Pantheon Report

Generated at 2018-08-12 05:12:00 (UTC).

Data path: GCE Tokyo Ethernet (*remote*) →GCE Iowa Ethernet (*local*).

Repeated the test of 17 congestion control schemes 10 times.

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

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

```
System info:
Linux 4.15.0-1014-gcp
net.core.default_qdisc = fq_codel
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: master @ 7719b900495aa706f8452ab7d4a94dd562e9296e
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```
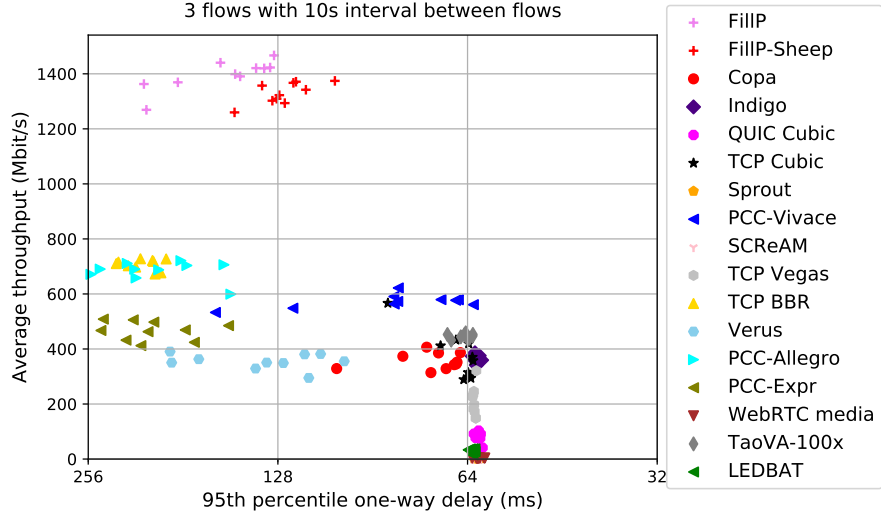
test from GCE Tokyo to GCE Iowa, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
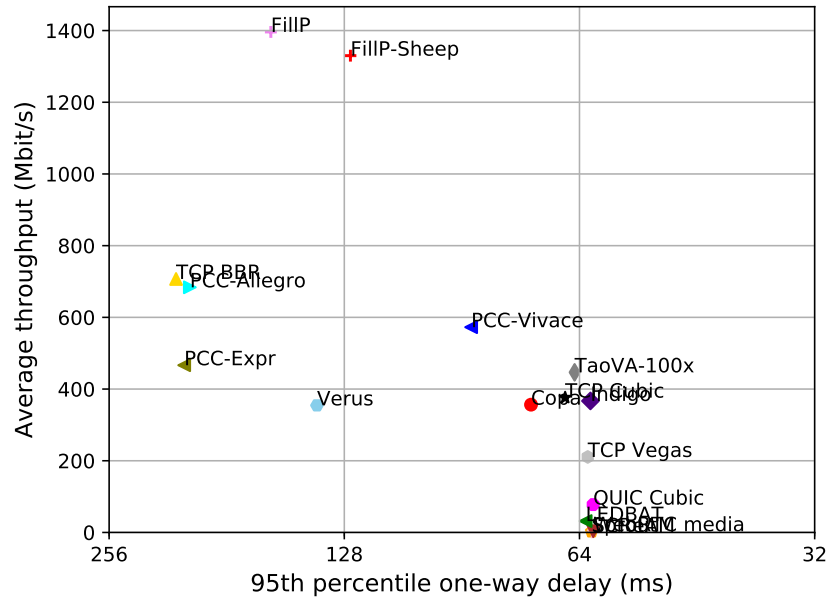
test from GCE Tokyo to GCE Iowa, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

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| 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	10	421.29	351.53	158.19	208.84	209.32	151.68	3.88	4.33	7.47
Copa	10	192.66	157.63	179.13	65.50	75.46	81.24	0.37	0.46	1.24
TCP Cubic	10	267.36	112.71	102.49	68.28	64.83	66.24	0.64	1.93	3.02
FillP	10	734.75	701.11	595.60	150.67	158.21	147.90	3.78	3.36	3.71
FillP-Sheep	10	709.12	660.12	555.73	126.87	123.07	106.86	1.03	1.23	1.61
Indigo	10	196.85	179.32	155.19	61.85	62.10	62.10	0.41	0.62	1.49
LEDBAT	10	21.07	12.82	6.80	62.89	62.78	62.49	0.88	1.48	2.73
PCC-Allegro	10	503.37	251.51	41.51	207.60	144.43	129.20	5.44	2.12	2.27
PCC-Expr	10	286.67	222.43	98.42	201.55	150.17	71.75	3.55	2.28	1.66
QUIC Cubic	10	41.79	41.84	24.21	61.46	61.43	61.36	0.51	1.16	1.32
SCReAM	10	0.22	0.22	0.22	61.66	61.50	61.40	0.38	0.61	1.12
Sprout	10	0.85	0.83	2.10	61.76	61.66	61.76	0.43	0.55	0.97
TaoVA-100x	10	229.91	223.10	207.85	63.93	65.27	67.26	0.41	0.64	1.34
TCP Vegas	10	110.22	95.20	112.78	62.25	62.18	63.73	0.43	0.66	1.75
Verus	10	193.77	179.23	128.39	134.91	129.83	130.02	1.25	0.97	2.76
PCC-Vivace	10	340.75	290.00	120.58	82.25	113.15	62.21	0.40	0.84	1.71
WebRTC media	10	1.86	1.18	0.47	61.48	61.36	61.38	0.51	0.80	1.32

```
Run 1: Statistics of TCP BBR

Start at: 2018-08-11 20:54:05
End at: 2018-08-11 20:54:35
Local clock offset: 0.127 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.94 Mbit/s
95th percentile per-packet one-way delay: 211.524 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 416.97 Mbit/s
95th percentile per-packet one-way delay: 230.941 ms
Loss rate: 4.35%
-- Flow 2:
Average throughput: 376.27 Mbit/s
95th percentile per-packet one-way delay: 170.546 ms
Loss rate: 3.01%
-- Flow 3:
Average throughput: 184.19 Mbit/s
95th percentile per-packet one-way delay: 144.737 ms
Loss rate: 7.80%
```

Run 1: Report of TCP BBR — Data Link
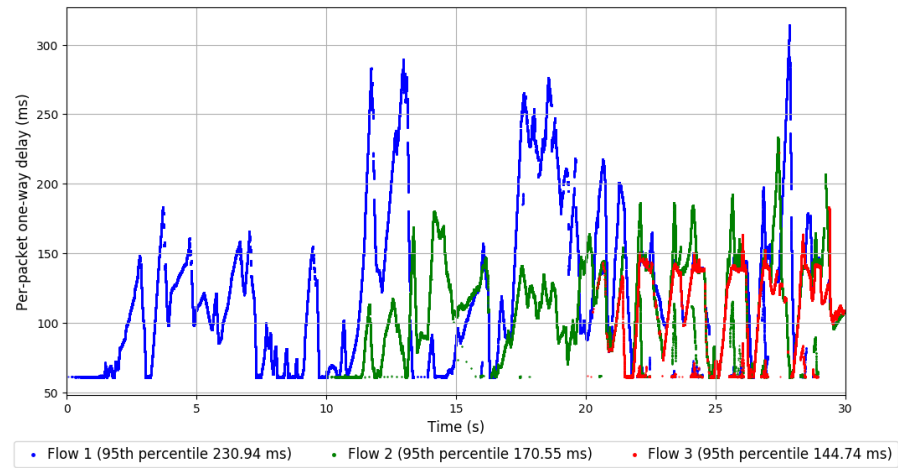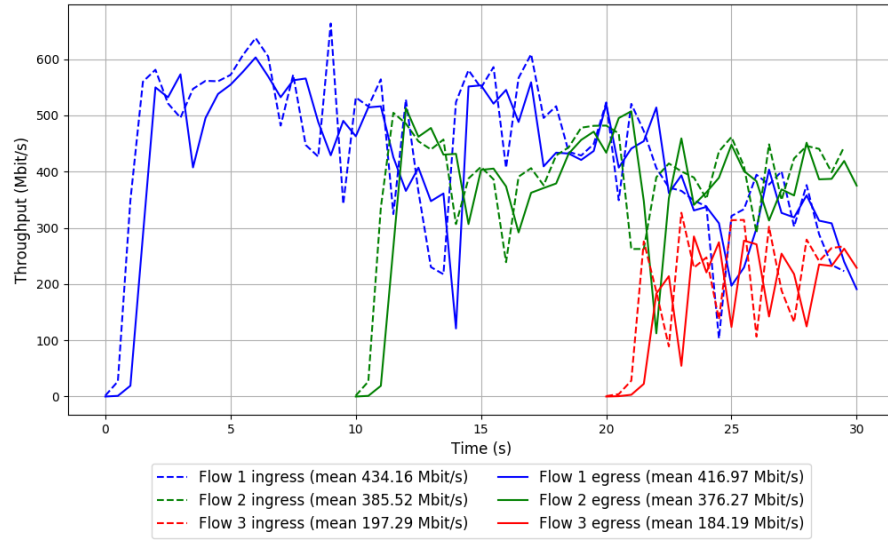
```
Run 2: Statistics of TCP BBR

Start at: 2018-08-11 21:20:43
End at: 2018-08-11 21:21:13
Local clock offset: 0.089 ms
Remote clock offset: 1.113 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.53 Mbit/s
95th percentile per-packet one-way delay: 200.485 ms
Loss rate: 5.24%
-- Flow 1:
Average throughput: 426.56 Mbit/s
95th percentile per-packet one-way delay: 202.160 ms
Loss rate: 5.18%
-- Flow 2:
Average throughput: 289.35 Mbit/s
95th percentile per-packet one-way delay: 200.796 ms
Loss rate: 4.50%
-- Flow 3:
Average throughput: 162.75 Mbit/s
95th percentile per-packet one-way delay: 149.521 ms
Loss rate: 8.35%
```
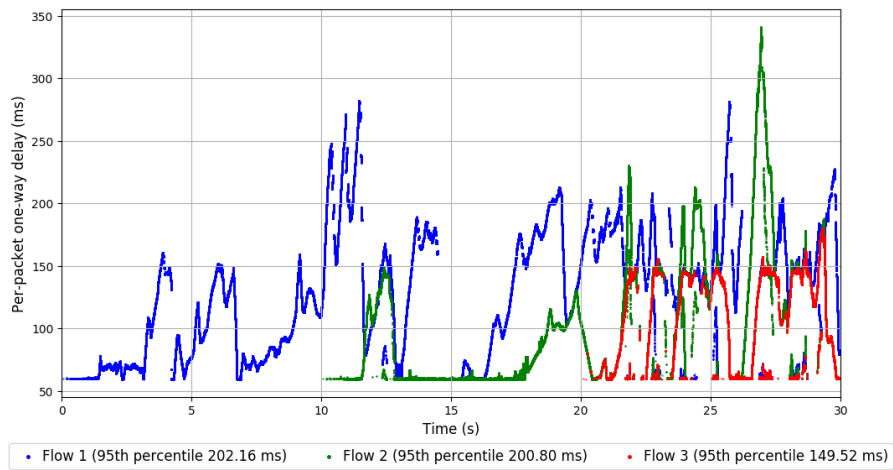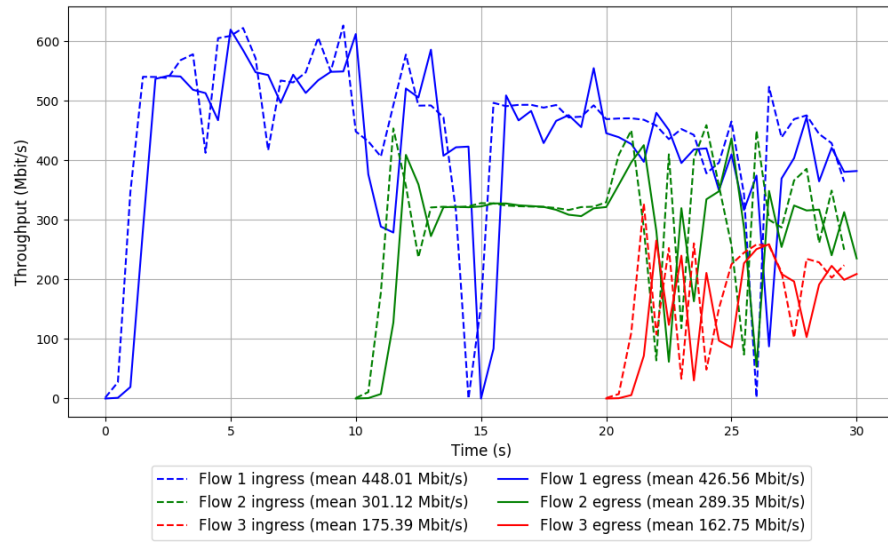
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2018-08-11 21:47:29
End at: 2018-08-11 21:47:59
Local clock offset: -0.126 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.58 Mbit/s
95th percentile per-packet one-way delay: 202.402 ms
Loss rate: 4.25%
-- Flow 1:
Average throughput: 405.16 Mbit/s
95th percentile per-packet one-way delay: 178.025 ms
Loss rate: 2.69%
-- Flow 2:
Average throughput: 362.00 Mbit/s
95th percentile per-packet one-way delay: 225.462 ms
Loss rate: 5.93%
-- Flow 3:
Average throughput: 229.93 Mbit/s
95th percentile per-packet one-way delay: 150.323 ms
Loss rate: 6.97%
```
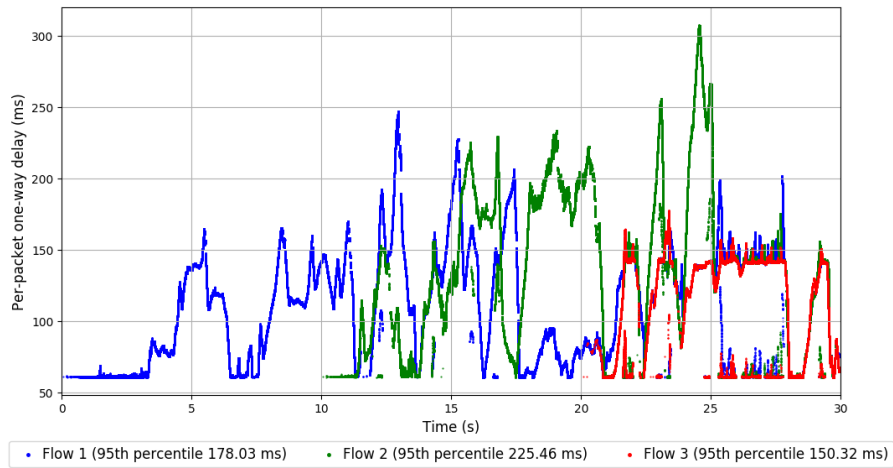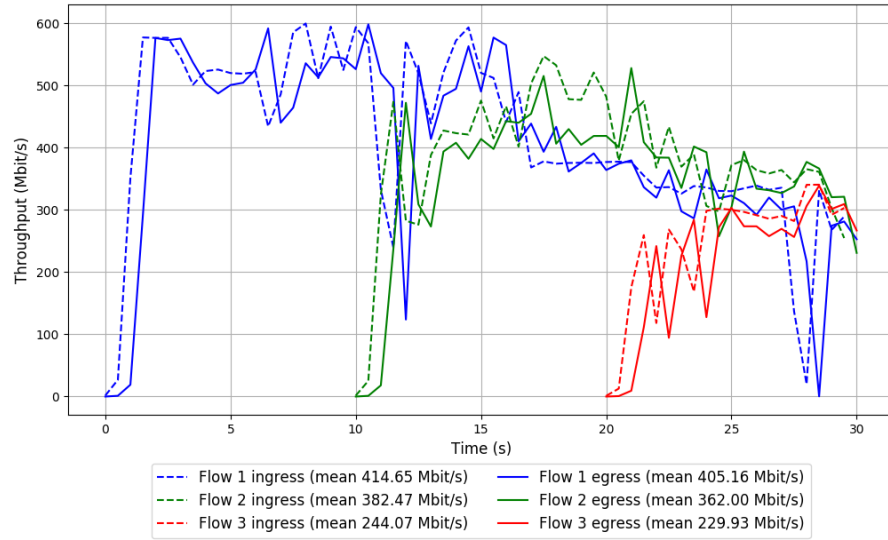
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-08-11 22:14:22
End at: 2018-08-11 22:14:52
Local clock offset: -0.041 ms
Remote clock offset: -0.689 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 715.78 Mbit/s
95th percentile per-packet one-way delay: 229.249 ms
Loss rate: 3.17%
-- Flow 1:
Average throughput: 423.45 Mbit/s
95th percentile per-packet one-way delay: 241.589 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 376.22 Mbit/s
95th percentile per-packet one-way delay: 198.634 ms
Loss rate: 3.55%
-- Flow 3:
Average throughput: 128.04 Mbit/s
95th percentile per-packet one-way delay: 145.995 ms
Loss rate: 5.05%
```

Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 433.65 Mbit/s)   Flow 1 egress (mean 423.45 Mbit/s)
Flow 2 ingress (mean 387.66 Mbit/s)   Flow 2 egress (mean 376.22 Mbit/s)
Flow 3 ingress (mean 133.19 Mbit/s)   Flow 3 egress (mean 128.04 Mbit/s)

Flow 1 (95th percentile 241.59 ms)   Flow 2 (95th percentile 198.63 ms)   Flow 3 (95th percentile 146.00 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-08-11 22:41:20
End at: 2018-08-11 22:41:50
Local clock offset: -0.004 ms
Remote clock offset: -0.26 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 718.46 Mbit/s
95th percentile per-packet one-way delay: 201.760 ms
Loss rate: 3.08%
-- Flow 1:
Average throughput: 442.79 Mbit/s
95th percentile per-packet one-way delay: 176.027 ms
Loss rate: 2.72%
-- Flow 2:
Average throughput: 361.28 Mbit/s
95th percentile per-packet one-way delay: 218.631 ms
Loss rate: 3.56%
-- Flow 3:
Average throughput: 107.60 Mbit/s
95th percentile per-packet one-way delay: 145.053 ms
Loss rate: 4.34%
```
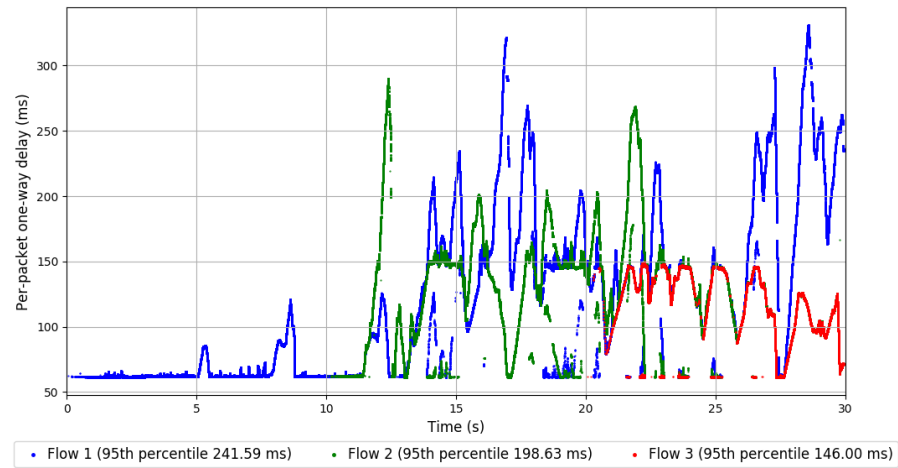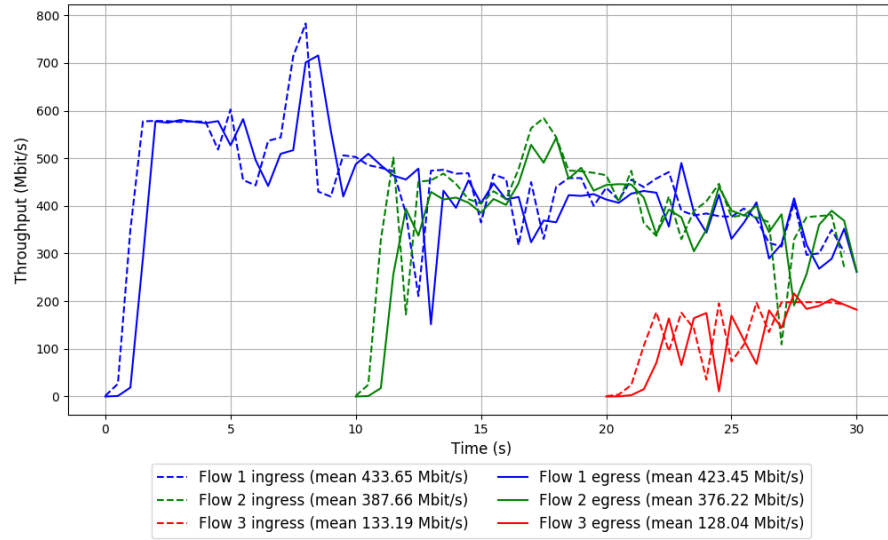
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 453.32 Mbit/s) --- Flow 1 egress (mean 442.79 Mbit/s)
Flow 2 ingress (mean 372.30 Mbit/s) --- Flow 2 egress (mean 361.28 Mbit/s)
Flow 3 ingress (mean 110.99 Mbit/s) --- Flow 3 egress (mean 107.60 Mbit/s)

Flow 1 (95th percentile 176.03 ms) • Flow 2 (95th percentile 218.63 ms) • Flow 3 (95th percentile 145.05 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2018-08-11 23:08:19
End at: 2018-08-11 23:08:49
Local clock offset: -0.065 ms
Remote clock offset: 0.214 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.27 Mbit/s
95th percentile per-packet one-way delay: 192.541 ms
Loss rate: 3.95%
-- Flow 1:
Average throughput: 416.62 Mbit/s
95th percentile per-packet one-way delay: 184.643 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 340.26 Mbit/s
95th percentile per-packet one-way delay: 233.925 ms
Loss rate: 4.73%
-- Flow 3:
Average throughput: 256.06 Mbit/s
95th percentile per-packet one-way delay: 174.121 ms
Loss rate: 7.56%
```
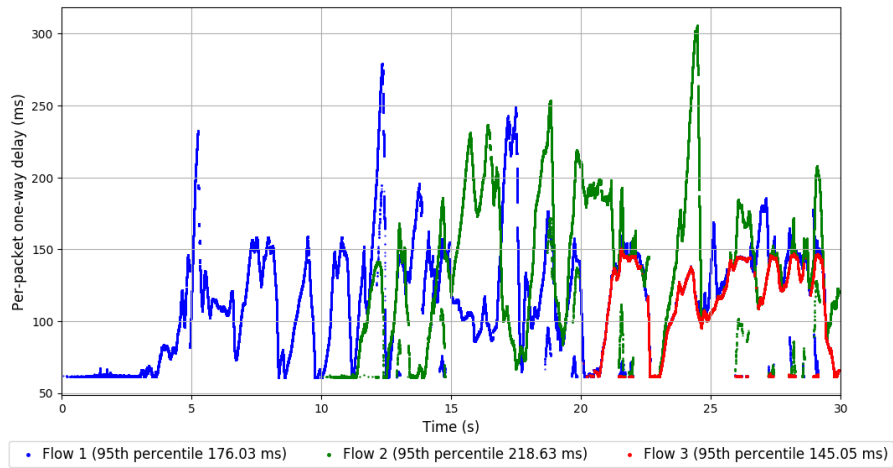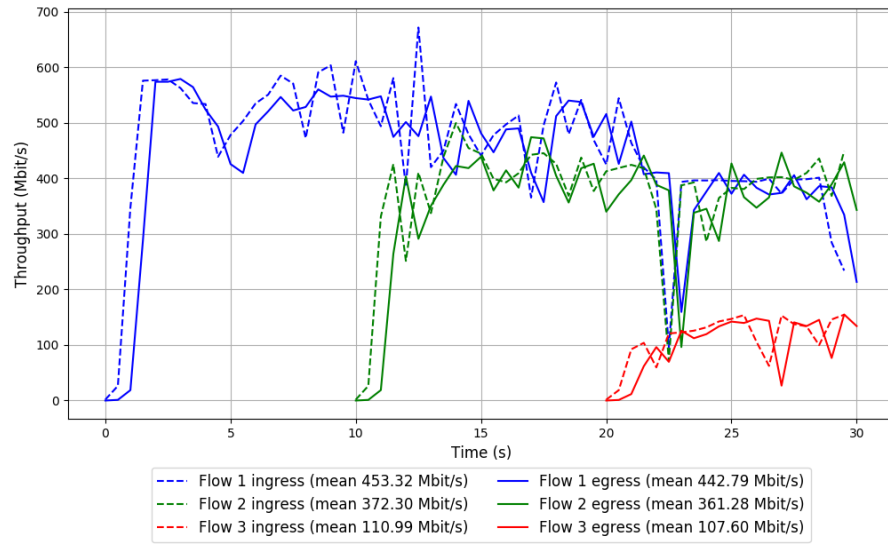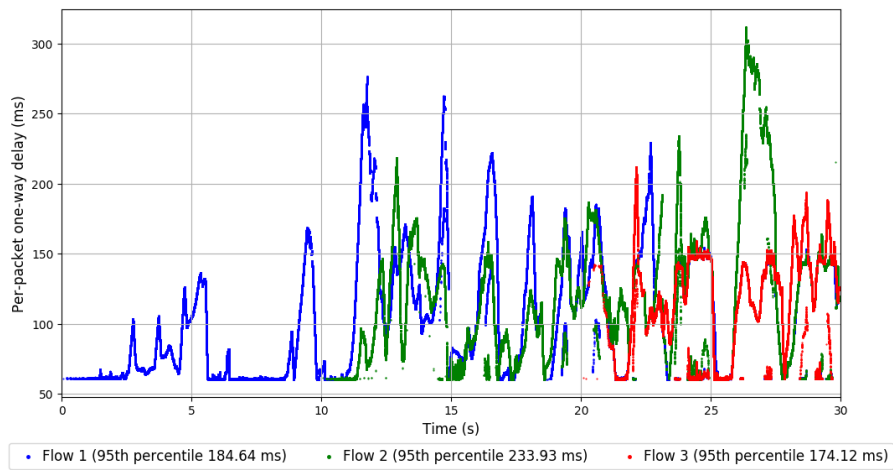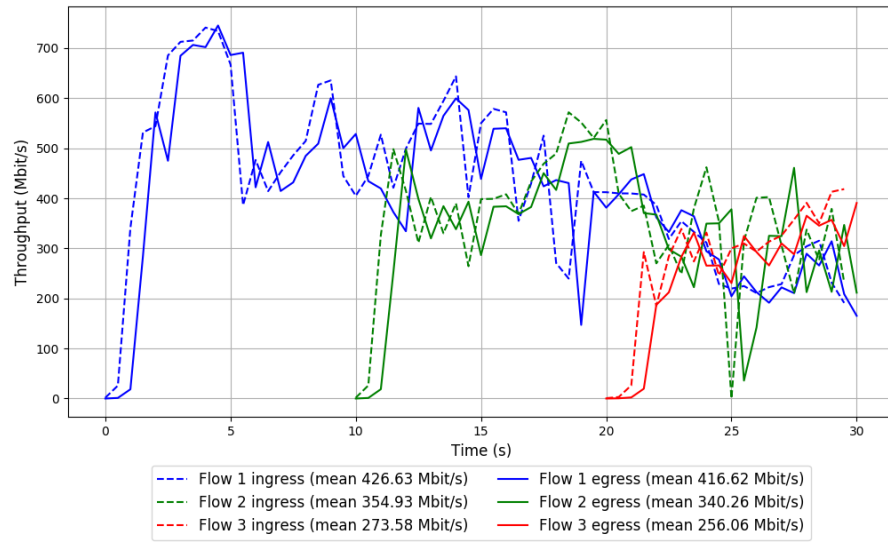
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 426.63 Mbit/s) — Flow 1 egress (mean 416.62 Mbit/s)
Flow 2 ingress (mean 354.93 Mbit/s) — Flow 2 egress (mean 340.26 Mbit/s)
Flow 3 ingress (mean 273.58 Mbit/s) — Flow 3 egress (mean 256.06 Mbit/s)

Flow 1 (95th percentile 184.64 ms) • Flow 2 (95th percentile 233.93 ms) • Flow 3 (95th percentile 174.12 ms)
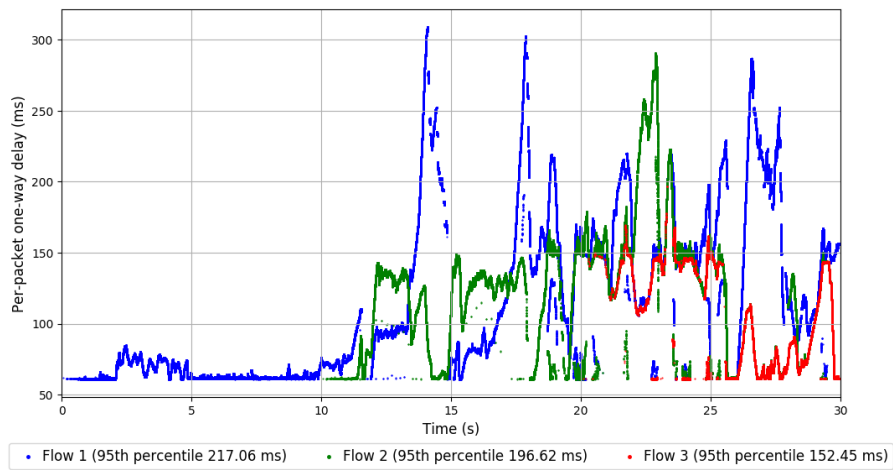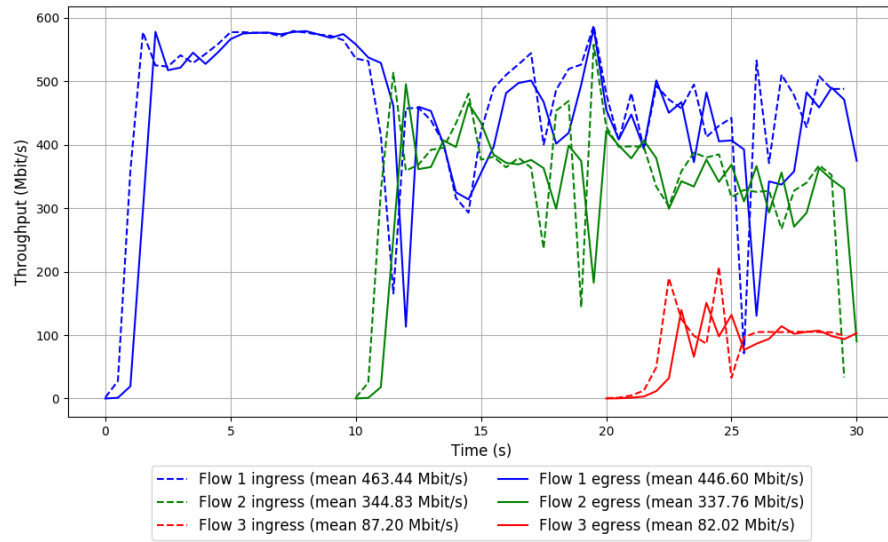
```
Run 7: Statistics of TCP BBR

Start at: 2018-08-11 23:35:10
End at: 2018-08-11 23:35:40
Local clock offset: -0.012 ms
Remote clock offset: -0.036 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 697.69 Mbit/s
95th percentile per-packet one-way delay: 215.277 ms
Loss rate: 3.78%
-- Flow 1:
Average throughput: 446.60 Mbit/s
95th percentile per-packet one-way delay: 217.057 ms
Loss rate: 4.03%
-- Flow 2:
Average throughput: 337.76 Mbit/s
95th percentile per-packet one-way delay: 196.624 ms
Loss rate: 2.85%
-- Flow 3:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 152.446 ms
Loss rate: 7.10%
```

Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2018-08-12 00:01:56
End at: 2018-08-12 00:02:26
Local clock offset: -0.056 ms
Remote clock offset: 0.747 ms


# Below is generated by plot.py at 2018-08-12 01:51:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 702.50 Mbit/s
95th percentile per-packet one-way delay: 221.114 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 399.52 Mbit/s
95th percentile per-packet one-way delay: 222.851 ms
Loss rate: 6.05%
-- Flow 2:
Average throughput: 331.09 Mbit/s
95th percentile per-packet one-way delay: 223.783 ms
Loss rate: 4.14%
-- Flow 3:
Average throughput: 251.54 Mbit/s
95th percentile per-packet one-way delay: 163.723 ms
Loss rate: 8.86%
```
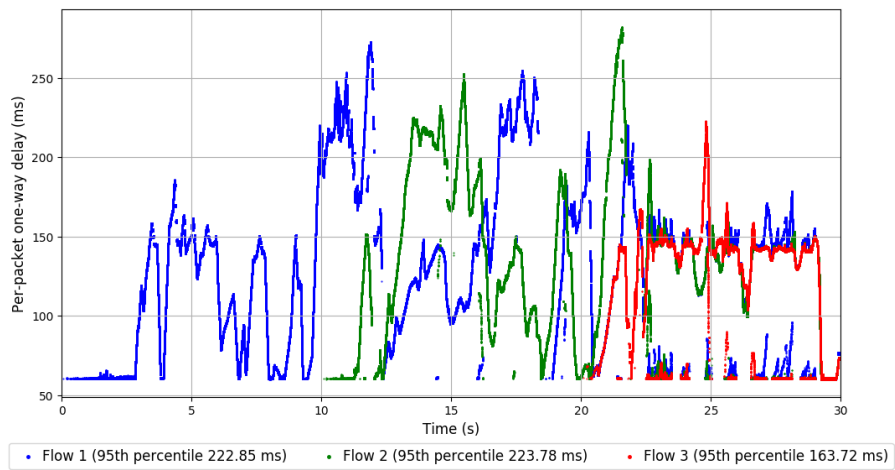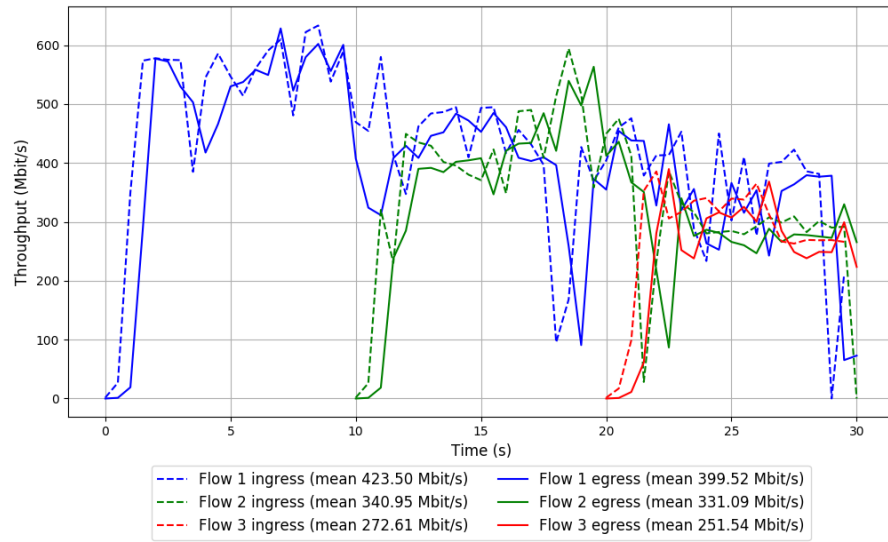
Run 8: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 423.50 Mbit/s) ——— Flow 1 egress (mean 399.52 Mbit/s)
- - - Flow 2 ingress (mean 340.95 Mbit/s) ——— Flow 2 egress (mean 331.09 Mbit/s)
- - - Flow 3 ingress (mean 272.61 Mbit/s) ——— Flow 3 egress (mean 251.54 Mbit/s)

- Flow 1 (95th percentile 222.85 ms)   - Flow 2 (95th percentile 223.78 ms)   - Flow 3 (95th percentile 163.72 ms)

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```
Run 9: Statistics of TCP BBR

Start at: 2018-08-12 00:28:47
End at: 2018-08-12 00:29:17
Local clock offset: -0.045 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2018-08-12 02:03:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 676.74 Mbit/s
95th percentile per-packet one-way delay: 196.292 ms
Loss rate: 5.72%
-- Flow 1:
Average throughput: 399.92 Mbit/s
95th percentile per-packet one-way delay: 199.844 ms
Loss rate: 4.69%
-- Flow 2:
Average throughput: 355.42 Mbit/s
95th percentile per-packet one-way delay: 197.272 ms
Loss rate: 5.95%
-- Flow 3:
Average throughput: 123.14 Mbit/s
95th percentile per-packet one-way delay: 152.392 ms
Loss rate: 13.76%
```
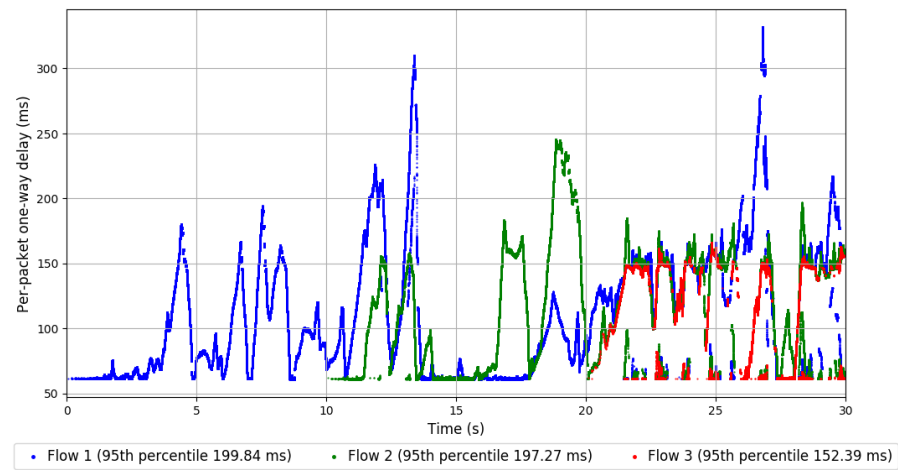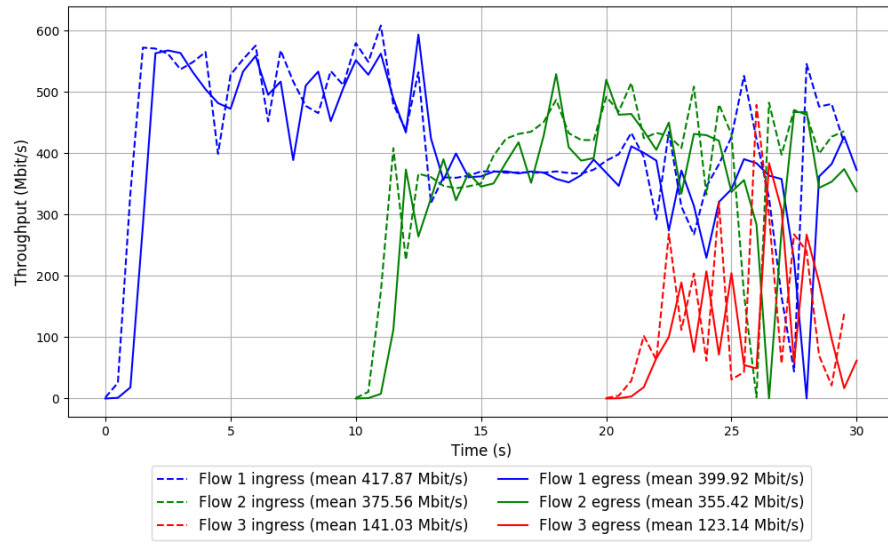
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 417.87 Mbit/s)   Flow 1 egress (mean 399.92 Mbit/s)
Flow 2 ingress (mean 375.56 Mbit/s)   Flow 2 egress (mean 355.42 Mbit/s)
Flow 3 ingress (mean 141.03 Mbit/s)   Flow 3 egress (mean 123.14 Mbit/s)

Flow 1 (95th percentile 199.84 ms)   Flow 2 (95th percentile 197.27 ms)   Flow 3 (95th percentile 152.39 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2018-08-12 00:55:21
End at: 2018-08-12 00:55:51
Local clock offset: -0.074 ms
Remote clock offset: 0.098 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.34 Mbit/s
95th percentile per-packet one-way delay: 231.017 ms
Loss rate: 4.20%
-- Flow 1:
Average throughput: 435.35 Mbit/s
95th percentile per-packet one-way delay: 235.232 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 385.69 Mbit/s
95th percentile per-packet one-way delay: 227.576 ms
Loss rate: 5.08%
-- Flow 3:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 138.487 ms
Loss rate: 4.94%
```
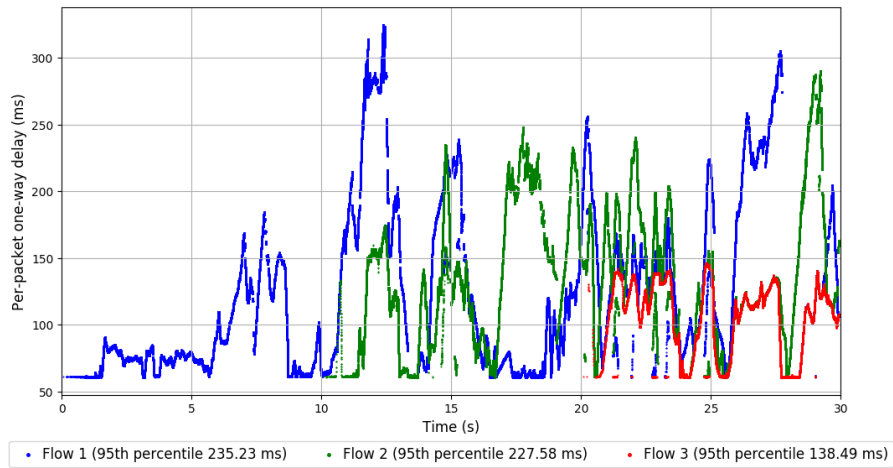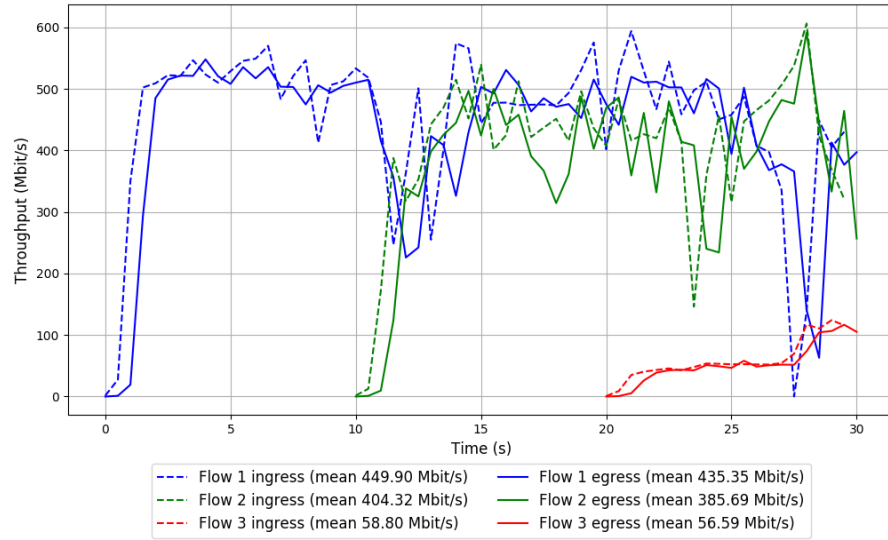
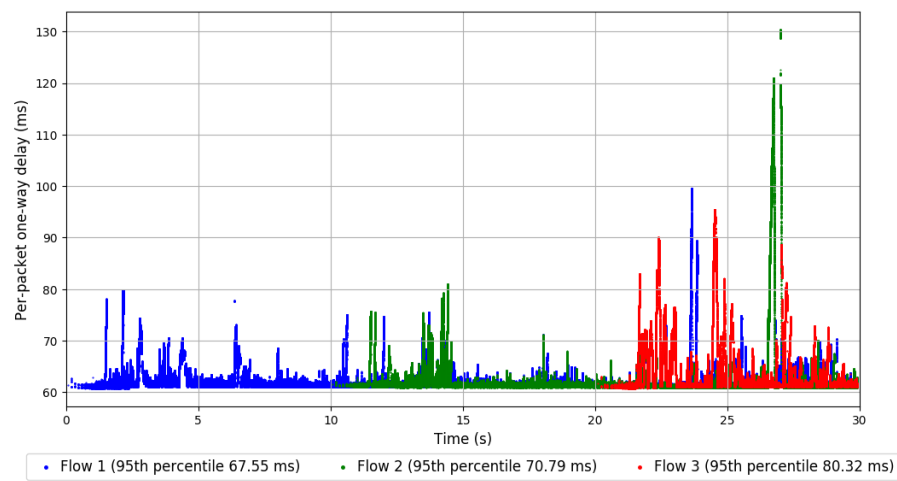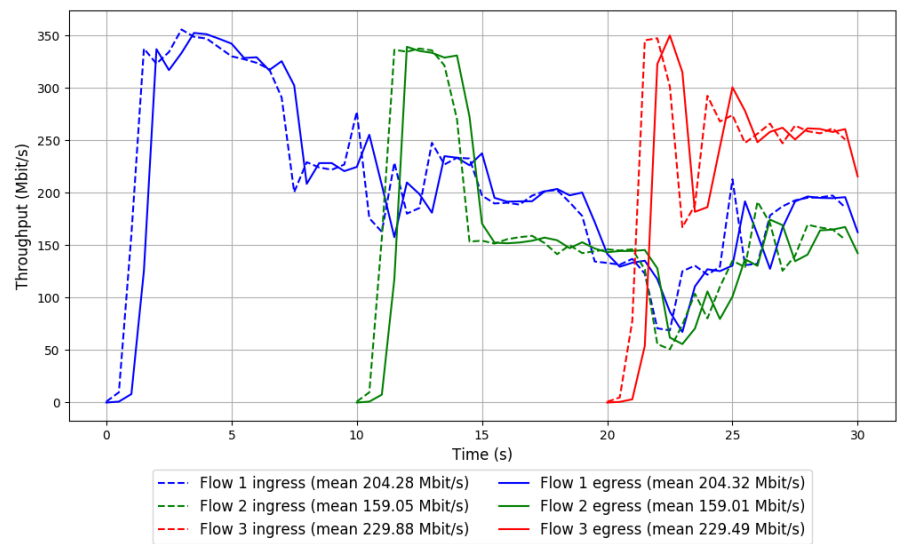Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-08-11 20:47:32
End at: 2018-08-11 20:48:02
Local clock offset: 0.056 ms
Remote clock offset: -0.231 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 385.56 Mbit/s
95th percentile per-packet one-way delay: 71.163 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 204.32 Mbit/s
95th percentile per-packet one-way delay: 67.552 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 159.01 Mbit/s
95th percentile per-packet one-way delay: 70.789 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 229.49 Mbit/s
95th percentile per-packet one-way delay: 80.323 ms
Loss rate: 1.40%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 204.28 Mbit/s)   Flow 1 egress (mean 204.32 Mbit/s)
Flow 2 ingress (mean 159.05 Mbit/s)   Flow 2 egress (mean 159.01 Mbit/s)
Flow 3 ingress (mean 229.88 Mbit/s)   Flow 3 egress (mean 229.49 Mbit/s)

Flow 1 (95th percentile 67.55 ms)   Flow 2 (95th percentile 70.79 ms)   Flow 3 (95th percentile 80.32 ms)
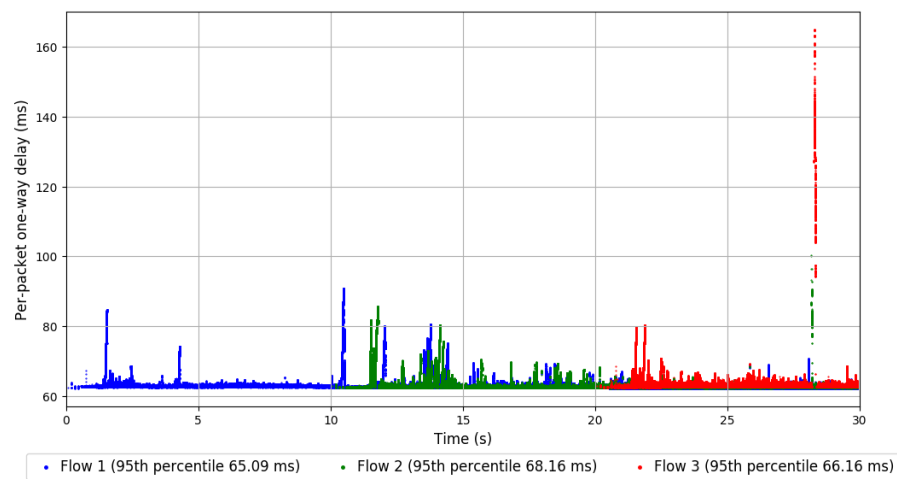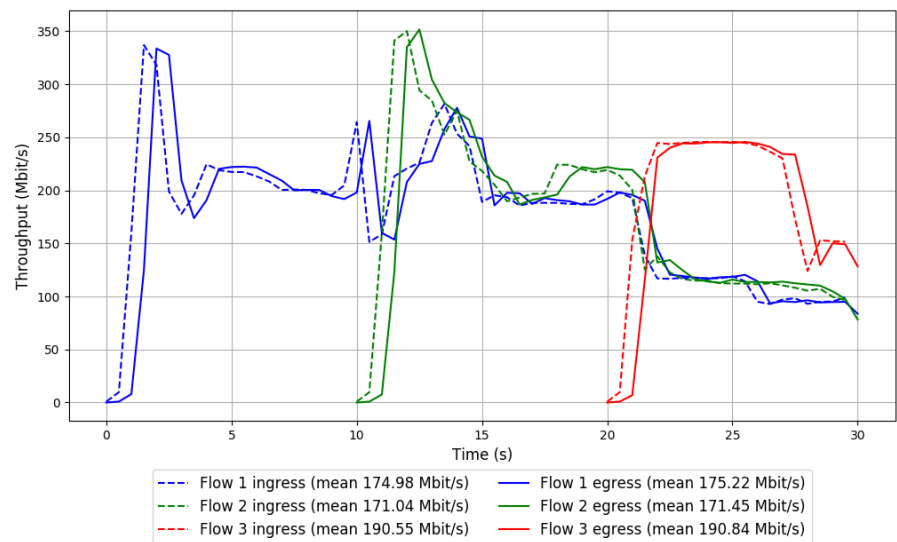
```
Run 2: Statistics of Copa

Start at: 2018-08-11 21:14:14
End at: 2018-08-11 21:14:44
Local clock offset: 0.049 ms
Remote clock offset: -1.536 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.11 Mbit/s
95th percentile per-packet one-way delay: 66.503 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 175.22 Mbit/s
95th percentile per-packet one-way delay: 65.086 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 171.45 Mbit/s
95th percentile per-packet one-way delay: 68.159 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 190.84 Mbit/s
95th percentile per-packet one-way delay: 66.160 ms
Loss rate: 1.08%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-08-11 21:40:55
End at: 2018-08-11 21:41:25
Local clock offset: -0.1 ms
Remote clock offset: 0.177 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.83 Mbit/s
95th percentile per-packet one-way delay: 103.258 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 179.12 Mbit/s
95th percentile per-packet one-way delay: 62.626 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 142.52 Mbit/s
95th percentile per-packet one-way delay: 117.240 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 166.96 Mbit/s
95th percentile per-packet one-way delay: 67.368 ms
Loss rate: 1.37%
```
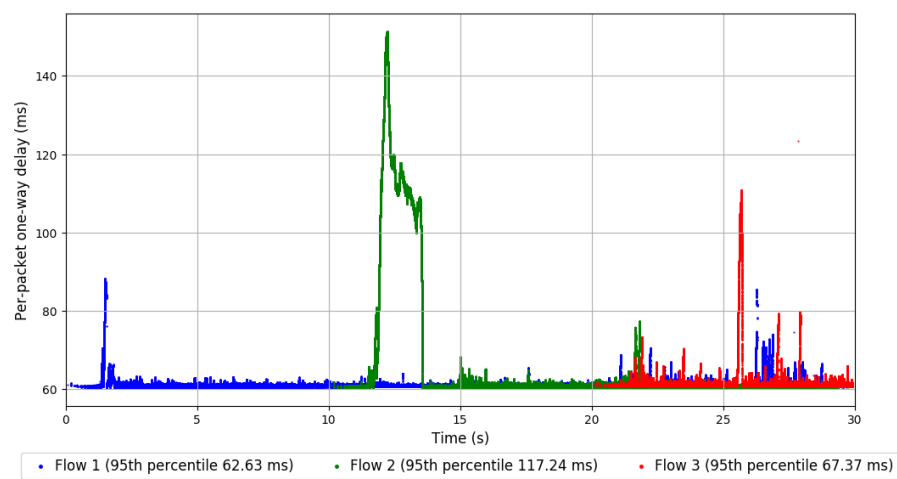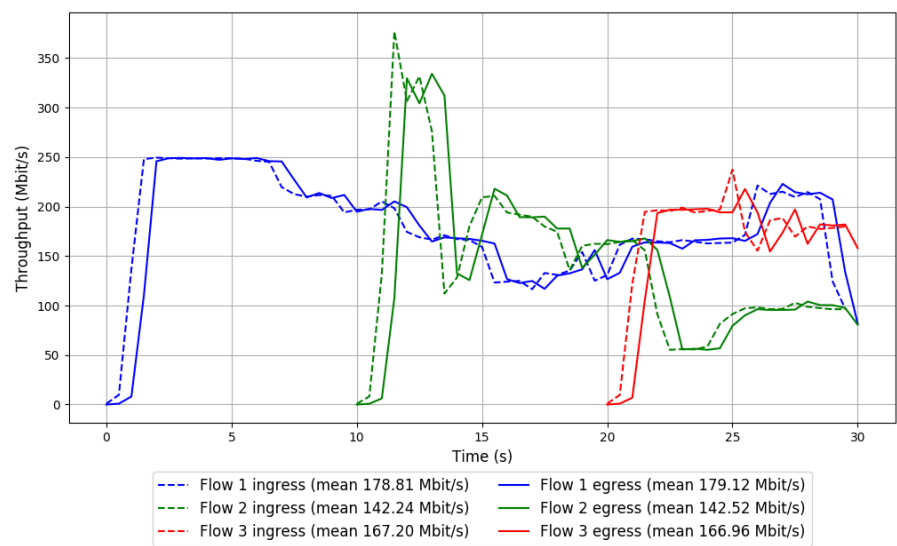
Run 3: Report of Copa — Data Link

- --- Flow 1 ingress (mean 178.81 Mbit/s) —— Flow 1 egress (mean 179.12 Mbit/s)
- --- Flow 2 ingress (mean 142.24 Mbit/s) —— Flow 2 egress (mean 142.52 Mbit/s)
- --- Flow 3 ingress (mean 167.20 Mbit/s) —— Flow 3 egress (mean 166.96 Mbit/s)

- • Flow 1 (95th percentile 62.63 ms) • Flow 2 (95th percentile 117.24 ms) • Flow 3 (95th percentile 67.37 ms)

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```
Run 4: Statistics of Copa

Start at: 2018-08-11 22:07:34
End at: 2018-08-11 22:08:04
Local clock offset: -0.073 ms
Remote clock offset: 0.129 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 343.03 Mbit/s
95th percentile per-packet one-way delay: 67.192 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 153.61 Mbit/s
95th percentile per-packet one-way delay: 62.580 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 177.55 Mbit/s
95th percentile per-packet one-way delay: 71.989 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 216.64 Mbit/s
95th percentile per-packet one-way delay: 65.871 ms
Loss rate: 1.36%
```
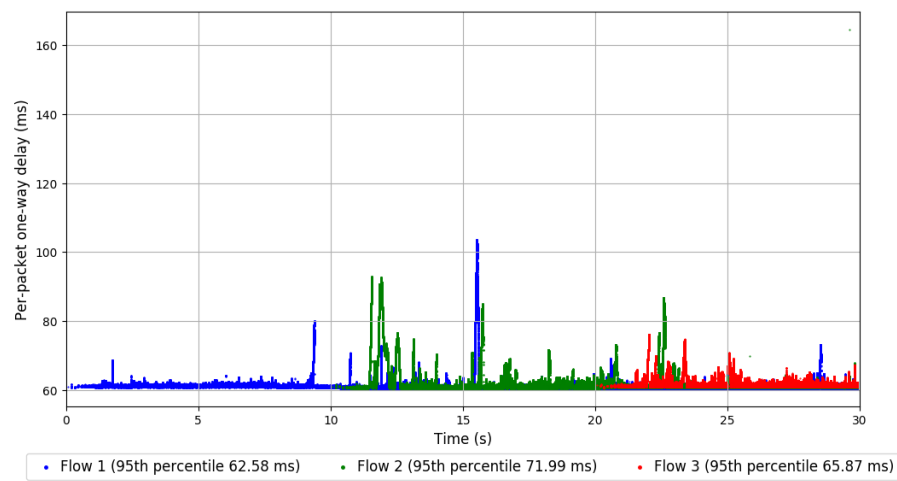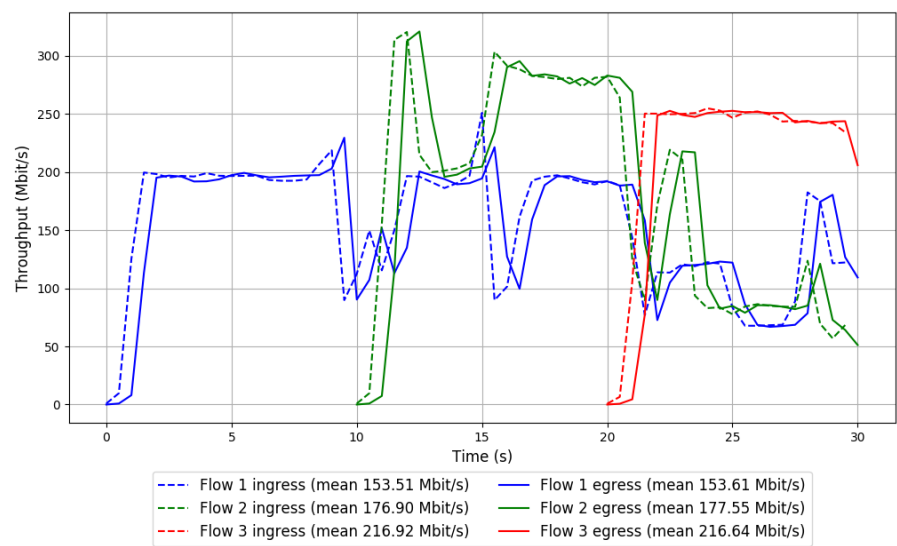
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-08-11 22:34:41
End at: 2018-08-11 22:35:11
Local clock offset: -0.024 ms
Remote clock offset: 0.034 ms


# Below is generated by plot.py at 2018-08-12 02:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.49 Mbit/s
95th percentile per-packet one-way delay: 81.071 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 196.34 Mbit/s
95th percentile per-packet one-way delay: 65.837 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 191.76 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 150.93 Mbit/s
95th percentile per-packet one-way delay: 124.518 ms
Loss rate: 1.41%
```
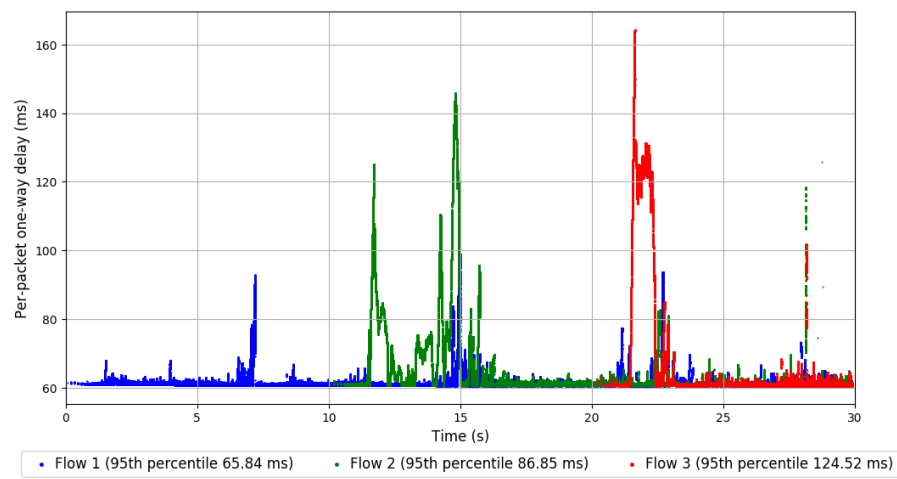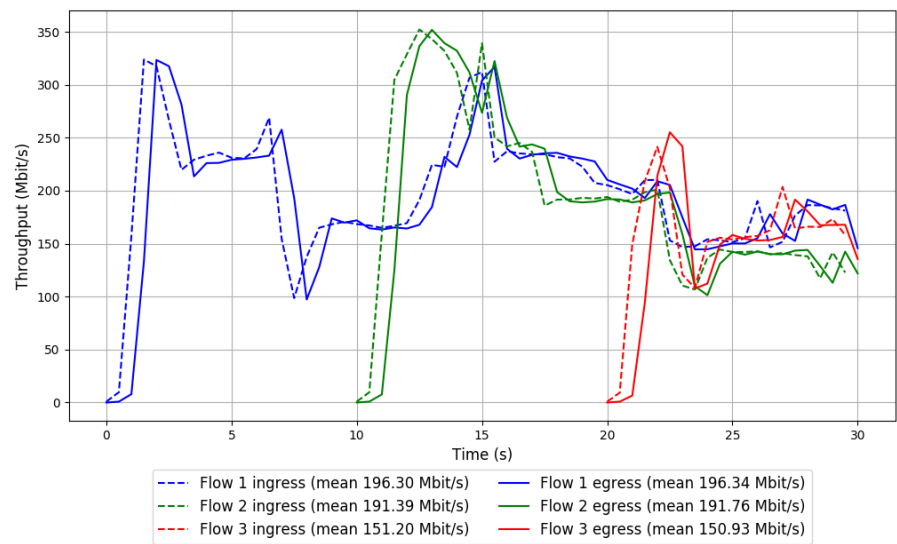
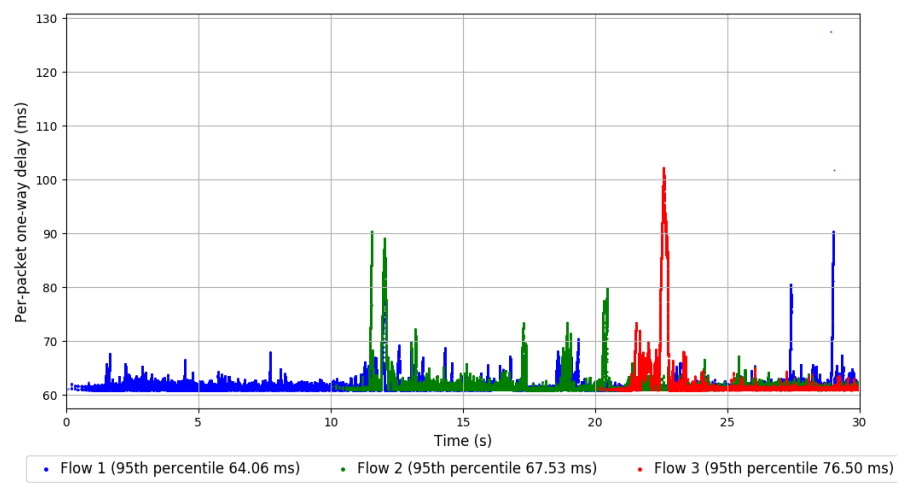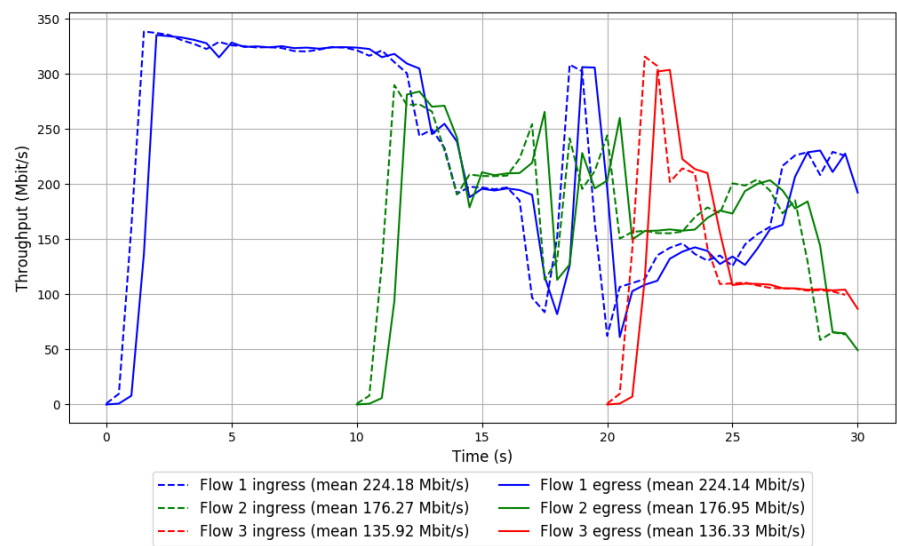Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-08-11 23:01:41
End at: 2018-08-11 23:02:11
Local clock offset: -0.042 ms
Remote clock offset: -0.182 ms


# Below is generated by plot.py at 2018-08-12 02:04:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.60 Mbit/s
95th percentile per-packet one-way delay: 65.698 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 224.14 Mbit/s
95th percentile per-packet one-way delay: 64.055 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 176.95 Mbit/s
95th percentile per-packet one-way delay: 67.532 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 136.33 Mbit/s
95th percentile per-packet one-way delay: 76.503 ms
Loss rate: 0.93%
```

Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 224.18 Mbit/s) — — — Flow 1 egress (mean 224.14 Mbit/s)
Flow 2 ingress (mean 176.27 Mbit/s) — — — Flow 2 egress (mean 176.95 Mbit/s)
Flow 3 ingress (mean 135.92 Mbit/s) — — — Flow 3 egress (mean 136.33 Mbit/s)

Flow 1 (95th percentile 64.06 ms)   Flow 2 (95th percentile 67.53 ms)   Flow 3 (95th percentile 76.50 ms)
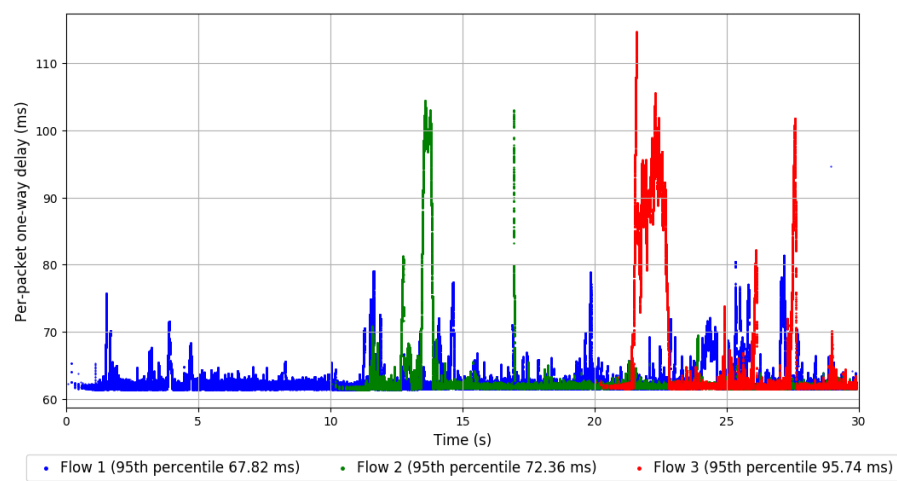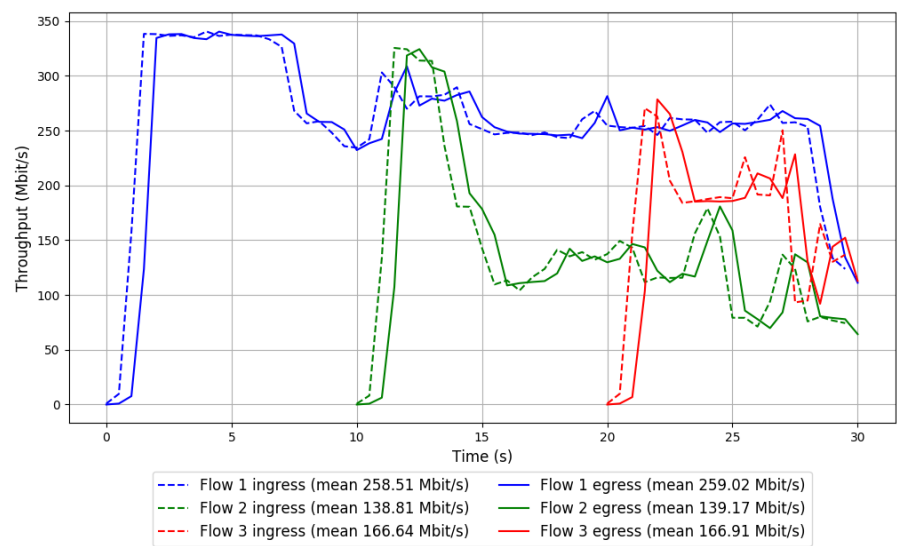
```
Run 7: Statistics of Copa

Start at: 2018-08-11 23:28:31
End at: 2018-08-11 23:29:01
Local clock offset: 0.014 ms
Remote clock offset: -0.584 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.50 Mbit/s
95th percentile per-packet one-way delay: 74.307 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 259.02 Mbit/s
95th percentile per-packet one-way delay: 67.816 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 139.17 Mbit/s
95th percentile per-packet one-way delay: 72.362 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 166.91 Mbit/s
95th percentile per-packet one-way delay: 95.740 ms
Loss rate: 1.08%
```

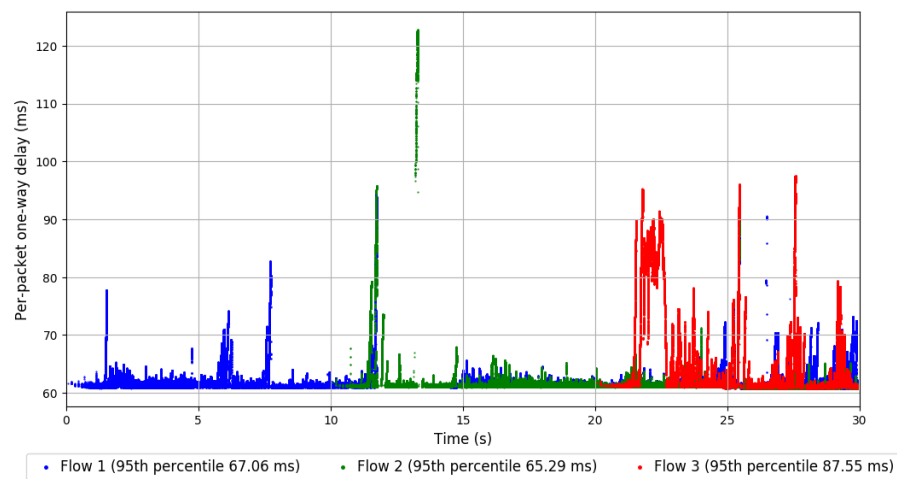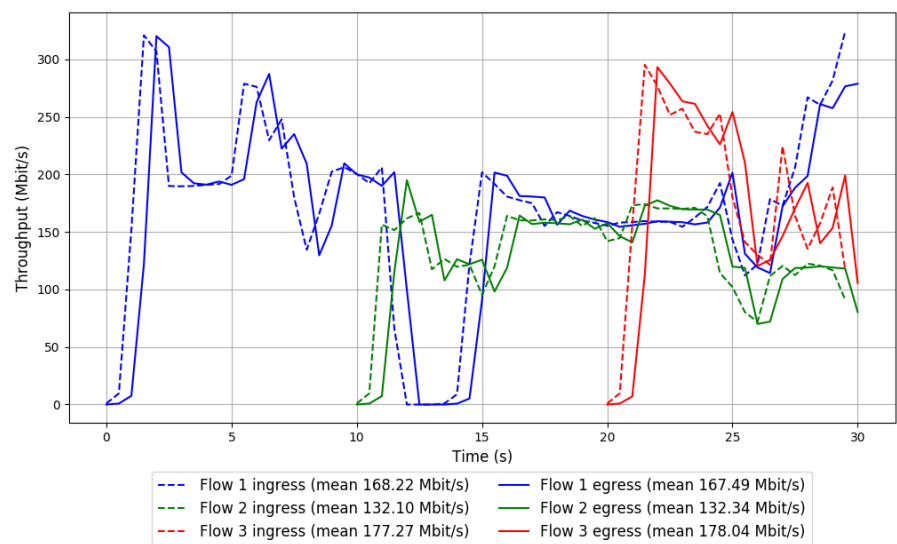Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-08-11 23:55:20
End at: 2018-08-11 23:55:50
Local clock offset: -0.076 ms
Remote clock offset: -0.127 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.14 Mbit/s
95th percentile per-packet one-way delay: 73.168 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 167.49 Mbit/s
95th percentile per-packet one-way delay: 67.057 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 132.34 Mbit/s
95th percentile per-packet one-way delay: 65.292 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 178.04 Mbit/s
95th percentile per-packet one-way delay: 87.551 ms
Loss rate: 0.80%
```
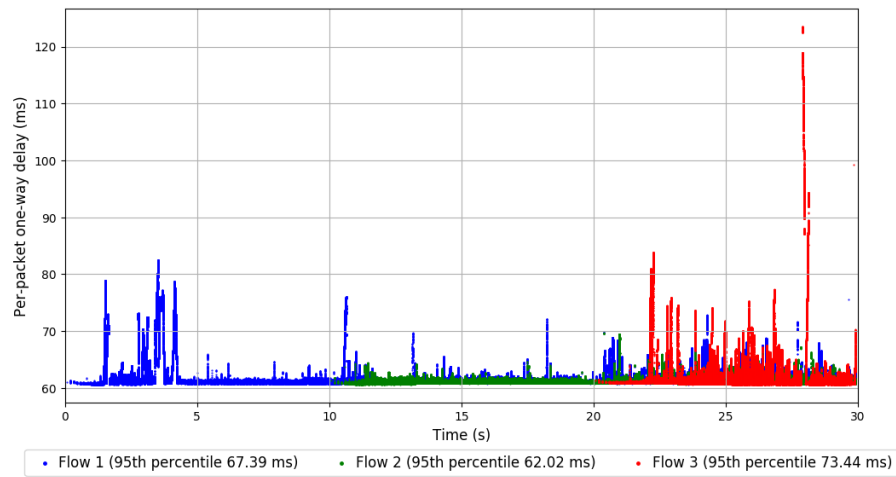
Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 168.22 Mbit/s) --- Flow 1 egress (mean 167.49 Mbit/s)
Flow 2 ingress (mean 132.10 Mbit/s) --- Flow 2 egress (mean 132.34 Mbit/s)
Flow 3 ingress (mean 177.27 Mbit/s) --- Flow 3 egress (mean 178.04 Mbit/s)

Flow 1 (95th percentile 67.06 ms) • Flow 2 (95th percentile 65.29 ms) • Flow 3 (95th percentile 87.55 ms)
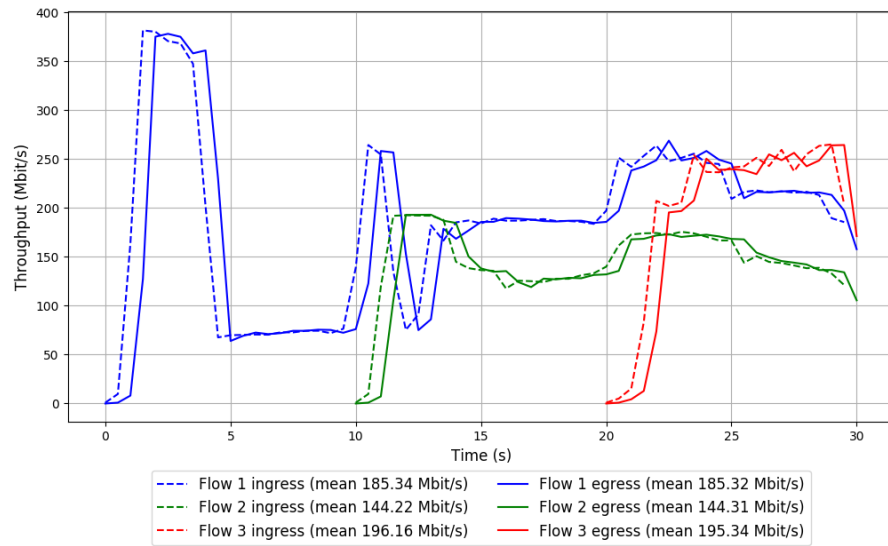
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```
Run 9: Statistics of Copa

Start at: 2018-08-12 00:22:12
End at: 2018-08-12 00:22:42
Local clock offset: -0.088 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.60 Mbit/s
95th percentile per-packet one-way delay: 66.704 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 185.32 Mbit/s
95th percentile per-packet one-way delay: 67.394 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 144.31 Mbit/s
95th percentile per-packet one-way delay: 62.023 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 195.34 Mbit/s
95th percentile per-packet one-way delay: 73.444 ms
Loss rate: 1.65%
```

Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 185.34 Mbit/s) --- Flow 1 egress (mean 185.32 Mbit/s)
Flow 2 ingress (mean 144.22 Mbit/s) --- Flow 2 egress (mean 144.31 Mbit/s)
Flow 3 ingress (mean 196.16 Mbit/s) --- Flow 3 egress (mean 195.34 Mbit/s)

Flow 1 (95th percentile 67.39 ms) • Flow 2 (95th percentile 62.02 ms) • Flow 3 (95th percentile 73.44 ms)

