Pantheon Report

Generated at 2018-01-02 13:40:42 (UTC).

Data path: AWS Brazil 1 Ethernet (*local*) →Brazil Ethernet (*remote*).

Repeated the test of 14 congestion control schemes 10 times.

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

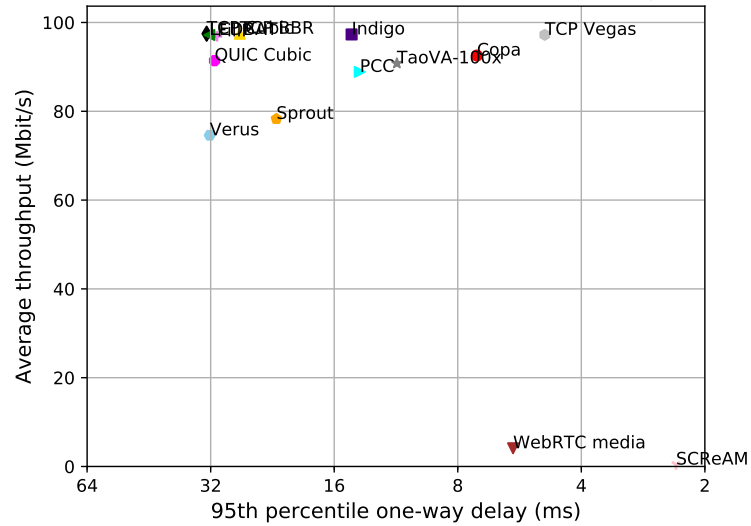Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

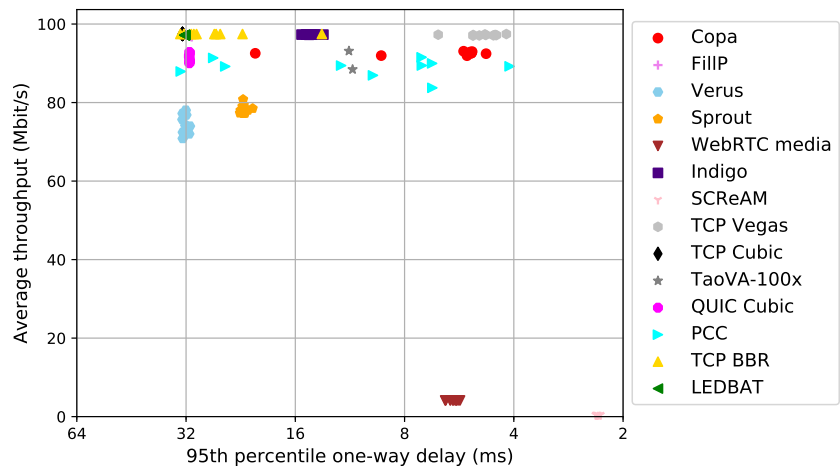NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ 904a5750834816b1e46a2c86405d707788d27c16
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ dcaef6b00654e660f73f7ed679d2eab61ce08639
third_party/genericCC @ 80b516c448f795fd6e9675f7177b69c622f07da8
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ fb1053193c2861da659ba9013db26744ccfcf993
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 AWS Brazil 1 Ethernet to Brazil Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

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

2

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	63.24	42.31	18.27	28.10	24.48	28.37	0.07	0.00	0.03
TCP Cubic	10	64.04	36.40	27.83	32.64	32.77	32.88	0.03	0.08	0.11
LEDBAT	10	62.88	36.80	29.67	32.20	32.41	32.44	0.03	0.06	0.09
PCC	10	69.25	22.25	14.66	10.27	13.77	13.90	0.06	0.11	0.15
QUIC Cubic	10	57.78	36.11	29.41	31.23	31.38	31.39	0.12	0.22	0.20
SCReAM	10	0.22	0.22	0.22	2.35	2.35	2.36	0.00	0.00	0.00
WebRTC media	10	2.32	1.44	0.35	5.57	5.90	7.06	0.00	0.00	0.06
Sprout	10	42.75	37.92	31.20	20.98	21.81	23.91	0.00	0.00	0.00
TaoVA-100x	2	51.05	49.41	28.31	10.59	11.61	20.12	0.08	0.01	0.42
TCP Vegas	10	48.54	45.85	54.67	6.77	4.53	4.67	0.00	0.00	0.00
Verus	9	45.49	30.48	27.25	30.51	32.52	32.81	9.49	19.49	31.74
Copa	10	58.76	40.30	28.84	5.46	7.35	10.46	0.00	0.00	0.00
FillP	10	58.64	40.35	34.40	30.86	30.89	30.90	17.19	24.07	31.23
Indigo	10	56.18	42.42	39.68	13.75	14.61	16.87	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-01-02 10:17:01
End at: 2018-01-02 10:17:31
Local clock offset: -0.381 ms
Remote clock offset: 0.698 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 26.446 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.80 Mbit/s
95th percentile per-packet one-way delay: 26.467 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.78 Mbit/s
95th percentile per-packet one-way delay: 25.492 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 26.635 ms
Loss rate: 0.00%
```
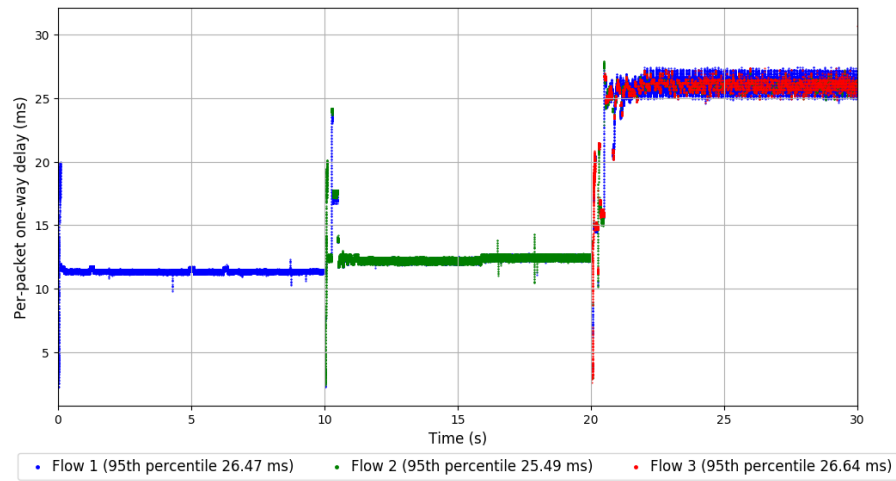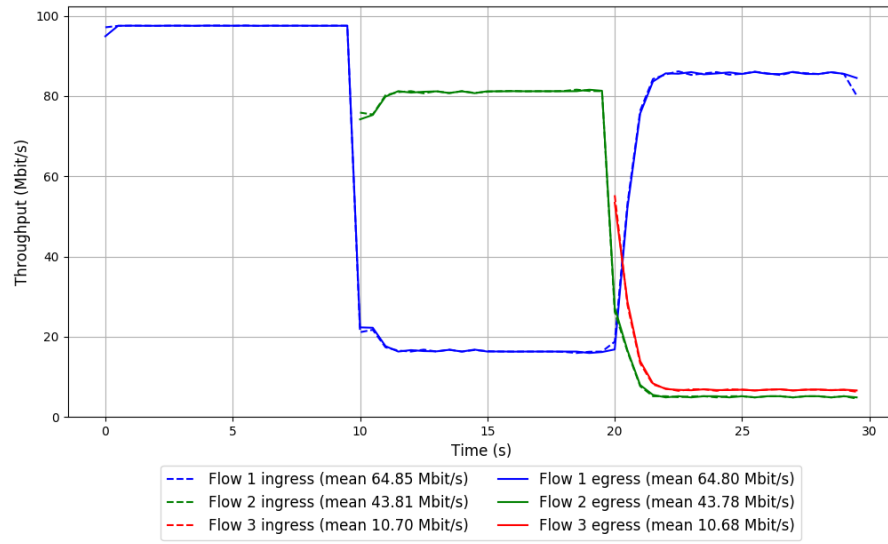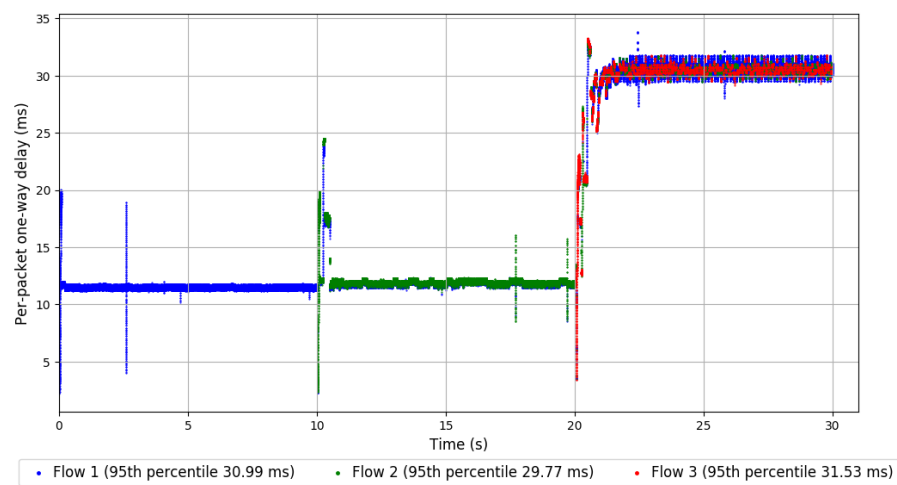
Run 1: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 64.85 Mbit/s) —— Flow 1 egress (mean 64.80 Mbit/s)
- - - Flow 2 ingress (mean 43.81 Mbit/s) —— Flow 2 egress (mean 43.78 Mbit/s)
- - - Flow 3 ingress (mean 10.70 Mbit/s) —— Flow 3 egress (mean 10.68 Mbit/s)

• Flow 1 (95th percentile 26.47 ms)   • Flow 2 (95th percentile 25.49 ms)   • Flow 3 (95th percentile 26.64 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2018-01-02 10:34:05
End at: 2018-01-02 10:34:35
Local clock offset: -0.408 ms
Remote clock offset: 0.678 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 30.965 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.32 Mbit/s
95th percentile per-packet one-way delay: 30.990 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 29.766 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.10 Mbit/s
95th percentile per-packet one-way delay: 31.534 ms
Loss rate: 0.01%
```
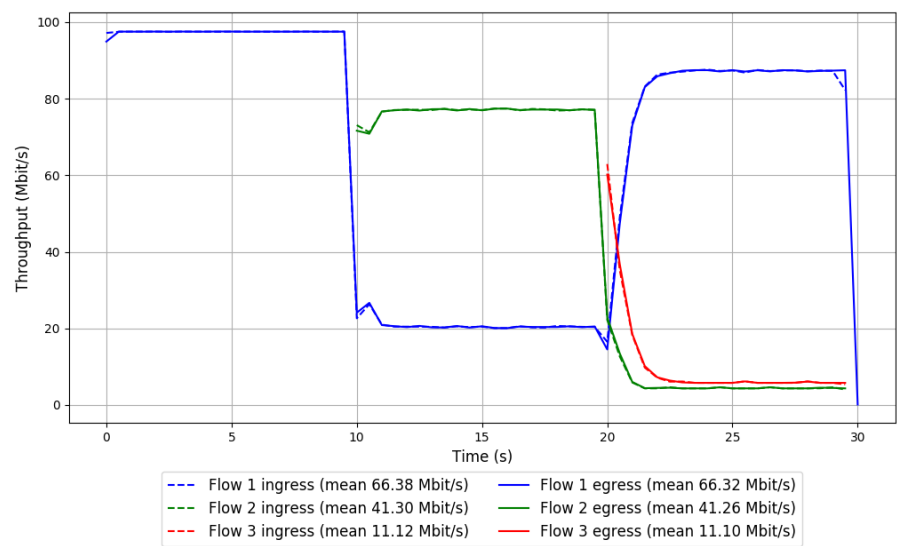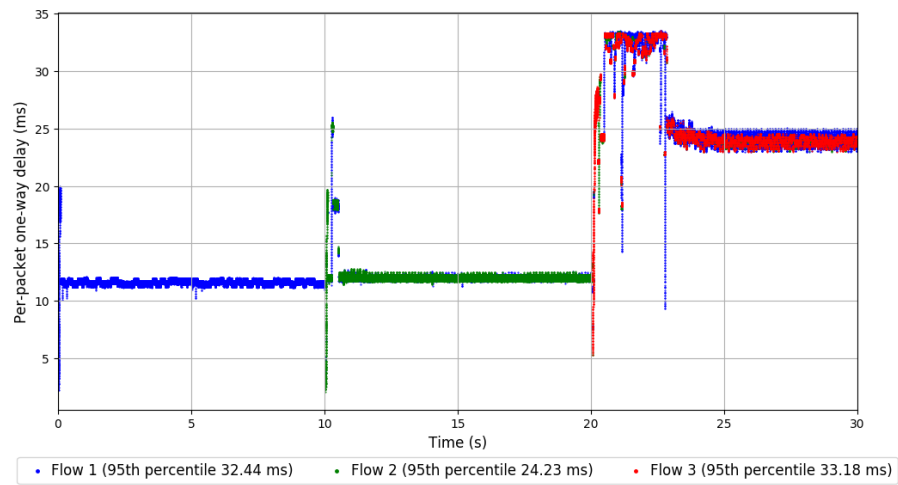
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 66.38 Mbit/s) --- Flow 1 egress (mean 66.32 Mbit/s)
Flow 2 ingress (mean 41.30 Mbit/s) --- Flow 2 egress (mean 41.26 Mbit/s)
Flow 3 ingress (mean 11.12 Mbit/s) --- Flow 3 egress (mean 11.10 Mbit/s)

Flow 1 (95th percentile 30.99 ms)   Flow 2 (95th percentile 29.77 ms)   Flow 3 (95th percentile 31.53 ms)

7

```
Run 3: Statistics of TCP BBR

Start at: 2018-01-02 10:51:09
End at: 2018-01-02 10:51:39
Local clock offset: -0.426 ms
Remote clock offset: 0.614 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 32.421 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 65.44 Mbit/s
95th percentile per-packet one-way delay: 32.438 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 36.89 Mbit/s
95th percentile per-packet one-way delay: 24.228 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 22.54 Mbit/s
95th percentile per-packet one-way delay: 33.176 ms
Loss rate: 0.05%
```
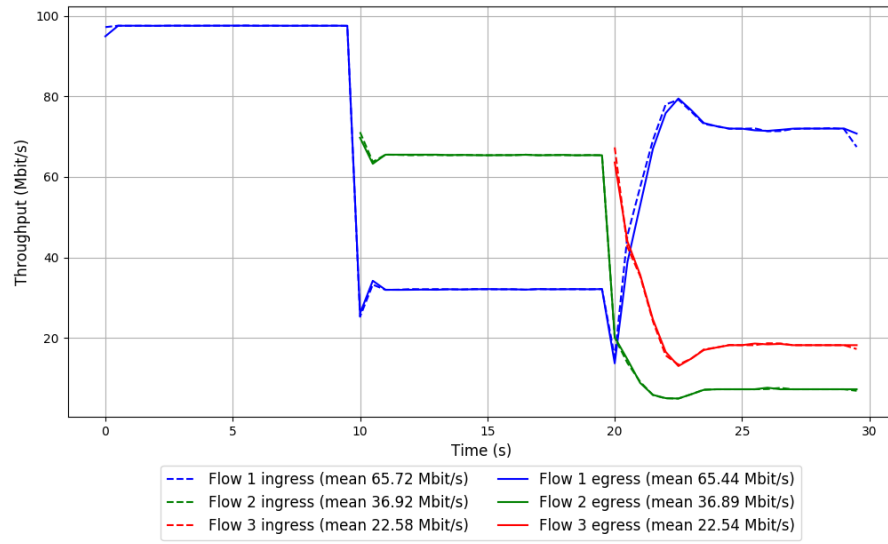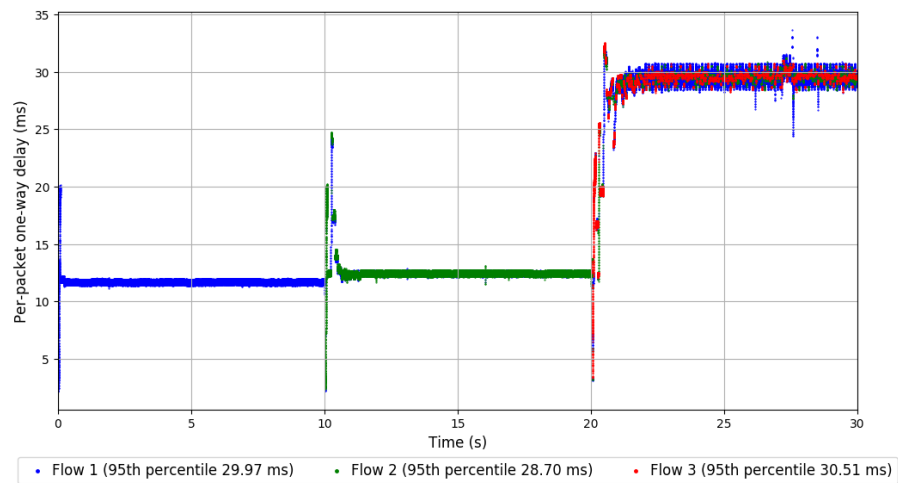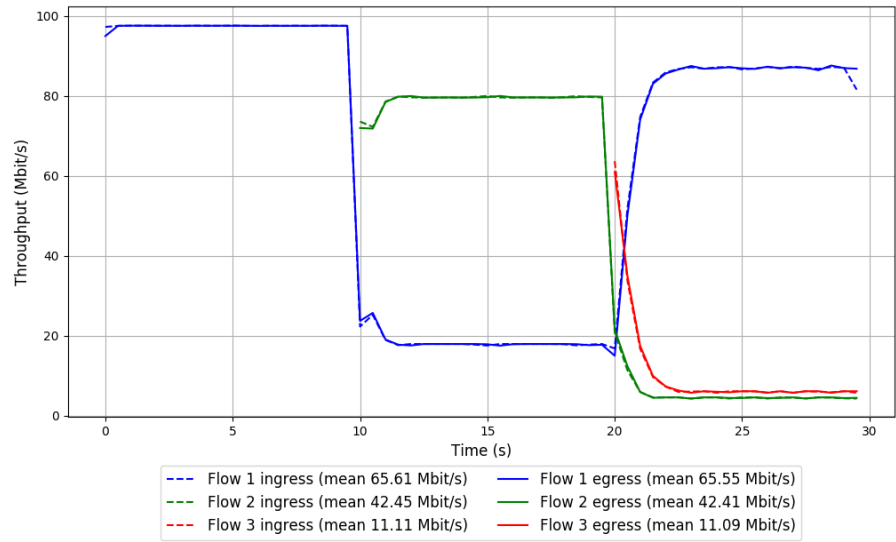
Run 3: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 65.72 Mbit/s) —— Flow 1 egress (mean 65.44 Mbit/s)
- - - Flow 2 ingress (mean 36.92 Mbit/s) —— Flow 2 egress (mean 36.89 Mbit/s)
- - - Flow 3 ingress (mean 22.58 Mbit/s) —— Flow 3 egress (mean 22.54 Mbit/s)

• Flow 1 (95th percentile 32.44 ms)   • Flow 2 (95th percentile 24.23 ms)   • Flow 3 (95th percentile 33.18 ms)

9

```
Run 4: Statistics of TCP BBR

Start at: 2018-01-02 11:08:14
End at: 2018-01-02 11:08:44
Local clock offset: -0.471 ms
Remote clock offset: 0.539 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 29.943 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.55 Mbit/s
95th percentile per-packet one-way delay: 29.966 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.41 Mbit/s
95th percentile per-packet one-way delay: 28.705 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.09 Mbit/s
95th percentile per-packet one-way delay: 30.512 ms
Loss rate: 0.00%
```
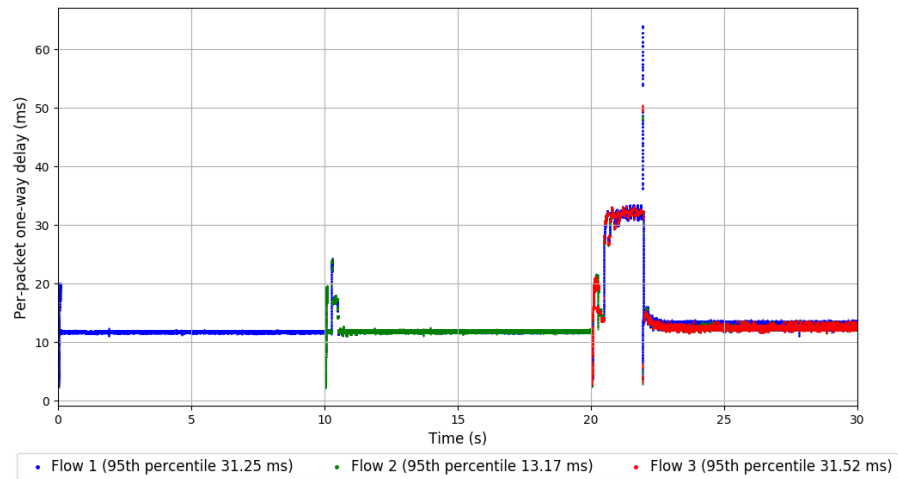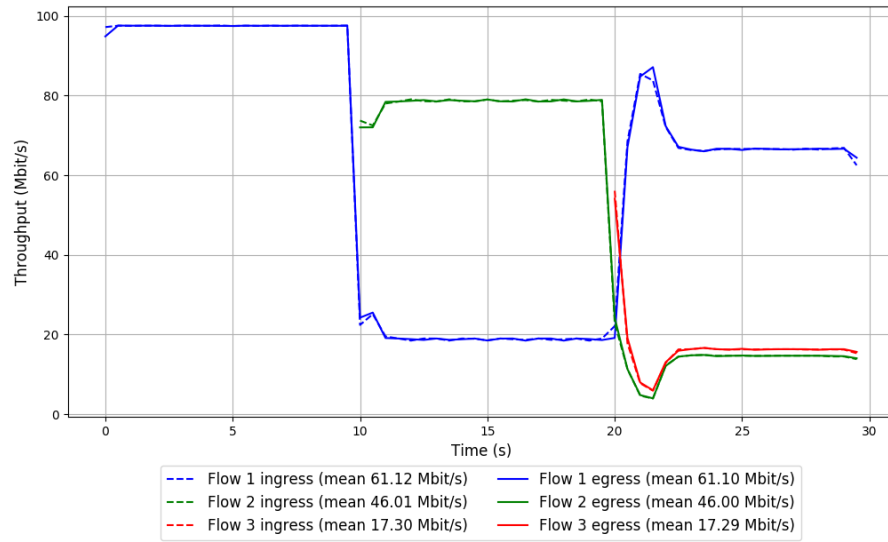
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 65.61 Mbit/s) --- Flow 1 egress (mean 65.55 Mbit/s)
Flow 2 ingress (mean 42.45 Mbit/s) --- Flow 2 egress (mean 42.41 Mbit/s)
Flow 3 ingress (mean 11.11 Mbit/s) --- Flow 3 egress (mean 11.09 Mbit/s)

Flow 1 (95th percentile 29.97 ms)   Flow 2 (95th percentile 28.70 ms)   Flow 3 (95th percentile 30.51 ms)

11

```
Run 5: Statistics of TCP BBR

Start at: 2018-01-02 11:25:19
End at: 2018-01-02 11:25:49
Local clock offset: -0.494 ms
Remote clock offset: 0.556 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 22.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.10 Mbit/s
95th percentile per-packet one-way delay: 31.253 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.00 Mbit/s
95th percentile per-packet one-way delay: 13.173 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.29 Mbit/s
95th percentile per-packet one-way delay: 31.524 ms
Loss rate: 0.00%
```
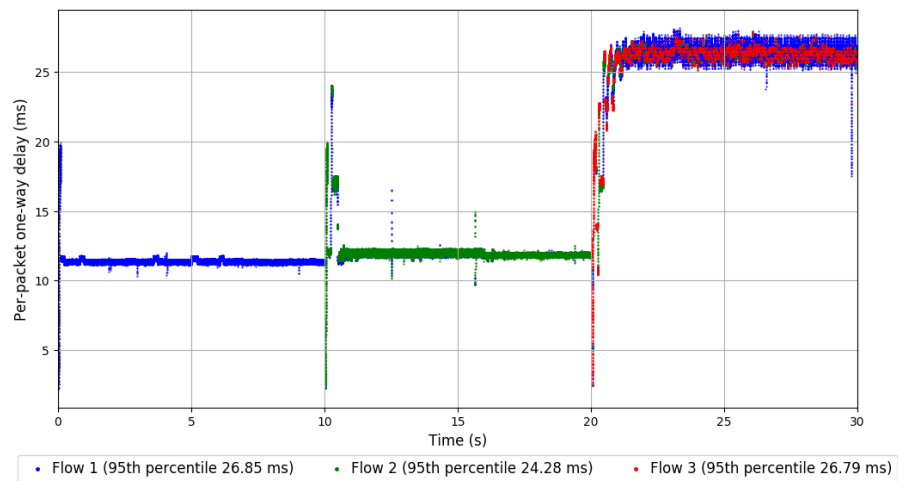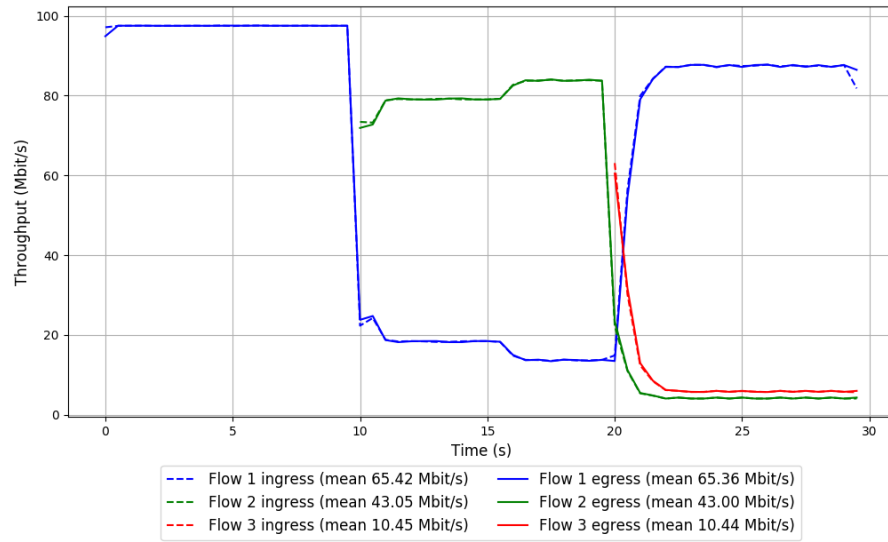
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 61.12 Mbit/s) --- Flow 1 egress (mean 61.10 Mbit/s)
Flow 2 ingress (mean 46.01 Mbit/s) --- Flow 2 egress (mean 46.00 Mbit/s)
Flow 3 ingress (mean 17.30 Mbit/s) --- Flow 3 egress (mean 17.29 Mbit/s)

• Flow 1 (95th percentile 31.25 ms) • Flow 2 (95th percentile 13.17 ms) • Flow 3 (95th percentile 31.52 ms)

13

```
Run 6: Statistics of TCP BBR

Start at: 2018-01-02 11:42:24
End at: 2018-01-02 11:42:54
Local clock offset: -0.373 ms
Remote clock offset: 0.53 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 26.740 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.36 Mbit/s
95th percentile per-packet one-way delay: 26.849 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.00 Mbit/s
95th percentile per-packet one-way delay: 24.277 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.44 Mbit/s
95th percentile per-packet one-way delay: 26.787 ms
Loss rate: 0.00%
```
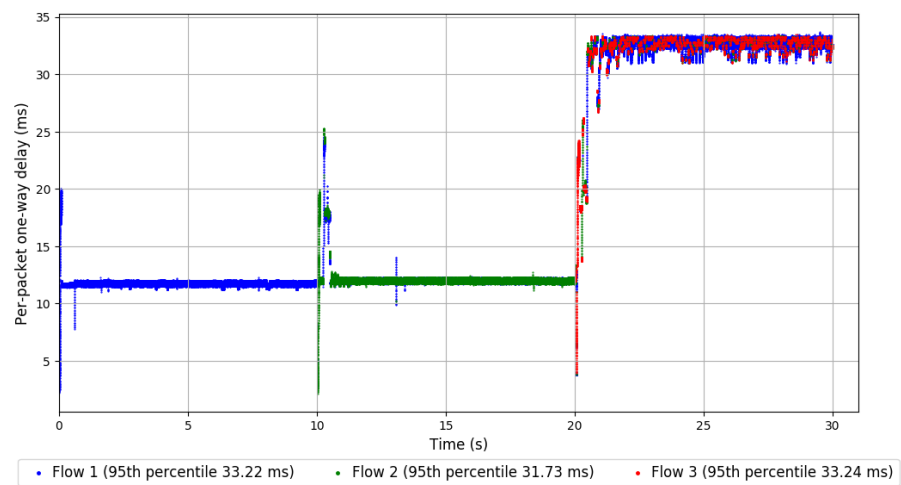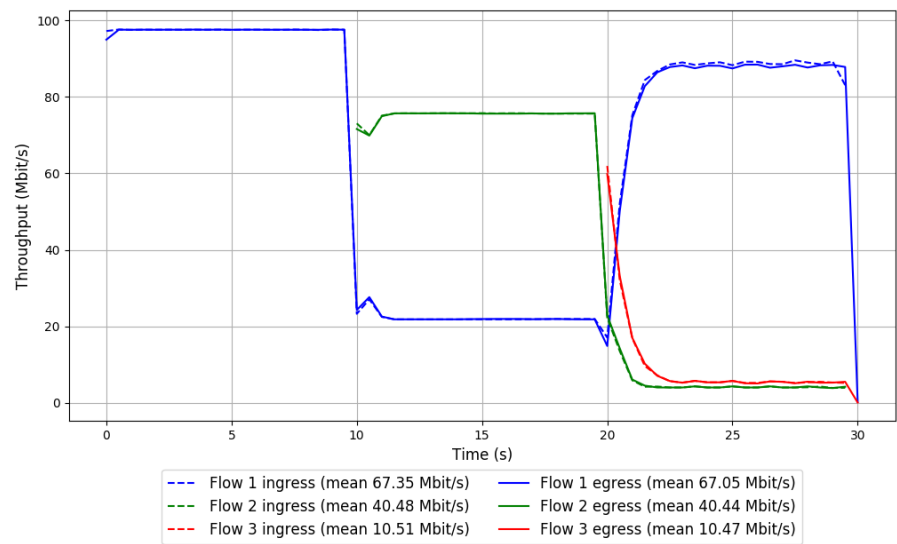
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 65.42 Mbit/s) --- Flow 1 egress (mean 65.36 Mbit/s)
Flow 2 ingress (mean 43.05 Mbit/s) --- Flow 2 egress (mean 43.00 Mbit/s)
Flow 3 ingress (mean 10.45 Mbit/s) --- Flow 3 egress (mean 10.44 Mbit/s)

Flow 1 (95th percentile 26.85 ms)   Flow 2 (95th percentile 24.28 ms)   Flow 3 (95th percentile 26.79 ms)

15

```
Run 7: Statistics of TCP BBR

Start at: 2018-01-02 11:59:29
End at: 2018-01-02 11:59:59
Local clock offset: -0.361 ms
Remote clock offset: 0.509 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 33.182 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 67.05 Mbit/s
95th percentile per-packet one-way delay: 33.219 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 31.726 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.47 Mbit/s
95th percentile per-packet one-way delay: 33.244 ms
Loss rate: 0.20%
```
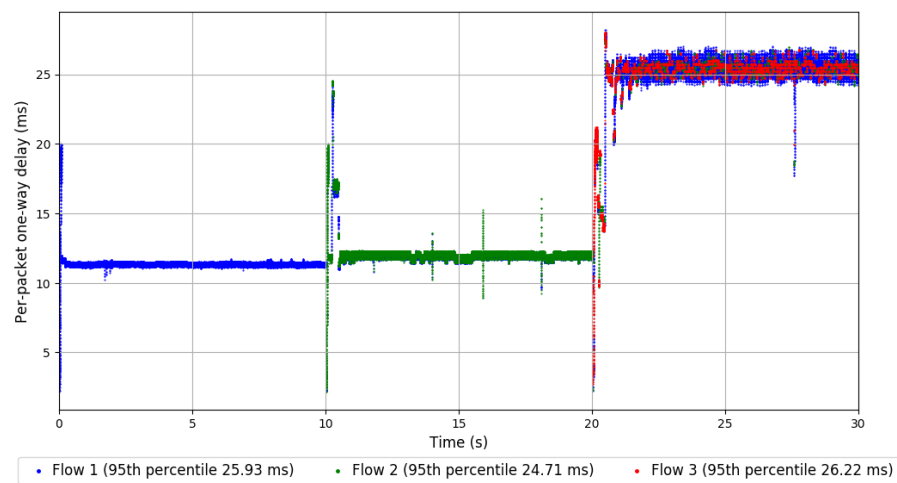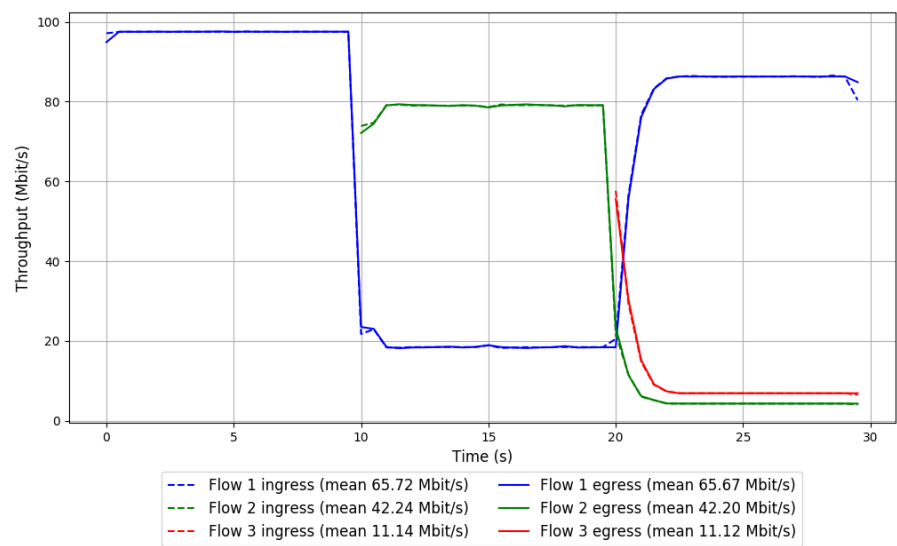
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 67.35 Mbit/s) --- Flow 1 egress (mean 67.05 Mbit/s)
Flow 2 ingress (mean 40.48 Mbit/s) --- Flow 2 egress (mean 40.44 Mbit/s)
Flow 3 ingress (mean 10.51 Mbit/s) --- Flow 3 egress (mean 10.47 Mbit/s)

Flow 1 (95th percentile 33.22 ms)   Flow 2 (95th percentile 31.73 ms)   Flow 3 (95th percentile 33.24 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2018-01-02 12:16:37
End at: 2018-01-02 12:17:07
Local clock offset: -0.321 ms
Remote clock offset: 0.43 ms


# Below is generated by plot.py at 2018-01-02 13:18:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 25.760 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.67 Mbit/s
95th percentile per-packet one-way delay: 25.927 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.20 Mbit/s
95th percentile per-packet one-way delay: 24.712 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 26.222 ms
Loss rate: 0.00%
```
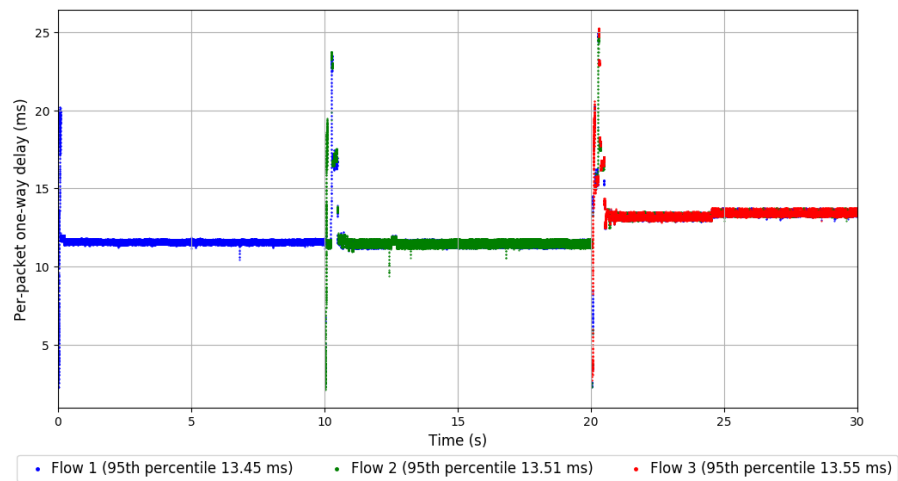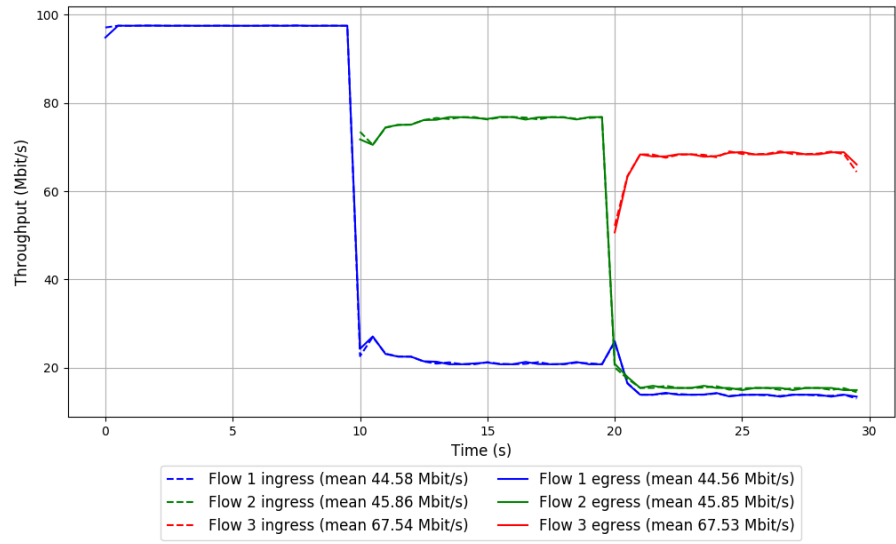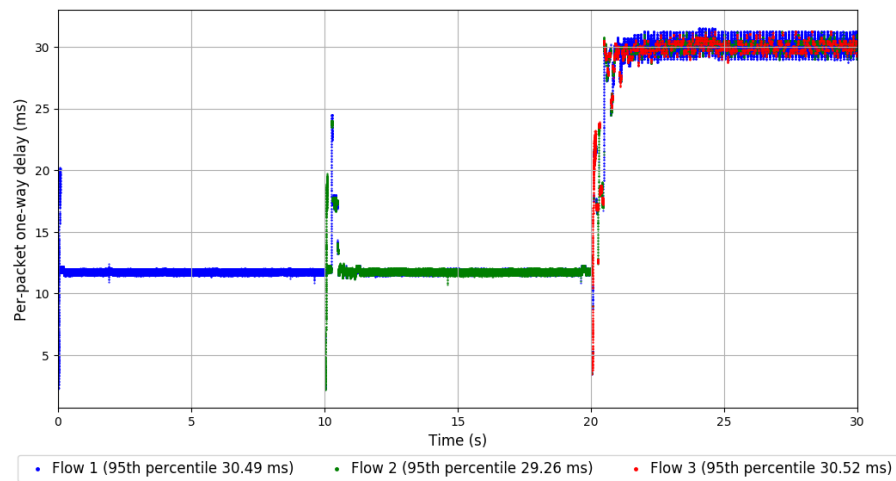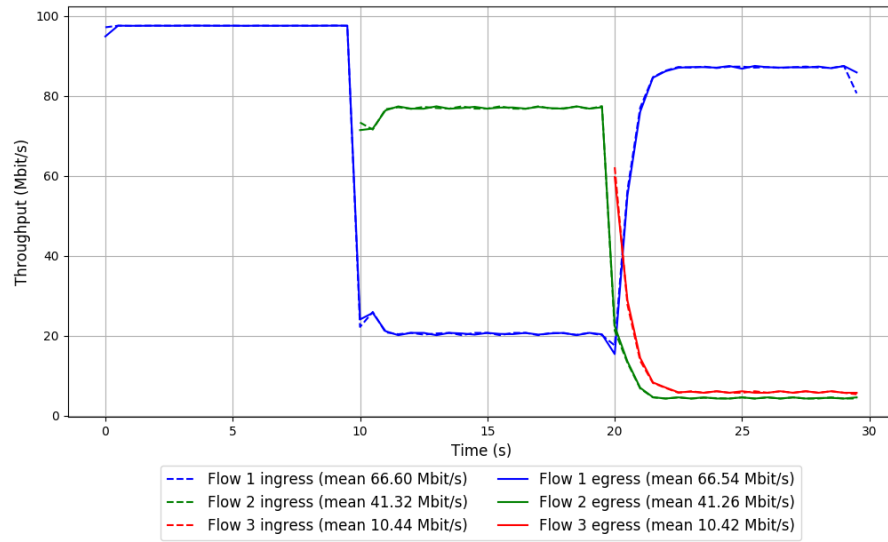
Run 8: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 65.72 Mbit/s)   —— Flow 1 egress (mean 65.67 Mbit/s)
- - - Flow 2 ingress (mean 42.24 Mbit/s)   —— Flow 2 egress (mean 42.20 Mbit/s)
- - - Flow 3 ingress (mean 11.14 Mbit/s)   —— Flow 3 egress (mean 11.12 Mbit/s)

• Flow 1 (95th percentile 25.93 ms)   • Flow 2 (95th percentile 24.71 ms)   • Flow 3 (95th percentile 26.22 ms)

```
Run 9: Statistics of TCP BBR

Start at: 2018-01-02 12:33:42
End at: 2018-01-02 12:34:12
Local clock offset: -0.327 ms
Remote clock offset: 0.343 ms

# Below is generated by plot.py at 2018-01-02 13:20:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 13.521 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.56 Mbit/s
95th percentile per-packet one-way delay: 13.453 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.85 Mbit/s
95th percentile per-packet one-way delay: 13.506 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 67.53 Mbit/s
95th percentile per-packet one-way delay: 13.551 ms
Loss rate: 0.00%
```
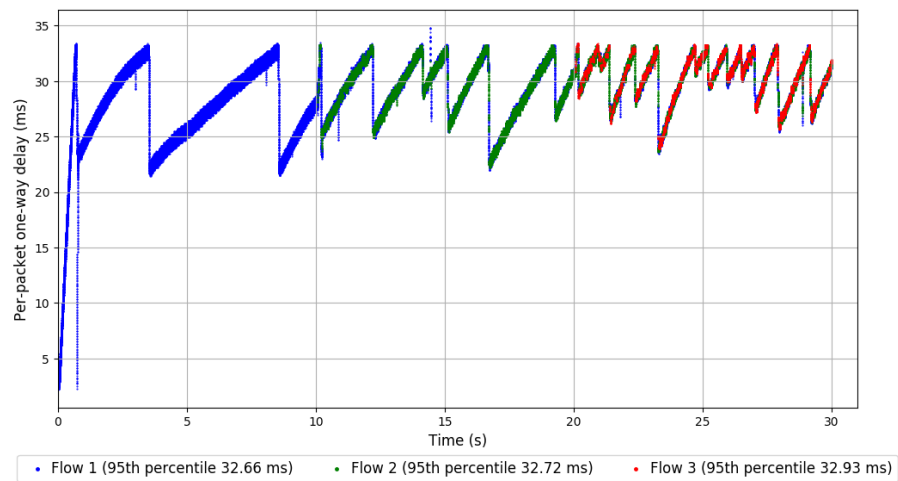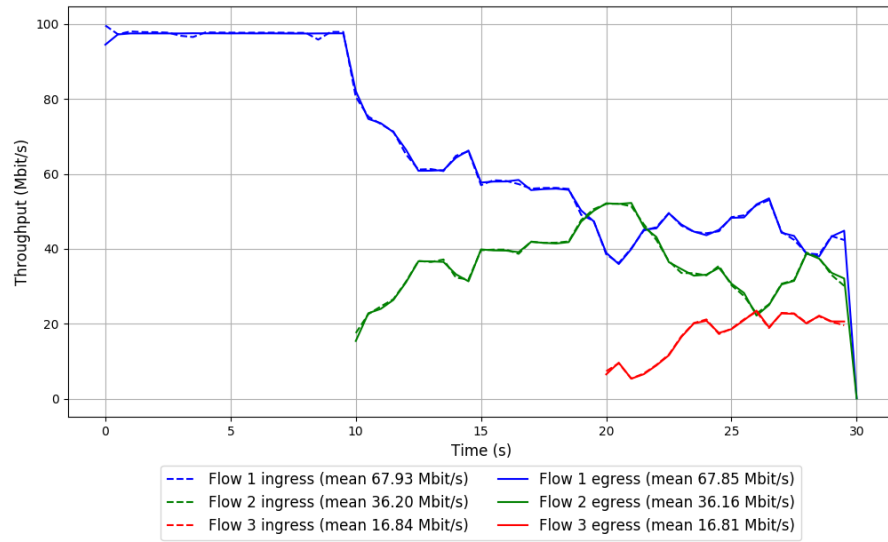
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 44.58 Mbit/s) — Flow 1 egress (mean 44.56 Mbit/s)
Flow 2 ingress (mean 45.86 Mbit/s) — Flow 2 egress (mean 45.85 Mbit/s)
Flow 3 ingress (mean 67.54 Mbit/s) — Flow 3 egress (mean 67.53 Mbit/s)

Flow 1 (95th percentile 13.45 ms)   Flow 2 (95th percentile 13.51 ms)   Flow 3 (95th percentile 13.55 ms)

21

```
Run 10: Statistics of TCP BBR

Start at: 2018-01-02 12:50:50
End at: 2018-01-02 12:51:20
Local clock offset: -0.303 ms
Remote clock offset: 0.239 ms


# Below is generated by plot.py at 2018-01-02 13:20:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 30.467 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 66.54 Mbit/s
95th percentile per-packet one-way delay: 30.487 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 29.260 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.42 Mbit/s
95th percentile per-packet one-way delay: 30.525 ms
Loss rate: 0.00%
```
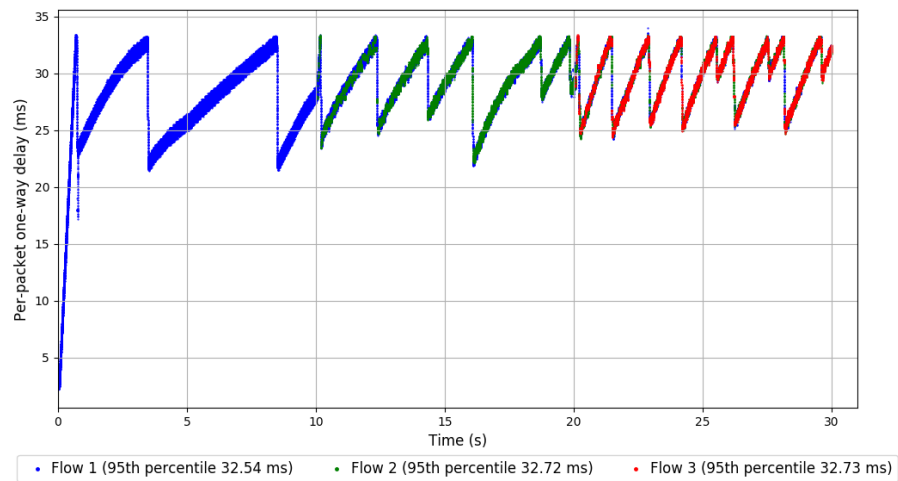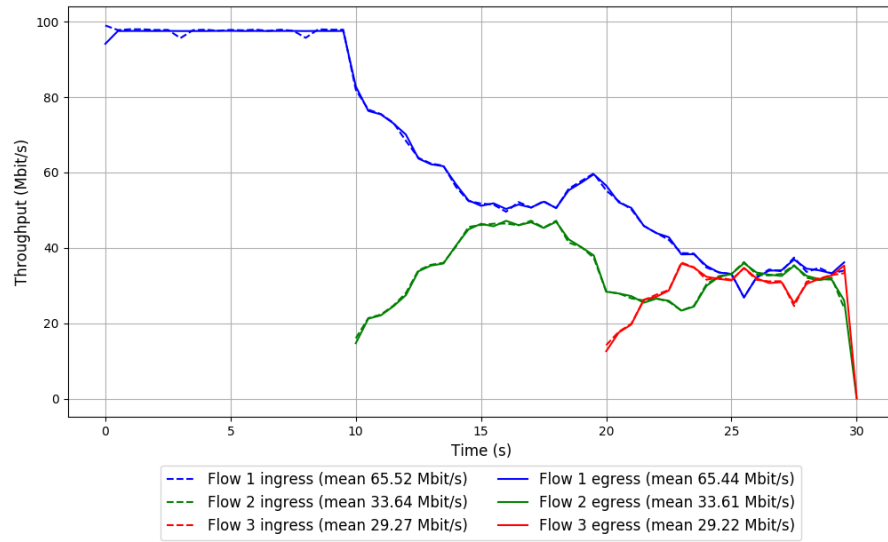
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 66.60 Mbit/s) --- Flow 1 egress (mean 66.54 Mbit/s)
Flow 2 ingress (mean 41.32 Mbit/s) --- Flow 2 egress (mean 41.26 Mbit/s)
Flow 3 ingress (mean 10.44 Mbit/s) --- Flow 3 egress (mean 10.42 Mbit/s)

Flow 1 (95th percentile 30.49 ms)   Flow 2 (95th percentile 29.26 ms)   Flow 3 (95th percentile 30.52 ms)

23

```
Run 1: Statistics of TCP Cubic

Start at: 2018-01-02 10:09:05
End at: 2018-01-02 10:09:35
Local clock offset: -0.358 ms
Remote clock offset: 0.748 ms

# Below is generated by plot.py at 2018-01-02 13:20:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 32.699 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 67.85 Mbit/s
95th percentile per-packet one-way delay: 32.662 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 36.16 Mbit/s
95th percentile per-packet one-way delay: 32.724 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 16.81 Mbit/s
95th percentile per-packet one-way delay: 32.933 ms
Loss rate: 0.16%
```
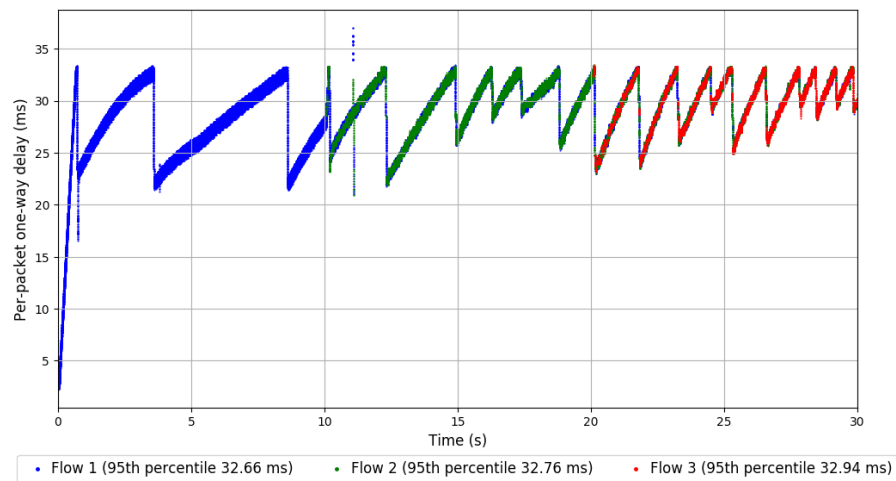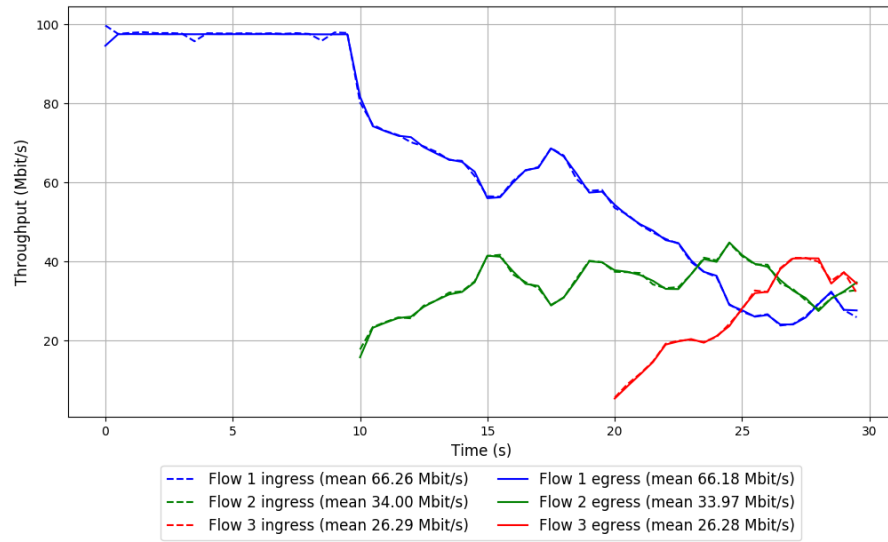
Run 1: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 67.93 Mbit/s)   —— Flow 1 egress (mean 67.85 Mbit/s)
- - - Flow 2 ingress (mean 36.20 Mbit/s)   —— Flow 2 egress (mean 36.16 Mbit/s)
- - - Flow 3 ingress (mean 16.84 Mbit/s)   —— Flow 3 egress (mean 16.81 Mbit/s)

• Flow 1 (95th percentile 32.66 ms)   • Flow 2 (95th percentile 32.72 ms)   • Flow 3 (95th percentile 32.93 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2018-01-02 10:26:09
End at: 2018-01-02 10:26:39
Local clock offset: -0.386 ms
Remote clock offset: 0.683 ms


# Below is generated by plot.py at 2018-01-02 13:20:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.672 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 65.44 Mbit/s
95th percentile per-packet one-way delay: 32.536 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.61 Mbit/s
95th percentile per-packet one-way delay: 32.716 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 29.22 Mbit/s
95th percentile per-packet one-way delay: 32.727 ms
Loss rate: 0.12%
```
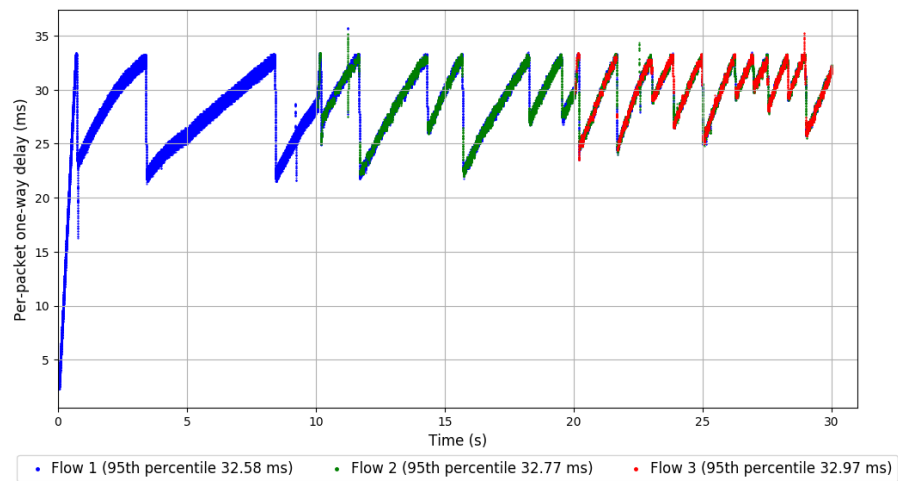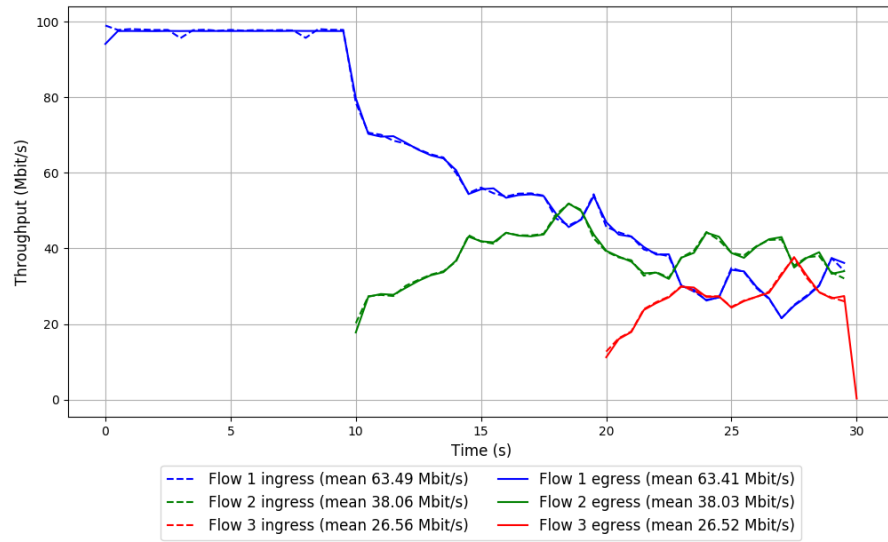
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-01-02 10:43:13
End at: 2018-01-02 10:43:43
Local clock offset: -0.422 ms
Remote clock offset: 0.616 ms


# Below is generated by plot.py at 2018-01-02 13:20:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.717 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 66.18 Mbit/s
95th percentile per-packet one-way delay: 32.660 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.97 Mbit/s
95th percentile per-packet one-way delay: 32.755 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 32.939 ms
Loss rate: 0.05%
```
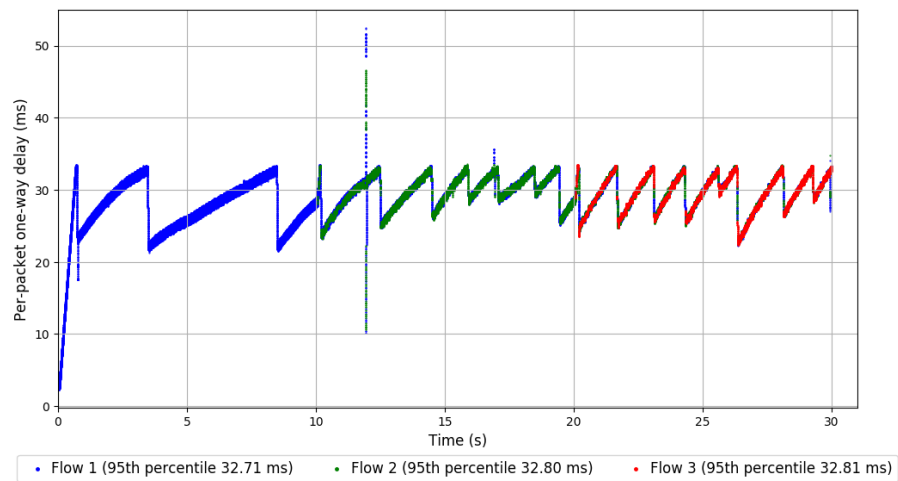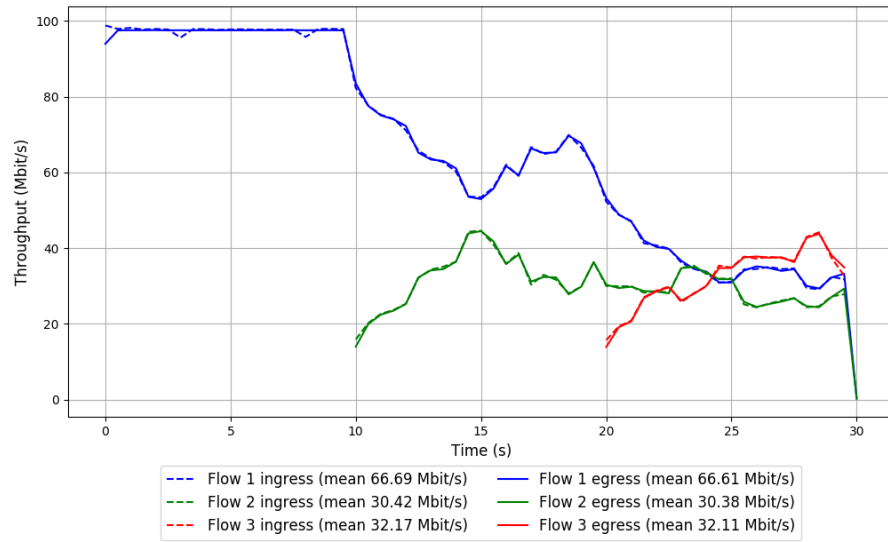
Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 66.26 Mbit/s) —— Flow 1 egress (mean 66.18 Mbit/s)
- - - - Flow 2 ingress (mean 34.00 Mbit/s) —— Flow 2 egress (mean 33.97 Mbit/s)
- - - - Flow 3 ingress (mean 26.29 Mbit/s) —— Flow 3 egress (mean 26.28 Mbit/s)

- Flow 1 (95th percentile 32.66 ms)   - Flow 2 (95th percentile 32.76 ms)   - Flow 3 (95th percentile 32.94 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-01-02 11:00:18
End at: 2018-01-02 11:00:48
Local clock offset: -0.443 ms
Remote clock offset: 0.62 ms


# Below is generated by plot.py at 2018-01-02 13:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 32.734 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.41 Mbit/s
95th percentile per-packet one-way delay: 32.582 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.03 Mbit/s
95th percentile per-packet one-way delay: 32.767 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 26.52 Mbit/s
95th percentile per-packet one-way delay: 32.966 ms
Loss rate: 0.13%
```
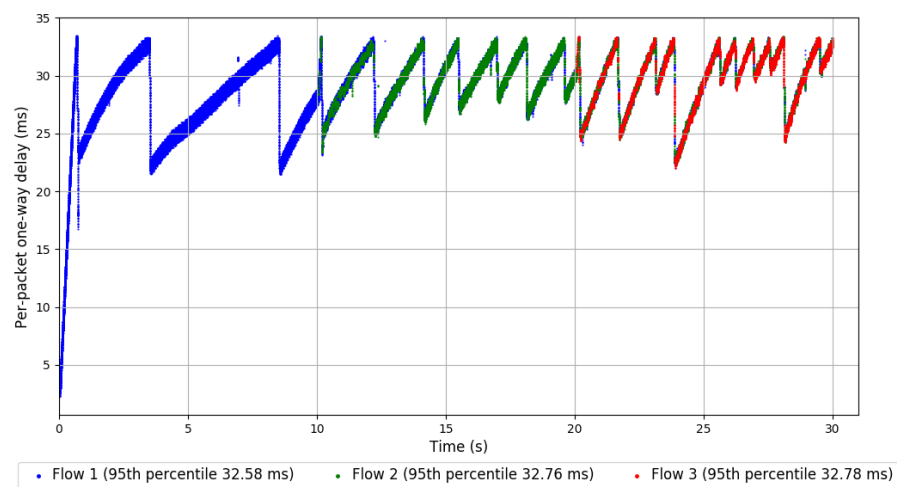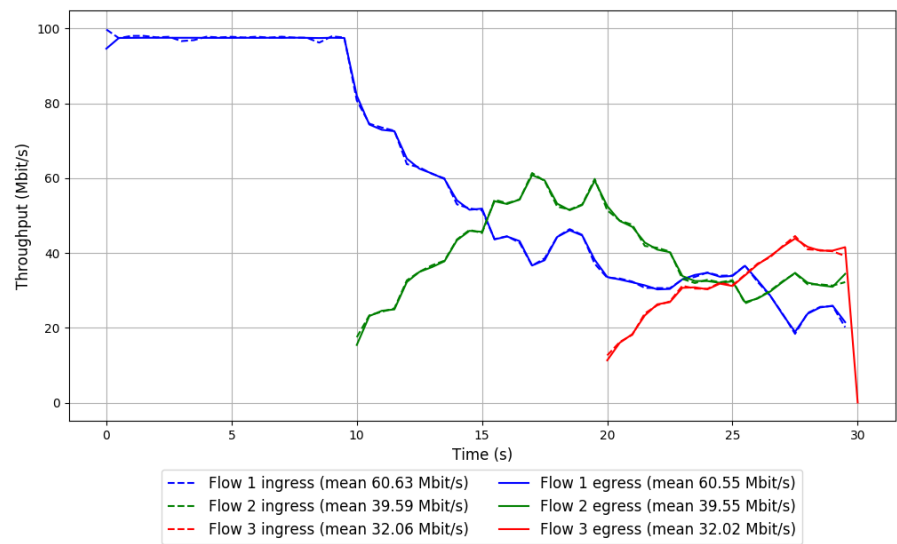
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.49 Mbit/s) — Flow 1 egress (mean 63.41 Mbit/s)
Flow 2 ingress (mean 38.06 Mbit/s) — Flow 2 egress (mean 38.03 Mbit/s)
Flow 3 ingress (mean 26.56 Mbit/s) — Flow 3 egress (mean 26.52 Mbit/s)

Flow 1 (95th percentile 32.58 ms)   Flow 2 (95th percentile 32.77 ms)   Flow 3 (95th percentile 32.97 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-01-02 11:17:23
End at: 2018-01-02 11:17:53
Local clock offset: -0.486 ms
Remote clock offset: 0.582 ms


