Pantheon Report

Generated at 2019-03-19 04:55:54 (UTC).

Data path: AWS Brazil 2 on `ens5` (*local*) →Colombia on `p4p1` (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

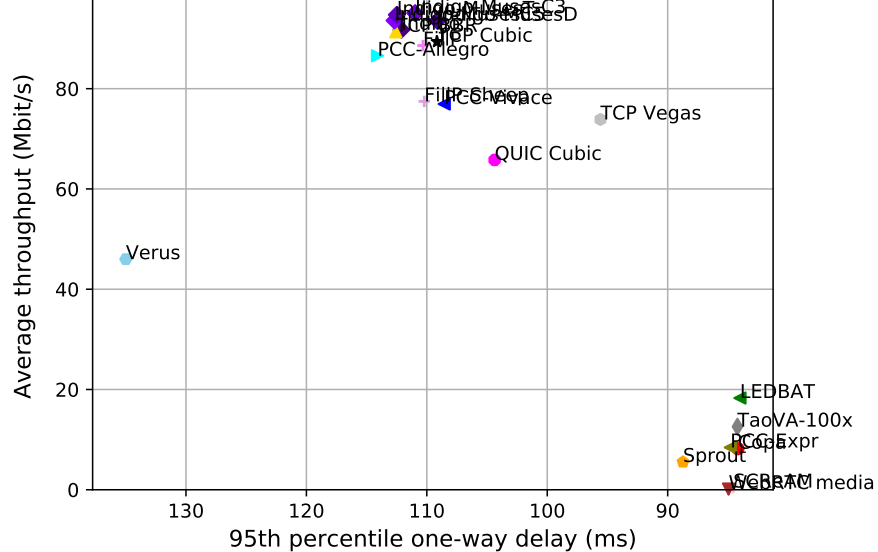NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1033-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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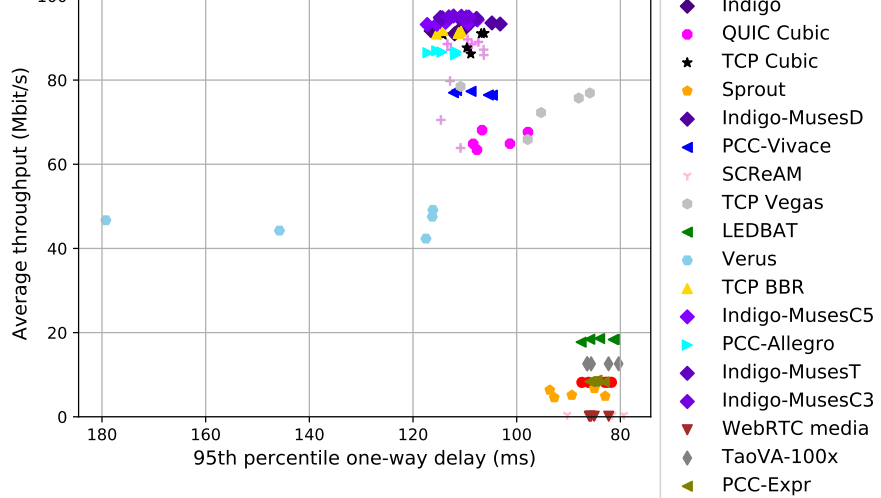
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS Brazil 2 to Colombia, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

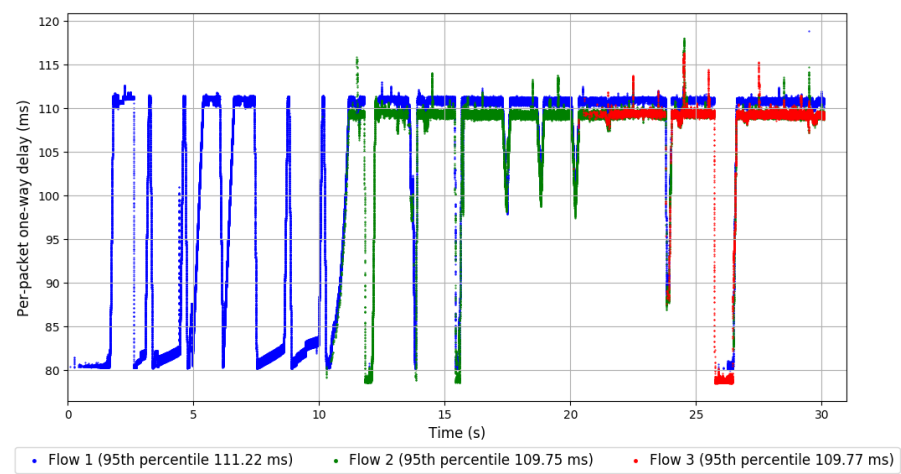| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	56.15	38.24	29.26	111.92	112.21	111.99	13.81	21.05	26.16
Copa	5	0.00	10.03	4.56	82.33	84.39	82.81	98.44	73.64	76.80
TCP Cubic	5	67.63	22.96	19.38	109.10	107.91	103.47	0.94	0.26	0.40
FillP	5	34.92	64.36	32.74	105.05	110.36	109.81	10.10	14.76	20.59
FillP-Sheep	5	18.96	72.55	30.86	107.11	110.19	110.25	13.45	7.38	18.07
Indigo	5	66.03	23.39	31.89	111.71	111.55	111.75	10.51	35.22	71.60
Indigo-MusesC3	5	49.53	48.85	45.59	109.71	110.82	111.18	1.09	1.94	4.77
Indigo-MusesC5	5	60.93	46.81	7.26	111.93	113.09	111.92	2.30	5.09	4.85
Indigo-MusesD	5	65.18	29.29	31.05	107.71	109.56	106.42	0.60	1.50	1.74
Indigo-MusesT	5	54.65	56.27	11.42	111.57	112.60	112.27	6.36	4.88	4.95
LEDBAT	5	11.87	7.79	3.76	83.29	83.96	84.15	0.01	0.00	0.00
PCC-Allegro	5	79.05	8.42	5.81	114.08	113.77	113.63	2.59	4.27	6.29
PCC-Expr	5	0.01	10.54	4.32	83.54	84.43	84.51	85.71	55.66	35.95
QUIC Cubic	5	43.85	26.09	14.13	105.06	102.72	98.52	0.78	0.54	0.45
SCReAM	5	0.22	0.22	0.22	83.73	84.46	84.14	0.00	0.00	0.00
Sprout	5	2.70	3.27	2.03	87.50	88.65	88.05	0.00	0.00	0.00
TaoVA-100x	5	7.54	5.14	4.89	90.02	82.39	82.77	37.08	49.68	62.87
TCP Vegas	5	42.38	31.69	31.17	96.03	97.01	93.15	1.60	0.89	0.85
Verus	5	32.37	15.09	11.25	129.22	132.05	126.48	51.35	51.06	35.18
PCC-Vivace	5	68.30	9.41	7.21	107.87	107.82	110.02	0.15	0.42	0.52
WebRTC media	5	0.05	0.04	0.04	84.74	84.03	84.41	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-03-19 02:42:23
End at: 2019-03-19 02:42:53
Local clock offset: -7.847 ms
Remote clock offset: 23.967 ms


# Below is generated by plot.py at 2019-03-19 04:46:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 115.454 ms
Loss rate: 16.43%
-- Flow 1:
Average throughput: 56.25 Mbit/s
95th percentile per-packet one-way delay: 115.504 ms
Loss rate: 13.67%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 115.114 ms
Loss rate: 17.84%
-- Flow 3:
Average throughput: 31.72 Mbit/s
95th percentile per-packet one-way delay: 115.389 ms
Loss rate: 26.15%
```
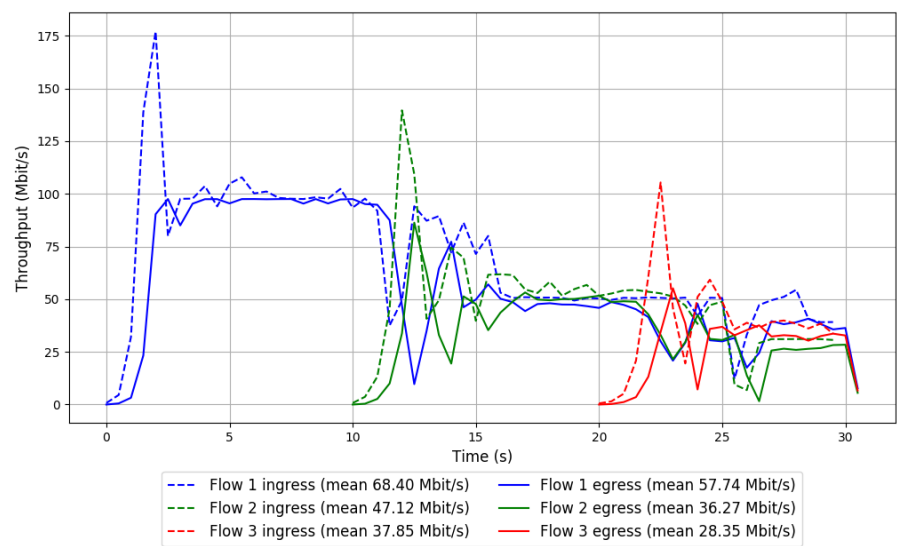
Run 1: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 65.21 Mbit/s) ——— Flow 1 egress (mean 56.25 Mbit/s)
- - - Flow 2 ingress (mean 44.20 Mbit/s) ——— Flow 2 egress (mean 36.27 Mbit/s)
- - - Flow 3 ingress (mean 42.96 Mbit/s) ——— Flow 3 egress (mean 31.72 Mbit/s)

- Flow 1 (95th percentile 115.50 ms)   • Flow 2 (95th percentile 115.11 ms)   • Flow 3 (95th percentile 115.39 ms)
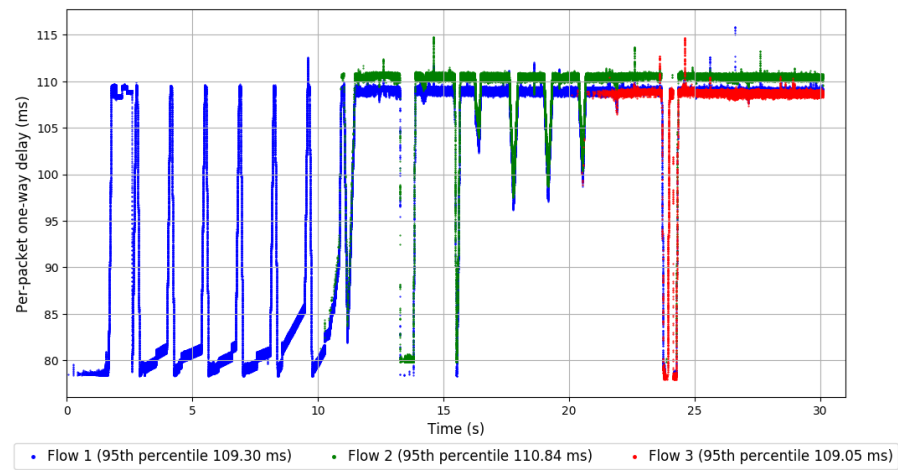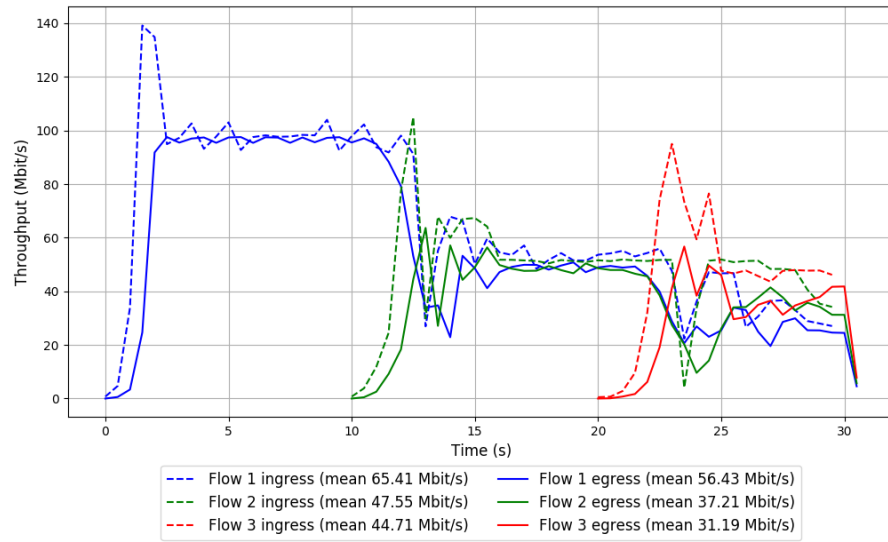
```
Run 2: Statistics of TCP BBR

Start at: 2019-03-19 03:09:12
End at: 2019-03-19 03:09:42
Local clock offset: -8.988 ms
Remote clock offset: 32.933 ms


# Below is generated by plot.py at 2019-03-19 04:46:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.31 Mbit/s
95th percentile per-packet one-way delay: 111.176 ms
Loss rate: 18.67%
-- Flow 1:
Average throughput: 57.74 Mbit/s
95th percentile per-packet one-way delay: 111.221 ms
Loss rate: 15.50%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 109.753 ms
Loss rate: 23.02%
-- Flow 3:
Average throughput: 28.35 Mbit/s
95th percentile per-packet one-way delay: 109.765 ms
Loss rate: 25.06%
```
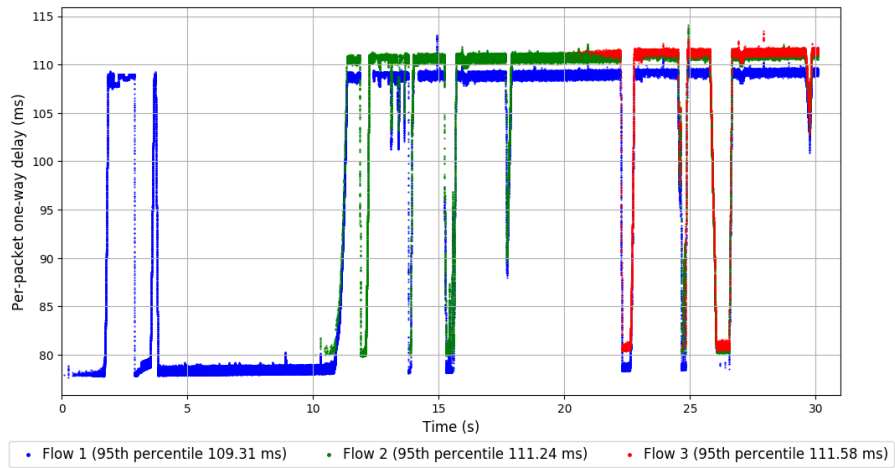
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-03-19 03:35:59
End at: 2019-03-19 03:36:29
Local clock offset: -10.833 ms
Remote clock offset: 41.394 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.60 Mbit/s
95th percentile per-packet one-way delay: 110.726 ms
Loss rate: 18.12%
-- Flow 1:
Average throughput: 56.43 Mbit/s
95th percentile per-packet one-way delay: 109.298 ms
Loss rate: 13.65%
-- Flow 2:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 110.840 ms
Loss rate: 21.64%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 109.051 ms
Loss rate: 30.24%
```

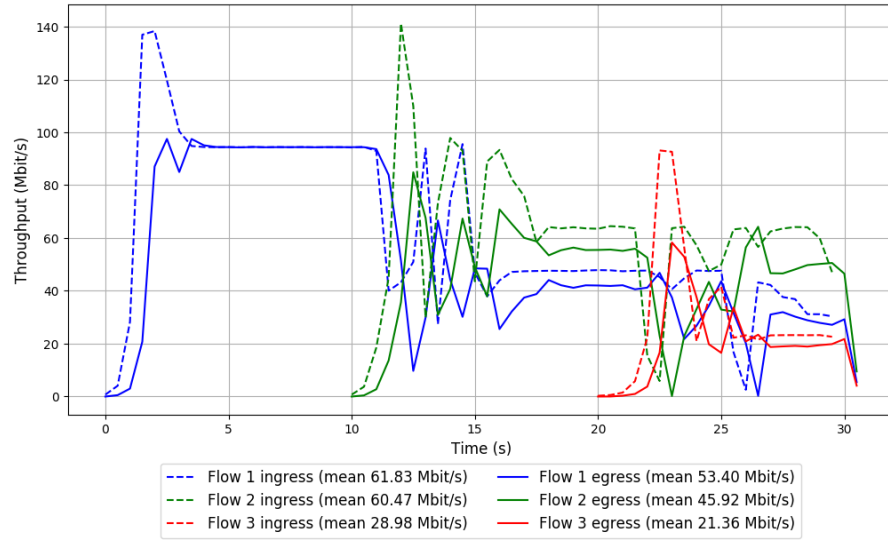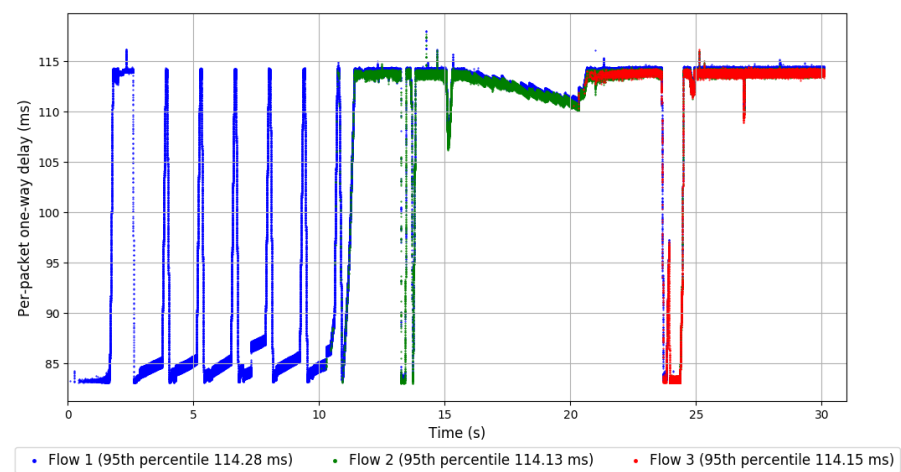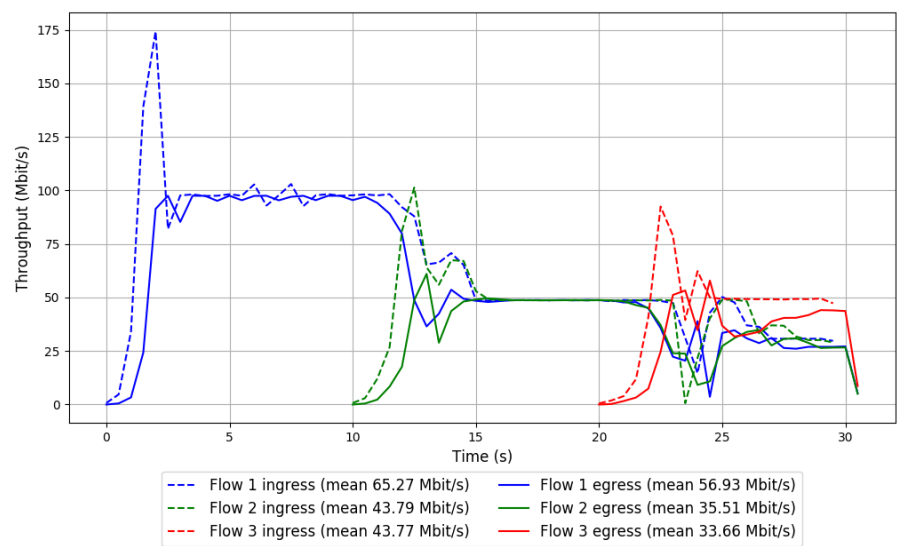Run 3: Report of TCP BBR — Data Link

Legend:
- Flow 1 ingress (mean 65.41 Mbit/s) — Flow 1 egress (mean 56.43 Mbit/s)
- Flow 2 ingress (mean 47.55 Mbit/s) — Flow 2 egress (mean 37.21 Mbit/s)
- Flow 3 ingress (mean 44.71 Mbit/s) — Flow 3 egress (mean 31.19 Mbit/s)

Legend:
- Flow 1 (95th percentile 109.30 ms)
- Flow 2 (95th percentile 110.84 ms)
- Flow 3 (95th percentile 109.05 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-03-19 04:02:47
End at: 2019-03-19 04:03:17
Local clock offset: -0.491 ms
Remote clock offset: -4.341 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.09 Mbit/s
95th percentile per-packet one-way delay: 111.278 ms
Loss rate: 18.39%
-- Flow 1:
Average throughput: 53.40 Mbit/s
95th percentile per-packet one-way delay: 109.307 ms
Loss rate: 13.55%
-- Flow 2:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 111.238 ms
Loss rate: 23.95%
-- Flow 3:
Average throughput: 21.36 Mbit/s
95th percentile per-packet one-way delay: 111.575 ms
Loss rate: 26.30%
```
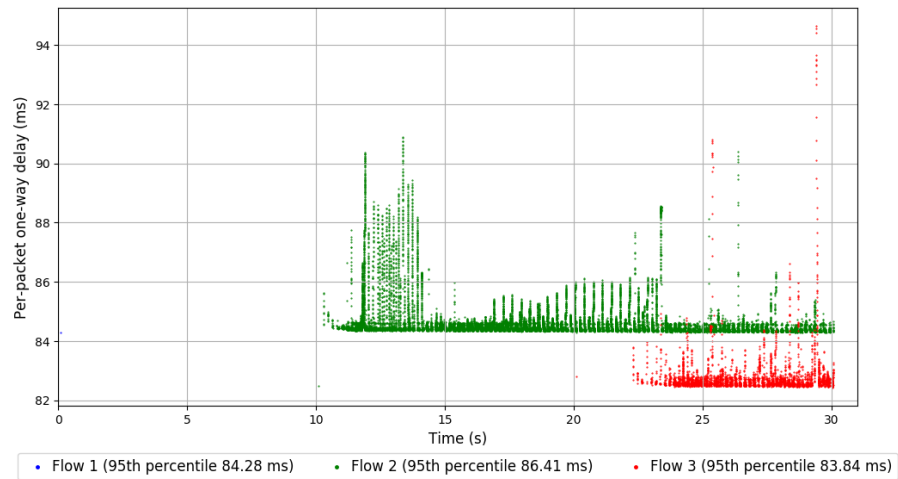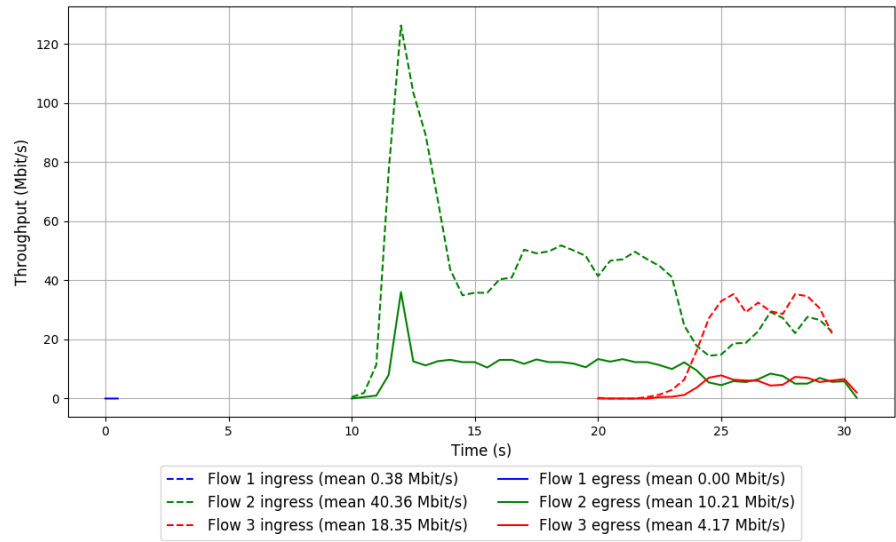
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 61.83 Mbit/s) --- Flow 1 egress (mean 53.40 Mbit/s)
Flow 2 ingress (mean 60.47 Mbit/s) --- Flow 2 egress (mean 45.92 Mbit/s)
Flow 3 ingress (mean 28.98 Mbit/s) --- Flow 3 egress (mean 21.36 Mbit/s)

Flow 1 (95th percentile 109.31 ms)   Flow 2 (95th percentile 111.24 ms)   Flow 3 (95th percentile 111.58 ms)

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```
Run 5: Statistics of TCP BBR

Start at: 2019-03-19 04:29:28
End at: 2019-03-19 04:29:58
Local clock offset: 4.44 ms
Remote clock offset: -19.142 ms

# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.78 Mbit/s
95th percentile per-packet one-way delay: 114.224 ms
Loss rate: 15.71%
-- Flow 1:
Average throughput: 56.93 Mbit/s
95th percentile per-packet one-way delay: 114.278 ms
Loss rate: 12.69%
-- Flow 2:
Average throughput: 35.51 Mbit/s
95th percentile per-packet one-way delay: 114.127 ms
Loss rate: 18.79%
-- Flow 3:
Average throughput: 33.66 Mbit/s
95th percentile per-packet one-way delay: 114.148 ms
Loss rate: 23.07%
```

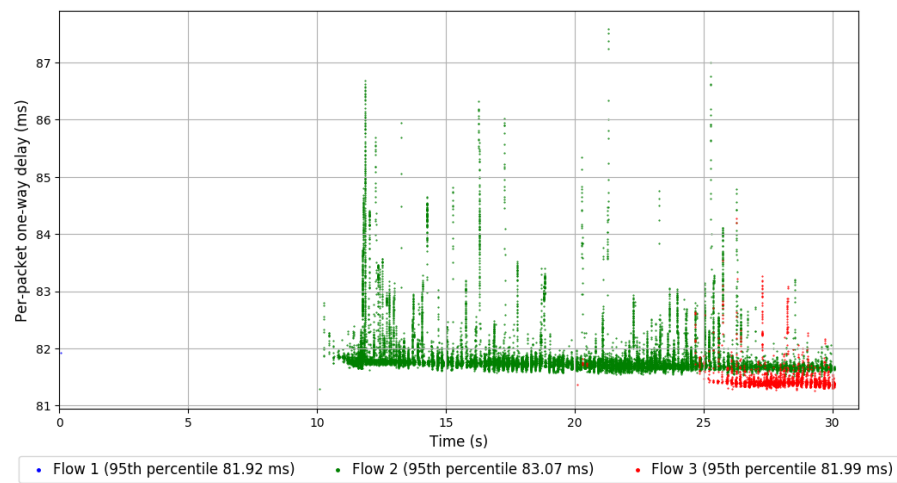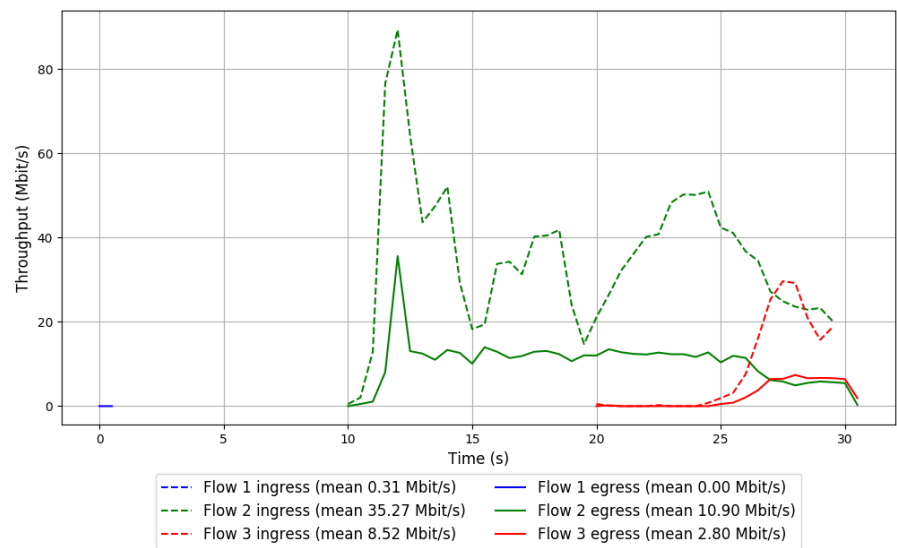Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-03-19 02:35:58
End at: 2019-03-19 02:36:28
Local clock offset: -6.909 ms
Remote clock offset: 17.384 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 86.165 ms
Loss rate: 75.17%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 84.281 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 10.21 Mbit/s
95th percentile per-packet one-way delay: 86.406 ms
Loss rate: 74.70%
-- Flow 3:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 83.841 ms
Loss rate: 77.27%
```
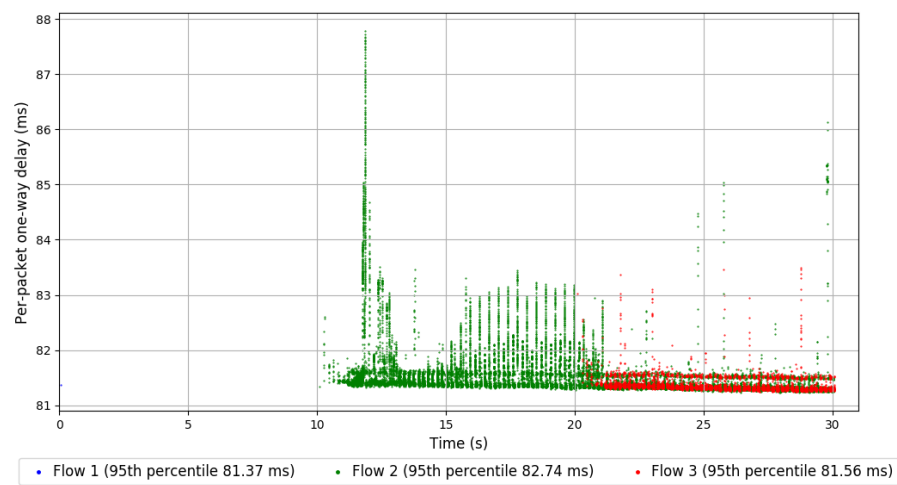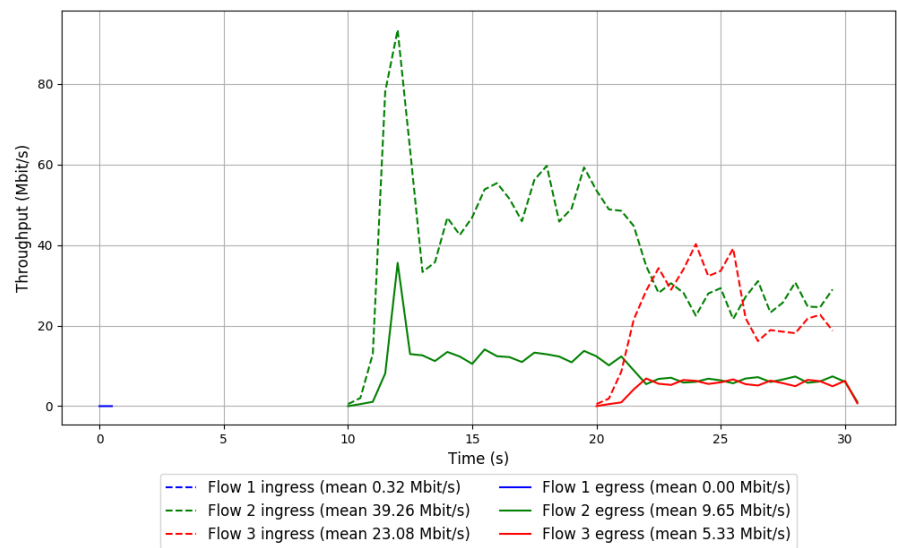
Run 1: Report of Copa — Data Link

- - - Flow 1 ingress (mean 0.38 Mbit/s)   —— Flow 1 egress (mean 0.00 Mbit/s)
- - - Flow 2 ingress (mean 40.36 Mbit/s)   —— Flow 2 egress (mean 10.21 Mbit/s)
- - - Flow 3 ingress (mean 18.35 Mbit/s)   —— Flow 3 egress (mean 4.17 Mbit/s)

- Flow 1 (95th percentile 84.28 ms)   • Flow 2 (95th percentile 86.41 ms)   • Flow 3 (95th percentile 83.84 ms)

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```
Run 2: Statistics of Copa

Start at: 2019-03-19 03:02:47
End at: 2019-03-19 03:03:17
Local clock offset: -8.727 ms
Remote clock offset: 33.188 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 82.973 ms
Loss rate: 68.88%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 81.918 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 10.90 Mbit/s
95th percentile per-packet one-way delay: 83.066 ms
Loss rate: 69.10%
-- Flow 3:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 81.994 ms
Loss rate: 67.08%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-03-19 03:29:32
End at: 2019-03-19 03:30:02
Local clock offset: -9.843 ms
Remote clock offset: 42.911 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 82.556 ms
Loss rate: 75.75%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 81.367 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 82.742 ms
Loss rate: 75.42%
-- Flow 3:
Average throughput: 5.33 Mbit/s
95th percentile per-packet one-way delay: 81.563 ms
Loss rate: 76.89%
```
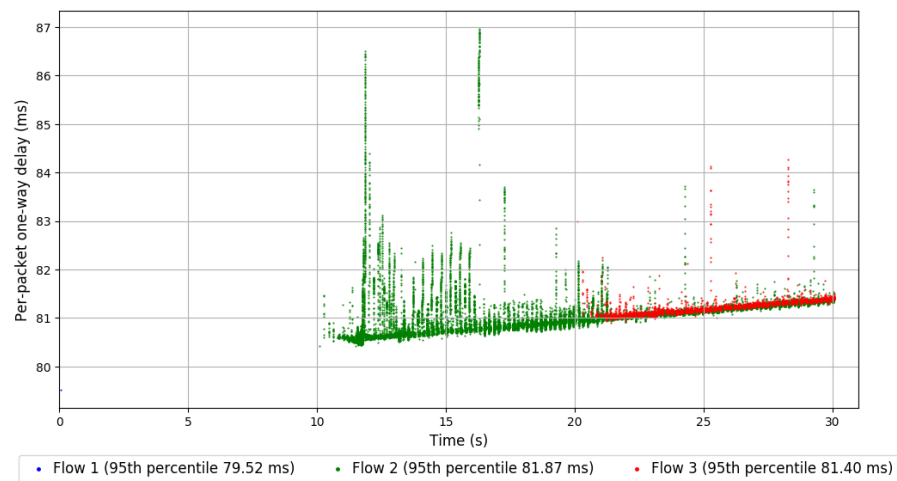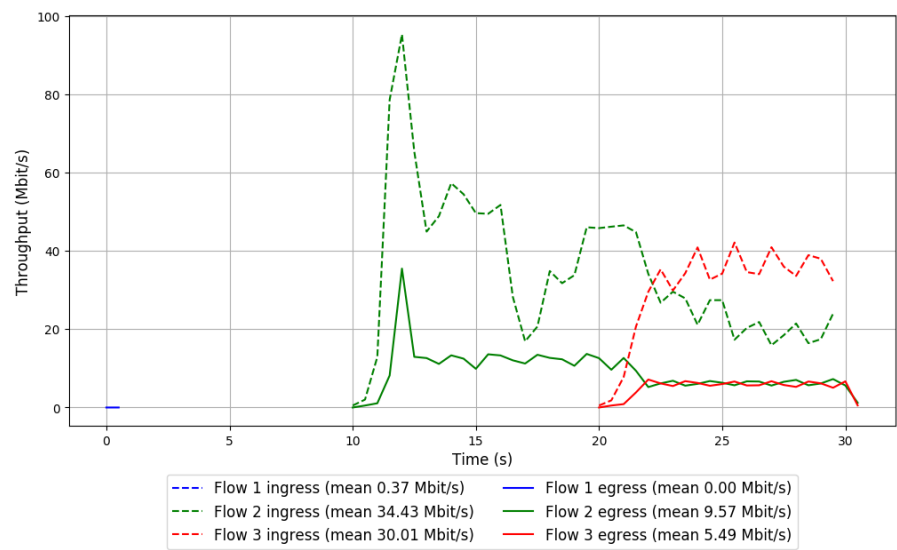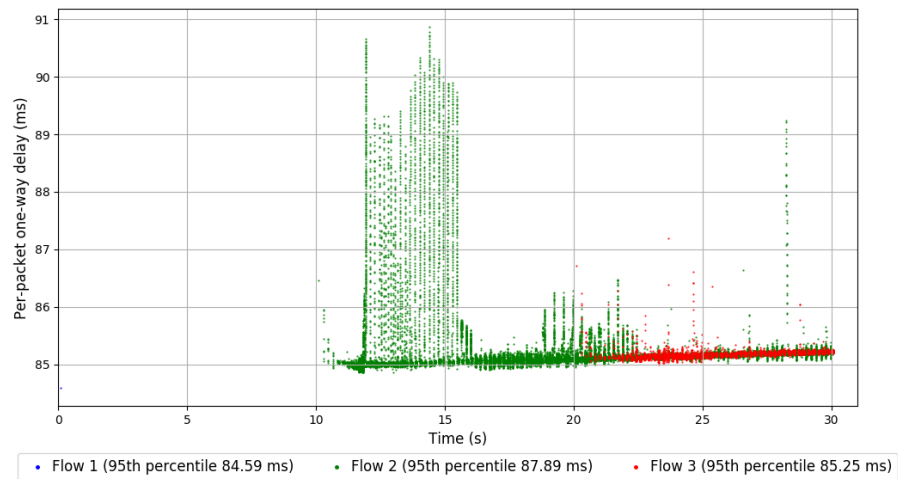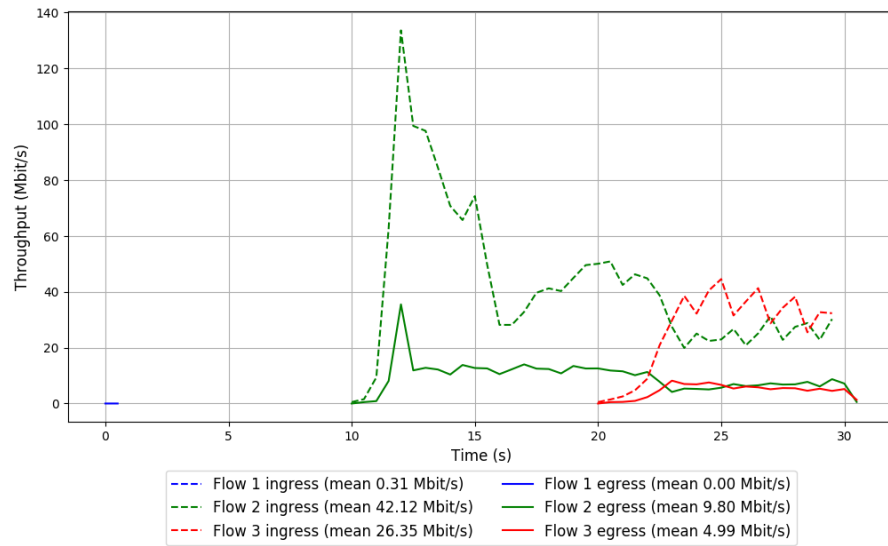
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 0.32 Mbit/s) — Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 39.26 Mbit/s) — Flow 2 egress (mean 9.65 Mbit/s)
Flow 3 ingress (mean 23.08 Mbit/s) — Flow 3 egress (mean 5.33 Mbit/s)

Flow 1 (95th percentile 81.37 ms)   Flow 2 (95th percentile 82.74 ms)   Flow 3 (95th percentile 81.56 ms)

```
Run 4: Statistics of Copa

Start at: 2019-03-19 03:56:19
End at: 2019-03-19 03:56:49
Local clock offset: -3.525 ms
Remote clock offset: 7.357 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 81.725 ms
Loss rate: 75.09%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 79.516 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 81.873 ms
Loss rate: 72.21%
-- Flow 3:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 81.396 ms
Loss rate: 81.72%
```
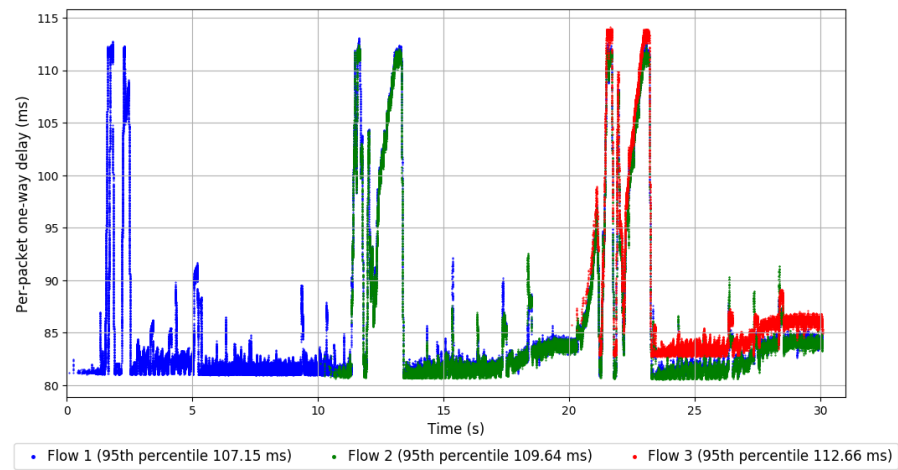
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 0.37 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 34.43 Mbit/s)   Flow 2 egress (mean 9.57 Mbit/s)
Flow 3 ingress (mean 30.01 Mbit/s)   Flow 3 egress (mean 5.49 Mbit/s)

Flow 1 (95th percentile 79.52 ms)   Flow 2 (95th percentile 81.87 ms)   Flow 3 (95th percentile 81.40 ms)

```
Run 5: Statistics of Copa

Start at: 2019-03-19 04:23:05
End at: 2019-03-19 04:23:35
Local clock offset: 2.721 ms
Remote clock offset: -15.017 ms


# Below is generated by plot.py at 2019-03-19 04:46:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 87.422 ms
Loss rate: 77.78%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 84.588 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 87.885 ms
Loss rate: 76.75%
-- Flow 3:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 85.245 ms
Loss rate: 81.06%
```
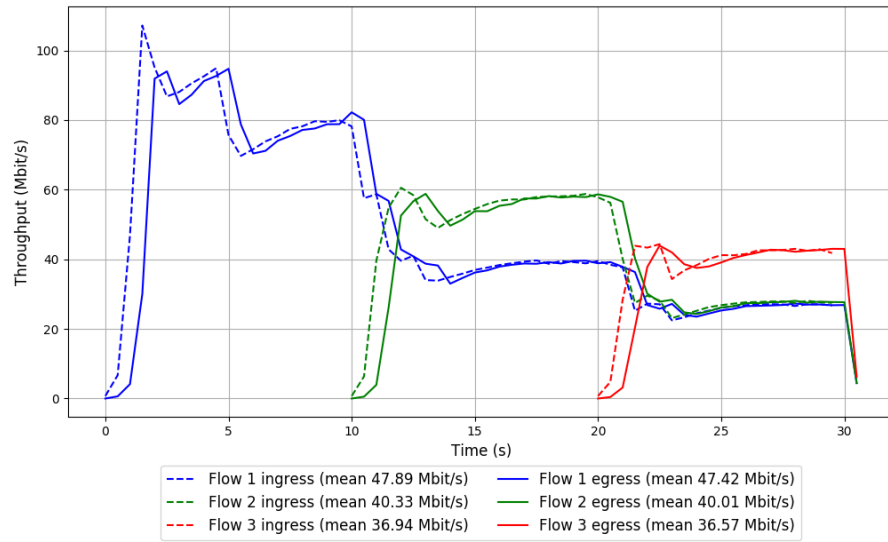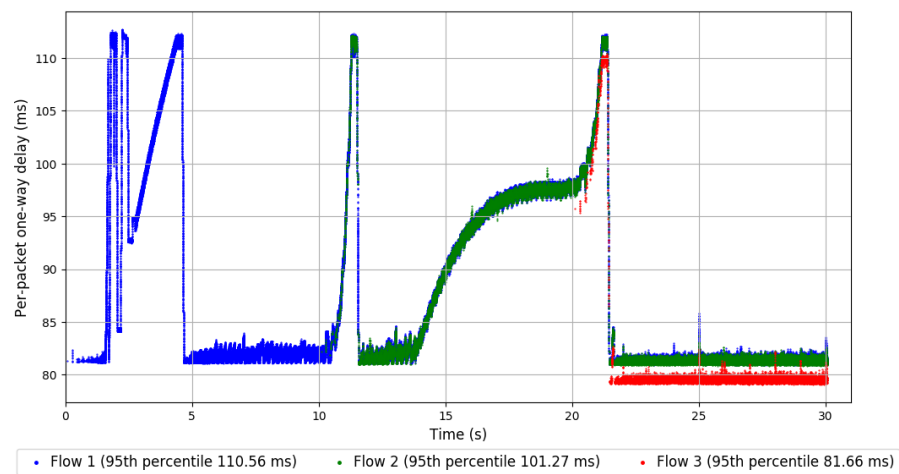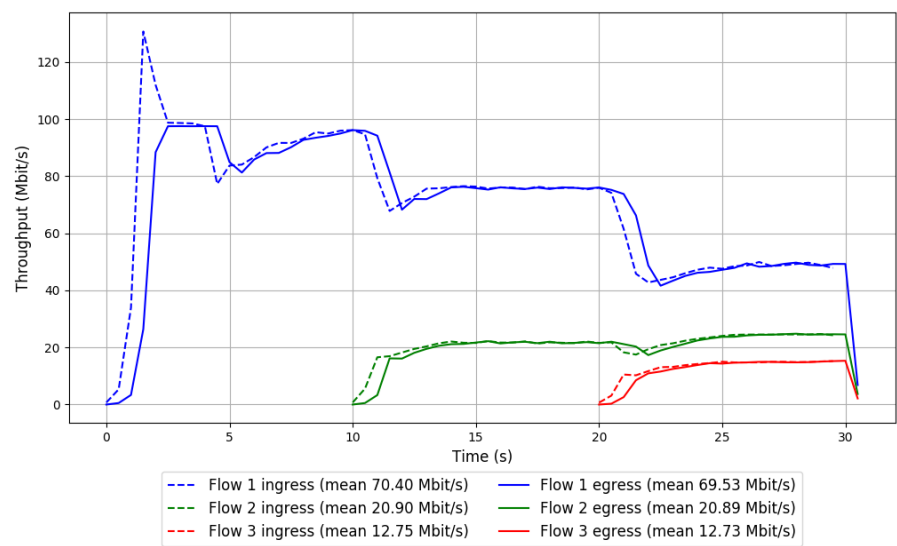
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 0.31 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 42.12 Mbit/s)   Flow 2 egress (mean 9.80 Mbit/s)
Flow 3 ingress (mean 26.35 Mbit/s)   Flow 3 egress (mean 4.99 Mbit/s)

Flow 1 (95th percentile 84.59 ms)   Flow 2 (95th percentile 87.89 ms)   Flow 3 (95th percentile 85.25 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-03-19 02:52:29
End at: 2019-03-19 02:52:59
Local clock offset: -8.745 ms
Remote clock offset: 27.33 ms


