Pantheon Report

Generated at 2019-03-27 03:25:00 (UTC).

Data path: AWS California 2 on ens5 (*local*) →Mexico on em1 (*remote*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against time.stanford.edu and have been applied to correct the timestamps in logs.
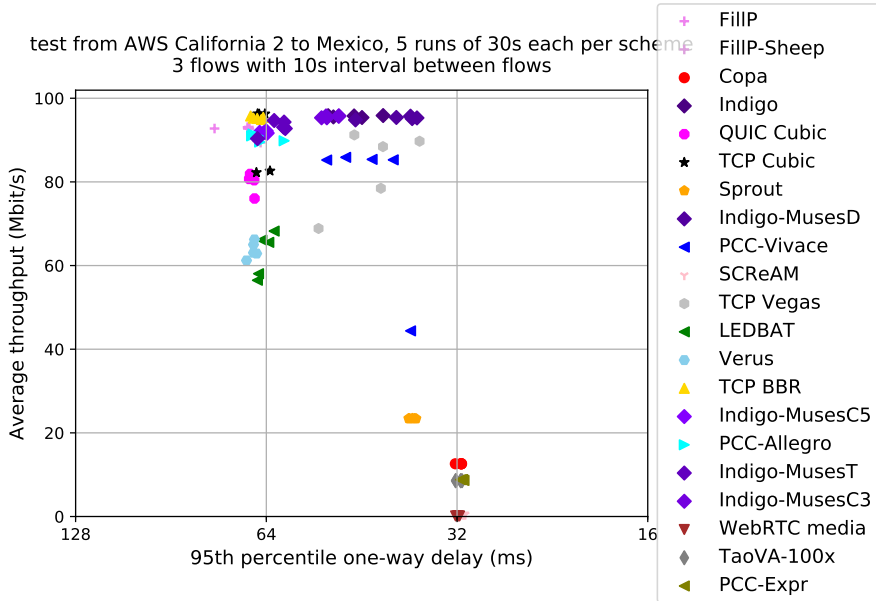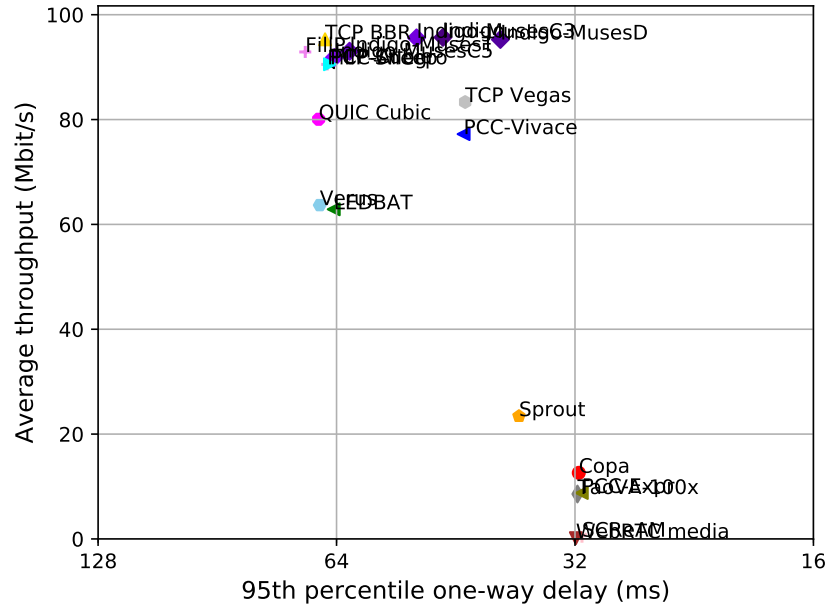
```
System info:
Linux 4.15.0-1034-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 California 2 to Mexico, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

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

3

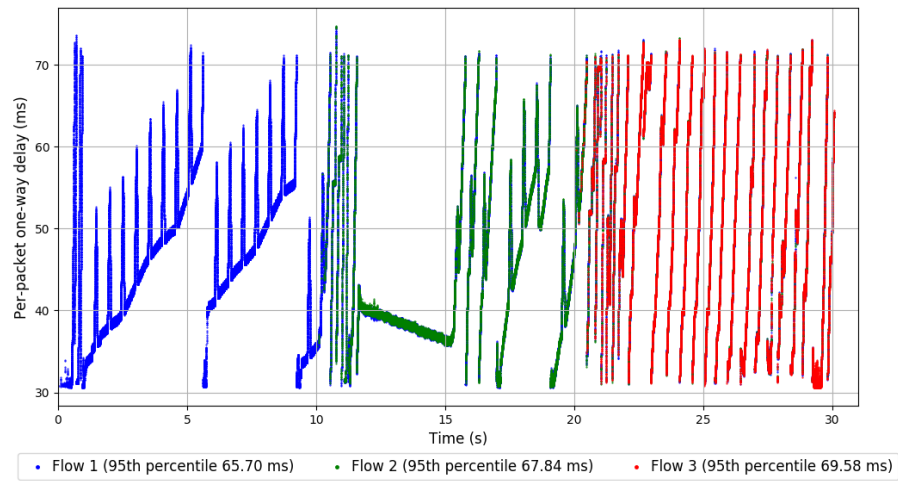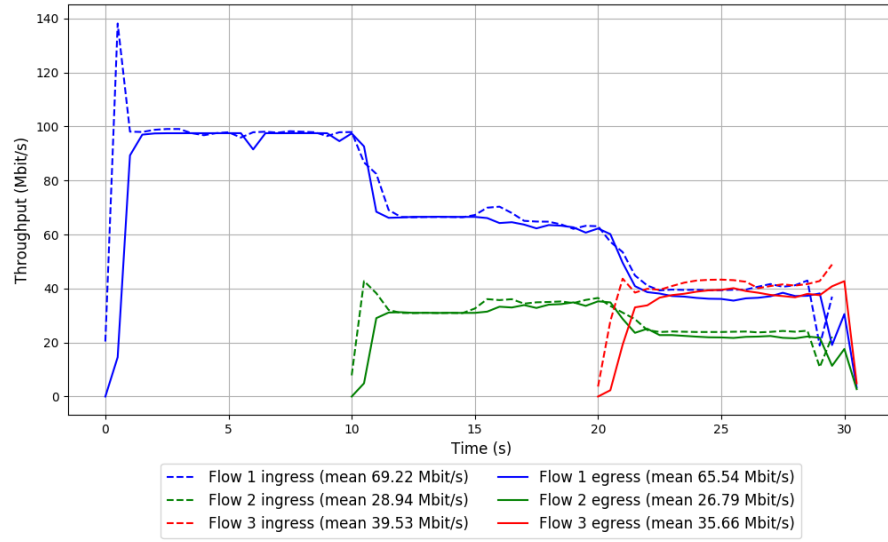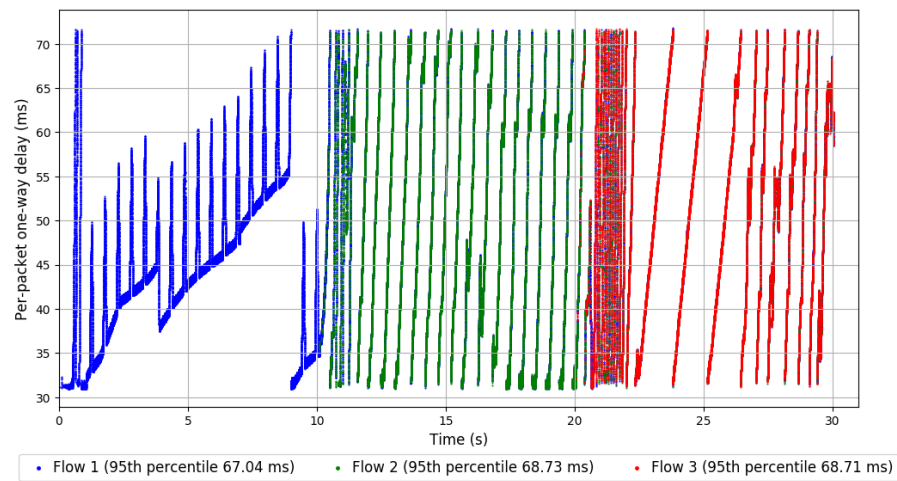| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	62.57	31.96	34.40	65.10	67.19	68.12	5.46	7.95	9.40
Copa	5	8.99	5.45	0.00	31.83	31.39	31.42	69.63	73.20	96.54
TCP Cubic	5	57.88	36.35	25.91	63.30	65.93	62.42	1.16	0.67	0.60
FillP	5	57.84	41.56	22.71	68.17	71.59	71.58	28.81	46.40	53.70
FillP-Sheep	5	58.14	37.09	23.53	64.20	67.25	67.00	8.26	15.87	16.80
Indigo	5	64.53	31.78	30.89	44.30	49.25	50.30	0.01	0.01	0.00
Indigo-MusesC3	5	52.83	49.23	36.03	46.43	49.48	60.46	0.39	1.00	3.65
Indigo-MusesC5	5	58.52	50.34	1.91	62.82	66.03	66.52	10.82	18.63	29.76
Indigo-MusesD	5	56.25	43.70	35.30	39.16	38.02	42.87	0.08	0.04	0.00
Indigo-MusesT	5	49.71	57.48	19.55	56.79	62.96	66.45	8.11	16.91	29.87
LEDBAT	5	39.16	27.38	16.89	63.64	65.99	63.08	0.07	0.26	0.18
PCC-Allegro	5	78.30	14.12	8.67	64.71	66.59	67.06	4.19	5.11	5.43
PCC-Expr	5	0.03	10.13	6.15	31.18	31.39	31.33	85.71	48.31	38.23
QUIC Cubic	5	55.45	28.04	18.16	67.17	67.77	67.88	3.51	1.78	1.31
SCReAM	5	0.21	0.21	0.22	31.33	31.33	31.39	0.00	0.00	0.00
Sprout	5	11.80	11.73	11.55	37.33	37.80	38.18	0.05	0.00	0.00
TaoVA-100x	5	0.00	9.58	6.58	31.11	32.18	31.51	95.92	75.33	36.50
TCP Vegas	5	48.87	30.89	41.78	43.63	41.76	37.85	0.90	0.47	0.41
Verus	5	37.74	26.36	27.33	66.55	67.92	67.77	24.84	40.57	36.59
PCC-Vivace	5	58.96	20.89	13.22	42.86	46.53	49.97	0.01	0.05	0.13
WebRTC media	5	0.05	0.05	0.05	31.83	31.84	32.00	0.02	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-03-27 01:23:58
End at: 2019-03-27 01:24:28
Local clock offset: 0.202 ms
Remote clock offset: -2.049 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 67.066 ms
Loss rate: 6.19%
-- Flow 1:
Average throughput: 65.54 Mbit/s
95th percentile per-packet one-way delay: 65.697 ms
Loss rate: 5.20%
-- Flow 2:
Average throughput: 26.79 Mbit/s
95th percentile per-packet one-way delay: 67.839 ms
Loss rate: 7.29%
-- Flow 3:
Average throughput: 35.66 Mbit/s
95th percentile per-packet one-way delay: 69.584 ms
Loss rate: 9.76%
```
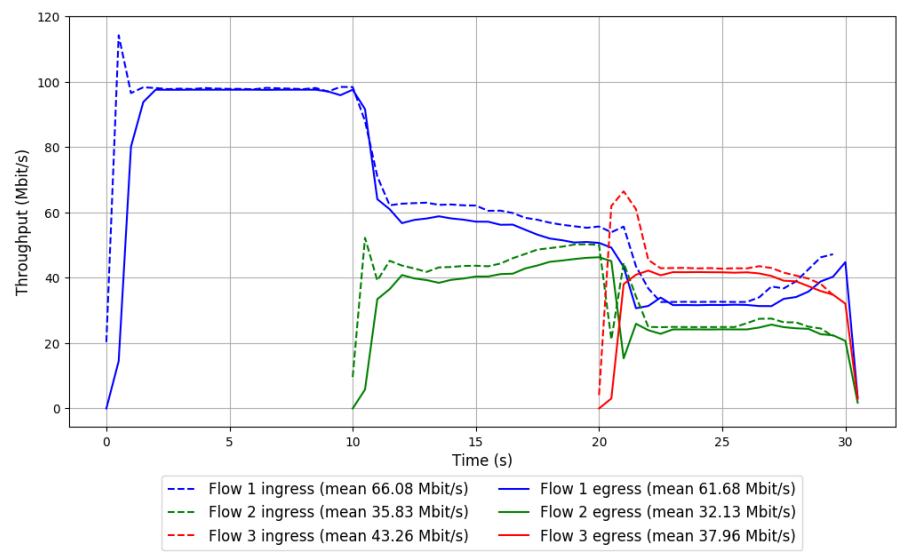
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 69.22 Mbit/s) --- Flow 1 egress (mean 65.54 Mbit/s)
Flow 2 ingress (mean 28.94 Mbit/s) --- Flow 2 egress (mean 26.79 Mbit/s)
Flow 3 ingress (mean 39.53 Mbit/s) --- Flow 3 egress (mean 35.66 Mbit/s)

Flow 1 (95th percentile 65.70 ms)   Flow 2 (95th percentile 67.84 ms)   Flow 3 (95th percentile 69.58 ms)

6

```
Run 2: Statistics of TCP BBR

Start at: 2019-03-27 01:49:36
End at: 2019-03-27 01:50:06
Local clock offset: 0.31 ms
Remote clock offset: -0.686 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 67.766 ms
Loss rate: 8.16%
-- Flow 1:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 67.039 ms
Loss rate: 6.57%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 68.732 ms
Loss rate: 10.21%
-- Flow 3:
Average throughput: 37.96 Mbit/s
95th percentile per-packet one-way delay: 68.706 ms
Loss rate: 12.02%
```
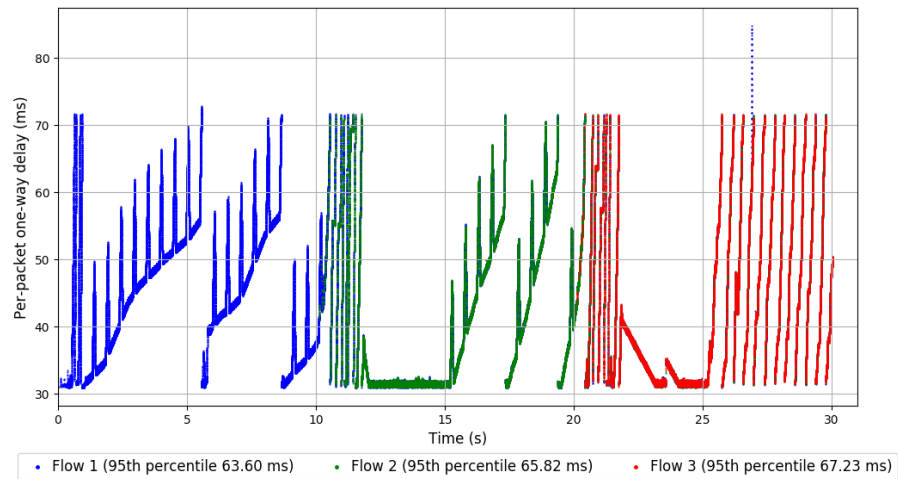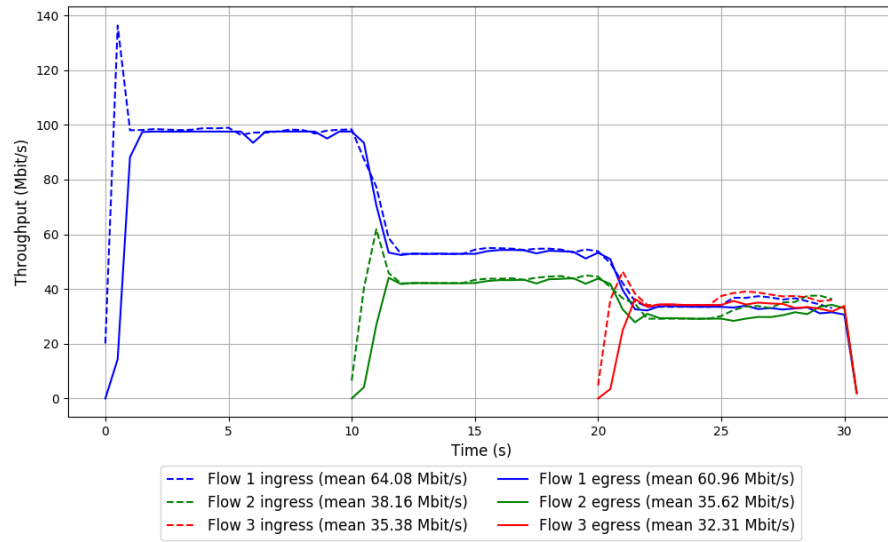
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 66.08 Mbit/s) --- Flow 1 egress (mean 61.68 Mbit/s)
Flow 2 ingress (mean 35.83 Mbit/s) --- Flow 2 egress (mean 32.13 Mbit/s)
Flow 3 ingress (mean 43.26 Mbit/s) --- Flow 3 egress (mean 37.96 Mbit/s)

Flow 1 (95th percentile 67.04 ms) • Flow 2 (95th percentile 68.73 ms) • Flow 3 (95th percentile 68.71 ms)

8

```
Run 3: Statistics of TCP BBR

Start at: 2019-03-27 02:15:19
End at: 2019-03-27 02:15:49
Local clock offset: 0.035 ms
Remote clock offset: 0.383 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 64.712 ms
Loss rate: 5.71%
-- Flow 1:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 4.82%
-- Flow 2:
Average throughput: 35.62 Mbit/s
95th percentile per-packet one-way delay: 65.822 ms
Loss rate: 6.61%
-- Flow 3:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 67.229 ms
Loss rate: 8.59%
```
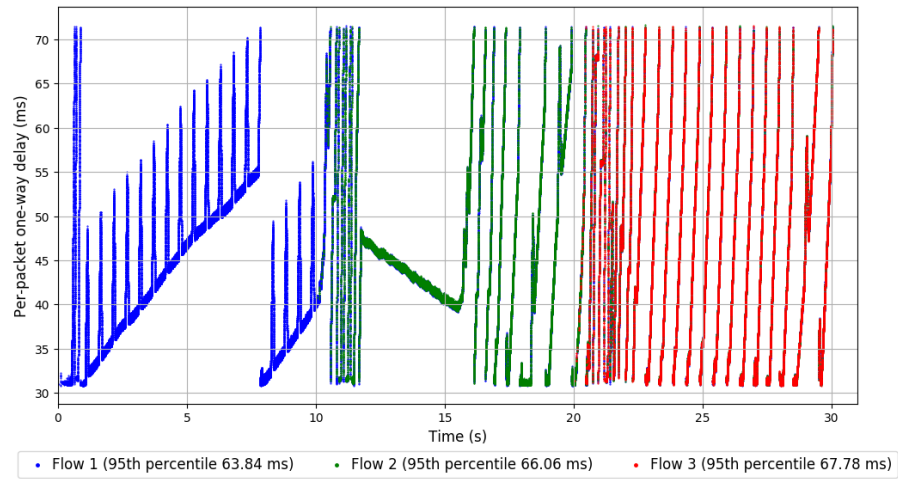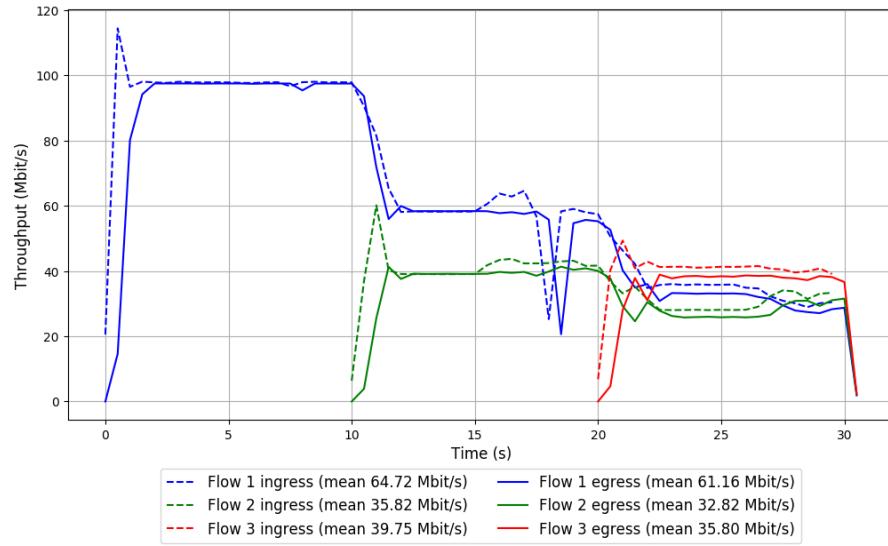
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-03-27 02:41:08
End at: 2019-03-27 02:41:38
Local clock offset: 0.419 ms
Remote clock offset: 1.088 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 65.160 ms
Loss rate: 6.71%
-- Flow 1:
Average throughput: 61.16 Mbit/s
95th percentile per-packet one-way delay: 63.841 ms
Loss rate: 5.46%
-- Flow 2:
Average throughput: 32.82 Mbit/s
95th percentile per-packet one-way delay: 66.058 ms
Loss rate: 8.35%
-- Flow 3:
Average throughput: 35.80 Mbit/s
95th percentile per-packet one-way delay: 67.781 ms
Loss rate: 9.84%
```
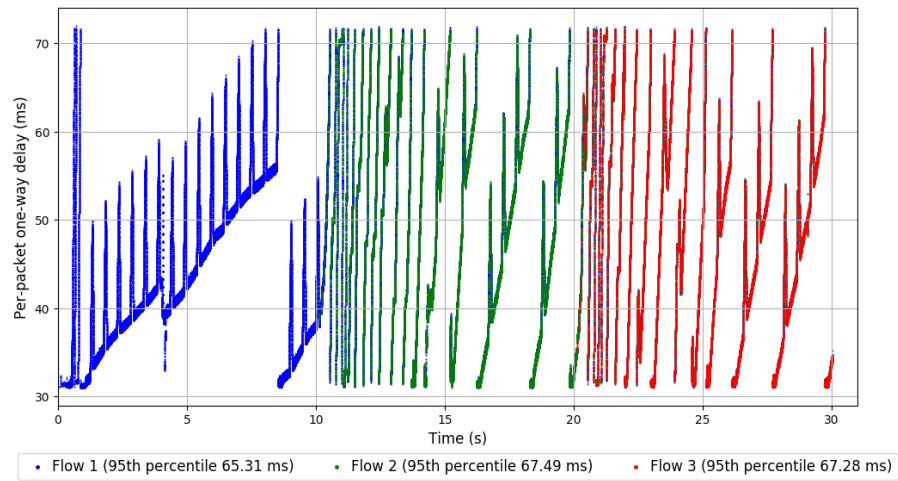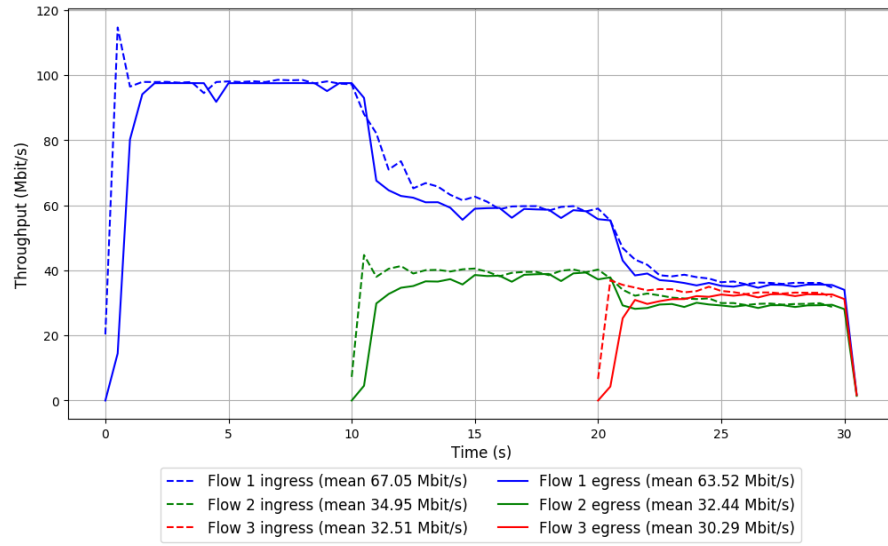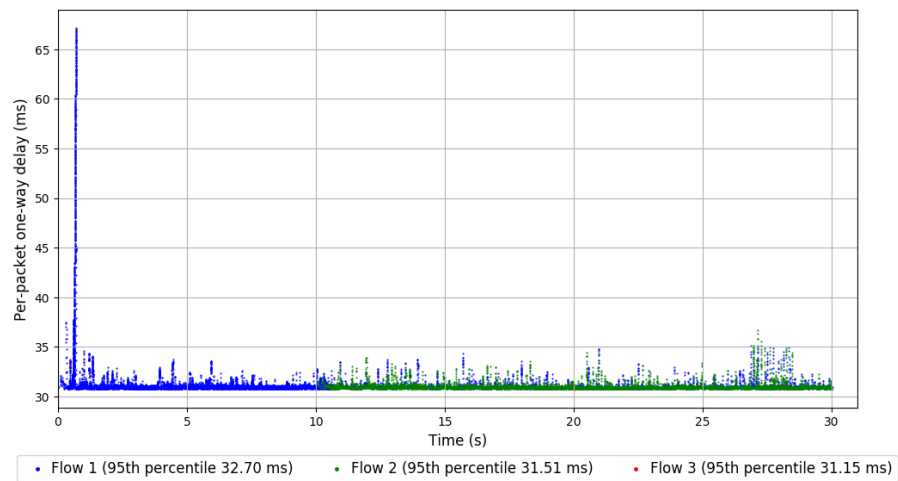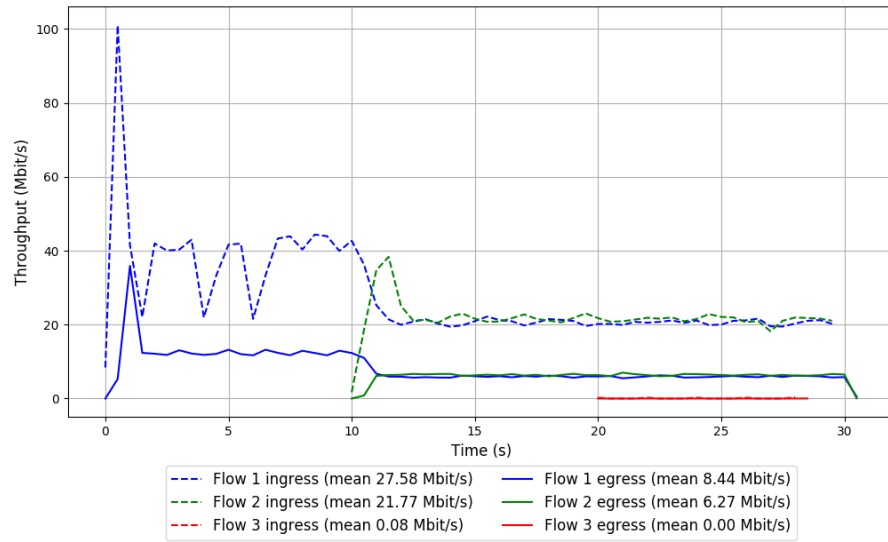
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 64.72 Mbit/s) --- Flow 1 egress (mean 61.16 Mbit/s) ---
Flow 2 ingress (mean 35.82 Mbit/s) --- Flow 2 egress (mean 32.82 Mbit/s) ---
Flow 3 ingress (mean 39.75 Mbit/s) --- Flow 3 egress (mean 35.80 Mbit/s) ---

Flow 1 (95th percentile 63.84 ms)   Flow 2 (95th percentile 66.06 ms)   Flow 3 (95th percentile 67.78 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-03-27 03:06:28
End at: 2019-03-27 03:06:58
Local clock offset: 0.584 ms
Remote clock offset: 1.945 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 66.148 ms
Loss rate: 5.89%
-- Flow 1:
Average throughput: 63.52 Mbit/s
95th percentile per-packet one-way delay: 65.313 ms
Loss rate: 5.26%
-- Flow 2:
Average throughput: 32.44 Mbit/s
95th percentile per-packet one-way delay: 67.488 ms
Loss rate: 7.28%
-- Flow 3:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 67.282 ms
Loss rate: 6.80%
```

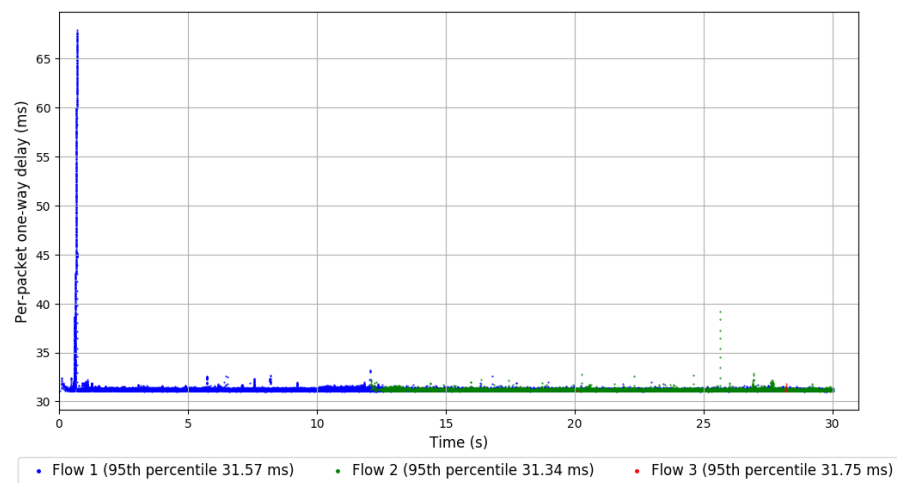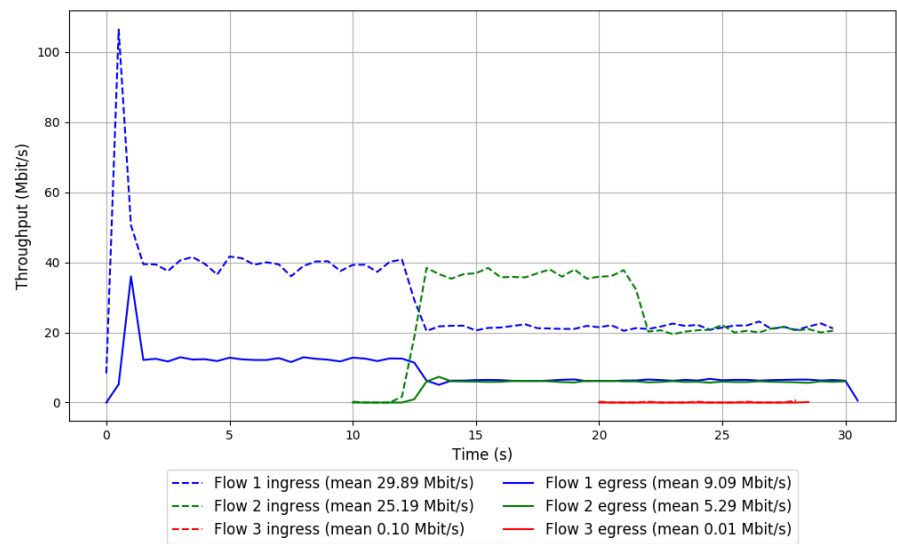Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-03-27 01:16:44
End at: 2019-03-27 01:17:14
Local clock offset: 0.078 ms
Remote clock offset: -2.264 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 32.198 ms
Loss rate: 70.04%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 32.699 ms
Loss rate: 69.41%
-- Flow 2:
Average throughput: 6.27 Mbit/s
95th percentile per-packet one-way delay: 31.509 ms
Loss rate: 71.21%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.150 ms
Loss rate: 98.03%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 27.58 Mbit/s)   Flow 1 egress (mean 8.44 Mbit/s)
Flow 2 ingress (mean 21.77 Mbit/s)   Flow 2 egress (mean 6.27 Mbit/s)
Flow 3 ingress (mean 0.08 Mbit/s)   Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 32.70 ms)   Flow 2 (95th percentile 31.51 ms)   Flow 3 (95th percentile 31.15 ms)

```
Run 2: Statistics of Copa

Start at: 2019-03-27 01:42:27
End at: 2019-03-27 01:42:57
Local clock offset: 0.355 ms
Remote clock offset: -0.879 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.477 ms
Loss rate: 72.98%
-- Flow 1:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 31.573 ms
Loss rate: 69.58%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 31.338 ms
Loss rate: 79.01%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 31.750 ms
Loss rate: 90.79%
```
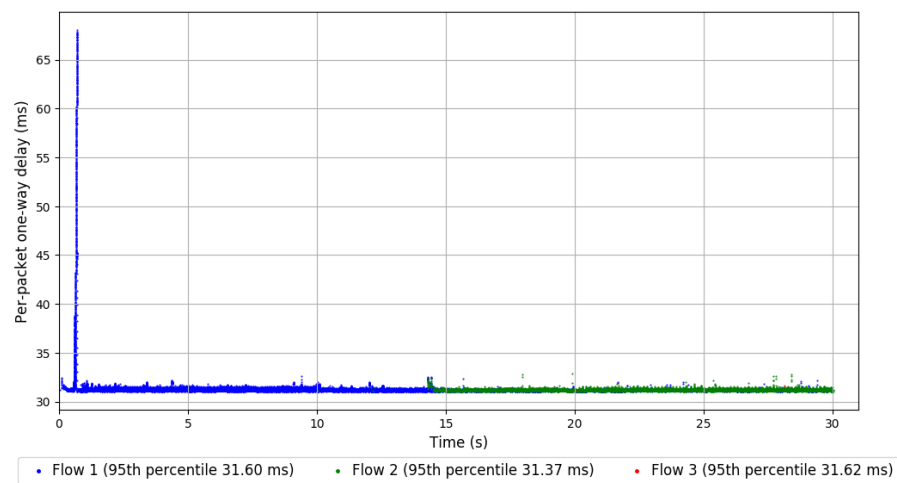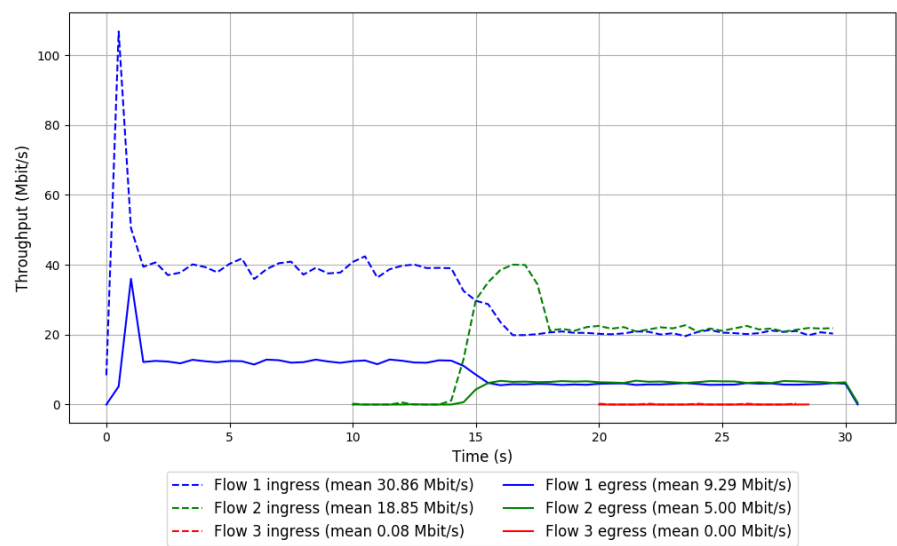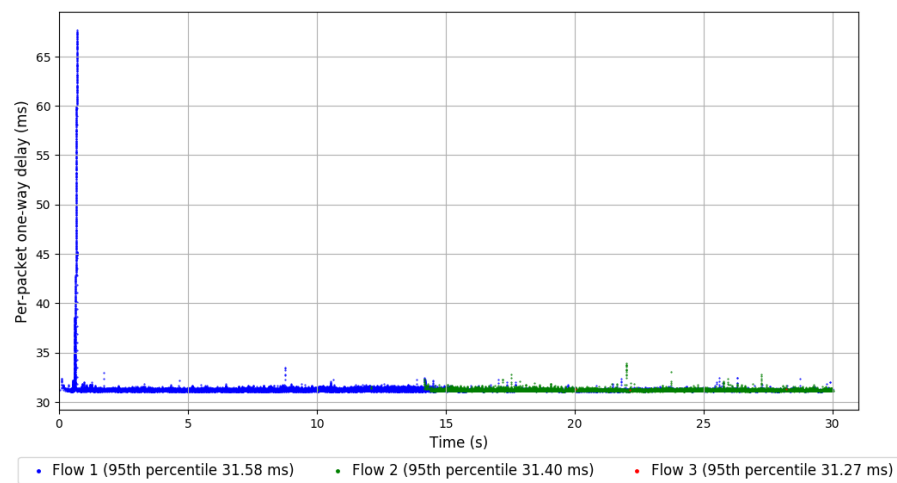
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 29.89 Mbit/s)   Flow 1 egress (mean 9.09 Mbit/s)
Flow 2 ingress (mean 25.19 Mbit/s)   Flow 2 egress (mean 5.29 Mbit/s)
Flow 3 ingress (mean 0.10 Mbit/s)   Flow 3 egress (mean 0.01 Mbit/s)

Flow 1 (95th percentile 31.57 ms)   Flow 2 (95th percentile 31.34 ms)   Flow 3 (95th percentile 31.75 ms)

18

```
Run 3: Statistics of Copa

Start at: 2019-03-27 02:08:01
End at: 2019-03-27 02:08:31
Local clock offset: 0.148 ms
Remote clock offset: 0.185 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.514 ms
Loss rate: 70.95%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 31.603 ms
Loss rate: 69.91%
-- Flow 2:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 31.369 ms
Loss rate: 73.48%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.620 ms
Loss rate: 97.92%
```
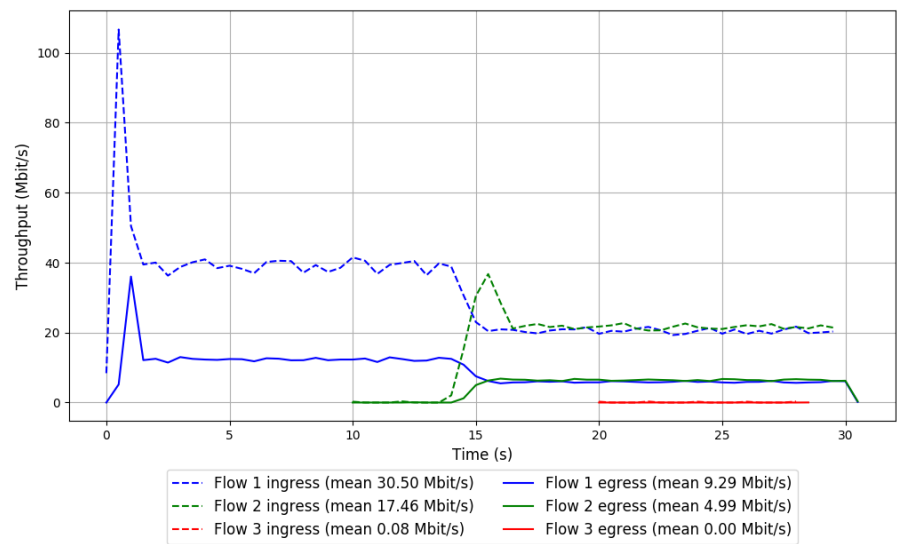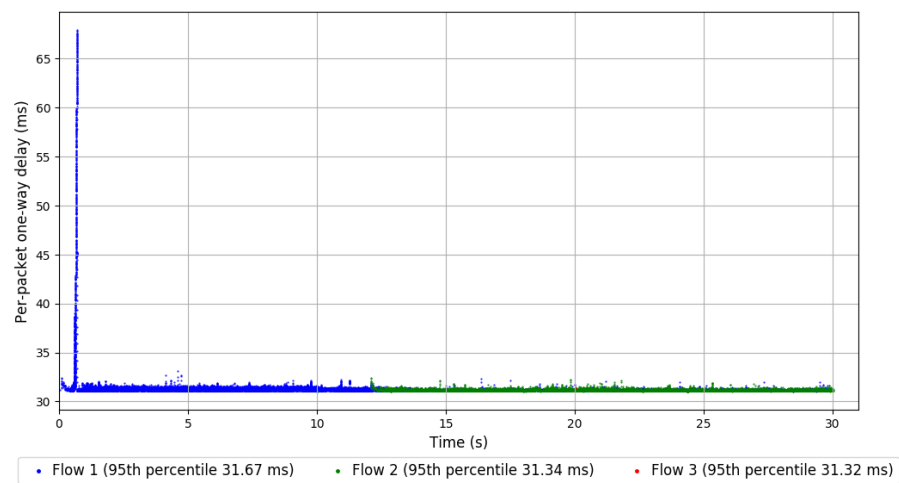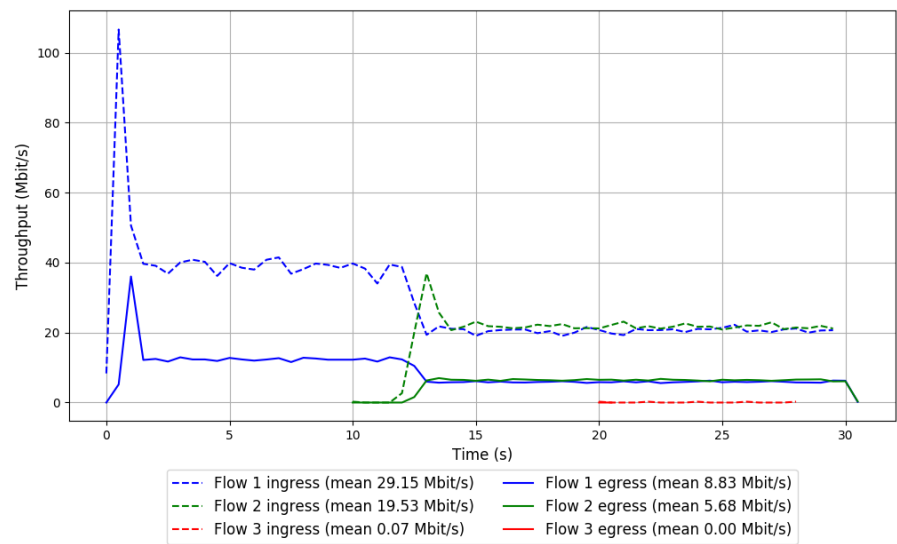
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 30.86 Mbit/s) — Flow 1 egress (mean 9.29 Mbit/s)
Flow 2 ingress (mean 18.85 Mbit/s) — Flow 2 egress (mean 5.00 Mbit/s)
Flow 3 ingress (mean 0.08 Mbit/s) — Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 31.60 ms)   Flow 2 (95th percentile 31.37 ms)   Flow 3 (95th percentile 31.62 ms)

```
Run 4: Statistics of Copa

Start at: 2019-03-27 02:34:00
End at: 2019-03-27 02:34:30
Local clock offset: 0.297 ms
Remote clock offset: 1.063 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.522 ms
Loss rate: 70.07%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 31.584 ms
Loss rate: 69.55%
-- Flow 2:
Average throughput: 4.99 Mbit/s
95th percentile per-packet one-way delay: 31.403 ms
Loss rate: 71.39%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.267 ms
Loss rate: 96.14%
```
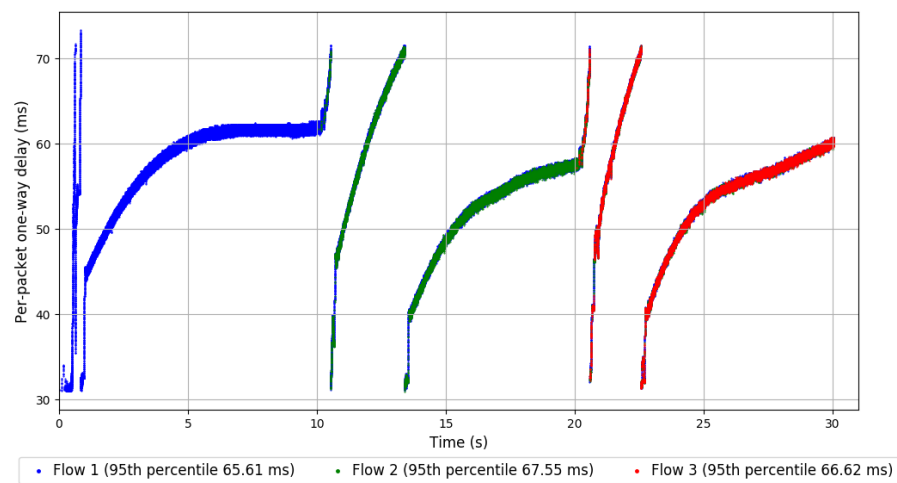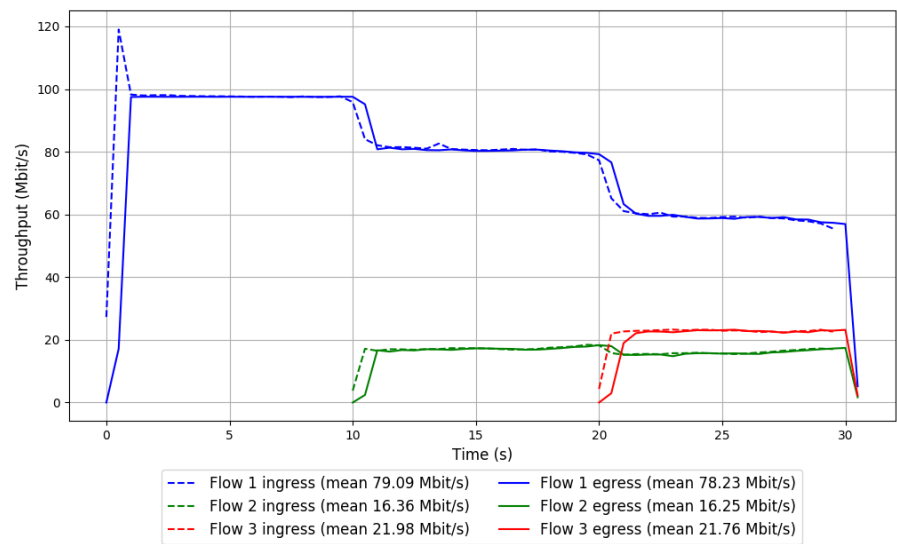
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-03-27 02:59:19
End at: 2019-03-27 02:59:49
Local clock offset: 0.502 ms
Remote clock offset: 1.853 ms