# Below is generated by plot.py at 2018-01-02 13:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.760 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 66.61 Mbit/s
95th percentile per-packet one-way delay: 32.706 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 32.795 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 32.11 Mbit/s
95th percentile per-packet one-way delay: 32.807 ms
Loss rate: 0.13%
```
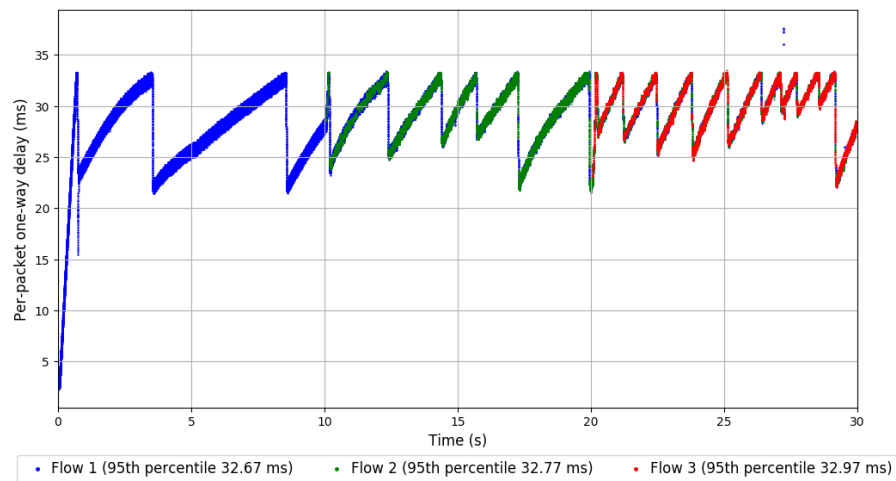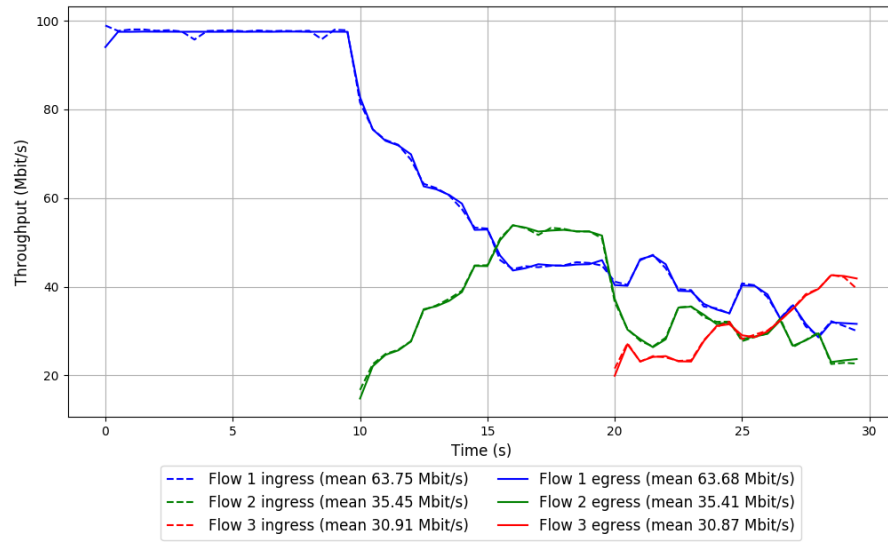
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2018-01-02 11:34:28
End at: 2018-01-02 11:34:58
Local clock offset: -0.425 ms
Remote clock offset: 0.547 ms


# Below is generated by plot.py at 2018-01-02 13:20:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.732 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 60.55 Mbit/s
95th percentile per-packet one-way delay: 32.580 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.55 Mbit/s
95th percentile per-packet one-way delay: 32.759 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 32.781 ms
Loss rate: 0.08%
```
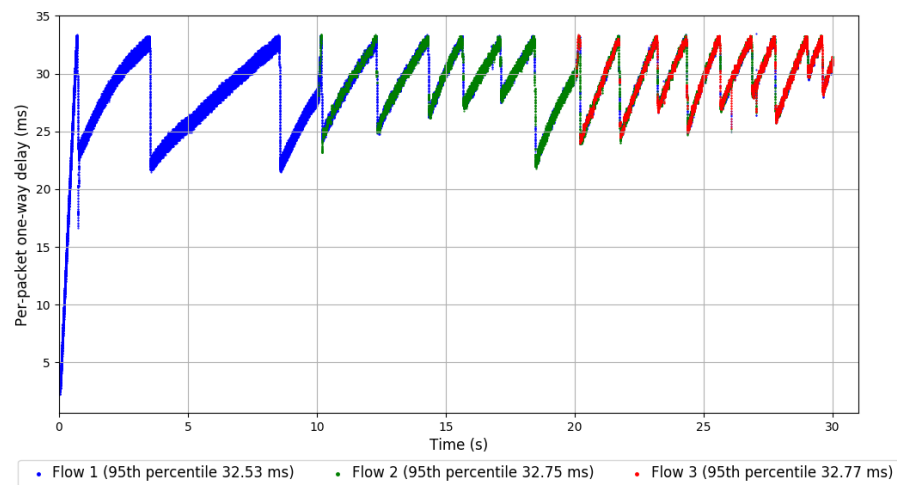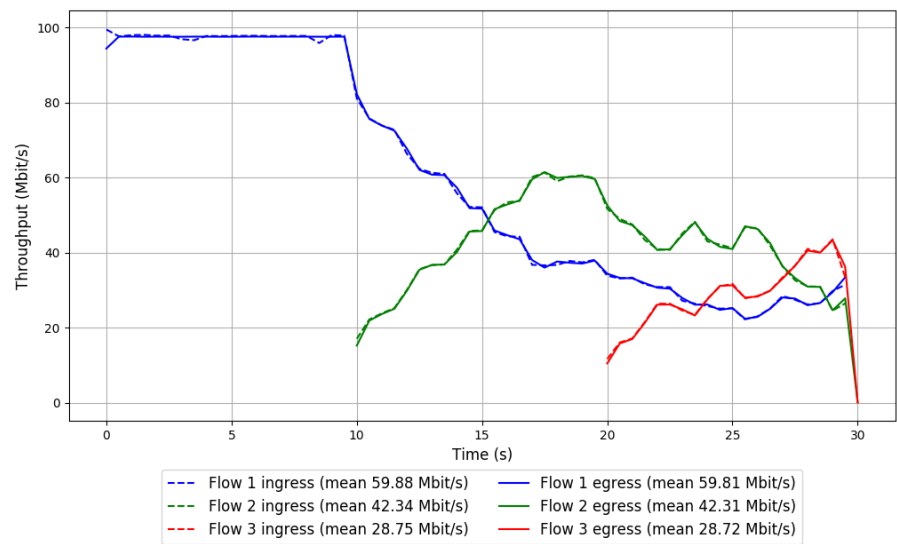
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2018-01-02 11:51:33
End at: 2018-01-02 11:52:03
Local clock offset: -0.368 ms
Remote clock offset: 0.498 ms


# Below is generated by plot.py at 2018-01-02 13:21:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.737 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.68 Mbit/s
95th percentile per-packet one-way delay: 32.668 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 35.41 Mbit/s
95th percentile per-packet one-way delay: 32.775 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 32.966 ms
Loss rate: 0.08%
```
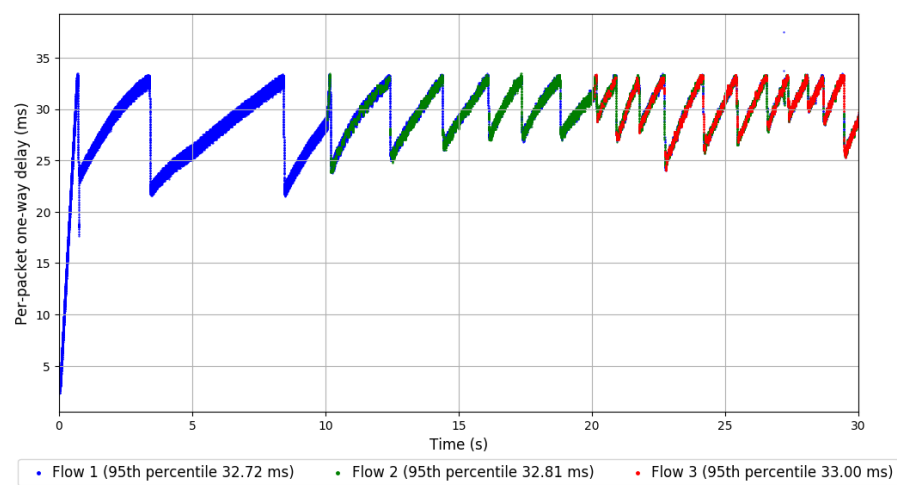
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2018-01-02 12:08:41
End at: 2018-01-02 12:09:11
Local clock offset: -0.335 ms
Remote clock offset: 0.495 ms


# Below is generated by plot.py at 2018-01-02 13:21:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.712 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 59.81 Mbit/s
95th percentile per-packet one-way delay: 32.529 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 42.31 Mbit/s
95th percentile per-packet one-way delay: 32.747 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.72 Mbit/s
95th percentile per-packet one-way delay: 32.774 ms
Loss rate: 0.09%
```
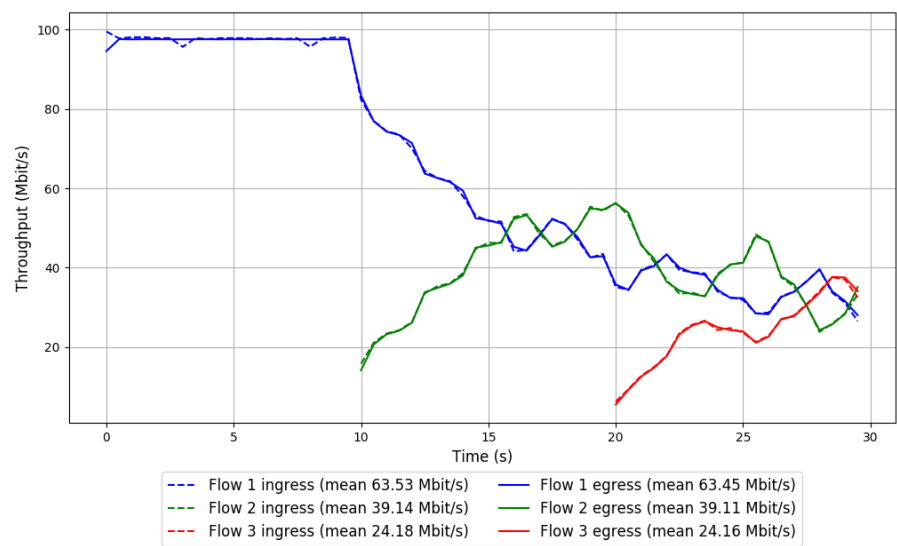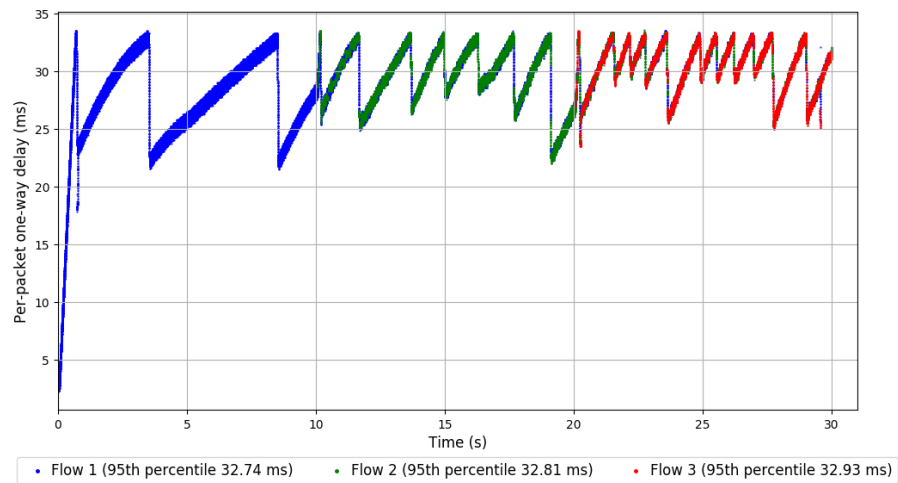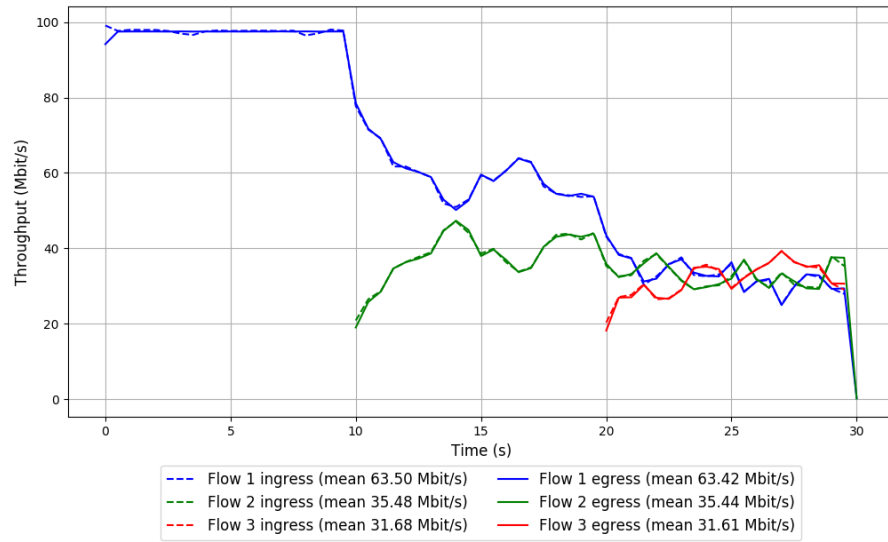
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 59.88 Mbit/s) --- Flow 1 egress (mean 59.81 Mbit/s)
Flow 2 ingress (mean 42.34 Mbit/s) --- Flow 2 egress (mean 42.31 Mbit/s)
Flow 3 ingress (mean 28.75 Mbit/s) --- Flow 3 egress (mean 28.72 Mbit/s)

• Flow 1 (95th percentile 32.53 ms)   • Flow 2 (95th percentile 32.75 ms)   • Flow 3 (95th percentile 32.77 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2018-01-02 12:25:46
End at: 2018-01-02 12:26:16
Local clock offset: -0.383 ms
Remote clock offset: 0.397 ms


# Below is generated by plot.py at 2018-01-02 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.780 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.45 Mbit/s
95th percentile per-packet one-way delay: 32.723 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.11 Mbit/s
95th percentile per-packet one-way delay: 32.807 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 24.16 Mbit/s
95th percentile per-packet one-way delay: 33.001 ms
Loss rate: 0.08%
```
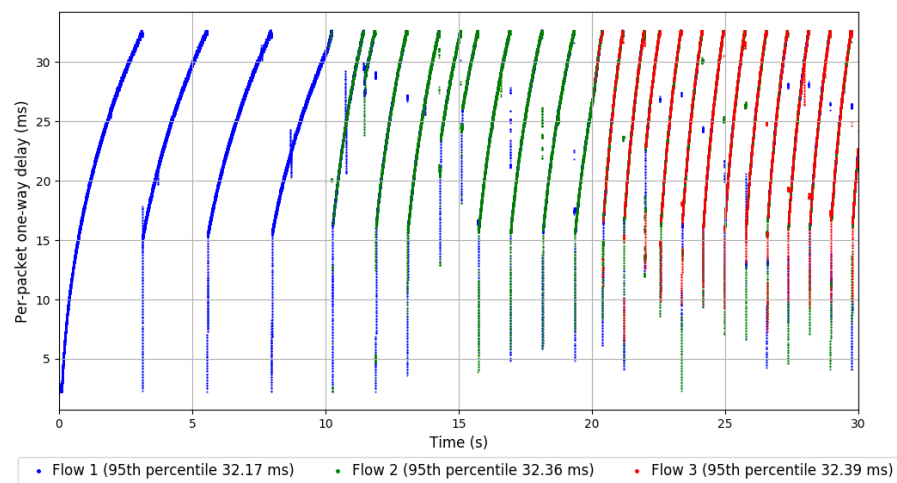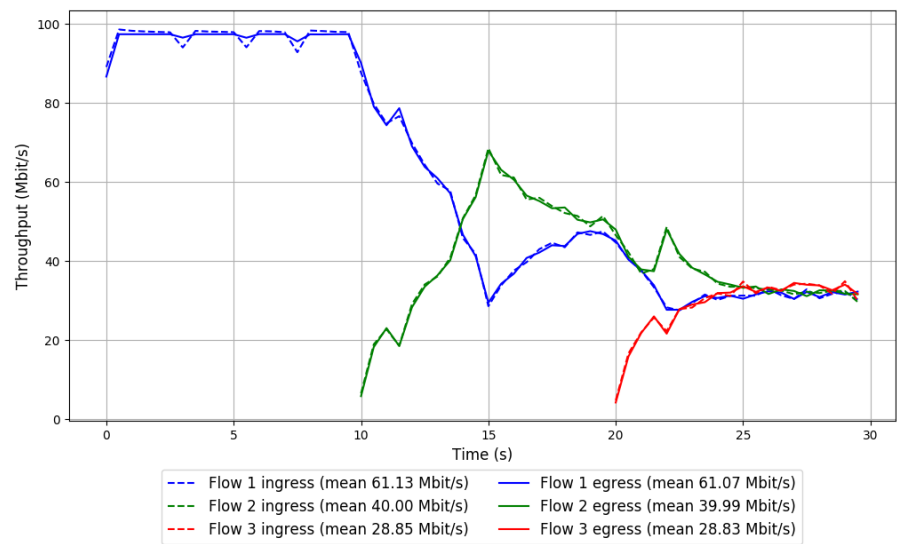
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.53 Mbit/s) --- Flow 1 egress (mean 63.45 Mbit/s)
Flow 2 ingress (mean 39.14 Mbit/s) --- Flow 2 egress (mean 39.11 Mbit/s)
Flow 3 ingress (mean 24.18 Mbit/s) --- Flow 3 egress (mean 24.16 Mbit/s)

Flow 1 (95th percentile 32.72 ms) • Flow 2 (95th percentile 32.81 ms) • Flow 3 (95th percentile 33.00 ms)

41

```
Run 10: Statistics of TCP Cubic

Start at: 2018-01-02 12:42:54
End at: 2018-01-02 12:43:24
Local clock offset: -0.378 ms
Remote clock offset: 0.3 ms


# Below is generated by plot.py at 2018-01-02 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 32.784 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.42 Mbit/s
95th percentile per-packet one-way delay: 32.740 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.44 Mbit/s
95th percentile per-packet one-way delay: 32.807 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.61 Mbit/s
95th percentile per-packet one-way delay: 32.934 ms
Loss rate: 0.17%
```
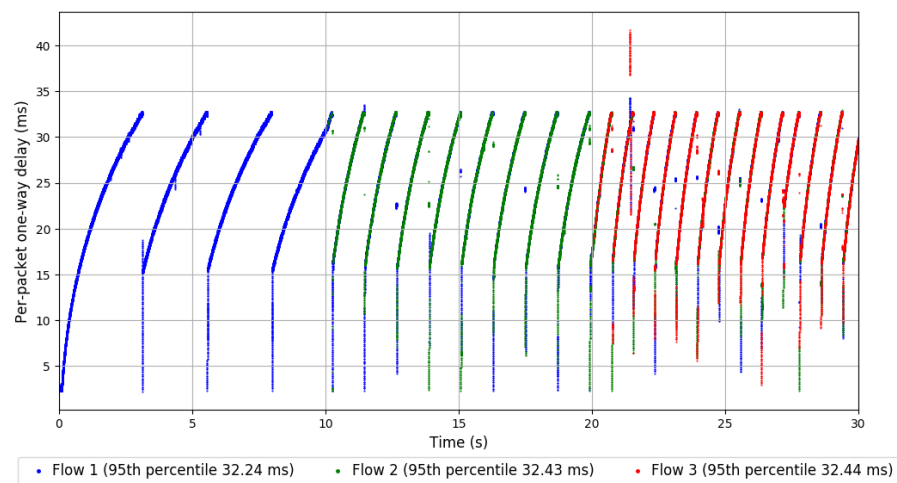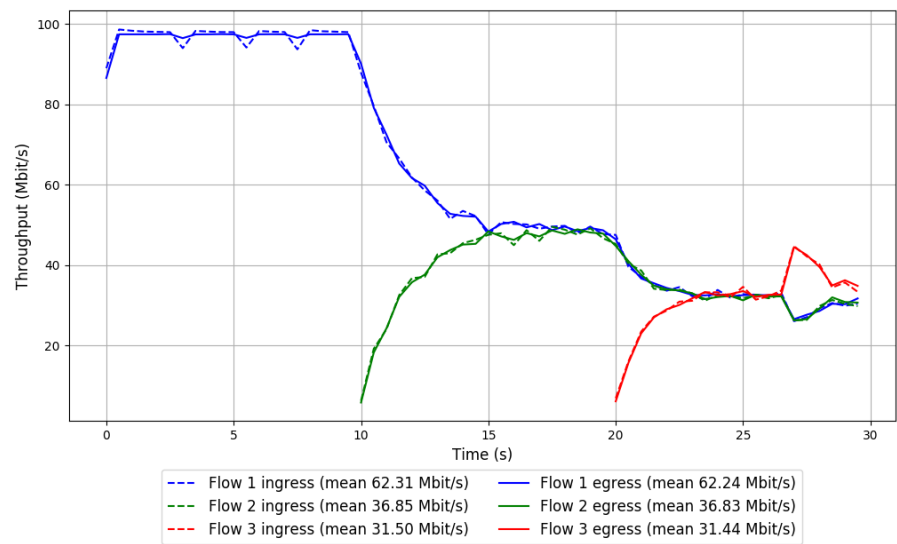
Run 10: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.50 Mbit/s) --- Flow 1 egress (mean 63.42 Mbit/s)
Flow 2 ingress (mean 35.48 Mbit/s) --- Flow 2 egress (mean 35.44 Mbit/s)
Flow 3 ingress (mean 31.68 Mbit/s) --- Flow 3 egress (mean 31.61 Mbit/s)

• Flow 1 (95th percentile 32.74 ms)   • Flow 2 (95th percentile 32.81 ms)   • Flow 3 (95th percentile 32.93 ms)
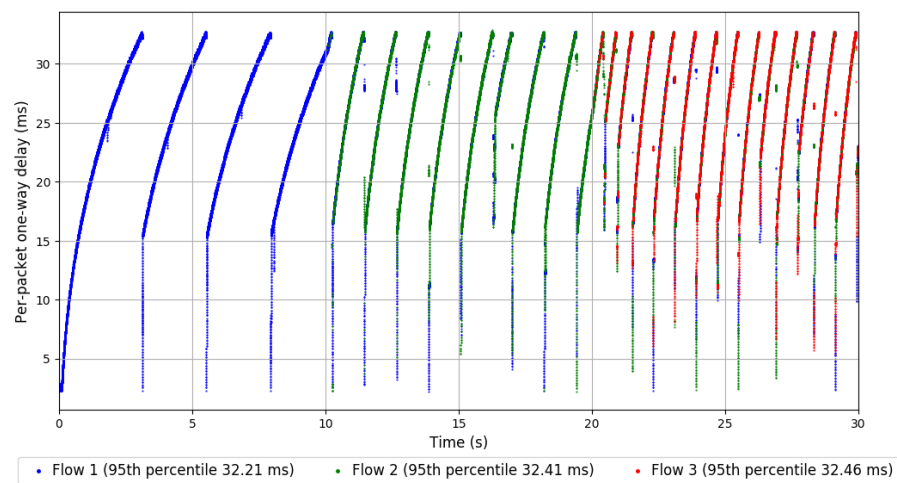
43

```
Run 1: Statistics of LEDBAT

Start at: 2018-01-02 10:05:39
End at: 2018-01-02 10:06:09
Local clock offset: -0.364 ms
Remote clock offset: 0.687 ms

# Below is generated by plot.py at 2018-01-02 13:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.191 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 61.07 Mbit/s
95th percentile per-packet one-way delay: 32.167 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.99 Mbit/s
95th percentile per-packet one-way delay: 32.360 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 28.83 Mbit/s
95th percentile per-packet one-way delay: 32.392 ms
Loss rate: 0.09%
```
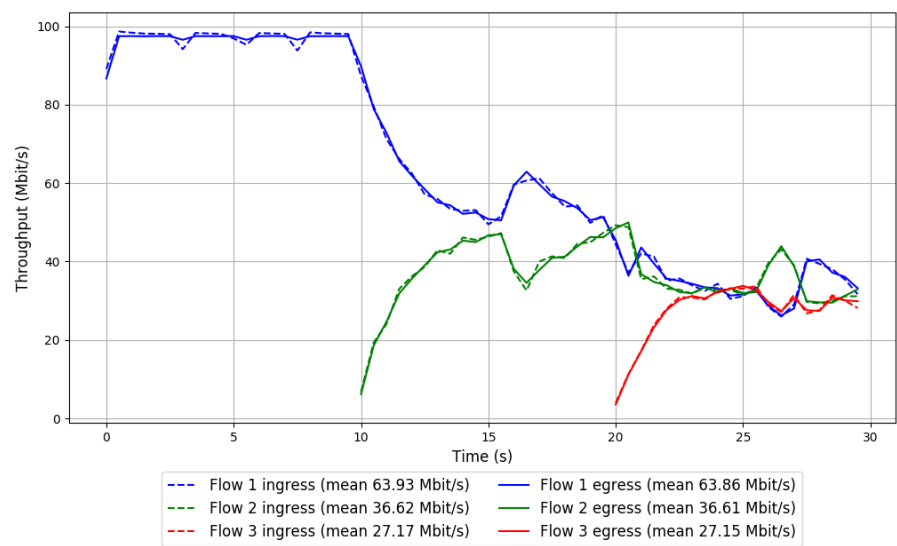
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 61.13 Mbit/s) --- Flow 1 egress (mean 61.07 Mbit/s)
Flow 2 ingress (mean 40.00 Mbit/s) --- Flow 2 egress (mean 39.99 Mbit/s)
Flow 3 ingress (mean 28.85 Mbit/s) --- Flow 3 egress (mean 28.83 Mbit/s)

Flow 1 (95th percentile 32.17 ms)   Flow 2 (95th percentile 32.36 ms)   Flow 3 (95th percentile 32.39 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2018-01-02 10:22:43
End at: 2018-01-02 10:23:13
Local clock offset: -0.421 ms
Remote clock offset: 0.707 ms


# Below is generated by plot.py at 2018-01-02 13:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.15 Mbit/s
95th percentile per-packet one-way delay: 32.266 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 32.243 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.83 Mbit/s
95th percentile per-packet one-way delay: 32.429 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 31.44 Mbit/s
95th percentile per-packet one-way delay: 32.443 ms
Loss rate: 0.08%
```
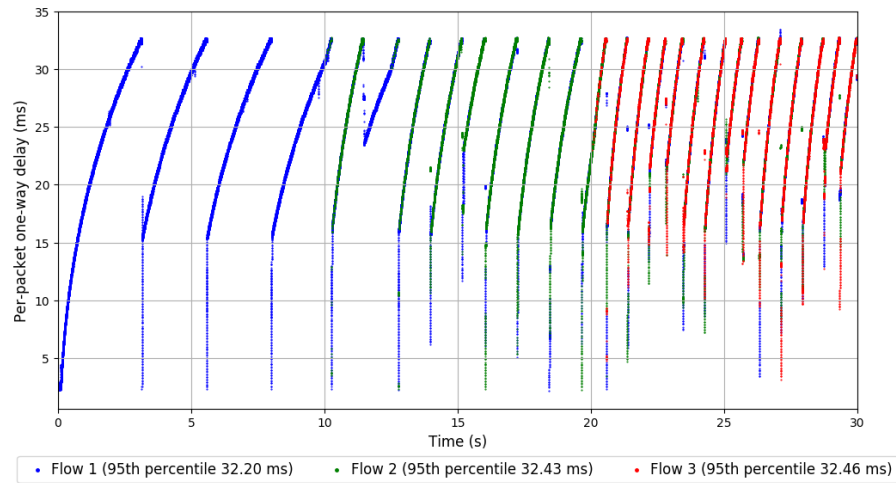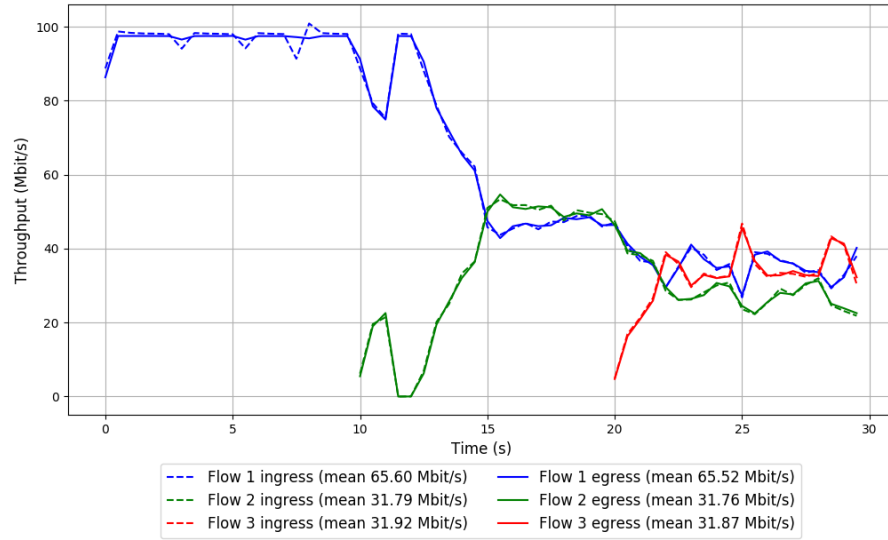
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.31 Mbit/s) --- Flow 1 egress (mean 62.24 Mbit/s)
Flow 2 ingress (mean 36.85 Mbit/s) --- Flow 2 egress (mean 36.83 Mbit/s)
Flow 3 ingress (mean 31.50 Mbit/s) --- Flow 3 egress (mean 31.44 Mbit/s)

Flow 1 (95th percentile 32.24 ms)   Flow 2 (95th percentile 32.43 ms)   Flow 3 (95th percentile 32.44 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2018-01-02 10:39:48
End at: 2018-01-02 10:40:18
Local clock offset: -0.402 ms
Remote clock offset: 0.65 ms


# Below is generated by plot.py at 2018-01-02 13:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.19 Mbit/s
95th percentile per-packet one-way delay: 32.250 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.86 Mbit/s
95th percentile per-packet one-way delay: 32.208 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.61 Mbit/s
95th percentile per-packet one-way delay: 32.407 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 27.15 Mbit/s
95th percentile per-packet one-way delay: 32.461 ms
Loss rate: 0.12%
```
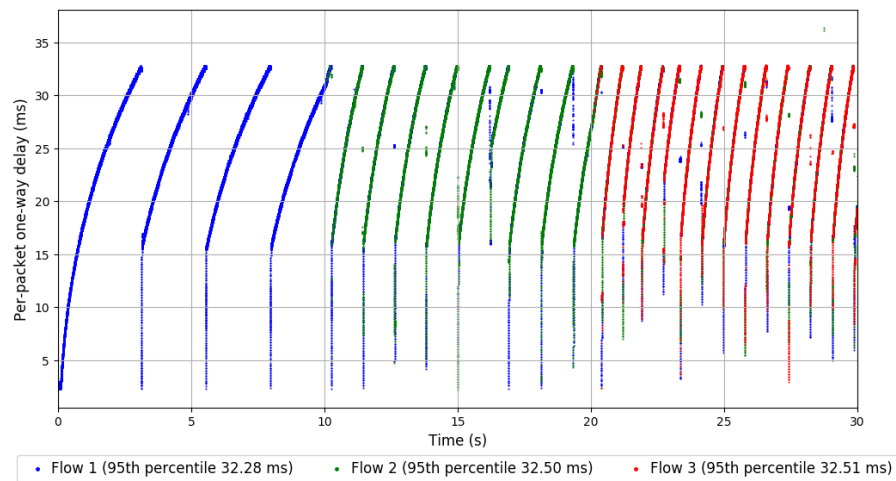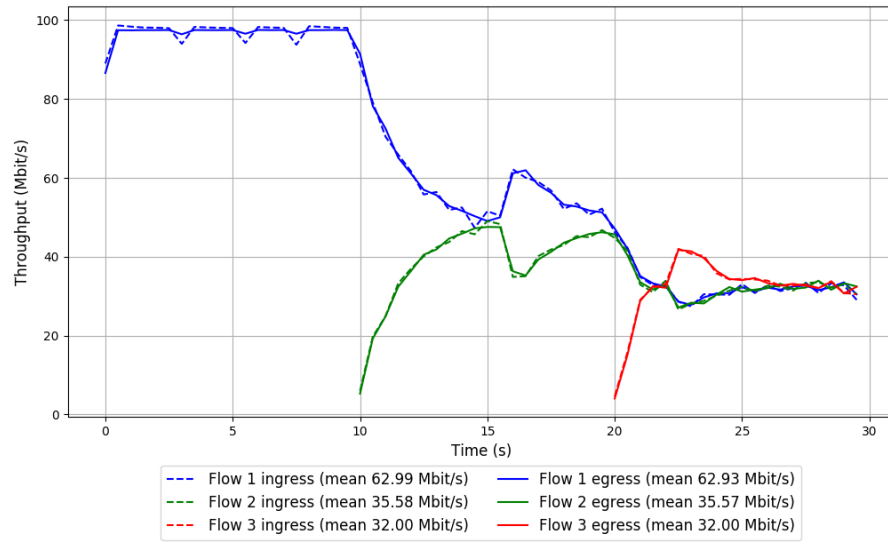
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 63.93 Mbit/s)   Flow 1 egress (mean 63.86 Mbit/s)
Flow 2 ingress (mean 36.62 Mbit/s)   Flow 2 egress (mean 36.61 Mbit/s)
Flow 3 ingress (mean 27.17 Mbit/s)   Flow 3 egress (mean 27.15 Mbit/s)

Flow 1 (95th percentile 32.21 ms)   Flow 2 (95th percentile 32.41 ms)   Flow 3 (95th percentile 32.46 ms)

49

```
Run 4: Statistics of LEDBAT

Start at: 2018-01-02 10:56:52
End at: 2018-01-02 10:57:22
Local clock offset: -0.428 ms
Remote clock offset: 0.608 ms

# Below is generated by plot.py at 2018-01-02 13:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.19 Mbit/s
95th percentile per-packet one-way delay: 32.239 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 65.52 Mbit/s
95th percentile per-packet one-way delay: 32.201 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 32.431 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.87 Mbit/s
95th percentile per-packet one-way delay: 32.460 ms
Loss rate: 0.09%
```
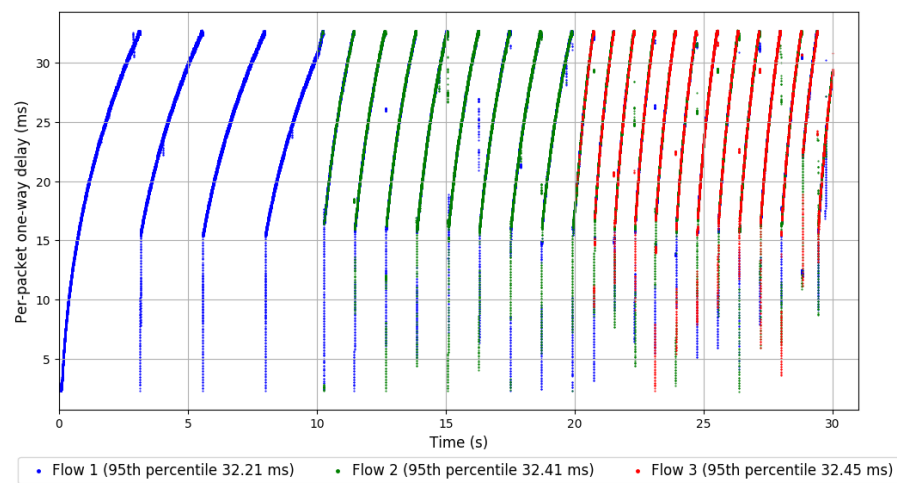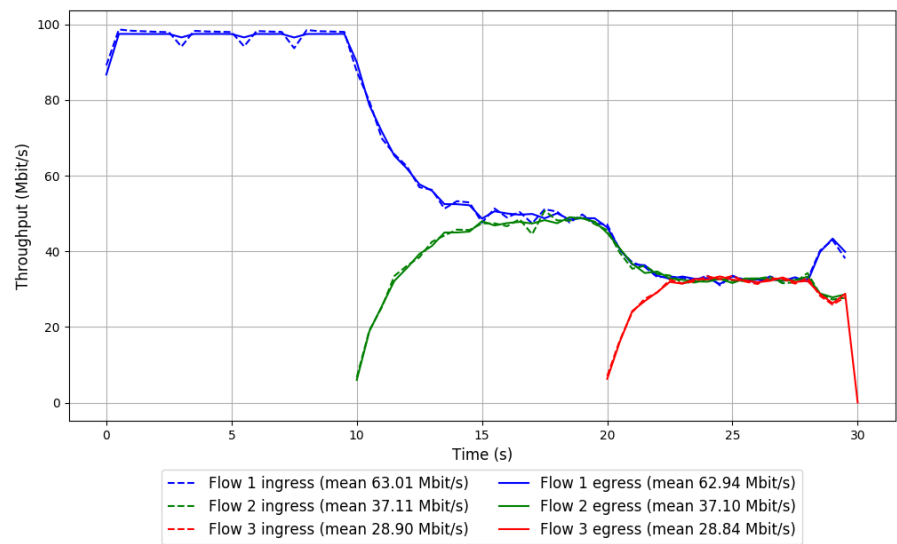
Run 4: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 65.60 Mbit/s)   —— Flow 1 egress (mean 65.52 Mbit/s)
- - - Flow 2 ingress (mean 31.79 Mbit/s)   —— Flow 2 egress (mean 31.76 Mbit/s)
- - - Flow 3 ingress (mean 31.92 Mbit/s)   —— Flow 3 egress (mean 31.87 Mbit/s)

- Flow 1 (95th percentile 32.20 ms)   • Flow 2 (95th percentile 32.43 ms)   • Flow 3 (95th percentile 32.46 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-01-02 11:13:57
End at: 2018-01-02 11:14:27
Local clock offset: -0.516 ms
Remote clock offset: 0.584 ms

# Below is generated by plot.py at 2018-01-02 13:23:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.18 Mbit/s
95th percentile per-packet one-way delay: 32.320 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.93 Mbit/s
95th percentile per-packet one-way delay: 32.284 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 32.501 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 32.511 ms
Loss rate: 0.07%
```
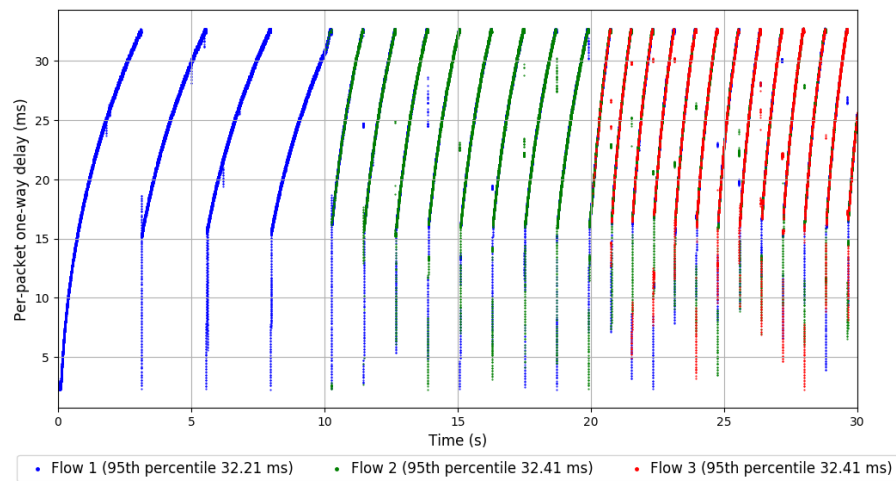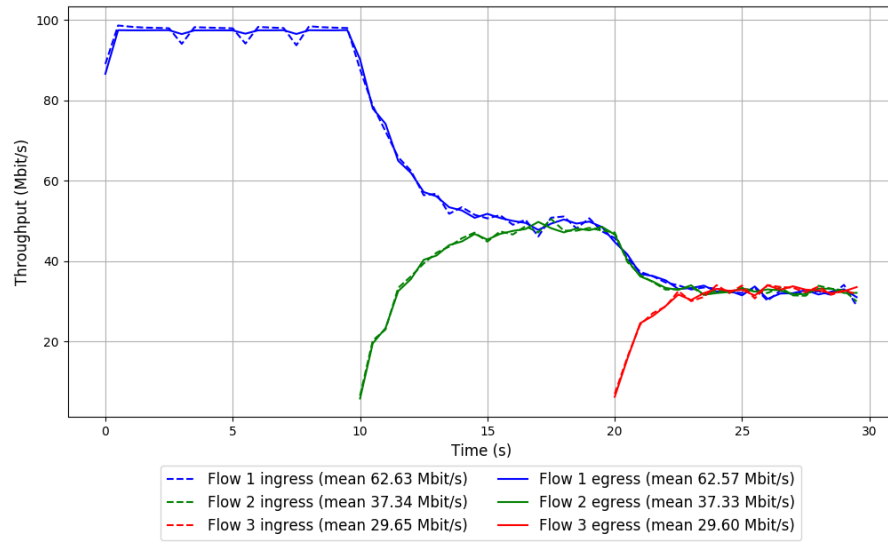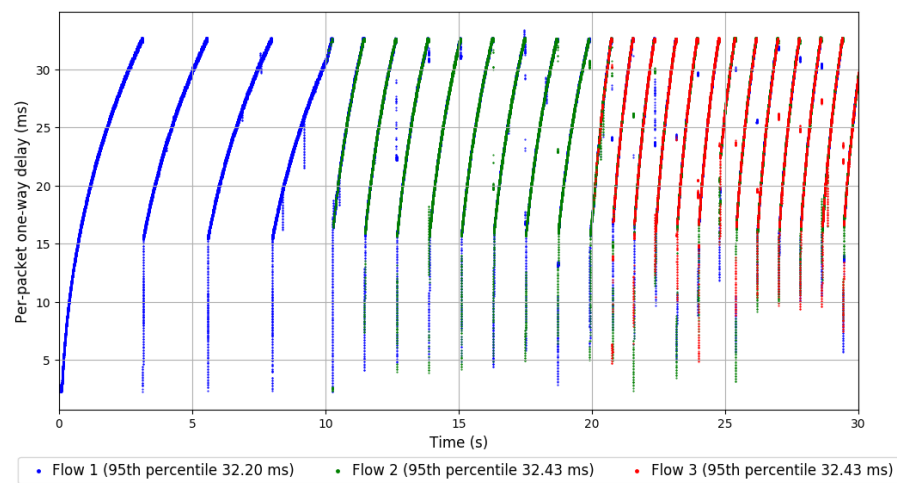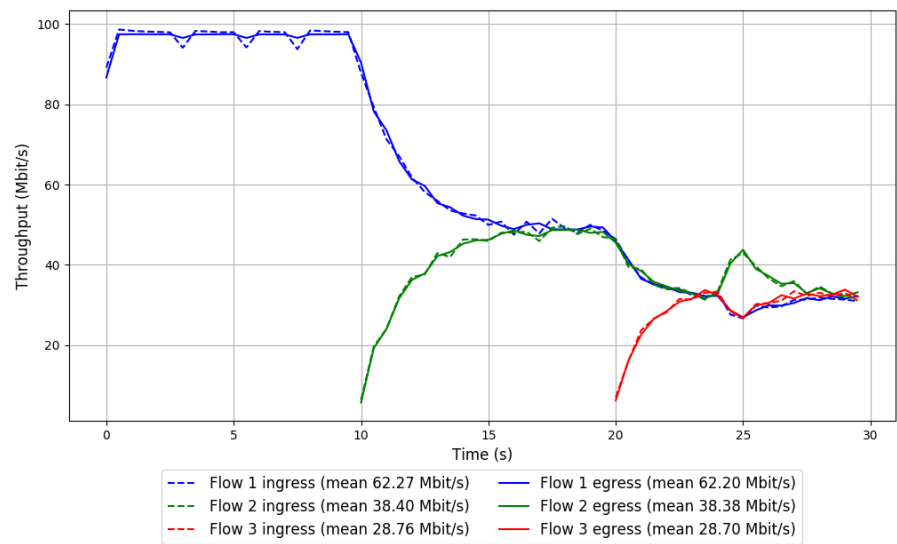
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.99 Mbit/s) --- Flow 1 egress (mean 62.93 Mbit/s)
Flow 2 ingress (mean 35.58 Mbit/s) --- Flow 2 egress (mean 35.57 Mbit/s)
Flow 3 ingress (mean 32.00 Mbit/s) --- Flow 3 egress (mean 32.00 Mbit/s)

Flow 1 (95th percentile 32.28 ms)   Flow 2 (95th percentile 32.50 ms)   Flow 3 (95th percentile 32.51 ms)

53

```
Run 6: Statistics of LEDBAT

Start at: 2018-01-02 11:31:02
End at: 2018-01-02 11:31:32
Local clock offset: -0.433 ms
Remote clock offset: 0.538 ms

# Below is generated by plot.py at 2018-01-02 13:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.16 Mbit/s
95th percentile per-packet one-way delay: 32.254 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.94 Mbit/s
95th percentile per-packet one-way delay: 32.212 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.10 Mbit/s
95th percentile per-packet one-way delay: 32.411 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.84 Mbit/s
95th percentile per-packet one-way delay: 32.449 ms
Loss rate: 0.10%
```
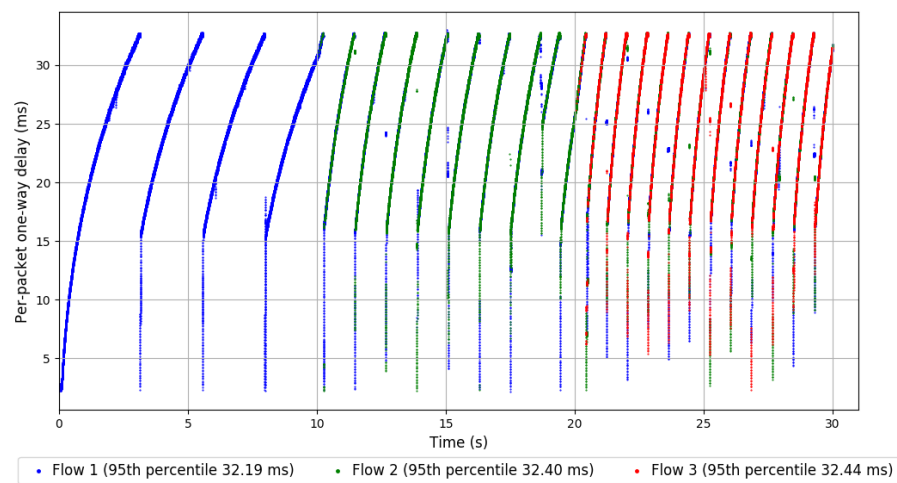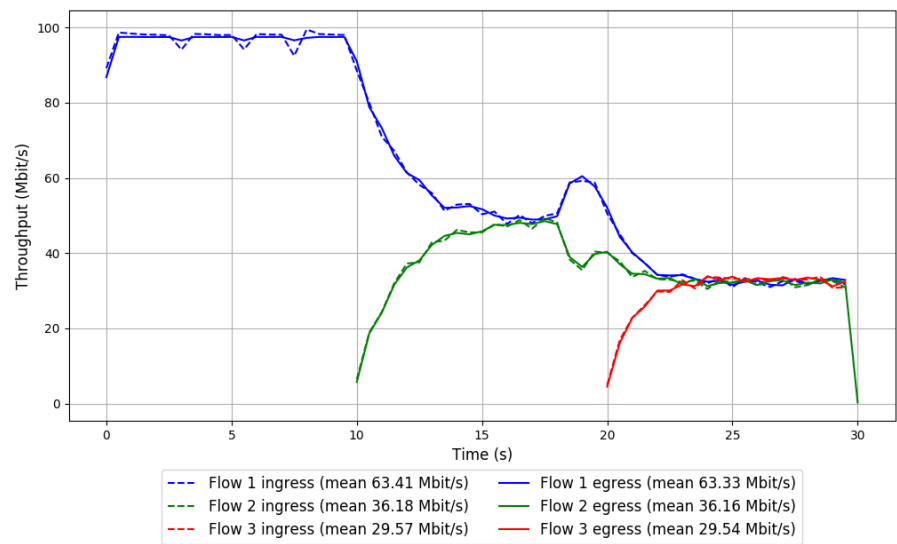
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 63.01 Mbit/s)   Flow 1 egress (mean 62.94 Mbit/s)
Flow 2 ingress (mean 37.11 Mbit/s)   Flow 2 egress (mean 37.10 Mbit/s)
Flow 3 ingress (mean 28.90 Mbit/s)   Flow 3 egress (mean 28.84 Mbit/s)

Flow 1 (95th percentile 32.21 ms)   Flow 2 (95th percentile 32.41 ms)   Flow 3 (95th percentile 32.45 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2018-01-02 11:48:07
End at: 2018-01-02 11:48:37
Local clock offset: -0.359 ms
Remote clock offset: 0.514 ms

# Below is generated by plot.py at 2018-01-02 13:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.239 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.57 Mbit/s
95th percentile per-packet one-way delay: 32.206 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.33 Mbit/s
95th percentile per-packet one-way delay: 32.407 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.60 Mbit/s
95th percentile per-packet one-way delay: 32.407 ms
Loss rate: 0.08%
```
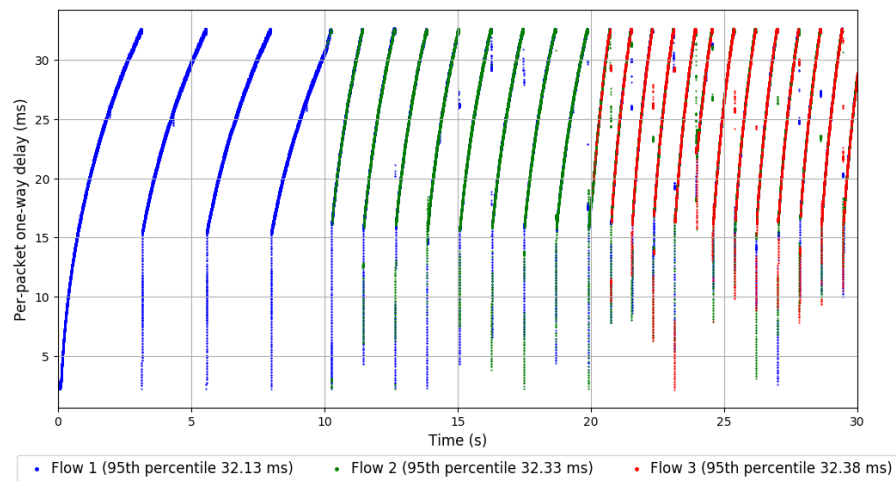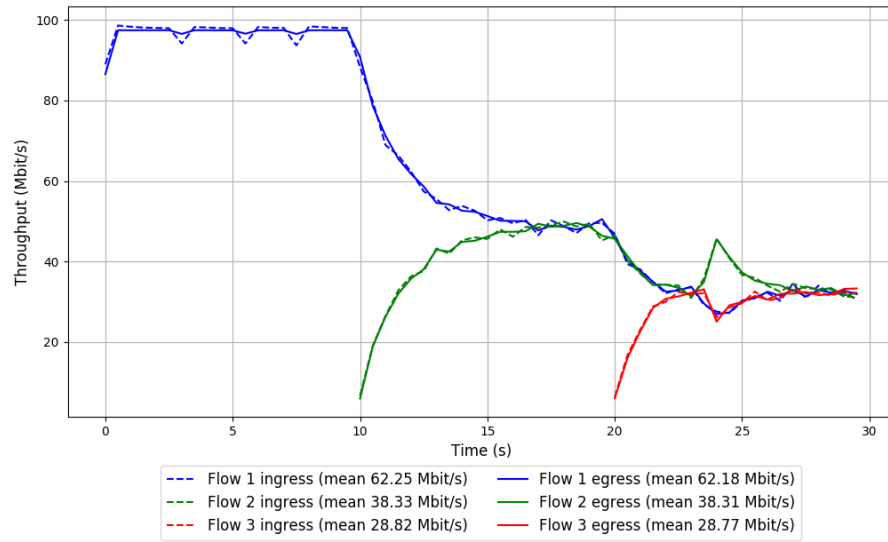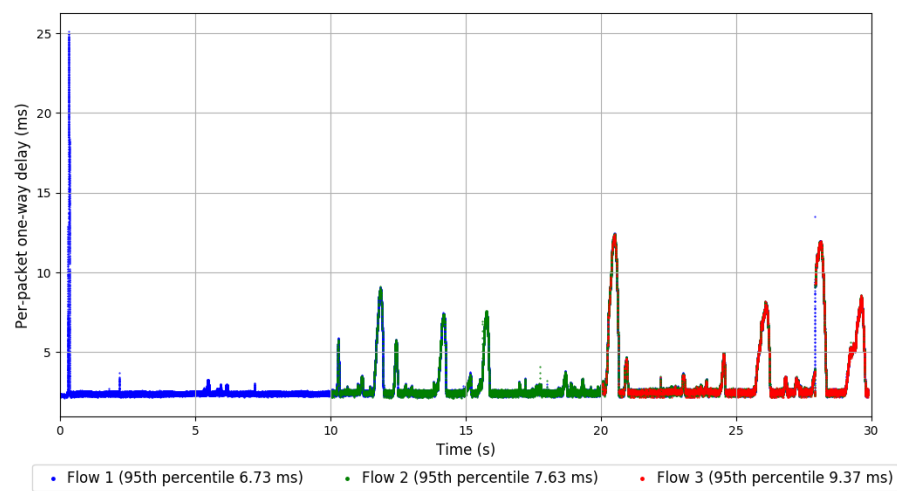
Run 7: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 62.63 Mbit/s)   —— Flow 1 egress (mean 62.57 Mbit/s)
- - - Flow 2 ingress (mean 37.34 Mbit/s)   —— Flow 2 egress (mean 37.33 Mbit/s)
- - - Flow 3 ingress (mean 29.65 Mbit/s)   —— Flow 3 egress (mean 29.60 Mbit/s)

• Flow 1 (95th percentile 32.21 ms)   • Flow 2 (95th percentile 32.41 ms)   • Flow 3 (95th percentile 32.41 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2018-01-02 12:05:15
End at: 2018-01-02 12:05:45
Local clock offset: -0.356 ms
Remote clock offset: 0.491 ms

# Below is generated by plot.py at 2018-01-02 13:23:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 32.249 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.20 Mbit/s
95th percentile per-packet one-way delay: 32.201 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 38.38 Mbit/s
95th percentile per-packet one-way delay: 32.427 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.70 Mbit/s
95th percentile per-packet one-way delay: 32.433 ms
Loss rate: 0.09%
```
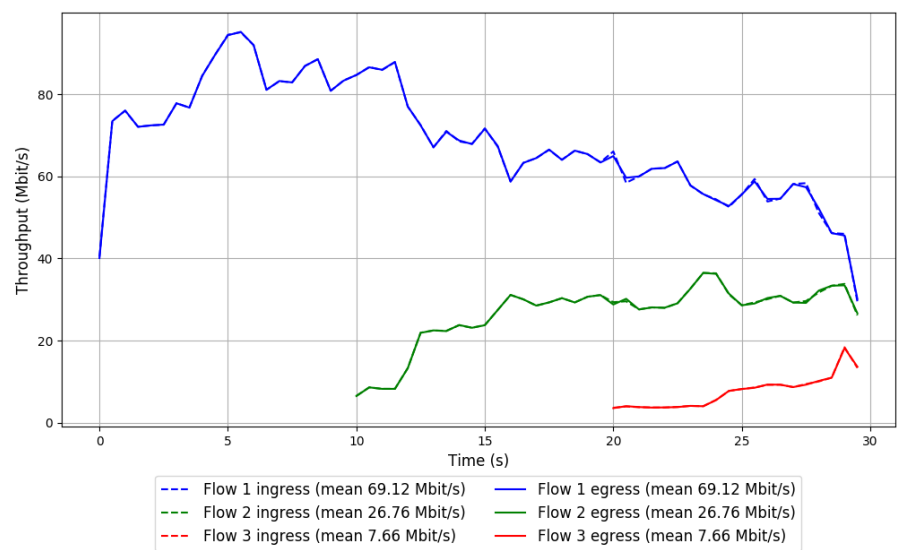
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.27 Mbit/s)   Flow 1 egress (mean 62.20 Mbit/s)
Flow 2 ingress (mean 38.40 Mbit/s)   Flow 2 egress (mean 38.38 Mbit/s)
Flow 3 ingress (mean 28.76 Mbit/s)   Flow 3 egress (mean 28.70 Mbit/s)

Flow 1 (95th percentile 32.20 ms)   Flow 2 (95th percentile 32.43 ms)   Flow 3 (95th percentile 32.43 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2018-01-02 12:22:20
End at: 2018-01-02 12:22:50
Local clock offset: -0.32 ms
Remote clock offset: 0.417 ms


# Below is generated by plot.py at 2018-01-02 13:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.17 Mbit/s
95th percentile per-packet one-way delay: 32.238 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 32.187 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.16 Mbit/s
95th percentile per-packet one-way delay: 32.403 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.54 Mbit/s
95th percentile per-packet one-way delay: 32.439 ms
Loss rate: 0.07%
```
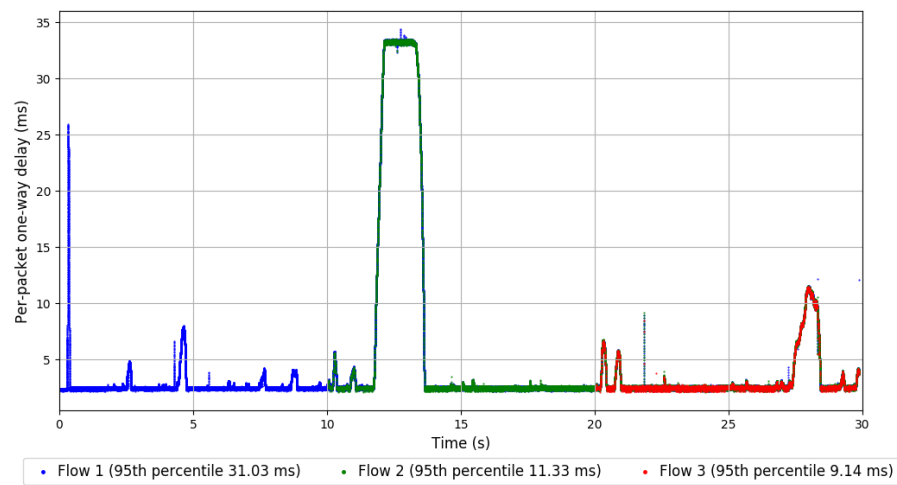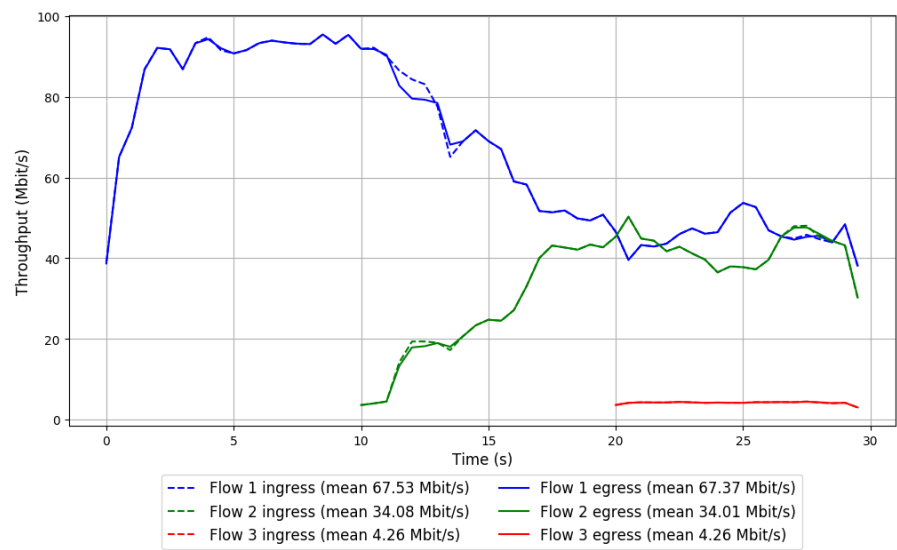
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 63.41 Mbit/s) — Flow 1 egress (mean 63.33 Mbit/s)
Flow 2 ingress (mean 36.18 Mbit/s) — Flow 2 egress (mean 36.16 Mbit/s)
Flow 3 ingress (mean 29.57 Mbit/s) — Flow 3 egress (mean 29.54 Mbit/s)

Flow 1 (95th percentile 32.19 ms) • Flow 2 (95th percentile 32.40 ms) • Flow 3 (95th percentile 32.44 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2018-01-02 12:39:29
End at: 2018-01-02 12:39:59
Local clock offset: -0.335 ms
Remote clock offset: 0.248 ms

# Below is generated by plot.py at 2018-01-02 13:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 32.175 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.18 Mbit/s
95th percentile per-packet one-way delay: 32.131 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.31 Mbit/s
95th percentile per-packet one-way delay: 32.331 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 32.379 ms
Loss rate: 0.07%
```
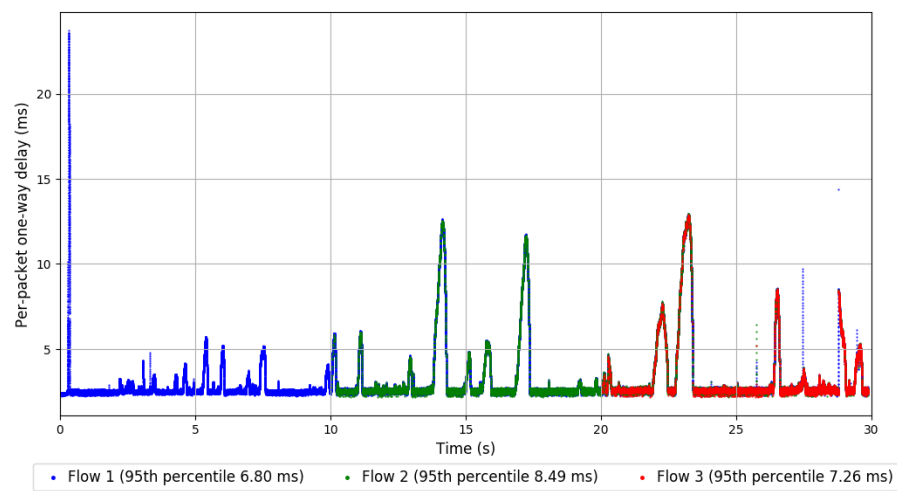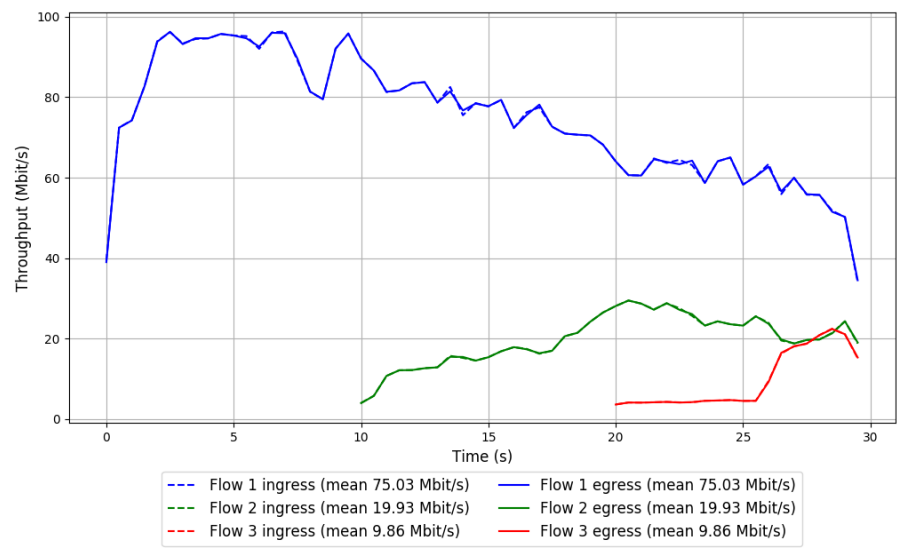
Run 10: Report of LEDBAT — Data Link

Flow 1 ingress (mean 62.25 Mbit/s) --- Flow 1 egress (mean 62.18 Mbit/s)
Flow 2 ingress (mean 38.33 Mbit/s) --- Flow 2 egress (mean 38.31 Mbit/s)
Flow 3 ingress (mean 28.82 Mbit/s) --- Flow 3 egress (mean 28.77 Mbit/s)

Flow 1 (95th percentile 32.13 ms)   Flow 2 (95th percentile 32.33 ms)   Flow 3 (95th percentile 32.38 ms)