# Below is generated by plot.py at 2019-03-19 04:46:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.23 Mbit/s
95th percentile per-packet one-way delay: 108.854 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 47.42 Mbit/s
95th percentile per-packet one-way delay: 107.150 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 40.01 Mbit/s
95th percentile per-packet one-way delay: 109.642 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 36.57 Mbit/s
95th percentile per-packet one-way delay: 112.661 ms
Loss rate: 1.02%
```
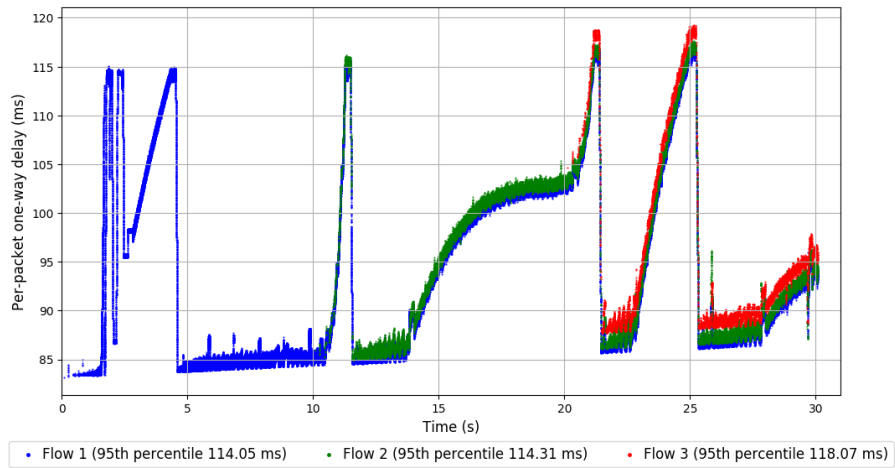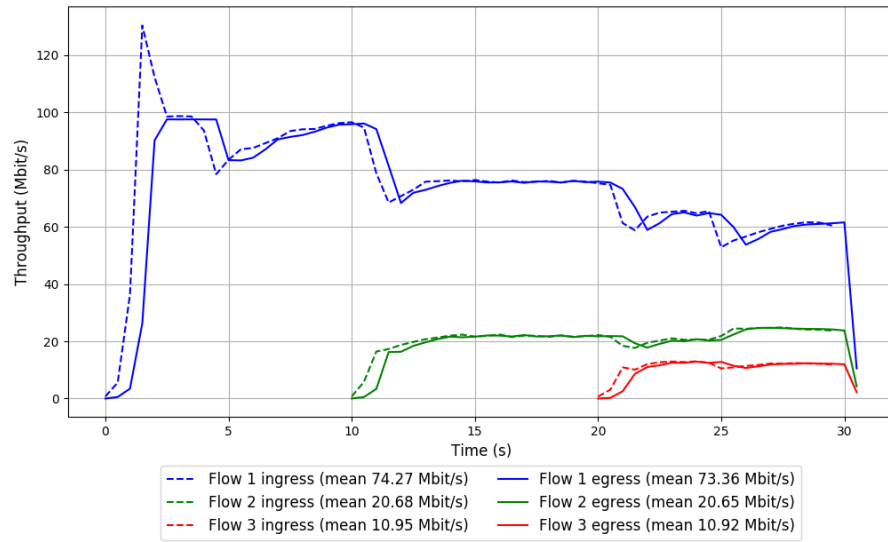
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-03-19 03:19:16
End at: 2019-03-19 03:19:46
Local clock offset: -10.177 ms
Remote clock offset: 36.629 ms


# Below is generated by plot.py at 2019-03-19 04:46:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.67 Mbit/s
95th percentile per-packet one-way delay: 109.608 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 69.53 Mbit/s
95th percentile per-packet one-way delay: 110.562 ms
Loss rate: 1.24%
-- Flow 2:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 101.265 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 81.662 ms
Loss rate: 0.27%
```
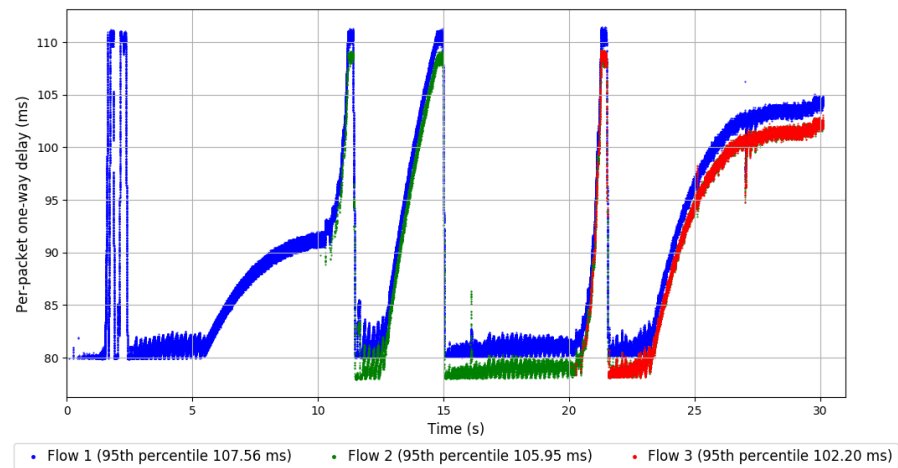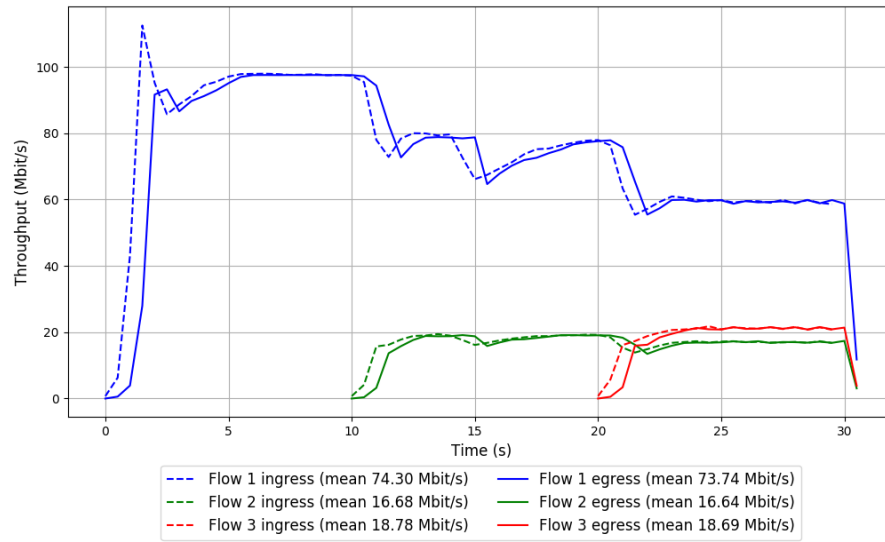
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-03-19 03:46:05
End at: 2019-03-19 03:46:35
Local clock offset: -11.241 ms
Remote clock offset: 48.7 ms


# Below is generated by plot.py at 2019-03-19 04:46:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 114.198 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 73.36 Mbit/s
95th percentile per-packet one-way delay: 114.050 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 20.65 Mbit/s
95th percentile per-packet one-way delay: 114.307 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 118.067 ms
Loss rate: 0.33%
```
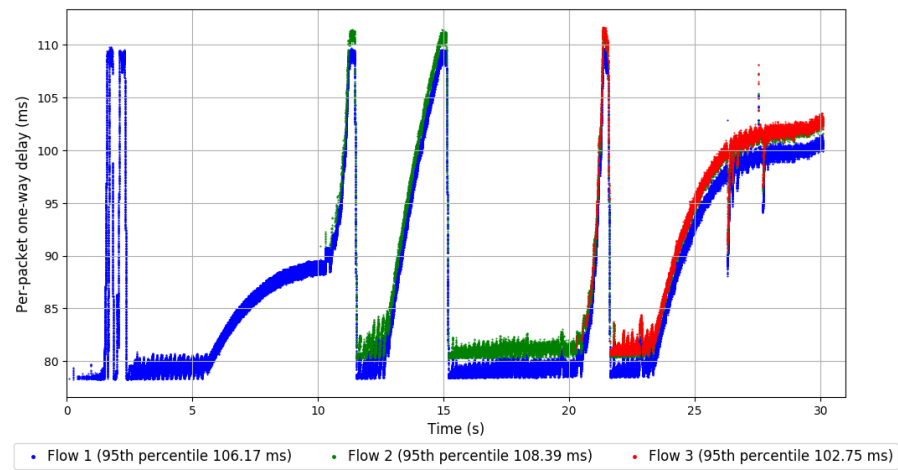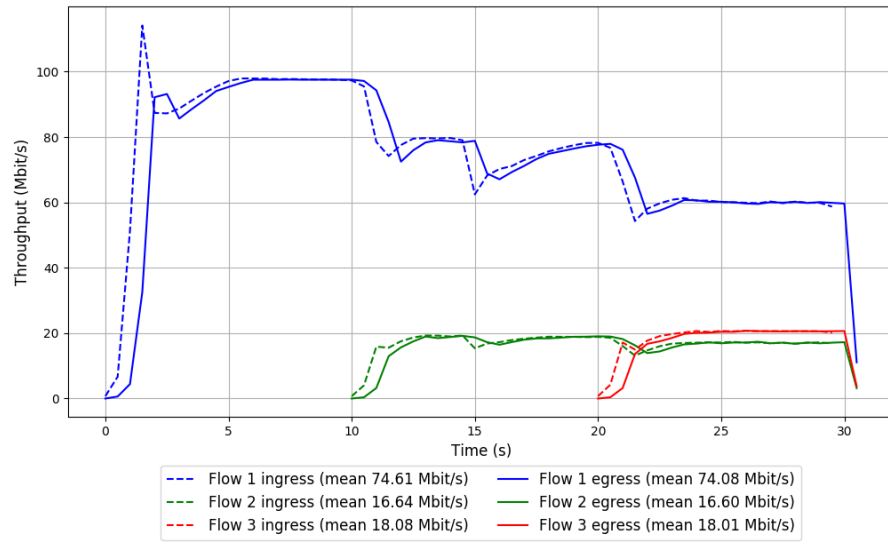
Run 3: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 74.27 Mbit/s) —— Flow 1 egress (mean 73.36 Mbit/s)
- - - Flow 2 ingress (mean 20.68 Mbit/s) —— Flow 2 egress (mean 20.65 Mbit/s)
- - - Flow 3 ingress (mean 10.95 Mbit/s) —— Flow 3 egress (mean 10.92 Mbit/s)

• Flow 1 (95th percentile 114.05 ms)   • Flow 2 (95th percentile 114.31 ms)   • Flow 3 (95th percentile 118.07 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-03-19 04:12:50
End at: 2019-03-19 04:13:20
Local clock offset: 1.835 ms
Remote clock offset: -13.996 ms


# Below is generated by plot.py at 2019-03-19 04:47:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.04 Mbit/s
95th percentile per-packet one-way delay: 106.829 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 73.74 Mbit/s
95th percentile per-packet one-way delay: 107.559 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 16.64 Mbit/s
95th percentile per-packet one-way delay: 105.946 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 18.69 Mbit/s
95th percentile per-packet one-way delay: 102.200 ms
Loss rate: 0.24%
```
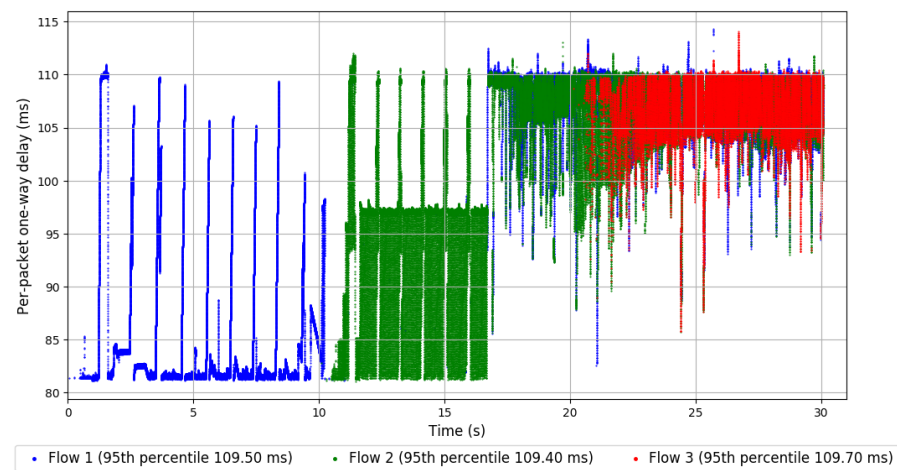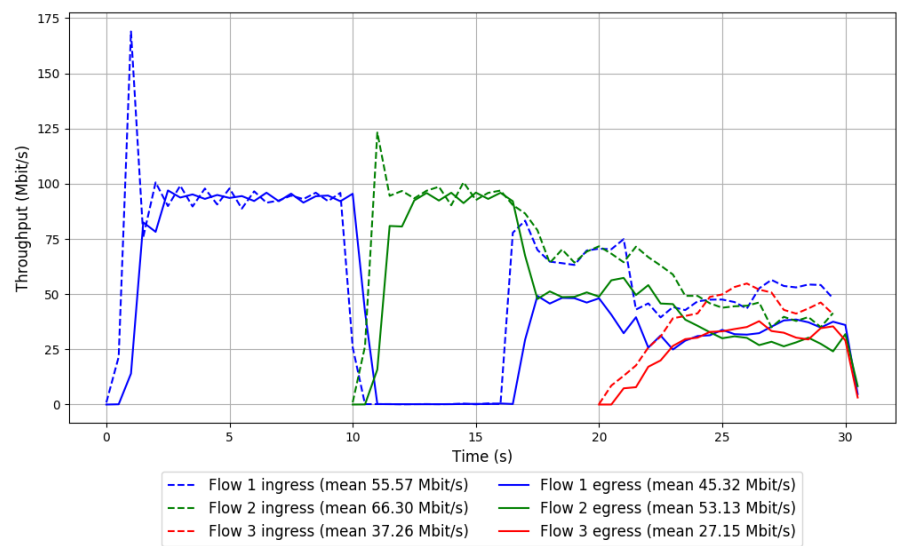
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 74.30 Mbit/s) --- Flow 1 egress (mean 73.74 Mbit/s)
Flow 2 ingress (mean 16.68 Mbit/s) --- Flow 2 egress (mean 16.64 Mbit/s)
Flow 3 ingress (mean 18.78 Mbit/s) --- Flow 3 egress (mean 18.69 Mbit/s)

Flow 1 (95th percentile 107.56 ms) Flow 2 (95th percentile 105.95 ms) Flow 3 (95th percentile 102.20 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-03-19 04:39:34
End at: 2019-03-19 04:40:04
Local clock offset: 5.041 ms
Remote clock offset: -30.004 ms


# Below is generated by plot.py at 2019-03-19 04:47:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.13 Mbit/s
95th percentile per-packet one-way delay: 106.271 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 74.08 Mbit/s
95th percentile per-packet one-way delay: 106.174 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 16.60 Mbit/s
95th percentile per-packet one-way delay: 108.386 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 18.01 Mbit/s
95th percentile per-packet one-way delay: 102.753 ms
Loss rate: 0.14%
```
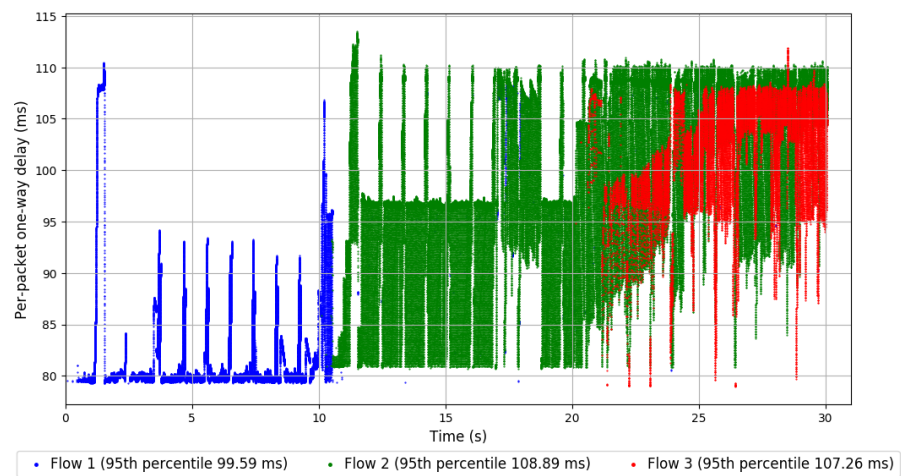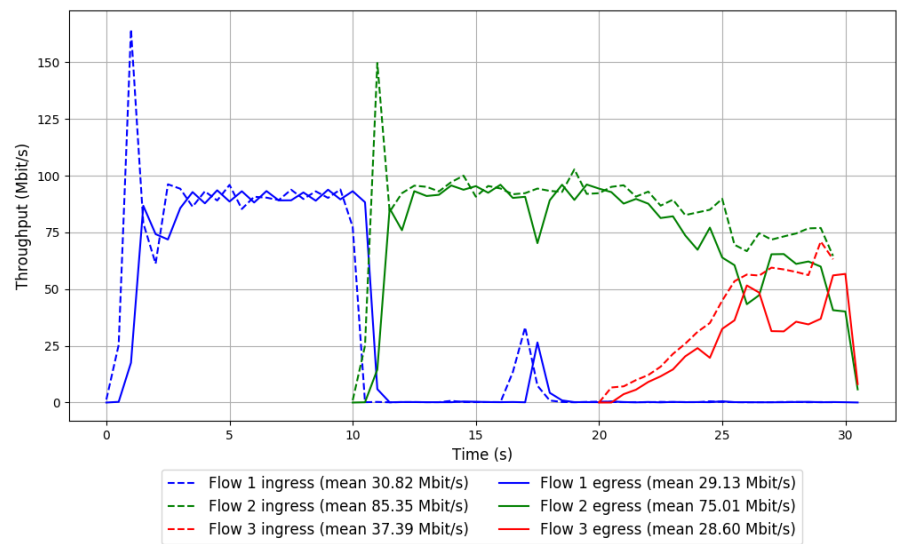
Run 5: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 74.61 Mbit/s) —— Flow 1 egress (mean 74.08 Mbit/s)
- - - - Flow 2 ingress (mean 16.64 Mbit/s) —— Flow 2 egress (mean 16.60 Mbit/s)
- - - - Flow 3 ingress (mean 18.08 Mbit/s) —— Flow 3 egress (mean 18.01 Mbit/s)

• Flow 1 (95th percentile 106.17 ms)   • Flow 2 (95th percentile 108.39 ms)   • Flow 3 (95th percentile 102.75 ms)

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```
Run 1: Statistics of FillP

Start at: 2019-03-19 02:37:12
End at: 2019-03-19 02:37:42
Local clock offset: -7.704 ms
Remote clock offset: 13.815 ms


# Below is generated by plot.py at 2019-03-19 04:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.68 Mbit/s
95th percentile per-packet one-way delay: 109.470 ms
Loss rate: 19.90%
-- Flow 1:
Average throughput: 45.32 Mbit/s
95th percentile per-packet one-way delay: 109.505 ms
Loss rate: 18.39%
-- Flow 2:
Average throughput: 53.13 Mbit/s
95th percentile per-packet one-way delay: 109.400 ms
Loss rate: 19.77%
-- Flow 3:
Average throughput: 27.15 Mbit/s
95th percentile per-packet one-way delay: 109.703 ms
Loss rate: 27.15%
```
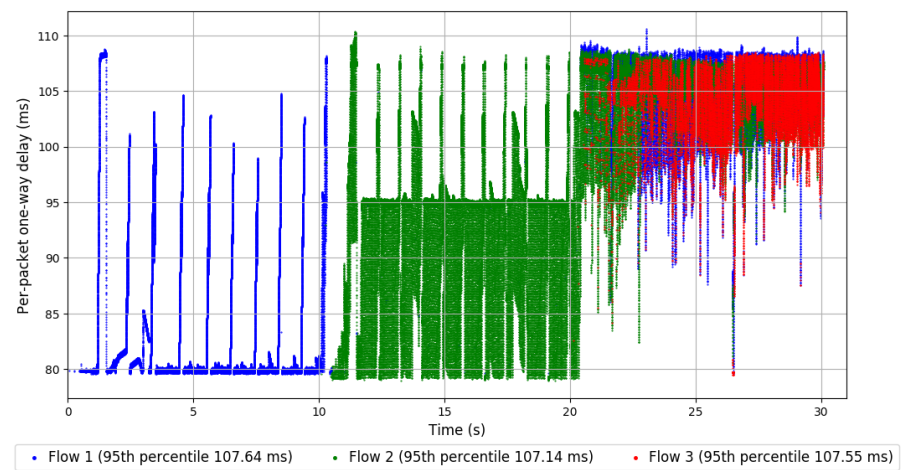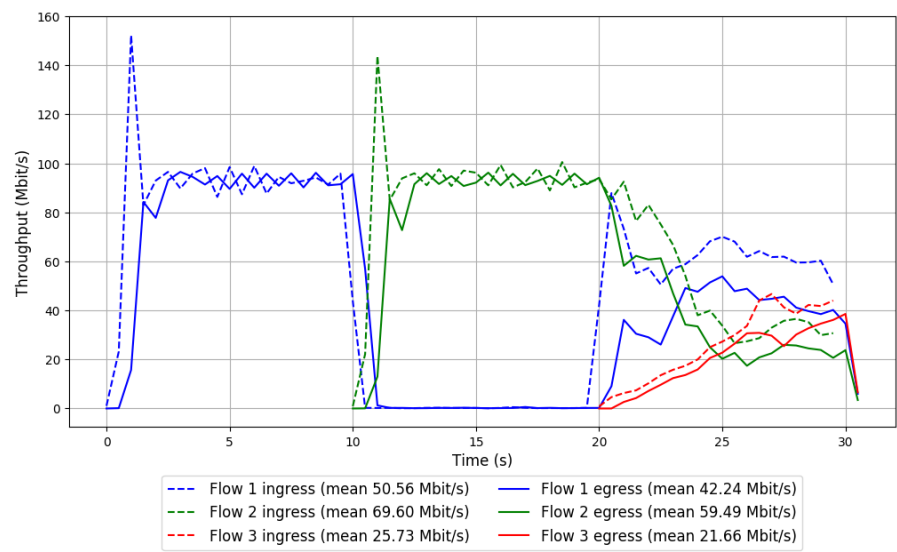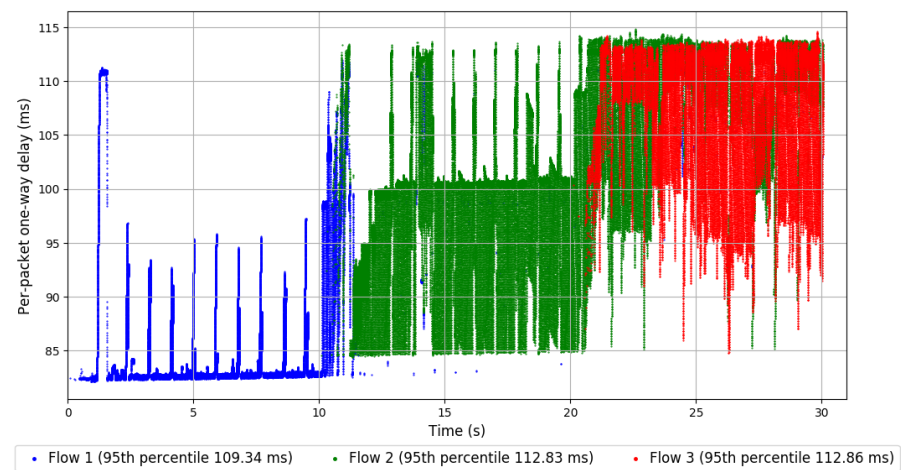
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 55.57 Mbit/s) --- Flow 1 egress (mean 45.32 Mbit/s) ---
Flow 2 ingress (mean 66.30 Mbit/s) --- Flow 2 egress (mean 53.13 Mbit/s) ---
Flow 3 ingress (mean 37.26 Mbit/s) --- Flow 3 egress (mean 27.15 Mbit/s) ---

Flow 1 (95th percentile 109.50 ms) • Flow 2 (95th percentile 109.40 ms) • Flow 3 (95th percentile 109.70 ms)

```
Run 2: Statistics of FillP

Start at: 2019-03-19 03:04:01
End at: 2019-03-19 03:04:31
Local clock offset: -9.493 ms
Remote clock offset: 30.963 ms


# Below is generated by plot.py at 2019-03-19 04:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.50 Mbit/s
95th percentile per-packet one-way delay: 108.674 ms
Loss rate: 11.40%
-- Flow 1:
Average throughput: 29.13 Mbit/s
95th percentile per-packet one-way delay: 99.588 ms
Loss rate: 5.40%
-- Flow 2:
Average throughput: 75.01 Mbit/s
95th percentile per-packet one-way delay: 108.891 ms
Loss rate: 12.02%
-- Flow 3:
Average throughput: 28.60 Mbit/s
95th percentile per-packet one-way delay: 107.258 ms
Loss rate: 23.43%
```
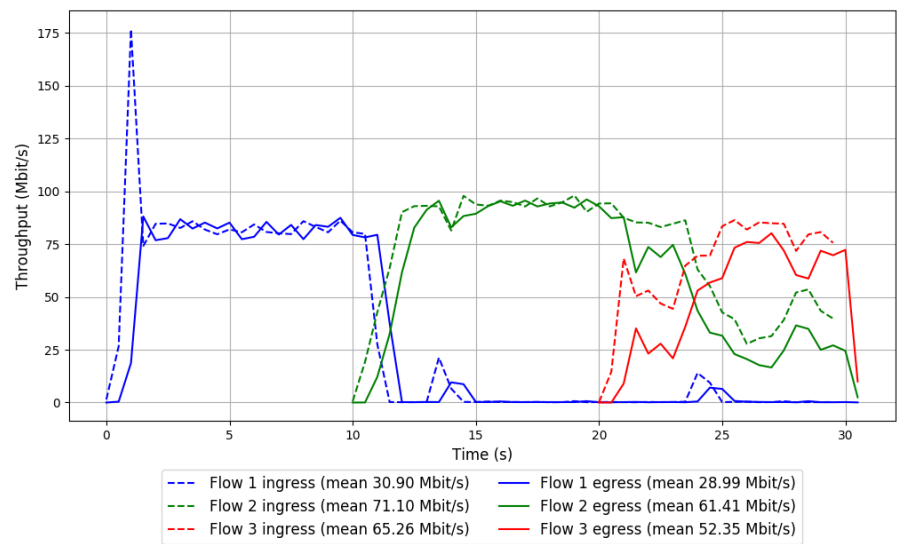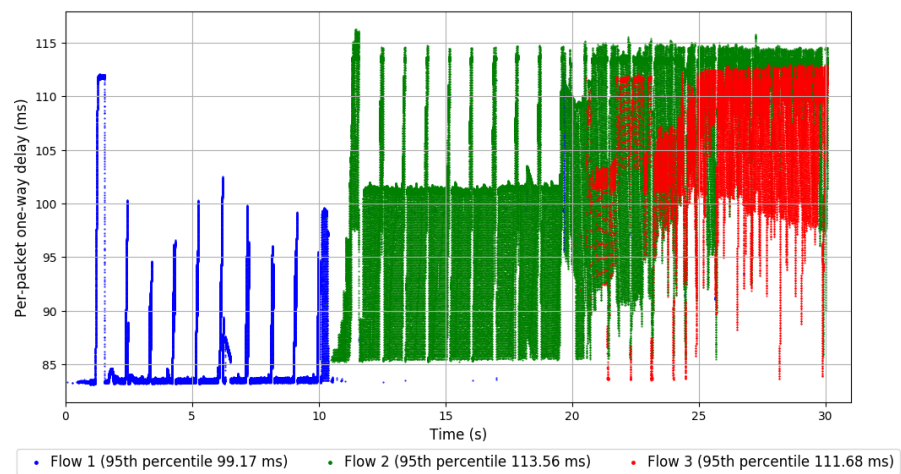
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-03-19 03:30:46
End at: 2019-03-19 03:31:16
Local clock offset: -9.934 ms
Remote clock offset: 39.583 ms


# Below is generated by plot.py at 2019-03-19 04:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.06 Mbit/s
95th percentile per-packet one-way delay: 107.392 ms
Loss rate: 15.46%
-- Flow 1:
Average throughput: 42.24 Mbit/s
95th percentile per-packet one-way delay: 107.642 ms
Loss rate: 16.38%
-- Flow 2:
Average throughput: 59.49 Mbit/s
95th percentile per-packet one-way delay: 107.135 ms
Loss rate: 14.41%
-- Flow 3:
Average throughput: 21.66 Mbit/s
95th percentile per-packet one-way delay: 107.554 ms
Loss rate: 15.65%
```
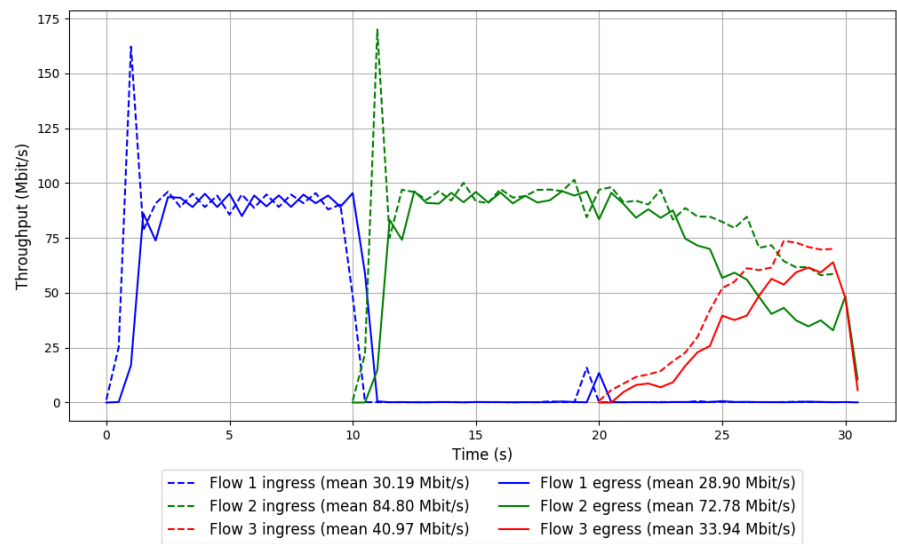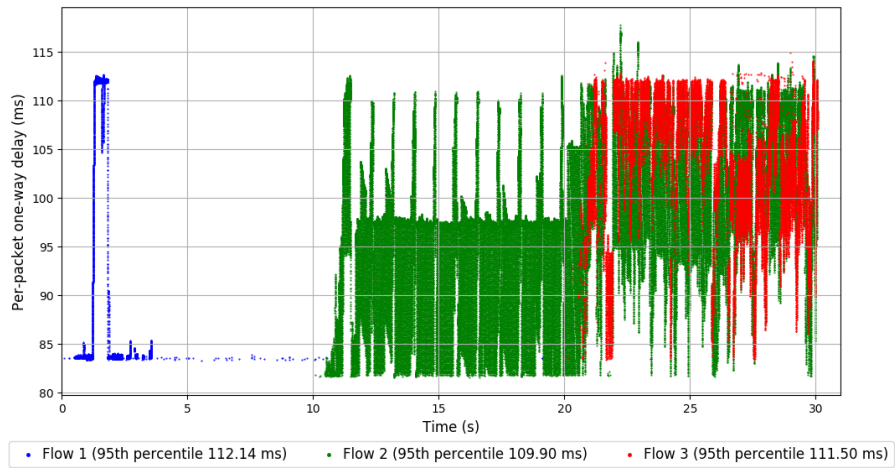
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 50.56 Mbit/s) --- Flow 1 egress (mean 42.24 Mbit/s)
Flow 2 ingress (mean 69.60 Mbit/s) --- Flow 2 egress (mean 59.49 Mbit/s)
Flow 3 ingress (mean 25.73 Mbit/s) --- Flow 3 egress (mean 21.66 Mbit/s)

Flow 1 (95th percentile 107.64 ms) Flow 2 (95th percentile 107.14 ms) Flow 3 (95th percentile 107.55 ms)

```
Run 4: Statistics of FillP

Start at: 2019-03-19 03:57:33
End at: 2019-03-19 03:58:03
Local clock offset: -2.232 ms
Remote clock offset: 8.114 ms


# Below is generated by plot.py at 2019-03-19 04:48:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.20 Mbit/s
95th percentile per-packet one-way delay: 112.690 ms
Loss rate: 12.57%
-- Flow 1:
Average throughput: 28.99 Mbit/s
95th percentile per-packet one-way delay: 109.342 ms
Loss rate: 6.11%
-- Flow 2:
Average throughput: 61.41 Mbit/s
95th percentile per-packet one-way delay: 112.825 ms
Loss rate: 13.52%
-- Flow 3:
Average throughput: 52.35 Mbit/s
95th percentile per-packet one-way delay: 112.857 ms
Loss rate: 19.70%
```
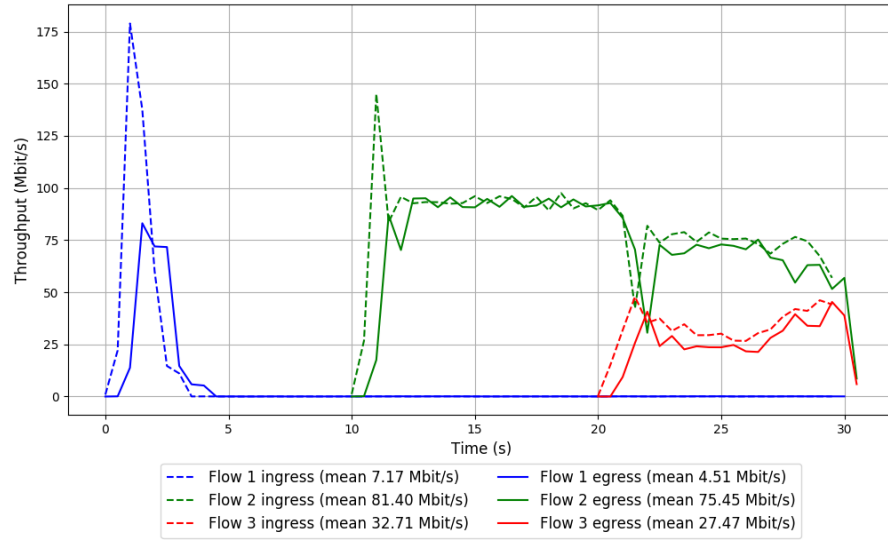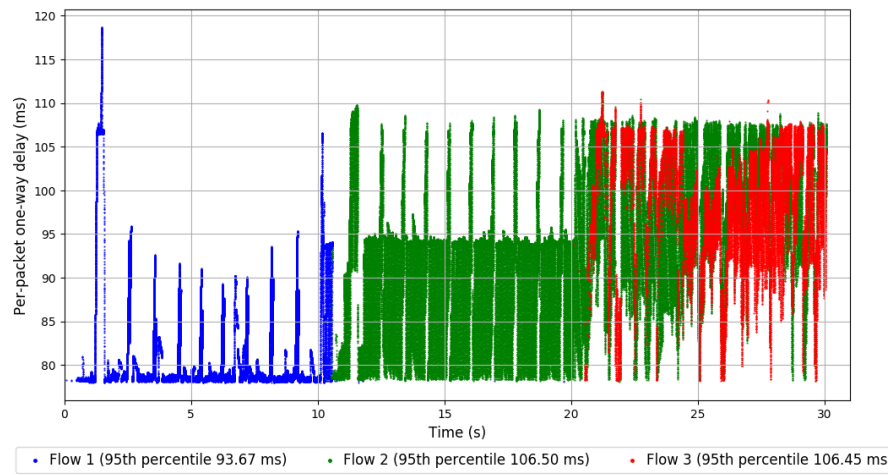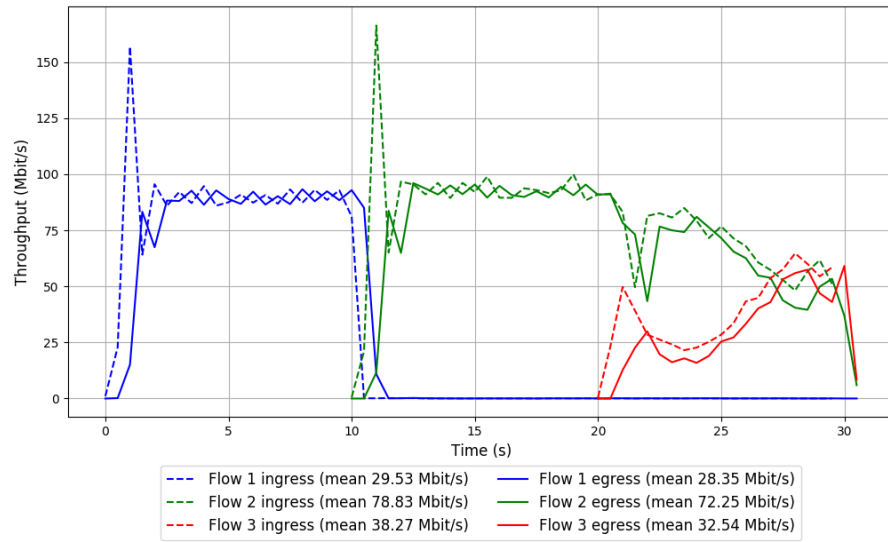
Run 4: Report of FillP — Data Link

- - - Flow 1 ingress (mean 30.90 Mbit/s) ——— Flow 1 egress (mean 28.99 Mbit/s)
- - - Flow 2 ingress (mean 71.10 Mbit/s) ——— Flow 2 egress (mean 61.41 Mbit/s)
- - - Flow 3 ingress (mean 65.26 Mbit/s) ——— Flow 3 egress (mean 52.35 Mbit/s)

• Flow 1 (95th percentile 109.34 ms)   • Flow 2 (95th percentile 112.83 ms)   • Flow 3 (95th percentile 112.86 ms)

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```
Run 5: Statistics of FillP

Start at: 2019-03-19 04:24:19
End at: 2019-03-19 04:24:49
Local clock offset: 2.874 ms
Remote clock offset: -16.599 ms

# Below is generated by plot.py at 2019-03-19 04:48:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.58 Mbit/s
95th percentile per-packet one-way delay: 113.370 ms
Loss rate: 11.51%
-- Flow 1:
Average throughput: 28.90 Mbit/s
95th percentile per-packet one-way delay: 99.165 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 72.78 Mbit/s
95th percentile per-packet one-way delay: 113.555 ms
Loss rate: 14.06%
-- Flow 3:
Average throughput: 33.94 Mbit/s
95th percentile per-packet one-way delay: 111.680 ms
Loss rate: 17.04%
```
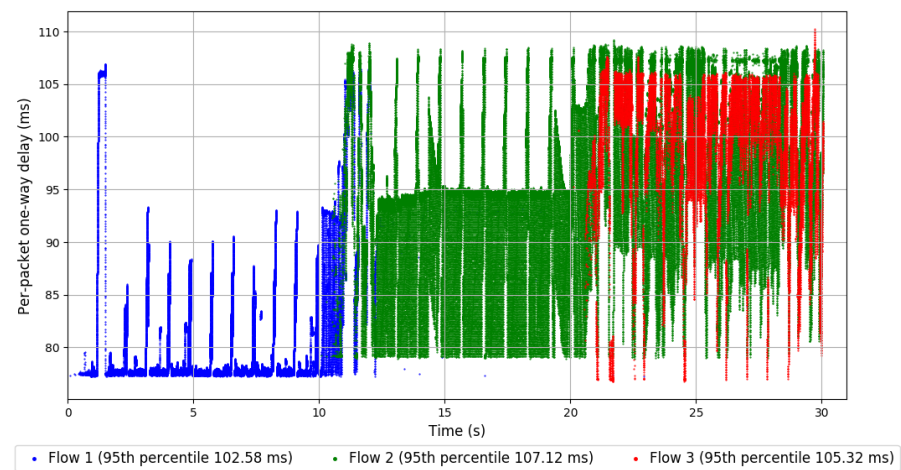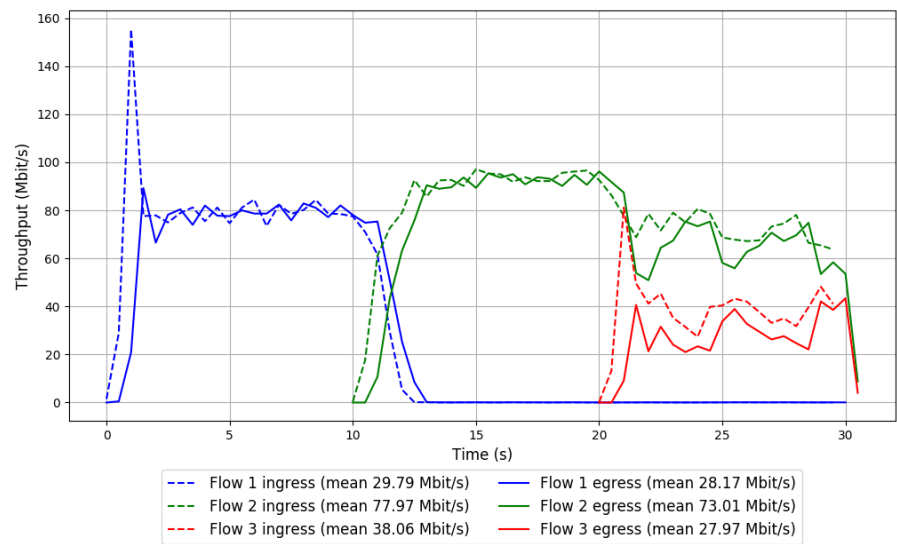
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-03-19 02:33:24
End at: 2019-03-19 02:33:54
Local clock offset: -6.845 ms
Remote clock offset: 16.095 ms


# Below is generated by plot.py at 2019-03-19 04:48:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.87 Mbit/s
95th percentile per-packet one-way delay: 110.832 ms
Loss rate: 11.44%
-- Flow 1:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 112.142 ms
Loss rate: 37.06%
-- Flow 2:
Average throughput: 75.45 Mbit/s
95th percentile per-packet one-way delay: 109.900 ms
Loss rate: 7.19%
-- Flow 3:
Average throughput: 27.47 Mbit/s
95th percentile per-packet one-way delay: 111.496 ms
Loss rate: 15.81%
```

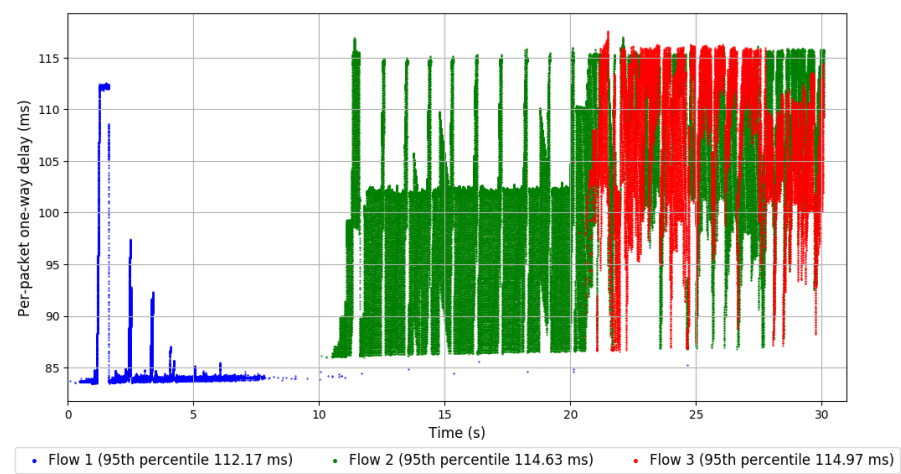Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-03-19 03:00:12
End at: 2019-03-19 03:00:42
Local clock offset: -8.525 ms
Remote clock offset: 29.132 ms


# Below is generated by plot.py at 2019-03-19 04:49:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.23 Mbit/s
95th percentile per-packet one-way delay: 106.388 ms
Loss rate: 7.78%
-- Flow 1:
Average throughput: 28.35 Mbit/s
95th percentile per-packet one-way delay: 93.675 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 72.25 Mbit/s
95th percentile per-packet one-way delay: 106.504 ms
Loss rate: 8.23%
-- Flow 3:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 106.446 ms
Loss rate: 14.88%
```

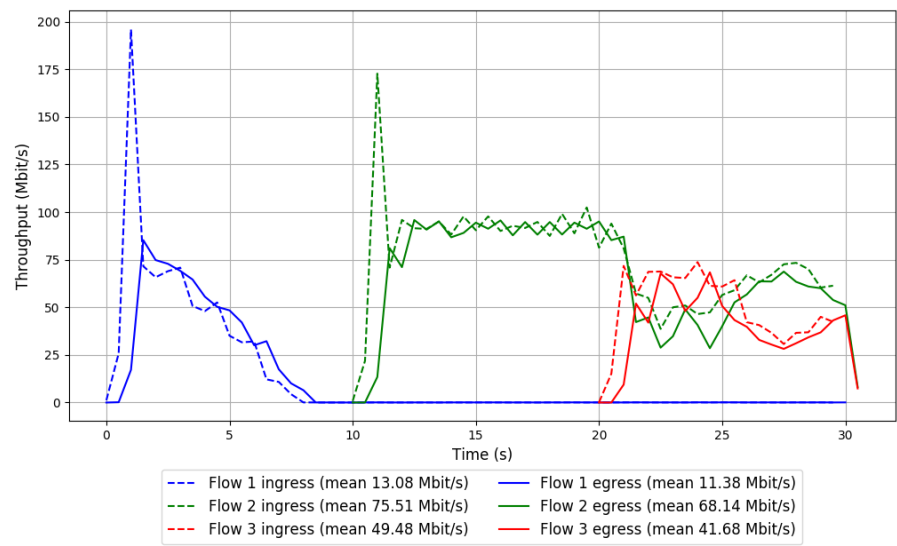Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 29.53 Mbit/s) --- Flow 1 egress (mean 28.35 Mbit/s)
Flow 2 ingress (mean 78.83 Mbit/s) --- Flow 2 egress (mean 72.25 Mbit/s)
Flow 3 ingress (mean 38.27 Mbit/s) --- Flow 3 egress (mean 32.54 Mbit/s)

