Pantheon Report

Generated at 2019-02-05 20:46:09 (UTC).

Data path: India on **em1** (*remote*) →AWS India 1 on **ens5** (*local*).

Repeated the test of 21 congestion control schemes 5 times.

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

NTP offsets were measured against **nets.org.sg** and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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

```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from India to AWS India 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from India to AWS India 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	59.27	40.08	27.91	256.79	388.36	481.10	3.05	4.06	4.87
Copa	5	49.78	33.56	25.05	82.97	78.60	80.24	0.13	0.42	1.00
TCP Cubic	5	48.05	39.19	32.43	102.11	95.97	124.01	0.19	0.49	0.89
FillP	5	58.21	38.41	31.26	137.40	177.49	145.80	0.39	2.94	3.19
FillP-Sheep	5	57.37	40.72	27.28	138.20	141.59	204.73	0.37	0.66	2.34
Indigo	5	54.30	38.68	27.99	86.09	82.43	81.65	0.21	0.37	0.88
Indigo-MusesC3	5	46.52	29.42	22.54	81.36	83.18	80.30	0.15	0.24	1.45
Indigo-MusesC5	5	52.93	41.03	38.49	151.38	161.08	138.19	1.30	2.81	3.36
Indigo-MusesD	5	35.14	40.95	17.30	77.19	99.53	76.08	0.15	1.04	1.88
Indigo-MusesT	5	65.77	27.95	23.38	136.94	149.93	84.79	1.20	1.50	1.20
LEDBAT	5	29.66	21.94	15.44	78.14	78.78	76.67	0.19	0.23	1.83
PCC-Allegro	5	38.76	30.69	33.86	885.72	522.90	488.38	7.81	5.27	3.55
PCC-Expr	5	35.01	24.46	19.38	668.34	458.67	113.59	15.28	4.95	1.21
QUIC Cubic	5	43.78	33.47	28.83	110.35	128.35	159.39	0.24	0.49	1.05
SCReAM	5	0.22	0.22	0.22	69.39	70.13	69.56	0.26	0.40	0.71
Sprout	5	9.48	9.39	9.20	78.47	77.98	78.50	0.27	0.46	0.79
TaoVA-100x	5	58.57	37.85	27.21	153.02	175.94	170.67	0.55	1.22	3.14
TCP Vegas	5	39.85	31.45	29.00	98.85	81.58	76.59	0.21	0.43	1.03
Verus	5	43.25	31.97	22.78	159.87	133.31	250.88	0.33	0.50	1.45
PCC-Vivace	5	24.74	8.42	18.25	72.48	71.75	89.53	0.45	0.84	1.10
WebRTC media	5	1.60	0.89	0.39	72.84	72.43	72.49	0.10	0.28	0.74

```
Run 1: Statistics of TCP BBR

Start at: 2019-02-05 18:35:26
End at: 2019-02-05 18:35:56
Local clock offset: -8.916 ms
Remote clock offset: -3.719 ms


# Below is generated by plot.py at 2019-02-05 20:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.59 Mbit/s
95th percentile per-packet one-way delay: 265.337 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 57.84 Mbit/s
95th percentile per-packet one-way delay: 294.590 ms
Loss rate: 2.76%
-- Flow 2:
Average throughput: 39.45 Mbit/s
95th percentile per-packet one-way delay: 213.623 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 355.556 ms
Loss rate: 3.73%
```

Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-02-05 19:04:19
End at: 2019-02-05 19:04:49
Local clock offset: -5.68 ms
Remote clock offset: -5.55 ms

# Below is generated by plot.py at 2019-02-05 20:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.43 Mbit/s
95th percentile per-packet one-way delay: 314.838 ms
Loss rate: 3.28%
-- Flow 1:
Average throughput: 61.86 Mbit/s
95th percentile per-packet one-way delay: 243.265 ms
Loss rate: 2.68%
-- Flow 2:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 444.119 ms
Loss rate: 4.28%
-- Flow 3:
Average throughput: 25.10 Mbit/s
95th percentile per-packet one-way delay: 465.958 ms
Loss rate: 4.83%
```

Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 63.39 Mbit/s) ---- Flow 1 egress (mean 61.86 Mbit/s) ——
Flow 2 ingress (mean 37.94 Mbit/s) ---- Flow 2 egress (mean 36.47 Mbit/s) ——
Flow 3 ingress (mean 26.15 Mbit/s) ---- Flow 3 egress (mean 25.10 Mbit/s) ——

• Flow 1 (95th percentile 243.26 ms)   • Flow 2 (95th percentile 444.12 ms)   • Flow 3 (95th percentile 465.96 ms)

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```
Run 3: Statistics of TCP BBR

Start at: 2019-02-05 19:31:53
End at: 2019-02-05 19:32:23
Local clock offset: -9.363 ms
Remote clock offset: -4.982 ms


# Below is generated by plot.py at 2019-02-05 20:34:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.87 Mbit/s
95th percentile per-packet one-way delay: 295.554 ms
Loss rate: 3.88%
-- Flow 1:
Average throughput: 58.15 Mbit/s
95th percentile per-packet one-way delay: 237.687 ms
Loss rate: 3.76%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 454.364 ms
Loss rate: 4.09%
-- Flow 3:
Average throughput: 32.42 Mbit/s
95th percentile per-packet one-way delay: 241.004 ms
Loss rate: 3.97%
```
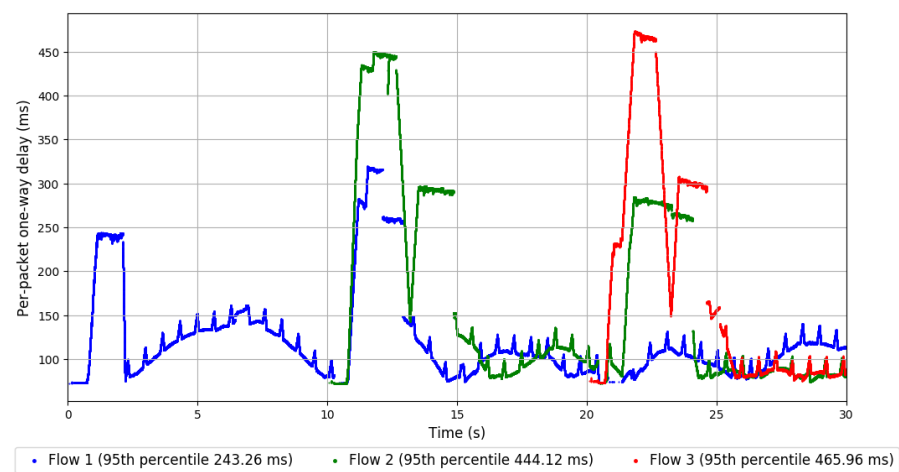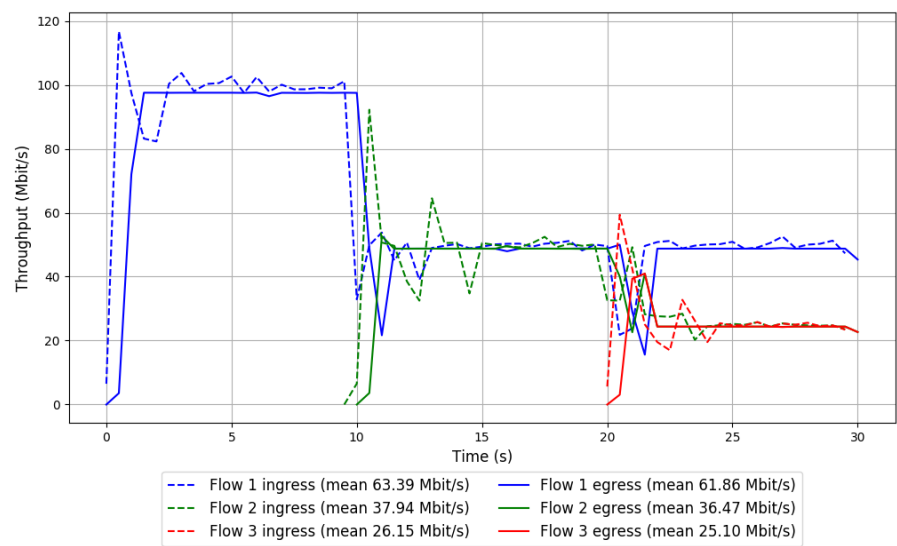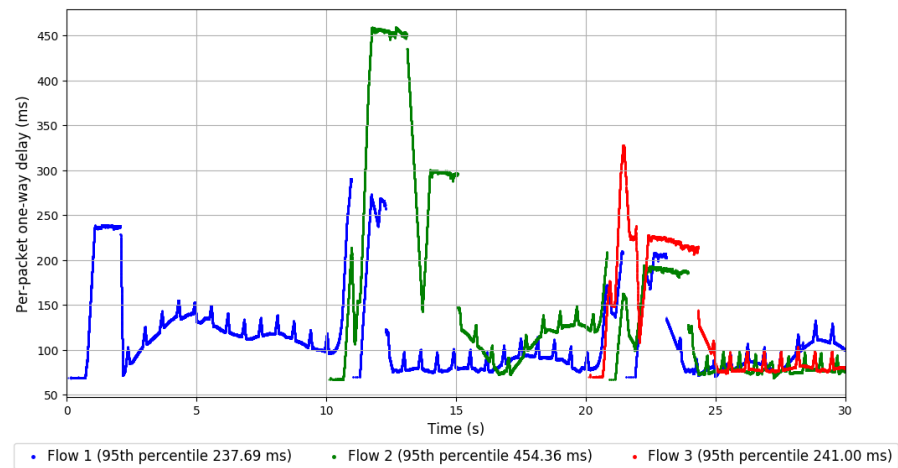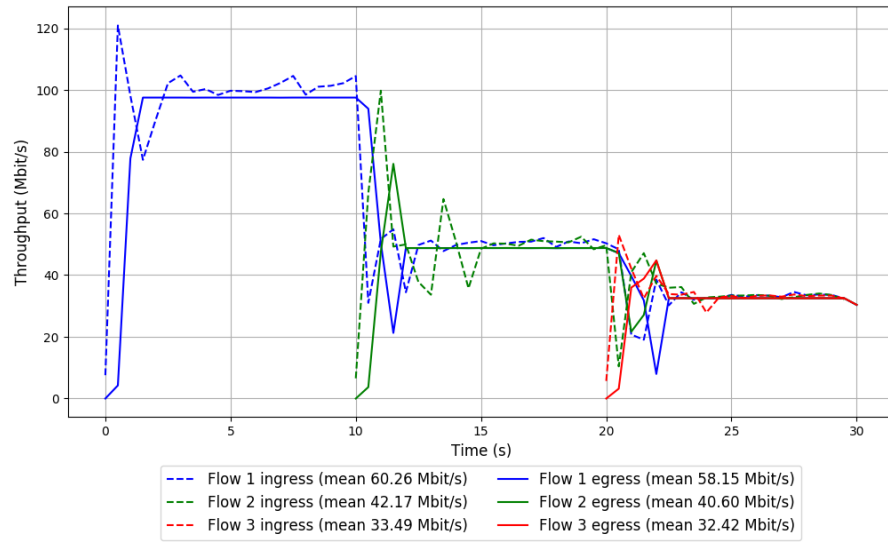
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 60.26 Mbit/s) --- Flow 1 egress (mean 58.15 Mbit/s)
Flow 2 ingress (mean 42.17 Mbit/s) --- Flow 2 egress (mean 40.60 Mbit/s)
Flow 3 ingress (mean 33.49 Mbit/s) --- Flow 3 egress (mean 32.42 Mbit/s)

Flow 1 (95th percentile 237.69 ms)   Flow 2 (95th percentile 454.36 ms)   Flow 3 (95th percentile 241.00 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-02-05 19:59:58
End at: 2019-02-05 20:00:28
Local clock offset: -4.004 ms
Remote clock offset: -3.682 ms


# Below is generated by plot.py at 2019-02-05 20:34:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.14 Mbit/s
95th percentile per-packet one-way delay: 366.394 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 62.77 Mbit/s
95th percentile per-packet one-way delay: 232.472 ms
Loss rate: 2.83%
-- Flow 2:
Average throughput: 36.01 Mbit/s
95th percentile per-packet one-way delay: 364.371 ms
Loss rate: 3.95%
-- Flow 3:
Average throughput: 25.47 Mbit/s
95th percentile per-packet one-way delay: 929.037 ms
Loss rate: 5.97%
```
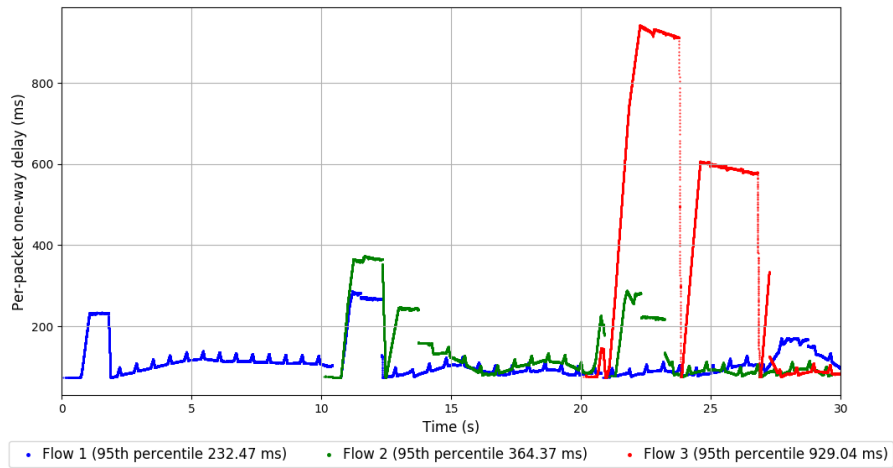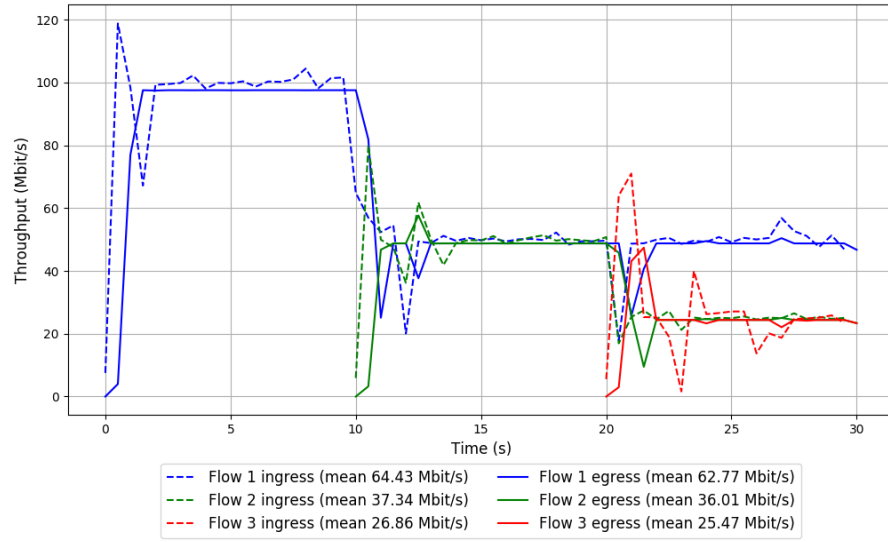
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 64.43 Mbit/s) --- Flow 1 egress (mean 62.77 Mbit/s)
Flow 2 ingress (mean 37.34 Mbit/s) --- Flow 2 egress (mean 36.01 Mbit/s)
Flow 3 ingress (mean 26.86 Mbit/s) --- Flow 3 egress (mean 25.47 Mbit/s)

Flow 1 (95th percentile 232.47 ms)   Flow 2 (95th percentile 364.37 ms)   Flow 3 (95th percentile 929.04 ms)
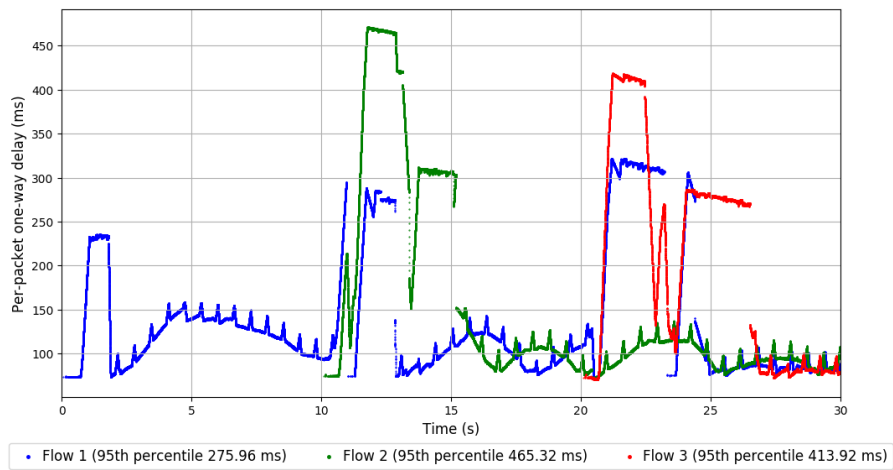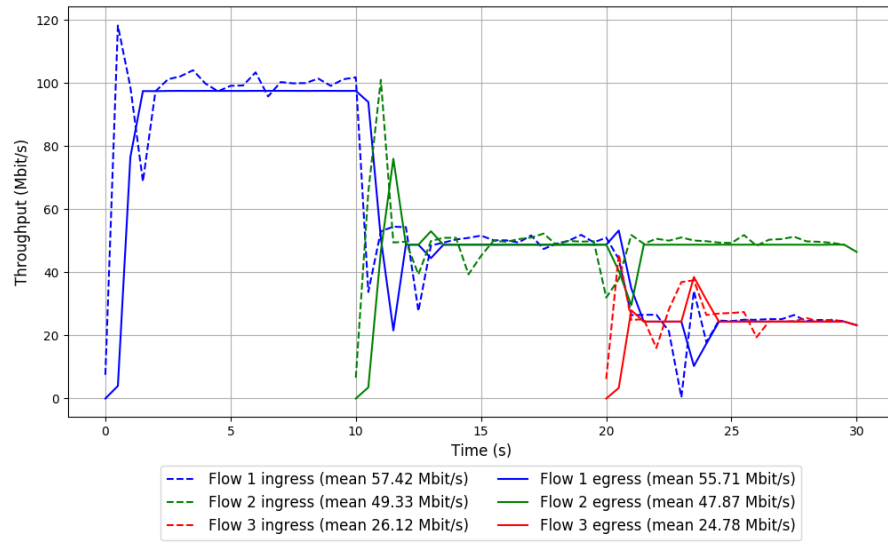
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```
Run 5: Statistics of TCP BBR

Start at: 2019-02-05 20:26:58
End at: 2019-02-05 20:27:28
Local clock offset: 0.156 ms
Remote clock offset: -5.226 ms


# Below is generated by plot.py at 2019-02-05 20:34:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 316.005 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 55.71 Mbit/s
95th percentile per-packet one-way delay: 275.957 ms
Loss rate: 3.24%
-- Flow 2:
Average throughput: 47.87 Mbit/s
95th percentile per-packet one-way delay: 465.325 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 24.78 Mbit/s
95th percentile per-packet one-way delay: 413.924 ms
Loss rate: 5.84%
```
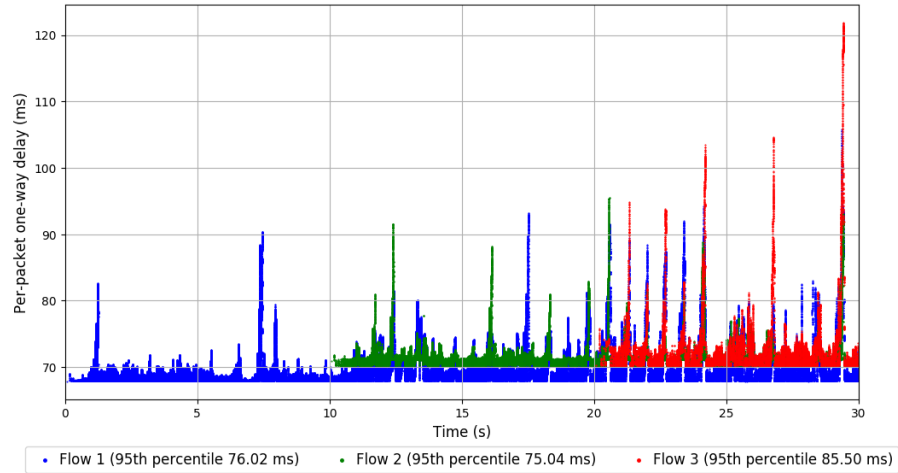
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-02-05 18:24:16
End at: 2019-02-05 18:24:46
Local clock offset: -9.483 ms
Remote clock offset: -4.179 ms


# Below is generated by plot.py at 2019-02-05 20:35:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.95 Mbit/s
95th percentile per-packet one-way delay: 76.374 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 76.019 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 27.66 Mbit/s
95th percentile per-packet one-way delay: 75.036 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 16.26 Mbit/s
95th percentile per-packet one-way delay: 85.495 ms
Loss rate: 1.08%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 53.14 Mbit/s) — Flow 1 egress (mean 53.18 Mbit/s)
Flow 2 ingress (mean 27.66 Mbit/s) — Flow 2 egress (mean 27.66 Mbit/s)
Flow 3 ingress (mean 16.31 Mbit/s) — Flow 3 egress (mean 16.26 Mbit/s)

Flow 1 (95th percentile 76.02 ms) — Flow 2 (95th percentile 75.04 ms) — Flow 3 (95th percentile 85.50 ms)
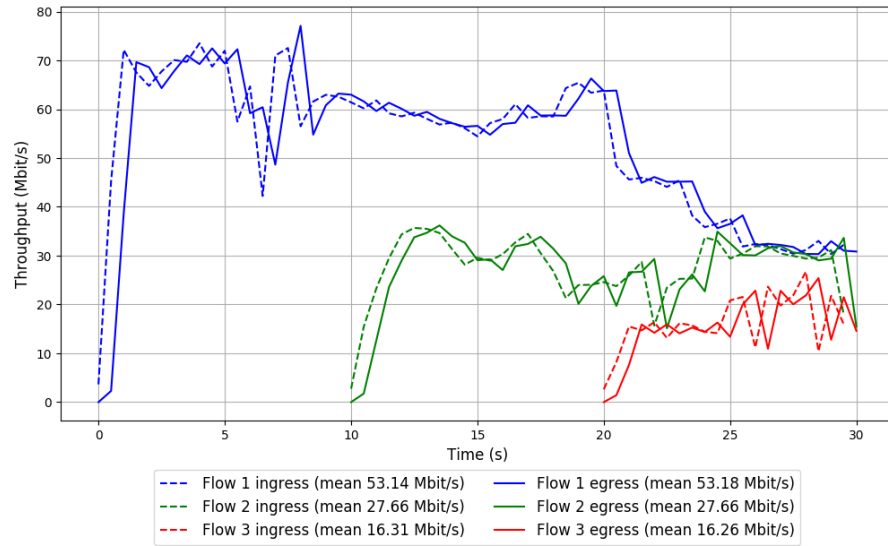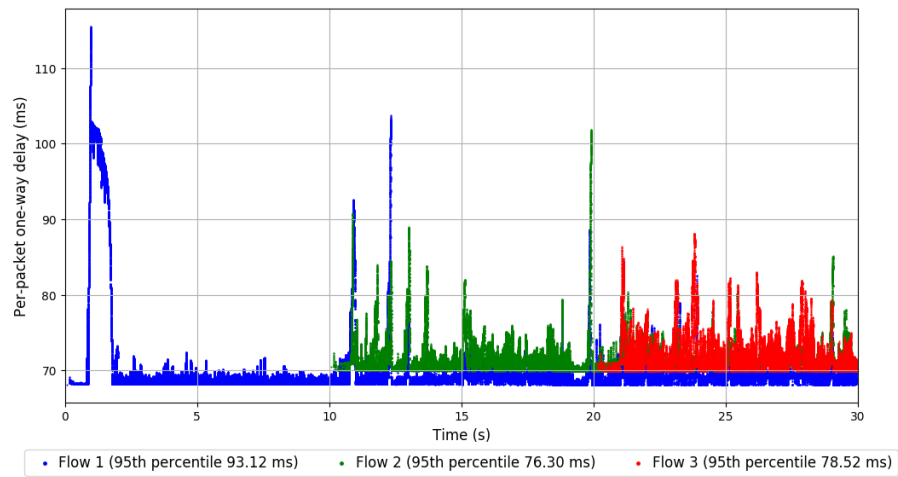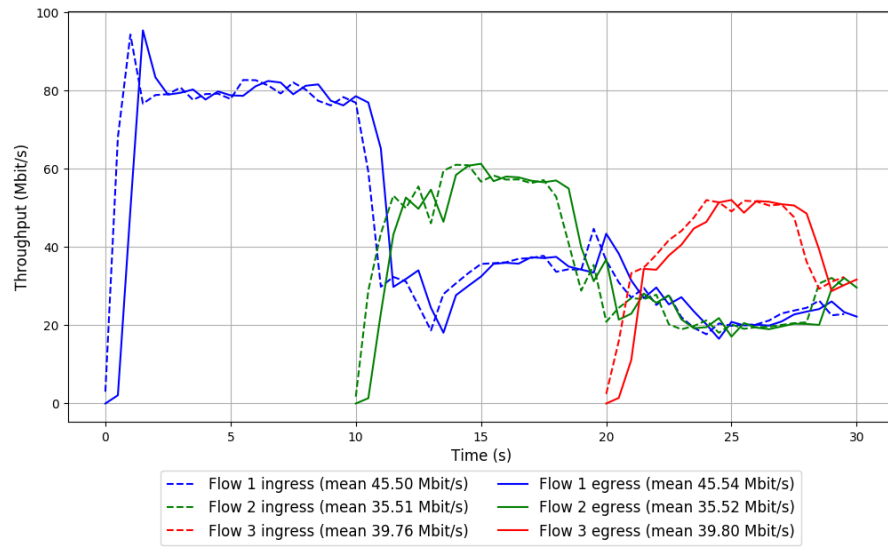
16

```
Run 2: Statistics of Copa

Start at: 2019-02-05 18:52:24
End at: 2019-02-05 18:52:54
Local clock offset: -7.273 ms
Remote clock offset: -3.378 ms


# Below is generated by plot.py at 2019-02-05 20:35:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.32 Mbit/s
95th percentile per-packet one-way delay: 79.253 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 45.54 Mbit/s
95th percentile per-packet one-way delay: 93.121 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 35.52 Mbit/s
95th percentile per-packet one-way delay: 76.295 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 39.80 Mbit/s
95th percentile per-packet one-way delay: 78.520 ms
Loss rate: 0.70%
```

Run 2: Report of Copa — Data Link

- - - Flow 1 ingress (mean 45.50 Mbit/s) —— Flow 1 egress (mean 45.54 Mbit/s)
- - - Flow 2 ingress (mean 35.51 Mbit/s) —— Flow 2 egress (mean 35.52 Mbit/s)
- - - Flow 3 ingress (mean 39.76 Mbit/s) —— Flow 3 egress (mean 39.80 Mbit/s)

• Flow 1 (95th percentile 93.12 ms) • Flow 2 (95th percentile 76.30 ms) • Flow 3 (95th percentile 78.52 ms)
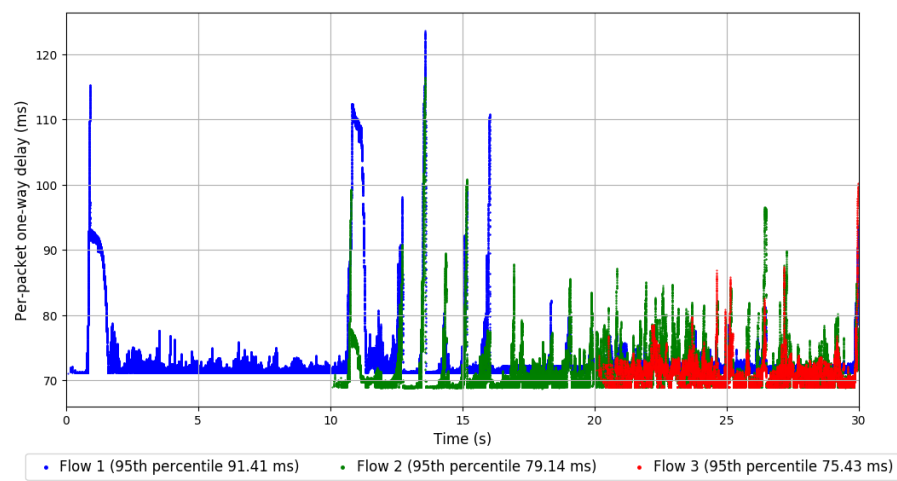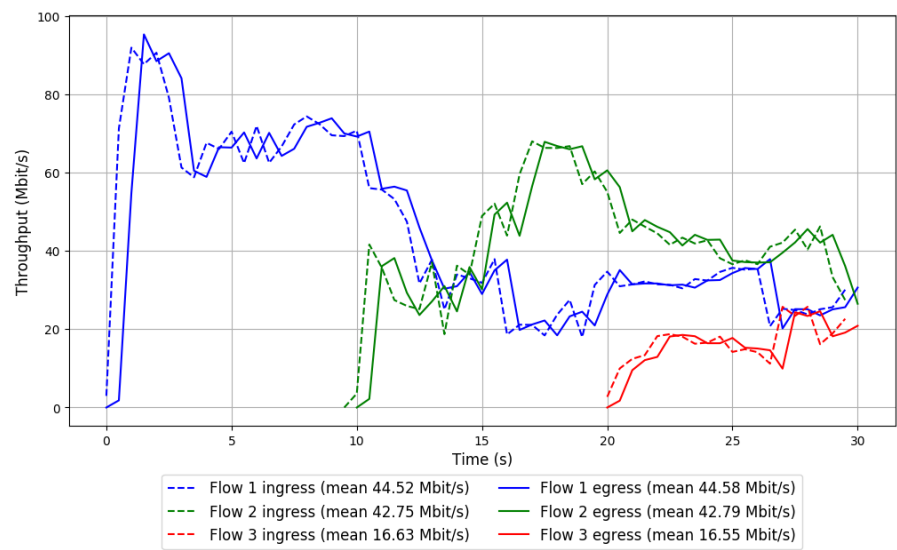
```
Run 3: Statistics of Copa

Start at: 2019-02-05 19:21:29
End at: 2019-02-05 19:21:59
Local clock offset: -6.605 ms
Remote clock offset: -5.187 ms


# Below is generated by plot.py at 2019-02-05 20:35:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.54 Mbit/s
95th percentile per-packet one-way delay: 86.067 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 44.58 Mbit/s
95th percentile per-packet one-way delay: 91.410 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 42.79 Mbit/s
95th percentile per-packet one-way delay: 79.141 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 16.55 Mbit/s
95th percentile per-packet one-way delay: 75.427 ms
Loss rate: 1.32%
```

Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 44.52 Mbit/s) ——— Flow 1 egress (mean 44.58 Mbit/s)
- - - Flow 2 ingress (mean 42.75 Mbit/s) ——— Flow 2 egress (mean 42.79 Mbit/s)
- - - Flow 3 ingress (mean 16.63 Mbit/s) ——— Flow 3 egress (mean 16.55 Mbit/s)

- Flow 1 (95th percentile 91.41 ms) • Flow 2 (95th percentile 79.14 ms) • Flow 3 (95th percentile 75.43 ms)
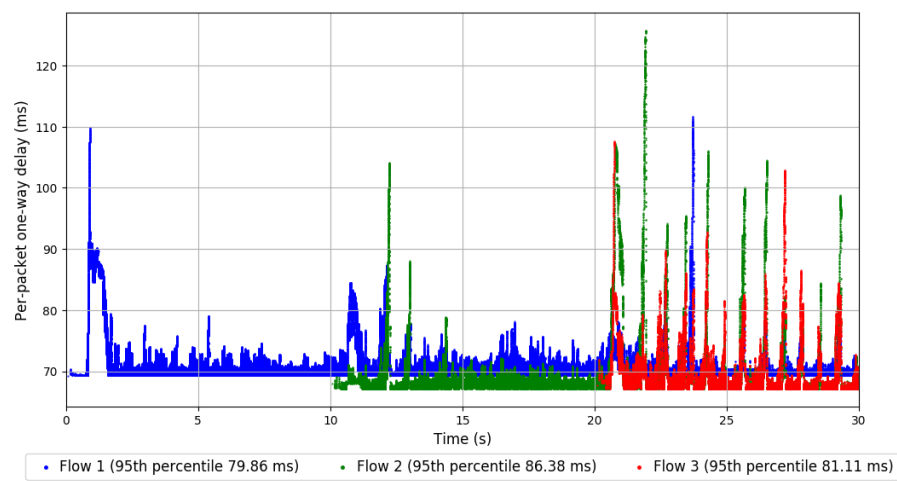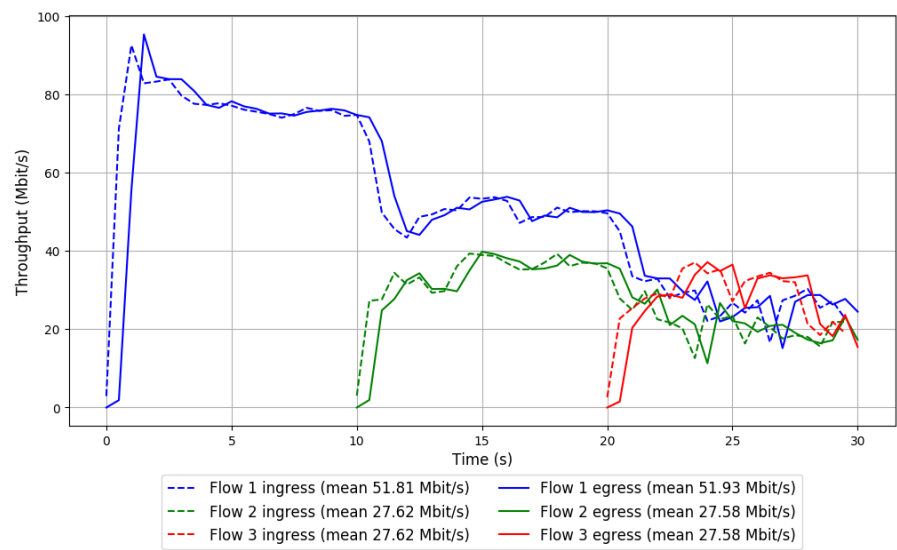
```
Run 4: Statistics of Copa

Start at: 2019-02-05 19:48:54
End at: 2019-02-05 19:49:24
Local clock offset: -8.381 ms
Remote clock offset: -4.367 ms


# Below is generated by plot.py at 2019-02-05 20:36:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.39 Mbit/s
95th percentile per-packet one-way delay: 81.428 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 51.93 Mbit/s
95th percentile per-packet one-way delay: 79.858 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 86.381 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 81.107 ms
Loss rate: 0.93%
```

Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 51.81 Mbit/s)   Flow 1 egress (mean 51.93 Mbit/s)
Flow 2 ingress (mean 27.62 Mbit/s)   Flow 2 egress (mean 27.58 Mbit/s)
Flow 3 ingress (mean 27.62 Mbit/s)   Flow 3 egress (mean 27.58 Mbit/s)

Flow 1 (95th percentile 79.86 ms)   Flow 2 (95th percentile 86.38 ms)   Flow 3 (95th percentile 81.11 ms)
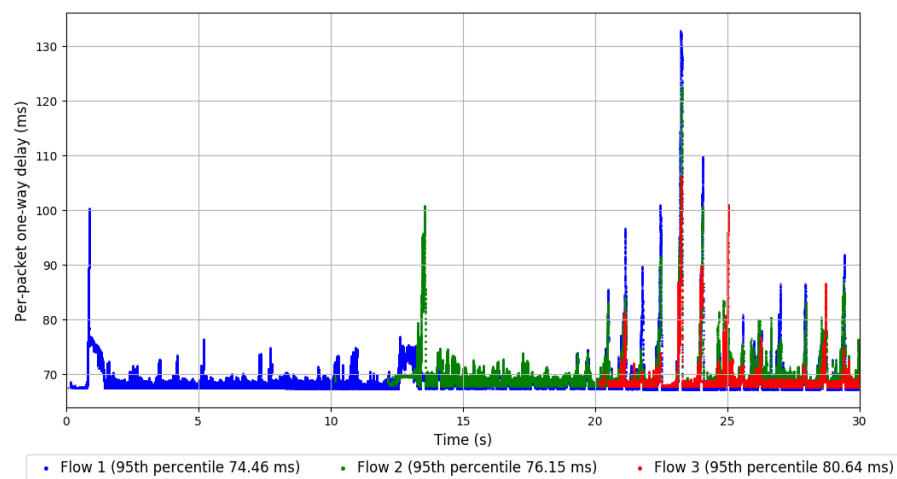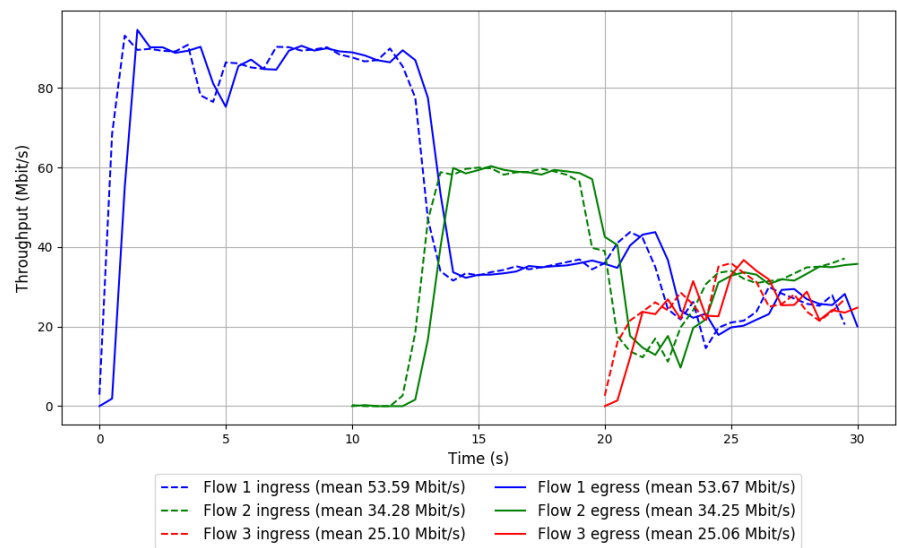
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```
Run 5: Statistics of Copa

Start at: 2019-02-05 20:16:49
End at: 2019-02-05 20:17:19
Local clock offset: -7.477 ms
Remote clock offset: -2.285 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.74 Mbit/s
95th percentile per-packet one-way delay: 74.869 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 74.460 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 76.152 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 25.06 Mbit/s
95th percentile per-packet one-way delay: 80.642 ms
Loss rate: 0.96%
```
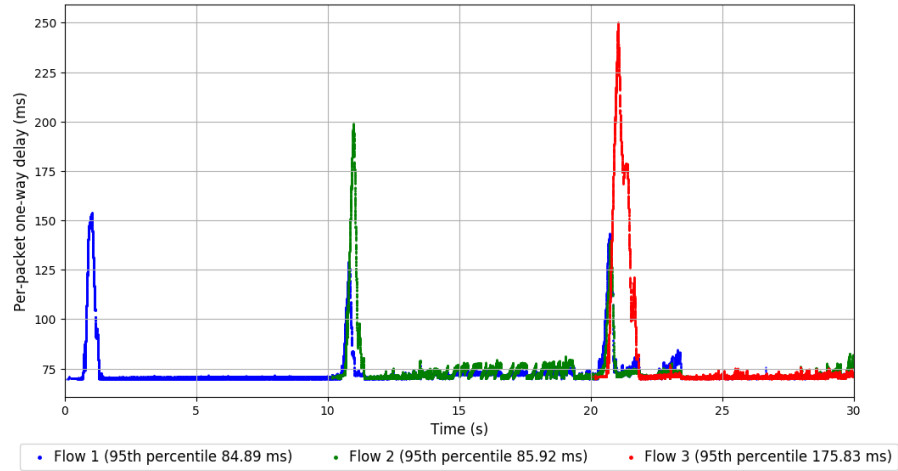
Run 5: Report of Copa — Data Link

- - - Flow 1 ingress (mean 53.59 Mbit/s)   —— Flow 1 egress (mean 53.67 Mbit/s)
- - - Flow 2 ingress (mean 34.28 Mbit/s)   —— Flow 2 egress (mean 34.25 Mbit/s)
- - - Flow 3 ingress (mean 25.10 Mbit/s)   —— Flow 3 egress (mean 25.06 Mbit/s)

• Flow 1 (95th percentile 74.46 ms)   • Flow 2 (95th percentile 76.15 ms)   • Flow 3 (95th percentile 80.64 ms)
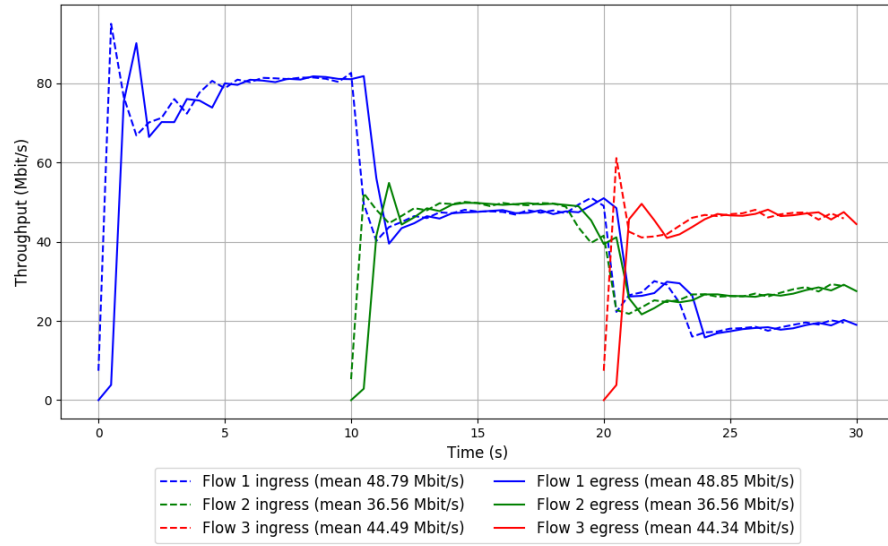
```
Run 1: Statistics of TCP Cubic

Start at: 2019-02-05 18:36:57
End at: 2019-02-05 18:37:27
Local clock offset: -9.927 ms
Remote clock offset: -4.263 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.84 Mbit/s
95th percentile per-packet one-way delay: 96.125 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 48.85 Mbit/s
95th percentile per-packet one-way delay: 84.886 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 85.920 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 44.34 Mbit/s
95th percentile per-packet one-way delay: 175.834 ms
Loss rate: 1.12%
```
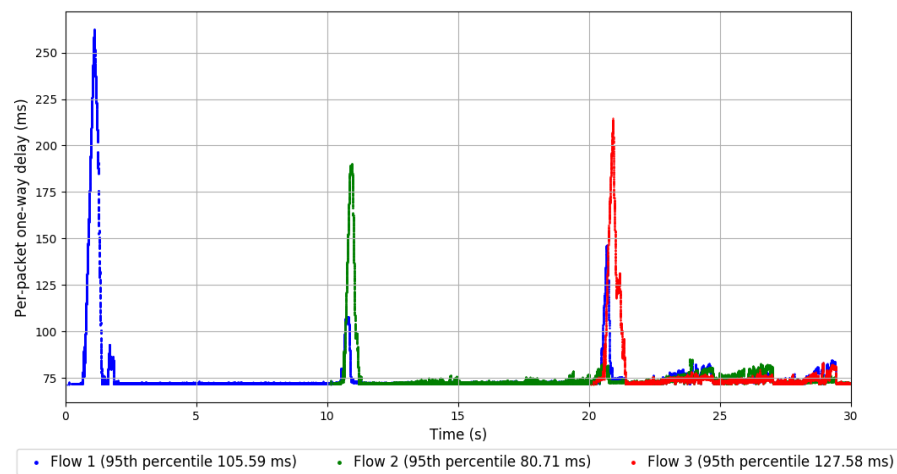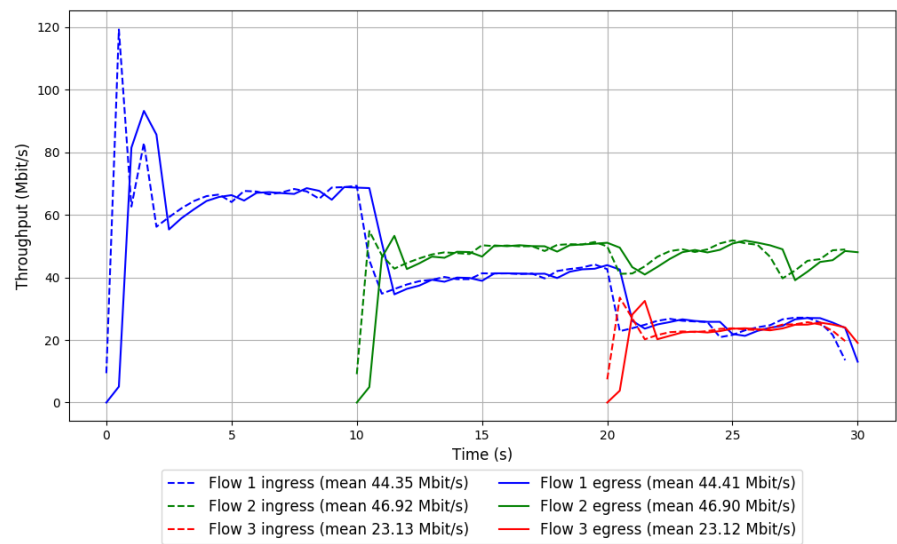
Run 1: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 48.79 Mbit/s)   Flow 1 egress (mean 48.85 Mbit/s)
- - - - Flow 2 ingress (mean 36.56 Mbit/s)   Flow 2 egress (mean 36.56 Mbit/s)
- - - - Flow 3 ingress (mean 44.49 Mbit/s)   Flow 3 egress (mean 44.34 Mbit/s)