63

```
Run 1: Statistics of PCC

Start at: 2018-01-02 10:18:09
End at: 2018-01-02 10:18:39
Local clock offset: -0.448 ms
Remote clock offset: 0.658 ms


# Below is generated by plot.py at 2018-01-02 13:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.43 Mbit/s
95th percentile per-packet one-way delay: 7.169 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.12 Mbit/s
95th percentile per-packet one-way delay: 6.729 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.76 Mbit/s
95th percentile per-packet one-way delay: 7.629 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 9.368 ms
Loss rate: 0.00%
```
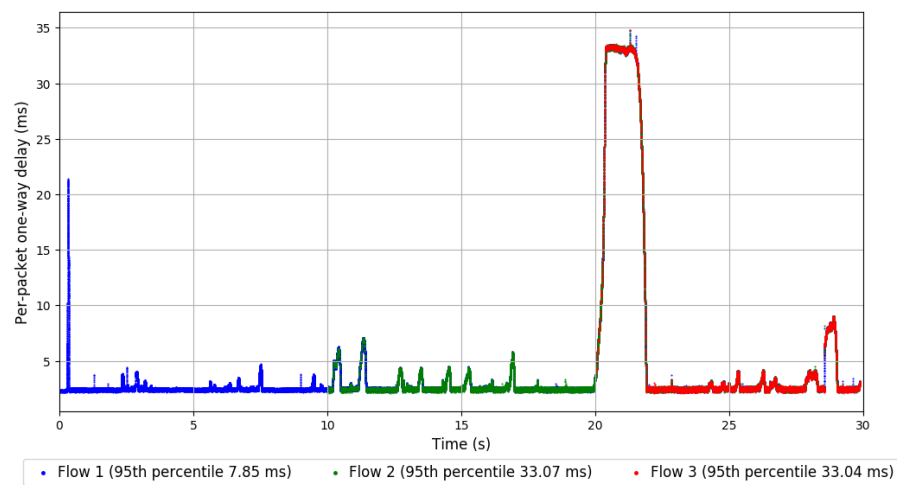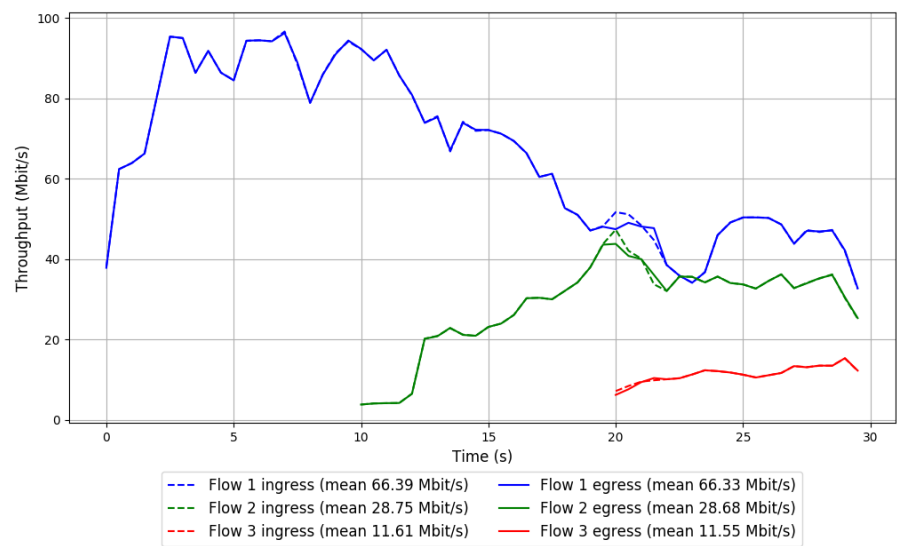
Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2018-01-02 10:35:13
End at: 2018-01-02 10:35:43
Local clock offset: -0.418 ms
Remote clock offset: 0.658 ms


# Below is generated by plot.py at 2018-01-02 13:23:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.37 Mbit/s
95th percentile per-packet one-way delay: 26.936 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 31.030 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 34.01 Mbit/s
95th percentile per-packet one-way delay: 11.329 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 4.26 Mbit/s
95th percentile per-packet one-way delay: 9.142 ms
Loss rate: 0.00%
```
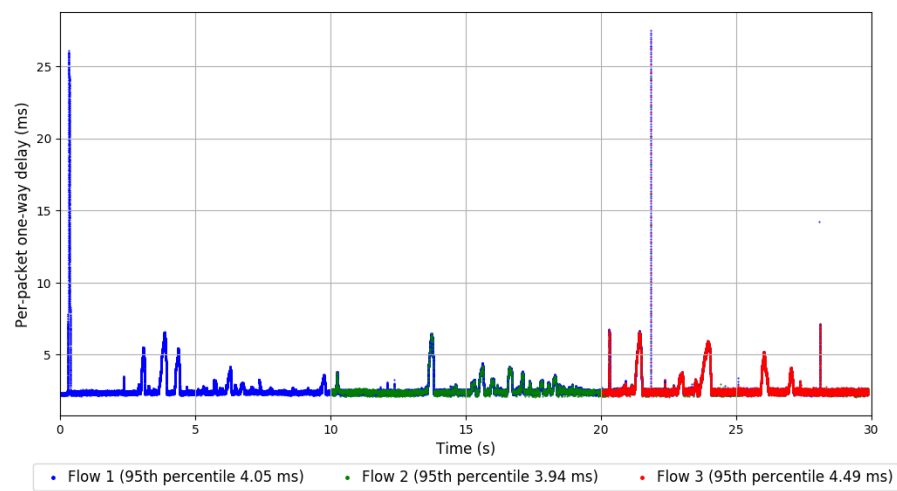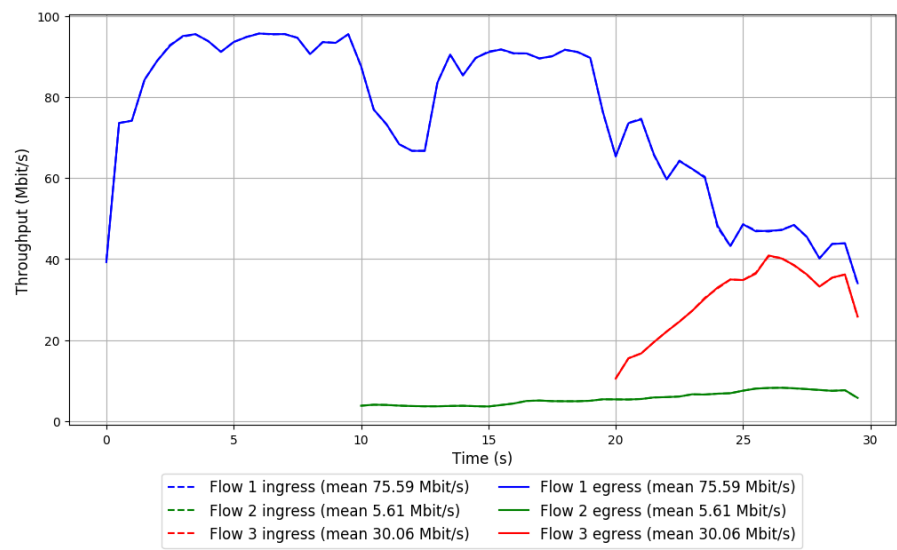
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2018-01-02 10:52:18
End at: 2018-01-02 10:52:48
Local clock offset: -0.481 ms
Remote clock offset: 0.616 ms


# Below is generated by plot.py at 2018-01-02 13:24:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 7.179 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.03 Mbit/s
95th percentile per-packet one-way delay: 6.803 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 8.495 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 7.259 ms
Loss rate: 0.00%
```
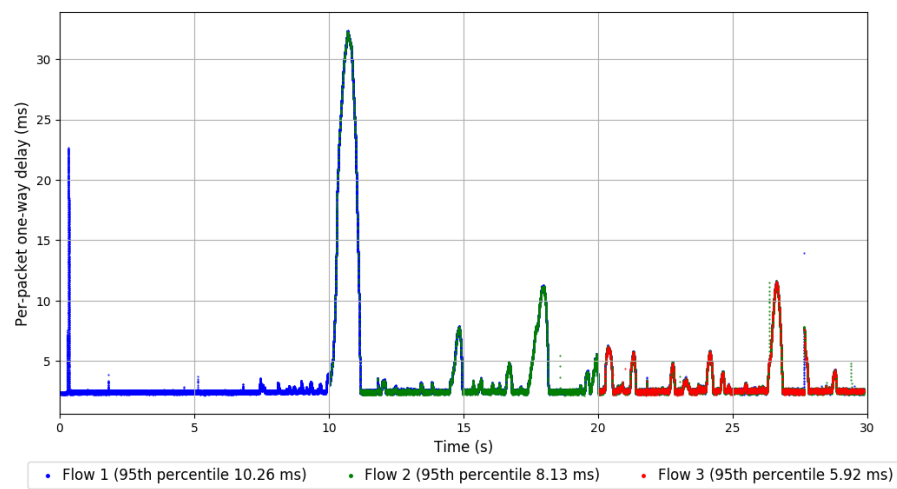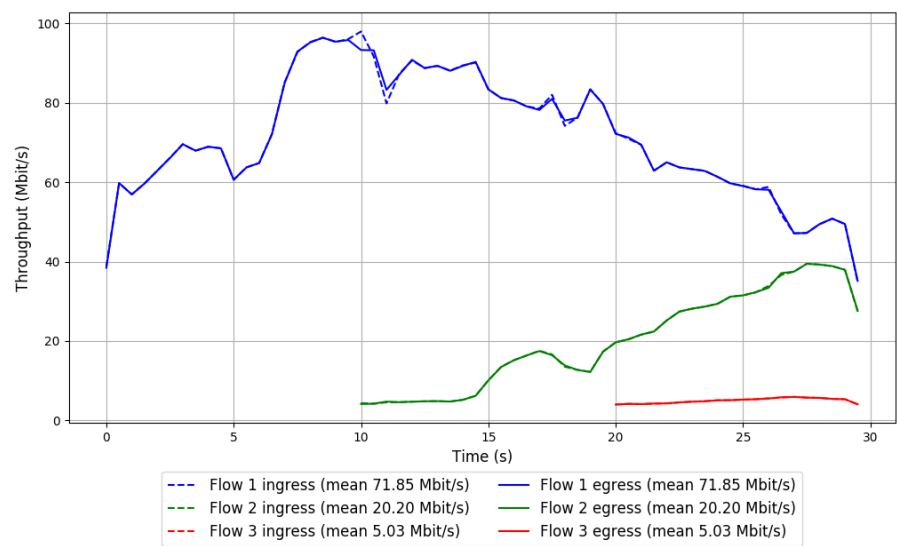
Run 3: Report of PCC — Data Link

- - - Flow 1 ingress (mean 75.03 Mbit/s) —— Flow 1 egress (mean 75.03 Mbit/s)
- - - Flow 2 ingress (mean 19.93 Mbit/s) —— Flow 2 egress (mean 19.93 Mbit/s)
- - - Flow 3 ingress (mean 9.86 Mbit/s) —— Flow 3 egress (mean 9.86 Mbit/s)

- Flow 1 (95th percentile 6.80 ms)   • Flow 2 (95th percentile 8.49 ms)   • Flow 3 (95th percentile 7.26 ms)

69

```
Run 4: Statistics of PCC

Start at: 2018-01-02 11:09:23
End at: 2018-01-02 11:09:53
Local clock offset: -0.441 ms
Remote clock offset: 0.585 ms


# Below is generated by plot.py at 2018-01-02 13:24:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.20 Mbit/s
95th percentile per-packet one-way delay: 24.954 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 66.33 Mbit/s
95th percentile per-packet one-way delay: 7.849 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 28.68 Mbit/s
95th percentile per-packet one-way delay: 33.070 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 33.041 ms
Loss rate: 0.56%
```
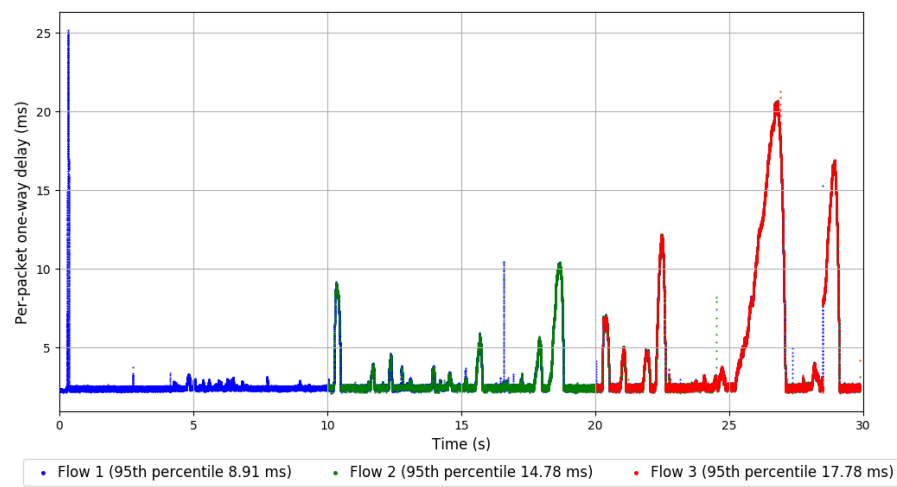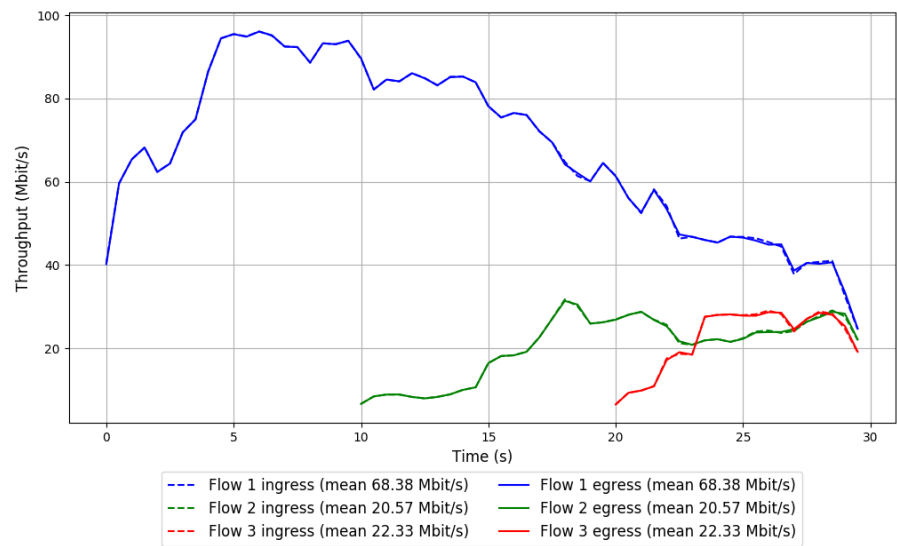
Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 66.39 Mbit/s) --- Flow 1 egress (mean 66.33 Mbit/s)
Flow 2 ingress (mean 28.75 Mbit/s) --- Flow 2 egress (mean 28.68 Mbit/s)
Flow 3 ingress (mean 11.61 Mbit/s) --- Flow 3 egress (mean 11.55 Mbit/s)

Flow 1 (95th percentile 7.85 ms)   Flow 2 (95th percentile 33.07 ms)   Flow 3 (95th percentile 33.04 ms)

71

```
Run 5: Statistics of PCC

Start at: 2018-01-02 11:26:27
End at: 2018-01-02 11:26:57
Local clock offset: -0.443 ms
Remote clock offset: 0.488 ms


# Below is generated by plot.py at 2018-01-02 13:24:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.23 Mbit/s
95th percentile per-packet one-way delay: 4.108 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 75.59 Mbit/s
95th percentile per-packet one-way delay: 4.052 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.61 Mbit/s
95th percentile per-packet one-way delay: 3.936 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.06 Mbit/s
95th percentile per-packet one-way delay: 4.492 ms
Loss rate: 0.00%
```
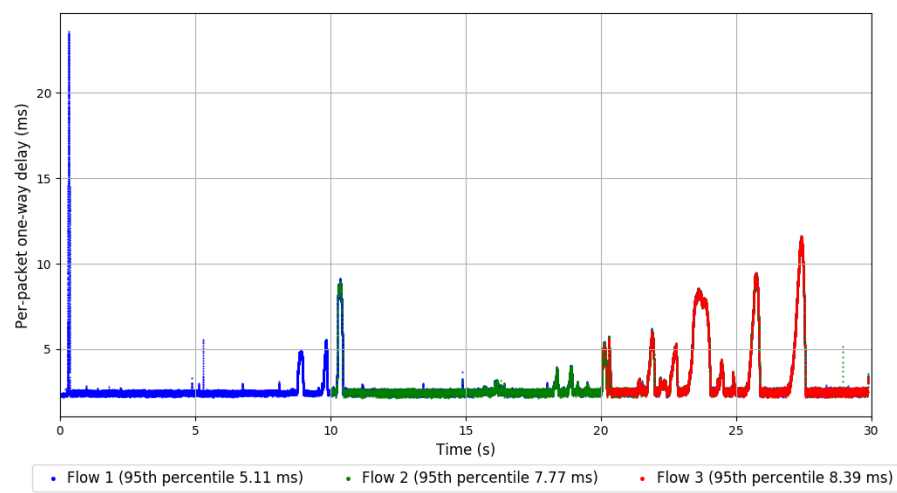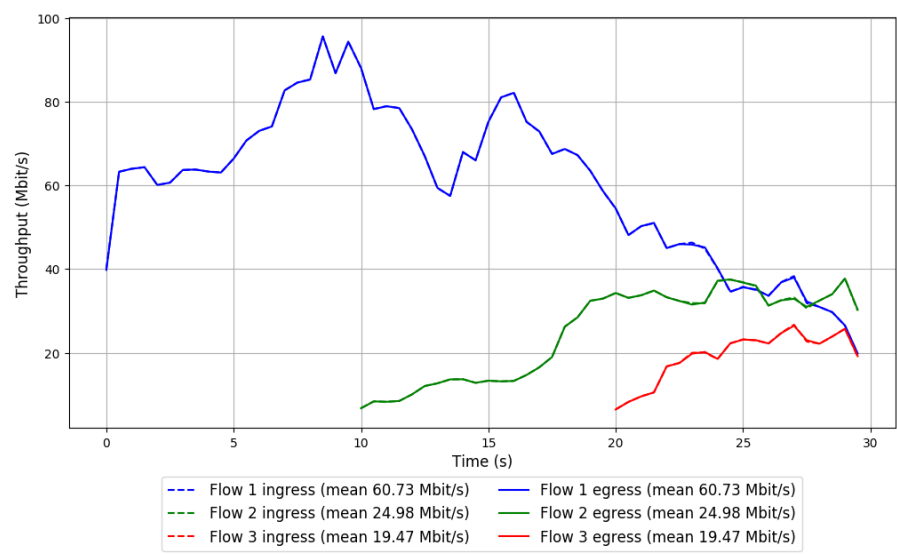
Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 75.59 Mbit/s) --- Flow 1 egress (mean 75.59 Mbit/s)
Flow 2 ingress (mean 5.61 Mbit/s) --- Flow 2 egress (mean 5.61 Mbit/s)
Flow 3 ingress (mean 30.06 Mbit/s) --- Flow 3 egress (mean 30.06 Mbit/s)

Flow 1 (95th percentile 4.05 ms)   Flow 2 (95th percentile 3.94 ms)   Flow 3 (95th percentile 4.49 ms)

73

```
Run 6: Statistics of PCC

Start at: 2018-01-02 11:43:33
End at: 2018-01-02 11:44:03
Local clock offset: -0.396 ms
Remote clock offset: 0.519 ms


# Below is generated by plot.py at 2018-01-02 13:24:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.93 Mbit/s
95th percentile per-packet one-way delay: 9.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 71.85 Mbit/s
95th percentile per-packet one-way delay: 10.255 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 8.128 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.03 Mbit/s
95th percentile per-packet one-way delay: 5.922 ms
Loss rate: 0.00%
```
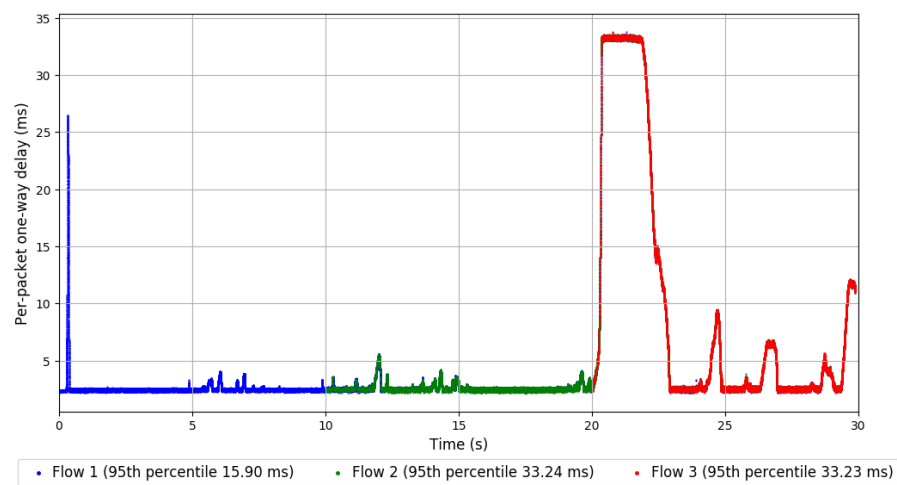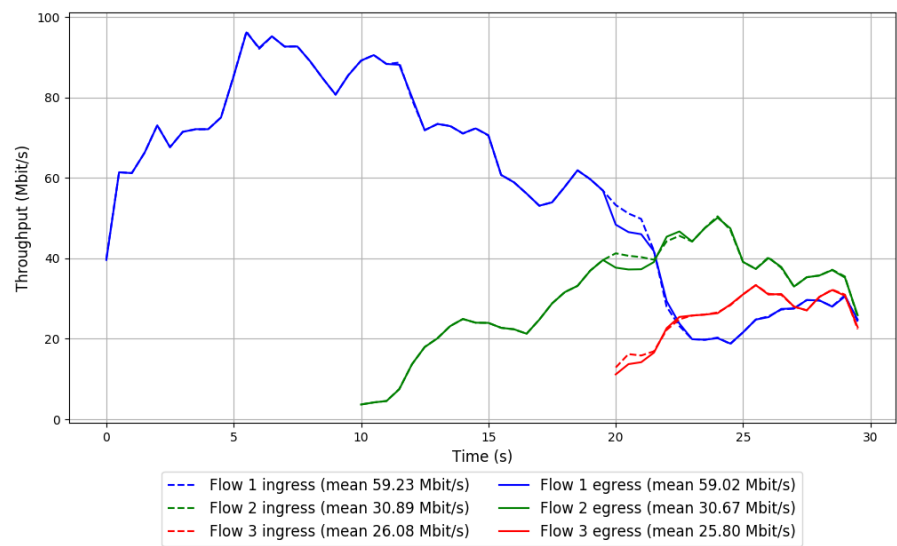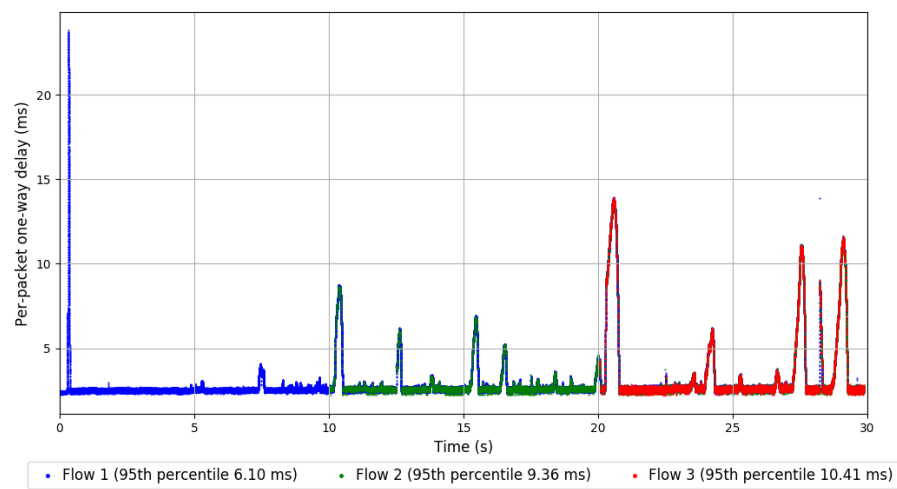
Run 6: Report of PCC — Data Link

- - - Flow 1 ingress (mean 71.85 Mbit/s) —— Flow 1 egress (mean 71.85 Mbit/s)
- - - Flow 2 ingress (mean 20.20 Mbit/s) —— Flow 2 egress (mean 20.20 Mbit/s)
- - - Flow 3 ingress (mean 5.03 Mbit/s) —— Flow 3 egress (mean 5.03 Mbit/s)

• Flow 1 (95th percentile 10.26 ms)　　• Flow 2 (95th percentile 8.13 ms)　　• Flow 3 (95th percentile 5.92 ms)

75

```
Run 7: Statistics of PCC

Start at: 2018-01-02 12:00:38
End at: 2018-01-02 12:01:08
Local clock offset: -0.353 ms
Remote clock offset: 0.488 ms

# Below is generated by plot.py at 2018-01-02 13:24:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.42 Mbit/s
95th percentile per-packet one-way delay: 11.964 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.38 Mbit/s
95th percentile per-packet one-way delay: 8.909 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.57 Mbit/s
95th percentile per-packet one-way delay: 14.777 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.33 Mbit/s
95th percentile per-packet one-way delay: 17.779 ms
Loss rate: 0.00%
```
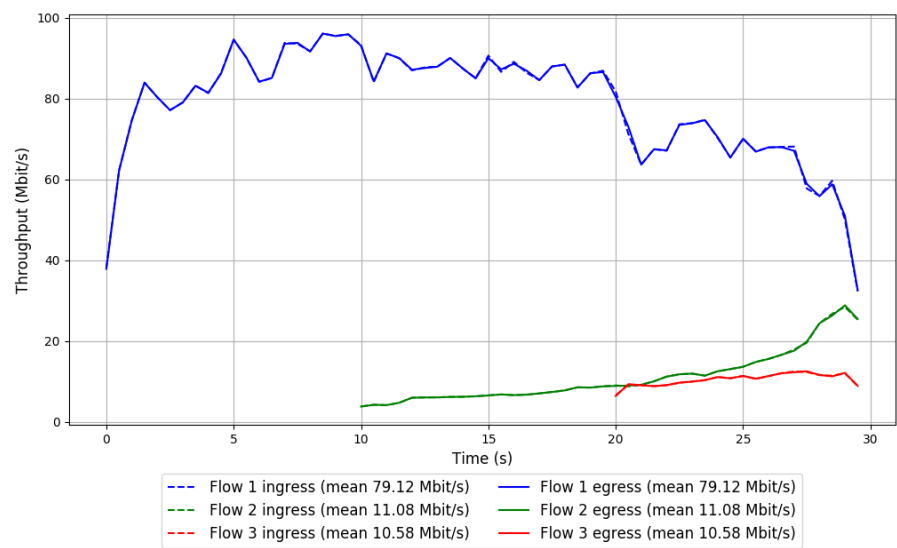
Run 7: Report of PCC — Data Link

```
Run 8: Statistics of PCC

Start at: 2018-01-02 12:17:46
End at: 2018-01-02 12:18:16
Local clock offset: -0.329 ms
Remote clock offset: 0.434 ms


# Below is generated by plot.py at 2018-01-02 13:24:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.75 Mbit/s
95th percentile per-packet one-way delay: 6.707 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 5.109 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.98 Mbit/s
95th percentile per-packet one-way delay: 7.768 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.47 Mbit/s
95th percentile per-packet one-way delay: 8.394 ms
Loss rate: 0.00%
```
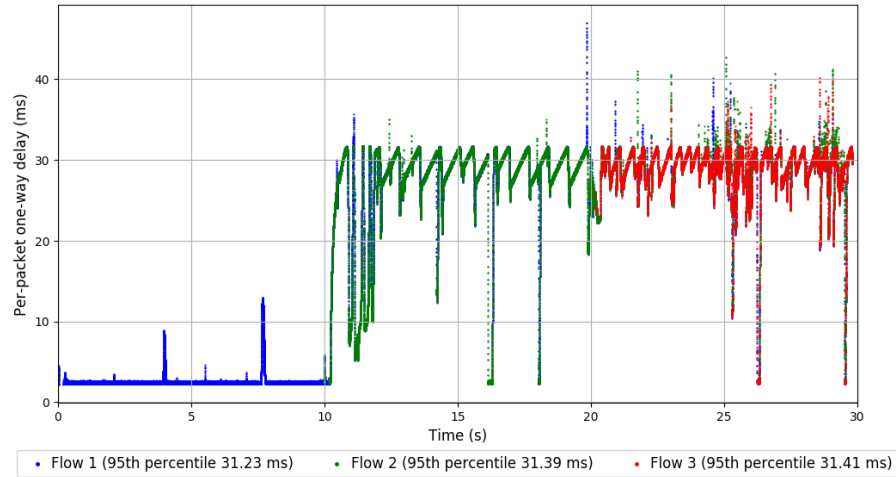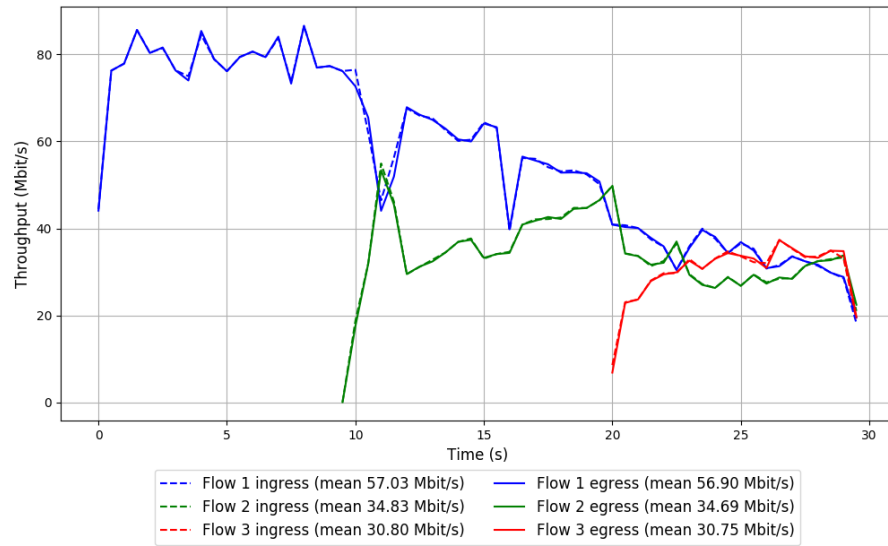
Run 8: Report of PCC — Data Link

79

```
Run 9: Statistics of PCC

Start at: 2018-01-02 12:34:51
End at: 2018-01-02 12:35:21
Local clock offset: -0.342 ms
Remote clock offset: 0.347 ms


# Below is generated by plot.py at 2018-01-02 13:24:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 33.099 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 59.02 Mbit/s
95th percentile per-packet one-way delay: 15.900 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 33.237 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 25.80 Mbit/s
95th percentile per-packet one-way delay: 33.228 ms
Loss rate: 0.99%
```
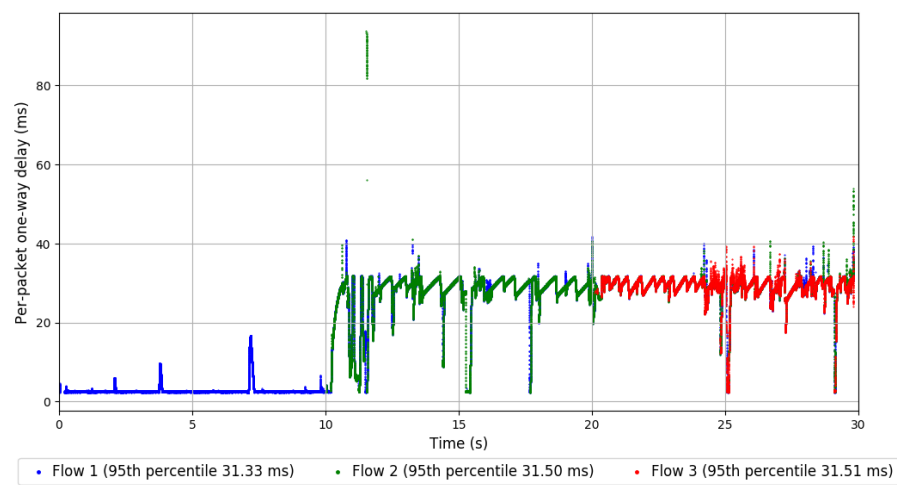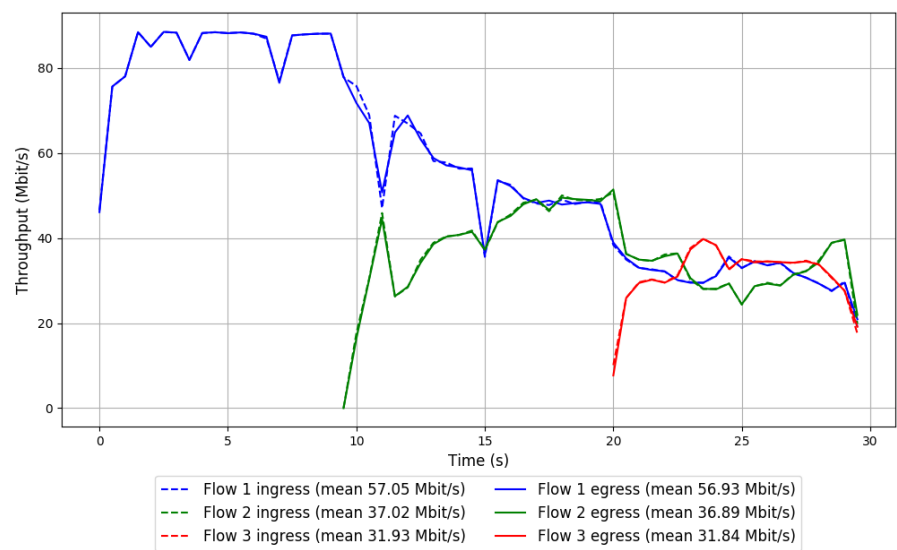
Run 9: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 59.23 Mbit/s) —— Flow 1 egress (mean 59.02 Mbit/s)
- - - - Flow 2 ingress (mean 30.89 Mbit/s) —— Flow 2 egress (mean 30.67 Mbit/s)
- - - - Flow 3 ingress (mean 26.08 Mbit/s) —— Flow 3 egress (mean 25.80 Mbit/s)

- Flow 1 (95th percentile 15.90 ms) · Flow 2 (95th percentile 33.24 ms) · Flow 3 (95th percentile 33.23 ms)

```
Run 10: Statistics of PCC

Start at: 2018-01-02 12:51:59
End at: 2018-01-02 12:52:29
Local clock offset: -0.378 ms
Remote clock offset: 0.242 ms


# Below is generated by plot.py at 2018-01-02 13:24:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.97 Mbit/s
95th percentile per-packet one-way delay: 6.716 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 79.12 Mbit/s
95th percentile per-packet one-way delay: 6.096 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 9.361 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.58 Mbit/s
95th percentile per-packet one-way delay: 10.414 ms
Loss rate: 0.00%
```
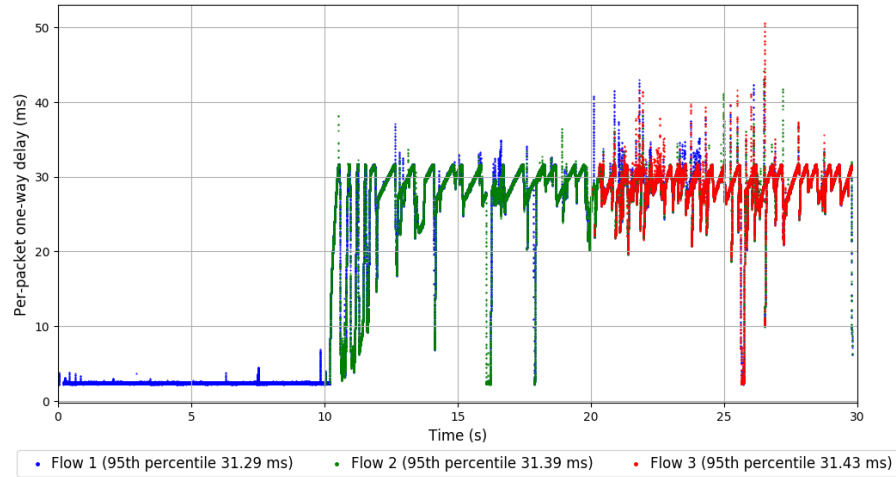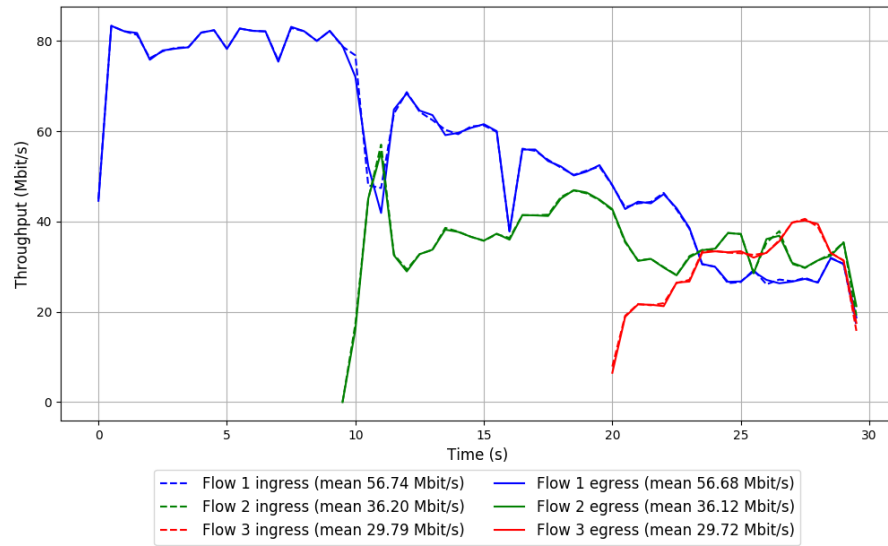
Run 10: Report of PCC — Data Link

83

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-01-02 10:12:31
End at: 2018-01-02 10:13:01
Local clock offset: -0.389 ms
Remote clock offset: 0.738 ms


# Below is generated by plot.py at 2018-01-02 13:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.03 Mbit/s
95th percentile per-packet one-way delay: 31.319 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.90 Mbit/s
95th percentile per-packet one-way delay: 31.230 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 31.394 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 31.405 ms
Loss rate: 0.16%
```
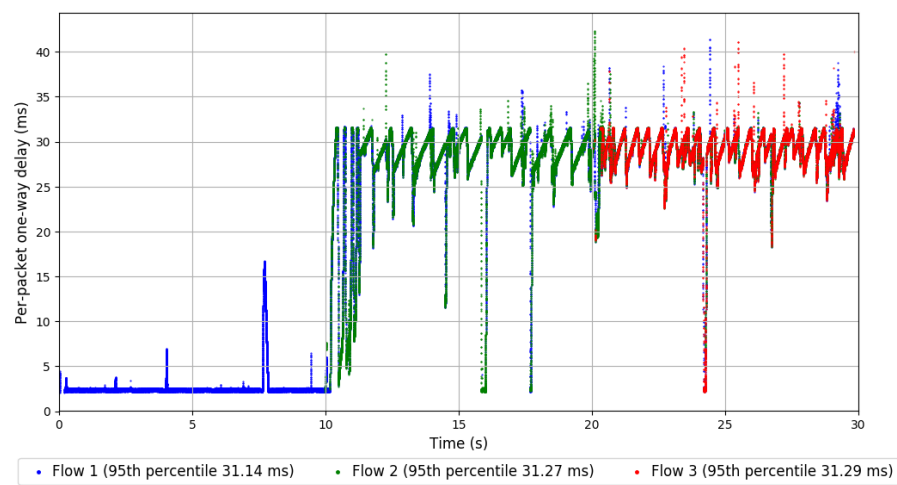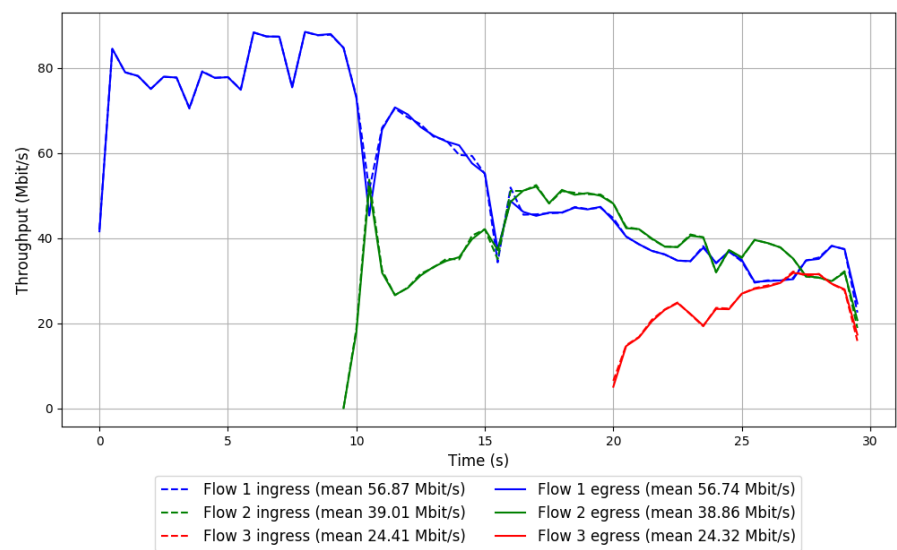
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.03 Mbit/s)   Flow 1 egress (mean 56.90 Mbit/s)
Flow 2 ingress (mean 34.83 Mbit/s)   Flow 2 egress (mean 34.69 Mbit/s)
Flow 3 ingress (mean 30.80 Mbit/s)   Flow 3 egress (mean 30.75 Mbit/s)

Flow 1 (95th percentile 31.23 ms)   Flow 2 (95th percentile 31.39 ms)   Flow 3 (95th percentile 31.41 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-01-02 10:29:35
End at: 2018-01-02 10:30:05
Local clock offset: -0.497 ms
Remote clock offset: 0.701 ms


# Below is generated by plot.py at 2018-01-02 13:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.83 Mbit/s
95th percentile per-packet one-way delay: 31.427 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 56.93 Mbit/s
95th percentile per-packet one-way delay: 31.326 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 36.89 Mbit/s
95th percentile per-packet one-way delay: 31.502 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 31.84 Mbit/s
95th percentile per-packet one-way delay: 31.511 ms
Loss rate: 0.25%
```
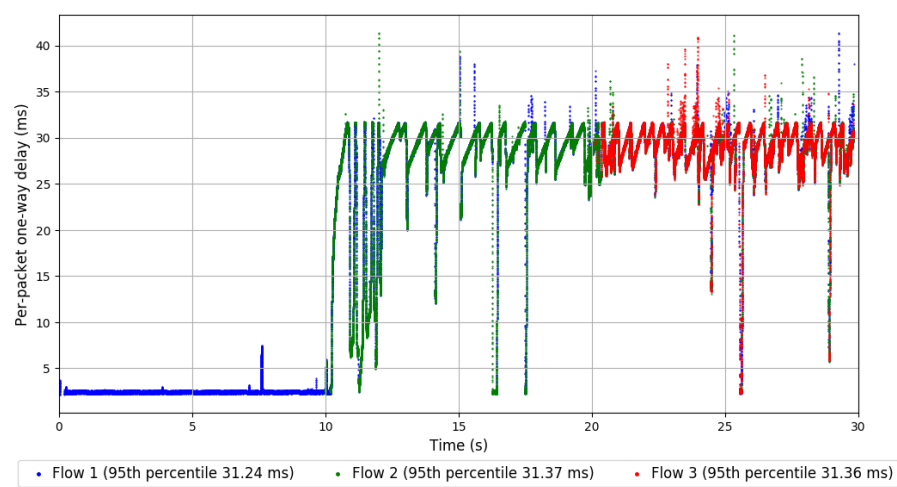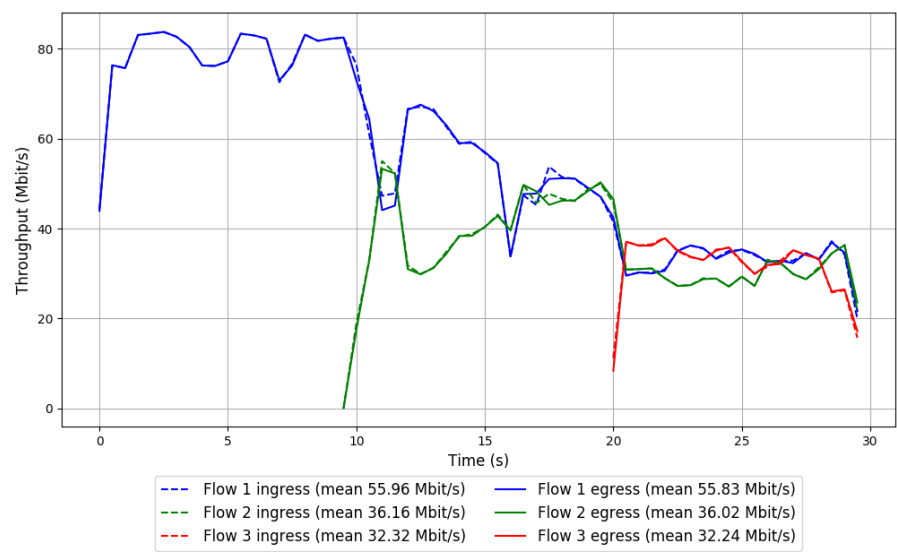
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-01-02 10:46:40
End at: 2018-01-02 10:47:10
Local clock offset: -0.434 ms
Remote clock offset: 0.621 ms


# Below is generated by plot.py at 2018-01-02 13:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.40 Mbit/s
95th percentile per-packet one-way delay: 31.347 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 31.286 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 36.12 Mbit/s
95th percentile per-packet one-way delay: 31.387 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 29.72 Mbit/s
95th percentile per-packet one-way delay: 31.435 ms
Loss rate: 0.19%
```
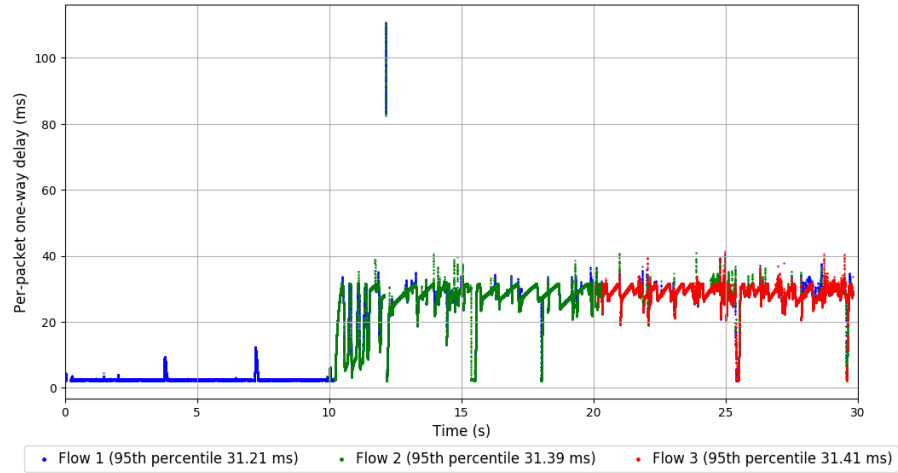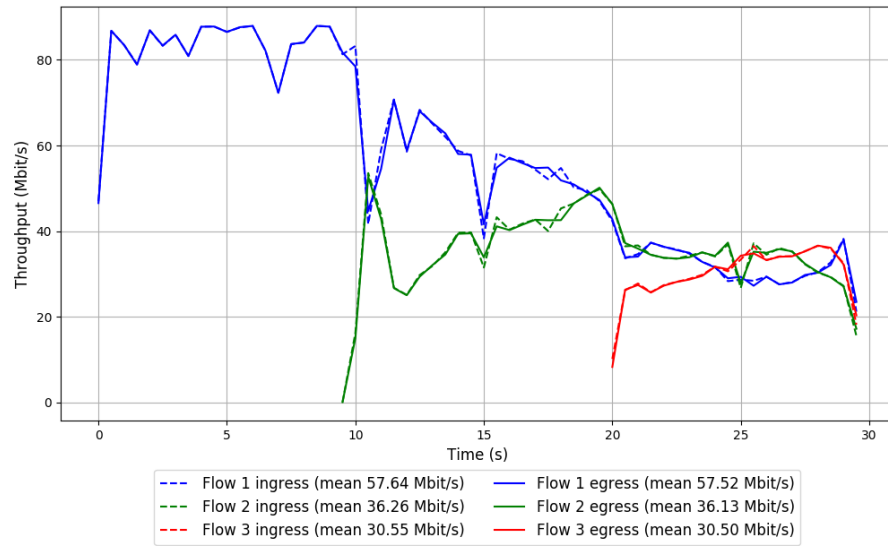
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-01-02 11:03:45
End at: 2018-01-02 11:04:15
Local clock offset: -0.425 ms
Remote clock offset: 0.535 ms


# Below is generated by plot.py at 2018-01-02 13:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.55 Mbit/s
95th percentile per-packet one-way delay: 31.211 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.74 Mbit/s
95th percentile per-packet one-way delay: 31.137 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 38.86 Mbit/s
95th percentile per-packet one-way delay: 31.274 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 24.32 Mbit/s
95th percentile per-packet one-way delay: 31.286 ms
Loss rate: 0.27%
```
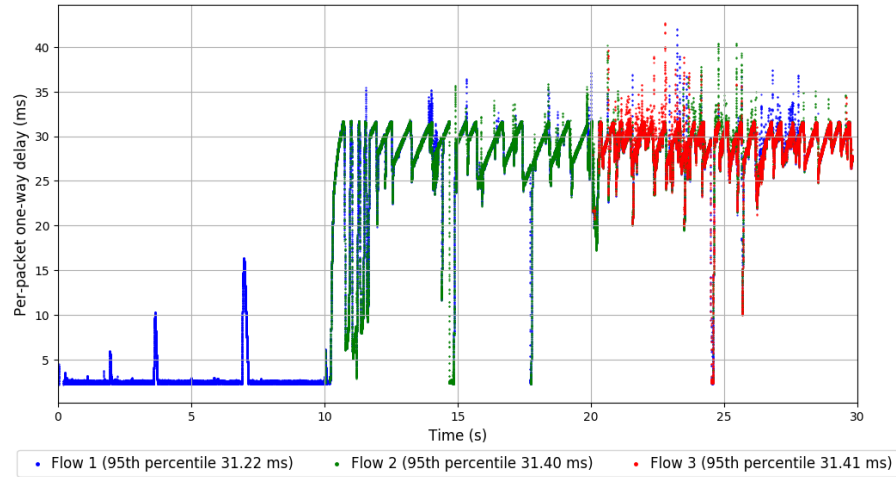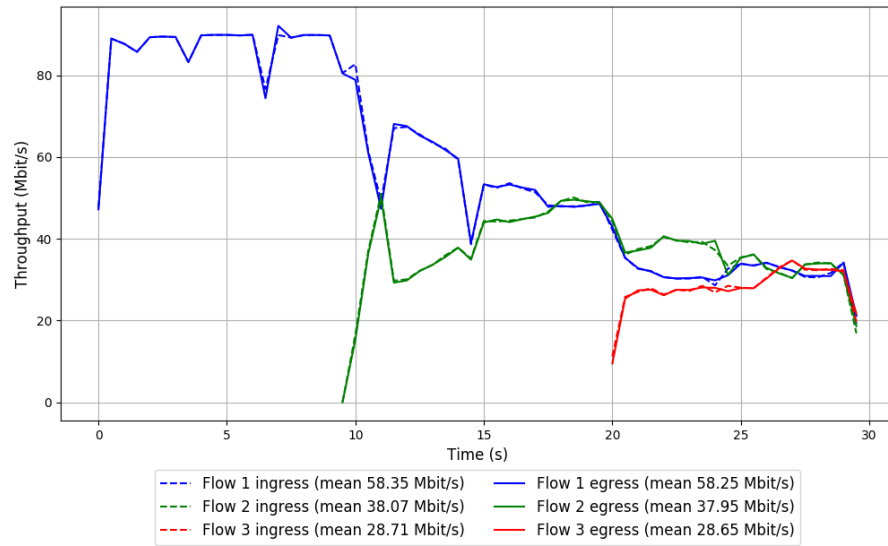
Run 4: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 56.87 Mbit/s)   —— Flow 1 egress (mean 56.74 Mbit/s)
- - - Flow 2 ingress (mean 39.01 Mbit/s)   —— Flow 2 egress (mean 38.86 Mbit/s)
- - - Flow 3 ingress (mean 24.41 Mbit/s)   —— Flow 3 egress (mean 24.32 Mbit/s)

- Flow 1 (95th percentile 31.14 ms)   • Flow 2 (95th percentile 31.27 ms)   • Flow 3 (95th percentile 31.29 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-01-02 11:20:50
End at: 2018-01-02 11:21:20
Local clock offset: -0.447 ms
Remote clock offset: 0.553 ms


# Below is generated by plot.py at 2018-01-02 13:26:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.31 Mbit/s
95th percentile per-packet one-way delay: 31.312 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 55.83 Mbit/s
95th percentile per-packet one-way delay: 31.244 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 36.02 Mbit/s
95th percentile per-packet one-way delay: 31.370 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 32.24 Mbit/s
95th percentile per-packet one-way delay: 31.359 ms
Loss rate: 0.23%
```
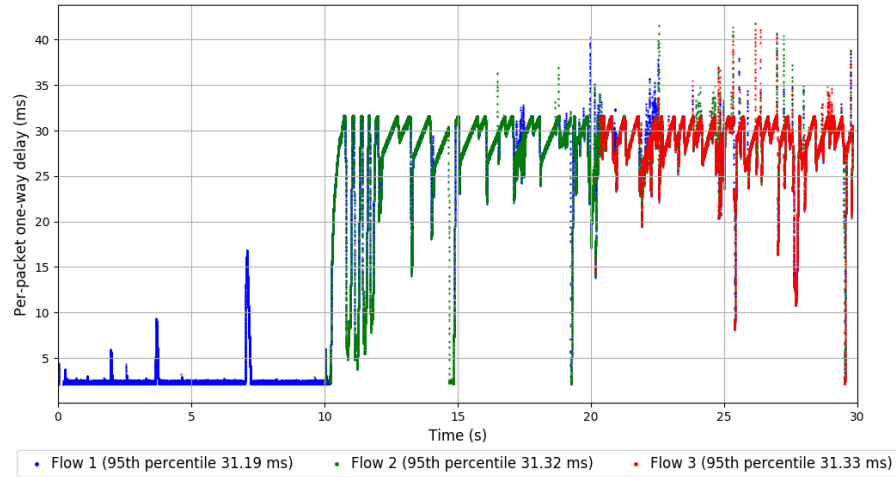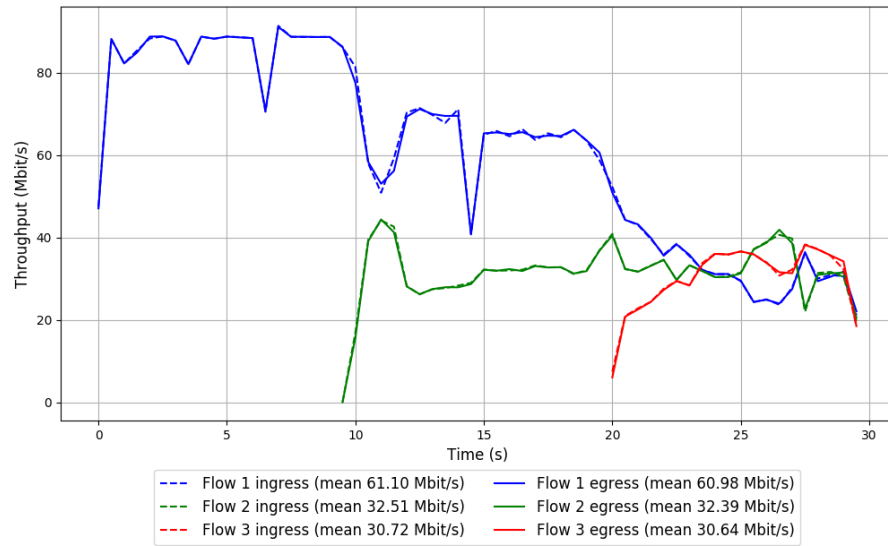
Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-01-02 11:37:55
End at: 2018-01-02 11:38:25
Local clock offset: -0.392 ms
Remote clock offset: 0.539 ms


# Below is generated by plot.py at 2018-01-02 13:26:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.53 Mbit/s
95th percentile per-packet one-way delay: 31.315 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 57.52 Mbit/s
95th percentile per-packet one-way delay: 31.206 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 36.13 Mbit/s
95th percentile per-packet one-way delay: 31.391 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 30.50 Mbit/s
95th percentile per-packet one-way delay: 31.412 ms
Loss rate: 0.18%
```
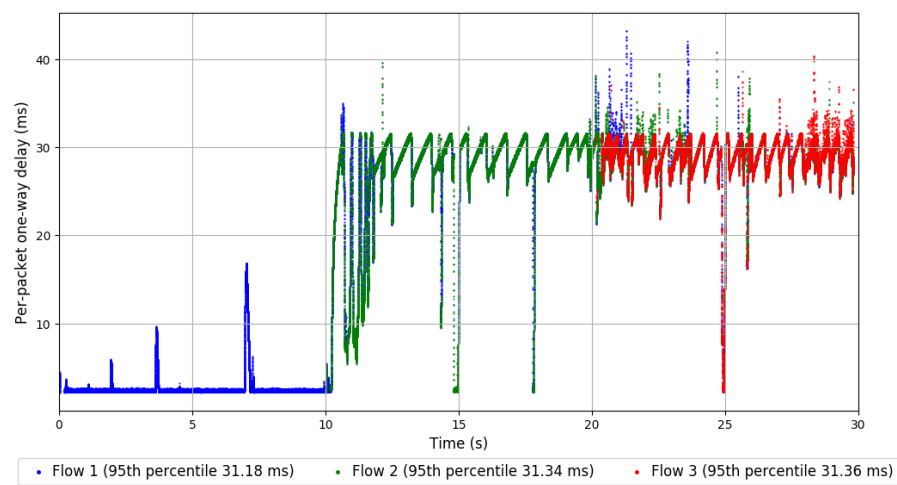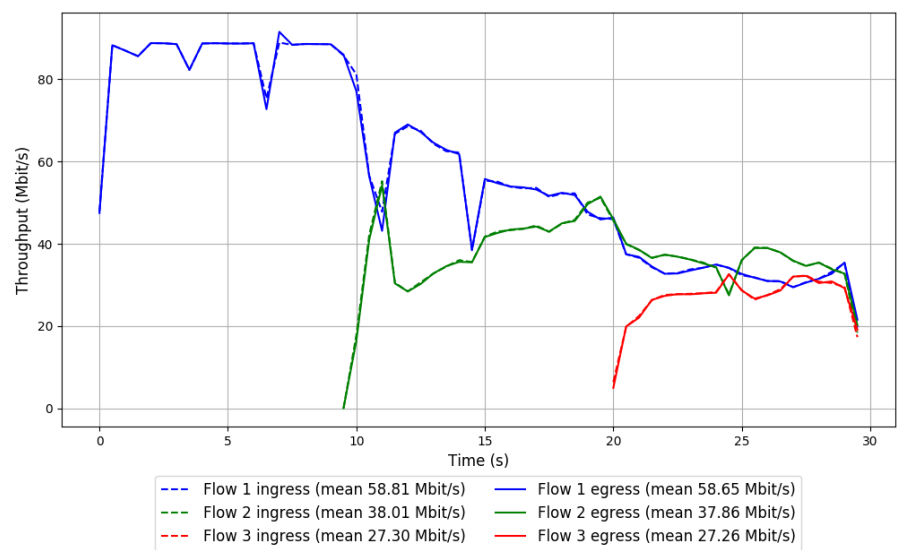
Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.64 Mbit/s)   Flow 1 egress (mean 57.52 Mbit/s)
Flow 2 ingress (mean 36.26 Mbit/s)   Flow 2 egress (mean 36.13 Mbit/s)
Flow 3 ingress (mean 30.55 Mbit/s)   Flow 3 egress (mean 30.50 Mbit/s)

Flow 1 (95th percentile 31.21 ms)   Flow 2 (95th percentile 31.39 ms)   Flow 3 (95th percentile 31.41 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-01-02 11:55:00
End at: 2018-01-02 11:55:30
Local clock offset: -0.369 ms
Remote clock offset: 0.511 ms


# Below is generated by plot.py at 2018-01-02 13:26:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.86 Mbit/s
95th percentile per-packet one-way delay: 31.322 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 31.222 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 31.396 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 28.65 Mbit/s
95th percentile per-packet one-way delay: 31.414 ms
Loss rate: 0.23%
```
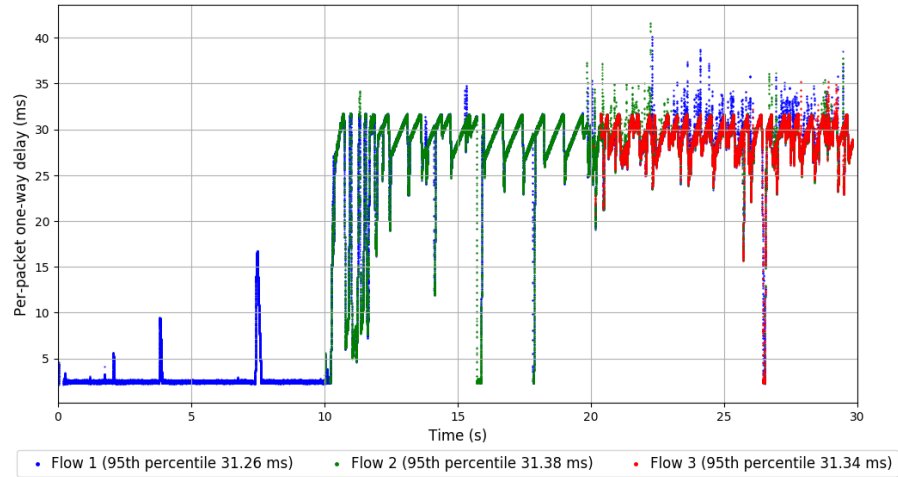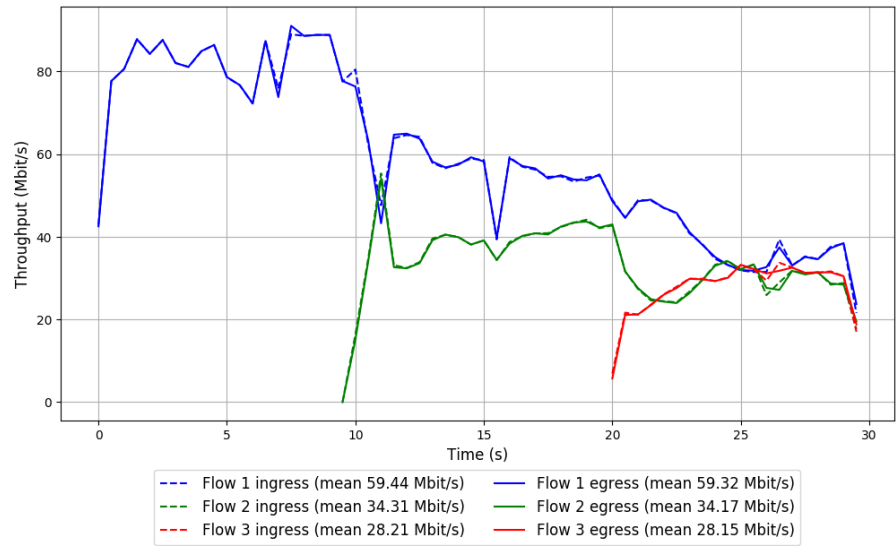
Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-01-02 12:12:08
End at: 2018-01-02 12:12:38
Local clock offset: -0.339 ms
Remote clock offset: 0.385 ms


# Below is generated by plot.py at 2018-01-02 13:26:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.54 Mbit/s
95th percentile per-packet one-way delay: 31.258 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 60.98 Mbit/s
95th percentile per-packet one-way delay: 31.193 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 32.39 Mbit/s
95th percentile per-packet one-way delay: 31.316 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 30.64 Mbit/s
95th percentile per-packet one-way delay: 31.327 ms
Loss rate: 0.18%
```
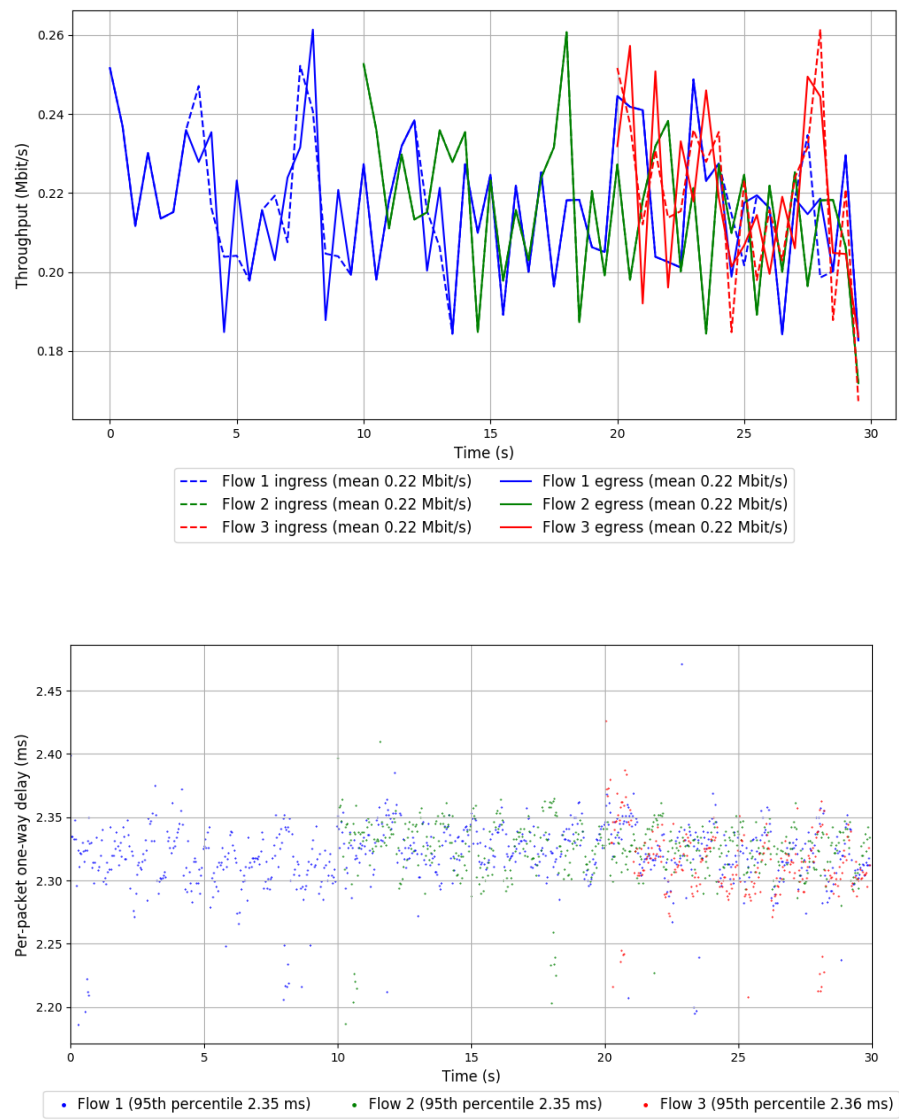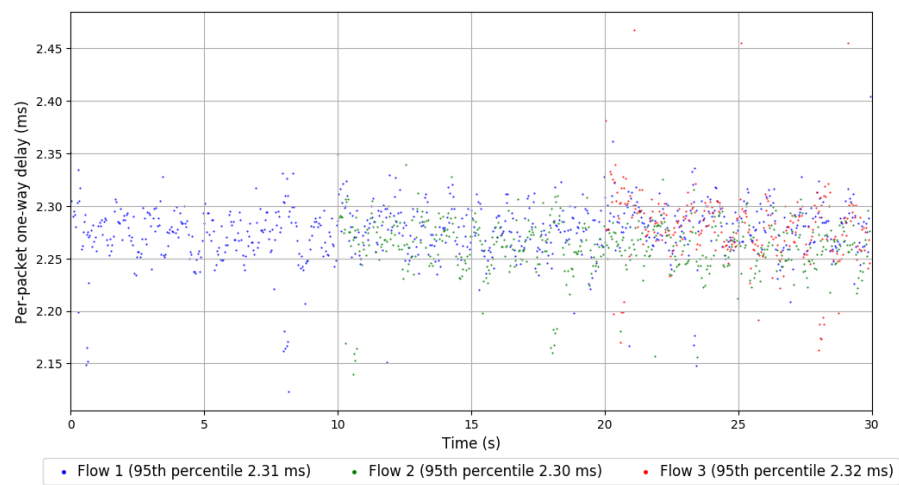
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 61.10 Mbit/s)   Flow 1 egress (mean 60.98 Mbit/s)
Flow 2 ingress (mean 32.51 Mbit/s)   Flow 2 egress (mean 32.39 Mbit/s)
Flow 3 ingress (mean 30.72 Mbit/s)   Flow 3 egress (mean 30.64 Mbit/s)