# Below is generated by plot.py at 2019-03-27 03:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.535 ms
Loss rate: 70.10%
-- Flow 1:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 31.668 ms
Loss rate: 69.71%
-- Flow 2:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 31.344 ms
Loss rate: 70.91%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.317 ms
Loss rate: 99.83%
```
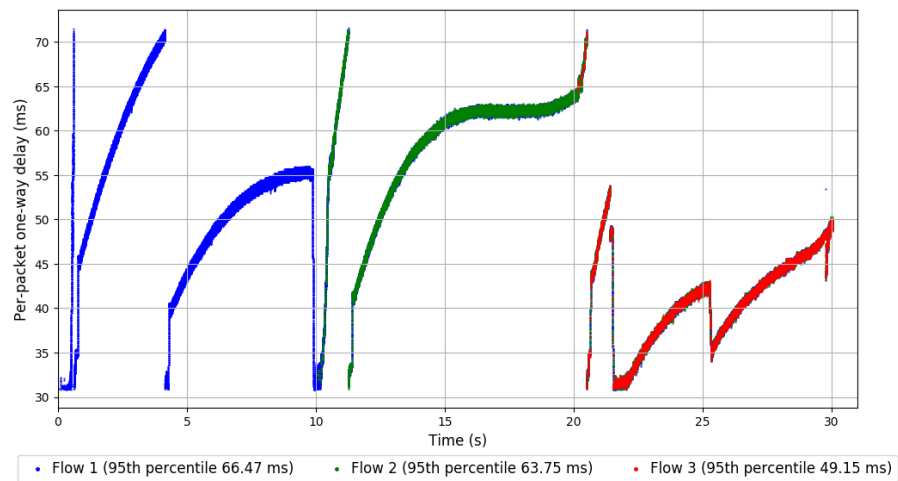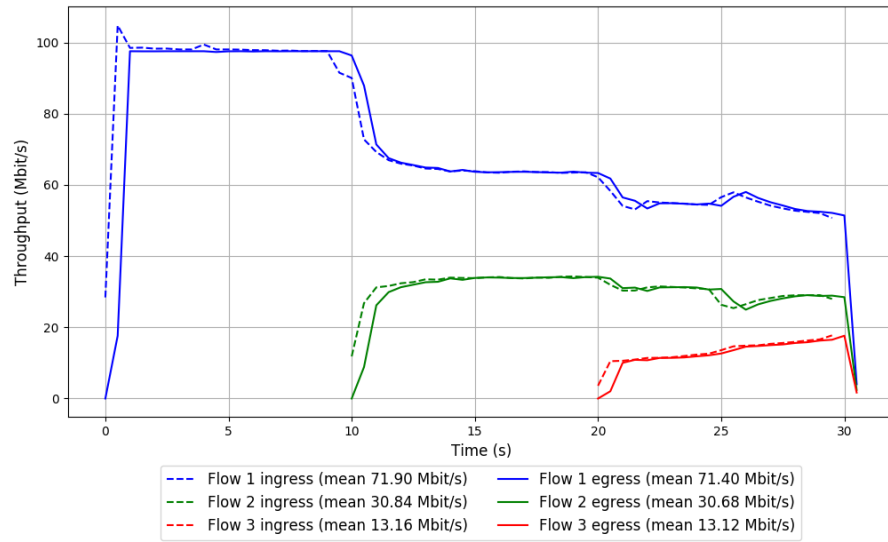
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 29.15 Mbit/s) — Flow 1 egress (mean 8.83 Mbit/s)
Flow 2 ingress (mean 19.53 Mbit/s) — Flow 2 egress (mean 5.68 Mbit/s)
Flow 3 ingress (mean 0.07 Mbit/s) — Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 31.67 ms) — Flow 2 (95th percentile 31.34 ms) — Flow 3 (95th percentile 31.32 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-03-27 01:14:21
End at: 2019-03-27 01:14:51
Local clock offset: 0.064 ms
Remote clock offset: -2.333 ms


# Below is generated by plot.py at 2019-03-27 03:15:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.28 Mbit/s
95th percentile per-packet one-way delay: 66.062 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 78.23 Mbit/s
95th percentile per-packet one-way delay: 65.610 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 16.25 Mbit/s
95th percentile per-packet one-way delay: 67.548 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 21.76 Mbit/s
95th percentile per-packet one-way delay: 66.618 ms
Loss rate: 0.99%
```
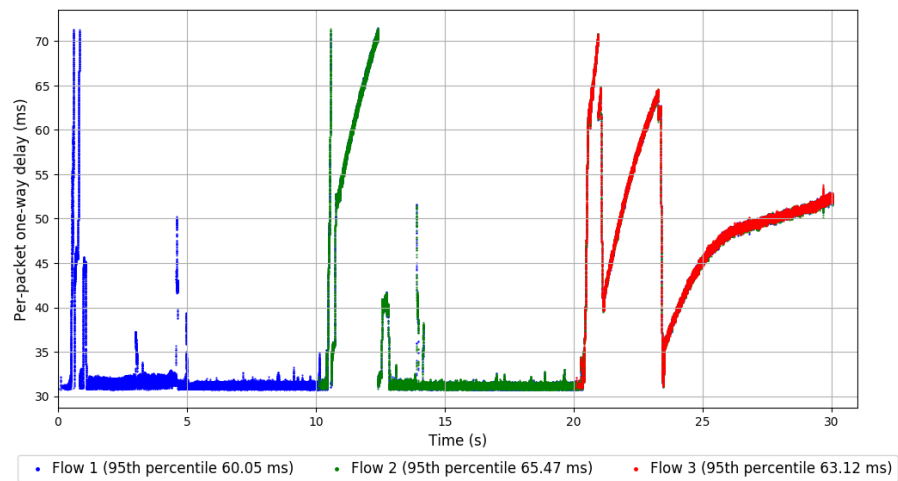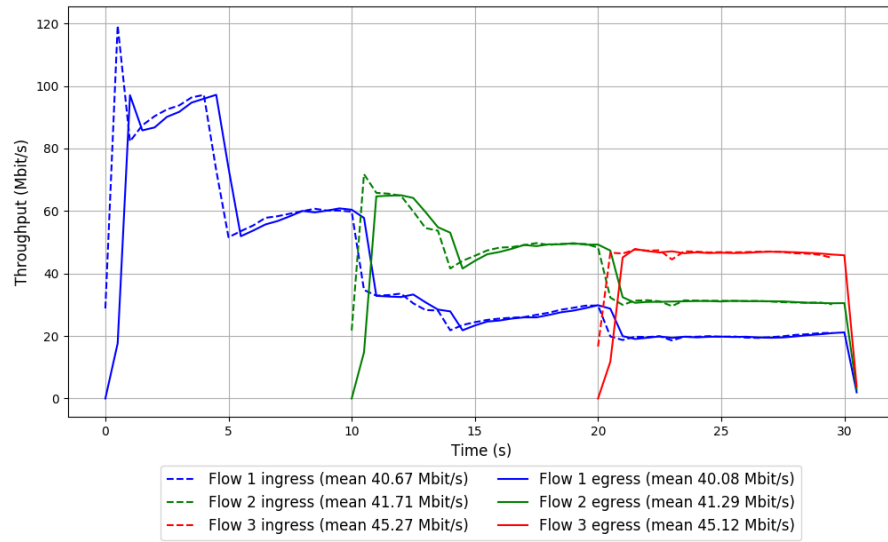
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-03-27 01:40:04
End at: 2019-03-27 01:40:34
Local clock offset: 0.344 ms
Remote clock offset: -1.192 ms


# Below is generated by plot.py at 2019-03-27 03:15:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.20 Mbit/s
95th percentile per-packet one-way delay: 65.676 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 66.472 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 30.68 Mbit/s
95th percentile per-packet one-way delay: 63.747 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 49.154 ms
Loss rate: 0.46%
```
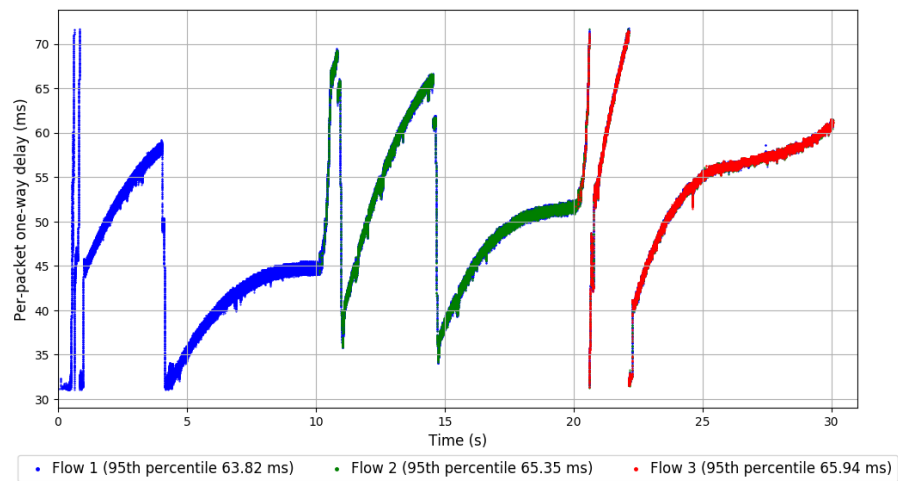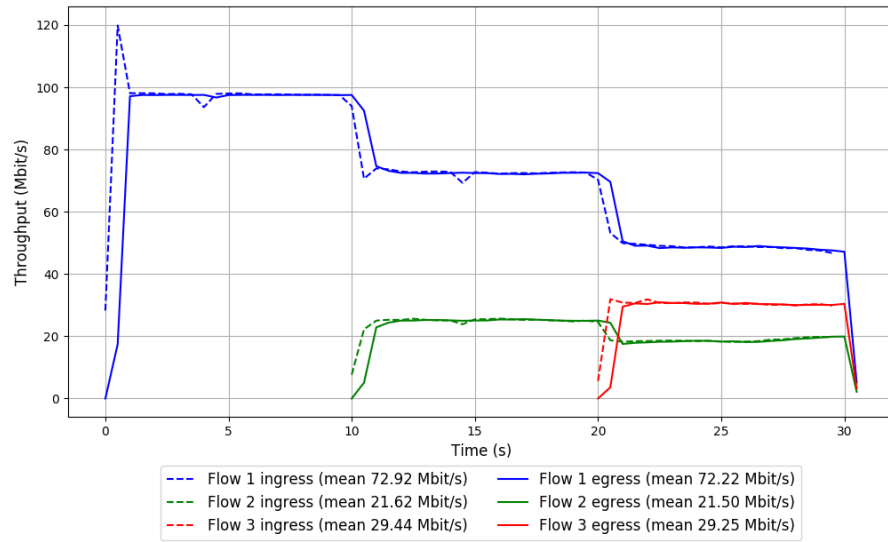
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 71.90 Mbit/s) —— Flow 1 egress (mean 71.40 Mbit/s)
Flow 2 ingress (mean 30.84 Mbit/s) —— Flow 2 egress (mean 30.68 Mbit/s)
Flow 3 ingress (mean 13.16 Mbit/s) —— Flow 3 egress (mean 13.12 Mbit/s)

Flow 1 (95th percentile 66.47 ms)   • Flow 2 (95th percentile 63.75 ms)   • Flow 3 (95th percentile 49.15 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-03-27 02:05:36
End at: 2019-03-27 02:06:06
Local clock offset: 0.172 ms
Remote clock offset: -0.159 ms


# Below is generated by plot.py at 2019-03-27 03:15:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.63 Mbit/s
95th percentile per-packet one-way delay: 63.153 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 40.08 Mbit/s
95th percentile per-packet one-way delay: 60.048 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 41.29 Mbit/s
95th percentile per-packet one-way delay: 65.466 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 45.12 Mbit/s
95th percentile per-packet one-way delay: 63.115 ms
Loss rate: 0.11%
```
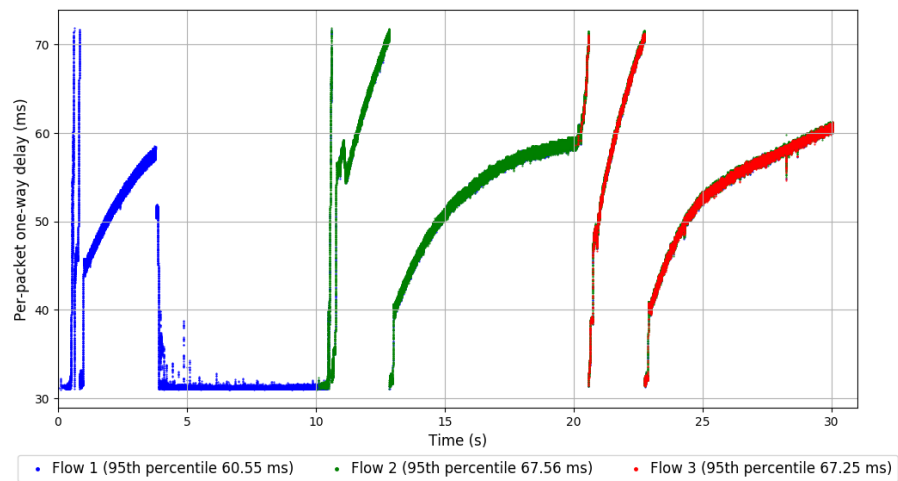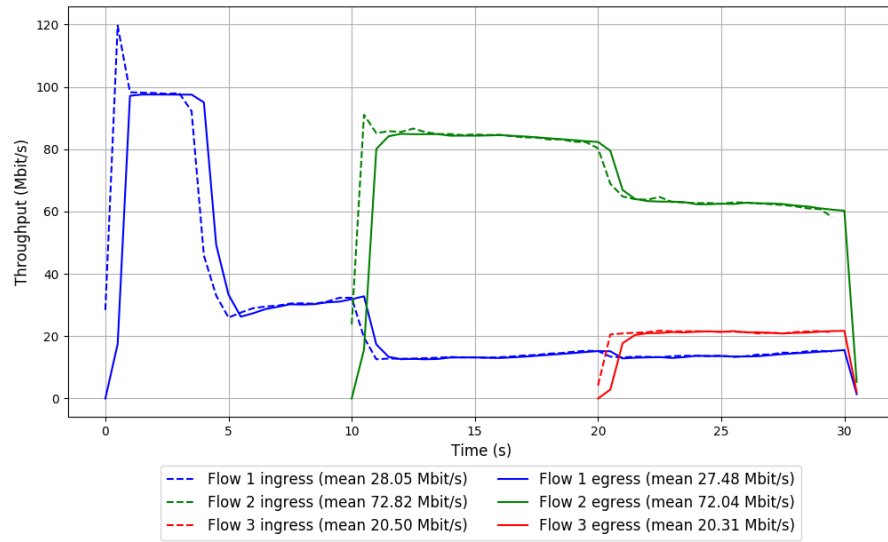
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 40.67 Mbit/s) --- Flow 1 egress (mean 40.08 Mbit/s)
Flow 2 ingress (mean 41.71 Mbit/s) --- Flow 2 egress (mean 41.29 Mbit/s)
Flow 3 ingress (mean 45.27 Mbit/s) --- Flow 3 egress (mean 45.12 Mbit/s)

Flow 1 (95th percentile 60.05 ms)   Flow 2 (95th percentile 65.47 ms)   Flow 3 (95th percentile 63.12 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-03-27 02:31:35
End at: 2019-03-27 02:32:05
Local clock offset: 0.265 ms
Remote clock offset: 1.009 ms


# Below is generated by plot.py at 2019-03-27 03:15:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.27 Mbit/s
95th percentile per-packet one-way delay: 64.326 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 72.22 Mbit/s
95th percentile per-packet one-way delay: 63.817 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 21.50 Mbit/s
95th percentile per-packet one-way delay: 65.347 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 29.25 Mbit/s
95th percentile per-packet one-way delay: 65.944 ms
Loss rate: 0.54%
```
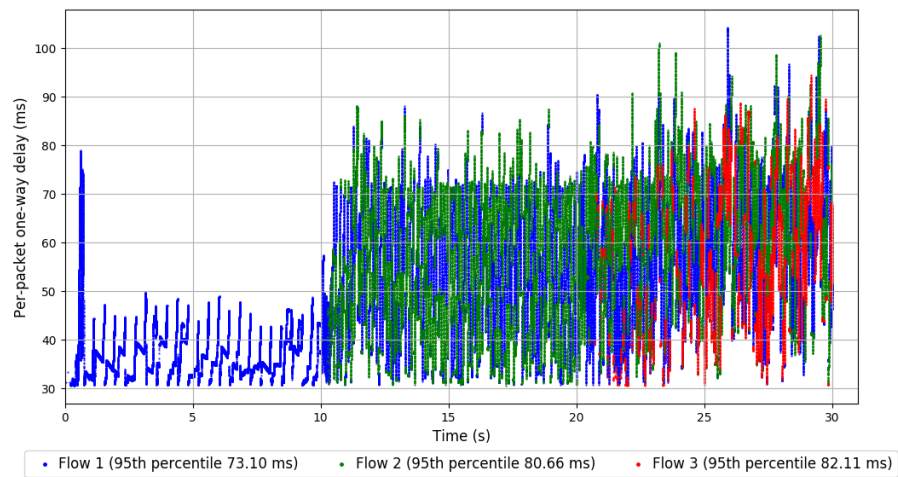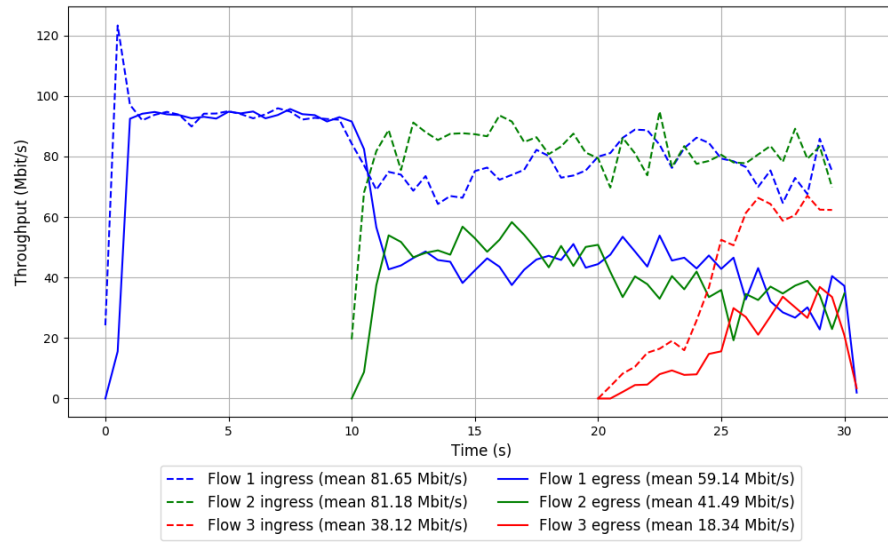
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-03-27 02:56:55
End at: 2019-03-27 02:57:25
Local clock offset: 0.487 ms
Remote clock offset: 1.778 ms


# Below is generated by plot.py at 2019-03-27 03:15:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.24 Mbit/s
95th percentile per-packet one-way delay: 66.343 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 27.48 Mbit/s
95th percentile per-packet one-way delay: 60.546 ms
Loss rate: 1.95%
-- Flow 2:
Average throughput: 72.04 Mbit/s
95th percentile per-packet one-way delay: 67.558 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 20.31 Mbit/s
95th percentile per-packet one-way delay: 67.255 ms
Loss rate: 0.92%
```
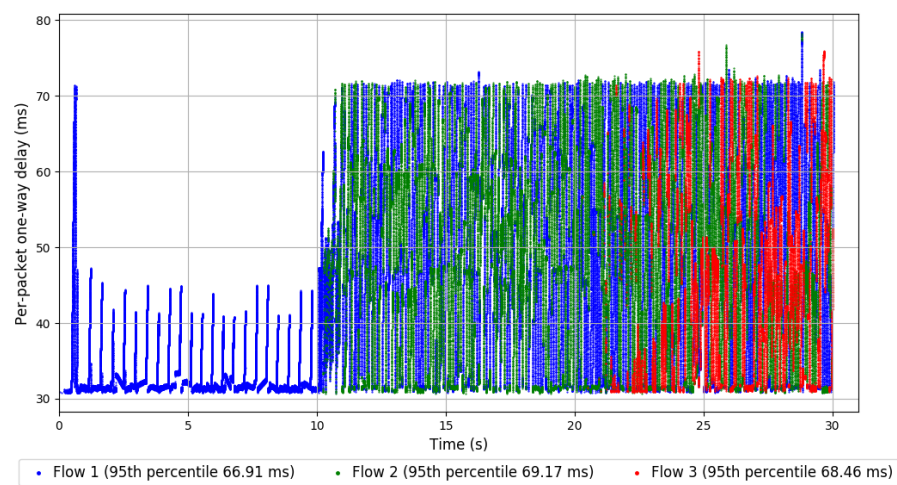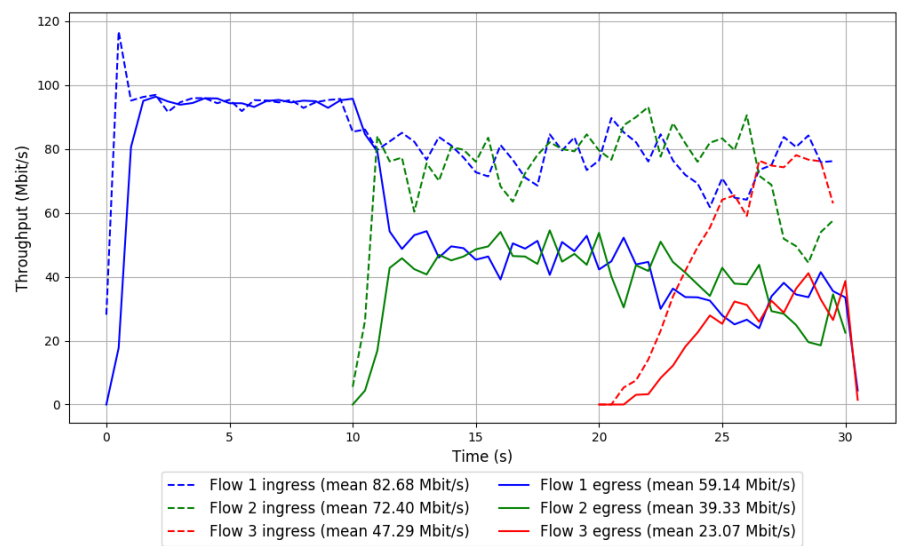
Run 5: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 28.05 Mbit/s) —— Flow 1 egress (mean 27.48 Mbit/s)
- - - Flow 2 ingress (mean 72.82 Mbit/s) —— Flow 2 egress (mean 72.04 Mbit/s)
- - - Flow 3 ingress (mean 20.50 Mbit/s) —— Flow 3 egress (mean 20.31 Mbit/s)

• Flow 1 (95th percentile 60.55 ms)   • Flow 2 (95th percentile 67.56 ms)   • Flow 3 (95th percentile 67.25 ms)

```
Run 1: Statistics of FillP

Start at: 2019-03-27 01:26:29
End at: 2019-03-27 01:26:59
Local clock offset: 0.233 ms
Remote clock offset: -1.76 ms


# Below is generated by plot.py at 2019-03-27 03:16:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 77.248 ms
Loss rate: 37.38%
-- Flow 1:
Average throughput: 59.14 Mbit/s
95th percentile per-packet one-way delay: 73.098 ms
Loss rate: 27.52%
-- Flow 2:
Average throughput: 41.49 Mbit/s
95th percentile per-packet one-way delay: 80.659 ms
Loss rate: 48.90%
-- Flow 3:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 82.112 ms
Loss rate: 51.85%
```
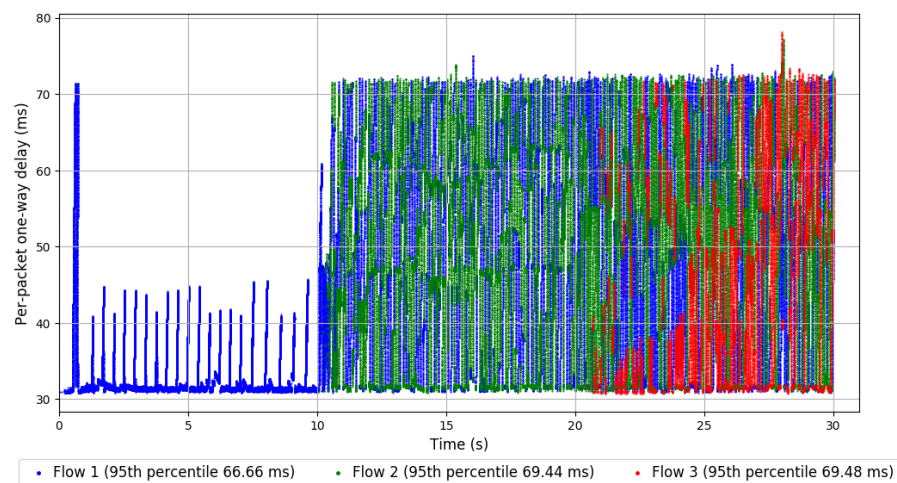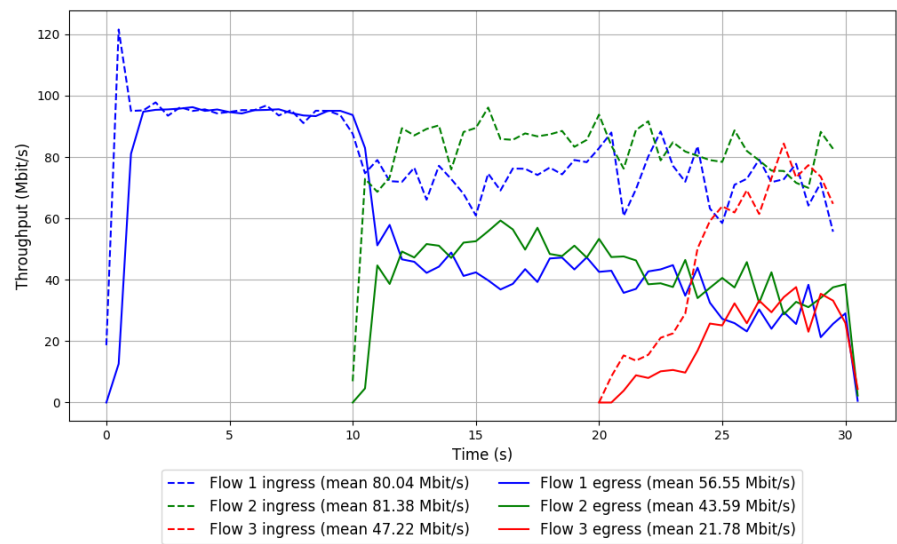
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 81.65 Mbit/s)   Flow 1 egress (mean 59.14 Mbit/s)
Flow 2 ingress (mean 81.18 Mbit/s)   Flow 2 egress (mean 41.49 Mbit/s)
Flow 3 ingress (mean 38.12 Mbit/s)   Flow 3 egress (mean 18.34 Mbit/s)

Flow 1 (95th percentile 73.10 ms)   Flow 2 (95th percentile 80.66 ms)   Flow 3 (95th percentile 82.11 ms)

36

```
Run 2: Statistics of FillP

Start at: 2019-03-27 01:52:03
End at: 2019-03-27 01:52:33
Local clock offset: 0.288 ms
Remote clock offset: -0.62 ms

# Below is generated by plot.py at 2019-03-27 03:16:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.74 Mbit/s
95th percentile per-packet one-way delay: 68.058 ms
Loss rate: 36.62%
-- Flow 1:
Average throughput: 59.14 Mbit/s
95th percentile per-packet one-way delay: 66.905 ms
Loss rate: 28.38%
-- Flow 2:
Average throughput: 39.33 Mbit/s
95th percentile per-packet one-way delay: 69.175 ms
Loss rate: 45.68%
-- Flow 3:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 68.464 ms
Loss rate: 52.24%
```
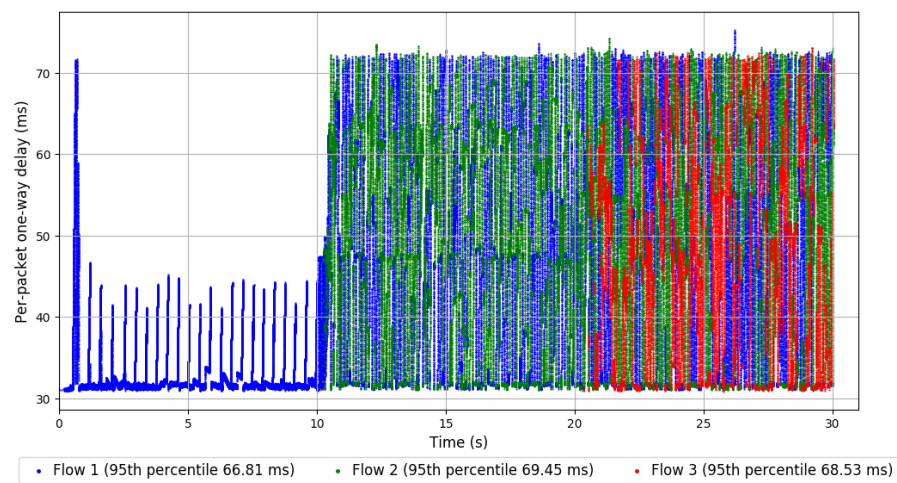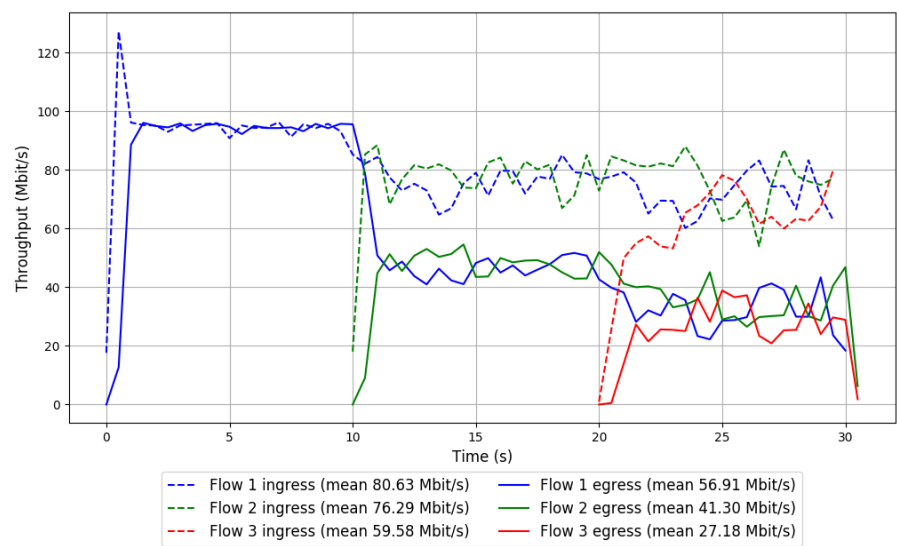
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-03-27 02:17:51
End at: 2019-03-27 02:18:21
Local clock offset: 0.028 ms
Remote clock offset: 0.522 ms


# Below is generated by plot.py at 2019-03-27 03:16:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 68.458 ms
Loss rate: 38.02%
-- Flow 1:
Average throughput: 56.55 Mbit/s
95th percentile per-packet one-way delay: 66.659 ms
Loss rate: 29.30%
-- Flow 2:
Average throughput: 43.59 Mbit/s
95th percentile per-packet one-way delay: 69.445 ms
Loss rate: 46.34%
-- Flow 3:
Average throughput: 21.78 Mbit/s
95th percentile per-packet one-way delay: 69.481 ms
Loss rate: 53.75%
```
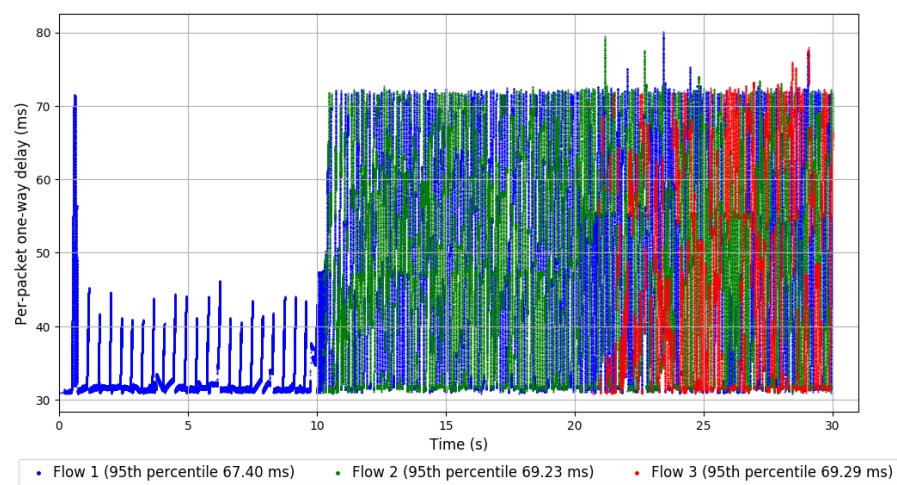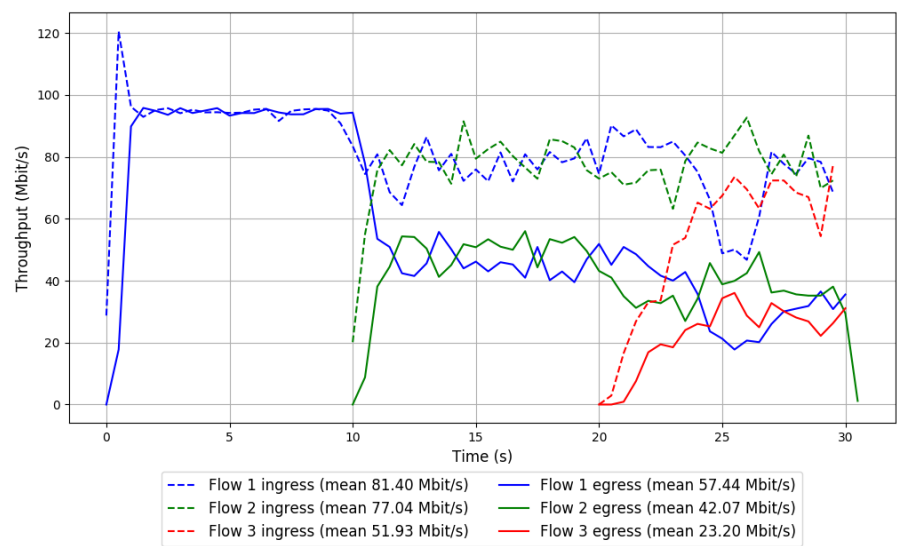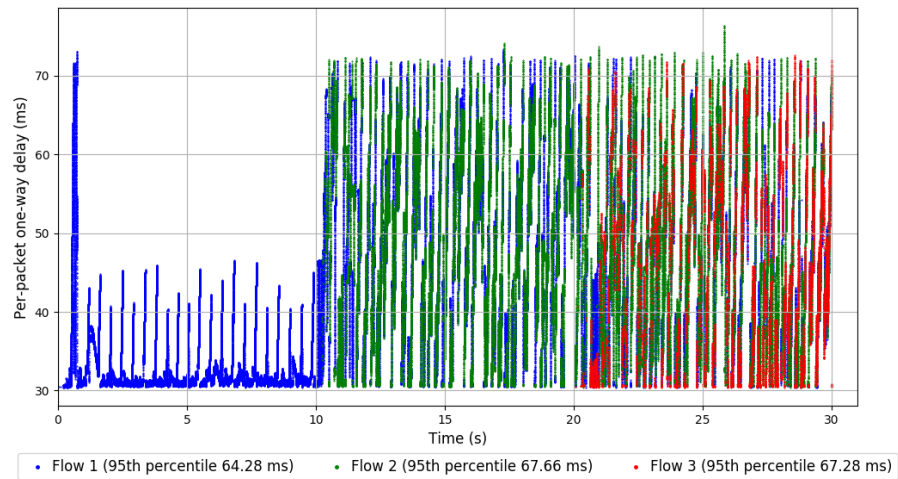
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-03-27 02:43:34
End at: 2019-03-27 02:44:04
Local clock offset: 0.465 ms
Remote clock offset: 1.453 ms


# Below is generated by plot.py at 2019-03-27 03:16:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.15 Mbit/s
95th percentile per-packet one-way delay: 68.184 ms
Loss rate: 38.29%
-- Flow 1:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 66.807 ms
Loss rate: 29.42%
-- Flow 2:
Average throughput: 41.30 Mbit/s
95th percentile per-packet one-way delay: 69.447 ms
Loss rate: 45.78%
-- Flow 3:
Average throughput: 27.18 Mbit/s
95th percentile per-packet one-way delay: 68.531 ms
Loss rate: 55.21%
```
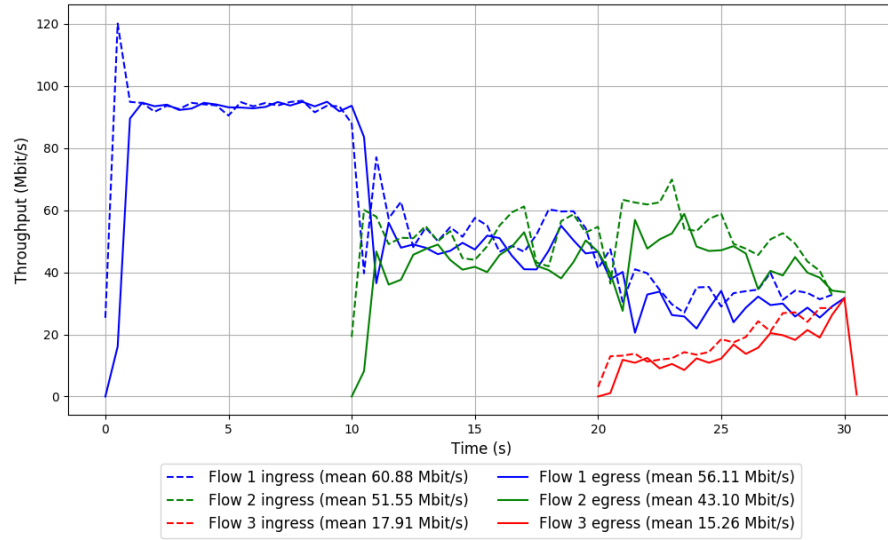
Run 4: Report of FillP — Data Link

- - - Flow 1 ingress (mean 80.63 Mbit/s)   ——— Flow 1 egress (mean 56.91 Mbit/s)
- - - Flow 2 ingress (mean 76.29 Mbit/s)   ——— Flow 2 egress (mean 41.30 Mbit/s)
- - - Flow 3 ingress (mean 59.58 Mbit/s)   ——— Flow 3 egress (mean 27.18 Mbit/s)

- Flow 1 (95th percentile 66.81 ms)   • Flow 2 (95th percentile 69.45 ms)   • Flow 3 (95th percentile 68.53 ms)
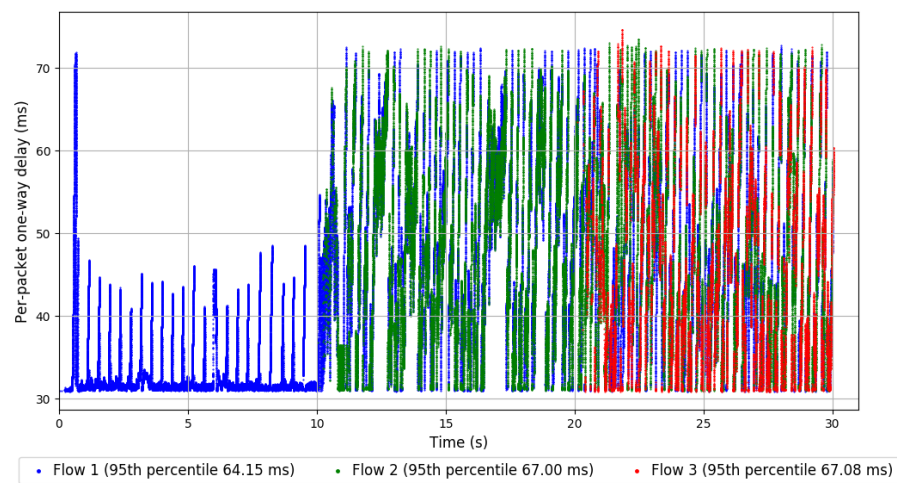
42

```
Run 5: Statistics of FillP

Start at: 2019-03-27 03:08:57
End at: 2019-03-27 03:09:27
Local clock offset: 0.599 ms
Remote clock offset: 1.892 ms


# Below is generated by plot.py at 2019-03-27 03:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 68.513 ms
Loss rate: 37.87%
-- Flow 1:
Average throughput: 57.44 Mbit/s
95th percentile per-packet one-way delay: 67.398 ms
Loss rate: 29.45%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 69.227 ms
Loss rate: 45.32%
-- Flow 3:
Average throughput: 23.20 Mbit/s
95th percentile per-packet one-way delay: 69.294 ms
Loss rate: 55.45%
```
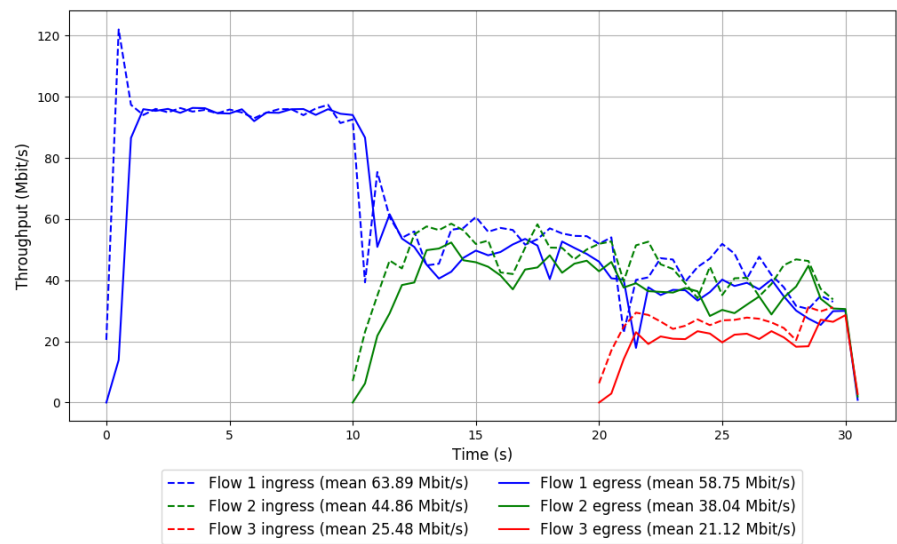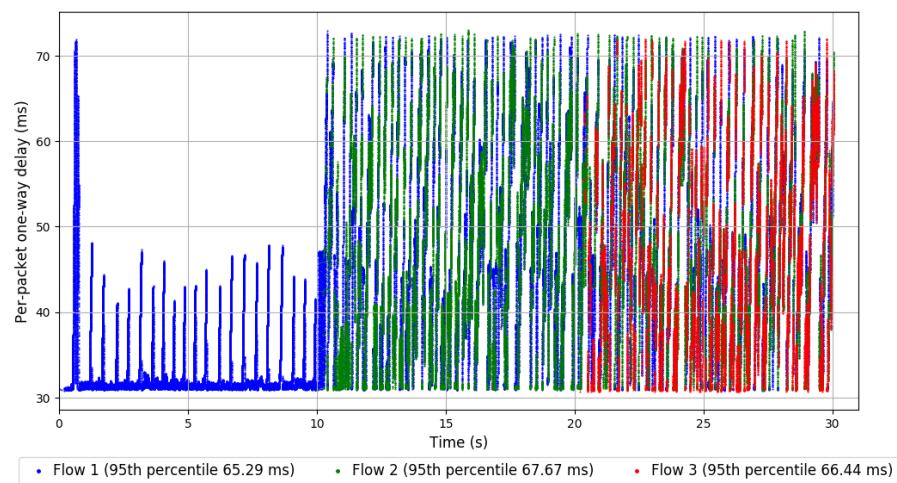
Run 5: Report of FillP — Data Link

44

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-03-27 01:11:55
End at: 2019-03-27 01:12:25
Local clock offset: 0.087 ms
Remote clock offset: -2.666 ms


# Below is generated by plot.py at 2019-03-27 03:16:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.80 Mbit/s
95th percentile per-packet one-way delay: 66.124 ms
Loss rate: 11.16%
-- Flow 1:
Average throughput: 56.11 Mbit/s
95th percentile per-packet one-way delay: 64.284 ms
Loss rate: 7.85%
-- Flow 2:
Average throughput: 43.10 Mbit/s
95th percentile per-packet one-way delay: 67.660 ms
Loss rate: 16.41%
-- Flow 3:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 67.284 ms
Loss rate: 14.77%
```

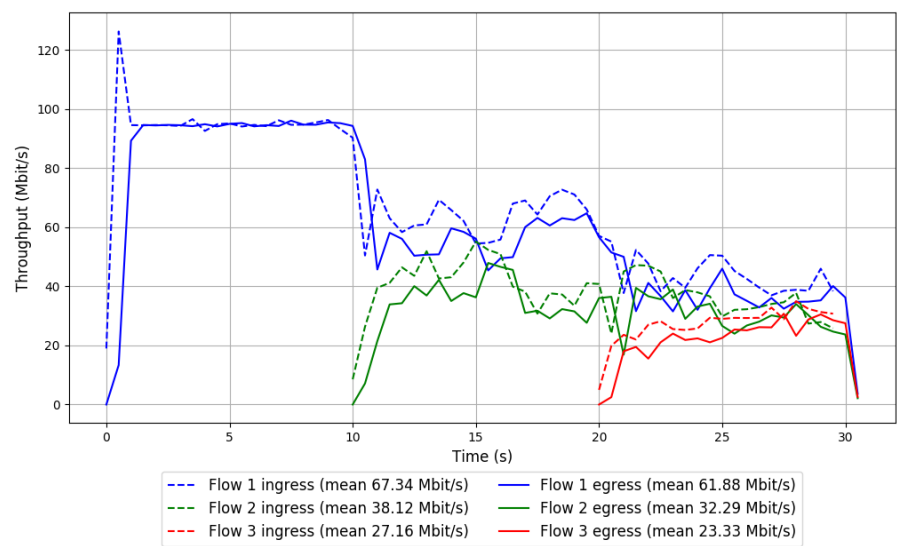Run 1: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 60.88 Mbit/s) --- Flow 1 egress (mean 56.11 Mbit/s)
Flow 2 ingress (mean 51.55 Mbit/s) --- Flow 2 egress (mean 43.10 Mbit/s)
Flow 3 ingress (mean 17.91 Mbit/s) --- Flow 3 egress (mean 15.26 Mbit/s)

Flow 1 (95th percentile 64.28 ms)   Flow 2 (95th percentile 67.66 ms)   Flow 3 (95th percentile 67.28 ms)

46

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-03-27 01:37:38
End at: 2019-03-27 01:38:08
Local clock offset: 0.326 ms
Remote clock offset: -1.122 ms


# Below is generated by plot.py at 2019-03-27 03:17:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.00 Mbit/s
95th percentile per-packet one-way delay: 65.451 ms
Loss rate: 10.83%
-- Flow 1:
Average throughput: 58.75 Mbit/s
95th percentile per-packet one-way delay: 64.149 ms
Loss rate: 7.98%
-- Flow 2:
Average throughput: 38.04 Mbit/s
95th percentile per-packet one-way delay: 67.002 ms
Loss rate: 15.14%
-- Flow 3:
Average throughput: 21.12 Mbit/s
95th percentile per-packet one-way delay: 67.085 ms
Loss rate: 17.17%
```
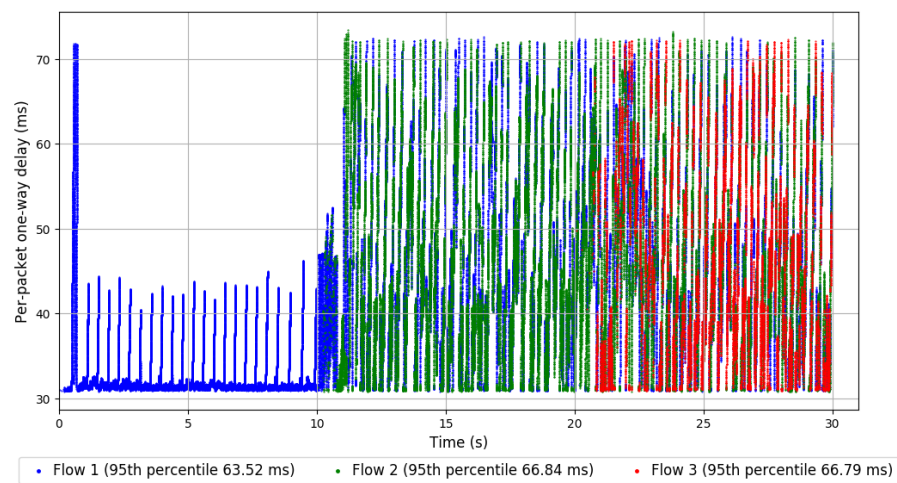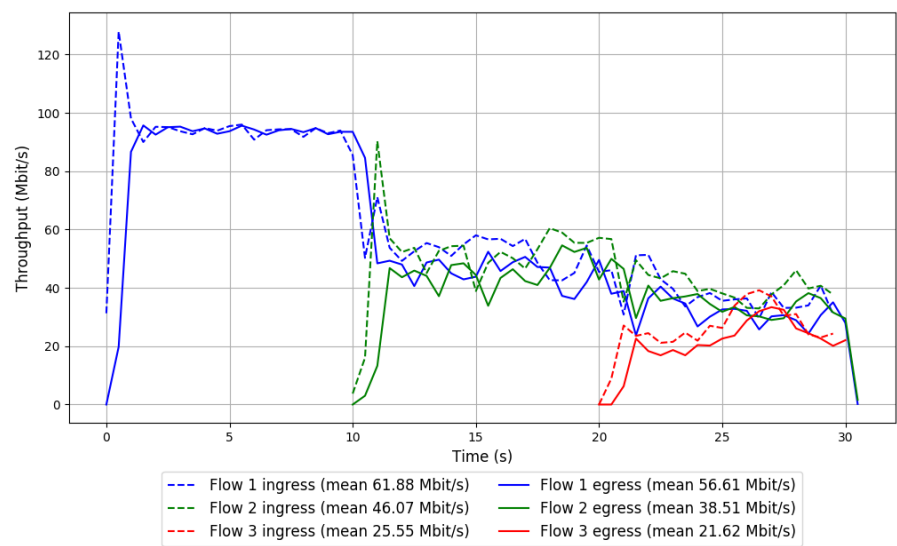
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 63.89 Mbit/s) --- Flow 1 egress (mean 58.75 Mbit/s) —
Flow 2 ingress (mean 44.86 Mbit/s) --- Flow 2 egress (mean 38.04 Mbit/s) —
Flow 3 ingress (mean 25.48 Mbit/s) --- Flow 3 egress (mean 21.12 Mbit/s) —

