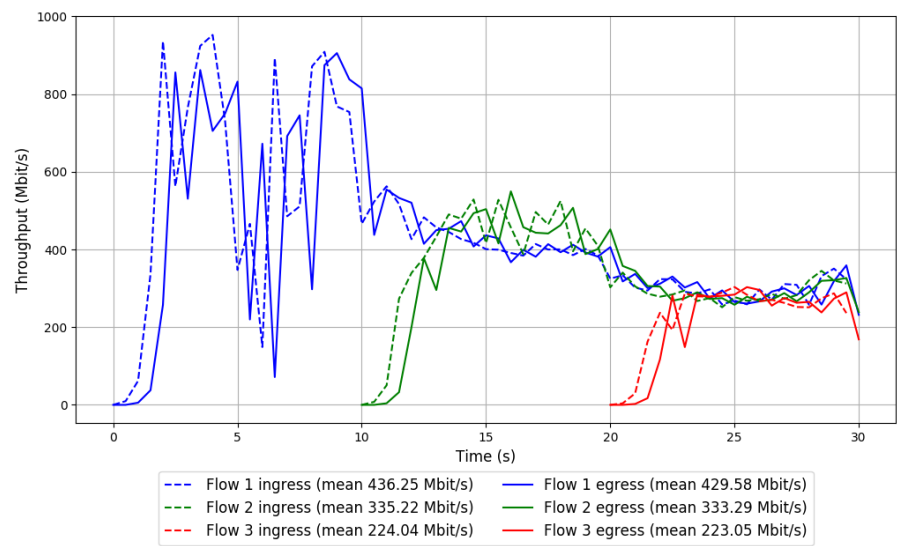
Run 1: Report of FillP — Data Link

- Flow 1 ingress (mean 463.82 Mbit/s)
- Flow 1 egress (mean 465.00 Mbit/s)
- Flow 2 ingress (mean 292.29 Mbit/s)
- Flow 2 egress (mean 292.79 Mbit/s)
- Flow 3 ingress (mean 232.02 Mbit/s)
- Flow 3 egress (mean 231.12 Mbit/s)

- Flow 1 (95th percentile 150.30 ms)
- Flow 2 (95th percentile 118.47 ms)
- Flow 3 (95th percentile 111.79 ms)

```
Run 2: Statistics of FillP

Start at: 2019-06-27 23:30:18
End at: 2019-06-27 23:30:48
Local clock offset: 0.006 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-06-28 02:27:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 663.41 Mbit/s
95th percentile per-packet one-way delay: 149.592 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 375.56 Mbit/s
95th percentile per-packet one-way delay: 164.701 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 324.85 Mbit/s
95th percentile per-packet one-way delay: 111.236 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 222.69 Mbit/s
95th percentile per-packet one-way delay: 112.688 ms
Loss rate: 3.34%
```
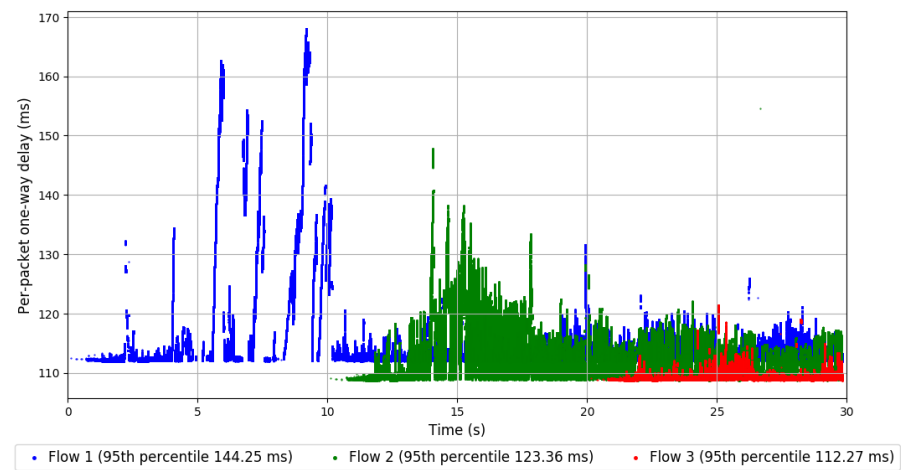
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 380.03 Mbit/s)   Flow 1 egress (mean 375.56 Mbit/s)
Flow 2 ingress (mean 323.52 Mbit/s)   Flow 2 egress (mean 324.85 Mbit/s)
Flow 3 ingress (mean 225.29 Mbit/s)   Flow 3 egress (mean 222.69 Mbit/s)

Flow 1 (95th percentile 164.70 ms)   Flow 2 (95th percentile 111.24 ms)   Flow 3 (95th percentile 112.69 ms)
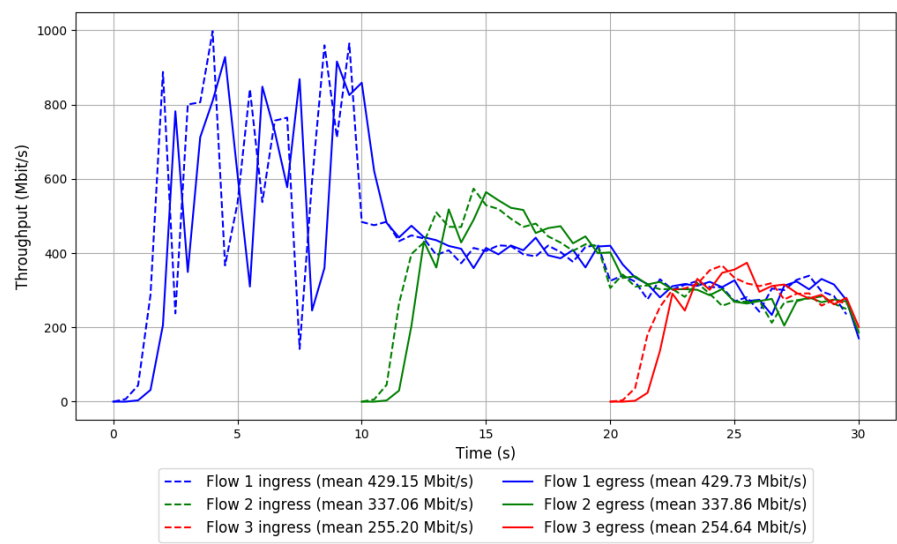
```
Run 3: Statistics of FillP

Start at: 2019-06-28 00:09:14
End at: 2019-06-28 00:09:44
Local clock offset: -0.048 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-06-28 02:32:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 723.21 Mbit/s
95th percentile per-packet one-way delay: 161.564 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 429.58 Mbit/s
95th percentile per-packet one-way delay: 170.486 ms
Loss rate: 2.24%
-- Flow 2:
Average throughput: 333.29 Mbit/s
95th percentile per-packet one-way delay: 136.337 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 223.05 Mbit/s
95th percentile per-packet one-way delay: 114.695 ms
Loss rate: 2.83%
```

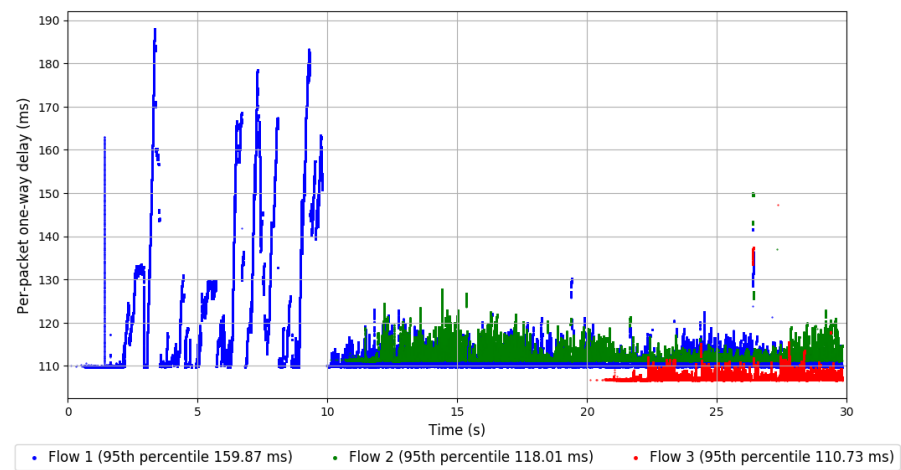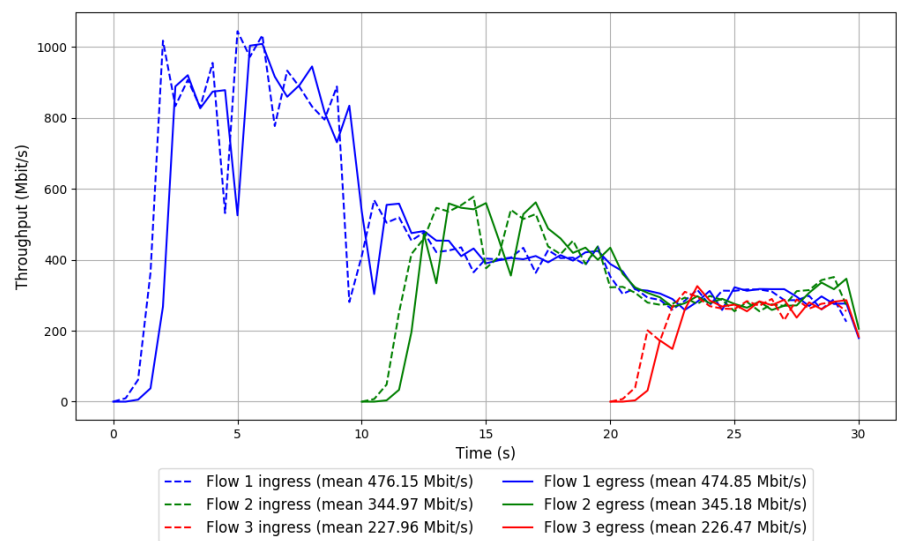Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-06-28 00:47:47
End at: 2019-06-28 00:48:17
Local clock offset: -0.091 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-06-28 02:32:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.38 Mbit/s
95th percentile per-packet one-way delay: 135.591 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 429.73 Mbit/s
95th percentile per-packet one-way delay: 144.247 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 337.86 Mbit/s
95th percentile per-packet one-way delay: 123.358 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 254.64 Mbit/s
95th percentile per-packet one-way delay: 112.266 ms
Loss rate: 2.44%
```

Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 429.15 Mbit/s) --- Flow 1 egress (mean 429.73 Mbit/s)
Flow 2 ingress (mean 337.06 Mbit/s) --- Flow 2 egress (mean 337.86 Mbit/s)
Flow 3 ingress (mean 255.20 Mbit/s) --- Flow 3 egress (mean 254.64 Mbit/s)

Flow 1 (95th percentile 144.25 ms) • Flow 2 (95th percentile 123.36 ms) • Flow 3 (95th percentile 112.27 ms)

```
Run 5: Statistics of FillP

Start at: 2019-06-28 01:26:17
End at: 2019-06-28 01:26:47
Local clock offset: -0.098 ms
Remote clock offset: -0.041 ms


# Below is generated by plot.py at 2019-06-28 02:35:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.55 Mbit/s
95th percentile per-packet one-way delay: 151.487 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 474.85 Mbit/s
95th percentile per-packet one-way delay: 159.866 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 345.18 Mbit/s
95th percentile per-packet one-way delay: 118.007 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 226.47 Mbit/s
95th percentile per-packet one-way delay: 110.729 ms
Loss rate: 2.80%
```
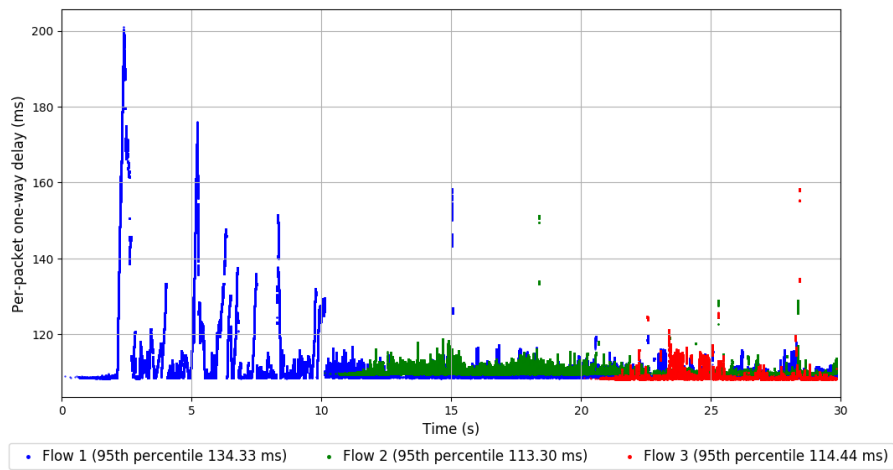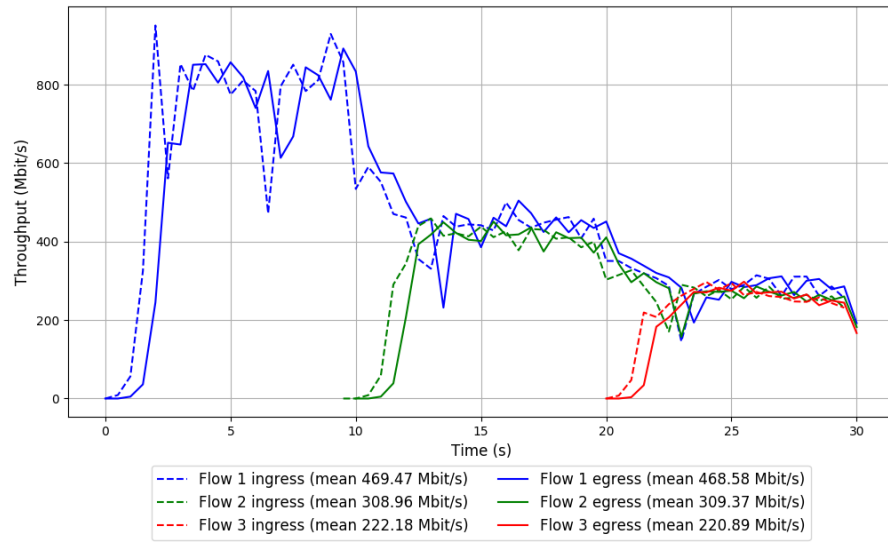
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-06-27 22:40:08
End at: 2019-06-27 22:40:38
Local clock offset: -0.596 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2019-06-28 02:35:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 745.90 Mbit/s
95th percentile per-packet one-way delay: 127.766 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 468.58 Mbit/s
95th percentile per-packet one-way delay: 134.332 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 309.37 Mbit/s
95th percentile per-packet one-way delay: 113.295 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 220.89 Mbit/s
95th percentile per-packet one-way delay: 114.439 ms
Loss rate: 2.72%
```
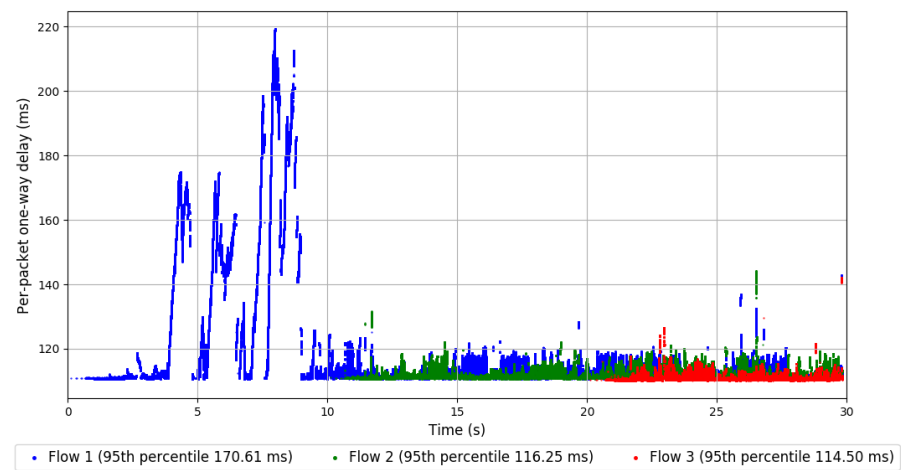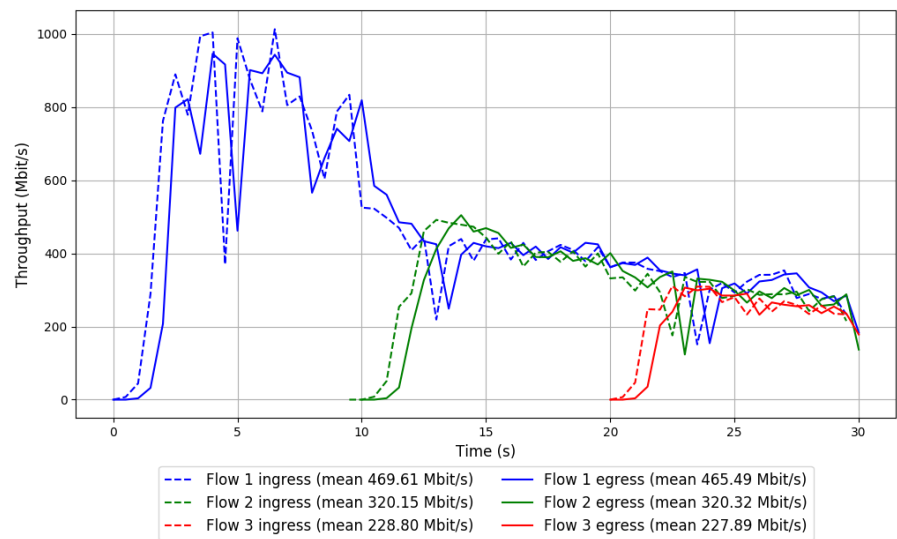
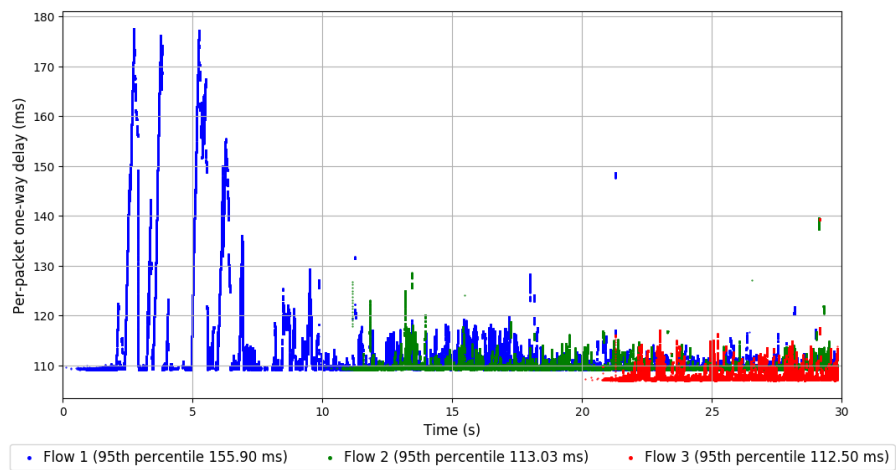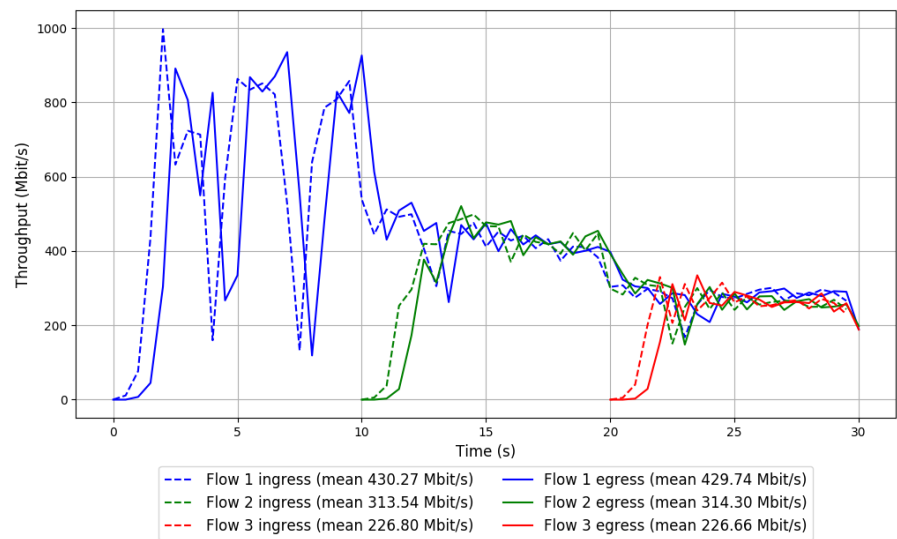Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-06-27 23:18:57
End at: 2019-06-27 23:19:27
Local clock offset: 0.694 ms
Remote clock offset: -0.45 ms


# Below is generated by plot.py at 2019-06-28 02:36:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 752.42 Mbit/s
95th percentile per-packet one-way delay: 161.346 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 465.49 Mbit/s
95th percentile per-packet one-way delay: 170.606 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 320.32 Mbit/s
95th percentile per-packet one-way delay: 116.245 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 227.89 Mbit/s
95th percentile per-packet one-way delay: 114.496 ms
Loss rate: 2.57%
```

Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-06-27 23:58:05
End at: 2019-06-27 23:58:35
Local clock offset: -0.043 ms
Remote clock offset: -0.476 ms


# Below is generated by plot.py at 2019-06-28 02:36:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 711.82 Mbit/s
95th percentile per-packet one-way delay: 143.506 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 429.74 Mbit/s
95th percentile per-packet one-way delay: 155.896 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 314.30 Mbit/s
95th percentile per-packet one-way delay: 113.027 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 226.66 Mbit/s
95th percentile per-packet one-way delay: 112.501 ms
Loss rate: 2.25%
```

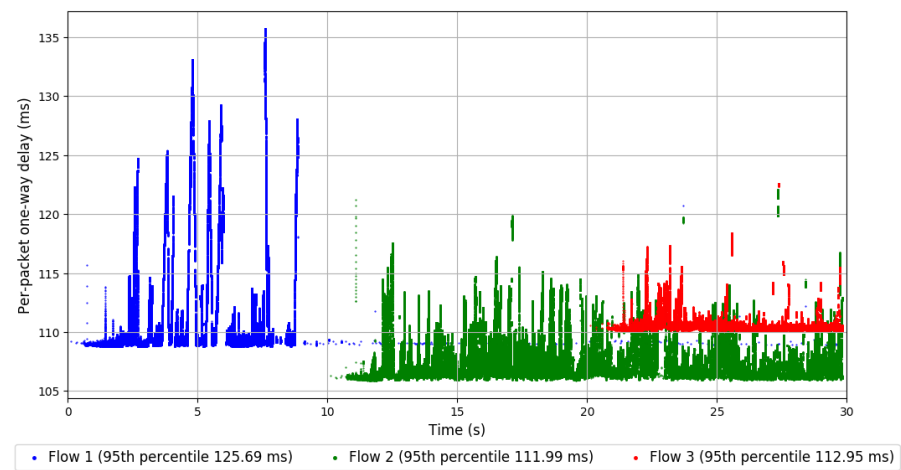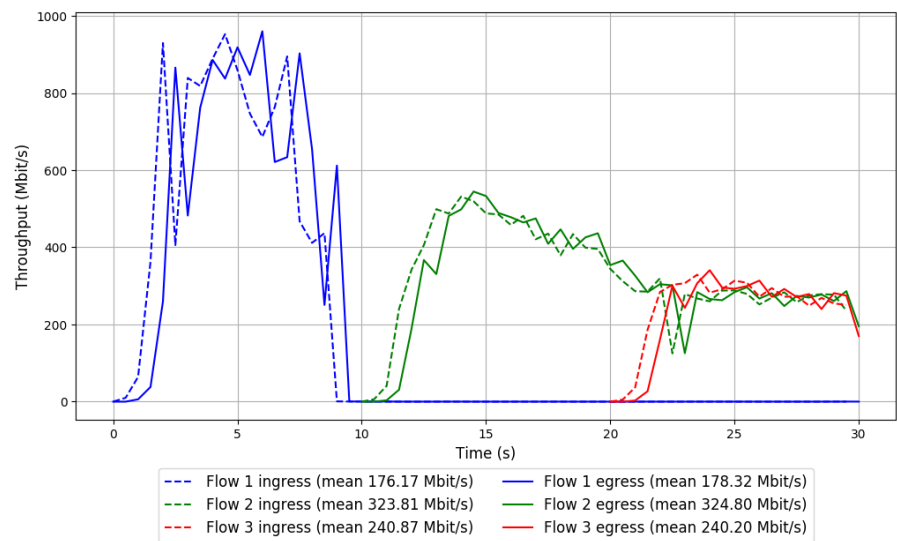Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 430.27 Mbit/s)   Flow 1 egress (mean 429.74 Mbit/s)
Flow 2 ingress (mean 313.54 Mbit/s)   Flow 2 egress (mean 314.30 Mbit/s)
Flow 3 ingress (mean 226.80 Mbit/s)   Flow 3 egress (mean 226.66 Mbit/s)

Flow 1 (95th percentile 155.90 ms)   Flow 2 (95th percentile 113.03 ms)   Flow 3 (95th percentile 112.50 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-06-28 00:36:45
End at: 2019-06-28 00:37:15
Local clock offset: -0.021 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-06-28 02:36:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.20 Mbit/s
95th percentile per-packet one-way delay: 119.996 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 178.32 Mbit/s
95th percentile per-packet one-way delay: 125.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 324.80 Mbit/s
95th percentile per-packet one-way delay: 111.992 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 240.20 Mbit/s
95th percentile per-packet one-way delay: 112.946 ms
Loss rate: 2.46%
```
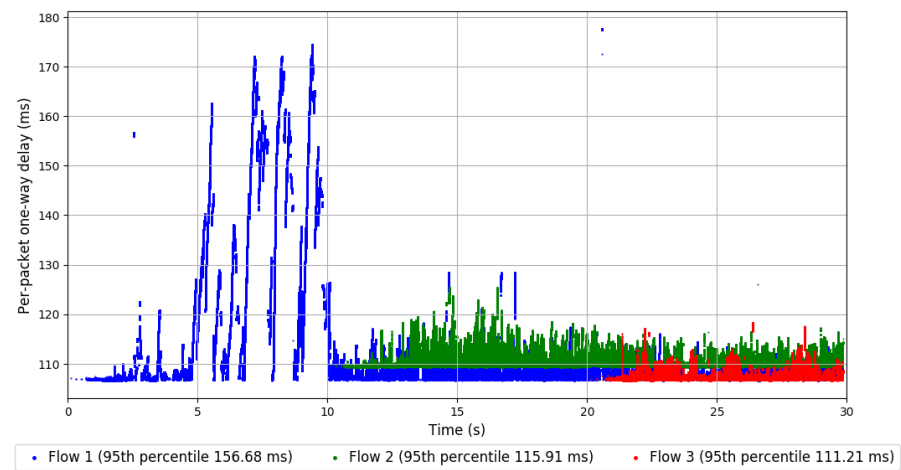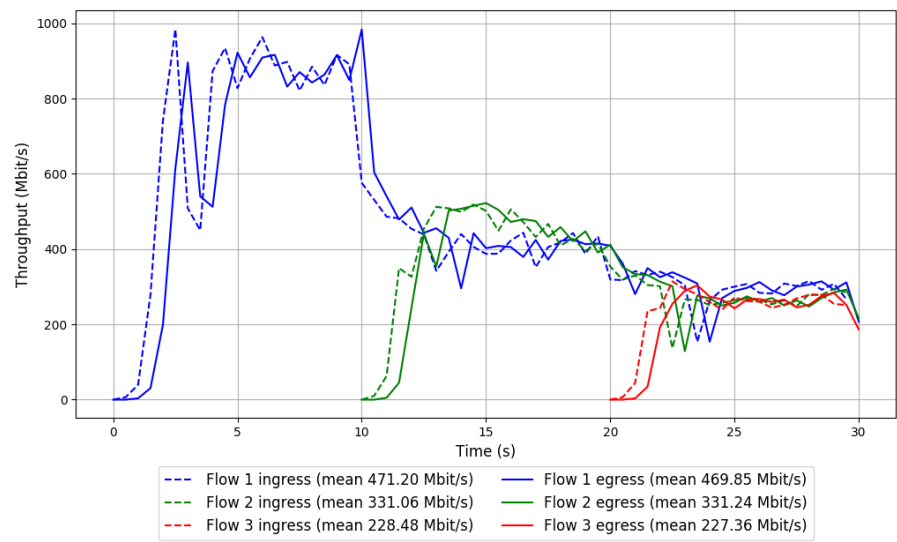
Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-06-28 01:15:06
End at: 2019-06-28 01:15:36
Local clock offset: -0.334 ms
Remote clock offset: 0.018 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 763.56 Mbit/s
95th percentile per-packet one-way delay: 152.501 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 469.85 Mbit/s
95th percentile per-packet one-way delay: 156.675 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 331.24 Mbit/s
95th percentile per-packet one-way delay: 115.914 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 227.36 Mbit/s
95th percentile per-packet one-way delay: 111.211 ms
Loss rate: 2.74%
```

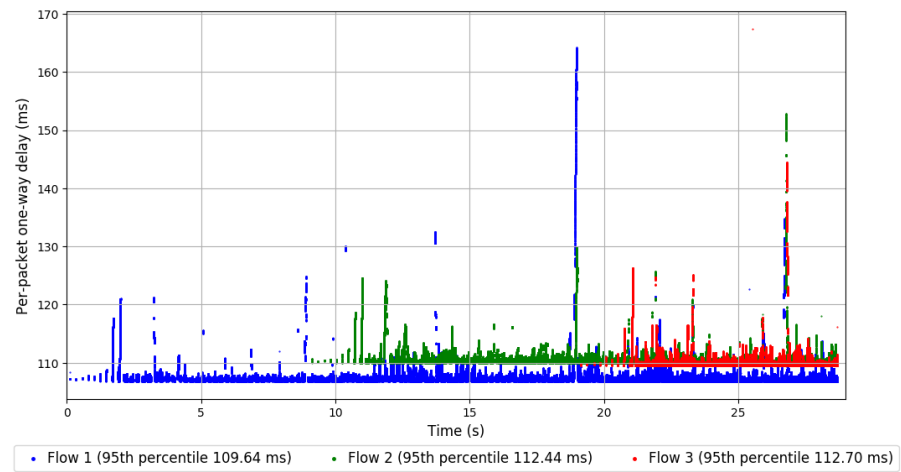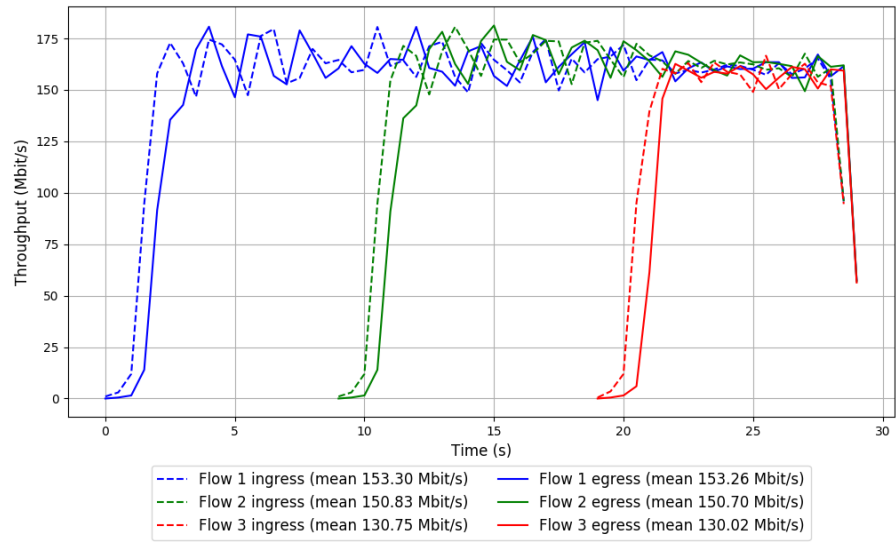# Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-06-27 22:31:12
End at: 2019-06-27 22:31:42
Local clock offset: 0.141 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 299.78 Mbit/s
95th percentile per-packet one-way delay: 111.759 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 153.26 Mbit/s
95th percentile per-packet one-way delay: 109.644 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 150.70 Mbit/s
95th percentile per-packet one-way delay: 112.444 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 130.02 Mbit/s
95th percentile per-packet one-way delay: 112.704 ms
Loss rate: 2.71%
```

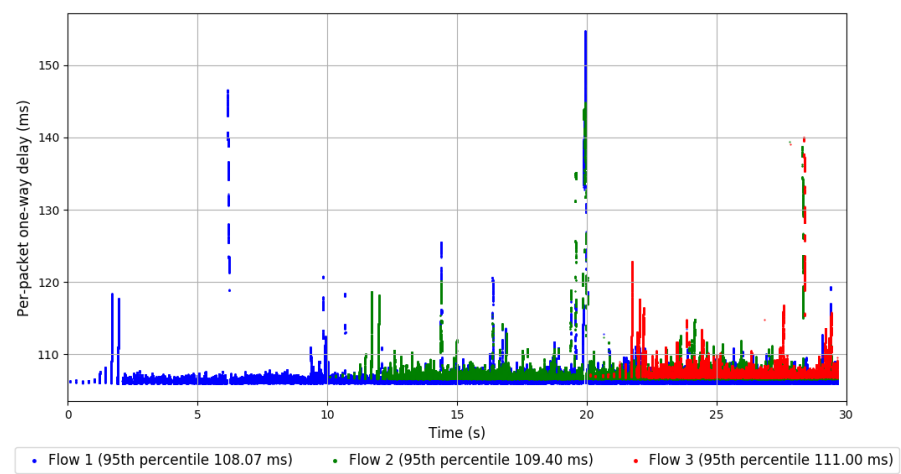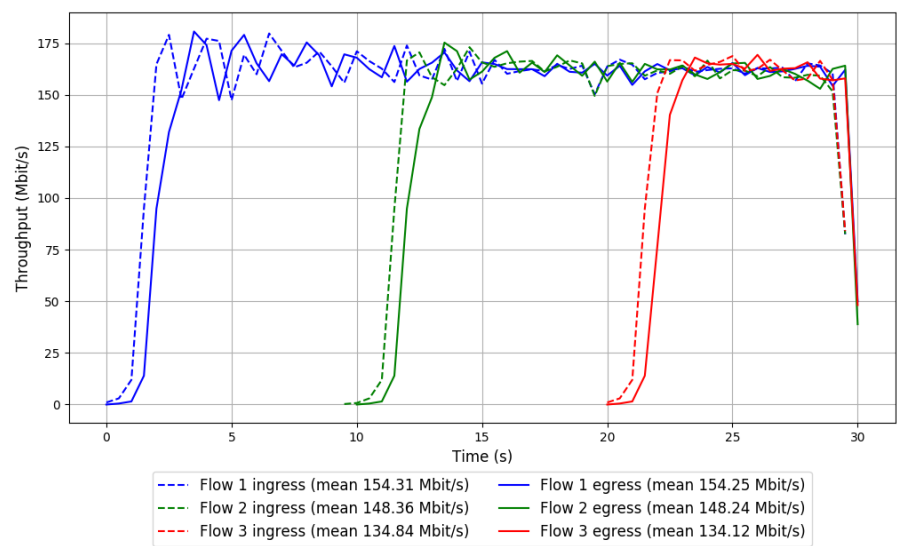# Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-06-27 23:09:47
End at: 2019-06-27 23:10:17
Local clock offset: -0.085 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 295.67 Mbit/s
95th percentile per-packet one-way delay: 108.988 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 154.25 Mbit/s
95th percentile per-packet one-way delay: 108.068 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 148.24 Mbit/s
95th percentile per-packet one-way delay: 109.399 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 134.12 Mbit/s
95th percentile per-packet one-way delay: 111.003 ms
Loss rate: 2.76%
```
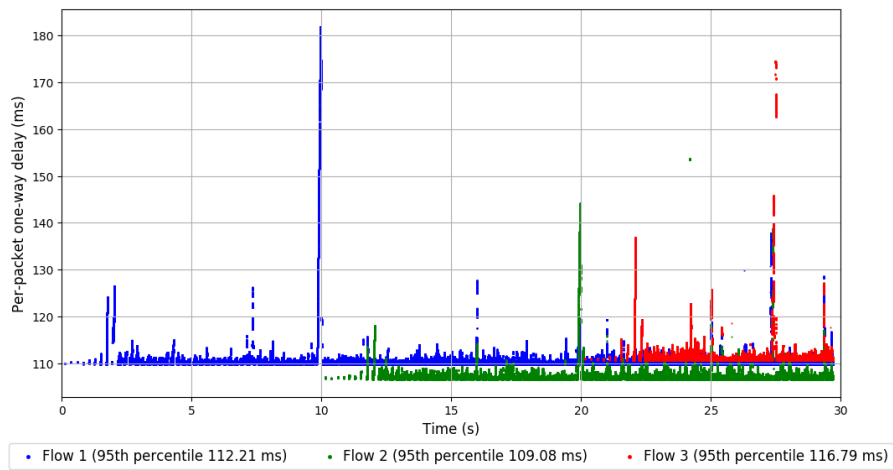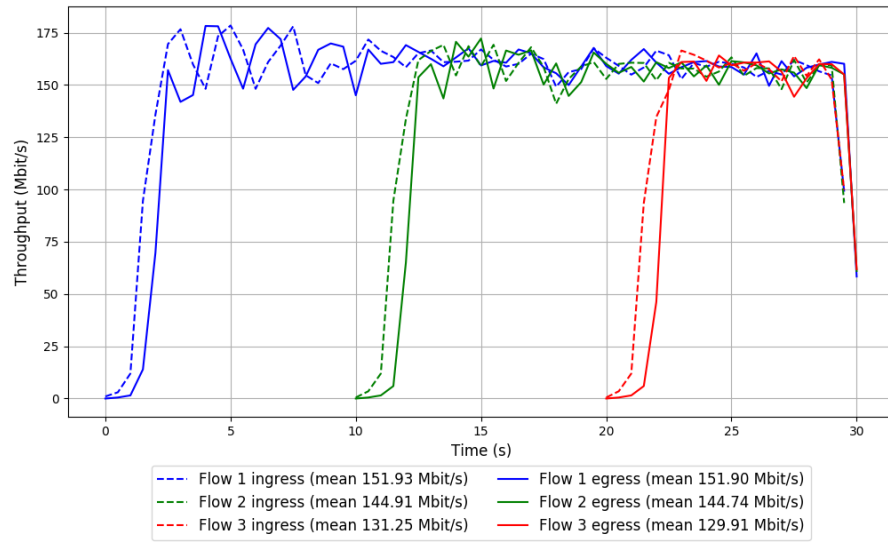
Run 2: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 154.31 Mbit/s) ——— Flow 1 egress (mean 154.25 Mbit/s)
- - - - Flow 2 ingress (mean 148.36 Mbit/s) ——— Flow 2 egress (mean 148.24 Mbit/s)
- - - - Flow 3 ingress (mean 134.84 Mbit/s) ——— Flow 3 egress (mean 134.12 Mbit/s)

- Flow 1 (95th percentile 108.07 ms)   - Flow 2 (95th percentile 109.40 ms)   - Flow 3 (95th percentile 111.00 ms)

```
Run 3: Statistics of Indigo

Start at: 2019-06-27 23:48:59
End at: 2019-06-27 23:49:29
Local clock offset: -0.07 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.41 Mbit/s
95th percentile per-packet one-way delay: 112.342 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 151.90 Mbit/s
95th percentile per-packet one-way delay: 112.211 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 144.74 Mbit/s
95th percentile per-packet one-way delay: 109.077 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 129.91 Mbit/s
95th percentile per-packet one-way delay: 116.789 ms
Loss rate: 3.27%
```

