Pantheon Report

Generated at 2017-12-11 10:44:08 (UTC).

Data path: Stanford ppp0 (*remote*) →AWS California 1 Ethernet (*local*).

Repeated the test of 14 congestion control schemes 3 times.

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

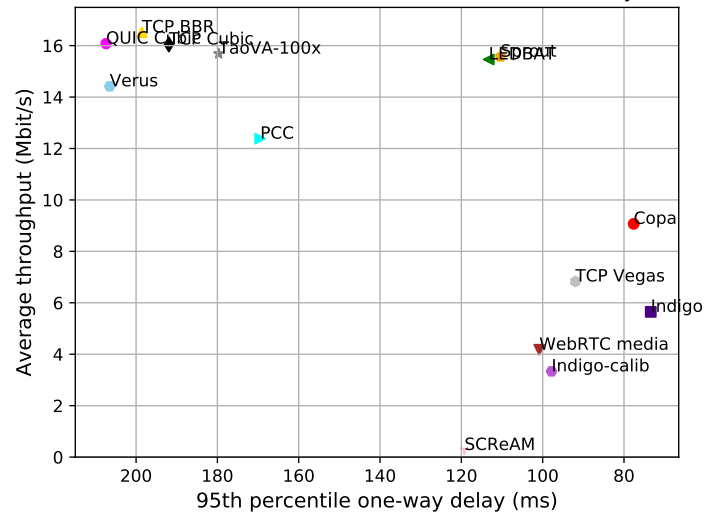Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

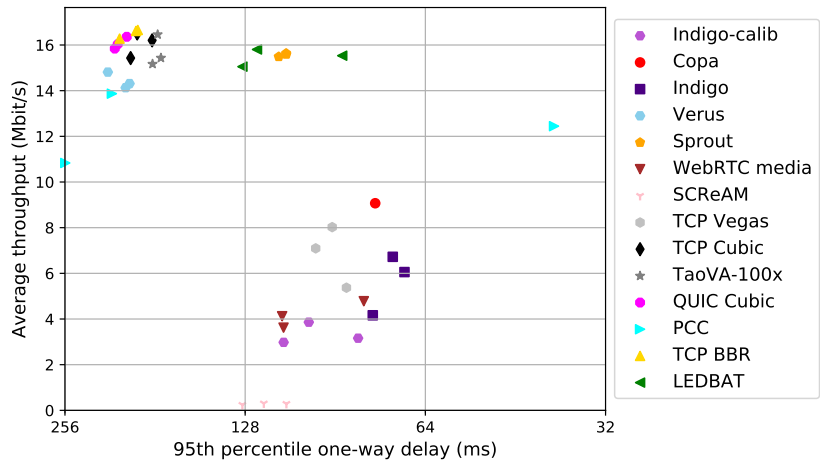NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from Stanford ppp0 to AWS California 1 Ethernet, 3 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from Stanford ppp0 to AWS California 1 Ethernet, 3 runs of 30s each per scheme
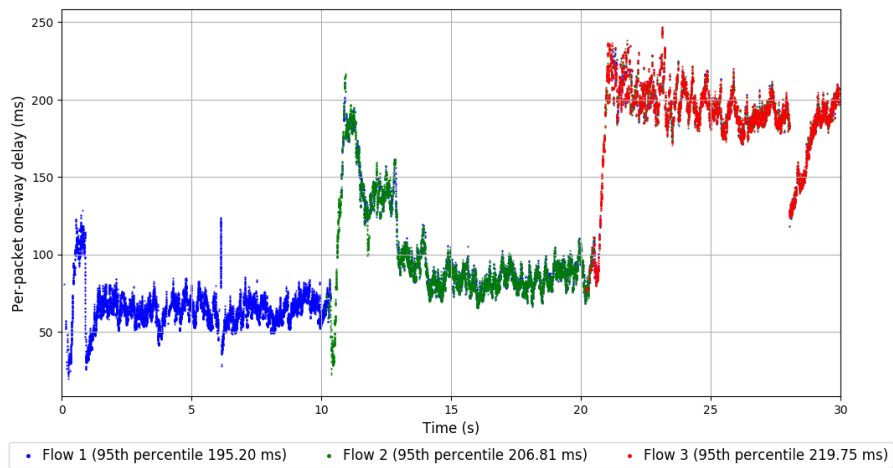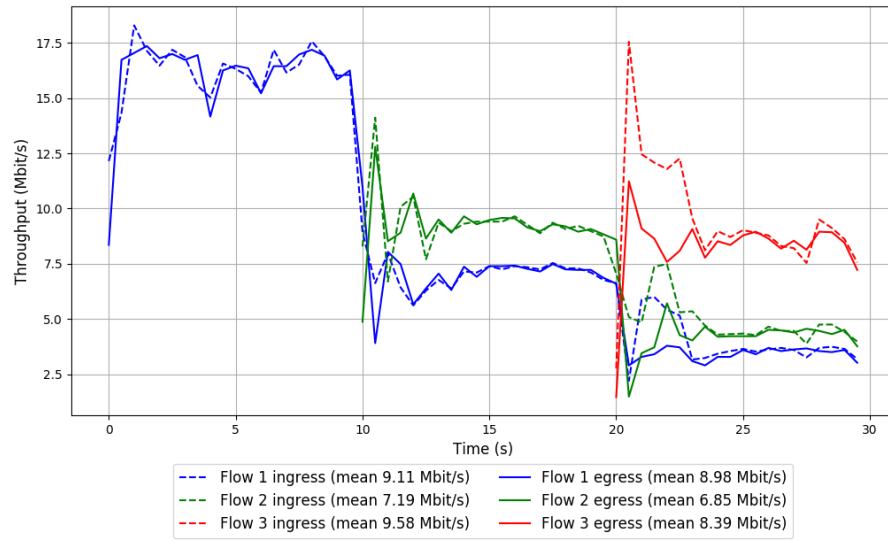3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	3	9.72	5.50	9.57	188.52	198.77	206.37	1.11	3.35	8.00
TCP Cubic	3	10.00	6.94	4.46	190.43	193.81	165.03	0.34	0.67	1.26
LEDBAT	3	9.99	5.64	5.31	114.46	111.14	82.95	0.25	0.80	1.25
PCC	3	6.46	6.66	3.40	157.69	168.86	182.79	2.97	4.15	9.04
QUIC Cubic	3	12.53	3.71	3.28	206.93	208.30	210.10	1.55	2.17	3.50
SCReAM	3	0.13	0.15	0.14	124.84	112.85	121.60	0.37	0.56	2.27
WebRTC media	3	2.64	1.11	0.44	102.14	99.89	80.58	1.16	1.05	1.11
Sprout	3	9.28	6.92	5.20	106.10	111.67	117.71	1.87	1.46	2.05
TaoVA-100x	3	9.76	6.63	6.05	181.97	94.30	72.75	0.79	1.68	3.28
TCP Vegas	3	11.83	4.82	7.62	2401.19	80.65	91.54	0.03	0.08	0.35
Verus	3	8.35	6.75	3.72	201.79	208.00	215.76	16.66	14.05	23.67
Copa	1	0.76	10.81	7.54	62.92	76.32	80.42	0.00	0.14	0.86
Indigo	3	3.04	1.85	4.22	74.35	74.52	68.46	0.20	0.44	0.39
Indigo-calib	3	1.45	1.42	2.83	98.32	88.24	87.56	0.17	0.23	0.32

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-11 09:06:05
End at: 2017-12-11 09:06:35
Local clock offset: -4.99 ms
Remote clock offset: -2.323 ms


# Below is generated by plot.py at 2017-12-11 10:43:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.28 Mbit/s
95th percentile per-packet one-way delay: 207.475 ms
Loss rate: 4.87%
-- Flow 1:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 195.204 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 206.810 ms
Loss rate: 5.11%
-- Flow 3:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 219.747 ms
Loss rate: 13.27%
```
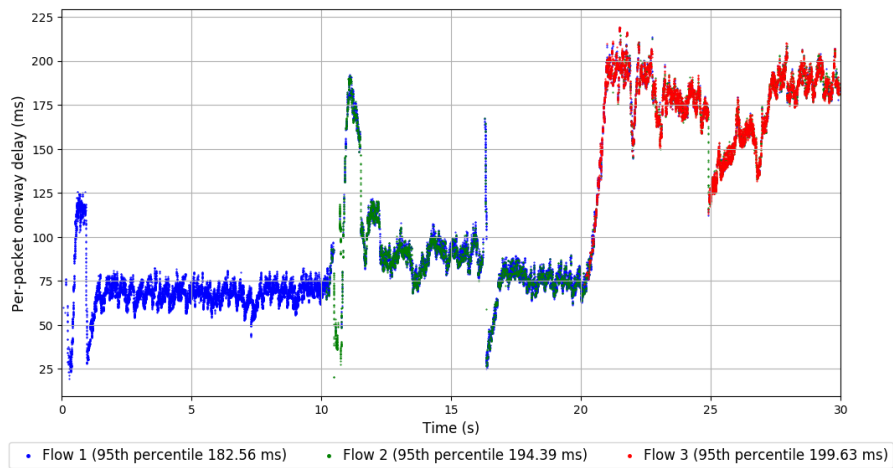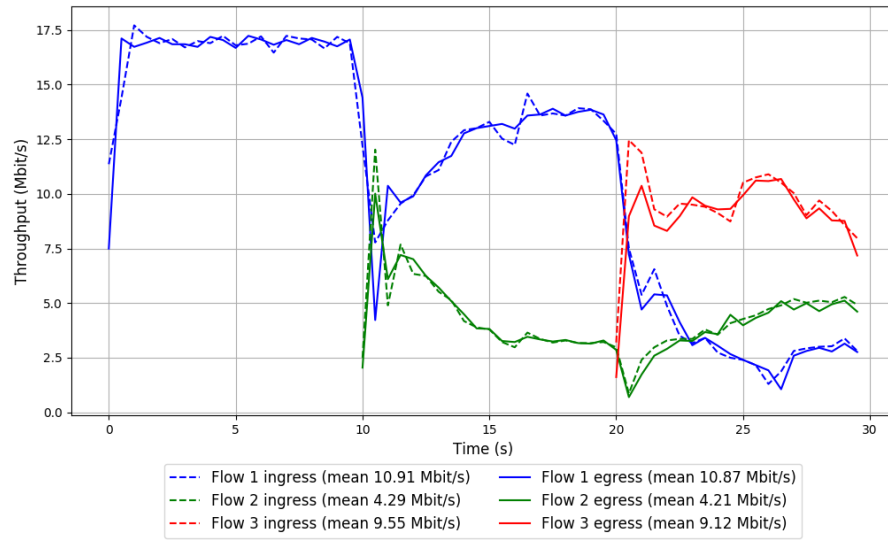
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 9.11 Mbit/s)   Flow 1 egress (mean 8.98 Mbit/s)
Flow 2 ingress (mean 7.19 Mbit/s)   Flow 2 egress (mean 6.85 Mbit/s)
Flow 3 ingress (mean 9.58 Mbit/s)   Flow 3 egress (mean 8.39 Mbit/s)

• Flow 1 (95th percentile 195.20 ms)   • Flow 2 (95th percentile 206.81 ms)   • Flow 3 (95th percentile 219.75 ms)
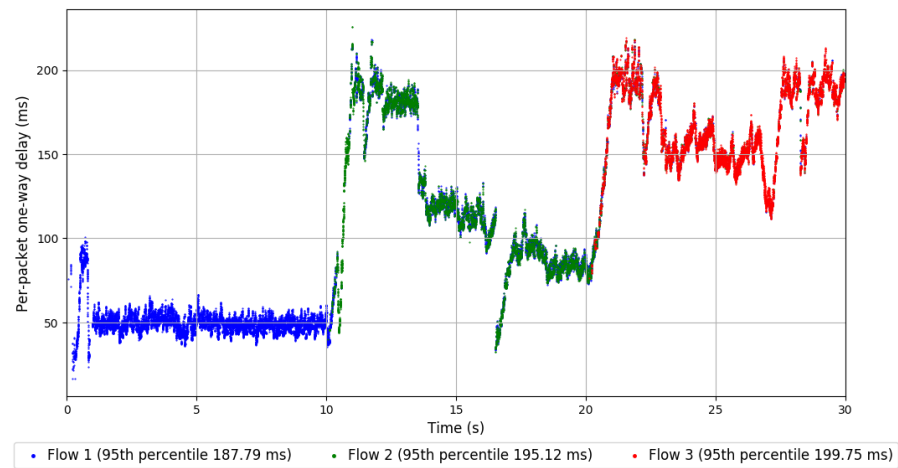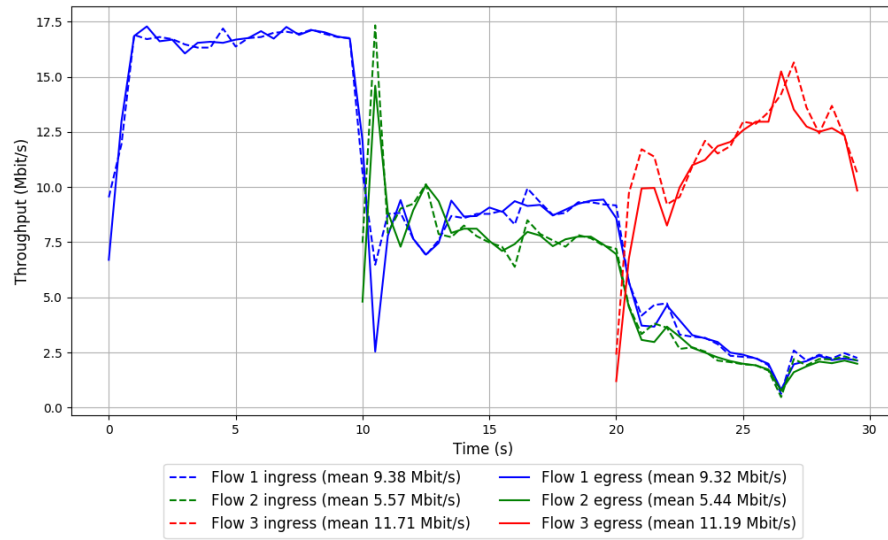
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```
Run 2: Statistics of TCP BBR

Start at: 2017-12-11 09:22:44
End at: 2017-12-11 09:23:14
Local clock offset: -5.838 ms
Remote clock offset: -2.141 ms


# Below is generated by plot.py at 2017-12-11 10:43:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 193.469 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 10.87 Mbit/s
95th percentile per-packet one-way delay: 182.559 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 194.389 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 9.12 Mbit/s
95th percentile per-packet one-way delay: 199.626 ms
Loss rate: 5.34%
```
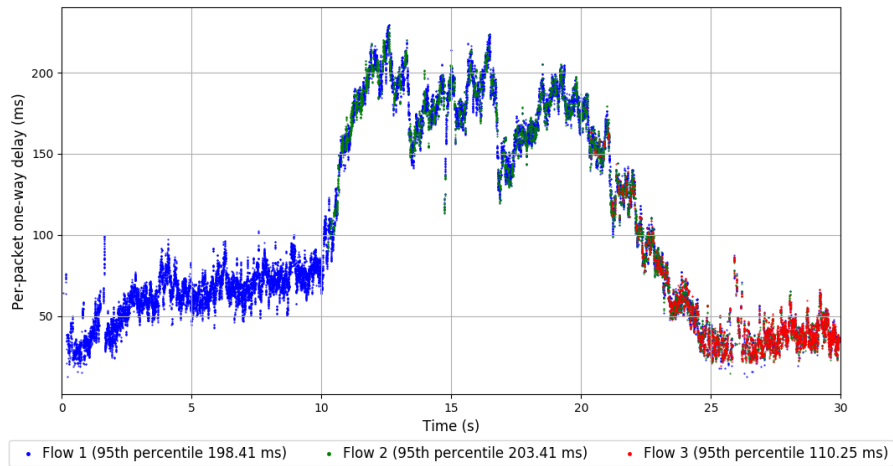
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-12-11 09:39:25
End at: 2017-12-11 09:39:55
Local clock offset: -5.345 ms
Remote clock offset: -1.749 ms


# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 194.810 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 187.794 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 5.44 Mbit/s
95th percentile per-packet one-way delay: 195.122 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 11.19 Mbit/s
95th percentile per-packet one-way delay: 199.746 ms
Loss rate: 5.39%
```

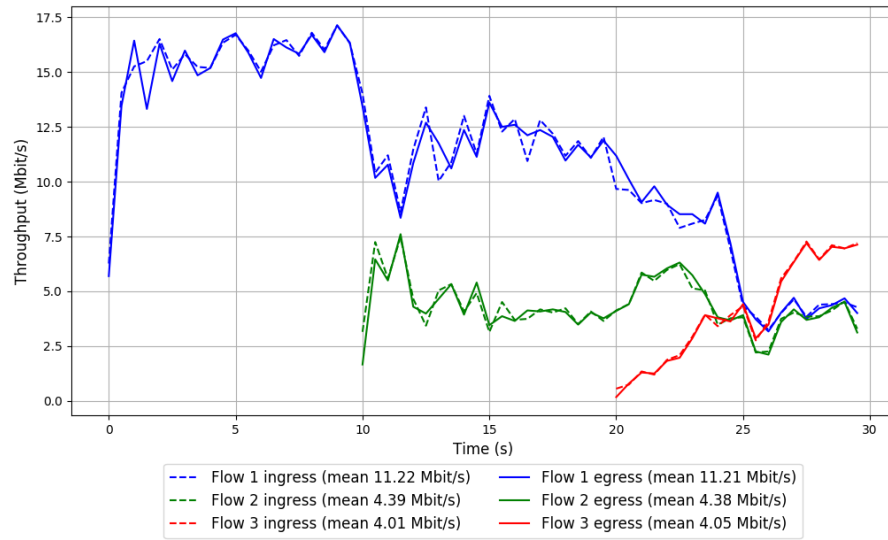Run 3: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-11 09:13:13
End at: 2017-12-11 09:13:43
Local clock offset: -4.484 ms
Remote clock offset: -2.112 ms

# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.43 Mbit/s
95th percentile per-packet one-way delay: 198.856 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 11.21 Mbit/s
95th percentile per-packet one-way delay: 198.409 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 203.413 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 110.255 ms
Loss rate: 1.12%
```
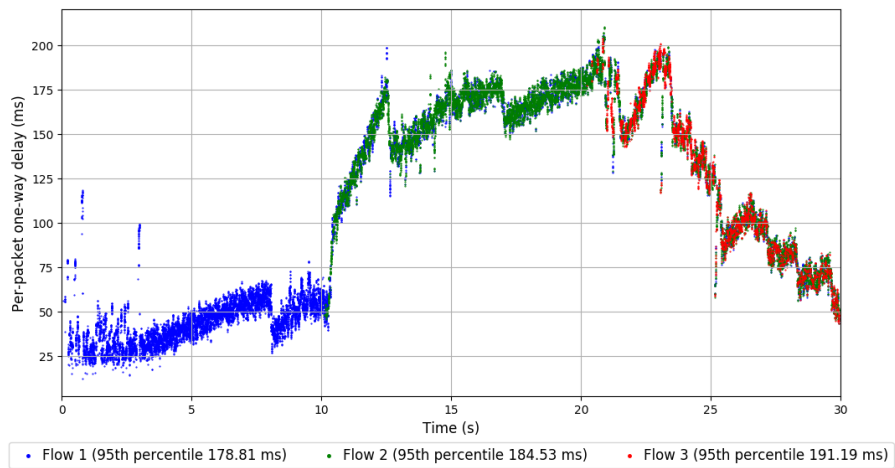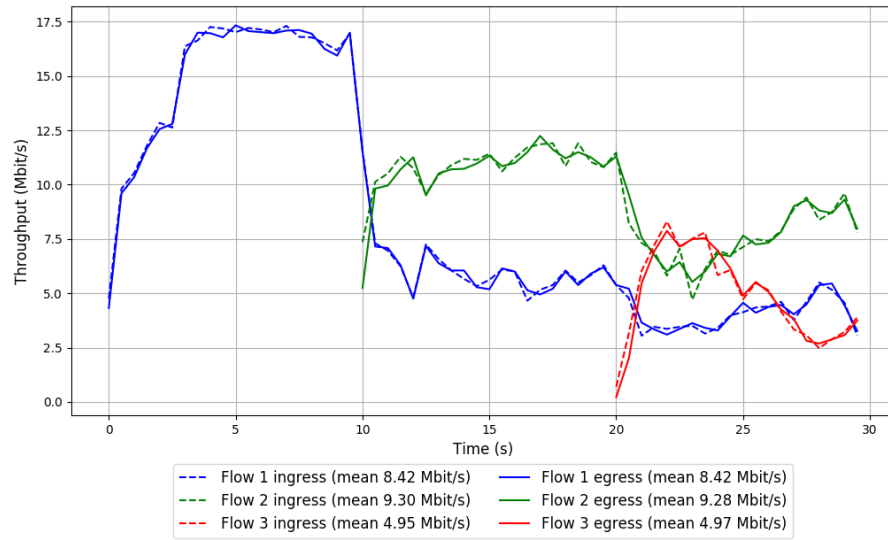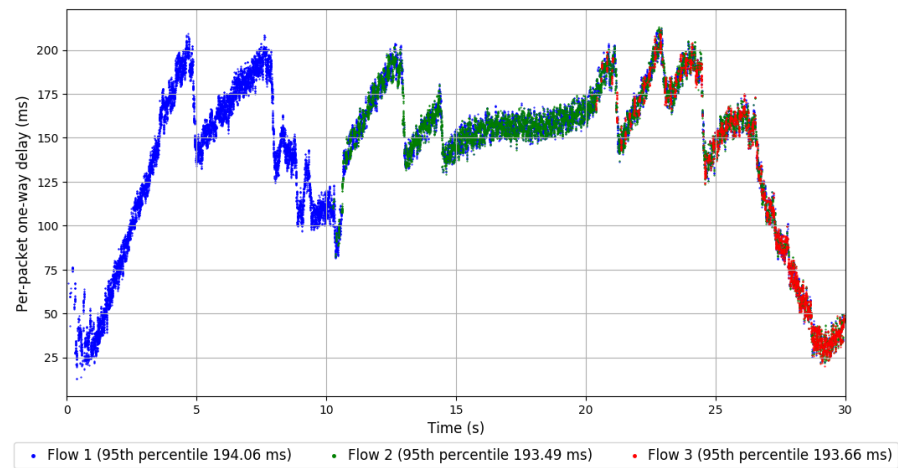
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 11.22 Mbit/s) --- Flow 1 egress (mean 11.21 Mbit/s)
Flow 2 ingress (mean 4.39 Mbit/s) --- Flow 2 egress (mean 4.38 Mbit/s)
Flow 3 ingress (mean 4.01 Mbit/s) --- Flow 3 egress (mean 4.05 Mbit/s)

Flow 1 (95th percentile 198.41 ms)   •   Flow 2 (95th percentile 203.41 ms)   •   Flow 3 (95th percentile 110.25 ms)

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```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-11 09:29:53
End at: 2017-12-11 09:30:23
Local clock offset: -5.641 ms
Remote clock offset: -2.099 ms


# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.20 Mbit/s
95th percentile per-packet one-way delay: 183.068 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 178.807 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 184.525 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 191.194 ms
Loss rate: 1.61%
```
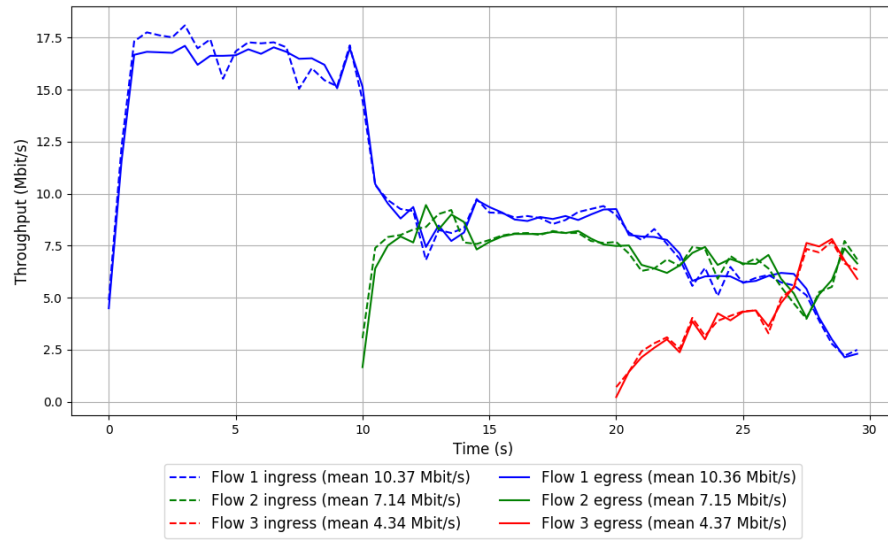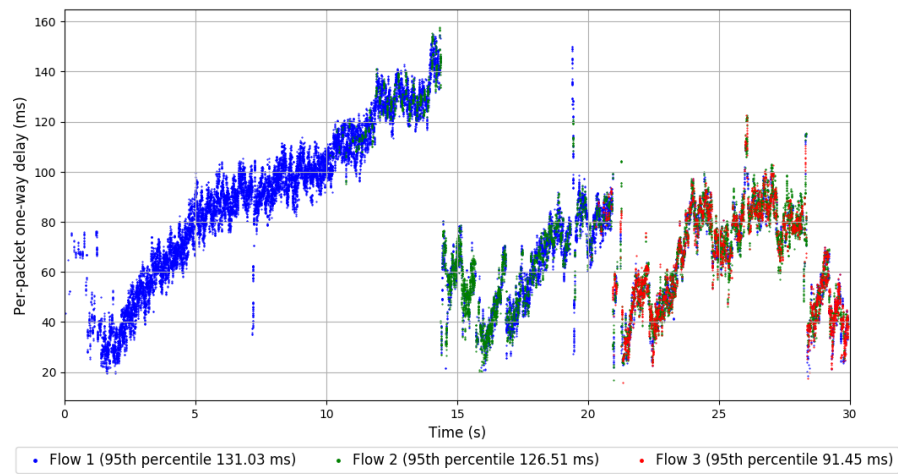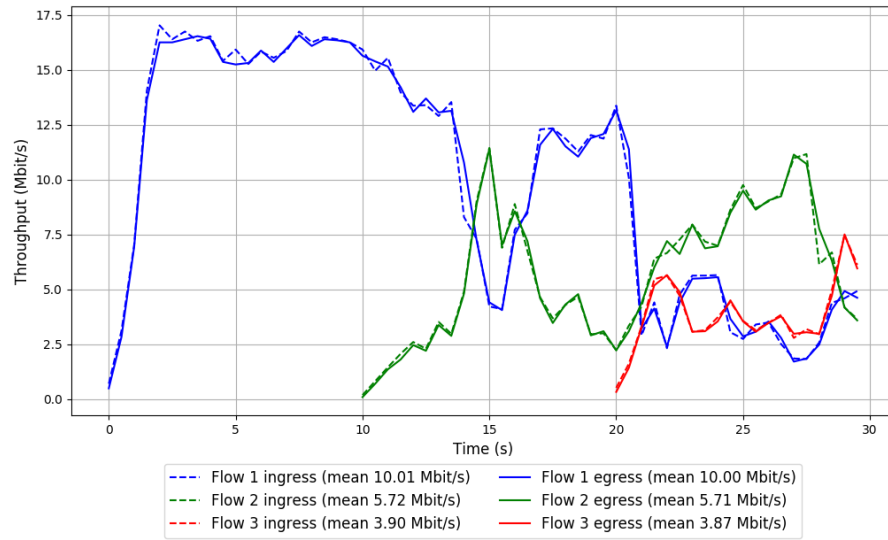
Run 2: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 8.42 Mbit/s)   —— Flow 1 egress (mean 8.42 Mbit/s)
- - - Flow 2 ingress (mean 9.30 Mbit/s)   —— Flow 2 egress (mean 9.28 Mbit/s)
- - - Flow 3 ingress (mean 4.95 Mbit/s)   —— Flow 3 egress (mean 4.97 Mbit/s)

• Flow 1 (95th percentile 178.81 ms)   • Flow 2 (95th percentile 184.53 ms)   • Flow 3 (95th percentile 191.19 ms)

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```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-11 09:46:34
End at: 2017-12-11 09:47:04
Local clock offset: -5.507 ms
Remote clock offset: -1.534 ms


# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.51 Mbit/s
95th percentile per-packet one-way delay: 193.891 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 194.062 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 7.15 Mbit/s
95th percentile per-packet one-way delay: 193.494 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 193.656 ms
Loss rate: 1.06%
```
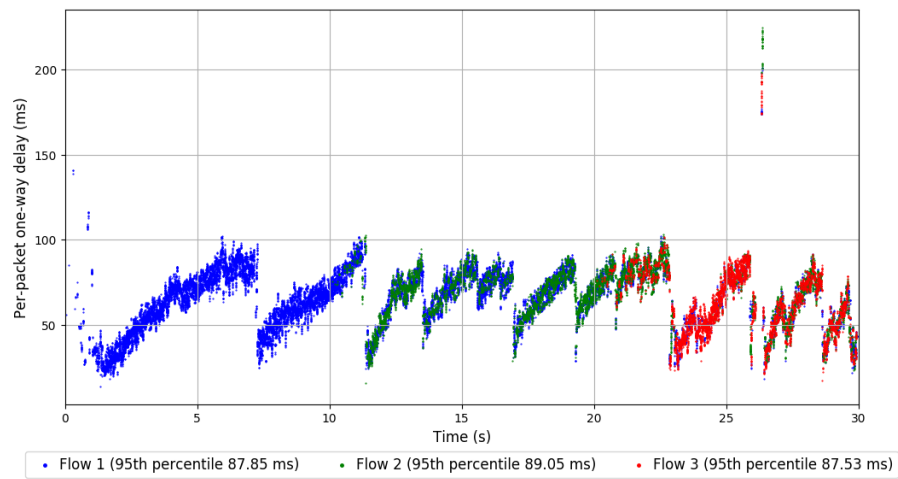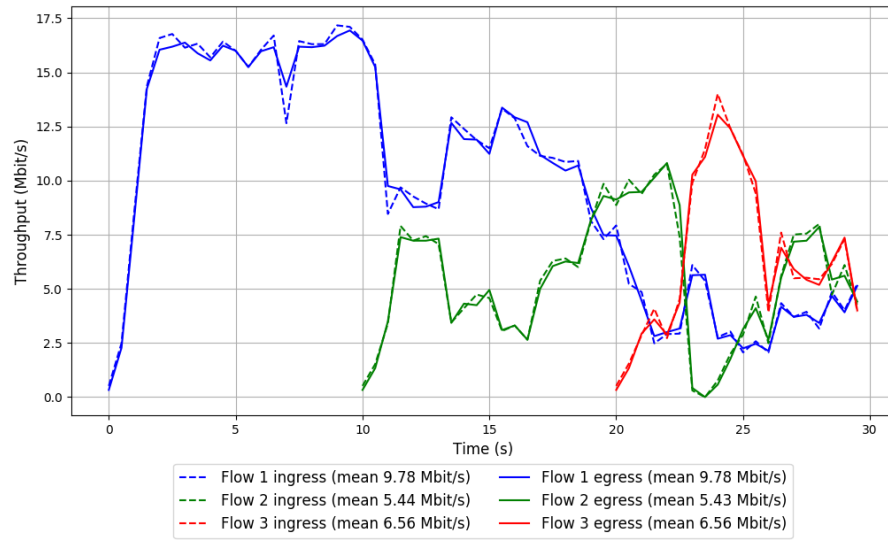
Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 10.37 Mbit/s) —— Flow 1 egress (mean 10.36 Mbit/s)
- - - - Flow 2 ingress (mean 7.14 Mbit/s) —— Flow 2 egress (mean 7.15 Mbit/s)
- - - - Flow 3 ingress (mean 4.34 Mbit/s) —— Flow 3 egress (mean 4.37 Mbit/s)

- Flow 1 (95th percentile 194.06 ms) • Flow 2 (95th percentile 193.49 ms) • Flow 3 (95th percentile 193.66 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2017-12-11 09:12:01
End at: 2017-12-11 09:12:31
Local clock offset: -4.522 ms
Remote clock offset: -2.059 ms

# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 129.371 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 131.034 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 126.508 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 91.446 ms
Loss rate: 1.52%
```
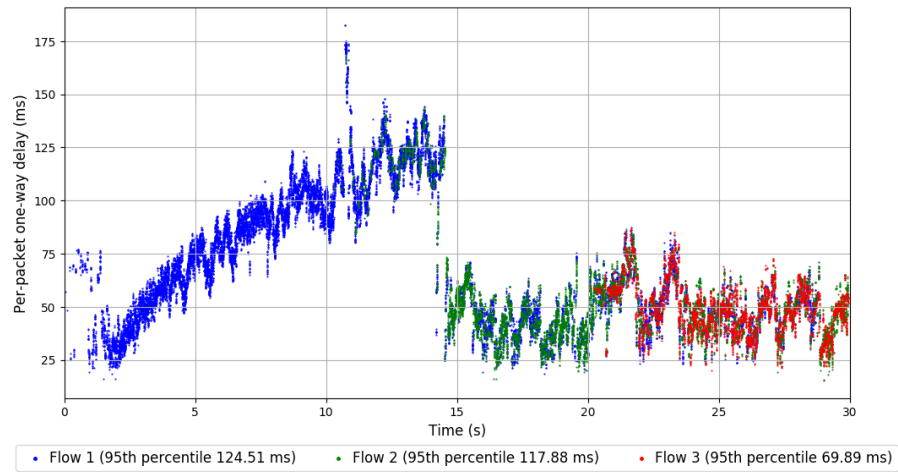
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-12-11 09:28:42
End at: 2017-12-11 09:29:12
Local clock offset: -5.648 ms
Remote clock offset: -2.023 ms

# Below is generated by plot.py at 2017-12-11 10:43:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.53 Mbit/s
95th percentile per-packet one-way delay: 88.127 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 9.78 Mbit/s
95th percentile per-packet one-way delay: 87.848 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 5.43 Mbit/s
95th percentile per-packet one-way delay: 89.049 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 6.56 Mbit/s
95th percentile per-packet one-way delay: 87.527 ms
Loss rate: 0.97%
```
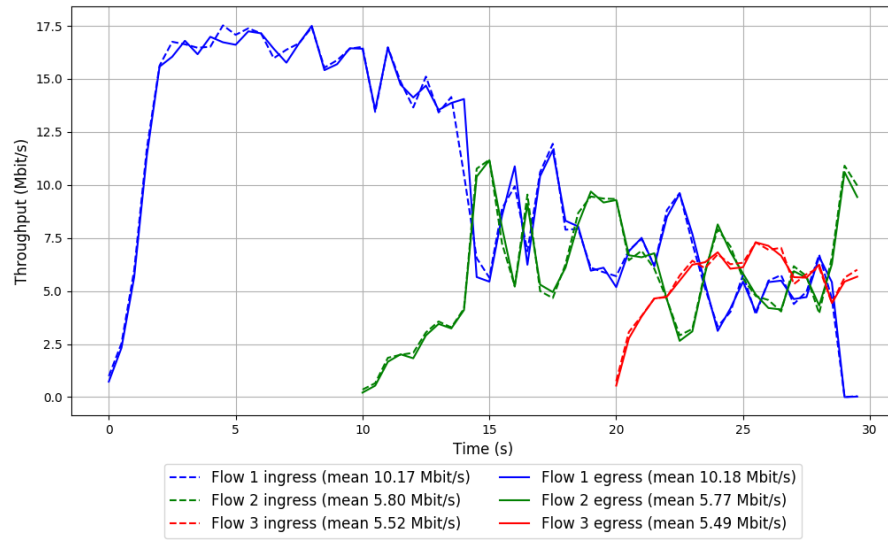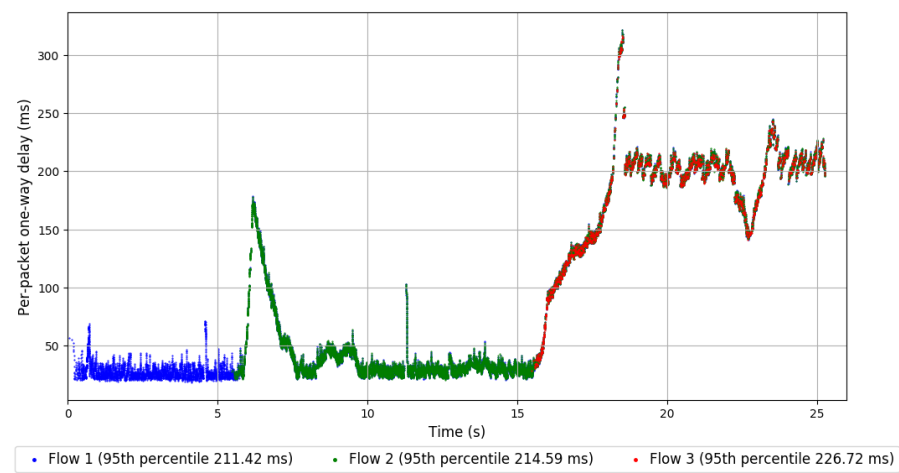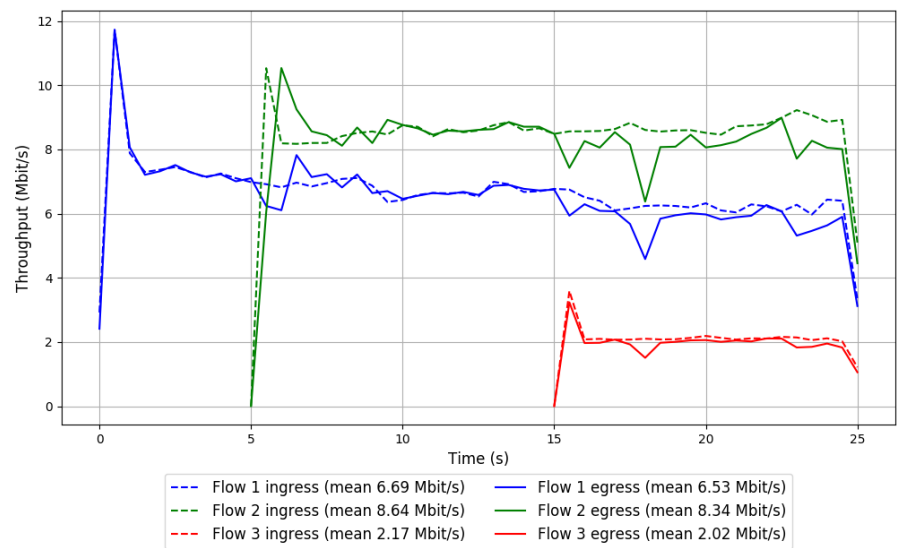
Run 2: Report of LEDBAT — Data Link

