Pantheon Report

Generated at 2019-06-28 02:58:10 (UTC).

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

Repeated the test of 22 congestion control schemes 5 times.

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

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

```
System info:
Linux 4.15.0-1039-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 @ c3953d08f32ec7ebbdede2d2f0cbdeed262571ef
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 11c9498ecb1596b02ccd896791a02d03172af7ed
 M helpers/__init__.pyc
 M helpers/context.pyc
 M helpers/utils.pyc
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
```
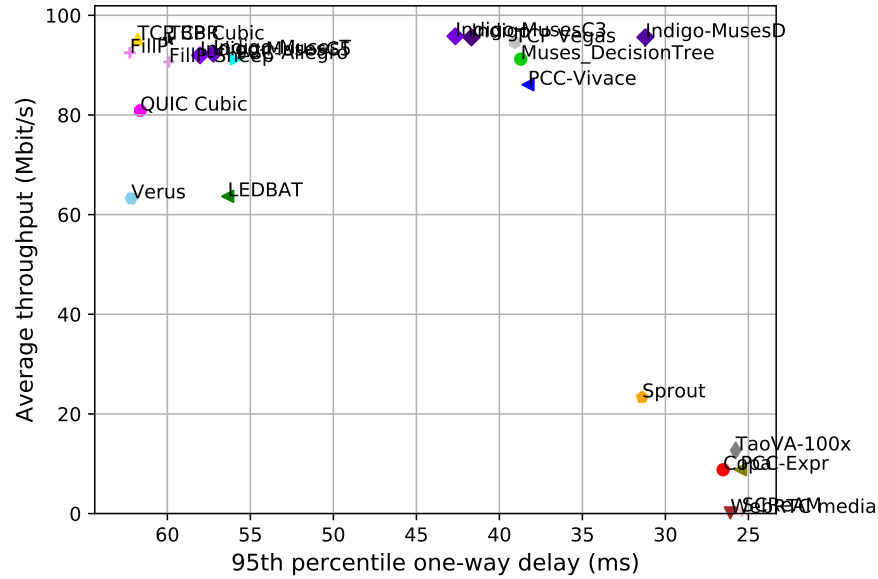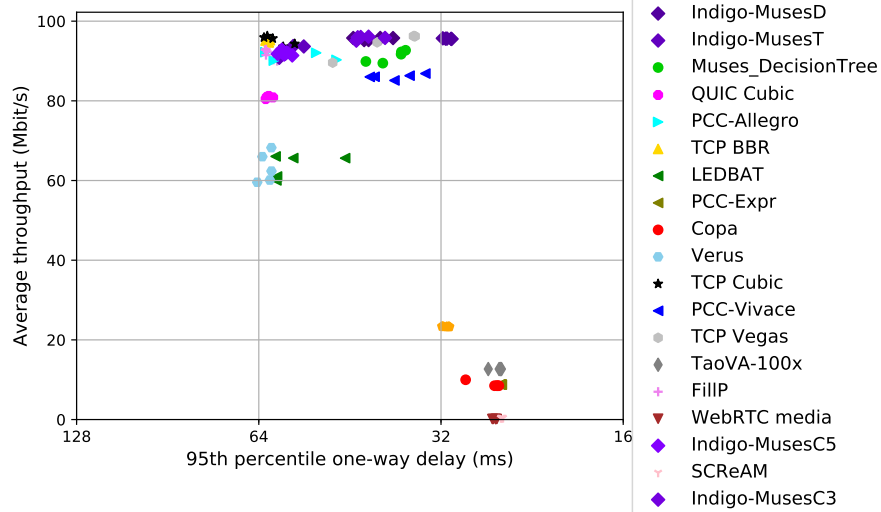
```
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from 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
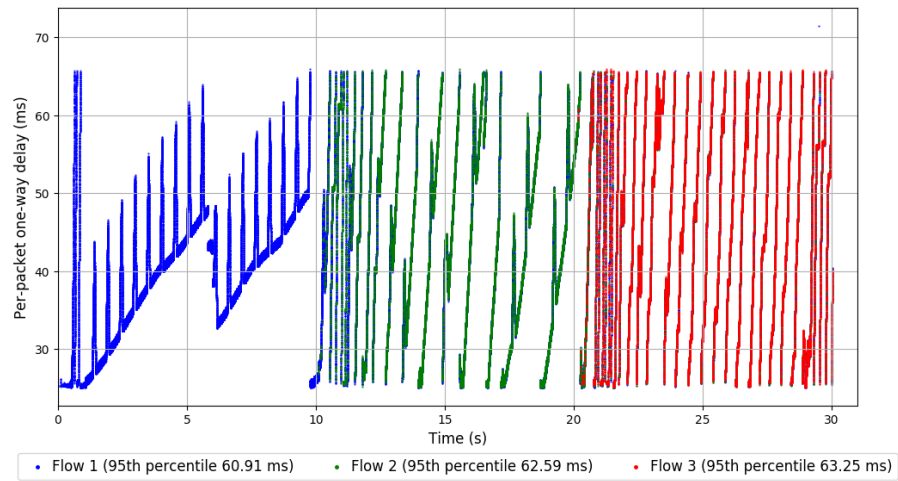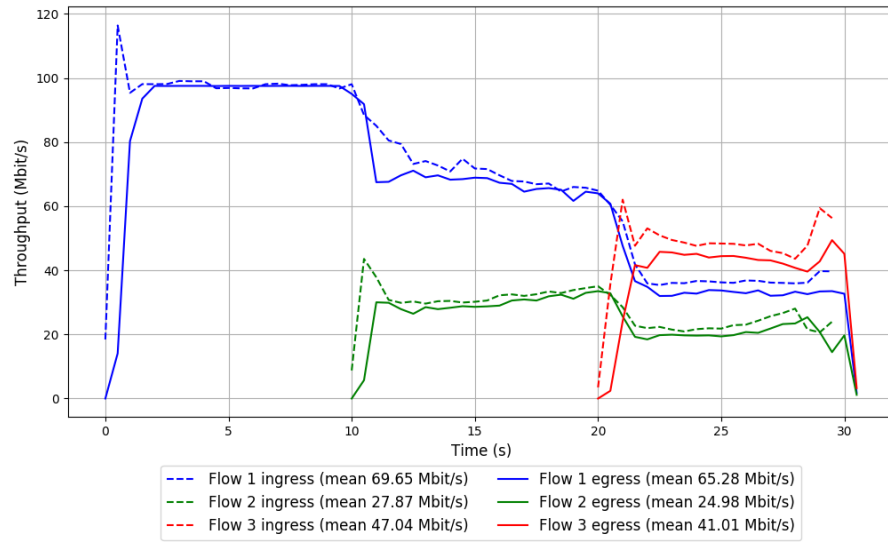### 3 flows with 10s interval between flows

3

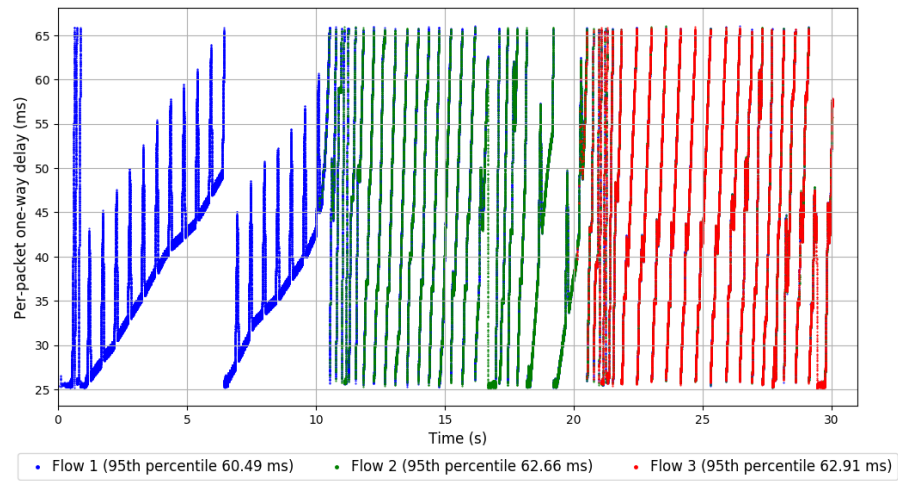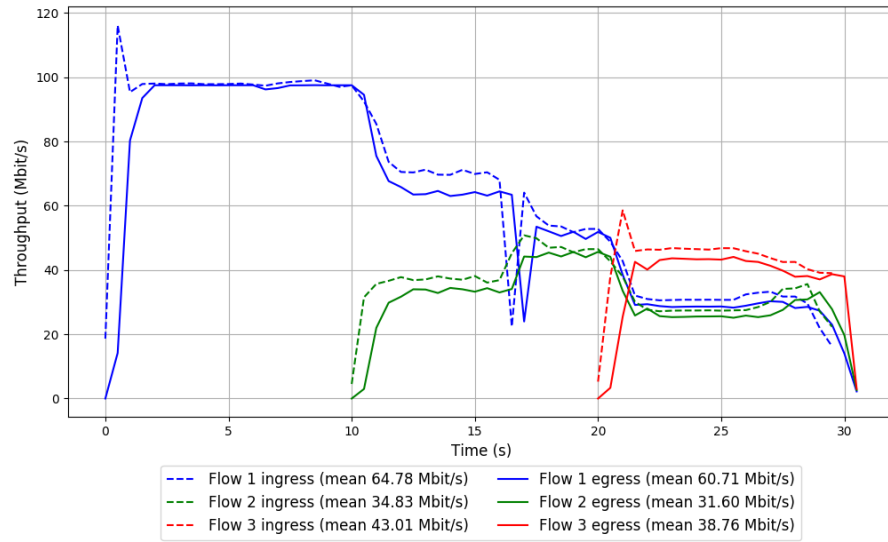| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	62.33	31.49	36.38	60.80	62.65	63.18	6.11	9.37	10.77
Copa	5	3.04	9.76	6.02	30.42	26.34	25.59	91.82	69.27	74.15
TCP Cubic	5	64.98	30.69	29.24	59.73	59.54	59.66	0.74	0.46	0.46
FillP	5	57.67	42.14	20.93	60.85	63.52	62.99	30.52	47.77	54.48
FillP-Sheep	5	57.32	36.20	28.60	58.34	61.27	61.27	9.29	17.18	17.58
Indigo	5	65.22	29.27	33.51	38.61	44.73	48.63	0.10	0.11	0.06
Indigo-MusesC3	5	53.26	49.65	35.73	38.73	42.30	51.36	0.32	0.48	2.31
Indigo-MusesC5	5	55.66	48.55	16.60	55.43	60.09	58.92	8.72	18.98	27.23
Indigo-MusesD	5	54.63	47.65	35.24	30.71	31.58	31.74	0.00	0.00	0.00
Indigo-MusesT	5	55.12	55.24	4.66	53.70	59.18	61.05	13.26	21.29	28.18
LEDBAT	5	39.70	26.26	20.83	55.31	57.33	46.96	0.11	0.20	0.02
Muses_DecisionTree	5	83.96	8.74	4.51	38.63	39.23	39.77	0.44	0.07	0.03
PCC-Allegro	5	80.69	12.03	7.74	55.57	57.14	56.80	2.65	2.95	2.15
PCC-Expr	5	0.03	9.71	7.07	25.37	25.47	25.50	85.71	46.70	29.09
QUIC Cubic	5	60.66	20.91	19.28	61.53	61.93	61.54	2.83	0.92	0.91
SCReAM	5	0.21	0.21	0.22	25.40	25.36	25.37	0.03	0.00	0.00
Sprout	5	11.76	11.68	11.45	31.22	31.59	31.35	0.05	0.01	0.00
TaoVA-100x	5	6.89	6.82	4.88	26.68	26.27	25.46	85.38	74.17	74.50
TCP Vegas	5	72.89	23.33	18.53	39.14	38.61	32.91	0.47	0.00	0.00
Verus	5	42.40	25.99	16.13	61.64	65.59	60.00	39.22	44.78	36.26
PCC-Vivace	5	65.79	23.82	13.44	37.58	39.55	41.38	0.02	0.05	0.13
WebRTC media	5	0.05	0.05	0.05	25.99	26.11	26.14	0.00	0.01	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-06-28 00:46:02
End at: 2019-06-28 00:46:32
Local clock offset: -9.074 ms
Remote clock offset: -6.755 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 61.696 ms
Loss rate: 7.97%
-- Flow 1:
Average throughput: 65.28 Mbit/s
95th percentile per-packet one-way delay: 60.914 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 24.98 Mbit/s
95th percentile per-packet one-way delay: 62.588 ms
Loss rate: 10.28%
-- Flow 3:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 63.252 ms
Loss rate: 12.97%
```

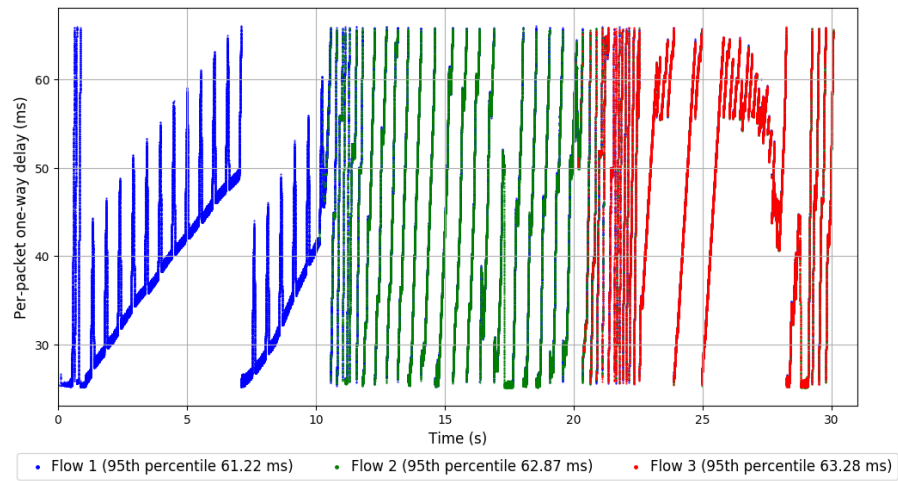Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-06-28 01:14:07
End at: 2019-06-28 01:14:37
Local clock offset: -2.74 ms
Remote clock offset: -5.856 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 61.616 ms
Loss rate: 7.38%
-- Flow 1:
Average throughput: 60.71 Mbit/s
95th percentile per-packet one-way delay: 60.493 ms
Loss rate: 6.19%
-- Flow 2:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 62.659 ms
Loss rate: 9.26%
-- Flow 3:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 62.910 ms
Loss rate: 9.72%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-06-28 01:41:31
End at: 2019-06-28 01:42:01
Local clock offset: -2.401 ms
Remote clock offset: -4.735 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.16 Mbit/s
95th percentile per-packet one-way delay: 62.395 ms
Loss rate: 7.69%
-- Flow 1:
Average throughput: 59.55 Mbit/s
95th percentile per-packet one-way delay: 61.218 ms
Loss rate: 6.18%
-- Flow 2:
Average throughput: 32.89 Mbit/s
95th percentile per-packet one-way delay: 62.867 ms
Loss rate: 9.66%
-- Flow 3:
Average throughput: 41.25 Mbit/s
95th percentile per-packet one-way delay: 63.276 ms
Loss rate: 10.83%
```
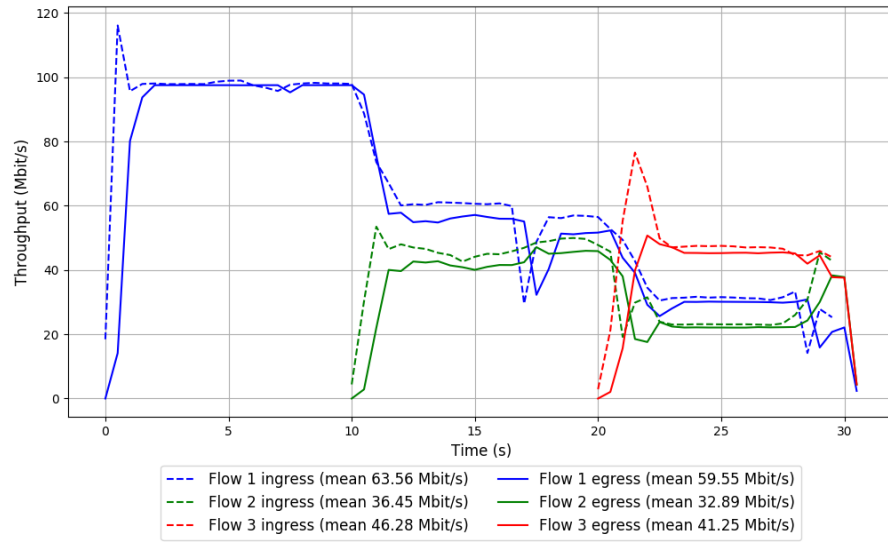
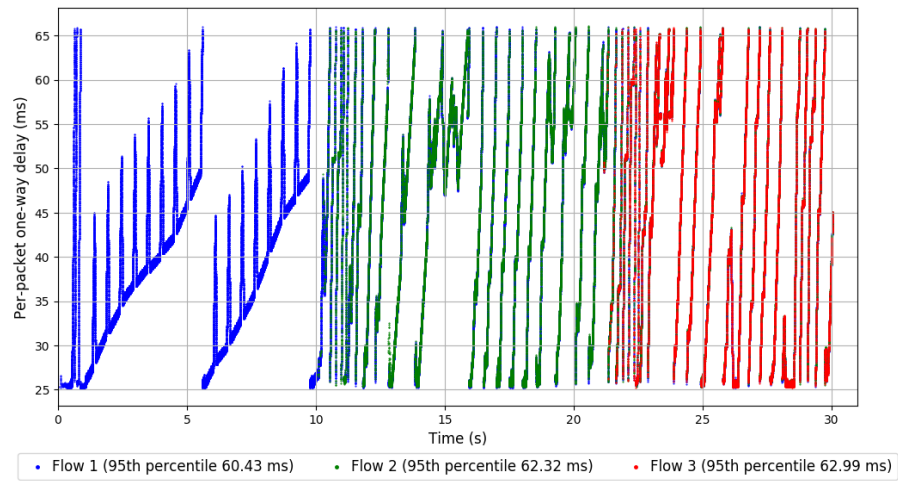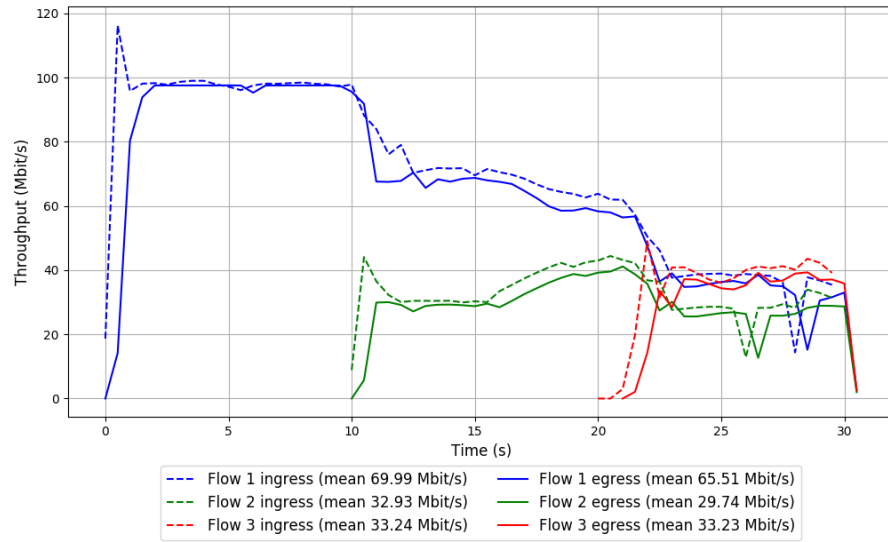Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-06-28 02:09:00
End at: 2019-06-28 02:09:30
Local clock offset: 0.999 ms
Remote clock offset: -3.968 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.24 Mbit/s
95th percentile per-packet one-way delay: 61.345 ms
Loss rate: 7.46%
-- Flow 1:
Average throughput: 65.51 Mbit/s
95th percentile per-packet one-way delay: 60.433 ms
Loss rate: 6.34%
-- Flow 2:
Average throughput: 29.74 Mbit/s
95th percentile per-packet one-way delay: 62.320 ms
Loss rate: 9.62%
-- Flow 3:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 62.990 ms
Loss rate: 10.27%
```
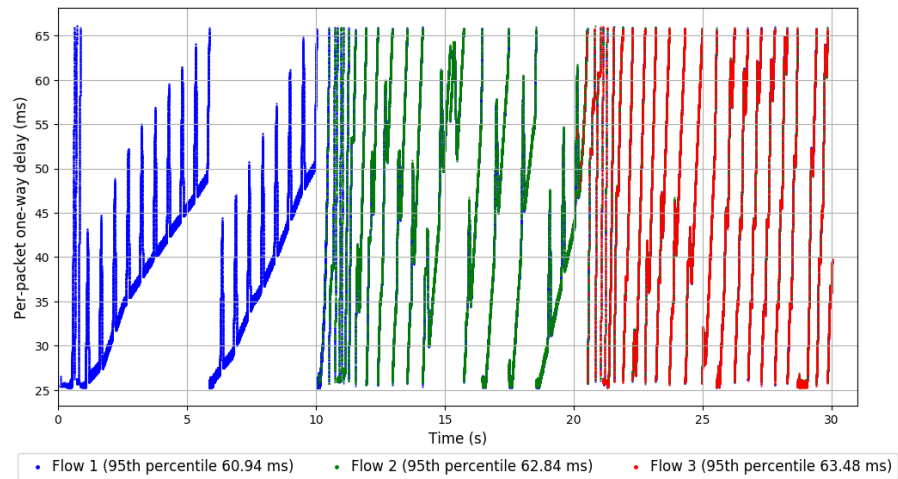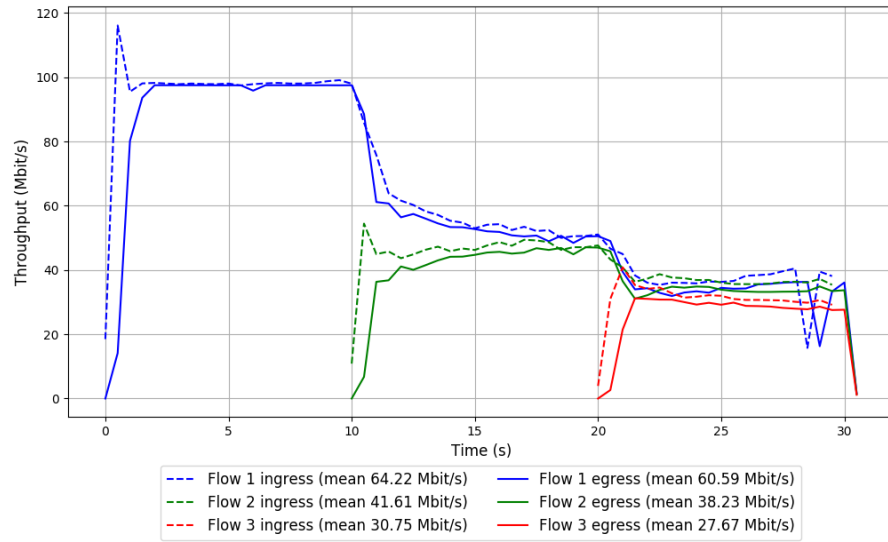
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 69.99 Mbit/s) --- Flow 1 egress (mean 65.51 Mbit/s)
Flow 2 ingress (mean 32.93 Mbit/s) --- Flow 2 egress (mean 29.74 Mbit/s)
Flow 3 ingress (mean 33.24 Mbit/s) --- Flow 3 egress (mean 33.23 Mbit/s)

Flow 1 (95th percentile 60.43 ms)   Flow 2 (95th percentile 62.32 ms)   Flow 3 (95th percentile 62.99 ms)

12

```
Run 5: Statistics of TCP BBR

Start at: 2019-06-28 02:37:11
End at: 2019-06-28 02:37:41
Local clock offset: 0.847 ms
Remote clock offset: -3.645 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 61.936 ms
Loss rate: 6.72%
-- Flow 1:
Average throughput: 60.59 Mbit/s
95th percentile per-packet one-way delay: 60.937 ms
Loss rate: 5.62%
-- Flow 2:
Average throughput: 38.23 Mbit/s
95th percentile per-packet one-way delay: 62.837 ms
Loss rate: 8.05%
-- Flow 3:
Average throughput: 27.67 Mbit/s
95th percentile per-packet one-way delay: 63.483 ms
Loss rate: 10.08%
```
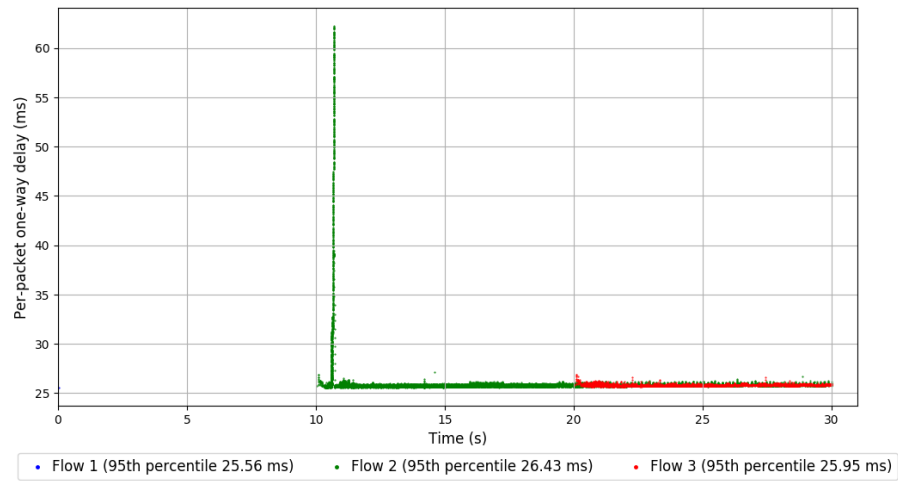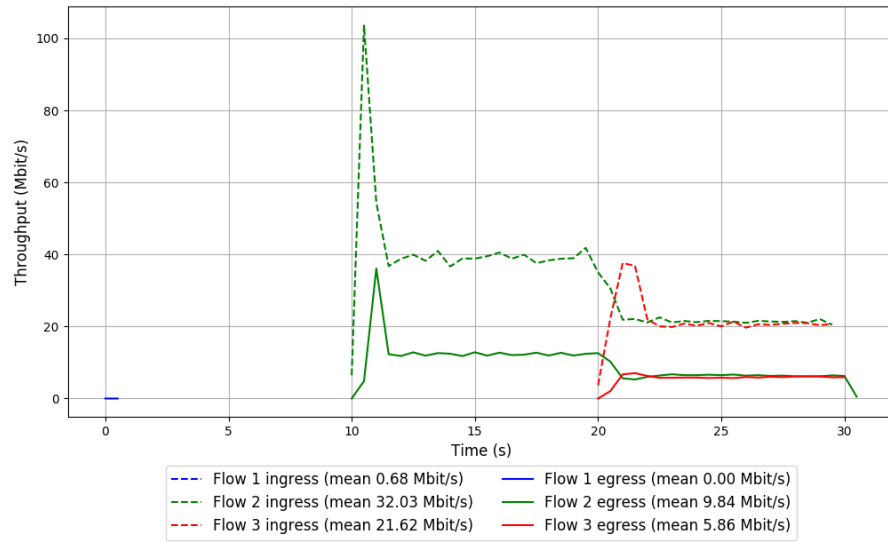
Run 5: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 64.22 Mbit/s)   —— Flow 1 egress (mean 60.59 Mbit/s)
- - - Flow 2 ingress (mean 41.61 Mbit/s)   —— Flow 2 egress (mean 38.23 Mbit/s)
- - - Flow 3 ingress (mean 30.75 Mbit/s)   —— Flow 3 egress (mean 27.67 Mbit/s)

- Flow 1 (95th percentile 60.94 ms)   • Flow 2 (95th percentile 62.84 ms)   • Flow 3 (95th percentile 63.48 ms)
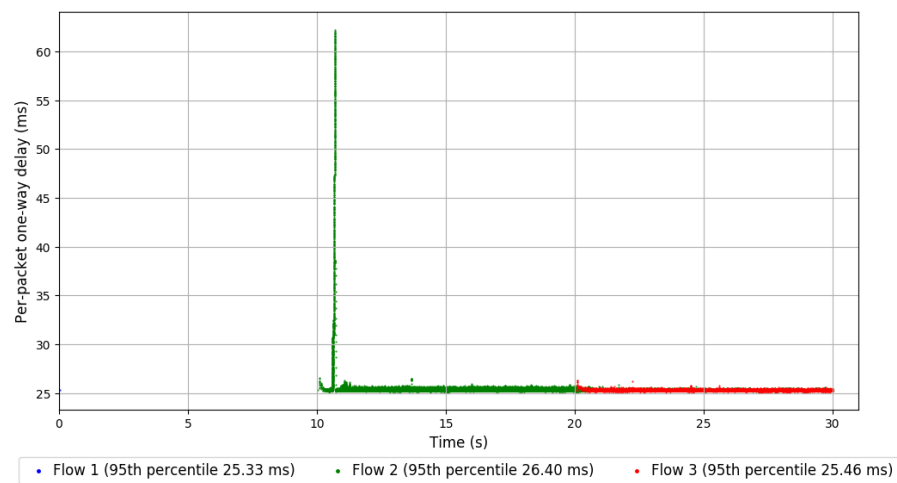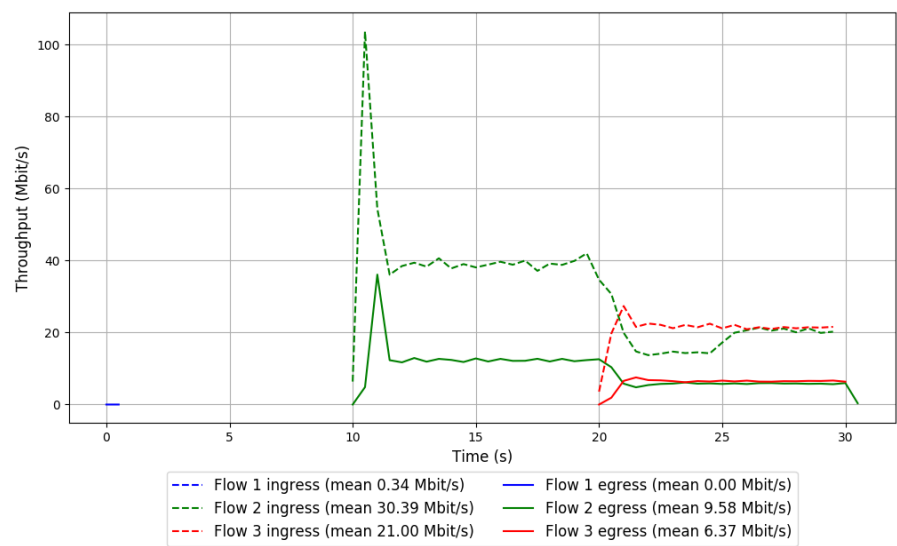
14

```
Run 1: Statistics of Copa

Start at: 2019-06-28 00:49:56
End at: 2019-06-28 00:50:26
Local clock offset: -7.999 ms
Remote clock offset: -6.585 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 26.106 ms
Loss rate: 70.20%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 25.562 ms
Loss rate: 97.92%
-- Flow 2:
Average throughput: 9.84 Mbit/s
95th percentile per-packet one-way delay: 26.433 ms
Loss rate: 69.29%
-- Flow 3:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 25.955 ms
Loss rate: 72.91%
```
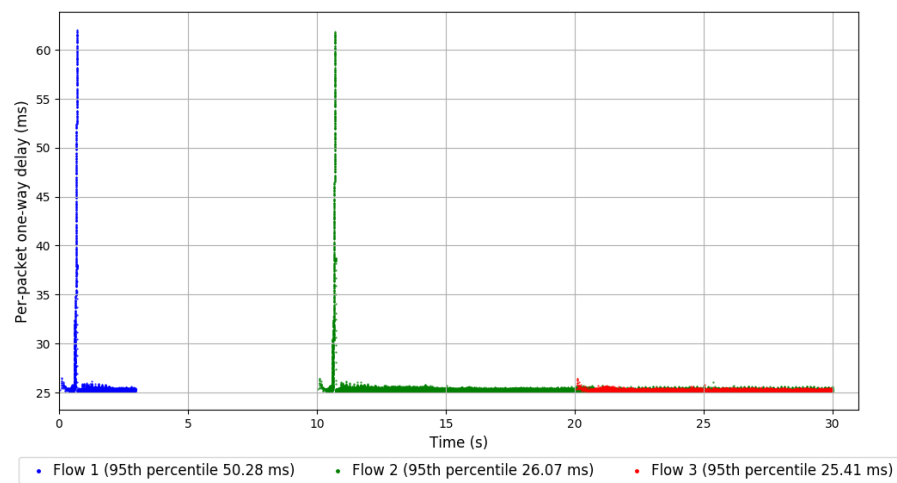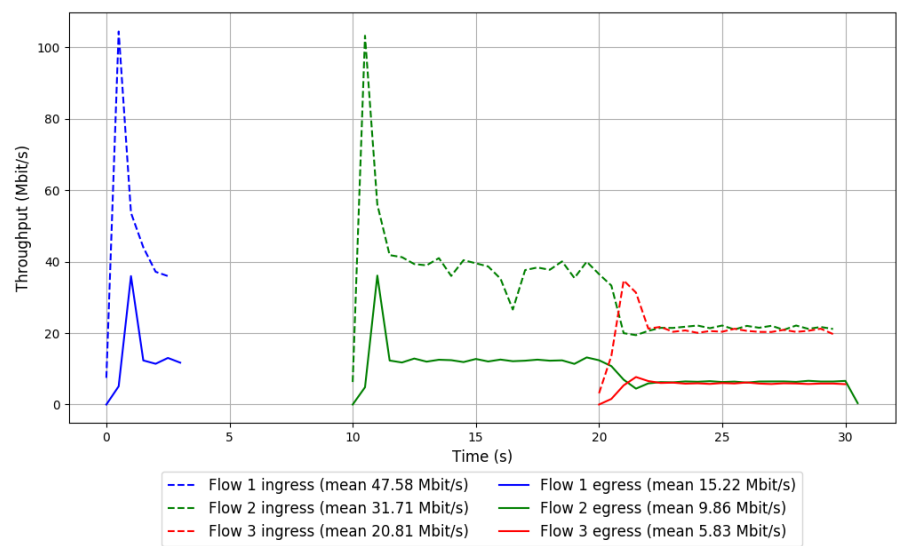
Run 1: Report of Copa — Data Link

- - - Flow 1 ingress (mean 0.68 Mbit/s) —— Flow 1 egress (mean 0.00 Mbit/s)
- - - Flow 2 ingress (mean 32.03 Mbit/s) —— Flow 2 egress (mean 9.84 Mbit/s)
- - - Flow 3 ingress (mean 21.62 Mbit/s) —— Flow 3 egress (mean 5.86 Mbit/s)

- Flow 1 (95th percentile 25.56 ms)　　　- Flow 2 (95th percentile 26.43 ms)　　　- Flow 3 (95th percentile 25.95 ms)

16

```
Run 2: Statistics of Copa

Start at: 2019-06-28 01:18:09
End at: 2019-06-28 01:18:39
Local clock offset: -2.569 ms
Remote clock offset: -5.655 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 25.678 ms
Loss rate: 68.78%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 25.328 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 26.400 ms
Loss rate: 68.47%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 25.457 ms
Loss rate: 69.69%
```
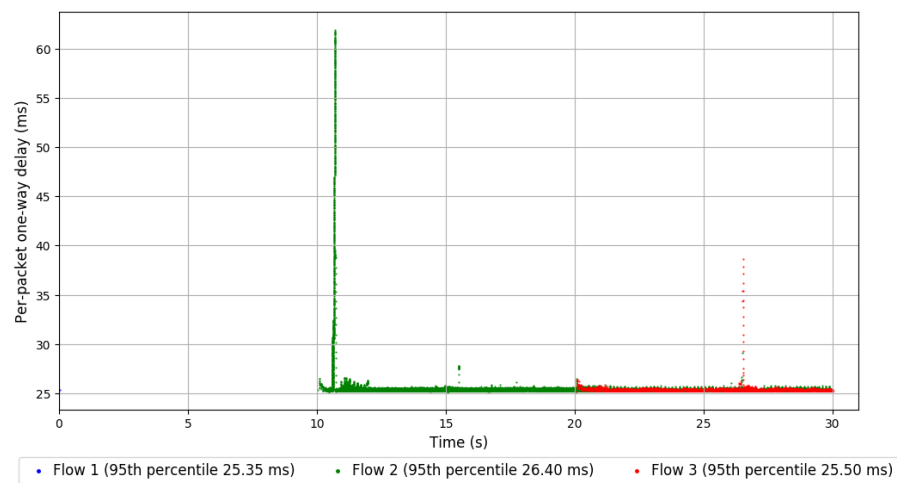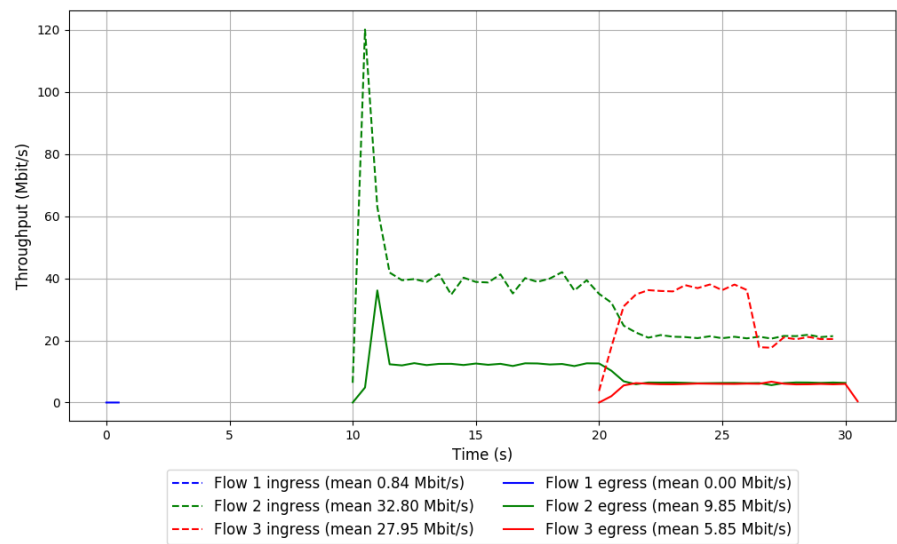
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 0.34 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 30.39 Mbit/s)   Flow 2 egress (mean 9.58 Mbit/s)
Flow 3 ingress (mean 21.00 Mbit/s)   Flow 3 egress (mean 6.37 Mbit/s)

Flow 1 (95th percentile 25.33 ms)   Flow 2 (95th percentile 26.40 ms)   Flow 3 (95th percentile 25.46 ms)

```
Run 3: Statistics of Copa

Start at: 2019-06-28 01:45:23
End at: 2019-06-28 01:45:53
Local clock offset: -2.347 ms
Remote clock offset: -4.691 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.99 Mbit/s
95th percentile per-packet one-way delay: 29.138 ms
Loss rate: 69.48%
-- Flow 1:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 50.276 ms
Loss rate: 68.31%
-- Flow 2:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 26.070 ms
Loss rate: 68.92%
-- Flow 3:
Average throughput: 5.83 Mbit/s
95th percentile per-packet one-way delay: 25.415 ms
Loss rate: 72.00%
```
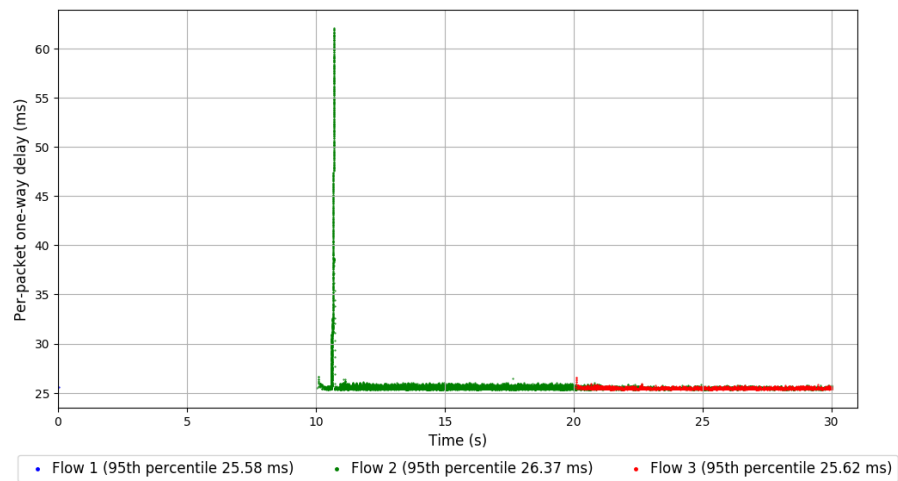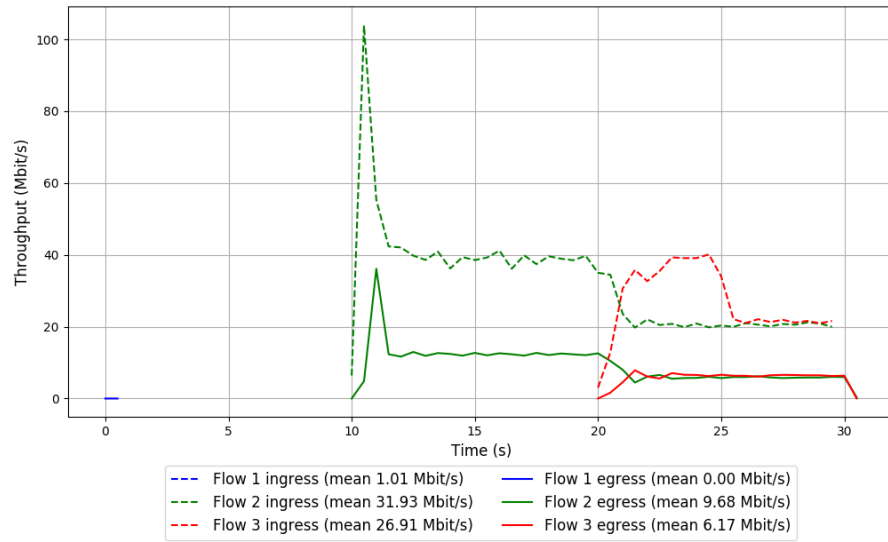
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-06-28 02:12:47
End at: 2019-06-28 02:13:17
Local clock offset: 1.285 ms
Remote clock offset: -3.907 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 25.805 ms
Loss rate: 72.70%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 25.352 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 26.404 ms
Loss rate: 69.98%
-- Flow 3:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 25.500 ms
Loss rate: 79.07%
```
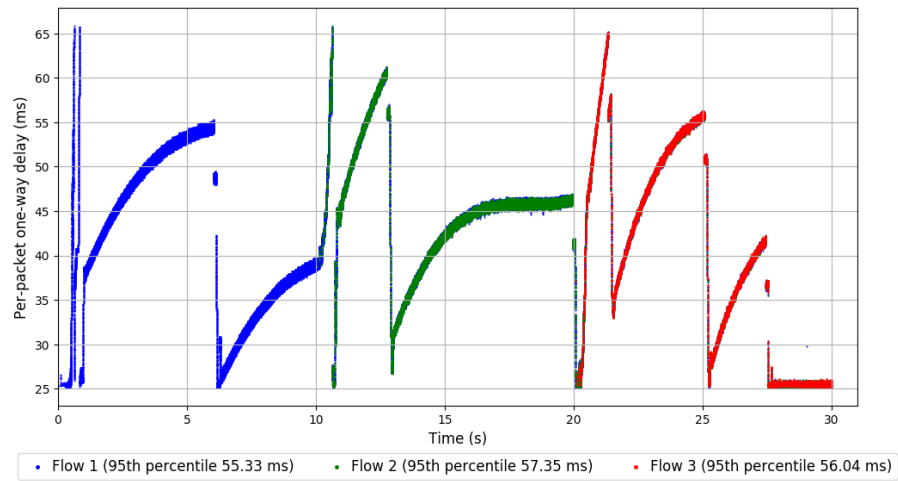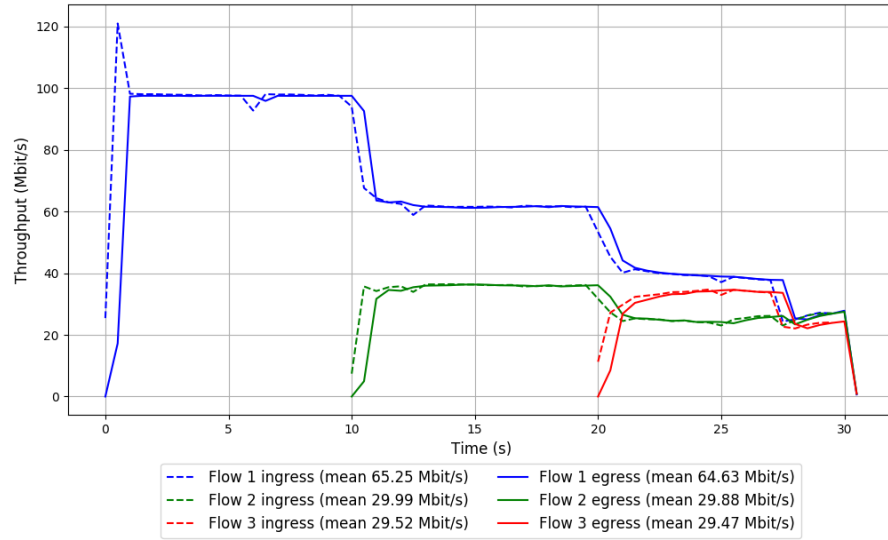
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 0.84 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 32.80 Mbit/s) --- Flow 2 egress (mean 9.85 Mbit/s)
Flow 3 ingress (mean 27.95 Mbit/s) --- Flow 3 egress (mean 5.85 Mbit/s)

Flow 1 (95th percentile 25.35 ms) · Flow 2 (95th percentile 26.40 ms) · Flow 3 (95th percentile 25.50 ms)

```
Run 5: Statistics of Copa

Start at: 2019-06-28 02:41:11
End at: 2019-06-28 02:41:41
Local clock offset: 0.908 ms
Remote clock offset: -3.545 ms