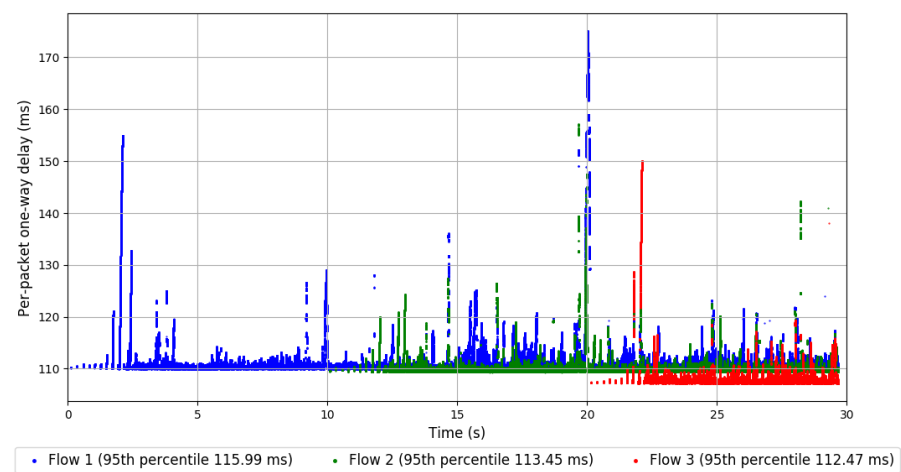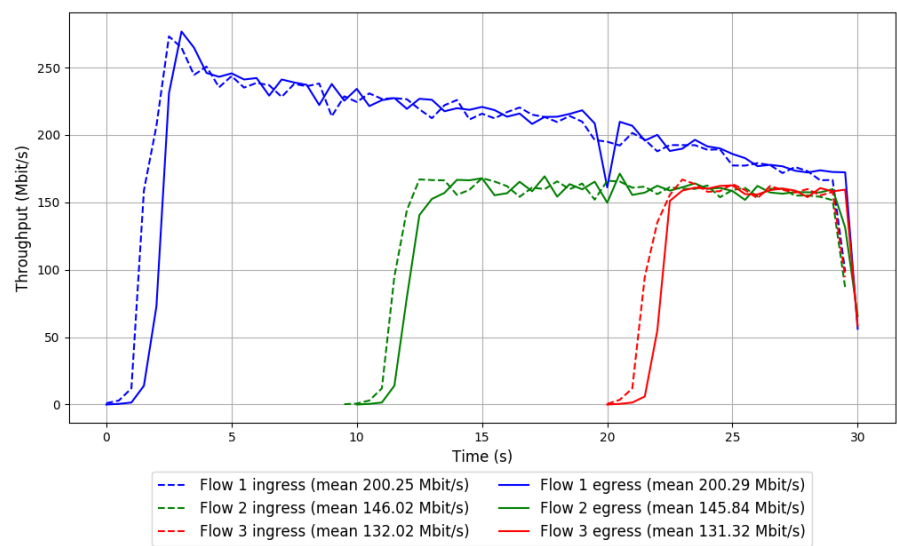Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-06-28 00:27:37
End at: 2019-06-28 00:28:07
Local clock offset: 0.075 ms
Remote clock offset: -0.481 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.10 Mbit/s
95th percentile per-packet one-way delay: 115.115 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 200.29 Mbit/s
95th percentile per-packet one-way delay: 115.986 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 145.84 Mbit/s
95th percentile per-packet one-way delay: 113.450 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 131.32 Mbit/s
95th percentile per-packet one-way delay: 112.469 ms
Loss rate: 2.75%
```

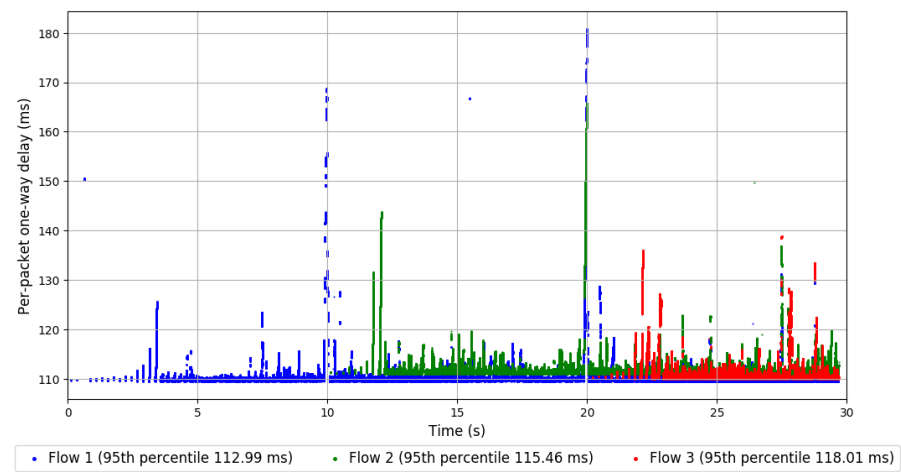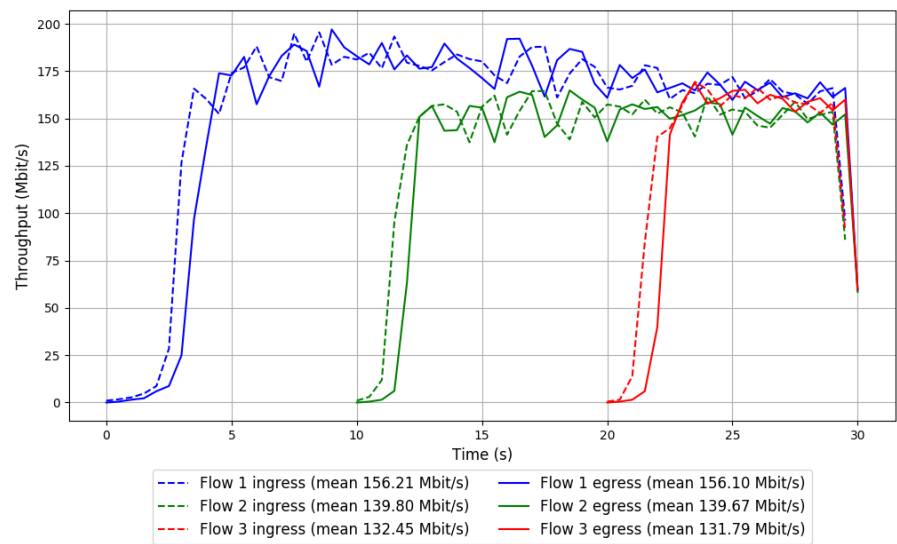# Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-06-28 01:05:56
End at: 2019-06-28 01:06:26
Local clock offset: -0.342 ms
Remote clock offset: -0.036 ms


# Below is generated by plot.py at 2019-06-28 02:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.66 Mbit/s
95th percentile per-packet one-way delay: 114.705 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 156.10 Mbit/s
95th percentile per-packet one-way delay: 112.987 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 139.67 Mbit/s
95th percentile per-packet one-way delay: 115.462 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 131.79 Mbit/s
95th percentile per-packet one-way delay: 118.008 ms
Loss rate: 2.75%
```
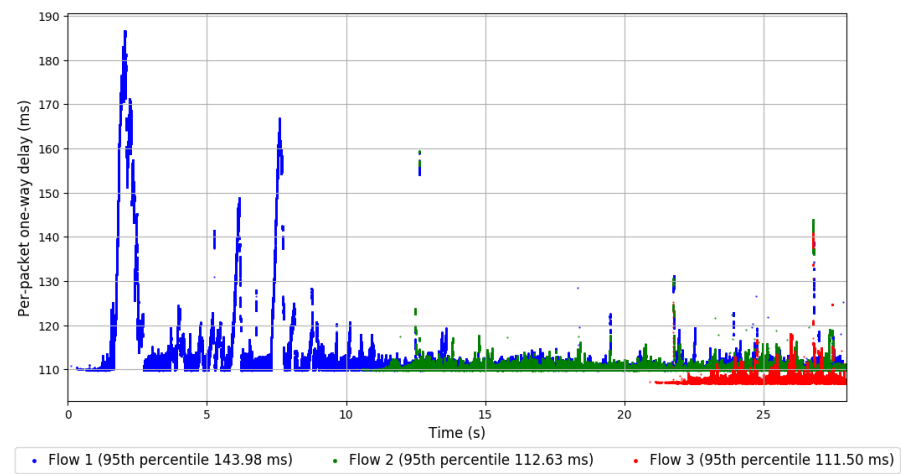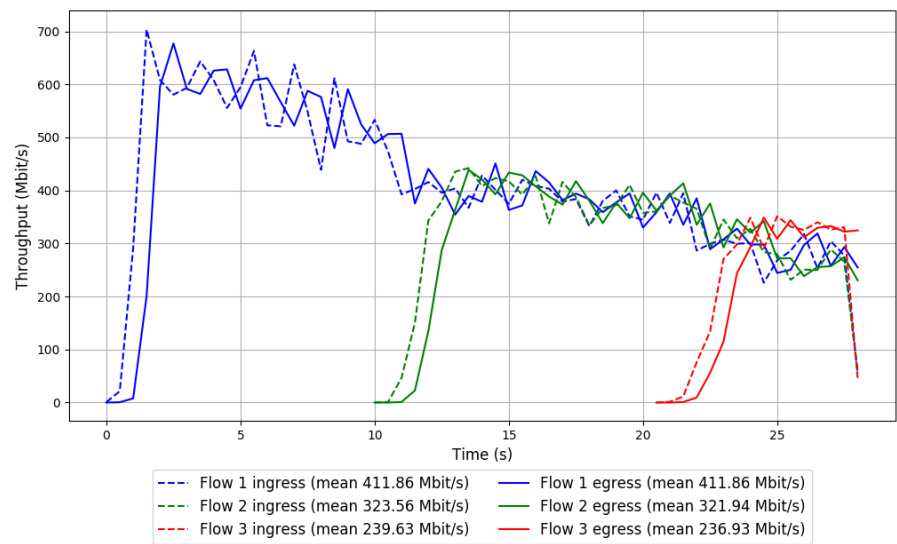
Run 5: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 156.21 Mbit/s) ——— Flow 1 egress (mean 156.10 Mbit/s)
- - - - Flow 2 ingress (mean 139.80 Mbit/s) ——— Flow 2 egress (mean 139.67 Mbit/s)
- - - - Flow 3 ingress (mean 132.45 Mbit/s) ——— Flow 3 egress (mean 131.79 Mbit/s)

- Flow 1 (95th percentile 112.99 ms)   • Flow 2 (95th percentile 115.46 ms)   • Flow 3 (95th percentile 118.01 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-06-27 22:45:42
End at: 2019-06-27 22:46:12
Local clock offset: 0.054 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2019-06-28 02:48:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 675.02 Mbit/s
95th percentile per-packet one-way delay: 124.604 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 411.86 Mbit/s
95th percentile per-packet one-way delay: 143.981 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 321.94 Mbit/s
95th percentile per-packet one-way delay: 112.630 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 236.93 Mbit/s
95th percentile per-packet one-way delay: 111.500 ms
Loss rate: 4.02%
```
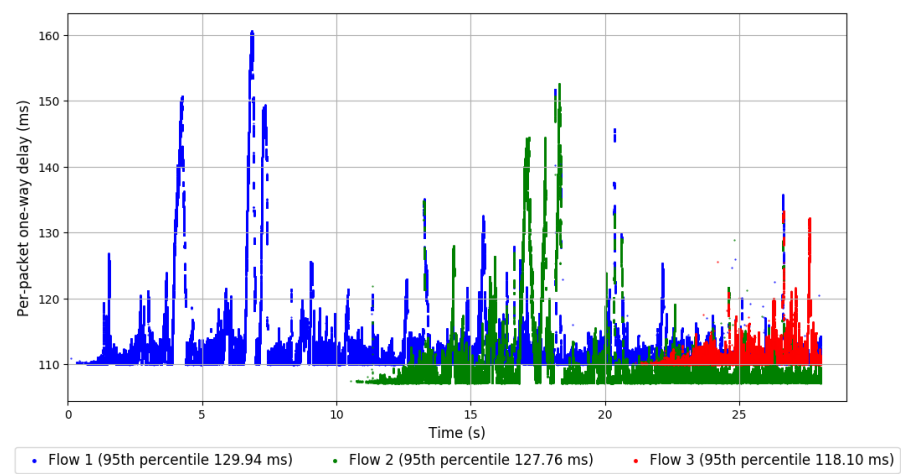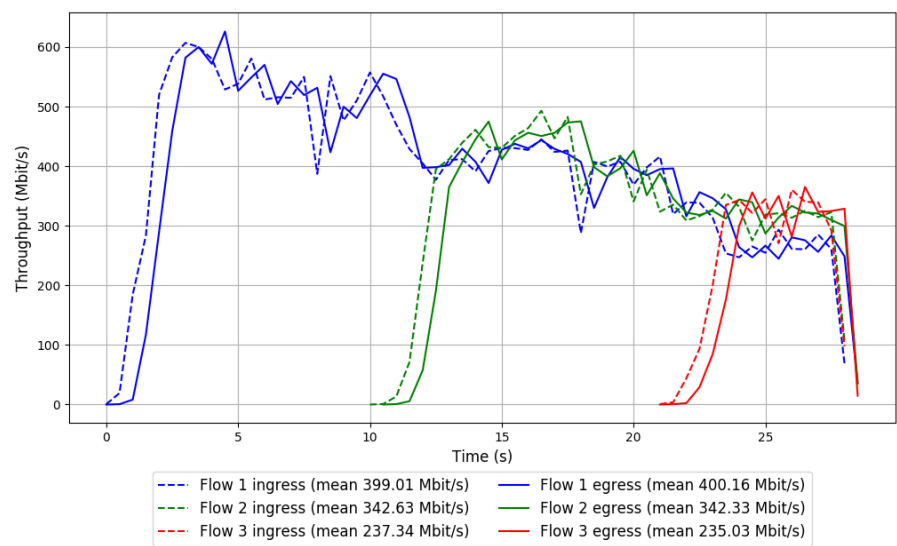
Run 1: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 411.86 Mbit/s) ——— Flow 1 egress (mean 411.86 Mbit/s)
- - - - Flow 2 ingress (mean 323.56 Mbit/s) ——— Flow 2 egress (mean 321.94 Mbit/s)
- - - - Flow 3 ingress (mean 239.63 Mbit/s) ——— Flow 3 egress (mean 236.93 Mbit/s)

- Flow 1 (95th percentile 143.98 ms)   - Flow 2 (95th percentile 112.63 ms)   - Flow 3 (95th percentile 111.50 ms)

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```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-06-27 23:24:33
End at: 2019-06-27 23:25:03
Local clock offset: 0.422 ms
Remote clock offset: -0.091 ms


# Below is generated by plot.py at 2019-06-28 02:49:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.85 Mbit/s
95th percentile per-packet one-way delay: 127.654 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 400.16 Mbit/s
95th percentile per-packet one-way delay: 129.940 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 342.33 Mbit/s
95th percentile per-packet one-way delay: 127.756 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 235.03 Mbit/s
95th percentile per-packet one-way delay: 118.098 ms
Loss rate: 4.11%
```

Run 2: Report of Indigo-MusesC3 — Data Link
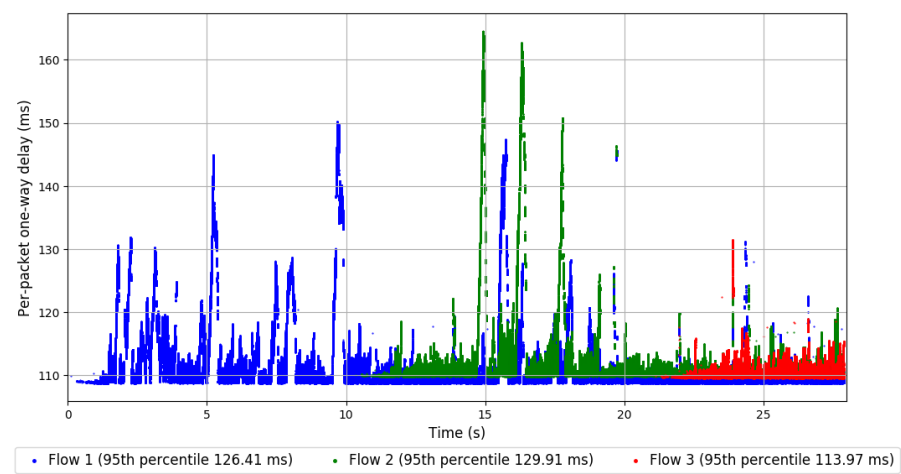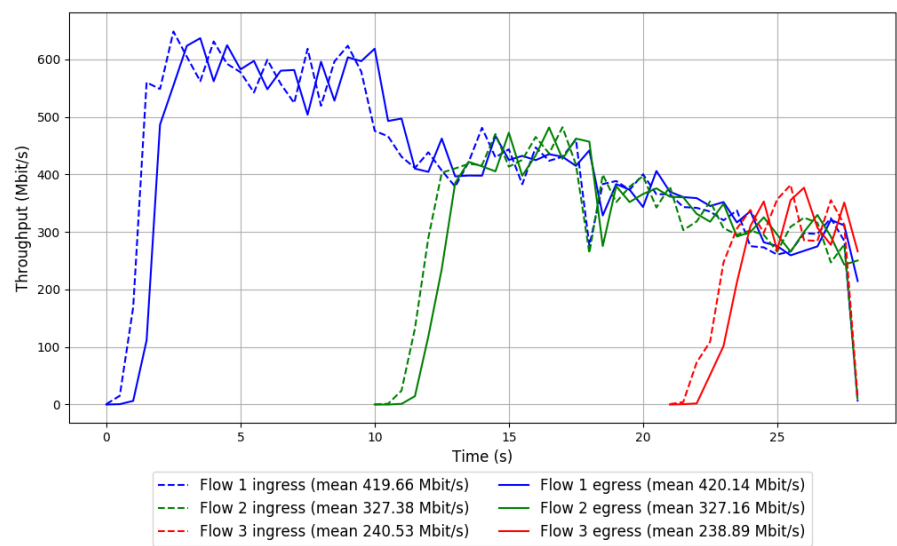

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```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-06-28 00:03:35
End at: 2019-06-28 00:04:05
Local clock offset: -0.058 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-06-28 02:57:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 684.99 Mbit/s
95th percentile per-packet one-way delay: 126.170 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 420.14 Mbit/s
95th percentile per-packet one-way delay: 126.414 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 327.16 Mbit/s
95th percentile per-packet one-way delay: 129.913 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 238.89 Mbit/s
95th percentile per-packet one-way delay: 113.966 ms
Loss rate: 3.91%
```
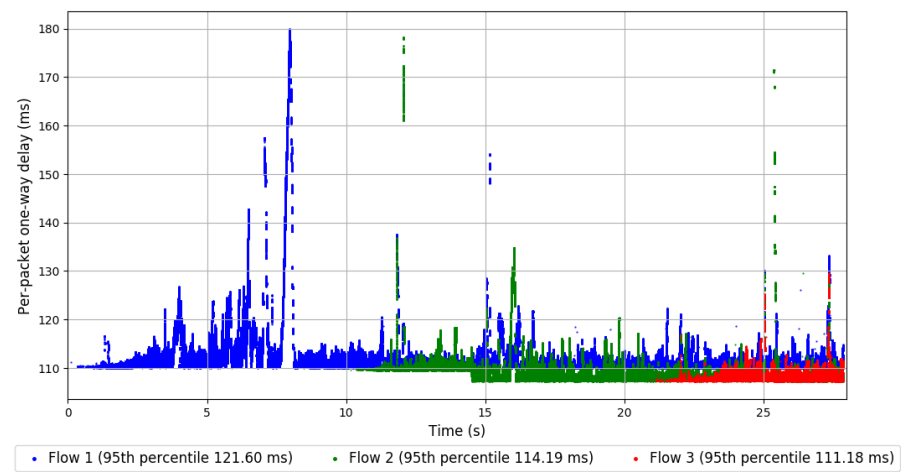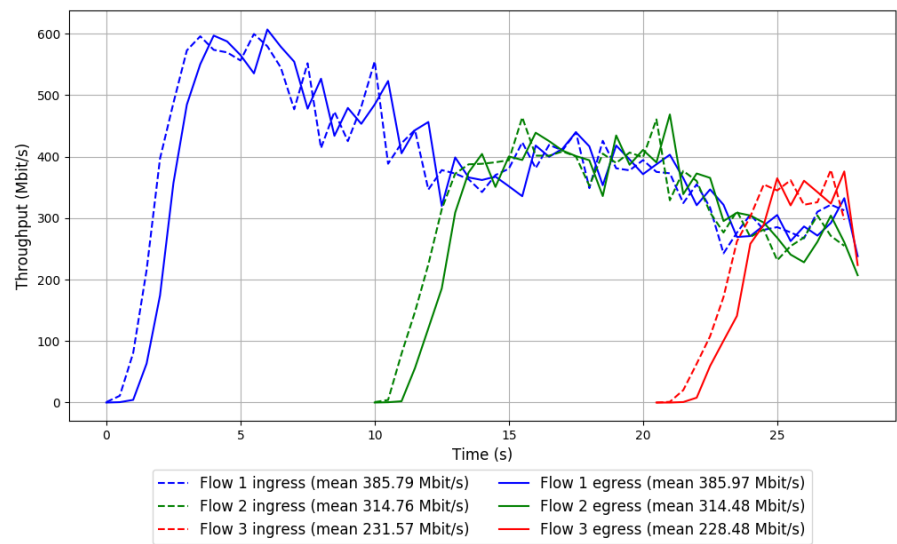
Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 419.66 Mbit/s)   Flow 1 egress (mean 420.14 Mbit/s)
Flow 2 ingress (mean 327.38 Mbit/s)   Flow 2 egress (mean 327.16 Mbit/s)
Flow 3 ingress (mean 240.53 Mbit/s)   Flow 3 egress (mean 238.89 Mbit/s)

Flow 1 (95th percentile 126.41 ms)   Flow 2 (95th percentile 129.91 ms)   Flow 3 (95th percentile 113.97 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-06-28 00:42:09
End at: 2019-06-28 00:42:39
Local clock offset: 0.014 ms
Remote clock offset: -0.482 ms


# Below is generated by plot.py at 2019-06-28 02:57:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 643.69 Mbit/s
95th percentile per-packet one-way delay: 119.031 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 385.97 Mbit/s
95th percentile per-packet one-way delay: 121.601 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 314.48 Mbit/s
95th percentile per-packet one-way delay: 114.190 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 228.48 Mbit/s
95th percentile per-packet one-way delay: 111.177 ms
Loss rate: 4.36%
```
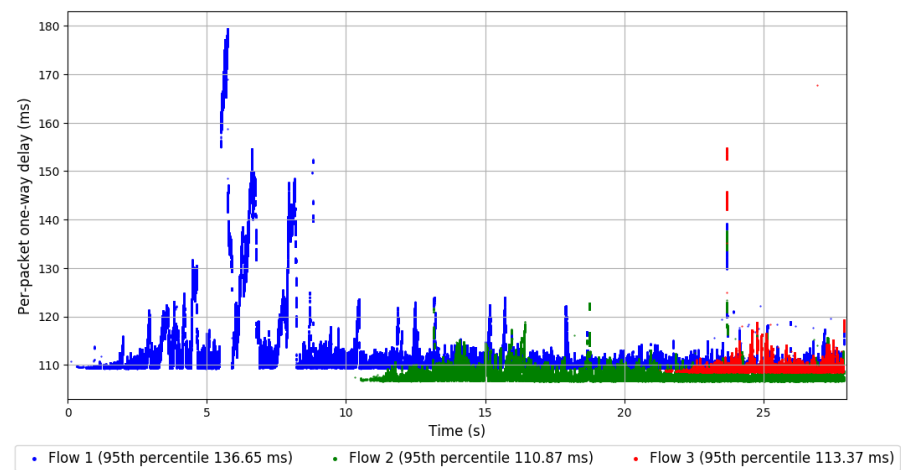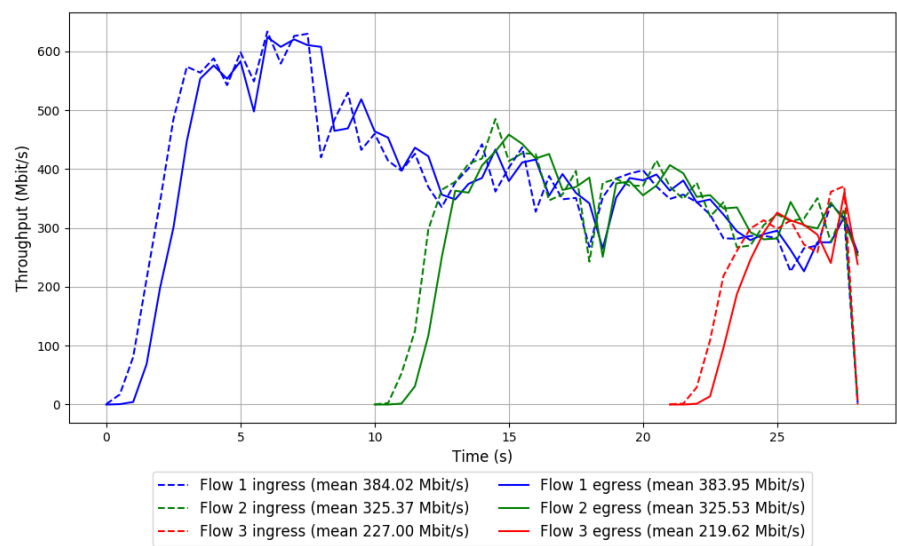
Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 385.79 Mbit/s)   Flow 1 egress (mean 385.97 Mbit/s)
Flow 2 ingress (mean 314.76 Mbit/s)   Flow 2 egress (mean 314.48 Mbit/s)
Flow 3 ingress (mean 231.57 Mbit/s)   Flow 3 egress (mean 228.48 Mbit/s)

Flow 1 (95th percentile 121.60 ms)   Flow 2 (95th percentile 114.19 ms)   Flow 3 (95th percentile 111.18 ms)

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```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-06-28 01:20:46
End at: 2019-06-28 01:21:16
Local clock offset: -0.372 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-06-28 02:57:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 642.19 Mbit/s
95th percentile per-packet one-way delay: 126.167 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 383.95 Mbit/s
95th percentile per-packet one-way delay: 136.649 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 325.53 Mbit/s
95th percentile per-packet one-way delay: 110.866 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 219.62 Mbit/s
95th percentile per-packet one-way delay: 113.366 ms
Loss rate: 6.36%
```
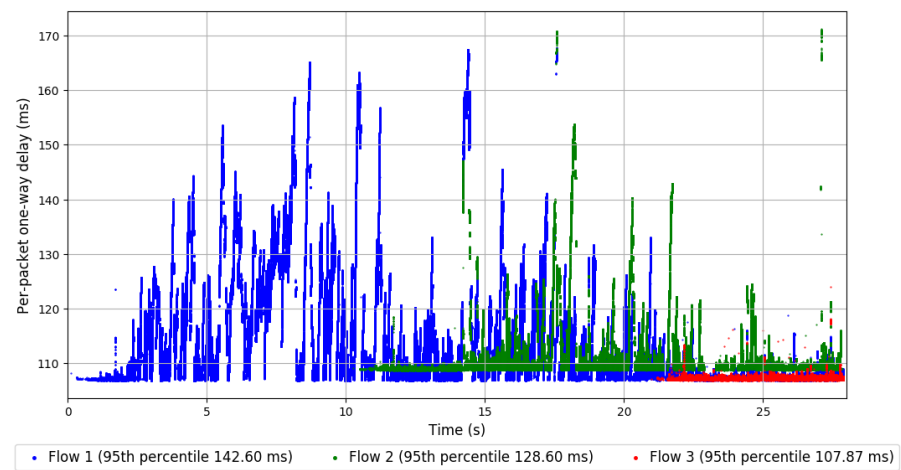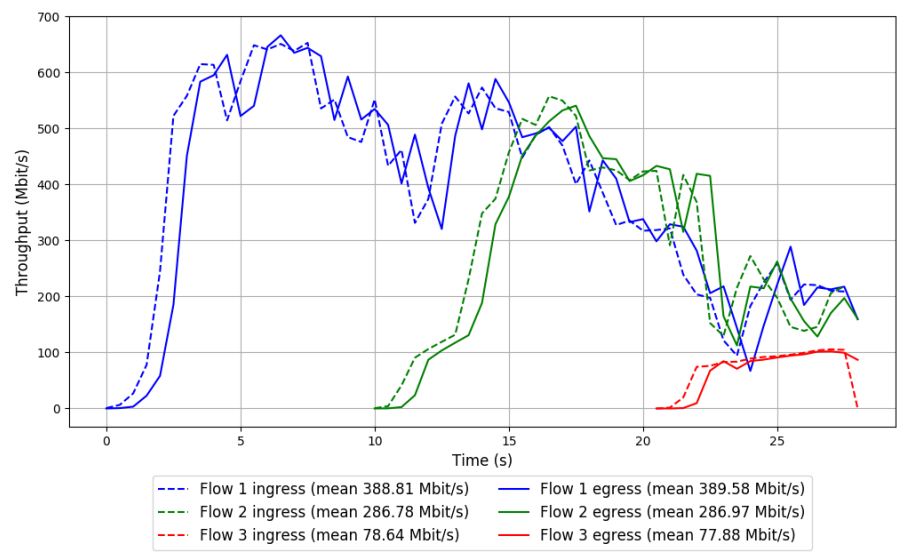
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 384.02 Mbit/s) — Flow 1 egress (mean 383.95 Mbit/s)
Flow 2 ingress (mean 325.37 Mbit/s) — Flow 2 egress (mean 325.53 Mbit/s)
Flow 3 ingress (mean 227.00 Mbit/s) — Flow 3 egress (mean 219.62 Mbit/s)

Flow 1 (95th percentile 136.65 ms) • Flow 2 (95th percentile 110.87 ms) • Flow 3 (95th percentile 113.37 ms)
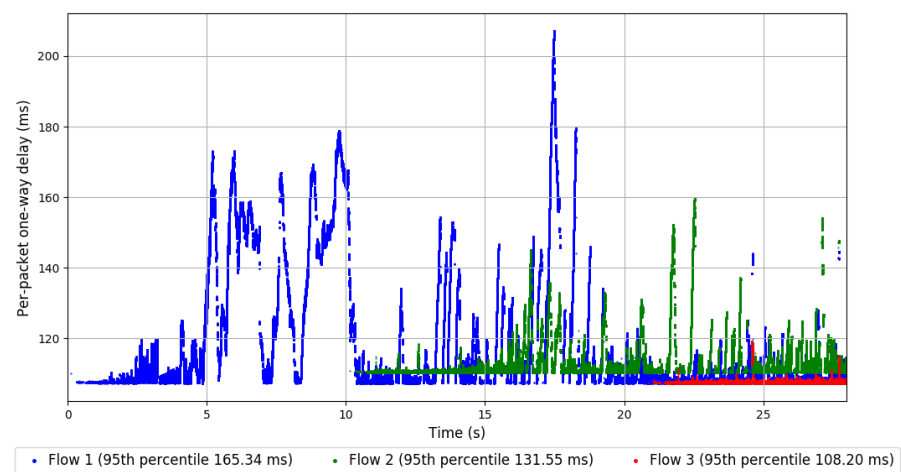
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```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-06-27 22:49:37
End at: 2019-06-27 22:50:07
Local clock offset: -0.101 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-06-28 02:58:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.40 Mbit/s
95th percentile per-packet one-way delay: 138.472 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 389.58 Mbit/s
95th percentile per-packet one-way delay: 142.605 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 286.97 Mbit/s
95th percentile per-packet one-way delay: 128.605 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 77.88 Mbit/s
95th percentile per-packet one-way delay: 107.867 ms
Loss rate: 4.05%
```
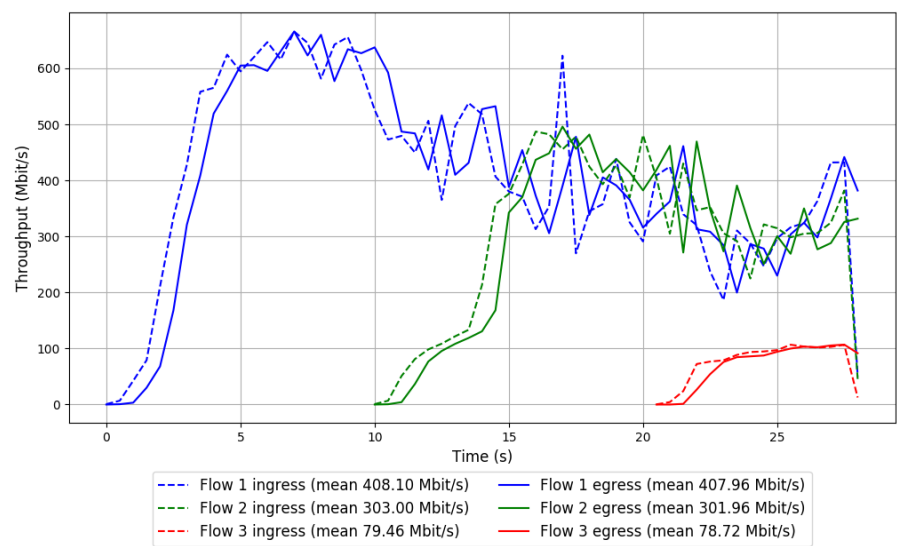
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-06-27 23:28:27
End at: 2019-06-27 23:28:57
Local clock offset: 0.146 ms
Remote clock offset: -0.456 ms

# Below is generated by plot.py at 2019-06-28 03:00:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.26 Mbit/s
95th percentile per-packet one-way delay: 160.208 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 407.96 Mbit/s
95th percentile per-packet one-way delay: 165.342 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 301.96 Mbit/s
95th percentile per-packet one-way delay: 131.552 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 78.72 Mbit/s
95th percentile per-packet one-way delay: 108.201 ms
Loss rate: 3.88%
```

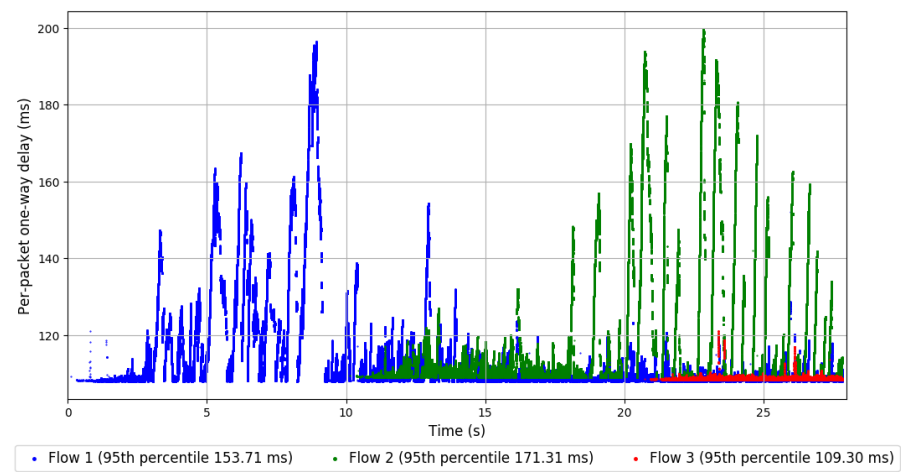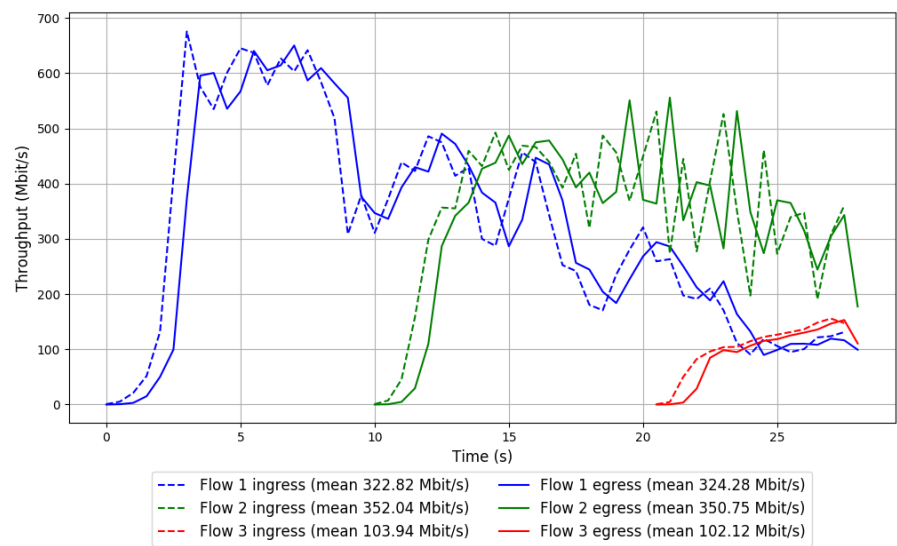Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 408.10 Mbit/s) Flow 1 egress (mean 407.96 Mbit/s)
Flow 2 ingress (mean 303.00 Mbit/s) Flow 2 egress (mean 301.96 Mbit/s)
Flow 3 ingress (mean 79.46 Mbit/s) Flow 3 egress (mean 78.72 Mbit/s)

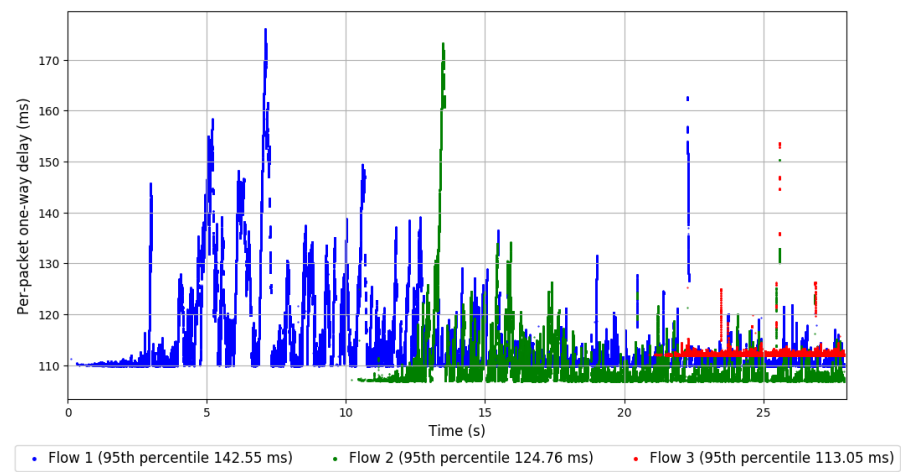Flow 1 (95th percentile 165.34 ms) Flow 2 (95th percentile 131.55 ms) Flow 3 (95th percentile 108.20 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-06-28 00:07:25
End at: 2019-06-28 00:07:55
Local clock offset: -0.794 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-06-28 03:00:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.25 Mbit/s
95th percentile per-packet one-way delay: 160.197 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 324.28 Mbit/s
95th percentile per-packet one-way delay: 153.712 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 350.75 Mbit/s
95th percentile per-packet one-way delay: 171.313 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 102.12 Mbit/s
95th percentile per-packet one-way delay: 109.298 ms
Loss rate: 4.74%
```
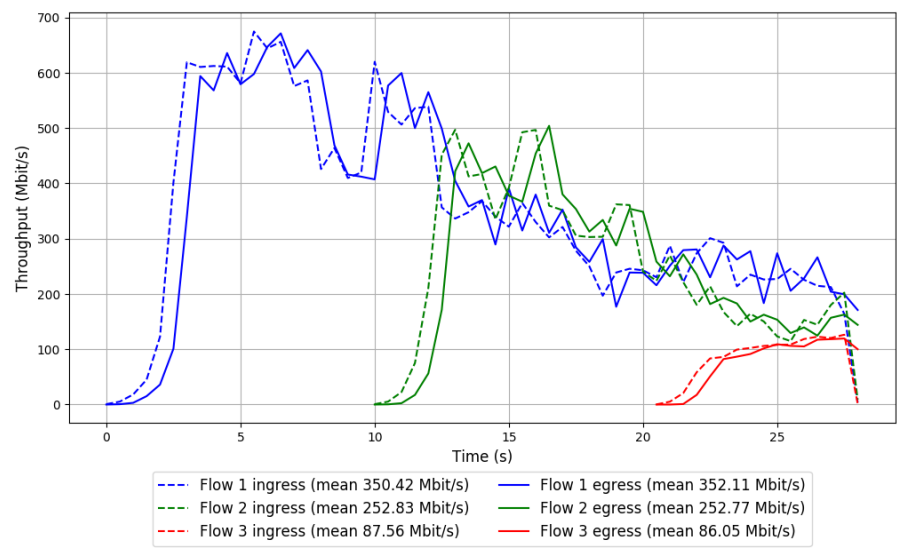
Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 322.82 Mbit/s) --- Flow 1 egress (mean 324.28 Mbit/s)
Flow 2 ingress (mean 352.04 Mbit/s) --- Flow 2 egress (mean 350.75 Mbit/s)
Flow 3 ingress (mean 103.94 Mbit/s) --- Flow 3 egress (mean 102.12 Mbit/s)