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```
Run 3: Statistics of LEDBAT

Start at: 2017-12-11 09:45:22
End at: 2017-12-11 09:45:52
Local clock offset: -5.443 ms
Remote clock offset: -1.585 ms

# Below is generated by plot.py at 2017-12-11 10:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 122.317 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 124.506 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 117.877 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 69.891 ms
Loss rate: 1.27%
```

Run 3: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-12-11 09:15:35
End at: 2017-12-11 09:16:06
Local clock offset: -4.702 ms
Remote clock offset: -2.094 ms

# Below is generated by plot.py at 2017-12-11 10:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.87 Mbit/s
95th percentile per-packet one-way delay: 213.713 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 211.419 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 8.34 Mbit/s
95th percentile per-packet one-way delay: 214.587 ms
Loss rate: 3.74%
-- Flow 3:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 226.718 ms
Loss rate: 7.16%
```
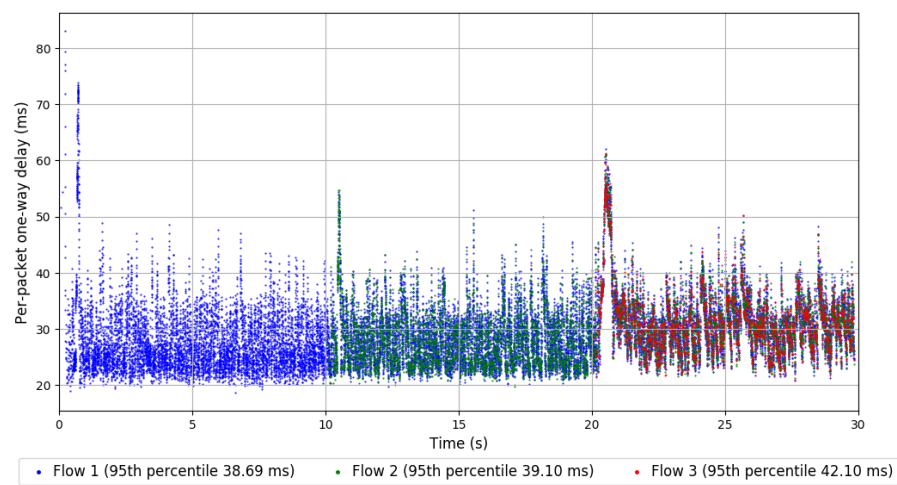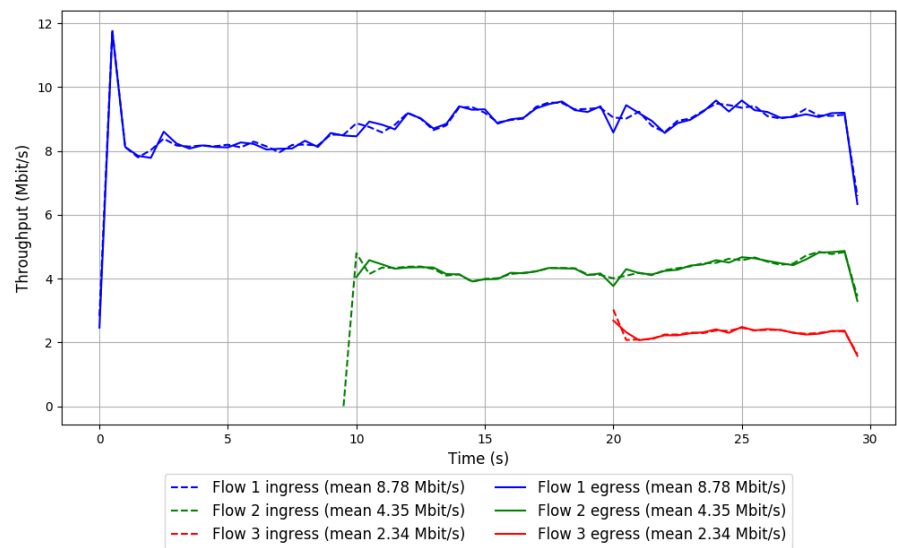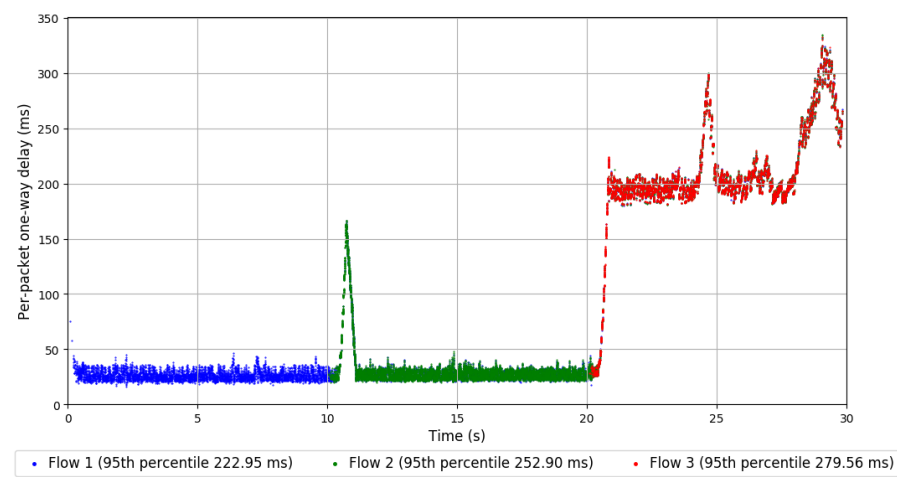
Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2017-12-11 09:32:15
End at: 2017-12-11 09:32:45
Local clock offset: -5.6 ms
Remote clock offset: -2.03 ms


# Below is generated by plot.py at 2017-12-11 10:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.45 Mbit/s
95th percentile per-packet one-way delay: 39.012 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 38.690 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 39.104 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 42.105 ms
Loss rate: 0.43%
```
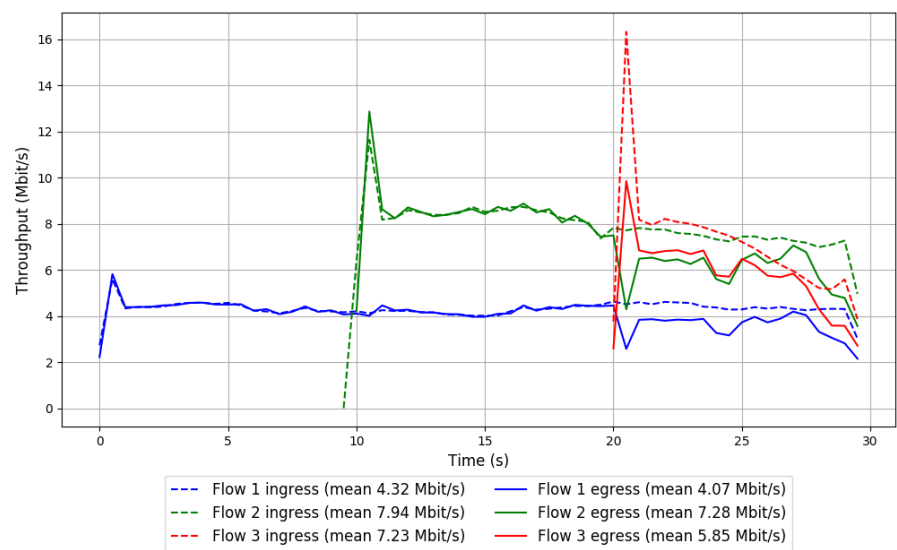
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2017-12-11 09:48:56
End at: 2017-12-11 09:49:26
Local clock offset: -5.664 ms
Remote clock offset: -1.514 ms


# Below is generated by plot.py at 2017-12-11 10:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 255.677 ms
Loss rate: 9.82%
-- Flow 1:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 222.951 ms
Loss rate: 6.14%
-- Flow 2:
Average throughput: 7.28 Mbit/s
95th percentile per-packet one-way delay: 252.895 ms
Loss rate: 8.47%
-- Flow 3:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 279.561 ms
Loss rate: 19.52%
```
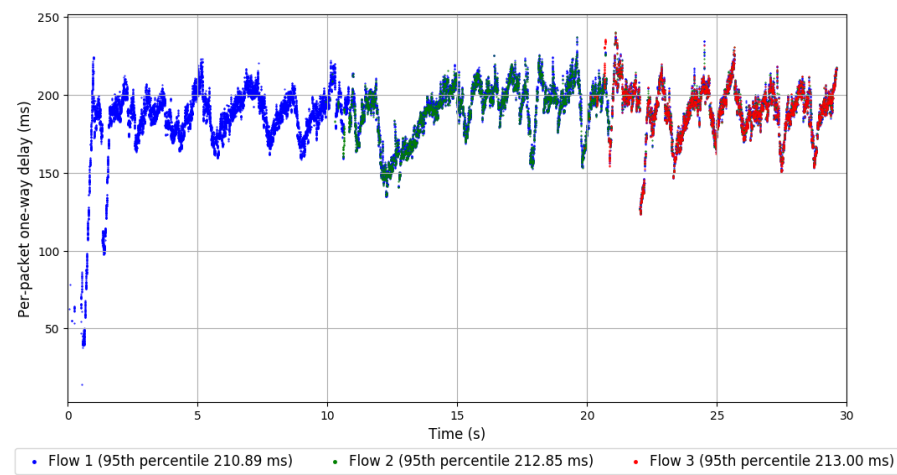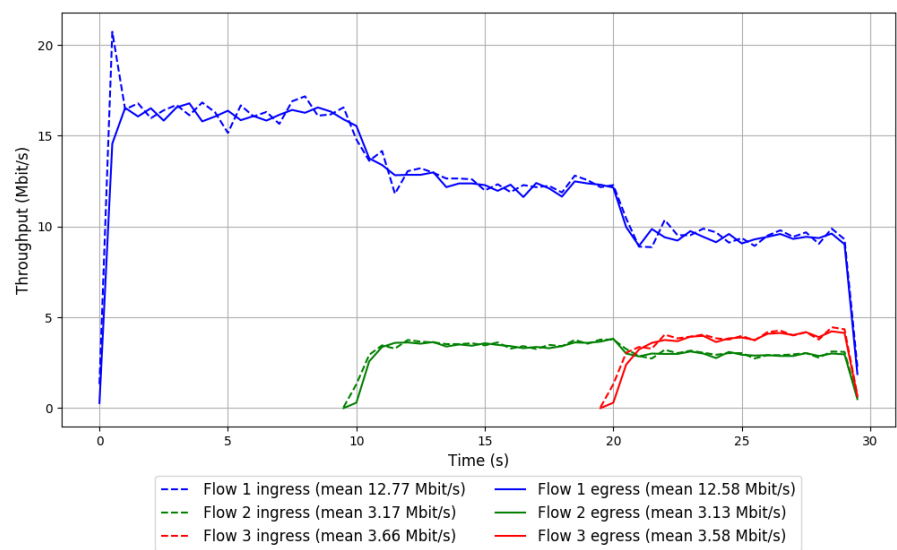
Run 3: Report of PCC — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-11 09:03:42
End at: 2017-12-11 09:04:12
Local clock offset: -5.432 ms
Remote clock offset: -2.394 ms

# Below is generated by plot.py at 2017-12-11 10:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.84 Mbit/s
95th percentile per-packet one-way delay: 211.376 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 210.891 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 3.13 Mbit/s
95th percentile per-packet one-way delay: 212.852 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 212.995 ms
Loss rate: 3.91%
```
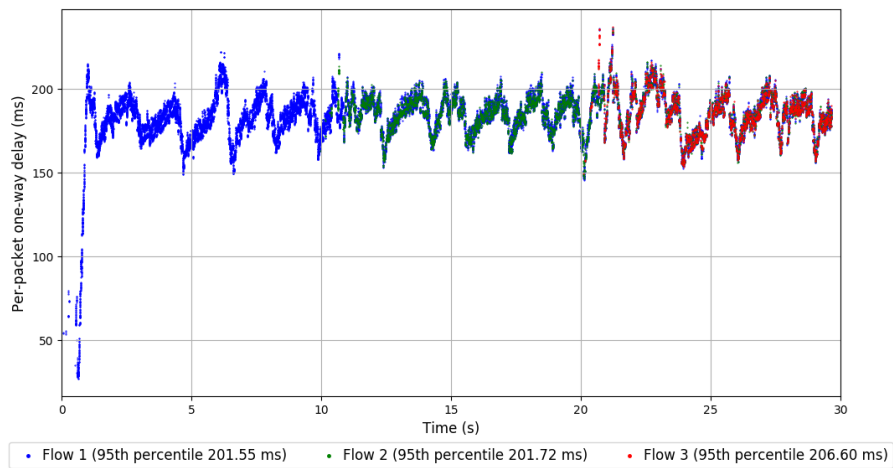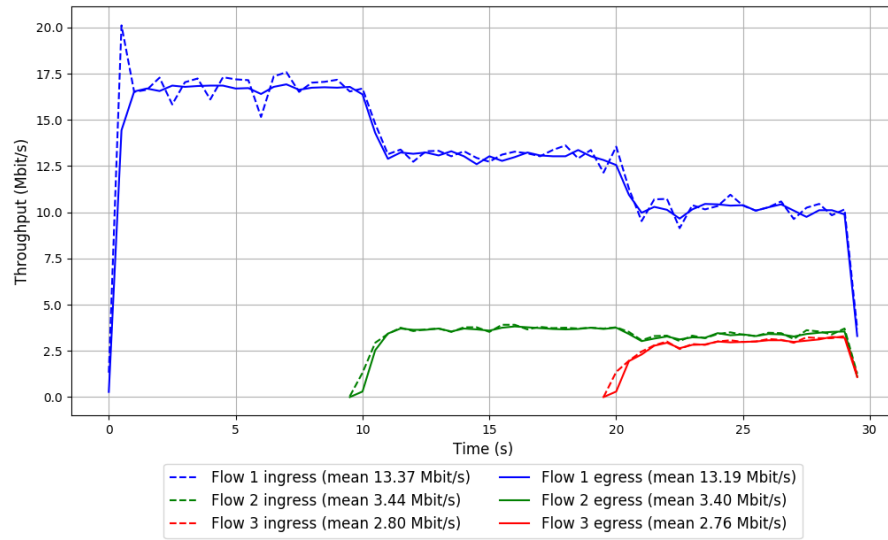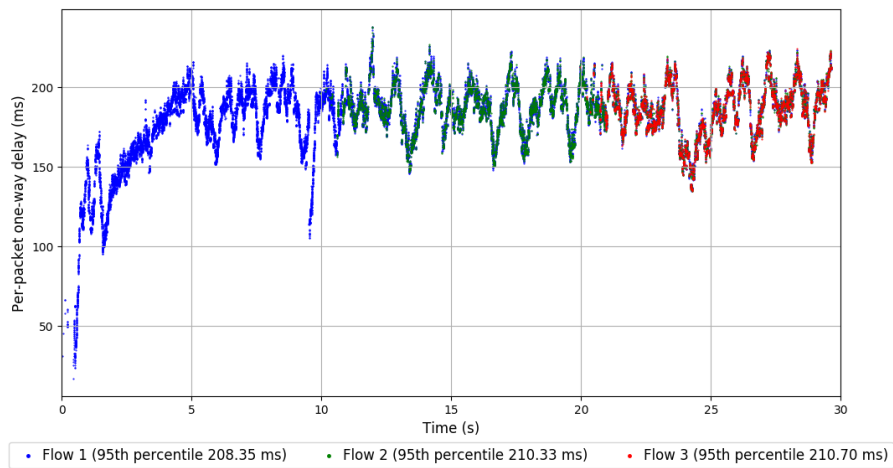
Run 1: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 12.77 Mbit/s) —— Flow 1 egress (mean 12.58 Mbit/s)
- - - Flow 2 ingress (mean 3.17 Mbit/s) —— Flow 2 egress (mean 3.13 Mbit/s)
- - - Flow 3 ingress (mean 3.66 Mbit/s) —— Flow 3 egress (mean 3.58 Mbit/s)

- Flow 1 (95th percentile 210.89 ms)   • Flow 2 (95th percentile 212.85 ms)   • Flow 3 (95th percentile 213.00 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-11 09:20:22
End at: 2017-12-11 09:20:52
Local clock offset: -5.294 ms
Remote clock offset: -2.13 ms


# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.36 Mbit/s
95th percentile per-packet one-way delay: 201.835 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 13.19 Mbit/s
95th percentile per-packet one-way delay: 201.549 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 201.719 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 206.605 ms
Loss rate: 3.39%
```
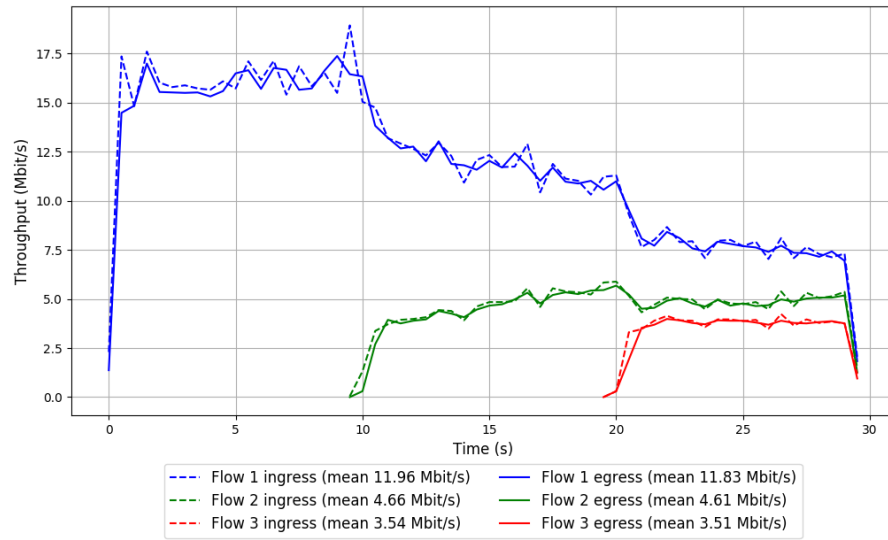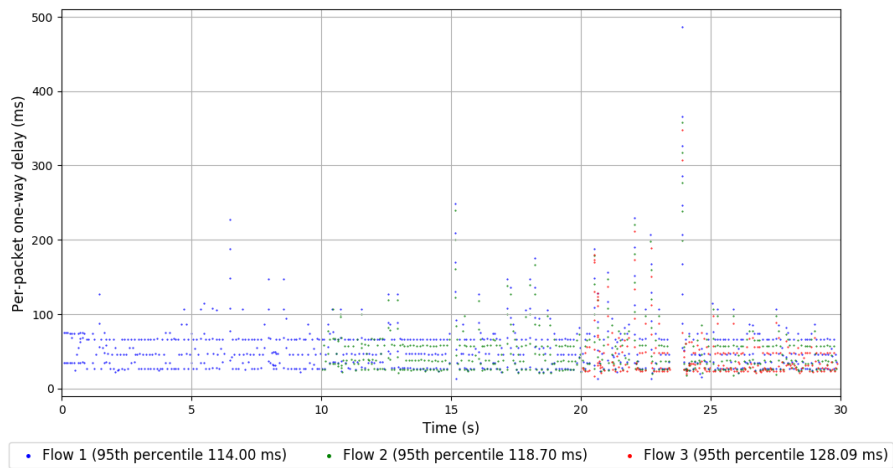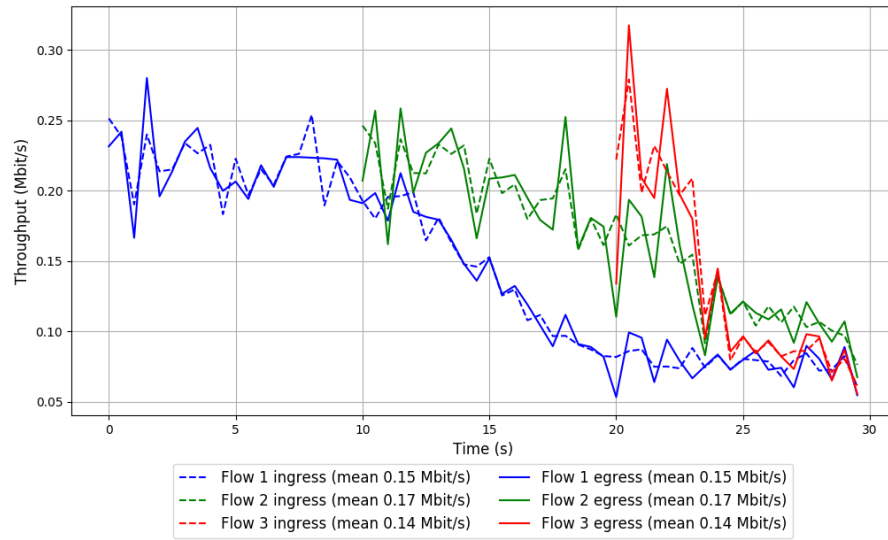
Run 2: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 13.37 Mbit/s) —— Flow 1 egress (mean 13.19 Mbit/s)
- - - - Flow 2 ingress (mean 3.44 Mbit/s) —— Flow 2 egress (mean 3.40 Mbit/s)
- - - - Flow 3 ingress (mean 2.80 Mbit/s) —— Flow 3 egress (mean 2.76 Mbit/s)