- Flow 1 (95th percentile 84.89 ms)   • Flow 2 (95th percentile 85.92 ms)   • Flow 3 (95th percentile 175.83 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-02-05 19:05:50
End at: 2019-02-05 19:06:20
Local clock offset: -6.216 ms
Remote clock offset: -5.635 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 91.534 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 44.41 Mbit/s
95th percentile per-packet one-way delay: 105.590 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 46.90 Mbit/s
95th percentile per-packet one-way delay: 80.706 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 23.12 Mbit/s
95th percentile per-packet one-way delay: 127.584 ms
Loss rate: 0.83%
```
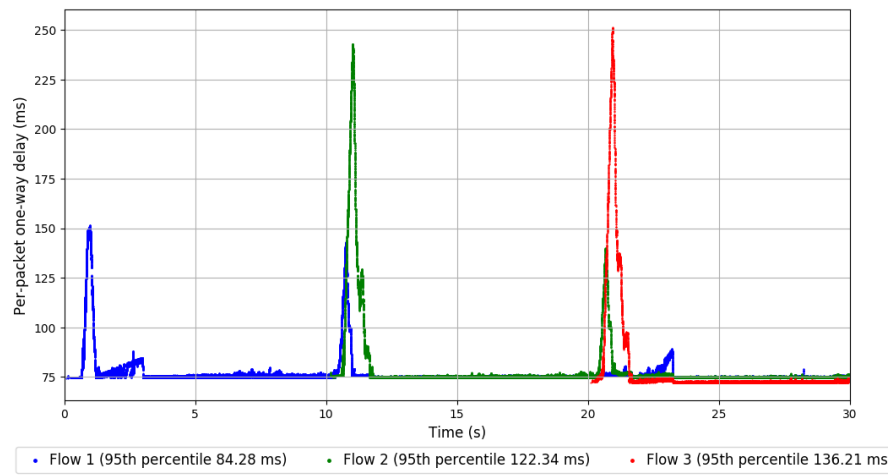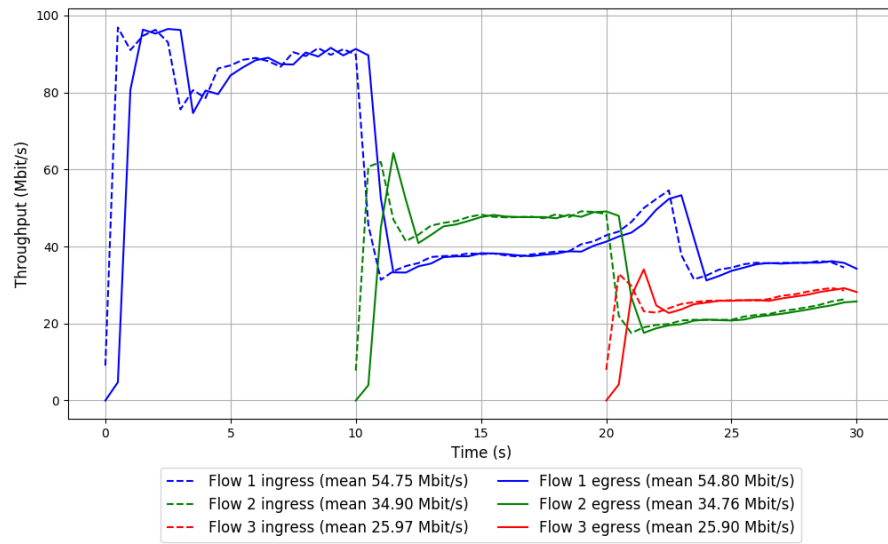
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 44.35 Mbit/s) --- Flow 1 egress (mean 44.41 Mbit/s)
Flow 2 ingress (mean 46.92 Mbit/s) --- Flow 2 egress (mean 46.90 Mbit/s)
Flow 3 ingress (mean 23.13 Mbit/s) --- Flow 3 egress (mean 23.12 Mbit/s)

Flow 1 (95th percentile 105.59 ms)   Flow 2 (95th percentile 80.71 ms)   Flow 3 (95th percentile 127.58 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-02-05 19:33:15
End at: 2019-02-05 19:33:45
Local clock offset: -4.998 ms
Remote clock offset: -6.422 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.47 Mbit/s
95th percentile per-packet one-way delay: 96.400 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 54.80 Mbit/s
95th percentile per-packet one-way delay: 84.275 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 122.343 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 25.90 Mbit/s
95th percentile per-packet one-way delay: 136.209 ms
Loss rate: 1.04%
```
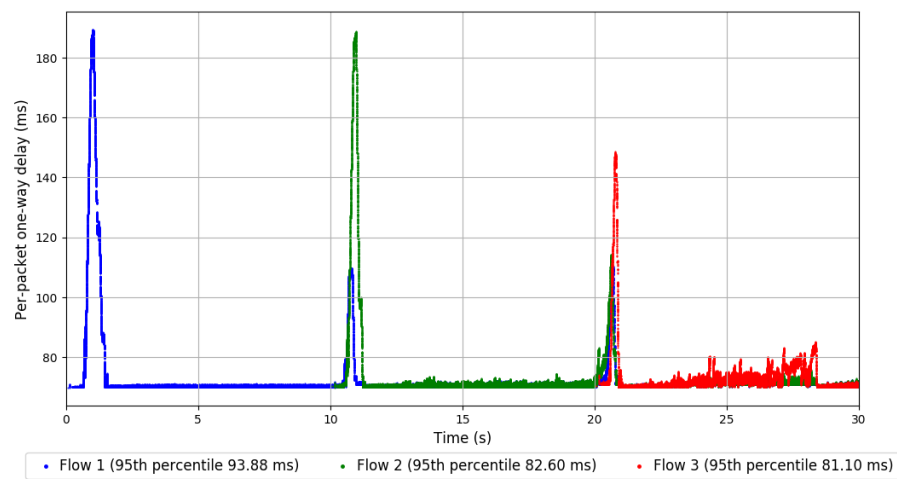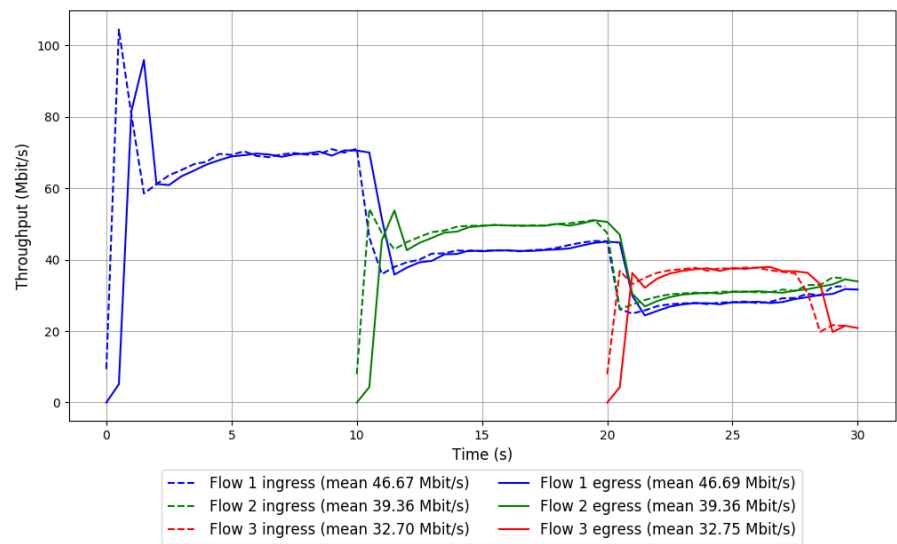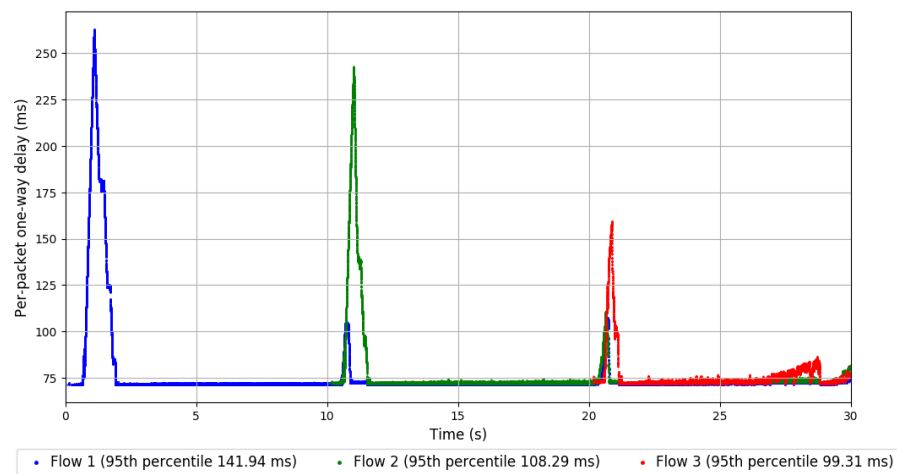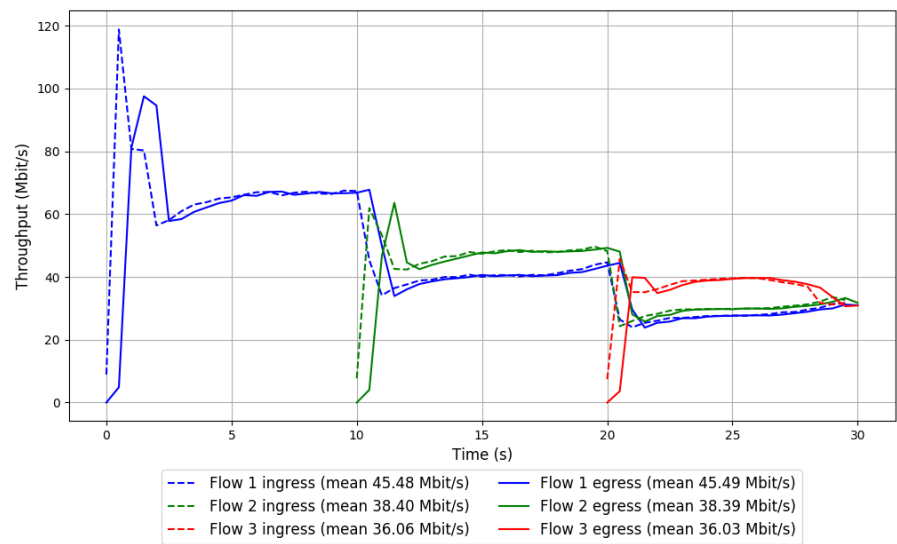
Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 54.75 Mbit/s) ——— Flow 1 egress (mean 54.80 Mbit/s)
- - - - Flow 2 ingress (mean 34.90 Mbit/s) ——— Flow 2 egress (mean 34.76 Mbit/s)
- - - - Flow 3 ingress (mean 25.97 Mbit/s) ——— Flow 3 egress (mean 25.90 Mbit/s)

• Flow 1 (95th percentile 84.28 ms)   • Flow 2 (95th percentile 122.34 ms)   • Flow 3 (95th percentile 136.21 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-02-05 20:01:20
End at: 2019-02-05 20:01:50
Local clock offset: -7.648 ms
Remote clock offset: -4.15 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.72 Mbit/s
95th percentile per-packet one-way delay: 87.502 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 93.876 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 39.36 Mbit/s
95th percentile per-packet one-way delay: 82.602 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 32.75 Mbit/s
95th percentile per-packet one-way delay: 81.097 ms
Loss rate: 0.63%
```
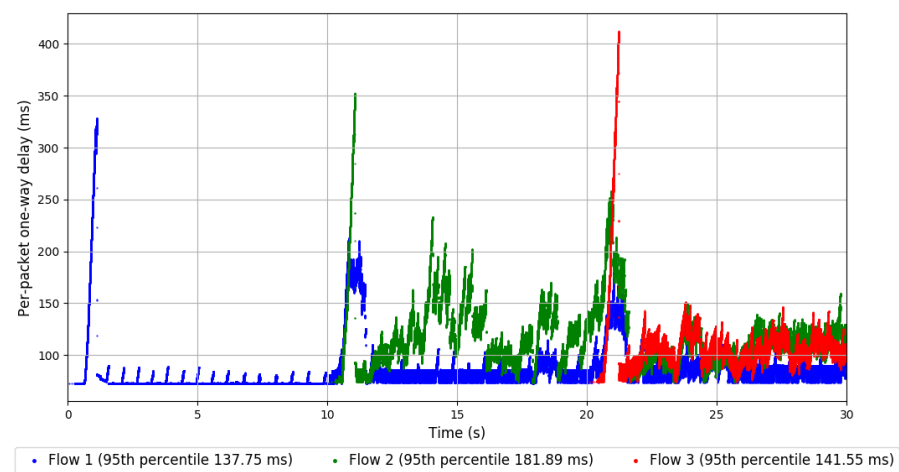
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-02-05 20:28:35
End at: 2019-02-05 20:29:05
Local clock offset: 0.271 ms
Remote clock offset: -3.732 ms


# Below is generated by plot.py at 2019-02-05 20:36:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.94 Mbit/s
95th percentile per-packet one-way delay: 124.485 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 45.49 Mbit/s
95th percentile per-packet one-way delay: 141.945 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 38.39 Mbit/s
95th percentile per-packet one-way delay: 108.289 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 36.03 Mbit/s
95th percentile per-packet one-way delay: 99.315 ms
Loss rate: 0.82%
```

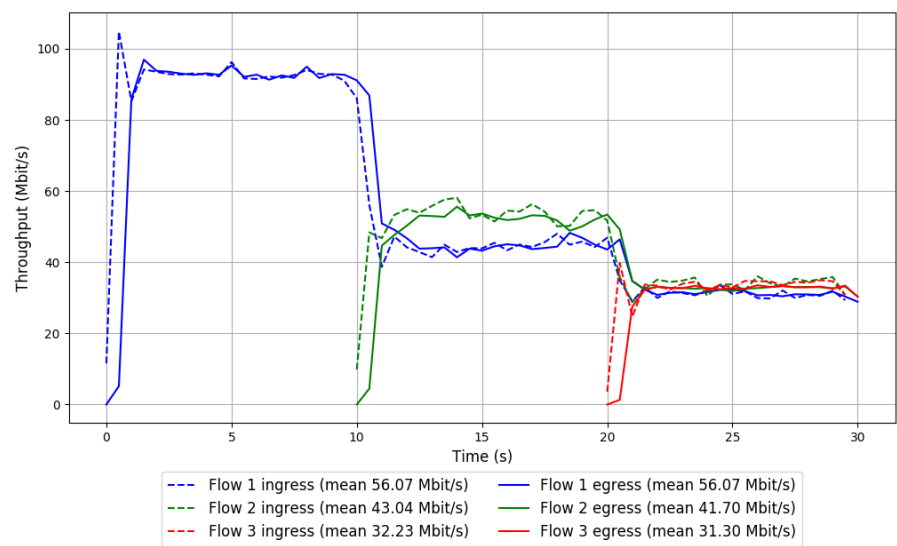Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-02-05 18:18:52
End at: 2019-02-05 18:19:22
Local clock offset: -9.459 ms
Remote clock offset: -6.397 ms


# Below is generated by plot.py at 2019-02-05 20:36:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.17 Mbit/s
95th percentile per-packet one-way delay: 164.618 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 56.07 Mbit/s
95th percentile per-packet one-way delay: 137.754 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 41.70 Mbit/s
95th percentile per-packet one-way delay: 181.893 ms
Loss rate: 3.50%
-- Flow 3:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 141.547 ms
Loss rate: 3.50%
```
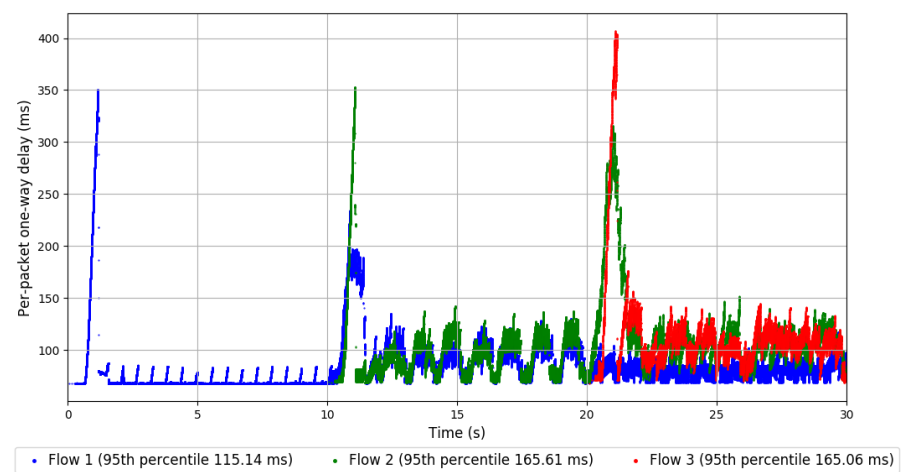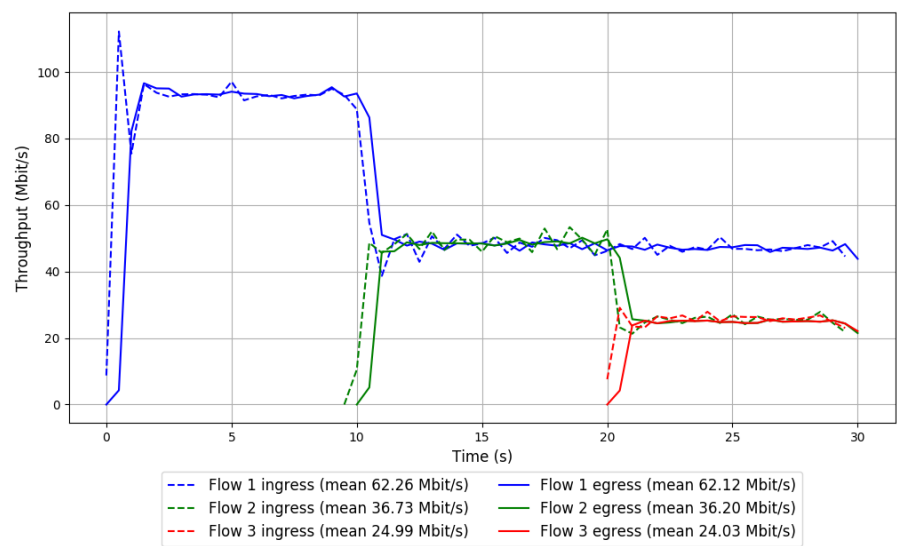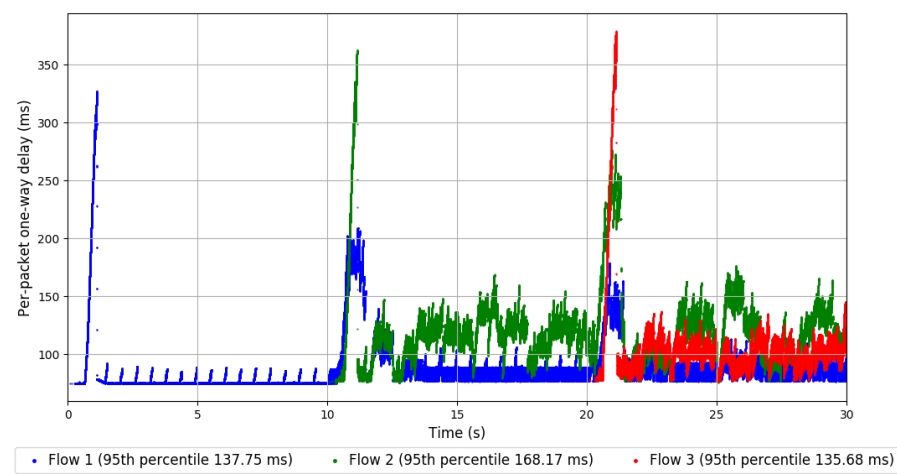
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 56.07 Mbit/s) — Flow 1 egress (mean 56.07 Mbit/s)
Flow 2 ingress (mean 43.04 Mbit/s) — Flow 2 egress (mean 41.70 Mbit/s)
Flow 3 ingress (mean 32.23 Mbit/s) — Flow 3 egress (mean 31.30 Mbit/s)

Flow 1 (95th percentile 137.75 ms)   Flow 2 (95th percentile 181.89 ms)   Flow 3 (95th percentile 141.55 ms)

```
Run 2: Statistics of FillP

Start at: 2019-02-05 18:47:02
End at: 2019-02-05 18:47:32
Local clock offset: -10.773 ms
Remote clock offset: -3.501 ms

# Below is generated by plot.py at 2019-02-05 20:36:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.14 Mbit/s
95th percentile per-packet one-way delay: 135.605 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 62.12 Mbit/s
95th percentile per-packet one-way delay: 115.143 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 36.20 Mbit/s
95th percentile per-packet one-way delay: 165.612 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 24.03 Mbit/s
95th percentile per-packet one-way delay: 165.057 ms
Loss rate: 4.58%
```
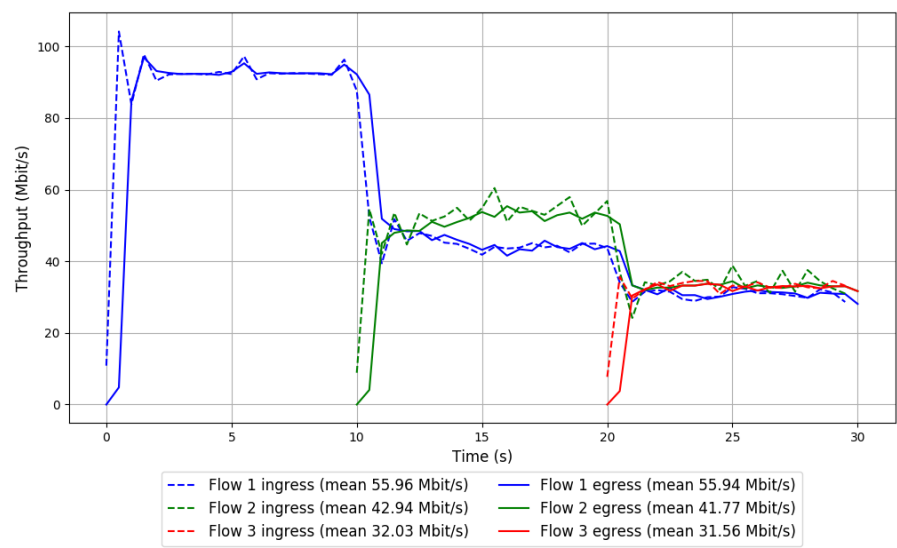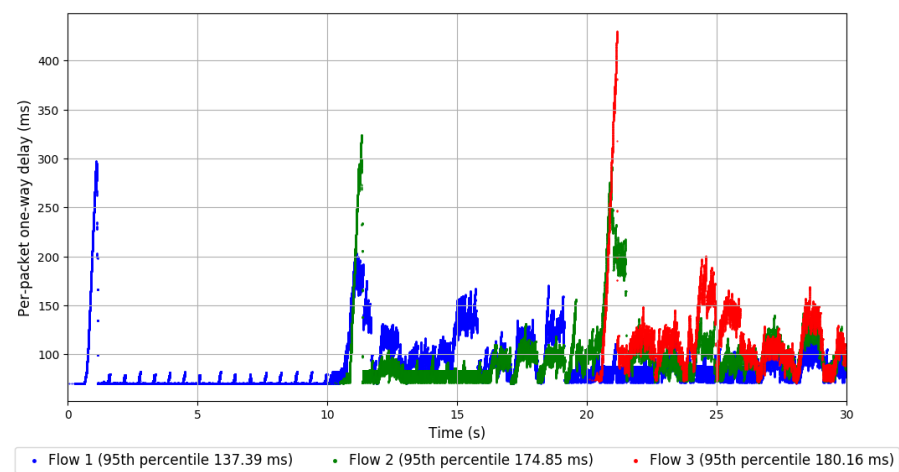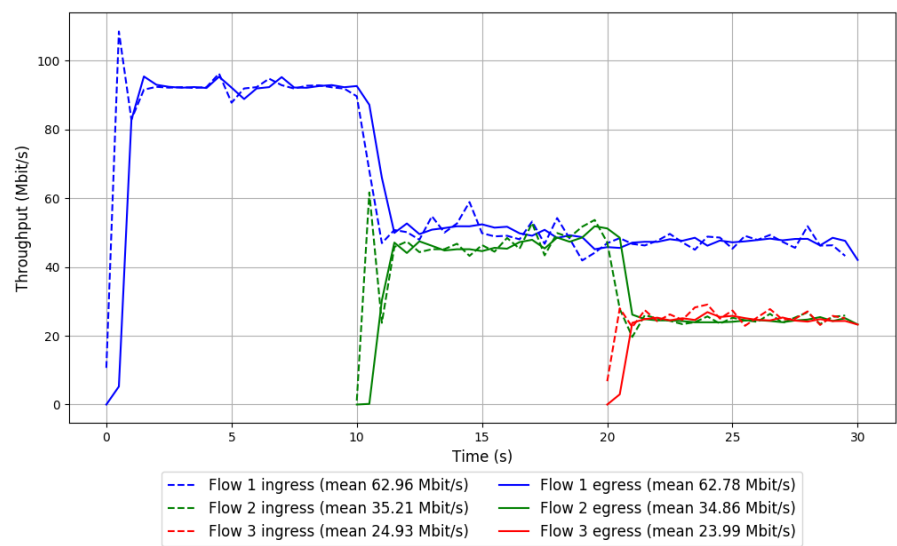
Run 2: Report of FillP — Data Link

- - - Flow 1 ingress (mean 62.26 Mbit/s) —— Flow 1 egress (mean 62.12 Mbit/s)
- - - Flow 2 ingress (mean 36.73 Mbit/s) —— Flow 2 egress (mean 36.20 Mbit/s)
- - - Flow 3 ingress (mean 24.99 Mbit/s) —— Flow 3 egress (mean 24.03 Mbit/s)

• Flow 1 (95th percentile 115.14 ms)   • Flow 2 (95th percentile 165.61 ms)   • Flow 3 (95th percentile 165.06 ms)

```
Run 3: Statistics of FillP

Start at: 2019-02-05 19:16:13
End at: 2019-02-05 19:16:43
Local clock offset: -4.563 ms
Remote clock offset: -7.295 ms

# Below is generated by plot.py at 2019-02-05 20:36:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.15 Mbit/s
95th percentile per-packet one-way delay: 153.815 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 55.94 Mbit/s
95th percentile per-packet one-way delay: 137.750 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 41.77 Mbit/s
95th percentile per-packet one-way delay: 168.166 ms
Loss rate: 3.03%
-- Flow 3:
Average throughput: 31.56 Mbit/s
95th percentile per-packet one-way delay: 135.682 ms
Loss rate: 2.24%
```
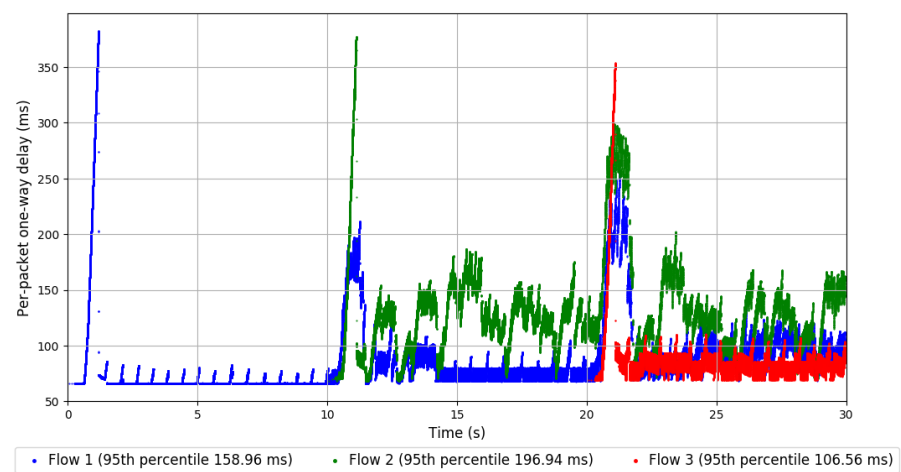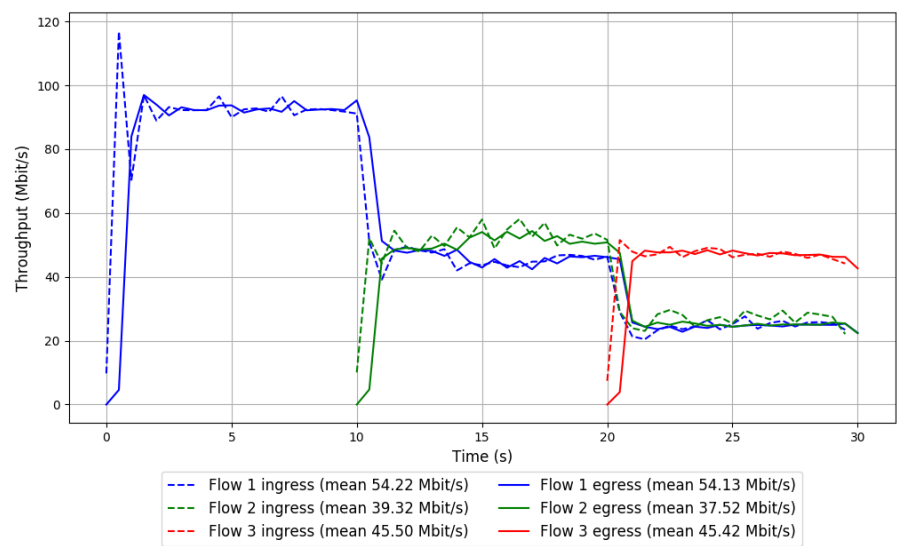
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 55.96 Mbit/s)   Flow 1 egress (mean 55.94 Mbit/s)
Flow 2 ingress (mean 42.94 Mbit/s)   Flow 2 egress (mean 41.77 Mbit/s)
Flow 3 ingress (mean 32.03 Mbit/s)   Flow 3 egress (mean 31.56 Mbit/s)

Flow 1 (95th percentile 137.75 ms)   Flow 2 (95th percentile 168.17 ms)   Flow 3 (95th percentile 135.68 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-02-05 19:43:26
End at: 2019-02-05 19:43:56
Local clock offset: -7.987 ms
Remote clock offset: -5.155 ms


# Below is generated by plot.py at 2019-02-05 20:36:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.88 Mbit/s
95th percentile per-packet one-way delay: 147.992 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 62.78 Mbit/s
95th percentile per-packet one-way delay: 137.391 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 34.86 Mbit/s
95th percentile per-packet one-way delay: 174.848 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 23.99 Mbit/s
95th percentile per-packet one-way delay: 180.161 ms
Loss rate: 4.52%
```
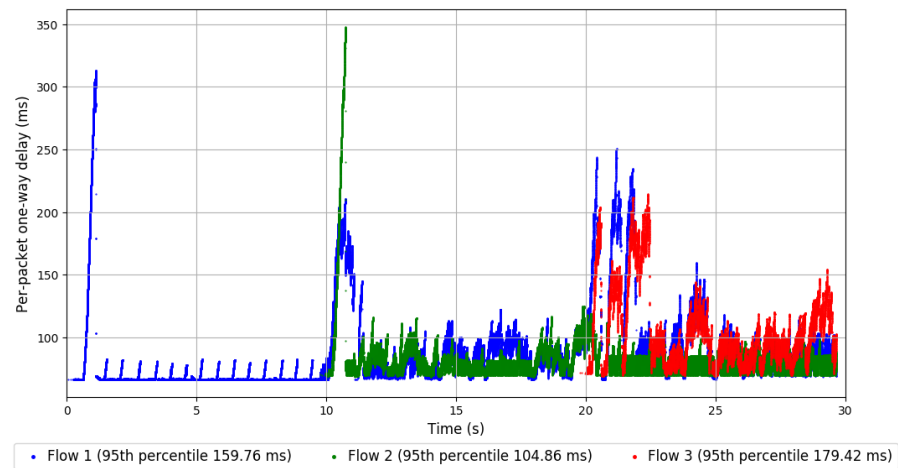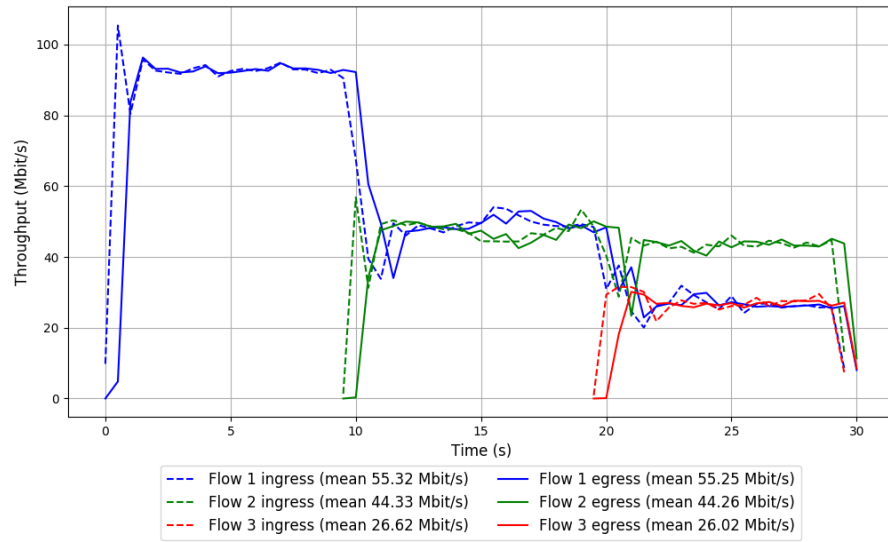
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 62.96 Mbit/s)   Flow 1 egress (mean 62.78 Mbit/s)
Flow 2 ingress (mean 35.21 Mbit/s)   Flow 2 egress (mean 34.86 Mbit/s)
Flow 3 ingress (mean 24.93 Mbit/s)   Flow 3 egress (mean 23.99 Mbit/s)

Flow 1 (95th percentile 137.39 ms)   Flow 2 (95th percentile 174.85 ms)   Flow 3 (95th percentile 180.16 ms)

```
Run 5: Statistics of FillP

Start at: 2019-02-05 20:11:40
End at: 2019-02-05 20:12:10
Local clock offset: -8.836 ms
Remote clock offset: -3.498 ms


# Below is generated by plot.py at 2019-02-05 20:37:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 170.129 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 54.13 Mbit/s
95th percentile per-packet one-way delay: 158.958 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 37.52 Mbit/s
95th percentile per-packet one-way delay: 196.943 ms
Loss rate: 4.92%
-- Flow 3:
Average throughput: 45.42 Mbit/s
95th percentile per-packet one-way delay: 106.563 ms
Loss rate: 1.12%
```
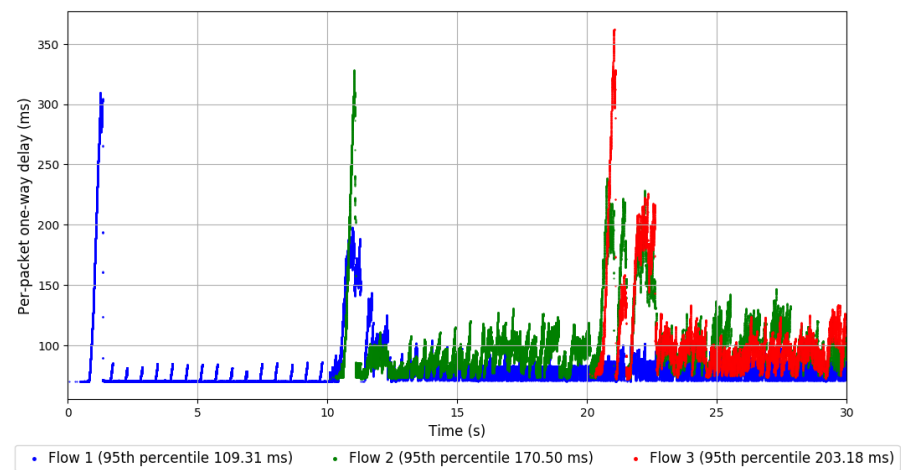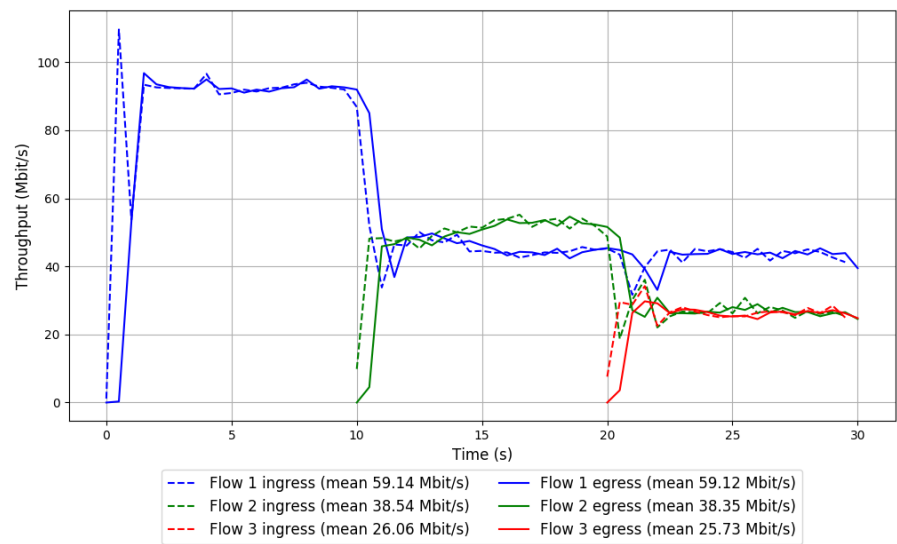
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 54.22 Mbit/s) ---- Flow 1 egress (mean 54.13 Mbit/s)
Flow 2 ingress (mean 39.32 Mbit/s) ---- Flow 2 egress (mean 37.52 Mbit/s)
Flow 3 ingress (mean 45.50 Mbit/s) ---- Flow 3 egress (mean 45.42 Mbit/s)

Flow 1 (95th percentile 158.96 ms)   Flow 2 (95th percentile 196.94 ms)   Flow 3 (95th percentile 106.56 ms)
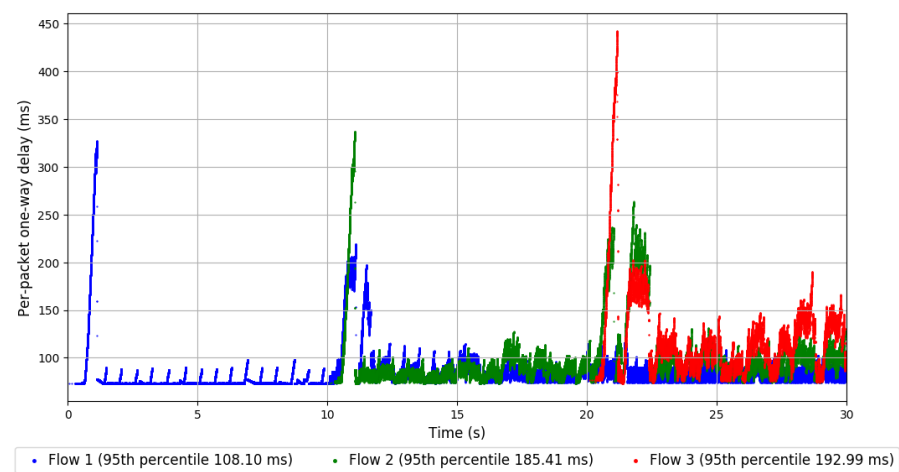
44

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-05 18:20:10
End at: 2019-02-05 18:20:40
Local clock offset: -10.776 ms
Remote clock offset: -3.865 ms

# Below is generated by plot.py at 2019-02-05 20:37:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.69 Mbit/s
95th percentile per-packet one-way delay: 148.215 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 55.25 Mbit/s
95th percentile per-packet one-way delay: 159.756 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 44.26 Mbit/s
95th percentile per-packet one-way delay: 104.855 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 26.02 Mbit/s
95th percentile per-packet one-way delay: 179.420 ms
Loss rate: 2.92%
```

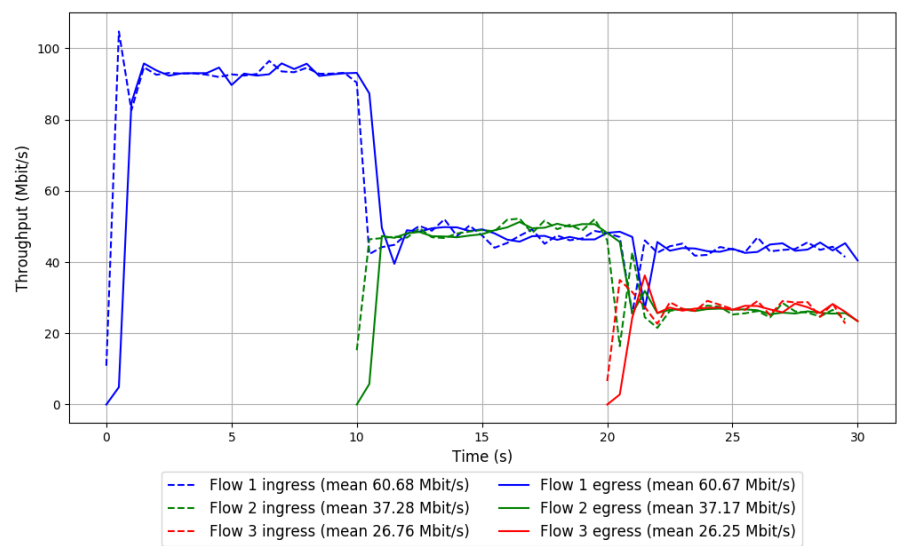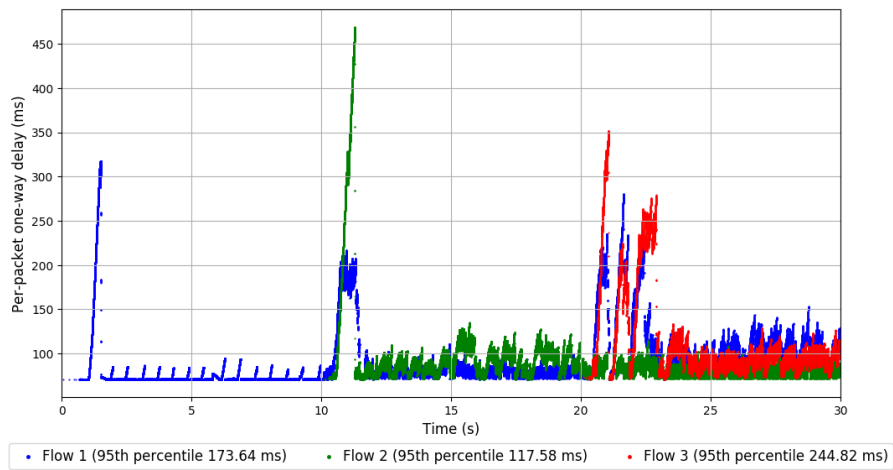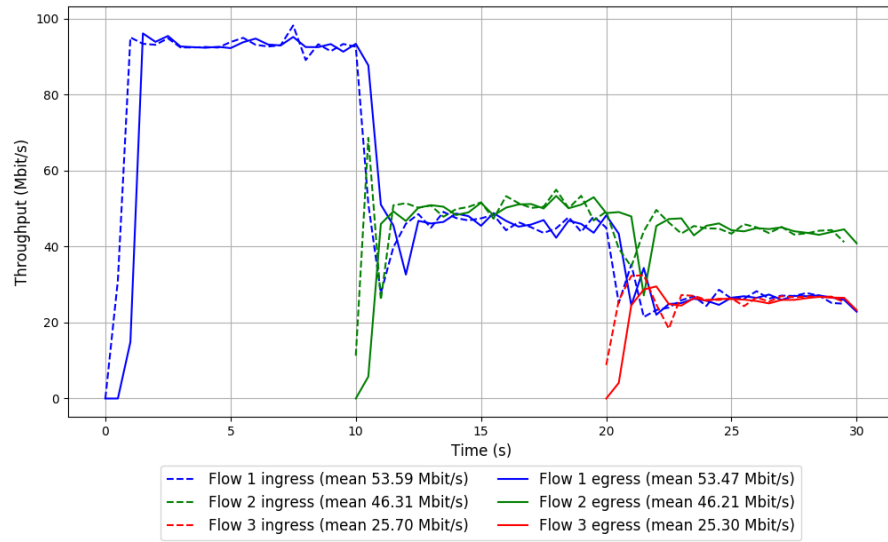Run 1: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 55.32 Mbit/s) —— Flow 1 egress (mean 55.25 Mbit/s)
- - - Flow 2 ingress (mean 44.33 Mbit/s) —— Flow 2 egress (mean 44.26 Mbit/s)
- - - Flow 3 ingress (mean 26.62 Mbit/s) —— Flow 3 egress (mean 26.02 Mbit/s)

• Flow 1 (95th percentile 159.76 ms)   • Flow 2 (95th percentile 104.86 ms)   • Flow 3 (95th percentile 179.42 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-05 18:48:21
End at: 2019-02-05 18:48:51
Local clock offset: -7.005 ms
Remote clock offset: -4.573 ms

# Below is generated by plot.py at 2019-02-05 20:37:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.11 Mbit/s
95th percentile per-packet one-way delay: 153.427 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 59.12 Mbit/s
95th percentile per-packet one-way delay: 109.313 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 38.35 Mbit/s
95th percentile per-packet one-way delay: 170.498 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 25.73 Mbit/s
95th percentile per-packet one-way delay: 203.180 ms
Loss rate: 2.05%
```

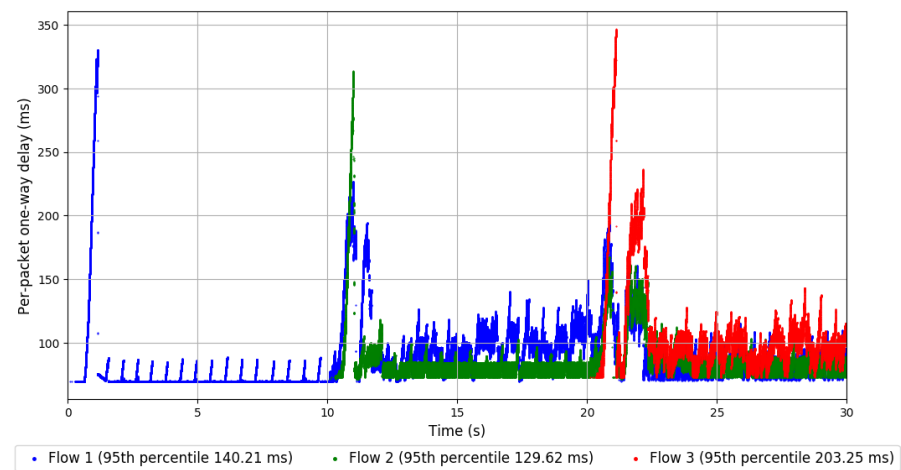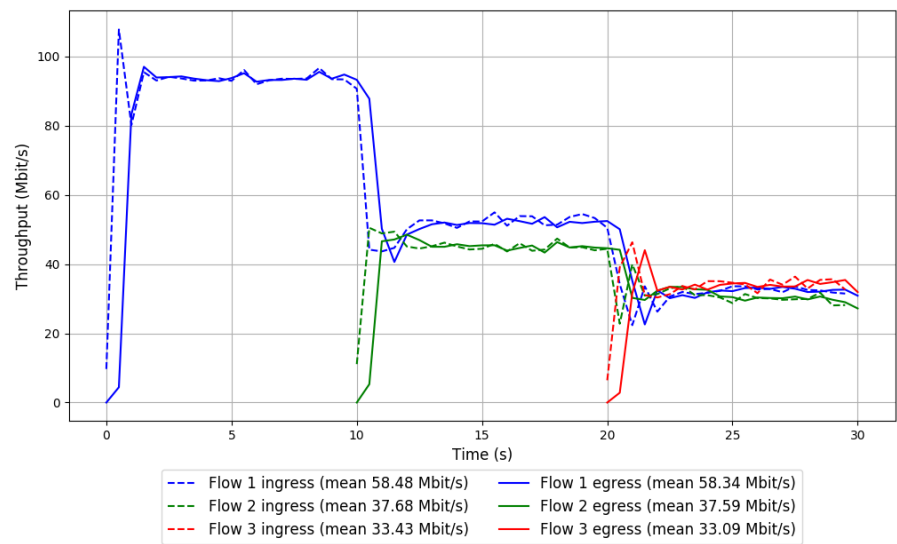Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 59.14 Mbit/s) --- Flow 1 egress (mean 59.12 Mbit/s)
Flow 2 ingress (mean 38.54 Mbit/s) --- Flow 2 egress (mean 38.35 Mbit/s)
Flow 3 ingress (mean 26.06 Mbit/s) --- Flow 3 egress (mean 25.73 Mbit/s)