Flow 1 (95th percentile 31.19 ms)   Flow 2 (95th percentile 31.32 ms)   Flow 3 (95th percentile 31.33 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-01-02 12:29:13
End at: 2018-01-02 12:29:43
Local clock offset: -0.332 ms
Remote clock offset: 0.32 ms


# Below is generated by plot.py at 2018-01-02 13:27:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.73 Mbit/s
95th percentile per-packet one-way delay: 31.272 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 58.65 Mbit/s
95th percentile per-packet one-way delay: 31.182 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 37.86 Mbit/s
95th percentile per-packet one-way delay: 31.340 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 27.26 Mbit/s
95th percentile per-packet one-way delay: 31.358 ms
Loss rate: 0.19%
```
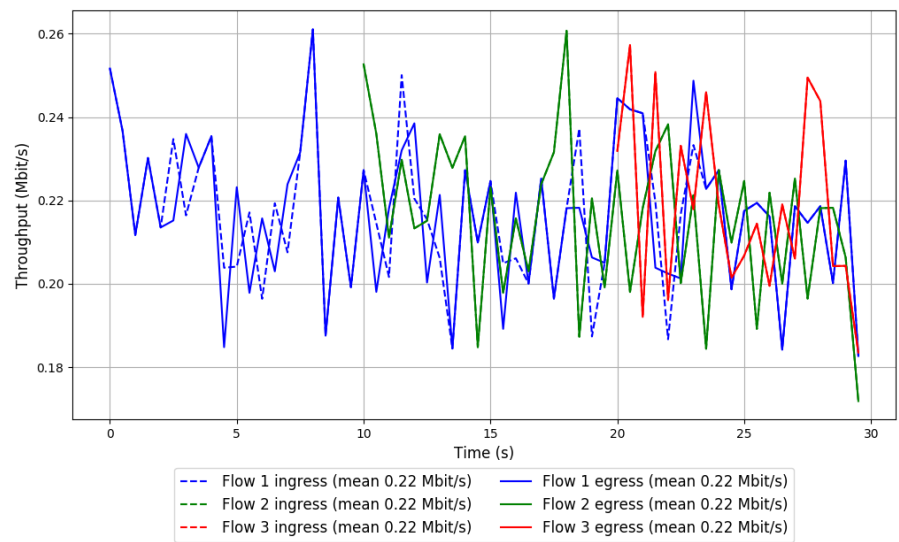
Run 9: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 58.81 Mbit/s)   —— Flow 1 egress (mean 58.65 Mbit/s)
- - - Flow 2 ingress (mean 38.01 Mbit/s)   —— Flow 2 egress (mean 37.86 Mbit/s)
- - - Flow 3 ingress (mean 27.30 Mbit/s)   —— Flow 3 egress (mean 27.26 Mbit/s)

• Flow 1 (95th percentile 31.18 ms)   • Flow 2 (95th percentile 31.34 ms)   • Flow 3 (95th percentile 31.36 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-01-02 12:46:21
End at: 2018-01-02 12:46:51
Local clock offset: -0.401 ms
Remote clock offset: 0.204 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 31.315 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 59.32 Mbit/s
95th percentile per-packet one-way delay: 31.261 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 31.383 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 28.15 Mbit/s
95th percentile per-packet one-way delay: 31.344 ms
Loss rate: 0.16%
```
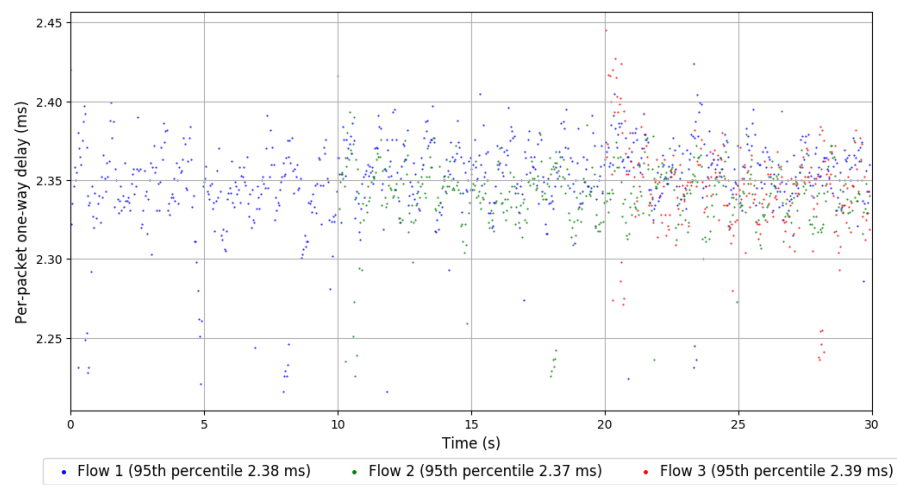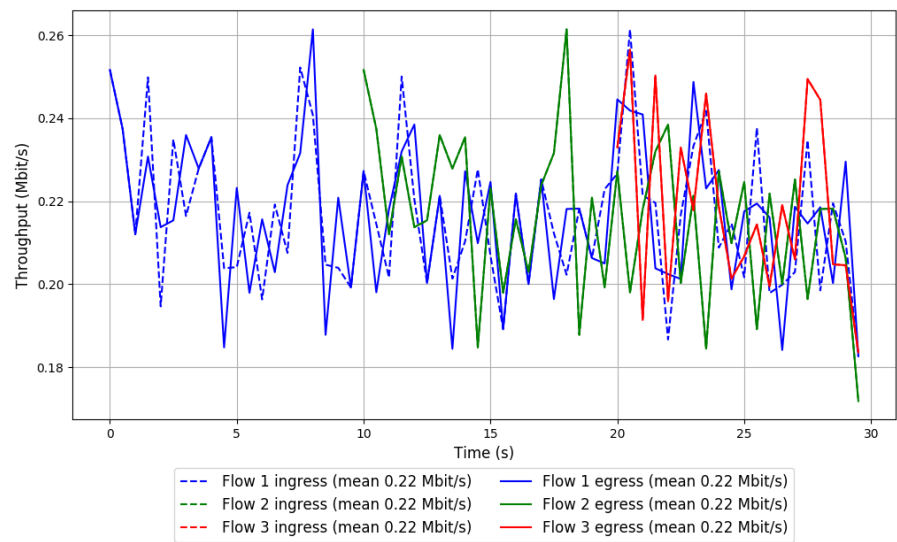
Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2018-01-02 10:06:49
End at: 2018-01-02 10:07:19
Local clock offset: -0.359 ms
Remote clock offset: 0.757 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.353 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.354 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.358 ms
Loss rate: 0.00%
```
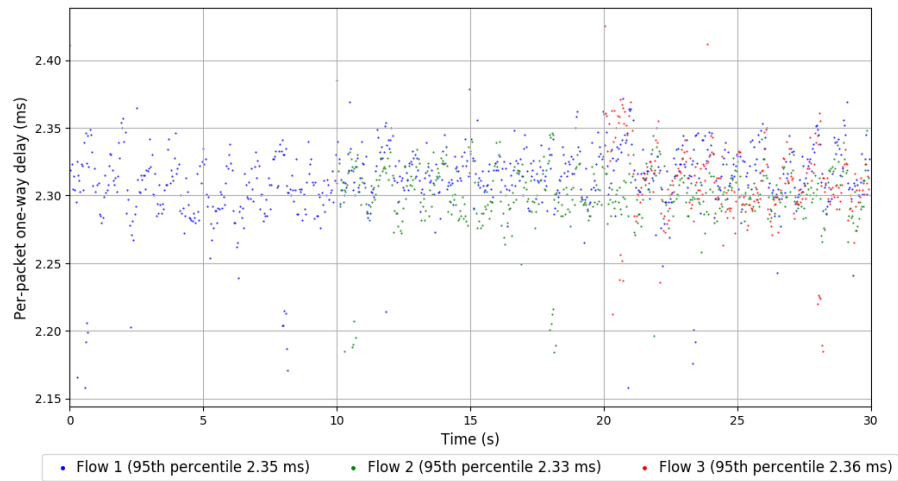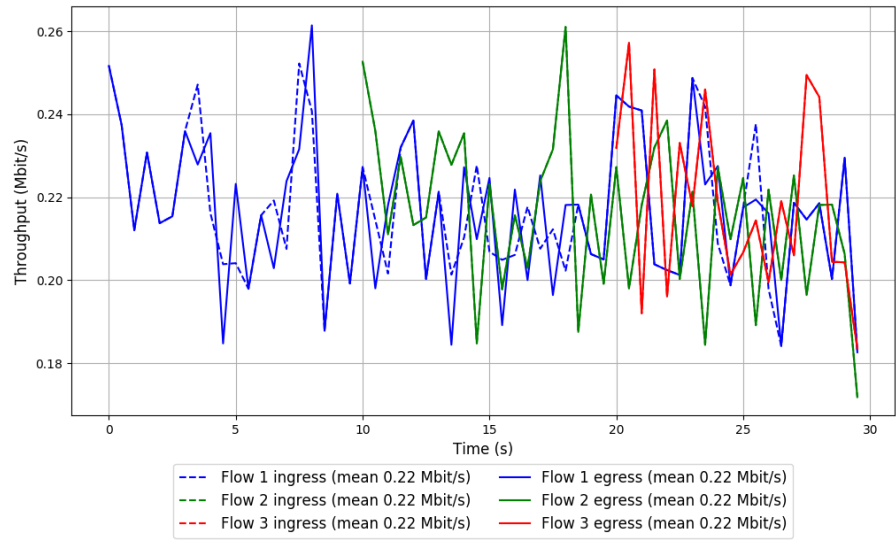
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-01-02 10:23:53
End at: 2018-01-02 10:24:23
Local clock offset: -0.409 ms
Remote clock offset: 0.648 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.296 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.319 ms
Loss rate: 0.00%
```
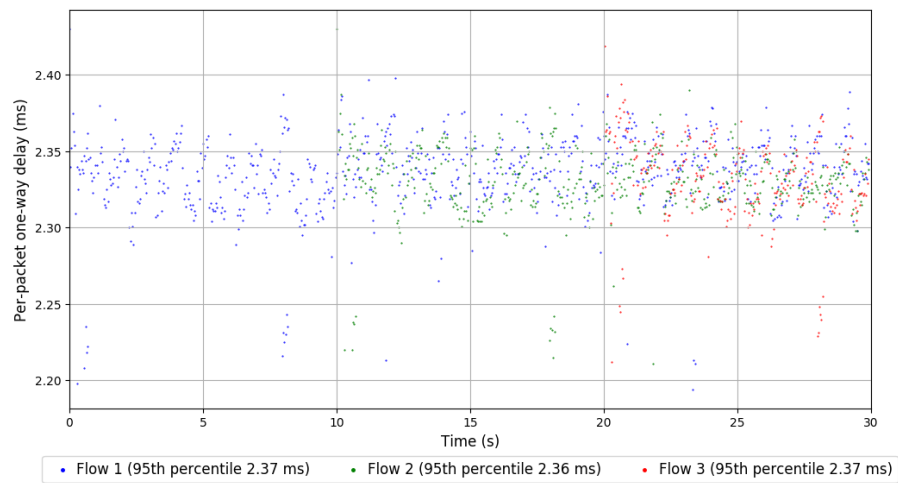
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-01-02 10:40:58
End at: 2018-01-02 10:41:28
Local clock offset: -0.44 ms
Remote clock offset: 0.639 ms

# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.382 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.385 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.370 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.393 ms
Loss rate: 0.00%
```
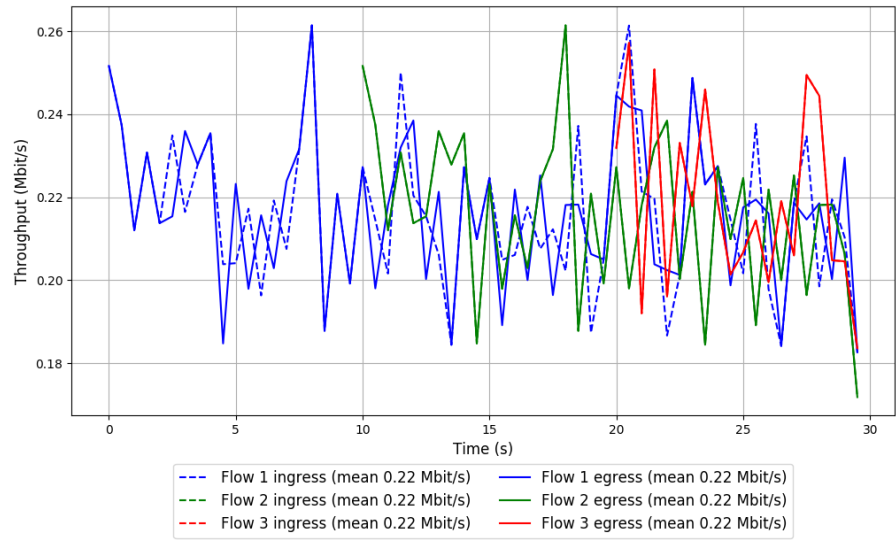
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-01-02 10:58:03
End at: 2018-01-02 10:58:33
Local clock offset: -0.421 ms
Remote clock offset: 0.604 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.346 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.330 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.359 ms
Loss rate: 0.00%
```
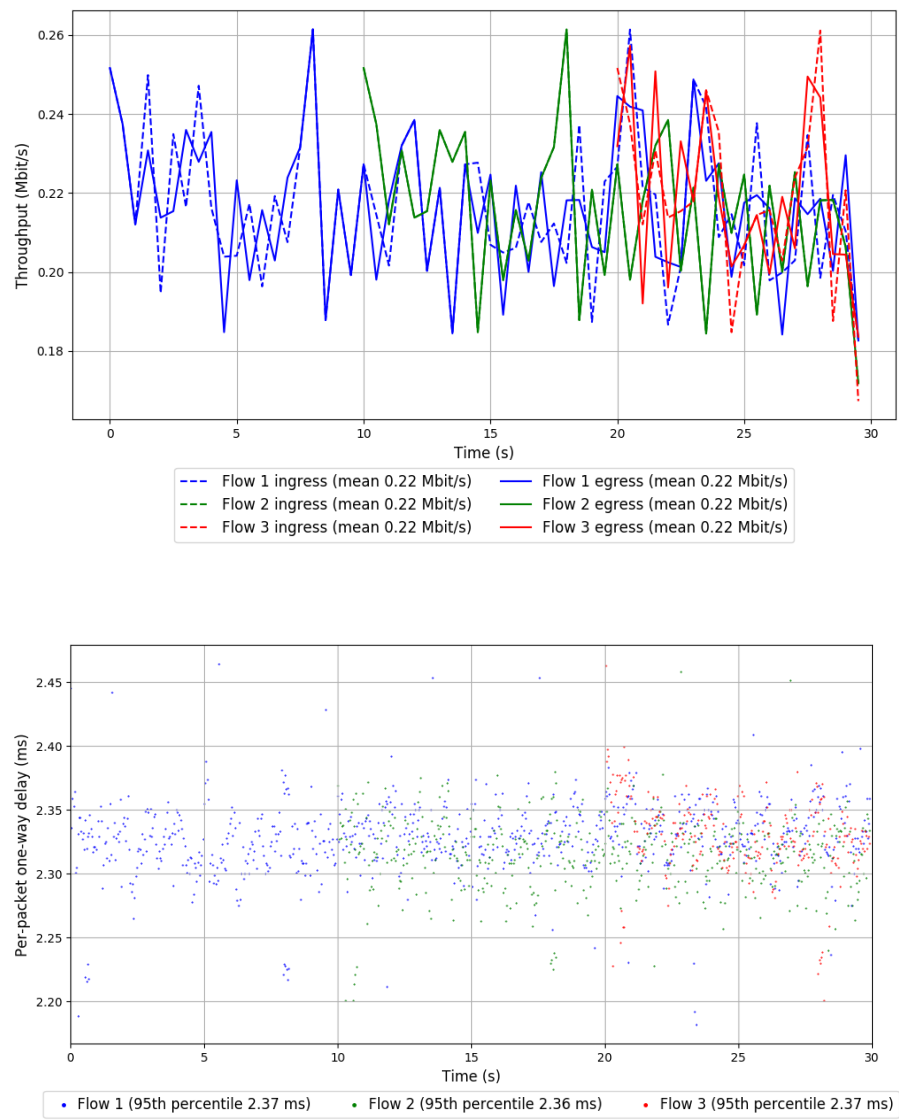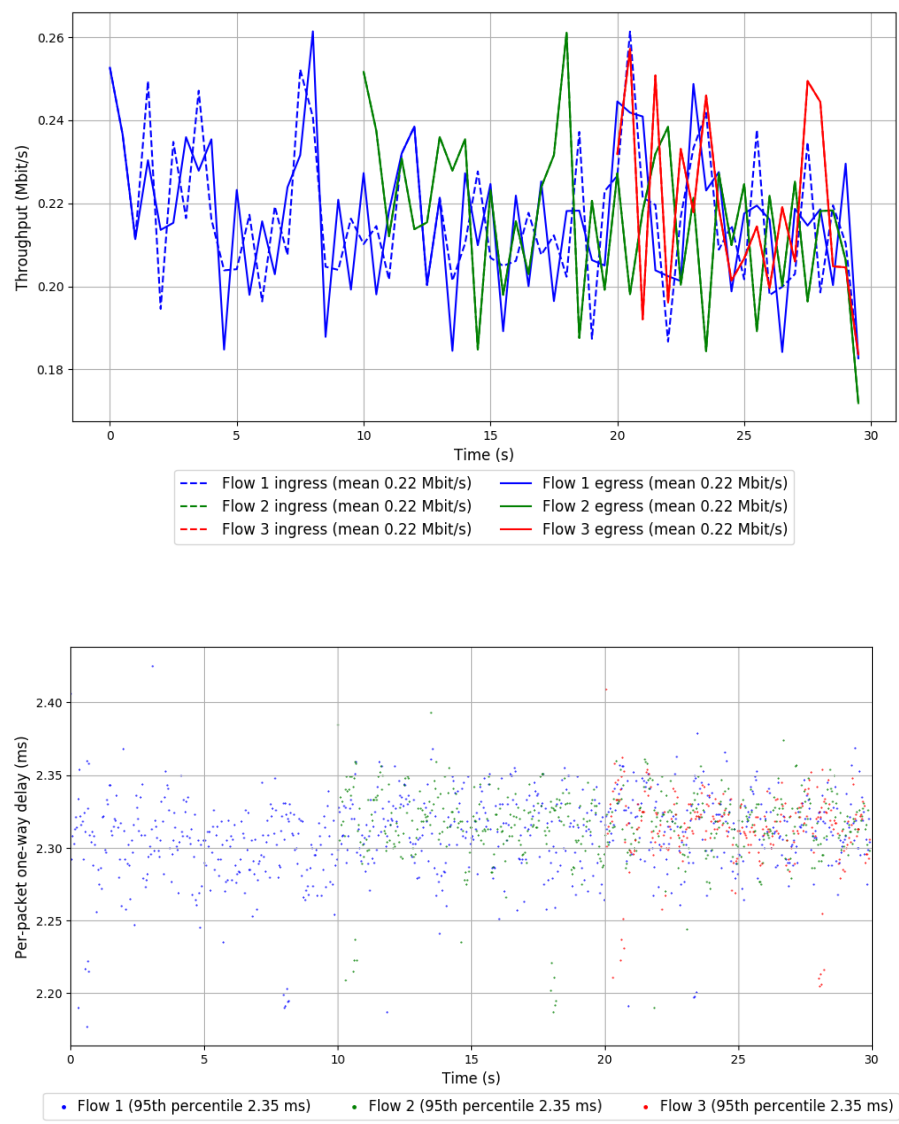
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-01-02 11:15:07
End at: 2018-01-02 11:15:38
Local clock offset: -0.45 ms
Remote clock offset: 0.584 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.367 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.369 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.360 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.370 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link

113

```
Run 6: Statistics of SCReAM

Start at: 2018-01-02 11:32:13
End at: 2018-01-02 11:32:43
Local clock offset: -0.411 ms
Remote clock offset: 0.549 ms

# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.365 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.358 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.374 ms
Loss rate: 0.00%
```
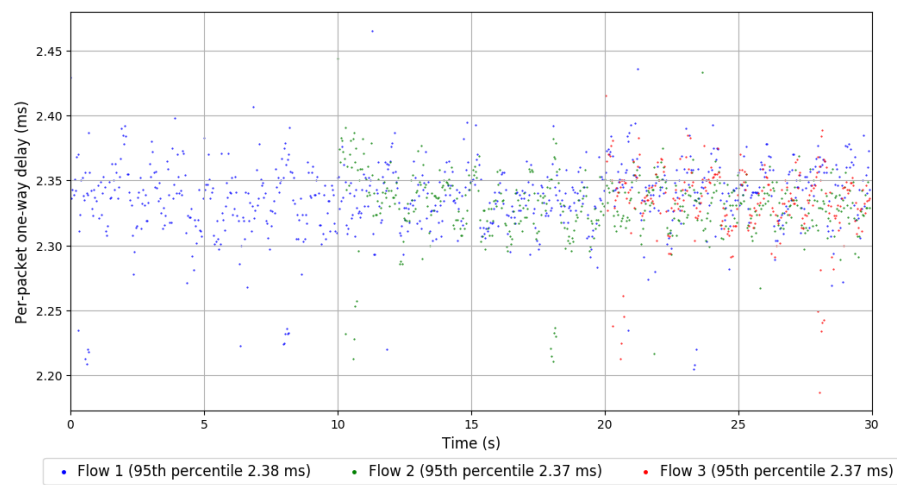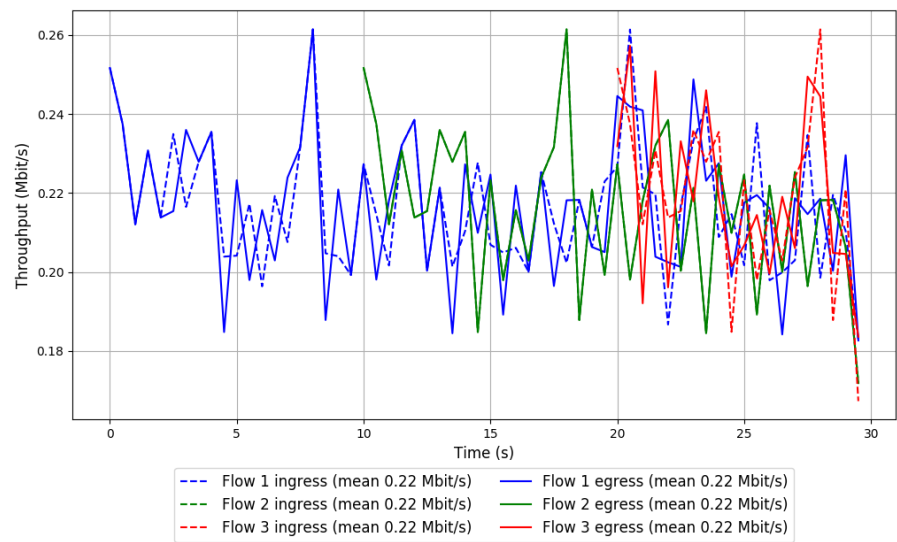
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2018-01-02 11:49:17
End at: 2018-01-02 11:49:47
Local clock offset: -0.414 ms
Remote clock offset: 0.449 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.349 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.349 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.347 ms
Loss rate: 0.00%
```
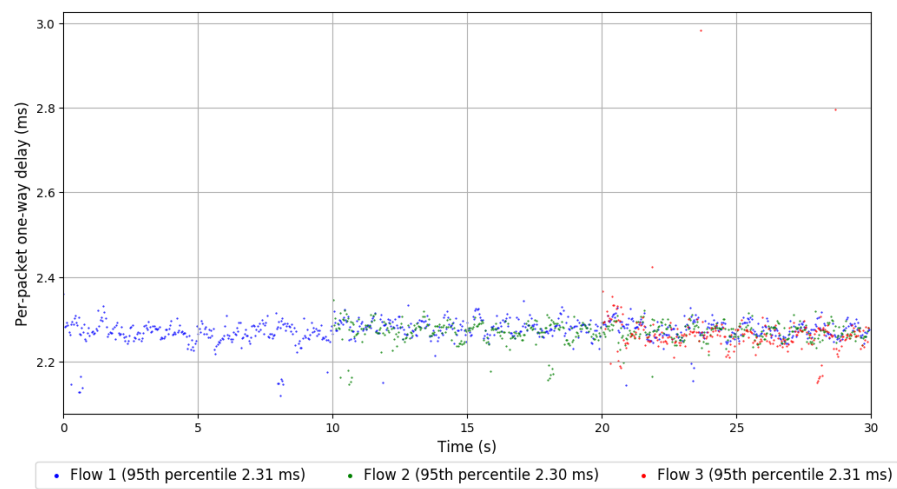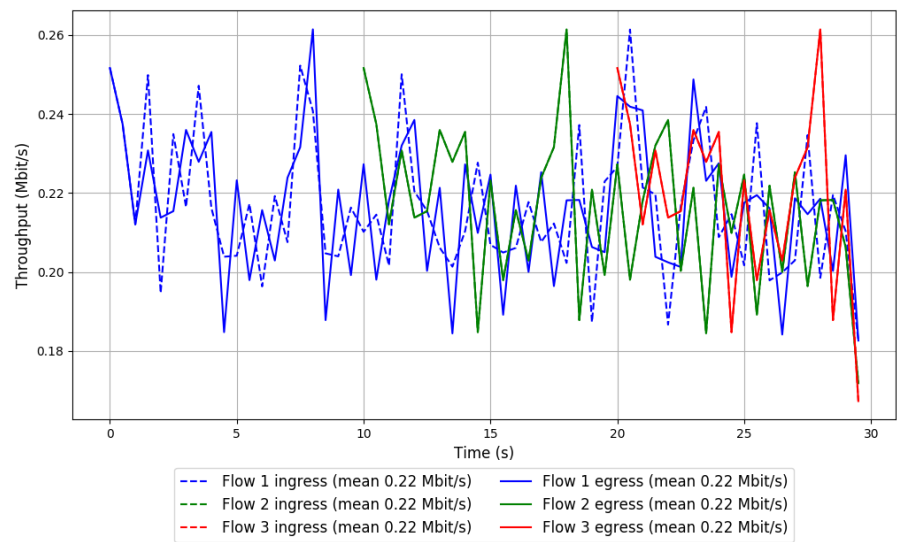
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-01-02 12:06:26
End at: 2018-01-02 12:06:56
Local clock offset: -0.349 ms
Remote clock offset: 0.49 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.373 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.376 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.366 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.369 ms
Loss rate: 0.00%
```
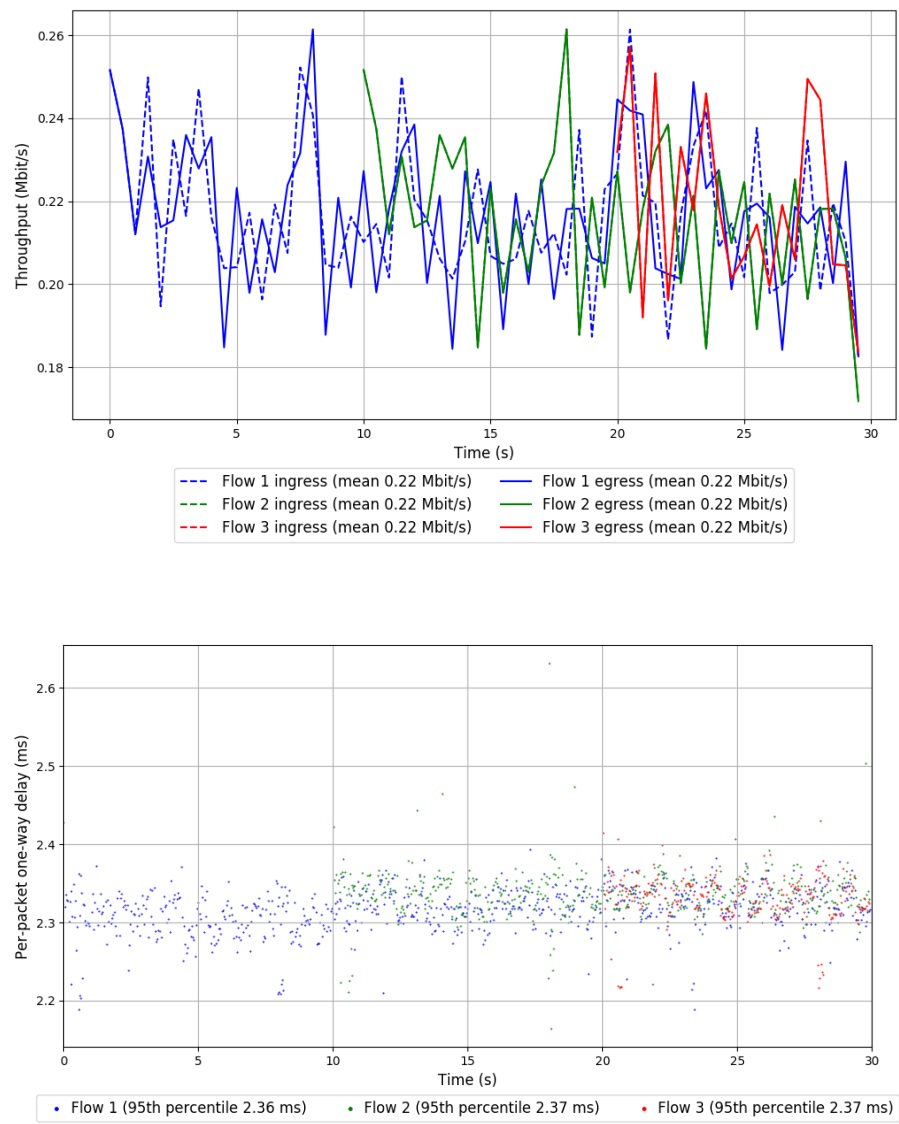
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-01-02 12:23:30
End at: 2018-01-02 12:24:00
Local clock offset: -0.343 ms
Remote clock offset: 0.334 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.306 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.308 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.303 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.306 ms
Loss rate: 0.00%
```
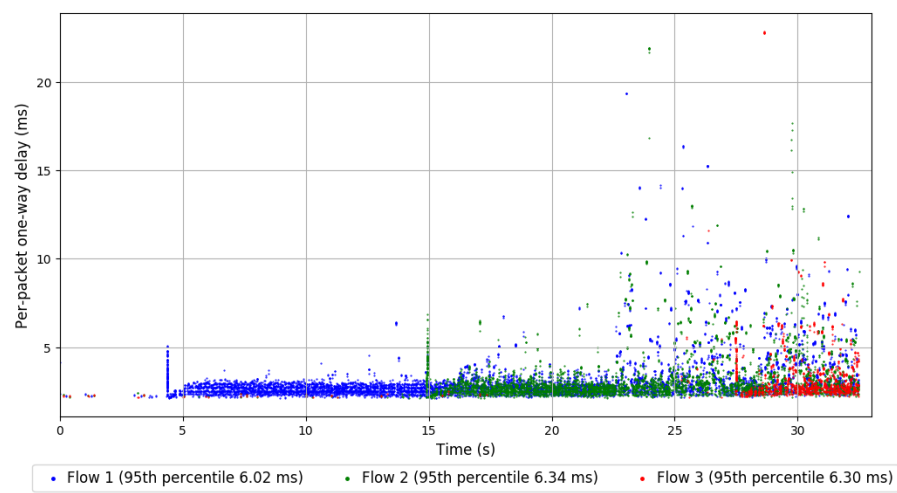
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-01-02 12:40:39
End at: 2018-01-02 12:41:09
Local clock offset: -0.334 ms
Remote clock offset: 0.3 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.365 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.357 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.368 ms
Loss rate: 0.00%
```
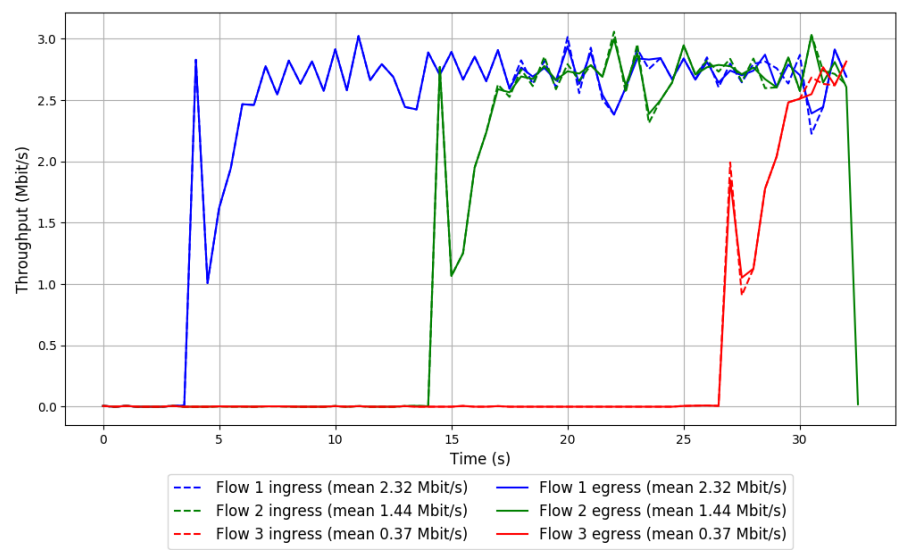
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-01-02 10:14:50
End at: 2018-01-02 10:15:20
Local clock offset: -0.399 ms
Remote clock offset: 0.72 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 6.184 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 6.020 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 6.338 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 6.298 ms
Loss rate: 0.00%
```
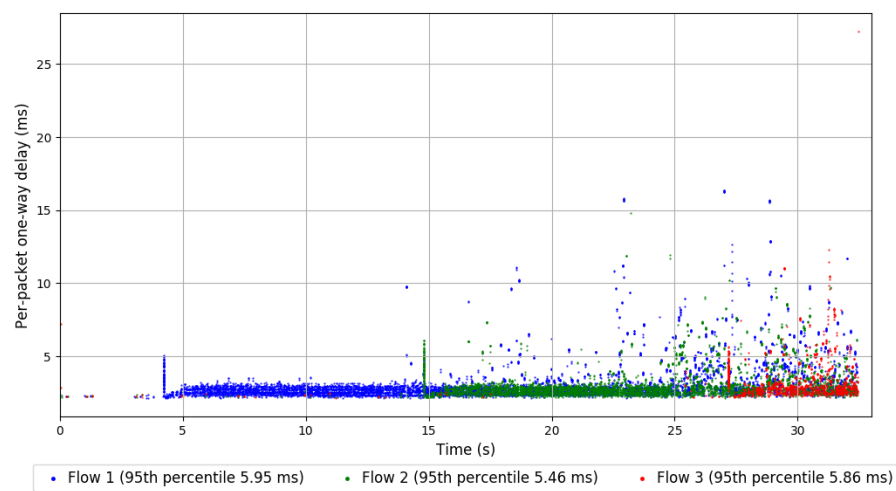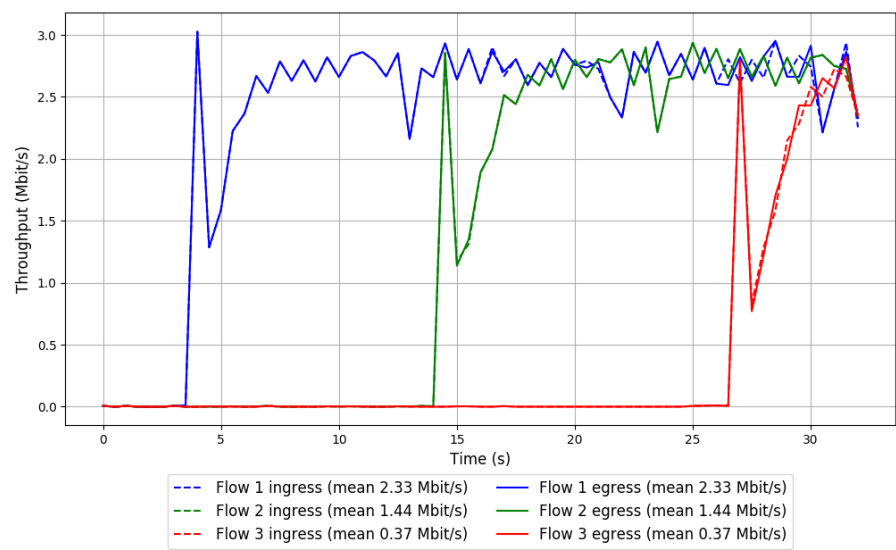
Run 1: Report of WebRTC media — Data Link

- - - Flow 1 ingress (mean 2.32 Mbit/s) ——— Flow 1 egress (mean 2.32 Mbit/s)
- - - Flow 2 ingress (mean 1.44 Mbit/s) ——— Flow 2 egress (mean 1.44 Mbit/s)
- - - Flow 3 ingress (mean 0.37 Mbit/s) ——— Flow 3 egress (mean 0.37 Mbit/s)

• Flow 1 (95th percentile 6.02 ms)   • Flow 2 (95th percentile 6.34 ms)   • Flow 3 (95th percentile 6.30 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2018-01-02 10:31:54
End at: 2018-01-02 10:32:24
Local clock offset: -0.485 ms
Remote clock offset: 0.607 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 5.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 5.953 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 5.465 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 5.862 ms
Loss rate: 0.00%
```
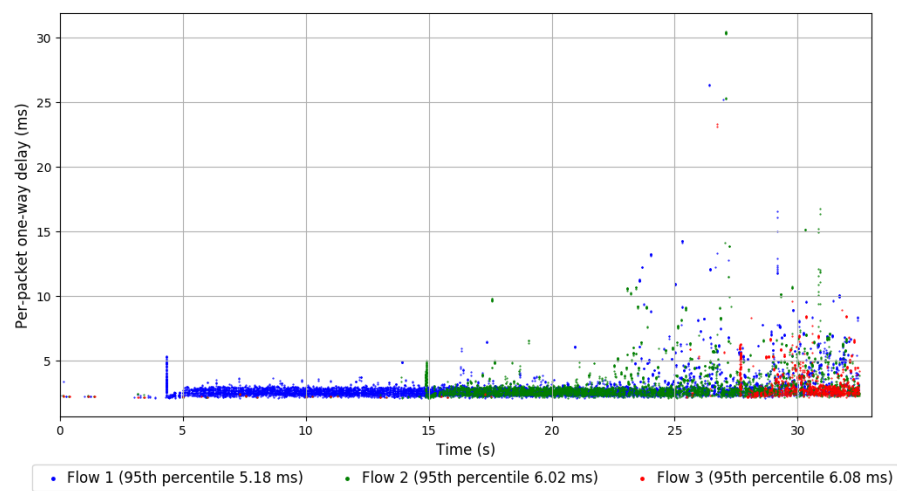
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-01-02 10:48:58
End at: 2018-01-02 10:49:29
Local clock offset: -0.427 ms
Remote clock offset: 0.614 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 5.670 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 5.177 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 6.021 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 6.076 ms
Loss rate: 0.00%
```
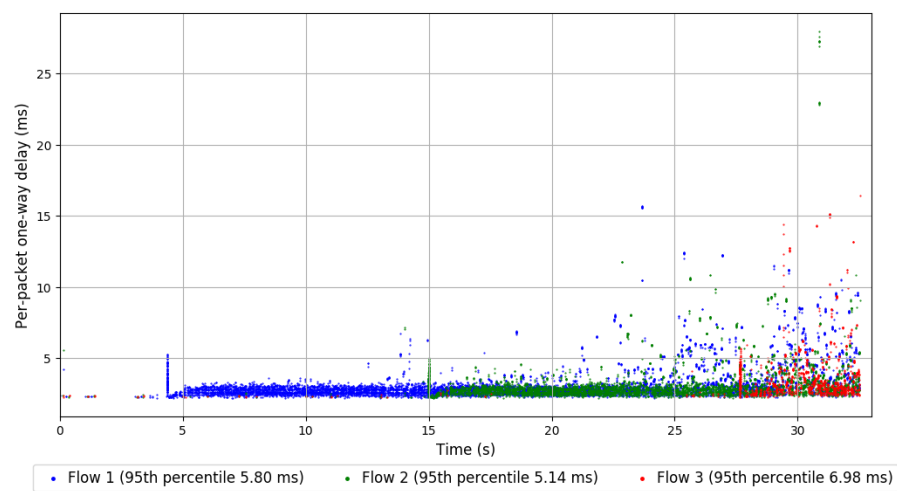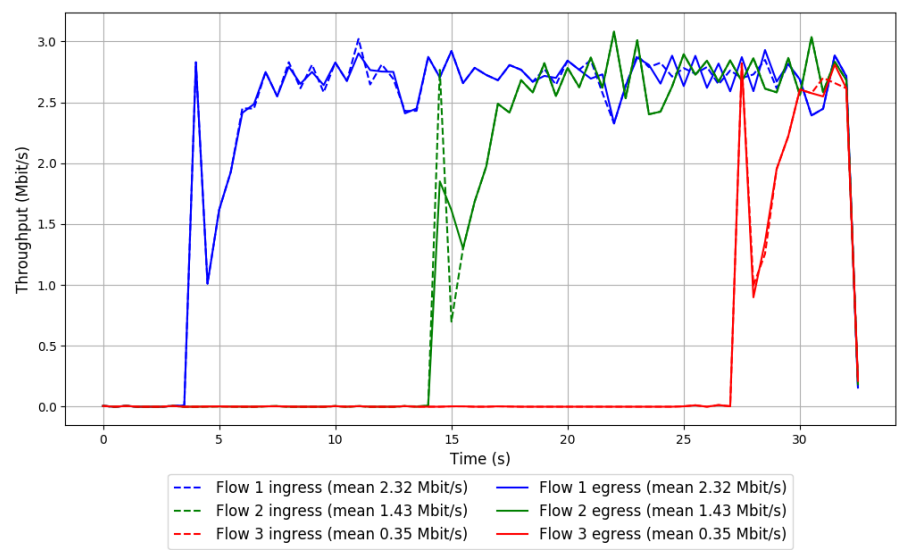
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-01-02 11:06:03
End at: 2018-01-02 11:06:33
Local clock offset: -0.51 ms
Remote clock offset: 0.602 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 5.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 5.796 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 5.144 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 6.979 ms
Loss rate: 0.00%
```
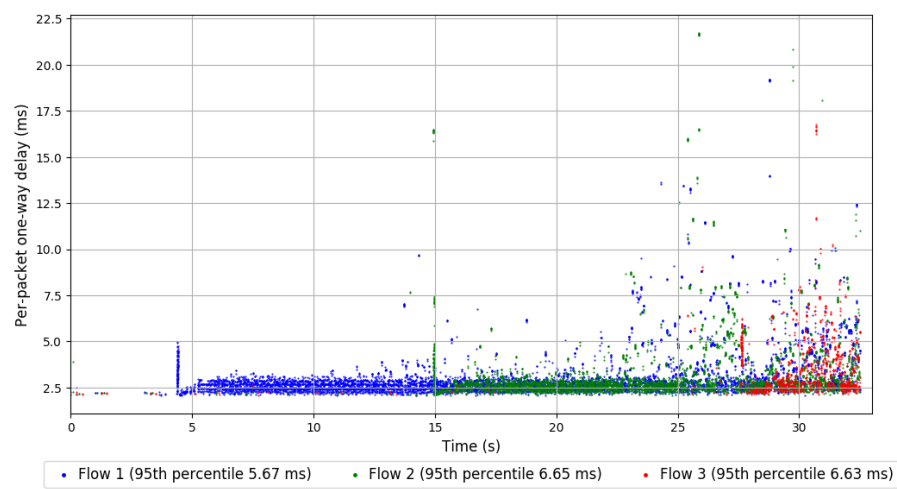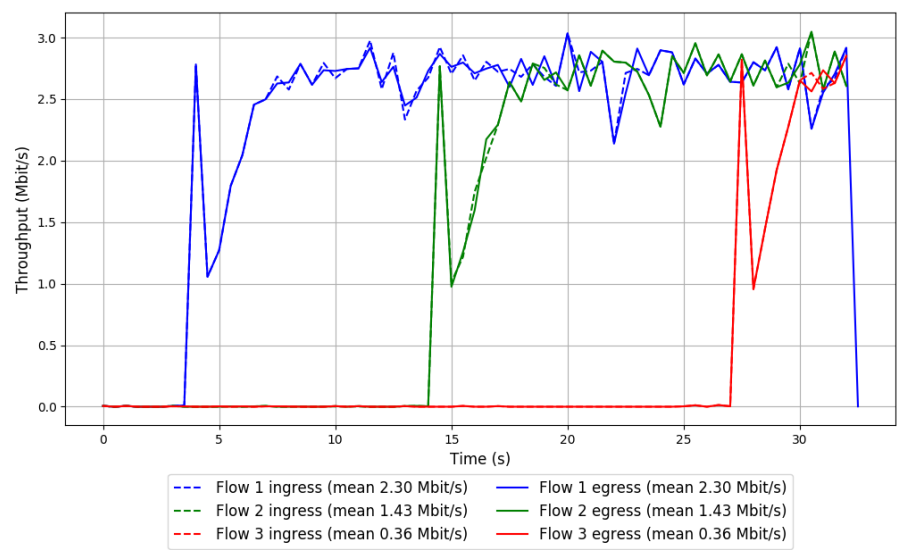
Run 4: Report of WebRTC media — Data Link

- - - Flow 1 ingress (mean 2.32 Mbit/s) ——— Flow 1 egress (mean 2.32 Mbit/s)
- - - Flow 2 ingress (mean 1.43 Mbit/s) ——— Flow 2 egress (mean 1.43 Mbit/s)
- - - Flow 3 ingress (mean 0.35 Mbit/s) ——— Flow 3 egress (mean 0.35 Mbit/s)

- Flow 1 (95th percentile 5.80 ms) - Flow 2 (95th percentile 5.14 ms) - Flow 3 (95th percentile 6.98 ms)

131

```
Run 5: Statistics of WebRTC media

Start at: 2018-01-02 11:23:08
End at: 2018-01-02 11:23:38
Local clock offset: -0.44 ms
Remote clock offset: 0.495 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 6.164 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 5.672 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 6.646 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 6.630 ms
Loss rate: 0.00%
```
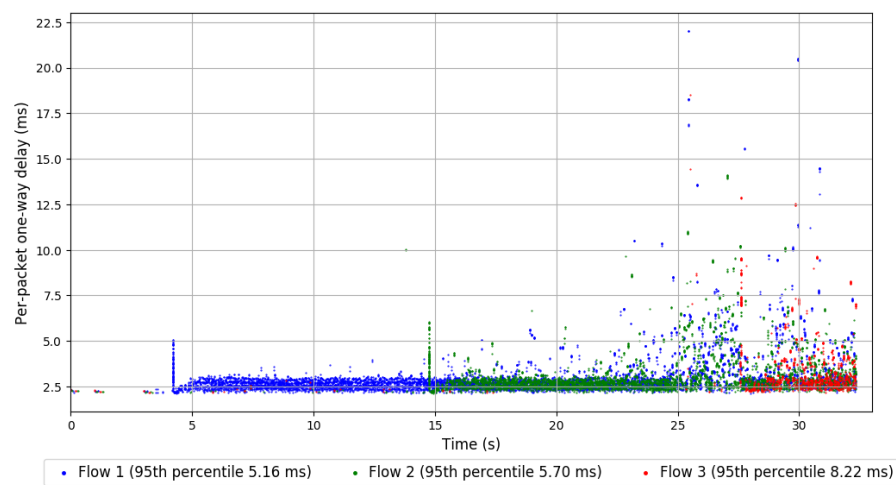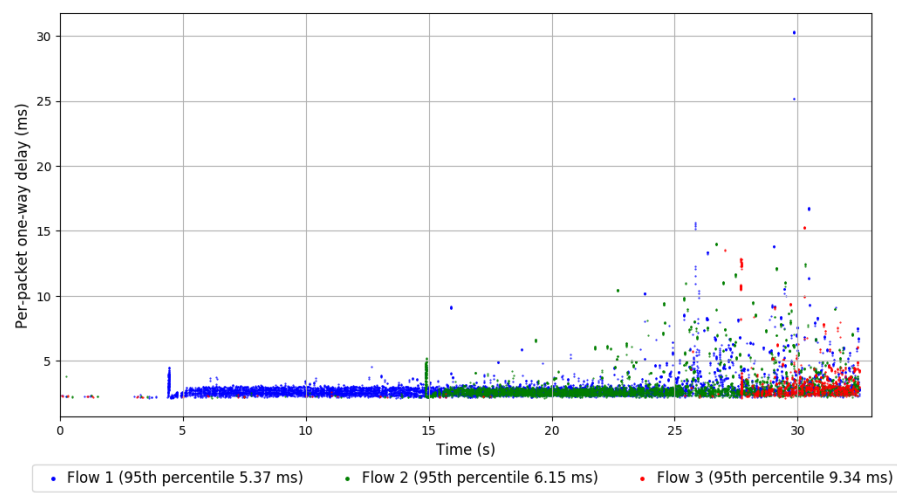
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-01-02 11:40:13
End at: 2018-01-02 11:40:43
Local clock offset: -0.397 ms
Remote clock offset: 0.537 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 5.626 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 5.162 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 5.695 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 8.223 ms
Loss rate: 0.00%
```
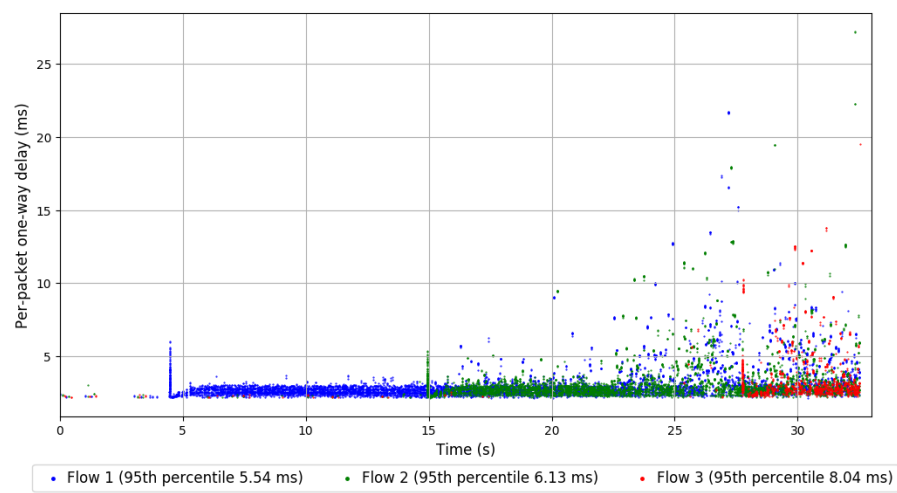
Run 6: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.34 Mbit/s)   Flow 1 egress (mean 2.34 Mbit/s)
Flow 2 ingress (mean 1.45 Mbit/s)   Flow 2 egress (mean 1.45 Mbit/s)
Flow 3 ingress (mean 0.33 Mbit/s)   Flow 3 egress (mean 0.33 Mbit/s)

Flow 1 (95th percentile 5.16 ms)   Flow 2 (95th percentile 5.70 ms)   Flow 3 (95th percentile 8.22 ms)

```
Run 7: Statistics of WebRTC media

Start at: 2018-01-02 11:57:18
End at: 2018-01-02 11:57:48
Local clock offset: -0.357 ms
Remote clock offset: 0.486 ms

# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 5.855 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 5.374 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.46 Mbit/s
95th percentile per-packet one-way delay: 6.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 9.337 ms
Loss rate: 0.00%
```
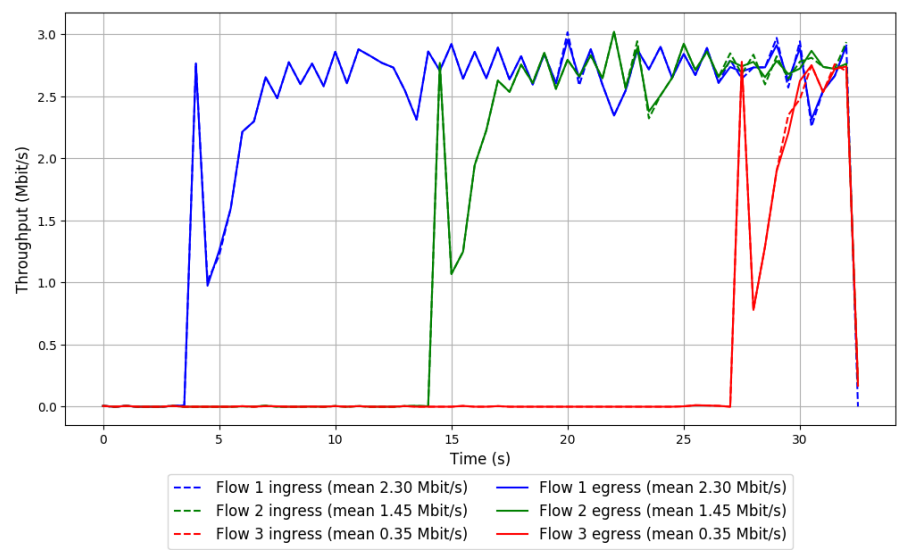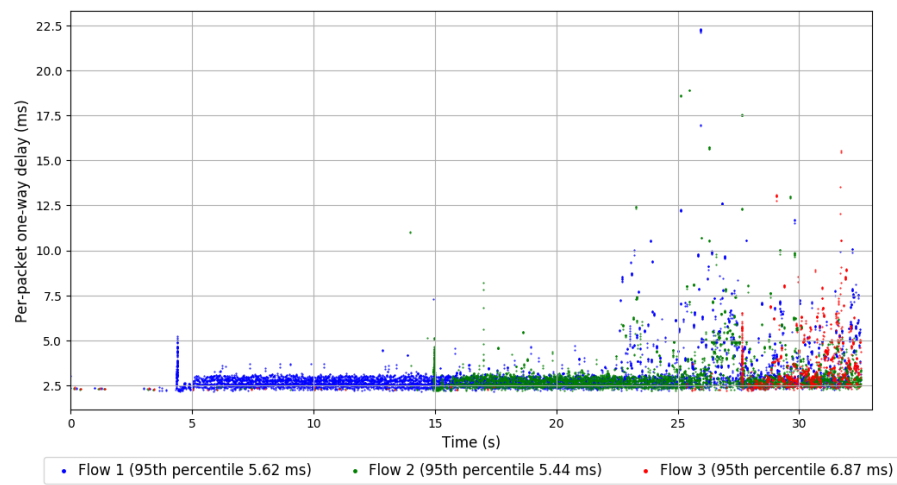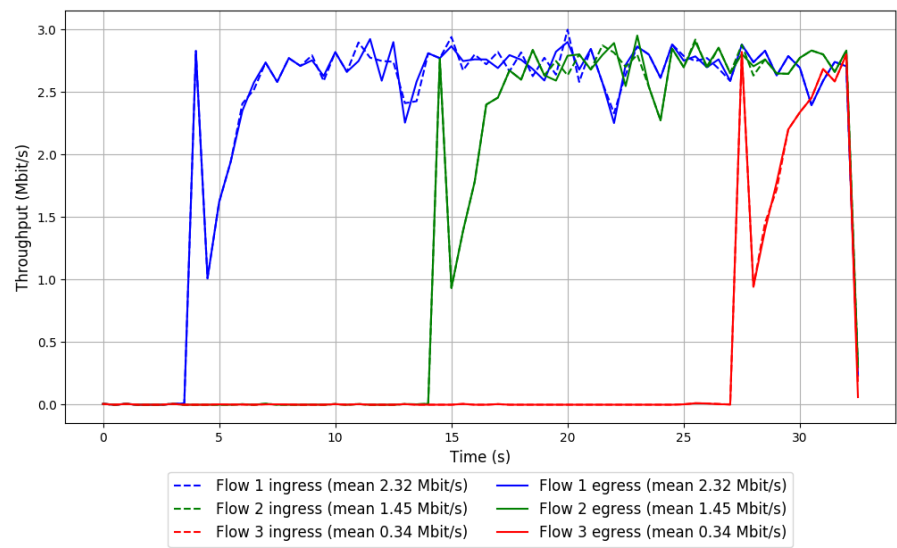
Run 7: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.32 Mbit/s) --- Flow 1 egress (mean 2.32 Mbit/s) ---
Flow 2 ingress (mean 1.46 Mbit/s) --- Flow 2 egress (mean 1.46 Mbit/s) ---
Flow 3 ingress (mean 0.34 Mbit/s) --- Flow 3 egress (mean 0.34 Mbit/s) ---

• Flow 1 (95th percentile 5.37 ms)   • Flow 2 (95th percentile 6.15 ms)   • Flow 3 (95th percentile 9.34 ms)

```
Run 8: Statistics of WebRTC media

Start at: 2018-01-02 12:14:27
End at: 2018-01-02 12:14:57
Local clock offset: -0.346 ms
Remote clock offset: 0.444 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 5.987 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 5.541 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 6.128 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 8.037 ms
Loss rate: 0.17%
```

Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-01-02 12:31:31
End at: 2018-01-02 12:32:01
Local clock offset: -0.387 ms
Remote clock offset: 0.359 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 5.791 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 5.620 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 5.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 6.874 ms
Loss rate: 0.44%
```
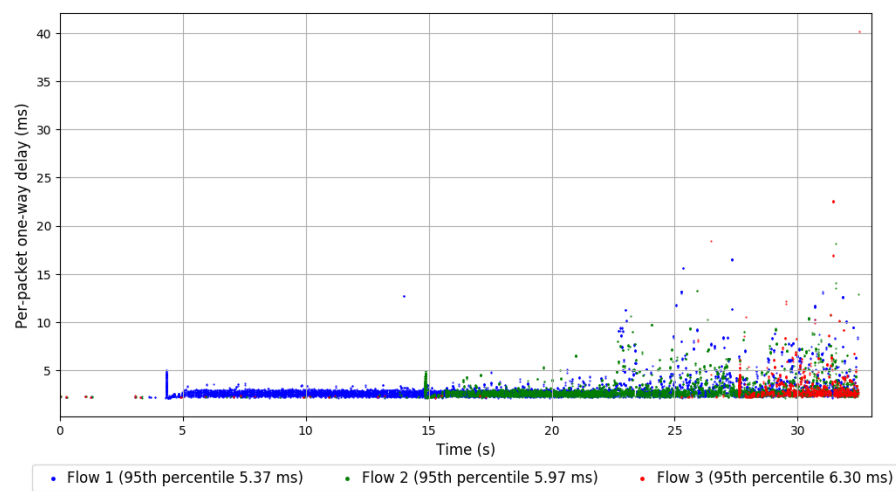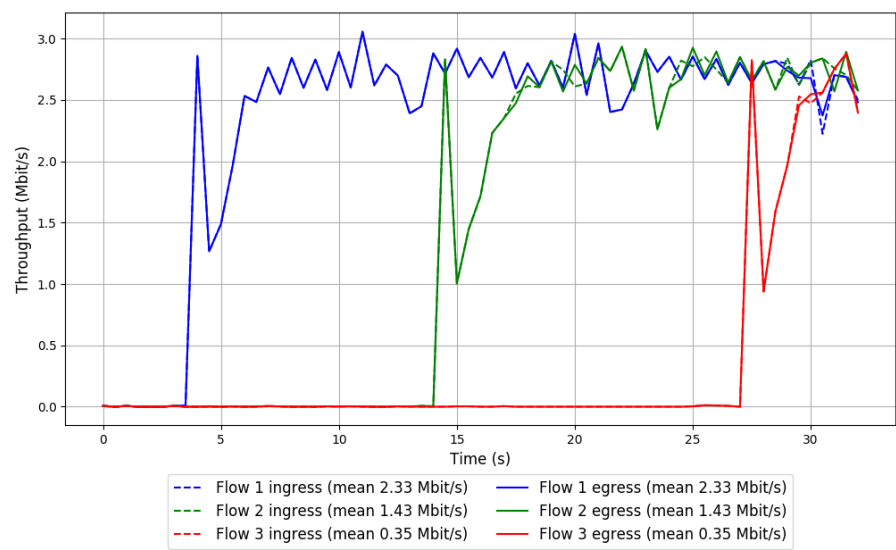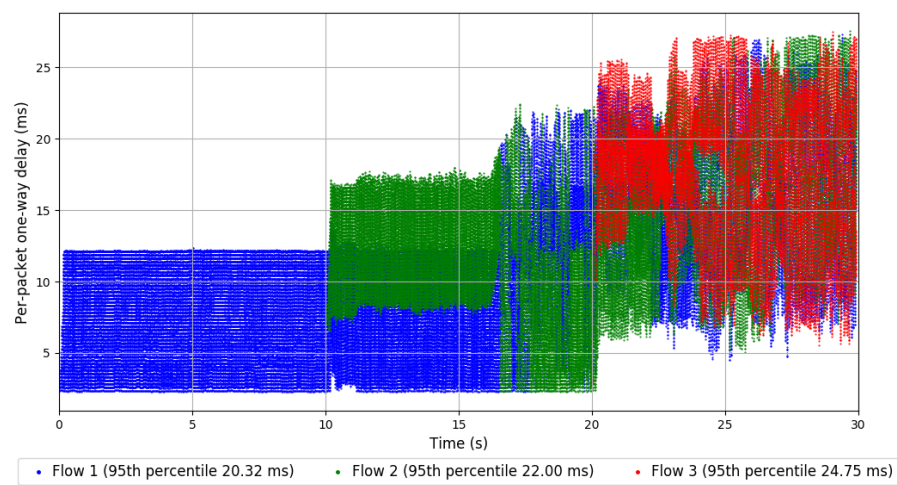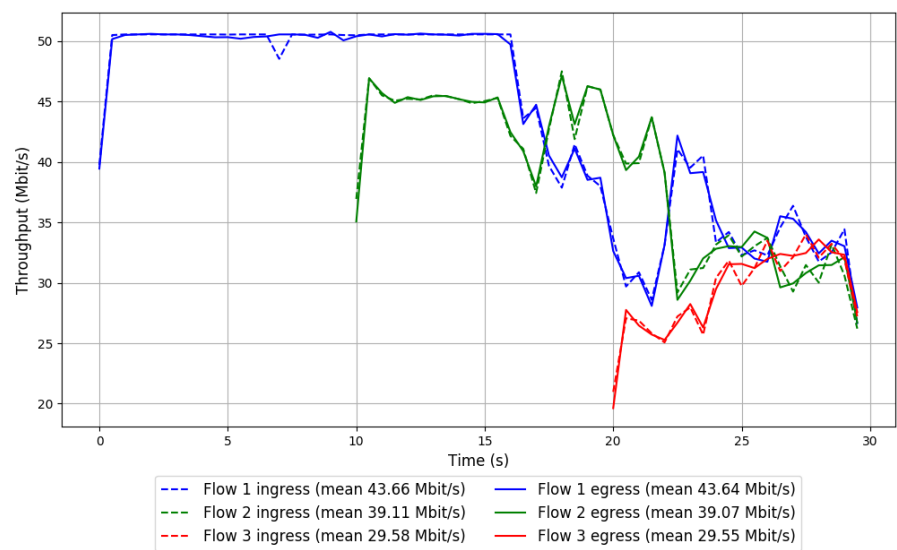
Run 9: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.32 Mbit/s)   Flow 1 egress (mean 2.32 Mbit/s)
Flow 2 ingress (mean 1.45 Mbit/s)   Flow 2 egress (mean 1.45 Mbit/s)
Flow 3 ingress (mean 0.34 Mbit/s)   Flow 3 egress (mean 0.34 Mbit/s)