- Flow 1 (95th percentile 201.55 ms)   • Flow 2 (95th percentile 201.72 ms)   • Flow 3 (95th percentile 206.60 ms)
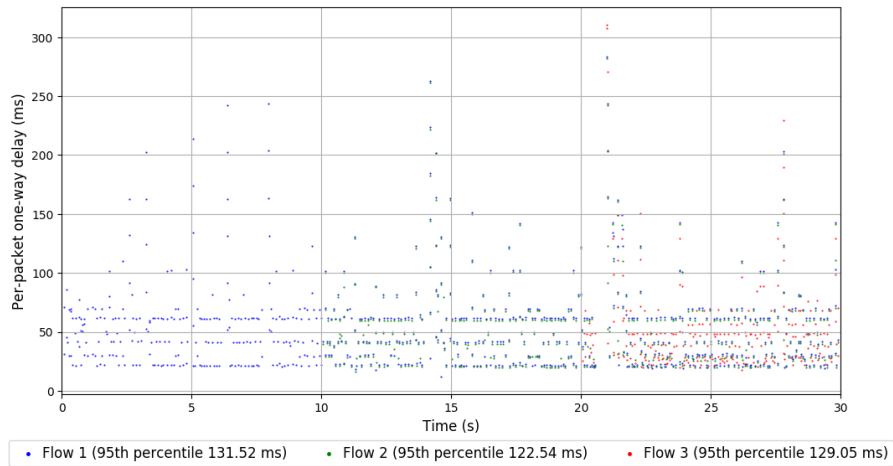
31

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-11 09:37:02
End at: 2017-12-11 09:37:32
Local clock offset: -5.378 ms
Remote clock offset: -1.865 ms


# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.03 Mbit/s
95th percentile per-packet one-way delay: 208.949 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 11.83 Mbit/s
95th percentile per-packet one-way delay: 208.346 ms
Loss rate: 1.30%
-- Flow 2:
Average throughput: 4.61 Mbit/s
95th percentile per-packet one-way delay: 210.334 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 210.696 ms
Loss rate: 3.20%
```

Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 11.96 Mbit/s) — Flow 1 egress (mean 11.83 Mbit/s)
Flow 2 ingress (mean 4.66 Mbit/s) — Flow 2 egress (mean 4.61 Mbit/s)
Flow 3 ingress (mean 3.54 Mbit/s) — Flow 3 egress (mean 3.51 Mbit/s)

Flow 1 (95th percentile 208.35 ms)   Flow 2 (95th percentile 210.33 ms)   Flow 3 (95th percentile 210.70 ms)
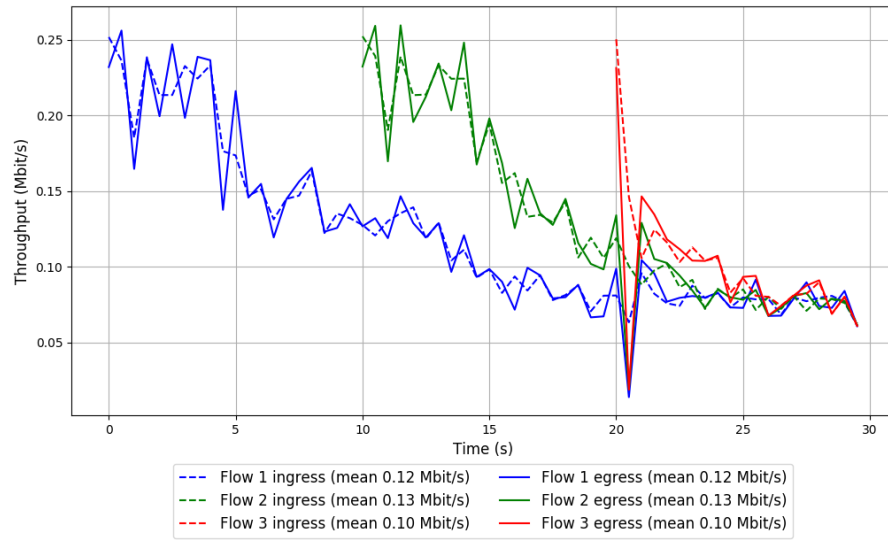
33

```
Run 1: Statistics of SCReAM

Start at: 2017-12-11 09:04:54
End at: 2017-12-11 09:05:24
Local clock offset: -5.114 ms
Remote clock offset: -2.381 ms

# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 119.128 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 114.005 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 118.705 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 128.095 ms
Loss rate: 2.12%
```
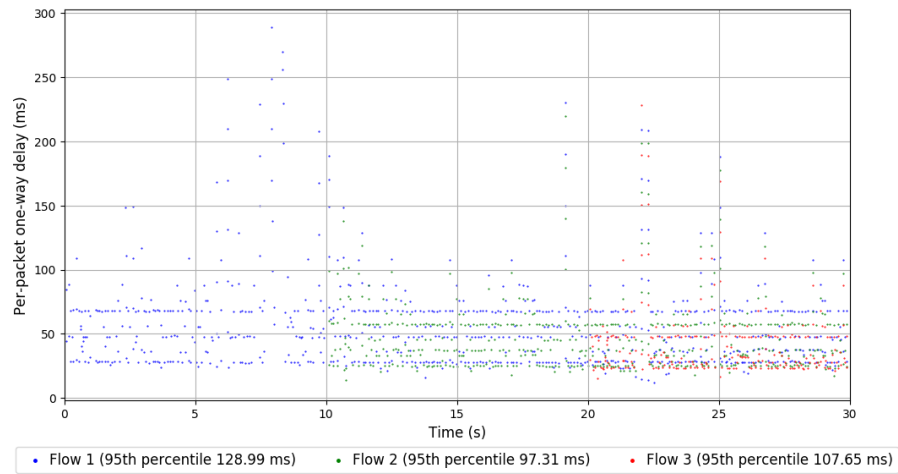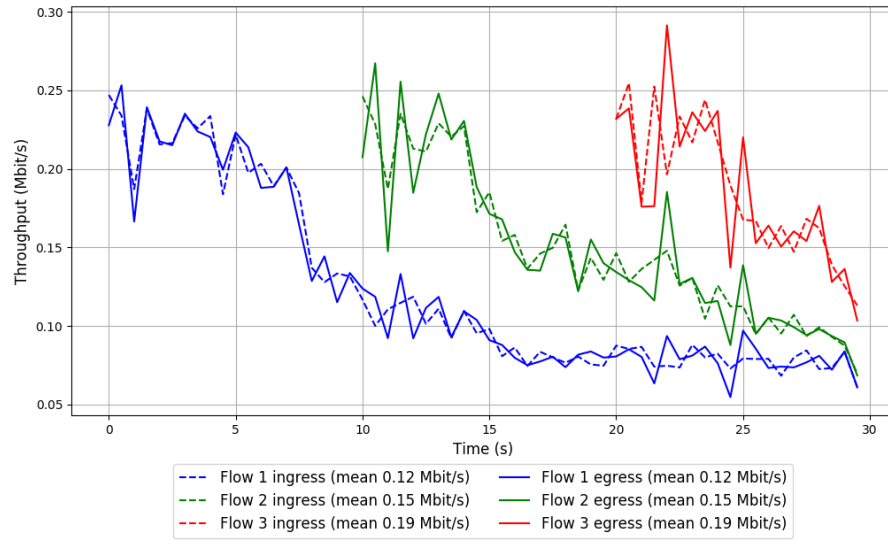
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-12-11 09:21:34
End at: 2017-12-11 09:22:04
Local clock offset: -5.528 ms
Remote clock offset: -2.086 ms

# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 129.381 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 131.518 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 122.544 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 129.049 ms
Loss rate: 4.42%
```
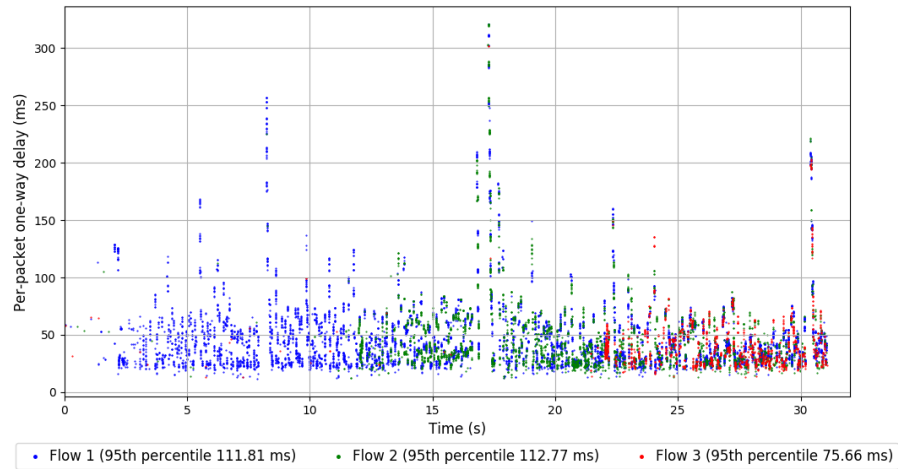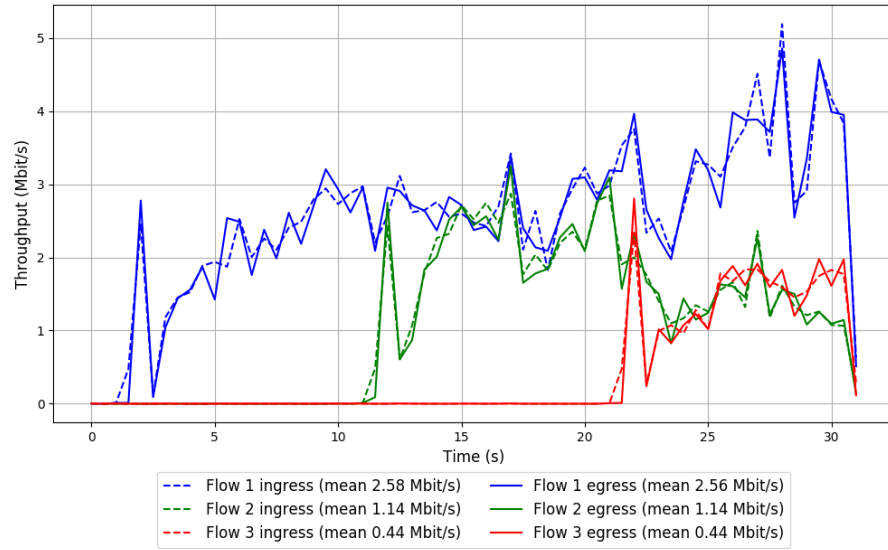
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-12-11 09:38:14
End at: 2017-12-11 09:38:44
Local clock offset: -5.251 ms
Remote clock offset: -1.822 ms


# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 109.224 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 128.993 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 97.306 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 107.653 ms
Loss rate: 0.26%
```
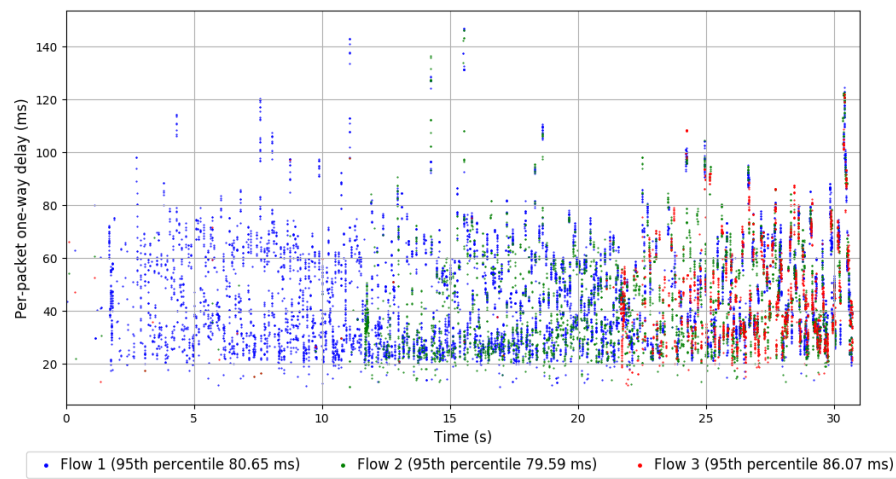
Run 3: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-11 09:09:39
End at: 2017-12-11 09:10:09
Local clock offset: -4.782 ms
Remote clock offset: -2.209 ms


# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 111.024 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 111.808 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 112.769 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 75.656 ms
Loss rate: 1.19%
```

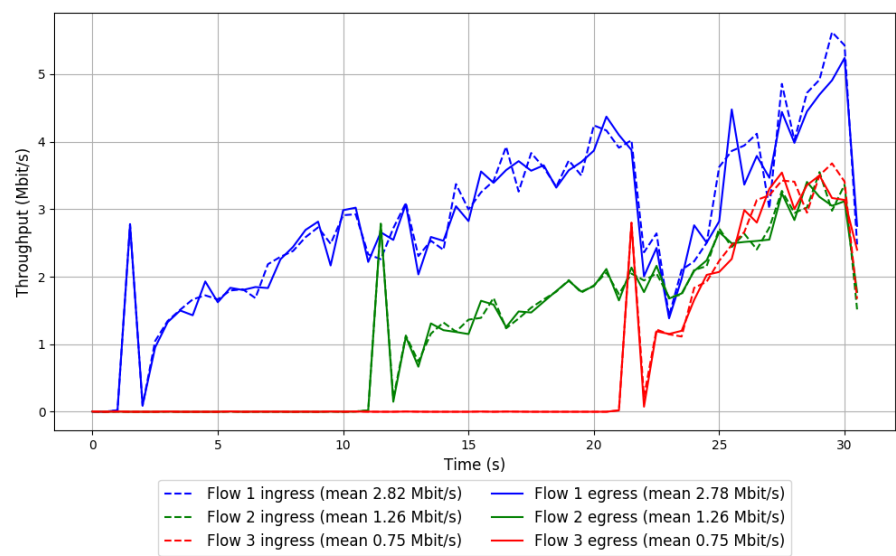Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-11 09:26:19
End at: 2017-12-11 09:26:49
Local clock offset: -6.138 ms
Remote clock offset: -2.031 ms

# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 81.101 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 2.78 Mbit/s
95th percentile per-packet one-way delay: 80.652 ms
Loss rate: 1.80%
-- Flow 2:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 79.595 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 86.071 ms
Loss rate: 0.85%
```

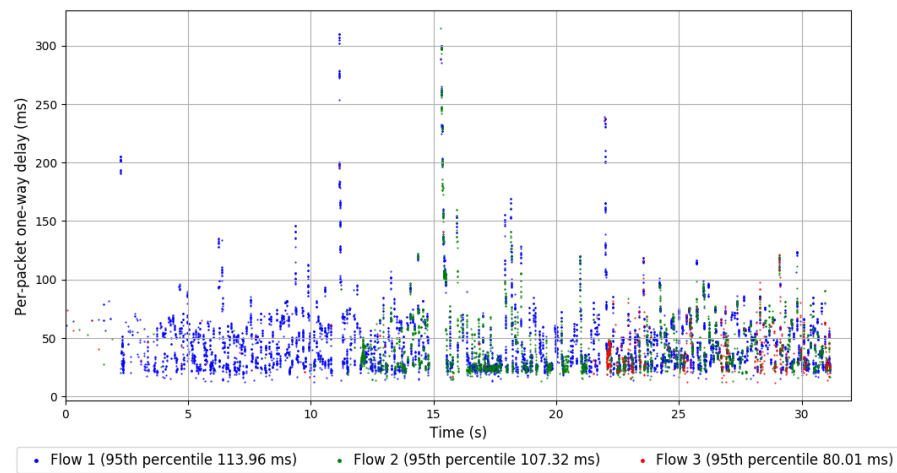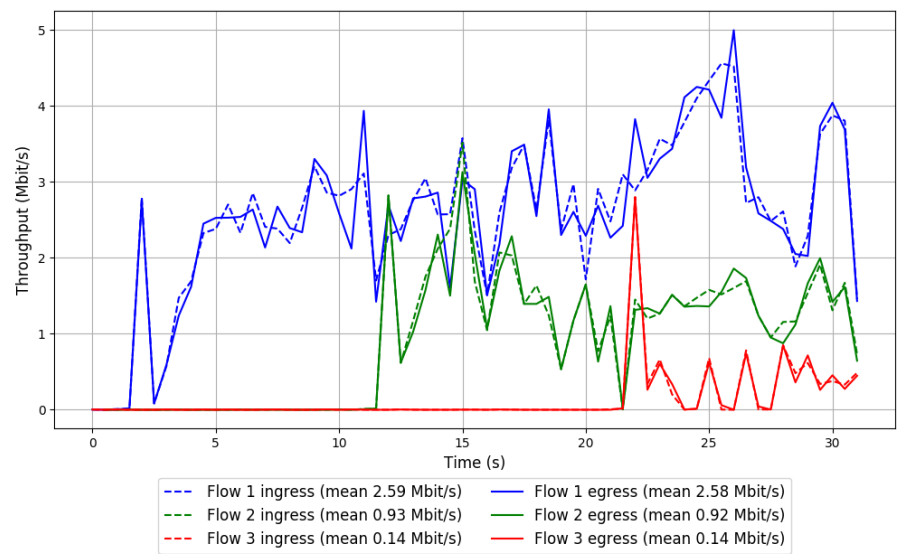Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-11 09:43:00
End at: 2017-12-11 09:43:30
Local clock offset: -5.406 ms
Remote clock offset: -1.567 ms


# Below is generated by plot.py at 2017-12-11 10:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 110.435 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 113.956 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 107.317 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 80.013 ms
Loss rate: 1.30%
```

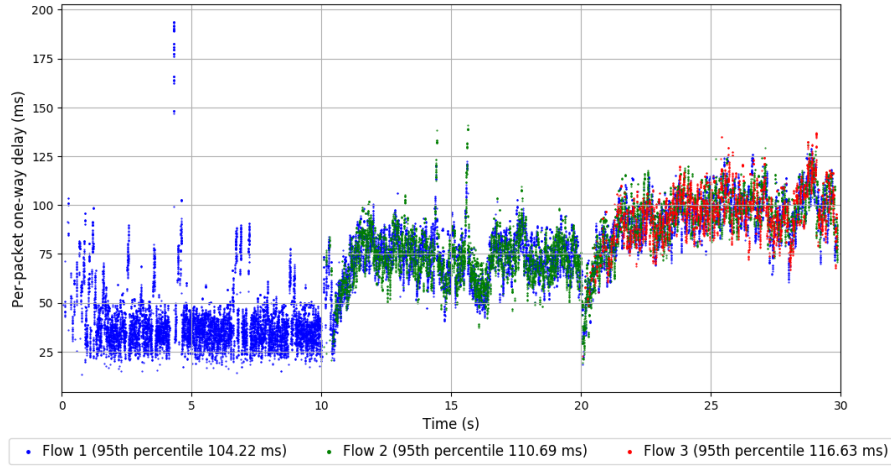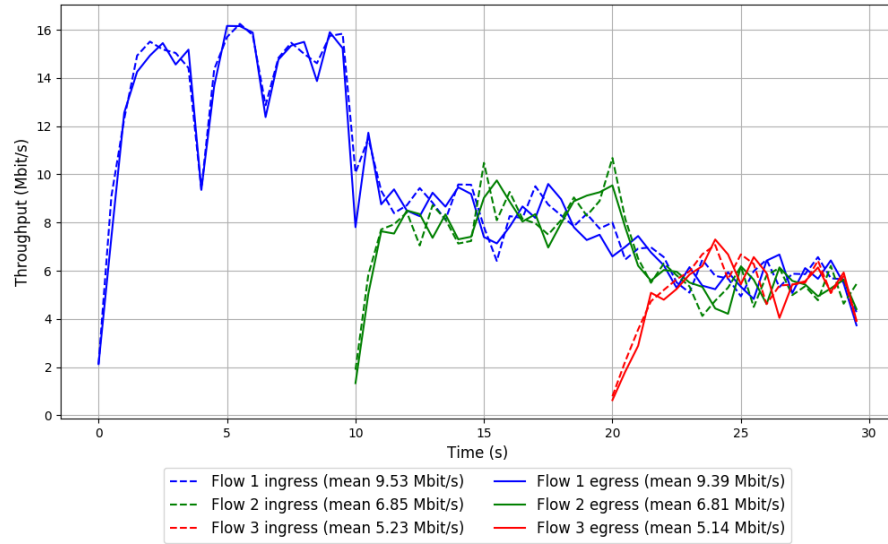Run 3: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-11 09:02:31
End at: 2017-12-11 09:03:01
Local clock offset: -5.754 ms
Remote clock offset: -2.414 ms


# Below is generated by plot.py at 2017-12-11 10:43:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.59 Mbit/s
95th percentile per-packet one-way delay: 109.267 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 104.218 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 110.687 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 116.626 ms
Loss rate: 2.03%
```

Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-11 09:19:11
End at: 2017-12-11 09:19:41
Local clock offset: -5.073 ms
Remote clock offset: -2.083 ms


# Below is generated by plot.py at 2017-12-11 10:43:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.64 Mbit/s
95th percentile per-packet one-way delay: 109.334 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 9.41 Mbit/s
95th percentile per-packet one-way delay: 105.090 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 6.87 Mbit/s
95th percentile per-packet one-way delay: 111.345 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 117.905 ms
Loss rate: 1.90%
```
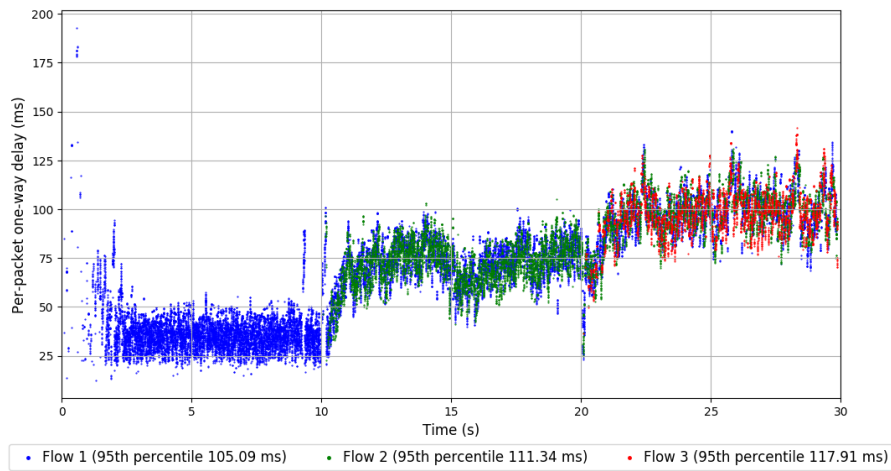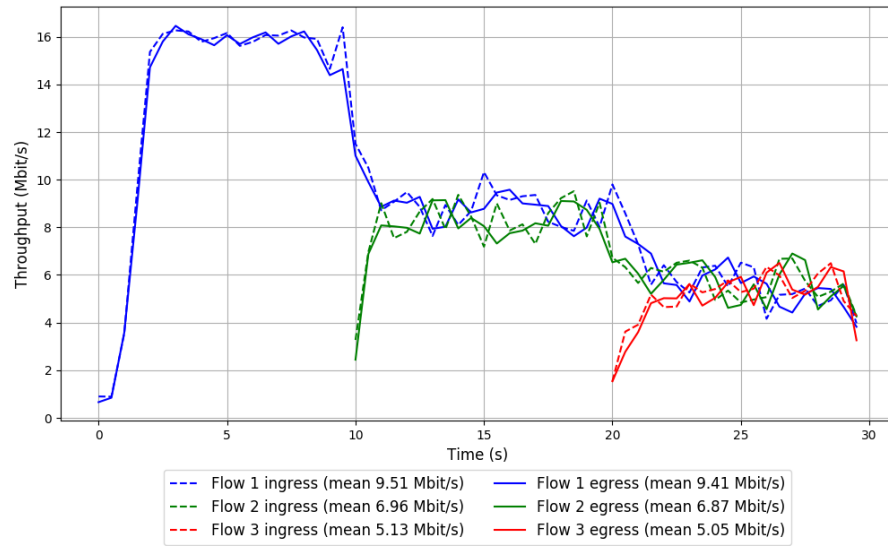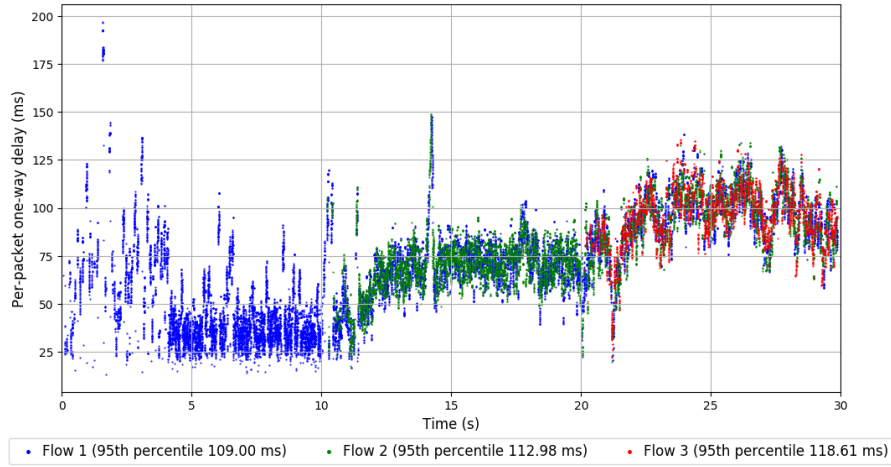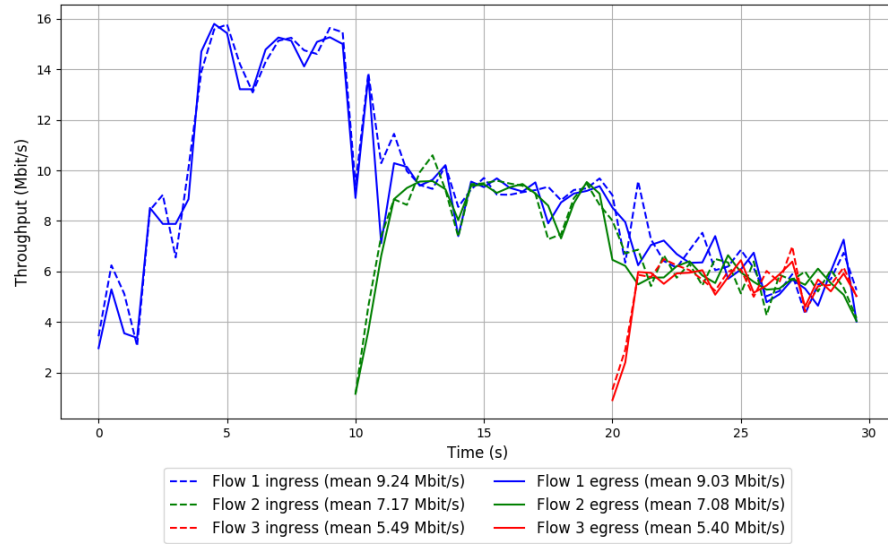
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-11 09:35:51
End at: 2017-12-11 09:36:21
Local clock offset: -5.351 ms
Remote clock offset: -1.781 ms


# Below is generated by plot.py at 2017-12-11 10:43:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.49 Mbit/s
95th percentile per-packet one-way delay: 112.493 ms
Loss rate: 2.20%
-- Flow 1:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 109.002 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 112.984 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 5.40 Mbit/s
95th percentile per-packet one-way delay: 118.607 ms
Loss rate: 2.23%
```

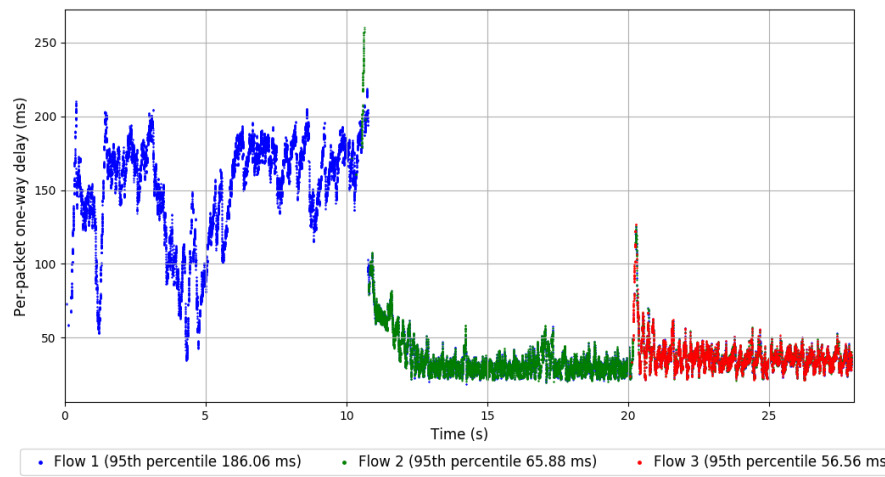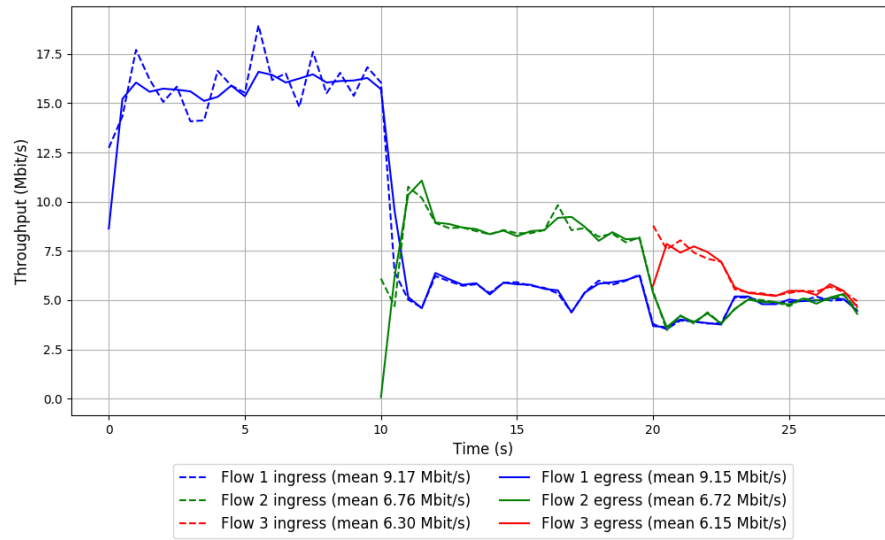## Run 3: Report of Sprout — Data Link

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

Start at: 2017-12-11 09:16:47
End at: 2017-12-11 09:17:17
Local clock offset: -4.722 ms
Remote clock offset: -2.072 ms


# Below is generated by plot.py at 2017-12-11 10:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.17 Mbit/s
95th percentile per-packet one-way delay: 182.789 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 9.15 Mbit/s
95th percentile per-packet one-way delay: 186.064 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 65.884 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 56.561 ms
Loss rate: 2.93%
```
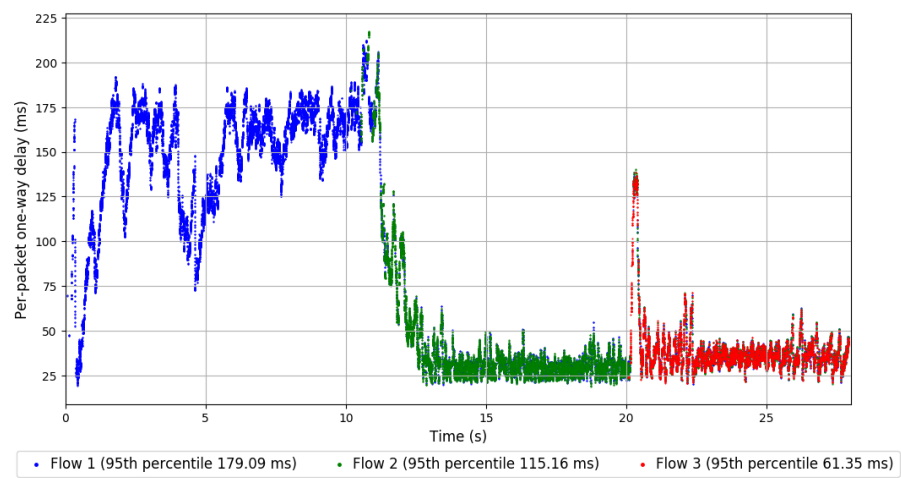
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 9.17 Mbit/s) --- Flow 1 egress (mean 9.15 Mbit/s)
Flow 2 ingress (mean 6.76 Mbit/s) --- Flow 2 egress (mean 6.72 Mbit/s)
Flow 3 ingress (mean 6.30 Mbit/s) --- Flow 3 egress (mean 6.15 Mbit/s)