# Below is generated by plot.py at 2019-06-28 02:46:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 25.889 ms
Loss rate: 71.88%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 25.576 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 26.374 ms
Loss rate: 69.70%
-- Flow 3:
Average throughput: 6.17 Mbit/s
95th percentile per-packet one-way delay: 25.618 ms
Loss rate: 77.07%
```
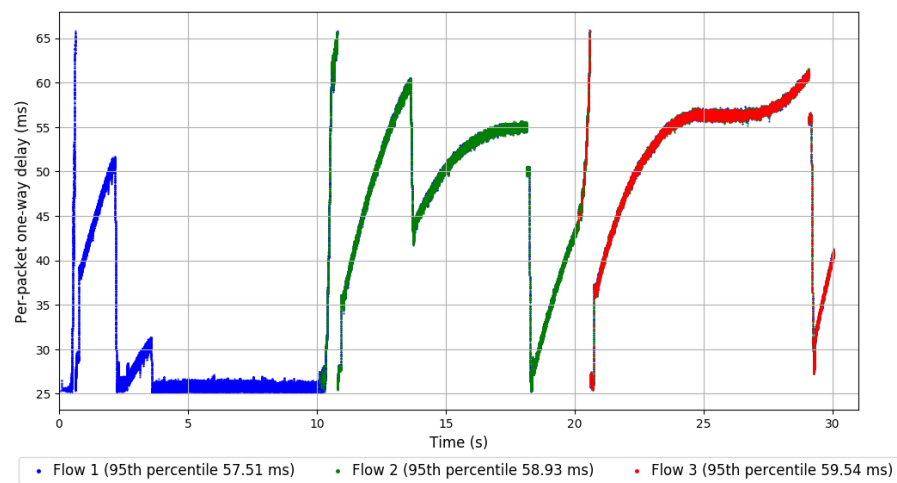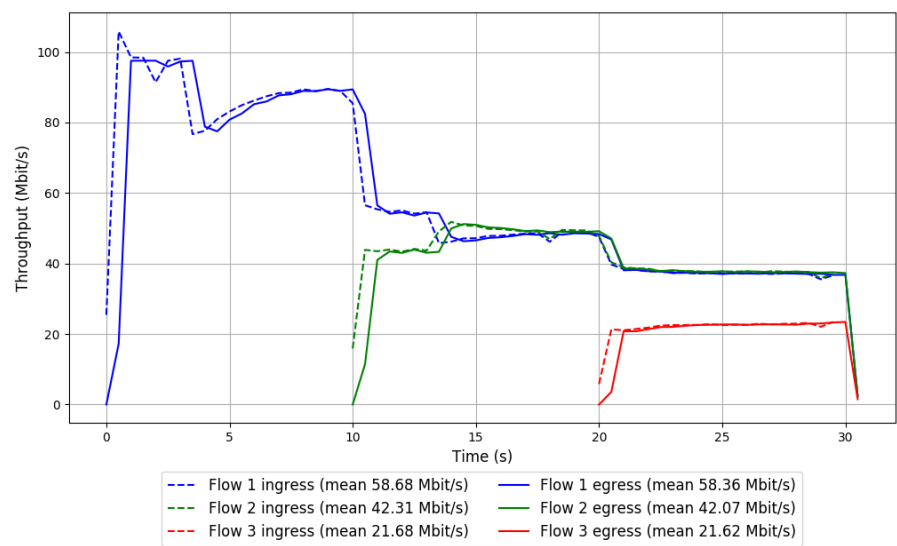
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 1.01 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 31.93 Mbit/s) --- Flow 2 egress (mean 9.68 Mbit/s)
Flow 3 ingress (mean 26.91 Mbit/s) --- Flow 3 egress (mean 6.17 Mbit/s)

Flow 1 (95th percentile 25.58 ms) Flow 2 (95th percentile 26.37 ms) Flow 3 (95th percentile 25.62 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-06-28 00:34:56
End at: 2019-06-28 00:35:26
Local clock offset: -7.805 ms
Remote clock offset: -6.896 ms


# Below is generated by plot.py at 2019-06-28 02:46:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.31 Mbit/s
95th percentile per-packet one-way delay: 55.828 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 64.63 Mbit/s
95th percentile per-packet one-way delay: 55.334 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 29.88 Mbit/s
95th percentile per-packet one-way delay: 57.346 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 29.47 Mbit/s
95th percentile per-packet one-way delay: 56.040 ms
Loss rate: 0.29%
```
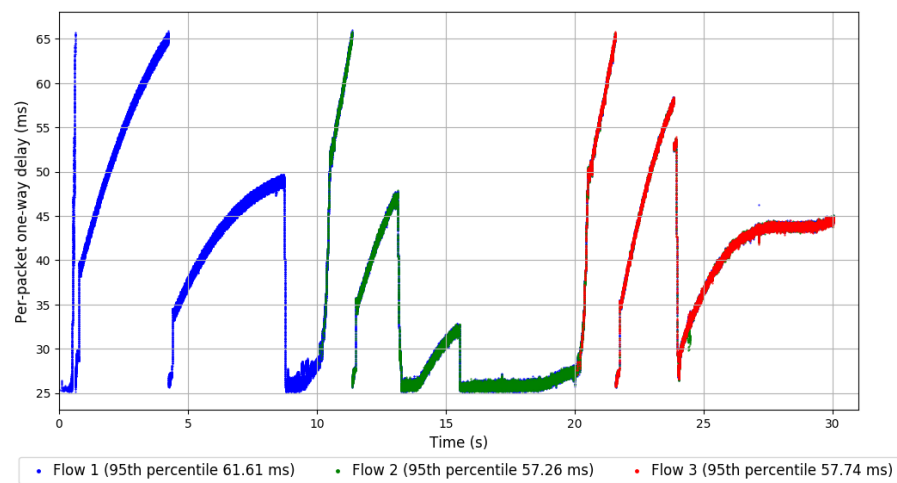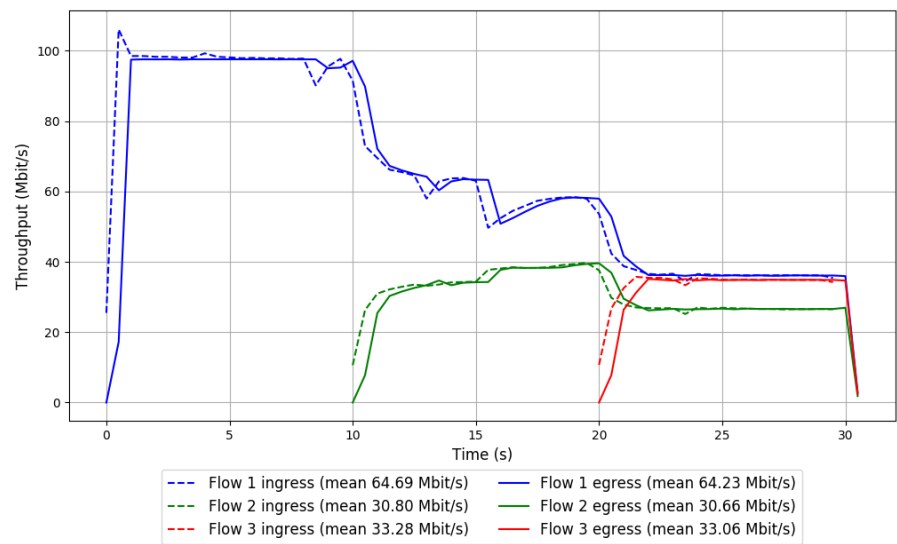
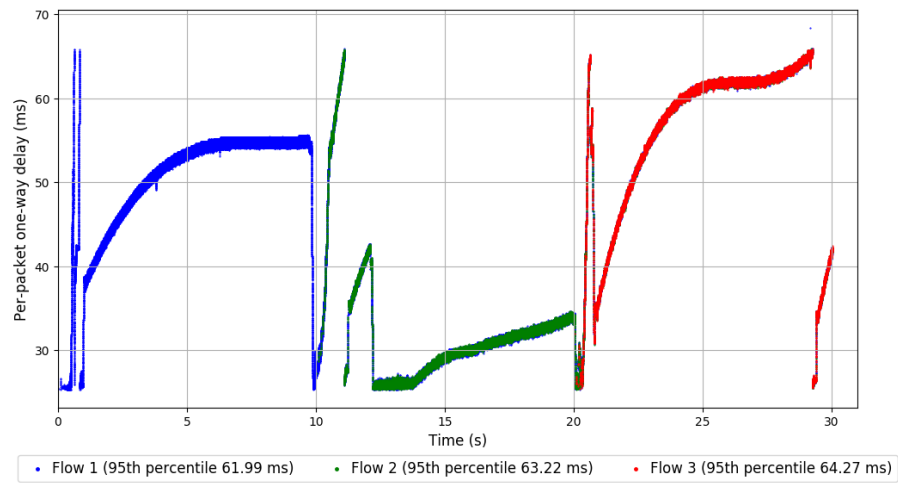Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-06-28 01:02:35
End at: 2019-06-28 01:03:05
Local clock offset: -3.747 ms
Remote clock offset: -6.231 ms


# Below is generated by plot.py at 2019-06-28 02:46:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.58 Mbit/s
95th percentile per-packet one-way delay: 58.320 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 58.36 Mbit/s
95th percentile per-packet one-way delay: 57.506 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 42.07 Mbit/s
95th percentile per-packet one-way delay: 58.926 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 21.62 Mbit/s
95th percentile per-packet one-way delay: 59.540 ms
Loss rate: 0.28%
```
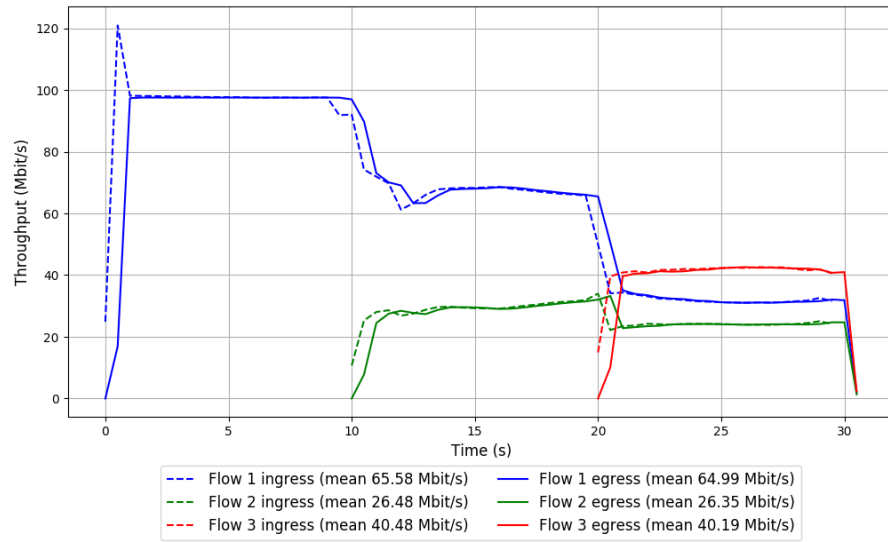
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-06-28 01:30:33
End at: 2019-06-28 01:31:03
Local clock offset: -2.52 ms
Remote clock offset: -5.106 ms


# Below is generated by plot.py at 2019-06-28 02:46:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.66 Mbit/s
95th percentile per-packet one-way delay: 60.692 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 64.23 Mbit/s
95th percentile per-packet one-way delay: 61.610 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 30.66 Mbit/s
95th percentile per-packet one-way delay: 57.255 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 33.06 Mbit/s
95th percentile per-packet one-way delay: 57.737 ms
Loss rate: 0.49%
```
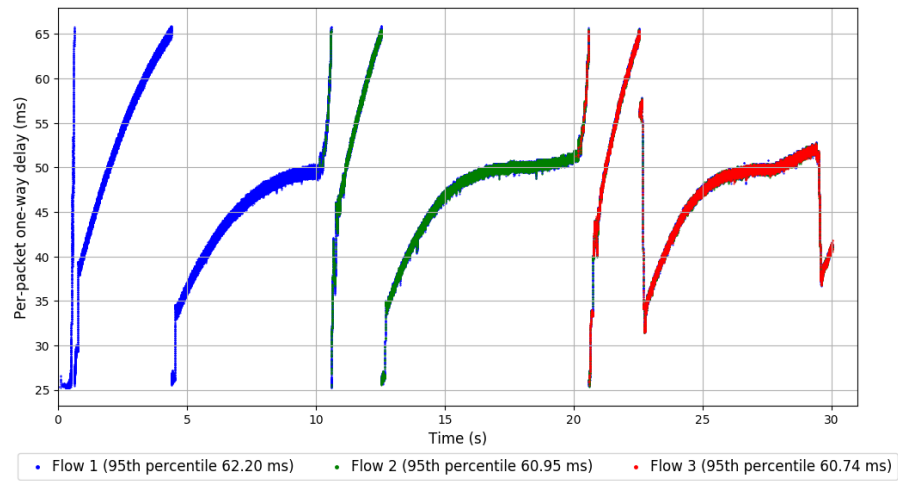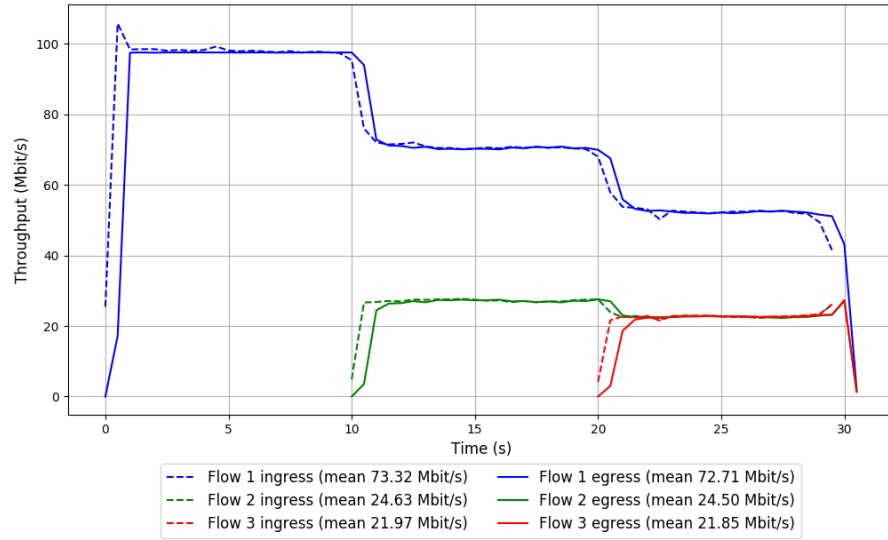
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 64.69 Mbit/s) — — — Flow 1 egress (mean 64.23 Mbit/s)
Flow 2 ingress (mean 30.80 Mbit/s) — — — Flow 2 egress (mean 30.66 Mbit/s)
Flow 3 ingress (mean 33.28 Mbit/s) — — — Flow 3 egress (mean 33.06 Mbit/s)

Flow 1 (95th percentile 61.61 ms)   Flow 2 (95th percentile 57.26 ms)   Flow 3 (95th percentile 57.74 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-06-28 01:57:43
End at: 2019-06-28 01:58:13
Local clock offset: -0.196 ms
Remote clock offset: -4.314 ms


# Below is generated by plot.py at 2019-06-28 02:47:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 62.746 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 64.99 Mbit/s
95th percentile per-packet one-way delay: 61.988 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 63.218 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 40.19 Mbit/s
95th percentile per-packet one-way delay: 64.267 ms
Loss rate: 0.62%
```
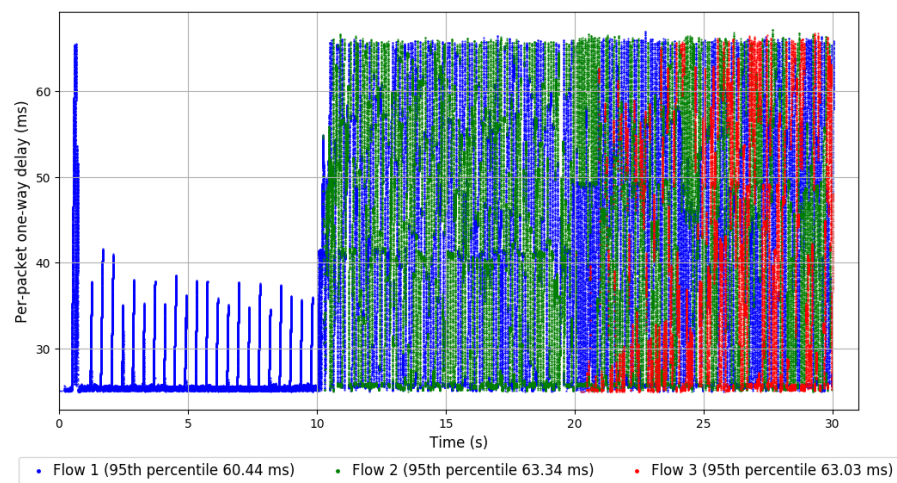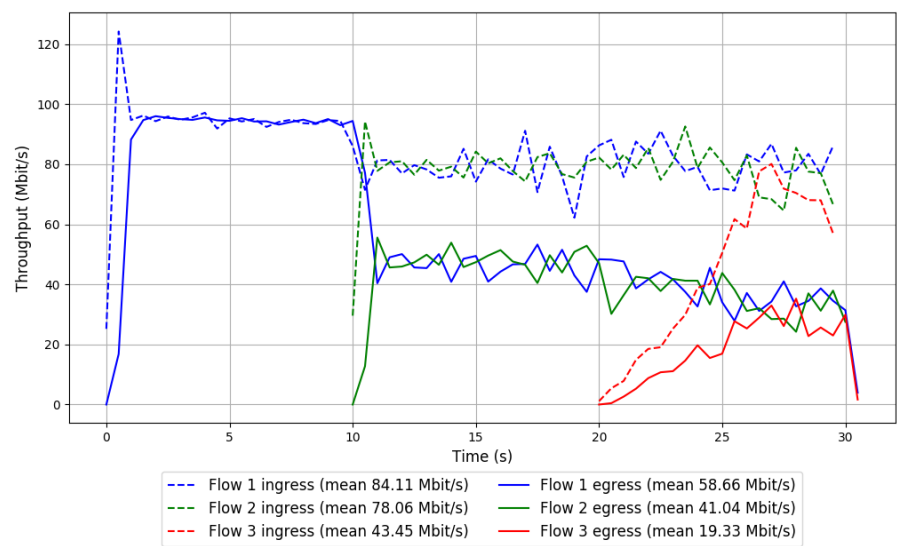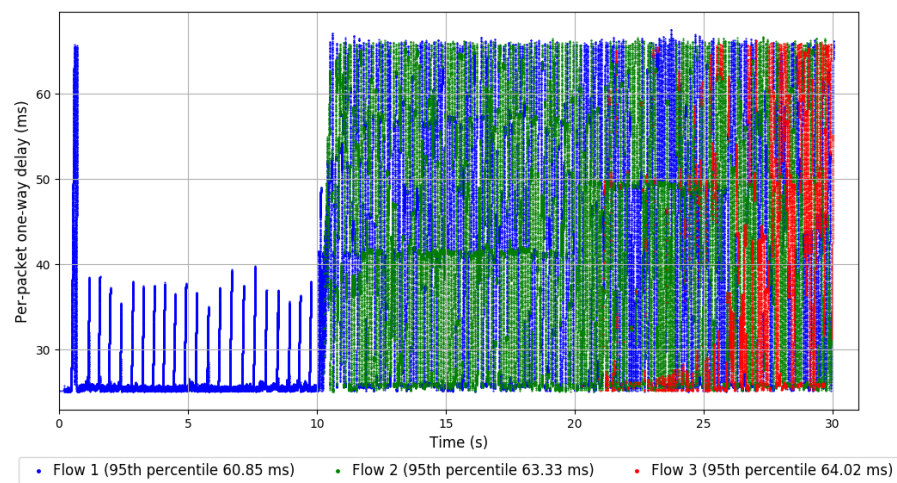
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 65.58 Mbit/s) --- Flow 1 egress (mean 64.99 Mbit/s)
Flow 2 ingress (mean 26.48 Mbit/s) --- Flow 2 egress (mean 26.35 Mbit/s)
Flow 3 ingress (mean 40.48 Mbit/s) --- Flow 3 egress (mean 40.19 Mbit/s)

Flow 1 (95th percentile 61.99 ms)   Flow 2 (95th percentile 63.22 ms)   Flow 3 (95th percentile 64.27 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-06-28 02:25:32
End at: 2019-06-28 02:26:02
Local clock offset: 0.939 ms
Remote clock offset: -3.79 ms


# Below is generated by plot.py at 2019-06-28 02:47:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 61.960 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 72.71 Mbit/s
95th percentile per-packet one-way delay: 62.202 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 24.50 Mbit/s
95th percentile per-packet one-way delay: 60.952 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 21.85 Mbit/s
95th percentile per-packet one-way delay: 60.741 ms
Loss rate: 0.64%
```

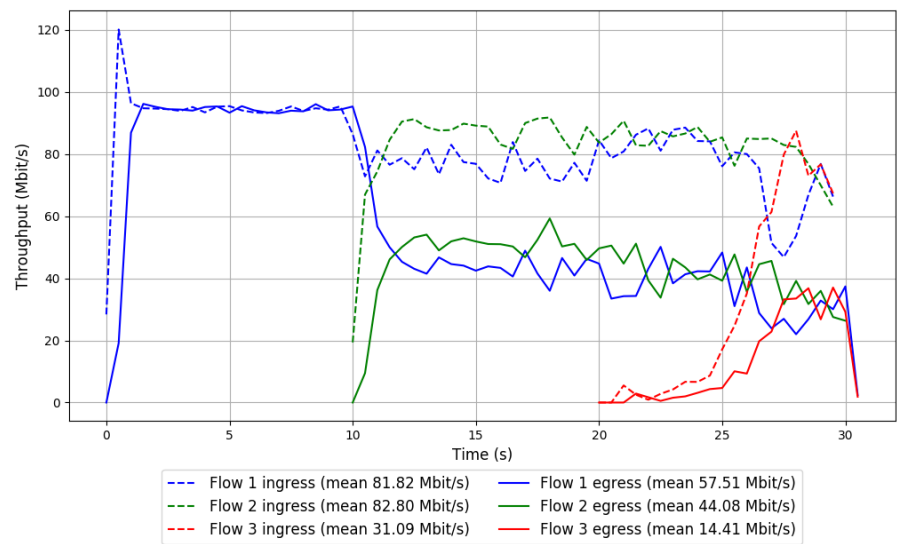Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-06-28 00:42:18
End at: 2019-06-28 00:42:48
Local clock offset: -8.623 ms
Remote clock offset: -6.805 ms


# Below is generated by plot.py at 2019-06-28 02:47:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 61.986 ms
Loss rate: 38.59%
-- Flow 1:
Average throughput: 58.66 Mbit/s
95th percentile per-packet one-way delay: 60.439 ms
Loss rate: 30.19%
-- Flow 2:
Average throughput: 41.04 Mbit/s
95th percentile per-packet one-way delay: 63.335 ms
Loss rate: 47.49%
-- Flow 3:
Average throughput: 19.33 Mbit/s
95th percentile per-packet one-way delay: 63.029 ms
Loss rate: 55.47%
```
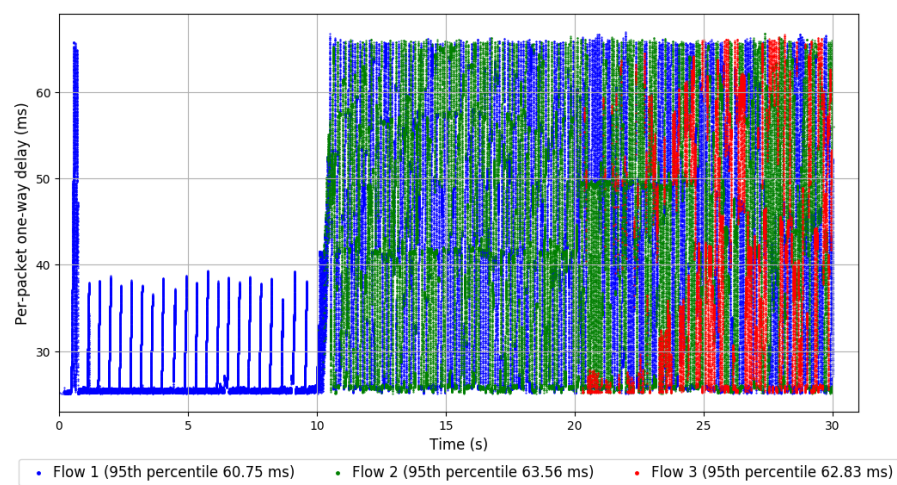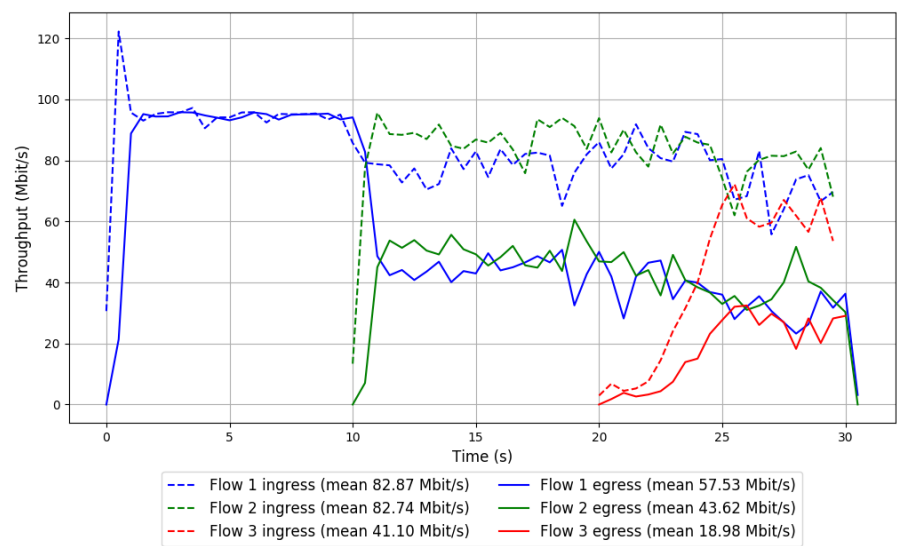
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 84.11 Mbit/s) --- Flow 1 egress (mean 58.66 Mbit/s) ——
Flow 2 ingress (mean 78.06 Mbit/s) --- Flow 2 egress (mean 41.04 Mbit/s) ——
Flow 3 ingress (mean 43.45 Mbit/s) --- Flow 3 egress (mean 19.33 Mbit/s) ——

• Flow 1 (95th percentile 60.44 ms)   • Flow 2 (95th percentile 63.34 ms)   • Flow 3 (95th percentile 63.03 ms)

```
Run 2: Statistics of FillP

Start at: 2019-06-28 01:10:18
End at: 2019-06-28 01:10:48
Local clock offset: -2.971 ms
Remote clock offset: -6.088 ms


# Below is generated by plot.py at 2019-06-28 02:47:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.49 Mbit/s
95th percentile per-packet one-way delay: 62.273 ms
Loss rate: 37.78%
-- Flow 1:
Average throughput: 57.51 Mbit/s
95th percentile per-packet one-way delay: 60.849 ms
Loss rate: 29.63%
-- Flow 2:
Average throughput: 44.08 Mbit/s
95th percentile per-packet one-way delay: 63.326 ms
Loss rate: 46.75%
-- Flow 3:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 64.023 ms
Loss rate: 54.46%
```
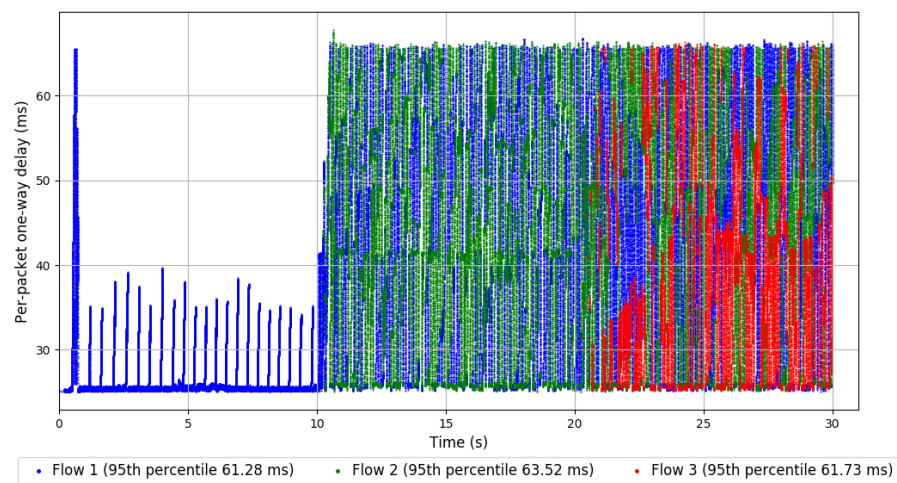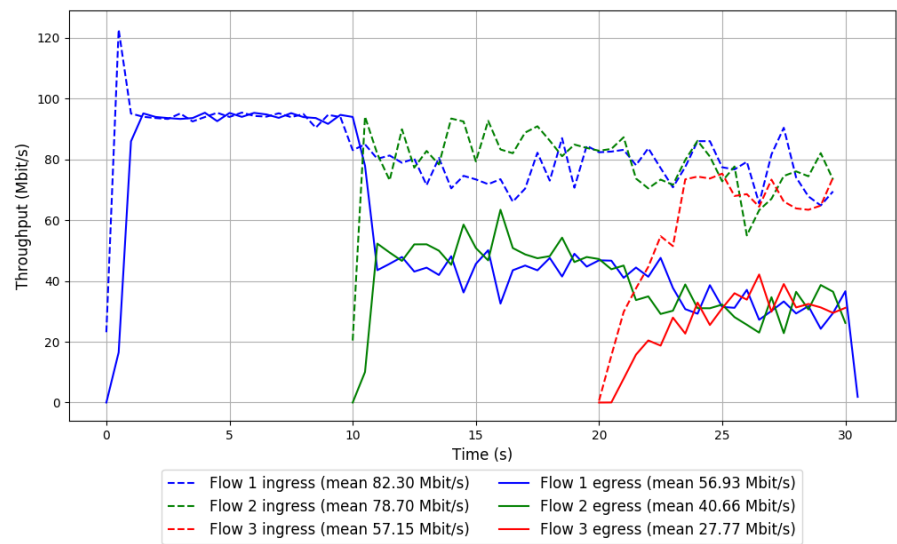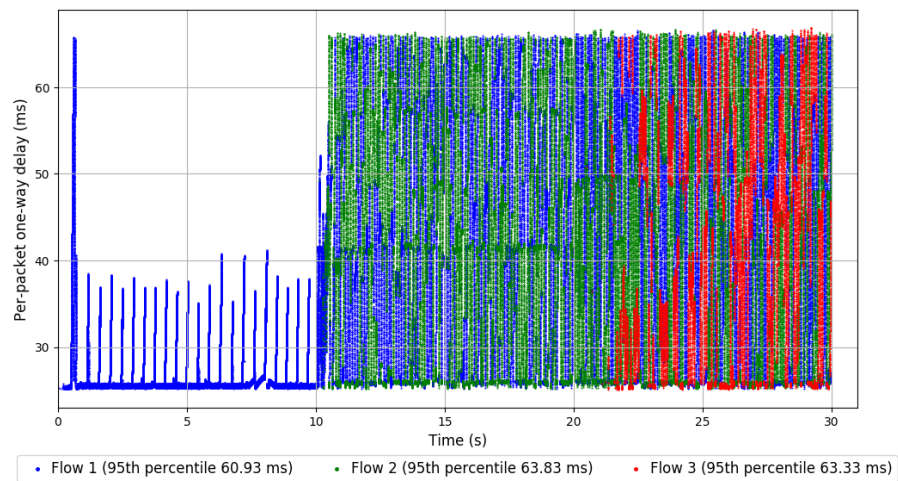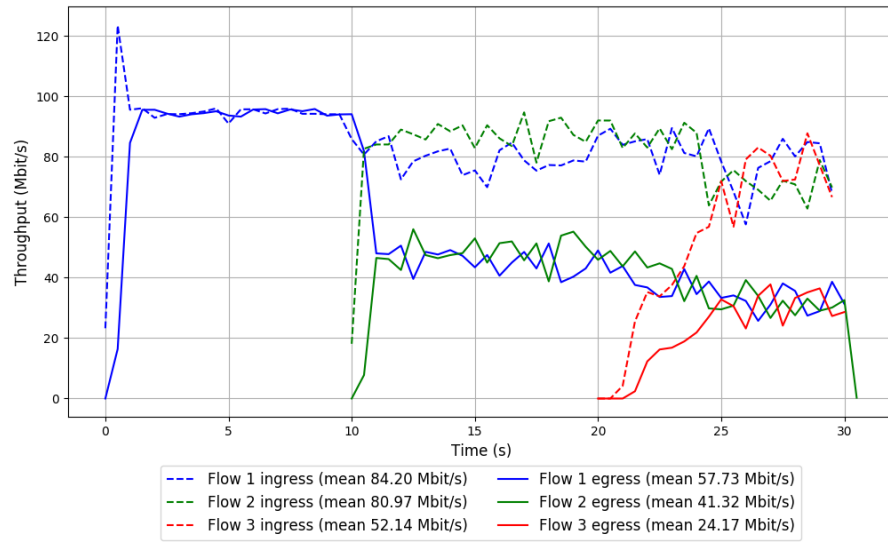
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 81.82 Mbit/s) --- Flow 1 egress (mean 57.51 Mbit/s)
Flow 2 ingress (mean 82.80 Mbit/s) --- Flow 2 egress (mean 44.08 Mbit/s)
Flow 3 ingress (mean 31.09 Mbit/s) --- Flow 3 egress (mean 14.41 Mbit/s)

Flow 1 (95th percentile 60.85 ms)   Flow 2 (95th percentile 63.33 ms)   Flow 3 (95th percentile 64.02 ms)

38

```
Run 3: Statistics of FillP

Start at: 2019-06-28 01:37:49
End at: 2019-06-28 01:38:19
Local clock offset: -2.444 ms
Remote clock offset: -4.813 ms


# Below is generated by plot.py at 2019-06-28 02:47:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.81 Mbit/s
95th percentile per-packet one-way delay: 62.334 ms
Loss rate: 38.70%
-- Flow 1:
Average throughput: 57.53 Mbit/s
95th percentile per-packet one-way delay: 60.750 ms
Loss rate: 30.52%
-- Flow 2:
Average throughput: 43.62 Mbit/s
95th percentile per-packet one-way delay: 63.558 ms
Loss rate: 47.22%
-- Flow 3:
Average throughput: 18.98 Mbit/s
95th percentile per-packet one-way delay: 62.833 ms
Loss rate: 54.05%
```
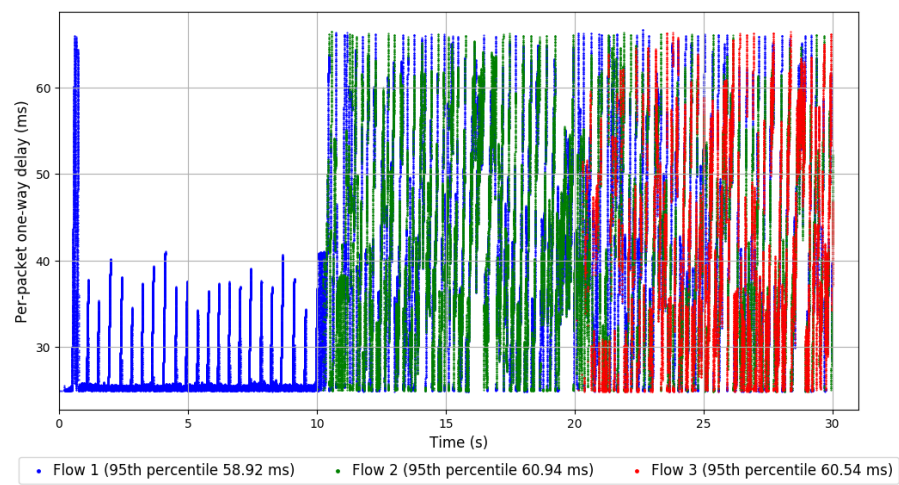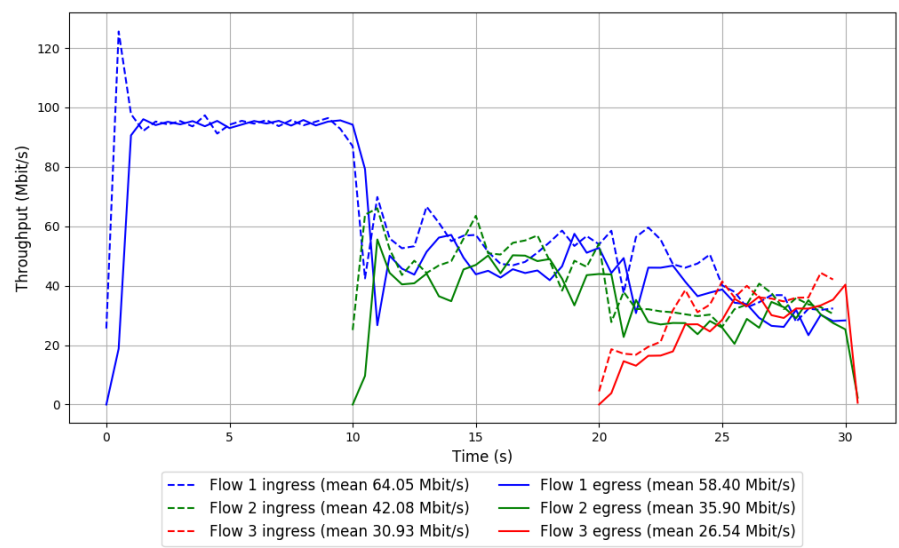
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-06-28 02:05:09
End at: 2019-06-28 02:05:39
Local clock offset: 0.655 ms
Remote clock offset: -4.09 ms


# Below is generated by plot.py at 2019-06-28 02:48:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.93 Mbit/s
95th percentile per-packet one-way delay: 62.273 ms
Loss rate: 39.47%
-- Flow 1:
Average throughput: 56.93 Mbit/s
95th percentile per-packet one-way delay: 61.284 ms
Loss rate: 30.74%
-- Flow 2:
Average throughput: 40.66 Mbit/s
95th percentile per-packet one-way delay: 63.525 ms
Loss rate: 48.43%
-- Flow 3:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 52.59%
```
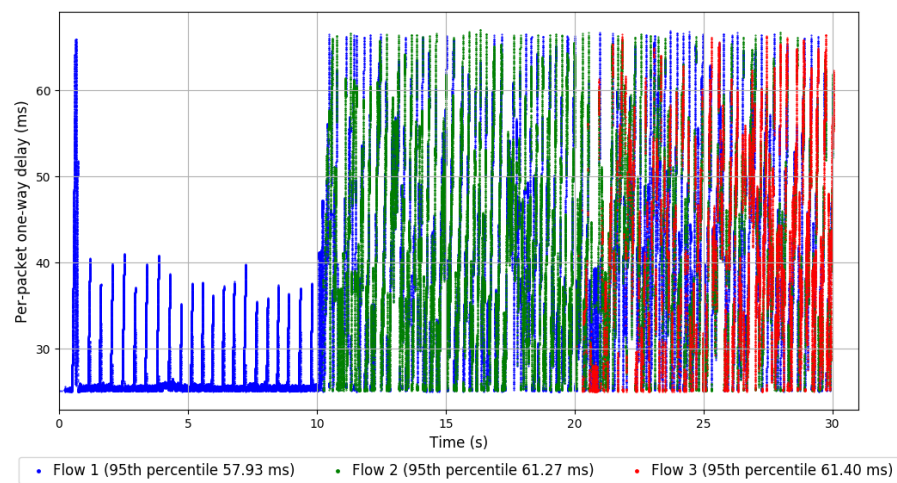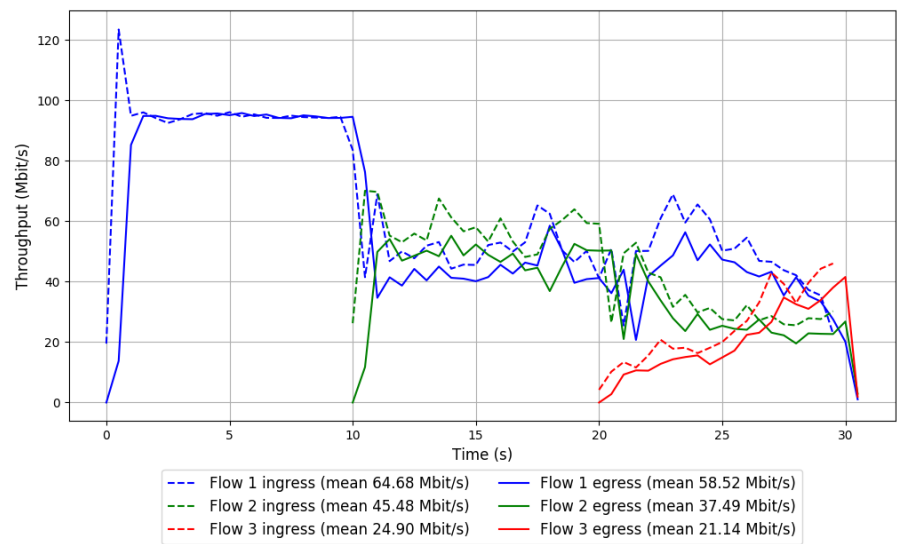
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-06-28 02:33:17
End at: 2019-06-28 02:33:47
Local clock offset: 0.82 ms
Remote clock offset: -3.754 ms


# Below is generated by plot.py at 2019-06-28 02:48:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.82 Mbit/s
95th percentile per-packet one-way delay: 62.438 ms
Loss rate: 40.28%
-- Flow 1:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 60.929 ms
Loss rate: 31.51%
-- Flow 2:
Average throughput: 41.32 Mbit/s
95th percentile per-packet one-way delay: 63.833 ms
Loss rate: 48.96%
-- Flow 3:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 63.328 ms
Loss rate: 55.85%
```
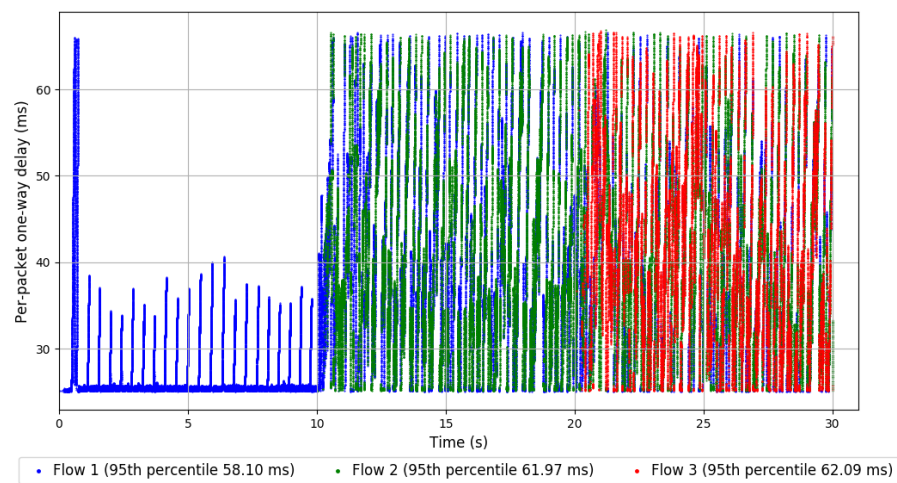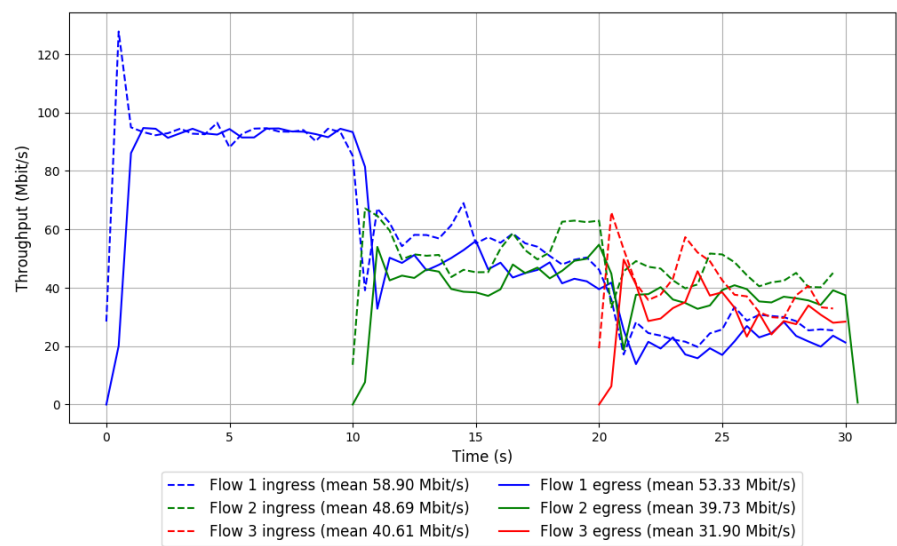
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 84.20 Mbit/s) — Flow 1 egress (mean 57.73 Mbit/s)
Flow 2 ingress (mean 80.97 Mbit/s) — Flow 2 egress (mean 41.32 Mbit/s)
Flow 3 ingress (mean 52.14 Mbit/s) — Flow 3 egress (mean 24.17 Mbit/s)

• Flow 1 (95th percentile 60.93 ms)   • Flow 2 (95th percentile 63.83 ms)   • Flow 3 (95th percentile 63.33 ms)

44

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-06-28 00:41:04
End at: 2019-06-28 00:41:34
Local clock offset: -8.508 ms
Remote clock offset: -6.891 ms


# Below is generated by plot.py at 2019-06-28 02:48:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.05 Mbit/s
95th percentile per-packet one-way delay: 59.900 ms
Loss rate: 10.91%
-- Flow 1:
Average throughput: 58.40 Mbit/s
95th percentile per-packet one-way delay: 58.920 ms
Loss rate: 8.80%
-- Flow 2:
Average throughput: 35.90 Mbit/s
95th percentile per-packet one-way delay: 60.937 ms
Loss rate: 14.57%
-- Flow 3:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 60.539 ms
Loss rate: 14.12%
```

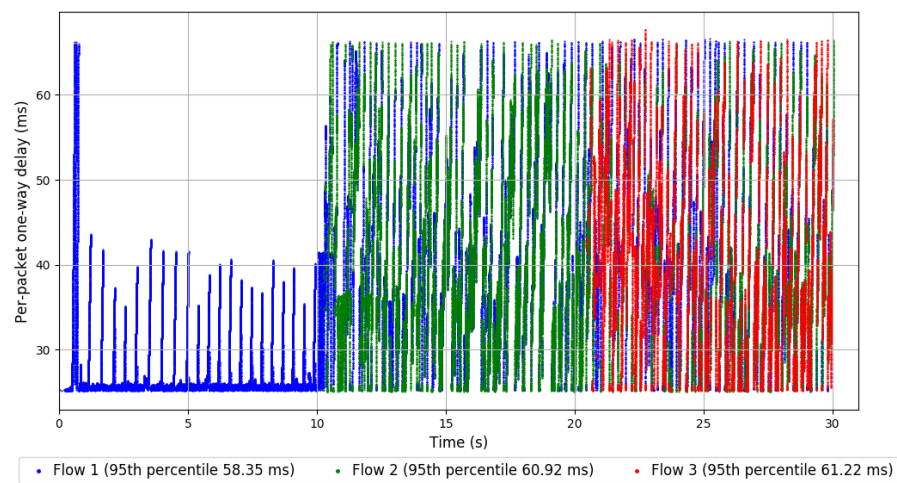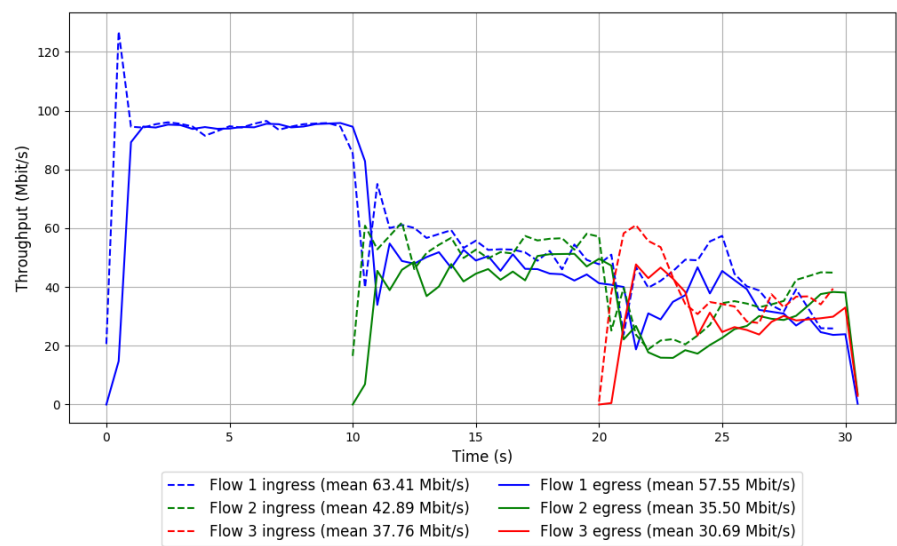Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-06-28 01:09:01
End at: 2019-06-28 01:09:31
Local clock offset: -3.023 ms
Remote clock offset: -6.096 ms