Flow 1 (95th percentile 109.31 ms)   Flow 2 (95th percentile 170.50 ms)   Flow 3 (95th percentile 203.18 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-05 19:17:34
End at: 2019-02-05 19:18:04
Local clock offset: -4.459 ms
Remote clock offset: -5.421 ms


# Below is generated by plot.py at 2019-02-05 20:37:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.06 Mbit/s
95th percentile per-packet one-way delay: 157.521 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 60.67 Mbit/s
95th percentile per-packet one-way delay: 108.103 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 37.17 Mbit/s
95th percentile per-packet one-way delay: 185.407 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 26.25 Mbit/s
95th percentile per-packet one-way delay: 192.993 ms
Loss rate: 2.69%
```

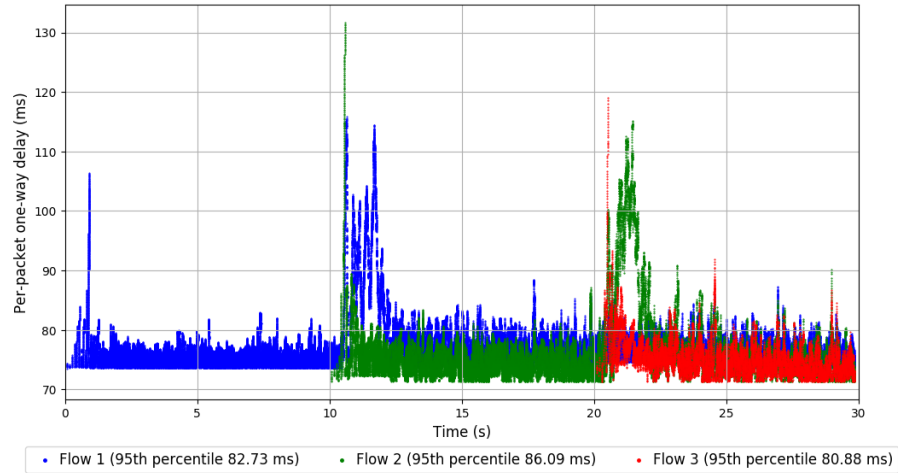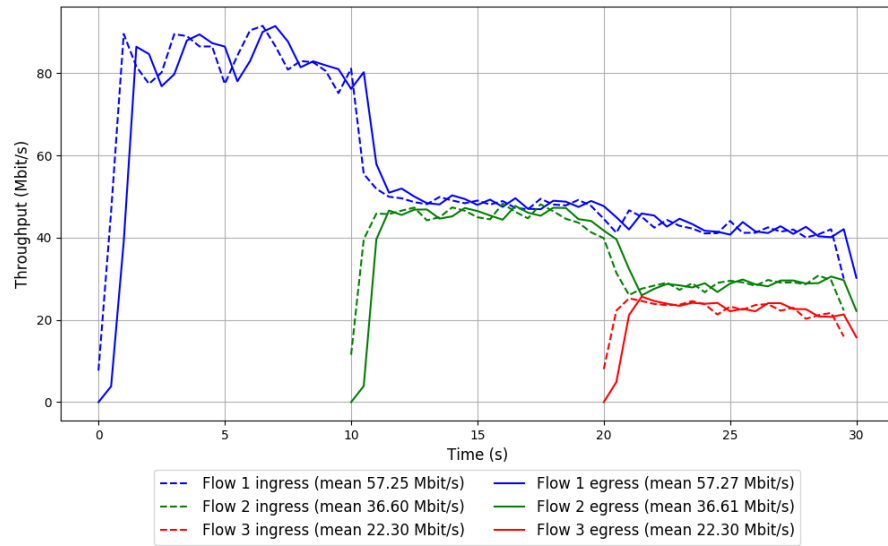# Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 60.68 Mbit/s) --- Flow 1 egress (mean 60.67 Mbit/s)
Flow 2 ingress (mean 37.28 Mbit/s) --- Flow 2 egress (mean 37.17 Mbit/s)
Flow 3 ingress (mean 26.76 Mbit/s) --- Flow 3 egress (mean 26.25 Mbit/s)

Flow 1 (95th percentile 108.10 ms)   Flow 2 (95th percentile 185.41 ms)   Flow 3 (95th percentile 192.99 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-05 19:44:40
End at: 2019-02-05 19:45:10
Local clock offset: -8.976 ms
Remote clock offset: -6.537 ms


# Below is generated by plot.py at 2019-02-05 20:38:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.55 Mbit/s
95th percentile per-packet one-way delay: 174.451 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 53.47 Mbit/s
95th percentile per-packet one-way delay: 173.638 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 46.21 Mbit/s
95th percentile per-packet one-way delay: 117.575 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 25.30 Mbit/s
95th percentile per-packet one-way delay: 244.819 ms
Loss rate: 2.33%
```

Run 4: Report of FillP-Sheep — Data Link
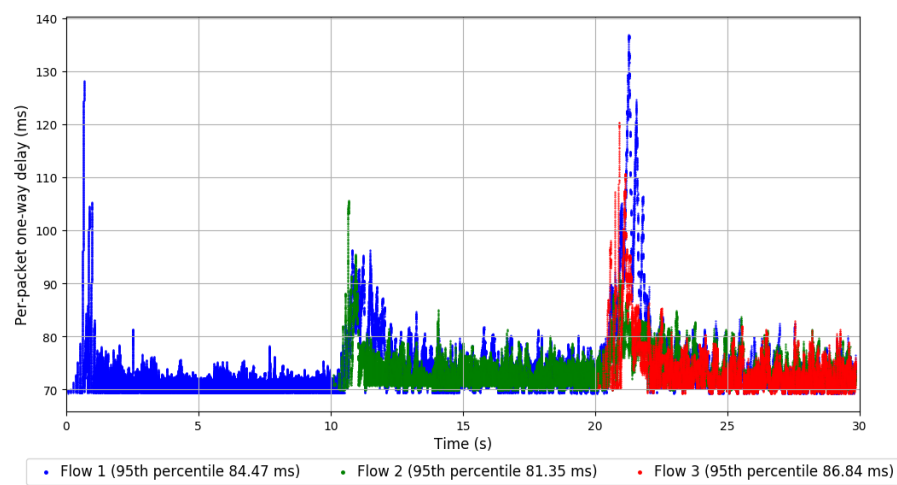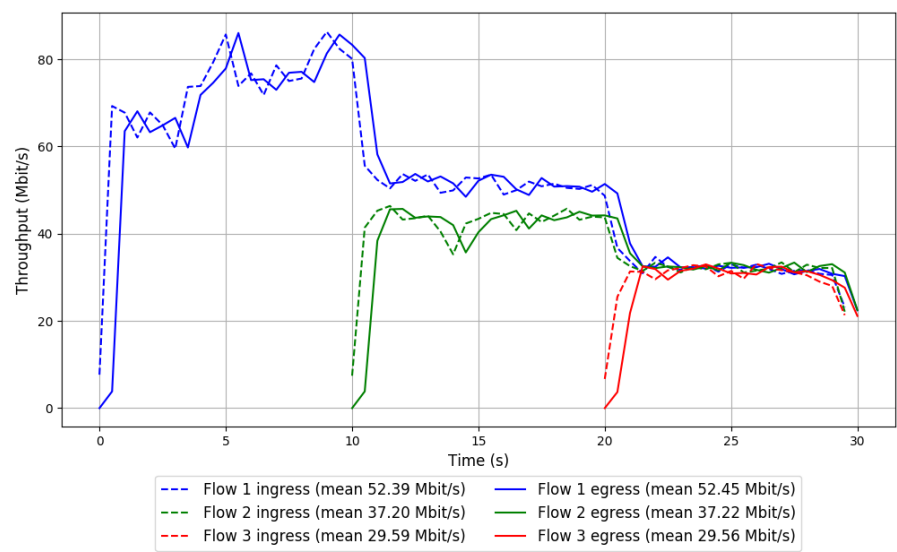

- - - Flow 1 ingress (mean 53.59 Mbit/s) —— Flow 1 egress (mean 53.47 Mbit/s)
- - - Flow 2 ingress (mean 46.31 Mbit/s) —— Flow 2 egress (mean 46.21 Mbit/s)
- - - Flow 3 ingress (mean 25.70 Mbit/s) —— Flow 3 egress (mean 25.30 Mbit/s)

· Flow 1 (95th percentile 173.64 ms)   · Flow 2 (95th percentile 117.58 ms)   · Flow 3 (95th percentile 244.82 ms)

52

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-05 20:12:55
End at: 2019-02-05 20:13:25
Local clock offset: -4.984 ms
Remote clock offset: -3.344 ms


# Below is generated by plot.py at 2019-02-05 20:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.26 Mbit/s
95th percentile per-packet one-way delay: 144.169 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 58.34 Mbit/s
95th percentile per-packet one-way delay: 140.206 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 37.59 Mbit/s
95th percentile per-packet one-way delay: 129.625 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 33.09 Mbit/s
95th percentile per-packet one-way delay: 203.255 ms
Loss rate: 1.69%
```

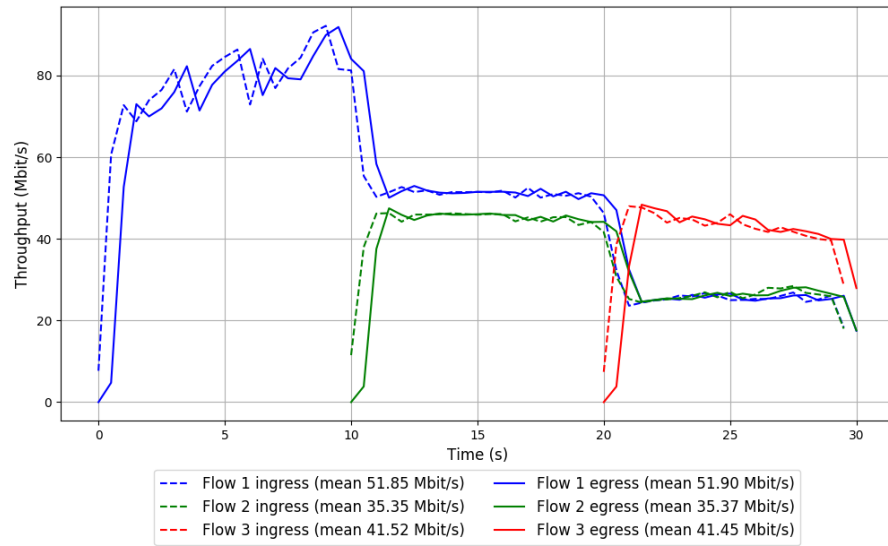Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-02-05 18:21:27
End at: 2019-02-05 18:21:57
Local clock offset: -7.992 ms
Remote clock offset: -5.951 ms


# Below is generated by plot.py at 2019-02-05 20:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.88 Mbit/s
95th percentile per-packet one-way delay: 83.086 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 57.27 Mbit/s
95th percentile per-packet one-way delay: 82.729 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 36.61 Mbit/s
95th percentile per-packet one-way delay: 86.088 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 80.884 ms
Loss rate: 0.82%
```
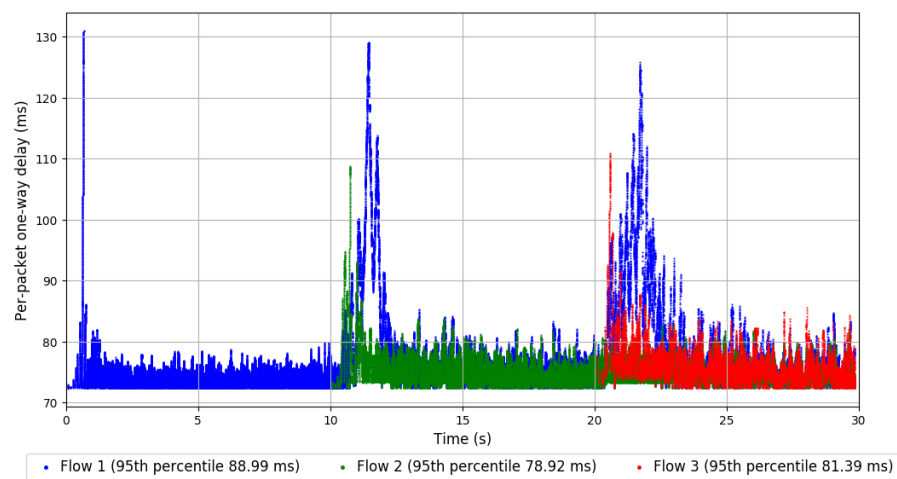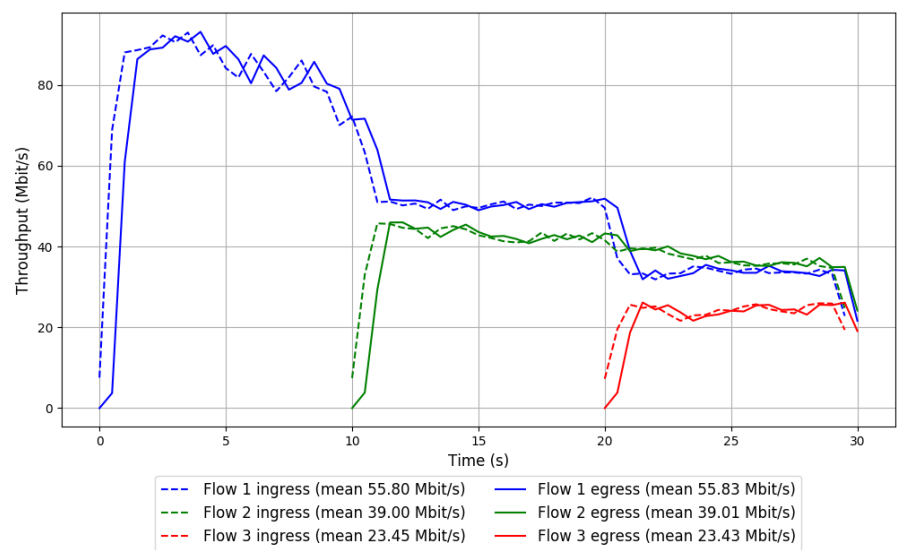
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-02-05 18:49:44
End at: 2019-02-05 18:50:14
Local clock offset: -10.307 ms
Remote clock offset: -5.165 ms


# Below is generated by plot.py at 2019-02-05 20:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.82 Mbit/s
95th percentile per-packet one-way delay: 83.222 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 52.45 Mbit/s
95th percentile per-packet one-way delay: 84.471 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 81.346 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 29.56 Mbit/s
95th percentile per-packet one-way delay: 86.837 ms
Loss rate: 0.90%
```
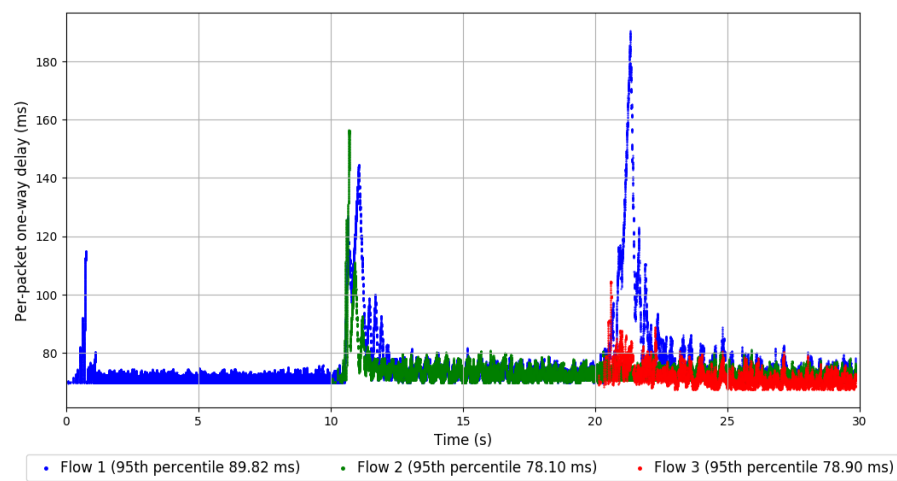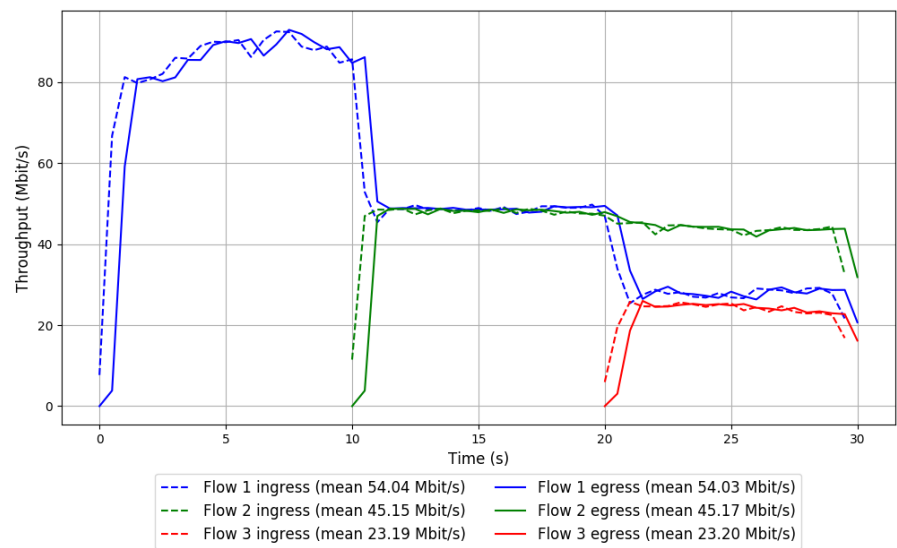
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-02-05 19:18:50
End at: 2019-02-05 19:19:20
Local clock offset: -5.223 ms
Remote clock offset: -6.237 ms


# Below is generated by plot.py at 2019-02-05 20:38:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.91 Mbit/s
95th percentile per-packet one-way delay: 84.564 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 51.90 Mbit/s
95th percentile per-packet one-way delay: 84.441 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 35.37 Mbit/s
95th percentile per-packet one-way delay: 87.681 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 80.260 ms
Loss rate: 0.97%
```
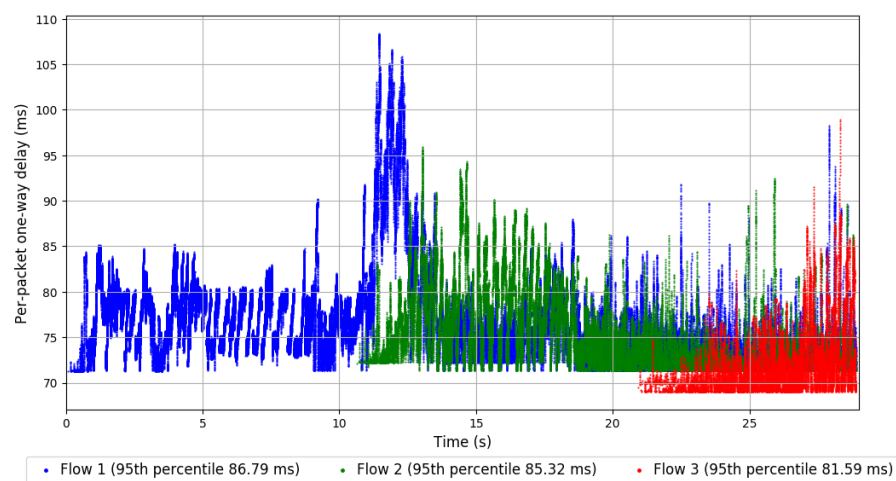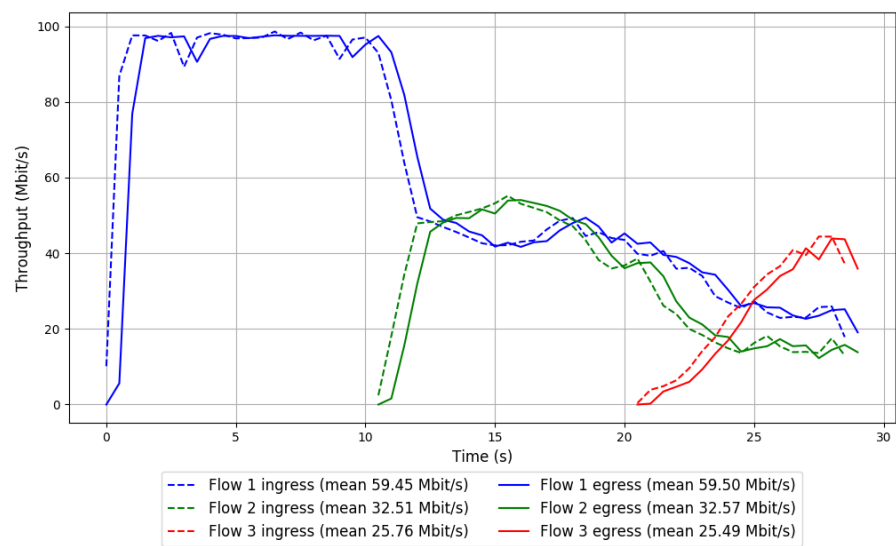
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-02-05 19:46:11
End at: 2019-02-05 19:46:41
Local clock offset: -4.495 ms
Remote clock offset: -3.456 ms


# Below is generated by plot.py at 2019-02-05 20:38:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.37 Mbit/s
95th percentile per-packet one-way delay: 83.530 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 55.83 Mbit/s
95th percentile per-packet one-way delay: 88.991 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 78.919 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 81.391 ms
Loss rate: 0.92%
```

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-02-05 20:14:09
End at: 2019-02-05 20:14:39
Local clock offset: -7.796 ms
Remote clock offset: -3.638 ms


# Below is generated by plot.py at 2019-02-05 20:38:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.60 Mbit/s
95th percentile per-packet one-way delay: 83.138 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 54.03 Mbit/s
95th percentile per-packet one-way delay: 89.819 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 45.17 Mbit/s
95th percentile per-packet one-way delay: 78.100 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 23.20 Mbit/s
95th percentile per-packet one-way delay: 78.900 ms
Loss rate: 0.80%
```
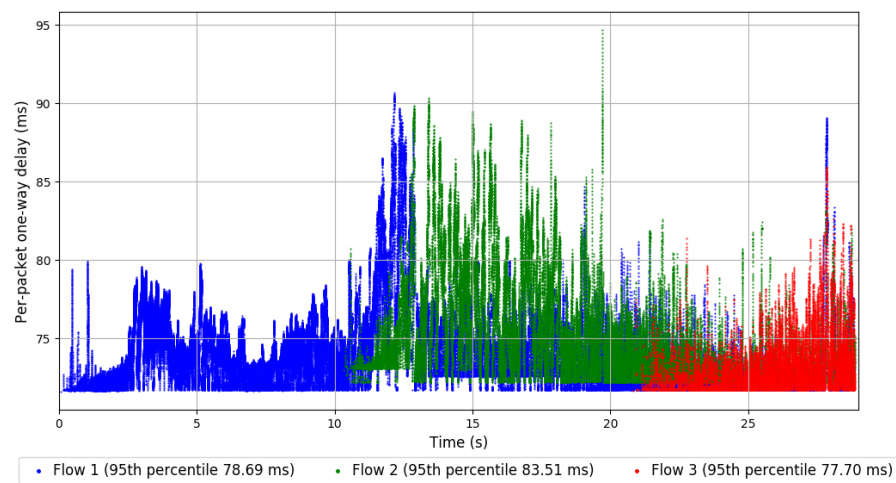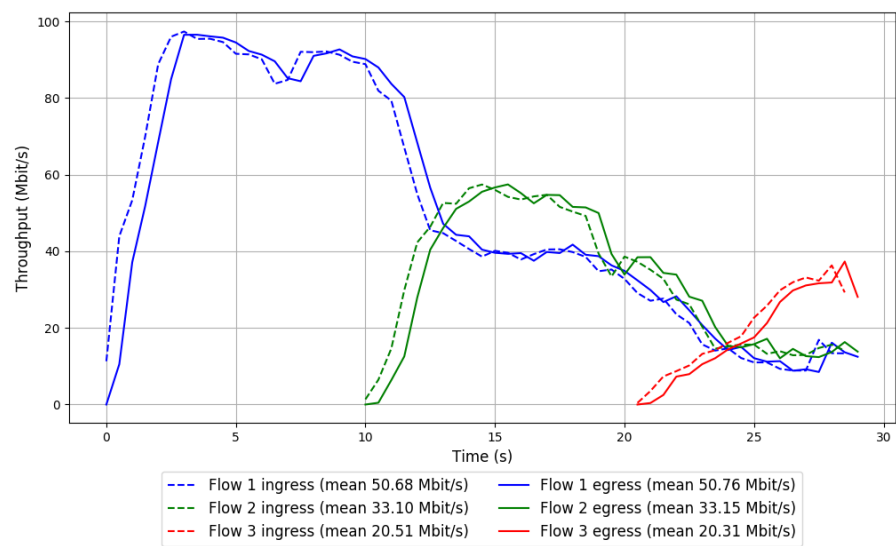
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-05 18:12:22
End at: 2019-02-05 18:12:52
Local clock offset: -8.859 ms
Remote clock offset: -3.983 ms


# Below is generated by plot.py at 2019-02-05 20:38:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.19 Mbit/s
95th percentile per-packet one-way delay: 85.546 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 59.50 Mbit/s
95th percentile per-packet one-way delay: 86.793 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 32.57 Mbit/s
95th percentile per-packet one-way delay: 85.318 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 25.49 Mbit/s
95th percentile per-packet one-way delay: 81.589 ms
Loss rate: 2.08%
```
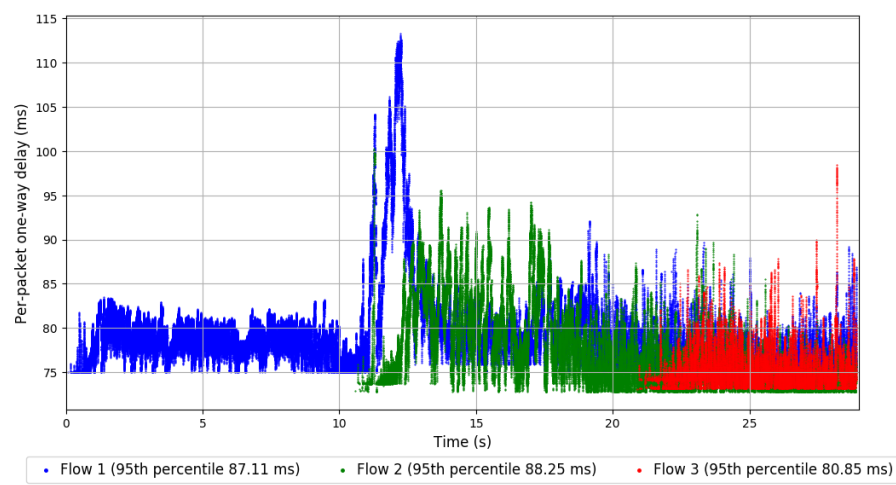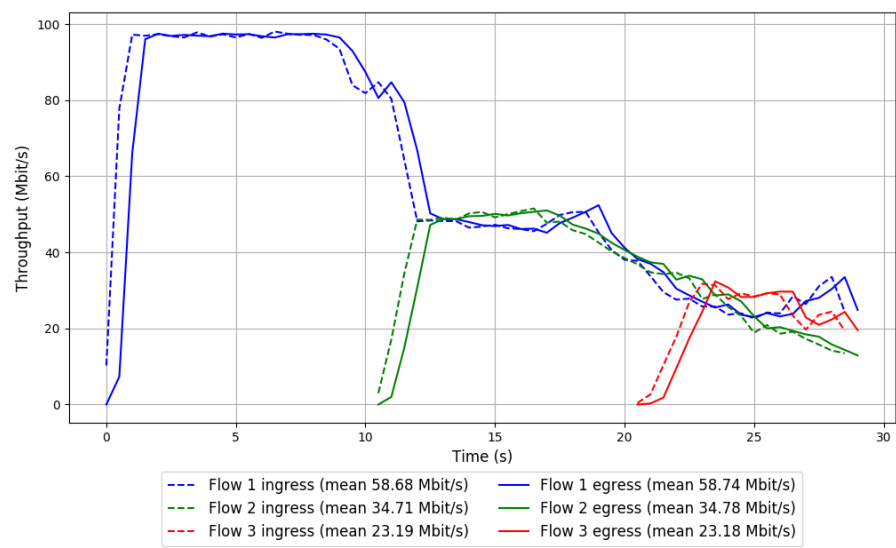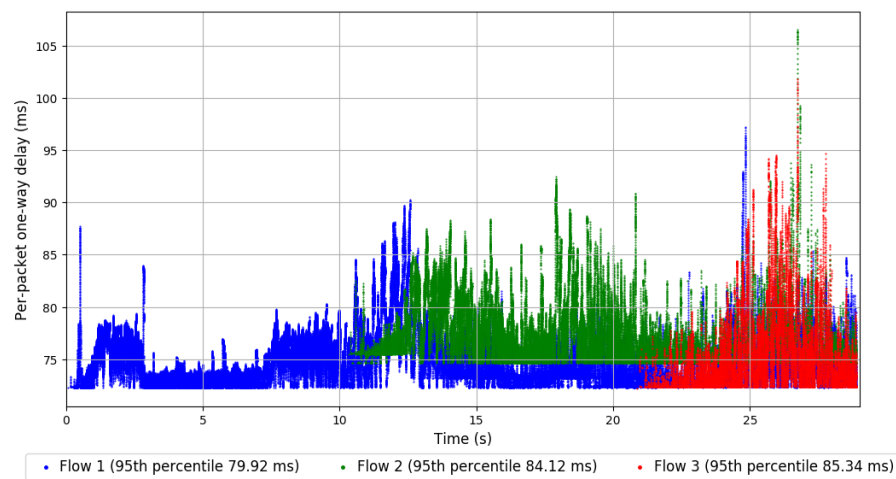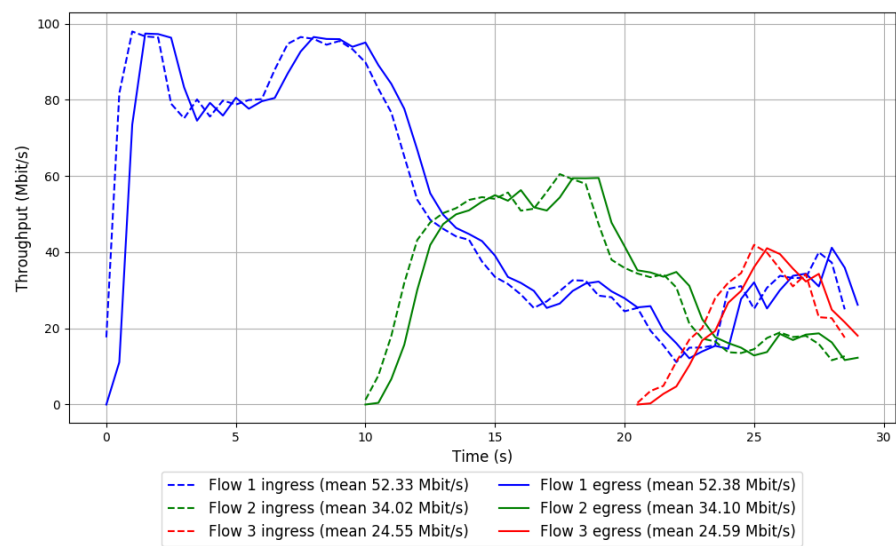
Run 1: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 59.45 Mbit/s) --- Flow 1 egress (mean 59.50 Mbit/s)
Flow 2 ingress (mean 32.51 Mbit/s) --- Flow 2 egress (mean 32.57 Mbit/s)
Flow 3 ingress (mean 25.76 Mbit/s) --- Flow 3 egress (mean 25.49 Mbit/s)

Flow 1 (95th percentile 86.79 ms) • Flow 2 (95th percentile 85.32 ms) • Flow 3 (95th percentile 81.59 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-05 18:40:40
End at: 2019-02-05 18:41:10
Local clock offset: -8.425 ms
Remote clock offset: -4.42 ms


# Below is generated by plot.py at 2019-02-05 20:38:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.79 Mbit/s
95th percentile per-packet one-way delay: 81.070 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 78.695 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 33.15 Mbit/s
95th percentile per-packet one-way delay: 83.506 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 20.31 Mbit/s
95th percentile per-packet one-way delay: 77.700 ms
Loss rate: 1.92%
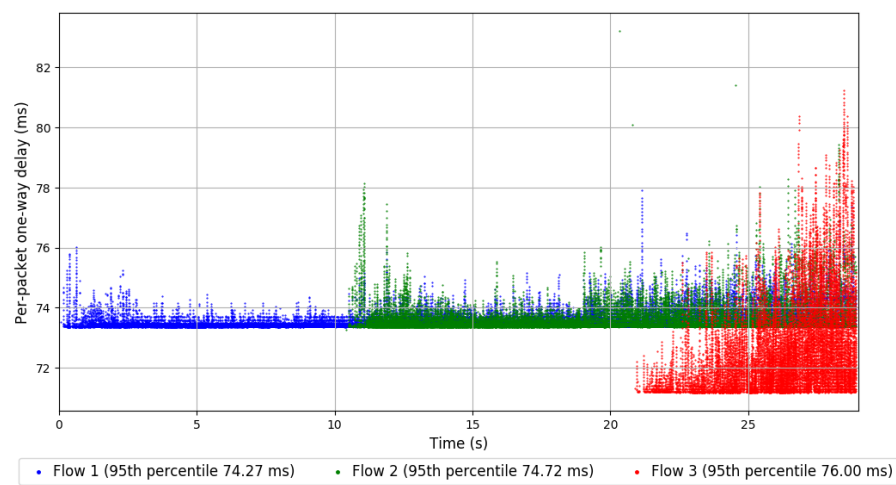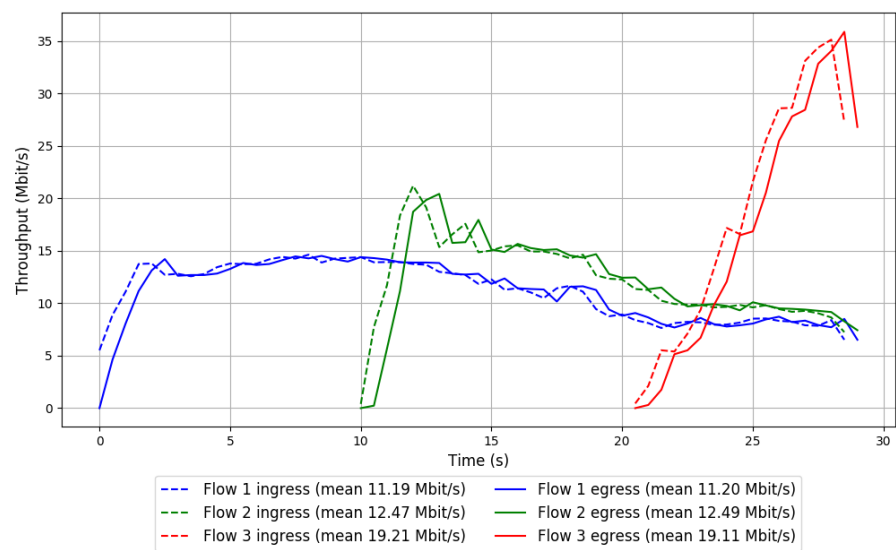```

Run 2: Report of Indigo-MusesC3 — Data Link





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```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-05 19:09:44
End at: 2019-02-05 19:10:14
Local clock offset: -3.425 ms
Remote clock offset: -6.174 ms

Below is generated by plot.py at 2019-02-05 20:39:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 87.28 Mbit/s
95th percentile per-packet one-way delay: 87.456 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 58.74 Mbit/s
95th percentile per-packet one-way delay: 87.113 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.78 Mbit/s
95th percentile per-packet one-way delay: 88.254 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 23.18 Mbit/s
95th percentile per-packet one-way delay: 80.846 ms
Loss rate: 0.93%
```
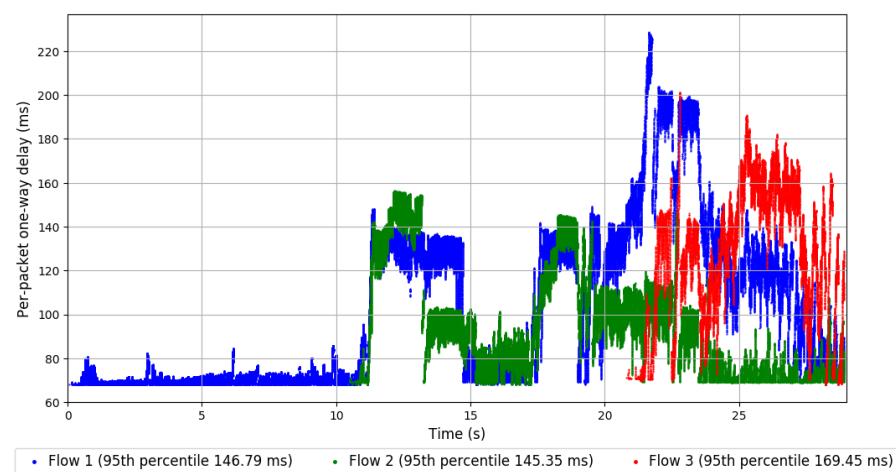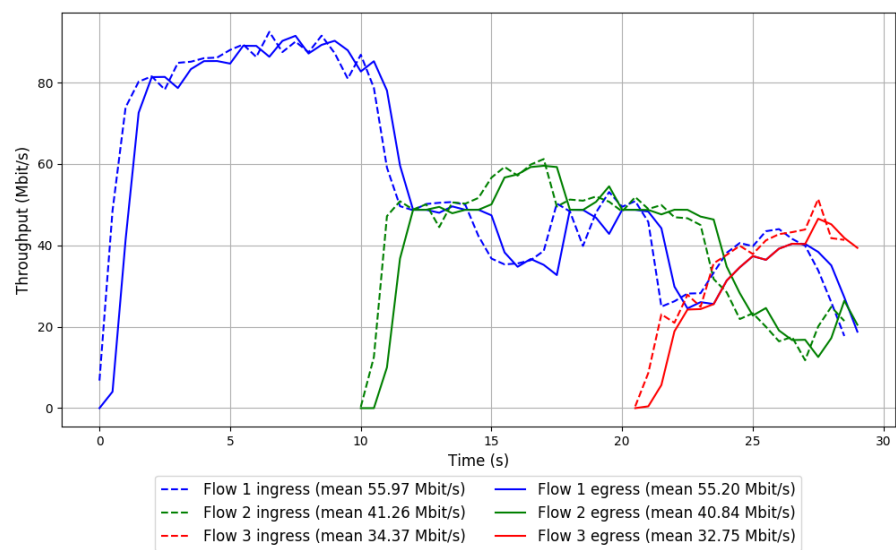
# Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-05 19:36:58
End at: 2019-02-05 19:37:28
Local clock offset: -4.911 ms
Remote clock offset: -6.256 ms

Below is generated by plot.py at 2019-02-05 20:39:06
Datalink statistics
-- Total of 3 flows:
Average throughput: 81.18 Mbit/s
95th percentile per-packet one-way delay: 82.389 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 52.38 Mbit/s
95th percentile per-packet one-way delay: 79.917 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 84.125 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 24.59 Mbit/s
95th percentile per-packet one-way delay: 85.345 ms
Loss rate: 0.79%
```
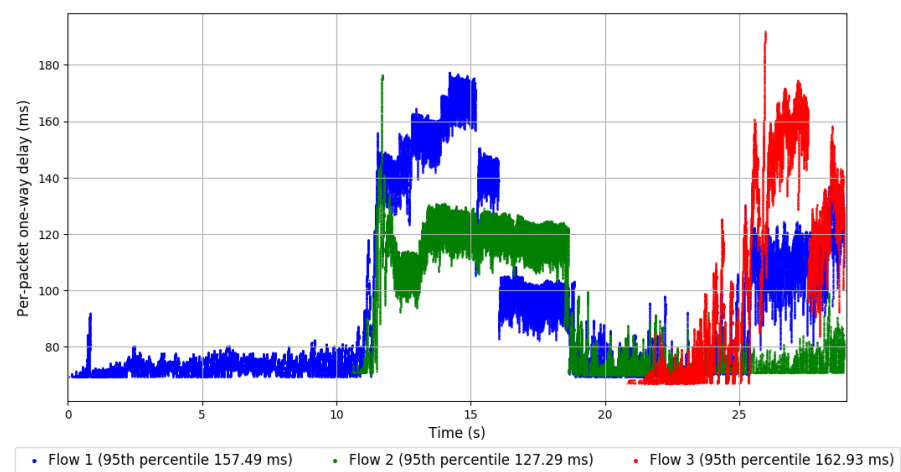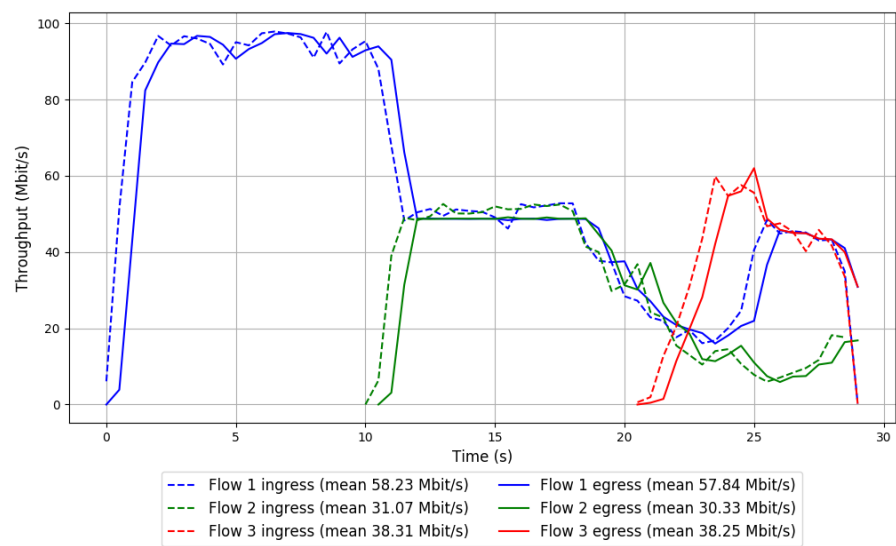
Run 4: Report of Indigo-MusesC3 — Data Link



- - - Flow 1 ingress (mean 52.33 Mbit/s) —— Flow 1 egress (mean 52.38 Mbit/s)
- - - Flow 2 ingress (mean 34.02 Mbit/s) —— Flow 2 egress (mean 34.10 Mbit/s)
- - - Flow 3 ingress (mean 24.55 Mbit/s) —— Flow 3 egress (mean 24.59 Mbit/s)



- Flow 1 (95th percentile 79.92 ms)  • Flow 2 (95th percentile 84.12 ms)  • Flow 3 (95th percentile 85.34 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-05 20:05:18
End at: 2019-02-05 20:05:49
Local clock offset: -3.894 ms
Remote clock offset: -3.688 ms


# Below is generated by plot.py at 2019-02-05 20:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.52 Mbit/s
95th percentile per-packet one-way delay: 74.742 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 74.268 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 74.720 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 19.11 Mbit/s
95th percentile per-packet one-way delay: 75.999 ms
Loss rate: 1.54%
```

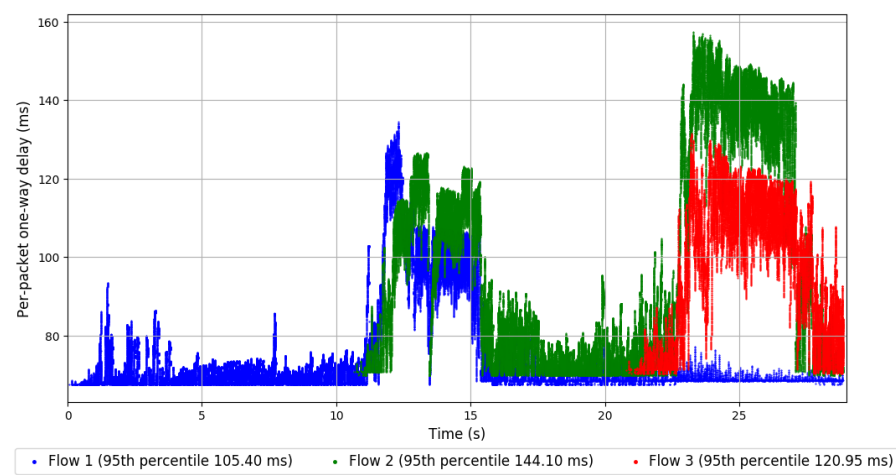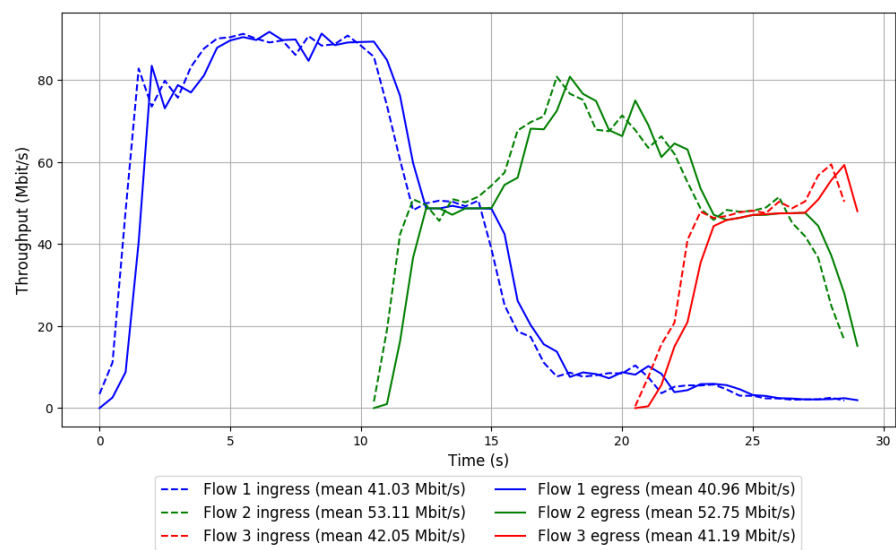Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-05 18:31:13
End at: 2019-02-05 18:31:43
Local clock offset: -11.403 ms
Remote clock offset: -4.098 ms