```
Run 10: Statistics of Copa

Start at: 2018-08-12 00:48:50
End at: 2018-08-12 00:49:20
Local clock offset: -0.091 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.58 Mbit/s
95th percentile per-packet one-way delay: 69.217 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 182.03 Mbit/s
95th percentile per-packet one-way delay: 64.968 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 141.23 Mbit/s
95th percentile per-packet one-way delay: 72.347 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 159.85 Mbit/s
95th percentile per-packet one-way delay: 74.880 ms
Loss rate: 1.29%
```

Run 10: Report of Copa — Data Link
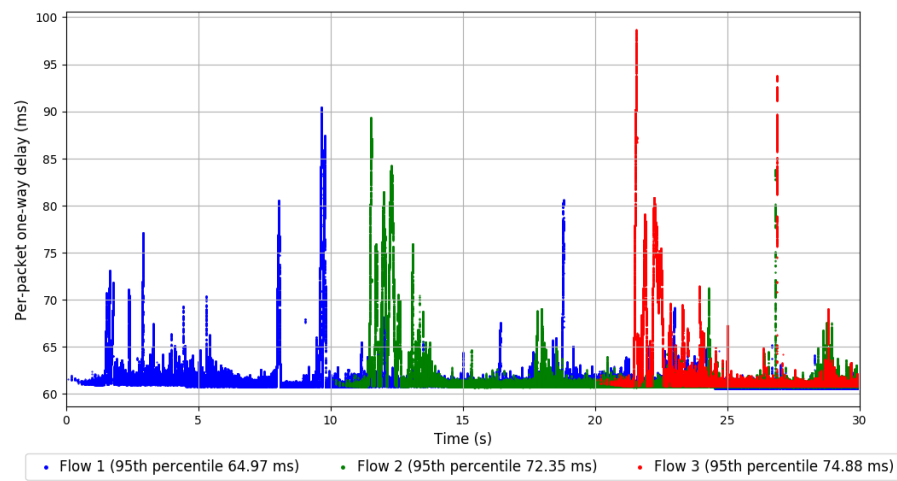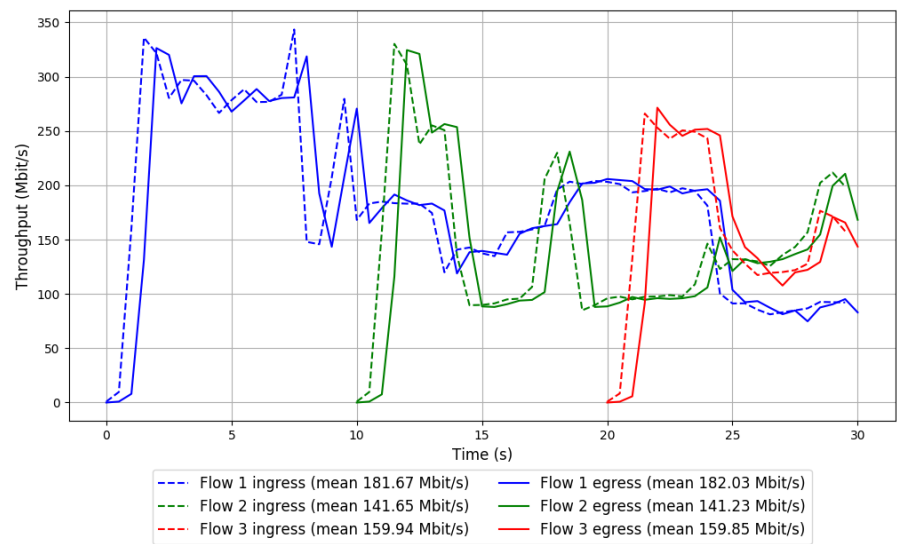
```
Run 1: Statistics of TCP Cubic

Start at: 2018-08-11 20:50:51
End at: 2018-08-11 20:51:21
Local clock offset: 0.112 ms
Remote clock offset: -0.266 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 304.76 Mbit/s
95th percentile per-packet one-way delay: 63.299 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 274.32 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 43.74 Mbit/s
95th percentile per-packet one-way delay: 62.702 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 62.138 ms
Loss rate: 4.36%
```

Run 1: Report of TCP Cubic — Data Link
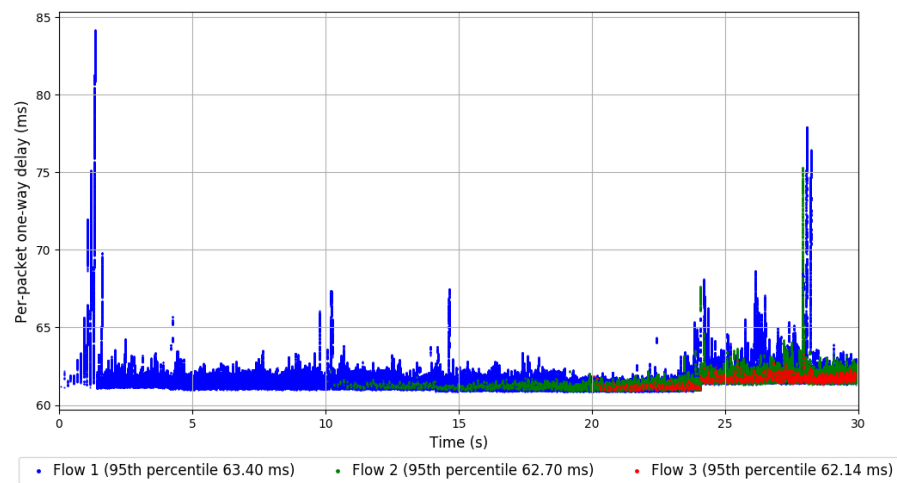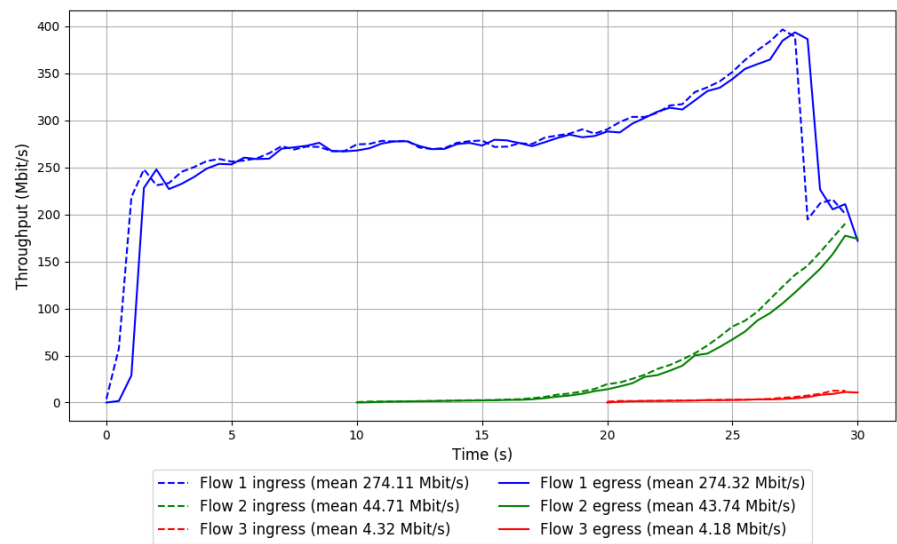
```
Run 2: Statistics of TCP Cubic

Start at: 2018-08-11 21:17:25
End at: 2018-08-11 21:17:55
Local clock offset: 0.055 ms
Remote clock offset: -0.26 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.67 Mbit/s
95th percentile per-packet one-way delay: 62.723 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 327.35 Mbit/s
95th percentile per-packet one-way delay: 62.718 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 62.822 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 62.055 ms
Loss rate: 4.80%
```
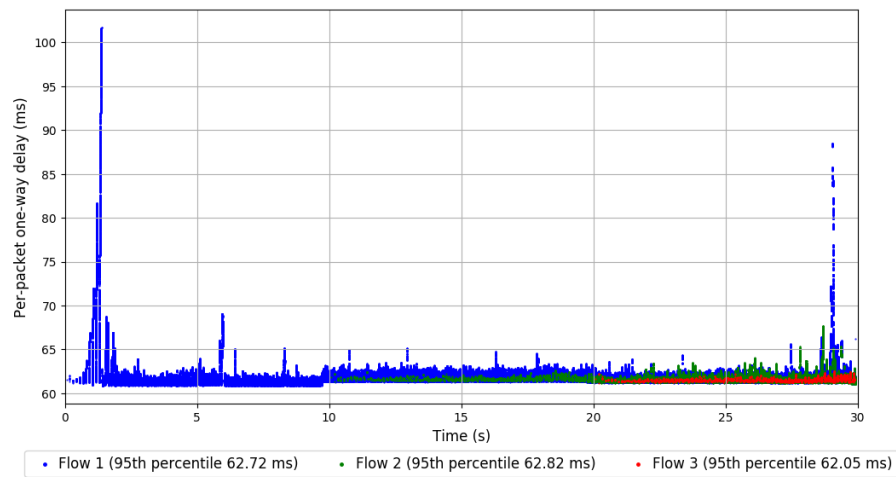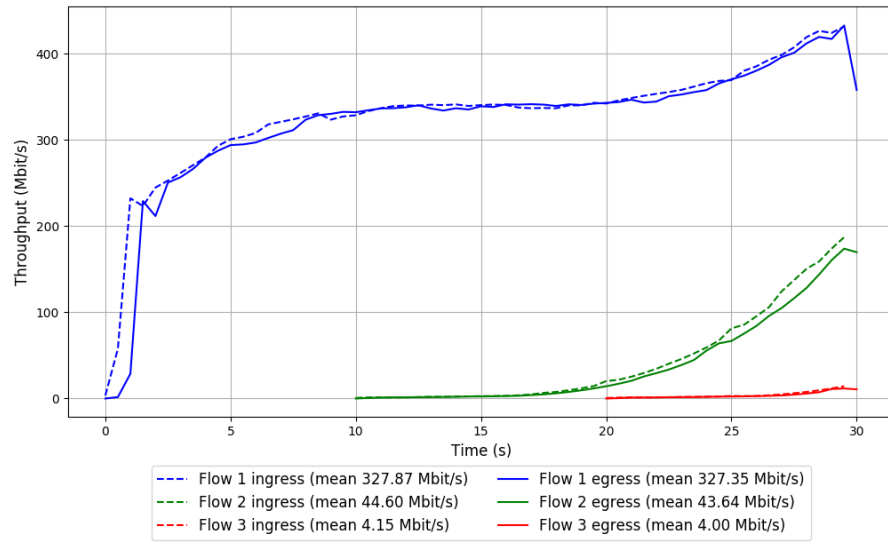
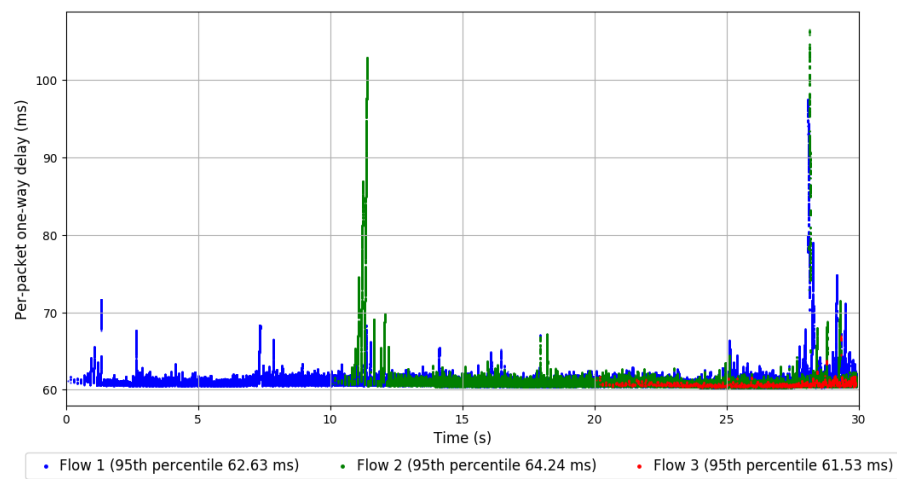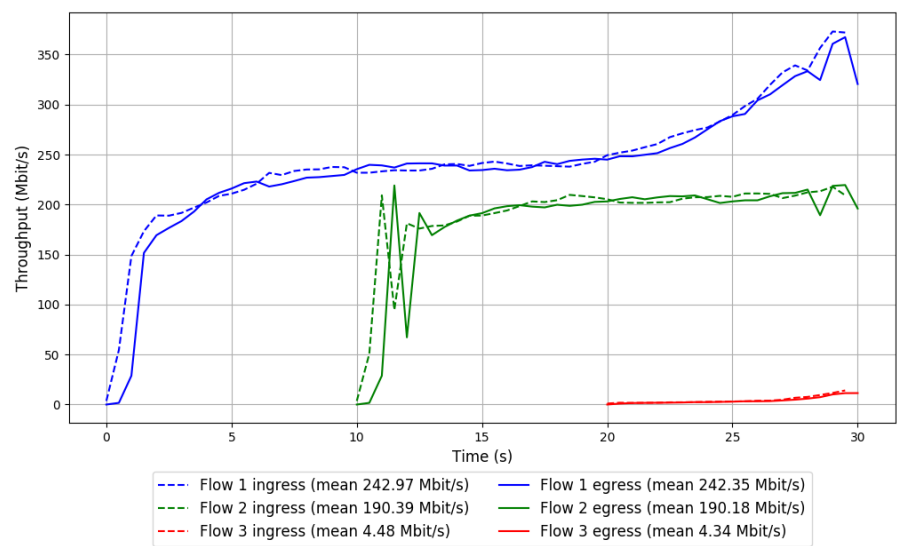Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-08-11 21:44:11
End at: 2018-08-11 21:44:41
Local clock offset: -0.025 ms
Remote clock offset: 0.379 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.26 Mbit/s
95th percentile per-packet one-way delay: 62.873 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 242.35 Mbit/s
95th percentile per-packet one-way delay: 62.635 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 190.18 Mbit/s
95th percentile per-packet one-way delay: 64.236 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 61.528 ms
Loss rate: 4.25%
```
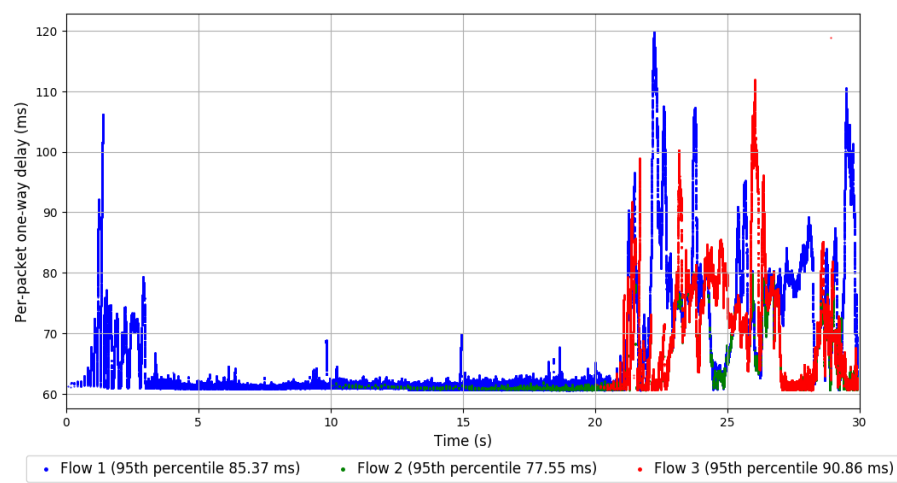
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 242.97 Mbit/s) --- Flow 1 egress (mean 242.35 Mbit/s)
Flow 2 ingress (mean 190.39 Mbit/s) --- Flow 2 egress (mean 190.18 Mbit/s)
Flow 3 ingress (mean 4.48 Mbit/s) --- Flow 3 egress (mean 4.34 Mbit/s)

Flow 1 (95th percentile 62.63 ms)   Flow 2 (95th percentile 64.24 ms)   Flow 3 (95th percentile 61.53 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-08-11 22:10:52
End at: 2018-08-11 22:11:22
Local clock offset: -0.023 ms
Remote clock offset: 0.067 ms


# Below is generated by plot.py at 2018-08-12 02:16:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 566.58 Mbit/s
95th percentile per-packet one-way delay: 85.629 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 438.29 Mbit/s
95th percentile per-packet one-way delay: 85.373 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 41.82 Mbit/s
95th percentile per-packet one-way delay: 77.547 ms
Loss rate: 2.87%
-- Flow 3:
Average throughput: 304.94 Mbit/s
95th percentile per-packet one-way delay: 90.856 ms
Loss rate: 1.02%
```
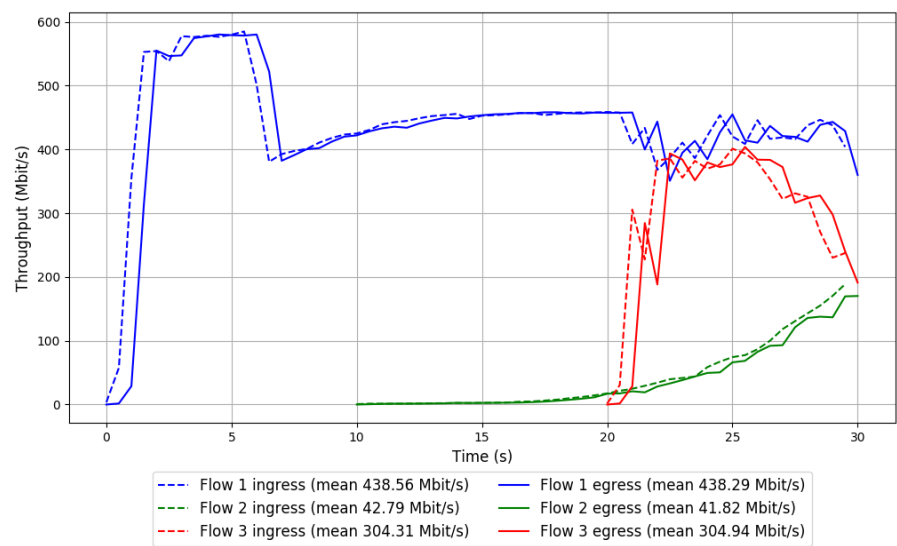
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 438.56 Mbit/s) --- Flow 1 egress (mean 438.29 Mbit/s)
Flow 2 ingress (mean 42.79 Mbit/s) --- Flow 2 egress (mean 41.82 Mbit/s)
Flow 3 ingress (mean 304.31 Mbit/s) --- Flow 3 egress (mean 304.94 Mbit/s)

Flow 1 (95th percentile 85.37 ms)   Flow 2 (95th percentile 77.55 ms)   Flow 3 (95th percentile 90.86 ms)

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```
Run 5: Statistics of TCP Cubic

Start at: 2018-08-11 22:37:58
End at: 2018-08-11 22:38:28
Local clock offset: 0.011 ms
Remote clock offset: -0.048 ms


# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.71 Mbit/s
95th percentile per-packet one-way delay: 66.775 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 233.25 Mbit/s
95th percentile per-packet one-way delay: 76.895 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 204.43 Mbit/s
95th percentile per-packet one-way delay: 63.516 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 192.82 Mbit/s
95th percentile per-packet one-way delay: 64.980 ms
Loss rate: 1.52%
```

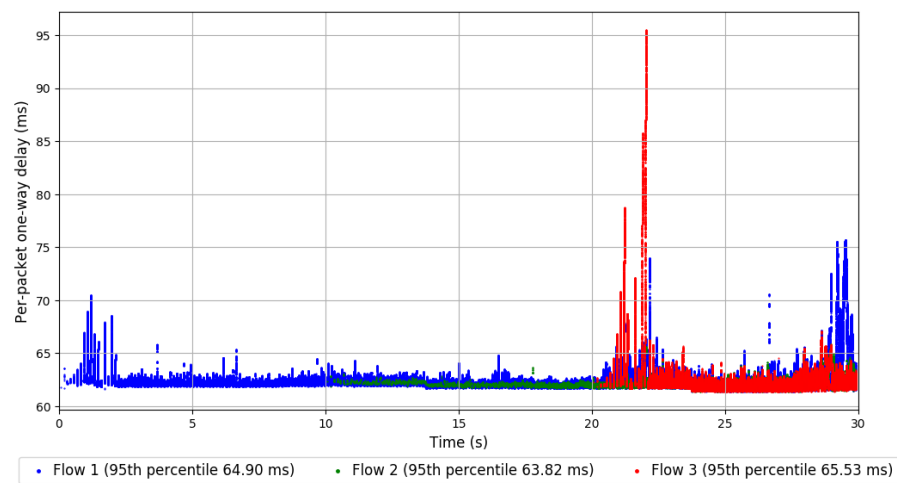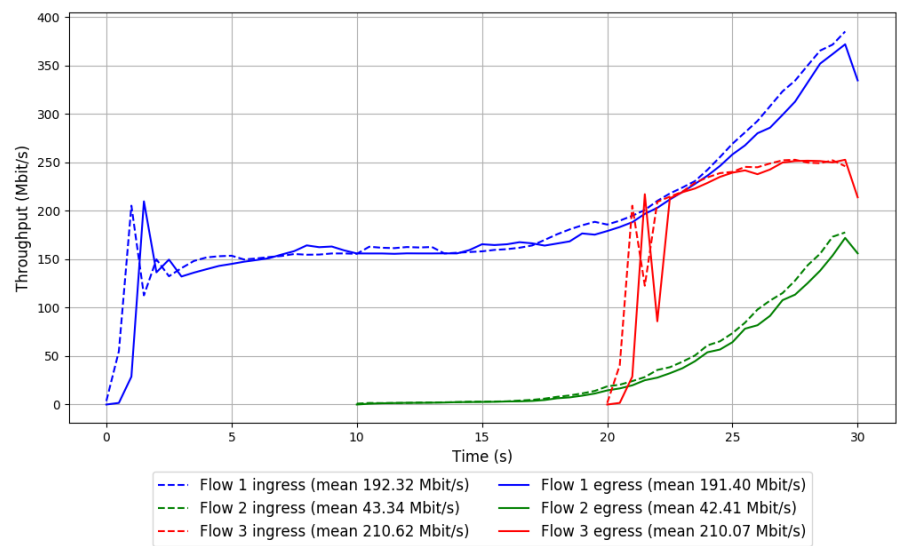Run 5: Report of TCP Cubic — Data Link
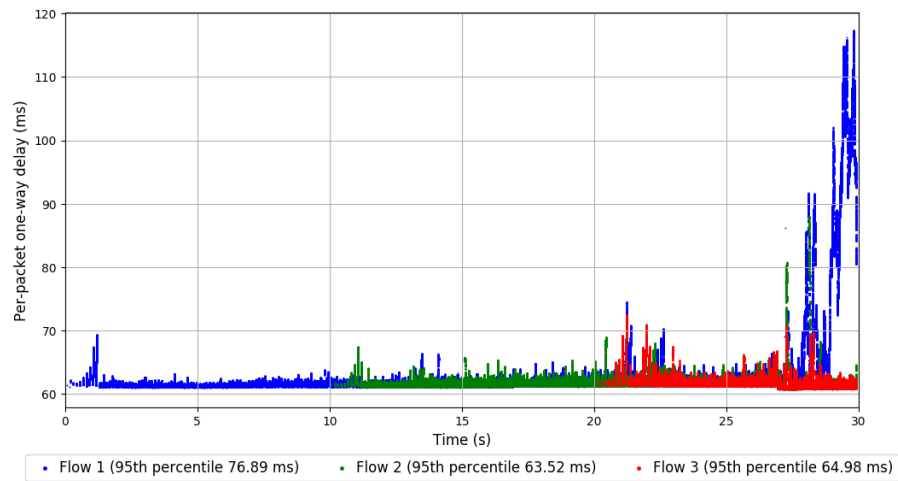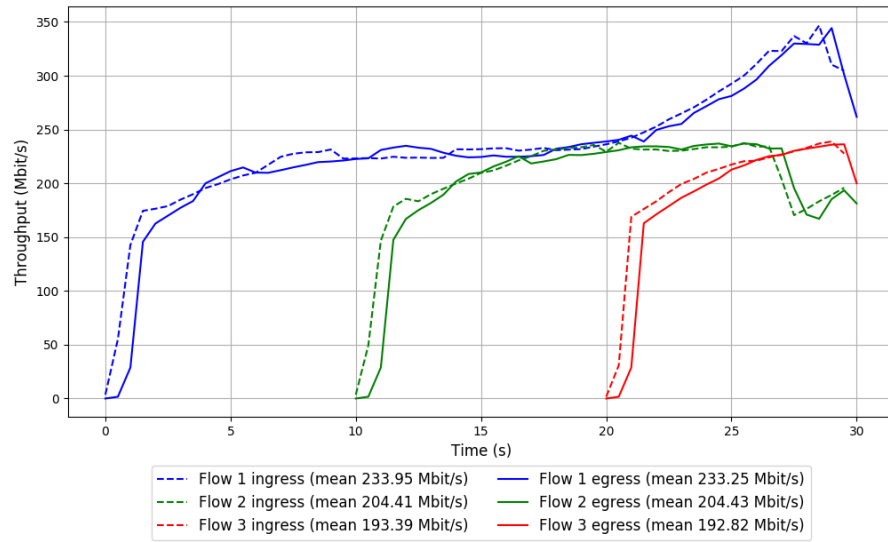
```
Run 6: Statistics of TCP Cubic

Start at: 2018-08-11 23:05:01
End at: 2018-08-11 23:05:31
Local clock offset: -0.084 ms
Remote clock offset: -0.793 ms


# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.86 Mbit/s
95th percentile per-packet one-way delay: 64.885 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 191.40 Mbit/s
95th percentile per-packet one-way delay: 64.896 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 42.41 Mbit/s
95th percentile per-packet one-way delay: 63.819 ms
Loss rate: 2.76%
-- Flow 3:
Average throughput: 210.07 Mbit/s
95th percentile per-packet one-way delay: 65.534 ms
Loss rate: 1.49%
```
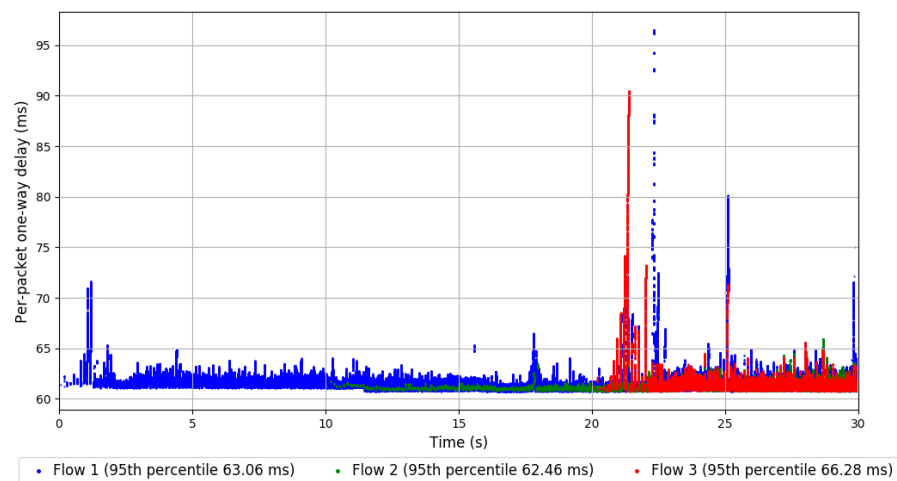
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2018-08-11 23:31:53
End at: 2018-08-11 23:32:23
Local clock offset: 0.045 ms
Remote clock offset: 0.111 ms


# Below is generated by plot.py at 2018-08-12 02:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.01 Mbit/s
95th percentile per-packet one-way delay: 63.232 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 220.88 Mbit/s
95th percentile per-packet one-way delay: 63.058 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 62.456 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 134.02 Mbit/s
95th percentile per-packet one-way delay: 66.275 ms
Loss rate: 1.43%
```
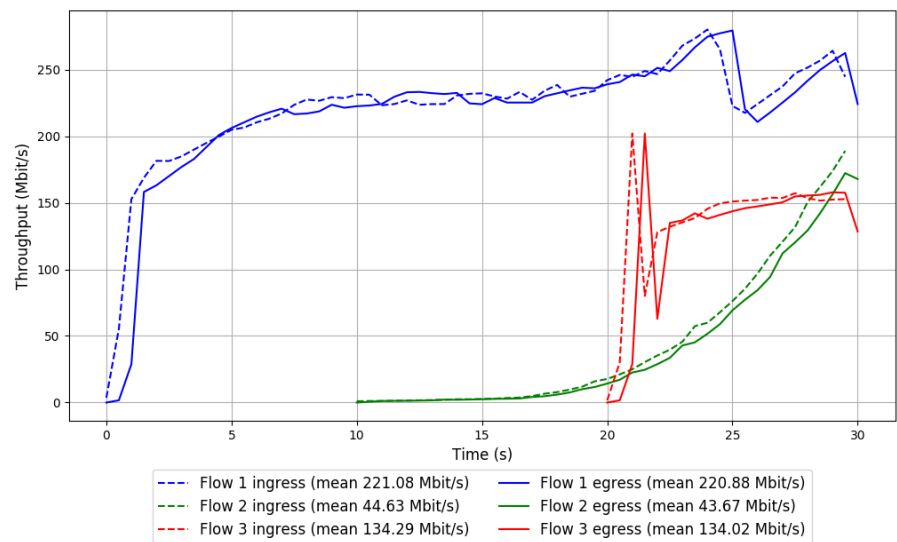
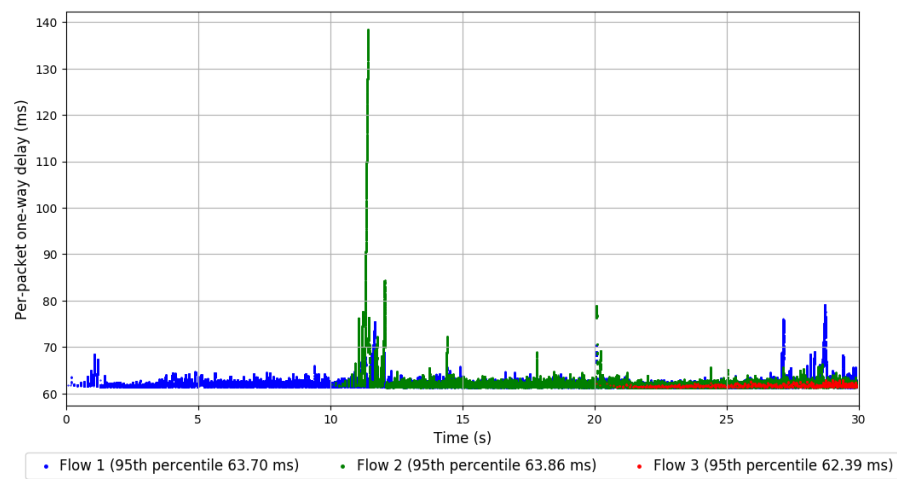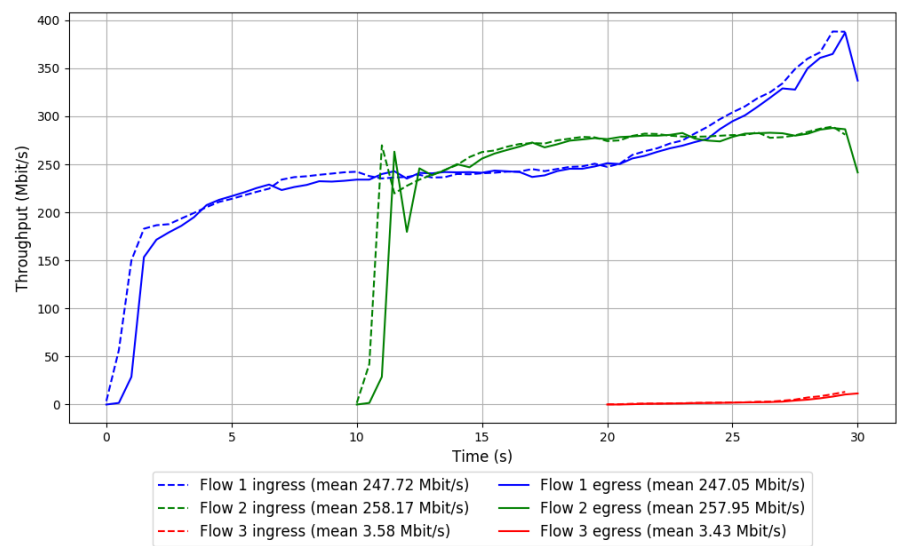Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2018-08-11 23:58:33
End at: 2018-08-11 23:59:03
Local clock offset: -0.037 ms
Remote clock offset: -0.532 ms


# Below is generated by plot.py at 2018-08-12 02:20:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 419.64 Mbit/s
95th percentile per-packet one-way delay: 63.730 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 247.05 Mbit/s
95th percentile per-packet one-way delay: 63.695 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 257.95 Mbit/s
95th percentile per-packet one-way delay: 63.859 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 62.393 ms
Loss rate: 5.36%
```

Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 247.72 Mbit/s) --- Flow 1 egress (mean 247.05 Mbit/s)
Flow 2 ingress (mean 258.17 Mbit/s) --- Flow 2 egress (mean 257.95 Mbit/s)
Flow 3 ingress (mean 3.58 Mbit/s) --- Flow 3 egress (mean 3.43 Mbit/s)

Flow 1 (95th percentile 63.70 ms)   Flow 2 (95th percentile 63.86 ms)   Flow 3 (95th percentile 62.39 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2018-08-12 00:25:25
End at: 2018-08-12 00:25:55
Local clock offset: -0.032 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2018-08-12 02:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.76 Mbit/s
95th percentile per-packet one-way delay: 70.634 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 266.15 Mbit/s
95th percentile per-packet one-way delay: 76.455 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 216.99 Mbit/s
95th percentile per-packet one-way delay: 63.346 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 62.281 ms
Loss rate: 4.47%
```

Run 9: Report of TCP Cubic — Data Link
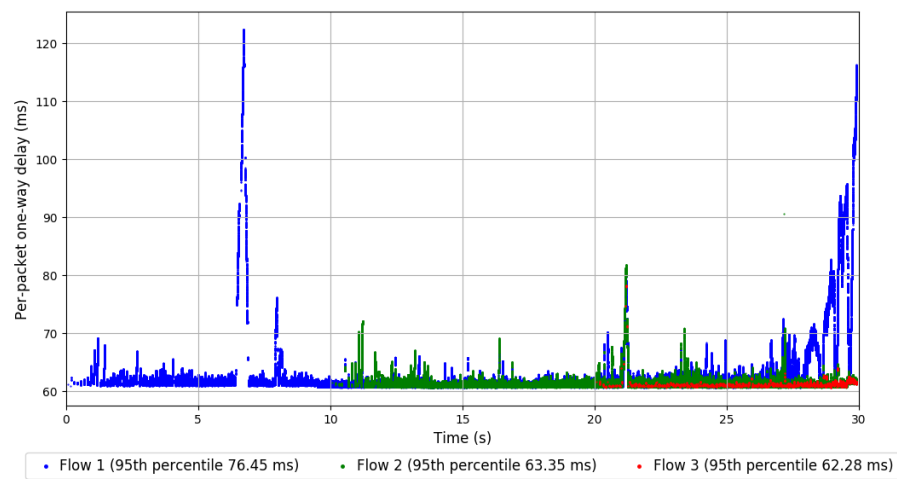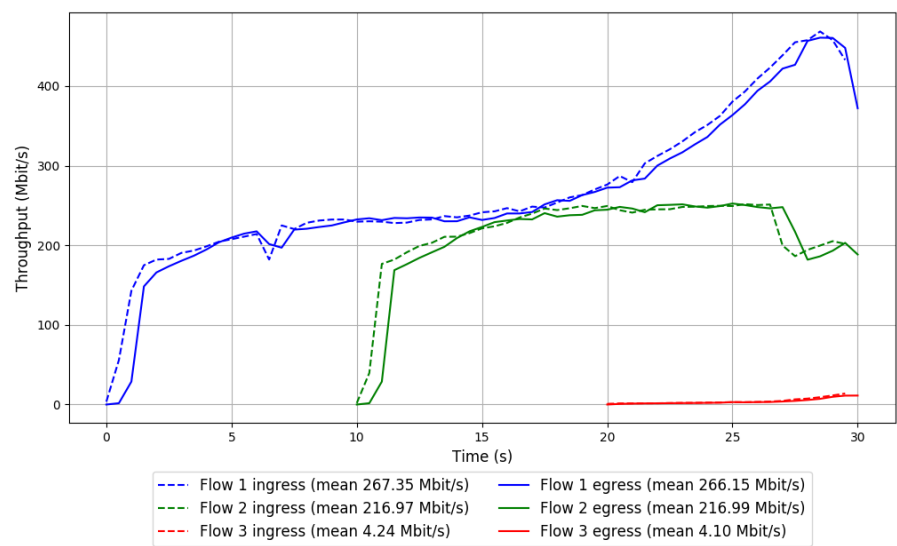
```
Run 10: Statistics of TCP Cubic

Start at: 2018-08-12 00:52:04
End at: 2018-08-12 00:52:35
Local clock offset: -0.04 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2018-08-12 02:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.42 Mbit/s
95th percentile per-packet one-way delay: 63.853 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 232.59 Mbit/s
95th percentile per-packet one-way delay: 63.645 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 42.32 Mbit/s
95th percentile per-packet one-way delay: 63.986 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 162.98 Mbit/s
95th percentile per-packet one-way delay: 64.399 ms
Loss rate: 1.55%
```
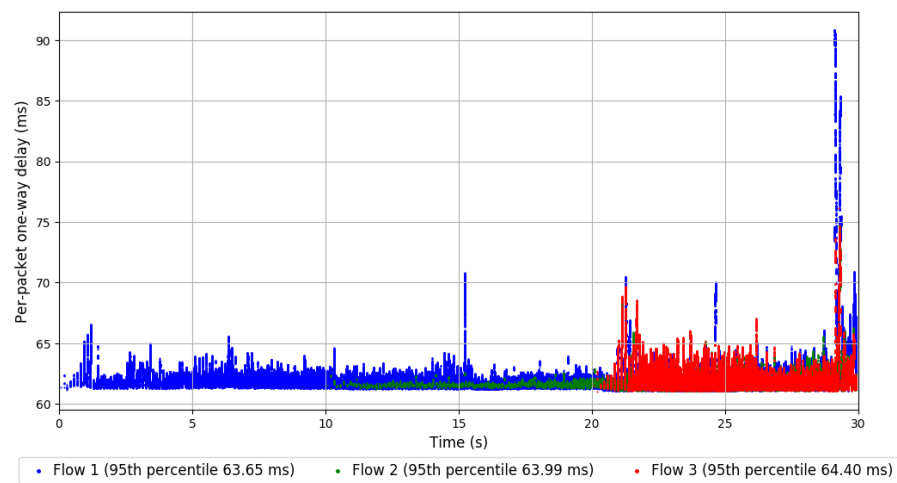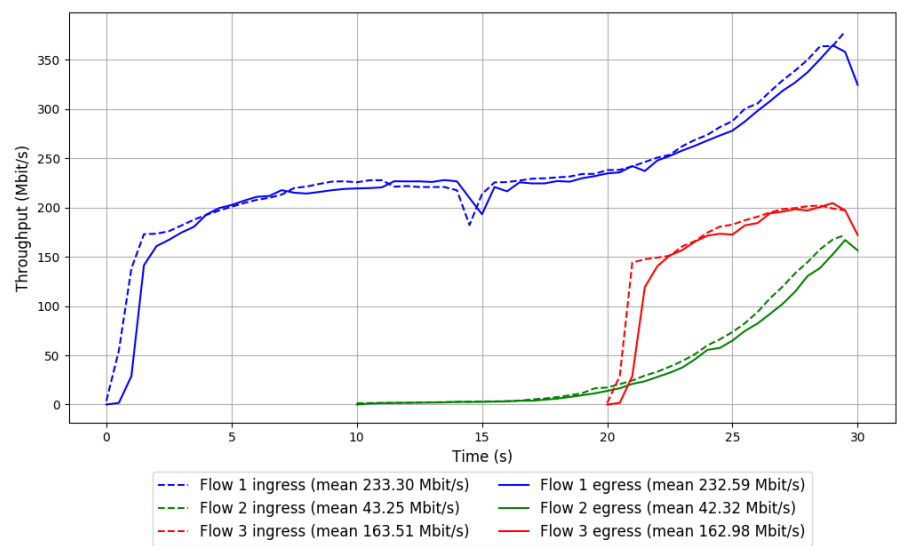
Run 10: Report of TCP Cubic — Data Link

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```
Run 1: Statistics of FillP

Start at: 2018-08-11 21:07:31
End at: 2018-08-11 21:08:01
Local clock offset: 0.034 ms
Remote clock offset: 1.152 ms


# Below is generated by plot.py at 2018-08-12 02:46:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1422.88 Mbit/s
95th percentile per-packet one-way delay: 131.680 ms
Loss rate: 2.89%
-- Flow 1:
Average throughput: 743.61 Mbit/s
95th percentile per-packet one-way delay: 135.408 ms
Loss rate: 3.53%
-- Flow 2:
Average throughput: 717.12 Mbit/s
95th percentile per-packet one-way delay: 125.039 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 617.69 Mbit/s
95th percentile per-packet one-way delay: 134.956 ms
Loss rate: 3.55%
```
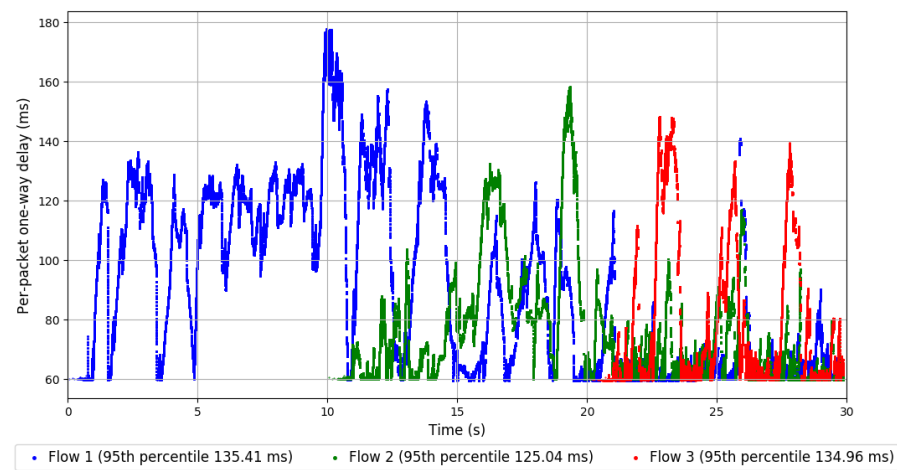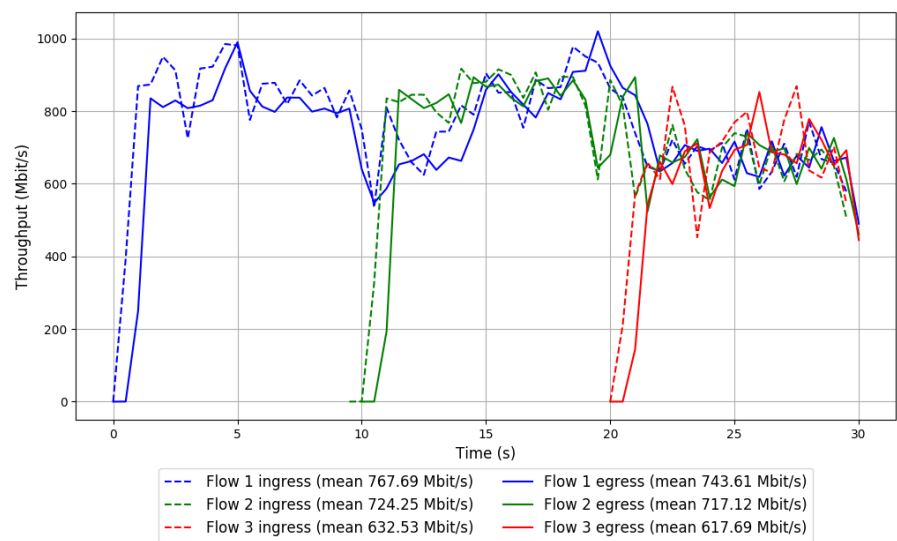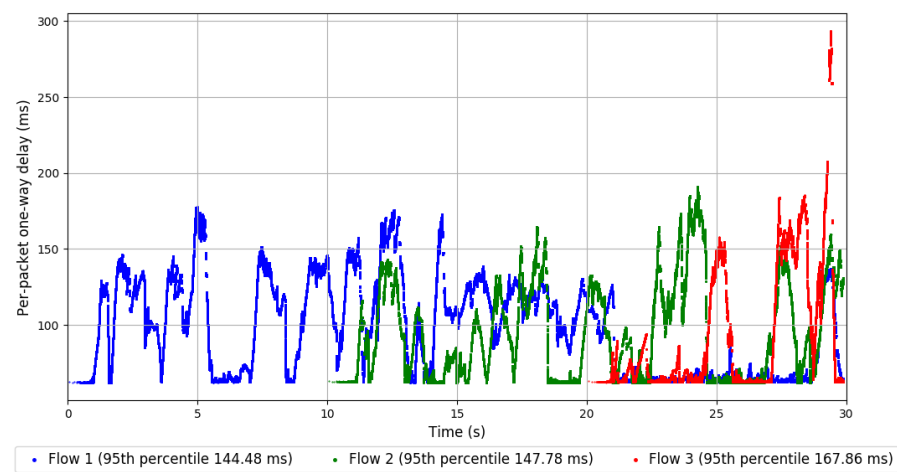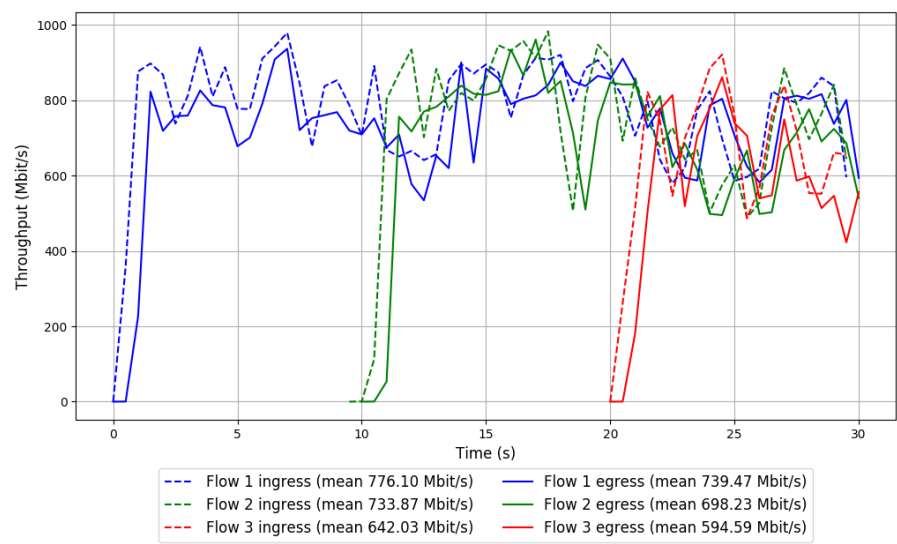
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 767.69 Mbit/s) --- Flow 1 egress (mean 743.61 Mbit/s)
Flow 2 ingress (mean 724.25 Mbit/s) --- Flow 2 egress (mean 717.12 Mbit/s)
Flow 3 ingress (mean 632.53 Mbit/s) --- Flow 3 egress (mean 617.69 Mbit/s)

Flow 1 (95th percentile 135.41 ms) • Flow 2 (95th percentile 125.04 ms) • Flow 3 (95th percentile 134.96 ms)

```
Run 2: Statistics of FillP

Start at: 2018-08-11 21:34:11
End at: 2018-08-11 21:34:41
Local clock offset: 0.042 ms
Remote clock offset: -1.471 ms

# Below is generated by plot.py at 2018-08-12 02:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1398.96 Mbit/s
95th percentile per-packet one-way delay: 149.644 ms
Loss rate: 5.72%
-- Flow 1:
Average throughput: 739.47 Mbit/s
95th percentile per-packet one-way delay: 144.479 ms
Loss rate: 5.11%
-- Flow 2:
Average throughput: 698.23 Mbit/s
95th percentile per-packet one-way delay: 147.782 ms
Loss rate: 5.44%
-- Flow 3:
Average throughput: 594.59 Mbit/s
95th percentile per-packet one-way delay: 167.861 ms
Loss rate: 8.54%
```
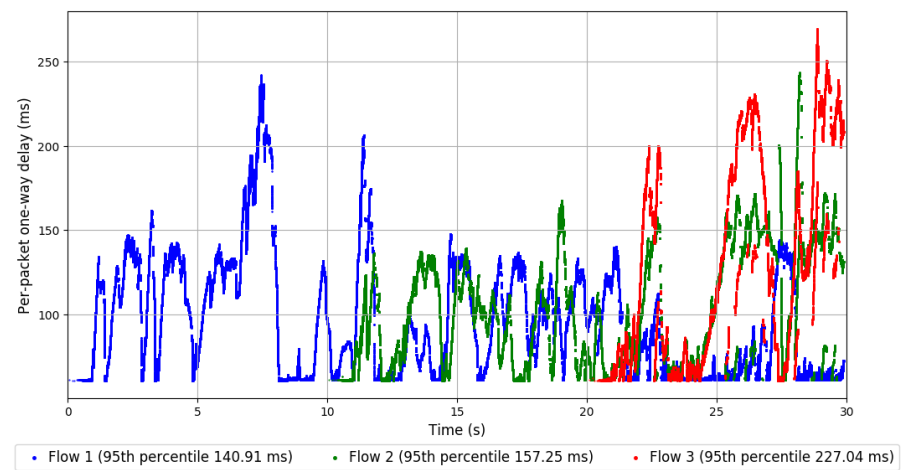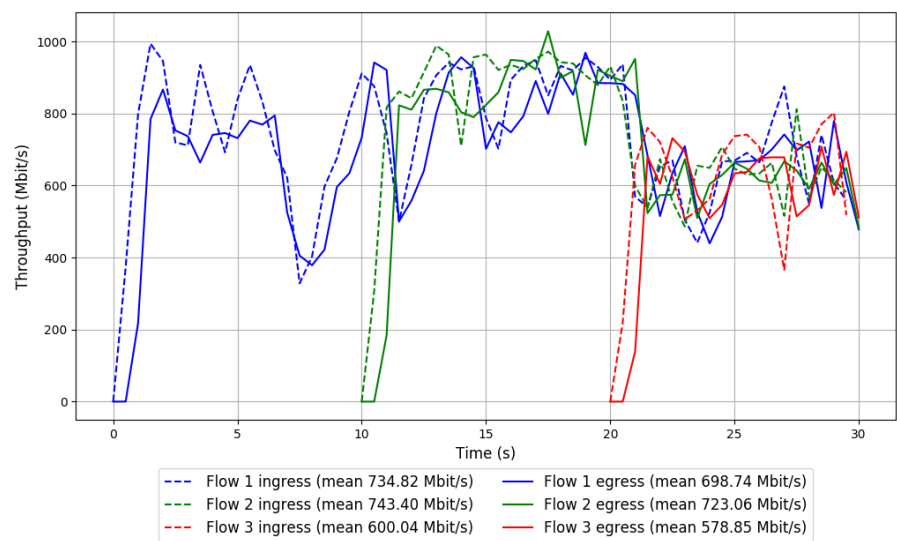
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 776.10 Mbit/s) Flow 1 egress (mean 739.47 Mbit/s)
Flow 2 ingress (mean 733.87 Mbit/s) Flow 2 egress (mean 698.23 Mbit/s)
Flow 3 ingress (mean 642.03 Mbit/s) Flow 3 egress (mean 594.59 Mbit/s)

Flow 1 (95th percentile 144.48 ms)   Flow 2 (95th percentile 147.78 ms)   Flow 3 (95th percentile 167.86 ms)

```
Run 3: Statistics of FillP

Start at: 2018-08-11 22:00:56
End at: 2018-08-11 22:01:26
Local clock offset: -0.094 ms
Remote clock offset: -0.296 ms


# Below is generated by plot.py at 2018-08-12 02:46:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1369.08 Mbit/s
95th percentile per-packet one-way delay: 184.489 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 698.74 Mbit/s
95th percentile per-packet one-way delay: 140.905 ms
Loss rate: 5.30%
-- Flow 2:
Average throughput: 723.06 Mbit/s
95th percentile per-packet one-way delay: 157.252 ms
Loss rate: 3.34%
-- Flow 3:
Average throughput: 578.85 Mbit/s
95th percentile per-packet one-way delay: 227.040 ms
Loss rate: 4.74%
```

Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 734.82 Mbit/s)   Flow 1 egress (mean 698.74 Mbit/s)
Flow 2 ingress (mean 743.40 Mbit/s)   Flow 2 egress (mean 723.06 Mbit/s)
Flow 3 ingress (mean 600.04 Mbit/s)   Flow 3 egress (mean 578.85 Mbit/s)

Flow 1 (95th percentile 140.91 ms)   Flow 2 (95th percentile 157.25 ms)   Flow 3 (95th percentile 227.04 ms)

```
Run 4: Statistics of FillP

Start at: 2018-08-11 22:27:55
End at: 2018-08-11 22:28:25
Local clock offset: -0.021 ms
Remote clock offset: -0.25 ms

# Below is generated by plot.py at 2018-08-12 02:47:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1420.75 Mbit/s
95th percentile per-packet one-way delay: 138.607 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 713.42 Mbit/s
95th percentile per-packet one-way delay: 143.229 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 754.75 Mbit/s
95th percentile per-packet one-way delay: 137.301 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 626.67 Mbit/s
95th percentile per-packet one-way delay: 122.077 ms
Loss rate: 3.10%
```
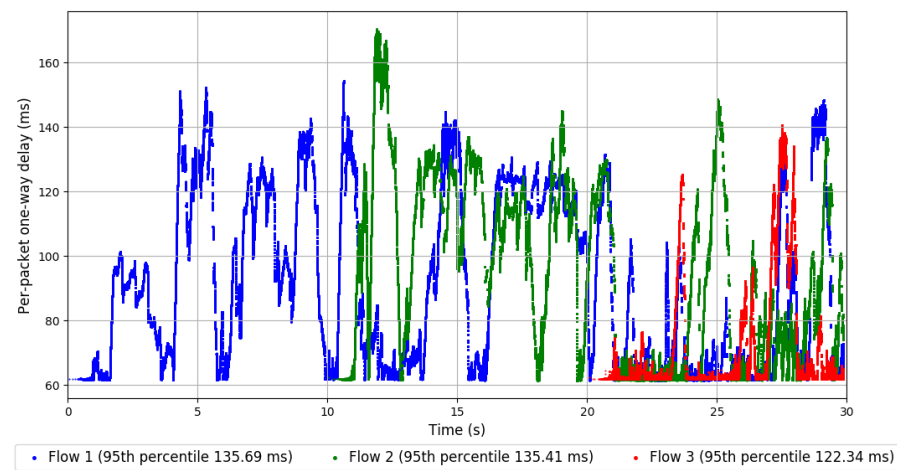
Run 4: Report of FillP — Data Link
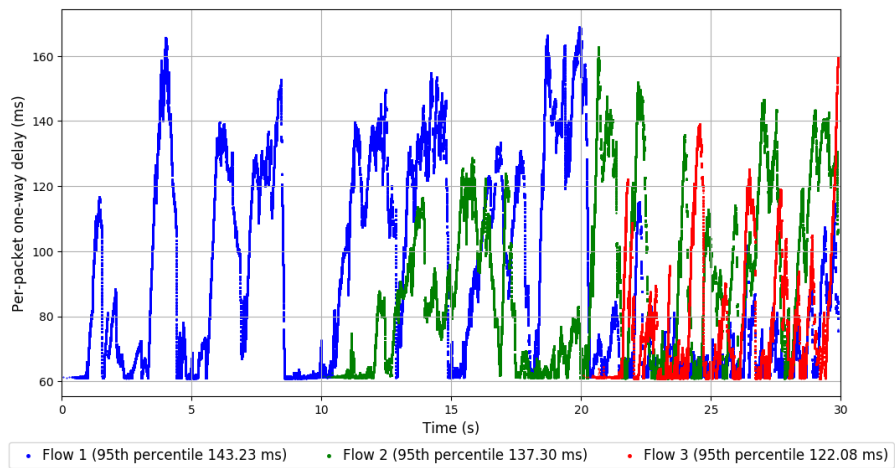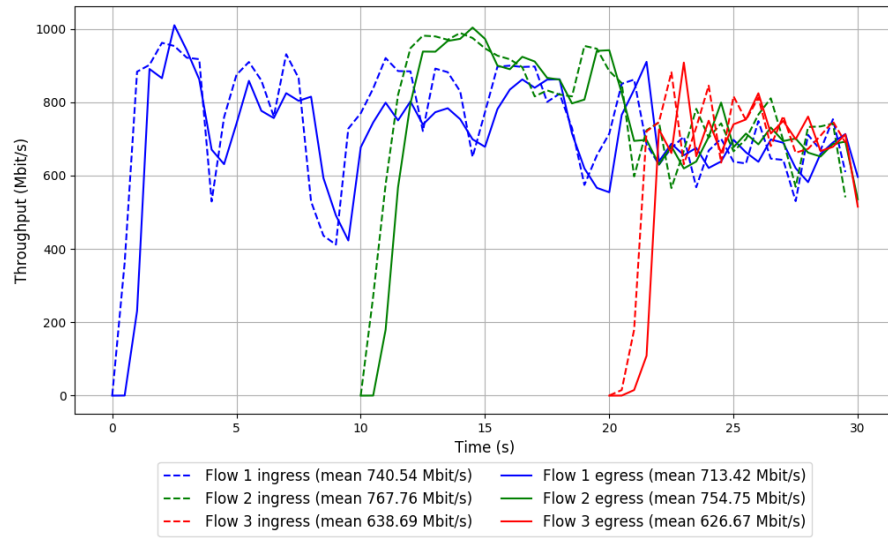
```
Run 5: Statistics of FillP

Start at: 2018-08-11 22:54:53
End at: 2018-08-11 22:55:23
Local clock offset: -0.031 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2018-08-12 02:49:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1440.34 Mbit/s
95th percentile per-packet one-way delay: 157.884 ms
Loss rate: 2.90%
-- Flow 1:
Average throughput: 793.55 Mbit/s
95th percentile per-packet one-way delay: 130.484 ms
Loss rate: 2.63%
-- Flow 2:
Average throughput: 726.71 Mbit/s
95th percentile per-packet one-way delay: 169.875 ms
Loss rate: 3.54%
-- Flow 3:
Average throughput: 500.89 Mbit/s
95th percentile per-packet one-way delay: 167.027 ms
Loss rate: 2.33%
```

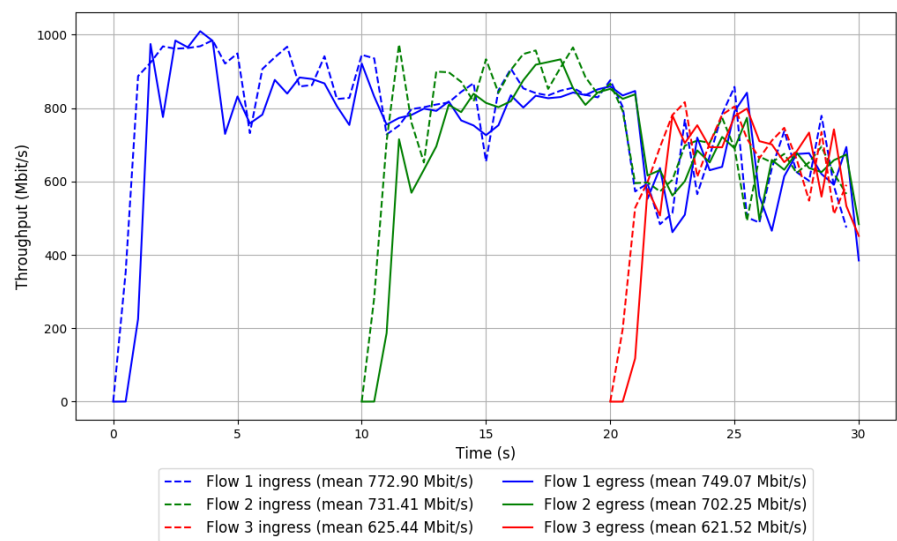Run 5: Report of FillP — Data Link
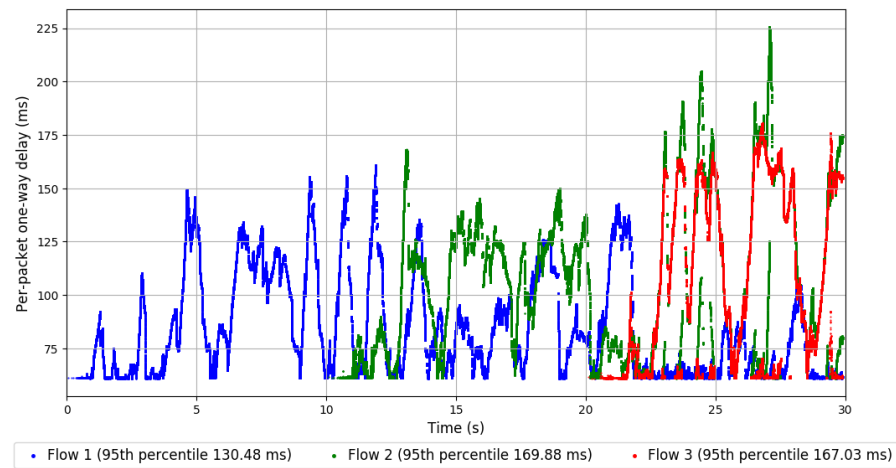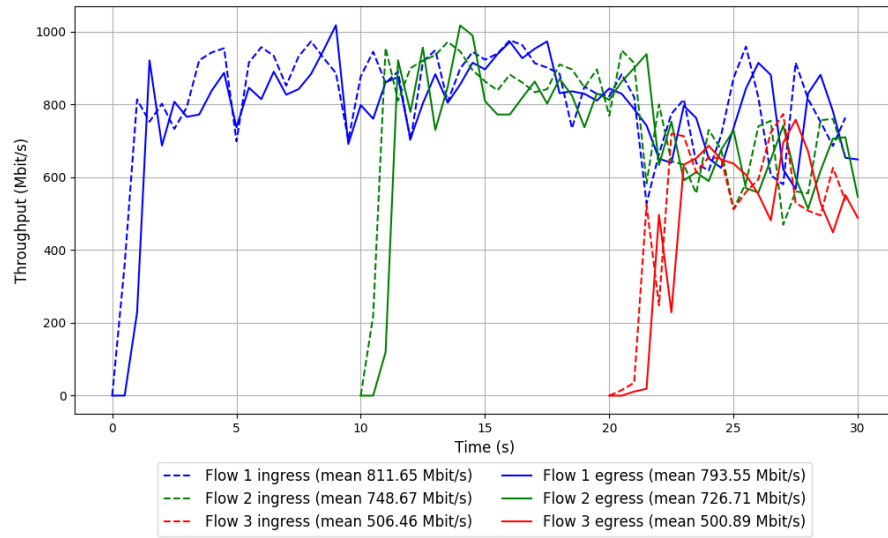
```
Run 6: Statistics of FillP

Start at: 2018-08-11 23:21:49
End at: 2018-08-11 23:22:19
Local clock offset: 0.023 ms
Remote clock offset: -0.575 ms


# Below is generated by plot.py at 2018-08-12 02:51:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1419.80 Mbit/s
95th percentile per-packet one-way delay: 134.566 ms
Loss rate: 3.62%
-- Flow 1:
Average throughput: 749.07 Mbit/s
95th percentile per-packet one-way delay: 135.691 ms
Loss rate: 3.48%
-- Flow 2:
Average throughput: 702.25 Mbit/s
95th percentile per-packet one-way delay: 135.406 ms
Loss rate: 4.58%
-- Flow 3:
Average throughput: 621.52 Mbit/s
95th percentile per-packet one-way delay: 122.344 ms
Loss rate: 1.87%
```
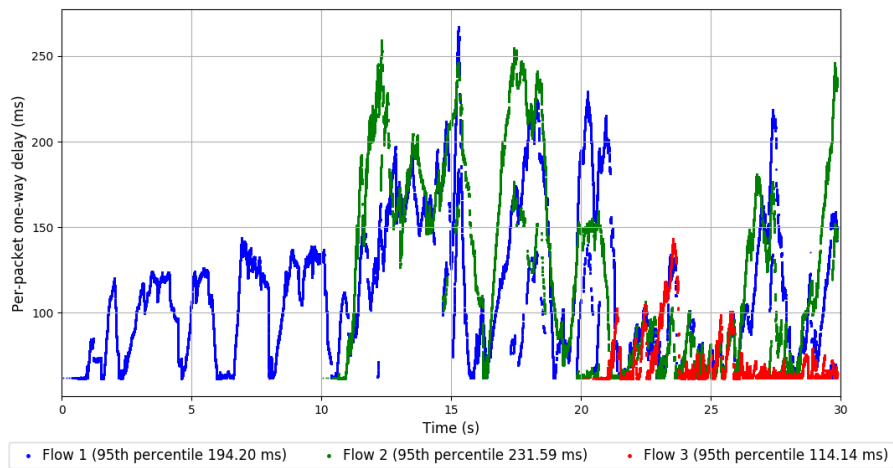
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 772.90 Mbit/s) --- Flow 1 egress (mean 749.07 Mbit/s)
Flow 2 ingress (mean 731.41 Mbit/s) --- Flow 2 egress (mean 702.25 Mbit/s)
Flow 3 ingress (mean 625.44 Mbit/s) --- Flow 3 egress (mean 621.52 Mbit/s)

Flow 1 (95th percentile 135.69 ms) · Flow 2 (95th percentile 135.41 ms) · Flow 3 (95th percentile 122.34 ms)

```
Run 7: Statistics of FillP

Start at: 2018-08-11 23:48:34
End at: 2018-08-11 23:49:04
Local clock offset: 0.006 ms
Remote clock offset: -0.156 ms

# Below is generated by plot.py at 2018-08-12 02:53:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1466.81 Mbit/s
95th percentile per-packet one-way delay: 129.812 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 789.12 Mbit/s
95th percentile per-packet one-way delay: 122.594 ms
Loss rate: 1.97%
-- Flow 2:
Average throughput: 722.07 Mbit/s
95th percentile per-packet one-way delay: 121.555 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 602.62 Mbit/s
95th percentile per-packet one-way delay: 155.068 ms
Loss rate: 5.12%
```

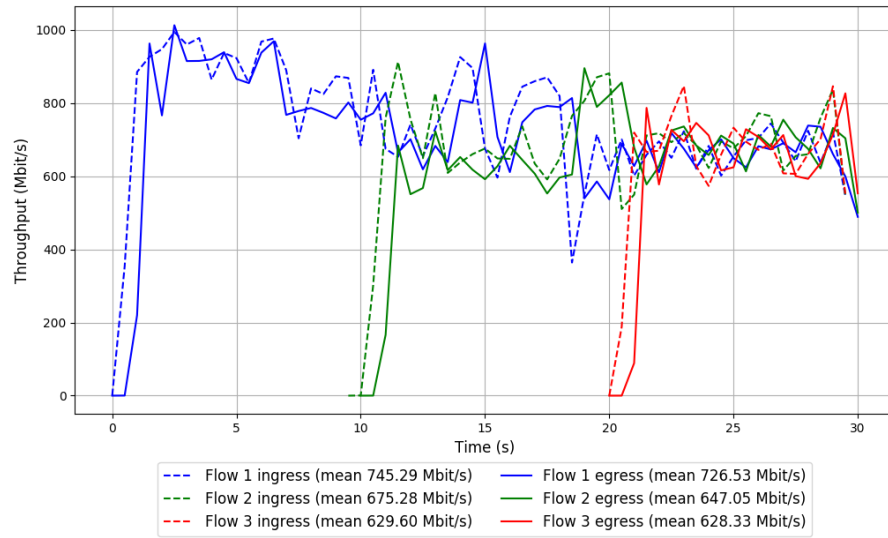# Run 7: Report of FillP — Data Link
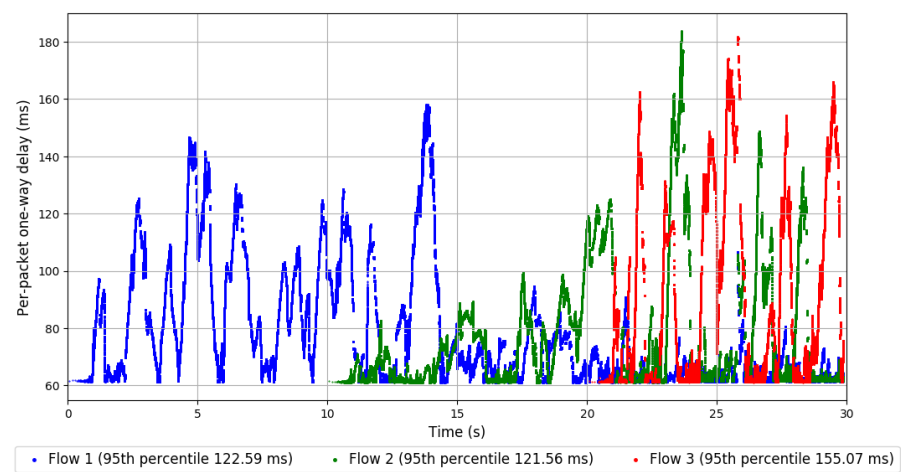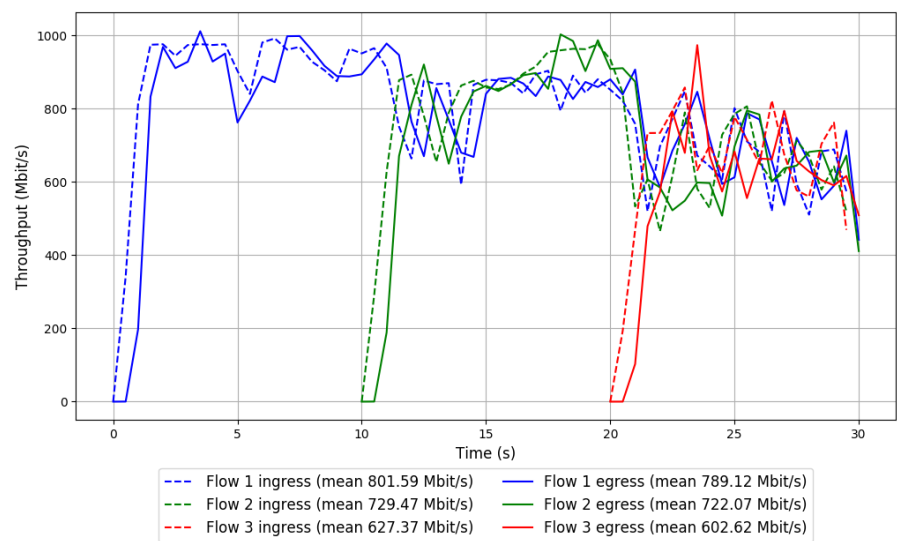
```
Run 8: Statistics of FillP

Start at: 2018-08-12 00:15:29
End at: 2018-08-12 00:15:59
Local clock offset: -0.066 ms
Remote clock offset: -0.728 ms


# Below is generated by plot.py at 2018-08-12 02:53:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1362.88 Mbit/s
95th percentile per-packet one-way delay: 208.861 ms
Loss rate: 3.26%
-- Flow 1:
Average throughput: 726.53 Mbit/s
95th percentile per-packet one-way delay: 194.198 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 647.05 Mbit/s
95th percentile per-packet one-way delay: 231.590 ms
Loss rate: 4.76%
-- Flow 3:
Average throughput: 628.33 Mbit/s
95th percentile per-packet one-way delay: 114.145 ms
Loss rate: 1.26%
```

Run 8: Report of FillP — Data Link

Flow 1 ingress (mean 745.29 Mbit/s) --- Flow 1 egress (mean 726.53 Mbit/s)
Flow 2 ingress (mean 675.28 Mbit/s) --- Flow 2 egress (mean 647.05 Mbit/s)
Flow 3 ingress (mean 629.60 Mbit/s) --- Flow 3 egress (mean 628.33 Mbit/s)

Flow 1 (95th percentile 194.20 ms) · Flow 2 (95th percentile 231.59 ms) · Flow 3 (95th percentile 114.14 ms)

```
Run 9: Statistics of FillP

Start at: 2018-08-12 00:42:06
End at: 2018-08-12 00:42:36
Local clock offset: -0.033 ms
Remote clock offset: -0.981 ms


# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1390.65 Mbit/s
95th percentile per-packet one-way delay: 146.934 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 734.32 Mbit/s
95th percentile per-packet one-way delay: 142.667 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 686.42 Mbit/s
95th percentile per-packet one-way delay: 149.647 ms
Loss rate: 3.13%
-- Flow 3:
Average throughput: 610.30 Mbit/s
95th percentile per-packet one-way delay: 149.565 ms
Loss rate: 2.91%
```
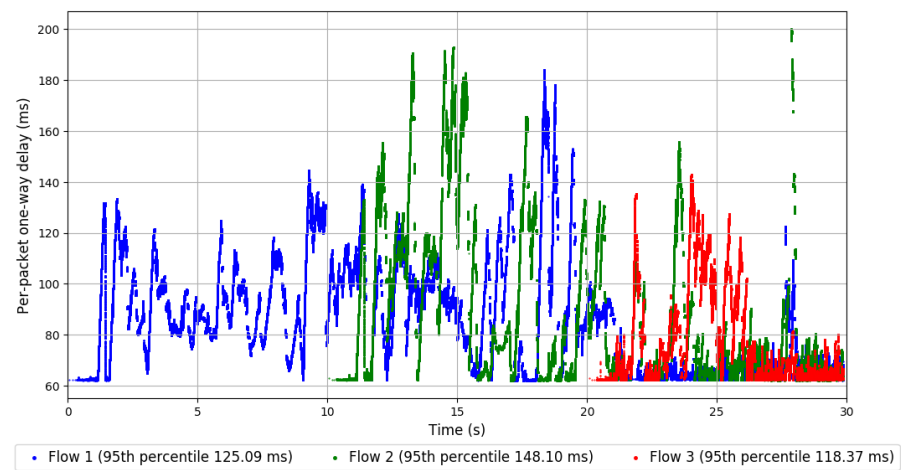
Run 9: Report of FillP — Data Link
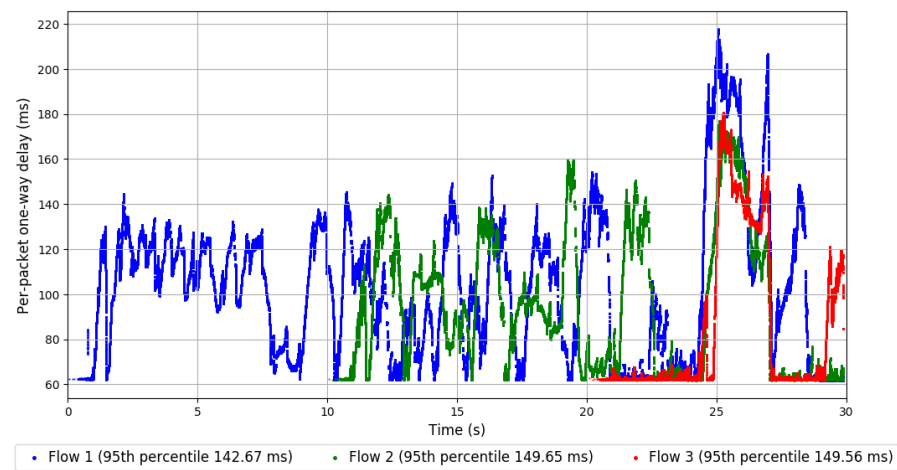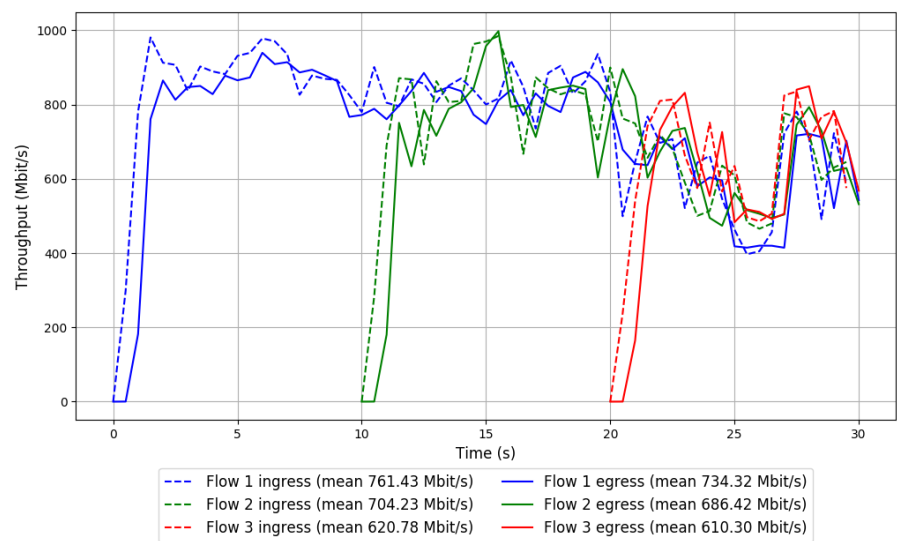
```
Run 10: Statistics of FillP

Start at: 2018-08-12 01:08:40
End at: 2018-08-12 01:09:10
Local clock offset: -0.058 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1269.11 Mbit/s
95th percentile per-packet one-way delay: 206.954 ms
Loss rate: 4.18%
-- Flow 1:
Average throughput: 659.72 Mbit/s
95th percentile per-packet one-way delay: 217.065 ms
Loss rate: 4.90%
-- Flow 2:
Average throughput: 633.42 Mbit/s
95th percentile per-packet one-way delay: 206.630 ms
Loss rate: 3.25%
-- Flow 3:
Average throughput: 574.54 Mbit/s
95th percentile per-packet one-way delay: 118.875 ms
Loss rate: 3.70%
```