# Below is generated by plot.py at 2019-06-28 02:48:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.47 Mbit/s
95th percentile per-packet one-way delay: 59.663 ms
Loss rate: 12.22%
-- Flow 1:
Average throughput: 58.52 Mbit/s
95th percentile per-packet one-way delay: 57.928 ms
Loss rate: 9.44%
-- Flow 2:
Average throughput: 37.49 Mbit/s
95th percentile per-packet one-way delay: 61.274 ms
Loss rate: 17.44%
-- Flow 3:
Average throughput: 21.14 Mbit/s
95th percentile per-packet one-way delay: 61.399 ms
Loss rate: 14.87%
```
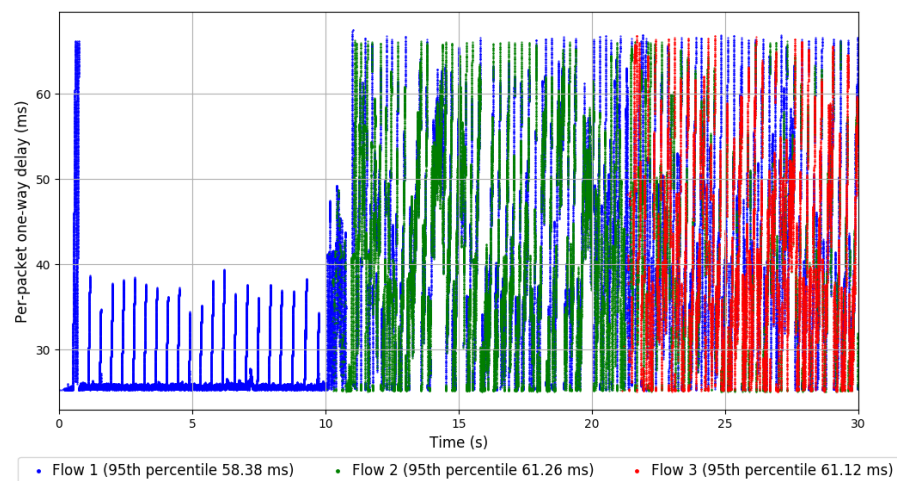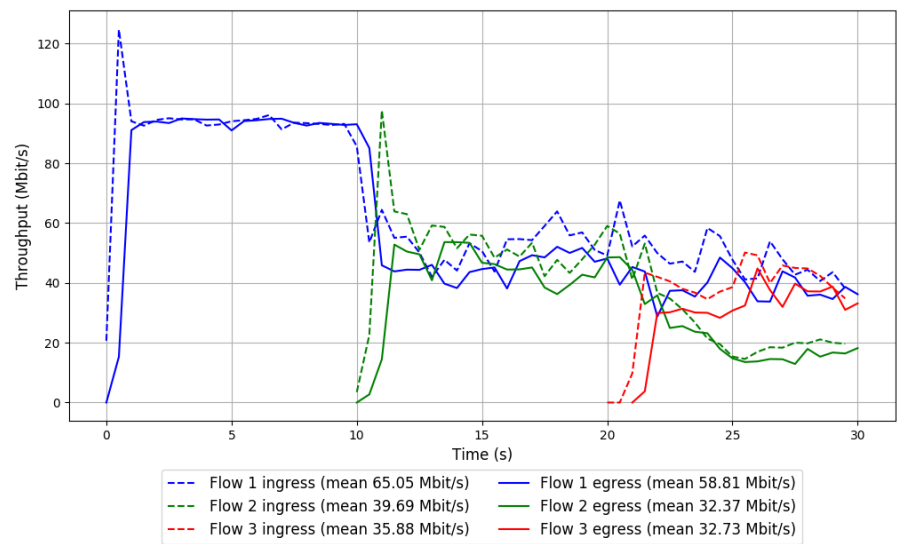
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 64.68 Mbit/s) --- Flow 1 egress (mean 58.52 Mbit/s)
Flow 2 ingress (mean 45.48 Mbit/s) --- Flow 2 egress (mean 37.49 Mbit/s)
Flow 3 ingress (mean 24.90 Mbit/s) --- Flow 3 egress (mean 21.14 Mbit/s)

Flow 1 (95th percentile 57.93 ms)   Flow 2 (95th percentile 61.27 ms)   Flow 3 (95th percentile 61.40 ms)

48

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-06-28 01:36:36
End at: 2019-06-28 01:37:06
Local clock offset: -2.426 ms
Remote clock offset: -4.929 ms


# Below is generated by plot.py at 2019-06-28 02:48:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.31 Mbit/s
95th percentile per-packet one-way delay: 60.530 ms
Loss rate: 13.77%
-- Flow 1:
Average throughput: 53.33 Mbit/s
95th percentile per-packet one-way delay: 58.103 ms
Loss rate: 9.46%
-- Flow 2:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 61.974 ms
Loss rate: 18.37%
-- Flow 3:
Average throughput: 31.90 Mbit/s
95th percentile per-packet one-way delay: 62.093 ms
Loss rate: 21.55%
```

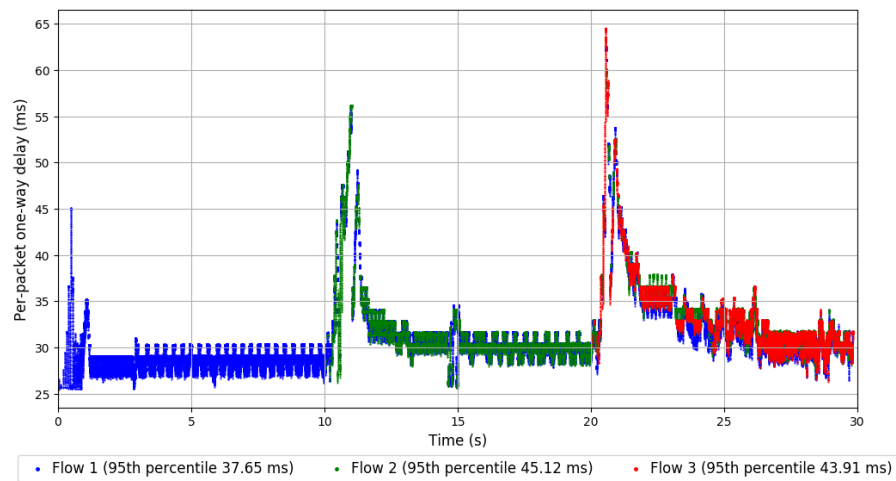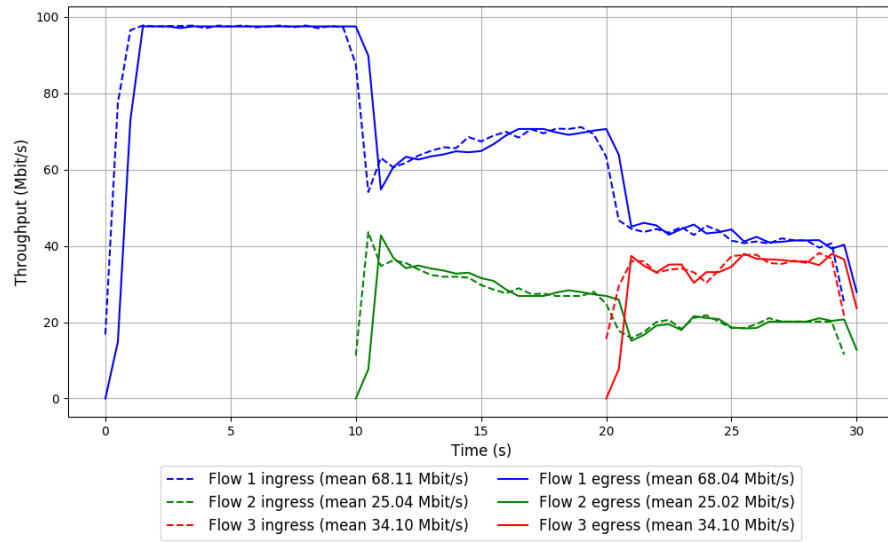Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 58.90 Mbit/s) --- Flow 1 egress (mean 53.33 Mbit/s)
Flow 2 ingress (mean 48.69 Mbit/s) --- Flow 2 egress (mean 39.73 Mbit/s)
Flow 3 ingress (mean 40.61 Mbit/s) --- Flow 3 egress (mean 31.90 Mbit/s)

Flow 1 (95th percentile 58.10 ms) Flow 2 (95th percentile 61.97 ms) Flow 3 (95th percentile 62.09 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-06-28 02:03:55
End at: 2019-06-28 02:04:25
Local clock offset: 0.561 ms
Remote clock offset: -4.086 ms


# Below is generated by plot.py at 2019-06-28 02:49:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.34 Mbit/s
95th percentile per-packet one-way delay: 59.762 ms
Loss rate: 12.47%
-- Flow 1:
Average throughput: 57.55 Mbit/s
95th percentile per-packet one-way delay: 58.355 ms
Loss rate: 9.17%
-- Flow 2:
Average throughput: 35.50 Mbit/s
95th percentile per-packet one-way delay: 60.924 ms
Loss rate: 17.09%
-- Flow 3:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 61.219 ms
Loss rate: 18.62%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 63.41 Mbit/s) --- Flow 1 egress (mean 57.55 Mbit/s)
Flow 2 ingress (mean 42.89 Mbit/s) --- Flow 2 egress (mean 35.50 Mbit/s)
Flow 3 ingress (mean 37.76 Mbit/s) --- Flow 3 egress (mean 30.69 Mbit/s)

Flow 1 (95th percentile 58.35 ms) • Flow 2 (95th percentile 60.92 ms) • Flow 3 (95th percentile 61.22 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-06-28 02:32:01
End at: 2019-06-28 02:32:31
Local clock offset: 0.81 ms
Remote clock offset: -3.763 ms


# Below is generated by plot.py at 2019-06-28 02:49:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.99 Mbit/s
95th percentile per-packet one-way delay: 59.689 ms
Loss rate: 12.90%
-- Flow 1:
Average throughput: 58.81 Mbit/s
95th percentile per-packet one-way delay: 58.381 ms
Loss rate: 9.59%
-- Flow 2:
Average throughput: 32.37 Mbit/s
95th percentile per-packet one-way delay: 61.256 ms
Loss rate: 18.44%
-- Flow 3:
Average throughput: 32.73 Mbit/s
95th percentile per-packet one-way delay: 61.121 ms
Loss rate: 18.72%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 65.05 Mbit/s) --- Flow 1 egress (mean 58.81 Mbit/s)
Flow 2 ingress (mean 39.69 Mbit/s) --- Flow 2 egress (mean 32.37 Mbit/s)
Flow 3 ingress (mean 35.88 Mbit/s) --- Flow 3 egress (mean 32.73 Mbit/s)

Flow 1 (95th percentile 58.38 ms)   Flow 2 (95th percentile 61.26 ms)   Flow 3 (95th percentile 61.12 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-06-28 00:48:35
End at: 2019-06-28 00:49:05
Local clock offset: -8.875 ms
Remote clock offset: -6.643 ms


# Below is generated by plot.py at 2019-06-28 02:49:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.79 Mbit/s
95th percentile per-packet one-way delay: 40.317 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 68.04 Mbit/s
95th percentile per-packet one-way delay: 37.652 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 25.02 Mbit/s
95th percentile per-packet one-way delay: 45.118 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 43.915 ms
Loss rate: 0.01%
```
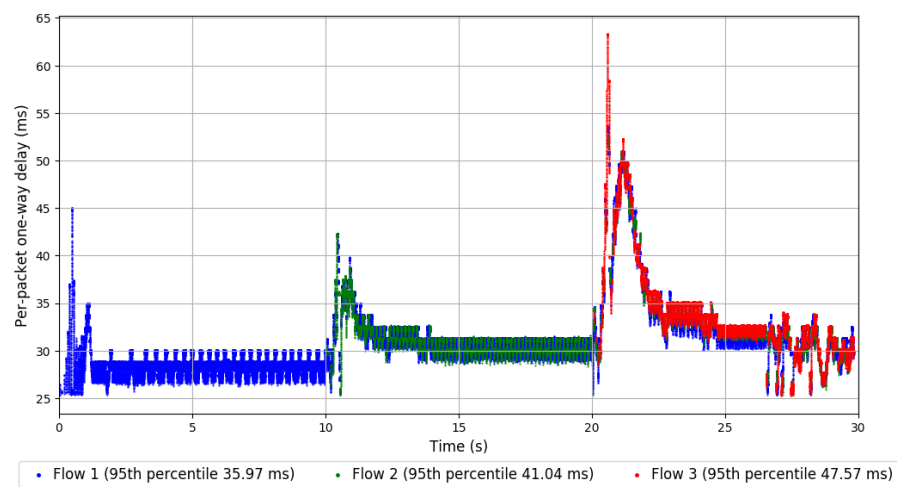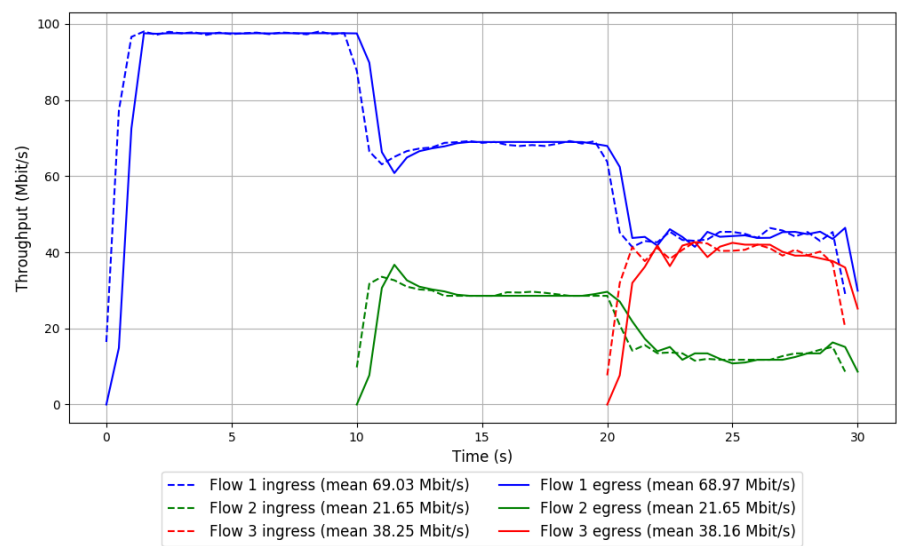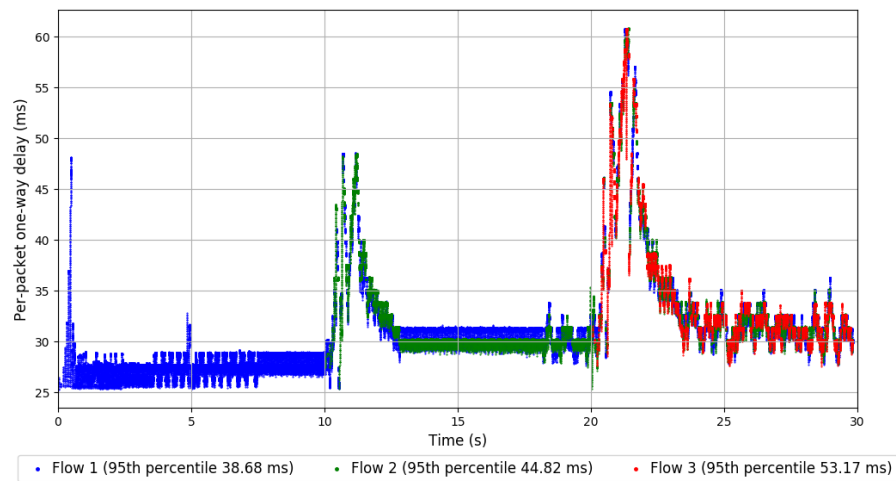
Run 1: Report of Indigo — Data Link

Run 2: Statistics of Indigo

Start at: 2019-06-28 01:16:44
End at: 2019-06-28 01:17:14
Local clock offset: -2.622 ms
Remote clock offset: -5.773 ms

Below is generated by plot.py at 2019-06-28 02:49:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.26 Mbit/s
95th percentile per-packet one-way delay: 42.153 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.19 Mbit/s
95th percentile per-packet one-way delay: 39.717 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.33 Mbit/s
95th percentile per-packet one-way delay: 44.609 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.65 Mbit/s
95th percentile per-packet one-way delay: 45.936 ms
Loss rate: 0.00%
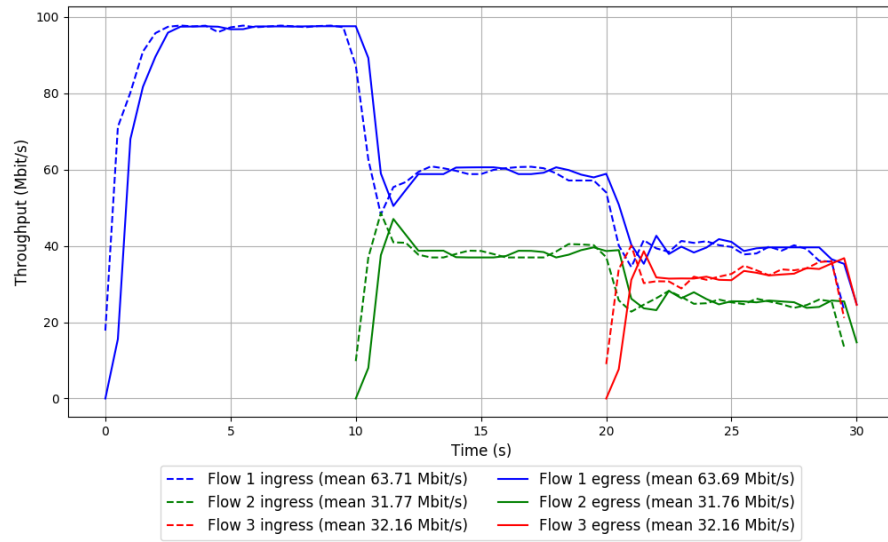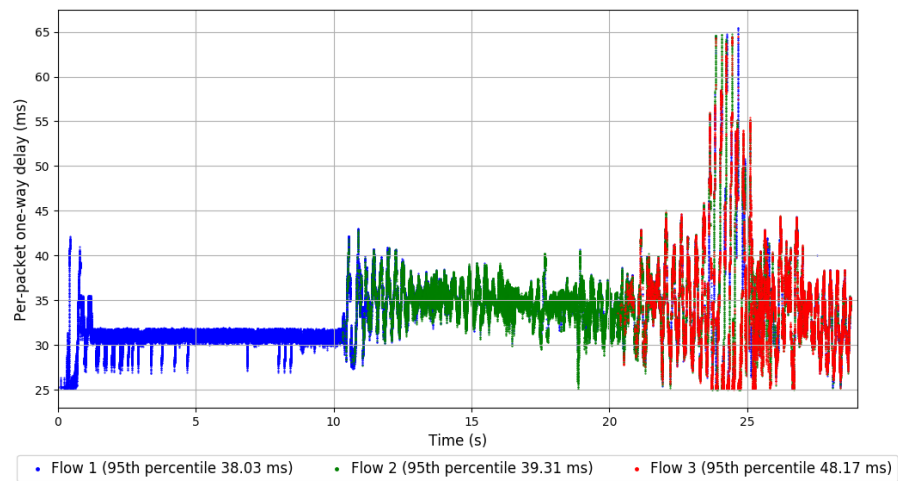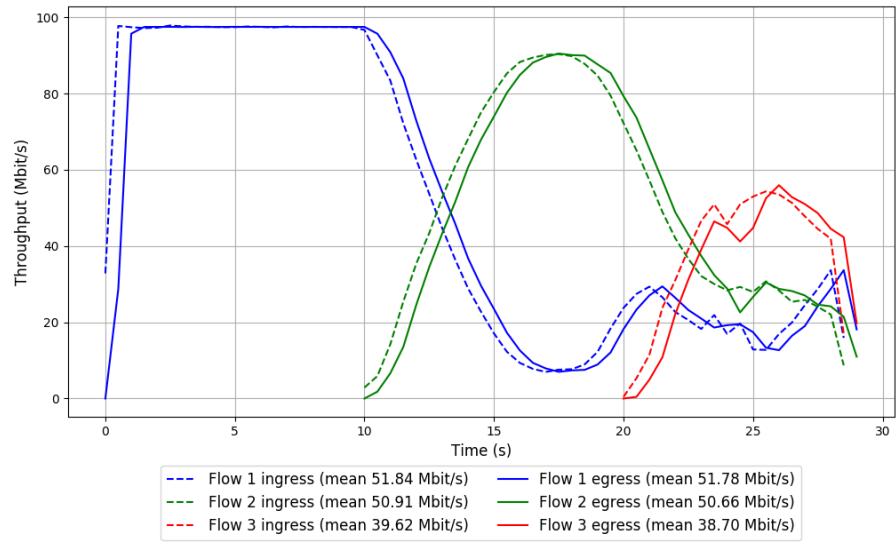
Run 2: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 61.21 Mbit/s) —— Flow 1 egress (mean 61.19 Mbit/s)
- - - Flow 2 ingress (mean 35.34 Mbit/s) —— Flow 2 egress (mean 35.33 Mbit/s)
- - - Flow 3 ingress (mean 32.66 Mbit/s) —— Flow 3 egress (mean 32.65 Mbit/s)

• Flow 1 (95th percentile 39.72 ms)   • Flow 2 (95th percentile 44.61 ms)   • Flow 3 (95th percentile 45.94 ms)

58

```
Run 3: Statistics of Indigo

Start at: 2019-06-28 01:44:06
End at: 2019-06-28 01:44:36
Local clock offset: -2.35 ms
Remote clock offset: -4.681 ms


# Below is generated by plot.py at 2019-06-28 02:49:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.77 Mbit/s
95th percentile per-packet one-way delay: 44.682 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 64.23 Mbit/s
95th percentile per-packet one-way delay: 41.040 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 32.58 Mbit/s
95th percentile per-packet one-way delay: 48.061 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 30.48 Mbit/s
95th percentile per-packet one-way delay: 52.548 ms
Loss rate: 0.01%
```

Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-06-28 02:11:30
End at: 2019-06-28 02:12:00
Local clock offset: 1.156 ms
Remote clock offset: -3.897 ms


# Below is generated by plot.py at 2019-06-28 02:49:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 38.405 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 68.97 Mbit/s
95th percentile per-packet one-way delay: 35.974 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 21.65 Mbit/s
95th percentile per-packet one-way delay: 41.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.16 Mbit/s
95th percentile per-packet one-way delay: 47.566 ms
Loss rate: 0.25%
```
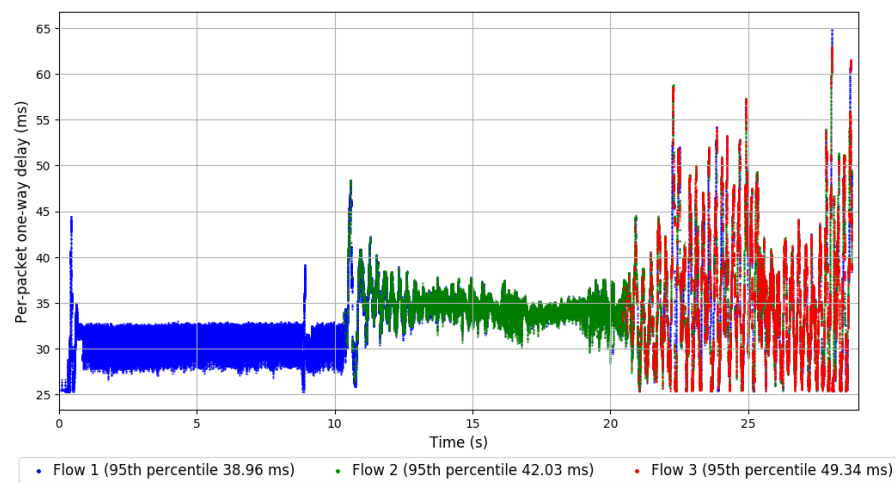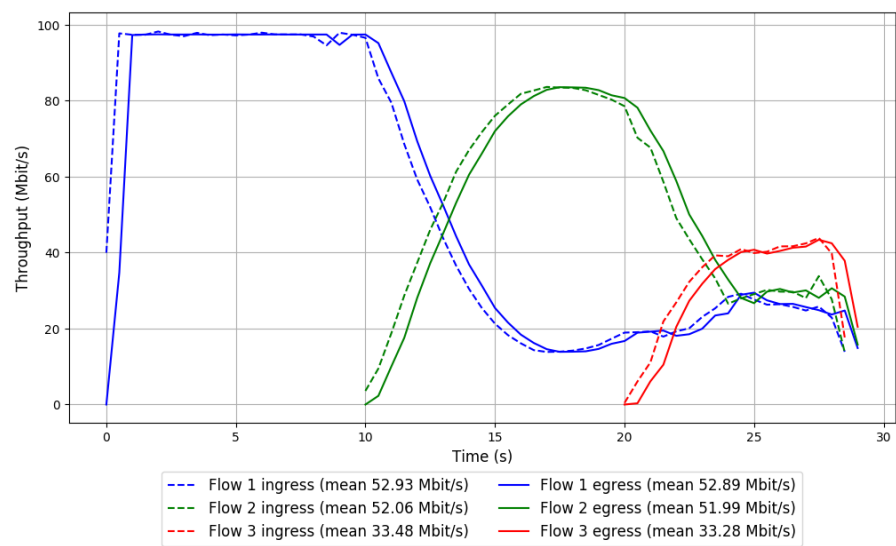
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-06-28 02:39:48
End at: 2019-06-28 02:40:18
Local clock offset: 0.866 ms
Remote clock offset: -3.579 ms


# Below is generated by plot.py at 2019-06-28 02:49:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.25 Mbit/s
95th percentile per-packet one-way delay: 42.866 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 63.69 Mbit/s
95th percentile per-packet one-way delay: 38.680 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 44.818 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 53.166 ms
Loss rate: 0.01%
```
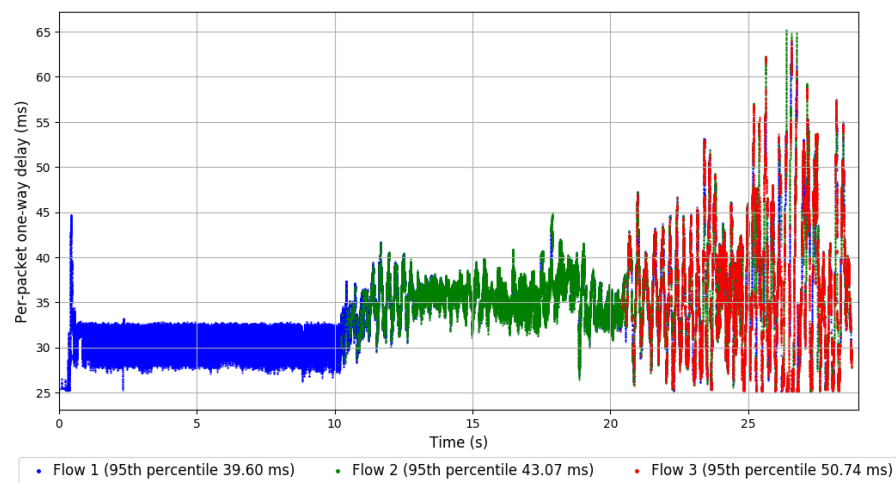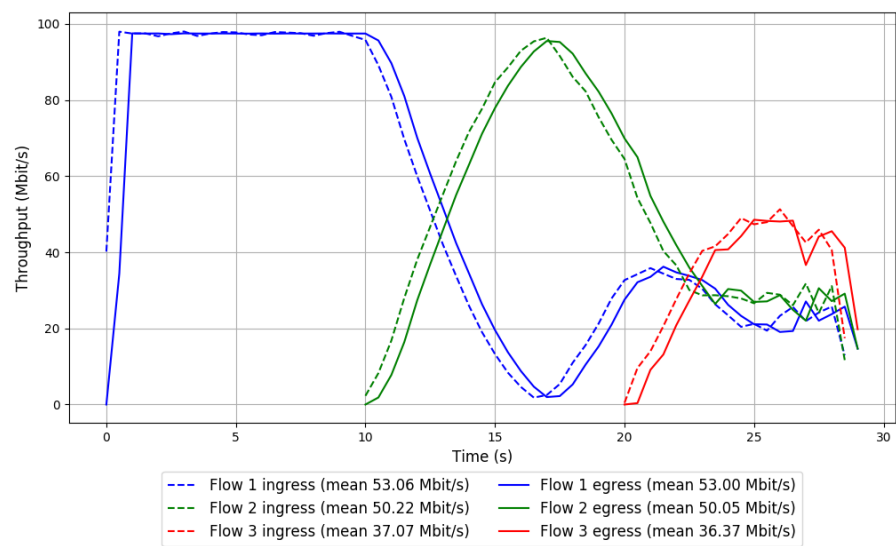
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-06-28 00:32:31
End at: 2019-06-28 00:33:01
Local clock offset: -7.557 ms
Remote clock offset: -7.004 ms


# Below is generated by plot.py at 2019-06-28 02:49:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.80 Mbit/s
95th percentile per-packet one-way delay: 39.588 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 51.78 Mbit/s
95th percentile per-packet one-way delay: 38.033 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 50.66 Mbit/s
95th percentile per-packet one-way delay: 39.315 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 48.170 ms
Loss rate: 2.30%
```

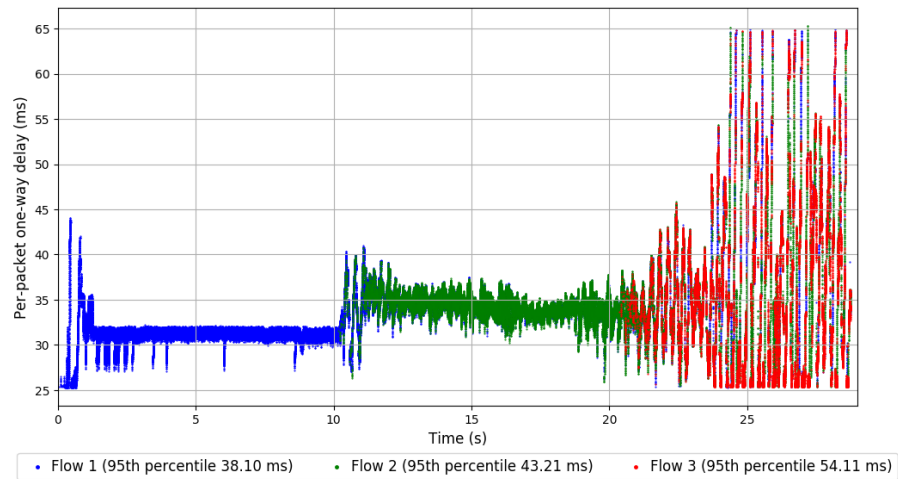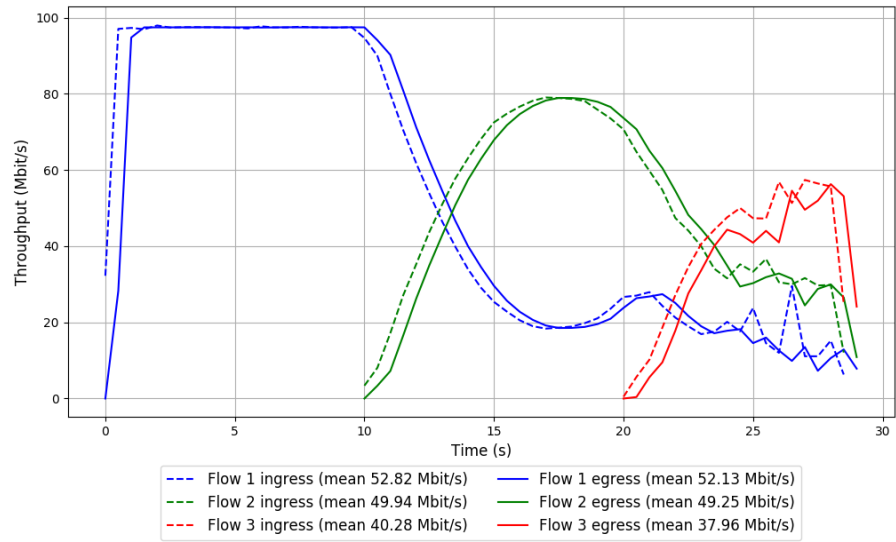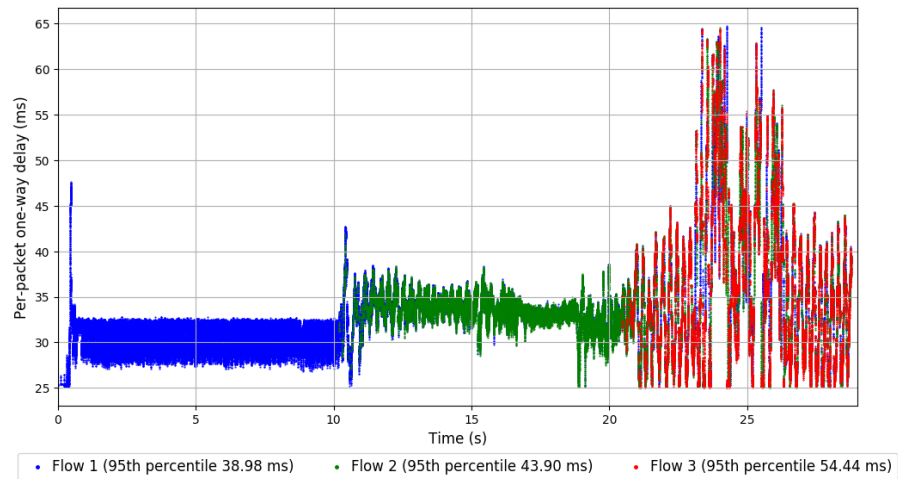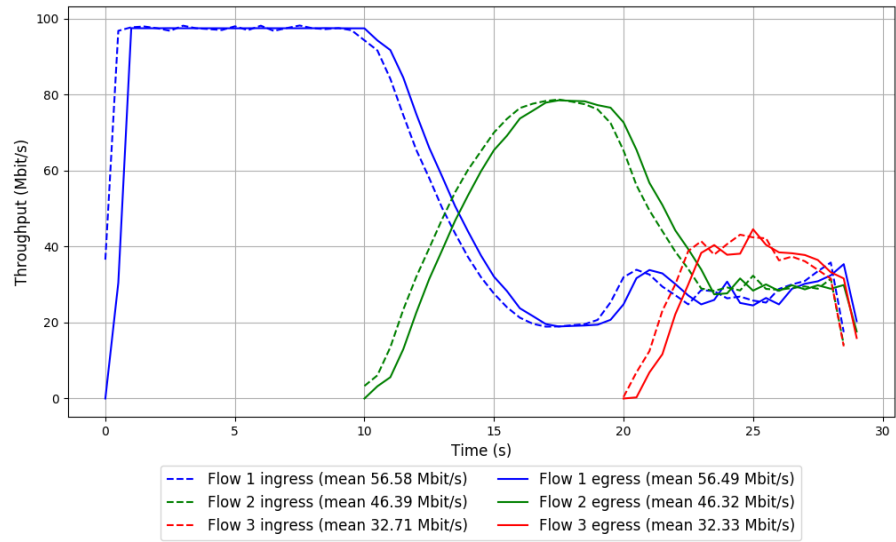Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-06-28 01:00:08
End at: 2019-06-28 01:00:38
Local clock offset: -4.172 ms
Remote clock offset: -6.27 ms

# Below is generated by plot.py at 2019-06-28 02:50:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.11 Mbit/s
95th percentile per-packet one-way delay: 42.156 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 52.89 Mbit/s
95th percentile per-packet one-way delay: 38.957 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 51.99 Mbit/s
95th percentile per-packet one-way delay: 42.030 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 49.342 ms
Loss rate: 0.51%
```

Run 2: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 52.93 Mbit/s) ---- Flow 1 egress (mean 52.89 Mbit/s)
Flow 2 ingress (mean 52.06 Mbit/s) ---- Flow 2 egress (mean 51.99 Mbit/s)
Flow 3 ingress (mean 33.48 Mbit/s) ---- Flow 3 egress (mean 33.28 Mbit/s)

Flow 1 (95th percentile 38.96 ms)   Flow 2 (95th percentile 42.03 ms)   Flow 3 (95th percentile 49.34 ms)

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-06-28 01:28:10
End at: 2019-06-28 01:28:40
Local clock offset: -2.53 ms
Remote clock offset: -5.215 ms


# Below is generated by plot.py at 2019-06-28 02:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 43.430 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 53.00 Mbit/s
95th percentile per-packet one-way delay: 39.599 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 43.068 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 36.37 Mbit/s
95th percentile per-packet one-way delay: 50.738 ms
Loss rate: 1.93%
```

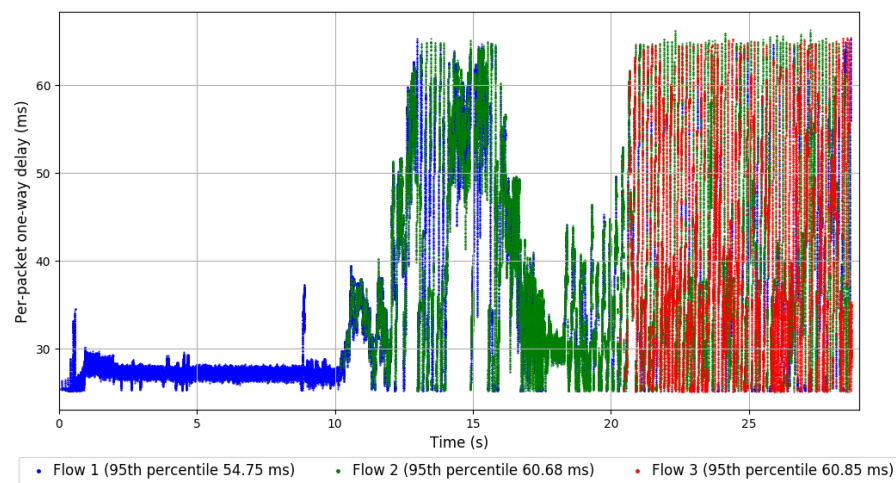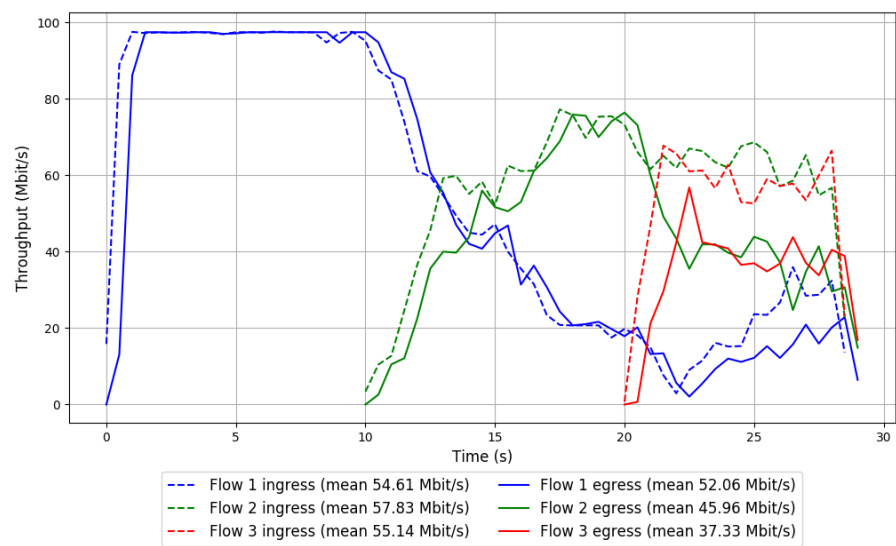Run 3: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 53.06 Mbit/s) ——— Flow 1 egress (mean 53.00 Mbit/s)
- - - Flow 2 ingress (mean 50.22 Mbit/s) ——— Flow 2 egress (mean 50.05 Mbit/s)
- - - Flow 3 ingress (mean 37.07 Mbit/s) ——— Flow 3 egress (mean 36.37 Mbit/s)

- Flow 1 (95th percentile 39.60 ms)   • Flow 2 (95th percentile 43.07 ms)   • Flow 3 (95th percentile 50.74 ms)

70

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-06-28 01:55:14
End at: 2019-06-28 01:55:44
Local clock offset: -0.575 ms
Remote clock offset: -4.327 ms


# Below is generated by plot.py at 2019-06-28 02:50:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.10 Mbit/s
95th percentile per-packet one-way delay: 44.157 ms
Loss rate: 1.85%
-- Flow 1:
Average throughput: 52.13 Mbit/s
95th percentile per-packet one-way delay: 38.103 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 43.209 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 37.96 Mbit/s
95th percentile per-packet one-way delay: 54.108 ms
Loss rate: 5.72%
```
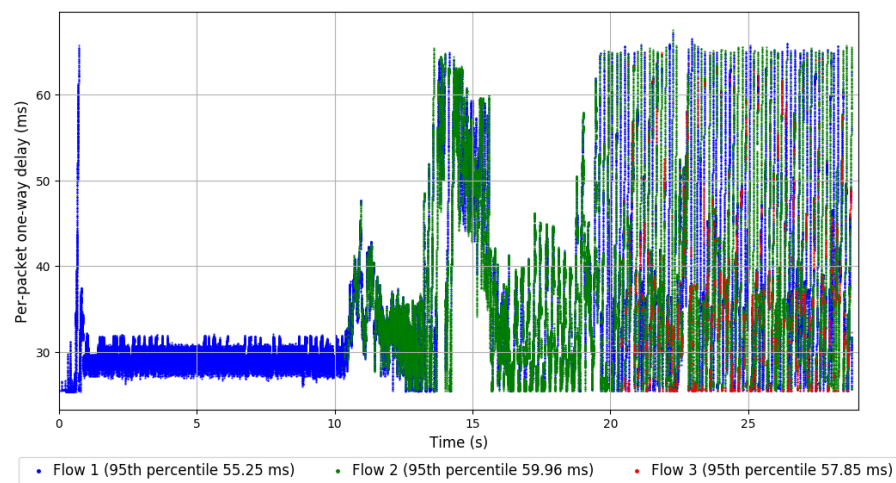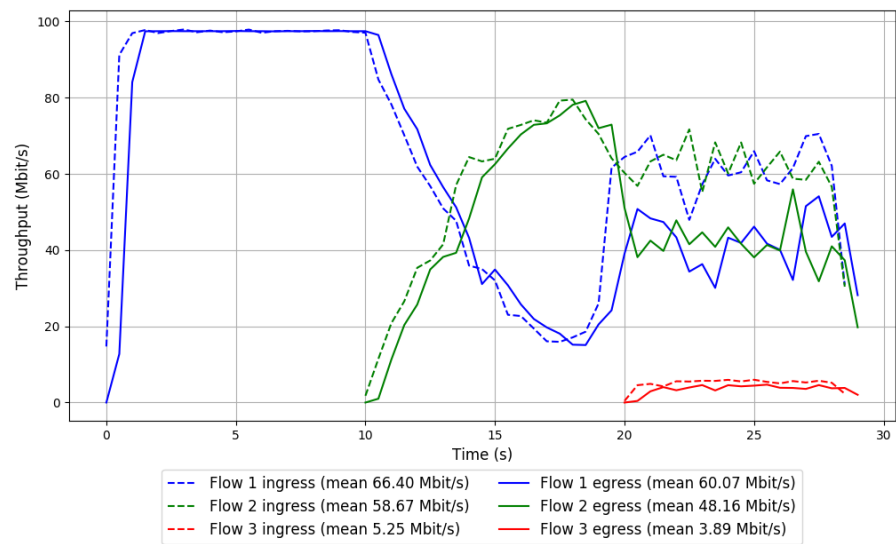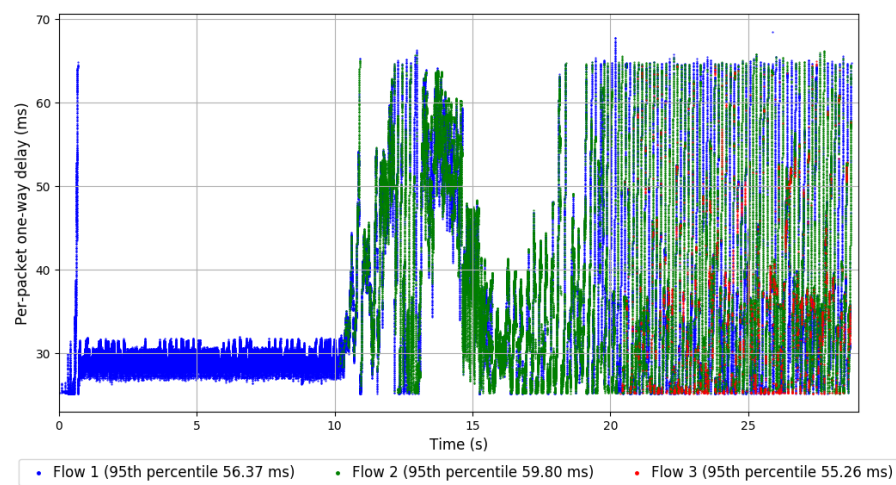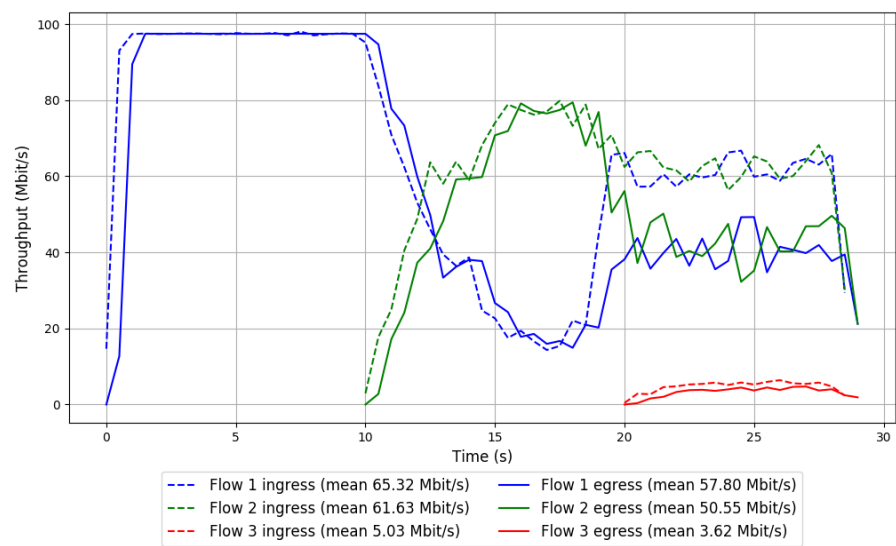
Run 4: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 52.82 Mbit/s)   —— Flow 1 egress (mean 52.13 Mbit/s)
- - - Flow 2 ingress (mean 49.94 Mbit/s)   —— Flow 2 egress (mean 49.25 Mbit/s)
- - - Flow 3 ingress (mean 40.28 Mbit/s)   —— Flow 3 egress (mean 37.96 Mbit/s)

• Flow 1 (95th percentile 38.10 ms)   • Flow 2 (95th percentile 43.21 ms)   • Flow 3 (95th percentile 54.11 ms)

72

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-06-28 02:23:01
End at: 2019-06-28 02:23:31
Local clock offset: 1.104 ms
Remote clock offset: -3.906 ms


# Below is generated by plot.py at 2019-06-28 02:50:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.96 Mbit/s
95th percentile per-packet one-way delay: 43.924 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 56.49 Mbit/s
95th percentile per-packet one-way delay: 38.980 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 46.32 Mbit/s
95th percentile per-packet one-way delay: 43.898 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 54.437 ms
Loss rate: 1.09%
```
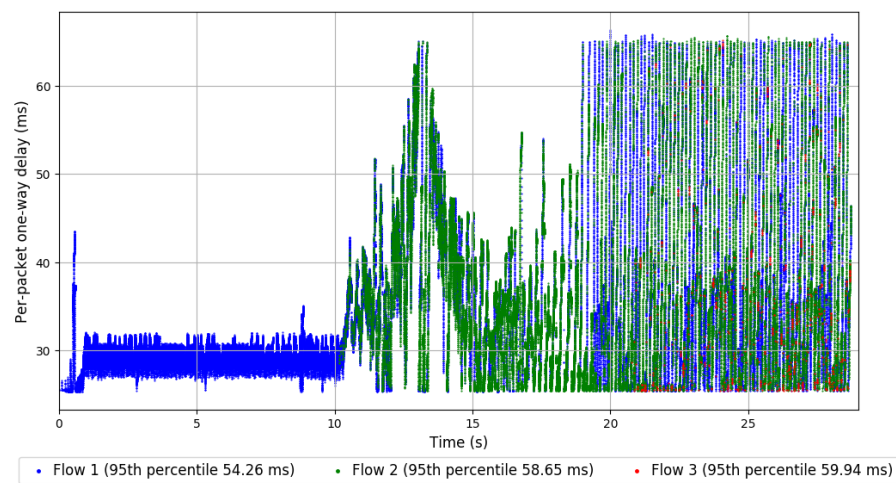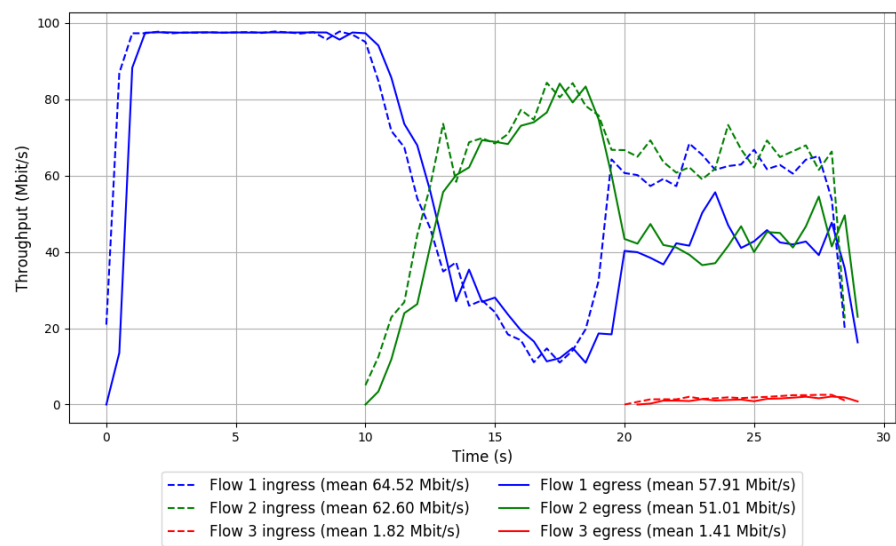
Run 5: Report of Indigo-MusesC3 — Data Link

74

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-06-28 00:29:59
End at: 2019-06-28 00:30:29
Local clock offset: -7.258 ms
Remote clock offset: -6.901 ms