# Below is generated by plot.py at 2019-02-05 20:39:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.57 Mbit/s
95th percentile per-packet one-way delay: 154.981 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 55.20 Mbit/s
95th percentile per-packet one-way delay: 146.790 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 40.84 Mbit/s
95th percentile per-packet one-way delay: 145.354 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 32.75 Mbit/s
95th percentile per-packet one-way delay: 169.449 ms
Loss rate: 5.48%
```

Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-05 18:59:39
End at: 2019-02-05 19:00:09
Local clock offset: -7.223 ms
Remote clock offset: -3.769 ms


# Below is generated by plot.py at 2019-02-05 20:39:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.88 Mbit/s
95th percentile per-packet one-way delay: 156.037 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 57.84 Mbit/s
95th percentile per-packet one-way delay: 157.485 ms
Loss rate: 1.54%
-- Flow 2:
Average throughput: 30.33 Mbit/s
95th percentile per-packet one-way delay: 127.288 ms
Loss rate: 3.03%
-- Flow 3:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 162.925 ms
Loss rate: 3.22%
```
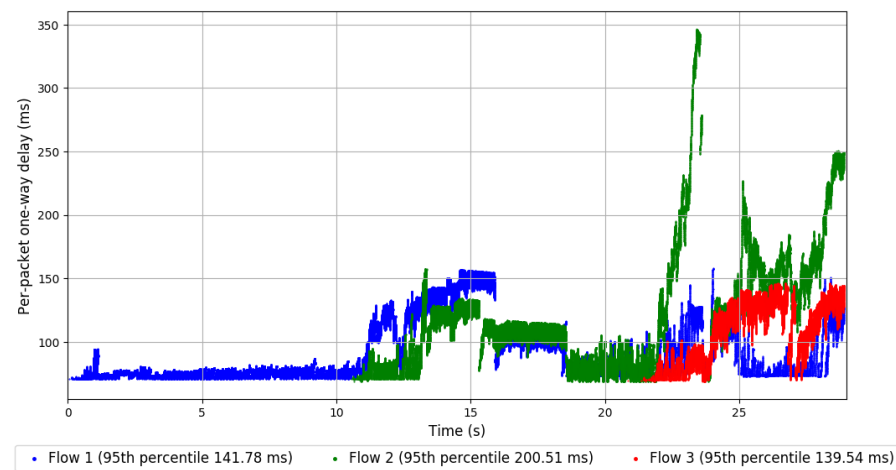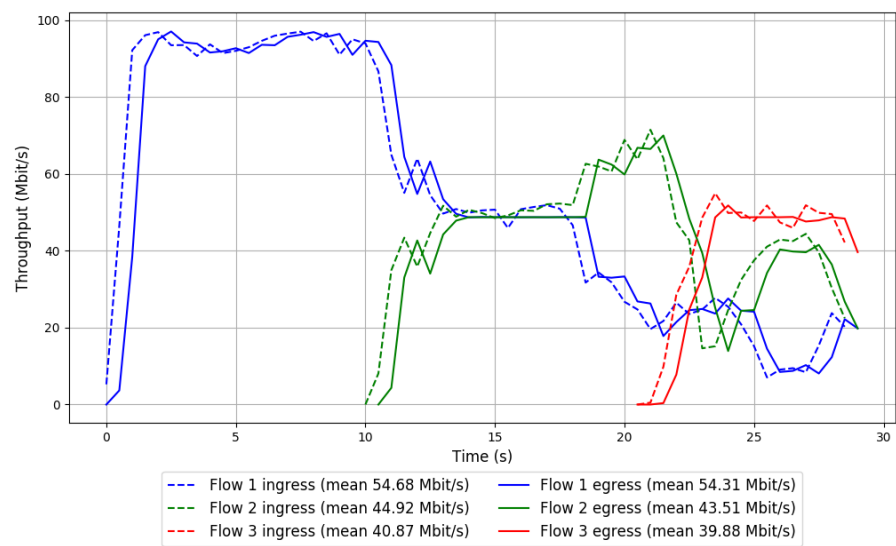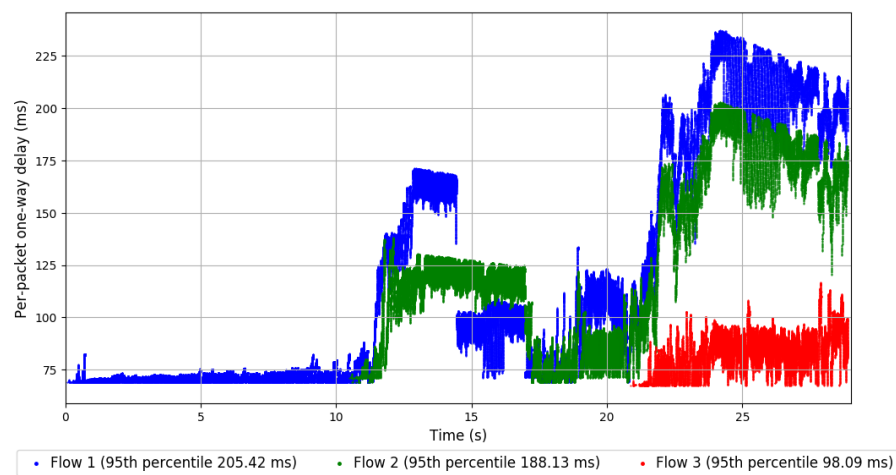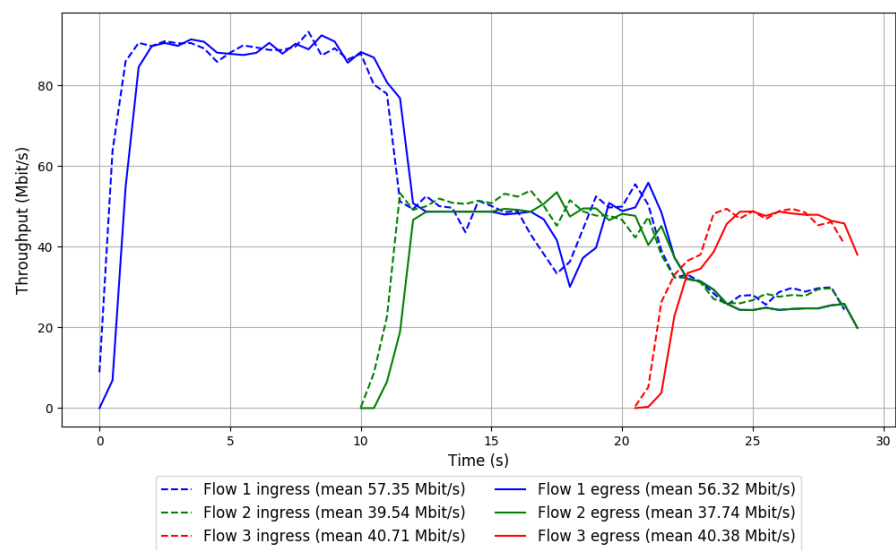
Run 2: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 58.23 Mbit/s)   —— Flow 1 egress (mean 57.84 Mbit/s)
- - - Flow 2 ingress (mean 31.07 Mbit/s)   —— Flow 2 egress (mean 30.33 Mbit/s)
- - - Flow 3 ingress (mean 38.31 Mbit/s)   —— Flow 3 egress (mean 38.25 Mbit/s)

• Flow 1 (95th percentile 157.49 ms)   • Flow 2 (95th percentile 127.29 ms)   • Flow 3 (95th percentile 162.93 ms)

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-05 19:27:44
End at: 2019-02-05 19:28:14
Local clock offset: -8.9 ms
Remote clock offset: -5.806 ms


# Below is generated by plot.py at 2019-02-05 20:39:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.80 Mbit/s
95th percentile per-packet one-way delay: 135.484 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 40.96 Mbit/s
95th percentile per-packet one-way delay: 105.404 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 52.75 Mbit/s
95th percentile per-packet one-way delay: 144.105 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 120.949 ms
Loss rate: 3.06%
```

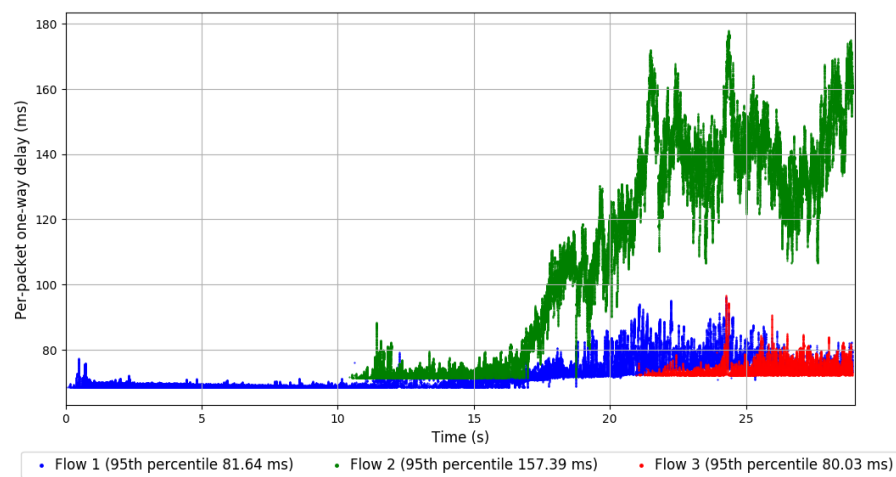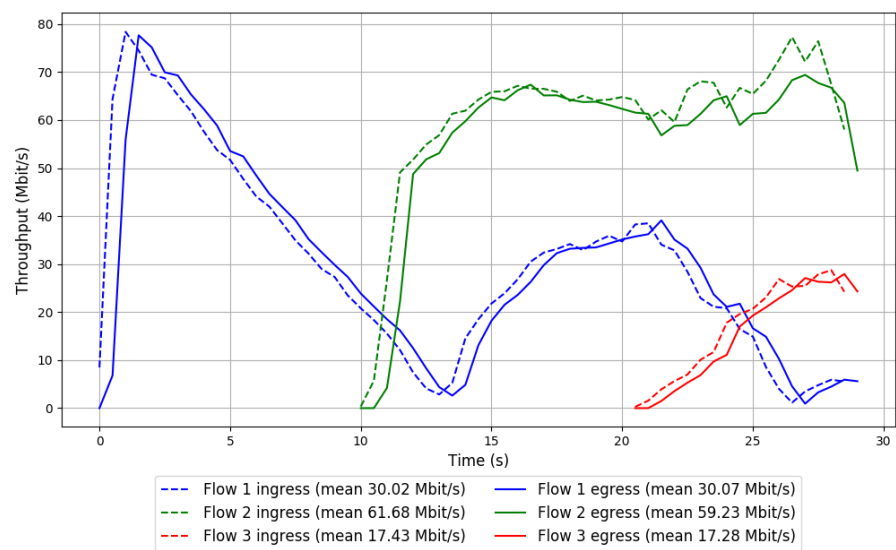Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-05 19:55:50
End at: 2019-02-05 19:56:20
Local clock offset: -7.072 ms
Remote clock offset: -4.81 ms


# Below is generated by plot.py at 2019-02-05 20:39:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 154.346 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 54.31 Mbit/s
95th percentile per-packet one-way delay: 141.784 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 43.51 Mbit/s
95th percentile per-packet one-way delay: 200.510 ms
Loss rate: 3.43%
-- Flow 3:
Average throughput: 39.88 Mbit/s
95th percentile per-packet one-way delay: 139.537 ms
Loss rate: 3.32%
```

Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 54.68 Mbit/s) --- Flow 1 egress (mean 54.31 Mbit/s)
Flow 2 ingress (mean 44.92 Mbit/s) --- Flow 2 egress (mean 43.51 Mbit/s)
Flow 3 ingress (mean 40.87 Mbit/s) --- Flow 3 egress (mean 39.88 Mbit/s)

Flow 1 (95th percentile 141.78 ms)   Flow 2 (95th percentile 200.51 ms)   Flow 3 (95th percentile 139.54 ms)
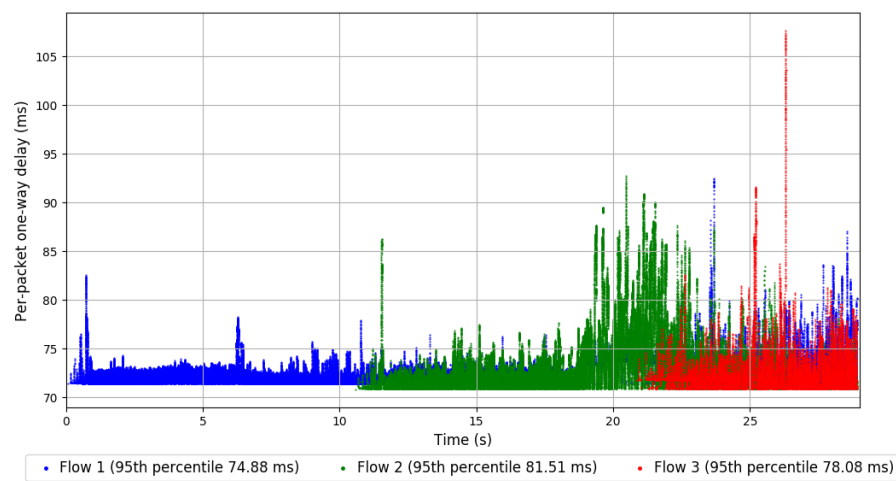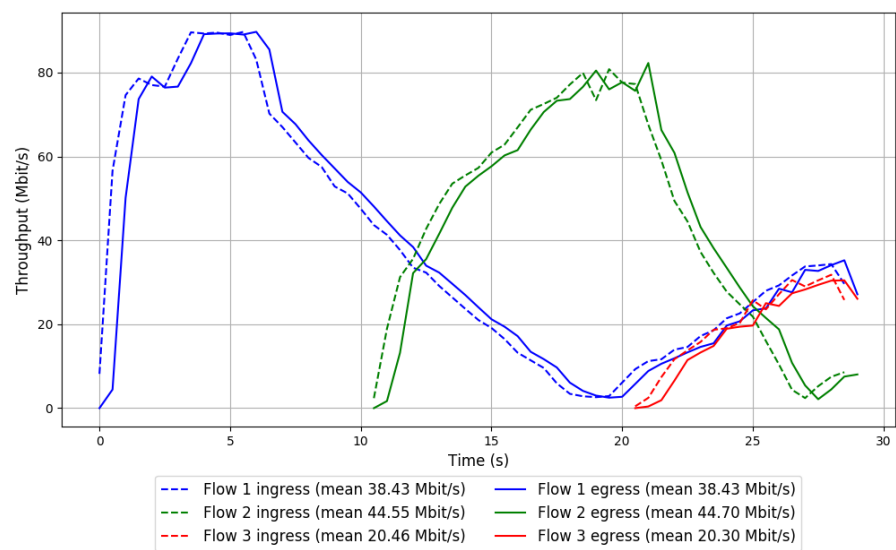
```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-05 20:23:06
End at: 2019-02-05 20:23:36
Local clock offset: -3.662 ms
Remote clock offset: -3.478 ms


# Below is generated by plot.py at 2019-02-05 20:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 196.015 ms
Loss rate: 2.80%
-- Flow 1:
Average throughput: 56.32 Mbit/s
95th percentile per-packet one-way delay: 205.416 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 37.74 Mbit/s
95th percentile per-packet one-way delay: 188.133 ms
Loss rate: 4.97%
-- Flow 3:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 98.091 ms
Loss rate: 1.71%
```

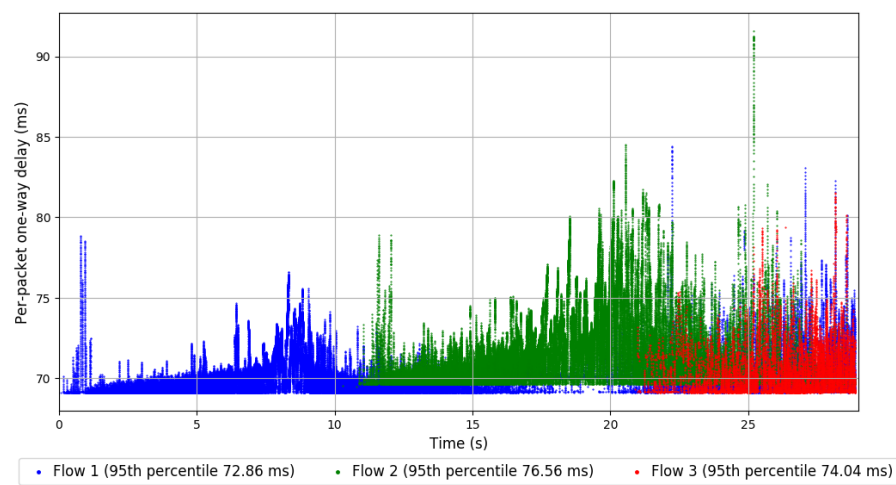Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 57.35 Mbit/s)   Flow 1 egress (mean 56.32 Mbit/s)
Flow 2 ingress (mean 39.54 Mbit/s)   Flow 2 egress (mean 37.74 Mbit/s)
Flow 3 ingress (mean 40.71 Mbit/s)   Flow 3 egress (mean 40.38 Mbit/s)

Flow 1 (95th percentile 205.42 ms)   Flow 2 (95th percentile 188.13 ms)   Flow 3 (95th percentile 98.09 ms)
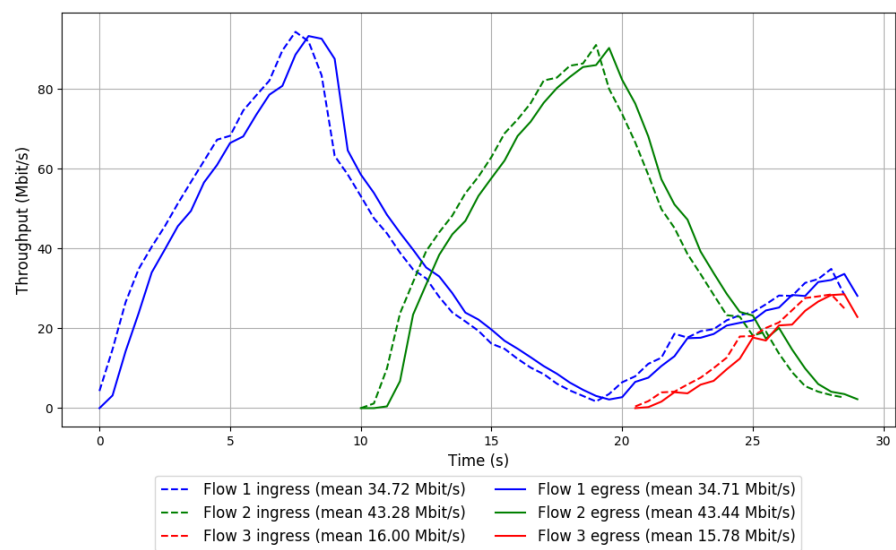
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```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-05 18:25:58
End at: 2019-02-05 18:26:28
Local clock offset: -8.681 ms
Remote clock offset: -4.115 ms

# Below is generated by plot.py at 2019-02-05 20:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.78 Mbit/s
95th percentile per-packet one-way delay: 150.199 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 30.07 Mbit/s
95th percentile per-packet one-way delay: 81.643 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 59.23 Mbit/s
95th percentile per-packet one-way delay: 157.386 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 17.28 Mbit/s
95th percentile per-packet one-way delay: 80.026 ms
Loss rate: 1.86%
```
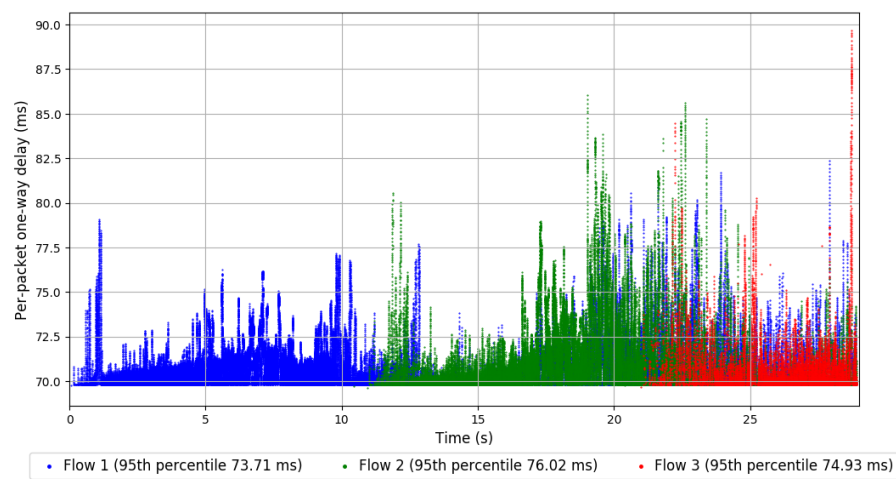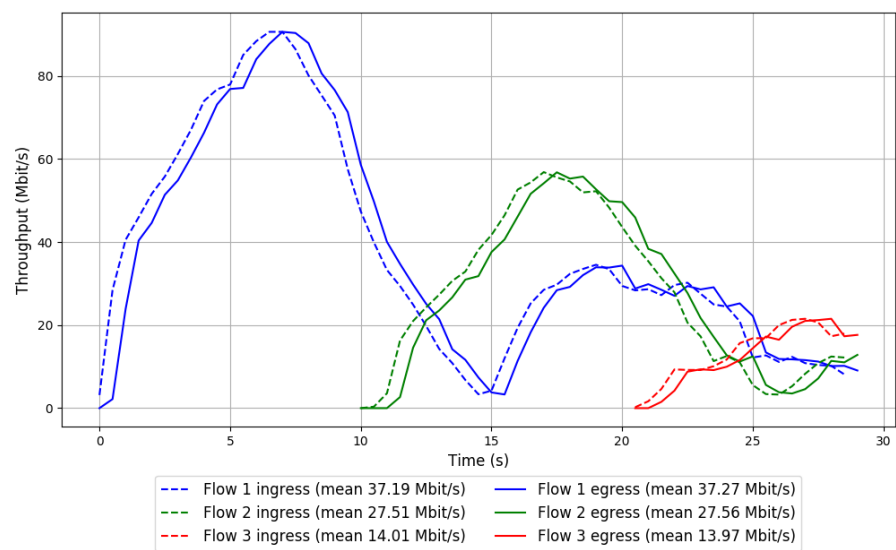
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-05 18:53:40
End at: 2019-02-05 18:54:10
Local clock offset: -8.279 ms
Remote clock offset: -5.545 ms


# Below is generated by plot.py at 2019-02-05 20:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.49 Mbit/s
95th percentile per-packet one-way delay: 78.112 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 74.883 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 81.510 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 20.30 Mbit/s
95th percentile per-packet one-way delay: 78.084 ms
Loss rate: 1.73%
```

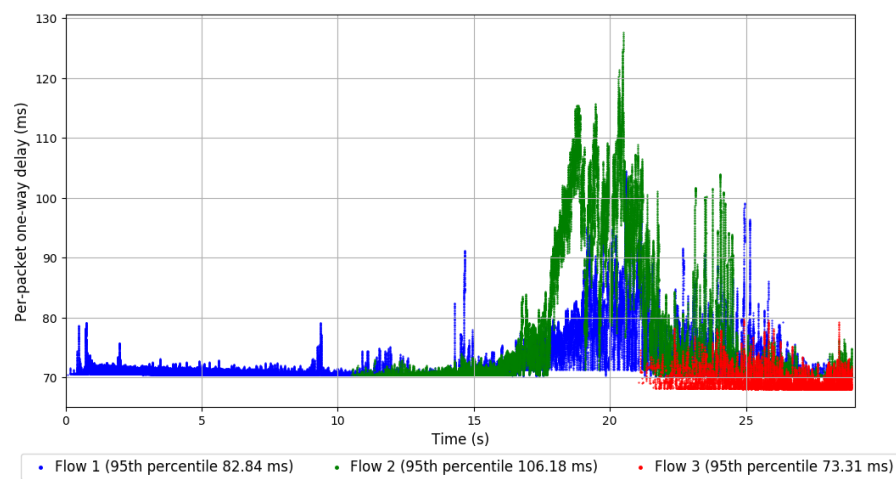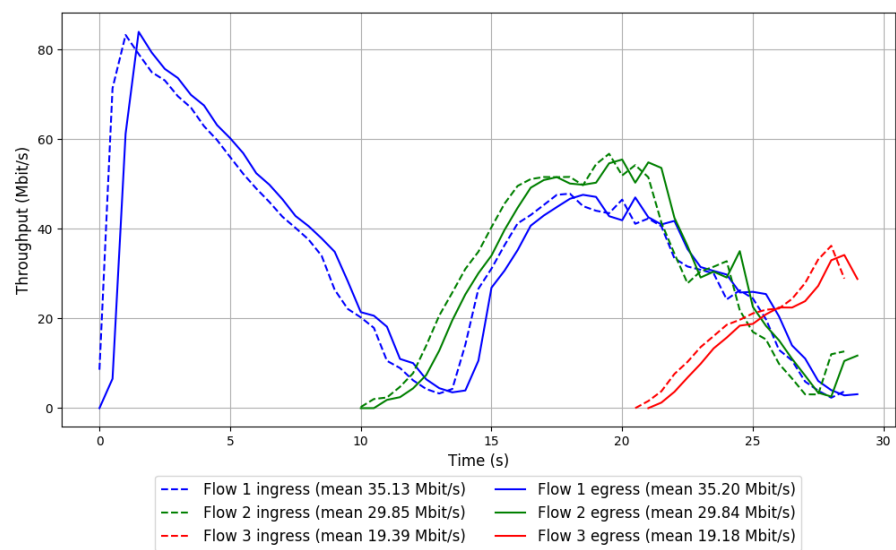Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-05 19:22:55
End at: 2019-02-05 19:23:25
Local clock offset: -8.204 ms
Remote clock offset: -4.564 ms


# Below is generated by plot.py at 2019-02-05 20:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.10 Mbit/s
95th percentile per-packet one-way delay: 74.991 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 34.71 Mbit/s
95th percentile per-packet one-way delay: 72.856 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 43.44 Mbit/s
95th percentile per-packet one-way delay: 76.565 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 15.78 Mbit/s
95th percentile per-packet one-way delay: 74.040 ms
Loss rate: 2.39%
```

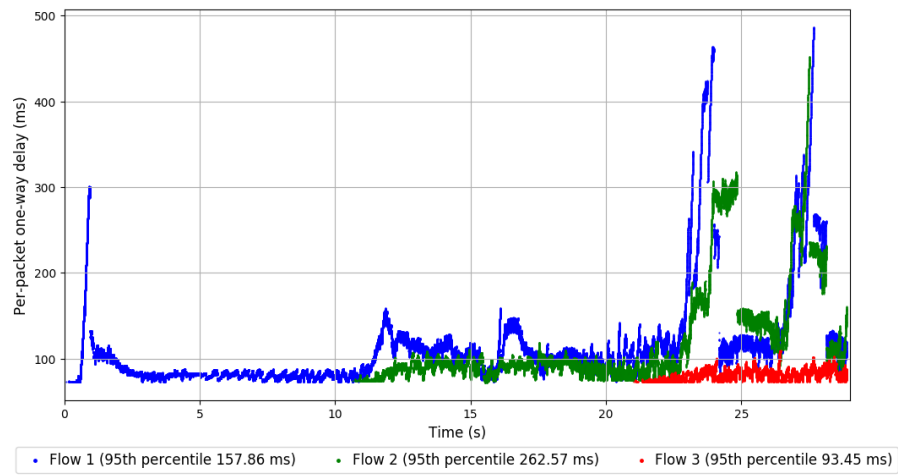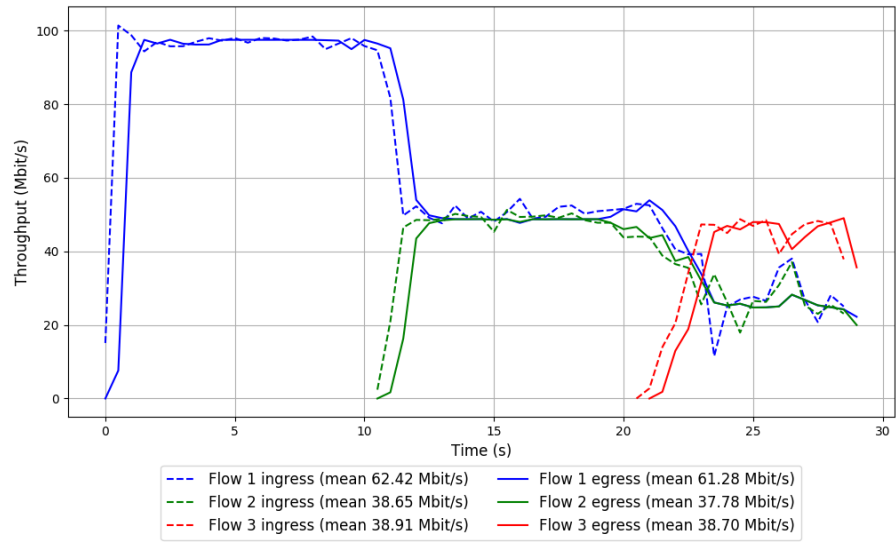Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-05 19:50:27
End at: 2019-02-05 19:50:57
Local clock offset: -8.012 ms
Remote clock offset: -4.479 ms


# Below is generated by plot.py at 2019-02-05 20:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.73 Mbit/s
95th percentile per-packet one-way delay: 74.566 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 37.27 Mbit/s
95th percentile per-packet one-way delay: 73.706 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 76.021 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 13.97 Mbit/s
95th percentile per-packet one-way delay: 74.932 ms
Loss rate: 1.35%
```

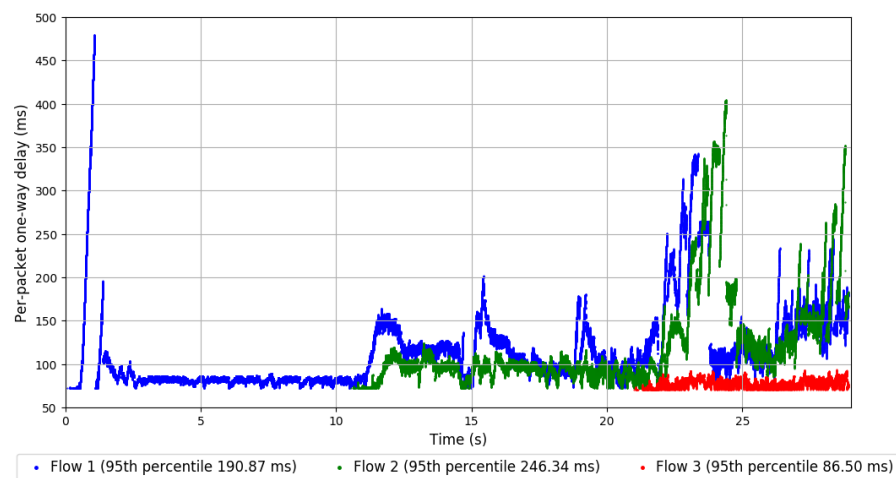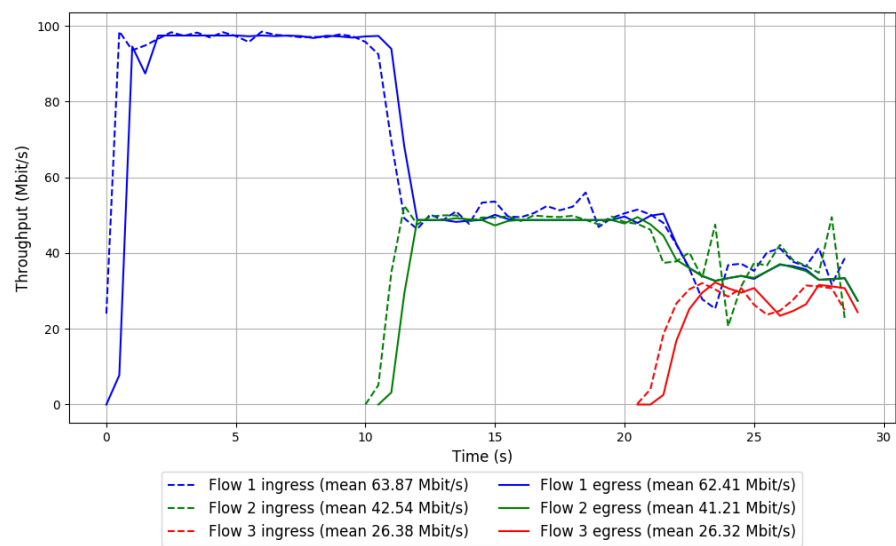Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-05 20:18:07
End at: 2019-02-05 20:18:37
Local clock offset: -4.48 ms
Remote clock offset: -3.209 ms


# Below is generated by plot.py at 2019-02-05 20:40:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.47 Mbit/s
95th percentile per-packet one-way delay: 98.608 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 35.20 Mbit/s
95th percentile per-packet one-way delay: 82.845 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 29.84 Mbit/s
95th percentile per-packet one-way delay: 106.178 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 19.18 Mbit/s
95th percentile per-packet one-way delay: 73.309 ms
Loss rate: 2.08%
```

Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-05 18:22:57
End at: 2019-02-05 18:23:27
Local clock offset: -7.475 ms
Remote clock offset: -4.195 ms


# Below is generated by plot.py at 2019-02-05 20:40:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.78 Mbit/s
95th percentile per-packet one-way delay: 189.287 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 61.28 Mbit/s
95th percentile per-packet one-way delay: 157.858 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 37.78 Mbit/s
95th percentile per-packet one-way delay: 262.566 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 38.70 Mbit/s
95th percentile per-packet one-way delay: 93.450 ms
Loss rate: 1.53%
```

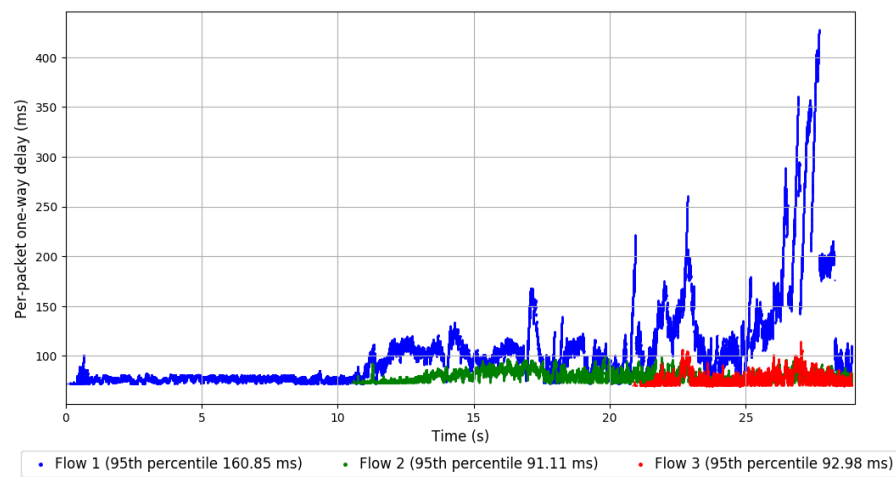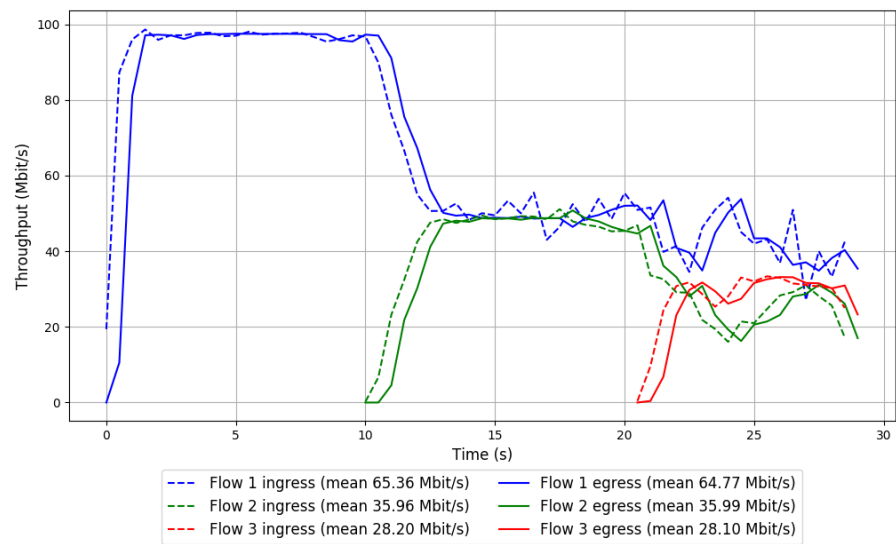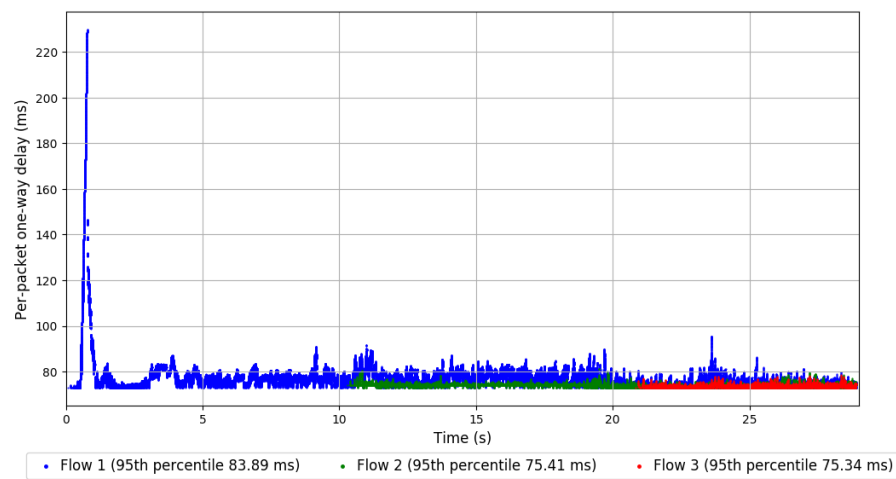Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 62.42 Mbit/s)   Flow 1 egress (mean 61.28 Mbit/s)
Flow 2 ingress (mean 38.65 Mbit/s)   Flow 2 egress (mean 37.78 Mbit/s)
Flow 3 ingress (mean 38.91 Mbit/s)   Flow 3 egress (mean 38.70 Mbit/s)

Flow 1 (95th percentile 157.86 ms)   Flow 2 (95th percentile 262.57 ms)   Flow 3 (95th percentile 93.45 ms)
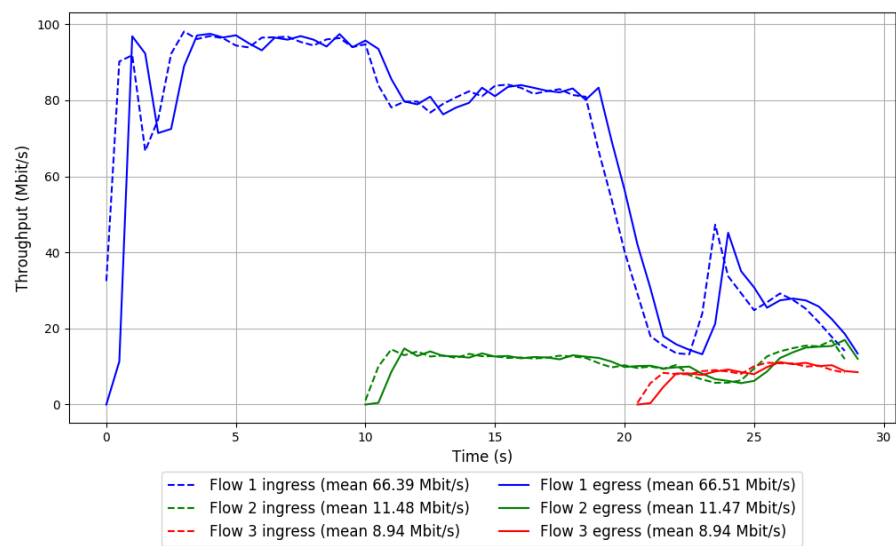
96

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-05 18:51:05
End at: 2019-02-05 18:51:35
Local clock offset: -6.818 ms
Remote clock offset: -4.167 ms


# Below is generated by plot.py at 2019-02-05 20:40:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 202.388 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 62.41 Mbit/s
95th percentile per-packet one-way delay: 190.866 ms
Loss rate: 2.55%
-- Flow 2:
Average throughput: 41.21 Mbit/s
95th percentile per-packet one-way delay: 246.336 ms
Loss rate: 3.53%
-- Flow 3:
Average throughput: 26.32 Mbit/s
95th percentile per-packet one-way delay: 86.500 ms
Loss rate: 1.26%
```

Run 2: Report of Indigo-MusesT — Data Link

Legend:
- Flow 1 ingress (mean 63.87 Mbit/s)
- Flow 1 egress (mean 62.41 Mbit/s)
- Flow 2 ingress (mean 42.54 Mbit/s)
- Flow 2 egress (mean 41.21 Mbit/s)
- Flow 3 ingress (mean 26.38 Mbit/s)
- Flow 3 egress (mean 26.32 Mbit/s)

Legend:
- Flow 1 (95th percentile 190.87 ms)
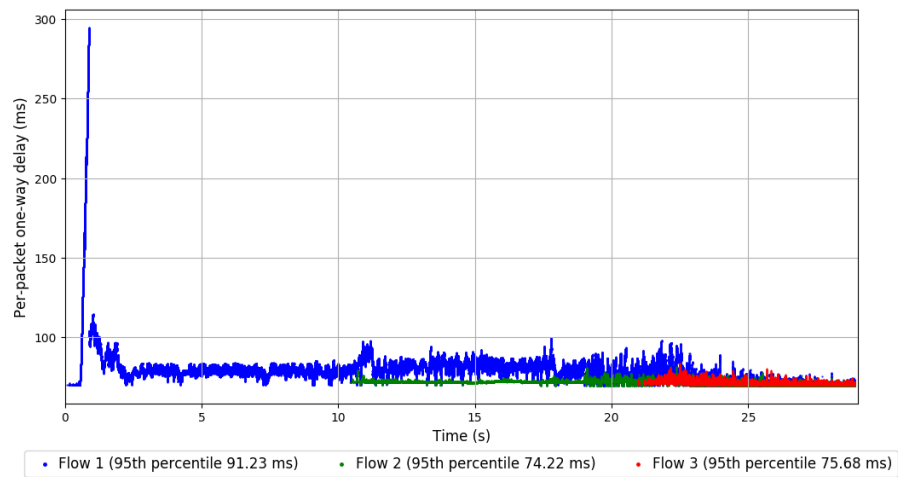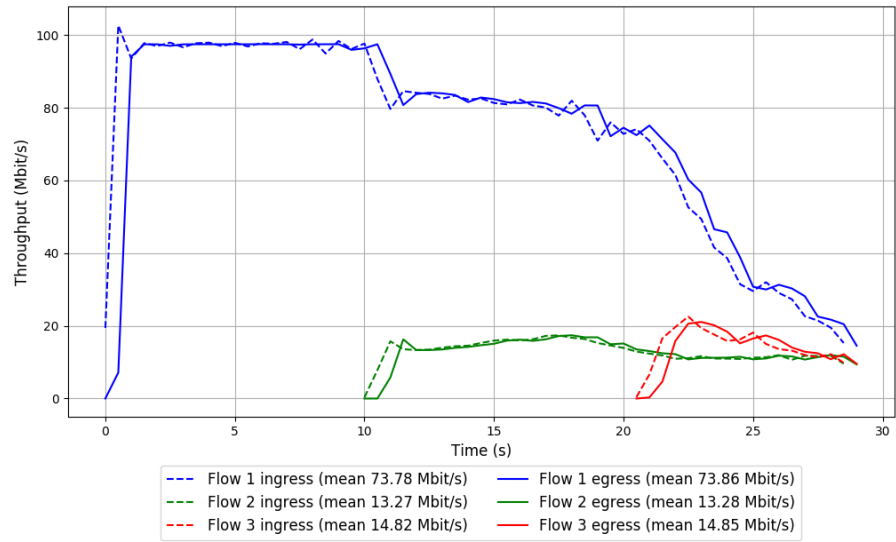- Flow 2 (95th percentile 246.34 ms)
- Flow 3 (95th percentile 86.50 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-05 19:20:13
End at: 2019-02-05 19:20:43
Local clock offset: -6.511 ms
Remote clock offset: -5.755 ms


# Below is generated by plot.py at 2019-02-05 20:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.61 Mbit/s
95th percentile per-packet one-way delay: 140.910 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 160.851 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 35.99 Mbit/s
95th percentile per-packet one-way delay: 91.113 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 28.10 Mbit/s
95th percentile per-packet one-way delay: 92.979 ms
Loss rate: 1.35%
```

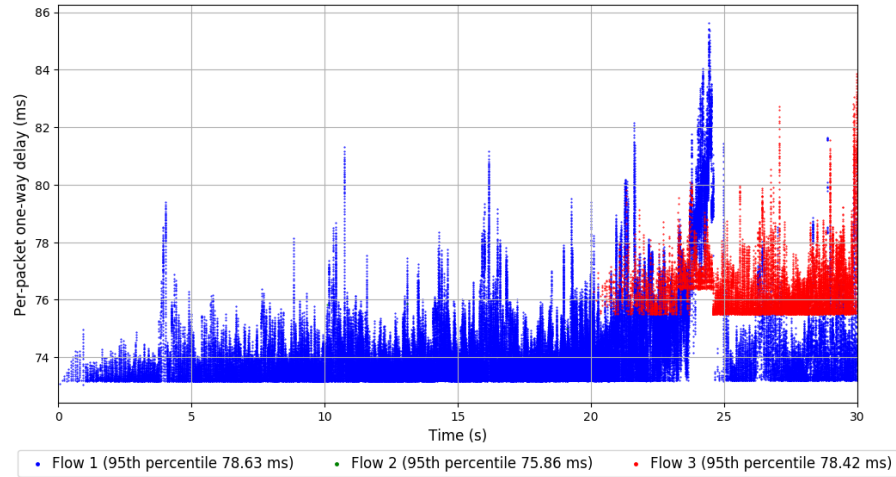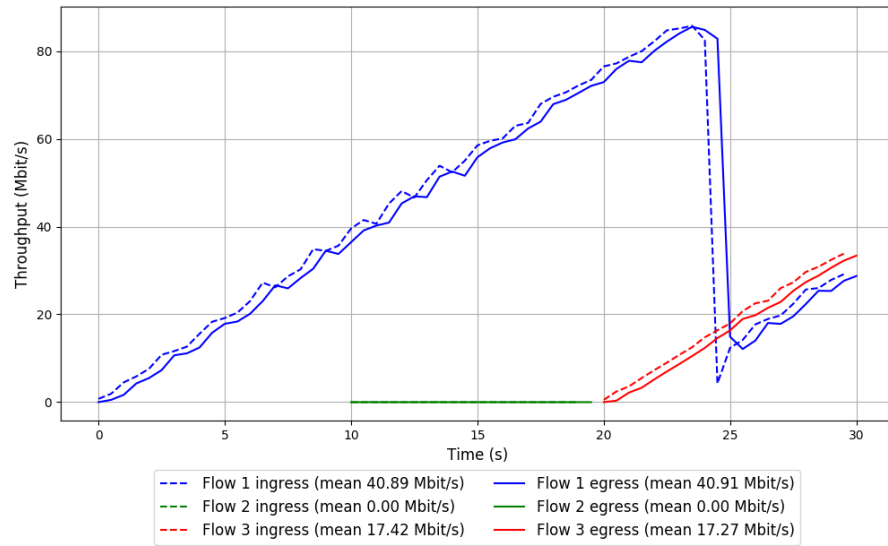## Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 65.36 Mbit/s) --- Flow 1 egress (mean 64.77 Mbit/s)
Flow 2 ingress (mean 35.96 Mbit/s) --- Flow 2 egress (mean 35.99 Mbit/s)
Flow 3 ingress (mean 28.20 Mbit/s) --- Flow 3 egress (mean 28.10 Mbit/s)