Flow 1 (95th percentile 64.15 ms)   Flow 2 (95th percentile 67.00 ms)   Flow 3 (95th percentile 67.08 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-03-27 02:03:06
End at: 2019-03-27 02:03:36
Local clock offset: 0.183 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-03-27 03:17:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.06 Mbit/s
95th percentile per-packet one-way delay: 66.291 ms
Loss rate: 10.34%
-- Flow 1:
Average throughput: 61.88 Mbit/s
95th percentile per-packet one-way delay: 65.288 ms
Loss rate: 8.03%
-- Flow 2:
Average throughput: 32.29 Mbit/s
95th percentile per-packet one-way delay: 67.675 ms
Loss rate: 15.14%
-- Flow 3:
Average throughput: 23.33 Mbit/s
95th percentile per-packet one-way delay: 66.439 ms
Loss rate: 14.15%
```
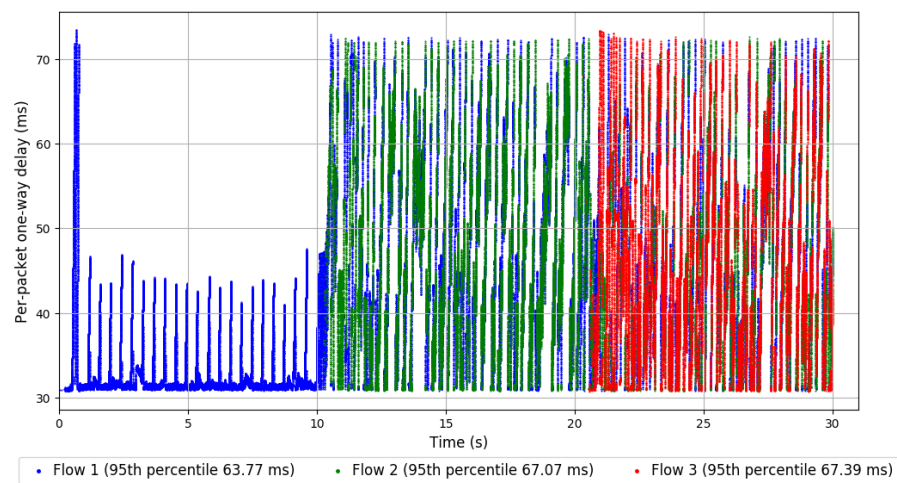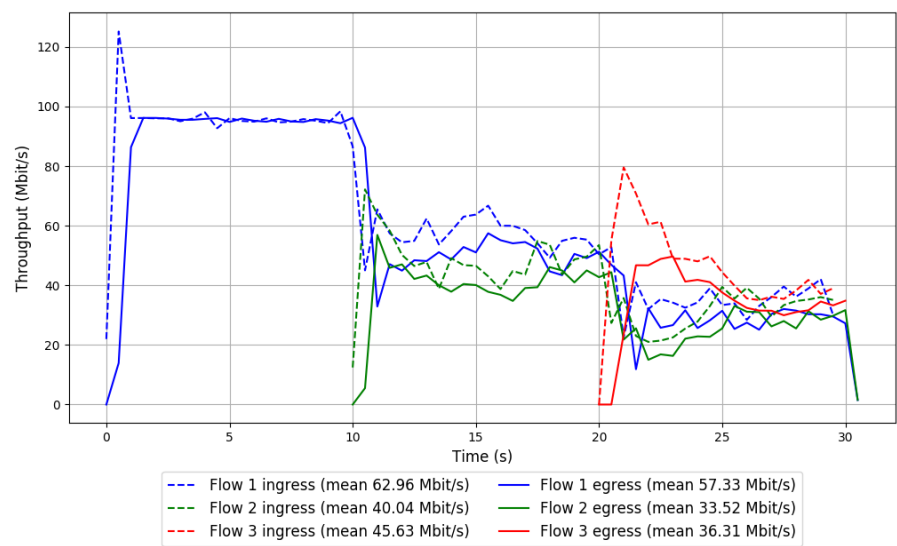
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 67.34 Mbit/s)   Flow 1 egress (mean 61.88 Mbit/s)
Flow 2 ingress (mean 38.12 Mbit/s)   Flow 2 egress (mean 32.29 Mbit/s)
Flow 3 ingress (mean 27.16 Mbit/s)   Flow 3 egress (mean 23.33 Mbit/s)

Flow 1 (95th percentile 65.29 ms)   Flow 2 (95th percentile 67.67 ms)   Flow 3 (95th percentile 66.44 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-03-27 02:29:05
End at: 2019-03-27 02:29:35
Local clock offset: 0.199 ms
Remote clock offset: 0.896 ms


# Below is generated by plot.py at 2019-03-27 03:17:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.39 Mbit/s
95th percentile per-packet one-way delay: 65.345 ms
Loss rate: 11.50%
-- Flow 1:
Average throughput: 56.61 Mbit/s
95th percentile per-packet one-way delay: 63.515 ms
Loss rate: 8.52%
-- Flow 2:
Average throughput: 38.51 Mbit/s
95th percentile per-packet one-way delay: 66.838 ms
Loss rate: 16.40%
-- Flow 3:
Average throughput: 21.62 Mbit/s
95th percentile per-packet one-way delay: 66.794 ms
Loss rate: 15.52%
```
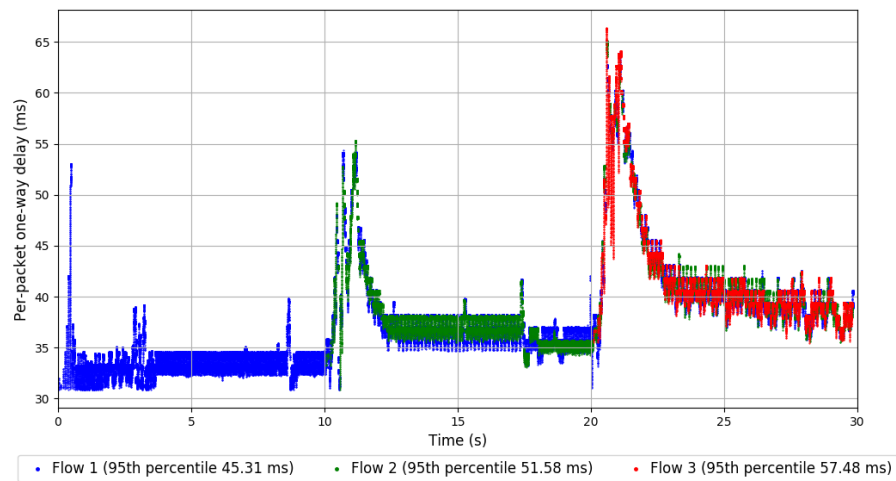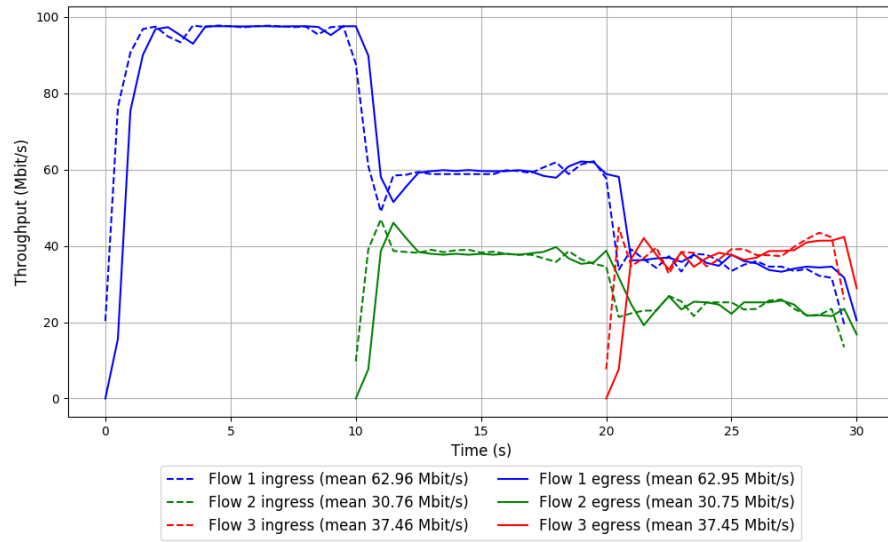
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 61.88 Mbit/s) --- Flow 1 egress (mean 56.61 Mbit/s)
Flow 2 ingress (mean 46.07 Mbit/s) --- Flow 2 egress (mean 38.51 Mbit/s)
Flow 3 ingress (mean 25.55 Mbit/s) --- Flow 3 egress (mean 21.62 Mbit/s)

Flow 1 (95th percentile 63.52 ms)   Flow 2 (95th percentile 66.84 ms)   Flow 3 (95th percentile 66.79 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-03-27 02:54:26
End at: 2019-03-27 02:54:56
Local clock offset: 0.501 ms
Remote clock offset: 1.766 ms


# Below is generated by plot.py at 2019-03-27 03:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.36 Mbit/s
95th percentile per-packet one-way delay: 65.552 ms
Loss rate: 12.73%
-- Flow 1:
Average throughput: 57.33 Mbit/s
95th percentile per-packet one-way delay: 63.768 ms
Loss rate: 8.91%
-- Flow 2:
Average throughput: 33.52 Mbit/s
95th percentile per-packet one-way delay: 67.071 ms
Loss rate: 16.27%
-- Flow 3:
Average throughput: 36.31 Mbit/s
95th percentile per-packet one-way delay: 67.394 ms
Loss rate: 22.38%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 62.96 Mbit/s) --- Flow 1 egress (mean 57.33 Mbit/s)
Flow 2 ingress (mean 40.04 Mbit/s) --- Flow 2 egress (mean 33.52 Mbit/s)
Flow 3 ingress (mean 45.63 Mbit/s) --- Flow 3 egress (mean 36.31 Mbit/s)

Flow 1 (95th percentile 63.77 ms)   Flow 2 (95th percentile 67.07 ms)   Flow 3 (95th percentile 67.39 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-03-27 01:08:15
End at: 2019-03-27 01:08:45
Local clock offset: 0.089 ms
Remote clock offset: -2.62 ms


# Below is generated by plot.py at 2019-03-27 03:17:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 50.154 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.95 Mbit/s
95th percentile per-packet one-way delay: 45.311 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 51.581 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.45 Mbit/s
95th percentile per-packet one-way delay: 57.480 ms
Loss rate: 0.00%
```
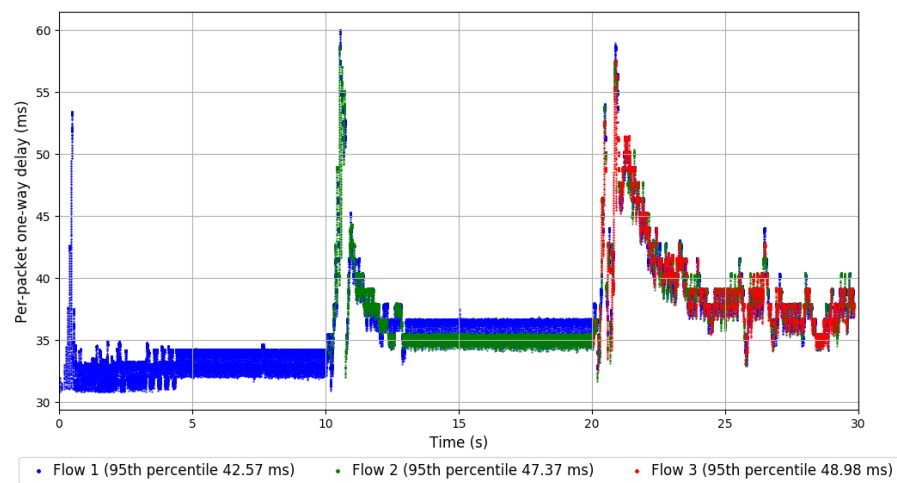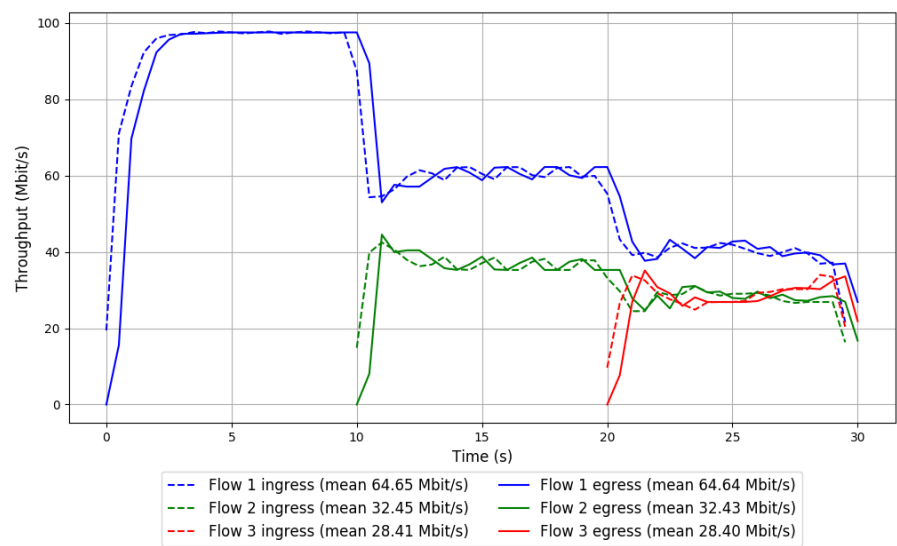
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-03-27 01:33:58
End at: 2019-03-27 01:34:28
Local clock offset: 0.29 ms
Remote clock offset: -1.514 ms


# Below is generated by plot.py at 2019-03-27 03:17:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.83 Mbit/s
95th percentile per-packet one-way delay: 51.110 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 61.43 Mbit/s
95th percentile per-packet one-way delay: 47.696 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 53.107 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 52.362 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-03-27 01:59:19
End at: 2019-03-27 01:59:49
Local clock offset: 0.221 ms
Remote clock offset: -0.377 ms


# Below is generated by plot.py at 2019-03-27 03:17:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 46.516 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 45.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.48 Mbit/s
95th percentile per-packet one-way delay: 51.146 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 46.265 ms
Loss rate: 0.00%
```
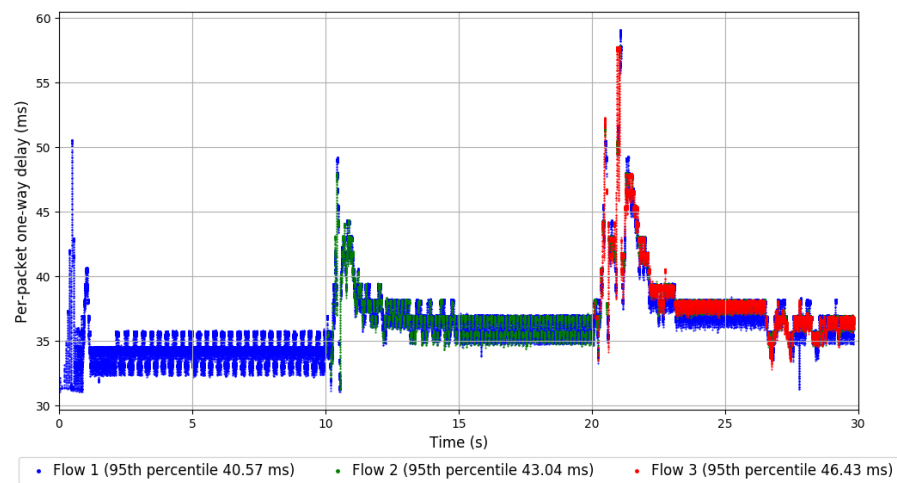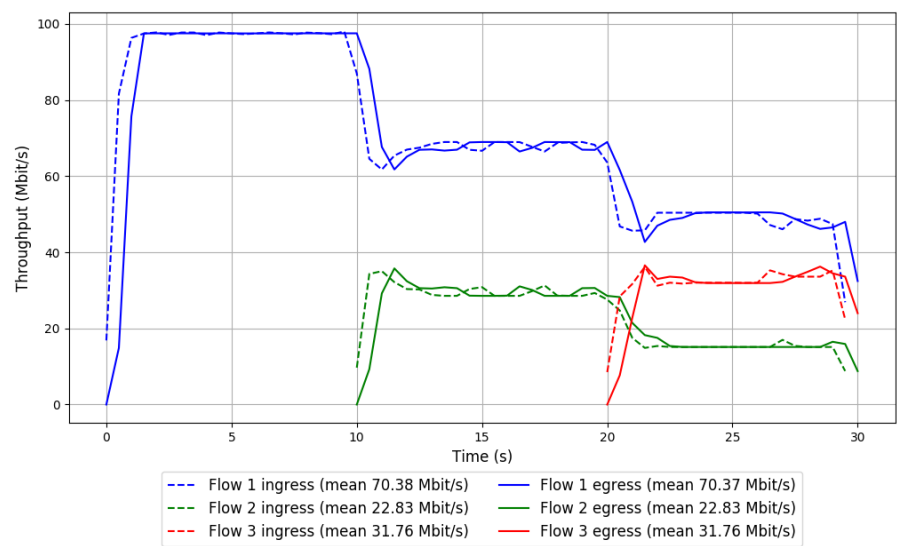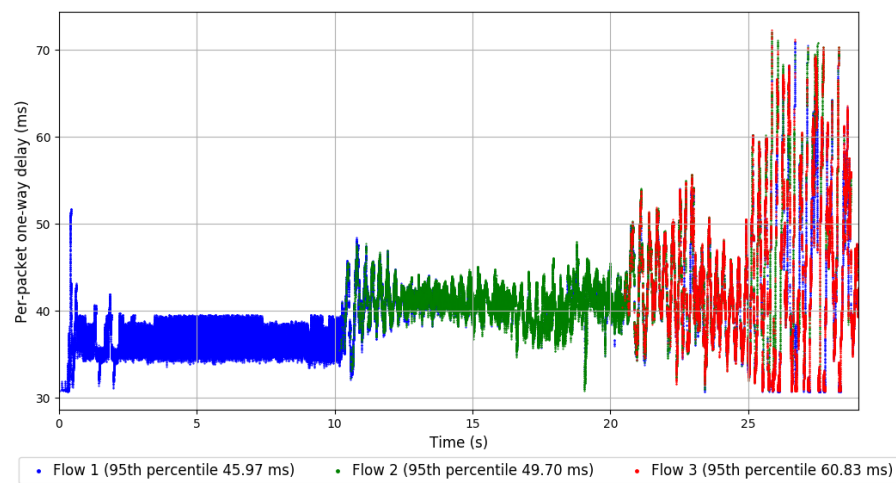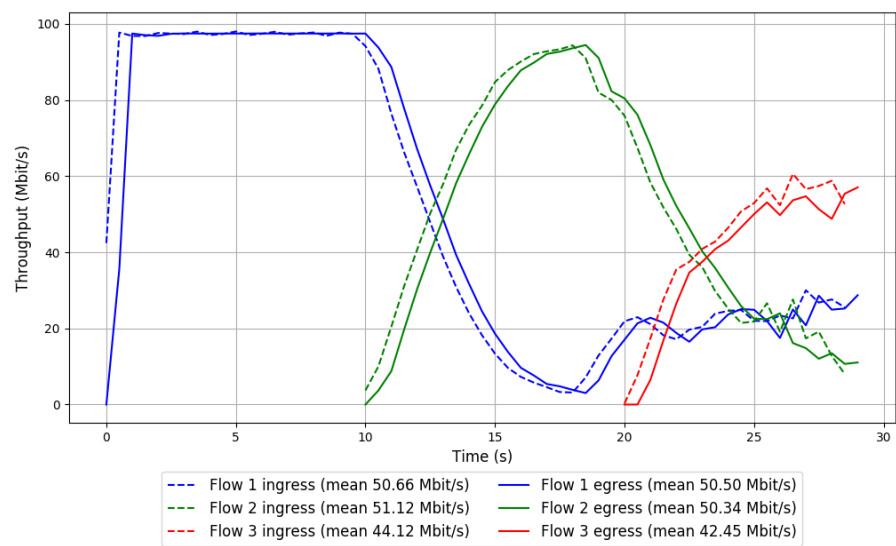
Run 3: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 63.26 Mbit/s) ——— Flow 1 egress (mean 63.25 Mbit/s)
- - - - Flow 2 ingress (mean 35.49 Mbit/s) ——— Flow 2 egress (mean 35.48 Mbit/s)
- - - - Flow 3 ingress (mean 27.62 Mbit/s) ——— Flow 3 egress (mean 27.61 Mbit/s)

- Flow 1 (95th percentile 45.33 ms)   - Flow 2 (95th percentile 51.15 ms)   - Flow 3 (95th percentile 46.27 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-03-27 02:25:14
End at: 2019-03-27 02:25:44
Local clock offset: 0.141 ms
Remote clock offset: 0.575 ms


# Below is generated by plot.py at 2019-03-27 03:17:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.39 Mbit/s
95th percentile per-packet one-way delay: 45.205 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 64.64 Mbit/s
95th percentile per-packet one-way delay: 42.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.43 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 48.978 ms
Loss rate: 0.00%
```
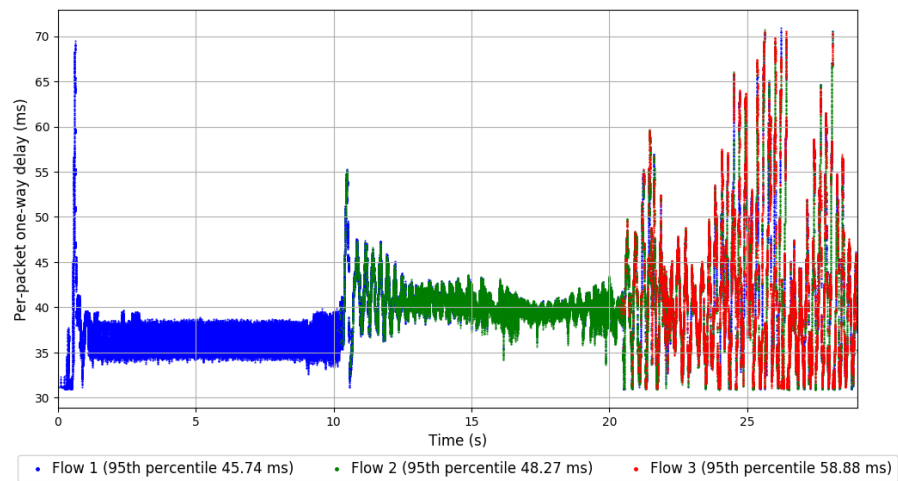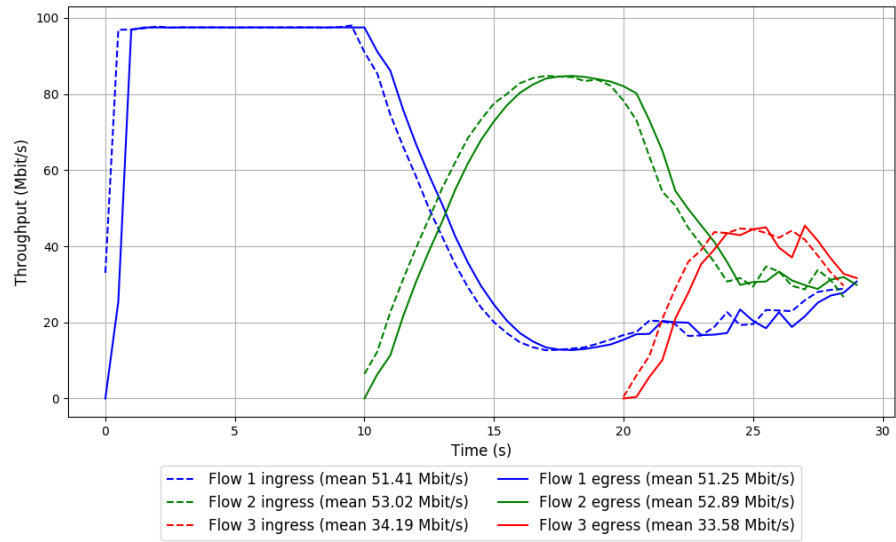
Run 4: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 64.65 Mbit/s)   ——— Flow 1 egress (mean 64.64 Mbit/s)
- - - - Flow 2 ingress (mean 32.45 Mbit/s)   ——— Flow 2 egress (mean 32.43 Mbit/s)
- - - - Flow 3 ingress (mean 28.41 Mbit/s)   ——— Flow 3 egress (mean 28.40 Mbit/s)

• Flow 1 (95th percentile 42.57 ms)   • Flow 2 (95th percentile 47.37 ms)   • Flow 3 (95th percentile 48.98 ms)

62

```
Run 5: Statistics of Indigo

Start at: 2019-03-27 02:50:46
End at: 2019-03-27 02:51:16
Local clock offset: 0.497 ms
Remote clock offset: 1.679 ms


# Below is generated by plot.py at 2019-03-27 03:18:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 41.860 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 70.37 Mbit/s
95th percentile per-packet one-way delay: 40.574 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.83 Mbit/s
95th percentile per-packet one-way delay: 43.038 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 46.429 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-03-27 01:13:08
End at: 2019-03-27 01:13:38
Local clock offset: 0.074 ms
Remote clock offset: -2.459 ms


# Below is generated by plot.py at 2019-03-27 03:18:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 51.516 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 50.50 Mbit/s
95th percentile per-packet one-way delay: 45.965 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 50.34 Mbit/s
95th percentile per-packet one-way delay: 49.704 ms
Loss rate: 1.48%
-- Flow 3:
Average throughput: 42.45 Mbit/s
95th percentile per-packet one-way delay: 60.828 ms
Loss rate: 3.79%
```
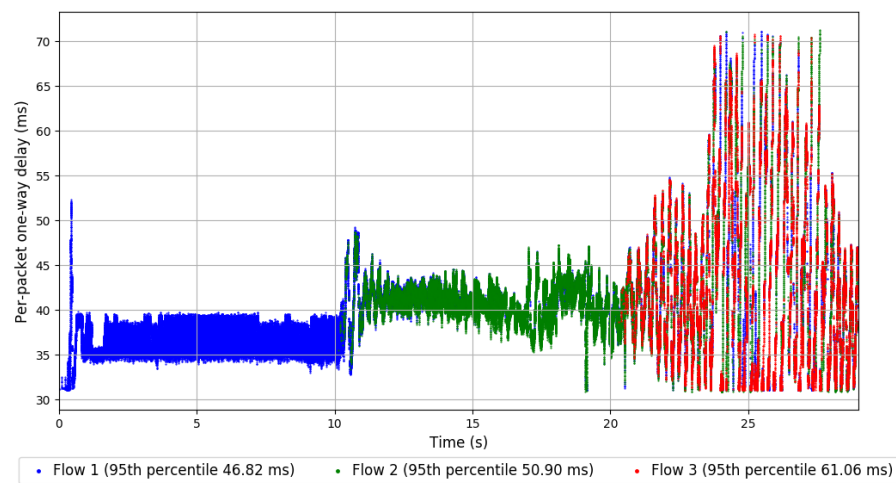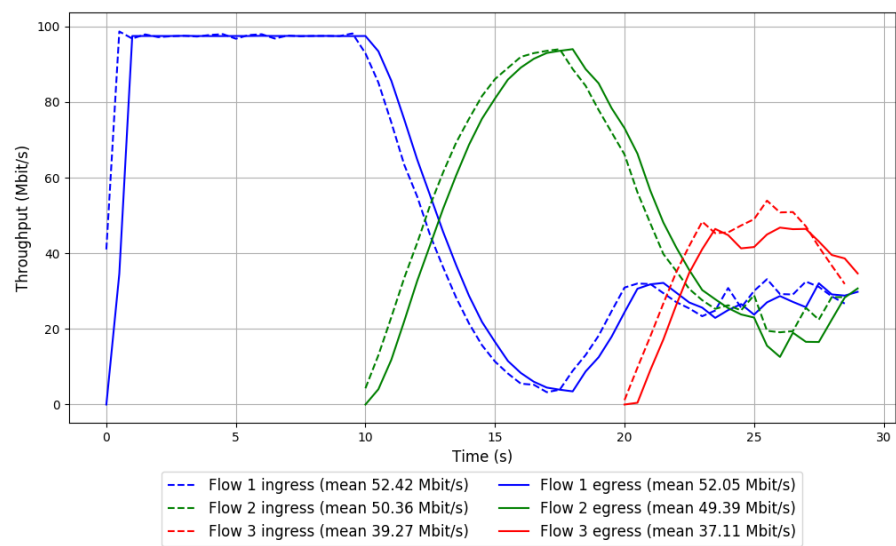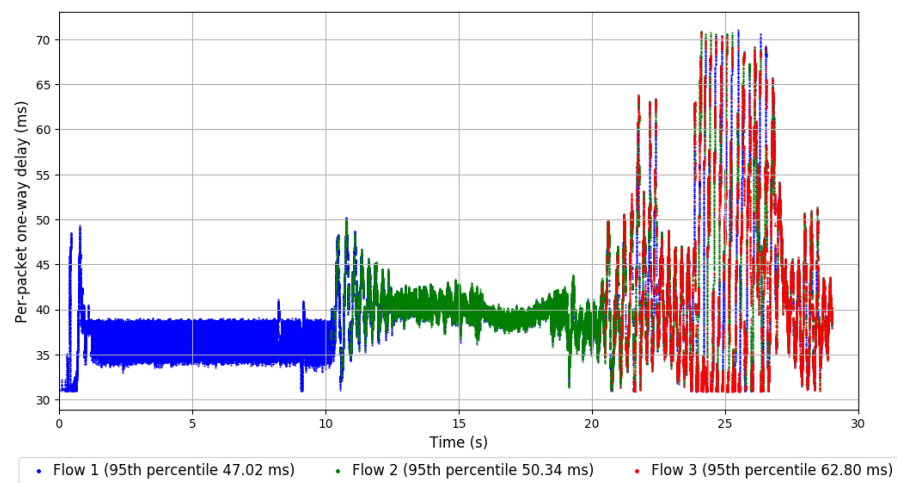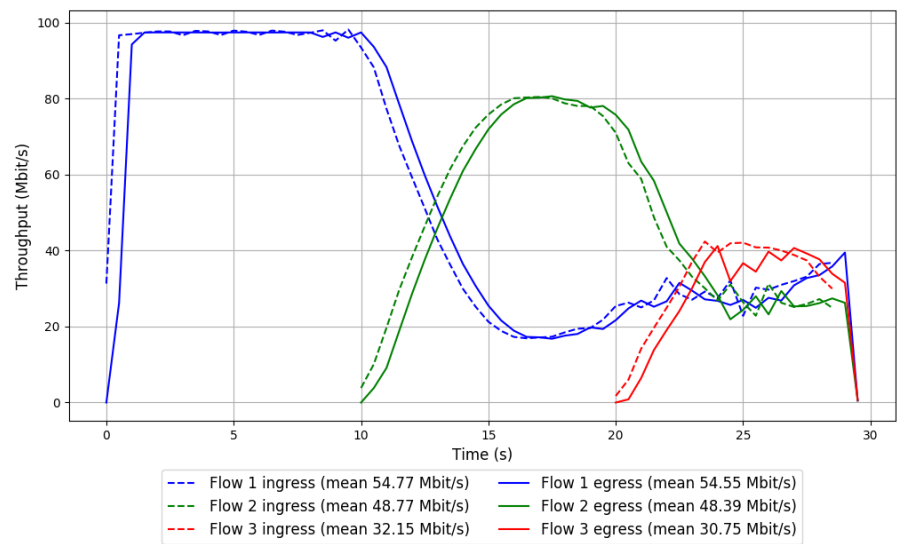
Run 1: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 50.66 Mbit/s) ——— Flow 1 egress (mean 50.50 Mbit/s)
- - - - Flow 2 ingress (mean 51.12 Mbit/s) ——— Flow 2 egress (mean 50.34 Mbit/s)
- - - - Flow 3 ingress (mean 44.12 Mbit/s) ——— Flow 3 egress (mean 42.45 Mbit/s)

• Flow 1 (95th percentile 45.97 ms)   • Flow 2 (95th percentile 49.70 ms)   • Flow 3 (95th percentile 60.83 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-03-27 01:38:51
End at: 2019-03-27 01:39:21
Local clock offset: 0.326 ms
Remote clock offset: -1.123 ms


# Below is generated by plot.py at 2019-03-27 03:18:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 49.193 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 45.742 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 52.89 Mbit/s
95th percentile per-packet one-way delay: 48.267 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 33.58 Mbit/s
95th percentile per-packet one-way delay: 58.884 ms
Loss rate: 1.80%
```
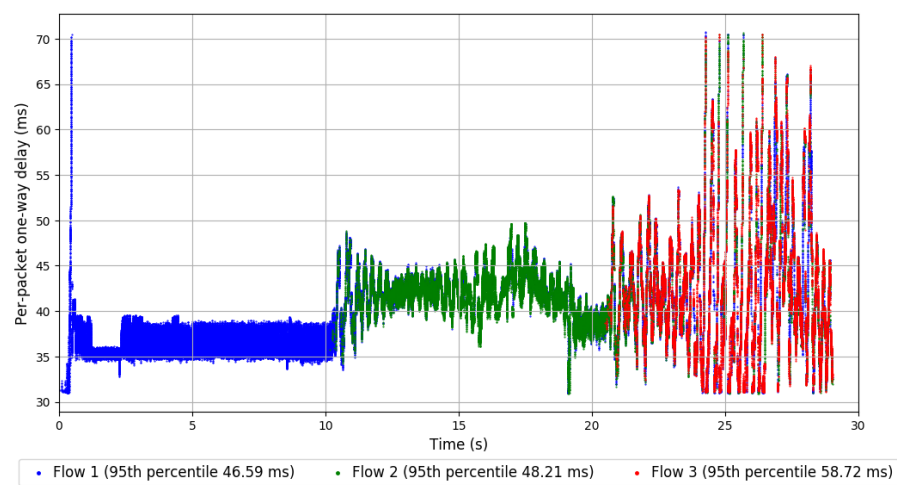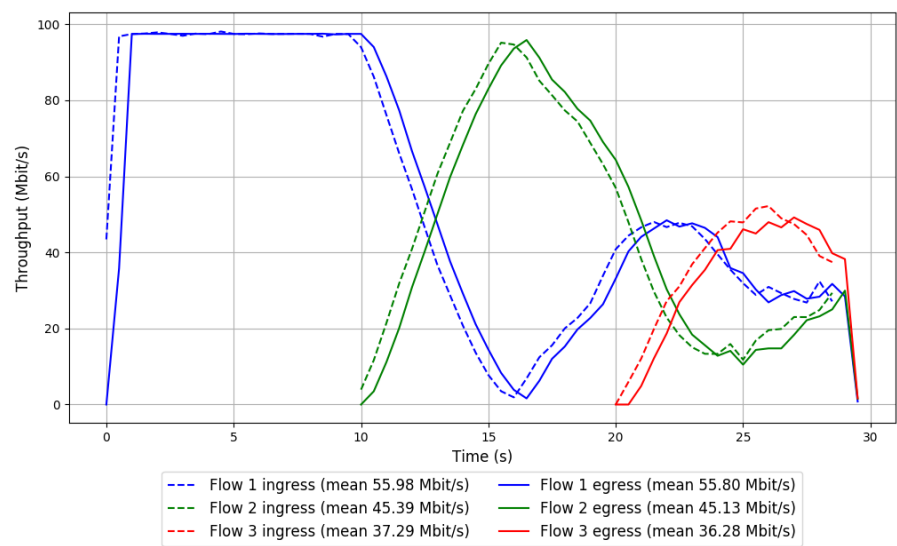
Run 2: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 51.41 Mbit/s)   Flow 1 egress (mean 51.25 Mbit/s)
Flow 2 ingress (mean 53.02 Mbit/s)   Flow 2 egress (mean 52.89 Mbit/s)
Flow 3 ingress (mean 34.19 Mbit/s)   Flow 3 egress (mean 33.58 Mbit/s)

Flow 1 (95th percentile 45.74 ms)   Flow 2 (95th percentile 48.27 ms)   Flow 3 (95th percentile 58.88 ms)

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:04:20
End at: 2019-03-27 02:04:50
Local clock offset: 0.181 ms
Remote clock offset: -0.006 ms


# Below is generated by plot.py at 2019-03-27 03:18:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.33 Mbit/s
95th percentile per-packet one-way delay: 52.362 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 52.05 Mbit/s
95th percentile per-packet one-way delay: 46.816 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 49.39 Mbit/s
95th percentile per-packet one-way delay: 50.895 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 61.061 ms
Loss rate: 5.51%
```
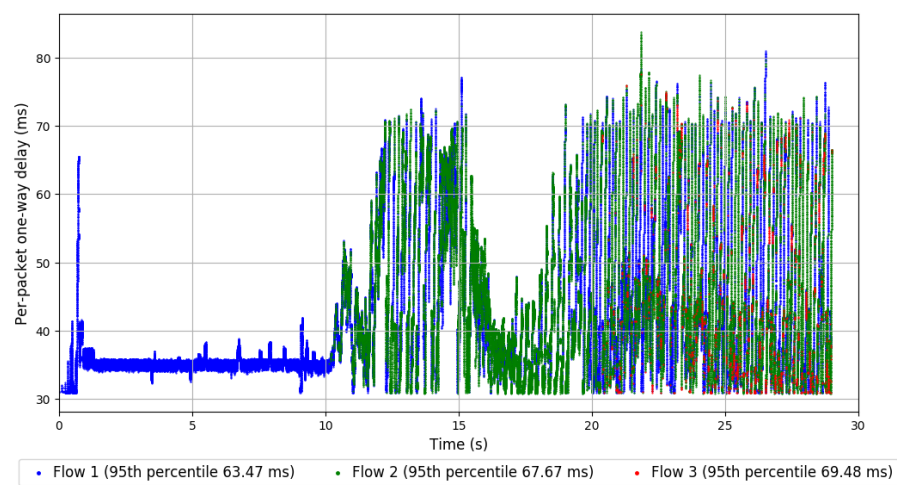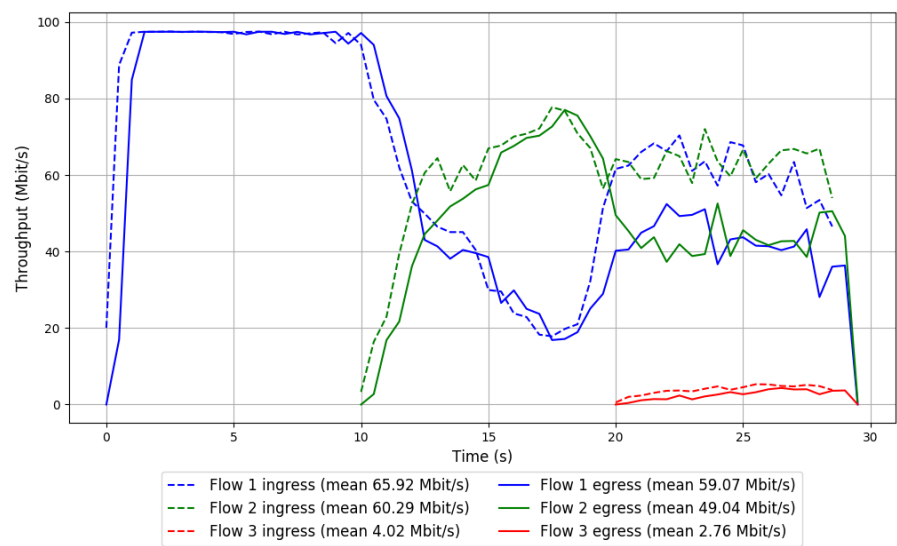
Run 3: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 52.42 Mbit/s) —— Flow 1 egress (mean 52.05 Mbit/s)
- - - Flow 2 ingress (mean 50.36 Mbit/s) —— Flow 2 egress (mean 49.39 Mbit/s)
- - - Flow 3 ingress (mean 39.27 Mbit/s) —— Flow 3 egress (mean 37.11 Mbit/s)

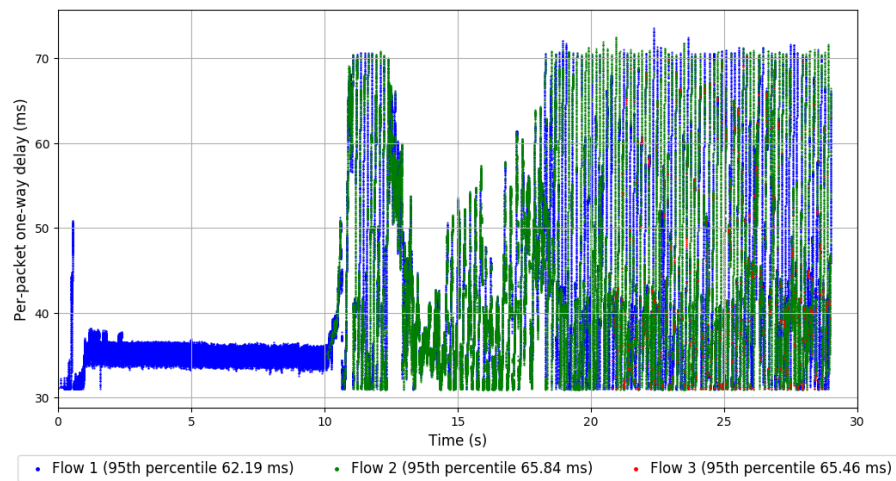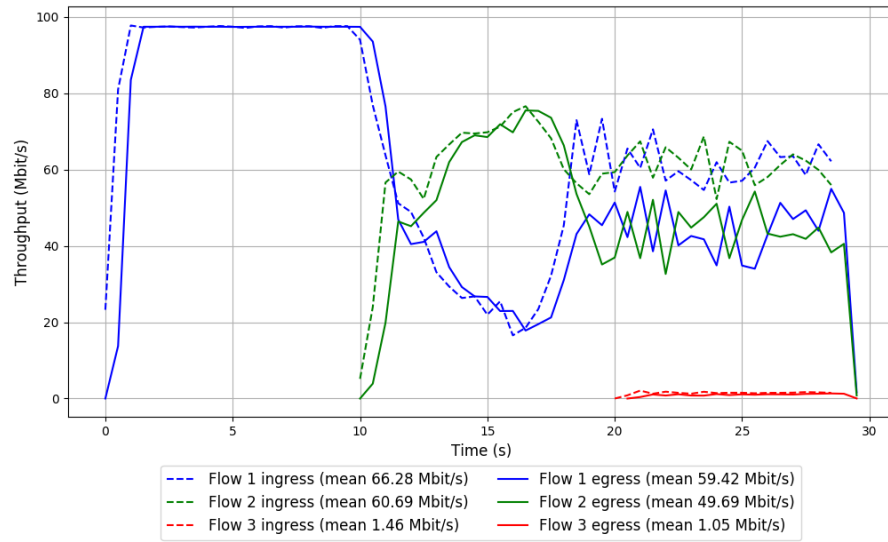• Flow 1 (95th percentile 46.82 ms)　　• Flow 2 (95th percentile 50.90 ms)　　• Flow 3 (95th percentile 61.06 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:30:20
End at: 2019-03-27 02:30:50
Local clock offset: 0.233 ms
Remote clock offset: 0.915 ms


# Below is generated by plot.py at 2019-03-27 03:18:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 51.366 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 54.55 Mbit/s
95th percentile per-packet one-way delay: 47.023 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 48.39 Mbit/s
95th percentile per-packet one-way delay: 50.341 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 62.804 ms
Loss rate: 4.37%
```

Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-03-27 02:55:39
End at: 2019-03-27 02:56:09
Local clock offset: 0.482 ms
Remote clock offset: 1.764 ms