# Below is generated by plot.py at 2019-06-28 02:50:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.84 Mbit/s
95th percentile per-packet one-way delay: 58.612 ms
Loss rate: 14.29%
-- Flow 1:
Average throughput: 52.06 Mbit/s
95th percentile per-packet one-way delay: 54.748 ms
Loss rate: 4.65%
-- Flow 2:
Average throughput: 45.96 Mbit/s
95th percentile per-packet one-way delay: 60.681 ms
Loss rate: 20.53%
-- Flow 3:
Average throughput: 37.33 Mbit/s
95th percentile per-packet one-way delay: 60.851 ms
Loss rate: 32.29%
```

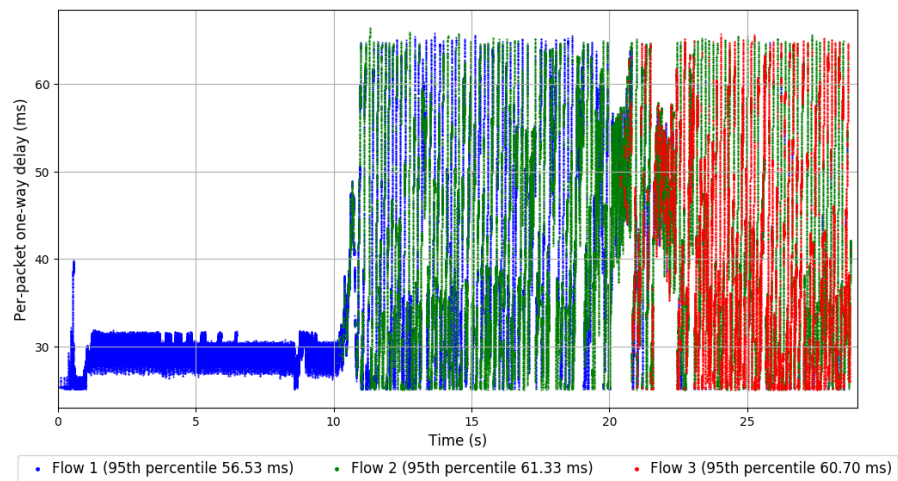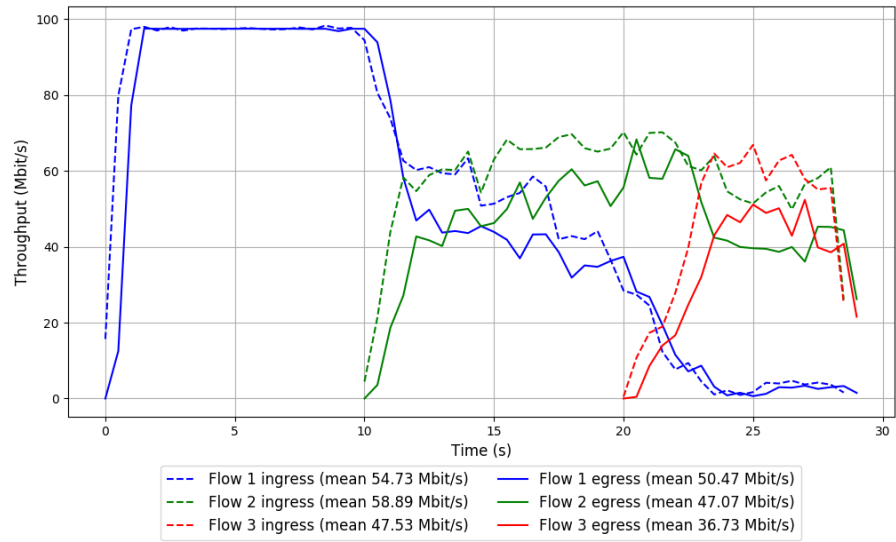Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-06-28 00:57:33
End at: 2019-06-28 00:58:03
Local clock offset: -4.776 ms
Remote clock offset: -6.35 ms


# Below is generated by plot.py at 2019-06-28 02:50:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 57.532 ms
Loss rate: 12.75%
-- Flow 1:
Average throughput: 60.07 Mbit/s
95th percentile per-packet one-way delay: 55.254 ms
Loss rate: 9.52%
-- Flow 2:
Average throughput: 48.16 Mbit/s
95th percentile per-packet one-way delay: 59.961 ms
Loss rate: 17.90%
-- Flow 3:
Average throughput: 3.89 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 25.83%
```
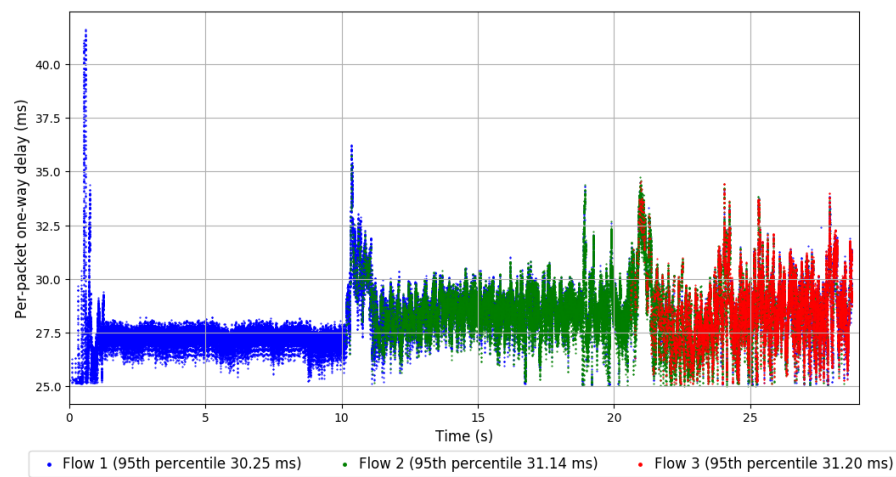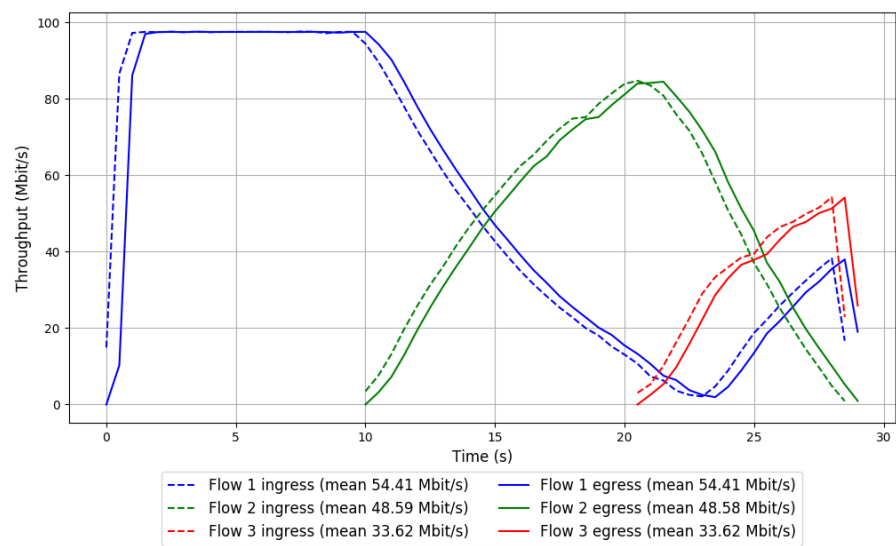
Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 66.40 Mbit/s)   Flow 1 egress (mean 60.07 Mbit/s)
Flow 2 ingress (mean 58.67 Mbit/s)   Flow 2 egress (mean 48.16 Mbit/s)
Flow 3 ingress (mean 5.25 Mbit/s)   Flow 3 egress (mean 3.89 Mbit/s)

Flow 1 (95th percentile 55.25 ms)   Flow 2 (95th percentile 59.96 ms)   Flow 3 (95th percentile 57.85 ms)
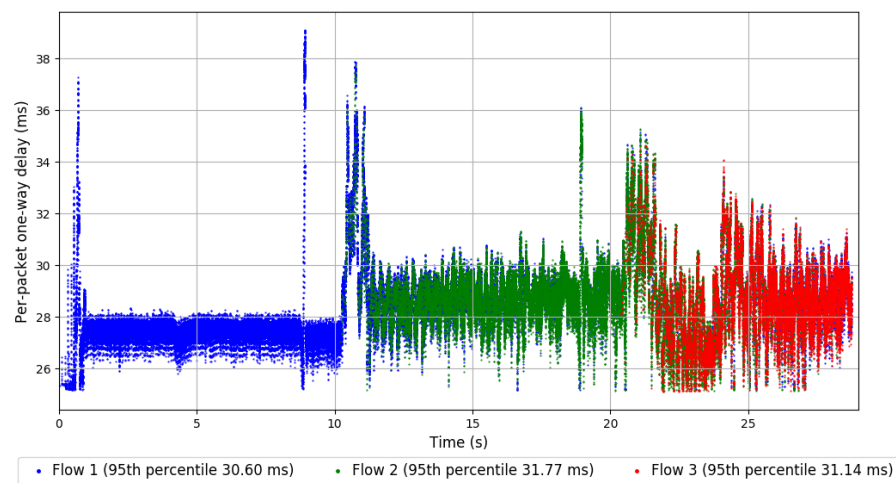
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-06-28 01:25:41
End at: 2019-06-28 01:26:11
Local clock offset: -2.521 ms
Remote clock offset: -5.265 ms


# Below is generated by plot.py at 2019-06-28 02:51:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.62 Mbit/s
95th percentile per-packet one-way delay: 58.102 ms
Loss rate: 14.15%
-- Flow 1:
Average throughput: 57.80 Mbit/s
95th percentile per-packet one-way delay: 56.371 ms
Loss rate: 11.49%
-- Flow 2:
Average throughput: 50.55 Mbit/s
95th percentile per-packet one-way delay: 59.804 ms
Loss rate: 17.99%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 55.263 ms
Loss rate: 28.22%
```

Run 3: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 65.32 Mbit/s) ——— Flow 1 egress (mean 57.80 Mbit/s)
- - - - Flow 2 ingress (mean 61.63 Mbit/s) ——— Flow 2 egress (mean 50.55 Mbit/s)
- - - - Flow 3 ingress (mean 5.03 Mbit/s) ——— Flow 3 egress (mean 3.62 Mbit/s)

• Flow 1 (95th percentile 56.37 ms)   • Flow 2 (95th percentile 59.80 ms)   • Flow 3 (95th percentile 55.26 ms)
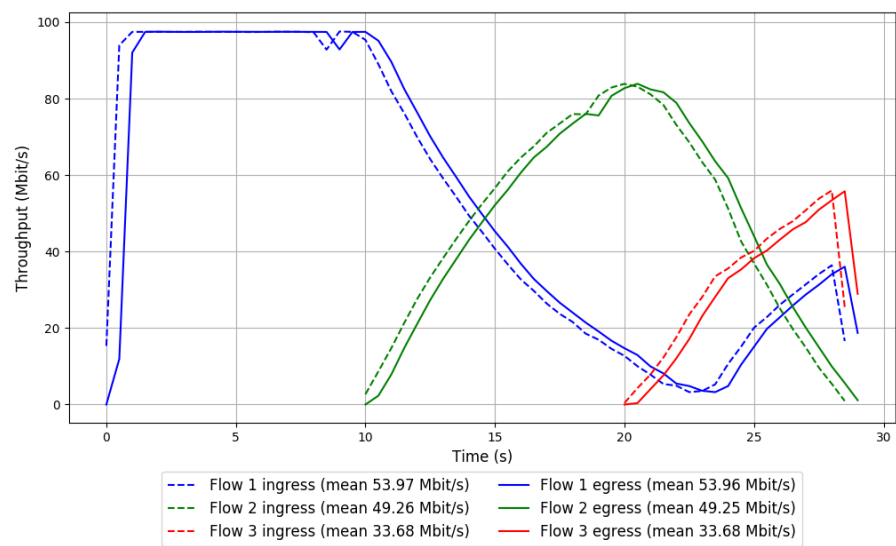
```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-06-28 01:52:45
End at: 2019-06-28 01:53:15
Local clock offset: -1.058 ms
Remote clock offset: -4.311 ms


# Below is generated by plot.py at 2019-06-28 02:51:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.39 Mbit/s
95th percentile per-packet one-way delay: 56.356 ms
Loss rate: 13.44%
-- Flow 1:
Average throughput: 57.91 Mbit/s
95th percentile per-packet one-way delay: 54.264 ms
Loss rate: 10.18%
-- Flow 2:
Average throughput: 51.01 Mbit/s
95th percentile per-packet one-way delay: 58.653 ms
Loss rate: 18.45%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 59.935 ms
Loss rate: 26.94%
```
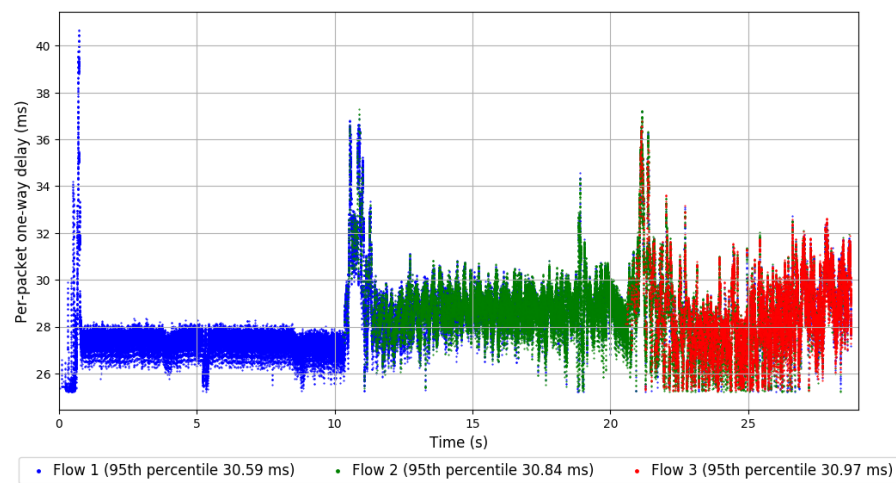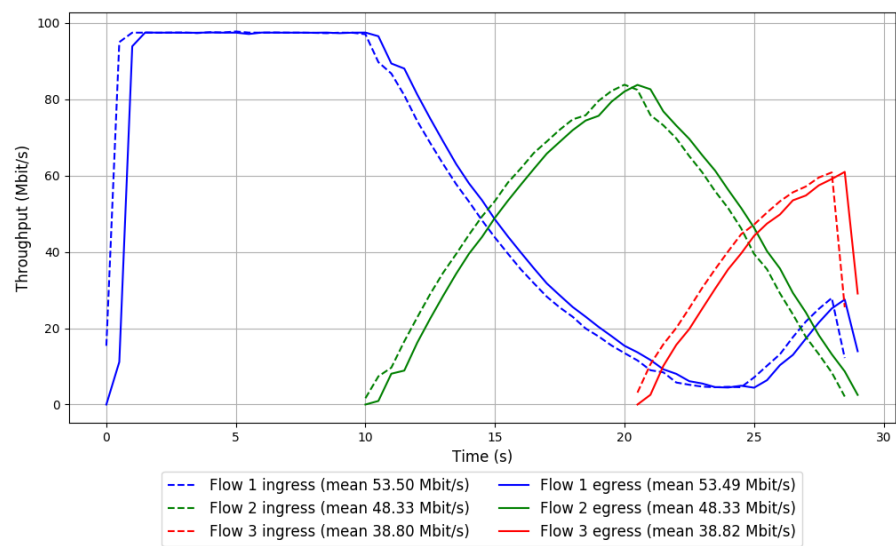
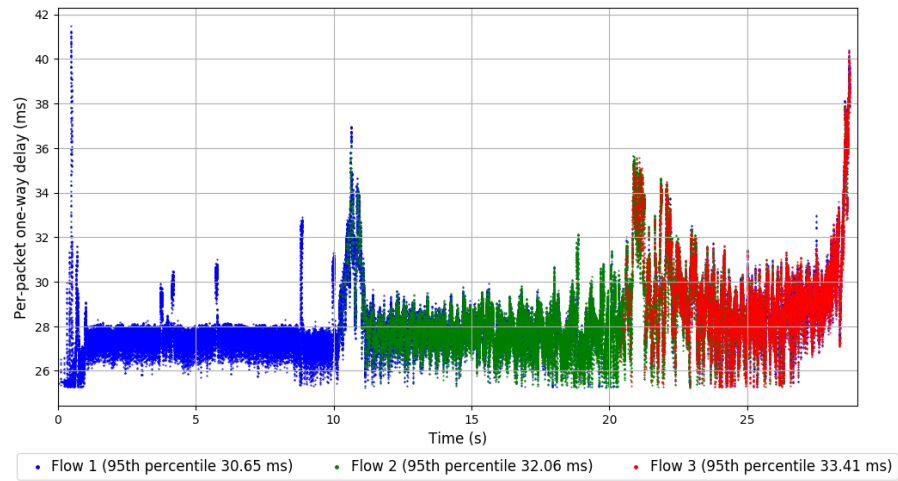Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-06-28 02:20:26
End at: 2019-06-28 02:20:56
Local clock offset: 1.311 ms
Remote clock offset: -3.929 ms


# Below is generated by plot.py at 2019-06-28 02:51:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.79 Mbit/s
95th percentile per-packet one-way delay: 59.563 ms
Loss rate: 14.11%
-- Flow 1:
Average throughput: 50.47 Mbit/s
95th percentile per-packet one-way delay: 56.528 ms
Loss rate: 7.74%
-- Flow 2:
Average throughput: 47.07 Mbit/s
95th percentile per-packet one-way delay: 61.332 ms
Loss rate: 20.02%
-- Flow 3:
Average throughput: 36.73 Mbit/s
95th percentile per-packet one-way delay: 60.695 ms
Loss rate: 22.85%
```
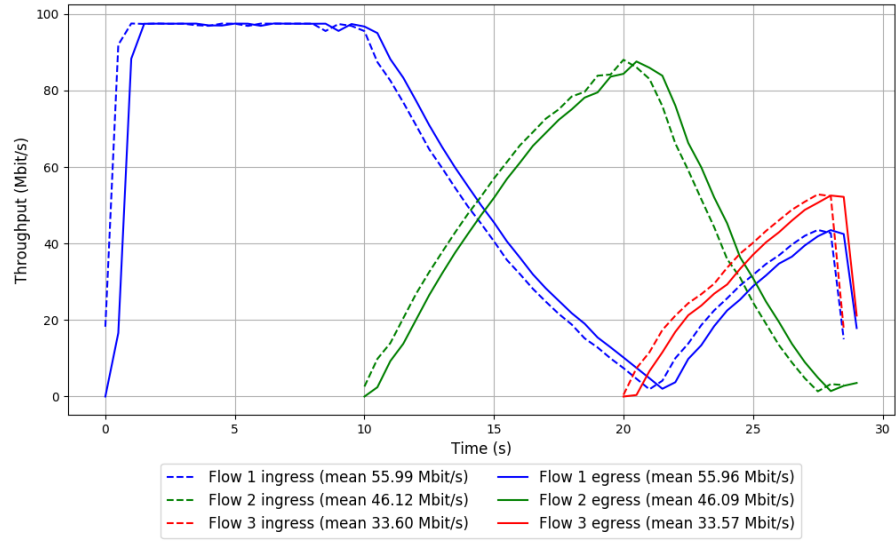
Run 5: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 54.73 Mbit/s) —— Flow 1 egress (mean 50.47 Mbit/s)
- - - Flow 2 ingress (mean 58.89 Mbit/s) —— Flow 2 egress (mean 47.07 Mbit/s)
- - - Flow 3 ingress (mean 47.53 Mbit/s) —— Flow 3 egress (mean 36.73 Mbit/s)

• Flow 1 (95th percentile 56.53 ms) • Flow 2 (95th percentile 61.33 ms) • Flow 3 (95th percentile 60.70 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-06-28 00:44:46
End at: 2019-06-28 00:45:16
Local clock offset: -8.904 ms
Remote clock offset: -6.782 ms


# Below is generated by plot.py at 2019-06-28 02:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.53 Mbit/s
95th percentile per-packet one-way delay: 30.741 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.41 Mbit/s
95th percentile per-packet one-way delay: 30.252 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 48.58 Mbit/s
95th percentile per-packet one-way delay: 31.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 31.196 ms
Loss rate: 0.00%
```

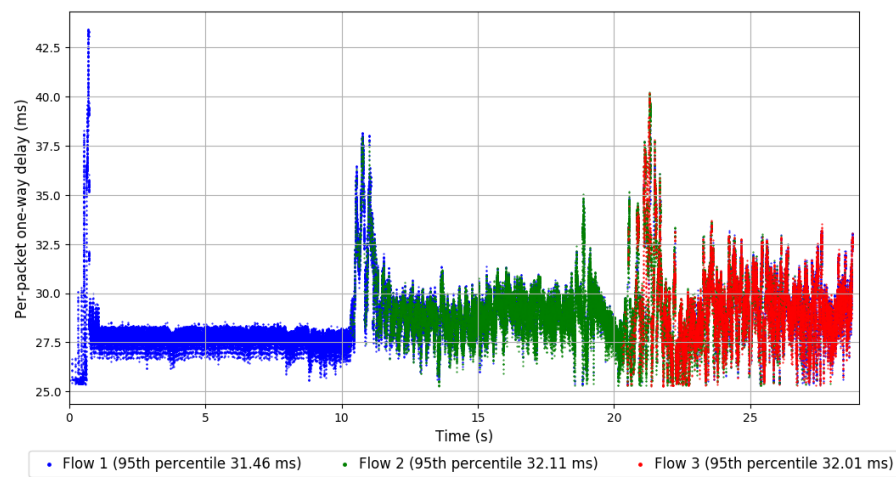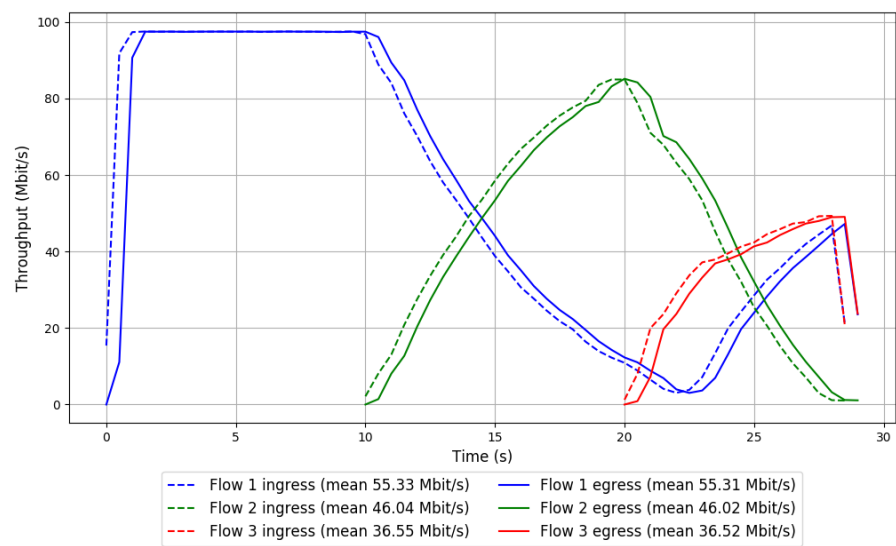Run 1: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 54.41 Mbit/s) --- Flow 1 egress (mean 54.41 Mbit/s)
Flow 2 ingress (mean 48.59 Mbit/s) --- Flow 2 egress (mean 48.58 Mbit/s)
Flow 3 ingress (mean 33.62 Mbit/s) --- Flow 3 egress (mean 33.62 Mbit/s)

Flow 1 (95th percentile 30.25 ms)   Flow 2 (95th percentile 31.14 ms)   Flow 3 (95th percentile 31.20 ms)

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-06-28 01:12:48
End at: 2019-06-28 01:13:18
Local clock offset: -2.781 ms
Remote clock offset: -6.037 ms


# Below is generated by plot.py at 2019-06-28 02:51:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.96 Mbit/s
95th percentile per-packet one-way delay: 30.600 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 31.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.68 Mbit/s
95th percentile per-packet one-way delay: 31.143 ms
Loss rate: 0.00%
```
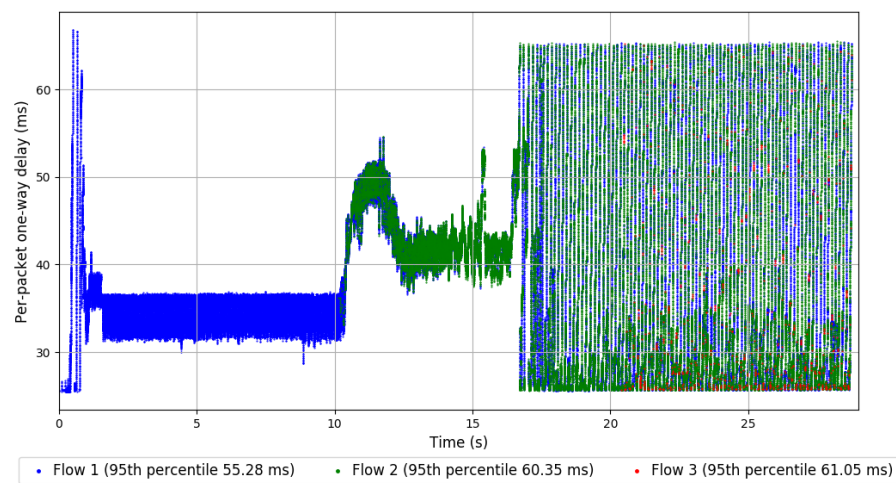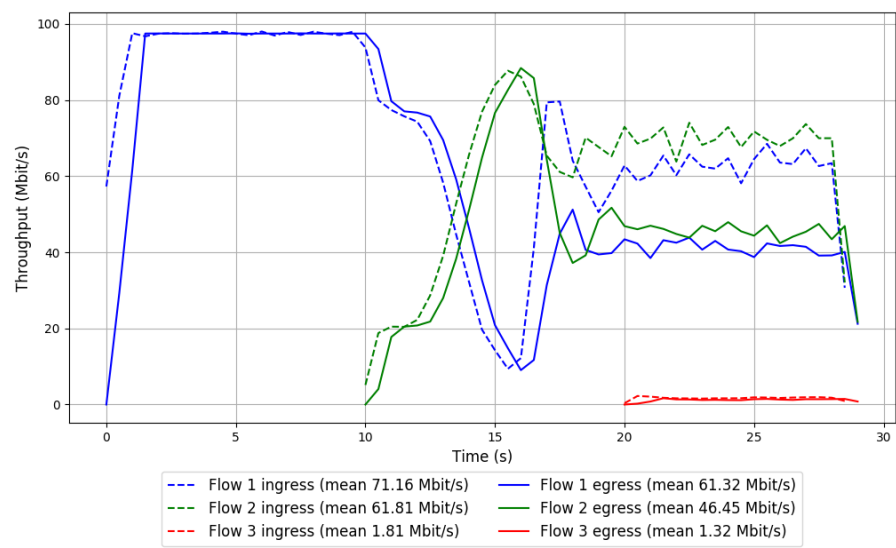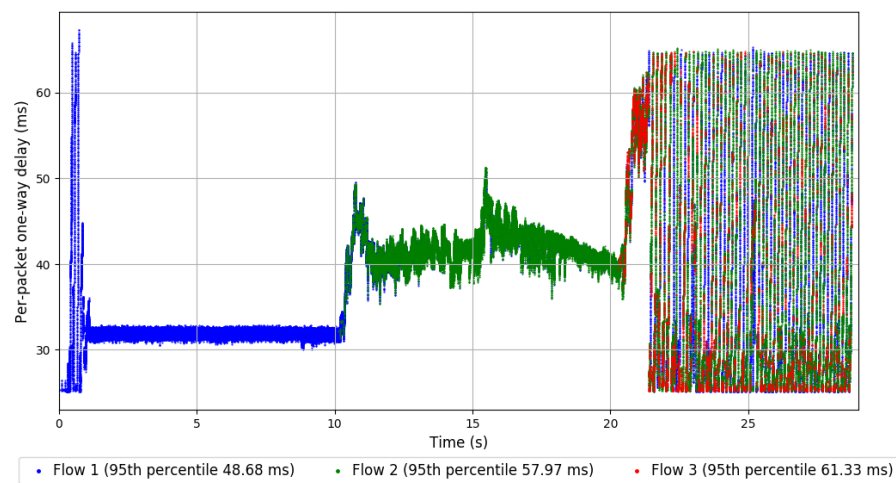
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-06-28 01:40:17
End at: 2019-06-28 01:40:47
Local clock offset: -2.429 ms
Remote clock offset: -4.719 ms


# Below is generated by plot.py at 2019-06-28 02:51:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.56 Mbit/s
95th percentile per-packet one-way delay: 30.798 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.49 Mbit/s
95th percentile per-packet one-way delay: 30.595 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 48.33 Mbit/s
95th percentile per-packet one-way delay: 30.836 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 30.971 ms
Loss rate: 0.00%
```
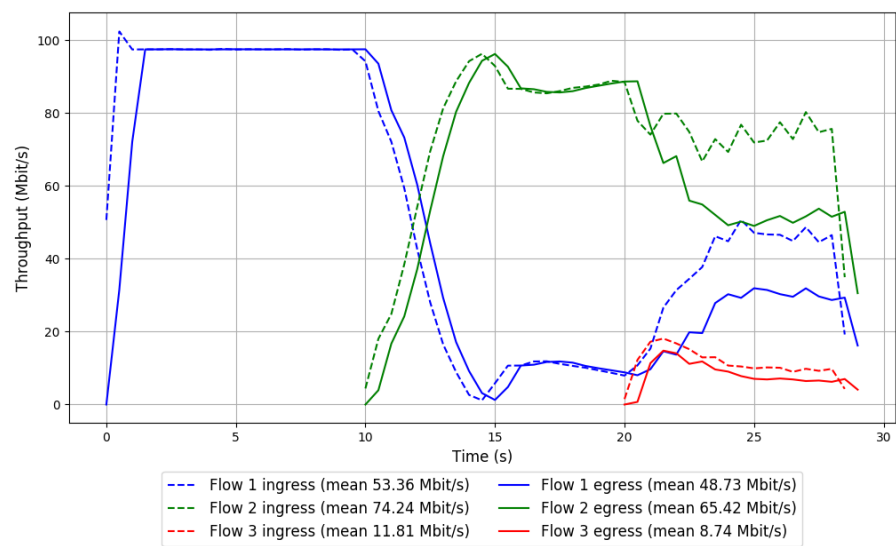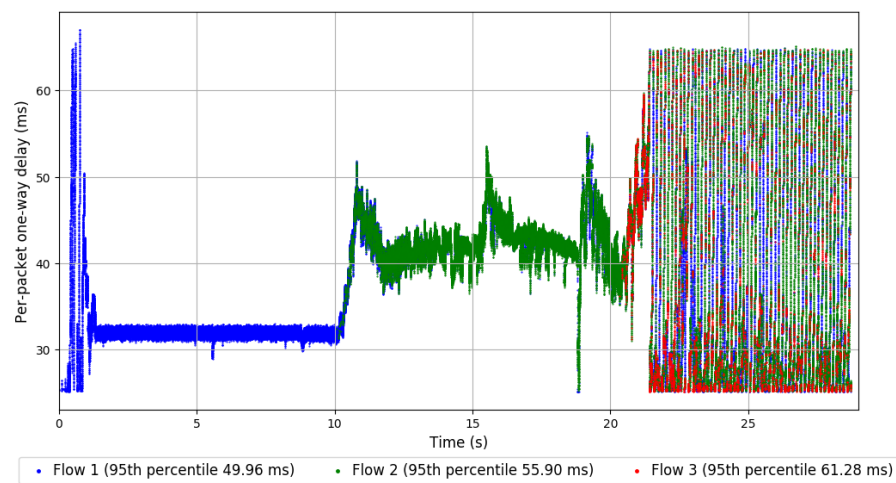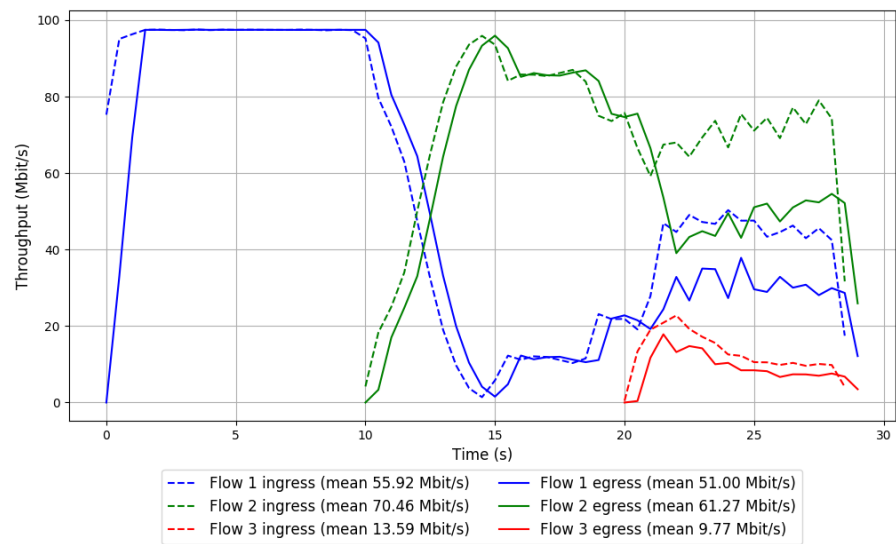
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-06-28 02:07:39
End at: 2019-06-28 02:08:09
Local clock offset: 0.858 ms
Remote clock offset: -4.012 ms


# Below is generated by plot.py at 2019-06-28 02:51:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 31.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.96 Mbit/s
95th percentile per-packet one-way delay: 30.647 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.09 Mbit/s
95th percentile per-packet one-way delay: 32.062 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 33.405 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 55.99 Mbit/s) --- Flow 1 egress (mean 55.96 Mbit/s)
Flow 2 ingress (mean 46.12 Mbit/s) --- Flow 2 egress (mean 46.09 Mbit/s)
Flow 3 ingress (mean 33.60 Mbit/s) --- Flow 3 egress (mean 33.57 Mbit/s)

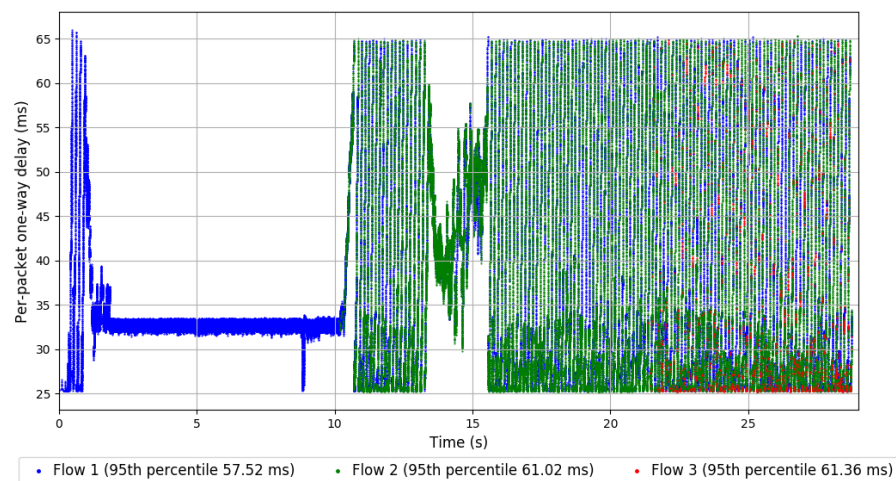Flow 1 (95th percentile 30.65 ms) • Flow 2 (95th percentile 32.06 ms) • Flow 3 (95th percentile 33.41 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-06-28 02:35:48
End at: 2019-06-28 02:36:18
Local clock offset: 0.811 ms
Remote clock offset: -3.665 ms


# Below is generated by plot.py at 2019-06-28 02:51:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.69 Mbit/s
95th percentile per-packet one-way delay: 31.780 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.31 Mbit/s
95th percentile per-packet one-way delay: 31.456 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.02 Mbit/s
95th percentile per-packet one-way delay: 32.111 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 32.010 ms
Loss rate: 0.00%
```

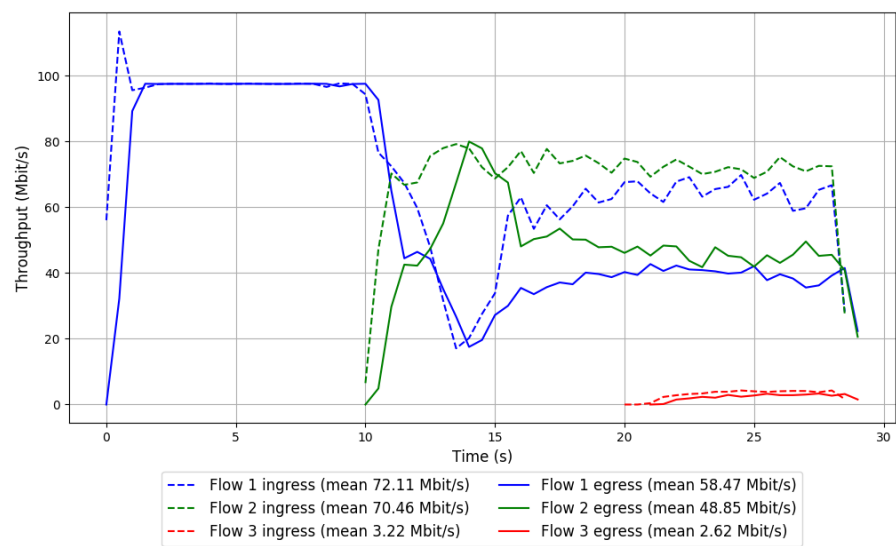Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-06-28 00:51:07
End at: 2019-06-28 00:51:37
Local clock offset: -7.309 ms
Remote clock offset: -6.49 ms


# Below is generated by plot.py at 2019-06-28 02:52:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 57.857 ms
Loss rate: 17.80%
-- Flow 1:
Average throughput: 61.32 Mbit/s
95th percentile per-packet one-way delay: 55.283 ms
Loss rate: 13.78%
-- Flow 2:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 60.350 ms
Loss rate: 24.82%
-- Flow 3:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 61.050 ms
Loss rate: 26.86%
```

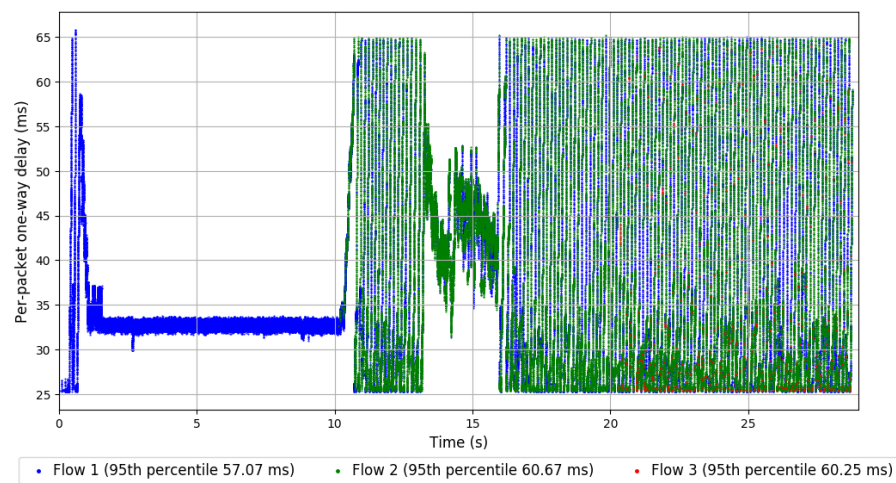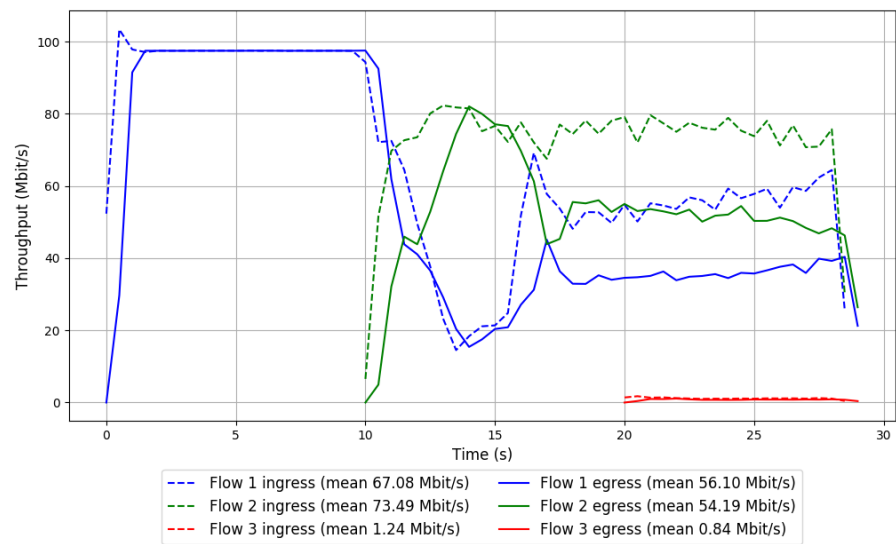Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-06-28 01:19:20
End at: 2019-06-28 01:19:50
Local clock offset: -2.56 ms
Remote clock offset: -5.617 ms


# Below is generated by plot.py at 2019-06-28 02:52:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.75 Mbit/s
95th percentile per-packet one-way delay: 56.139 ms
Loss rate: 10.58%
-- Flow 1:
Average throughput: 48.73 Mbit/s
95th percentile per-packet one-way delay: 48.678 ms
Loss rate: 8.55%
-- Flow 2:
Average throughput: 65.42 Mbit/s
95th percentile per-packet one-way delay: 57.968 ms
Loss rate: 11.73%
-- Flow 3:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 61.334 ms
Loss rate: 25.79%
```

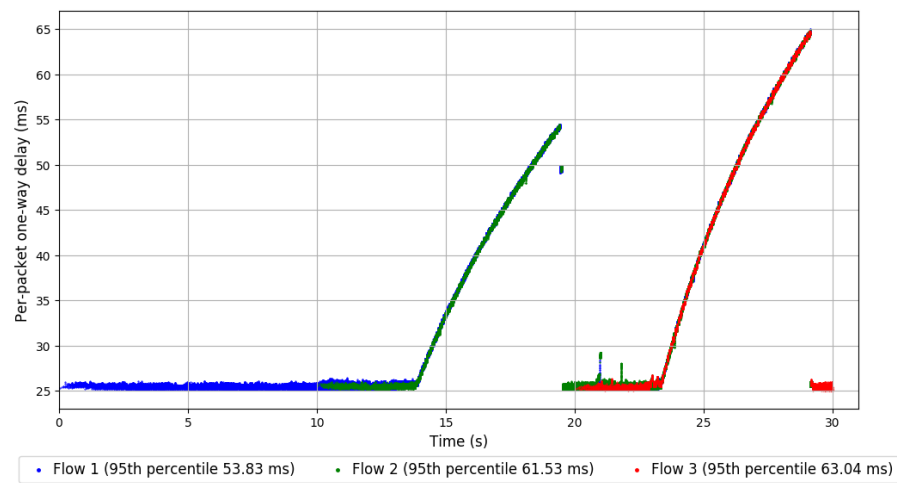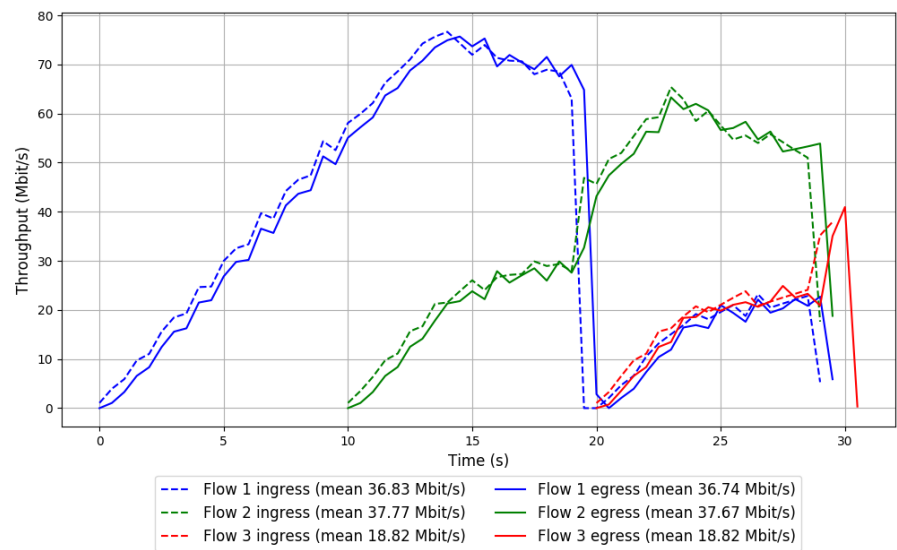Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-06-28 01:46:34
End at: 2019-06-28 01:47:04
Local clock offset: -2.358 ms
Remote clock offset: -4.609 ms

# Below is generated by plot.py at 2019-06-28 02:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.65 Mbit/s
95th percentile per-packet one-way delay: 53.935 ms
Loss rate: 11.38%
-- Flow 1:
Average throughput: 51.00 Mbit/s
95th percentile per-packet one-way delay: 49.964 ms
Loss rate: 8.81%
-- Flow 2:
Average throughput: 61.27 Mbit/s
95th percentile per-packet one-way delay: 55.900 ms
Loss rate: 13.06%
-- Flow 3:
Average throughput: 9.77 Mbit/s
95th percentile per-packet one-way delay: 61.277 ms
Loss rate: 28.21%
```

Run 3: Report of Indigo-MusesT — Data Link

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-06-28 02:13:58
End at: 2019-06-28 02:14:28
Local clock offset: 1.304 ms
Remote clock offset: -3.933 ms


# Below is generated by plot.py at 2019-06-28 02:52:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.80 Mbit/s
95th percentile per-packet one-way delay: 59.204 ms
Loss rate: 23.50%
-- Flow 1:
Average throughput: 58.47 Mbit/s
95th percentile per-packet one-way delay: 57.518 ms
Loss rate: 18.90%
-- Flow 2:
Average throughput: 48.85 Mbit/s
95th percentile per-packet one-way delay: 61.020 ms
Loss rate: 30.67%
-- Flow 3:
Average throughput: 2.62 Mbit/s
95th percentile per-packet one-way delay: 61.357 ms
Loss rate: 28.14%
```

Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-06-28 02:42:23
End at: 2019-06-28 02:42:53
Local clock offset: 0.91 ms
Remote clock offset: -3.591 ms