Flow 1 (95th percentile 93.67 ms)   Flow 2 (95th percentile 106.50 ms)   Flow 3 (95th percentile 106.45 ms)
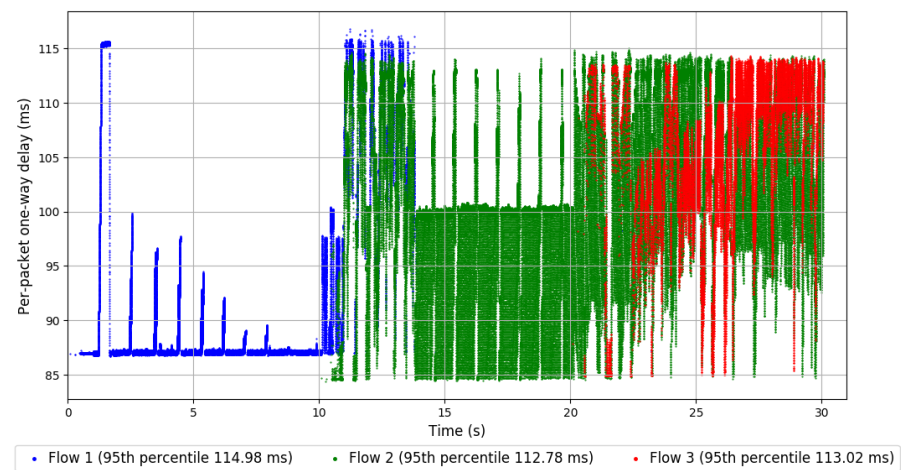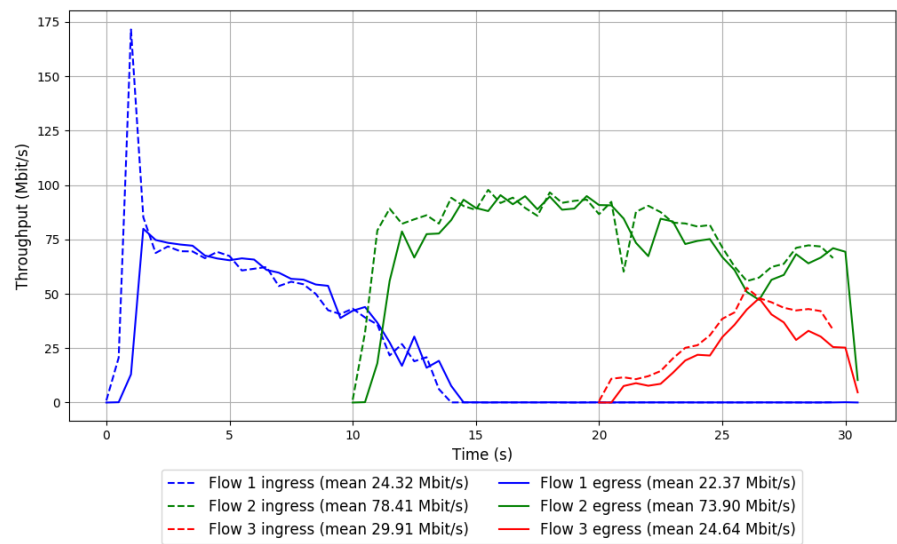
```
Run 3: Statistics of FillP-Sheep

Start at: 2019-03-19 03:26:56
End at: 2019-03-19 03:27:26
Local clock offset: -9.708 ms
Remote clock offset: 37.998 ms


# Below is generated by plot.py at 2019-03-19 04:49:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.94 Mbit/s
95th percentile per-packet one-way delay: 106.345 ms
Loss rate: 8.69%
-- Flow 1:
Average throughput: 28.17 Mbit/s
95th percentile per-packet one-way delay: 102.575 ms
Loss rate: 5.37%
-- Flow 2:
Average throughput: 73.01 Mbit/s
95th percentile per-packet one-way delay: 107.124 ms
Loss rate: 6.25%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 105.316 ms
Loss rate: 26.48%
```
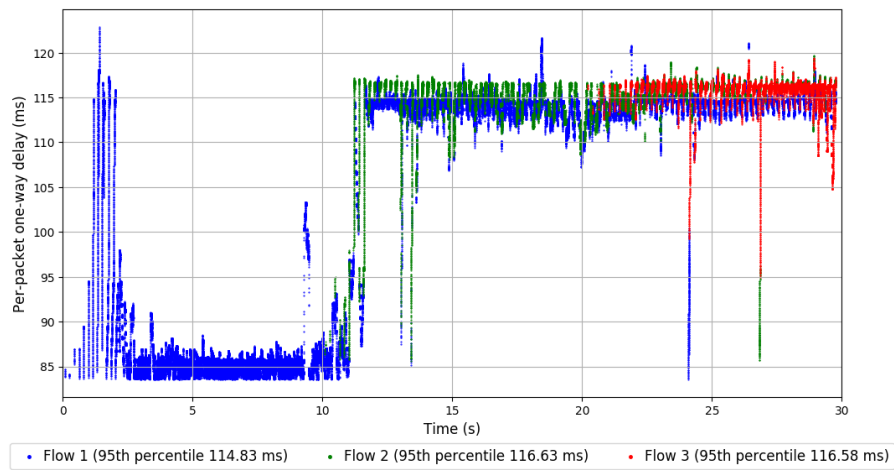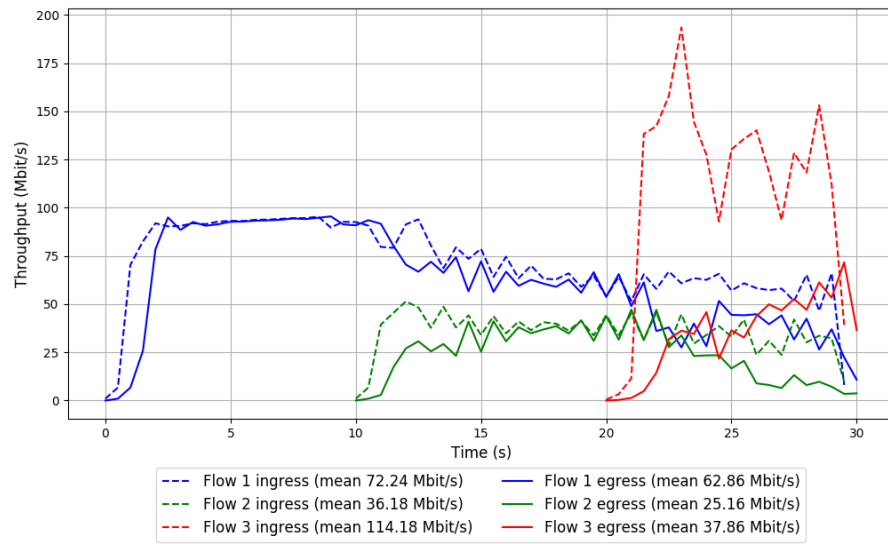
Run 3: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 29.79 Mbit/s)   —— Flow 1 egress (mean 28.17 Mbit/s)
- - - Flow 2 ingress (mean 77.97 Mbit/s)   —— Flow 2 egress (mean 73.01 Mbit/s)
- - - Flow 3 ingress (mean 38.06 Mbit/s)   —— Flow 3 egress (mean 27.97 Mbit/s)

- Flow 1 (95th percentile 102.58 ms)   • Flow 2 (95th percentile 107.12 ms)   • Flow 3 (95th percentile 105.32 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-03-19 03:53:45
End at: 2019-03-19 03:54:15
Local clock offset: -4.166 ms
Remote clock offset: 18.076 ms


# Below is generated by plot.py at 2019-03-19 04:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.53 Mbit/s
95th percentile per-packet one-way delay: 114.624 ms
Loss rate: 11.43%
-- Flow 1:
Average throughput: 11.38 Mbit/s
95th percentile per-packet one-way delay: 112.167 ms
Loss rate: 12.94%
-- Flow 2:
Average throughput: 68.14 Mbit/s
95th percentile per-packet one-way delay: 114.629 ms
Loss rate: 9.63%
-- Flow 3:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 114.968 ms
Loss rate: 15.74%
```

Run 4: Report of FillP-Sheep — Data Link
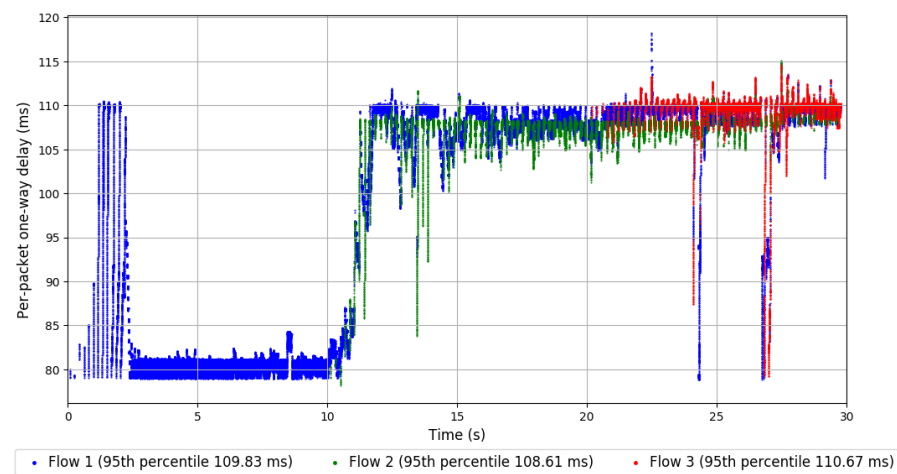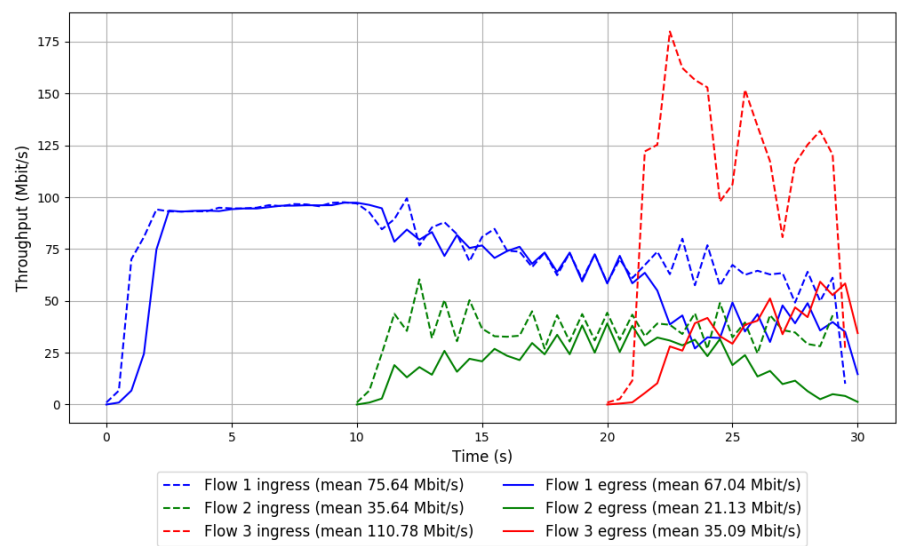

Flow 1 ingress (mean 13.08 Mbit/s) --- Flow 1 egress (mean 11.38 Mbit/s)
Flow 2 ingress (mean 75.51 Mbit/s) --- Flow 2 egress (mean 68.14 Mbit/s)
Flow 3 ingress (mean 49.48 Mbit/s) --- Flow 3 egress (mean 41.68 Mbit/s)

Flow 1 (95th percentile 112.17 ms) • Flow 2 (95th percentile 114.63 ms) • Flow 3 (95th percentile 114.97 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-03-19 04:20:30
End at: 2019-03-19 04:21:00
Local clock offset: 2.372 ms
Remote clock offset: -13.268 ms


# Below is generated by plot.py at 2019-03-19 04:49:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.78 Mbit/s
95th percentile per-packet one-way delay: 112.859 ms
Loss rate: 7.64%
-- Flow 1:
Average throughput: 22.37 Mbit/s
95th percentile per-packet one-way delay: 114.978 ms
Loss rate: 7.96%
-- Flow 2:
Average throughput: 73.90 Mbit/s
95th percentile per-packet one-way delay: 112.780 ms
Loss rate: 5.62%
-- Flow 3:
Average throughput: 24.64 Mbit/s
95th percentile per-packet one-way delay: 113.023 ms
Loss rate: 17.44%
```

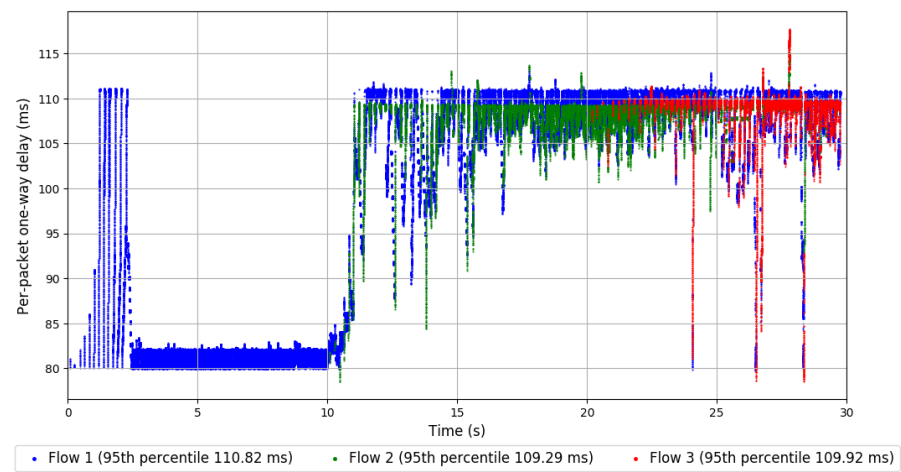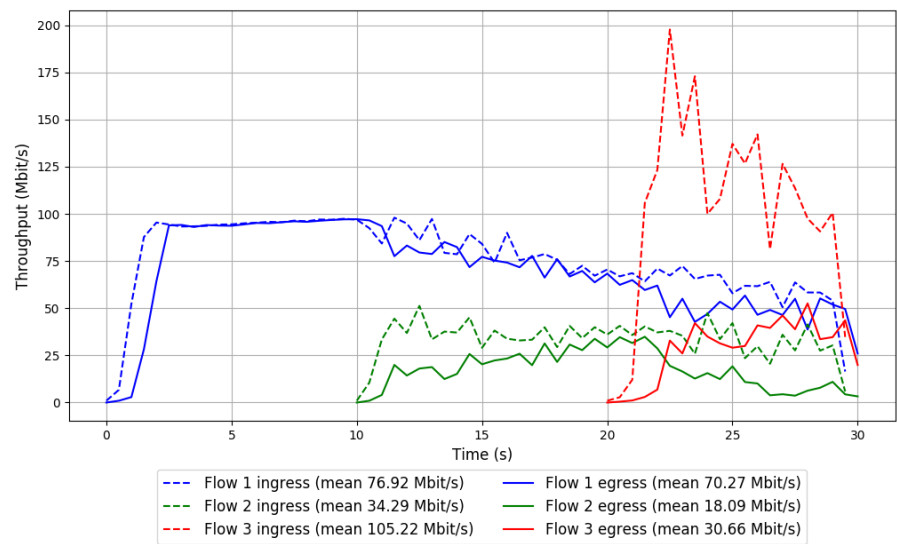Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-03-19 02:32:03
End at: 2019-03-19 02:32:33
Local clock offset: -6.817 ms
Remote clock offset: 17.732 ms


# Below is generated by plot.py at 2019-03-19 04:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 116.501 ms
Loss rate: 30.97%
-- Flow 1:
Average throughput: 62.86 Mbit/s
95th percentile per-packet one-way delay: 114.834 ms
Loss rate: 12.89%
-- Flow 2:
Average throughput: 25.16 Mbit/s
95th percentile per-packet one-way delay: 116.626 ms
Loss rate: 30.36%
-- Flow 3:
Average throughput: 37.86 Mbit/s
95th percentile per-packet one-way delay: 116.579 ms
Loss rate: 66.84%
```
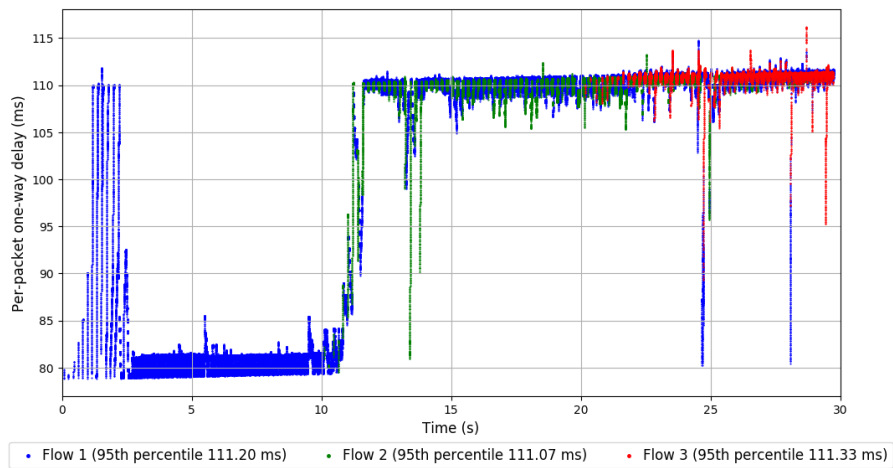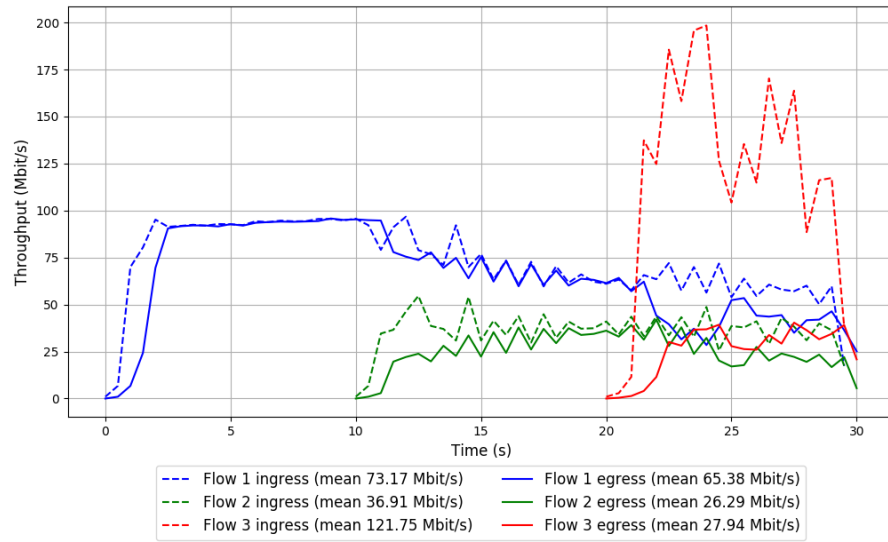
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-03-19 02:58:52
End at: 2019-03-19 02:59:22
Local clock offset: -8.434 ms
Remote clock offset: 27.526 ms


# Below is generated by plot.py at 2019-03-19 04:49:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 110.058 ms
Loss rate: 31.52%
-- Flow 1:
Average throughput: 67.04 Mbit/s
95th percentile per-packet one-way delay: 109.829 ms
Loss rate: 11.28%
-- Flow 2:
Average throughput: 21.13 Mbit/s
95th percentile per-packet one-way delay: 108.614 ms
Loss rate: 40.64%
-- Flow 3:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 110.668 ms
Loss rate: 68.33%
```
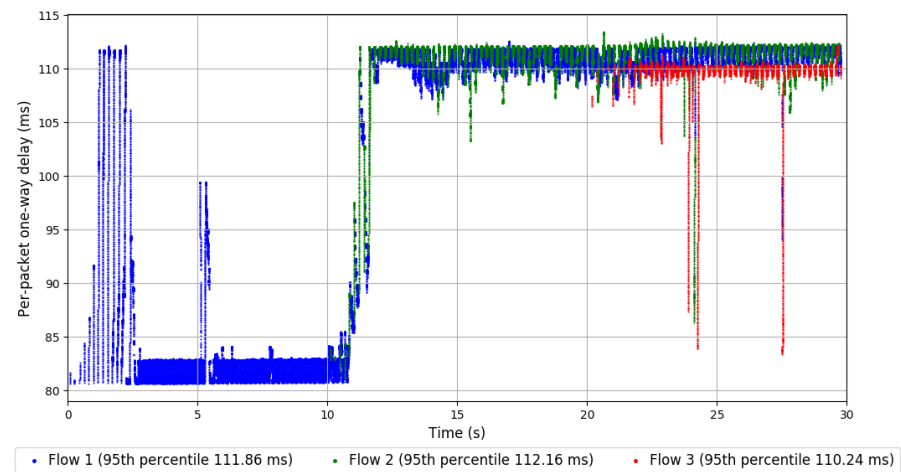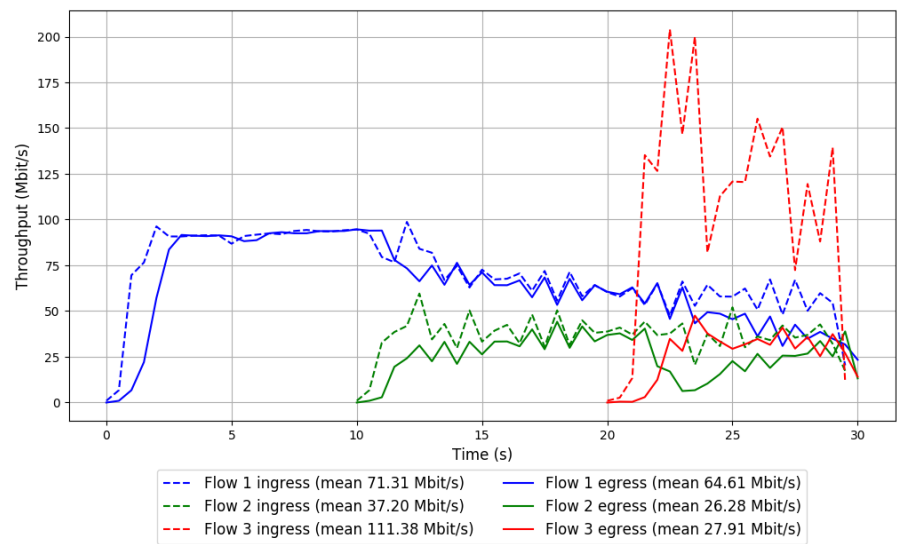
Run 2: Report of Indigo — Data Link

Flow 1 ingress (mean 75.64 Mbit/s) — — —   Flow 1 egress (mean 67.04 Mbit/s) ———
Flow 2 ingress (mean 35.64 Mbit/s) — — —   Flow 2 egress (mean 21.13 Mbit/s) ———
Flow 3 ingress (mean 110.78 Mbit/s) — — — Flow 3 egress (mean 35.09 Mbit/s) ———

Flow 1 (95th percentile 109.83 ms)   Flow 2 (95th percentile 108.61 ms)   Flow 3 (95th percentile 110.67 ms)

```
Run 3: Statistics of Indigo

Start at: 2019-03-19 03:25:36
End at: 2019-03-19 03:26:06
Local clock offset: -10.439 ms
Remote clock offset: 37.759 ms


# Below is generated by plot.py at 2019-03-19 04:49:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.08 Mbit/s
95th percentile per-packet one-way delay: 110.799 ms
Loss rate: 30.94%
-- Flow 1:
Average throughput: 70.27 Mbit/s
95th percentile per-packet one-way delay: 110.816 ms
Loss rate: 8.54%
-- Flow 2:
Average throughput: 18.09 Mbit/s
95th percentile per-packet one-way delay: 109.286 ms
Loss rate: 47.16%
-- Flow 3:
Average throughput: 30.66 Mbit/s
95th percentile per-packet one-way delay: 109.923 ms
Loss rate: 70.86%
```
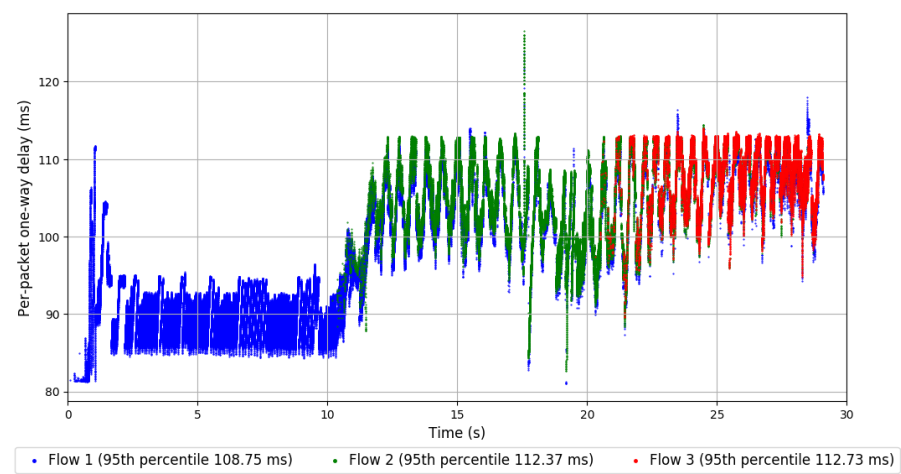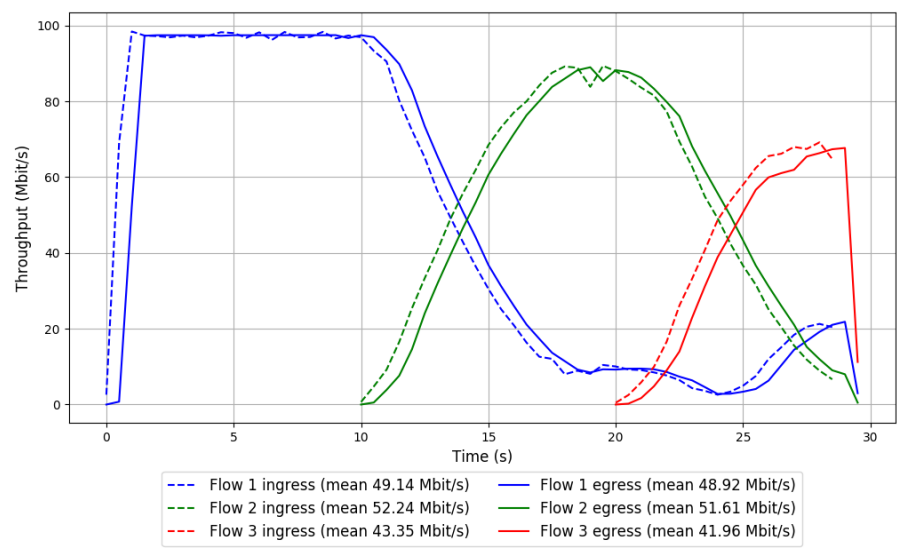
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-03-19 03:52:25
End at: 2019-03-19 03:52:55
Local clock offset: -4.907 ms
Remote clock offset: 17.158 ms


# Below is generated by plot.py at 2019-03-19 04:49:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.73 Mbit/s
95th percentile per-packet one-way delay: 111.222 ms
Loss rate: 32.85%
-- Flow 1:
Average throughput: 65.38 Mbit/s
95th percentile per-packet one-way delay: 111.200 ms
Loss rate: 10.55%
-- Flow 2:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 111.069 ms
Loss rate: 28.66%
-- Flow 3:
Average throughput: 27.94 Mbit/s
95th percentile per-packet one-way delay: 111.330 ms
Loss rate: 77.05%
```
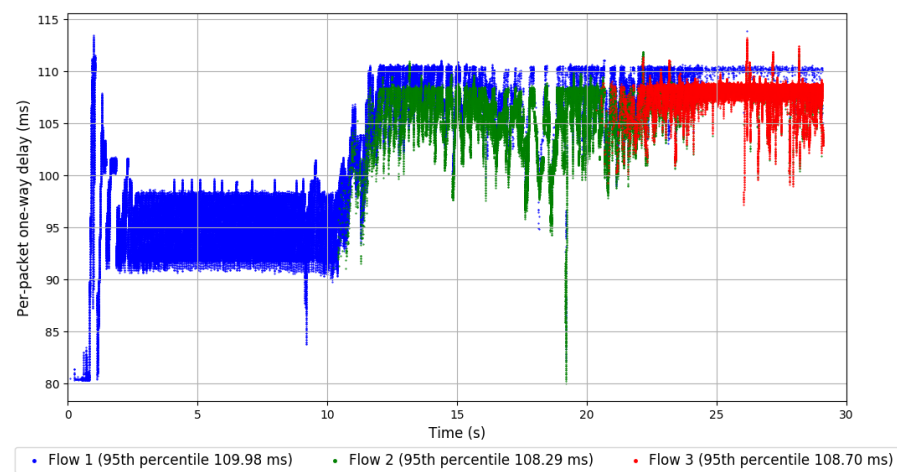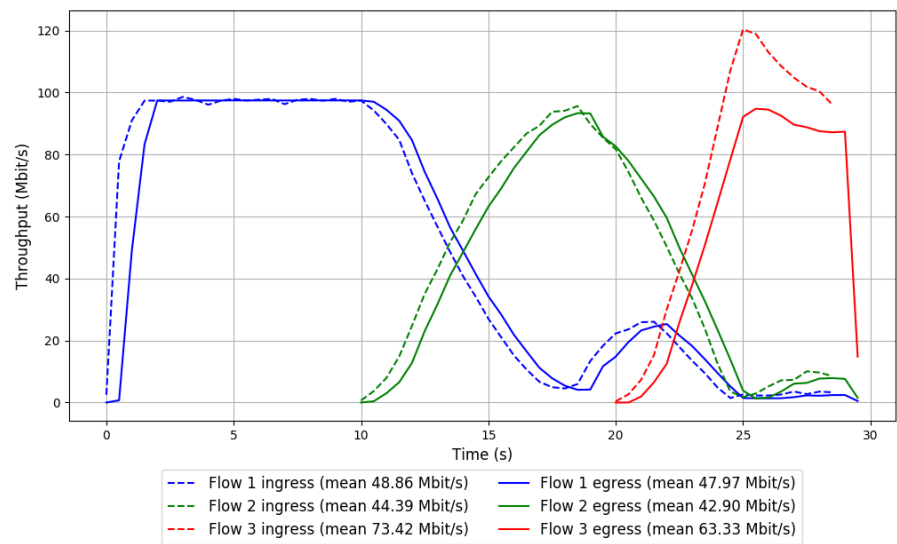
Run 4: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 73.17 Mbit/s) ——— Flow 1 egress (mean 65.38 Mbit/s)
- - - Flow 2 ingress (mean 36.91 Mbit/s) ——— Flow 2 egress (mean 26.29 Mbit/s)
- - - Flow 3 ingress (mean 121.75 Mbit/s) ——— Flow 3 egress (mean 27.94 Mbit/s)

• Flow 1 (95th percentile 111.20 ms)   • Flow 2 (95th percentile 111.07 ms)   • Flow 3 (95th percentile 111.33 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-03-19 04:19:10
End at: 2019-03-19 04:19:40
Local clock offset: 2.154 ms
Remote clock offset: -18.315 ms


# Below is generated by plot.py at 2019-03-19 04:50:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 111.979 ms
Loss rate: 30.94%
-- Flow 1:
Average throughput: 64.61 Mbit/s
95th percentile per-packet one-way delay: 111.860 ms
Loss rate: 9.29%
-- Flow 2:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 112.158 ms
Loss rate: 29.26%
-- Flow 3:
Average throughput: 27.91 Mbit/s
95th percentile per-packet one-way delay: 110.243 ms
Loss rate: 74.93%
```
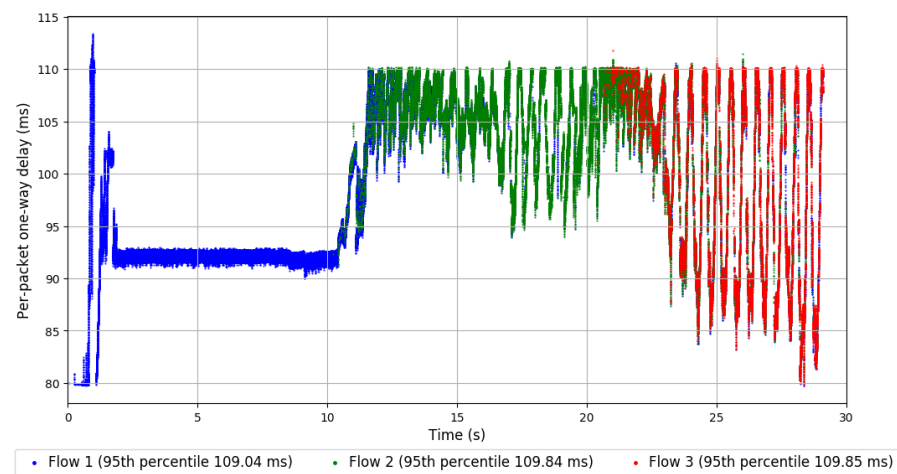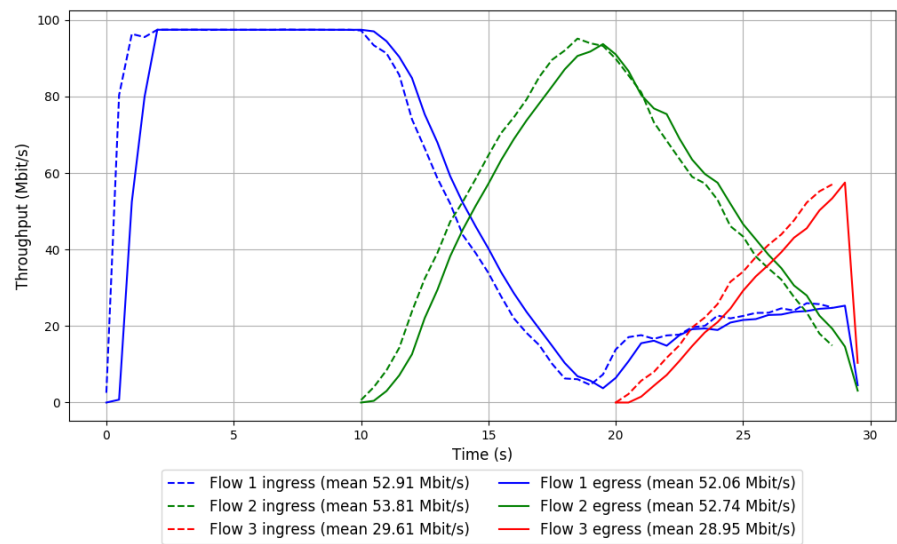
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-19 02:39:48
End at: 2019-03-19 02:40:18
Local clock offset: -7.073 ms
Remote clock offset: 18.942 ms

# Below is generated by plot.py at 2019-03-19 04:50:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.22 Mbit/s
95th percentile per-packet one-way delay: 112.188 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 48.92 Mbit/s
95th percentile per-packet one-way delay: 108.749 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 51.61 Mbit/s
95th percentile per-packet one-way delay: 112.374 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 41.96 Mbit/s
95th percentile per-packet one-way delay: 112.733 ms
Loss rate: 3.09%
```

Run 1: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 49.14 Mbit/s)   —— Flow 1 egress (mean 48.92 Mbit/s)
- - - Flow 2 ingress (mean 52.24 Mbit/s)   —— Flow 2 egress (mean 51.61 Mbit/s)
- - - Flow 3 ingress (mean 43.35 Mbit/s)   —— Flow 3 egress (mean 41.96 Mbit/s)

• Flow 1 (95th percentile 108.75 ms)   • Flow 2 (95th percentile 112.37 ms)   • Flow 3 (95th percentile 112.73 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-19 03:06:37
End at: 2019-03-19 03:07:07
Local clock offset: -9.622 ms
Remote clock offset: 31.006 ms


# Below is generated by plot.py at 2019-03-19 04:50:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.98 Mbit/s
95th percentile per-packet one-way delay: 109.222 ms
Loss rate: 4.85%
-- Flow 1:
Average throughput: 47.97 Mbit/s
95th percentile per-packet one-way delay: 109.981 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 42.90 Mbit/s
95th percentile per-packet one-way delay: 108.290 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 108.698 ms
Loss rate: 13.75%
```
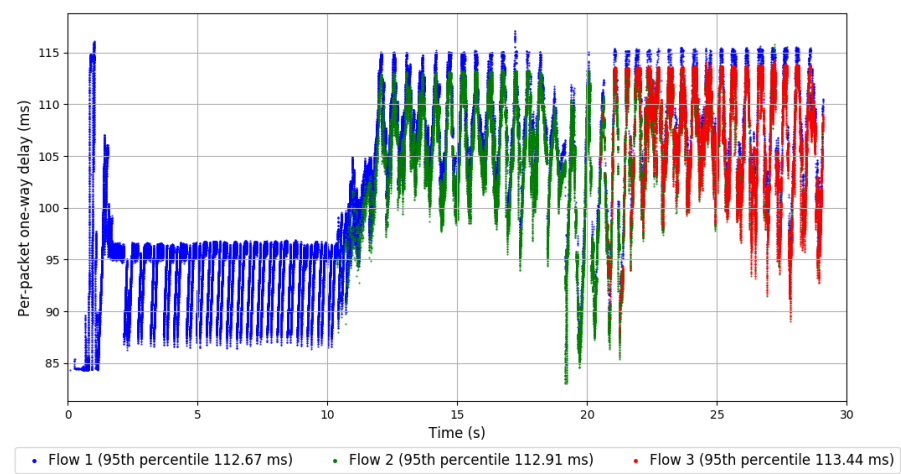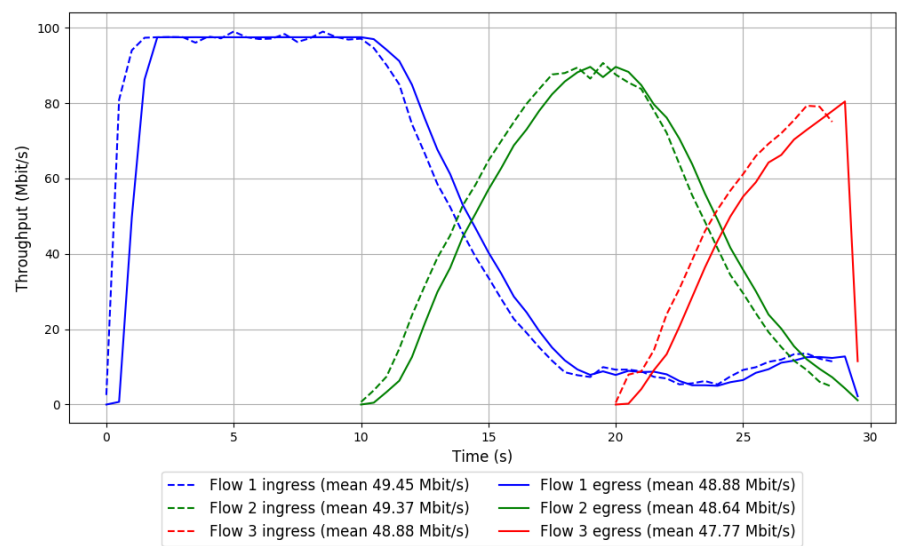
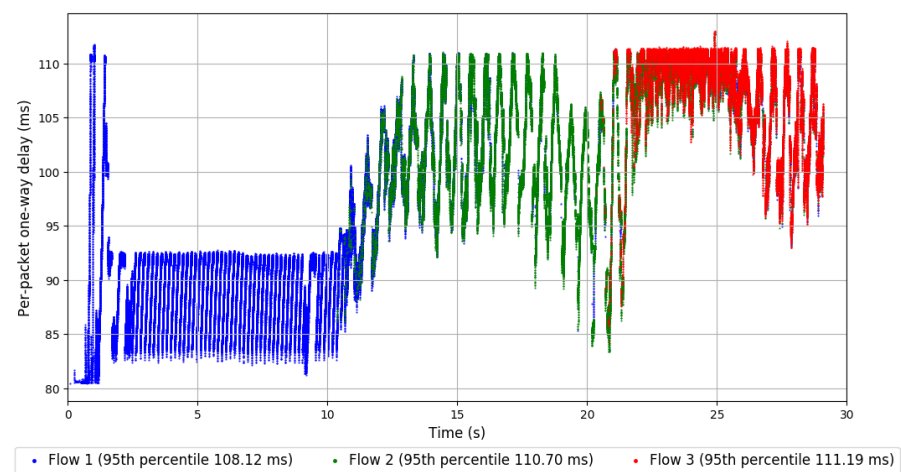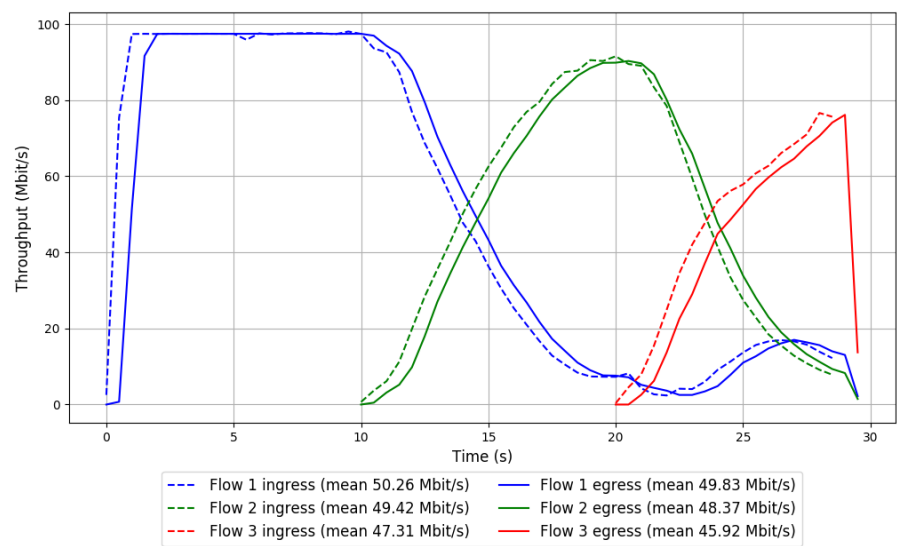Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-19 03:33:23
End at: 2019-03-19 03:33:53
Local clock offset: -10.746 ms
Remote clock offset: 40.304 ms


# Below is generated by plot.py at 2019-03-19 04:50:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.98 Mbit/s
95th percentile per-packet one-way delay: 109.691 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 52.06 Mbit/s
95th percentile per-packet one-way delay: 109.037 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 52.74 Mbit/s
95th percentile per-packet one-way delay: 109.842 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 28.95 Mbit/s
95th percentile per-packet one-way delay: 109.853 ms
Loss rate: 2.15%
```

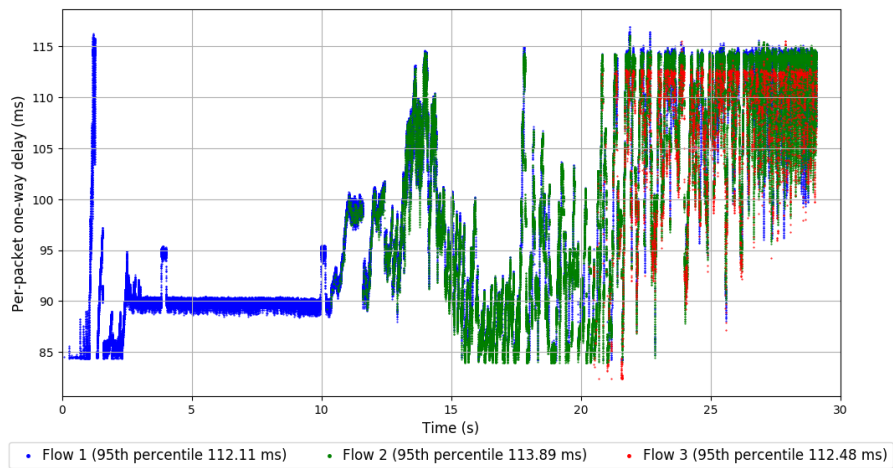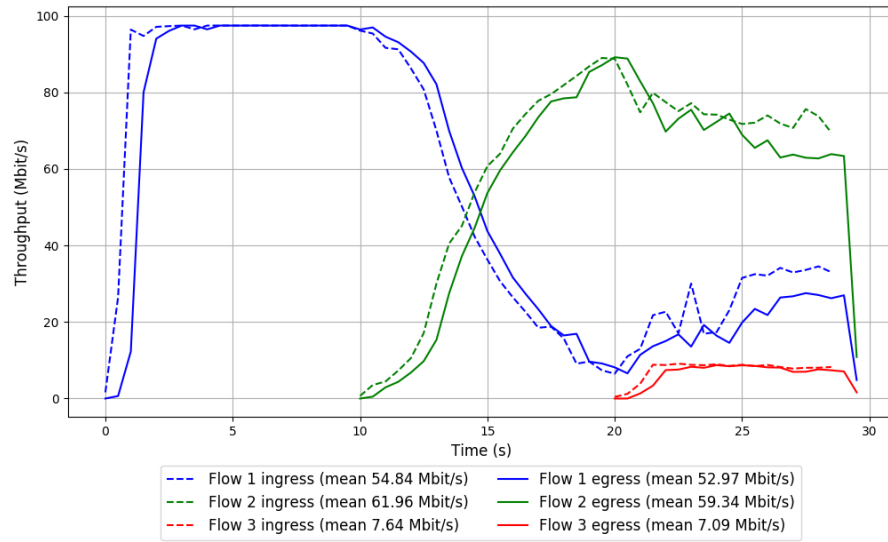Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-19 04:00:08
End at: 2019-03-19 04:00:38
Local clock offset: -1.953 ms
Remote clock offset: 3.238 ms


# Below is generated by plot.py at 2019-03-19 04:50:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.02 Mbit/s
95th percentile per-packet one-way delay: 113.088 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 48.88 Mbit/s
95th percentile per-packet one-way delay: 112.671 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 48.64 Mbit/s
95th percentile per-packet one-way delay: 112.907 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 47.77 Mbit/s
95th percentile per-packet one-way delay: 113.435 ms
Loss rate: 2.05%
```
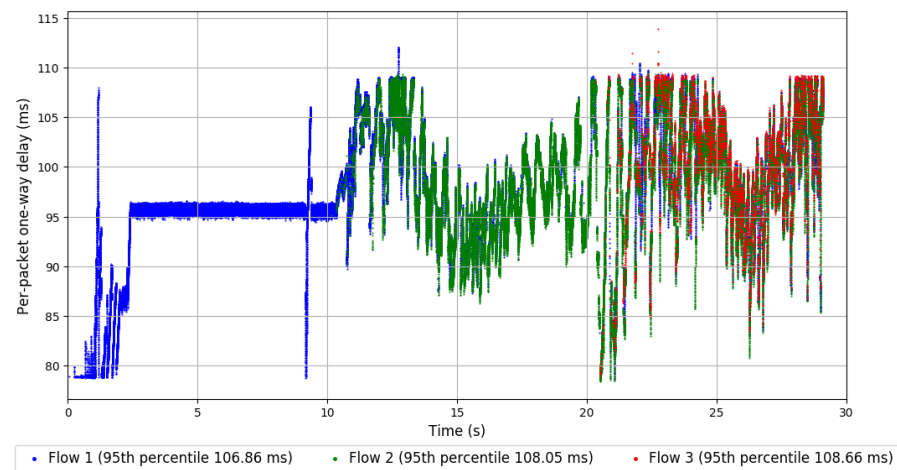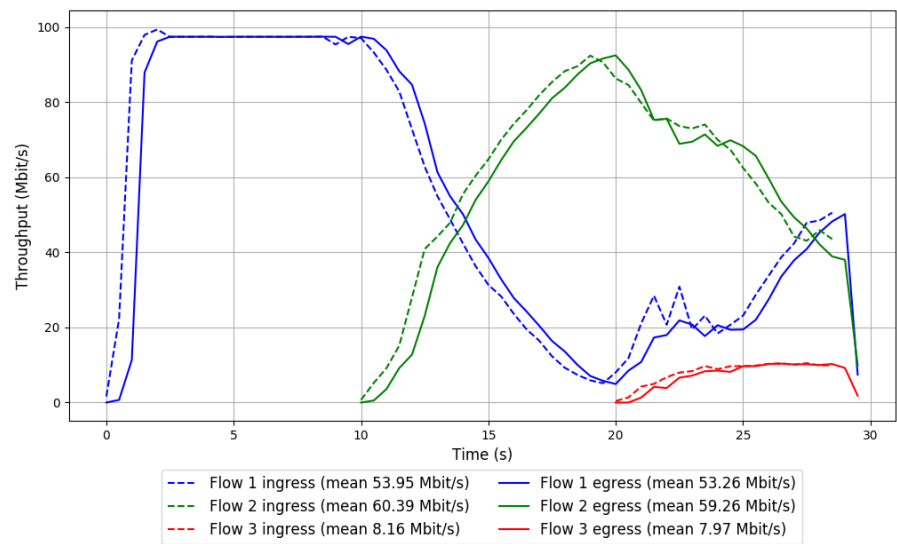
Run 4: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 49.45 Mbit/s) —— Flow 1 egress (mean 48.88 Mbit/s)
- - - - Flow 2 ingress (mean 49.37 Mbit/s) —— Flow 2 egress (mean 48.64 Mbit/s)
- - - - Flow 3 ingress (mean 48.88 Mbit/s) —— Flow 3 egress (mean 47.77 Mbit/s)