Flow 1 (95th percentile 160.85 ms)   Flow 2 (95th percentile 91.11 ms)   Flow 3 (95th percentile 92.98 ms)

100

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-05 19:47:36
End at: 2019-02-05 19:48:06
Local clock offset: -6.581 ms
Remote clock offset: -6.272 ms


# Below is generated by plot.py at 2019-02-05 20:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.41 Mbit/s
95th percentile per-packet one-way delay: 83.107 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 66.51 Mbit/s
95th percentile per-packet one-way delay: 83.888 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 11.47 Mbit/s
95th percentile per-packet one-way delay: 75.412 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 75.339 ms
Loss rate: 1.00%
```

Run 4: Report of Indigo-MusesT — Data Link
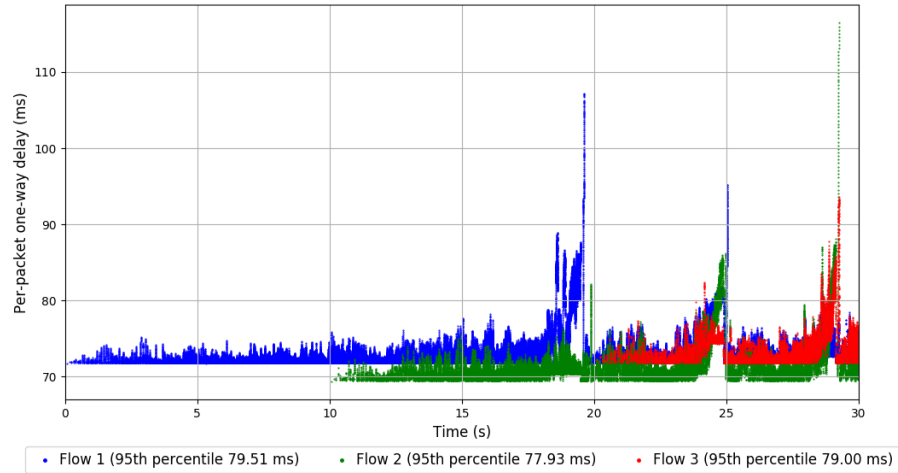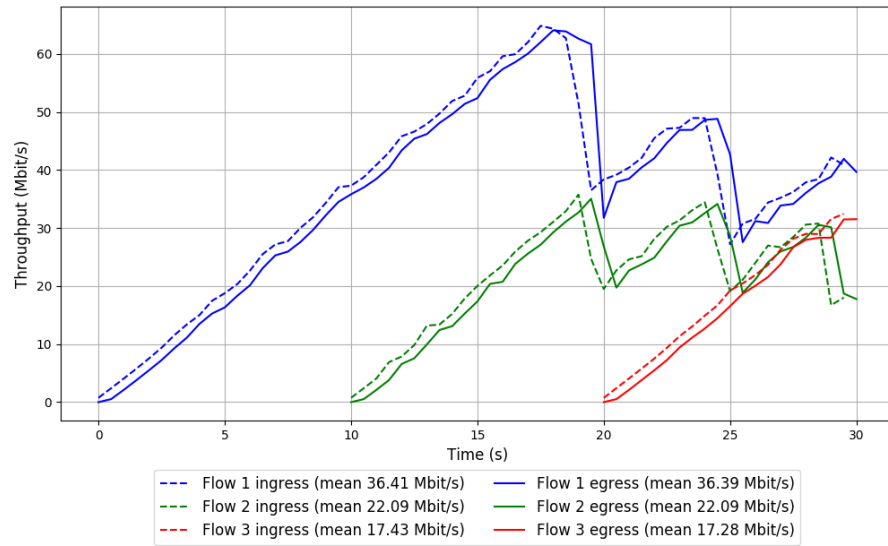
```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-05 20:15:24
End at: 2019-02-05 20:15:54
Local clock offset: -7.541 ms
Remote clock offset: -3.854 ms


# Below is generated by plot.py at 2019-02-05 20:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 89.861 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 73.86 Mbit/s
95th percentile per-packet one-way delay: 91.233 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 13.28 Mbit/s
95th percentile per-packet one-way delay: 74.218 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 14.85 Mbit/s
95th percentile per-packet one-way delay: 75.676 ms
Loss rate: 0.88%
```

Run 5: Report of Indigo-MusesT — Data Link
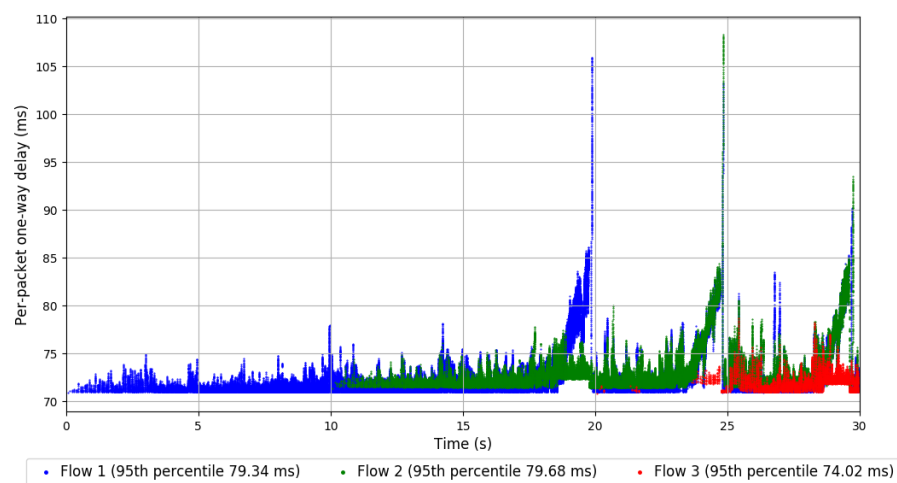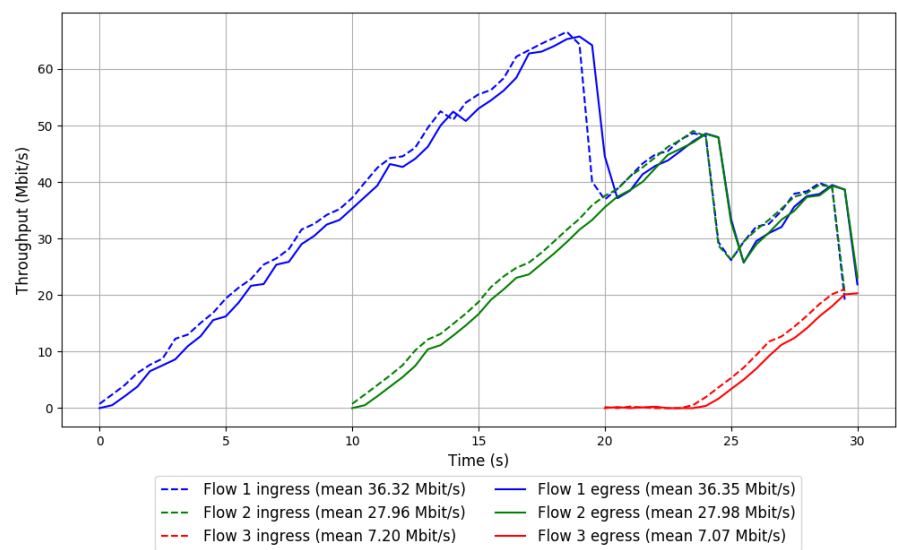

- - - - Flow 1 ingress (mean 73.78 Mbit/s) ——— Flow 1 egress (mean 73.86 Mbit/s)
- - - - Flow 2 ingress (mean 13.27 Mbit/s) ——— Flow 2 egress (mean 13.28 Mbit/s)
- - - - Flow 3 ingress (mean 14.82 Mbit/s) ——— Flow 3 egress (mean 14.85 Mbit/s)

- Flow 1 (95th percentile 91.23 ms)   - Flow 2 (95th percentile 74.22 ms)   - Flow 3 (95th percentile 75.68 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2019-02-05 18:15:02
End at: 2019-02-05 18:15:32
Local clock offset: -8.124 ms
Remote clock offset: -6.681 ms

# Below is generated by plot.py at 2019-02-05 20:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.61 Mbit/s
95th percentile per-packet one-way delay: 78.596 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 40.91 Mbit/s
95th percentile per-packet one-way delay: 78.631 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 75.855 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.27 Mbit/s
95th percentile per-packet one-way delay: 78.423 ms
Loss rate: 1.66%
```
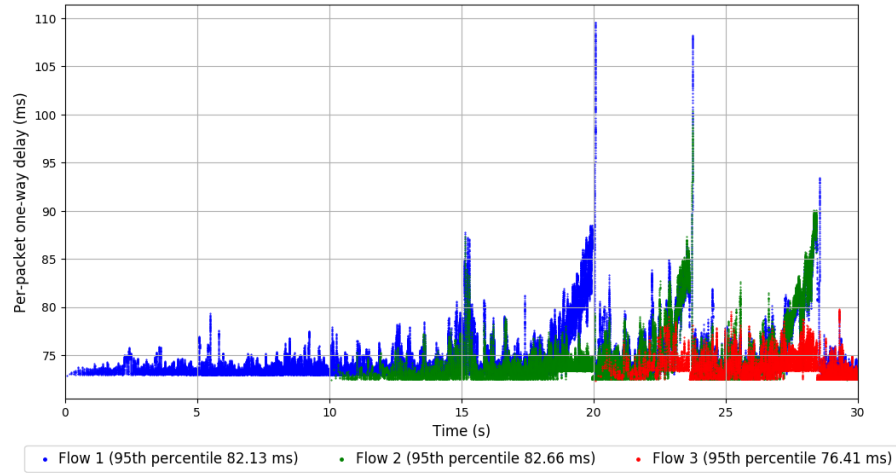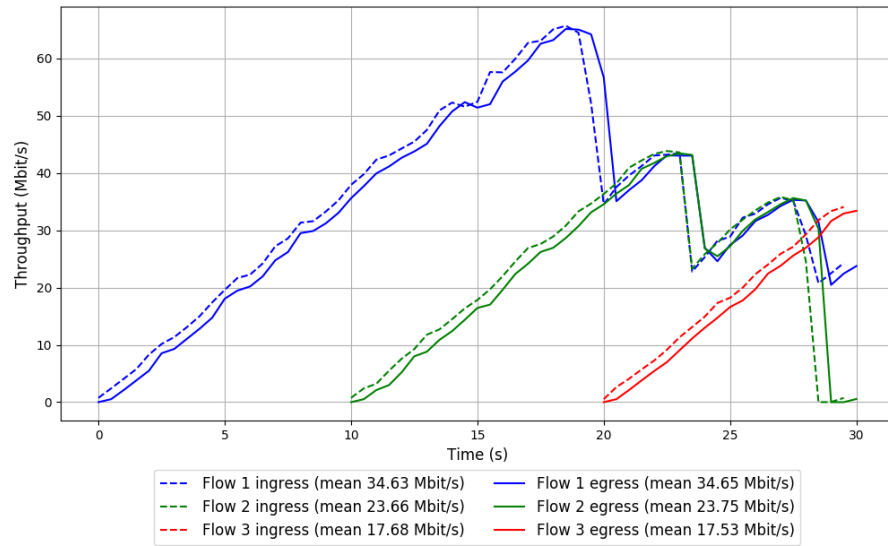
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-02-05 18:43:11
End at: 2019-02-05 18:43:41
Local clock offset: -8.994 ms
Remote clock offset: -5.041 ms


# Below is generated by plot.py at 2019-02-05 20:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.80 Mbit/s
95th percentile per-packet one-way delay: 79.209 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 79.510 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 22.09 Mbit/s
95th percentile per-packet one-way delay: 77.926 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 17.28 Mbit/s
95th percentile per-packet one-way delay: 78.995 ms
Loss rate: 1.65%
```
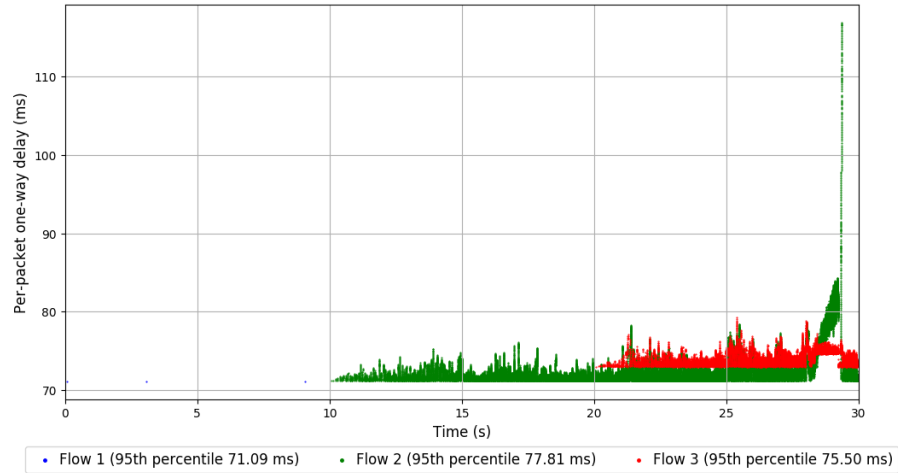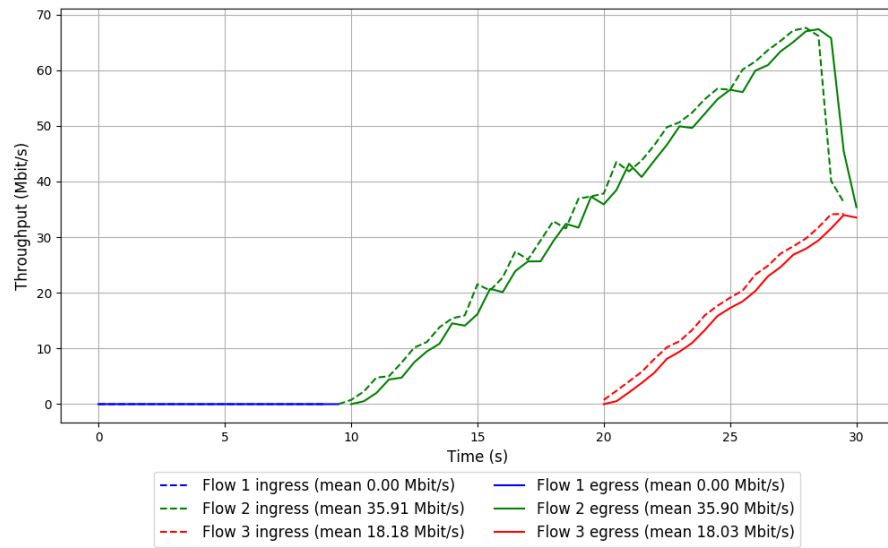
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-02-05 19:12:23
End at: 2019-02-05 19:12:53
Local clock offset: -13.138 ms
Remote clock offset: -11.895 ms

# Below is generated by plot.py at 2019-02-05 20:41:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.24 Mbit/s
95th percentile per-packet one-way delay: 79.314 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 36.35 Mbit/s
95th percentile per-packet one-way delay: 79.344 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 27.98 Mbit/s
95th percentile per-packet one-way delay: 79.676 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 7.07 Mbit/s
95th percentile per-packet one-way delay: 74.015 ms
Loss rate: 2.58%
```
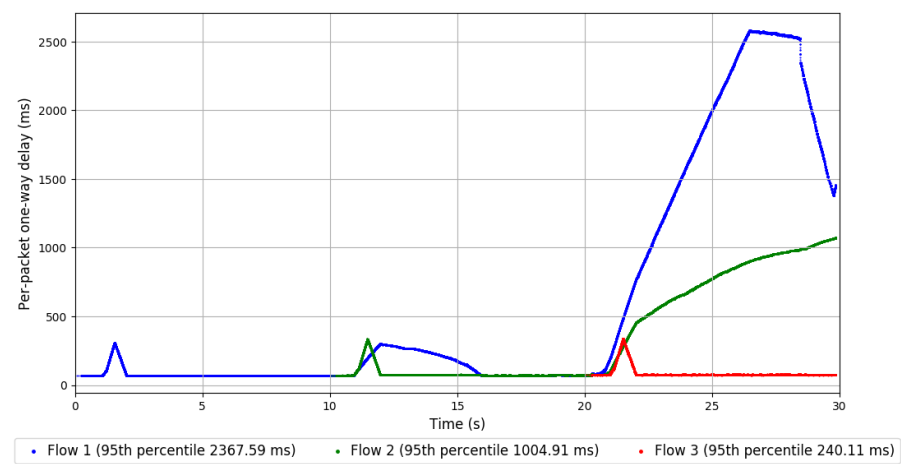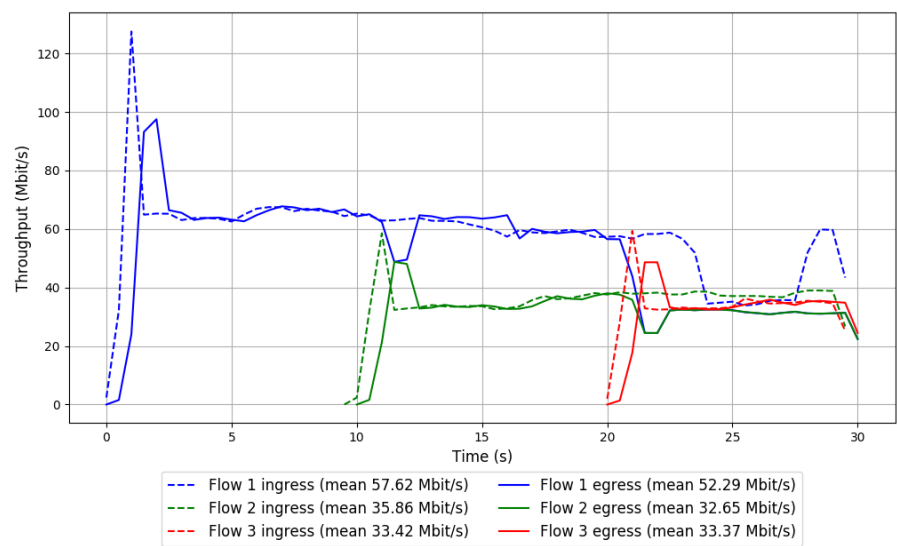
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-02-05 19:39:41
End at: 2019-02-05 19:40:11
Local clock offset: -7.183 ms
Remote clock offset: -6.297 ms


# Below is generated by plot.py at 2019-02-05 20:41:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.18 Mbit/s
95th percentile per-packet one-way delay: 82.010 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 34.65 Mbit/s
95th percentile per-packet one-way delay: 82.128 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 82.655 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 17.53 Mbit/s
95th percentile per-packet one-way delay: 76.408 ms
Loss rate: 1.65%
```
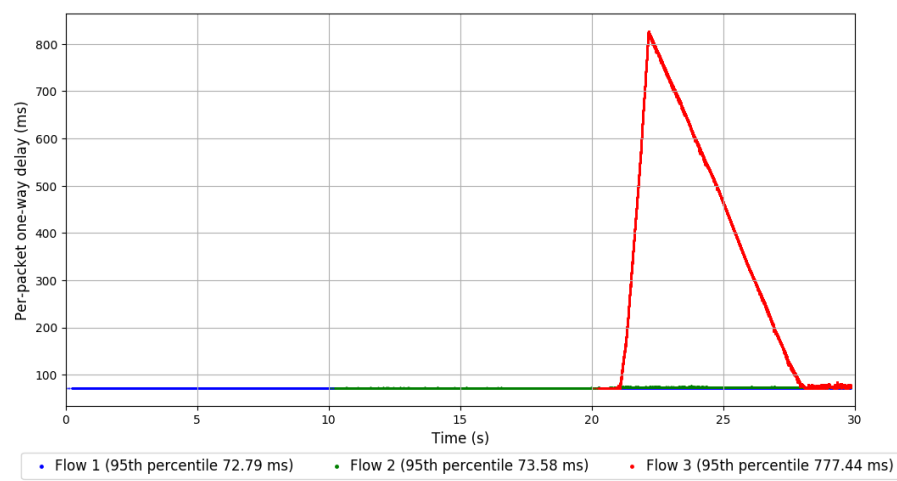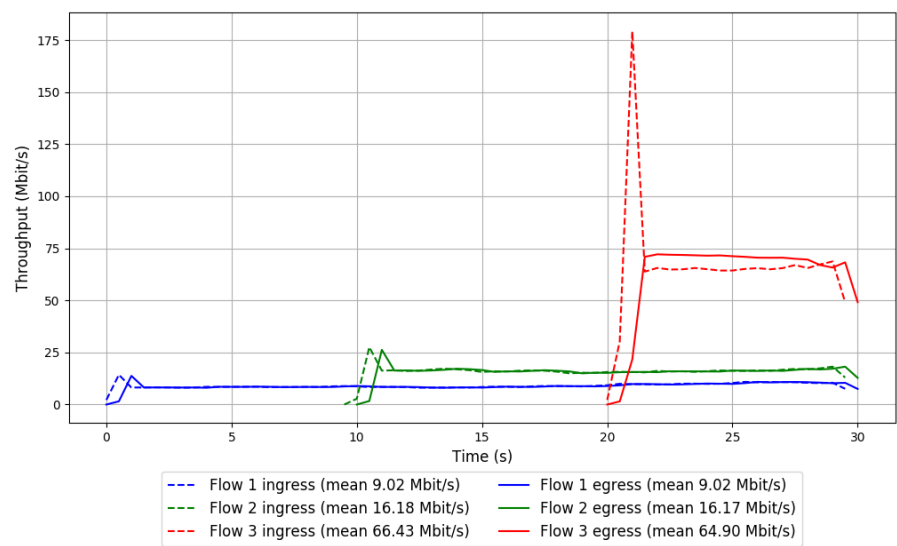
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-02-05 20:08:03
End at: 2019-02-05 20:08:33
Local clock offset: -4.787 ms
Remote clock offset: -4.105 ms

# Below is generated by plot.py at 2019-02-05 20:41:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 77.100 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 71.089 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.90 Mbit/s
95th percentile per-packet one-way delay: 77.812 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 18.03 Mbit/s
95th percentile per-packet one-way delay: 75.495 ms
Loss rate: 1.61%
```

Run 5: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 0.00 Mbit/s)   —— Flow 1 egress (mean 0.00 Mbit/s)
- - - Flow 2 ingress (mean 35.91 Mbit/s)   —— Flow 2 egress (mean 35.90 Mbit/s)
- - - Flow 3 ingress (mean 18.18 Mbit/s)   —— Flow 3 egress (mean 18.03 Mbit/s)

• Flow 1 (95th percentile 71.09 ms)   • Flow 2 (95th percentile 77.81 ms)   • Flow 3 (95th percentile 75.50 ms)

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-05 18:39:25
End at: 2019-02-05 18:39:55
Local clock offset: -7.831 ms
Remote clock offset: -2.843 ms


# Below is generated by plot.py at 2019-02-05 20:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.92 Mbit/s
95th percentile per-packet one-way delay: 1943.683 ms
Loss rate: 8.42%
-- Flow 1:
Average throughput: 52.29 Mbit/s
95th percentile per-packet one-way delay: 2367.594 ms
Loss rate: 9.49%
-- Flow 2:
Average throughput: 32.65 Mbit/s
95th percentile per-packet one-way delay: 1004.914 ms
Loss rate: 9.28%
-- Flow 3:
Average throughput: 33.37 Mbit/s
95th percentile per-packet one-way delay: 240.112 ms
Loss rate: 0.96%
```
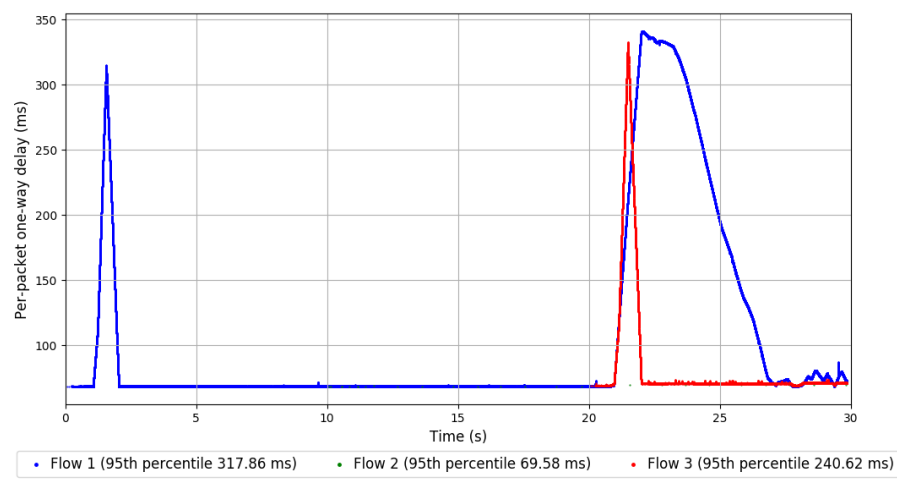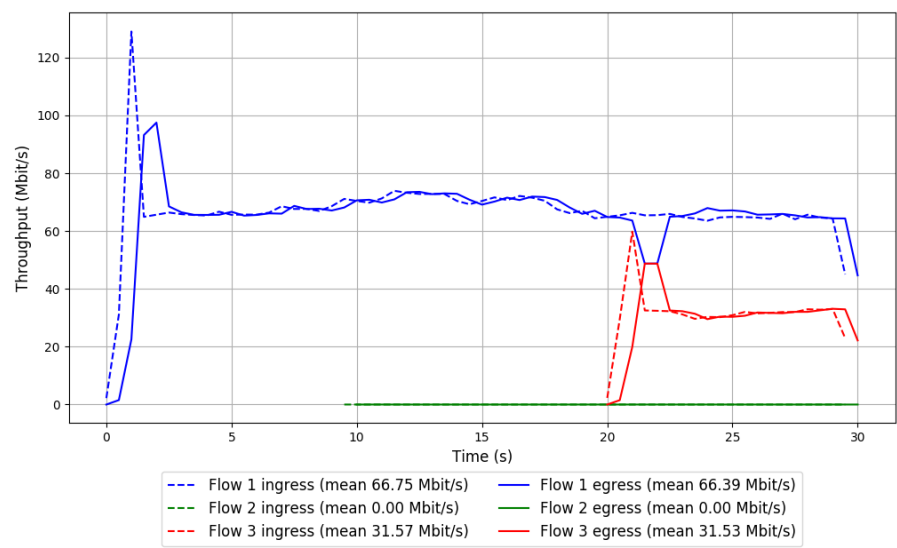
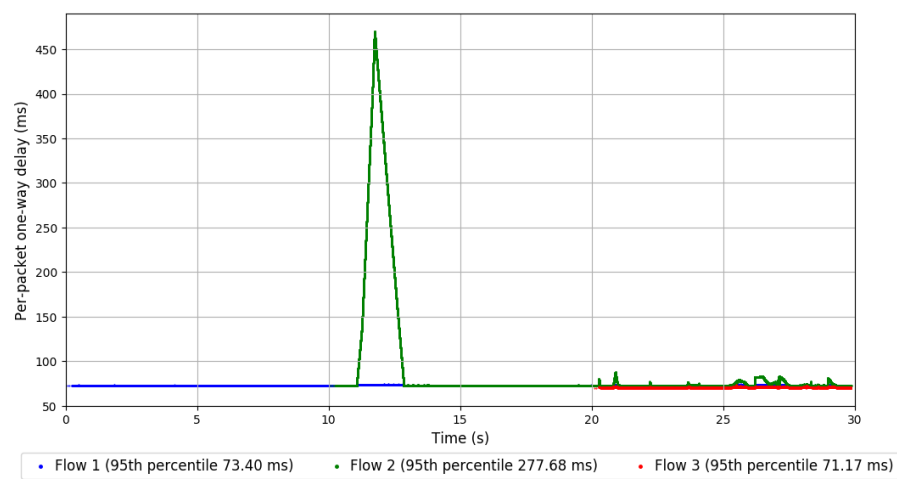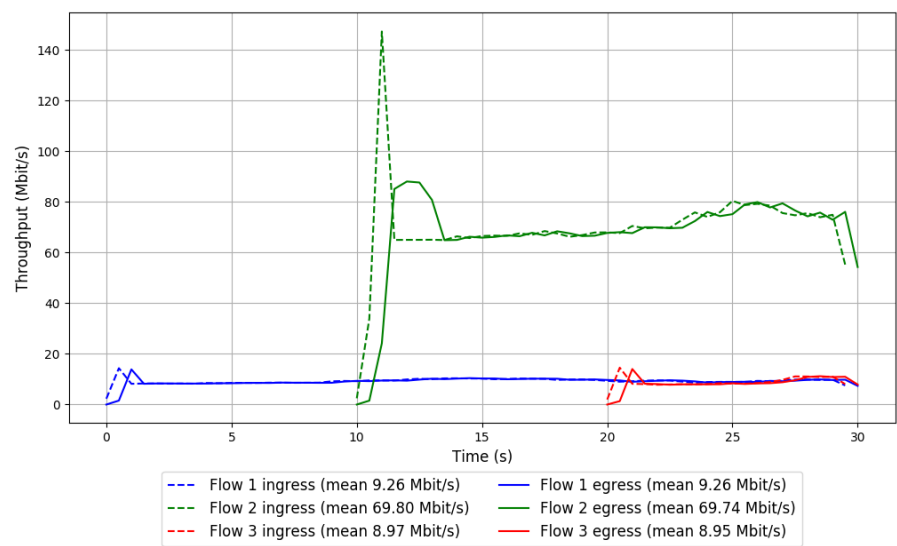# Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 57.62 Mbit/s) --- Flow 1 egress (mean 52.29 Mbit/s)
Flow 2 ingress (mean 35.86 Mbit/s) --- Flow 2 egress (mean 32.65 Mbit/s)
Flow 3 ingress (mean 33.42 Mbit/s) --- Flow 3 egress (mean 33.37 Mbit/s)

Flow 1 (95th percentile 2367.59 ms)   Flow 2 (95th percentile 1004.91 ms)   Flow 3 (95th percentile 240.11 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-05 19:08:21
End at: 2019-02-05 19:08:51
Local clock offset: -5.872 ms
Remote clock offset: -5.298 ms


# Below is generated by plot.py at 2019-02-05 20:41:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.05 Mbit/s
95th percentile per-packet one-way delay: 727.761 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 72.793 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 73.580 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 64.90 Mbit/s
95th percentile per-packet one-way delay: 777.438 ms
Loss rate: 3.10%
```
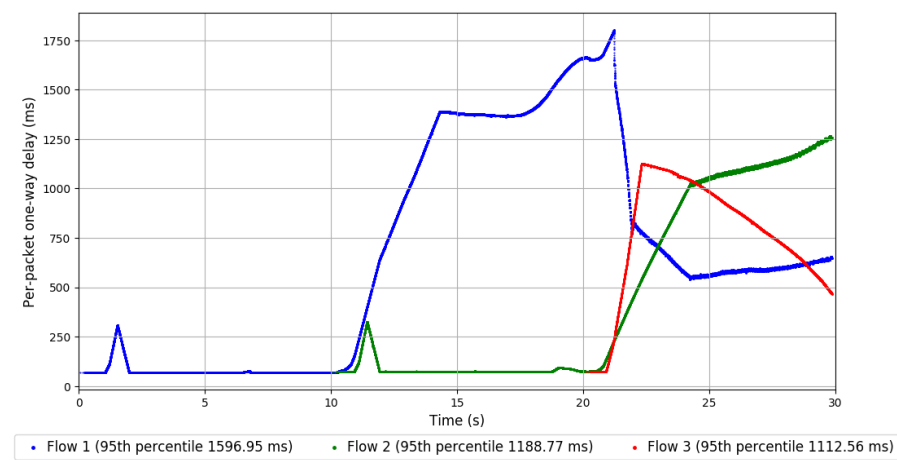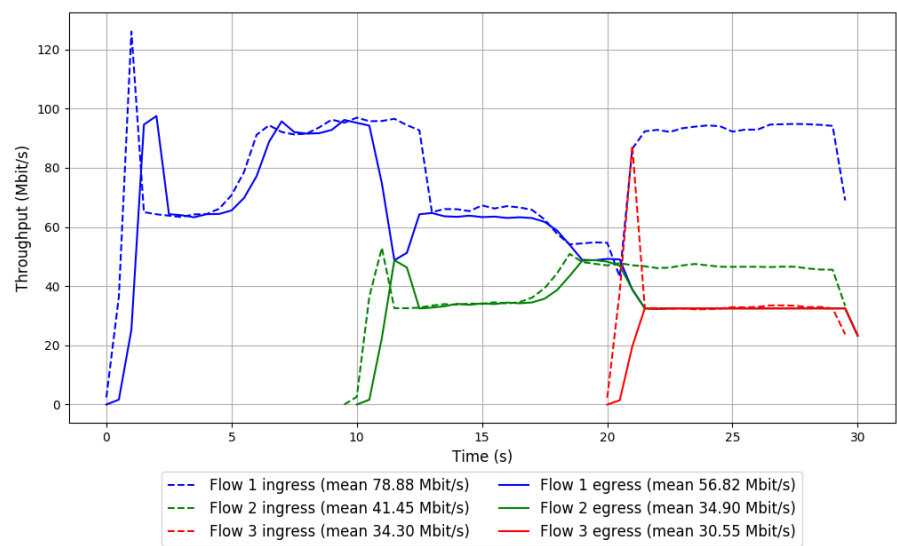
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-05 19:35:42
End at: 2019-02-05 19:36:12
Local clock offset: -8.756 ms
Remote clock offset: -4.206 ms


# Below is generated by plot.py at 2019-02-05 20:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.73 Mbit/s
95th percentile per-packet one-way delay: 310.005 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 66.39 Mbit/s
95th percentile per-packet one-way delay: 317.855 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 69.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 240.615 ms
Loss rate: 0.99%
```

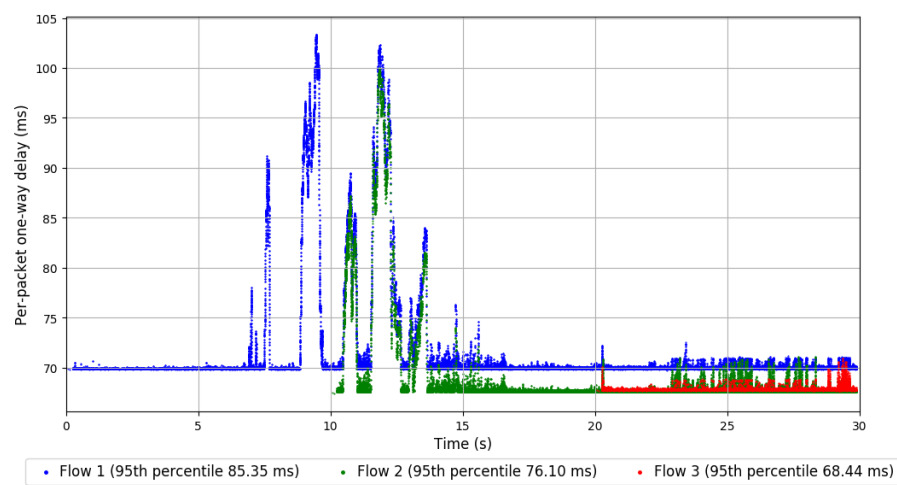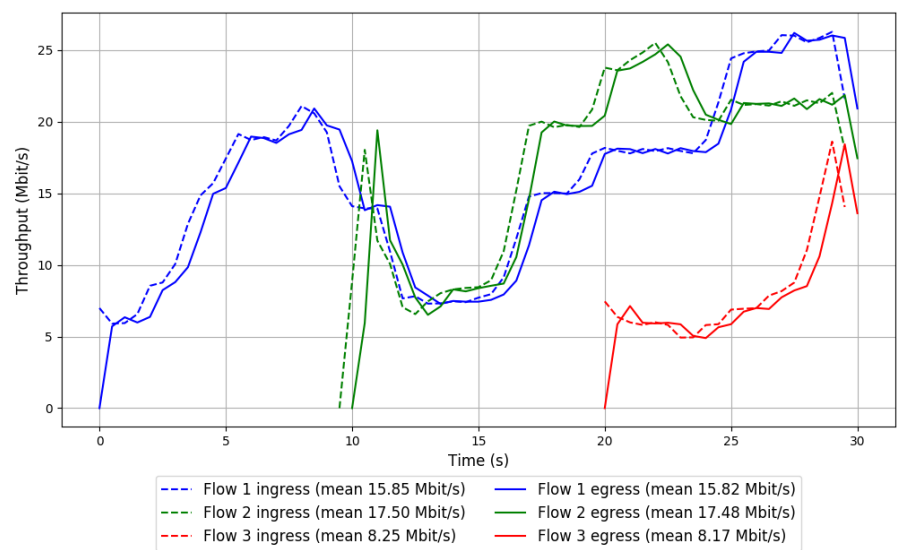Run 3: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 66.75 Mbit/s) —— Flow 1 egress (mean 66.39 Mbit/s)
- - - Flow 2 ingress (mean 0.00 Mbit/s) —— Flow 2 egress (mean 0.00 Mbit/s)
- - - Flow 3 ingress (mean 31.57 Mbit/s) —— Flow 3 egress (mean 31.53 Mbit/s)

• Flow 1 (95th percentile 317.86 ms)   • Flow 2 (95th percentile 69.58 ms)   • Flow 3 (95th percentile 240.62 ms)

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```
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-05 20:04:02
End at: 2019-02-05 20:04:32
Local clock offset: -5.31 ms
Remote clock offset: -4.205 ms


# Below is generated by plot.py at 2019-02-05 20:41:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.50 Mbit/s
95th percentile per-packet one-way delay: 223.906 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 73.404 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 69.74 Mbit/s
95th percentile per-packet one-way delay: 277.676 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 8.95 Mbit/s
95th percentile per-packet one-way delay: 71.174 ms
Loss rate: 0.99%
```
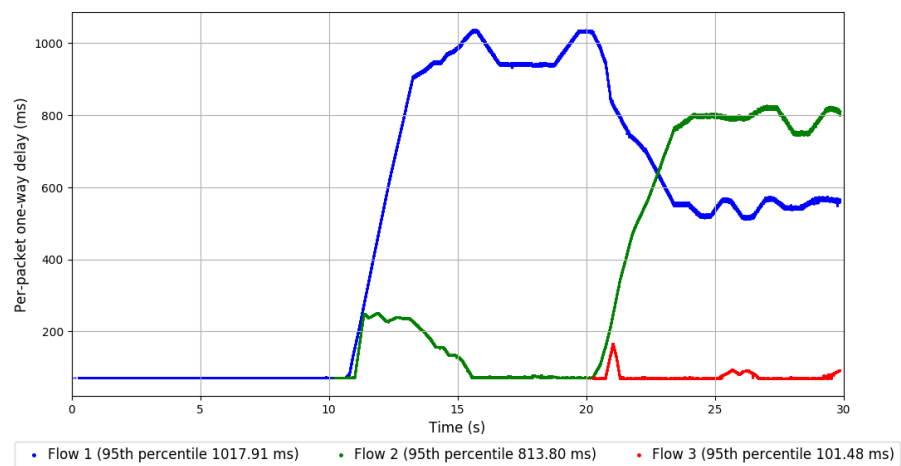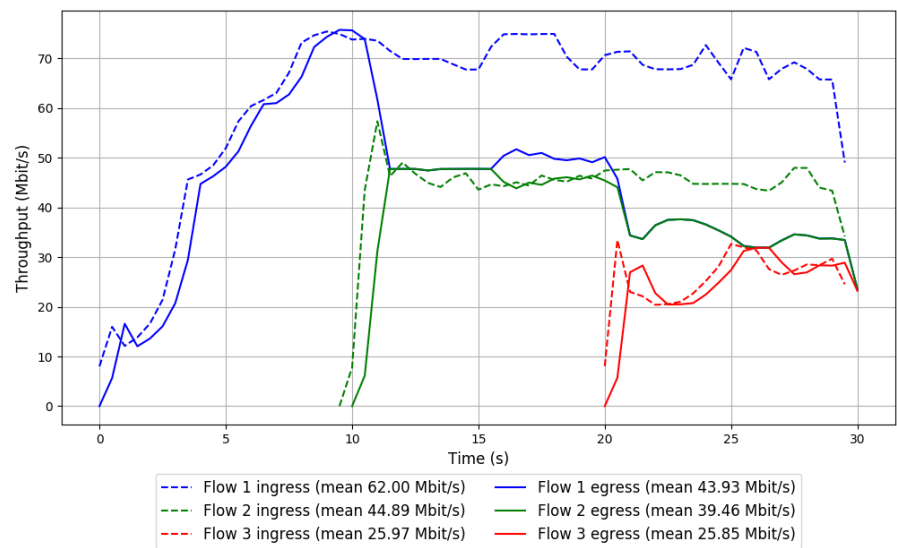
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-05 20:31:00
End at: 2019-02-05 20:31:30
Local clock offset: -0.78 ms
Remote clock offset: -4.622 ms


# Below is generated by plot.py at 2019-02-05 20:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.02 Mbit/s
95th percentile per-packet one-way delay: 1443.832 ms
Loss rate: 23.77%
-- Flow 1:
Average throughput: 56.82 Mbit/s
95th percentile per-packet one-way delay: 1596.946 ms
Loss rate: 28.17%
-- Flow 2:
Average throughput: 34.90 Mbit/s
95th percentile per-packet one-way delay: 1188.768 ms
Loss rate: 16.13%
-- Flow 3:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 1112.555 ms
Loss rate: 11.73%
```
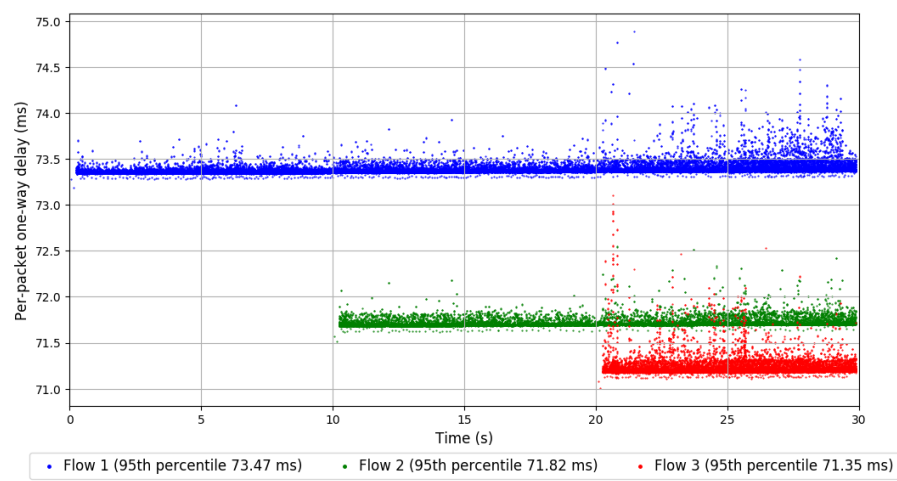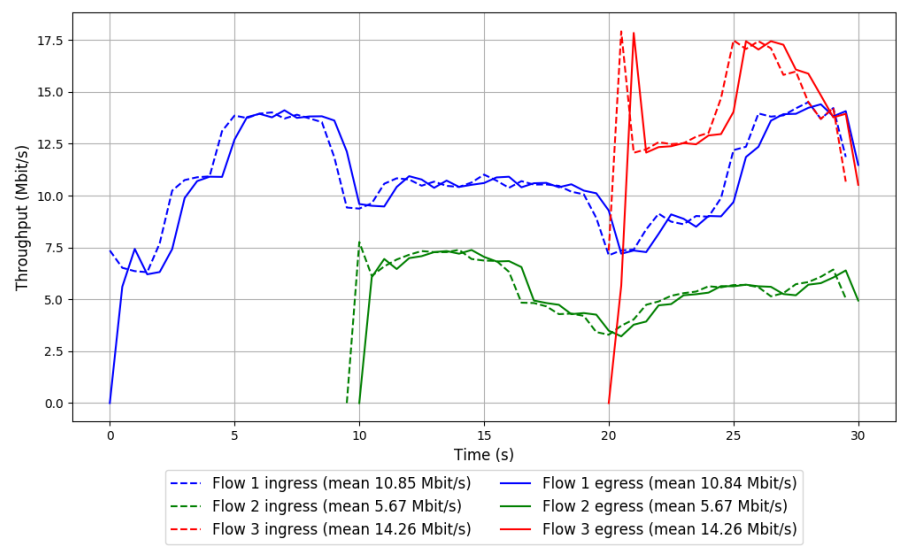
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 78.88 Mbit/s)   Flow 1 egress (mean 56.82 Mbit/s)
Flow 2 ingress (mean 41.45 Mbit/s)   Flow 2 egress (mean 34.90 Mbit/s)
Flow 3 ingress (mean 34.30 Mbit/s)   Flow 3 egress (mean 30.55 Mbit/s)

Flow 1 (95th percentile 1596.95 ms)   Flow 2 (95th percentile 1188.77 ms)   Flow 3 (95th percentile 1112.56 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-05 18:29:56
End at: 2019-02-05 18:30:26
Local clock offset: -11.025 ms
Remote clock offset: -5.418 ms


# Below is generated by plot.py at 2019-02-05 20:42:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.12 Mbit/s
95th percentile per-packet one-way delay: 79.671 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 85.353 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 76.100 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 68.443 ms
Loss rate: 1.73%
```
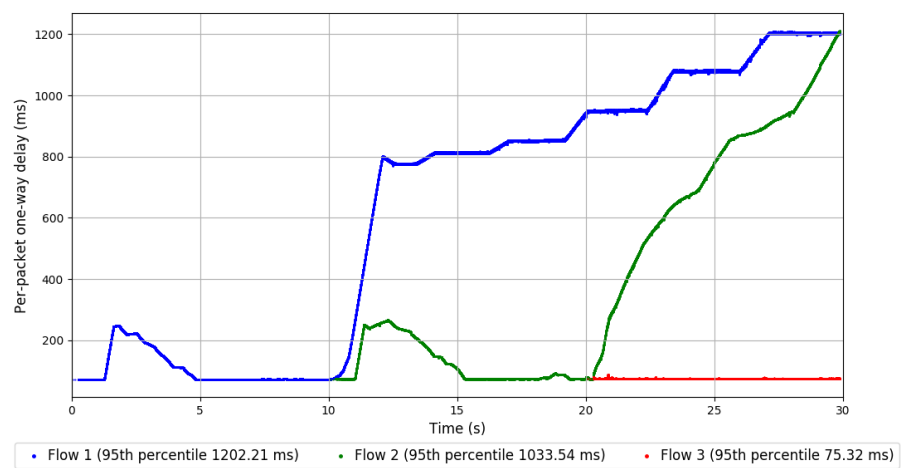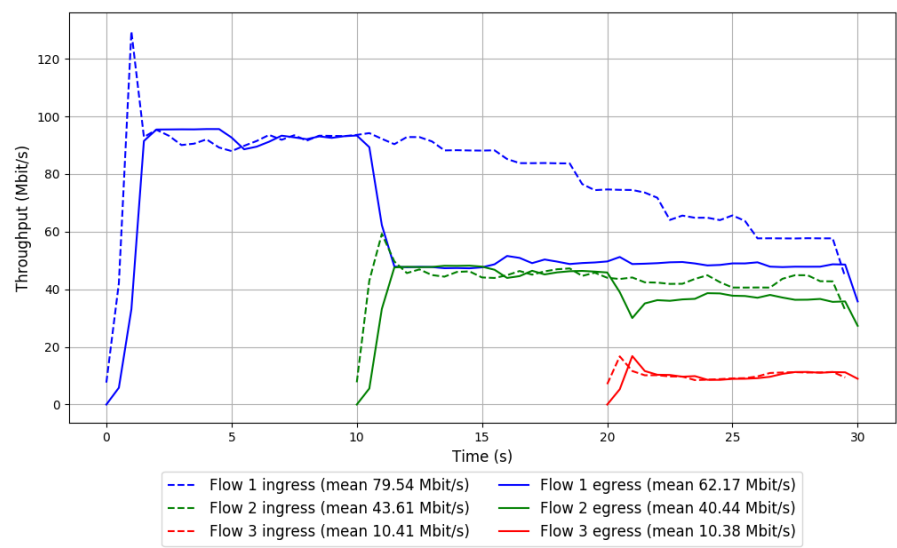
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-05 18:57:34
End at: 2019-02-05 18:58:04
Local clock offset: -8.69 ms
Remote clock offset: -6.124 ms