# Below is generated by plot.py at 2019-06-28 02:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.49 Mbit/s
95th percentile per-packet one-way delay: 59.012 ms
Loss rate: 20.42%
-- Flow 1:
Average throughput: 56.10 Mbit/s
95th percentile per-packet one-way delay: 57.069 ms
Loss rate: 16.28%
-- Flow 2:
Average throughput: 54.19 Mbit/s
95th percentile per-packet one-way delay: 60.671 ms
Loss rate: 26.16%
-- Flow 3:
Average throughput: 0.84 Mbit/s
95th percentile per-packet one-way delay: 60.252 ms
Loss rate: 31.92%
```
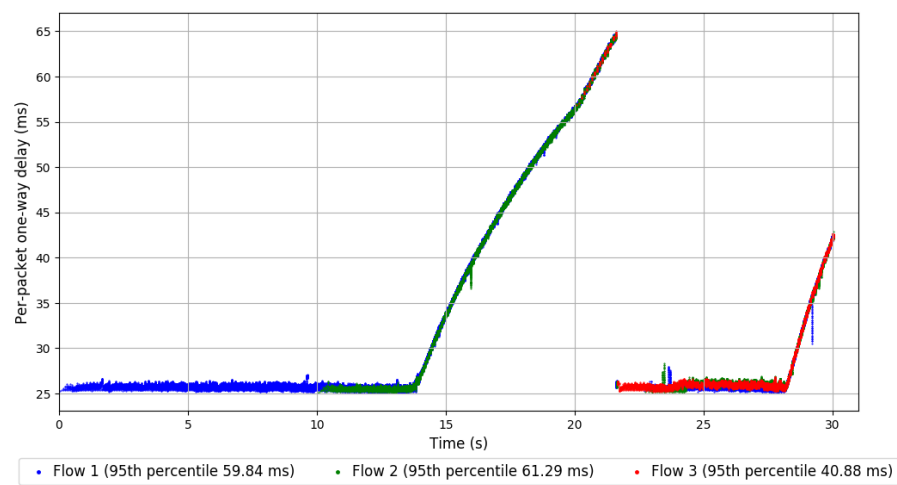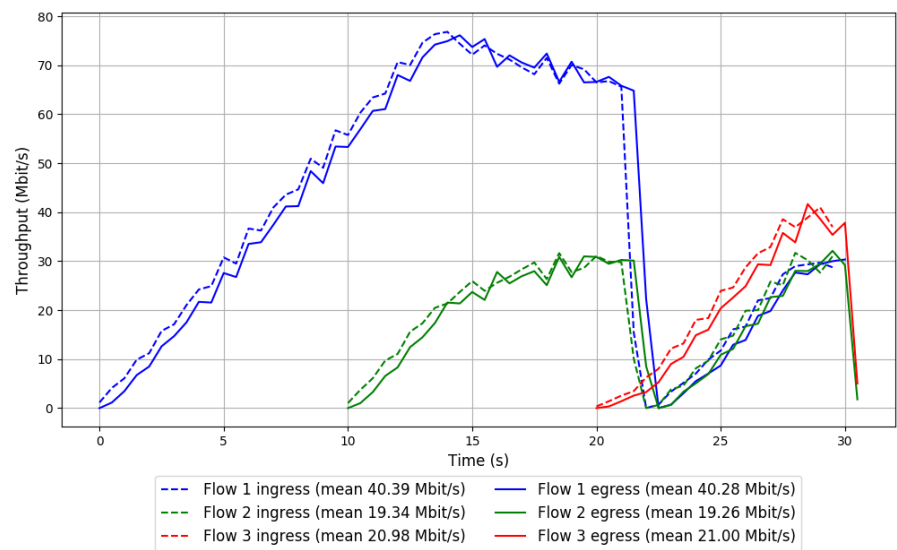
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-06-28 00:38:39
End at: 2019-06-28 00:39:09
Local clock offset: -8.239 ms
Remote clock offset: -6.894 ms

# Below is generated by plot.py at 2019-06-28 02:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.05 Mbit/s
95th percentile per-packet one-way delay: 60.046 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 36.74 Mbit/s
95th percentile per-packet one-way delay: 53.831 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 37.67 Mbit/s
95th percentile per-packet one-way delay: 61.526 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 18.82 Mbit/s
95th percentile per-packet one-way delay: 63.039 ms
Loss rate: 0.00%
```
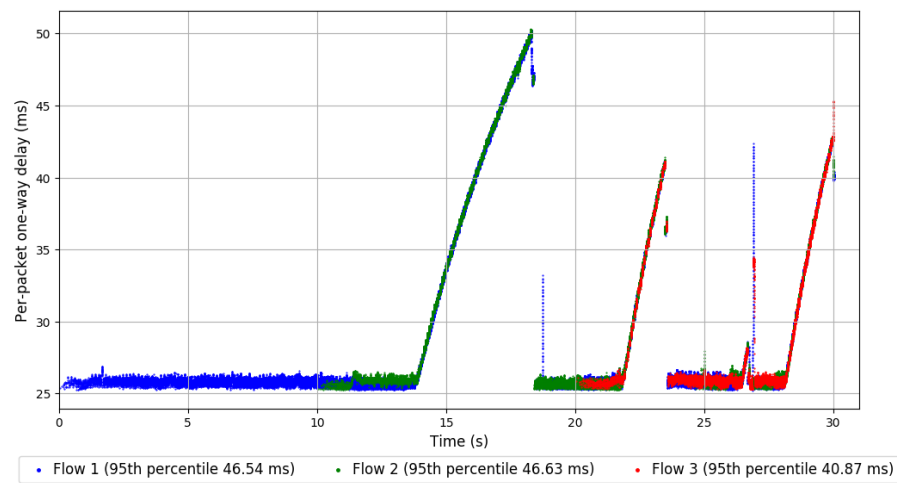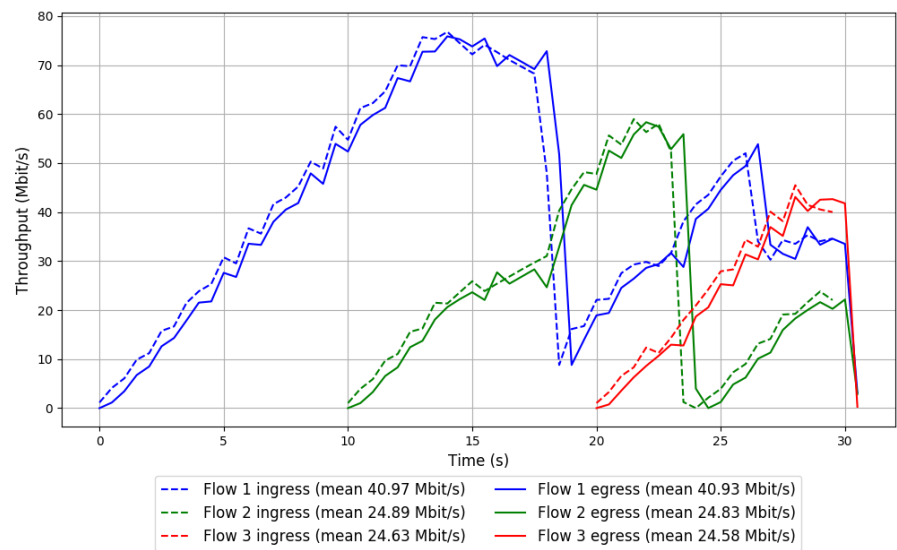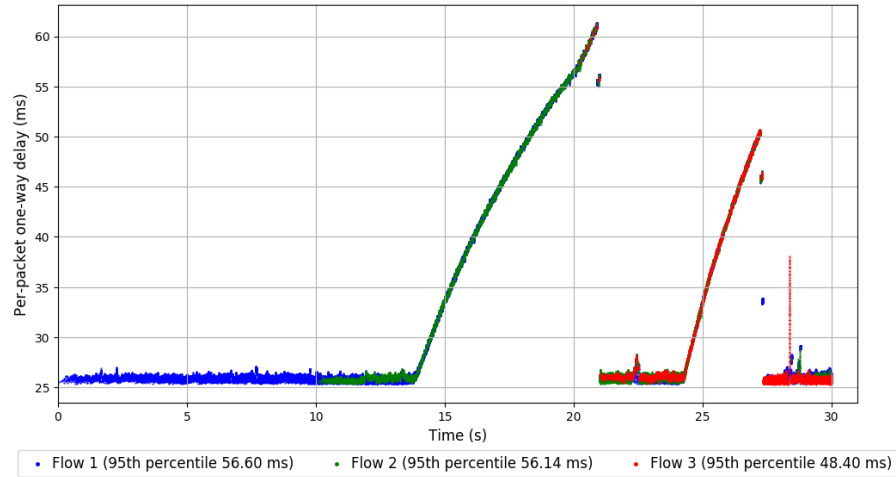
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 36.83 Mbit/s)   Flow 1 egress (mean 36.74 Mbit/s)
Flow 2 ingress (mean 37.77 Mbit/s)   Flow 2 egress (mean 37.67 Mbit/s)
Flow 3 ingress (mean 18.82 Mbit/s)   Flow 3 egress (mean 18.82 Mbit/s)

Flow 1 (95th percentile 53.83 ms)   Flow 2 (95th percentile 61.53 ms)   Flow 3 (95th percentile 63.04 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2019-06-28 01:06:32
End at: 2019-06-28 01:07:02
Local clock offset: -3.271 ms
Remote clock offset: -6.129 ms


# Below is generated by plot.py at 2019-06-28 02:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.01 Mbit/s
95th percentile per-packet one-way delay: 59.706 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 41.15 Mbit/s
95th percentile per-packet one-way delay: 59.745 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 61.086 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 20.91 Mbit/s
95th percentile per-packet one-way delay: 41.610 ms
Loss rate: 0.04%
```
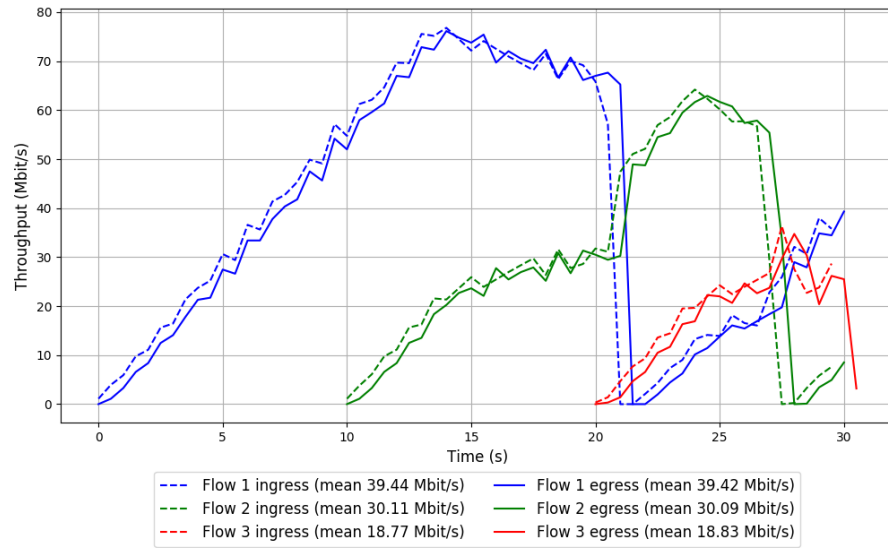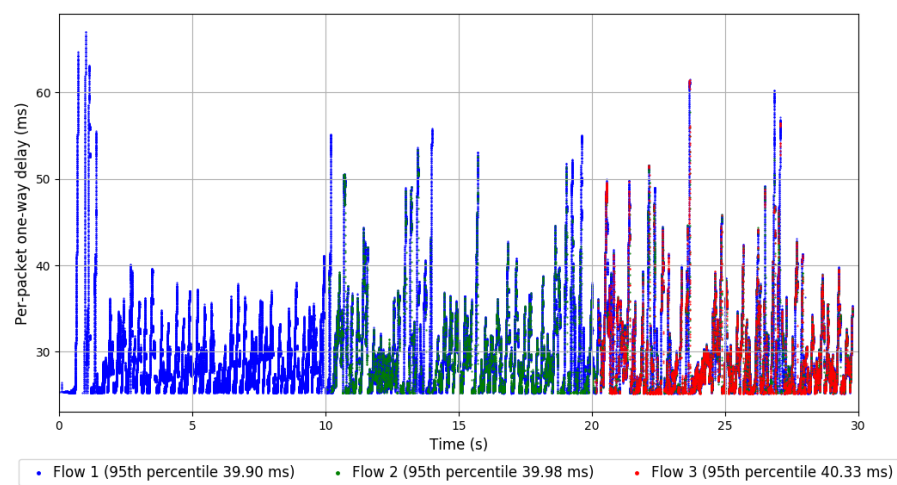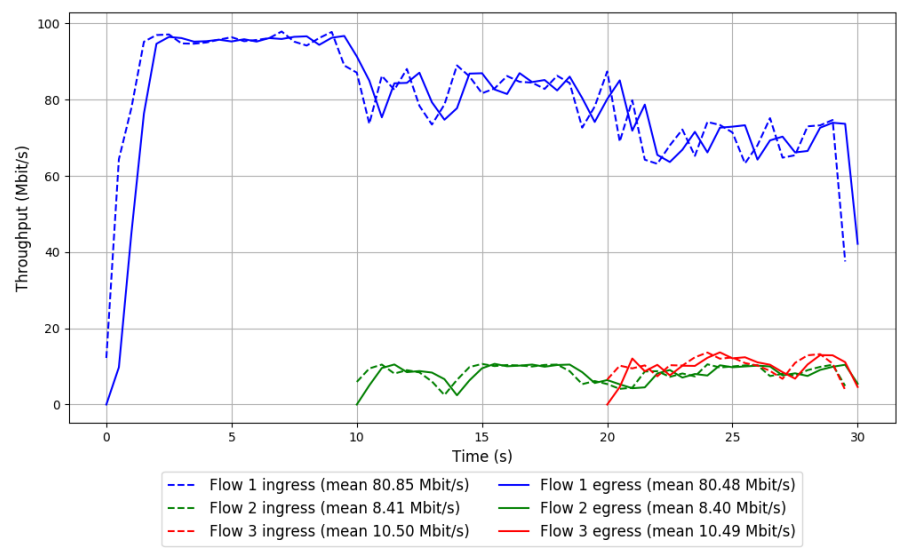
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 41.19 Mbit/s) — — — Flow 1 egress (mean 41.15 Mbit/s)
Flow 2 ingress (mean 19.52 Mbit/s) — — — Flow 2 egress (mean 19.46 Mbit/s)
Flow 3 ingress (mean 20.89 Mbit/s) — — — Flow 3 egress (mean 20.91 Mbit/s)

Flow 1 (95th percentile 59.74 ms)   Flow 2 (95th percentile 61.09 ms)   Flow 3 (95th percentile 41.61 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-06-28 01:34:13
End at: 2019-06-28 01:34:43
Local clock offset: -2.496 ms
Remote clock offset: -5.03 ms

# Below is generated by plot.py at 2019-06-28 02:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.02 Mbit/s
95th percentile per-packet one-way delay: 59.858 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 40.28 Mbit/s
95th percentile per-packet one-way delay: 59.842 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 19.26 Mbit/s
95th percentile per-packet one-way delay: 61.288 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 21.00 Mbit/s
95th percentile per-packet one-way delay: 40.881 ms
Loss rate: 0.04%
```

Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-06-28 02:01:31
End at: 2019-06-28 02:02:01
Local clock offset: 0.339 ms
Remote clock offset: -4.095 ms


# Below is generated by plot.py at 2019-06-28 02:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 46.083 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 40.93 Mbit/s
95th percentile per-packet one-way delay: 46.544 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 24.83 Mbit/s
95th percentile per-packet one-way delay: 46.633 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 40.871 ms
Loss rate: 0.01%
```
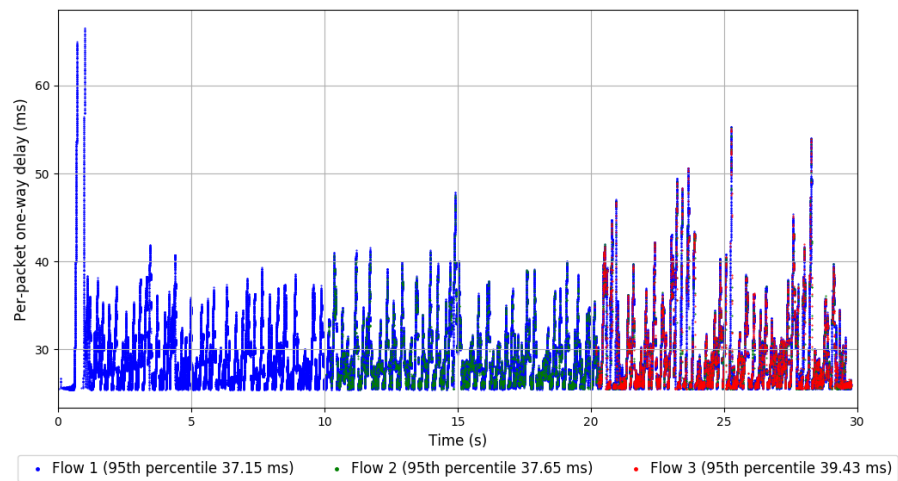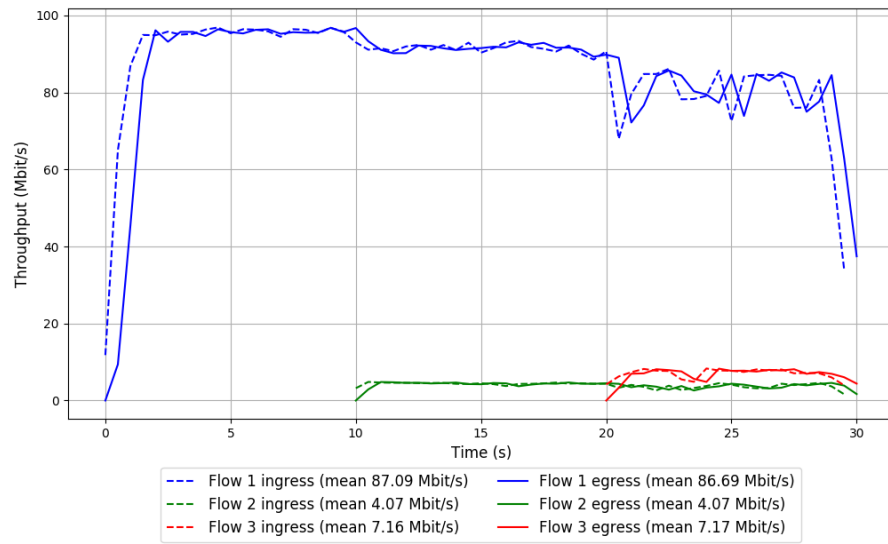
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-06-28 02:29:34
End at: 2019-06-28 02:30:04
Local clock offset: 0.828 ms
Remote clock offset: -3.745 ms


# Below is generated by plot.py at 2019-06-28 02:53:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.63 Mbit/s
95th percentile per-packet one-way delay: 56.139 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 39.42 Mbit/s
95th percentile per-packet one-way delay: 56.604 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 30.09 Mbit/s
95th percentile per-packet one-way delay: 56.139 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 18.83 Mbit/s
95th percentile per-packet one-way delay: 48.402 ms
Loss rate: 0.03%
```

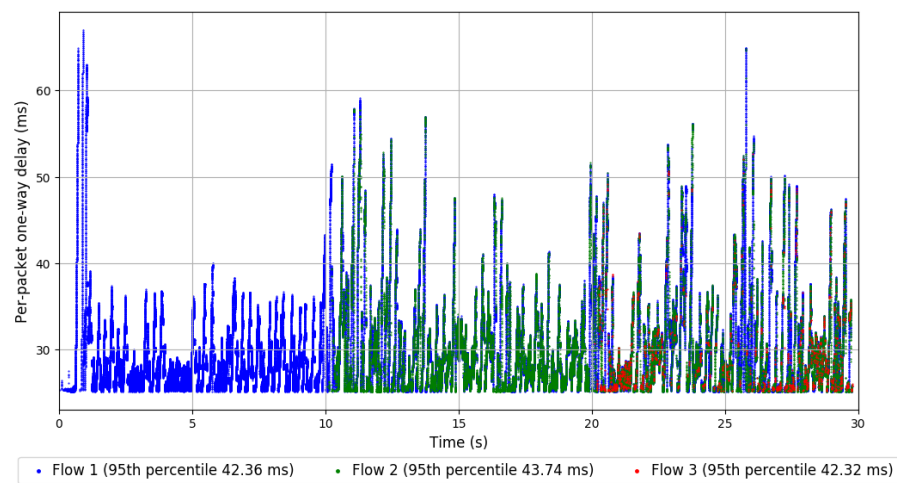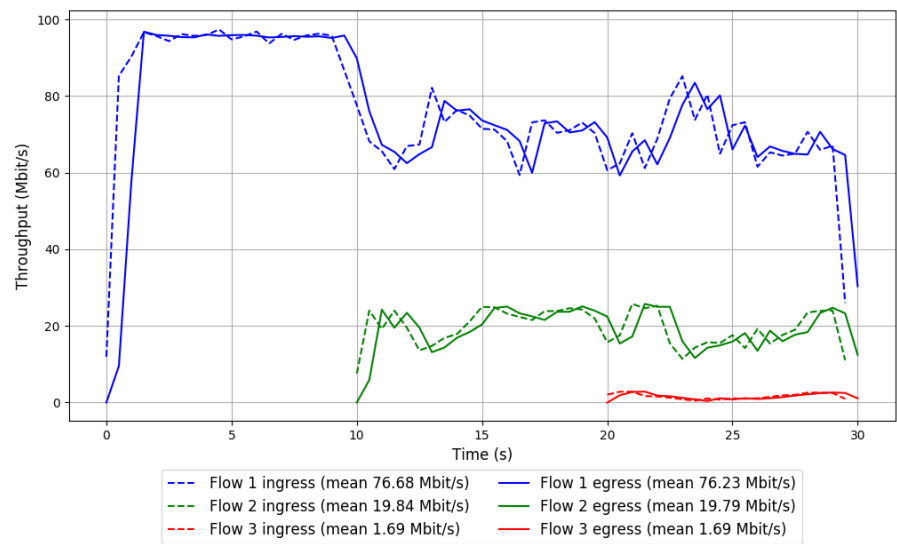## Run 5: Report of LEDBAT — Data Link

114

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 00:31:15
End at: 2019-06-28 00:31:45
Local clock offset: -7.42 ms
Remote clock offset: -6.926 ms


# Below is generated by plot.py at 2019-06-28 02:53:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.46 Mbit/s
95th percentile per-packet one-way delay: 39.929 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 80.48 Mbit/s
95th percentile per-packet one-way delay: 39.895 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 39.981 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 40.327 ms
Loss rate: 0.02%
```

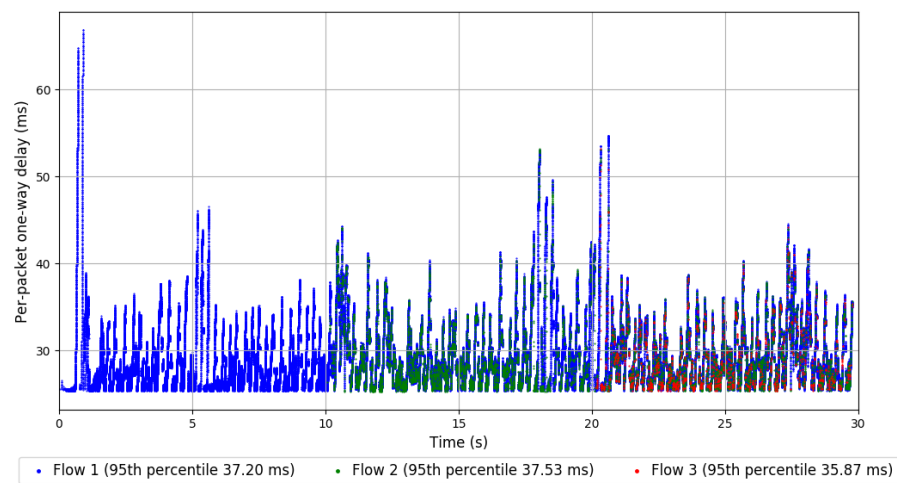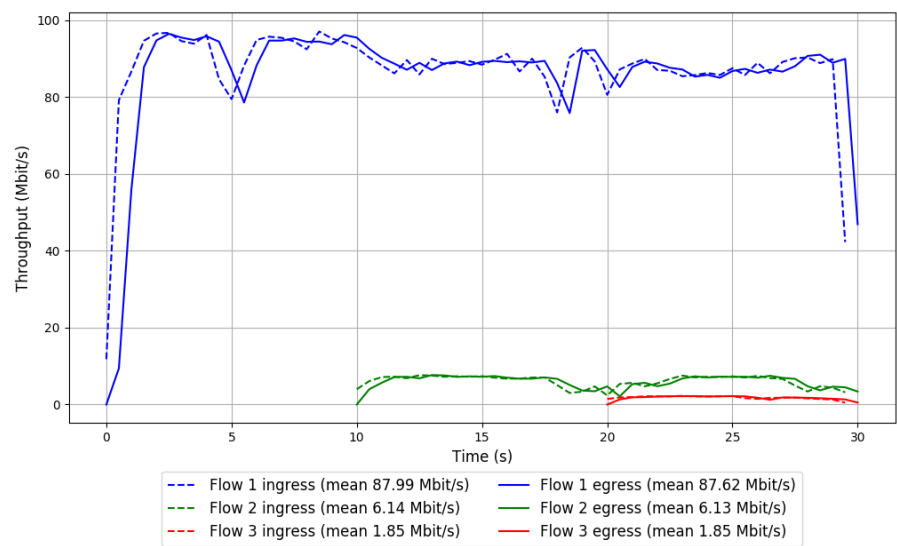Run 1: Report of Muses_DecisionTree — Data Link

- - - - Flow 1 ingress (mean 80.85 Mbit/s)   —— Flow 1 egress (mean 80.48 Mbit/s)
- - - - Flow 2 ingress (mean 8.41 Mbit/s)   —— Flow 2 egress (mean 8.40 Mbit/s)
- - - - Flow 3 ingress (mean 10.50 Mbit/s)   —— Flow 3 egress (mean 10.49 Mbit/s)

• Flow 1 (95th percentile 39.90 ms)   • Flow 2 (95th percentile 39.98 ms)   • Flow 3 (95th percentile 40.33 ms)

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 00:58:51
End at: 2019-06-28 00:59:21
Local clock offset: -4.502 ms
Remote clock offset: -6.199 ms


# Below is generated by plot.py at 2019-06-28 02:53:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 37.243 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 86.69 Mbit/s
95th percentile per-packet one-way delay: 37.145 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 37.653 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 39.426 ms
Loss rate: 0.00%
```
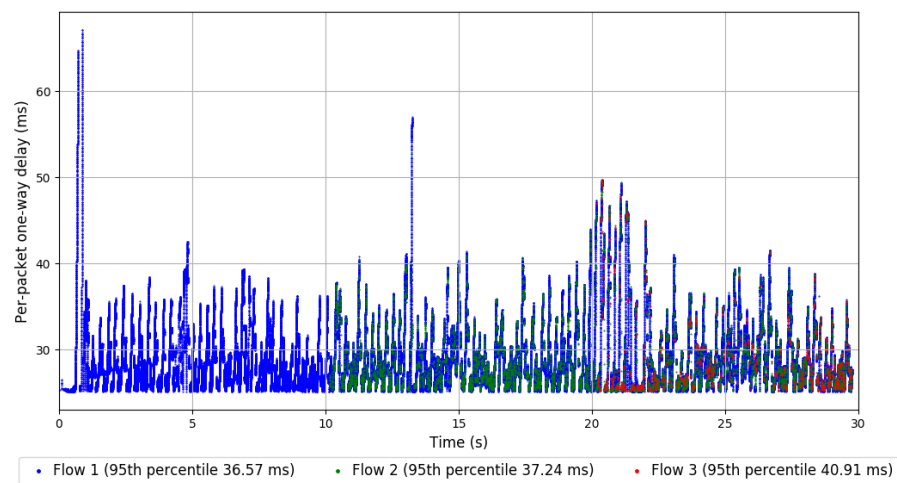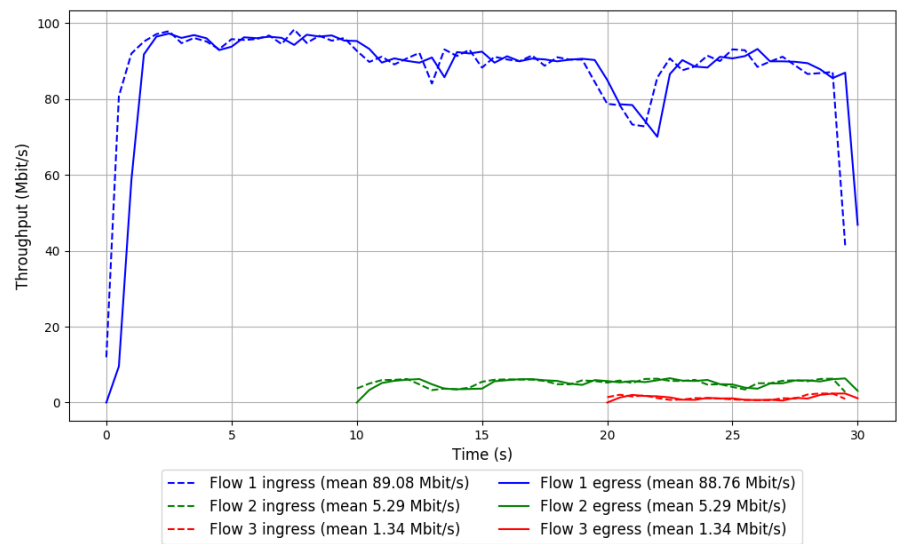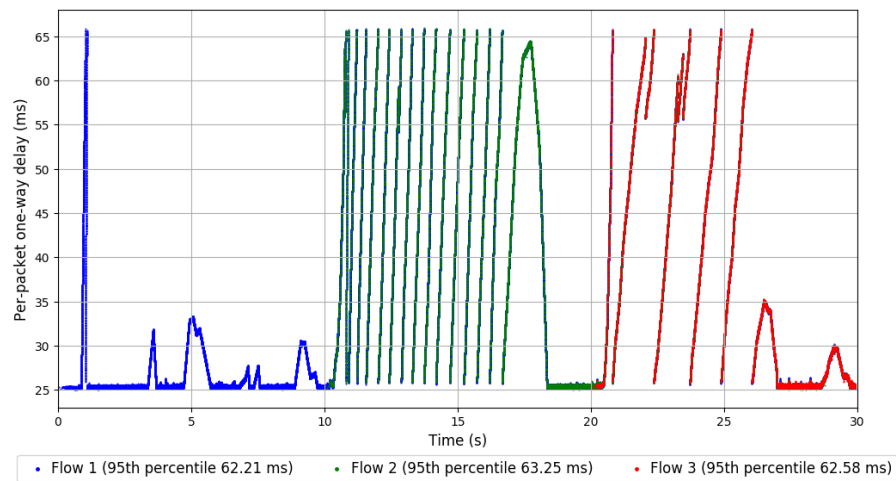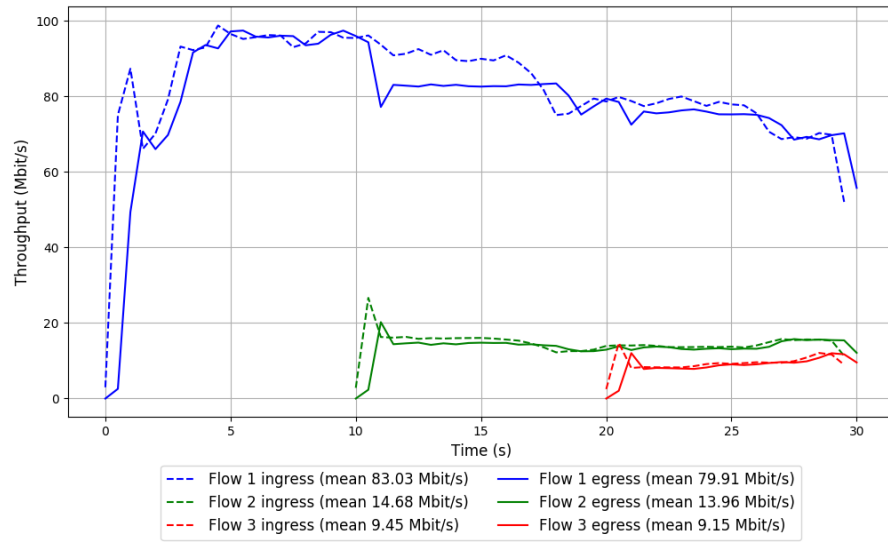
Run 2: Report of Muses_DecisionTree — Data Link

- - - - Flow 1 ingress (mean 87.09 Mbit/s) ——— Flow 1 egress (mean 86.69 Mbit/s)
- - - - Flow 2 ingress (mean 4.07 Mbit/s) ——— Flow 2 egress (mean 4.07 Mbit/s)
- - - - Flow 3 ingress (mean 7.16 Mbit/s) ——— Flow 3 egress (mean 7.17 Mbit/s)

- Flow 1 (95th percentile 37.15 ms) - Flow 2 (95th percentile 37.65 ms) - Flow 3 (95th percentile 39.43 ms)

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 01:26:56
End at: 2019-06-28 01:27:26
Local clock offset: -2.539 ms
Remote clock offset: -5.194 ms


# Below is generated by plot.py at 2019-06-28 02:53:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.88 Mbit/s
95th percentile per-packet one-way delay: 42.589 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 76.23 Mbit/s
95th percentile per-packet one-way delay: 42.356 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 19.79 Mbit/s
95th percentile per-packet one-way delay: 43.741 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 42.323 ms
Loss rate: 0.07%
```

Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 01:54:00
End at: 2019-06-28 01:54:30
Local clock offset: -0.77 ms
Remote clock offset: -4.363 ms

# Below is generated by plot.py at 2019-06-28 02:53:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.28 Mbit/s
95th percentile per-packet one-way delay: 37.209 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 87.62 Mbit/s
95th percentile per-packet one-way delay: 37.204 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 37.526 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 35.866 ms
Loss rate: 0.07%
```

Run 4: Report of Muses_DecisionTree — Data Link

- - - - Flow 1 ingress (mean 87.99 Mbit/s)   —— Flow 1 egress (mean 87.62 Mbit/s)
- - - - Flow 2 ingress (mean 6.14 Mbit/s)   —— Flow 2 egress (mean 6.13 Mbit/s)
- - - - Flow 3 ingress (mean 1.85 Mbit/s)   —— Flow 3 egress (mean 1.85 Mbit/s)

- Flow 1 (95th percentile 37.20 ms)   • Flow 2 (95th percentile 37.53 ms)   • Flow 3 (95th percentile 35.87 ms)

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-06-28 02:21:43
End at: 2019-06-28 02:22:13
Local clock offset: 1.163 ms
Remote clock offset: -3.94 ms


# Below is generated by plot.py at 2019-06-28 02:54:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.69 Mbit/s
95th percentile per-packet one-way delay: 36.618 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 88.76 Mbit/s
95th percentile per-packet one-way delay: 36.567 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 37.241 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 40.912 ms
Loss rate: 0.00%
```

Run 5: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 89.08 Mbit/s) --- Flow 1 egress (mean 88.76 Mbit/s)
Flow 2 ingress (mean 5.29 Mbit/s) --- Flow 2 egress (mean 5.29 Mbit/s)
Flow 3 ingress (mean 1.34 Mbit/s) --- Flow 3 egress (mean 1.34 Mbit/s)

Flow 1 (95th percentile 36.57 ms)   Flow 2 (95th percentile 37.24 ms)   Flow 3 (95th percentile 40.91 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-06-28 00:27:32
End at: 2019-06-28 00:28:02
Local clock offset: -6.996 ms
Remote clock offset: -6.862 ms


# Below is generated by plot.py at 2019-06-28 02:54:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.21 Mbit/s
95th percentile per-packet one-way delay: 62.423 ms
Loss rate: 3.86%
-- Flow 1:
Average throughput: 79.91 Mbit/s
95th percentile per-packet one-way delay: 62.213 ms
Loss rate: 3.77%
-- Flow 2:
Average throughput: 13.96 Mbit/s
95th percentile per-packet one-way delay: 63.251 ms
Loss rate: 4.87%
-- Flow 3:
Average throughput: 9.15 Mbit/s
95th percentile per-packet one-way delay: 62.583 ms
Loss rate: 3.10%
```

Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-06-28 00:54:57
End at: 2019-06-28 00:55:27
Local clock offset: -5.541 ms
Remote clock offset: -6.402 ms


# Below is generated by plot.py at 2019-06-28 02:54:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.55 Mbit/s
95th percentile per-packet one-way delay: 57.343 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 82.50 Mbit/s
95th percentile per-packet one-way delay: 57.146 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 9.23 Mbit/s
95th percentile per-packet one-way delay: 58.942 ms
Loss rate: 1.91%
-- Flow 3:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 58.356 ms
Loss rate: 2.55%
```
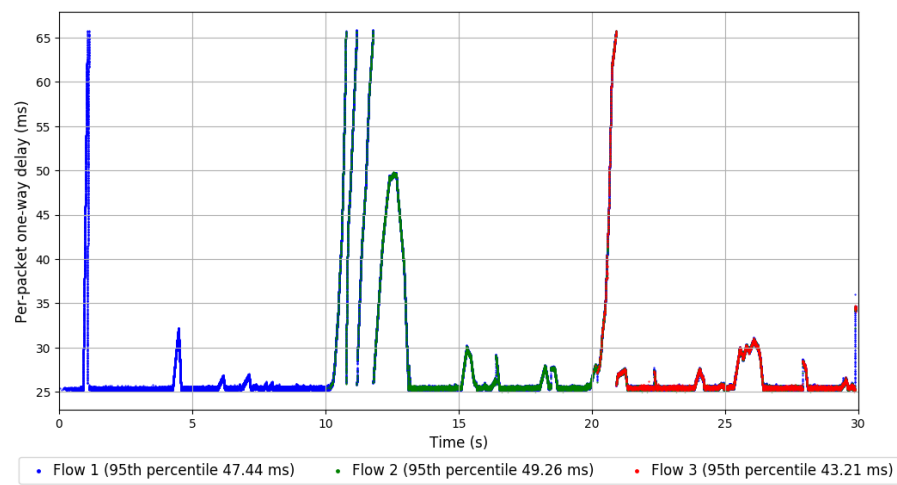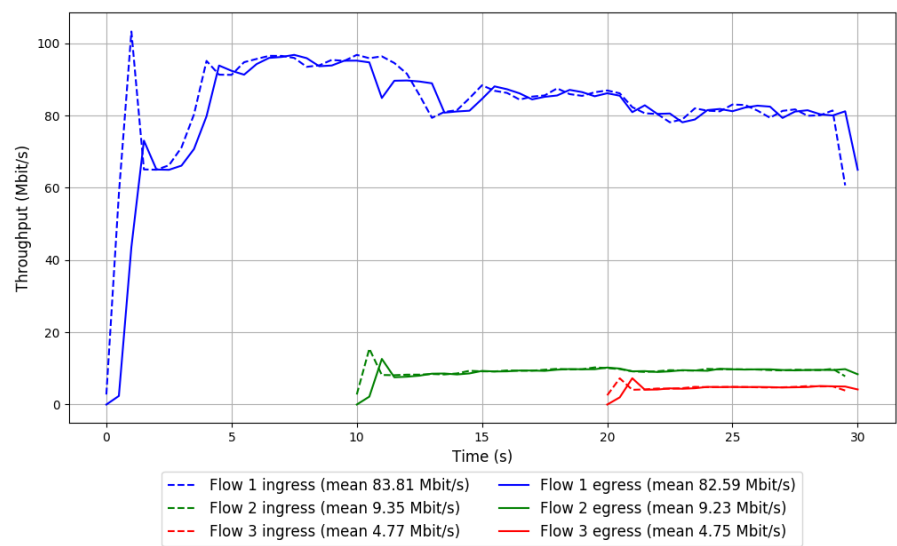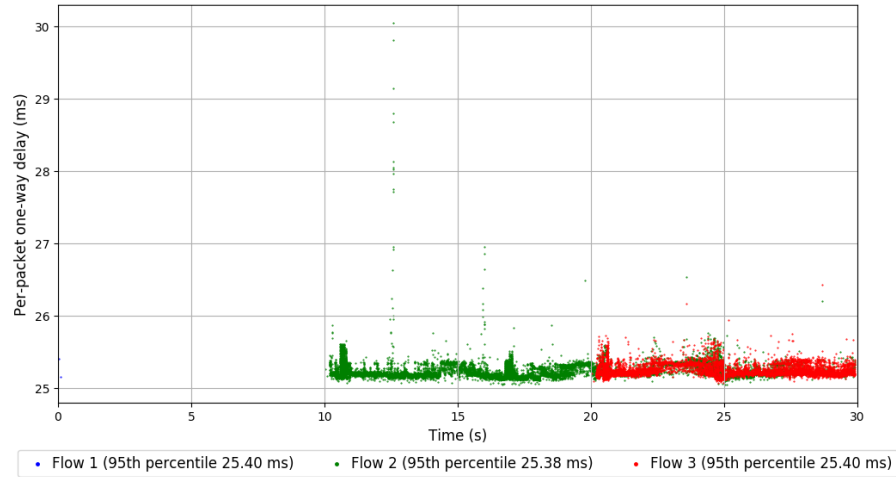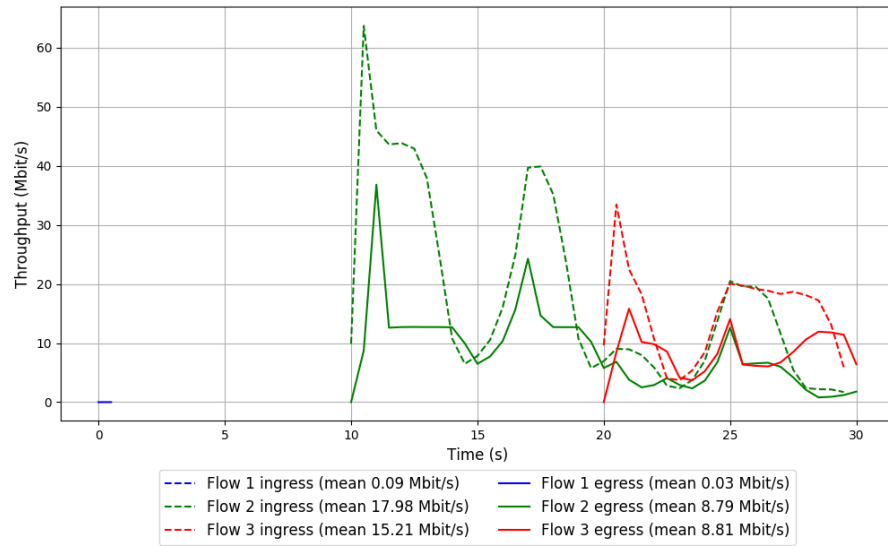
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-06-28 01:23:10
End at: 2019-06-28 01:23:40
Local clock offset: -2.572 ms
Remote clock offset: -5.409 ms


# Below is generated by plot.py at 2019-06-28 02:54:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.06 Mbit/s
95th percentile per-packet one-way delay: 51.447 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 81.61 Mbit/s
95th percentile per-packet one-way delay: 50.798 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 11.70 Mbit/s
95th percentile per-packet one-way delay: 52.865 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 59.836 ms
Loss rate: 1.62%
```
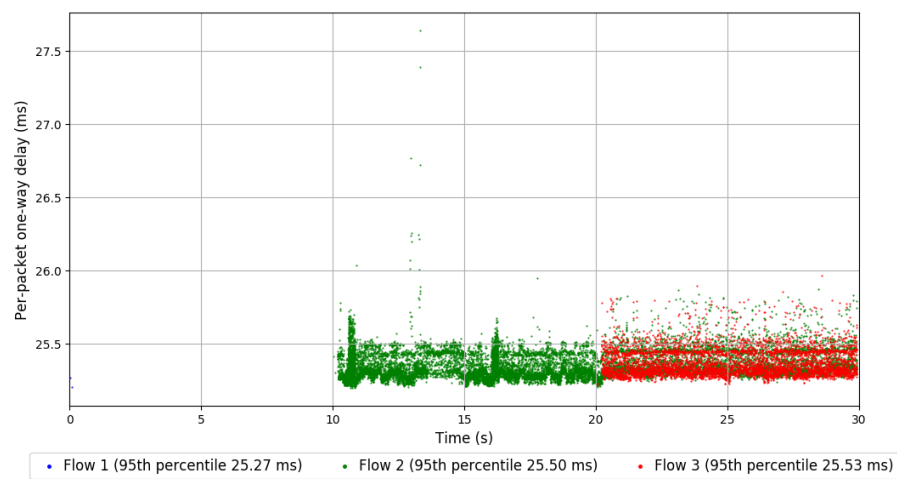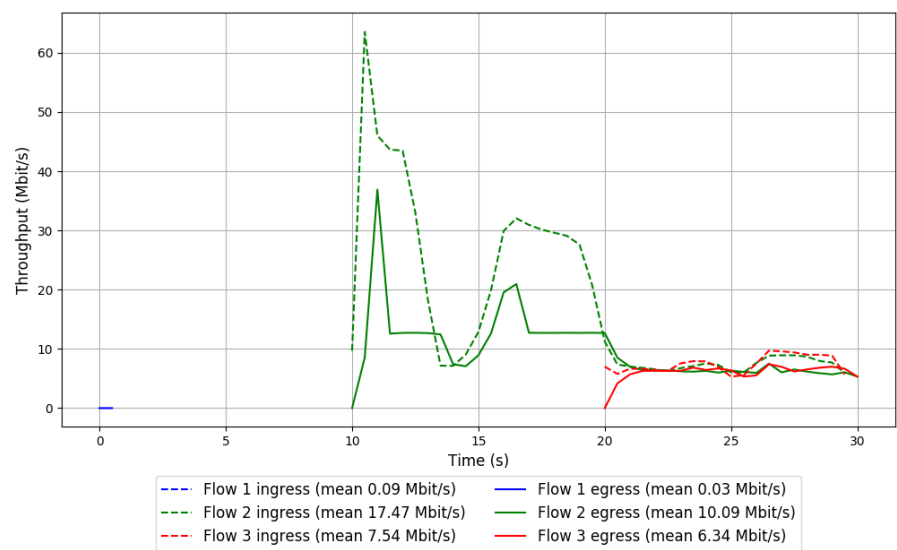
Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 82.75 Mbit/s)   Flow 1 egress (mean 81.61 Mbit/s)
Flow 2 ingress (mean 11.83 Mbit/s)   Flow 2 egress (mean 11.70 Mbit/s)
Flow 3 ingress (mean 8.23 Mbit/s)   Flow 3 egress (mean 8.09 Mbit/s)

Flow 1 (95th percentile 50.80 ms)   Flow 2 (95th percentile 52.87 ms)   Flow 3 (95th percentile 59.84 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-06-28 01:50:15
End at: 2019-06-28 01:50:45
Local clock offset: -1.715 ms
Remote clock offset: -4.456 ms


# Below is generated by plot.py at 2019-06-28 02:54:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.09 Mbit/s
95th percentile per-packet one-way delay: 60.446 ms
Loss rate: 4.82%
-- Flow 1:
Average throughput: 76.84 Mbit/s
95th percentile per-packet one-way delay: 60.278 ms
Loss rate: 4.77%
-- Flow 2:
Average throughput: 16.05 Mbit/s
95th percentile per-packet one-way delay: 61.375 ms
Loss rate: 5.60%
-- Flow 3:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 60.023 ms
Loss rate: 3.13%
```
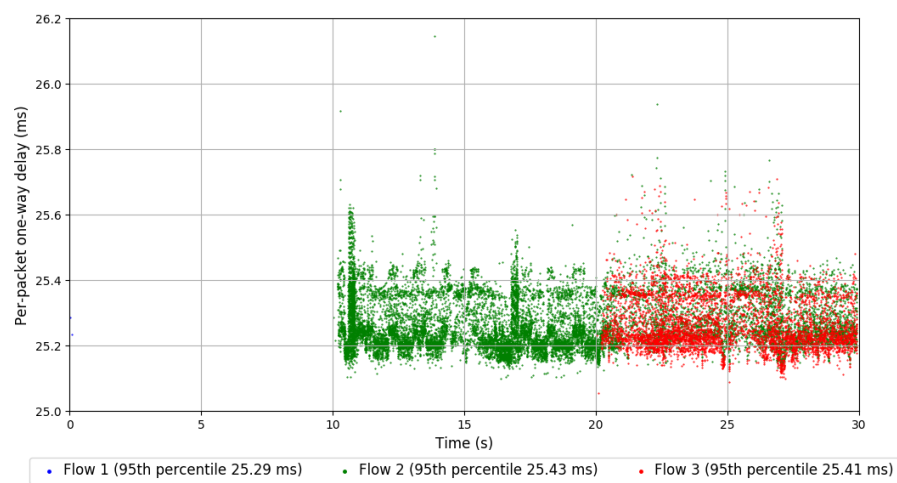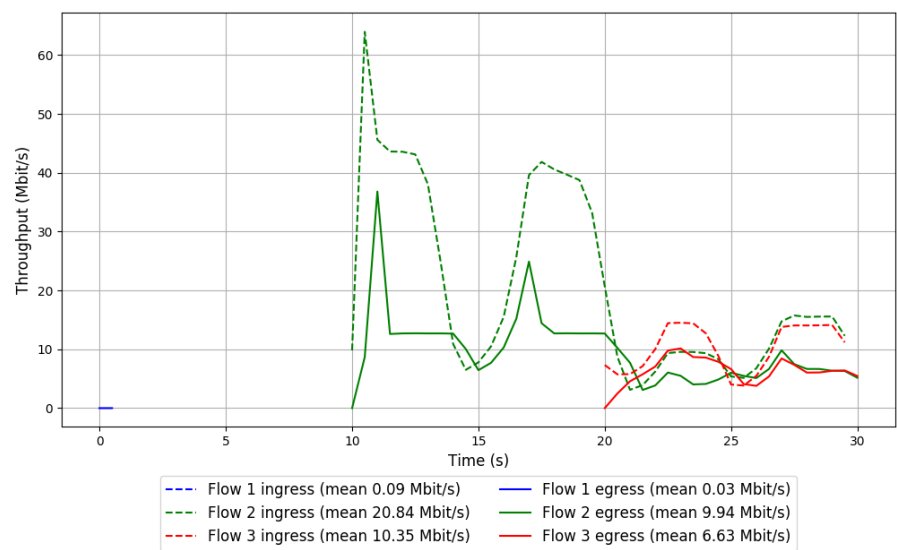
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-06-28 02:17:52
End at: 2019-06-28 02:18:22
Local clock offset: 1.532 ms
Remote clock offset: -3.87 ms


# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.29 Mbit/s
95th percentile per-packet one-way delay: 47.615 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 82.59 Mbit/s
95th percentile per-packet one-way delay: 47.439 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 9.23 Mbit/s
95th percentile per-packet one-way delay: 49.258 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 4.75 Mbit/s
95th percentile per-packet one-way delay: 43.206 ms
Loss rate: 0.34%
```