Flow 1 (95th percentile 153.71 ms) • Flow 2 (95th percentile 171.31 ms) • Flow 3 (95th percentile 109.30 ms)
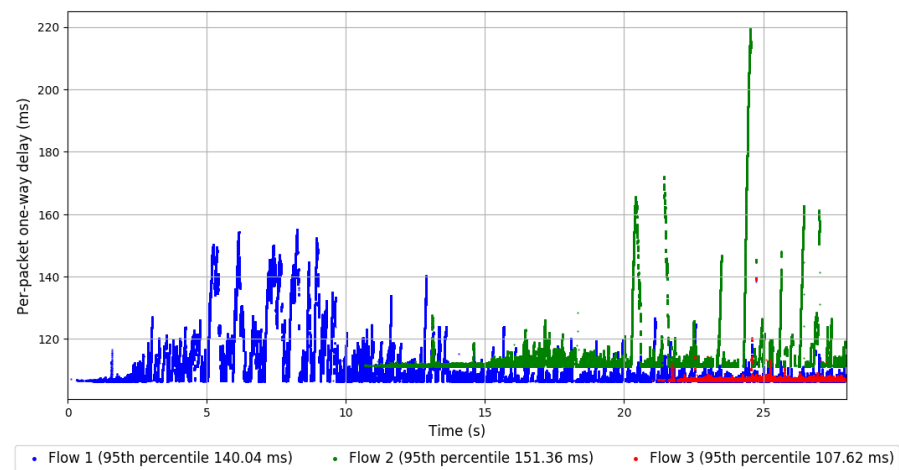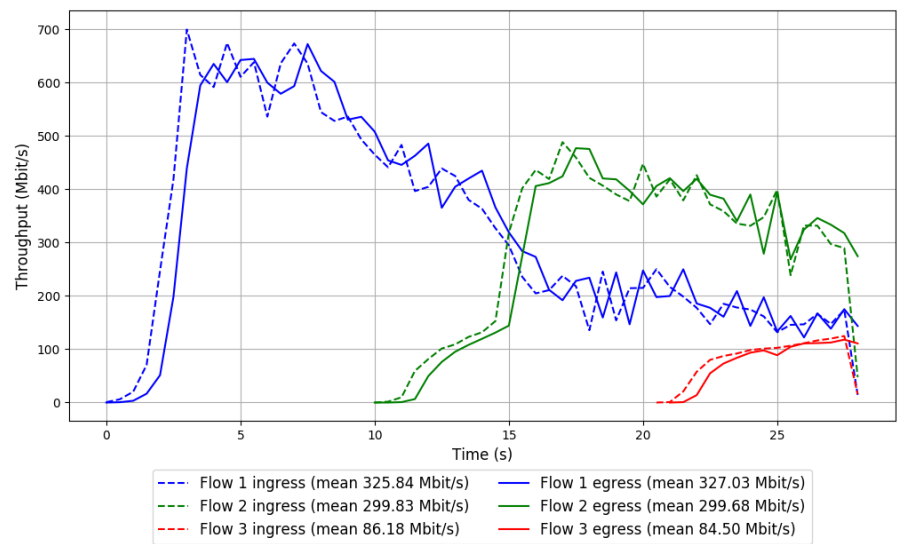
```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-06-28 00:45:59
End at: 2019-06-28 00:46:29
Local clock offset: -0.024 ms
Remote clock offset: -0.139 ms


# Below is generated by plot.py at 2019-06-28 03:00:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.71 Mbit/s
95th percentile per-packet one-way delay: 138.702 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 352.11 Mbit/s
95th percentile per-packet one-way delay: 142.547 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 252.77 Mbit/s
95th percentile per-packet one-way delay: 124.761 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 113.049 ms
Loss rate: 4.83%
```

Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 350.42 Mbit/s) --- Flow 1 egress (mean 352.11 Mbit/s)
Flow 2 ingress (mean 252.83 Mbit/s) --- Flow 2 egress (mean 252.77 Mbit/s)
Flow 3 ingress (mean 87.56 Mbit/s) --- Flow 3 egress (mean 86.05 Mbit/s)

Flow 1 (95th percentile 142.55 ms) • Flow 2 (95th percentile 124.76 ms) • Flow 3 (95th percentile 113.05 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-06-28 01:24:30
End at: 2019-06-28 01:25:00
Local clock offset: -0.361 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-06-28 03:00:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.54 Mbit/s
95th percentile per-packet one-way delay: 141.208 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 327.03 Mbit/s
95th percentile per-packet one-way delay: 140.045 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 299.68 Mbit/s
95th percentile per-packet one-way delay: 151.361 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 84.50 Mbit/s
95th percentile per-packet one-way delay: 107.616 ms
Loss rate: 4.91%
```
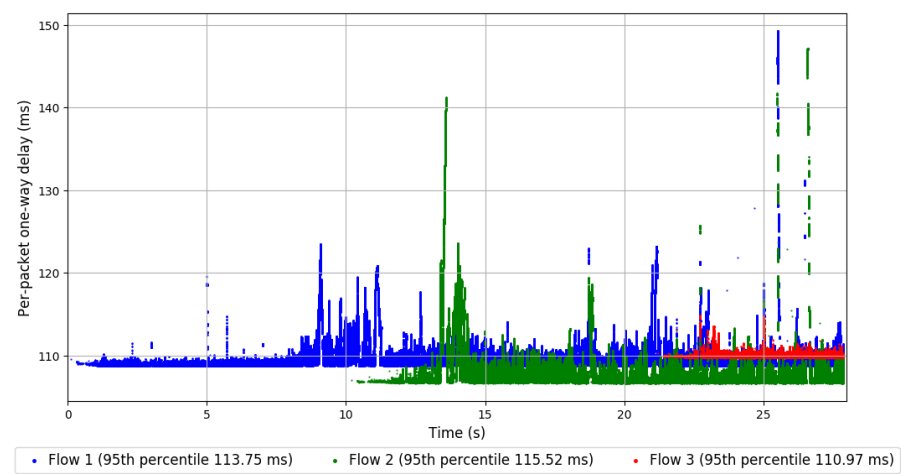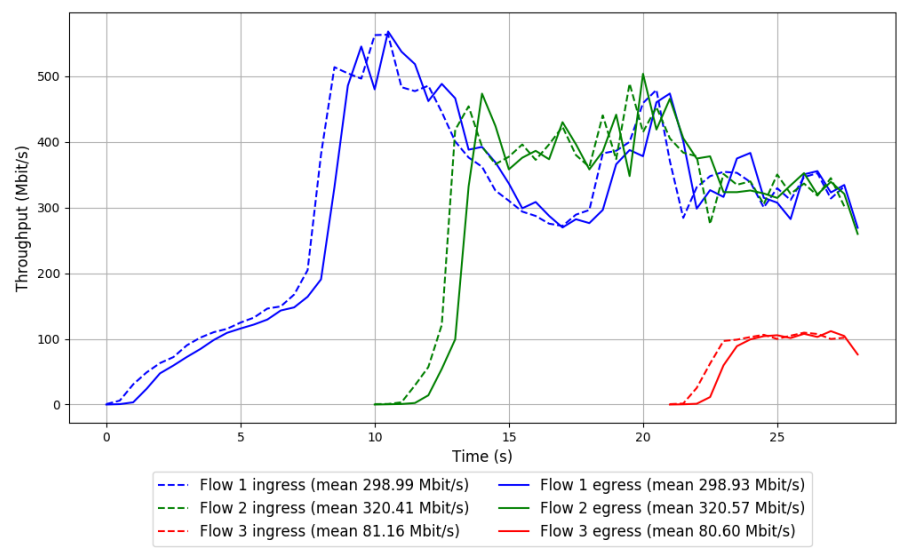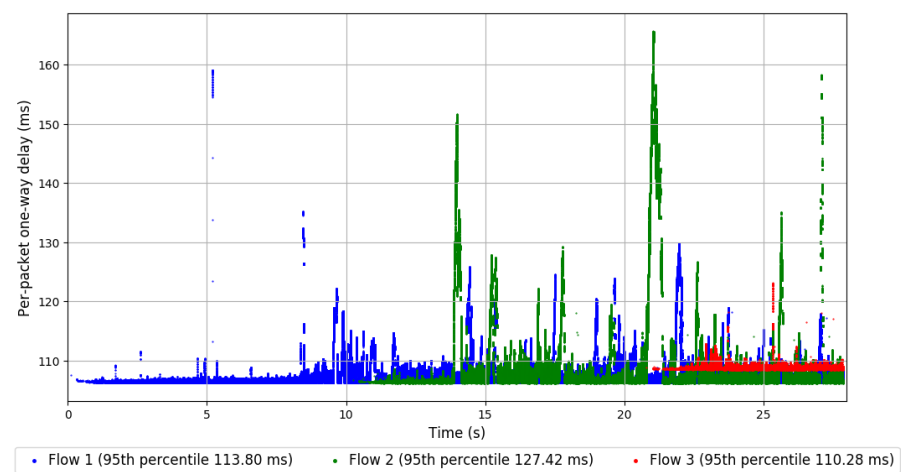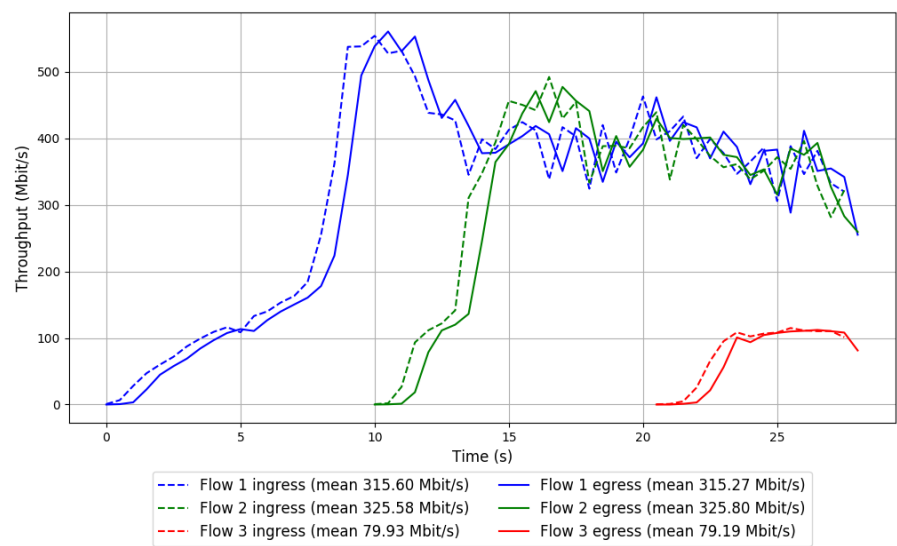
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 325.84 Mbit/s)   Flow 1 egress (mean 327.03 Mbit/s)
Flow 2 ingress (mean 299.83 Mbit/s)   Flow 2 egress (mean 299.68 Mbit/s)
Flow 3 ingress (mean 86.18 Mbit/s)   Flow 3 egress (mean 84.50 Mbit/s)

Flow 1 (95th percentile 140.04 ms)   Flow 2 (95th percentile 151.36 ms)   Flow 3 (95th percentile 107.62 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-06-27 22:43:56
End at: 2019-06-27 22:44:26
Local clock offset: 0.019 ms
Remote clock offset: 0.032 ms


# Below is generated by plot.py at 2019-06-28 03:06:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 522.27 Mbit/s
95th percentile per-packet one-way delay: 114.070 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 298.93 Mbit/s
95th percentile per-packet one-way delay: 113.746 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 320.57 Mbit/s
95th percentile per-packet one-way delay: 115.521 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 80.60 Mbit/s
95th percentile per-packet one-way delay: 110.971 ms
Loss rate: 3.85%
```

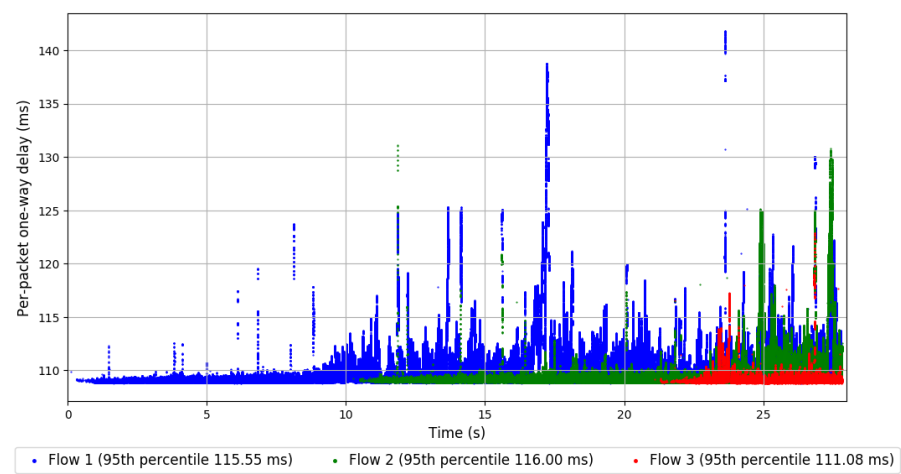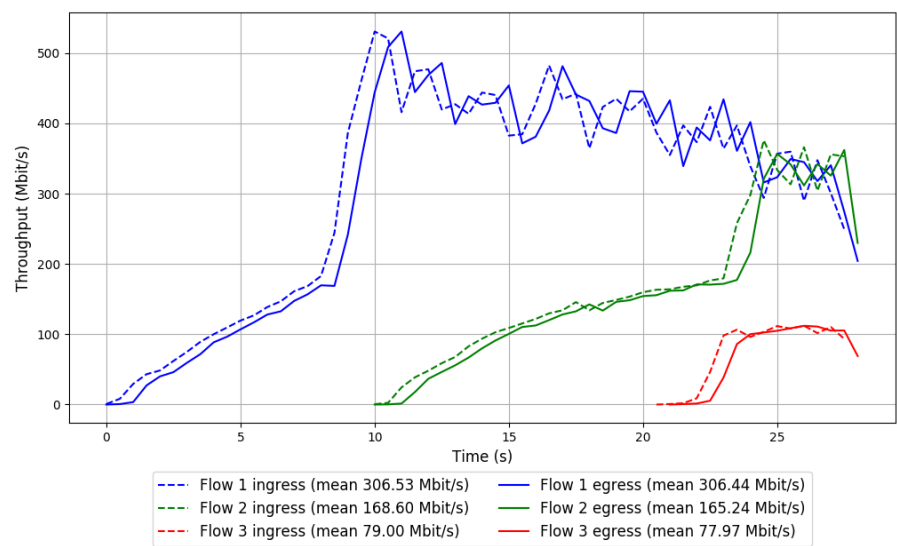Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 298.99 Mbit/s) ---- Flow 1 egress (mean 298.93 Mbit/s)
Flow 2 ingress (mean 320.41 Mbit/s) ---- Flow 2 egress (mean 320.57 Mbit/s)
Flow 3 ingress (mean 81.16 Mbit/s) ---- Flow 3 egress (mean 80.60 Mbit/s)

• Flow 1 (95th percentile 113.75 ms)   • Flow 2 (95th percentile 115.52 ms)   • Flow 3 (95th percentile 110.97 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-06-27 23:22:46
End at: 2019-06-27 23:23:16
Local clock offset: -0.51 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-06-28 03:07:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.26 Mbit/s
95th percentile per-packet one-way delay: 117.702 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 315.27 Mbit/s
95th percentile per-packet one-way delay: 113.798 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 325.80 Mbit/s
95th percentile per-packet one-way delay: 127.425 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 79.19 Mbit/s
95th percentile per-packet one-way delay: 110.277 ms
Loss rate: 3.91%
```

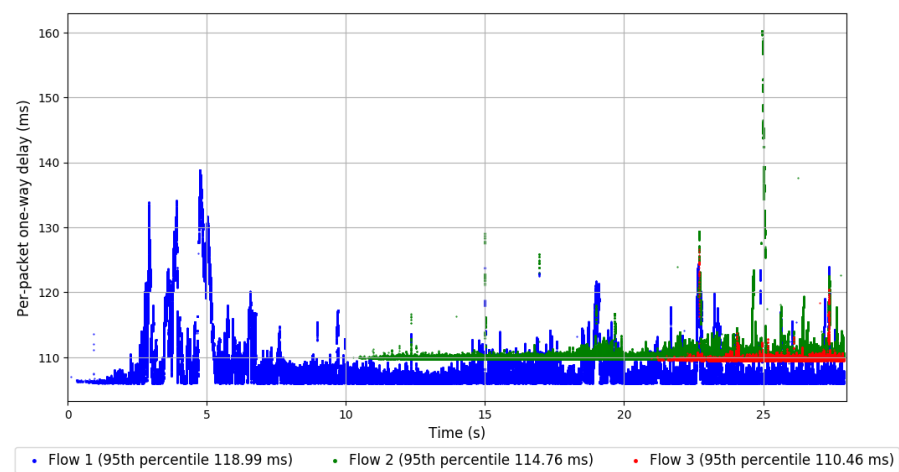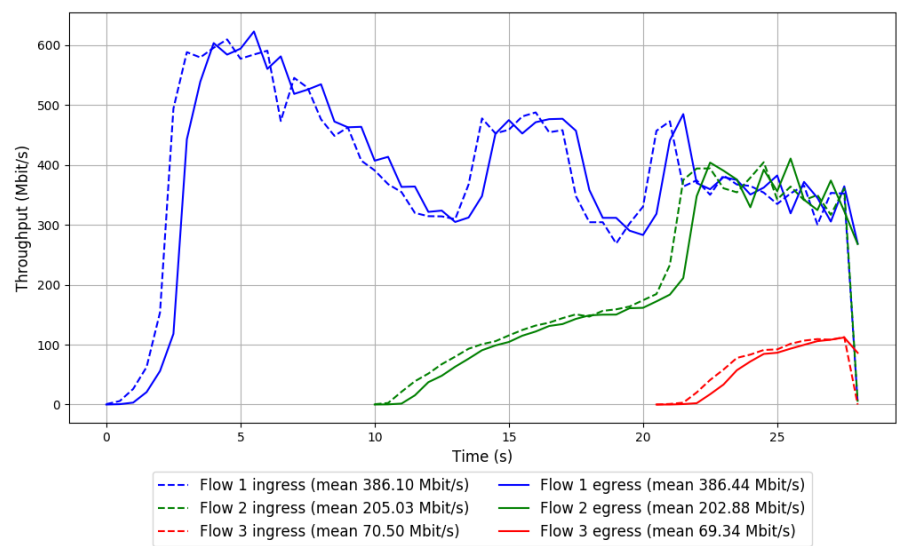Run 2: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 315.60 Mbit/s)   Flow 1 egress (mean 315.27 Mbit/s)
Flow 2 ingress (mean 325.58 Mbit/s)   Flow 2 egress (mean 325.80 Mbit/s)
Flow 3 ingress (mean 79.93 Mbit/s)   Flow 3 egress (mean 79.19 Mbit/s)

Flow 1 (95th percentile 113.80 ms)   Flow 2 (95th percentile 127.42 ms)   Flow 3 (95th percentile 110.28 ms)
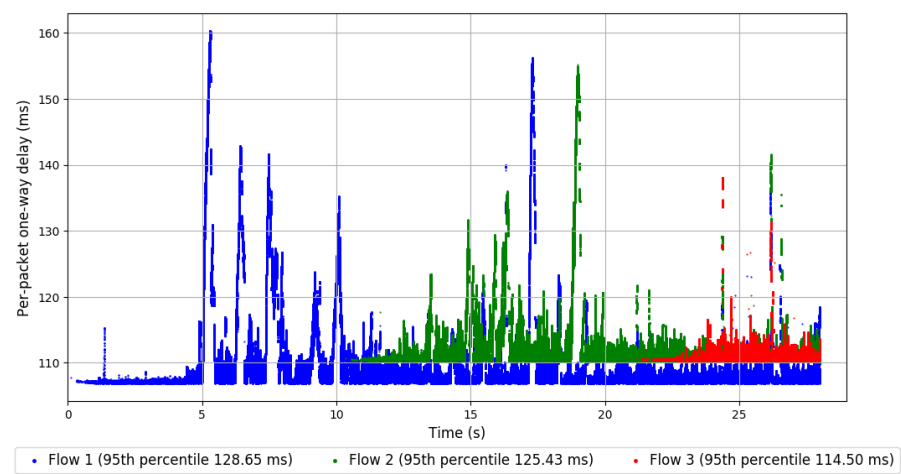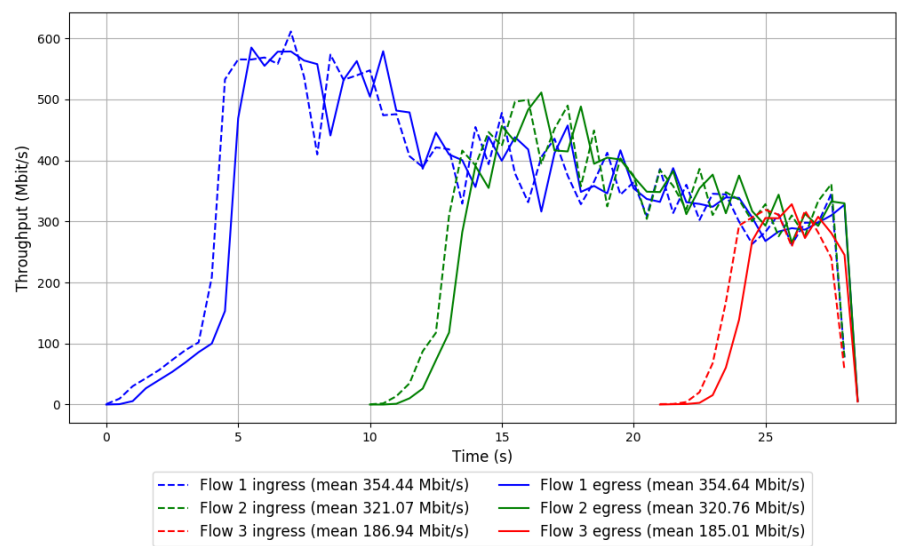
```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-06-28 00:01:53
End at: 2019-06-28 00:02:23
Local clock offset: -0.031 ms
Remote clock offset: -0.108 ms


# Below is generated by plot.py at 2019-06-28 03:07:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.04 Mbit/s
95th percentile per-packet one-way delay: 115.482 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 306.44 Mbit/s
95th percentile per-packet one-way delay: 115.551 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 165.24 Mbit/s
95th percentile per-packet one-way delay: 116.004 ms
Loss rate: 3.21%
-- Flow 3:
Average throughput: 77.97 Mbit/s
95th percentile per-packet one-way delay: 111.076 ms
Loss rate: 4.41%
```

Run 3: Report of Indigo-MusesD — Data Link

- - - - Flow 1 ingress (mean 306.53 Mbit/s) ——— Flow 1 egress (mean 306.44 Mbit/s)
- - - - Flow 2 ingress (mean 168.60 Mbit/s) ——— Flow 2 egress (mean 165.24 Mbit/s)
- - - - Flow 3 ingress (mean 79.00 Mbit/s) ——— Flow 3 egress (mean 77.97 Mbit/s)

- Flow 1 (95th percentile 115.55 ms)   - Flow 2 (95th percentile 116.00 ms)   - Flow 3 (95th percentile 111.08 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-06-28 00:40:22
End at: 2019-06-28 00:40:52
Local clock offset: -0.029 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-06-28 03:08:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.47 Mbit/s
95th percentile per-packet one-way delay: 117.986 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 386.44 Mbit/s
95th percentile per-packet one-way delay: 118.993 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 202.88 Mbit/s
95th percentile per-packet one-way delay: 114.760 ms
Loss rate: 2.28%
-- Flow 3:
Average throughput: 69.34 Mbit/s
95th percentile per-packet one-way delay: 110.463 ms
Loss rate: 4.70%
```
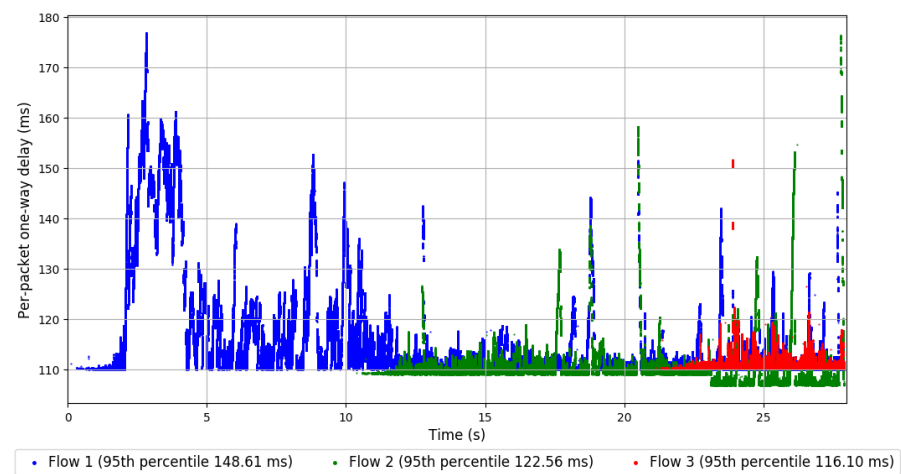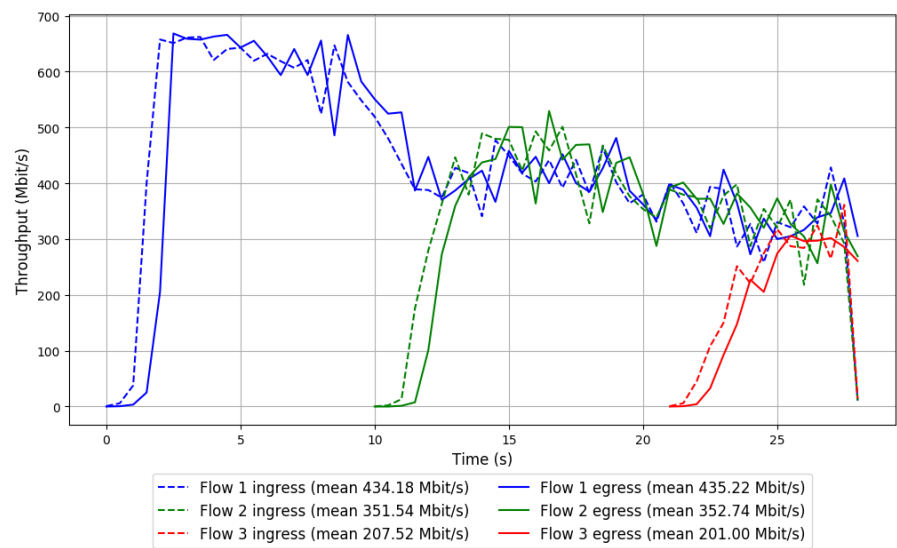
Run 4: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 386.10 Mbit/s) ——— Flow 1 egress (mean 386.44 Mbit/s)
- - - Flow 2 ingress (mean 205.03 Mbit/s) ——— Flow 2 egress (mean 202.88 Mbit/s)
- - - Flow 3 ingress (mean 70.50 Mbit/s) ——— Flow 3 egress (mean 69.34 Mbit/s)

- Flow 1 (95th percentile 118.99 ms)   • Flow 2 (95th percentile 114.76 ms)   • Flow 3 (95th percentile 110.46 ms)
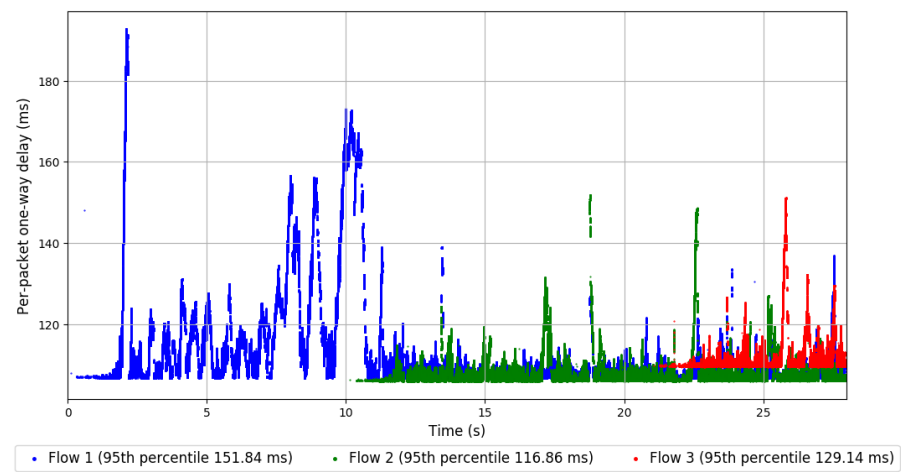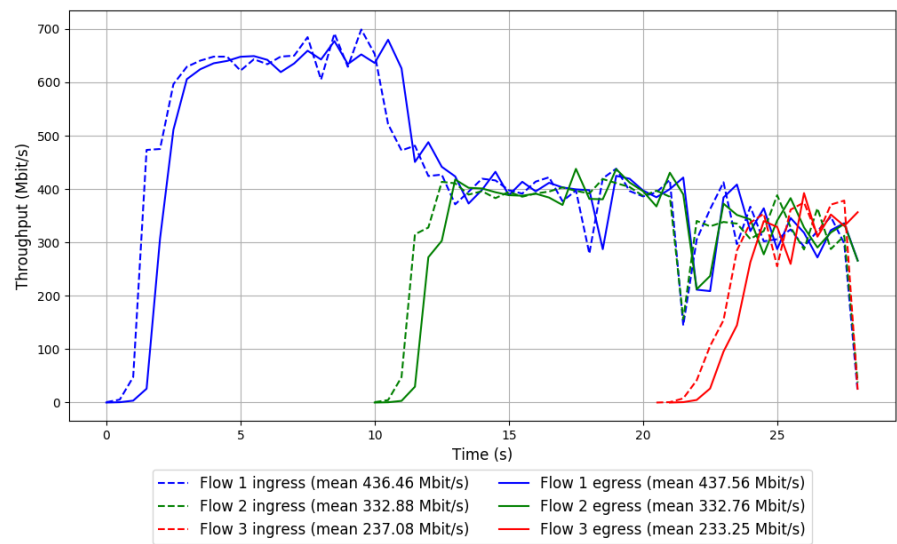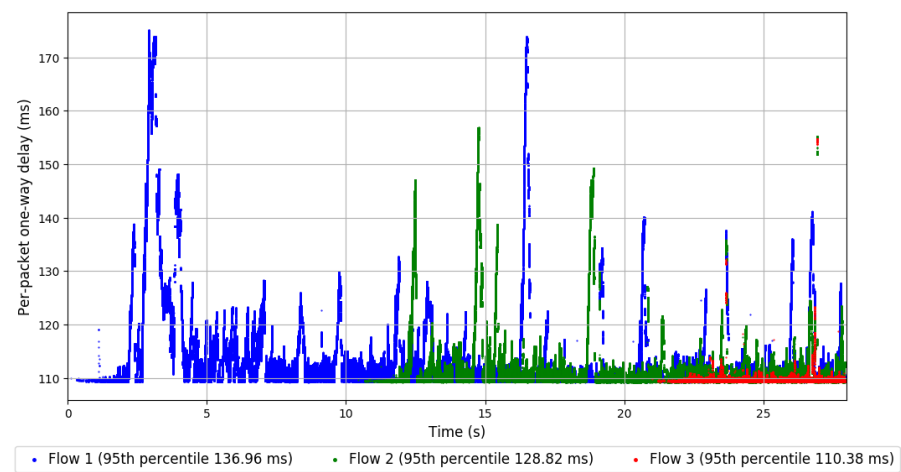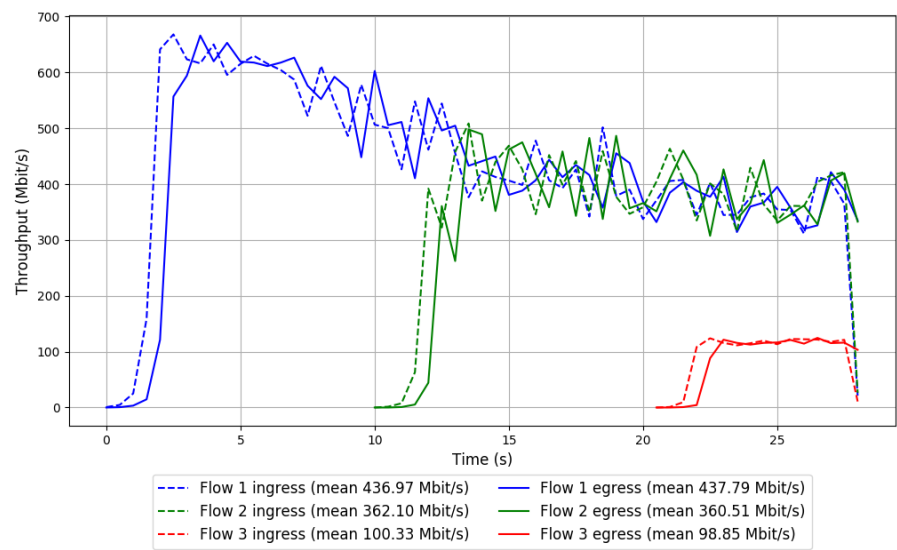
```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-06-28 01:18:55
End at: 2019-06-28 01:19:25
Local clock offset: 0.018 ms
Remote clock offset: -0.086 ms


# Below is generated by plot.py at 2019-06-28 03:11:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.17 Mbit/s
95th percentile per-packet one-way delay: 126.364 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 354.64 Mbit/s
95th percentile per-packet one-way delay: 128.645 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 320.76 Mbit/s
95th percentile per-packet one-way delay: 125.430 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 185.01 Mbit/s
95th percentile per-packet one-way delay: 114.501 ms
Loss rate: 4.11%
```

Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 354.44 Mbit/s) — Flow 1 egress (mean 354.64 Mbit/s)
Flow 2 ingress (mean 321.07 Mbit/s) — Flow 2 egress (mean 320.76 Mbit/s)
Flow 3 ingress (mean 186.94 Mbit/s) — Flow 3 egress (mean 185.01 Mbit/s)

Flow 1 (95th percentile 128.65 ms)   Flow 2 (95th percentile 125.43 ms)   Flow 3 (95th percentile 114.50 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-06-27 22:42:01
End at: 2019-06-27 22:42:31
Local clock offset: 0.101 ms
Remote clock offset: 0.042 ms

# Below is generated by plot.py at 2019-06-28 03:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 706.84 Mbit/s
95th percentile per-packet one-way delay: 144.210 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 435.22 Mbit/s
95th percentile per-packet one-way delay: 148.608 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 352.74 Mbit/s
95th percentile per-packet one-way delay: 122.560 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 201.00 Mbit/s
95th percentile per-packet one-way delay: 116.099 ms
Loss rate: 6.15%
```

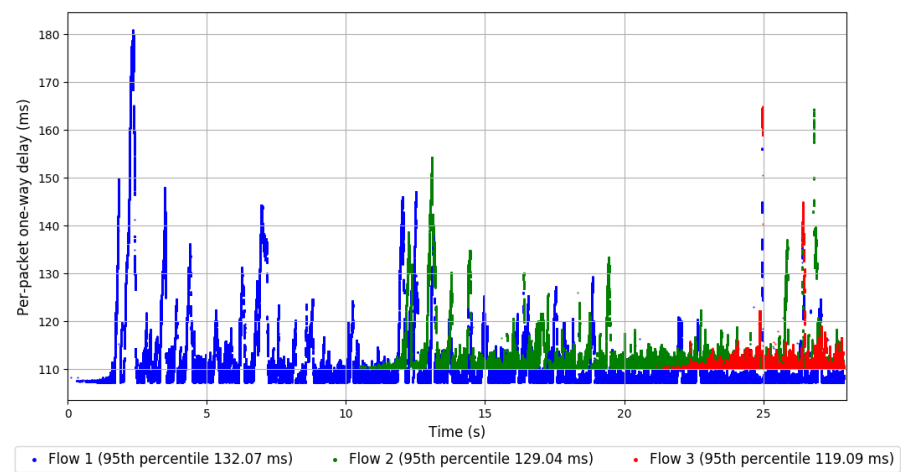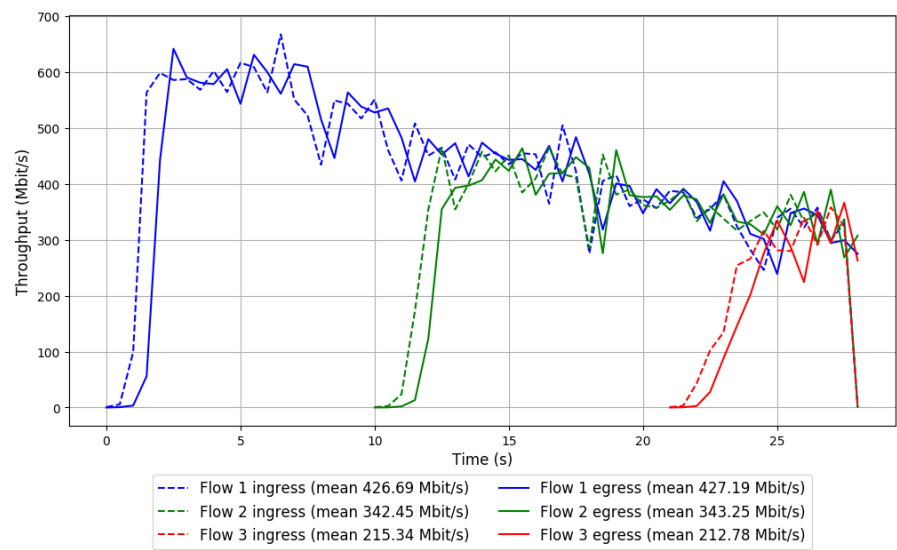Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-06-27 23:20:51
End at: 2019-06-27 23:21:21
Local clock offset: -0.006 ms
Remote clock offset: -0.114 ms


# Below is generated by plot.py at 2019-06-28 03:13:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 707.81 Mbit/s
95th percentile per-packet one-way delay: 141.598 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 437.56 Mbit/s
95th percentile per-packet one-way delay: 151.840 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 332.76 Mbit/s
95th percentile per-packet one-way delay: 116.865 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 233.25 Mbit/s
95th percentile per-packet one-way delay: 129.140 ms
Loss rate: 4.67%
```
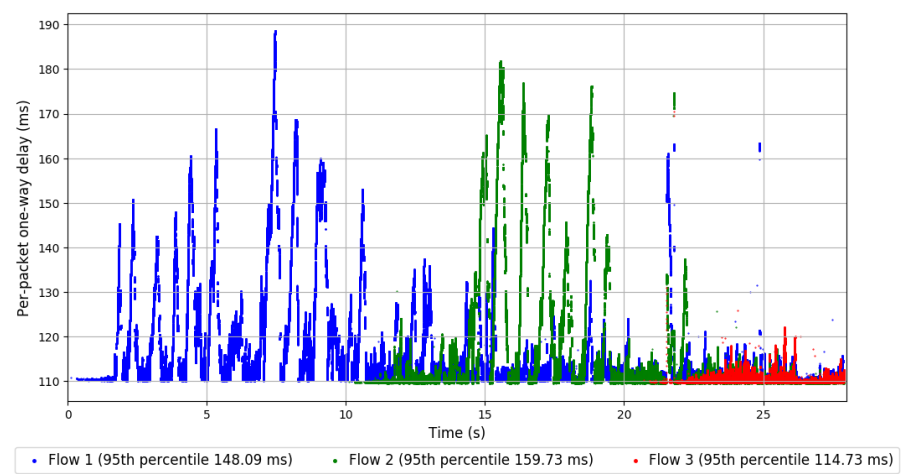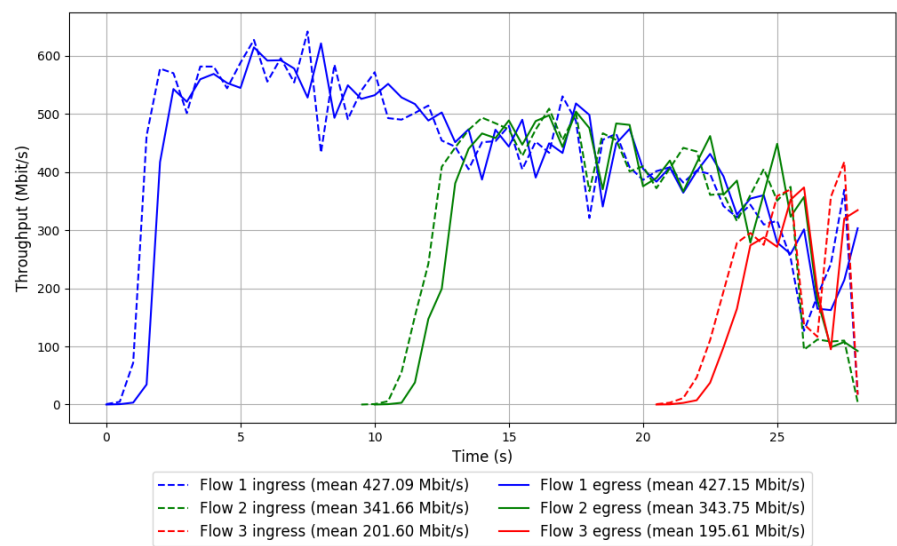
Run 2: Report of Indigo-MusesT — Data Link

