Pantheon Report

Generated at 2018-04-17 22:04:58 (UTC).

Data path: Mexico Ethernet (*remote*) →AWS California 2 Ethernet (*local*).

Repeated the test of 16 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`).
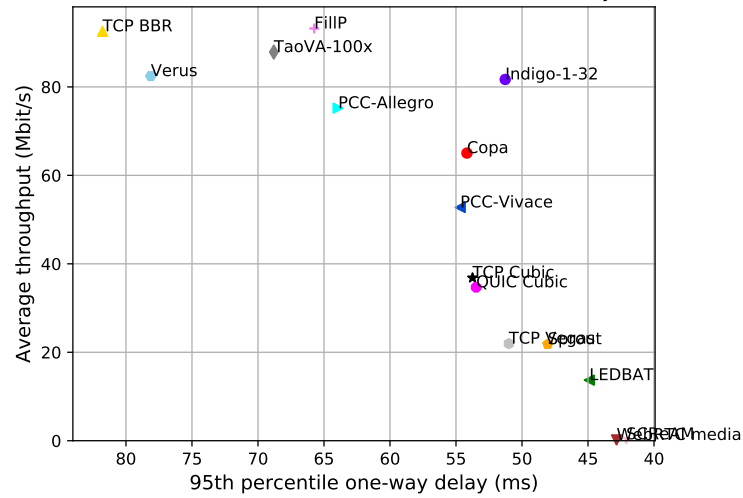
NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.
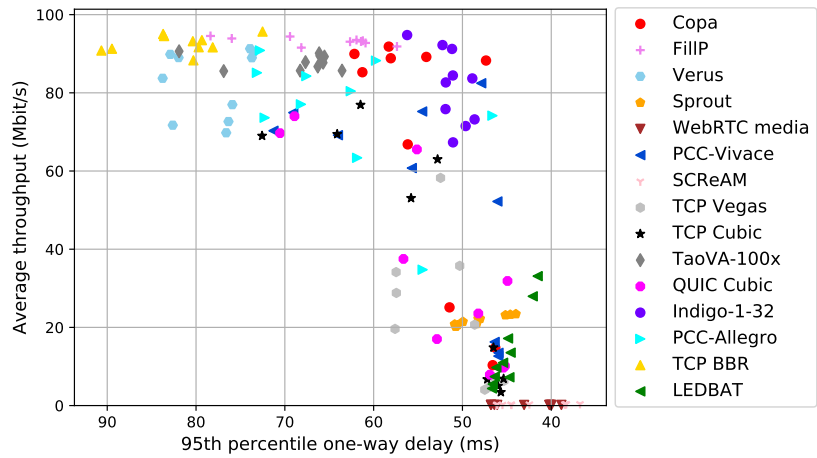
```
Git summary:
branch: master @ b3d6e7098641364fd3a292656a51aa81e316d0b4
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 11f8c46a2bf1dc797253db7e8ca04076272b2a44
third_party/genericCC @ d223989828276fa83a807da6e0341dc0c7b89aec
third_party/indigo @ a9b2060d39e4da2e8987e893e3eca2a6c7cd0ab9
third_party/indigo-1-layer-128-unit @ 3ae9e4ef4230db7484501f82ce8b377695f2f66d
third_party/indigo-1-layer-32-unit @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-1-layer-32-unit-no-calib @ 1f3a7f75b41135ed5b540c0fd3505939528e2a5f
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/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
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/vivace @ 7a4ba531e75b4a6f66f5c4580192120401784ce3
```

third_party/webrtc @ f271183af822eee5d0031620f4bebf38aedc5581

test from Mexico Ethernet to AWS California 2 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from Mexico Ethernet to AWS California 2 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	55.26	38.85	34.76	81.11	80.25	77.07	1.43	1.59	2.16
TCP Cubic	10	19.31	15.95	20.83	52.18	51.92	56.97	0.91	1.01	1.28
LEDBAT	10	7.17	7.06	5.60	44.43	45.06	45.14	1.36	1.46	2.01
PCC-Allegro	10	48.45	27.66	25.48	61.14	59.35	62.35	1.15	1.44	1.95
QUIC Cubic	10	19.05	13.90	19.54	51.96	49.88	53.37	0.96	1.04	1.43
SCReAM	10	0.16	0.16	0.19	41.86	41.50	41.49	0.81	0.84	0.89
WebRTC media	10	0.07	0.07	0.05	42.40	42.76	42.98	0.70	1.33	1.55
Sprout	10	11.05	10.96	10.64	47.53	48.44	48.57	1.51	1.63	1.96
TaoVA-100x	10	48.98	42.60	31.96	66.04	68.99	74.63	1.56	2.01	2.50
TCP Vegas	10	9.82	10.51	15.54	48.09	50.59	52.50	0.92	1.23	1.46
Verus	10	49.52	35.98	27.31	72.02	79.87	80.87	1.41	1.43	2.16
Copa	10	41.72	27.91	14.39	52.81	54.86	57.97	1.12	1.21	2.00
FillP	10	44.14	49.44	49.10	61.32	66.66	68.76	1.18	1.29	2.22
Indigo-1-32	10	49.61	33.34	30.58	49.72	51.95	58.07	1.01	1.17	1.80
PCC-Vivace	10	38.54	17.82	7.21	54.62	50.33	52.97	1.05	1.30	1.89
PCC-Expr	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

```
Run 1: Statistics of TCP BBR

Start at: 2018-04-17 13:15:37
End at: 2018-04-17 13:16:07
Local clock offset: -0.289 ms
Remote clock offset: -1.54 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.05 Mbit/s
95th percentile per-packet one-way delay: 83.703 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 55.52 Mbit/s
95th percentile per-packet one-way delay: 82.977 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 85.581 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 47.08 Mbit/s
95th percentile per-packet one-way delay: 67.370 ms
Loss rate: 1.26%
```
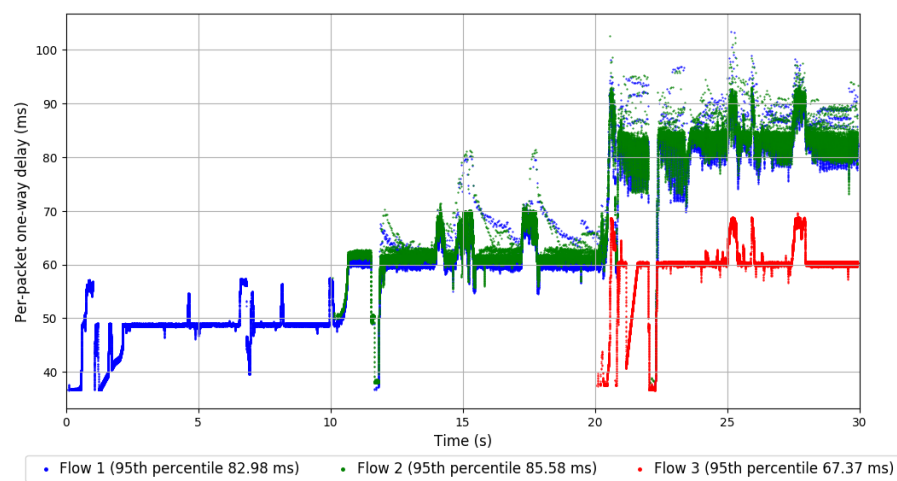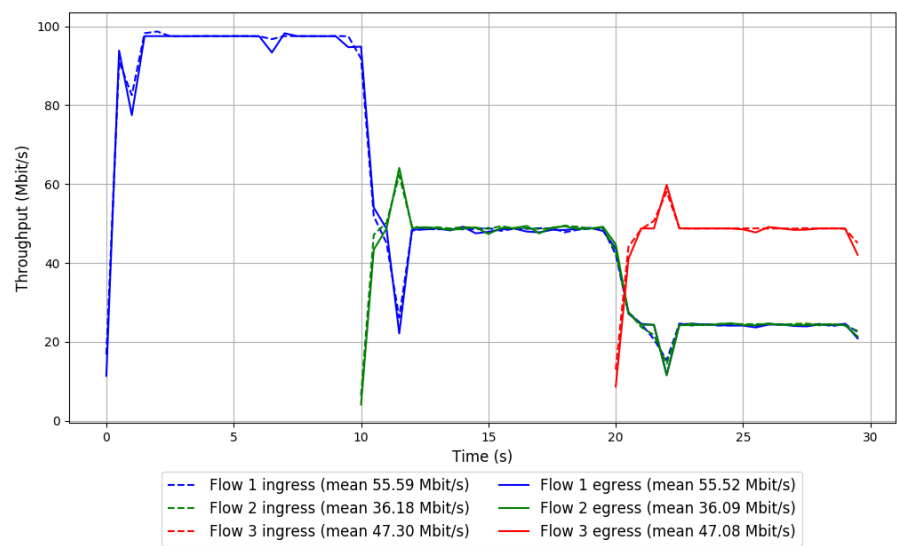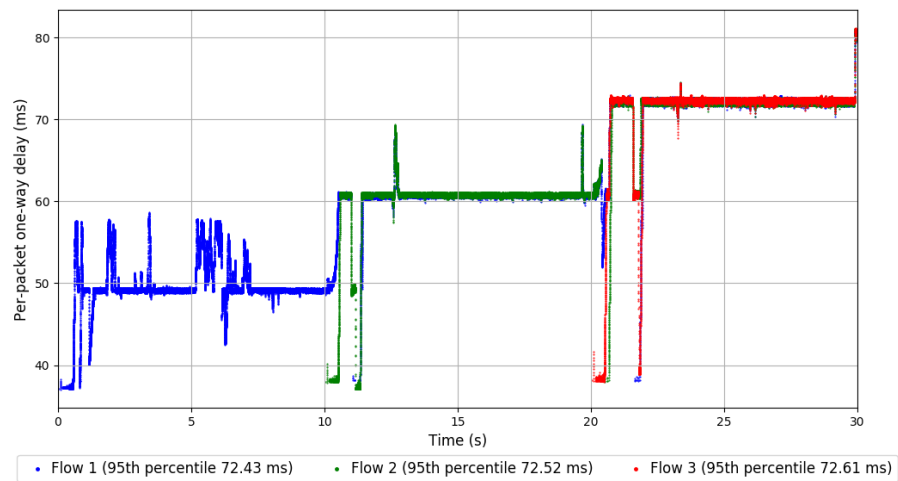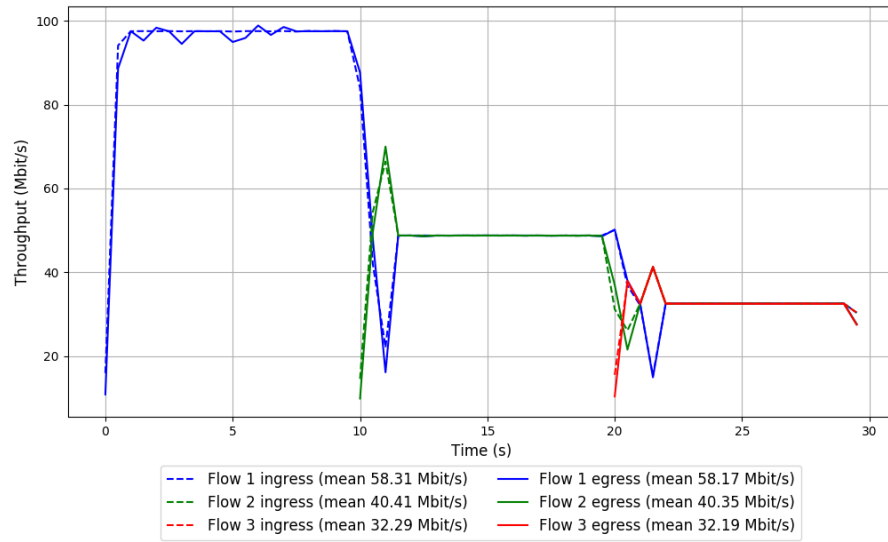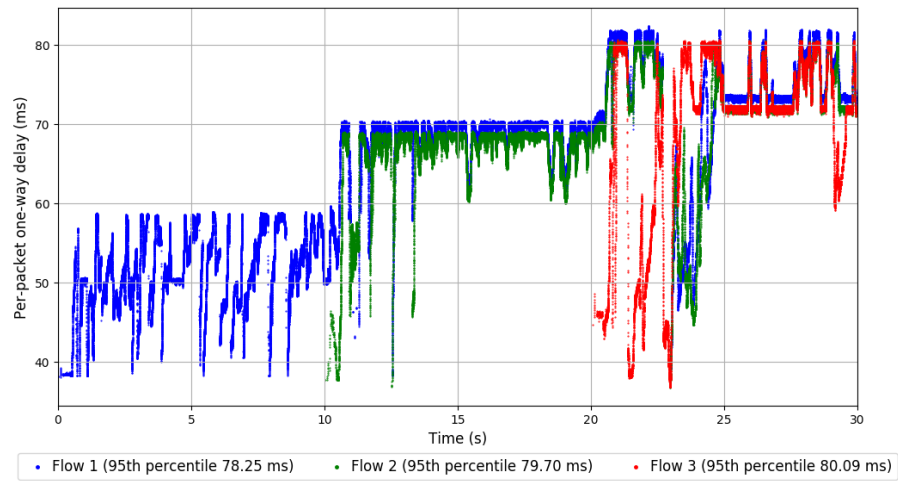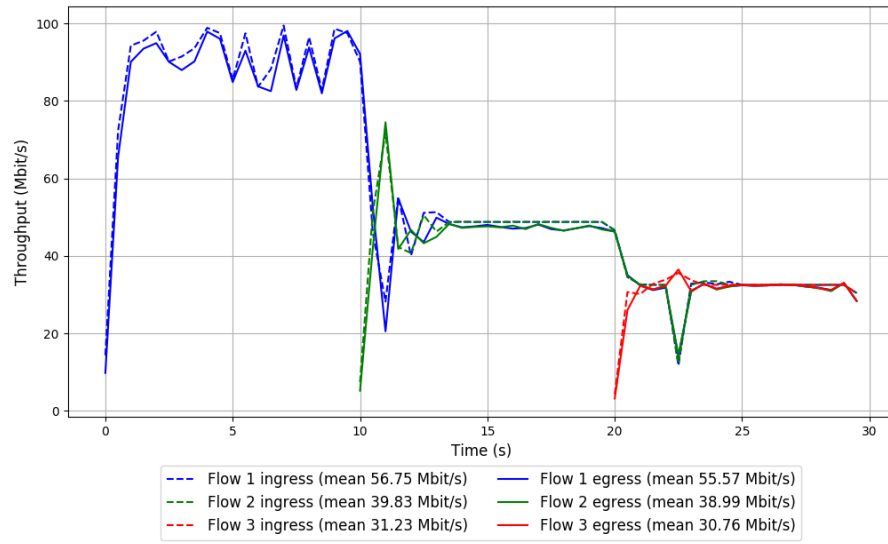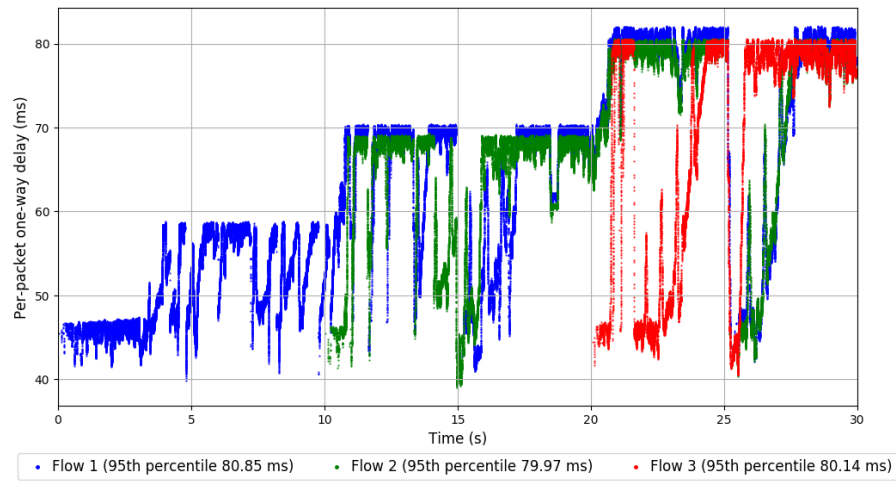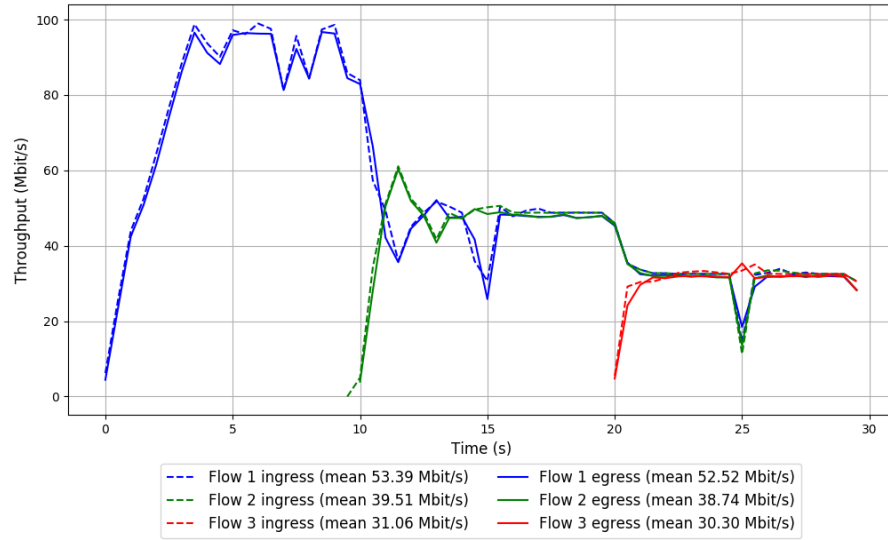
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-04-17 13:39:36
End at: 2018-04-17 13:40:06
Local clock offset: 2.714 ms
Remote clock offset: -2.384 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 72.509 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 58.17 Mbit/s
95th percentile per-packet one-way delay: 72.427 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 40.35 Mbit/s
95th percentile per-packet one-way delay: 72.515 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 72.607 ms
Loss rate: 1.17%
```

Run 2: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 58.31 Mbit/s) —— Flow 1 egress (mean 58.17 Mbit/s)
- - - Flow 2 ingress (mean 40.41 Mbit/s) —— Flow 2 egress (mean 40.35 Mbit/s)
- - - Flow 3 ingress (mean 32.29 Mbit/s) —— Flow 3 egress (mean 32.19 Mbit/s)

• Flow 1 (95th percentile 72.43 ms)   • Flow 2 (95th percentile 72.52 ms)   • Flow 3 (95th percentile 72.61 ms)

8

```
Run 3: Statistics of TCP BBR

Start at: 2018-04-17 14:03:11
End at: 2018-04-17 14:03:41
Local clock offset: 6.177 ms
Remote clock offset: -2.463 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.67 Mbit/s
95th percentile per-packet one-way delay: 79.702 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 55.57 Mbit/s
95th percentile per-packet one-way delay: 78.251 ms
Loss rate: 2.29%
-- Flow 2:
Average throughput: 38.99 Mbit/s
95th percentile per-packet one-way delay: 79.700 ms
Loss rate: 2.44%
-- Flow 3:
Average throughput: 30.76 Mbit/s
95th percentile per-packet one-way delay: 80.095 ms
Loss rate: 2.24%
```
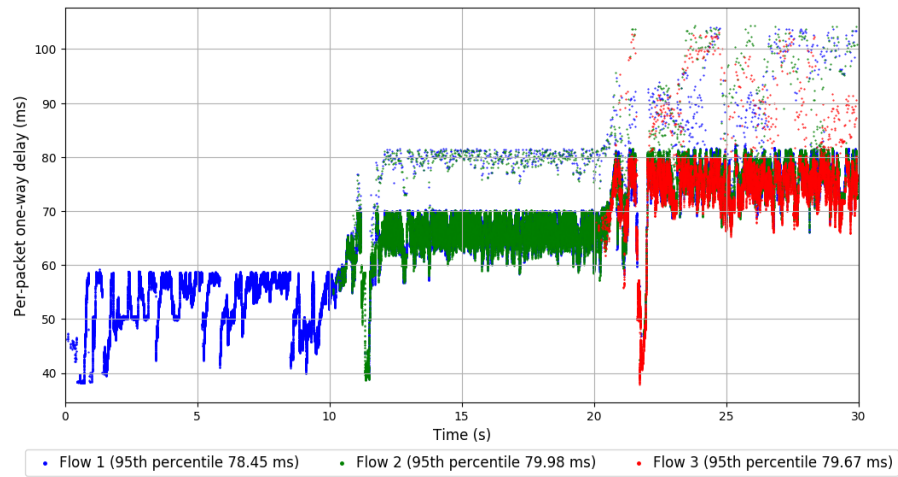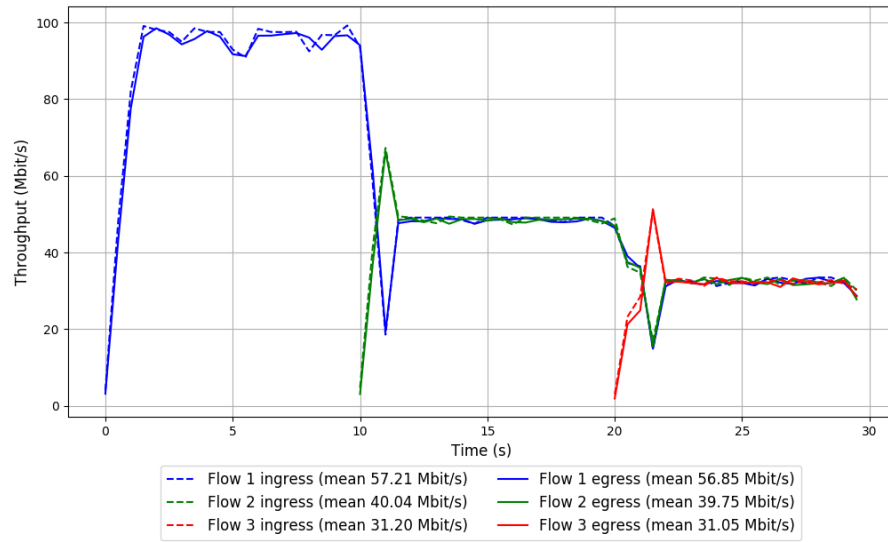
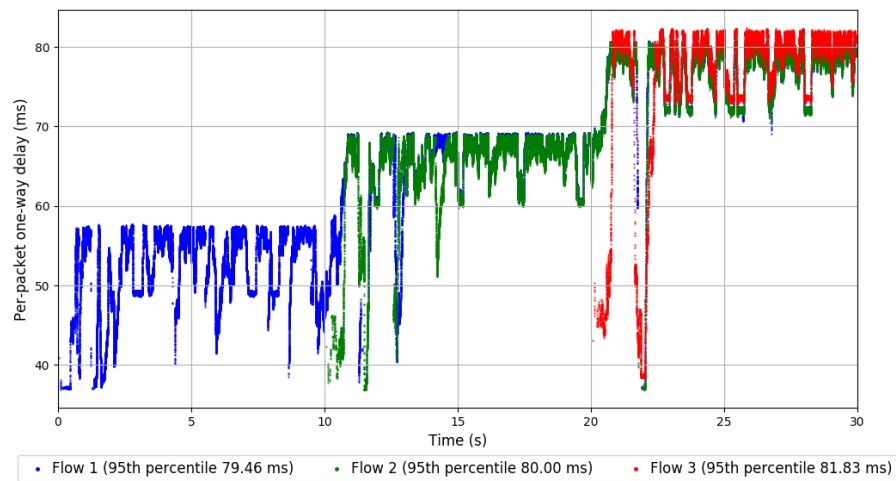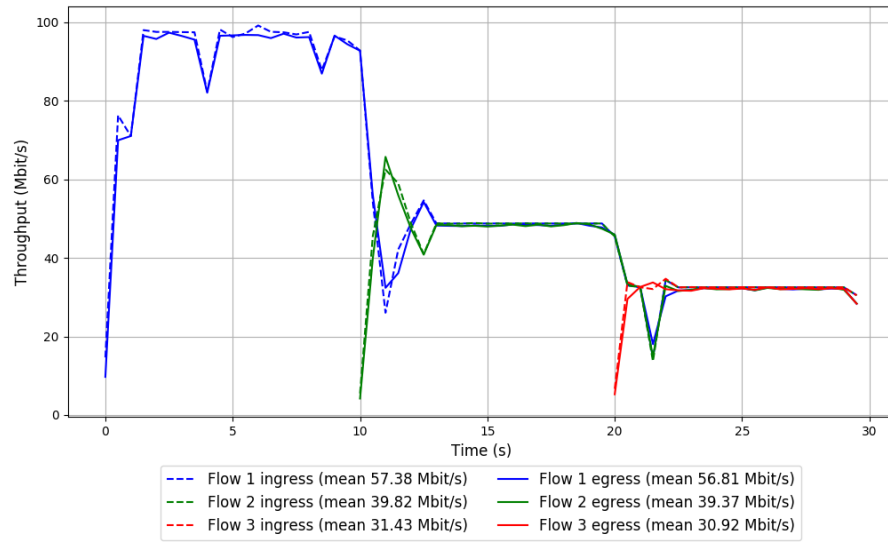Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-04-17 14:30:25
End at: 2018-04-17 14:30:55
Local clock offset: 11.815 ms
Remote clock offset: -1.139 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.32 Mbit/s
95th percentile per-packet one-way delay: 80.296 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 52.52 Mbit/s
95th percentile per-packet one-way delay: 80.850 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 79.975 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 30.30 Mbit/s
95th percentile per-packet one-way delay: 80.140 ms
Loss rate: 3.16%
```
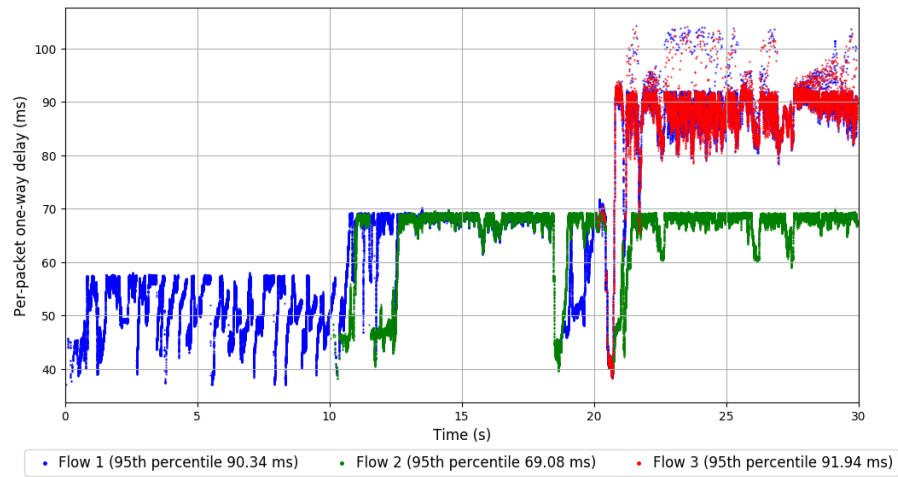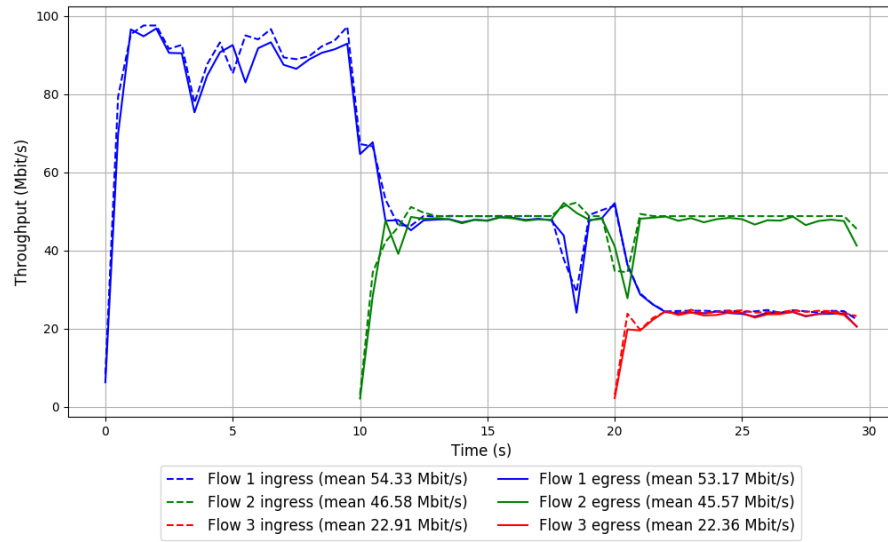
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 53.39 Mbit/s) --- Flow 1 egress (mean 52.52 Mbit/s)
Flow 2 ingress (mean 39.51 Mbit/s) --- Flow 2 egress (mean 38.74 Mbit/s)
Flow 3 ingress (mean 31.06 Mbit/s) --- Flow 3 egress (mean 30.30 Mbit/s)

Flow 1 (95th percentile 80.85 ms)   Flow 2 (95th percentile 79.97 ms)   Flow 3 (95th percentile 80.14 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-04-17 14:58:15
End at: 2018-04-17 14:58:45
Local clock offset: -0.284 ms
Remote clock offset: 0.262 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.48 Mbit/s
95th percentile per-packet one-way delay: 79.340 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 78.447 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 39.75 Mbit/s
95th percentile per-packet one-way delay: 79.980 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 79.672 ms
Loss rate: 1.70%
```
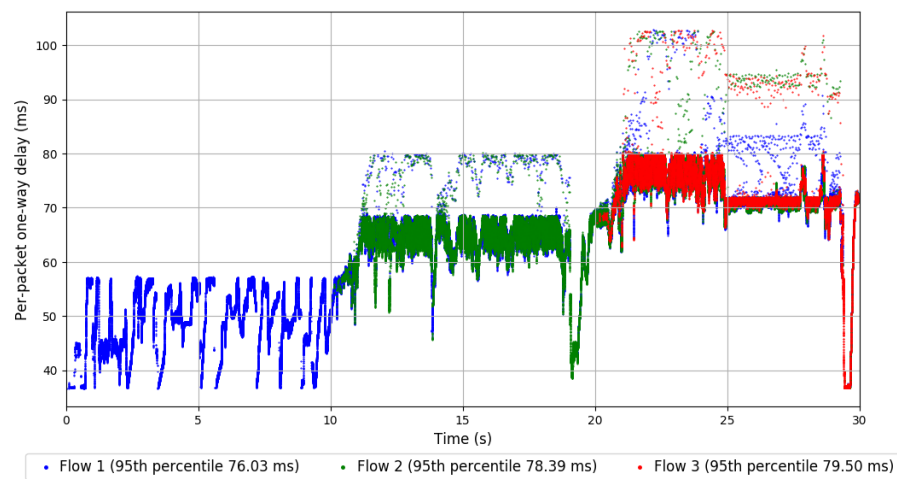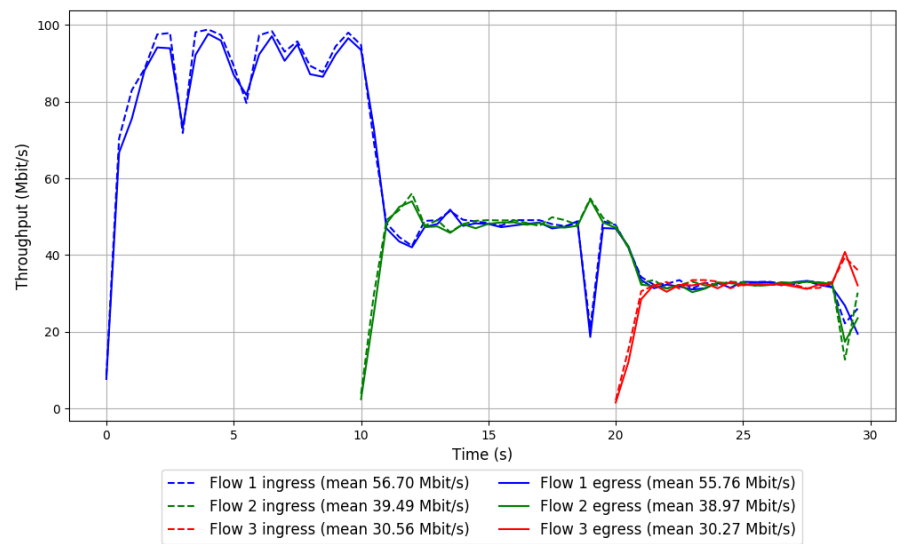
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 57.21 Mbit/s)   Flow 1 egress (mean 56.85 Mbit/s)
Flow 2 ingress (mean 40.04 Mbit/s)   Flow 2 egress (mean 39.75 Mbit/s)
Flow 3 ingress (mean 31.20 Mbit/s)   Flow 3 egress (mean 31.05 Mbit/s)

Flow 1 (95th percentile 78.45 ms)   Flow 2 (95th percentile 79.98 ms)   Flow 3 (95th percentile 79.67 ms)

14