# Below is generated by plot.py at 2019-03-27 03:18:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 49.170 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 55.80 Mbit/s
95th percentile per-packet one-way delay: 46.588 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 48.212 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 58.720 ms
Loss rate: 2.79%
```
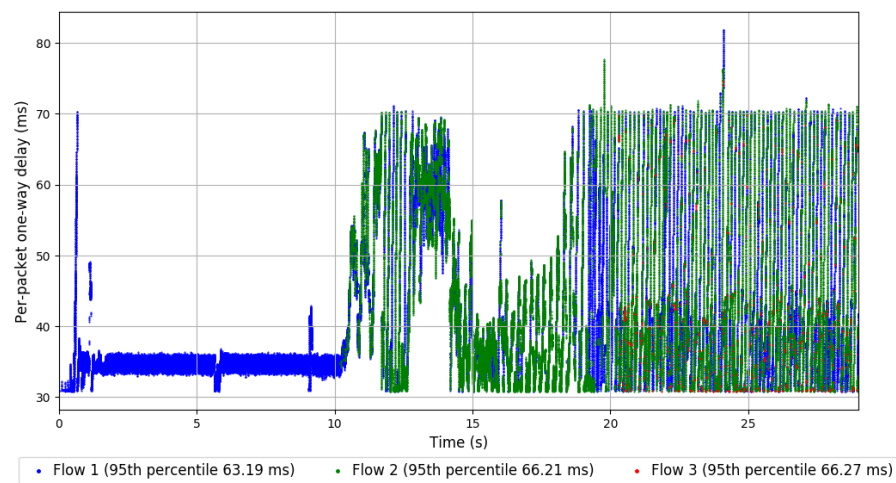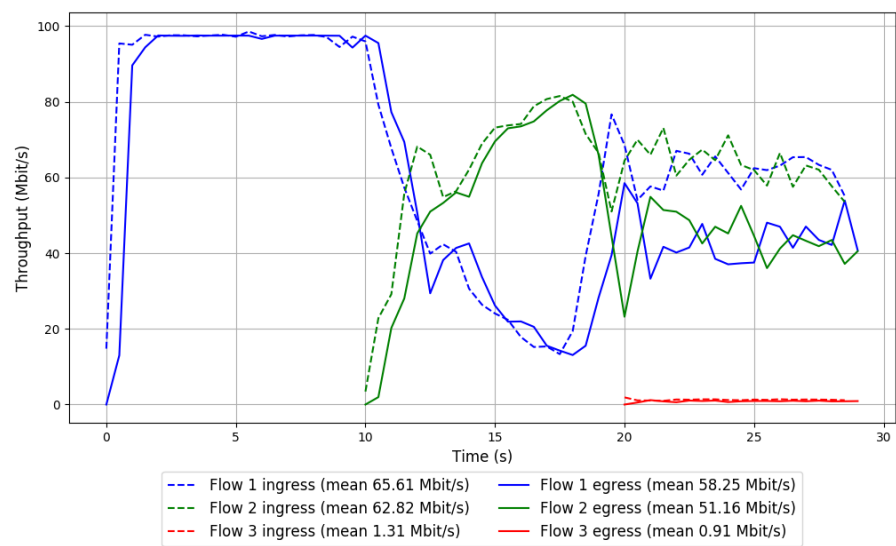
Run 5: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 55.98 Mbit/s)   —— Flow 1 egress (mean 55.80 Mbit/s)
- - - Flow 2 ingress (mean 45.39 Mbit/s)   —— Flow 2 egress (mean 45.13 Mbit/s)
- - - Flow 3 ingress (mean 37.29 Mbit/s)   —— Flow 3 egress (mean 36.28 Mbit/s)

- Flow 1 (95th percentile 46.59 ms)   • Flow 2 (95th percentile 48.21 ms)   • Flow 3 (95th percentile 58.72 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-03-27 01:21:25
End at: 2019-03-27 01:21:55
Local clock offset: 0.175 ms
Remote clock offset: -1.92 ms


# Below is generated by plot.py at 2019-03-27 03:18:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.85 Mbit/s
95th percentile per-packet one-way delay: 65.568 ms
Loss rate: 13.56%
-- Flow 1:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 63.465 ms
Loss rate: 10.28%
-- Flow 2:
Average throughput: 49.04 Mbit/s
95th percentile per-packet one-way delay: 67.669 ms
Loss rate: 18.53%
-- Flow 3:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 69.477 ms
Loss rate: 30.94%
```
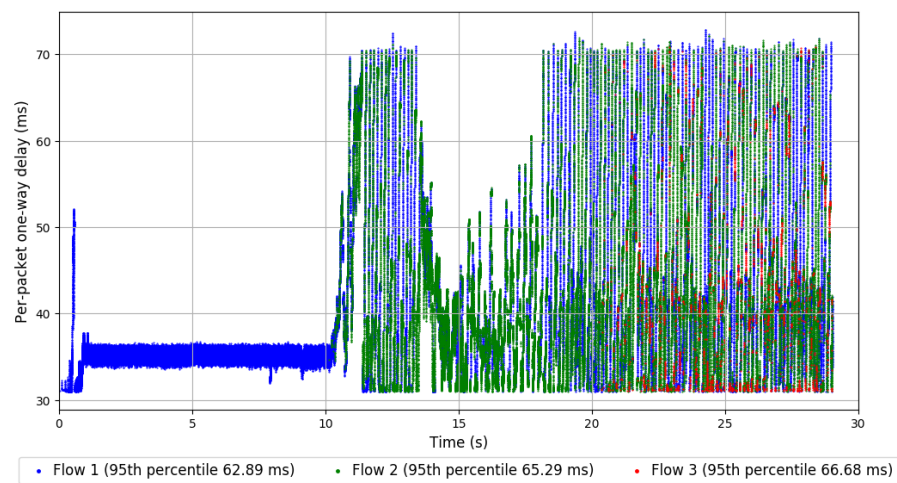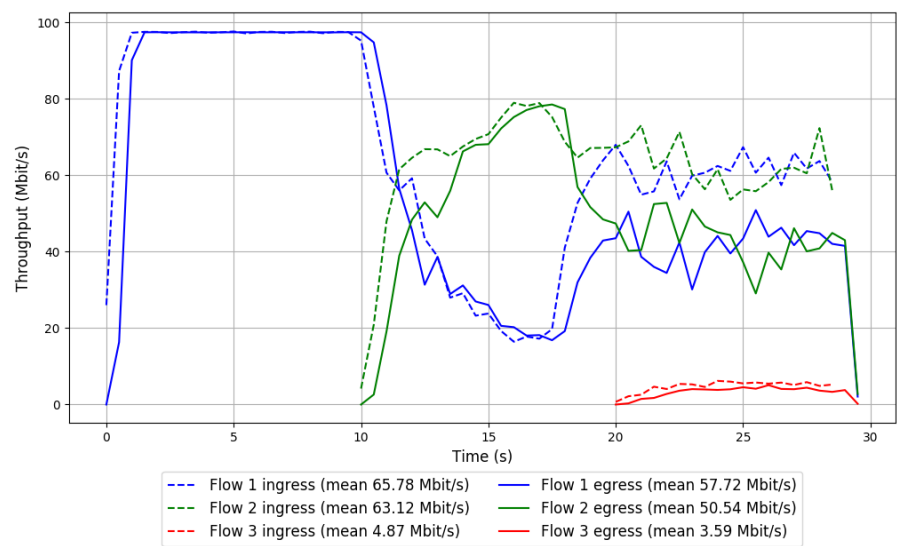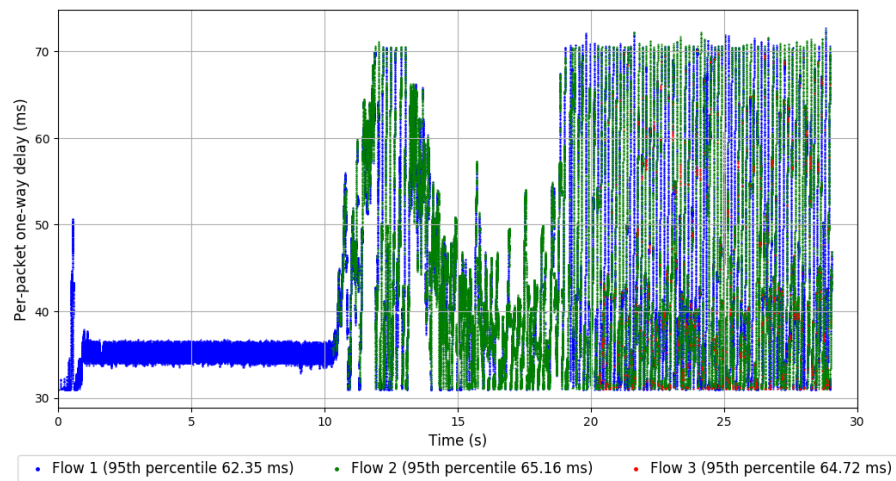
Run 1: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 65.92 Mbit/s) ——— Flow 1 egress (mean 59.07 Mbit/s)
- - - Flow 2 ingress (mean 60.29 Mbit/s) ——— Flow 2 egress (mean 49.04 Mbit/s)
- - - Flow 3 ingress (mean 4.02 Mbit/s) ——— Flow 3 egress (mean 2.76 Mbit/s)

- Flow 1 (95th percentile 63.47 ms) - Flow 2 (95th percentile 67.67 ms) - Flow 3 (95th percentile 69.48 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-03-27 01:47:08
End at: 2019-03-27 01:47:39
Local clock offset: 0.339 ms
Remote clock offset: -0.699 ms


# Below is generated by plot.py at 2019-03-27 03:19:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 64.027 ms
Loss rate: 13.22%
-- Flow 1:
Average throughput: 59.42 Mbit/s
95th percentile per-packet one-way delay: 62.186 ms
Loss rate: 10.24%
-- Flow 2:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 65.843 ms
Loss rate: 17.99%
-- Flow 3:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 65.459 ms
Loss rate: 31.85%
```
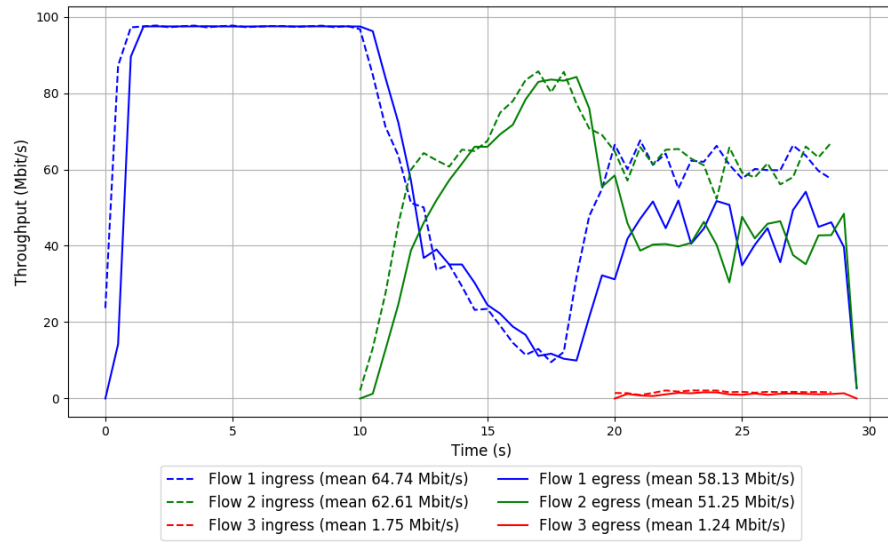
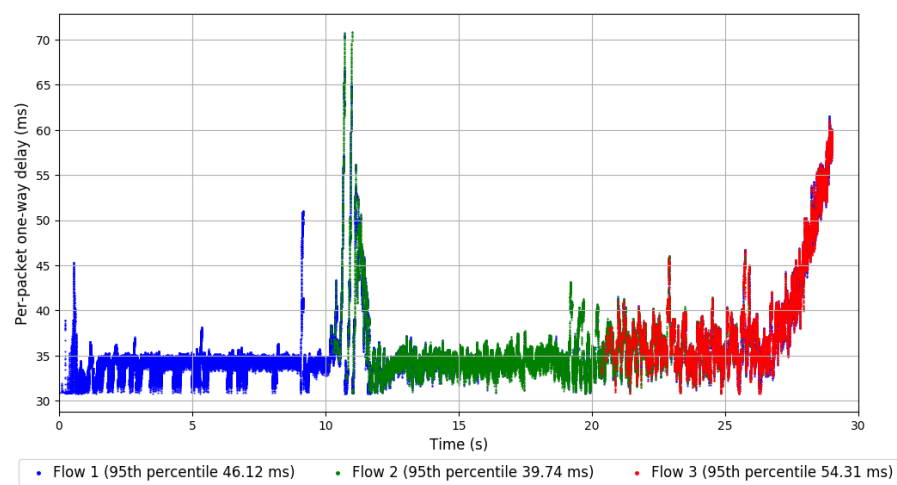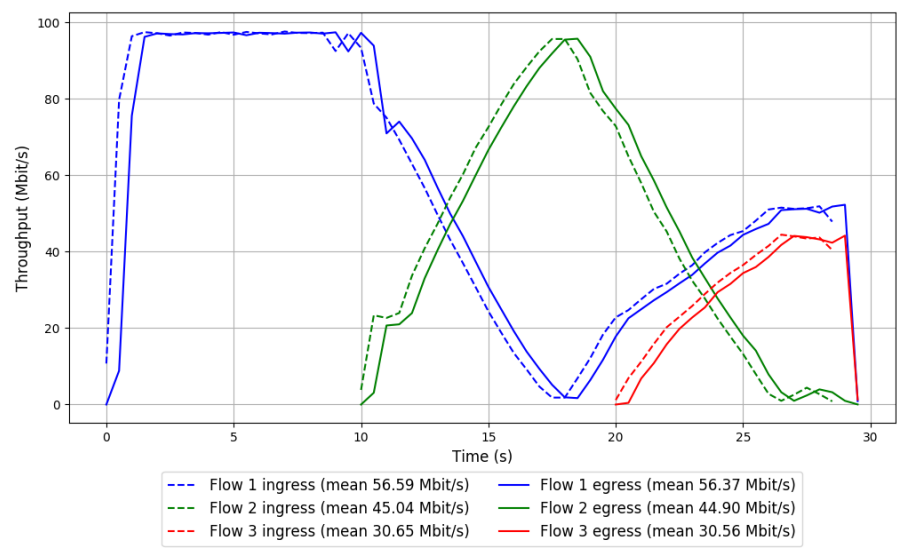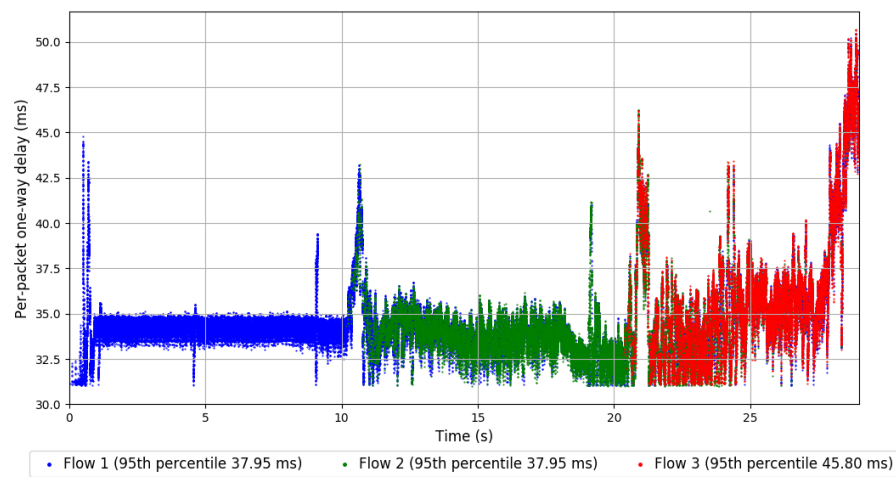Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-03-27 02:12:45
End at: 2019-03-27 02:13:15
Local clock offset: 0.095 ms
Remote clock offset: 0.118 ms


# Below is generated by plot.py at 2019-03-27 03:19:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.74 Mbit/s
95th percentile per-packet one-way delay: 64.614 ms
Loss rate: 14.09%
-- Flow 1:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 63.191 ms
Loss rate: 11.19%
-- Flow 2:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 66.209 ms
Loss rate: 18.59%
-- Flow 3:
Average throughput: 0.91 Mbit/s
95th percentile per-packet one-way delay: 66.269 ms
Loss rate: 30.66%
```

Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 65.61 Mbit/s) --- Flow 1 egress (mean 58.25 Mbit/s)
Flow 2 ingress (mean 62.82 Mbit/s) --- Flow 2 egress (mean 51.16 Mbit/s)
Flow 3 ingress (mean 1.31 Mbit/s) --- Flow 3 egress (mean 0.91 Mbit/s)

Flow 1 (95th percentile 63.19 ms) • Flow 2 (95th percentile 66.21 ms) • Flow 3 (95th percentile 66.27 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-03-27 02:38:42
End at: 2019-03-27 02:39:12
Local clock offset: 0.394 ms
Remote clock offset: 1.229 ms


# Below is generated by plot.py at 2019-03-27 03:19:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.70 Mbit/s
95th percentile per-packet one-way delay: 63.944 ms
Loss rate: 15.33%
-- Flow 1:
Average throughput: 57.72 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 12.22%
-- Flow 2:
Average throughput: 50.54 Mbit/s
95th percentile per-packet one-way delay: 65.293 ms
Loss rate: 19.93%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 66.676 ms
Loss rate: 26.19%
```
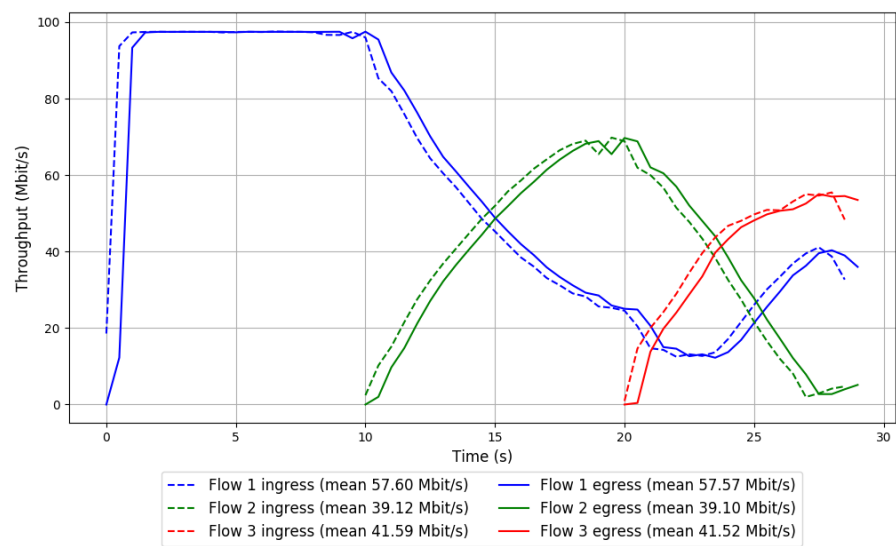
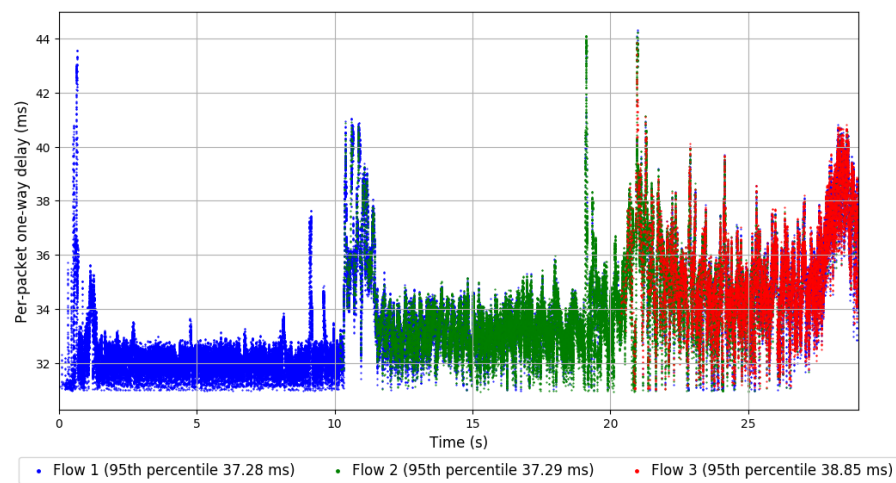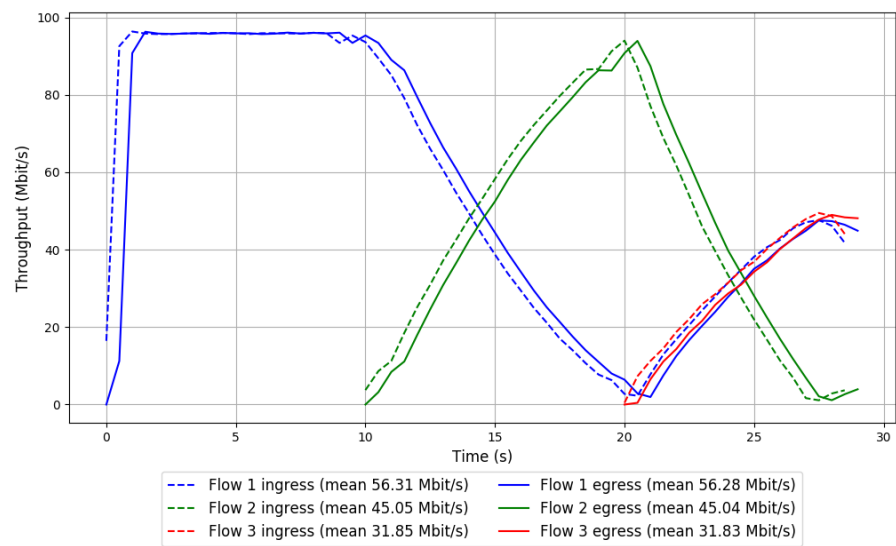Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-03-27 03:04:01
End at: 2019-03-27 03:04:31
Local clock offset: 0.558 ms
Remote clock offset: 1.913 ms


# Below is generated by plot.py at 2019-03-27 03:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 63.794 ms
Loss rate: 13.29%
-- Flow 1:
Average throughput: 58.13 Mbit/s
95th percentile per-packet one-way delay: 62.348 ms
Loss rate: 10.16%
-- Flow 2:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 65.158 ms
Loss rate: 18.10%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 64.719 ms
Loss rate: 29.17%
```

Run 5: Report of Indigo-MusesC5 — Data Link

84

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-03-27 01:10:42
End at: 2019-03-27 01:11:12
Local clock offset: 0.081 ms
Remote clock offset: -2.491 ms


# Below is generated by plot.py at 2019-03-27 03:19:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.82 Mbit/s
95th percentile per-packet one-way delay: 46.283 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 46.124 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 44.90 Mbit/s
95th percentile per-packet one-way delay: 39.737 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 54.314 ms
Loss rate: 0.00%
```
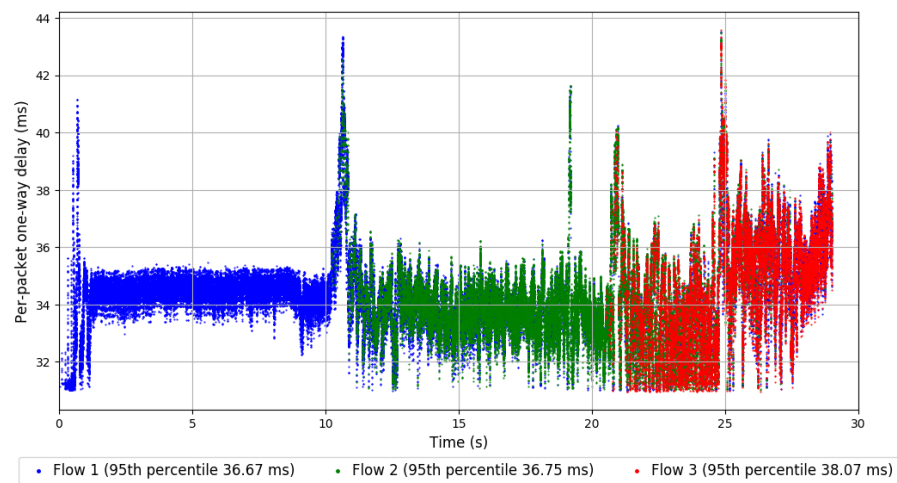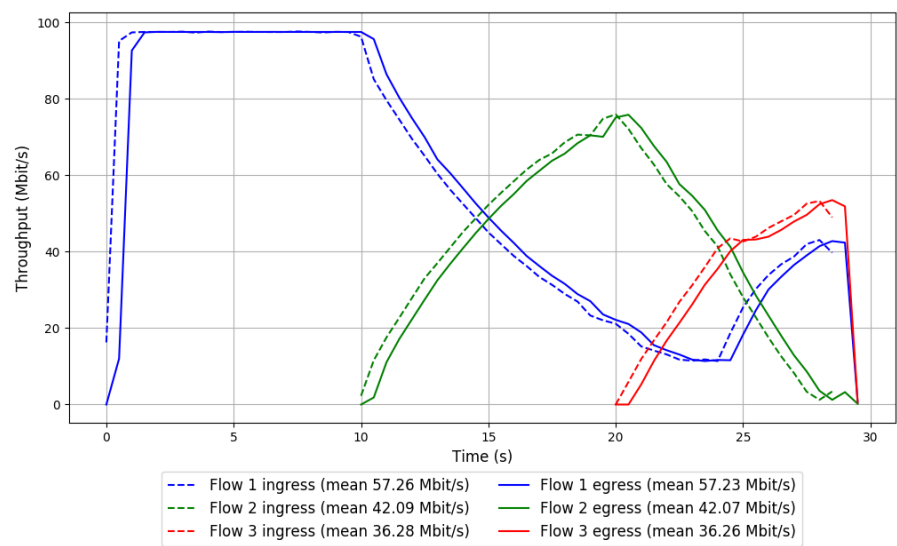
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-03-27 01:36:25
End at: 2019-03-27 01:36:55
Local clock offset: 0.345 ms
Remote clock offset: -1.184 ms


# Below is generated by plot.py at 2019-03-27 03:19:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.41 Mbit/s
95th percentile per-packet one-way delay: 39.897 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.57 Mbit/s
95th percentile per-packet one-way delay: 37.949 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.10 Mbit/s
95th percentile per-packet one-way delay: 37.950 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.52 Mbit/s
95th percentile per-packet one-way delay: 45.797 ms
Loss rate: 0.00%
```
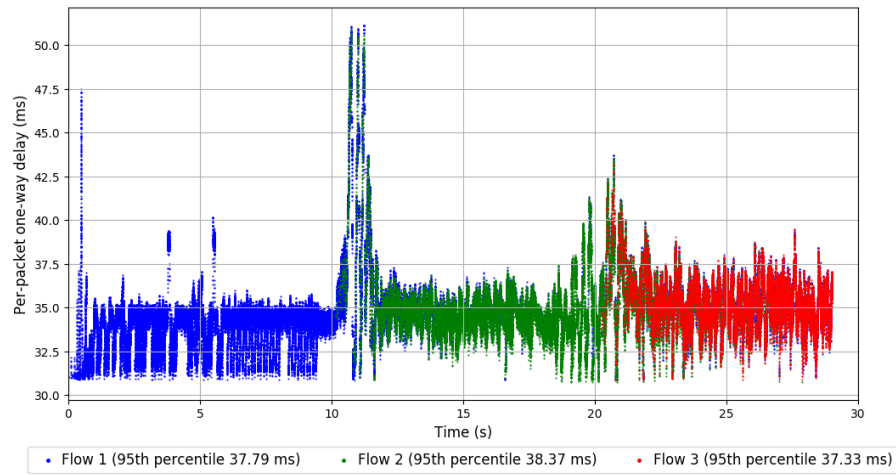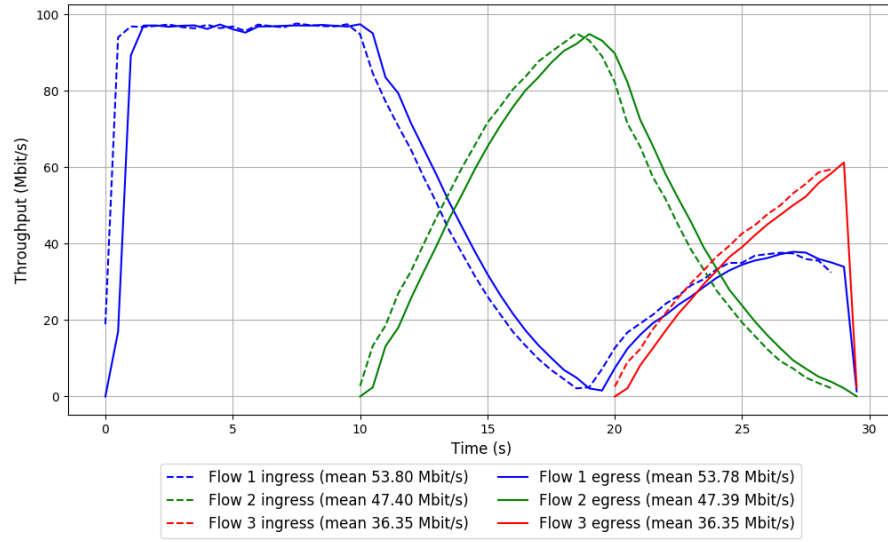
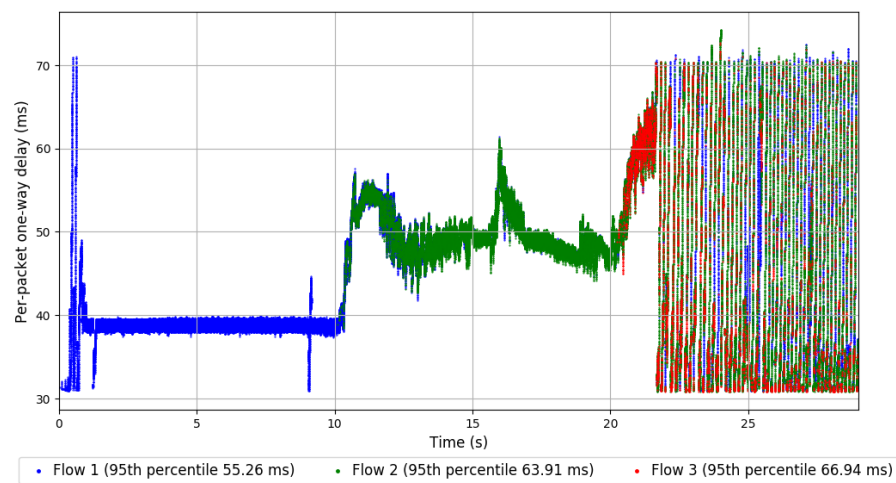Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:01:51
End at: 2019-03-27 02:02:21
Local clock offset: 0.189 ms
Remote clock offset: -0.153 ms


# Below is generated by plot.py at 2019-03-27 03:20:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.13 Mbit/s
95th percentile per-packet one-way delay: 37.669 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 37.279 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 45.04 Mbit/s
95th percentile per-packet one-way delay: 37.291 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 38.853 ms
Loss rate: 0.01%
```

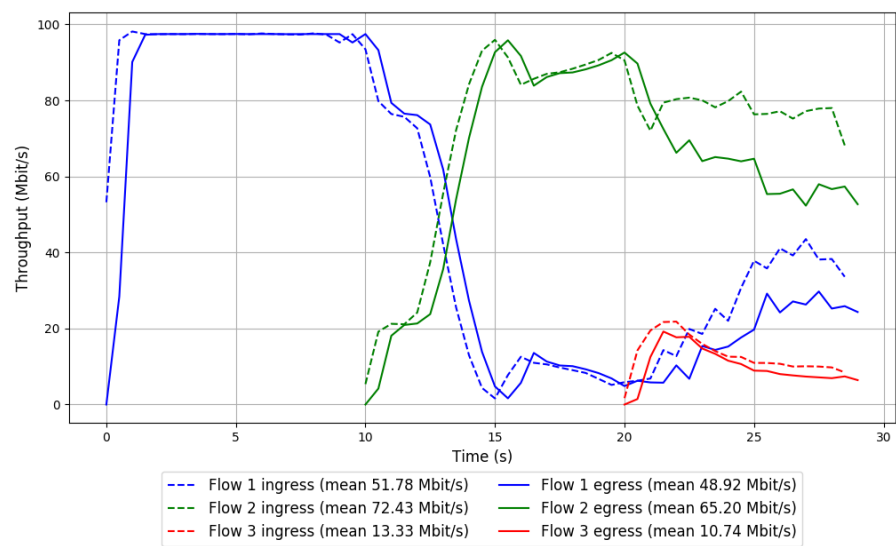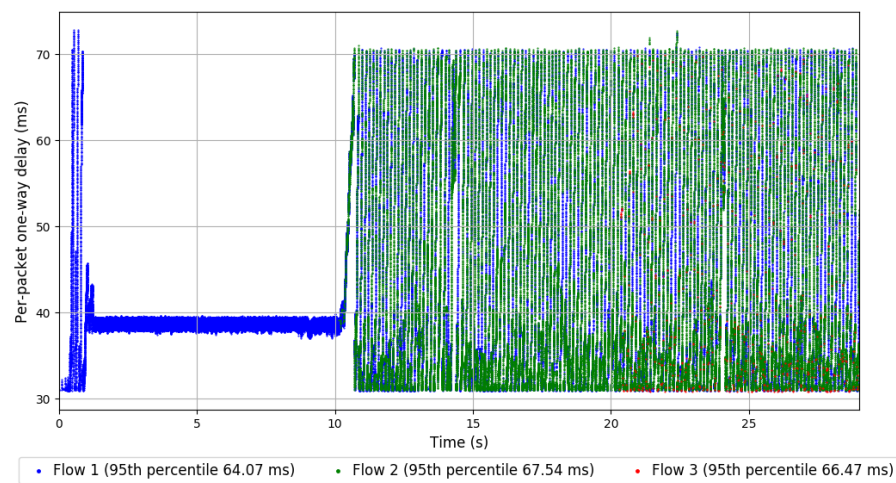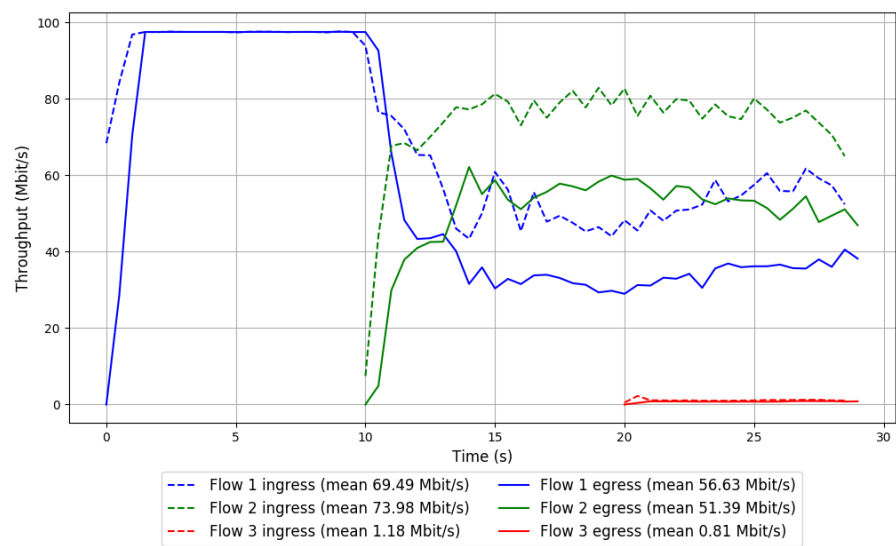Run 3: Report of Indigo-MusesD — Data Link

90

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:27:48
End at: 2019-03-27 02:28:18
Local clock offset: 0.185 ms
Remote clock offset: 0.848 ms


# Below is generated by plot.py at 2019-03-27 03:20:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 37.017 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 57.23 Mbit/s
95th percentile per-packet one-way delay: 36.669 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 36.751 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 36.26 Mbit/s
95th percentile per-packet one-way delay: 38.074 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 57.26 Mbit/s)   Flow 1 egress (mean 57.23 Mbit/s)
Flow 2 ingress (mean 42.09 Mbit/s)   Flow 2 egress (mean 42.07 Mbit/s)
Flow 3 ingress (mean 36.28 Mbit/s)   Flow 3 egress (mean 36.26 Mbit/s)

Flow 1 (95th percentile 36.67 ms)   Flow 2 (95th percentile 36.75 ms)   Flow 3 (95th percentile 38.07 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-03-27 02:53:13
End at: 2019-03-27 02:53:43
Local clock offset: 0.485 ms
Remote clock offset: 1.537 ms


# Below is generated by plot.py at 2019-03-27 03:20:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.71 Mbit/s
95th percentile per-packet one-way delay: 37.897 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.78 Mbit/s
95th percentile per-packet one-way delay: 37.790 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 47.39 Mbit/s
95th percentile per-packet one-way delay: 38.373 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 37.329 ms
Loss rate: 0.00%
```
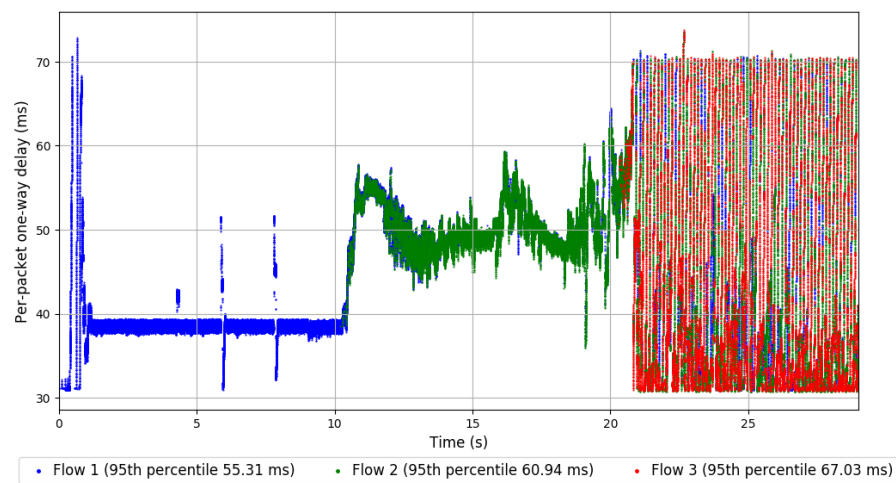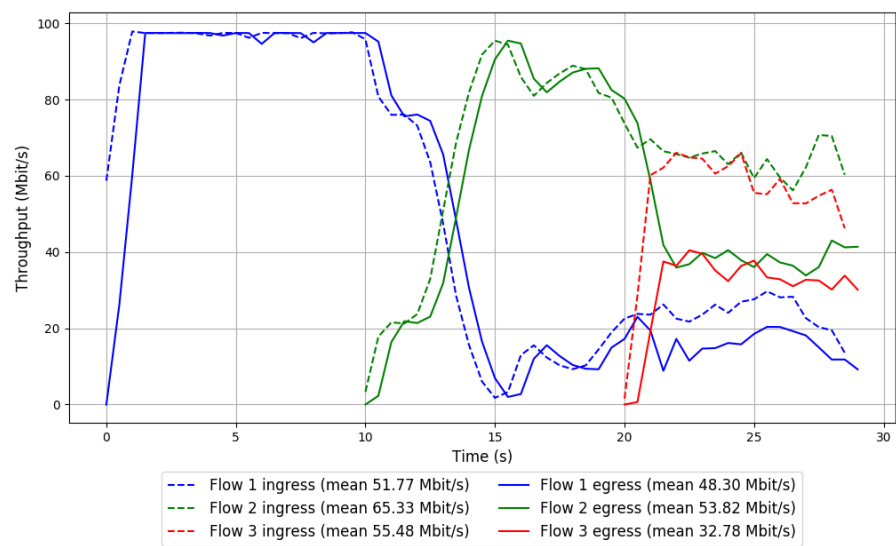
Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 53.80 Mbit/s) --- Flow 1 egress (mean 53.78 Mbit/s)
Flow 2 ingress (mean 47.40 Mbit/s) --- Flow 2 egress (mean 47.39 Mbit/s)
Flow 3 ingress (mean 36.35 Mbit/s) --- Flow 3 egress (mean 36.35 Mbit/s)

Flow 1 (95th percentile 37.79 ms) • Flow 2 (95th percentile 38.37 ms) • Flow 3 (95th percentile 37.33 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-03-27 01:17:54
End at: 2019-03-27 01:18:24
Local clock offset: 0.107 ms
Remote clock offset: -2.109 ms


# Below is generated by plot.py at 2019-03-27 03:20:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 62.195 ms
Loss rate: 8.12%
-- Flow 1:
Average throughput: 48.92 Mbit/s
95th percentile per-packet one-way delay: 55.262 ms
Loss rate: 5.51%
-- Flow 2:
Average throughput: 65.20 Mbit/s
95th percentile per-packet one-way delay: 63.907 ms
Loss rate: 10.00%
-- Flow 3:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 66.935 ms
Loss rate: 19.59%
```
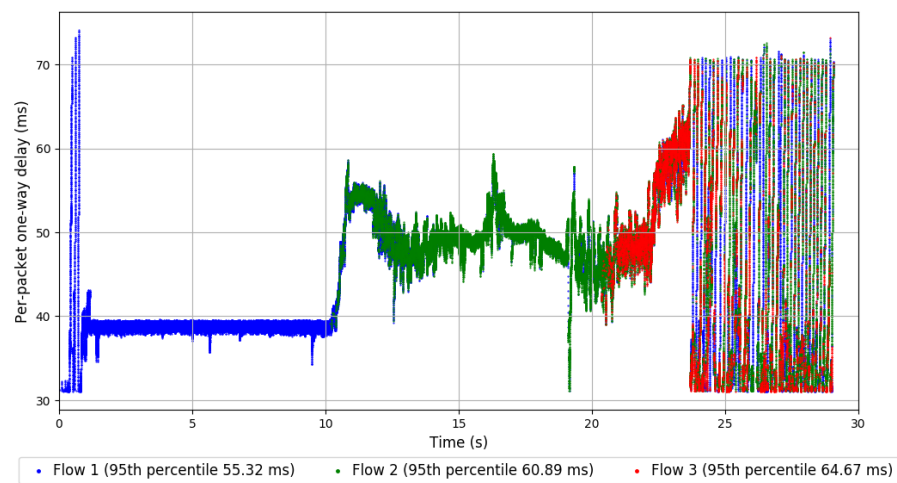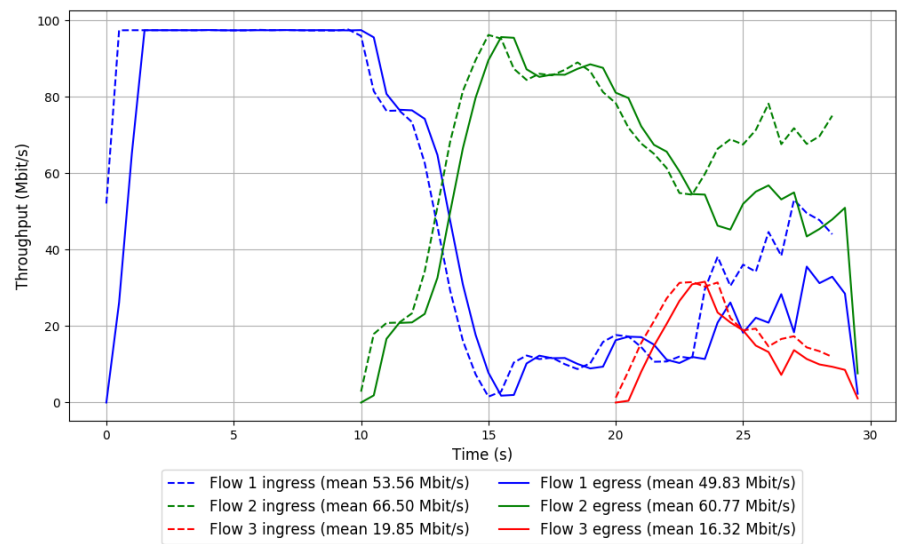
Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 51.78 Mbit/s) --- Flow 1 egress (mean 48.92 Mbit/s)
Flow 2 ingress (mean 72.43 Mbit/s) --- Flow 2 egress (mean 65.20 Mbit/s)
Flow 3 ingress (mean 13.33 Mbit/s) --- Flow 3 egress (mean 10.74 Mbit/s)

Flow 1 (95th percentile 55.26 ms)   Flow 2 (95th percentile 63.91 ms)   Flow 3 (95th percentile 66.94 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-03-27 01:43:37
End at: 2019-03-27 01:44:07
Local clock offset: 0.365 ms
Remote clock offset: -0.892 ms


# Below is generated by plot.py at 2019-03-27 03:20:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.35 Mbit/s
95th percentile per-packet one-way delay: 66.087 ms
Loss rate: 23.40%
-- Flow 1:
Average throughput: 56.63 Mbit/s
95th percentile per-packet one-way delay: 64.069 ms
Loss rate: 18.45%
-- Flow 2:
Average throughput: 51.39 Mbit/s
95th percentile per-packet one-way delay: 67.537 ms
Loss rate: 30.48%
-- Flow 3:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 66.471 ms
Loss rate: 30.66%
```
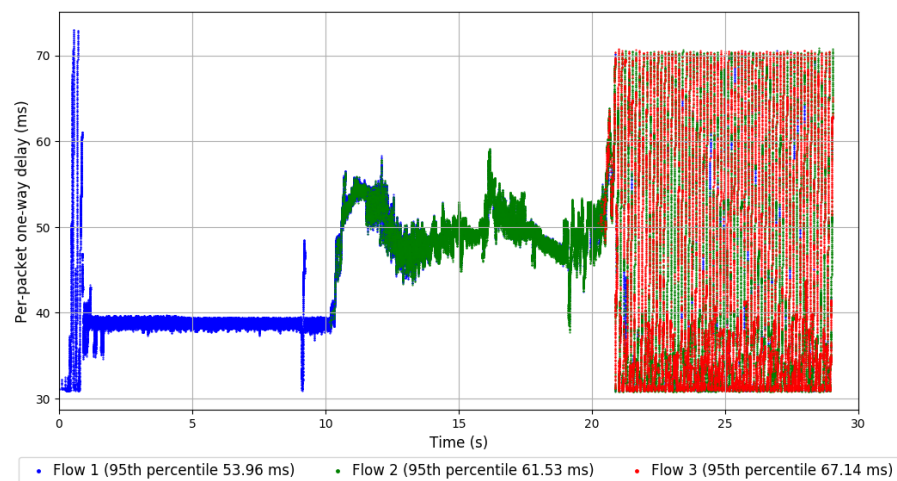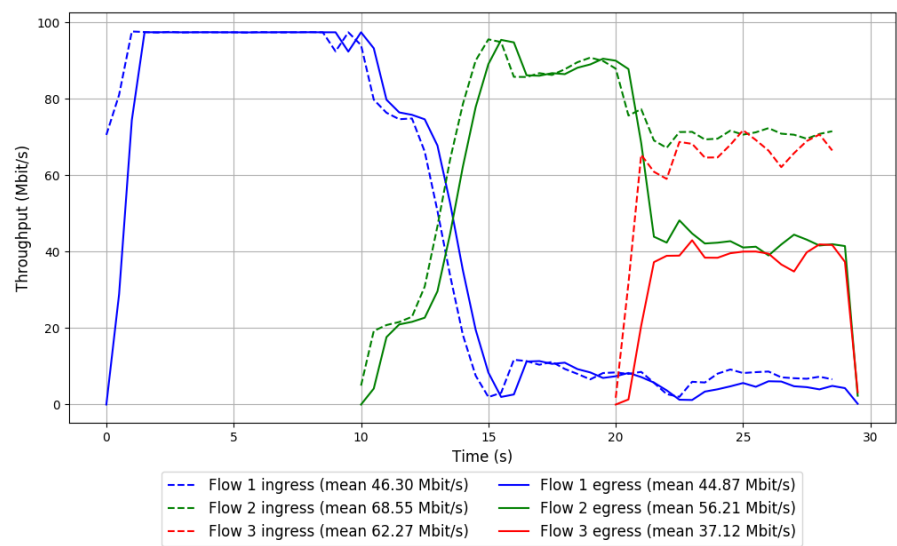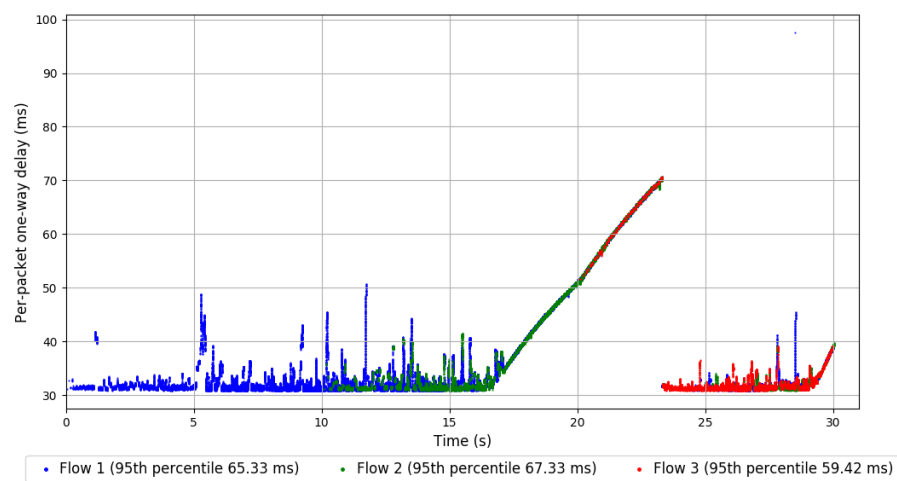
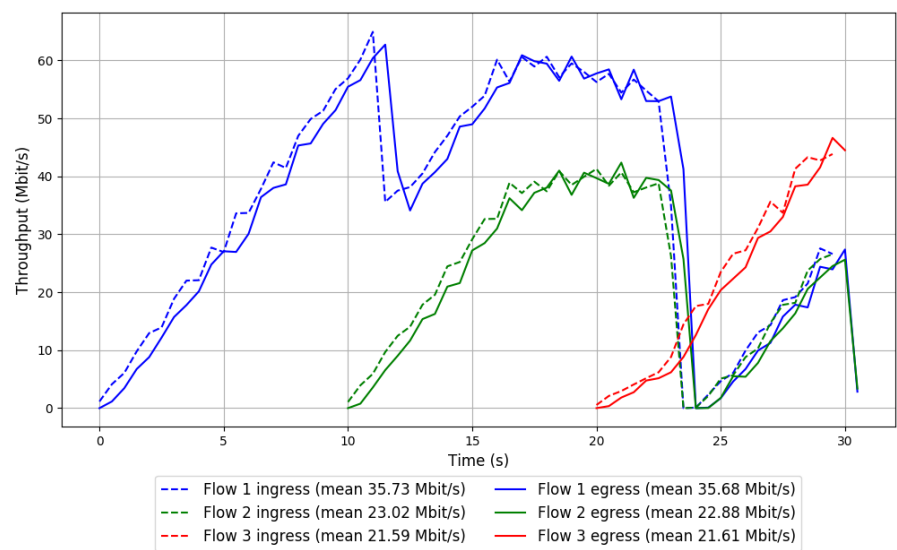Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-03-27 02:09:11
End at: 2019-03-27 02:09:41
Local clock offset: 0.137 ms
Remote clock offset: 0.059 ms