Flow 1 (95th percentile 186.06 ms) · Flow 2 (95th percentile 65.88 ms) · Flow 3 (95th percentile 56.56 ms)
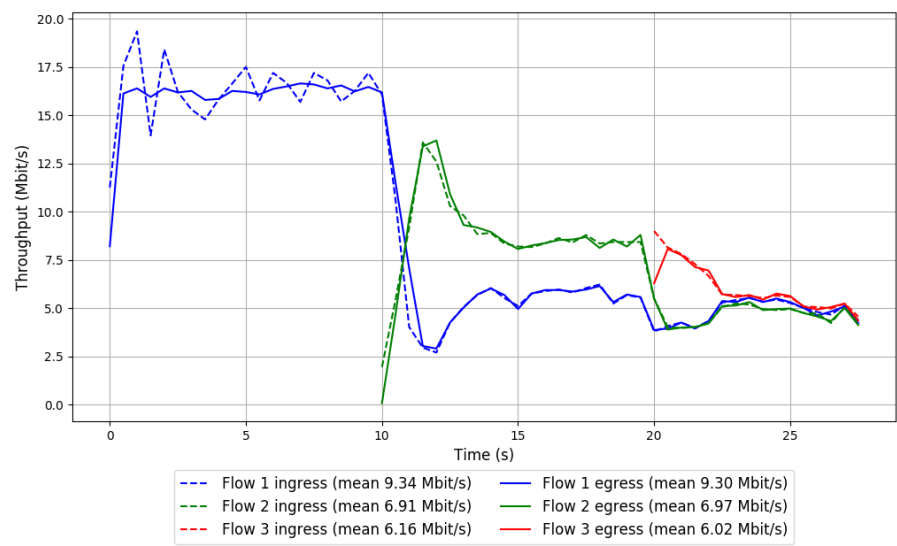
```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-11 09:33:27
End at: 2017-12-11 09:33:57
Local clock offset: -5.494 ms
Remote clock offset: -1.922 ms


# Below is generated by plot.py at 2017-12-11 10:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.43 Mbit/s
95th percentile per-packet one-way delay: 176.984 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 179.094 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 115.161 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 61.348 ms
Loss rate: 2.99%
```
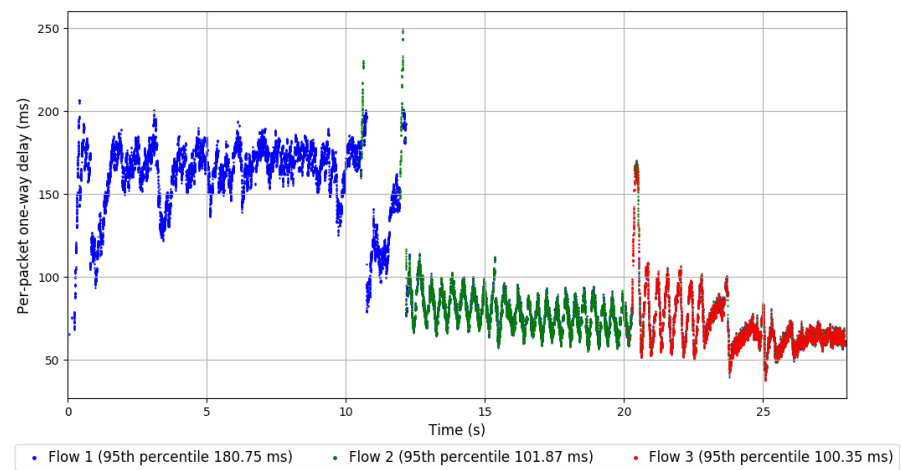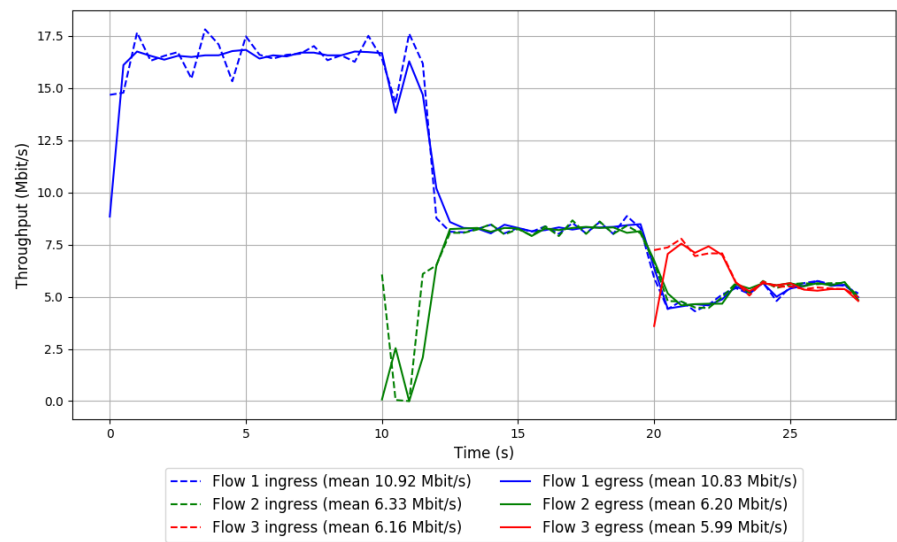
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 9.34 Mbit/s)   Flow 1 egress (mean 9.30 Mbit/s)
Flow 2 ingress (mean 6.91 Mbit/s)   Flow 2 egress (mean 6.97 Mbit/s)
Flow 3 ingress (mean 6.16 Mbit/s)   Flow 3 egress (mean 6.02 Mbit/s)

Flow 1 (95th percentile 179.09 ms)   Flow 2 (95th percentile 115.16 ms)   Flow 3 (95th percentile 61.35 ms)

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

Start at: 2017-12-11 09:50:08
End at: 2017-12-11 09:50:38
Local clock offset: -5.785 ms
Remote clock offset: -1.497 ms

# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.46 Mbit/s
95th percentile per-packet one-way delay: 179.246 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 180.751 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 6.20 Mbit/s
95th percentile per-packet one-way delay: 101.868 ms
Loss rate: 3.06%
-- Flow 3:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 100.347 ms
Loss rate: 3.92%
```
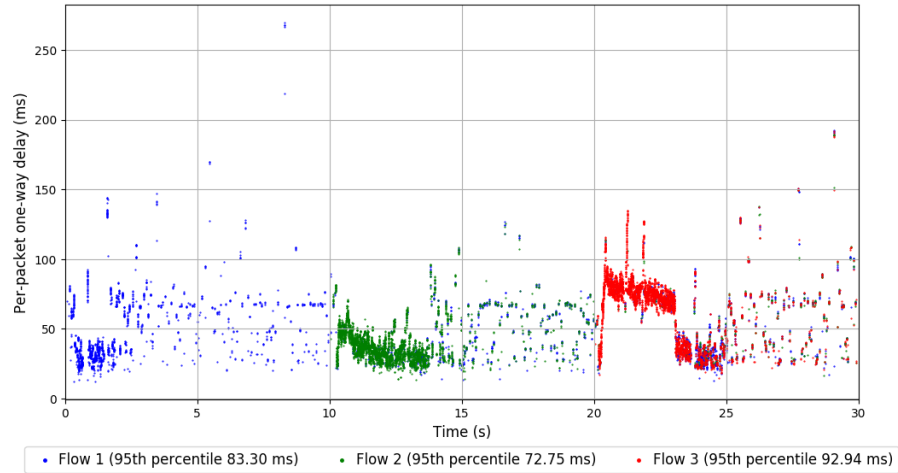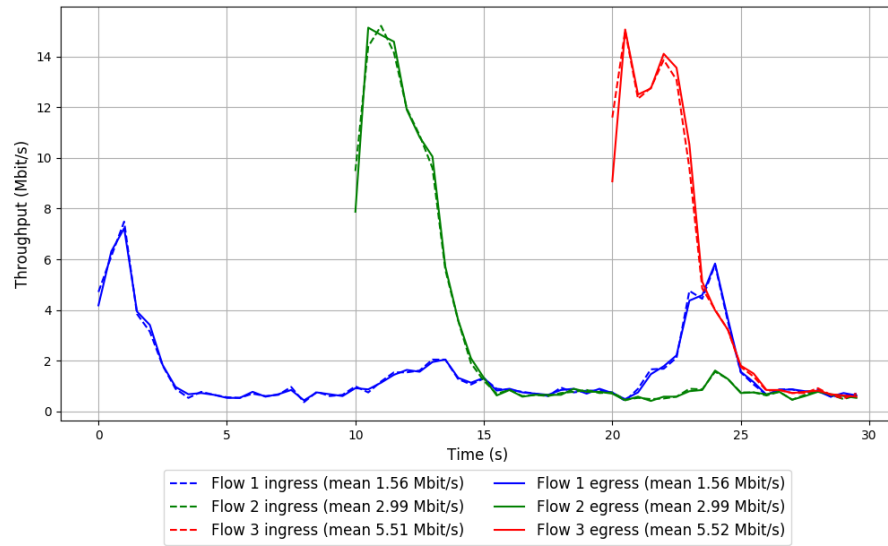
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 10.92 Mbit/s) --- Flow 1 egress (mean 10.83 Mbit/s)
Flow 2 ingress (mean 6.33 Mbit/s) --- Flow 2 egress (mean 6.20 Mbit/s)
Flow 3 ingress (mean 6.16 Mbit/s) --- Flow 3 egress (mean 5.99 Mbit/s)

Flow 1 (95th percentile 180.75 ms)   Flow 2 (95th percentile 101.87 ms)   Flow 3 (95th percentile 100.35 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-11 09:14:24
End at: 2017-12-11 09:14:54
Local clock offset: -4.64 ms
Remote clock offset: -2.057 ms

# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.37 Mbit/s
95th percentile per-packet one-way delay: 86.699 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 83.301 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 72.749 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 5.52 Mbit/s
95th percentile per-packet one-way delay: 92.939 ms
Loss rate: 0.24%
```
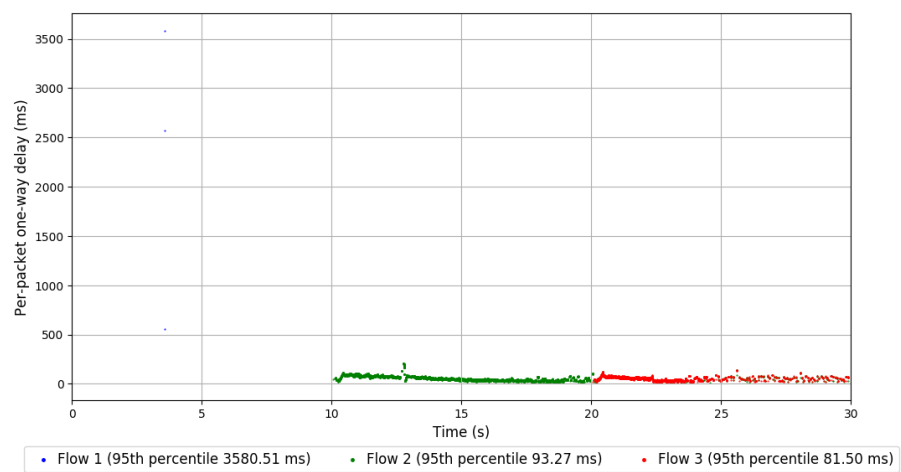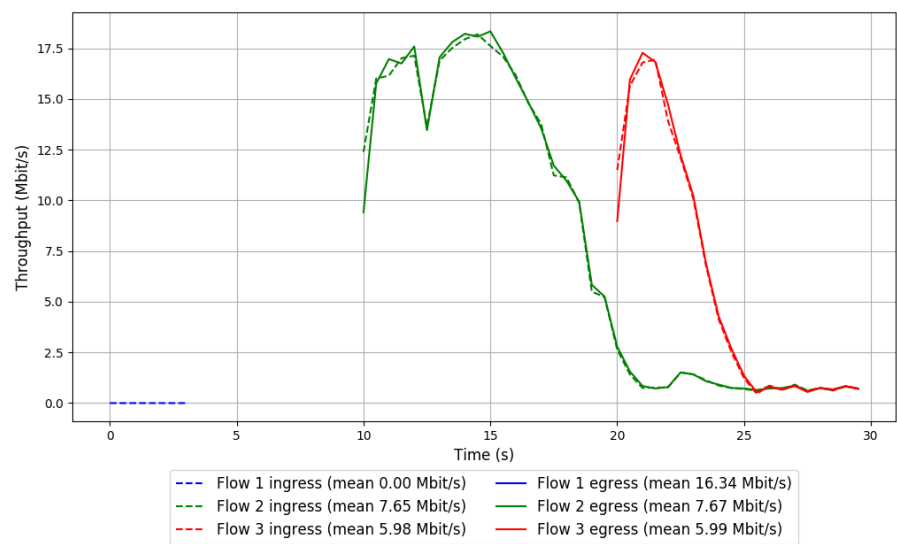
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-11 09:31:04
End at: 2017-12-11 09:31:34
Local clock offset: -5.528 ms
Remote clock offset: -2.084 ms


# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 91.582 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 16.34 Mbit/s
95th percentile per-packet one-way delay: 3580.506 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.67 Mbit/s
95th percentile per-packet one-way delay: 93.266 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 81.503 ms
Loss rate: 0.16%
```

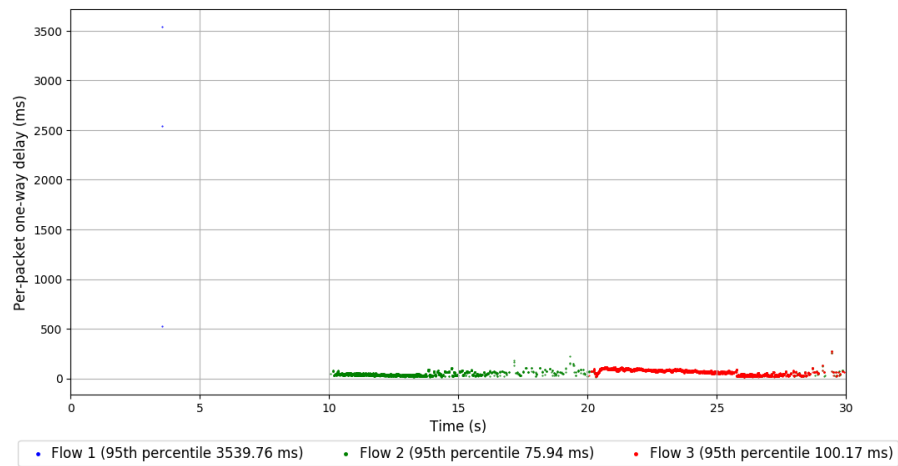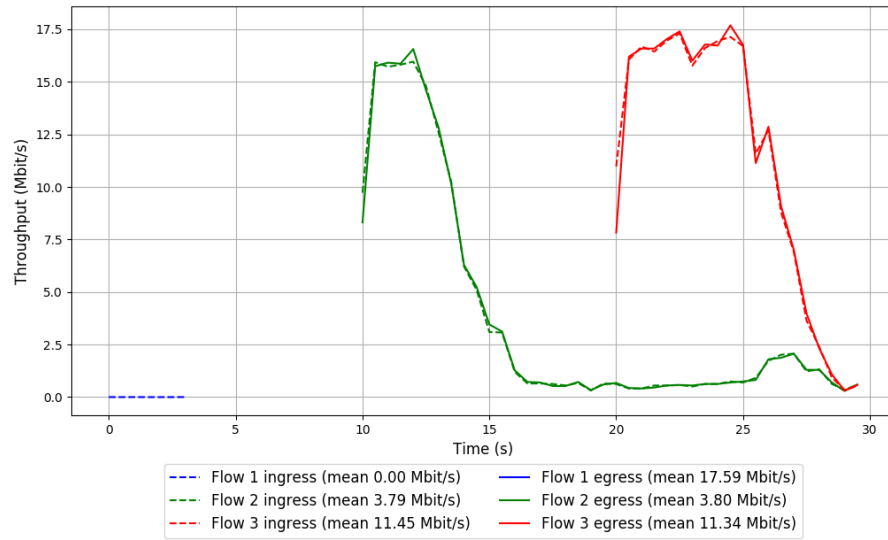Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-11 09:47:45
End at: 2017-12-11 09:48:15
Local clock offset: -5.603 ms
Remote clock offset: -1.503 ms


# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 97.582 ms
Loss rate: 0.43%
-- Flow 1:
Average throughput: 17.59 Mbit/s
95th percentile per-packet one-way delay: 3539.755 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.80 Mbit/s
95th percentile per-packet one-way delay: 75.943 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 11.34 Mbit/s
95th percentile per-packet one-way delay: 100.166 ms
Loss rate: 0.65%
```
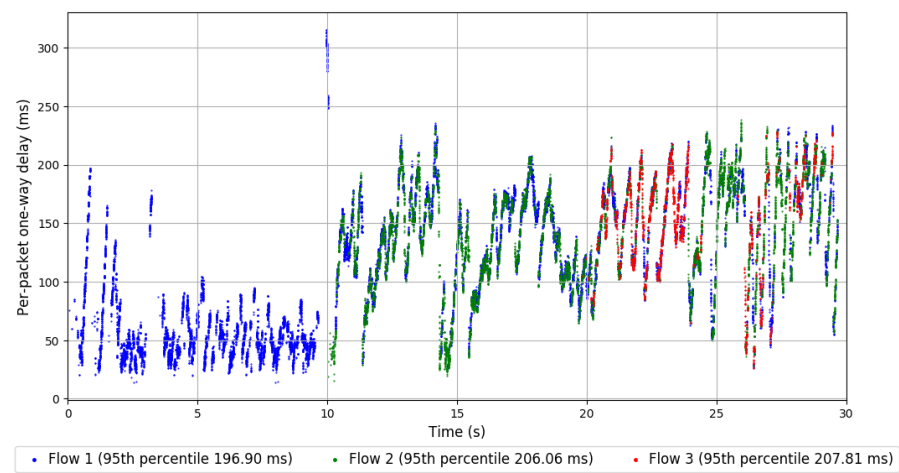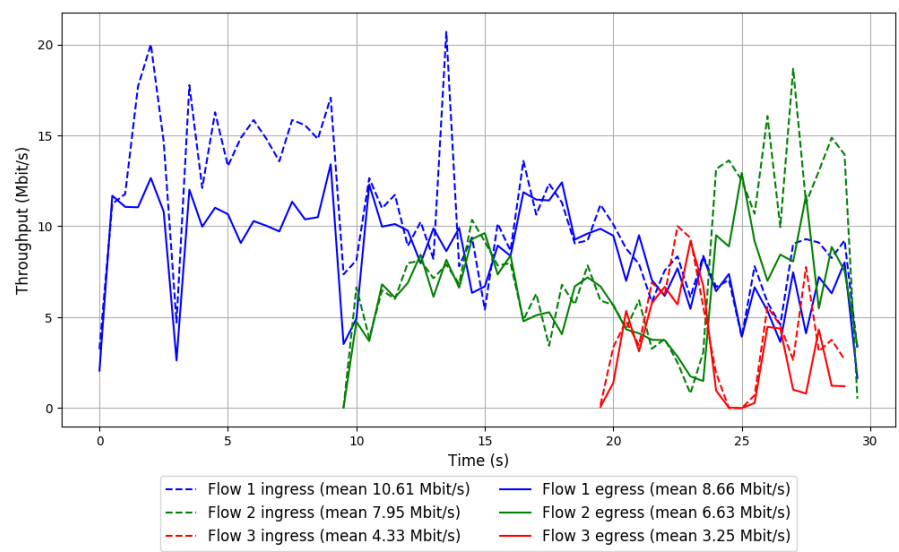
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 0.00 Mbit/s)   Flow 1 egress (mean 17.59 Mbit/s)
Flow 2 ingress (mean 3.79 Mbit/s)   Flow 2 egress (mean 3.80 Mbit/s)
Flow 3 ingress (mean 11.45 Mbit/s)   Flow 3 egress (mean 11.34 Mbit/s)