Flow 1 (95th percentile 5.62 ms)   Flow 2 (95th percentile 5.44 ms)   Flow 3 (95th percentile 6.87 ms)

```
Run 10: Statistics of WebRTC media

Start at: 2018-01-02 12:48:39
End at: 2018-01-02 12:49:10
Local clock offset: -0.293 ms
Remote clock offset: 0.248 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 5.899 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 5.370 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 5.974 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 6.304 ms
Loss rate: 0.00%
```
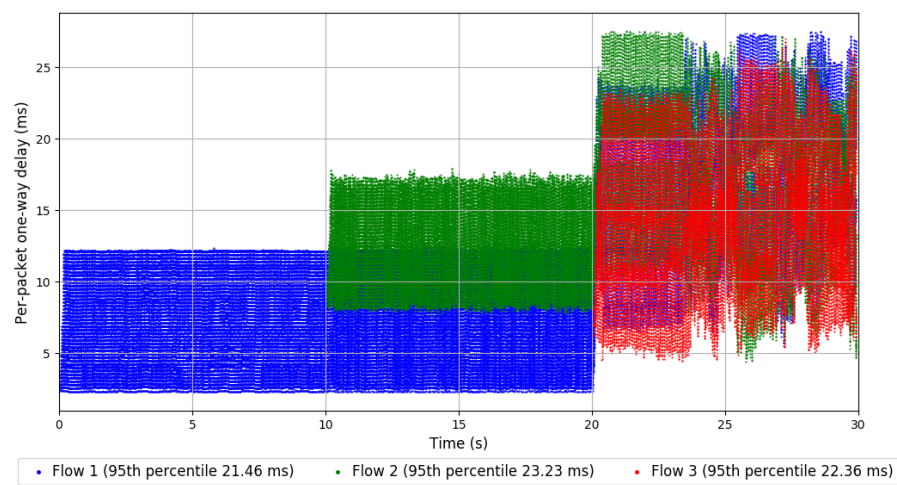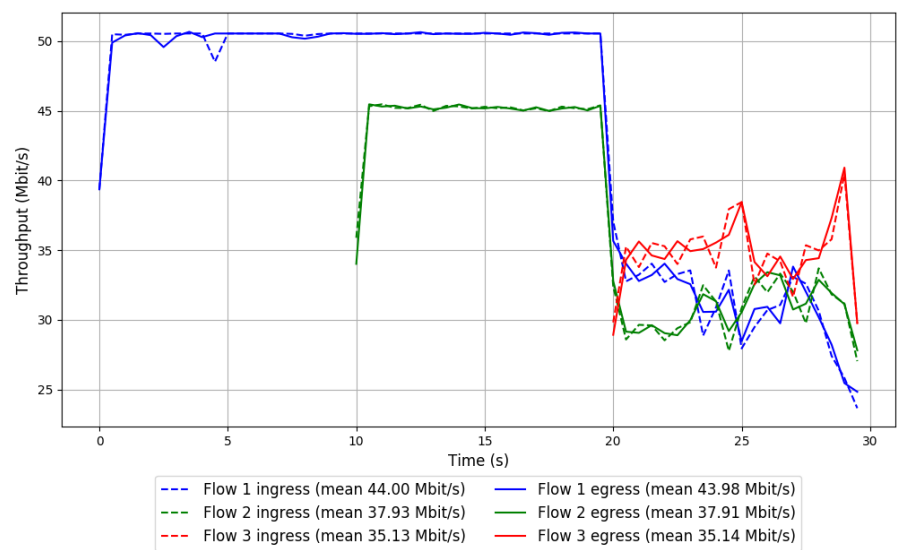
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-01-02 10:15:54
End at: 2018-01-02 10:16:24
Local clock offset: -0.405 ms
Remote clock offset: 0.717 ms


# Below is generated by plot.py at 2018-01-02 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.40 Mbit/s
95th percentile per-packet one-way delay: 22.190 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.64 Mbit/s
95th percentile per-packet one-way delay: 20.324 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 21.997 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.55 Mbit/s
95th percentile per-packet one-way delay: 24.746 ms
Loss rate: 0.00%
```
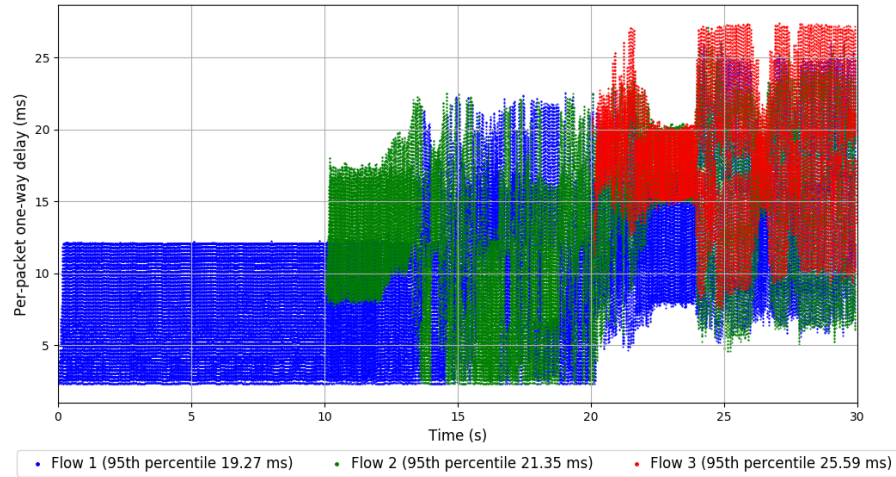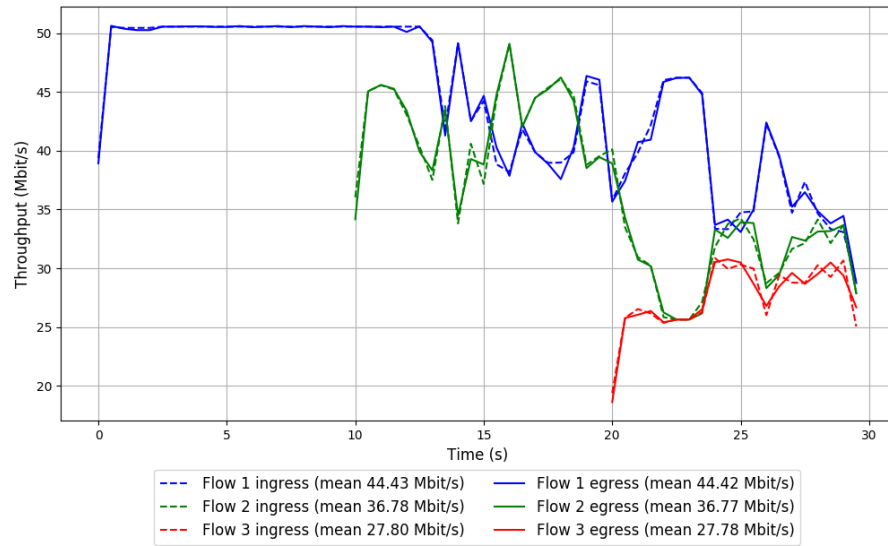
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-01-02 10:32:58
End at: 2018-01-02 10:33:28
Local clock offset: -0.415 ms
Remote clock offset: 0.671 ms


# Below is generated by plot.py at 2018-01-02 13:27:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.80 Mbit/s
95th percentile per-packet one-way delay: 22.284 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.98 Mbit/s
95th percentile per-packet one-way delay: 21.461 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 23.229 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.14 Mbit/s
95th percentile per-packet one-way delay: 22.360 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-01-02 10:50:03
End at: 2018-01-02 10:50:33
Local clock offset: -0.411 ms
Remote clock offset: 0.658 ms


# Below is generated by plot.py at 2018-01-02 13:27:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.04 Mbit/s
95th percentile per-packet one-way delay: 21.614 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.42 Mbit/s
95th percentile per-packet one-way delay: 19.275 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.77 Mbit/s
95th percentile per-packet one-way delay: 21.350 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.78 Mbit/s
95th percentile per-packet one-way delay: 25.592 ms
Loss rate: 0.00%
```
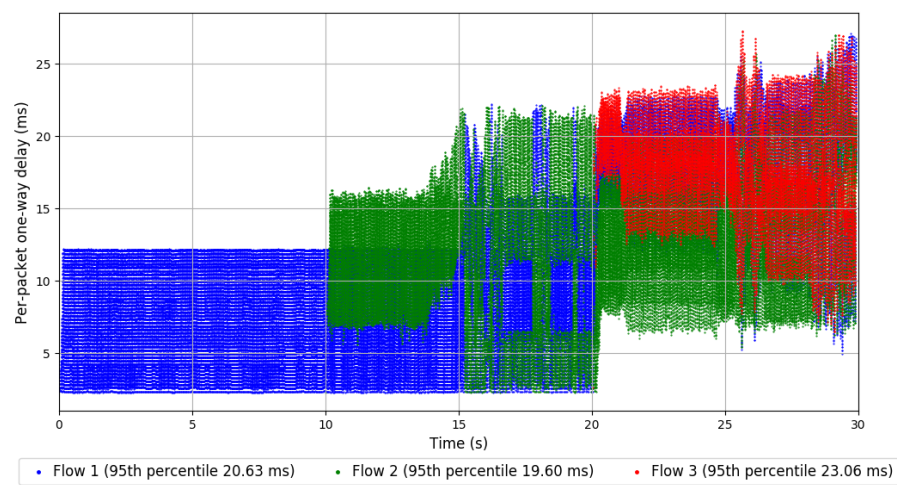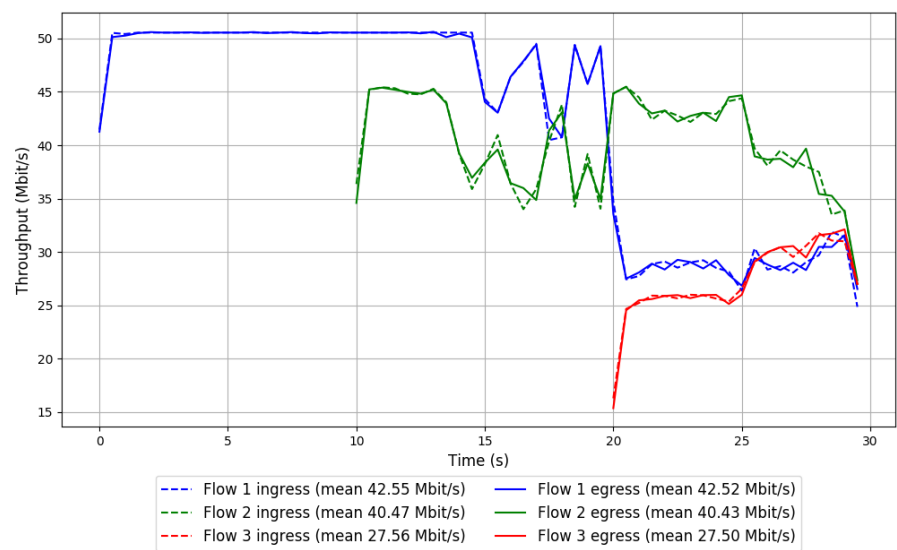
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-01-02 11:07:07
End at: 2018-01-02 11:07:37
Local clock offset: -0.44 ms
Remote clock offset: 0.61 ms


# Below is generated by plot.py at 2018-01-02 13:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.51 Mbit/s
95th percentile per-packet one-way delay: 20.974 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.52 Mbit/s
95th percentile per-packet one-way delay: 20.628 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.43 Mbit/s
95th percentile per-packet one-way delay: 19.597 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.50 Mbit/s
95th percentile per-packet one-way delay: 23.063 ms
Loss rate: 0.00%
```
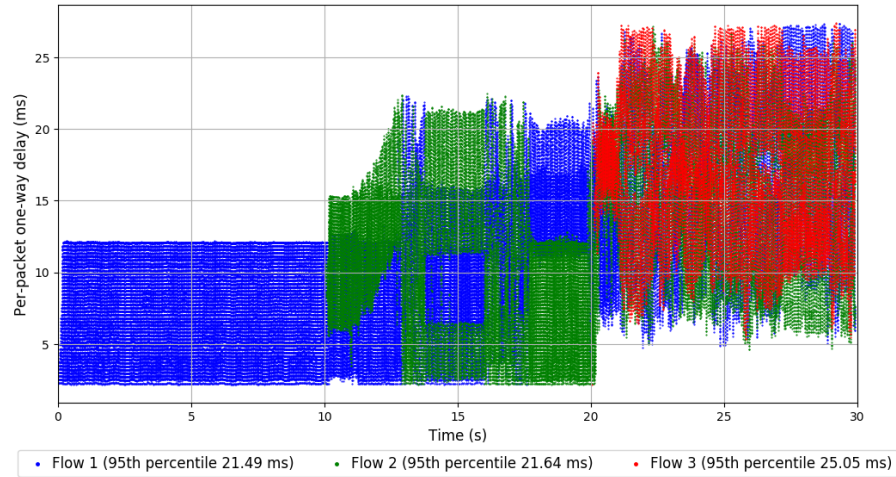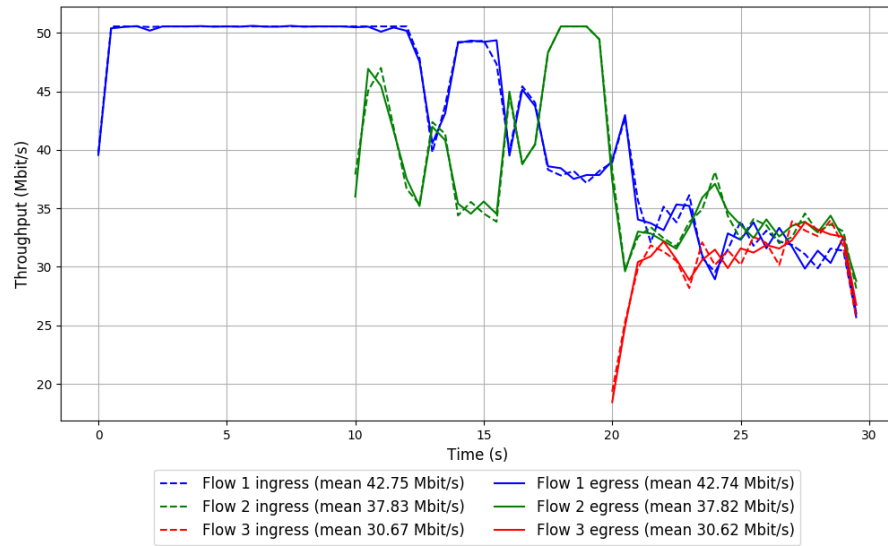
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-01-02 11:24:12
End at: 2018-01-02 11:24:42
Local clock offset: -0.443 ms
Remote clock offset: 0.49 ms


# Below is generated by plot.py at 2018-01-02 13:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.02 Mbit/s
95th percentile per-packet one-way delay: 22.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.74 Mbit/s
95th percentile per-packet one-way delay: 21.489 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.82 Mbit/s
95th percentile per-packet one-way delay: 21.638 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.62 Mbit/s
95th percentile per-packet one-way delay: 25.052 ms
Loss rate: 0.00%
```
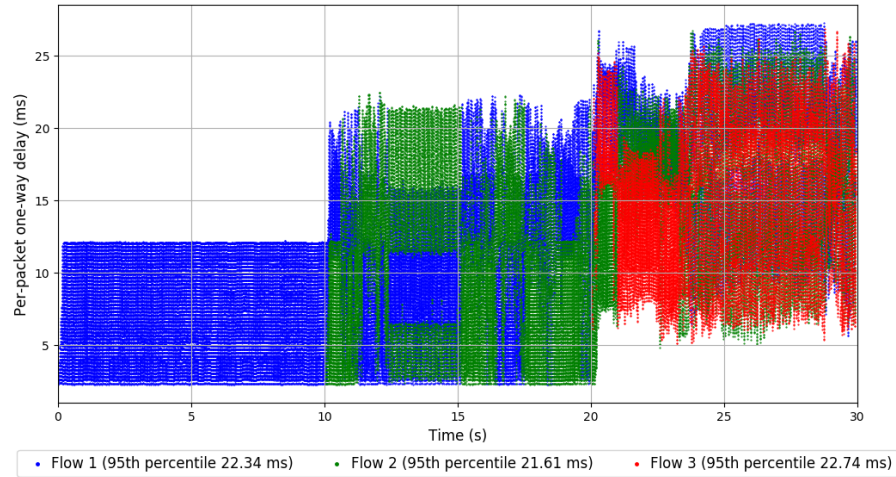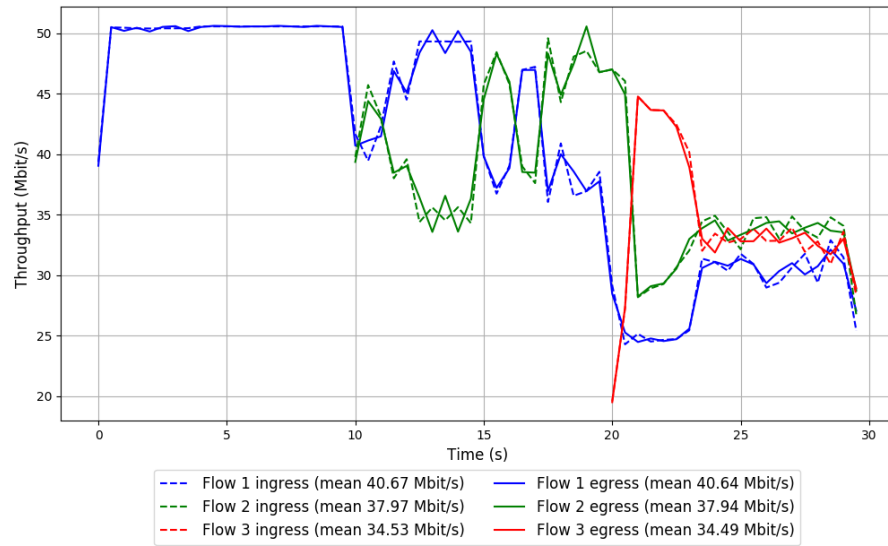
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 42.75 Mbit/s)   Flow 1 egress (mean 42.74 Mbit/s)
Flow 2 ingress (mean 37.83 Mbit/s)   Flow 2 egress (mean 37.82 Mbit/s)
Flow 3 ingress (mean 30.67 Mbit/s)   Flow 3 egress (mean 30.62 Mbit/s)

• Flow 1 (95th percentile 21.49 ms)   • Flow 2 (95th percentile 21.64 ms)   • Flow 3 (95th percentile 25.05 ms)

153

```
Run 6: Statistics of Sprout

Start at: 2018-01-02 11:41:18
End at: 2018-01-02 11:41:48
Local clock offset: -0.397 ms
Remote clock offset: 0.537 ms


# Below is generated by plot.py at 2018-01-02 13:27:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.30 Mbit/s
95th percentile per-packet one-way delay: 22.257 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 22.345 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.94 Mbit/s
95th percentile per-packet one-way delay: 21.612 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.49 Mbit/s
95th percentile per-packet one-way delay: 22.743 ms
Loss rate: 0.00%
```
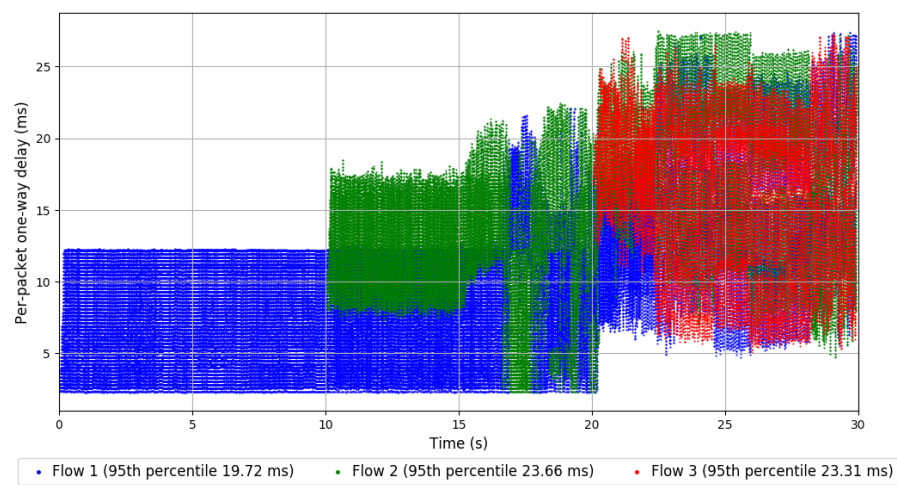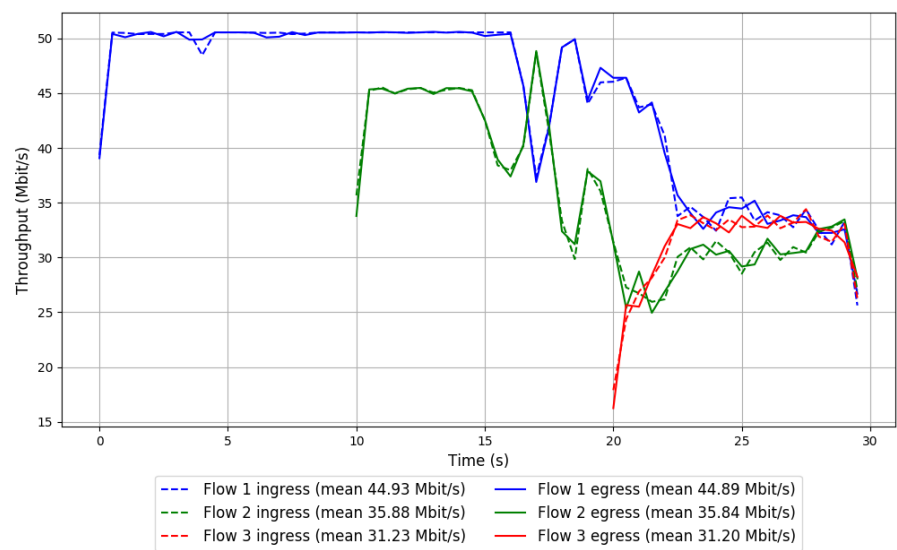
Run 6: Report of Sprout — Data Link

- - - - Flow 1 ingress (mean 40.67 Mbit/s)   —— Flow 1 egress (mean 40.64 Mbit/s)
- - - - Flow 2 ingress (mean 37.97 Mbit/s)   —— Flow 2 egress (mean 37.94 Mbit/s)
- - - - Flow 3 ingress (mean 34.53 Mbit/s)   —— Flow 3 egress (mean 34.49 Mbit/s)

- Flow 1 (95th percentile 22.34 ms)   • Flow 2 (95th percentile 21.61 ms)   • Flow 3 (95th percentile 22.74 ms)

```
Run 7: Statistics of Sprout

Start at: 2018-01-02 11:58:22
End at: 2018-01-02 11:58:52
Local clock offset: -0.372 ms
Remote clock offset: 0.495 ms


# Below is generated by plot.py at 2018-01-02 13:28:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.02 Mbit/s
95th percentile per-packet one-way delay: 22.379 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.89 Mbit/s
95th percentile per-packet one-way delay: 19.722 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.84 Mbit/s
95th percentile per-packet one-way delay: 23.656 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.20 Mbit/s
95th percentile per-packet one-way delay: 23.311 ms
Loss rate: 0.00%
```

Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-01-02 12:15:31
End at: 2018-01-02 12:16:01
Local clock offset: -0.339 ms
Remote clock offset: 0.422 ms


# Below is generated by plot.py at 2018-01-02 13:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.26 Mbit/s
95th percentile per-packet one-way delay: 22.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 20.630 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.43 Mbit/s
95th percentile per-packet one-way delay: 22.503 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.27 Mbit/s
95th percentile per-packet one-way delay: 23.091 ms
Loss rate: 0.00%
```
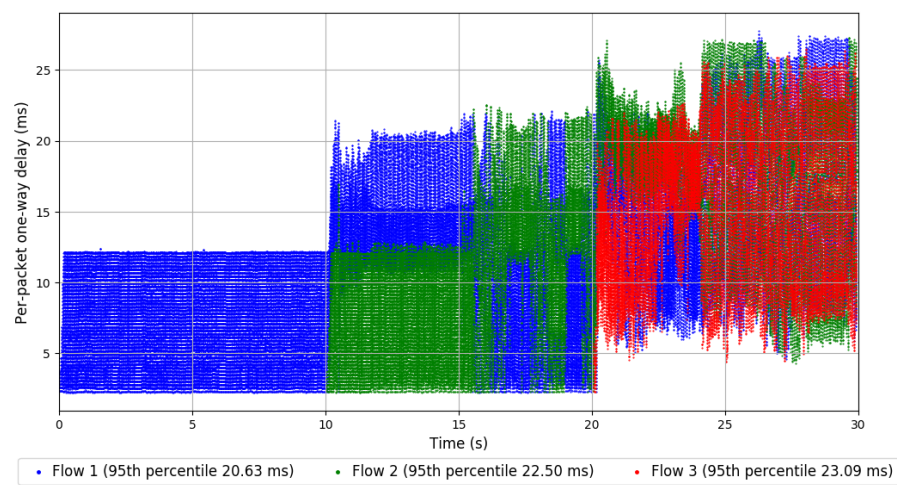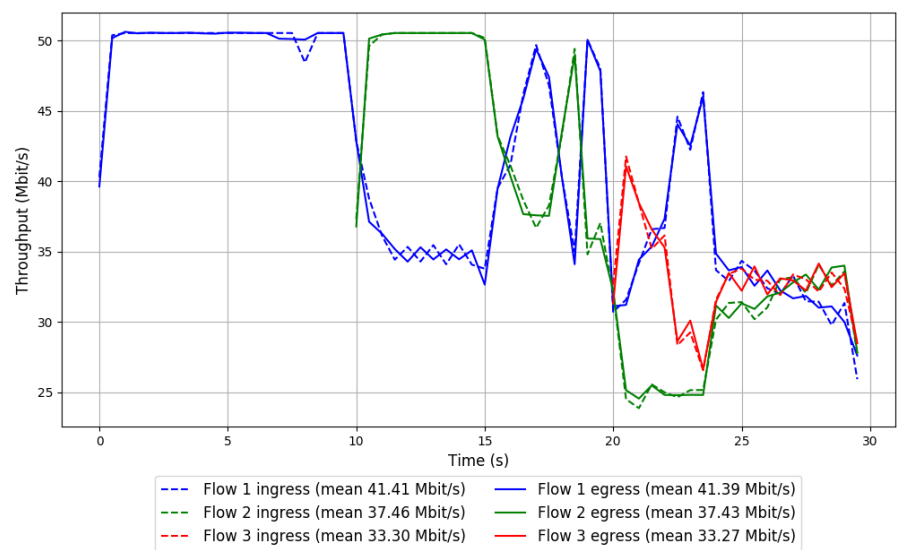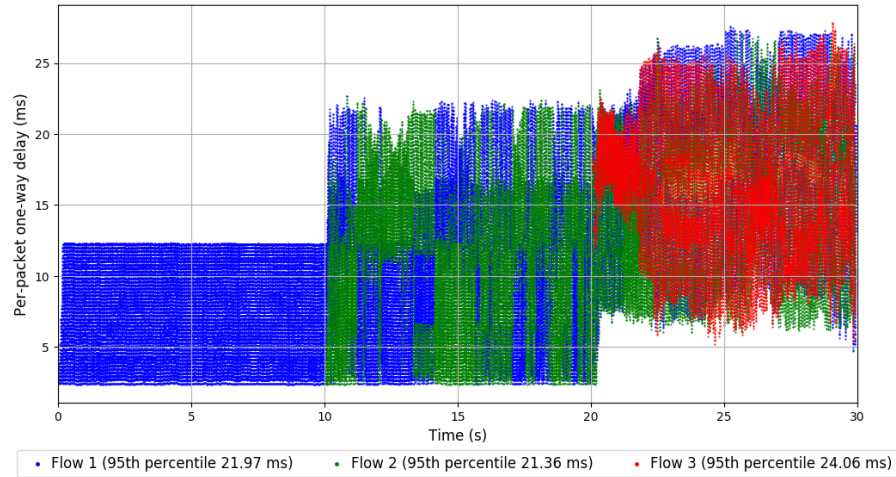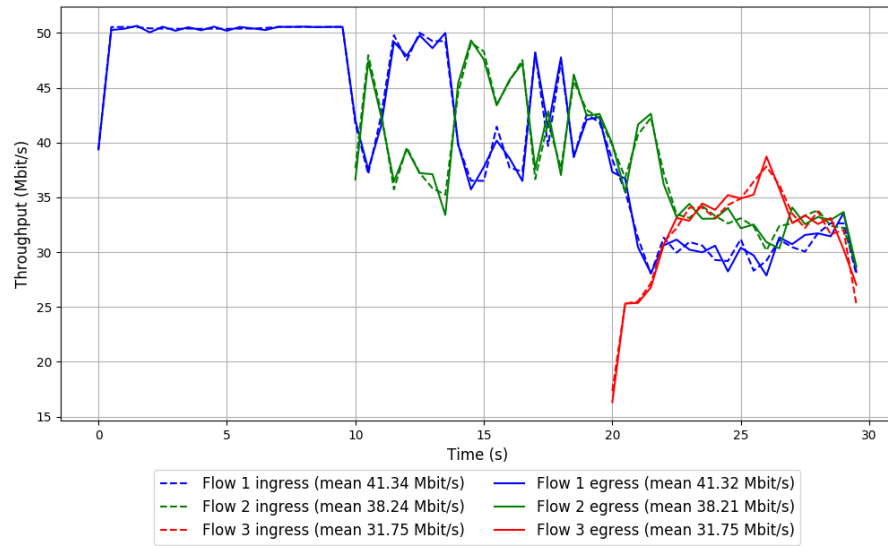
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-01-02 12:32:36
End at: 2018-01-02 12:33:06
Local clock offset: -0.419 ms
Remote clock offset: 0.355 ms


# Below is generated by plot.py at 2018-01-02 13:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 22.244 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.32 Mbit/s
95th percentile per-packet one-way delay: 21.972 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.21 Mbit/s
95th percentile per-packet one-way delay: 21.355 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 24.062 ms
Loss rate: 0.00%
```
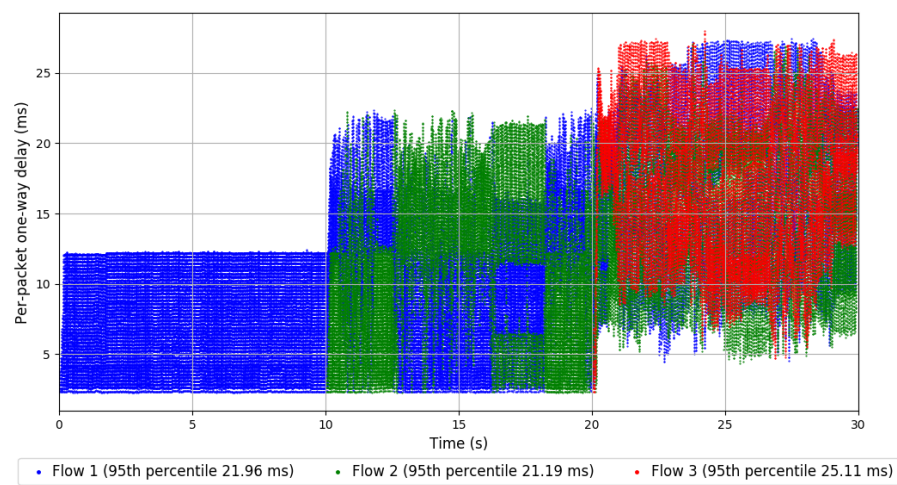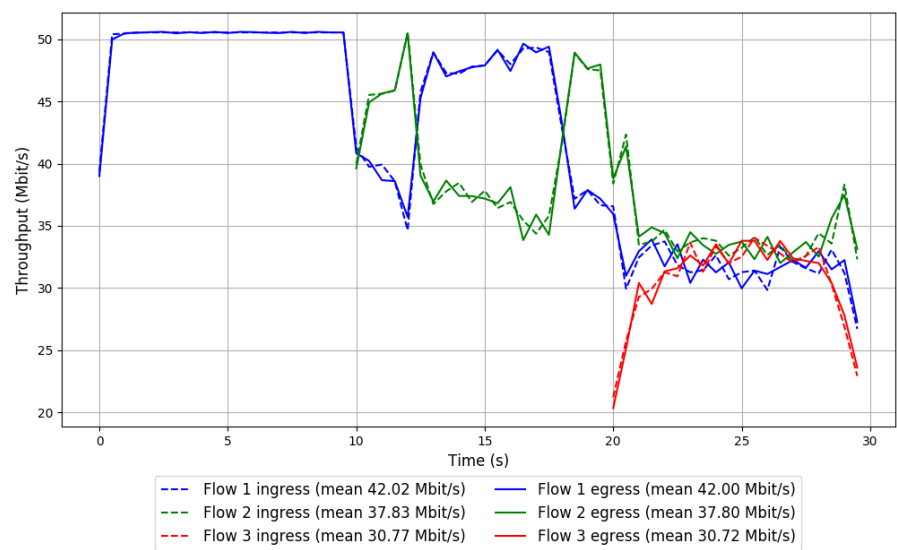
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-01-02 12:49:44
End at: 2018-01-02 12:50:14
Local clock offset: -0.329 ms
Remote clock offset: 0.24 ms


# Below is generated by plot.py at 2018-01-02 13:28:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.33 Mbit/s
95th percentile per-packet one-way delay: 22.737 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.00 Mbit/s
95th percentile per-packet one-way delay: 21.965 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.80 Mbit/s
95th percentile per-packet one-way delay: 21.187 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.72 Mbit/s
95th percentile per-packet one-way delay: 25.113 ms
Loss rate: 0.00%
```

Run 10: Report of Sprout — Data Link

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

Start at: 2018-01-02 10:19:16
End at: 2018-01-02 10:19:46
Local clock offset: -0.38 ms
Remote clock offset: 0.646 ms
```
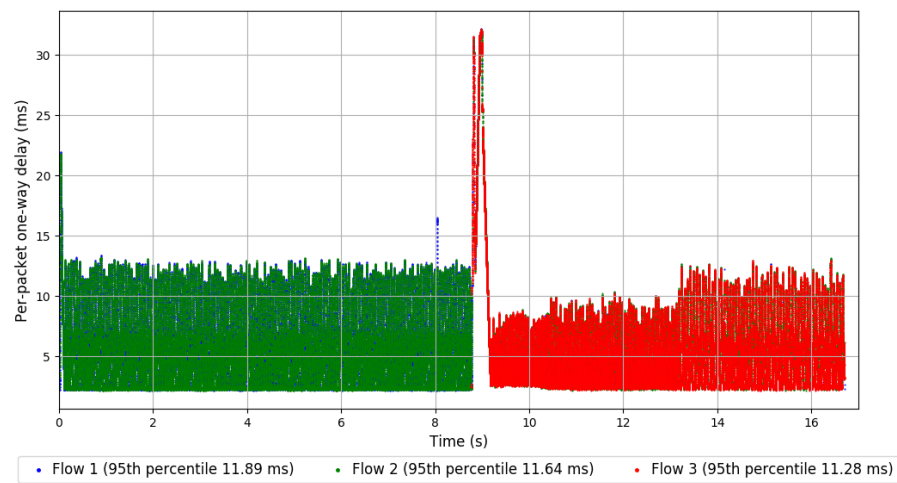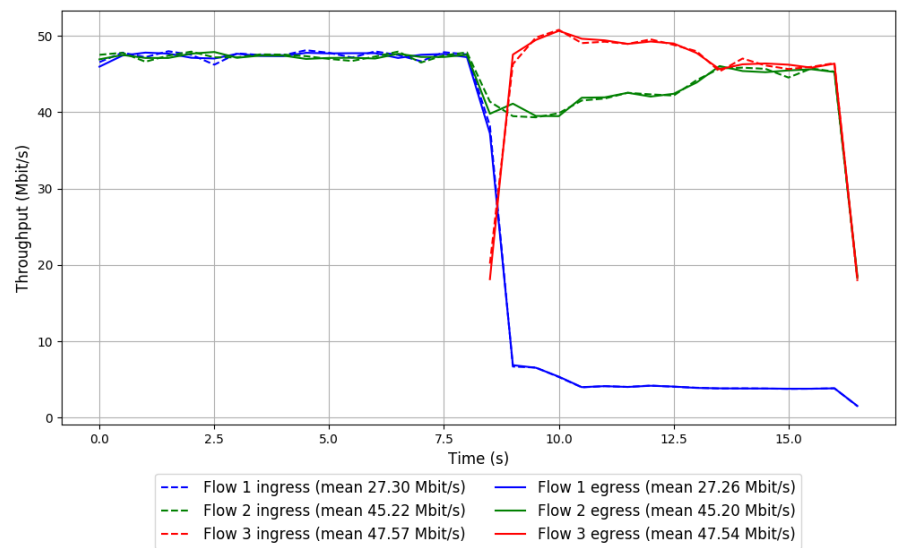
Run 1: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 27.30 Mbit/s)   —— Flow 1 egress (mean 27.26 Mbit/s)
- - - Flow 2 ingress (mean 45.22 Mbit/s)   —— Flow 2 egress (mean 45.20 Mbit/s)
- - - Flow 3 ingress (mean 47.57 Mbit/s)   —— Flow 3 egress (mean 47.54 Mbit/s)

- Flow 1 (95th percentile 11.89 ms)   • Flow 2 (95th percentile 11.64 ms)   • Flow 3 (95th percentile 11.28 ms)

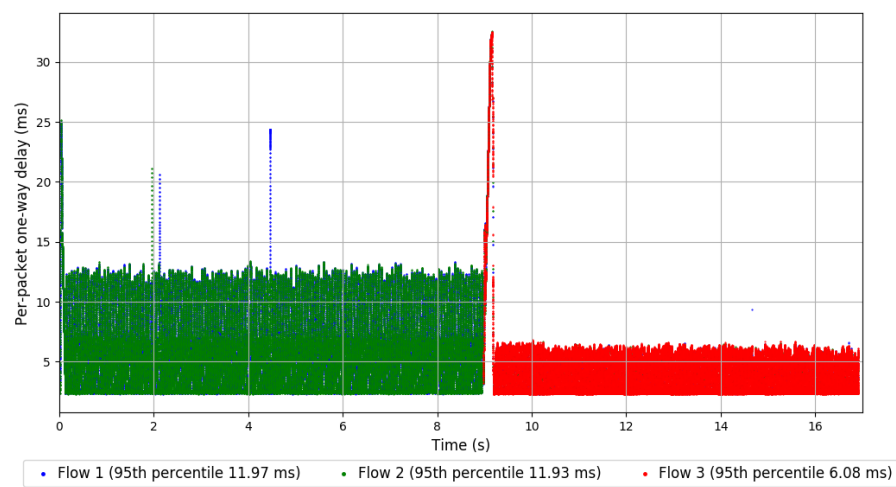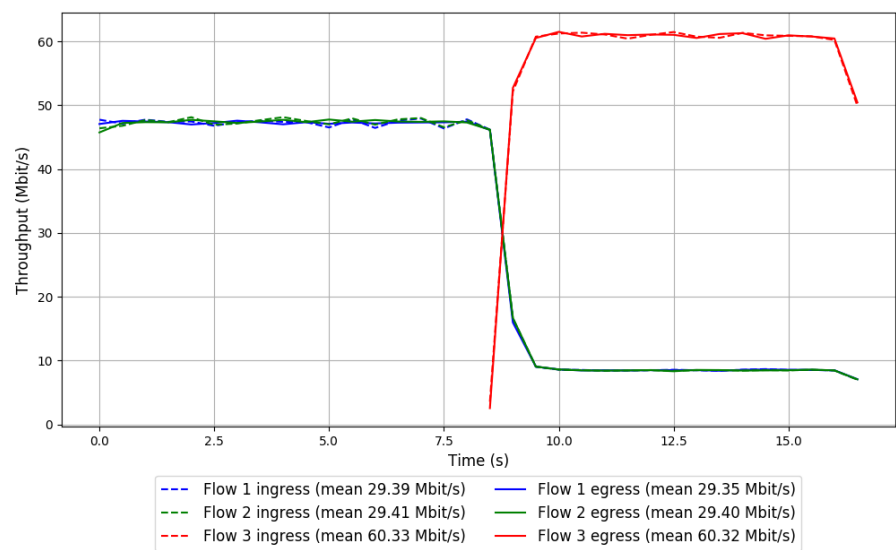165

Run 2: Statistics of TaoVA-100x

Start at: 2018-01-02 10:36:21
End at: 2018-01-02 10:36:51
Local clock offset: -0.467 ms
Remote clock offset: 0.648 ms

Run 2: Report of TaoVA-100x — Data Link
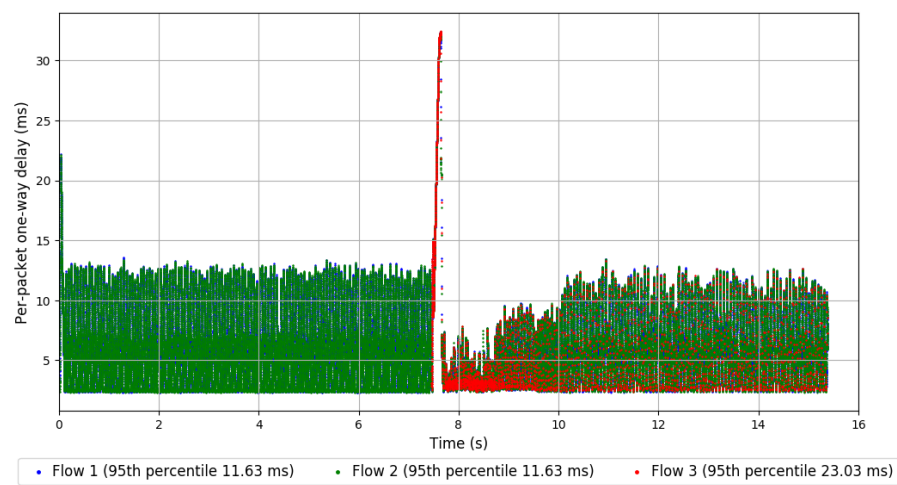
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-01-02 10:53:25
End at: 2018-01-02 10:53:55
Local clock offset: -0.508 ms
Remote clock offset: 0.611 ms
```
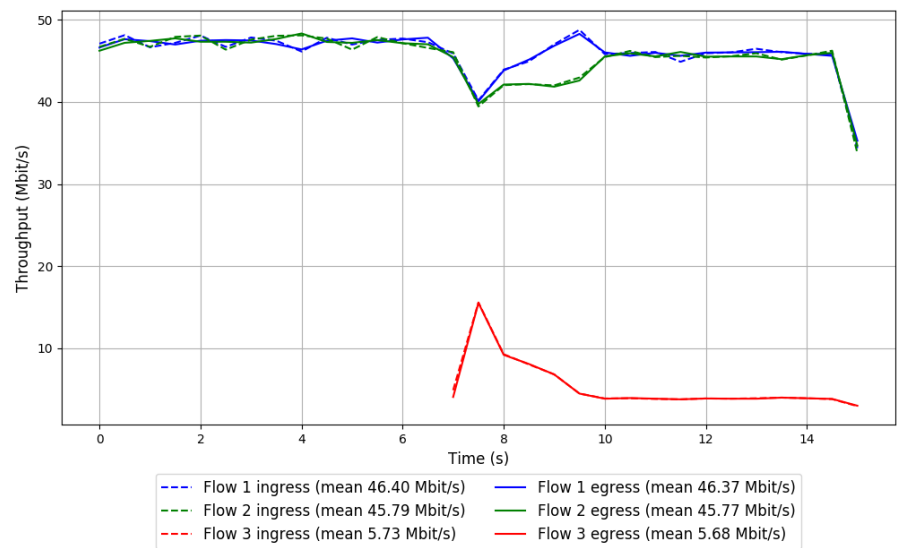
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 46.40 Mbit/s)   Flow 1 egress (mean 46.37 Mbit/s)
Flow 2 ingress (mean 45.79 Mbit/s)   Flow 2 egress (mean 45.77 Mbit/s)
Flow 3 ingress (mean 5.73 Mbit/s)   Flow 3 egress (mean 5.68 Mbit/s)

Flow 1 (95th percentile 11.63 ms)   Flow 2 (95th percentile 11.63 ms)   Flow 3 (95th percentile 23.03 ms)
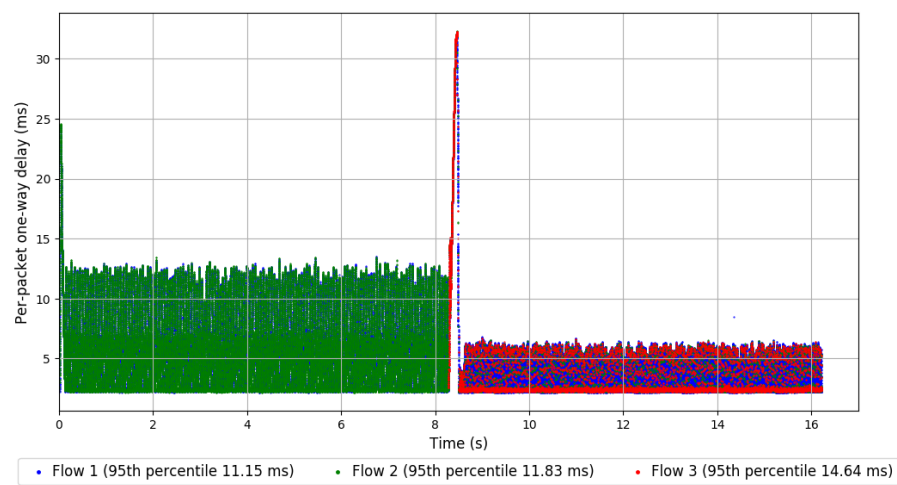
```
Run 4: Statistics of TaoVA-100x

Start at: 2018-01-02 11:10:30
End at: 2018-01-02 11:11:00
Local clock offset: -0.435 ms
Remote clock offset: 0.526 ms
```
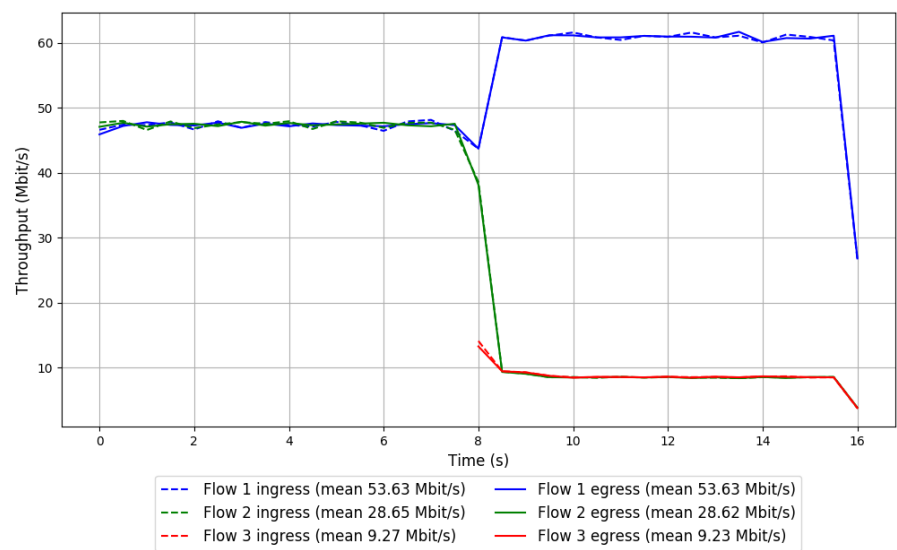
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 53.63 Mbit/s)   Flow 1 egress (mean 53.63 Mbit/s)
Flow 2 ingress (mean 28.65 Mbit/s)   Flow 2 egress (mean 28.62 Mbit/s)
Flow 3 ingress (mean 9.27 Mbit/s)   Flow 3 egress (mean 9.23 Mbit/s)

Flow 1 (95th percentile 11.15 ms)   Flow 2 (95th percentile 11.83 ms)   Flow 3 (95th percentile 14.64 ms)

171

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

Start at: 2018-01-02 11:27:35
End at: 2018-01-02 11:28:05
Local clock offset: -0.473 ms
Remote clock offset: 0.494 ms
```
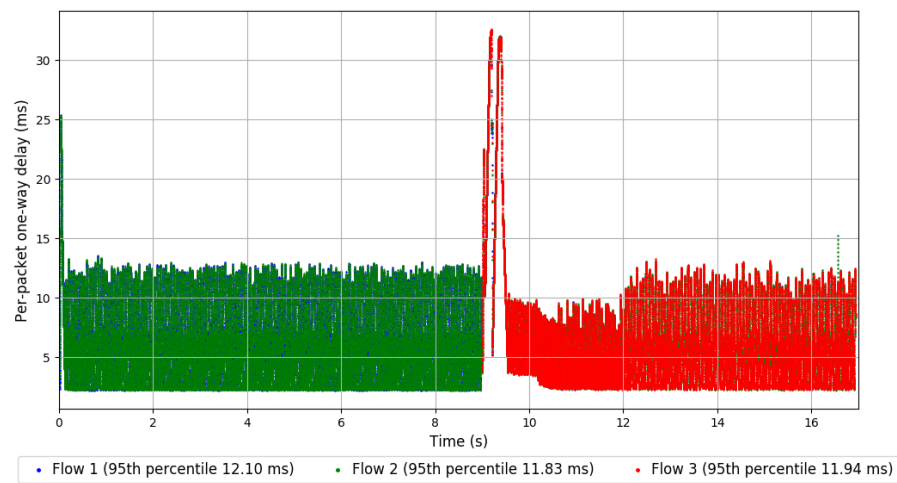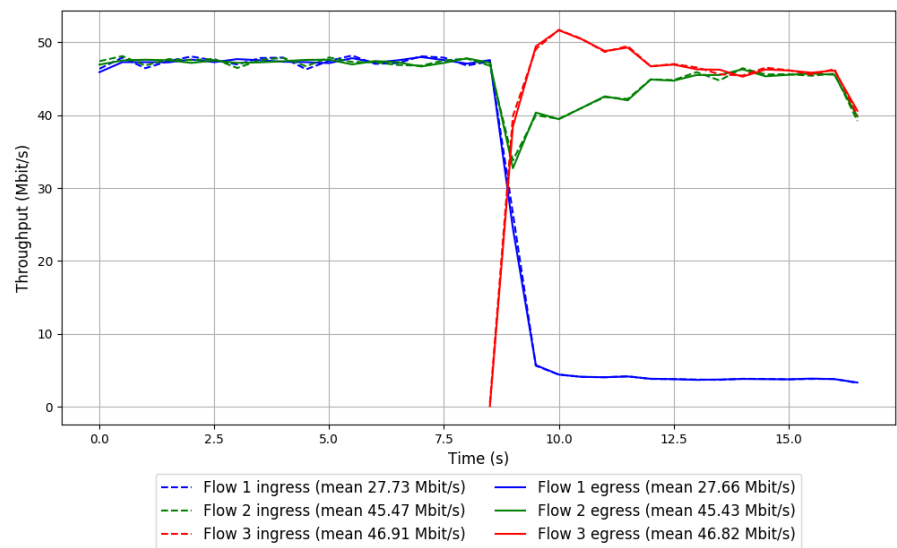
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 27.73 Mbit/s)   Flow 1 egress (mean 27.66 Mbit/s)
Flow 2 ingress (mean 45.47 Mbit/s)   Flow 2 egress (mean 45.43 Mbit/s)
Flow 3 ingress (mean 46.91 Mbit/s)   Flow 3 egress (mean 46.82 Mbit/s)

Flow 1 (95th percentile 12.10 ms)   Flow 2 (95th percentile 11.83 ms)   Flow 3 (95th percentile 11.94 ms)
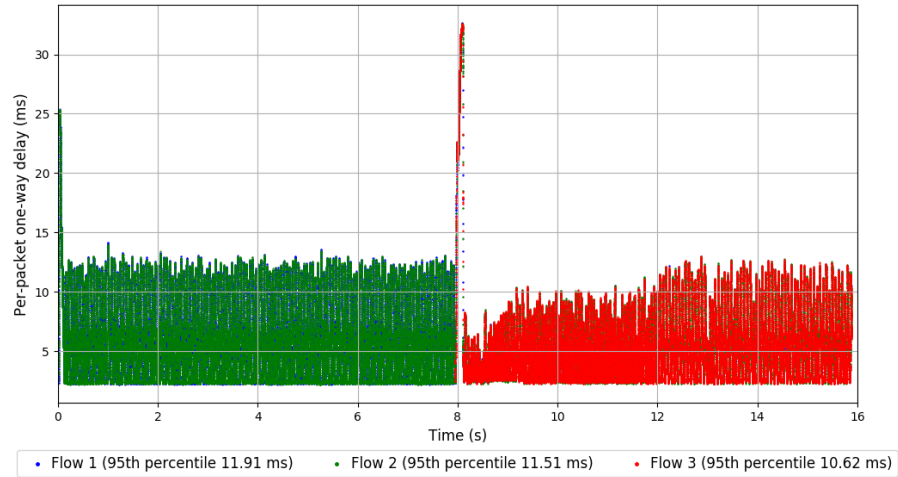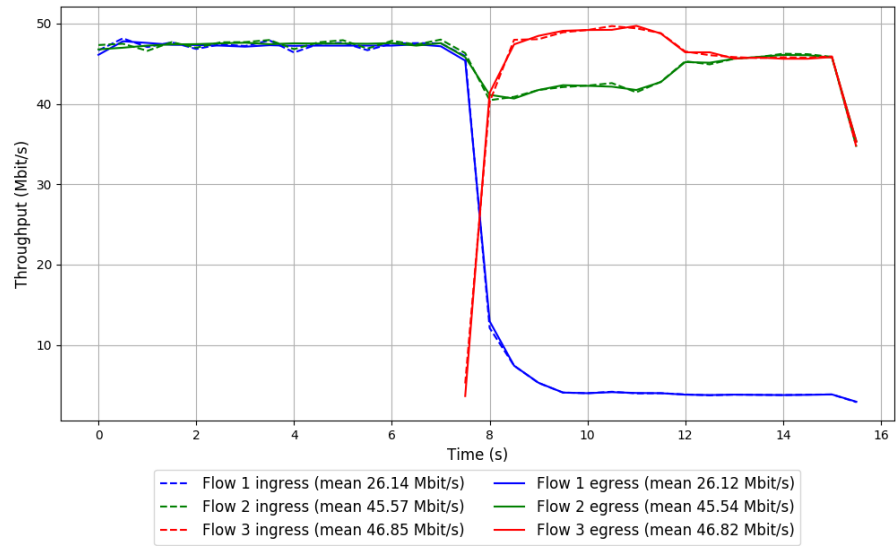
173

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

Start at: 2018-01-02 11:44:40
End at: 2018-01-02 11:45:10
Local clock offset: -0.4 ms
Remote clock offset: 0.468 ms
```

Run 6: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 26.14 Mbit/s) —— Flow 1 egress (mean 26.12 Mbit/s)
- - - Flow 2 ingress (mean 45.57 Mbit/s) —— Flow 2 egress (mean 45.54 Mbit/s)
- - - Flow 3 ingress (mean 46.85 Mbit/s) —— Flow 3 egress (mean 46.82 Mbit/s)

- Flow 1 (95th percentile 11.91 ms)   · Flow 2 (95th percentile 11.51 ms)   · Flow 3 (95th percentile 10.62 ms)

```
Run 7: Statistics of TaoVA-100x

Start at: 2018-01-02 12:01:45
End at: 2018-01-02 12:02:15
Local clock offset: -0.35 ms
Remote clock offset: 0.484 ms

# Below is generated by plot.py at 2018-01-02 13:31:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.44 Mbit/s
95th percentile per-packet one-way delay: 11.126 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 51.76 Mbit/s
95th percentile per-packet one-way delay: 10.579 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 52.73 Mbit/s
95th percentile per-packet one-way delay: 11.390 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 28.452 ms
Loss rate: 0.78%
```
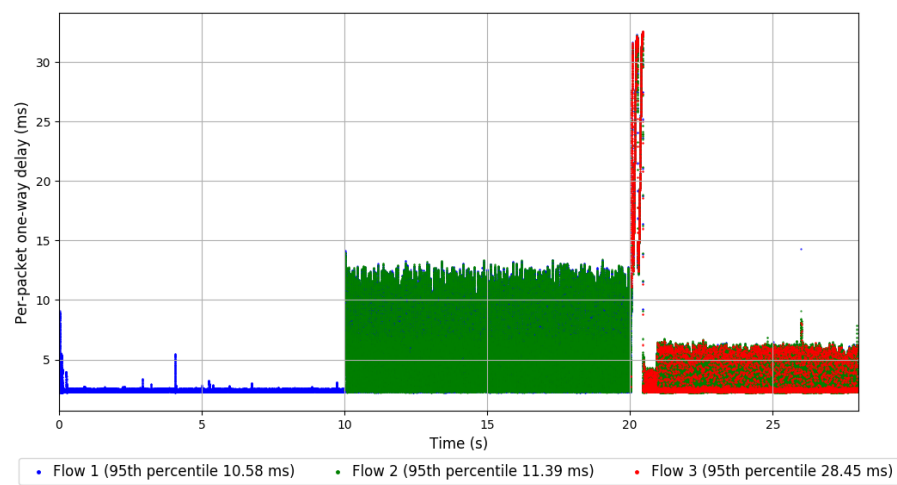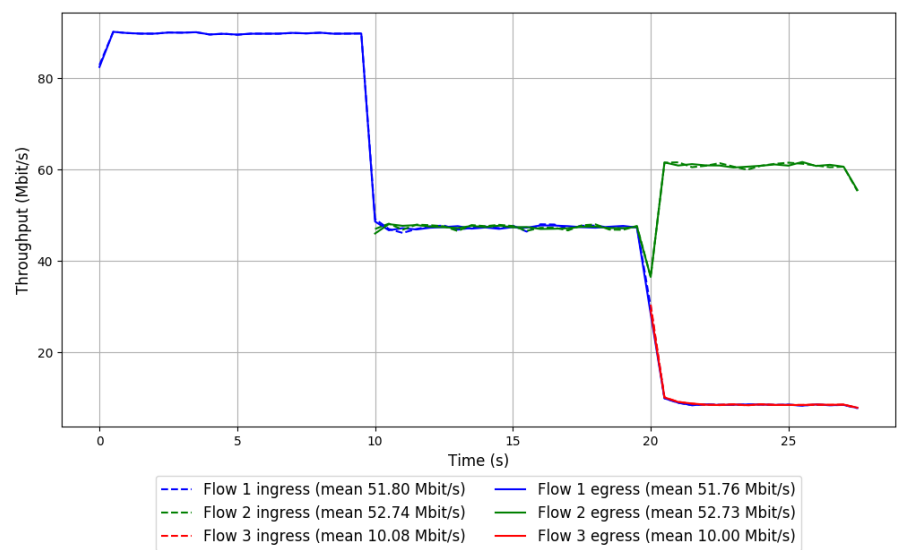
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 51.80 Mbit/s) --- Flow 1 egress (mean 51.76 Mbit/s)
Flow 2 ingress (mean 52.74 Mbit/s) --- Flow 2 egress (mean 52.73 Mbit/s)
Flow 3 ingress (mean 10.08 Mbit/s) --- Flow 3 egress (mean 10.00 Mbit/s)

Flow 1 (95th percentile 10.58 ms)　Flow 2 (95th percentile 11.39 ms)　Flow 3 (95th percentile 28.45 ms)
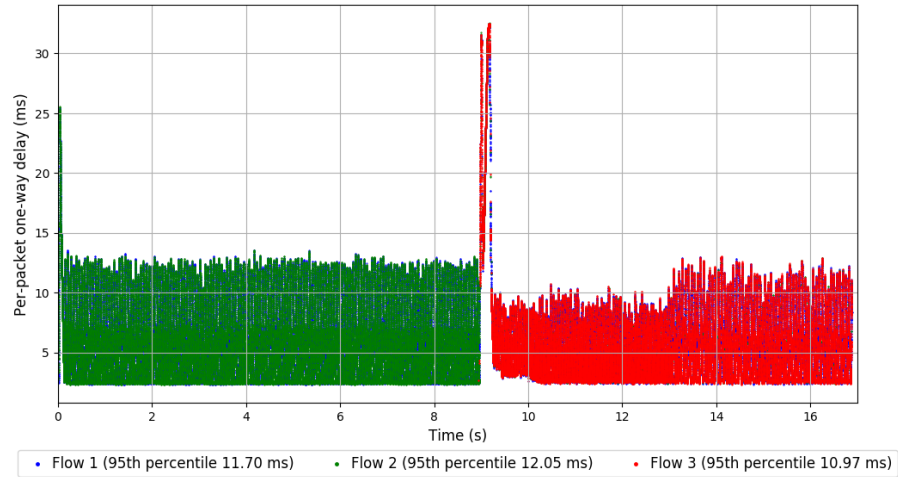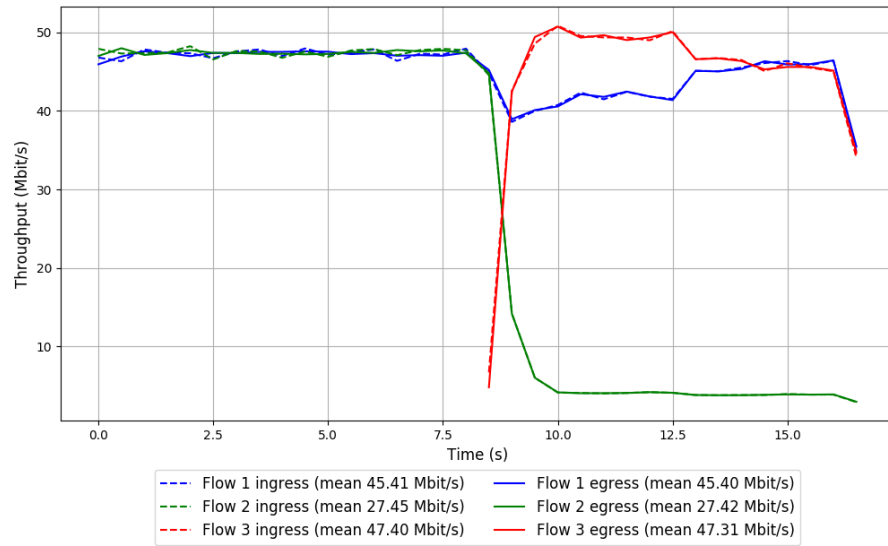
```
Run 8: Statistics of TaoVA-100x

Start at: 2018-01-02 12:18:53
End at: 2018-01-02 12:19:23
Local clock offset: -0.401 ms
Remote clock offset: 0.422 ms
```

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

- Flow 1 ingress (mean 45.41 Mbit/s)
- Flow 2 ingress (mean 27.45 Mbit/s)
- Flow 3 ingress (mean 47.40 Mbit/s)
- Flow 1 egress (mean 45.40 Mbit/s)
- Flow 2 egress (mean 27.42 Mbit/s)
- Flow 3 egress (mean 47.31 Mbit/s)

- Flow 1 (95th percentile 11.70 ms)
- Flow 2 (95th percentile 12.05 ms)
- Flow 3 (95th percentile 10.97 ms)

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

Start at: 2018-01-02 12:35:58
End at: 2018-01-02 12:36:28
Local clock offset: -0.336 ms
Remote clock offset: 0.329 ms


# Below is generated by plot.py at 2018-01-02 13:31:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 11.387 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 50.34 Mbit/s
95th percentile per-packet one-way delay: 10.599 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 46.10 Mbit/s
95th percentile per-packet one-way delay: 11.835 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.62 Mbit/s
95th percentile per-packet one-way delay: 11.796 ms
Loss rate: 0.06%
```
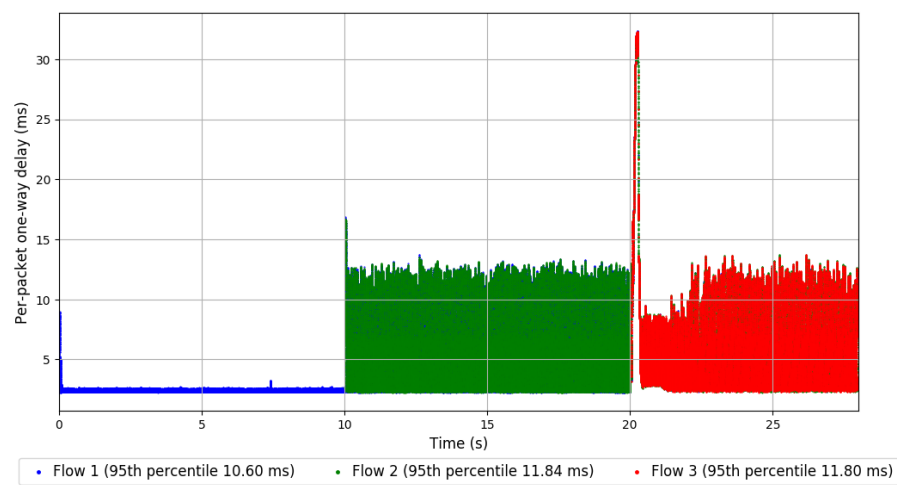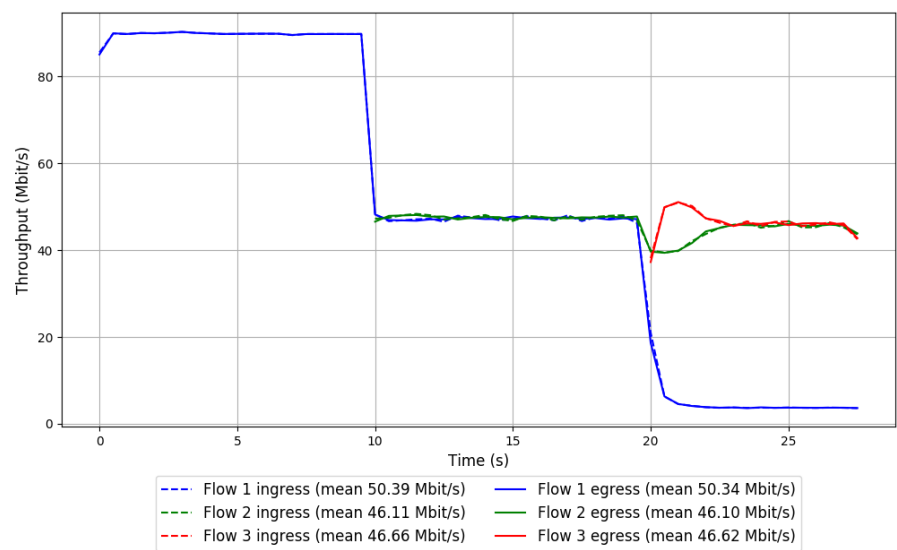
Run 9: Report of TaoVA-100x — Data Link