```
Run 6: Statistics of TCP BBR

Start at: 2018-04-17 15:26:20
End at: 2018-04-17 15:26:50
Local clock offset: -1.844 ms
Remote clock offset: -5.494 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.21 Mbit/s
95th percentile per-packet one-way delay: 80.357 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 79.462 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 39.37 Mbit/s
95th percentile per-packet one-way delay: 80.002 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 81.826 ms
Loss rate: 2.36%
```
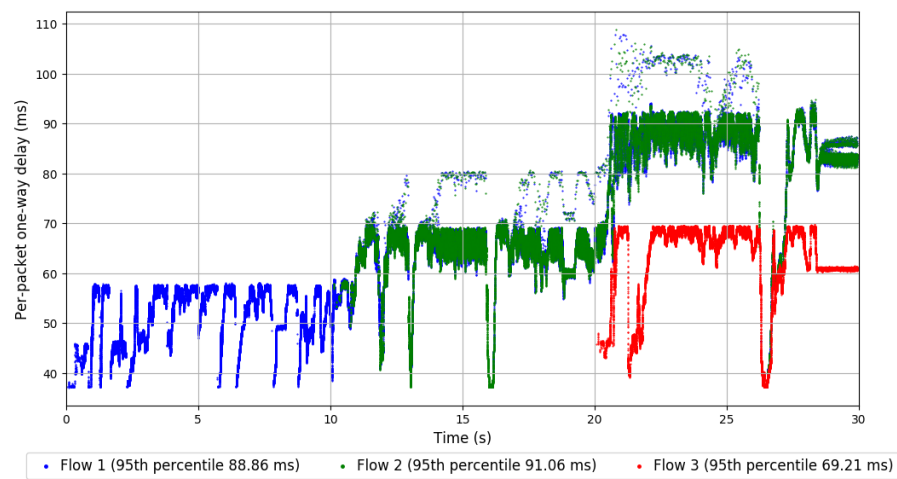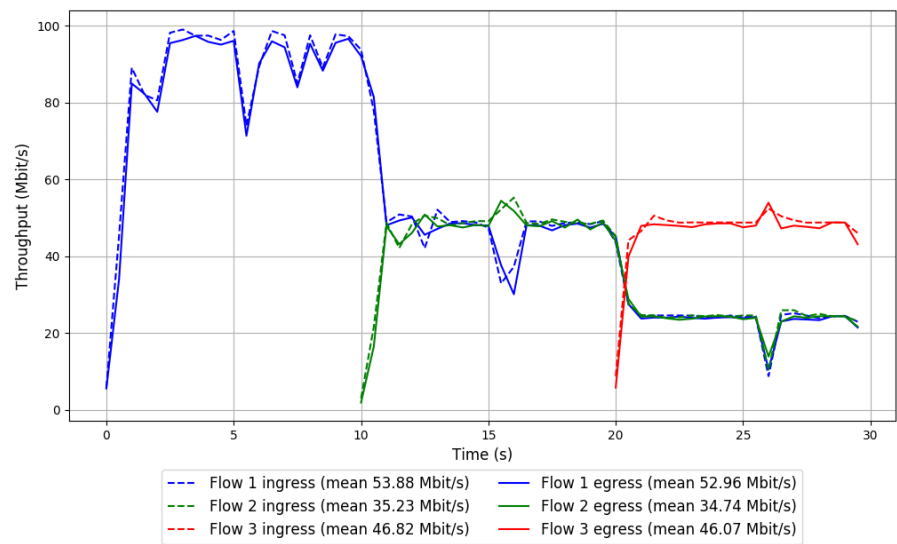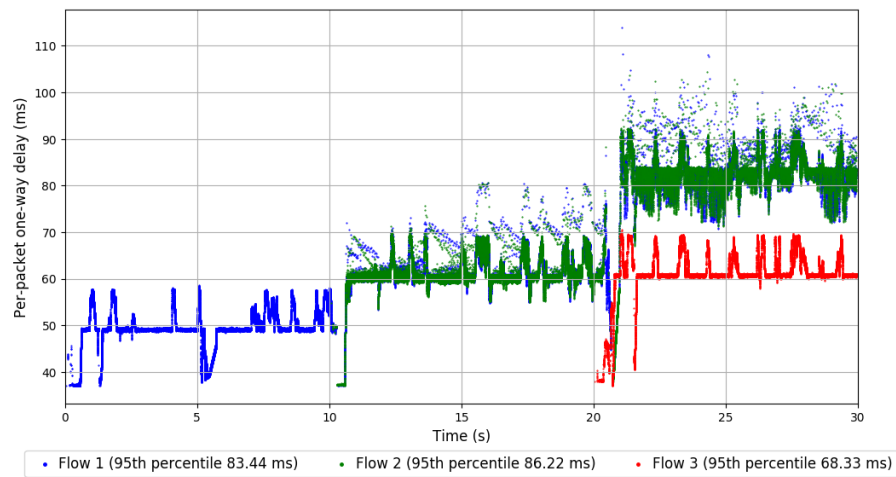
Run 6: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 57.38 Mbit/s) —— Flow 1 egress (mean 56.81 Mbit/s)
- - - Flow 2 ingress (mean 39.82 Mbit/s) —— Flow 2 egress (mean 39.37 Mbit/s)
- - - Flow 3 ingress (mean 31.43 Mbit/s) —— Flow 3 egress (mean 30.92 Mbit/s)

• Flow 1 (95th percentile 79.46 ms)   • Flow 2 (95th percentile 80.00 ms)   • Flow 3 (95th percentile 81.83 ms)
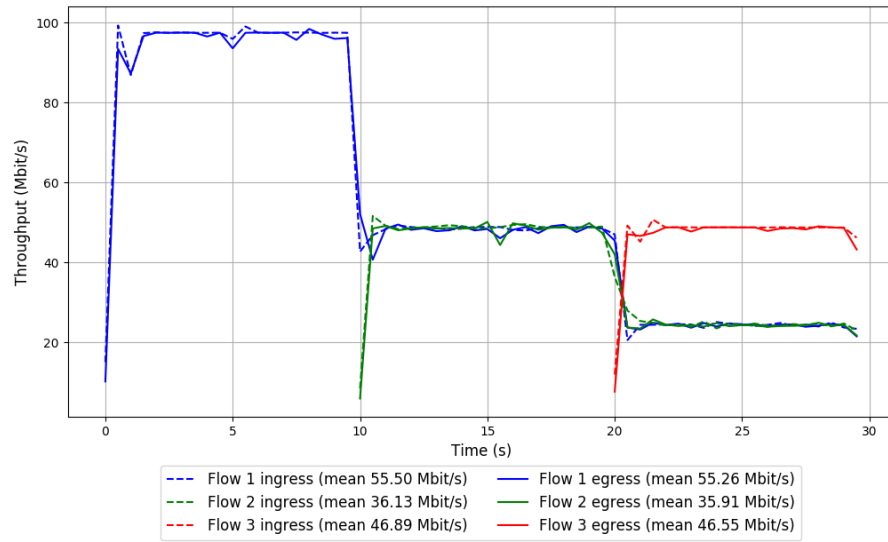
```
Run 7: Statistics of TCP BBR

Start at: 2018-04-17 15:53:52
End at: 2018-04-17 15:54:22
Local clock offset: -0.522 ms
Remote clock offset: -6.759 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.82 Mbit/s
95th percentile per-packet one-way delay: 90.656 ms
Loss rate: 2.55%
-- Flow 1:
Average throughput: 53.17 Mbit/s
95th percentile per-packet one-way delay: 90.344 ms
Loss rate: 2.41%
-- Flow 2:
Average throughput: 45.57 Mbit/s
95th percentile per-packet one-way delay: 69.078 ms
Loss rate: 2.54%
-- Flow 3:
Average throughput: 22.36 Mbit/s
95th percentile per-packet one-way delay: 91.939 ms
Loss rate: 3.63%
```
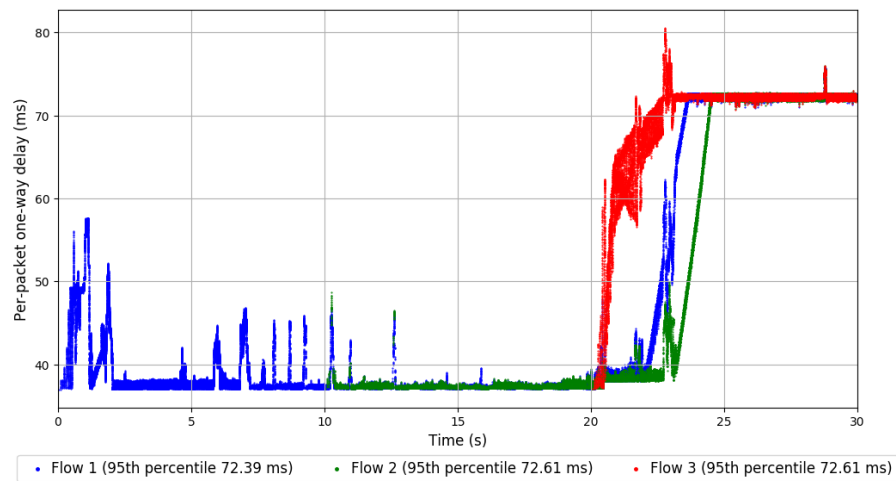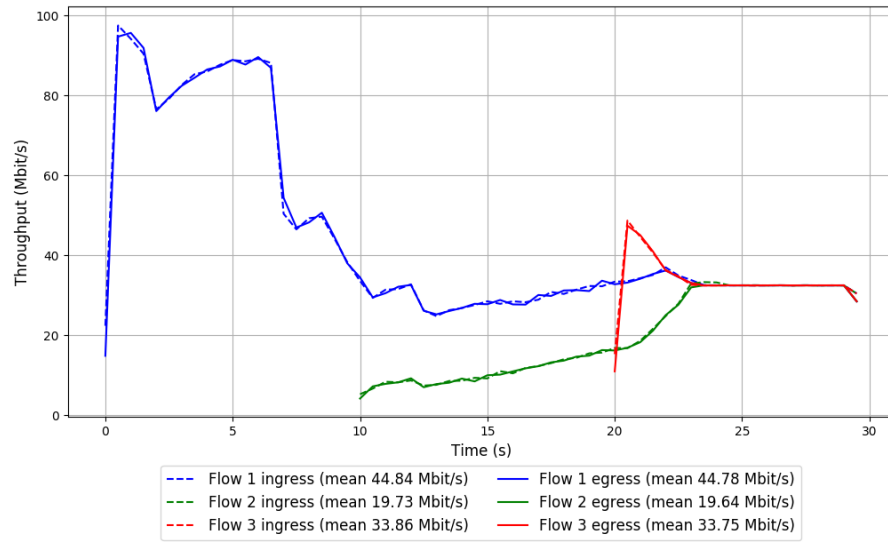
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 54.33 Mbit/s) --- Flow 1 egress (mean 53.17 Mbit/s)
Flow 2 ingress (mean 46.58 Mbit/s) --- Flow 2 egress (mean 45.57 Mbit/s)
Flow 3 ingress (mean 22.91 Mbit/s) --- Flow 3 egress (mean 22.36 Mbit/s)

Flow 1 (95th percentile 90.34 ms) Flow 2 (95th percentile 69.08 ms) Flow 3 (95th percentile 91.94 ms)

```
Run 8: Statistics of TCP BBR

Start at: 2018-04-17 16:22:42
End at: 2018-04-17 16:23:12
Local clock offset: -0.128 ms
Remote clock offset: -5.053 ms


# Below is generated by plot.py at 2018-04-17 21:48:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 78.124 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 55.76 Mbit/s
95th percentile per-packet one-way delay: 76.031 ms
Loss rate: 1.94%
-- Flow 2:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 78.388 ms
Loss rate: 1.80%
-- Flow 3:
Average throughput: 30.27 Mbit/s
95th percentile per-packet one-way delay: 79.495 ms
Loss rate: 2.08%
```
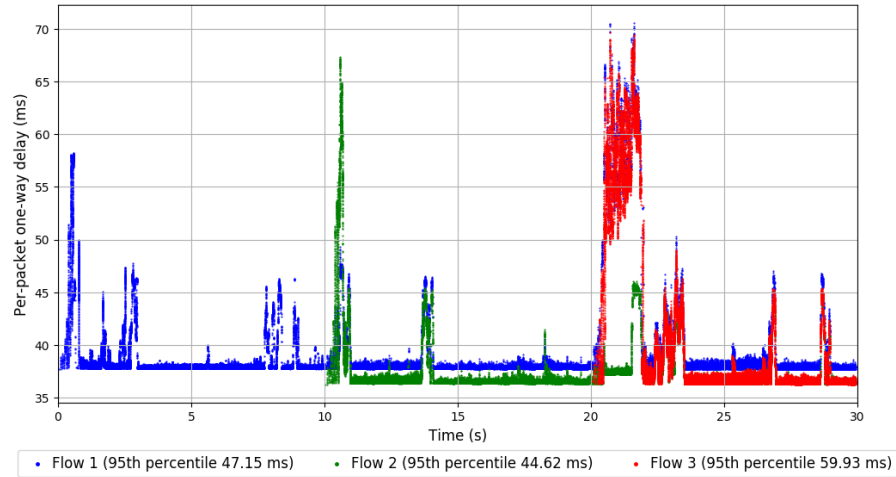
Run 8: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 56.70 Mbit/s) ——— Flow 1 egress (mean 55.76 Mbit/s)
- - - Flow 2 ingress (mean 39.49 Mbit/s) ——— Flow 2 egress (mean 38.97 Mbit/s)
- - - Flow 3 ingress (mean 30.56 Mbit/s) ——— Flow 3 egress (mean 30.27 Mbit/s)

• Flow 1 (95th percentile 76.03 ms)   • Flow 2 (95th percentile 78.39 ms)   • Flow 3 (95th percentile 79.50 ms)

20

```
Run 9: Statistics of TCP BBR

Start at: 2018-04-17 16:48:04
End at: 2018-04-17 16:48:34
Local clock offset: -0.134 ms
Remote clock offset: -1.614 ms


# Below is generated by plot.py at 2018-04-17 21:49:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.28 Mbit/s
95th percentile per-packet one-way delay: 89.471 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 52.96 Mbit/s
95th percentile per-packet one-way delay: 88.863 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 34.74 Mbit/s
95th percentile per-packet one-way delay: 91.055 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 46.07 Mbit/s
95th percentile per-packet one-way delay: 69.212 ms
Loss rate: 2.45%
```
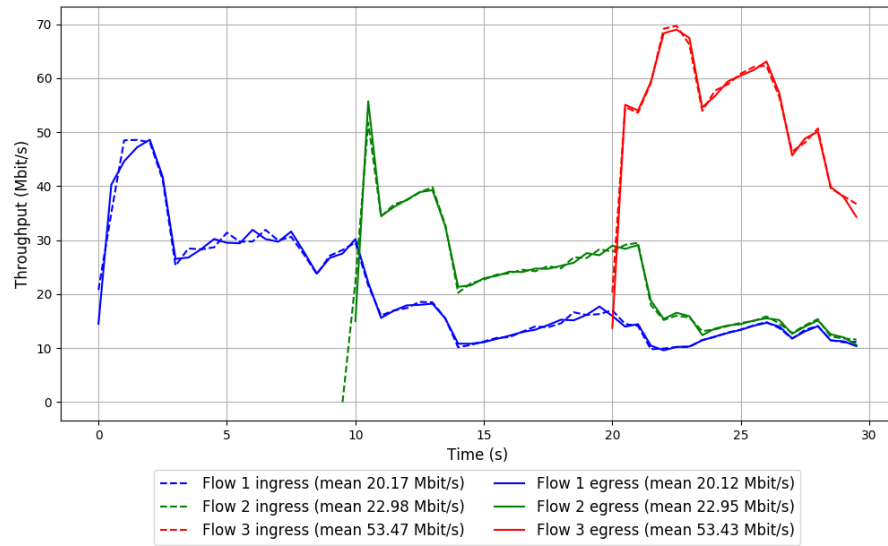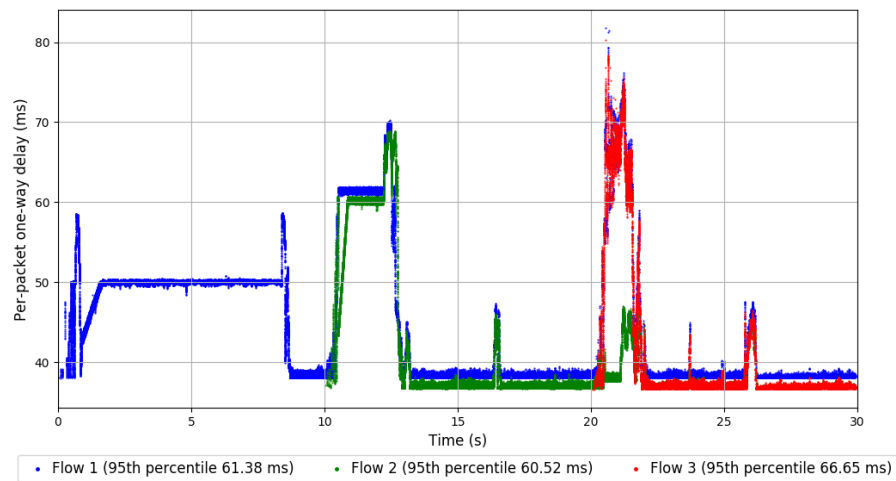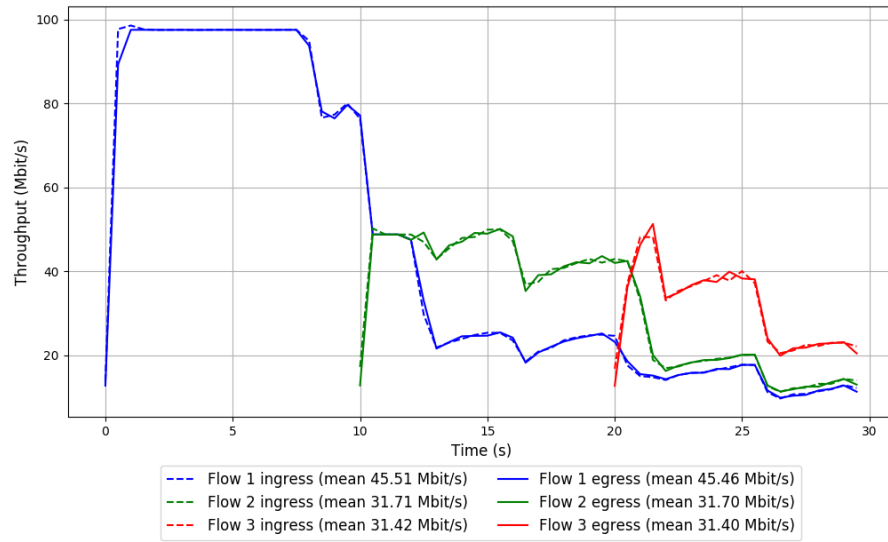
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 53.88 Mbit/s) --- Flow 1 egress (mean 52.96 Mbit/s)
Flow 2 ingress (mean 35.23 Mbit/s) --- Flow 2 egress (mean 34.74 Mbit/s)
Flow 3 ingress (mean 46.82 Mbit/s) --- Flow 3 egress (mean 46.07 Mbit/s)

Flow 1 (95th percentile 88.86 ms)   Flow 2 (95th percentile 91.06 ms)   Flow 3 (95th percentile 69.21 ms)
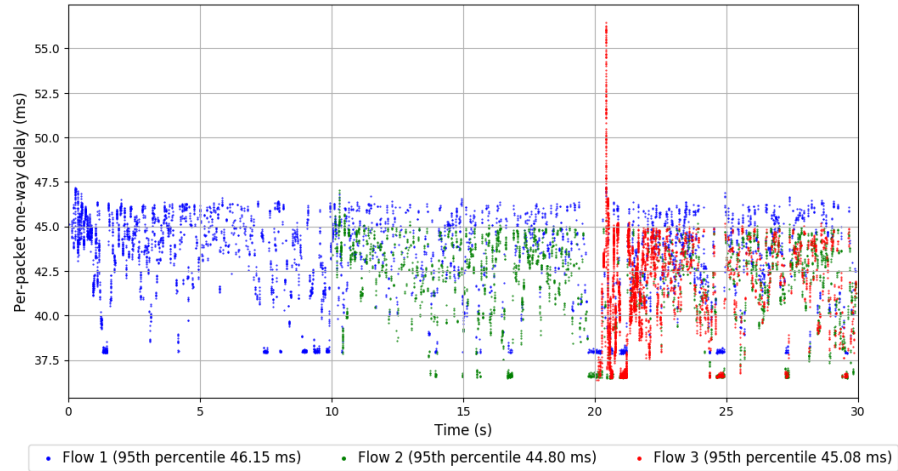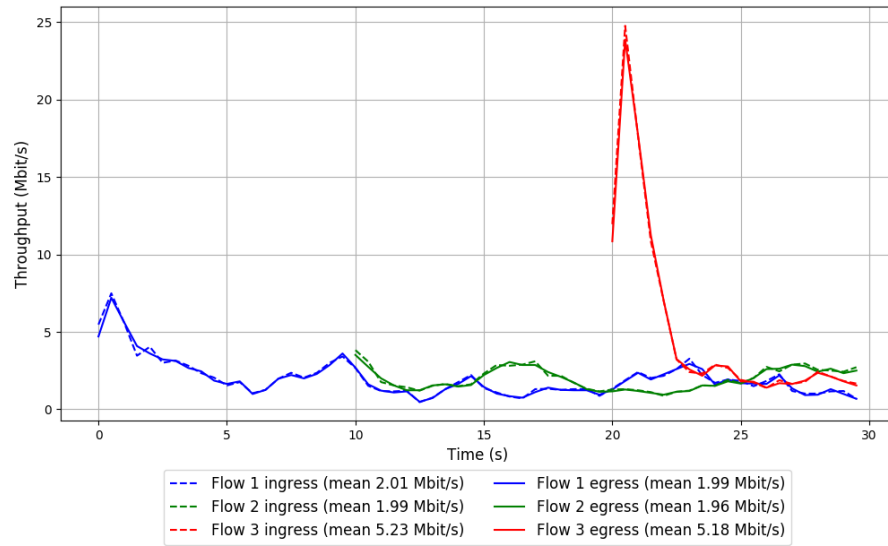
22

```
Run 10: Statistics of TCP BBR

Start at: 2018-04-17 17:12:45
End at: 2018-04-17 17:13:15
Local clock offset: 0.917 ms
Remote clock offset: -2.659 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 83.599 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 55.26 Mbit/s
95th percentile per-packet one-way delay: 83.436 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 35.91 Mbit/s
95th percentile per-packet one-way delay: 86.223 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 46.55 Mbit/s
95th percentile per-packet one-way delay: 68.335 ms
Loss rate: 1.51%
```

Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 55.50 Mbit/s)   Flow 1 egress (mean 55.26 Mbit/s)
Flow 2 ingress (mean 36.13 Mbit/s)   Flow 2 egress (mean 35.91 Mbit/s)
Flow 3 ingress (mean 46.89 Mbit/s)   Flow 3 egress (mean 46.55 Mbit/s)

Flow 1 (95th percentile 83.44 ms)   Flow 2 (95th percentile 86.22 ms)   Flow 3 (95th percentile 68.33 ms)
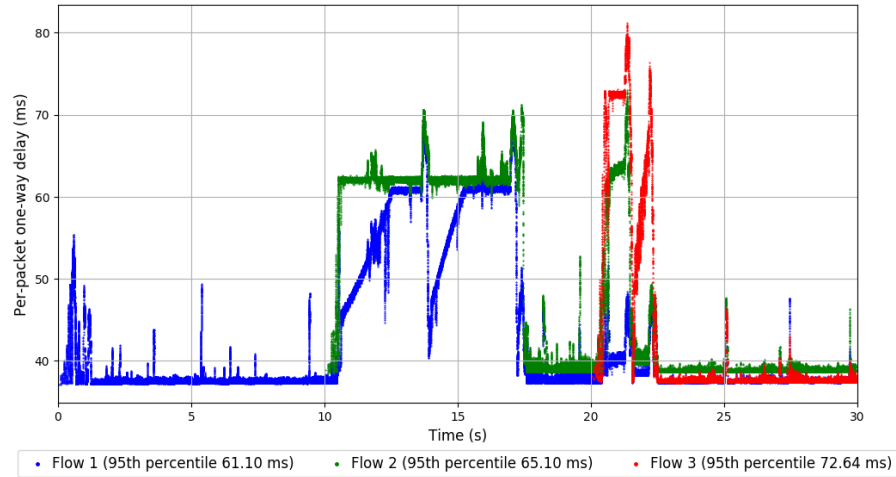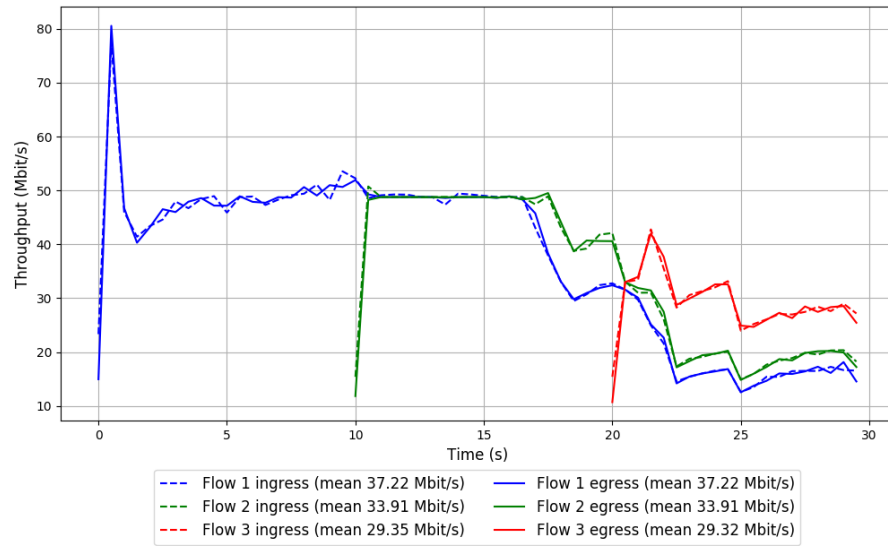
```
Run 1: Statistics of TCP Cubic

Start at: 2018-04-17 13:08:12
End at: 2018-04-17 13:08:42
Local clock offset: 0.099 ms
Remote clock offset: -2.171 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.00 Mbit/s
95th percentile per-packet one-way delay: 72.562 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 44.78 Mbit/s
95th percentile per-packet one-way delay: 72.395 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 19.64 Mbit/s
95th percentile per-packet one-way delay: 72.612 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 33.75 Mbit/s
95th percentile per-packet one-way delay: 72.614 ms
Loss rate: 0.99%
```

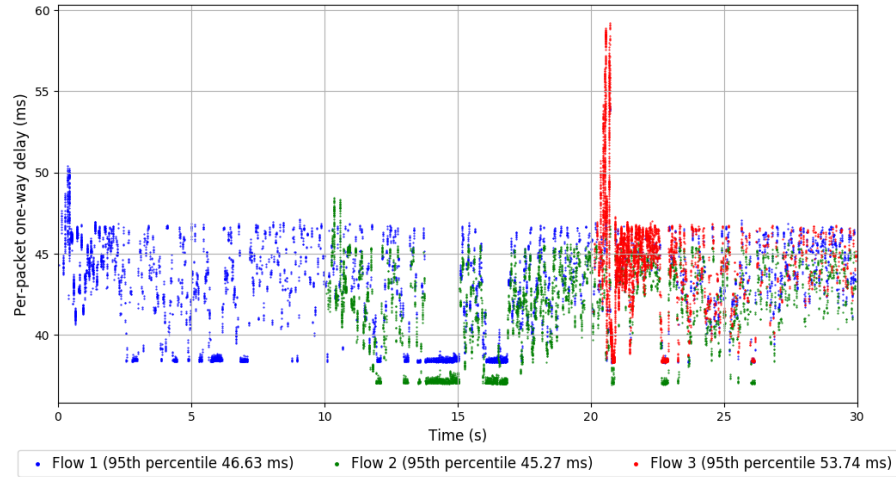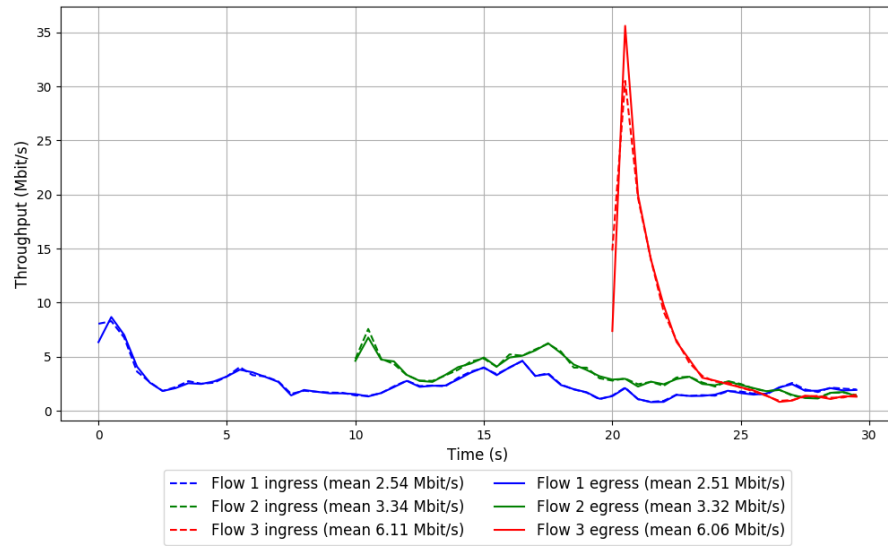Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-04-17 13:32:34
End at: 2018-04-17 13:33:04
Local clock offset: 1.831 ms
Remote clock offset: -1.49 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.07 Mbit/s
95th percentile per-packet one-way delay: 55.786 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 47.154 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 22.95 Mbit/s
95th percentile per-packet one-way delay: 44.617 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 53.43 Mbit/s
95th percentile per-packet one-way delay: 59.932 ms
Loss rate: 0.75%
```
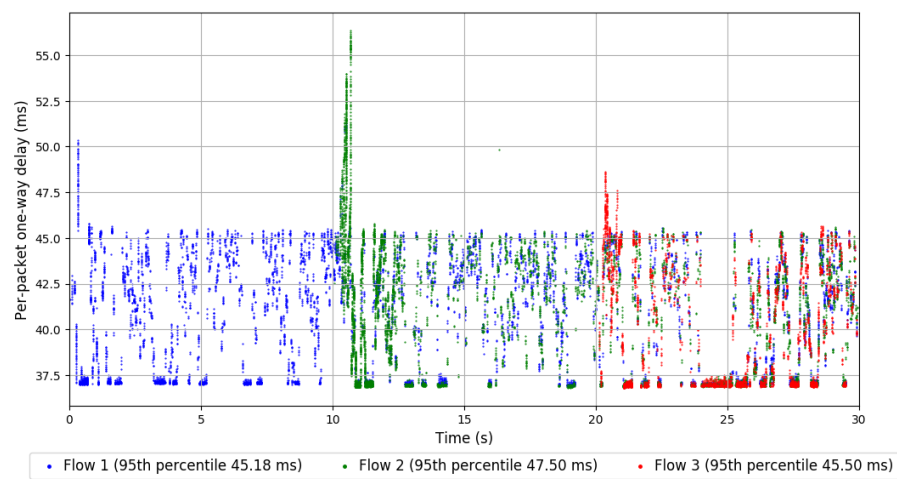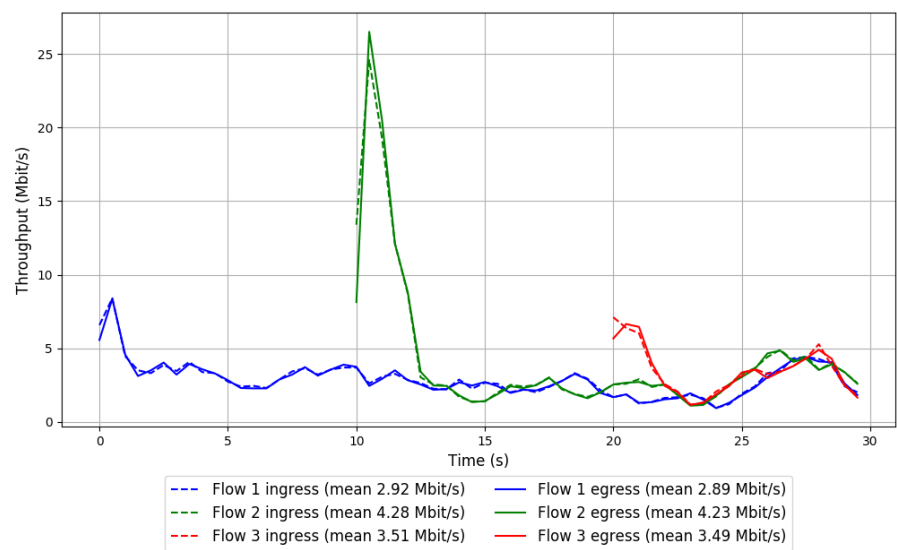
Run 2: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 20.17 Mbit/s) —— Flow 1 egress (mean 20.12 Mbit/s)
- - - Flow 2 ingress (mean 22.98 Mbit/s) —— Flow 2 egress (mean 22.95 Mbit/s)
- - - Flow 3 ingress (mean 53.47 Mbit/s) —— Flow 3 egress (mean 53.43 Mbit/s)

• Flow 1 (95th percentile 47.15 ms)   • Flow 2 (95th percentile 44.62 ms)   • Flow 3 (95th percentile 59.93 ms)