Flow 1 (95th percentile 3539.76 ms)   Flow 2 (95th percentile 75.94 ms)   Flow 3 (95th percentile 100.17 ms)

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```
Run 1: Statistics of Verus

Start at: 2017-12-11 09:17:59
End at: 2017-12-11 09:18:29
Local clock offset: -4.988 ms
Remote clock offset: -2.145 ms

# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.13 Mbit/s
95th percentile per-packet one-way delay: 202.728 ms
Loss rate: 18.63%
-- Flow 1:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 196.897 ms
Loss rate: 18.64%
-- Flow 2:
Average throughput: 6.63 Mbit/s
95th percentile per-packet one-way delay: 206.057 ms
Loss rate: 17.19%
-- Flow 3:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 207.815 ms
Loss rate: 24.06%
```

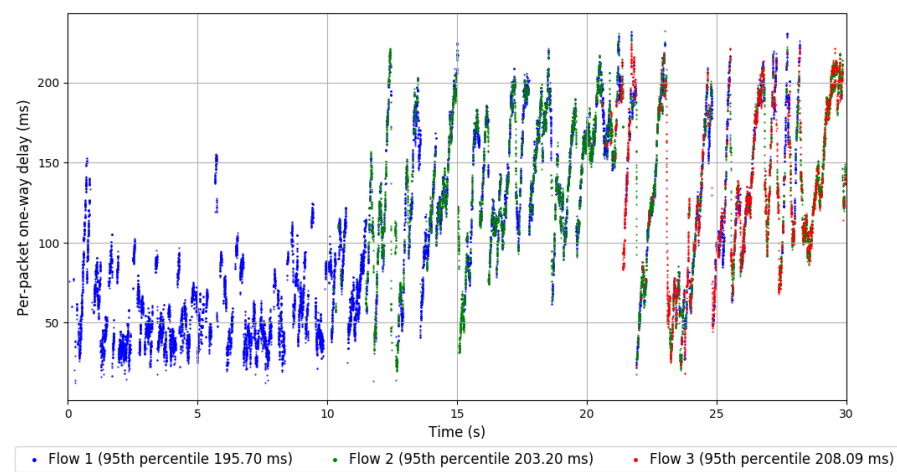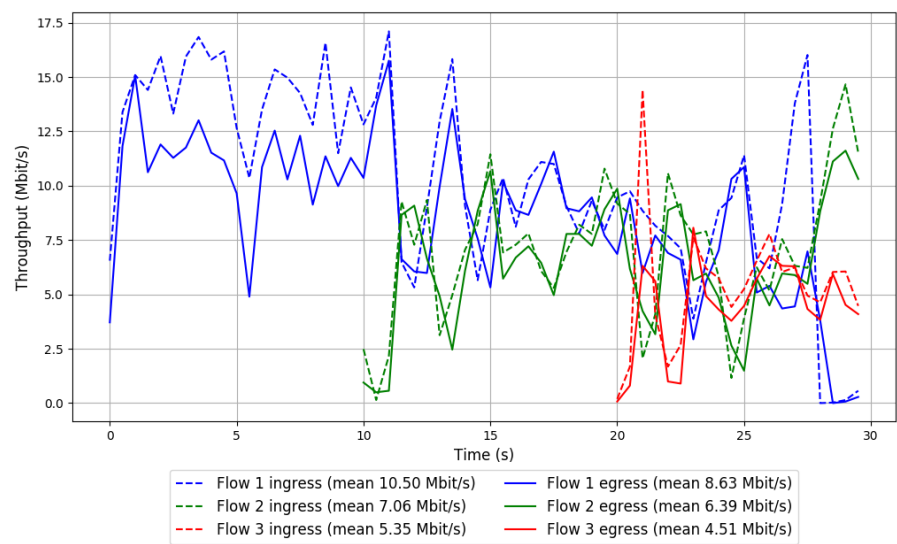Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-12-11 09:34:39
End at: 2017-12-11 09:35:09
Local clock offset: -5.444 ms
Remote clock offset: -1.936 ms


# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.31 Mbit/s
95th percentile per-packet one-way delay: 199.658 ms
Loss rate: 15.73%
-- Flow 1:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 195.701 ms
Loss rate: 17.99%
-- Flow 2:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 203.202 ms
Loss rate: 10.06%
-- Flow 3:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 208.091 ms
Loss rate: 17.45%
```

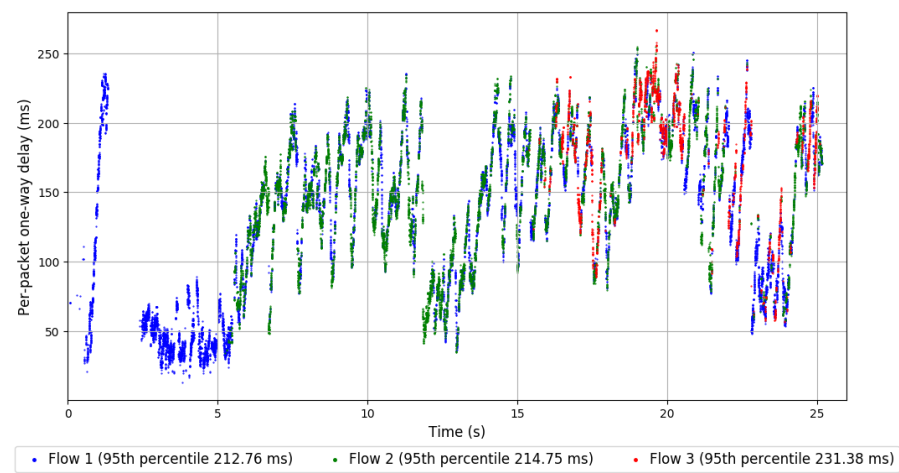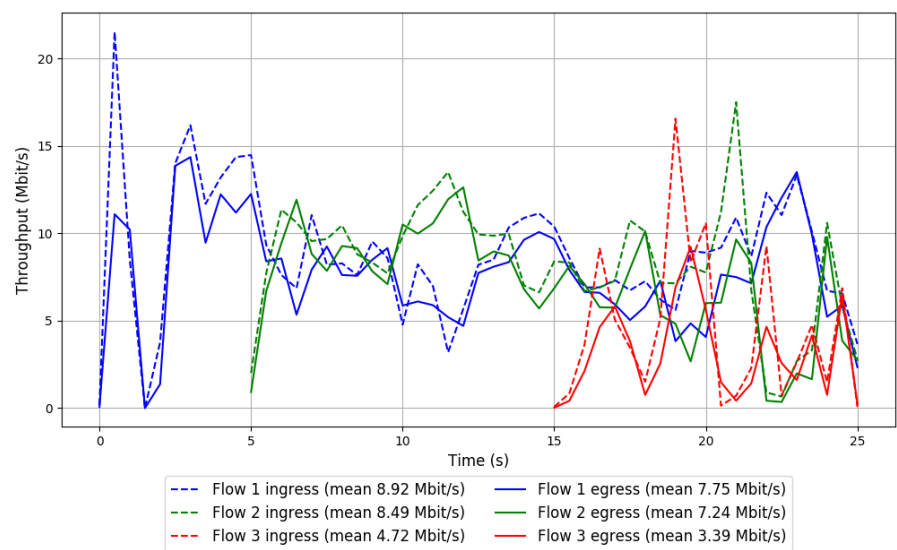Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-12-11 09:51:20
End at: 2017-12-11 09:51:50
Local clock offset: -5.902 ms
Remote clock offset: -1.475 ms

# Below is generated by plot.py at 2017-12-11 10:43:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 217.077 ms
Loss rate: 15.65%
-- Flow 1:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 212.758 ms
Loss rate: 13.34%
-- Flow 2:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 214.751 ms
Loss rate: 14.89%
-- Flow 3:
Average throughput: 3.39 Mbit/s
95th percentile per-packet one-way delay: 231.378 ms
Loss rate: 29.51%
```

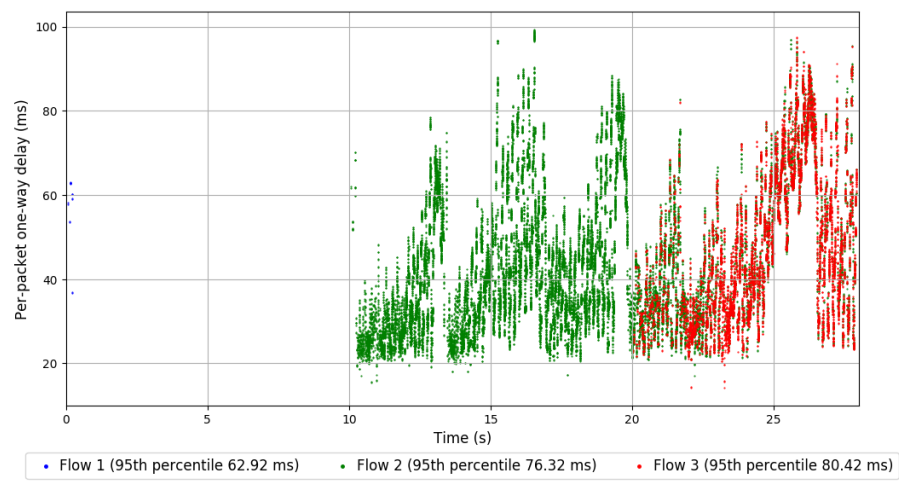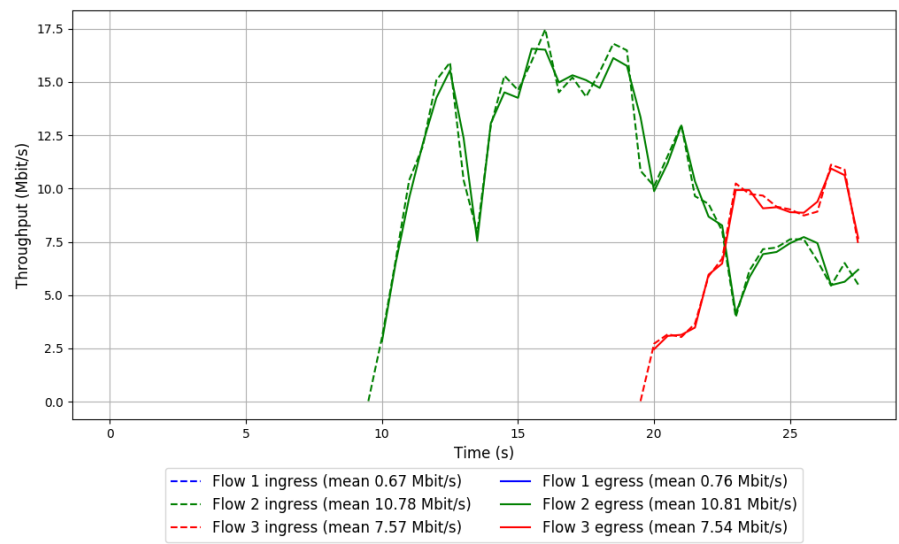## Run 3: Report of Verus — Data Link

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```
Run 1: Statistics of Copa

Start at: 2017-12-11 09:08:28
End at: 2017-12-11 09:08:58
Local clock offset: -4.956 ms
Remote clock offset: -2.237 ms


# Below is generated by plot.py at 2017-12-11 10:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 77.618 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 62.917 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 76.317 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 80.416 ms
Loss rate: 0.86%
```
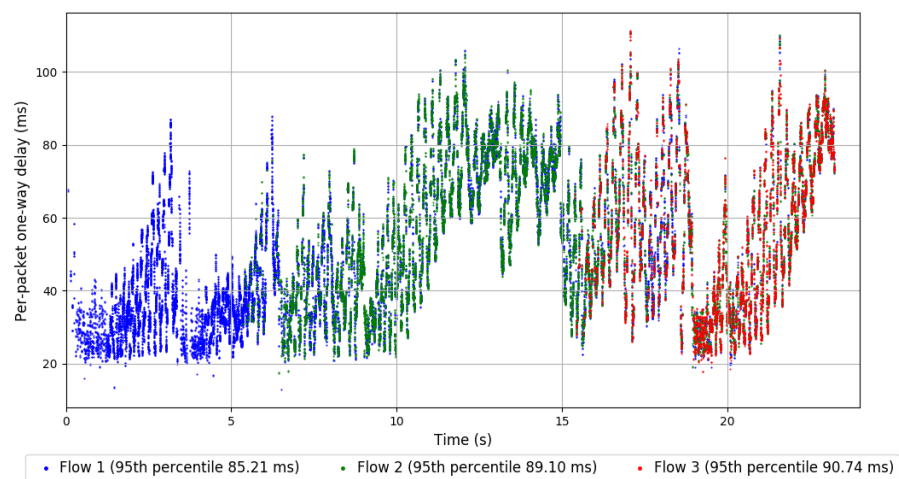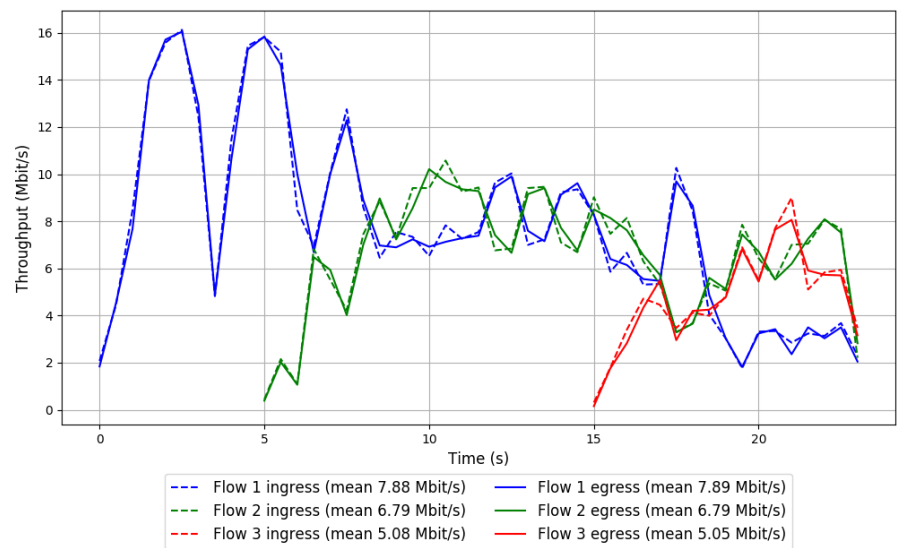
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 0.67 Mbit/s) --- Flow 1 egress (mean 0.76 Mbit/s)
Flow 2 ingress (mean 10.78 Mbit/s) --- Flow 2 egress (mean 10.81 Mbit/s)
Flow 3 ingress (mean 7.57 Mbit/s) --- Flow 3 egress (mean 7.54 Mbit/s)

Flow 1 (95th percentile 62.92 ms) · Flow 2 (95th percentile 76.32 ms) · Flow 3 (95th percentile 80.42 ms)

Run 2: Statistics of Copa

Start at: 2017-12-11 09:25:07
End at: 2017-12-11 09:25:37
Local clock offset: -6.235 ms
Remote clock offset: -2.137 ms

Run 2: Report of Copa — Data Link
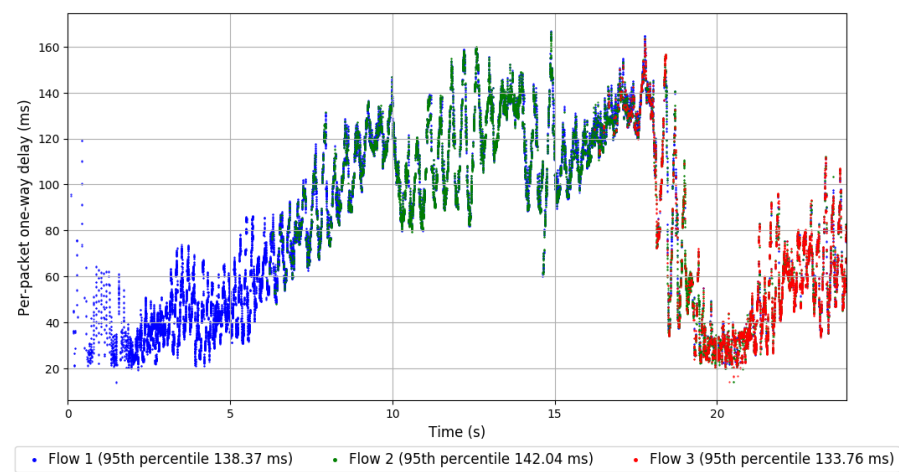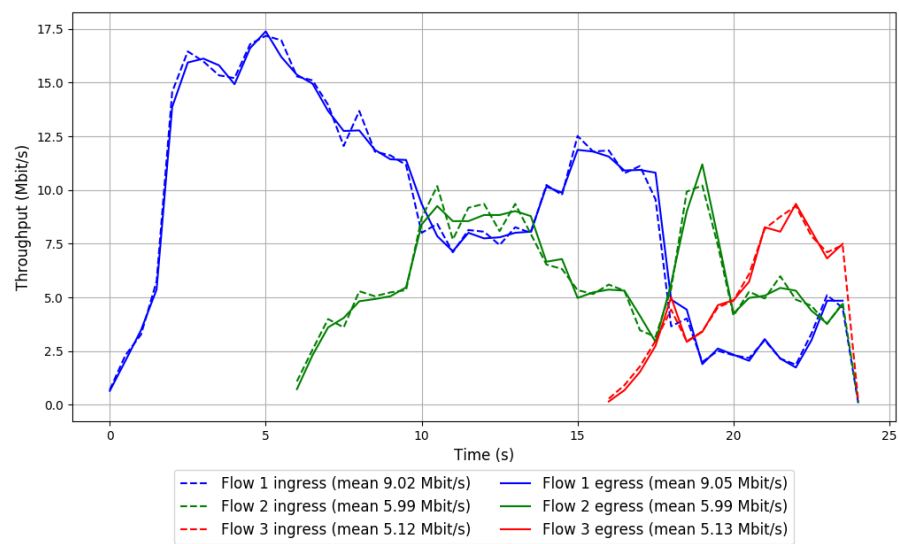
Run 3: Statistics of Copa