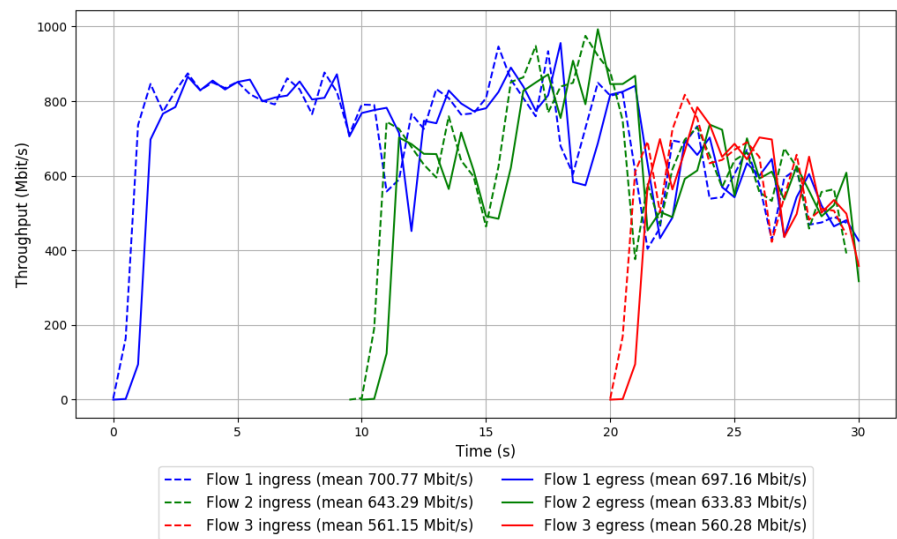Run 10: Report of FillP — Data Link

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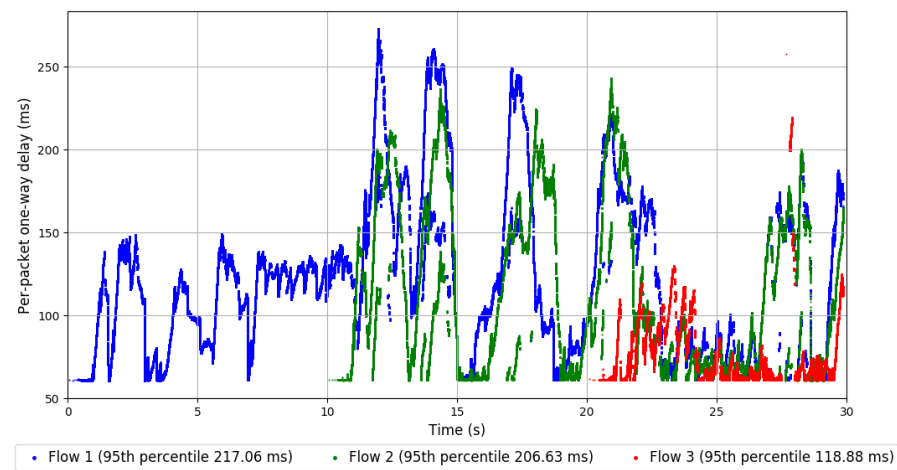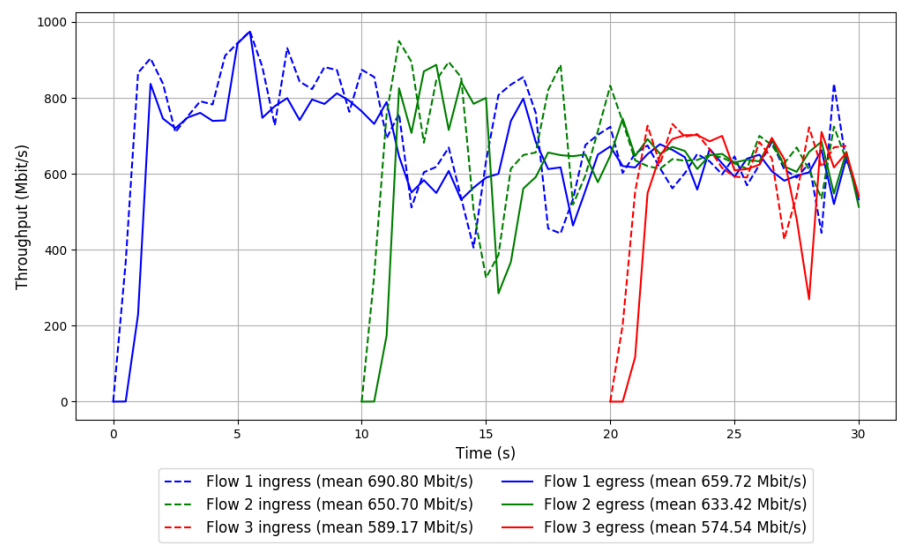
```
Run 1: Statistics of FillP-Sheep

Start at: 2018-08-11 21:05:28
End at: 2018-08-11 21:05:58
Local clock offset: 0.046 ms
Remote clock offset: -1.358 ms


# Below is generated by plot.py at 2018-08-12 03:17:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1302.33 Mbit/s
95th percentile per-packet one-way delay: 130.615 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 697.16 Mbit/s
95th percentile per-packet one-way delay: 125.087 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 633.83 Mbit/s
95th percentile per-packet one-way delay: 148.101 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 560.28 Mbit/s
95th percentile per-packet one-way delay: 118.367 ms
Loss rate: 1.32%
```

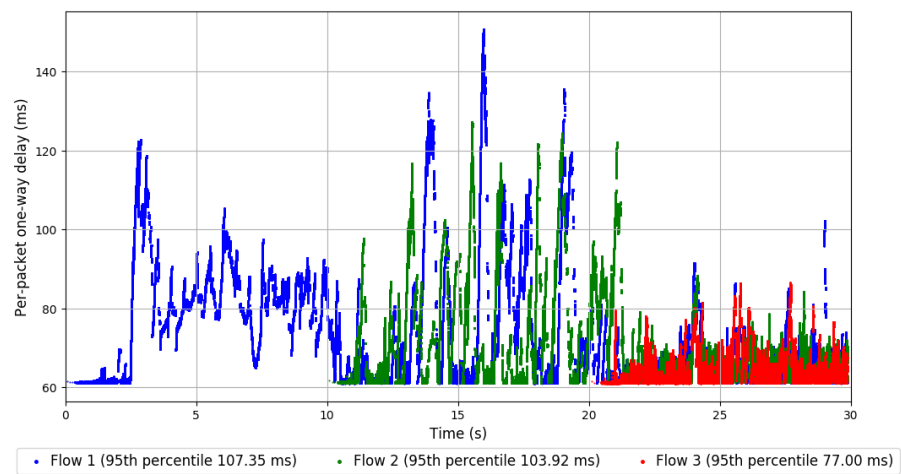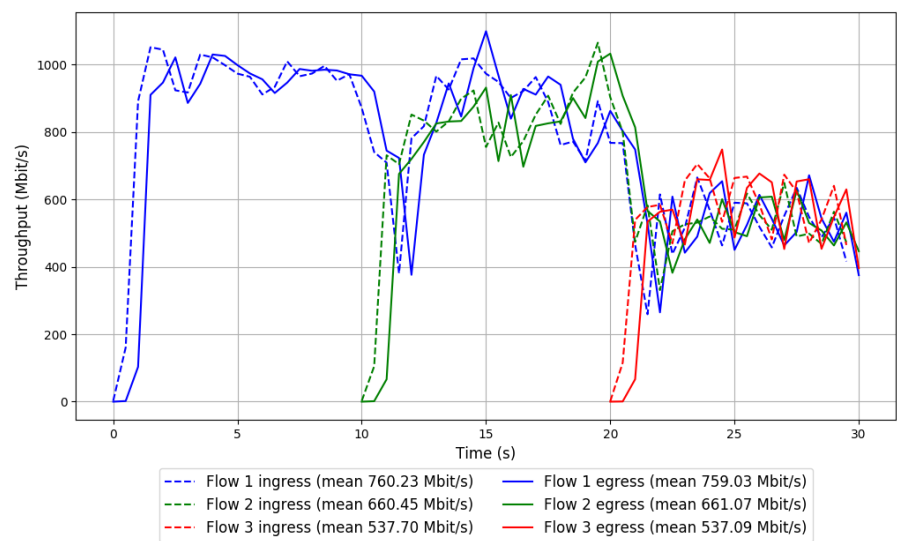# Run 1: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 700.77 Mbit/s)   ──── Flow 1 egress (mean 697.16 Mbit/s)
- - - - Flow 2 ingress (mean 643.29 Mbit/s)   ──── Flow 2 egress (mean 633.83 Mbit/s)
- - - - Flow 3 ingress (mean 561.15 Mbit/s)   ──── Flow 3 egress (mean 560.28 Mbit/s)

- Flow 1 (95th percentile 125.09 ms)   • Flow 2 (95th percentile 148.10 ms)   • Flow 3 (95th percentile 118.37 ms)
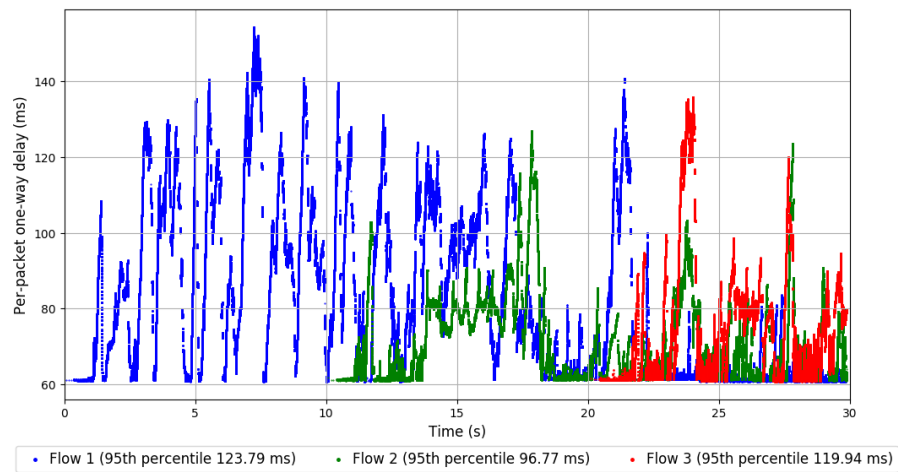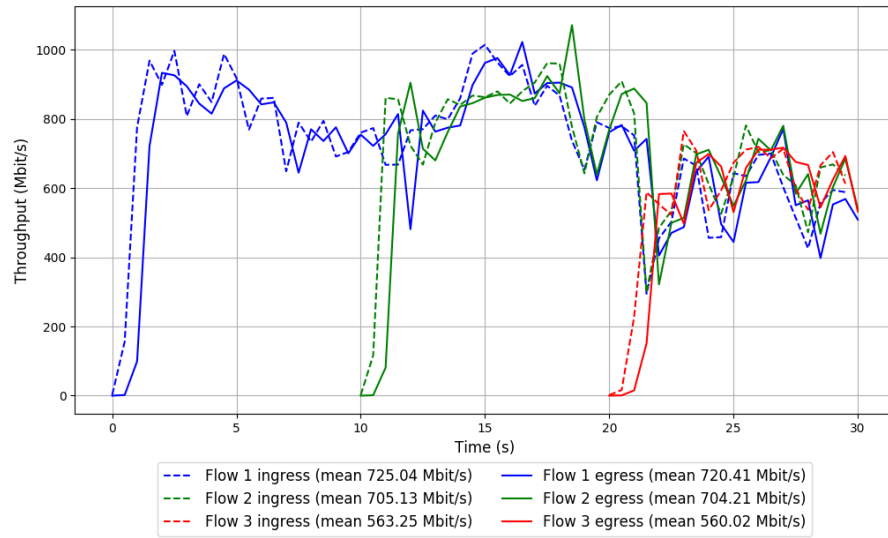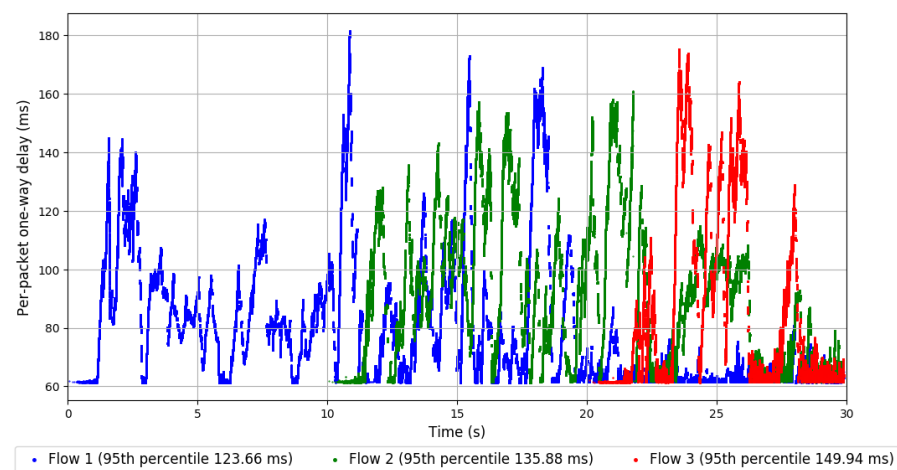
```
Run 2: Statistics of FillP-Sheep

Start at: 2018-08-11 21:32:05
End at: 2018-08-11 21:32:35
Local clock offset: -0.017 ms
Remote clock offset: -0.171 ms


# Below is generated by plot.py at 2018-08-12 03:18:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1374.29 Mbit/s
95th percentile per-packet one-way delay: 103.927 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 759.03 Mbit/s
95th percentile per-packet one-way delay: 107.351 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 661.07 Mbit/s
95th percentile per-packet one-way delay: 103.916 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 537.09 Mbit/s
95th percentile per-packet one-way delay: 77.002 ms
Loss rate: 1.37%
```
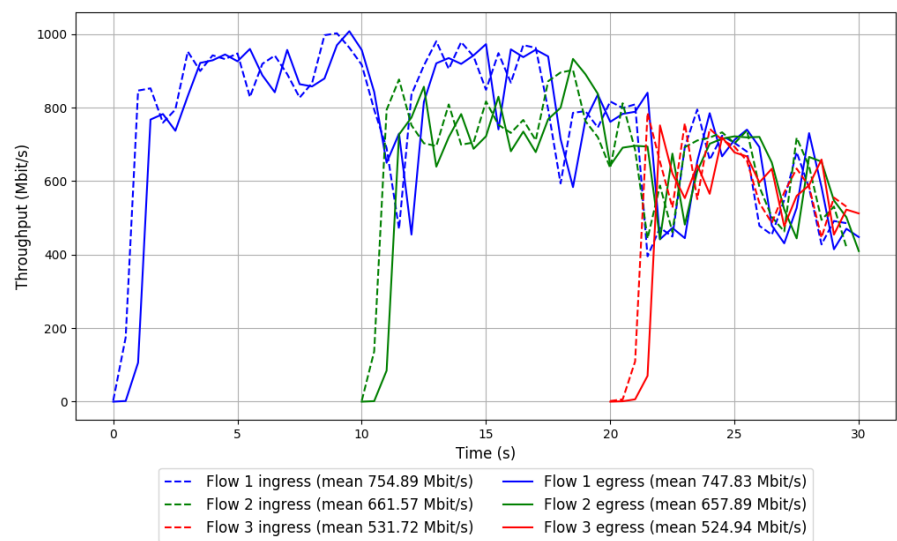
Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 760.23 Mbit/s) --- Flow 1 egress (mean 759.03 Mbit/s)
Flow 2 ingress (mean 660.45 Mbit/s) --- Flow 2 egress (mean 661.07 Mbit/s)
Flow 3 ingress (mean 537.70 Mbit/s) --- Flow 3 egress (mean 537.09 Mbit/s)

Flow 1 (95th percentile 107.35 ms)   Flow 2 (95th percentile 103.92 ms)   Flow 3 (95th percentile 77.00 ms)

```
Run 3: Statistics of FillP-Sheep

Start at: 2018-08-11 21:58:50
End at: 2018-08-11 21:59:20
Local clock offset: -0.12 ms
Remote clock offset: -0.135 ms


# Below is generated by plot.py at 2018-08-12 03:20:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1371.29 Mbit/s
95th percentile per-packet one-way delay: 119.806 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 720.41 Mbit/s
95th percentile per-packet one-way delay: 123.790 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 704.21 Mbit/s
95th percentile per-packet one-way delay: 96.774 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 560.02 Mbit/s
95th percentile per-packet one-way delay: 119.939 ms
Loss rate: 1.83%
```

Run 3: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 725.04 Mbit/s)   —— Flow 1 egress (mean 720.41 Mbit/s)
- - - - Flow 2 ingress (mean 705.13 Mbit/s)   —— Flow 2 egress (mean 704.21 Mbit/s)
- - - - Flow 3 ingress (mean 563.25 Mbit/s)   —— Flow 3 egress (mean 560.02 Mbit/s)

- Flow 1 (95th percentile 123.79 ms)   • Flow 2 (95th percentile 96.77 ms)   • Flow 3 (95th percentile 119.94 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2018-08-11 22:25:49
End at: 2018-08-11 22:26:19
Local clock offset: 0.013 ms
Remote clock offset: -0.614 ms


# Below is generated by plot.py at 2018-08-12 03:22:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1357.17 Mbit/s
95th percentile per-packet one-way delay: 135.608 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 747.83 Mbit/s
95th percentile per-packet one-way delay: 123.664 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 657.89 Mbit/s
95th percentile per-packet one-way delay: 135.881 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 524.94 Mbit/s
95th percentile per-packet one-way delay: 149.939 ms
Loss rate: 2.50%
```
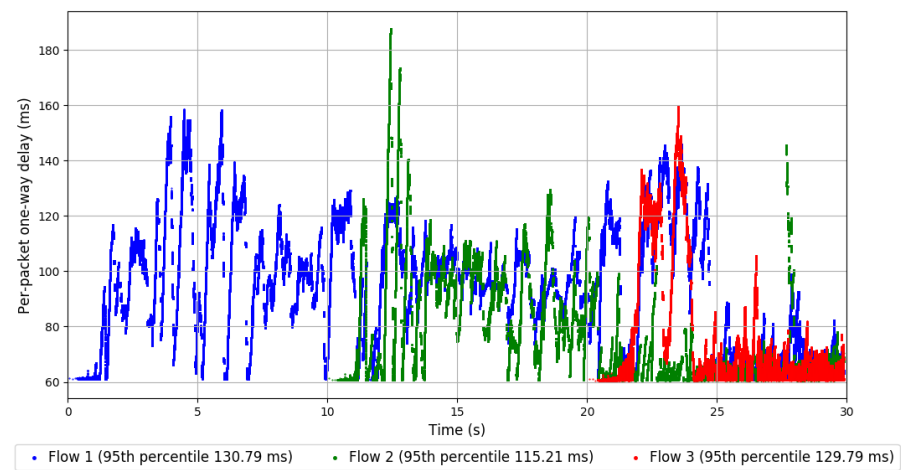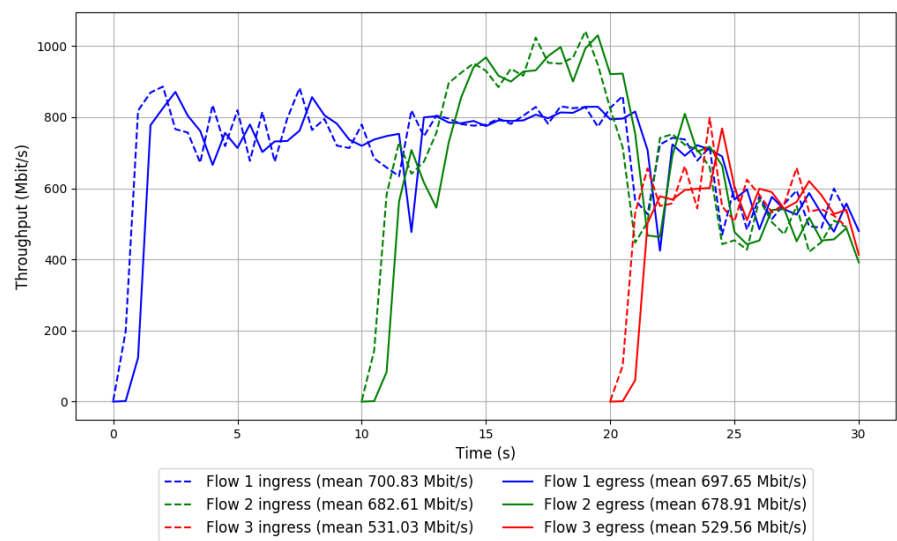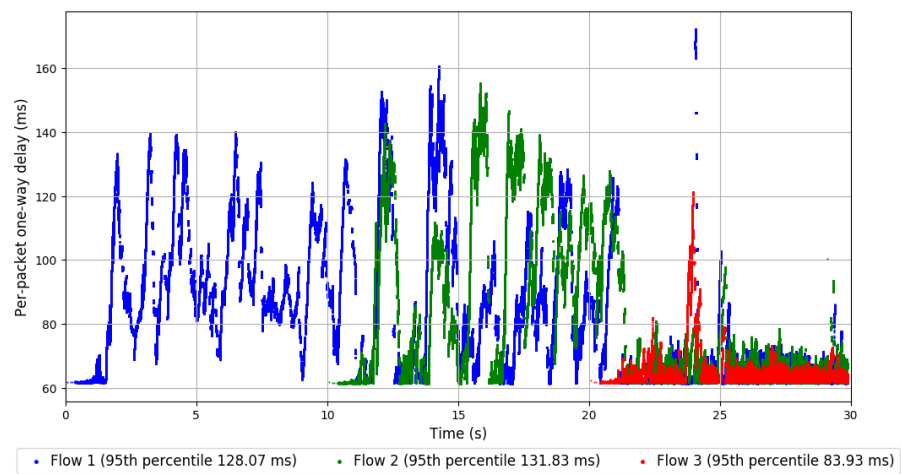
Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 754.89 Mbit/s) --- Flow 1 egress (mean 747.83 Mbit/s)
Flow 2 ingress (mean 661.57 Mbit/s) --- Flow 2 egress (mean 657.89 Mbit/s)
Flow 3 ingress (mean 531.72 Mbit/s) --- Flow 3 egress (mean 524.94 Mbit/s)

Flow 1 (95th percentile 123.66 ms)   Flow 2 (95th percentile 135.88 ms)   Flow 3 (95th percentile 149.94 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-08-11 22:52:45
End at: 2018-08-11 22:53:15
Local clock offset: -0.076 ms
Remote clock offset: -0.286 ms


# Below is generated by plot.py at 2018-08-12 03:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1367.22 Mbit/s
95th percentile per-packet one-way delay: 120.957 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 706.24 Mbit/s
95th percentile per-packet one-way delay: 128.114 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 700.51 Mbit/s
95th percentile per-packet one-way delay: 116.485 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 597.24 Mbit/s
95th percentile per-packet one-way delay: 95.074 ms
Loss rate: 1.68%
```

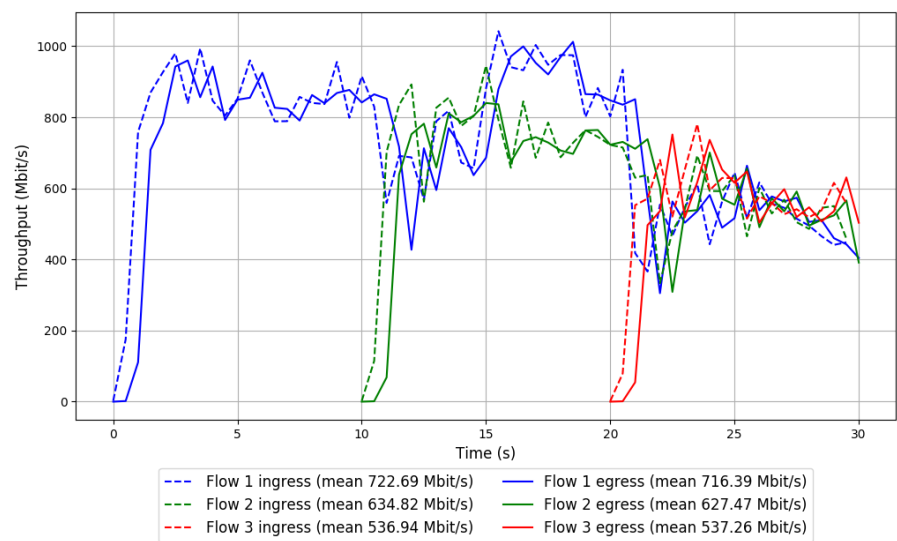# Run 5: Report of FillP-Sheep — Data Link
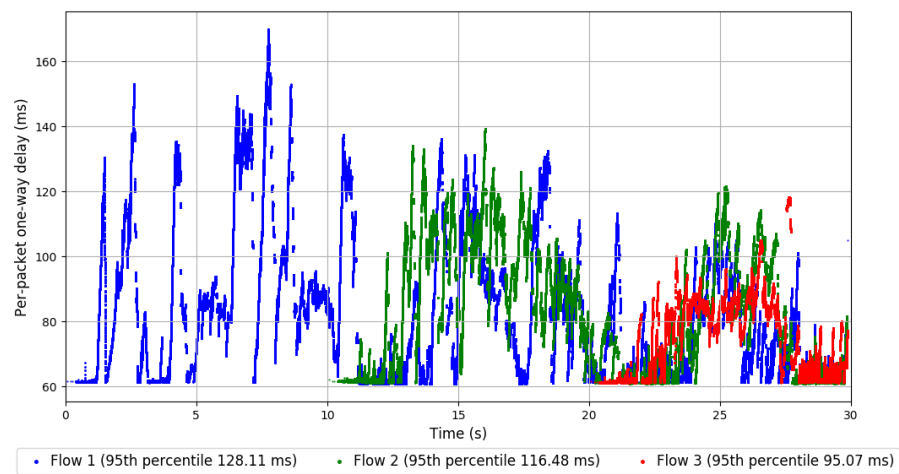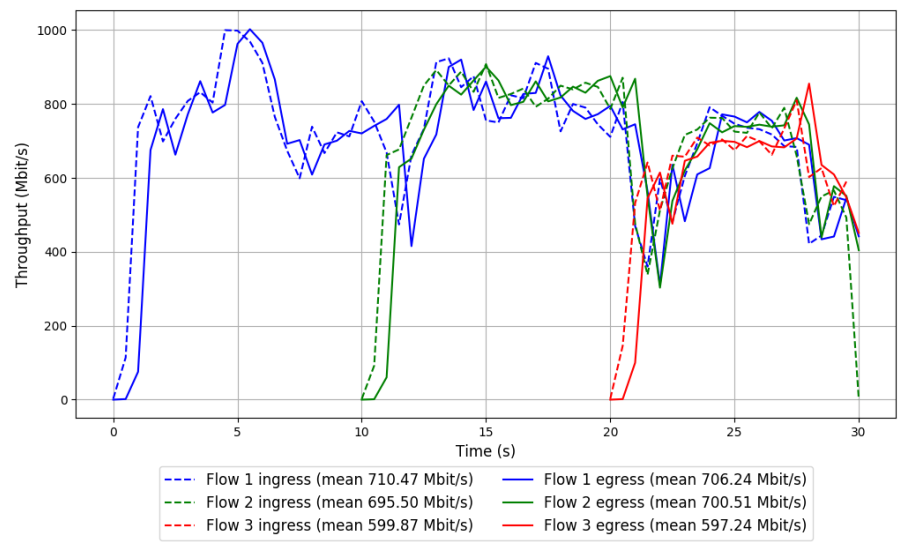
```
Run 6: Statistics of FillP-Sheep

Start at: 2018-08-11 23:19:44
End at: 2018-08-11 23:20:14
Local clock offset: -0.009 ms
Remote clock offset: 0.257 ms


# Below is generated by plot.py at 2018-08-12 03:23:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1322.30 Mbit/s
95th percentile per-packet one-way delay: 127.321 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 697.65 Mbit/s
95th percentile per-packet one-way delay: 130.794 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 678.91 Mbit/s
95th percentile per-packet one-way delay: 115.206 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 529.56 Mbit/s
95th percentile per-packet one-way delay: 129.787 ms
Loss rate: 1.35%
```
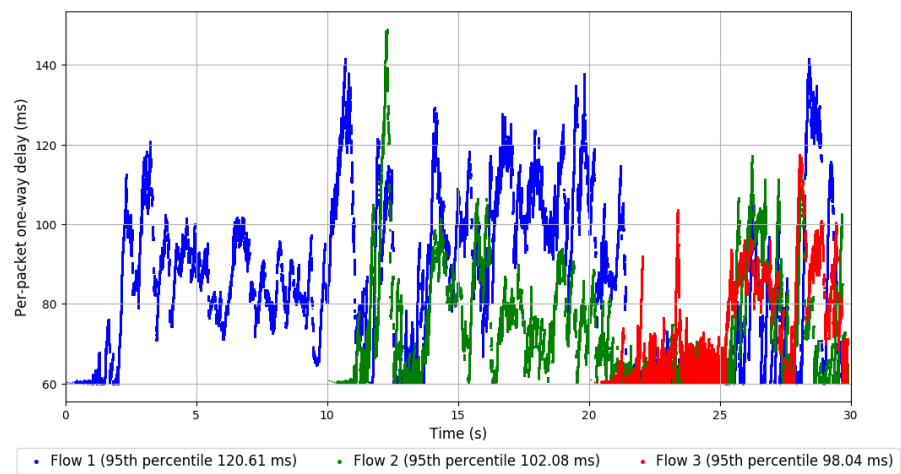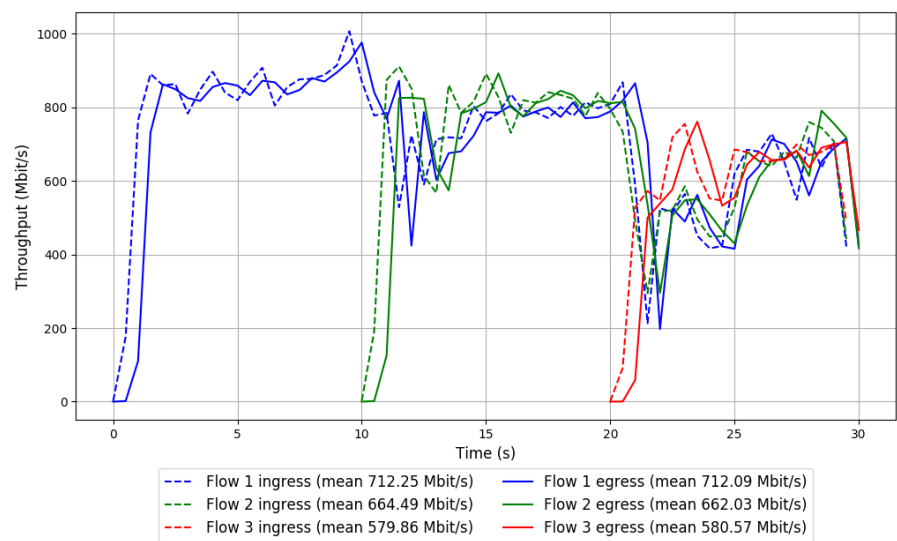
Run 6: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 700.83 Mbit/s) ——— Flow 1 egress (mean 697.65 Mbit/s)
- - - - Flow 2 ingress (mean 682.61 Mbit/s) ——— Flow 2 egress (mean 678.91 Mbit/s)
- - - - Flow 3 ingress (mean 531.03 Mbit/s) ——— Flow 3 egress (mean 529.56 Mbit/s)

• Flow 1 (95th percentile 130.79 ms)   • Flow 2 (95th percentile 115.21 ms)   • Flow 3 (95th percentile 129.79 ms)

```
Run 7: Statistics of FillP-Sheep

Start at: 2018-08-11 23:46:30
End at: 2018-08-11 23:47:00
Local clock offset: 0.014 ms
Remote clock offset: -0.388 ms


# Below is generated by plot.py at 2018-08-12 03:45:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1309.58 Mbit/s
95th percentile per-packet one-way delay: 128.550 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 716.39 Mbit/s
95th percentile per-packet one-way delay: 128.075 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 627.47 Mbit/s
95th percentile per-packet one-way delay: 131.830 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 537.26 Mbit/s
95th percentile per-packet one-way delay: 83.933 ms
Loss rate: 1.07%
```

Run 7: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 722.69 Mbit/s) ——— Flow 1 egress (mean 716.39 Mbit/s)
- - - - Flow 2 ingress (mean 634.82 Mbit/s) ——— Flow 2 egress (mean 627.47 Mbit/s)
- - - - Flow 3 ingress (mean 536.94 Mbit/s) ——— Flow 3 egress (mean 537.26 Mbit/s)

• Flow 1 (95th percentile 128.07 ms)   • Flow 2 (95th percentile 131.83 ms)   • Flow 3 (95th percentile 83.93 ms)

```
Run 8: Statistics of FillP-Sheep

Start at: 2018-08-12 00:13:22
End at: 2018-08-12 00:13:52
Local clock offset: -0.032 ms
Remote clock offset: 0.739 ms


# Below is generated by plot.py at 2018-08-12 03:47:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1342.14 Mbit/s
95th percentile per-packet one-way delay: 115.542 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 712.09 Mbit/s
95th percentile per-packet one-way delay: 120.606 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 662.03 Mbit/s
95th percentile per-packet one-way delay: 102.083 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 580.57 Mbit/s
95th percentile per-packet one-way delay: 98.037 ms
Loss rate: 1.07%
```

Run 8: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 712.25 Mbit/s)   —— Flow 1 egress (mean 712.09 Mbit/s)
- - - Flow 2 ingress (mean 664.49 Mbit/s)   —— Flow 2 egress (mean 662.03 Mbit/s)
- - - Flow 3 ingress (mean 579.86 Mbit/s)   —— Flow 3 egress (mean 580.57 Mbit/s)

• Flow 1 (95th percentile 120.61 ms)   • Flow 2 (95th percentile 102.08 ms)   • Flow 3 (95th percentile 98.04 ms)

```
Run 9: Statistics of FillP-Sheep

Start at: 2018-08-12 00:40:03
End at: 2018-08-12 00:40:33
Local clock offset: -0.062 ms
Remote clock offset: 0.253 ms


# Below is generated by plot.py at 2018-08-12 03:47:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1259.82 Mbit/s
95th percentile per-packet one-way delay: 149.966 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 660.44 Mbit/s
95th percentile per-packet one-way delay: 152.628 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 613.23 Mbit/s
95th percentile per-packet one-way delay: 160.442 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 583.79 Mbit/s
95th percentile per-packet one-way delay: 113.426 ms
Loss rate: 2.25%
```

Run 9: Report of FillP-Sheep — Data Link
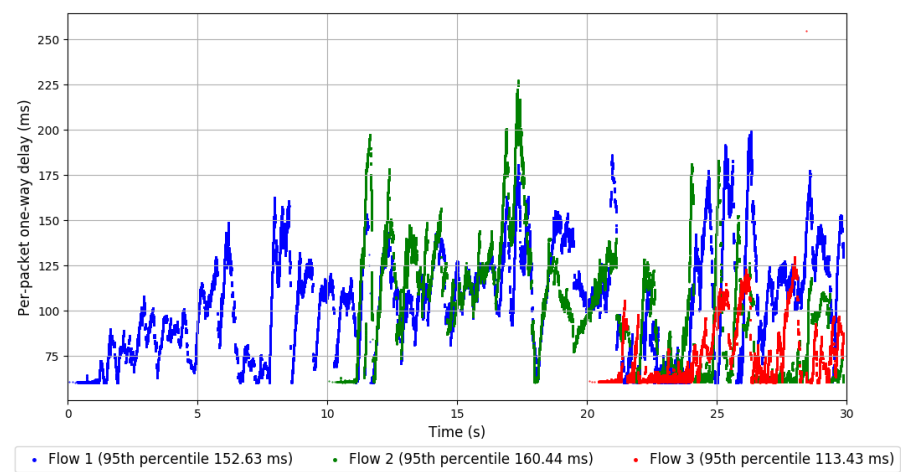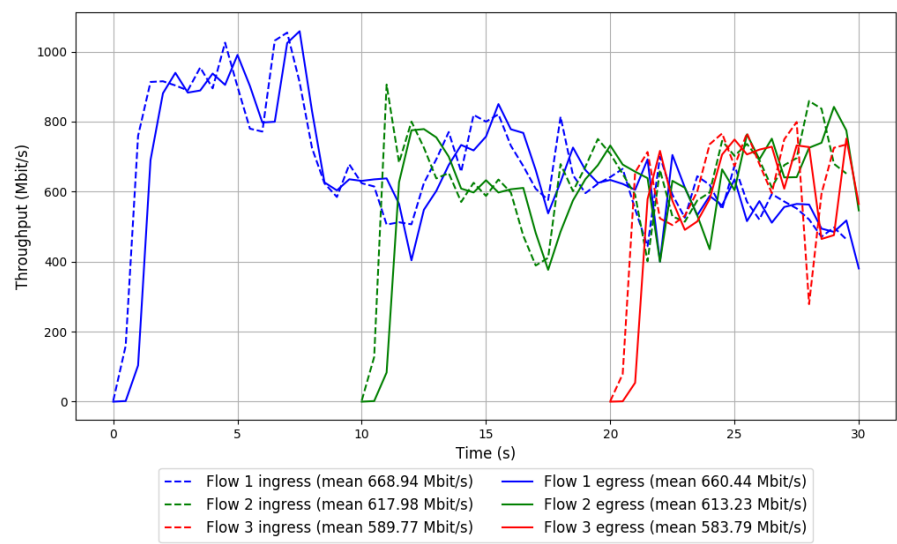
```
Run 10: Statistics of FillP-Sheep

Start at: 2018-08-12 01:06:36
End at: 2018-08-12 01:07:06
Local clock offset: -0.128 ms
Remote clock offset: -0.266 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1293.53 Mbit/s
95th percentile per-packet one-way delay: 124.815 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 673.97 Mbit/s
95th percentile per-packet one-way delay: 128.609 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 662.01 Mbit/s
95th percentile per-packet one-way delay: 120.018 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 546.51 Mbit/s
95th percentile per-packet one-way delay: 83.090 ms
Loss rate: 1.62%
```

Run 10: Report of FillP-Sheep — Data Link
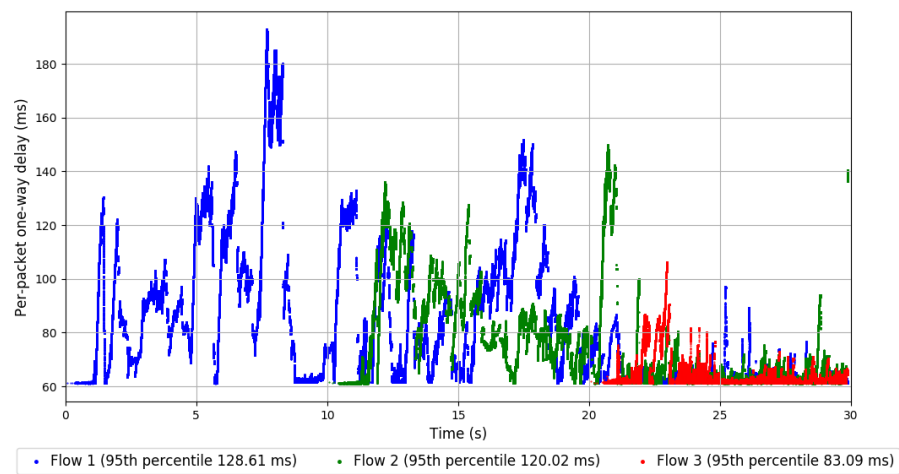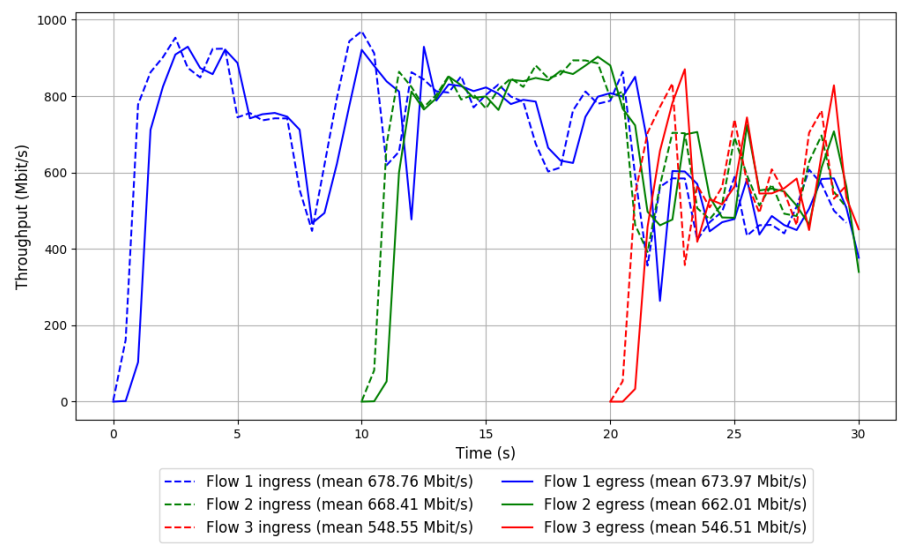
```
Run 1: Statistics of Indigo

Start at: 2018-08-11 20:55:57
End at: 2018-08-11 20:56:27
Local clock offset: 0.109 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.64 Mbit/s
95th percentile per-packet one-way delay: 61.577 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 189.60 Mbit/s
95th percentile per-packet one-way delay: 61.561 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 178.29 Mbit/s
95th percentile per-packet one-way delay: 61.734 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 151.88 Mbit/s
95th percentile per-packet one-way delay: 61.301 ms
Loss rate: 1.48%
```

Run 1: Report of Indigo — Data Link
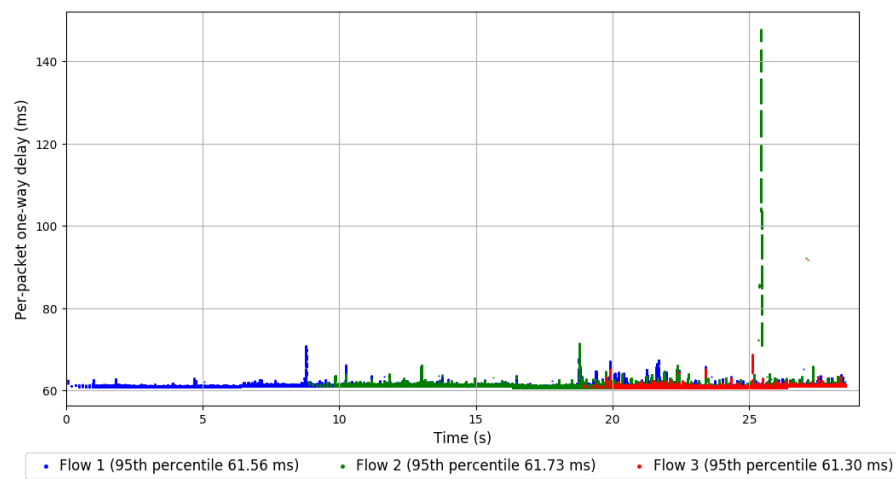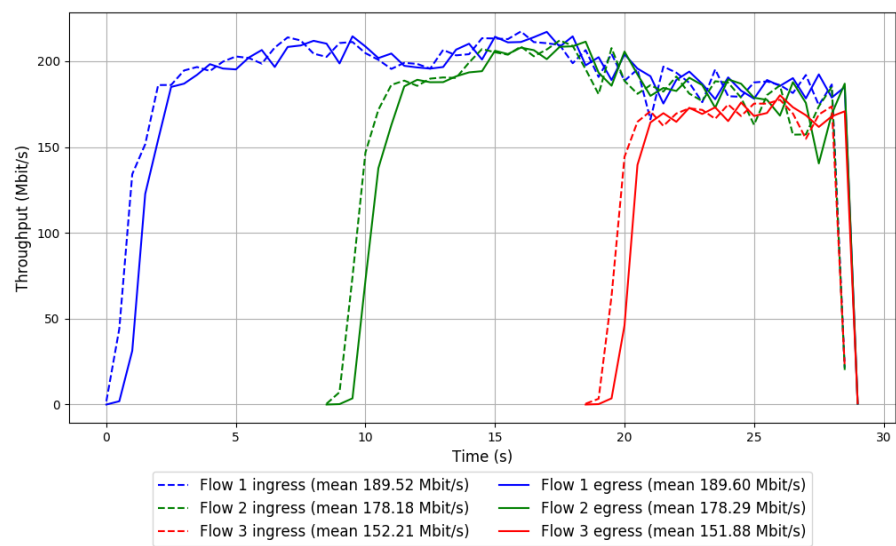
```
Run 2: Statistics of Indigo

Start at: 2018-08-11 21:22:33
End at: 2018-08-11 21:23:03
Local clock offset: 0.067 ms
Remote clock offset: -0.488 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 364.72 Mbit/s
95th percentile per-packet one-way delay: 62.250 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 197.85 Mbit/s
95th percentile per-packet one-way delay: 62.197 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 177.53 Mbit/s
95th percentile per-packet one-way delay: 62.542 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 150.81 Mbit/s
95th percentile per-packet one-way delay: 61.828 ms
Loss rate: 1.47%
```

Run 2: Report of Indigo — Data Link
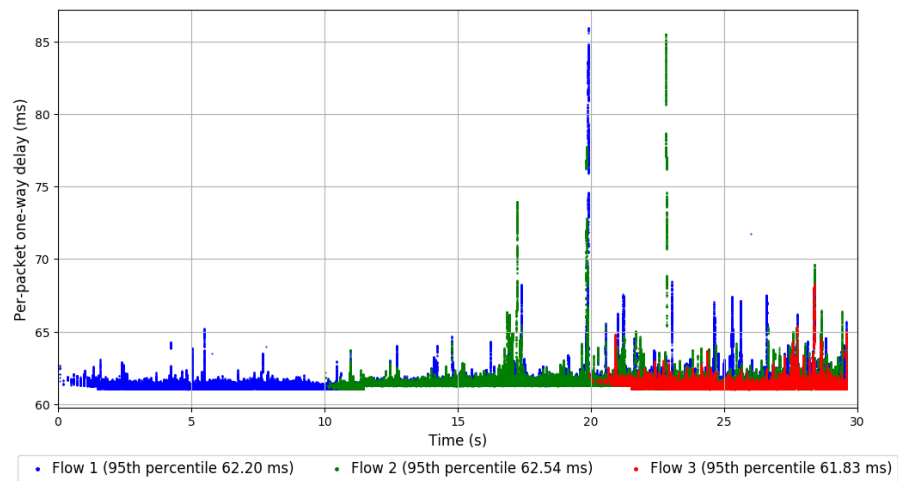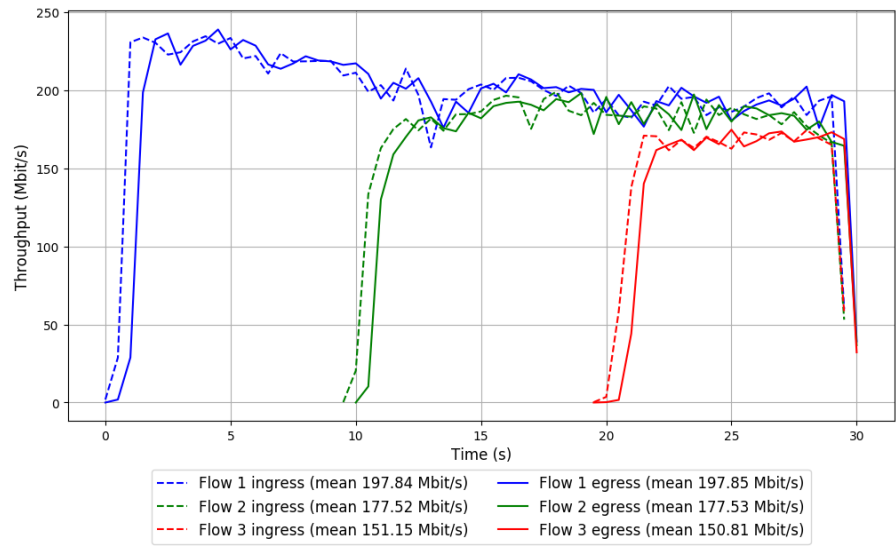
```
Run 3: Statistics of Indigo

Start at: 2018-08-11 21:49:21
End at: 2018-08-11 21:49:51
Local clock offset: -0.14 ms
Remote clock offset: -0.628 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.50 Mbit/s
95th percentile per-packet one-way delay: 62.348 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 195.52 Mbit/s
95th percentile per-packet one-way delay: 62.238 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 176.51 Mbit/s
95th percentile per-packet one-way delay: 62.469 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 144.89 Mbit/s
95th percentile per-packet one-way delay: 62.532 ms
Loss rate: 1.41%
```
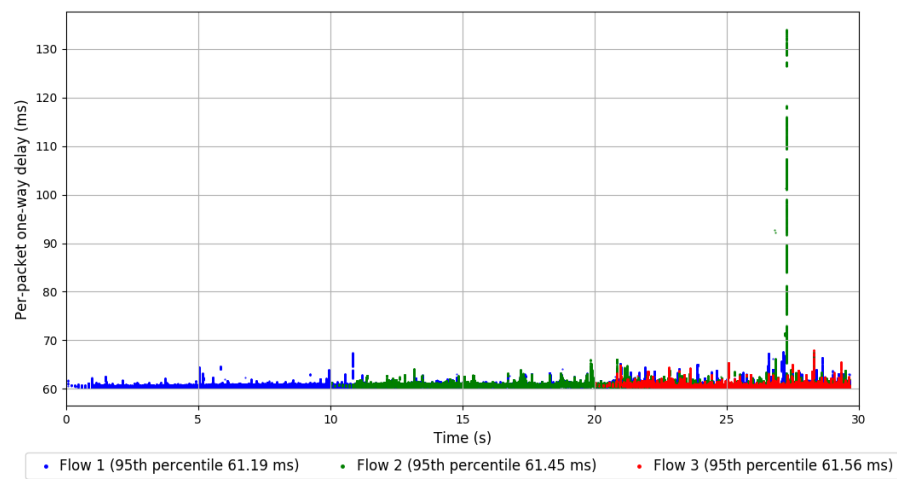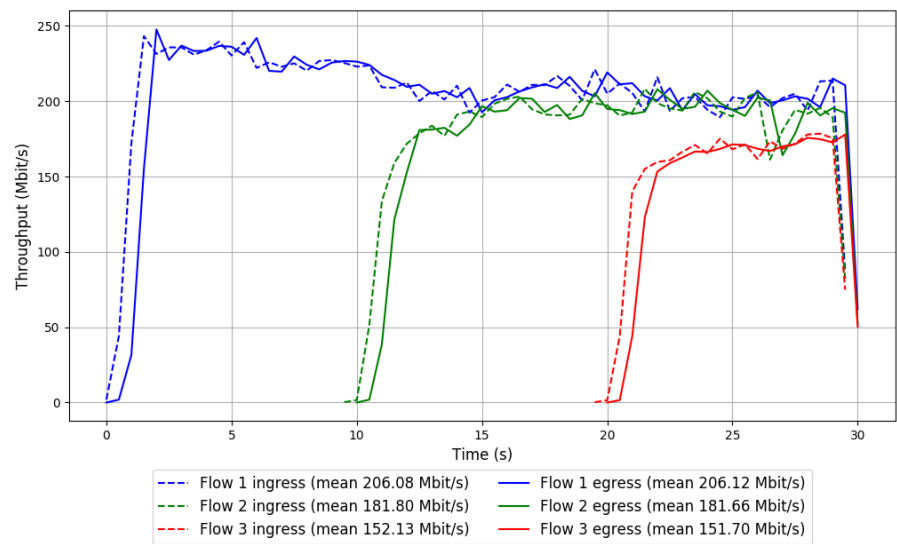
Run 3: Report of Indigo — Data Link
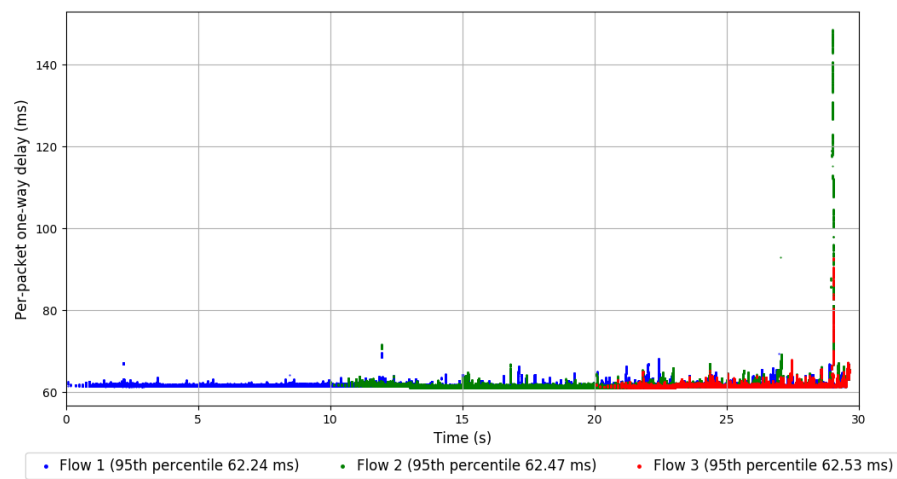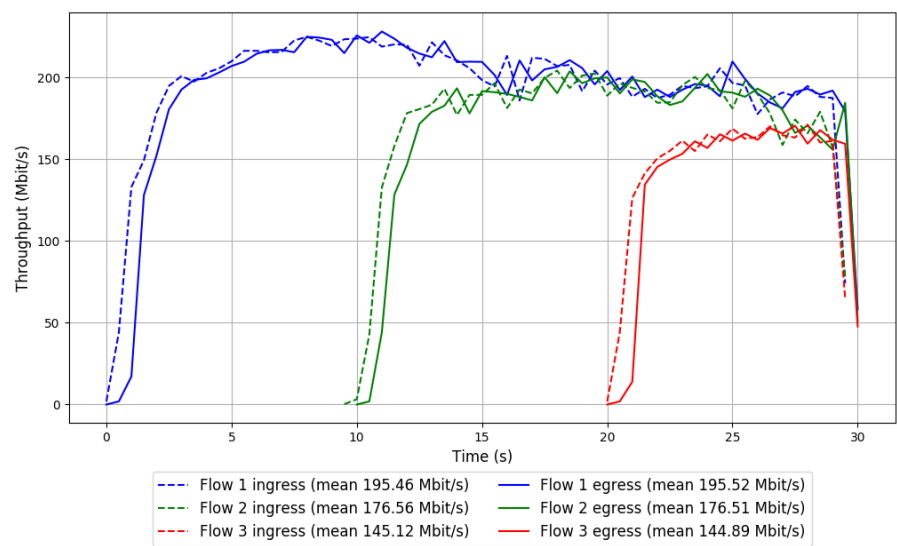
```
Run 4: Statistics of Indigo

Start at: 2018-08-11 22:16:14
End at: 2018-08-11 22:16:44
Local clock offset: -0.004 ms
Remote clock offset: -0.912 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.69 Mbit/s
95th percentile per-packet one-way delay: 62.889 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 197.26 Mbit/s
95th percentile per-packet one-way delay: 62.844 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 188.58 Mbit/s
95th percentile per-packet one-way delay: 62.895 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 146.80 Mbit/s
95th percentile per-packet one-way delay: 63.031 ms
Loss rate: 1.47%
```

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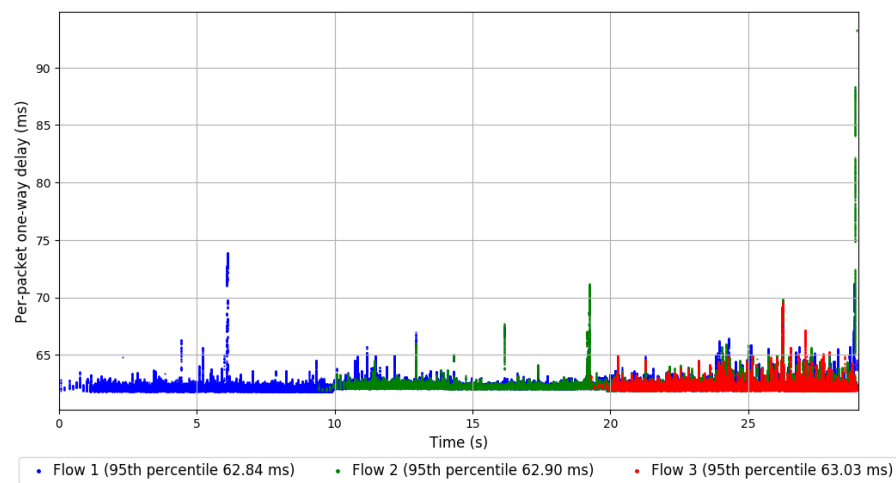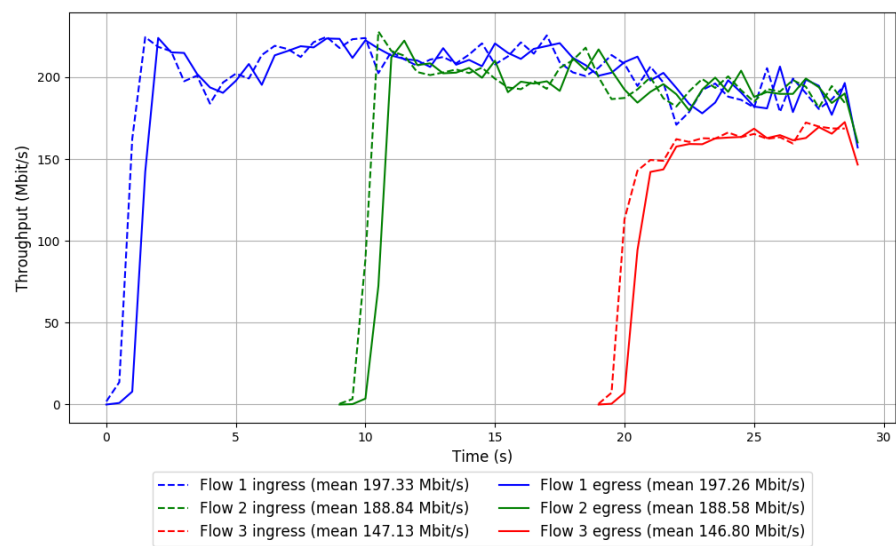
```
Run 5: Statistics of Indigo

Start at: 2018-08-11 22:43:11
End at: 2018-08-11 22:43:41
Local clock offset: -0.054 ms
Remote clock offset: 0.572 ms

# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.75 Mbit/s
95th percentile per-packet one-way delay: 61.323 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 206.12 Mbit/s
95th percentile per-packet one-way delay: 61.188 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 181.66 Mbit/s
95th percentile per-packet one-way delay: 61.445 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 151.70 Mbit/s
95th percentile per-packet one-way delay: 61.560 ms
Loss rate: 1.54%
```

Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 206.08 Mbit/s) —— Flow 1 egress (mean 206.12 Mbit/s)
Flow 2 ingress (mean 181.80 Mbit/s) —— Flow 2 egress (mean 181.66 Mbit/s)
Flow 3 ingress (mean 152.13 Mbit/s) —— Flow 3 egress (mean 151.70 Mbit/s)

• Flow 1 (95th percentile 61.19 ms)   • Flow 2 (95th percentile 61.45 ms)   • Flow 3 (95th percentile 61.56 ms)

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```
Run 6: Statistics of Indigo

Start at: 2018-08-11 23:10:13
End at: 2018-08-11 23:10:43
Local clock offset: -0.015 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.78 Mbit/s
95th percentile per-packet one-way delay: 62.292 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 206.36 Mbit/s
95th percentile per-packet one-way delay: 62.097 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 177.72 Mbit/s
95th percentile per-packet one-way delay: 62.611 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 158.33 Mbit/s
95th percentile per-packet one-way delay: 62.326 ms
Loss rate: 1.59%
```

Run 6: Report of Indigo — Data Link
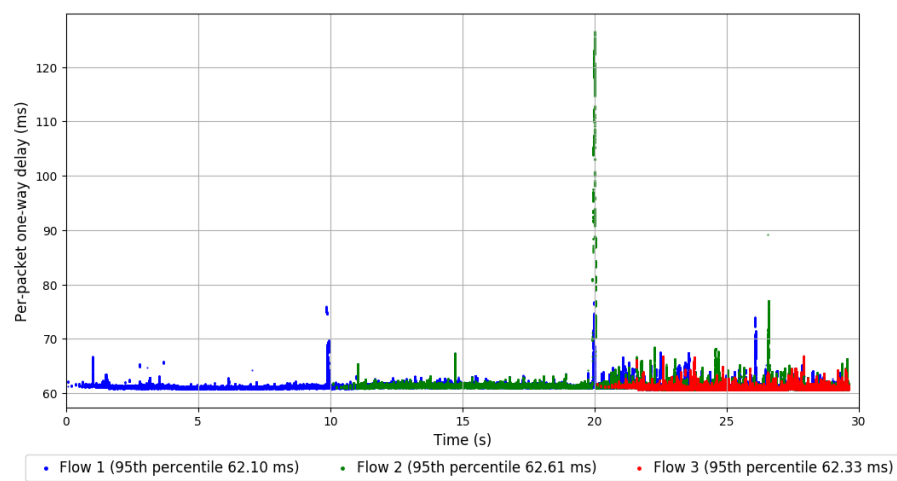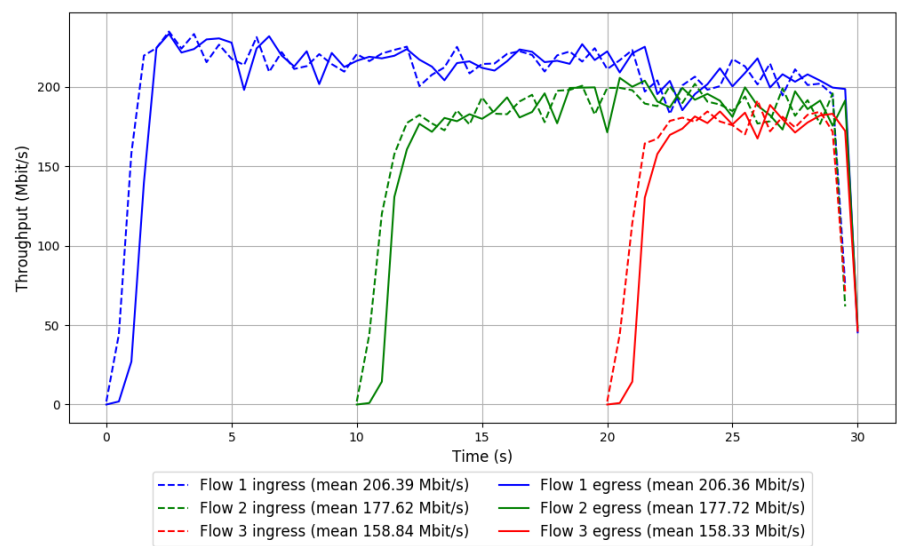
```
Run 7: Statistics of Indigo

Start at: 2018-08-11 23:37:00
End at: 2018-08-11 23:37:30
Local clock offset: -0.005 ms
Remote clock offset: 0.226 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.82 Mbit/s
95th percentile per-packet one-way delay: 61.978 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 197.16 Mbit/s
95th percentile per-packet one-way delay: 61.878 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 186.34 Mbit/s
95th percentile per-packet one-way delay: 62.109 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 152.31 Mbit/s
95th percentile per-packet one-way delay: 62.002 ms
Loss rate: 1.46%
```

Run 7: Report of Indigo — Data Link
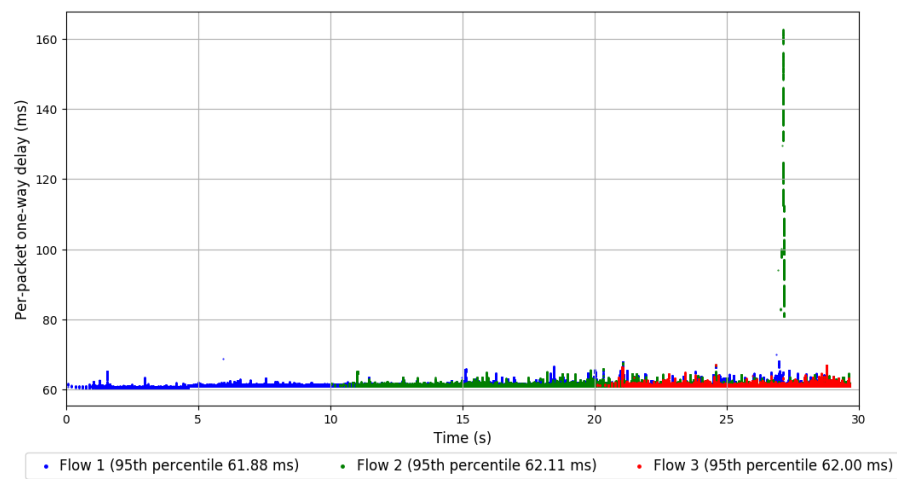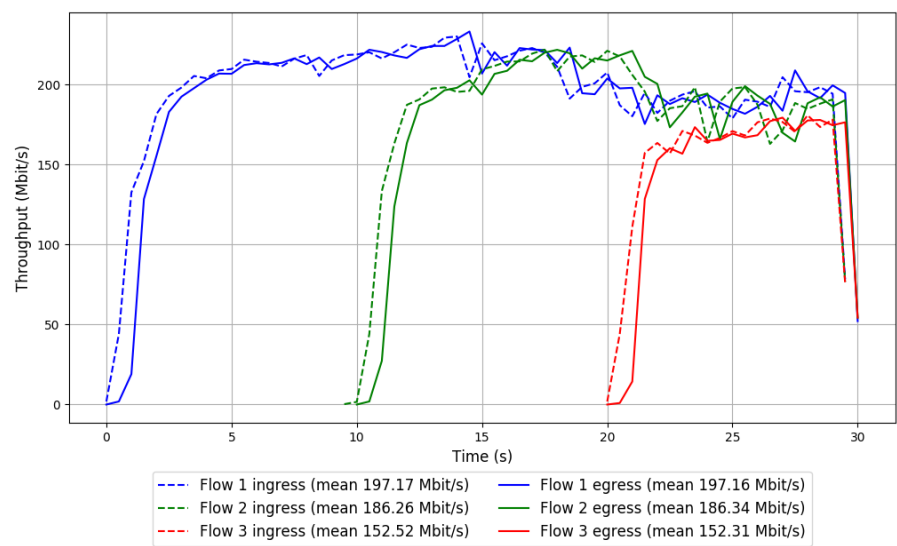
```
Run 8: Statistics of Indigo

Start at: 2018-08-12 00:03:49
End at: 2018-08-12 00:04:19
Local clock offset: -0.02 ms
Remote clock offset: 0.805 ms


# Below is generated by plot.py at 2018-08-12 03:48:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 359.48 Mbit/s
95th percentile per-packet one-way delay: 60.787 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 191.09 Mbit/s
95th percentile per-packet one-way delay: 60.714 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 173.89 Mbit/s
95th percentile per-packet one-way delay: 60.884 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 164.87 Mbit/s
95th percentile per-packet one-way delay: 60.842 ms
Loss rate: 1.53%
```

Run 8: Report of Indigo — Data Link
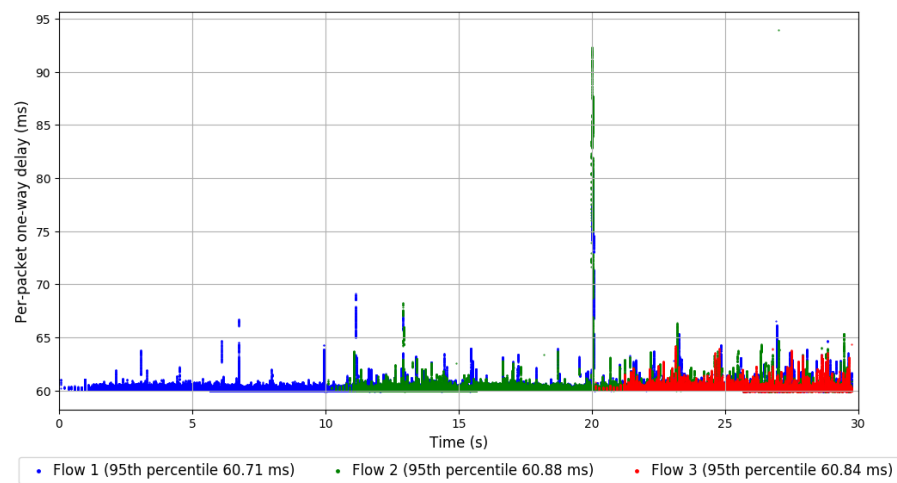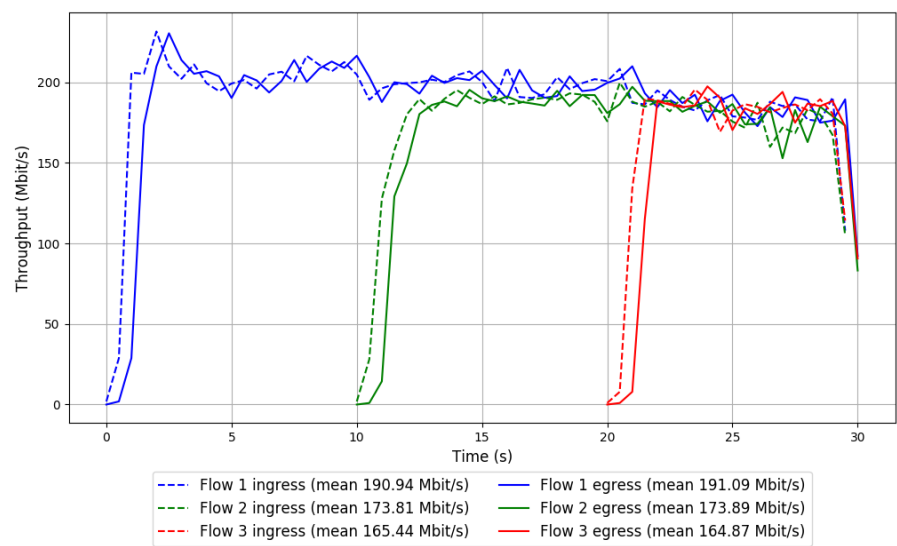
```
Run 9: Statistics of Indigo

Start at: 2018-08-12 00:30:38
End at: 2018-08-12 00:31:08
Local clock offset: -0.107 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 341.27 Mbit/s
95th percentile per-packet one-way delay: 61.974 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 182.21 Mbit/s
95th percentile per-packet one-way delay: 61.739 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 165.52 Mbit/s
95th percentile per-packet one-way delay: 62.014 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 154.35 Mbit/s
95th percentile per-packet one-way delay: 62.779 ms
Loss rate: 1.46%
```

Run 9: Report of Indigo — Data Link
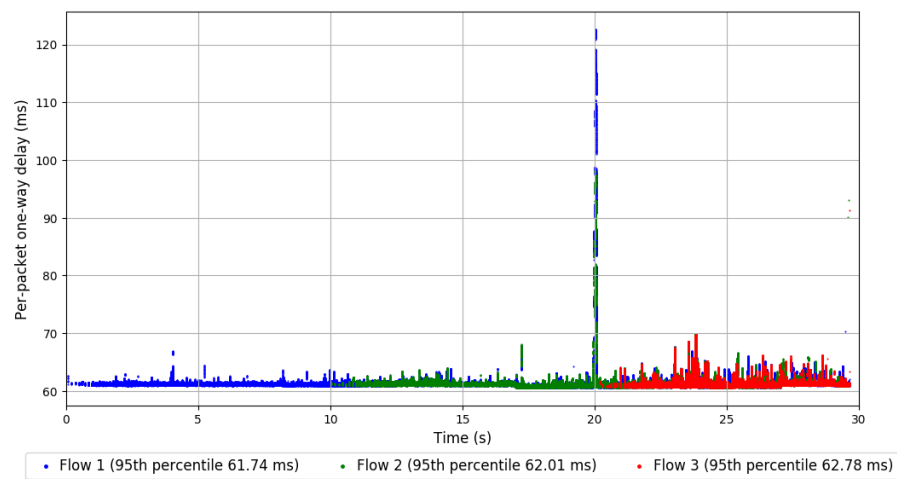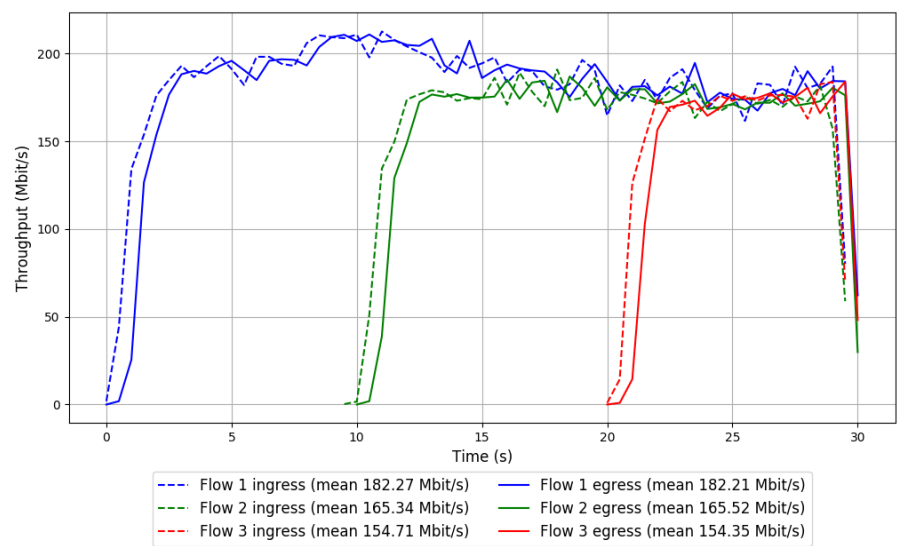
Run 10: Statistics of Indigo

Start at: 2018-08-12 00:57:12
End at: 2018-08-12 00:57:42
Local clock offset: -0.042 ms
Remote clock offset: -0.082 ms

Below is generated by plot.py at 2018-08-12 03:48:28
Datalink statistics
-- Total of 3 flows:
Average throughput: 386.07 Mbit/s
95th percentile per-packet one-way delay: 62.287 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 205.31 Mbit/s
95th percentile per-packet one-way delay: 62.071 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 187.16 Mbit/s
95th percentile per-packet one-way delay: 62.330 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 175.97 Mbit/s
95th percentile per-packet one-way delay: 62.789 ms
Loss rate: 1.50%

# Run 10: Report of Indigo — Data Link
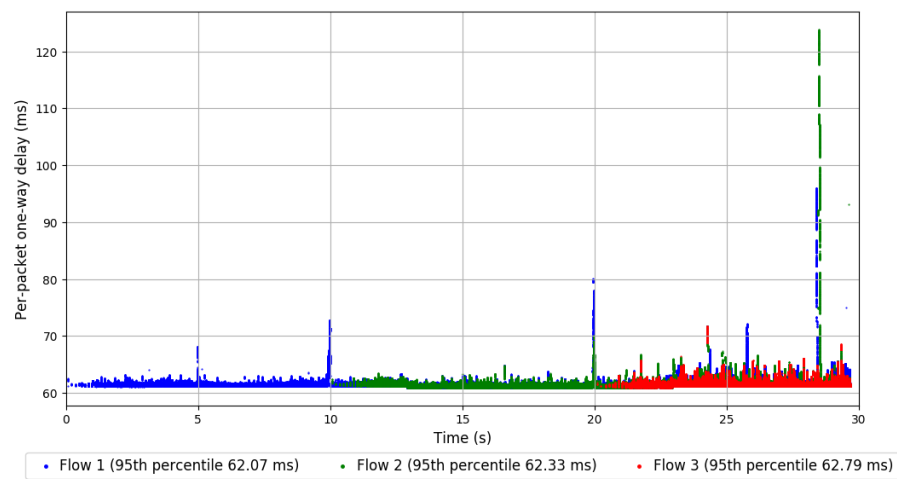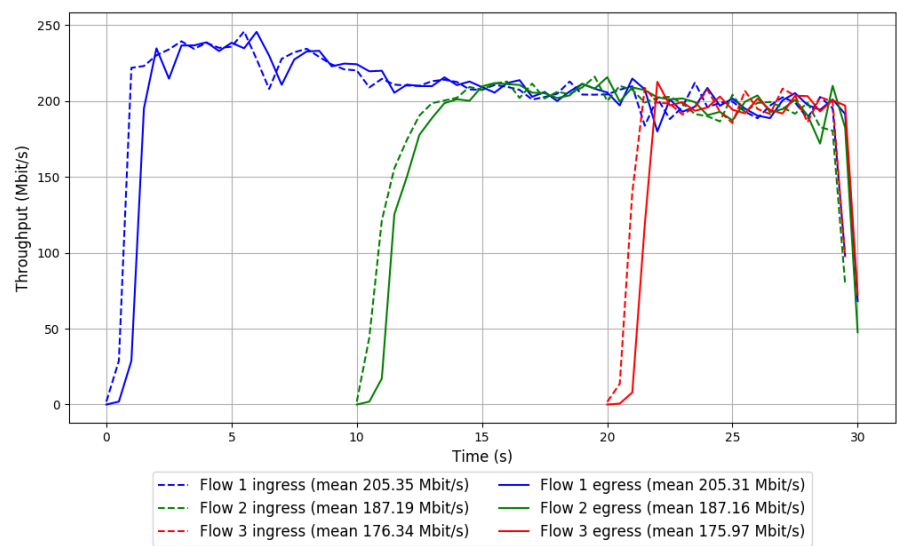
```
Run 1: Statistics of LEDBAT

Start at: 2018-08-11 20:58:44
End at: 2018-08-11 20:59:14
Local clock offset: 0.061 ms
Remote clock offset: -0.238 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.86 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.86 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 62.624 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 62.139 ms
Loss rate: 2.50%
```

Run 1: Report of LEDBAT — Data Link
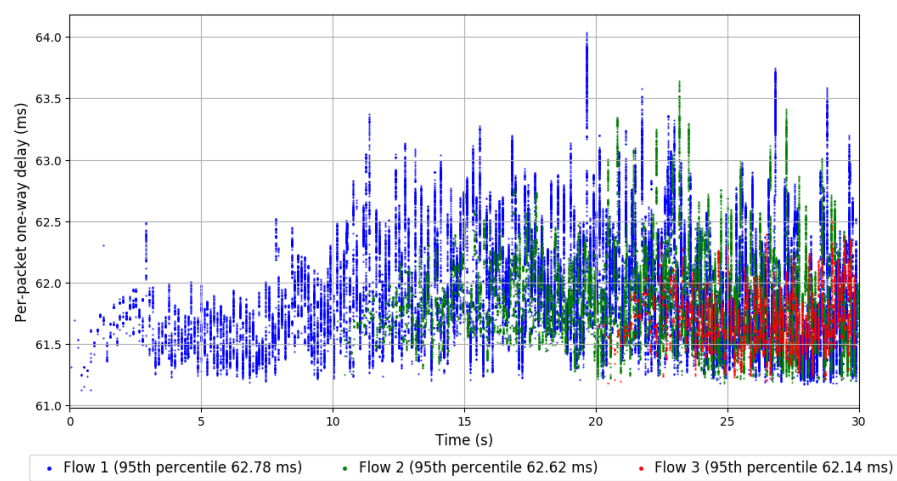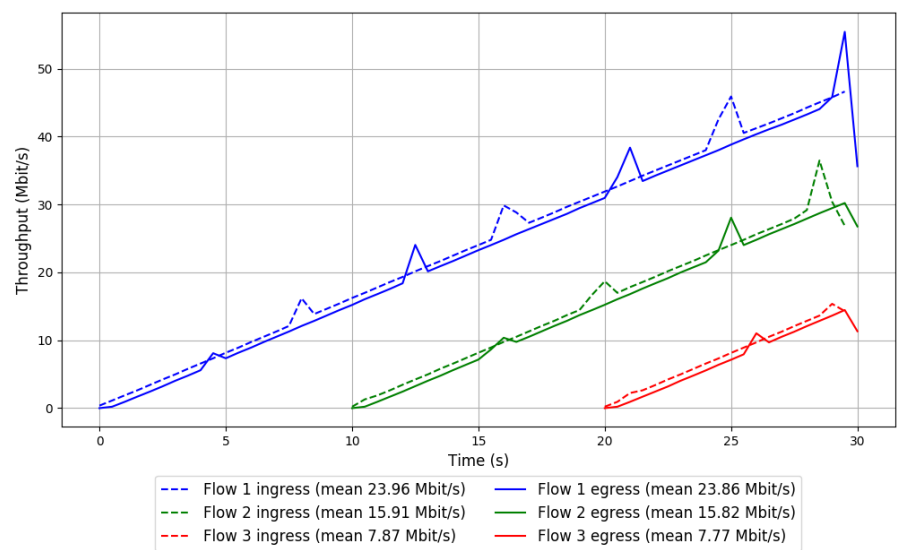
```
Run 2: Statistics of LEDBAT