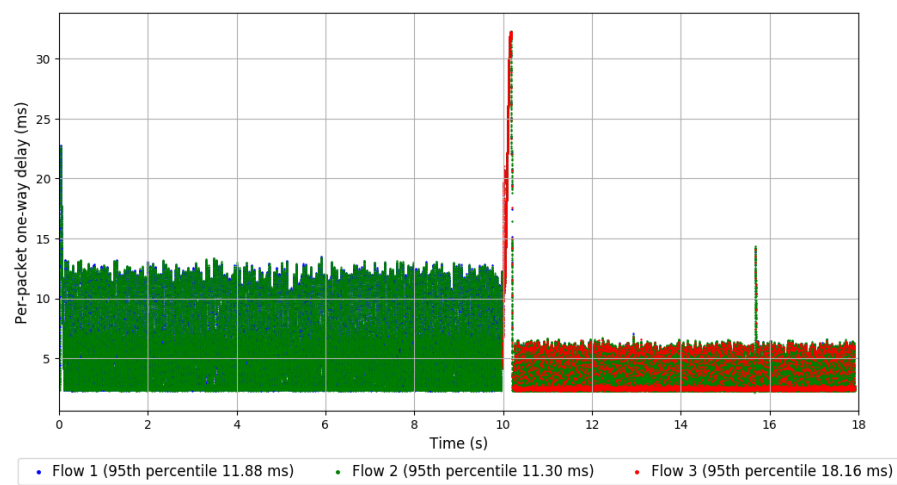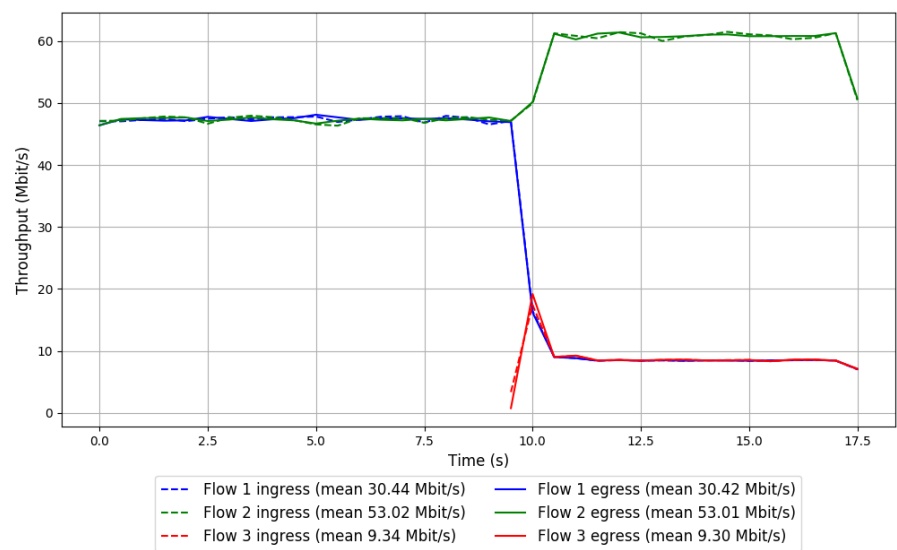Flow 1 ingress (mean 50.39 Mbit/s)   Flow 1 egress (mean 50.34 Mbit/s)
Flow 2 ingress (mean 46.11 Mbit/s)   Flow 2 egress (mean 46.10 Mbit/s)
Flow 3 ingress (mean 46.66 Mbit/s)   Flow 3 egress (mean 46.62 Mbit/s)

Flow 1 (95th percentile 10.60 ms)   Flow 2 (95th percentile 11.84 ms)   Flow 3 (95th percentile 11.80 ms)

Run 10: Statistics of TaoVA-100x

Start at: 2018-01-02 12:53:06
End at: 2018-01-02 12:53:36
Local clock offset: -0.31 ms
Remote clock offset: 0.232 ms

Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-01-02 10:10:13
End at: 2018-01-02 10:10:43
Local clock offset: -0.386 ms
Remote clock offset: 0.699 ms


# Below is generated by plot.py at 2018-01-02 13:31:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.45 Mbit/s
95th percentile per-packet one-way delay: 4.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.49 Mbit/s
95th percentile per-packet one-way delay: 5.471 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.10 Mbit/s
95th percentile per-packet one-way delay: 4.185 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.94 Mbit/s
95th percentile per-packet one-way delay: 3.732 ms
Loss rate: 0.00%
```
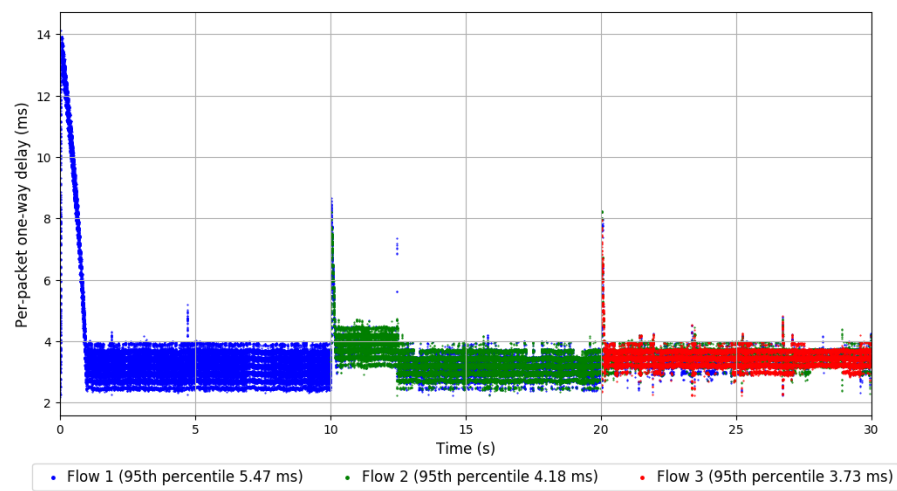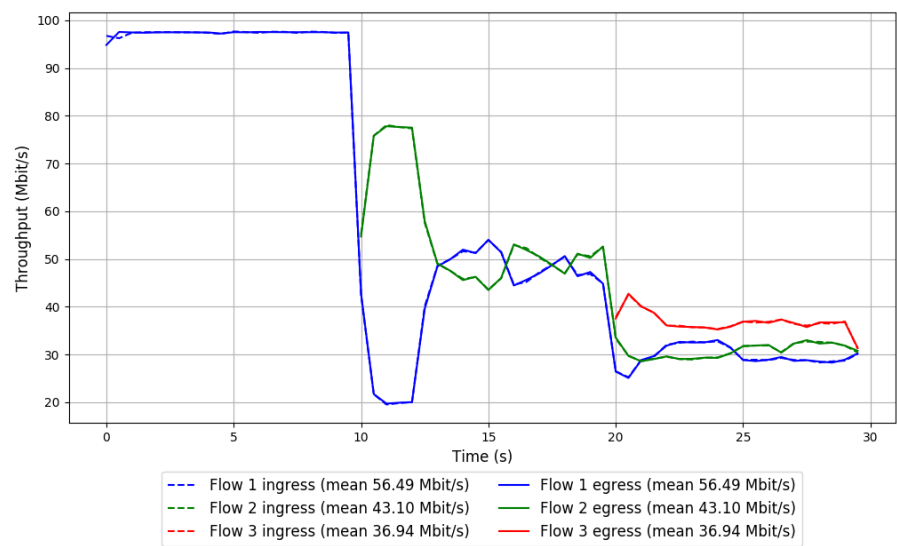
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-01-02 10:27:17
End at: 2018-01-02 10:27:47
Local clock offset: -0.411 ms
Remote clock offset: 0.685 ms


# Below is generated by plot.py at 2018-01-02 13:31:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.28 Mbit/s
95th percentile per-packet one-way delay: 6.463 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.86 Mbit/s
95th percentile per-packet one-way delay: 13.172 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.50 Mbit/s
95th percentile per-packet one-way delay: 4.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.63 Mbit/s
95th percentile per-packet one-way delay: 4.419 ms
Loss rate: 0.00%
```
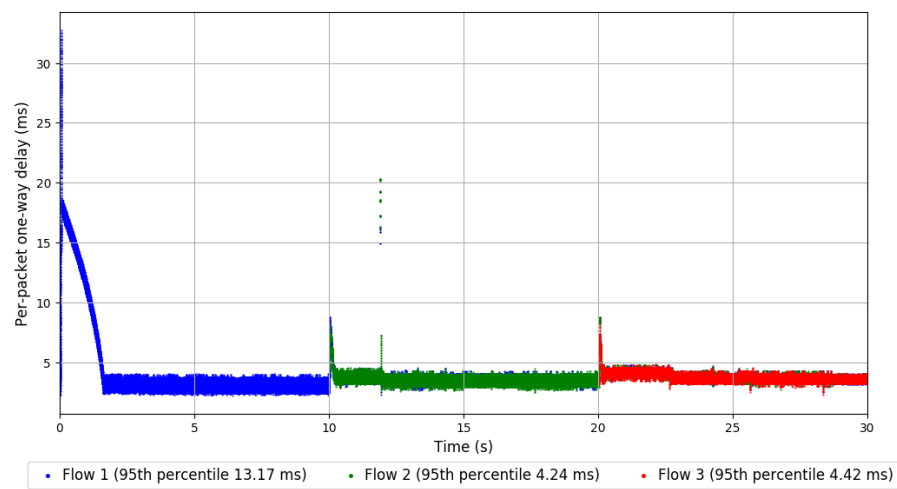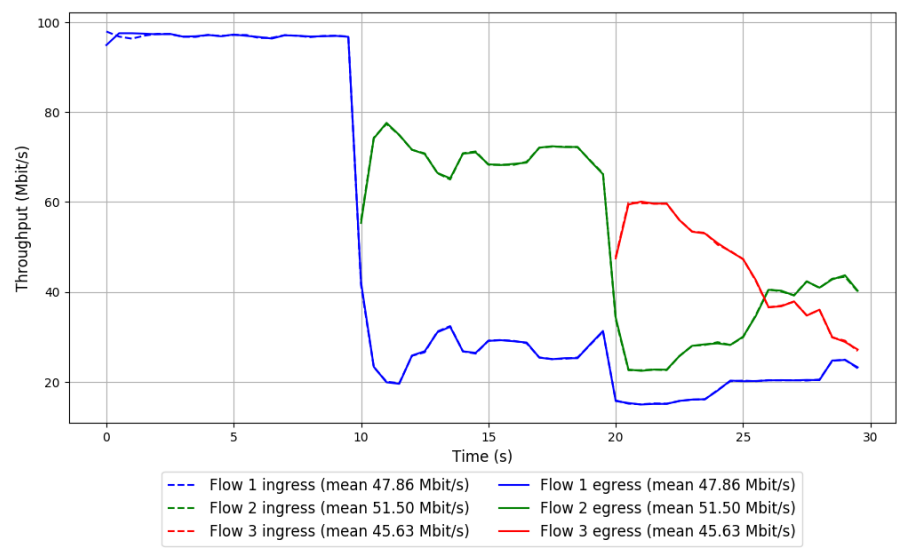
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-01-02 10:44:22
End at: 2018-01-02 10:44:52
Local clock offset: -0.511 ms
Remote clock offset: 0.624 ms


# Below is generated by plot.py at 2018-01-02 13:31:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 4.503 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.06 Mbit/s
95th percentile per-packet one-way delay: 4.333 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.37 Mbit/s
95th percentile per-packet one-way delay: 4.361 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.10 Mbit/s
95th percentile per-packet one-way delay: 4.614 ms
Loss rate: 0.00%
```
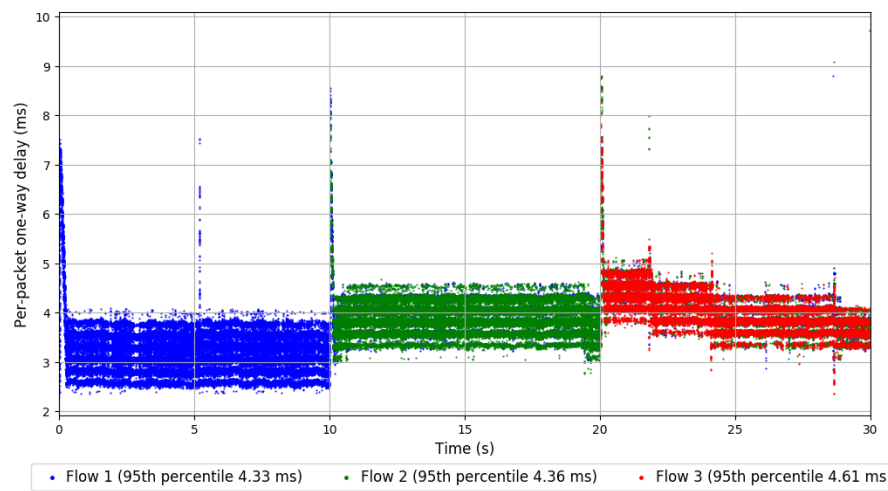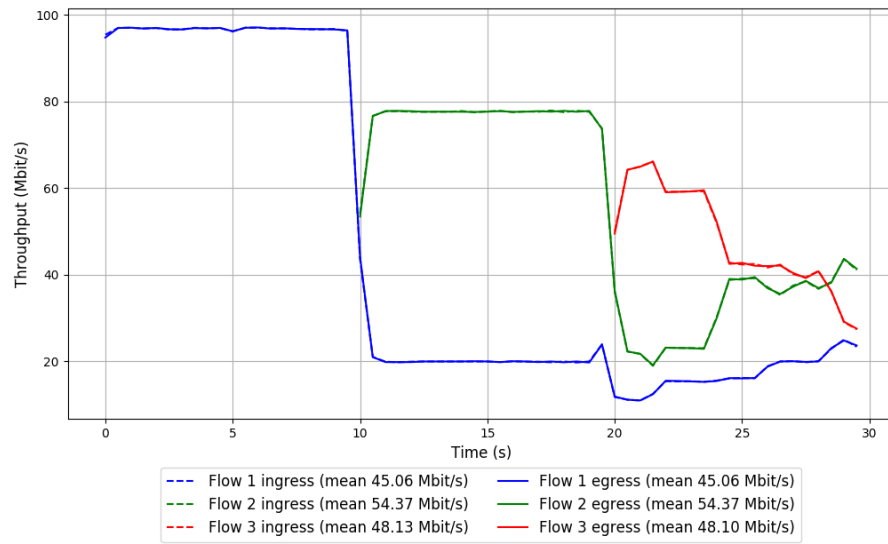
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 45.06 Mbit/s) --- Flow 1 egress (mean 45.06 Mbit/s)
Flow 2 ingress (mean 54.37 Mbit/s) --- Flow 2 egress (mean 54.37 Mbit/s)
Flow 3 ingress (mean 48.13 Mbit/s) --- Flow 3 egress (mean 48.10 Mbit/s)

Flow 1 (95th percentile 4.33 ms)   Flow 2 (95th percentile 4.36 ms)   Flow 3 (95th percentile 4.61 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-01-02 11:01:27
End at: 2018-01-02 11:01:57
Local clock offset: -0.477 ms
Remote clock offset: 0.548 ms


# Below is generated by plot.py at 2018-01-02 13:31:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.18 Mbit/s
95th percentile per-packet one-way delay: 4.469 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.58 Mbit/s
95th percentile per-packet one-way delay: 7.737 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.47 Mbit/s
95th percentile per-packet one-way delay: 4.173 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.14 Mbit/s
95th percentile per-packet one-way delay: 4.476 ms
Loss rate: 0.00%
```
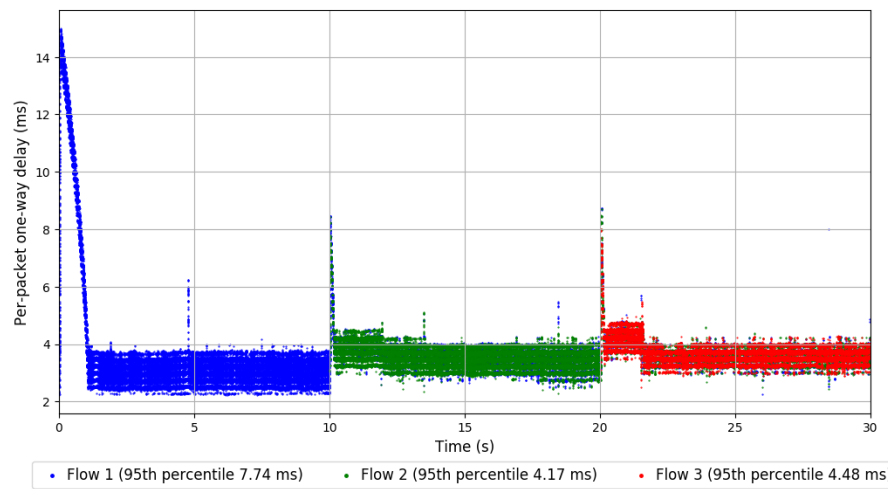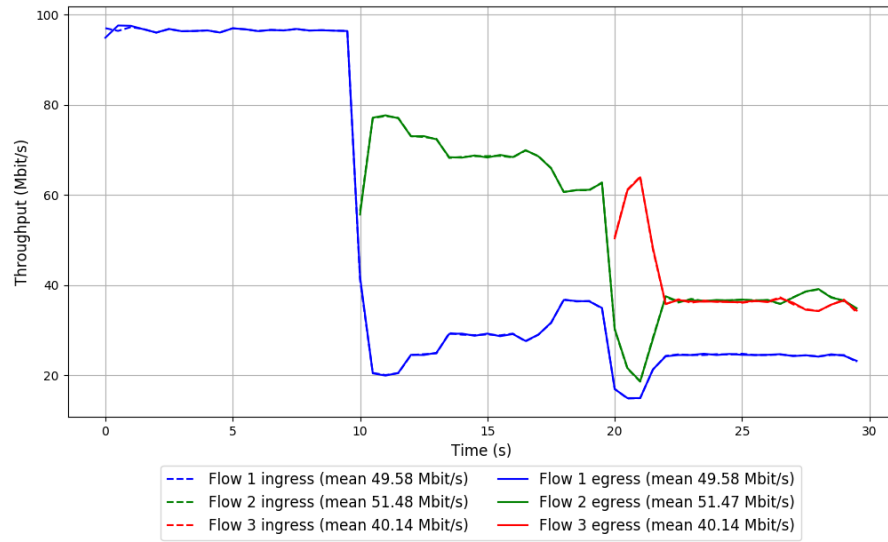
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-01-02 11:18:32
End at: 2018-01-02 11:19:02
Local clock offset: -0.438 ms
Remote clock offset: 0.523 ms


# Below is generated by plot.py at 2018-01-02 13:31:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 5.175 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.02 Mbit/s
95th percentile per-packet one-way delay: 5.204 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.17 Mbit/s
95th percentile per-packet one-way delay: 4.968 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.70 Mbit/s
95th percentile per-packet one-way delay: 5.194 ms
Loss rate: 0.00%
```
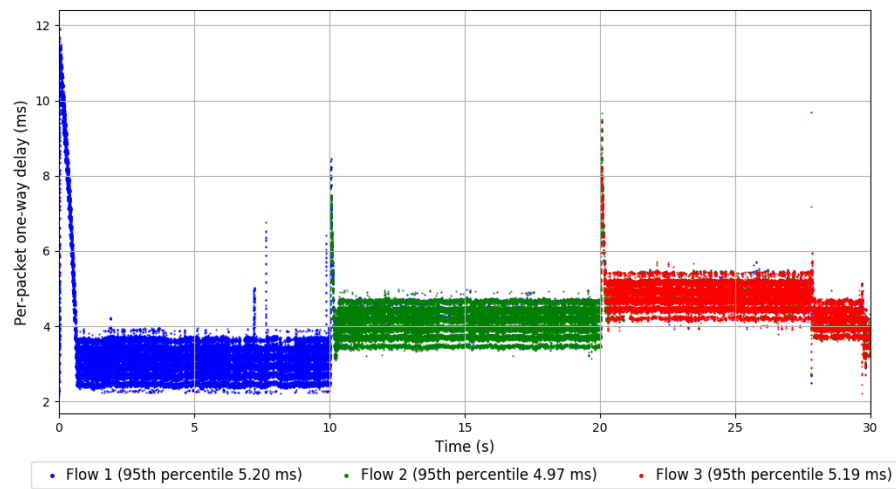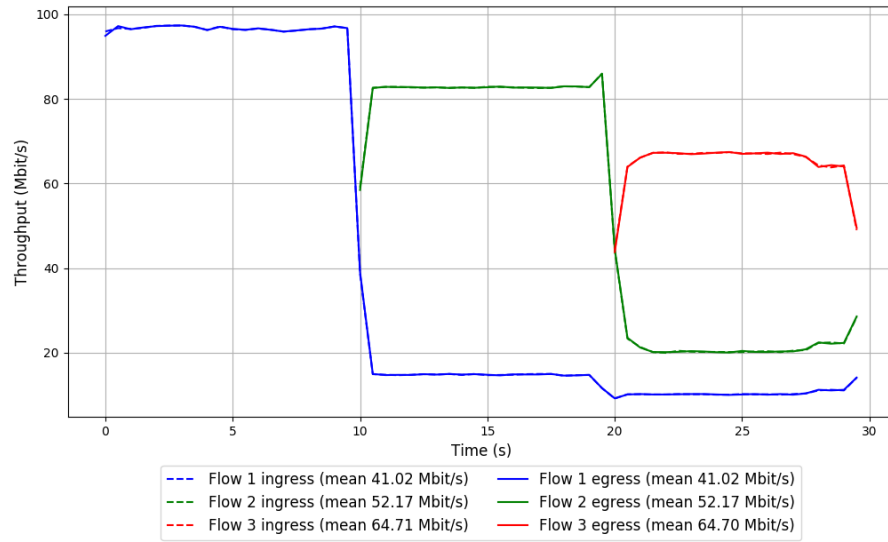
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 41.02 Mbit/s) --- Flow 1 egress (mean 41.02 Mbit/s)
Flow 2 ingress (mean 52.17 Mbit/s) --- Flow 2 egress (mean 52.17 Mbit/s)
Flow 3 ingress (mean 64.71 Mbit/s) --- Flow 3 egress (mean 64.70 Mbit/s)

Flow 1 (95th percentile 5.20 ms)   Flow 2 (95th percentile 4.97 ms)   Flow 3 (95th percentile 5.19 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2018-01-02 11:35:37
End at: 2018-01-02 11:36:07
Local clock offset: -0.476 ms
Remote clock offset: 0.54 ms


# Below is generated by plot.py at 2018-01-02 13:32:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.35 Mbit/s
95th percentile per-packet one-way delay: 4.807 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 52.60 Mbit/s
95th percentile per-packet one-way delay: 5.985 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.05 Mbit/s
95th percentile per-packet one-way delay: 4.578 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 66.55 Mbit/s
95th percentile per-packet one-way delay: 4.809 ms
Loss rate: 0.00%
```
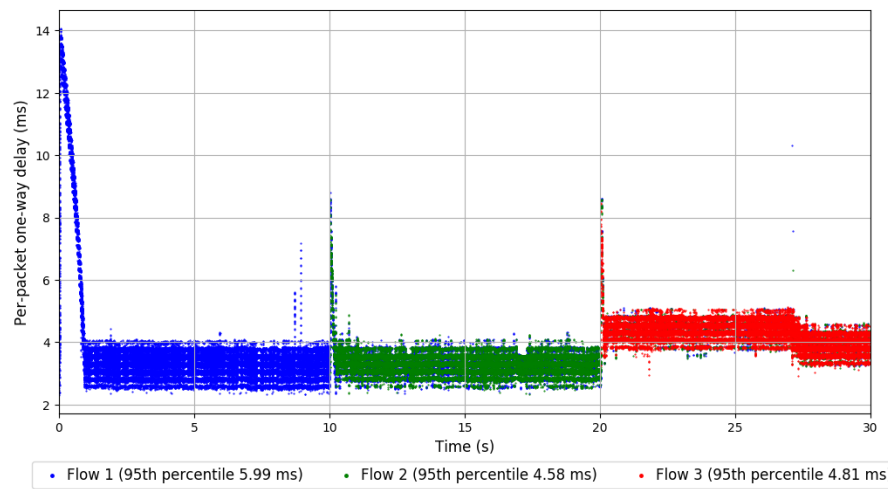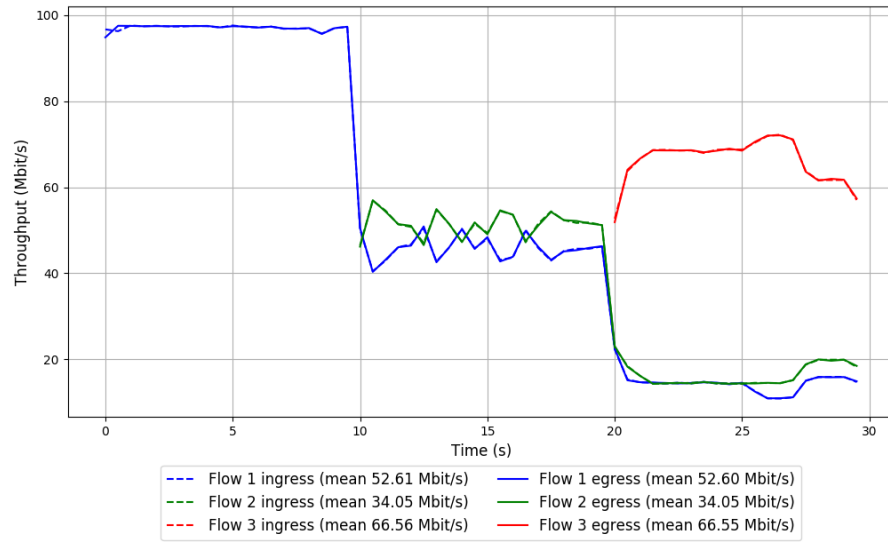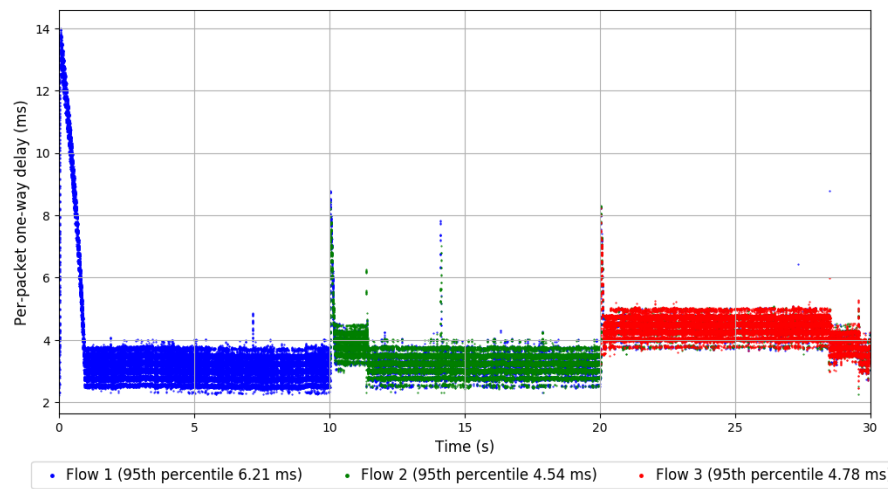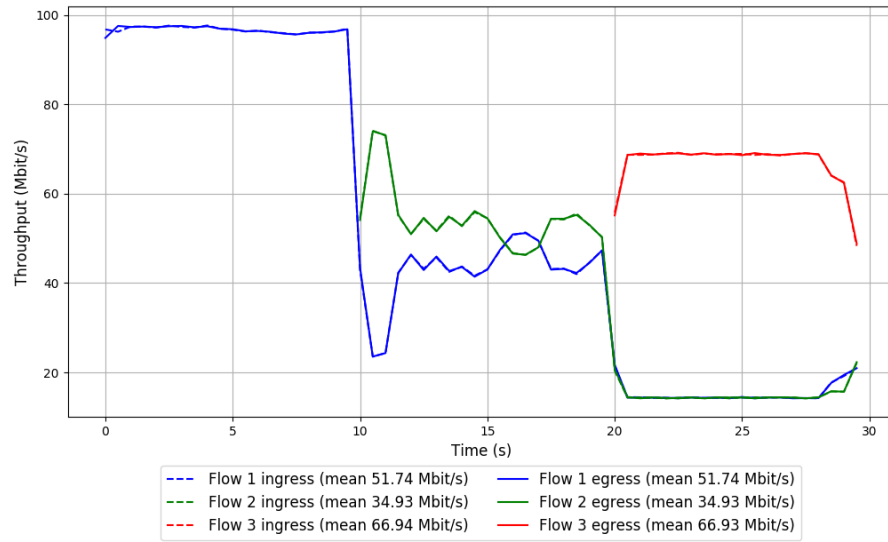
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-01-02 11:52:41
End at: 2018-01-02 11:53:11
Local clock offset: -0.384 ms
Remote clock offset: 0.48 ms


# Below is generated by plot.py at 2018-01-02 13:32:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.22 Mbit/s
95th percentile per-packet one-way delay: 4.779 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.74 Mbit/s
95th percentile per-packet one-way delay: 6.207 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.93 Mbit/s
95th percentile per-packet one-way delay: 4.542 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 66.93 Mbit/s
95th percentile per-packet one-way delay: 4.784 ms
Loss rate: 0.00%
```

Run 7: Report of TCP Vegas — Data Link

- Flow 1 ingress (mean 51.74 Mbit/s) --- Flow 1 egress (mean 51.74 Mbit/s)
- Flow 2 ingress (mean 34.93 Mbit/s) --- Flow 2 egress (mean 34.93 Mbit/s)
- Flow 3 ingress (mean 66.94 Mbit/s) --- Flow 3 egress (mean 66.93 Mbit/s)

- Flow 1 (95th percentile 6.21 ms)
- Flow 2 (95th percentile 4.54 ms)
- Flow 3 (95th percentile 4.78 ms)

197

```
Run 8: Statistics of TCP Vegas

Start at: 2018-01-02 12:09:50
End at: 2018-01-02 12:10:20
Local clock offset: -0.339 ms
Remote clock offset: 0.502 ms


# Below is generated by plot.py at 2018-01-02 13:32:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.12 Mbit/s
95th percentile per-packet one-way delay: 4.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.38 Mbit/s
95th percentile per-packet one-way delay: 8.390 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.81 Mbit/s
95th percentile per-packet one-way delay: 4.510 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 61.92 Mbit/s
95th percentile per-packet one-way delay: 4.447 ms
Loss rate: 0.00%
```
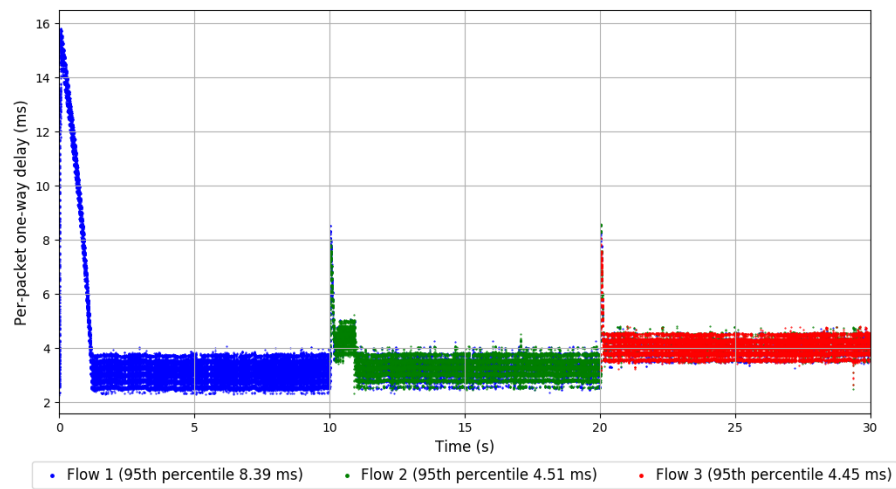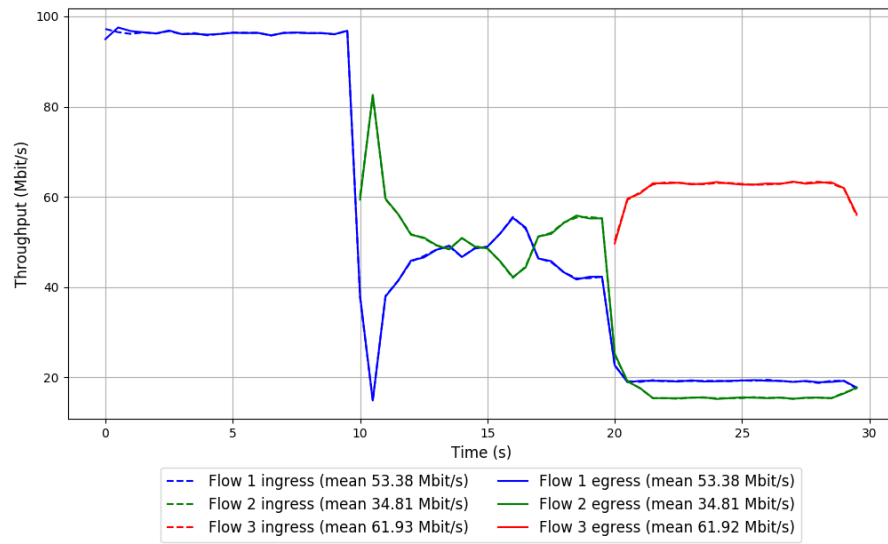
Run 8: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 53.38 Mbit/s)   Flow 1 egress (mean 53.38 Mbit/s)
Flow 2 ingress (mean 34.81 Mbit/s)   Flow 2 egress (mean 34.81 Mbit/s)
Flow 3 ingress (mean 61.93 Mbit/s)   Flow 3 egress (mean 61.92 Mbit/s)

Flow 1 (95th percentile 8.39 ms)   Flow 2 (95th percentile 4.51 ms)   Flow 3 (95th percentile 4.45 ms)

```
Run 9: Statistics of TCP Vegas

Start at: 2018-01-02 12:26:55
End at: 2018-01-02 12:27:25
Local clock offset: -0.33 ms
Remote clock offset: 0.329 ms


# Below is generated by plot.py at 2018-01-02 13:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.04 Mbit/s
95th percentile per-packet one-way delay: 5.182 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.00 Mbit/s
95th percentile per-packet one-way delay: 5.151 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 4.987 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.12 Mbit/s
95th percentile per-packet one-way delay: 5.216 ms
Loss rate: 0.00%
```
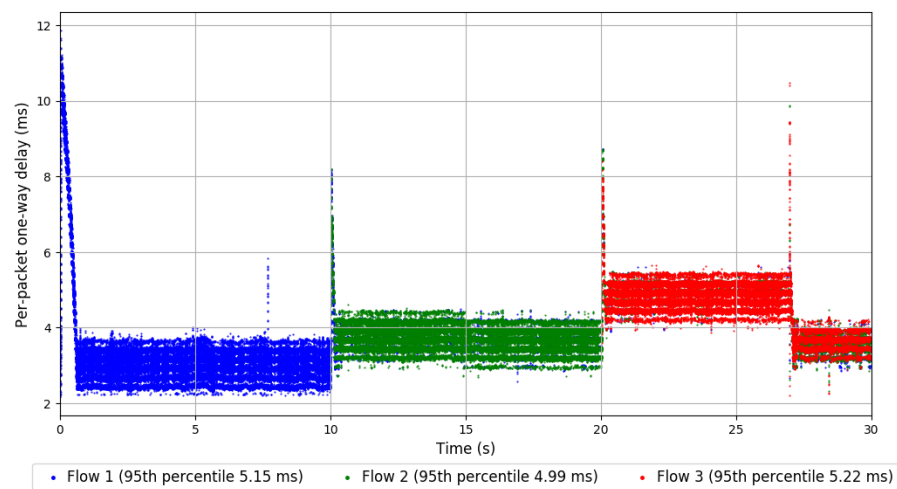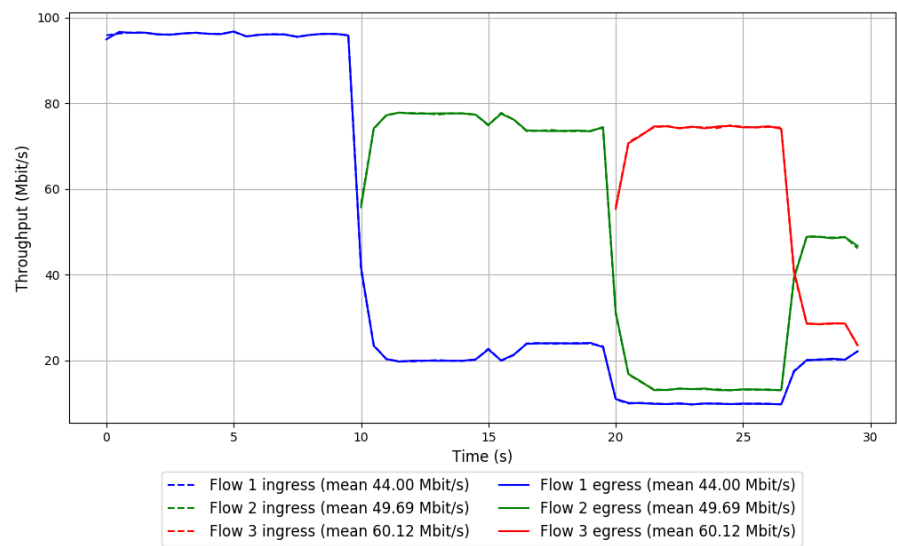
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2018-01-02 12:44:03
End at: 2018-01-02 12:44:33
Local clock offset: -0.328 ms
Remote clock offset: 0.291 ms


# Below is generated by plot.py at 2018-01-02 13:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.09 Mbit/s
95th percentile per-packet one-way delay: 4.979 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.68 Mbit/s
95th percentile per-packet one-way delay: 6.042 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 52.45 Mbit/s
95th percentile per-packet one-way delay: 4.780 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 55.65 Mbit/s
95th percentile per-packet one-way delay: 4.986 ms
Loss rate: 0.00%
```
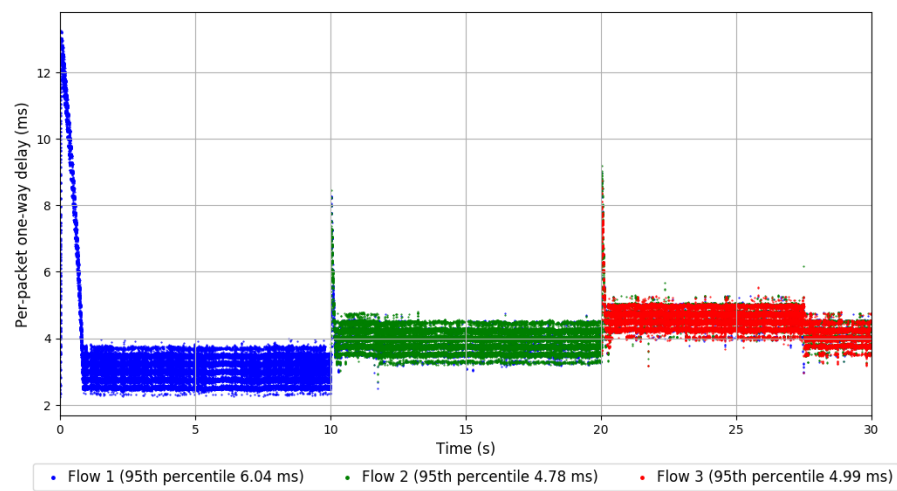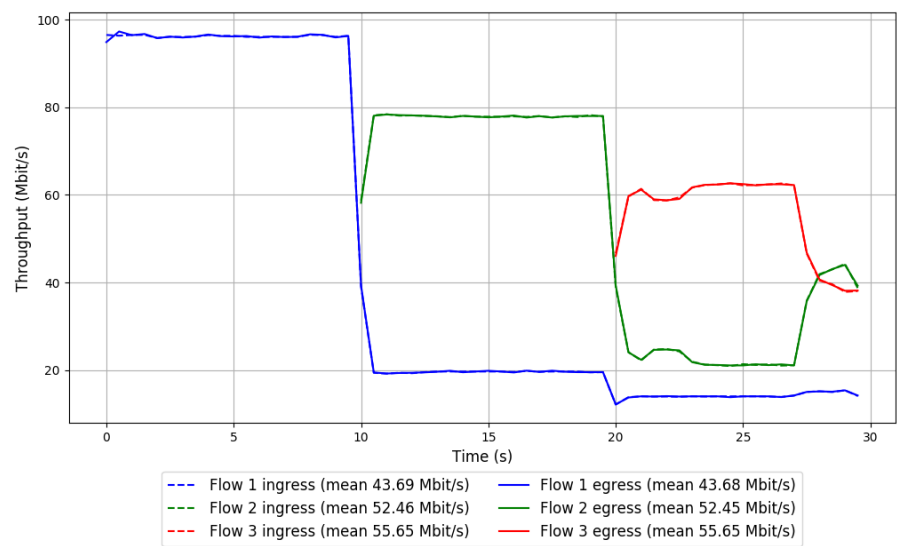
Run 10: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 43.69 Mbit/s)   Flow 1 egress (mean 43.68 Mbit/s)
Flow 2 ingress (mean 52.46 Mbit/s)   Flow 2 egress (mean 52.45 Mbit/s)
Flow 3 ingress (mean 55.65 Mbit/s)   Flow 3 egress (mean 55.65 Mbit/s)

Flow 1 (95th percentile 6.04 ms)   Flow 2 (95th percentile 4.78 ms)   Flow 3 (95th percentile 4.99 ms)
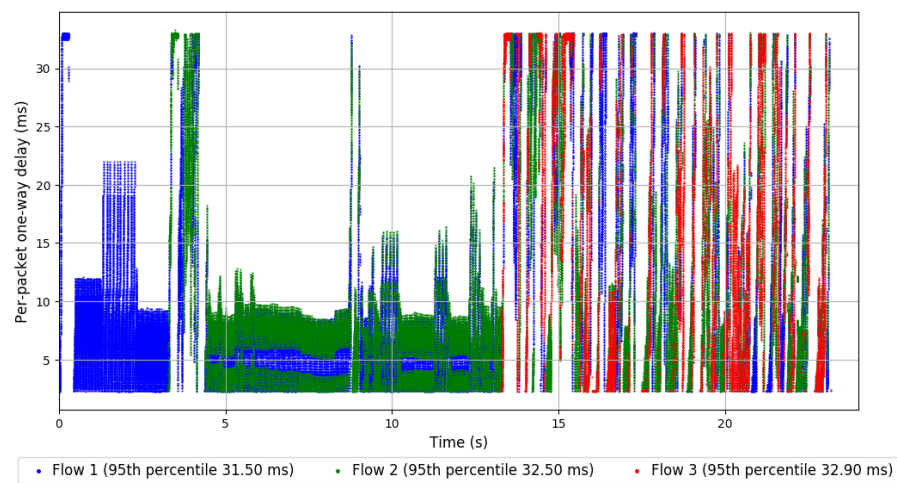
```
Run 1: Statistics of Verus

Start at: 2018-01-02 10:21:35
End at: 2018-01-02 10:22:05
Local clock offset: -0.403 ms
Remote clock offset: 0.717 ms
```
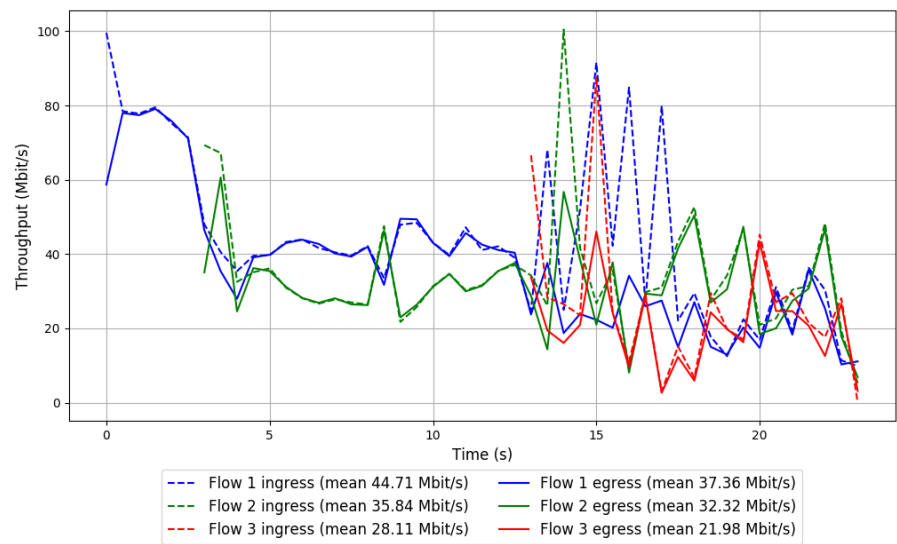
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-01-02 10:38:39
End at: 2018-01-02 10:39:09
Local clock offset: -0.414 ms
Remote clock offset: 0.644 ms


# Below is generated by plot.py at 2018-01-02 13:33:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.86 Mbit/s
95th percentile per-packet one-way delay: 32.679 ms
Loss rate: 23.89%
-- Flow 1:
Average throughput: 42.70 Mbit/s
95th percentile per-packet one-way delay: 31.809 ms
Loss rate: 8.48%
-- Flow 2:
Average throughput: 28.82 Mbit/s
95th percentile per-packet one-way delay: 32.813 ms
Loss rate: 35.30%
-- Flow 3:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 32.869 ms
Loss rate: 46.50%
```
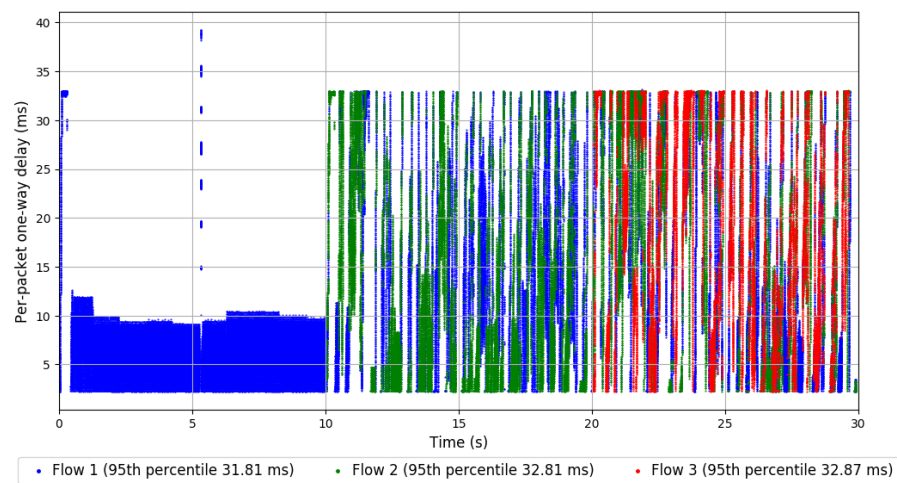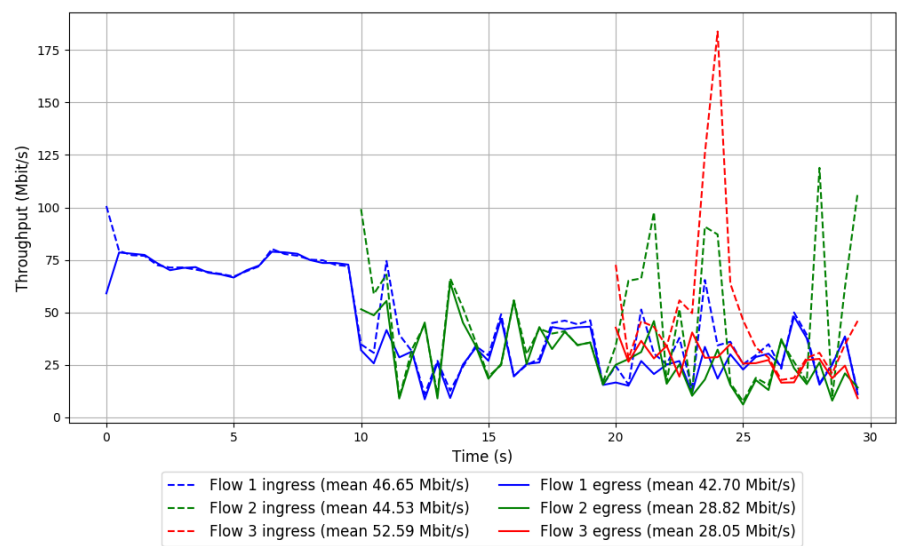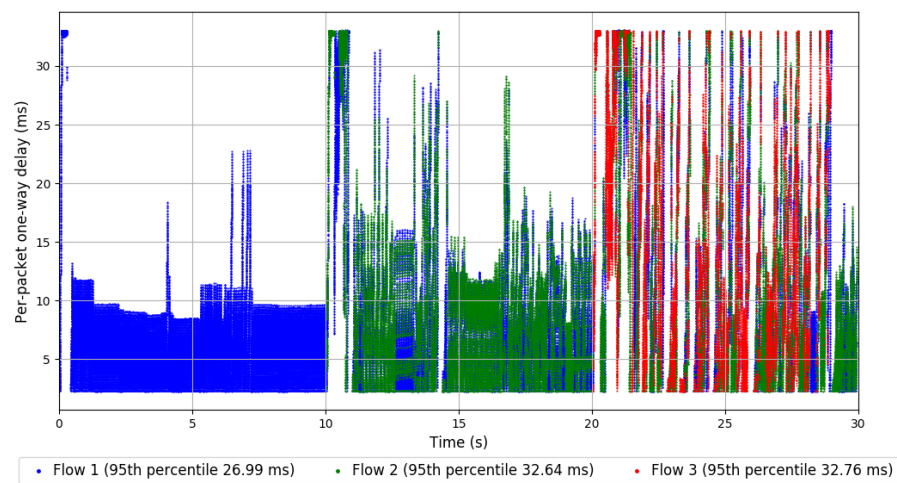
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-01-02 10:55:43
End at: 2018-01-02 10:56:13
Local clock offset: -0.421 ms
Remote clock offset: 0.62 ms


# Below is generated by plot.py at 2018-01-02 13:33:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.00 Mbit/s
95th percentile per-packet one-way delay: 31.229 ms
Loss rate: 7.21%
-- Flow 1:
Average throughput: 45.56 Mbit/s
95th percentile per-packet one-way delay: 26.989 ms
Loss rate: 4.61%
-- Flow 2:
Average throughput: 31.43 Mbit/s
95th percentile per-packet one-way delay: 32.638 ms
Loss rate: 9.19%
-- Flow 3:
Average throughput: 25.21 Mbit/s
95th percentile per-packet one-way delay: 32.763 ms
Loss rate: 16.00%
```
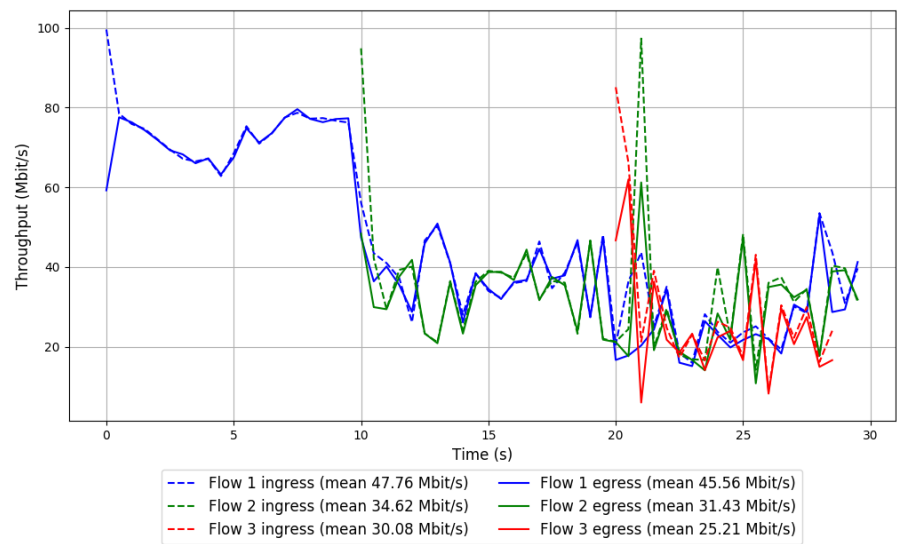
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 47.76 Mbit/s)   Flow 1 egress (mean 45.56 Mbit/s)
Flow 2 ingress (mean 34.62 Mbit/s)   Flow 2 egress (mean 31.43 Mbit/s)
Flow 3 ingress (mean 30.08 Mbit/s)   Flow 3 egress (mean 25.21 Mbit/s)

Flow 1 (95th percentile 26.99 ms)   Flow 2 (95th percentile 32.64 ms)   Flow 3 (95th percentile 32.76 ms)

209

```
Run 4: Statistics of Verus

Start at: 2018-01-02 11:12:48
End at: 2018-01-02 11:13:18
Local clock offset: -0.432 ms
Remote clock offset: 0.521 ms


# Below is generated by plot.py at 2018-01-02 13:33:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.69 Mbit/s
95th percentile per-packet one-way delay: 32.742 ms
Loss rate: 27.83%
-- Flow 1:
Average throughput: 45.50 Mbit/s
95th percentile per-packet one-way delay: 31.882 ms
Loss rate: 11.10%
-- Flow 2:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 32.775 ms
Loss rate: 40.53%
-- Flow 3:
Average throughput: 27.37 Mbit/s
95th percentile per-packet one-way delay: 32.827 ms
Loss rate: 49.72%
```
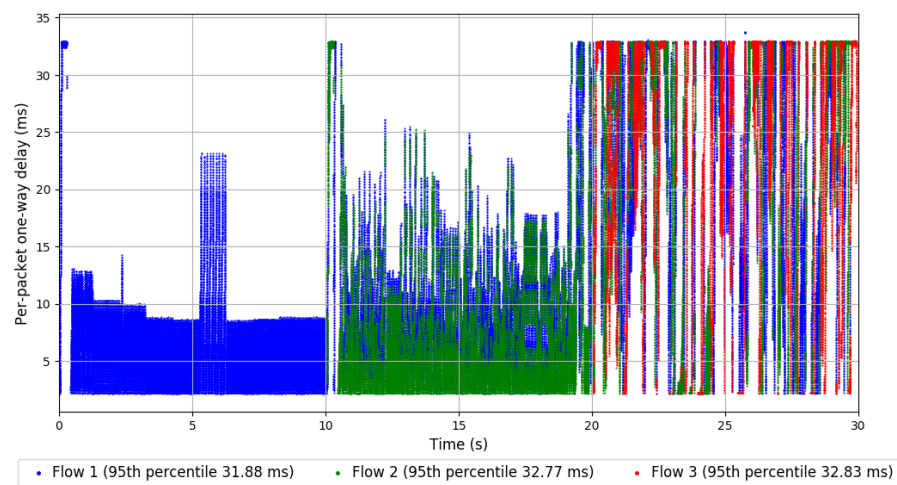
Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 51.24 Mbit/s)　　　Flow 1 egress (mean 45.50 Mbit/s)
Flow 2 ingress (mean 54.25 Mbit/s)　　　Flow 2 egress (mean 32.22 Mbit/s)
Flow 3 ingress (mean 54.51 Mbit/s)　　　Flow 3 egress (mean 27.37 Mbit/s)

Flow 1 (95th percentile 31.88 ms)　　　Flow 2 (95th percentile 32.77 ms)　　　Flow 3 (95th percentile 32.83 ms)

```
Run 5: Statistics of Verus

Start at: 2018-01-02 11:29:53
End at: 2018-01-02 11:30:23
Local clock offset: -0.433 ms
Remote clock offset: 0.557 ms


# Below is generated by plot.py at 2018-01-02 13:33:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.85 Mbit/s
95th percentile per-packet one-way delay: 31.950 ms
Loss rate: 16.21%
-- Flow 1:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 30.275 ms
Loss rate: 13.31%
-- Flow 2:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 32.591 ms
Loss rate: 22.96%
-- Flow 3:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 32.762 ms
Loss rate: 15.37%
```
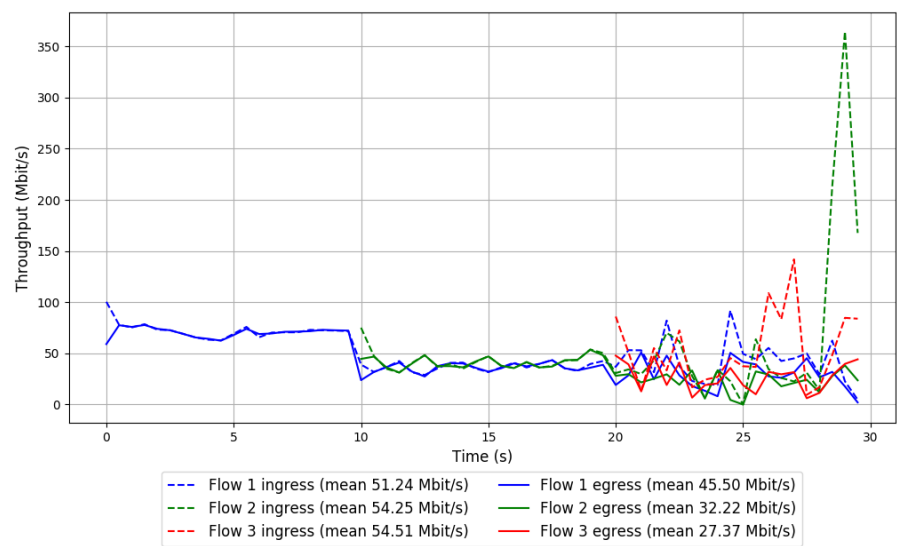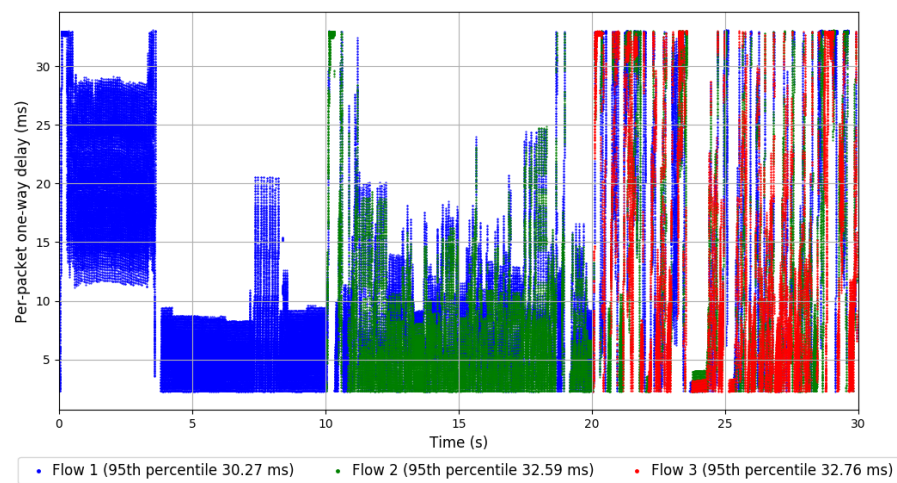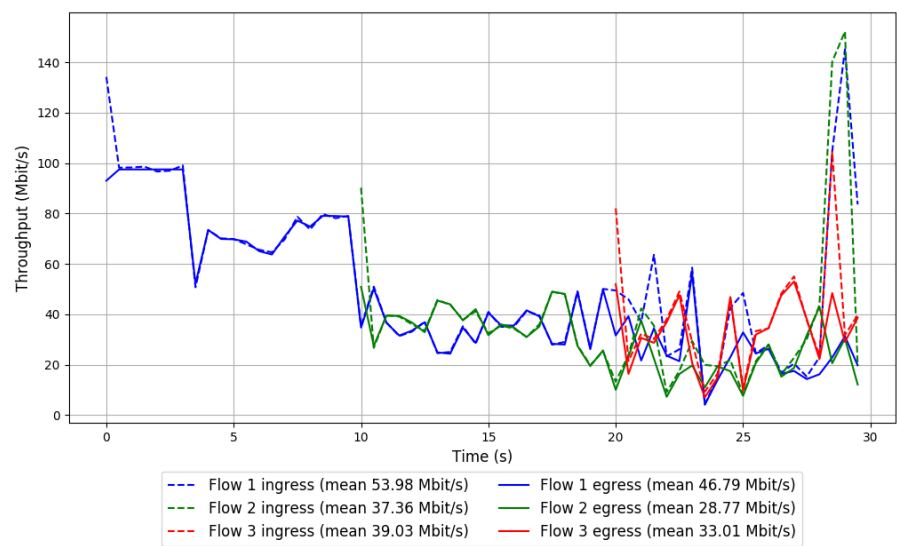
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 53.98 Mbit/s) — Flow 1 egress (mean 46.79 Mbit/s)
Flow 2 ingress (mean 37.36 Mbit/s) — Flow 2 egress (mean 28.77 Mbit/s)
Flow 3 ingress (mean 39.03 Mbit/s) — Flow 3 egress (mean 33.01 Mbit/s)

Flow 1 (95th percentile 30.27 ms) — Flow 2 (95th percentile 32.59 ms) — Flow 3 (95th percentile 32.76 ms)

```
Run 6: Statistics of Verus

Start at: 2018-01-02 11:46:58
End at: 2018-01-02 11:47:28
Local clock offset: -0.359 ms
Remote clock offset: 0.503 ms


# Below is generated by plot.py at 2018-01-02 13:33:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.20 Mbit/s
95th percentile per-packet one-way delay: 32.141 ms
Loss rate: 8.76%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 30.428 ms
Loss rate: 5.70%
-- Flow 2:
Average throughput: 29.20 Mbit/s
95th percentile per-packet one-way delay: 32.617 ms
Loss rate: 12.51%
-- Flow 3:
Average throughput: 25.75 Mbit/s
95th percentile per-packet one-way delay: 32.830 ms
Loss rate: 15.36%
```
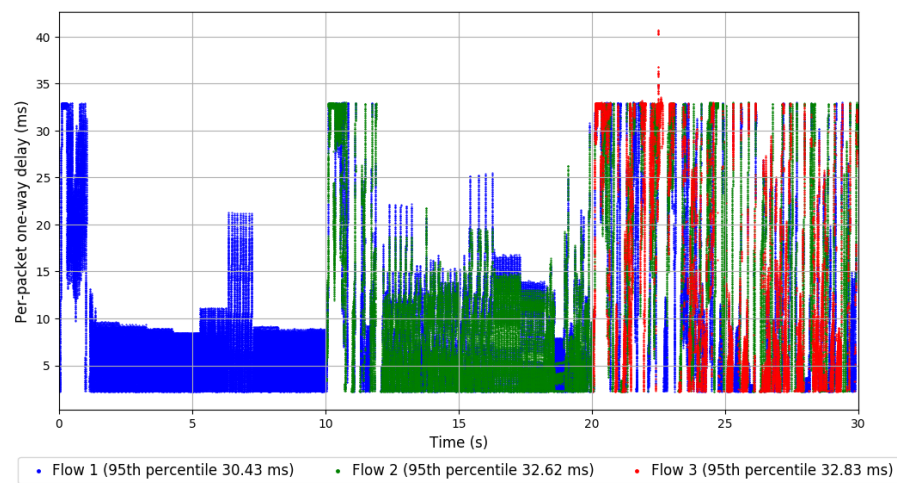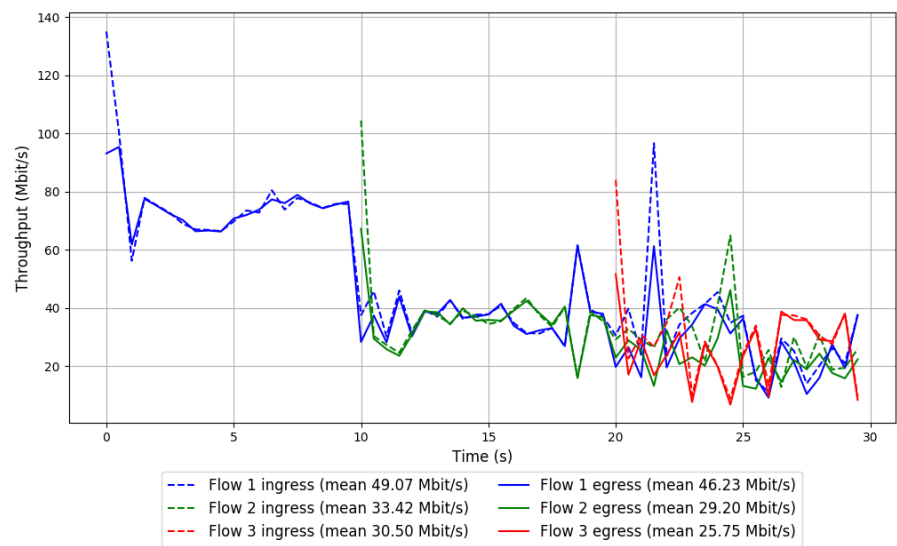
Run 6: Report of Verus — Data Link