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```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-06-27 23:59:58
End at: 2019-06-28 00:00:28
Local clock offset: -0.589 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-06-28 03:13:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 688.78 Mbit/s
95th percentile per-packet one-way delay: 133.992 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 437.79 Mbit/s
95th percentile per-packet one-way delay: 136.957 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 360.51 Mbit/s
95th percentile per-packet one-way delay: 128.818 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 98.85 Mbit/s
95th percentile per-packet one-way delay: 110.383 ms
Loss rate: 4.47%
```
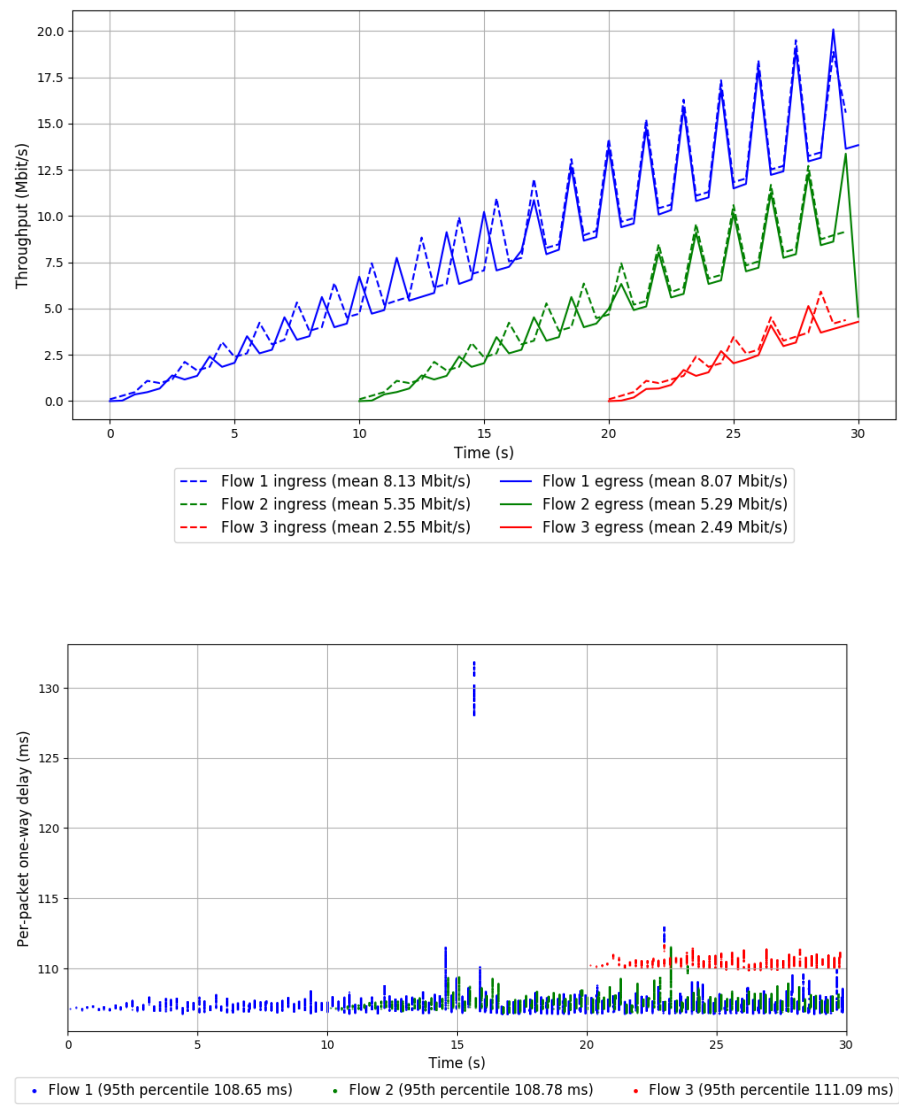
Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-06-28 00:38:26
End at: 2019-06-28 00:38:56
Local clock offset: 0.022 ms
Remote clock offset: -0.465 ms


# Below is generated by plot.py at 2019-06-28 03:19:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.44 Mbit/s
95th percentile per-packet one-way delay: 130.539 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 427.19 Mbit/s
95th percentile per-packet one-way delay: 132.071 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 343.25 Mbit/s
95th percentile per-packet one-way delay: 129.045 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 212.78 Mbit/s
95th percentile per-packet one-way delay: 119.088 ms
Loss rate: 4.32%
```
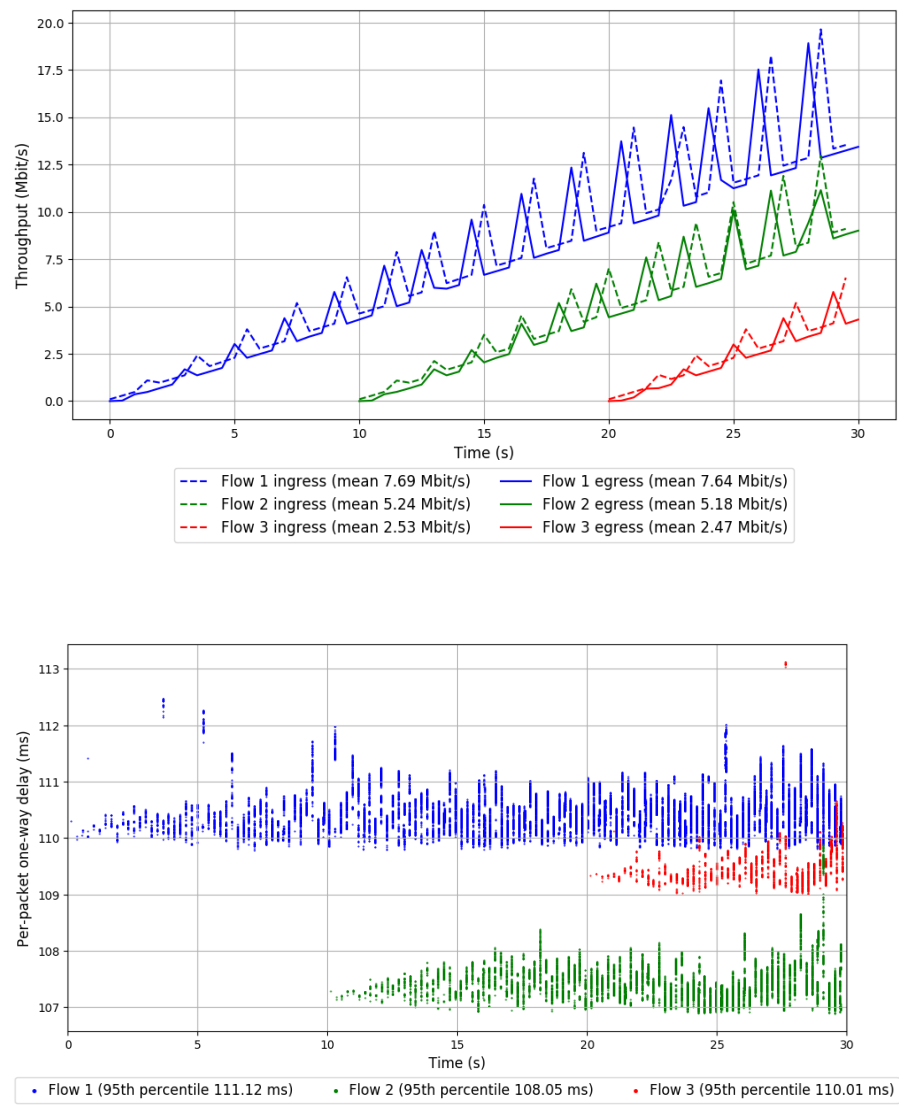
Run 4: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 426.69 Mbit/s) Flow 1 egress (mean 427.19 Mbit/s)
Flow 2 ingress (mean 342.45 Mbit/s) Flow 2 egress (mean 343.25 Mbit/s)
Flow 3 ingress (mean 215.34 Mbit/s) Flow 3 egress (mean 212.78 Mbit/s)

Flow 1 (95th percentile 132.07 ms) Flow 2 (95th percentile 129.04 ms) Flow 3 (95th percentile 119.09 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-06-28 01:17:00
End at: 2019-06-28 01:17:30
Local clock offset: -0.143 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.90 Mbit/s
95th percentile per-packet one-way delay: 150.993 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 427.15 Mbit/s
95th percentile per-packet one-way delay: 148.091 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 343.75 Mbit/s
95th percentile per-packet one-way delay: 159.729 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 195.61 Mbit/s
95th percentile per-packet one-way delay: 114.727 ms
Loss rate: 5.86%
```

Run 5: Report of Indigo-MusesT — Data Link

- - - - Flow 1 ingress (mean 427.09 Mbit/s) — Flow 1 egress (mean 427.15 Mbit/s)
- - - - Flow 2 ingress (mean 341.66 Mbit/s) — Flow 2 egress (mean 343.75 Mbit/s)
- - - - Flow 3 ingress (mean 201.60 Mbit/s) — Flow 3 egress (mean 195.61 Mbit/s)

- Flow 1 (95th percentile 148.09 ms) • Flow 2 (95th percentile 159.73 ms) • Flow 3 (95th percentile 114.73 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-06-27 22:19:41
End at: 2019-06-27 22:20:11
Local clock offset: 0.092 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.35 Mbit/s
95th percentile per-packet one-way delay: 110.406 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 108.654 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 108.775 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 111.094 ms
Loss rate: 4.43%
```
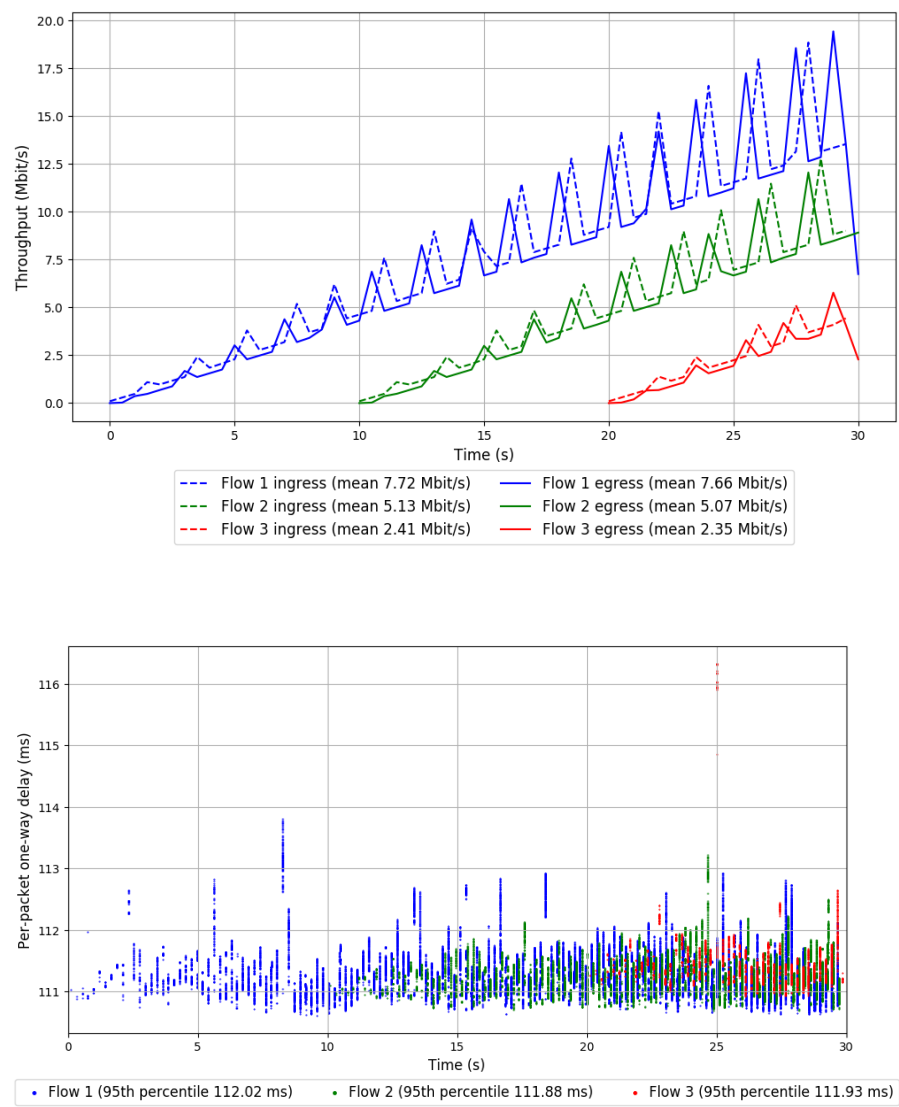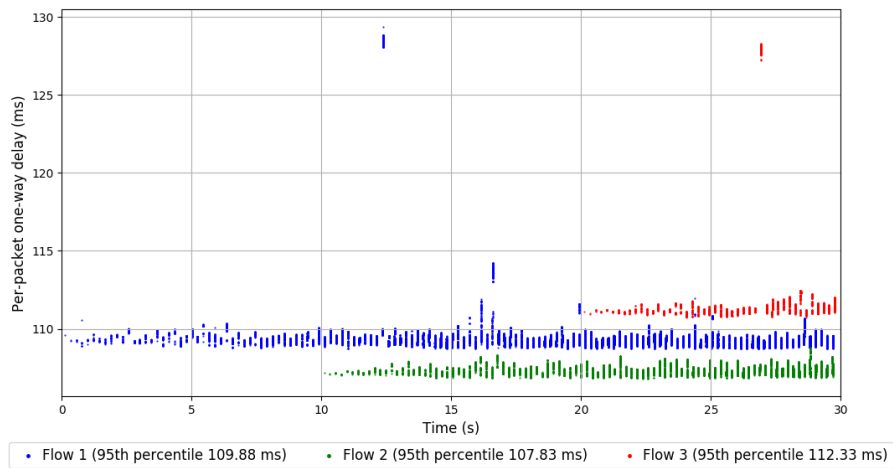
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-06-27 22:58:41
End at: 2019-06-27 22:59:11
Local clock offset: -0.023 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 111.013 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 7.64 Mbit/s
95th percentile per-packet one-way delay: 111.125 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 5.18 Mbit/s
95th percentile per-packet one-way delay: 108.051 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 2.47 Mbit/s
95th percentile per-packet one-way delay: 110.013 ms
Loss rate: 4.46%
```
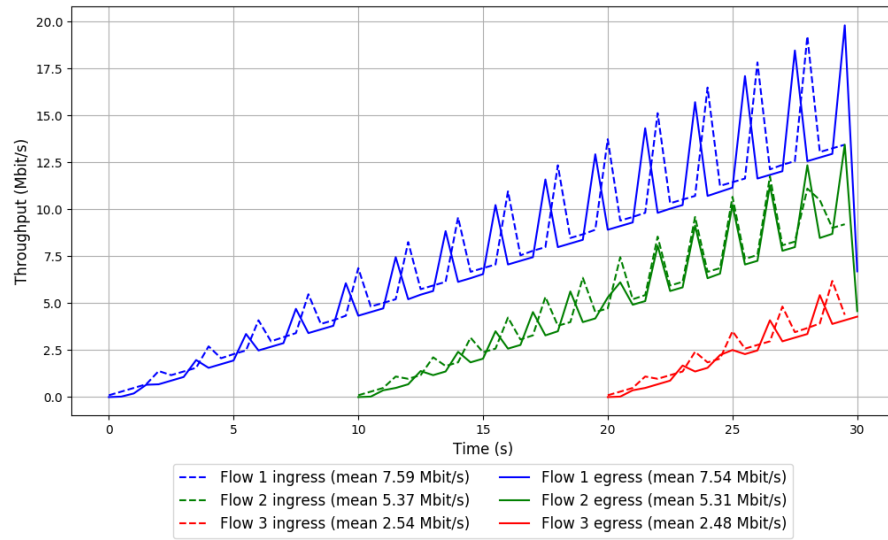
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-06-27 23:37:31
End at: 2019-06-27 23:38:01
Local clock offset: 0.354 ms
Remote clock offset: -0.168 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 111.624 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 111.838 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 5.20 Mbit/s
95th percentile per-packet one-way delay: 108.230 ms
Loss rate: 2.20%
-- Flow 3:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 107.302 ms
Loss rate: 4.46%
```

Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-06-28 00:16:27
End at: 2019-06-28 00:16:57
Local clock offset: 0.793 ms
Remote clock offset: -0.446 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 111.943 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 112.015 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 111.881 ms
Loss rate: 2.23%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 111.934 ms
Loss rate: 4.47%
```
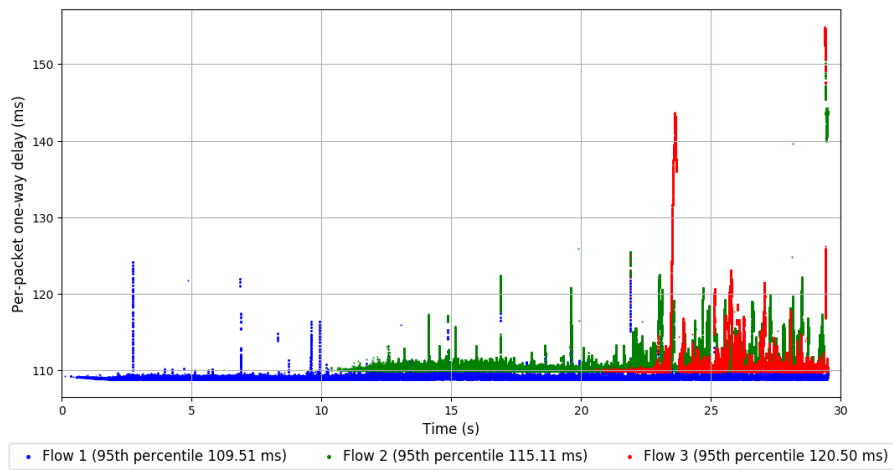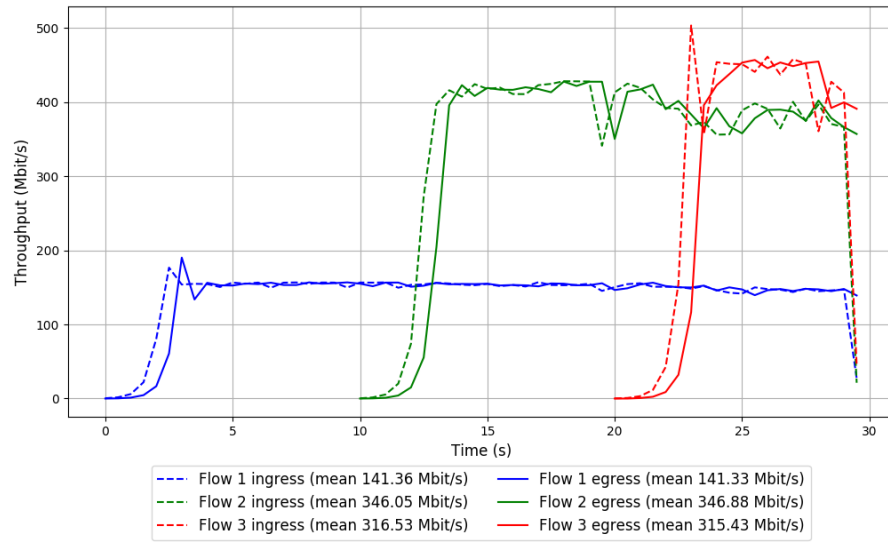
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.72 Mbit/s)   Flow 1 egress (mean 7.66 Mbit/s)
Flow 2 ingress (mean 5.13 Mbit/s)   Flow 2 egress (mean 5.07 Mbit/s)
Flow 3 ingress (mean 2.41 Mbit/s)   Flow 3 egress (mean 2.35 Mbit/s)

Flow 1 (95th percentile 112.02 ms)   Flow 2 (95th percentile 111.88 ms)   Flow 3 (95th percentile 111.93 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-06-28 00:54:56
End at: 2019-06-28 00:55:26
Local clock offset: -0.138 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 111.148 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 109.877 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 5.31 Mbit/s
95th percentile per-packet one-way delay: 107.832 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 112.334 ms
Loss rate: 4.43%
```

Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 7.59 Mbit/s) --- Flow 1 egress (mean 7.54 Mbit/s)
Flow 2 ingress (mean 5.37 Mbit/s) --- Flow 2 egress (mean 5.31 Mbit/s)
Flow 3 ingress (mean 2.54 Mbit/s) --- Flow 3 egress (mean 2.48 Mbit/s)

Flow 1 (95th percentile 109.88 ms) Flow 2 (95th percentile 107.83 ms) Flow 3 (95th percentile 112.33 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-06-27 22:38:24
End at: 2019-06-27 22:38:54
Local clock offset: -0.003 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-06-28 03:21:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.59 Mbit/s
95th percentile per-packet one-way delay: 114.883 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 141.33 Mbit/s
95th percentile per-packet one-way delay: 109.514 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 346.88 Mbit/s
95th percentile per-packet one-way delay: 115.115 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 315.43 Mbit/s
95th percentile per-packet one-way delay: 120.501 ms
Loss rate: 2.70%
```
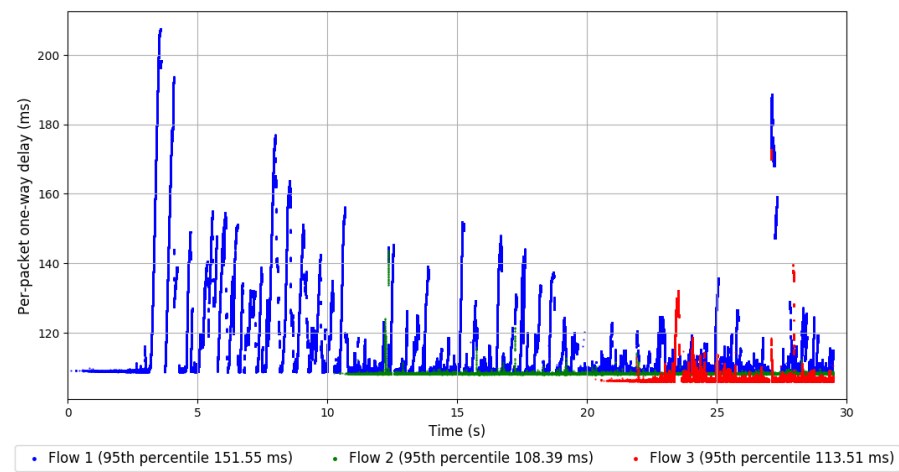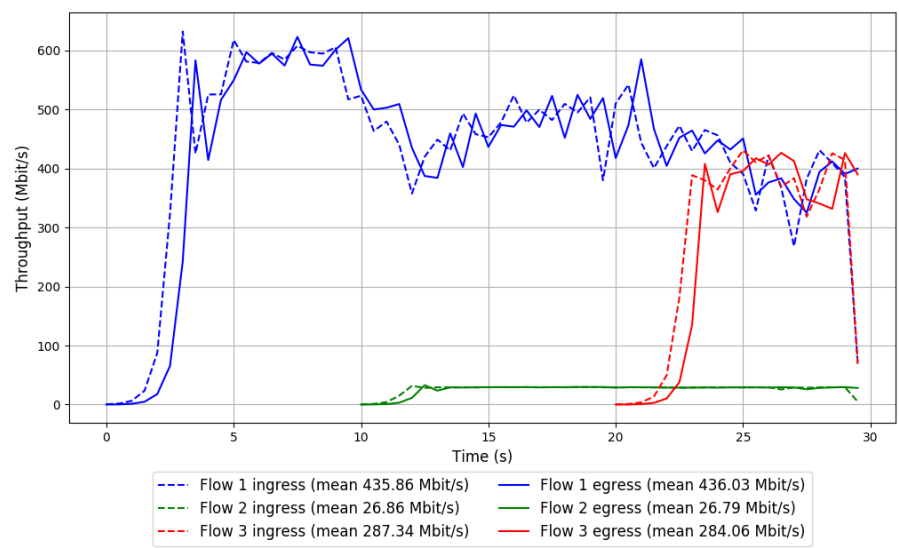
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-06-27 23:16:58
End at: 2019-06-27 23:17:28
Local clock offset: 0.015 ms
Remote clock offset: -0.102 ms


# Below is generated by plot.py at 2019-06-28 03:24:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.92 Mbit/s
95th percentile per-packet one-way delay: 147.122 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 424.70 Mbit/s
95th percentile per-packet one-way delay: 154.576 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 355.01 Mbit/s
95th percentile per-packet one-way delay: 130.238 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 219.27 Mbit/s
95th percentile per-packet one-way delay: 115.521 ms
Loss rate: 2.68%
```
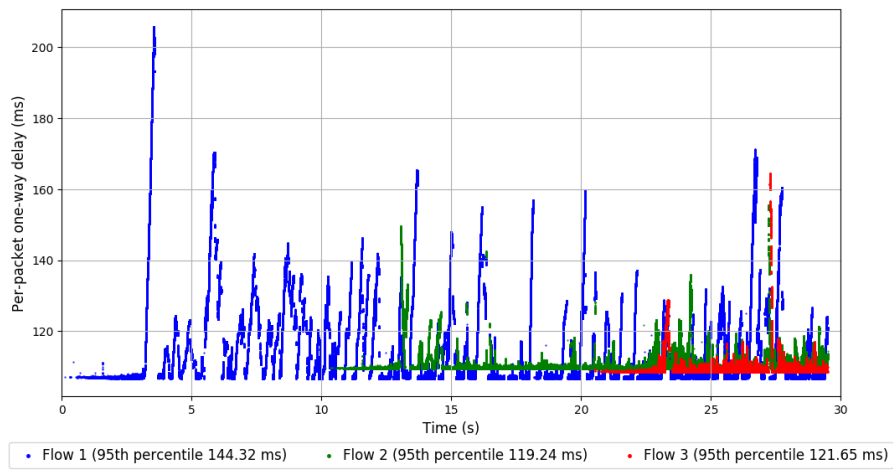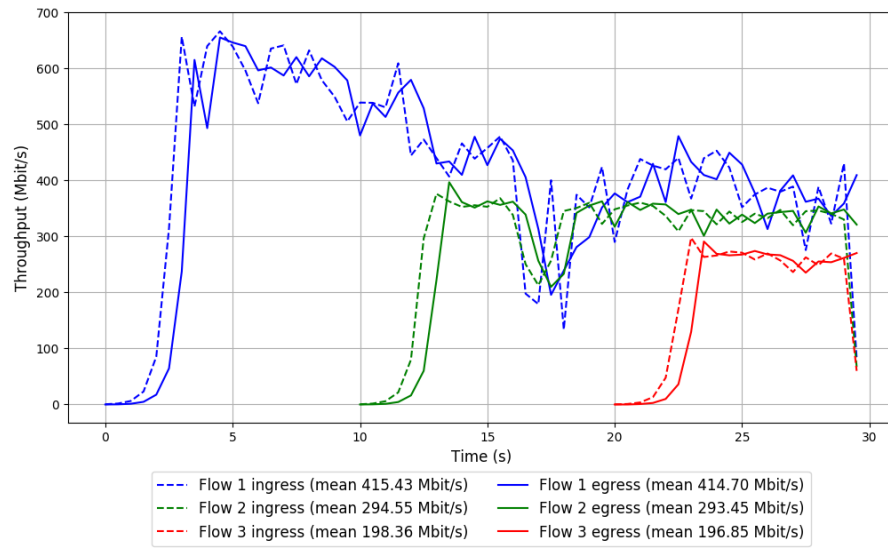
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-06-27 23:56:13
End at: 2019-06-27 23:56:43
Local clock offset: -0.0 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2019-06-28 03:24:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 589.11 Mbit/s
95th percentile per-packet one-way delay: 156.328 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 418.15 Mbit/s
95th percentile per-packet one-way delay: 167.056 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 221.99 Mbit/s
95th percentile per-packet one-way delay: 113.509 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 80.87 Mbit/s
95th percentile per-packet one-way delay: 107.414 ms
Loss rate: 3.03%
```
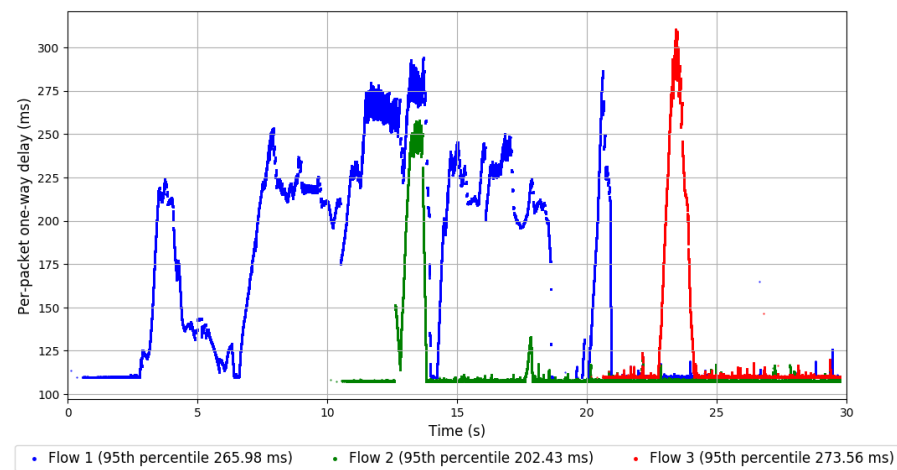
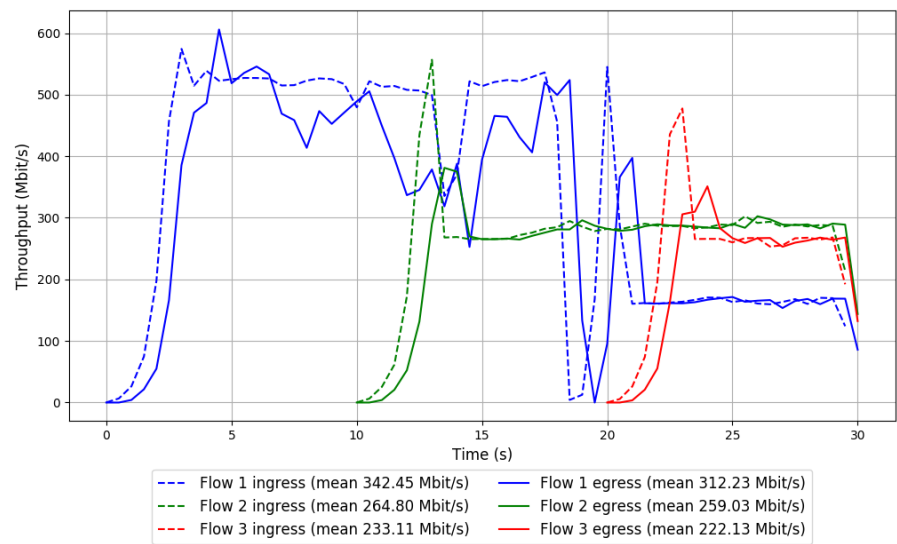# Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 00:34:56
End at: 2019-06-28 00:35:26
Local clock offset: -0.784 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-06-28 03:24:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.04 Mbit/s
95th percentile per-packet one-way delay: 149.465 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 436.03 Mbit/s
95th percentile per-packet one-way delay: 151.553 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 26.79 Mbit/s
95th percentile per-packet one-way delay: 108.395 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 284.06 Mbit/s
95th percentile per-packet one-way delay: 113.506 ms
Loss rate: 3.44%
```

Run 4: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 435.86 Mbit/s) — — — Flow 1 egress (mean 436.03 Mbit/s)
Flow 2 ingress (mean 26.86 Mbit/s) — — — Flow 2 egress (mean 26.79 Mbit/s)
Flow 3 ingress (mean 287.34 Mbit/s) — — — Flow 3 egress (mean 284.06 Mbit/s)

Flow 1 (95th percentile 151.55 ms) • Flow 2 (95th percentile 108.39 ms) • Flow 3 (95th percentile 113.51 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 01:13:10
End at: 2019-06-28 01:13:40
Local clock offset: -0.376 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-06-28 03:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 669.43 Mbit/s
95th percentile per-packet one-way delay: 138.234 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 414.70 Mbit/s
95th percentile per-packet one-way delay: 144.324 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 293.45 Mbit/s
95th percentile per-packet one-way delay: 119.243 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 196.85 Mbit/s
95th percentile per-packet one-way delay: 121.650 ms
Loss rate: 3.09%
```

Run 5: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 415.43 Mbit/s)   Flow 1 egress (mean 414.70 Mbit/s)
Flow 2 ingress (mean 294.55 Mbit/s)   Flow 2 egress (mean 293.45 Mbit/s)
Flow 3 ingress (mean 198.36 Mbit/s)   Flow 3 egress (mean 196.85 Mbit/s)

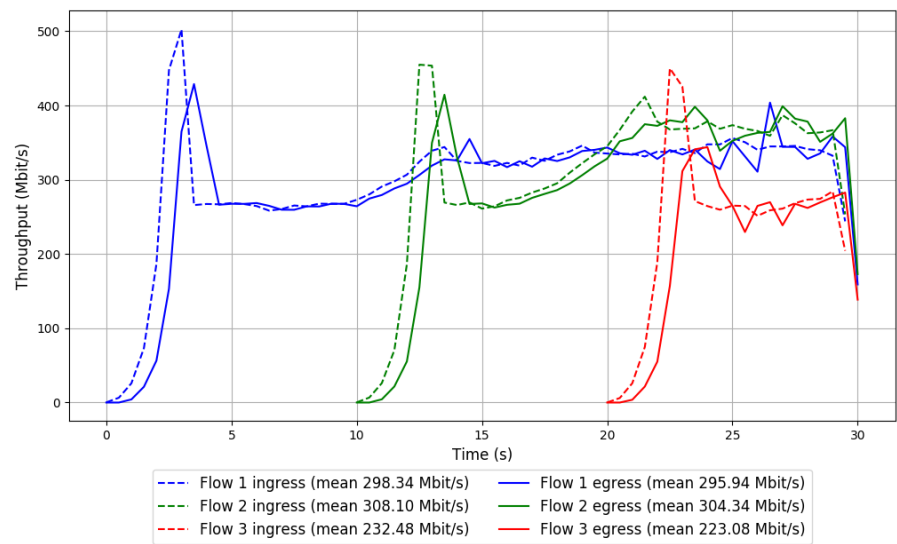Flow 1 (95th percentile 144.32 ms)   Flow 2 (95th percentile 119.24 ms)   Flow 3 (95th percentile 121.65 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-06-27 22:29:11
End at: 2019-06-27 22:29:41
Local clock offset: 0.755 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-06-28 03:35:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.73 Mbit/s
95th percentile per-packet one-way delay: 258.664 ms
Loss rate: 7.32%
-- Flow 1:
Average throughput: 312.23 Mbit/s
95th percentile per-packet one-way delay: 265.975 ms
Loss rate: 9.51%
-- Flow 2:
Average throughput: 259.03 Mbit/s
95th percentile per-packet one-way delay: 202.428 ms
Loss rate: 3.26%
-- Flow 3:
Average throughput: 222.13 Mbit/s
95th percentile per-packet one-way delay: 273.563 ms
Loss rate: 6.84%
```