Start at: 2017-12-11 09:41:48
End at: 2017-12-11 09:42:18
Local clock offset: -5.367 ms
Remote clock offset: -1.722 ms
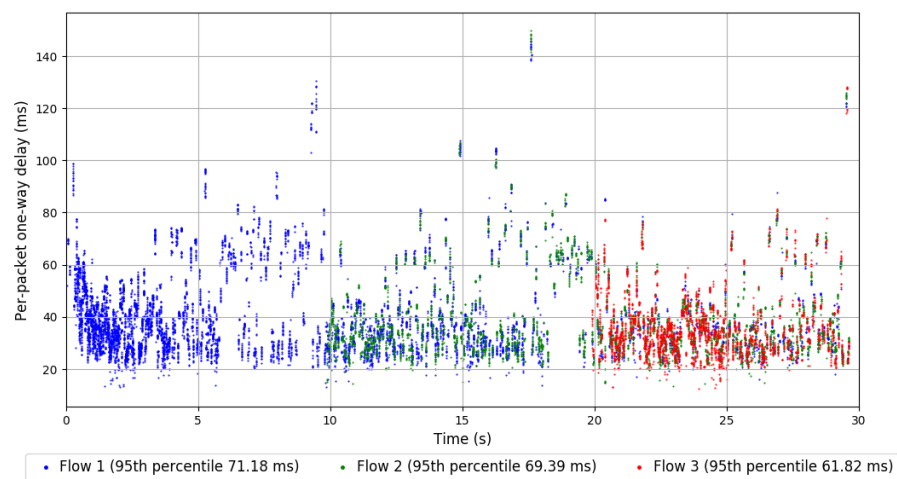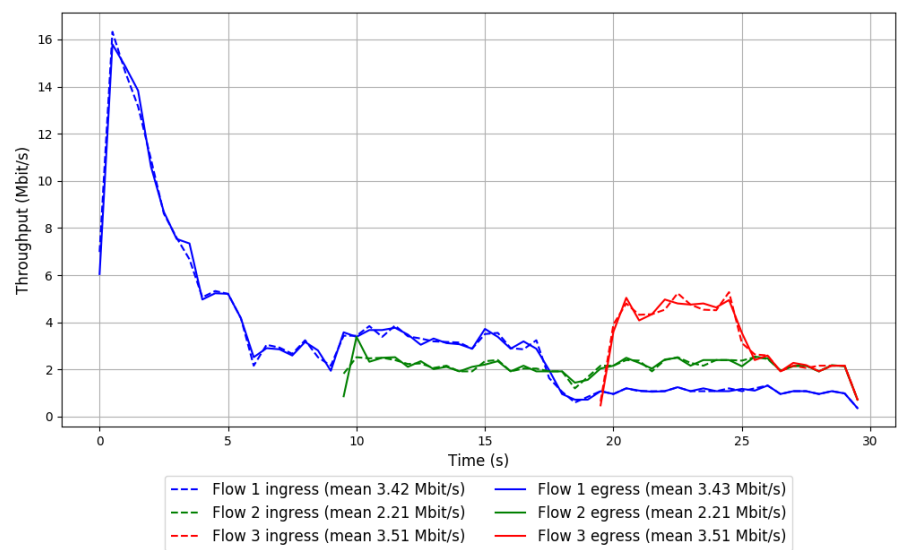
Run 3: Report of Copa — Data Link

```
Run 1: Statistics of Indigo

Start at: 2017-12-11 09:10:50
End at: 2017-12-11 09:11:20
Local clock offset: -4.696 ms
Remote clock offset: -2.086 ms

# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 69.354 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 3.43 Mbit/s
95th percentile per-packet one-way delay: 71.183 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 69.387 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 3.51 Mbit/s
95th percentile per-packet one-way delay: 61.818 ms
Loss rate: 0.35%
```
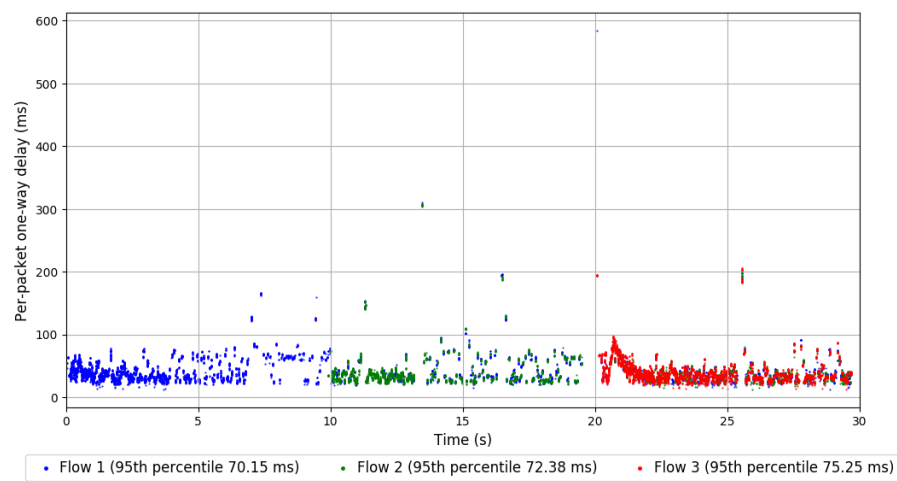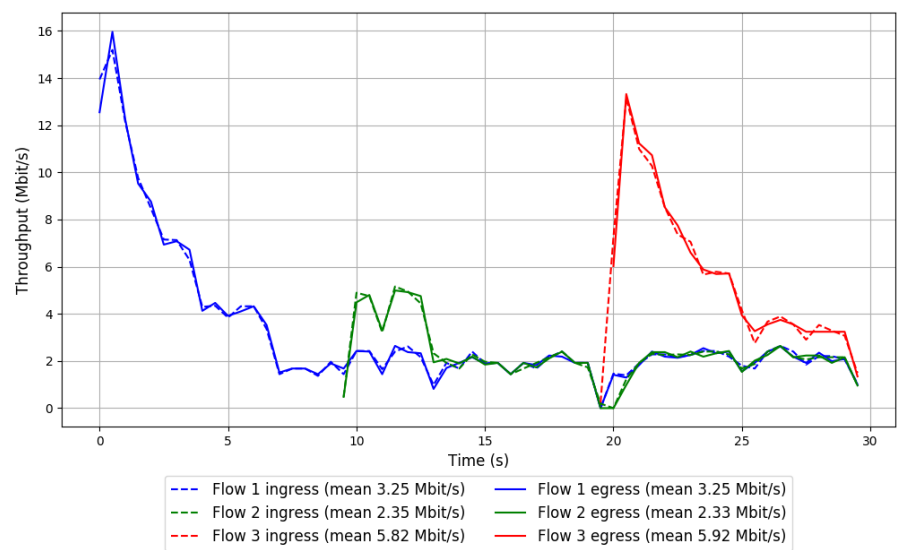
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-12-11 09:27:30
End at: 2017-12-11 09:28:00
Local clock offset: -5.79 ms
Remote clock offset: -2.082 ms

# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 72.553 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 3.25 Mbit/s
95th percentile per-packet one-way delay: 70.152 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 72.377 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 75.251 ms
Loss rate: 0.44%
```
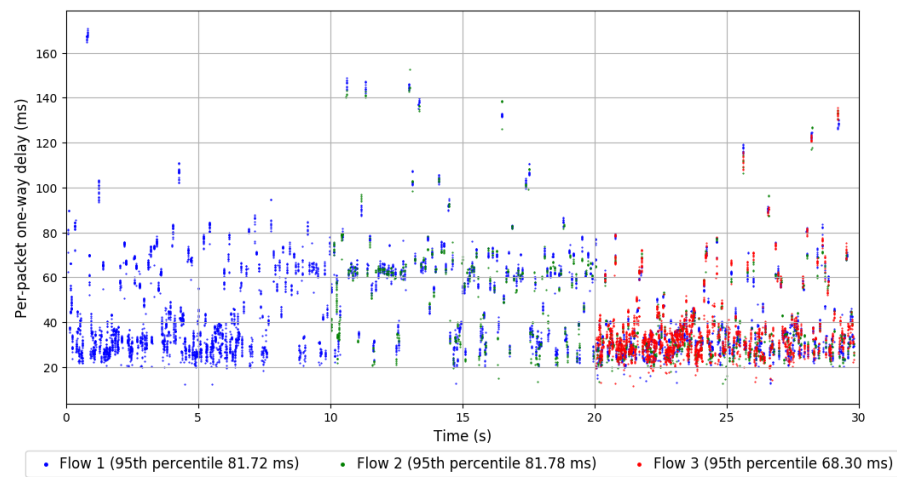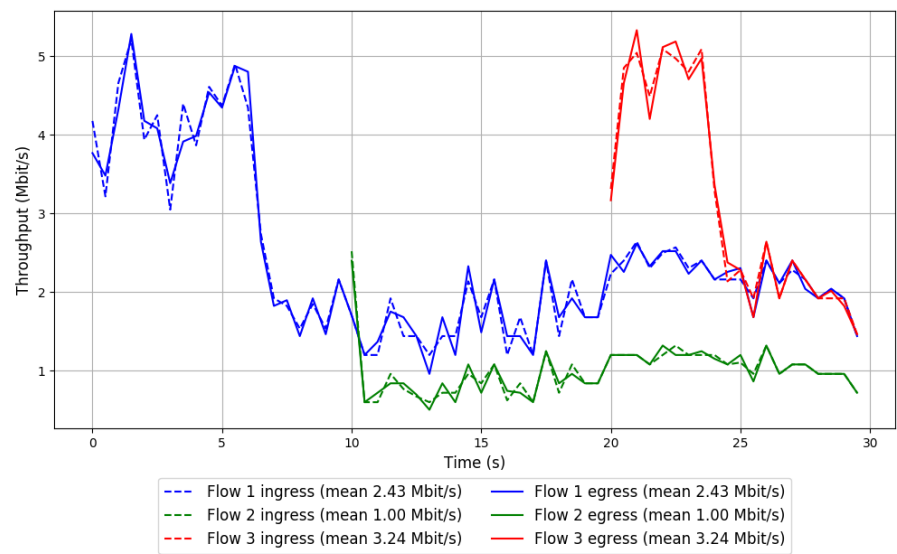
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-12-11 09:44:11
End at: 2017-12-11 09:44:41
Local clock offset: -5.349 ms
Remote clock offset: -1.567 ms


# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 78.350 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 81.724 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 81.783 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 68.297 ms
Loss rate: 0.38%
```

Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 2.43 Mbit/s) ——— Flow 1 egress (mean 2.43 Mbit/s)
Flow 2 ingress (mean 1.00 Mbit/s) ——— Flow 2 egress (mean 1.00 Mbit/s)
Flow 3 ingress (mean 3.24 Mbit/s) ——— Flow 3 egress (mean 3.24 Mbit/s)

• Flow 1 (95th percentile 81.72 ms)   • Flow 2 (95th percentile 81.78 ms)   • Flow 3 (95th percentile 68.30 ms)
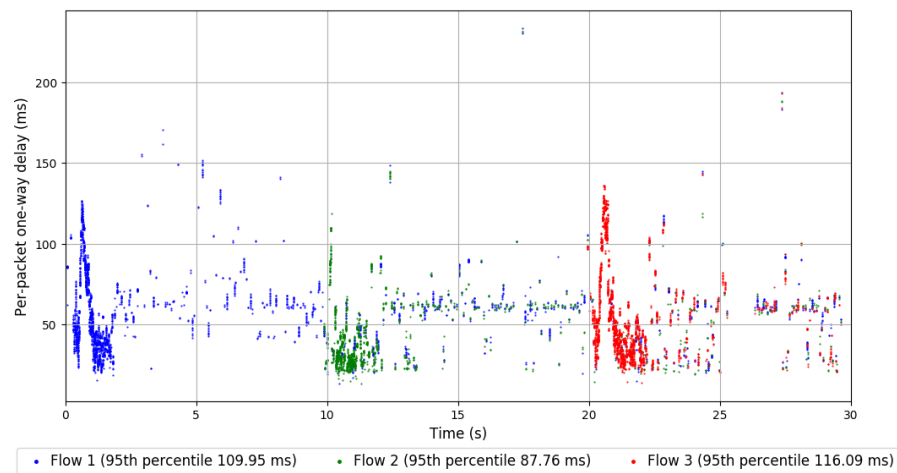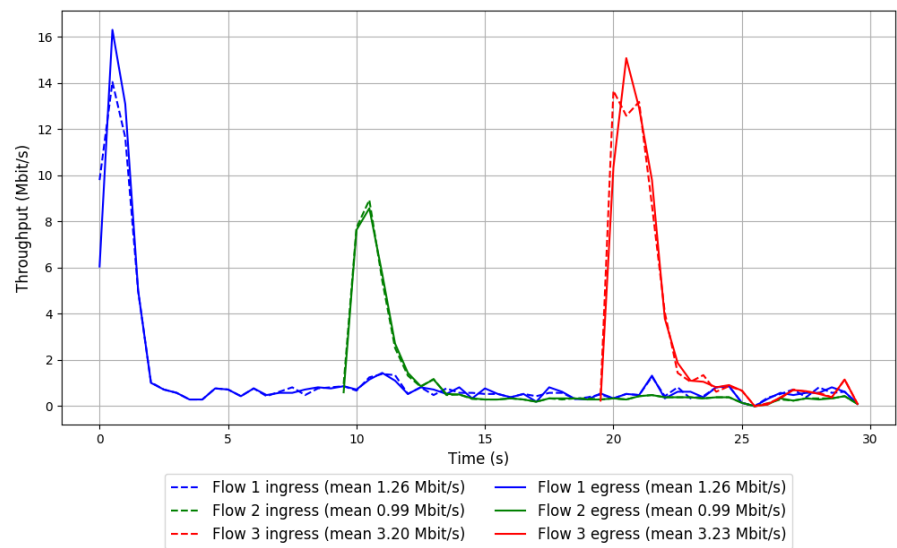
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```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-11 09:07:17
End at: 2017-12-11 09:07:47
Local clock offset: -4.976 ms
Remote clock offset: -2.294 ms

# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 110.388 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 109.955 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 87.757 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 3.23 Mbit/s
95th percentile per-packet one-way delay: 116.093 ms
Loss rate: 0.15%
```

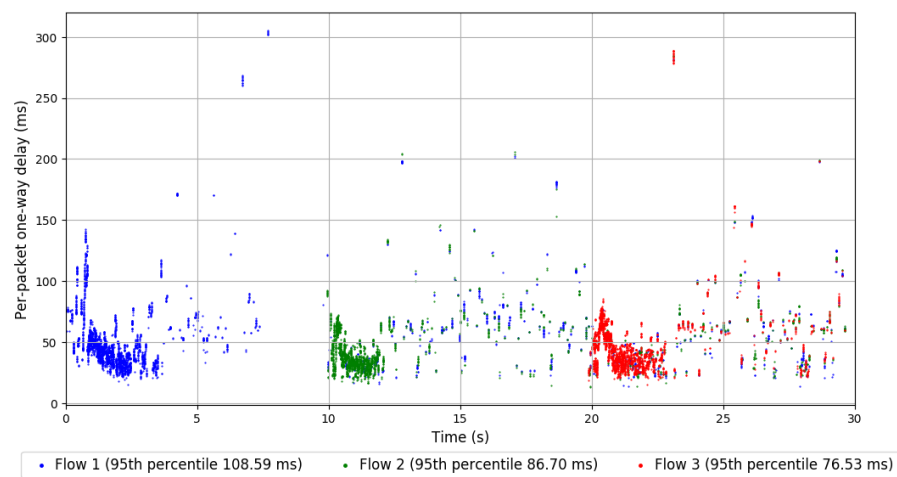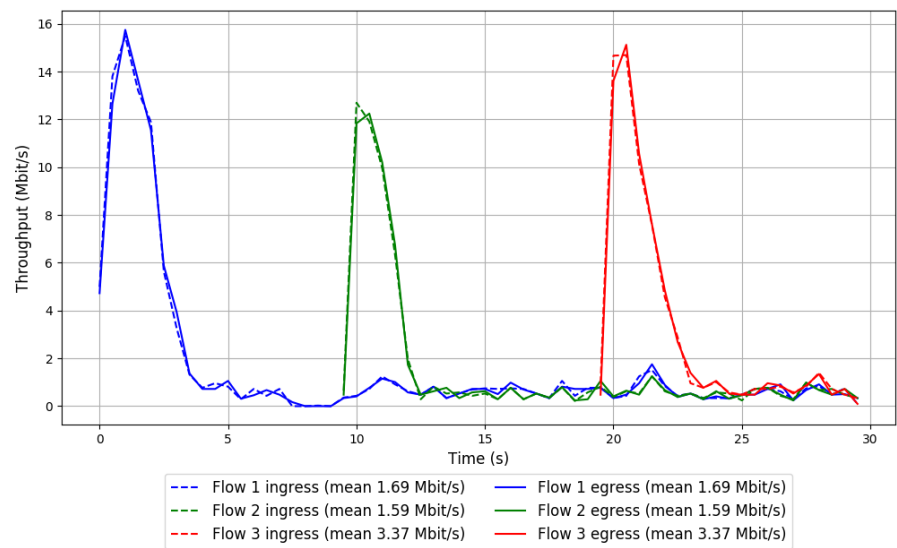Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-11 09:23:56
End at: 2017-12-11 09:24:26
Local clock offset: -6.019 ms
Remote clock offset: -2.147 ms

# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 100.206 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 108.592 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 86.697 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 3.37 Mbit/s
95th percentile per-packet one-way delay: 76.527 ms
Loss rate: 0.55%
```

Run 2: Report of Indigo-calib — Data Link

```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-11 09:40:36
End at: 2017-12-11 09:41:06
Local clock offset: -5.257 ms
Remote clock offset: -1.752 ms

# Below is generated by plot.py at 2017-12-11 10:44:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 82.893 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 76.424 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 90.272 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 70.050 ms
Loss rate: 0.26%
```

Run 3: Report of Indigo-calib — Data Link