- - - Flow 1 ingress (mean 49.07 Mbit/s) —— Flow 1 egress (mean 46.23 Mbit/s)
- - - Flow 2 ingress (mean 33.42 Mbit/s) —— Flow 2 egress (mean 29.20 Mbit/s)
- - - Flow 3 ingress (mean 30.50 Mbit/s) —— Flow 3 egress (mean 25.75 Mbit/s)

• Flow 1 (95th percentile 30.43 ms)   • Flow 2 (95th percentile 32.62 ms)   • Flow 3 (95th percentile 32.83 ms)

```
Run 7: Statistics of Verus

Start at: 2018-01-02 12:04:06
End at: 2018-01-02 12:04:36
Local clock offset: -0.334 ms
Remote clock offset: 0.49 ms


# Below is generated by plot.py at 2018-01-02 13:33:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 32.703 ms
Loss rate: 16.01%
-- Flow 1:
Average throughput: 46.15 Mbit/s
95th percentile per-packet one-way delay: 32.135 ms
Loss rate: 13.59%
-- Flow 2:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 32.703 ms
Loss rate: 12.10%
-- Flow 3:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 32.894 ms
Loss rate: 32.17%
```
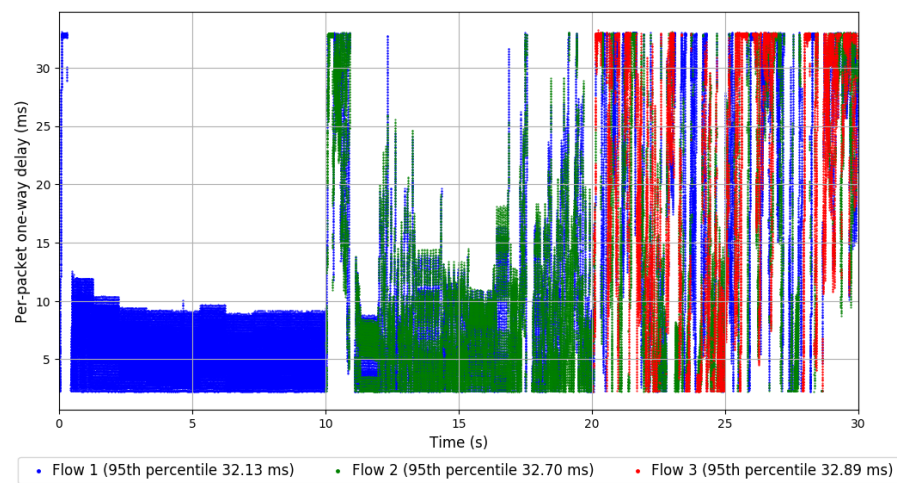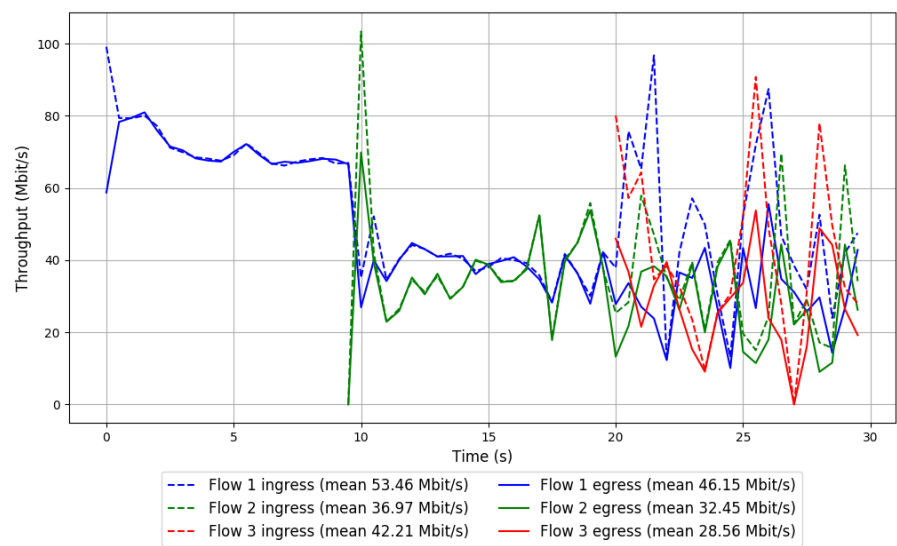
Run 7: Report of Verus — Data Link

Flow 1 ingress (mean 53.46 Mbit/s) Flow 1 egress (mean 46.15 Mbit/s)
Flow 2 ingress (mean 36.97 Mbit/s) Flow 2 egress (mean 32.45 Mbit/s)
Flow 3 ingress (mean 42.21 Mbit/s) Flow 3 egress (mean 28.56 Mbit/s)

• Flow 1 (95th percentile 32.13 ms)   • Flow 2 (95th percentile 32.70 ms)   • Flow 3 (95th percentile 32.89 ms)
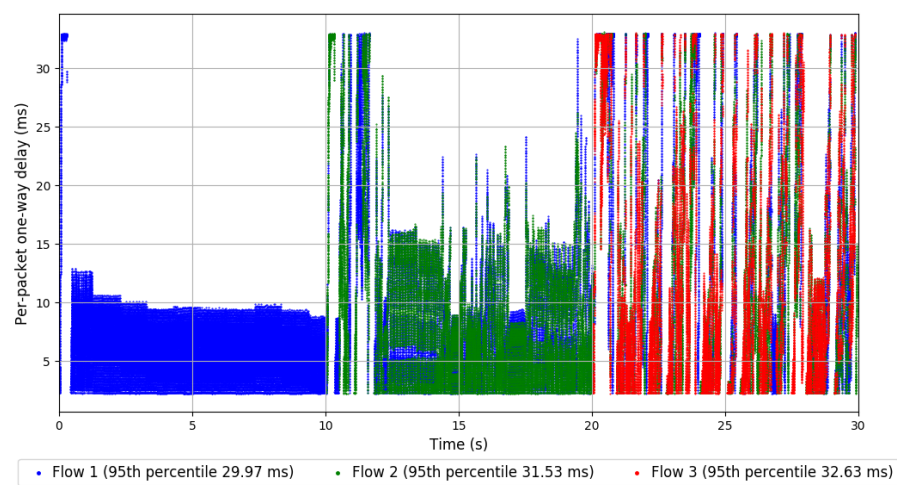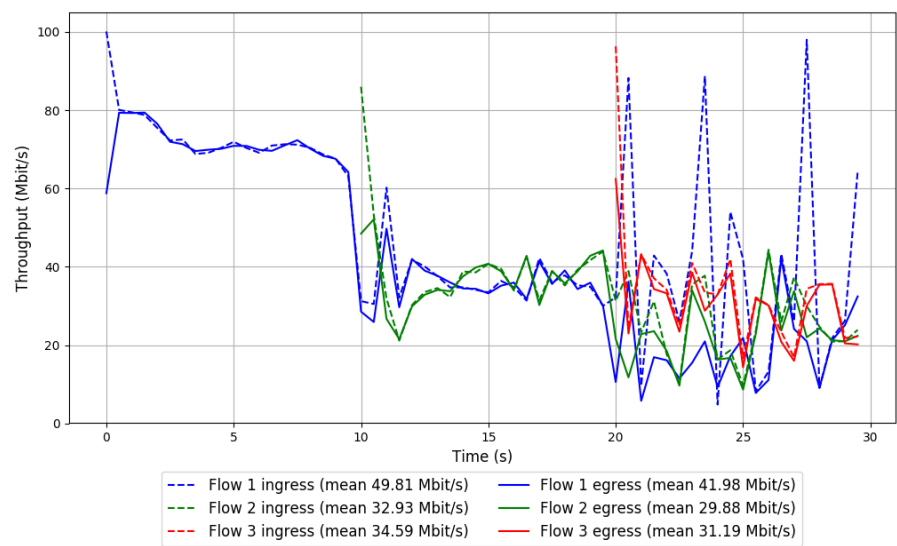
```
Run 8: Statistics of Verus

Start at: 2018-01-02 12:21:11
End at: 2018-01-02 12:21:41
Local clock offset: -0.303 ms
Remote clock offset: 0.406 ms


# Below is generated by plot.py at 2018-01-02 13:33:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.02 Mbit/s
95th percentile per-packet one-way delay: 31.370 ms
Loss rate: 13.12%
-- Flow 1:
Average throughput: 41.98 Mbit/s
95th percentile per-packet one-way delay: 29.972 ms
Loss rate: 15.64%
-- Flow 2:
Average throughput: 29.88 Mbit/s
95th percentile per-packet one-way delay: 31.530 ms
Loss rate: 9.21%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 32.627 ms
Loss rate: 9.61%
```

Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 49.81 Mbit/s)   Flow 1 egress (mean 41.98 Mbit/s)
Flow 2 ingress (mean 32.93 Mbit/s)   Flow 2 egress (mean 29.88 Mbit/s)
Flow 3 ingress (mean 34.59 Mbit/s)   Flow 3 egress (mean 31.19 Mbit/s)

Flow 1 (95th percentile 29.97 ms)   Flow 2 (95th percentile 31.53 ms)   Flow 3 (95th percentile 32.63 ms)

```
Run 9: Statistics of Verus

Start at: 2018-01-02 12:38:19
End at: 2018-01-02 12:38:49
Local clock offset: -0.308 ms
Remote clock offset: 0.286 ms


# Below is generated by plot.py at 2018-01-02 13:34:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.05 Mbit/s
95th percentile per-packet one-way delay: 32.068 ms
Loss rate: 15.13%
-- Flow 1:
Average throughput: 49.06 Mbit/s
95th percentile per-packet one-way delay: 30.522 ms
Loss rate: 6.63%
-- Flow 2:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 32.293 ms
Loss rate: 20.60%
-- Flow 3:
Average throughput: 26.17 Mbit/s
95th percentile per-packet one-way delay: 32.820 ms
Loss rate: 37.25%
```
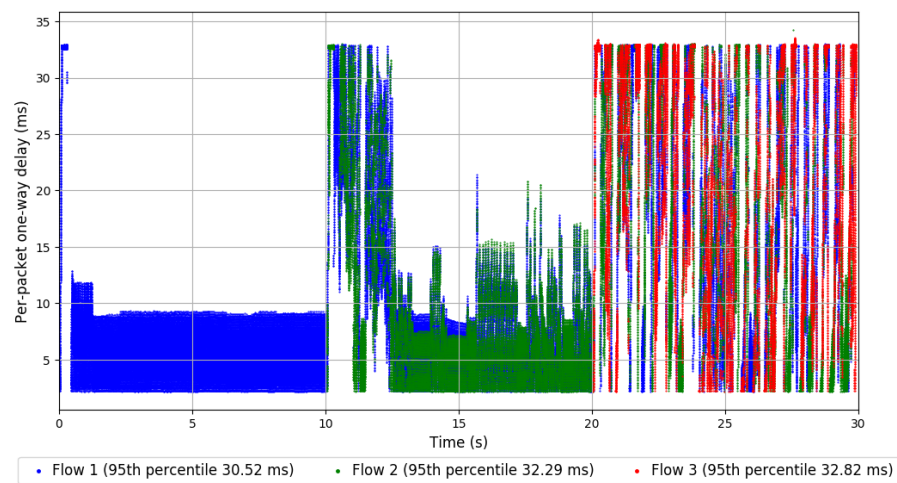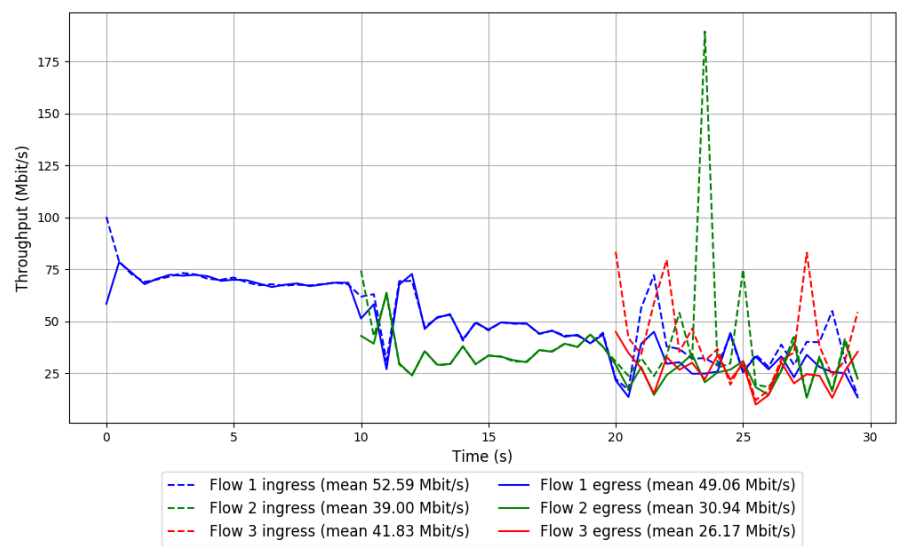
Run 9: Report of Verus — Data Link

- - - Flow 1 ingress (mean 52.59 Mbit/s) —— Flow 1 egress (mean 49.06 Mbit/s)
- - - Flow 2 ingress (mean 39.00 Mbit/s) —— Flow 2 egress (mean 30.94 Mbit/s)
- - - Flow 3 ingress (mean 41.83 Mbit/s) —— Flow 3 egress (mean 26.17 Mbit/s)

• Flow 1 (95th percentile 30.52 ms)   • Flow 2 (95th percentile 32.29 ms)   • Flow 3 (95th percentile 32.82 ms)

```
Run 10: Statistics of Verus

Start at: 2018-01-02 12:55:24
End at: 2018-01-02 12:55:54
Local clock offset: -0.276 ms
Remote clock offset: 0.204 ms


# Below is generated by plot.py at 2018-01-02 13:34:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.44 Mbit/s
95th percentile per-packet one-way delay: 32.653 ms
Loss rate: 19.64%
-- Flow 1:
Average throughput: 45.45 Mbit/s
95th percentile per-packet one-way delay: 30.536 ms
Loss rate: 6.32%
-- Flow 2:
Average throughput: 30.63 Mbit/s
95th percentile per-packet one-way delay: 32.695 ms
Loss rate: 12.97%
-- Flow 3:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 32.895 ms
Loss rate: 63.71%
```
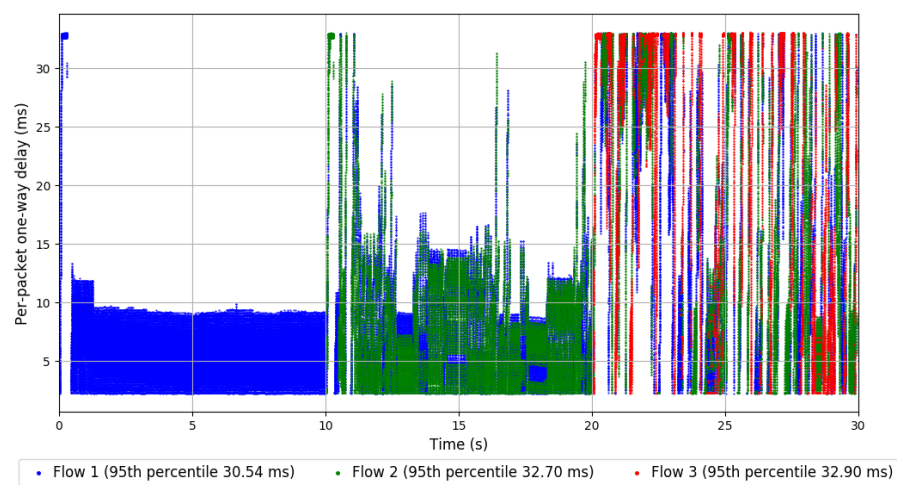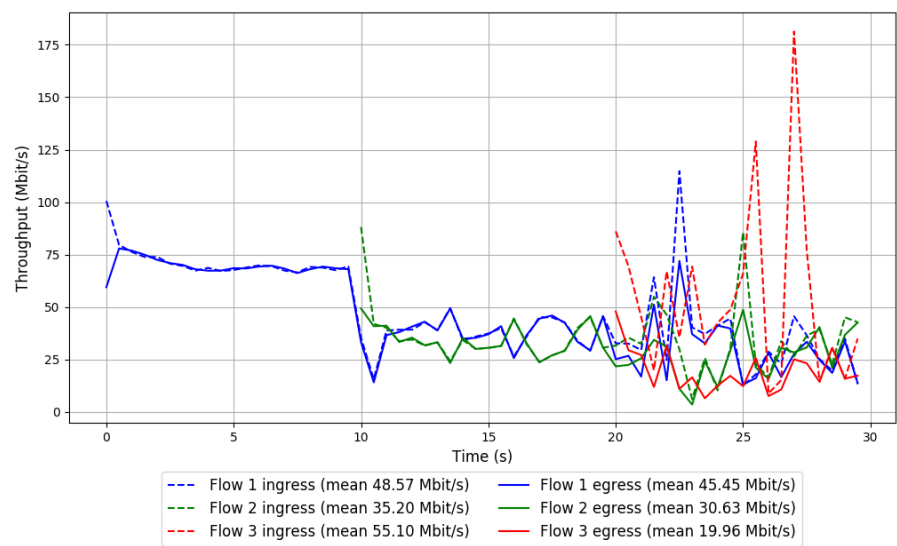
Run 10: Report of Verus — Data Link

Flow 1 ingress (mean 48.57 Mbit/s)   Flow 1 egress (mean 45.45 Mbit/s)
Flow 2 ingress (mean 35.20 Mbit/s)   Flow 2 egress (mean 30.63 Mbit/s)
Flow 3 ingress (mean 55.10 Mbit/s)   Flow 3 egress (mean 19.96 Mbit/s)

Flow 1 (95th percentile 30.54 ms)   Flow 2 (95th percentile 32.70 ms)   Flow 3 (95th percentile 32.90 ms)

223

```
Run 1: Statistics of Copa

Start at: 2018-01-02 10:07:53
End at: 2018-01-02 10:08:23
Local clock offset: -0.427 ms
Remote clock offset: 0.757 ms


# Below is generated by plot.py at 2018-01-02 13:35:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.94 Mbit/s
95th percentile per-packet one-way delay: 5.383 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 5.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.67 Mbit/s
95th percentile per-packet one-way delay: 5.463 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 5.937 ms
Loss rate: 0.00%
```
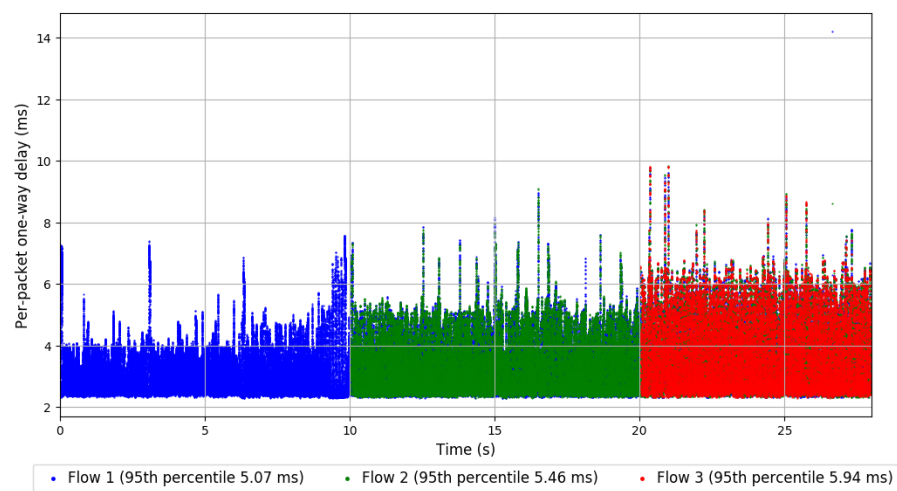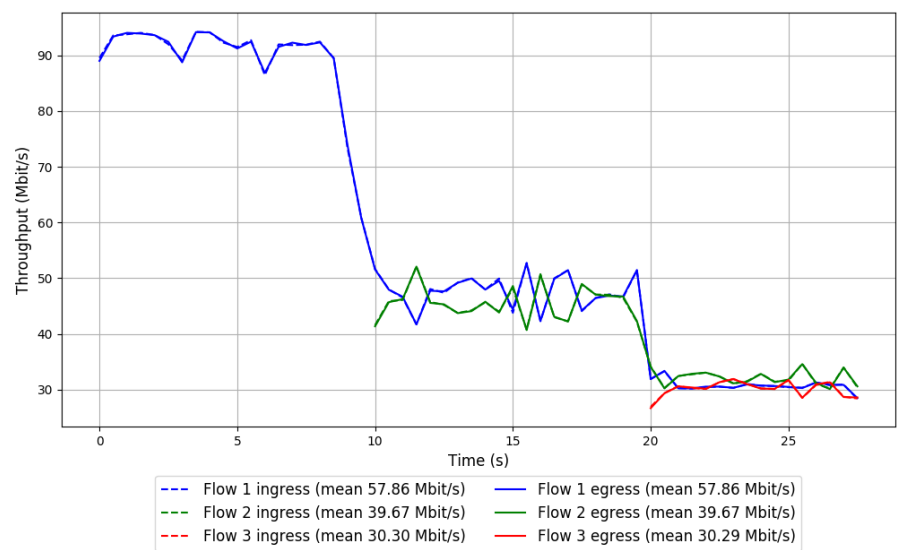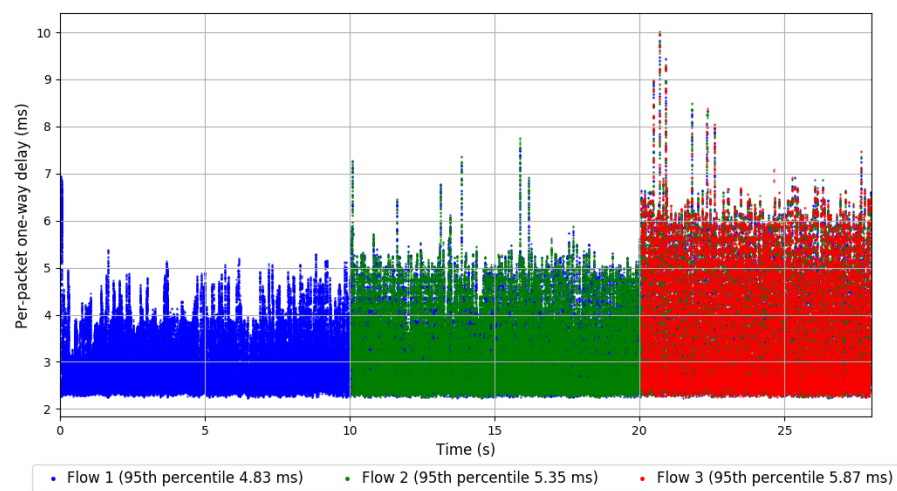
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 57.86 Mbit/s)   Flow 1 egress (mean 57.86 Mbit/s)
Flow 2 ingress (mean 39.67 Mbit/s)   Flow 2 egress (mean 39.67 Mbit/s)
Flow 3 ingress (mean 30.30 Mbit/s)   Flow 3 egress (mean 30.29 Mbit/s)

Flow 1 (95th percentile 5.07 ms)   Flow 2 (95th percentile 5.46 ms)   Flow 3 (95th percentile 5.94 ms)

```
Run 2: Statistics of Copa

Start at: 2018-01-02 10:24:57
End at: 2018-01-02 10:25:27
Local clock offset: -0.402 ms
Remote clock offset: 0.69 ms


# Below is generated by plot.py at 2018-01-02 13:35:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.98 Mbit/s
95th percentile per-packet one-way delay: 5.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.39 Mbit/s
95th percentile per-packet one-way delay: 4.833 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 5.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.07 Mbit/s
95th percentile per-packet one-way delay: 5.871 ms
Loss rate: 0.00%
```
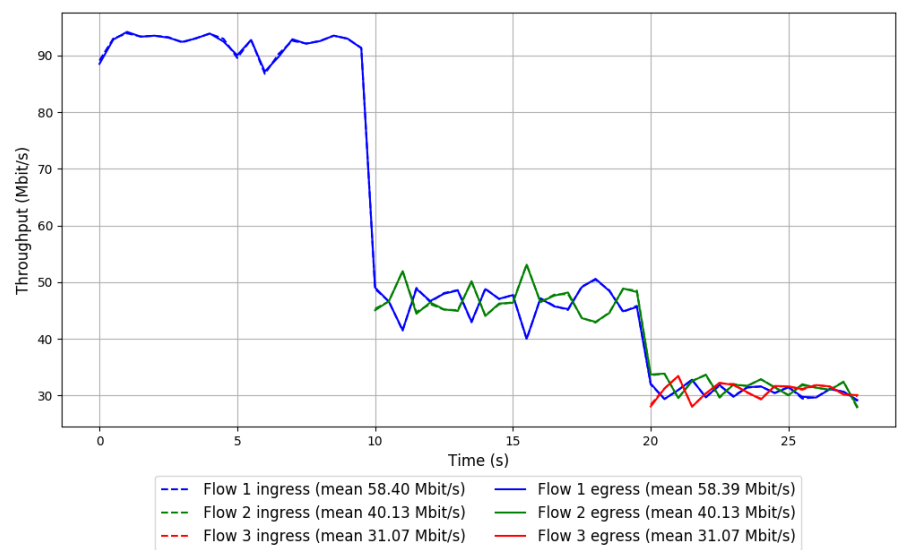
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-01-02 10:42:02
End at: 2018-01-02 10:42:32
Local clock offset: -0.524 ms
Remote clock offset: 0.63 ms


# Below is generated by plot.py at 2018-01-02 13:35:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.45 Mbit/s
95th percentile per-packet one-way delay: 4.770 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.80 Mbit/s
95th percentile per-packet one-way delay: 4.662 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.18 Mbit/s
95th percentile per-packet one-way delay: 4.898 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 3.704 ms
Loss rate: 0.00%
```
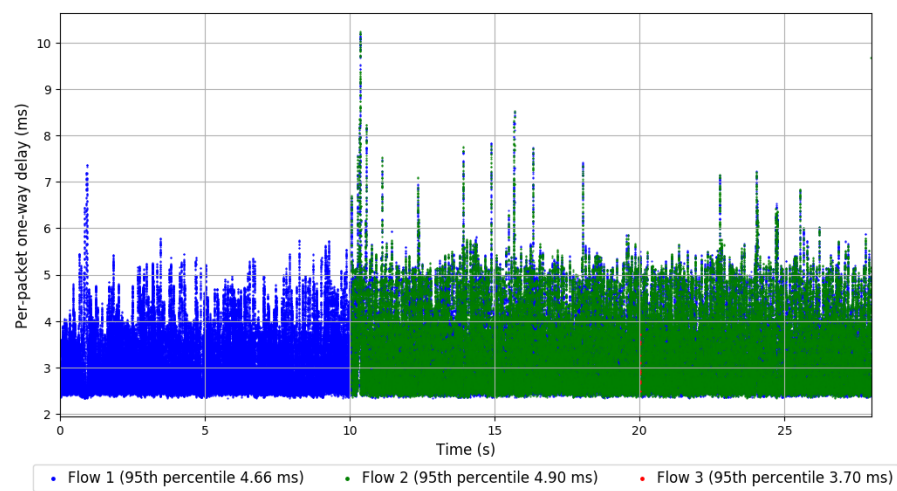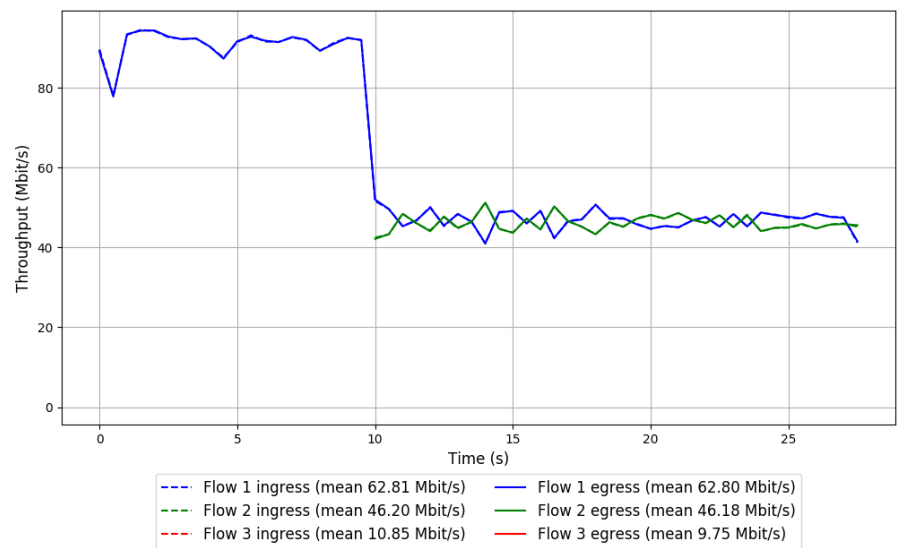
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 62.81 Mbit/s) --- Flow 1 egress (mean 62.80 Mbit/s)
Flow 2 ingress (mean 46.20 Mbit/s) --- Flow 2 egress (mean 46.18 Mbit/s)
Flow 3 ingress (mean 10.85 Mbit/s) --- Flow 3 egress (mean 9.75 Mbit/s)

• Flow 1 (95th percentile 4.66 ms)   • Flow 2 (95th percentile 4.90 ms)   • Flow 3 (95th percentile 3.70 ms)

```
Run 4: Statistics of Copa

Start at: 2018-01-02 10:59:07
End at: 2018-01-02 10:59:37
Local clock offset: -0.485 ms
Remote clock offset: 0.613 ms


# Below is generated by plot.py at 2018-01-02 13:35:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.07 Mbit/s
95th percentile per-packet one-way delay: 5.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.02 Mbit/s
95th percentile per-packet one-way delay: 5.022 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 5.710 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 10.735 ms
Loss rate: 0.00%
```
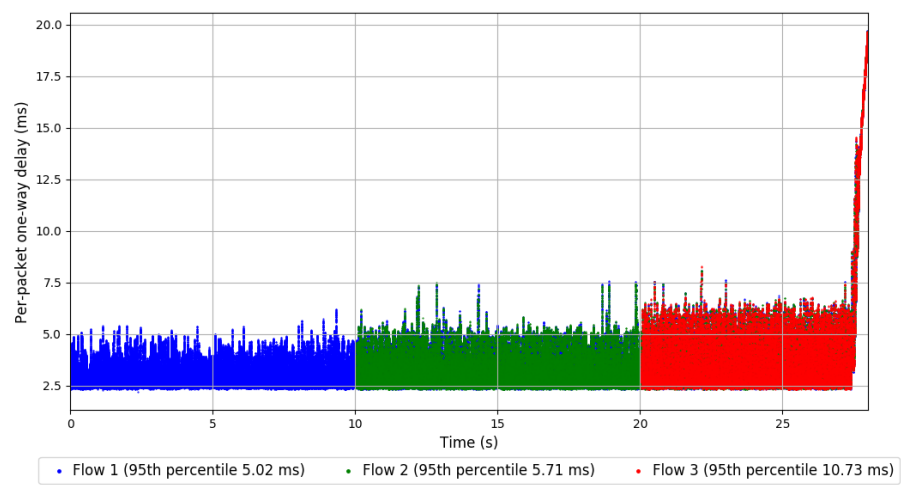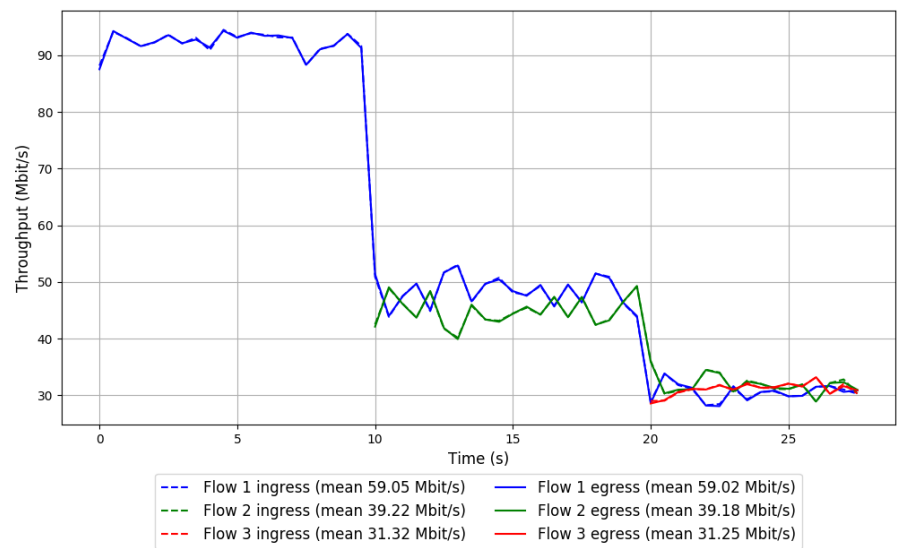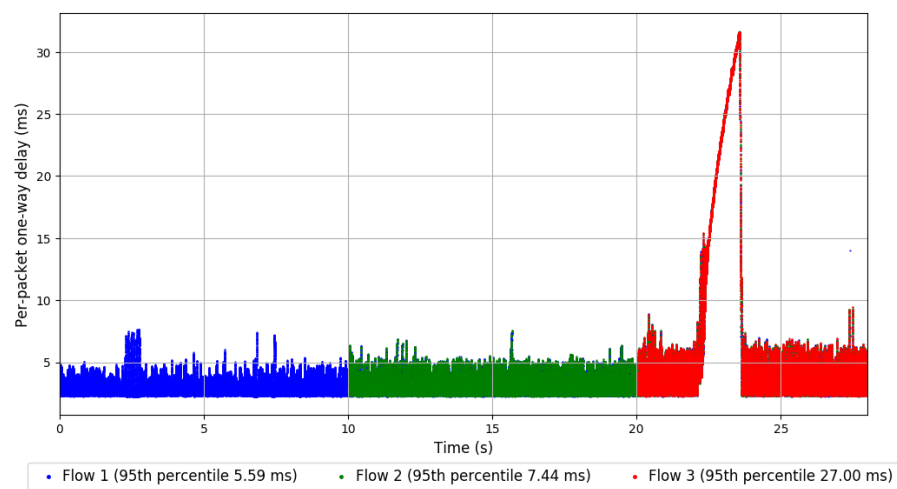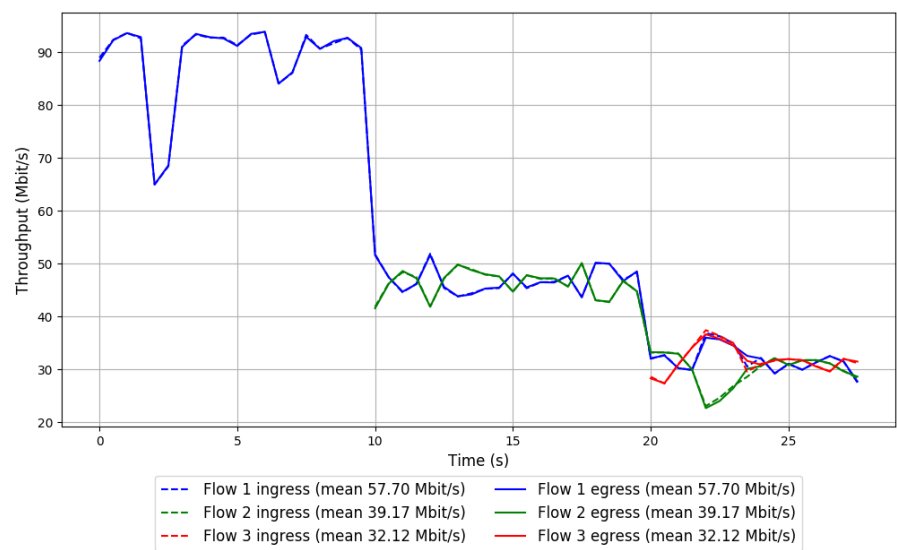
Run 4: Report of Copa — Data Link

- - - Flow 1 ingress (mean 59.05 Mbit/s)   —— Flow 1 egress (mean 59.02 Mbit/s)
- - - Flow 2 ingress (mean 39.22 Mbit/s)   —— Flow 2 egress (mean 39.18 Mbit/s)
- - - Flow 3 ingress (mean 31.32 Mbit/s)   —— Flow 3 egress (mean 31.25 Mbit/s)

• Flow 1 (95th percentile 5.02 ms)   • Flow 2 (95th percentile 5.71 ms)   • Flow 3 (95th percentile 10.73 ms)

231

```
Run 5: Statistics of Copa

Start at: 2018-01-02 11:16:11
End at: 2018-01-02 11:16:41
Local clock offset: -0.445 ms
Remote clock offset: 0.587 ms


# Below is generated by plot.py at 2018-01-02 13:36:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 9.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.70 Mbit/s
95th percentile per-packet one-way delay: 5.595 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.17 Mbit/s
95th percentile per-packet one-way delay: 7.444 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 27.003 ms
Loss rate: 0.00%
```
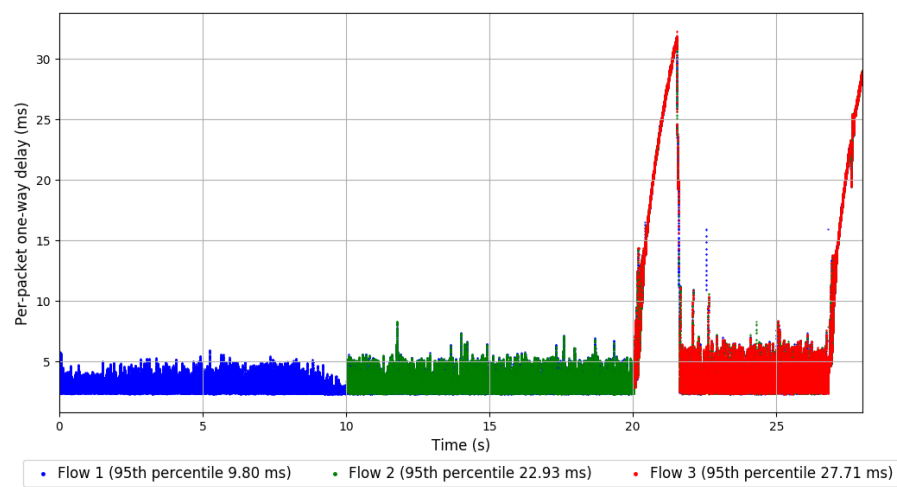
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-01-02 11:33:17
End at: 2018-01-02 11:33:47
Local clock offset: -0.485 ms
Remote clock offset: 0.554 ms


# Below is generated by plot.py at 2018-01-02 13:36:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.55 Mbit/s
95th percentile per-packet one-way delay: 20.629 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.07 Mbit/s
95th percentile per-packet one-way delay: 9.798 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 22.935 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.29 Mbit/s
95th percentile per-packet one-way delay: 27.711 ms
Loss rate: 0.00%
```
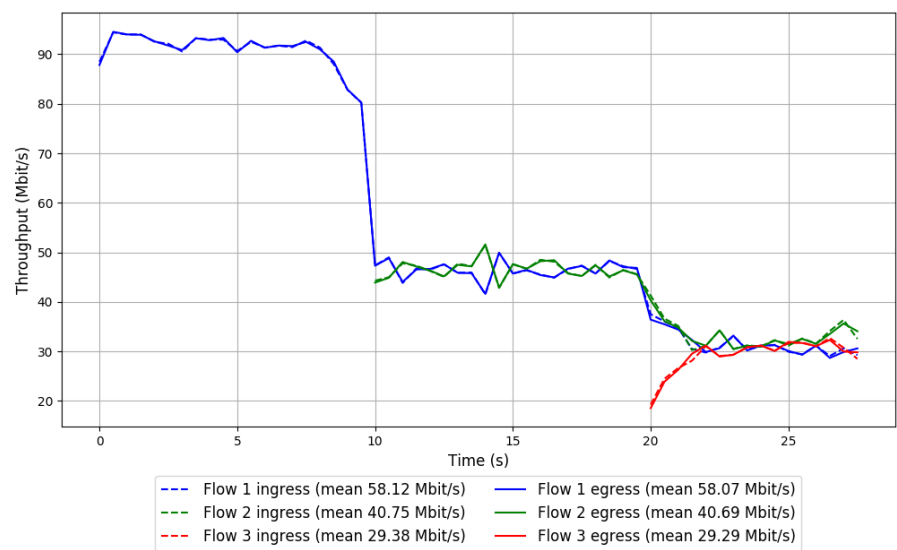
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-01-02 11:50:21
End at: 2018-01-02 11:50:51
Local clock offset: -0.424 ms
Remote clock offset: 0.505 ms


# Below is generated by plot.py at 2018-01-02 13:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.49 Mbit/s
95th percentile per-packet one-way delay: 5.333 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.46 Mbit/s
95th percentile per-packet one-way delay: 4.979 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 5.451 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.09 Mbit/s
95th percentile per-packet one-way delay: 5.940 ms
Loss rate: 0.00%
```
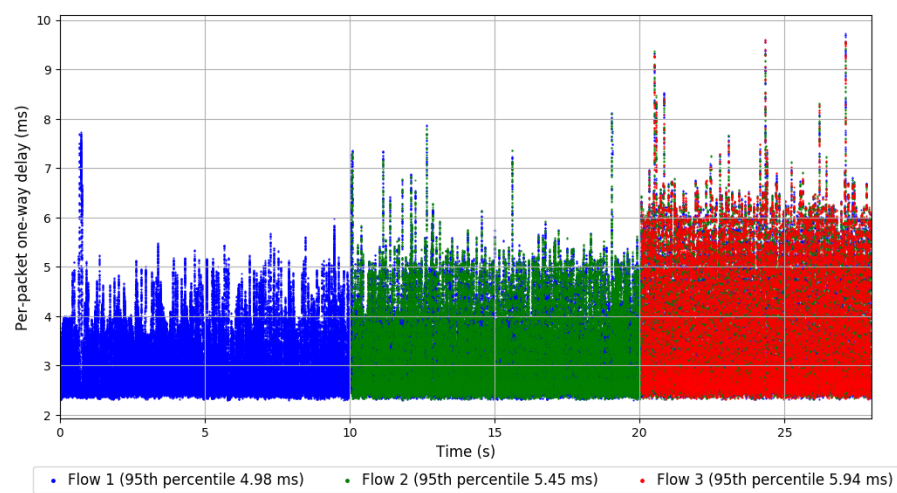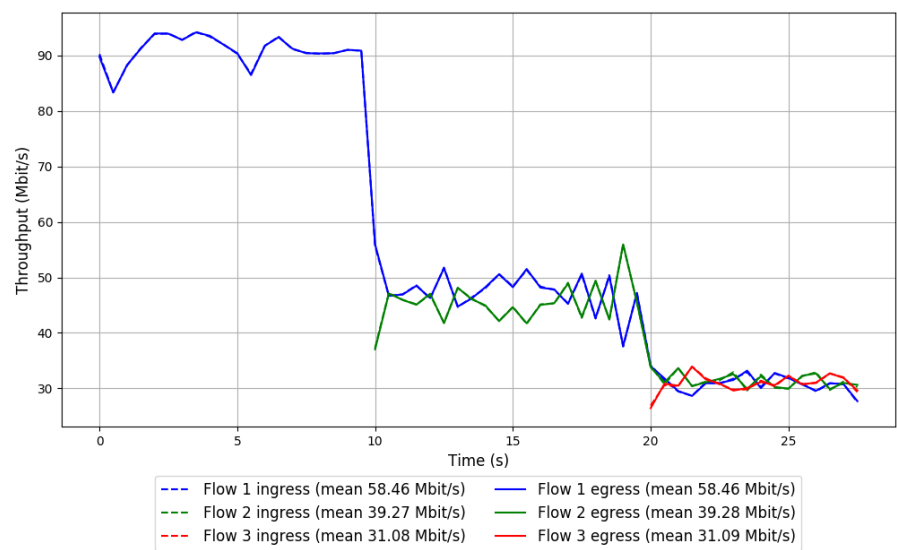
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 58.46 Mbit/s)   Flow 1 egress (mean 58.46 Mbit/s)
Flow 2 ingress (mean 39.27 Mbit/s)   Flow 2 egress (mean 39.28 Mbit/s)
Flow 3 ingress (mean 31.08 Mbit/s)   Flow 3 egress (mean 31.09 Mbit/s)

Flow 1 (95th percentile 4.98 ms)   Flow 2 (95th percentile 5.45 ms)   Flow 3 (95th percentile 5.94 ms)

237

```
Run 8: Statistics of Copa

Start at: 2018-01-02 12:07:30
End at: 2018-01-02 12:08:00
Local clock offset: -0.352 ms
Remote clock offset: 0.5 ms


# Below is generated by plot.py at 2018-01-02 13:36:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.61 Mbit/s
95th percentile per-packet one-way delay: 5.233 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.35 Mbit/s
95th percentile per-packet one-way delay: 4.878 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.59 Mbit/s
95th percentile per-packet one-way delay: 5.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.12 Mbit/s
95th percentile per-packet one-way delay: 5.898 ms
Loss rate: 0.00%
```
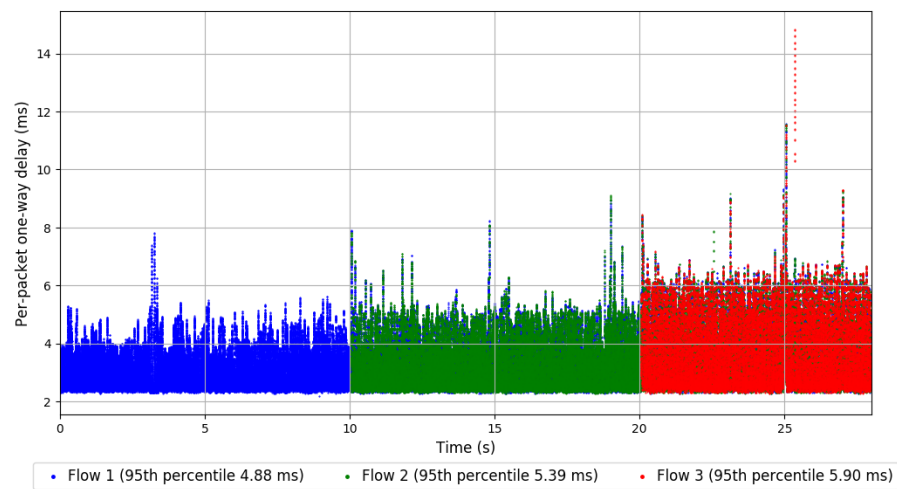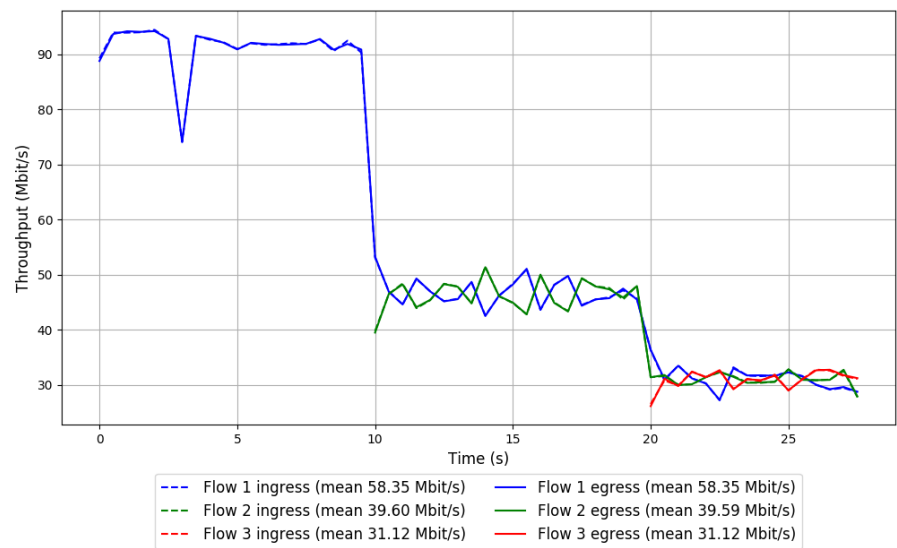
Run 8: Report of Copa — Data Link

239

```
Run 9: Statistics of Copa

Start at: 2018-01-02 12:24:34
End at: 2018-01-02 12:25:04
Local clock offset: -0.348 ms
Remote clock offset: 0.404 ms


# Below is generated by plot.py at 2018-01-02 13:37:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.58 Mbit/s
95th percentile per-packet one-way delay: 5.239 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.13 Mbit/s
95th percentile per-packet one-way delay: 4.880 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 5.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 5.897 ms
Loss rate: 0.00%
```
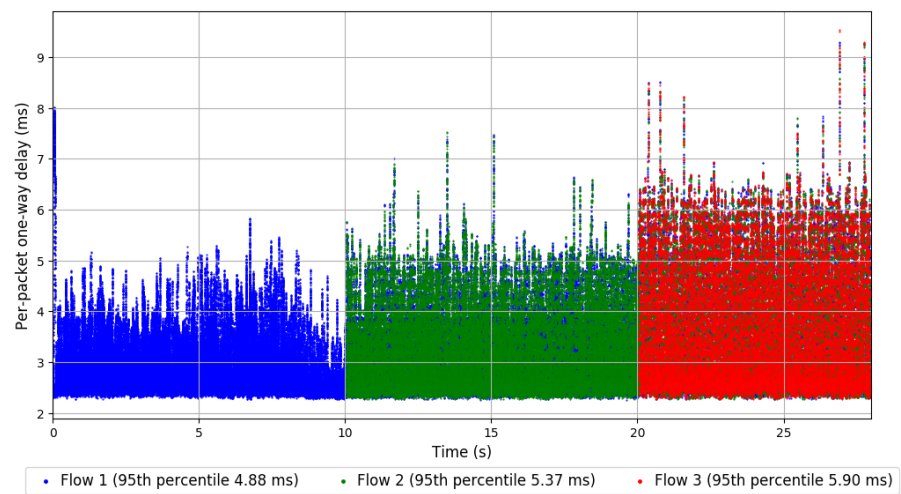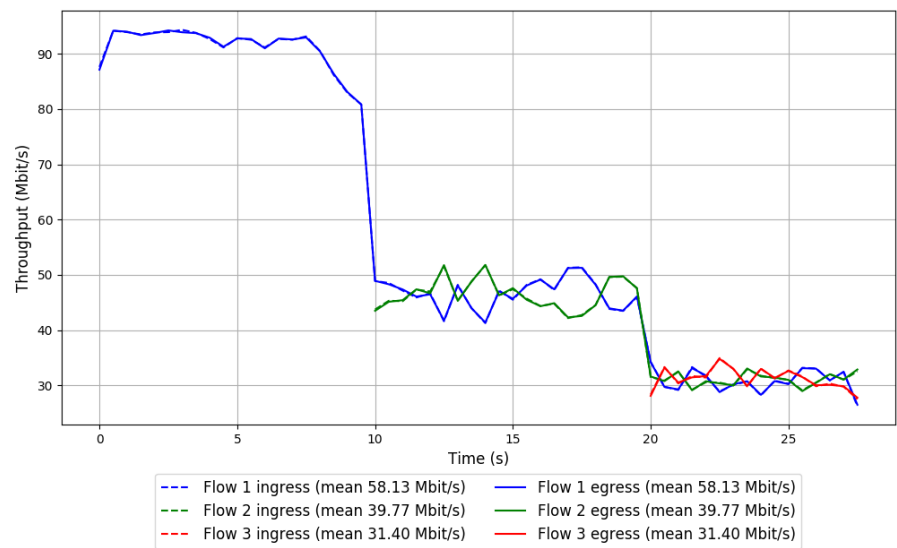
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 58.13 Mbit/s) --- Flow 1 egress (mean 58.13 Mbit/s)
Flow 2 ingress (mean 39.77 Mbit/s) --- Flow 2 egress (mean 39.77 Mbit/s)
Flow 3 ingress (mean 31.40 Mbit/s) --- Flow 3 egress (mean 31.40 Mbit/s)

Flow 1 (95th percentile 4.88 ms) Flow 2 (95th percentile 5.37 ms) Flow 3 (95th percentile 5.90 ms)

241

```
Run 10: Statistics of Copa

Start at: 2018-01-02 12:41:43
End at: 2018-01-02 12:42:13
Local clock offset: -0.333 ms
Remote clock offset: 0.312 ms


# Below is generated by plot.py at 2018-01-02 13:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.87 Mbit/s
95th percentile per-packet one-way delay: 5.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.82 Mbit/s
95th percentile per-packet one-way delay: 4.891 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.29 Mbit/s
95th percentile per-packet one-way delay: 5.434 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 5.870 ms
Loss rate: 0.00%
```
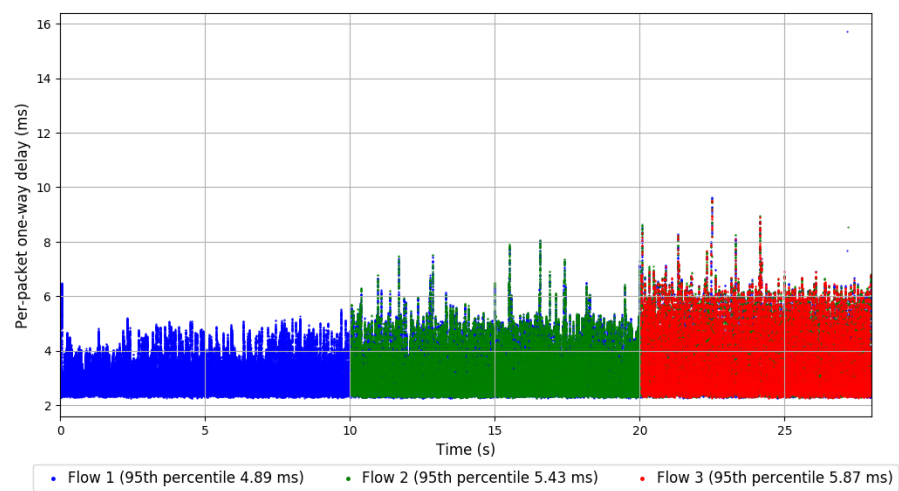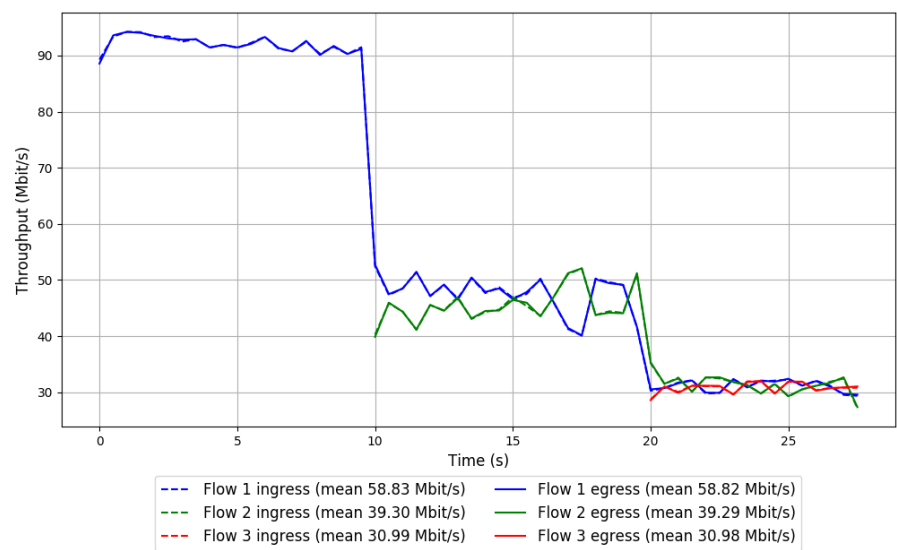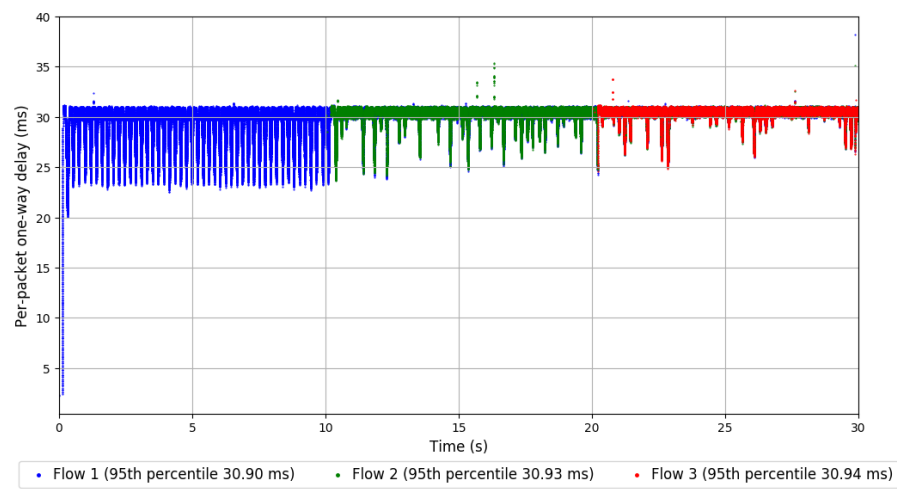
Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 58.83 Mbit/s) --- Flow 1 egress (mean 58.82 Mbit/s)
Flow 2 ingress (mean 39.30 Mbit/s) --- Flow 2 egress (mean 39.29 Mbit/s)
Flow 3 ingress (mean 30.99 Mbit/s) --- Flow 3 egress (mean 30.98 Mbit/s)

Flow 1 (95th percentile 4.89 ms)   Flow 2 (95th percentile 5.43 ms)   Flow 3 (95th percentile 5.87 ms)
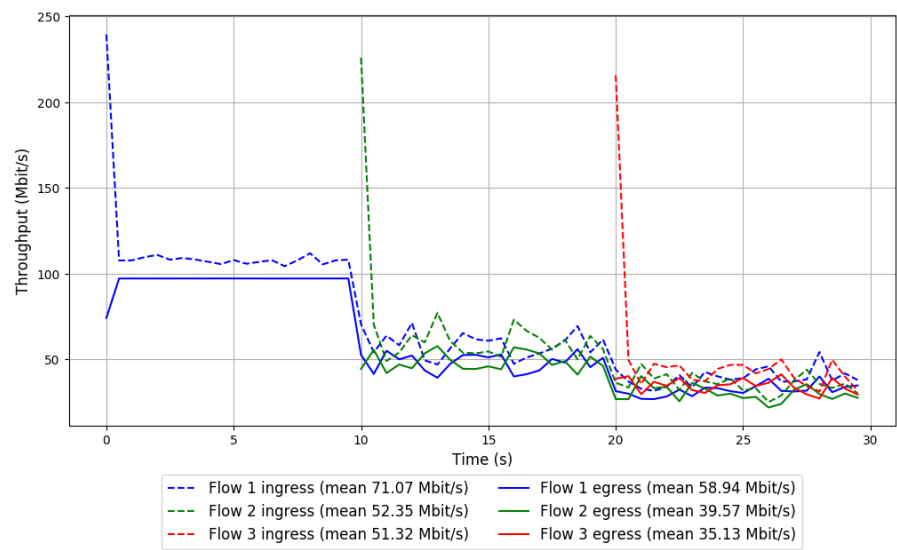
```
Run 1: Statistics of FillP

Start at: 2018-01-02 10:11:22
End at: 2018-01-02 10:11:52
Local clock offset: -0.398 ms
Remote clock offset: 0.735 ms


# Below is generated by plot.py at 2018-01-02 13:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.913 ms
Loss rate: 21.11%
-- Flow 1:
Average throughput: 58.94 Mbit/s
95th percentile per-packet one-way delay: 30.900 ms
Loss rate: 16.99%
-- Flow 2:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 30.925 ms
Loss rate: 24.41%
-- Flow 3:
Average throughput: 35.13 Mbit/s
95th percentile per-packet one-way delay: 30.937 ms
Loss rate: 31.55%
```

Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-01-02 10:28:26
End at: 2018-01-02 10:28:56
Local clock offset: -0.425 ms
Remote clock offset: 0.618 ms


# Below is generated by plot.py at 2018-01-02 13:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.852 ms
Loss rate: 20.22%
-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 30.837 ms
Loss rate: 16.43%
-- Flow 2:
Average throughput: 42.71 Mbit/s
95th percentile per-packet one-way delay: 30.857 ms
Loss rate: 22.83%
-- Flow 3:
Average throughput: 35.67 Mbit/s
95th percentile per-packet one-way delay: 30.883 ms
Loss rate: 29.80%
```
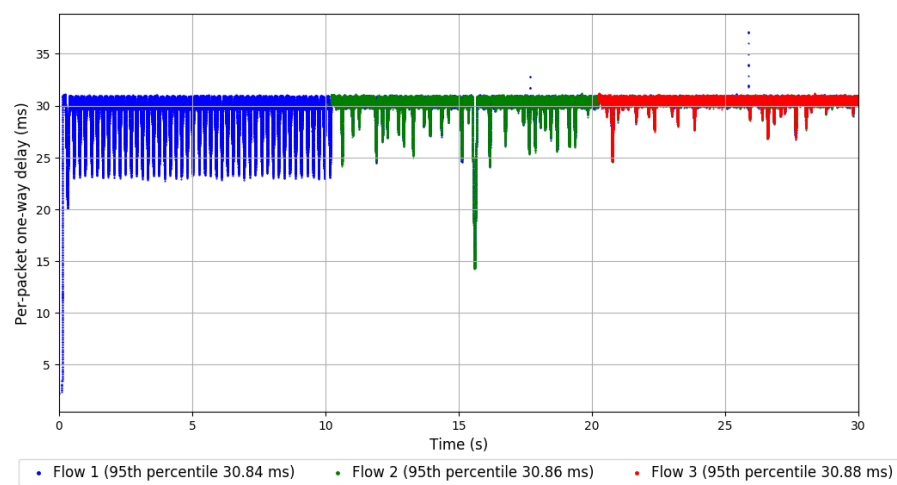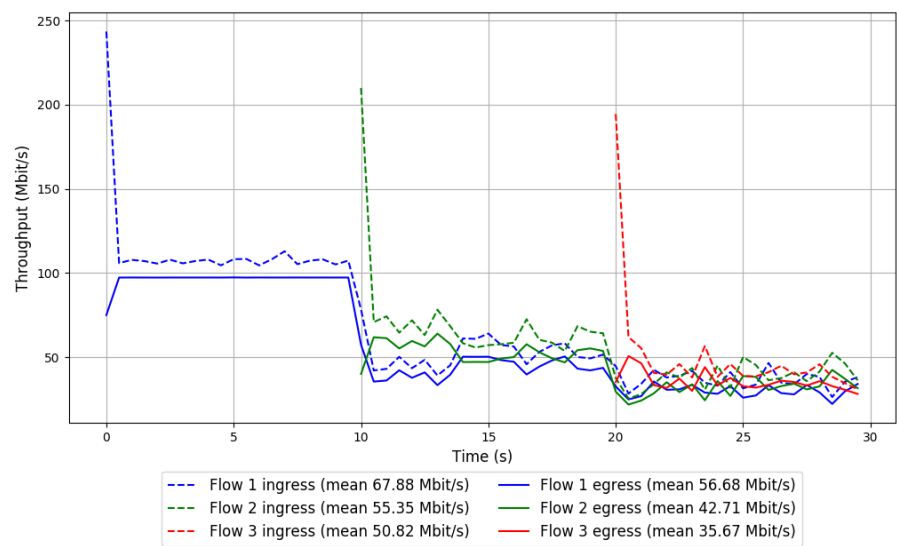
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-01-02 10:45:31
End at: 2018-01-02 10:46:01
Local clock offset: -0.421 ms
Remote clock offset: 0.62 ms