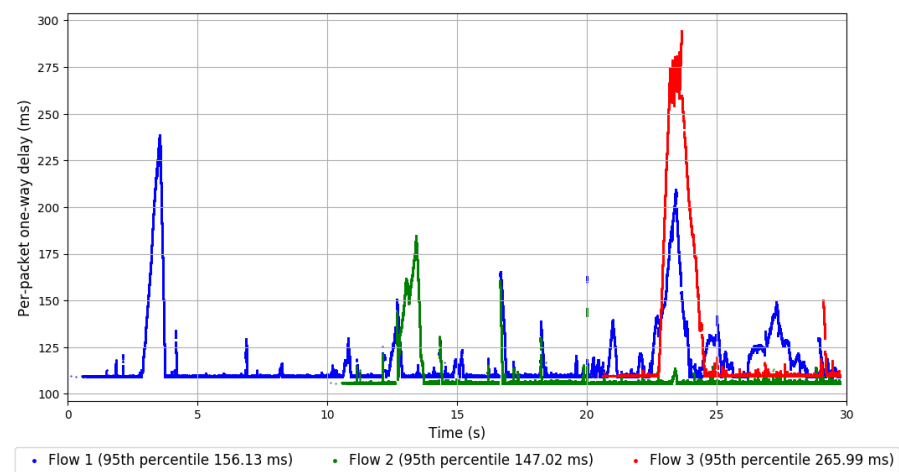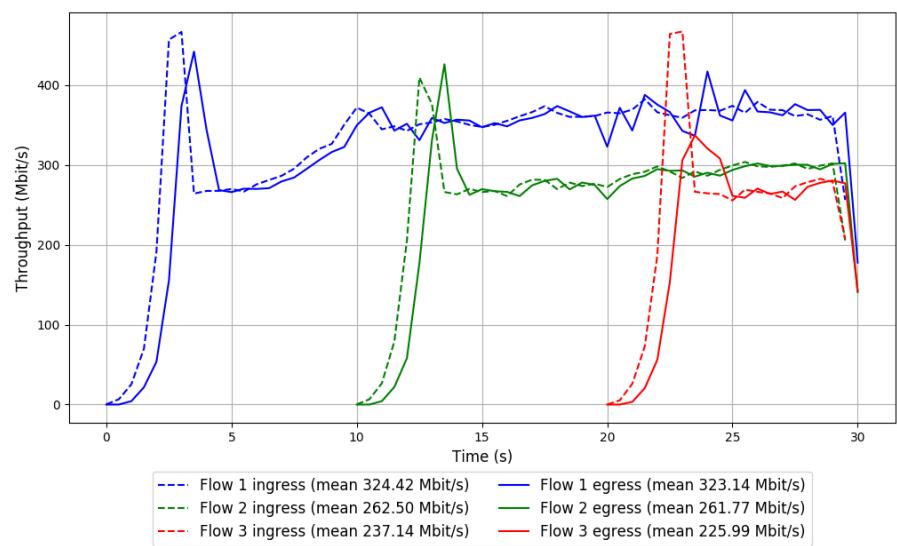Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 342.45 Mbit/s)   Flow 1 egress (mean 312.23 Mbit/s)
Flow 2 ingress (mean 264.80 Mbit/s)   Flow 2 egress (mean 259.03 Mbit/s)
Flow 3 ingress (mean 233.11 Mbit/s)   Flow 3 egress (mean 222.13 Mbit/s)

Flow 1 (95th percentile 265.98 ms)   Flow 2 (95th percentile 202.43 ms)   Flow 3 (95th percentile 273.56 ms)
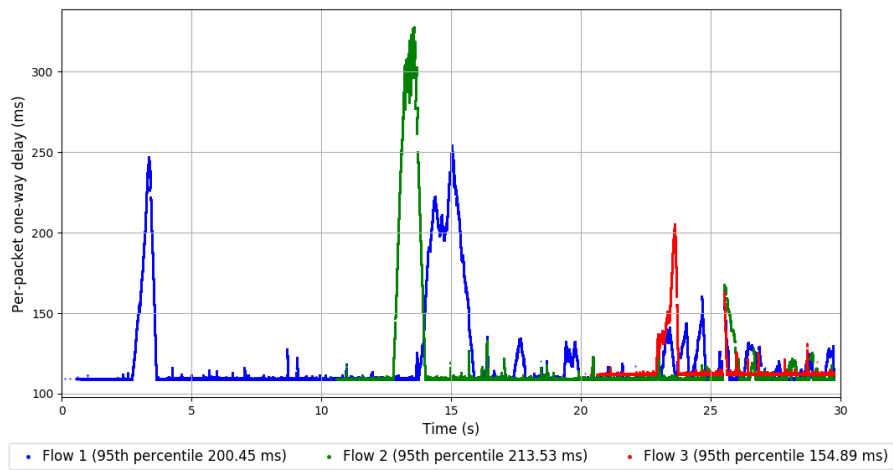
```
Run 2: Statistics of PCC-Allegro

Start at: 2019-06-27 23:07:51
End at: 2019-06-27 23:08:21
Local clock offset: 0.038 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-06-28 03:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.90 Mbit/s
95th percentile per-packet one-way delay: 238.345 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 304.83 Mbit/s
95th percentile per-packet one-way delay: 250.144 ms
Loss rate: 4.69%
-- Flow 2:
Average throughput: 185.34 Mbit/s
95th percentile per-packet one-way delay: 154.878 ms
Loss rate: 2.88%
-- Flow 3:
Average throughput: 226.58 Mbit/s
95th percentile per-packet one-way delay: 224.498 ms
Loss rate: 4.44%
```

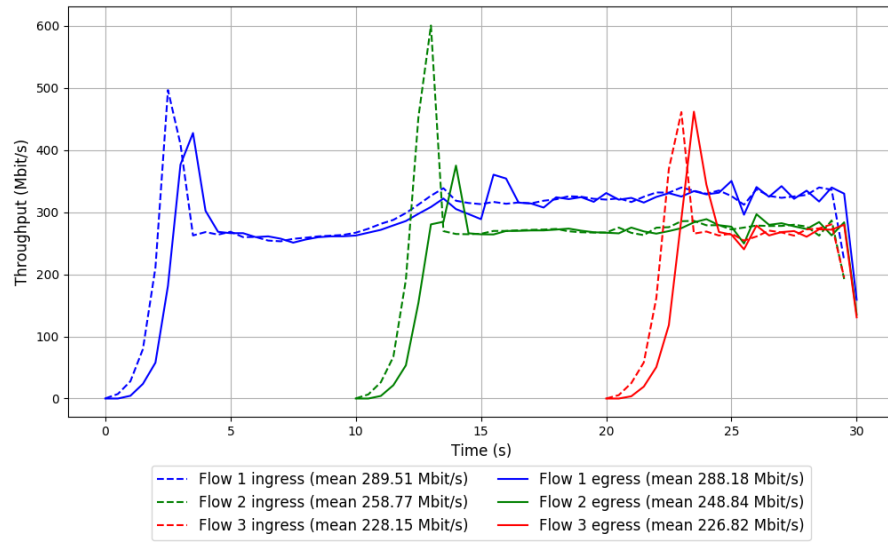## Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-06-27 23:46:58
End at: 2019-06-27 23:47:28
Local clock offset: -0.176 ms
Remote clock offset: -0.124 ms


# Below is generated by plot.py at 2019-06-28 03:42:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.88 Mbit/s
95th percentile per-packet one-way delay: 189.780 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 295.94 Mbit/s
95th percentile per-packet one-way delay: 173.501 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 304.34 Mbit/s
95th percentile per-packet one-way delay: 191.898 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 223.08 Mbit/s
95th percentile per-packet one-way delay: 259.336 ms
Loss rate: 6.20%
```

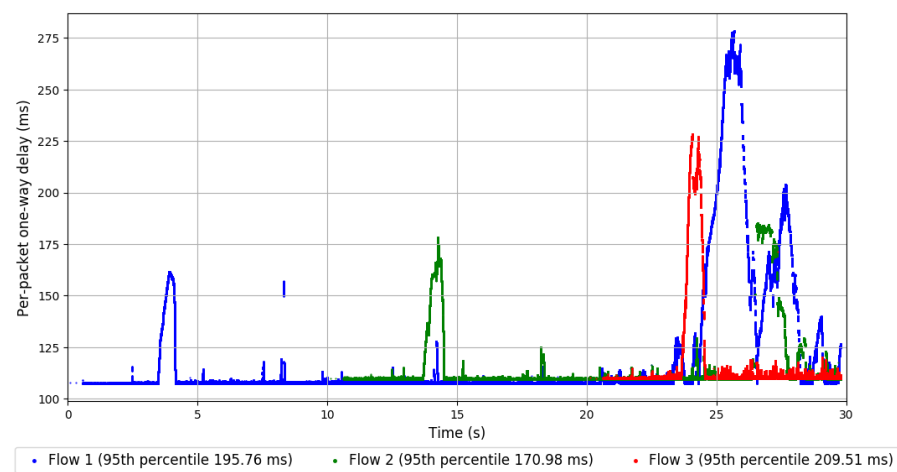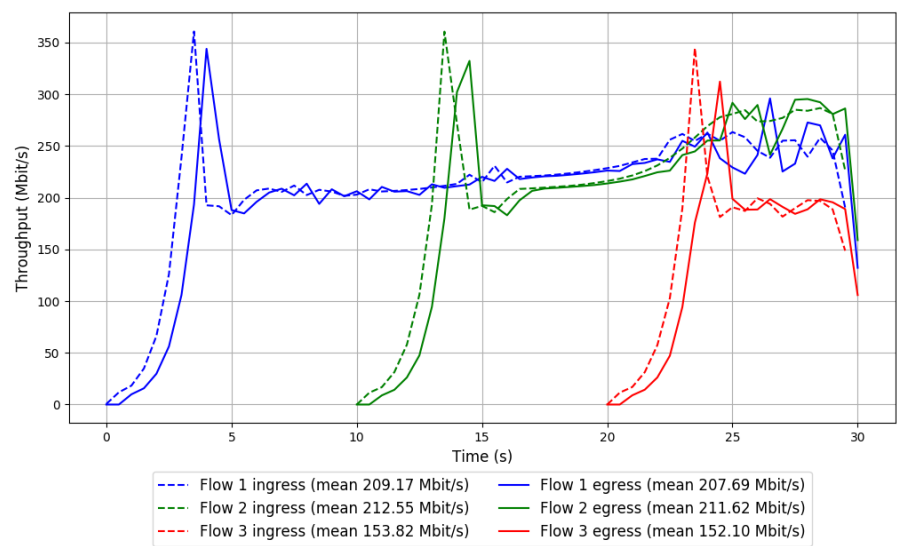Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-06-28 00:25:37
End at: 2019-06-28 00:26:07
Local clock offset: -0.297 ms
Remote clock offset: -0.082 ms


# Below is generated by plot.py at 2019-06-28 03:44:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 569.64 Mbit/s
95th percentile per-packet one-way delay: 168.320 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 323.14 Mbit/s
95th percentile per-packet one-way delay: 156.133 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 261.77 Mbit/s
95th percentile per-packet one-way delay: 147.016 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 225.99 Mbit/s
95th percentile per-packet one-way delay: 265.989 ms
Loss rate: 6.85%
```

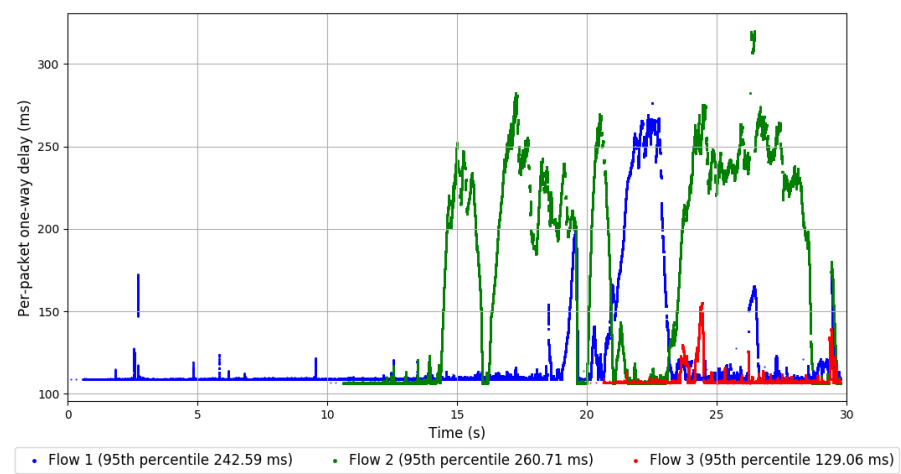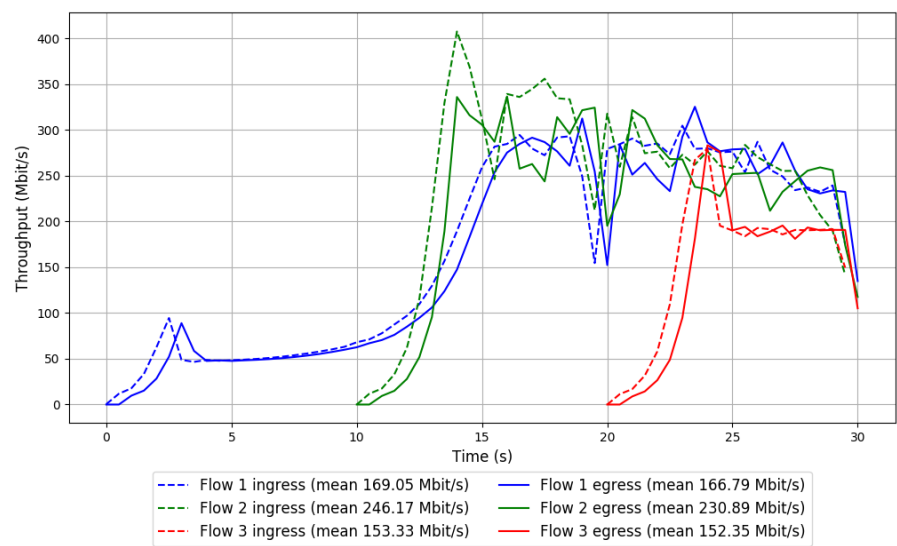## Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 324.42 Mbit/s) — Flow 1 egress (mean 323.14 Mbit/s)
Flow 2 ingress (mean 262.50 Mbit/s) — Flow 2 egress (mean 261.77 Mbit/s)
Flow 3 ingress (mean 237.14 Mbit/s) — Flow 3 egress (mean 225.99 Mbit/s)

Flow 1 (95th percentile 156.13 ms)   Flow 2 (95th percentile 147.02 ms)   Flow 3 (95th percentile 265.99 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-06-28 01:03:58
End at: 2019-06-28 01:04:28
Local clock offset: -0.197 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2019-06-28 03:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 526.39 Mbit/s
95th percentile per-packet one-way delay: 195.374 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 288.18 Mbit/s
95th percentile per-packet one-way delay: 200.450 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 248.84 Mbit/s
95th percentile per-packet one-way delay: 213.526 ms
Loss rate: 4.89%
-- Flow 3:
Average throughput: 226.82 Mbit/s
95th percentile per-packet one-way delay: 154.891 ms
Loss rate: 2.84%
```

Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-06-27 22:34:18
End at: 2019-06-27 22:34:48
Local clock offset: 0.811 ms
Remote clock offset: 0.323 ms


# Below is generated by plot.py at 2019-06-28 03:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 397.29 Mbit/s
95th percentile per-packet one-way delay: 183.973 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 207.69 Mbit/s
95th percentile per-packet one-way delay: 195.758 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 211.62 Mbit/s
95th percentile per-packet one-way delay: 170.976 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 152.10 Mbit/s
95th percentile per-packet one-way delay: 209.509 ms
Loss rate: 3.33%
```
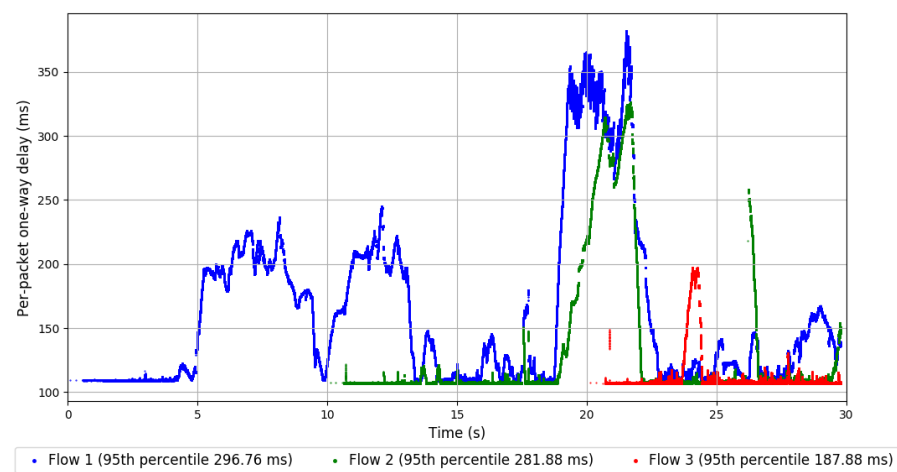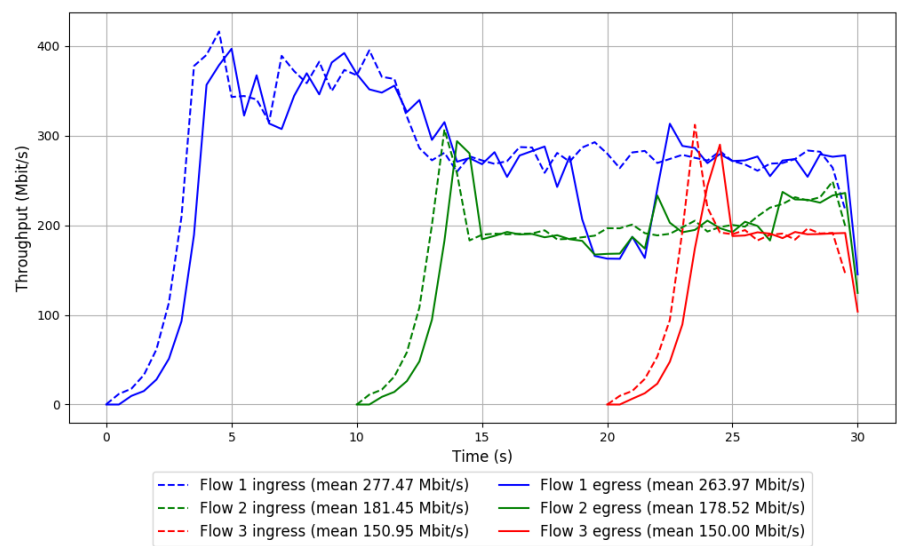
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-06-27 23:12:54
End at: 2019-06-27 23:13:24
Local clock offset: -0.627 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-06-28 03:44:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.31 Mbit/s
95th percentile per-packet one-way delay: 253.754 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 166.79 Mbit/s
95th percentile per-packet one-way delay: 242.588 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 230.89 Mbit/s
95th percentile per-packet one-way delay: 260.712 ms
Loss rate: 7.23%
-- Flow 3:
Average throughput: 152.35 Mbit/s
95th percentile per-packet one-way delay: 129.060 ms
Loss rate: 2.84%
```
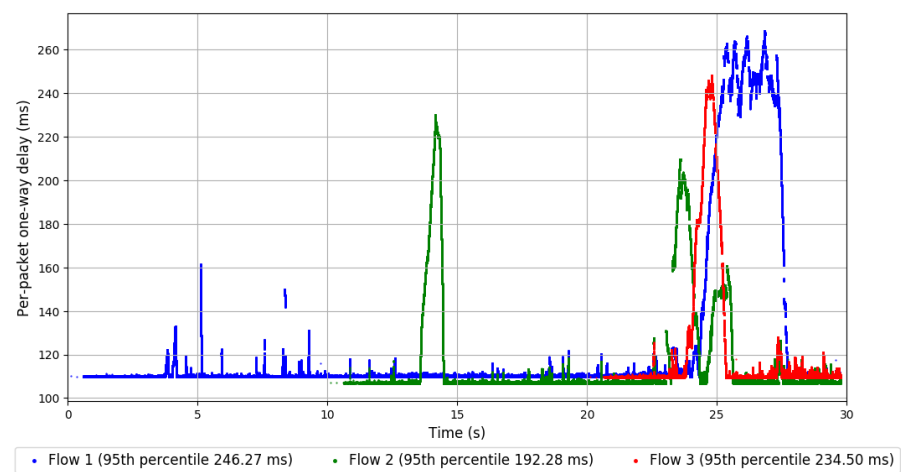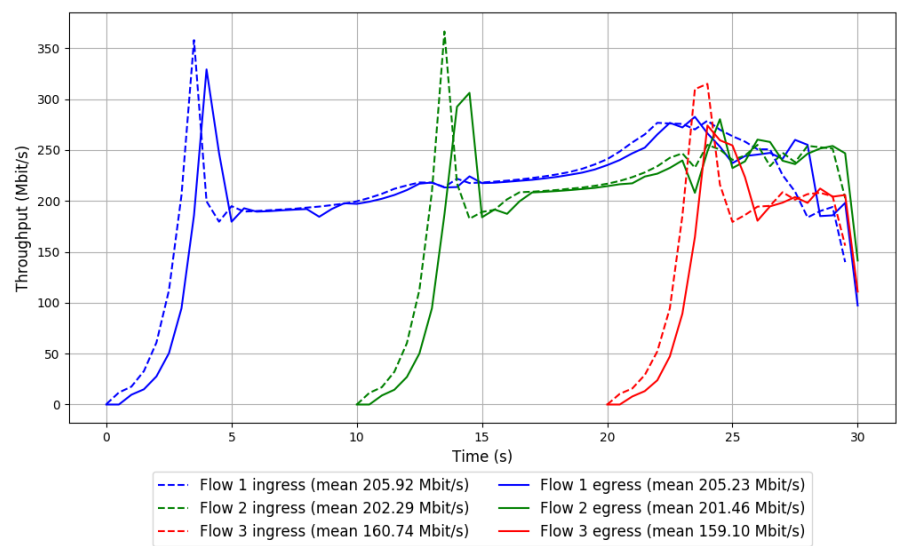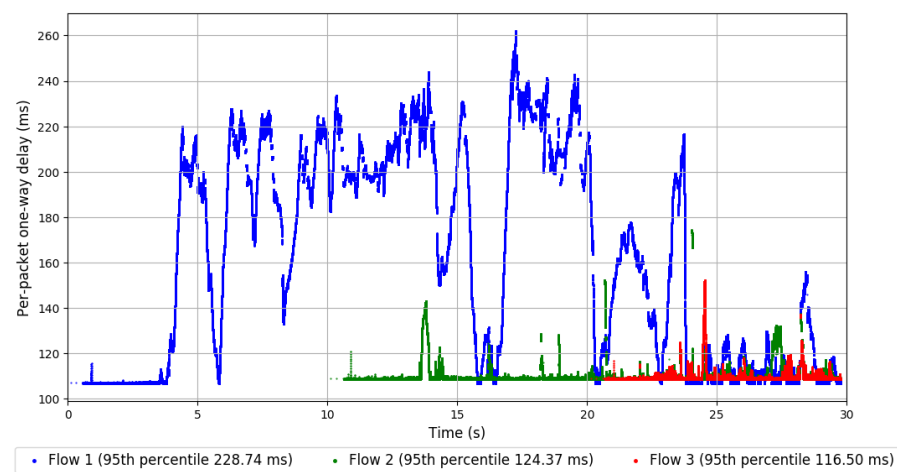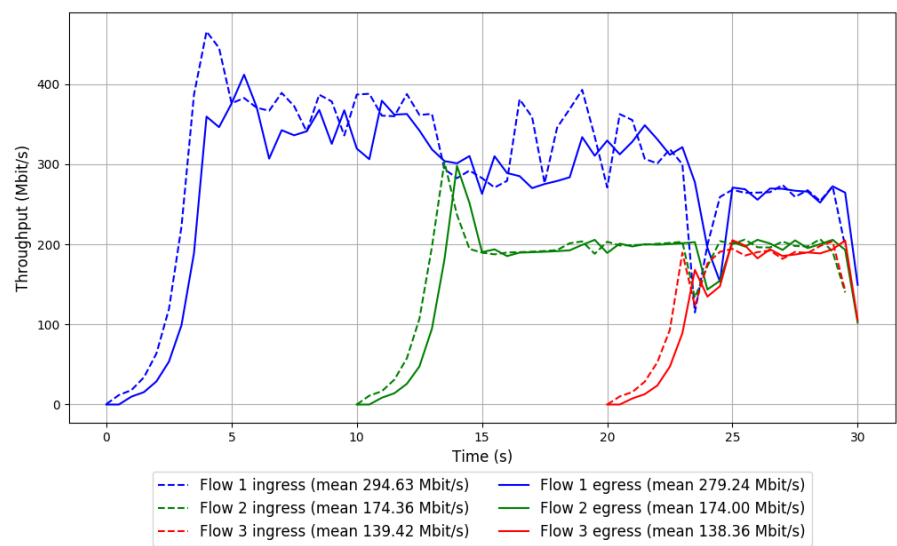
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-06-27 23:52:06
End at: 2019-06-27 23:52:36
Local clock offset: 0.032 ms
Remote clock offset: -0.1 ms


# Below is generated by plot.py at 2019-06-28 03:45:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 430.98 Mbit/s
95th percentile per-packet one-way delay: 280.409 ms
Loss rate: 4.49%
-- Flow 1:
Average throughput: 263.97 Mbit/s
95th percentile per-packet one-way delay: 296.757 ms
Loss rate: 5.57%
-- Flow 2:
Average throughput: 178.52 Mbit/s
95th percentile per-packet one-way delay: 281.878 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 150.00 Mbit/s
95th percentile per-packet one-way delay: 187.879 ms
Loss rate: 2.83%
```
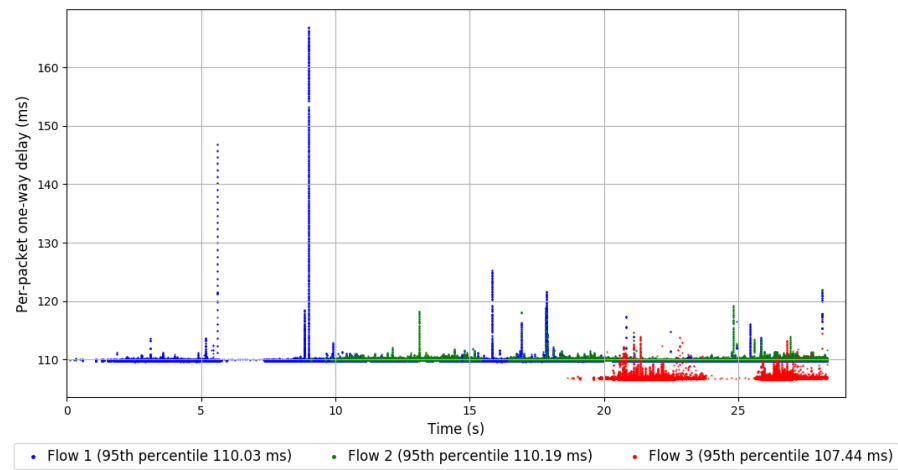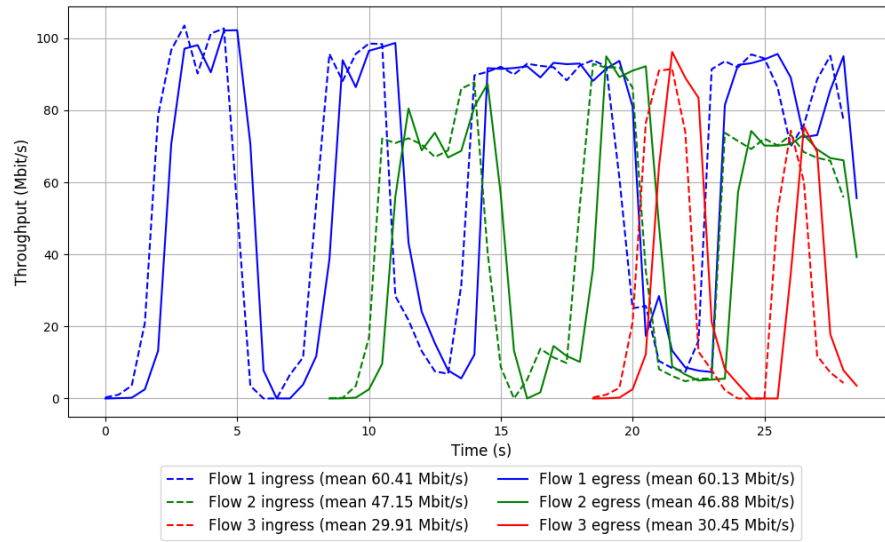
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 277.47 Mbit/s) ---- Flow 1 egress (mean 263.97 Mbit/s)
Flow 2 ingress (mean 181.45 Mbit/s) ---- Flow 2 egress (mean 178.52 Mbit/s)
Flow 3 ingress (mean 150.95 Mbit/s) ---- Flow 3 egress (mean 150.00 Mbit/s)

Flow 1 (95th percentile 296.76 ms)   Flow 2 (95th percentile 281.88 ms)   Flow 3 (95th percentile 187.88 ms)

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```
Run 4: Statistics of PCC-Expr

Start at: 2019-06-28 00:30:48
End at: 2019-06-28 00:31:18
Local clock offset: -0.008 ms
Remote clock offset: -0.1 ms


# Below is generated by plot.py at 2019-06-28 03:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.40 Mbit/s
95th percentile per-packet one-way delay: 236.655 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 205.23 Mbit/s
95th percentile per-packet one-way delay: 246.267 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 201.46 Mbit/s
95th percentile per-packet one-way delay: 192.283 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 159.10 Mbit/s
95th percentile per-packet one-way delay: 234.495 ms
Loss rate: 3.24%
```

Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 205.92 Mbit/s) Flow 1 egress (mean 205.23 Mbit/s)
Flow 2 ingress (mean 202.29 Mbit/s) Flow 2 egress (mean 201.46 Mbit/s)
Flow 3 ingress (mean 160.74 Mbit/s) Flow 3 egress (mean 159.10 Mbit/s)

Flow 1 (95th percentile 246.27 ms) Flow 2 (95th percentile 192.28 ms) Flow 3 (95th percentile 234.50 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-06-28 01:09:03
End at: 2019-06-28 01:09:33
Local clock offset: -0.215 ms
Remote clock offset: -0.039 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.46 Mbit/s
95th percentile per-packet one-way delay: 224.988 ms
Loss rate: 4.44%
-- Flow 1:
Average throughput: 279.24 Mbit/s
95th percentile per-packet one-way delay: 228.743 ms
Loss rate: 5.91%
-- Flow 2:
Average throughput: 174.00 Mbit/s
95th percentile per-packet one-way delay: 124.370 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 138.36 Mbit/s
95th percentile per-packet one-way delay: 116.498 ms
Loss rate: 2.96%
```

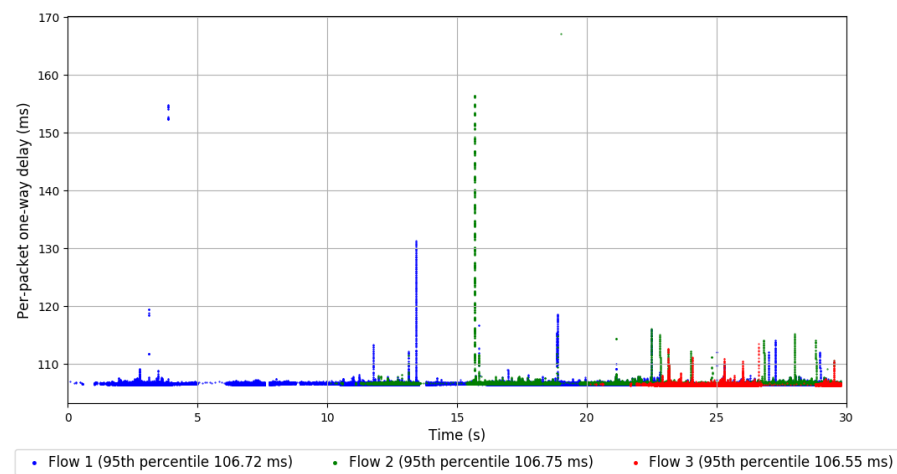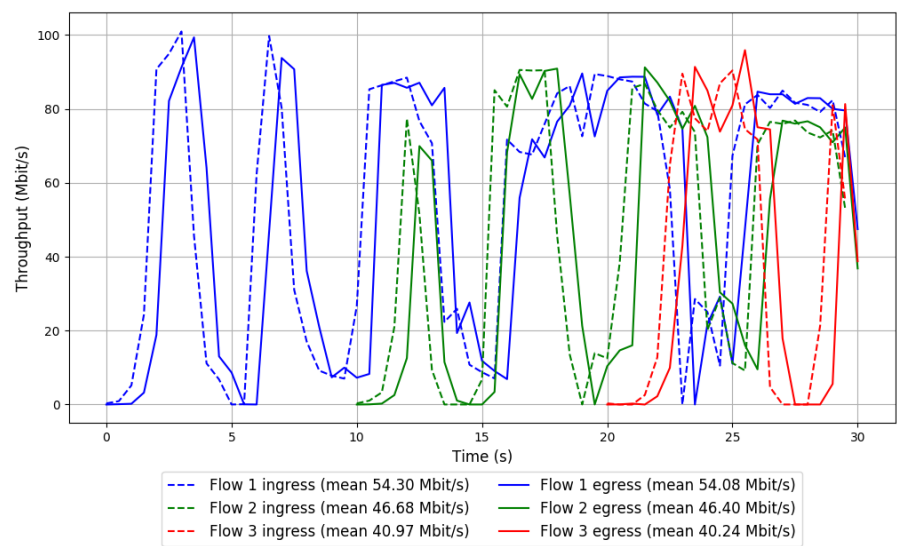Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-06-27 22:18:16
End at: 2019-06-27 22:18:46
Local clock offset: -0.006 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.26 Mbit/s
95th percentile per-packet one-way delay: 110.116 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 60.13 Mbit/s
95th percentile per-packet one-way delay: 110.033 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 46.88 Mbit/s
95th percentile per-packet one-way delay: 110.186 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 107.442 ms
Loss rate: 0.36%
```
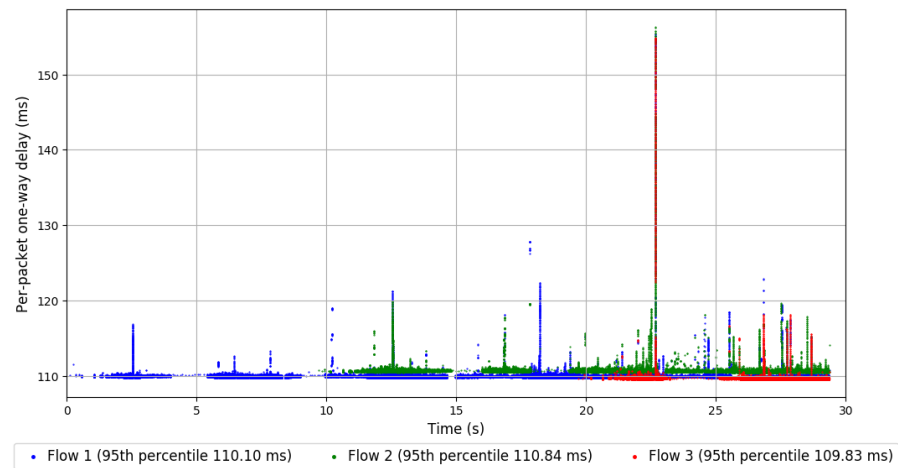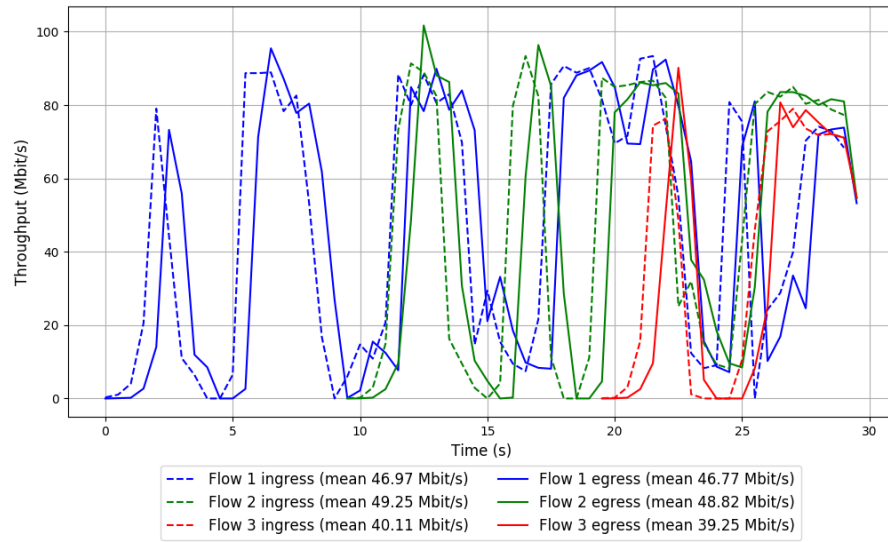
Run 1: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 60.41 Mbit/s)
- Flow 2 ingress (mean 47.15 Mbit/s)
- Flow 3 ingress (mean 29.91 Mbit/s)
- Flow 1 egress (mean 60.13 Mbit/s)
- Flow 2 egress (mean 46.88 Mbit/s)
- Flow 3 egress (mean 30.45 Mbit/s)

- Flow 1 (95th percentile 110.03 ms)
- Flow 2 (95th percentile 110.19 ms)
- Flow 3 (95th percentile 107.44 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-06-27 22:57:18
End at: 2019-06-27 22:57:48
Local clock offset: 0.654 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.98 Mbit/s
95th percentile per-packet one-way delay: 110.614 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 107.892 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 110.083 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 34.99 Mbit/s
95th percentile per-packet one-way delay: 110.811 ms
Loss rate: 4.32%
```
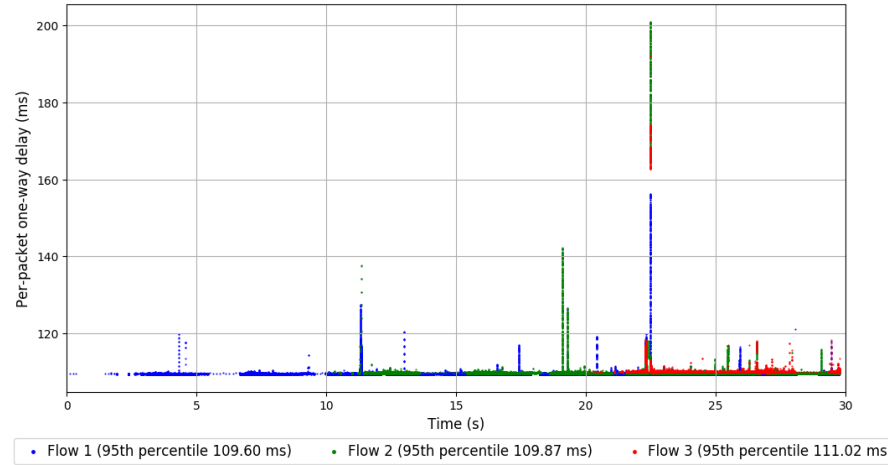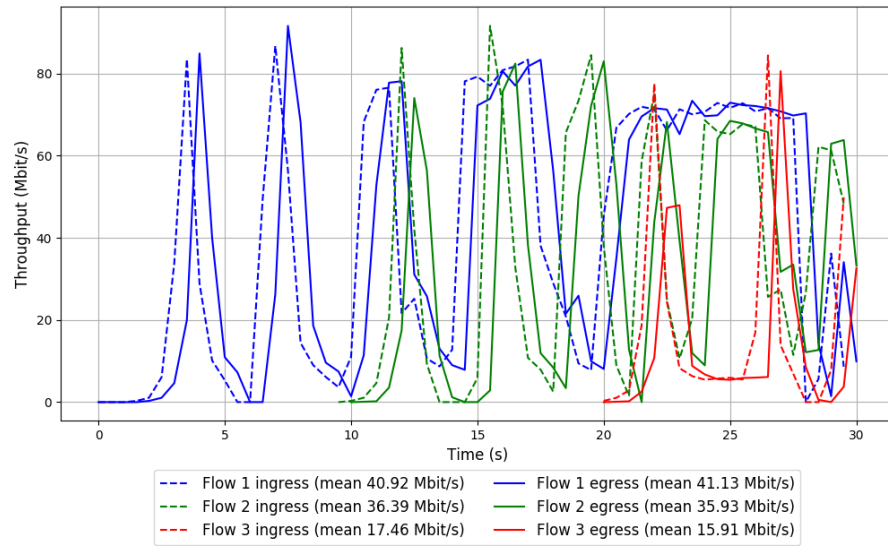
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 53.53 Mbit/s)   Flow 1 egress (mean 53.42 Mbit/s)
Flow 2 ingress (mean 50.29 Mbit/s)   Flow 2 egress (mean 50.05 Mbit/s)
Flow 3 ingress (mean 35.77 Mbit/s)   Flow 3 egress (mean 34.99 Mbit/s)