• Flow 1 (95th percentile 112.67 ms)   • Flow 2 (95th percentile 112.91 ms)   • Flow 3 (95th percentile 113.44 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-19 04:26:54
End at: 2019-03-19 04:27:24
Local clock offset: 4.11 ms
Remote clock offset: -21.917 ms


# Below is generated by plot.py at 2019-03-19 04:50:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.17 Mbit/s
95th percentile per-packet one-way delay: 110.664 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 108.118 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 48.37 Mbit/s
95th percentile per-packet one-way delay: 110.697 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 111.193 ms
Loss rate: 2.83%
```

Run 5: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 50.26 Mbit/s) ——— Flow 1 egress (mean 49.83 Mbit/s)
- - - - Flow 2 ingress (mean 49.42 Mbit/s) ——— Flow 2 egress (mean 48.37 Mbit/s)
- - - - Flow 3 ingress (mean 47.31 Mbit/s) ——— Flow 3 egress (mean 45.92 Mbit/s)

- Flow 1 (95th percentile 108.12 ms)   • Flow 2 (95th percentile 110.70 ms)   • Flow 3 (95th percentile 111.19 ms)
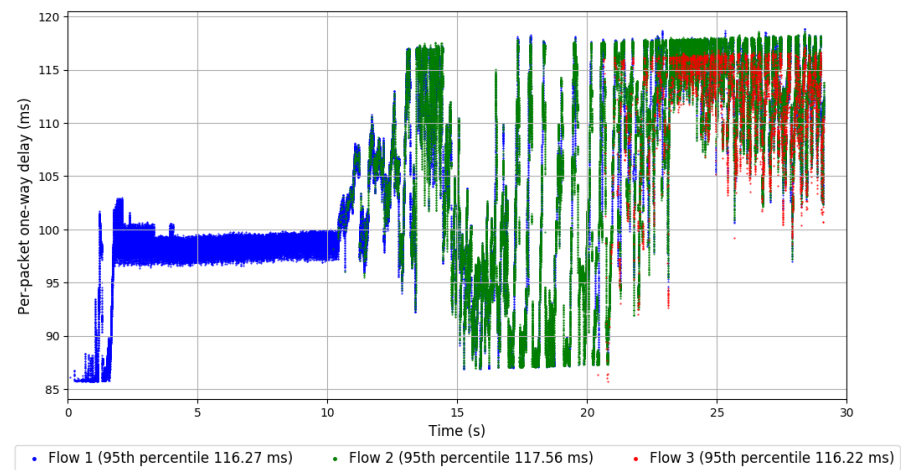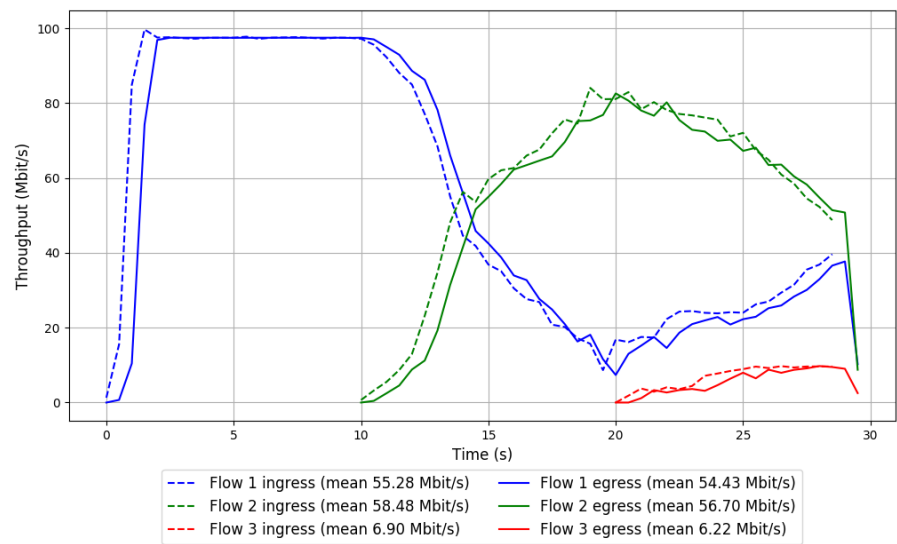
```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-19 02:56:14
End at: 2019-03-19 02:56:44
Local clock offset: -8.239 ms
Remote clock offset: 31.492 ms

# Below is generated by plot.py at 2019-03-19 04:50:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.76 Mbit/s
95th percentile per-packet one-way delay: 113.685 ms
Loss rate: 3.73%
-- Flow 1:
Average throughput: 52.97 Mbit/s
95th percentile per-packet one-way delay: 112.106 ms
Loss rate: 3.32%
-- Flow 2:
Average throughput: 59.34 Mbit/s
95th percentile per-packet one-way delay: 113.885 ms
Loss rate: 4.11%
-- Flow 3:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 112.483 ms
Loss rate: 7.02%
```

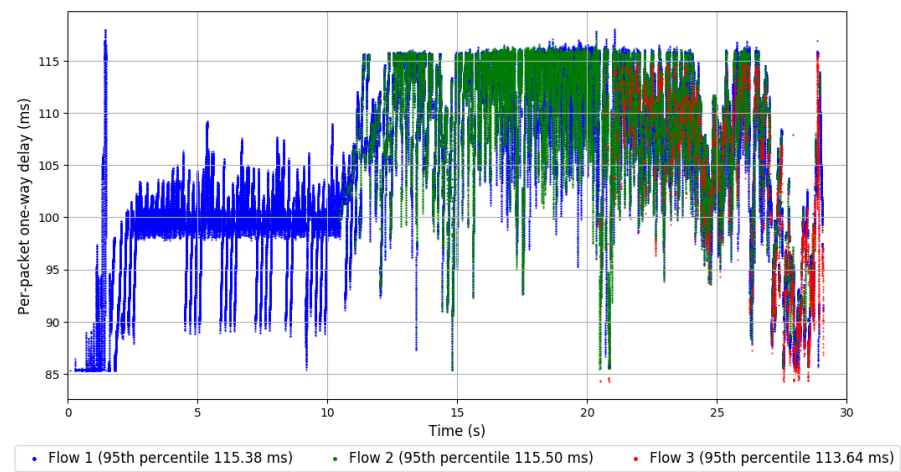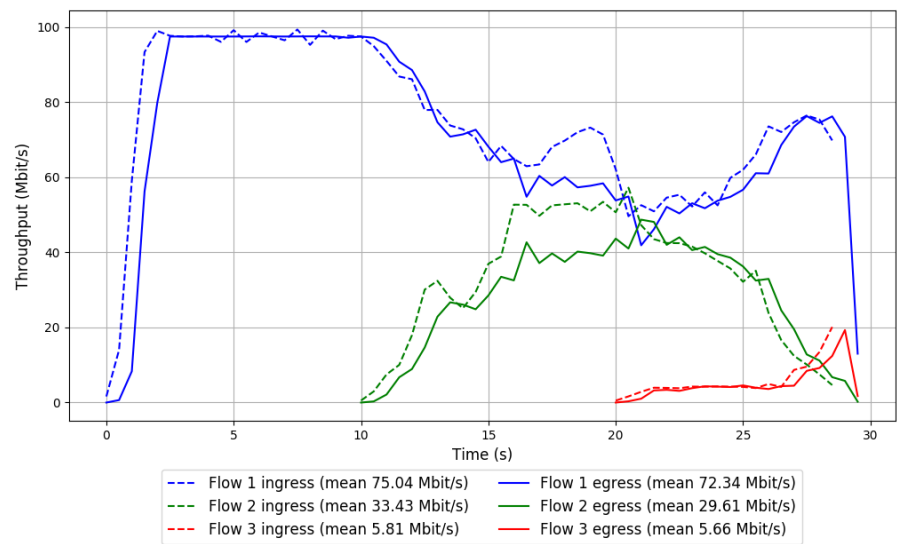Run 1: Report of Indigo-MusesC5 — Data Link

--- Flow 1 ingress (mean 54.84 Mbit/s) —— Flow 1 egress (mean 52.97 Mbit/s)
--- Flow 2 ingress (mean 61.96 Mbit/s) —— Flow 2 egress (mean 59.34 Mbit/s)
--- Flow 3 ingress (mean 7.64 Mbit/s) —— Flow 3 egress (mean 7.09 Mbit/s)

• Flow 1 (95th percentile 112.11 ms)   • Flow 2 (95th percentile 113.89 ms)   • Flow 3 (95th percentile 112.48 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-19 03:22:59
End at: 2019-03-19 03:23:29
Local clock offset: -9.625 ms
Remote clock offset: 37.933 ms


# Below is generated by plot.py at 2019-03-19 04:50:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 107.607 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 53.26 Mbit/s
95th percentile per-packet one-way delay: 106.864 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 59.26 Mbit/s
95th percentile per-packet one-way delay: 108.046 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 108.657 ms
Loss rate: 2.33%
```

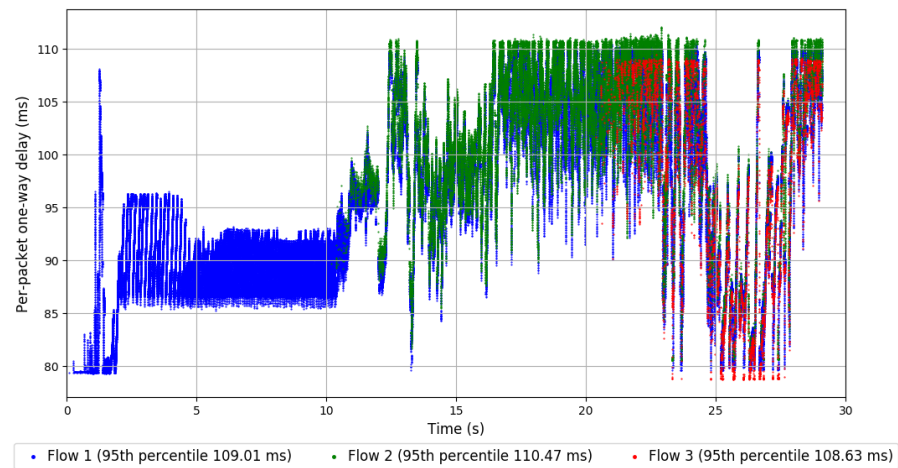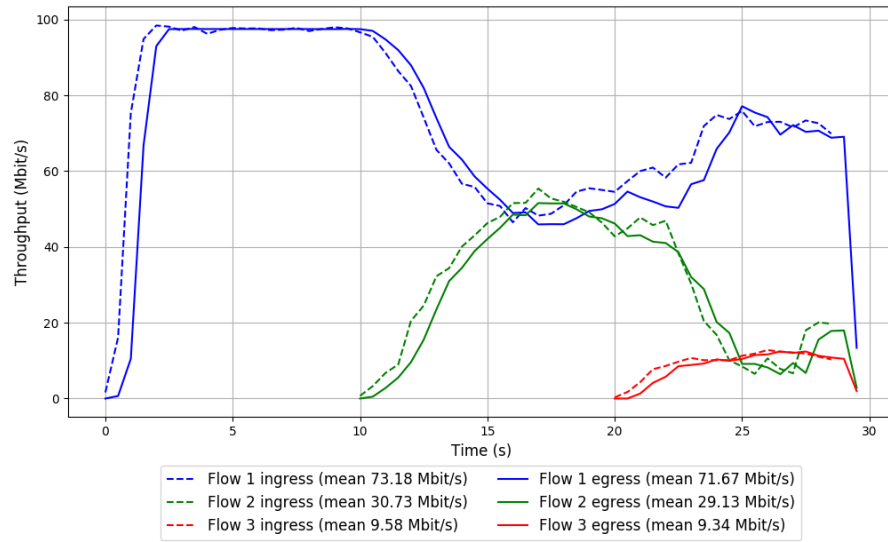Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-19 03:49:48
End at: 2019-03-19 03:50:18
Local clock offset: -7.583 ms
Remote clock offset: 30.901 ms


# Below is generated by plot.py at 2019-03-19 04:51:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 117.259 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 54.43 Mbit/s
95th percentile per-packet one-way delay: 116.267 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 56.70 Mbit/s
95th percentile per-packet one-way delay: 117.556 ms
Loss rate: 2.96%
-- Flow 3:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 116.218 ms
Loss rate: 9.63%
```

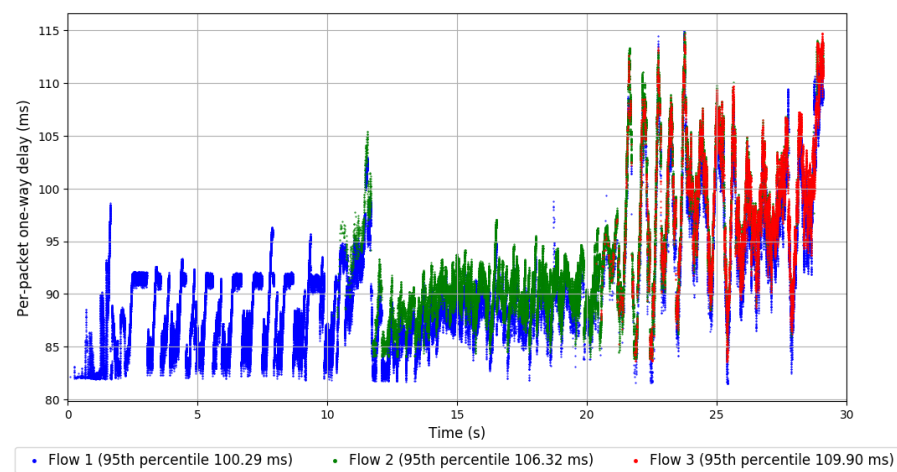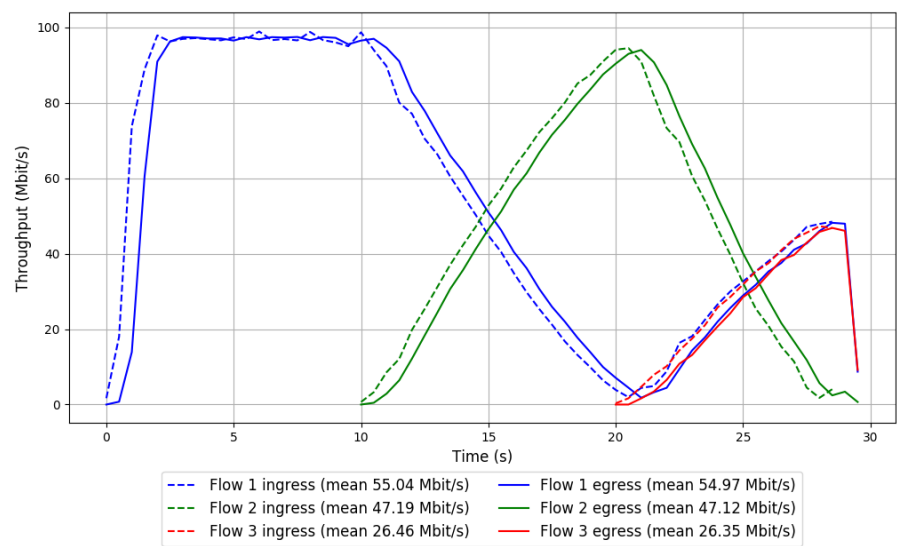Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 55.28 Mbit/s)   Flow 1 egress (mean 54.43 Mbit/s)
Flow 2 ingress (mean 58.48 Mbit/s)   Flow 2 egress (mean 56.70 Mbit/s)
Flow 3 ingress (mean 6.90 Mbit/s)   Flow 3 egress (mean 6.22 Mbit/s)

Flow 1 (95th percentile 116.27 ms)   Flow 2 (95th percentile 117.56 ms)   Flow 3 (95th percentile 116.22 ms)
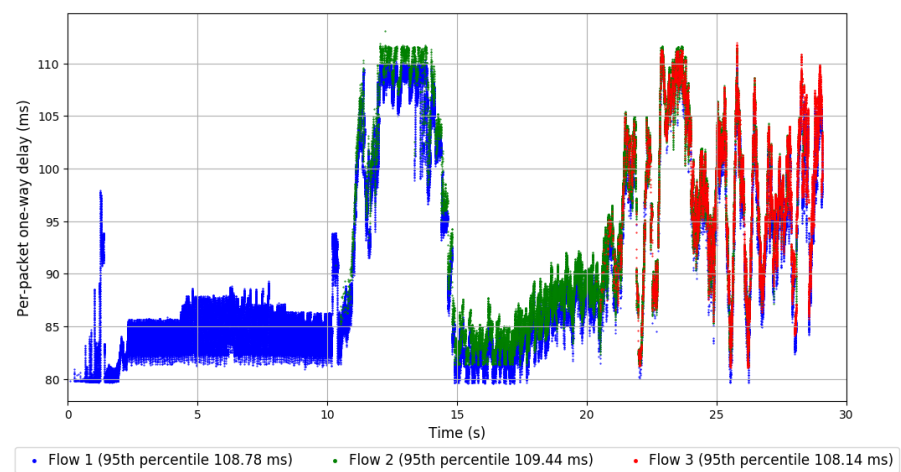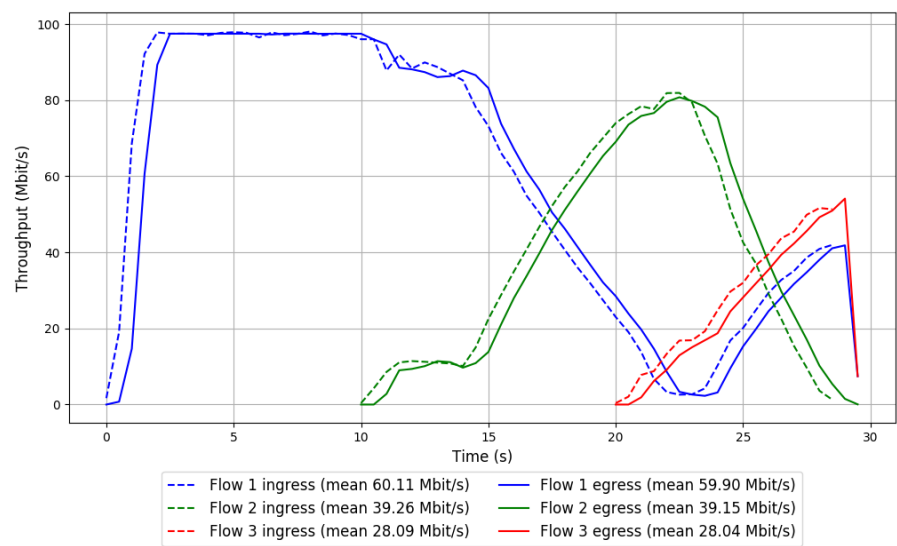
```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-19 04:16:33
End at: 2019-03-19 04:17:03
Local clock offset: 1.727 ms
Remote clock offset: -11.759 ms


# Below is generated by plot.py at 2019-03-19 04:51:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.26 Mbit/s
95th percentile per-packet one-way delay: 115.409 ms
Loss rate: 5.30%
-- Flow 1:
Average throughput: 72.34 Mbit/s
95th percentile per-packet one-way delay: 115.376 ms
Loss rate: 3.58%
-- Flow 2:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 115.497 ms
Loss rate: 11.47%
-- Flow 3:
Average throughput: 5.66 Mbit/s
95th percentile per-packet one-way delay: 113.636 ms
Loss rate: 2.87%
```

Run 4: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 75.04 Mbit/s) —— Flow 1 egress (mean 72.34 Mbit/s)
- - - Flow 2 ingress (mean 33.43 Mbit/s) —— Flow 2 egress (mean 29.61 Mbit/s)
- - - Flow 3 ingress (mean 5.81 Mbit/s) —— Flow 3 egress (mean 5.66 Mbit/s)

- Flow 1 (95th percentile 115.38 ms)   - Flow 2 (95th percentile 115.50 ms)   - Flow 3 (95th percentile 113.64 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-19 04:43:17
End at: 2019-03-19 04:43:47
Local clock offset: 5.541 ms
Remote clock offset: -31.777 ms


# Below is generated by plot.py at 2019-03-19 04:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.44 Mbit/s
95th percentile per-packet one-way delay: 109.454 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 71.67 Mbit/s
95th percentile per-packet one-way delay: 109.014 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 29.13 Mbit/s
95th percentile per-packet one-way delay: 110.475 ms
Loss rate: 5.12%
-- Flow 3:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 108.626 ms
Loss rate: 2.42%
```

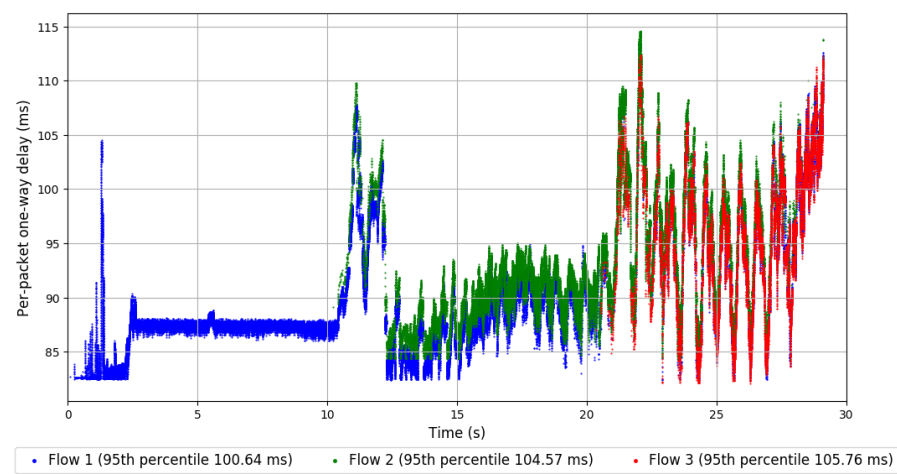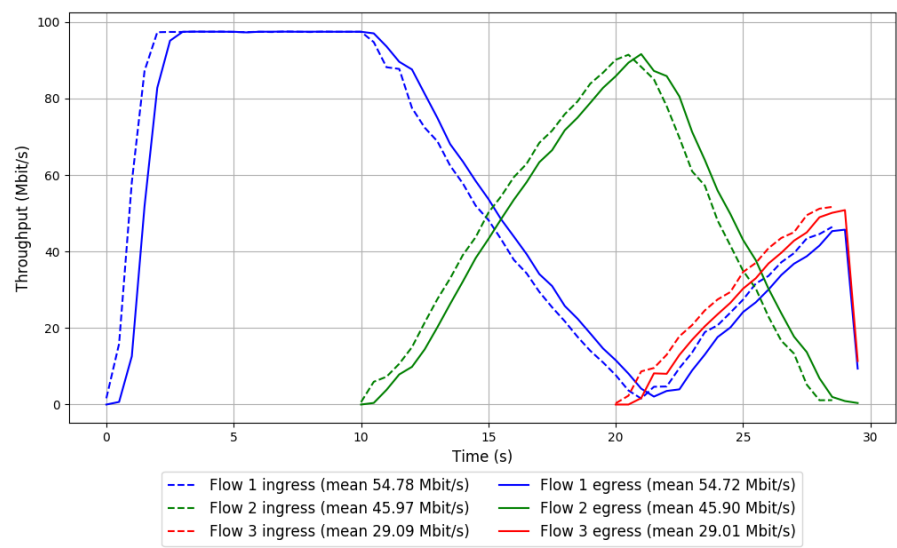Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 73.18 Mbit/s)   Flow 1 egress (mean 71.67 Mbit/s)
Flow 2 ingress (mean 30.73 Mbit/s)   Flow 2 egress (mean 29.13 Mbit/s)
Flow 3 ingress (mean 9.58 Mbit/s)   Flow 3 egress (mean 9.34 Mbit/s)

Flow 1 (95th percentile 109.01 ms)   Flow 2 (95th percentile 110.47 ms)   Flow 3 (95th percentile 108.63 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-19 02:38:30
End at: 2019-03-19 02:39:00
Local clock offset: -6.976 ms
Remote clock offset: 18.436 ms


# Below is generated by plot.py at 2019-03-19 04:51:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 104.779 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 54.97 Mbit/s
95th percentile per-packet one-way delay: 100.292 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 47.12 Mbit/s
95th percentile per-packet one-way delay: 106.320 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 109.898 ms
Loss rate: 0.19%
```
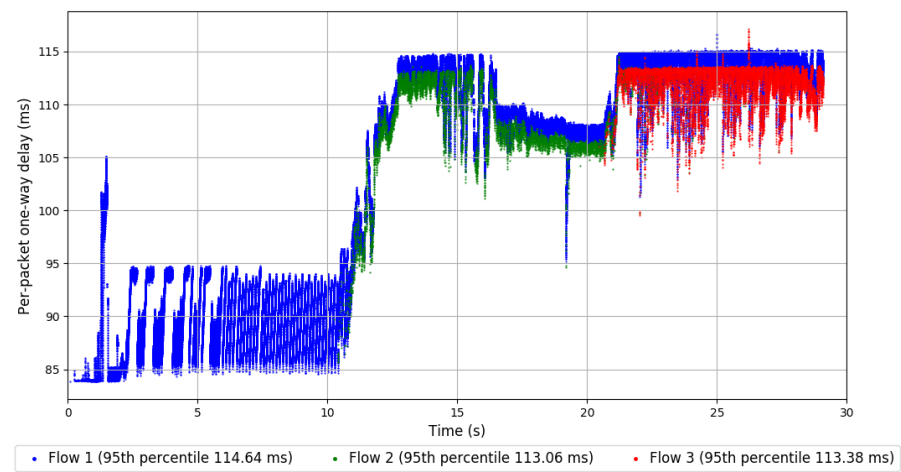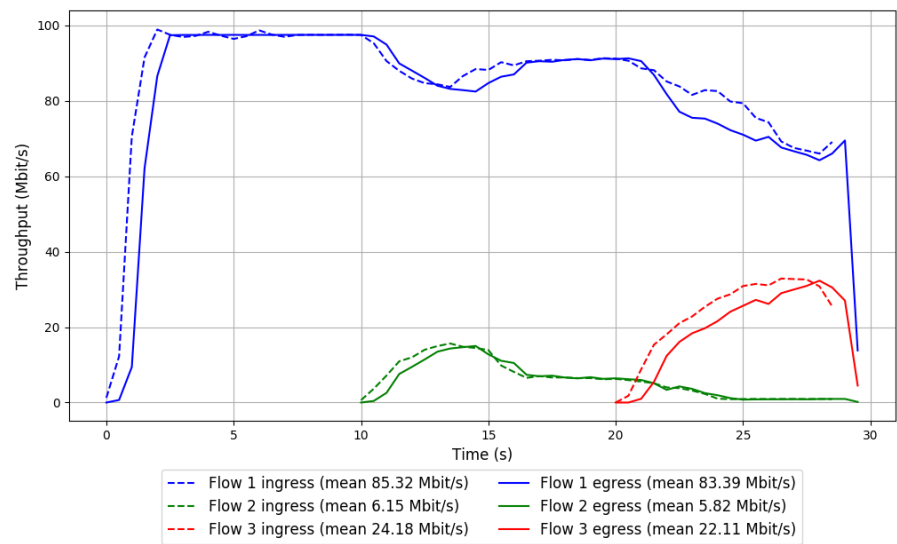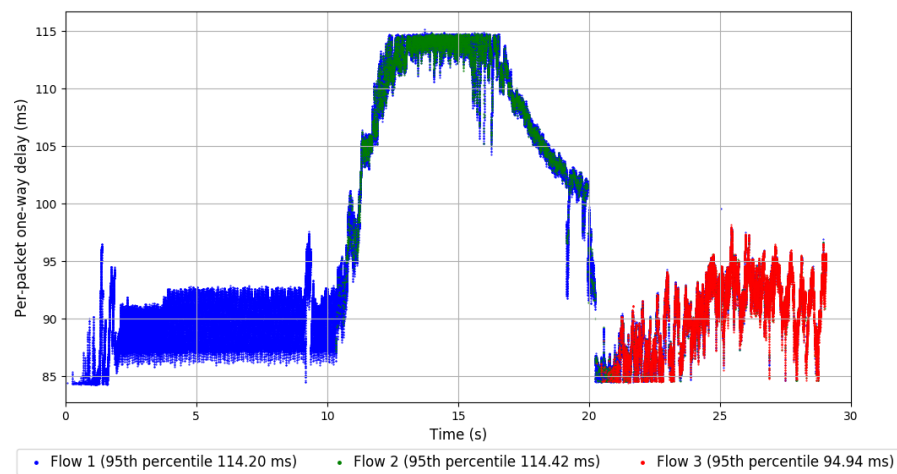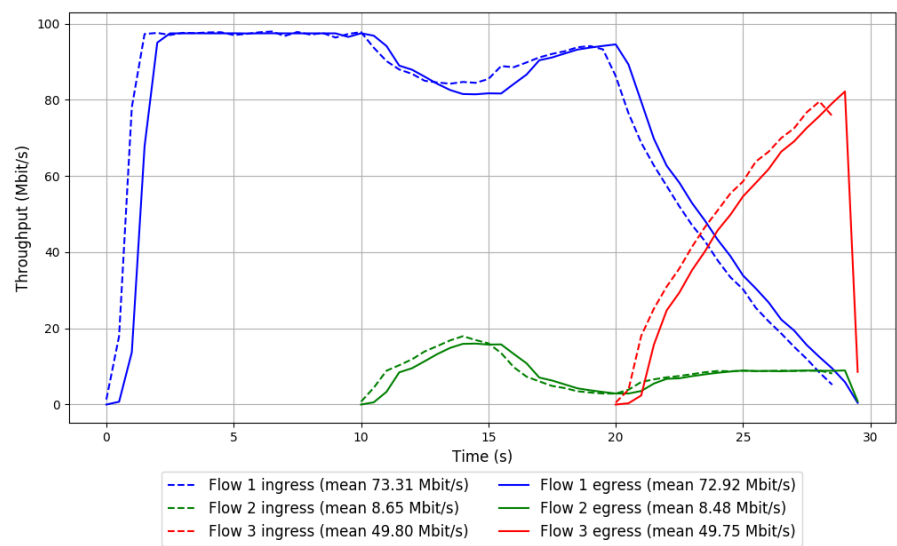
Run 1: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 55.04 Mbit/s) —— Flow 1 egress (mean 54.97 Mbit/s)
- - - Flow 2 ingress (mean 47.19 Mbit/s) —— Flow 2 egress (mean 47.12 Mbit/s)
- - - Flow 3 ingress (mean 26.46 Mbit/s) —— Flow 3 egress (mean 26.35 Mbit/s)

- Flow 1 (95th percentile 100.29 ms)   - Flow 2 (95th percentile 106.32 ms)   - Flow 3 (95th percentile 109.90 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-19 03:05:18
End at: 2019-03-19 03:05:48
Local clock offset: -9.572 ms
Remote clock offset: 31.462 ms


# Below is generated by plot.py at 2019-03-19 04:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.63 Mbit/s
95th percentile per-packet one-way delay: 108.910 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 59.90 Mbit/s
95th percentile per-packet one-way delay: 108.778 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 39.15 Mbit/s
95th percentile per-packet one-way delay: 109.435 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 28.04 Mbit/s
95th percentile per-packet one-way delay: 108.145 ms
Loss rate: 0.01%
```

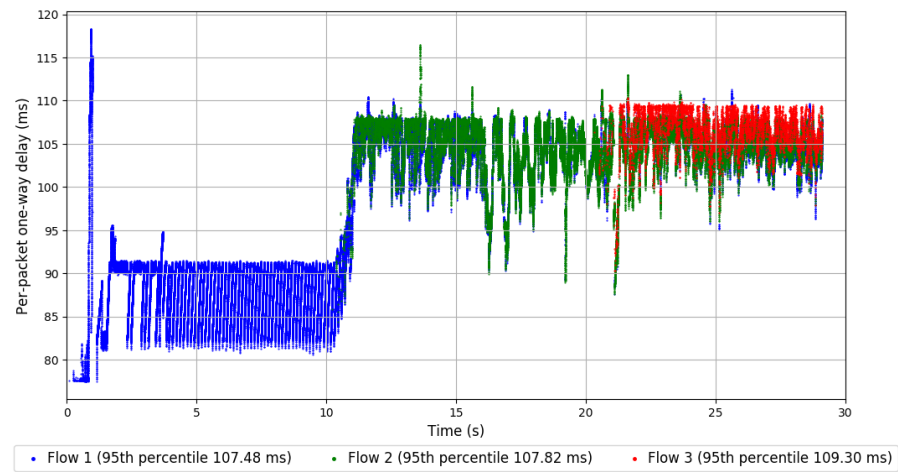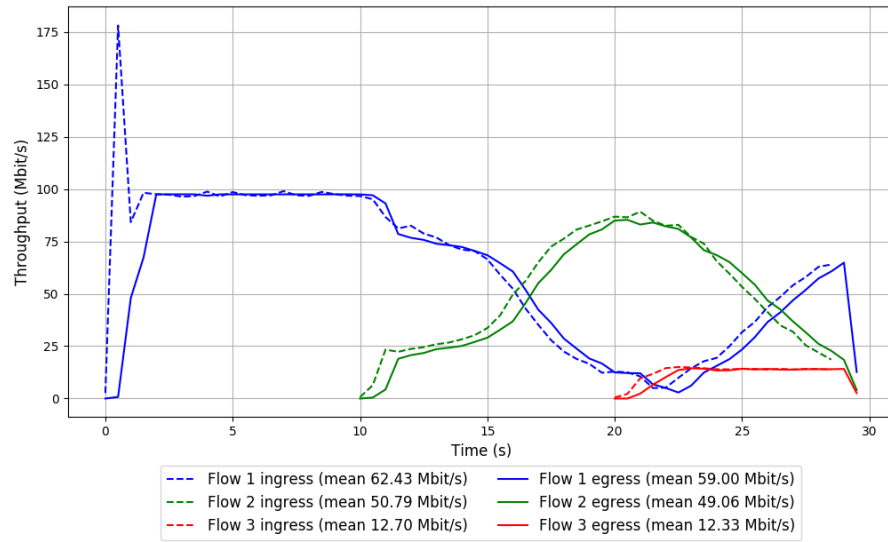Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-19 03:32:04
End at: 2019-03-19 03:32:34
Local clock offset: -10.688 ms
Remote clock offset: 44.094 ms

# Below is generated by plot.py at 2019-03-19 04:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 103.185 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.72 Mbit/s
95th percentile per-packet one-way delay: 100.642 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 45.90 Mbit/s
95th percentile per-packet one-way delay: 104.569 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 29.01 Mbit/s
95th percentile per-packet one-way delay: 105.757 ms
Loss rate: 0.02%
```

Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 54.78 Mbit/s) --- Flow 1 egress (mean 54.72 Mbit/s)
Flow 2 ingress (mean 45.97 Mbit/s) --- Flow 2 egress (mean 45.90 Mbit/s)
Flow 3 ingress (mean 29.09 Mbit/s) --- Flow 3 egress (mean 29.01 Mbit/s)

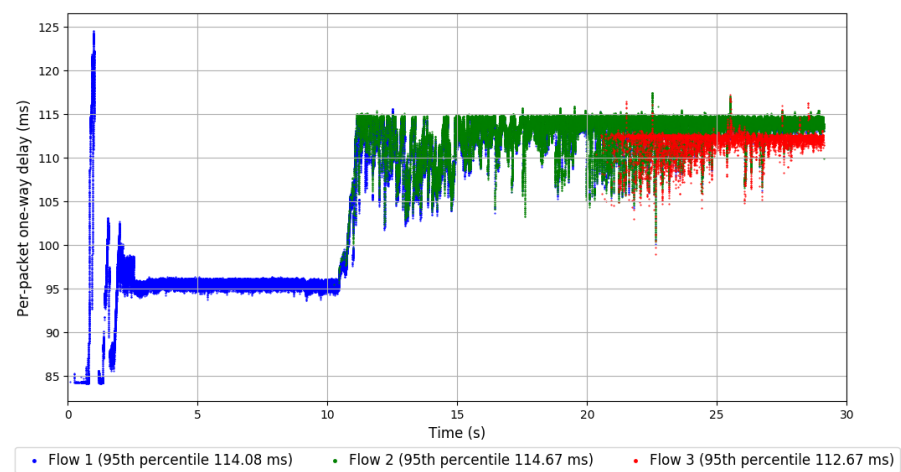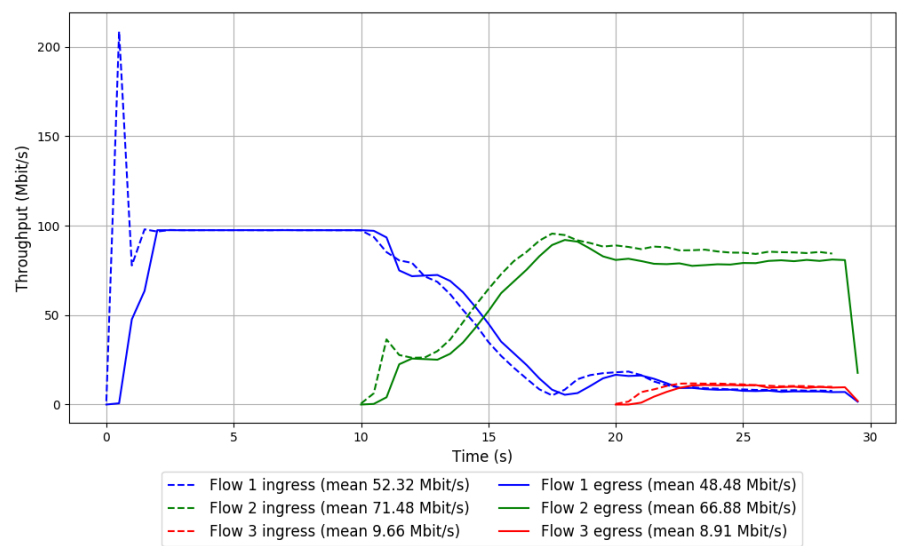Flow 1 (95th percentile 100.64 ms) • Flow 2 (95th percentile 104.57 ms) • Flow 3 (95th percentile 105.76 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-19 03:58:50
End at: 2019-03-19 03:59:20
Local clock offset: -1.693 ms
Remote clock offset: 5.79 ms


# Below is generated by plot.py at 2019-03-19 04:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.75 Mbit/s
95th percentile per-packet one-way delay: 114.615 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 83.39 Mbit/s
95th percentile per-packet one-way delay: 114.643 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 113.056 ms
Loss rate: 5.27%
-- Flow 3:
Average throughput: 22.11 Mbit/s
95th percentile per-packet one-way delay: 113.375 ms
Loss rate: 8.50%
```

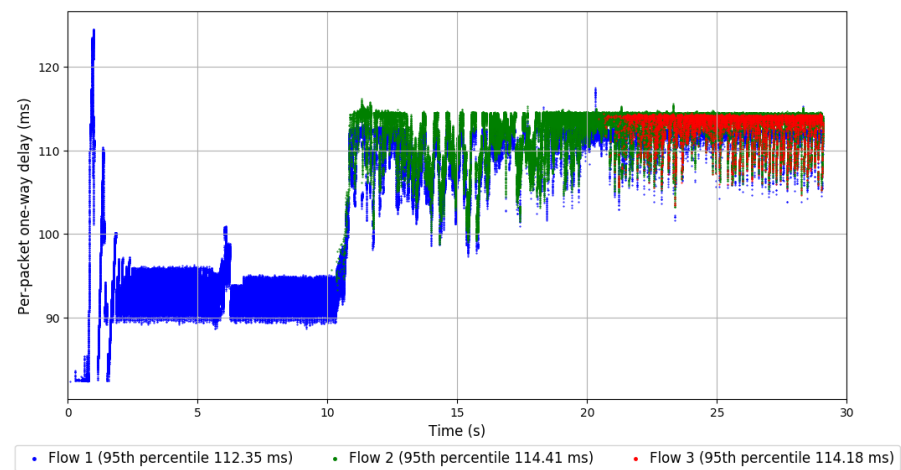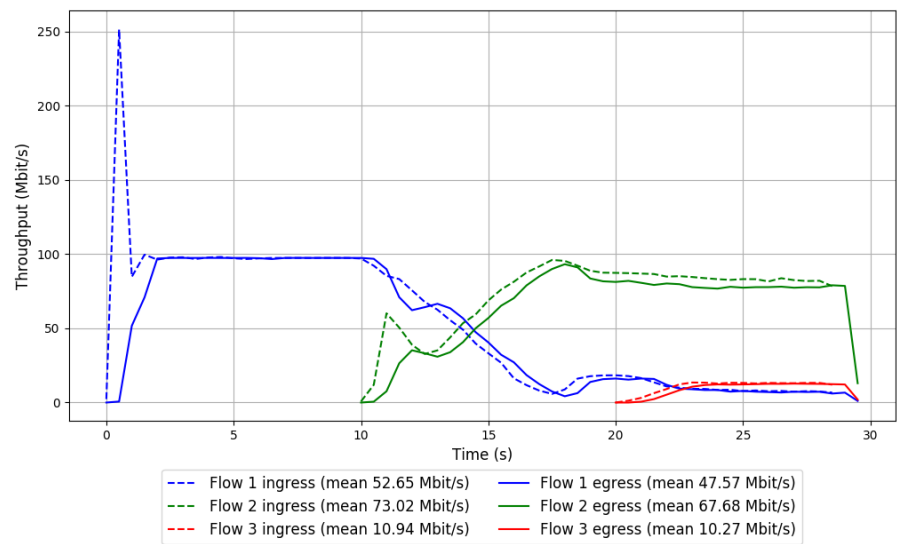# Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-19 04:25:36
End at: 2019-03-19 04:26:06
Local clock offset: 3.138 ms
Remote clock offset: -16.415 ms


# Below is generated by plot.py at 2019-03-19 04:51:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.48 Mbit/s
95th percentile per-packet one-way delay: 114.164 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 72.92 Mbit/s
95th percentile per-packet one-way delay: 114.199 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 8.48 Mbit/s
95th percentile per-packet one-way delay: 114.422 ms
Loss rate: 1.97%
-- Flow 3:
Average throughput: 49.75 Mbit/s
95th percentile per-packet one-way delay: 94.942 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 73.31 Mbit/s)   —— Flow 1 egress (mean 72.92 Mbit/s)
- - - Flow 2 ingress (mean 8.65 Mbit/s)   —— Flow 2 egress (mean 8.48 Mbit/s)
- - - Flow 3 ingress (mean 49.80 Mbit/s)   —— Flow 3 egress (mean 49.75 Mbit/s)

• Flow 1 (95th percentile 114.20 ms)   • Flow 2 (95th percentile 114.42 ms)   • Flow 3 (95th percentile 94.94 ms)
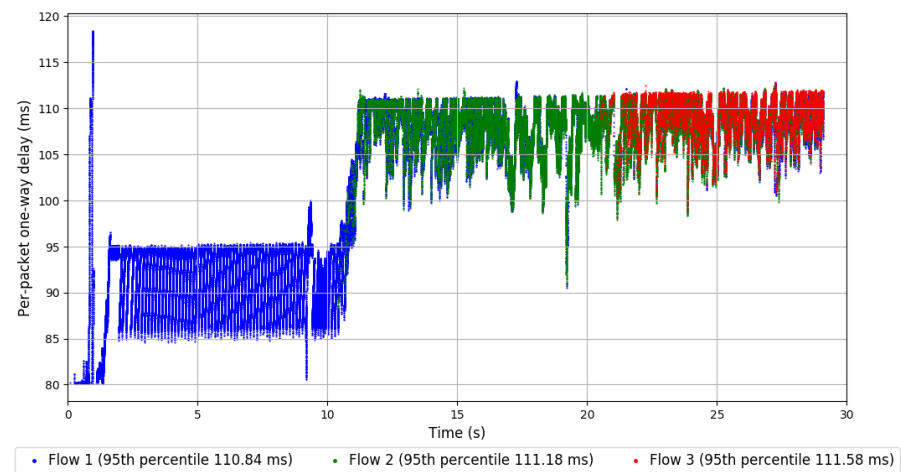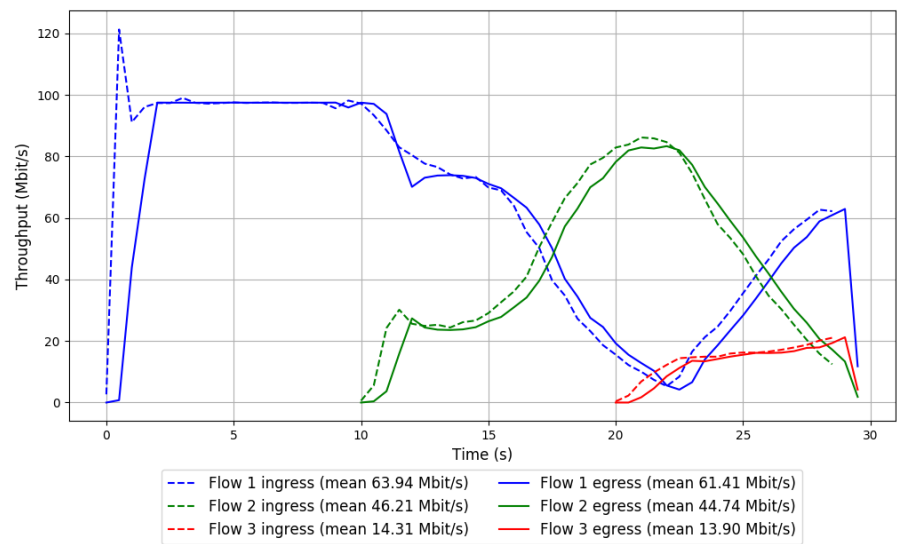
94

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-19 02:34:40
End at: 2019-03-19 02:35:10
Local clock offset: -6.879 ms
Remote clock offset: 12.264 ms