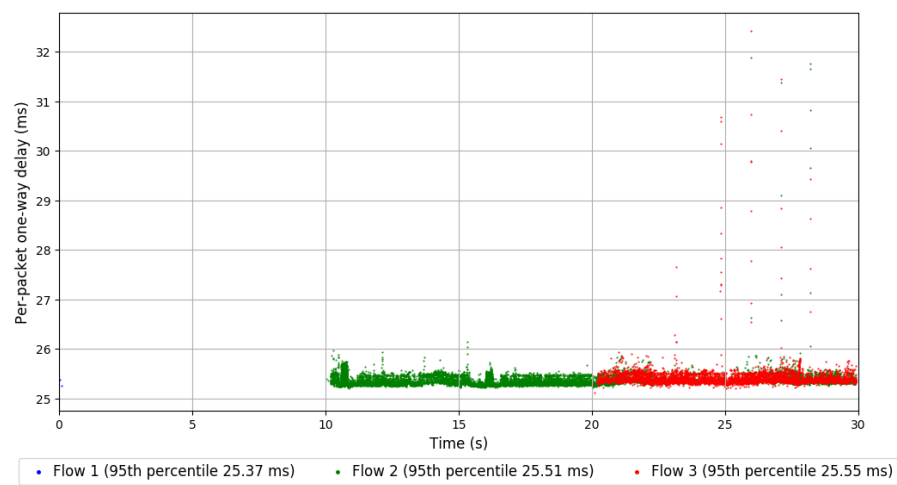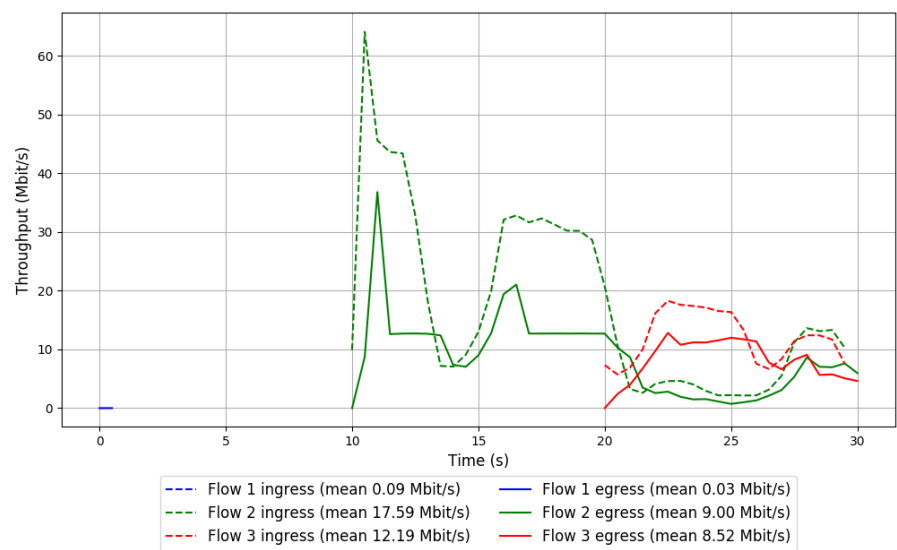Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-06-28 00:39:54
End at: 2019-06-28 00:40:24
Local clock offset: -8.373 ms
Remote clock offset: -6.844 ms


# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.76 Mbit/s
95th percentile per-packet one-way delay: 25.388 ms
Loss rate: 48.43%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 25.402 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 8.79 Mbit/s
95th percentile per-packet one-way delay: 25.379 ms
Loss rate: 51.10%
-- Flow 3:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 25.401 ms
Loss rate: 42.06%
```
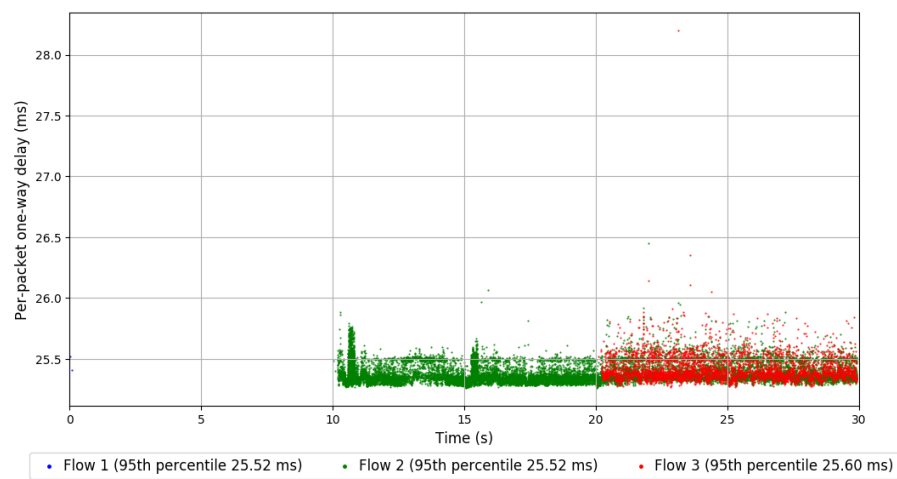
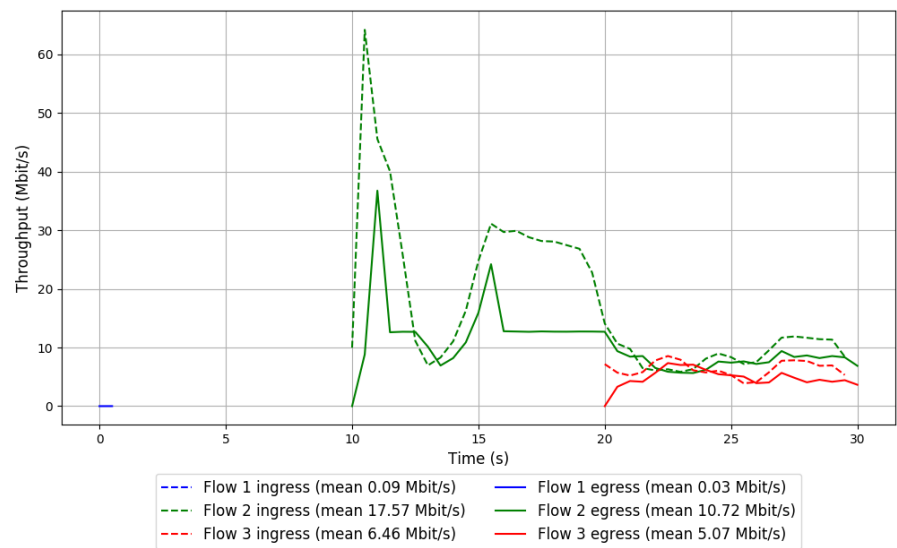Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-06-28 01:07:50
End at: 2019-06-28 01:08:20
Local clock offset: -3.157 ms
Remote clock offset: -6.154 ms

# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 25.508 ms
Loss rate: 37.62%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 25.266 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 25.502 ms
Loss rate: 42.27%
-- Flow 3:
Average throughput: 6.34 Mbit/s
95th percentile per-packet one-way delay: 25.528 ms
Loss rate: 15.91%
```

Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-06-28 01:35:26
End at: 2019-06-28 01:35:56
Local clock offset: -2.443 ms
Remote clock offset: -4.998 ms


# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 25.421 ms
Loss rate: 49.06%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 25.286 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.94 Mbit/s
95th percentile per-packet one-way delay: 25.425 ms
Loss rate: 52.30%
-- Flow 3:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 25.412 ms
Loss rate: 35.89%
```
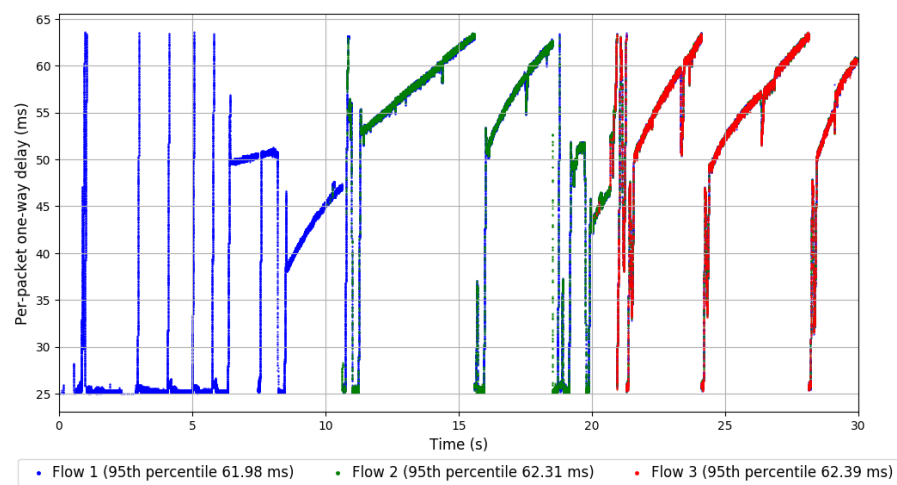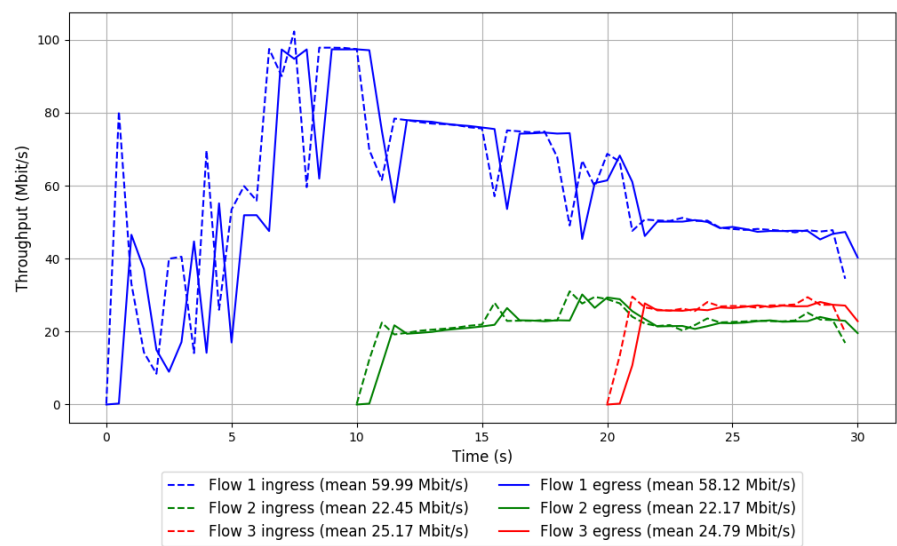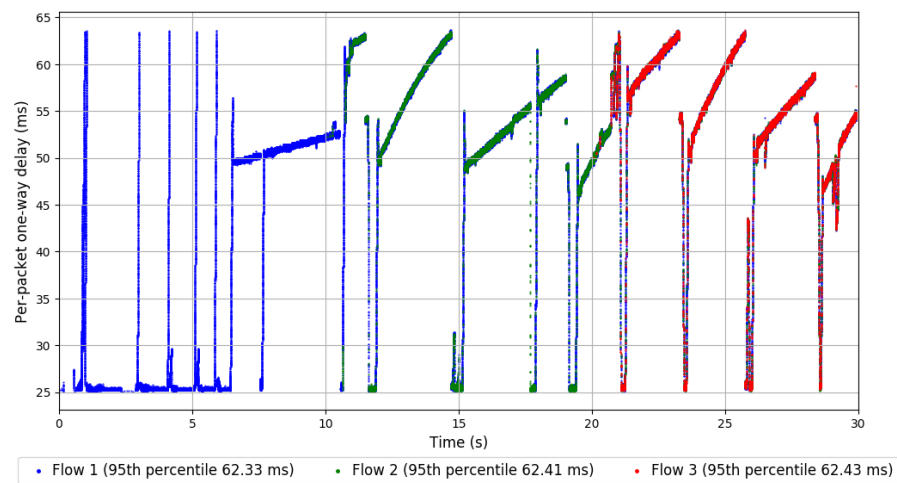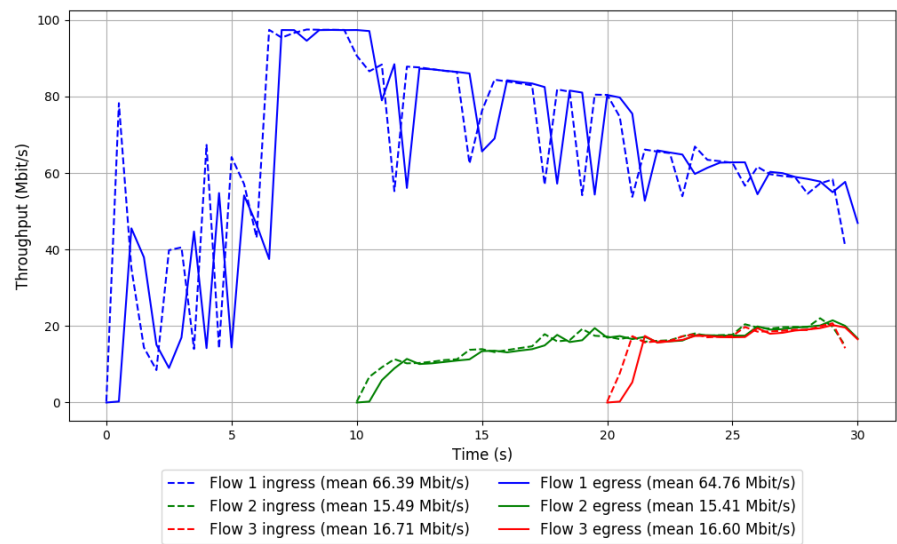
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.09 Mbit/s) --- Flow 1 egress (mean 0.03 Mbit/s)
Flow 2 ingress (mean 20.84 Mbit/s) --- Flow 2 egress (mean 9.94 Mbit/s)
Flow 3 ingress (mean 10.35 Mbit/s) --- Flow 3 egress (mean 6.63 Mbit/s)

Flow 1 (95th percentile 25.29 ms)   Flow 2 (95th percentile 25.43 ms)   Flow 3 (95th percentile 25.41 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-06-28 02:02:44
End at: 2019-06-28 02:03:14
Local clock offset: 0.447 ms
Remote clock offset: -4.092 ms


# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 25.526 ms
Loss rate: 44.04%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 25.372 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 25.511 ms
Loss rate: 48.84%
-- Flow 3:
Average throughput: 8.52 Mbit/s
95th percentile per-packet one-way delay: 25.552 ms
Loss rate: 30.11%
```

Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-06-28 02:30:51
End at: 2019-06-28 02:31:21
Local clock offset: 0.806 ms
Remote clock offset: -3.792 ms


# Below is generated by plot.py at 2019-06-28 02:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 25.546 ms
Loss rate: 36.29%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 25.521 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.72 Mbit/s
95th percentile per-packet one-way delay: 25.523 ms
Loss rate: 38.99%
-- Flow 3:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 25.597 ms
Loss rate: 21.49%
```
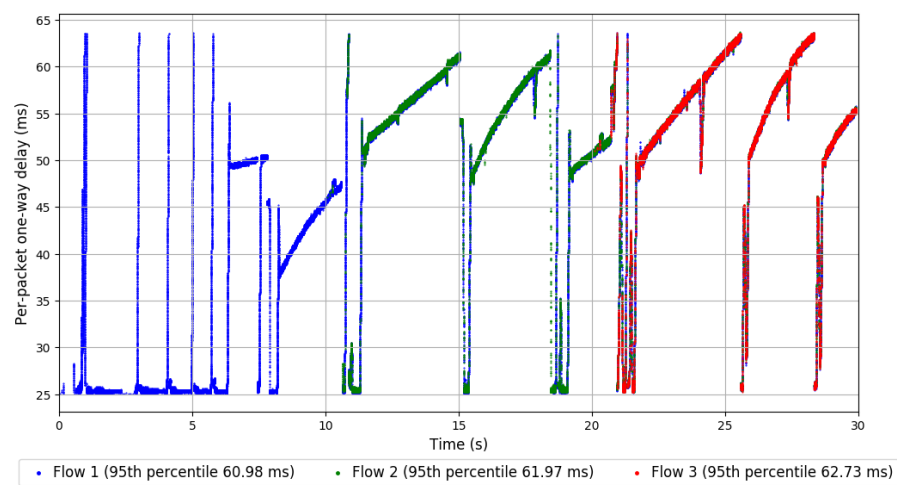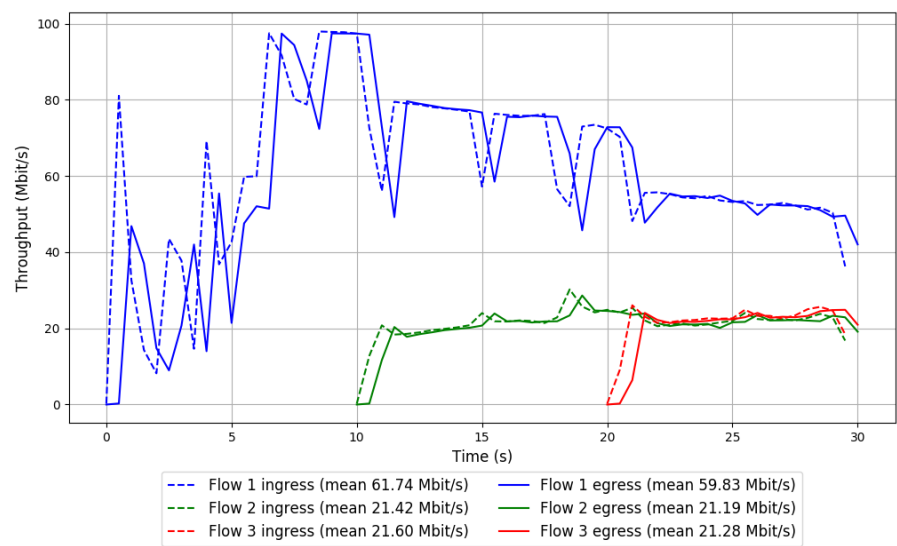
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-06-28 00:47:19
End at: 2019-06-28 00:47:49
Local clock offset: -9.231 ms
Remote clock offset: -6.7 ms


# Below is generated by plot.py at 2019-06-28 02:55:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.00 Mbit/s
95th percentile per-packet one-way delay: 62.095 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 58.12 Mbit/s
95th percentile per-packet one-way delay: 61.978 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 22.17 Mbit/s
95th percentile per-packet one-way delay: 62.306 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 24.79 Mbit/s
95th percentile per-packet one-way delay: 62.392 ms
Loss rate: 1.34%
```
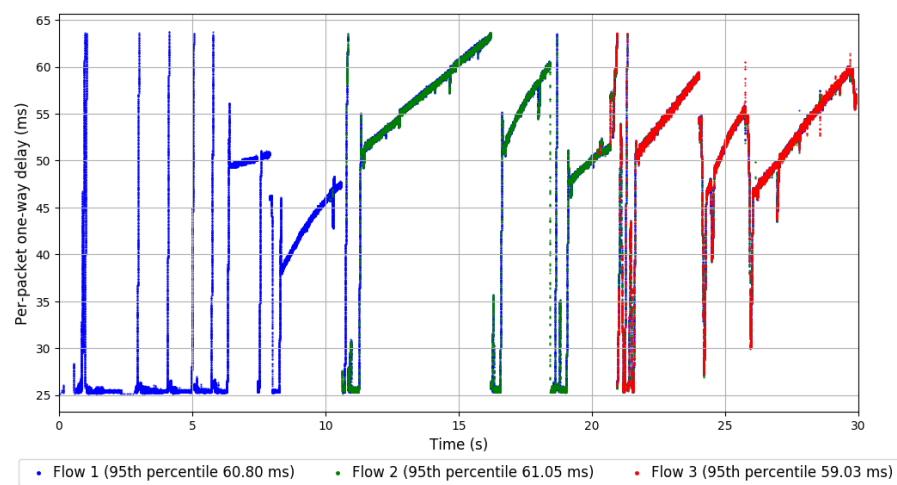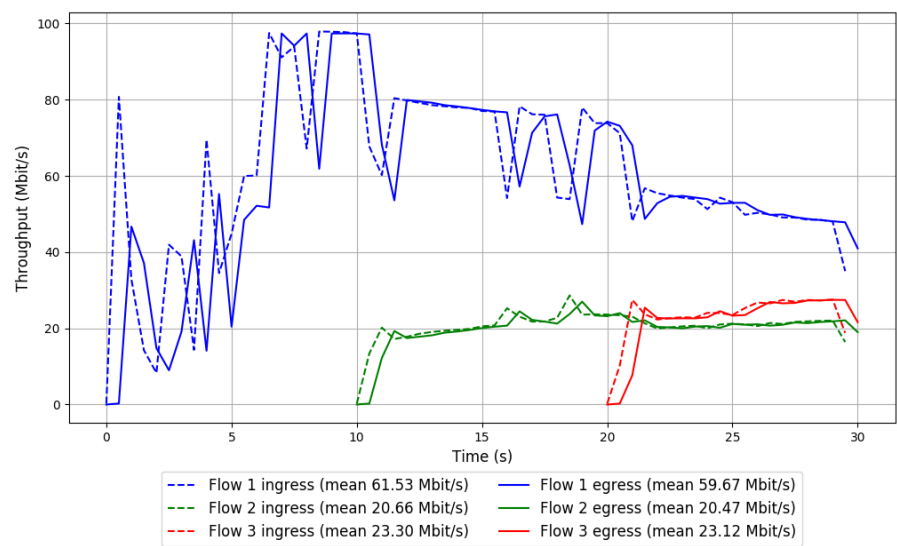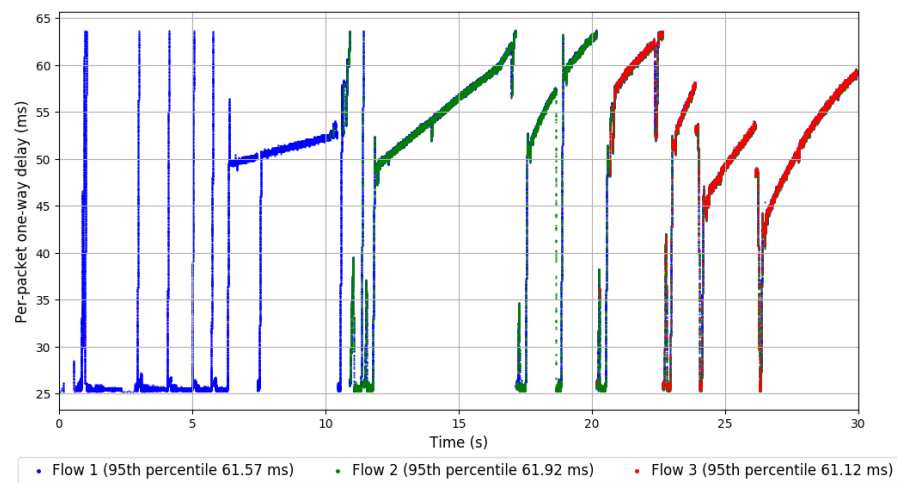
Run 1: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 59.99 Mbit/s)   —— Flow 1 egress (mean 58.12 Mbit/s)
- - - Flow 2 ingress (mean 22.45 Mbit/s)   —— Flow 2 egress (mean 22.17 Mbit/s)
- - - Flow 3 ingress (mean 25.17 Mbit/s)   —— Flow 3 egress (mean 24.79 Mbit/s)

- Flow 1 (95th percentile 61.98 ms)   • Flow 2 (95th percentile 62.31 ms)   • Flow 3 (95th percentile 62.39 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-06-28 01:15:27
End at: 2019-06-28 01:15:57
Local clock offset: -2.666 ms
Remote clock offset: -5.803 ms


# Below is generated by plot.py at 2019-06-28 02:55:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: 62.353 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 64.76 Mbit/s
95th percentile per-packet one-way delay: 62.328 ms
Loss rate: 2.35%
-- Flow 2:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 62.414 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 16.60 Mbit/s
95th percentile per-packet one-way delay: 62.431 ms
Loss rate: 0.57%
```
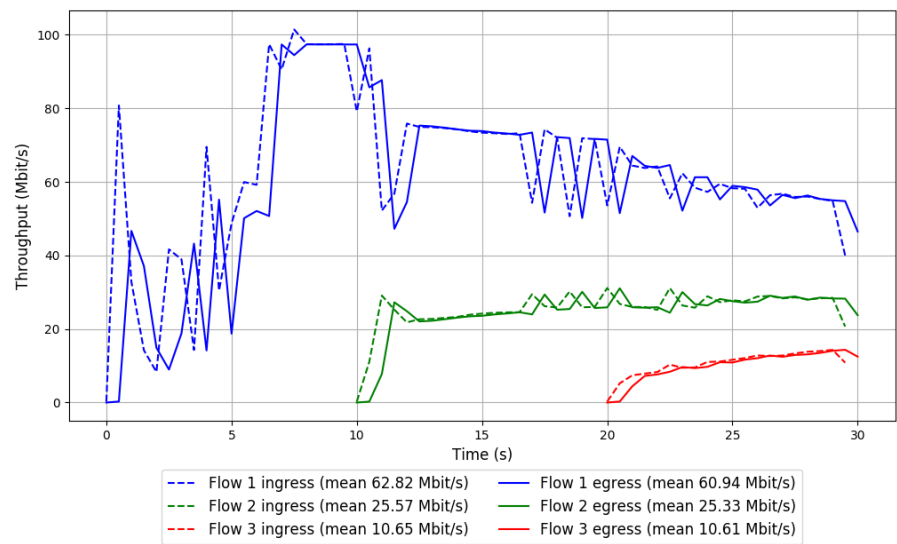
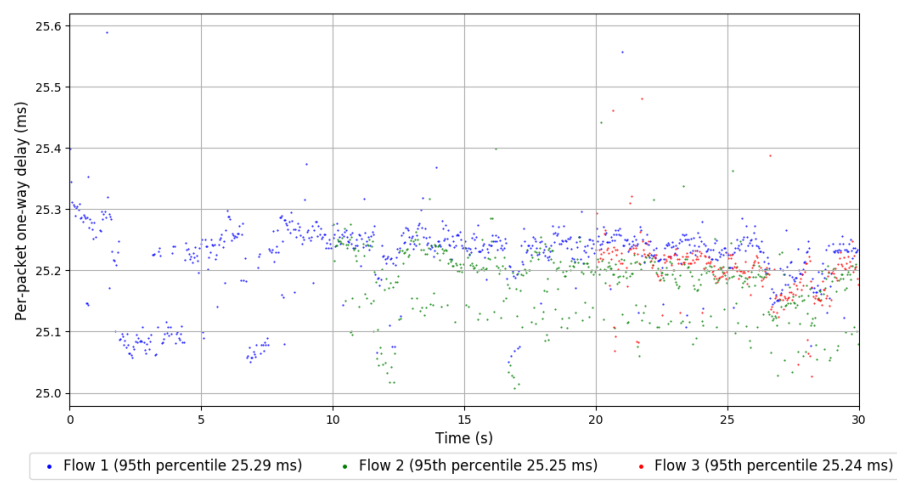Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-06-28 01:42:49
End at: 2019-06-28 01:43:19
Local clock offset: -2.384 ms
Remote clock offset: -4.67 ms


# Below is generated by plot.py at 2019-06-28 02:55:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.90 Mbit/s
95th percentile per-packet one-way delay: 61.510 ms
Loss rate: 2.53%
-- Flow 1:
Average throughput: 59.83 Mbit/s
95th percentile per-packet one-way delay: 60.981 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 61.969 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 21.28 Mbit/s
95th percentile per-packet one-way delay: 62.732 ms
Loss rate: 1.45%
```
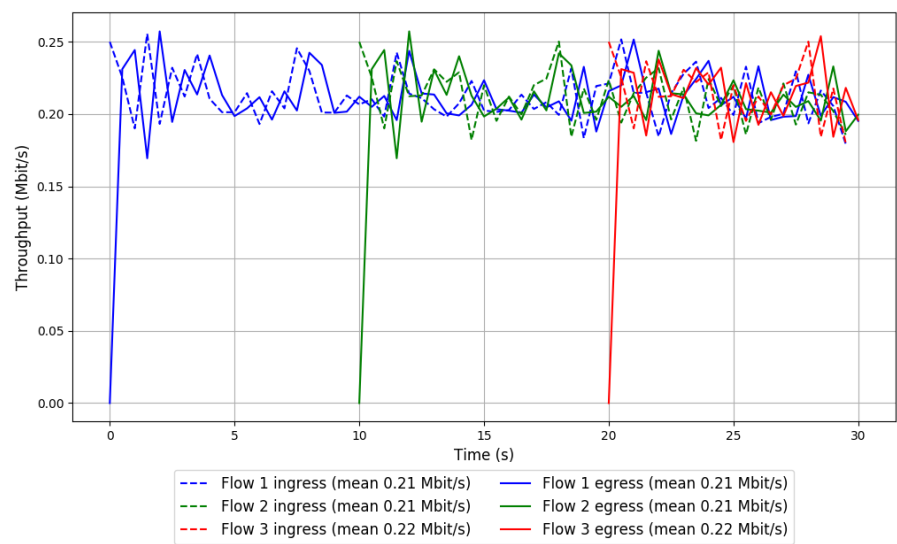
Run 3: Report of QUIC Cubic — Data Link
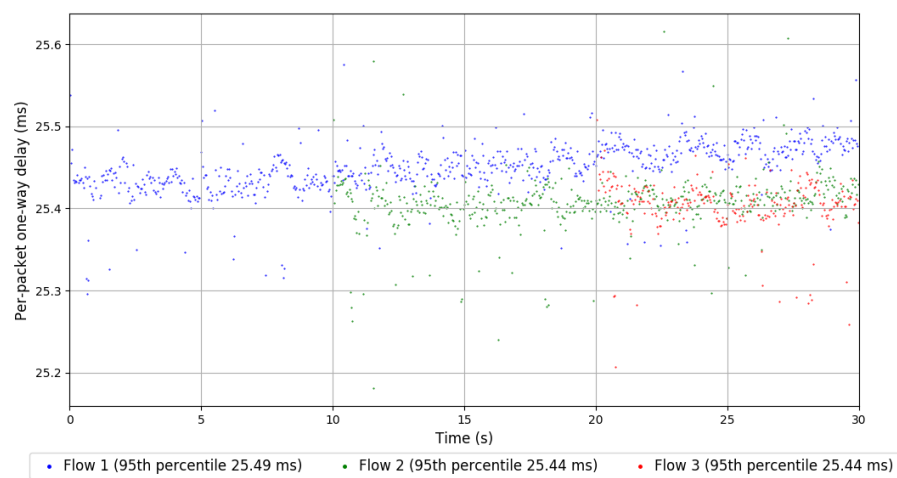
```
Run 4: Statistics of QUIC Cubic

Start at: 2019-06-28 02:10:16
End at: 2019-06-28 02:10:46
Local clock offset: 1.048 ms
Remote clock offset: -3.976 ms


# Below is generated by plot.py at 2019-06-28 02:55:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.87 Mbit/s
95th percentile per-packet one-way delay: 60.601 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 59.67 Mbit/s
95th percentile per-packet one-way delay: 60.797 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 20.47 Mbit/s
95th percentile per-packet one-way delay: 61.046 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 23.12 Mbit/s
95th percentile per-packet one-way delay: 59.029 ms
Loss rate: 0.72%
```
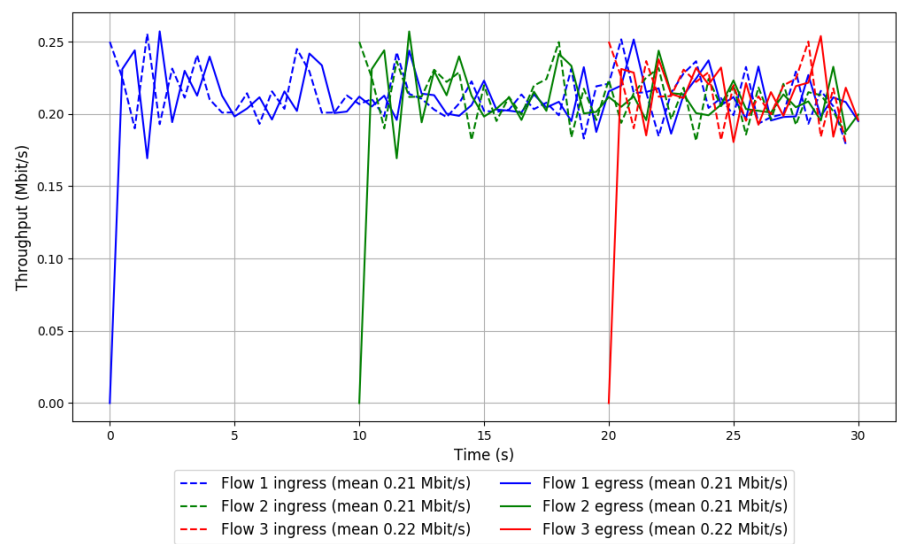
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-06-28 02:38:29
End at: 2019-06-28 02:38:59
Local clock offset: 0.857 ms
Remote clock offset: -3.607 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.23 Mbit/s
95th percentile per-packet one-way delay: 61.620 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 60.94 Mbit/s
95th percentile per-packet one-way delay: 61.572 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 25.33 Mbit/s
95th percentile per-packet one-way delay: 61.920 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 61.123 ms
Loss rate: 0.47%
```
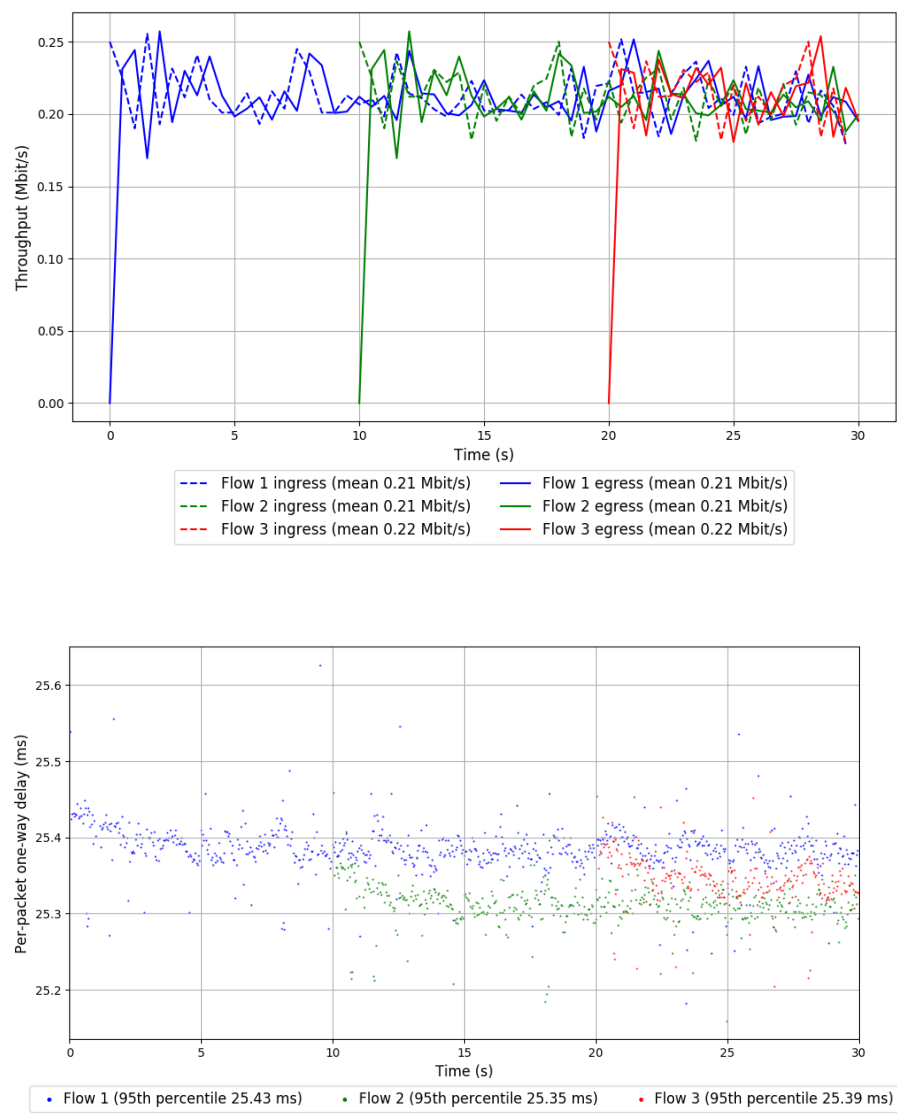
Run 5: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 62.82 Mbit/s) ——— Flow 1 egress (mean 60.94 Mbit/s)
- - - - Flow 2 ingress (mean 25.57 Mbit/s) ——— Flow 2 egress (mean 25.33 Mbit/s)
- - - - Flow 3 ingress (mean 10.65 Mbit/s) ——— Flow 3 egress (mean 10.61 Mbit/s)

- Flow 1 (95th percentile 61.57 ms)   • Flow 2 (95th percentile 61.92 ms)   • Flow 3 (95th percentile 61.12 ms)
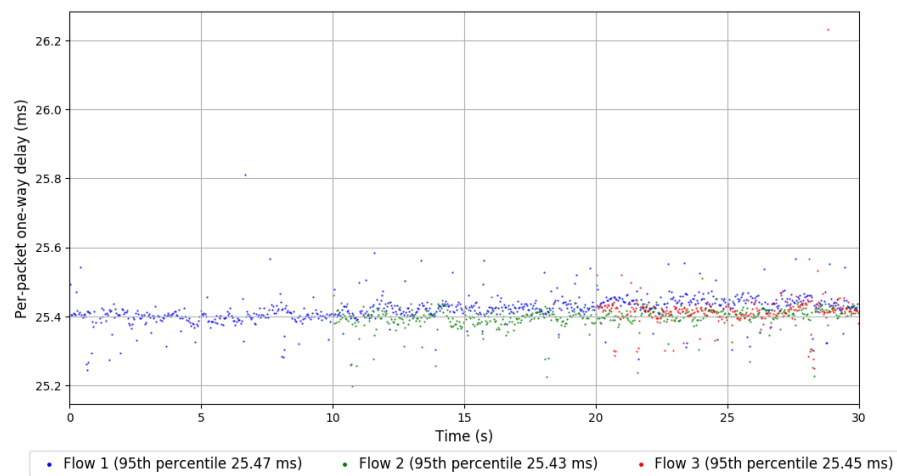
154

```
Run 1: Statistics of SCReAM

Start at: 2019-06-28 00:33:47
End at: 2019-06-28 00:34:17
Local clock offset: -7.663 ms
Remote clock offset: -7.01 ms

# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 25.275 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.285 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.248 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.241 ms
Loss rate: 0.00%
```
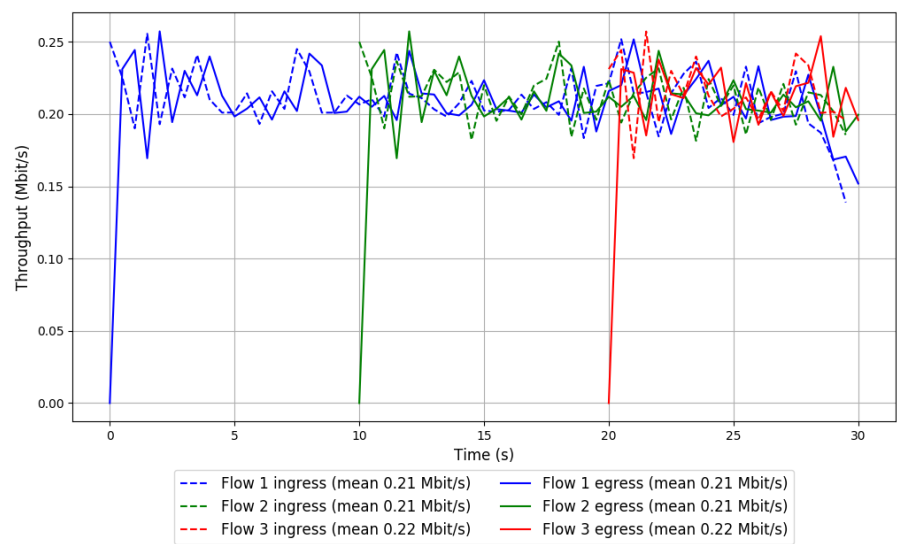
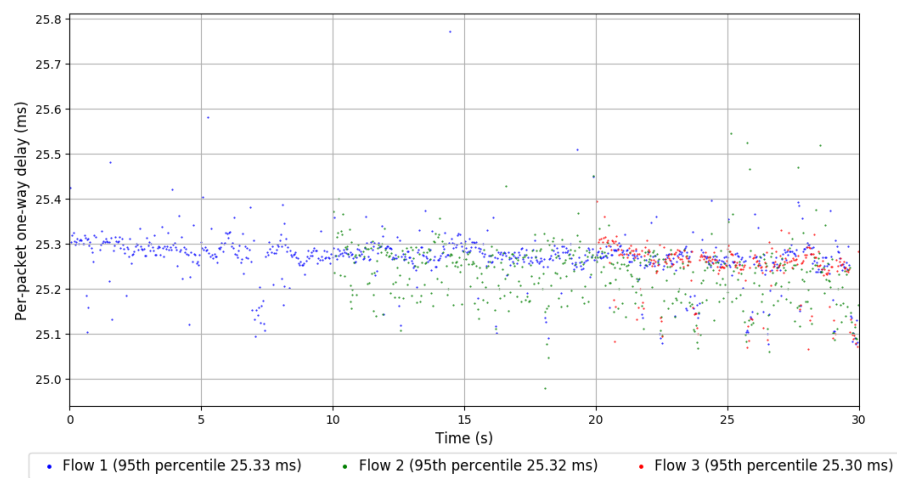# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-06-28 01:01:26
End at: 2019-06-28 01:01:56
Local clock offset: -3.949 ms
Remote clock offset: -6.285 ms

# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 25.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.492 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.442 ms
Loss rate: 0.00%
```
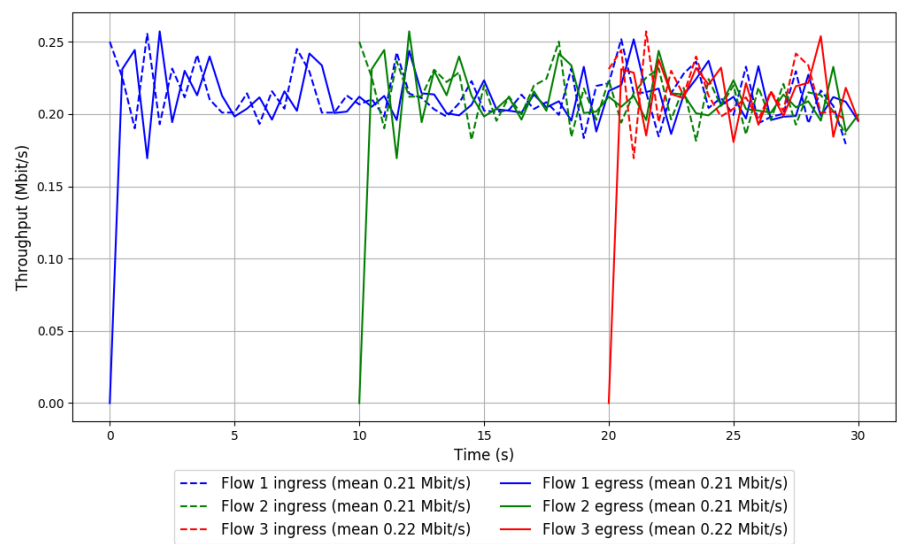
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-06-28 01:29:24
End at: 2019-06-28 01:29:54
Local clock offset: -2.551 ms
Remote clock offset: -5.166 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 25.415 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.427 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.353 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.392 ms
Loss rate: 0.00%
```
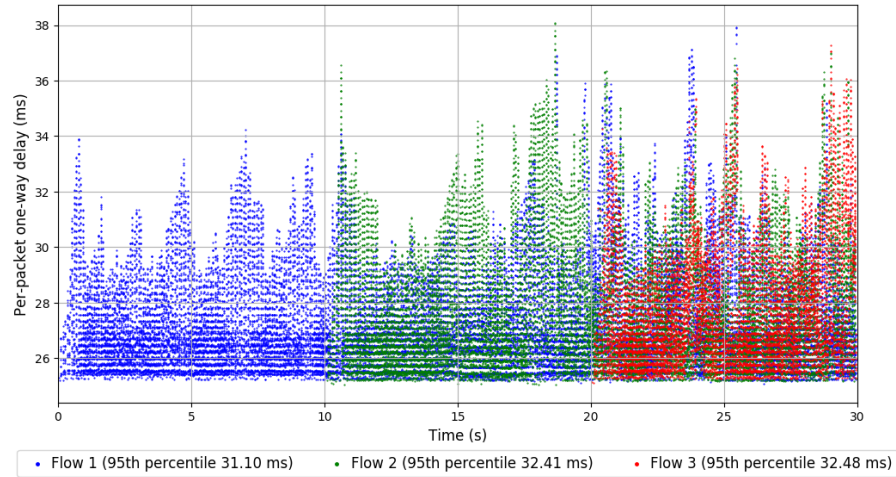
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-06-28 01:56:34
End at: 2019-06-28 01:57:04
Local clock offset: -0.315 ms
Remote clock offset: -4.314 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 25.460 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.469 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.431 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.450 ms
Loss rate: 0.00%
```
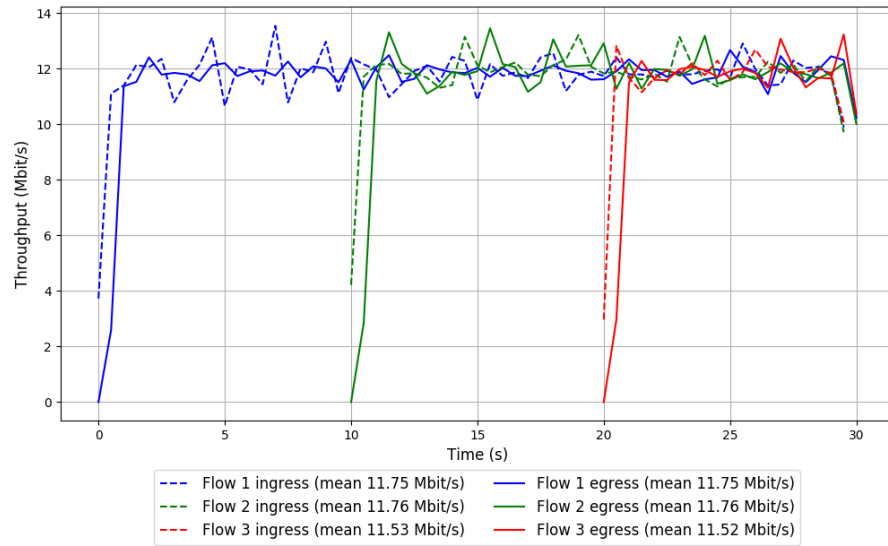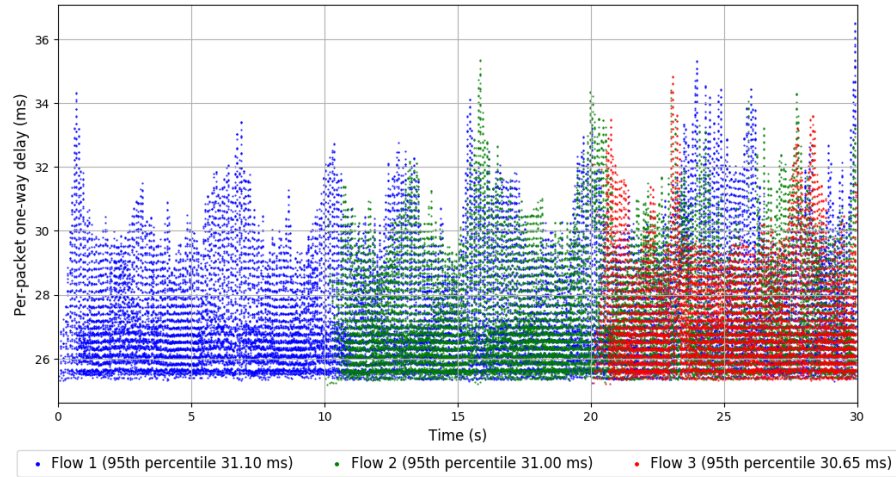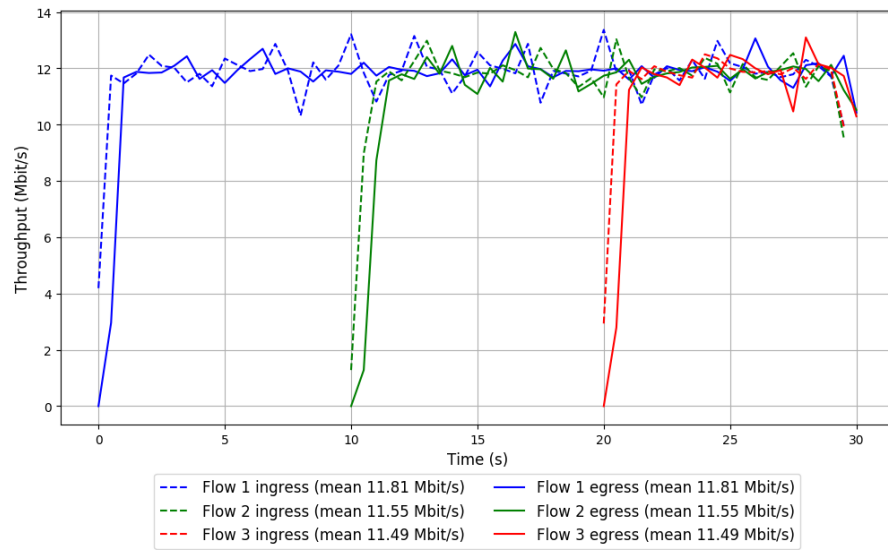
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-06-28 02:24:23
End at: 2019-06-28 02:24:53
Local clock offset: 1.028 ms
Remote clock offset: -3.851 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 25.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.326 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 25.322 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 25.305 ms
Loss rate: 0.00%
```
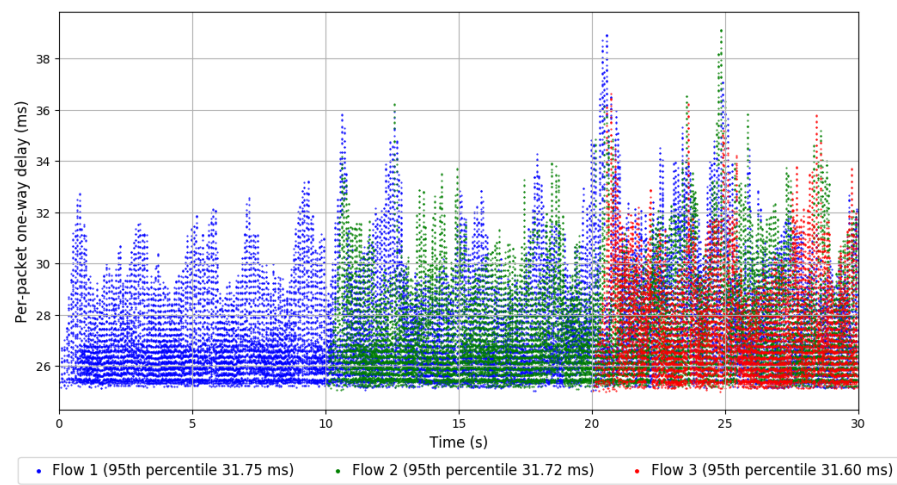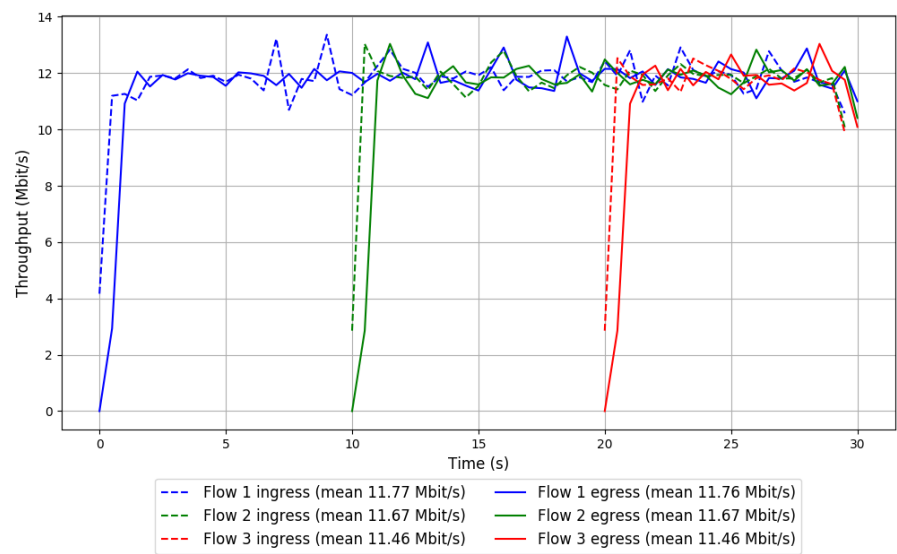
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-06-28 00:36:13
End at: 2019-06-28 00:36:43
Local clock offset: -7.964 ms
Remote clock offset: -6.92 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.38 Mbit/s
95th percentile per-packet one-way delay: 31.864 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 31.103 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 32.406 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 32.481 ms
Loss rate: 0.00%
```
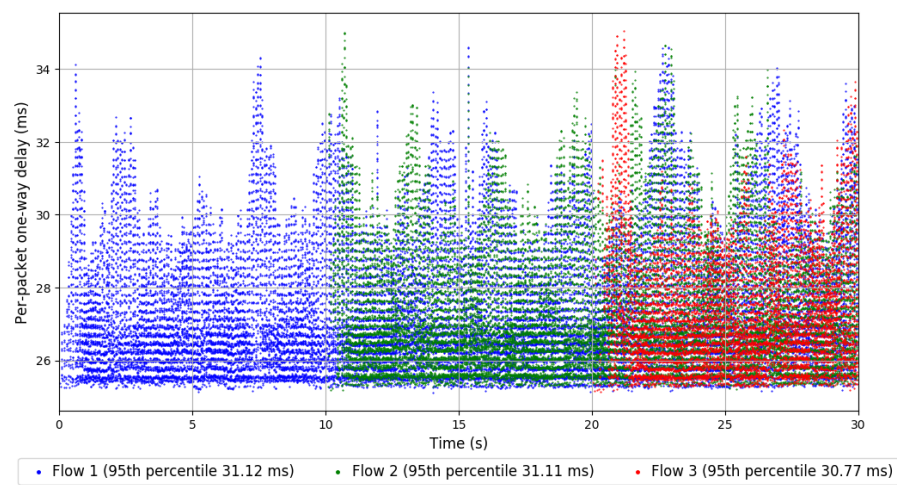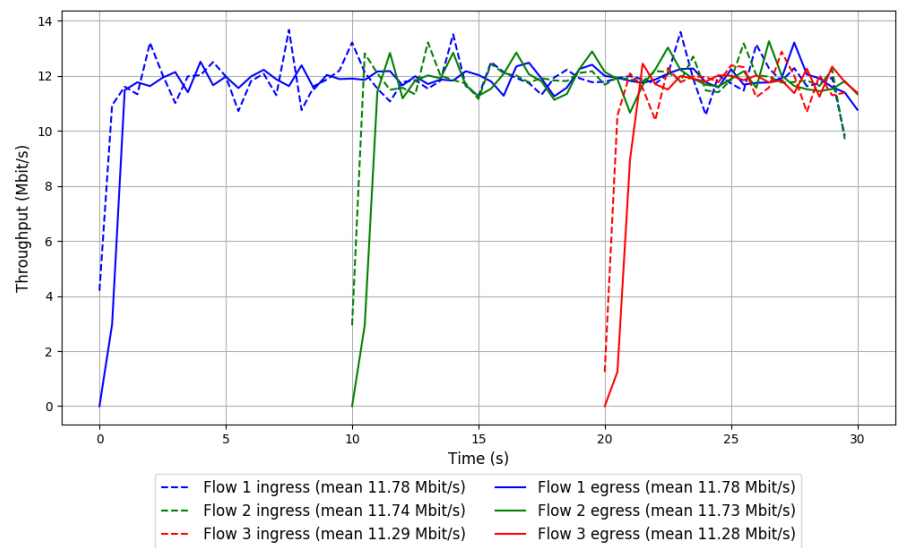
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-06-28 01:03:59
End at: 2019-06-28 01:04:29
Local clock offset: -3.604 ms
Remote clock offset: -6.18 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.29 Mbit/s
95th percentile per-packet one-way delay: 31.009 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 31.102 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 30.997 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 30.649 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-06-28 01:31:48
End at: 2019-06-28 01:32:18
Local clock offset: -2.47 ms
Remote clock offset: -5.115 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 31.698 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 31.750 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 31.717 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 31.598 ms
Loss rate: 0.00%
```
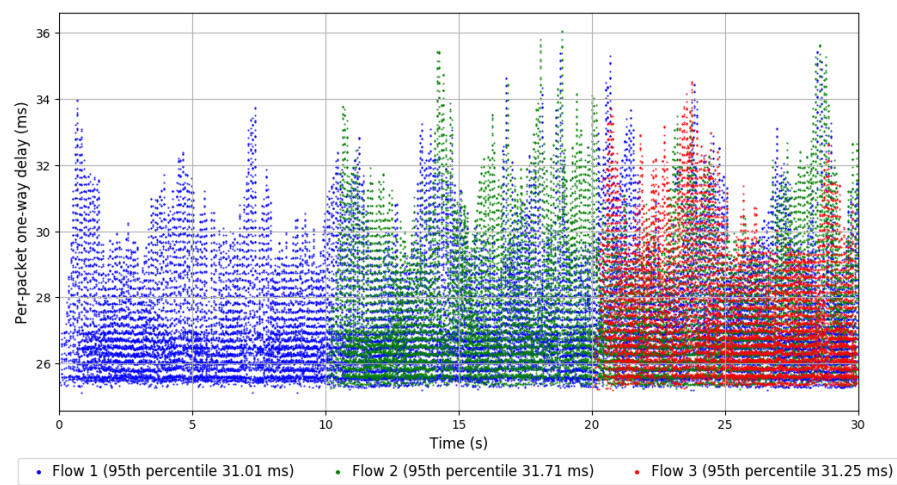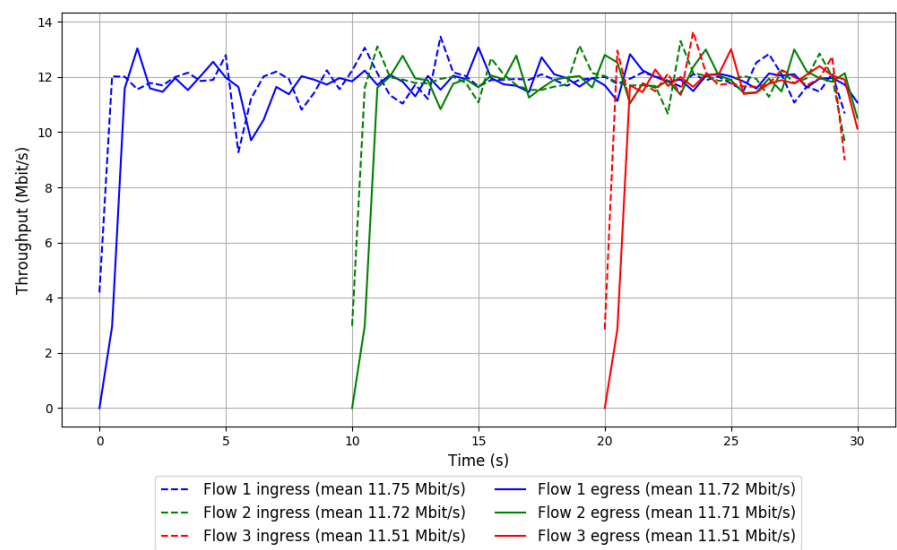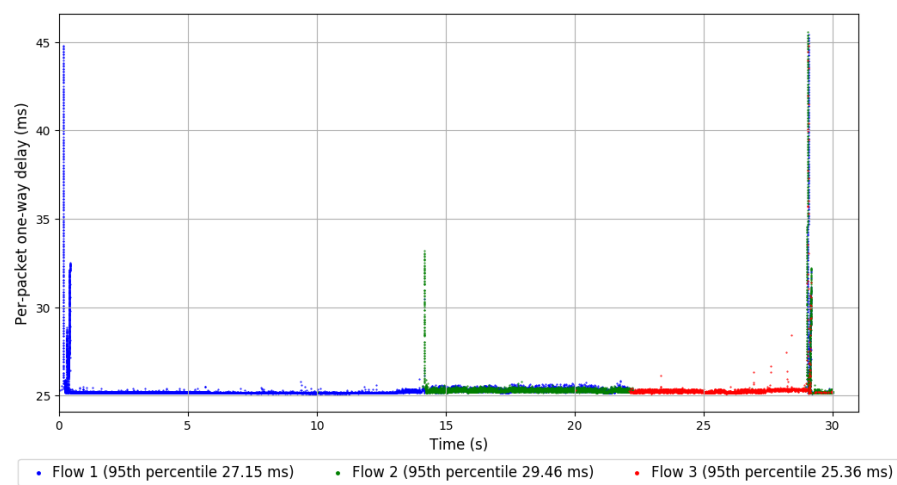
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-06-28 01:59:03
End at: 2019-06-28 01:59:33
Local clock offset: 0.031 ms
Remote clock offset: -4.299 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 31.095 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 31.117 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 11.28 Mbit/s
95th percentile per-packet one-way delay: 30.765 ms
Loss rate: 0.00%
```
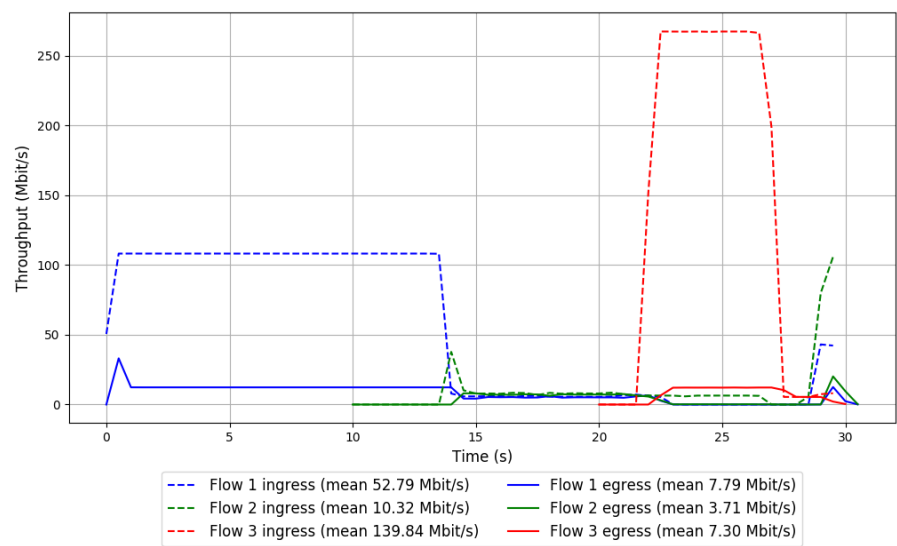
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-06-28 02:27:00
End at: 2019-06-28 02:27:30
Local clock offset: 0.889 ms
Remote clock offset: -3.73 ms


# Below is generated by plot.py at 2019-06-28 02:55:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 31.310 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 31.012 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 11.71 Mbit/s
95th percentile per-packet one-way delay: 31.711 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 31.253 ms
Loss rate: 0.00%
```
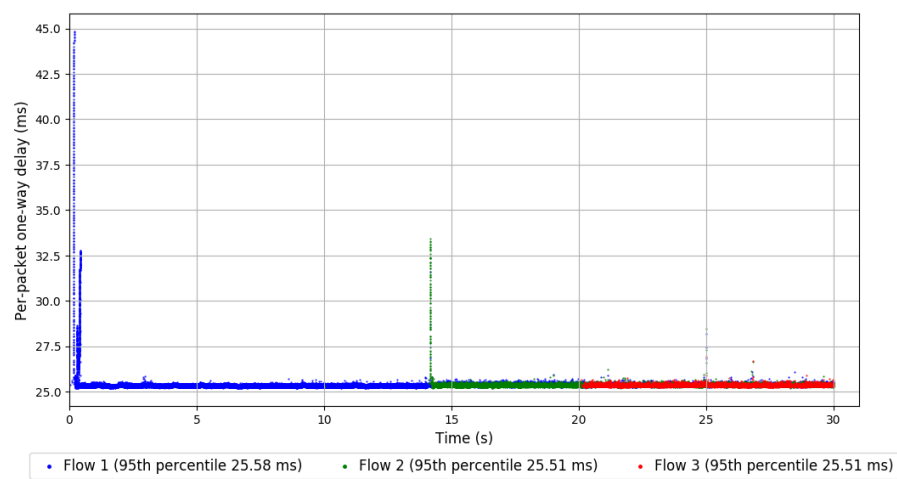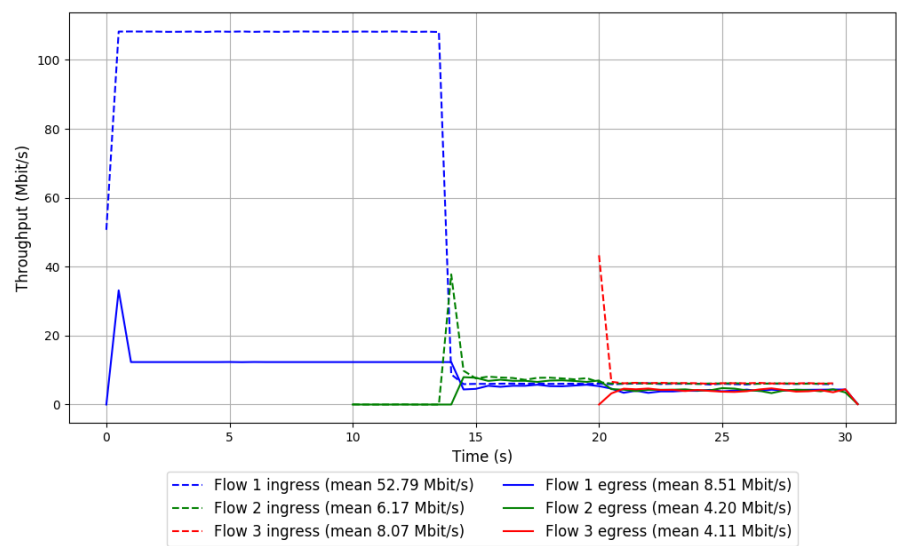
Run 5: Report of Sprout — Data Link

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

Start at: 2019-06-28 00:43:34
End at: 2019-06-28 00:44:04
Local clock offset: -8.79 ms
Remote clock offset: -6.753 ms


# Below is generated by plot.py at 2019-06-28 02:55:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 26.735 ms
Loss rate: 88.05%
-- Flow 1:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 27.154 ms
Loss rate: 85.25%
-- Flow 2:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 29.462 ms
Loss rate: 64.02%
-- Flow 3:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 25.361 ms
Loss rate: 94.80%
```
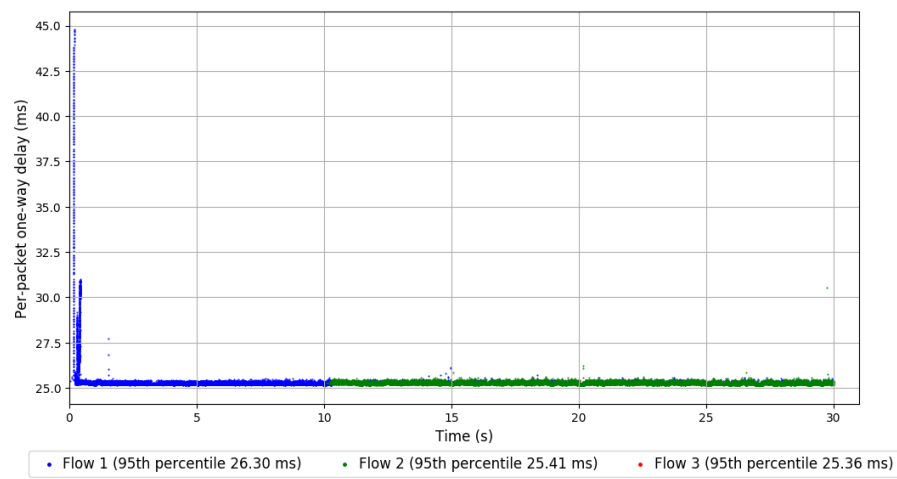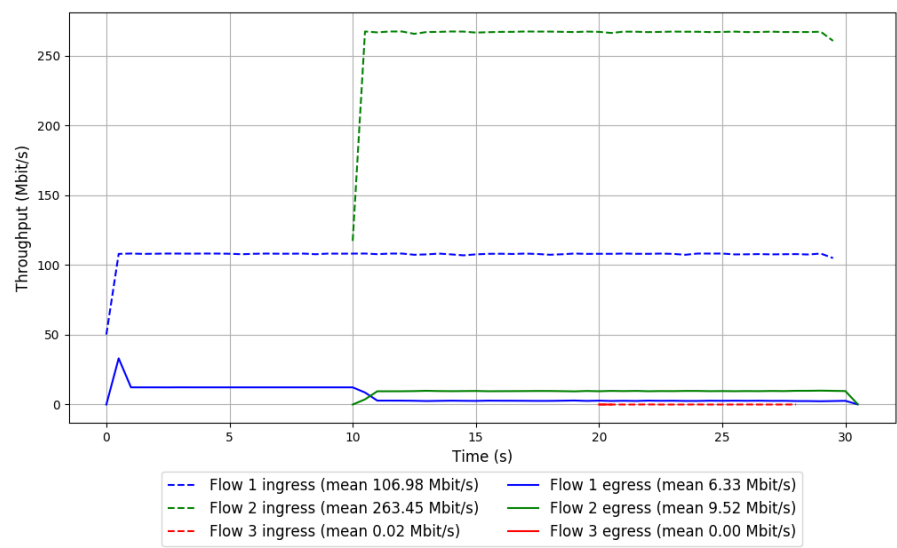
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-06-28 01:11:37
End at: 2019-06-28 01:12:07
Local clock offset: -2.869 ms
Remote clock offset: -6.054 ms


# Below is generated by plot.py at 2019-06-28 02:55:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 25.537 ms
Loss rate: 78.72%
-- Flow 1:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 25.580 ms
Loss rate: 83.87%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 25.511 ms
Loss rate: 31.85%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 25.514 ms
Loss rate: 49.14%
```
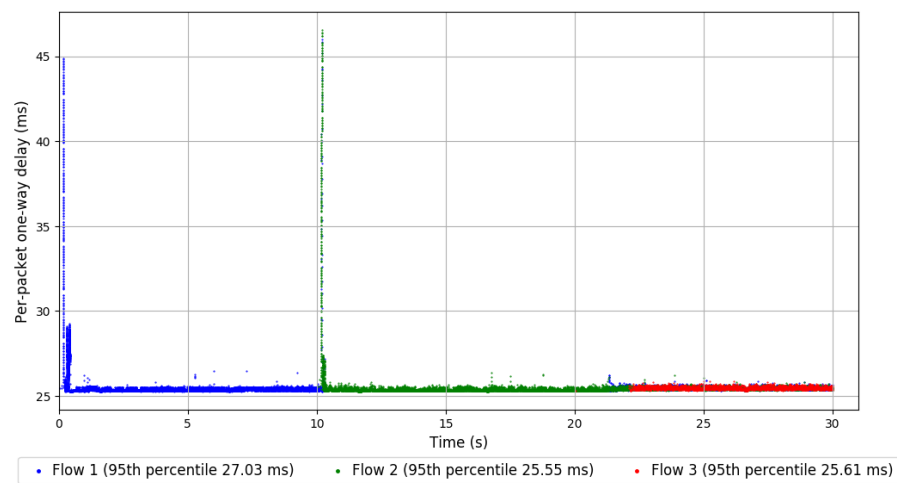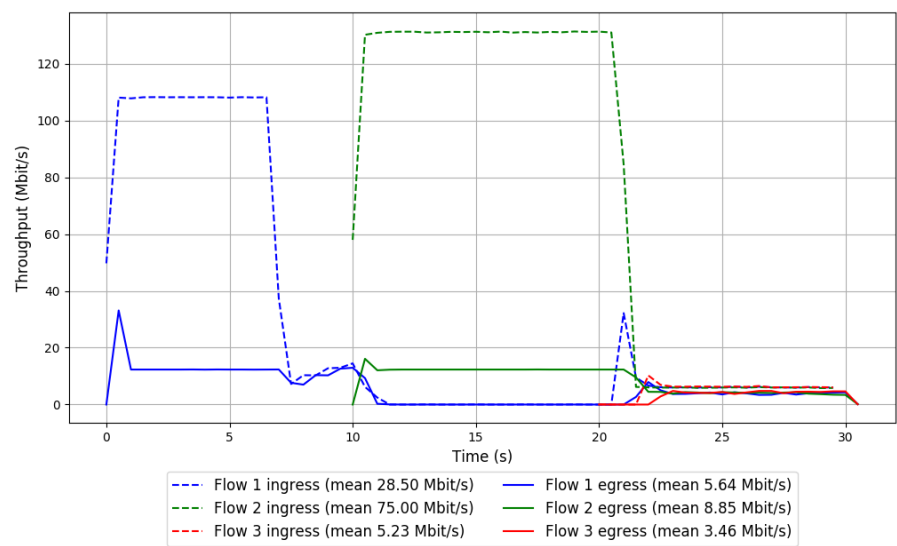
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 52.79 Mbit/s) — Flow 1 egress (mean 8.51 Mbit/s)
Flow 2 ingress (mean 6.17 Mbit/s) — Flow 2 egress (mean 4.20 Mbit/s)
Flow 3 ingress (mean 8.07 Mbit/s) — Flow 3 egress (mean 4.11 Mbit/s)

Flow 1 (95th percentile 25.58 ms)   Flow 2 (95th percentile 25.51 ms)   Flow 3 (95th percentile 25.51 ms)

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

Start at: 2019-06-28 01:39:04
End at: 2019-06-28 01:39:34
Local clock offset: -2.428 ms
Remote clock offset: -4.865 ms


# Below is generated by plot.py at 2019-06-28 02:56:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 25.430 ms
Loss rate: 95.51%
-- Flow 1:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 26.297 ms
Loss rate: 94.08%
-- Flow 2:
Average throughput: 9.52 Mbit/s
95th percentile per-packet one-way delay: 25.410 ms
Loss rate: 96.39%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 25.362 ms
Loss rate: 99.16%
```
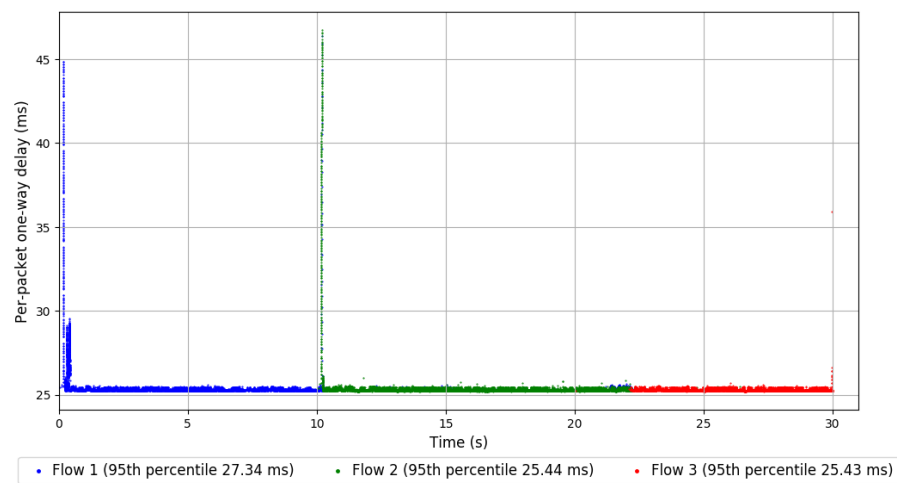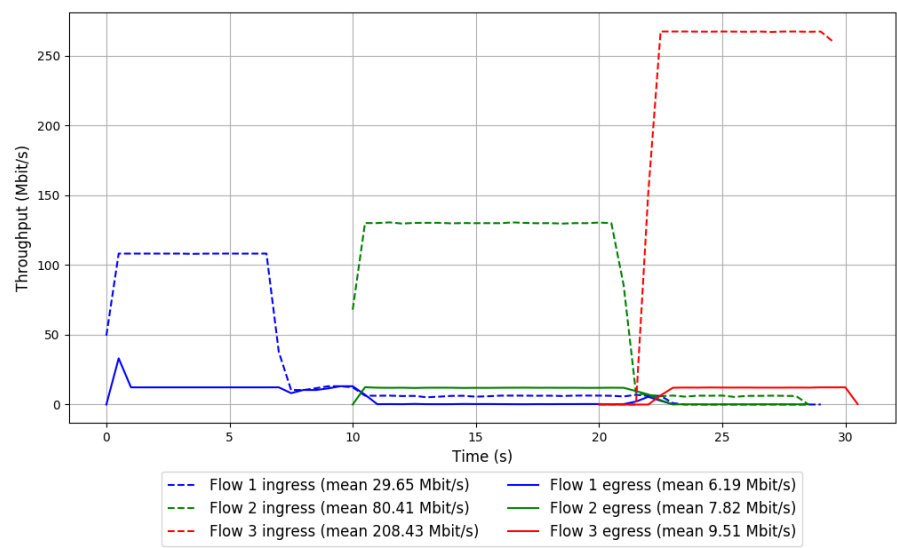
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 106.98 Mbit/s) --- Flow 1 egress (mean 6.33 Mbit/s)
Flow 2 ingress (mean 263.45 Mbit/s) --- Flow 2 egress (mean 9.52 Mbit/s)
Flow 3 ingress (mean 0.02 Mbit/s) --- Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 26.30 ms)   Flow 2 (95th percentile 25.41 ms)   Flow 3 (95th percentile 25.36 ms)

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

Start at: 2019-06-28 02:06:28
End at: 2019-06-28 02:06:58
Local clock offset: 0.827 ms
Remote clock offset: -3.949 ms


# Below is generated by plot.py at 2019-06-28 02:56:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 25.650 ms
Loss rate: 84.19%
-- Flow 1:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 27.026 ms
Loss rate: 80.21%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 25.555 ms
Loss rate: 88.21%
-- Flow 3:
Average throughput: 3.46 Mbit/s
95th percentile per-packet one-way delay: 25.609 ms
Loss rate: 33.95%
```
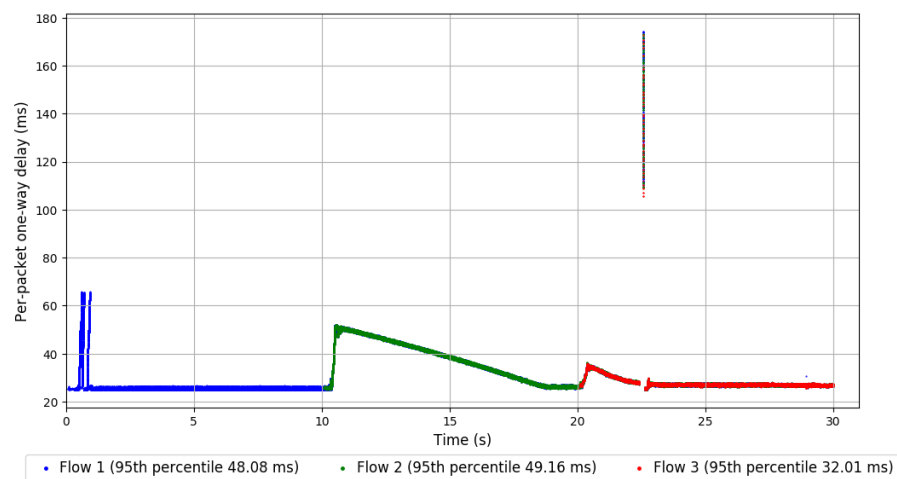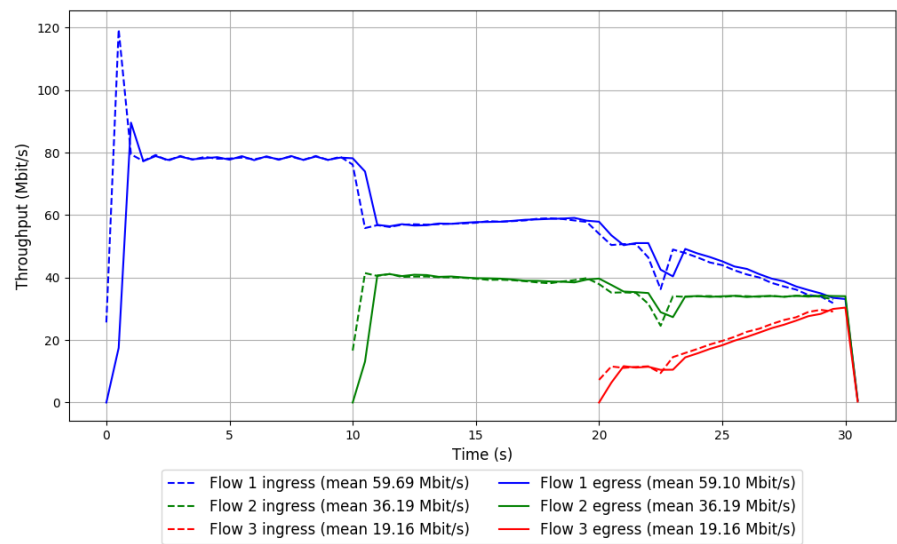
Run 4: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 28.50 Mbit/s) — Flow 1 egress (mean 5.64 Mbit/s)
- - - - Flow 2 ingress (mean 75.00 Mbit/s) — Flow 2 egress (mean 8.85 Mbit/s)
- - - - Flow 3 ingress (mean 5.23 Mbit/s) — Flow 3 egress (mean 3.46 Mbit/s)

- Flow 1 (95th percentile 27.03 ms) • Flow 2 (95th percentile 25.55 ms) • Flow 3 (95th percentile 25.61 ms)

182

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

Start at: 2019-06-28 02:34:35
End at: 2019-06-28 02:35:05
Local clock offset: 0.848 ms
Remote clock offset: -3.747 ms


# Below is generated by plot.py at 2019-06-28 02:56:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.68 Mbit/s
95th percentile per-packet one-way delay: 25.498 ms
Loss rate: 91.41%
-- Flow 1:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 27.340 ms
Loss rate: 83.50%
-- Flow 2:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 25.437 ms
Loss rate: 90.36%
-- Flow 3:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 25.430 ms
Loss rate: 95.44%
```
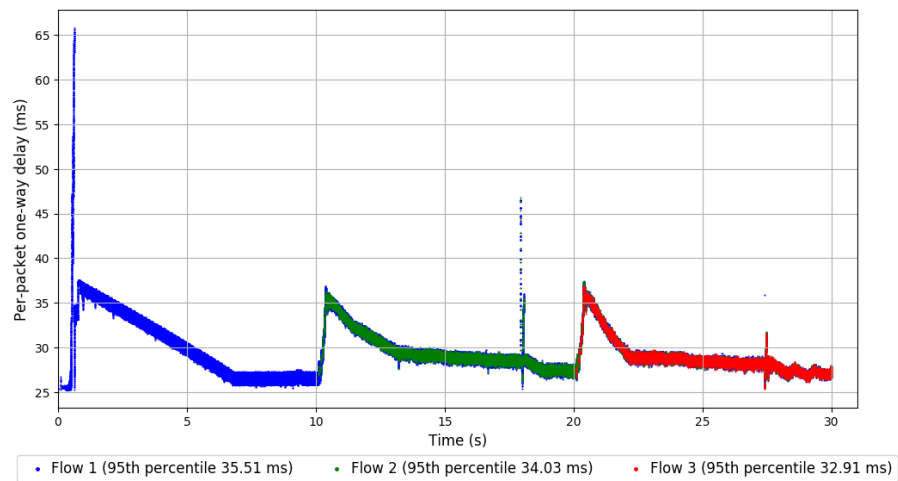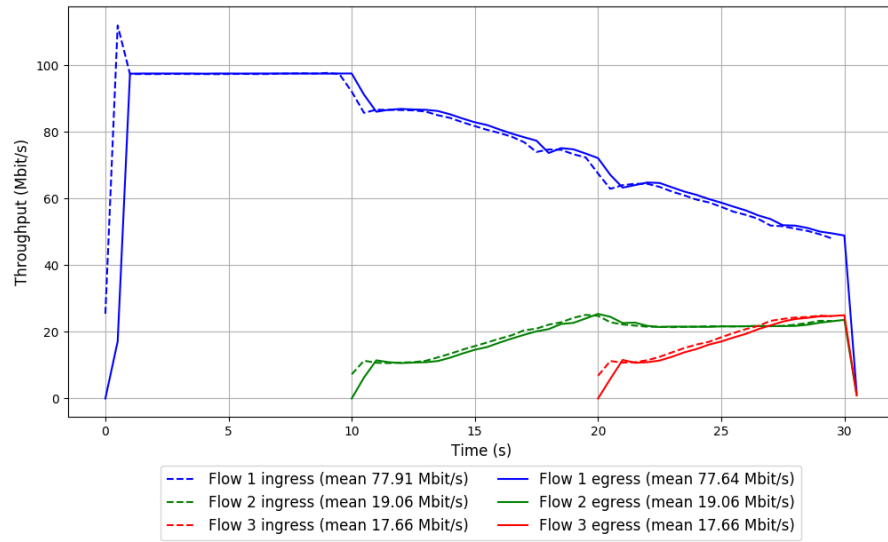
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-06-28 00:28:45
End at: 2019-06-28 00:29:15
Local clock offset: -7.081 ms
Remote clock offset: -6.919 ms


# Below is generated by plot.py at 2019-06-28 02:56:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.57 Mbit/s
95th percentile per-packet one-way delay: 48.318 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 48.080 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 36.19 Mbit/s
95th percentile per-packet one-way delay: 49.158 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.16 Mbit/s
95th percentile per-packet one-way delay: 32.005 ms
Loss rate: 0.00%
```
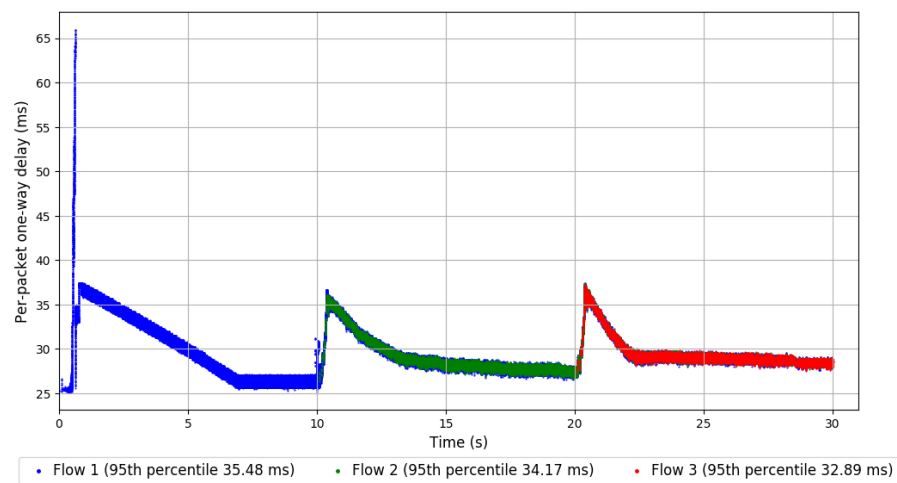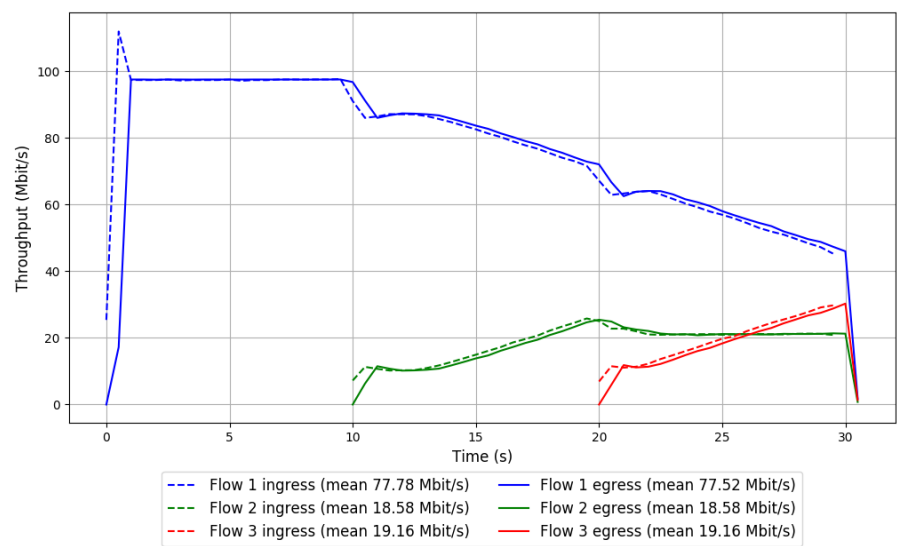
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-06-28 00:56:14
End at: 2019-06-28 00:56:44
Local clock offset: -5.134 ms
Remote clock offset: -6.4 ms


# Below is generated by plot.py at 2019-06-28 02:56:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.21 Mbit/s
95th percentile per-packet one-way delay: 35.313 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 77.64 Mbit/s
95th percentile per-packet one-way delay: 35.513 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 19.06 Mbit/s
95th percentile per-packet one-way delay: 34.033 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.66 Mbit/s
95th percentile per-packet one-way delay: 32.911 ms
Loss rate: 0.00%
```
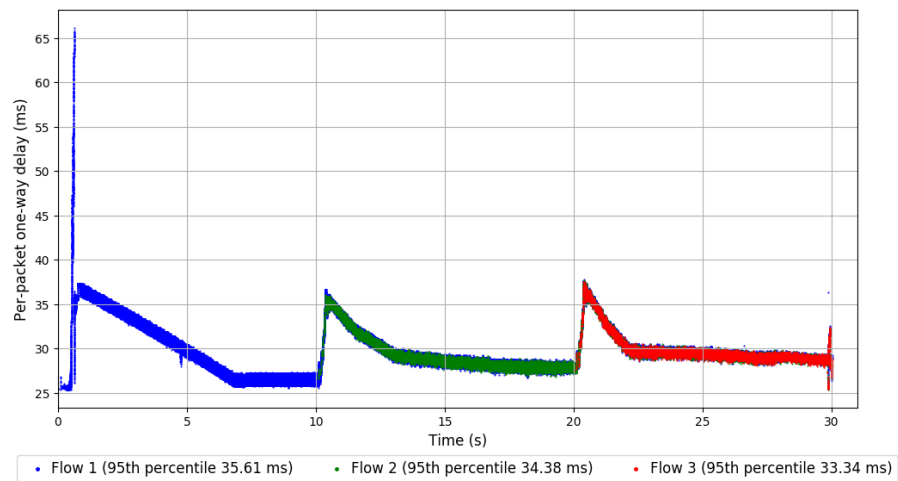
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-06-28 01:24:25
End at: 2019-06-28 01:24:55
Local clock offset: -2.557 ms
Remote clock offset: -5.393 ms


# Below is generated by plot.py at 2019-06-28 02:56:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 35.386 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 77.52 Mbit/s
95th percentile per-packet one-way delay: 35.475 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 18.58 Mbit/s
95th percentile per-packet one-way delay: 34.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.16 Mbit/s
95th percentile per-packet one-way delay: 32.887 ms
Loss rate: 0.00%
```
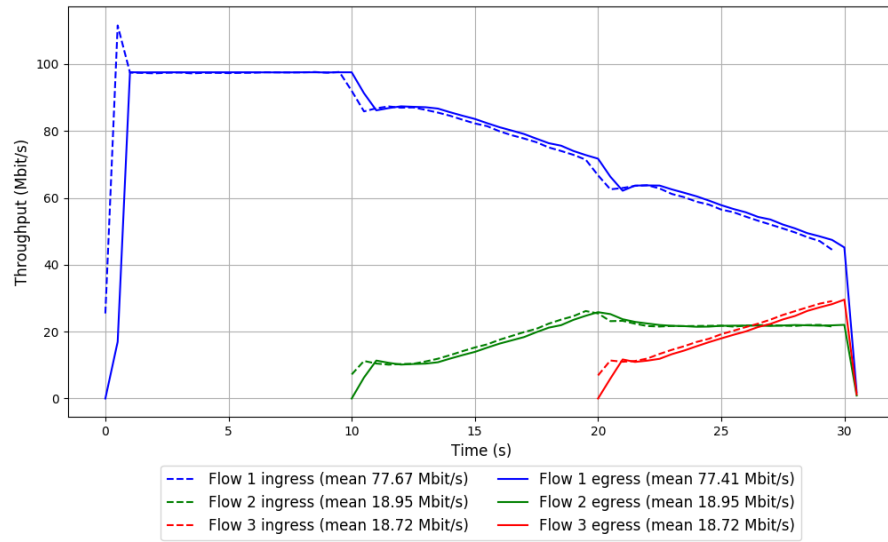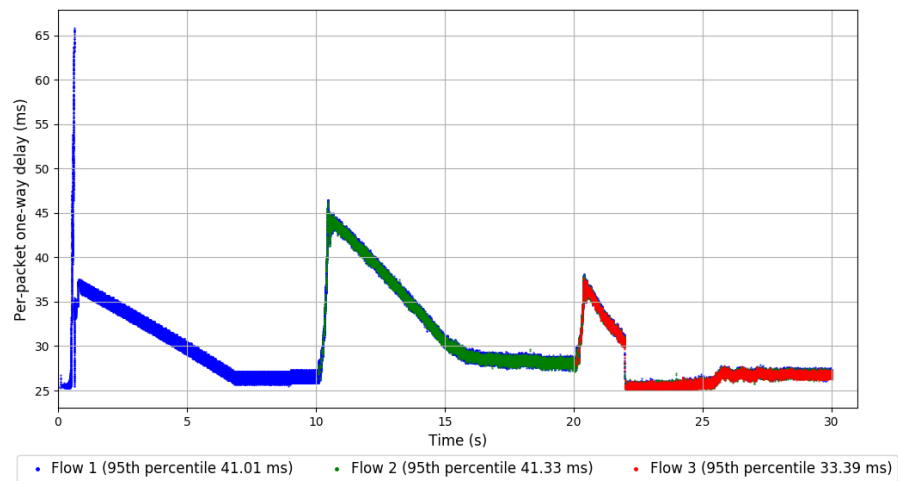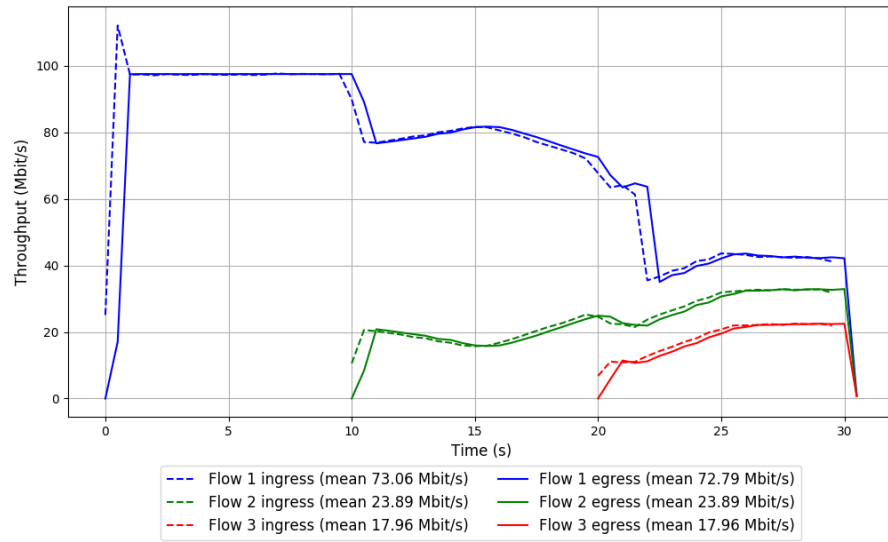
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-06-28 01:51:29
End at: 2019-06-28 01:51:59
Local clock offset: -1.371 ms
Remote clock offset: -4.4 ms


# Below is generated by plot.py at 2019-06-28 02:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.26 Mbit/s
95th percentile per-packet one-way delay: 35.530 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 35.608 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 34.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.72 Mbit/s
95th percentile per-packet one-way delay: 33.343 ms
Loss rate: 0.00%
```
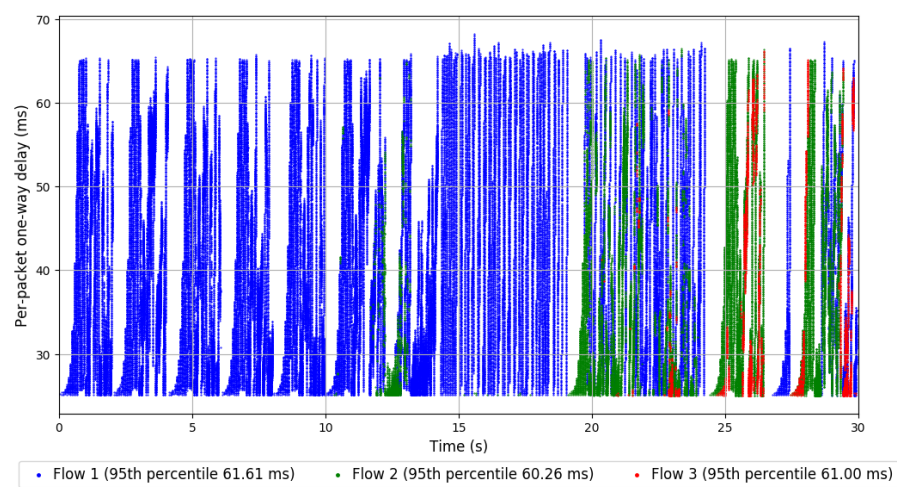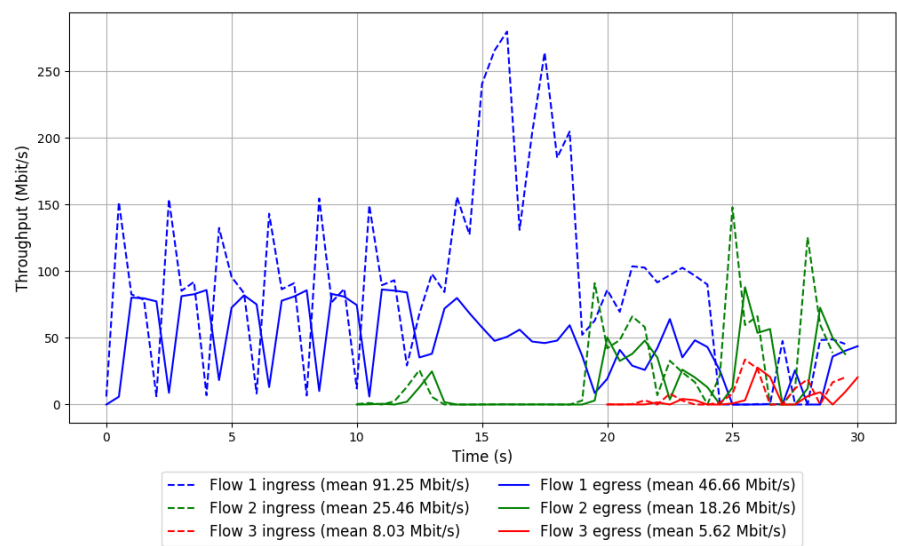
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-06-28 02:19:08
End at: 2019-06-28 02:19:38
Local clock offset: 1.38 ms
Remote clock offset: -3.955 ms