Flow 1 (95th percentile 107.89 ms)   Flow 2 (95th percentile 110.08 ms)   Flow 3 (95th percentile 110.81 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-06-27 23:36:08
End at: 2019-06-27 23:36:38
Local clock offset: -0.348 ms
Remote clock offset: -0.128 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.87 Mbit/s
95th percentile per-packet one-way delay: 106.724 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 54.08 Mbit/s
95th percentile per-packet one-way delay: 106.717 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 46.40 Mbit/s
95th percentile per-packet one-way delay: 106.755 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 106.551 ms
Loss rate: 3.96%
```

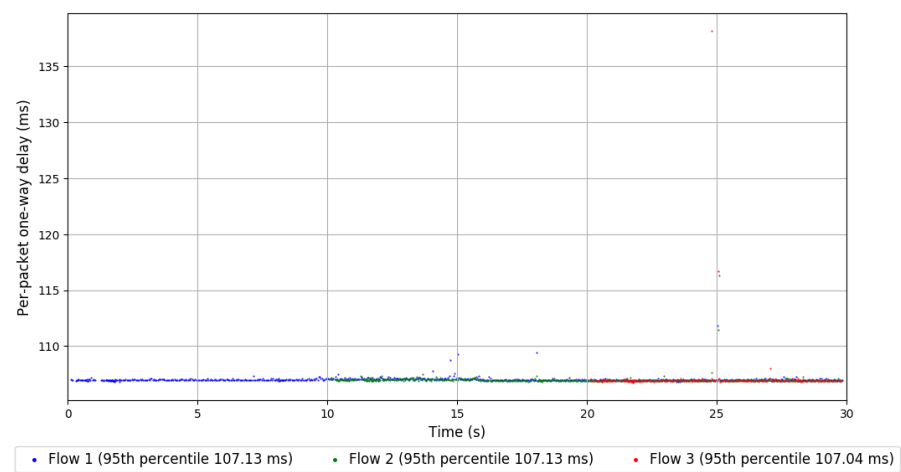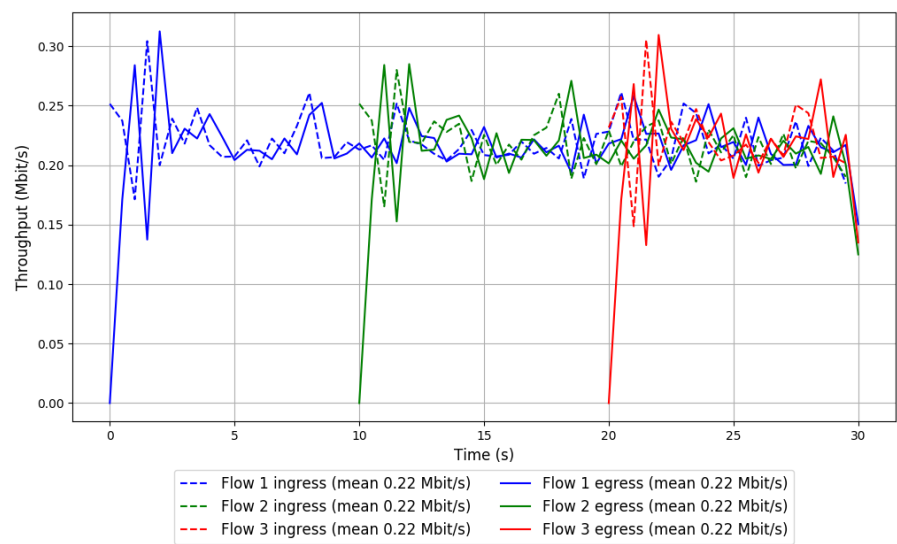Run 3: Report of QUIC Cubic — Data Link

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```
Run 4: Statistics of QUIC Cubic

Start at: 2019-06-28 00:15:03
End at: 2019-06-28 00:15:33
Local clock offset: 0.709 ms
Remote clock offset: -0.107 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.54 Mbit/s
95th percentile per-packet one-way delay: 110.729 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 46.77 Mbit/s
95th percentile per-packet one-way delay: 110.099 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 48.82 Mbit/s
95th percentile per-packet one-way delay: 110.842 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 39.25 Mbit/s
95th percentile per-packet one-way delay: 109.829 ms
Loss rate: 4.31%
```

Run 4: Report of QUIC Cubic — Data Link
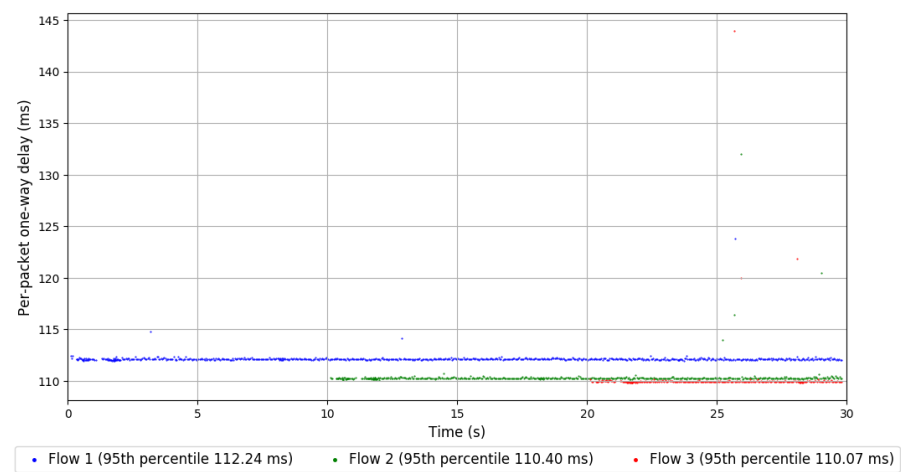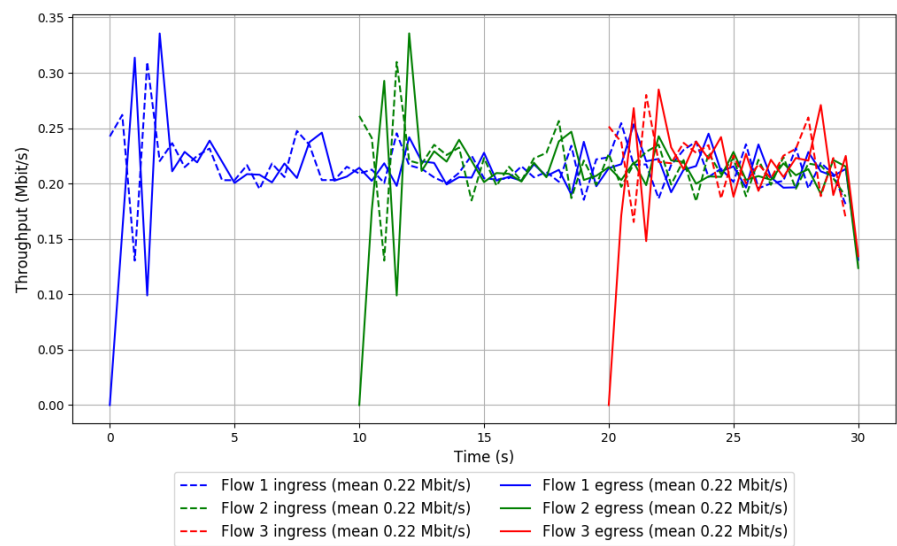

Flow 1 ingress (mean 46.97 Mbit/s) --- Flow 1 egress (mean 46.77 Mbit/s)
Flow 2 ingress (mean 49.25 Mbit/s) --- Flow 2 egress (mean 48.82 Mbit/s)
Flow 3 ingress (mean 40.11 Mbit/s) --- Flow 3 egress (mean 39.25 Mbit/s)

Flow 1 (95th percentile 110.10 ms)　Flow 2 (95th percentile 110.84 ms)　Flow 3 (95th percentile 109.83 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-06-28 00:53:34
End at: 2019-06-28 00:54:04
Local clock offset: -0.038 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.14 Mbit/s
95th percentile per-packet one-way delay: 109.994 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 41.13 Mbit/s
95th percentile per-packet one-way delay: 109.598 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 109.867 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 15.91 Mbit/s
95th percentile per-packet one-way delay: 111.024 ms
Loss rate: 10.27%
```

Run 5: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 40.92 Mbit/s)
- Flow 1 egress (mean 41.13 Mbit/s)
- Flow 2 ingress (mean 36.39 Mbit/s)
- Flow 2 egress (mean 35.93 Mbit/s)
- Flow 3 ingress (mean 17.46 Mbit/s)
- Flow 3 egress (mean 15.91 Mbit/s)

- Flow 1 (95th percentile 109.60 ms)
- Flow 2 (95th percentile 109.87 ms)
- Flow 3 (95th percentile 111.02 ms)

```
Run 1: Statistics of SCReAM

Start at: 2019-06-27 22:22:58
End at: 2019-06-27 22:23:28
Local clock offset: -0.073 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 107.122 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.133 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.134 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.040 ms
Loss rate: 2.23%
```
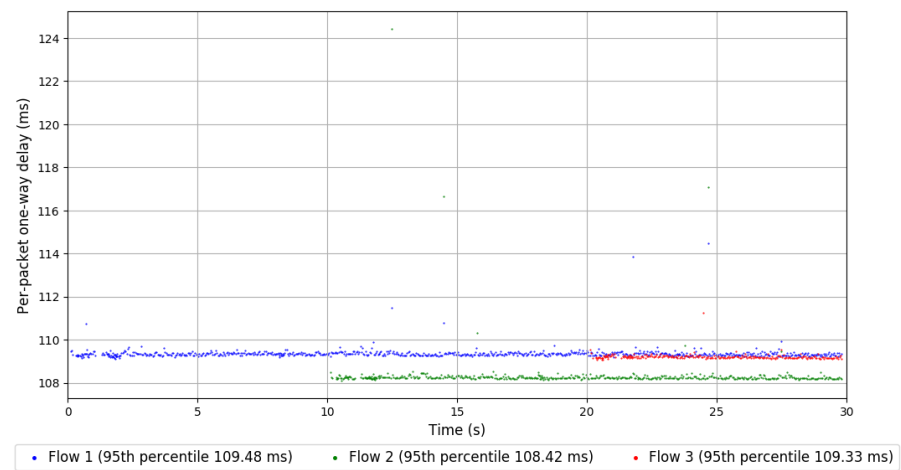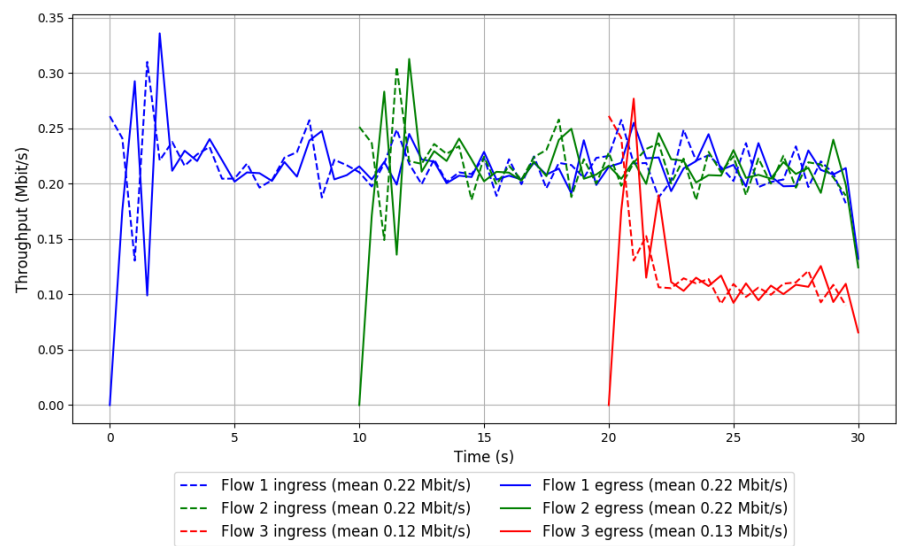
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-06-27 23:01:58
End at: 2019-06-27 23:02:28
Local clock offset: -0.015 ms
Remote clock offset: 0.036 ms

# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.207 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.242 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.402 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.070 ms
Loss rate: 1.88%
```
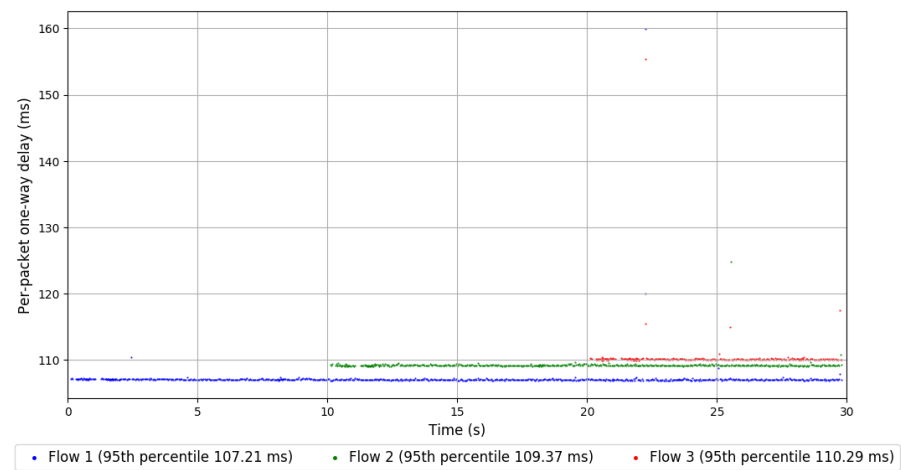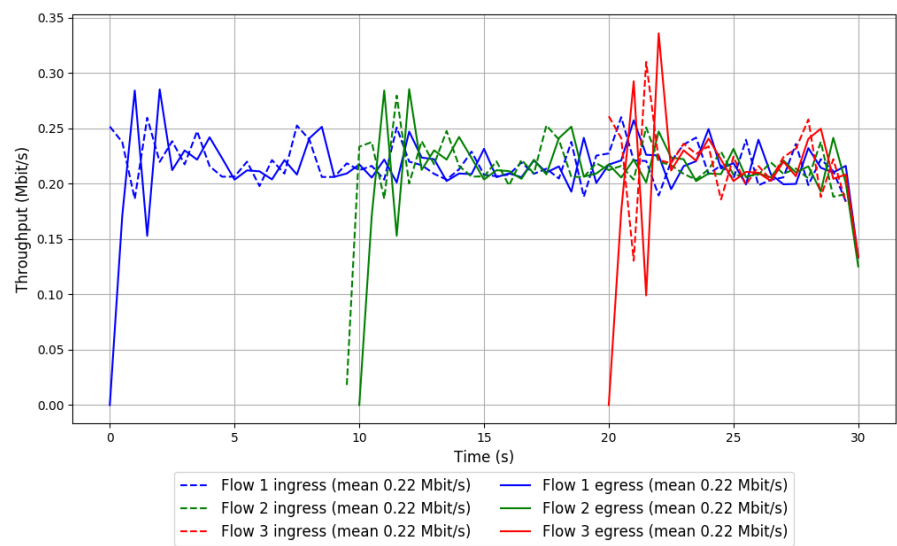
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-06-27 23:40:52
End at: 2019-06-27 23:41:22
Local clock offset: -0.023 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 109.044 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 109.093 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.029 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 106.437 ms
Loss rate: 2.22%
```
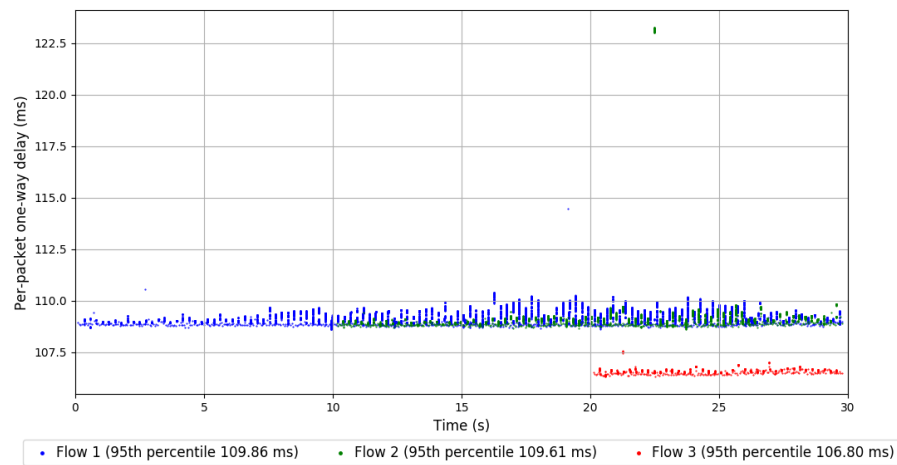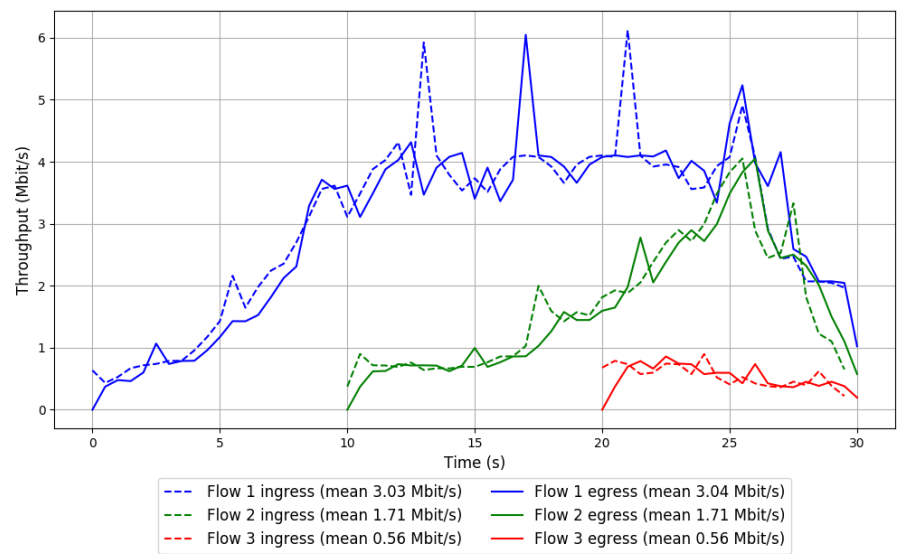
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-06-28 00:19:49
End at: 2019-06-28 00:20:19
Local clock offset: -0.858 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 109.450 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.483 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.419 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 109.334 ms
Loss rate: 1.94%
```

Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-06-28 00:58:01
End at: 2019-06-28 00:58:31
Local clock offset: -0.043 ms
Remote clock offset: -0.046 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 110.153 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.207 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.374 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.290 ms
Loss rate: 2.22%
```
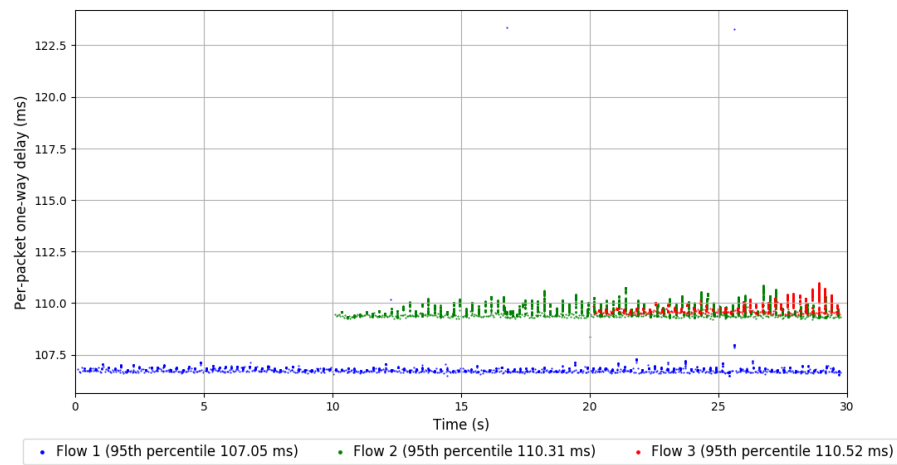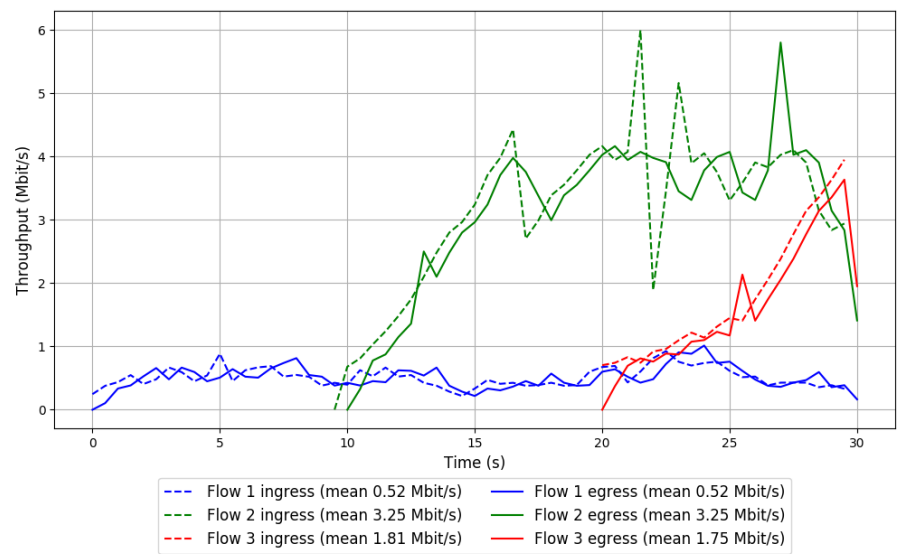
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-06-27 22:33:01
End at: 2019-06-27 22:33:31
Local clock offset: -0.095 ms
Remote clock offset: 0.349 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 109.803 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 109.859 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 109.605 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 106.799 ms
Loss rate: 1.96%
```
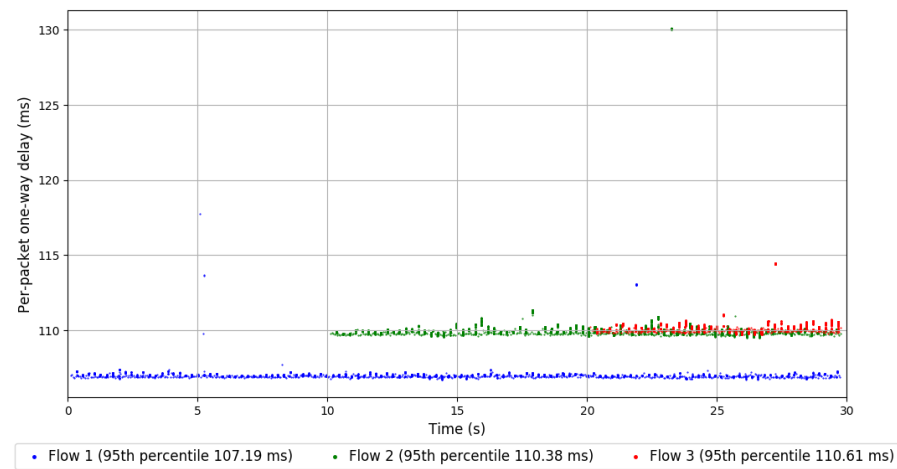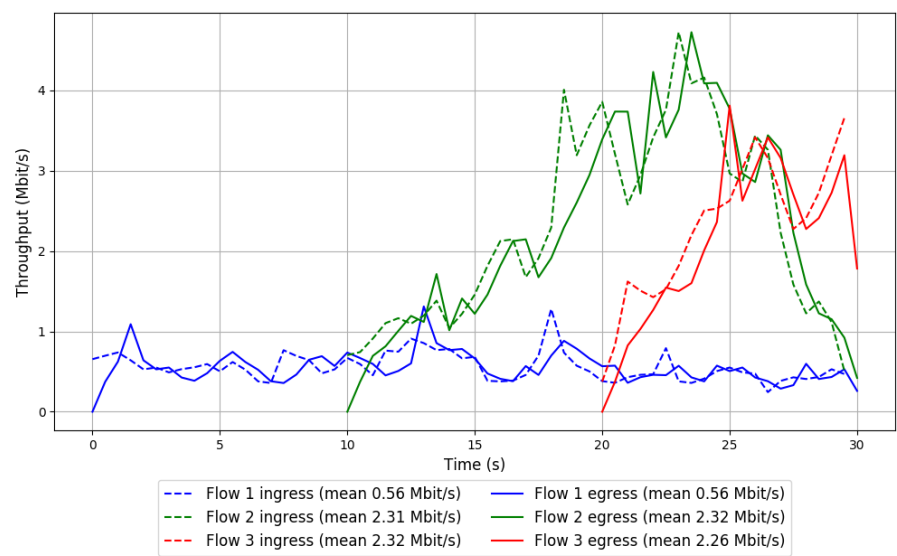
Run 1: Report of Sprout — Data Link

Run 2: Statistics of Sprout

Start at: 2019-06-27 23:11:36
End at: 2019-06-27 23:12:06
Local clock offset: -0.448 ms
Remote clock offset: -0.081 ms

Below is generated by plot.py at 2019-06-28 03:56:05
Datalink statistics
-- Total of 3 flows:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 110.327 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 107.053 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 110.308 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 110.516 ms
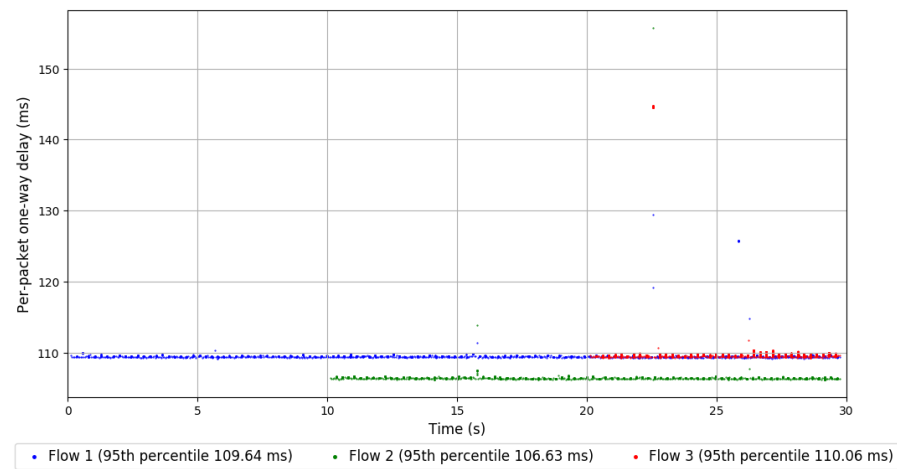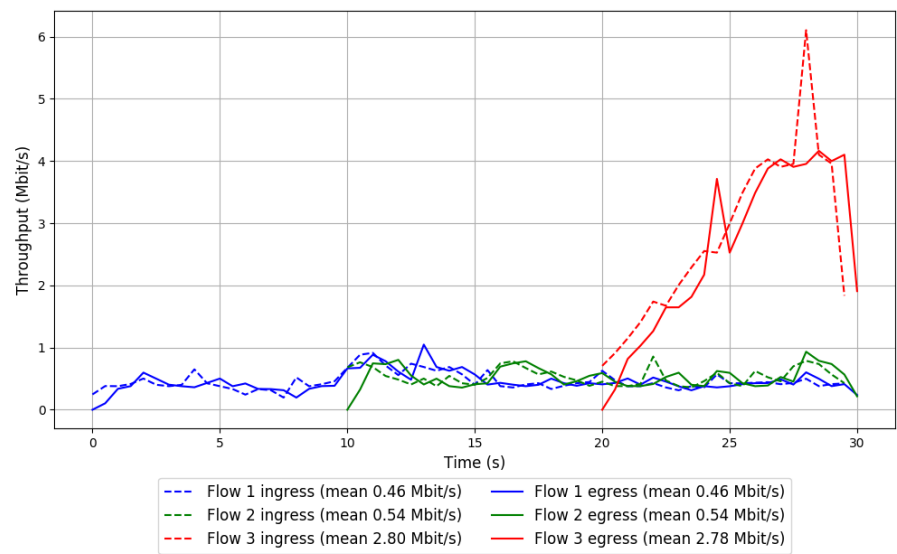Loss rate: 5.63%

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-06-27 23:50:48
End at: 2019-06-27 23:51:18
Local clock offset: -0.106 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 110.499 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 107.187 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 110.384 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 110.612 ms
Loss rate: 4.13%
```
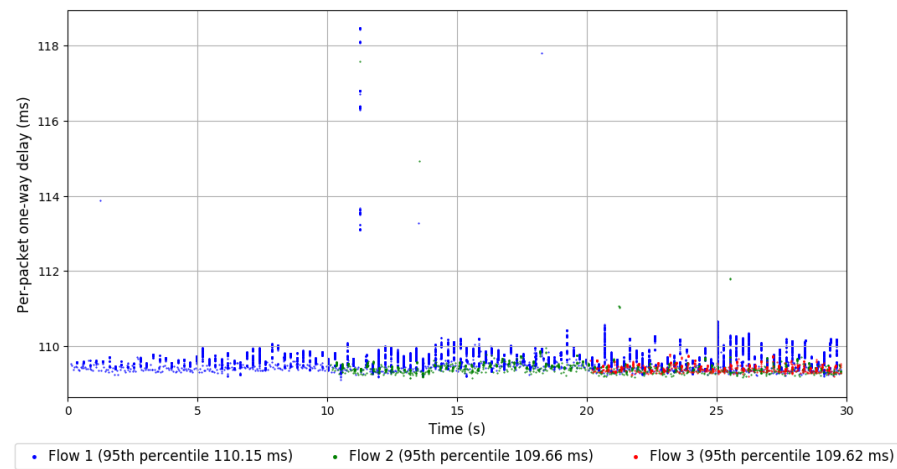
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-06-28 00:29:31
End at: 2019-06-28 00:30:01
Local clock offset: 0.088 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 109.925 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 109.640 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 106.628 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 110.065 ms
Loss rate: 3.31%
```
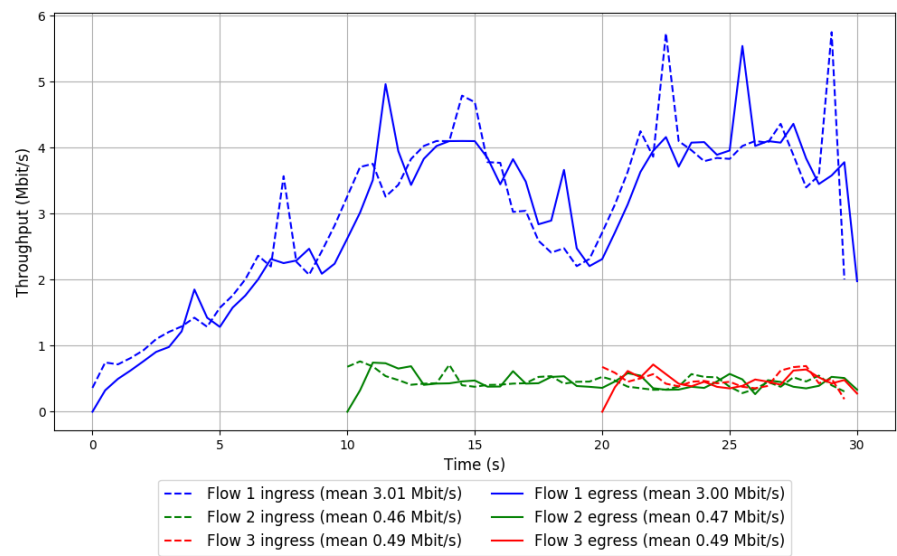
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-06-28 01:07:45
End at: 2019-06-28 01:08:15
Local clock offset: 0.158 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-06-28 03:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 110.132 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 110.152 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 109.663 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 109.620 ms
Loss rate: 1.54%
```
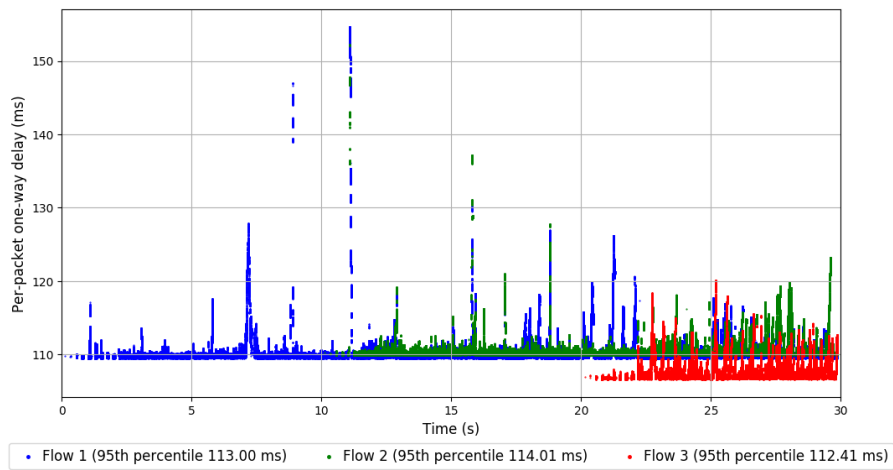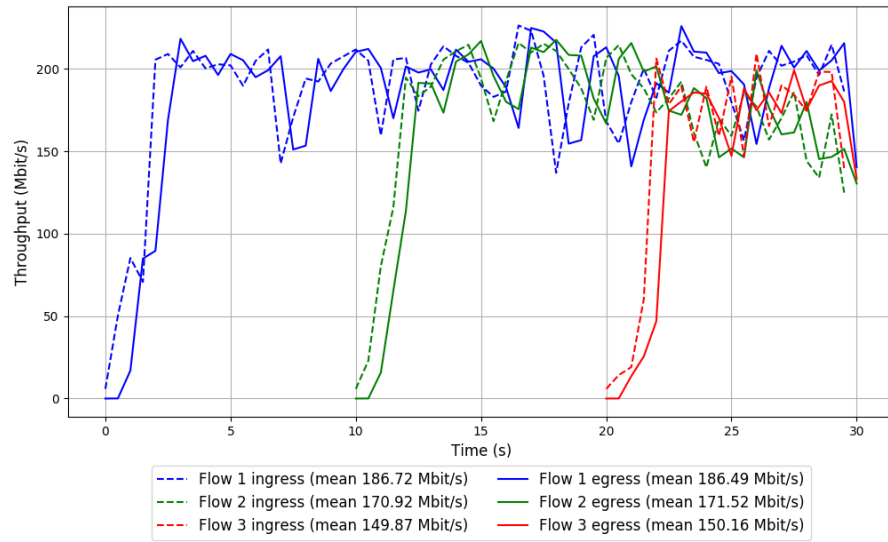
Run 5: Report of Sprout — Data Link

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

Start at: 2019-06-27 22:53:18
End at: 2019-06-27 22:53:48
Local clock offset: 0.028 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-06-28 03:57:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 349.43 Mbit/s
95th percentile per-packet one-way delay: 113.303 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 186.49 Mbit/s
95th percentile per-packet one-way delay: 113.001 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 171.52 Mbit/s
95th percentile per-packet one-way delay: 114.011 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 150.16 Mbit/s
95th percentile per-packet one-way delay: 112.414 ms
Loss rate: 1.97%
```
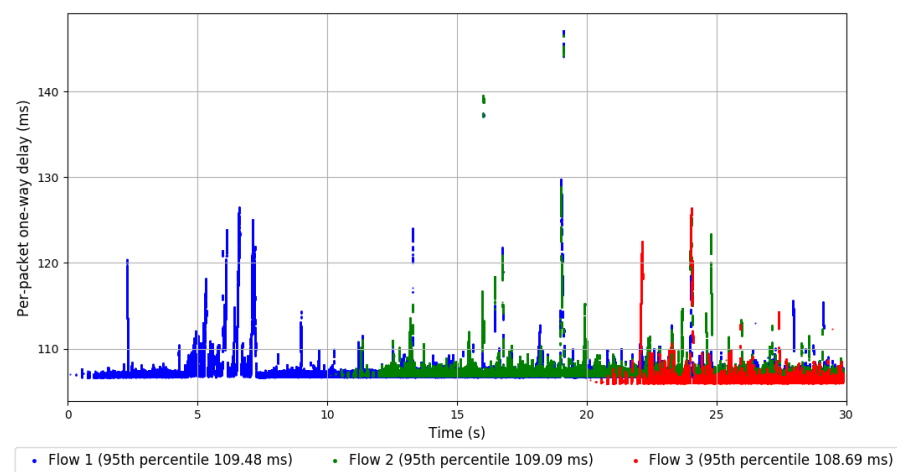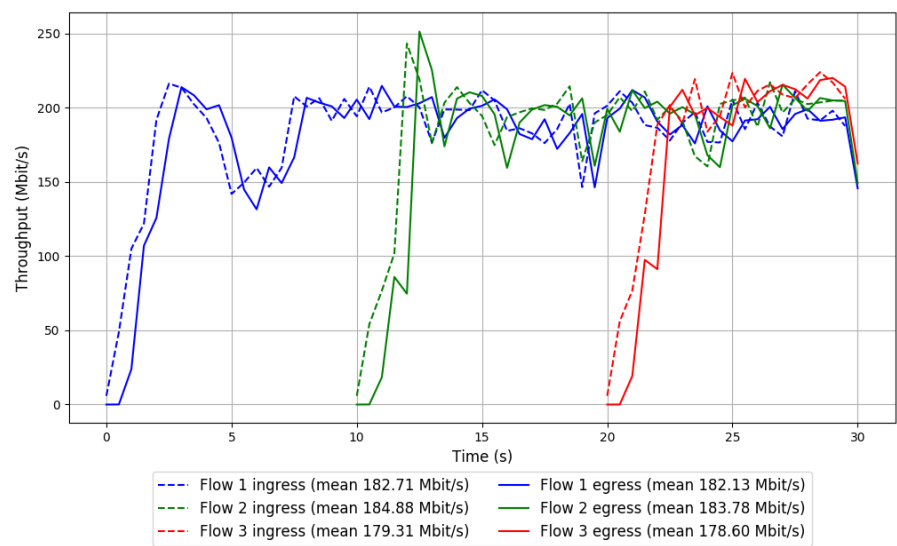
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 186.72 Mbit/s) --- Flow 1 egress (mean 186.49 Mbit/s)
Flow 2 ingress (mean 170.92 Mbit/s) --- Flow 2 egress (mean 171.52 Mbit/s)
Flow 3 ingress (mean 149.87 Mbit/s) --- Flow 3 egress (mean 150.16 Mbit/s)

Flow 1 (95th percentile 113.00 ms)   Flow 2 (95th percentile 114.01 ms)   Flow 3 (95th percentile 112.41 ms)

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

Start at: 2019-06-27 23:32:08
End at: 2019-06-27 23:32:38
Local clock offset: -0.043 ms
Remote clock offset: -0.13 ms