# Below is generated by plot.py at 2019-02-05 20:43:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 989.520 ms
Loss rate: 21.91%
-- Flow 1:
Average throughput: 43.93 Mbit/s
95th percentile per-packet one-way delay: 1017.913 ms
Loss rate: 29.33%
-- Flow 2:
Average throughput: 39.46 Mbit/s
95th percentile per-packet one-way delay: 813.803 ms
Loss rate: 12.42%
-- Flow 3:
Average throughput: 25.85 Mbit/s
95th percentile per-packet one-way delay: 101.485 ms
Loss rate: 1.30%
```

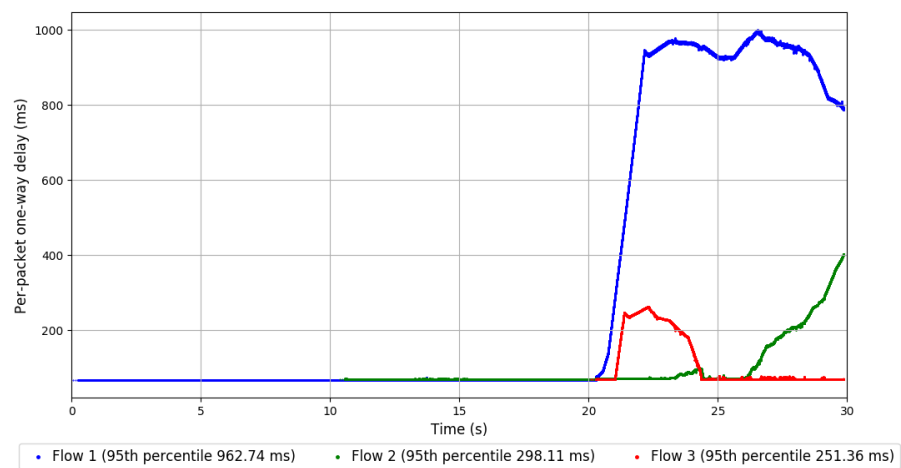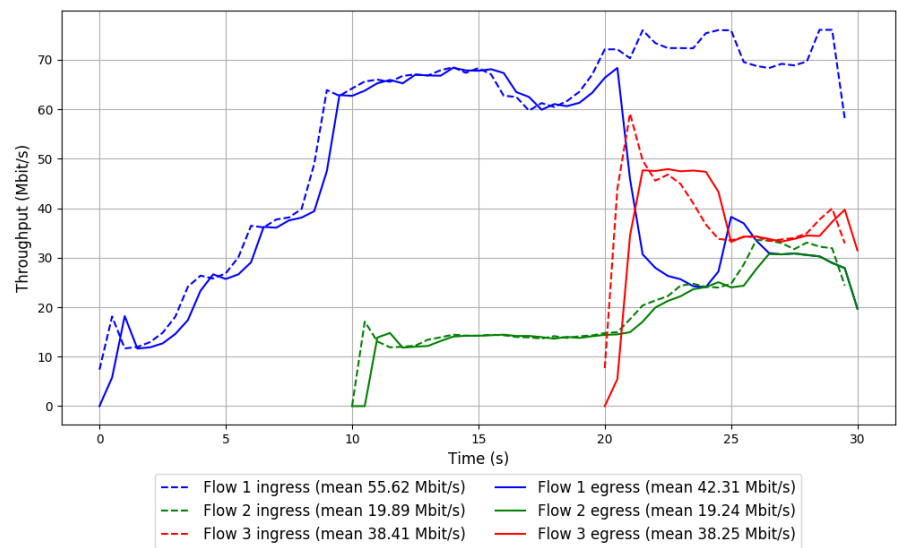## Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-02-05 19:26:32
End at: 2019-02-05 19:27:02
Local clock offset: -5.469 ms
Remote clock offset: -5.863 ms


# Below is generated by plot.py at 2019-02-05 20:43:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.29 Mbit/s
95th percentile per-packet one-way delay: 73.437 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 73.475 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 71.816 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 71.346 ms
Loss rate: 0.81%
```
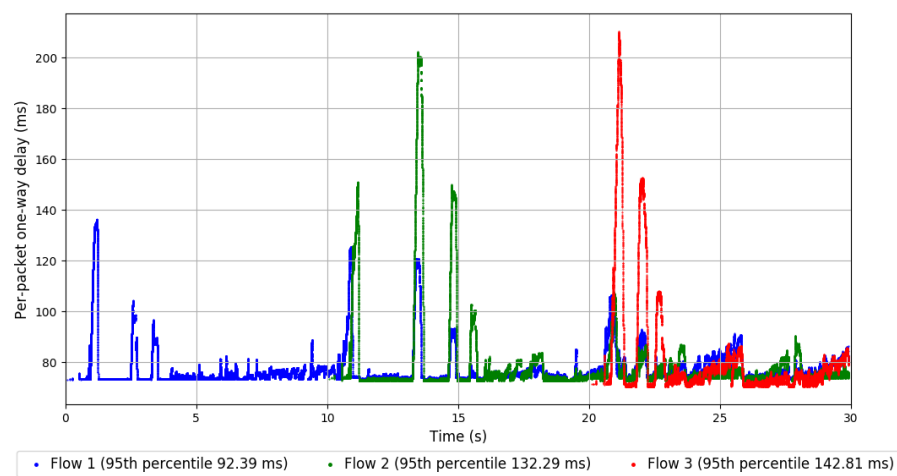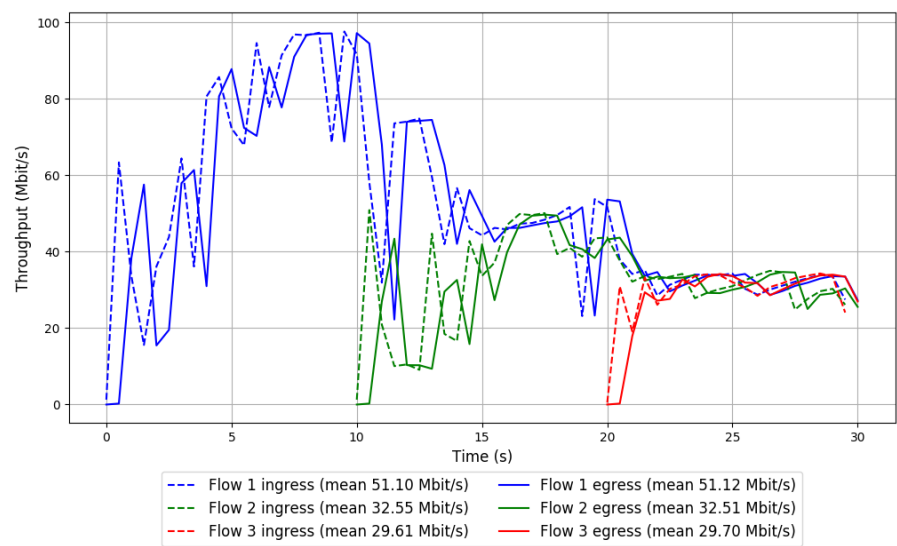
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-02-05 19:54:14
End at: 2019-02-05 19:54:44
Local clock offset: -5.804 ms
Remote clock offset: -4.233 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.45 Mbit/s
95th percentile per-packet one-way delay: 1196.445 ms
Loss rate: 17.67%
-- Flow 1:
Average throughput: 62.17 Mbit/s
95th percentile per-packet one-way delay: 1202.211 ms
Loss rate: 22.04%
-- Flow 2:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 1033.537 ms
Loss rate: 7.63%
-- Flow 3:
Average throughput: 10.38 Mbit/s
95th percentile per-packet one-way delay: 75.321 ms
Loss rate: 1.03%
```

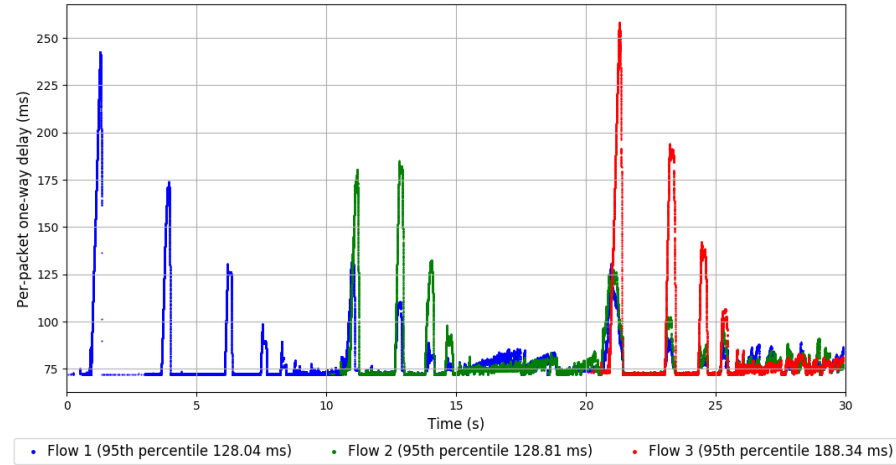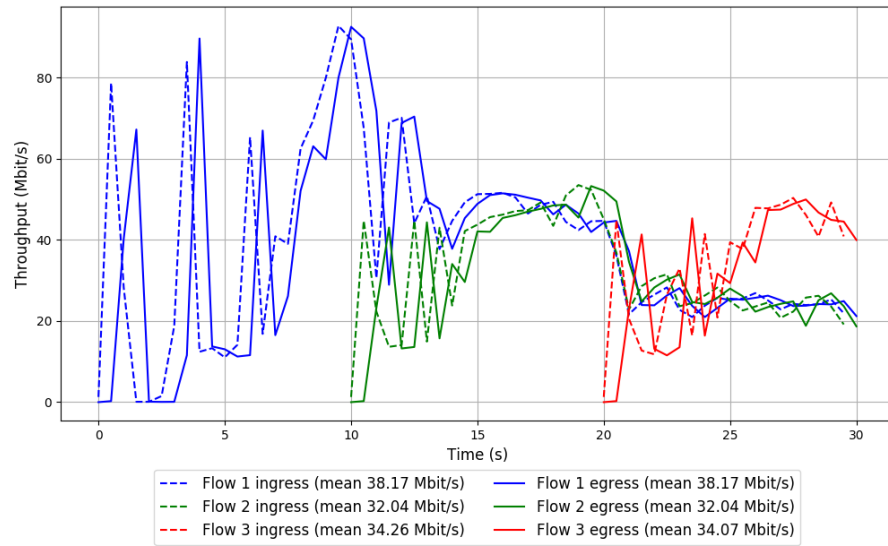Run 4: Report of PCC-Expr — Data Link

- - - Flow 1 ingress (mean 79.54 Mbit/s)   —— Flow 1 egress (mean 62.17 Mbit/s)
- - - Flow 2 ingress (mean 43.61 Mbit/s)   —— Flow 2 egress (mean 40.44 Mbit/s)
- - - Flow 3 ingress (mean 10.41 Mbit/s)   —— Flow 3 egress (mean 10.38 Mbit/s)

- Flow 1 (95th percentile 1202.21 ms)   • Flow 2 (95th percentile 1033.54 ms)   • Flow 3 (95th percentile 75.32 ms)

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```
Run 5: Statistics of PCC-Expr

Start at: 2019-02-05 20:21:40
End at: 2019-02-05 20:22:10
Local clock offset: -4.161 ms
Remote clock offset: -3.128 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.45 Mbit/s
95th percentile per-packet one-way delay: 952.038 ms
Loss rate: 17.30%
-- Flow 1:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 962.742 ms
Loss rate: 24.15%
-- Flow 2:
Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 298.108 ms
Loss rate: 3.69%
-- Flow 3:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 251.357 ms
Loss rate: 1.20%
```

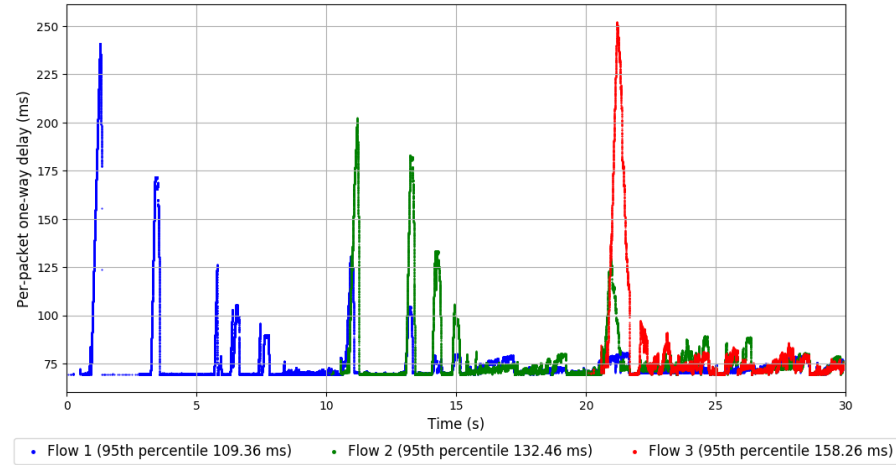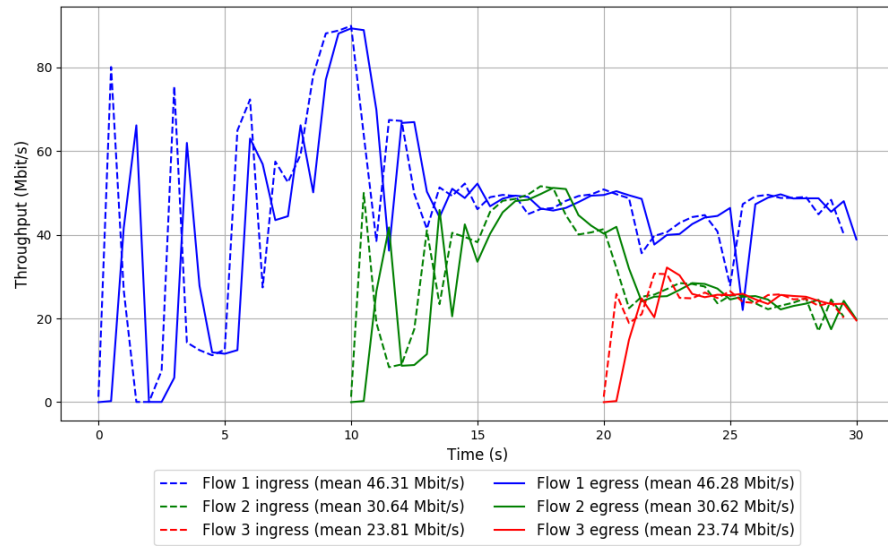## Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 55.62 Mbit/s)   Flow 1 egress (mean 42.31 Mbit/s)
Flow 2 ingress (mean 19.89 Mbit/s)   Flow 2 egress (mean 19.24 Mbit/s)
Flow 3 ingress (mean 38.41 Mbit/s)   Flow 3 egress (mean 38.25 Mbit/s)

Flow 1 (95th percentile 962.74 ms)   Flow 2 (95th percentile 298.11 ms)   Flow 3 (95th percentile 251.36 ms)

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```
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-05 18:13:47
End at: 2019-02-05 18:14:17
Local clock offset: -7.57 ms
Remote clock offset: -3.913 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.49 Mbit/s
95th percentile per-packet one-way delay: 104.341 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 51.12 Mbit/s
95th percentile per-packet one-way delay: 92.394 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 32.51 Mbit/s
95th percentile per-packet one-way delay: 132.289 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 29.70 Mbit/s
95th percentile per-packet one-way delay: 142.814 ms
Loss rate: 0.52%
```
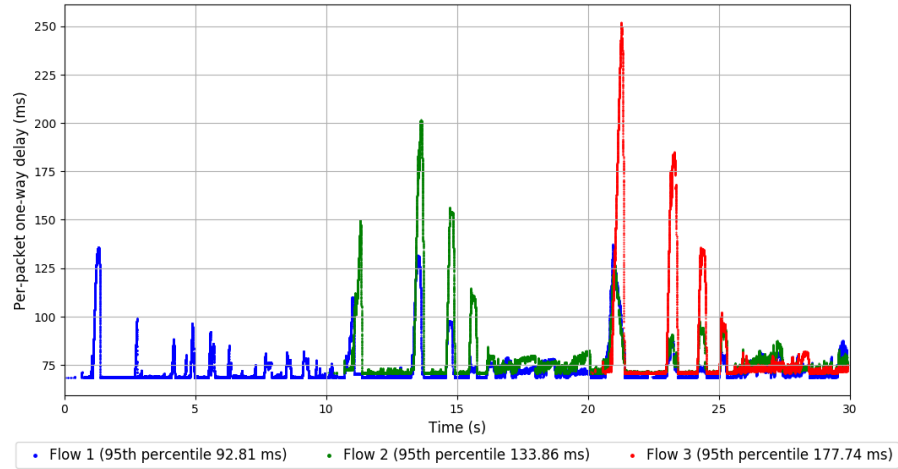
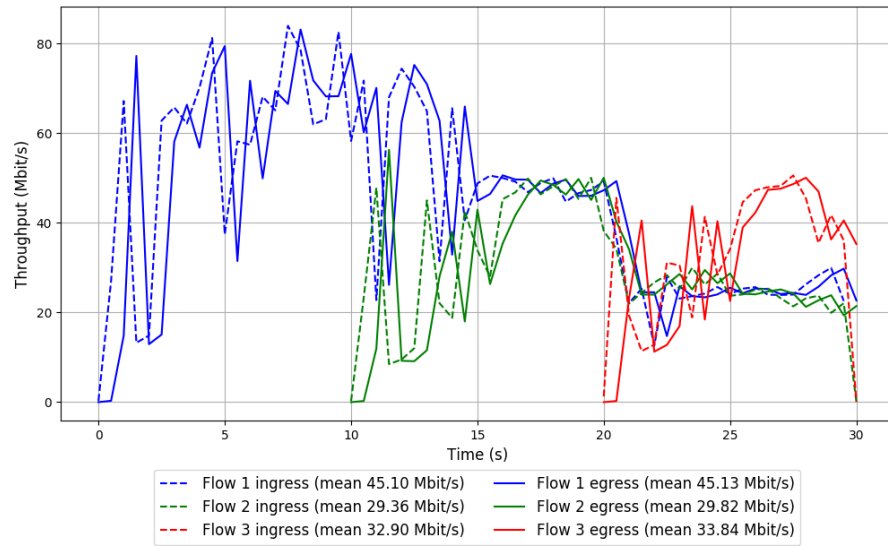Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-05 18:41:55
End at: 2019-02-05 18:42:25
Local clock offset: -8.897 ms
Remote clock offset: -5.324 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.68 Mbit/s
95th percentile per-packet one-way delay: 137.587 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 38.17 Mbit/s
95th percentile per-packet one-way delay: 128.040 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 32.04 Mbit/s
95th percentile per-packet one-way delay: 128.815 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 34.07 Mbit/s
95th percentile per-packet one-way delay: 188.345 ms
Loss rate: 1.35%
```

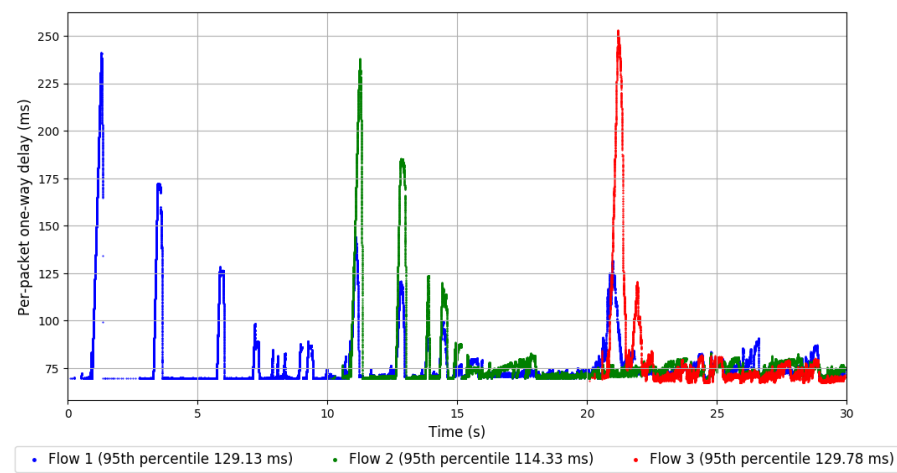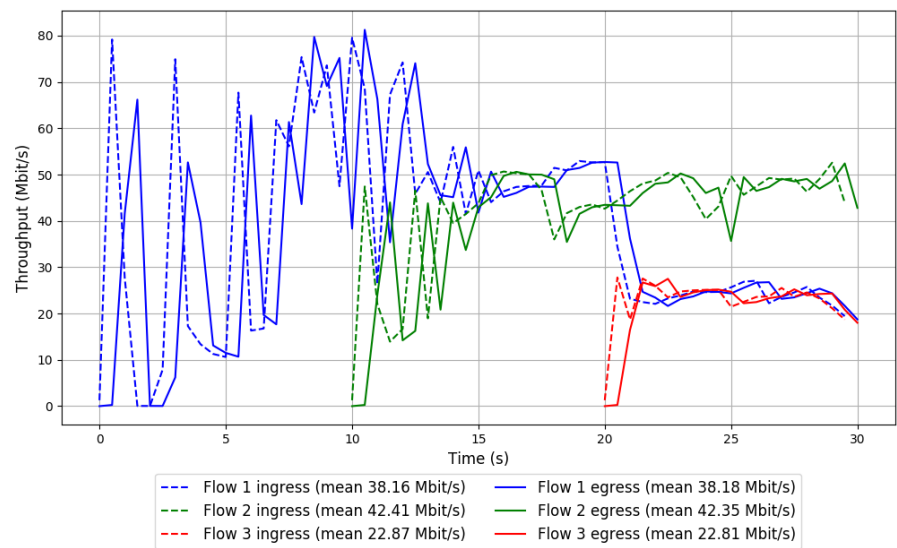Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-05 19:11:04
End at: 2019-02-05 19:11:34
Local clock offset: -8.364 ms
Remote clock offset: -5.589 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.42 Mbit/s
95th percentile per-packet one-way delay: 124.721 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 46.28 Mbit/s
95th percentile per-packet one-way delay: 109.363 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 30.62 Mbit/s
95th percentile per-packet one-way delay: 132.461 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 23.74 Mbit/s
95th percentile per-packet one-way delay: 158.263 ms
Loss rate: 1.11%
```

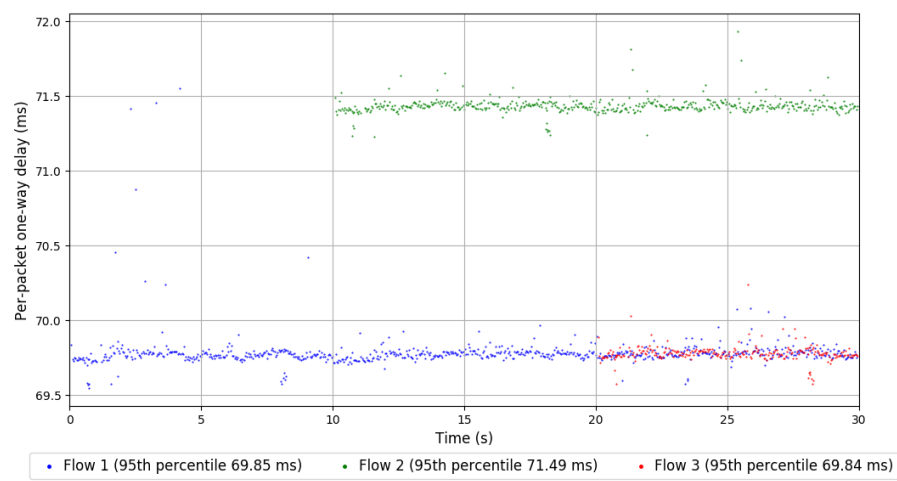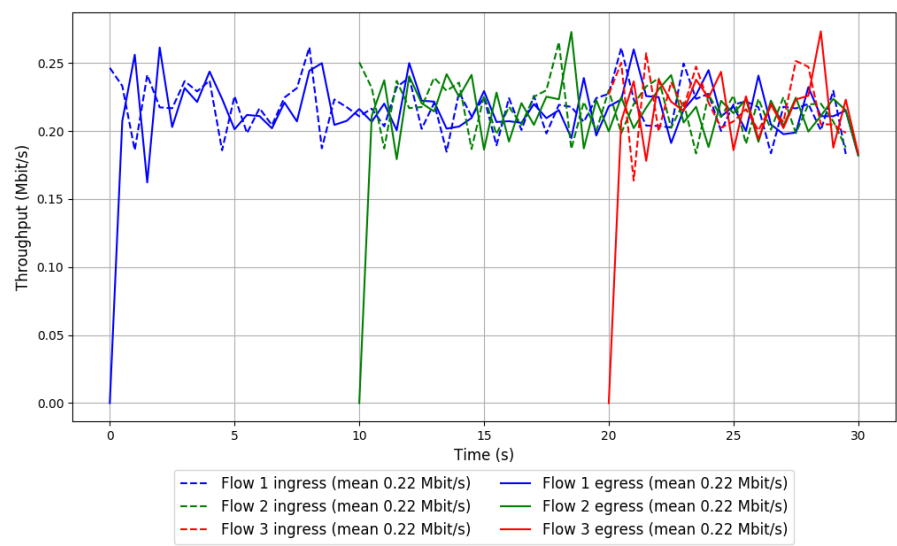## Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-05 19:38:20
End at: 2019-02-05 19:38:50
Local clock offset: -8.152 ms
Remote clock offset: -5.547 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.08 Mbit/s
95th percentile per-packet one-way delay: 119.523 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 92.812 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 133.856 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 33.84 Mbit/s
95th percentile per-packet one-way delay: 177.736 ms
Loss rate: 1.24%
```
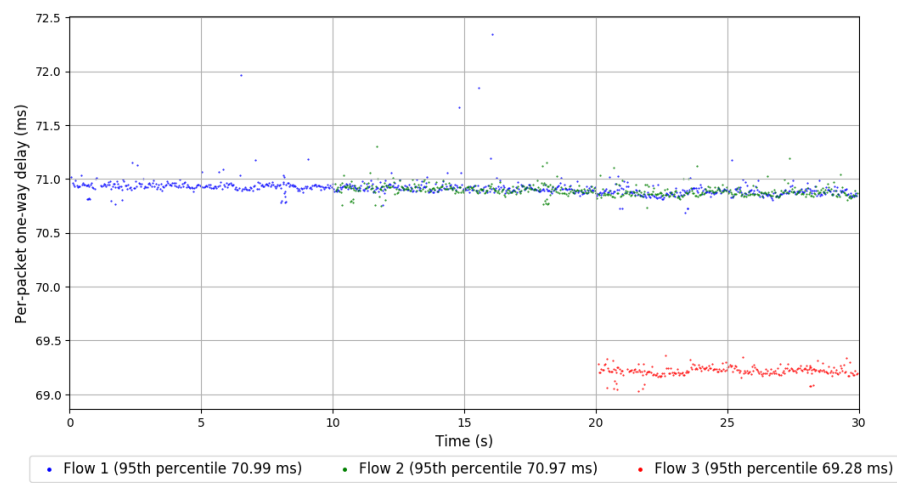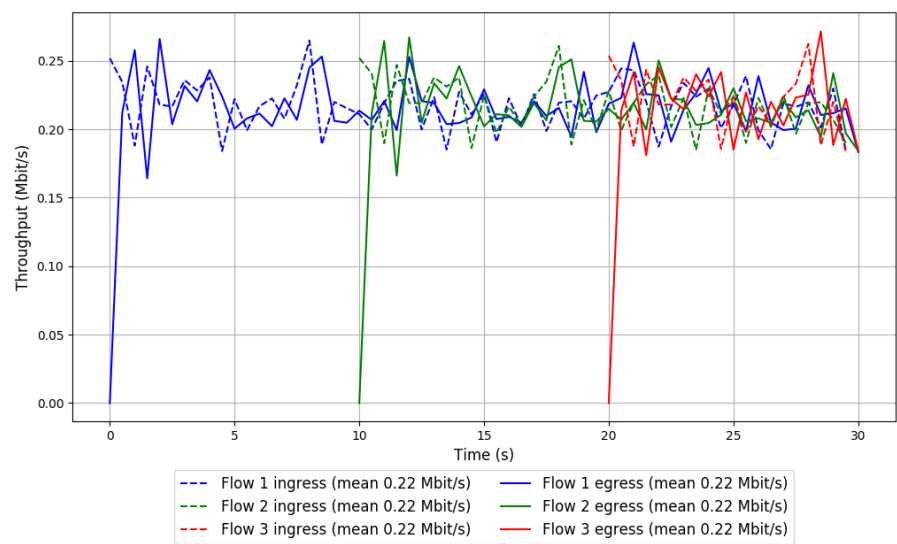
Run 4: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 45.10 Mbit/s) —— Flow 1 egress (mean 45.13 Mbit/s)
- - - Flow 2 ingress (mean 29.36 Mbit/s) —— Flow 2 egress (mean 29.82 Mbit/s)
- - - Flow 3 ingress (mean 32.90 Mbit/s) —— Flow 3 egress (mean 33.84 Mbit/s)

• Flow 1 (95th percentile 92.81 ms)   • Flow 2 (95th percentile 133.86 ms)   • Flow 3 (95th percentile 177.74 ms)

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```
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-05 20:06:31
End at: 2019-02-05 20:07:01
Local clock offset: -6.693 ms
Remote clock offset: -2.684 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.83 Mbit/s
95th percentile per-packet one-way delay: 125.729 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 38.18 Mbit/s
95th percentile per-packet one-way delay: 129.133 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 42.35 Mbit/s
95th percentile per-packet one-way delay: 114.332 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 22.81 Mbit/s
95th percentile per-packet one-way delay: 129.782 ms
Loss rate: 1.03%
```

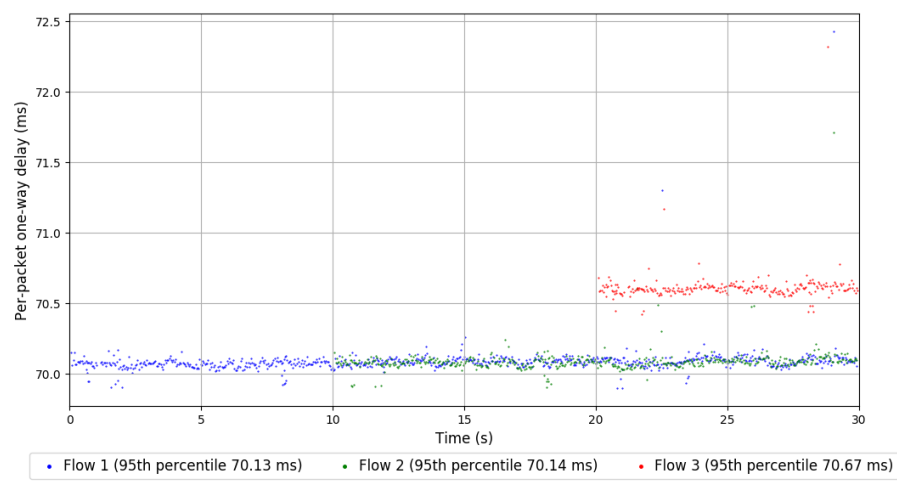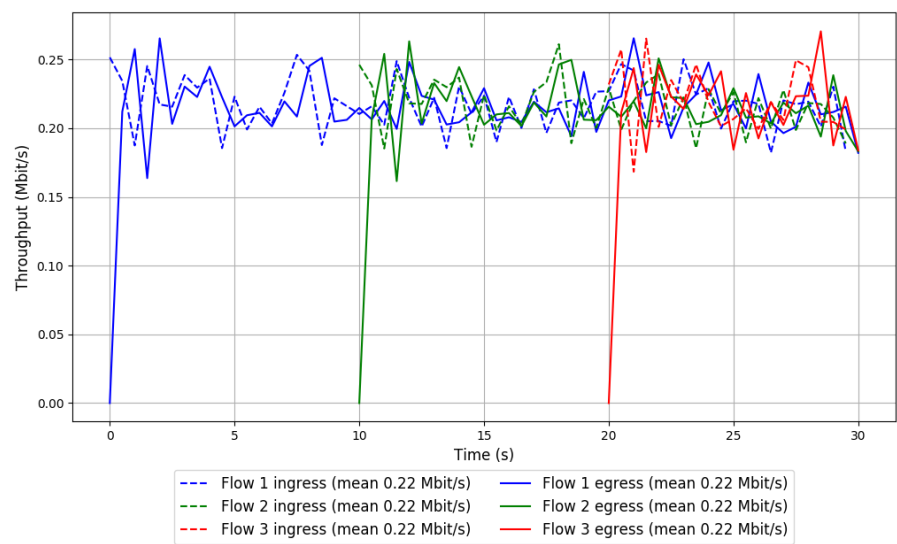Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-02-05 18:27:24
End at: 2019-02-05 18:27:54
Local clock offset: -9.801 ms
Remote clock offset: -5.71 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 71.462 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.847 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 71.494 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.837 ms
Loss rate: 0.71%
```
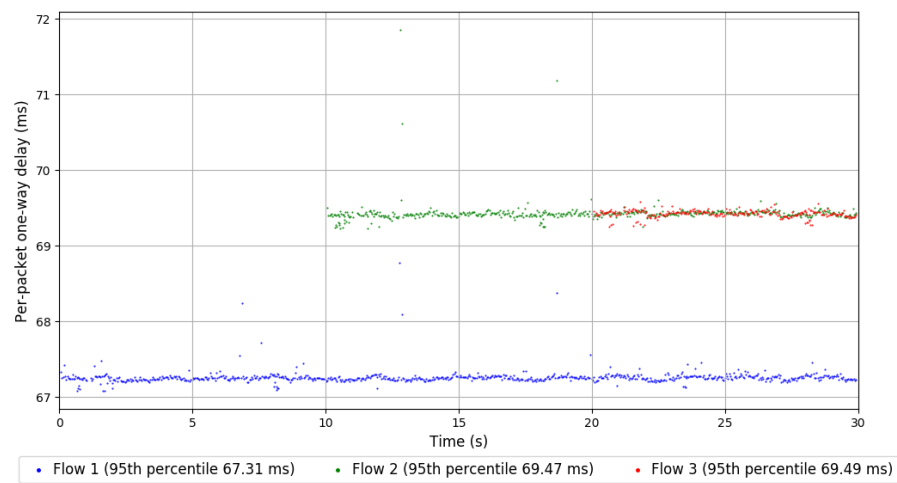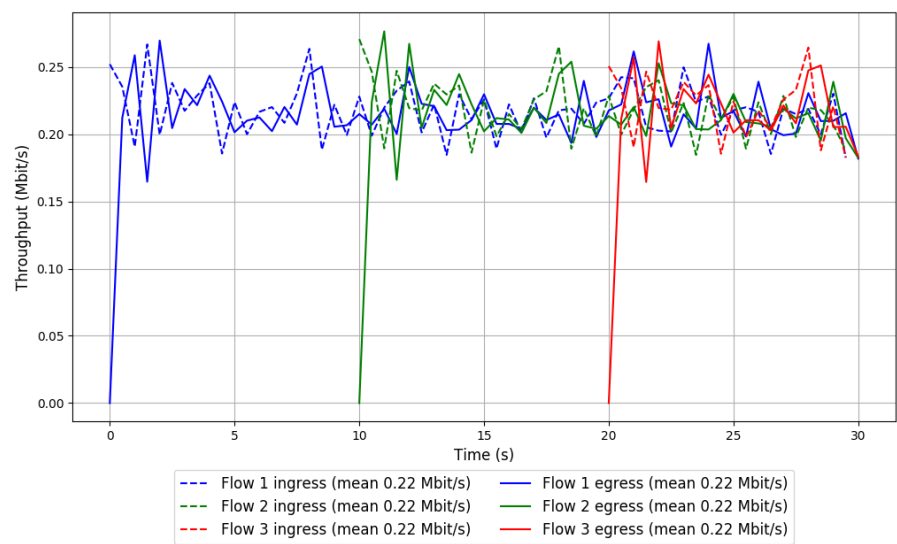
Run 1: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s)   Flow 1 egress (mean 0.22 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s)   Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)   Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 69.85 ms)   Flow 2 (95th percentile 71.49 ms)   Flow 3 (95th percentile 69.84 ms)

```
Run 2: Statistics of SCReAM

Start at: 2019-02-05 18:54:55
End at: 2019-02-05 18:55:25
Local clock offset: -7.132 ms
Remote clock offset: -4.59 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 70.975 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.987 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.973 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.285 ms
Loss rate: 0.71%
```
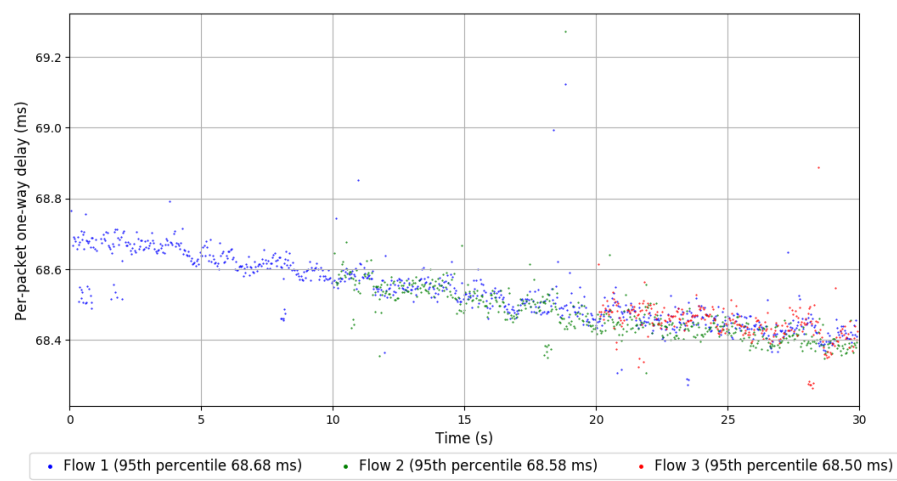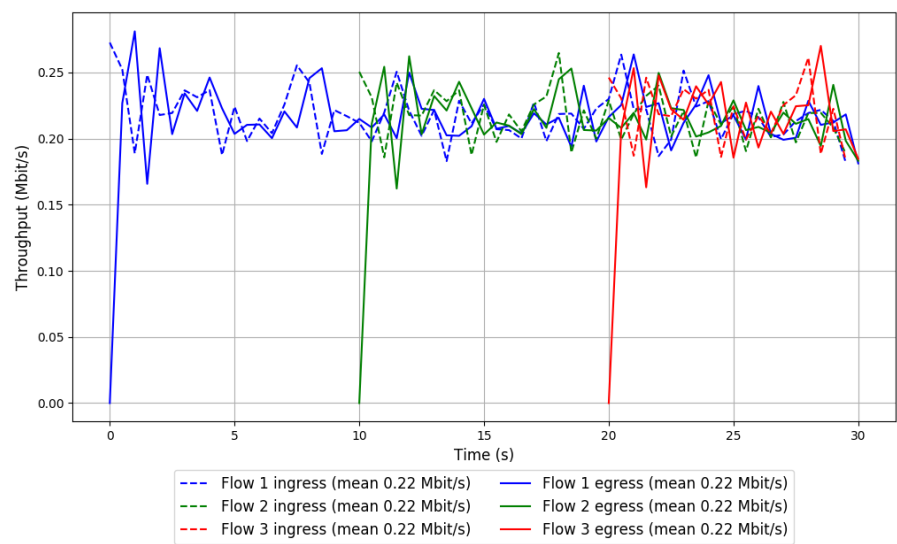
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-02-05 19:24:10
End at: 2019-02-05 19:24:40
Local clock offset: -8.688 ms
Remote clock offset: -5.934 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 70.622 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.134 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.141 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 70.665 ms
Loss rate: 0.70%
```
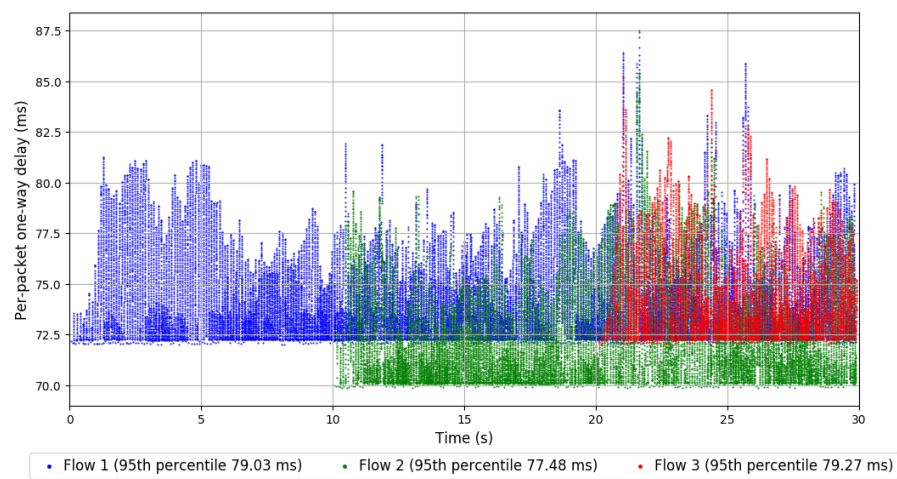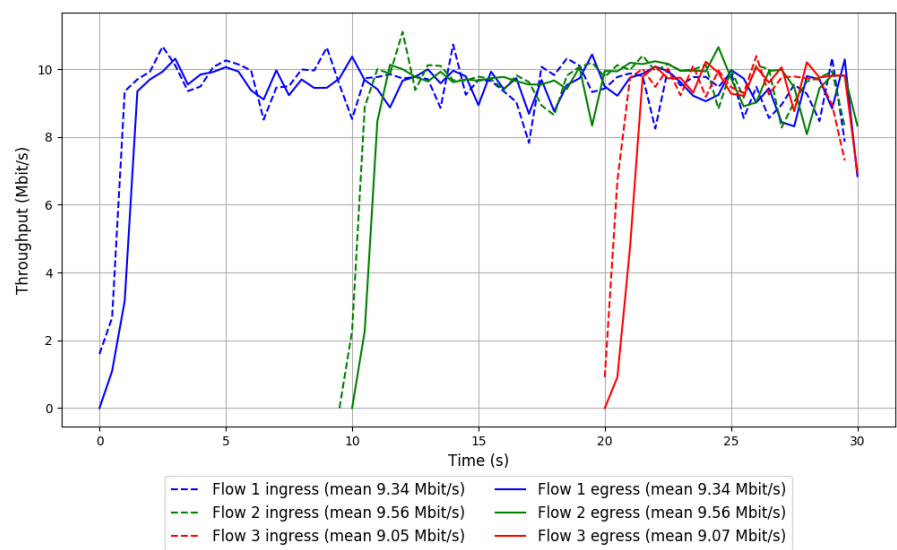
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-02-05 19:51:44
End at: 2019-02-05 19:52:14
Local clock offset: -8.016 ms
Remote clock offset: -4.096 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 69.463 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 67.313 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.473 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 69.491 ms
Loss rate: 0.71%
```
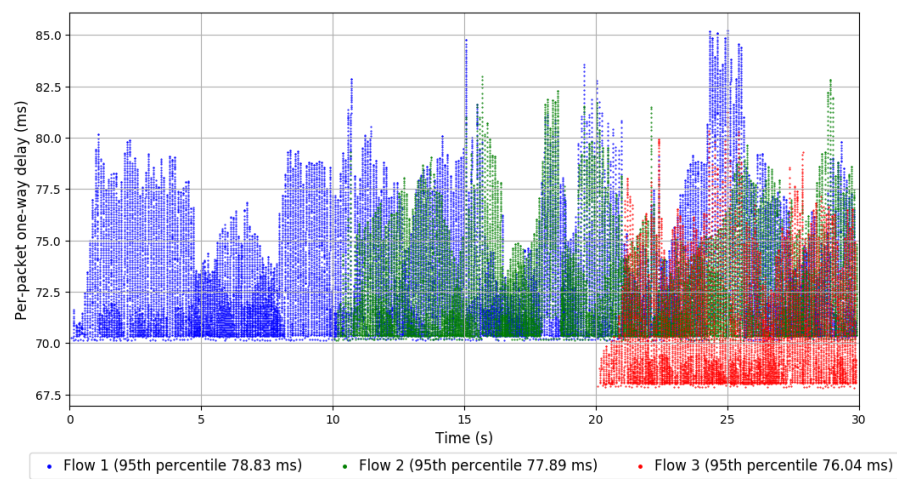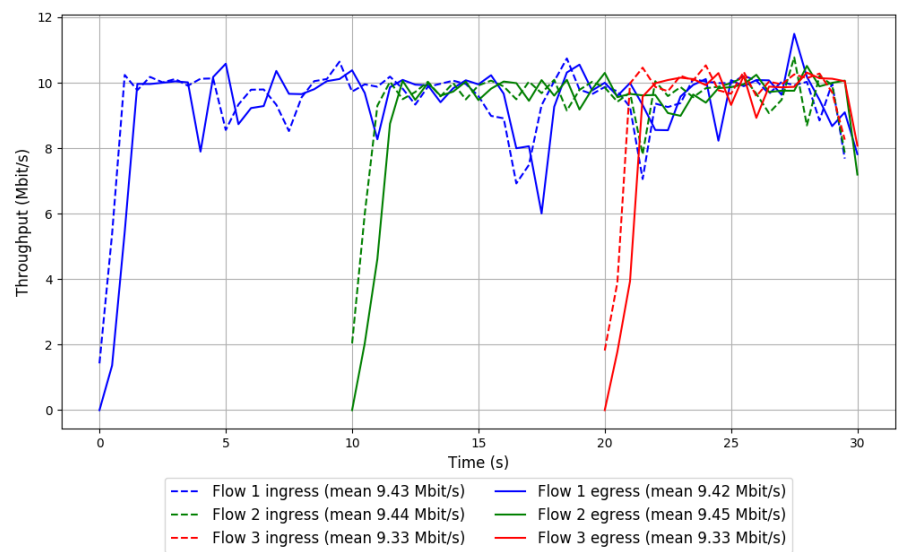
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-02-05 20:19:19
End at: 2019-02-05 20:19:49
Local clock offset: -6.487 ms
Remote clock offset: -4.023 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 68.667 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.682 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.583 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 68.503 ms
Loss rate: 0.71%
```

Run 5: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.22 Mbit/s) Flow 1 egress (mean 0.22 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s) Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s) Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 68.68 ms)   Flow 2 (95th percentile 68.58 ms)   Flow 3 (95th percentile 68.50 ms)
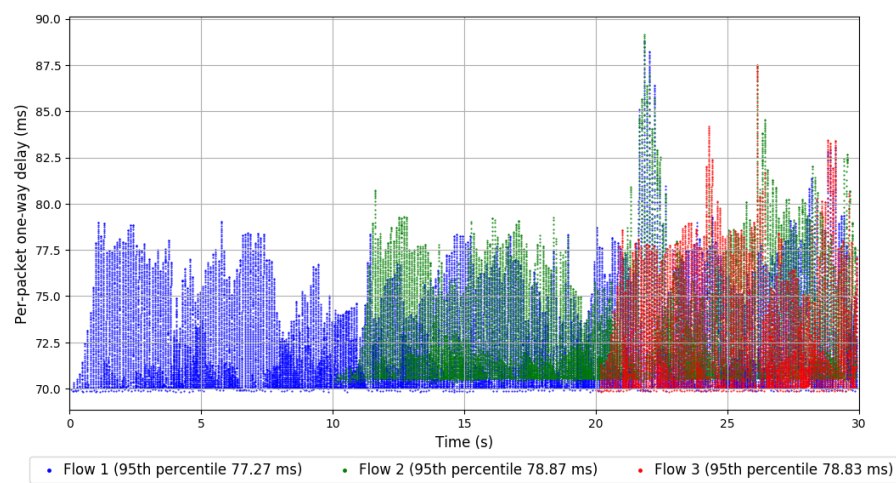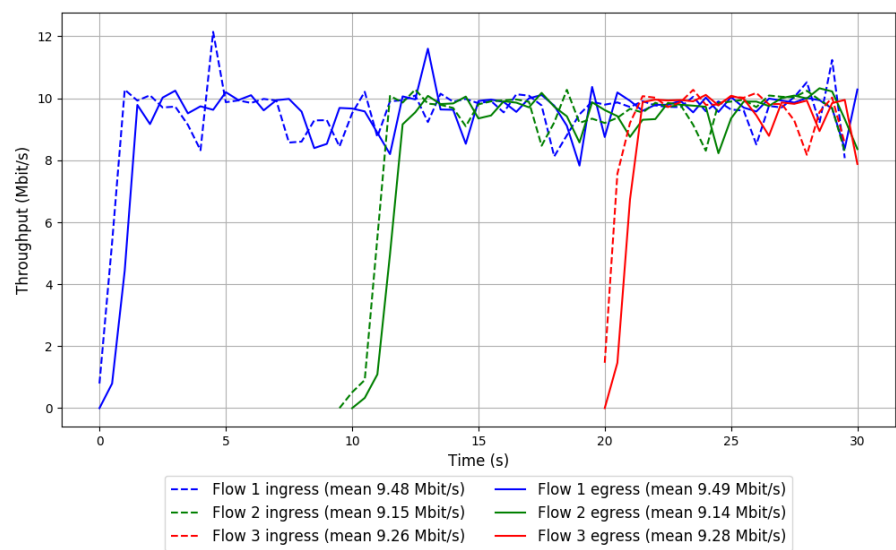
154