# Below is generated by plot.py at 2019-03-19 04:52:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.67 Mbit/s
95th percentile per-packet one-way delay: 107.739 ms
Loss rate: 4.59%
-- Flow 1:
Average throughput: 59.00 Mbit/s
95th percentile per-packet one-way delay: 107.478 ms
Loss rate: 5.39%
-- Flow 2:
Average throughput: 49.06 Mbit/s
95th percentile per-packet one-way delay: 107.819 ms
Loss rate: 3.30%
-- Flow 3:
Average throughput: 12.33 Mbit/s
95th percentile per-packet one-way delay: 109.297 ms
Loss rate: 2.84%
```
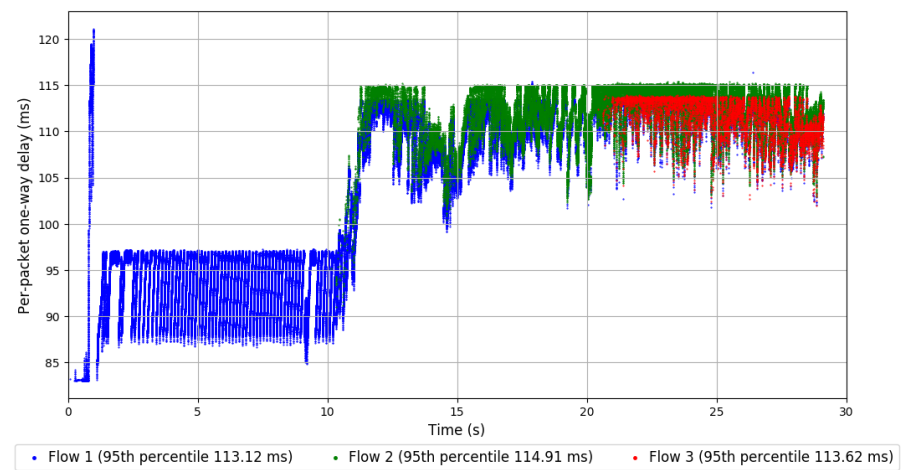
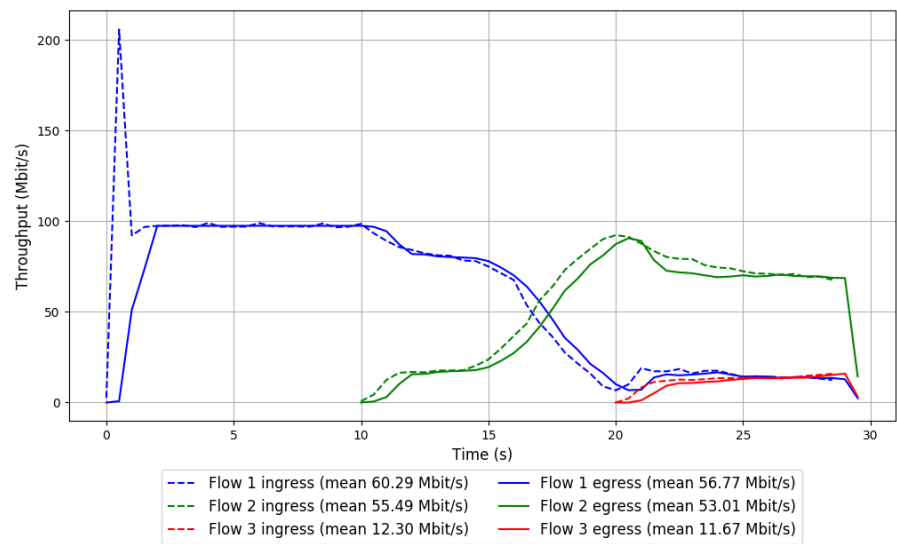Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-19 03:01:29
End at: 2019-03-19 03:01:59
Local clock offset: -8.58 ms
Remote clock offset: 33.819 ms


# Below is generated by plot.py at 2019-03-19 04:52:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.63 Mbit/s
95th percentile per-packet one-way delay: 114.597 ms
Loss rate: 6.85%
-- Flow 1:
Average throughput: 48.48 Mbit/s
95th percentile per-packet one-way delay: 114.077 ms
Loss rate: 7.24%
-- Flow 2:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 114.668 ms
Loss rate: 6.36%
-- Flow 3:
Average throughput: 8.91 Mbit/s
95th percentile per-packet one-way delay: 112.671 ms
Loss rate: 7.74%
```

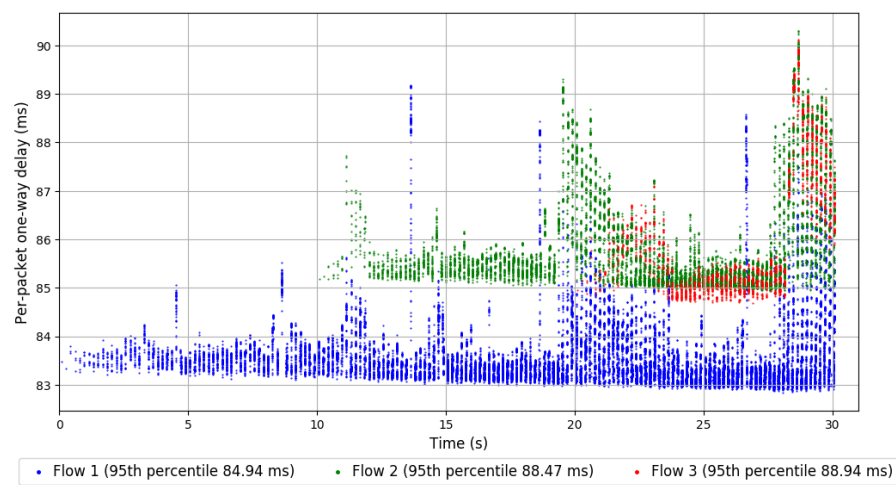# Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-19 03:28:13
End at: 2019-03-19 03:28:43
Local clock offset: -9.839 ms
Remote clock offset: 43.545 ms


# Below is generated by plot.py at 2019-03-19 04:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.80 Mbit/s
95th percentile per-packet one-way delay: 114.345 ms
Loss rate: 8.38%
-- Flow 1:
Average throughput: 47.57 Mbit/s
95th percentile per-packet one-way delay: 112.348 ms
Loss rate: 9.57%
-- Flow 2:
Average throughput: 67.68 Mbit/s
95th percentile per-packet one-way delay: 114.413 ms
Loss rate: 7.23%
-- Flow 3:
Average throughput: 10.27 Mbit/s
95th percentile per-packet one-way delay: 114.176 ms
Loss rate: 6.14%
```

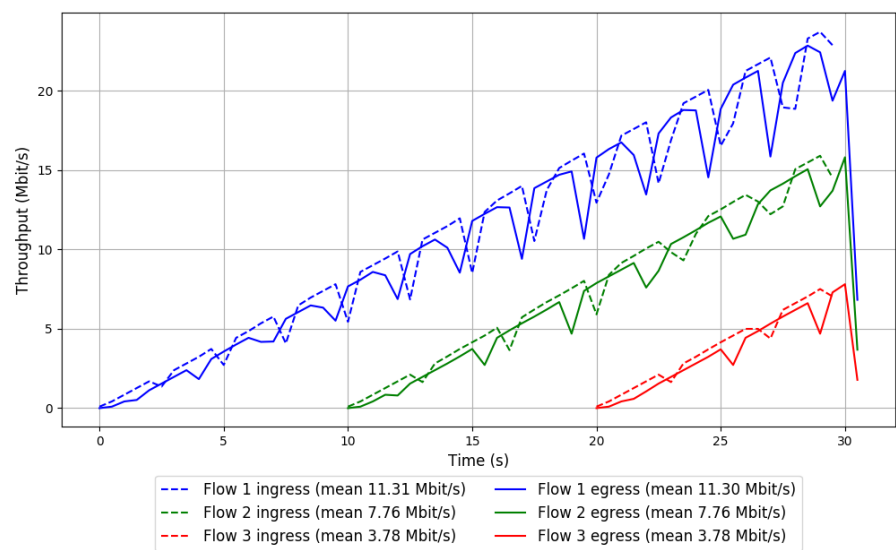# Run 3: Report of Indigo-MusesT — Data Link

- - - - Flow 1 ingress (mean 52.65 Mbit/s) ——— Flow 1 egress (mean 47.57 Mbit/s)
- - - - Flow 2 ingress (mean 73.02 Mbit/s) ——— Flow 2 egress (mean 67.68 Mbit/s)
- - - - Flow 3 ingress (mean 10.94 Mbit/s) ——— Flow 3 egress (mean 10.27 Mbit/s)

- Flow 1 (95th percentile 112.35 ms)   • Flow 2 (95th percentile 114.41 ms)   • Flow 3 (95th percentile 114.18 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-19 03:55:01
End at: 2019-03-19 03:55:31
Local clock offset: -4.182 ms
Remote clock offset: 10.756 ms


# Below is generated by plot.py at 2019-03-19 04:52:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 111.049 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 61.41 Mbit/s
95th percentile per-packet one-way delay: 110.837 ms
Loss rate: 3.86%
-- Flow 2:
Average throughput: 44.74 Mbit/s
95th percentile per-packet one-way delay: 111.179 ms
Loss rate: 3.10%
-- Flow 3:
Average throughput: 13.90 Mbit/s
95th percentile per-packet one-way delay: 111.578 ms
Loss rate: 2.83%
```

Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-19 04:21:47
End at: 2019-03-19 04:22:17
Local clock offset: 3.341 ms
Remote clock offset: -14.976 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.86 Mbit/s
95th percentile per-packet one-way delay: 114.726 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 56.77 Mbit/s
95th percentile per-packet one-way delay: 113.119 ms
Loss rate: 5.75%
-- Flow 2:
Average throughput: 53.01 Mbit/s
95th percentile per-packet one-way delay: 114.906 ms
Loss rate: 4.40%
-- Flow 3:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 113.624 ms
Loss rate: 5.21%
```

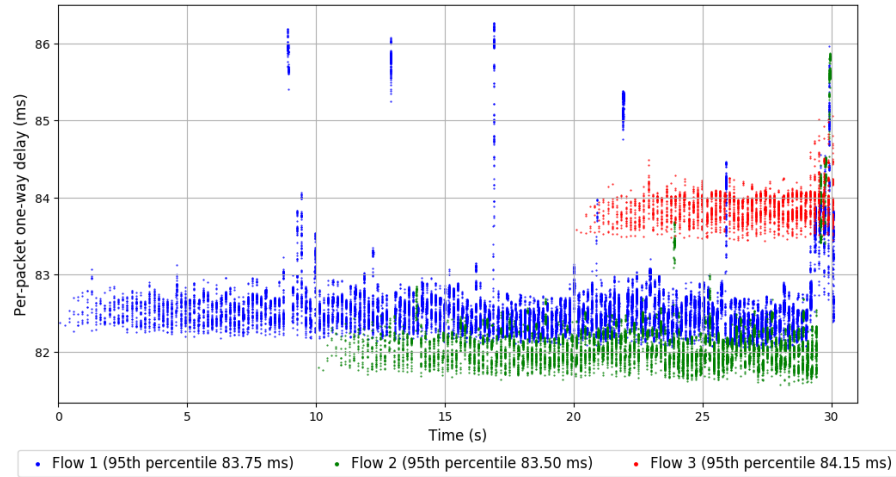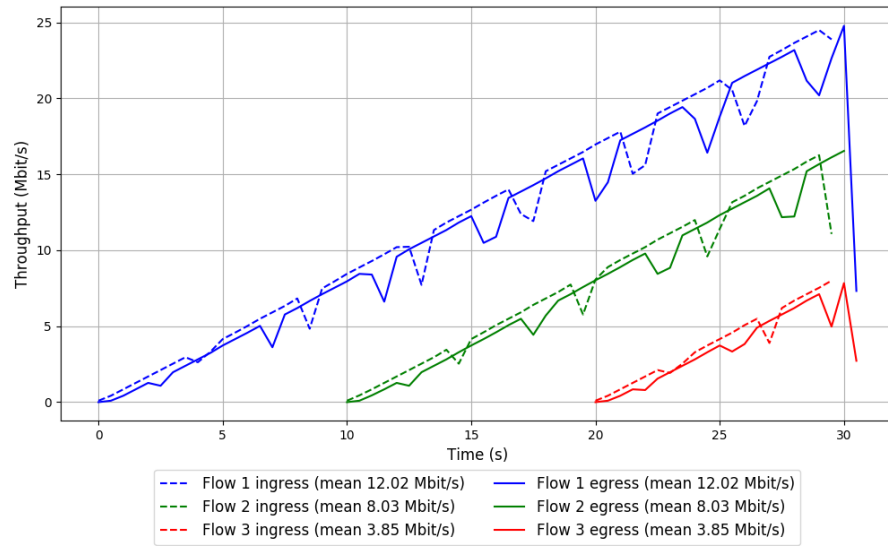Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-03-19 02:44:56
End at: 2019-03-19 02:45:26
Local clock offset: -7.142 ms
Remote clock offset: 25.906 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.73 Mbit/s
95th percentile per-packet one-way delay: 87.572 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.30 Mbit/s
95th percentile per-packet one-way delay: 84.939 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 88.471 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.78 Mbit/s
95th percentile per-packet one-way delay: 88.935 ms
Loss rate: 0.00%
```
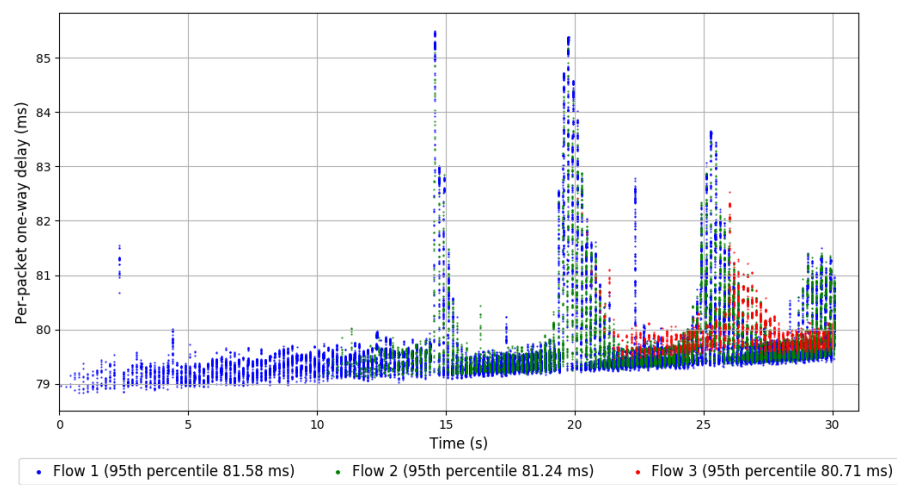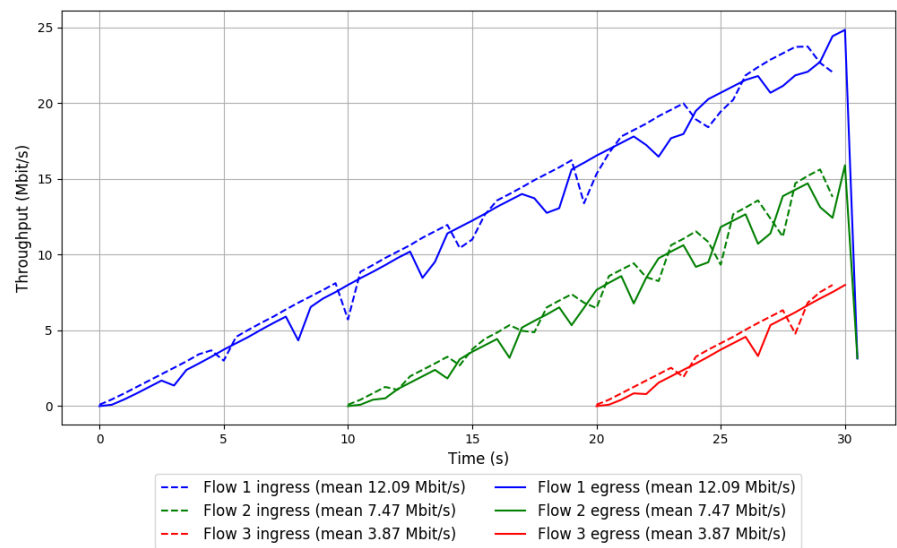
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-03-19 03:11:46
End at: 2019-03-19 03:12:16
Local clock offset: -9.182 ms
Remote clock offset: 32.973 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.38 Mbit/s
95th percentile per-packet one-way delay: 81.168 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 12.00 Mbit/s
95th percentile per-packet one-way delay: 80.198 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 81.425 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 82.306 ms
Loss rate: 0.00%
```
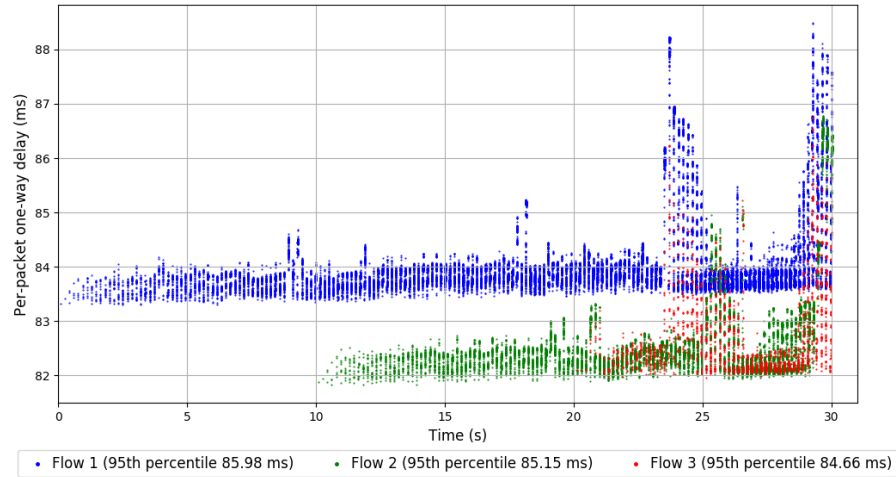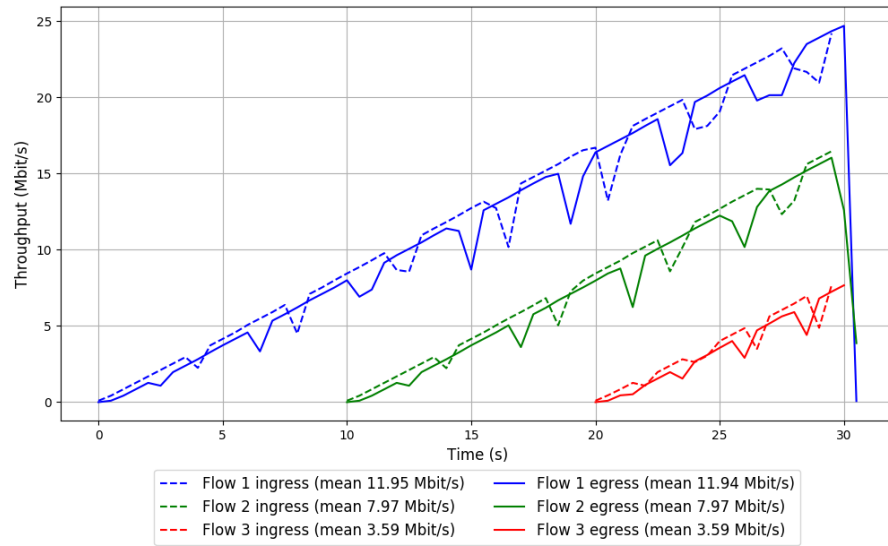
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.01 Mbit/s)   Flow 1 egress (mean 12.00 Mbit/s)
Flow 2 ingress (mean 7.73 Mbit/s)   Flow 2 egress (mean 7.73 Mbit/s)
Flow 3 ingress (mean 3.73 Mbit/s)   Flow 3 egress (mean 3.73 Mbit/s)

Flow 1 (95th percentile 80.20 ms)   Flow 2 (95th percentile 81.42 ms)   Flow 3 (95th percentile 82.31 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-03-19 03:38:34
End at: 2019-03-19 03:39:04
Local clock offset: -10.939 ms
Remote clock offset: 45.939 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.61 Mbit/s
95th percentile per-packet one-way delay: 84.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.02 Mbit/s
95th percentile per-packet one-way delay: 83.747 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 83.495 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 84.154 ms
Loss rate: 0.00%
```
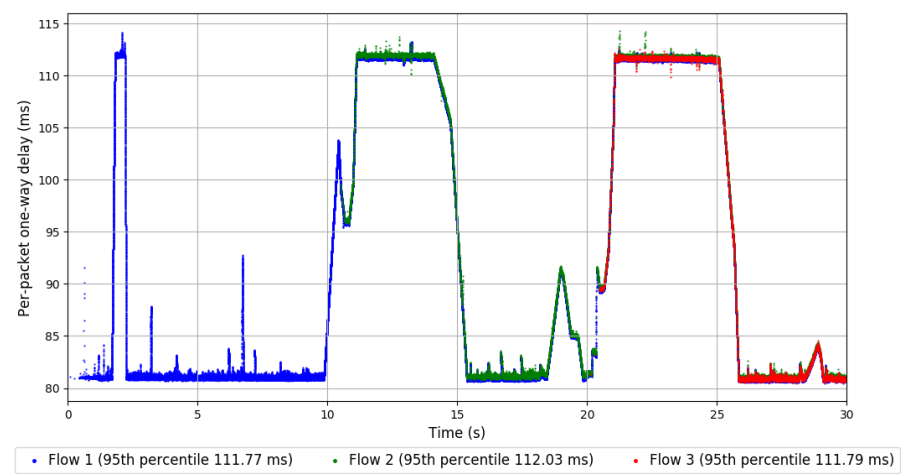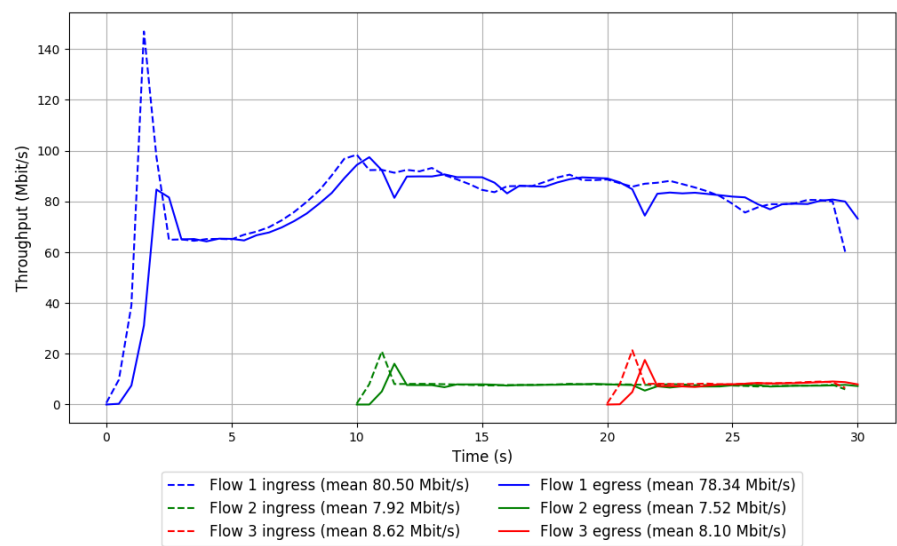
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-03-19 04:05:19
End at: 2019-03-19 04:05:49
Local clock offset: -0.475 ms
Remote clock offset: -7.015 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 81.371 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.09 Mbit/s
95th percentile per-packet one-way delay: 81.577 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 81.243 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 80.711 ms
Loss rate: 0.00%
```
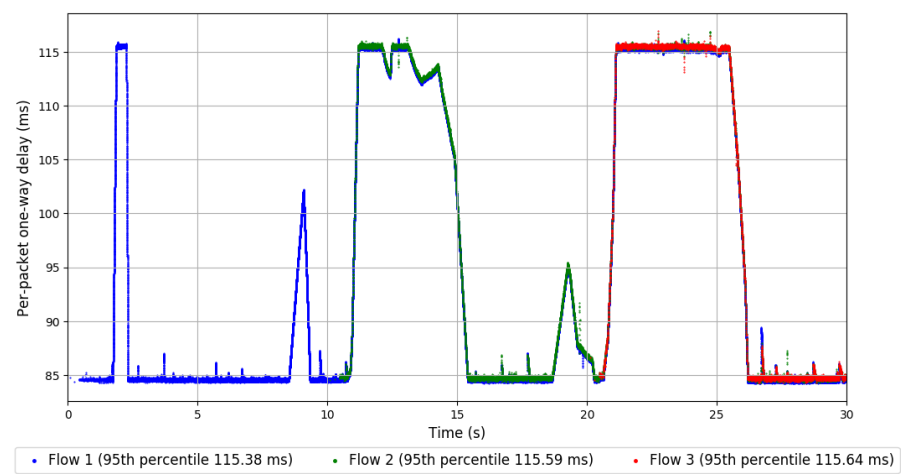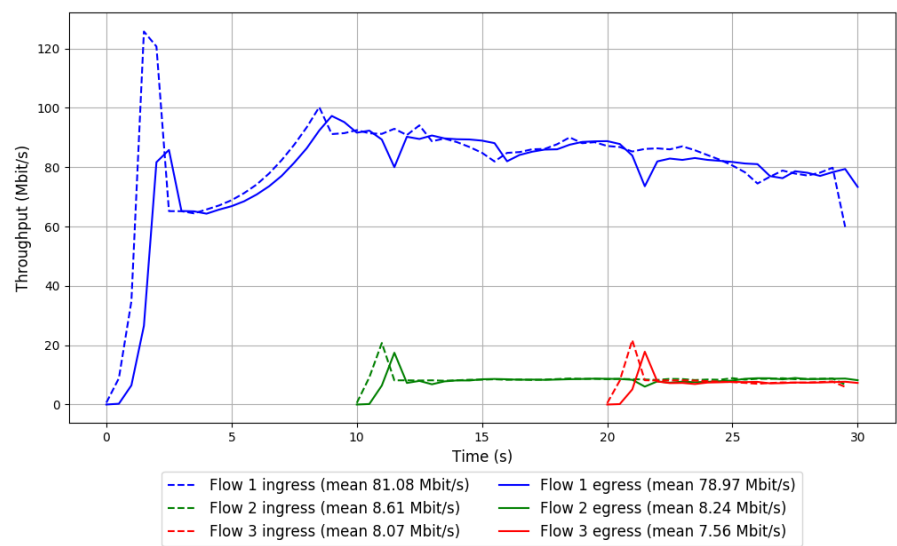
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-03-19 04:32:03
End at: 2019-03-19 04:32:33
Local clock offset: 4.798 ms
Remote clock offset: -22.037 ms


# Below is generated by plot.py at 2019-03-19 04:52:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.43 Mbit/s
95th percentile per-packet one-way delay: 85.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 85.981 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.97 Mbit/s
95th percentile per-packet one-way delay: 85.152 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 84.658 ms
Loss rate: 0.00%
```
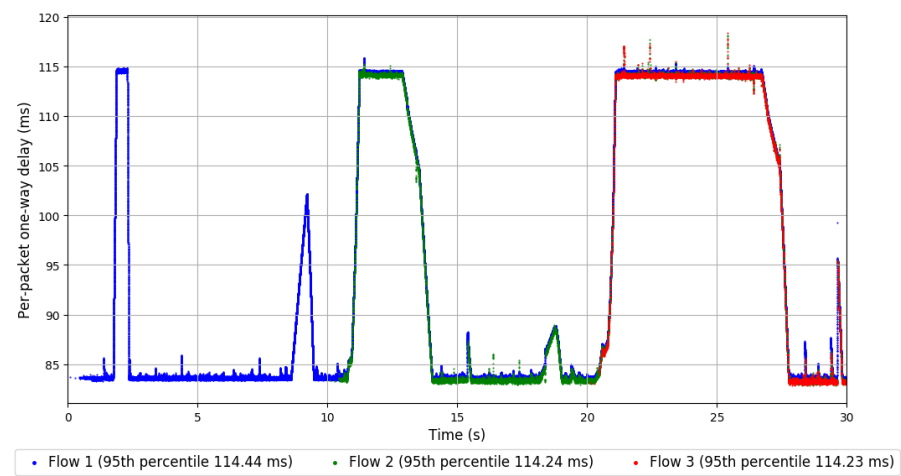
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 11.95 Mbit/s) --- Flow 1 egress (mean 11.94 Mbit/s)
Flow 2 ingress (mean 7.97 Mbit/s) --- Flow 2 egress (mean 7.97 Mbit/s)
Flow 3 ingress (mean 3.59 Mbit/s) --- Flow 3 egress (mean 3.59 Mbit/s)

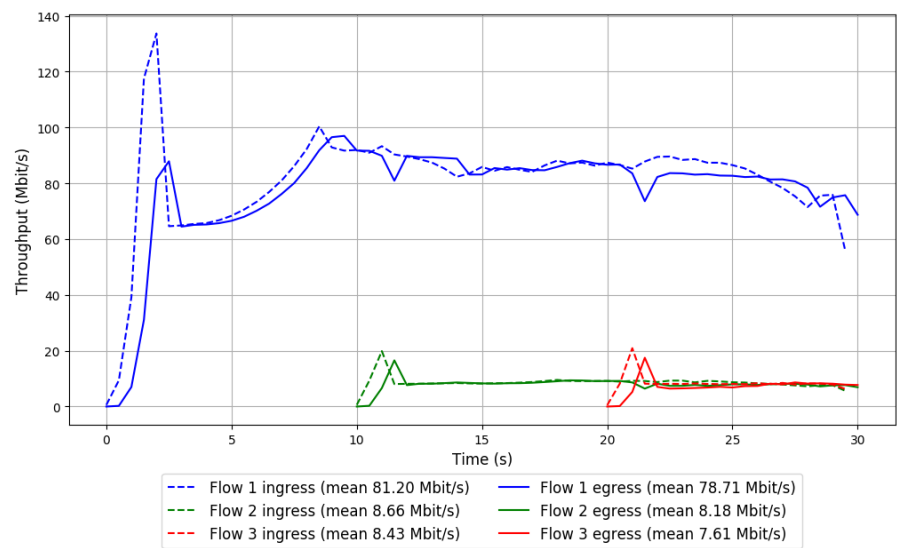Flow 1 (95th percentile 85.98 ms)   Flow 2 (95th percentile 85.15 ms)   Flow 3 (95th percentile 84.66 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-03-19 02:49:53
End at: 2019-03-19 02:50:23
Local clock offset: -8.414 ms
Remote clock offset: 24.336 ms


# Below is generated by plot.py at 2019-03-19 04:53:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.01 Mbit/s
95th percentile per-packet one-way delay: 111.799 ms
Loss rate: 2.93%
-- Flow 1:
Average throughput: 78.34 Mbit/s
95th percentile per-packet one-way delay: 111.766 ms
Loss rate: 2.68%
-- Flow 2:
Average throughput: 7.52 Mbit/s
95th percentile per-packet one-way delay: 112.033 ms
Loss rate: 5.05%
-- Flow 3:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 111.790 ms
Loss rate: 6.00%
```

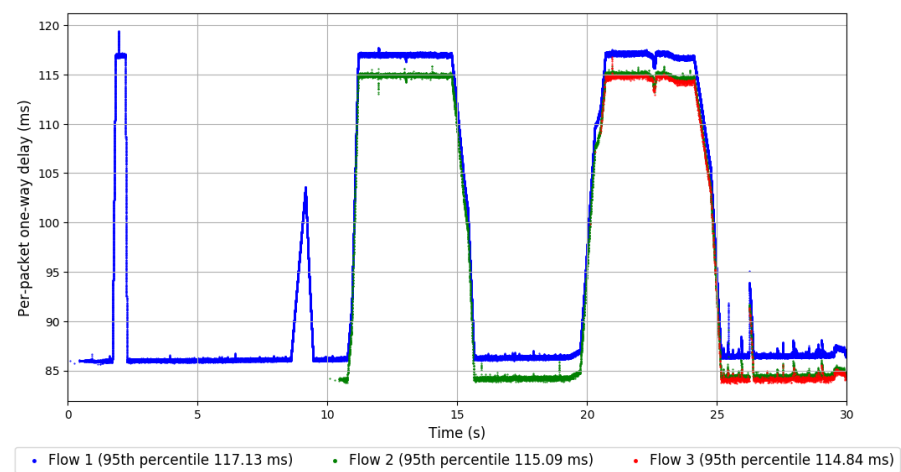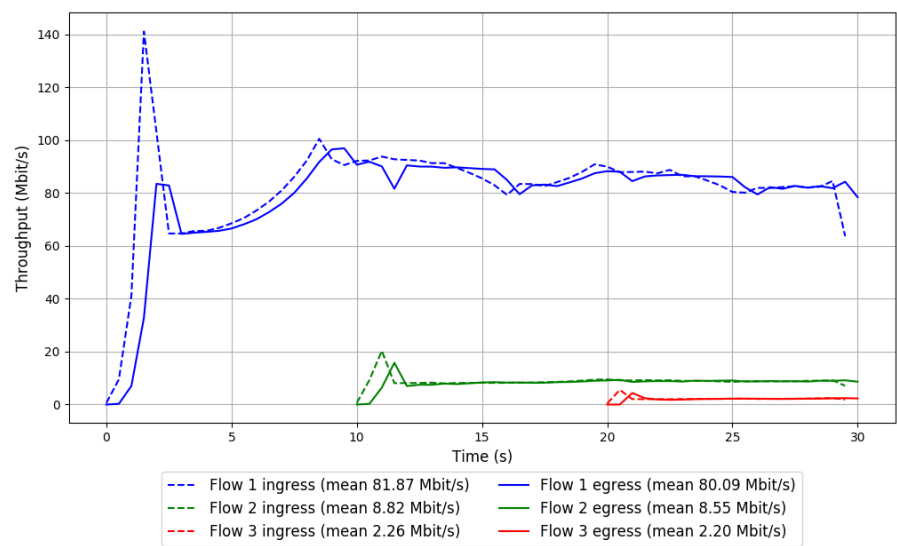Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-03-19 03:16:43
End at: 2019-03-19 03:17:13
Local clock offset: -9.312 ms
Remote clock offset: 39.854 ms


# Below is generated by plot.py at 2019-03-19 04:53:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.95 Mbit/s
95th percentile per-packet one-way delay: 115.425 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 78.97 Mbit/s
95th percentile per-packet one-way delay: 115.384 ms
Loss rate: 2.61%
-- Flow 2:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 115.594 ms
Loss rate: 4.27%
-- Flow 3:
Average throughput: 7.56 Mbit/s
95th percentile per-packet one-way delay: 115.635 ms
Loss rate: 6.28%
```

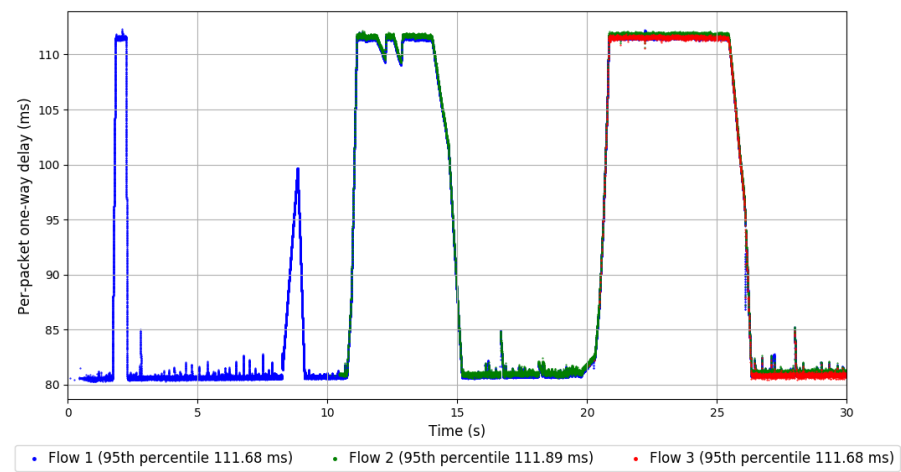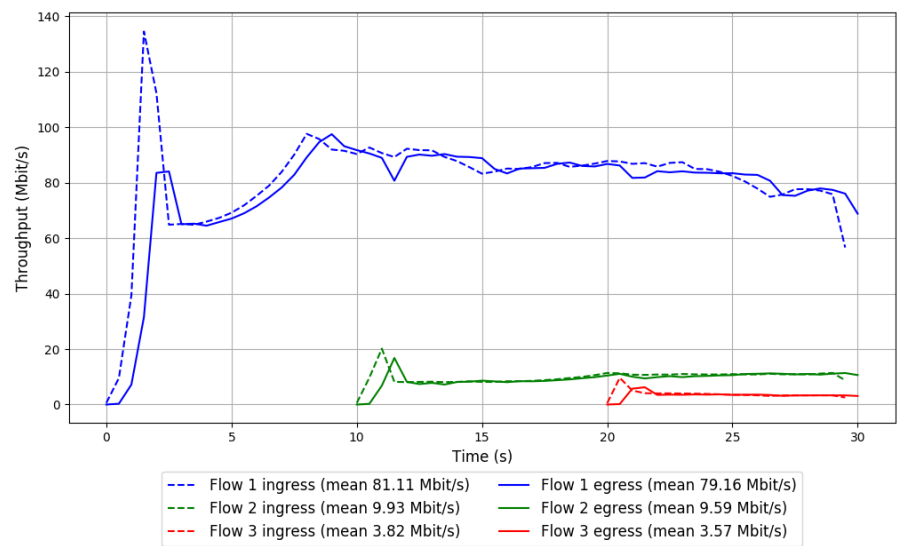Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 81.08 Mbit/s)   Flow 1 egress (mean 78.97 Mbit/s)
Flow 2 ingress (mean 8.61 Mbit/s)   Flow 2 egress (mean 8.24 Mbit/s)
Flow 3 ingress (mean 8.07 Mbit/s)   Flow 3 egress (mean 7.56 Mbit/s)

Flow 1 (95th percentile 115.38 ms)   Flow 2 (95th percentile 115.59 ms)   Flow 3 (95th percentile 115.64 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-03-19 03:43:31
End at: 2019-03-19 03:44:01
Local clock offset: -10.384 ms
Remote clock offset: 49.854 ms


# Below is generated by plot.py at 2019-03-19 04:53:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.66 Mbit/s
95th percentile per-packet one-way delay: 114.431 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 78.71 Mbit/s
95th percentile per-packet one-way delay: 114.437 ms
Loss rate: 3.07%
-- Flow 2:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 114.240 ms
Loss rate: 5.58%
-- Flow 3:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 114.231 ms
Loss rate: 9.68%
```

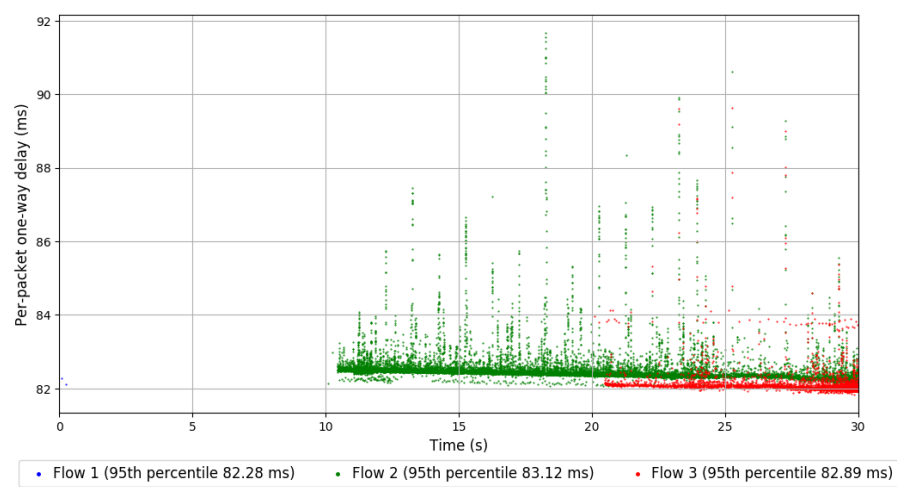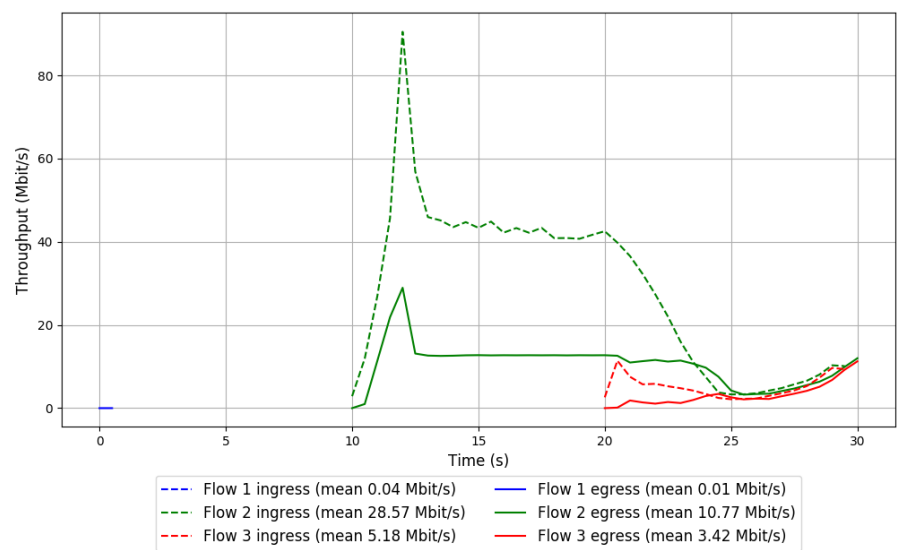# Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-03-19 04:10:17
End at: 2019-03-19 04:10:47
Local clock offset: 0.609 ms
Remote clock offset: -7.003 ms


# Below is generated by plot.py at 2019-03-19 04:53:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 117.121 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 80.09 Mbit/s
95th percentile per-packet one-way delay: 117.129 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 115.086 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 114.837 ms
Loss rate: 2.94%
```

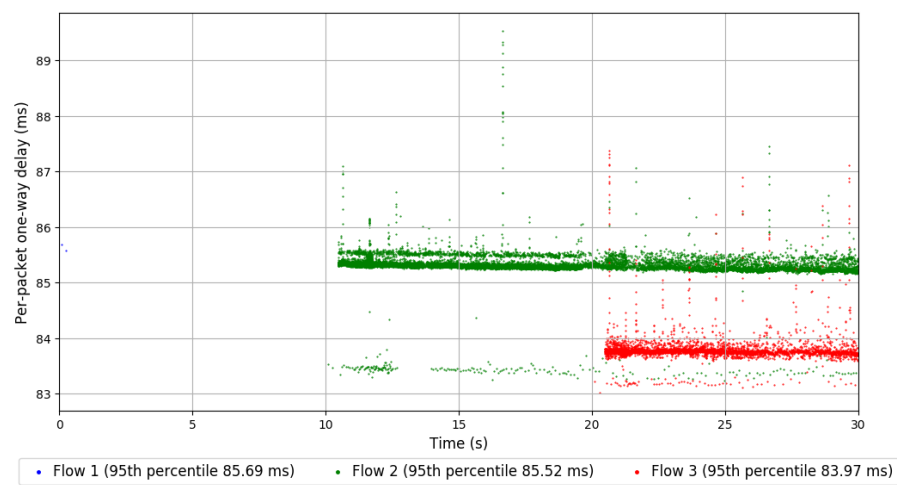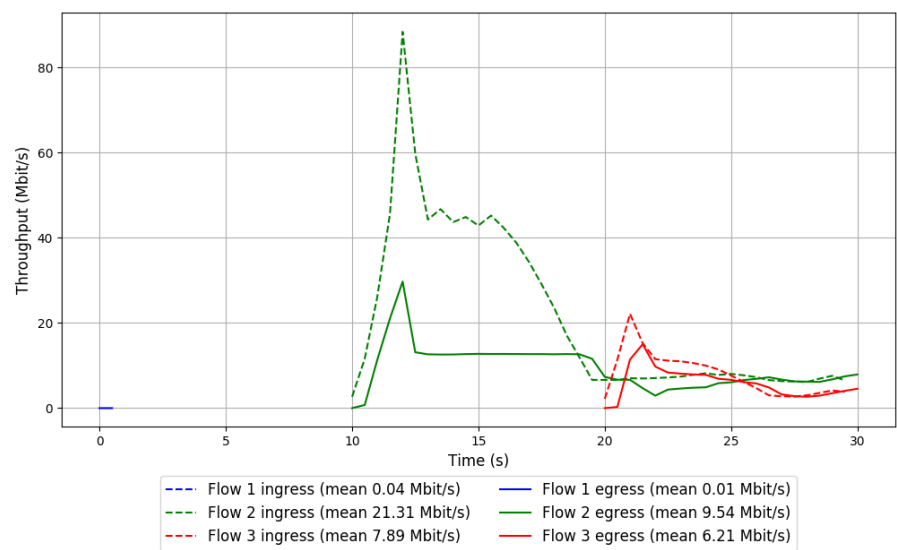Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 81.87 Mbit/s) --- Flow 1 egress (mean 80.09 Mbit/s)
Flow 2 ingress (mean 8.82 Mbit/s) --- Flow 2 egress (mean 8.55 Mbit/s)
Flow 3 ingress (mean 2.26 Mbit/s) --- Flow 3 egress (mean 2.20 Mbit/s)

Flow 1 (95th percentile 117.13 ms)   Flow 2 (95th percentile 115.09 ms)   Flow 3 (95th percentile 114.84 ms)

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```
Run 5: Statistics of PCC-Allegro