# Below is generated by plot.py at 2019-03-27 03:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.08 Mbit/s
95th percentile per-packet one-way delay: 60.104 ms
Loss rate: 16.04%
-- Flow 1:
Average throughput: 48.30 Mbit/s
95th percentile per-packet one-way delay: 55.313 ms
Loss rate: 6.67%
-- Flow 2:
Average throughput: 53.82 Mbit/s
95th percentile per-packet one-way delay: 60.936 ms
Loss rate: 17.61%
-- Flow 3:
Average throughput: 32.78 Mbit/s
95th percentile per-packet one-way delay: 67.029 ms
Loss rate: 41.00%
```

Run 3: Report of Indigo-MusesT — Data Link

- Flow 1 ingress (mean 51.77 Mbit/s)
- Flow 1 egress (mean 48.30 Mbit/s)
- Flow 2 ingress (mean 65.33 Mbit/s)
- Flow 2 egress (mean 53.82 Mbit/s)
- Flow 3 ingress (mean 55.48 Mbit/s)
- Flow 3 egress (mean 32.78 Mbit/s)

- Flow 1 (95th percentile 55.31 ms)
- Flow 2 (95th percentile 60.94 ms)
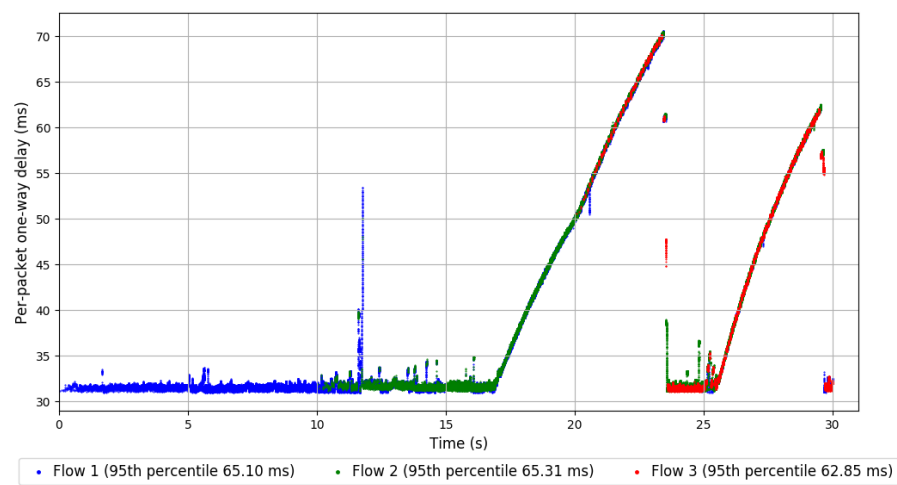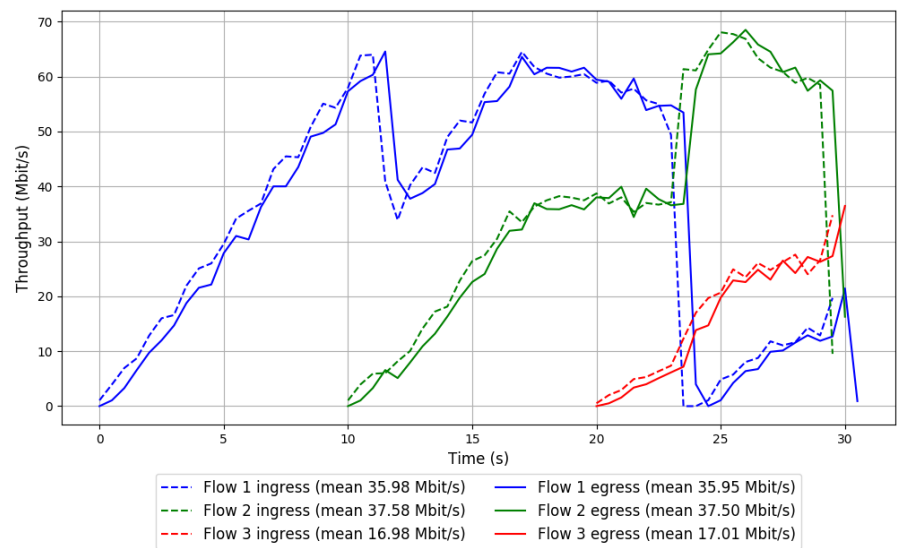- Flow 3 (95th percentile 67.03 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-03-27 02:35:10
End at: 2019-03-27 02:35:40
Local clock offset: 0.325 ms
Remote clock offset: 1.061 ms


# Below is generated by plot.py at 2019-03-27 03:21:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.30 Mbit/s
95th percentile per-packet one-way delay: 60.000 ms
Loss rate: 8.15%
-- Flow 1:
Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 55.321 ms
Loss rate: 6.84%
-- Flow 2:
Average throughput: 60.77 Mbit/s
95th percentile per-packet one-way delay: 60.887 ms
Loss rate: 8.46%
-- Flow 3:
Average throughput: 16.32 Mbit/s
95th percentile per-packet one-way delay: 64.671 ms
Loss rate: 17.63%
```

Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-03-27 03:00:29
End at: 2019-03-27 03:00:59
Local clock offset: 0.531 ms
Remote clock offset: 1.698 ms


# Below is generated by plot.py at 2019-03-27 03:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 59.732 ms
Loss rate: 15.56%
-- Flow 1:
Average throughput: 44.87 Mbit/s
95th percentile per-packet one-way delay: 53.964 ms
Loss rate: 3.06%
-- Flow 2:
Average throughput: 56.21 Mbit/s
95th percentile per-packet one-way delay: 61.535 ms
Loss rate: 17.98%
-- Flow 3:
Average throughput: 37.12 Mbit/s
95th percentile per-packet one-way delay: 67.138 ms
Loss rate: 40.47%
```
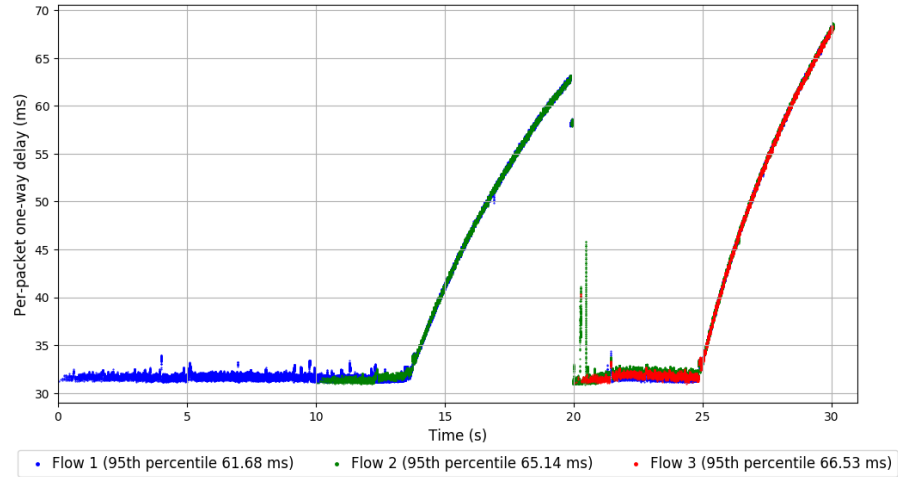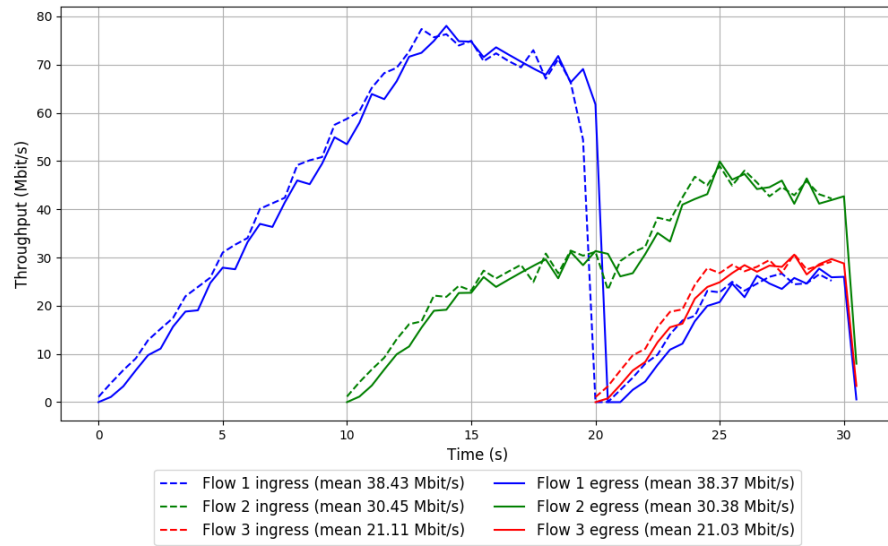
Run 5: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 46.30 Mbit/s) — Flow 1 egress (mean 44.87 Mbit/s)
Flow 2 ingress (mean 68.55 Mbit/s) — Flow 2 egress (mean 56.21 Mbit/s)
Flow 3 ingress (mean 62.27 Mbit/s) — Flow 3 egress (mean 37.12 Mbit/s)

Flow 1 (95th percentile 53.96 ms)   Flow 2 (95th percentile 61.53 ms)   Flow 3 (95th percentile 67.14 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-03-27 01:25:15
End at: 2019-03-27 01:25:45
Local clock offset: 0.228 ms
Remote clock offset: -1.778 ms


# Below is generated by plot.py at 2019-03-27 03:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.05 Mbit/s
95th percentile per-packet one-way delay: 65.842 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 35.68 Mbit/s
95th percentile per-packet one-way delay: 65.332 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 22.88 Mbit/s
95th percentile per-packet one-way delay: 67.325 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 21.61 Mbit/s
95th percentile per-packet one-way delay: 59.417 ms
Loss rate: 0.00%
```
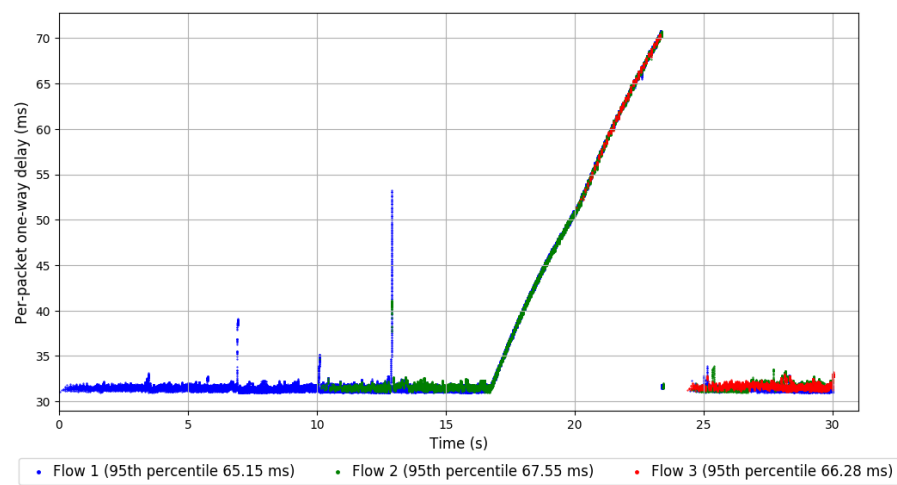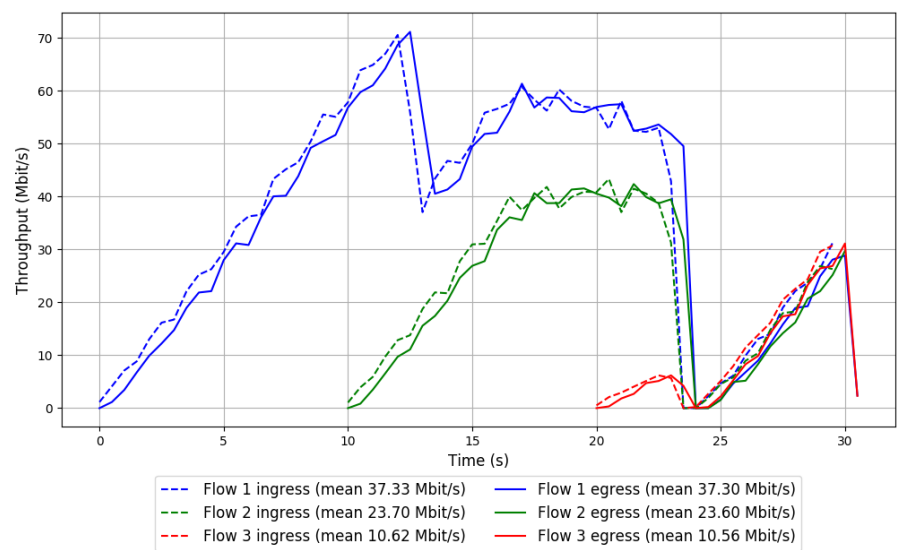
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-03-27 01:50:50
End at: 2019-03-27 01:51:20
Local clock offset: 0.278 ms
Remote clock offset: -0.614 ms


# Below is generated by plot.py at 2019-03-27 03:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.10 Mbit/s
95th percentile per-packet one-way delay: 65.058 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 65.098 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 37.50 Mbit/s
95th percentile per-packet one-way delay: 65.309 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 17.01 Mbit/s
95th percentile per-packet one-way delay: 62.851 ms
Loss rate: 0.00%
```
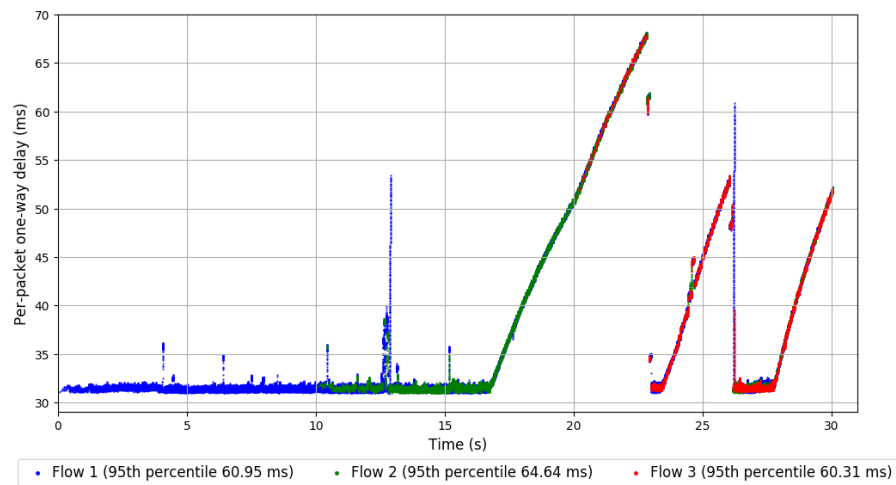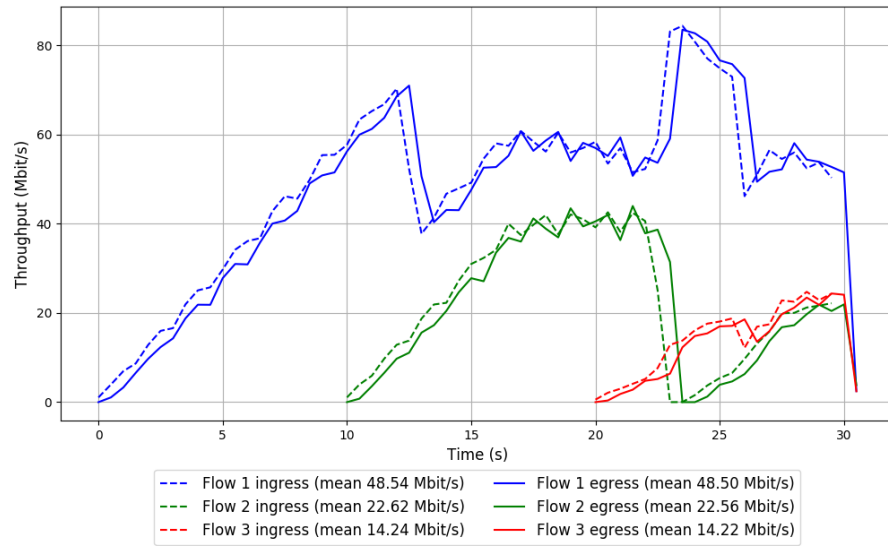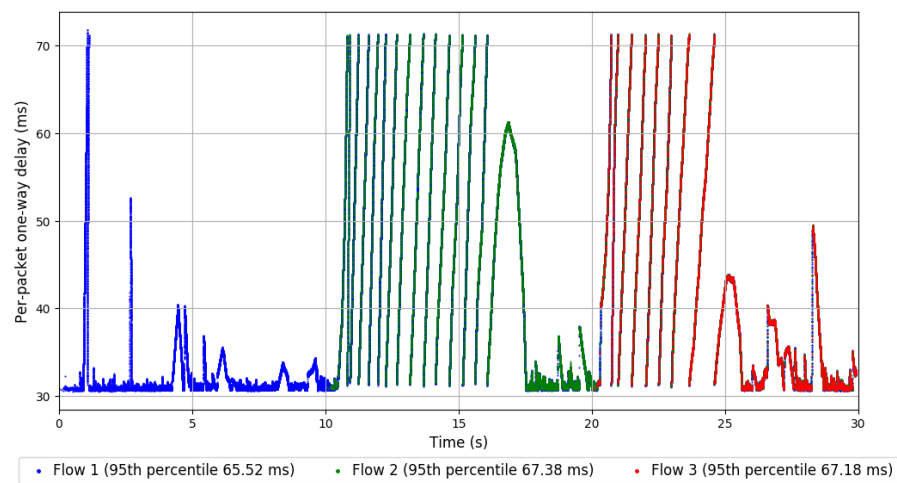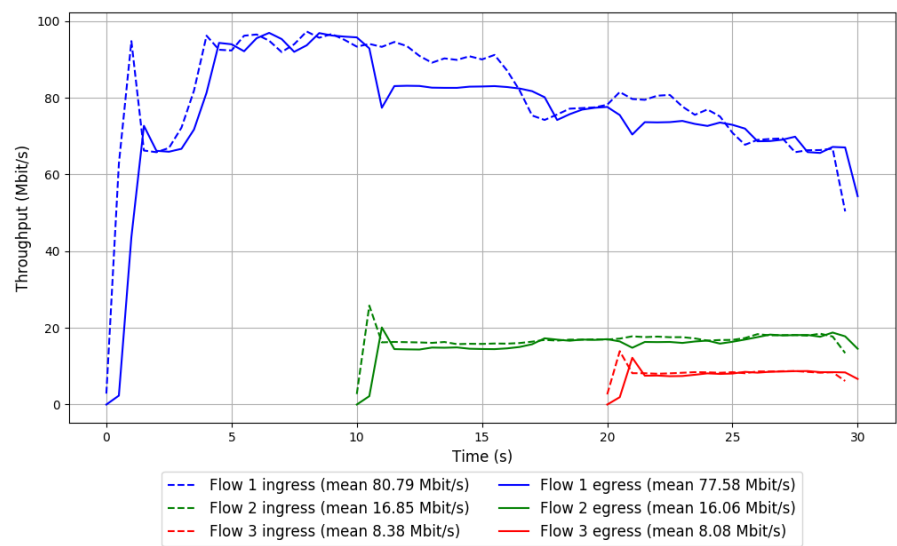
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 35.98 Mbit/s) --- Flow 1 egress (mean 35.95 Mbit/s)
Flow 2 ingress (mean 37.58 Mbit/s) --- Flow 2 egress (mean 37.50 Mbit/s)
Flow 3 ingress (mean 16.98 Mbit/s) --- Flow 3 egress (mean 17.01 Mbit/s)

Flow 1 (95th percentile 65.10 ms)   Flow 2 (95th percentile 65.31 ms)   Flow 3 (95th percentile 62.85 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-03-27 02:16:37
End at: 2019-03-27 02:17:07
Local clock offset: 0.026 ms
Remote clock offset: 0.484 ms


# Below is generated by plot.py at 2019-03-27 03:21:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.54 Mbit/s
95th percentile per-packet one-way delay: 63.432 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 38.37 Mbit/s
95th percentile per-packet one-way delay: 61.681 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 65.138 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 21.03 Mbit/s
95th percentile per-packet one-way delay: 66.534 ms
Loss rate: 0.00%
```
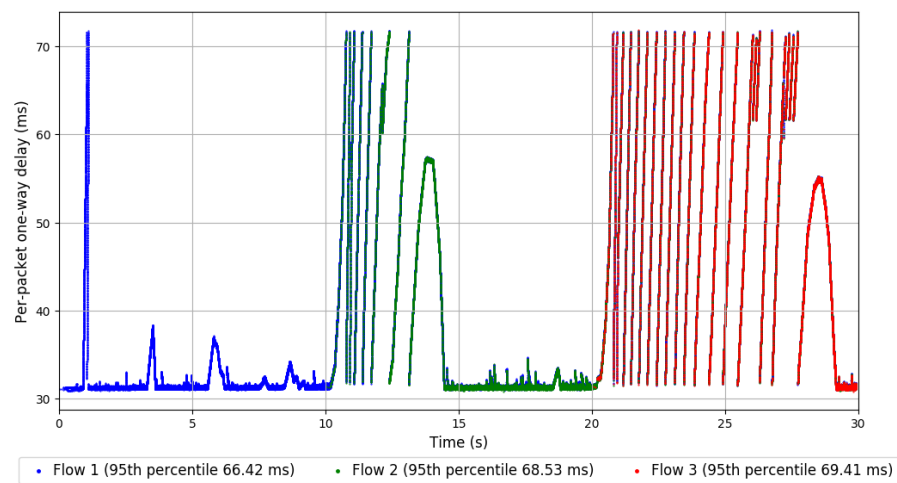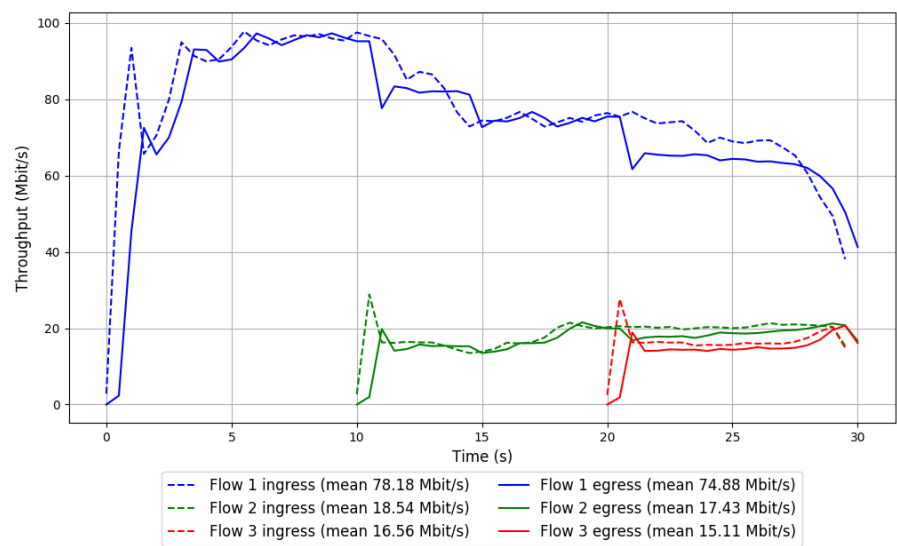
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 38.43 Mbit/s) --- Flow 1 egress (mean 38.37 Mbit/s)
Flow 2 ingress (mean 30.45 Mbit/s) --- Flow 2 egress (mean 30.38 Mbit/s)
Flow 3 ingress (mean 21.11 Mbit/s) --- Flow 3 egress (mean 21.03 Mbit/s)

Flow 1 (95th percentile 61.68 ms)   Flow 2 (95th percentile 65.14 ms)   Flow 3 (95th percentile 66.53 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-03-27 02:42:22
End at: 2019-03-27 02:42:52
Local clock offset: 0.442 ms
Remote clock offset: 1.366 ms


# Below is generated by plot.py at 2019-03-27 03:21:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.48 Mbit/s
95th percentile per-packet one-way delay: 66.111 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 65.154 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 23.60 Mbit/s
95th percentile per-packet one-way delay: 67.549 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 10.56 Mbit/s
95th percentile per-packet one-way delay: 66.276 ms
Loss rate: 0.70%
```
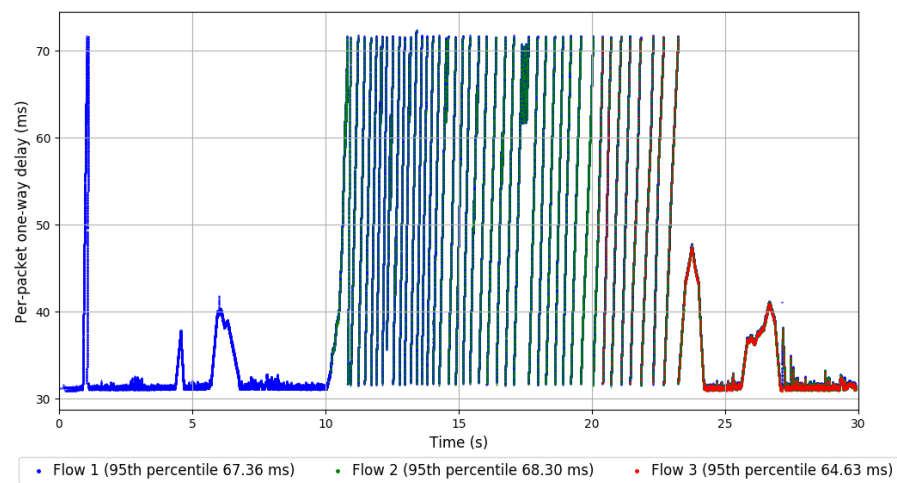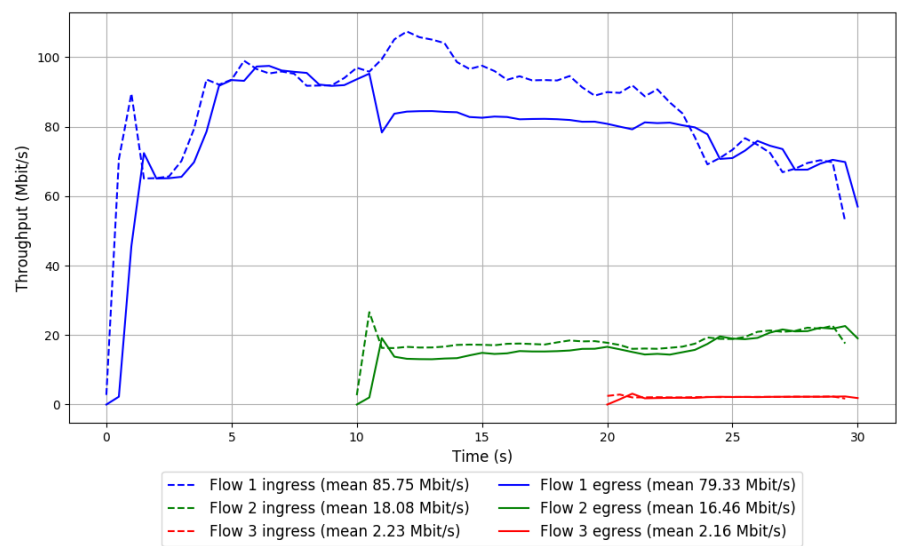
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 37.33 Mbit/s)   Flow 1 egress (mean 37.30 Mbit/s)
Flow 2 ingress (mean 23.70 Mbit/s)   Flow 2 egress (mean 23.60 Mbit/s)
Flow 3 ingress (mean 10.62 Mbit/s)   Flow 3 egress (mean 10.56 Mbit/s)

Flow 1 (95th percentile 65.15 ms)   Flow 2 (95th percentile 67.55 ms)   Flow 3 (95th percentile 66.28 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-03-27 03:07:43
End at: 2019-03-27 03:08:13
Local clock offset: 0.597 ms
Remote clock offset: 1.871 ms


# Below is generated by plot.py at 2019-03-27 03:21:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.24 Mbit/s
95th percentile per-packet one-way delay: 62.208 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 48.50 Mbit/s
95th percentile per-packet one-way delay: 60.948 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 64.641 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 60.311 ms
Loss rate: 0.20%
```

Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-03-27 01:05:49
End at: 2019-03-27 01:06:19
Local clock offset: 0.108 ms
Remote clock offset: -2.921 ms


# Below is generated by plot.py at 2019-03-27 03:21:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.93 Mbit/s
95th percentile per-packet one-way delay: 65.911 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 77.58 Mbit/s
95th percentile per-packet one-way delay: 65.523 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 16.06 Mbit/s
95th percentile per-packet one-way delay: 67.377 ms
Loss rate: 4.69%
-- Flow 3:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 67.177 ms
Loss rate: 3.53%
```
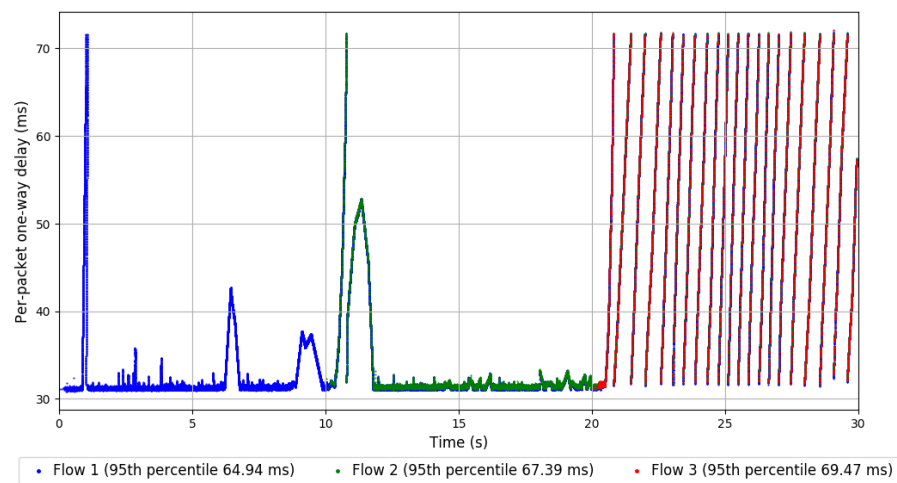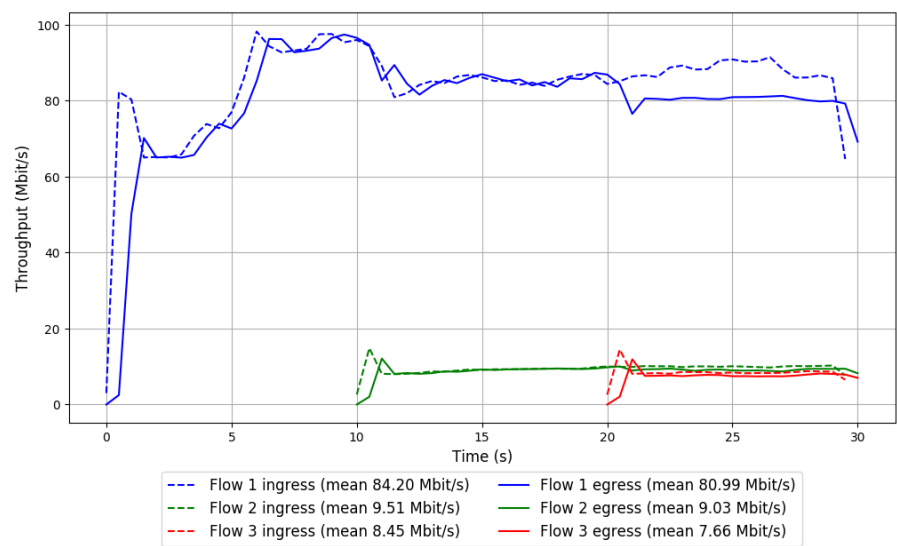
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-03-27 01:31:29
End at: 2019-03-27 01:31:59
Local clock offset: 0.302 ms
Remote clock offset: -1.387 ms


# Below is generated by plot.py at 2019-03-27 03:22:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.46 Mbit/s
95th percentile per-packet one-way delay: 67.179 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 74.88 Mbit/s
95th percentile per-packet one-way delay: 66.422 ms
Loss rate: 4.21%
-- Flow 2:
Average throughput: 17.43 Mbit/s
95th percentile per-packet one-way delay: 68.529 ms
Loss rate: 5.98%
-- Flow 3:
Average throughput: 15.11 Mbit/s
95th percentile per-packet one-way delay: 69.412 ms
Loss rate: 8.74%
```
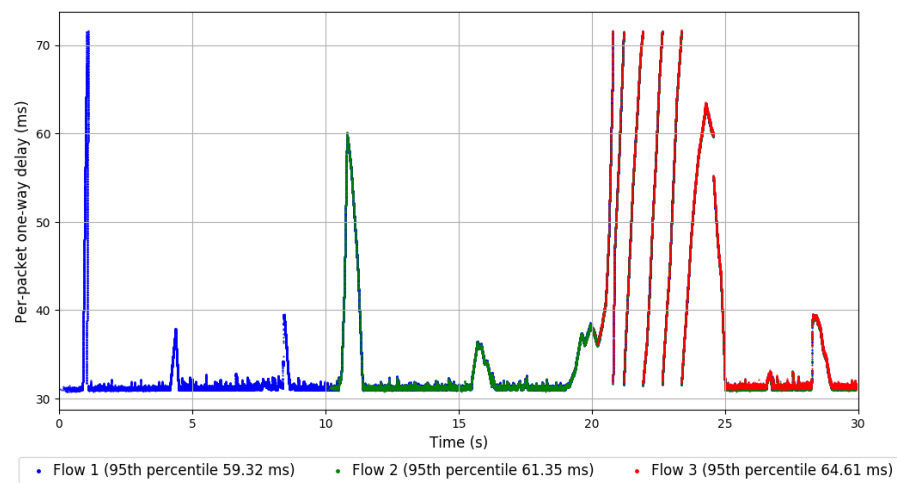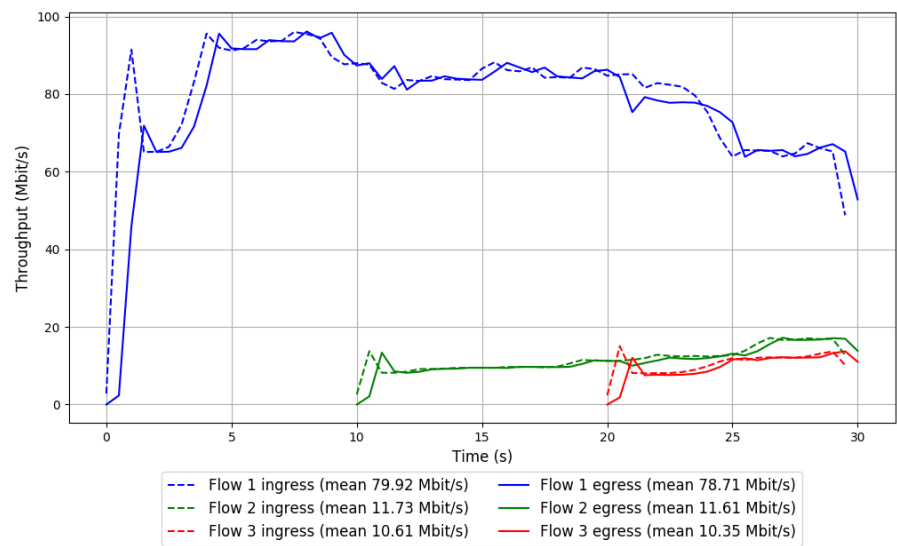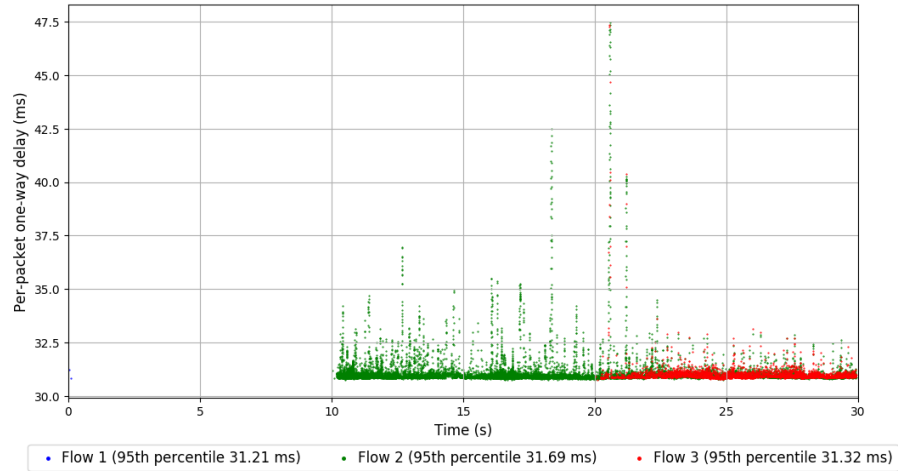
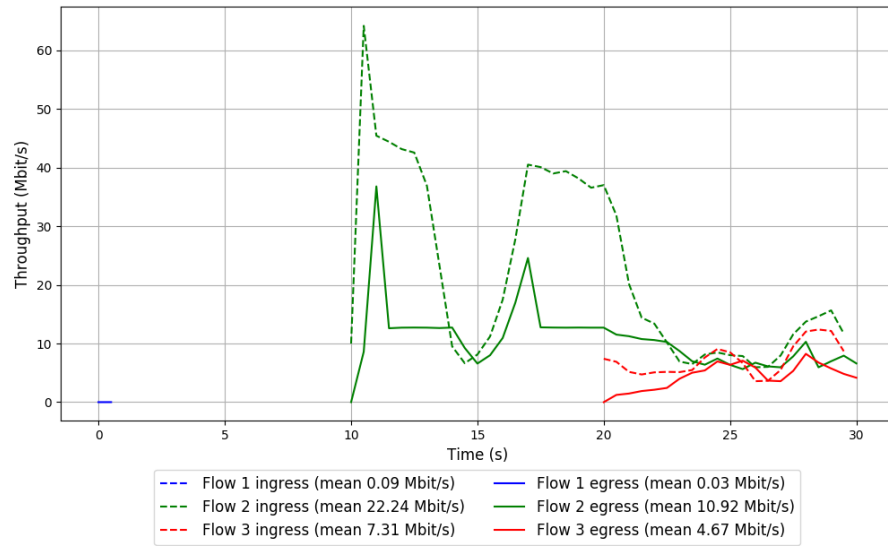Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-03-27 01:56:51
End at: 2019-03-27 01:57:21
Local clock offset: 0.225 ms
Remote clock offset: -0.307 ms


# Below is generated by plot.py at 2019-03-27 03:22:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.99 Mbit/s
95th percentile per-packet one-way delay: 67.505 ms
Loss rate: 7.63%
-- Flow 1:
Average throughput: 79.33 Mbit/s
95th percentile per-packet one-way delay: 67.359 ms
Loss rate: 7.49%
-- Flow 2:
Average throughput: 16.46 Mbit/s
95th percentile per-packet one-way delay: 68.295 ms
Loss rate: 8.91%
-- Flow 3:
Average throughput: 2.16 Mbit/s
95th percentile per-packet one-way delay: 64.629 ms
Loss rate: 3.25%
```
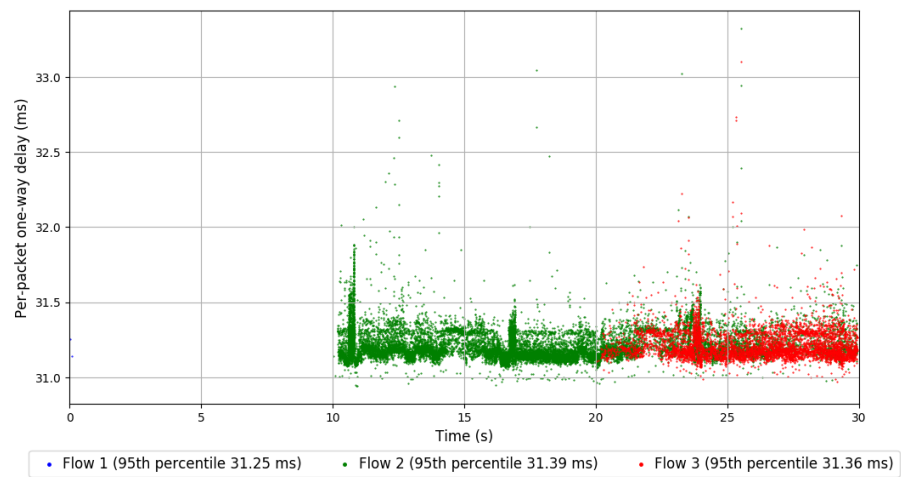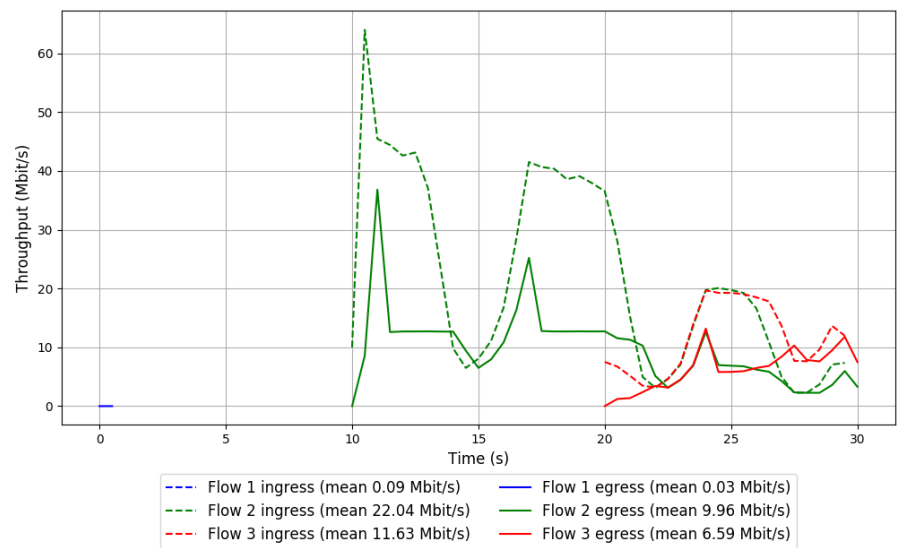
Run 3: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 85.75 Mbit/s)   —— Flow 1 egress (mean 79.33 Mbit/s)
- - - Flow 2 ingress (mean 18.08 Mbit/s)   —— Flow 2 egress (mean 16.46 Mbit/s)
- - - Flow 3 ingress (mean 2.23 Mbit/s)   —— Flow 3 egress (mean 2.16 Mbit/s)

- Flow 1 (95th percentile 67.36 ms)   • Flow 2 (95th percentile 68.30 ms)   • Flow 3 (95th percentile 64.63 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-03-27 02:22:45
End at: 2019-03-27 02:23:15
Local clock offset: 0.077 ms
Remote clock offset: 0.683 ms


# Below is generated by plot.py at 2019-03-27 03:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.53 Mbit/s
95th percentile per-packet one-way delay: 65.572 ms
Loss rate: 3.97%
-- Flow 1:
Average throughput: 80.99 Mbit/s
95th percentile per-packet one-way delay: 64.936 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 67.385 ms
Loss rate: 4.89%
-- Flow 3:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 69.474 ms
Loss rate: 9.11%
```

Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 84.20 Mbit/s)   Flow 1 egress (mean 80.99 Mbit/s)
Flow 2 ingress (mean 9.51 Mbit/s)   Flow 2 egress (mean 9.03 Mbit/s)
Flow 3 ingress (mean 8.45 Mbit/s)   Flow 3 egress (mean 7.66 Mbit/s)

Flow 1 (95th percentile 64.94 ms)   Flow 2 (95th percentile 67.39 ms)   Flow 3 (95th percentile 69.47 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-03-27 02:48:21
End at: 2019-03-27 02:48:51
Local clock offset: 0.483 ms
Remote clock offset: 1.541 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 59.986 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 78.71 Mbit/s
95th percentile per-packet one-way delay: 59.316 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 11.61 Mbit/s
95th percentile per-packet one-way delay: 61.354 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 64.610 ms
Loss rate: 2.53%
```
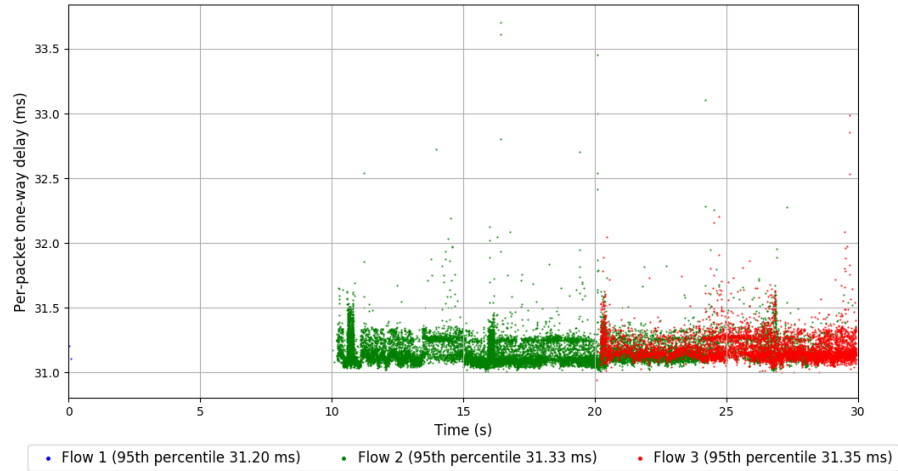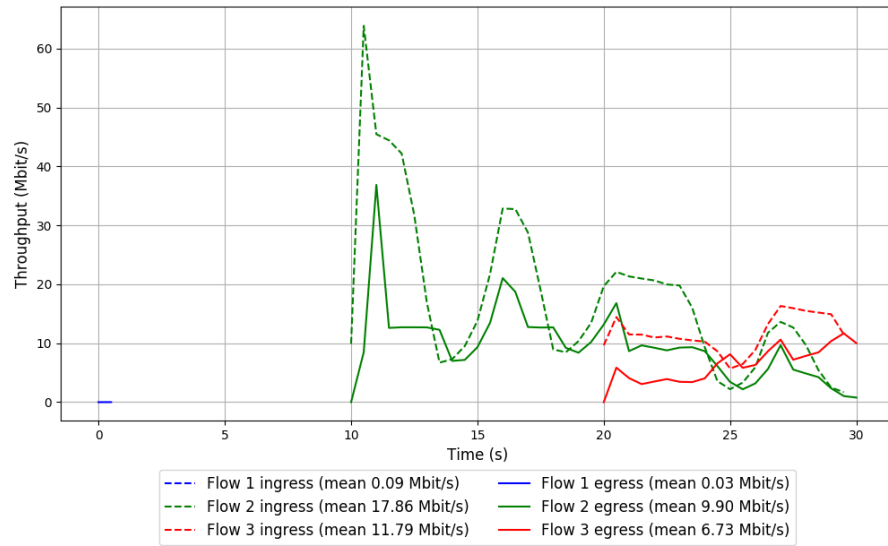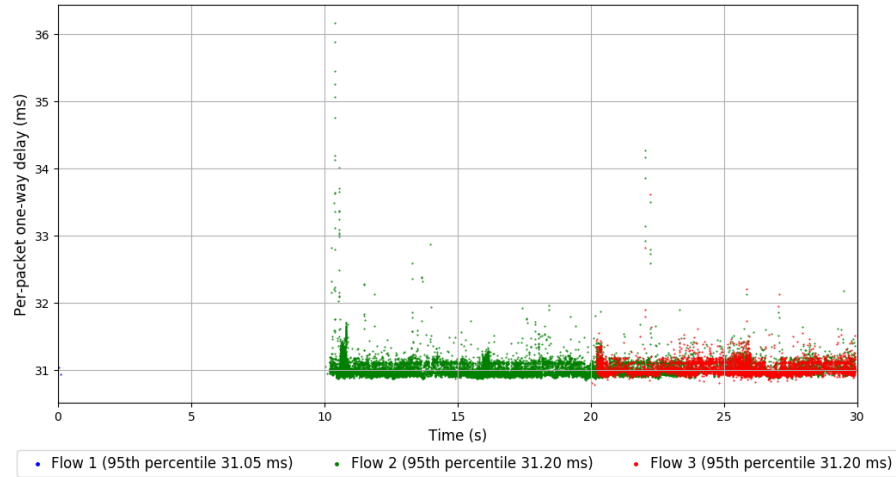
Run 5: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 79.92 Mbit/s) —— Flow 1 egress (mean 78.71 Mbit/s)
- - - Flow 2 ingress (mean 11.73 Mbit/s) —— Flow 2 egress (mean 11.61 Mbit/s)
- - - Flow 3 ingress (mean 10.61 Mbit/s) —— Flow 3 egress (mean 10.35 Mbit/s)

• Flow 1 (95th percentile 59.32 ms)   • Flow 2 (95th percentile 61.35 ms)   • Flow 3 (95th percentile 64.61 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-03-27 01:15:34
End at: 2019-03-27 01:16:04
Local clock offset: 0.066 ms
Remote clock offset: -2.291 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 31.590 ms
Loss rate: 48.83%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.206 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.92 Mbit/s
95th percentile per-packet one-way delay: 31.687 ms
Loss rate: 50.89%
-- Flow 3:
Average throughput: 4.67 Mbit/s
95th percentile per-packet one-way delay: 31.315 ms
Loss rate: 36.16%
```
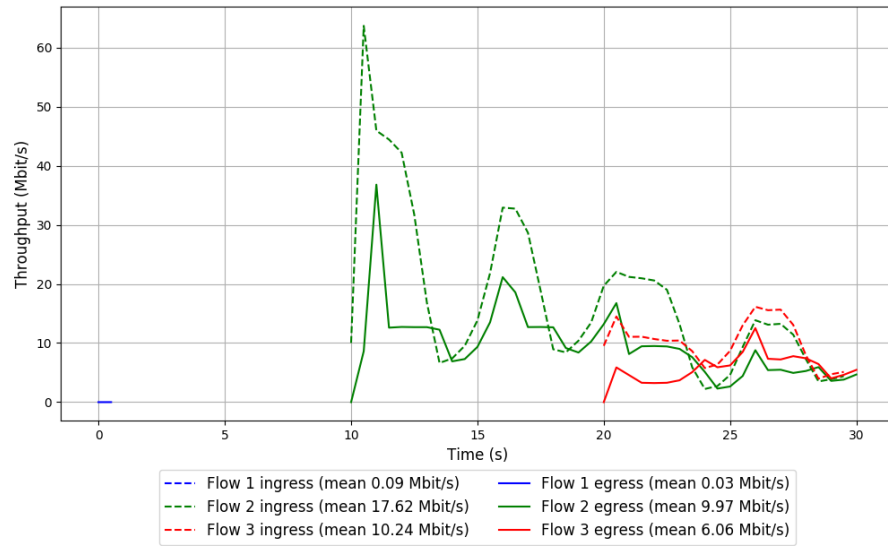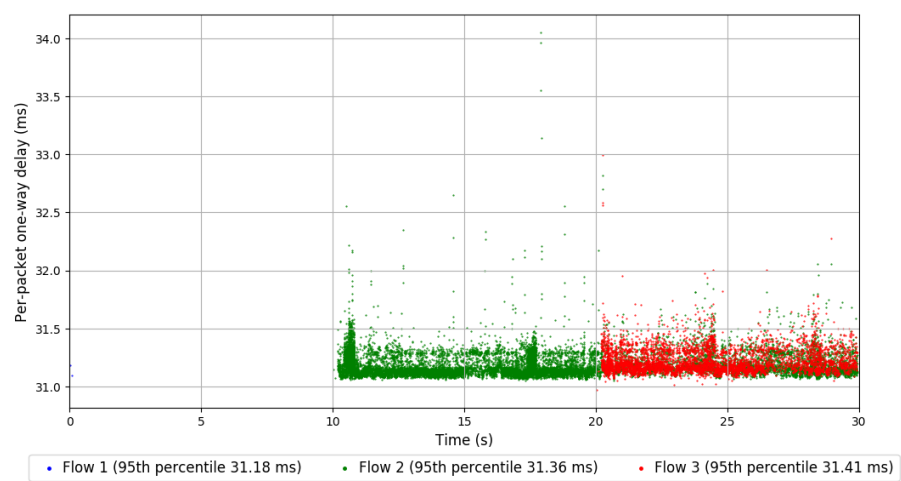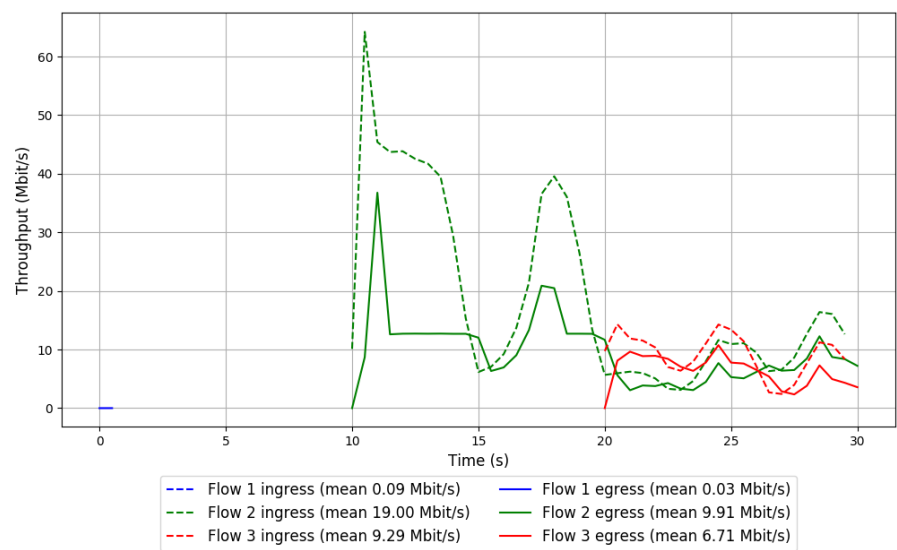
Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.09 Mbit/s) --- Flow 1 egress (mean 0.03 Mbit/s)
Flow 2 ingress (mean 22.24 Mbit/s) --- Flow 2 egress (mean 10.92 Mbit/s)
Flow 3 ingress (mean 7.31 Mbit/s) --- Flow 3 egress (mean 4.67 Mbit/s)