Start at: 2018-08-11 21:25:21
End at: 2018-08-11 21:25:51
Local clock offset: 0.131 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.32 Mbit/s
95th percentile per-packet one-way delay: 62.712 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 62.750 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 62.251 ms
Loss rate: 2.96%
-- Flow 3:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 62.775 ms
Loss rate: 2.59%
```
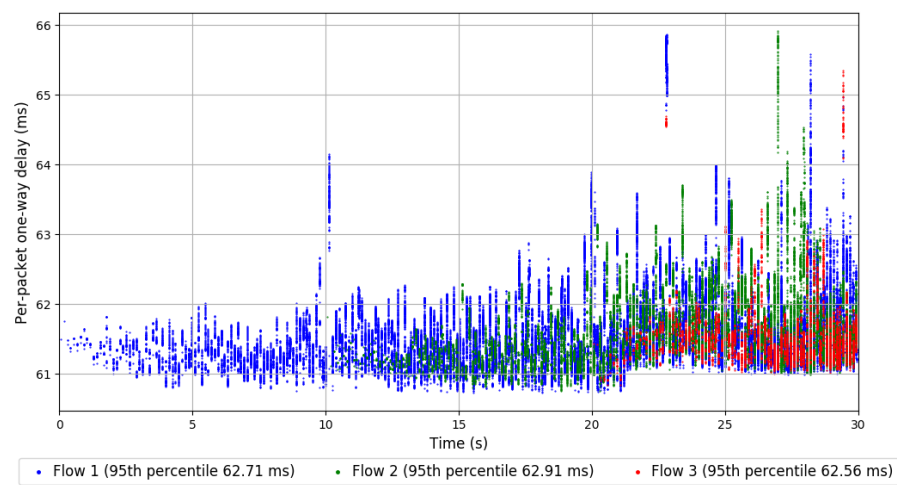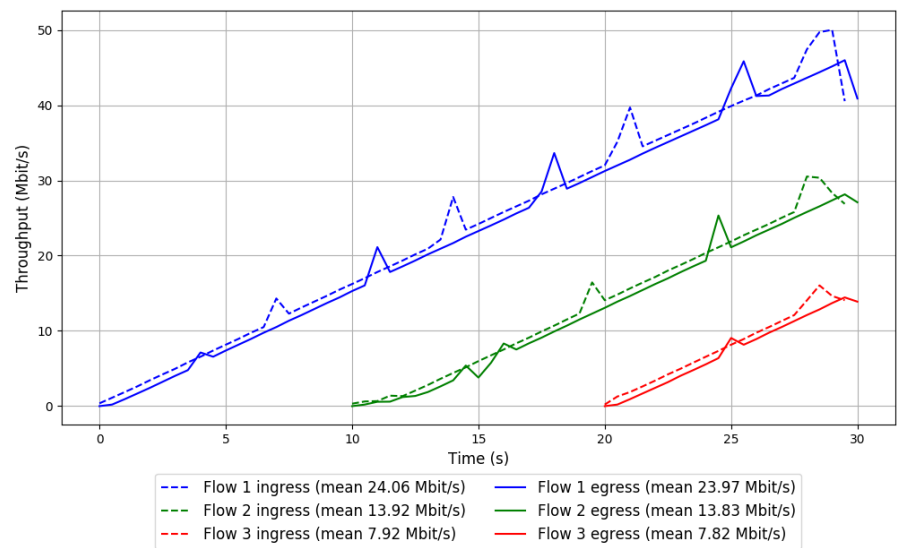
Run 2: Report of LEDBAT — Data Link
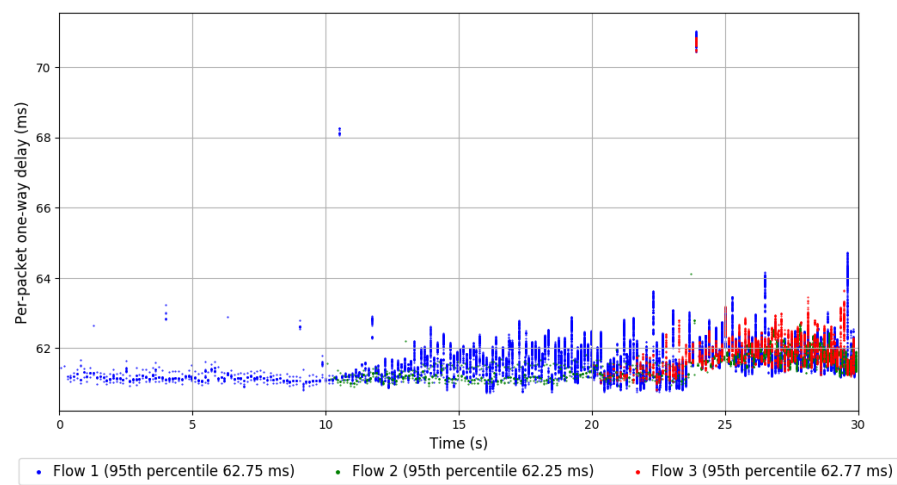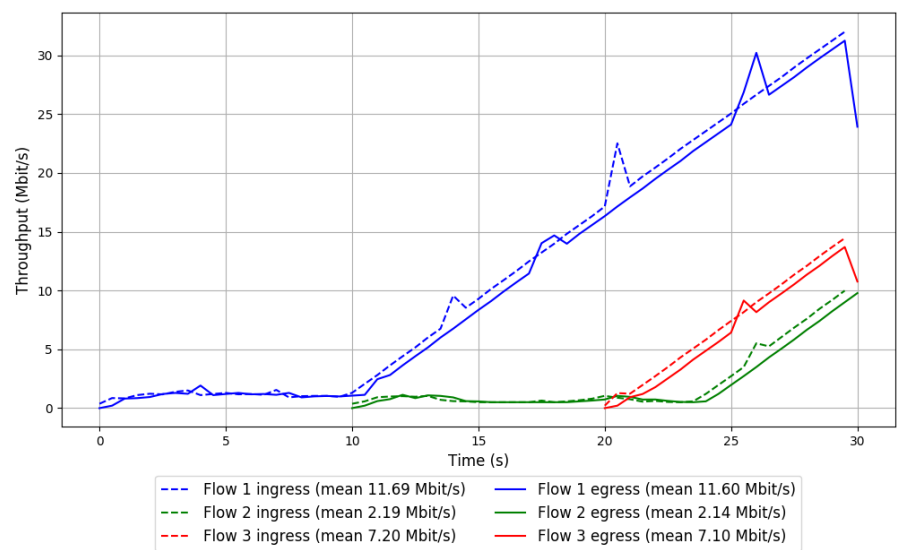
```
Run 3: Statistics of LEDBAT

Start at: 2018-08-11 21:52:09
End at: 2018-08-11 21:52:39
Local clock offset: -0.015 ms
Remote clock offset: -0.309 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 62.492 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 62.555 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 62.235 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 4.10%
```

## Run 3: Report of LEDBAT — Data Link
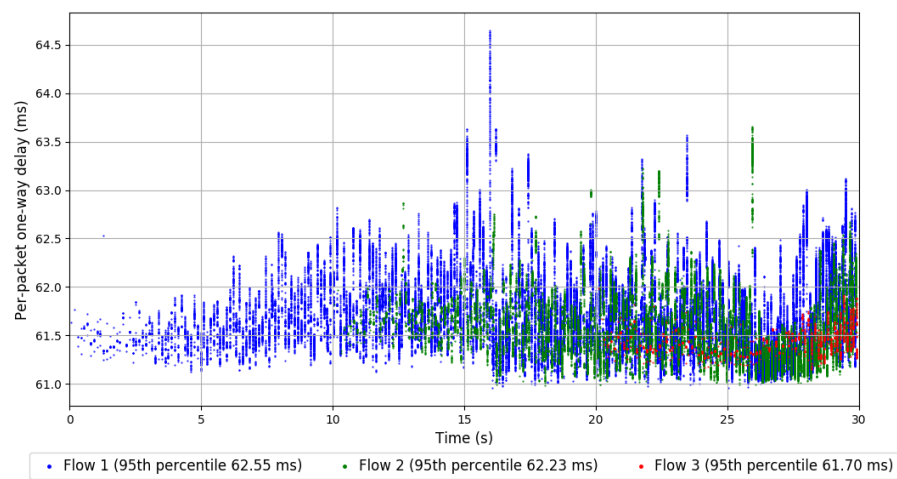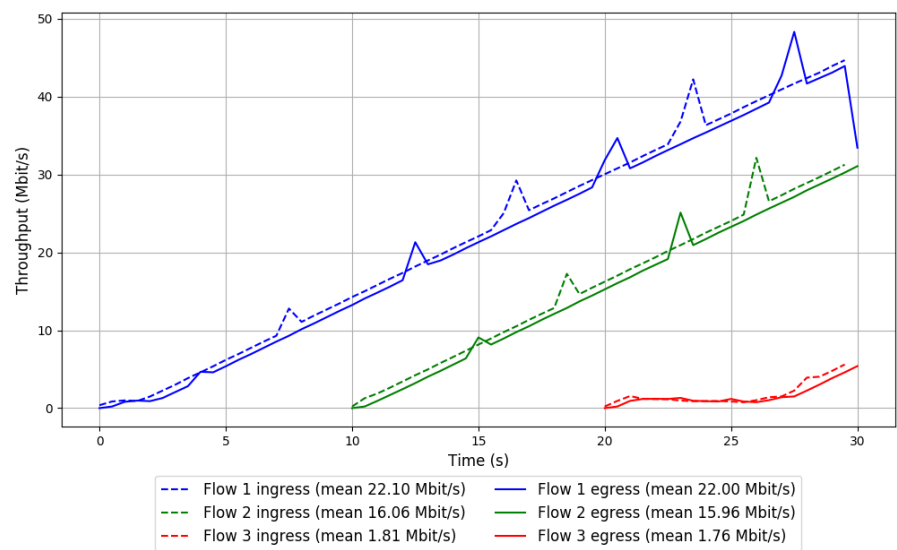
```
Run 4: Statistics of LEDBAT

Start at: 2018-08-11 22:19:04
End at: 2018-08-11 22:19:34
Local clock offset: -0.019 ms
Remote clock offset: -0.044 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.74 Mbit/s
95th percentile per-packet one-way delay: 62.735 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 62.710 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 13.83 Mbit/s
95th percentile per-packet one-way delay: 62.909 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 7.82 Mbit/s
95th percentile per-packet one-way delay: 62.556 ms
Loss rate: 2.48%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 24.06 Mbit/s) — Flow 1 egress (mean 23.97 Mbit/s)
Flow 2 ingress (mean 13.92 Mbit/s) — Flow 2 egress (mean 13.83 Mbit/s)
Flow 3 ingress (mean 7.92 Mbit/s) — Flow 3 egress (mean 7.82 Mbit/s)

Flow 1 (95th percentile 62.71 ms) — Flow 2 (95th percentile 62.91 ms) — Flow 3 (95th percentile 62.56 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-08-11 22:45:58
End at: 2018-08-11 22:46:28
Local clock offset: -0.054 ms
Remote clock offset: -0.117 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 62.267 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 62.231 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 62.418 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 62.250 ms
Loss rate: 2.48%
```

Run 5: Report of LEDBAT — Data Link
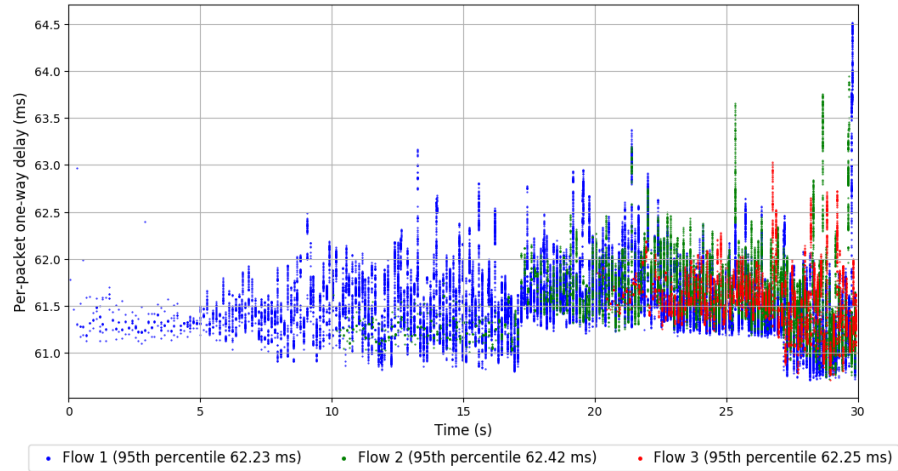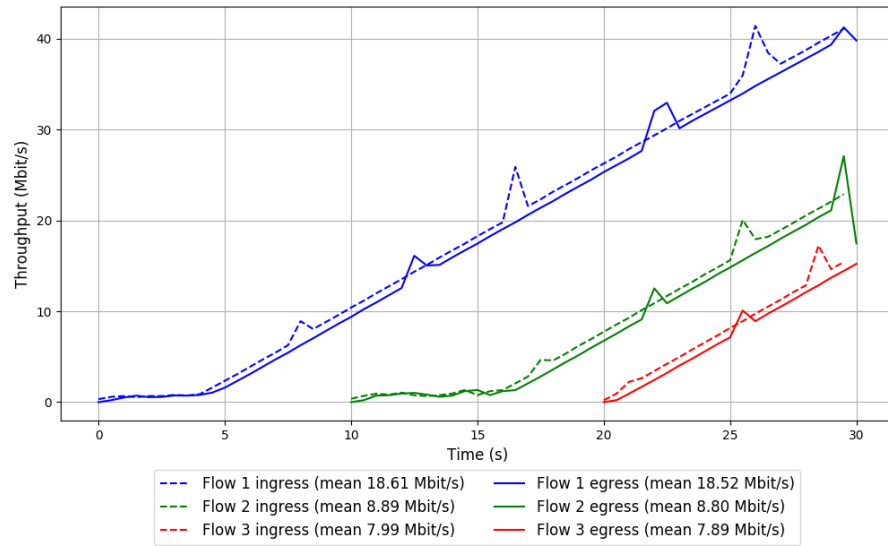
```
Run 6: Statistics of LEDBAT

Start at: 2018-08-11 23:13:01
End at: 2018-08-11 23:13:31
Local clock offset: -0.037 ms
Remote clock offset: -0.626 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.12 Mbit/s
95th percentile per-packet one-way delay: 62.770 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 23.96 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 62.604 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 4.49 Mbit/s
95th percentile per-packet one-way delay: 62.386 ms
Loss rate: 3.17%
```

Run 6: Report of LEDBAT — Data Link
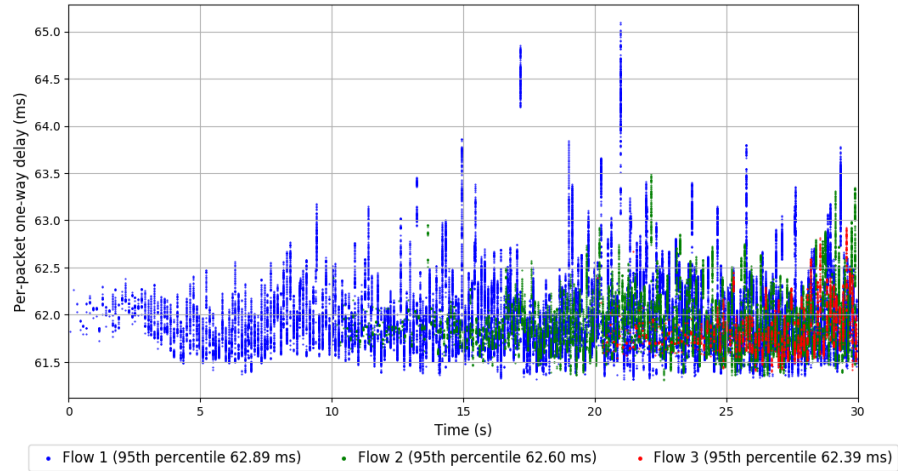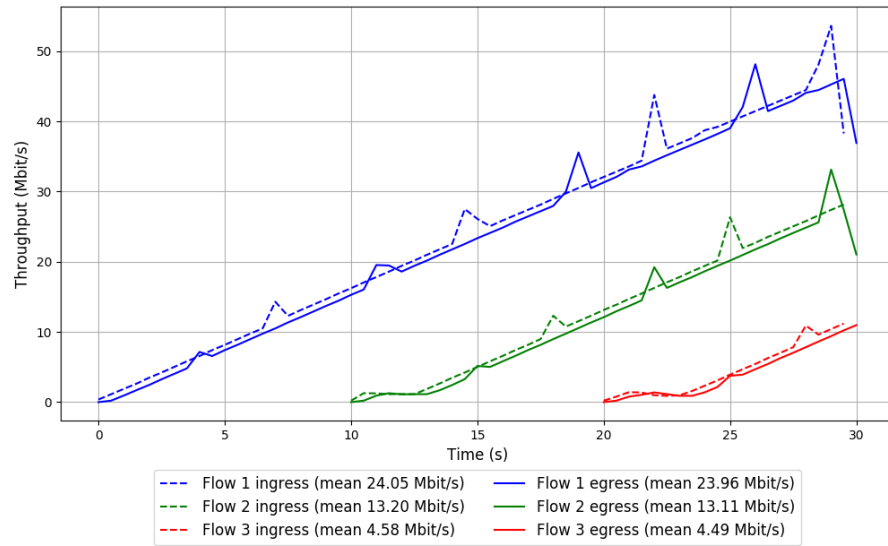
```
Run 7: Statistics of LEDBAT

Start at: 2018-08-11 23:39:49
End at: 2018-08-11 23:40:19
Local clock offset: 0.003 ms
Remote clock offset: -1.244 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.51 Mbit/s
95th percentile per-packet one-way delay: 63.351 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 63.404 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 13.98 Mbit/s
95th percentile per-packet one-way delay: 63.236 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 63.130 ms
Loss rate: 2.46%
```

# Run 7: Report of LEDBAT — Data Link
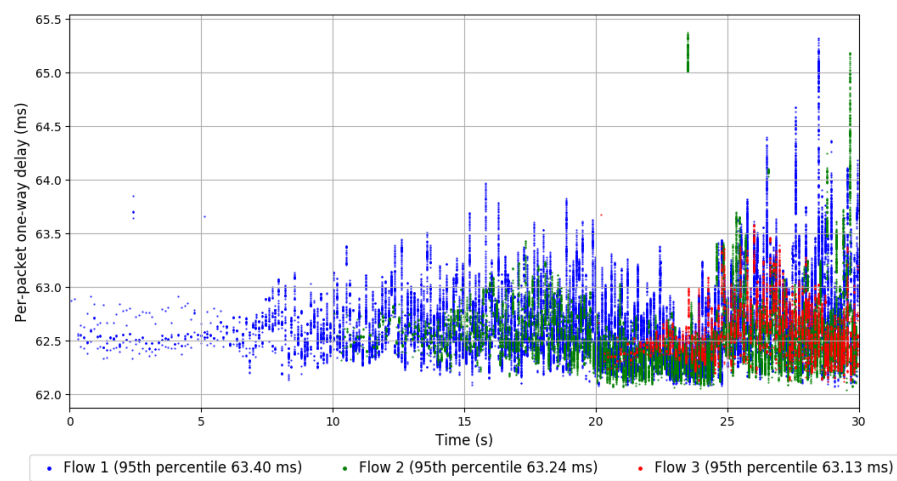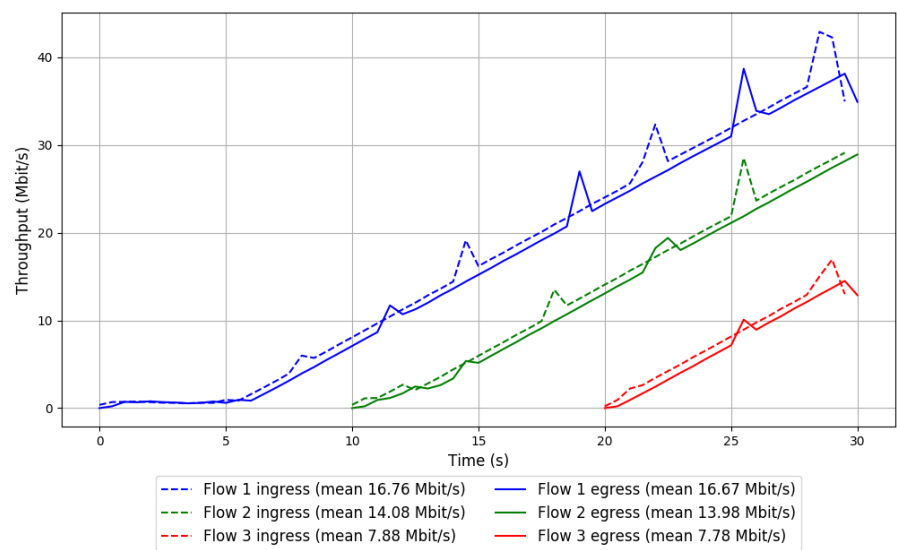
```
Run 8: Statistics of LEDBAT

Start at: 2018-08-12 00:06:37
End at: 2018-08-12 00:07:07
Local clock offset: 0.013 ms
Remote clock offset: -1.204 ms

# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.44 Mbit/s
95th percentile per-packet one-way delay: 63.860 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 22.43 Mbit/s
95th percentile per-packet one-way delay: 63.907 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 63.863 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 63.340 ms
Loss rate: 2.50%
```

# Run 8: Report of LEDBAT — Data Link
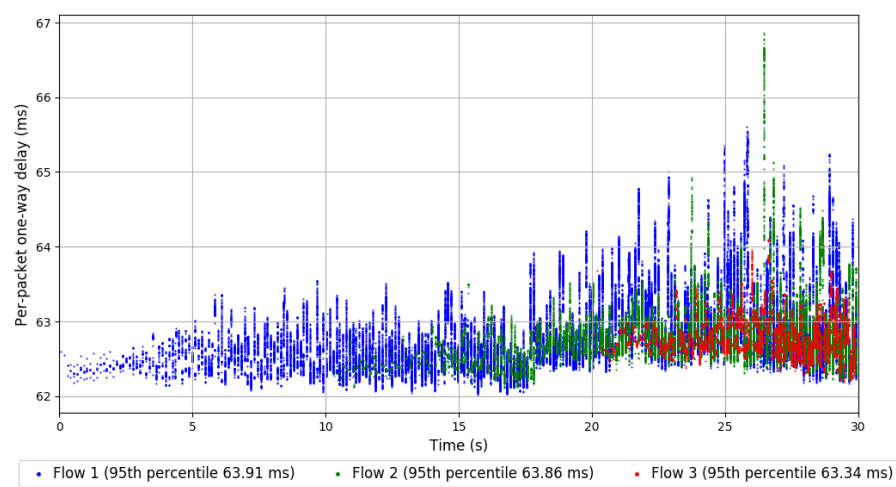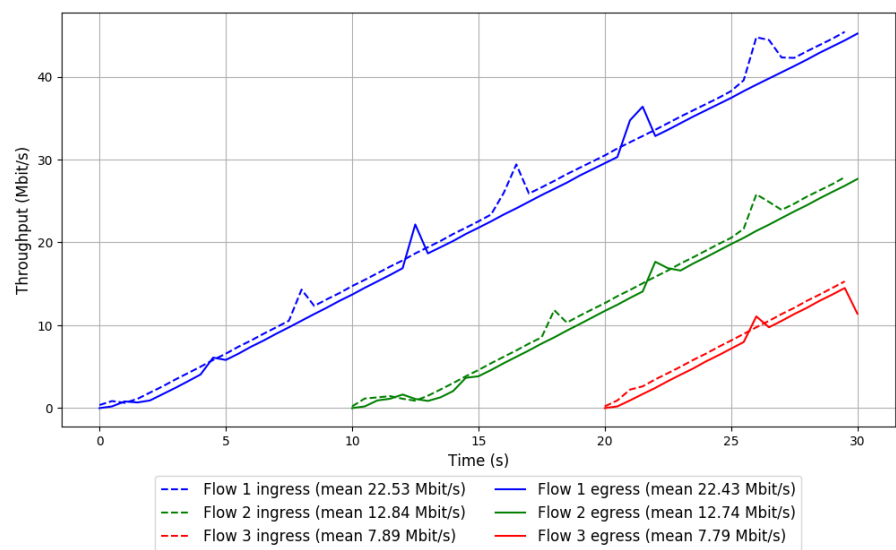
```
Run 9: Statistics of LEDBAT

Start at: 2018-08-12 00:33:22
End at: 2018-08-12 00:33:52
Local clock offset: -0.106 ms
Remote clock offset: -0.121 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 62.291 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.83 Mbit/s
95th percentile per-packet one-way delay: 62.274 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.97 Mbit/s
95th percentile per-packet one-way delay: 62.393 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 7.80 Mbit/s
95th percentile per-packet one-way delay: 61.888 ms
Loss rate: 2.50%
```

# Run 9: Report of LEDBAT — Data Link
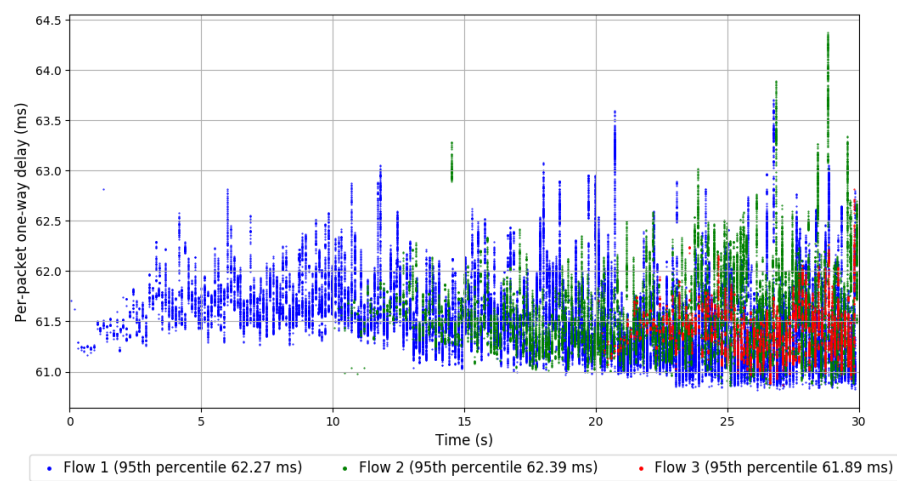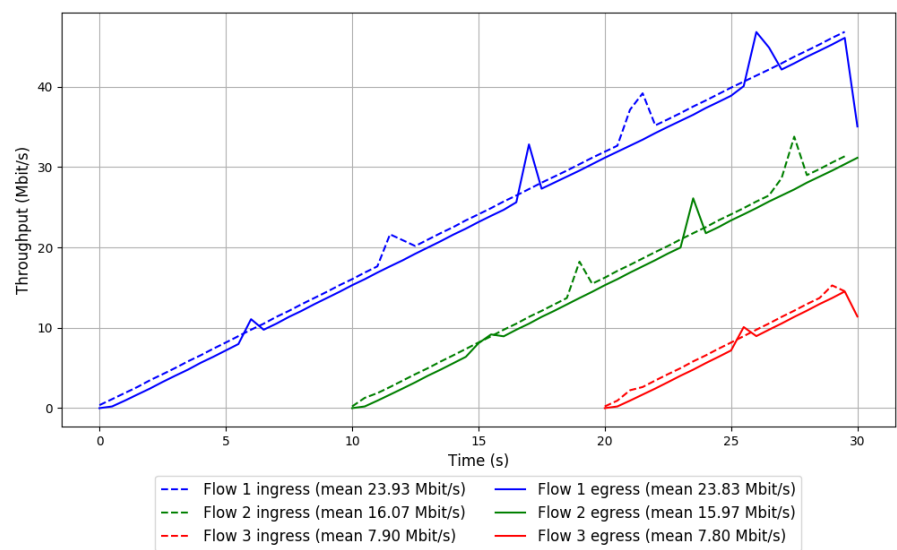
```
Run 10: Statistics of LEDBAT

Start at: 2018-08-12 01:00:01
End at: 2018-08-12 01:00:31
Local clock offset: -0.069 ms
Remote clock offset: -0.868 ms


# Below is generated by plot.py at 2018-08-12 03:48:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.85 Mbit/s
95th percentile per-packet one-way delay: 63.340 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 23.81 Mbit/s
95th percentile per-packet one-way delay: 63.414 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 15.82 Mbit/s
95th percentile per-packet one-way delay: 63.270 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 7.76 Mbit/s
95th percentile per-packet one-way delay: 62.759 ms
Loss rate: 2.51%
```
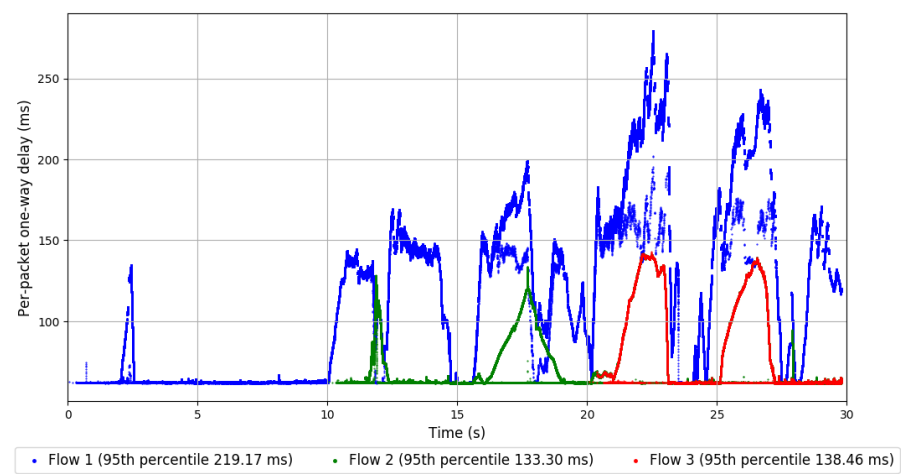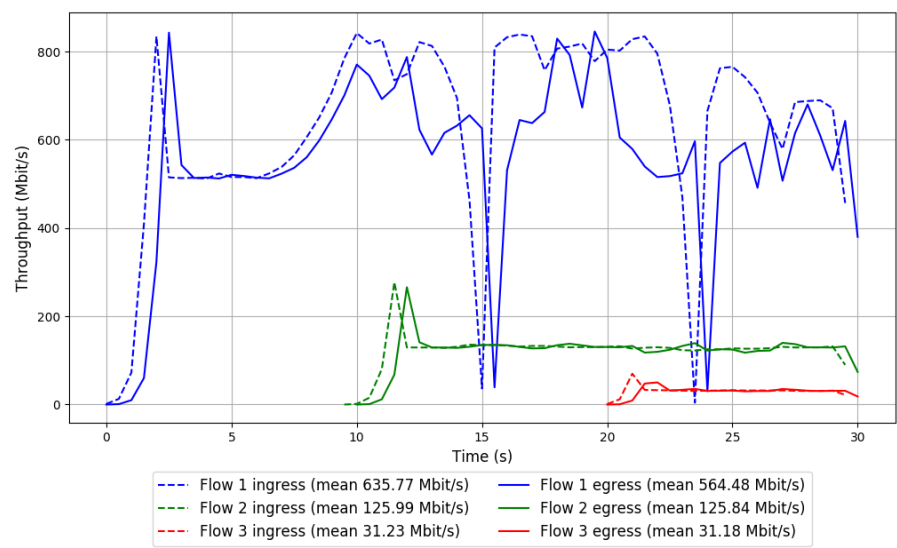
Run 10: Report of LEDBAT — Data Link
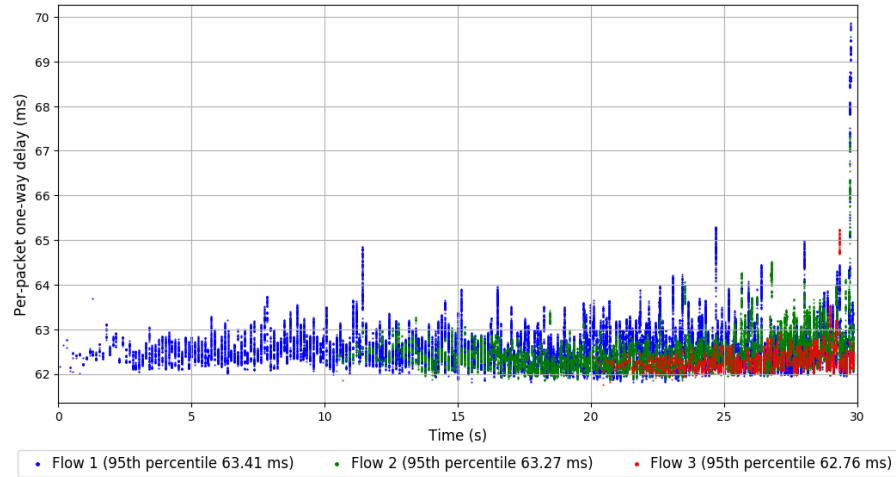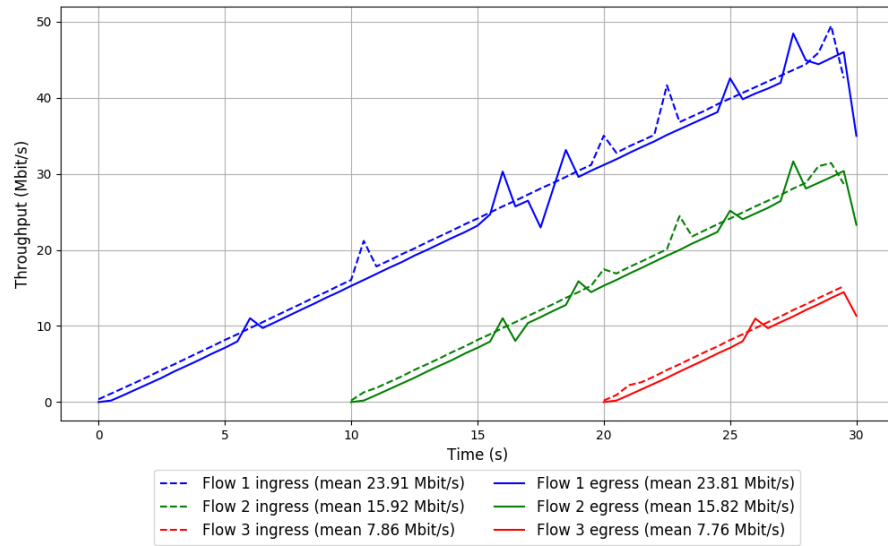
```
Run 1: Statistics of PCC-Allegro

Start at: 2018-08-11 21:09:40
End at: 2018-08-11 21:10:10
Local clock offset: 0.14 ms
Remote clock offset: -0.892 ms


# Below is generated by plot.py at 2018-08-12 03:53:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.14 Mbit/s
95th percentile per-packet one-way delay: 214.913 ms
Loss rate: 10.19%
-- Flow 1:
Average throughput: 564.48 Mbit/s
95th percentile per-packet one-way delay: 219.166 ms
Loss rate: 11.58%
-- Flow 2:
Average throughput: 125.84 Mbit/s
95th percentile per-packet one-way delay: 133.300 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 31.18 Mbit/s
95th percentile per-packet one-way delay: 138.461 ms
Loss rate: 1.41%
```

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

Flow 1 ingress (mean 635.77 Mbit/s) ---- Flow 1 egress (mean 564.48 Mbit/s) ——
Flow 2 ingress (mean 125.99 Mbit/s) ---- Flow 2 egress (mean 125.84 Mbit/s) ——
Flow 3 ingress (mean 31.23 Mbit/s) ---- Flow 3 egress (mean 31.18 Mbit/s) ——

Flow 1 (95th percentile 219.17 ms)　Flow 2 (95th percentile 133.30 ms)　Flow 3 (95th percentile 138.46 ms)

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```
Run 2: Statistics of PCC-Allegro

Start at: 2018-08-11 21:36:20
End at: 2018-08-11 21:36:50
Local clock offset: -0.034 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2018-08-12 03:54:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 720.94 Mbit/s
95th percentile per-packet one-way delay: 182.420 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 541.36 Mbit/s
95th percentile per-packet one-way delay: 186.184 ms
Loss rate: 6.84%
-- Flow 2:
Average throughput: 239.82 Mbit/s
95th percentile per-packet one-way delay: 143.757 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 62.66 Mbit/s
95th percentile per-packet one-way delay: 94.247 ms
Loss rate: 1.35%
```
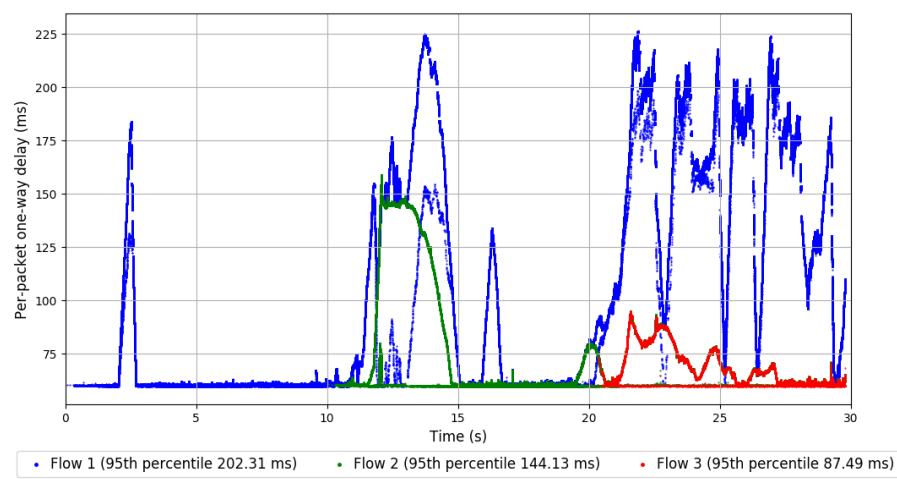
Run 2: Report of PCC-Allegro — Data Link
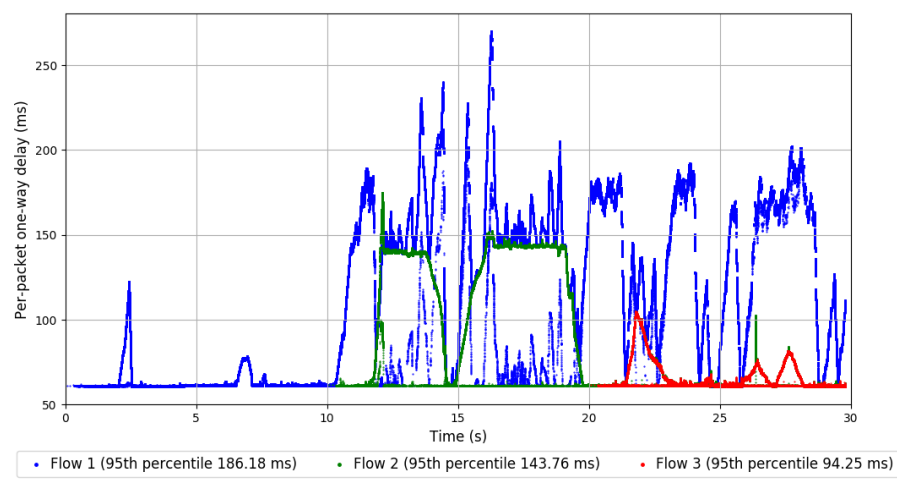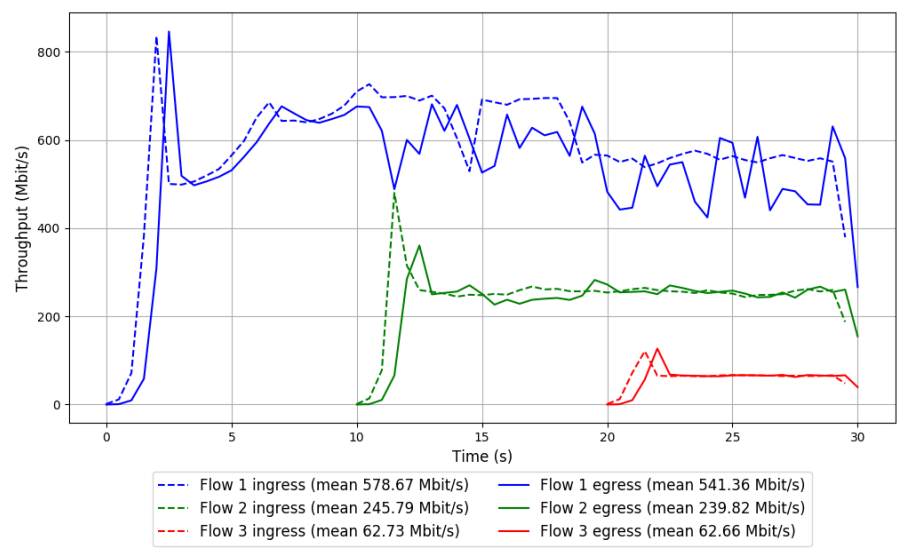
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-08-11 22:03:03
End at: 2018-08-11 22:03:34
Local clock offset: -0.088 ms
Remote clock offset: 1.126 ms


# Below is generated by plot.py at 2018-08-12 03:54:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 687.60 Mbit/s
95th percentile per-packet one-way delay: 197.859 ms
Loss rate: 5.07%
-- Flow 1:
Average throughput: 514.85 Mbit/s
95th percentile per-packet one-way delay: 202.311 ms
Loss rate: 6.12%
-- Flow 2:
Average throughput: 245.12 Mbit/s
95th percentile per-packet one-way delay: 144.128 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 31.07 Mbit/s
95th percentile per-packet one-way delay: 87.490 ms
Loss rate: 1.26%
```
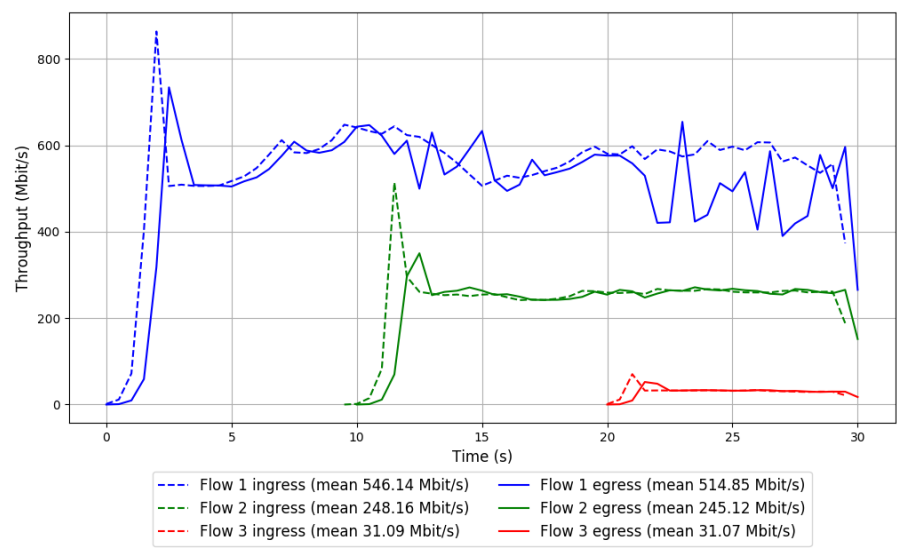
Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-08-11 22:30:05
End at: 2018-08-11 22:30:35
Local clock offset: 0.01 ms
Remote clock offset: 1.236 ms


# Below is generated by plot.py at 2018-08-12 03:57:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.76 Mbit/s
95th percentile per-packet one-way delay: 221.965 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 538.30 Mbit/s
95th percentile per-packet one-way delay: 226.887 ms
Loss rate: 6.80%
-- Flow 2:
Average throughput: 244.78 Mbit/s
95th percentile per-packet one-way delay: 142.771 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 30.80 Mbit/s
95th percentile per-packet one-way delay: 143.033 ms
Loss rate: 3.83%
```
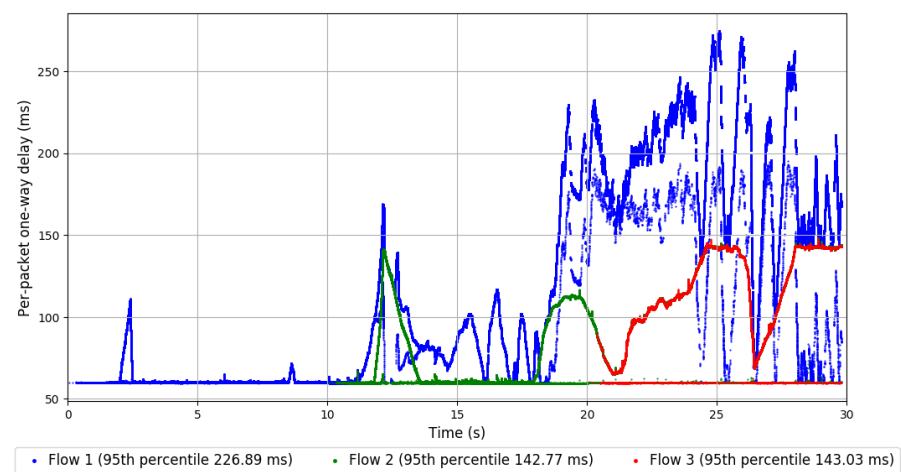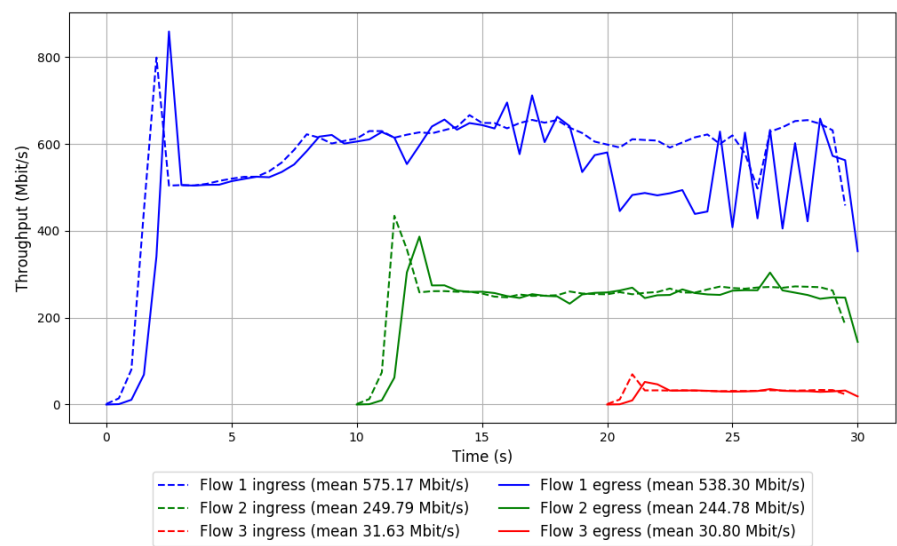
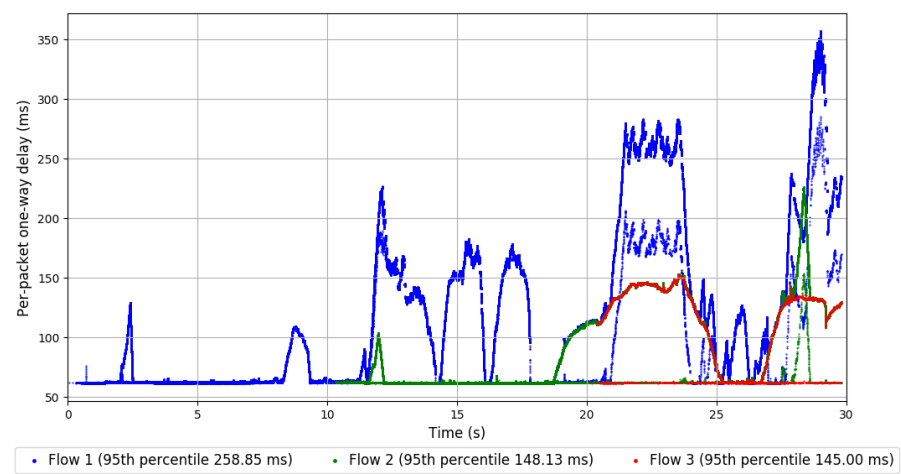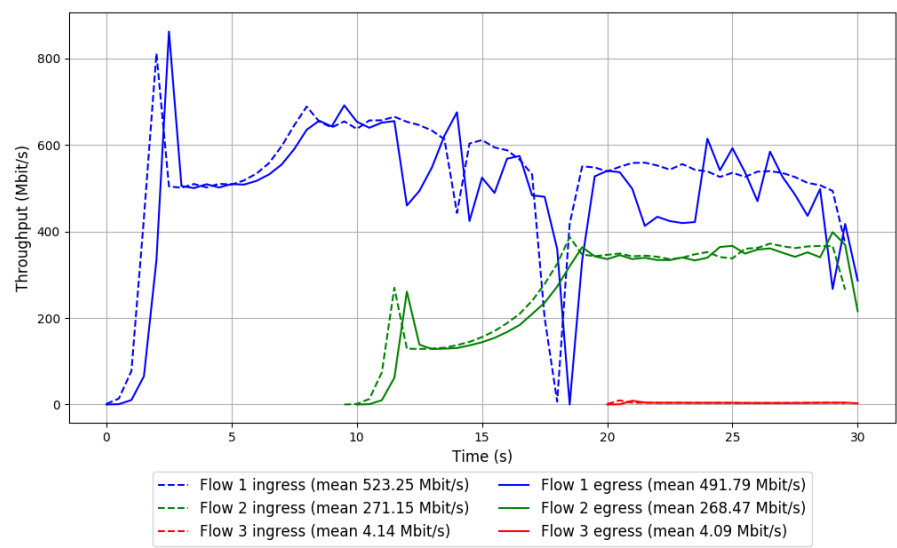Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 575.17 Mbit/s) — Flow 1 egress (mean 538.30 Mbit/s)
Flow 2 ingress (mean 249.79 Mbit/s) — Flow 2 egress (mean 244.78 Mbit/s)
Flow 3 ingress (mean 31.63 Mbit/s) — Flow 3 egress (mean 30.80 Mbit/s)

Flow 1 (95th percentile 226.89 ms) — Flow 2 (95th percentile 142.77 ms) — Flow 3 (95th percentile 143.03 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-08-11 22:57:03
End at: 2018-08-11 22:57:33
Local clock offset: -0.025 ms
Remote clock offset: -0.753 ms

# Below is generated by plot.py at 2018-08-12 03:59:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 671.32 Mbit/s
95th percentile per-packet one-way delay: 253.462 ms
Loss rate: 5.16%
-- Flow 1:
Average throughput: 491.79 Mbit/s
95th percentile per-packet one-way delay: 258.853 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 268.47 Mbit/s
95th percentile per-packet one-way delay: 148.135 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 145.004 ms
Loss rate: 2.62%
```
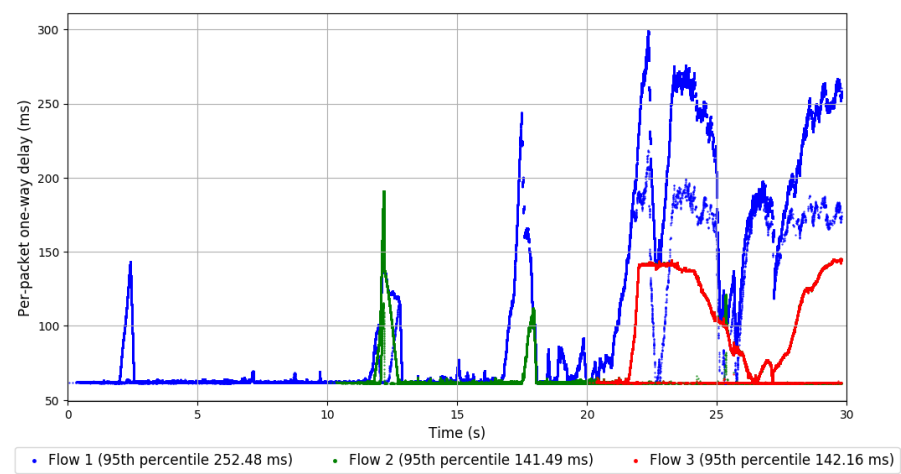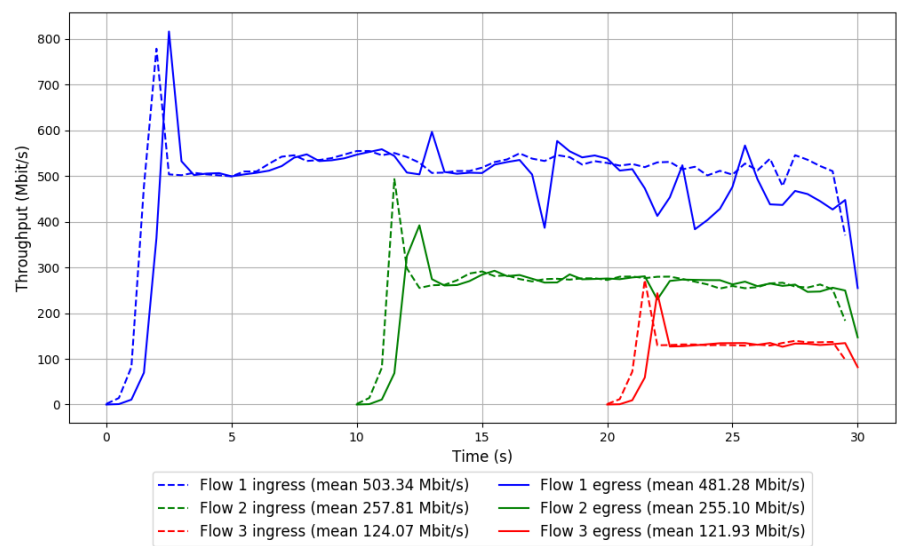
Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 523.25 Mbit/s)   Flow 1 egress (mean 491.79 Mbit/s)
Flow 2 ingress (mean 271.15 Mbit/s)   Flow 2 egress (mean 268.47 Mbit/s)
Flow 3 ingress (mean 4.14 Mbit/s)   Flow 3 egress (mean 4.09 Mbit/s)

Flow 1 (95th percentile 258.85 ms)   Flow 2 (95th percentile 148.13 ms)   Flow 3 (95th percentile 145.00 ms)
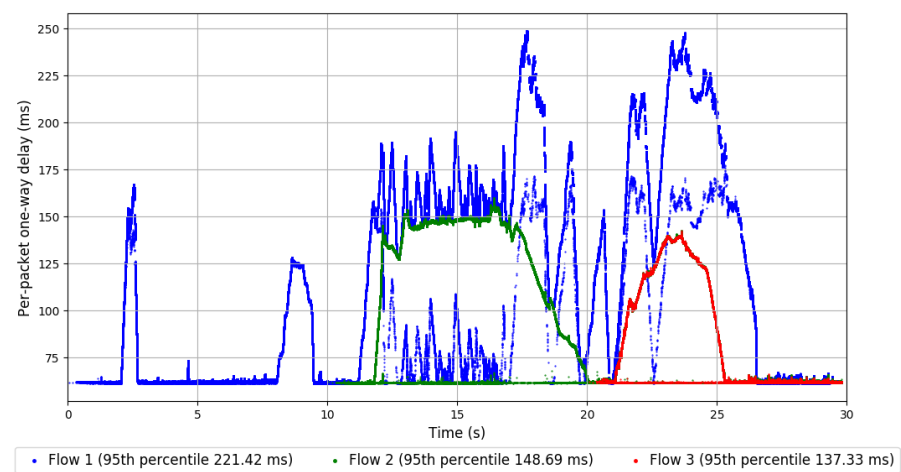
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```
Run 6: Statistics of PCC-Allegro

Start at: 2018-08-11 23:23:58
End at: 2018-08-11 23:24:28
Local clock offset: -0.069 ms
Remote clock offset: -0.47 ms

# Below is generated by plot.py at 2018-08-12 04:00:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.35 Mbit/s
95th percentile per-packet one-way delay: 245.026 ms
Loss rate: 3.92%
-- Flow 1:
Average throughput: 481.28 Mbit/s
95th percentile per-packet one-way delay: 252.480 ms
Loss rate: 4.77%
-- Flow 2:
Average throughput: 255.10 Mbit/s
95th percentile per-packet one-way delay: 141.489 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 121.93 Mbit/s
95th percentile per-packet one-way delay: 142.165 ms
Loss rate: 2.95%
```

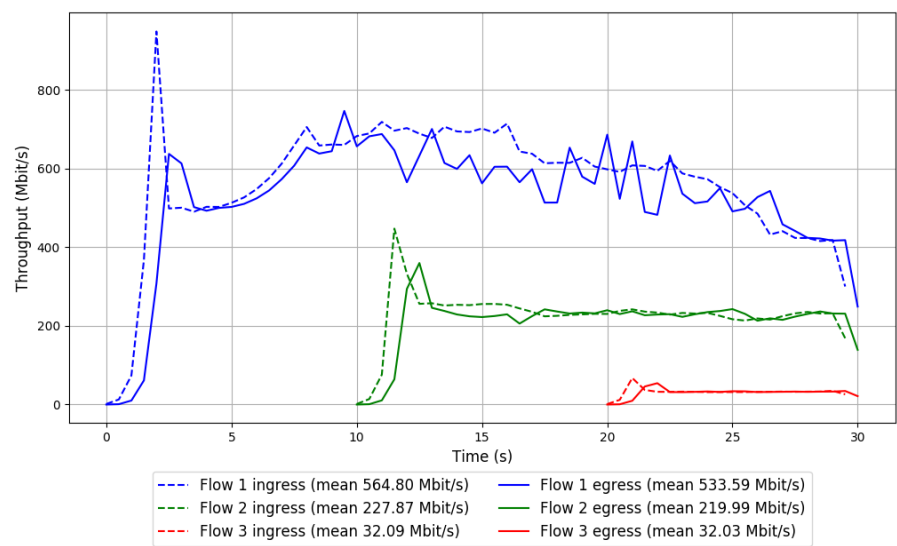Run 6: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 503.34 Mbit/s) --- Flow 1 egress (mean 481.28 Mbit/s) ---
Flow 2 ingress (mean 257.81 Mbit/s) --- Flow 2 egress (mean 255.10 Mbit/s) ---
Flow 3 ingress (mean 124.07 Mbit/s) --- Flow 3 egress (mean 121.93 Mbit/s) ---

Flow 1 (95th percentile 252.48 ms)   Flow 2 (95th percentile 141.49 ms)   Flow 3 (95th percentile 142.16 ms)

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```
Run 7: Statistics of PCC-Allegro

Start at: 2018-08-11 23:50:45
End at: 2018-08-11 23:51:15
Local clock offset: -0.044 ms
Remote clock offset: -0.621 ms


# Below is generated by plot.py at 2018-08-12 04:00:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.98 Mbit/s
95th percentile per-packet one-way delay: 215.953 ms
Loss rate: 5.46%
-- Flow 1:
Average throughput: 533.59 Mbit/s
95th percentile per-packet one-way delay: 221.424 ms
Loss rate: 5.92%
-- Flow 2:
Average throughput: 219.99 Mbit/s
95th percentile per-packet one-way delay: 148.690 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 32.03 Mbit/s
95th percentile per-packet one-way delay: 137.330 ms
Loss rate: 1.44%
```

Run 7: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 564.80 Mbit/s) Flow 1 egress (mean 533.59 Mbit/s)
Flow 2 ingress (mean 227.87 Mbit/s) Flow 2 egress (mean 219.99 Mbit/s)
Flow 3 ingress (mean 32.09 Mbit/s) Flow 3 egress (mean 32.03 Mbit/s)

Flow 1 (95th percentile 221.42 ms) Flow 2 (95th percentile 148.69 ms) Flow 3 (95th percentile 137.33 ms)

```
Run 8: Statistics of PCC-Allegro

Start at: 2018-08-12 00:17:36
End at: 2018-08-12 00:18:06
Local clock offset: -0.09 ms
Remote clock offset: 0.069 ms


# Below is generated by plot.py at 2018-08-12 04:02:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 706.13 Mbit/s
95th percentile per-packet one-way delay: 155.865 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 491.41 Mbit/s
95th percentile per-packet one-way delay: 166.185 ms
Loss rate: 1.88%
-- Flow 2:
Average throughput: 307.36 Mbit/s
95th percentile per-packet one-way delay: 144.606 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 33.10 Mbit/s
95th percentile per-packet one-way delay: 144.110 ms
Loss rate: 2.44%
```
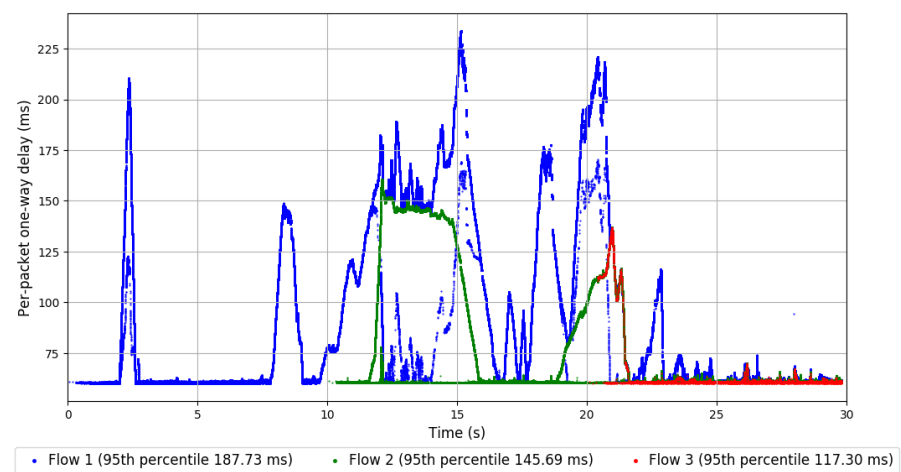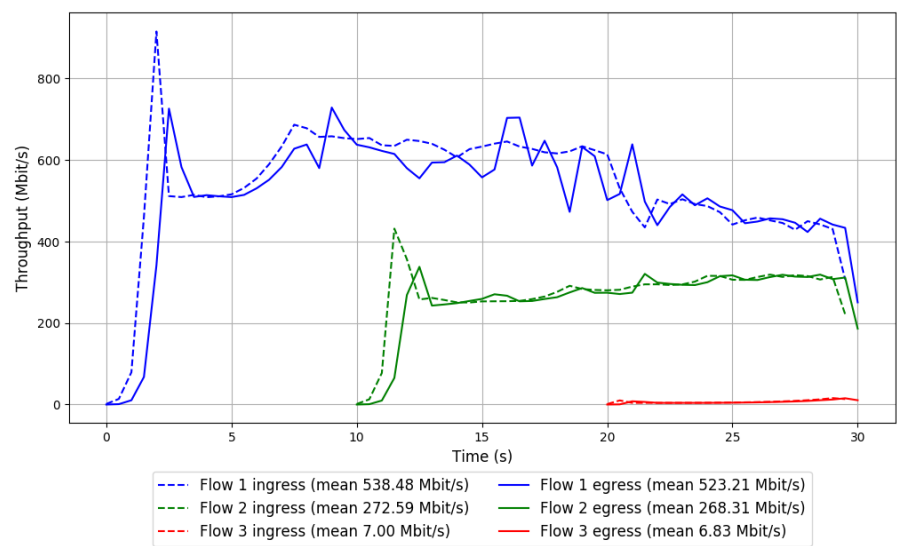
Run 8: Report of PCC-Allegro — Data Link
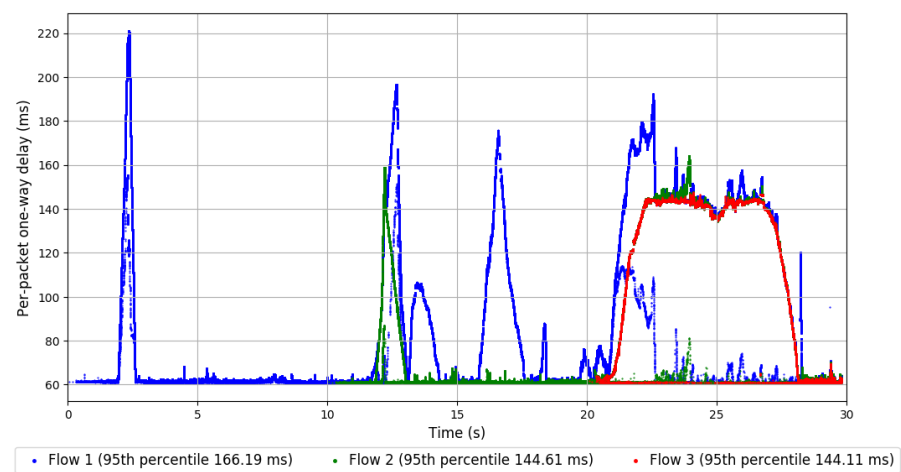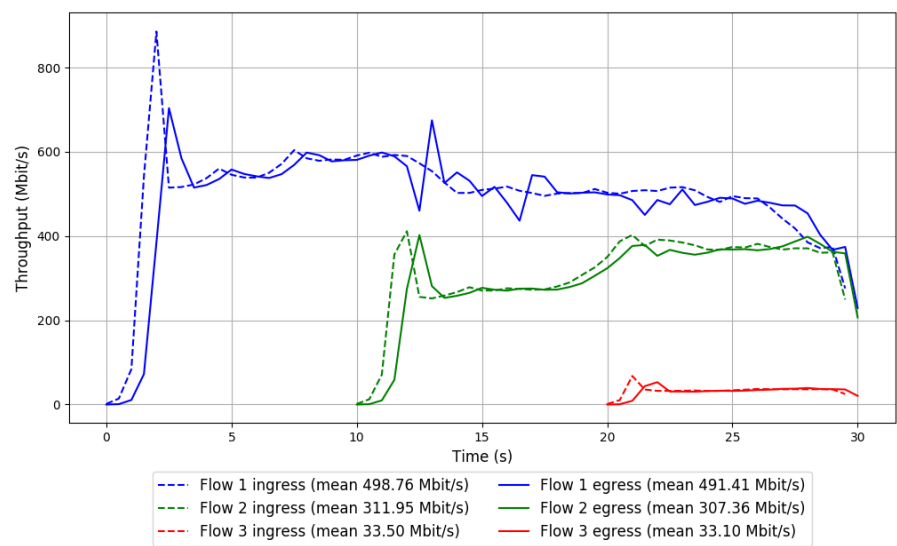
```
Run 9: Statistics of PCC-Allegro

Start at: 2018-08-12 00:44:15
End at: 2018-08-12 00:44:45
Local clock offset: -0.032 ms
Remote clock offset: 0.514 ms


# Below is generated by plot.py at 2018-08-12 04:06:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 703.43 Mbit/s
95th percentile per-packet one-way delay: 178.484 ms
Loss rate: 2.98%
-- Flow 1:
Average throughput: 523.21 Mbit/s
95th percentile per-packet one-way delay: 187.728 ms
Loss rate: 3.25%
-- Flow 2:
Average throughput: 268.31 Mbit/s
95th percentile per-packet one-way delay: 145.694 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 117.297 ms
Loss rate: 3.61%
```

Run 9: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 538.48 Mbit/s)   —— Flow 1 egress (mean 523.21 Mbit/s)
- - - Flow 2 ingress (mean 272.59 Mbit/s)   —— Flow 2 egress (mean 268.31 Mbit/s)
- - - Flow 3 ingress (mean 7.00 Mbit/s)   —— Flow 3 egress (mean 6.83 Mbit/s)

· Flow 1 (95th percentile 187.73 ms)   · Flow 2 (95th percentile 145.69 ms)   · Flow 3 (95th percentile 117.30 ms)

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```
Run 10: Statistics of PCC-Allegro

Start at: 2018-08-12 01:10:44
End at: 2018-08-12 01:11:14
Local clock offset: -0.063 ms
Remote clock offset: -1.338 ms


# Below is generated by plot.py at 2018-08-12 04:06:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 599.24 Mbit/s
95th percentile per-packet one-way delay: 151.979 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 353.39 Mbit/s
95th percentile per-packet one-way delay: 154.765 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 340.33 Mbit/s
95th percentile per-packet one-way delay: 151.762 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 142.834 ms
Loss rate: 1.82%
```

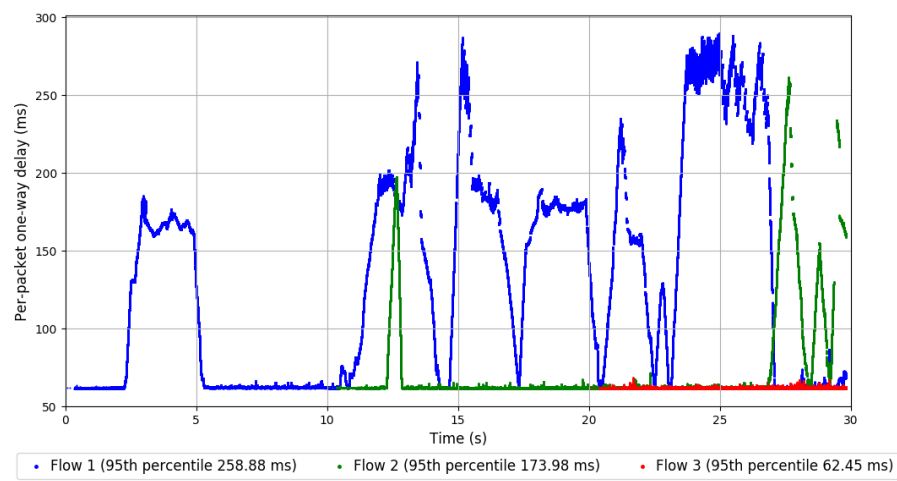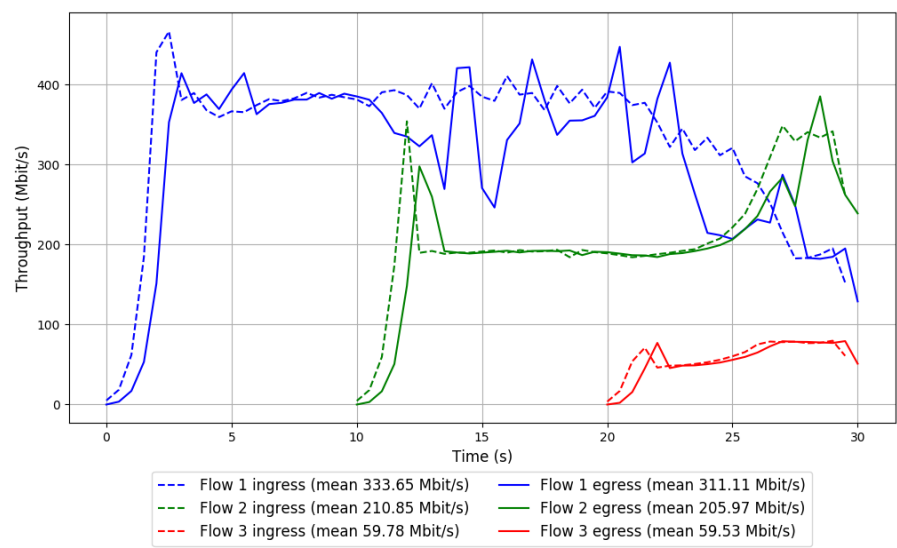Run 10: Report of PCC-Allegro — Data Link

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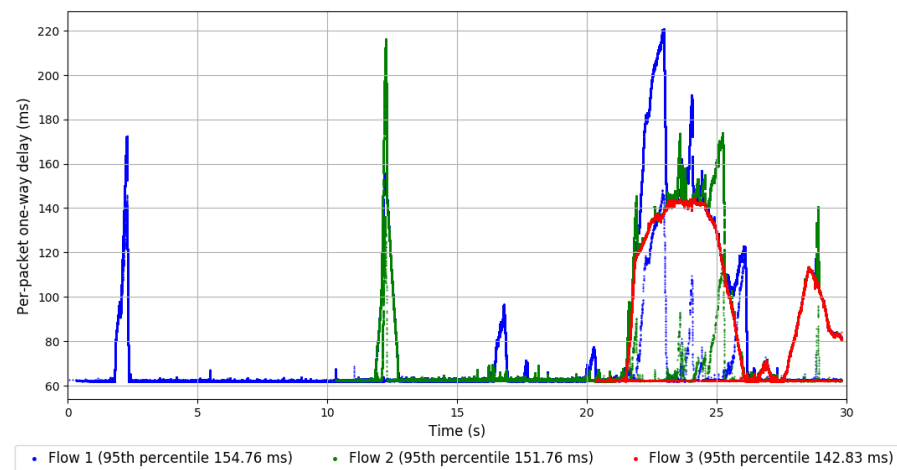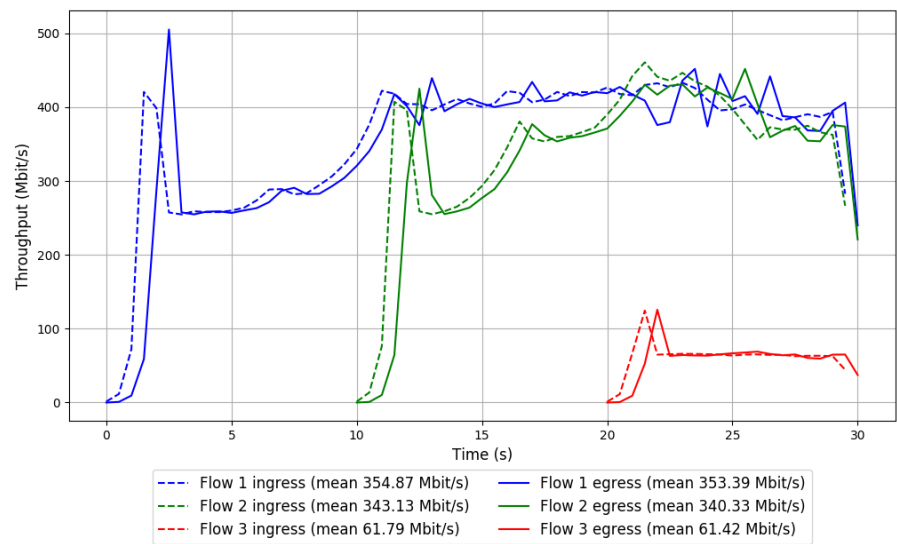
```
Run 1: Statistics of PCC-Expr

Start at: 2018-08-11 21:02:25
End at: 2018-08-11 21:02:55
Local clock offset: 0.077 ms
Remote clock offset: -0.206 ms

# Below is generated by plot.py at 2018-08-12 04:11:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.91 Mbit/s
95th percentile per-packet one-way delay: 153.315 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 294.85 Mbit/s
95th percentile per-packet one-way delay: 170.599 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 195.34 Mbit/s
95th percentile per-packet one-way delay: 67.997 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 184.69 Mbit/s
95th percentile per-packet one-way delay: 130.635 ms
Loss rate: 1.47%
```

Run 1: Report of PCC-Expr — Data Link
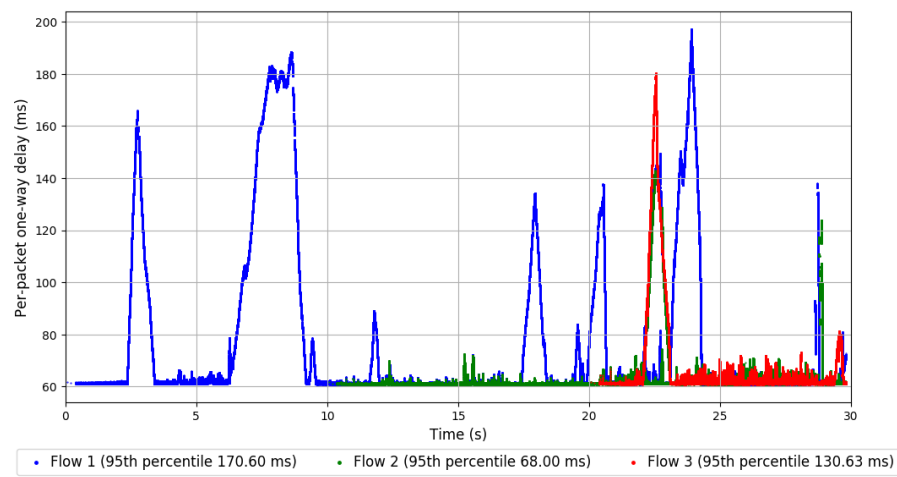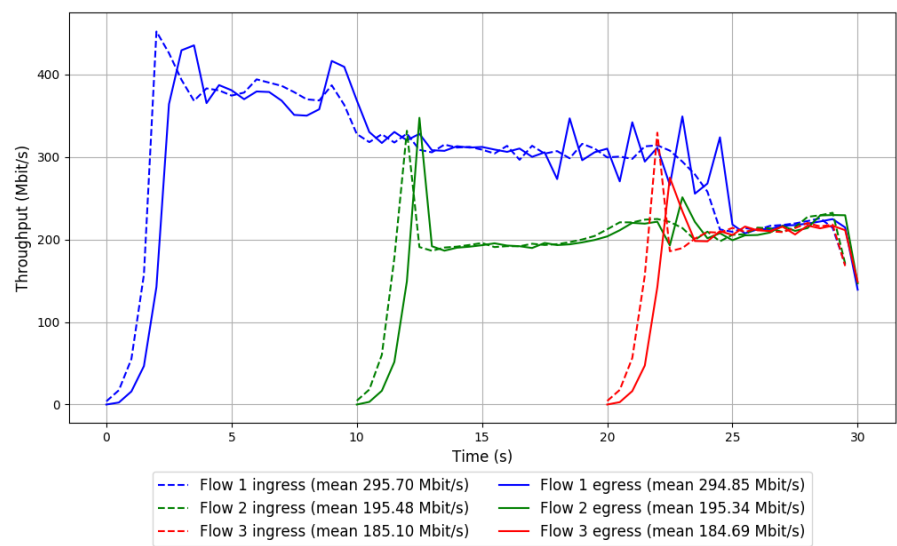
```
Run 2: Statistics of PCC-Expr

Start at: 2018-08-11 21:29:02
End at: 2018-08-11 21:29:32
Local clock offset: 0.022 ms
Remote clock offset: -0.68 ms


# Below is generated by plot.py at 2018-08-12 04:13:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.25 Mbit/s
95th percentile per-packet one-way delay: 244.408 ms
Loss rate: 5.73%
-- Flow 1:
Average throughput: 311.11 Mbit/s
95th percentile per-packet one-way delay: 258.875 ms
Loss rate: 7.14%
-- Flow 2:
Average throughput: 205.97 Mbit/s
95th percentile per-packet one-way delay: 173.981 ms
Loss rate: 2.93%
-- Flow 3:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 62.448 ms
Loss rate: 1.66%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 333.65 Mbit/s) --- Flow 1 egress (mean 311.11 Mbit/s)
Flow 2 ingress (mean 210.85 Mbit/s) --- Flow 2 egress (mean 205.97 Mbit/s)
Flow 3 ingress (mean 59.78 Mbit/s) --- Flow 3 egress (mean 59.53 Mbit/s)

Flow 1 (95th percentile 258.88 ms)   Flow 2 (95th percentile 173.98 ms)   Flow 3 (95th percentile 62.45 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2018-08-11 21:55:47
End at: 2018-08-11 21:56:17
Local clock offset: -0.093 ms
Remote clock offset: -0.182 ms


# Below is generated by plot.py at 2018-08-12 04:15:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.20 Mbit/s
95th percentile per-packet one-way delay: 179.575 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 307.01 Mbit/s
95th percentile per-packet one-way delay: 181.378 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 209.30 Mbit/s
95th percentile per-packet one-way delay: 74.573 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 71.17 Mbit/s
95th percentile per-packet one-way delay: 62.136 ms
Loss rate: 2.09%
```