Start at: 2019-03-19 04:37:00
End at: 2019-03-19 04:37:30
Local clock offset: 4.724 ms
Remote clock offset: -28.526 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.72 Mbit/s
95th percentile per-packet one-way delay: 111.702 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 79.16 Mbit/s
95th percentile per-packet one-way delay: 111.676 ms
Loss rate: 2.40%
-- Flow 2:
Average throughput: 9.59 Mbit/s
95th percentile per-packet one-way delay: 111.890 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 111.680 ms
Loss rate: 6.57%
```
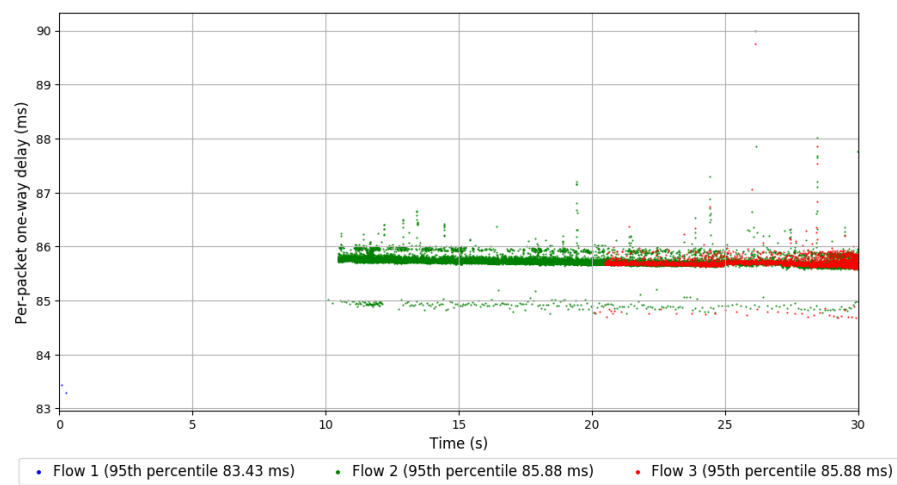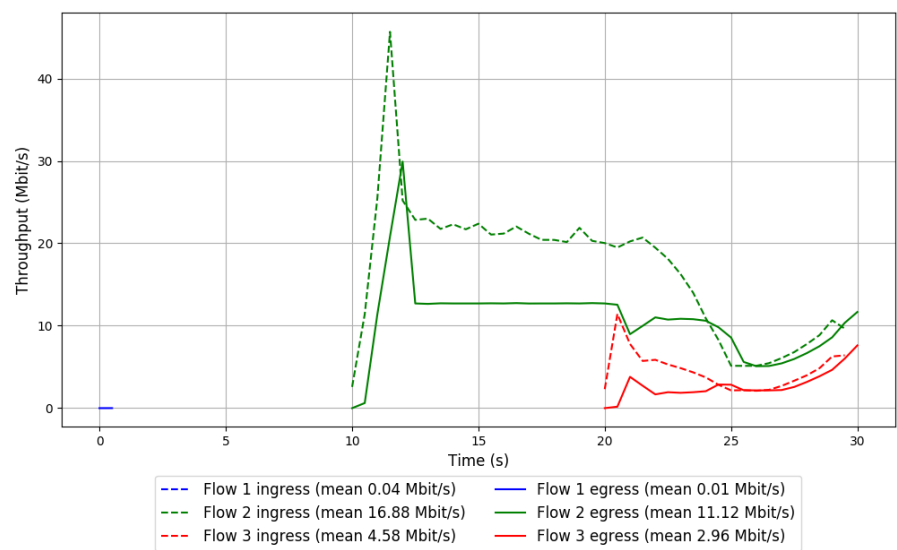
Run 5: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 81.11 Mbit/s) —— Flow 1 egress (mean 79.16 Mbit/s)
- - - Flow 2 ingress (mean 9.93 Mbit/s) —— Flow 2 egress (mean 9.59 Mbit/s)
- - - Flow 3 ingress (mean 3.82 Mbit/s) —— Flow 3 egress (mean 3.57 Mbit/s)

- Flow 1 (95th percentile 111.68 ms)   - Flow 2 (95th percentile 111.89 ms)   - Flow 3 (95th percentile 111.68 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-03-19 02:46:10
End at: 2019-03-19 02:46:40
Local clock offset: -7.998 ms
Remote clock offset: 24.855 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 83.095 ms
Loss rate: 59.96%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 82.280 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.77 Mbit/s
95th percentile per-packet one-way delay: 83.119 ms
Loss rate: 62.29%
-- Flow 3:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 82.885 ms
Loss rate: 34.04%
```
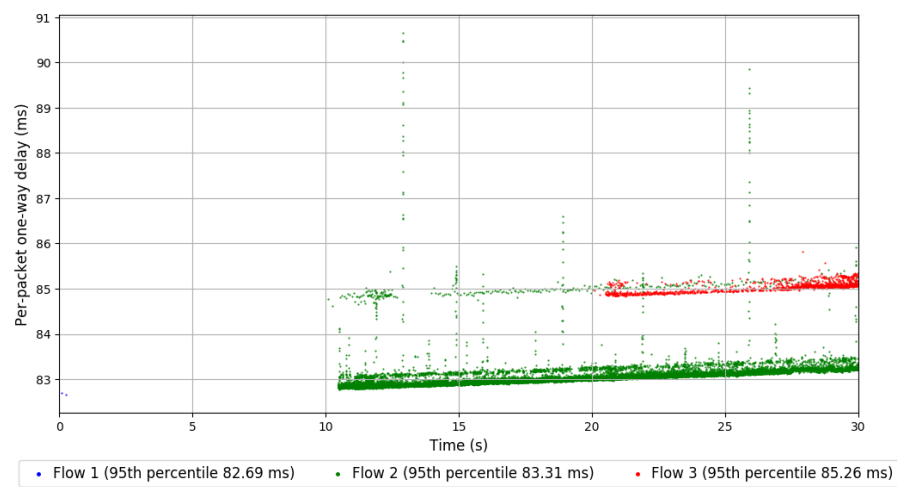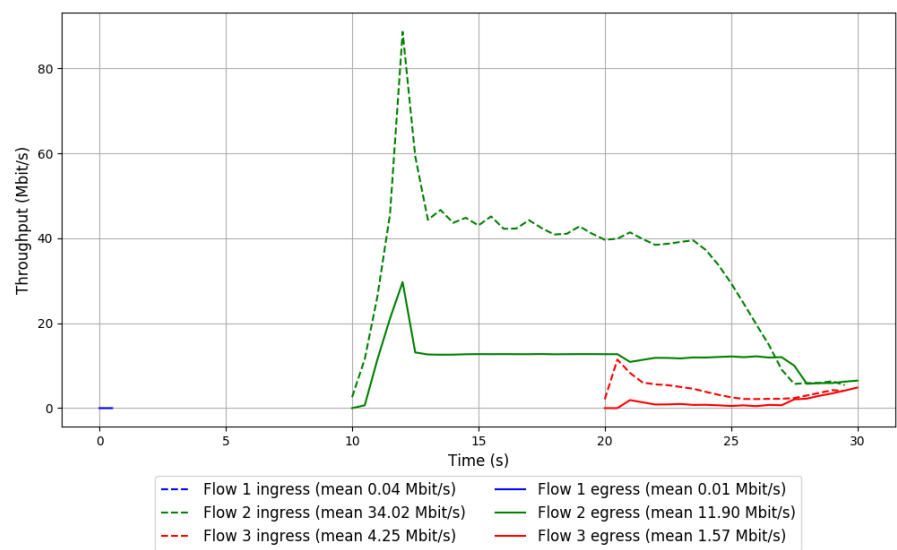
Run 1: Report of PCC-Expr — Data Link

Legend:
- Flow 1 ingress (mean 0.04 Mbit/s)
- Flow 1 egress (mean 0.01 Mbit/s)
- Flow 2 ingress (mean 28.57 Mbit/s)
- Flow 2 egress (mean 10.77 Mbit/s)
- Flow 3 ingress (mean 5.18 Mbit/s)
- Flow 3 egress (mean 3.42 Mbit/s)

Legend:
- Flow 1 (95th percentile 82.28 ms)
- Flow 2 (95th percentile 83.12 ms)
- Flow 3 (95th percentile 82.89 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-03-19 03:13:00
End at: 2019-03-19 03:13:30
Local clock offset: -9.166 ms
Remote clock offset: 39.141 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 85.511 ms
Loss rate: 49.96%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 85.687 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 85.522 ms
Loss rate: 55.23%
-- Flow 3:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 83.968 ms
Loss rate: 21.29%
```
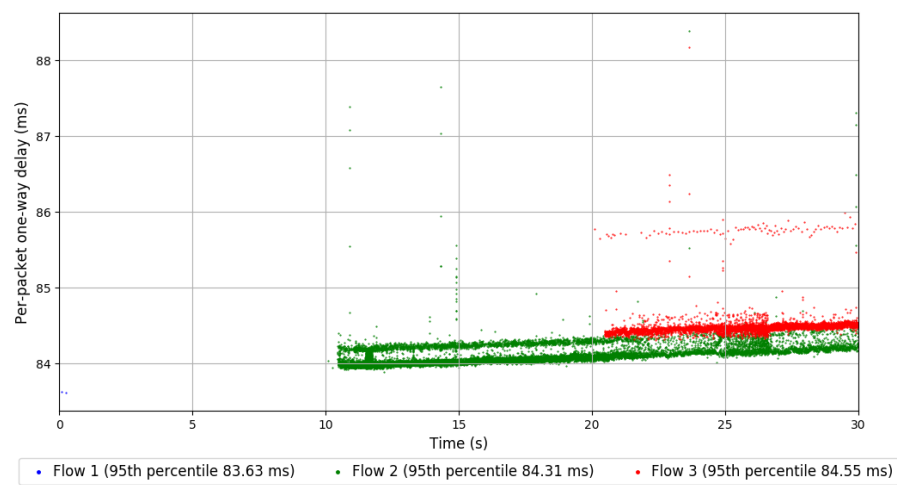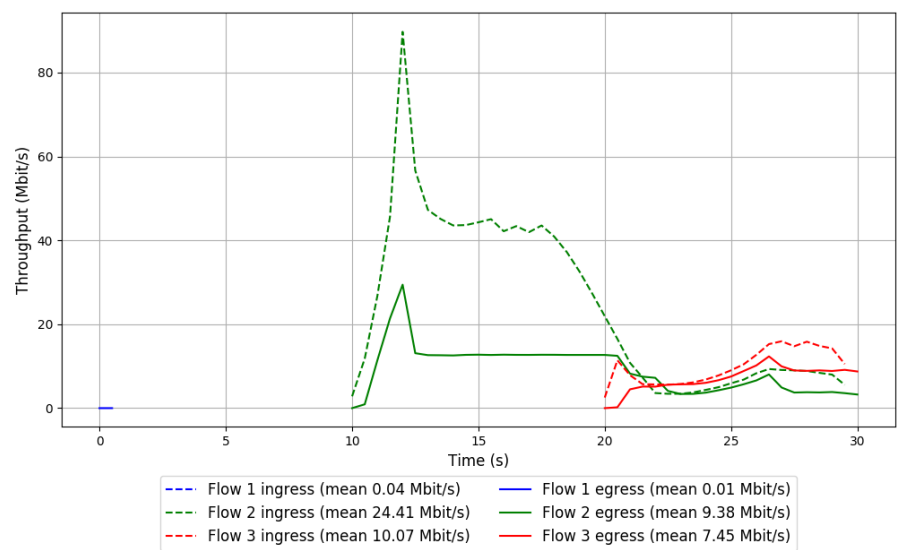
Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.04 Mbit/s)   Flow 1 egress (mean 0.01 Mbit/s)
Flow 2 ingress (mean 21.31 Mbit/s) Flow 2 egress (mean 9.54 Mbit/s)
Flow 3 ingress (mean 7.89 Mbit/s)   Flow 3 egress (mean 6.21 Mbit/s)

Flow 1 (95th percentile 85.69 ms)   Flow 2 (95th percentile 85.52 ms)   Flow 3 (95th percentile 83.97 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2019-03-19 03:39:48
End at: 2019-03-19 03:40:18
Local clock offset: -10.982 ms
Remote clock offset: 47.602 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.37 Mbit/s
95th percentile per-packet one-way delay: 85.880 ms
Loss rate: 34.28%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 83.431 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 85.883 ms
Loss rate: 34.14%
-- Flow 3:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 85.875 ms
Loss rate: 35.33%
```
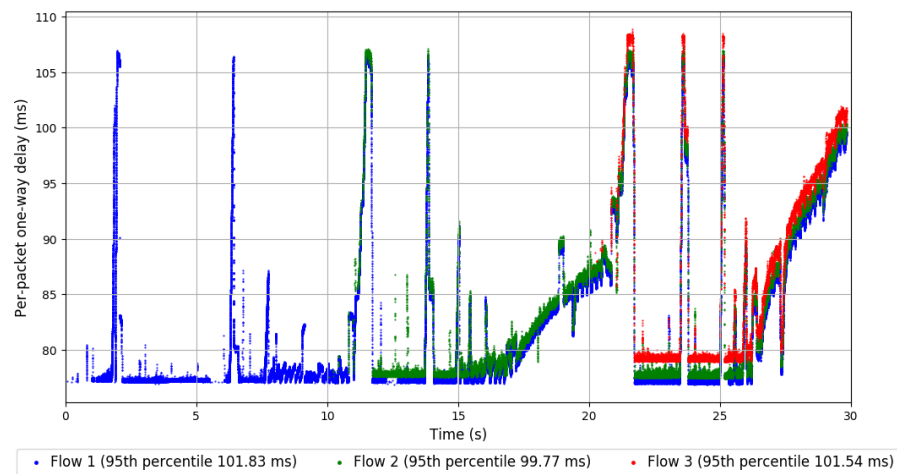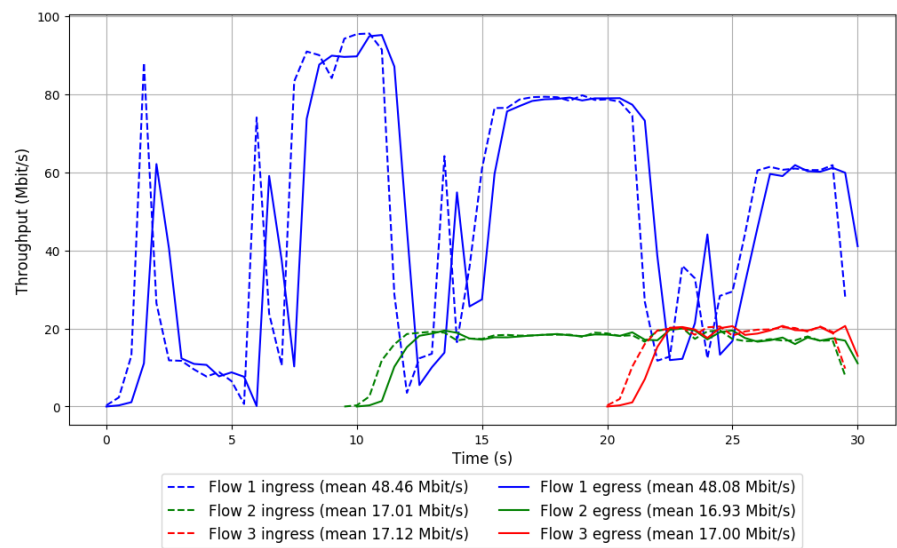
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-03-19 04:06:34
End at: 2019-03-19 04:07:04
Local clock offset: -0.174 ms
Remote clock offset: -4.769 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 85.017 ms
Loss rate: 64.92%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 82.691 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 11.90 Mbit/s
95th percentile per-packet one-way delay: 83.311 ms
Loss rate: 65.03%
-- Flow 3:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 85.259 ms
Loss rate: 63.07%
```

Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-03-19 04:33:18
End at: 2019-03-19 04:33:48
Local clock offset: 4.974 ms
Remote clock offset: -20.557 ms


# Below is generated by plot.py at 2019-03-19 04:53:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 84.512 ms
Loss rate: 55.54%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 83.628 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.38 Mbit/s
95th percentile per-packet one-way delay: 84.310 ms
Loss rate: 61.59%
-- Flow 3:
Average throughput: 7.45 Mbit/s
95th percentile per-packet one-way delay: 84.553 ms
Loss rate: 26.01%
```
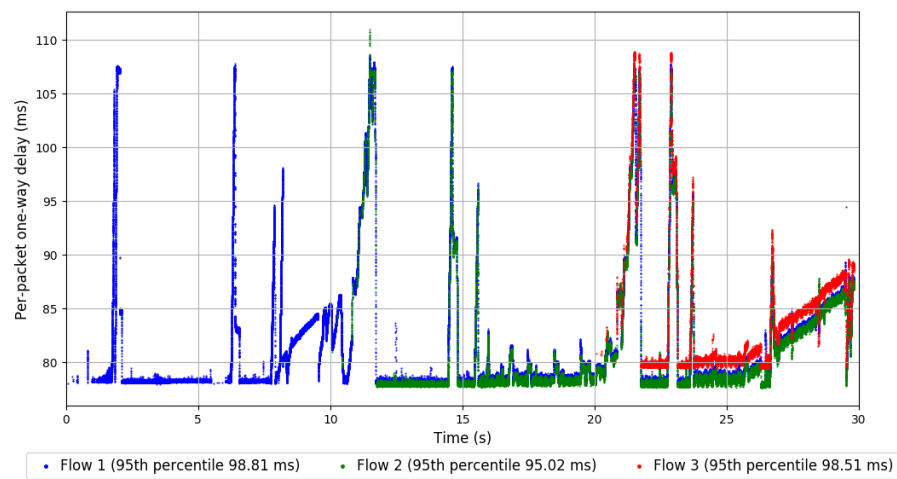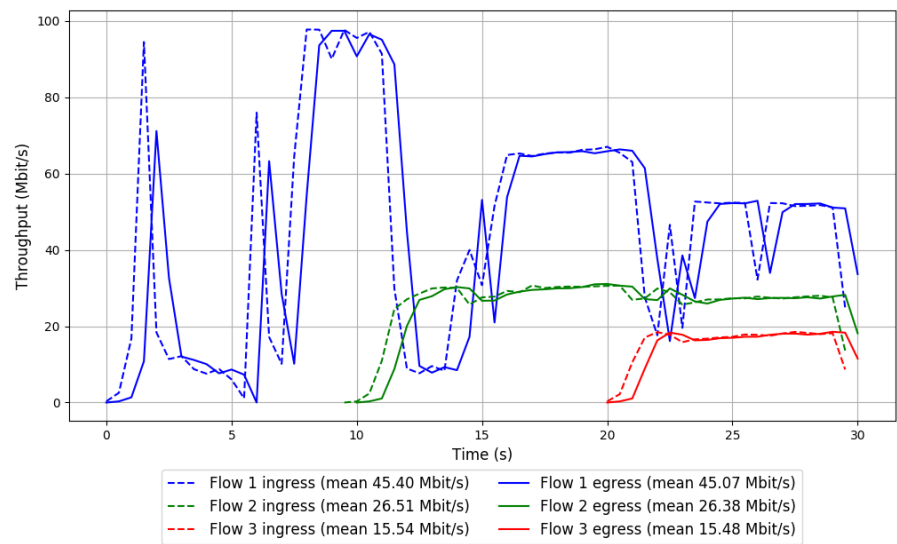
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.04 Mbit/s) --- Flow 1 egress (mean 0.01 Mbit/s)
Flow 2 ingress (mean 24.41 Mbit/s) --- Flow 2 egress (mean 9.38 Mbit/s)
Flow 3 ingress (mean 10.07 Mbit/s) --- Flow 3 egress (mean 7.45 Mbit/s)

Flow 1 (95th percentile 83.63 ms)   Flow 2 (95th percentile 84.31 ms)   Flow 3 (95th percentile 84.55 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-03-19 02:51:11
End at: 2019-03-19 02:51:41
Local clock offset: -7.789 ms
Remote clock offset: 23.942 ms


# Below is generated by plot.py at 2019-03-19 04:53:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.89 Mbit/s
95th percentile per-packet one-way delay: 101.293 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 48.08 Mbit/s
95th percentile per-packet one-way delay: 101.826 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 16.93 Mbit/s
95th percentile per-packet one-way delay: 99.768 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 17.00 Mbit/s
95th percentile per-packet one-way delay: 101.542 ms
Loss rate: 0.59%
```
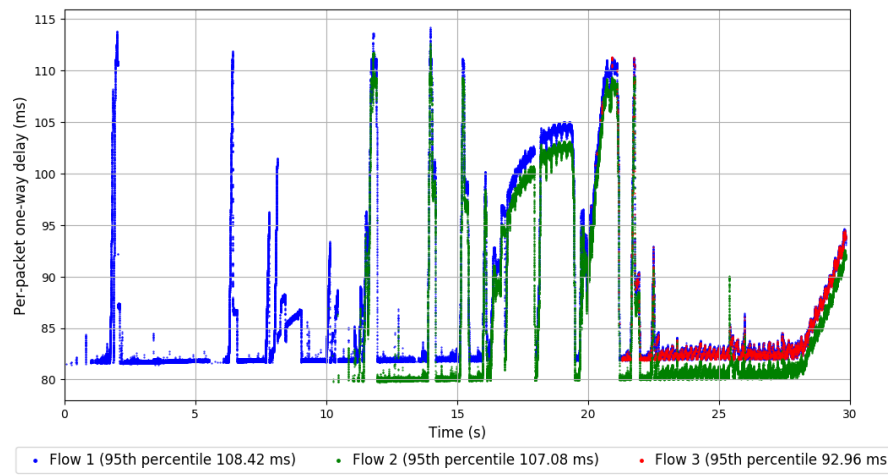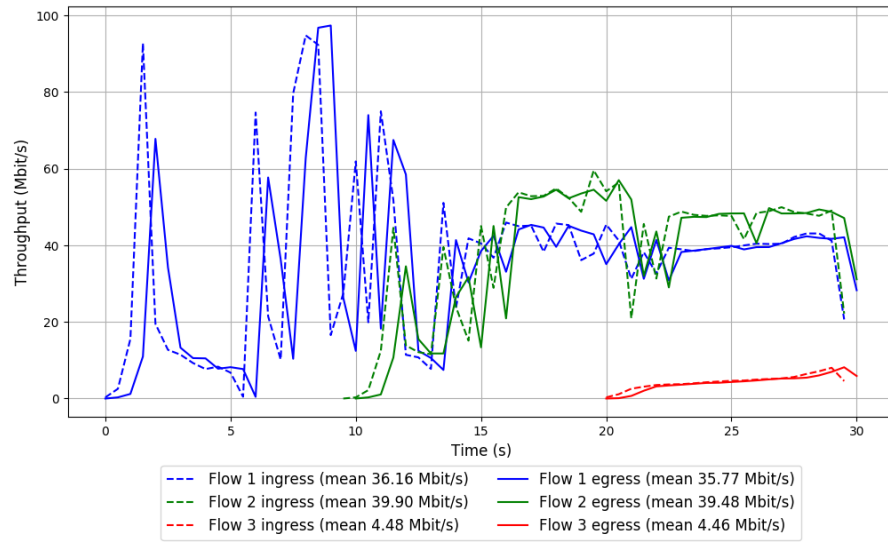
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 48.46 Mbit/s) --- Flow 1 egress (mean 48.08 Mbit/s)
Flow 2 ingress (mean 17.01 Mbit/s) --- Flow 2 egress (mean 16.93 Mbit/s)
Flow 3 ingress (mean 17.12 Mbit/s) --- Flow 3 egress (mean 17.00 Mbit/s)

Flow 1 (95th percentile 101.83 ms) • Flow 2 (95th percentile 99.77 ms) • Flow 3 (95th percentile 101.54 ms)

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```
Run 2: Statistics of QUIC Cubic

Start at: 2019-03-19 03:17:59
End at: 2019-03-19 03:18:29
Local clock offset: -10.121 ms
Remote clock offset: 36.206 ms


# Below is generated by plot.py at 2019-03-19 04:53:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.86 Mbit/s
95th percentile per-packet one-way delay: 108.389 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 44.40 Mbit/s
95th percentile per-packet one-way delay: 108.342 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 109.322 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 17.32 Mbit/s
95th percentile per-packet one-way delay: 96.483 ms
Loss rate: 0.46%
```
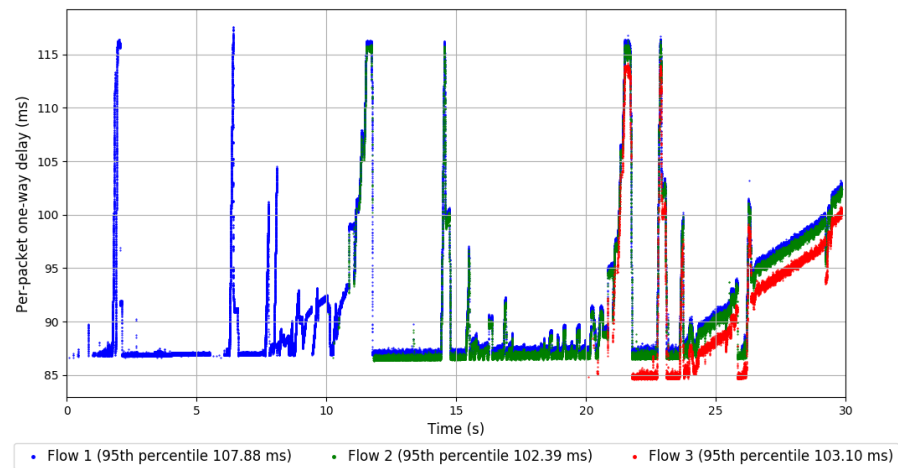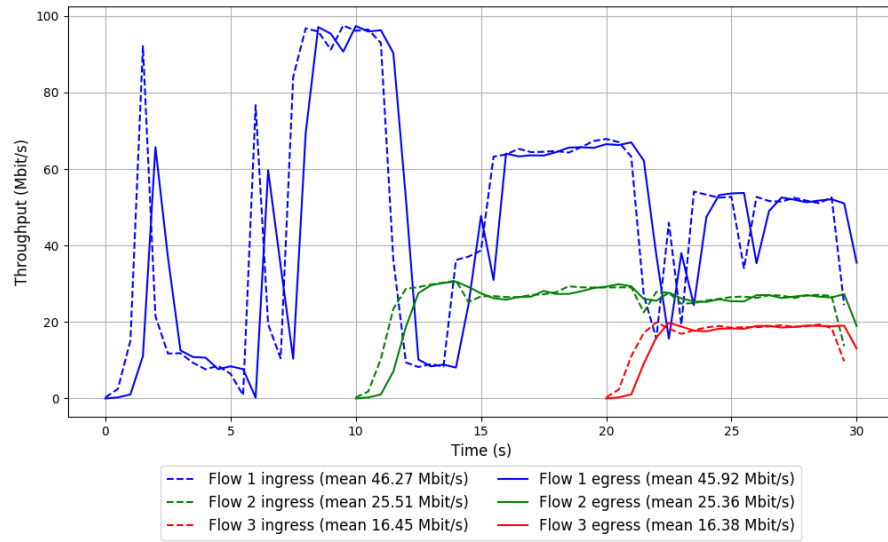
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-03-19 03:44:48
End at: 2019-03-19 03:45:18
Local clock offset: -11.174 ms
Remote clock offset: 44.188 ms


# Below is generated by plot.py at 2019-03-19 04:53:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.65 Mbit/s
95th percentile per-packet one-way delay: 97.823 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 45.07 Mbit/s
95th percentile per-packet one-way delay: 98.808 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 26.38 Mbit/s
95th percentile per-packet one-way delay: 95.020 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 15.48 Mbit/s
95th percentile per-packet one-way delay: 98.507 ms
Loss rate: 0.24%
```
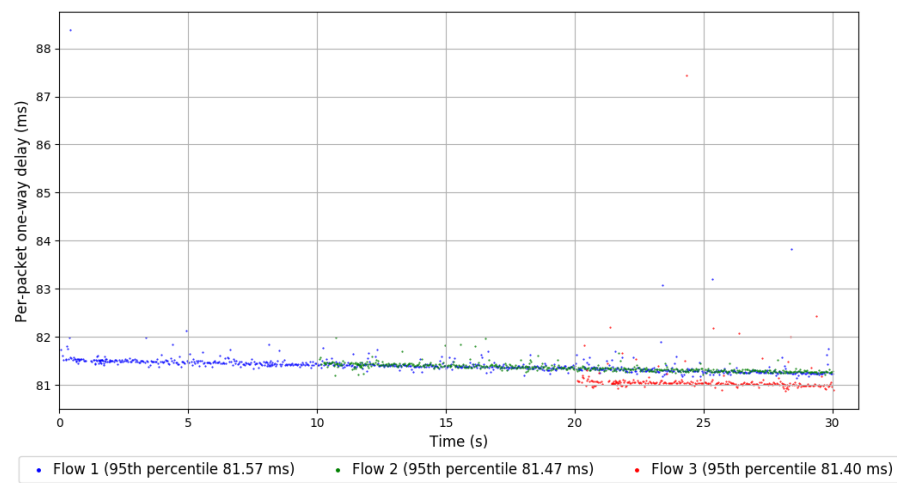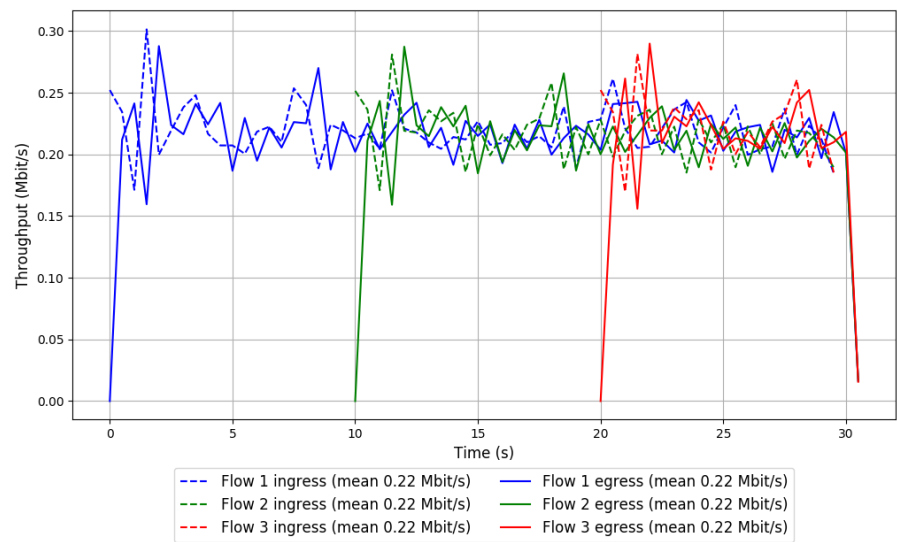
Run 3: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 45.40 Mbit/s)   —— Flow 1 egress (mean 45.07 Mbit/s)
- - - - Flow 2 ingress (mean 26.51 Mbit/s)   —— Flow 2 egress (mean 26.38 Mbit/s)
- - - - Flow 3 ingress (mean 15.54 Mbit/s)   —— Flow 3 egress (mean 15.48 Mbit/s)

- Flow 1 (95th percentile 98.81 ms)   • Flow 2 (95th percentile 95.02 ms)   • Flow 3 (95th percentile 98.51 ms)

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```
Run 4: Statistics of QUIC Cubic

Start at: 2019-03-19 04:11:33
End at: 2019-03-19 04:12:03
Local clock offset: 0.758 ms
Remote clock offset: -11.91 ms


# Below is generated by plot.py at 2019-03-19 04:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.43 Mbit/s
95th percentile per-packet one-way delay: 107.663 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 35.77 Mbit/s
95th percentile per-packet one-way delay: 108.423 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 39.48 Mbit/s
95th percentile per-packet one-way delay: 107.085 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 92.964 ms
Loss rate: 0.67%
```

Run 4: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 36.16 Mbit/s)   —— Flow 1 egress (mean 35.77 Mbit/s)
- - - Flow 2 ingress (mean 39.90 Mbit/s)   —— Flow 2 egress (mean 39.48 Mbit/s)
- - - Flow 3 ingress (mean 4.48 Mbit/s)   —— Flow 3 egress (mean 4.46 Mbit/s)

- Flow 1 (95th percentile 108.42 ms)   • Flow 2 (95th percentile 107.08 ms)   • Flow 3 (95th percentile 92.96 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-03-19 04:38:17
End at: 2019-03-19 04:38:47
Local clock offset: 4.918 ms
Remote clock offset: -23.153 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.11 Mbit/s
95th percentile per-packet one-way delay: 106.675 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 107.879 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 25.36 Mbit/s
95th percentile per-packet one-way delay: 102.388 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 16.38 Mbit/s
95th percentile per-packet one-way delay: 103.098 ms
Loss rate: 0.27%
```
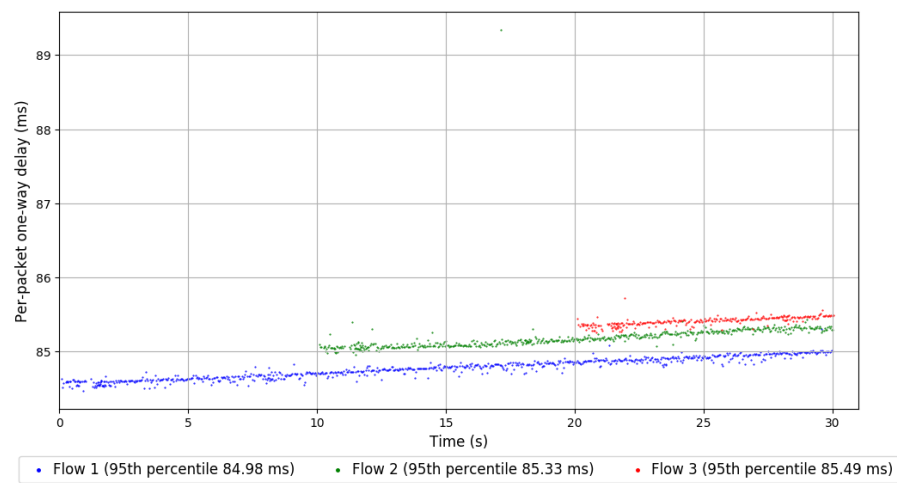
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 46.27 Mbit/s) --- Flow 1 egress (mean 45.92 Mbit/s)
Flow 2 ingress (mean 25.51 Mbit/s) --- Flow 2 egress (mean 25.36 Mbit/s)
Flow 3 ingress (mean 16.45 Mbit/s) --- Flow 3 egress (mean 16.38 Mbit/s)

Flow 1 (95th percentile 107.88 ms) • Flow 2 (95th percentile 102.39 ms) • Flow 3 (95th percentile 103.10 ms)
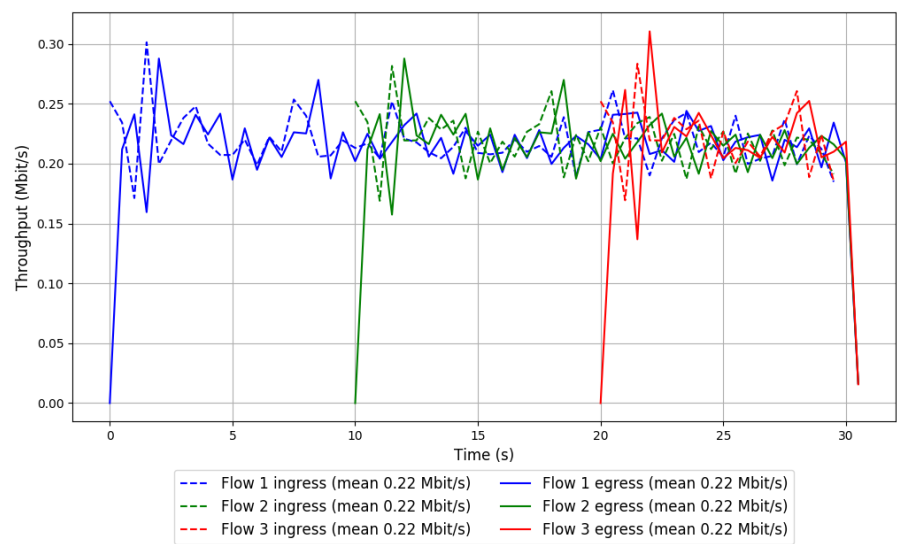
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```
Run 1: Statistics of SCReAM

Start at: 2019-03-19 02:53:48
End at: 2019-03-19 02:54:18
Local clock offset: -8.798 ms
Remote clock offset: 26.656 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 81.534 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.474 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.396 ms
Loss rate: 0.00%
```
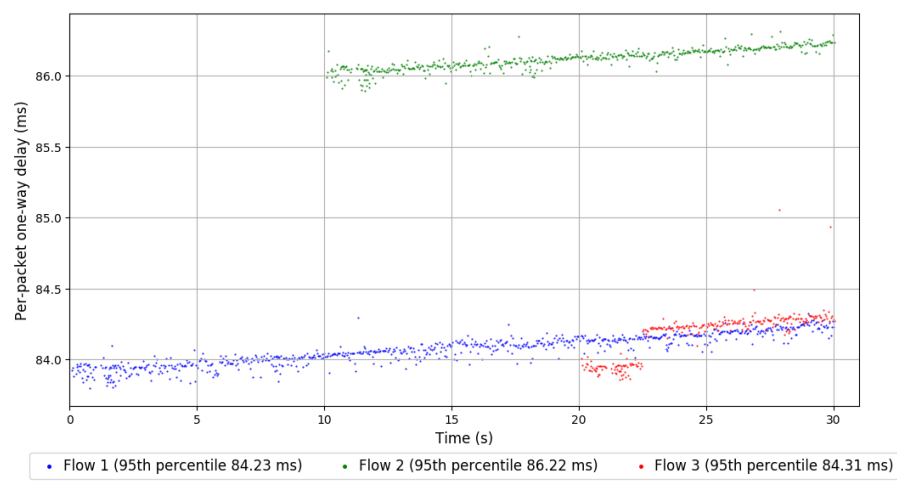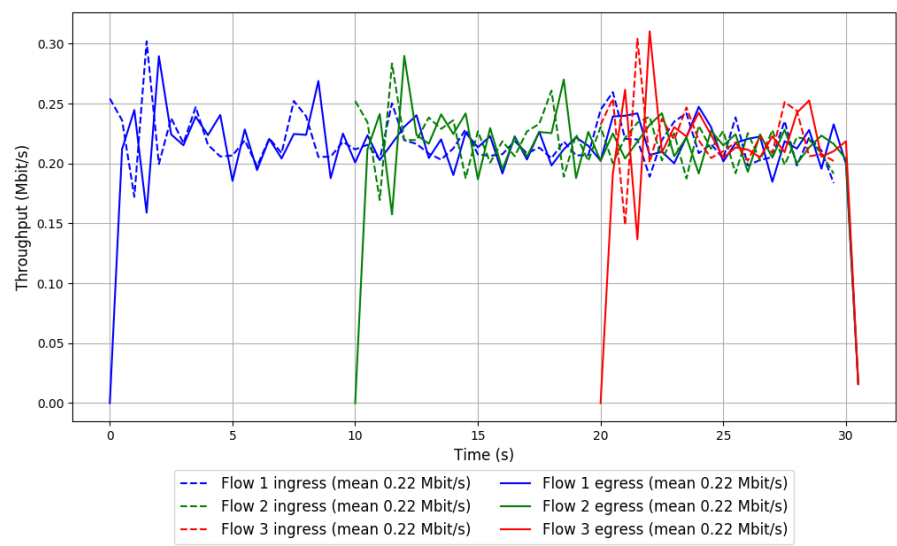
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-03-19 03:20:33
End at: 2019-03-19 03:21:03
Local clock offset: -9.456 ms
Remote clock offset: 35.72 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 79.341 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.445 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.280 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.383 ms
Loss rate: 0.00%
```
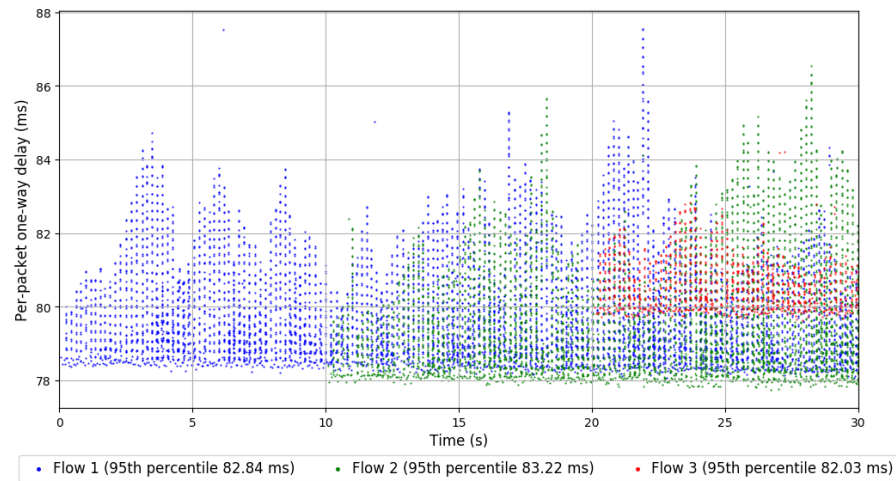
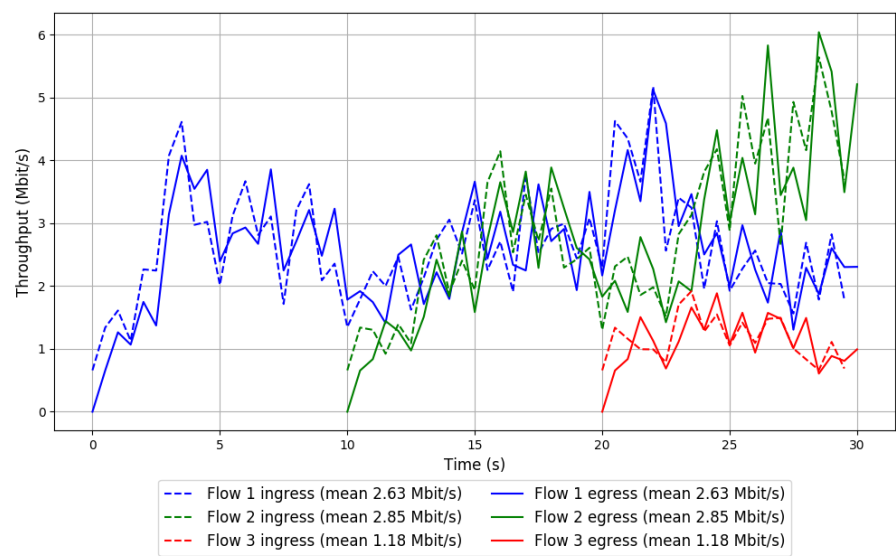# Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-03-19 03:47:23
End at: 2019-03-19 03:47:53
Local clock offset: -9.996 ms
Remote clock offset: 43.262 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 90.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.416 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.989 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.108 ms
Loss rate: 0.00%
```