Flow 1 (95th percentile 31.21 ms) Flow 2 (95th percentile 31.69 ms) Flow 3 (95th percentile 31.32 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-03-27 01:41:17
End at: 2019-03-27 01:41:47
Local clock offset: 0.312 ms
Remote clock offset: -0.952 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 31.387 ms
Loss rate: 52.41%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.252 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 31.395 ms
Loss rate: 54.79%
-- Flow 3:
Average throughput: 6.59 Mbit/s
95th percentile per-packet one-way delay: 31.363 ms
Loss rate: 43.31%
```
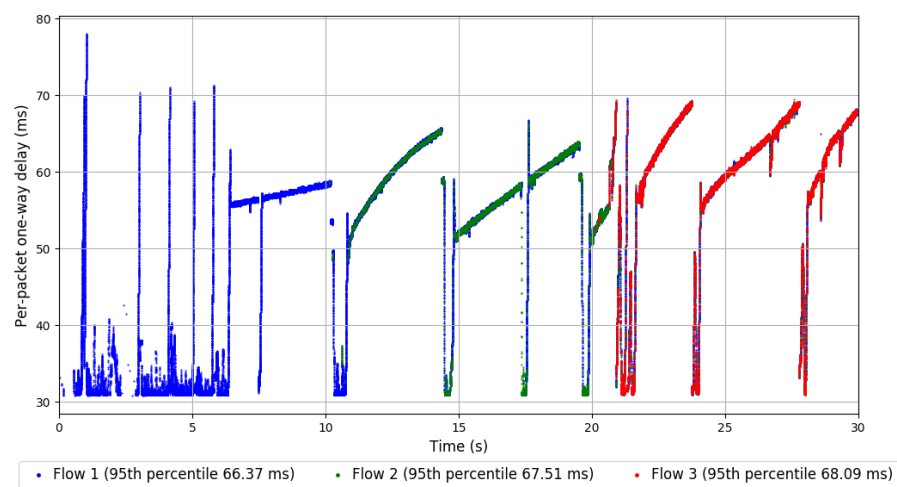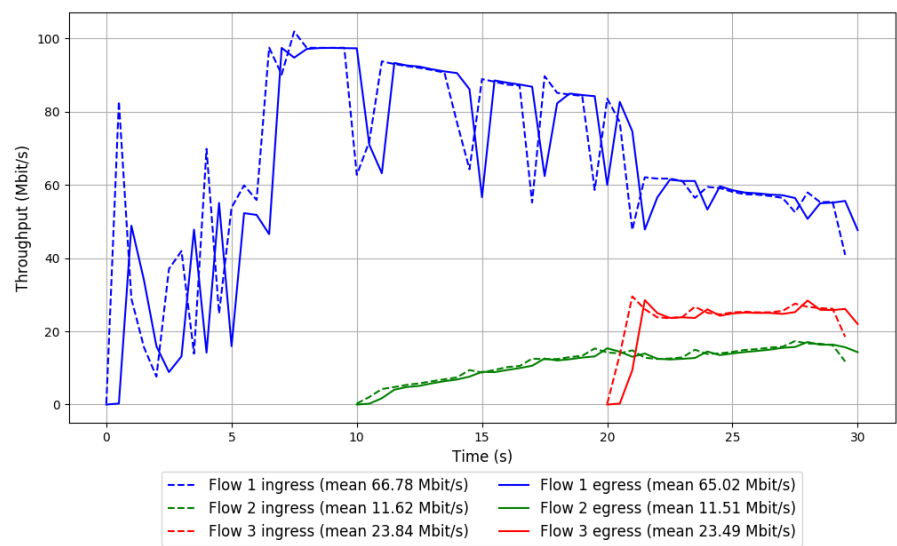
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-03-27 02:06:51
End at: 2019-03-27 02:07:21
Local clock offset: 0.148 ms
Remote clock offset: 0.127 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 31.336 ms
Loss rate: 44.20%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.204 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.90 Mbit/s
95th percentile per-packet one-way delay: 31.329 ms
Loss rate: 44.61%
-- Flow 3:
Average throughput: 6.73 Mbit/s
95th percentile per-packet one-way delay: 31.353 ms
Loss rate: 42.93%
```
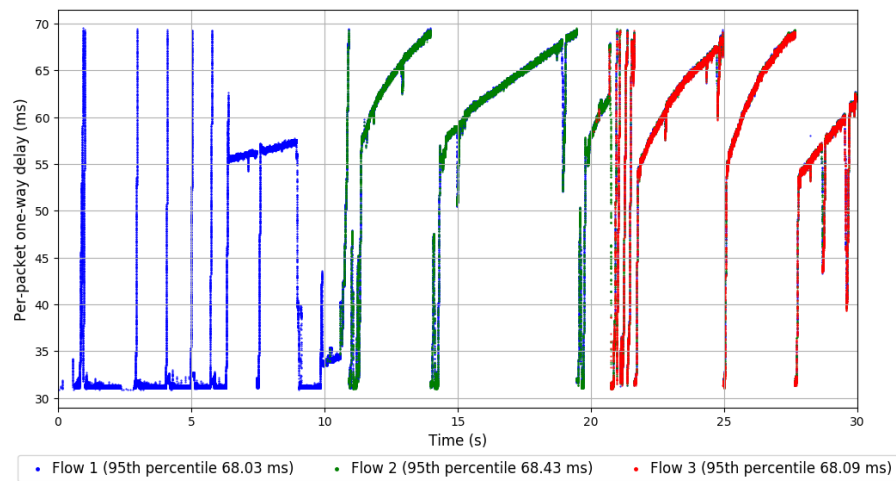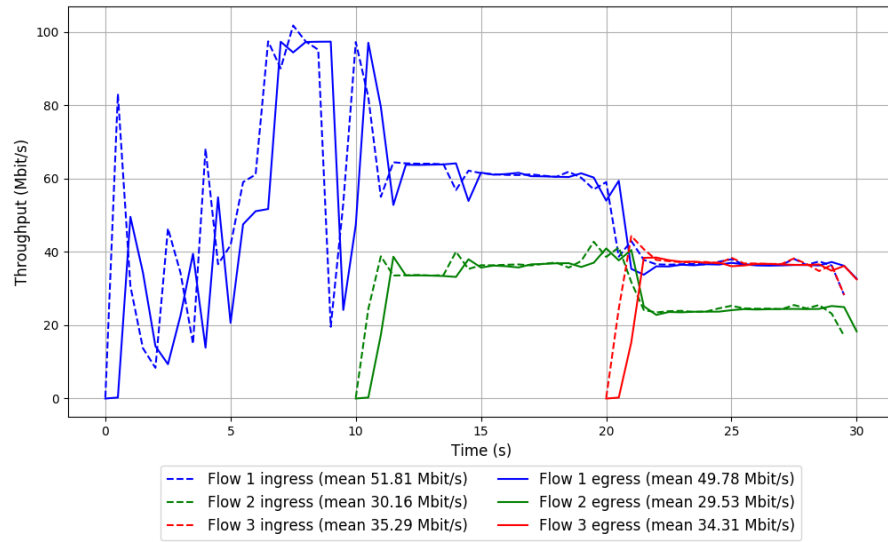
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.09 Mbit/s)   Flow 1 egress (mean 0.03 Mbit/s)
Flow 2 ingress (mean 17.86 Mbit/s)   Flow 2 egress (mean 9.90 Mbit/s)
Flow 3 ingress (mean 11.79 Mbit/s)   Flow 3 egress (mean 6.73 Mbit/s)

Flow 1 (95th percentile 31.20 ms)   Flow 2 (95th percentile 31.33 ms)   Flow 3 (95th percentile 31.35 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-03-27 02:32:50
End at: 2019-03-27 02:33:20
Local clock offset: 0.283 ms
Remote clock offset: 0.879 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 31.203 ms
Loss rate: 42.83%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.047 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.97 Mbit/s
95th percentile per-packet one-way delay: 31.203 ms
Loss rate: 43.40%
-- Flow 3:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 31.205 ms
Loss rate: 40.87%
```
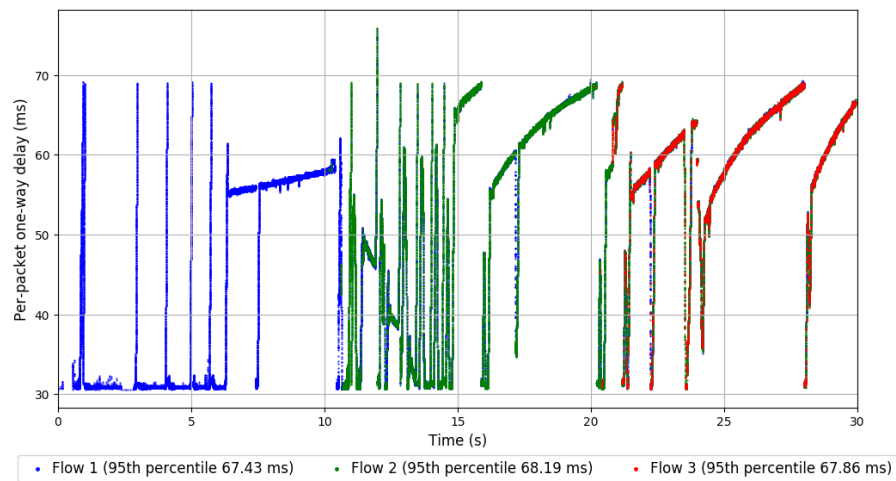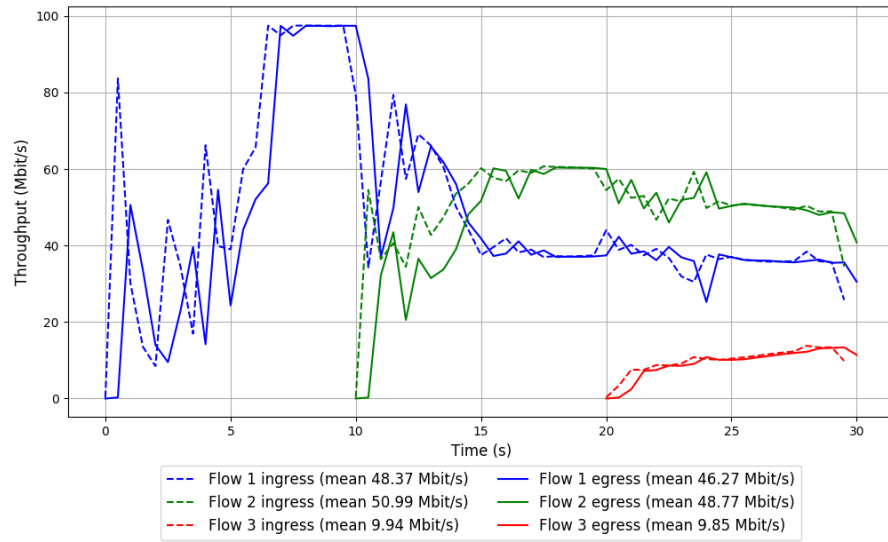
Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.09 Mbit/s)   Flow 1 egress (mean 0.03 Mbit/s)
Flow 2 ingress (mean 17.62 Mbit/s)   Flow 2 egress (mean 9.97 Mbit/s)
Flow 3 ingress (mean 10.24 Mbit/s)   Flow 3 egress (mean 6.06 Mbit/s)

Flow 1 (95th percentile 31.05 ms)   Flow 2 (95th percentile 31.20 ms)   Flow 3 (95th percentile 31.20 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-03-27 02:58:09
End at: 2019-03-27 02:58:39
Local clock offset: 0.498 ms
Remote clock offset: 1.849 ms


# Below is generated by plot.py at 2019-03-27 03:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 31.374 ms
Loss rate: 43.95%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.184 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.91 Mbit/s
95th percentile per-packet one-way delay: 31.356 ms
Loss rate: 47.86%
-- Flow 3:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 31.411 ms
Loss rate: 27.86%
```
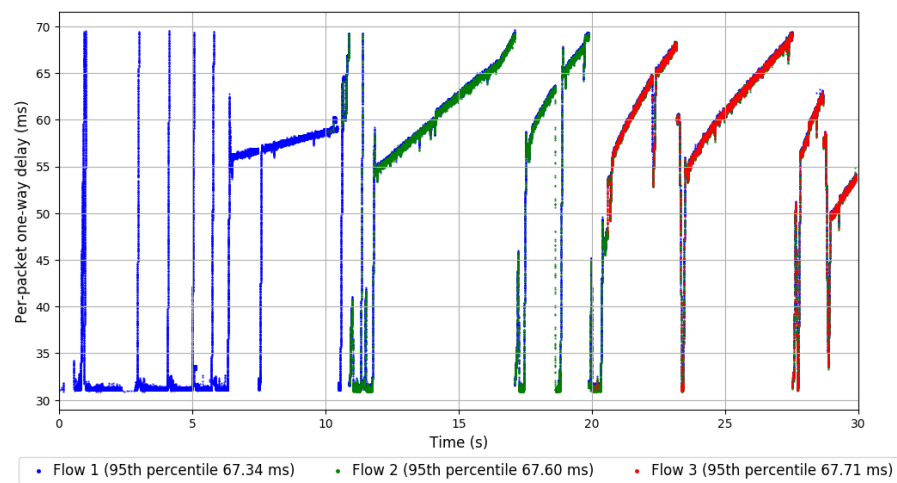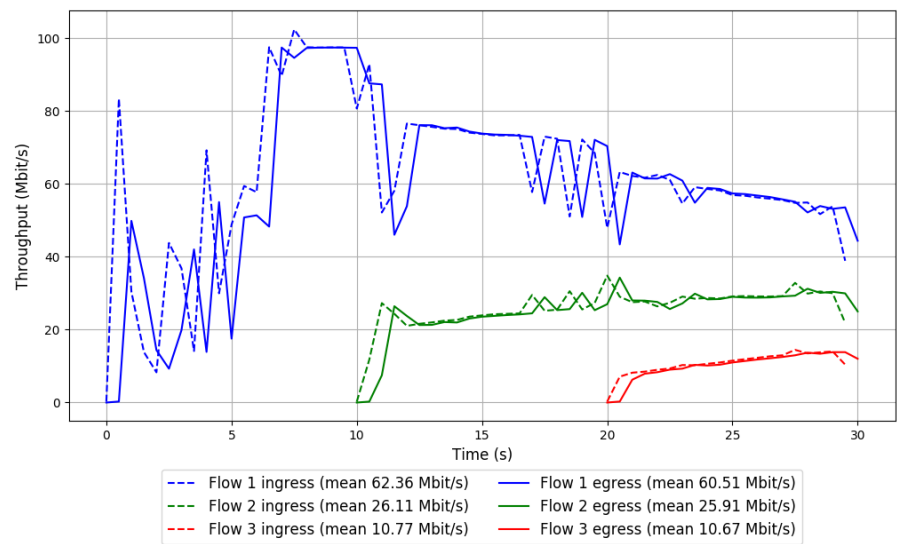
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-03-27 01:22:41
End at: 2019-03-27 01:23:11
Local clock offset: 0.196 ms
Remote clock offset: -1.851 ms


# Below is generated by plot.py at 2019-03-27 03:22:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.40 Mbit/s
95th percentile per-packet one-way delay: 66.881 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 65.02 Mbit/s
95th percentile per-packet one-way delay: 66.371 ms
Loss rate: 2.51%
-- Flow 2:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 67.514 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 68.094 ms
Loss rate: 1.30%
```
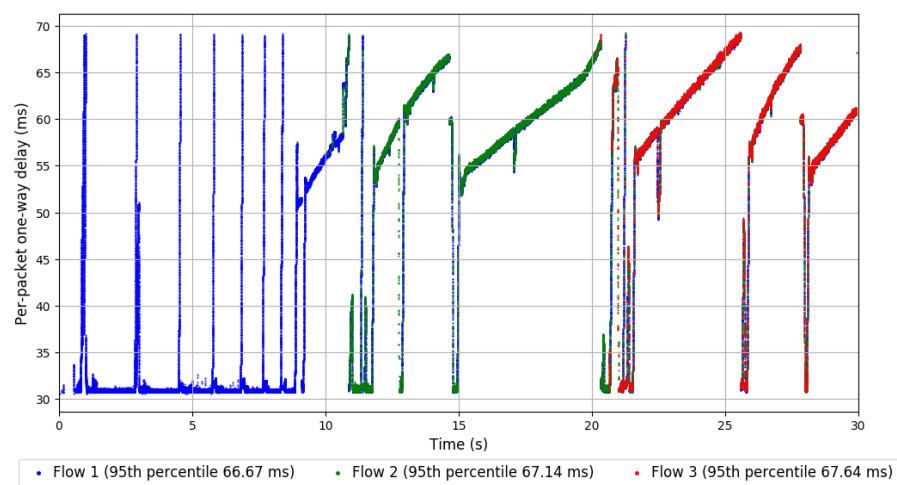
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-03-27 01:48:22
End at: 2019-03-27 01:48:52
Local clock offset: 0.343 ms
Remote clock offset: -0.68 ms


# Below is generated by plot.py at 2019-03-27 03:22:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.71 Mbit/s
95th percentile per-packet one-way delay: 68.120 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 49.78 Mbit/s
95th percentile per-packet one-way delay: 68.029 ms
Loss rate: 3.80%
-- Flow 2:
Average throughput: 29.53 Mbit/s
95th percentile per-packet one-way delay: 68.430 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 34.31 Mbit/s
95th percentile per-packet one-way delay: 68.087 ms
Loss rate: 2.76%
```
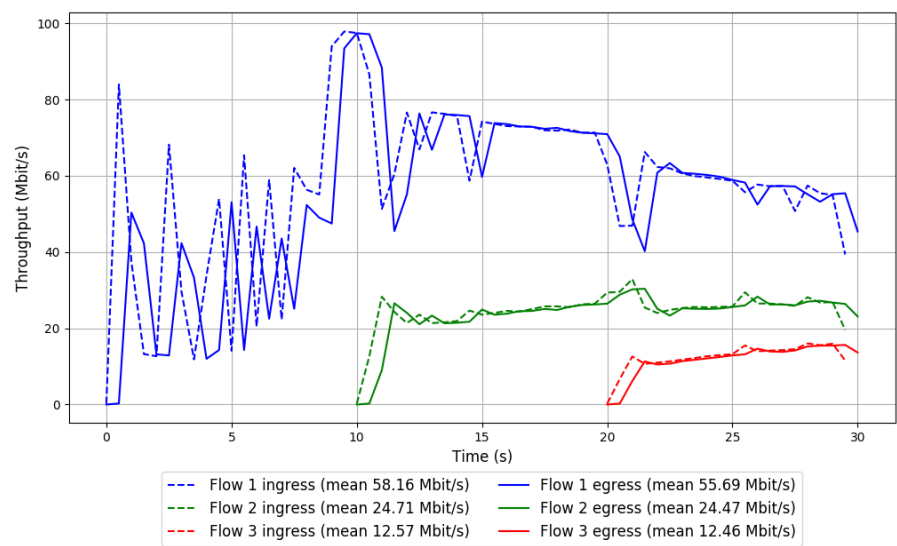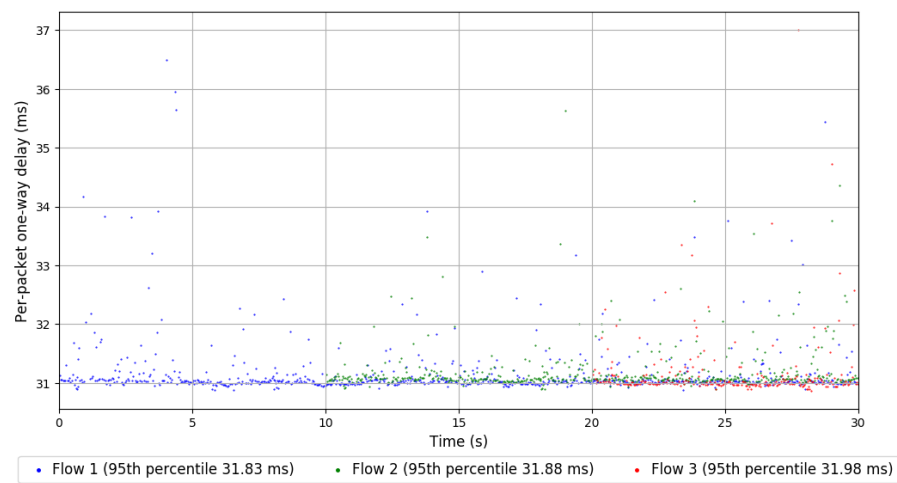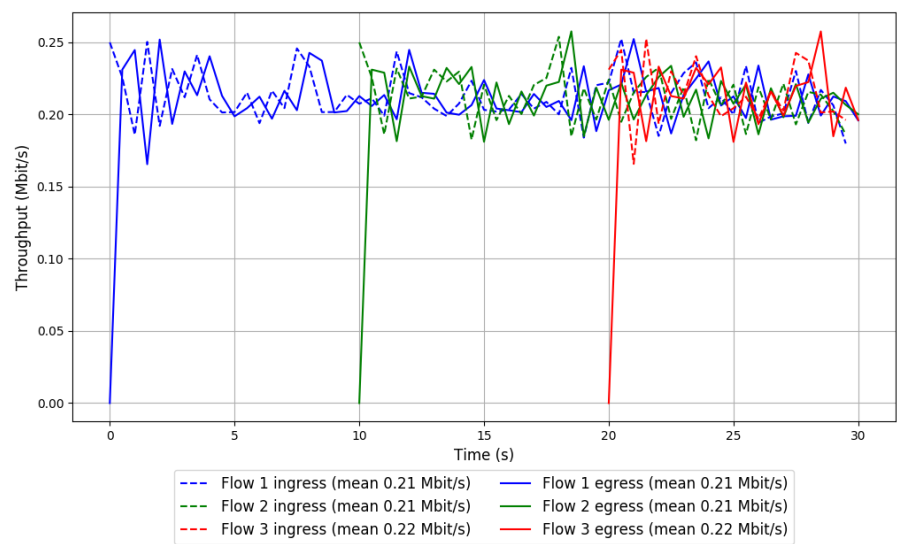
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-03-27 02:13:59
End at: 2019-03-27 02:14:29
Local clock offset: 0.061 ms
Remote clock offset: 0.15 ms


# Below is generated by plot.py at 2019-03-27 03:22:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.90 Mbit/s
95th percentile per-packet one-way delay: 67.897 ms
Loss rate: 4.13%
-- Flow 1:
Average throughput: 46.27 Mbit/s
95th percentile per-packet one-way delay: 67.428 ms
Loss rate: 4.23%
-- Flow 2:
Average throughput: 48.77 Mbit/s
95th percentile per-packet one-way delay: 68.185 ms
Loss rate: 4.31%
-- Flow 3:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 67.865 ms
Loss rate: 0.90%
```
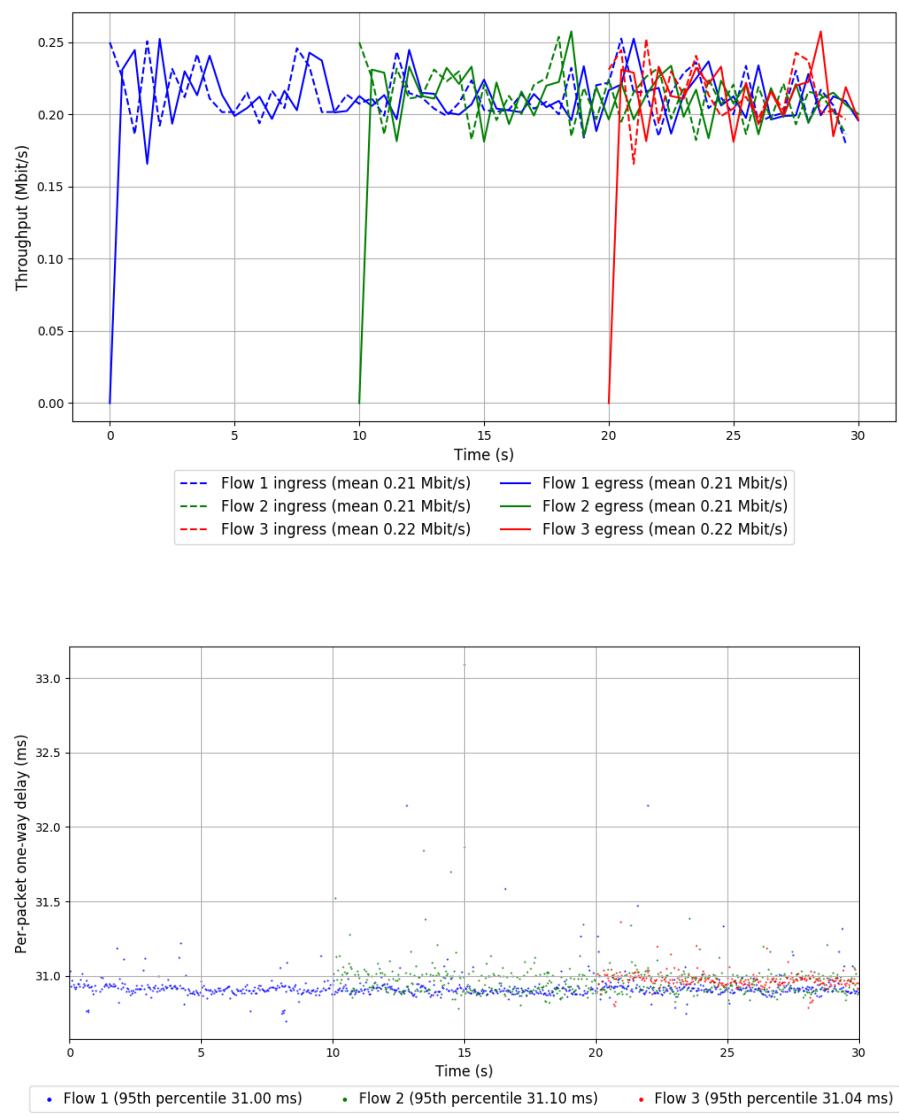
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-03-27 02:39:55
End at: 2019-03-27 02:40:25
Local clock offset: 0.396 ms
Remote clock offset: 1.231 ms


# Below is generated by plot.py at 2019-03-27 03:23:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.23 Mbit/s
95th percentile per-packet one-way delay: 67.402 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 60.51 Mbit/s
95th percentile per-packet one-way delay: 67.342 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 25.91 Mbit/s
95th percentile per-packet one-way delay: 67.598 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 10.67 Mbit/s
95th percentile per-packet one-way delay: 67.713 ms
Loss rate: 0.68%
```

Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-03-27 03:05:15
End at: 2019-03-27 03:05:45
Local clock offset: 0.568 ms
Remote clock offset: 1.723 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.03 Mbit/s
95th percentile per-packet one-way delay: 66.802 ms
Loss rate: 3.30%
-- Flow 1:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 66.670 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 24.47 Mbit/s
95th percentile per-packet one-way delay: 67.143 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 12.46 Mbit/s
95th percentile per-packet one-way delay: 67.637 ms
Loss rate: 0.89%
```
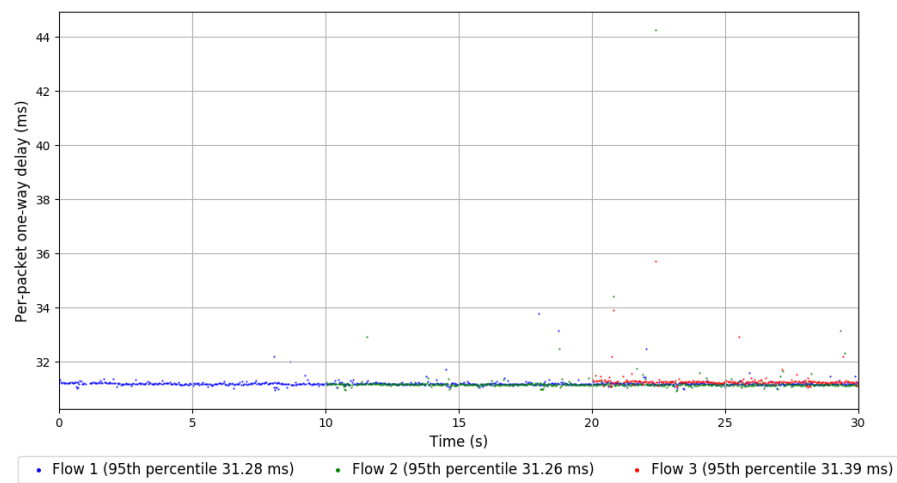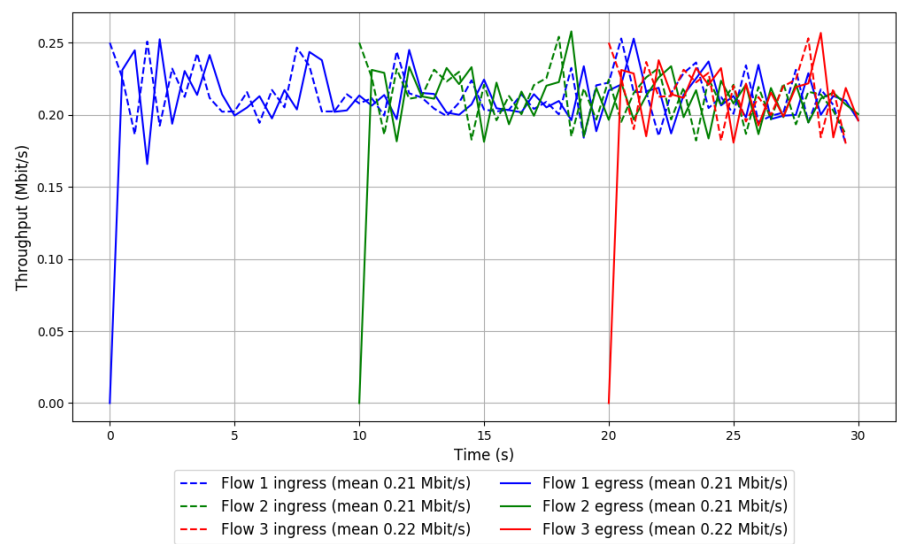
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-03-27 01:19:07
End at: 2019-03-27 01:19:37
Local clock offset: 0.12 ms
Remote clock offset: -2.028 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.907 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.834 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.884 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.977 ms
Loss rate: 0.00%
```
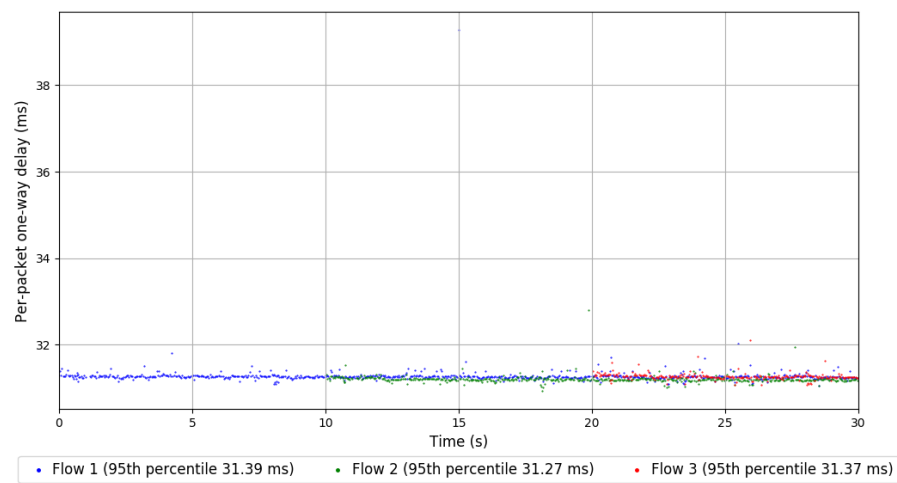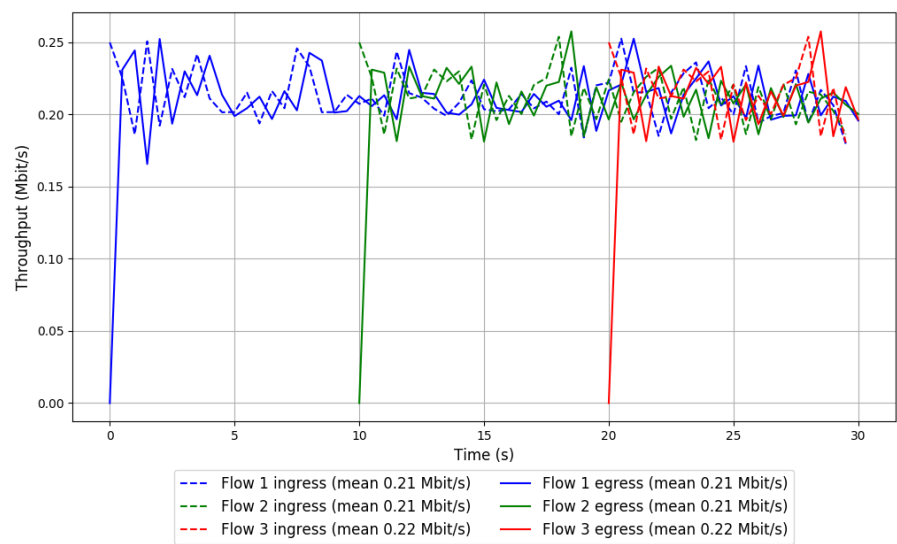
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-03-27 01:44:51
End at: 2019-03-27 01:45:21
Local clock offset: 0.364 ms
Remote clock offset: -0.997 ms

# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.052 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.003 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.097 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.040 ms
Loss rate: 0.00%
```
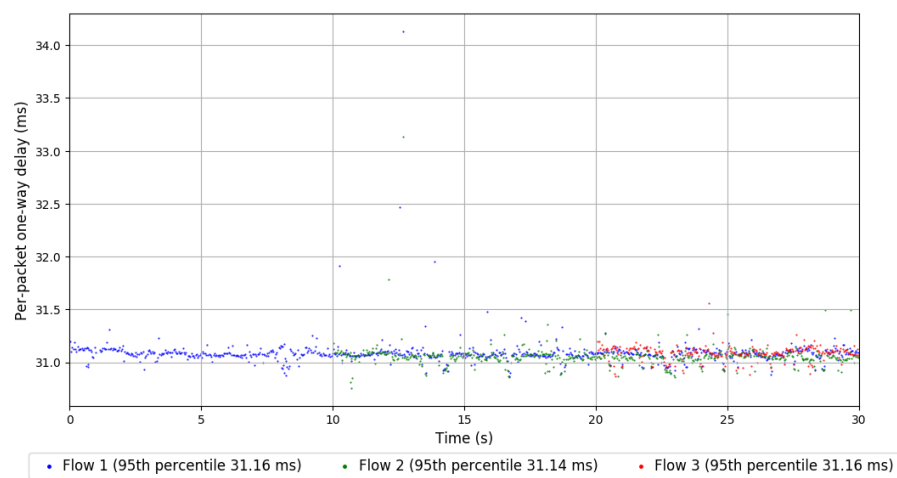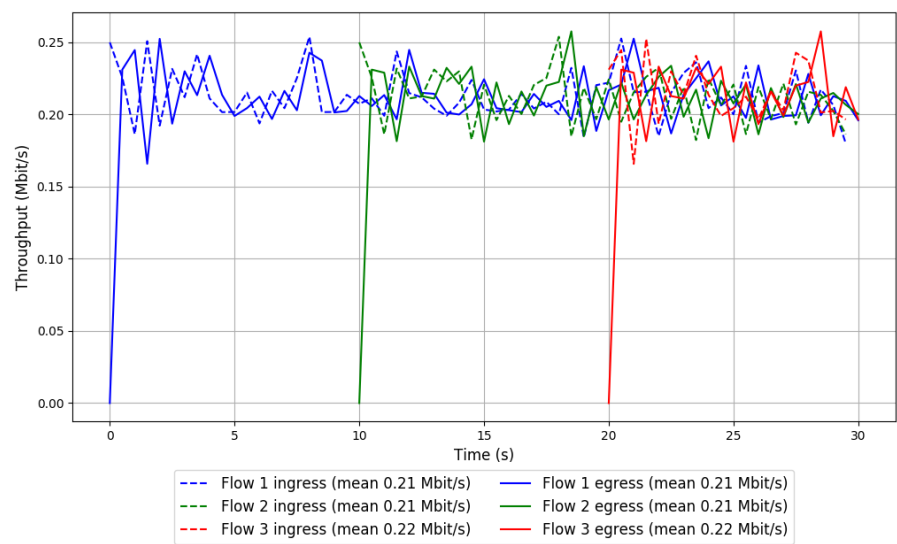
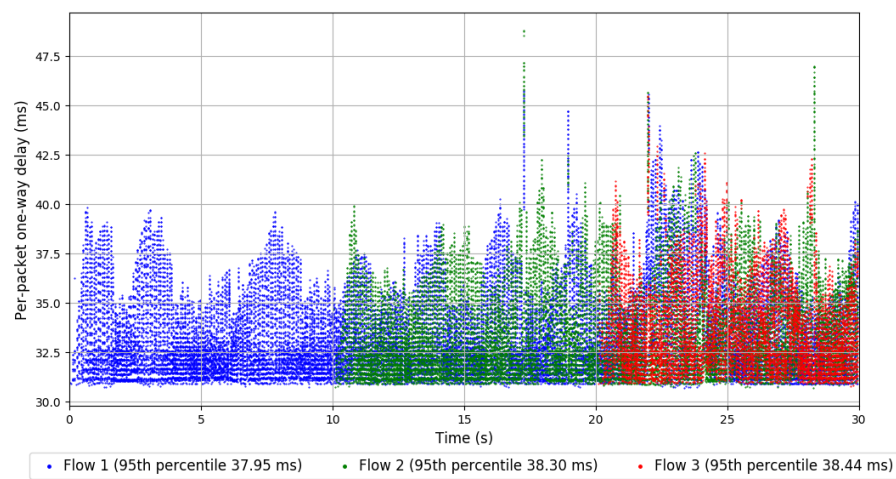# Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-03-27 02:10:27
End at: 2019-03-27 02:10:57
Local clock offset: 0.122 ms
Remote clock offset: 0.273 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.282 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.260 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.389 ms
Loss rate: 0.00%
```
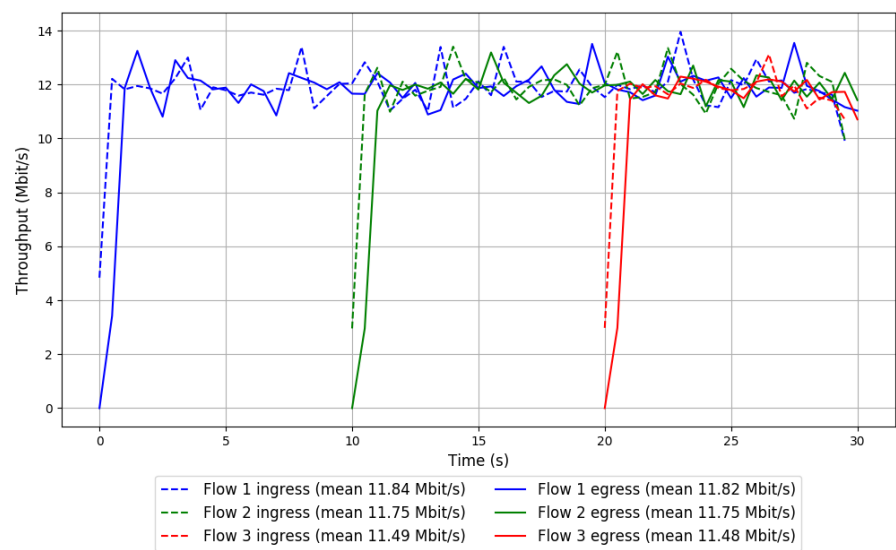
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-03-27 02:36:24
End at: 2019-03-27 02:36:54
Local clock offset: 0.351 ms
Remote clock offset: 1.146 ms

# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.358 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.369 ms
Loss rate: 0.00%
```
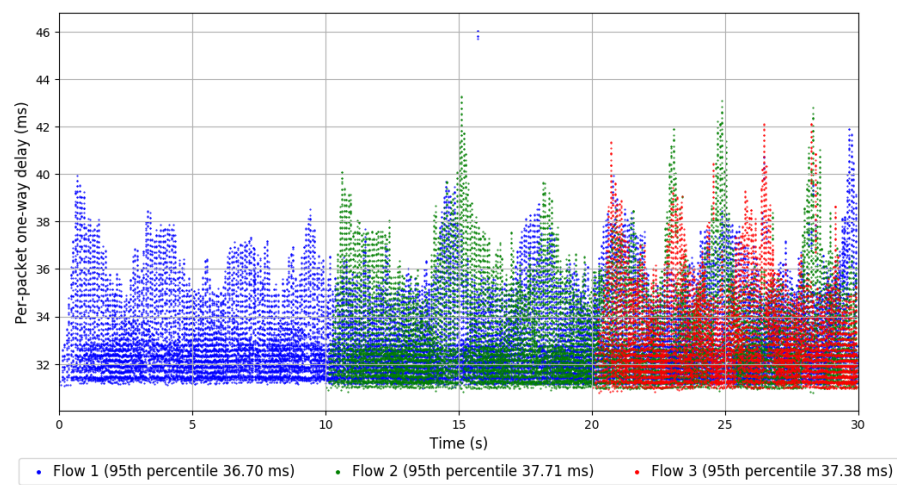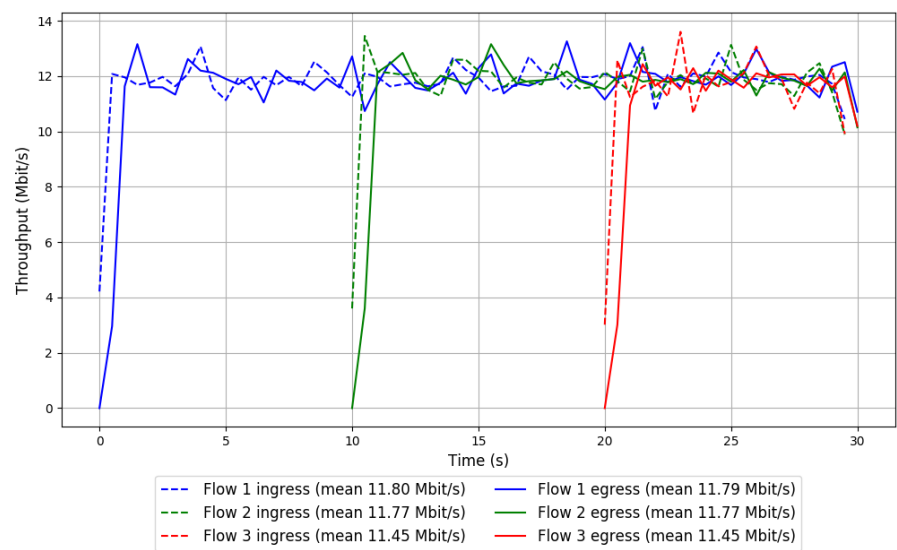
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-03-27 03:01:43
End at: 2019-03-27 03:02:13
Local clock offset: 0.539 ms
Remote clock offset: 1.878 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.159 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.158 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.135 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.165 ms
Loss rate: 0.00%
```
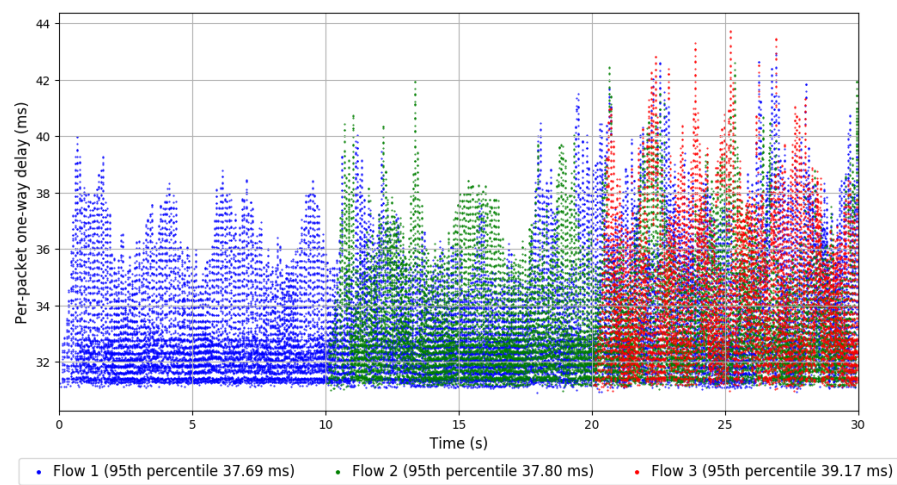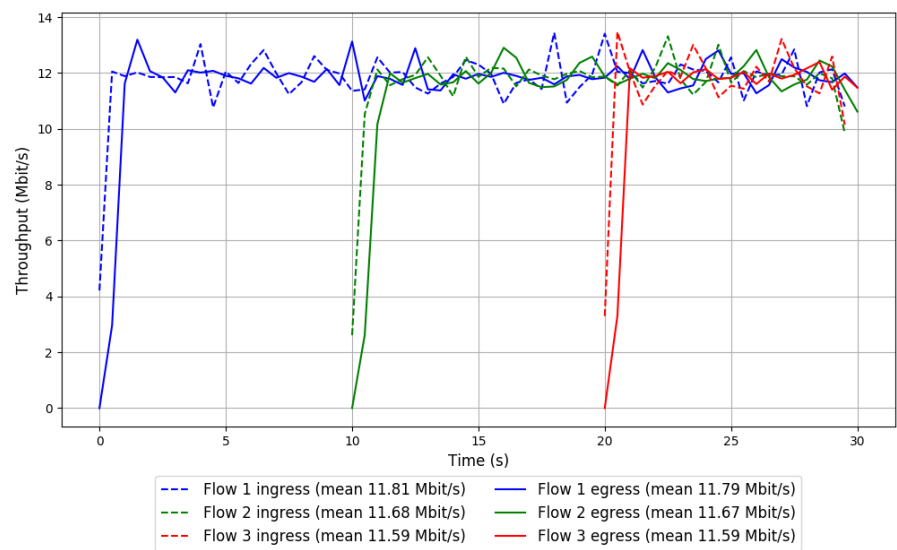
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-03-27 01:04:40
End at: 2019-03-27 01:05:10
Local clock offset: 0.11 ms
Remote clock offset: -2.801 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 38.146 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 37.948 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 38.299 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.48 Mbit/s
95th percentile per-packet one-way delay: 38.439 ms
Loss rate: 0.00%
```

Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-03-27 01:30:18
End at: 2019-03-27 01:30:48
Local clock offset: 0.275 ms
Remote clock offset: -1.478 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.40 Mbit/s
95th percentile per-packet one-way delay: 37.144 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 36.704 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 37.708 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.45 Mbit/s
95th percentile per-packet one-way delay: 37.383 ms
Loss rate: 0.00%
```
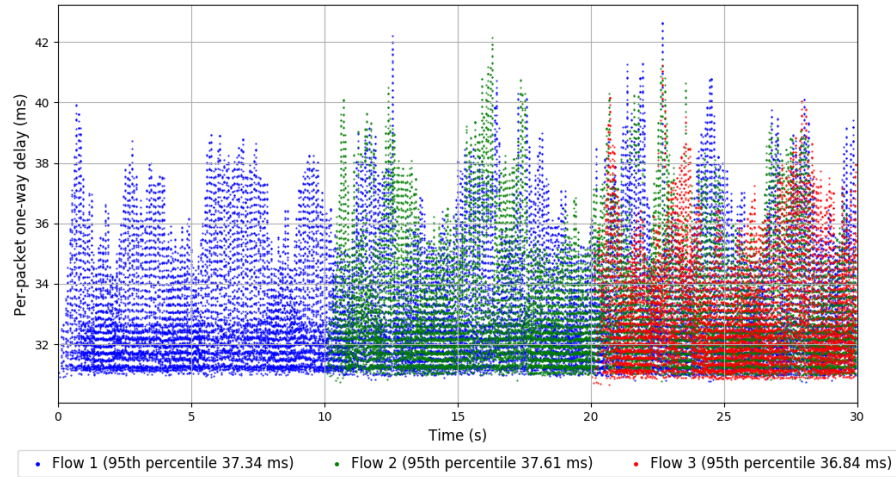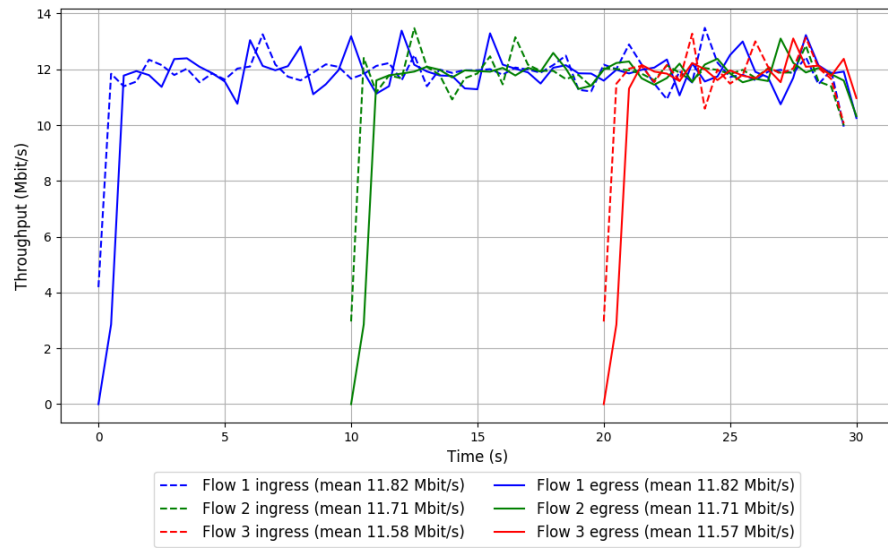
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-03-27 01:55:41
End at: 2019-03-27 01:56:11
Local clock offset: 0.245 ms
Remote clock offset: -0.308 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.39 Mbit/s
95th percentile per-packet one-way delay: 38.019 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 37.691 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 37.799 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 39.172 ms
Loss rate: 0.00%
```
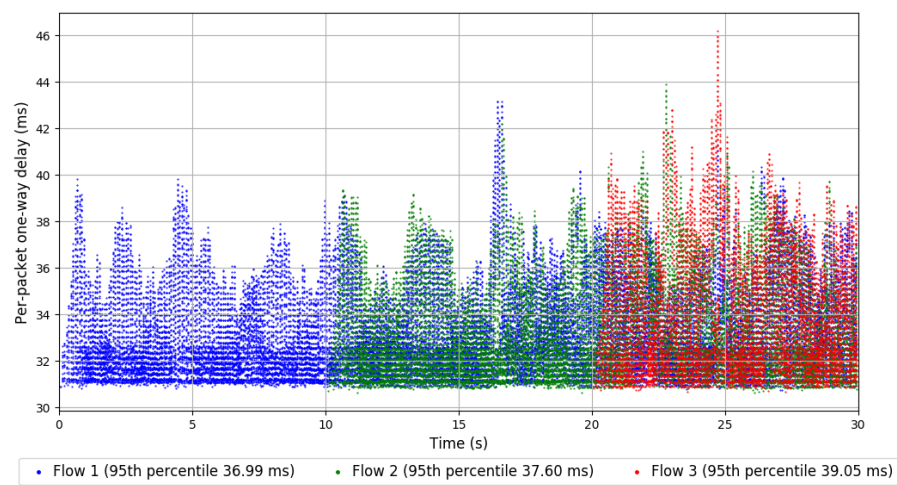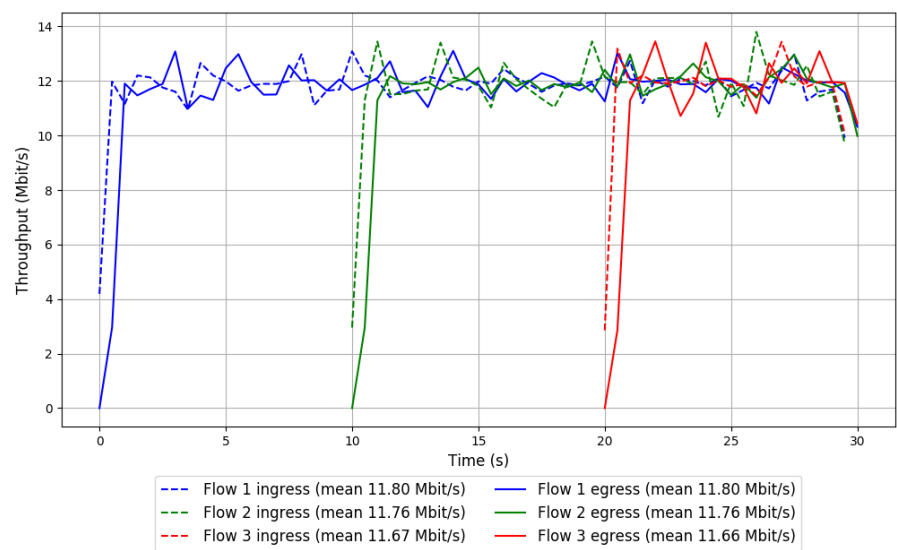
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-03-27 02:21:35
End at: 2019-03-27 02:22:05
Local clock offset: 0.074 ms
Remote clock offset: 0.503 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 37.343 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 37.335 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 37.614 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: 36.836 ms
Loss rate: 0.00%
```
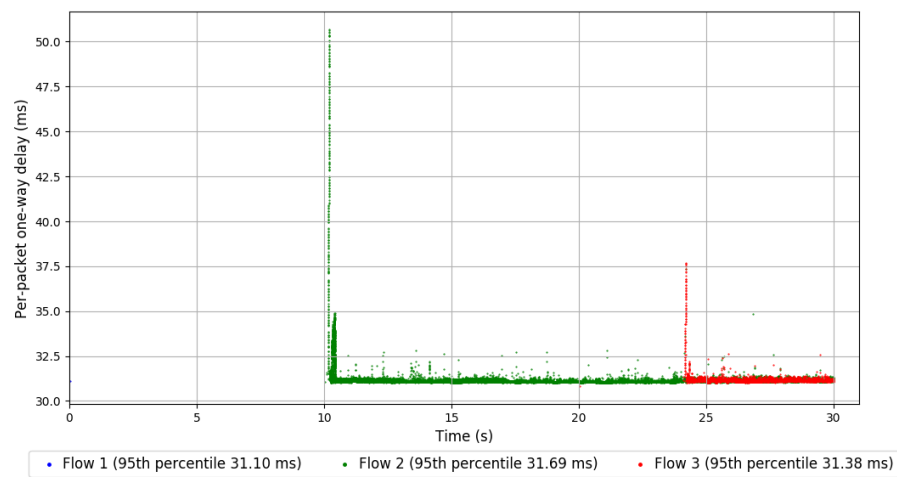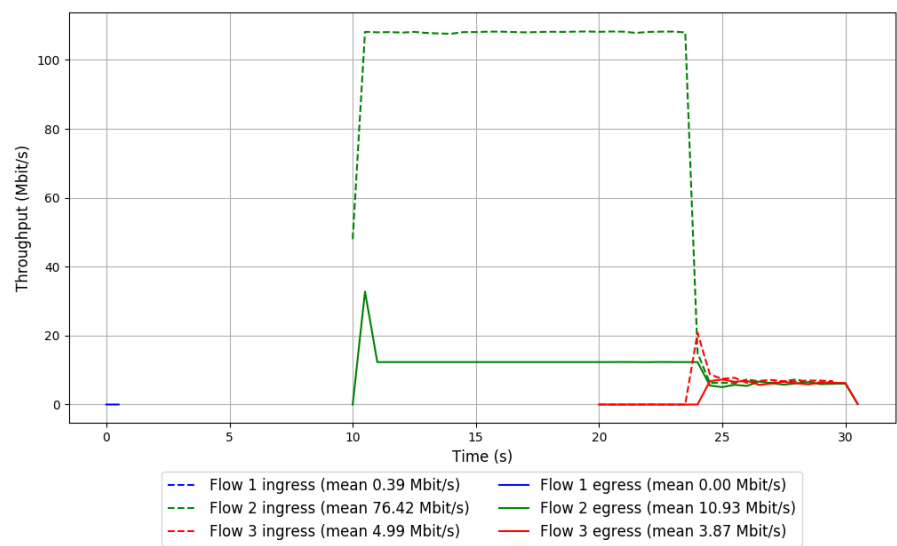
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-03-27 02:47:11
End at: 2019-03-27 02:47:41
Local clock offset: 0.5 ms
Remote clock offset: 1.332 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.47 Mbit/s
95th percentile per-packet one-way delay: 37.640 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 36.986 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 37.601 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 39.055 ms
Loss rate: 0.00%
```
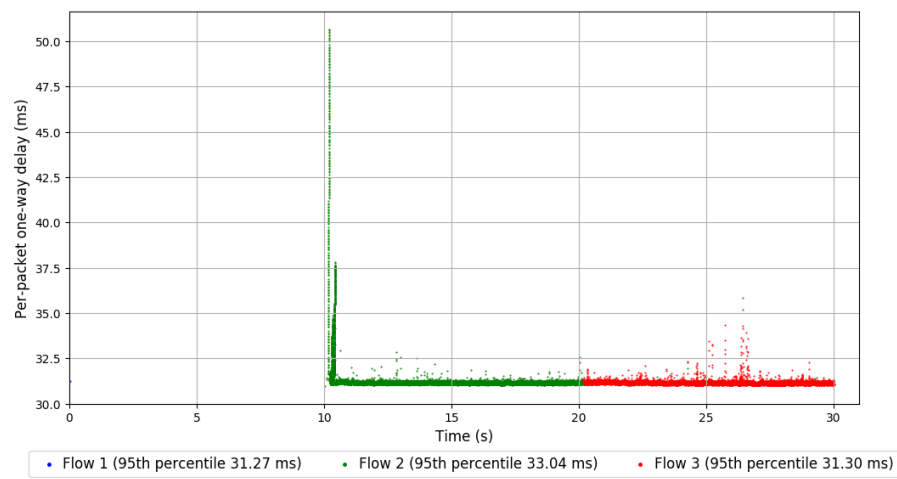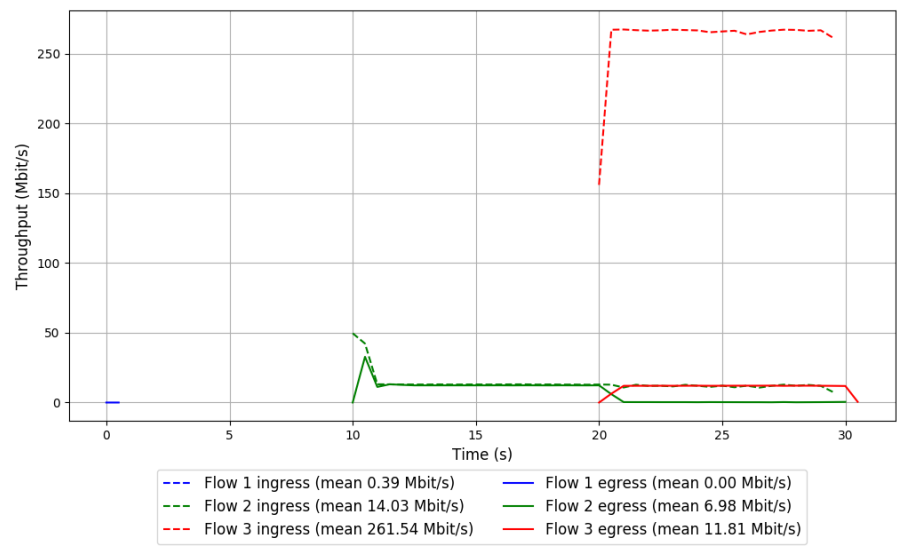
Run 5: Report of Sprout — Data Link

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

Start at: 2019-03-27 01:29:06
End at: 2019-03-27 01:29:36
Local clock offset: 0.266 ms
Remote clock offset: -1.593 ms

# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.578 ms
Loss rate: 83.71%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.097 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.93 Mbit/s
95th percentile per-packet one-way delay: 31.686 ms
Loss rate: 85.70%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 31.380 ms
Loss rate: 22.47%
```

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

Flow 1 ingress (mean 0.39 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 76.42 Mbit/s) --- Flow 2 egress (mean 10.93 Mbit/s)
Flow 3 ingress (mean 4.99 Mbit/s) --- Flow 3 egress (mean 3.87 Mbit/s)

Flow 1 (95th percentile 31.10 ms)　　Flow 2 (95th percentile 31.69 ms)　　Flow 3 (95th percentile 31.38 ms)

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

Start at: 2019-03-27 01:54:31
End at: 2019-03-27 01:55:01
Local clock offset: 0.243 ms
Remote clock offset: -0.424 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.557 ms
Loss rate: 91.10%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.267 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 33.043 ms
Loss rate: 50.35%
-- Flow 3:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 31.299 ms
Loss rate: 95.48%
```
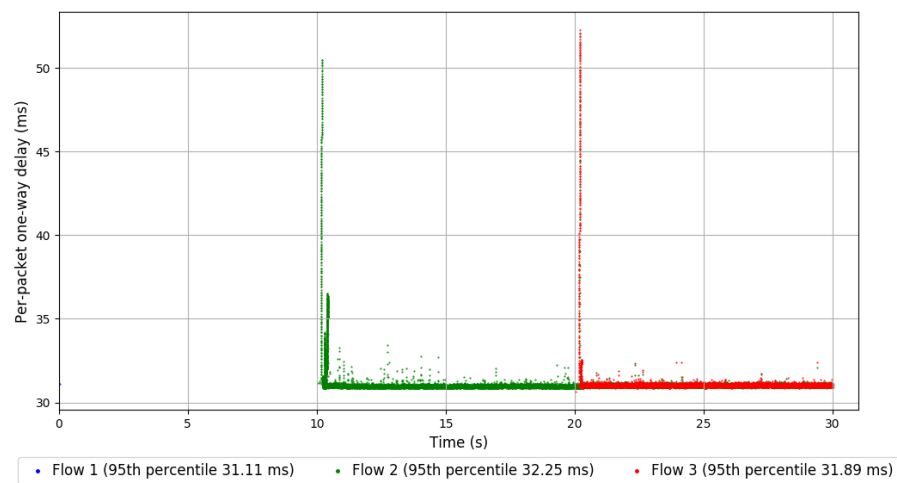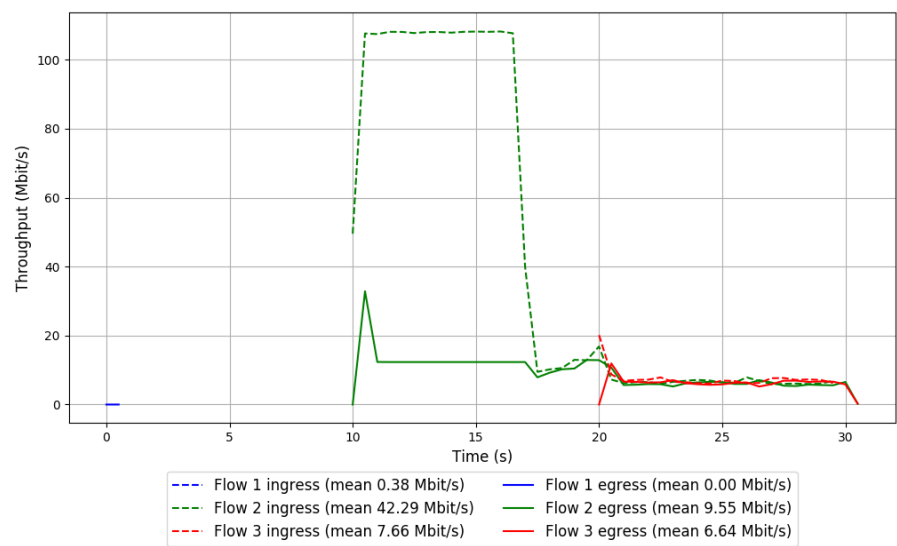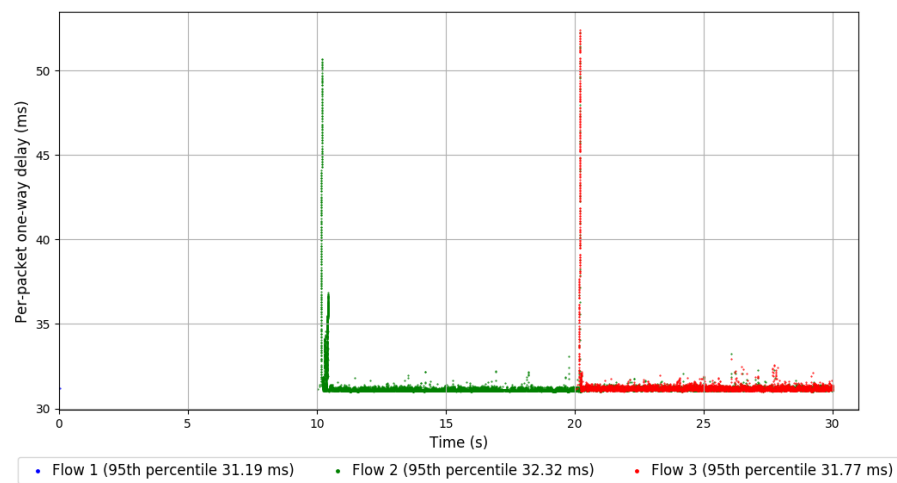
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s) ---
Flow 2 ingress (mean 14.03 Mbit/s) ---
Flow 3 ingress (mean 261.54 Mbit/s) ---
Flow 1 egress (mean 0.00 Mbit/s) ——
Flow 2 egress (mean 6.98 Mbit/s) ——
Flow 3 egress (mean 11.81 Mbit/s) ——

Flow 1 (95th percentile 31.27 ms) •
Flow 2 (95th percentile 33.04 ms) •
Flow 3 (95th percentile 31.30 ms) •

168

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

Start at: 2019-03-27 02:20:25
End at: 2019-03-27 02:20:55
Local clock offset: 0.043 ms
Remote clock offset: 0.443 ms

# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 32.144 ms
Loss rate: 72.11%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.107 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 32.251 ms
Loss rate: 77.42%
-- Flow 3:
Average throughput: 6.64 Mbit/s
95th percentile per-packet one-way delay: 31.893 ms
Loss rate: 13.32%
```
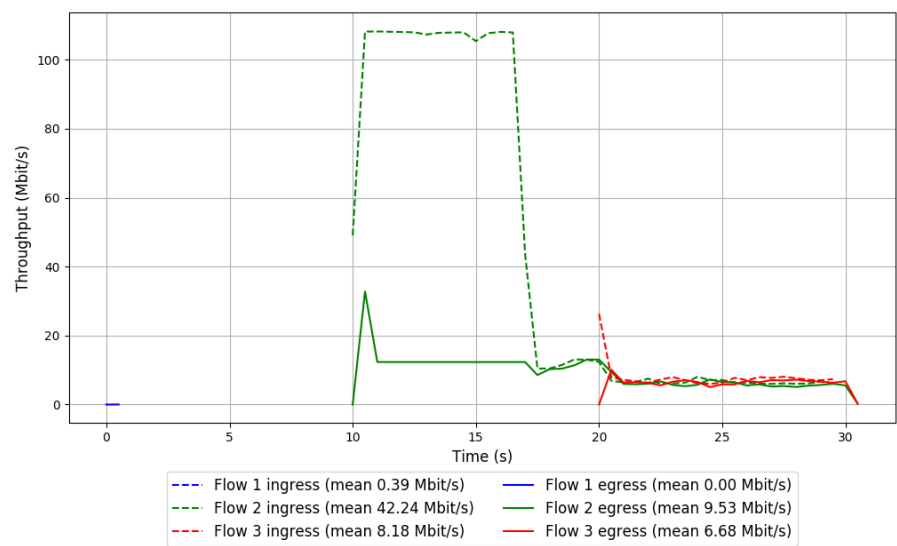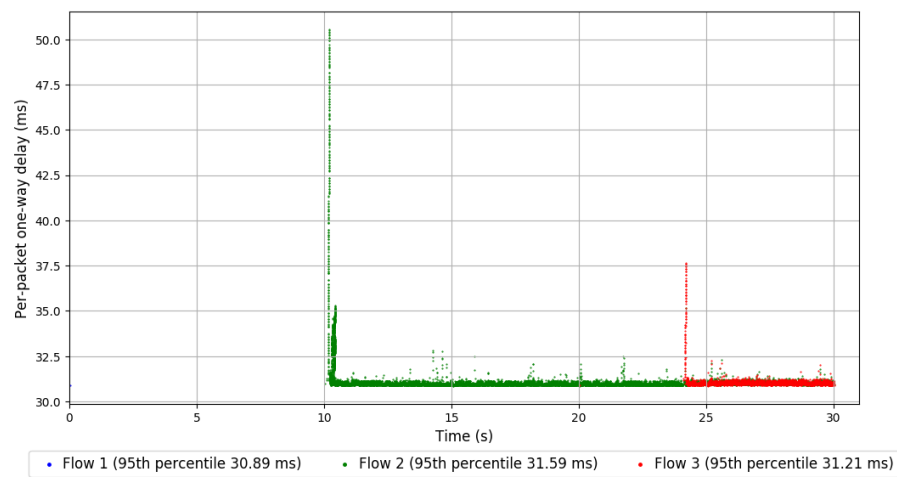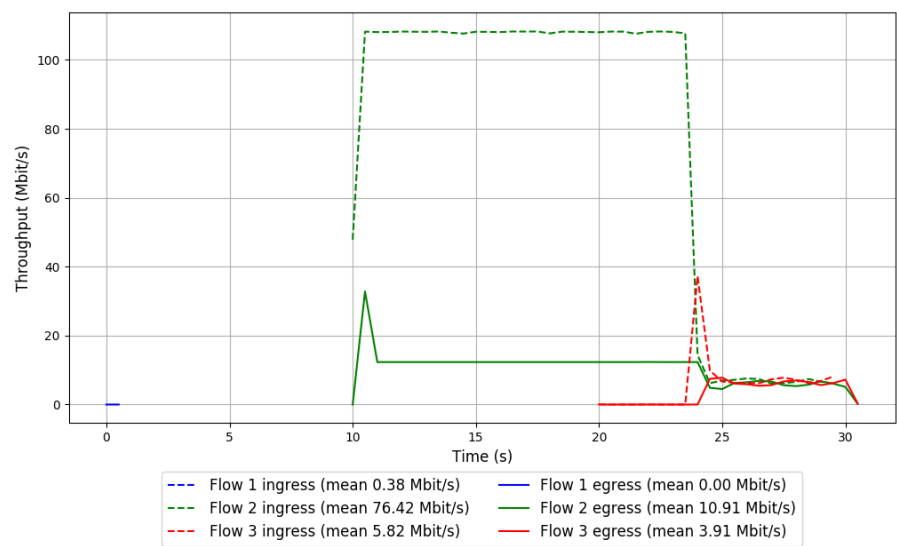
Run 3: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 0.38 Mbit/s)   —— Flow 1 egress (mean 0.00 Mbit/s)
- - - Flow 2 ingress (mean 42.29 Mbit/s)   —— Flow 2 egress (mean 9.55 Mbit/s)
- - - Flow 3 ingress (mean 7.66 Mbit/s)   —— Flow 3 egress (mean 6.64 Mbit/s)

• Flow 1 (95th percentile 31.11 ms)   • Flow 2 (95th percentile 32.25 ms)   • Flow 3 (95th percentile 31.89 ms)

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

Start at: 2019-03-27 02:46:01
End at: 2019-03-27 02:46:31
Local clock offset: 0.494 ms
Remote clock offset: 1.474 ms

# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 32.164 ms
Loss rate: 72.24%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.189 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.53 Mbit/s
95th percentile per-packet one-way delay: 32.323 ms
Loss rate: 77.44%
-- Flow 3:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 31.770 ms
Loss rate: 18.37%
```
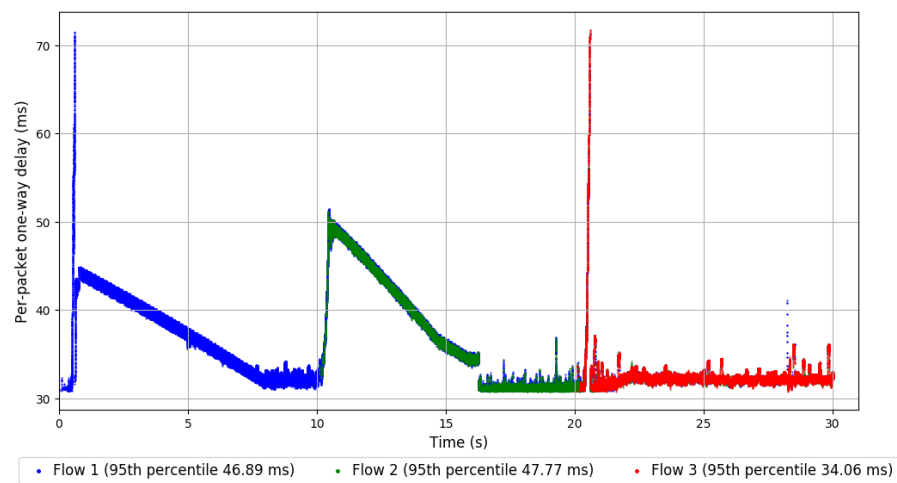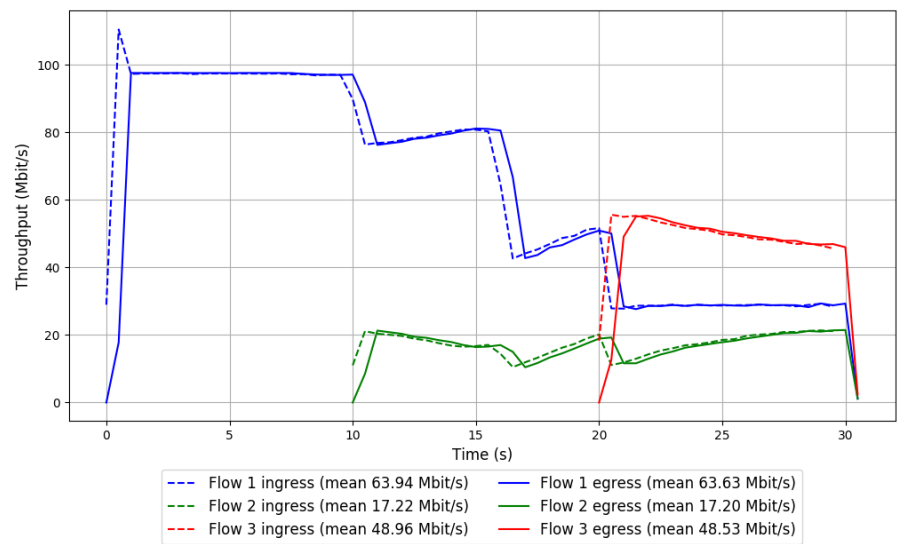
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s) Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 42.24 Mbit/s) Flow 2 egress (mean 9.53 Mbit/s)
Flow 3 ingress (mean 8.18 Mbit/s) Flow 3 egress (mean 6.68 Mbit/s)

Flow 1 (95th percentile 31.19 ms) Flow 2 (95th percentile 32.32 ms) Flow 3 (95th percentile 31.77 ms)
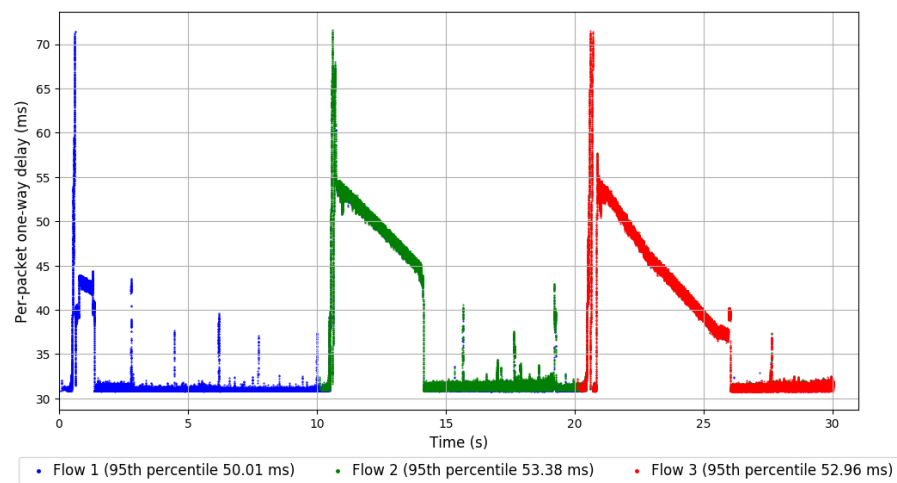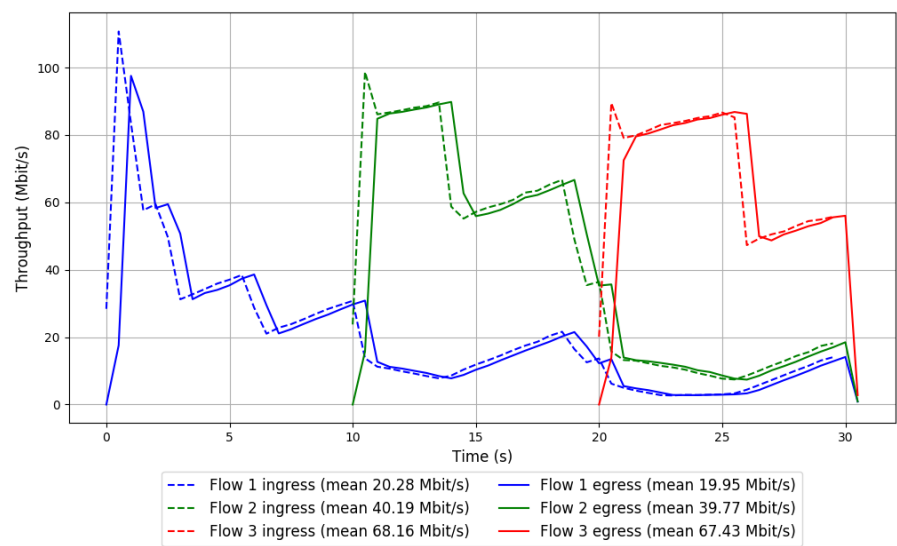
```
Run 5: Statistics of TaoVA-100x

Start at: 2019-03-27 03:11:29
End at: 2019-03-27 03:11:59
Local clock offset: 0.627 ms
Remote clock offset: 1.725 ms


# Below is generated by plot.py at 2019-03-27 03:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.419 ms
Loss rate: 83.79%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.887 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 31.591 ms
Loss rate: 85.72%
-- Flow 3:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 31.206 ms
Loss rate: 32.86%
```

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

Flow 1 ingress (mean 0.38 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 76.42 Mbit/s) --- Flow 2 egress (mean 10.91 Mbit/s)
Flow 3 ingress (mean 5.82 Mbit/s) --- Flow 3 egress (mean 3.91 Mbit/s)

Flow 1 (95th percentile 30.89 ms) • Flow 2 (95th percentile 31.59 ms) • Flow 3 (95th percentile 31.21 ms)
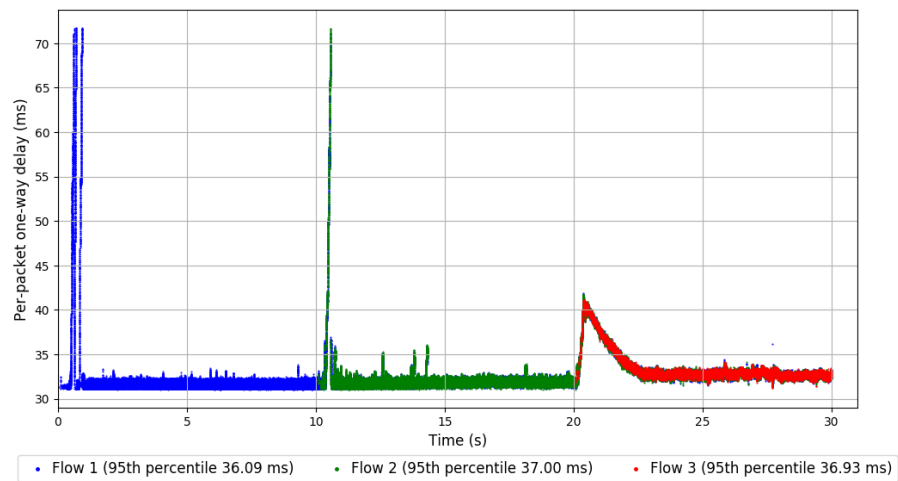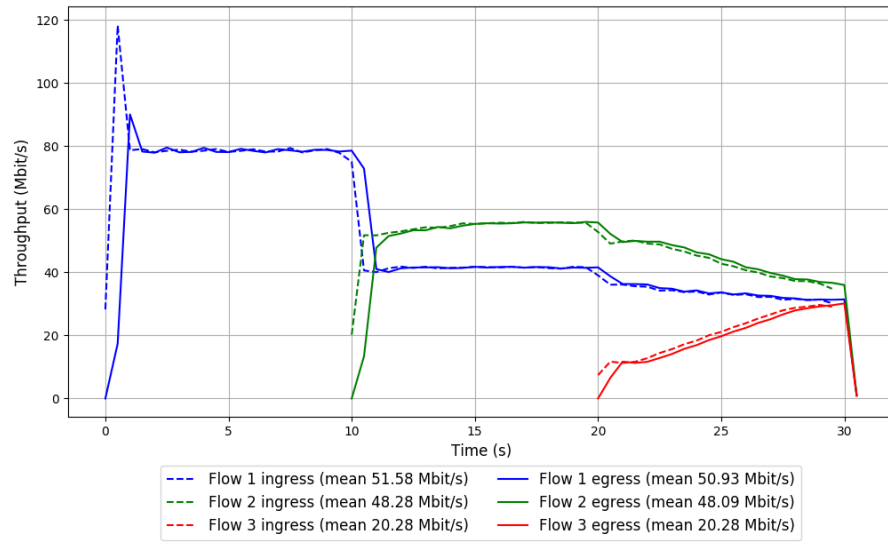
174

```
Run 1: Statistics of TCP Vegas

Start at: 2019-03-27 01:09:29
End at: 2019-03-27 01:09:59
Local clock offset: 0.092 ms
Remote clock offset: -2.587 ms


# Below is generated by plot.py at 2019-03-27 03:23:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.23 Mbit/s
95th percentile per-packet one-way delay: 46.481 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 46.888 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 17.20 Mbit/s
95th percentile per-packet one-way delay: 47.775 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 48.53 Mbit/s
95th percentile per-packet one-way delay: 34.060 ms
Loss rate: 0.87%
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-03-27 01:35:13
End at: 2019-03-27 01:35:43
Local clock offset: 0.329 ms
Remote clock offset: -1.419 ms


# Below is generated by plot.py at 2019-03-27 03:23:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.86 Mbit/s
95th percentile per-packet one-way delay: 52.934 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 19.95 Mbit/s
95th percentile per-packet one-way delay: 50.014 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 53.379 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 67.43 Mbit/s
95th percentile per-packet one-way delay: 52.958 ms
Loss rate: 1.06%
```
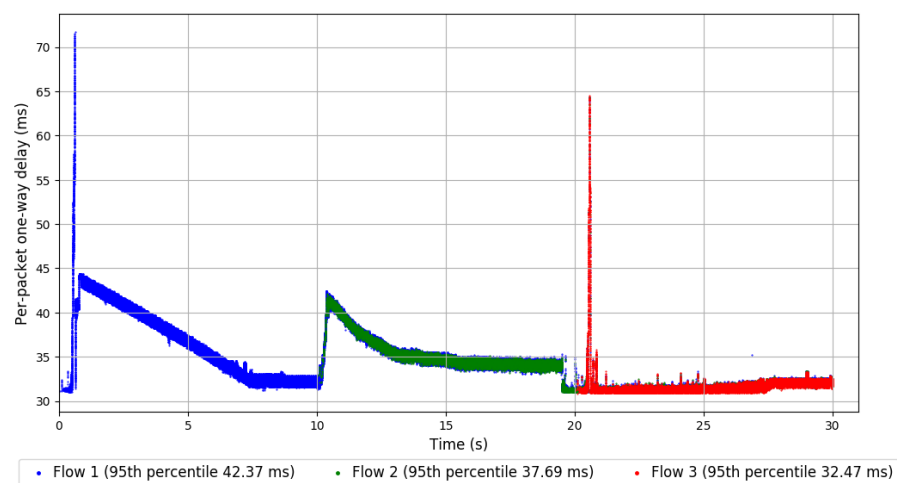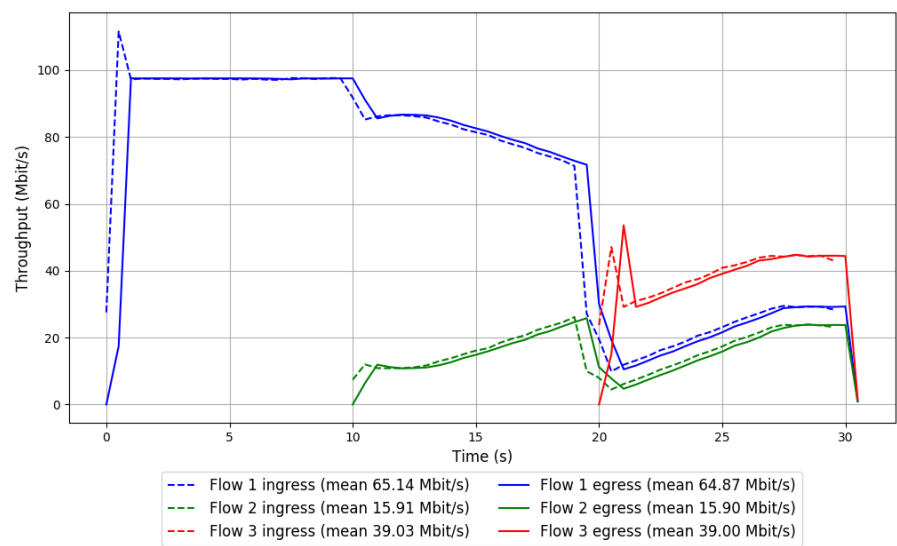
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-03-27 02:00:36
End at: 2019-03-27 02:01:06
Local clock offset: 0.199 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-03-27 03:24:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.72 Mbit/s
95th percentile per-packet one-way delay: 36.668 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 50.93 Mbit/s
95th percentile per-packet one-way delay: 36.094 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 48.09 Mbit/s
95th percentile per-packet one-way delay: 36.996 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 20.28 Mbit/s
95th percentile per-packet one-way delay: 36.927 ms
Loss rate: 0.00%
```
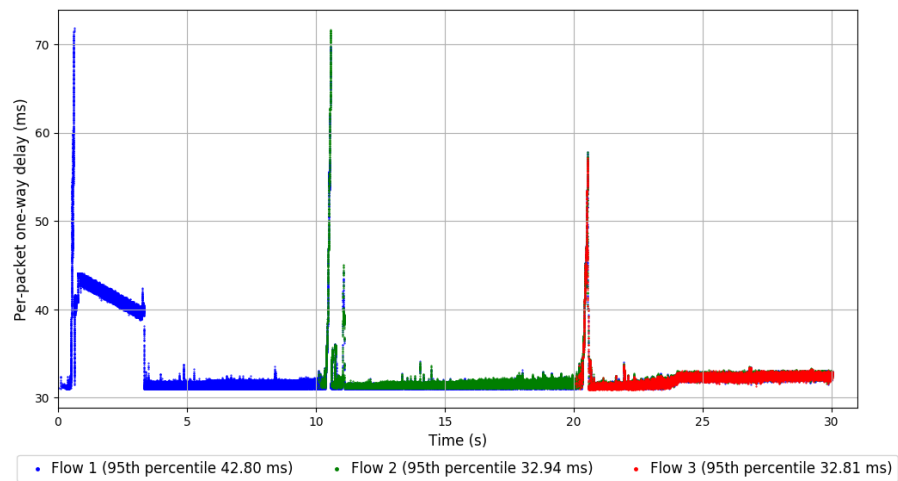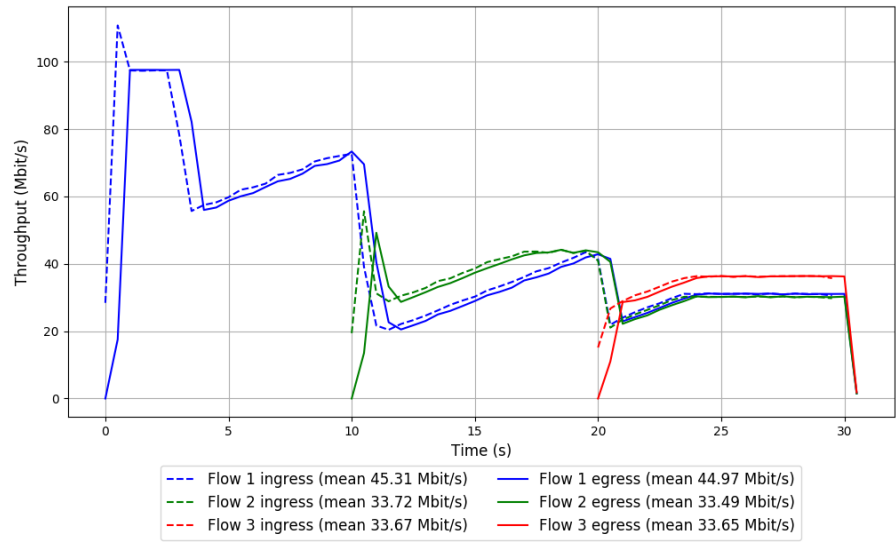
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-03-27 02:26:33
End at: 2019-03-27 02:27:03
Local clock offset: 0.151 ms
Remote clock offset: 0.765 ms


# Below is generated by plot.py at 2019-03-27 03:24:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.43 Mbit/s
95th percentile per-packet one-way delay: 41.885 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 64.87 Mbit/s
95th percentile per-packet one-way delay: 42.372 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 15.90 Mbit/s
95th percentile per-packet one-way delay: 37.689 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 32.473 ms
Loss rate: 0.08%
```
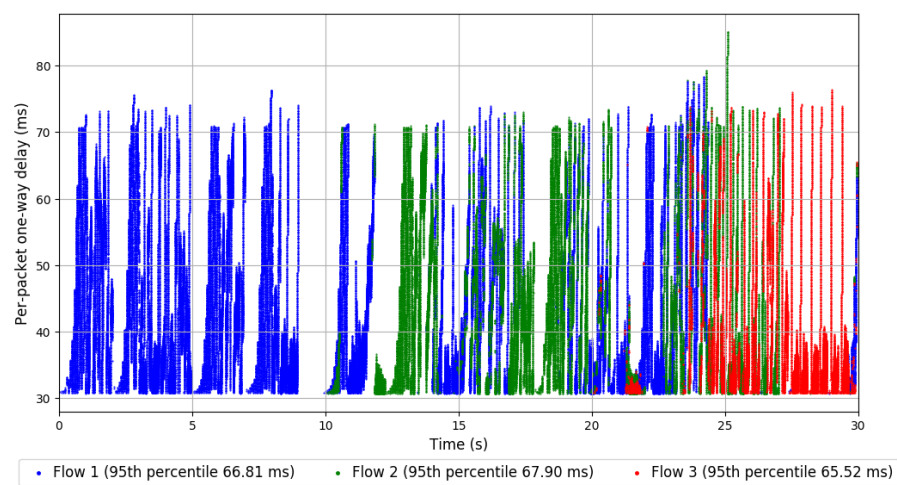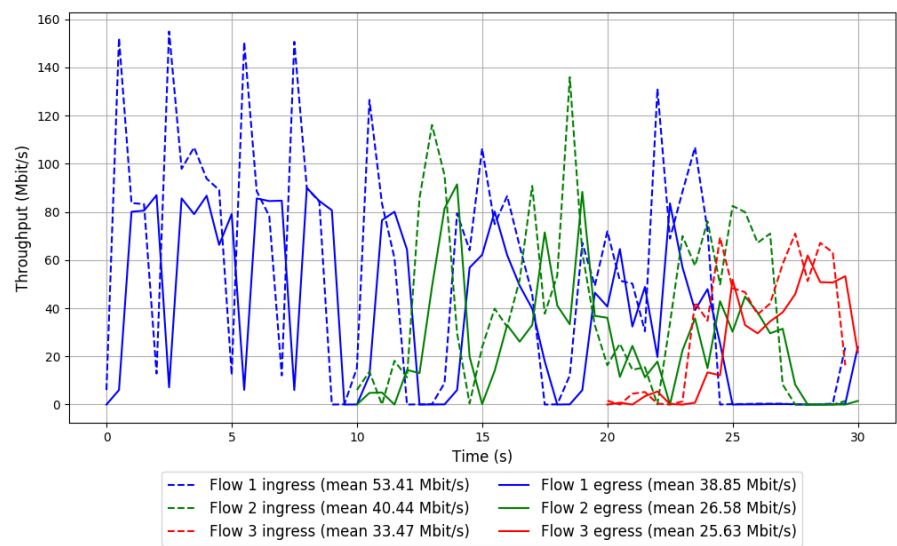
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-03-27 02:52:01
End at: 2019-03-27 02:52:31
Local clock offset: 0.473 ms
Remote clock offset: 1.685 ms


# Below is generated by plot.py at 2019-03-27 03:24:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.47 Mbit/s
95th percentile per-packet one-way delay: 42.207 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 44.97 Mbit/s
95th percentile per-packet one-way delay: 42.800 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 33.49 Mbit/s
95th percentile per-packet one-way delay: 32.938 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 33.65 Mbit/s
95th percentile per-packet one-way delay: 32.808 ms
Loss rate: 0.06%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 45.31 Mbit/s) --- Flow 1 egress (mean 44.97 Mbit/s)
Flow 2 ingress (mean 33.72 Mbit/s) --- Flow 2 egress (mean 33.49 Mbit/s)
Flow 3 ingress (mean 33.67 Mbit/s) --- Flow 3 egress (mean 33.65 Mbit/s)

Flow 1 (95th percentile 42.80 ms)   Flow 2 (95th percentile 32.94 ms)   Flow 3 (95th percentile 32.81 ms)

184