28

```
Run 3: Statistics of TCP Cubic

Start at: 2018-04-17 13:56:05
End at: 2018-04-17 13:56:35
Local clock offset: 3.523 ms
Remote clock offset: -1.984 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.92 Mbit/s
95th percentile per-packet one-way delay: 61.477 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 45.46 Mbit/s
95th percentile per-packet one-way delay: 61.384 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 60.518 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 66.648 ms
Loss rate: 0.73%
```
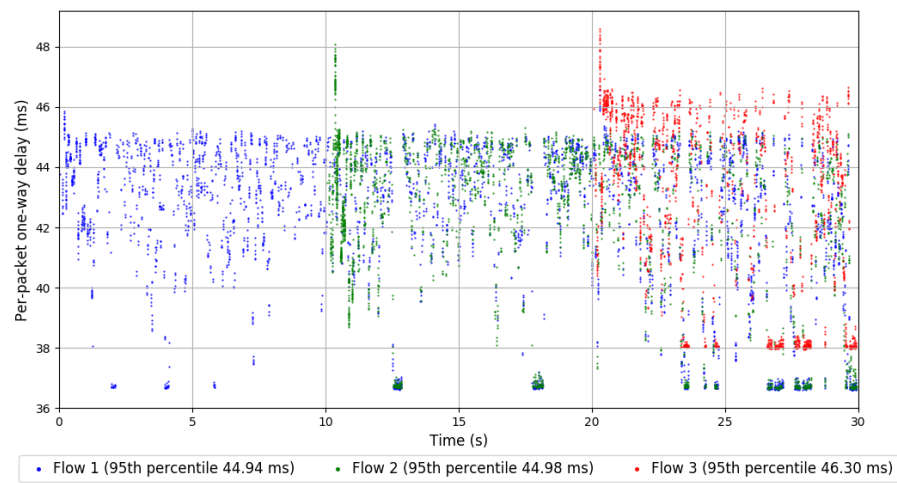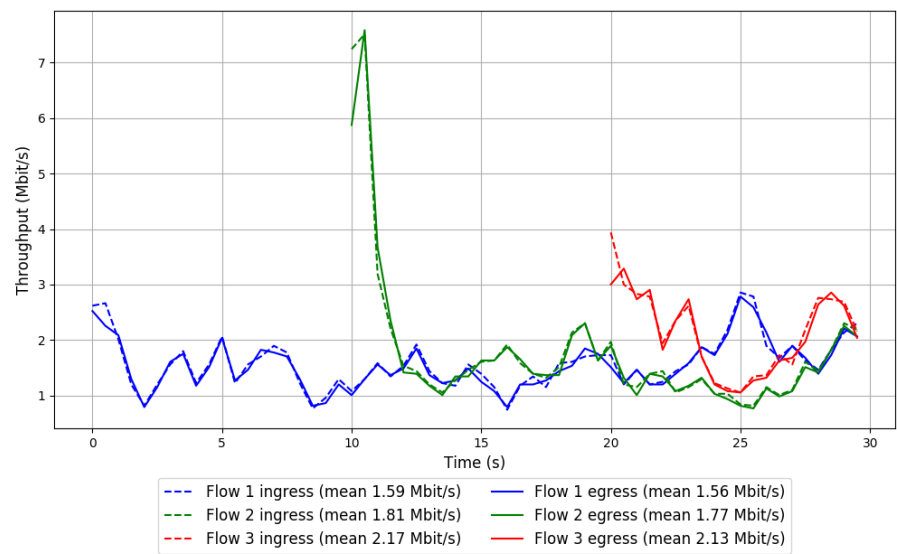
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2018-04-17 14:21:07
End at: 2018-04-17 14:21:37
Local clock offset: 10.471 ms
Remote clock offset: -0.965 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.00 Mbit/s
95th percentile per-packet one-way delay: 45.996 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 46.148 ms
Loss rate: 1.47%
-- Flow 2:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 44.800 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 5.18 Mbit/s
95th percentile per-packet one-way delay: 45.080 ms
Loss rate: 1.69%
```
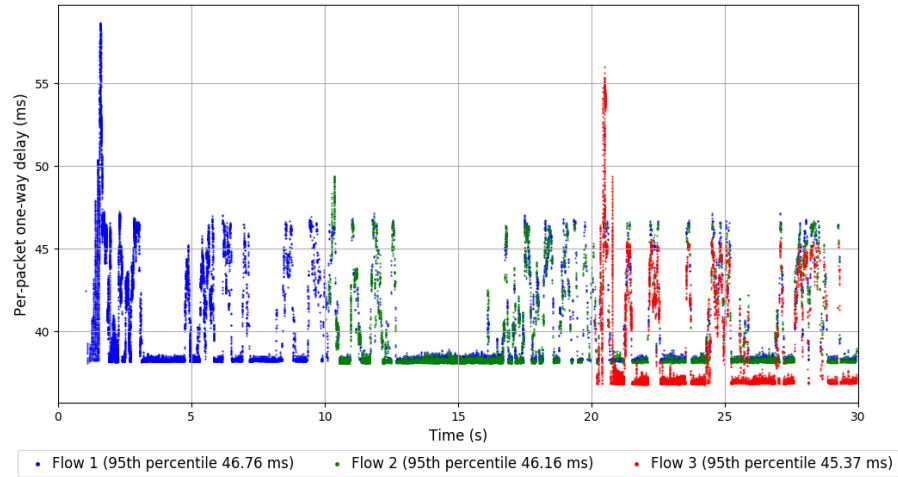
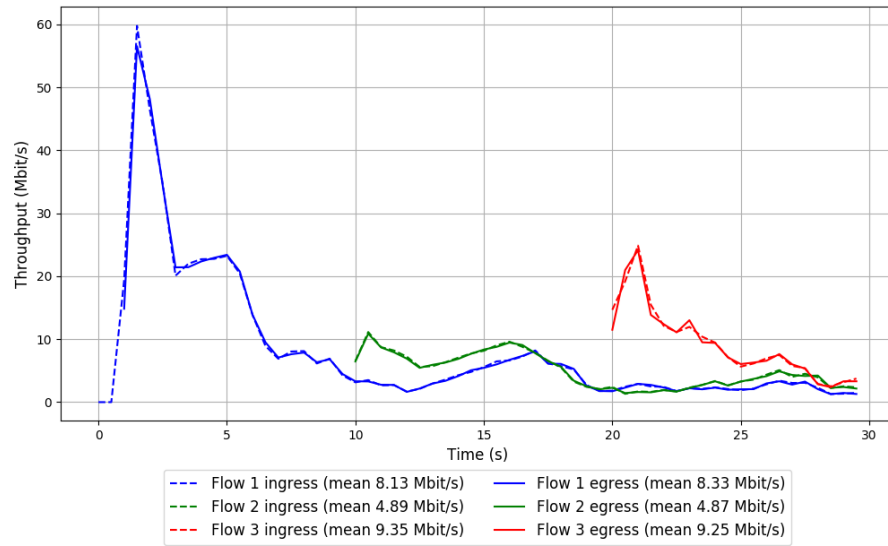Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-04-17 14:50:15
End at: 2018-04-17 14:50:45
Local clock offset: 1.223 ms
Remote clock offset: -0.486 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.45 Mbit/s
95th percentile per-packet one-way delay: 64.104 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 61.098 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 33.91 Mbit/s
95th percentile per-packet one-way delay: 65.102 ms
Loss rate: 0.31%
-- Flow 3:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 72.645 ms
Loss rate: 0.79%
```
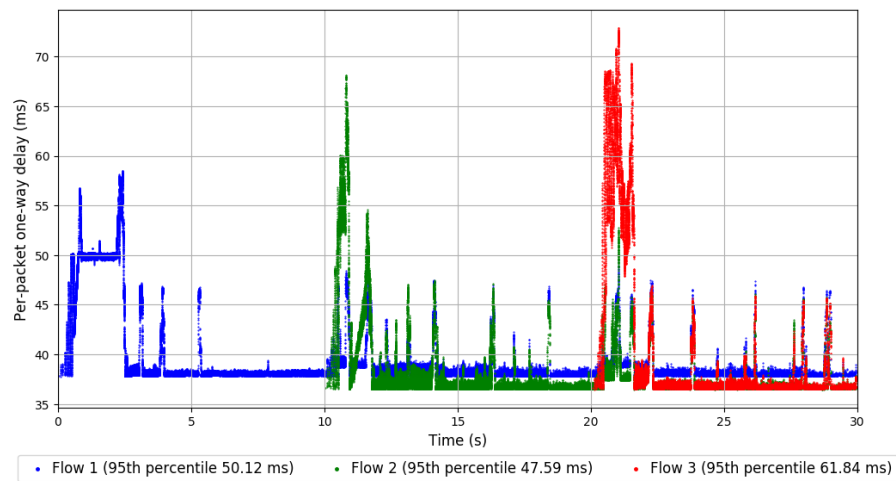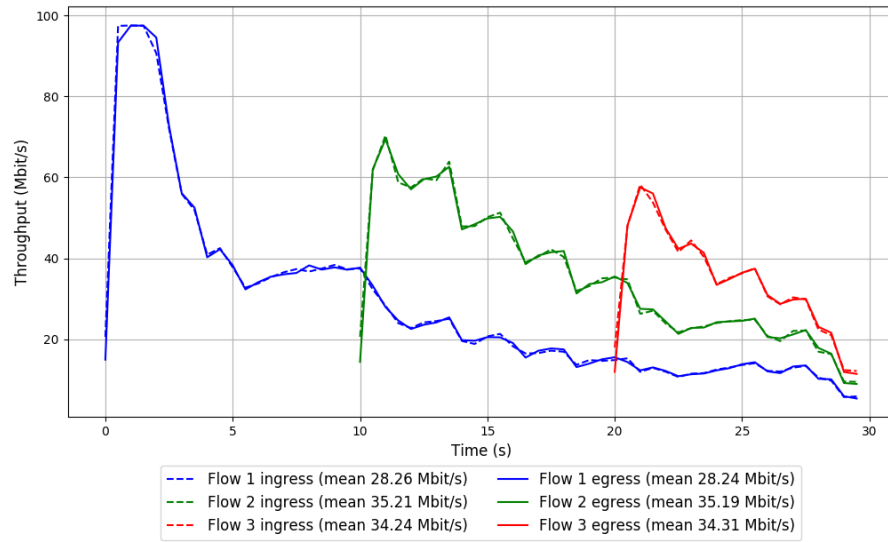
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 37.22 Mbit/s) --- Flow 1 egress (mean 37.22 Mbit/s)
Flow 2 ingress (mean 33.91 Mbit/s) --- Flow 2 egress (mean 33.91 Mbit/s)
Flow 3 ingress (mean 29.35 Mbit/s) --- Flow 3 egress (mean 29.32 Mbit/s)

Flow 1 (95th percentile 61.10 ms)   Flow 2 (95th percentile 65.10 ms)   Flow 3 (95th percentile 72.64 ms)

```
Run 6: Statistics of TCP Cubic

Start at: 2018-04-17 15:17:50
End at: 2018-04-17 15:18:20
Local clock offset: -1.358 ms
Remote clock offset: -3.167 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.72 Mbit/s
95th percentile per-packet one-way delay: 47.204 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 46.634 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 45.271 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 53.738 ms
Loss rate: 1.42%
```
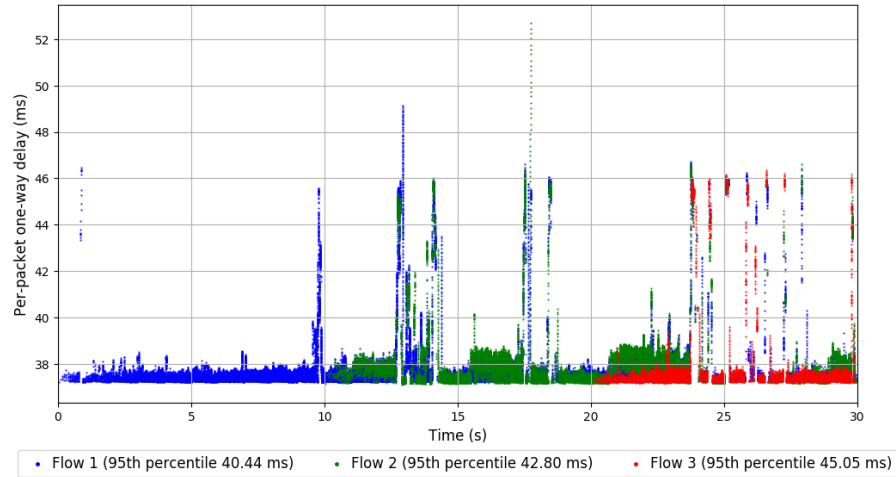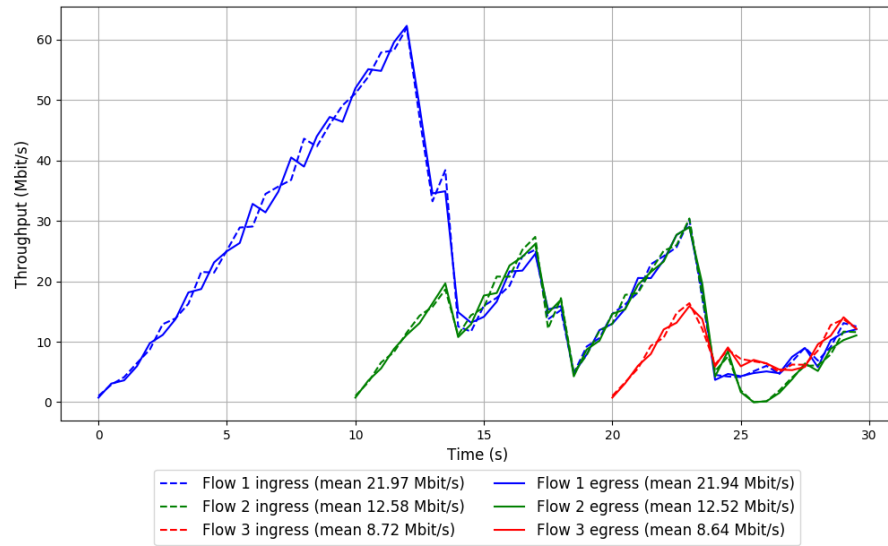
Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 2.54 Mbit/s)   Flow 1 egress (mean 2.51 Mbit/s)
Flow 2 ingress (mean 3.34 Mbit/s)   Flow 2 egress (mean 3.32 Mbit/s)
Flow 3 ingress (mean 6.11 Mbit/s)   Flow 3 egress (mean 6.06 Mbit/s)

Flow 1 (95th percentile 46.63 ms)   Flow 2 (95th percentile 45.27 ms)   Flow 3 (95th percentile 53.74 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-04-17 15:45:14
End at: 2018-04-17 15:45:44
Local clock offset: -1.514 ms
Remote clock offset: -8.149 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 45.368 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 2.89 Mbit/s
95th percentile per-packet one-way delay: 45.183 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 47.504 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 3.49 Mbit/s
95th percentile per-packet one-way delay: 45.499 ms
Loss rate: 1.38%
```
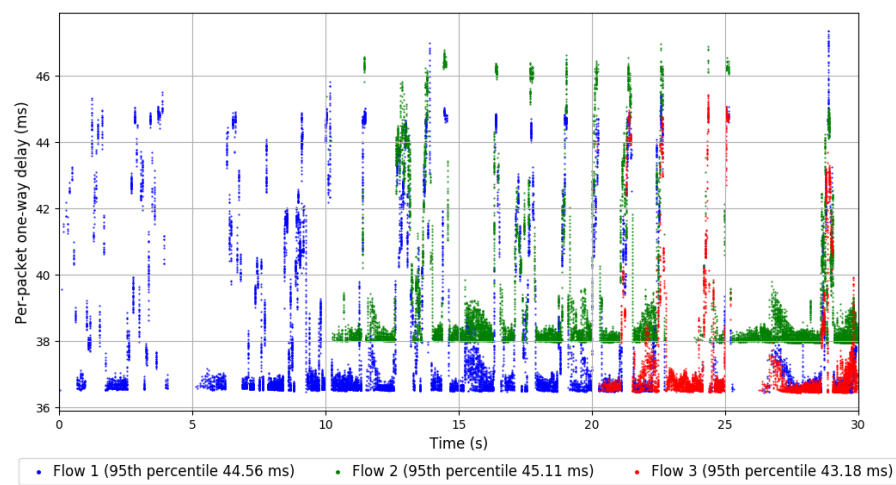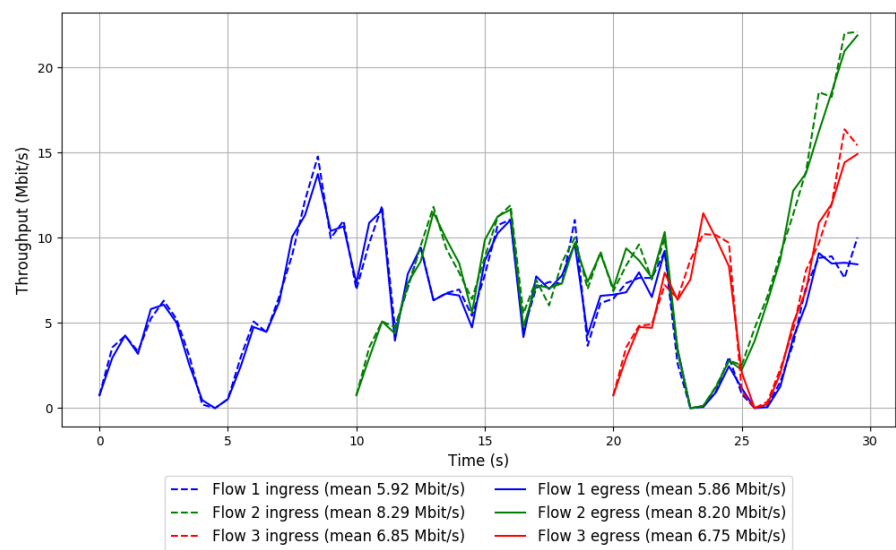
Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 2.92 Mbit/s)   Flow 1 egress (mean 2.89 Mbit/s)
Flow 2 ingress (mean 4.28 Mbit/s)   Flow 2 egress (mean 4.23 Mbit/s)
Flow 3 ingress (mean 3.51 Mbit/s)   Flow 3 egress (mean 3.49 Mbit/s)

Flow 1 (95th percentile 45.18 ms)   Flow 2 (95th percentile 47.50 ms)   Flow 3 (95th percentile 45.50 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2018-04-17 16:14:27
End at: 2018-04-17 16:14:57
Local clock offset: -0.5 ms
Remote clock offset: -6.244 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 45.674 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 44.940 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 44.985 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 46.299 ms
Loss rate: 2.78%
```
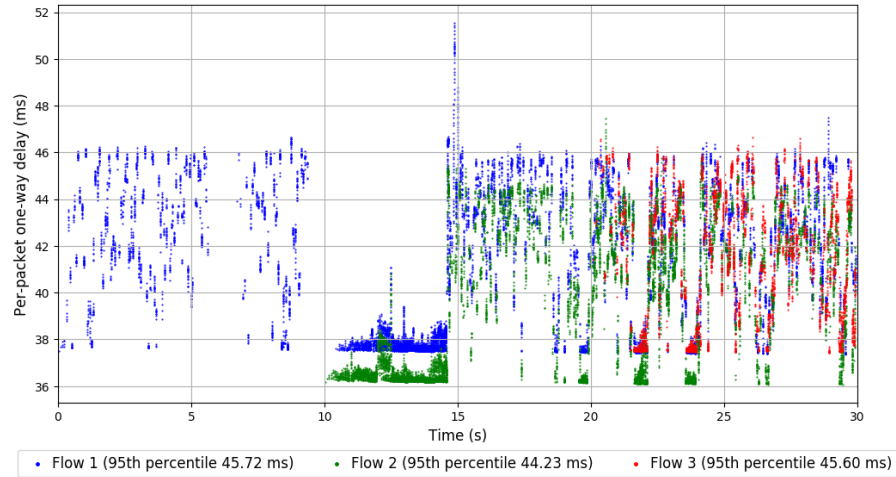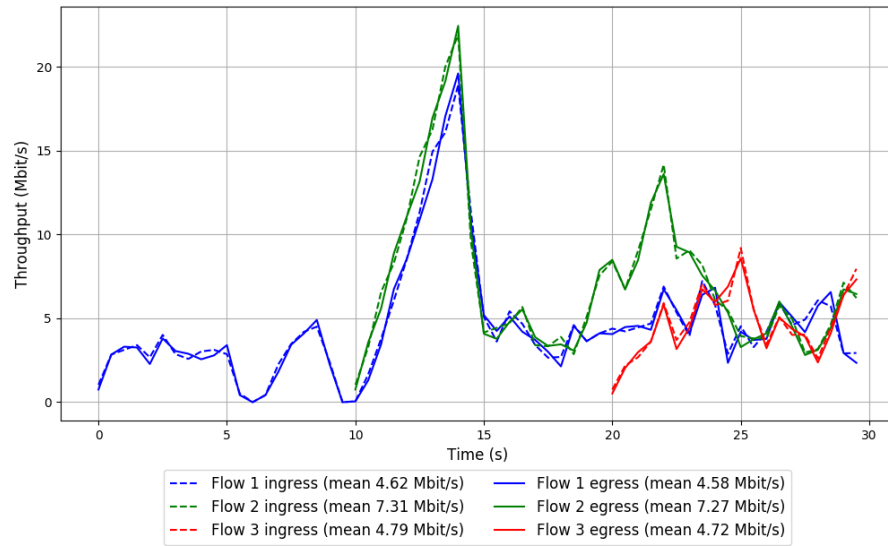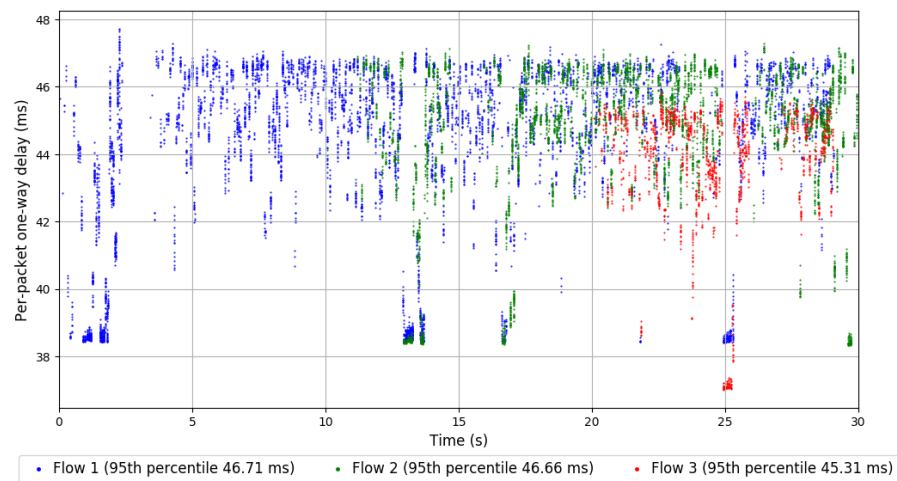
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 1.59 Mbit/s)   Flow 1 egress (mean 1.56 Mbit/s)
Flow 2 ingress (mean 1.81 Mbit/s)   Flow 2 egress (mean 1.77 Mbit/s)
Flow 3 ingress (mean 2.17 Mbit/s)   Flow 3 egress (mean 2.13 Mbit/s)

Flow 1 (95th percentile 44.94 ms)   Flow 2 (95th percentile 44.98 ms)   Flow 3 (95th percentile 46.30 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2018-04-17 16:40:19
End at: 2018-04-17 16:40:49
Local clock offset: -0.052 ms
Remote clock offset: -1.755 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.84 Mbit/s
95th percentile per-packet one-way delay: 46.504 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 46.755 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 46.161 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 45.371 ms
Loss rate: 1.82%
```
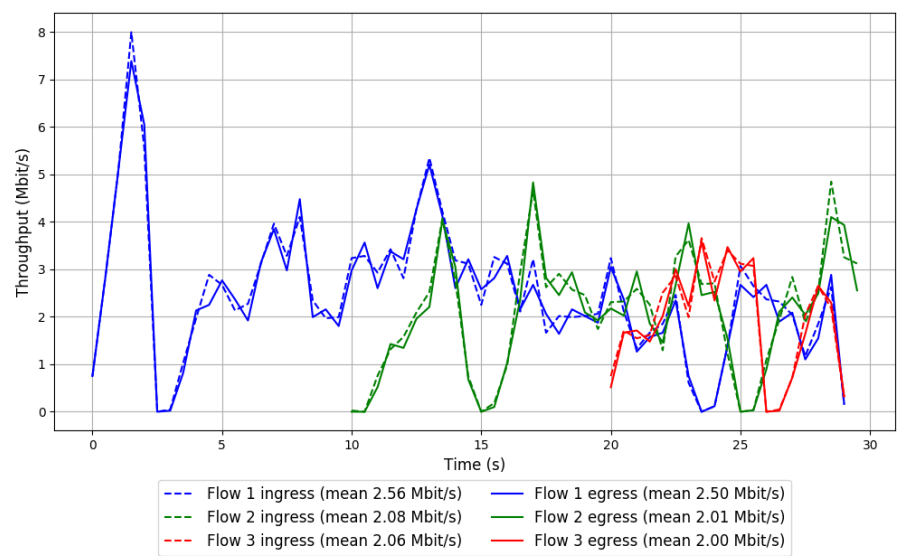
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 8.13 Mbit/s) — Flow 1 egress (mean 8.33 Mbit/s)
Flow 2 ingress (mean 4.89 Mbit/s) — Flow 2 egress (mean 4.87 Mbit/s)
Flow 3 ingress (mean 9.35 Mbit/s) — Flow 3 egress (mean 9.25 Mbit/s)

Flow 1 (95th percentile 46.76 ms)   Flow 2 (95th percentile 46.16 ms)   Flow 3 (95th percentile 45.37 ms)

42

```
Run 10: Statistics of TCP Cubic

Start at: 2018-04-17 17:05:44
End at: 2018-04-17 17:06:14
Local clock offset: 0.708 ms
Remote clock offset: -2.077 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 52.801 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 50.123 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 47.593 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 34.31 Mbit/s
95th percentile per-packet one-way delay: 61.836 ms
Loss rate: 0.47%
```
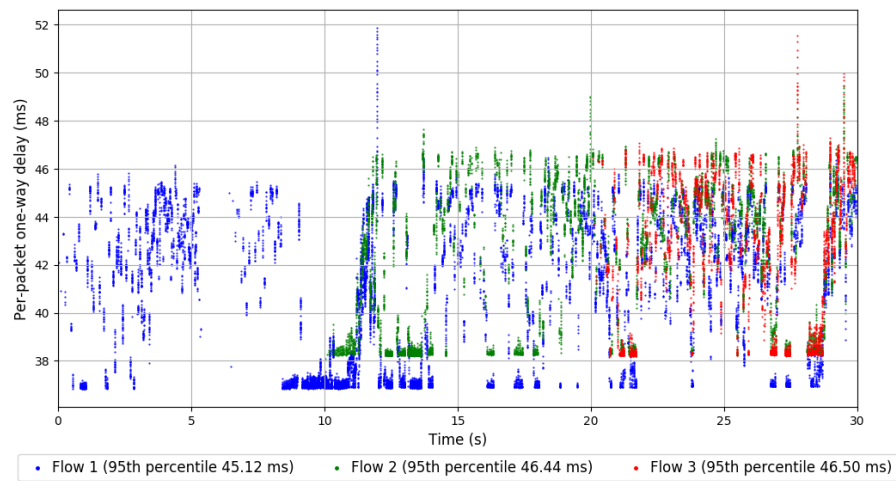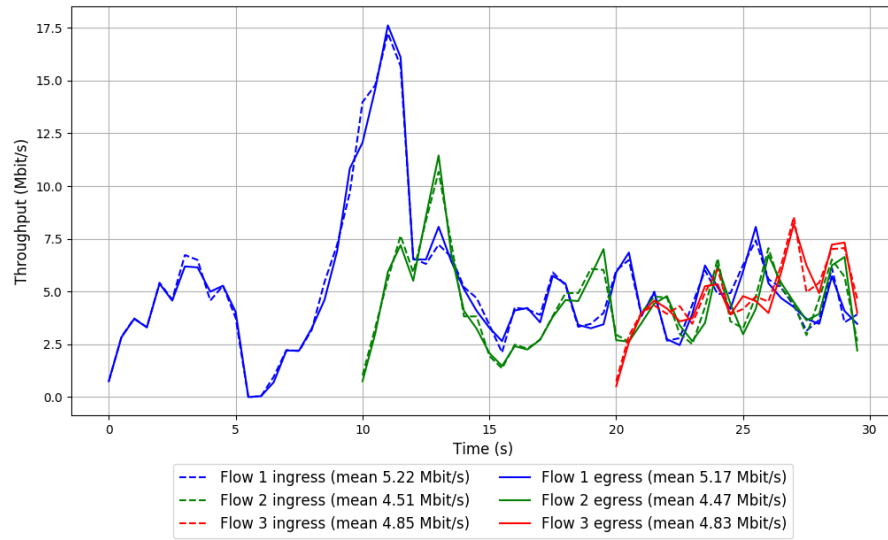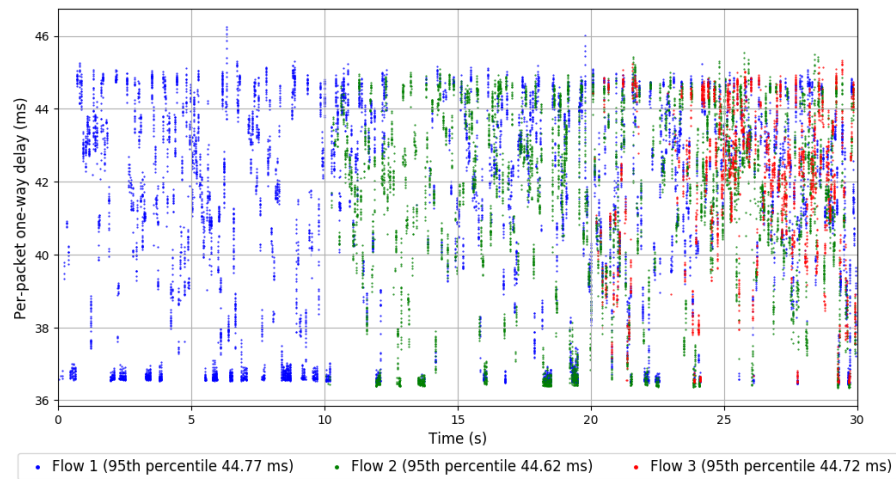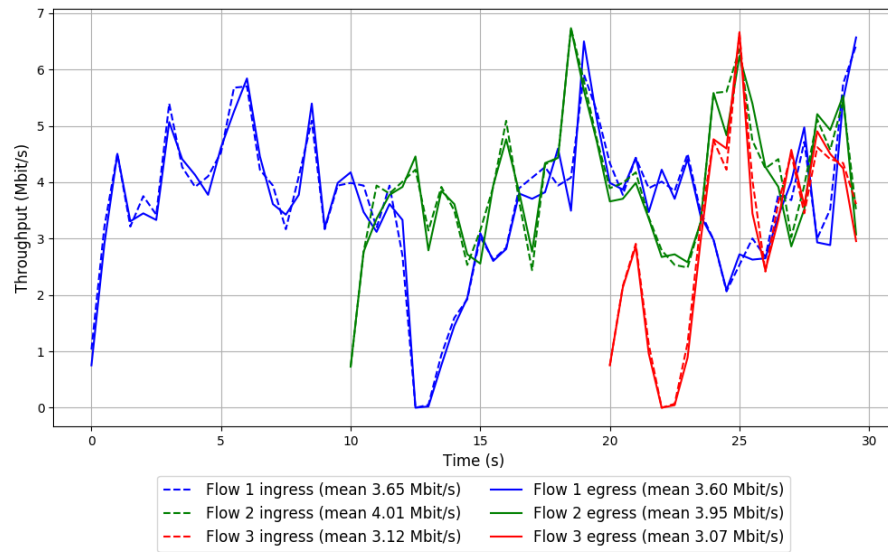
Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2018-04-17 13:11:13
End at: 2018-04-17 13:11:43
Local clock offset: 0.002 ms
Remote clock offset: -2.094 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.11 Mbit/s
95th percentile per-packet one-way delay: 41.533 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 21.94 Mbit/s
95th percentile per-packet one-way delay: 40.444 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 42.799 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 8.64 Mbit/s
95th percentile per-packet one-way delay: 45.054 ms
Loss rate: 1.53%
```
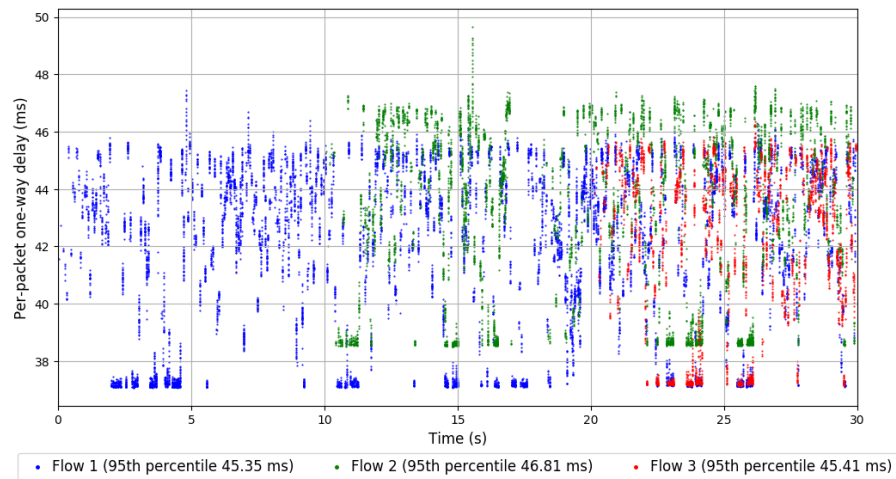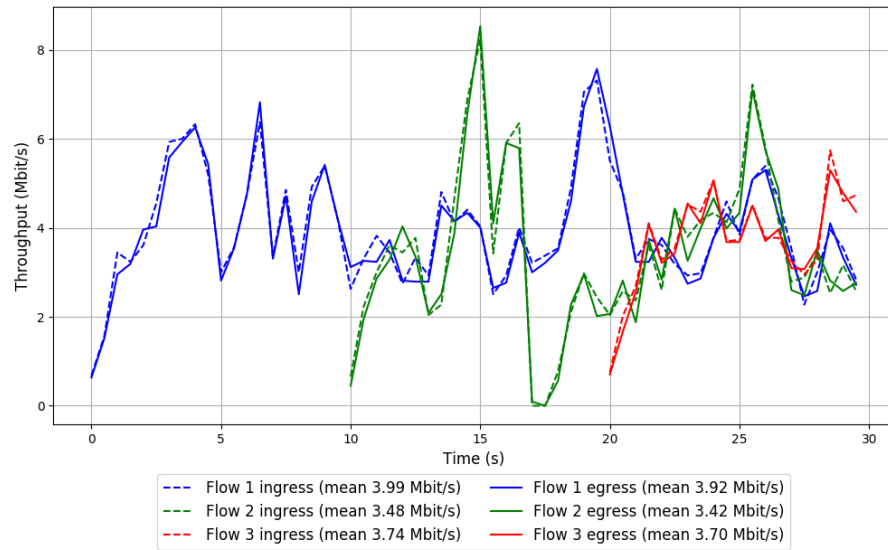
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-04-17 13:35:21
End at: 2018-04-17 13:35:51
Local clock offset: 2.298 ms
Remote clock offset: -1.7 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 44.578 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 44.560 ms
Loss rate: 1.27%
-- Flow 2:
Average throughput: 8.20 Mbit/s
95th percentile per-packet one-way delay: 45.114 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 43.182 ms
Loss rate: 2.29%
```
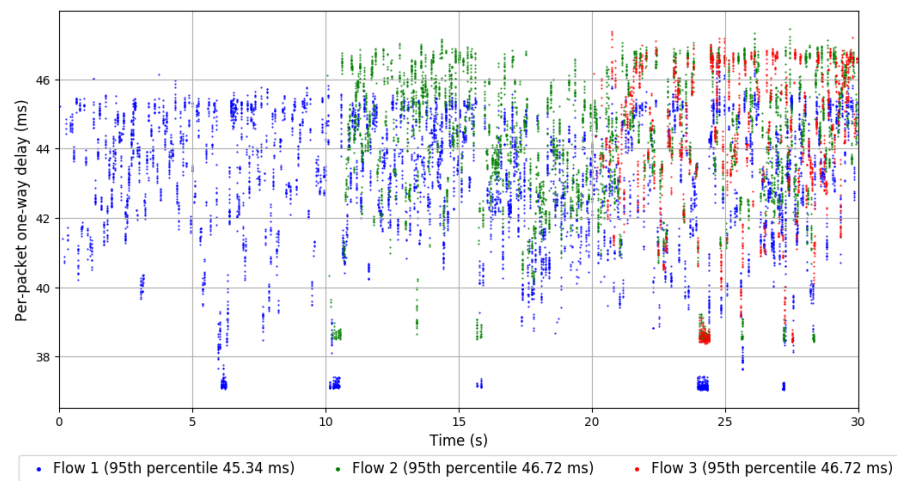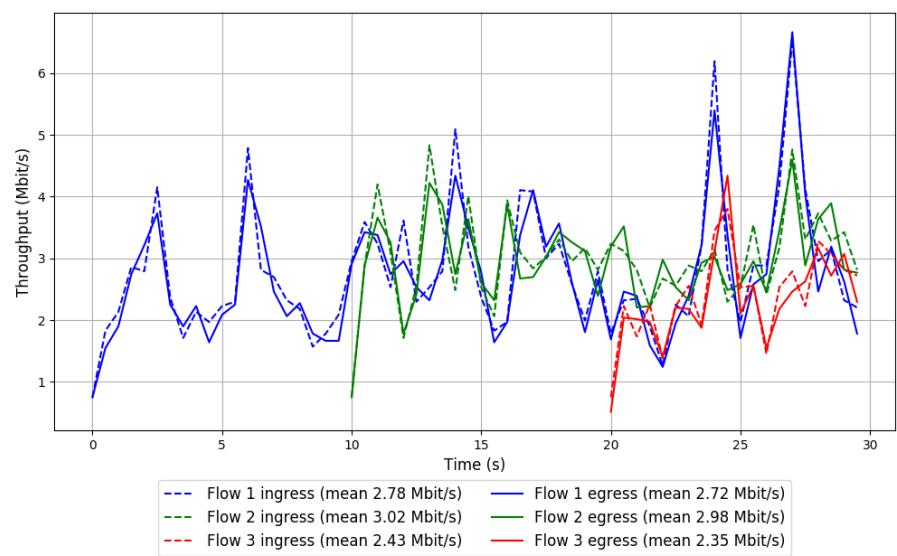
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-04-17 13:58:53
End at: 2018-04-17 13:59:23
Local clock offset: 4.039 ms
Remote clock offset: -1.98 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 45.424 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 45.724 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 7.27 Mbit/s
95th percentile per-packet one-way delay: 44.234 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 45.598 ms
Loss rate: 2.24%
```
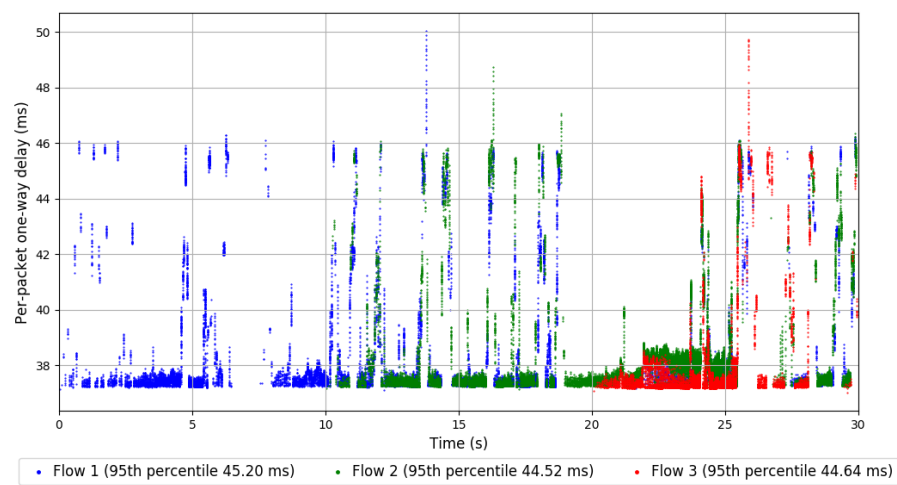
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-04-17 14:24:26
End at: 2018-04-17 14:24:56
Local clock offset: 11.085 ms
Remote clock offset: -1.256 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 46.674 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 46.712 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 46.660 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 45.313 ms
Loss rate: 2.86%
```
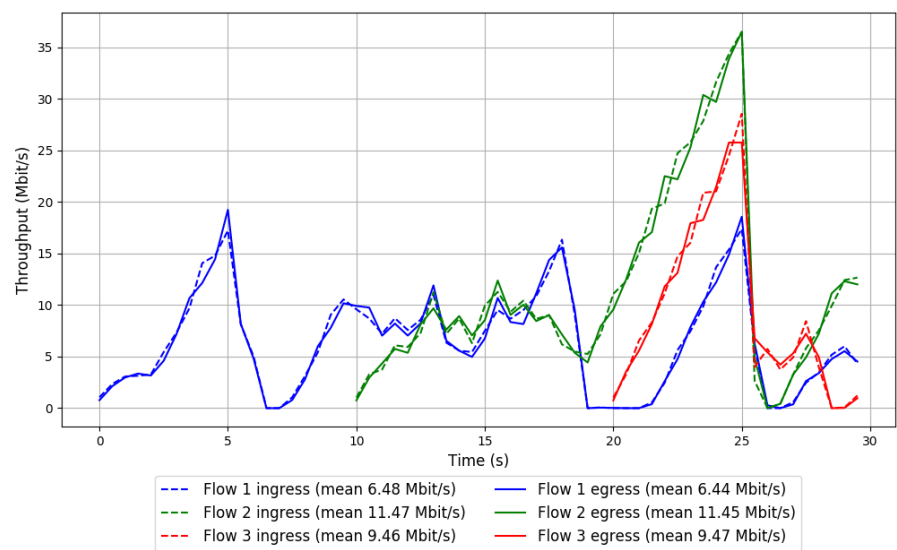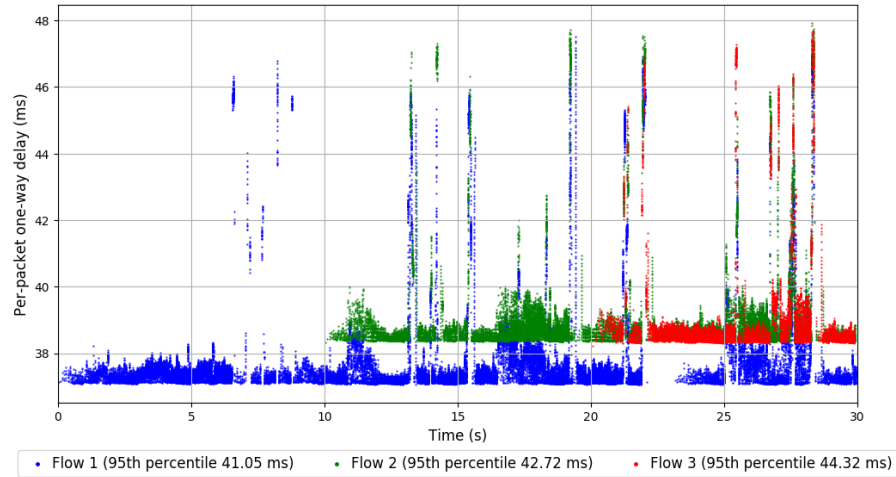
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.56 Mbit/s)   Flow 1 egress (mean 2.50 Mbit/s)
Flow 2 ingress (mean 2.08 Mbit/s)   Flow 2 egress (mean 2.01 Mbit/s)
Flow 3 ingress (mean 2.06 Mbit/s)   Flow 3 egress (mean 2.00 Mbit/s)

Flow 1 (95th percentile 46.71 ms)   Flow 2 (95th percentile 46.66 ms)   Flow 3 (95th percentile 45.31 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-04-17 14:53:08
End at: 2018-04-17 14:53:38
Local clock offset: 0.62 ms
Remote clock offset: 0.074 ms

# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.73 Mbit/s
95th percentile per-packet one-way delay: 46.186 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 5.17 Mbit/s
95th percentile per-packet one-way delay: 45.118 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 46.442 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 46.498 ms
Loss rate: 1.22%
```
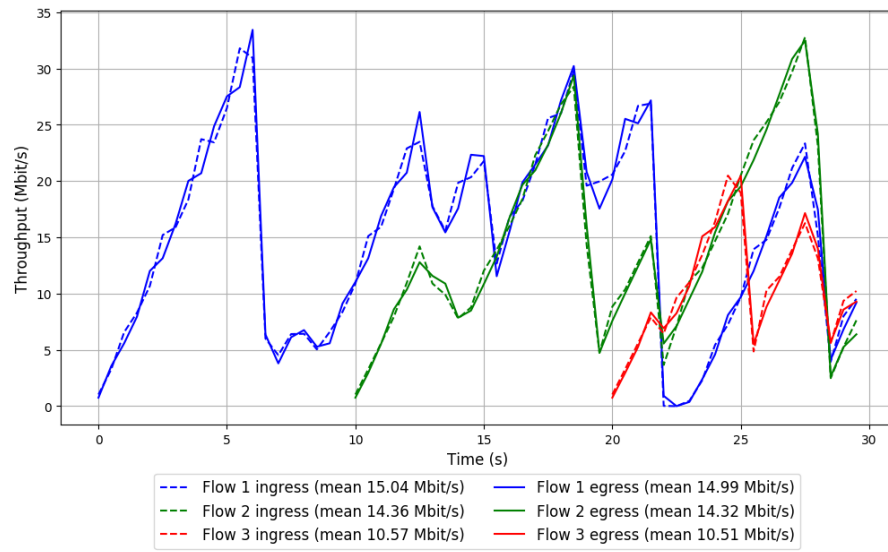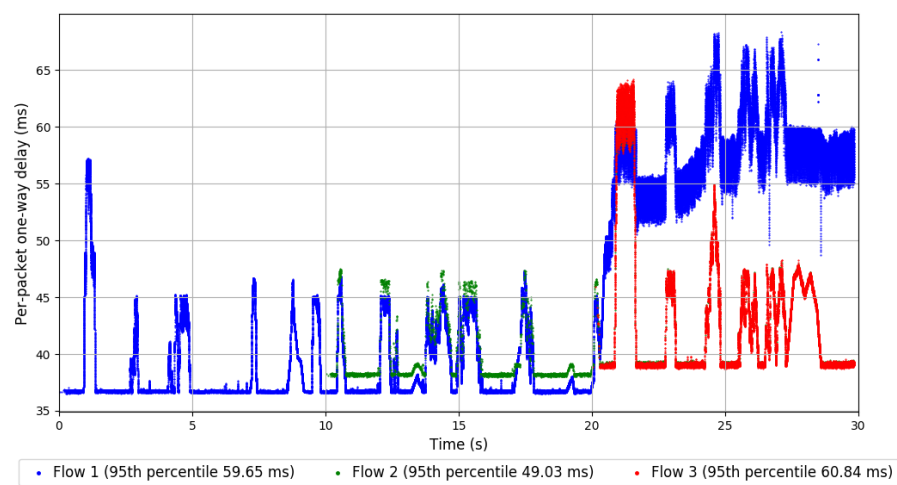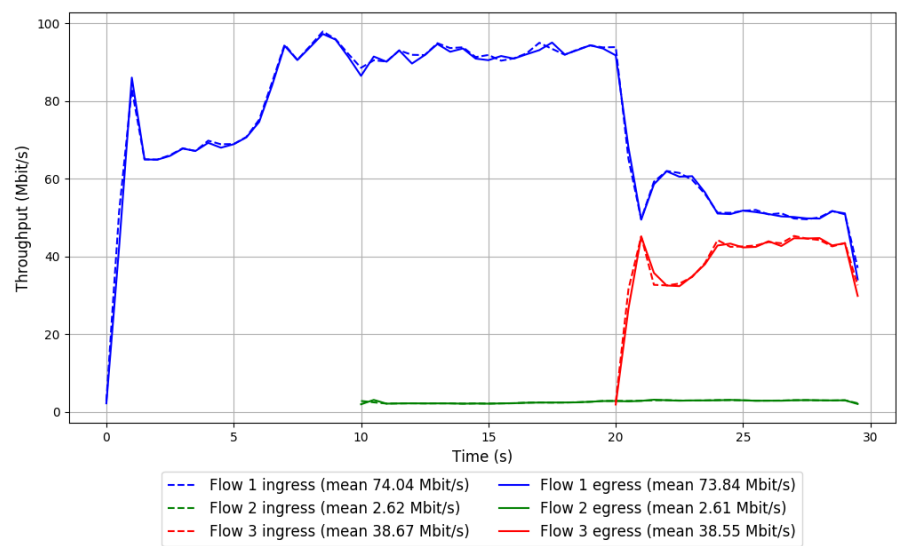
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 5.22 Mbit/s) --- Flow 1 egress (mean 5.17 Mbit/s)
Flow 2 ingress (mean 4.51 Mbit/s) --- Flow 2 egress (mean 4.47 Mbit/s)
Flow 3 ingress (mean 4.85 Mbit/s) --- Flow 3 egress (mean 4.83 Mbit/s)