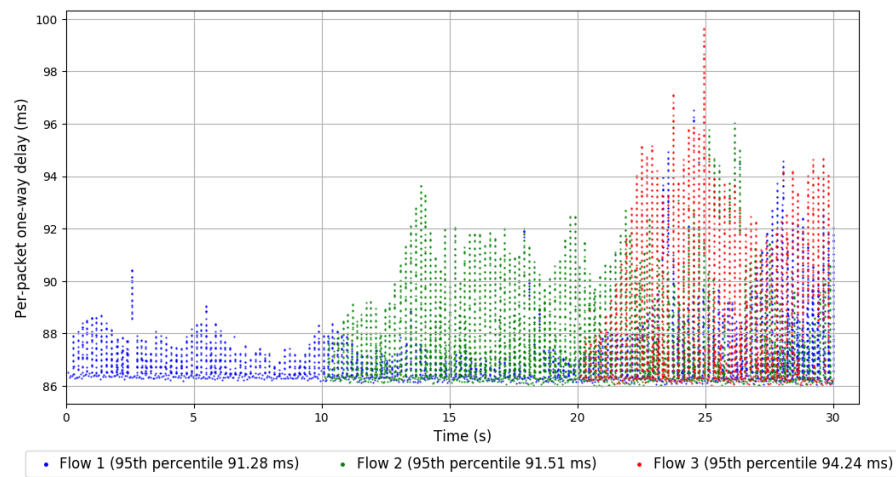# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-03-19 04:14:07
End at: 2019-03-19 04:14:37
Local clock offset: 2.097 ms
Remote clock offset: -9.972 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.444 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.984 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.329 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.489 ms
Loss rate: 0.00%
```
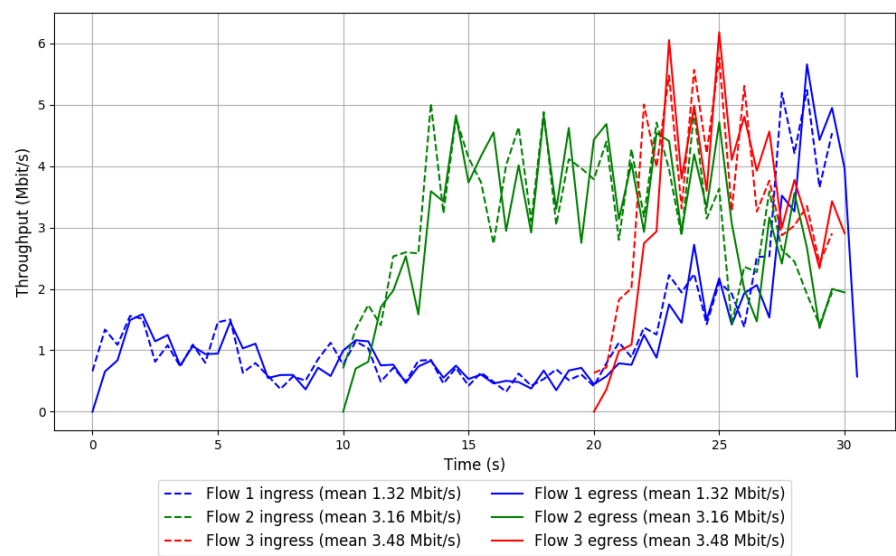
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-03-19 04:40:52
End at: 2019-03-19 04:41:22
Local clock offset: 5.228 ms
Remote clock offset: -25.365 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.197 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.231 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.223 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.309 ms
Loss rate: 0.00%
```
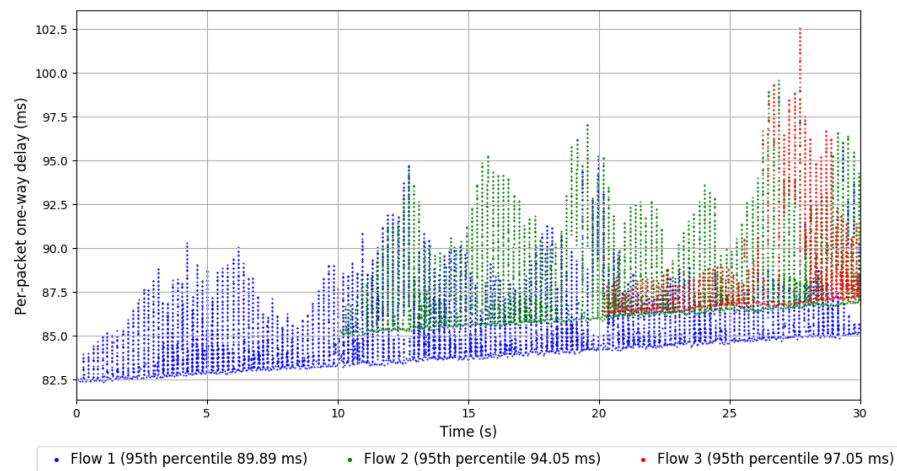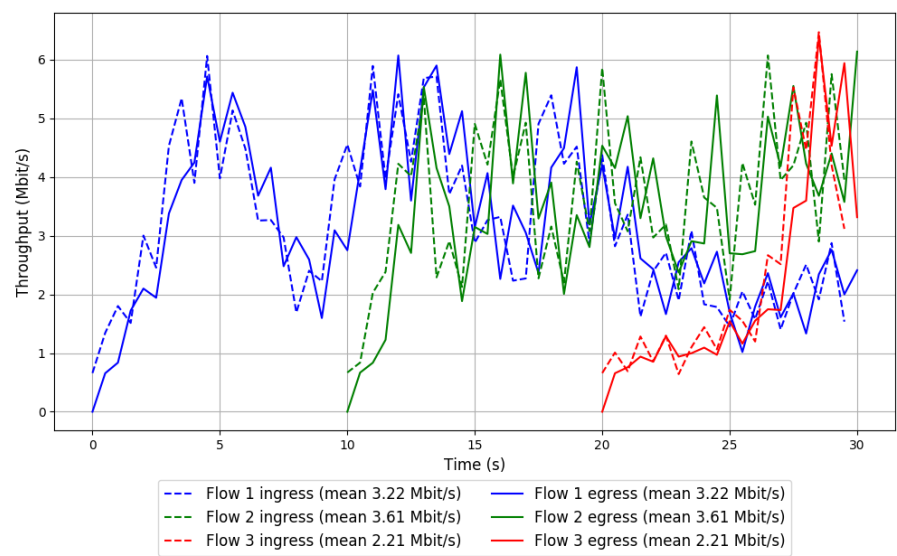
Run 5: Report of SCReAM — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2019-03-19 02:55:01
End at: 2019-03-19 02:55:31
Local clock offset: -8.967 ms
Remote clock offset: 26.072 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 82.914 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.63 Mbit/s
95th percentile per-packet one-way delay: 82.836 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 83.216 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 82.034 ms
Loss rate: 0.00%
```
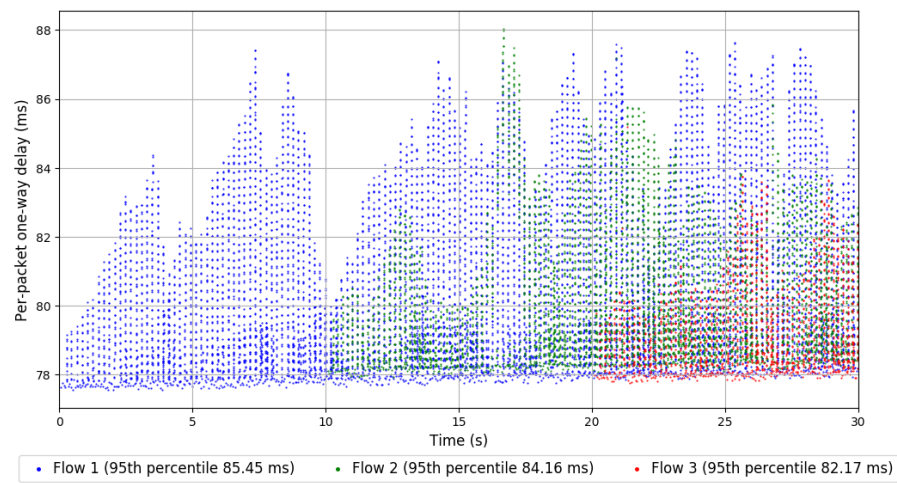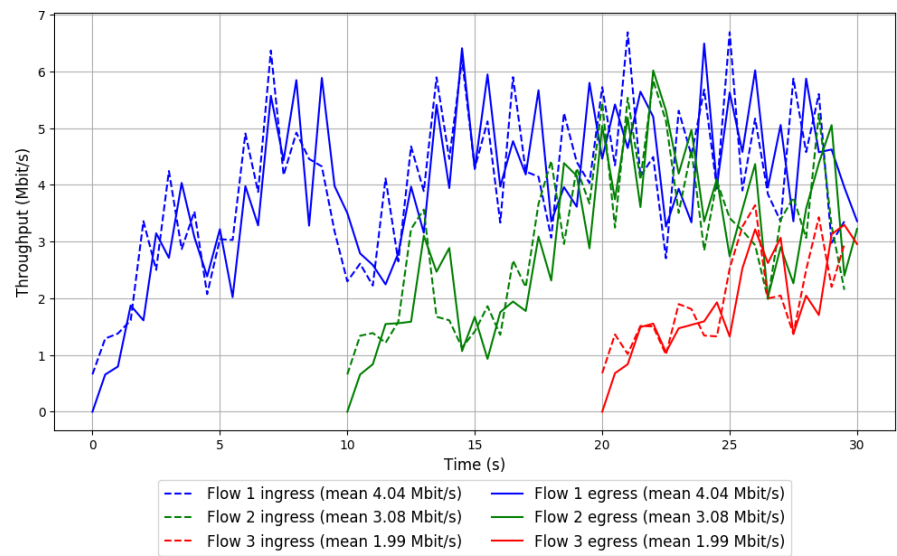
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-03-19 03:21:46
End at: 2019-03-19 03:22:16
Local clock offset: -10.27 ms
Remote clock offset: 42.561 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 92.749 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 91.277 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 91.511 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 94.239 ms
Loss rate: 0.00%
```
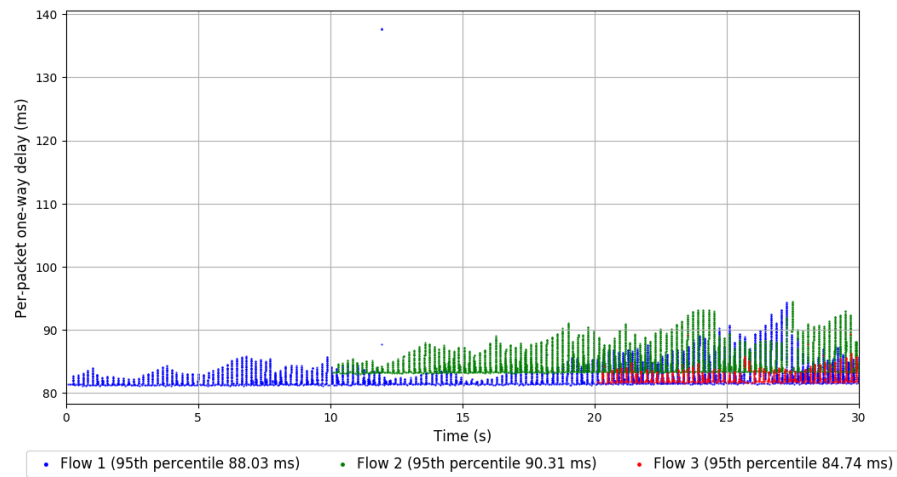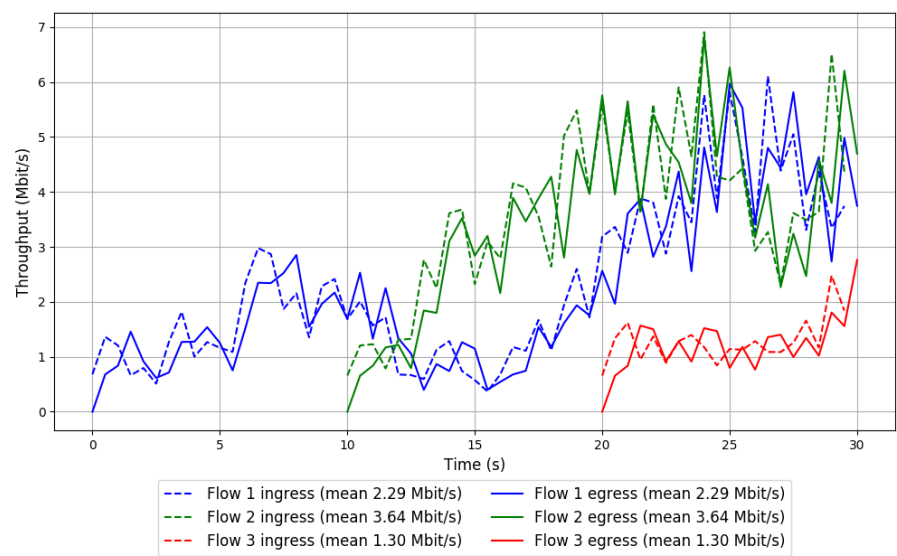
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-03-19 03:48:35
End at: 2019-03-19 03:49:05
Local clock offset: -7.915 ms
Remote clock offset: 35.541 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 93.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 89.889 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 94.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 97.049 ms
Loss rate: 0.00%
```
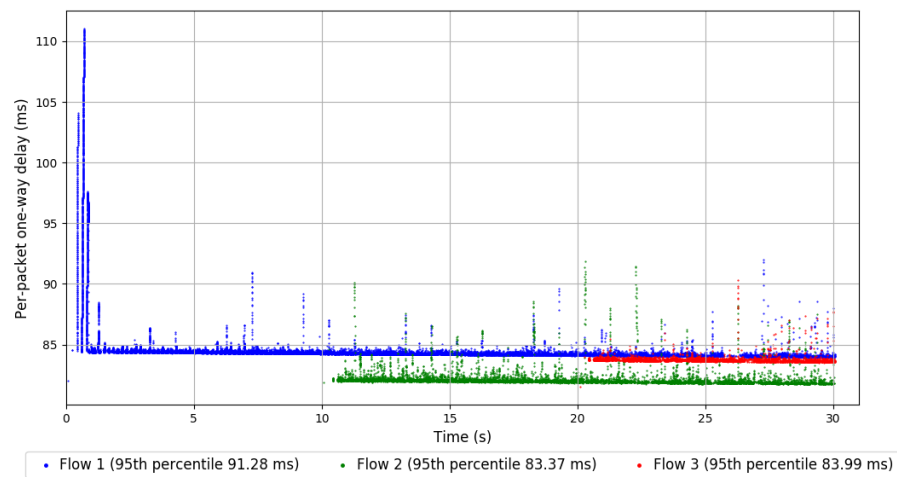
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-03-19 04:15:20
End at: 2019-03-19 04:15:50
Local clock offset: 2.255 ms
Remote clock offset: -15.883 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 85.004 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 85.447 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 84.160 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 82.170 ms
Loss rate: 0.00%
```
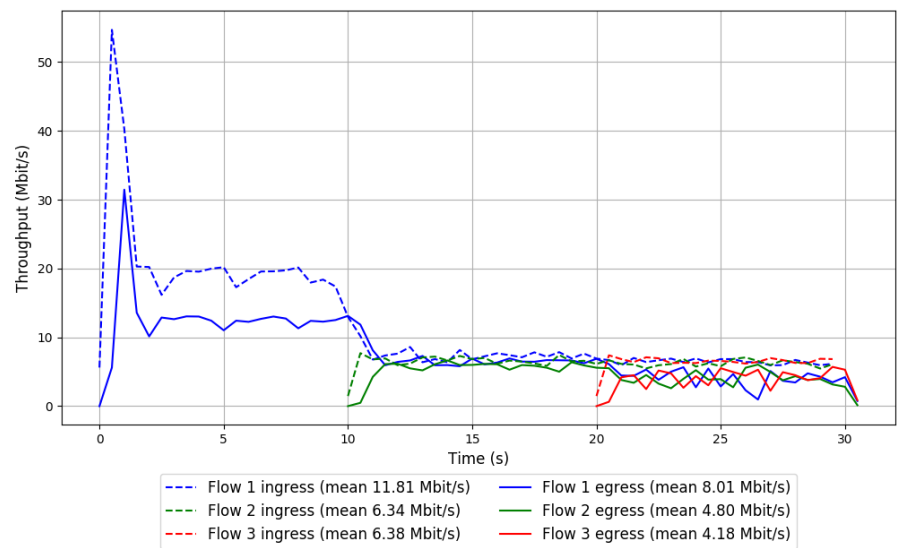
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-03-19 04:42:04
End at: 2019-03-19 04:42:34
Local clock offset: 6.202 ms
Remote clock offset: -27.441 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 89.368 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 88.031 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.64 Mbit/s
95th percentile per-packet one-way delay: 90.310 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 84.743 ms
Loss rate: 0.00%
```
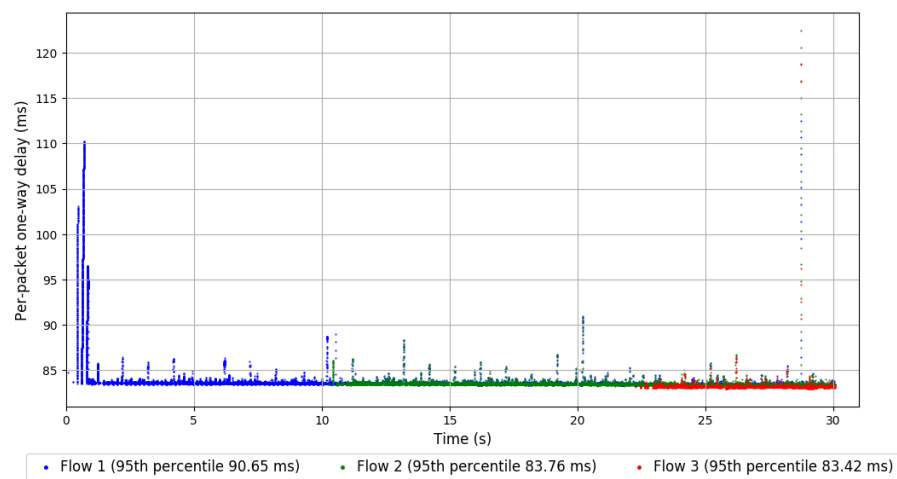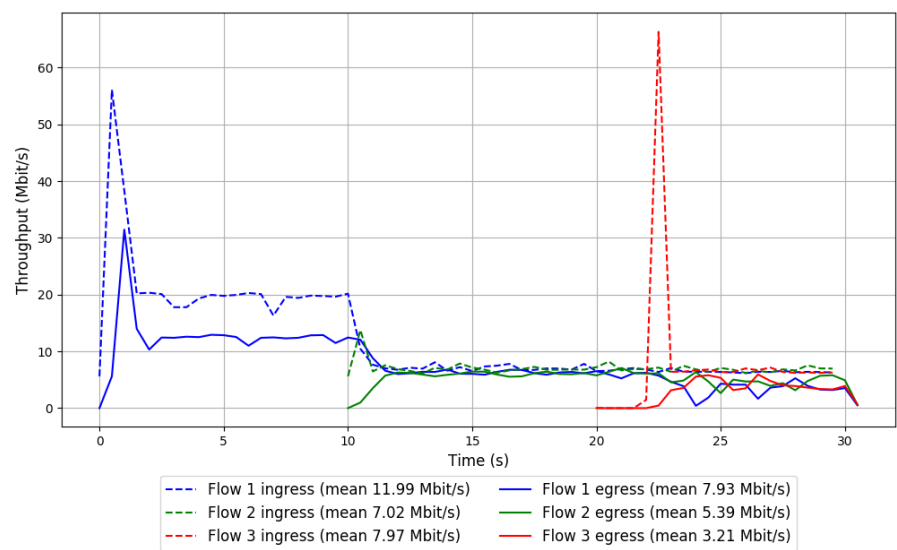
Run 5: Report of Sprout — Data Link

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

Start at: 2019-03-19 02:43:42
End at: 2019-03-19 02:44:12
Local clock offset: -7.866 ms
Remote clock offset: 22.807 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 86.377 ms
Loss rate: 30.64%
-- Flow 1:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 91.279 ms
Loss rate: 32.21%
-- Flow 2:
Average throughput: 4.80 Mbit/s
95th percentile per-packet one-way delay: 83.371 ms
Loss rate: 24.37%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 83.994 ms
Loss rate: 34.42%
```
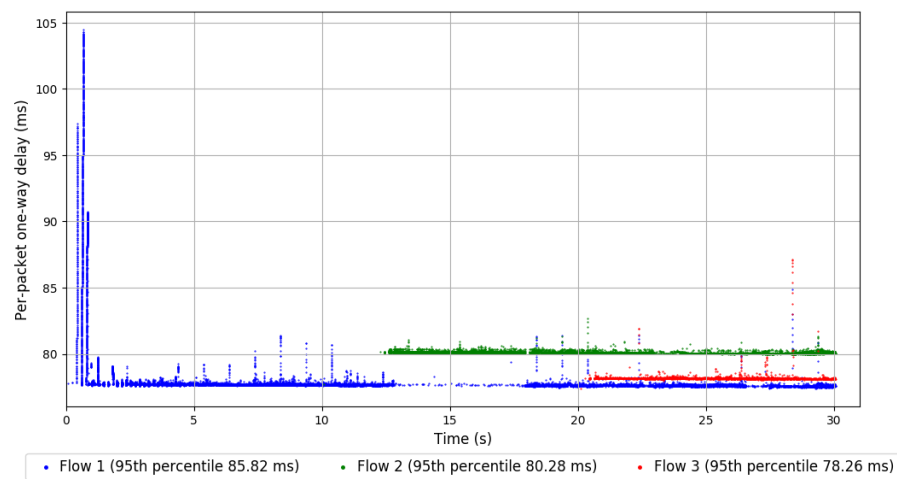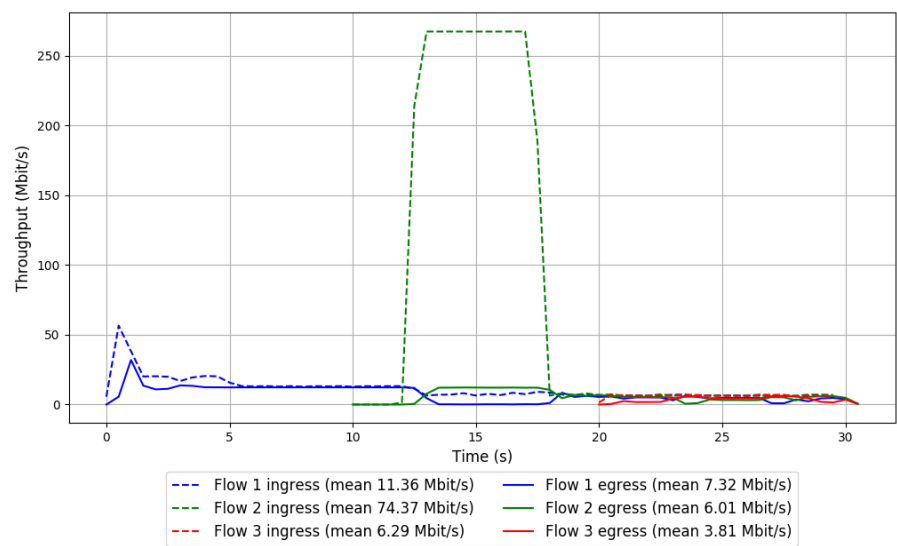
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-03-19 03:10:31
End at: 2019-03-19 03:11:01
Local clock offset: -9.829 ms
Remote clock offset: 37.152 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 85.636 ms
Loss rate: 34.86%
-- Flow 1:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 90.651 ms
Loss rate: 33.87%
-- Flow 2:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 83.762 ms
Loss rate: 23.30%
-- Flow 3:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 83.425 ms
Loss rate: 59.72%
```
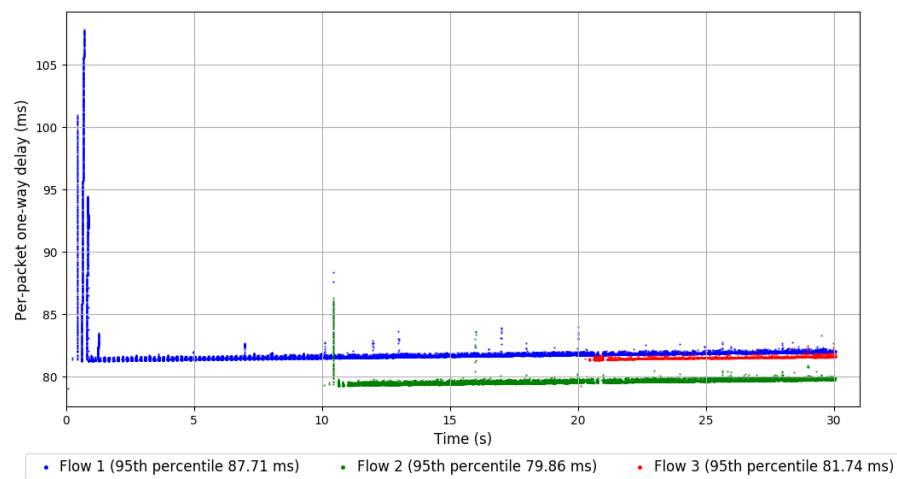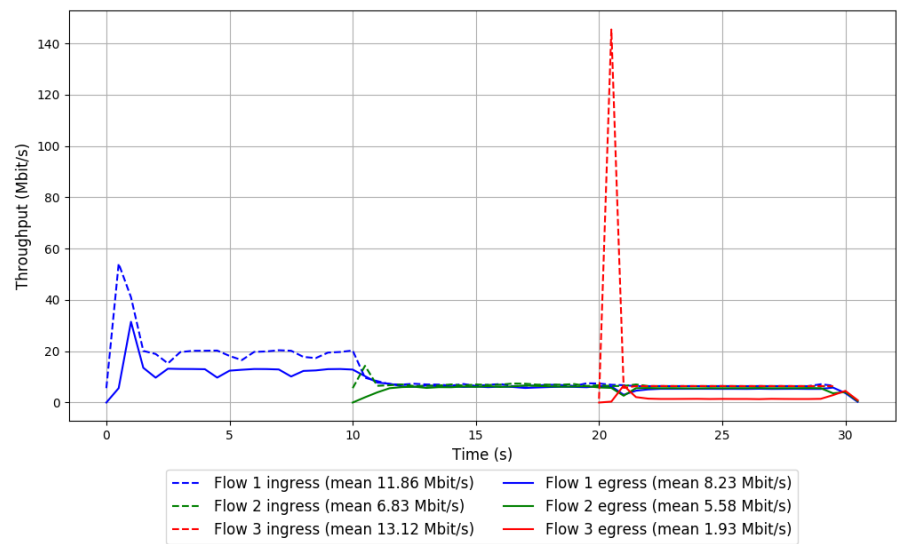
Run 2: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 11.99 Mbit/s)
- Flow 1 egress (mean 7.93 Mbit/s)
- Flow 2 ingress (mean 7.02 Mbit/s)
- Flow 2 egress (mean 5.39 Mbit/s)
- Flow 3 ingress (mean 7.97 Mbit/s)
- Flow 3 egress (mean 3.21 Mbit/s)

- Flow 1 (95th percentile 90.65 ms)
- Flow 2 (95th percentile 83.76 ms)
- Flow 3 (95th percentile 83.42 ms)

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

Start at: 2019-03-19 03:37:19
End at: 2019-03-19 03:37:49
Local clock offset: -10.116 ms
Remote clock offset: 41.886 ms

# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 80.333 ms
Loss rate: 80.01%
-- Flow 1:
Average throughput: 7.32 Mbit/s
95th percentile per-packet one-way delay: 85.822 ms
Loss rate: 35.54%
-- Flow 2:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 80.275 ms
Loss rate: 91.92%
-- Flow 3:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 78.262 ms
Loss rate: 39.45%
```
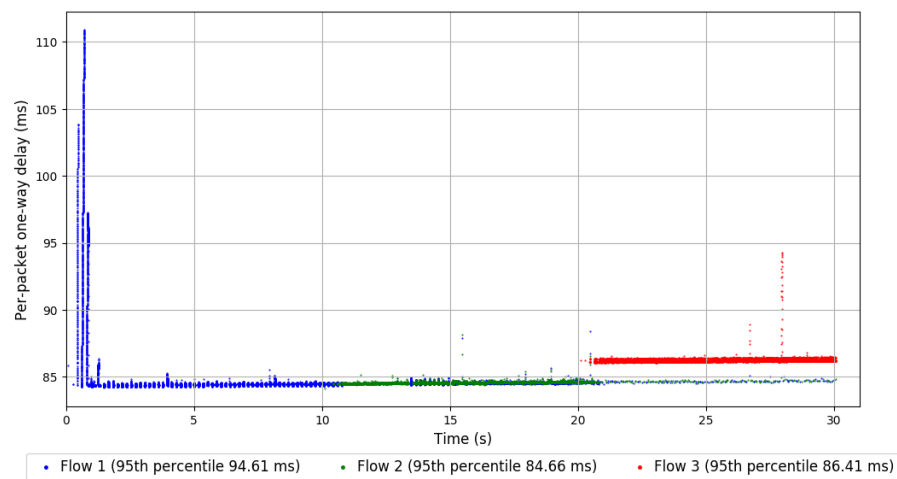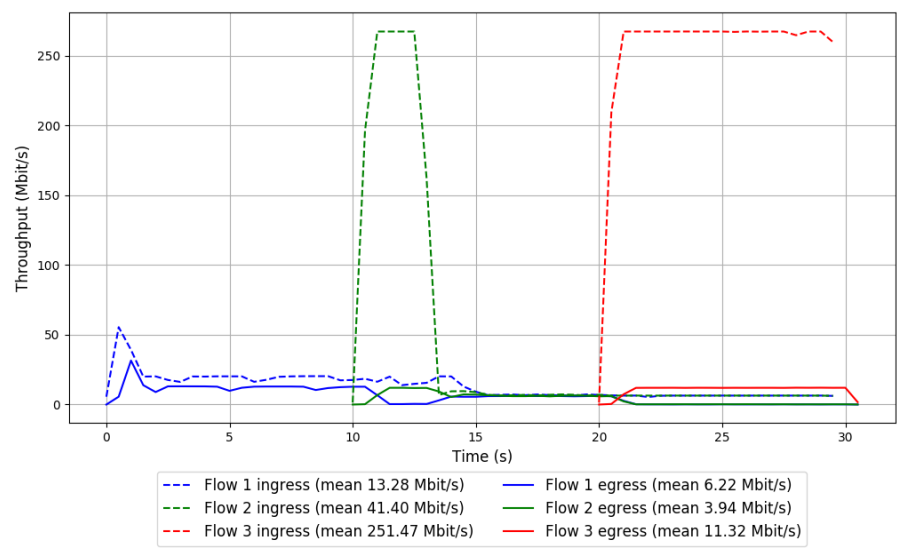
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 11.36 Mbit/s) — Flow 1 egress (mean 7.32 Mbit/s)
Flow 2 ingress (mean 74.37 Mbit/s) — Flow 2 egress (mean 6.01 Mbit/s)
Flow 3 ingress (mean 6.29 Mbit/s) — Flow 3 egress (mean 3.81 Mbit/s)

Flow 1 (95th percentile 85.82 ms) · Flow 2 (95th percentile 80.28 ms) · Flow 3 (95th percentile 78.26 ms)

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

Start at: 2019-03-19 04:04:06
End at: 2019-03-19 04:04:36
Local clock offset: -0.831 ms
Remote clock offset: -5.708 ms


# Below is generated by plot.py at 2019-03-19 04:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 82.284 ms
Loss rate: 39.36%
-- Flow 1:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 87.714 ms
Loss rate: 30.55%
-- Flow 2:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 79.862 ms
Loss rate: 18.33%
-- Flow 3:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 81.742 ms
Loss rate: 85.26%
```
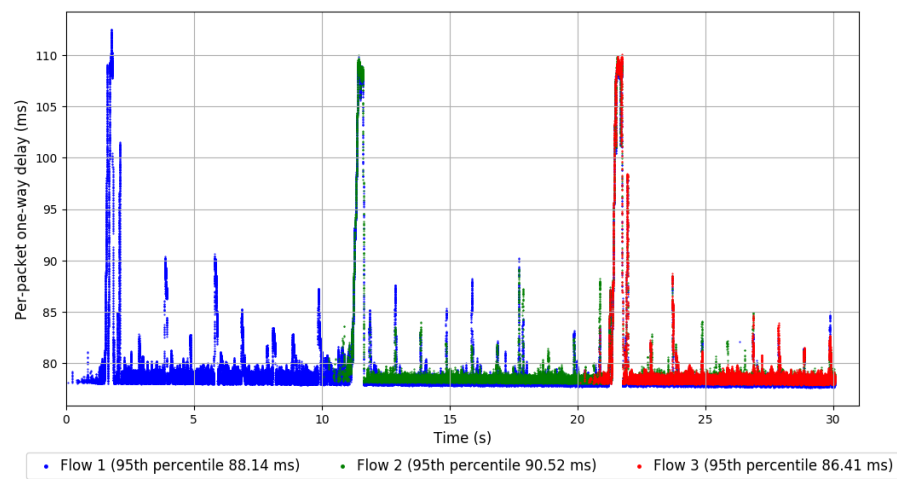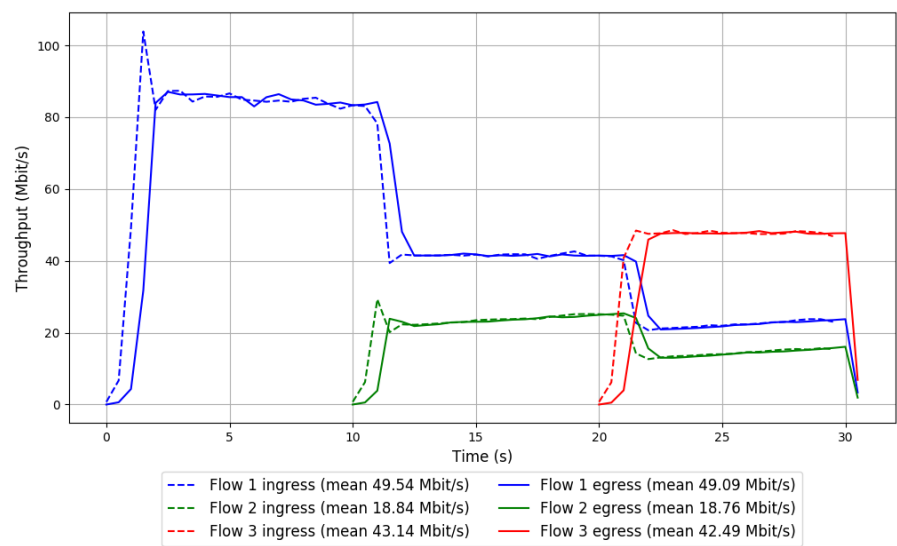
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-03-19 04:30:48
End at: 2019-03-19 04:31:18
Local clock offset: 4.655 ms
Remote clock offset: -18.979 ms


# Below is generated by plot.py at 2019-03-19 04:54:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 86.425 ms
Loss rate: 89.88%
-- Flow 1:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 94.614 ms
Loss rate: 53.25%
-- Flow 2:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 84.658 ms
Loss rate: 90.49%
-- Flow 3:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 86.406 ms
Loss rate: 95.50%
```
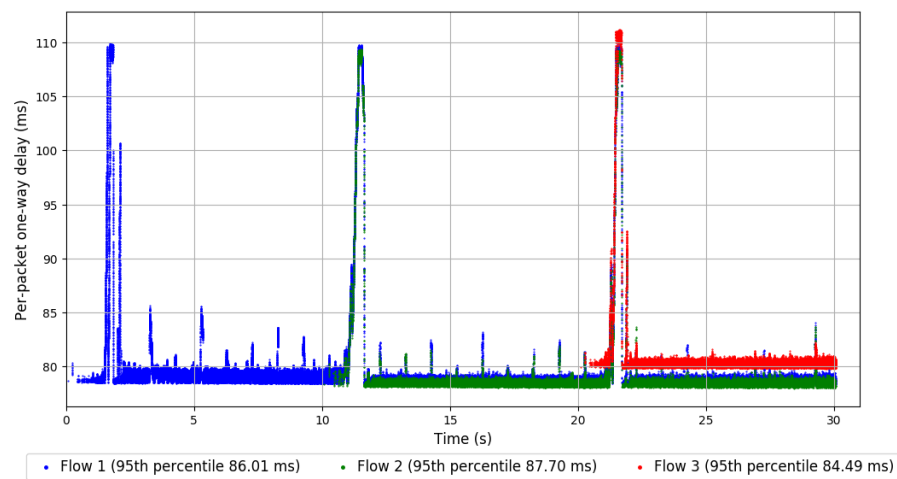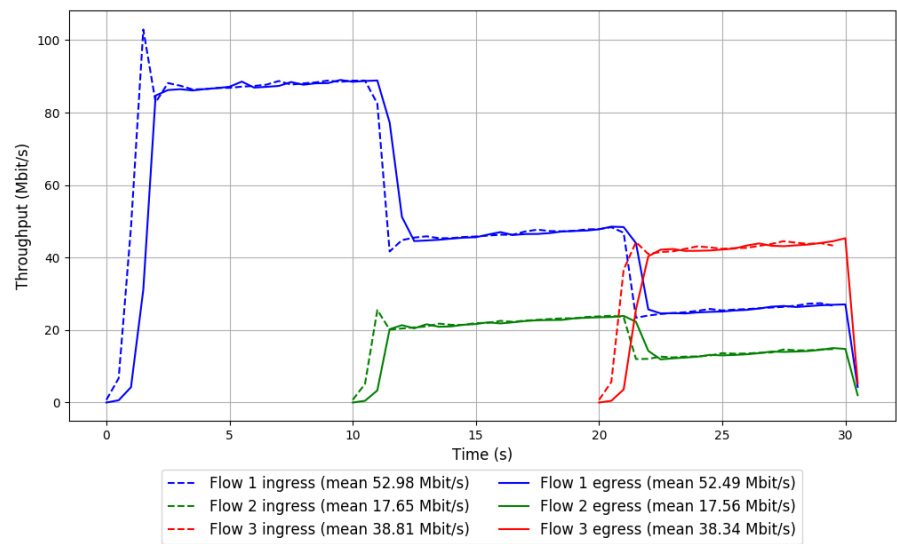
Run 5: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 13.28 Mbit/s)   —— Flow 1 egress (mean 6.22 Mbit/s)
- - - Flow 2 ingress (mean 41.40 Mbit/s)   —— Flow 2 egress (mean 3.94 Mbit/s)
- - - Flow 3 ingress (mean 251.47 Mbit/s)   —— Flow 3 egress (mean 11.32 Mbit/s)

- Flow 1 (95th percentile 94.61 ms)   • Flow 2 (95th percentile 84.66 ms)   • Flow 3 (95th percentile 86.41 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-03-19 02:47:24
End at: 2019-03-19 02:47:54
Local clock offset: -8.082 ms
Remote clock offset: 21.798 ms


# Below is generated by plot.py at 2019-03-19 04:54:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.72 Mbit/s
95th percentile per-packet one-way delay: 88.020 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 88.135 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 18.76 Mbit/s
95th percentile per-packet one-way delay: 90.518 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 42.49 Mbit/s
95th percentile per-packet one-way delay: 86.406 ms
Loss rate: 1.51%
```
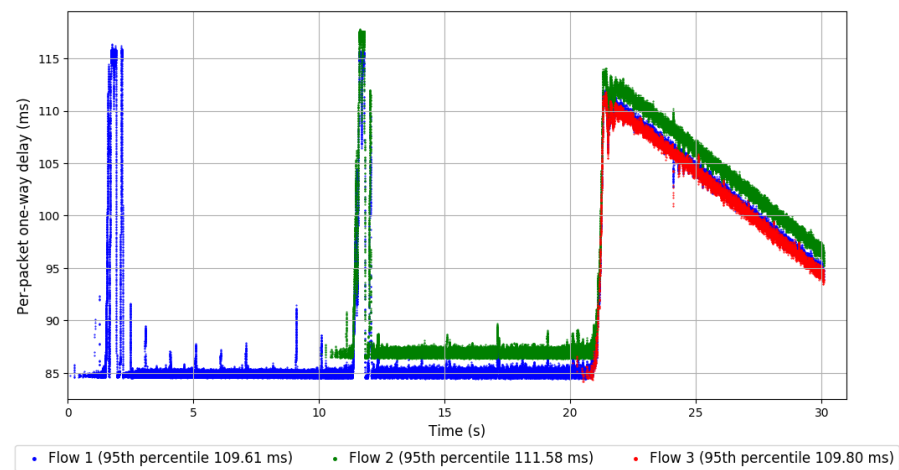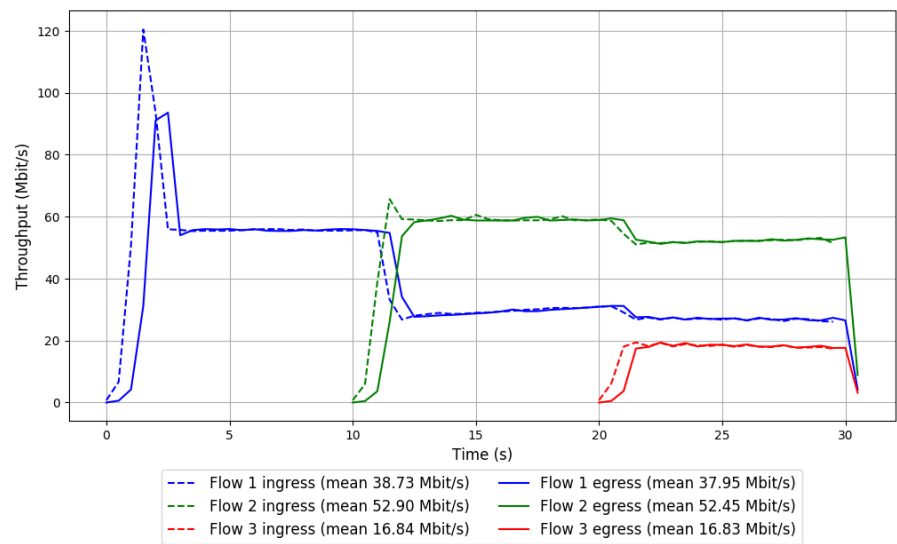
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-03-19 03:14:13
End at: 2019-03-19 03:14:43
Local clock offset: -9.963 ms
Remote clock offset: 33.778 ms


# Below is generated by plot.py at 2019-03-19 04:54:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.93 Mbit/s
95th percentile per-packet one-way delay: 85.882 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 52.49 Mbit/s
95th percentile per-packet one-way delay: 86.006 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 17.56 Mbit/s
95th percentile per-packet one-way delay: 87.698 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 84.487 ms
Loss rate: 1.21%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-03-19 03:41:02
End at: 2019-03-19 03:41:32
Local clock offset: -11.11 ms
Remote clock offset: 49.221 ms


# Below is generated by plot.py at 2019-03-19 04:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 110.830 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 109.606 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 52.45 Mbit/s
95th percentile per-packet one-way delay: 111.578 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 16.83 Mbit/s
95th percentile per-packet one-way delay: 109.796 ms
Loss rate: 0.00%
```
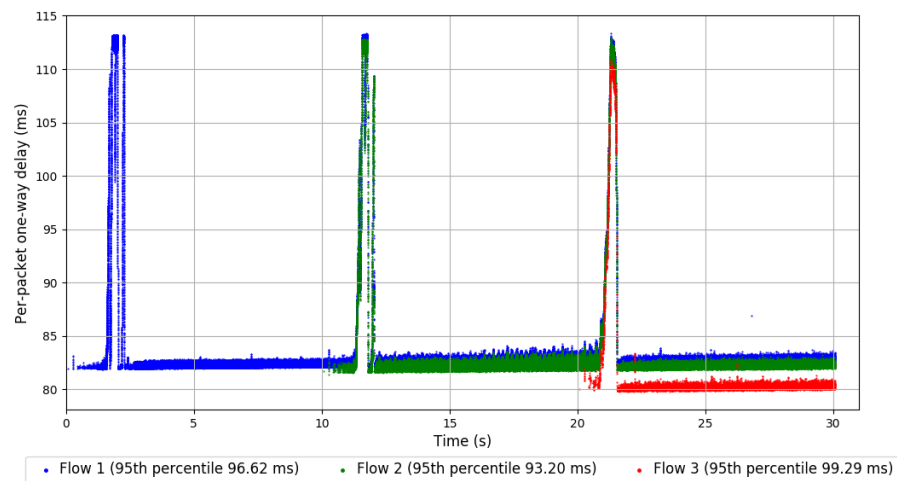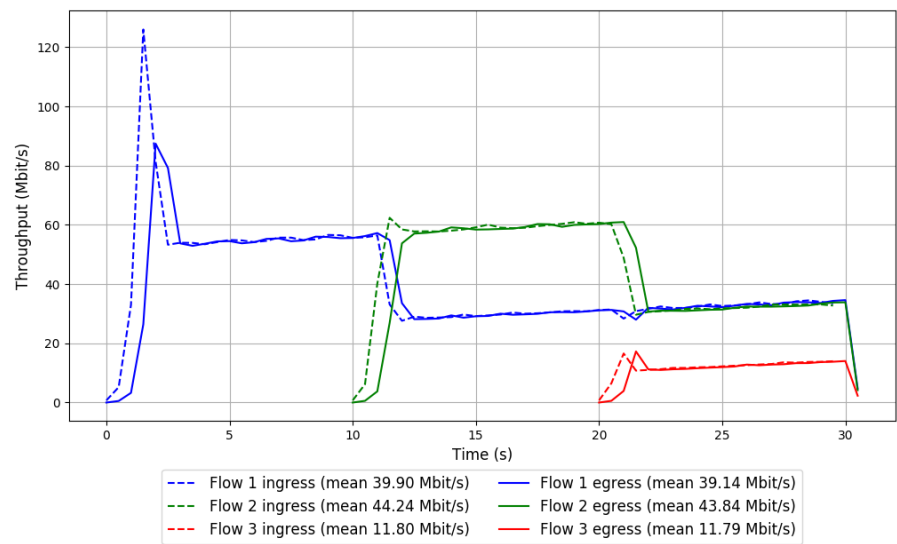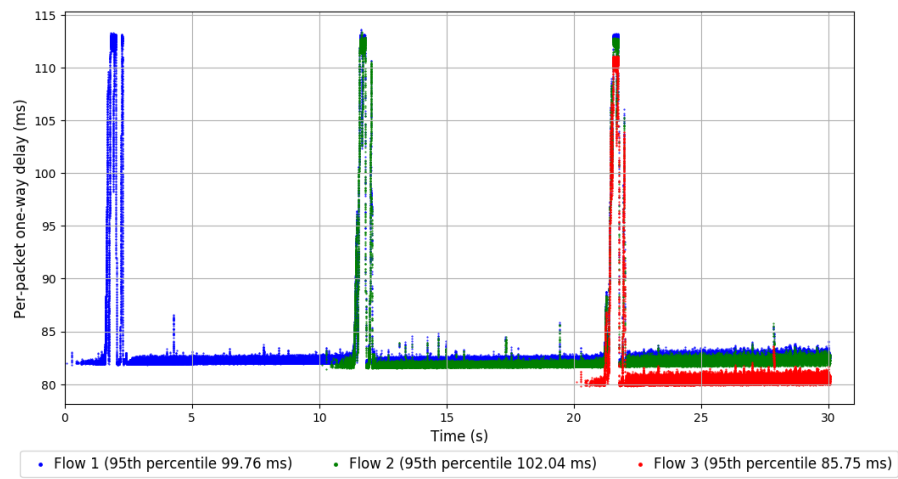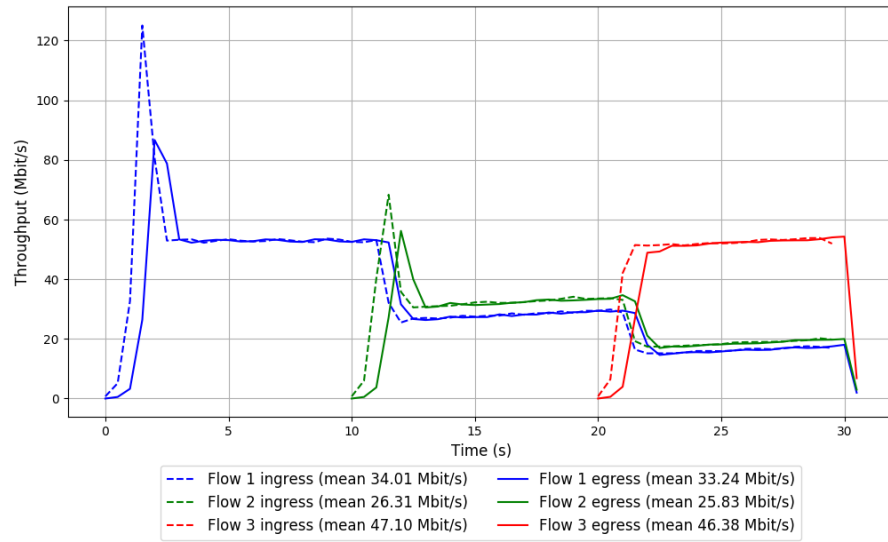
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 38.73 Mbit/s) —— Flow 1 egress (mean 37.95 Mbit/s)
Flow 2 ingress (mean 52.90 Mbit/s) —— Flow 2 egress (mean 52.45 Mbit/s)
Flow 3 ingress (mean 16.84 Mbit/s) —— Flow 3 egress (mean 16.83 Mbit/s)

Flow 1 (95th percentile 109.61 ms) • Flow 2 (95th percentile 111.58 ms) • Flow 3 (95th percentile 109.80 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-03-19 04:07:47
End at: 2019-03-19 04:08:17
Local clock offset: 0.076 ms
Remote clock offset: -8.93 ms


# Below is generated by plot.py at 2019-03-19 04:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.28 Mbit/s
95th percentile per-packet one-way delay: 95.300 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 39.14 Mbit/s
95th percentile per-packet one-way delay: 96.616 ms
Loss rate: 1.90%
-- Flow 2:
Average throughput: 43.84 Mbit/s
95th percentile per-packet one-way delay: 93.202 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 99.288 ms
Loss rate: 0.03%
```

Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-03-19 04:34:31
End at: 2019-03-19 04:35:01
Local clock offset: 4.372 ms
Remote clock offset: -25.96 ms


# Below is generated by plot.py at 2019-03-19 04:54:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.88 Mbit/s
95th percentile per-packet one-way delay: 97.882 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 33.24 Mbit/s
95th percentile per-packet one-way delay: 99.762 ms
Loss rate: 2.26%
-- Flow 2:
Average throughput: 25.83 Mbit/s
95th percentile per-packet one-way delay: 102.042 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 46.38 Mbit/s
95th percentile per-packet one-way delay: 85.749 ms
Loss rate: 1.52%
```
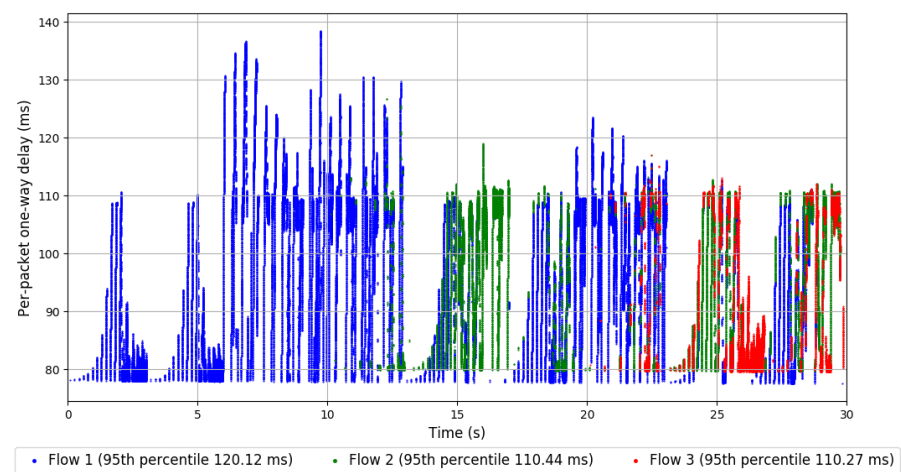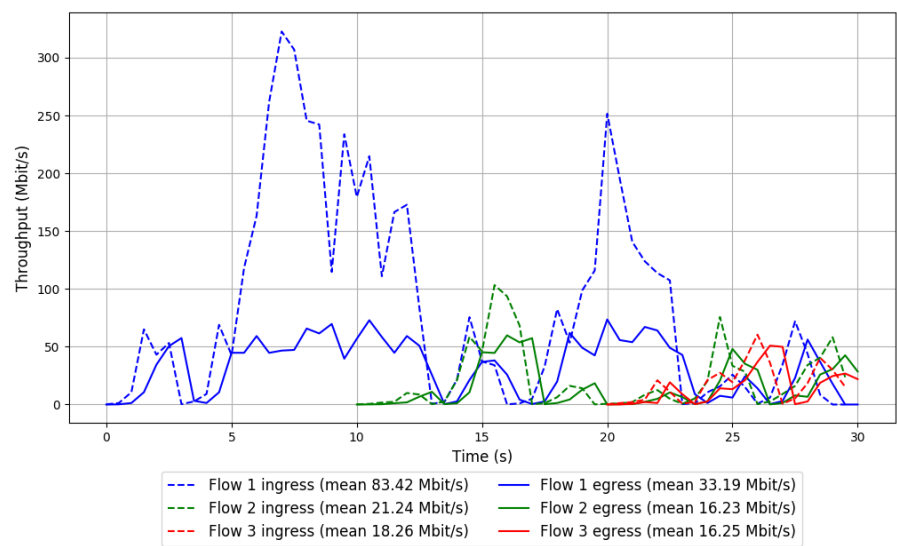
Run 5: Report of TCP Vegas — Data Link