Run 3: Report of PCC-Expr — Data Link
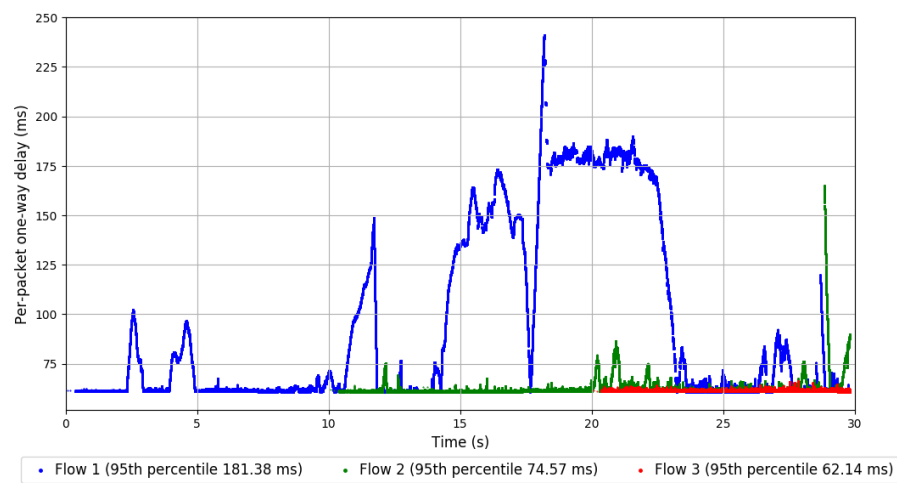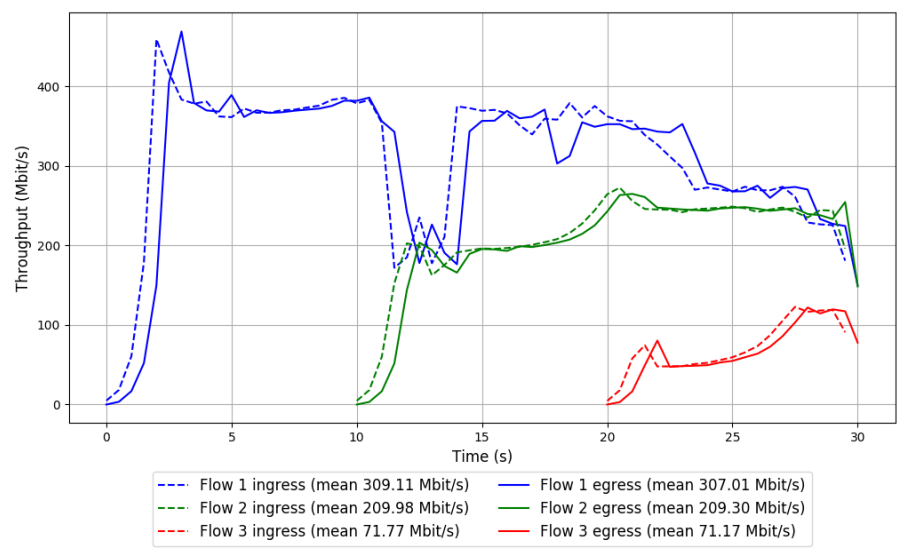
```
Run 4: Statistics of PCC-Expr

Start at: 2018-08-11 22:22:49
End at: 2018-08-11 22:23:19
Local clock offset: 0.001 ms
Remote clock offset: 0.09 ms


# Below is generated by plot.py at 2018-08-12 04:16:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.10 Mbit/s
95th percentile per-packet one-way delay: 223.014 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 256.33 Mbit/s
95th percentile per-packet one-way delay: 116.179 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 219.61 Mbit/s
95th percentile per-packet one-way delay: 247.437 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 91.70 Mbit/s
95th percentile per-packet one-way delay: 62.068 ms
Loss rate: 1.49%
```

# Run 4: Report of PCC-Expr — Data Link
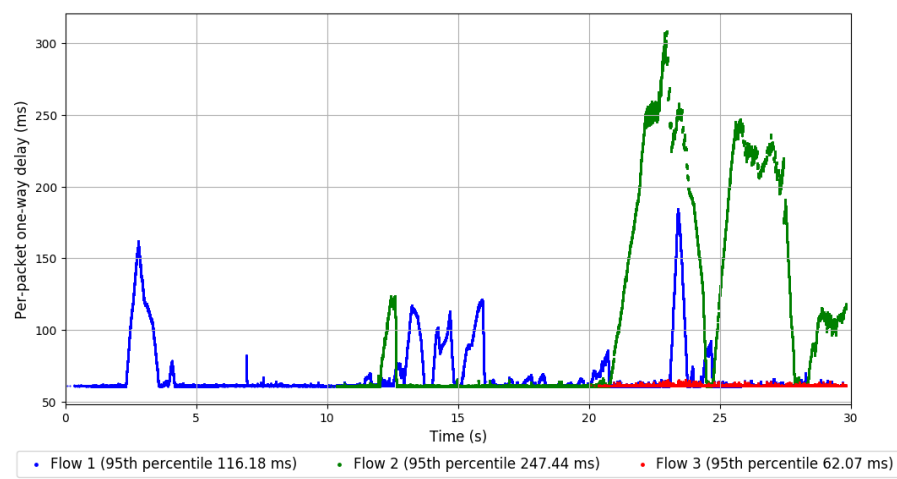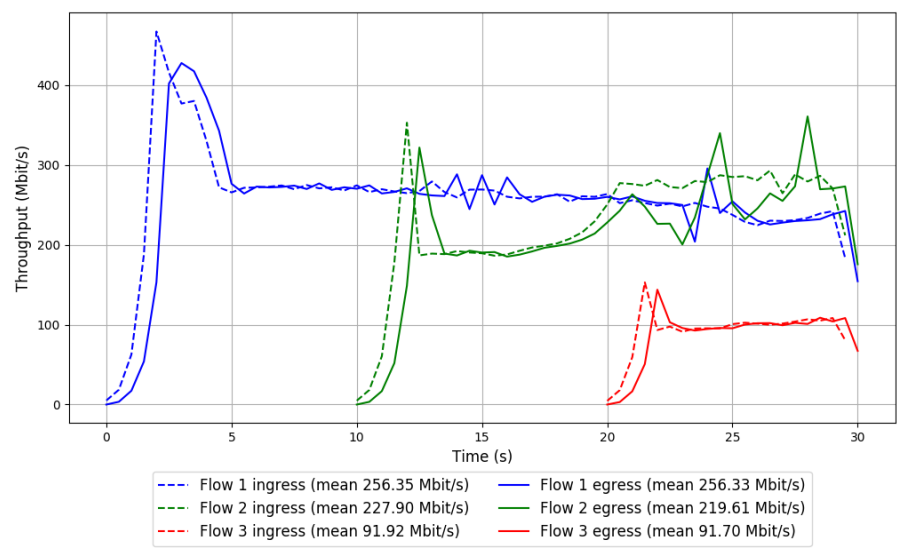
```
Run 5: Statistics of PCC-Expr

Start at: 2018-08-11 22:49:39
End at: 2018-08-11 22:50:09
Local clock offset: -0.07 ms
Remote clock offset: -0.379 ms

# Below is generated by plot.py at 2018-08-12 04:19:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.47 Mbit/s
95th percentile per-packet one-way delay: 242.304 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 290.86 Mbit/s
95th percentile per-packet one-way delay: 252.810 ms
Loss rate: 3.70%
-- Flow 2:
Average throughput: 279.85 Mbit/s
95th percentile per-packet one-way delay: 194.004 ms
Loss rate: 6.10%
-- Flow 3:
Average throughput: 97.34 Mbit/s
95th percentile per-packet one-way delay: 63.123 ms
Loss rate: 1.54%
```

Run 5: Report of PCC-Expr — Data Link
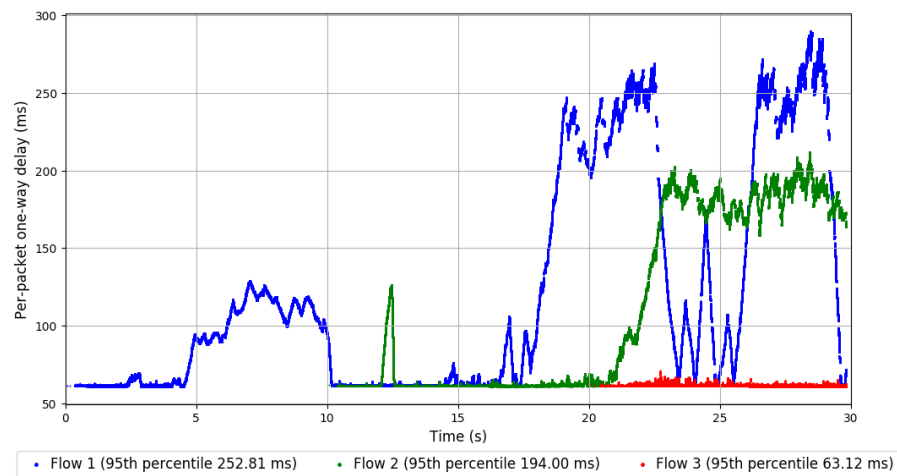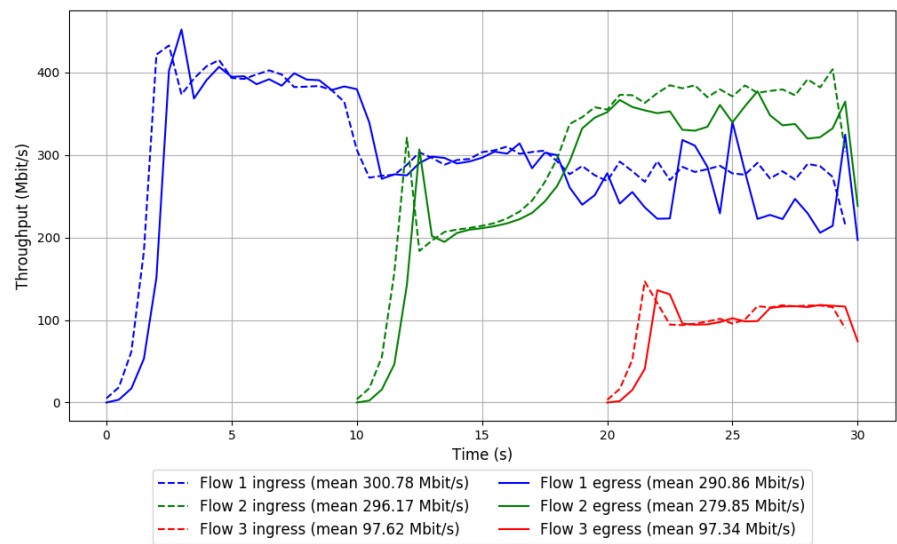
```
Run 6: Statistics of PCC-Expr

Start at: 2018-08-11 23:16:38
End at: 2018-08-11 23:17:08
Local clock offset: 0.057 ms
Remote clock offset: -0.722 ms

# Below is generated by plot.py at 2018-08-12 04:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 505.78 Mbit/s
95th percentile per-packet one-way delay: 217.199 ms
Loss rate: 2.74%
-- Flow 1:
Average throughput: 318.50 Mbit/s
95th percentile per-packet one-way delay: 209.144 ms
Loss rate: 2.81%
-- Flow 2:
Average throughput: 235.08 Mbit/s
95th percentile per-packet one-way delay: 231.946 ms
Loss rate: 2.77%
-- Flow 3:
Average throughput: 95.62 Mbit/s
95th percentile per-packet one-way delay: 67.936 ms
Loss rate: 1.92%
```

Run 6: Report of PCC-Expr — Data Link
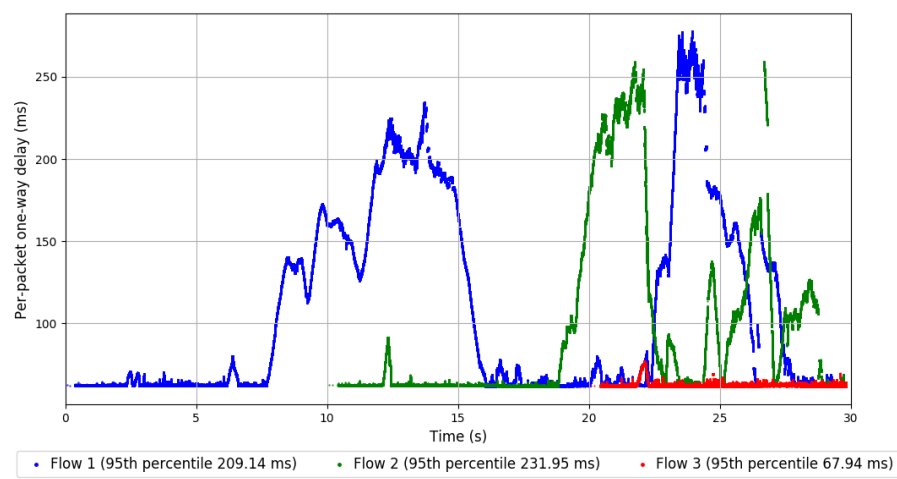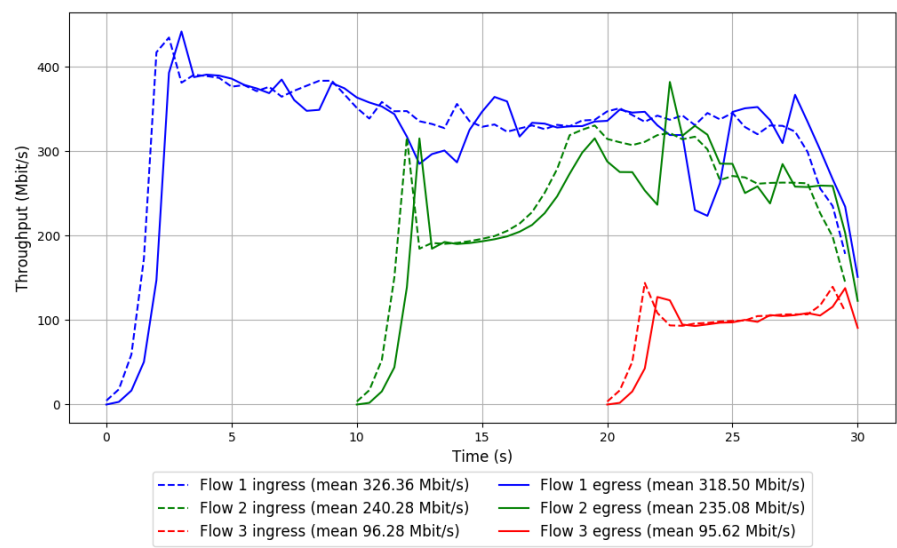
```
Run 7: Statistics of PCC-Expr

Start at: 2018-08-11 23:43:31
End at: 2018-08-11 23:44:01
Local clock offset: -0.022 ms
Remote clock offset: -0.028 ms

# Below is generated by plot.py at 2018-08-12 04:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 412.25 Mbit/s
95th percentile per-packet one-way delay: 211.196 ms
Loss rate: 4.07%
-- Flow 1:
Average throughput: 261.52 Mbit/s
95th percentile per-packet one-way delay: 215.765 ms
Loss rate: 5.83%
-- Flow 2:
Average throughput: 196.13 Mbit/s
95th percentile per-packet one-way delay: 63.927 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 62.82 Mbit/s
95th percentile per-packet one-way delay: 61.821 ms
Loss rate: 1.84%
```

Run 7: Report of PCC-Expr — Data Link
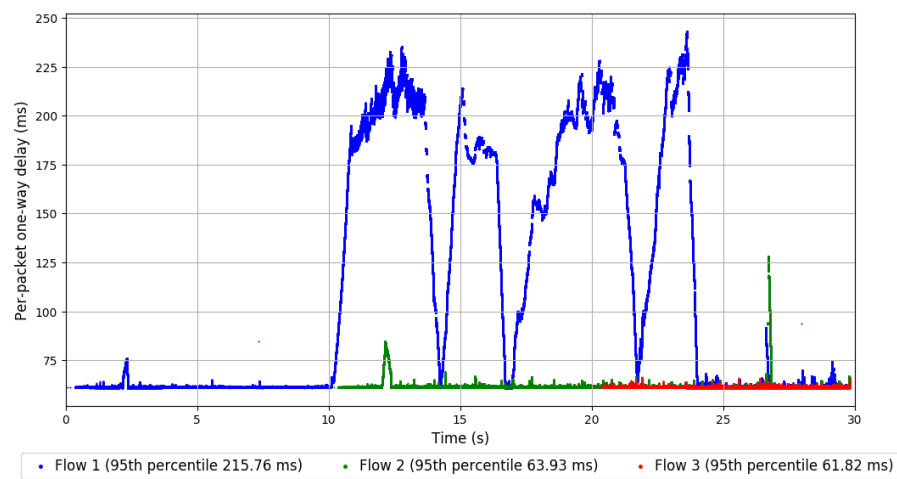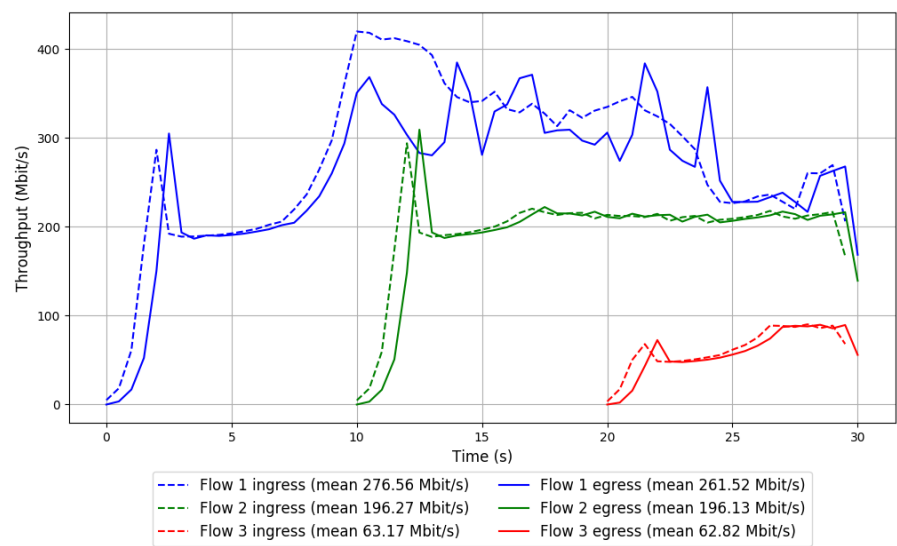
```
Run 8: Statistics of PCC-Expr

Start at: 2018-08-12 00:10:16
End at: 2018-08-12 00:10:46
Local clock offset: -0.003 ms
Remote clock offset: 1.074 ms


# Below is generated by plot.py at 2018-08-12 04:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 497.60 Mbit/s
95th percentile per-packet one-way delay: 201.438 ms
Loss rate: 3.05%
-- Flow 1:
Average throughput: 282.91 Mbit/s
95th percentile per-packet one-way delay: 213.329 ms
Loss rate: 3.66%
-- Flow 2:
Average throughput: 227.40 Mbit/s
95th percentile per-packet one-way delay: 187.529 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 194.96 Mbit/s
95th percentile per-packet one-way delay: 82.098 ms
Loss rate: 1.62%
```
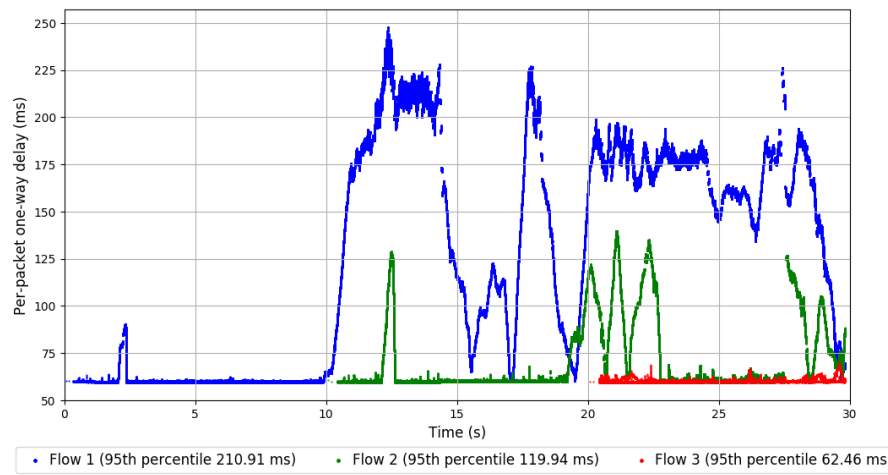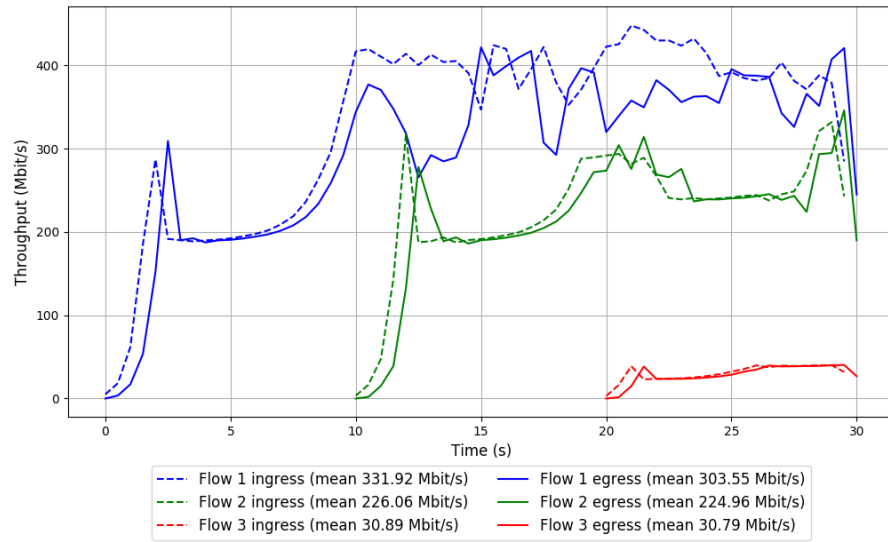
Run 8: Report of PCC-Expr — Data Link
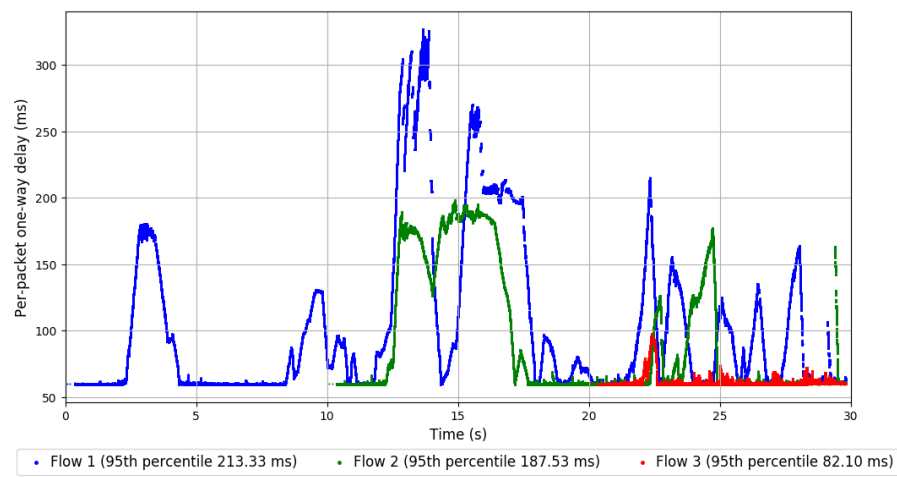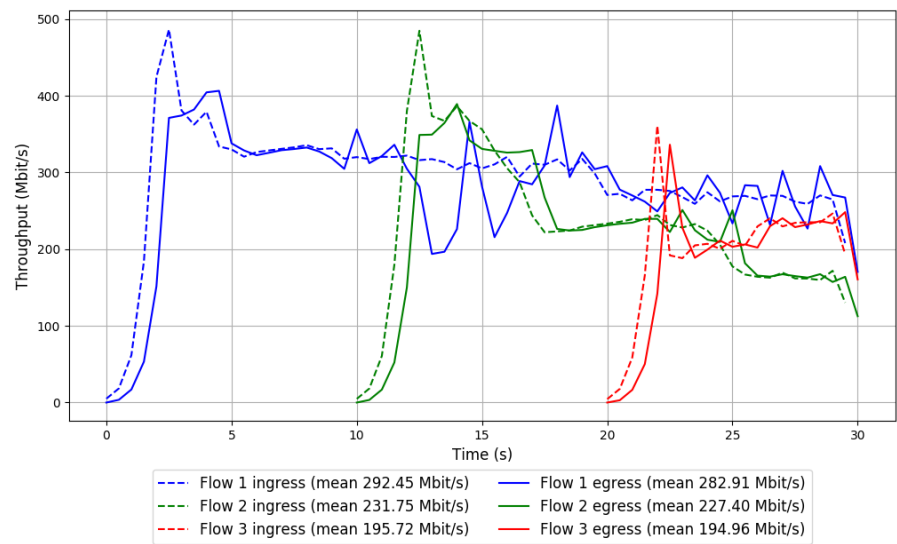
```
Run 9: Statistics of PCC-Expr

Start at: 2018-08-12 00:37:01
End at: 2018-08-12 00:37:31
Local clock offset: -0.09 ms
Remote clock offset: 1.116 ms


# Below is generated by plot.py at 2018-08-12 04:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.89 Mbit/s
95th percentile per-packet one-way delay: 205.761 ms
Loss rate: 6.39%
-- Flow 1:
Average throughput: 303.55 Mbit/s
95th percentile per-packet one-way delay: 210.909 ms
Loss rate: 8.92%
-- Flow 2:
Average throughput: 224.96 Mbit/s
95th percentile per-packet one-way delay: 119.935 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 30.79 Mbit/s
95th percentile per-packet one-way delay: 62.458 ms
Loss rate: 1.60%
```

Run 9: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 331.92 Mbit/s) --- Flow 1 egress (mean 303.55 Mbit/s)
Flow 2 ingress (mean 226.06 Mbit/s) --- Flow 2 egress (mean 224.96 Mbit/s)
Flow 3 ingress (mean 30.89 Mbit/s) --- Flow 3 egress (mean 30.79 Mbit/s)

Flow 1 (95th percentile 210.91 ms)   Flow 2 (95th percentile 119.94 ms)   Flow 3 (95th percentile 62.46 ms)

```
Run 10: Statistics of PCC-Expr

Start at: 2018-08-12 01:03:39
End at: 2018-08-12 01:04:09
Local clock offset: -0.025 ms
Remote clock offset: -0.568 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 424.20 Mbit/s
95th percentile per-packet one-way delay: 173.720 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 240.03 Mbit/s
95th percentile per-packet one-way delay: 186.543 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 230.65 Mbit/s
95th percentile per-packet one-way delay: 140.399 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 62.803 ms
Loss rate: 1.41%
```

Run 10: Report of PCC-Expr — Data Link
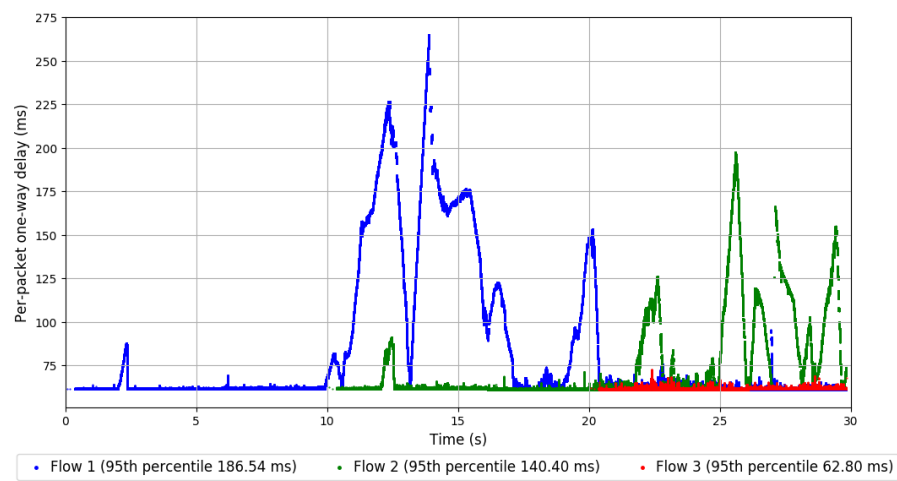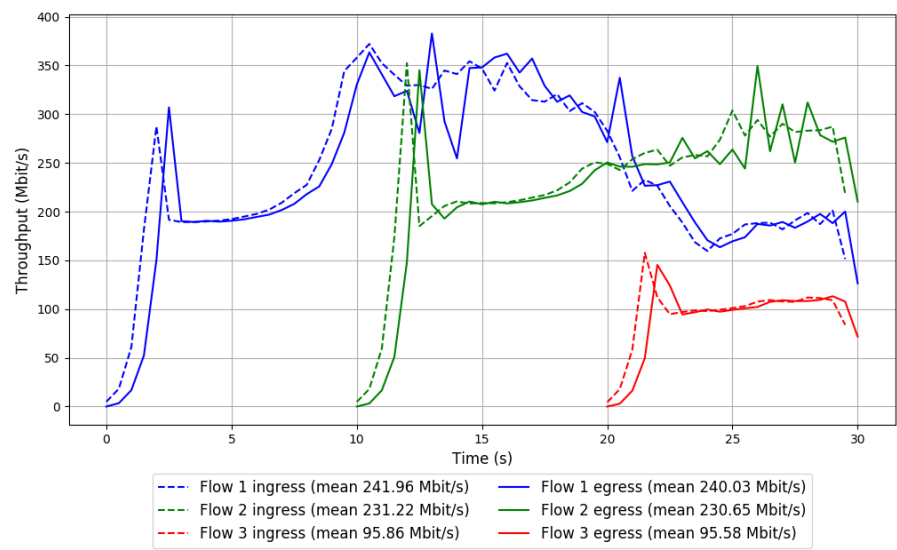
Run 1: Statistics of QUIC Cubic

Start at: 2018-08-11 20:57:30
End at: 2018-08-11 20:58:00
Local clock offset: 0.076 ms
Remote clock offset: -0.142 ms

Below is generated by plot.py at 2018-08-12 04:28:56
Datalink statistics
-- Total of 3 flows:
Average throughput: 95.58 Mbit/s
95th percentile per-packet one-way delay: 61.490 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 59.98 Mbit/s
95th percentile per-packet one-way delay: 61.302 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 41.24 Mbit/s
95th percentile per-packet one-way delay: 61.588 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 18.43 Mbit/s
95th percentile per-packet one-way delay: 61.145 ms
Loss rate: 0.57%

Run 1: Report of QUIC Cubic — Data Link
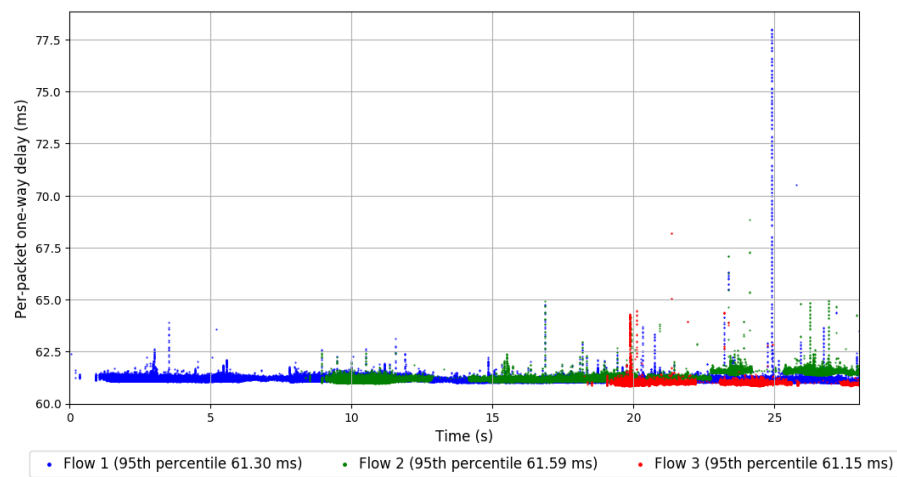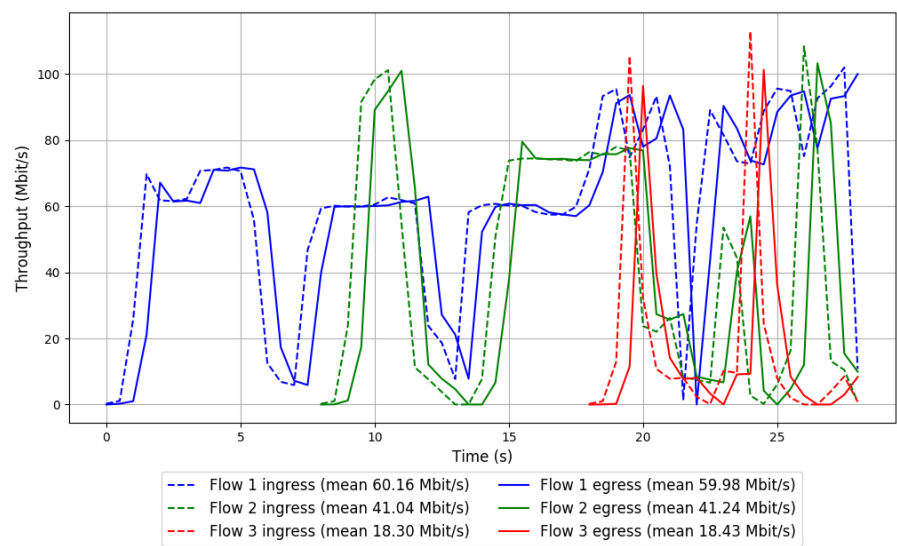
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-08-11 21:24:07
End at: 2018-08-11 21:24:37
Local clock offset: 0.083 ms
Remote clock offset: -1.386 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 62.540 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 58.06 Mbit/s
95th percentile per-packet one-way delay: 62.566 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 39.08 Mbit/s
95th percentile per-packet one-way delay: 62.492 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 62.300 ms
Loss rate: 2.97%
```

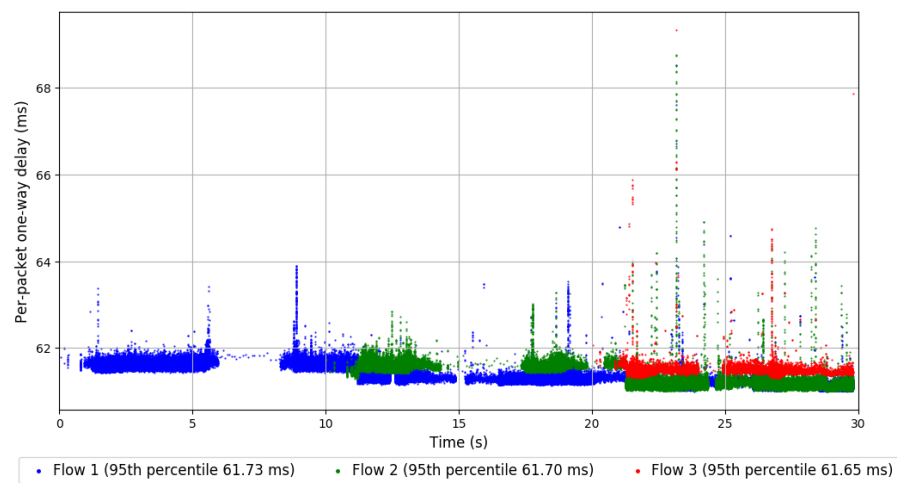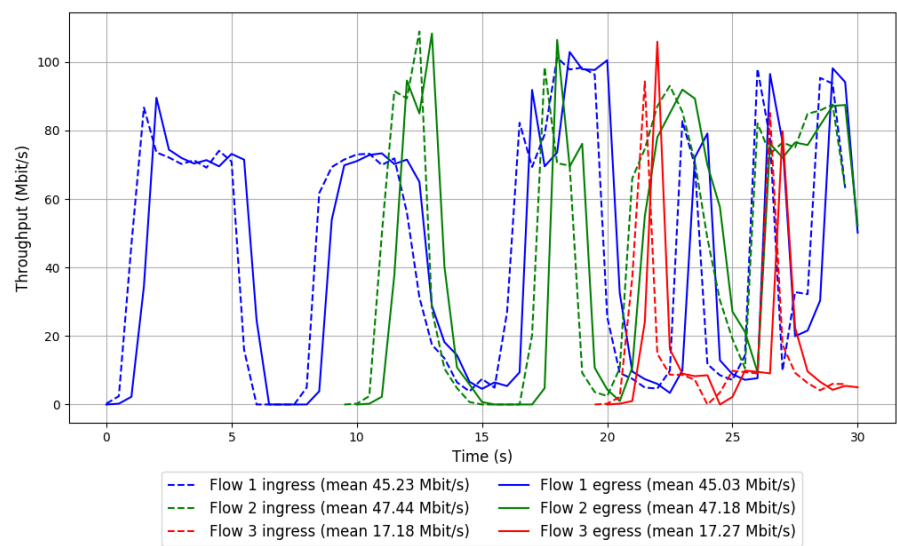## Run 2: Report of QUIC Cubic — Data Link

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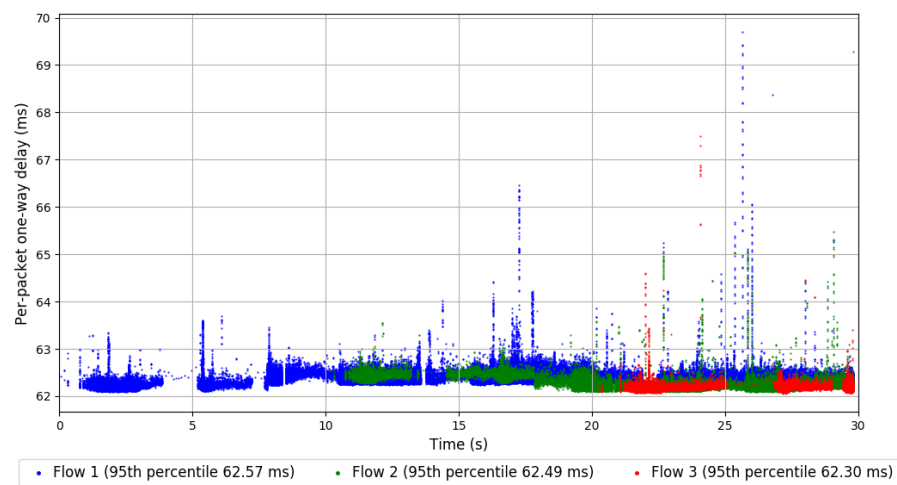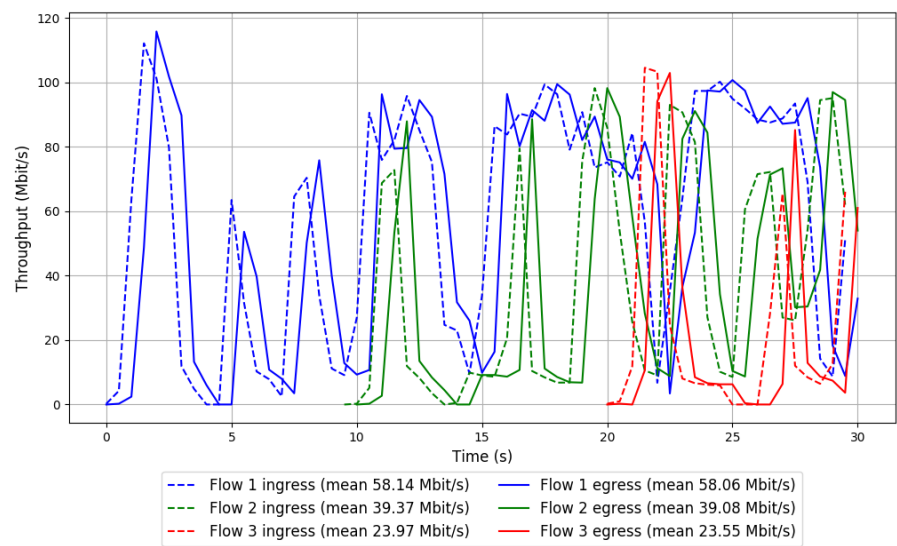
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-08-11 21:50:55
End at: 2018-08-11 21:51:25
Local clock offset: -0.045 ms
Remote clock offset: -0.397 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 61.719 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 45.03 Mbit/s
95th percentile per-packet one-way delay: 61.730 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 47.18 Mbit/s
95th percentile per-packet one-way delay: 61.704 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 17.27 Mbit/s
95th percentile per-packet one-way delay: 61.652 ms
Loss rate: 0.59%
```
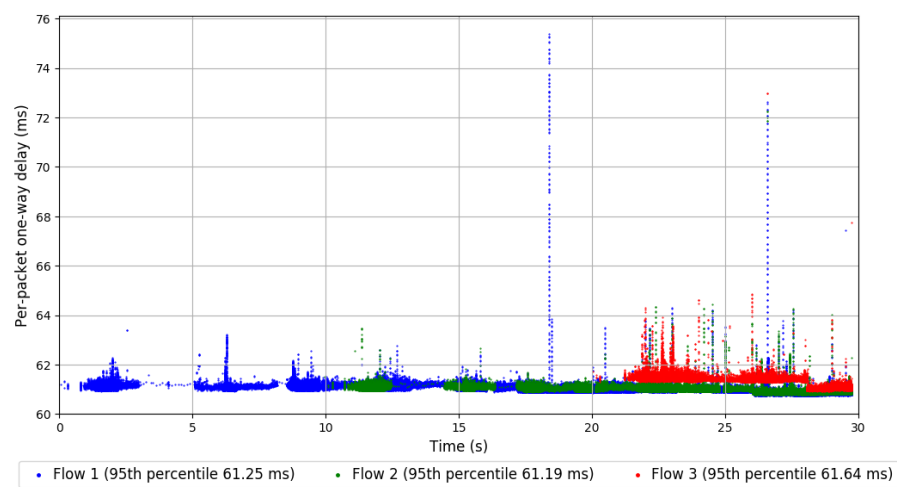
Run 3: Report of QUIC Cubic — Data Link

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```
Run 4: Statistics of QUIC Cubic

Start at: 2018-08-11 22:17:49
End at: 2018-08-11 22:18:19
Local clock offset: -0.045 ms
Remote clock offset: 0.001 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.24 Mbit/s
95th percentile per-packet one-way delay: 61.459 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 61.250 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 48.22 Mbit/s
95th percentile per-packet one-way delay: 61.190 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 47.66 Mbit/s
95th percentile per-packet one-way delay: 61.639 ms
Loss rate: 1.78%
```
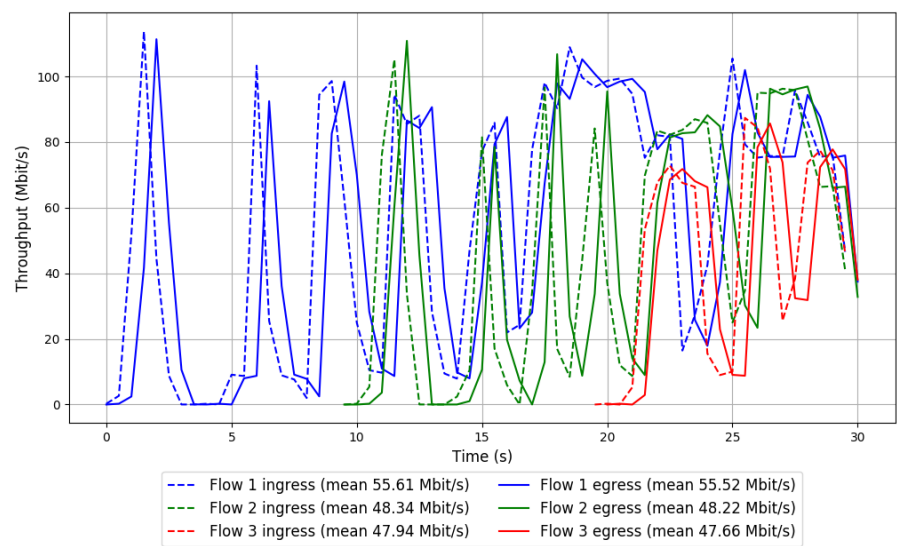
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-08-11 22:44:46
End at: 2018-08-11 22:45:16
Local clock offset: -0.047 ms
Remote clock offset: 0.606 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.21 Mbit/s
95th percentile per-packet one-way delay: 60.584 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 60.755 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 60.595 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 22.24 Mbit/s
95th percentile per-packet one-way delay: 60.469 ms
Loss rate: 1.16%
```
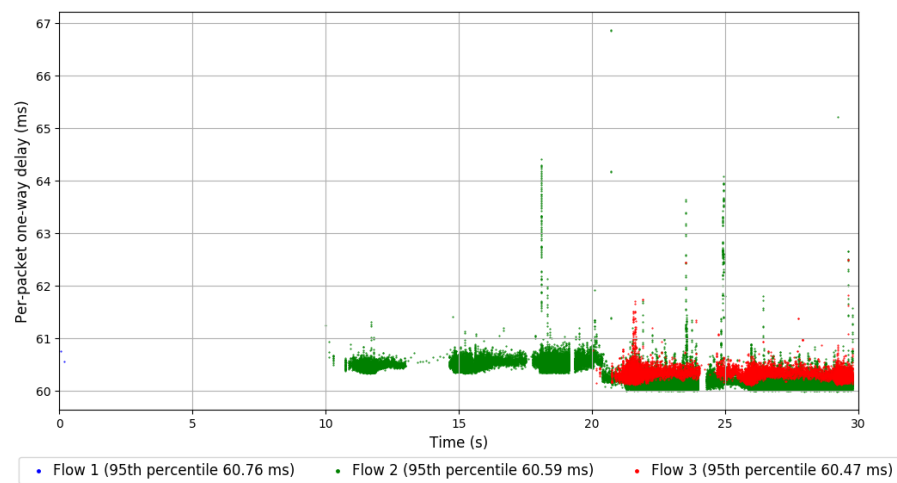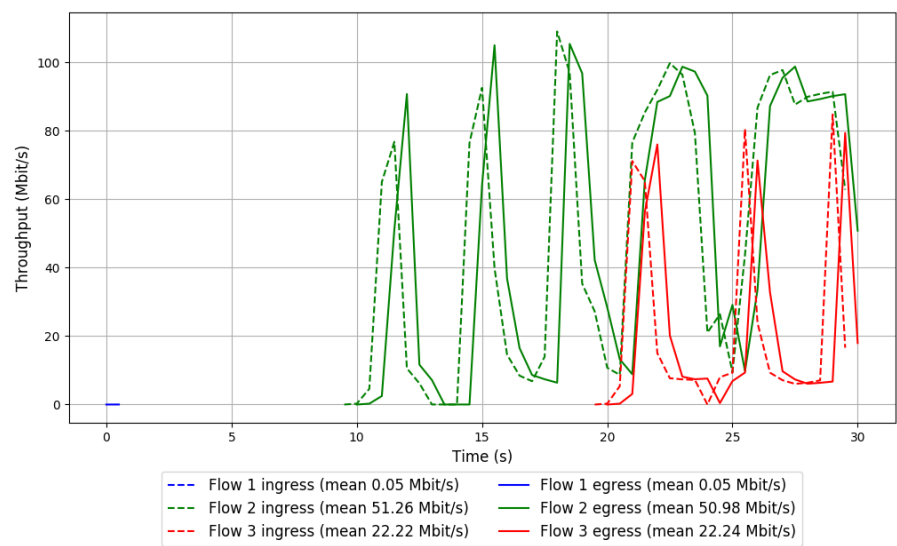
Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-08-11 23:11:48
End at: 2018-08-11 23:12:18
Local clock offset: -0.085 ms
Remote clock offset: 0.07 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.52 Mbit/s
95th percentile per-packet one-way delay: 61.117 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 44.37 Mbit/s
95th percentile per-packet one-way delay: 61.131 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 38.39 Mbit/s
95th percentile per-packet one-way delay: 61.091 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 17.34 Mbit/s
95th percentile per-packet one-way delay: 61.086 ms
Loss rate: 0.00%
```
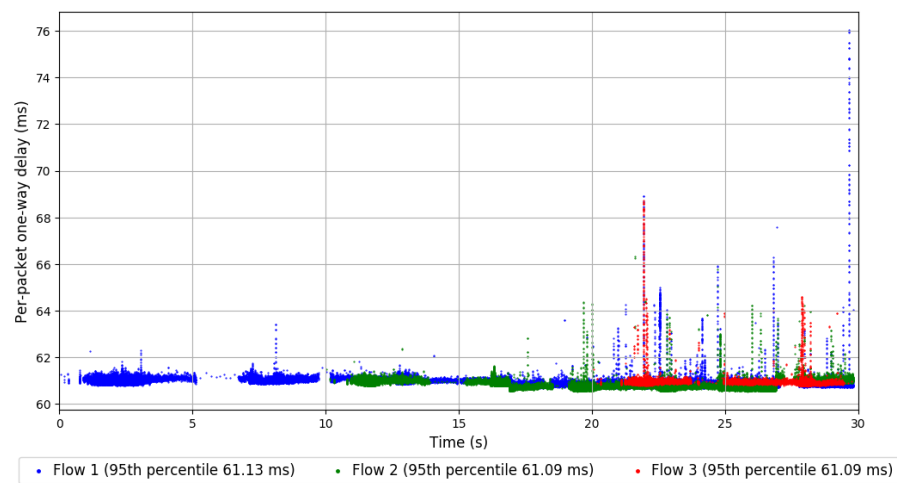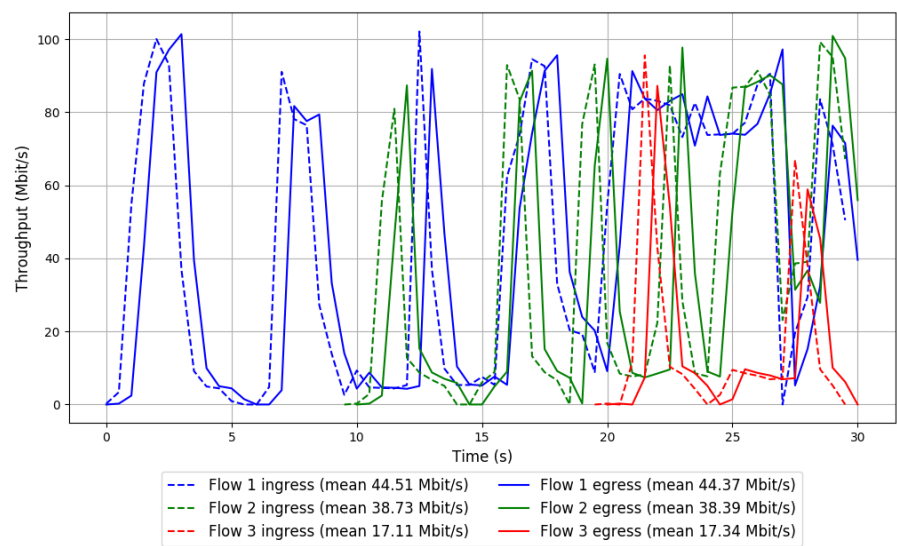
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 44.51 Mbit/s) — Flow 1 egress (mean 44.37 Mbit/s)
Flow 2 ingress (mean 38.73 Mbit/s) — Flow 2 egress (mean 38.39 Mbit/s)
Flow 3 ingress (mean 17.11 Mbit/s) — Flow 3 egress (mean 17.34 Mbit/s)

Flow 1 (95th percentile 61.13 ms) • Flow 2 (95th percentile 61.09 ms) • Flow 3 (95th percentile 61.09 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-08-11 23:38:35
End at: 2018-08-11 23:39:05
Local clock offset: 0.061 ms
Remote clock offset: 0.503 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.51 Mbit/s
95th percentile per-packet one-way delay: 61.000 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 53.00 Mbit/s
95th percentile per-packet one-way delay: 61.028 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 48.50 Mbit/s
95th percentile per-packet one-way delay: 60.788 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 19.13 Mbit/s
95th percentile per-packet one-way delay: 61.022 ms
Loss rate: 1.33%
```
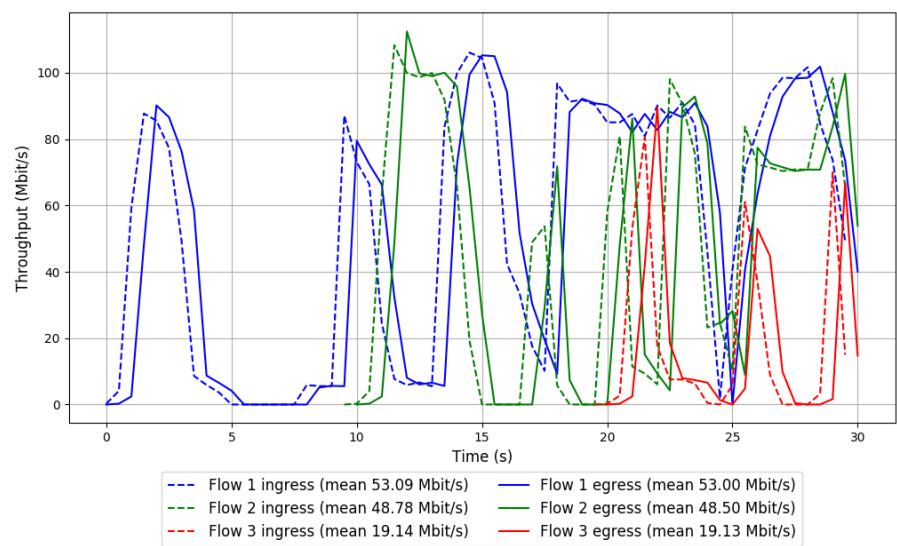
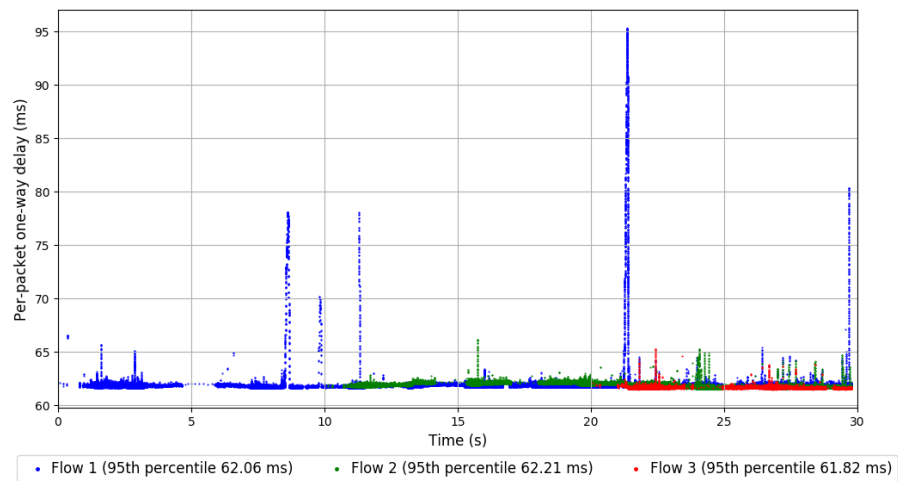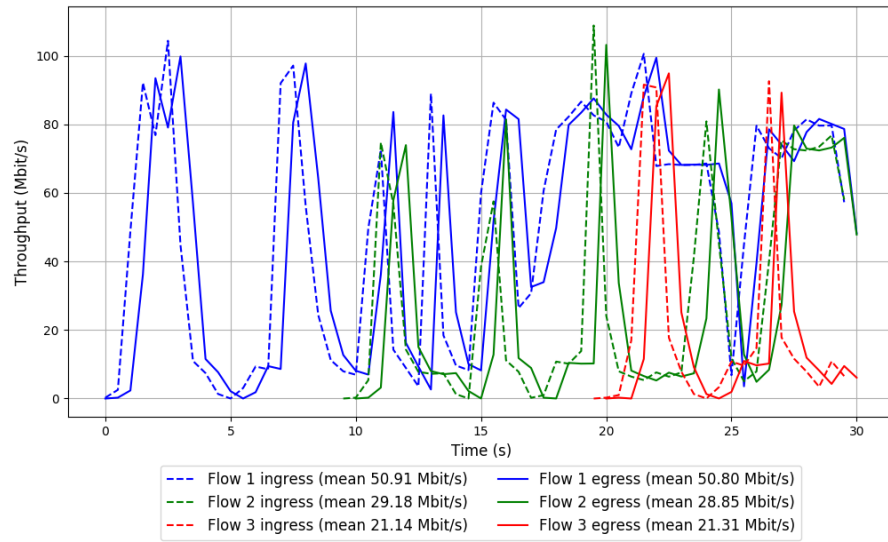Run 7: Report of QUIC Cubic — Data Link
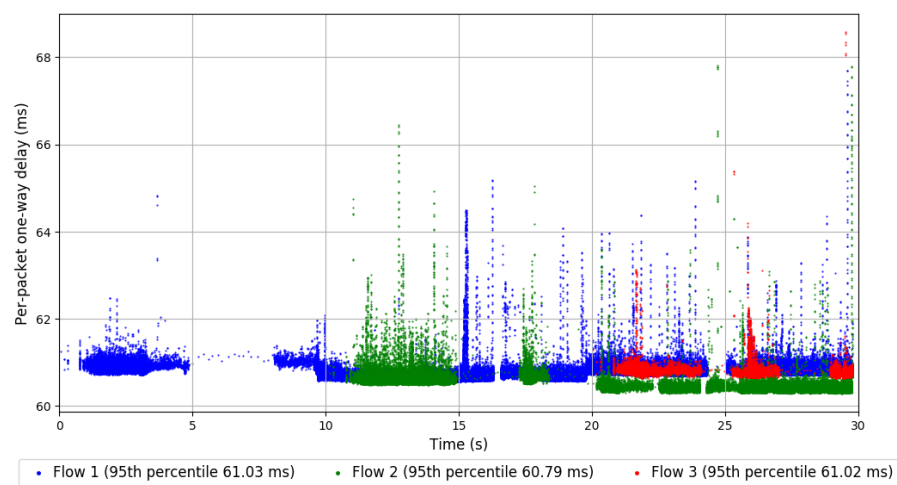
```
Run 8: Statistics of QUIC Cubic

Start at: 2018-08-12 00:05:23
End at: 2018-08-12 00:05:53
Local clock offset: -0.055 ms
Remote clock offset: -0.716 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.96 Mbit/s
95th percentile per-packet one-way delay: 62.130 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 50.80 Mbit/s
95th percentile per-packet one-way delay: 62.060 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 62.207 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 61.820 ms
Loss rate: 0.44%
```

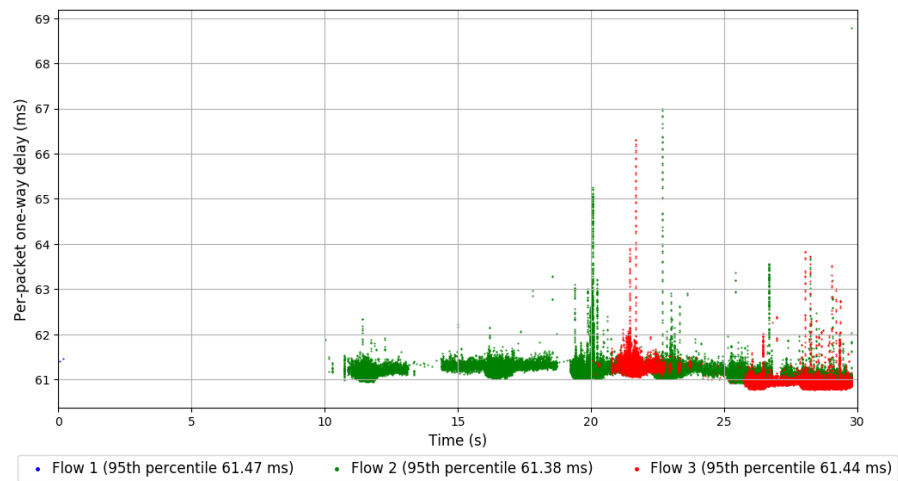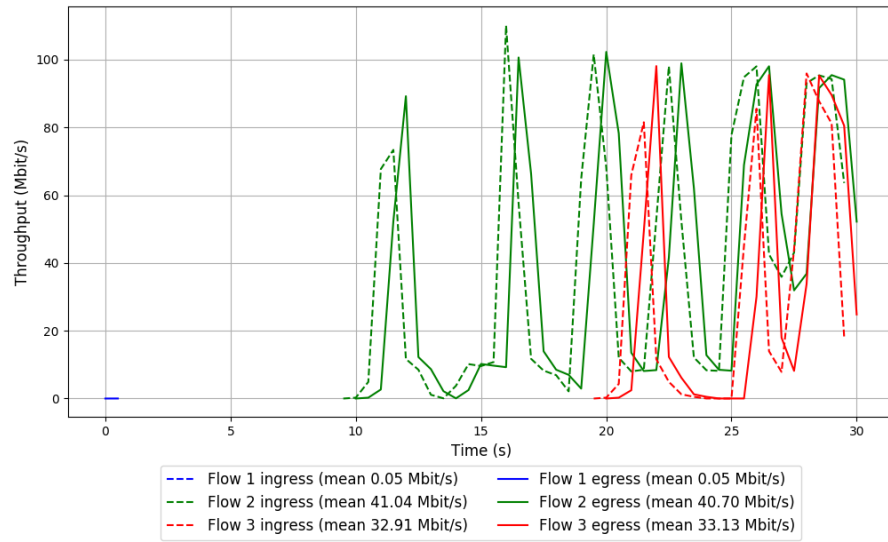# Run 8: Report of QUIC Cubic — Data Link

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-08-12 00:32:11
End at: 2018-08-12 00:32:41
Local clock offset: -0.074 ms
Remote clock offset: -0.193 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.93 Mbit/s
95th percentile per-packet one-way delay: 61.396 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 61.465 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.70 Mbit/s
95th percentile per-packet one-way delay: 61.382 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 33.13 Mbit/s
95th percentile per-packet one-way delay: 61.435 ms
Loss rate: 0.58%
```

Run 9: Report of QUIC Cubic — Data Link

- --- Flow 1 ingress (mean 0.05 Mbit/s)   — Flow 1 egress (mean 0.05 Mbit/s)
- --- Flow 2 ingress (mean 41.04 Mbit/s)   — Flow 2 egress (mean 40.70 Mbit/s)
- --- Flow 3 ingress (mean 32.91 Mbit/s)   — Flow 3 egress (mean 33.13 Mbit/s)

- Flow 1 (95th percentile 61.47 ms)   • Flow 2 (95th percentile 61.38 ms)   • Flow 3 (95th percentile 61.44 ms)

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```
Run 10: Statistics of QUIC Cubic

Start at: 2018-08-12 00:58:48
End at: 2018-08-12 00:59:18
Local clock offset: -0.026 ms
Remote clock offset: 0.054 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.62 Mbit/s
95th percentile per-packet one-way delay: 61.293 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 51.00 Mbit/s
95th percentile per-packet one-way delay: 61.319 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 61.237 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 61.073 ms
Loss rate: 3.76%
```
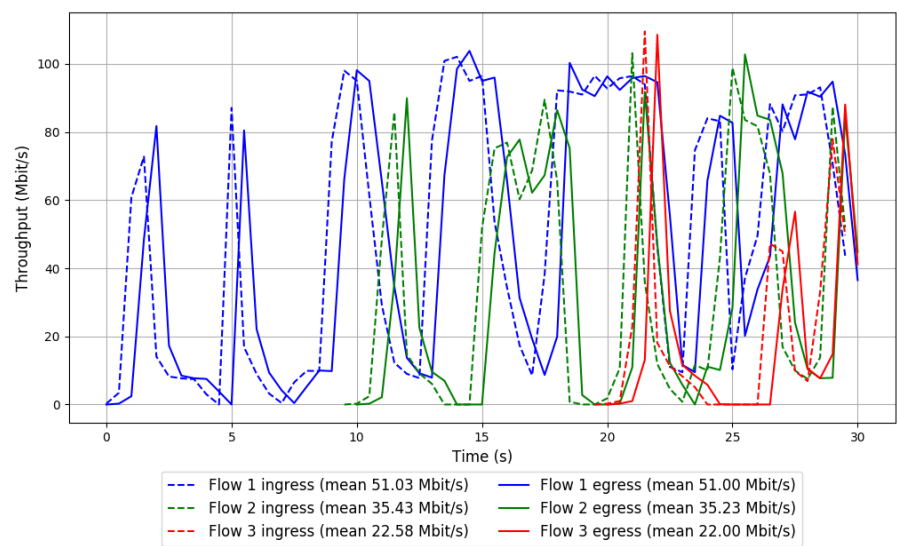
Run 10: Report of QUIC Cubic — Data Link
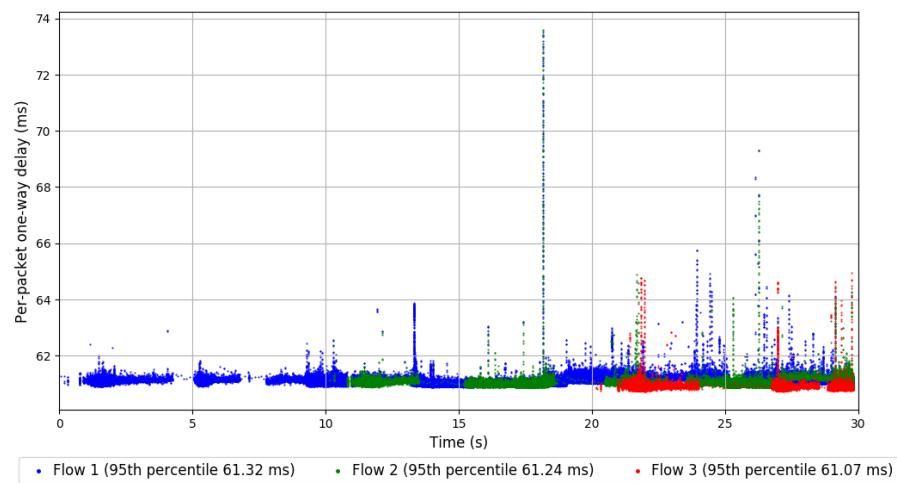
```
Run 1: Statistics of SCReAM

Start at: 2018-08-11 21:01:16
End at: 2018-08-11 21:01:46
Local clock offset: 0.037 ms
Remote clock offset: -1.371 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 62.729 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.776 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.609 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.454 ms
Loss rate: 1.10%
```

Run 1: Report of SCReAM — Data Link
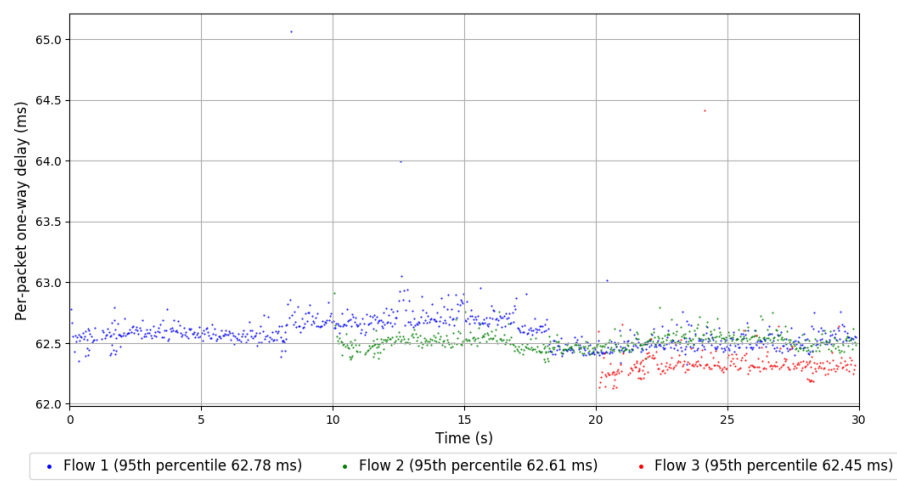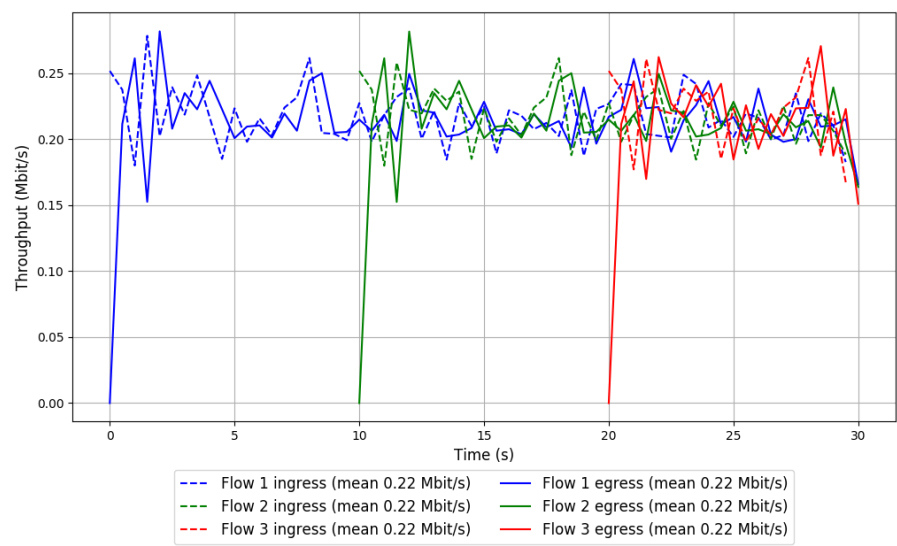
```
Run 2: Statistics of SCReAM

Start at: 2018-08-11 21:27:53
End at: 2018-08-11 21:28:23
Local clock offset: 0.075 ms
Remote clock offset: 0.043 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.374 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.402 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.208 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.232 ms
Loss rate: 1.08%
```

Run 2: Report of SCReAM — Data Link
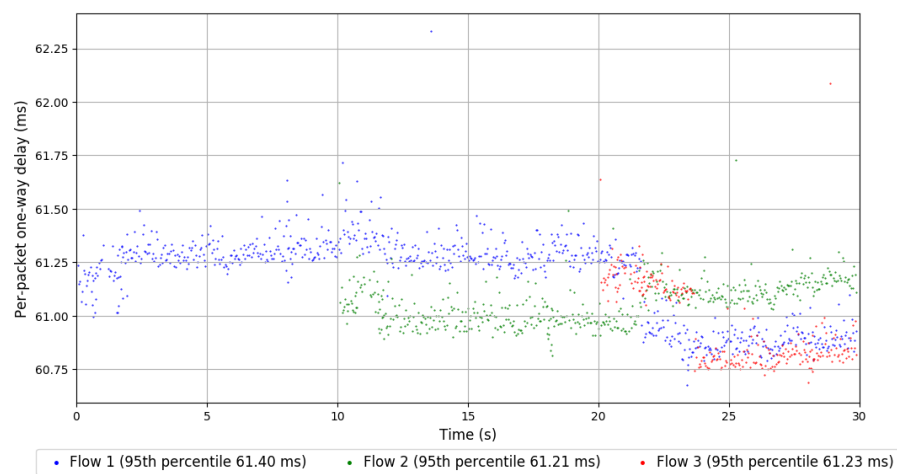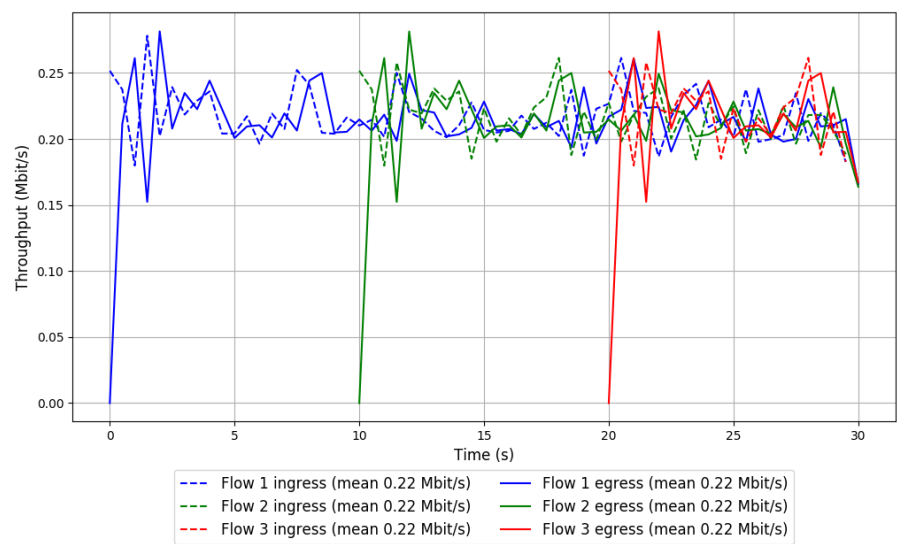
```
Run 3: Statistics of SCReAM

Start at: 2018-08-11 21:54:39
End at: 2018-08-11 21:55:09
Local clock offset: -0.119 ms
Remote clock offset: -1.453 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 63.013 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.056 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.943 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 62.441 ms
Loss rate: 1.45%
```

Run 3: Report of SCReAM — Data Link
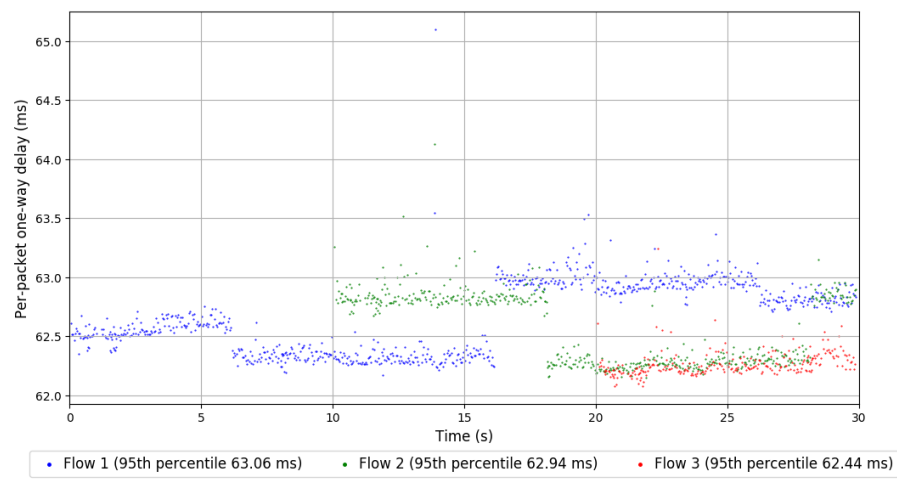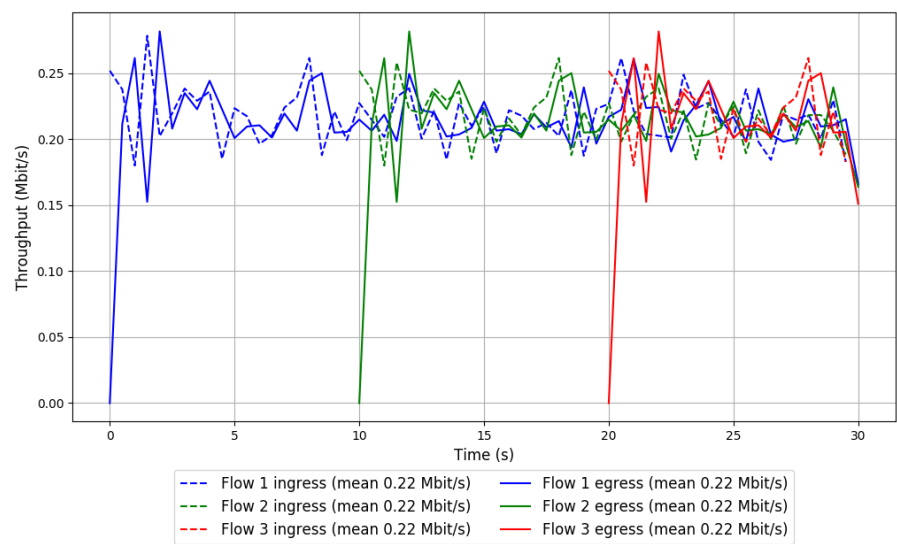
```
Run 4: Statistics of SCReAM

Start at: 2018-08-11 22:21:40
End at: 2018-08-11 22:22:10
Local clock offset: -0.069 ms
Remote clock offset: -0.119 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.507 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.554 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.387 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 1.08%
```

# Run 4: Report of SCReAM — Data Link
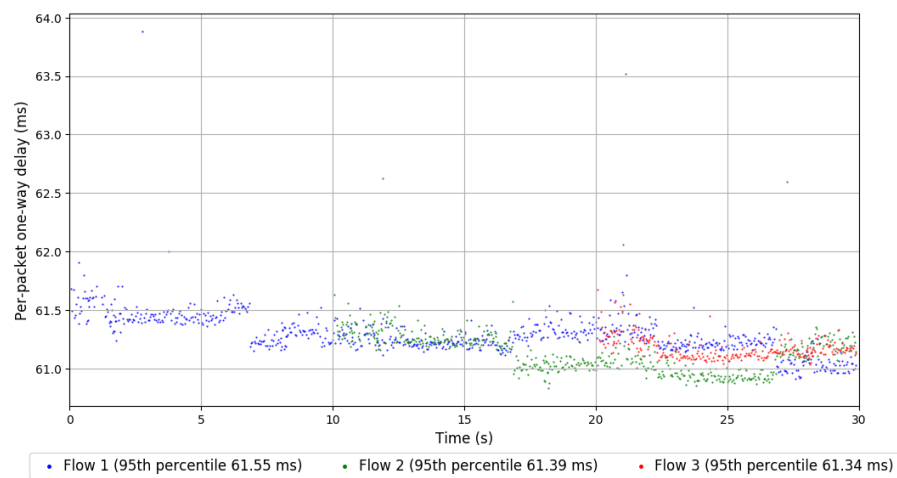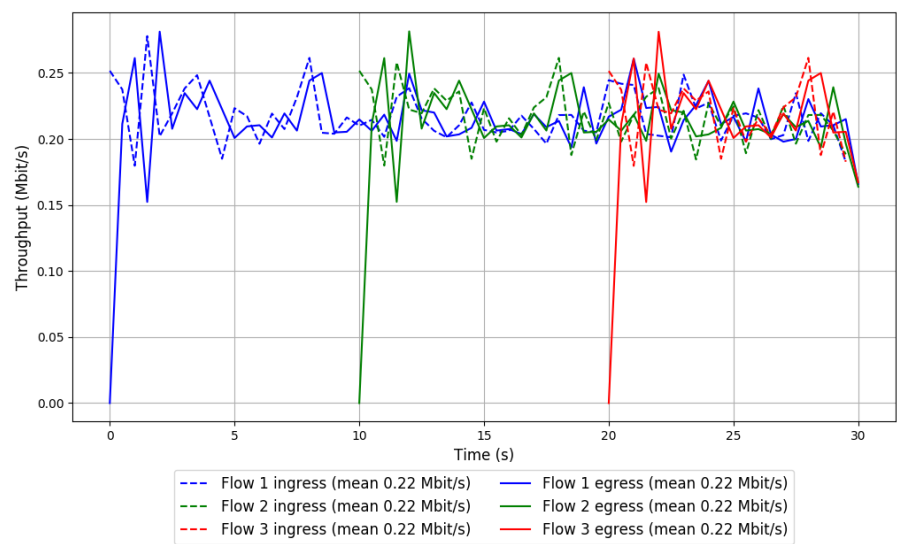
```
Run 5: Statistics of SCReAM

Start at: 2018-08-11 22:48:30
End at: 2018-08-11 22:49:00
Local clock offset: -0.034 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.649 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.691 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.239 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.326 ms
Loss rate: 1.08%
```