# Below is generated by plot.py at 2019-06-28 02:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.68 Mbit/s
95th percentile per-packet one-way delay: 40.801 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 72.79 Mbit/s
95th percentile per-packet one-way delay: 41.013 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 23.89 Mbit/s
95th percentile per-packet one-way delay: 41.331 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.96 Mbit/s
95th percentile per-packet one-way delay: 33.393 ms
Loss rate: 0.00%
```

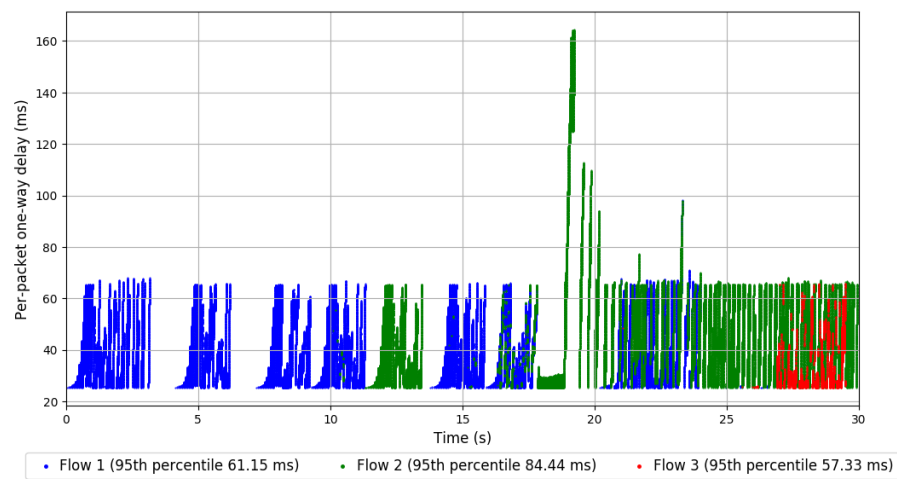Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-06-28 00:37:23
End at: 2019-06-28 00:37:53
Local clock offset: -8.082 ms
Remote clock offset: -6.981 ms


# Below is generated by plot.py at 2019-06-28 02:57:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.11 Mbit/s
95th percentile per-packet one-way delay: 61.373 ms
Loss rate: 45.37%
-- Flow 1:
Average throughput: 46.66 Mbit/s
95th percentile per-packet one-way delay: 61.607 ms
Loss rate: 48.86%
-- Flow 2:
Average throughput: 18.26 Mbit/s
95th percentile per-packet one-way delay: 60.264 ms
Loss rate: 28.21%
-- Flow 3:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 61.004 ms
Loss rate: 30.11%
```
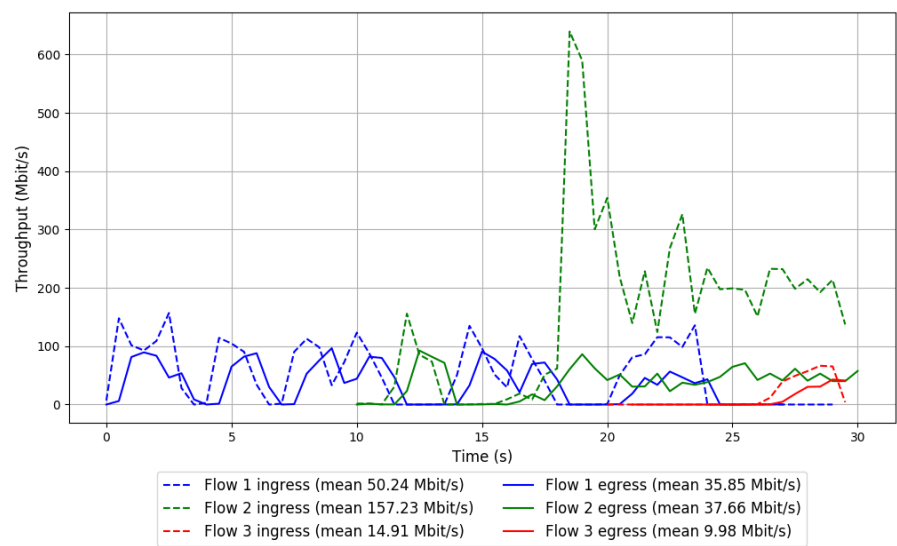
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 91.25 Mbit/s)   Flow 1 egress (mean 46.66 Mbit/s)
Flow 2 ingress (mean 25.46 Mbit/s)   Flow 2 egress (mean 18.26 Mbit/s)
Flow 3 ingress (mean 8.03 Mbit/s)   Flow 3 egress (mean 5.62 Mbit/s)

Flow 1 (95th percentile 61.61 ms)   Flow 2 (95th percentile 60.26 ms)   Flow 3 (95th percentile 61.00 ms)

```
Run 2: Statistics of Verus

Start at: 2019-06-28 01:05:11
End at: 2019-06-28 01:05:41
Local clock offset: -3.437 ms
Remote clock offset: -6.128 ms


# Below is generated by plot.py at 2019-06-28 02:57:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.57 Mbit/s
95th percentile per-packet one-way delay: 64.380 ms
Loss rate: 62.40%
-- Flow 1:
Average throughput: 35.85 Mbit/s
95th percentile per-packet one-way delay: 61.150 ms
Loss rate: 35.34%
-- Flow 2:
Average throughput: 37.66 Mbit/s
95th percentile per-packet one-way delay: 84.442 ms
Loss rate: 76.06%
-- Flow 3:
Average throughput: 9.98 Mbit/s
95th percentile per-packet one-way delay: 57.334 ms
Loss rate: 42.79%
```
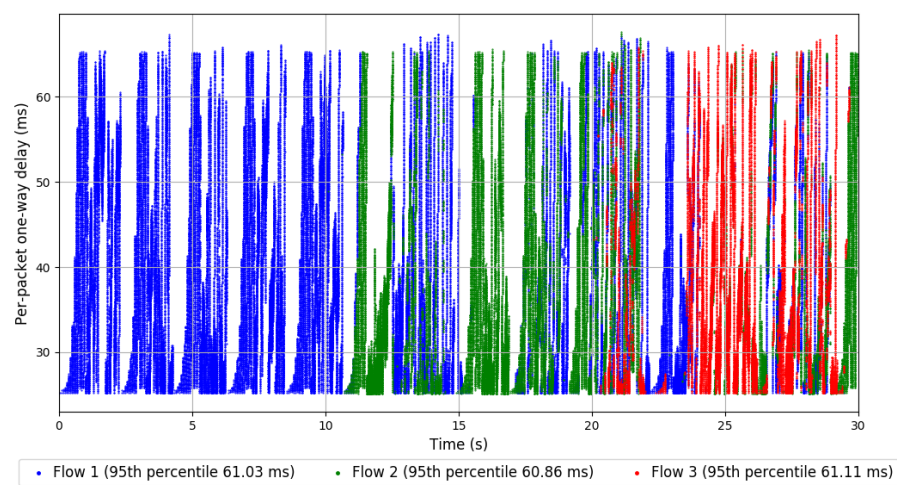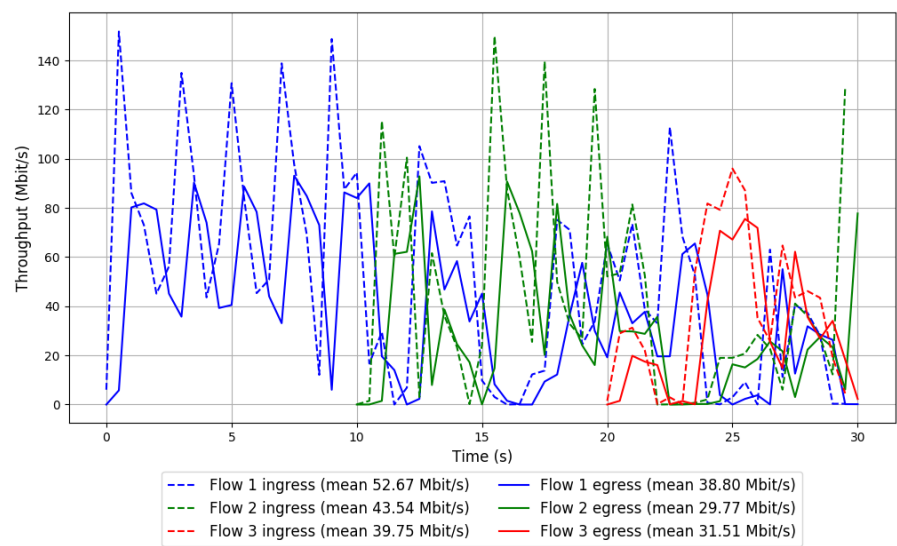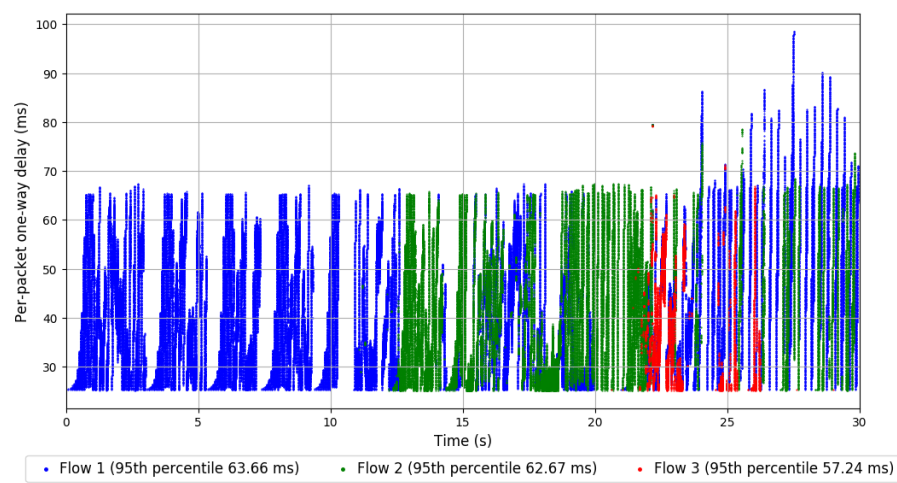
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-06-28 01:32:58
End at: 2019-06-28 01:33:28
Local clock offset: -2.477 ms
Remote clock offset: -5.04 ms

# Below is generated by plot.py at 2019-06-28 02:57:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.25 Mbit/s
95th percentile per-packet one-way delay: 61.009 ms
Loss rate: 27.39%
-- Flow 1:
Average throughput: 38.80 Mbit/s
95th percentile per-packet one-way delay: 61.027 ms
Loss rate: 26.50%
-- Flow 2:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 60.858 ms
Loss rate: 31.65%
-- Flow 3:
Average throughput: 31.51 Mbit/s
95th percentile per-packet one-way delay: 61.108 ms
Loss rate: 21.41%
```

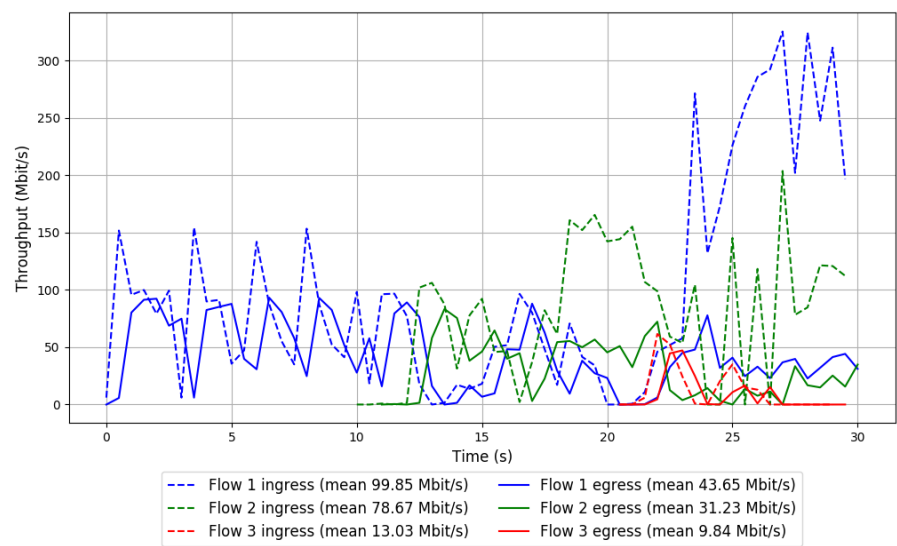Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-06-28 02:00:14
End at: 2019-06-28 02:00:44
Local clock offset: 0.152 ms
Remote clock offset: -4.239 ms


# Below is generated by plot.py at 2019-06-28 02:57:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.99 Mbit/s
95th percentile per-packet one-way delay: 63.143 ms
Loss rate: 57.55%
-- Flow 1:
Average throughput: 43.65 Mbit/s
95th percentile per-packet one-way delay: 63.662 ms
Loss rate: 56.25%
-- Flow 2:
Average throughput: 31.23 Mbit/s
95th percentile per-packet one-way delay: 62.669 ms
Loss rate: 62.25%
-- Flow 3:
Average throughput: 9.84 Mbit/s
95th percentile per-packet one-way delay: 57.238 ms
Loss rate: 27.85%
```

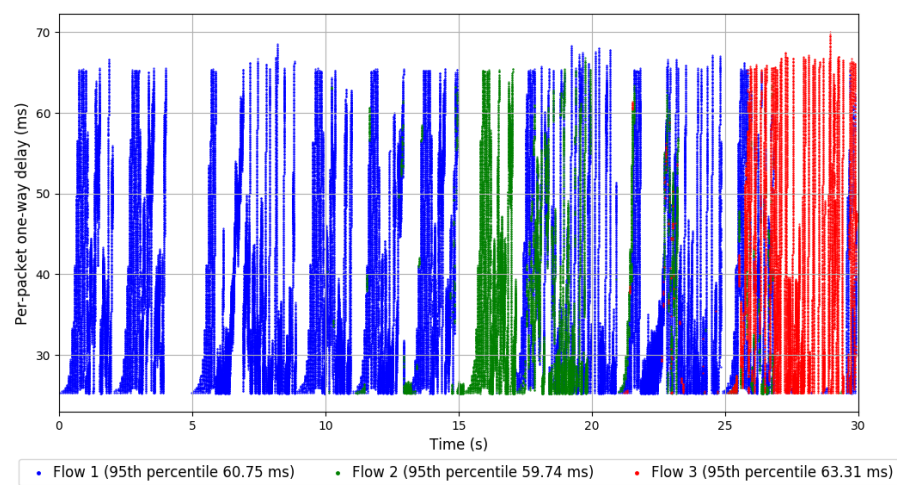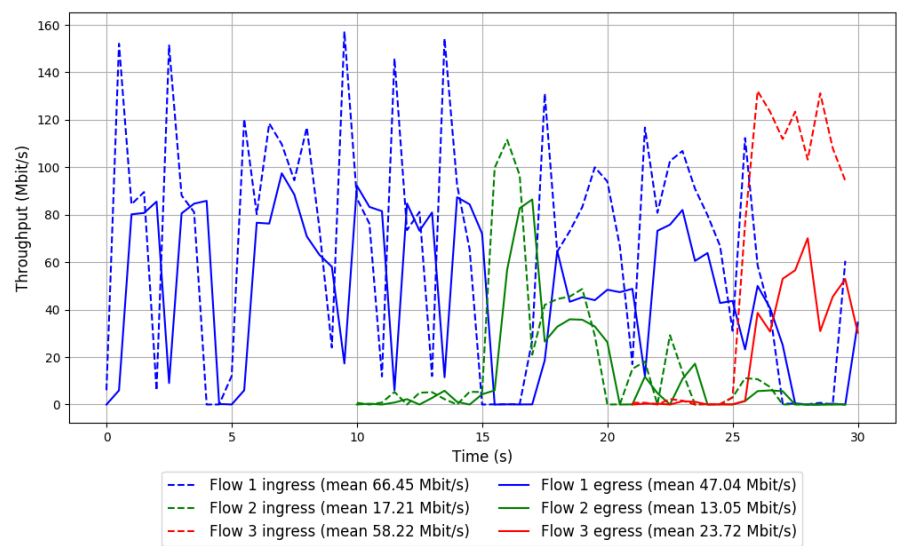Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-06-28 02:28:13
End at: 2019-06-28 02:28:43
Local clock offset: 0.874 ms
Remote clock offset: -3.742 ms


# Below is generated by plot.py at 2019-06-28 02:57:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.37 Mbit/s
95th percentile per-packet one-way delay: 60.990 ms
Loss rate: 34.11%
-- Flow 1:
Average throughput: 47.04 Mbit/s
95th percentile per-packet one-way delay: 60.749 ms
Loss rate: 29.16%
-- Flow 2:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 59.736 ms
Loss rate: 25.73%
-- Flow 3:
Average throughput: 23.72 Mbit/s
95th percentile per-packet one-way delay: 63.313 ms
Loss rate: 59.16%
```

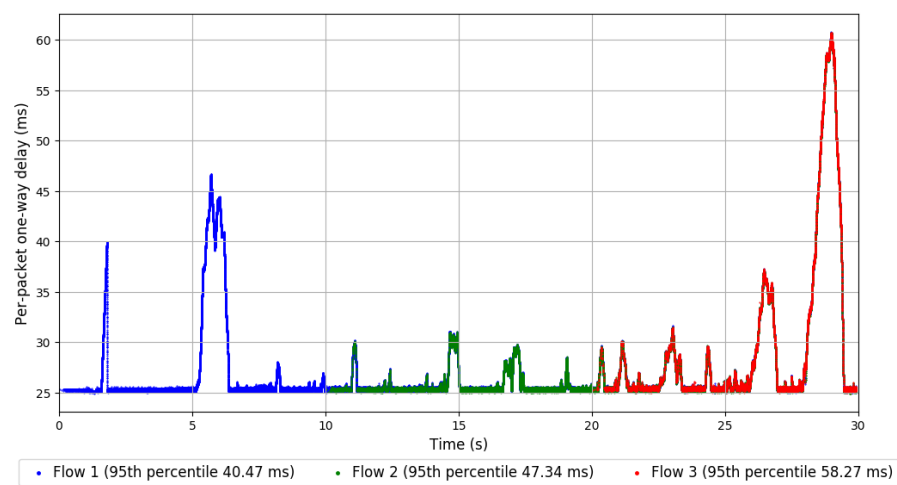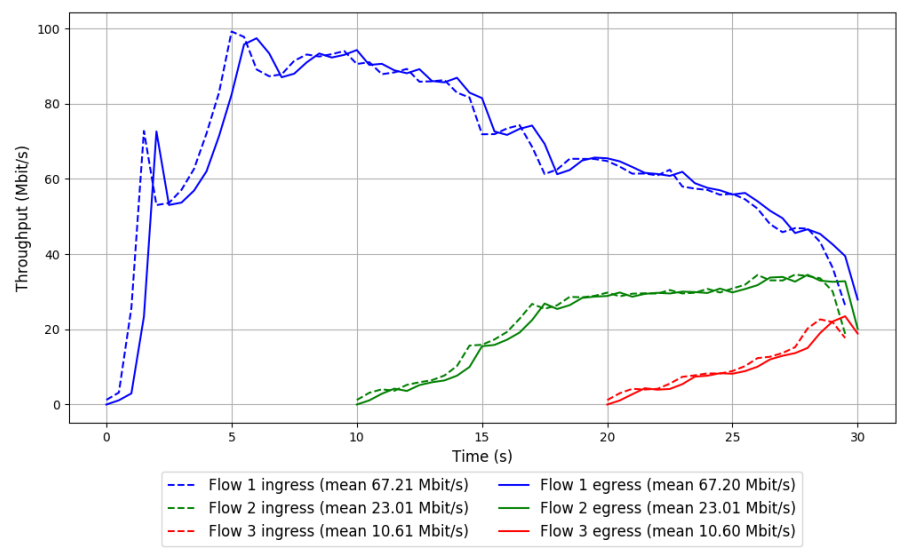Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-06-28 00:25:07
End at: 2019-06-28 00:25:37
Local clock offset: -6.651 ms
Remote clock offset: -6.874 ms


# Below is generated by plot.py at 2019-06-28 02:58:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.01 Mbit/s
95th percentile per-packet one-way delay: 41.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.20 Mbit/s
95th percentile per-packet one-way delay: 40.468 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.01 Mbit/s
95th percentile per-packet one-way delay: 47.343 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.60 Mbit/s
95th percentile per-packet one-way delay: 58.268 ms
Loss rate: 0.01%
```

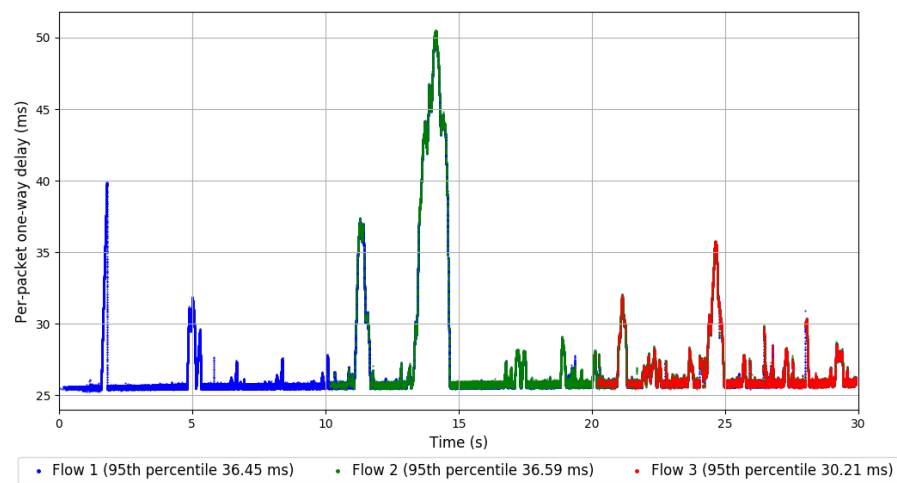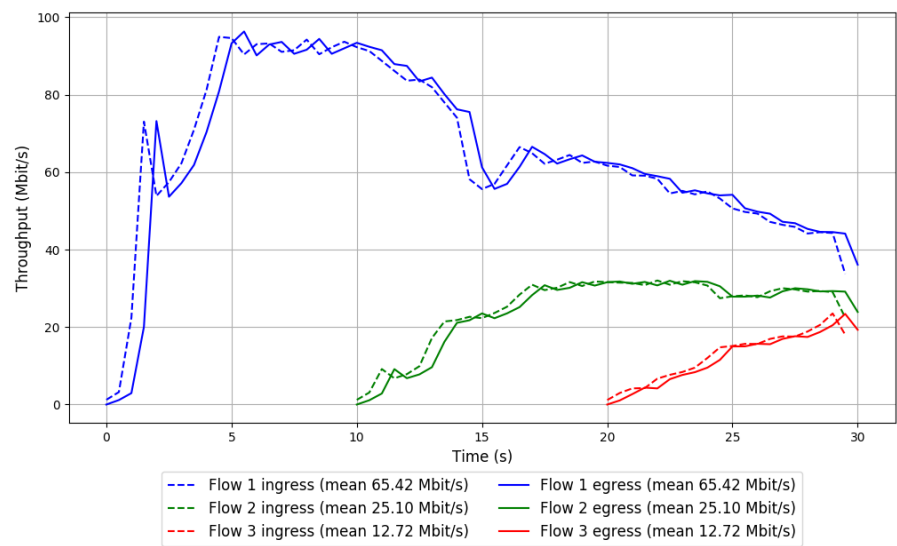# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-06-28 00:52:27
End at: 2019-06-28 00:52:57
Local clock offset: -6.621 ms
Remote clock offset: -6.456 ms


# Below is generated by plot.py at 2019-06-28 02:58:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 36.066 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.42 Mbit/s
95th percentile per-packet one-way delay: 36.447 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.10 Mbit/s
95th percentile per-packet one-way delay: 36.585 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.72 Mbit/s
95th percentile per-packet one-way delay: 30.214 ms
Loss rate: 0.00%
```

Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-06-28 01:20:39
End at: 2019-06-28 01:21:09
Local clock offset: -2.576 ms
Remote clock offset: -5.58 ms


# Below is generated by plot.py at 2019-06-28 02:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.85 Mbit/s
95th percentile per-packet one-way delay: 33.963 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.63 Mbit/s
95th percentile per-packet one-way delay: 32.090 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 35.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.23 Mbit/s
95th percentile per-packet one-way delay: 36.202 ms
Loss rate: 0.00%
```
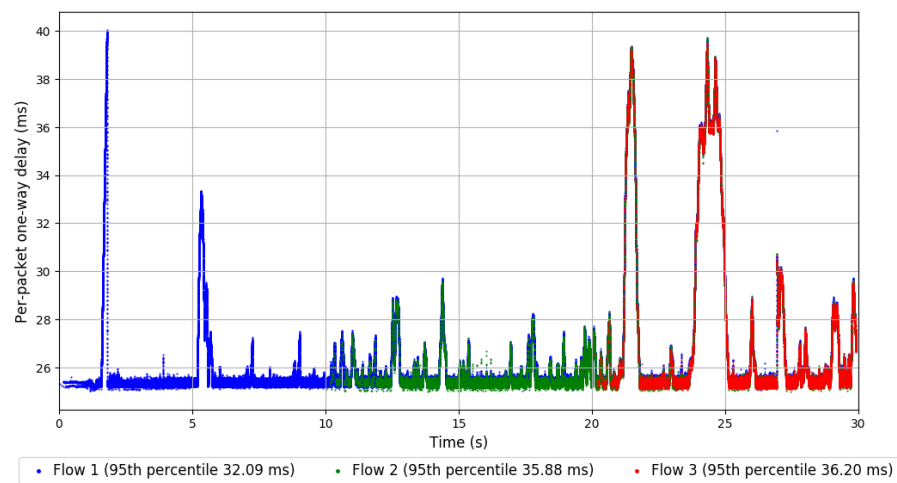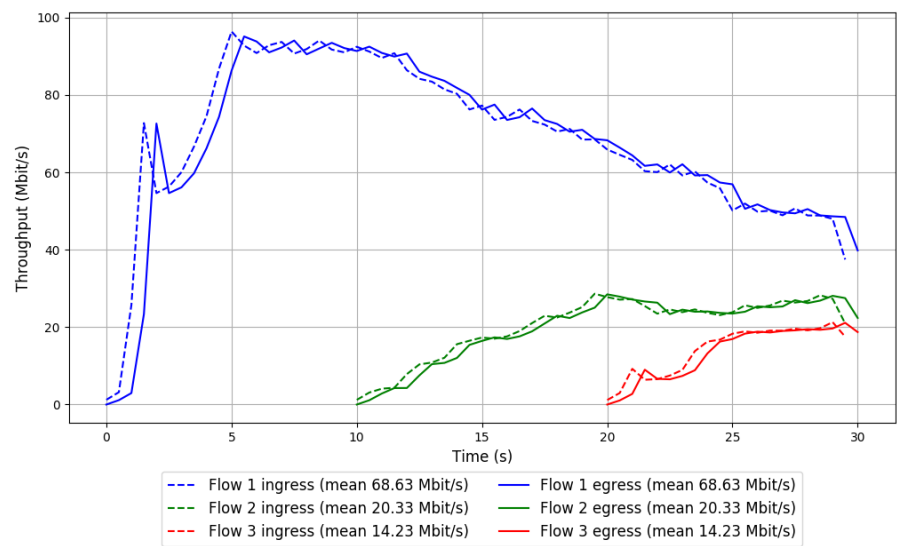
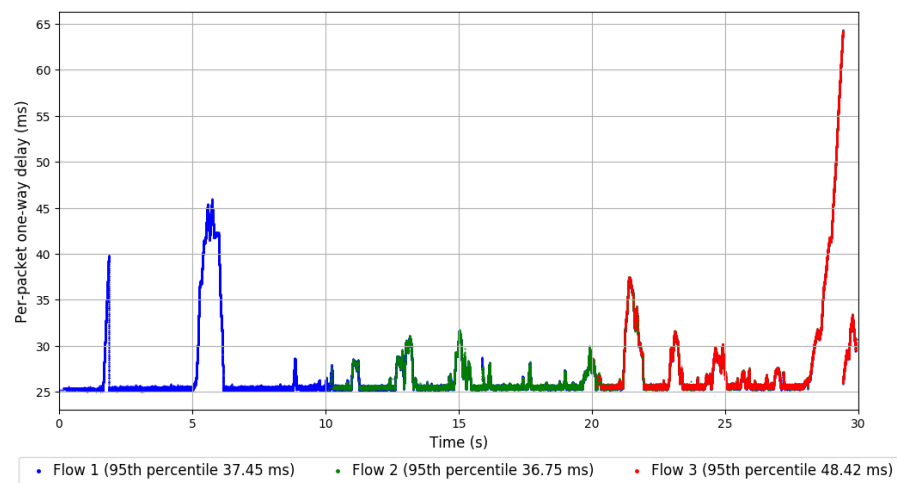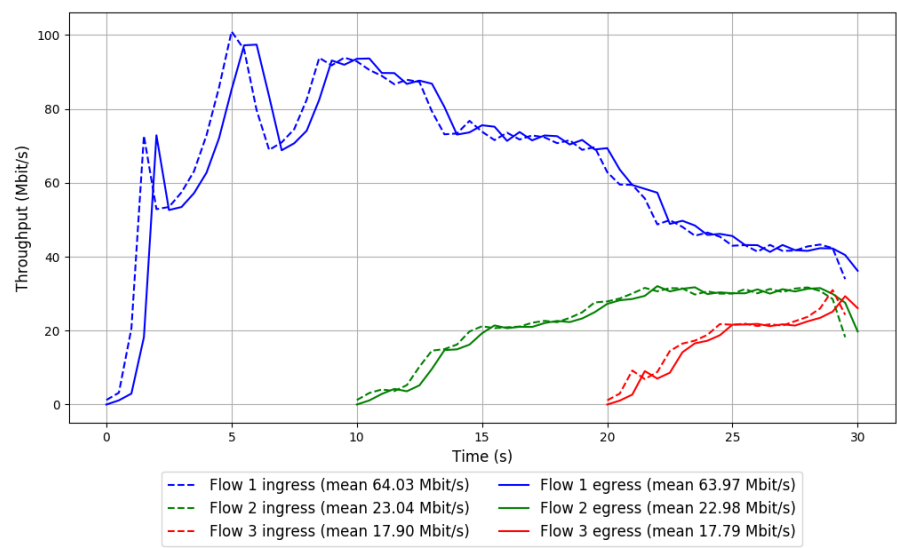# Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-06-28 01:47:48
End at: 2019-06-28 01:48:18
Local clock offset: -2.332 ms
Remote clock offset: -4.637 ms


# Below is generated by plot.py at 2019-06-28 02:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.12 Mbit/s
95th percentile per-packet one-way delay: 38.202 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 63.97 Mbit/s
95th percentile per-packet one-way delay: 37.452 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 22.98 Mbit/s
95th percentile per-packet one-way delay: 36.749 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 48.419 ms
Loss rate: 0.64%
```

Run 4: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 64.03 Mbit/s)   —— Flow 1 egress (mean 63.97 Mbit/s)
- - - - Flow 2 ingress (mean 23.04 Mbit/s)   —— Flow 2 egress (mean 22.98 Mbit/s)
- - - - Flow 3 ingress (mean 17.90 Mbit/s)   —— Flow 3 egress (mean 17.79 Mbit/s)

• Flow 1 (95th percentile 37.45 ms)   • Flow 2 (95th percentile 36.75 ms)   • Flow 3 (95th percentile 48.42 ms)
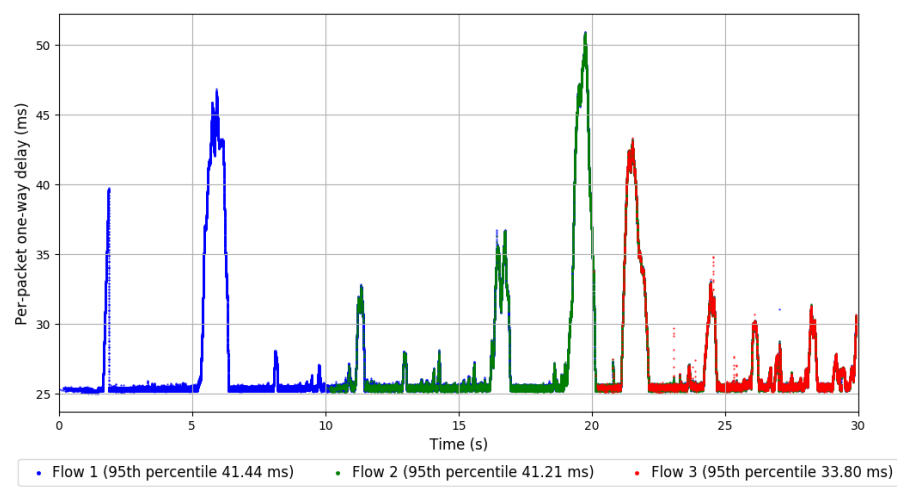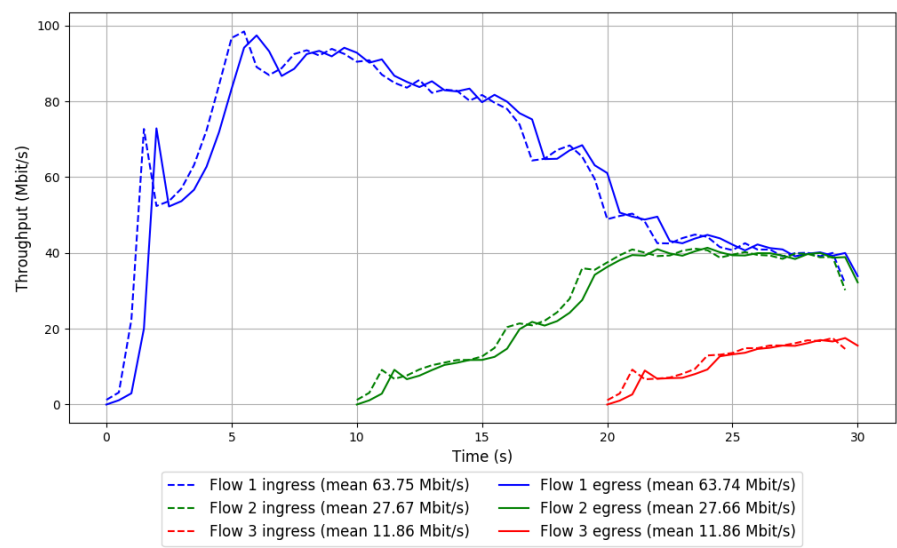
```
Run 5: Statistics of PCC-Vivace

Start at: 2019-06-28 02:15:16
End at: 2019-06-28 02:15:46
Local clock offset: 1.395 ms
Remote clock offset: -3.914 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 41.196 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.74 Mbit/s
95th percentile per-packet one-way delay: 41.442 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 41.214 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 33.804 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-06-28 00:26:22
End at: 2019-06-28 00:26:52
Local clock offset: -6.809 ms
Remote clock offset: -6.91 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 25.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.845 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.010 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.839 ms
Loss rate: 0.00%
```
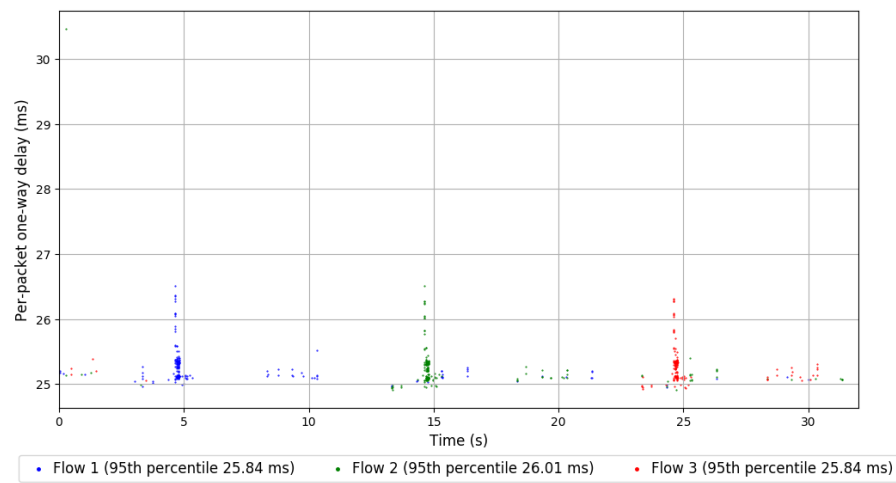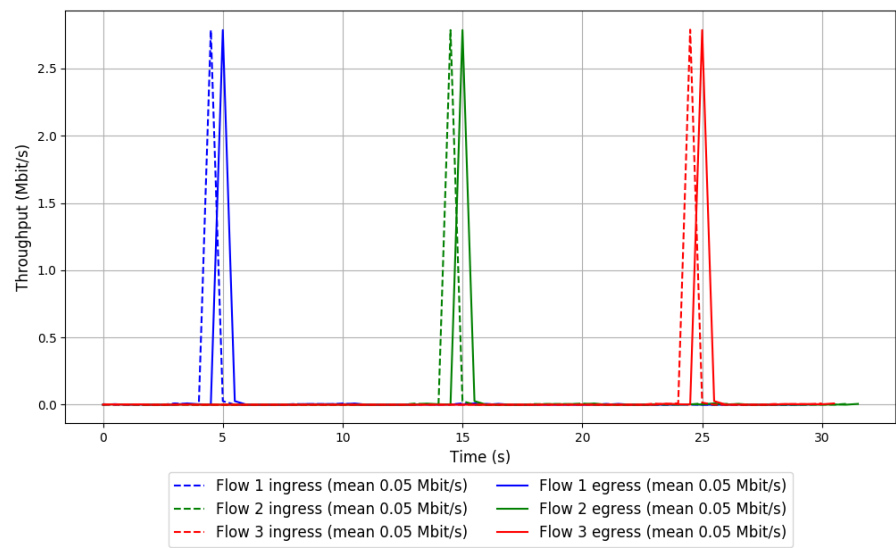
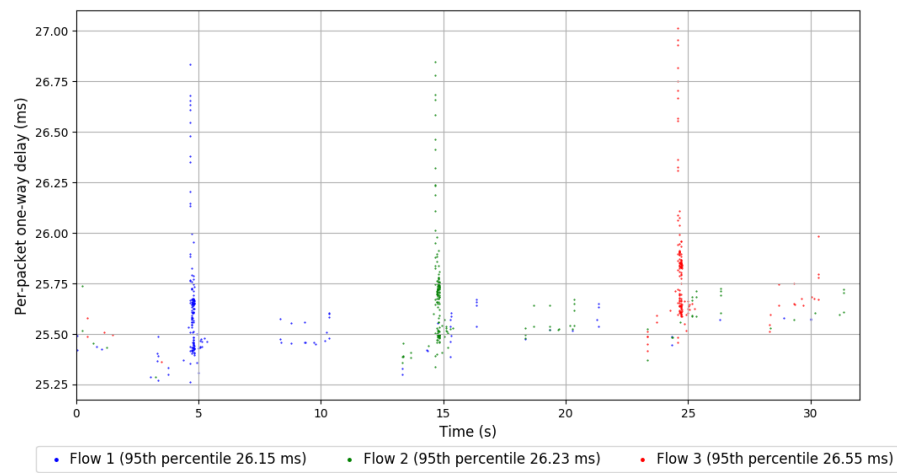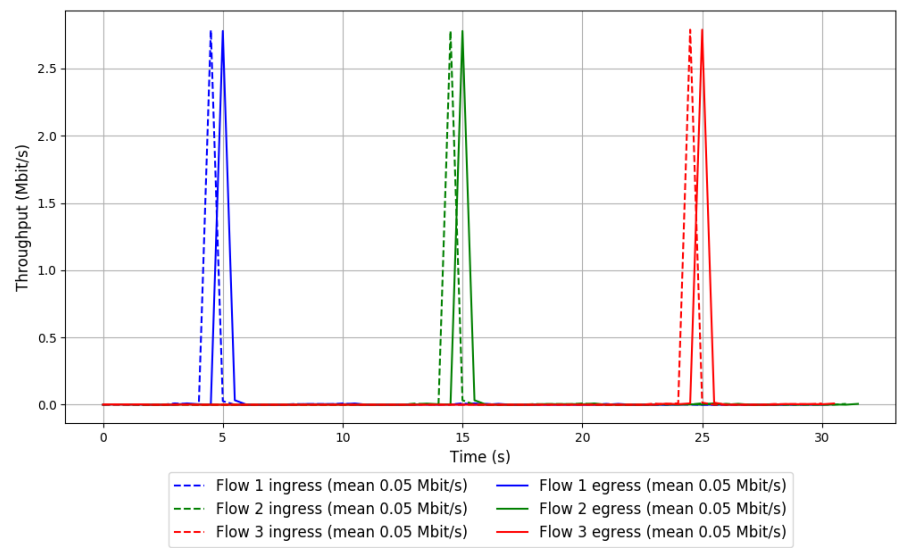Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-06-28 00:53:48
End at: 2019-06-28 00:54:18
Local clock offset: -6.053 ms
Remote clock offset: -6.406 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 26.323 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.146 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.232 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.553 ms
Loss rate: 0.00%
```

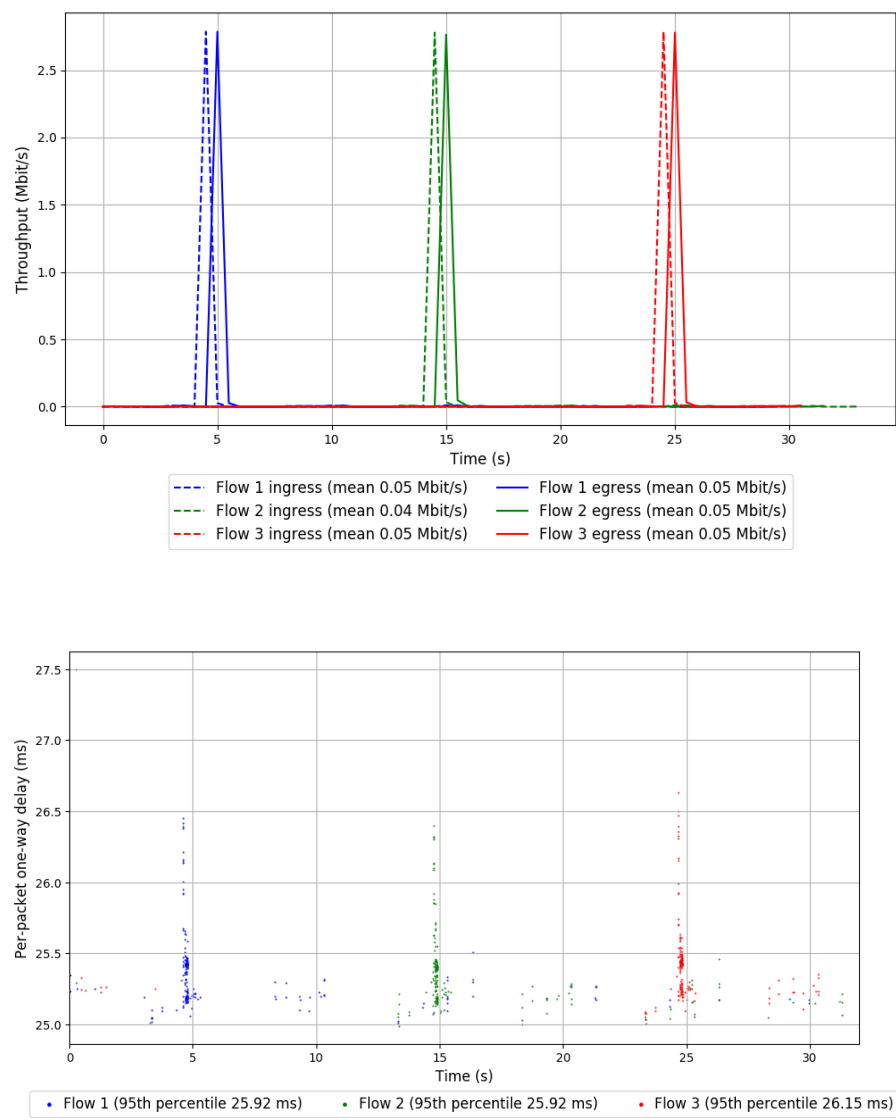Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-06-28 01:22:01
End at: 2019-06-28 01:22:31
Local clock offset: -2.557 ms
Remote clock offset: -5.533 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 25.994 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.923 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.151 ms
Loss rate: 0.00%
```

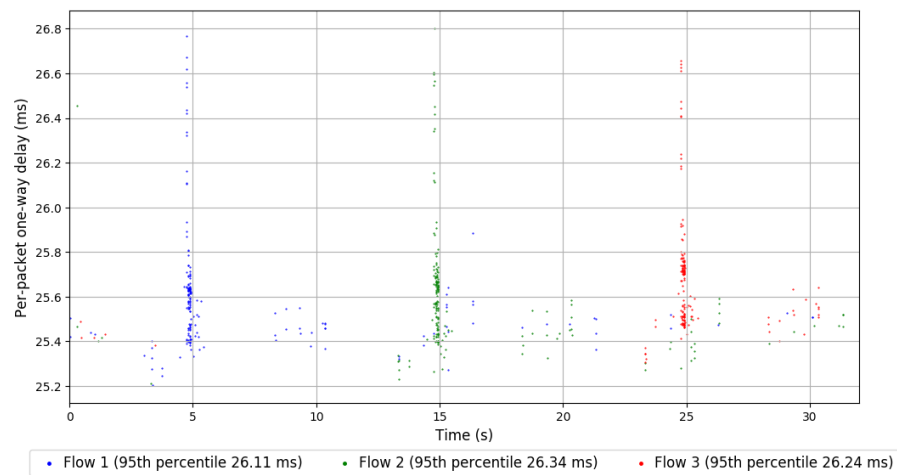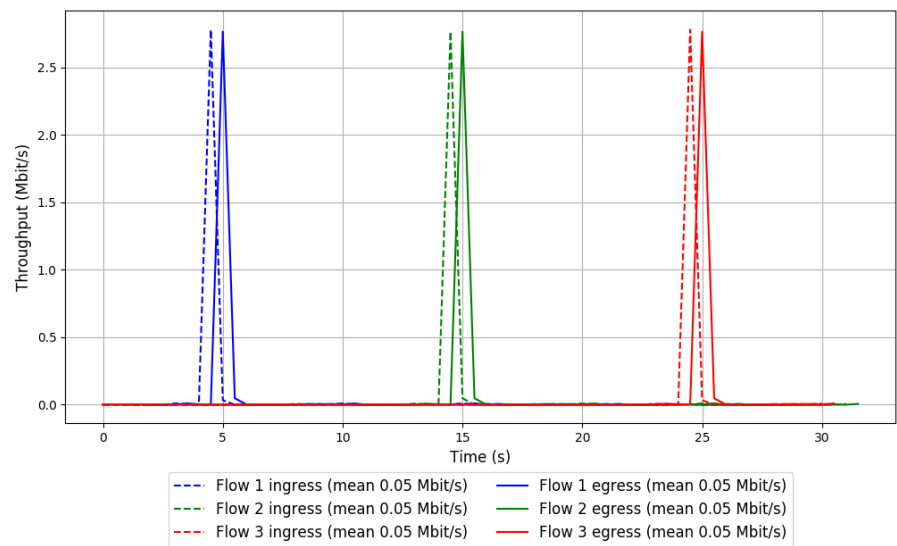Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-06-28 01:49:05
End at: 2019-06-28 01:49:35
Local clock offset: -1.984 ms
Remote clock offset: -4.498 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 26.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.341 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.239 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-06-28 02:16:42
End at: 2019-06-28 02:17:12
Local clock offset: 1.494 ms
Remote clock offset: -3.936 ms


# Below is generated by plot.py at 2019-06-28 02:58:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 26.003 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 26.028 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 25.915 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link