Flow 1 (95th percentile 45.12 ms) Flow 2 (95th percentile 46.44 ms) Flow 3 (95th percentile 46.50 ms)

54

```
Run 6: Statistics of LEDBAT

Start at: 2018-04-17 15:21:09
End at: 2018-04-17 15:21:39
Local clock offset: -1.507 ms
Remote clock offset: -3.736 ms


# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 44.714 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 44.768 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 44.621 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 3.07 Mbit/s
95th percentile per-packet one-way delay: 44.715 ms
Loss rate: 2.34%
```
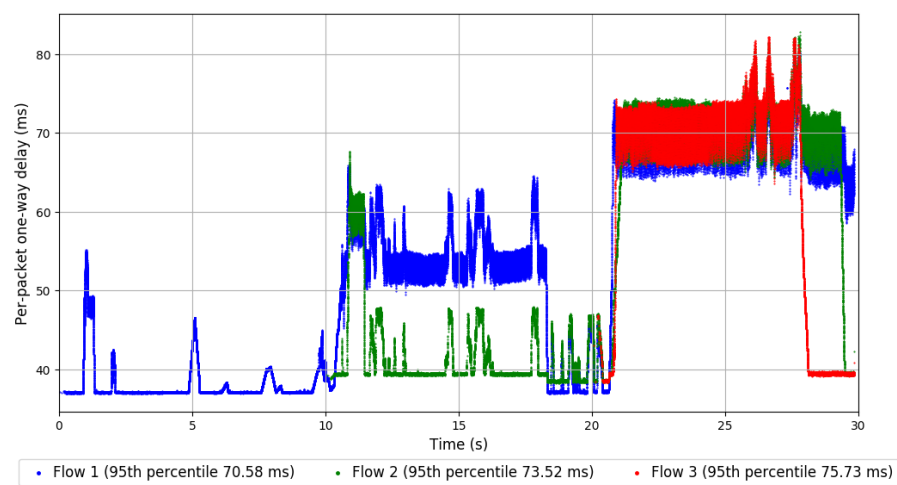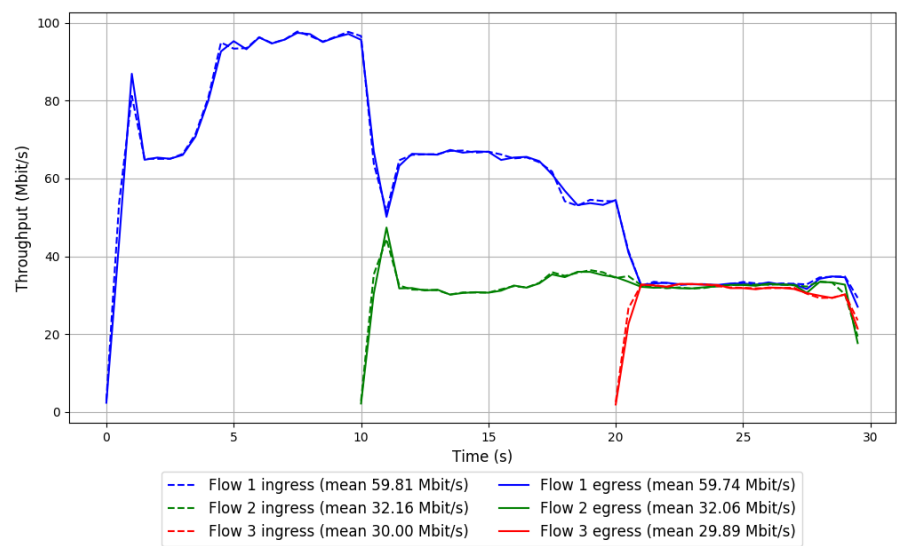
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 3.65 Mbit/s)   Flow 1 egress (mean 3.60 Mbit/s)
Flow 2 ingress (mean 4.01 Mbit/s)   Flow 2 egress (mean 3.95 Mbit/s)
Flow 3 ingress (mean 3.12 Mbit/s)   Flow 3 egress (mean 3.07 Mbit/s)

Flow 1 (95th percentile 44.77 ms)   Flow 2 (95th percentile 44.62 ms)   Flow 3 (95th percentile 44.72 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2018-04-17 15:48:35
End at: 2018-04-17 15:49:05
Local clock offset: -0.996 ms
Remote clock offset: -7.614 ms

# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 46.368 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 45.352 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 46.809 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 3.70 Mbit/s
95th percentile per-packet one-way delay: 45.410 ms
Loss rate: 1.83%
```
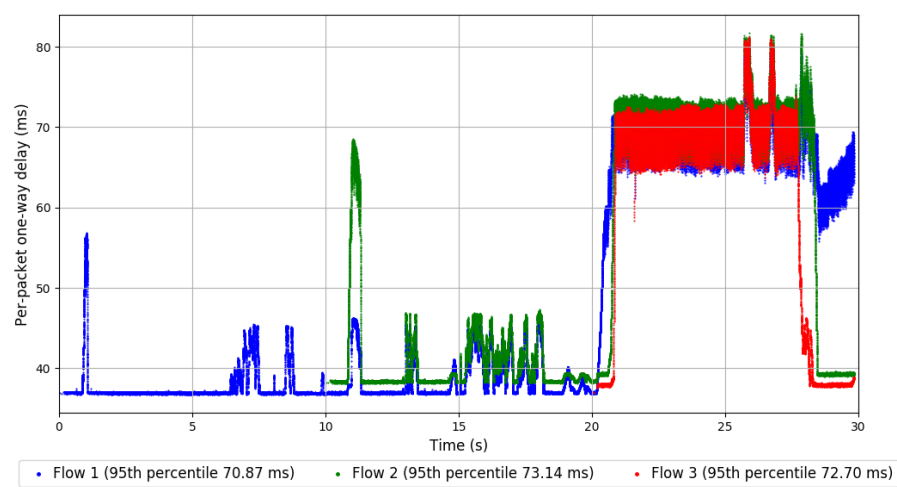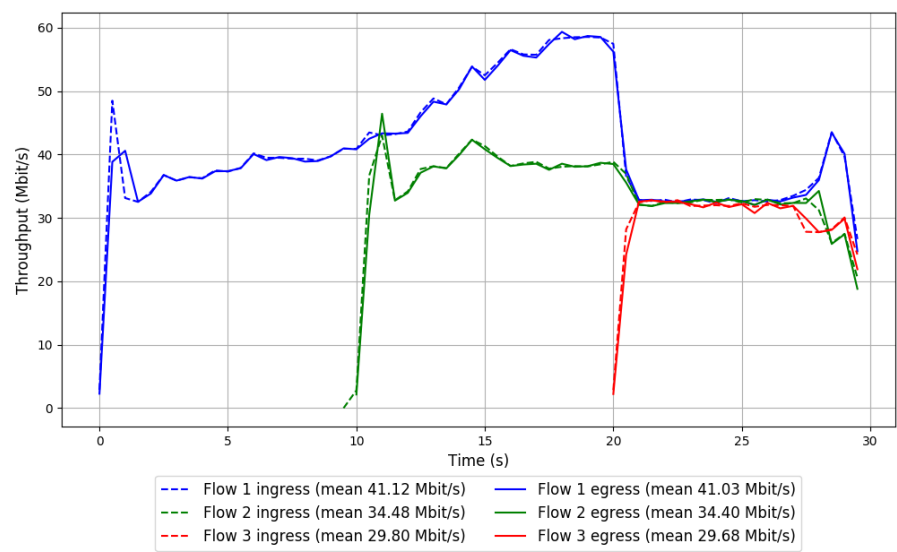
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-04-17 16:18:09
End at: 2018-04-17 16:18:39
Local clock offset: -0.214 ms
Remote clock offset: -6.795 ms

# Below is generated by plot.py at 2018-04-17 21:49:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 46.591 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 2.72 Mbit/s
95th percentile per-packet one-way delay: 45.336 ms
Loss rate: 2.36%
-- Flow 2:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 46.716 ms
Loss rate: 2.01%
-- Flow 3:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 46.721 ms
Loss rate: 3.89%
```
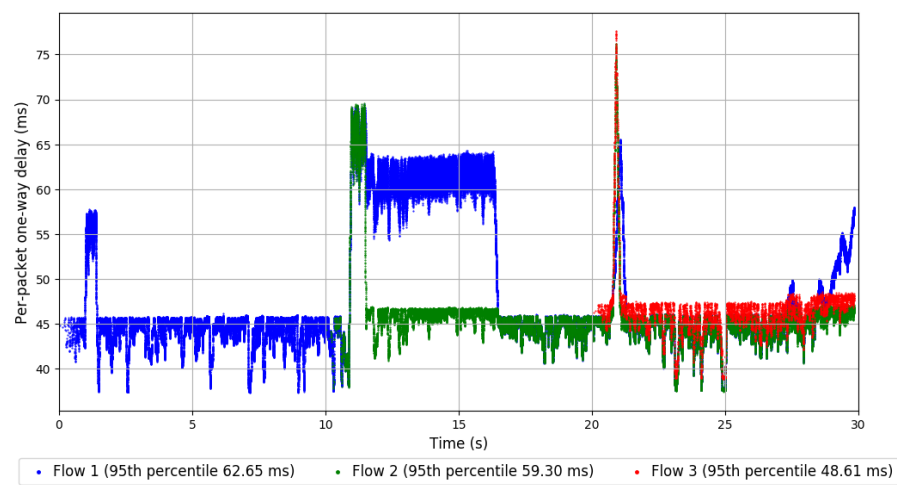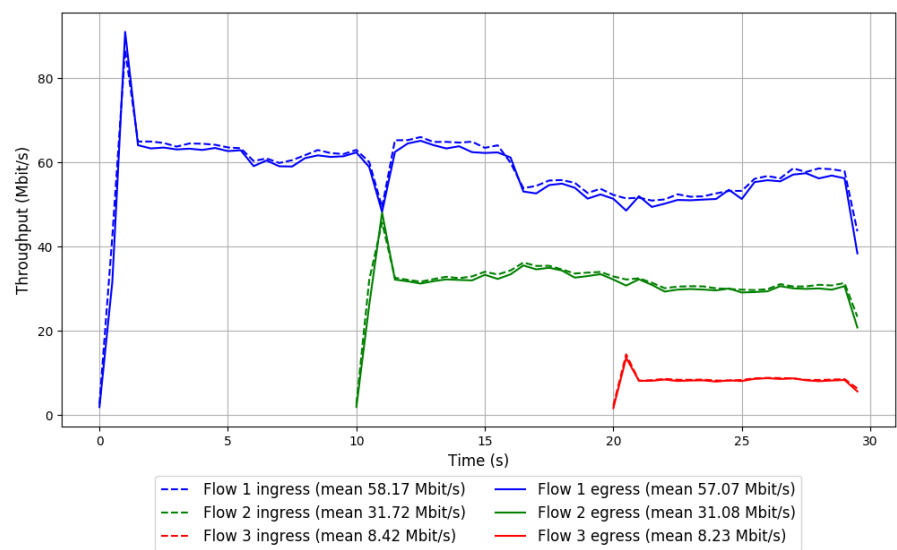
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.78 Mbit/s) --- Flow 1 egress (mean 2.72 Mbit/s)
Flow 2 ingress (mean 3.02 Mbit/s) --- Flow 2 egress (mean 2.98 Mbit/s)
Flow 3 ingress (mean 2.43 Mbit/s) --- Flow 3 egress (mean 2.35 Mbit/s)

Flow 1 (95th percentile 45.34 ms)   Flow 2 (95th percentile 46.72 ms)   Flow 3 (95th percentile 46.72 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2018-04-17 16:43:25
End at: 2018-04-17 16:43:55
Local clock offset: -0.112 ms
Remote clock offset: -2.006 ms

# Below is generated by plot.py at 2018-04-17 21:49:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.17 Mbit/s
95th percentile per-packet one-way delay: 44.868 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 45.203 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 11.45 Mbit/s
95th percentile per-packet one-way delay: 44.516 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 44.636 ms
Loss rate: 0.59%
```
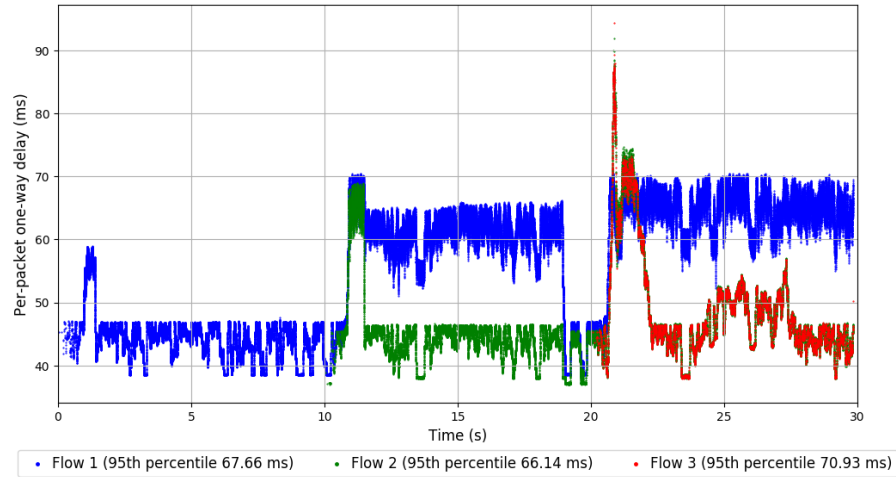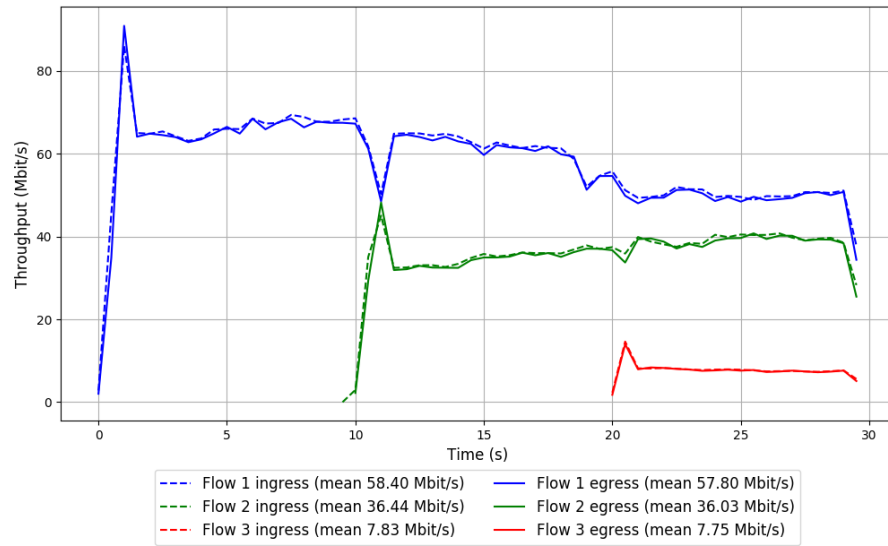
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 6.48 Mbit/s) Flow 1 egress (mean 6.44 Mbit/s)
Flow 2 ingress (mean 11.47 Mbit/s) Flow 2 egress (mean 11.45 Mbit/s)
Flow 3 ingress (mean 9.46 Mbit/s) Flow 3 egress (mean 9.47 Mbit/s)

Flow 1 (95th percentile 45.20 ms) Flow 2 (95th percentile 44.52 ms) Flow 3 (95th percentile 44.64 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2018-04-17 17:08:33
End at: 2018-04-17 17:09:03
Local clock offset: 0.864 ms
Remote clock offset: -2.556 ms

# Below is generated by plot.py at 2018-04-17 21:49:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.95 Mbit/s
95th percentile per-packet one-way delay: 42.090 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 14.99 Mbit/s
95th percentile per-packet one-way delay: 41.052 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 14.32 Mbit/s
95th percentile per-packet one-way delay: 42.723 ms
Loss rate: 0.58%
-- Flow 3:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 44.316 ms
Loss rate: 1.29%
```
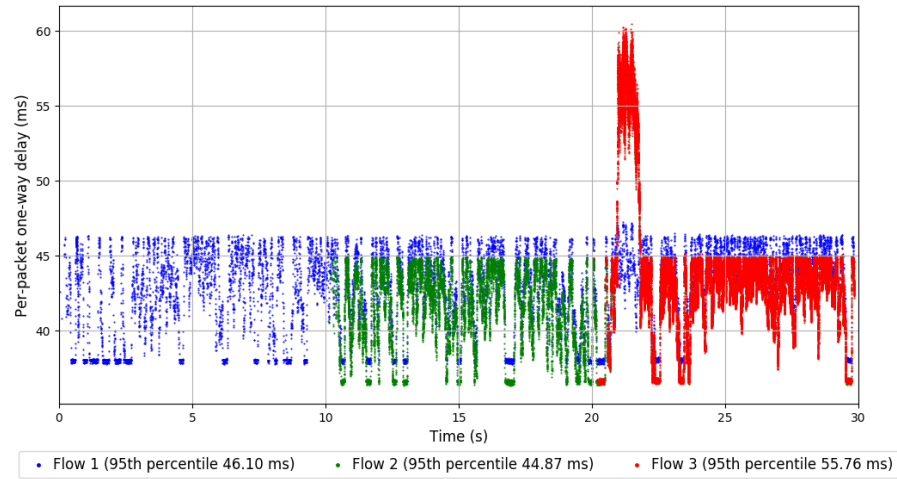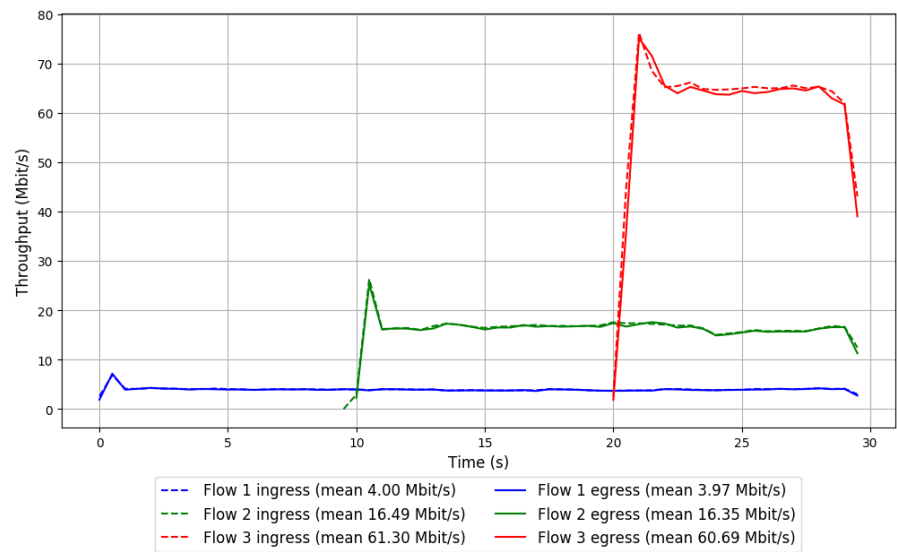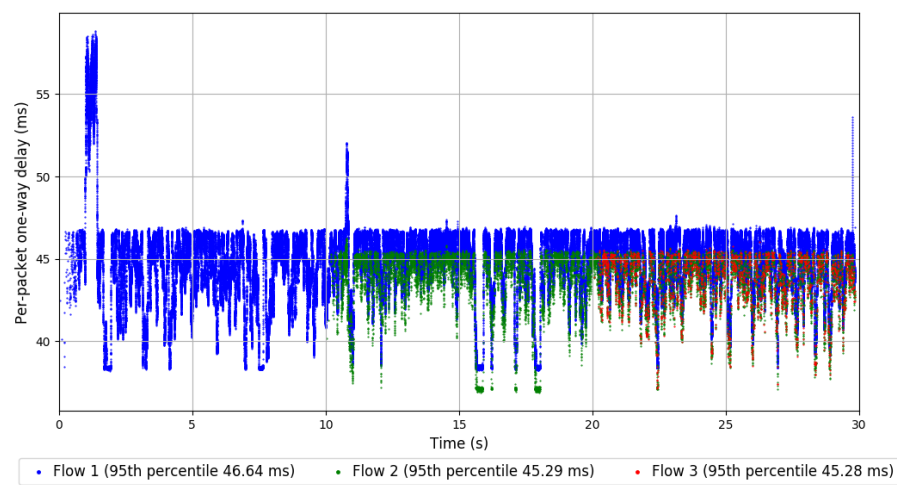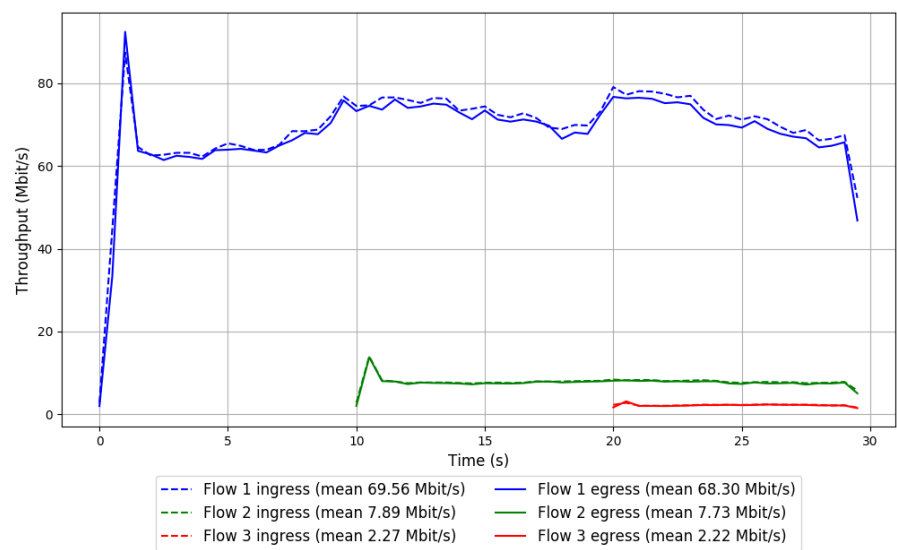
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-04-17 13:24:12
End at: 2018-04-17 13:24:42
Local clock offset: -0.27 ms
Remote clock offset: -1.707 ms


# Below is generated by plot.py at 2018-04-17 21:50:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.24 Mbit/s
95th percentile per-packet one-way delay: 59.735 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 73.84 Mbit/s
95th percentile per-packet one-way delay: 59.654 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 49.035 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 38.55 Mbit/s
95th percentile per-packet one-way delay: 60.839 ms
Loss rate: 1.01%
```
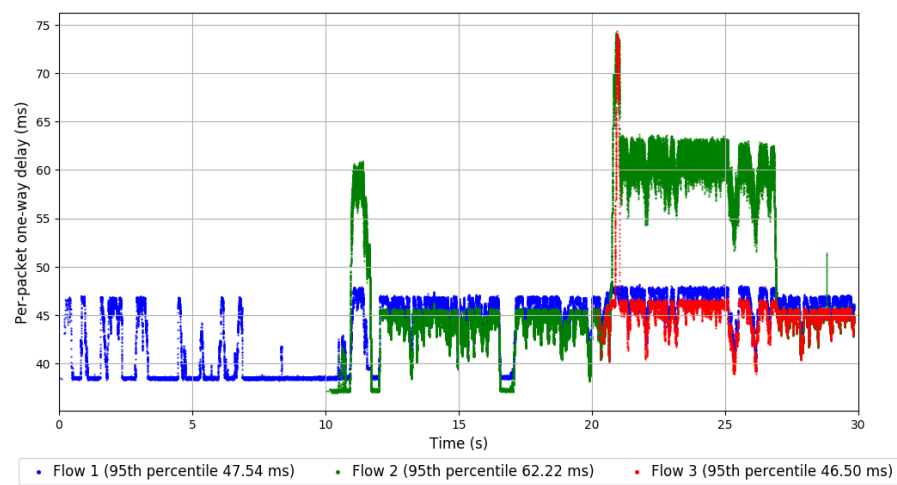
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 74.04 Mbit/s) — — — Flow 1 egress (mean 73.84 Mbit/s)
Flow 2 ingress (mean 2.62 Mbit/s) — — — Flow 2 egress (mean 2.61 Mbit/s)
Flow 3 ingress (mean 38.67 Mbit/s) — — — Flow 3 egress (mean 38.55 Mbit/s)

Flow 1 (95th percentile 59.65 ms)   Flow 2 (95th percentile 49.03 ms)   Flow 3 (95th percentile 60.84 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-04-17 13:48:02
End at: 2018-04-17 13:48:32
Local clock offset: 3.237 ms
Remote clock offset: -2.462 ms


# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.85 Mbit/s
95th percentile per-packet one-way delay: 72.808 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 59.74 Mbit/s
95th percentile per-packet one-way delay: 70.583 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 73.518 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 29.89 Mbit/s
95th percentile per-packet one-way delay: 75.731 ms
Loss rate: 1.09%
```
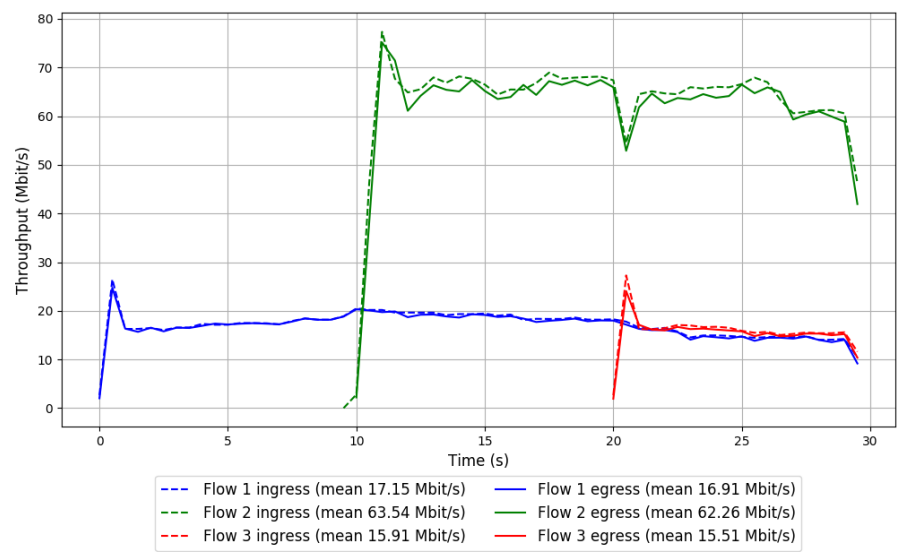
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 59.81 Mbit/s)   Flow 1 egress (mean 59.74 Mbit/s)
Flow 2 ingress (mean 32.16 Mbit/s)   Flow 2 egress (mean 32.06 Mbit/s)
Flow 3 ingress (mean 30.00 Mbit/s)   Flow 3 egress (mean 29.89 Mbit/s)