Run 5: Report of SCReAM — Data Link
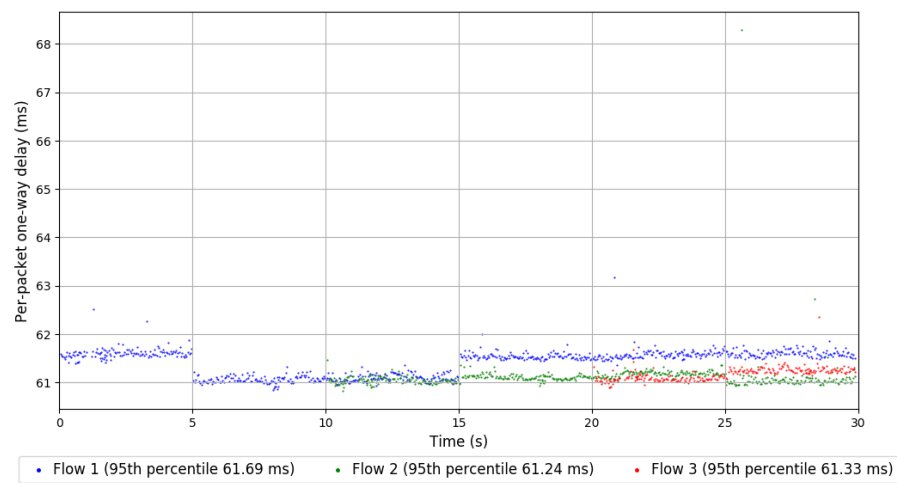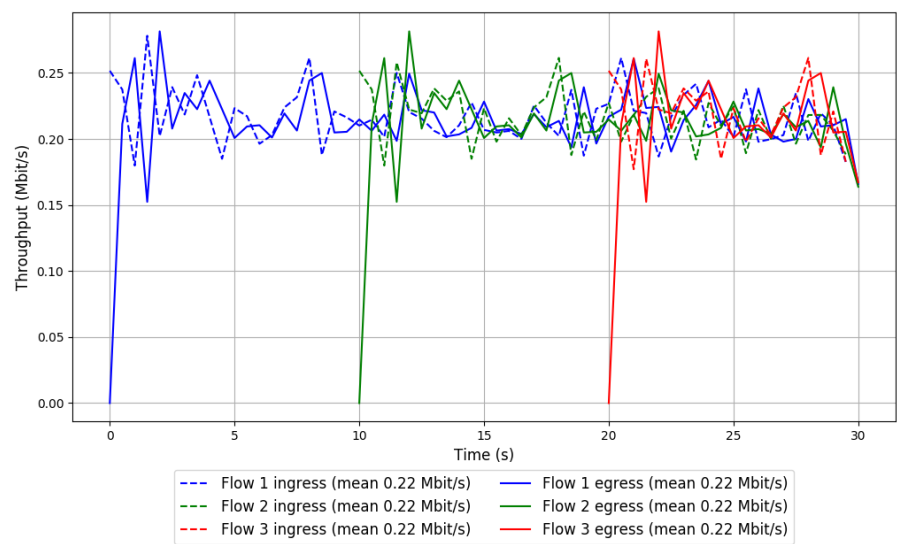
```
Run 6: Statistics of SCReAM

Start at: 2018-08-11 23:15:29
End at: 2018-08-11 23:15:59
Local clock offset: -0.017 ms
Remote clock offset: 0.384 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.296 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.343 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.120 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.819 ms
Loss rate: 1.08%
```
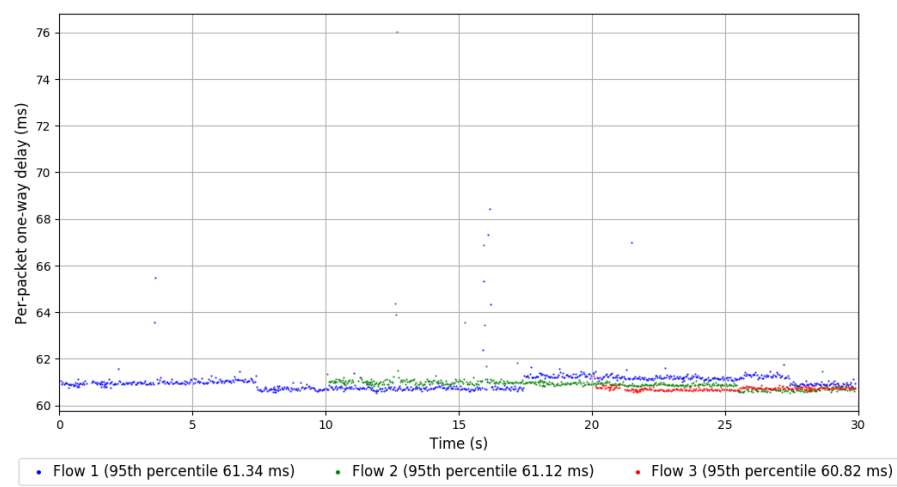
Run 6: Report of SCReAM — Data Link
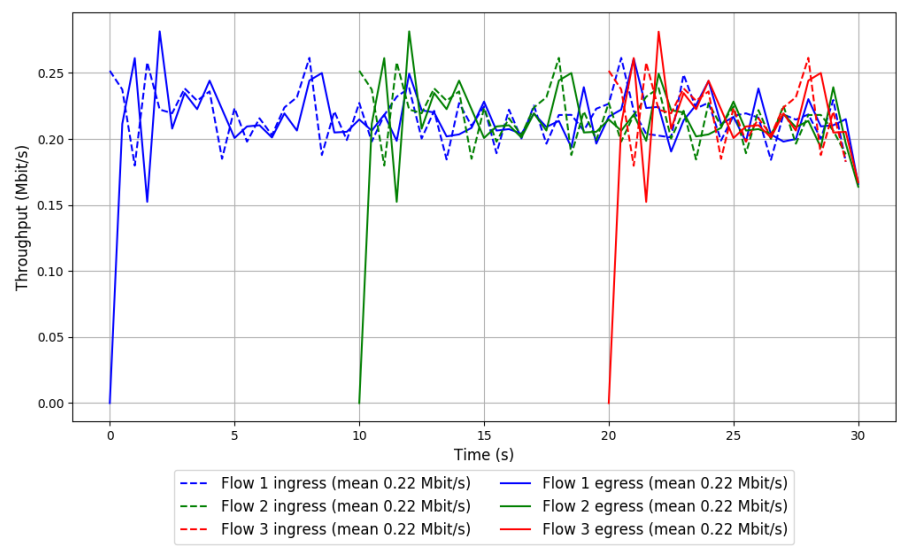
```
Run 7: Statistics of SCReAM

Start at: 2018-08-11 23:42:22
End at: 2018-08-11 23:42:52
Local clock offset: -0.035 ms
Remote clock offset: 0.251 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.309 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.314 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.314 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.243 ms
Loss rate: 1.08%
```
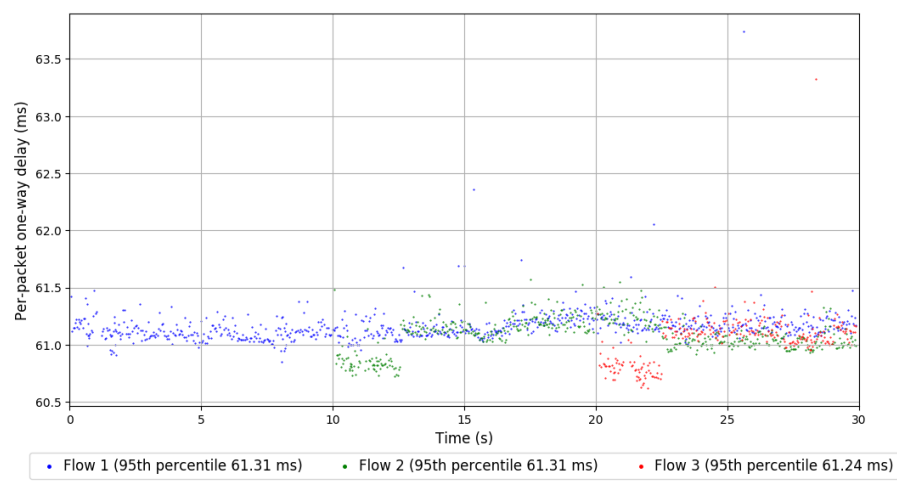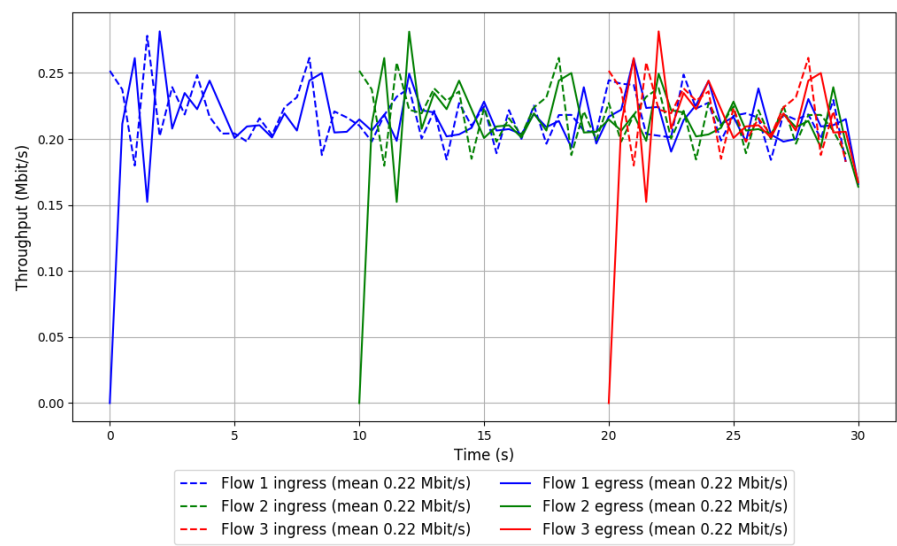
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-08-12 00:09:08
End at: 2018-08-12 00:09:38
Local clock offset: -0.059 ms
Remote clock offset: 0.727 ms

# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 60.925 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.018 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.700 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.688 ms
Loss rate: 1.08%
```
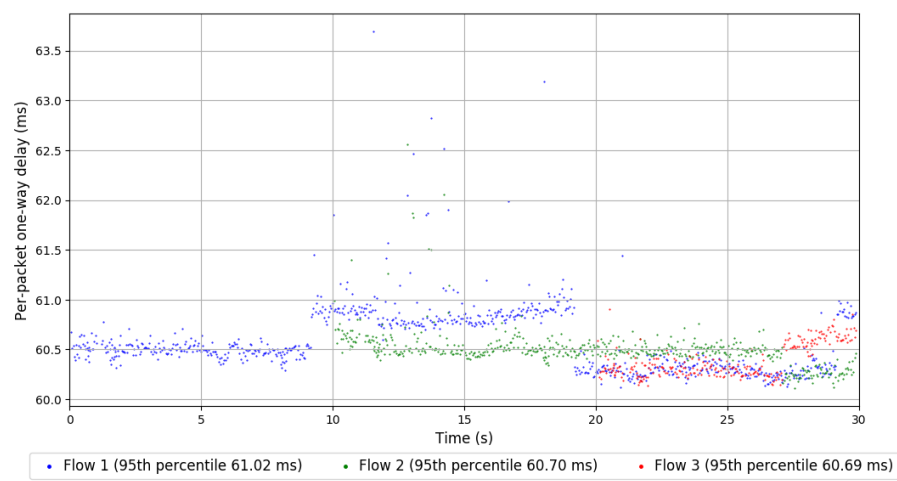
Run 8: Report of SCReAM — Data Link
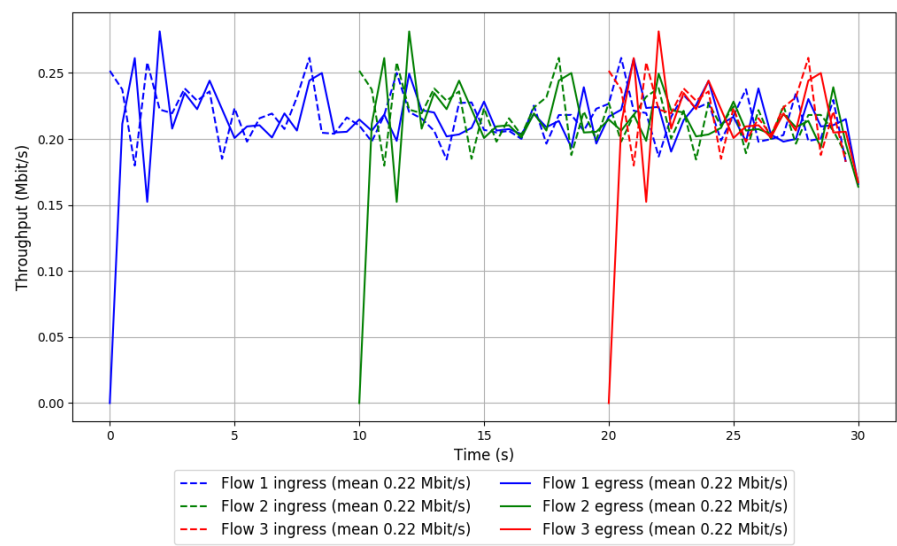
```
Run 9: Statistics of SCReAM

Start at: 2018-08-12 00:35:52
End at: 2018-08-12 00:36:22
Local clock offset: -0.071 ms
Remote clock offset: 0.501 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 61.031 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.074 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.888 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 60.897 ms
Loss rate: 1.10%
```
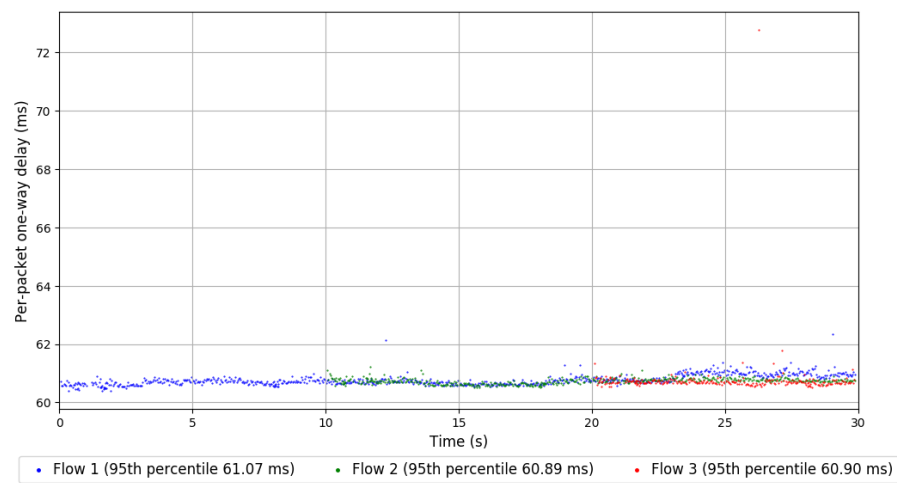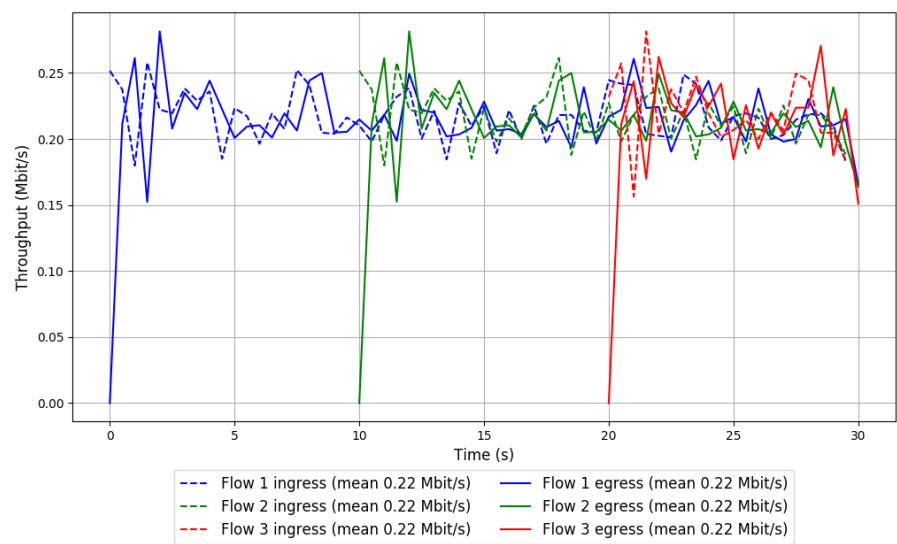
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-08-12 01:02:30
End at: 2018-08-12 01:03:00
Local clock offset: -0.074 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.497 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.375 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.569 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 61.513 ms
Loss rate: 1.08%
```
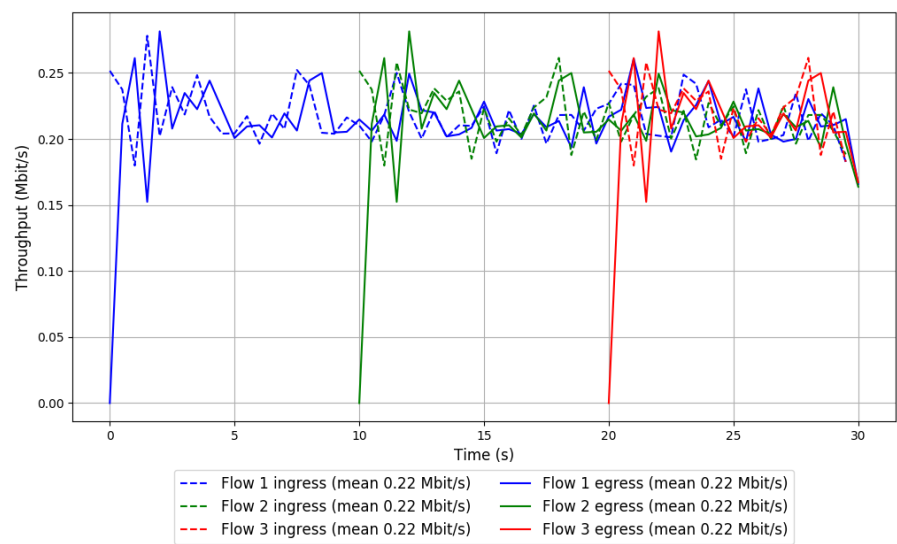
Run 10: Report of SCReAM — Data Link
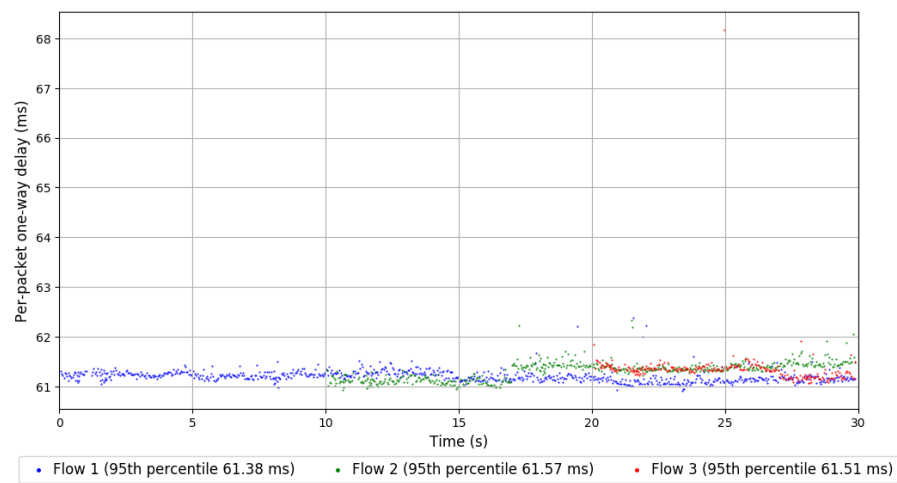
```
Run 1: Statistics of Sprout

Start at: 2018-08-11 21:04:19
End at: 2018-08-11 21:04:49
Local clock offset: 0.052 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2018-08-12 04:28:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 61.791 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 61.779 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 61.522 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 61.817 ms
Loss rate: 1.24%
```
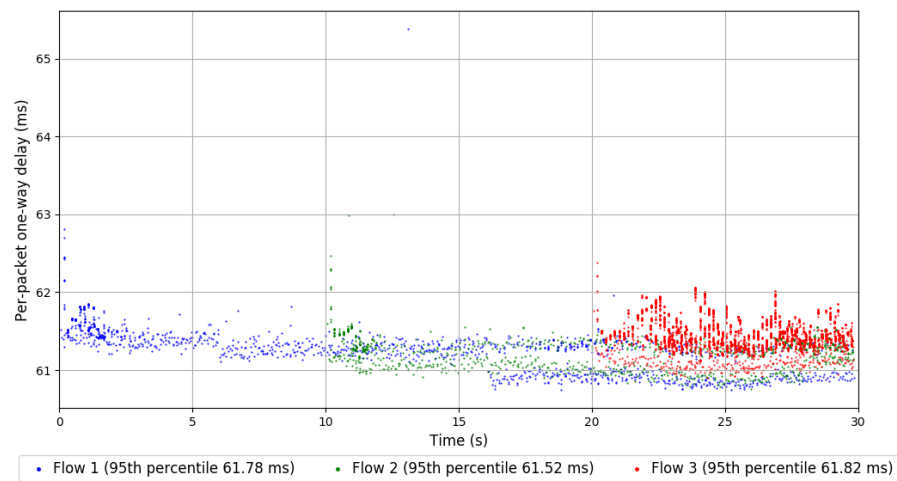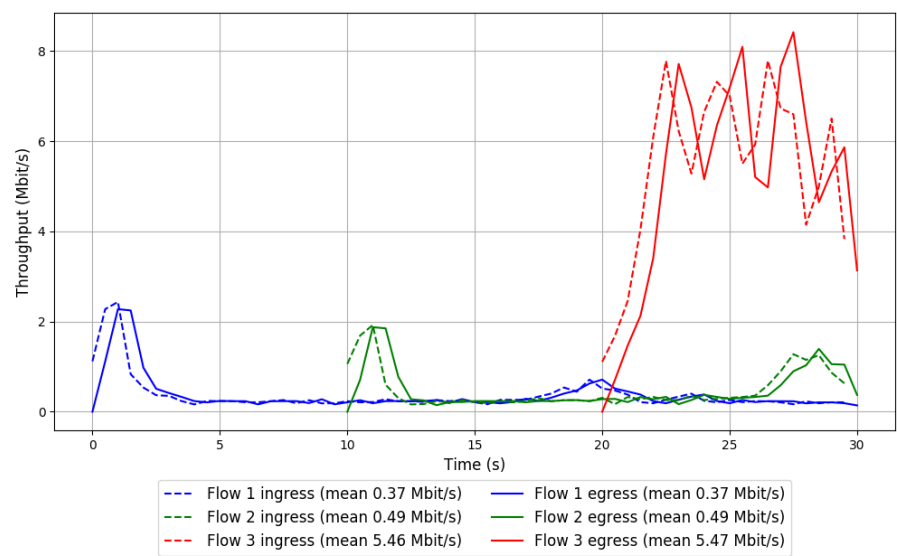
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-08-11 21:30:56
End at: 2018-08-11 21:31:26
Local clock offset: 0.01 ms
Remote clock offset: -0.913 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 62.487 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 62.347 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 62.274 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 2.87 Mbit/s
95th percentile per-packet one-way delay: 62.659 ms
Loss rate: 0.33%
```
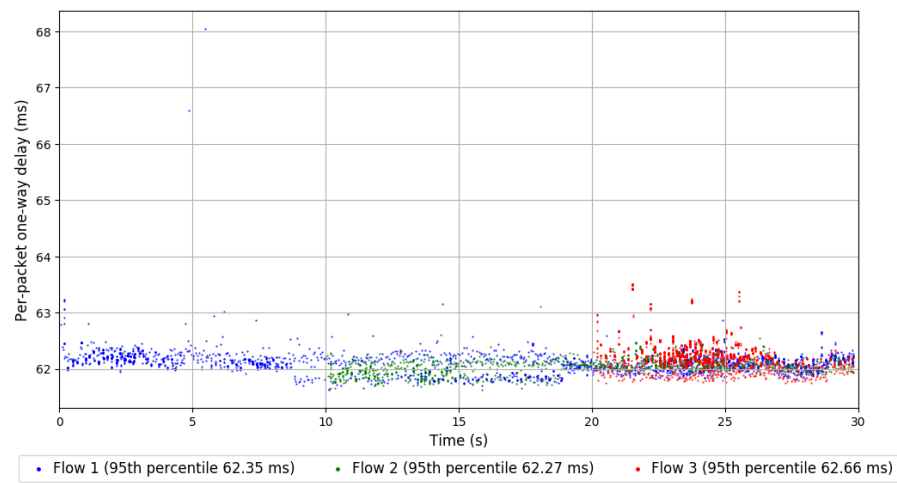
Run 2: Report of Sprout — Data Link
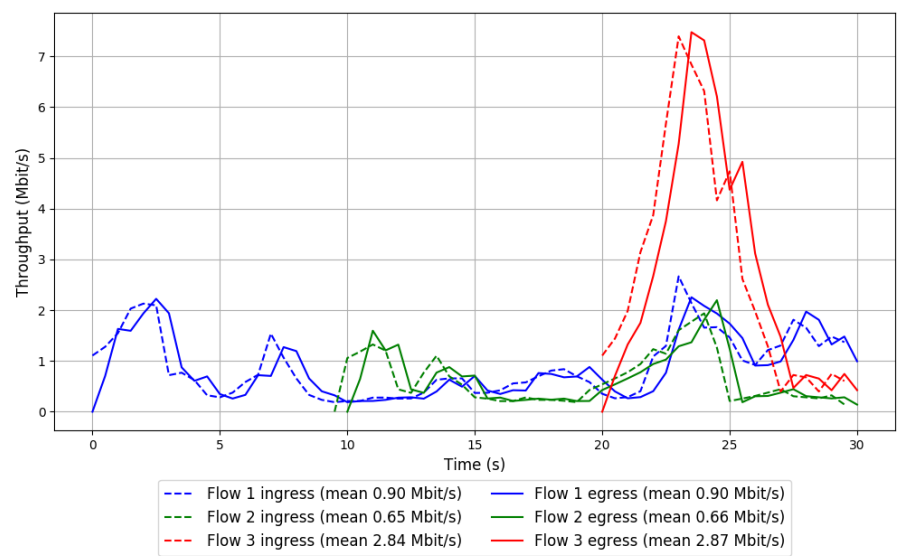
```
Run 3: Statistics of Sprout

Start at: 2018-08-11 21:57:41
End at: 2018-08-11 21:58:11
Local clock offset: -0.083 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 61.775 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 61.809 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 61.655 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 1.70 Mbit/s
95th percentile per-packet one-way delay: 61.591 ms
Loss rate: 0.14%
```
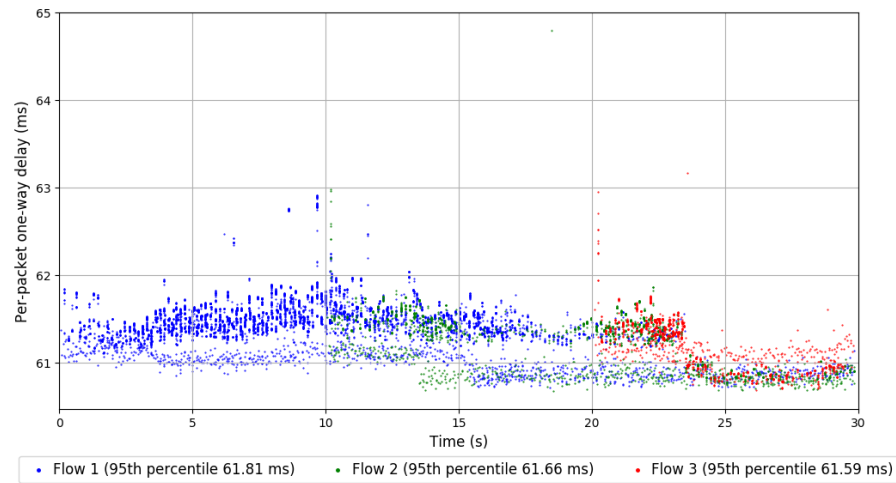
Run 3: Report of Sprout — Data Link
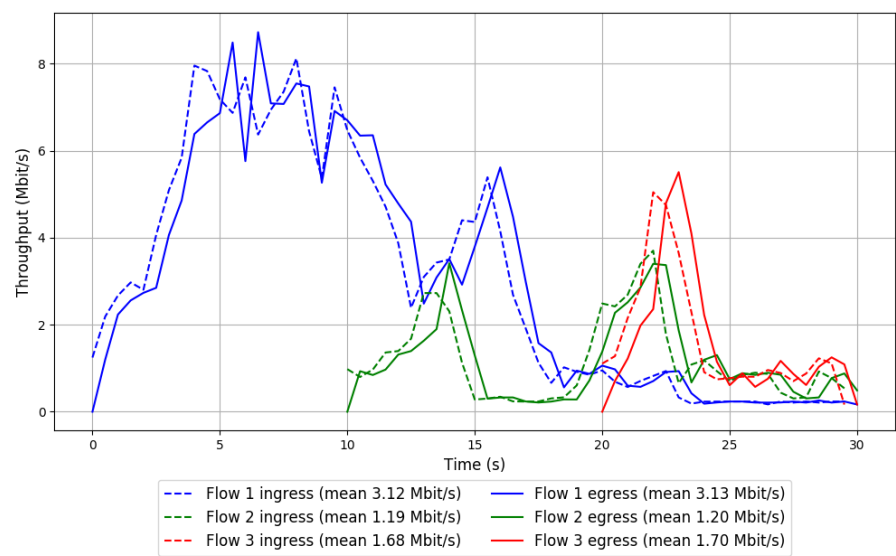
```
Run 4: Statistics of Sprout

Start at: 2018-08-11 22:24:40
End at: 2018-08-11 22:25:10
Local clock offset: -0.025 ms
Remote clock offset: 0.264 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 61.308 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 61.314 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 61.289 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 61.332 ms
Loss rate: 0.45%
```

Run 4: Report of Sprout — Data Link
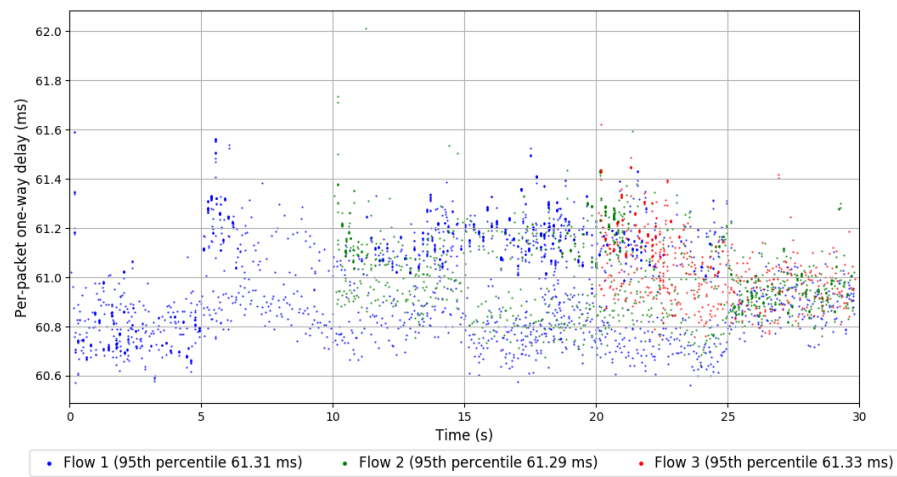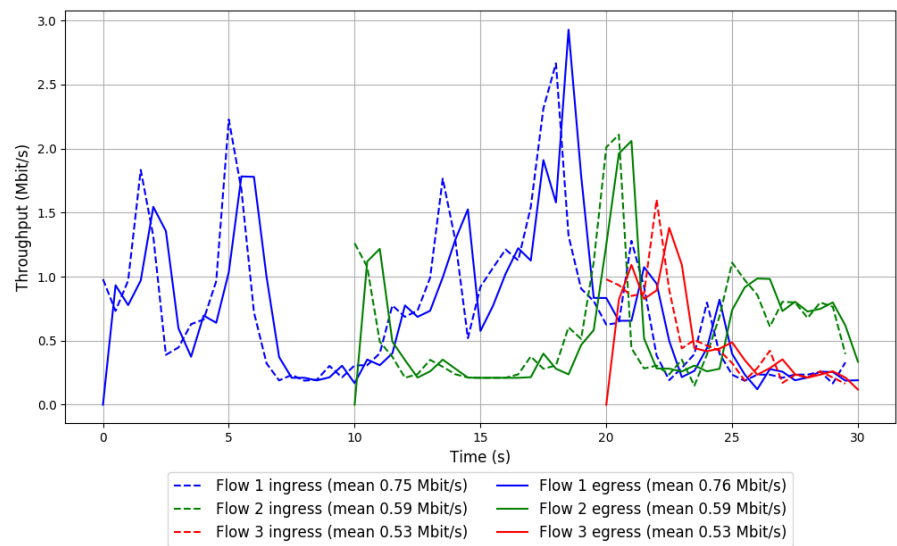
```
Run 5: Statistics of Sprout

Start at: 2018-08-11 22:51:36
End at: 2018-08-11 22:52:06
Local clock offset: -0.02 ms
Remote clock offset: -0.908 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 62.493 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 62.471 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 0.94 Mbit/s
95th percentile per-packet one-way delay: 62.502 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 62.539 ms
Loss rate: 1.00%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 0.44 Mbit/s)   Flow 1 egress (mean 0.44 Mbit/s)
Flow 2 ingress (mean 0.94 Mbit/s)   Flow 2 egress (mean 0.94 Mbit/s)
Flow 3 ingress (mean 1.17 Mbit/s)   Flow 3 egress (mean 1.18 Mbit/s)

Flow 1 (95th percentile 62.47 ms)   Flow 2 (95th percentile 62.50 ms)   Flow 3 (95th percentile 62.54 ms)

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```
Run 6: Statistics of Sprout

Start at: 2018-08-11 23:18:35
End at: 2018-08-11 23:19:05
Local clock offset: -0.074 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 61.461 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 61.516 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 61.277 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 61.472 ms
Loss rate: 1.18%
```
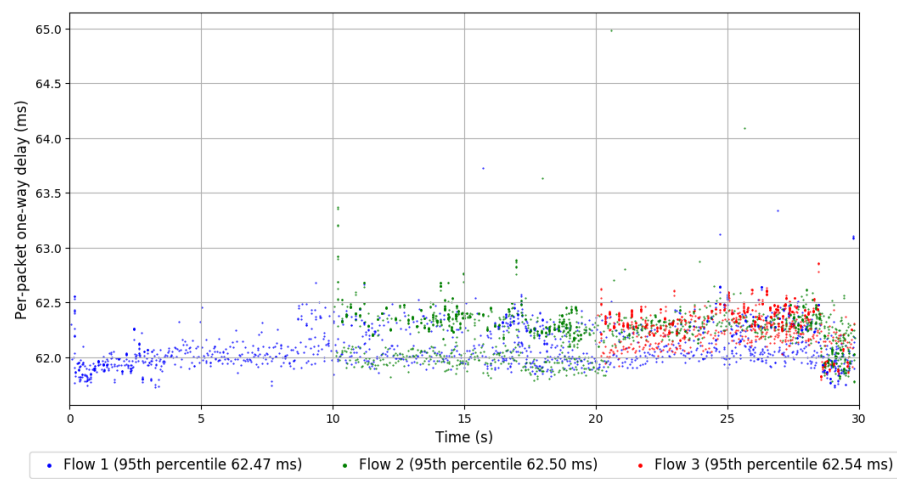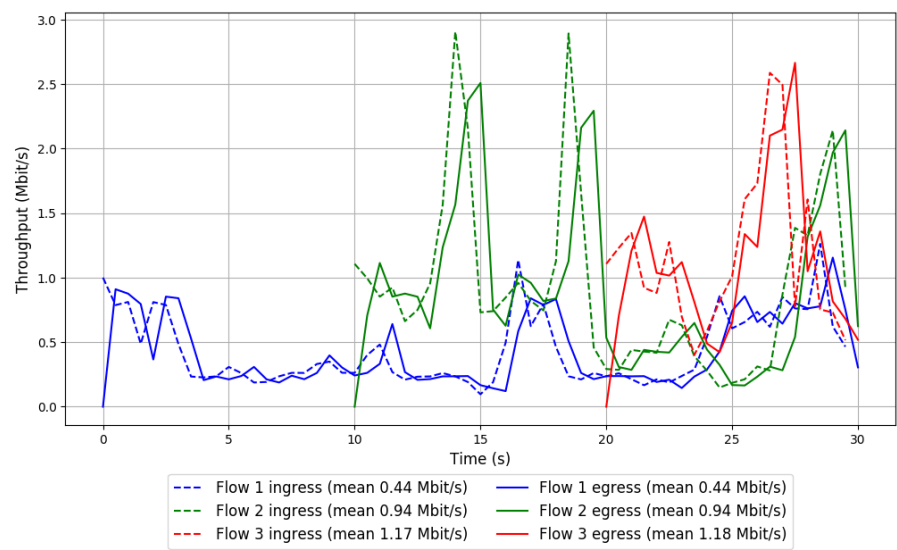
Run 6: Report of Sprout — Data Link
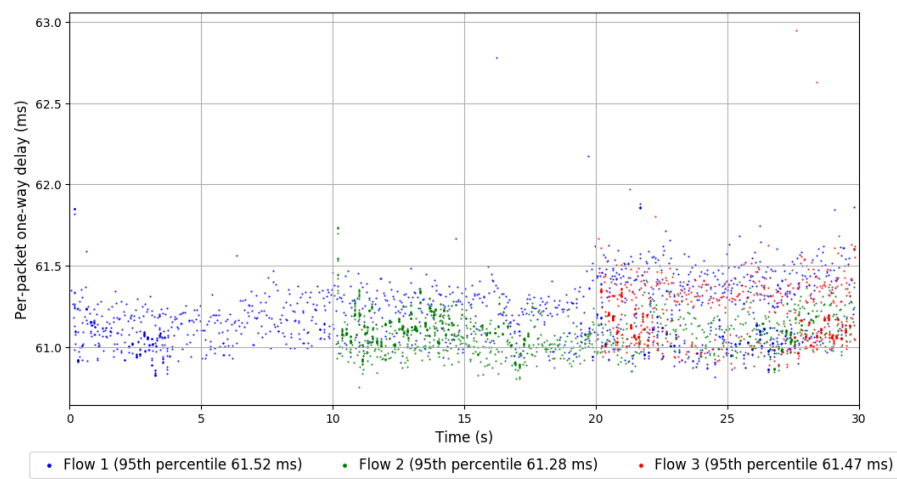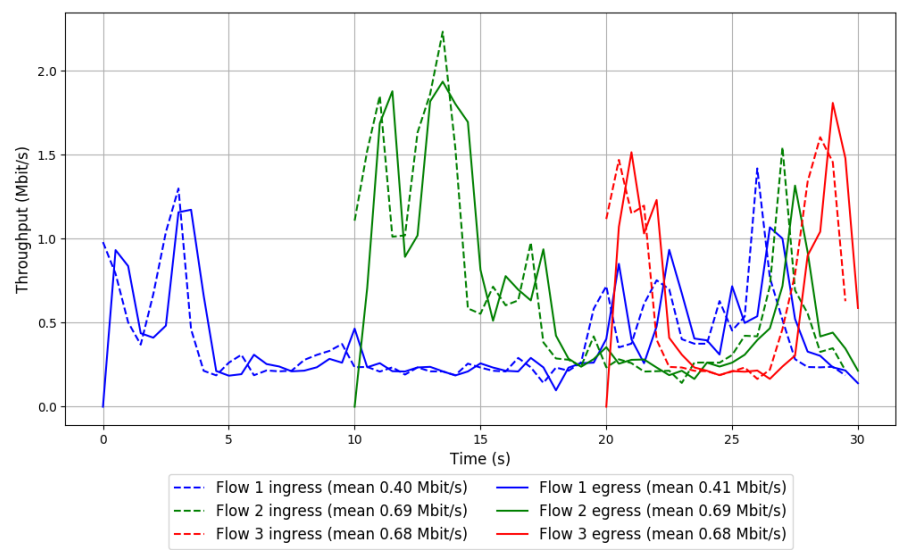
```
Run 7: Statistics of Sprout

Start at: 2018-08-11 23:45:21
End at: 2018-08-11 23:45:51
Local clock offset: -0.026 ms
Remote clock offset: 0.108 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 61.526 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 61.541 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 61.519 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 1.15 Mbit/s
95th percentile per-packet one-way delay: 61.431 ms
Loss rate: 0.51%
```

Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-08-12 00:12:13
End at: 2018-08-12 00:12:43
Local clock offset: -0.029 ms
Remote clock offset: 0.267 ms


# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 61.309 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 61.318 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 61.303 ms
Loss rate: 0.48%
```
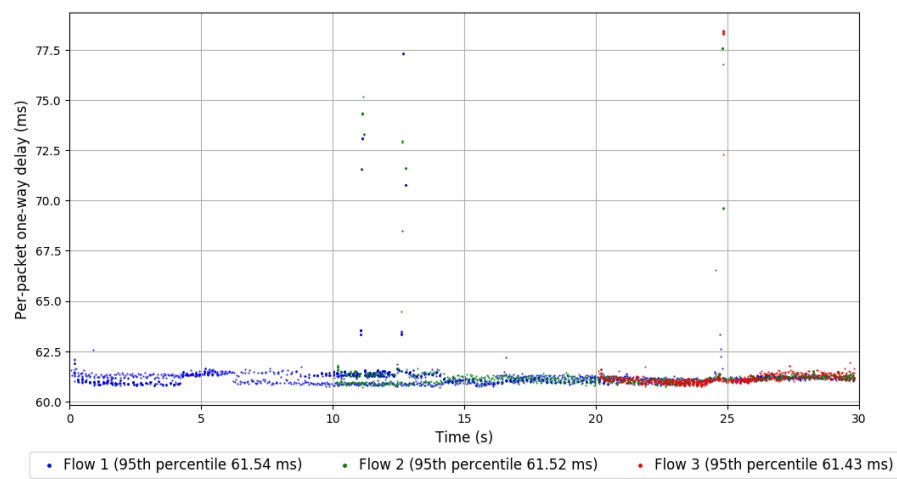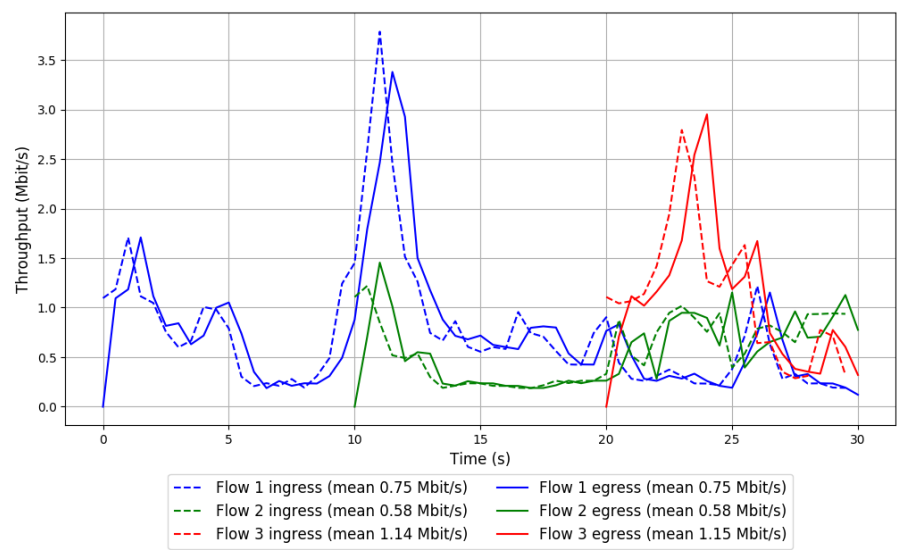
Run 8: Report of Sprout — Data Link
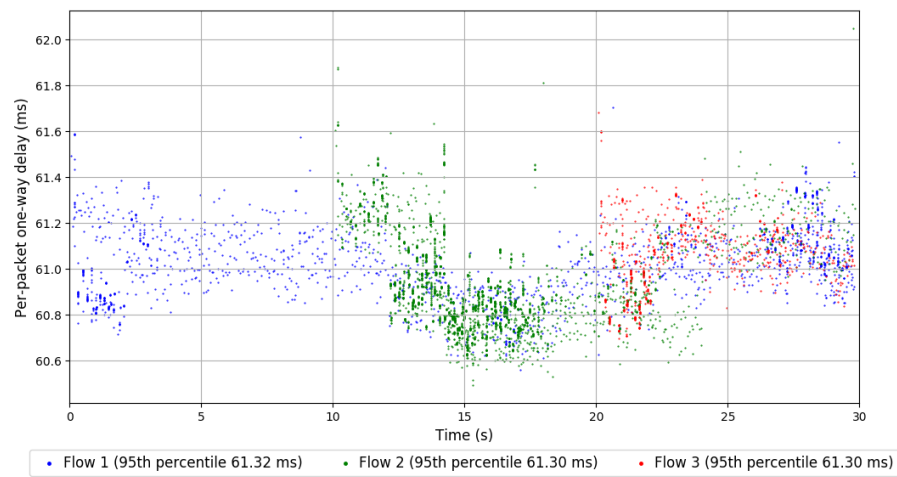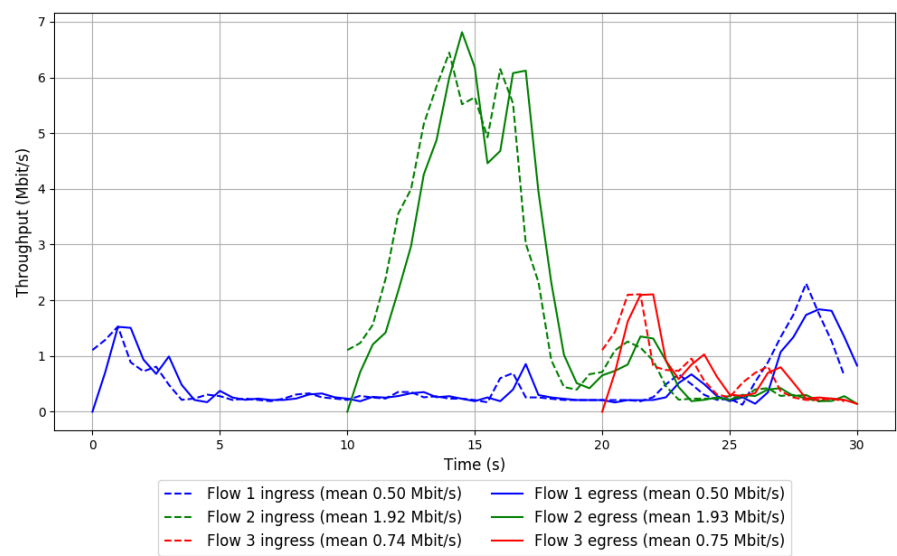
Run 9: Statistics of Sprout

Start at: 2018-08-12 00:38:54
End at: 2018-08-12 00:39:24
Local clock offset: -0.091 ms
Remote clock offset: -0.296 ms

Below is generated by plot.py at 2018-08-12 04:28:57
Datalink statistics
-- Total of 3 flows:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 61.791 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 61.793 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 61.631 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 5.07 Mbit/s
95th percentile per-packet one-way delay: 61.805 ms
Loss rate: 0.69%

Run 9: Report of Sprout — Data Link
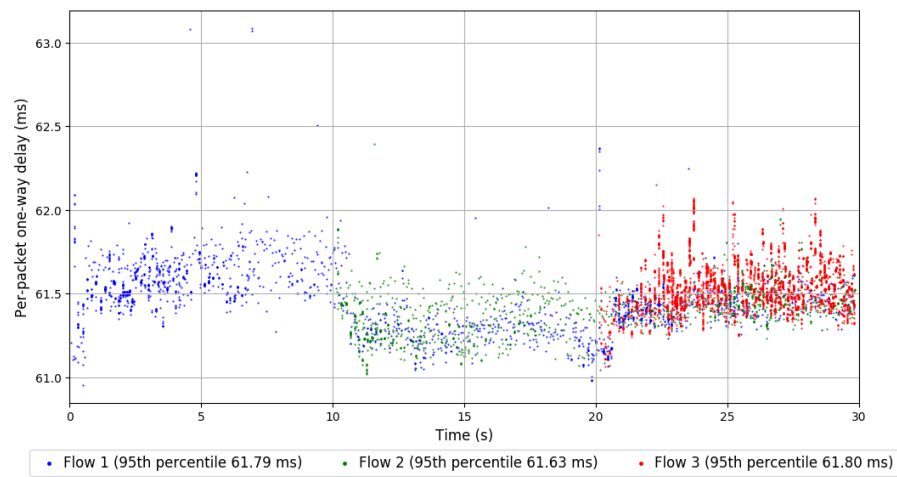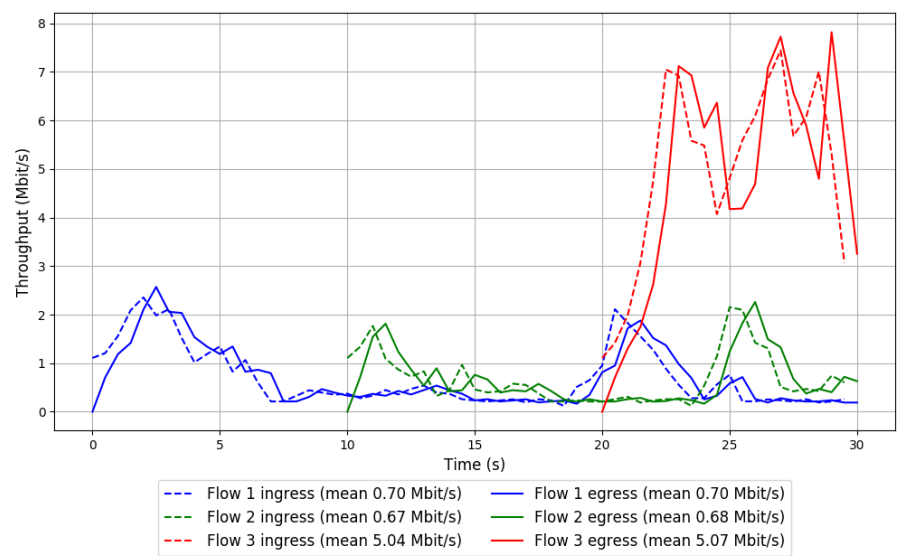
```
Run 10: Statistics of Sprout

Start at: 2018-08-12 01:05:27
End at: 2018-08-12 01:05:57
Local clock offset: -0.045 ms
Remote clock offset: -0.17 ms

# Below is generated by plot.py at 2018-08-12 04:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 61.689 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 61.711 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 61.670 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 61.665 ms
Loss rate: 3.64%
```

Run 10: Report of Sprout — Data Link
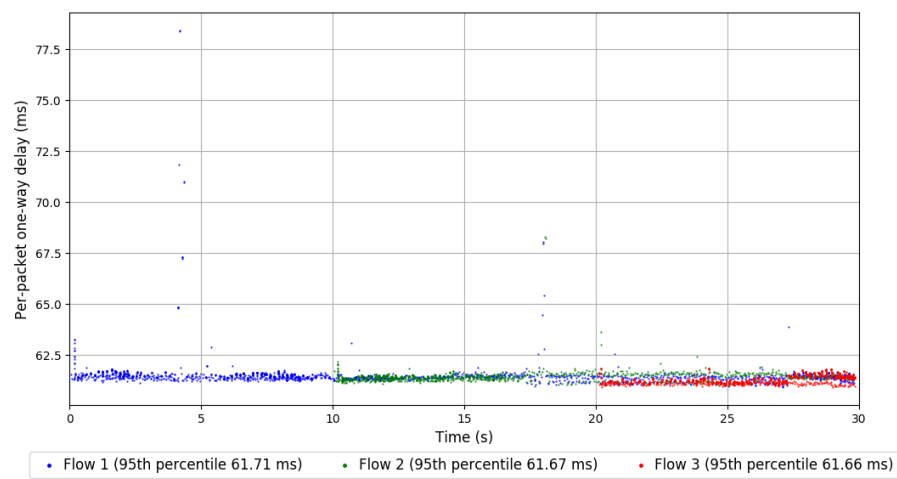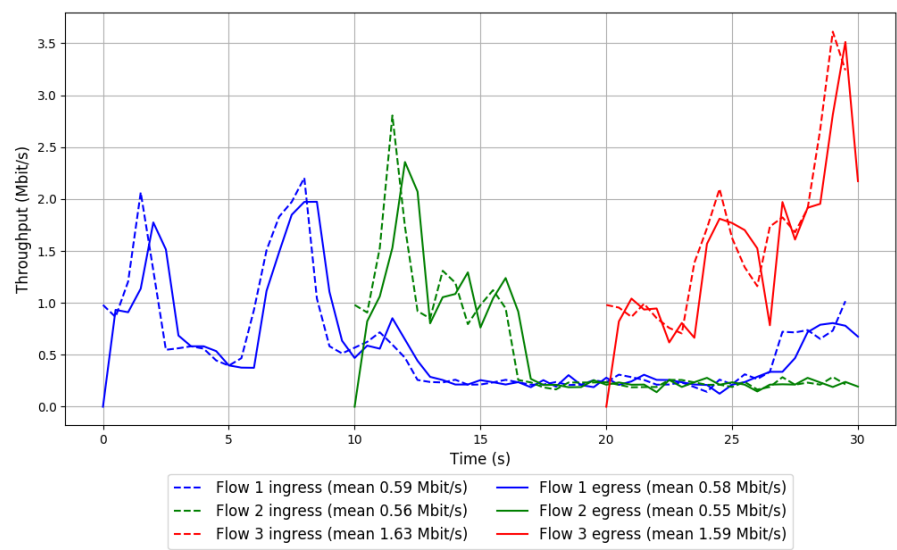
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-08-11 20:52:15
End at: 2018-08-11 20:52:45
Local clock offset: 0.1 ms
Remote clock offset: -0.185 ms


# Below is generated by plot.py at 2018-08-12 04:37:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.18 Mbit/s
95th percentile per-packet one-way delay: 65.601 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 229.83 Mbit/s
95th percentile per-packet one-way delay: 64.649 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 216.84 Mbit/s
95th percentile per-packet one-way delay: 64.958 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 213.00 Mbit/s
95th percentile per-packet one-way delay: 67.921 ms
Loss rate: 1.37%
```

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

Flow 1 ingress (mean 229.95 Mbit/s) Flow 1 egress (mean 229.83 Mbit/s)
Flow 2 ingress (mean 216.73 Mbit/s) Flow 2 egress (mean 216.84 Mbit/s)
Flow 3 ingress (mean 213.27 Mbit/s) Flow 3 egress (mean 213.00 Mbit/s)

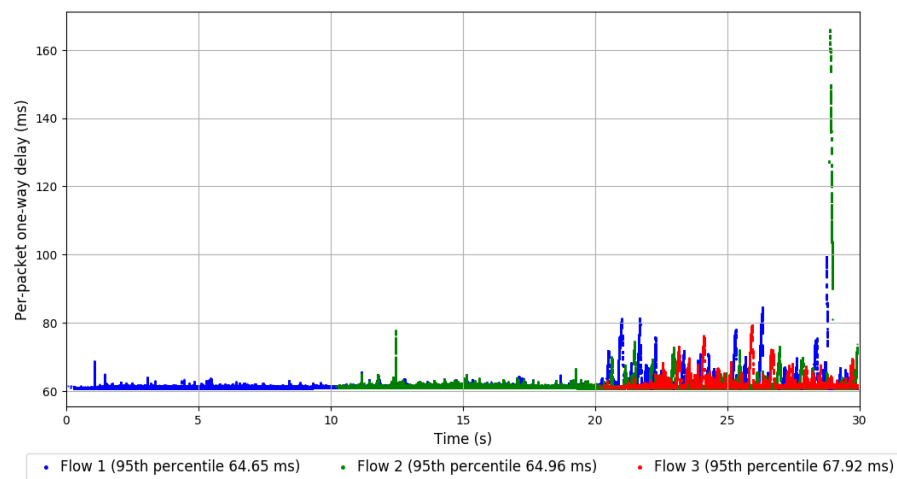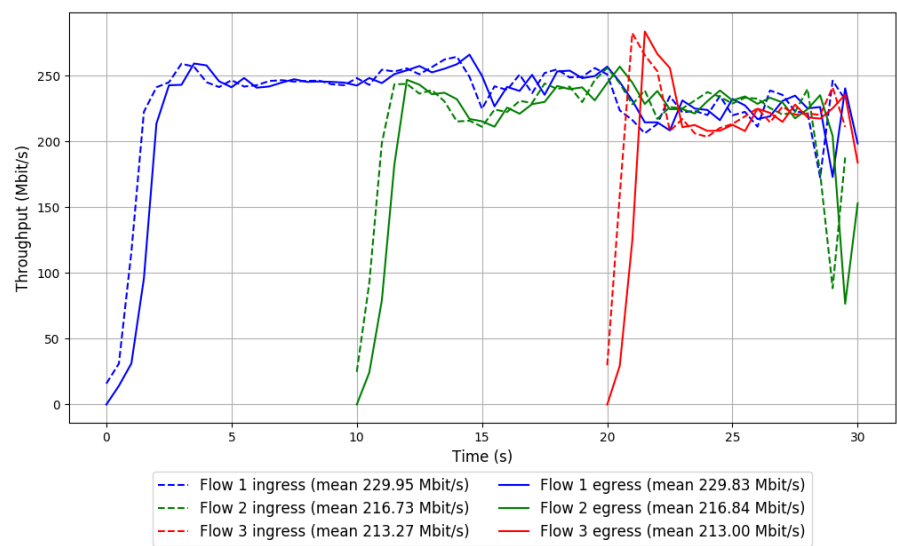Flow 1 (95th percentile 64.65 ms)   Flow 2 (95th percentile 64.96 ms)   Flow 3 (95th percentile 67.92 ms)

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

Start at: 2018-08-11 21:18:52
End at: 2018-08-11 21:19:22
Local clock offset: 0.069 ms
Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2018-08-12 04:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.91 Mbit/s
95th percentile per-packet one-way delay: 62.759 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 234.84 Mbit/s
95th percentile per-packet one-way delay: 62.115 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 220.17 Mbit/s
95th percentile per-packet one-way delay: 63.233 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 217.70 Mbit/s
95th percentile per-packet one-way delay: 63.938 ms
Loss rate: 1.42%
```

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

- - - - Flow 1 ingress (mean 234.79 Mbit/s) ——— Flow 1 egress (mean 234.84 Mbit/s)
- - - - Flow 2 ingress (mean 220.13 Mbit/s) ——— Flow 2 egress (mean 220.17 Mbit/s)
- - - - Flow 3 ingress (mean 218.06 Mbit/s) ——— Flow 3 egress (mean 217.70 Mbit/s)

• Flow 1 (95th percentile 62.12 ms)   • Flow 2 (95th percentile 63.23 ms)   • Flow 3 (95th percentile 63.94 ms)

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

Start at: 2018-08-11 21:45:39
End at: 2018-08-11 21:46:09
Local clock offset: -0.13 ms
Remote clock offset: -1.32 ms

# Below is generated by plot.py at 2018-08-12 04:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 432.18 Mbit/s
95th percentile per-packet one-way delay: 67.931 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 219.21 Mbit/s
95th percentile per-packet one-way delay: 66.648 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 210.01 Mbit/s
95th percentile per-packet one-way delay: 69.265 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 222.78 Mbit/s
95th percentile per-packet one-way delay: 68.382 ms
Loss rate: 1.12%
```
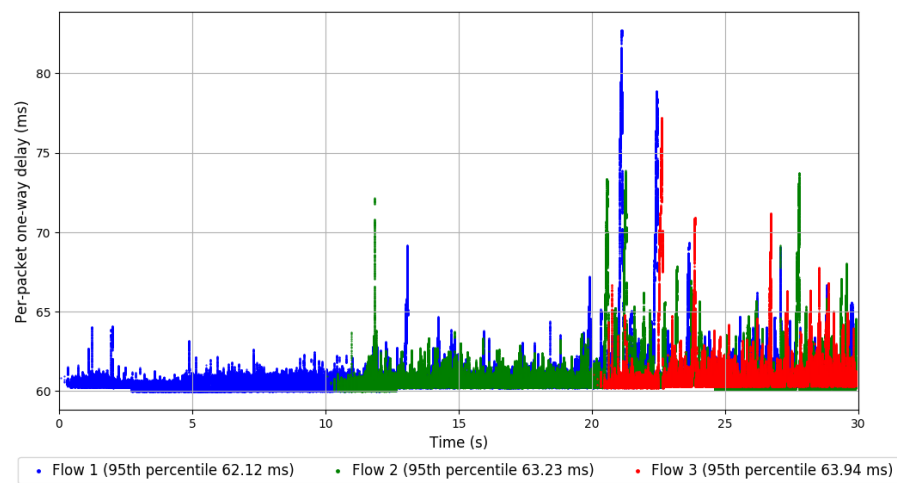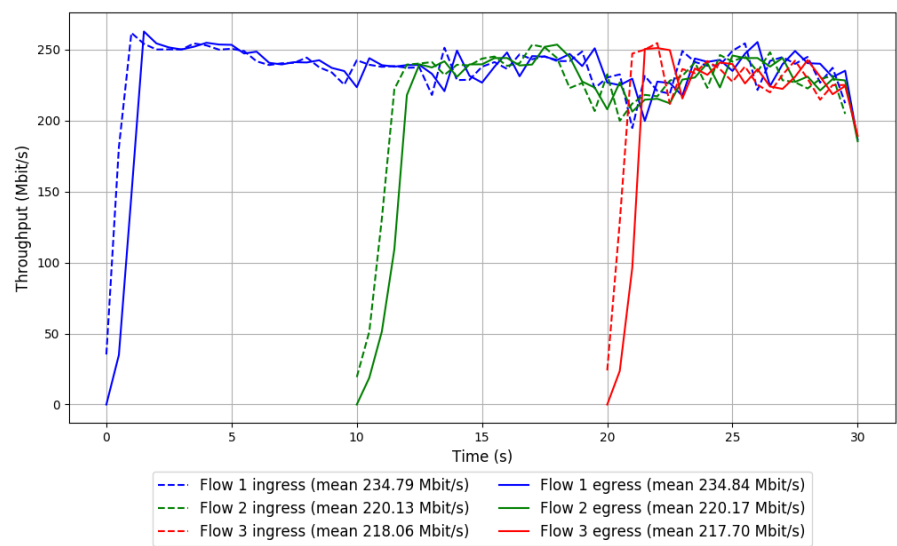
Run 3: Report of TaoVA-100x — Data Link

Legend:
- Flow 1 ingress (mean 219.16 Mbit/s) — Flow 1 egress (mean 219.21 Mbit/s)
- Flow 2 ingress (mean 210.24 Mbit/s) — Flow 2 egress (mean 210.01 Mbit/s)
- Flow 3 ingress (mean 222.51 Mbit/s) — Flow 3 egress (mean 222.78 Mbit/s)

Legend:
- Flow 1 (95th percentile 66.65 ms)
- Flow 2 (95th percentile 69.27 ms)
- Flow 3 (95th percentile 68.38 ms)

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

Start at: 2018-08-11 22:12:30
End at: 2018-08-11 22:13:00
Local clock offset: -0.073 ms
Remote clock offset: -1.409 ms


# Below is generated by plot.py at 2018-08-12 04:38:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.59 Mbit/s
95th percentile per-packet one-way delay: 68.878 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 233.25 Mbit/s
95th percentile per-packet one-way delay: 66.363 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 230.17 Mbit/s
95th percentile per-packet one-way delay: 69.836 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 201.40 Mbit/s
95th percentile per-packet one-way delay: 73.804 ms
Loss rate: 1.28%
```
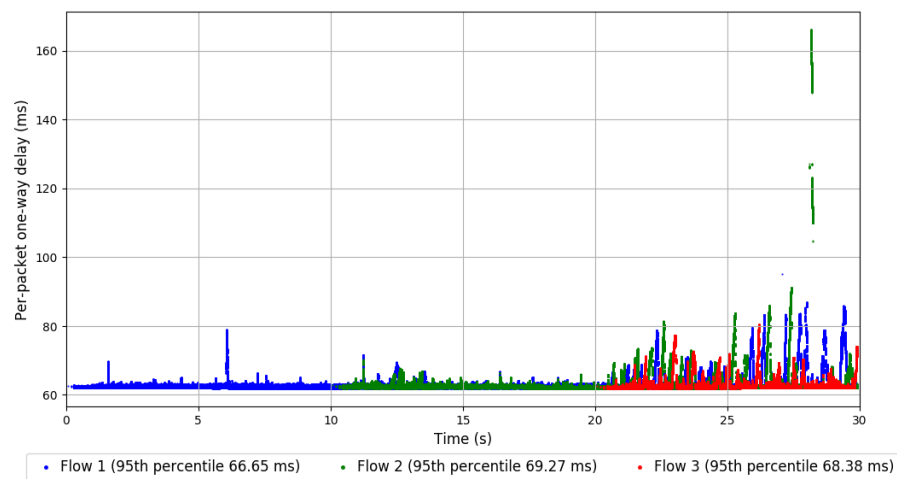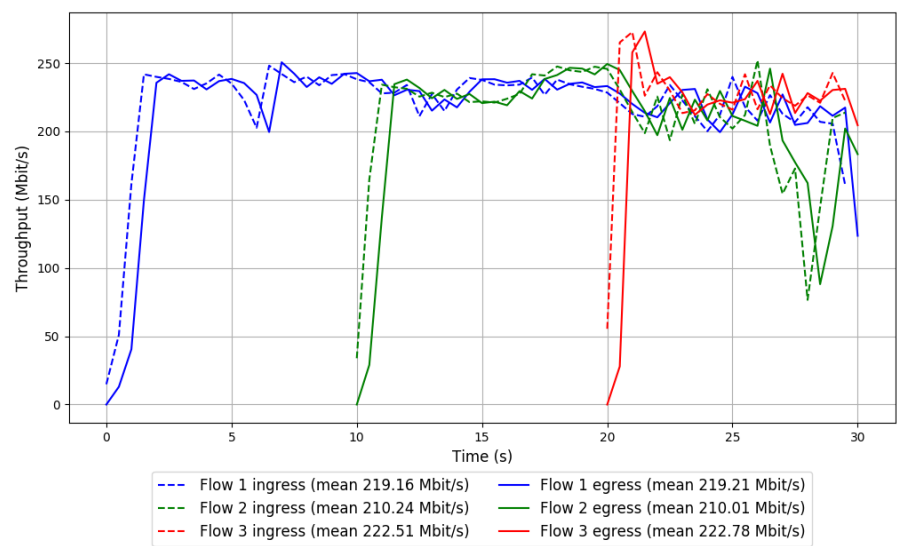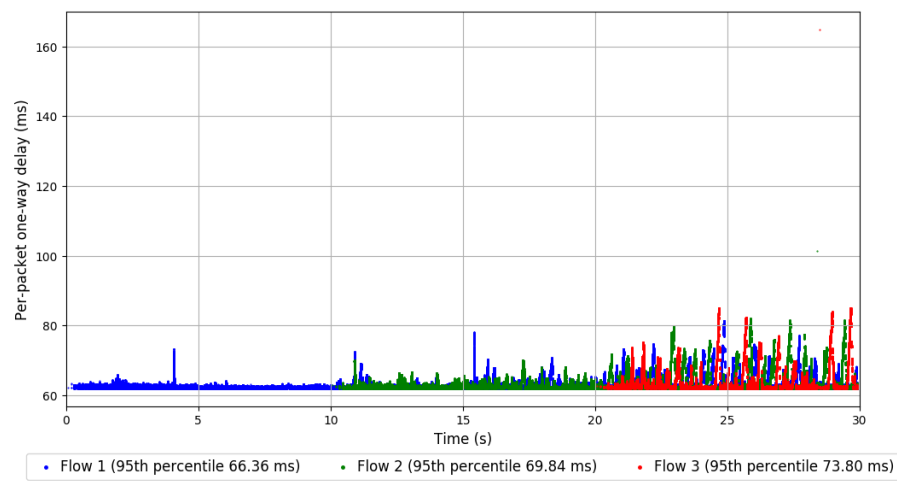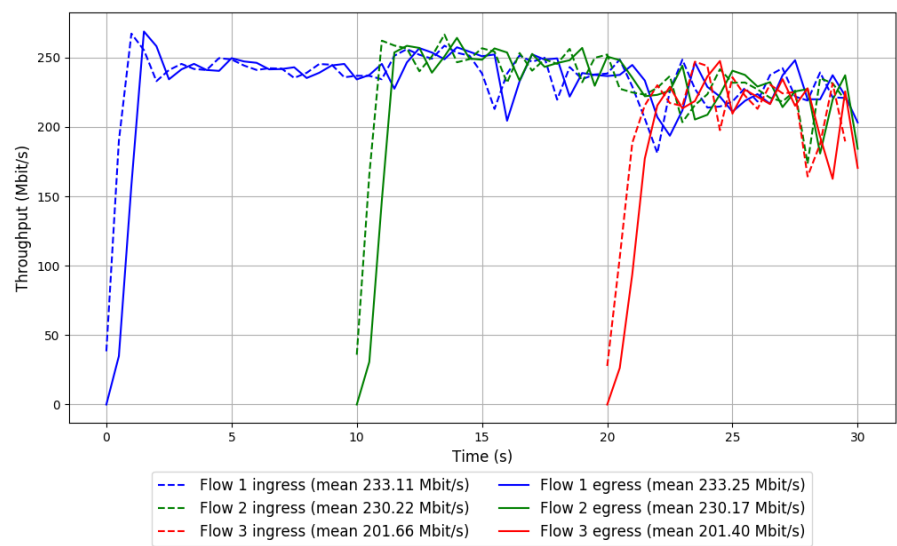
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2018-08-11 22:39:30
End at: 2018-08-11 22:40:00
Local clock offset: 0.031 ms
Remote clock offset: 0.618 ms


# Below is generated by plot.py at 2018-08-12 04:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.44 Mbit/s
95th percentile per-packet one-way delay: 62.786 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 231.37 Mbit/s
95th percentile per-packet one-way delay: 62.117 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 225.97 Mbit/s
95th percentile per-packet one-way delay: 63.168 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 200.73 Mbit/s
95th percentile per-packet one-way delay: 64.186 ms
Loss rate: 2.37%
```

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

Flow 1 ingress (mean 231.20 Mbit/s) --- Flow 1 egress (mean 231.37 Mbit/s)
Flow 2 ingress (mean 226.07 Mbit/s) --- Flow 2 egress (mean 225.97 Mbit/s)
Flow 3 ingress (mean 203.68 Mbit/s) --- Flow 3 egress (mean 200.73 Mbit/s)

Flow 1 (95th percentile 62.12 ms)   Flow 2 (95th percentile 63.17 ms)   Flow 3 (95th percentile 64.19 ms)

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```
Run 6: Statistics of TaoVA-100x

Start at: 2018-08-11 23:06:26
End at: 2018-08-11 23:06:56
Local clock offset: -0.063 ms
Remote clock offset: -0.706 ms


# Below is generated by plot.py at 2018-08-12 04:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.56 Mbit/s
95th percentile per-packet one-way delay: 64.441 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 235.82 Mbit/s
95th percentile per-packet one-way delay: 63.562 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 234.12 Mbit/s
95th percentile per-packet one-way delay: 63.851 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 203.62 Mbit/s
95th percentile per-packet one-way delay: 70.767 ms
Loss rate: 0.92%
```
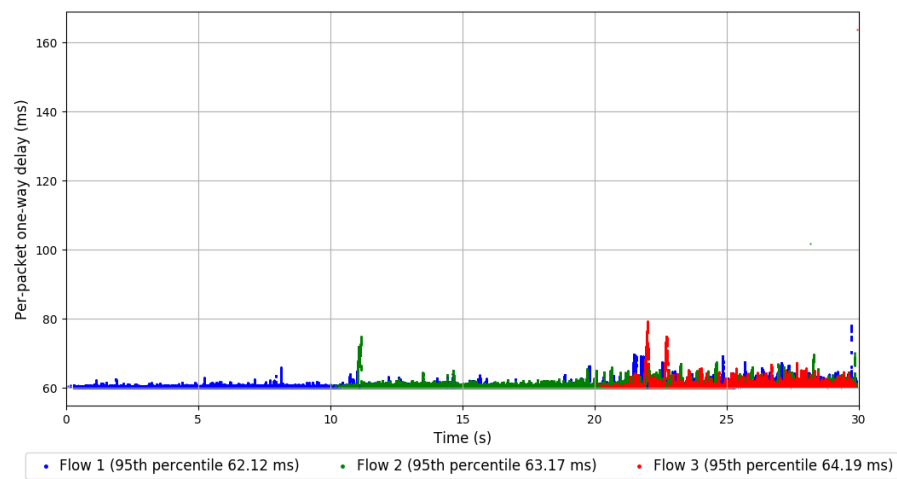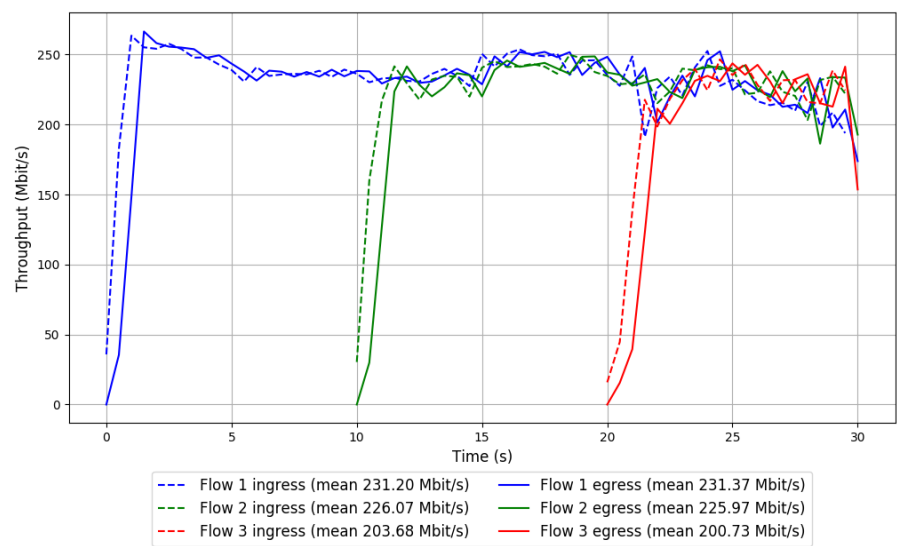
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 235.87 Mbit/s) --- Flow 1 egress (mean 235.82 Mbit/s)
Flow 2 ingress (mean 234.19 Mbit/s) --- Flow 2 egress (mean 234.12 Mbit/s)
Flow 3 ingress (mean 202.97 Mbit/s) --- Flow 3 egress (mean 203.62 Mbit/s)

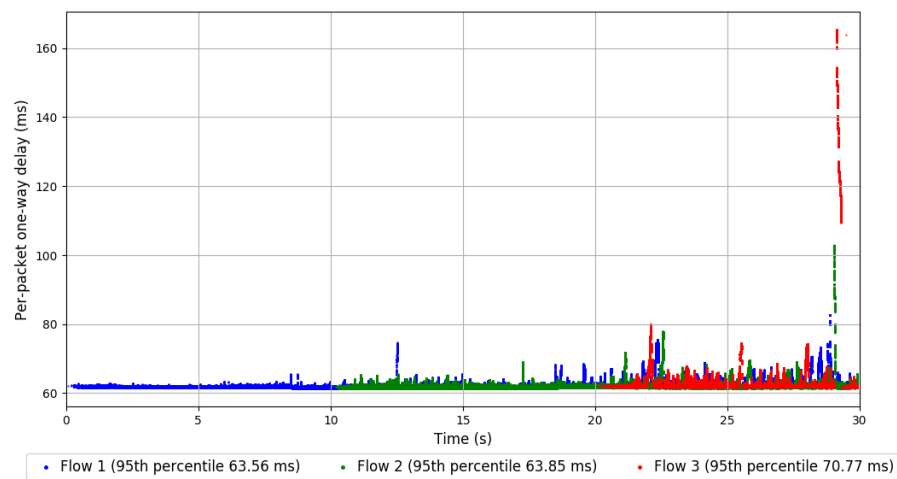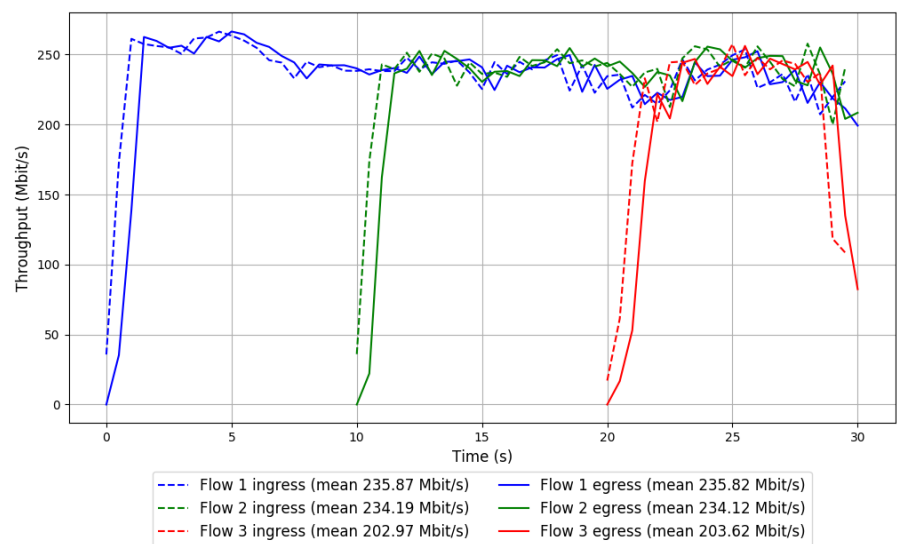Flow 1 (95th percentile 63.56 ms) • Flow 2 (95th percentile 63.85 ms) • Flow 3 (95th percentile 70.77 ms)
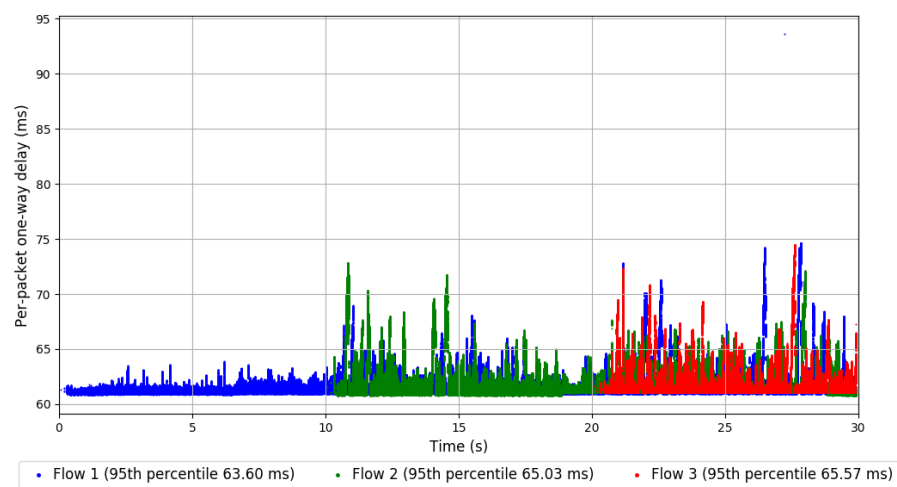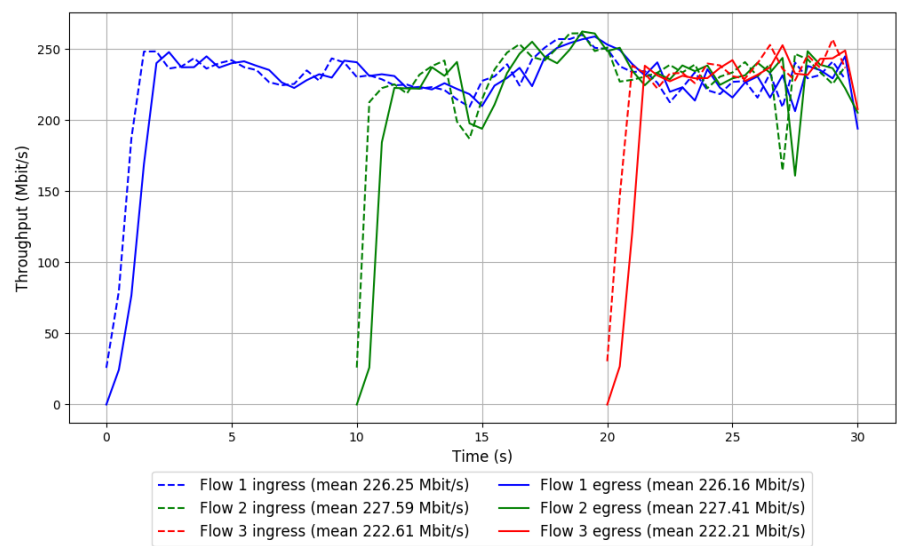
```
Run 7: Statistics of TaoVA-100x

Start at: 2018-08-11 23:33:18
End at: 2018-08-11 23:33:48
Local clock offset: 0.012 ms
Remote clock offset: -0.044 ms


# Below is generated by plot.py at 2018-08-12 04:44:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 450.53 Mbit/s
95th percentile per-packet one-way delay: 64.578 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 226.16 Mbit/s
95th percentile per-packet one-way delay: 63.598 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 227.41 Mbit/s
95th percentile per-packet one-way delay: 65.027 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 222.21 Mbit/s
95th percentile per-packet one-way delay: 65.571 ms
Loss rate: 1.41%
```

Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 226.25 Mbit/s)   Flow 1 egress (mean 226.16 Mbit/s)
Flow 2 ingress (mean 227.59 Mbit/s)   Flow 2 egress (mean 227.41 Mbit/s)
Flow 3 ingress (mean 222.61 Mbit/s)   Flow 3 egress (mean 222.21 Mbit/s)

Flow 1 (95th percentile 63.60 ms)   Flow 2 (95th percentile 65.03 ms)   Flow 3 (95th percentile 65.57 ms)
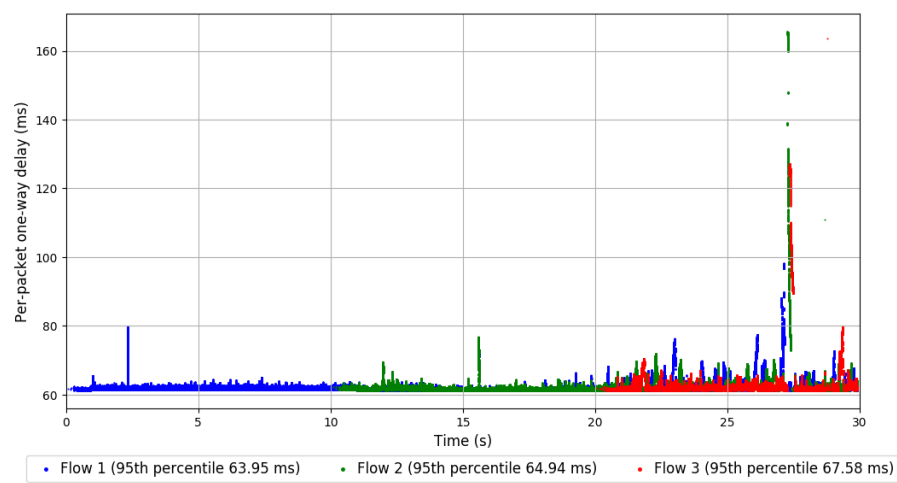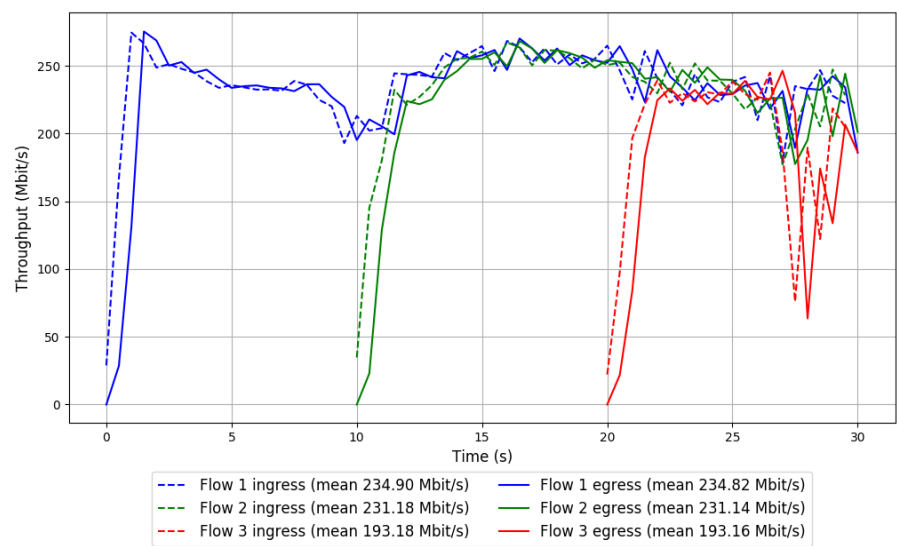
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-08-12 00:00:04
End at: 2018-08-12 00:00:34
Local clock offset: -0.049 ms
Remote clock offset: -0.499 ms


# Below is generated by plot.py at 2018-08-12 04:45:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.99 Mbit/s
95th percentile per-packet one-way delay: 64.740 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 234.82 Mbit/s
95th percentile per-packet one-way delay: 63.953 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 231.14 Mbit/s
95th percentile per-packet one-way delay: 64.943 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 193.16 Mbit/s
95th percentile per-packet one-way delay: 67.578 ms
Loss rate: 1.26%
```

Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 234.90 Mbit/s) --- Flow 1 egress (mean 234.82 Mbit/s)
Flow 2 ingress (mean 231.18 Mbit/s) --- Flow 2 egress (mean 231.14 Mbit/s)
Flow 3 ingress (mean 193.18 Mbit/s) --- Flow 3 egress (mean 193.16 Mbit/s)

Flow 1 (95th percentile 63.95 ms)   Flow 2 (95th percentile 64.94 ms)   Flow 3 (95th percentile 67.58 ms)

259

```
Run 9: Statistics of TaoVA-100x

Start at: 2018-08-12 00:26:57
End at: 2018-08-12 00:27:27
Local clock offset: -0.107 ms
Remote clock offset: 0.053 ms


# Below is generated by plot.py at 2018-08-12 04:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.05 Mbit/s
95th percentile per-packet one-way delay: 63.559 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 228.08 Mbit/s
95th percentile per-packet one-way delay: 62.999 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 216.97 Mbit/s
95th percentile per-packet one-way delay: 64.571 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 202.54 Mbit/s
95th percentile per-packet one-way delay: 63.419 ms
Loss rate: 1.10%
```
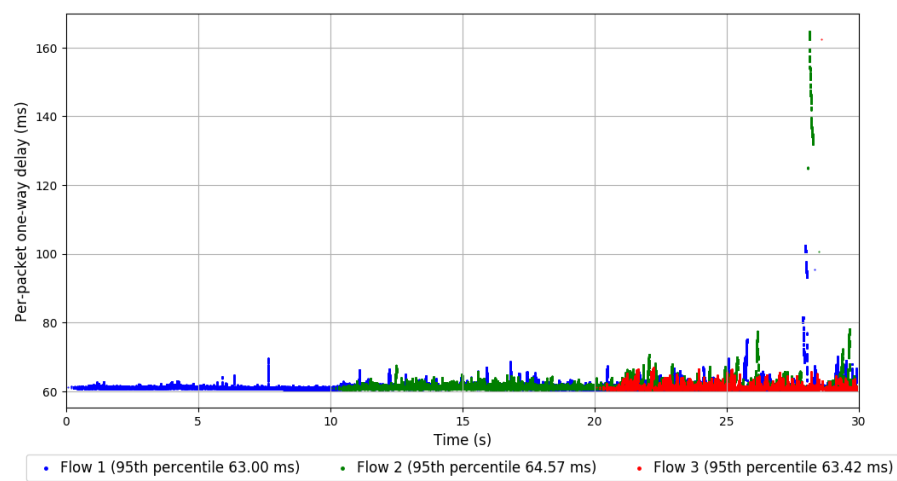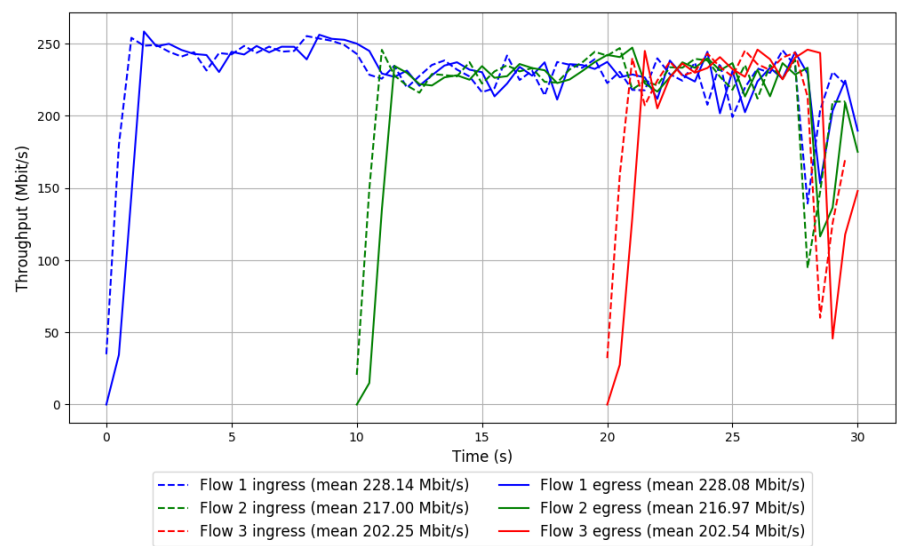
Run 9: Report of TaoVA-100x — Data Link

261

```
Run 10: Statistics of TaoVA-100x

Start at: 2018-08-12 00:53:30
End at: 2018-08-12 00:54:00
Local clock offset: -0.052 ms
Remote clock offset: 0.327 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.01 Mbit/s
95th percentile per-packet one-way delay: 63.990 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 225.72 Mbit/s
95th percentile per-packet one-way delay: 63.309 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 218.18 Mbit/s
95th percentile per-packet one-way delay: 63.866 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 201.32 Mbit/s
95th percentile per-packet one-way delay: 67.028 ms
Loss rate: 1.19%
```
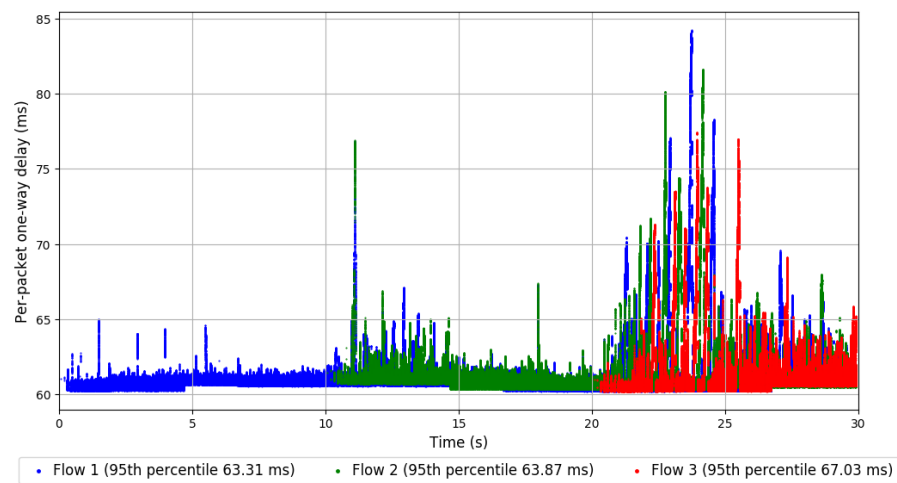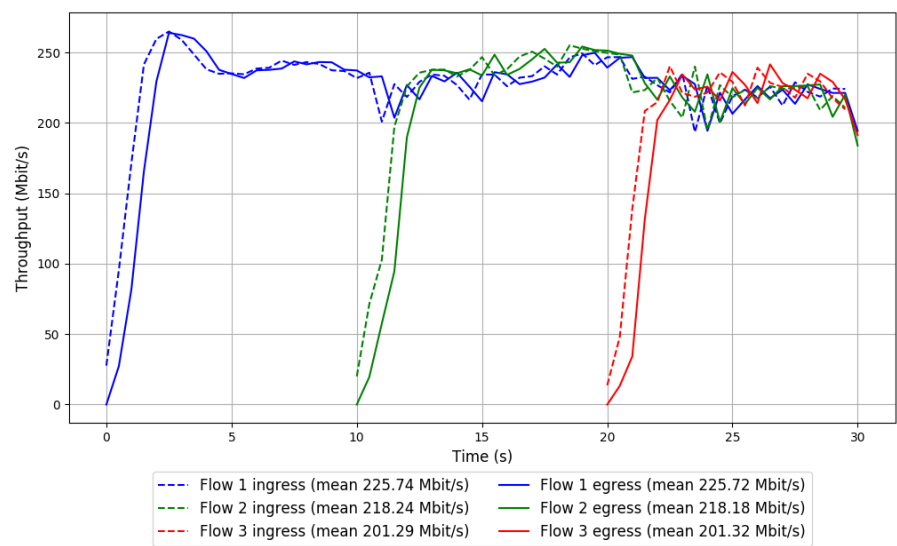
# Run 10: Report of TaoVA-100x — Data Link

263

```
Run 1: Statistics of TCP Vegas

Start at: 2018-08-11 20:59:55
End at: 2018-08-11 21:00:25
Local clock offset: 0.037 ms
Remote clock offset: -0.238 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 226.06 Mbit/s
95th percentile per-packet one-way delay: 62.885 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 111.16 Mbit/s
95th percentile per-packet one-way delay: 62.548 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 63.93 Mbit/s
95th percentile per-packet one-way delay: 62.665 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 219.72 Mbit/s
95th percentile per-packet one-way delay: 63.587 ms
Loss rate: 0.71%
```

Run 1: Report of TCP Vegas — Data Link
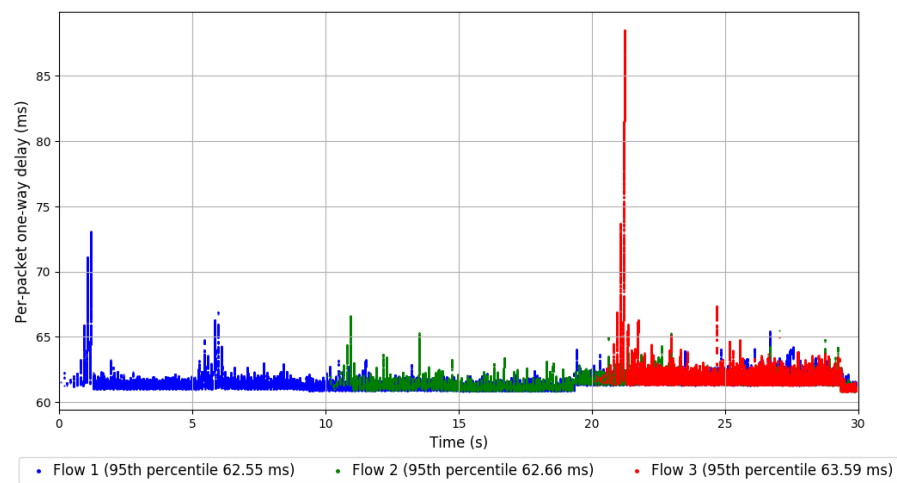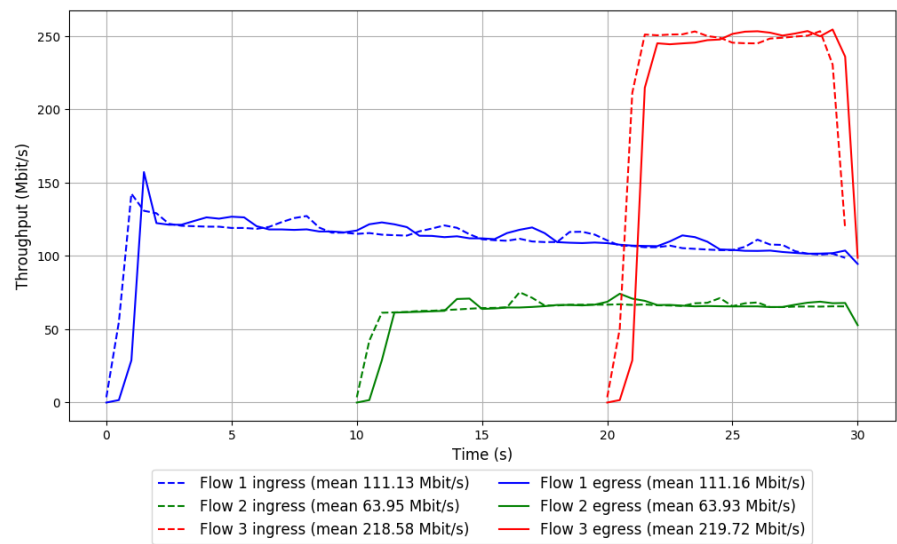
```
Run 2: Statistics of TCP Vegas

Start at: 2018-08-11 21:26:31
End at: 2018-08-11 21:27:01
Local clock offset: 0.093 ms
Remote clock offset: 0.731 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.91 Mbit/s
95th percentile per-packet one-way delay: 62.533 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 131.49 Mbit/s
95th percentile per-packet one-way delay: 61.611 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 67.42 Mbit/s
95th percentile per-packet one-way delay: 61.339 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 211.31 Mbit/s
95th percentile per-packet one-way delay: 74.029 ms
Loss rate: 1.34%
```
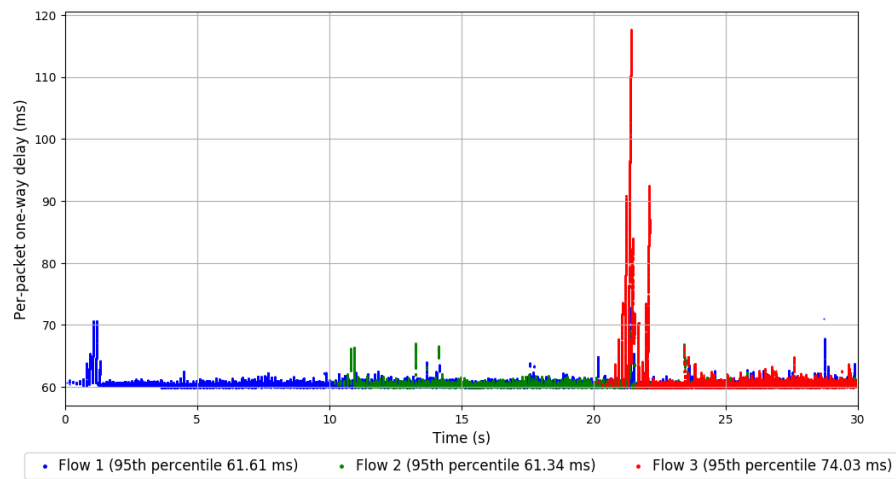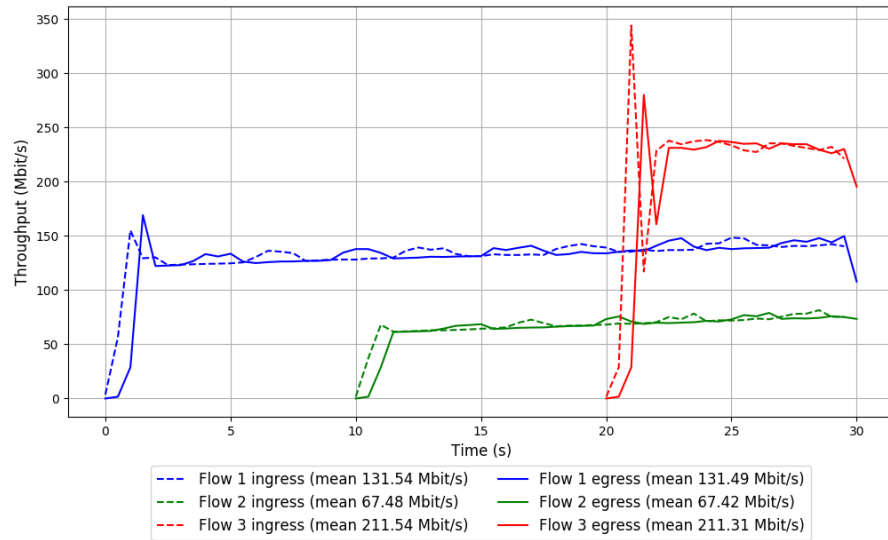
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-08-11 21:53:20
End at: 2018-08-11 21:53:50
Local clock offset: -0.062 ms
Remote clock offset: 0.618 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 182.22 Mbit/s
95th percentile per-packet one-way delay: 62.636 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 63.29 Mbit/s
95th percentile per-packet one-way delay: 61.738 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 66.77 Mbit/s
95th percentile per-packet one-way delay: 62.058 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 226.60 Mbit/s
95th percentile per-packet one-way delay: 65.035 ms
Loss rate: 1.38%
```
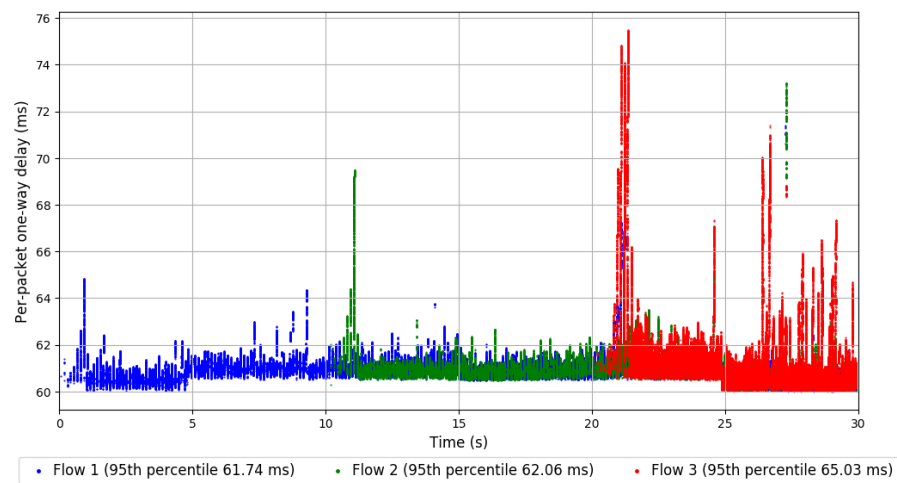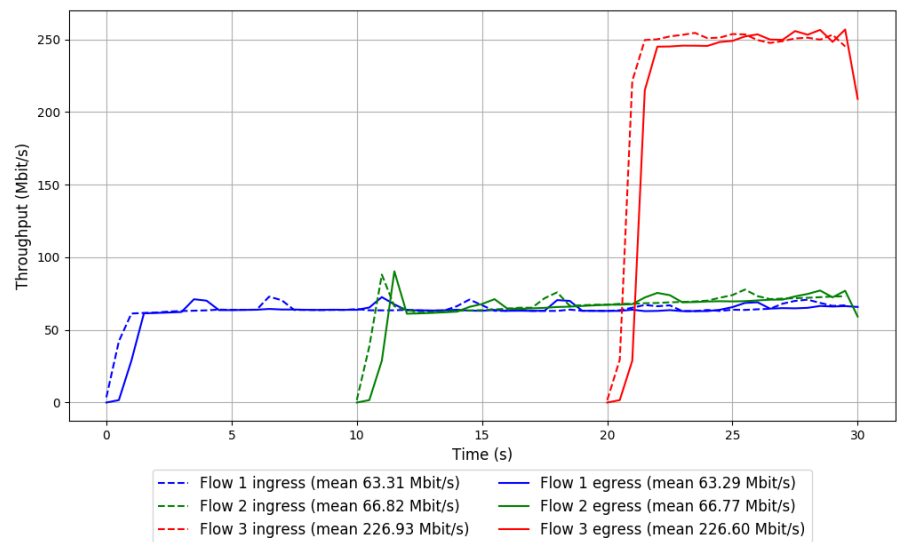
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-08-11 22:20:15
End at: 2018-08-11 22:20:45
Local clock offset: -0.0 ms
Remote clock offset: 0.57 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 320.99 Mbit/s
95th percentile per-packet one-way delay: 61.981 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 246.49 Mbit/s
95th percentile per-packet one-way delay: 62.154 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 110.00 Mbit/s
95th percentile per-packet one-way delay: 61.498 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 61.182 ms
Loss rate: 2.53%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 246.51 Mbit/s) ---- Flow 1 egress (mean 246.49 Mbit/s)
Flow 2 ingress (mean 110.03 Mbit/s) ---- Flow 2 egress (mean 110.00 Mbit/s)
Flow 3 ingress (mean 4.24 Mbit/s) ---- Flow 3 egress (mean 4.19 Mbit/s)

Flow 1 (95th percentile 62.15 ms) Flow 2 (95th percentile 61.50 ms) Flow 3 (95th percentile 61.18 ms)

271

```
Run 5: Statistics of TCP Vegas

Start at: 2018-08-11 22:47:08
End at: 2018-08-11 22:47:38
Local clock offset: -0.04 ms
Remote clock offset: -0.208 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.36 Mbit/s
95th percentile per-packet one-way delay: 62.878 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 70.50 Mbit/s
95th percentile per-packet one-way delay: 62.564 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 124.85 Mbit/s
95th percentile per-packet one-way delay: 62.753 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 224.46 Mbit/s
95th percentile per-packet one-way delay: 63.618 ms
Loss rate: 1.36%
```
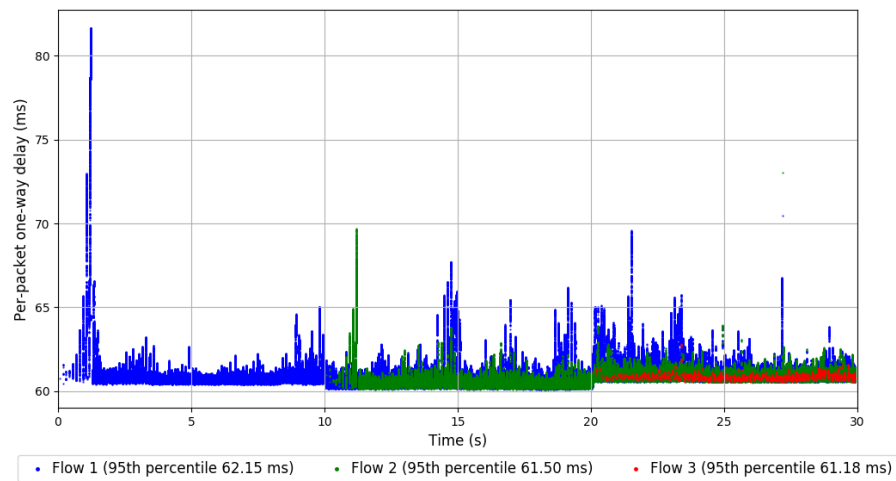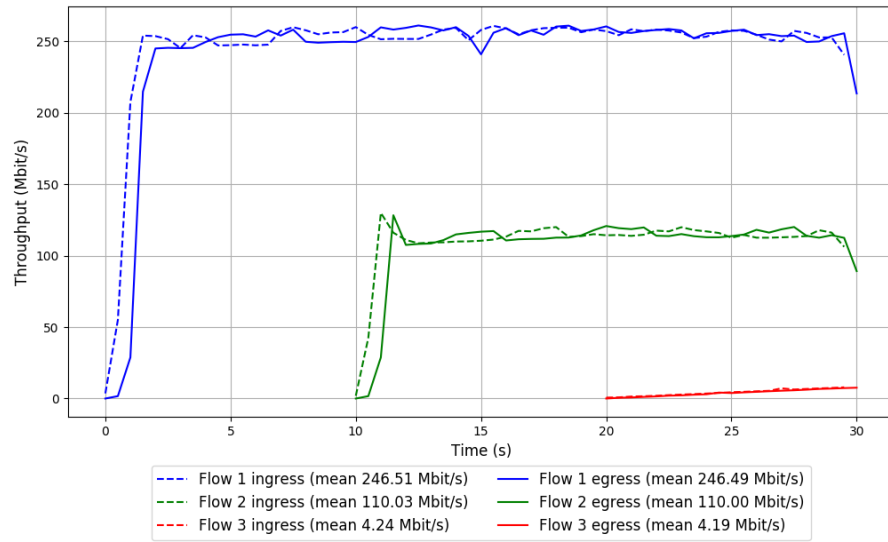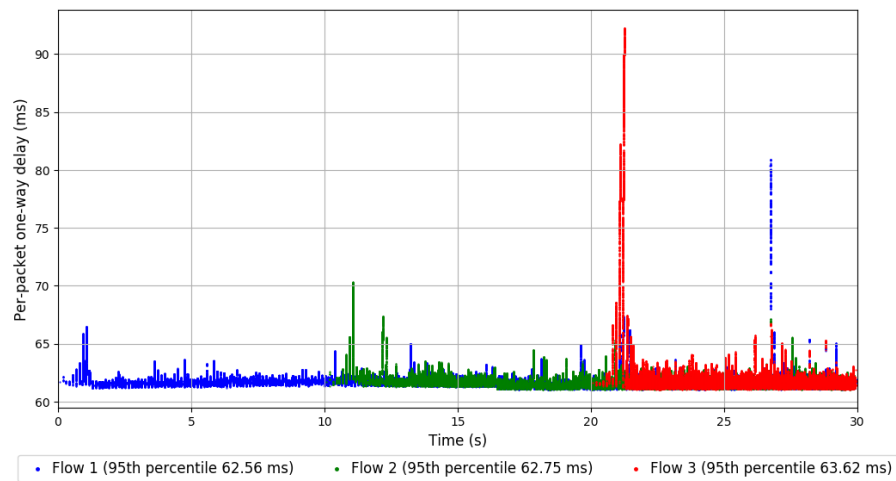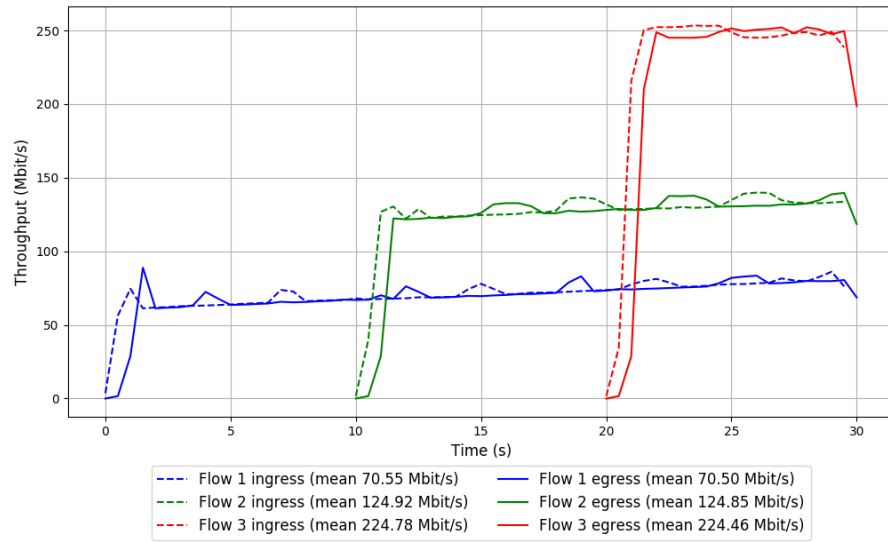
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 70.55 Mbit/s) --- Flow 1 egress (mean 70.50 Mbit/s)
Flow 2 ingress (mean 124.92 Mbit/s) --- Flow 2 egress (mean 124.85 Mbit/s)
Flow 3 ingress (mean 224.78 Mbit/s) --- Flow 3 egress (mean 224.46 Mbit/s)

Flow 1 (95th percentile 62.56 ms) Flow 2 (95th percentile 62.75 ms) Flow 3 (95th percentile 63.62 ms)

273

```
Run 6: Statistics of TCP Vegas

Start at: 2018-08-11 23:14:12
End at: 2018-08-11 23:14:42
Local clock offset: -0.062 ms
Remote clock offset: 0.309 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.74 Mbit/s
95th percentile per-packet one-way delay: 62.143 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 64.82 Mbit/s
95th percentile per-packet one-way delay: 62.259 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 124.34 Mbit/s
95th percentile per-packet one-way delay: 62.036 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 61.296 ms
Loss rate: 2.55%
```
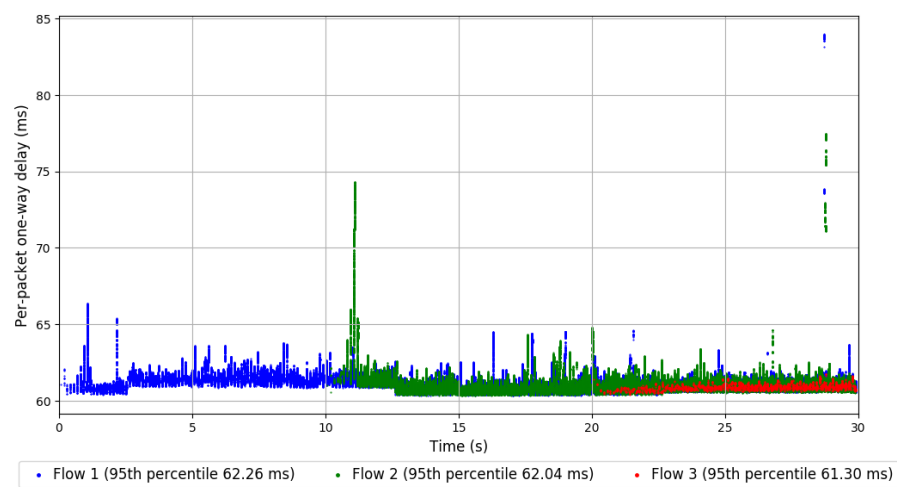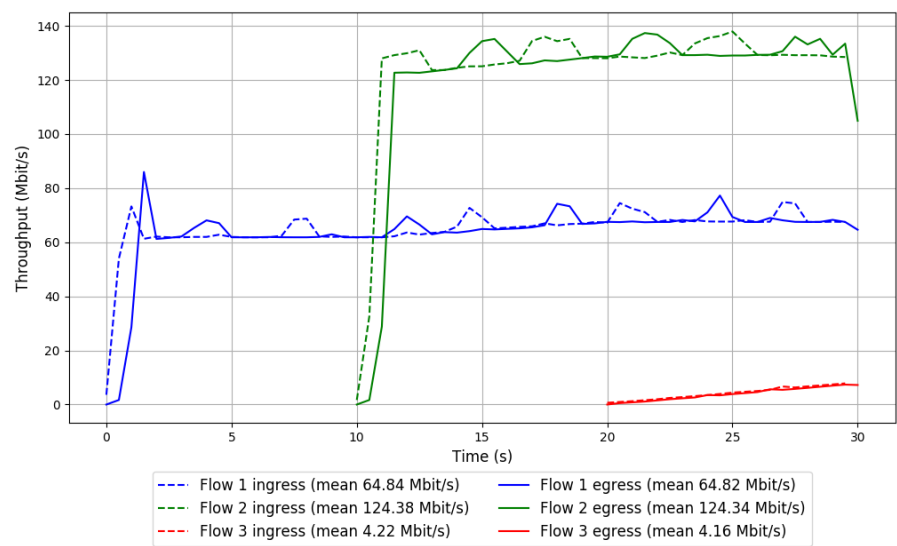
Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 64.84 Mbit/s) --- Flow 1 egress (mean 64.82 Mbit/s)
Flow 2 ingress (mean 124.38 Mbit/s) --- Flow 2 egress (mean 124.34 Mbit/s)
Flow 3 ingress (mean 4.22 Mbit/s) --- Flow 3 egress (mean 4.16 Mbit/s)

Flow 1 (95th percentile 62.26 ms)   Flow 2 (95th percentile 62.04 ms)   Flow 3 (95th percentile 61.30 ms)
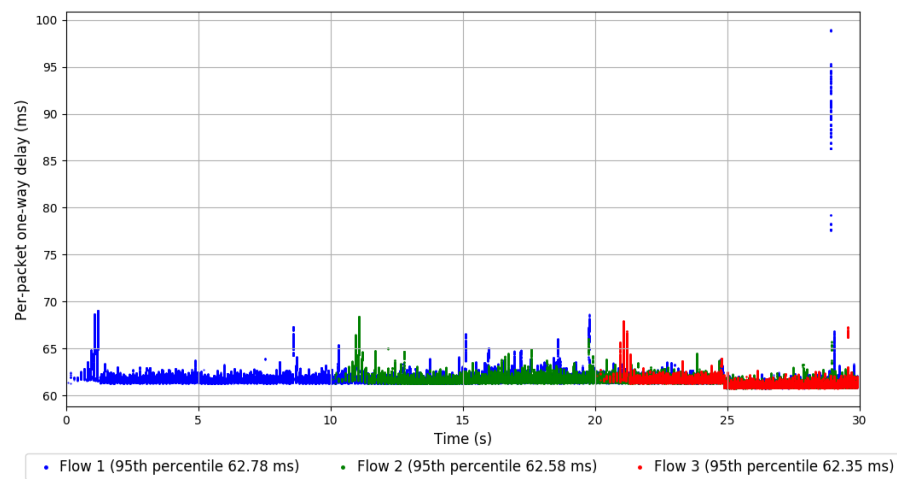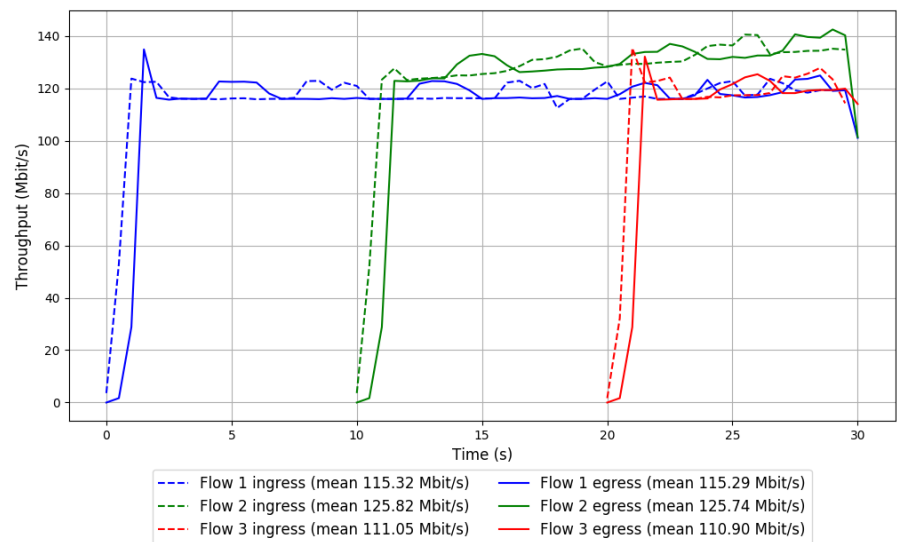
275

```
Run 7: Statistics of TCP Vegas

Start at: 2018-08-11 23:41:00
End at: 2018-08-11 23:41:30
Local clock offset: -0.011 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.31 Mbit/s
95th percentile per-packet one-way delay: 62.667 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 115.29 Mbit/s
95th percentile per-packet one-way delay: 62.782 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 125.74 Mbit/s
95th percentile per-packet one-way delay: 62.575 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 110.90 Mbit/s
95th percentile per-packet one-way delay: 62.354 ms
Loss rate: 1.36%
```

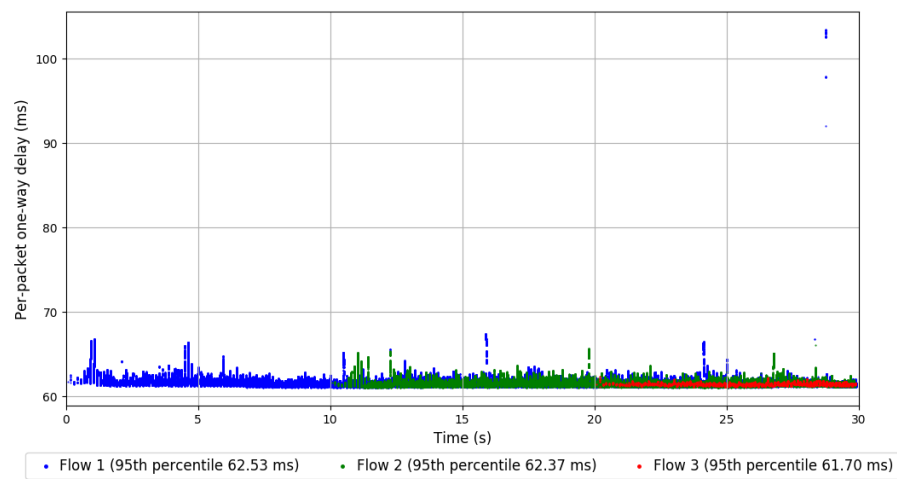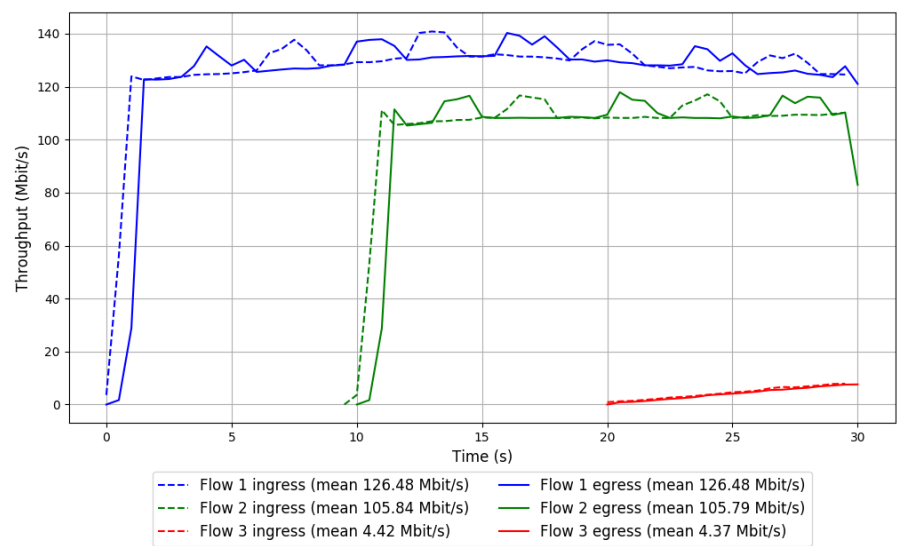# Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2018-08-12 00:07:48
End at: 2018-08-12 00:08:18
Local clock offset: -0.092 ms
Remote clock offset: -0.254 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 198.22 Mbit/s
95th percentile per-packet one-way delay: 62.468 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 126.48 Mbit/s
95th percentile per-packet one-way delay: 62.527 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 105.79 Mbit/s
95th percentile per-packet one-way delay: 62.369 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 61.705 ms
Loss rate: 2.32%
```

Run 8: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 126.48 Mbit/s) — Flow 1 egress (mean 126.48 Mbit/s)
Flow 2 ingress (mean 105.84 Mbit/s) — Flow 2 egress (mean 105.79 Mbit/s)
Flow 3 ingress (mean 4.42 Mbit/s) — Flow 3 egress (mean 4.37 Mbit/s)

Flow 1 (95th percentile 62.53 ms)   Flow 2 (95th percentile 62.37 ms)   Flow 3 (95th percentile 61.70 ms)
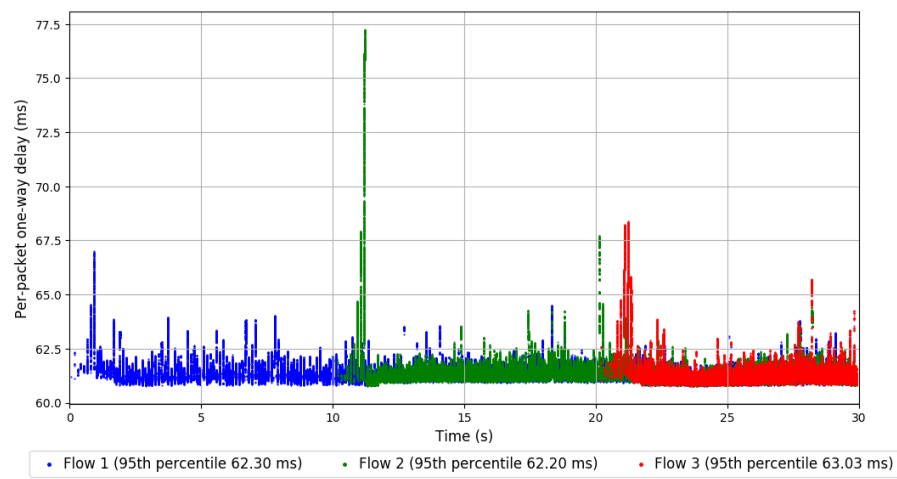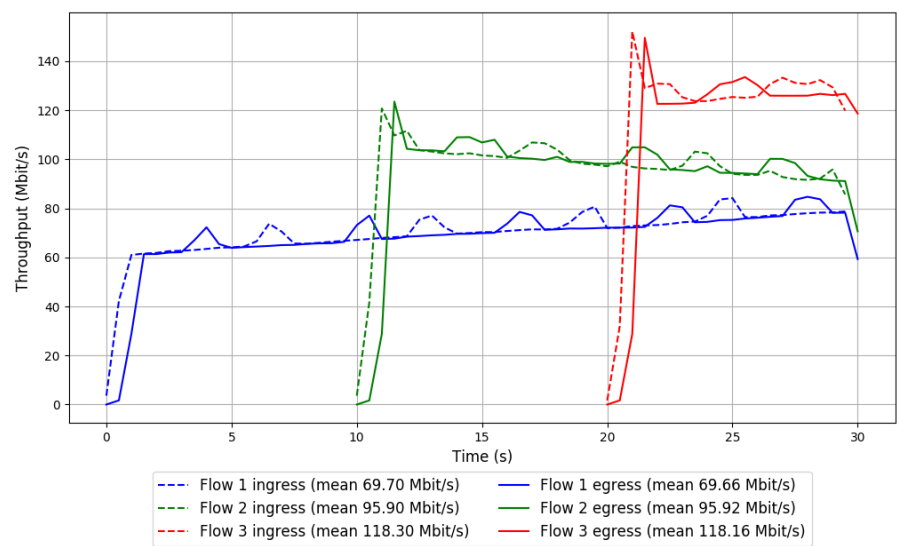
```
Run 9: Statistics of TCP Vegas

Start at: 2018-08-12 00:34:33
End at: 2018-08-12 00:35:03
Local clock offset: -0.056 ms
Remote clock offset: -0.163 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 172.32 Mbit/s
95th percentile per-packet one-way delay: 62.352 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 69.66 Mbit/s
95th percentile per-packet one-way delay: 62.299 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 95.92 Mbit/s
95th percentile per-packet one-way delay: 62.197 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 118.16 Mbit/s
95th percentile per-packet one-way delay: 63.028 ms
Loss rate: 1.34%
```

Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2018-08-12 01:01:13
End at: 2018-08-12 01:01:43
Local clock offset: -0.004 ms
Remote clock offset: 0.197 ms


# Below is generated by plot.py at 2018-08-12 04:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.94 Mbit/s
95th percentile per-packet one-way delay: 62.074 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 102.97 Mbit/s
95th percentile per-packet one-way delay: 61.999 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 67.20 Mbit/s
95th percentile per-packet one-way delay: 62.283 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 61.440 ms
Loss rate: 2.63%
```
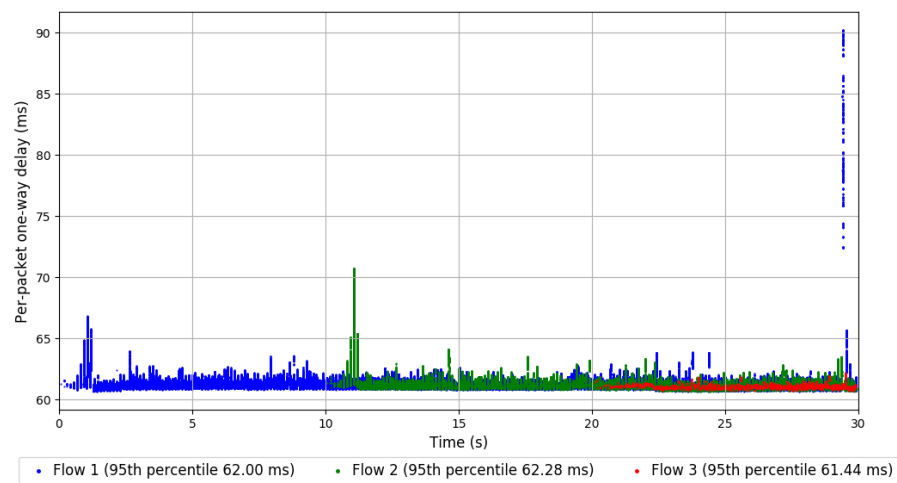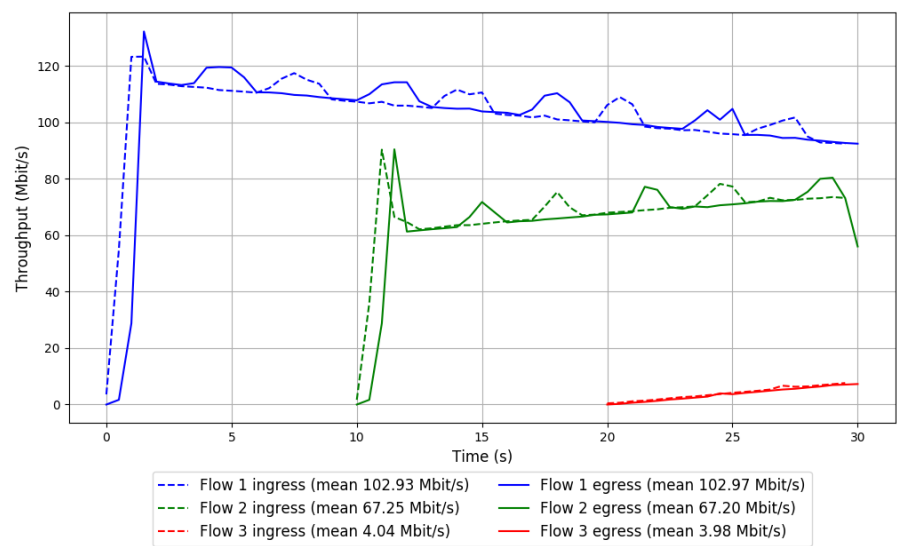
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-08-11 20:49:17
End at: 2018-08-11 20:49:47
Local clock offset: 0.111 ms
Remote clock offset: 0.588 ms


# Below is generated by plot.py at 2018-08-12 04:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 348.92 Mbit/s
95th percentile per-packet one-way delay: 125.466 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 179.99 Mbit/s
95th percentile per-packet one-way delay: 145.791 ms
Loss rate: 2.88%
-- Flow 2:
Average throughput: 216.78 Mbit/s
95th percentile per-packet one-way delay: 120.209 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 75.23 Mbit/s
95th percentile per-packet one-way delay: 95.841 ms
Loss rate: 0.28%
```
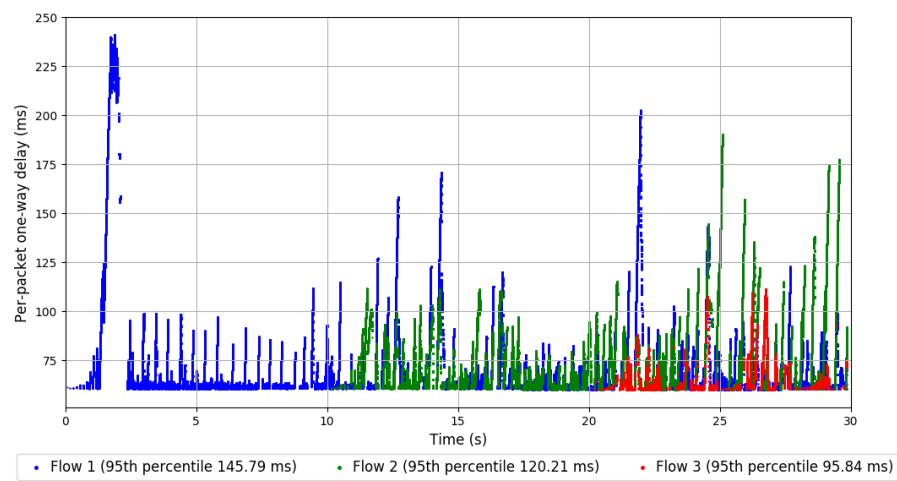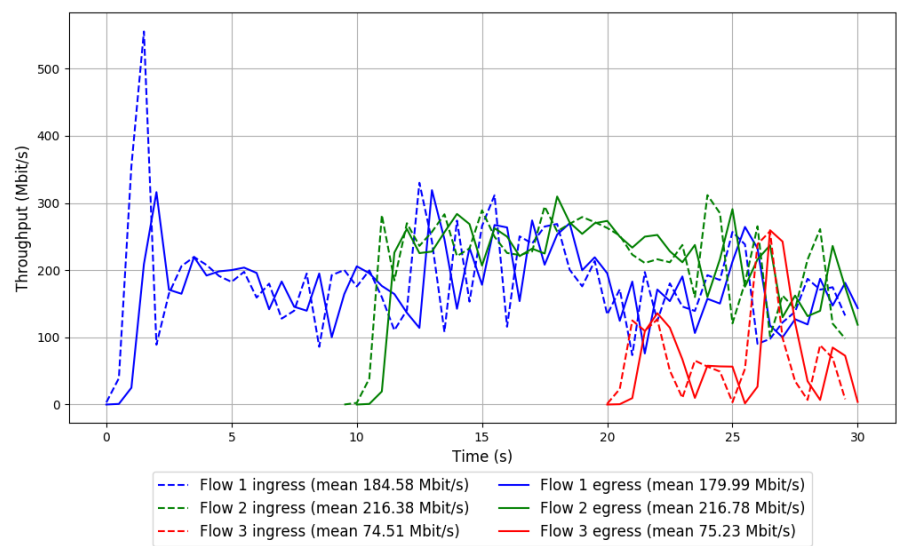
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-08-11 21:15:56
End at: 2018-08-11 21:16:26
Local clock offset: 0.086 ms
Remote clock offset: 0.614 ms


# Below is generated by plot.py at 2018-08-12 04:53:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.87 Mbit/s
95th percentile per-packet one-way delay: 114.330 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 125.85 Mbit/s
95th percentile per-packet one-way delay: 113.530 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 181.37 Mbit/s
95th percentile per-packet one-way delay: 96.400 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 147.53 Mbit/s
95th percentile per-packet one-way delay: 169.417 ms
Loss rate: 5.38%
```
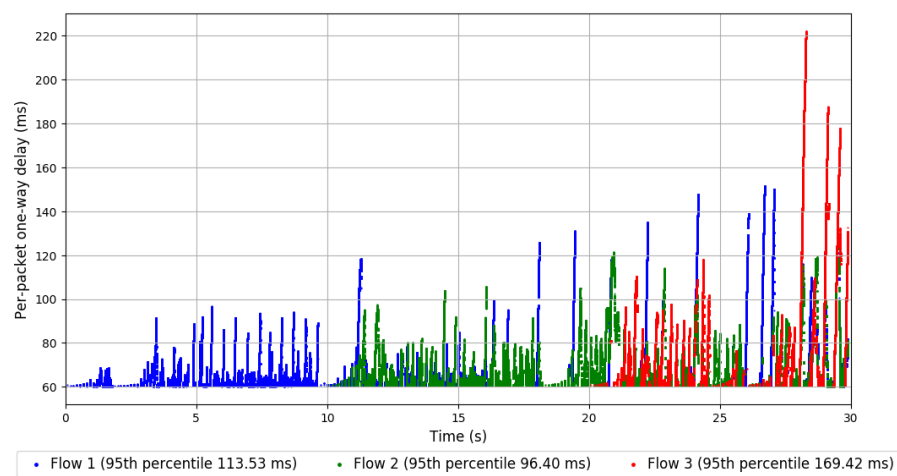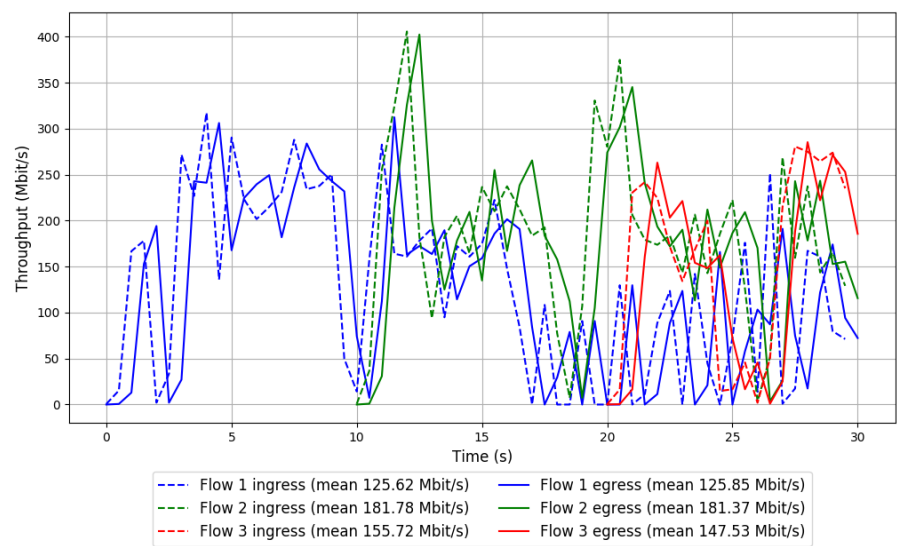
Run 2: Report of Verus — Data Link

- Flow 1 ingress (mean 125.62 Mbit/s)
- Flow 1 egress (mean 125.85 Mbit/s)
- Flow 2 ingress (mean 181.78 Mbit/s)
- Flow 2 egress (mean 181.37 Mbit/s)
- Flow 3 ingress (mean 155.72 Mbit/s)
- Flow 3 egress (mean 147.53 Mbit/s)

- Flow 1 (95th percentile 113.53 ms)
- Flow 2 (95th percentile 96.40 ms)
- Flow 3 (95th percentile 169.42 ms)

287

```
Run 3: Statistics of Verus

Start at: 2018-08-11 21:42:36
End at: 2018-08-11 21:43:06
Local clock offset: -0.05 ms
Remote clock offset: -0.12 ms


# Below is generated by plot.py at 2018-08-12 04:55:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.53 Mbit/s
95th percentile per-packet one-way delay: 116.077 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 223.79 Mbit/s
95th percentile per-packet one-way delay: 112.896 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 155.55 Mbit/s
95th percentile per-packet one-way delay: 102.046 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 162.64 Mbit/s
95th percentile per-packet one-way delay: 133.102 ms
Loss rate: 1.95%
```
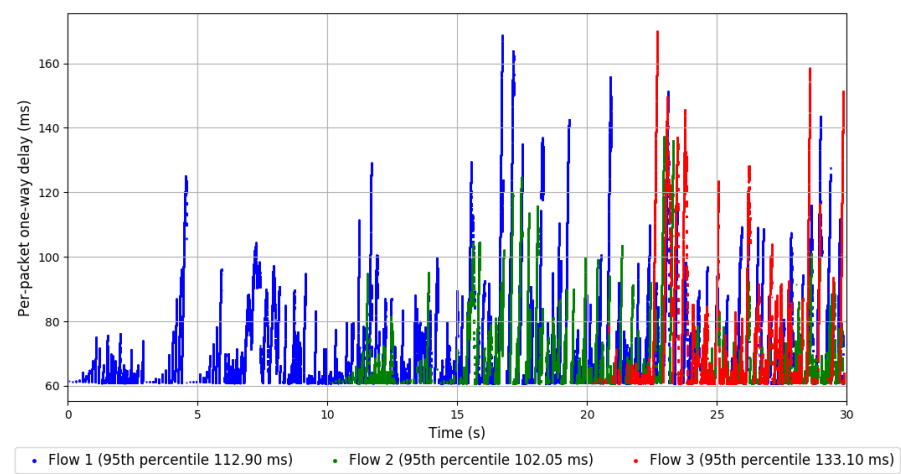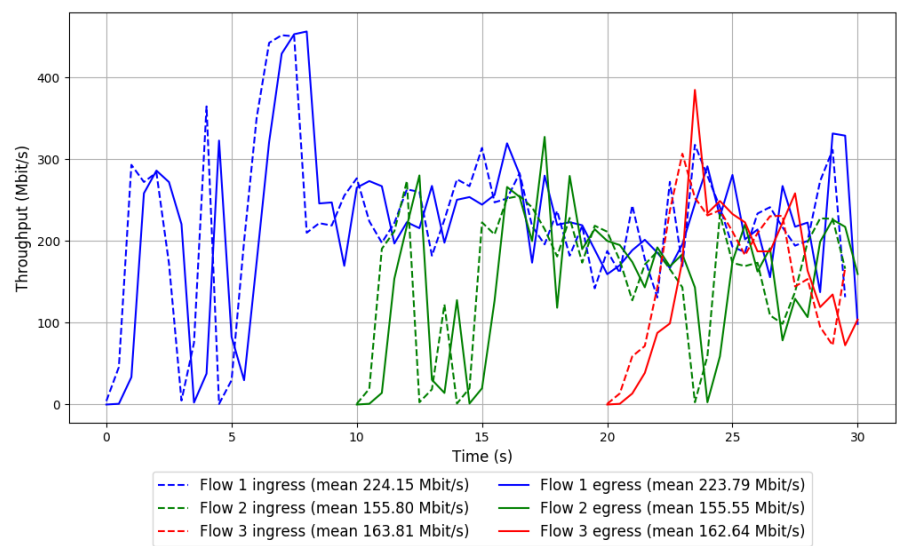
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 224.15 Mbit/s) — Flow 1 egress (mean 223.79 Mbit/s)
Flow 2 ingress (mean 155.80 Mbit/s) — Flow 2 egress (mean 155.55 Mbit/s)
Flow 3 ingress (mean 163.81 Mbit/s) — Flow 3 egress (mean 162.64 Mbit/s)

Flow 1 (95th percentile 112.90 ms)   Flow 2 (95th percentile 102.05 ms)   Flow 3 (95th percentile 133.10 ms)
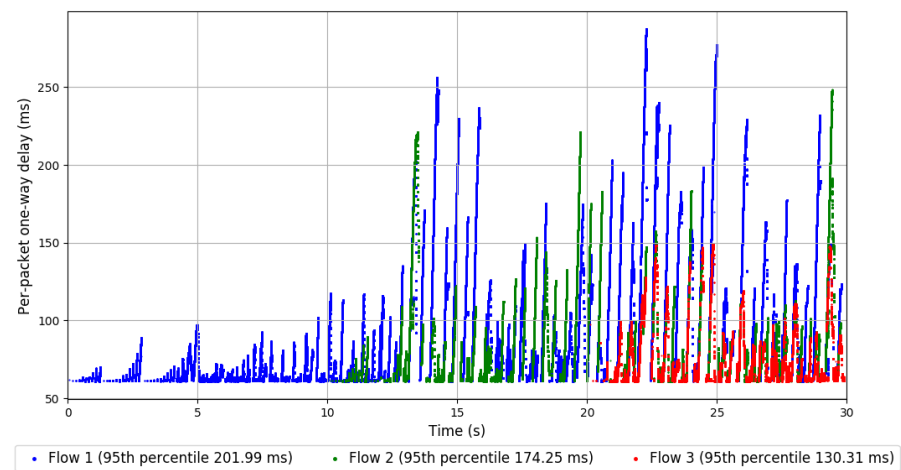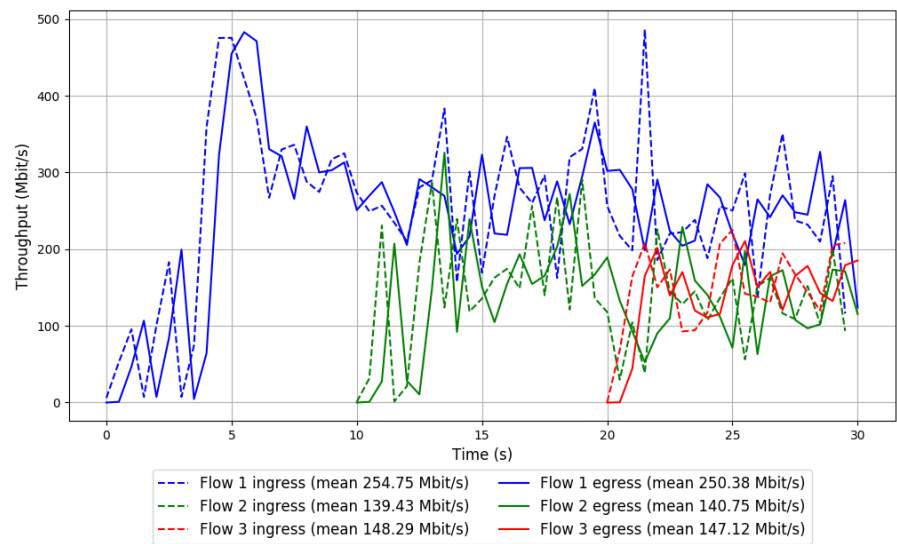
```
Run 4: Statistics of Verus

Start at: 2018-08-11 22:09:16
End at: 2018-08-11 22:09:46
Local clock offset: -0.05 ms
Remote clock offset: -0.232 ms


# Below is generated by plot.py at 2018-08-12 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.57 Mbit/s
95th percentile per-packet one-way delay: 189.805 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 250.38 Mbit/s
95th percentile per-packet one-way delay: 201.992 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 140.75 Mbit/s
95th percentile per-packet one-way delay: 174.252 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 147.12 Mbit/s
95th percentile per-packet one-way delay: 130.315 ms
Loss rate: 2.38%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-08-11 22:36:25
End at: 2018-08-11 22:36:55
Local clock offset: -0.022 ms
Remote clock offset: -0.093 ms


# Below is generated by plot.py at 2018-08-12 04:55:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.60 Mbit/s
95th percentile per-packet one-way delay: 133.344 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 114.850 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 181.33 Mbit/s
95th percentile per-packet one-way delay: 159.198 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 75.18 Mbit/s
95th percentile per-packet one-way delay: 95.609 ms
Loss rate: 1.42%
```

Run 5: Report of Verus — Data Link

293
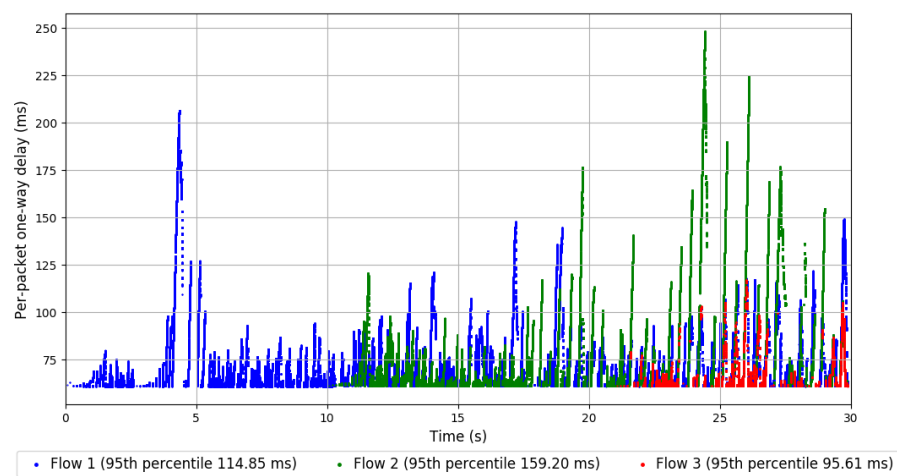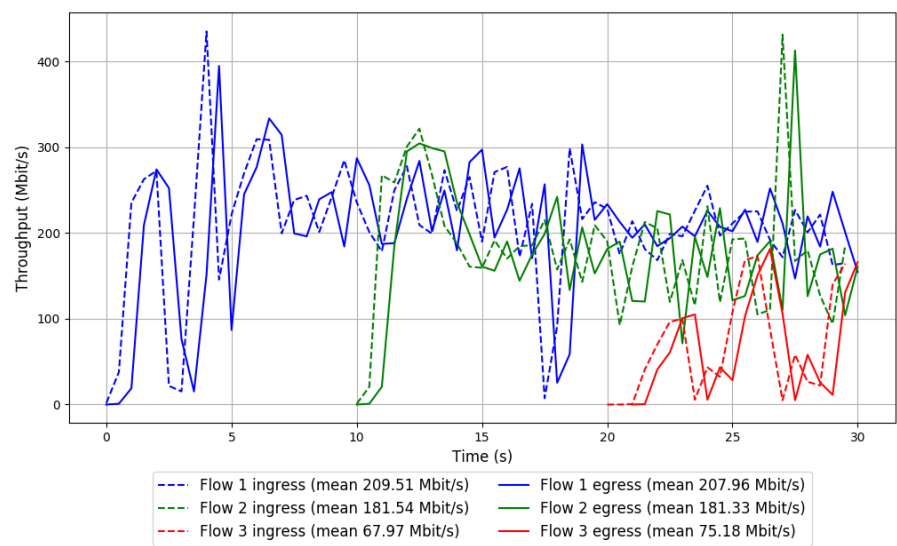
```
Run 6: Statistics of Verus

Start at: 2018-08-11 23:03:26
End at: 2018-08-11 23:03:56
Local clock offset: -0.07 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2018-08-12 04:56:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.86 Mbit/s
95th percentile per-packet one-way delay: 109.487 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 181.74 Mbit/s
95th percentile per-packet one-way delay: 100.563 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 233.71 Mbit/s
95th percentile per-packet one-way delay: 118.317 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 137.81 Mbit/s
95th percentile per-packet one-way delay: 89.594 ms
Loss rate: 1.74%
```

## Run 6: Report of Verus — Data Link

295
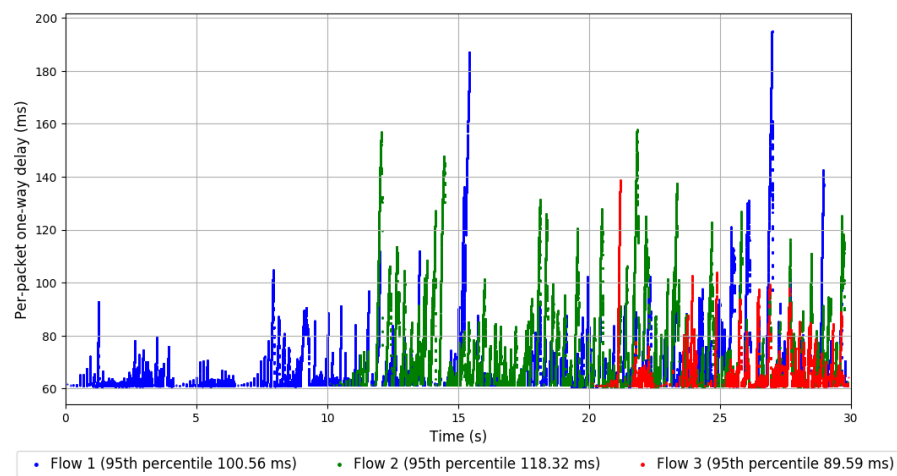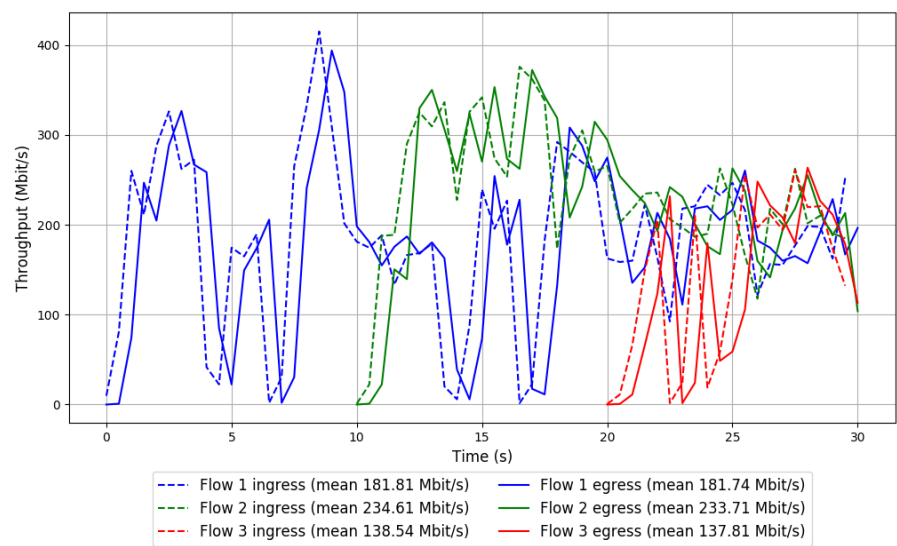
```
Run 7: Statistics of Verus

Start at: 2018-08-11 23:30:19
End at: 2018-08-11 23:30:49
Local clock offset: 0.052 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2018-08-12 04:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 362.97 Mbit/s
95th percentile per-packet one-way delay: 170.904 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 237.13 Mbit/s
95th percentile per-packet one-way delay: 190.422 ms
Loss rate: 3.49%
-- Flow 2:
Average throughput: 137.79 Mbit/s
95th percentile per-packet one-way delay: 106.634 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 104.77 Mbit/s
95th percentile per-packet one-way delay: 98.084 ms
Loss rate: 1.80%
```

Run 7: Report of Verus — Data Link
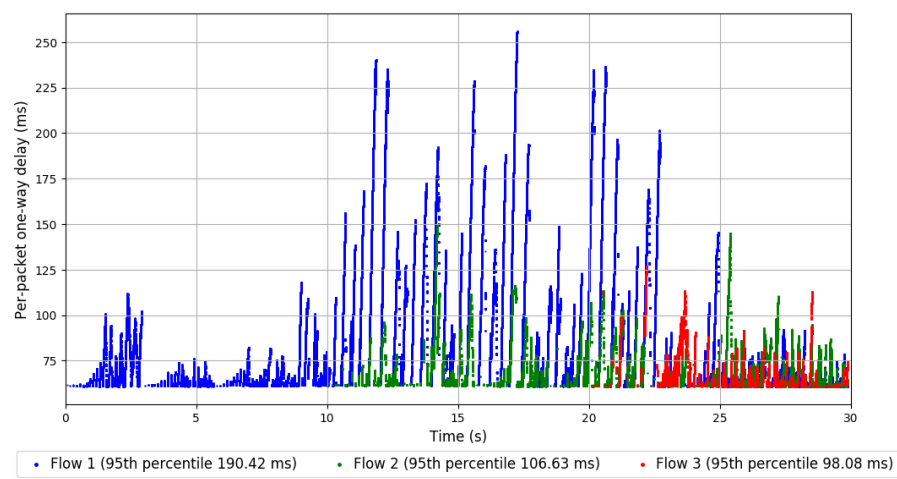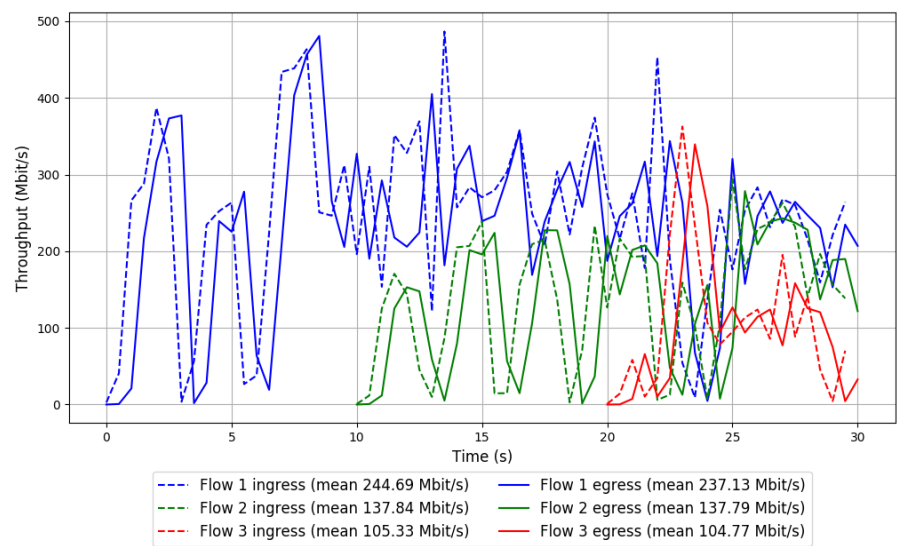
```
Run 8: Statistics of Verus

Start at: 2018-08-11 23:56:59
End at: 2018-08-11 23:57:29
Local clock offset: 0.038 ms
Remote clock offset: -1.224 ms


# Below is generated by plot.py at 2018-08-12 04:59:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 355.30 Mbit/s
95th percentile per-packet one-way delay: 100.443 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 147.12 Mbit/s
95th percentile per-packet one-way delay: 98.472 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 204.24 Mbit/s
95th percentile per-packet one-way delay: 97.574 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 220.73 Mbit/s
95th percentile per-packet one-way delay: 112.986 ms
Loss rate: 0.70%
```