```
Run 1: Statistics of Sprout

Start at: 2019-02-05 18:38:14
End at: 2019-02-05 18:38:44
Local clock offset: -8.2 ms
Remote clock offset: -4.818 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.66 Mbit/s
95th percentile per-packet one-way delay: 78.665 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 79.026 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 77.483 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 79.266 ms
Loss rate: 0.61%
```
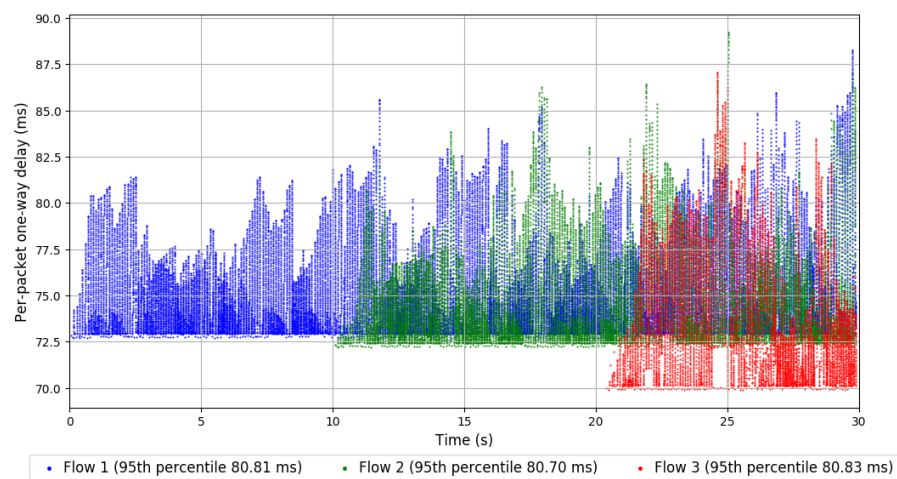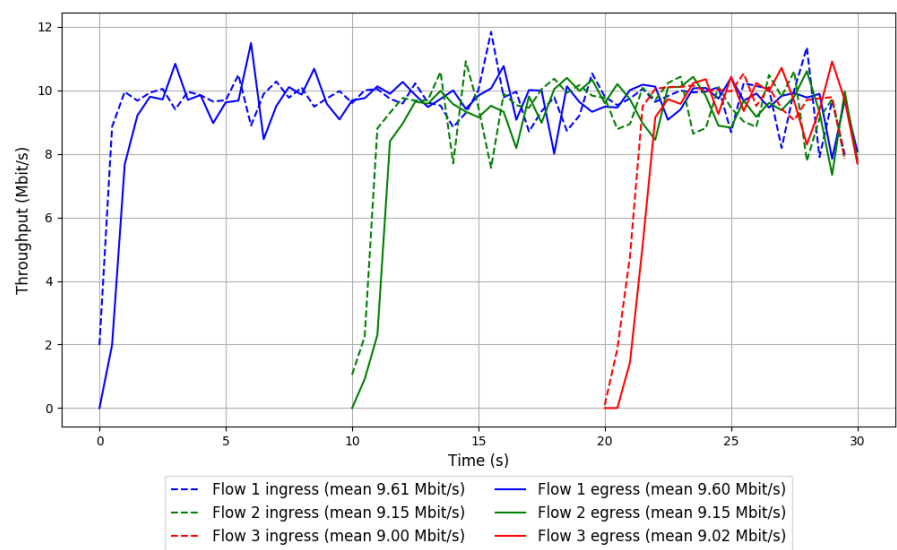
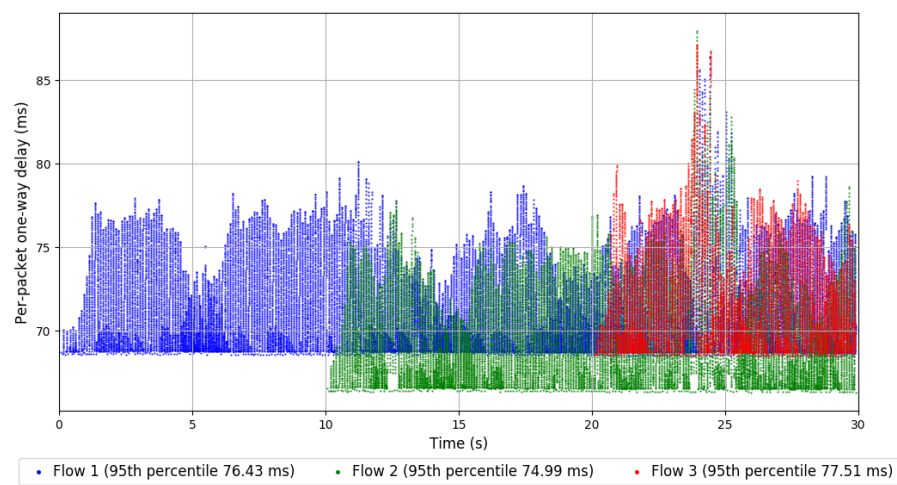Run 1: Report of Sprout — Data Link

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```
Run 2: Statistics of Sprout

Start at: 2019-02-05 19:07:10
End at: 2019-02-05 19:07:40
Local clock offset: -8.653 ms
Remote clock offset: -6.655 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.76 Mbit/s
95th percentile per-packet one-way delay: 78.287 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 78.832 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 9.45 Mbit/s
95th percentile per-packet one-way delay: 77.888 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 9.33 Mbit/s
95th percentile per-packet one-way delay: 76.038 ms
Loss rate: 1.05%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-02-05 19:34:31
End at: 2019-02-05 19:35:01
Local clock offset: -8.484 ms
Remote clock offset: -5.286 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.61 Mbit/s
95th percentile per-packet one-way delay: 78.086 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 9.49 Mbit/s
95th percentile per-packet one-way delay: 77.266 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 78.867 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 78.835 ms
Loss rate: 0.56%
```
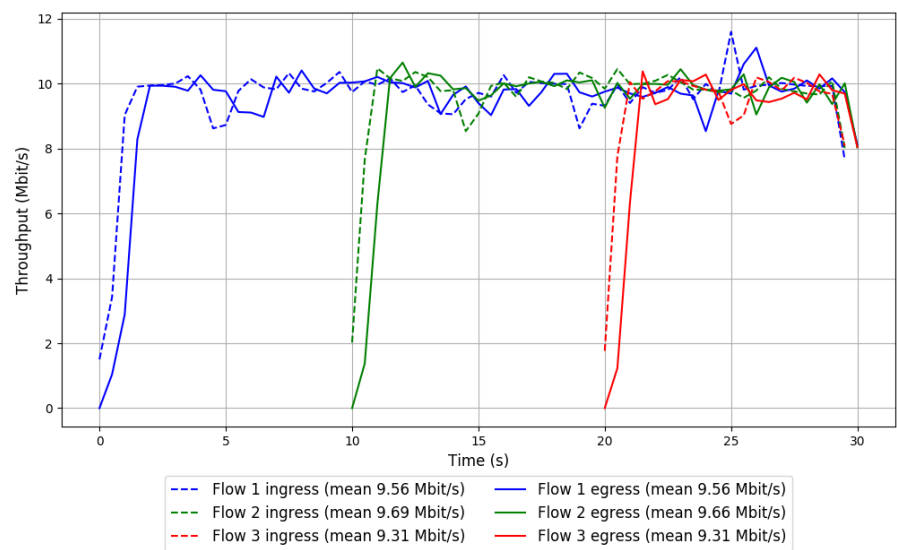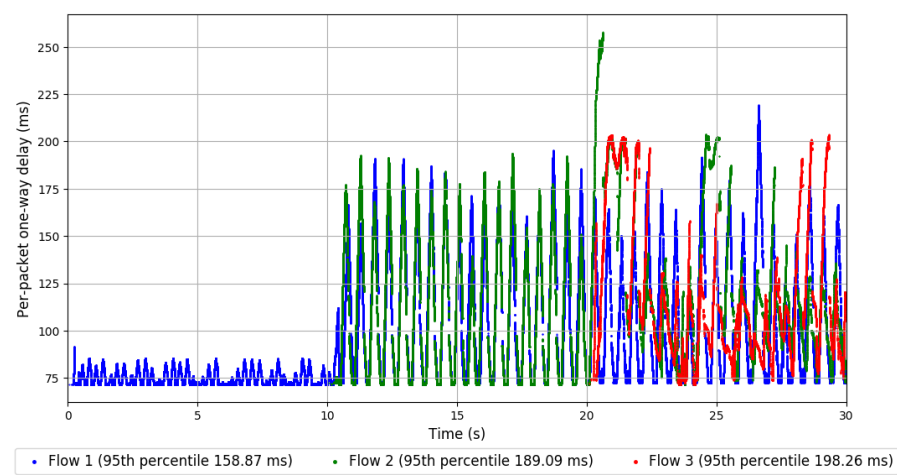
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-02-05 20:02:44
End at: 2019-02-05 20:03:14
Local clock offset: -6.129 ms
Remote clock offset: -5.002 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 80.790 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 80.813 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 9.15 Mbit/s
95th percentile per-packet one-way delay: 80.697 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 80.829 ms
Loss rate: 0.66%
```
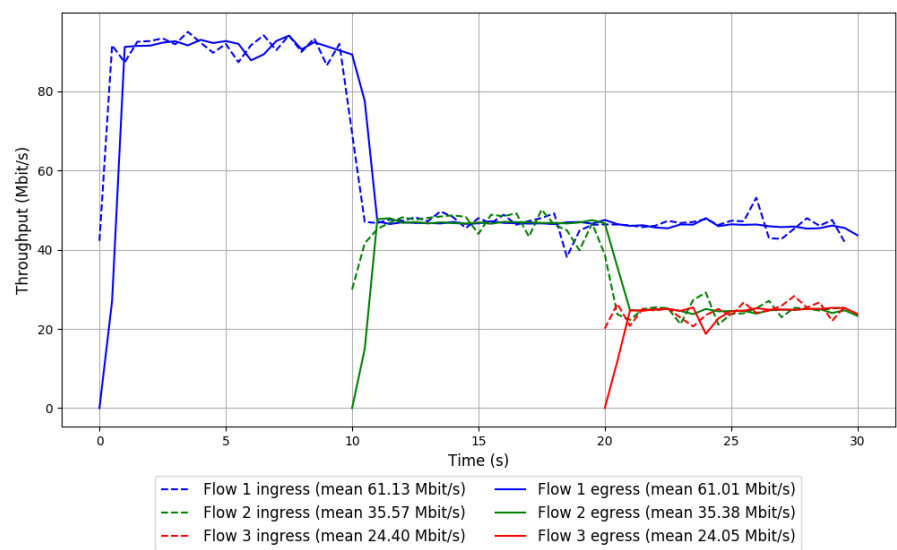
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-02-05 20:29:50
End at: 2019-02-05 20:30:20
Local clock offset: -1.159 ms
Remote clock offset: -2.806 ms


# Below is generated by plot.py at 2019-02-05 20:43:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.03 Mbit/s
95th percentile per-packet one-way delay: 76.430 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 9.56 Mbit/s
95th percentile per-packet one-way delay: 76.434 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 74.988 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 77.514 ms
Loss rate: 1.06%
```
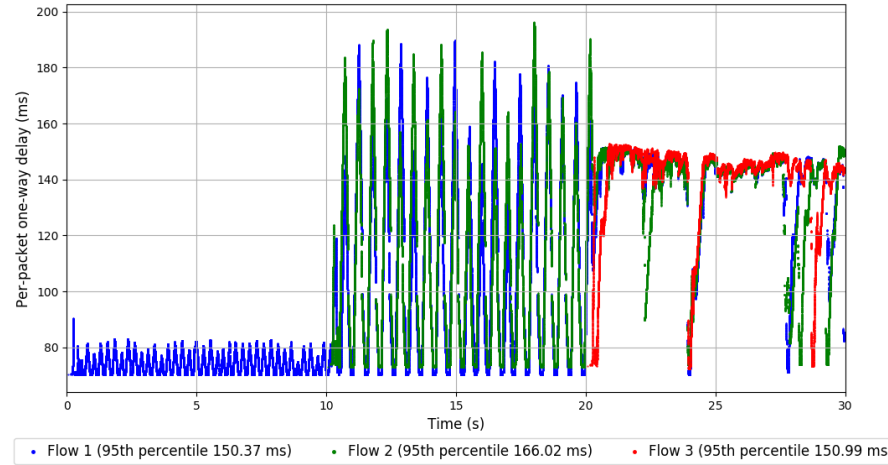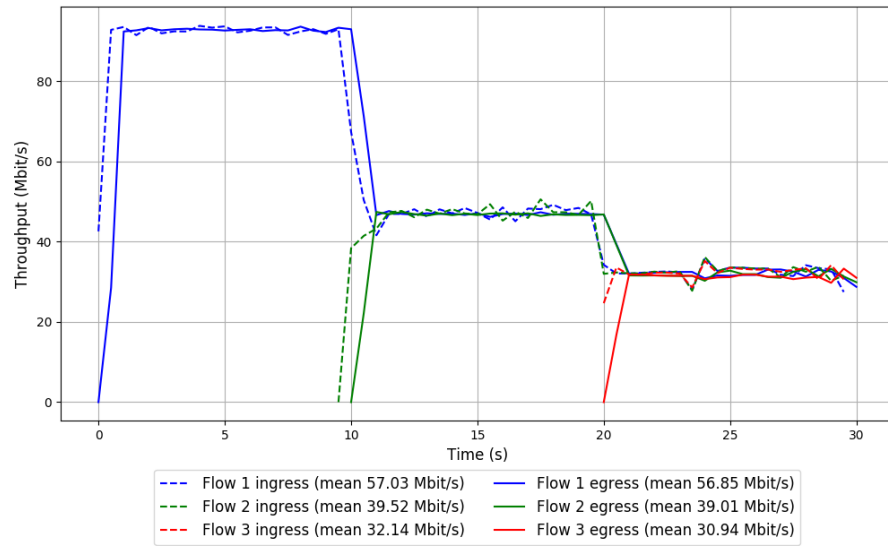
Run 5: Report of Sprout — Data Link

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

Start at: 2019-02-05 18:33:59
End at: 2019-02-05 18:34:29
Local clock offset: -8.254 ms
Remote clock offset: -4.393 ms


# Below is generated by plot.py at 2019-02-05 20:45:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.50 Mbit/s
95th percentile per-packet one-way delay: 174.527 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 61.01 Mbit/s
95th percentile per-packet one-way delay: 158.870 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 35.38 Mbit/s
95th percentile per-packet one-way delay: 189.092 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 24.05 Mbit/s
95th percentile per-packet one-way delay: 198.265 ms
Loss rate: 2.22%
```

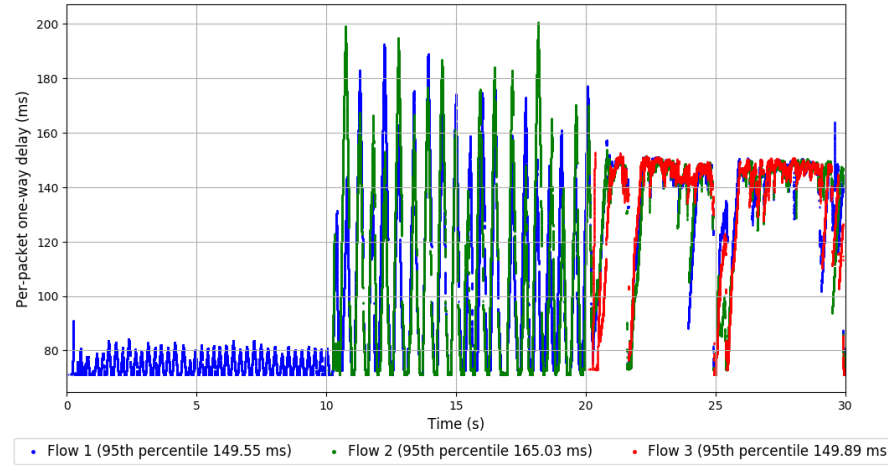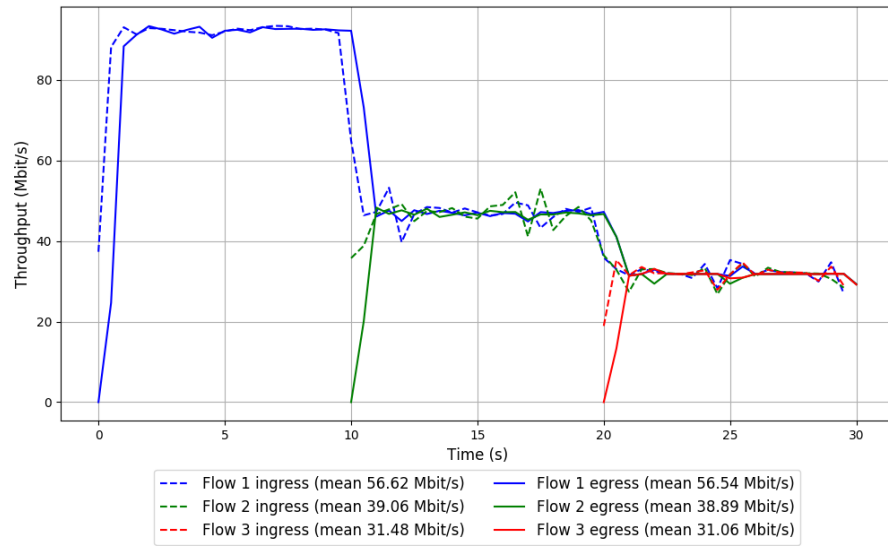# Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-02-05 19:02:32
End at: 2019-02-05 19:03:02
Local clock offset: -5.841 ms
Remote clock offset: -5.708 ms

# Below is generated by plot.py at 2019-02-05 20:45:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 152.507 ms
Loss rate: 1.34%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 150.370 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 166.024 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 150.987 ms
Loss rate: 4.51%
```

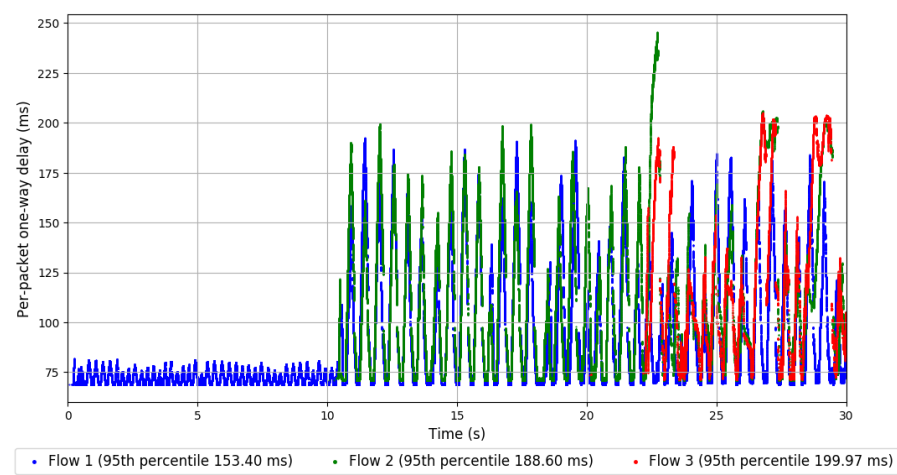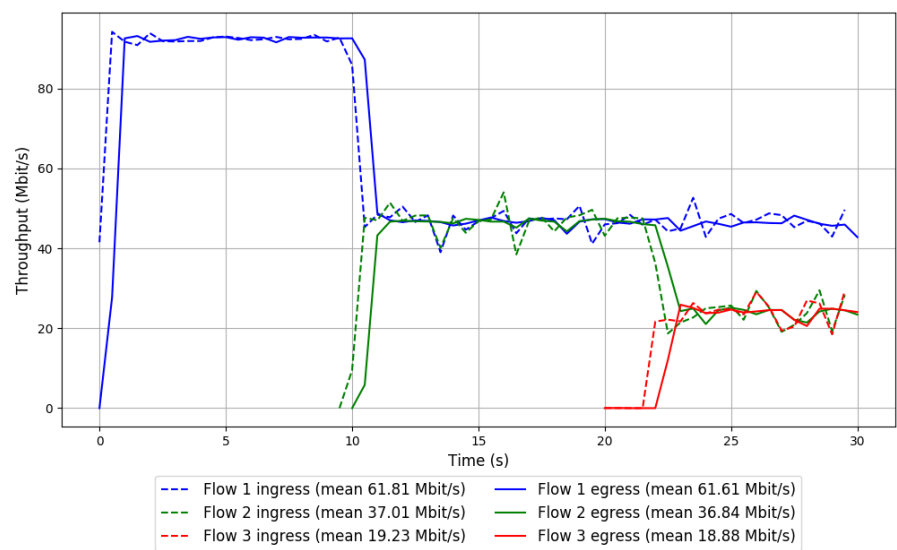Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-02-05 19:30:14
End at: 2019-02-05 19:30:44
Local clock offset: -6.25 ms
Remote clock offset: -4.403 ms


# Below is generated by plot.py at 2019-02-05 20:45:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.68 Mbit/s
95th percentile per-packet one-way delay: 150.793 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 56.54 Mbit/s
95th percentile per-packet one-way delay: 149.546 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.89 Mbit/s
95th percentile per-packet one-way delay: 165.034 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 31.06 Mbit/s
95th percentile per-packet one-way delay: 149.887 ms
Loss rate: 2.16%
```
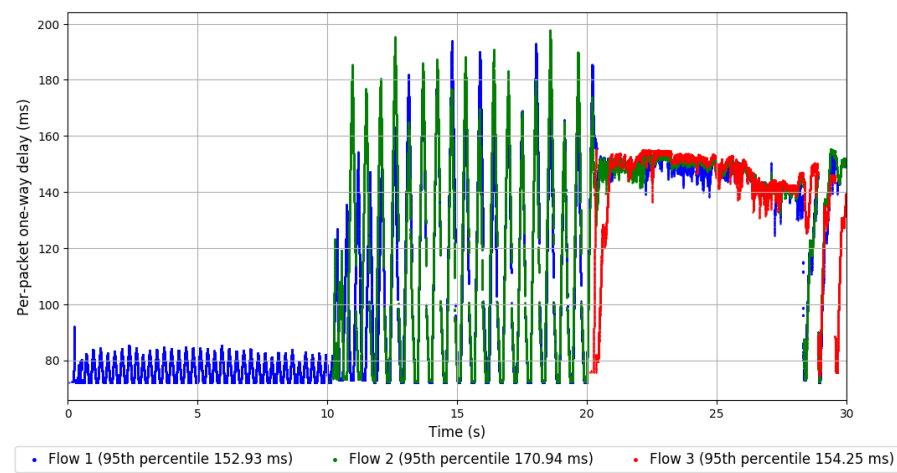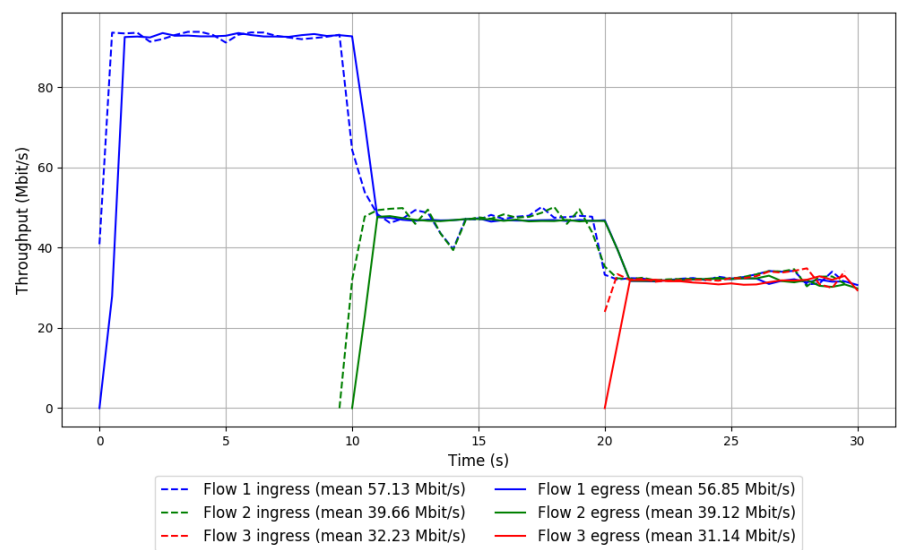
Run 3: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 56.62 Mbit/s) —— Flow 1 egress (mean 56.54 Mbit/s)
- - - Flow 2 ingress (mean 39.06 Mbit/s) —— Flow 2 egress (mean 38.89 Mbit/s)
- - - Flow 3 ingress (mean 31.48 Mbit/s) —— Flow 3 egress (mean 31.06 Mbit/s)

• Flow 1 (95th percentile 149.55 ms)   • Flow 2 (95th percentile 165.03 ms)   • Flow 3 (95th percentile 149.89 ms)

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

Start at: 2019-02-05 19:58:32
End at: 2019-02-05 19:59:02
Local clock offset: -5.909 ms
Remote clock offset: -3.528 ms


# Below is generated by plot.py at 2019-02-05 20:45:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.38 Mbit/s
95th percentile per-packet one-way delay: 171.643 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 61.61 Mbit/s
95th percentile per-packet one-way delay: 153.398 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 36.84 Mbit/s
95th percentile per-packet one-way delay: 188.602 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 18.88 Mbit/s
95th percentile per-packet one-way delay: 199.974 ms
Loss rate: 2.62%
```

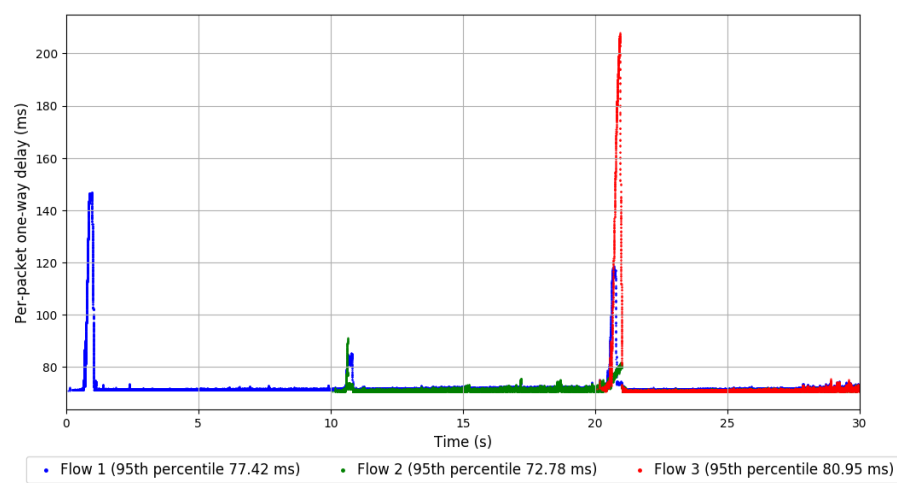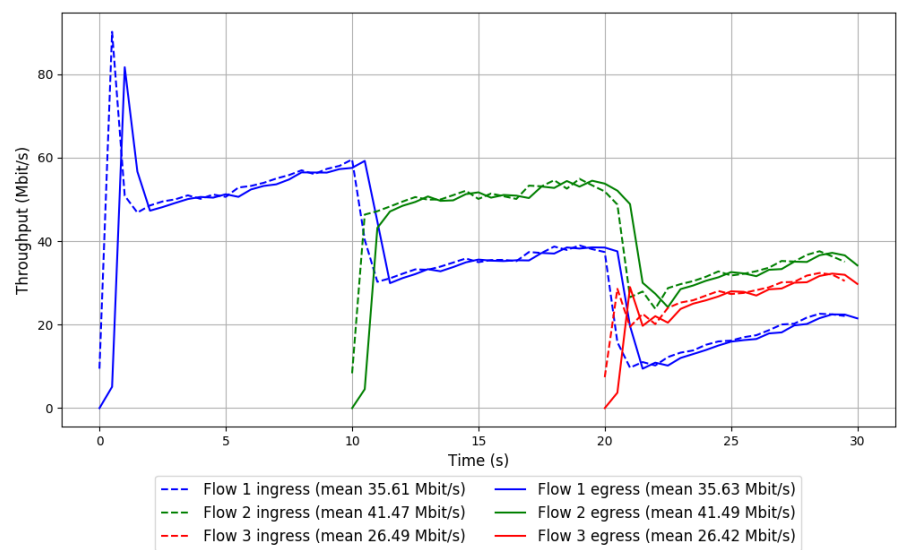# Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-02-05 20:25:39
End at: 2019-02-05 20:26:09
Local clock offset: 0.98 ms
Remote clock offset: -5.087 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.18 Mbit/s
95th percentile per-packet one-way delay: 158.308 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 152.932 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 39.12 Mbit/s
95th percentile per-packet one-way delay: 170.943 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 31.14 Mbit/s
95th percentile per-packet one-way delay: 154.247 ms
Loss rate: 4.20%
```

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

- Flow 1 ingress (mean 57.13 Mbit/s)
- Flow 1 egress (mean 56.85 Mbit/s)
- Flow 2 ingress (mean 39.66 Mbit/s)
- Flow 2 egress (mean 39.12 Mbit/s)
- Flow 3 ingress (mean 32.23 Mbit/s)
- Flow 3 egress (mean 31.14 Mbit/s)

- Flow 1 (95th percentile 152.93 ms)
- Flow 2 (95th percentile 170.94 ms)
- Flow 3 (95th percentile 154.25 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2019-02-05 18:28:33
End at: 2019-02-05 18:29:03
Local clock offset: -8.783 ms
Remote clock offset: -3.935 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.96 Mbit/s
95th percentile per-packet one-way delay: 73.827 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 35.63 Mbit/s
95th percentile per-packet one-way delay: 77.425 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 41.49 Mbit/s
95th percentile per-packet one-way delay: 72.784 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 26.42 Mbit/s
95th percentile per-packet one-way delay: 80.953 ms
Loss rate: 1.04%
```
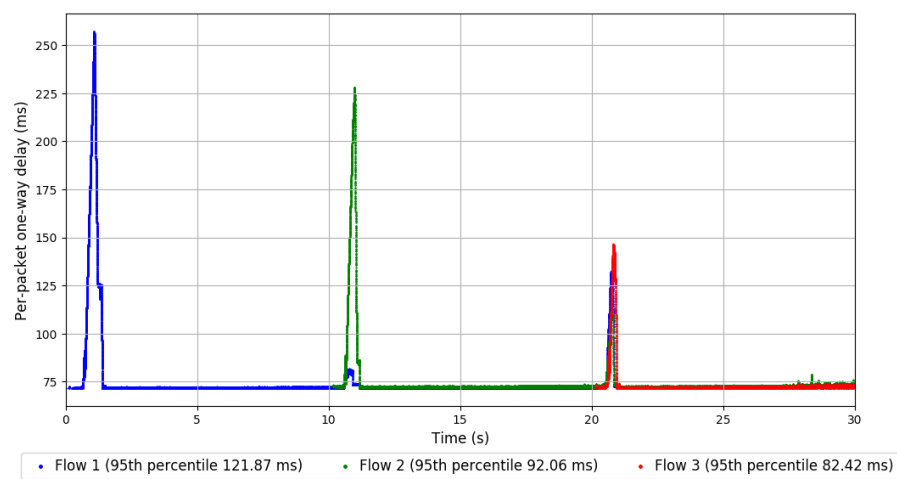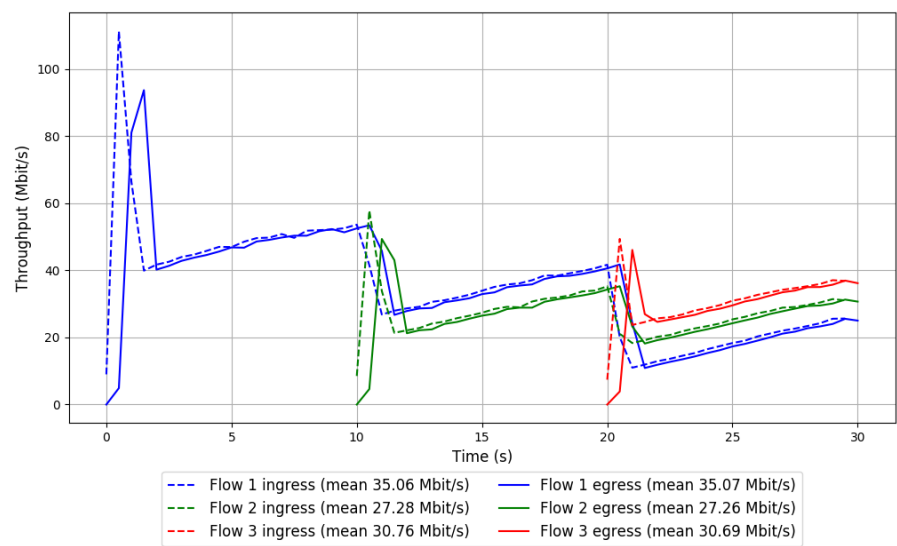
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-02-05 18:56:03
End at: 2019-02-05 18:56:33
Local clock offset: -7.099 ms
Remote clock offset: -4.015 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.53 Mbit/s
95th percentile per-packet one-way delay: 72.805 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 53.86 Mbit/s
95th percentile per-packet one-way delay: 72.977 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 71.535 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 73.789 ms
Loss rate: 1.01%
```

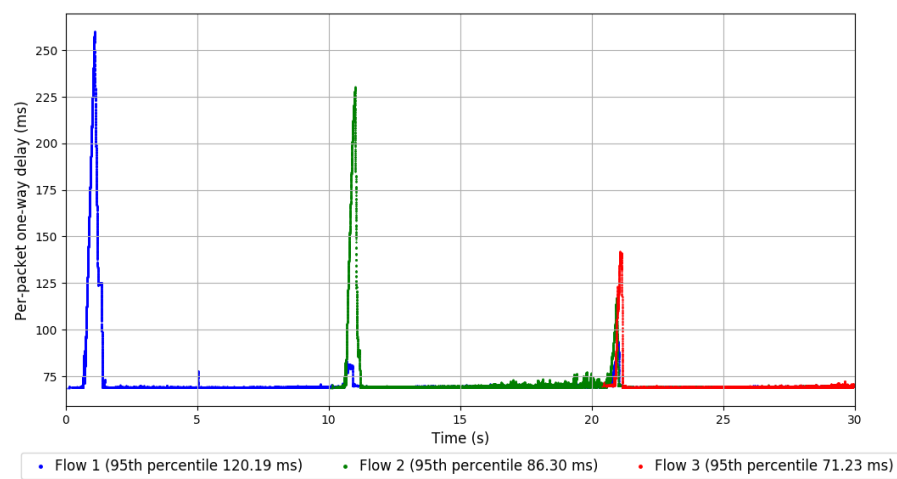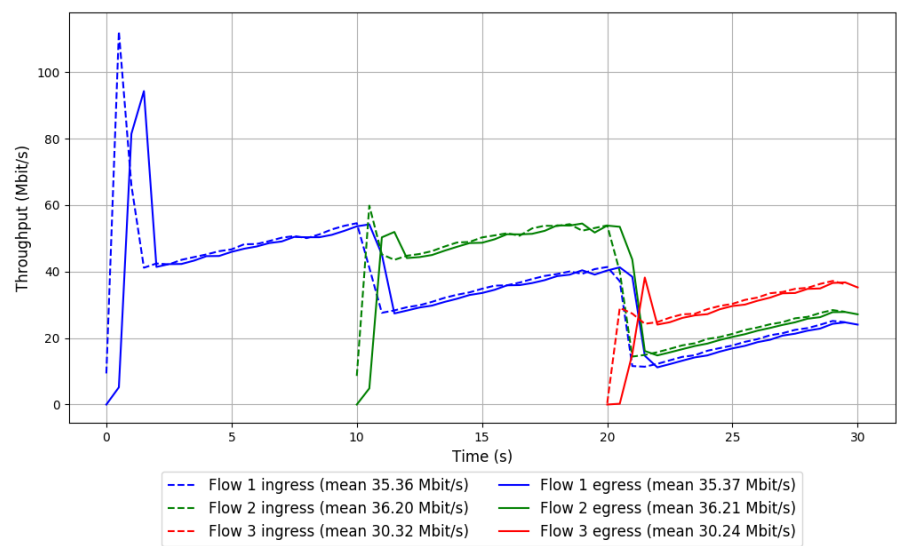Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-02-05 19:25:19
End at: 2019-02-05 19:25:49
Local clock offset: -7.295 ms
Remote clock offset: -6.157 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.35 Mbit/s
95th percentile per-packet one-way delay: 107.731 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 35.07 Mbit/s
95th percentile per-packet one-way delay: 121.869 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 27.26 Mbit/s
95th percentile per-packet one-way delay: 92.060 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 82.420 ms
Loss rate: 1.03%
```
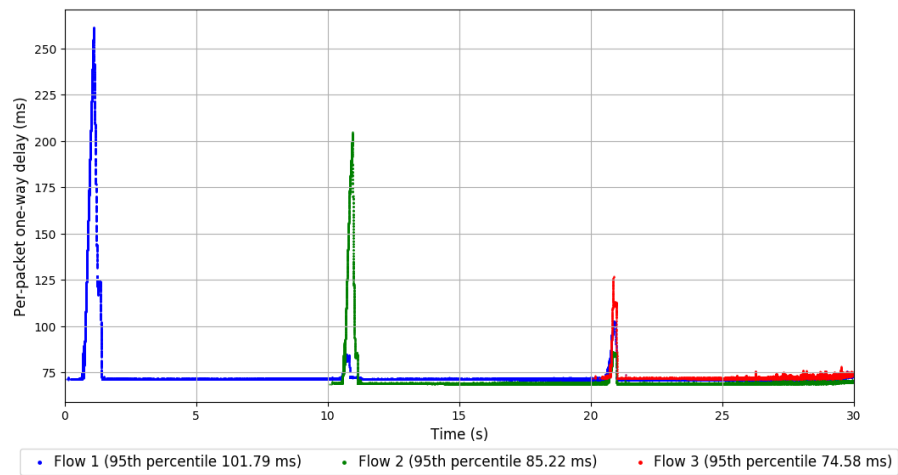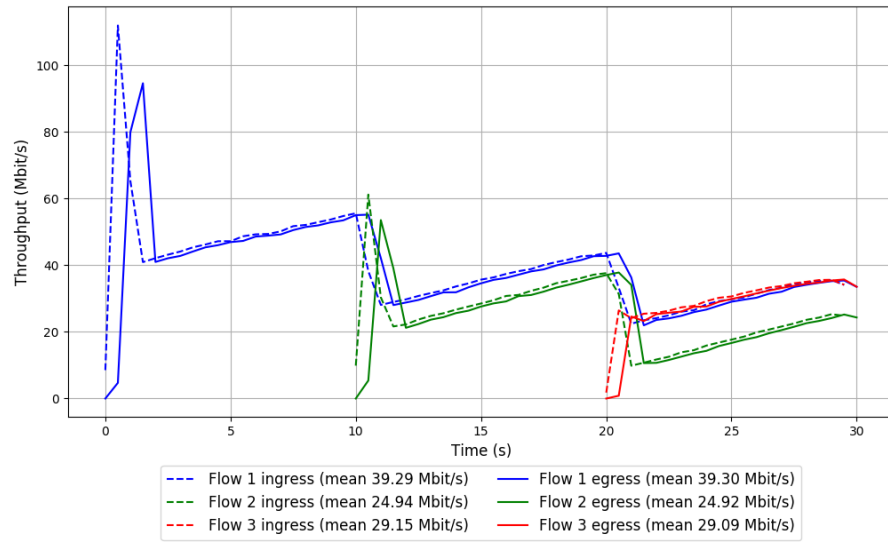
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-02-05 19:52:57
End at: 2019-02-05 19:53:27
Local clock offset: -8.718 ms
Remote clock offset: -4.347 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.16 Mbit/s
95th percentile per-packet one-way delay: 90.768 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 35.37 Mbit/s
95th percentile per-packet one-way delay: 120.192 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 36.21 Mbit/s
95th percentile per-packet one-way delay: 86.301 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 30.24 Mbit/s
95th percentile per-packet one-way delay: 71.234 ms
Loss rate: 1.06%
```
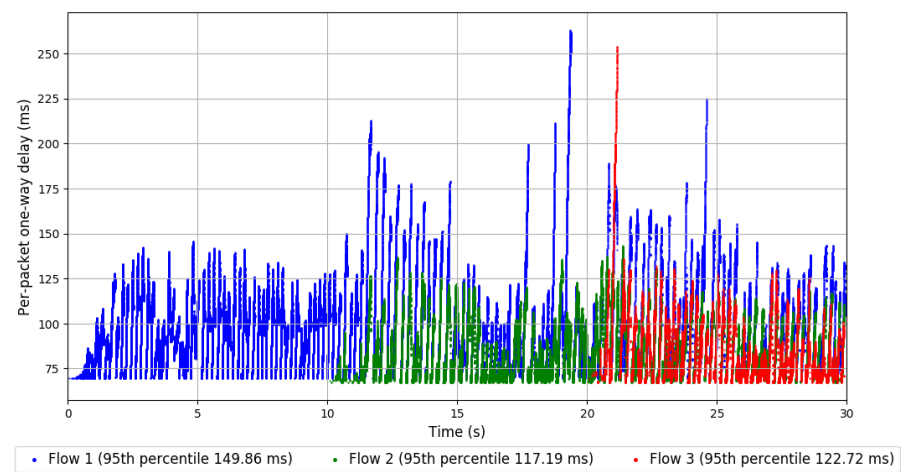
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-02-05 20:20:28
End at: 2019-02-05 20:20:58
Local clock offset: -3.313 ms
Remote clock offset: -4.164 ms


# Below is generated by plot.py at 2019-02-05 20:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.49 Mbit/s
95th percentile per-packet one-way delay: 88.348 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 39.30 Mbit/s
95th percentile per-packet one-way delay: 101.791 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 24.92 Mbit/s
95th percentile per-packet one-way delay: 85.215 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 29.09 Mbit/s
95th percentile per-packet one-way delay: 74.578 ms
Loss rate: 1.01%
```

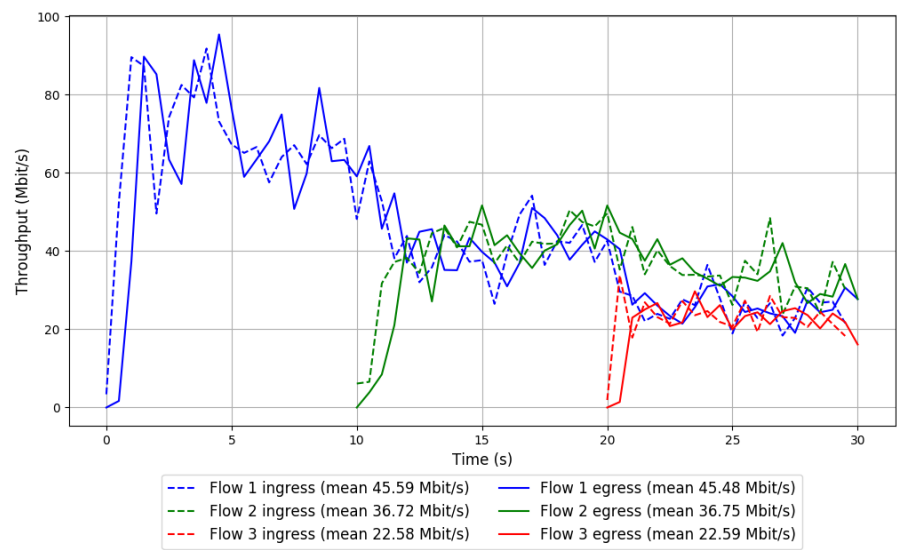## Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-02-05 18:32:31
End at: 2019-02-05 18:33:01
Local clock offset: -9.356 ms
Remote clock offset: -3.431 ms