Flow 1 (95th percentile 70.58 ms)   Flow 2 (95th percentile 73.52 ms)   Flow 3 (95th percentile 75.73 ms)
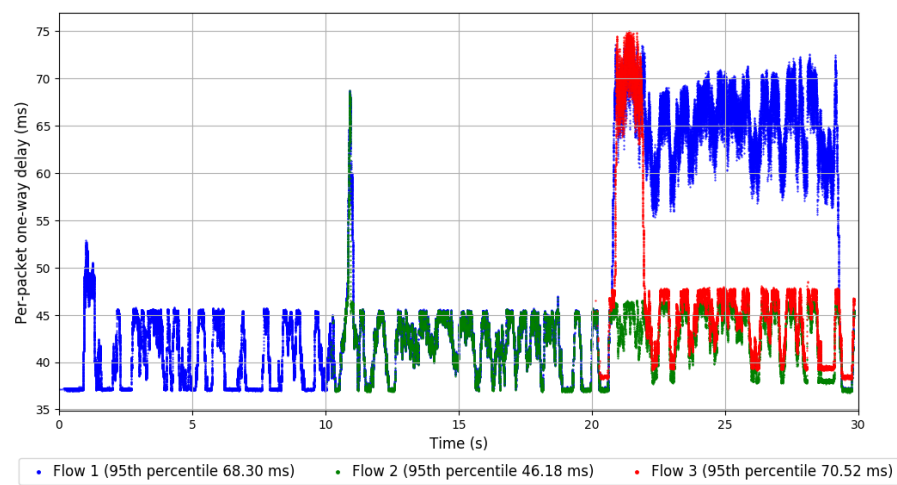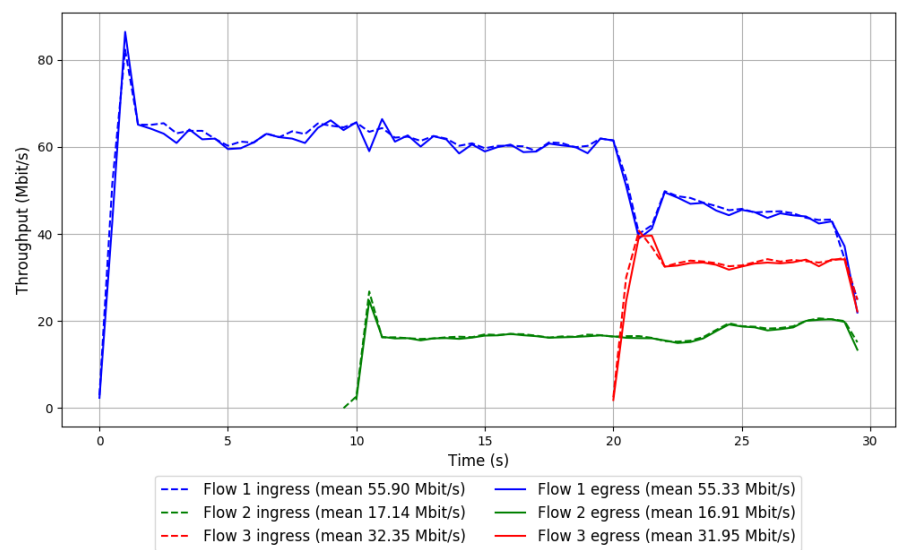
68

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-04-17 14:12:39
End at: 2018-04-17 14:13:09
Local clock offset: 9.062 ms
Remote clock offset: -1.566 ms

# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.63 Mbit/s
95th percentile per-packet one-way delay: 72.274 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 70.869 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 34.40 Mbit/s
95th percentile per-packet one-way delay: 73.143 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 29.68 Mbit/s
95th percentile per-packet one-way delay: 72.698 ms
Loss rate: 1.05%
```
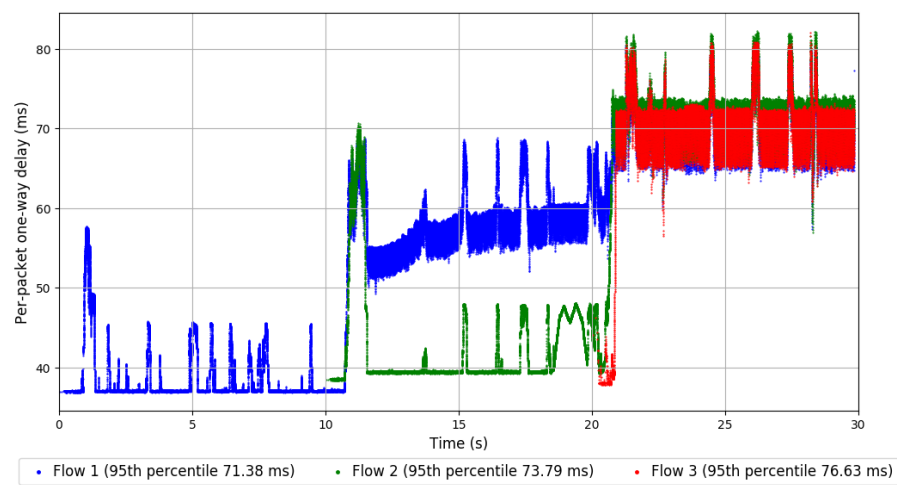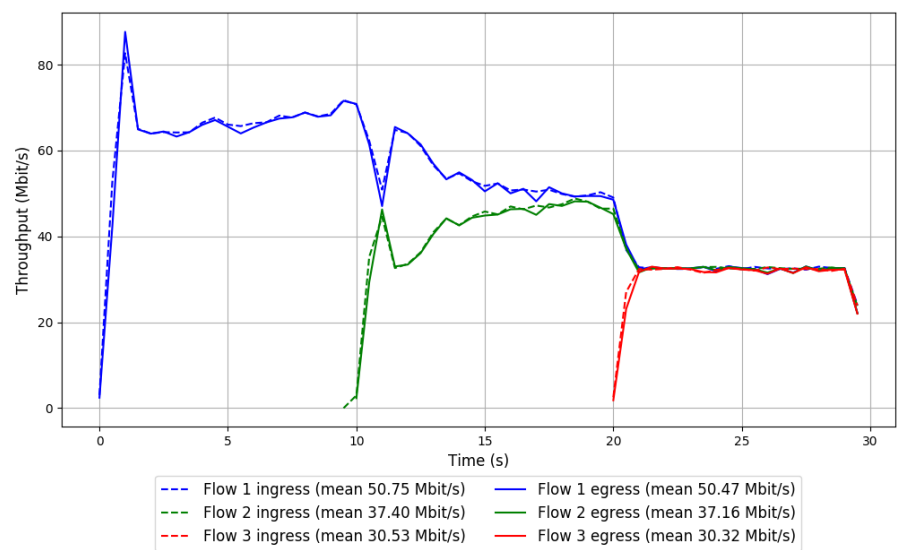
Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-04-17 14:41:26
End at: 2018-04-17 14:41:56
Local clock offset: 4.463 ms
Remote clock offset: -0.808 ms


# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 62.576 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 57.07 Mbit/s
95th percentile per-packet one-way delay: 62.648 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 59.296 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 48.606 ms
Loss rate: 2.95%
```
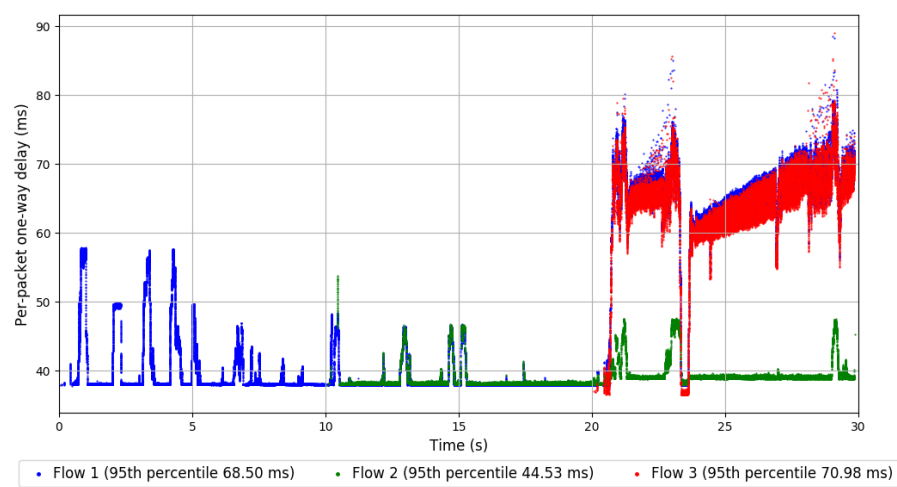
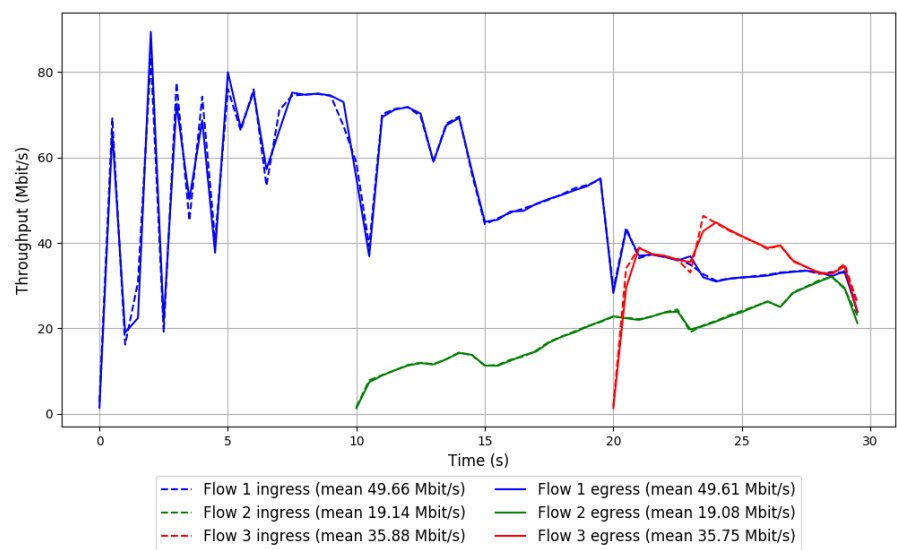Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-04-17 15:08:14
End at: 2018-04-17 15:08:44
Local clock offset: -1.313 ms
Remote clock offset: 0.097 ms


# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.28 Mbit/s
95th percentile per-packet one-way delay: 67.578 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 57.80 Mbit/s
95th percentile per-packet one-way delay: 67.662 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 36.03 Mbit/s
95th percentile per-packet one-way delay: 66.135 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 70.926 ms
Loss rate: 1.79%
```

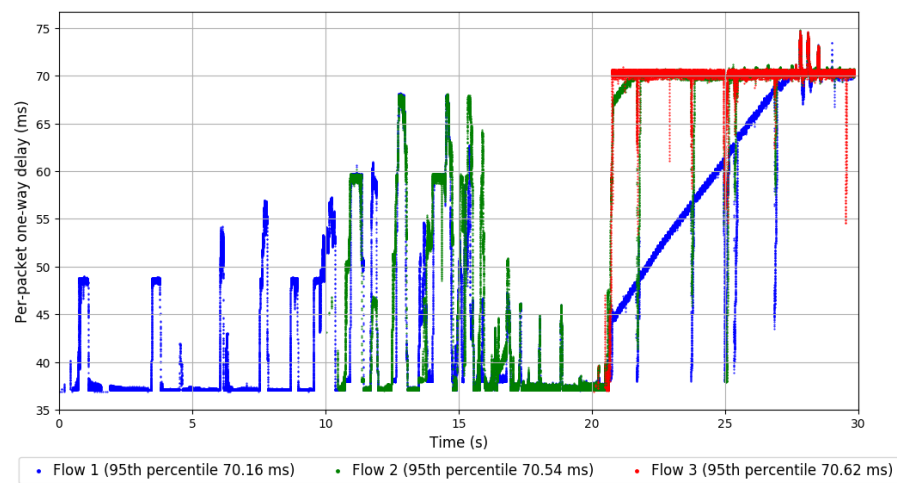Run 5: Report of PCC-Allegro — Data Link

```
Run 6: Statistics of PCC-Allegro

Start at: 2018-04-17 15:36:25
End at: 2018-04-17 15:36:55
Local clock offset: -2.642 ms
Remote clock offset: -6.817 ms


# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 54.483 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 46.101 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 16.35 Mbit/s
95th percentile per-packet one-way delay: 44.866 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 60.69 Mbit/s
95th percentile per-packet one-way delay: 55.761 ms
Loss rate: 1.75%
```

Run 6: Report of PCC-Allegro — Data Link

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-04-17 16:04:54
End at: 2018-04-17 16:05:24
Local clock offset: -0.316 ms
Remote clock offset: -6.396 ms


# Below is generated by plot.py at 2018-04-17 21:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.16 Mbit/s
95th percentile per-packet one-way delay: 46.622 ms
Loss rate: 2.09%
-- Flow 1:
Average throughput: 68.30 Mbit/s
95th percentile per-packet one-way delay: 46.637 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 45.286 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 45.285 ms
Loss rate: 3.01%
```

Run 7: Report of PCC-Allegro — Data Link

```
Run 8: Statistics of PCC-Allegro

Start at: 2018-04-17 16:31:54
End at: 2018-04-17 16:32:24
Local clock offset: -0.028 ms
Remote clock offset: -3.182 ms

# Below is generated by plot.py at 2018-04-17 21:50:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.38 Mbit/s
95th percentile per-packet one-way delay: 61.859 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 16.91 Mbit/s
95th percentile per-packet one-way delay: 47.539 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 62.26 Mbit/s
95th percentile per-packet one-way delay: 62.218 ms
Loss rate: 2.33%
-- Flow 3:
Average throughput: 15.51 Mbit/s
95th percentile per-packet one-way delay: 46.504 ms
Loss rate: 3.24%
```
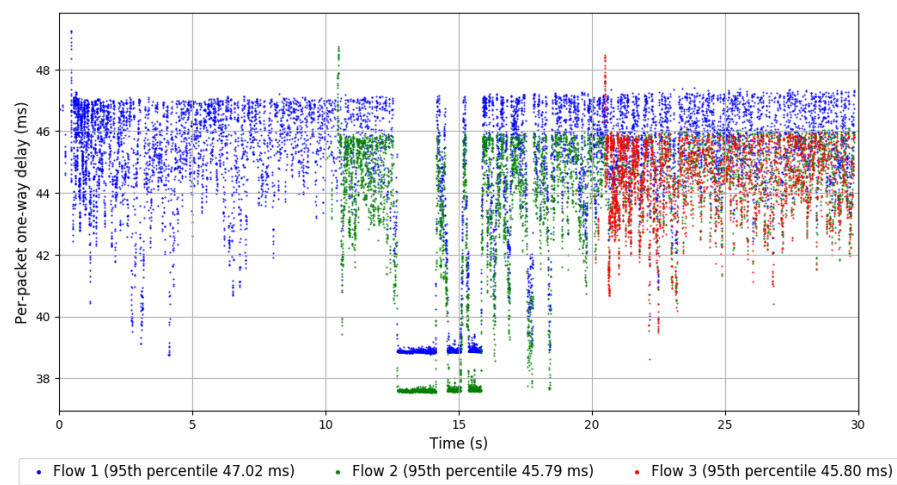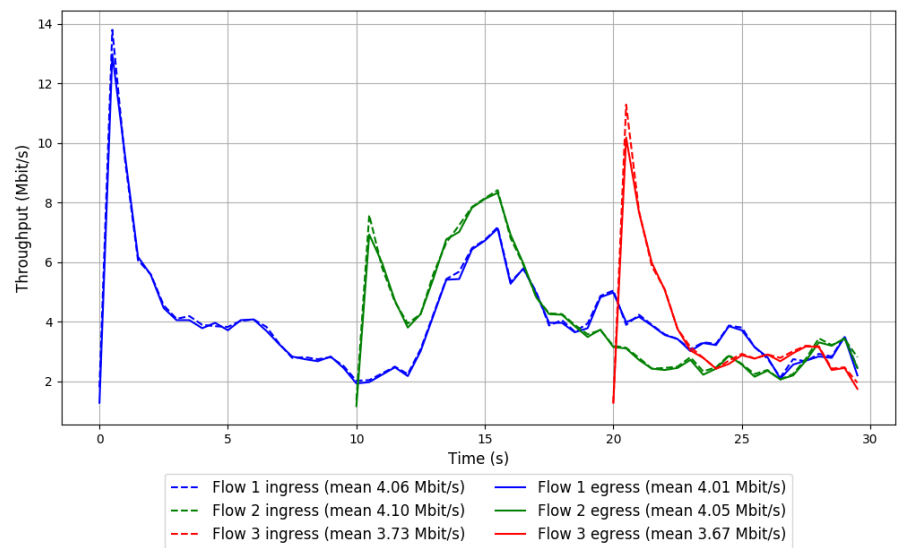
Run 8: Report of PCC-Allegro — Data Link

```
Run 9: Statistics of PCC-Allegro

Start at: 2018-04-17 16:57:23
End at: 2018-04-17 16:57:53
Local clock offset: 0.511 ms
Remote clock offset: -1.857 ms

# Below is generated by plot.py at 2018-04-17 21:51:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.06 Mbit/s
95th percentile per-packet one-way delay: 68.189 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 55.33 Mbit/s
95th percentile per-packet one-way delay: 68.301 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 16.91 Mbit/s
95th percentile per-packet one-way delay: 46.177 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 31.95 Mbit/s
95th percentile per-packet one-way delay: 70.519 ms
Loss rate: 2.01%
```

Run 9: Report of PCC-Allegro — Data Link

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-04-17 17:21:32
End at: 2018-04-17 17:22:02
Local clock offset: 0.9 ms
Remote clock offset: -2.615 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.13 Mbit/s
95th percentile per-packet one-way delay: 73.143 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 50.47 Mbit/s
95th percentile per-packet one-way delay: 71.382 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 37.16 Mbit/s
95th percentile per-packet one-way delay: 73.790 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 30.32 Mbit/s
95th percentile per-packet one-way delay: 76.627 ms
Loss rate: 1.56%
```
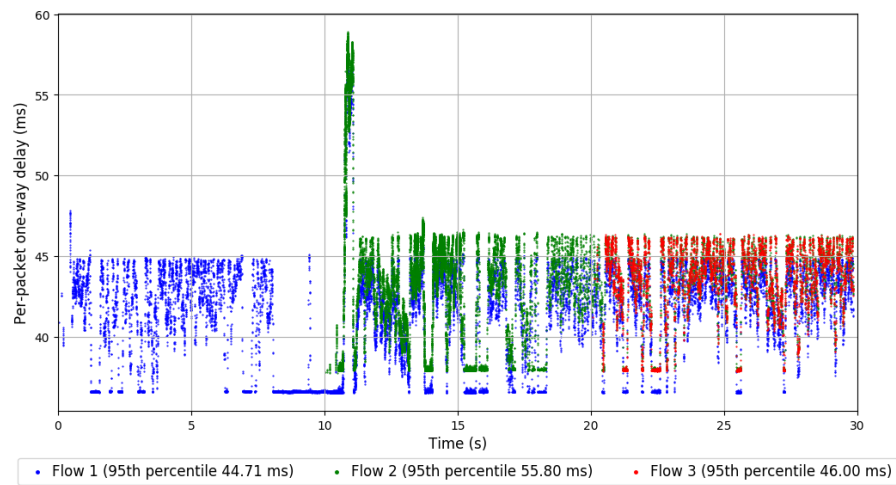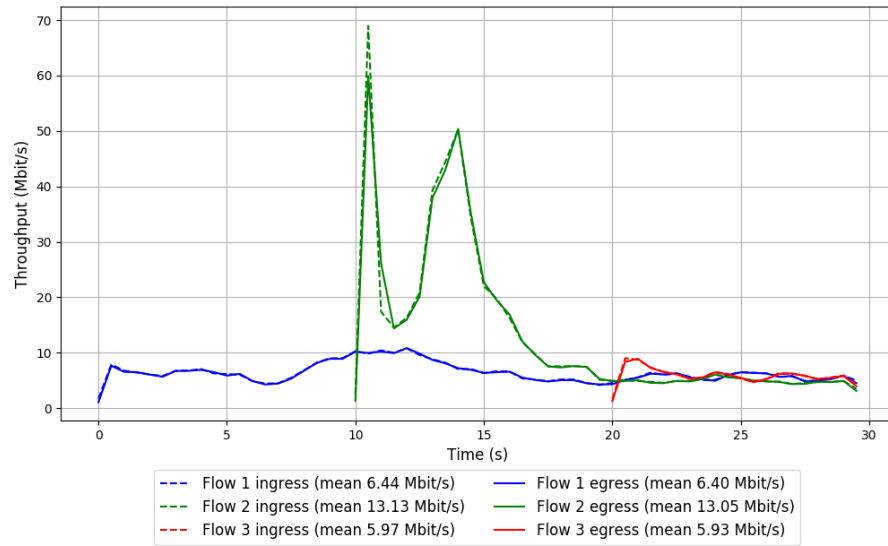
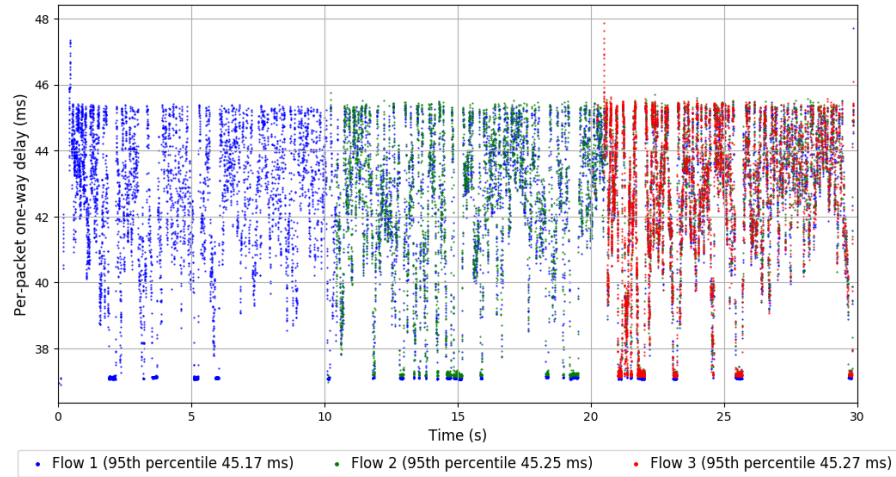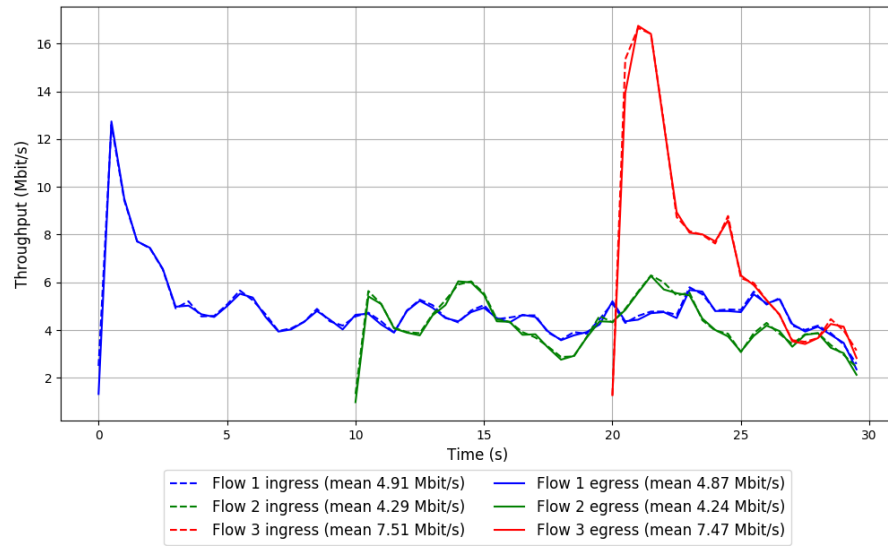Run 10: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-04-17 13:22:49
End at: 2018-04-17 13:23:19
Local clock offset: -0.527 ms
Remote clock offset: -1.352 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.02 Mbit/s
95th percentile per-packet one-way delay: 68.915 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 49.61 Mbit/s
95th percentile per-packet one-way delay: 68.497 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 19.08 Mbit/s
95th percentile per-packet one-way delay: 44.529 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 70.978 ms
Loss rate: 1.03%
```
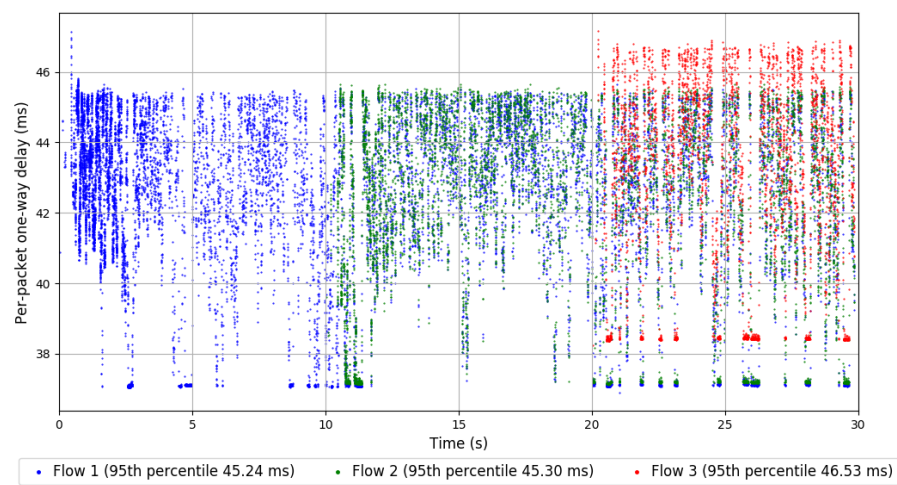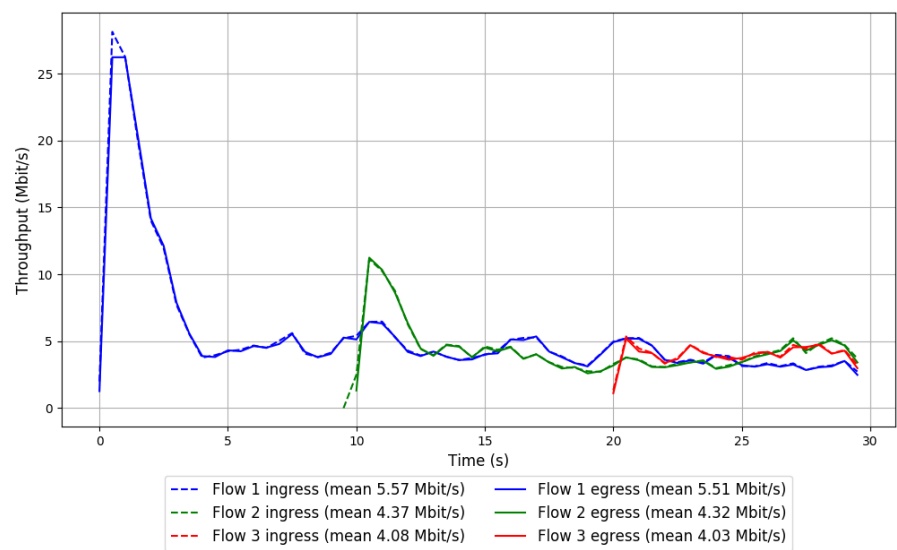
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-04-17 13:46:33
End at: 2018-04-17 13:47:03
Local clock offset: 3.133 ms
Remote clock offset: -2.471 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.69 Mbit/s
95th percentile per-packet one-way delay: 70.538 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 70.160 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 37.25 Mbit/s
95th percentile per-packet one-way delay: 70.537 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 70.623 ms
Loss rate: 1.07%
```
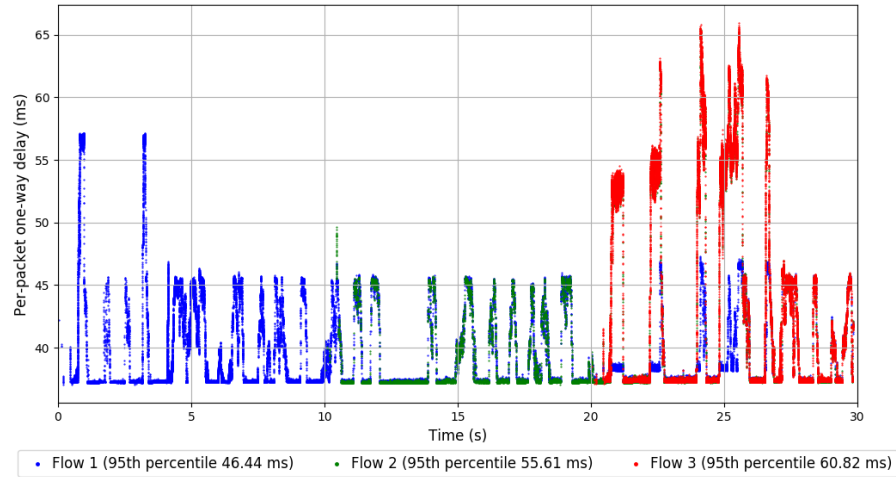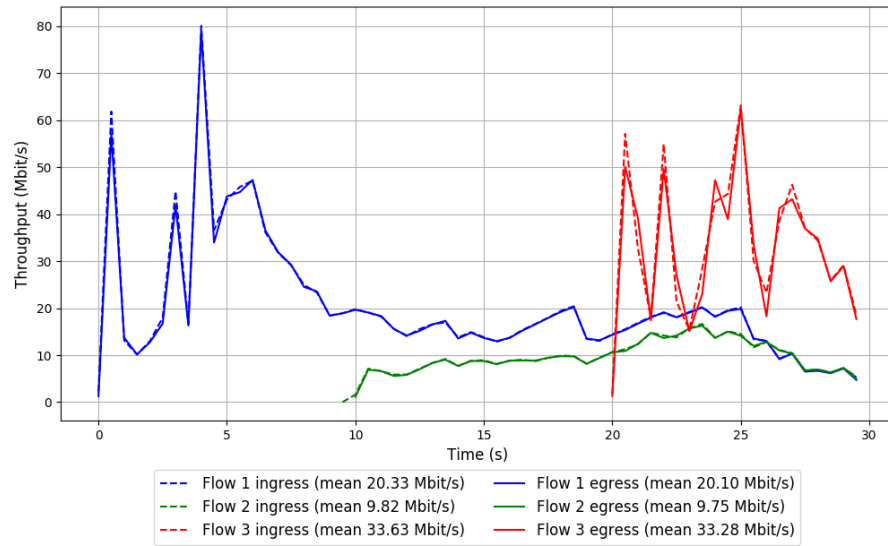
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 34.98 Mbit/s)   Flow 1 egress (mean 34.80 Mbit/s)
Flow 2 ingress (mean 37.41 Mbit/s)   Flow 2 egress (mean 37.25 Mbit/s)
Flow 3 ingress (mean 31.01 Mbit/s)   Flow 3 egress (mean 30.94 Mbit/s)

Flow 1 (95th percentile 70.16 ms)   Flow 2 (95th percentile 70.54 ms)   Flow 3 (95th percentile 70.62 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-04-17 14:11:13
End at: 2018-04-17 14:11:43
Local clock offset: 8.693 ms
Remote clock offset: -1.292 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.56 Mbit/s
95th percentile per-packet one-way delay: 48.214 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 17.57 Mbit/s
95th percentile per-packet one-way delay: 51.307 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 6.22 Mbit/s
95th percentile per-packet one-way delay: 46.062 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 44.542 ms
Loss rate: 1.51%
```
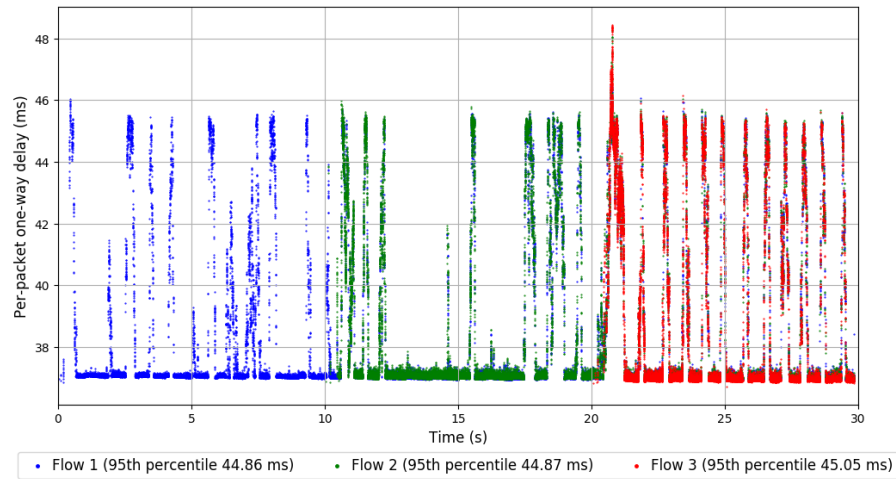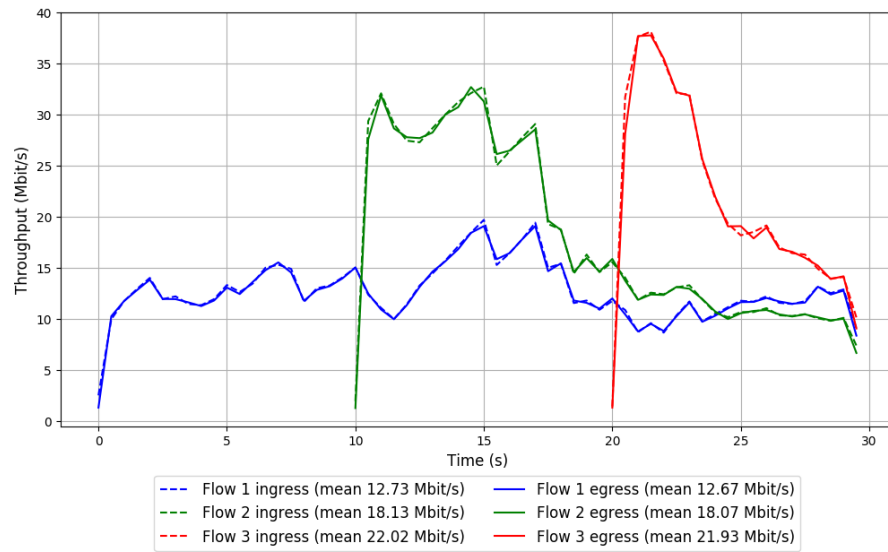
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2018-04-17 14:40:01
End at: 2018-04-17 14:40:31
Local clock offset: 5.169 ms
Remote clock offset: -0.852 ms

# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 46.919 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 47.023 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 45.794 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 3.67 Mbit/s
95th percentile per-packet one-way delay: 45.801 ms
Loss rate: 2.49%
```
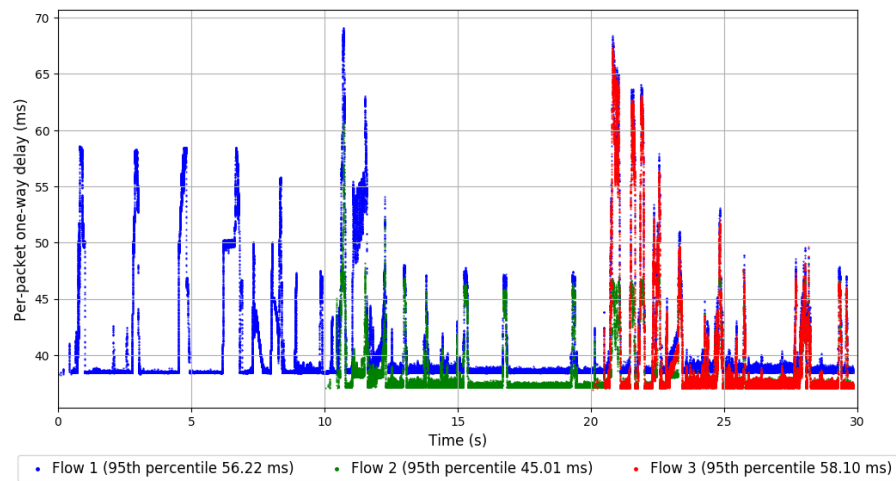
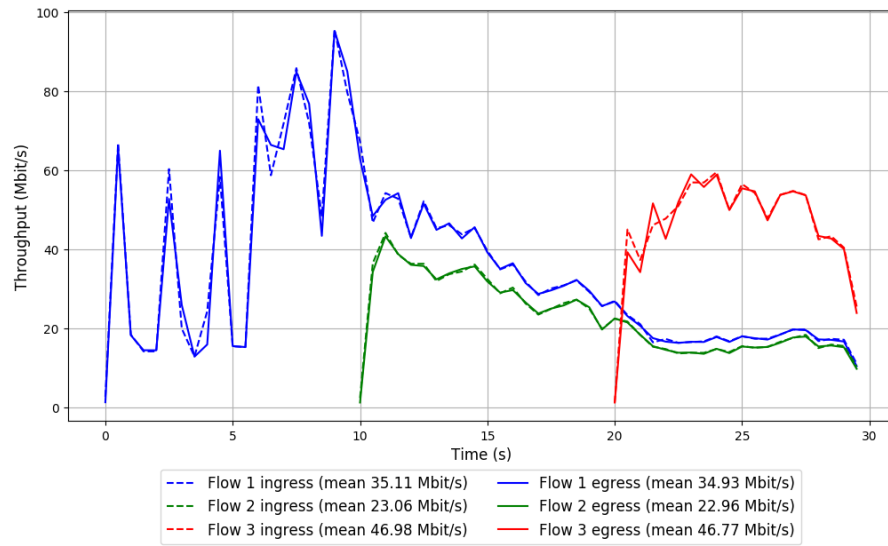Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-04-17 15:06:48
End at: 2018-04-17 15:07:18
Local clock offset: -1.515 ms
Remote clock offset: 0.545 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.02 Mbit/s
95th percentile per-packet one-way delay: 52.870 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 6.40 Mbit/s
95th percentile per-packet one-way delay: 44.709 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 55.800 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 5.93 Mbit/s
95th percentile per-packet one-way delay: 46.003 ms
Loss rate: 1.38%
```
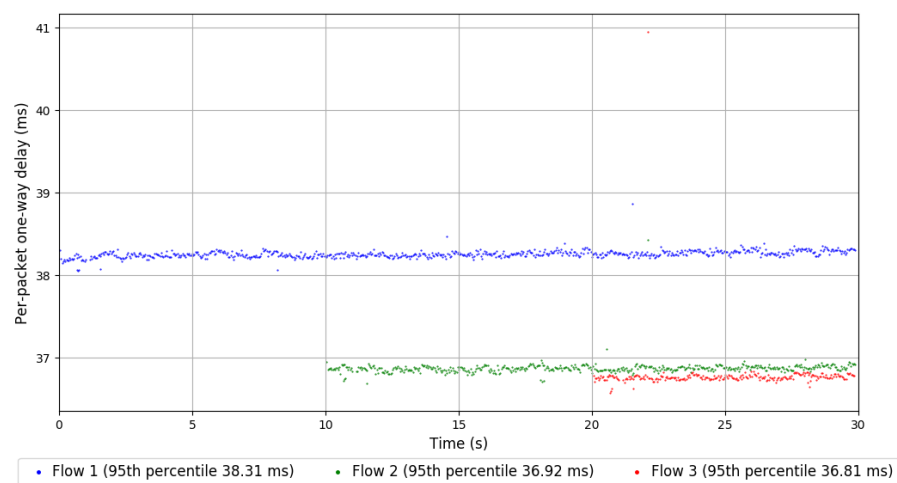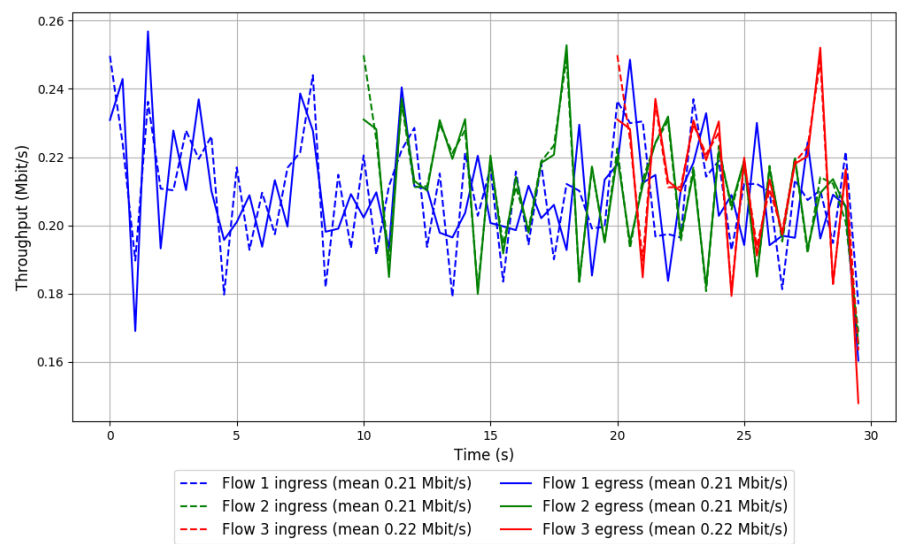
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 6.44 Mbit/s)   Flow 1 egress (mean 6.40 Mbit/s)
Flow 2 ingress (mean 13.13 Mbit/s)   Flow 2 egress (mean 13.05 Mbit/s)
Flow 3 ingress (mean 5.97 Mbit/s)   Flow 3 egress (mean 5.93 Mbit/s)

Flow 1 (95th percentile 44.71 ms)   Flow 2 (95th percentile 55.80 ms)   Flow 3 (95th percentile 46.00 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-04-17 15:35:03
End at: 2018-04-17 15:35:33
Local clock offset: -2.441 ms
Remote clock offset: -7.089 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 45.215 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 45.171 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 45.251 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 7.47 Mbit/s
95th percentile per-packet one-way delay: 45.270 ms
Loss rate: 1.21%
```

Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 4.91 Mbit/s) — Flow 1 egress (mean 4.87 Mbit/s)
Flow 2 ingress (mean 4.29 Mbit/s) — Flow 2 egress (mean 4.24 Mbit/s)
Flow 3 ingress (mean 7.51 Mbit/s) — Flow 3 egress (mean 7.47 Mbit/s)

Flow 1 (95th percentile 45.17 ms) — Flow 2 (95th percentile 45.25 ms) — Flow 3 (95th percentile 45.27 ms)

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-04-17 16:03:30
End at: 2018-04-17 16:04:00
Local clock offset: -0.314 ms
Remote clock offset: -6.361 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 45.378 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 5.51 Mbit/s
95th percentile per-packet one-way delay: 45.236 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 45.296 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 46.528 ms
Loss rate: 1.72%
```
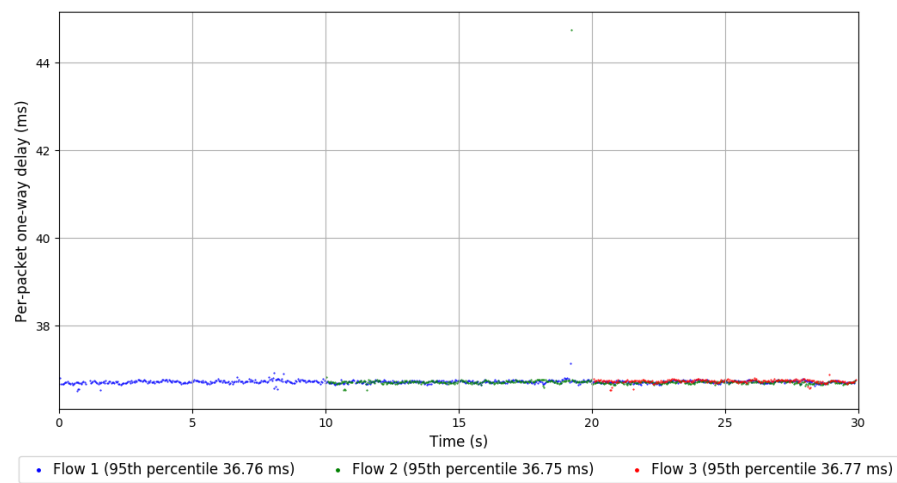
Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-04-17 16:30:30
End at: 2018-04-17 16:31:00
Local clock offset: 0.007 ms
Remote clock offset: -3.459 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 37.51 Mbit/s
95th percentile per-packet one-way delay: 56.643 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 20.10 Mbit/s
95th percentile per-packet one-way delay: 46.441 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 55.610 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 33.28 Mbit/s
95th percentile per-packet one-way delay: 60.821 ms
Loss rate: 1.72%
```
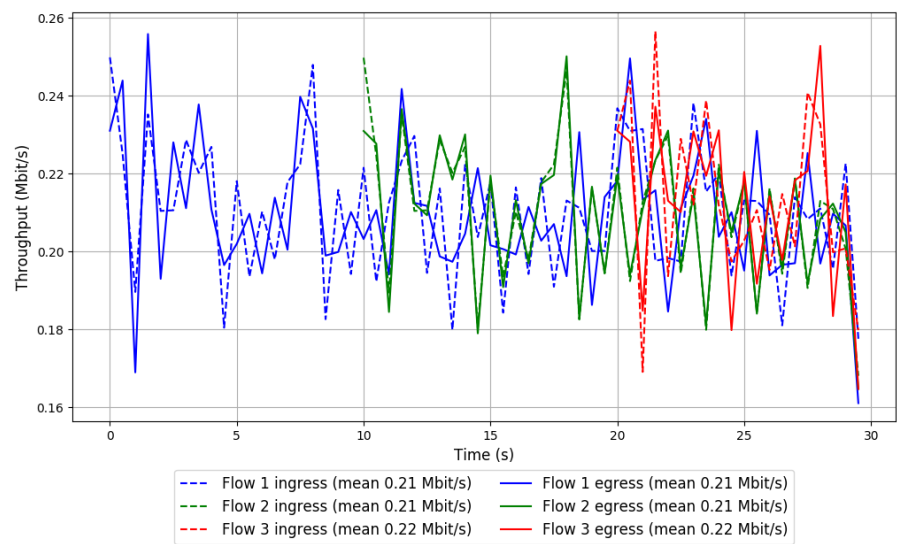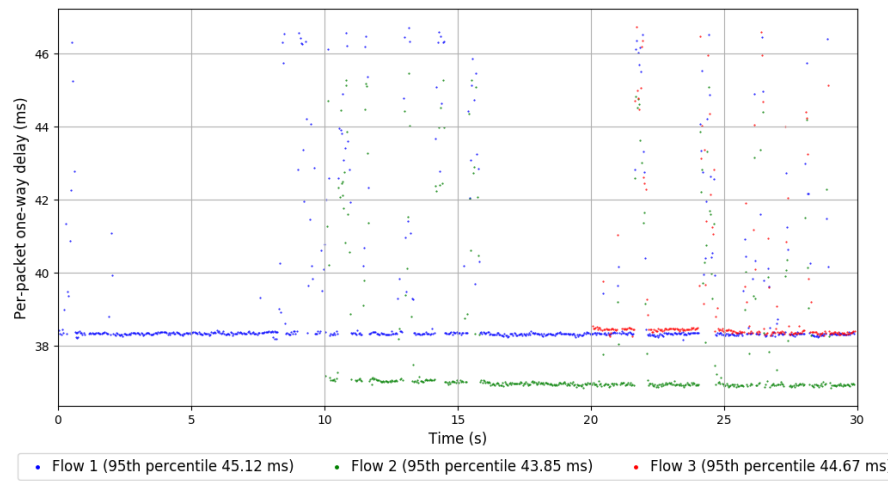
Run 8: Report of QUIC Cubic — Data Link

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-04-17 16:55:57
End at: 2018-04-17 16:56:27
Local clock offset: 0.448 ms
Remote clock offset: -1.582 ms


# Below is generated by plot.py at 2018-04-17 21:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.87 Mbit/s
95th percentile per-packet one-way delay: 44.927 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 44.856 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 18.07 Mbit/s
95th percentile per-packet one-way delay: 44.870 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 21.93 Mbit/s
95th percentile per-packet one-way delay: 45.051 ms
Loss rate: 1.10%
```
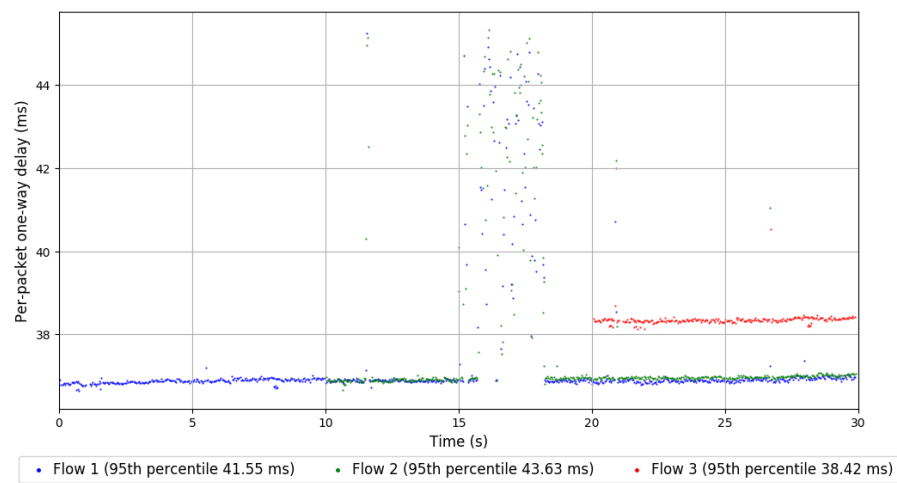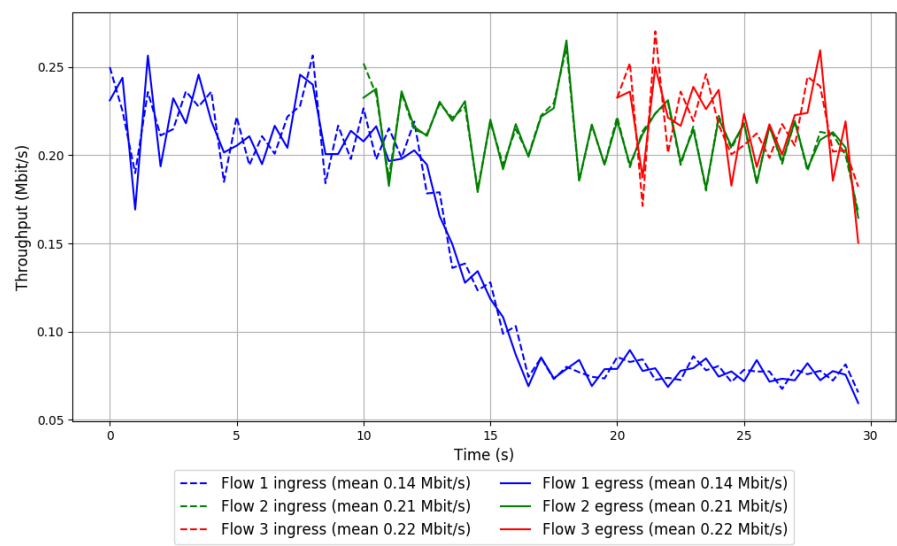
Run 9: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 12.73 Mbit/s) ——— Flow 1 egress (mean 12.67 Mbit/s)
- - - Flow 2 ingress (mean 18.13 Mbit/s) ——— Flow 2 egress (mean 18.07 Mbit/s)
- - - Flow 3 ingress (mean 22.02 Mbit/s) ——— Flow 3 egress (mean 21.93 Mbit/s)

• Flow 1 (95th percentile 44.86 ms)   • Flow 2 (95th percentile 44.87 ms)   • Flow 3 (95th percentile 45.05 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-04-17 17:20:07
End at: 2018-04-17 17:20:37
Local clock offset: 0.931 ms
Remote clock offset: -2.653 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.52 Mbit/s
95th percentile per-packet one-way delay: 55.128 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 34.93 Mbit/s
95th percentile per-packet one-way delay: 56.223 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 45.012 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 46.77 Mbit/s
95th percentile per-packet one-way delay: 58.097 ms
Loss rate: 1.11%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 35.11 Mbit/s)   Flow 1 egress (mean 34.93 Mbit/s)
Flow 2 ingress (mean 23.06 Mbit/s)   Flow 2 egress (mean 22.96 Mbit/s)
Flow 3 ingress (mean 46.98 Mbit/s)   Flow 3 egress (mean 46.77 Mbit/s)

Flow 1 (95th percentile 56.22 ms)   Flow 2 (95th percentile 45.01 ms)   Flow 3 (95th percentile 58.10 ms)
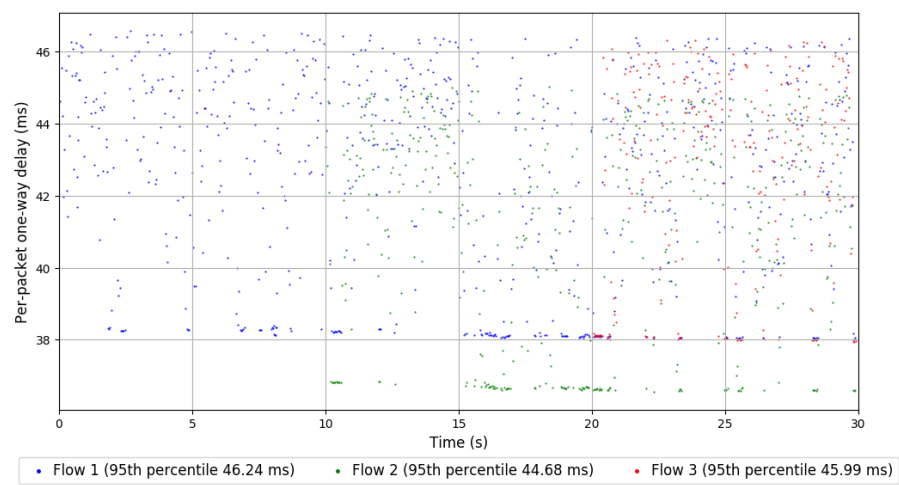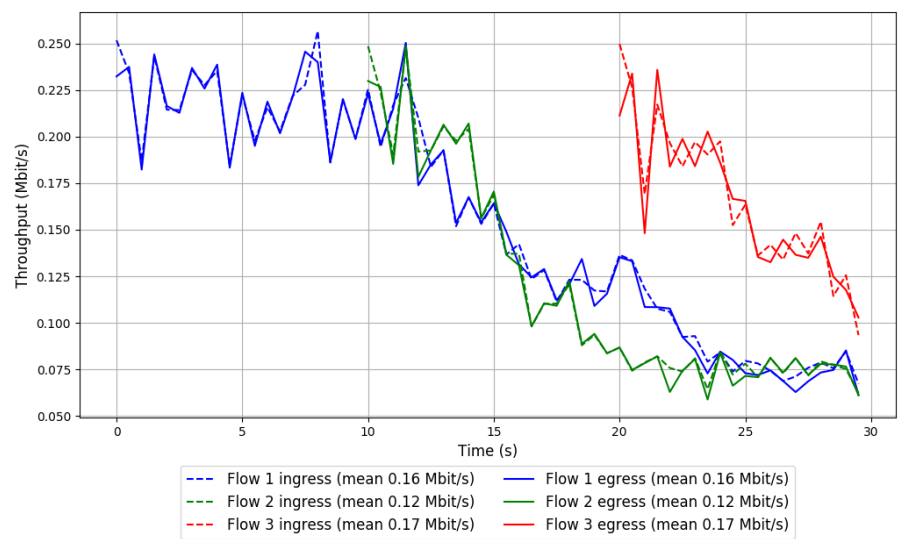
```
Run 1: Statistics of SCReAM

Start at: 2018-04-17 13:04:07
End at: 2018-04-17 13:04:37
Local clock offset: 0.499 ms
Remote clock offset: -1.797 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 38.305 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 38.314 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.916 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.811 ms
Loss rate: 0.74%
```
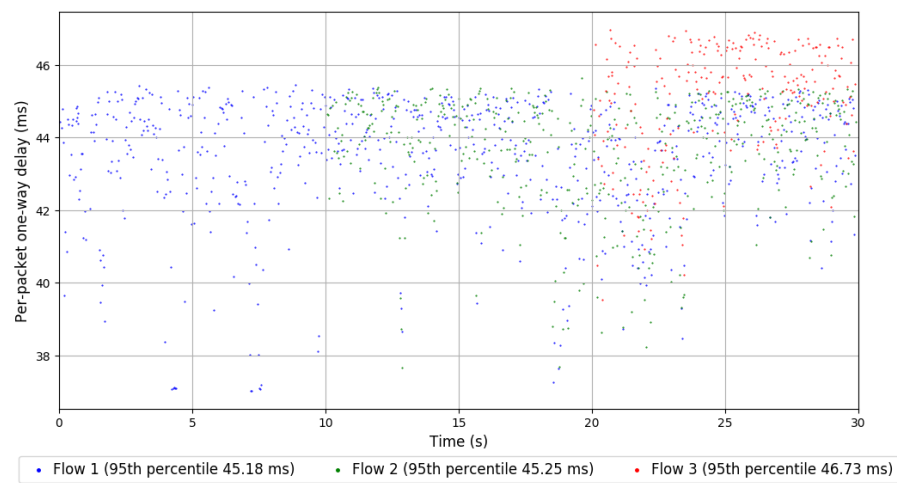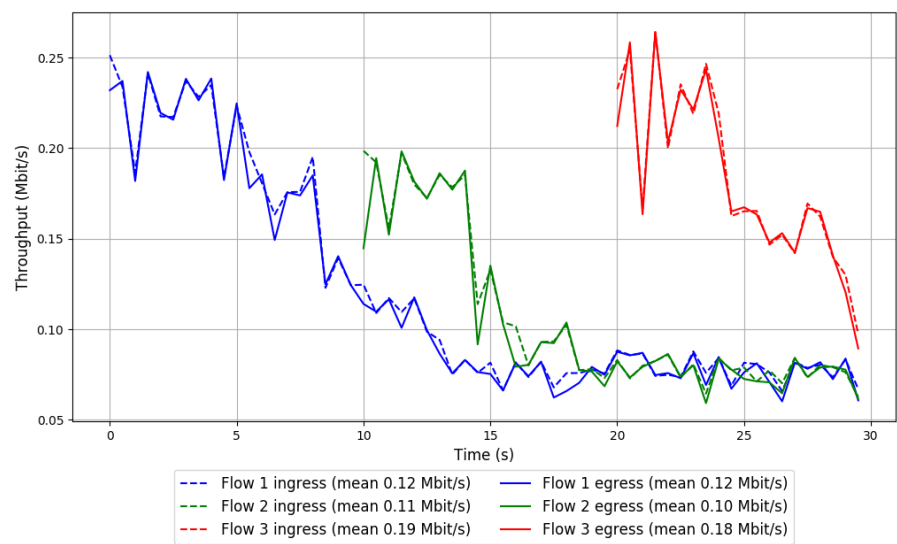
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-04-17 13:28:10
End at: 2018-04-17 13:28:40
Local clock offset: 1.039 ms
Remote clock offset: -1.649 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 38.470 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 38.481 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 37.042 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 37.027 ms
Loss rate: 0.35%
```

Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-04-17 13:52:00
End at: 2018-04-17 13:52:30
Local clock offset: 3.409 ms
Remote clock offset: -2.03 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 36.761 ms
Loss rate: 0.26%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.761 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 36.748 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 36.772 ms
Loss rate: 0.35%
```
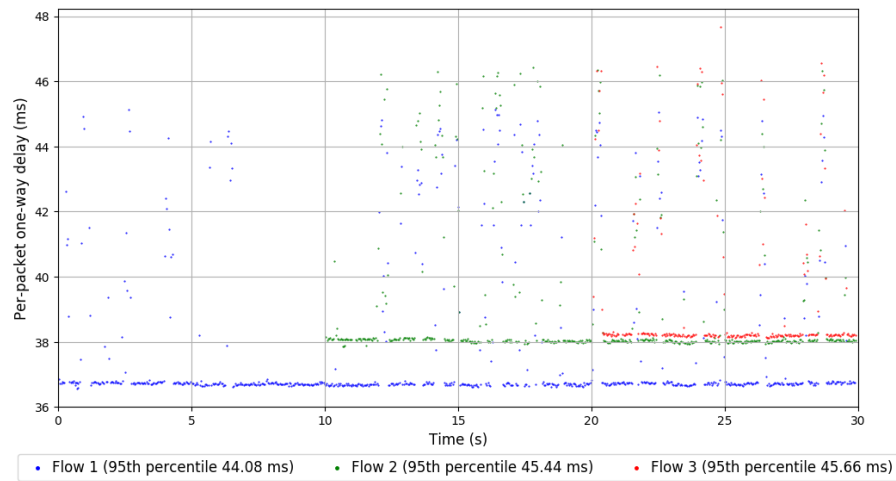
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-04-17 14:16:41
End at: 2018-04-17 14:17:11
Local clock offset: 9.837 ms
Remote clock offset: -1.518 ms

# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 44.519 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 45.125 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 43.848 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 44.672 ms
Loss rate: 0.90%
```
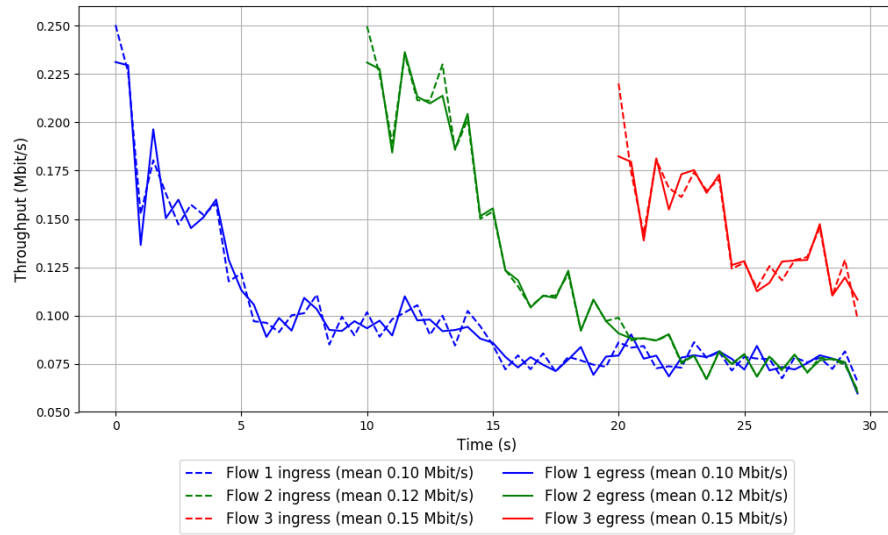
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-04-17 14:45:56
End at: 2018-04-17 14:46:26
Local clock offset: 2.507 ms
Remote clock offset: -0.13 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 42.465 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 41.548 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 43.628 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 38.419 ms
Loss rate: 0.73%
```
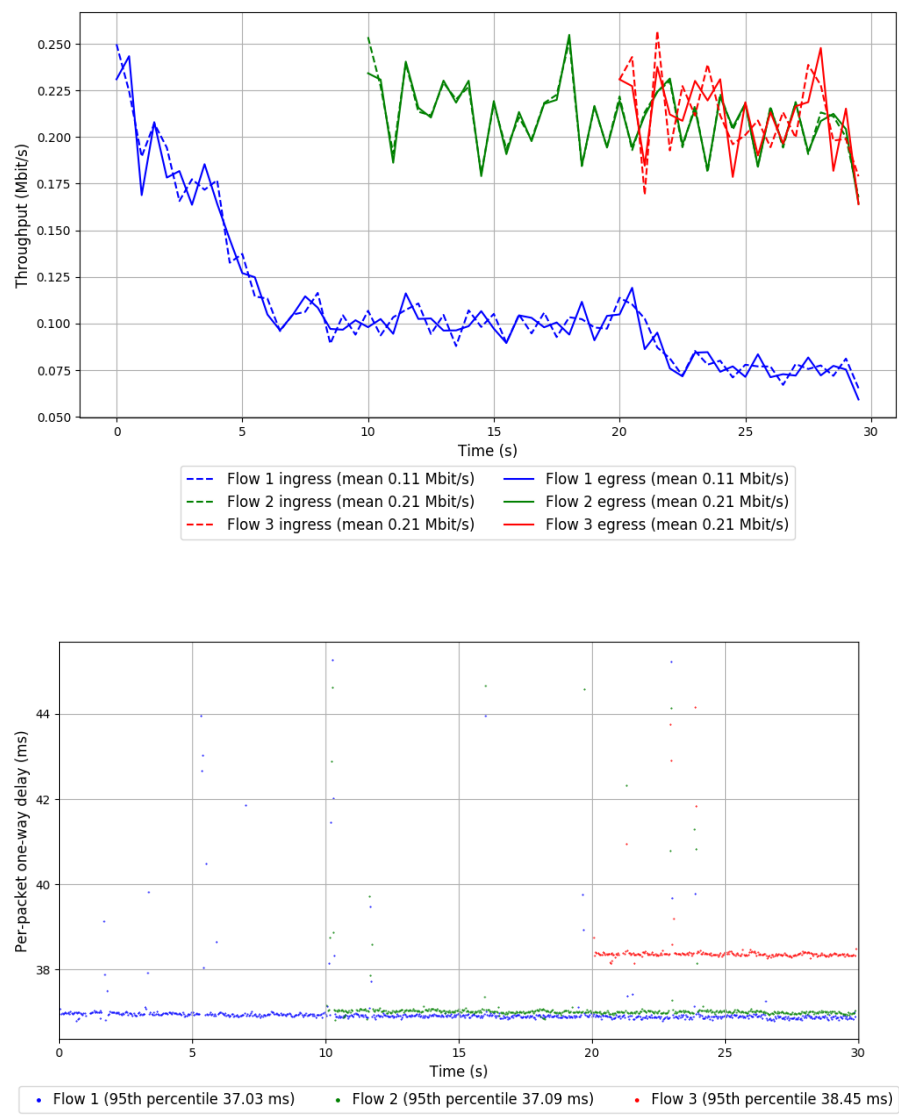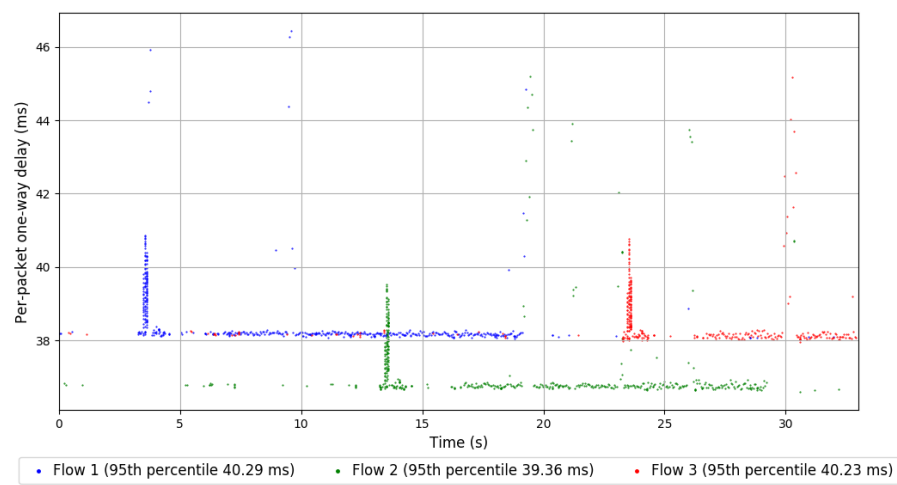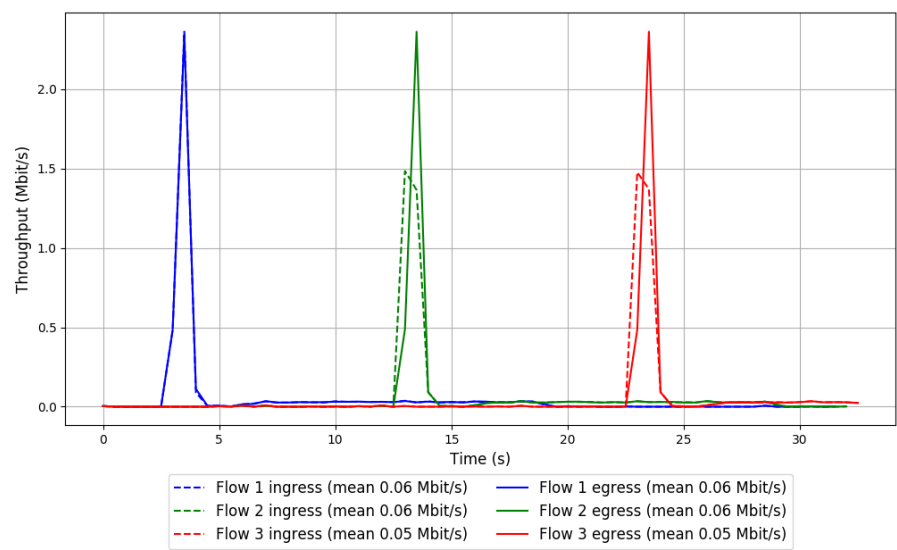
Run 5: Report of SCReAM — Data Link