# Below is generated by plot.py at 2019-06-28 03:58:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.52 Mbit/s
95th percentile per-packet one-way delay: 109.195 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 182.13 Mbit/s
95th percentile per-packet one-way delay: 109.476 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 183.78 Mbit/s
95th percentile per-packet one-way delay: 109.094 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 178.60 Mbit/s
95th percentile per-packet one-way delay: 108.690 ms
Loss rate: 2.58%
```

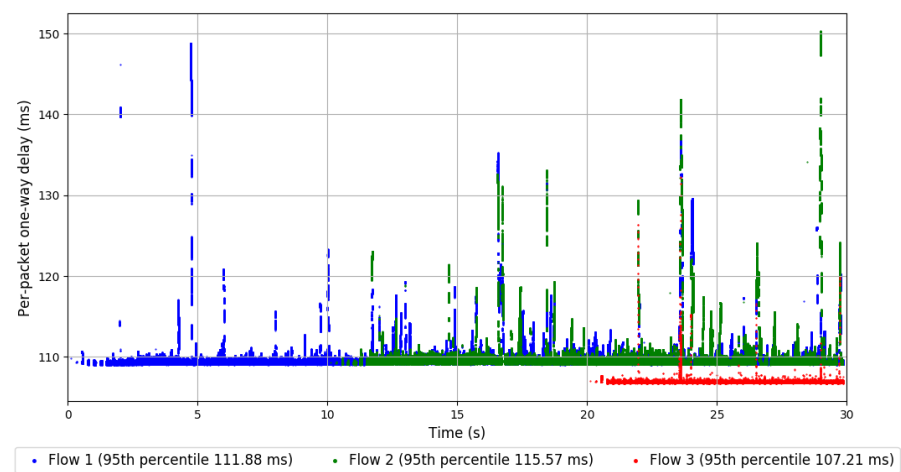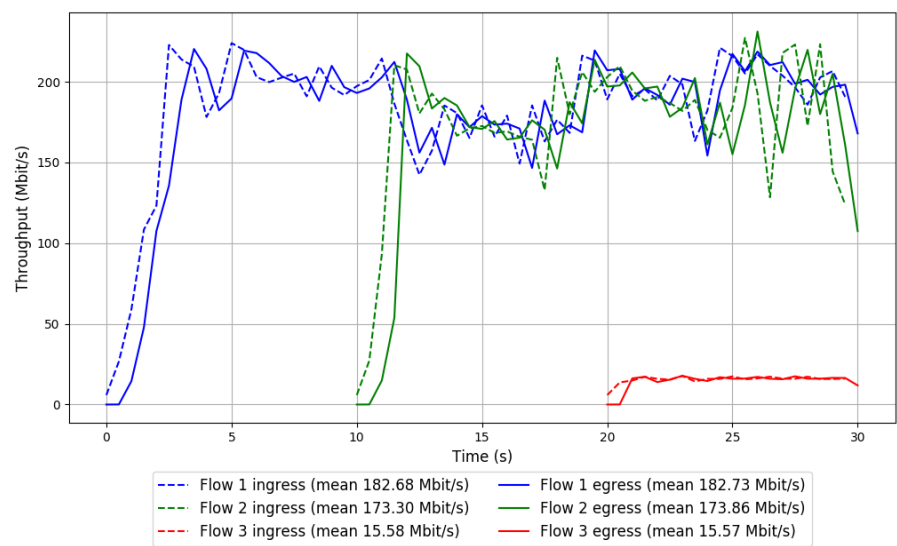Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-06-28 00:11:07
End at: 2019-06-28 00:11:37
Local clock offset: -0.009 ms
Remote clock offset: -0.137 ms


# Below is generated by plot.py at 2019-06-28 03:58:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.09 Mbit/s
95th percentile per-packet one-way delay: 112.975 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 182.73 Mbit/s
95th percentile per-packet one-way delay: 111.882 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 173.86 Mbit/s
95th percentile per-packet one-way delay: 115.569 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 15.57 Mbit/s
95th percentile per-packet one-way delay: 107.207 ms
Loss rate: 2.26%
```
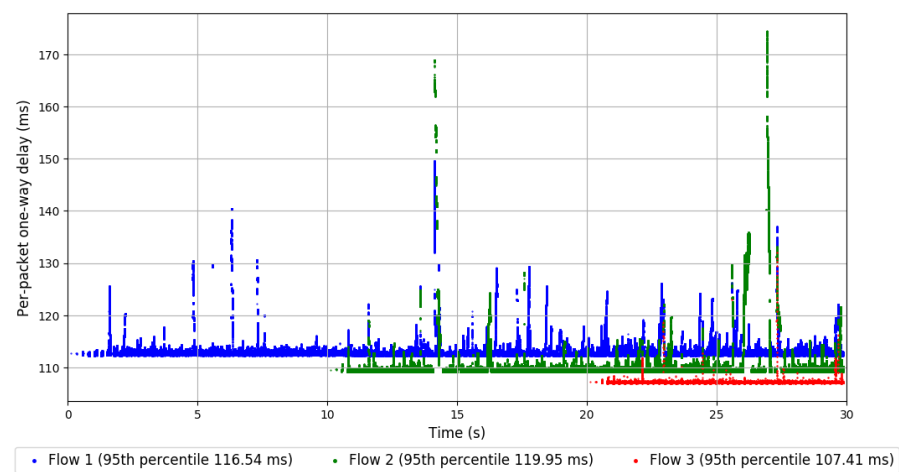
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2019-06-28 00:49:39
End at: 2019-06-28 00:50:09
Local clock offset: 0.071 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2019-06-28 03:58:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.27 Mbit/s
95th percentile per-packet one-way delay: 117.355 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 173.76 Mbit/s
95th percentile per-packet one-way delay: 116.543 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 169.41 Mbit/s
95th percentile per-packet one-way delay: 119.949 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 107.407 ms
Loss rate: 2.33%
```
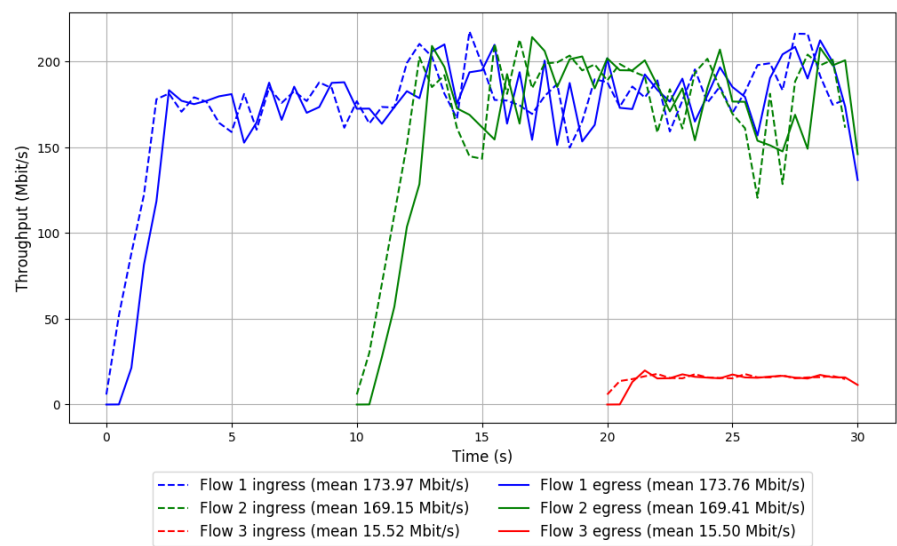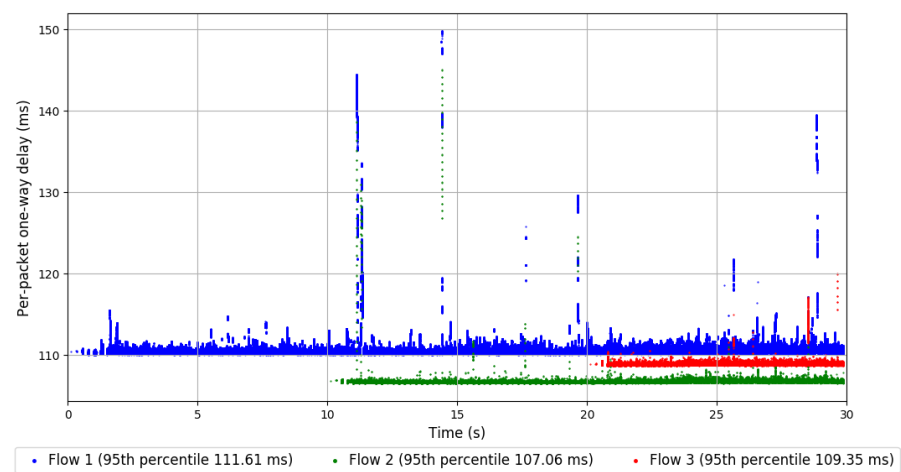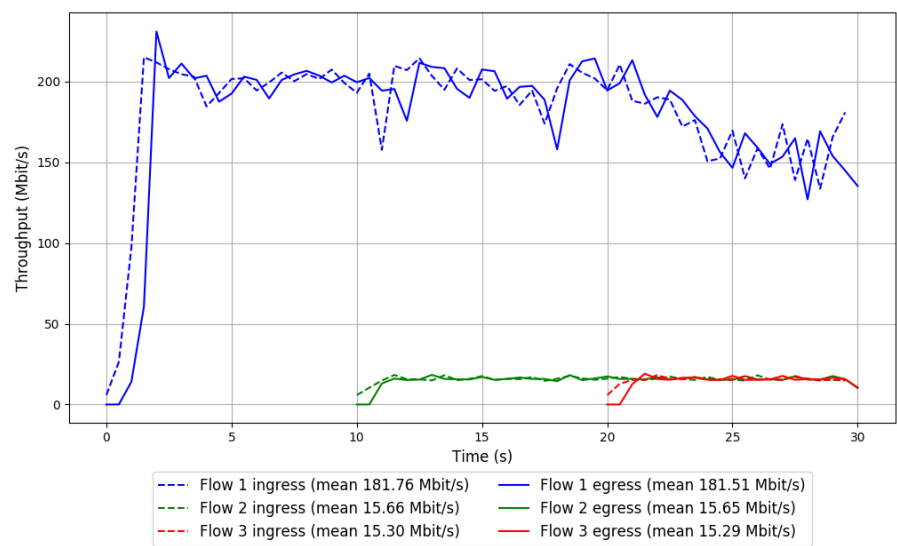
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 173.97 Mbit/s)   Flow 1 egress (mean 173.76 Mbit/s)
Flow 2 ingress (mean 169.15 Mbit/s)   Flow 2 egress (mean 169.41 Mbit/s)
Flow 3 ingress (mean 15.52 Mbit/s)   Flow 3 egress (mean 15.50 Mbit/s)

Flow 1 (95th percentile 116.54 ms)   Flow 2 (95th percentile 119.95 ms)   Flow 3 (95th percentile 107.41 ms)

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

Start at: 2019-06-28 01:28:12
End at: 2019-06-28 01:28:42
Local clock offset: -0.19 ms
Remote clock offset: -0.05 ms

# Below is generated by plot.py at 2019-06-28 03:58:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.90 Mbit/s
95th percentile per-packet one-way delay: 111.545 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 181.51 Mbit/s
95th percentile per-packet one-way delay: 111.609 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 15.65 Mbit/s
95th percentile per-packet one-way delay: 107.056 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 15.29 Mbit/s
95th percentile per-packet one-way delay: 109.346 ms
Loss rate: 2.32%
```
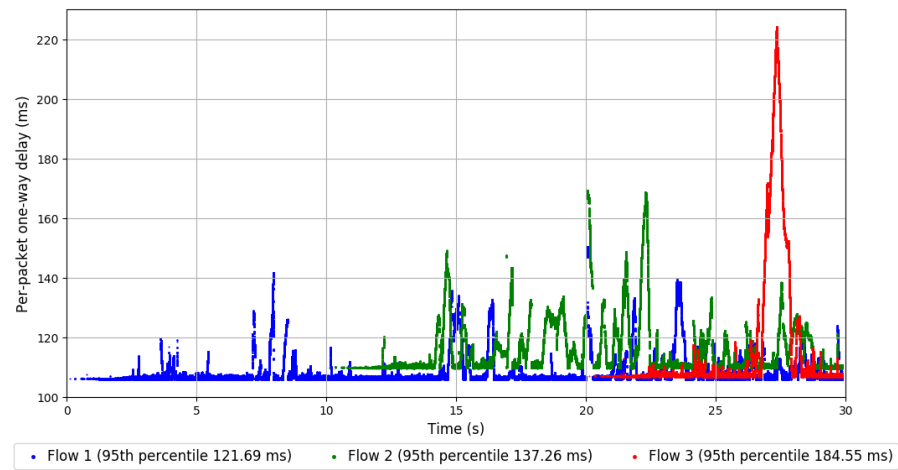
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-06-27 22:47:36
End at: 2019-06-27 22:48:06
Local clock offset: 0.028 ms
Remote clock offset: 0.001 ms


# Below is generated by plot.py at 2019-06-28 04:00:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 754.69 Mbit/s
95th percentile per-packet one-way delay: 132.501 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 378.26 Mbit/s
95th percentile per-packet one-way delay: 121.688 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 429.00 Mbit/s
95th percentile per-packet one-way delay: 137.265 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 280.21 Mbit/s
95th percentile per-packet one-way delay: 184.554 ms
Loss rate: 2.09%
```
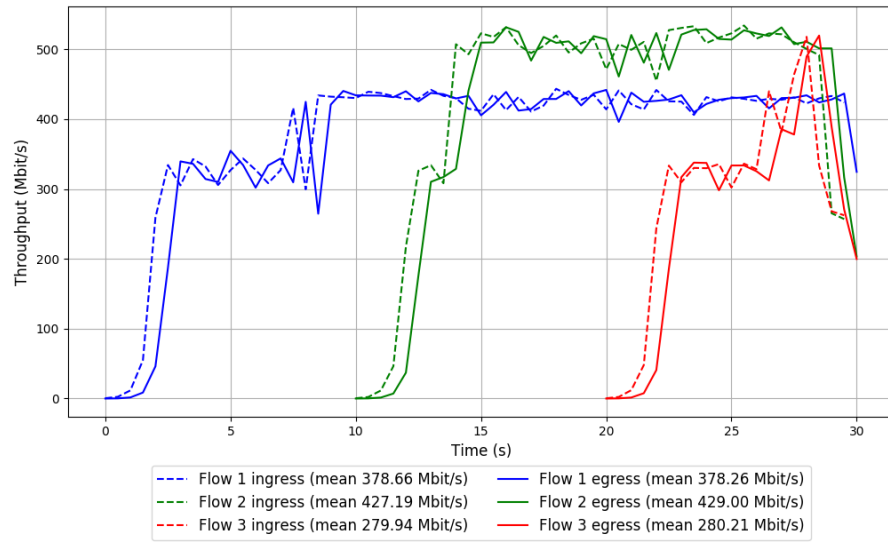
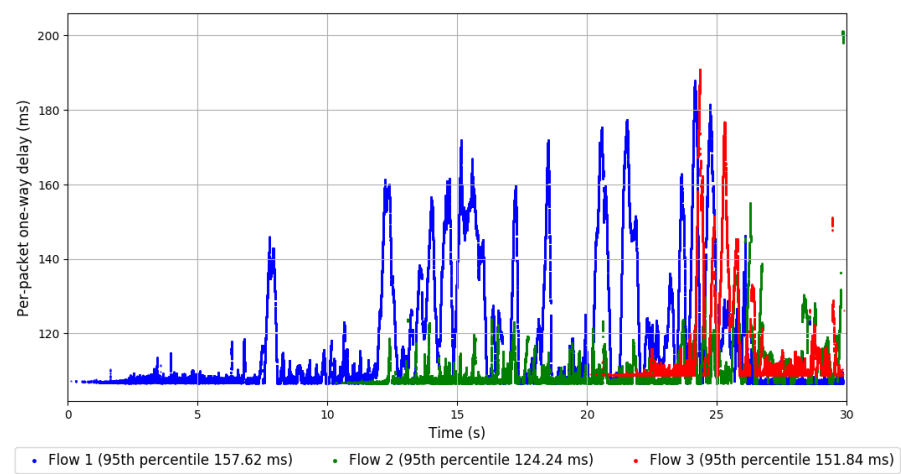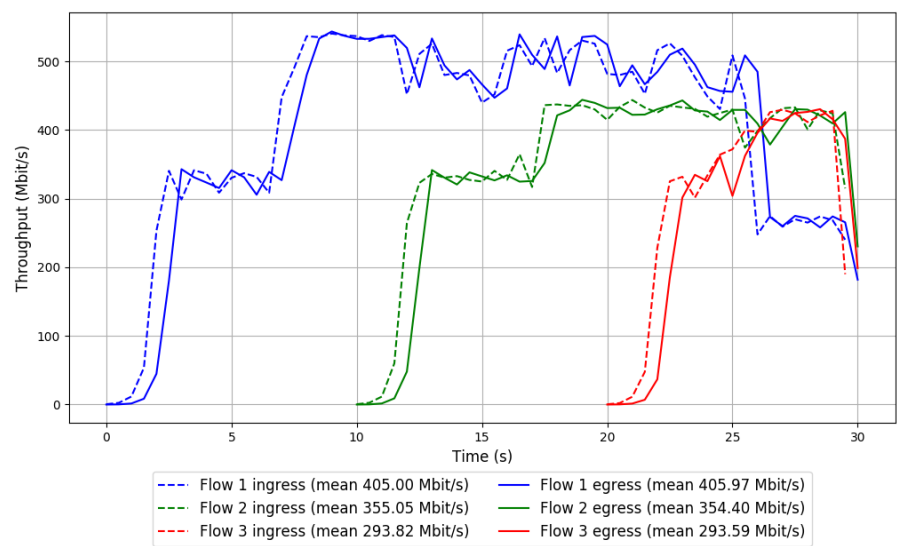# Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 378.66 Mbit/s) --- Flow 1 egress (mean 378.26 Mbit/s)
Flow 2 ingress (mean 427.19 Mbit/s) --- Flow 2 egress (mean 429.00 Mbit/s)
Flow 3 ingress (mean 279.94 Mbit/s) --- Flow 3 egress (mean 280.21 Mbit/s)

Flow 1 (95th percentile 121.69 ms)   Flow 2 (95th percentile 137.26 ms)   Flow 3 (95th percentile 184.55 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-06-27 23:26:27
End at: 2019-06-27 23:26:57
Local clock offset: -0.003 ms
Remote clock offset: -0.131 ms


# Below is generated by plot.py at 2019-06-28 04:08:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 737.11 Mbit/s
95th percentile per-packet one-way delay: 153.560 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 405.97 Mbit/s
95th percentile per-packet one-way delay: 157.615 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 354.40 Mbit/s
95th percentile per-packet one-way delay: 124.236 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 293.59 Mbit/s
95th percentile per-packet one-way delay: 151.836 ms
Loss rate: 1.98%
```

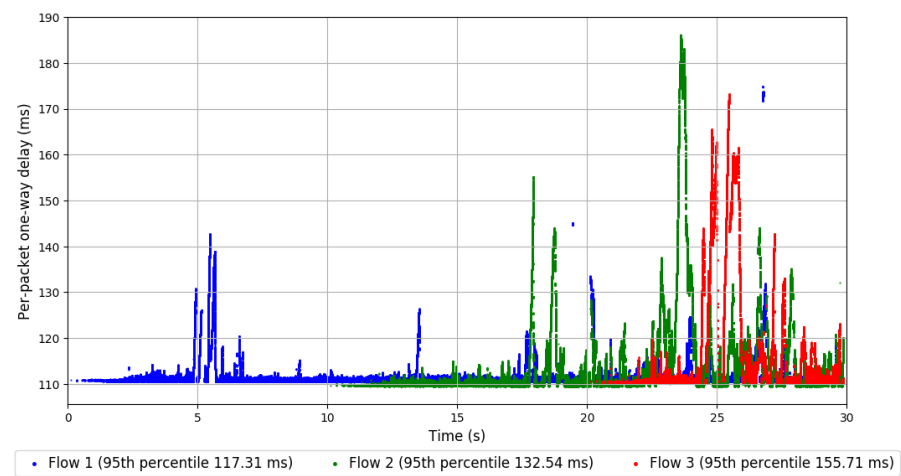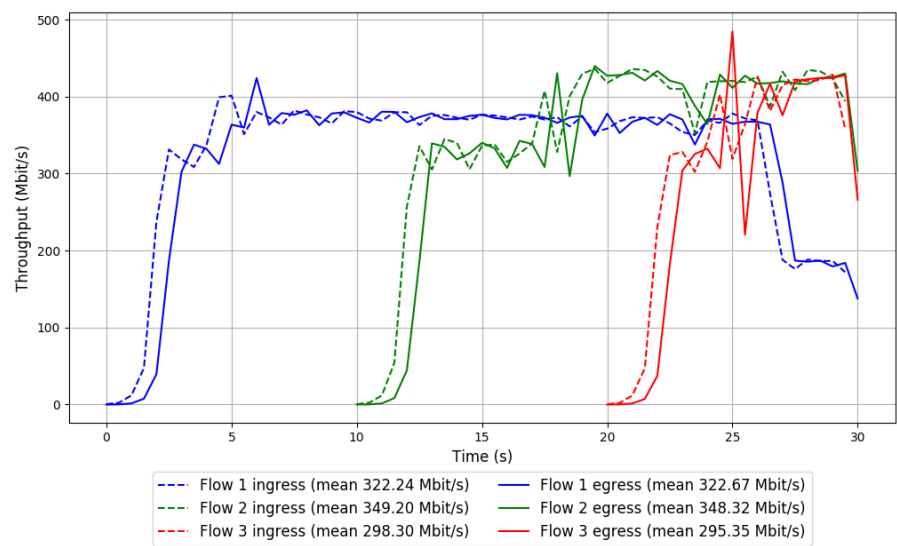# Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 405.00 Mbit/s) — Flow 1 egress (mean 405.97 Mbit/s)
Flow 2 ingress (mean 355.05 Mbit/s) — Flow 2 egress (mean 354.40 Mbit/s)
Flow 3 ingress (mean 293.82 Mbit/s) — Flow 3 egress (mean 293.59 Mbit/s)

Flow 1 (95th percentile 157.62 ms) — Flow 2 (95th percentile 124.24 ms) — Flow 3 (95th percentile 151.84 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-06-28 00:05:30
End at: 2019-06-28 00:06:00
Local clock offset: 0.735 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-06-28 04:08:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 650.60 Mbit/s
95th percentile per-packet one-way delay: 130.381 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 322.67 Mbit/s
95th percentile per-packet one-way delay: 117.309 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 348.32 Mbit/s
95th percentile per-packet one-way delay: 132.537 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 295.35 Mbit/s
95th percentile per-packet one-way delay: 155.713 ms
Loss rate: 3.17%
```

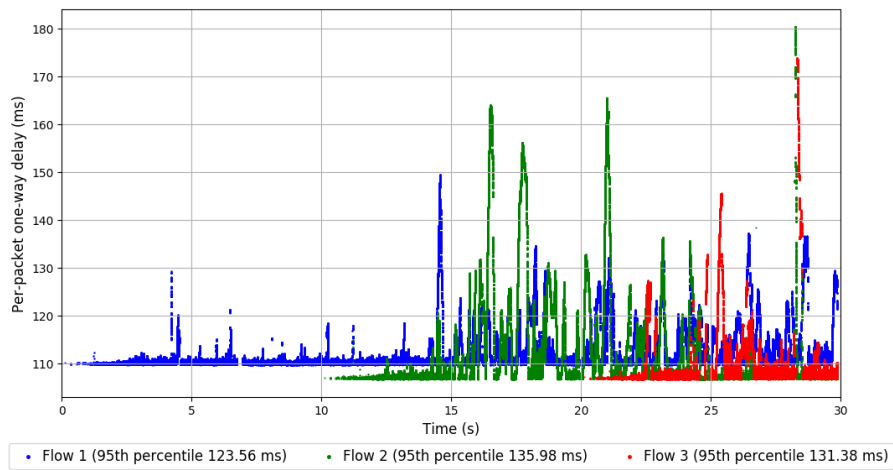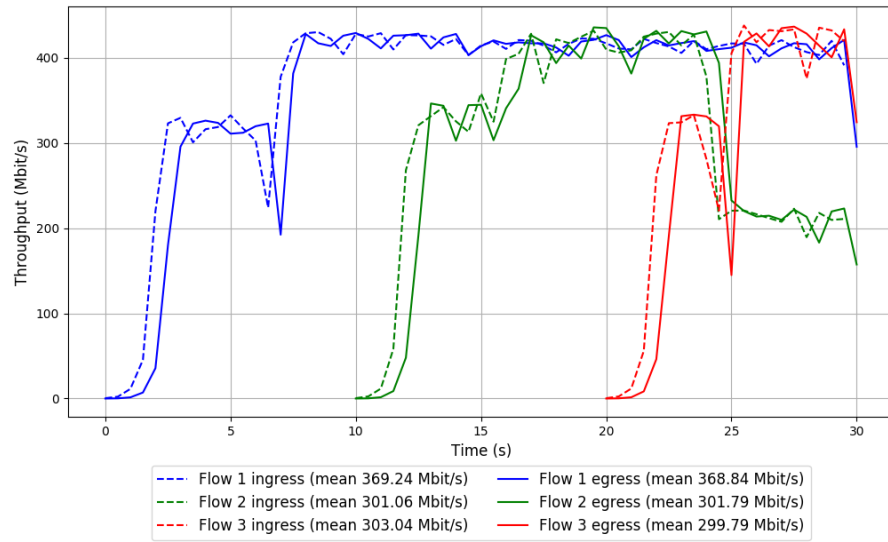## Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 322.24 Mbit/s)   Flow 1 egress (mean 322.67 Mbit/s)
Flow 2 ingress (mean 349.20 Mbit/s)   Flow 2 egress (mean 348.32 Mbit/s)
Flow 3 ingress (mean 298.30 Mbit/s)   Flow 3 egress (mean 295.35 Mbit/s)

Flow 1 (95th percentile 117.31 ms)   Flow 2 (95th percentile 132.54 ms)   Flow 3 (95th percentile 155.71 ms)
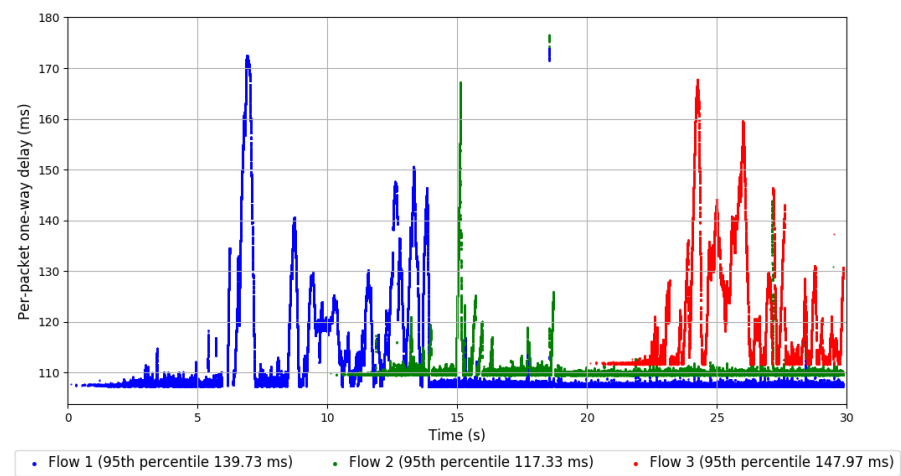
190

```
Run 4: Statistics of TCP Vegas

Start at: 2019-06-28 00:44:02
End at: 2019-06-28 00:44:32
Local clock offset: -0.036 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.29 Mbit/s
95th percentile per-packet one-way delay: 127.828 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 368.84 Mbit/s
95th percentile per-packet one-way delay: 123.557 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 301.79 Mbit/s
95th percentile per-packet one-way delay: 135.979 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 299.79 Mbit/s
95th percentile per-packet one-way delay: 131.382 ms
Loss rate: 3.22%
```

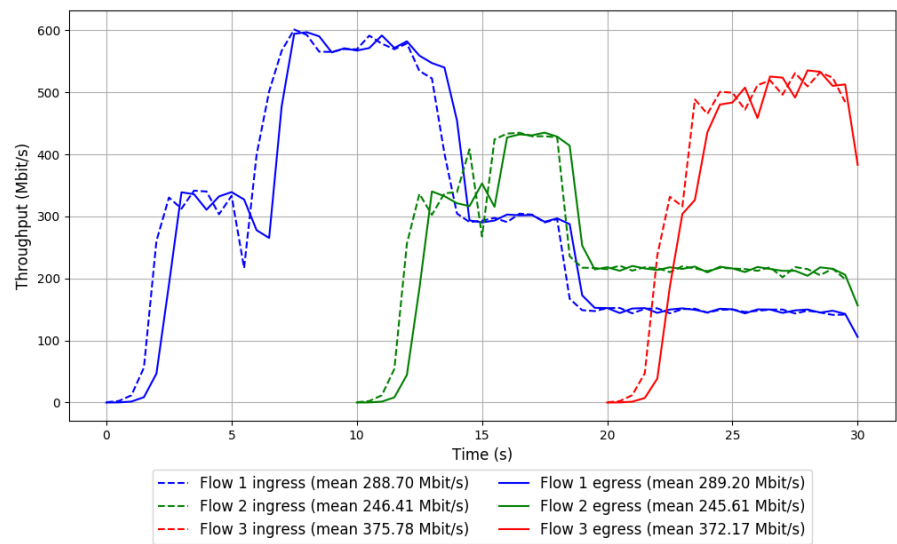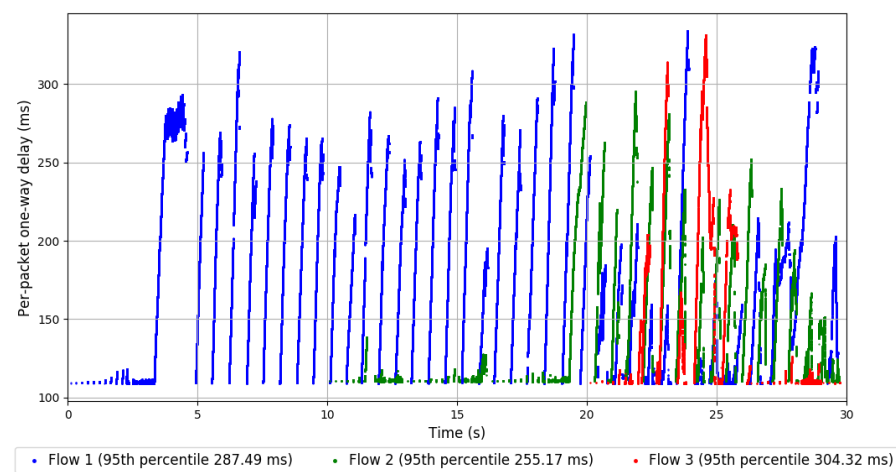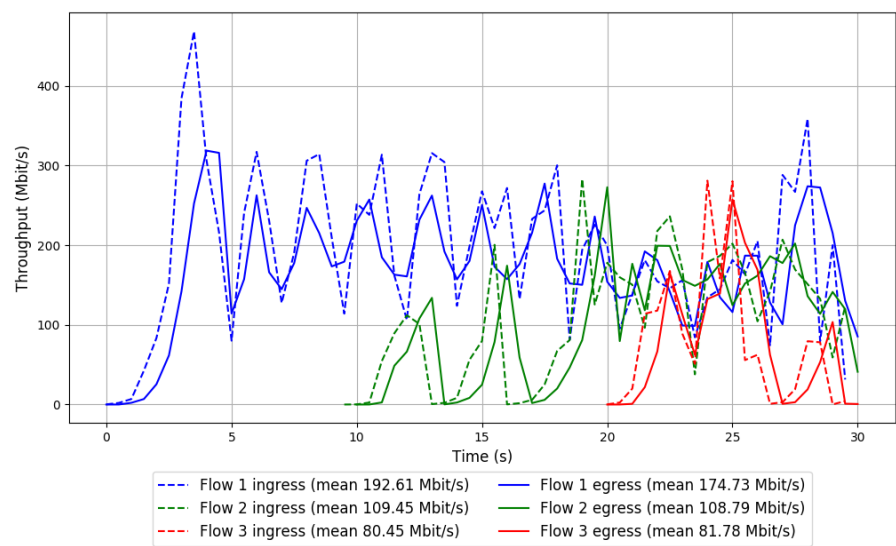# Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 369.24 Mbit/s) — Flow 1 egress (mean 368.84 Mbit/s)
Flow 2 ingress (mean 301.06 Mbit/s) — Flow 2 egress (mean 301.79 Mbit/s)
Flow 3 ingress (mean 303.04 Mbit/s) — Flow 3 egress (mean 299.79 Mbit/s)

Flow 1 (95th percentile 123.56 ms) • Flow 2 (95th percentile 135.98 ms) • Flow 3 (95th percentile 131.38 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-06-28 01:22:38
End at: 2019-06-28 01:23:08
Local clock offset: 0.313 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.97 Mbit/s
95th percentile per-packet one-way delay: 139.664 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 289.20 Mbit/s
95th percentile per-packet one-way delay: 139.732 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 245.61 Mbit/s
95th percentile per-packet one-way delay: 117.326 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 372.17 Mbit/s
95th percentile per-packet one-way delay: 147.966 ms
Loss rate: 3.14%
```

Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-06-27 22:26:06
End at: 2019-06-27 22:26:36
Local clock offset: 0.017 ms
Remote clock offset: -0.063 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.69 Mbit/s
95th percentile per-packet one-way delay: 283.707 ms
Loss rate: 7.49%
-- Flow 1:
Average throughput: 174.73 Mbit/s
95th percentile per-packet one-way delay: 287.487 ms
Loss rate: 10.42%
-- Flow 2:
Average throughput: 108.79 Mbit/s
95th percentile per-packet one-way delay: 255.174 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 81.78 Mbit/s
95th percentile per-packet one-way delay: 304.318 ms
Loss rate: 0.65%
```
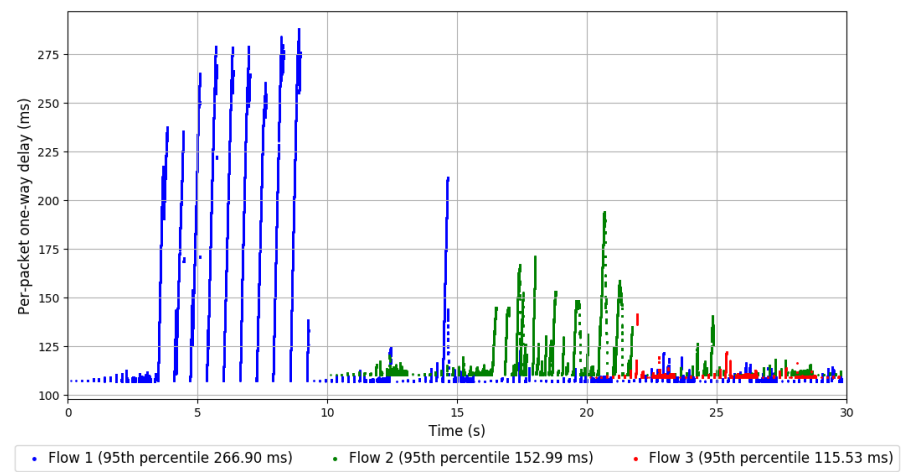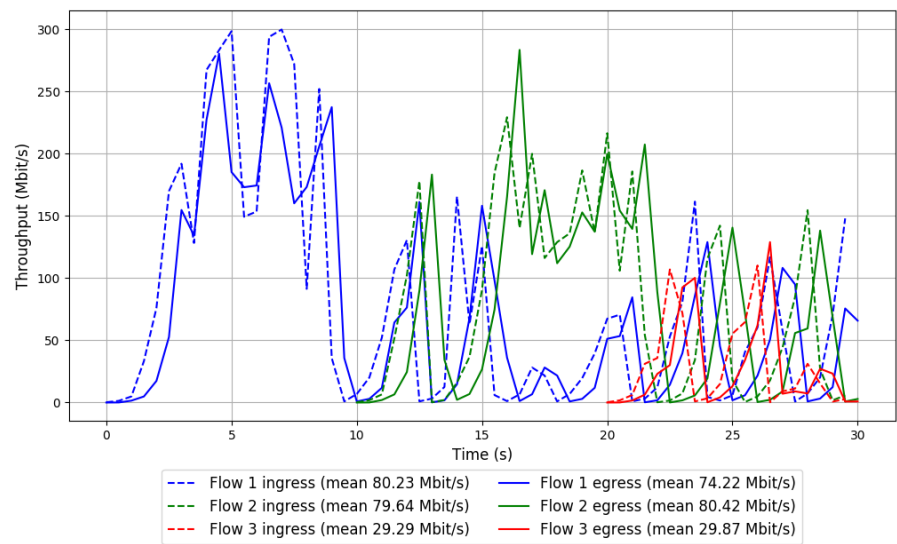
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 192.61 Mbit/s) — Flow 1 egress (mean 174.73 Mbit/s)
Flow 2 ingress (mean 109.45 Mbit/s) — Flow 2 egress (mean 108.79 Mbit/s)
Flow 3 ingress (mean 80.45 Mbit/s) — Flow 3 egress (mean 81.78 Mbit/s)

Flow 1 (95th percentile 287.49 ms) · Flow 2 (95th percentile 255.17 ms) · Flow 3 (95th percentile 304.32 ms)
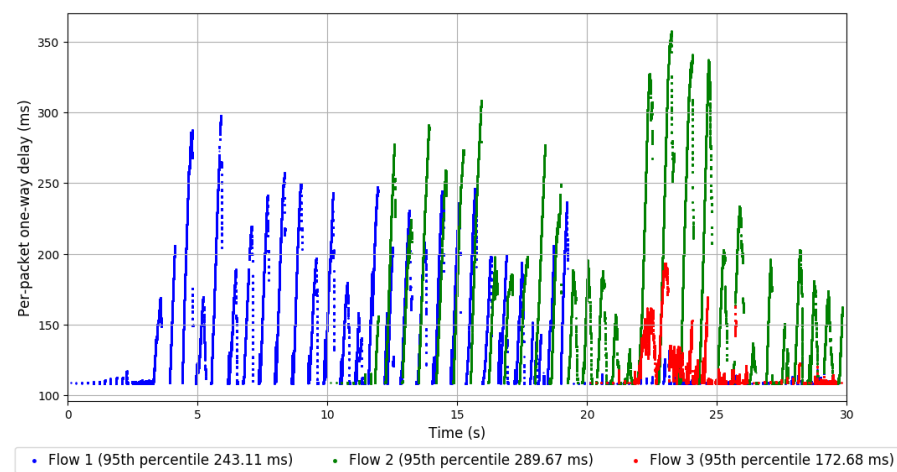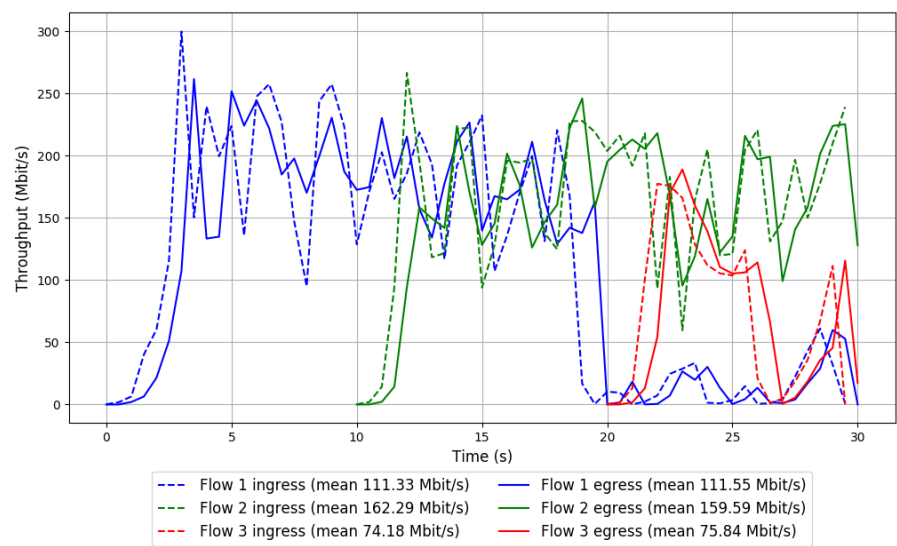
```
Run 2: Statistics of Verus