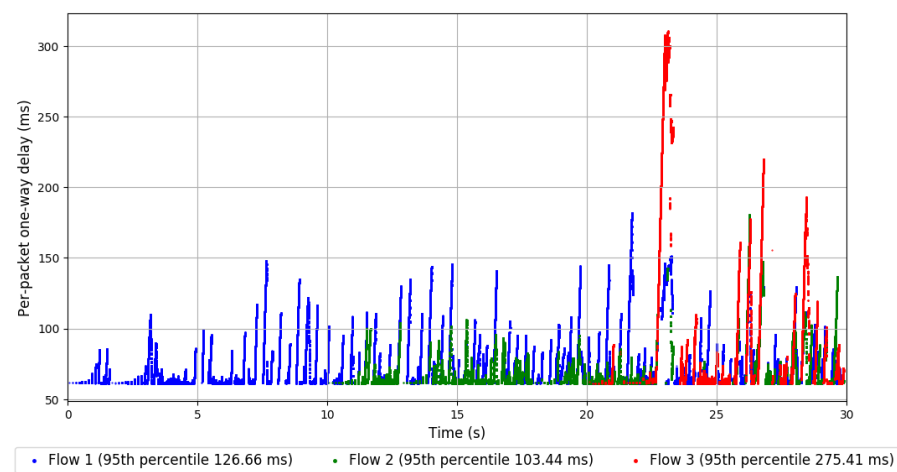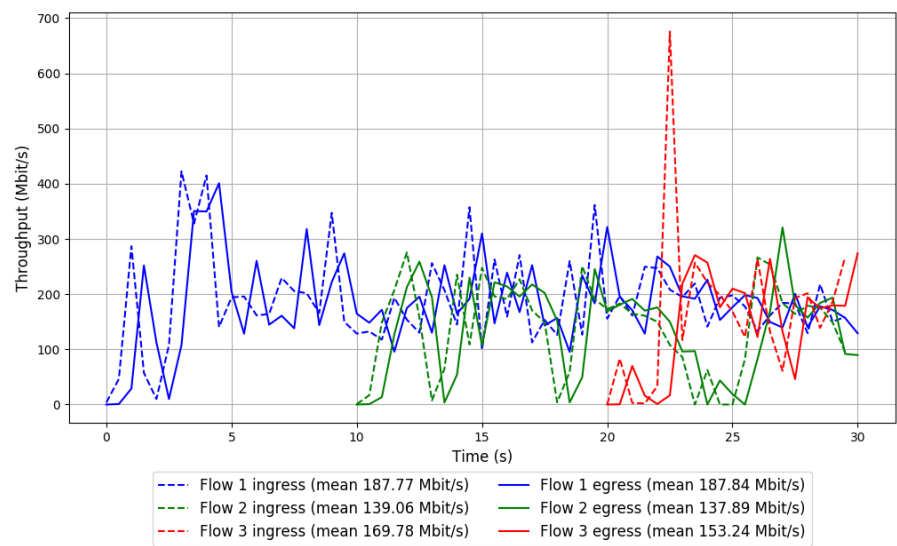Run 8: Report of Verus — Data Link

299
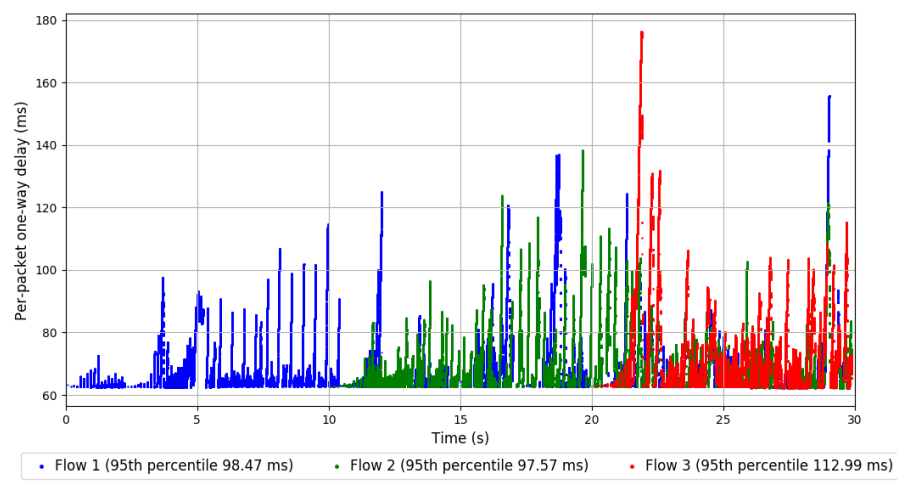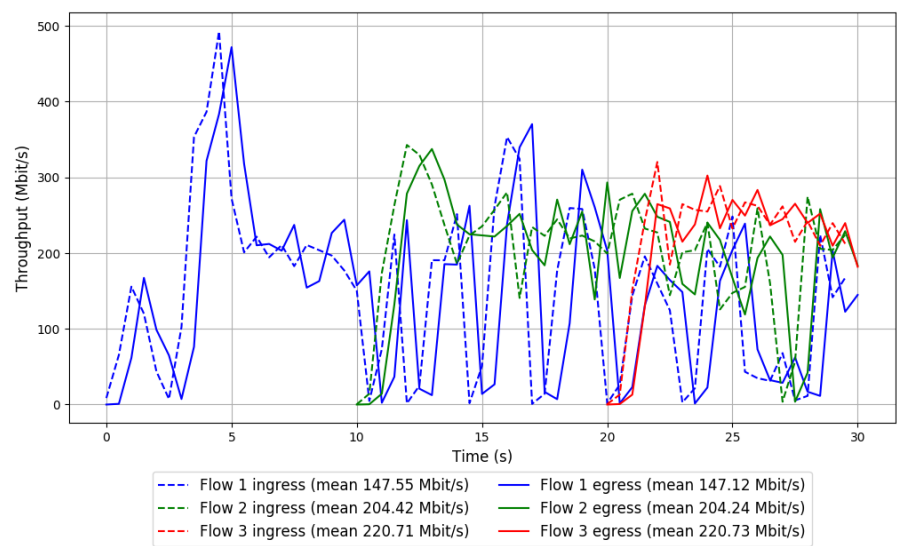
```
Run 9: Statistics of Verus

Start at: 2018-08-12 00:23:53
End at: 2018-08-12 00:24:23
Local clock offset: -0.038 ms
Remote clock offset: -0.285 ms


# Below is generated by plot.py at 2018-08-12 04:59:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 329.02 Mbit/s
95th percentile per-packet one-way delay: 138.869 ms
Loss rate: 2.44%
-- Flow 1:
Average throughput: 187.84 Mbit/s
95th percentile per-packet one-way delay: 126.657 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 137.89 Mbit/s
95th percentile per-packet one-way delay: 103.440 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 153.24 Mbit/s
95th percentile per-packet one-way delay: 275.413 ms
Loss rate: 9.67%
```

Run 9: Report of Verus — Data Link

Flow 1 ingress (mean 187.77 Mbit/s) ---- Flow 1 egress (mean 187.84 Mbit/s) ——
Flow 2 ingress (mean 139.06 Mbit/s) ---- Flow 2 egress (mean 137.89 Mbit/s) ——
Flow 3 ingress (mean 169.78 Mbit/s) ---- Flow 3 egress (mean 153.24 Mbit/s) ——

Flow 1 (95th percentile 126.66 ms) Flow 2 (95th percentile 103.44 ms) Flow 3 (95th percentile 275.41 ms)

```
Run 10: Statistics of Verus

Start at: 2018-08-12 00:50:31
End at: 2018-08-12 00:51:01
Local clock offset: -0.062 ms
Remote clock offset: 0.253 ms


# Below is generated by plot.py at 2018-08-12 04:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 350.31 Mbit/s
95th percentile per-packet one-way delay: 188.706 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 195.93 Mbit/s
95th percentile per-packet one-way delay: 143.966 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 202.90 Mbit/s
95th percentile per-packet one-way delay: 220.244 ms
Loss rate: 3.65%
-- Flow 3:
Average throughput: 59.68 Mbit/s
95th percentile per-packet one-way delay: 99.820 ms
Loss rate: 2.29%
```
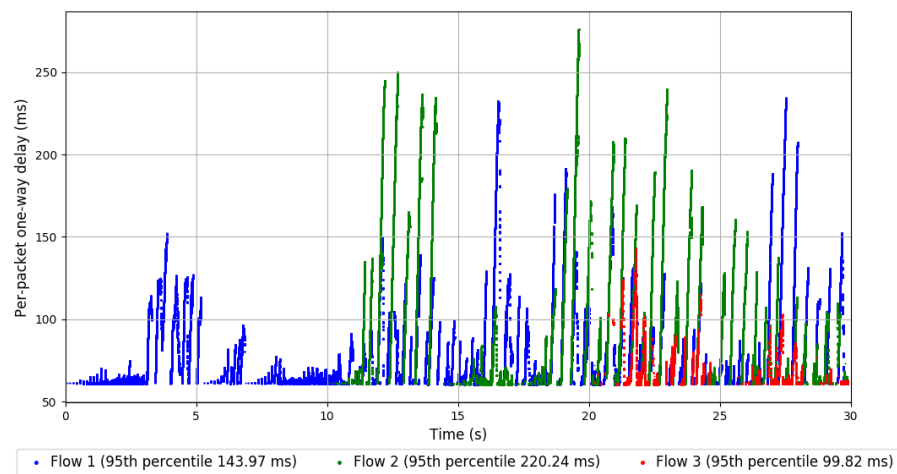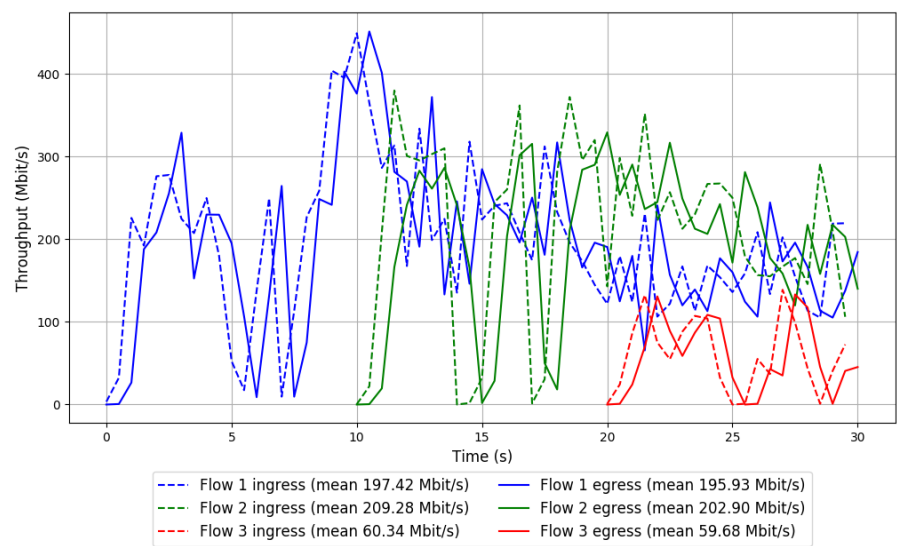
Run 10: Report of Verus — Data Link

303

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-08-11 20:44:35
End at: 2018-08-11 20:45:05
Local clock offset: 0.134 ms
Remote clock offset: -0.08 ms


# Below is generated by plot.py at 2018-08-12 05:06:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.46 Mbit/s
95th percentile per-packet one-way delay: 83.677 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 363.66 Mbit/s
95th percentile per-packet one-way delay: 77.767 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 251.76 Mbit/s
95th percentile per-packet one-way delay: 113.481 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 100.53 Mbit/s
95th percentile per-packet one-way delay: 61.766 ms
Loss rate: 1.90%
```
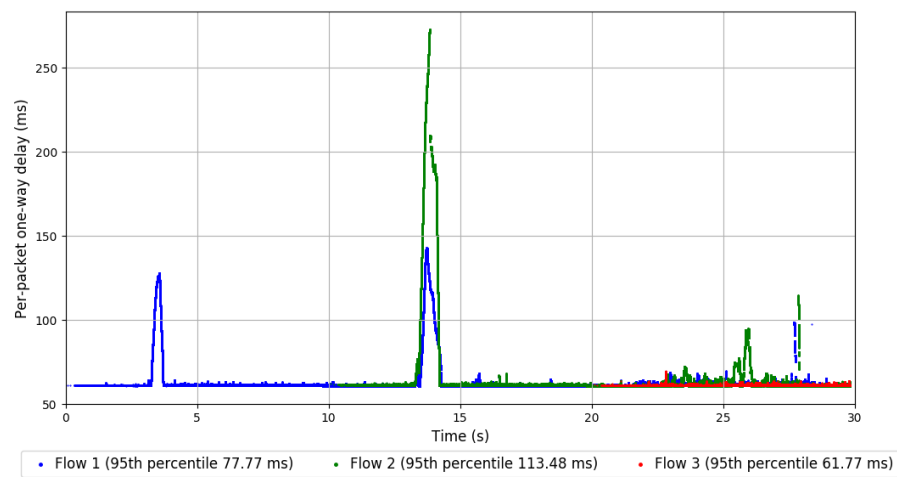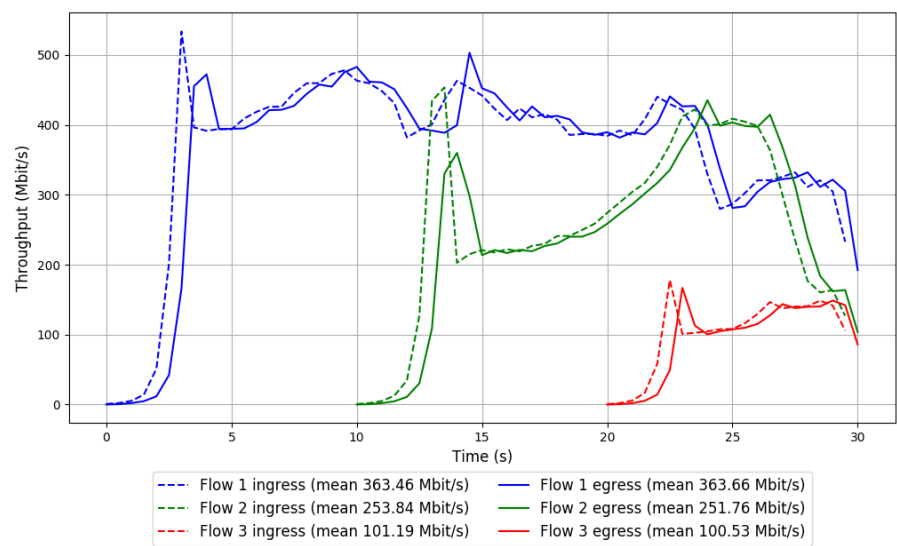
Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 363.46 Mbit/s) --- Flow 1 egress (mean 363.66 Mbit/s)
Flow 2 ingress (mean 253.84 Mbit/s) --- Flow 2 egress (mean 251.76 Mbit/s)
Flow 3 ingress (mean 101.19 Mbit/s) --- Flow 3 egress (mean 100.53 Mbit/s)

Flow 1 (95th percentile 77.77 ms) • Flow 2 (95th percentile 113.48 ms) • Flow 3 (95th percentile 61.77 ms)

305

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-08-11 21:11:15
End at: 2018-08-11 21:11:45
Local clock offset: 0.049 ms
Remote clock offset: 0.642 ms


# Below is generated by plot.py at 2018-08-12 05:06:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 590.62 Mbit/s
95th percentile per-packet one-way delay: 83.796 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 357.93 Mbit/s
95th percentile per-packet one-way delay: 70.451 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 338.27 Mbit/s
95th percentile per-packet one-way delay: 115.254 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 25.03 Mbit/s
95th percentile per-packet one-way delay: 60.448 ms
Loss rate: 1.53%
```
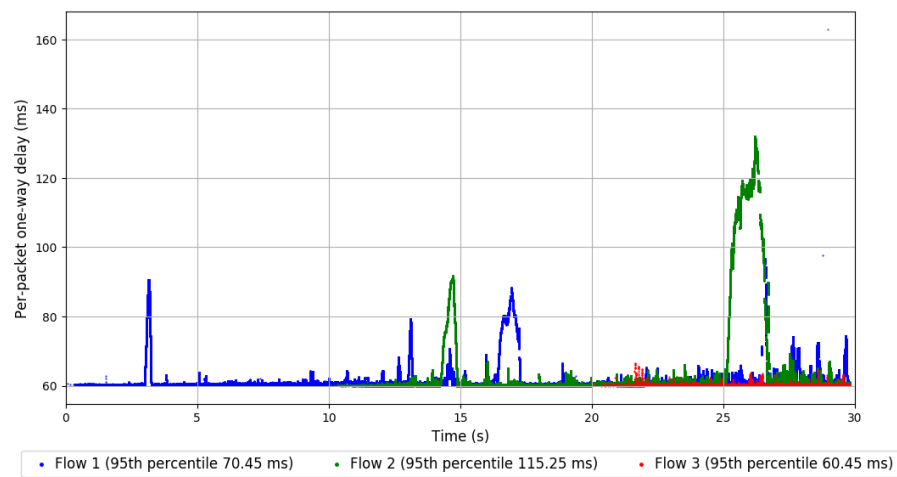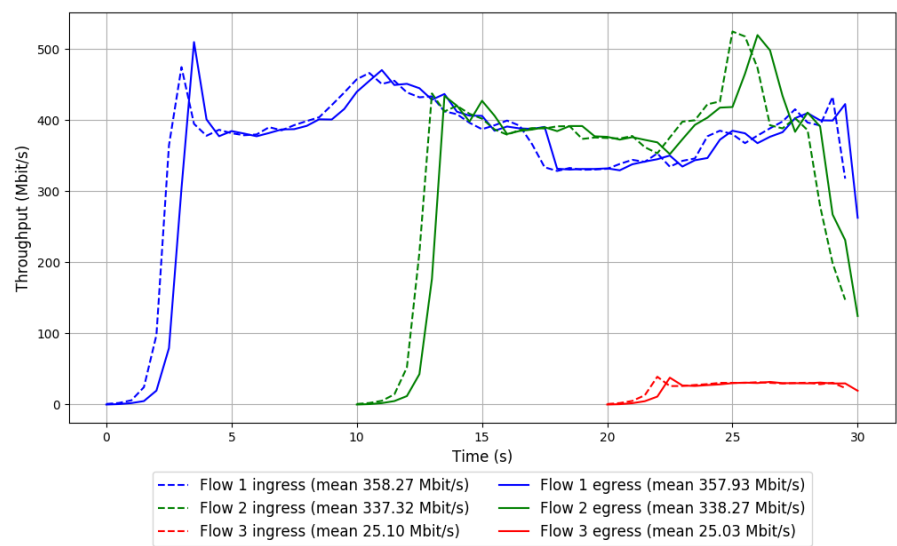
Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 358.27 Mbit/s) --- Flow 1 egress (mean 357.93 Mbit/s)
Flow 2 ingress (mean 337.32 Mbit/s) --- Flow 2 egress (mean 338.27 Mbit/s)
Flow 3 ingress (mean 25.10 Mbit/s) --- Flow 3 egress (mean 25.03 Mbit/s)

Flow 1 (95th percentile 70.45 ms)   Flow 2 (95th percentile 115.25 ms)   Flow 3 (95th percentile 60.45 ms)
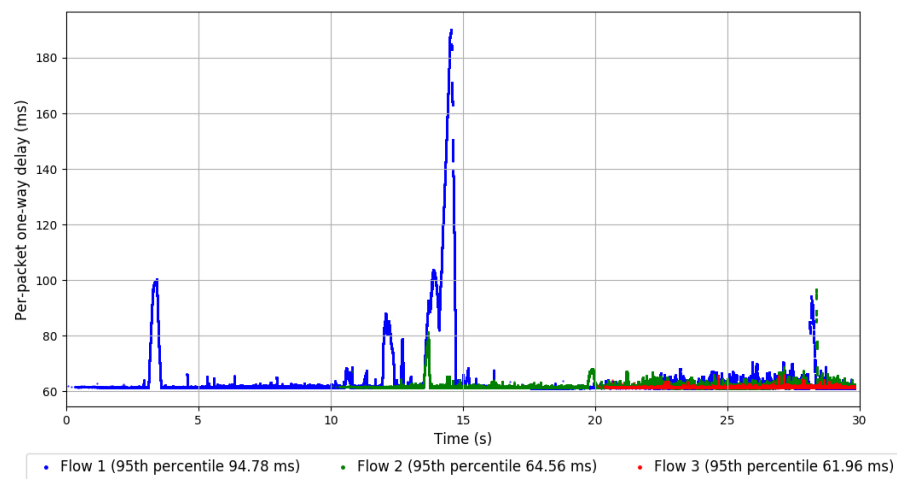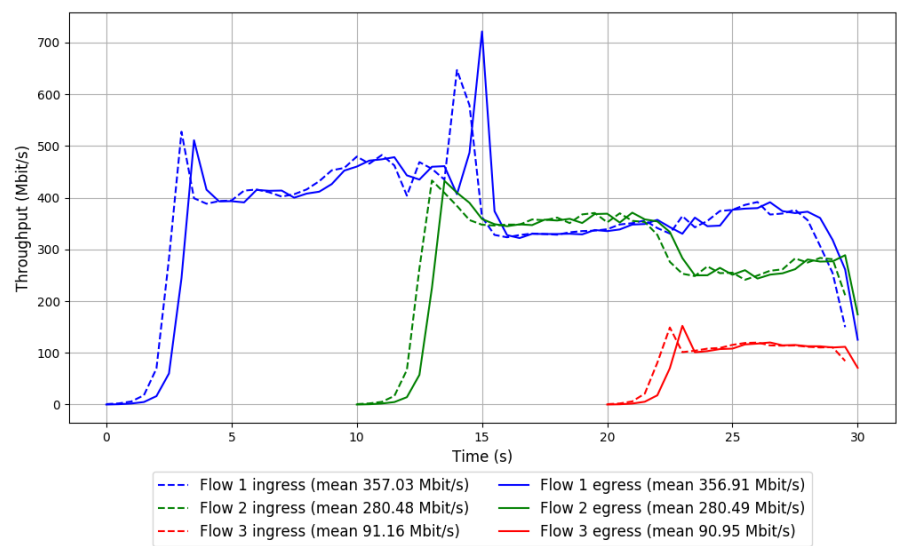
```
Run 3: Statistics of PCC-Vivace

Start at: 2018-08-11 21:37:57
End at: 2018-08-11 21:38:27
Local clock offset: -0.07 ms
Remote clock offset: -0.455 ms


# Below is generated by plot.py at 2018-08-12 05:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 572.79 Mbit/s
95th percentile per-packet one-way delay: 82.599 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 356.91 Mbit/s
95th percentile per-packet one-way delay: 94.779 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 280.49 Mbit/s
95th percentile per-packet one-way delay: 64.562 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 61.964 ms
Loss rate: 1.49%
```

Run 3: Report of PCC-Vivace — Data Link

- --- Flow 1 ingress (mean 357.03 Mbit/s)   —— Flow 1 egress (mean 356.91 Mbit/s)
- --- Flow 2 ingress (mean 280.48 Mbit/s)   —— Flow 2 egress (mean 280.49 Mbit/s)
- --- Flow 3 ingress (mean 91.16 Mbit/s)   —— Flow 3 egress (mean 90.95 Mbit/s)

- Flow 1 (95th percentile 94.78 ms)   • Flow 2 (95th percentile 64.56 ms)   • Flow 3 (95th percentile 61.96 ms)
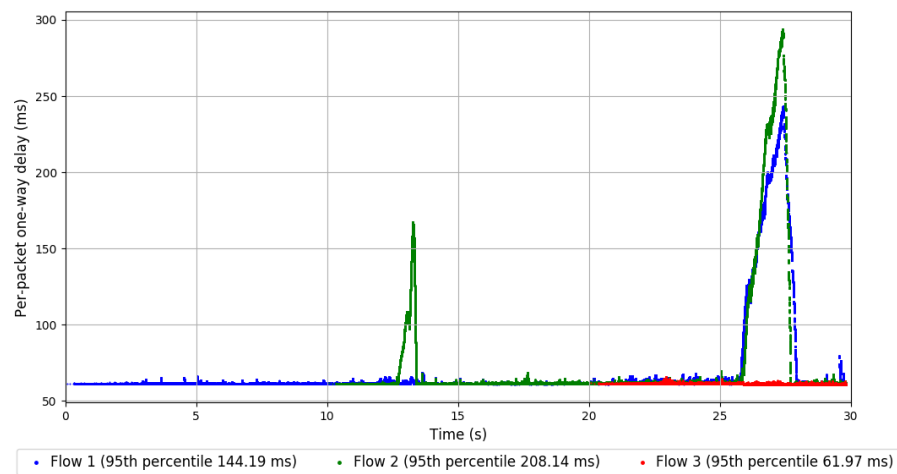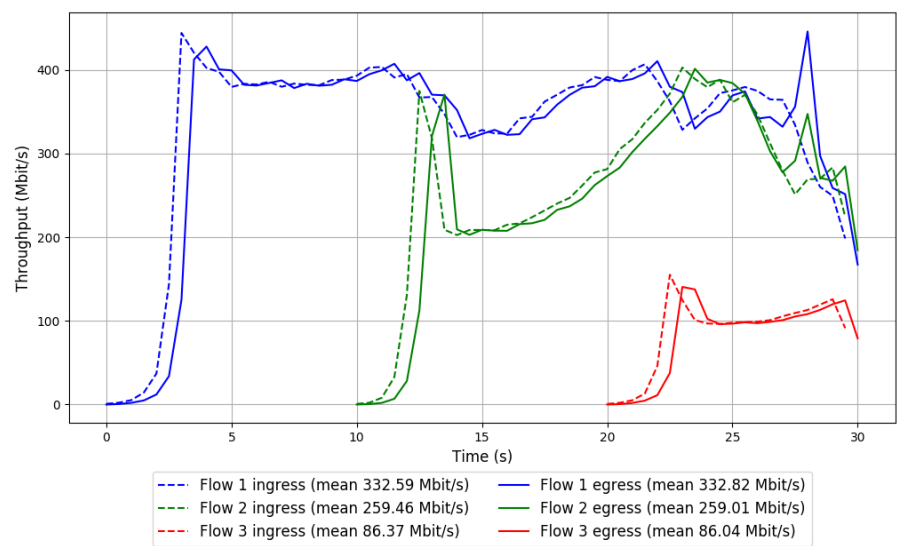
```
Run 4: Statistics of PCC-Vivace

Start at: 2018-08-11 22:04:39
End at: 2018-08-11 22:05:09
Local clock offset: -0.089 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2018-08-12 05:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.81 Mbit/s
95th percentile per-packet one-way delay: 160.858 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 332.82 Mbit/s
95th percentile per-packet one-way delay: 144.191 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 259.01 Mbit/s
95th percentile per-packet one-way delay: 208.143 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 86.04 Mbit/s
95th percentile per-packet one-way delay: 61.968 ms
Loss rate: 1.62%
```

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

Flow 1 ingress (mean 332.59 Mbit/s) --- Flow 1 egress (mean 332.82 Mbit/s)
Flow 2 ingress (mean 259.46 Mbit/s) --- Flow 2 egress (mean 259.01 Mbit/s)
Flow 3 ingress (mean 86.37 Mbit/s) --- Flow 3 egress (mean 86.04 Mbit/s)

Flow 1 (95th percentile 144.19 ms)   Flow 2 (95th percentile 208.14 ms)   Flow 3 (95th percentile 61.97 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-08-11 22:31:41
End at: 2018-08-11 22:32:11
Local clock offset: 0.055 ms
Remote clock offset: -0.619 ms


# Below is generated by plot.py at 2018-08-12 05:10:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 578.87 Mbit/s
95th percentile per-packet one-way delay: 66.197 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 349.52 Mbit/s
95th percentile per-packet one-way delay: 65.961 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 316.50 Mbit/s
95th percentile per-packet one-way delay: 67.141 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 59.10 Mbit/s
95th percentile per-packet one-way delay: 62.104 ms
Loss rate: 2.00%
```

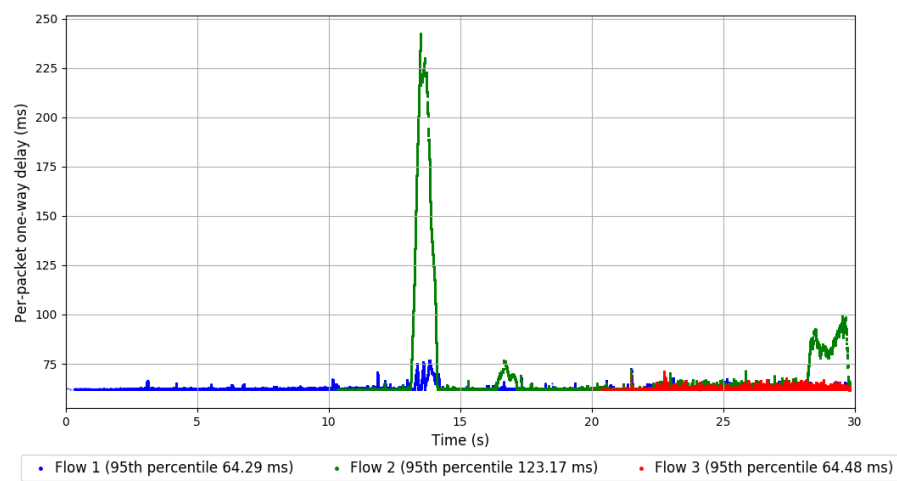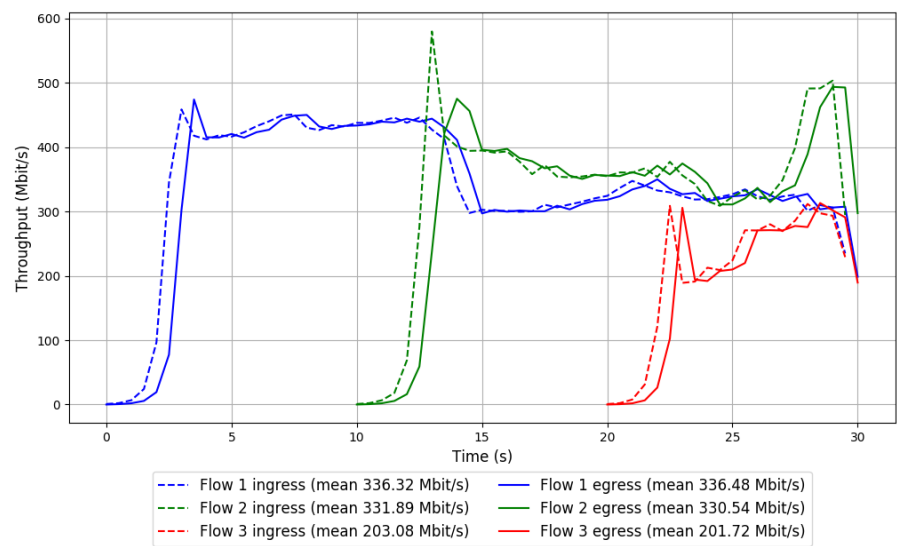# Run 5: Report of PCC-Vivace — Data Link
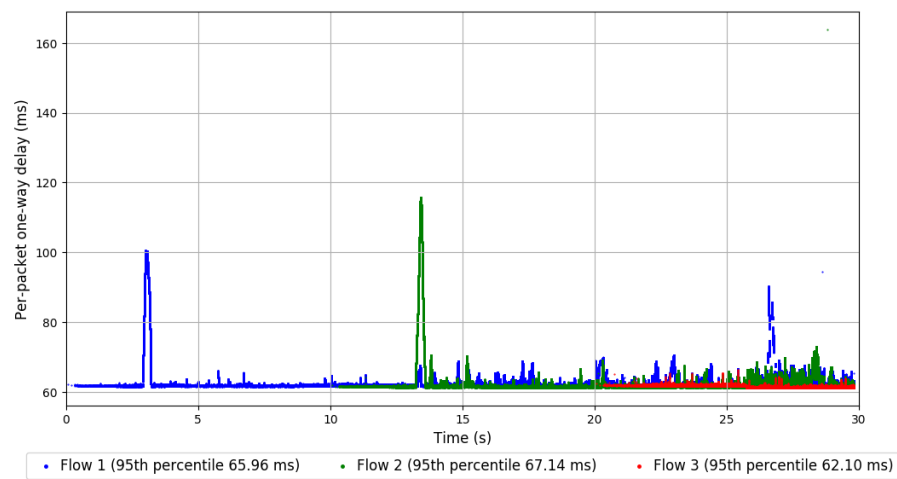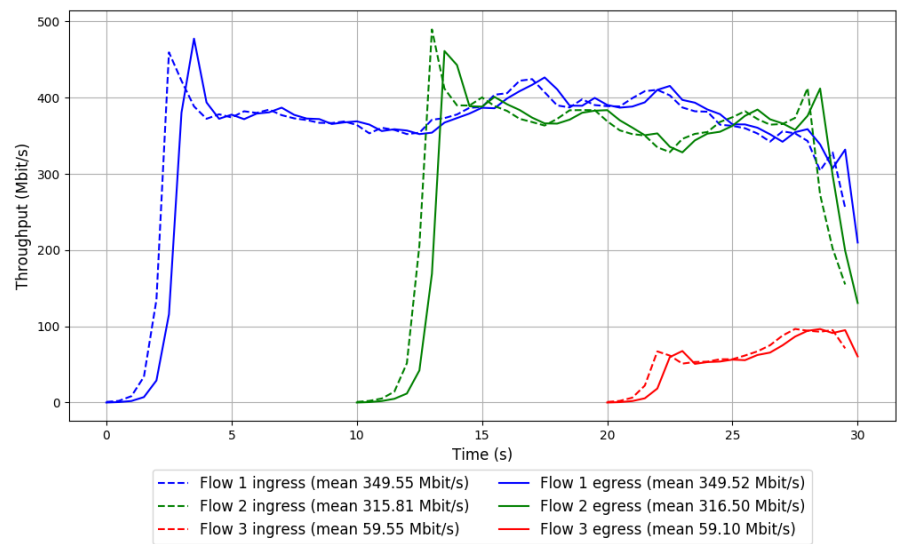
```
Run 6: Statistics of PCC-Vivace

Start at: 2018-08-11 22:58:38
End at: 2018-08-11 22:59:08
Local clock offset: -0.037 ms
Remote clock offset: -0.777 ms


# Below is generated by plot.py at 2018-08-12 05:10:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.81 Mbit/s
95th percentile per-packet one-way delay: 82.445 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 336.48 Mbit/s
95th percentile per-packet one-way delay: 64.288 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 330.54 Mbit/s
95th percentile per-packet one-way delay: 123.168 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 201.72 Mbit/s
95th percentile per-packet one-way delay: 64.479 ms
Loss rate: 1.94%
```

Run 6: Report of PCC-Vivace — Data Link

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-08-11 23:25:34
End at: 2018-08-11 23:26:04
Local clock offset: -0.057 ms
Remote clock offset: 0.729 ms


# Below is generated by plot.py at 2018-08-12 05:10:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 548.13 Mbit/s
95th percentile per-packet one-way delay: 121.184 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 314.10 Mbit/s
95th percentile per-packet one-way delay: 103.687 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 276.57 Mbit/s
95th percentile per-packet one-way delay: 226.511 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 154.32 Mbit/s
95th percentile per-packet one-way delay: 61.966 ms
Loss rate: 1.52%
```
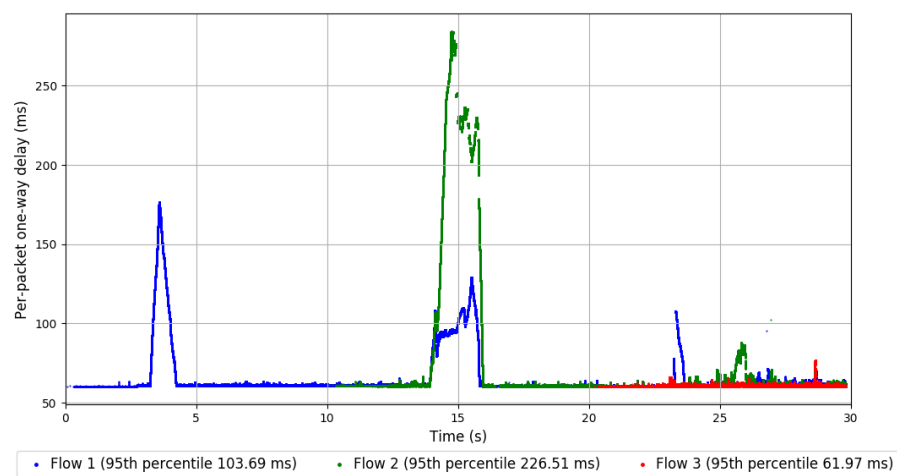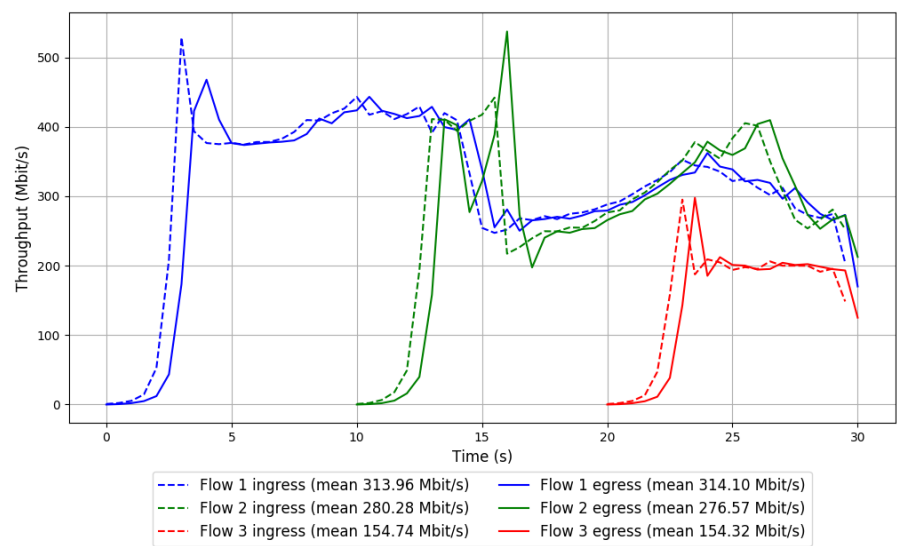
Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-08-11 23:52:21
End at: 2018-08-11 23:52:51
Local clock offset: -0.016 ms
Remote clock offset: 0.753 ms


# Below is generated by plot.py at 2018-08-12 05:10:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.07 Mbit/s
95th percentile per-packet one-way delay: 66.855 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 351.24 Mbit/s
95th percentile per-packet one-way delay: 74.036 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 262.61 Mbit/s
95th percentile per-packet one-way delay: 64.915 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 157.63 Mbit/s
95th percentile per-packet one-way delay: 62.155 ms
Loss rate: 1.76%
```
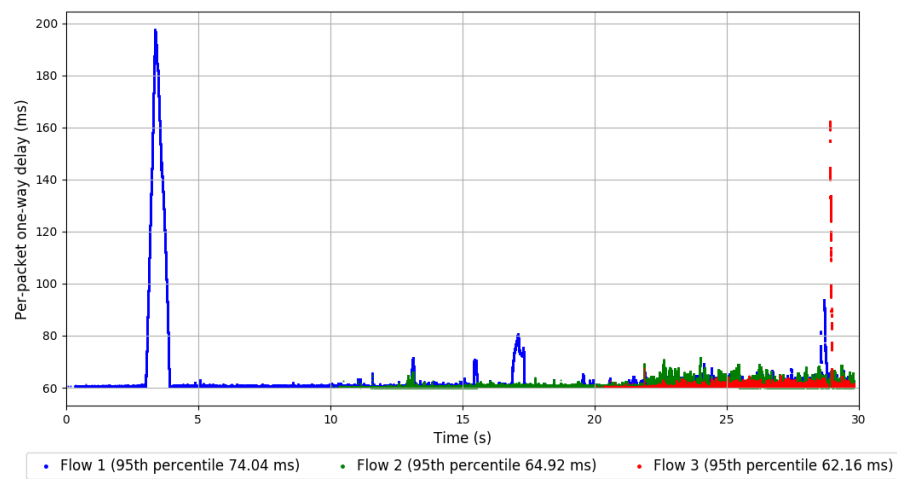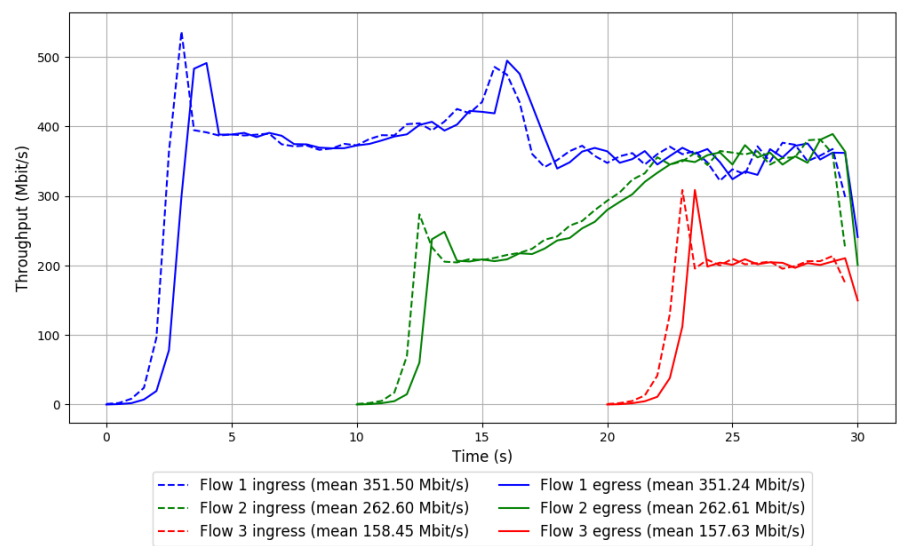
Run 8: Report of PCC-Vivace — Data Link

```
Run 9: Statistics of PCC-Vivace

Start at: 2018-08-12 00:19:13
End at: 2018-08-12 00:19:43
Local clock offset: -0.012 ms
Remote clock offset: 0.784 ms


# Below is generated by plot.py at 2018-08-12 05:11:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 561.04 Mbit/s
95th percentile per-packet one-way delay: 62.664 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 325.09 Mbit/s
95th percentile per-packet one-way delay: 62.622 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 271.62 Mbit/s
95th percentile per-packet one-way delay: 62.670 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 170.59 Mbit/s
95th percentile per-packet one-way delay: 62.766 ms
Loss rate: 1.61%
```
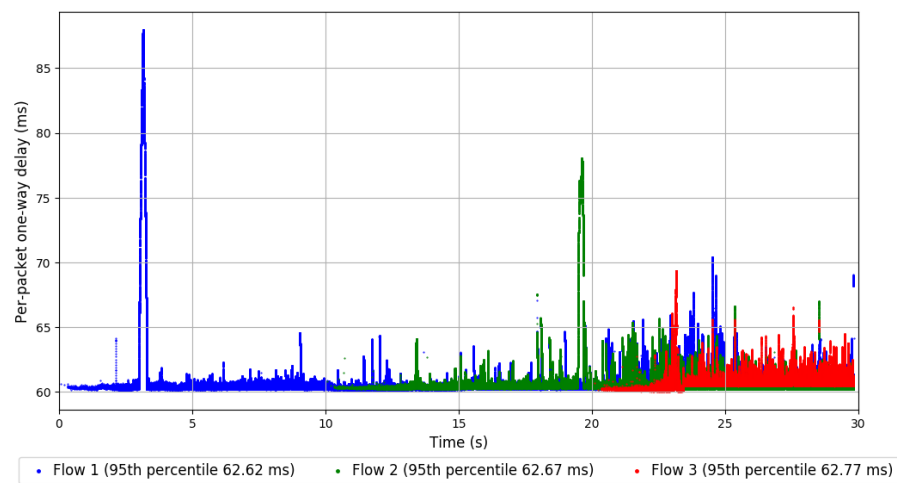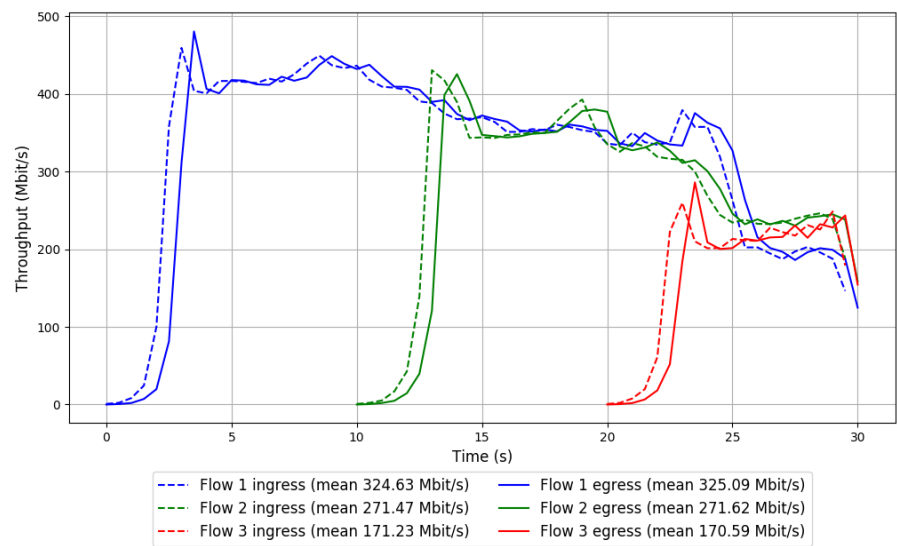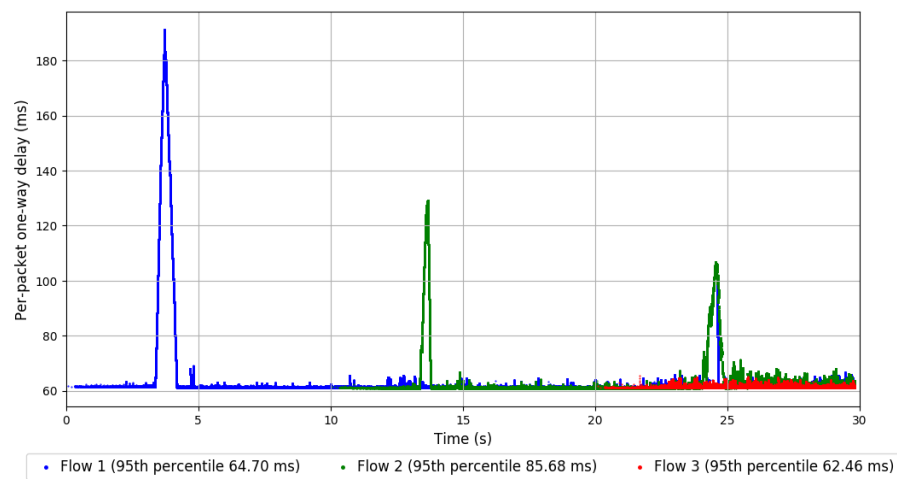
Run 9: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 324.63 Mbit/s)   Flow 1 egress (mean 325.09 Mbit/s)
Flow 2 ingress (mean 271.47 Mbit/s)   Flow 2 egress (mean 271.62 Mbit/s)
Flow 3 ingress (mean 171.23 Mbit/s)   Flow 3 egress (mean 170.59 Mbit/s)

Flow 1 (95th percentile 62.62 ms)   Flow 2 (95th percentile 62.67 ms)   Flow 3 (95th percentile 62.77 ms)
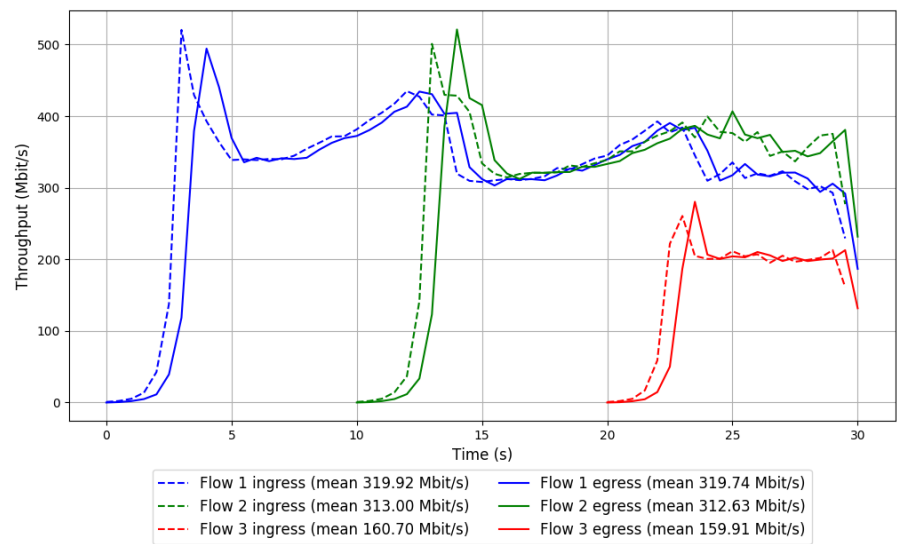
```
Run 10: Statistics of PCC-Vivace

Start at: 2018-08-12 00:45:51
End at: 2018-08-12 00:46:21
Local clock offset: -0.001 ms
Remote clock offset: -0.118 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 579.47 Mbit/s
95th percentile per-packet one-way delay: 70.529 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 319.74 Mbit/s
95th percentile per-packet one-way delay: 64.699 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 312.63 Mbit/s
95th percentile per-packet one-way delay: 85.682 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 159.91 Mbit/s
95th percentile per-packet one-way delay: 62.461 ms
Loss rate: 1.74%
```

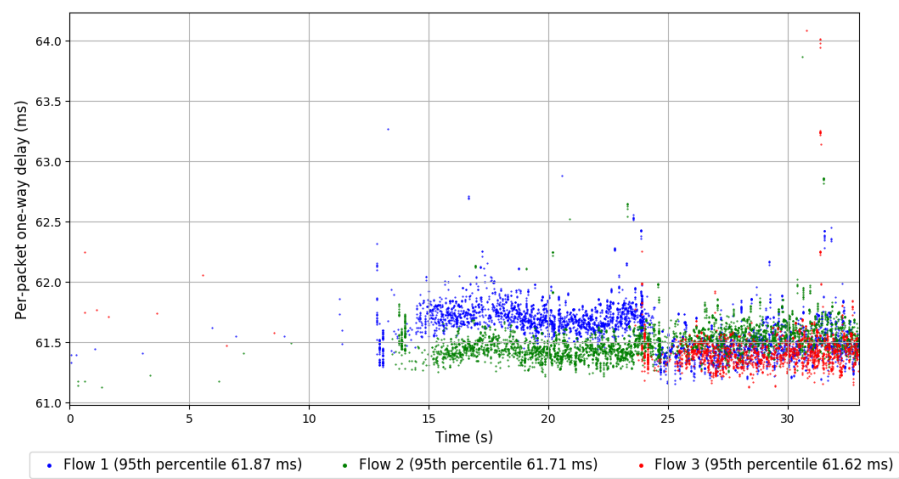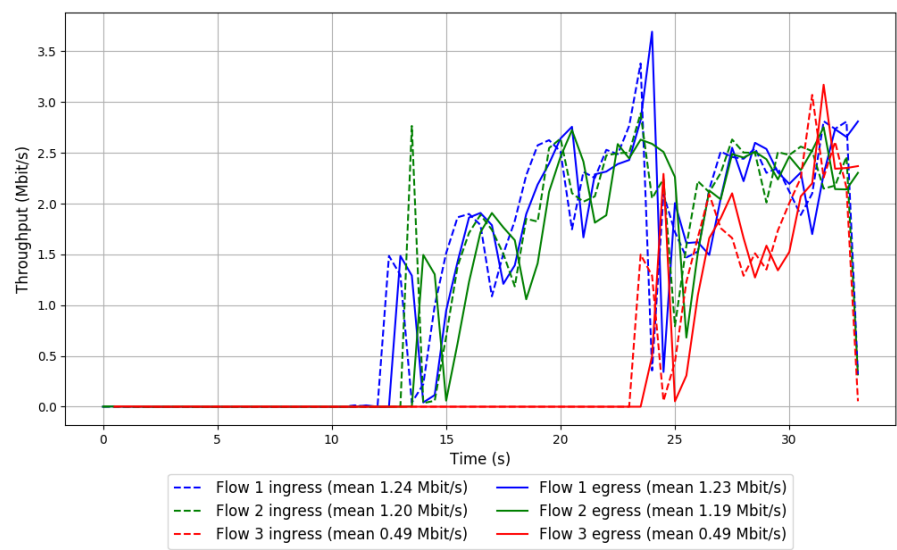# Run 10: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 319.92 Mbit/s) ----   Flow 1 egress (mean 319.74 Mbit/s) ——
Flow 2 ingress (mean 313.00 Mbit/s) ----   Flow 2 egress (mean 312.63 Mbit/s) ——
Flow 3 ingress (mean 160.70 Mbit/s) ----   Flow 3 egress (mean 159.91 Mbit/s) ——

Flow 1 (95th percentile 64.70 ms)   Flow 2 (95th percentile 85.68 ms)   Flow 3 (95th percentile 62.46 ms)

323

```
Run 1: Statistics of WebRTC media

Start at: 2018-08-11 20:46:23
End at: 2018-08-11 20:46:53
Local clock offset: 0.12 ms
Remote clock offset: -0.258 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 61.815 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 61.869 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 61.711 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 61.619 ms
Loss rate: 0.72%
```

Run 1: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.24 Mbit/s)   Flow 1 egress (mean 1.23 Mbit/s)
Flow 2 ingress (mean 1.20 Mbit/s)   Flow 2 egress (mean 1.19 Mbit/s)
Flow 3 ingress (mean 0.49 Mbit/s)   Flow 3 egress (mean 0.49 Mbit/s)

Flow 1 (95th percentile 61.87 ms)   Flow 2 (95th percentile 61.71 ms)   Flow 3 (95th percentile 61.62 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2018-08-11 21:13:05
End at: 2018-08-11 21:13:35
Local clock offset: 0.077 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 61.661 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 61.306 ms
Loss rate: 1.70%
```

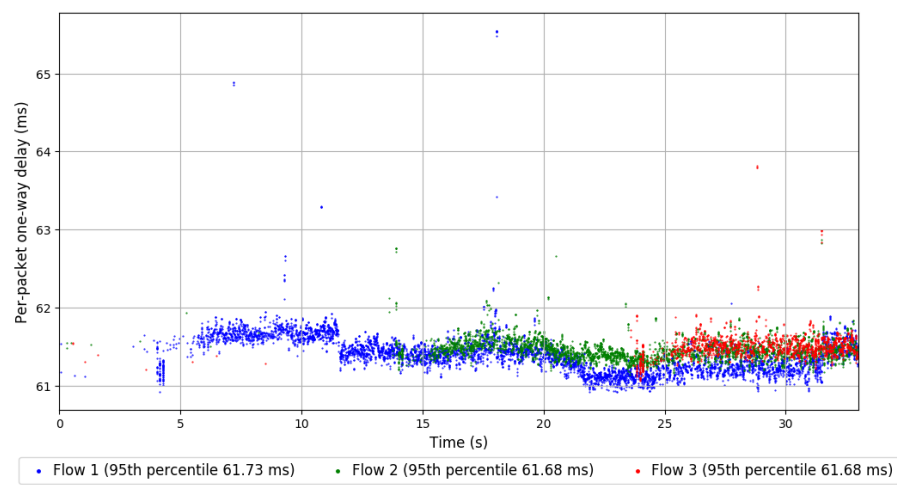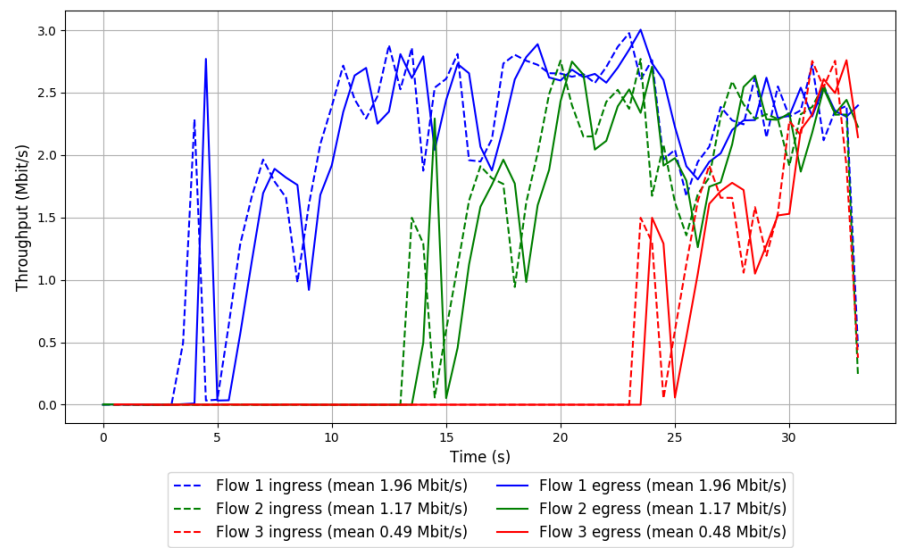Run 2: Report of WebRTC media — Data Link
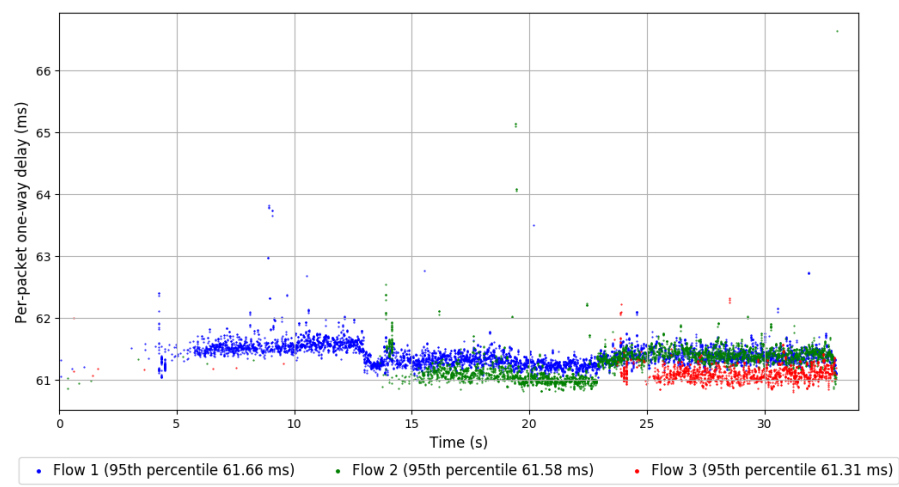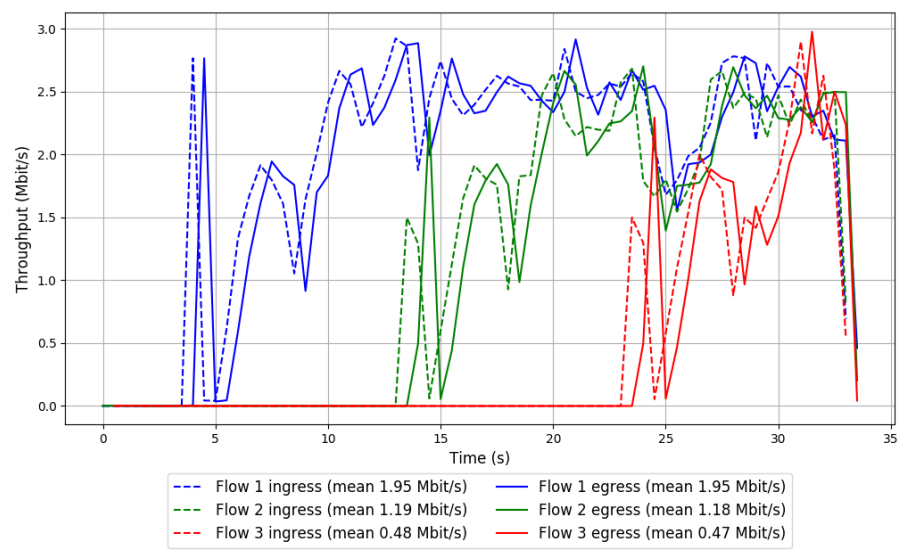
```
Run 3: Statistics of WebRTC media

Start at: 2018-08-11 21:39:46
End at: 2018-08-11 21:40:16
Local clock offset: -0.098 ms
Remote clock offset: -0.311 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 61.712 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 61.732 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.678 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 61.676 ms
Loss rate: 1.27%
```

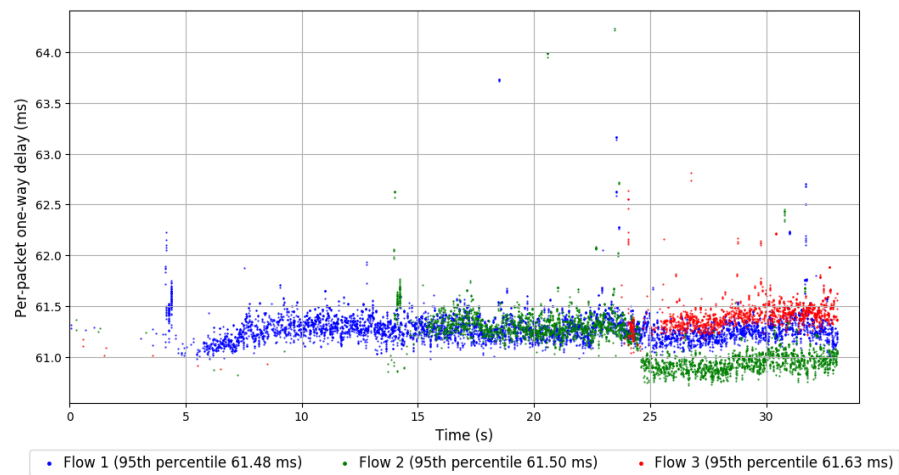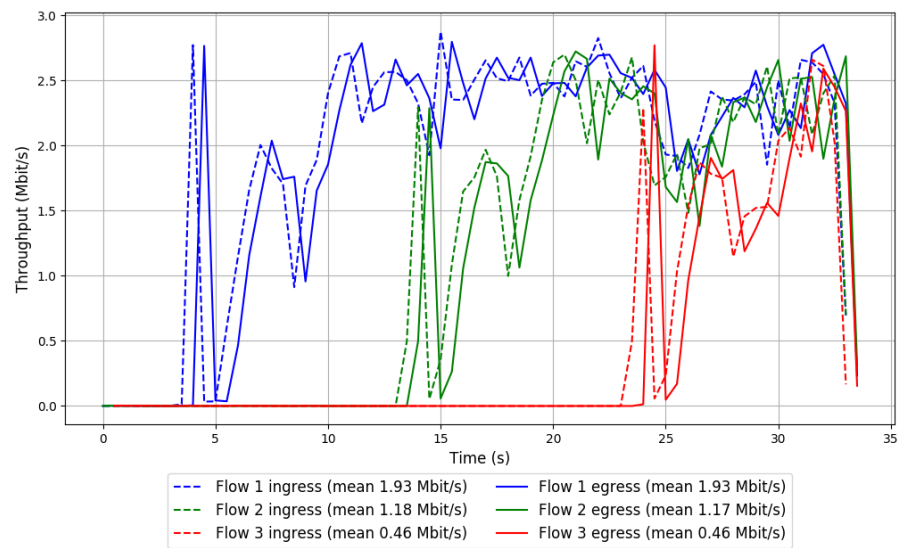Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-08-11 22:06:25
End at: 2018-08-11 22:06:55
Local clock offset: -0.056 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 61.514 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.475 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.497 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 61.627 ms
Loss rate: 0.55%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-08-11 22:33:32
End at: 2018-08-11 22:34:02
Local clock offset: 0.05 ms
Remote clock offset: 1.276 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 60.231 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 60.246 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 60.225 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 60.074 ms
Loss rate: 0.63%
```
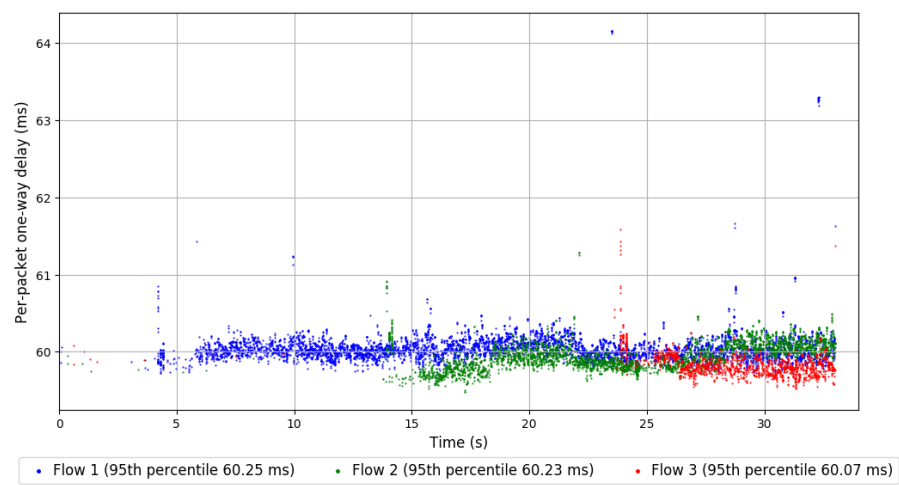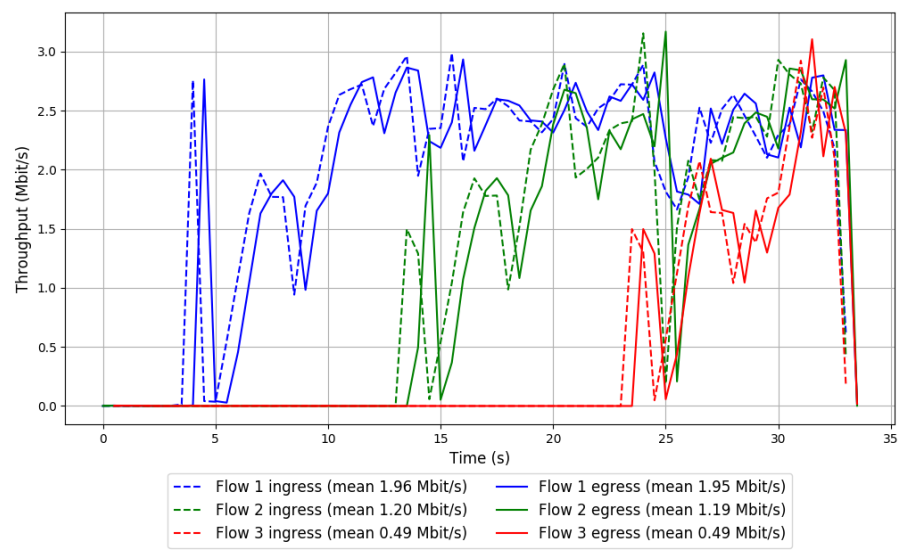
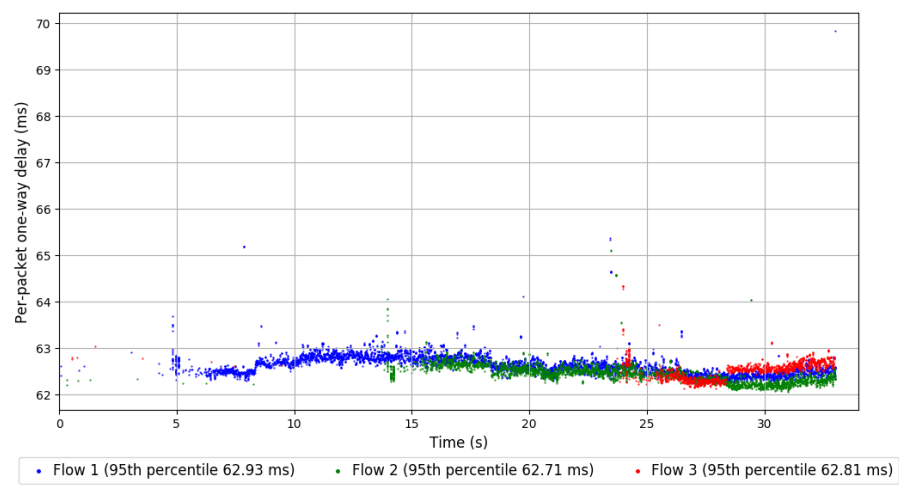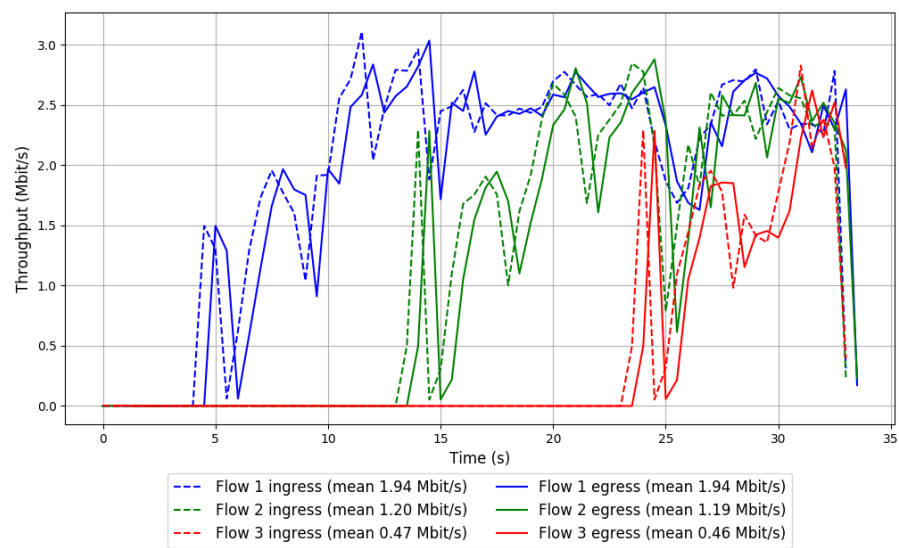Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-08-11 23:00:32
End at: 2018-08-11 23:01:02
Local clock offset: -0.042 ms
Remote clock offset: -1.292 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 62.891 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 62.933 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 62.714 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.810 ms
Loss rate: 2.17%
```

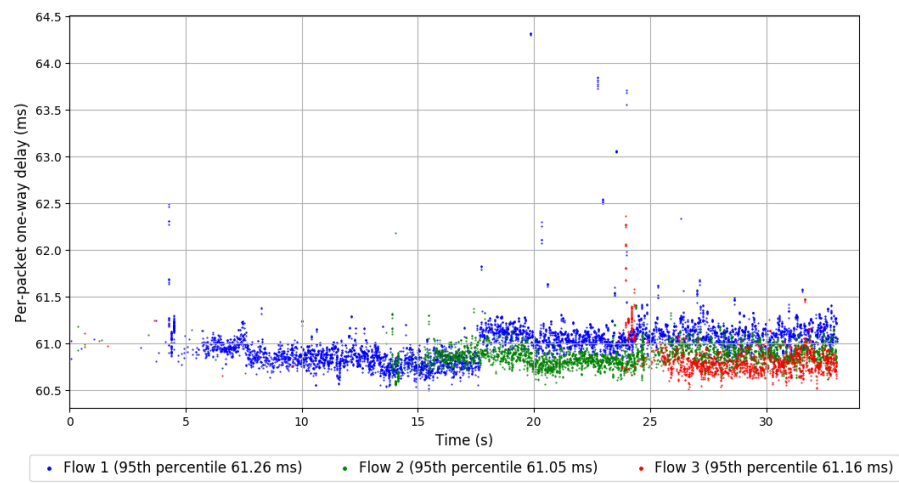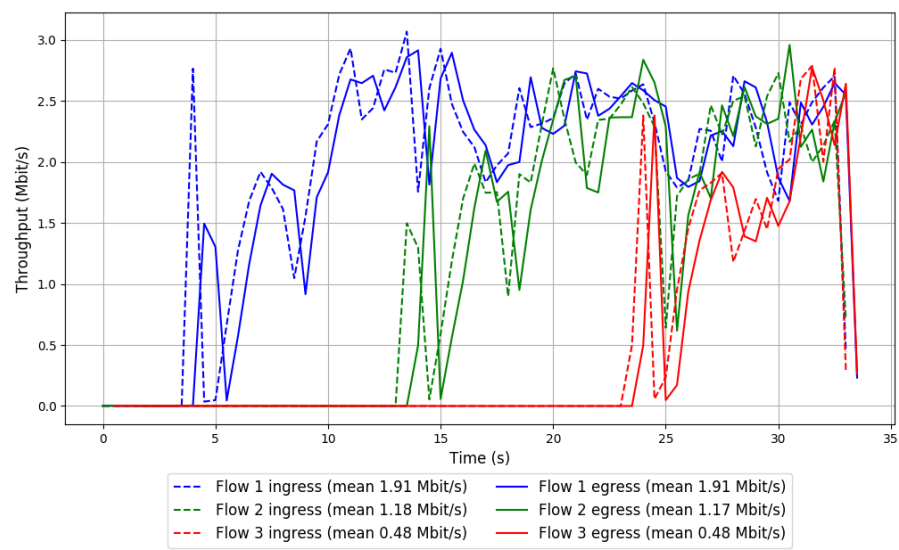Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-08-11 23:27:22
End at: 2018-08-11 23:27:52
Local clock offset: -0.024 ms
Remote clock offset: 0.311 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 61.218 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 61.257 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.053 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 61.165 ms
Loss rate: 1.35%
```

Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-08-11 23:54:11
End at: 2018-08-11 23:54:41
Local clock offset: -0.015 ms
Remote clock offset: -0.42 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 61.950 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 61.948 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 61.909 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 62.027 ms
Loss rate: 1.70%
```

Run 8: Report of WebRTC media — Data Link
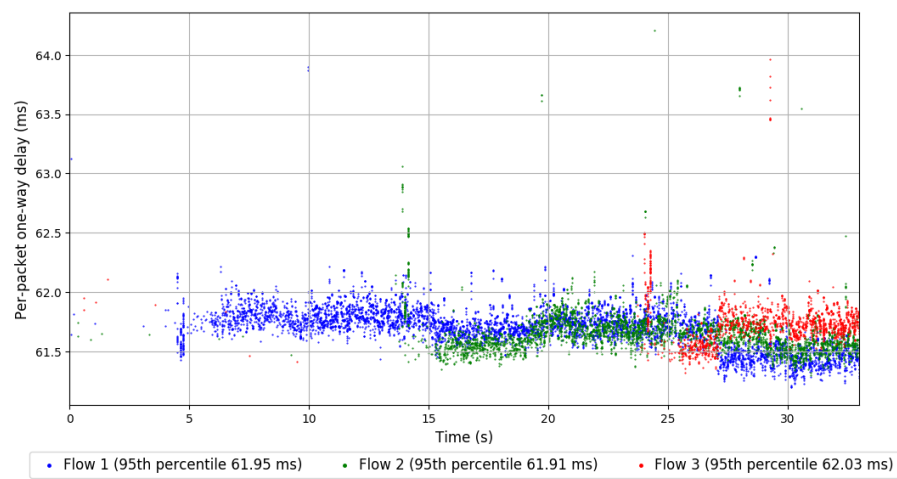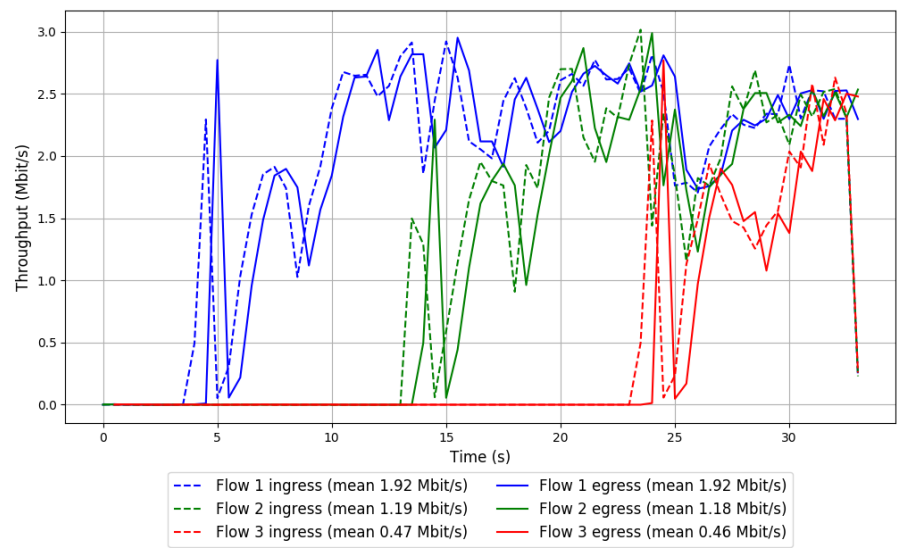
```
Run 9: Statistics of WebRTC media

Start at: 2018-08-12 00:21:02
End at: 2018-08-12 00:21:32
Local clock offset: -0.087 ms
Remote clock offset: 1.498 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 60.089 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 60.127 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 59.888 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 59.888 ms
Loss rate: 1.27%
```
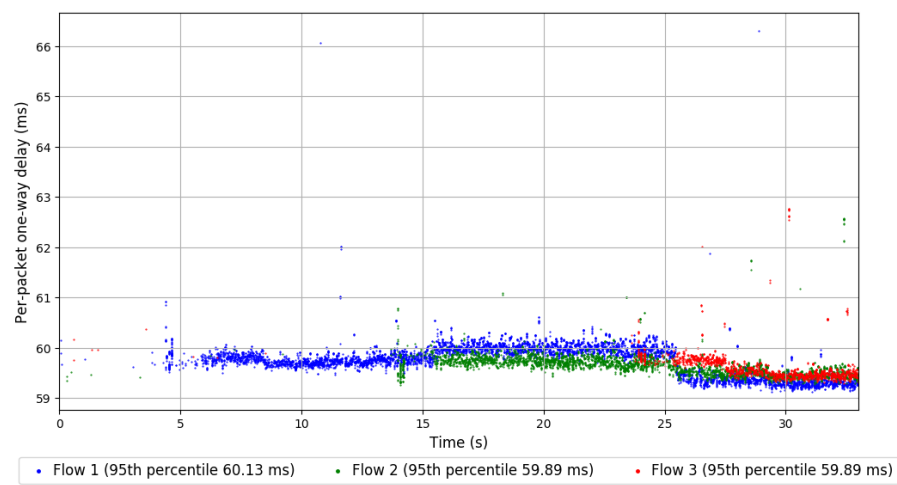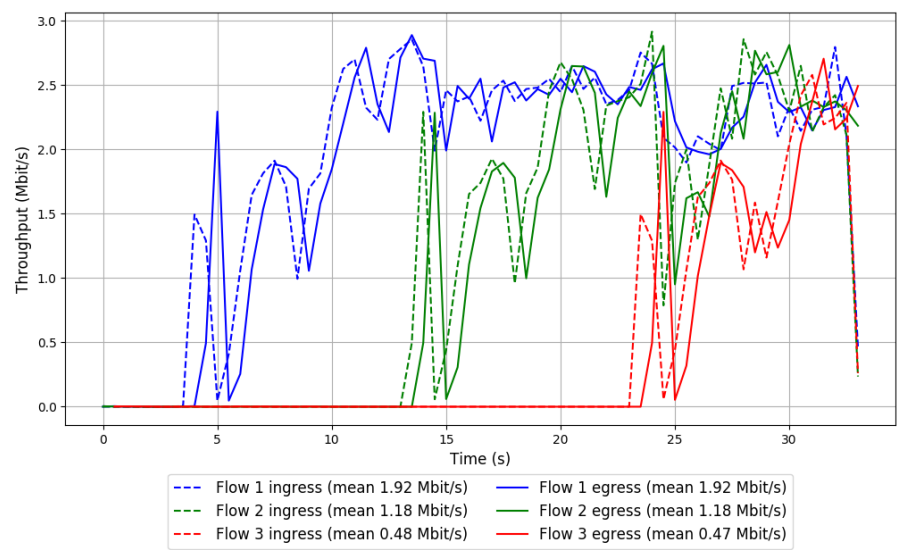
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-08-12 00:47:41
End at: 2018-08-12 00:48:11
Local clock offset: -0.043 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2018-08-12 05:11:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 61.555 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 61.576 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 61.337 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 61.583 ms
Loss rate: 1.80%
```

Run 10: Report of WebRTC media — Data Link