# Below is generated by plot.py at 2019-02-05 20:45:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.30 Mbit/s
95th percentile per-packet one-way delay: 138.852 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 45.48 Mbit/s
95th percentile per-packet one-way delay: 149.856 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 36.75 Mbit/s
95th percentile per-packet one-way delay: 117.189 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 22.59 Mbit/s
95th percentile per-packet one-way delay: 122.718 ms
Loss rate: 1.44%
```

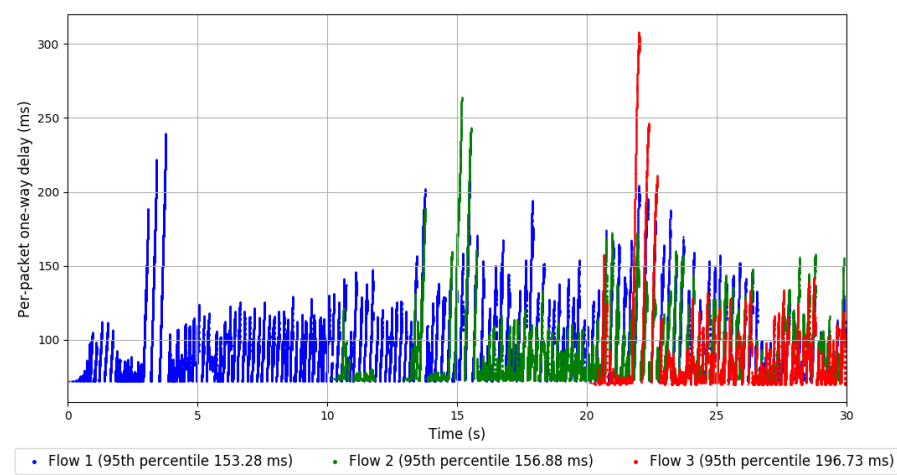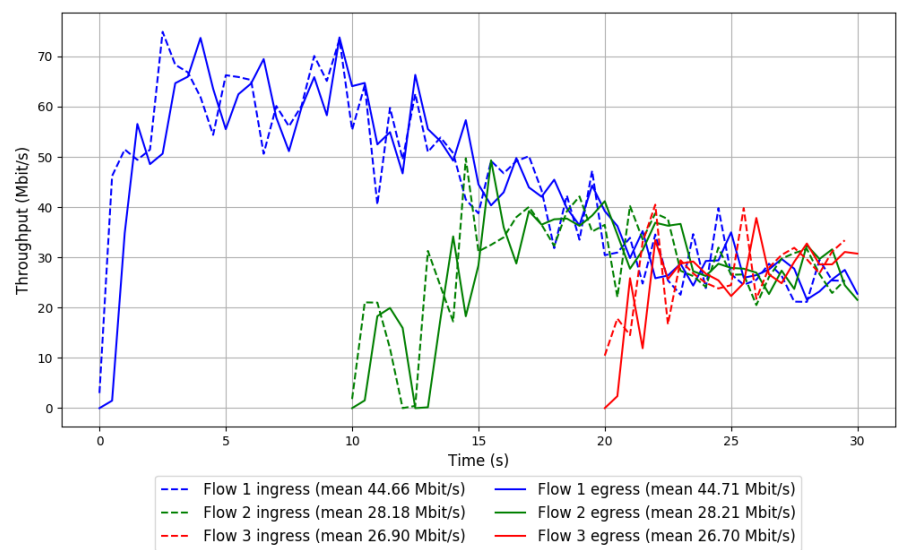Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-02-05 19:01:11
End at: 2019-02-05 19:01:41
Local clock offset: -7.168 ms
Remote clock offset: -6.352 ms


# Below is generated by plot.py at 2019-02-05 20:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.19 Mbit/s
95th percentile per-packet one-way delay: 156.388 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 44.71 Mbit/s
95th percentile per-packet one-way delay: 153.283 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 28.21 Mbit/s
95th percentile per-packet one-way delay: 156.876 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 26.70 Mbit/s
95th percentile per-packet one-way delay: 196.730 ms
Loss rate: 1.60%
```

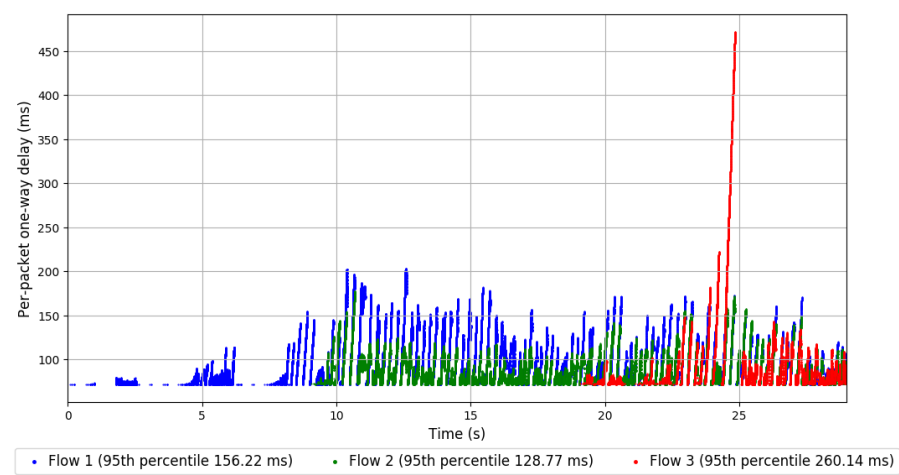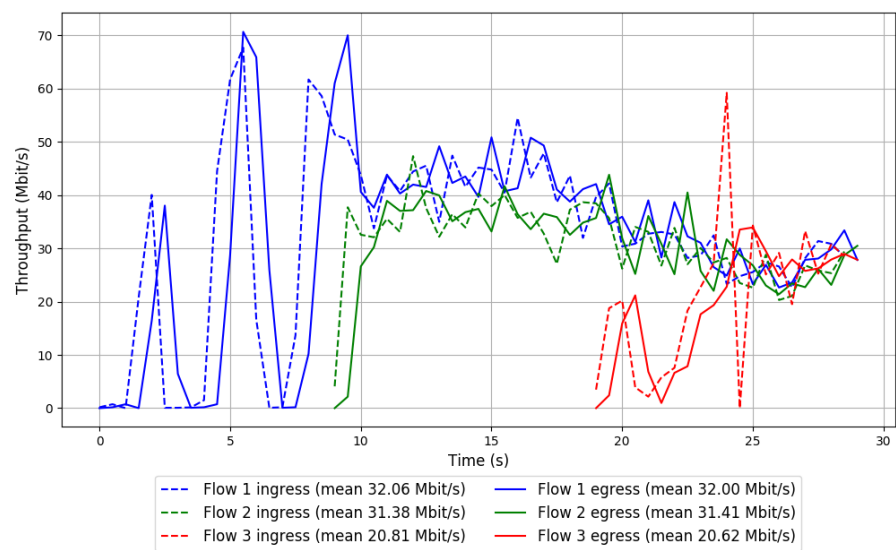Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-02-05 19:28:59
End at: 2019-02-05 19:29:29
Local clock offset: -8.565 ms
Remote clock offset: -6.48 ms


# Below is generated by plot.py at 2019-02-05 20:45:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.67 Mbit/s
95th percentile per-packet one-way delay: 152.762 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 156.224 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 31.41 Mbit/s
95th percentile per-packet one-way delay: 128.767 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 20.62 Mbit/s
95th percentile per-packet one-way delay: 260.143 ms
Loss rate: 1.74%
```

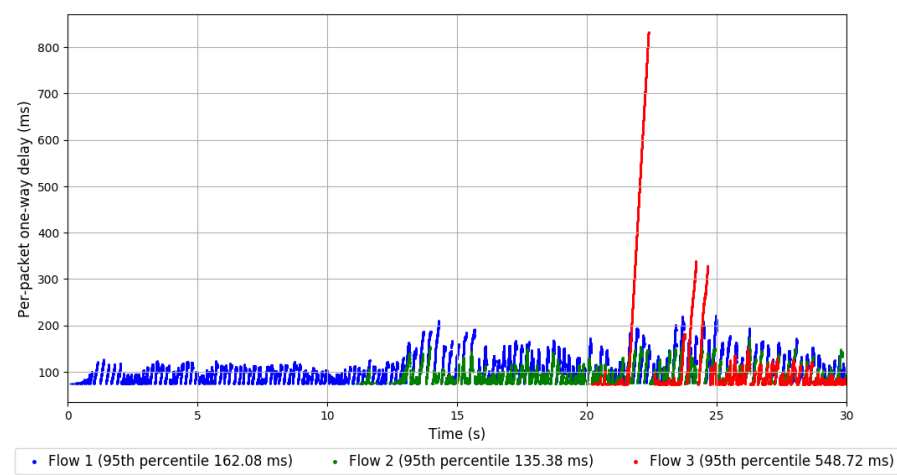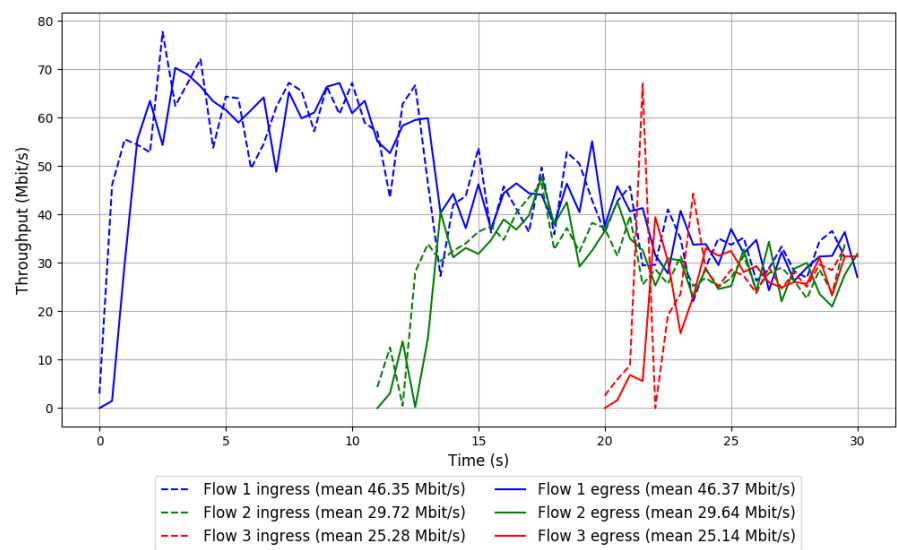## Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-02-05 19:57:10
End at: 2019-02-05 19:57:40
Local clock offset: -4.477 ms
Remote clock offset: -5.73 ms


# Below is generated by plot.py at 2019-02-05 20:46:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.31 Mbit/s
95th percentile per-packet one-way delay: 166.799 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 46.37 Mbit/s
95th percentile per-packet one-way delay: 162.078 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 135.377 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 25.14 Mbit/s
95th percentile per-packet one-way delay: 548.716 ms
Loss rate: 1.32%
```

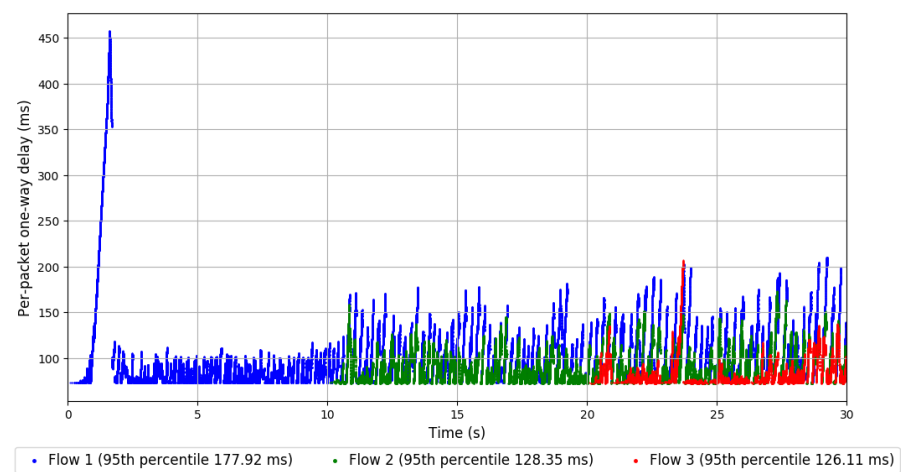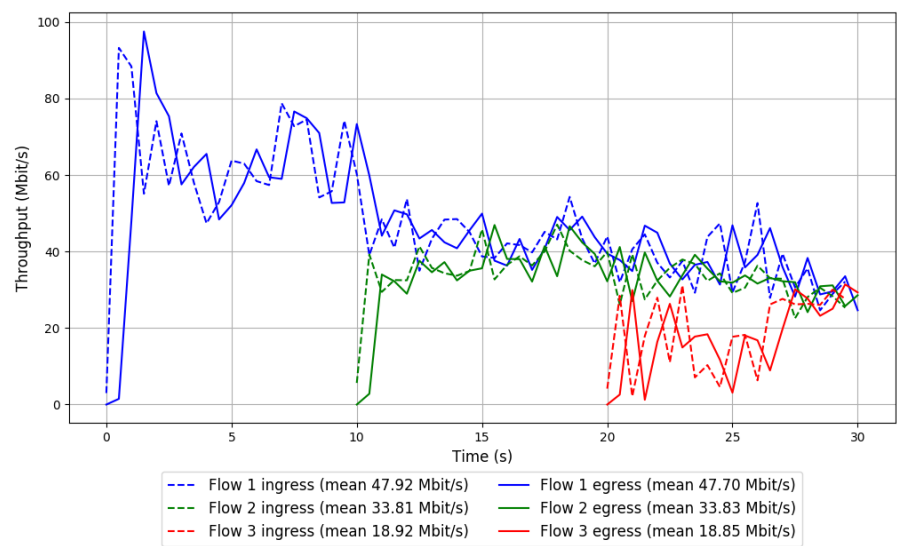Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-02-05 20:24:23
End at: 2019-02-05 20:24:53
Local clock offset: -1.437 ms
Remote clock offset: -5.435 ms


# Below is generated by plot.py at 2019-02-05 20:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.44 Mbit/s
95th percentile per-packet one-way delay: 160.465 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 47.70 Mbit/s
95th percentile per-packet one-way delay: 177.920 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 128.349 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 18.85 Mbit/s
95th percentile per-packet one-way delay: 126.111 ms
Loss rate: 1.15%
```

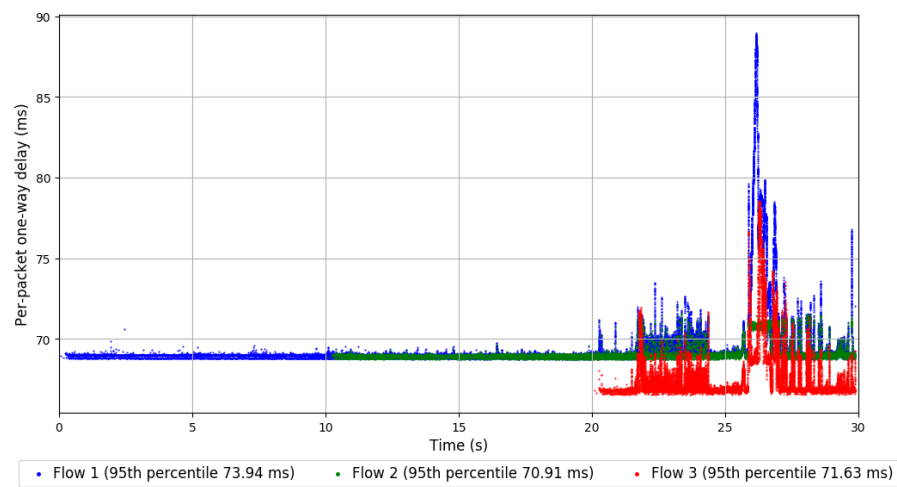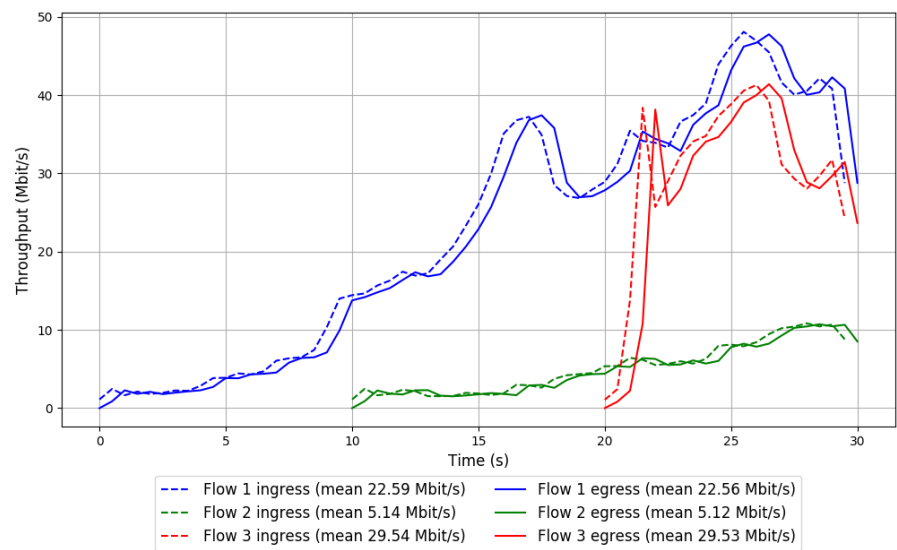Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-05 18:17:28
End at: 2019-02-05 18:17:58
Local clock offset: -10.859 ms
Remote clock offset: -3.723 ms


# Below is generated by plot.py at 2019-02-05 20:46:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.66 Mbit/s
95th percentile per-packet one-way delay: 72.307 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 73.936 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 70.908 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 29.53 Mbit/s
95th percentile per-packet one-way delay: 71.631 ms
Loss rate: 0.82%
```

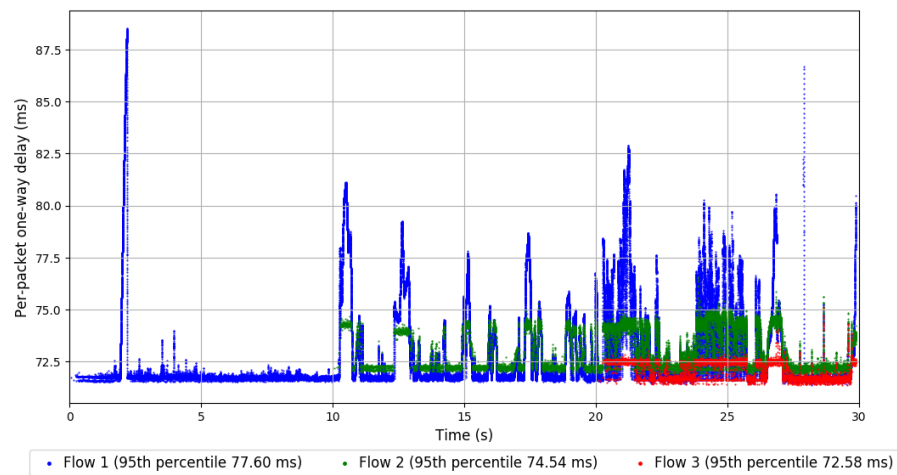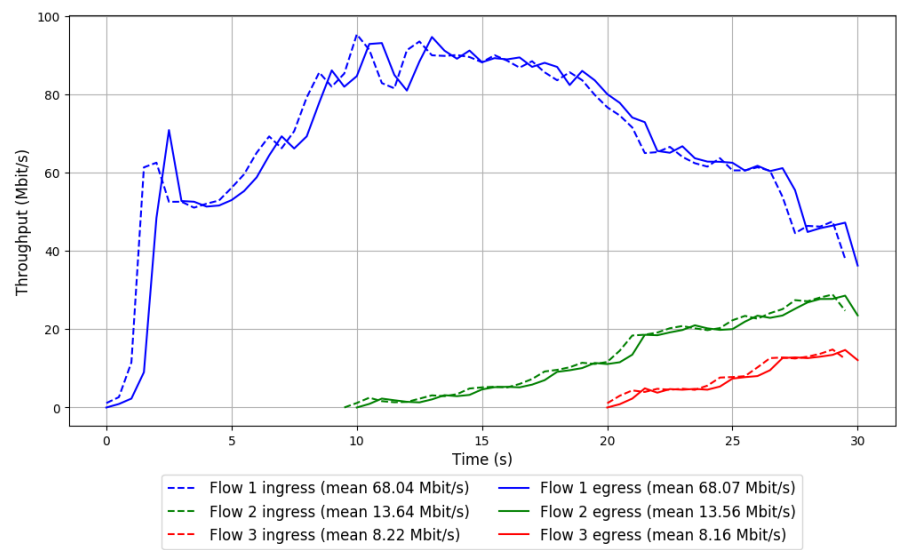Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-05 18:45:41
End at: 2019-02-05 18:46:11
Local clock offset: -8.448 ms
Remote clock offset: -4.438 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.76 Mbit/s
95th percentile per-packet one-way delay: 77.152 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 77.602 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 13.56 Mbit/s
95th percentile per-packet one-way delay: 74.536 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 72.579 ms
Loss rate: 1.53%
```

Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 68.04 Mbit/s) ---- Flow 1 egress (mean 68.07 Mbit/s)
Flow 2 ingress (mean 13.64 Mbit/s) ---- Flow 2 egress (mean 13.56 Mbit/s)
Flow 3 ingress (mean 8.22 Mbit/s) ---- Flow 3 egress (mean 8.16 Mbit/s)

Flow 1 (95th percentile 77.60 ms) • Flow 2 (95th percentile 74.54 ms) • Flow 3 (95th percentile 72.58 ms)
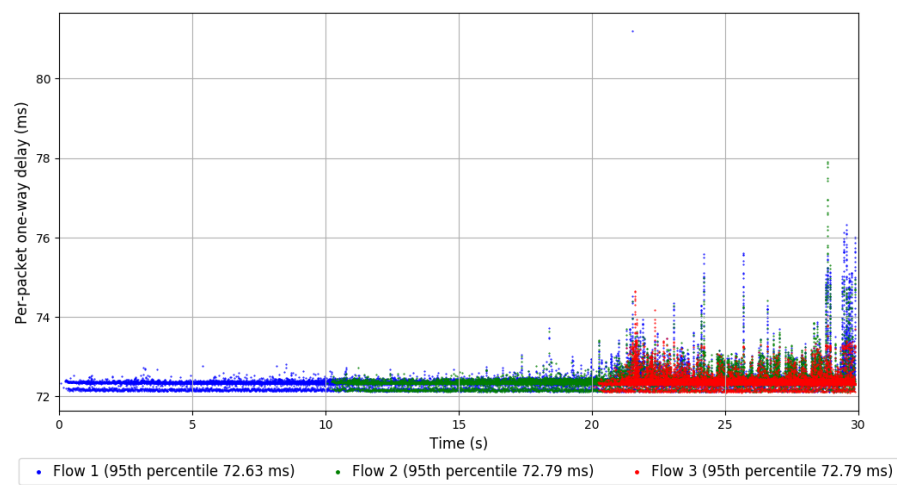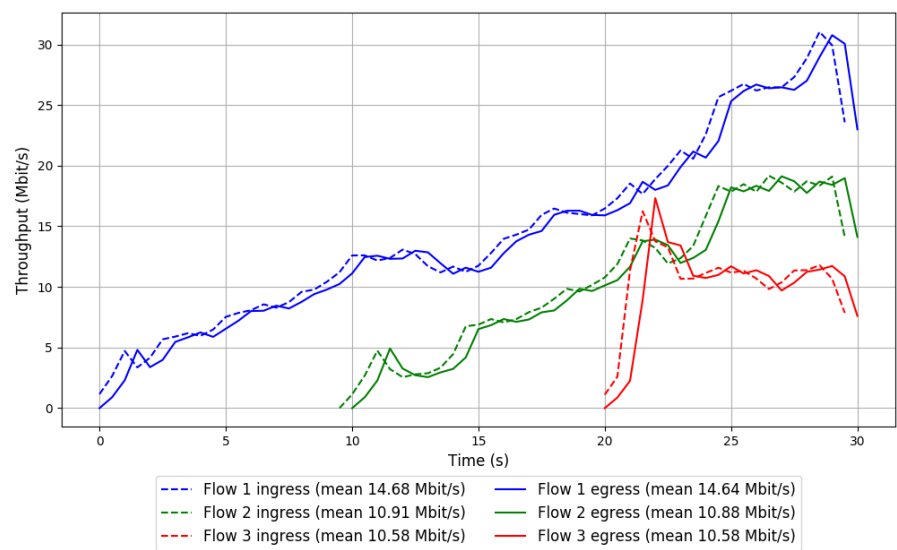
```
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-05 19:14:51
End at: 2019-02-05 19:15:21
Local clock offset: -5.392 ms
Remote clock offset: -5.622 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.34 Mbit/s
95th percentile per-packet one-way delay: 72.722 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 14.64 Mbit/s
95th percentile per-packet one-way delay: 72.632 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 72.794 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 10.58 Mbit/s
95th percentile per-packet one-way delay: 72.793 ms
Loss rate: 0.83%
```
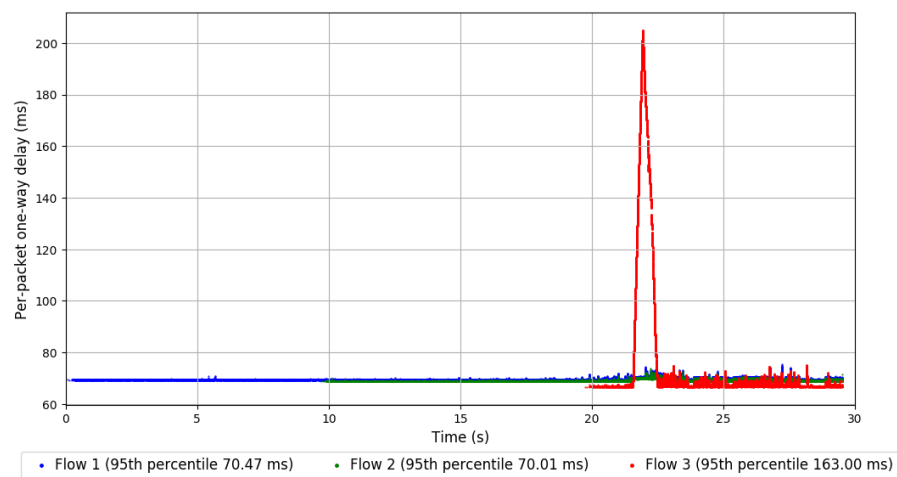
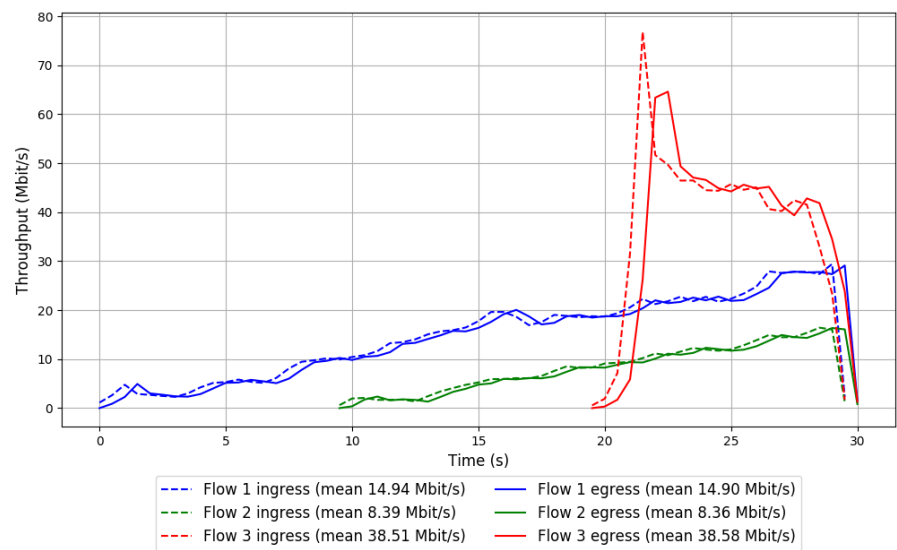Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-05 19:42:08
End at: 2019-02-05 19:42:38
Local clock offset: -8.504 ms
Remote clock offset: -4.046 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.32 Mbit/s
95th percentile per-packet one-way delay: 86.281 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 14.90 Mbit/s
95th percentile per-packet one-way delay: 70.465 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 70.010 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 162.998 ms
Loss rate: 0.59%
```

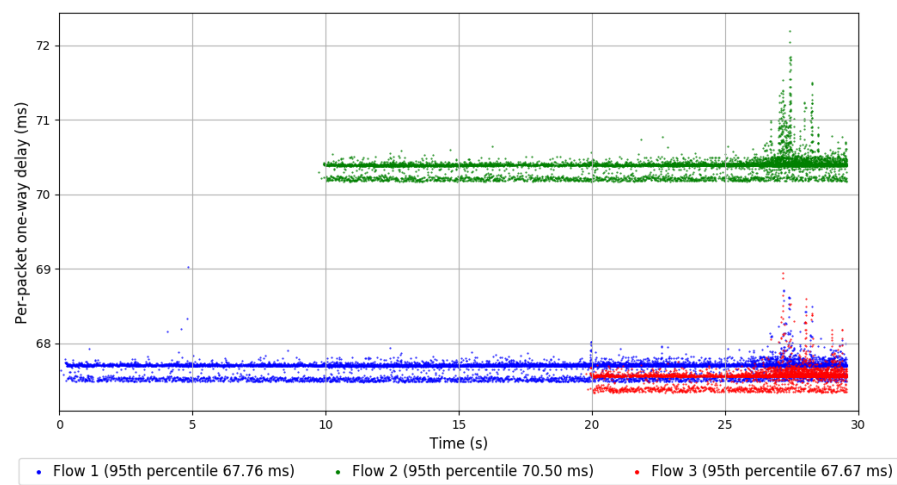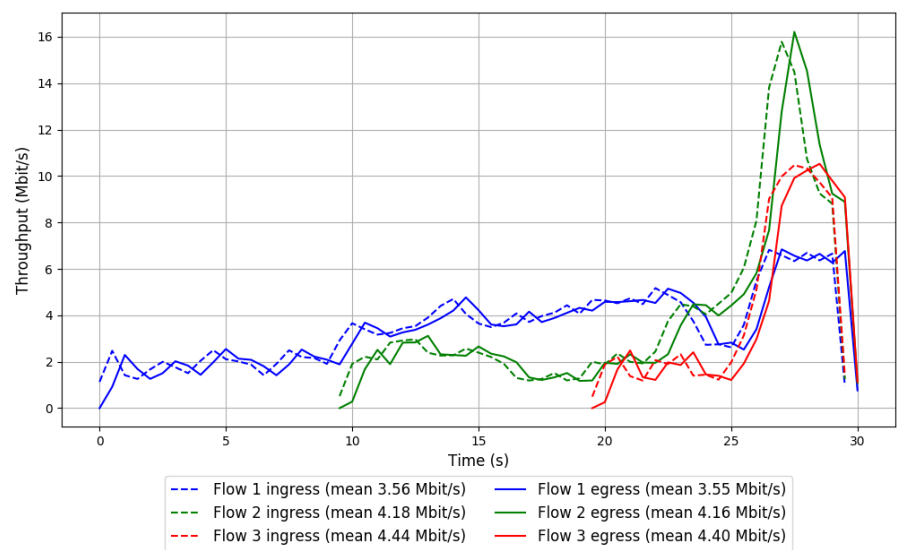Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-05 20:10:29
End at: 2019-02-05 20:10:59
Local clock offset: -7.597 ms
Remote clock offset: -3.766 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 70.421 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 67.761 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 70.499 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 67.667 ms
Loss rate: 1.71%
```

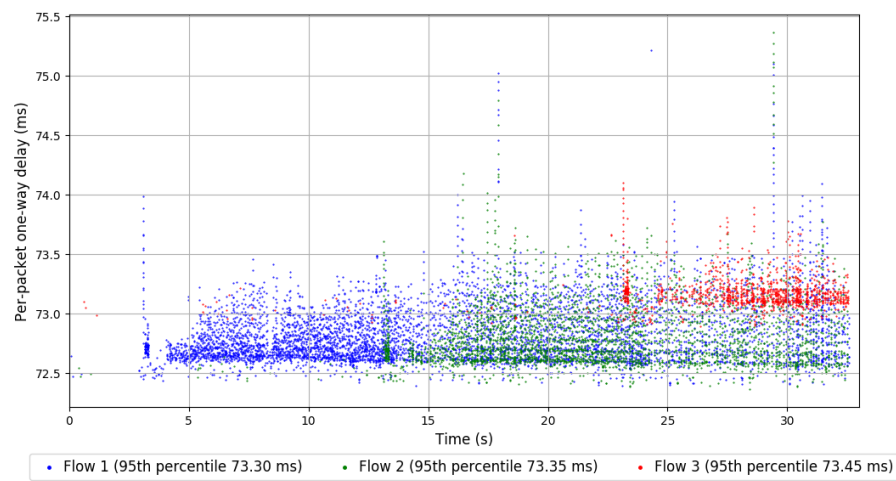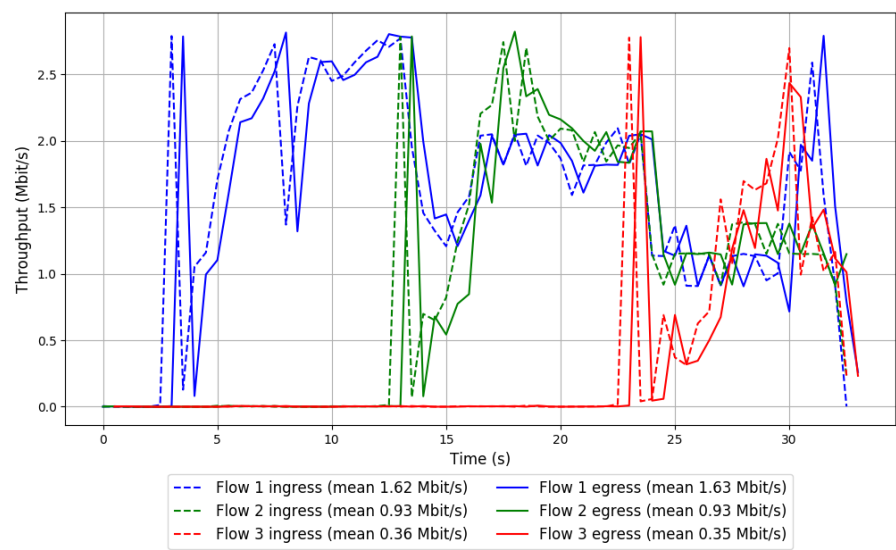Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-02-05 18:16:17
End at: 2019-02-05 18:16:47
Local clock offset: -9.144 ms
Remote clock offset: -5.456 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 73.347 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 73.301 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 73.349 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 73.447 ms
Loss rate: 1.03%
```

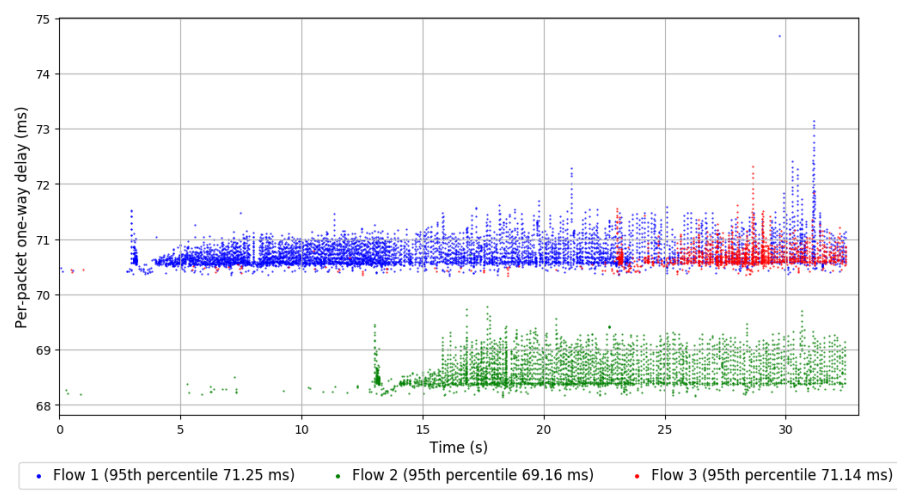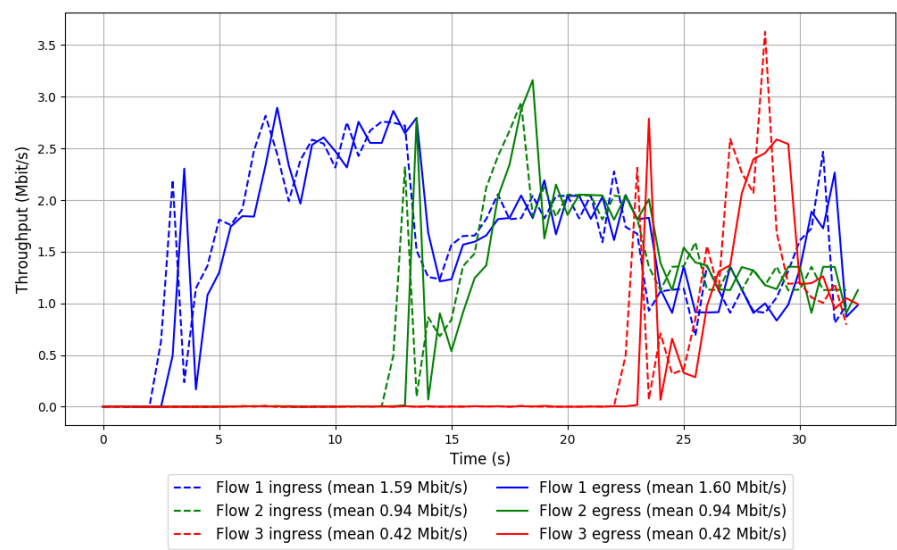Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-02-05 18:44:32
End at: 2019-02-05 18:45:02
Local clock offset: -8.536 ms
Remote clock offset: -3.275 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 71.135 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 1.60 Mbit/s
95th percentile per-packet one-way delay: 71.248 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 69.158 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 71.139 ms
Loss rate: 0.00%
```

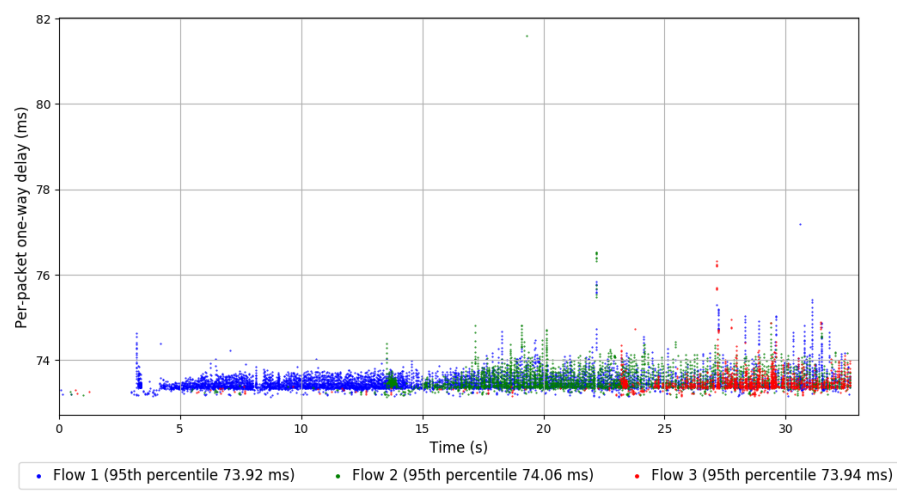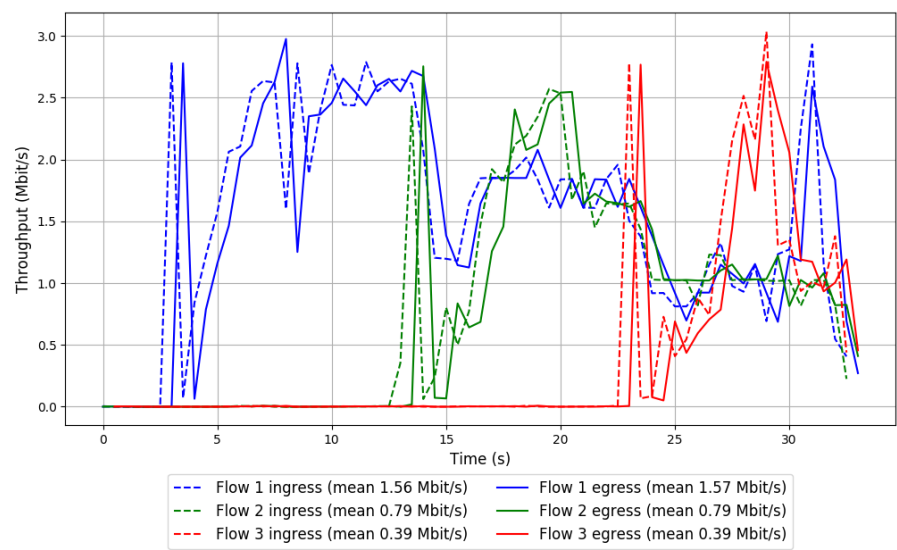Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-02-05 19:13:40
End at: 2019-02-05 19:14:10
Local clock offset: -5.201 ms
Remote clock offset: -6.382 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 73.980 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 73.915 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.79 Mbit/s
95th percentile per-packet one-way delay: 74.060 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 73.935 ms
Loss rate: 0.84%
```

Run 3: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.56 Mbit/s) --- Flow 1 egress (mean 1.57 Mbit/s)
Flow 2 ingress (mean 0.79 Mbit/s) --- Flow 2 egress (mean 0.79 Mbit/s)
Flow 3 ingress (mean 0.39 Mbit/s) --- Flow 3 egress (mean 0.39 Mbit/s)

Flow 1 (95th percentile 73.92 ms)   Flow 2 (95th percentile 74.06 ms)   Flow 3 (95th percentile 73.94 ms)
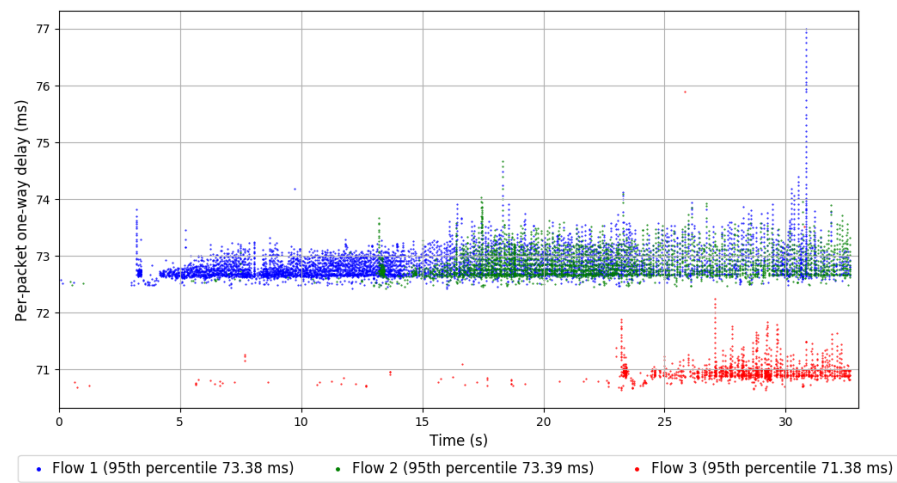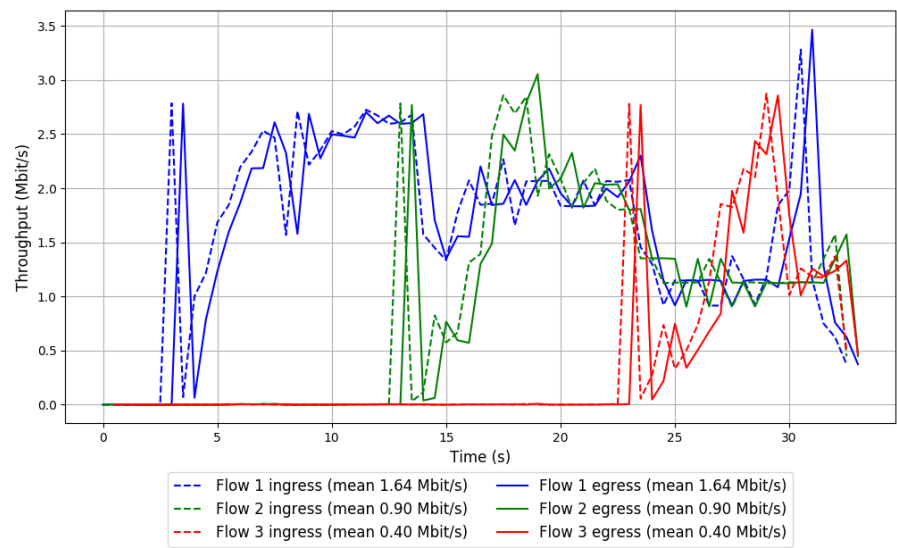
```
Run 4: Statistics of WebRTC media

Start at: 2019-02-05 19:40:58
End at: 2019-02-05 19:41:28
Local clock offset: -6.781 ms
Remote clock offset: -6.042 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 73.352 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 73.377 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 73.385 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 71.380 ms
Loss rate: 0.96%
```

Run 4: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.64 Mbit/s)   Flow 1 egress (mean 1.64 Mbit/s)
Flow 2 ingress (mean 0.90 Mbit/s)   Flow 2 egress (mean 0.90 Mbit/s)
Flow 3 ingress (mean 0.40 Mbit/s)   Flow 3 egress (mean 0.40 Mbit/s)

Flow 1 (95th percentile 73.38 ms)   Flow 2 (95th percentile 73.39 ms)   Flow 3 (95th percentile 71.38 ms)

```
Run 5: Statistics of WebRTC media

Start at: 2019-02-05 20:09:19
End at: 2019-02-05 20:09:49
Local clock offset: -5.074 ms
Remote clock offset: -3.046 ms


# Below is generated by plot.py at 2019-02-05 20:46:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 72.338 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 72.347 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.89 Mbit/s
95th percentile per-packet one-way delay: 72.192 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 72.529 ms
Loss rate: 0.87%
```

Run 5: Report of WebRTC media — Data Link