Start at: 2019-06-27 23:05:01
End at: 2019-06-27 23:05:31
Local clock offset: -0.04 ms
Remote clock offset: 0.021 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.10 Mbit/s
95th percentile per-packet one-way delay: 258.033 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 74.22 Mbit/s
95th percentile per-packet one-way delay: 266.897 ms
Loss rate: 8.23%
-- Flow 2:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 152.994 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 115.527 ms
Loss rate: 0.32%
```
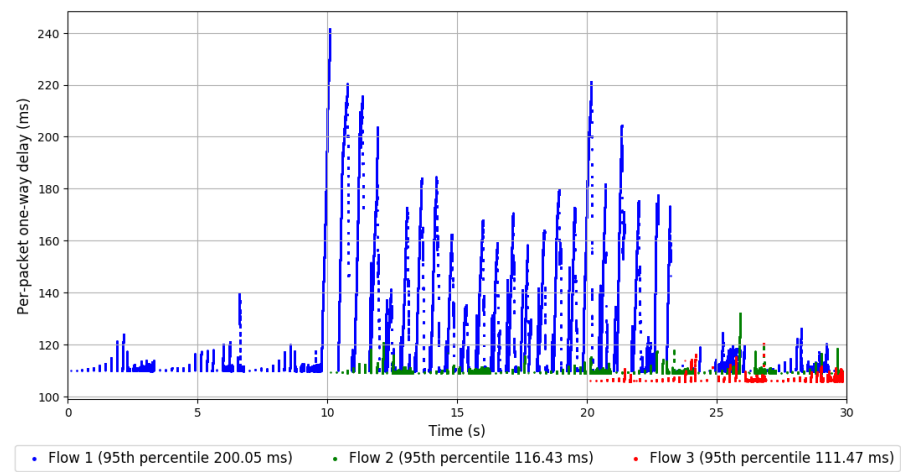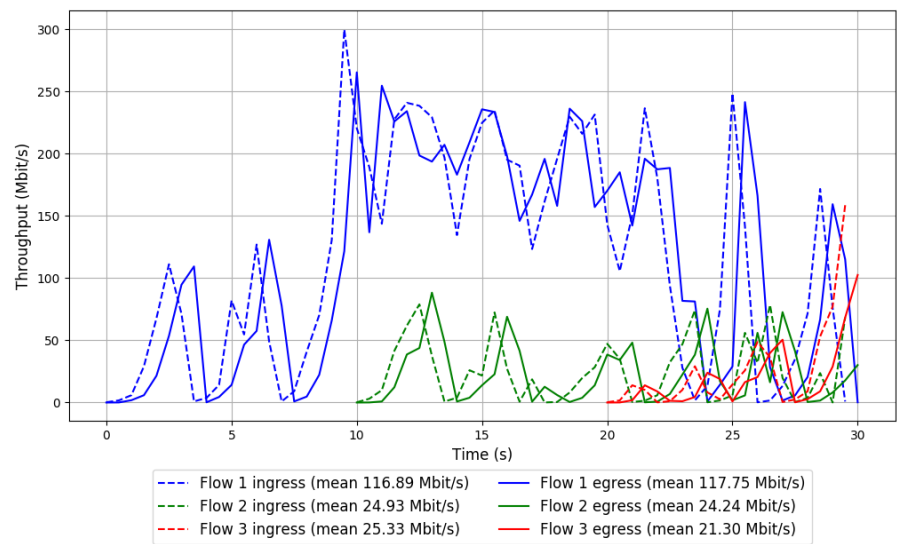
Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 80.23 Mbit/s)   Flow 1 egress (mean 74.22 Mbit/s)
Flow 2 ingress (mean 79.64 Mbit/s)   Flow 2 egress (mean 80.42 Mbit/s)
Flow 3 ingress (mean 29.29 Mbit/s)   Flow 3 egress (mean 29.87 Mbit/s)

Flow 1 (95th percentile 266.90 ms)   Flow 2 (95th percentile 152.99 ms)   Flow 3 (95th percentile 115.53 ms)

```
Run 3: Statistics of Verus

Start at: 2019-06-27 23:43:58
End at: 2019-06-27 23:44:28
Local clock offset: -0.319 ms
Remote clock offset: -0.068 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.63 Mbit/s
95th percentile per-packet one-way delay: 262.754 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 111.55 Mbit/s
95th percentile per-packet one-way delay: 243.108 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 159.59 Mbit/s
95th percentile per-packet one-way delay: 289.672 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 75.84 Mbit/s
95th percentile per-packet one-way delay: 172.677 ms
Loss rate: 0.01%
```
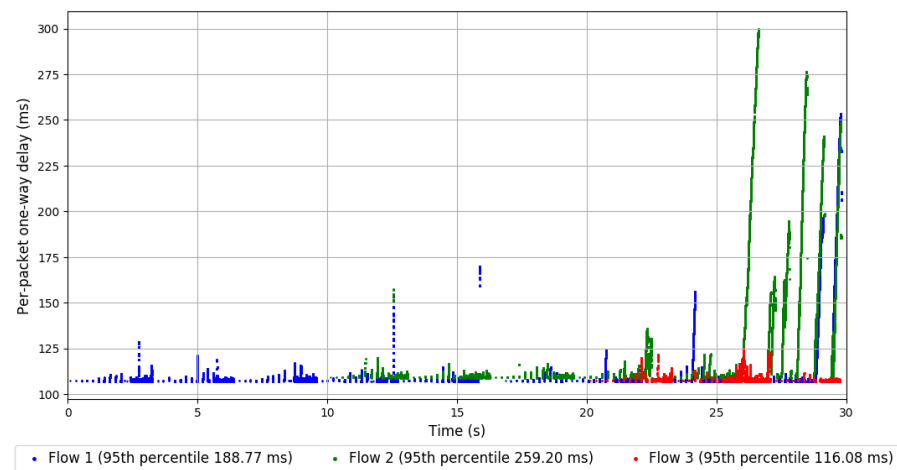
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-06-28 00:22:47
End at: 2019-06-28 00:23:17
Local clock offset: -0.148 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.39 Mbit/s
95th percentile per-packet one-way delay: 195.578 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 117.75 Mbit/s
95th percentile per-packet one-way delay: 200.047 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 116.429 ms
Loss rate: 3.85%
-- Flow 3:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 111.474 ms
Loss rate: 17.72%
```
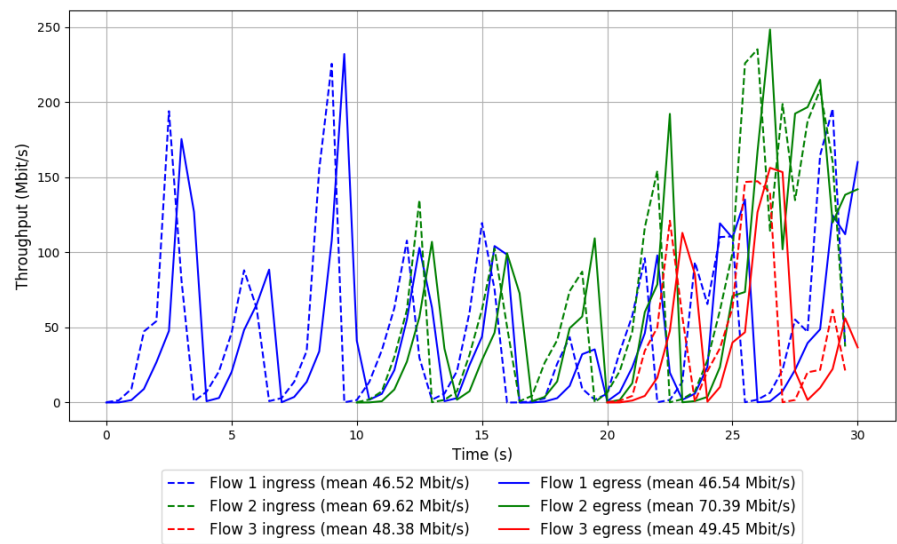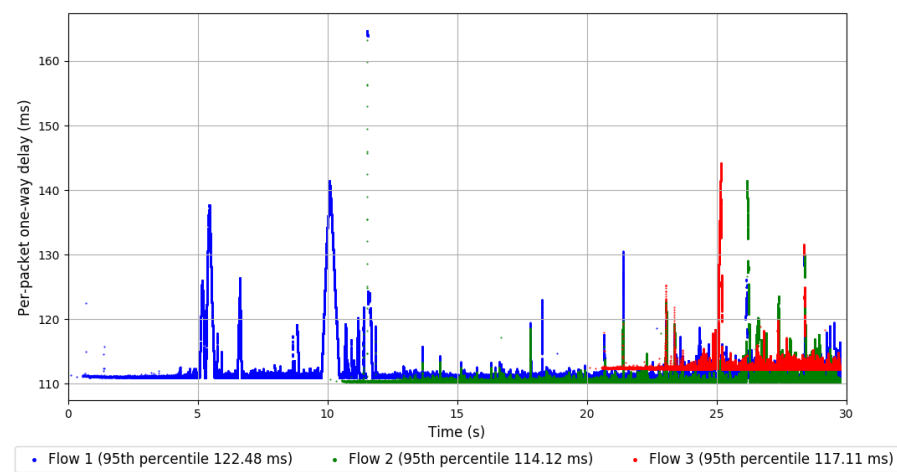
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-06-28 01:01:11
End at: 2019-06-28 01:01:41
Local clock offset: -0.133 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2019-06-28 04:09:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.19 Mbit/s
95th percentile per-packet one-way delay: 233.286 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 46.54 Mbit/s
95th percentile per-packet one-way delay: 188.767 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 70.39 Mbit/s
95th percentile per-packet one-way delay: 259.200 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 49.45 Mbit/s
95th percentile per-packet one-way delay: 116.084 ms
Loss rate: 0.01%
```

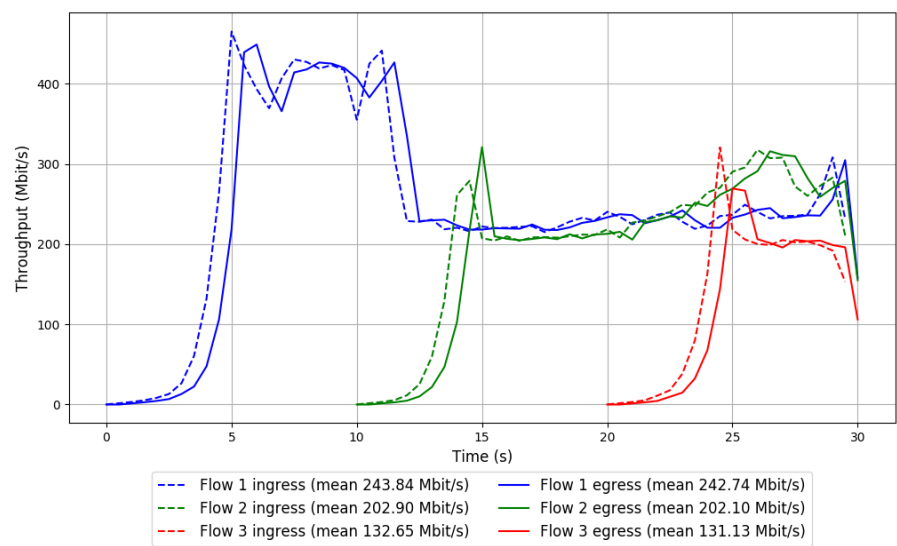# Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-06-27 22:24:15
End at: 2019-06-27 22:24:45
Local clock offset: 0.099 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-06-28 04:13:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 419.33 Mbit/s
95th percentile per-packet one-way delay: 118.763 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 242.74 Mbit/s
95th percentile per-packet one-way delay: 122.478 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 202.10 Mbit/s
95th percentile per-packet one-way delay: 114.121 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 131.13 Mbit/s
95th percentile per-packet one-way delay: 117.114 ms
Loss rate: 3.36%
```

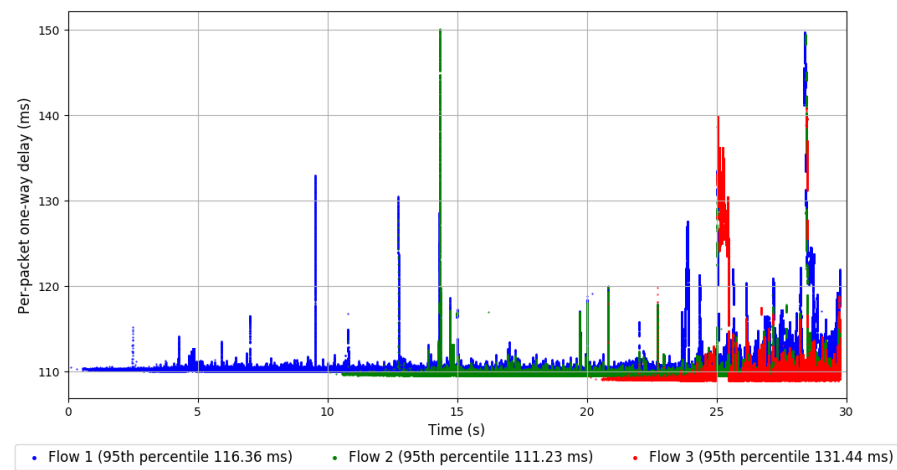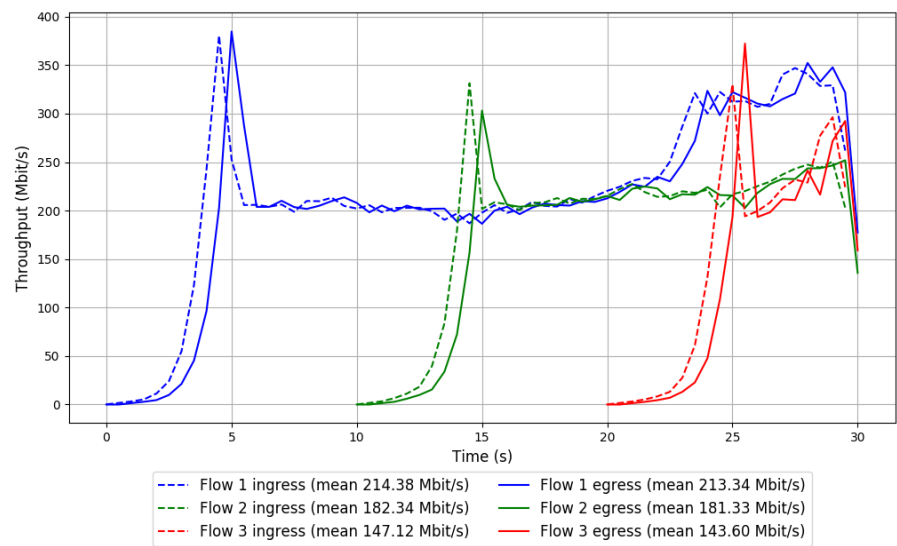Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-06-27 23:03:14
End at: 2019-06-27 23:03:44
Local clock offset: -0.032 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-06-28 04:13:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.13 Mbit/s
95th percentile per-packet one-way delay: 116.134 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 213.34 Mbit/s
95th percentile per-packet one-way delay: 116.360 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 181.33 Mbit/s
95th percentile per-packet one-way delay: 111.235 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 143.60 Mbit/s
95th percentile per-packet one-way delay: 131.439 ms
Loss rate: 4.57%
```

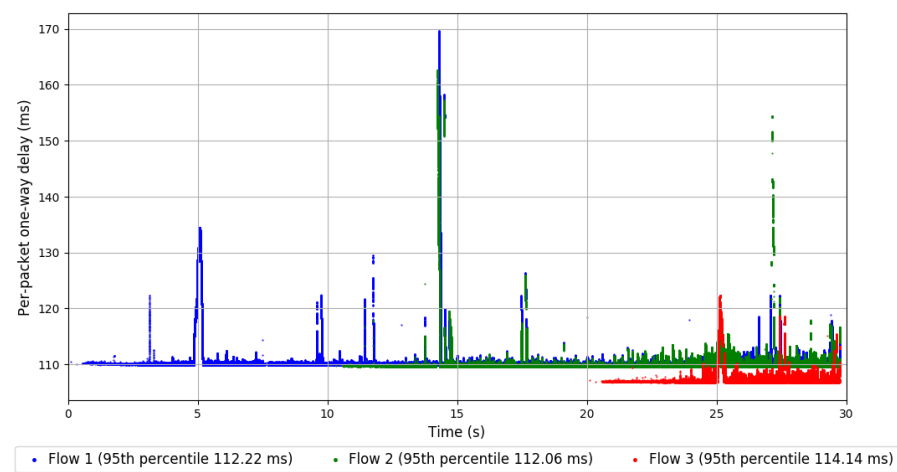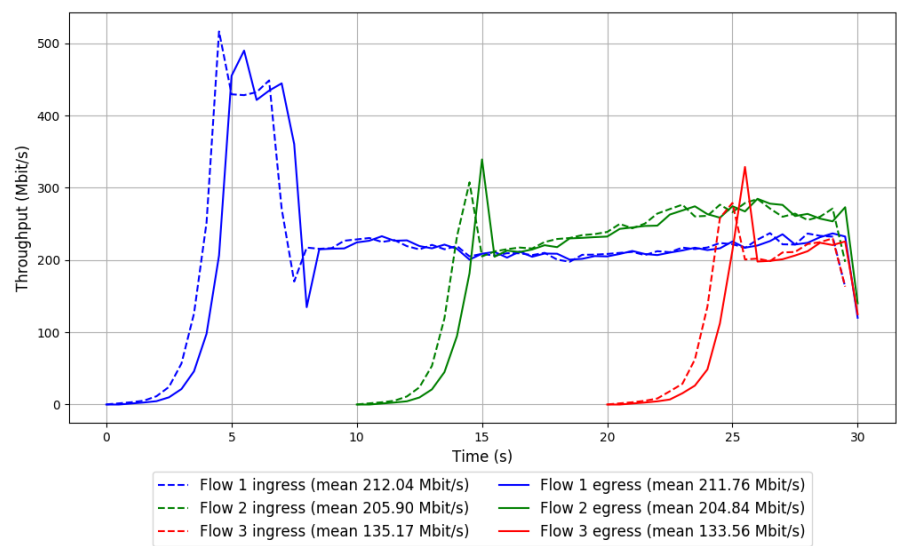## Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 214.38 Mbit/s) — — — Flow 1 egress (mean 213.34 Mbit/s)
Flow 2 ingress (mean 182.34 Mbit/s) — — — Flow 2 egress (mean 181.33 Mbit/s)
Flow 3 ingress (mean 147.12 Mbit/s) — — — Flow 3 egress (mean 143.60 Mbit/s)

Flow 1 (95th percentile 116.36 ms)   Flow 2 (95th percentile 111.23 ms)   Flow 3 (95th percentile 131.44 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-06-27 23:42:09
End at: 2019-06-27 23:42:39
Local clock offset: -0.029 ms
Remote clock offset: -0.155 ms


# Below is generated by plot.py at 2019-06-28 04:13:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.85 Mbit/s
95th percentile per-packet one-way delay: 112.234 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 211.76 Mbit/s
95th percentile per-packet one-way delay: 112.220 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 204.84 Mbit/s
95th percentile per-packet one-way delay: 112.057 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 133.56 Mbit/s
95th percentile per-packet one-way delay: 114.144 ms
Loss rate: 3.43%
```

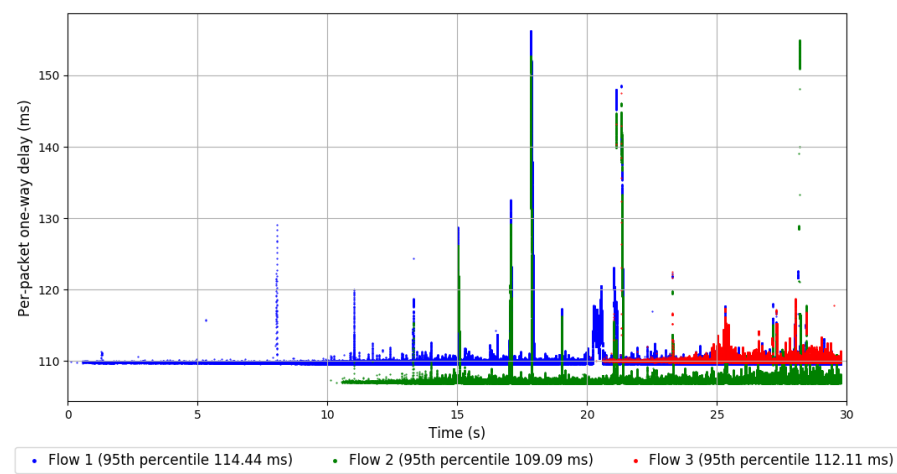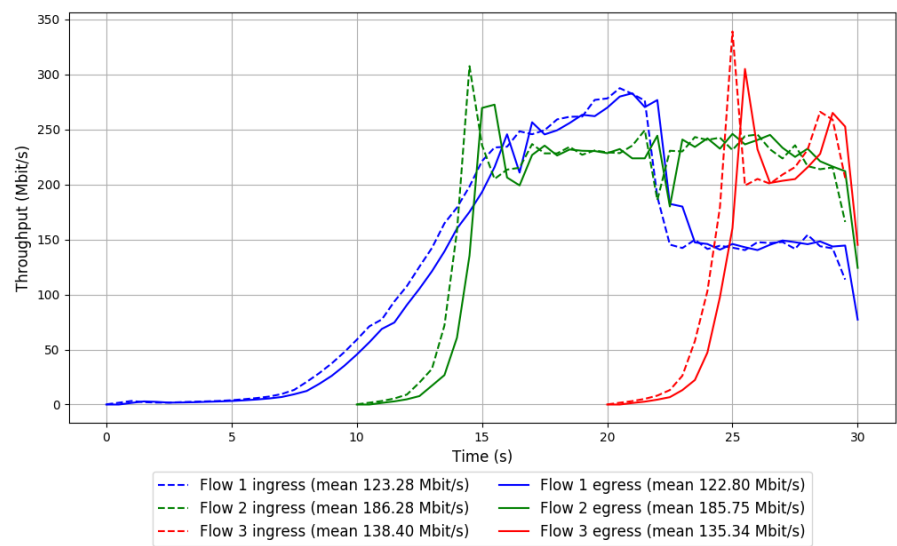## Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 212.04 Mbit/s) --- Flow 1 egress (mean 211.76 Mbit/s)
Flow 2 ingress (mean 205.90 Mbit/s) --- Flow 2 egress (mean 204.84 Mbit/s)
Flow 3 ingress (mean 135.17 Mbit/s) --- Flow 3 egress (mean 133.56 Mbit/s)

Flow 1 (95th percentile 112.22 ms) • Flow 2 (95th percentile 112.06 ms) • Flow 3 (95th percentile 114.14 ms)
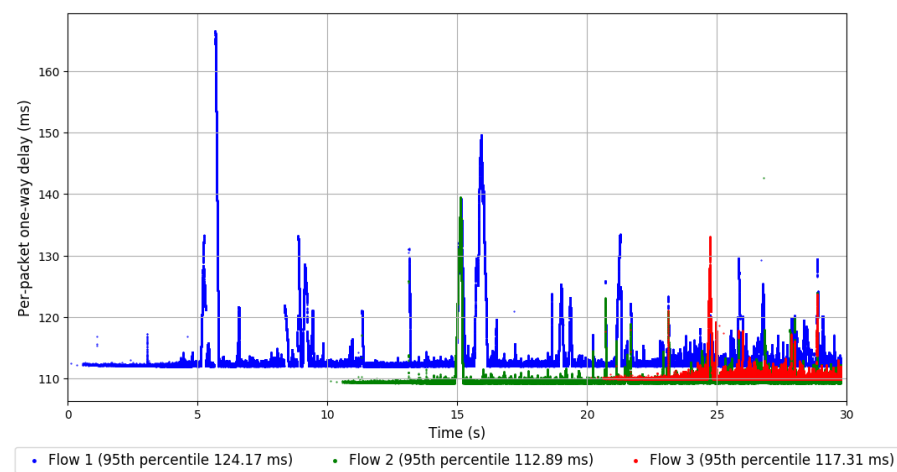
```
Run 4: Statistics of PCC-Vivace

Start at: 2019-06-28 00:21:05
End at: 2019-06-28 00:21:35
Local clock offset: 0.105 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-06-28 04:13:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.86 Mbit/s
95th percentile per-packet one-way delay: 112.025 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 122.80 Mbit/s
95th percentile per-packet one-way delay: 114.439 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 185.75 Mbit/s
95th percentile per-packet one-way delay: 109.088 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 135.34 Mbit/s
95th percentile per-packet one-way delay: 112.114 ms
Loss rate: 4.40%
```

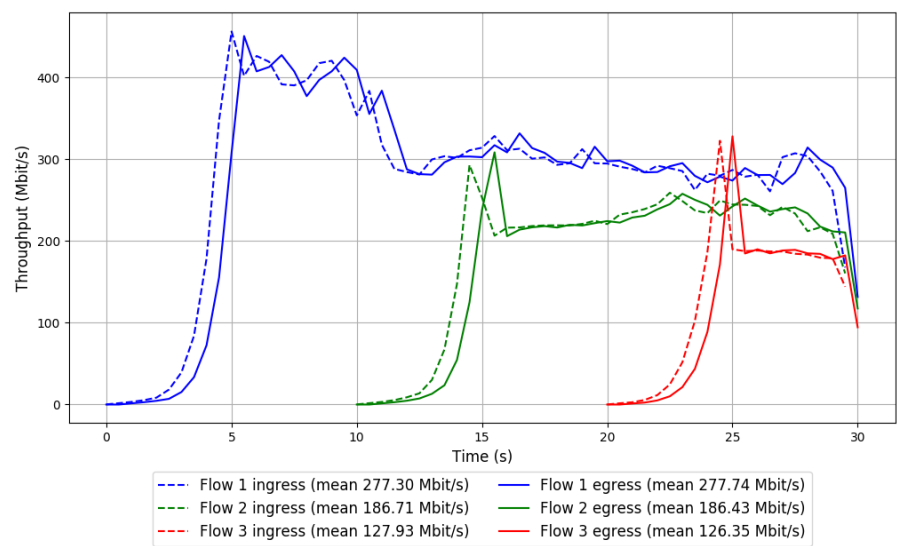Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-06-28 00:59:18
End at: 2019-06-28 00:59:48
Local clock offset: -0.077 ms
Remote clock offset: -0.064 ms

# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.26 Mbit/s
95th percentile per-packet one-way delay: 121.548 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 277.74 Mbit/s
95th percentile per-packet one-way delay: 124.170 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 186.43 Mbit/s
95th percentile per-packet one-way delay: 112.890 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 126.35 Mbit/s
95th percentile per-packet one-way delay: 117.306 ms
Loss rate: 3.44%
```

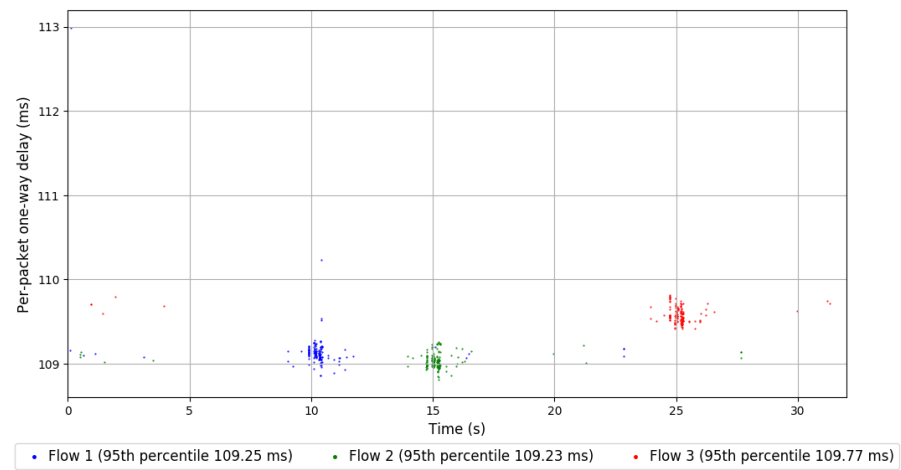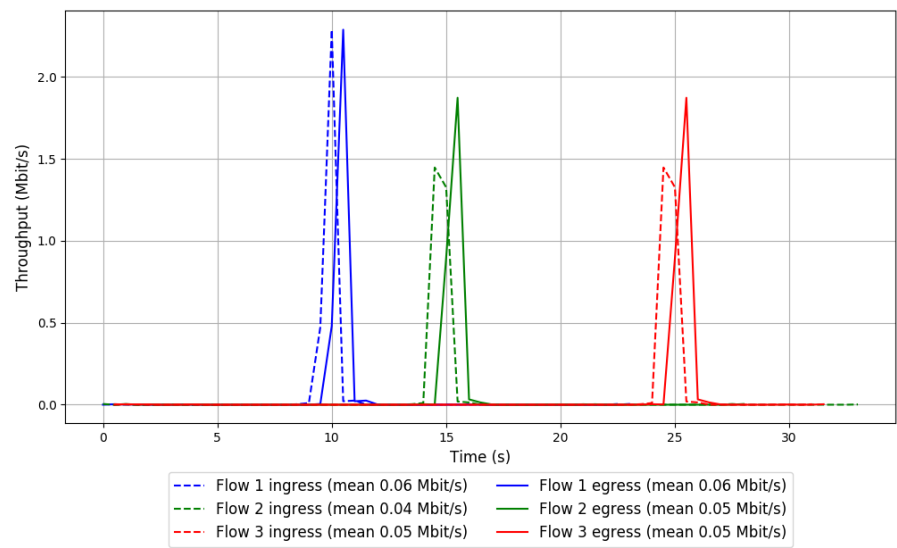Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-06-27 22:27:54
End at: 2019-06-27 22:28:24
Local clock offset: -0.065 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 109.704 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 109.255 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.228 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.773 ms
Loss rate: 0.00%
```

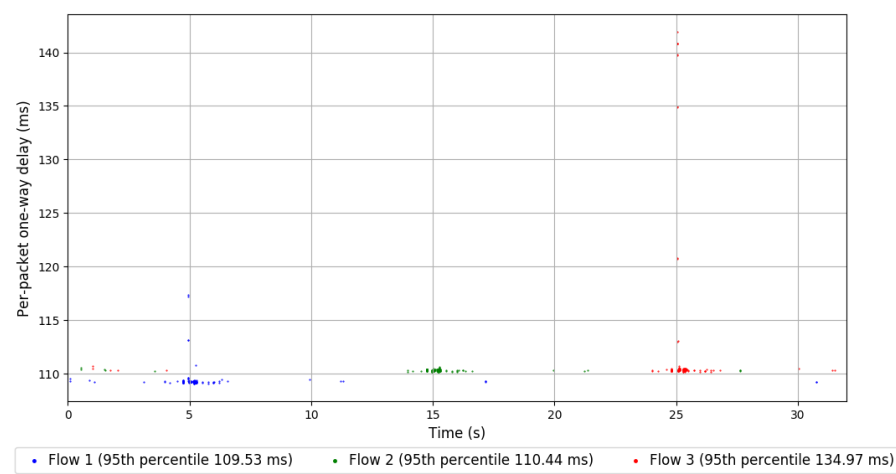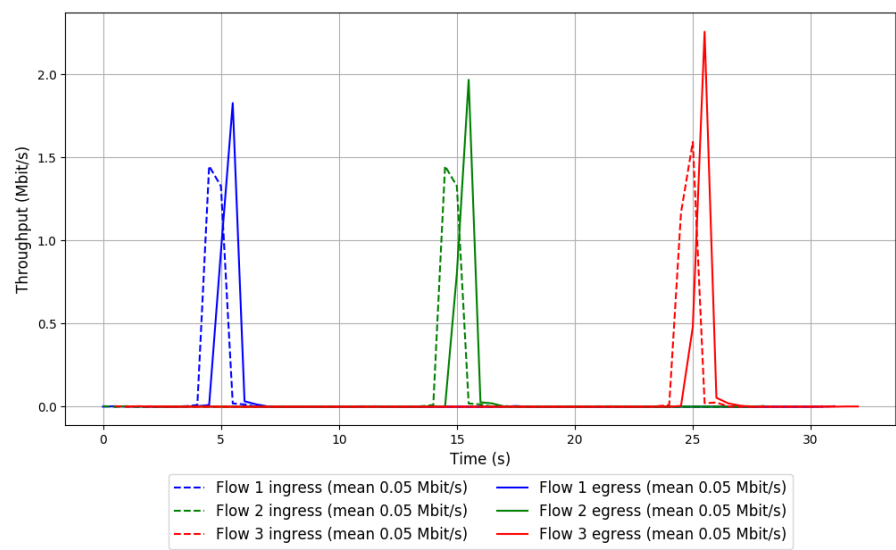Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-06-27 23:06:35
End at: 2019-06-27 23:07:05
Local clock offset: 0.121 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 110.581 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.441 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 134.975 ms
Loss rate: 0.00%
```

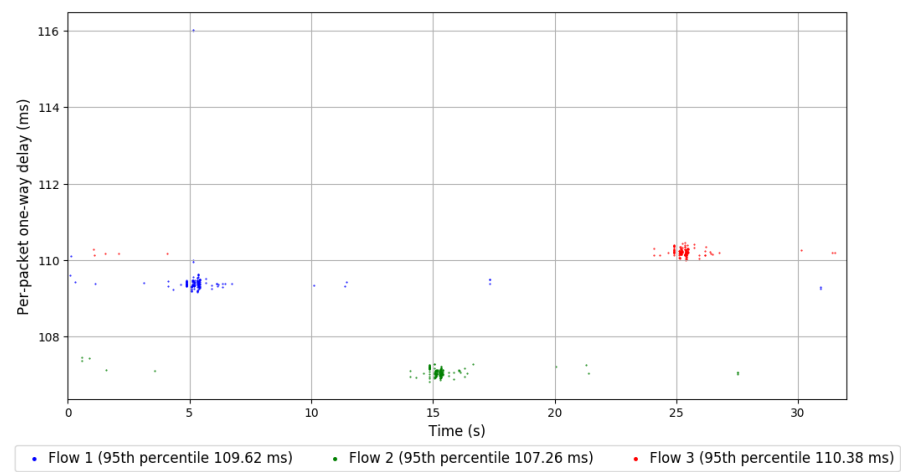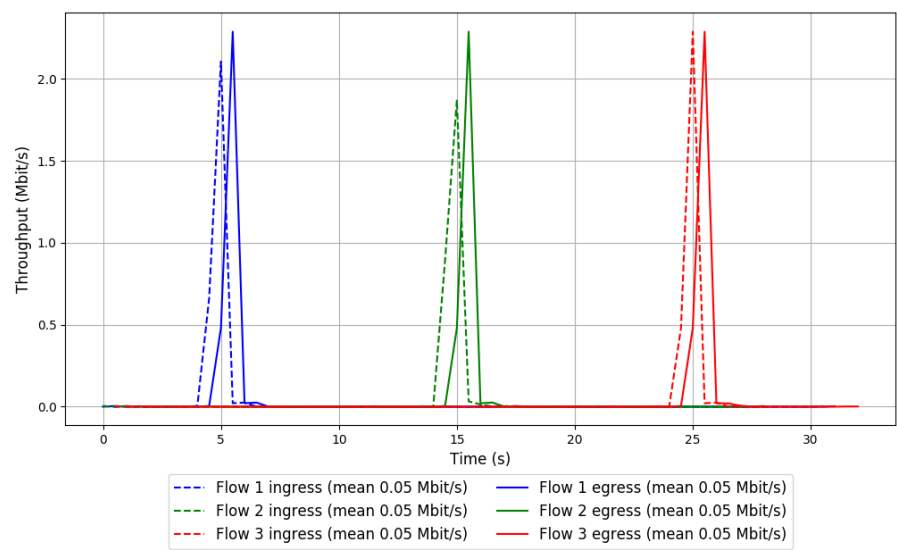Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-06-27 23:45:42
End at: 2019-06-27 23:46:12
Local clock offset: 0.068 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 110.317 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.616 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 107.257 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.380 ms
Loss rate: 0.00%
```

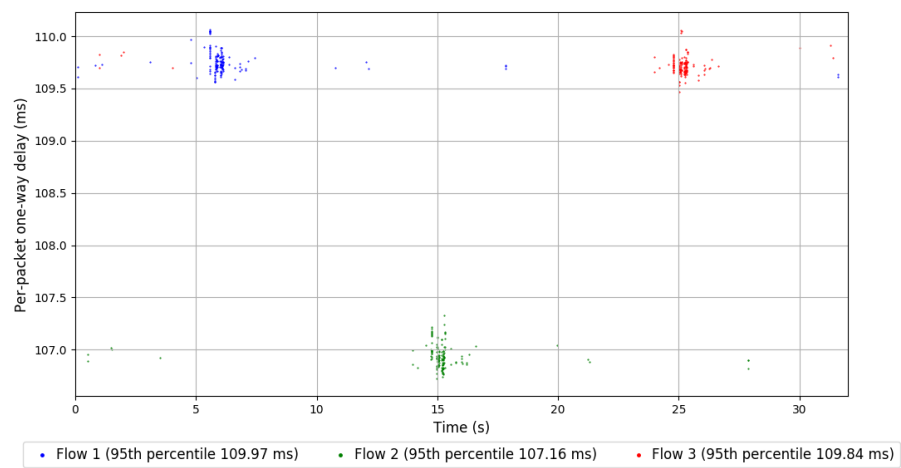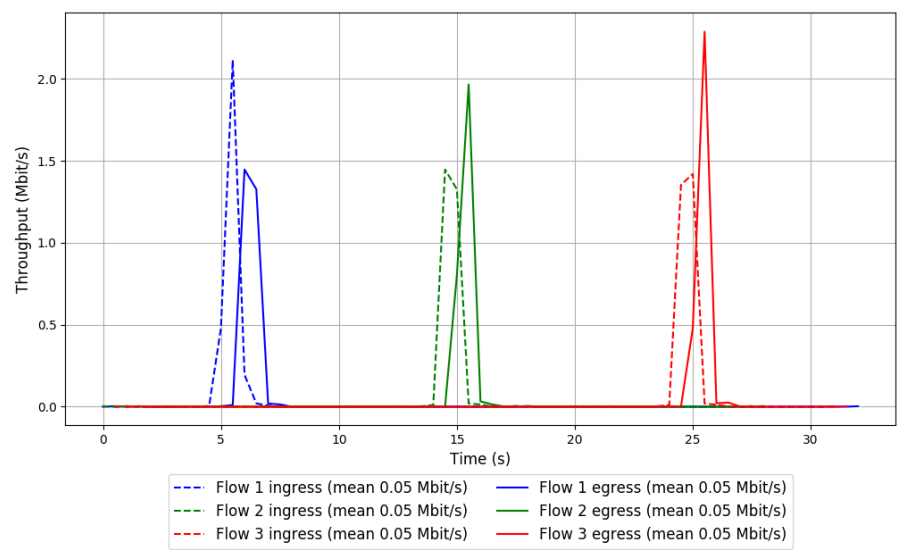Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-06-28 00:24:20
End at: 2019-06-28 00:24:50
Local clock offset: -0.104 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 109.883 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.969 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 107.164 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.845 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-06-28 01:02:41
End at: 2019-06-28 01:03:11
Local clock offset: -0.08 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2019-06-28 04:13:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 109.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 107.563 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 109.983 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link