- - - Flow 1 ingress (mean 34.01 Mbit/s) —— Flow 1 egress (mean 33.24 Mbit/s)
- - - Flow 2 ingress (mean 26.31 Mbit/s) —— Flow 2 egress (mean 25.83 Mbit/s)
- - - Flow 3 ingress (mean 47.10 Mbit/s) —— Flow 3 egress (mean 46.38 Mbit/s)

- Flow 1 (95th percentile 99.76 ms)   - Flow 2 (95th percentile 102.04 ms)   - Flow 3 (95th percentile 85.75 ms)
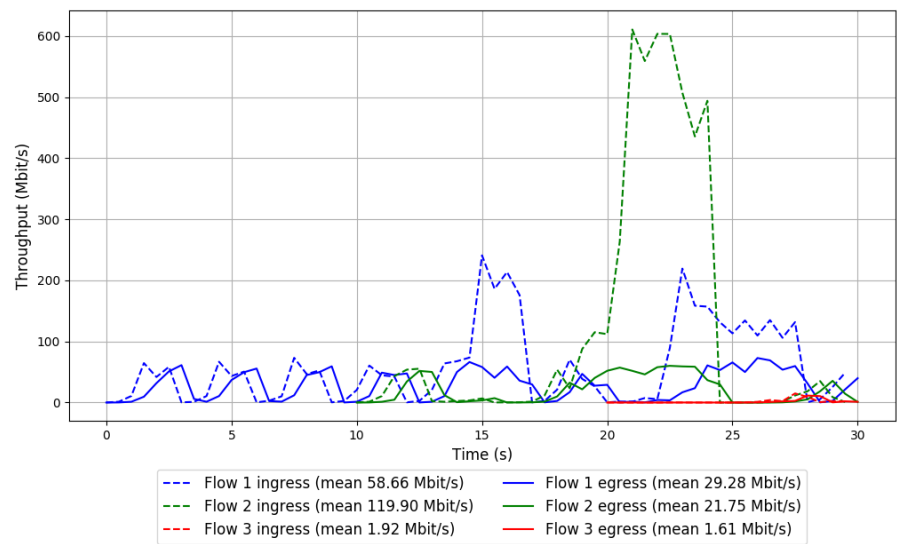
```
Run 1: Statistics of Verus

Start at: 2019-03-19 02:41:06
End at: 2019-03-19 02:41:36
Local clock offset: -7.815 ms
Remote clock offset: 16.6 ms


# Below is generated by plot.py at 2019-03-19 04:54:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.15 Mbit/s
95th percentile per-packet one-way delay: 116.162 ms
Loss rate: 52.40%
-- Flow 1:
Average throughput: 33.19 Mbit/s
95th percentile per-packet one-way delay: 120.120 ms
Loss rate: 60.21%
-- Flow 2:
Average throughput: 16.23 Mbit/s
95th percentile per-packet one-way delay: 110.441 ms
Loss rate: 23.61%
-- Flow 3:
Average throughput: 16.25 Mbit/s
95th percentile per-packet one-way delay: 110.265 ms
Loss rate: 10.98%
```
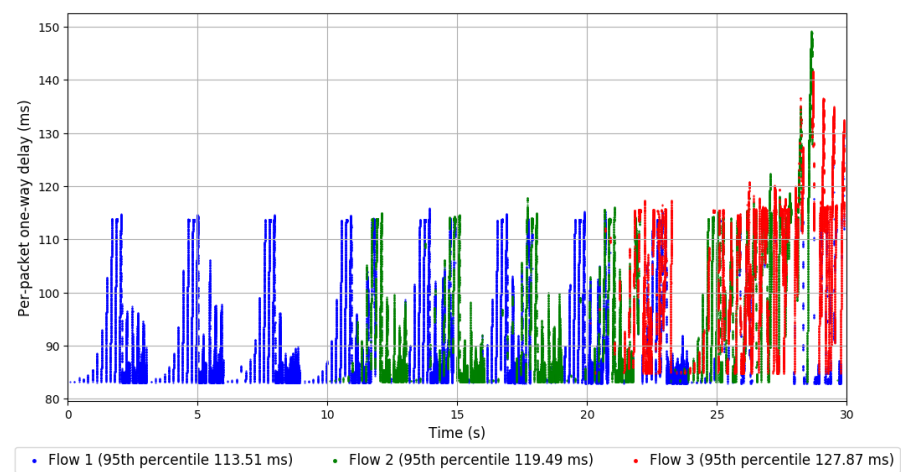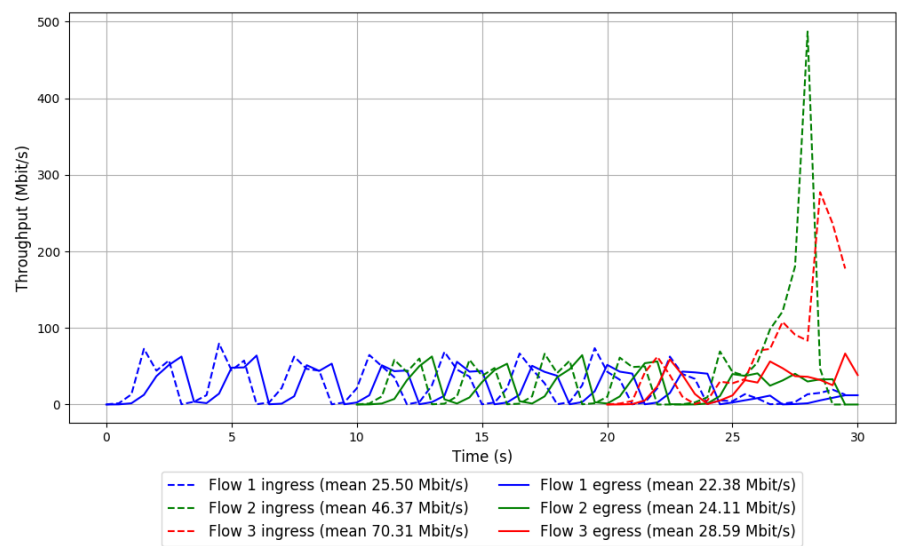
Run 1: Report of Verus — Data Link

- Flow 1 ingress (mean 83.42 Mbit/s)
- Flow 1 egress (mean 33.19 Mbit/s)
- Flow 2 ingress (mean 21.24 Mbit/s)
- Flow 2 egress (mean 16.23 Mbit/s)
- Flow 3 ingress (mean 18.26 Mbit/s)
- Flow 3 egress (mean 16.25 Mbit/s)

- Flow 1 (95th percentile 120.12 ms)
- Flow 2 (95th percentile 110.44 ms)
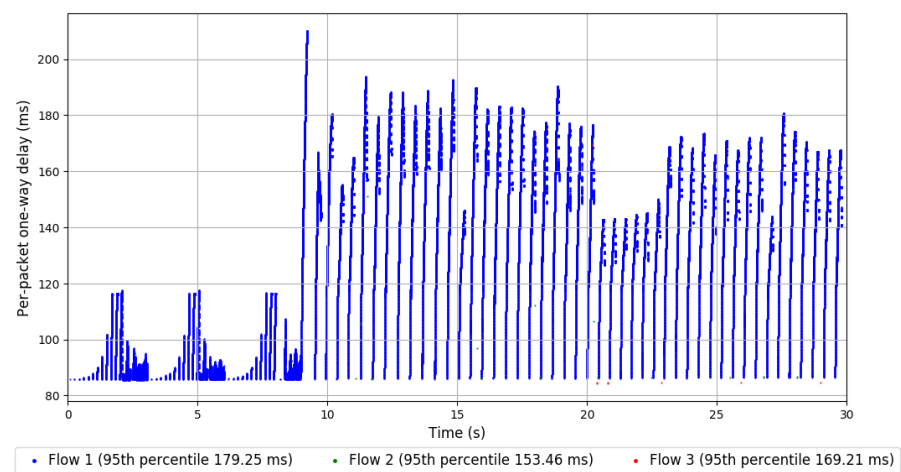- Flow 3 (95th percentile 110.27 ms)

```
Run 2: Statistics of Verus

Start at: 2019-03-19 03:07:55
End at: 2019-03-19 03:08:25
Local clock offset: -9.699 ms
Remote clock offset: 31.335 ms


# Below is generated by plot.py at 2019-03-19 04:55:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.24 Mbit/s
95th percentile per-packet one-way delay: 145.770 ms
Loss rate: 68.14%
-- Flow 1:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 112.651 ms
Loss rate: 50.08%
-- Flow 2:
Average throughput: 21.75 Mbit/s
95th percentile per-packet one-way delay: 160.433 ms
Loss rate: 81.86%
-- Flow 3:
Average throughput: 1.61 Mbit/s
95th percentile per-packet one-way delay: 110.825 ms
Loss rate: 16.13%
```

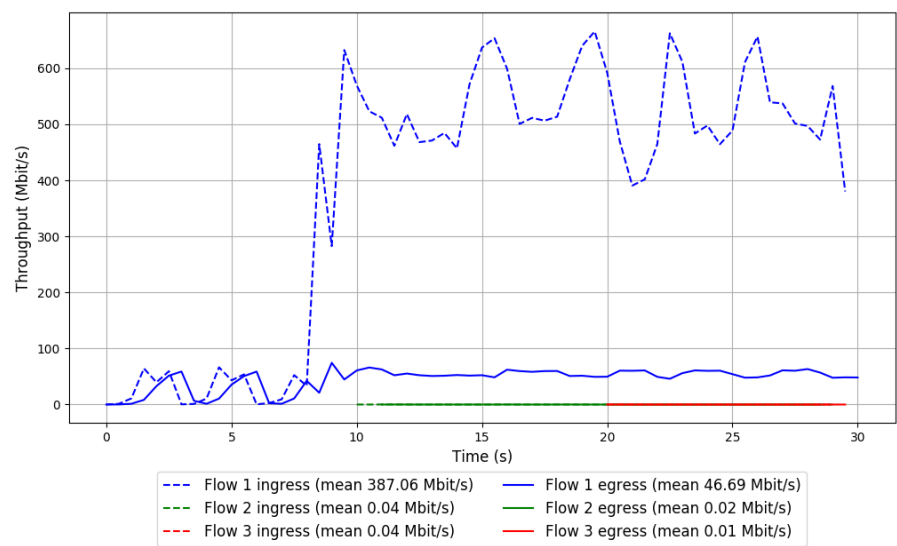## Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-03-19 03:34:42
End at: 2019-03-19 03:35:12
Local clock offset: -10.783 ms
Remote clock offset: 45.94 ms


# Below is generated by plot.py at 2019-03-19 04:55:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.55 Mbit/s
95th percentile per-packet one-way delay: 116.285 ms
Loss rate: 39.91%
-- Flow 1:
Average throughput: 22.38 Mbit/s
95th percentile per-packet one-way delay: 113.513 ms
Loss rate: 12.14%
-- Flow 2:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 119.488 ms
Loss rate: 48.46%
-- Flow 3:
Average throughput: 28.59 Mbit/s
95th percentile per-packet one-way delay: 127.868 ms
Loss rate: 59.25%
```

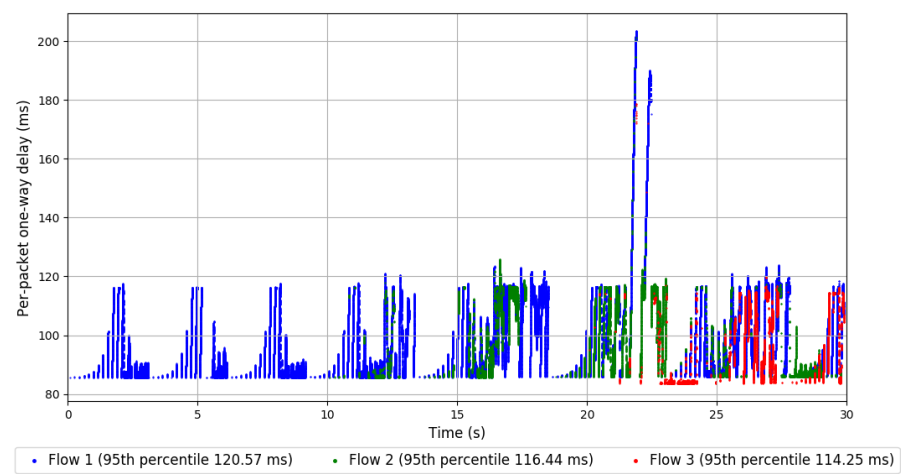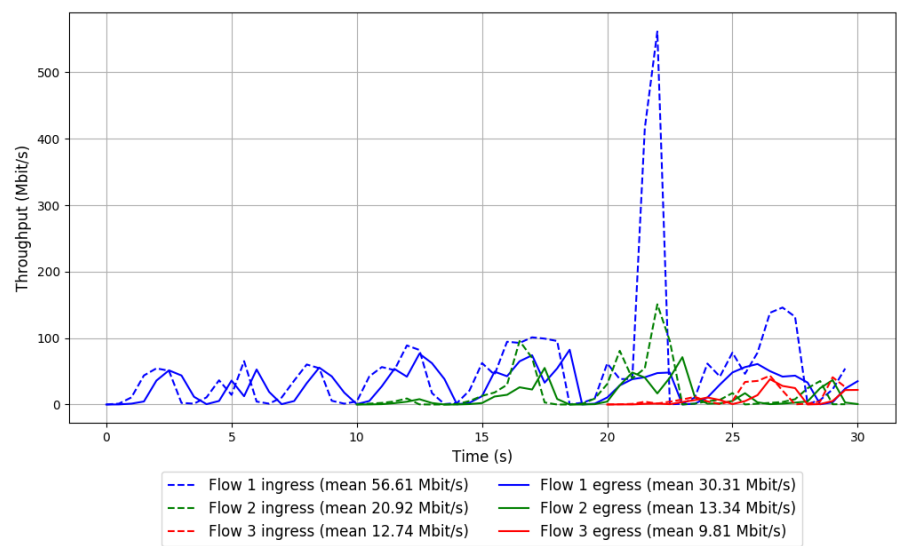Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-03-19 04:01:27
End at: 2019-03-19 04:01:57
Local clock offset: -1.665 ms
Remote clock offset: 2.619 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.70 Mbit/s
95th percentile per-packet one-way delay: 179.246 ms
Loss rate: 87.91%
-- Flow 1:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 179.246 ms
Loss rate: 87.92%
-- Flow 2:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 153.464 ms
Loss rate: 65.15%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 169.212 ms
Loss rate: 66.67%
```
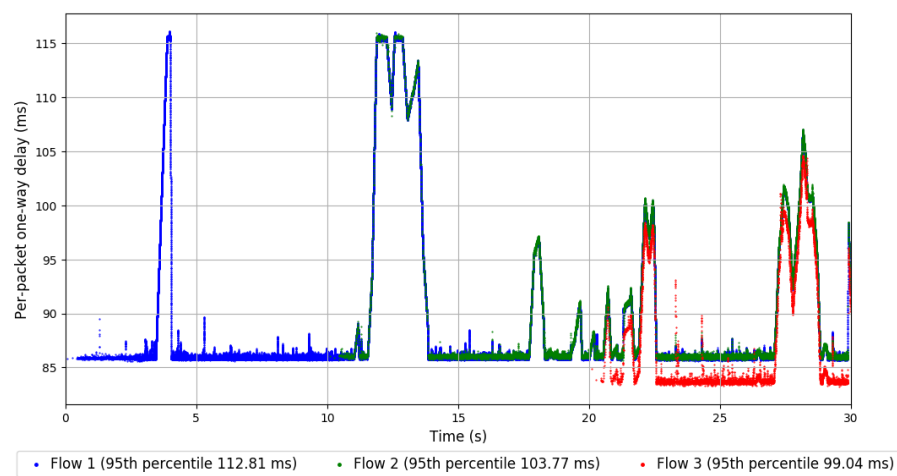
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-03-19 04:28:12
End at: 2019-03-19 04:28:42
Local clock offset: 3.429 ms
Remote clock offset: -18.687 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 117.504 ms
Loss rate: 43.21%
-- Flow 1:
Average throughput: 30.31 Mbit/s
95th percentile per-packet one-way delay: 120.566 ms
Loss rate: 46.41%
-- Flow 2:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 116.437 ms
Loss rate: 36.23%
-- Flow 3:
Average throughput: 9.81 Mbit/s
95th percentile per-packet one-way delay: 114.249 ms
Loss rate: 22.89%
```

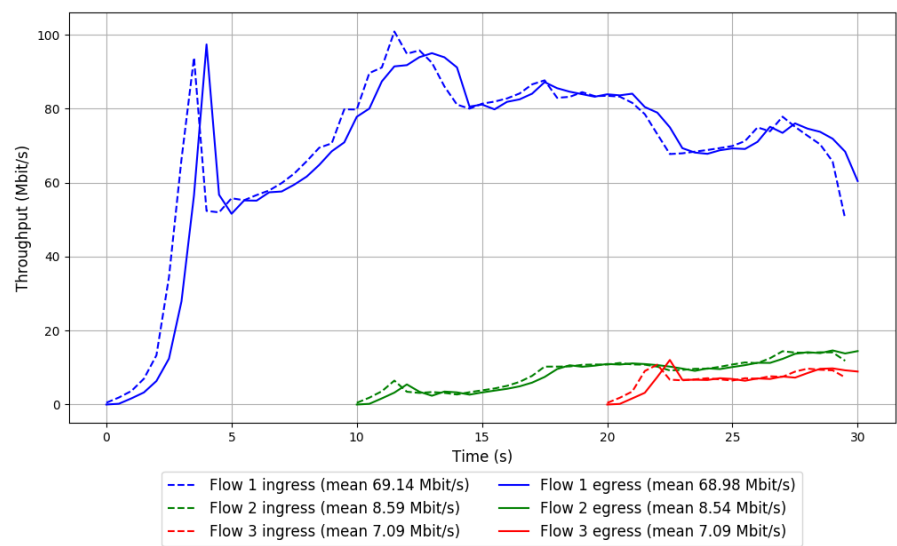## Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-03-19 02:30:41
End at: 2019-03-19 02:31:11
Local clock offset: -6.842 ms
Remote clock offset: 17.633 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.01 Mbit/s
95th percentile per-packet one-way delay: 112.202 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 68.98 Mbit/s
95th percentile per-packet one-way delay: 112.805 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 103.774 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 99.039 ms
Loss rate: 0.00%
```

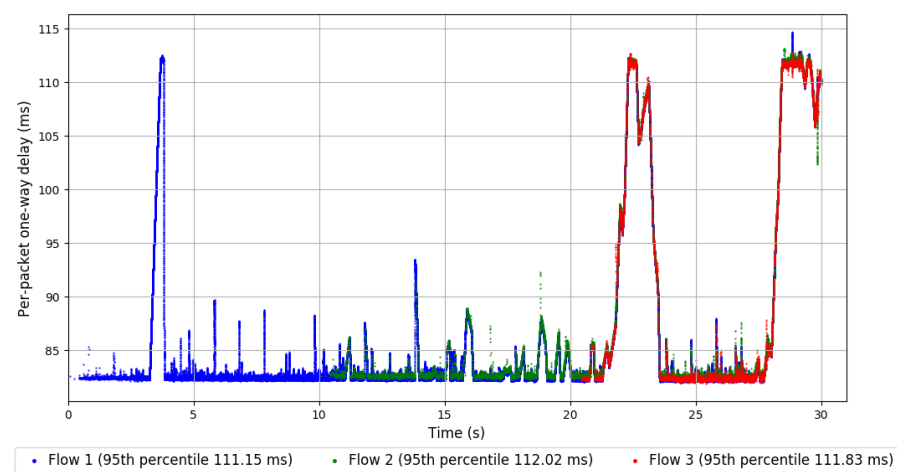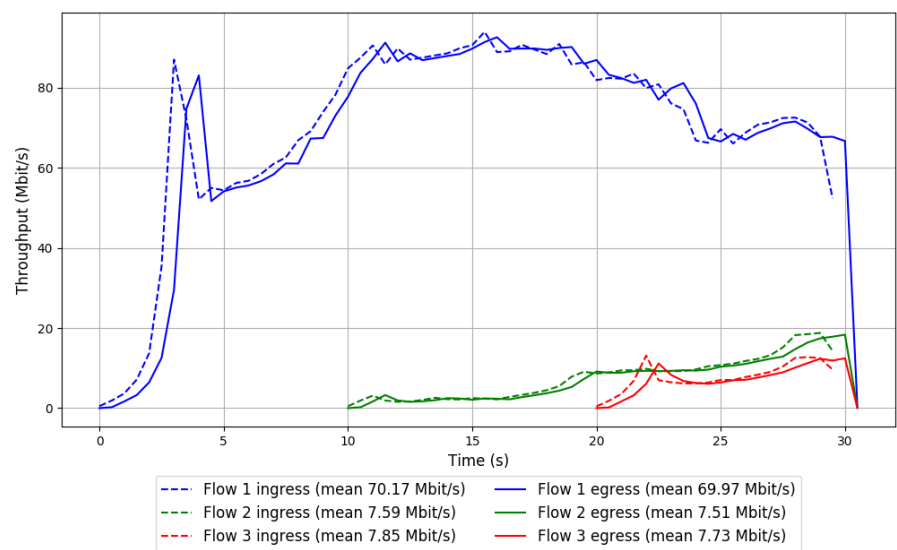# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-03-19 02:57:33
End at: 2019-03-19 02:58:03
Local clock offset: -8.34 ms
Remote clock offset: 32.168 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.52 Mbit/s
95th percentile per-packet one-way delay: 111.613 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 69.97 Mbit/s
95th percentile per-packet one-way delay: 111.153 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 112.019 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 111.831 ms
Loss rate: 1.23%
```
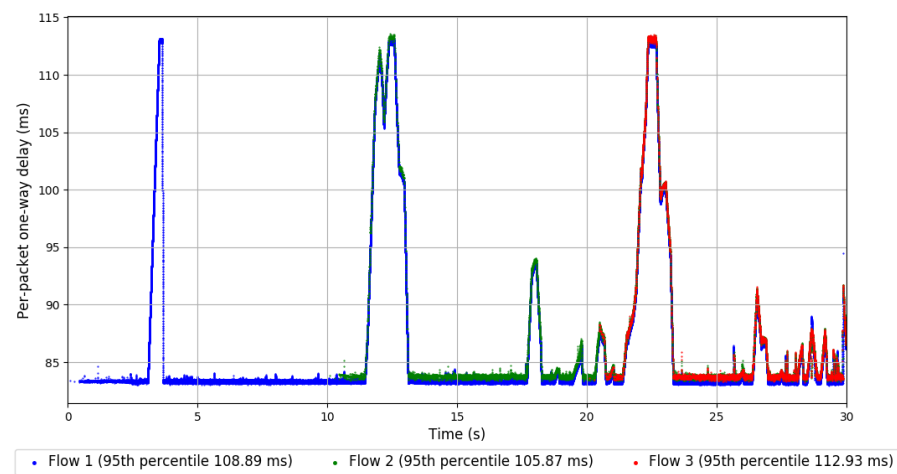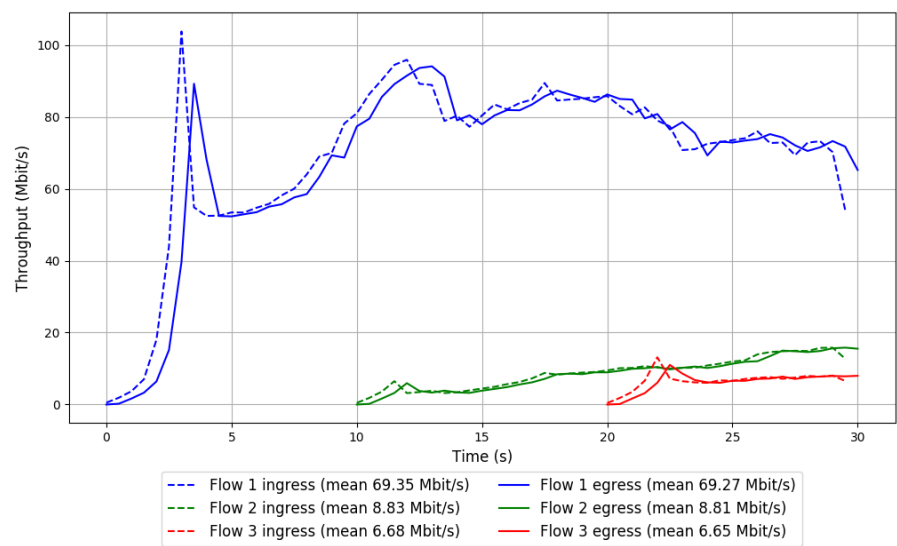
Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 70.17 Mbit/s) --- Flow 1 egress (mean 69.97 Mbit/s)
Flow 2 ingress (mean 7.59 Mbit/s) --- Flow 2 egress (mean 7.51 Mbit/s)
Flow 3 ingress (mean 7.85 Mbit/s) --- Flow 3 egress (mean 7.73 Mbit/s)

Flow 1 (95th percentile 111.15 ms) · Flow 2 (95th percentile 112.02 ms) · Flow 3 (95th percentile 111.83 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-03-19 03:24:17
End at: 2019-03-19 03:24:47
Local clock offset: -9.611 ms
Remote clock offset: 41.359 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.32 Mbit/s
95th percentile per-packet one-way delay: 108.812 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 69.27 Mbit/s
95th percentile per-packet one-way delay: 108.890 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 105.868 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 112.927 ms
Loss rate: 0.47%
```
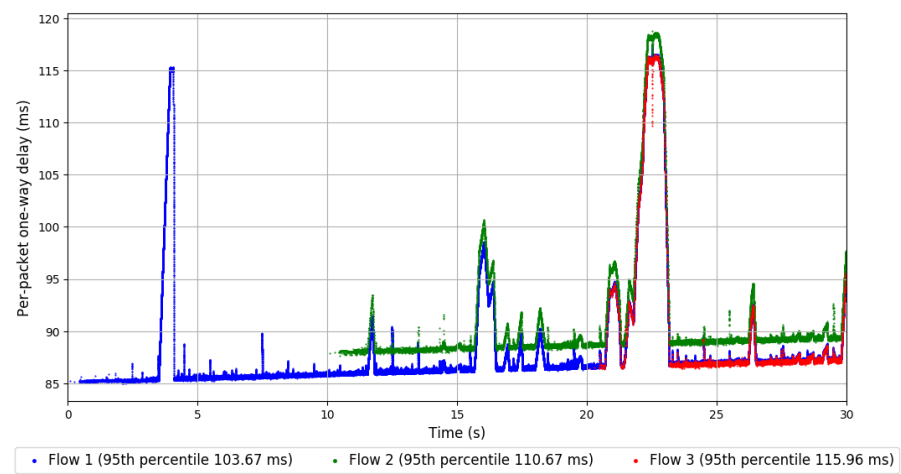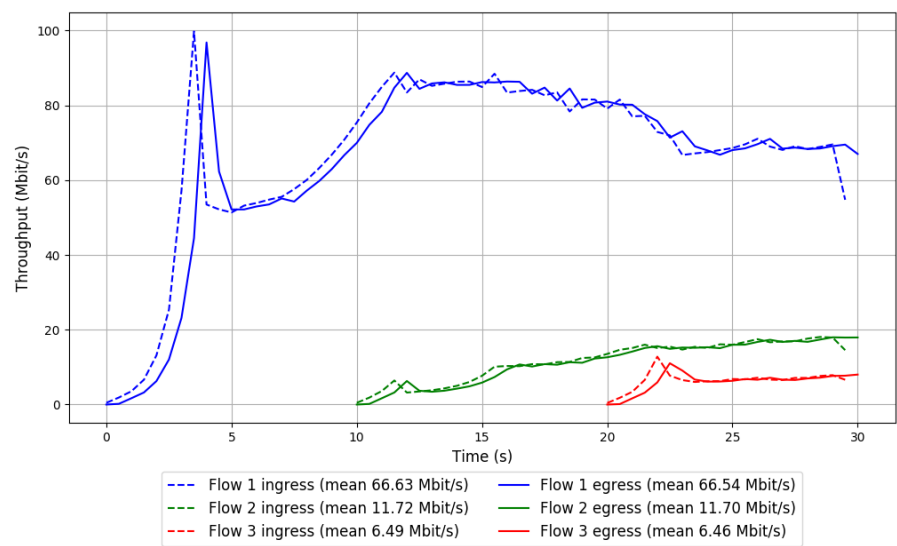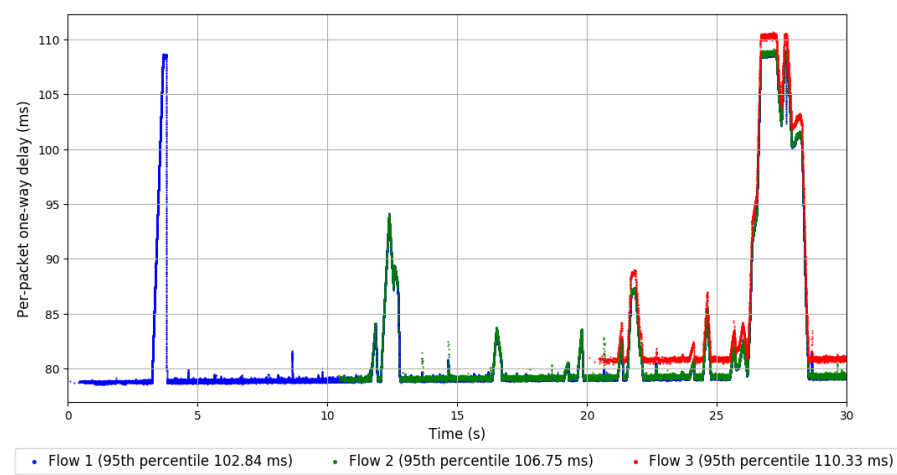
Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 69.35 Mbit/s) — Flow 1 egress (mean 69.27 Mbit/s)
Flow 2 ingress (mean 8.83 Mbit/s) — Flow 2 egress (mean 8.81 Mbit/s)
Flow 3 ingress (mean 6.68 Mbit/s) — Flow 3 egress (mean 6.65 Mbit/s)

Flow 1 (95th percentile 108.89 ms) — Flow 2 (95th percentile 105.87 ms) — Flow 3 (95th percentile 112.93 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-03-19 03:51:06
End at: 2019-03-19 03:51:36
Local clock offset: -5.817 ms
Remote clock offset: 28.092 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.46 Mbit/s
95th percentile per-packet one-way delay: 105.463 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 66.54 Mbit/s
95th percentile per-packet one-way delay: 103.672 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 11.70 Mbit/s
95th percentile per-packet one-way delay: 110.674 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 6.46 Mbit/s
95th percentile per-packet one-way delay: 115.960 ms
Loss rate: 0.36%
```

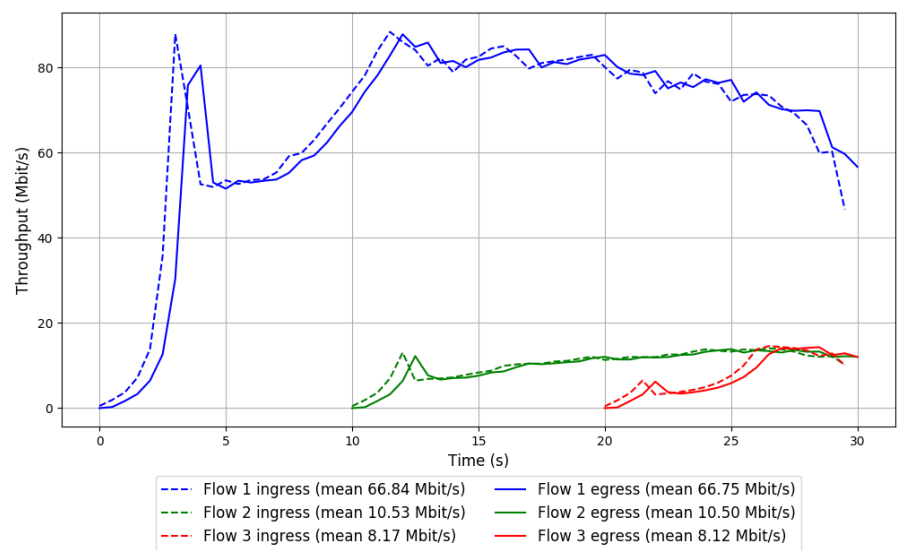# Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-03-19 04:17:51
End at: 2019-03-19 04:18:21
Local clock offset: 1.93 ms
Remote clock offset: -17.478 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.42 Mbit/s
95th percentile per-packet one-way delay: 104.697 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 66.75 Mbit/s
95th percentile per-packet one-way delay: 102.838 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 106.754 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 110.331 ms
Loss rate: 0.55%
```
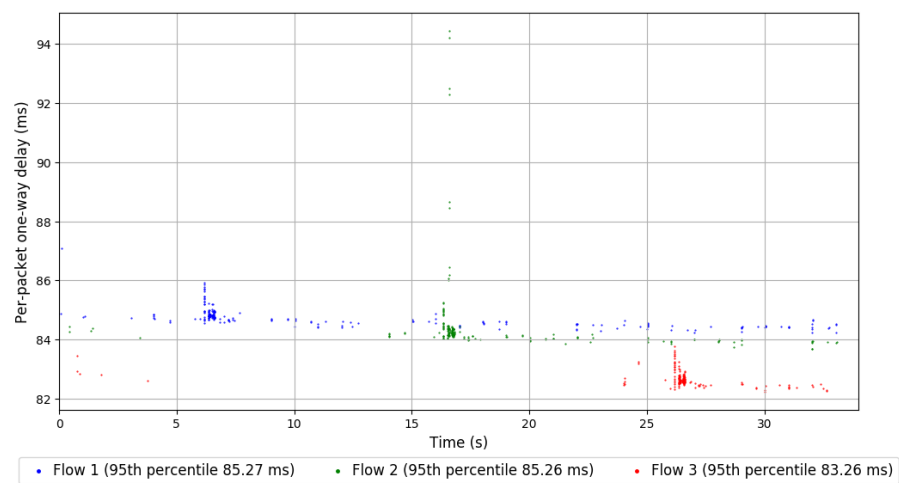
Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-03-19 02:48:41
End at: 2019-03-19 02:49:11
Local clock offset: -7.513 ms
Remote clock offset: 27.68 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 85.041 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.274 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 85.263 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 83.256 ms
Loss rate: 0.00%
```
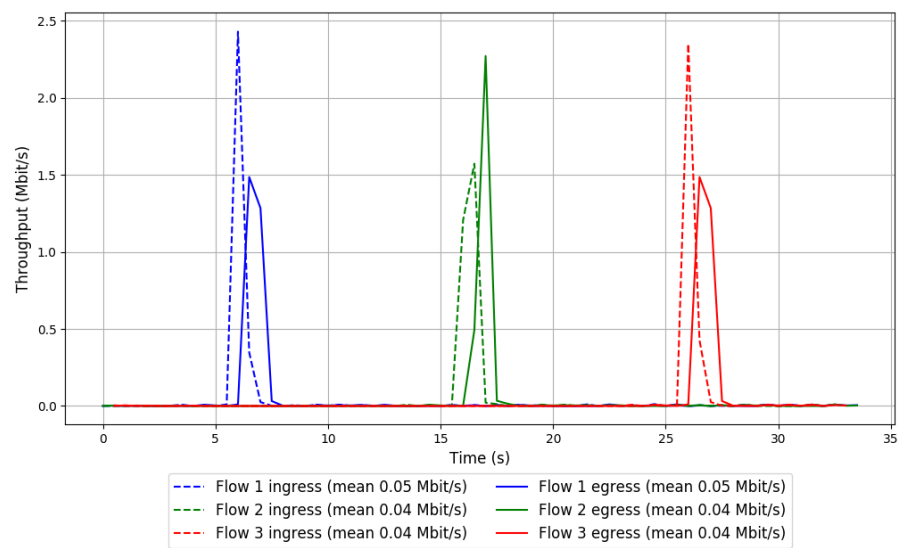
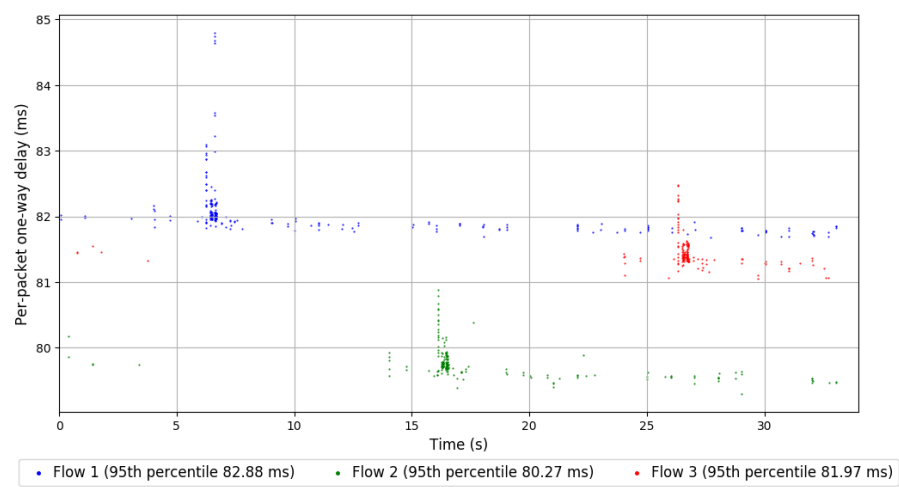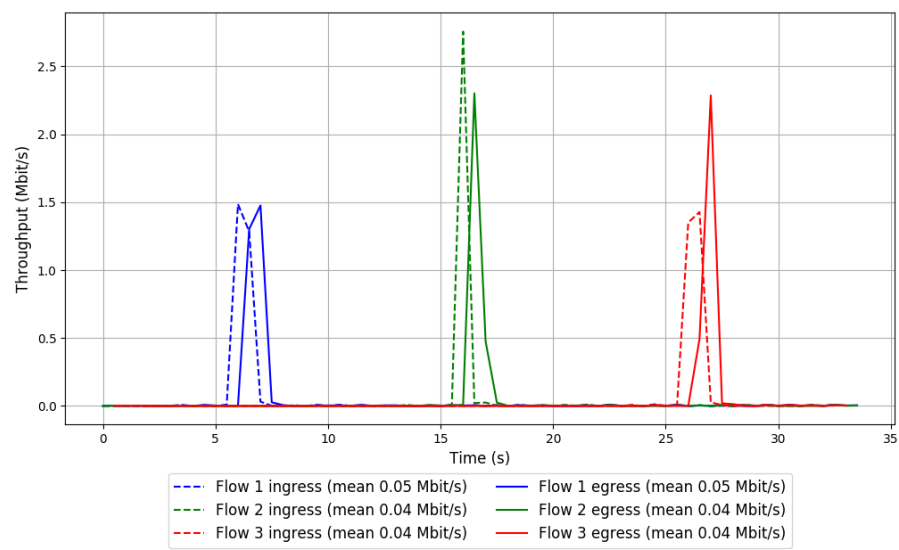Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-03-19 03:15:31
End at: 2019-03-19 03:16:01
Local clock offset: -10.09 ms
Remote clock offset: 35.314 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 82.245 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 82.877 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 80.273 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 81.968 ms
Loss rate: 0.00%
```

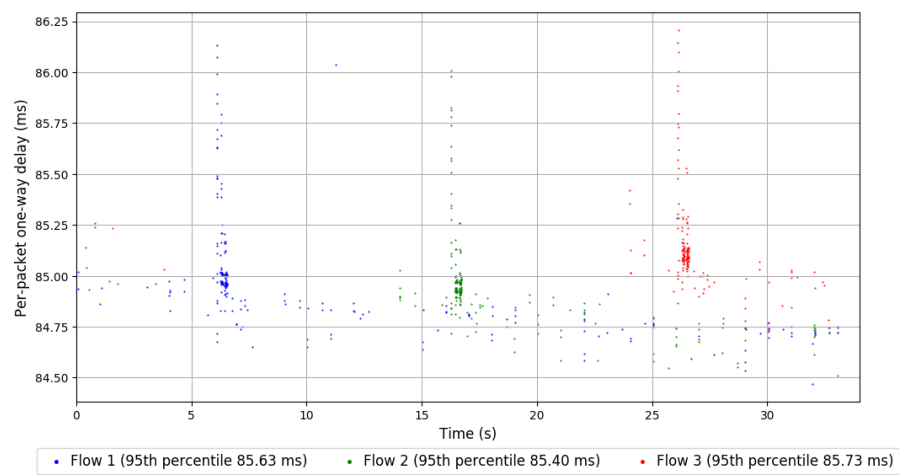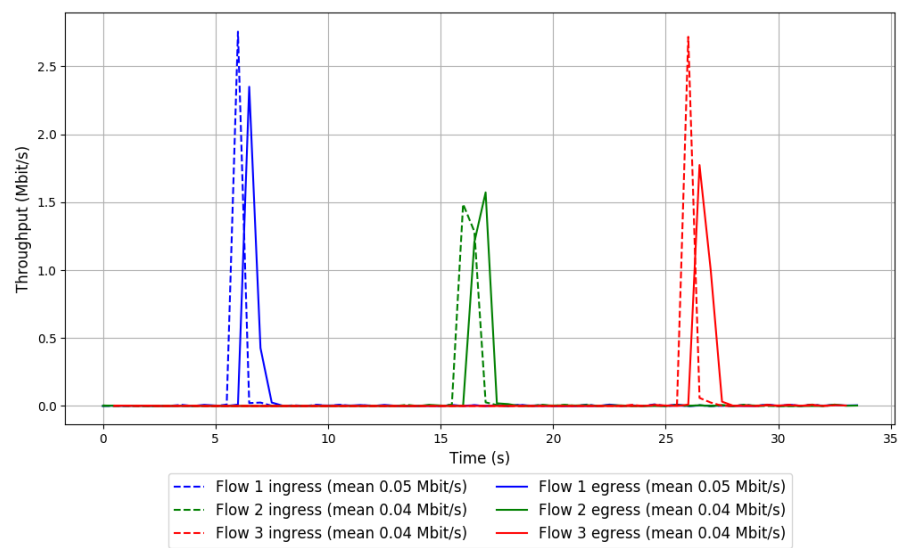Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-03-19 03:42:19
End at: 2019-03-19 03:42:49
Local clock offset: -11.16 ms
Remote clock offset: 48.424 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 85.619 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 85.403 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 85.729 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-03-19 04:09:04
End at: 2019-03-19 04:09:34
Local clock offset: 0.376 ms
Remote clock offset: -5.93 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 85.836 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 85.944 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 84.664 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 84.664 ms
Loss rate: 0.00%
```
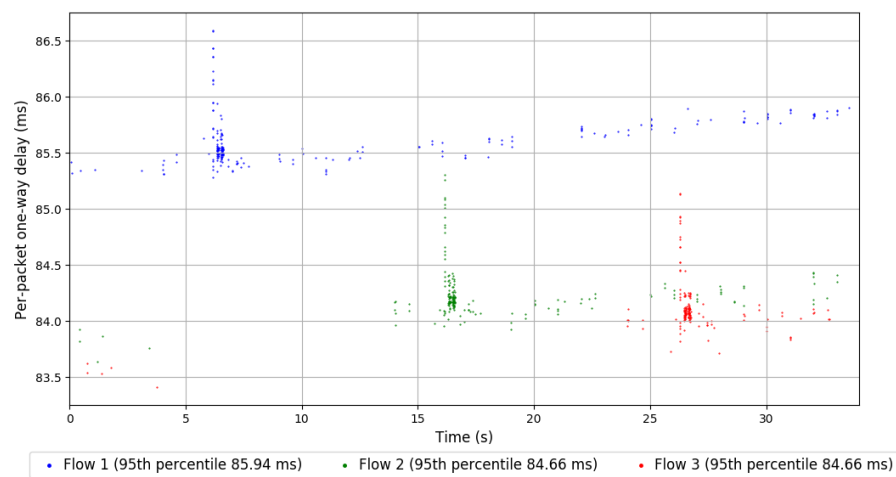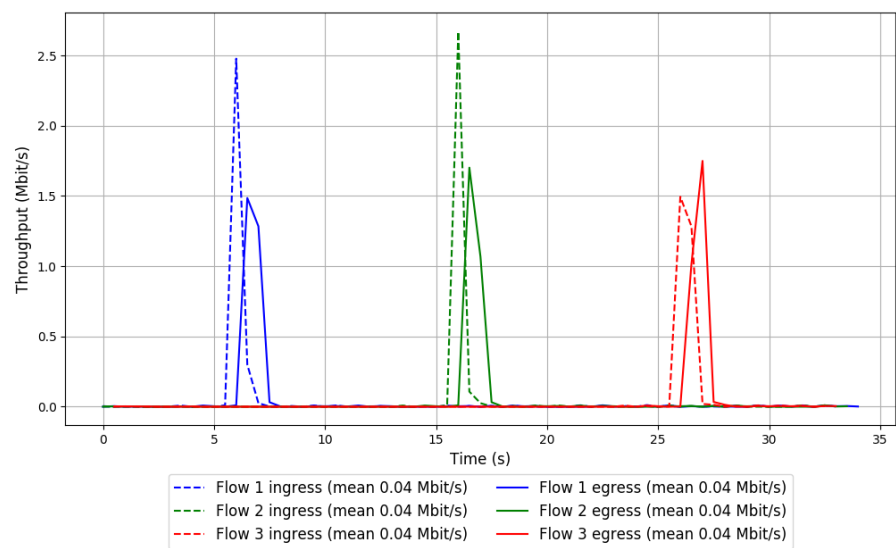
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-03-19 04:35:48
End at: 2019-03-19 04:36:18
Local clock offset: 4.564 ms
Remote clock offset: -22.811 ms


# Below is generated by plot.py at 2019-03-19 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 85.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 83.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 84.555 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 86.436 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link