```
Run 1: Statistics of Verus

Start at: 2019-03-27 01:07:01
End at: 2019-03-27 01:07:32
Local clock offset: 0.089 ms
Remote clock offset: -2.723 ms

# Below is generated by plot.py at 2019-03-27 03:24:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.01 Mbit/s
95th percentile per-packet one-way delay: 67.053 ms
Loss rate: 28.76%
-- Flow 1:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 66.805 ms
Loss rate: 27.19%
-- Flow 2:
Average throughput: 26.58 Mbit/s
95th percentile per-packet one-way delay: 67.902 ms
Loss rate: 34.17%
-- Flow 3:
Average throughput: 25.63 Mbit/s
95th percentile per-packet one-way delay: 65.517 ms
Loss rate: 23.24%
```
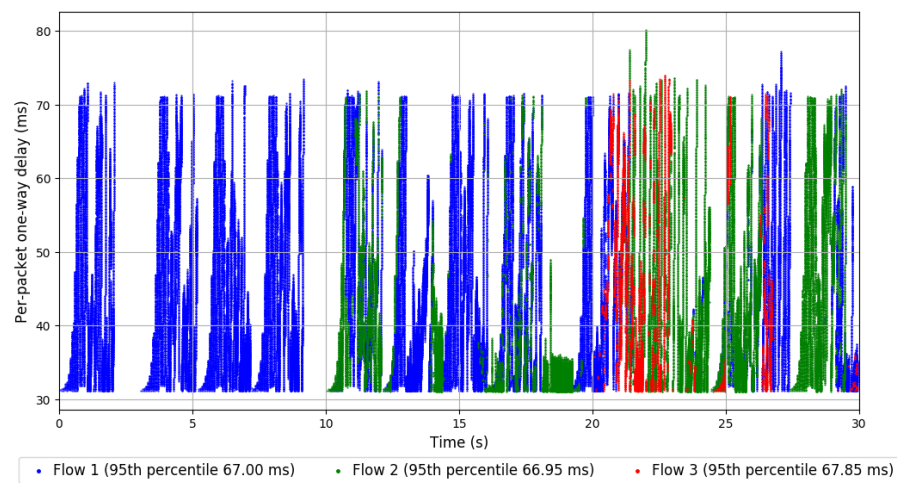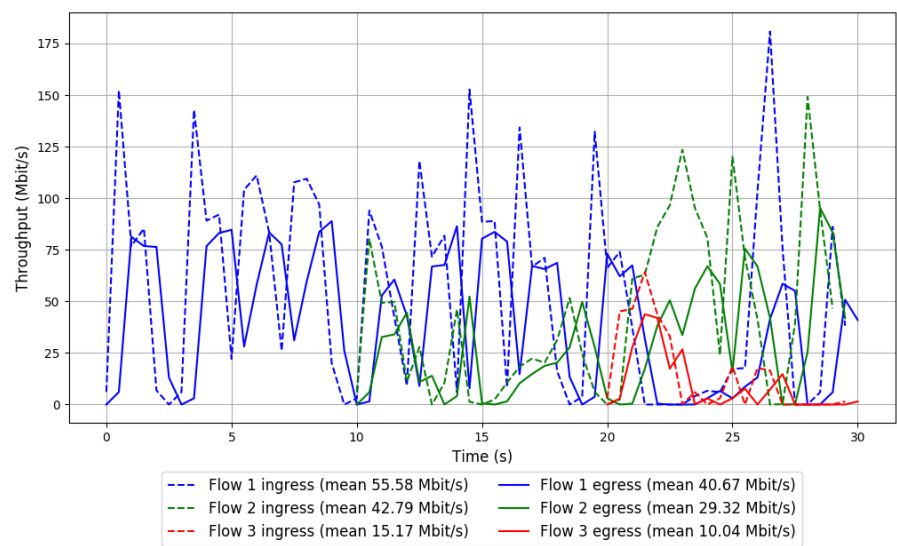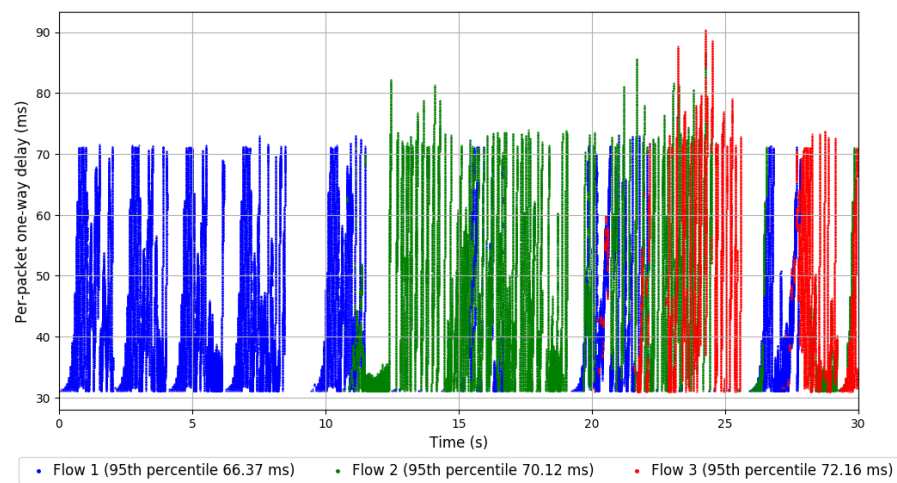
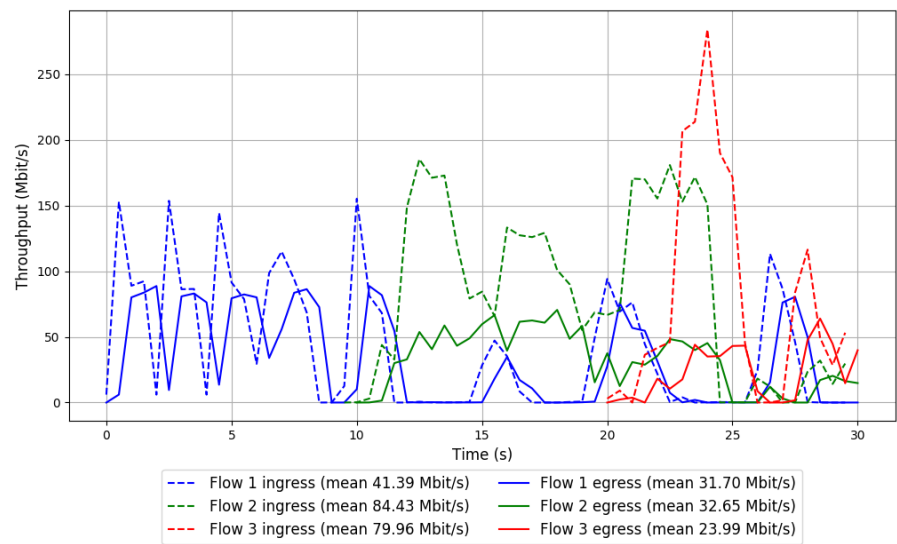Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-03-27 01:32:44
End at: 2019-03-27 01:33:14
Local clock offset: 0.294 ms
Remote clock offset: -1.32 ms


# Below is generated by plot.py at 2019-03-27 03:24:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.06 Mbit/s
95th percentile per-packet one-way delay: 67.057 ms
Loss rate: 28.67%
-- Flow 1:
Average throughput: 40.67 Mbit/s
95th percentile per-packet one-way delay: 67.004 ms
Loss rate: 26.82%
-- Flow 2:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 66.953 ms
Loss rate: 31.44%
-- Flow 3:
Average throughput: 10.04 Mbit/s
95th percentile per-packet one-way delay: 67.854 ms
Loss rate: 33.81%
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-03-27 01:58:04
End at: 2019-03-27 01:58:34
Local clock offset: 0.21 ms
Remote clock offset: -0.274 ms


# Below is generated by plot.py at 2019-03-27 03:24:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.22 Mbit/s
95th percentile per-packet one-way delay: 68.775 ms
Loss rate: 50.58%
-- Flow 1:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 66.372 ms
Loss rate: 23.37%
-- Flow 2:
Average throughput: 32.65 Mbit/s
95th percentile per-packet one-way delay: 70.118 ms
Loss rate: 61.45%
-- Flow 3:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 72.156 ms
Loss rate: 69.99%
```
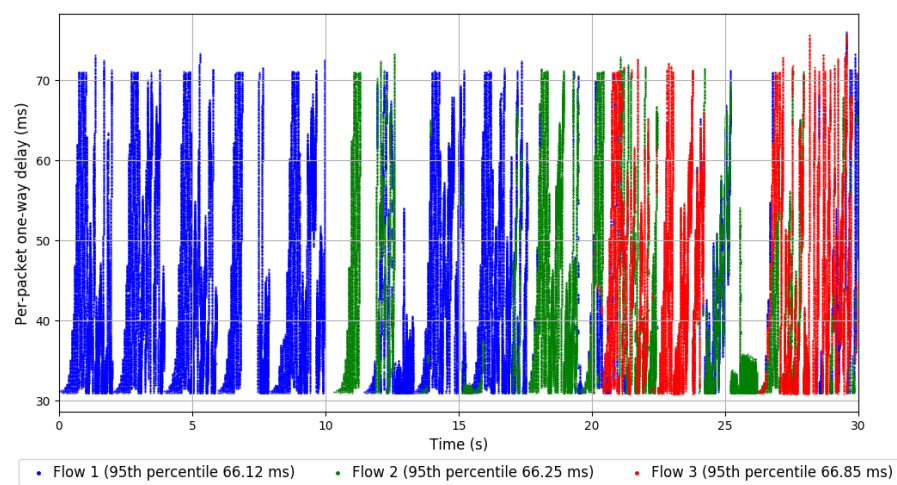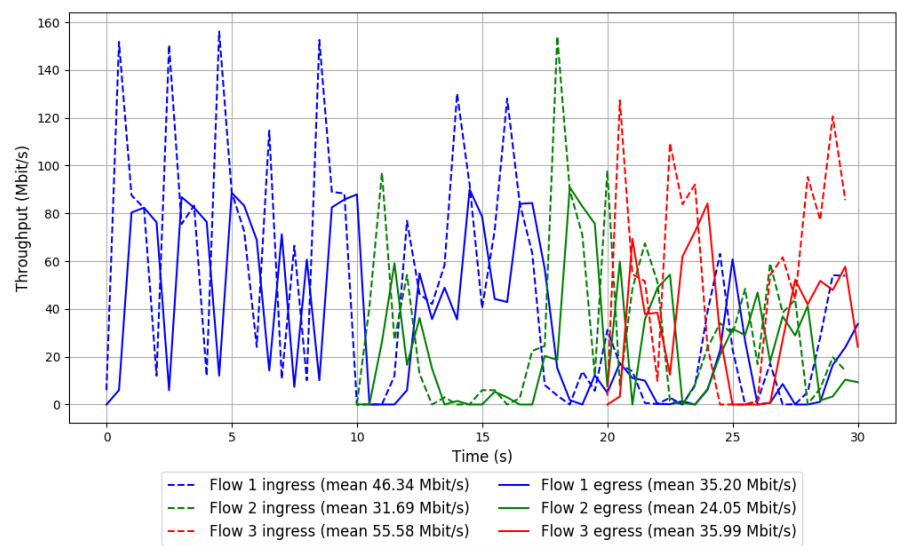
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-03-27 02:23:59
End at: 2019-03-27 02:24:29
Local clock offset: 0.117 ms
Remote clock offset: 0.707 ms


# Below is generated by plot.py at 2019-03-27 03:24:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.87 Mbit/s
95th percentile per-packet one-way delay: 66.286 ms
Loss rate: 26.38%
-- Flow 1:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 66.118 ms
Loss rate: 24.00%
-- Flow 2:
Average throughput: 24.05 Mbit/s
95th percentile per-packet one-way delay: 66.248 ms
Loss rate: 24.05%
-- Flow 3:
Average throughput: 35.99 Mbit/s
95th percentile per-packet one-way delay: 66.850 ms
Loss rate: 35.03%
```
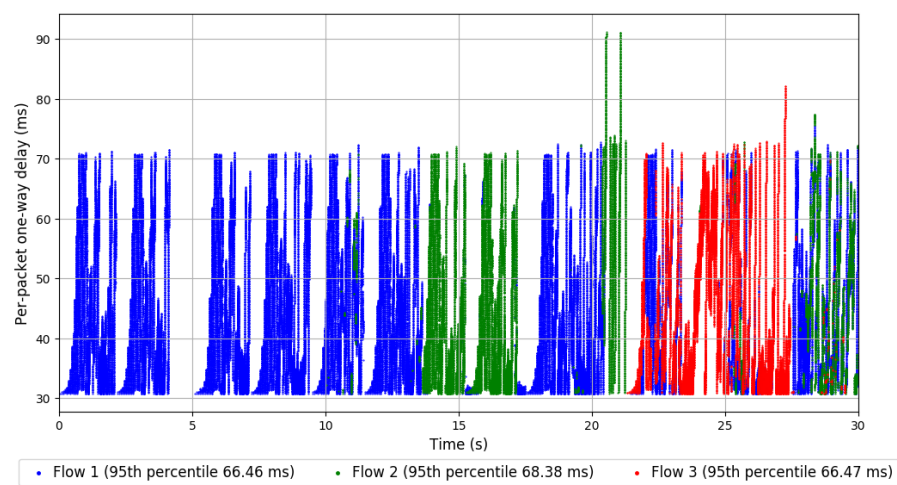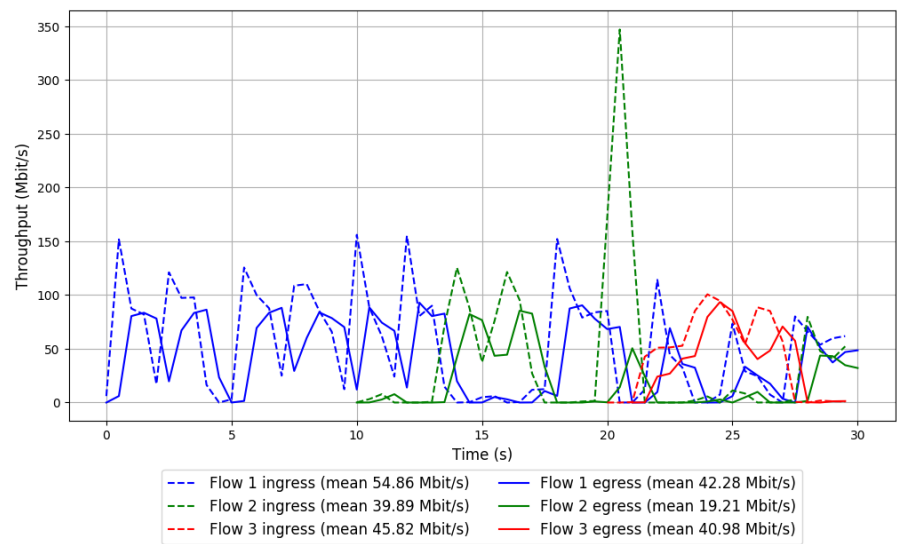
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-03-27 02:49:33
End at: 2019-03-27 02:50:03
Local clock offset: 0.491 ms
Remote clock offset: 1.38 ms


# Below is generated by plot.py at 2019-03-27 03:24:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.24 Mbit/s
95th percentile per-packet one-way delay: 66.824 ms
Loss rate: 30.58%
-- Flow 1:
Average throughput: 42.28 Mbit/s
95th percentile per-packet one-way delay: 66.463 ms
Loss rate: 22.83%
-- Flow 2:
Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 68.375 ms
Loss rate: 51.74%
-- Flow 3:
Average throughput: 40.98 Mbit/s
95th percentile per-packet one-way delay: 66.470 ms
Loss rate: 20.89%
```

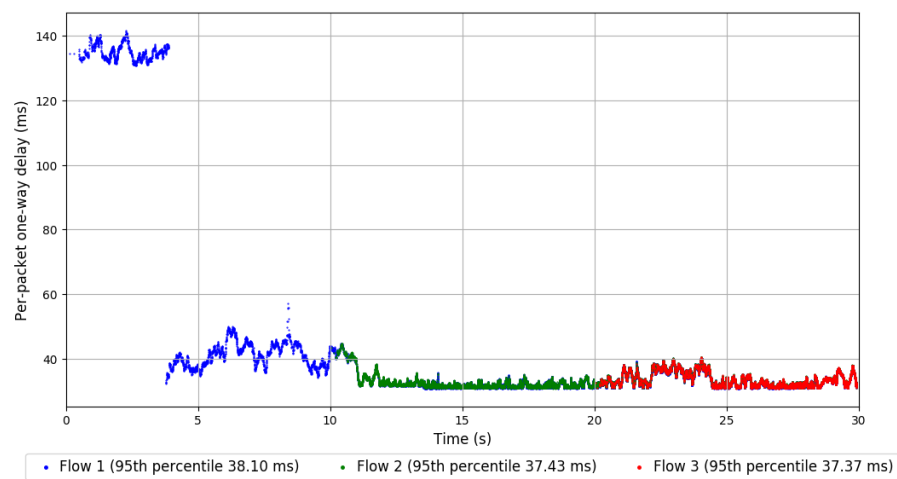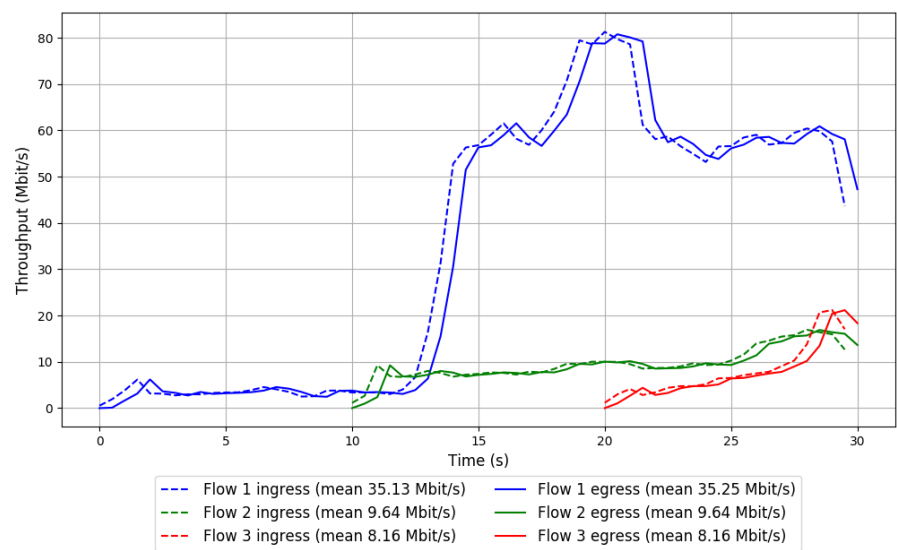Run 5: Report of Verus — Data Link

194

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-03-27 01:27:50
End at: 2019-03-27 01:28:20
Local clock offset: 0.244 ms
Remote clock offset: -1.852 ms


# Below is generated by plot.py at 2019-03-27 03:24:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.38 Mbit/s
95th percentile per-packet one-way delay: 37.891 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 38.105 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 37.433 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 37.373 ms
Loss rate: 0.00%
```

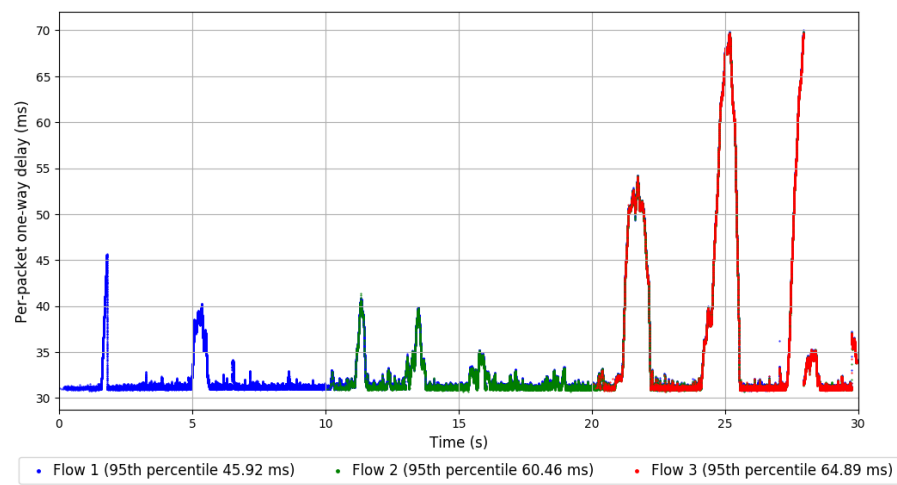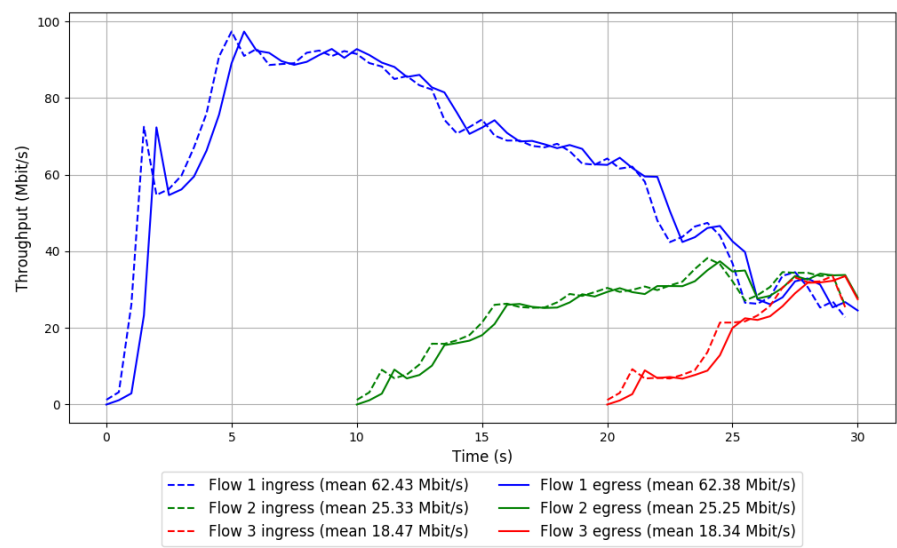Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-03-27 01:53:16
End at: 2019-03-27 01:53:46
Local clock offset: 0.244 ms
Remote clock offset: -0.656 ms

# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.23 Mbit/s
95th percentile per-packet one-way delay: 51.399 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 62.38 Mbit/s
95th percentile per-packet one-way delay: 45.919 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 25.25 Mbit/s
95th percentile per-packet one-way delay: 60.460 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 64.886 ms
Loss rate: 0.67%
```

Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-03-27 02:19:07
End at: 2019-03-27 02:19:37
Local clock offset: 0.035 ms
Remote clock offset: 0.569 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.27 Mbit/s
95th percentile per-packet one-way delay: 40.356 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.93 Mbit/s
95th percentile per-packet one-way delay: 40.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.25 Mbit/s
95th percentile per-packet one-way delay: 41.446 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.78 Mbit/s
95th percentile per-packet one-way delay: 39.480 ms
Loss rate: 0.00%
```
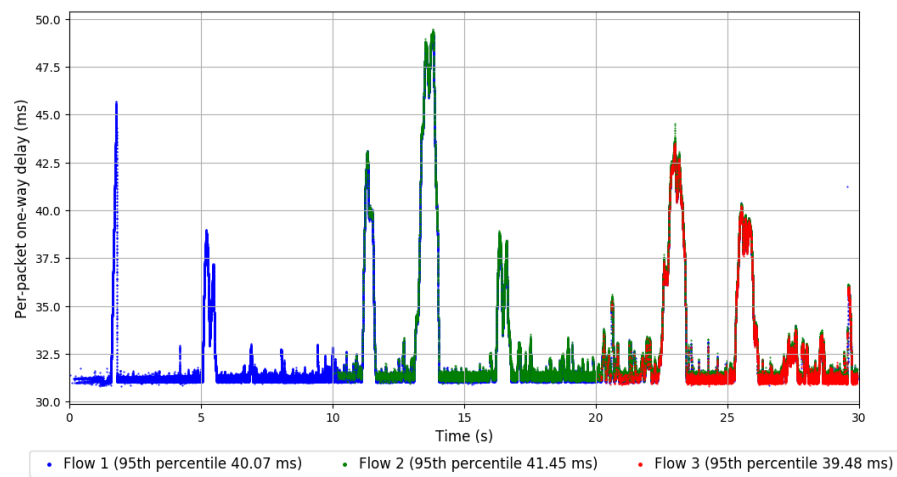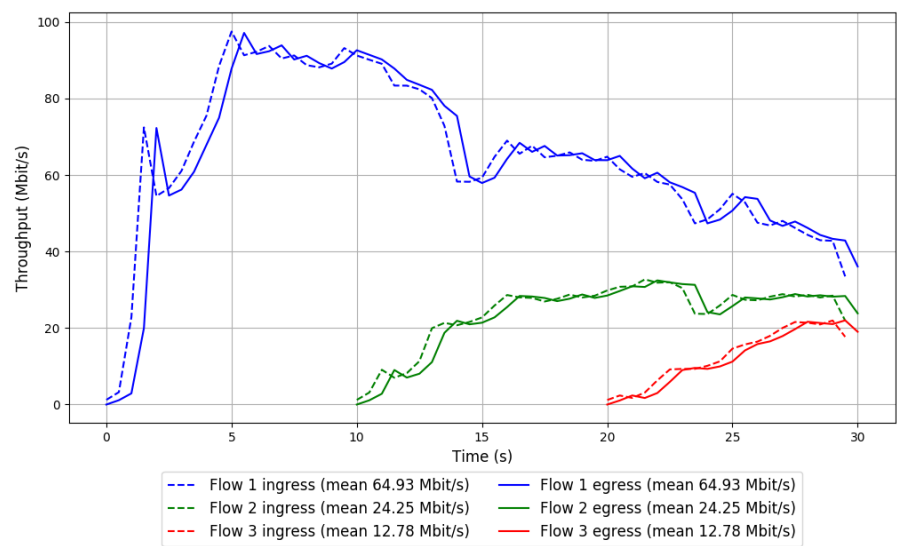
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-03-27 02:44:47
End at: 2019-03-27 02:45:17
Local clock offset: 0.483 ms
Remote clock offset: 1.436 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.38 Mbit/s
95th percentile per-packet one-way delay: 43.578 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.69 Mbit/s
95th percentile per-packet one-way delay: 43.504 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.41 Mbit/s
95th percentile per-packet one-way delay: 40.897 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.47 Mbit/s
95th percentile per-packet one-way delay: 46.950 ms
Loss rate: 0.00%
```
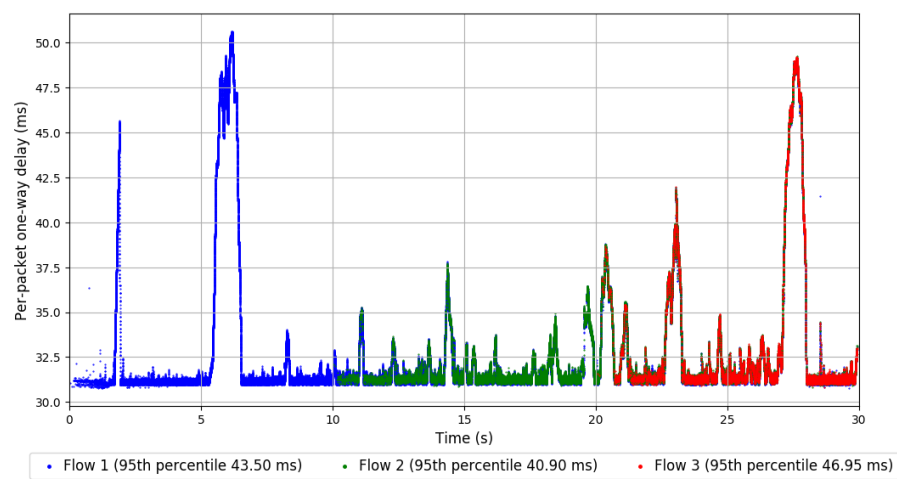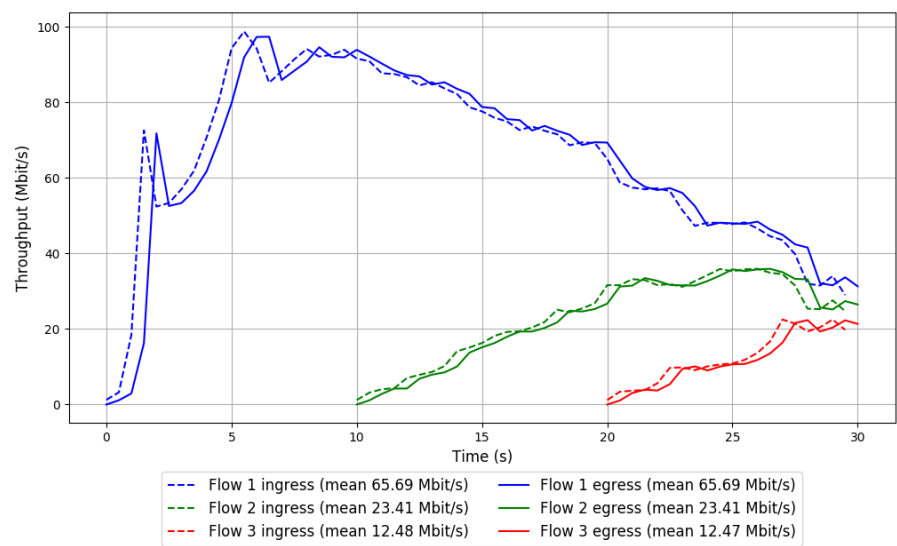
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 65.69 Mbit/s)   Flow 1 egress (mean 65.69 Mbit/s)
Flow 2 ingress (mean 23.41 Mbit/s)   Flow 2 egress (mean 23.41 Mbit/s)
Flow 3 ingress (mean 12.48 Mbit/s)   Flow 3 egress (mean 12.47 Mbit/s)

Flow 1 (95th percentile 43.50 ms)   Flow 2 (95th percentile 40.90 ms)   Flow 3 (95th percentile 46.95 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-03-27 03:10:12
End at: 2019-03-27 03:10:42
Local clock offset: 0.619 ms
Remote clock offset: 1.645 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.87 Mbit/s
95th percentile per-packet one-way delay: 47.968 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.55 Mbit/s
95th percentile per-packet one-way delay: 46.710 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.92 Mbit/s
95th percentile per-packet one-way delay: 52.422 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 61.141 ms
Loss rate: 0.00%
```
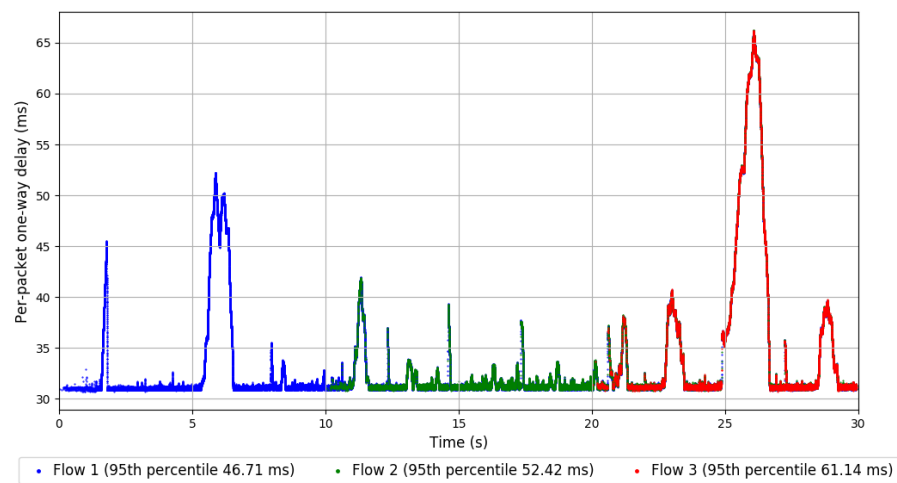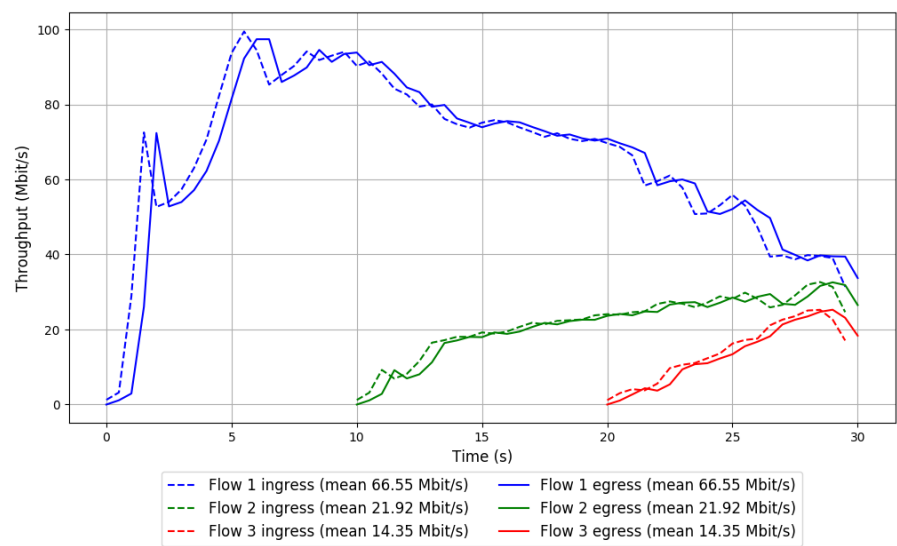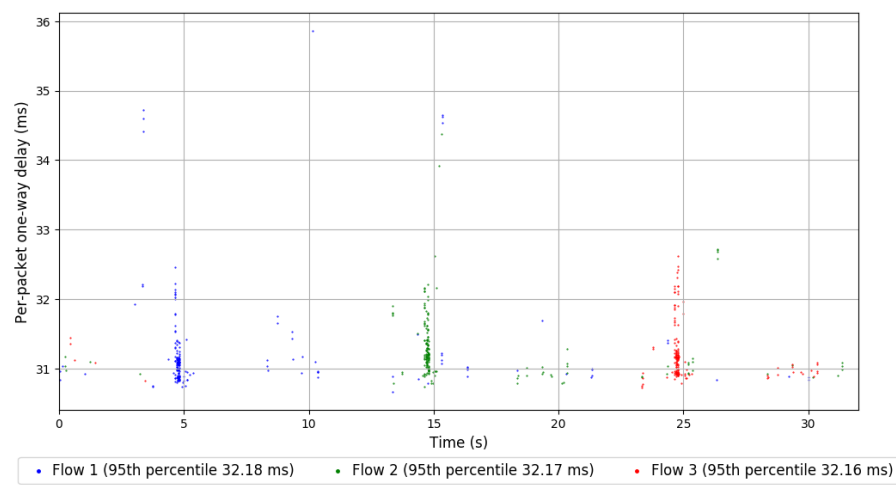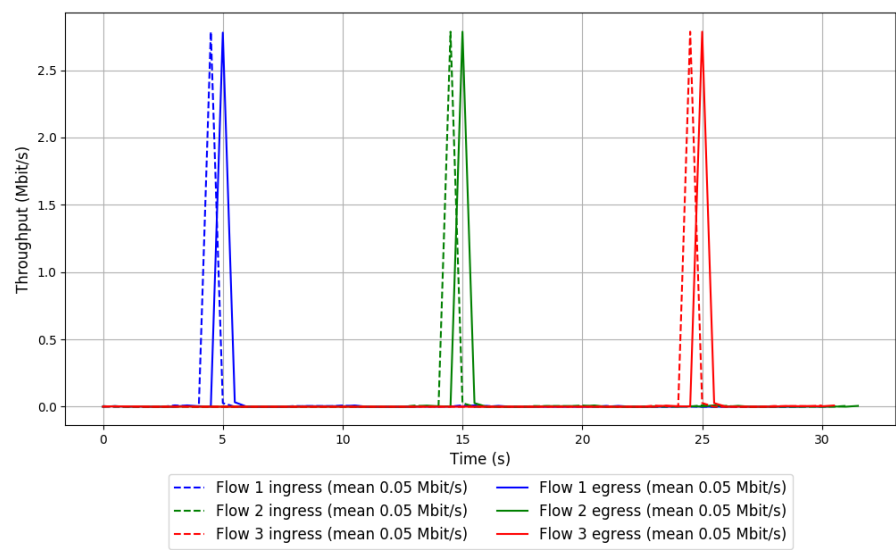
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 66.55 Mbit/s) --- Flow 1 egress (mean 66.55 Mbit/s)
Flow 2 ingress (mean 21.92 Mbit/s) --- Flow 2 egress (mean 21.92 Mbit/s)
Flow 3 ingress (mean 14.35 Mbit/s) --- Flow 3 egress (mean 14.35 Mbit/s)

Flow 1 (95th percentile 46.71 ms) • Flow 2 (95th percentile 52.42 ms) • Flow 3 (95th percentile 61.14 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2019-03-27 01:20:16
End at: 2019-03-27 01:20:46
Local clock offset: 0.141 ms
Remote clock offset: -1.977 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 32.167 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.182 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.155 ms
Loss rate: 0.00%
```

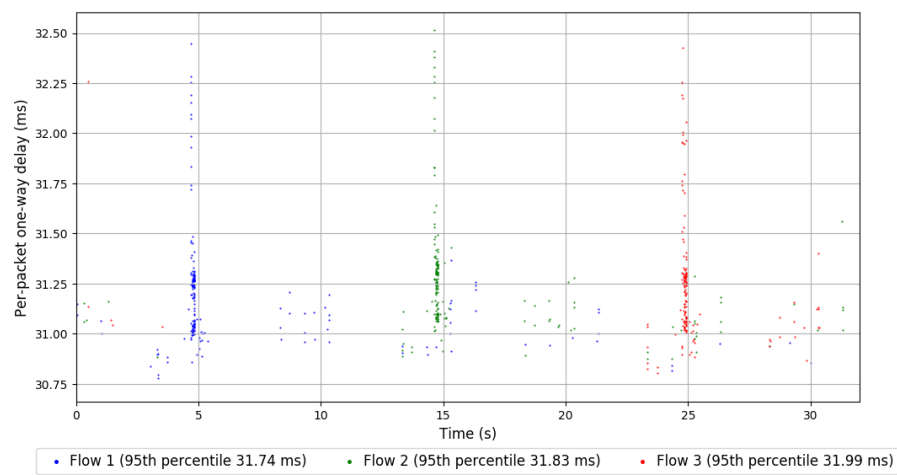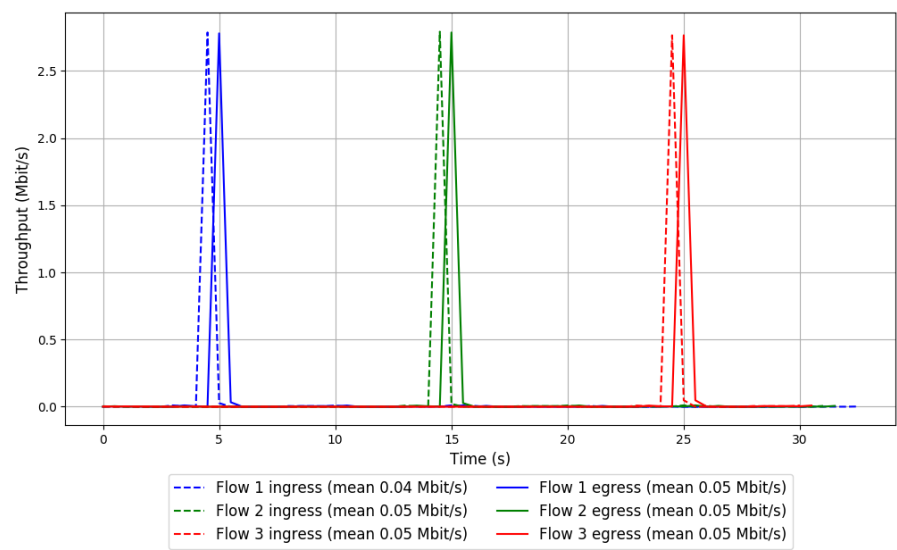Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-03-27 01:46:00
End at: 2019-03-27 01:46:30
Local clock offset: 0.367 ms
Remote clock offset: -0.775 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 31.956 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.742 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.831 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.993 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-03-27 02:11:36
End at: 2019-03-27 02:12:06
Local clock offset: 0.106 ms
Remote clock offset: 0.268 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 31.934 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.786 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 32.275 ms
Loss rate: 0.00%
```
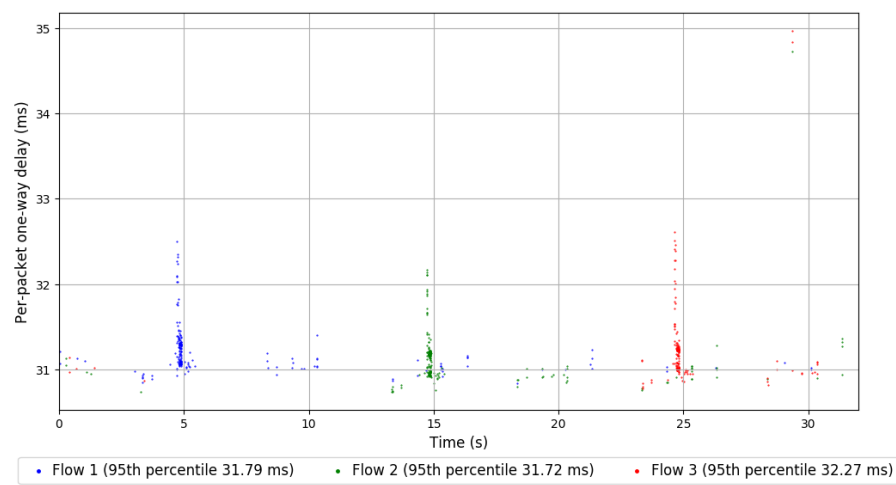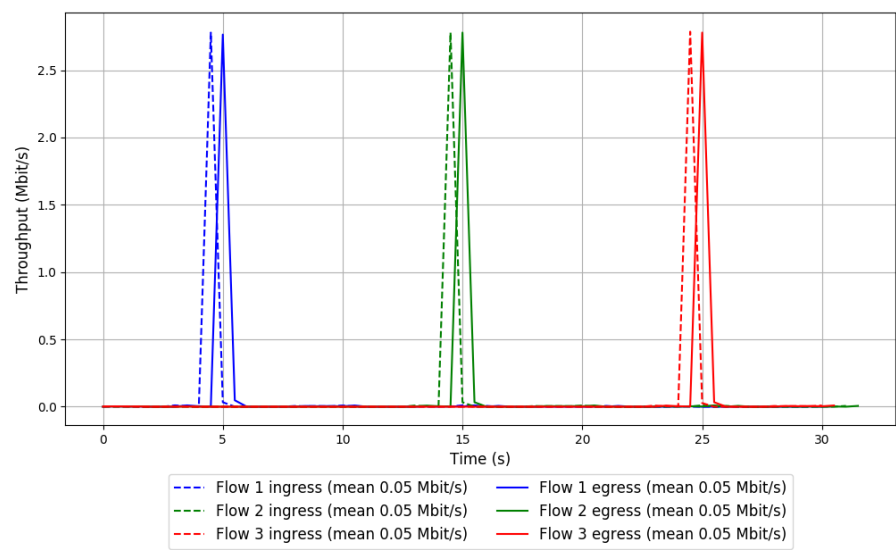
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-03-27 02:37:33
End at: 2019-03-27 02:38:03
Local clock offset: 0.371 ms
Remote clock offset: 1.016 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 31.713 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.632 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.735 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.729 ms
Loss rate: 0.00%
```
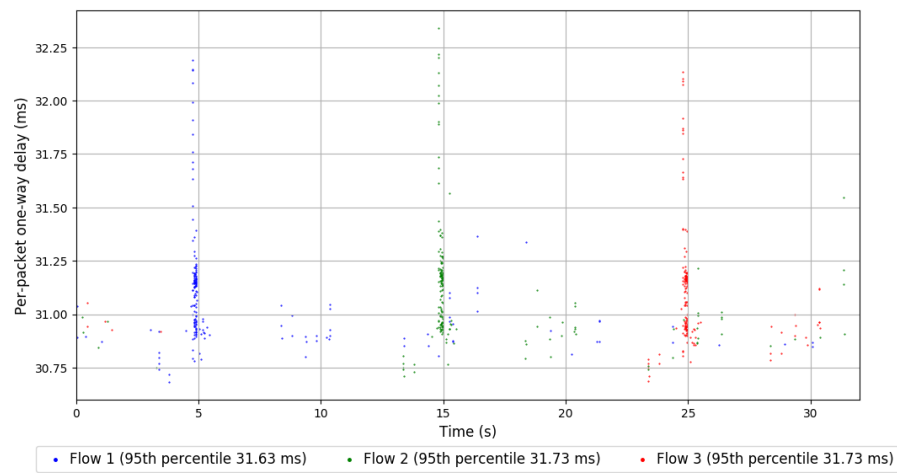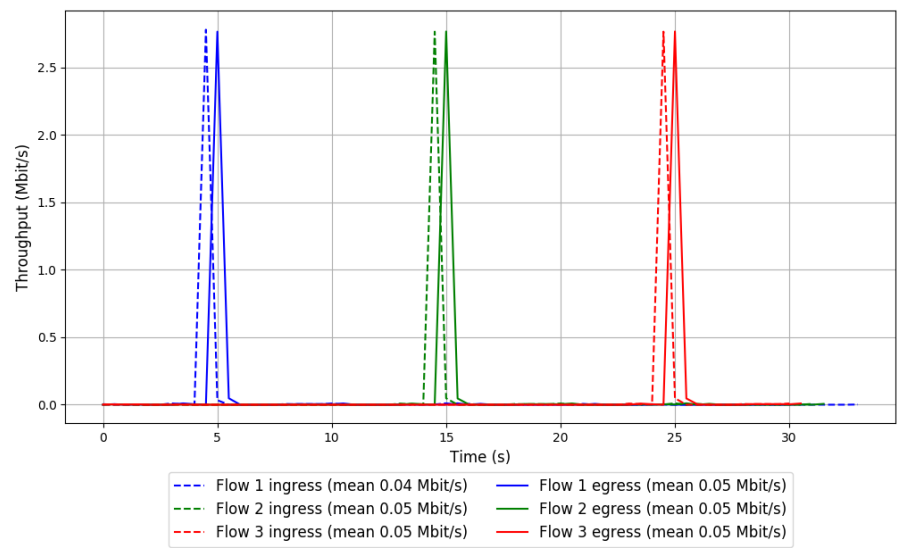
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-03-27 03:02:52
End at: 2019-03-27 03:03:22
Local clock offset: 0.568 ms
Remote clock offset: 1.937 ms


# Below is generated by plot.py at 2019-03-27 03:24:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 31.827 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.797 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.769 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 31.854 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link