# Below is generated by plot.py at 2018-01-02 13:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.904 ms
Loss rate: 21.27%
-- Flow 1:
Average throughput: 59.46 Mbit/s
95th percentile per-packet one-way delay: 30.887 ms
Loss rate: 17.57%
-- Flow 2:
Average throughput: 39.92 Mbit/s
95th percentile per-packet one-way delay: 30.919 ms
Loss rate: 24.04%
-- Flow 3:
Average throughput: 32.86 Mbit/s
95th percentile per-packet one-way delay: 30.929 ms
Loss rate: 31.93%
```
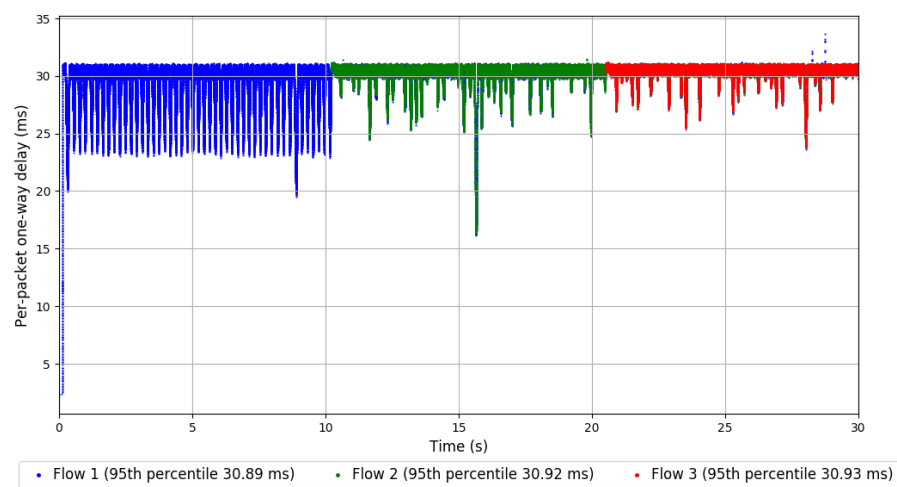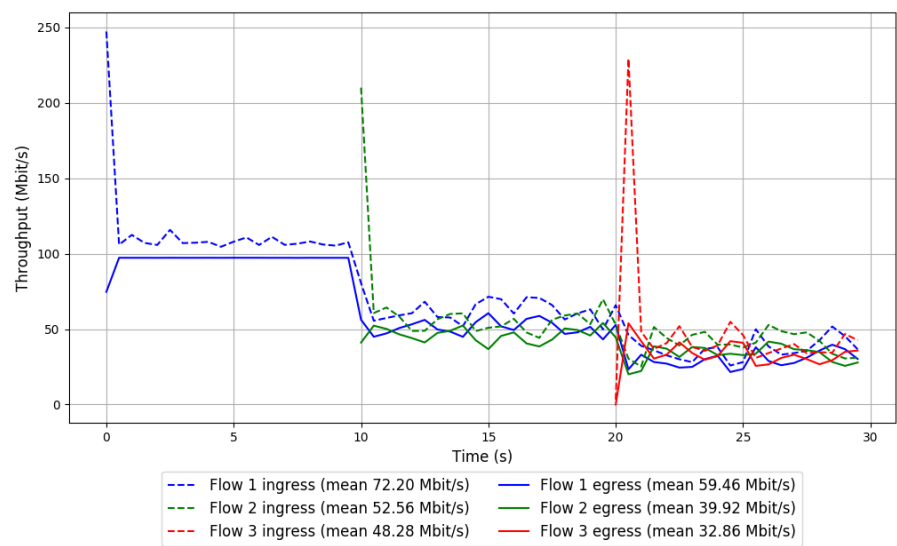
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 72.20 Mbit/s) --- Flow 1 egress (mean 59.46 Mbit/s)
Flow 2 ingress (mean 52.56 Mbit/s) --- Flow 2 egress (mean 39.92 Mbit/s)
Flow 3 ingress (mean 48.28 Mbit/s) --- Flow 3 egress (mean 32.86 Mbit/s)

Flow 1 (95th percentile 30.89 ms)   Flow 2 (95th percentile 30.92 ms)   Flow 3 (95th percentile 30.93 ms)

```
Run 4: Statistics of FillP

Start at: 2018-01-02 11:02:35
End at: 2018-01-02 11:03:05
Local clock offset: -0.437 ms
Remote clock offset: 0.542 ms


# Below is generated by plot.py at 2018-01-02 13:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 30.848 ms
Loss rate: 21.53%
-- Flow 1:
Average throughput: 59.31 Mbit/s
95th percentile per-packet one-way delay: 30.832 ms
Loss rate: 17.41%
-- Flow 2:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 30.863 ms
Loss rate: 25.07%
-- Flow 3:
Average throughput: 34.67 Mbit/s
95th percentile per-packet one-way delay: 30.869 ms
Loss rate: 31.78%
```
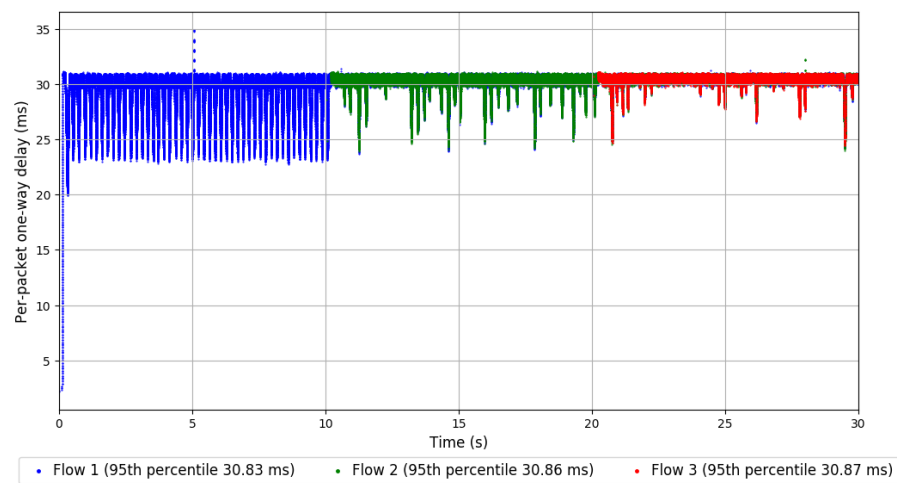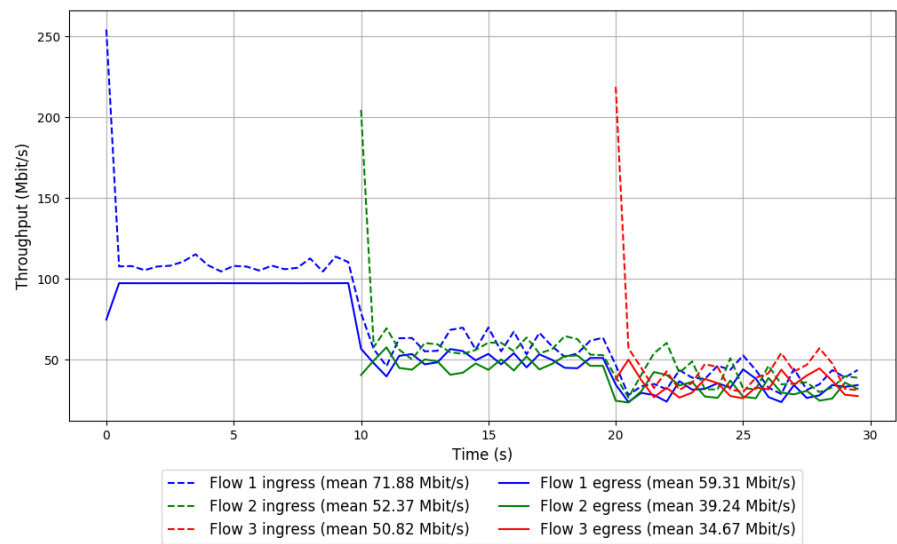
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 71.88 Mbit/s) --- Flow 1 egress (mean 59.31 Mbit/s)
Flow 2 ingress (mean 52.37 Mbit/s) --- Flow 2 egress (mean 39.24 Mbit/s)
Flow 3 ingress (mean 50.82 Mbit/s) --- Flow 3 egress (mean 34.67 Mbit/s)

Flow 1 (95th percentile 30.83 ms) Flow 2 (95th percentile 30.86 ms) Flow 3 (95th percentile 30.87 ms)

```
Run 5: Statistics of FillP

Start at: 2018-01-02 11:19:40
End at: 2018-01-02 11:20:10
Local clock offset: -0.466 ms
Remote clock offset: 0.509 ms


# Below is generated by plot.py at 2018-01-02 13:38:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.870 ms
Loss rate: 20.56%
-- Flow 1:
Average throughput: 58.33 Mbit/s
95th percentile per-packet one-way delay: 30.854 ms
Loss rate: 16.85%
-- Flow 2:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 30.881 ms
Loss rate: 23.65%
-- Flow 3:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 30.901 ms
Loss rate: 29.81%
```
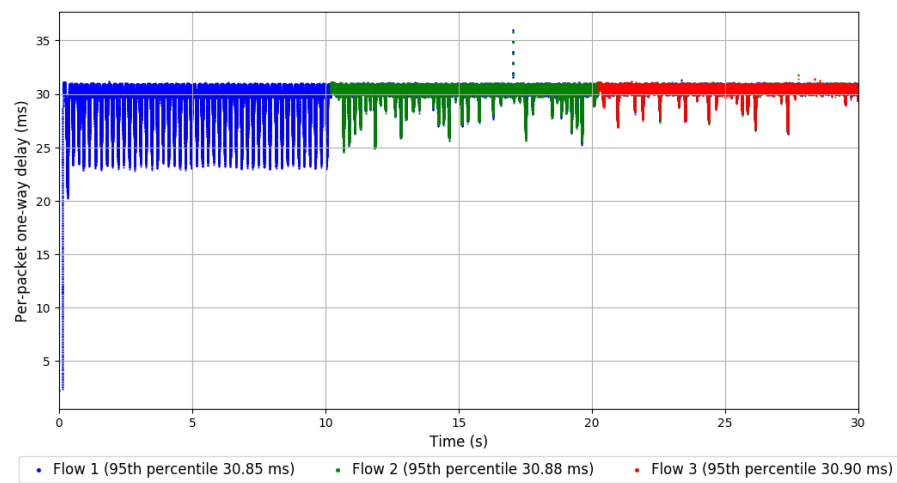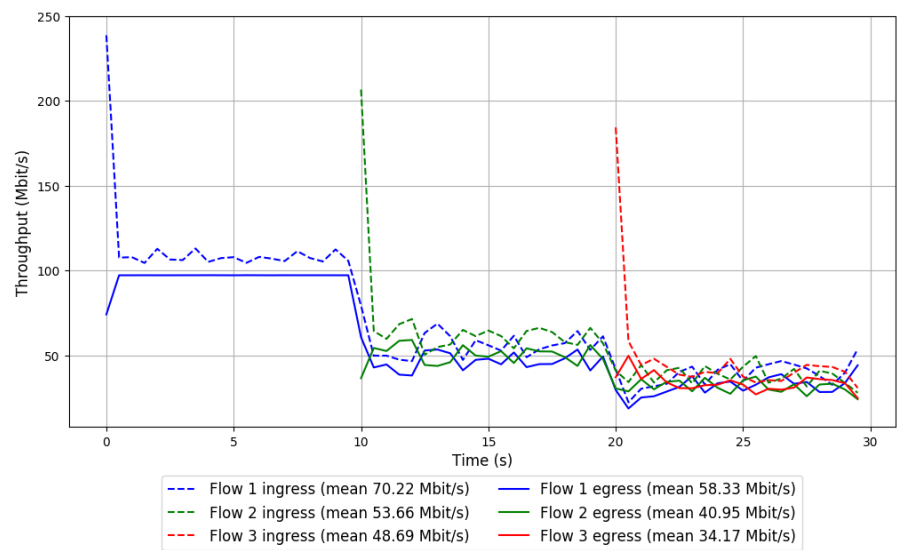
Run 5: Report of FillP — Data Link

```
Run 6: Statistics of FillP

Start at: 2018-01-02 11:36:45
End at: 2018-01-02 11:37:15
Local clock offset: -0.42 ms
Remote clock offset: 0.492 ms


# Below is generated by plot.py at 2018-01-02 13:38:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.71 Mbit/s
95th percentile per-packet one-way delay: 30.874 ms
Loss rate: 21.18%
-- Flow 1:
Average throughput: 58.49 Mbit/s
95th percentile per-packet one-way delay: 30.860 ms
Loss rate: 17.43%
-- Flow 2:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 30.885 ms
Loss rate: 23.98%
-- Flow 3:
Average throughput: 33.95 Mbit/s
95th percentile per-packet one-way delay: 30.906 ms
Loss rate: 31.35%
```
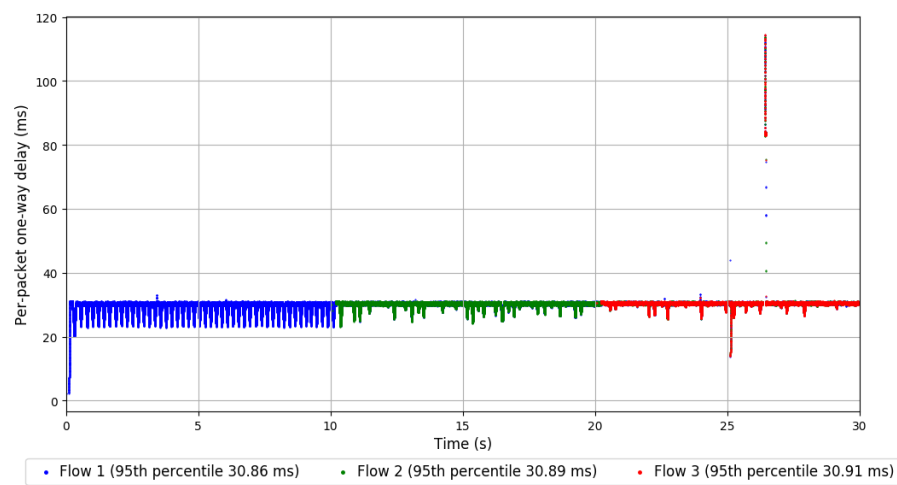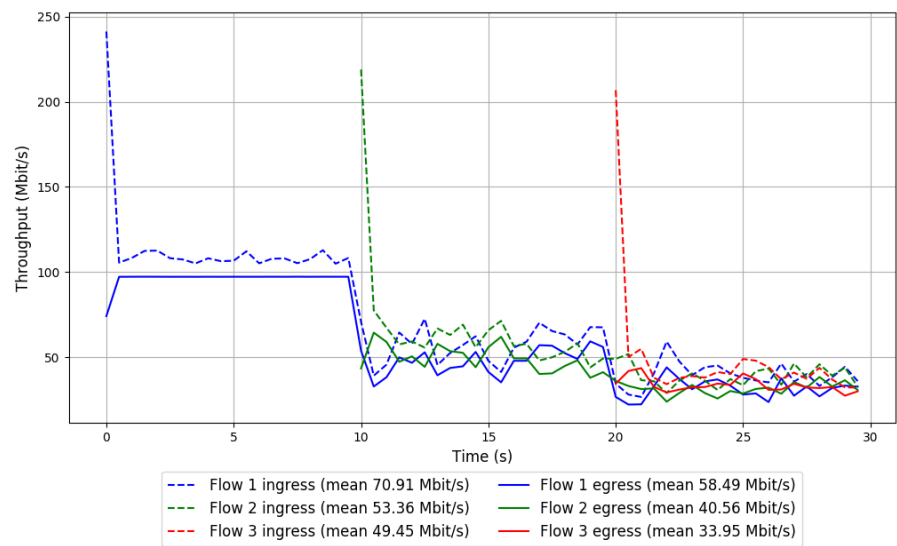
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 70.91 Mbit/s) --- Flow 1 egress (mean 58.49 Mbit/s)
Flow 2 ingress (mean 53.36 Mbit/s) --- Flow 2 egress (mean 40.56 Mbit/s)
Flow 3 ingress (mean 49.45 Mbit/s) --- Flow 3 egress (mean 33.95 Mbit/s)

Flow 1 (95th percentile 30.86 ms)   Flow 2 (95th percentile 30.89 ms)   Flow 3 (95th percentile 30.91 ms)
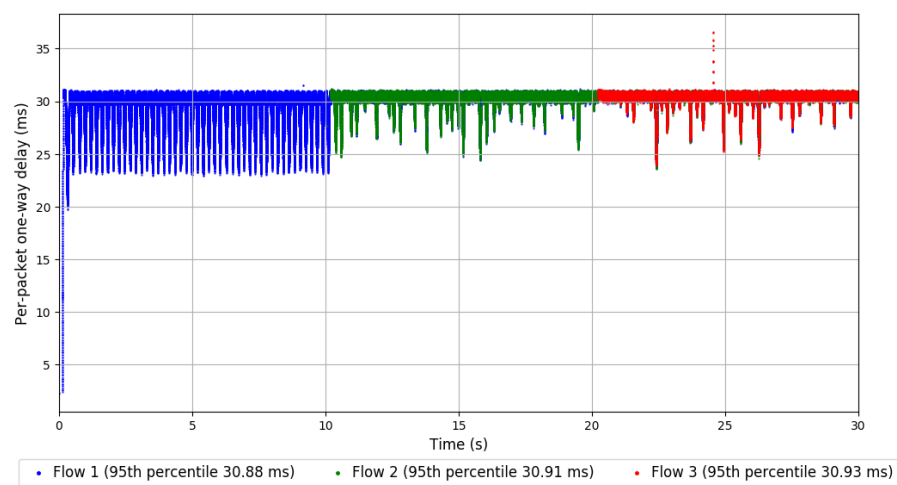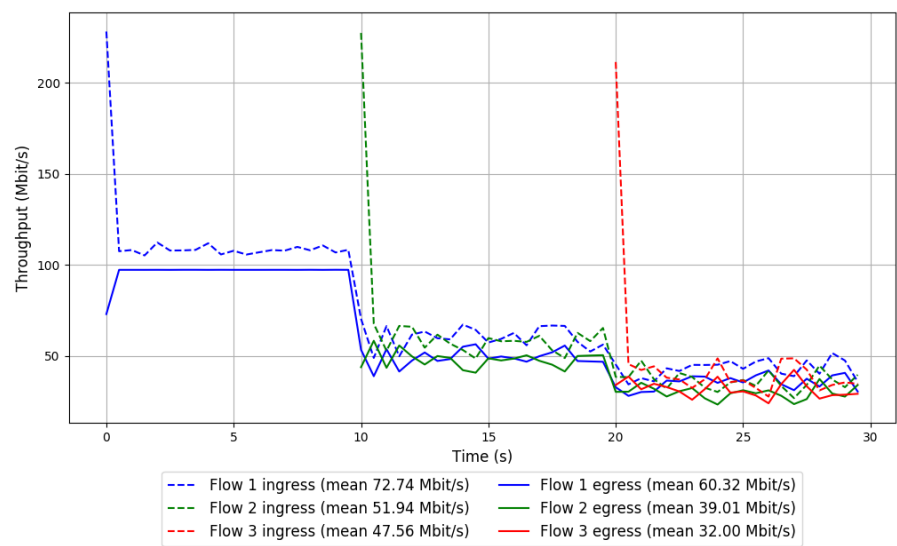
255

```
Run 7: Statistics of FillP

Start at: 2018-01-02 11:53:50
End at: 2018-01-02 11:54:20
Local clock offset: -0.353 ms
Remote clock offset: 0.49 ms


# Below is generated by plot.py at 2018-01-02 13:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.87 Mbit/s
95th percentile per-packet one-way delay: 30.900 ms
Loss rate: 21.22%
-- Flow 1:
Average throughput: 60.32 Mbit/s
95th percentile per-packet one-way delay: 30.884 ms
Loss rate: 16.99%
-- Flow 2:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 30.914 ms
Loss rate: 24.88%
-- Flow 3:
Average throughput: 32.00 Mbit/s
95th percentile per-packet one-way delay: 30.926 ms
Loss rate: 32.71%
```

Run 7: Report of FillP — Data Link

```
Run 8: Statistics of FillP

Start at: 2018-01-02 12:10:58
End at: 2018-01-02 12:11:28
Local clock offset: -0.349 ms
Remote clock offset: 0.409 ms


# Below is generated by plot.py at 2018-01-02 13:39:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.89 Mbit/s
95th percentile per-packet one-way delay: 30.864 ms
Loss rate: 21.26%
-- Flow 1:
Average throughput: 57.48 Mbit/s
95th percentile per-packet one-way delay: 30.851 ms
Loss rate: 17.77%
-- Flow 2:
Average throughput: 41.75 Mbit/s
95th percentile per-packet one-way delay: 30.874 ms
Loss rate: 23.24%
-- Flow 3:
Average throughput: 35.15 Mbit/s
95th percentile per-packet one-way delay: 30.887 ms
Loss rate: 31.45%
```
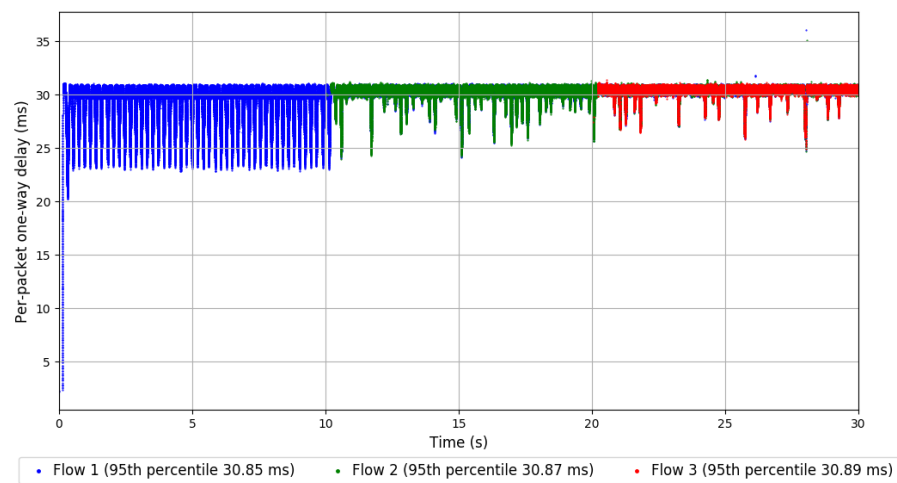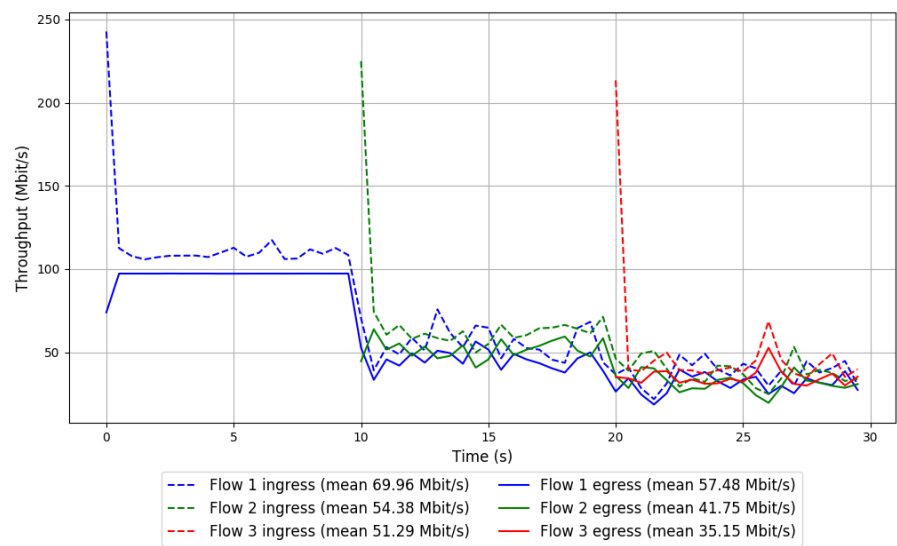
Run 8: Report of FillP — Data Link

Flow 1 ingress (mean 69.96 Mbit/s)   Flow 1 egress (mean 57.48 Mbit/s)
Flow 2 ingress (mean 54.38 Mbit/s)   Flow 2 egress (mean 41.75 Mbit/s)
Flow 3 ingress (mean 51.29 Mbit/s)   Flow 3 egress (mean 35.15 Mbit/s)

Flow 1 (95th percentile 30.85 ms)   Flow 2 (95th percentile 30.87 ms)   Flow 3 (95th percentile 30.89 ms)

```
Run 9: Statistics of FillP

Start at: 2018-01-02 12:28:03
End at: 2018-01-02 12:28:33
Local clock offset: -0.31 ms
Remote clock offset: 0.327 ms


# Below is generated by plot.py at 2018-01-02 13:39:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.91 Mbit/s
95th percentile per-packet one-way delay: 30.836 ms
Loss rate: 21.55%
-- Flow 1:
Average throughput: 58.73 Mbit/s
95th percentile per-packet one-way delay: 30.821 ms
Loss rate: 17.82%
-- Flow 2:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 30.849 ms
Loss rate: 24.31%
-- Flow 3:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 30.861 ms
Loss rate: 31.42%
```
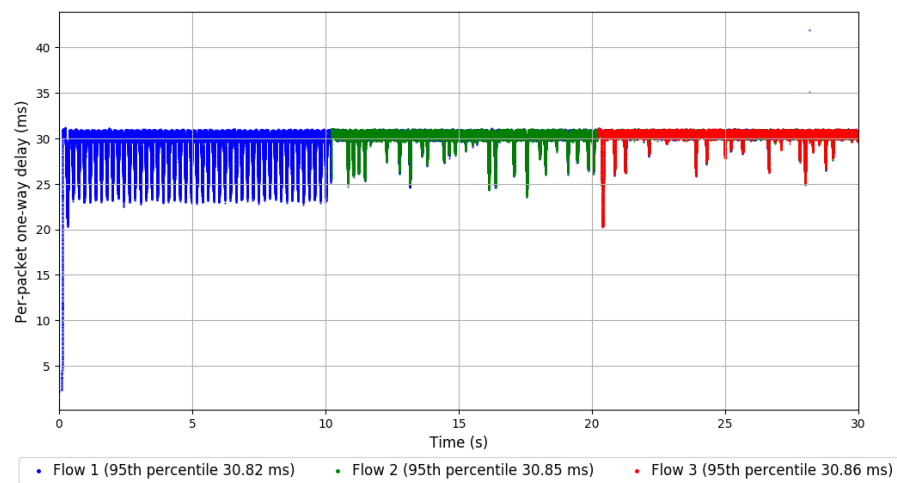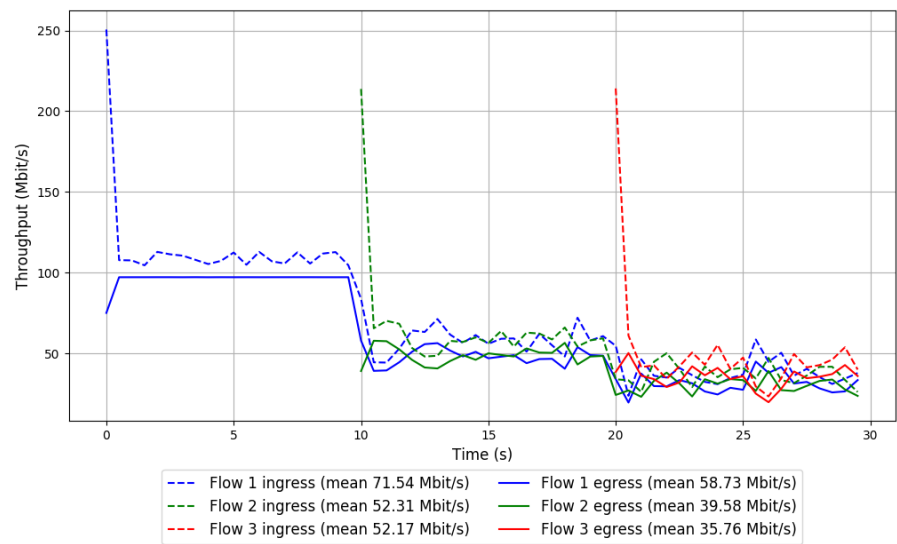
Run 9: Report of FillP — Data Link

Flow 1 ingress (mean 71.54 Mbit/s) --- Flow 1 egress (mean 58.73 Mbit/s)
Flow 2 ingress (mean 52.31 Mbit/s) --- Flow 2 egress (mean 39.58 Mbit/s)
Flow 3 ingress (mean 52.17 Mbit/s) --- Flow 3 egress (mean 35.76 Mbit/s)

Flow 1 (95th percentile 30.82 ms)   Flow 2 (95th percentile 30.85 ms)   Flow 3 (95th percentile 30.86 ms)

```
Run 10: Statistics of FillP

Start at: 2018-01-02 12:45:11
End at: 2018-01-02 12:45:42
Local clock offset: -0.305 ms
Remote clock offset: 0.27 ms


# Below is generated by plot.py at 2018-01-02 13:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.91 Mbit/s
95th percentile per-packet one-way delay: 30.885 ms
Loss rate: 20.71%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 30.868 ms
Loss rate: 16.62%
-- Flow 2:
Average throughput: 40.20 Mbit/s
95th percentile per-packet one-way delay: 30.899 ms
Loss rate: 24.31%
-- Flow 3:
Average throughput: 34.65 Mbit/s
95th percentile per-packet one-way delay: 30.913 ms
Loss rate: 30.47%
```
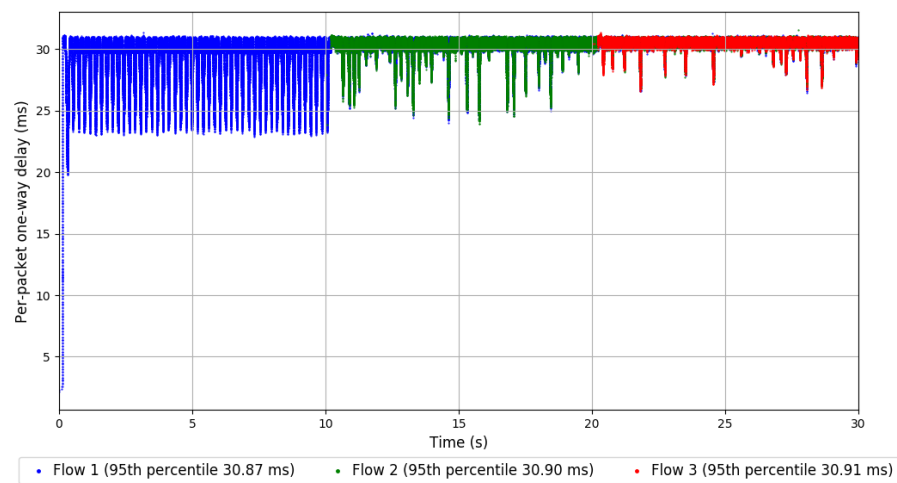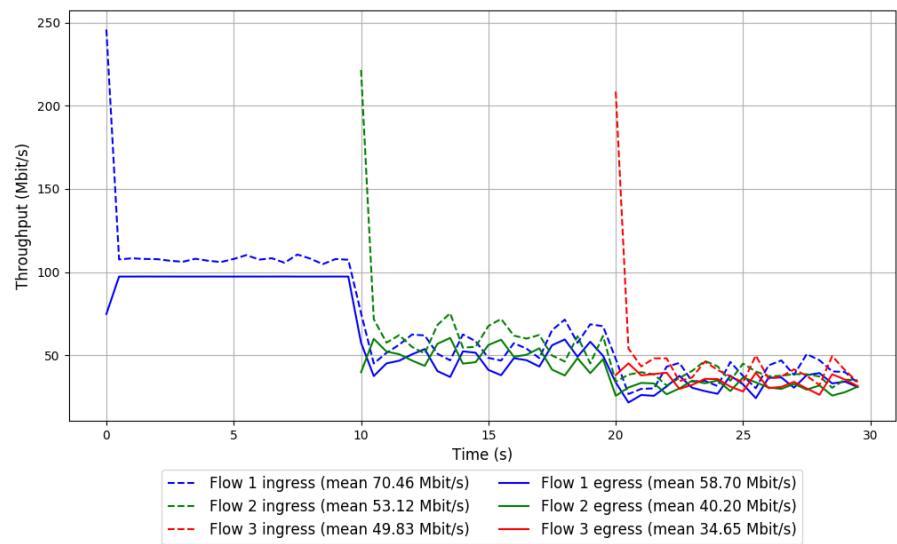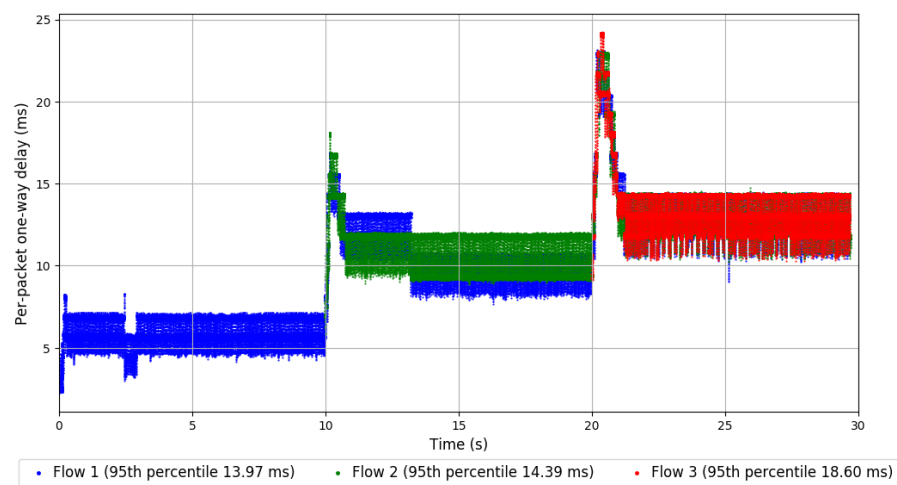
Run 10: Report of FillP — Data Link

Flow 1 ingress (mean 70.46 Mbit/s) --- Flow 1 egress (mean 58.70 Mbit/s)
Flow 2 ingress (mean 53.12 Mbit/s) --- Flow 2 egress (mean 40.20 Mbit/s)
Flow 3 ingress (mean 49.83 Mbit/s) --- Flow 3 egress (mean 34.65 Mbit/s)

Flow 1 (95th percentile 30.87 ms)   Flow 2 (95th percentile 30.90 ms)   Flow 3 (95th percentile 30.91 ms)
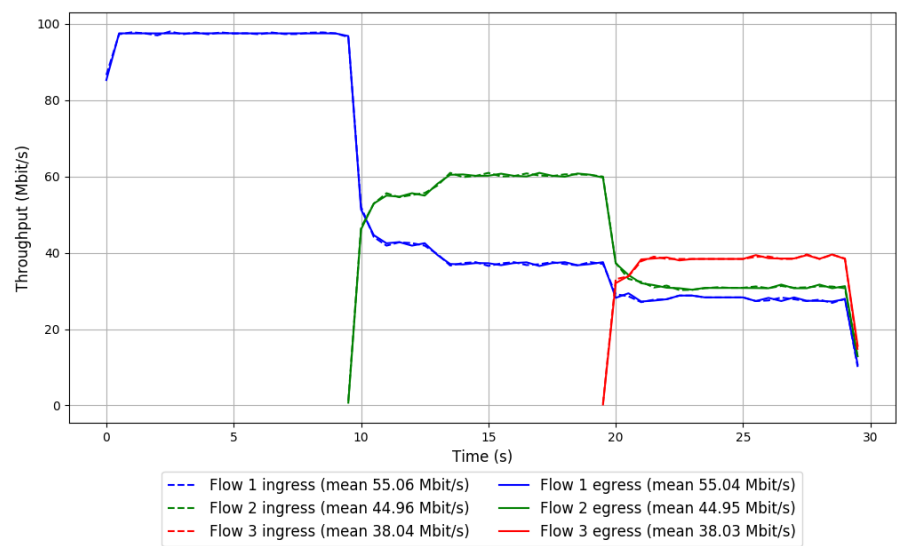
```
Run 1: Statistics of Indigo

Start at: 2018-01-02 10:20:25
End at: 2018-01-02 10:20:55
Local clock offset: -0.401 ms
Remote clock offset: 0.733 ms


# Below is generated by plot.py at 2018-01-02 13:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 14.369 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.04 Mbit/s
95th percentile per-packet one-way delay: 13.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.95 Mbit/s
95th percentile per-packet one-way delay: 14.392 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.03 Mbit/s
95th percentile per-packet one-way delay: 18.598 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-01-02 10:37:29
End at: 2018-01-02 10:37:59
Local clock offset: -0.465 ms
Remote clock offset: 0.581 ms

# Below is generated by plot.py at 2018-01-02 13:39:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 14.111 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 14.026 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.05 Mbit/s
95th percentile per-packet one-way delay: 14.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 14.192 ms
Loss rate: 0.00%
```
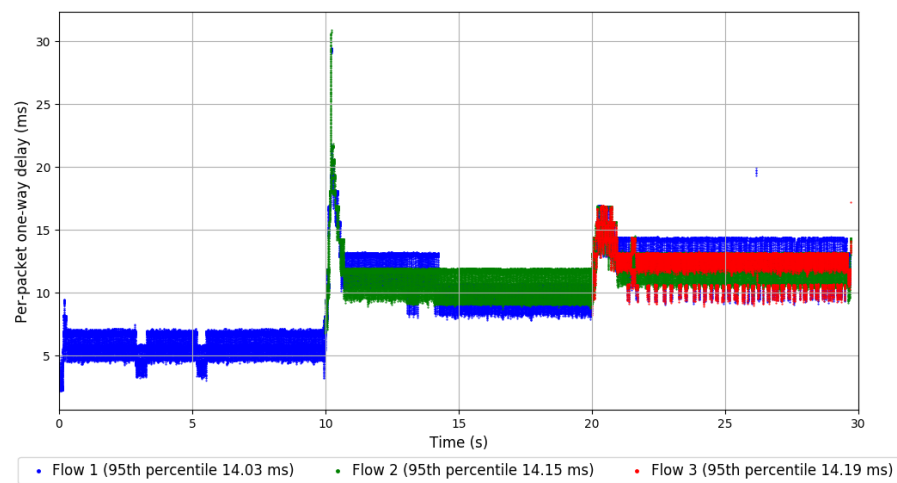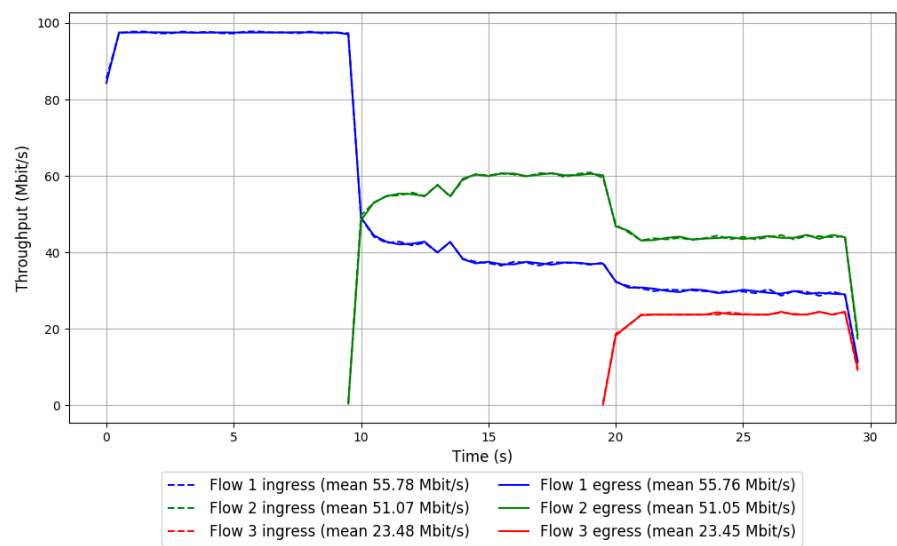
Run 2: Report of Indigo — Data Link

Flow 1 ingress (mean 55.78 Mbit/s) --- Flow 1 egress (mean 55.76 Mbit/s)
Flow 2 ingress (mean 51.07 Mbit/s) --- Flow 2 egress (mean 51.05 Mbit/s)
Flow 3 ingress (mean 23.48 Mbit/s) --- Flow 3 egress (mean 23.45 Mbit/s)

Flow 1 (95th percentile 14.03 ms) • Flow 2 (95th percentile 14.15 ms) • Flow 3 (95th percentile 14.19 ms)

```
Run 3: Statistics of Indigo

Start at: 2018-01-02 10:54:33
End at: 2018-01-02 10:55:03
Local clock offset: -0.432 ms
Remote clock offset: 0.625 ms


# Below is generated by plot.py at 2018-01-02 13:39:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 14.178 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.21 Mbit/s
95th percentile per-packet one-way delay: 13.105 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 14.315 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 39.16 Mbit/s
95th percentile per-packet one-way delay: 14.453 ms
Loss rate: 0.00%
```
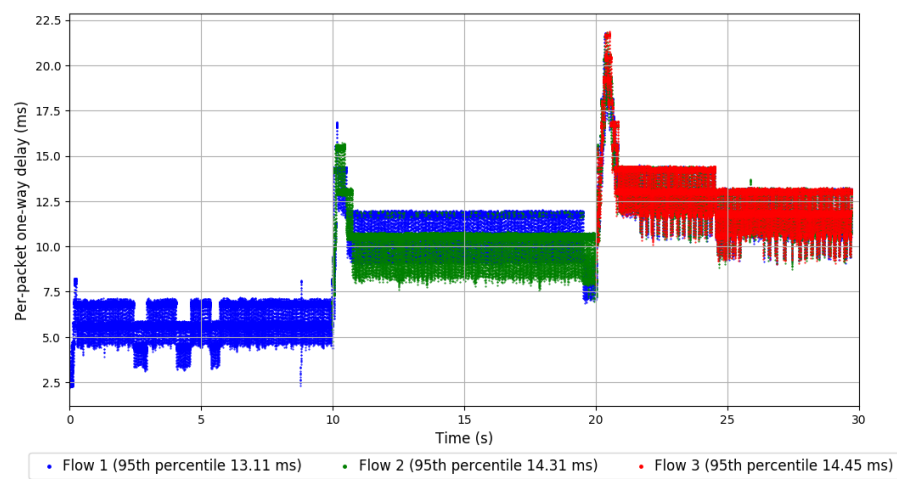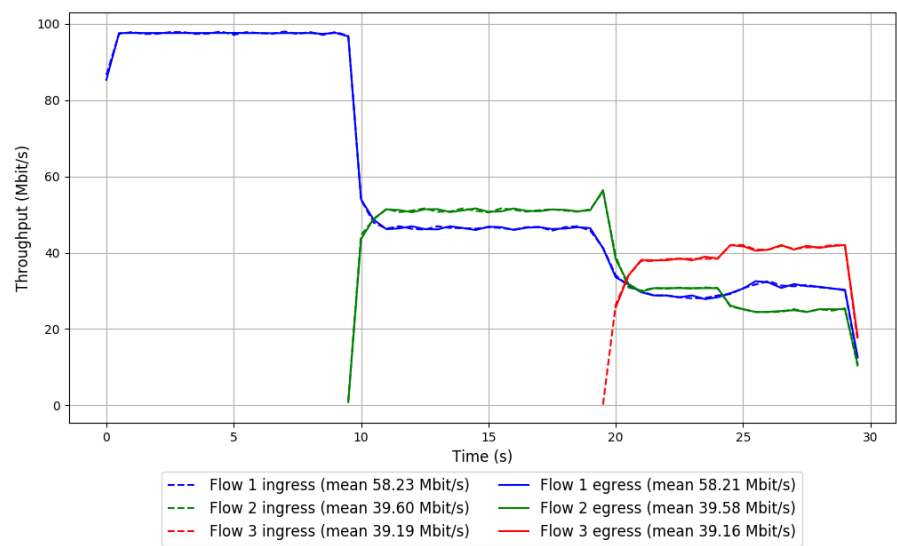
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2018-01-02 11:11:38
End at: 2018-01-02 11:12:08
Local clock offset: -0.482 ms
Remote clock offset: 0.555 ms


# Below is generated by plot.py at 2018-01-02 13:39:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.26 Mbit/s
95th percentile per-packet one-way delay: 14.661 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.78 Mbit/s
95th percentile per-packet one-way delay: 13.941 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.81 Mbit/s
95th percentile per-packet one-way delay: 14.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 17.192 ms
Loss rate: 0.00%
```
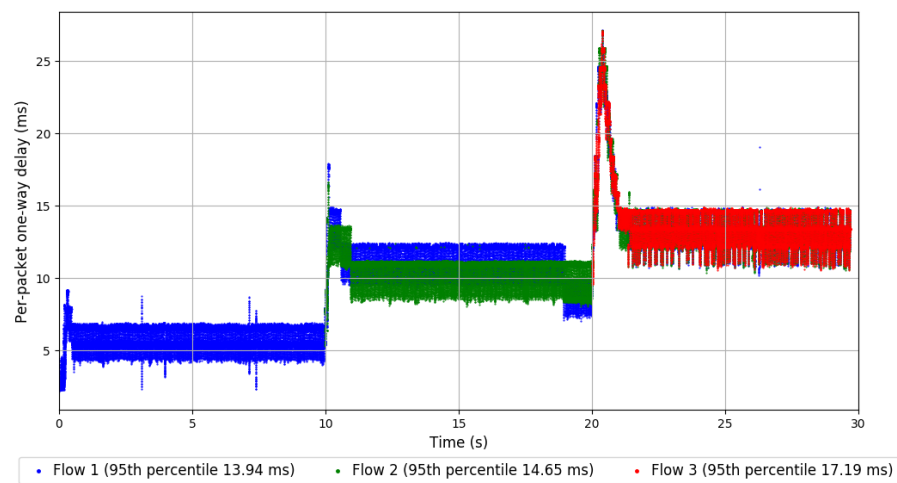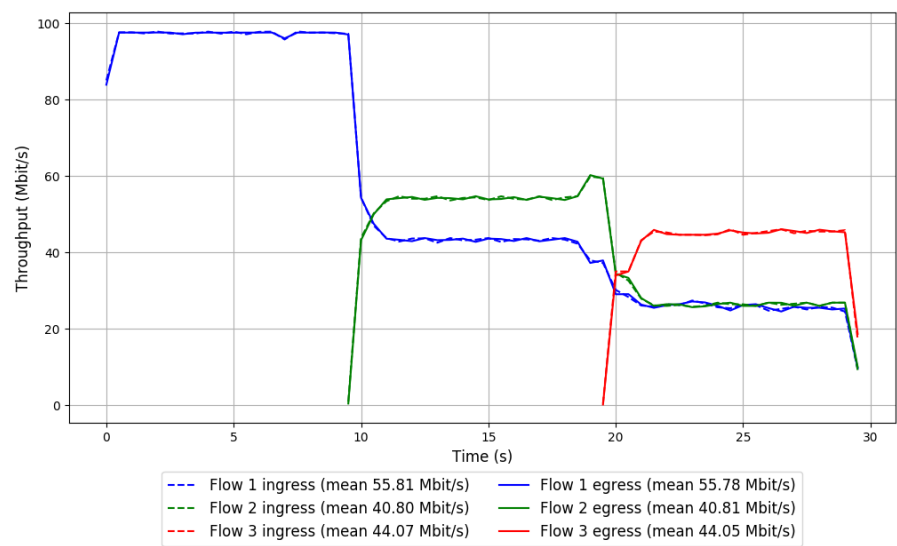
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 55.81 Mbit/s) Flow 1 egress (mean 55.78 Mbit/s)
Flow 2 ingress (mean 40.80 Mbit/s) Flow 2 egress (mean 40.81 Mbit/s)
Flow 3 ingress (mean 44.07 Mbit/s) Flow 3 egress (mean 44.05 Mbit/s)

Flow 1 (95th percentile 13.94 ms) Flow 2 (95th percentile 14.65 ms) Flow 3 (95th percentile 17.19 ms)

```
Run 5: Statistics of Indigo

Start at: 2018-01-02 11:28:43
End at: 2018-01-02 11:29:13
Local clock offset: -0.496 ms
Remote clock offset: 0.501 ms

# Below is generated by plot.py at 2018-01-02 13:40:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 14.962 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.04 Mbit/s
95th percentile per-packet one-way delay: 13.924 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.03 Mbit/s
95th percentile per-packet one-way delay: 14.903 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.19 Mbit/s
95th percentile per-packet one-way delay: 16.192 ms
Loss rate: 0.00%
```
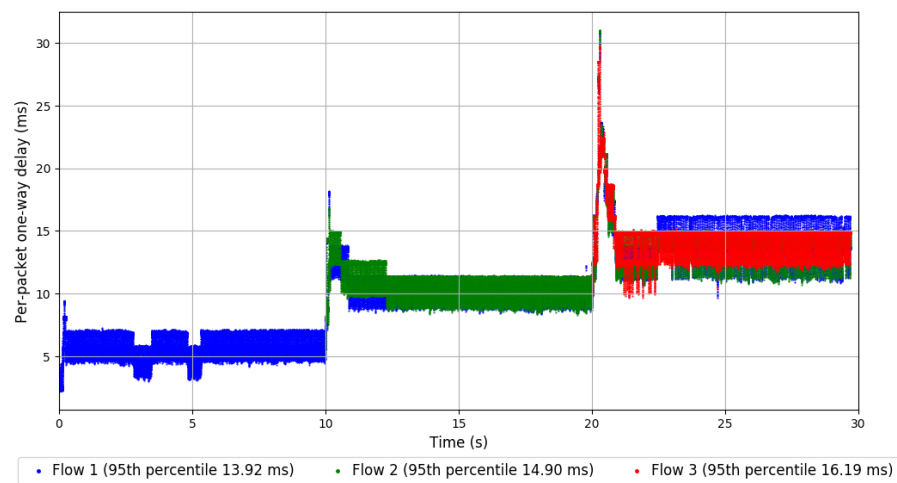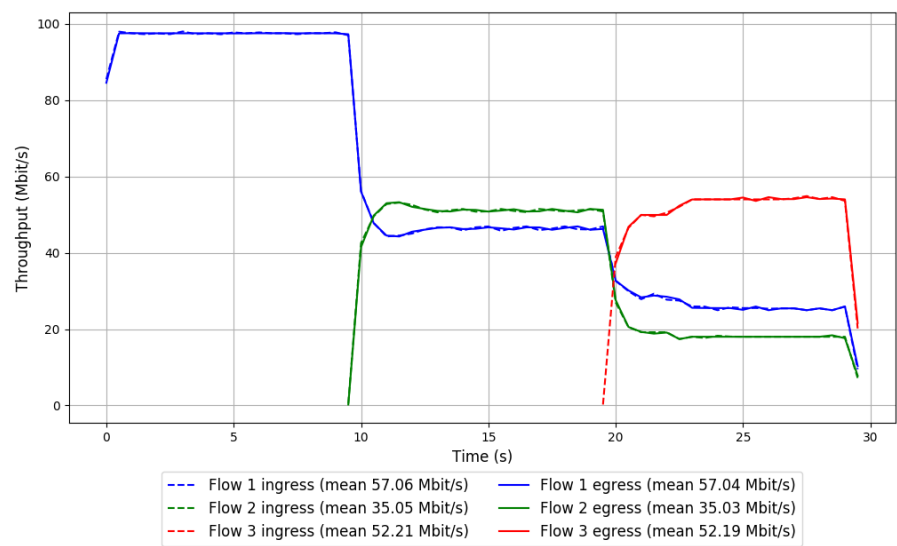
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2018-01-02 11:45:48
End at: 2018-01-02 11:46:18
Local clock offset: -0.378 ms
Remote clock offset: 0.524 ms

# Below is generated by plot.py at 2018-01-02 13:40:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 14.845 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.36 Mbit/s
95th percentile per-packet one-way delay: 13.570 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.01 Mbit/s
95th percentile per-packet one-way delay: 14.928 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.01 Mbit/s
95th percentile per-packet one-way delay: 18.095 ms
Loss rate: 0.00%
```
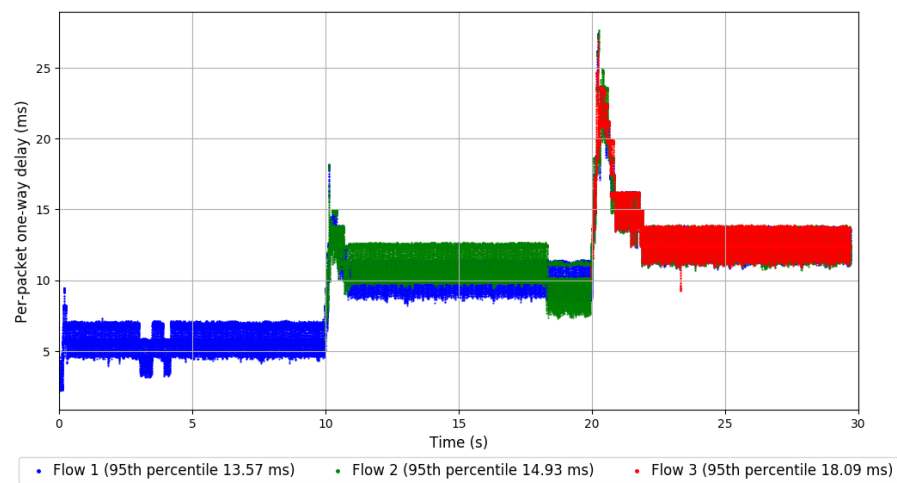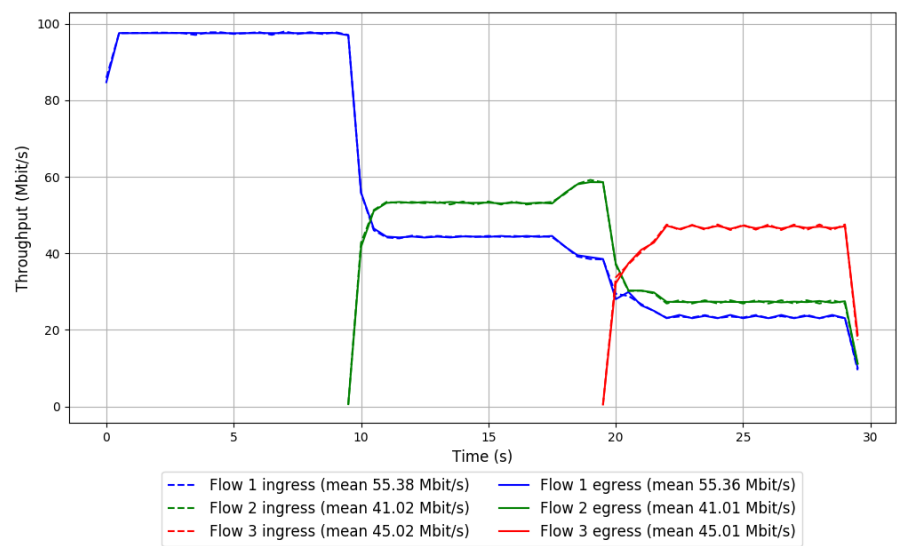
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2018-01-02 12:02:56
End at: 2018-01-02 12:03:26
Local clock offset: -0.348 ms
Remote clock offset: 0.451 ms


# Below is generated by plot.py at 2018-01-02 13:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 13.387 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 13.378 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.38 Mbit/s
95th percentile per-packet one-way delay: 13.143 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 20.68 Mbit/s
95th percentile per-packet one-way delay: 13.630 ms
Loss rate: 0.00%
```
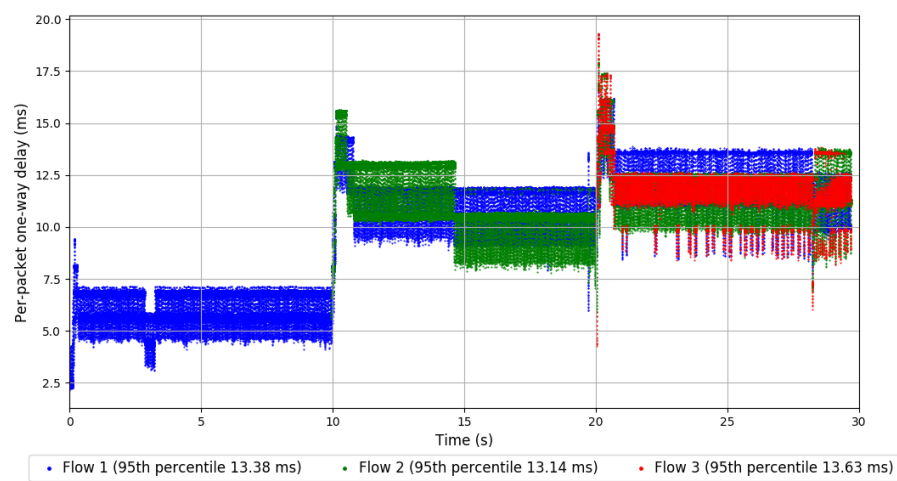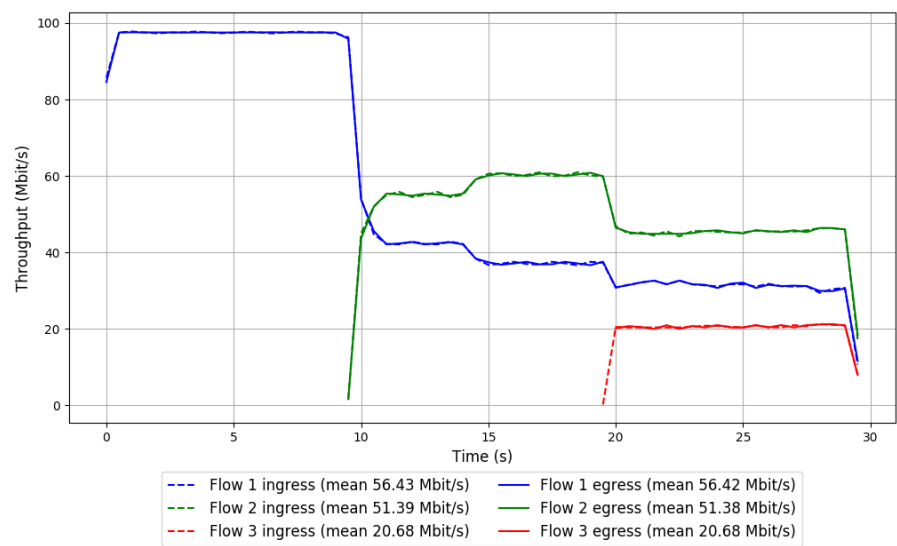
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2018-01-02 12:20:01
End at: 2018-01-02 12:20:31
Local clock offset: -0.342 ms
Remote clock offset: 0.423 ms


# Below is generated by plot.py at 2018-01-02 13:40:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 14.922 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.28 Mbit/s
95th percentile per-packet one-way delay: 13.612 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.28 Mbit/s
95th percentile per-packet one-way delay: 15.693 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.98 Mbit/s
95th percentile per-packet one-way delay: 20.599 ms
Loss rate: 0.03%
```
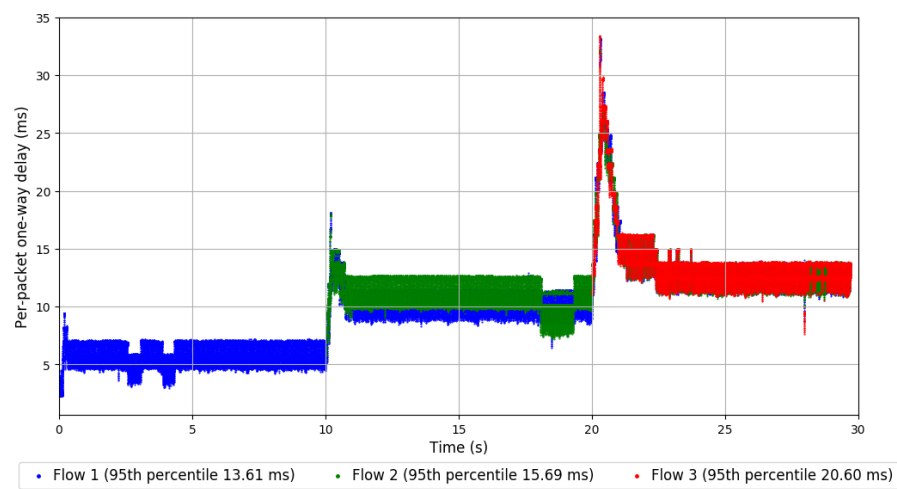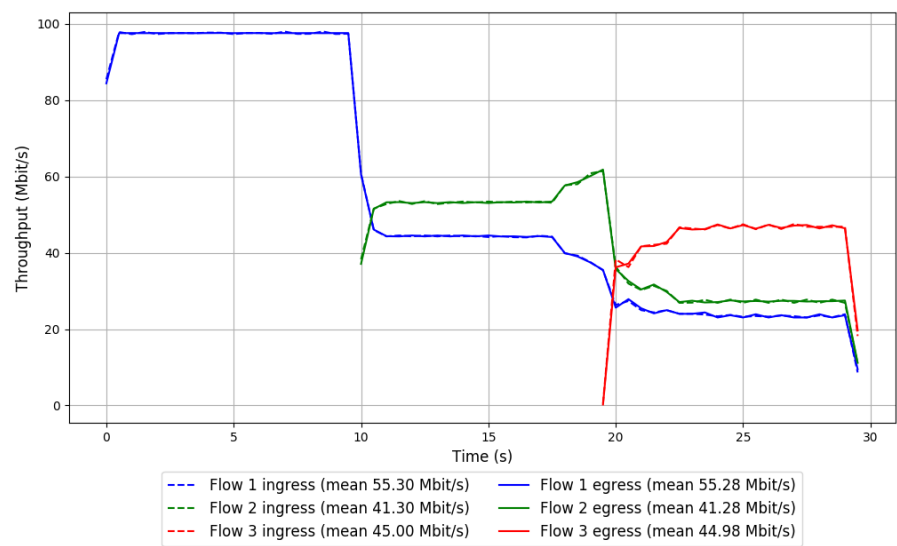
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2018-01-02 12:37:09
End at: 2018-01-02 12:37:39
Local clock offset: -0.313 ms
Remote clock offset: 0.34 ms


# Below is generated by plot.py at 2018-01-02 13:40:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 15.381 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.16 Mbit/s
95th percentile per-packet one-way delay: 14.200 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 15.608 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 43.70 Mbit/s
95th percentile per-packet one-way delay: 20.186 ms
Loss rate: 0.00%
```

Run 9: Report of Indigo — Data Link

Flow 1 ingress (mean 57.18 Mbit/s) Flow 1 egress (mean 57.16 Mbit/s)
Flow 2 ingress (mean 38.95 Mbit/s) Flow 2 egress (mean 38.94 Mbit/s)
Flow 3 ingress (mean 43.72 Mbit/s) Flow 3 egress (mean 43.70 Mbit/s)

Flow 1 (95th percentile 14.20 ms) Flow 2 (95th percentile 15.61 ms) Flow 3 (95th percentile 20.19 ms)

```
Run 10: Statistics of Indigo

Start at: 2018-01-02 12:54:14
End at: 2018-01-02 12:54:44
Local clock offset: -0.359 ms
Remote clock offset: 0.148 ms


# Below is generated by plot.py at 2018-01-02 13:40:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 14.307 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 13.805 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.14 Mbit/s
95th percentile per-packet one-way delay: 14.292 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.59 Mbit/s
95th percentile per-packet one-way delay: 15.595 ms
Loss rate: 0.00%
```
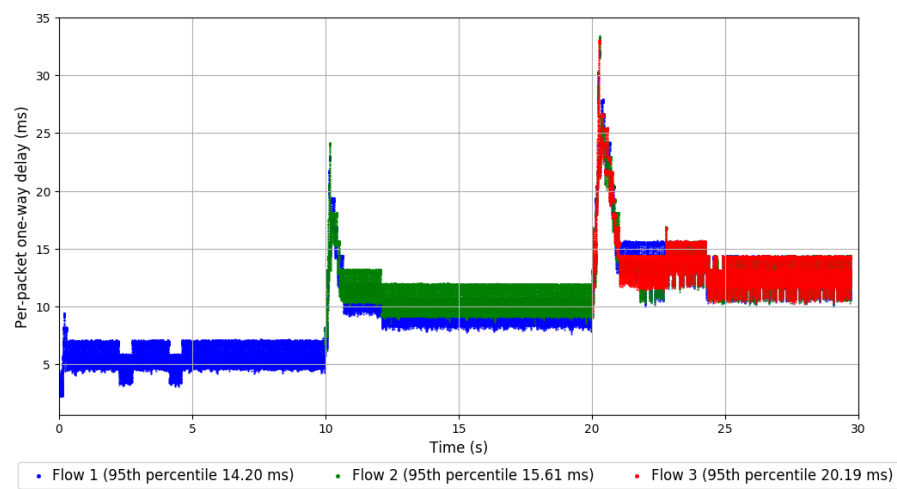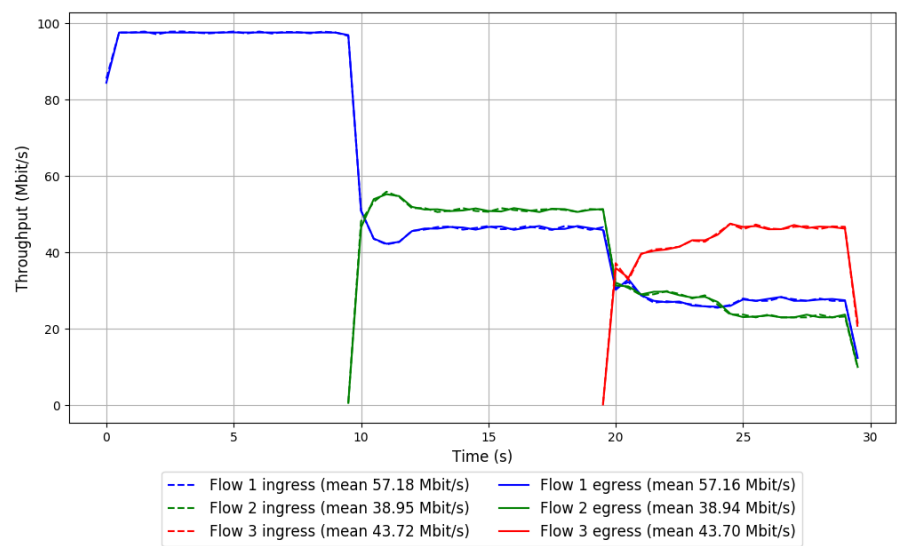
Run 10: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 55.79 Mbit/s) ——— Flow 1 egress (mean 55.76 Mbit/s)
- - - Flow 2 ingress (mean 40.15 Mbit/s) ——— Flow 2 egress (mean 40.14 Mbit/s)
- - - Flow 3 ingress (mean 45.60 Mbit/s) ——— Flow 3 egress (mean 45.59 Mbit/s)

• Flow 1 (95th percentile 13.80 ms) • Flow 2 (95th percentile 14.29 ms) • Flow 3 (95th percentile 15.60 ms)