114

```
Run 6: Statistics of SCReAM

Start at: 2018-04-17 15:12:41
End at: 2018-04-17 15:13:11
Local clock offset: -1.221 ms
Remote clock offset: -0.122 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 45.495 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 45.802 ms
Loss rate: 2.48%
-- Flow 2:
Average throughput: 0.13 Mbit/s
95th percentile per-packet one-way delay: 44.328 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 44.370 ms
Loss rate: 2.13%
```
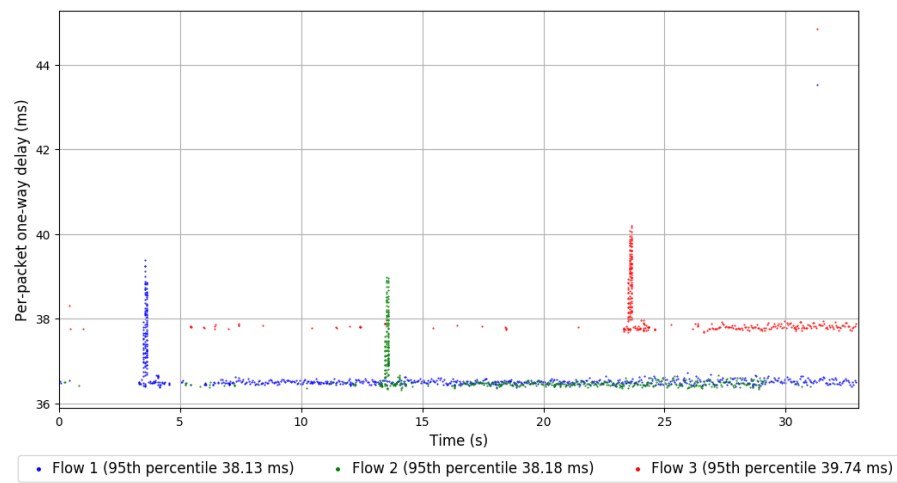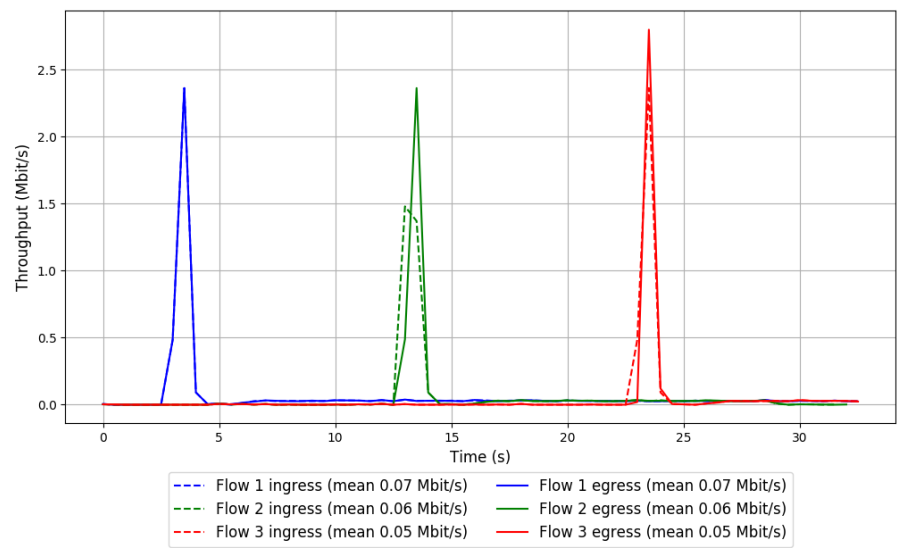
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2018-04-17 15:40:34
End at: 2018-04-17 15:41:04
Local clock offset: -2.842 ms
Remote clock offset: -7.689 ms

# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 46.053 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 46.239 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 44.676 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 45.990 ms
Loss rate: 1.11%
```
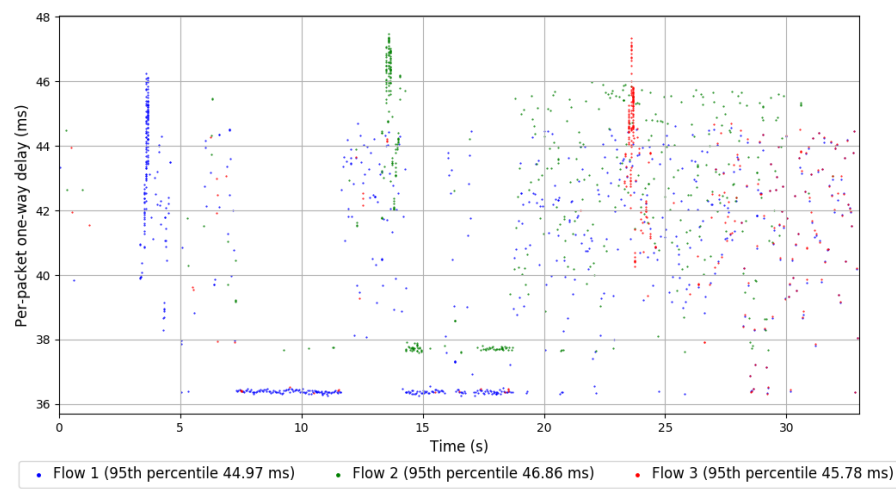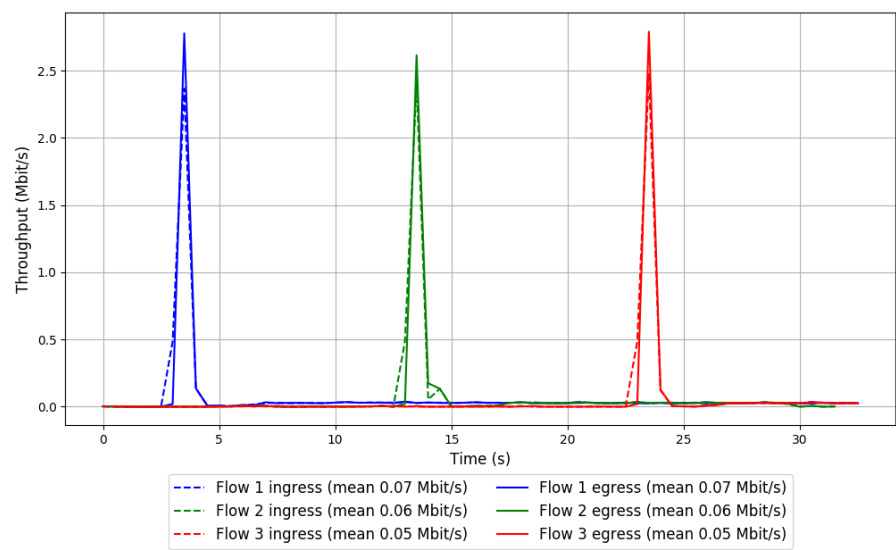
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-04-17 16:09:19
End at: 2018-04-17 16:09:49
Local clock offset: -0.419 ms
Remote clock offset: -6.484 ms

# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 46.159 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 45.180 ms
Loss rate: 1.88%
-- Flow 2:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 45.250 ms
Loss rate: 2.92%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 46.726 ms
Loss rate: 1.23%
```
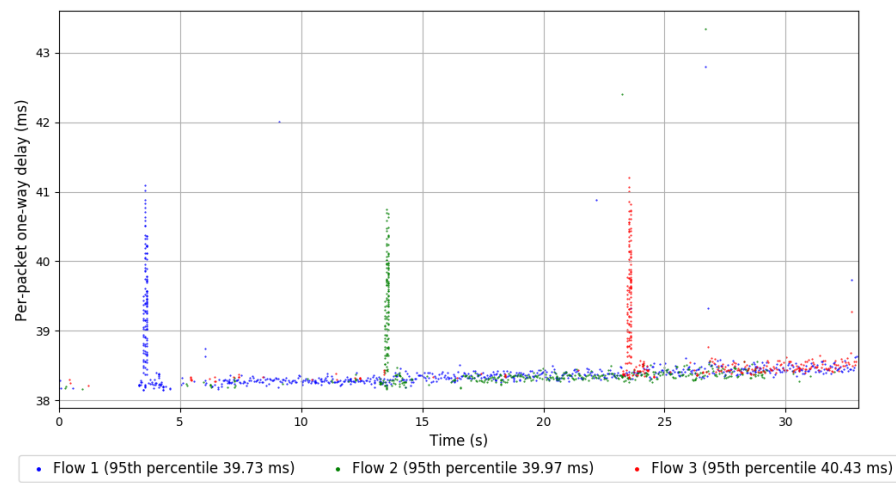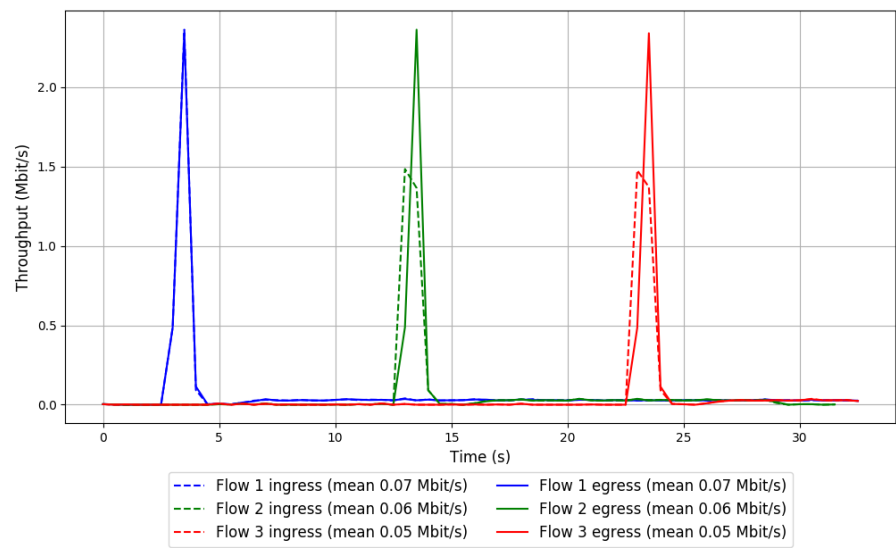
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-04-17 16:36:01
End at: 2018-04-17 16:36:31
Local clock offset: -0.017 ms
Remote clock offset: -2.24 ms

# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 44.487 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 44.076 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 45.441 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 45.663 ms
Loss rate: 1.00%
```

Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-04-17 17:01:27
End at: 2018-04-17 17:01:57
Local clock offset: 0.593 ms
Remote clock offset: -2.3 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.32 Mbit/s
95th percentile per-packet one-way delay: 38.398 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 37.029 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 37.090 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 38.454 ms
Loss rate: 0.35%
```
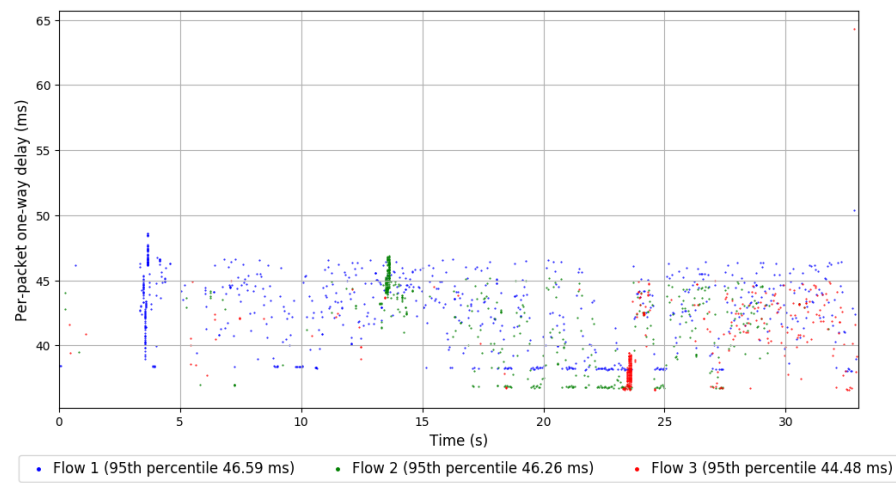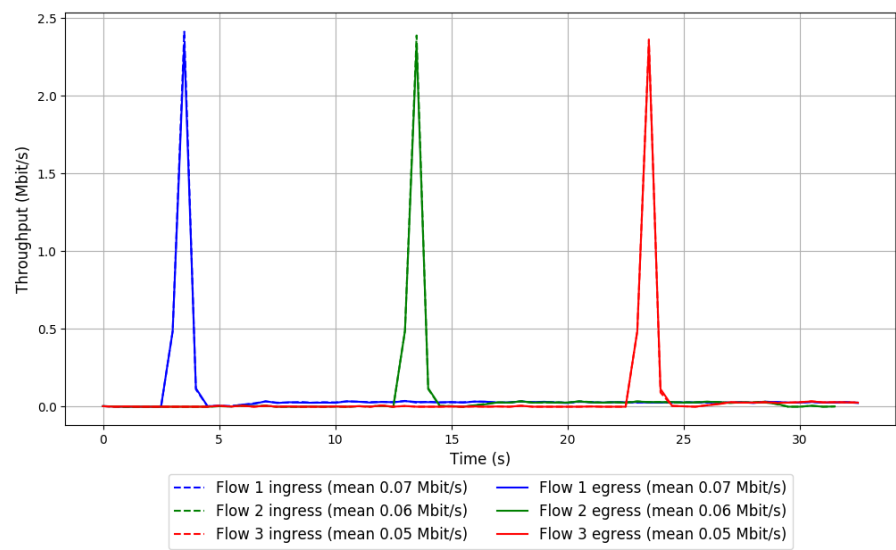
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-04-17 13:26:52
End at: 2018-04-17 13:27:22
Local clock offset: 0.602 ms
Remote clock offset: -1.671 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 40.176 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.286 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 39.359 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 40.235 ms
Loss rate: 0.08%
```
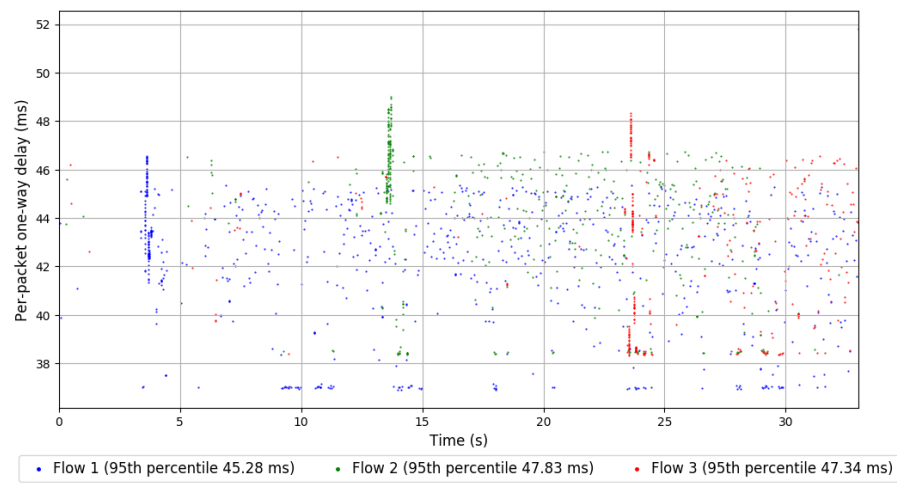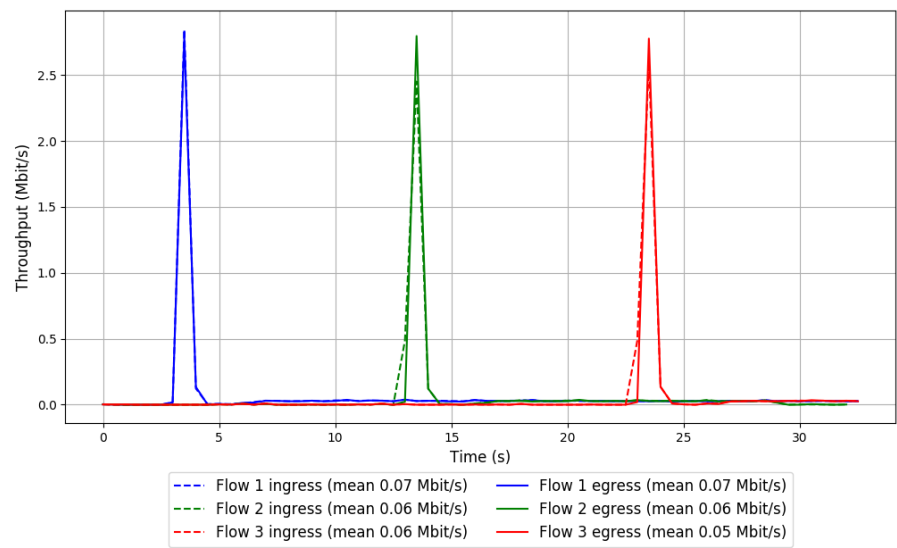
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-04-17 13:50:41
End at: 2018-04-17 13:51:11
Local clock offset: 3.265 ms
Remote clock offset: -2.005 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 38.860 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 38.132 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 38.180 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 39.740 ms
Loss rate: 0.16%
```
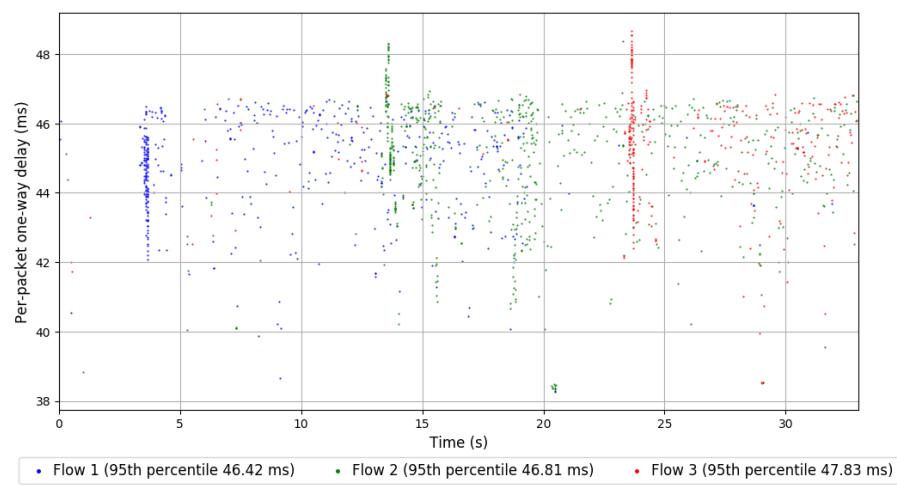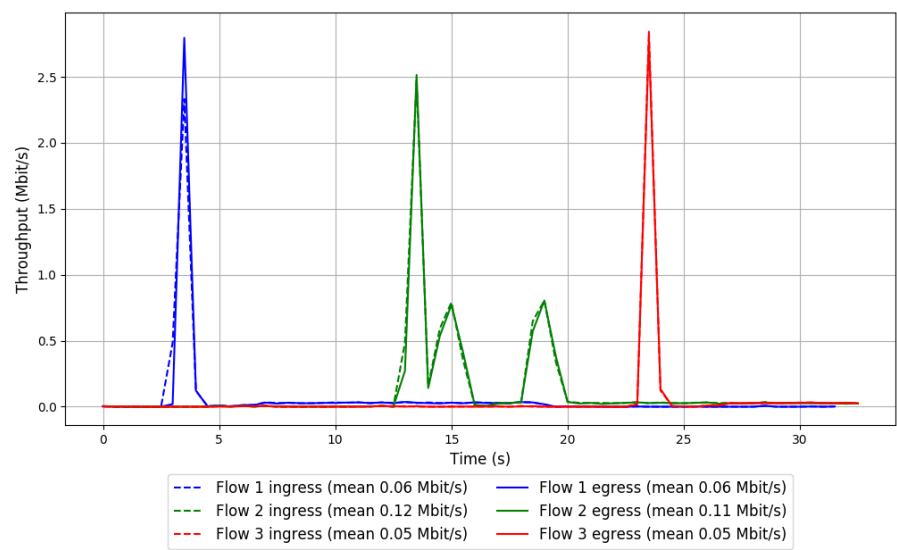
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-04-17 14:15:22
End at: 2018-04-17 14:15:52
Local clock offset: 9.55 ms
Remote clock offset: -1.084 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 46.087 ms
Loss rate: 3.29%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 44.970 ms
Loss rate: 1.74%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.857 ms
Loss rate: 3.96%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 45.781 ms
Loss rate: 4.54%
```
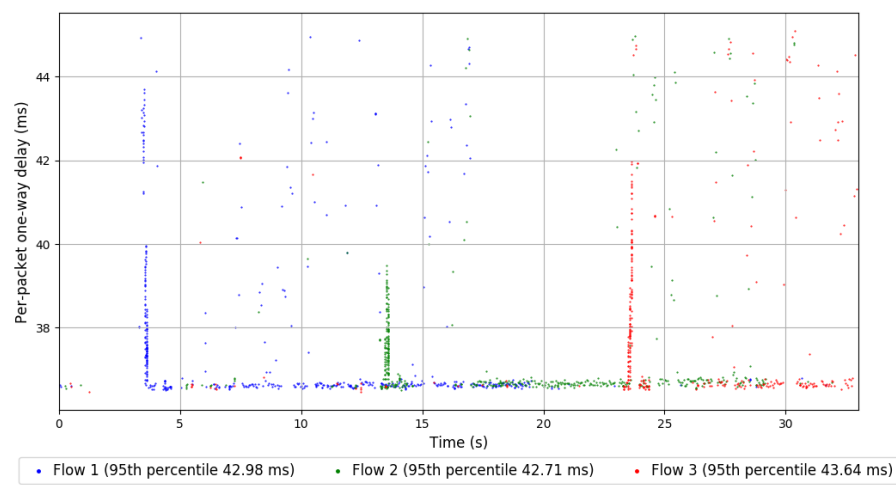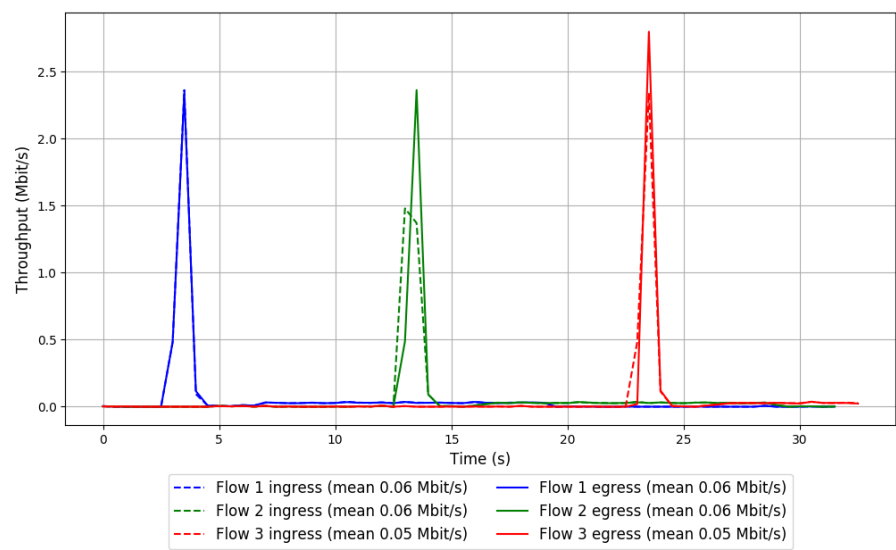
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-04-17 14:44:38
End at: 2018-04-17 14:45:08
Local clock offset: 3.055 ms
Remote clock offset: -0.251 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 40.051 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 39.731 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 39.972 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 40.434 ms
Loss rate: 0.08%
```
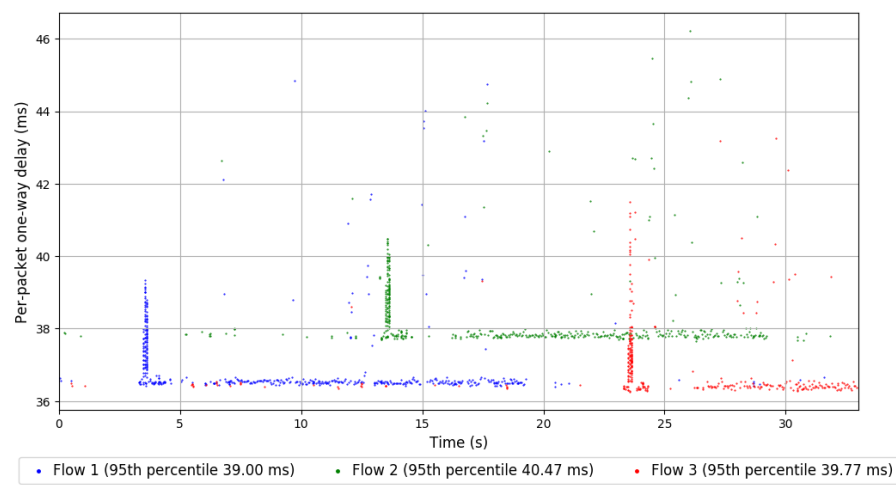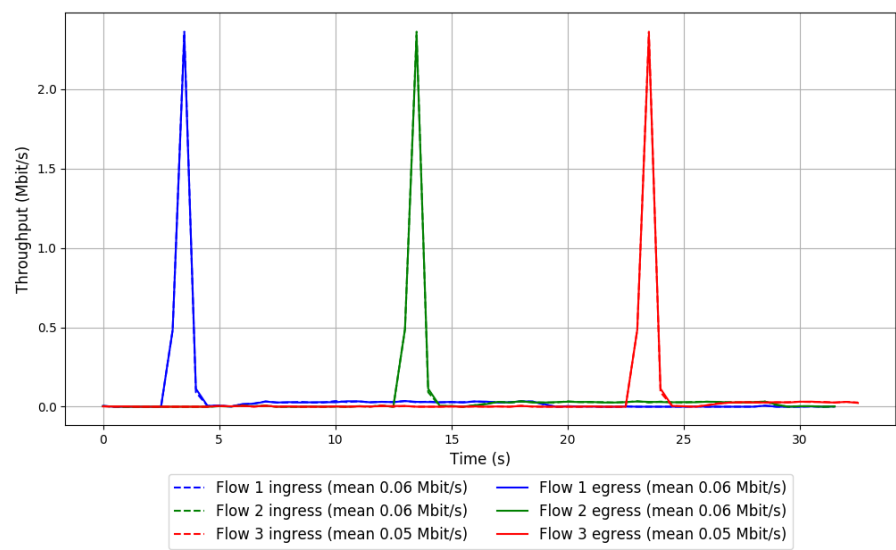
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-04-17 15:11:22
End at: 2018-04-17 15:11:52
Local clock offset: -1.236 ms
Remote clock offset: 0.174 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 46.405 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 46.588 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.260 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 44.477 ms
Loss rate: 0.20%
```
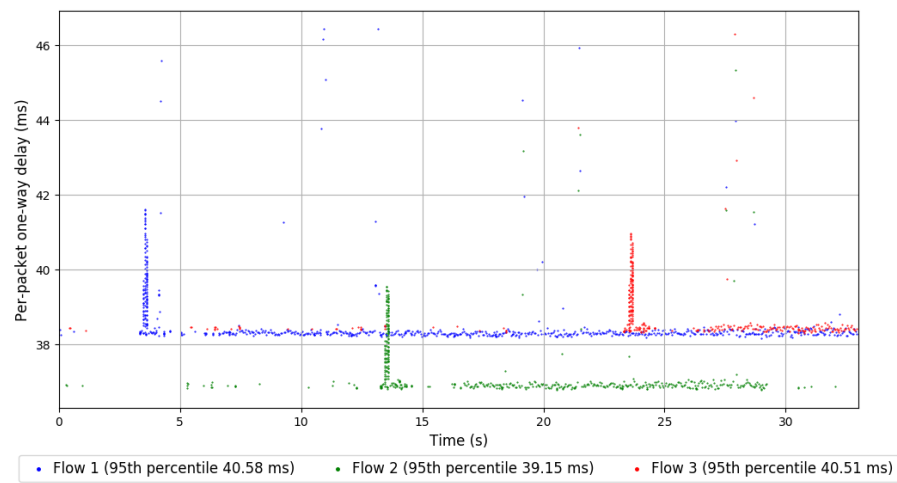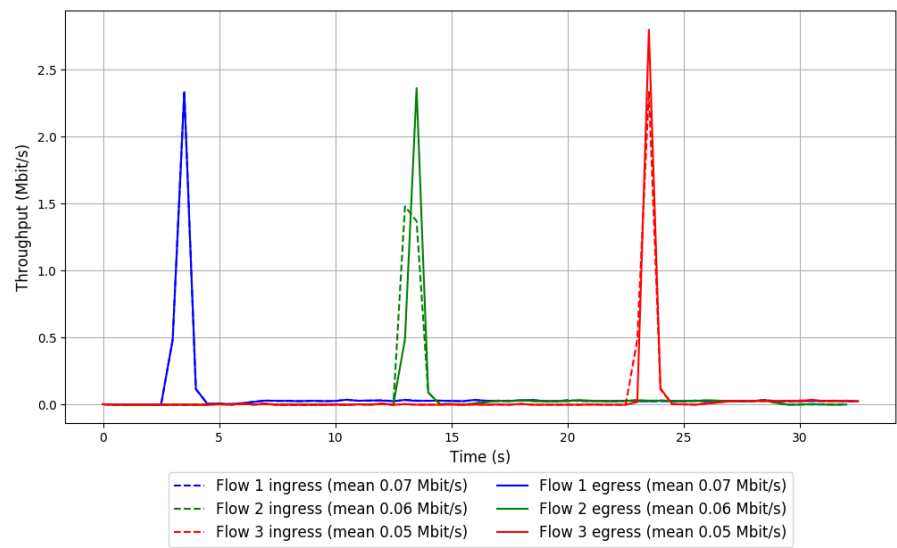
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-04-17 15:39:15
End at: 2018-04-17 15:39:45
Local clock offset: -2.758 ms
Remote clock offset: -7.564 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 46.797 ms
Loss rate: 4.23%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 45.281 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 47.832 ms
Loss rate: 3.56%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.344 ms
Loss rate: 8.09%
```

Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-04-17 16:07:55
End at: 2018-04-17 16:08:25
Local clock offset: -0.437 ms
Remote clock offset: -6.498 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.770 ms
Loss rate: 2.64%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 46.422 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 46.815 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.826 ms
Loss rate: 1.84%
```
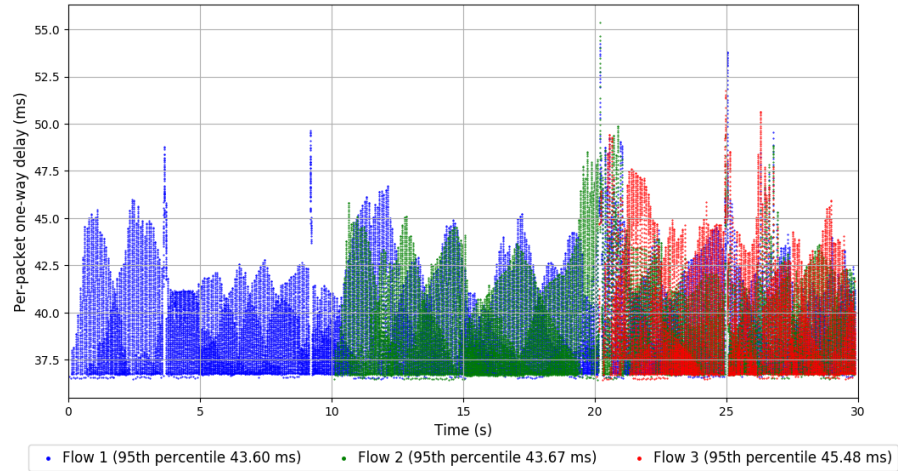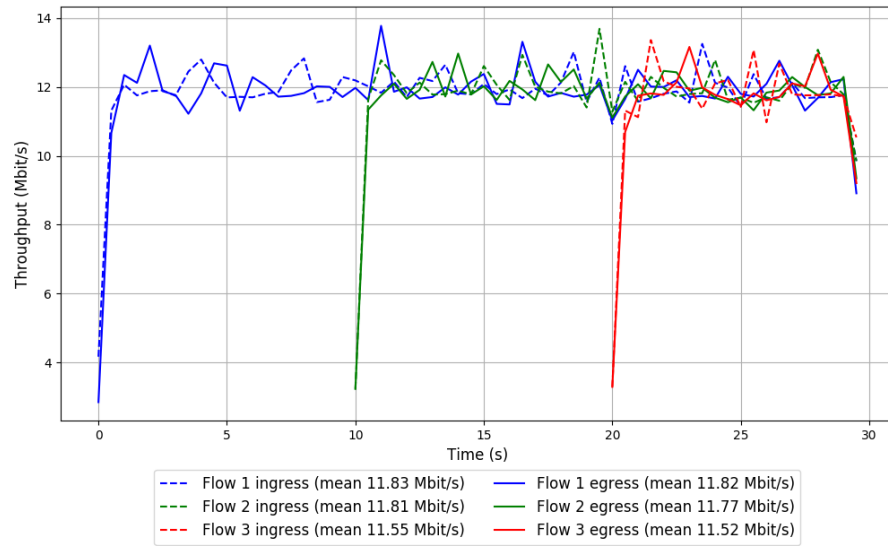
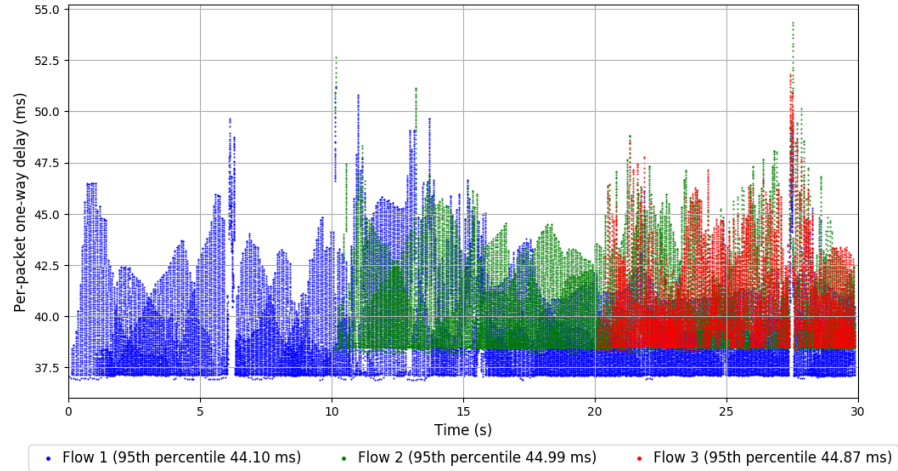Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-04-17 16:34:42
End at: 2018-04-17 16:35:12
Local clock offset: -0.009 ms
Remote clock offset: -2.377 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 43.057 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.975 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 42.707 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 43.644 ms
Loss rate: 0.23%
```
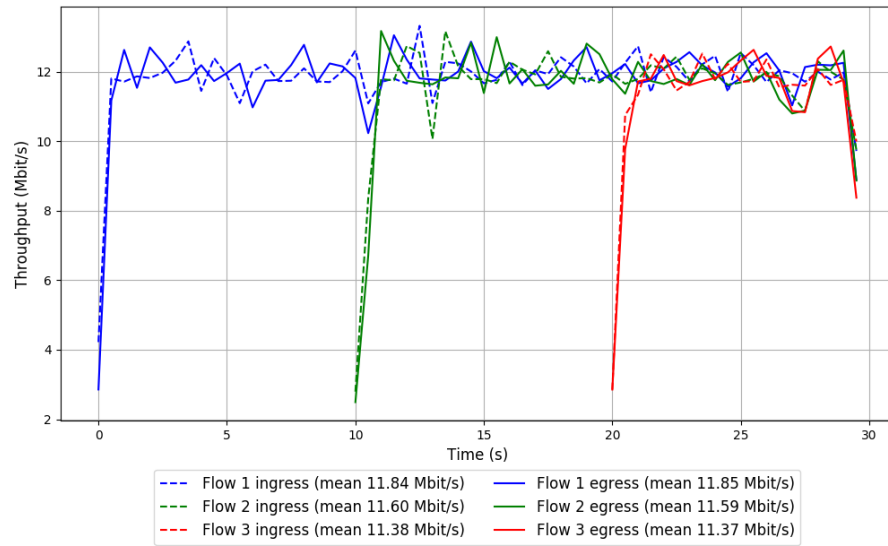
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-04-17 17:00:08
End at: 2018-04-17 17:00:38
Local clock offset: 0.626 ms
Remote clock offset: -1.695 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 39.970 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 38.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 40.473 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 39.765 ms
Loss rate: 0.16%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-04-17 17:24:15
End at: 2018-04-17 17:24:45
Local clock offset: 1.137 ms
Remote clock offset: -2.554 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 40.219 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 40.577 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 39.149 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 40.506 ms
Loss rate: 0.16%
```
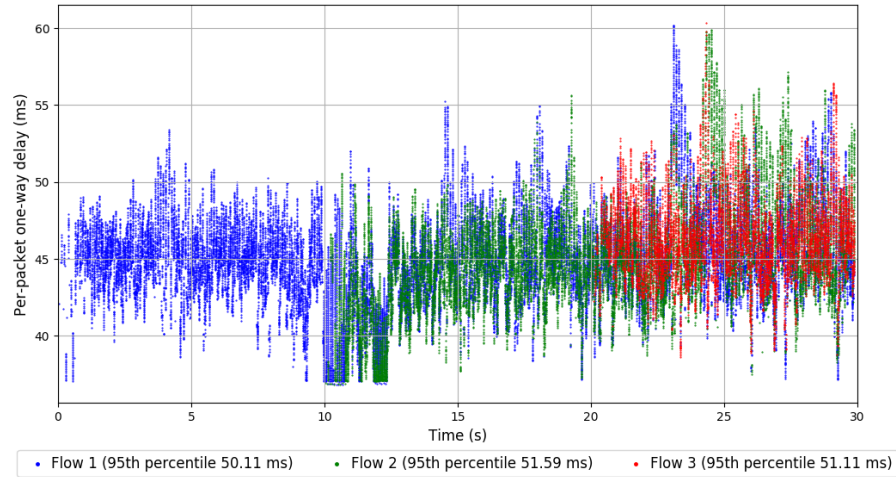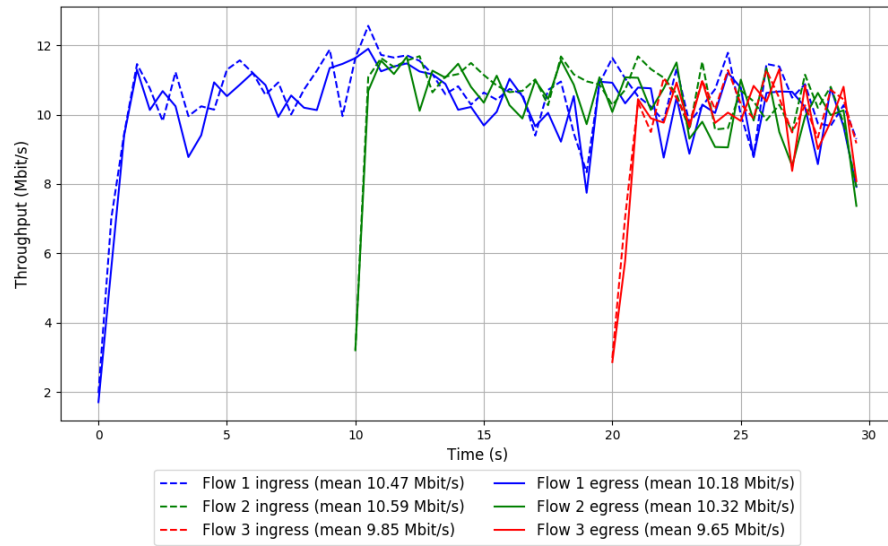
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-04-17 13:14:17
End at: 2018-04-17 13:14:47
Local clock offset: -0.142 ms
Remote clock offset: -1.5 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.42 Mbit/s
95th percentile per-packet one-way delay: 43.986 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 43.601 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 43.673 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 45.480 ms
Loss rate: 0.81%
```
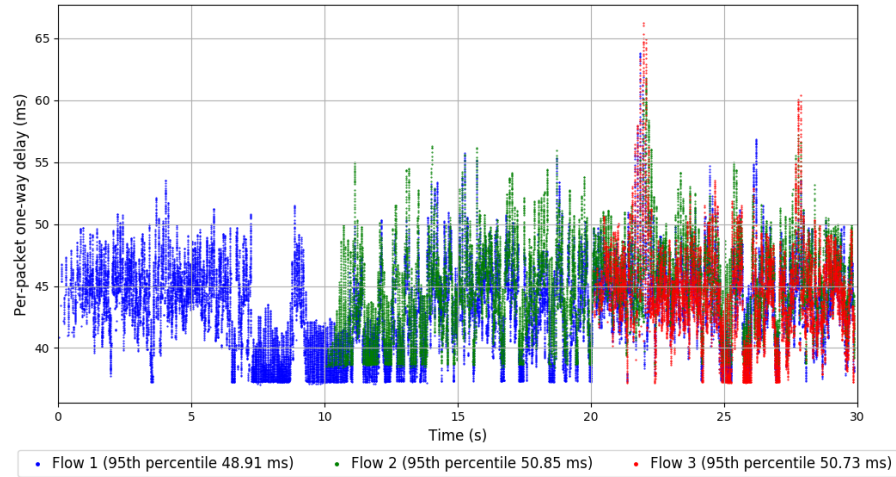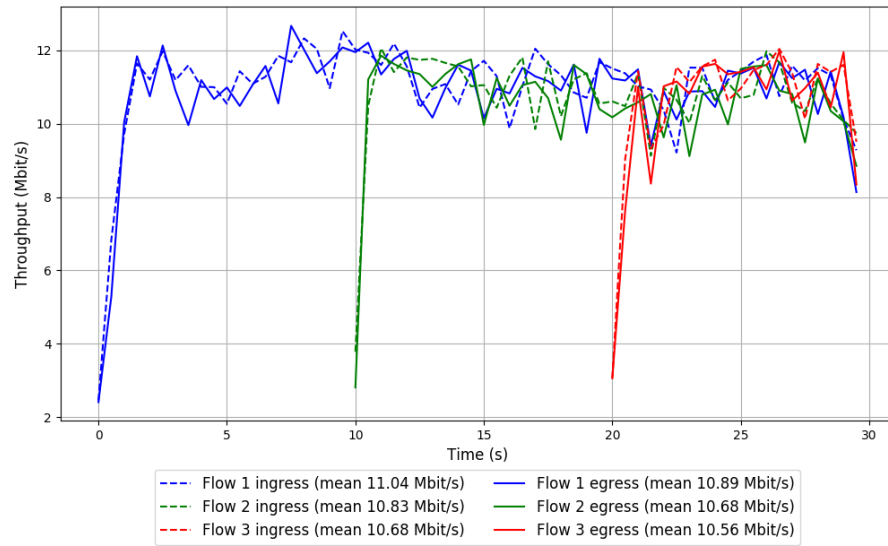
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-04-17 13:38:17
End at: 2018-04-17 13:38:47
Local clock offset: 2.607 ms
Remote clock offset: -2.319 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.28 Mbit/s
95th percentile per-packet one-way delay: 44.618 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 11.85 Mbit/s
95th percentile per-packet one-way delay: 44.097 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 44.990 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 44.872 ms
Loss rate: 0.99%
```
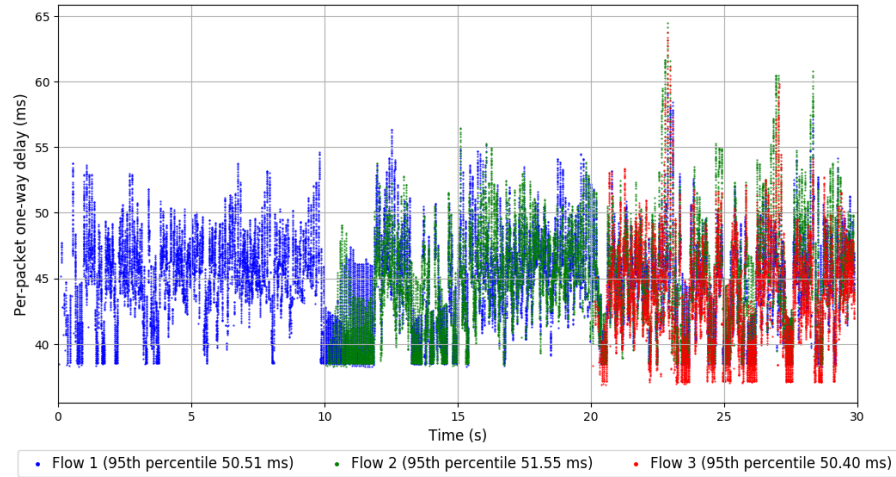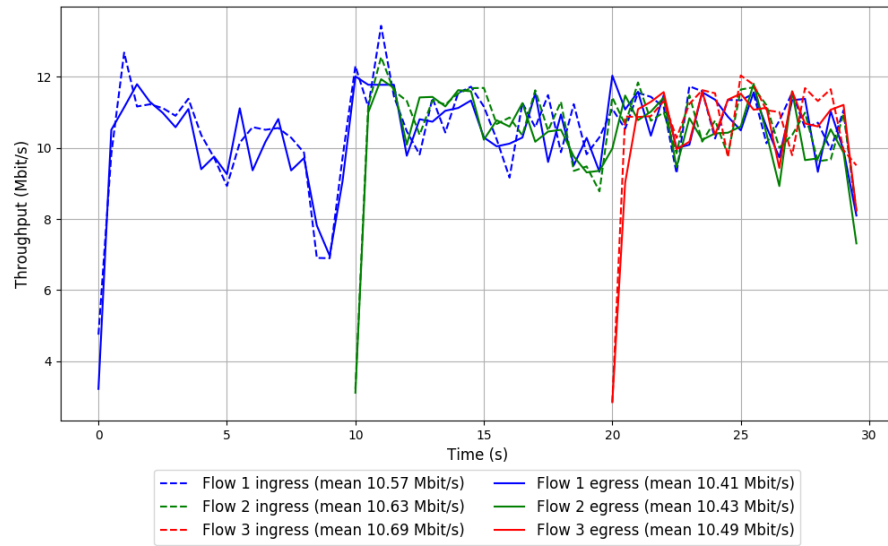
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-04-17 14:01:49
End at: 2018-04-17 14:02:19
Local clock offset: 5.586 ms
Remote clock offset: -1.908 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.91 Mbit/s
95th percentile per-packet one-way delay: 48.400 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 10.51 Mbit/s
95th percentile per-packet one-way delay: 48.047 ms
Loss rate: 3.22%
-- Flow 2:
Average throughput: 10.33 Mbit/s
95th percentile per-packet one-way delay: 49.267 ms
Loss rate: 2.88%
-- Flow 3:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 47.319 ms
Loss rate: 2.36%
```
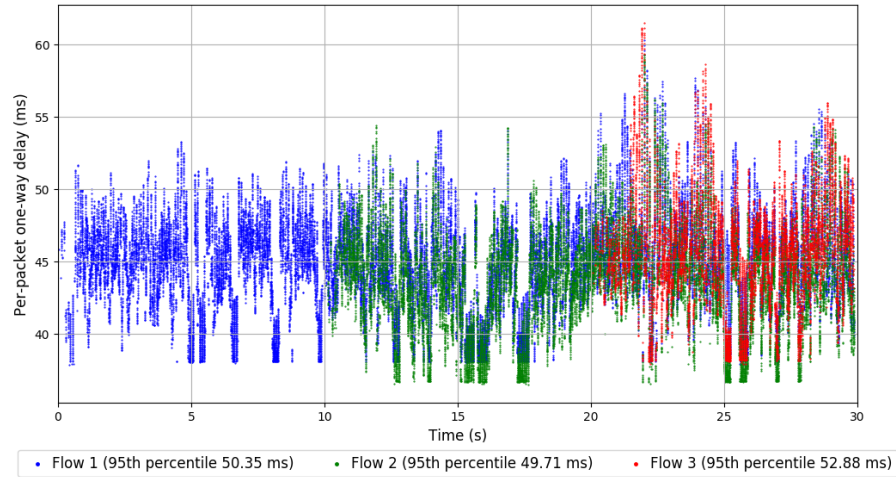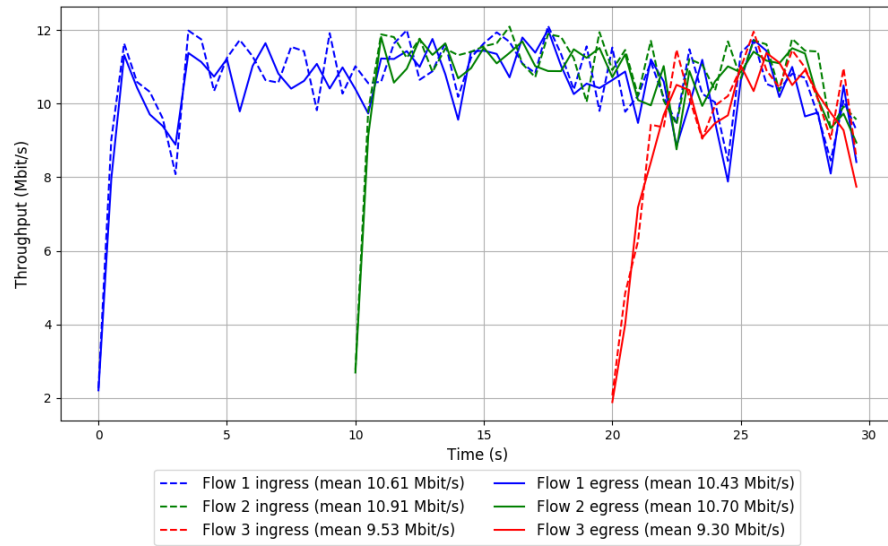
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-04-17 14:28:56
End at: 2018-04-17 14:29:26
Local clock offset: 11.672 ms
Remote clock offset: -1.158 ms


# Below is generated by plot.py at 2018-04-17 21:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.21 Mbit/s
95th percentile per-packet one-way delay: 50.756 ms
Loss rate: 2.91%
-- Flow 1:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 50.109 ms
Loss rate: 3.08%
-- Flow 2:
Average throughput: 10.32 Mbit/s
95th percentile per-packet one-way delay: 51.593 ms
Loss rate: 2.68%
-- Flow 3:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 51.107 ms
Loss rate: 2.87%
```
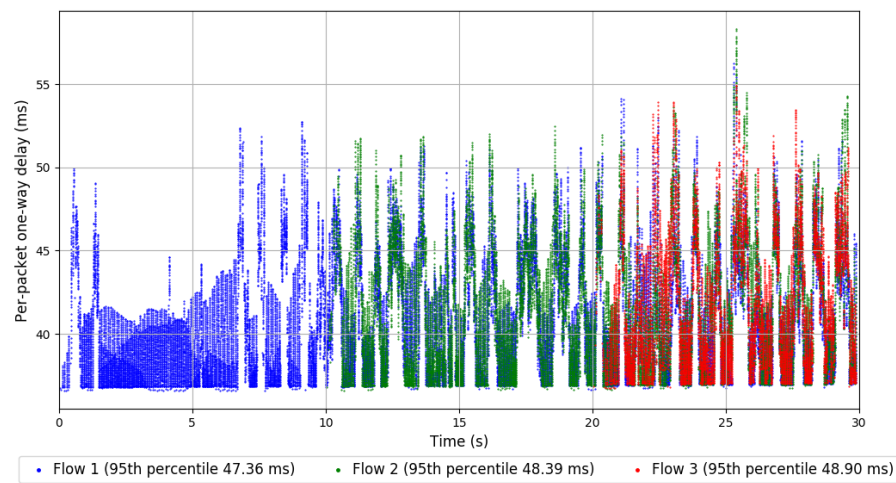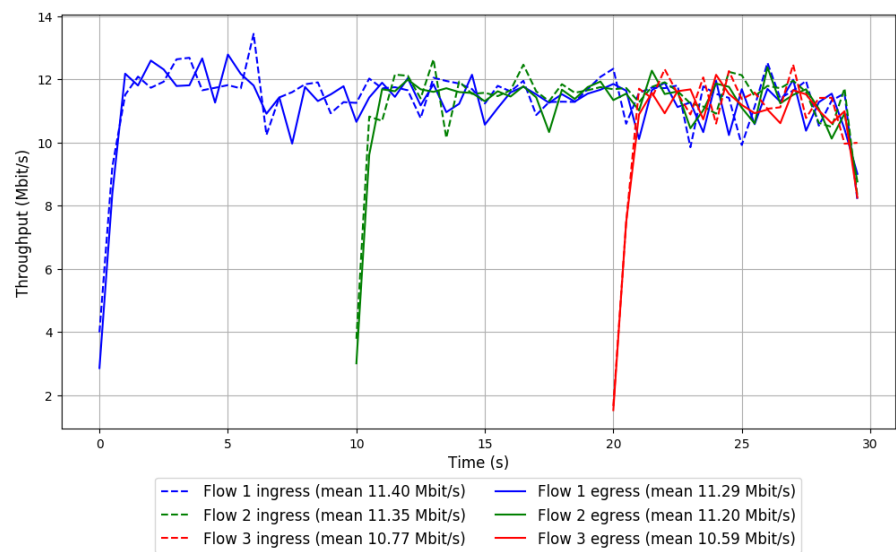
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-04-17 14:56:51
End at: 2018-04-17 14:57:21
Local clock offset: -0.179 ms
Remote clock offset: -0.214 ms


# Below is generated by plot.py at 2018-04-17 21:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.46 Mbit/s
95th percentile per-packet one-way delay: 49.946 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 10.89 Mbit/s
95th percentile per-packet one-way delay: 48.910 ms
Loss rate: 1.60%
-- Flow 2:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 50.855 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 10.56 Mbit/s
95th percentile per-packet one-way delay: 50.732 ms
Loss rate: 1.90%
```
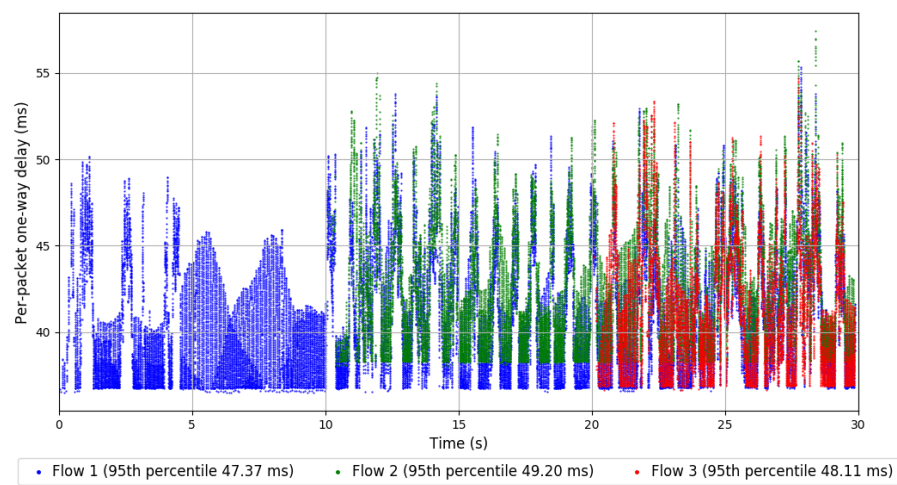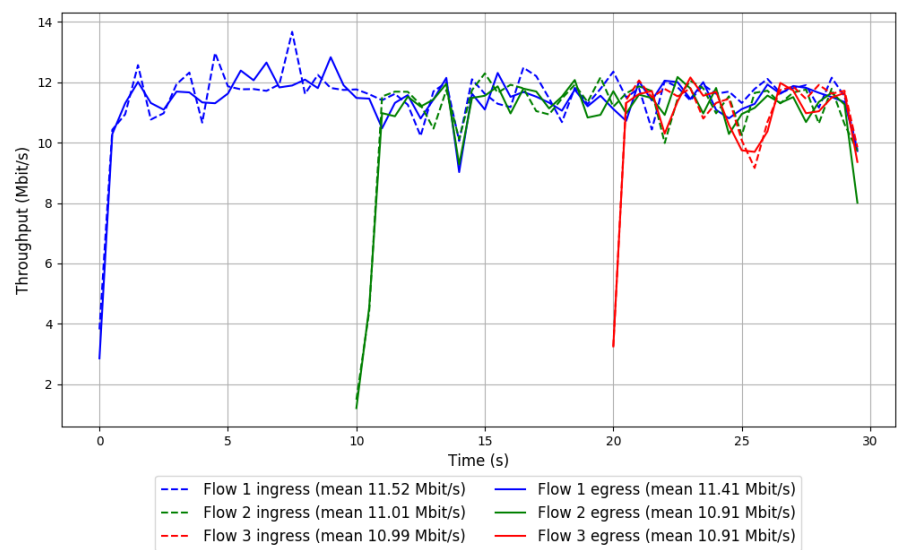
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-04-17 15:24:56
End at: 2018-04-17 15:25:26
Local clock offset: -1.746 ms
Remote clock offset: -5.323 ms


# Below is generated by plot.py at 2018-04-17 21:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.79 Mbit/s
95th percentile per-packet one-way delay: 50.877 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 10.41 Mbit/s
95th percentile per-packet one-way delay: 50.512 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 51.550 ms
Loss rate: 2.09%
-- Flow 3:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 50.400 ms
Loss rate: 2.45%
```
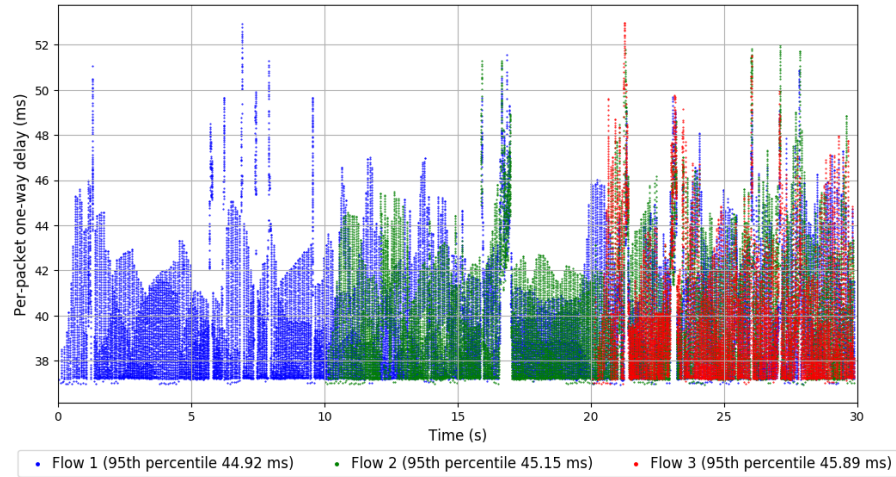
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-04-17 15:52:27
End at: 2018-04-17 15:52:57
Local clock offset: -0.616 ms
Remote clock offset: -6.477 ms


# Below is generated by plot.py at 2018-04-17 21:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.59 Mbit/s
95th percentile per-packet one-way delay: 50.561 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 10.43 Mbit/s
95th percentile per-packet one-way delay: 50.354 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 49.712 ms
Loss rate: 2.35%
-- Flow 3:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 52.875 ms
Loss rate: 2.94%
```
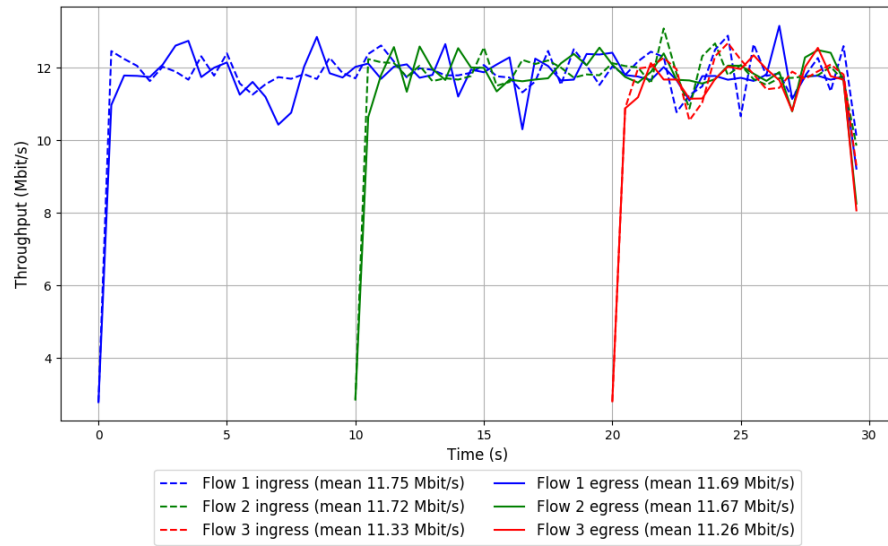
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-04-17 16:21:20
End at: 2018-04-17 16:21:50
Local clock offset: -0.089 ms
Remote clock offset: -5.684 ms


# Below is generated by plot.py at 2018-04-17 21:52:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.22 Mbit/s
95th percentile per-packet one-way delay: 48.014 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 11.29 Mbit/s
95th percentile per-packet one-way delay: 47.362 ms
Loss rate: 1.18%
-- Flow 2:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 48.389 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 10.59 Mbit/s
95th percentile per-packet one-way delay: 48.904 ms
Loss rate: 2.42%
```
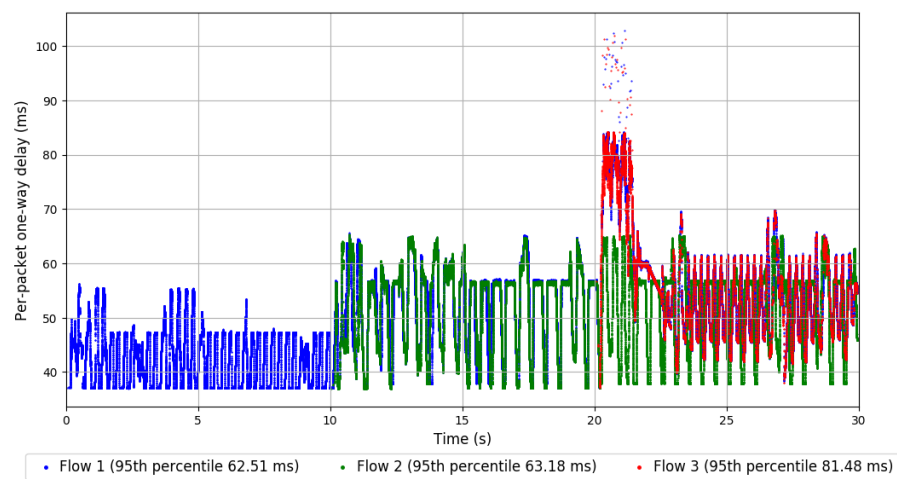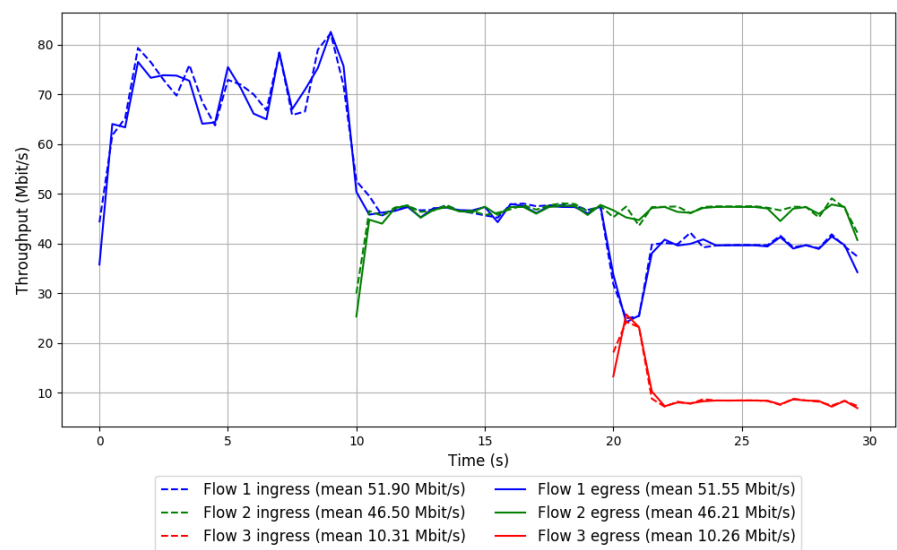
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-04-17 16:46:41
End at: 2018-04-17 16:47:11
Local clock offset: -0.132 ms
Remote clock offset: -1.281 ms


# Below is generated by plot.py at 2018-04-17 21:52:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.24 Mbit/s
95th percentile per-packet one-way delay: 48.223 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 11.41 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 49.205 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 48.114 ms
Loss rate: 1.58%
```
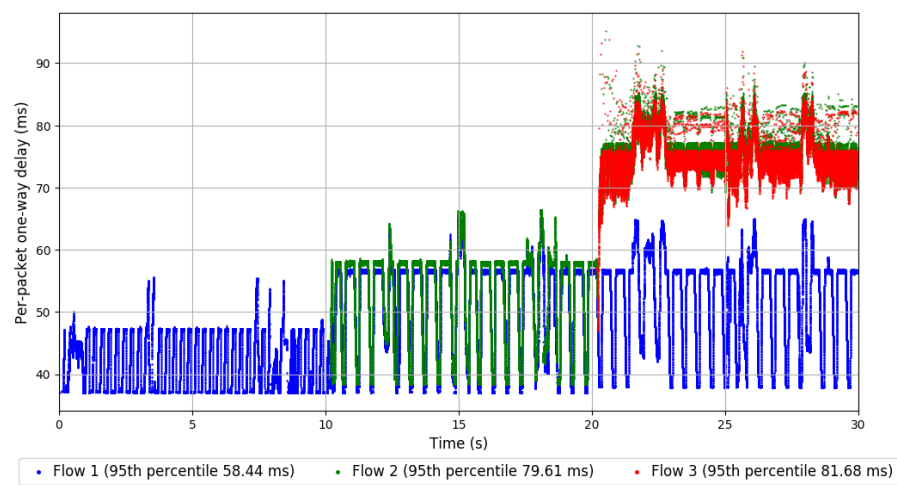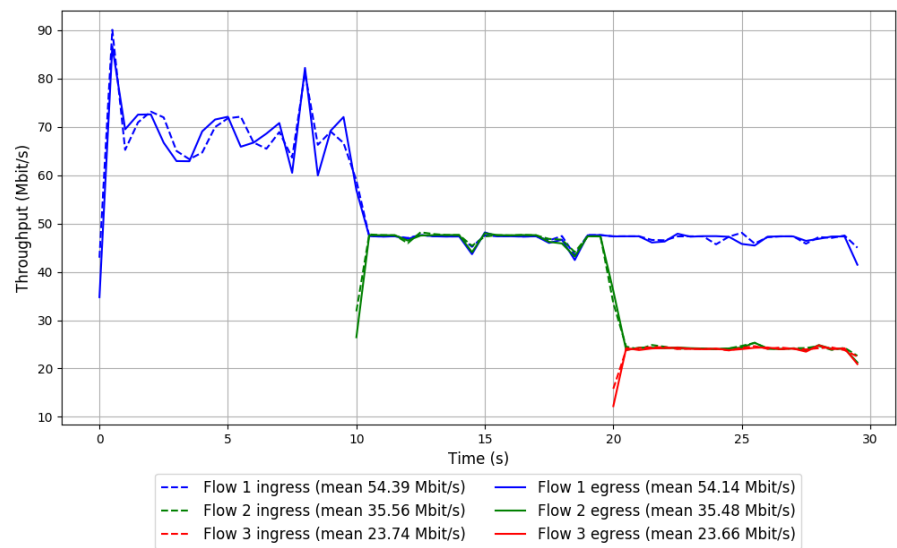
Run 9: Report of Sprout — Data Link

Flow 1 ingress (mean 11.52 Mbit/s) --- Flow 1 egress (mean 11.41 Mbit/s)
Flow 2 ingress (mean 11.01 Mbit/s) --- Flow 2 egress (mean 10.91 Mbit/s)
Flow 3 ingress (mean 10.99 Mbit/s) --- Flow 3 egress (mean 10.91 Mbit/s)

Flow 1 (95th percentile 47.37 ms)   Flow 2 (95th percentile 49.20 ms)   Flow 3 (95th percentile 48.11 ms)

```
Run 10: Statistics of Sprout

Start at: 2018-04-17 17:11:25
End at: 2018-04-17 17:11:55
Local clock offset: 0.919 ms
Remote clock offset: -2.669 ms


# Below is generated by plot.py at 2018-04-17 21:52:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.14 Mbit/s
95th percentile per-packet one-way delay: 45.158 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 44.916 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 45.150 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 45.886 ms
Loss rate: 1.30%
```
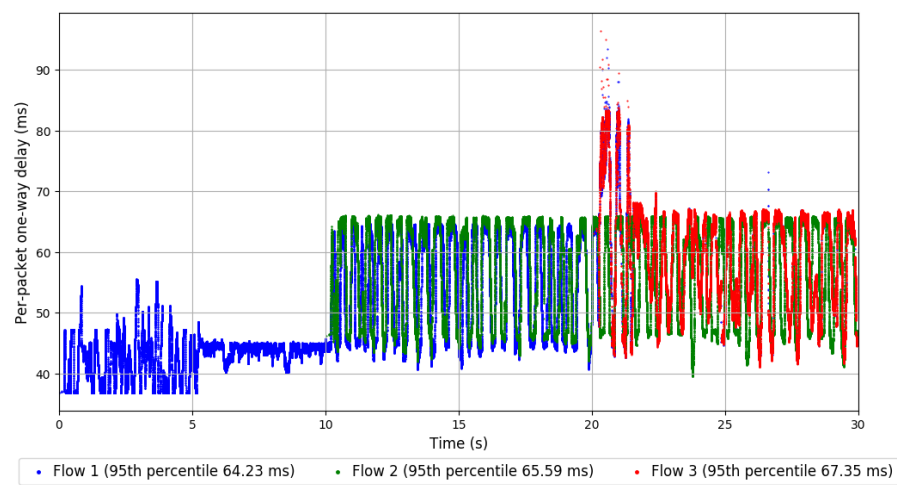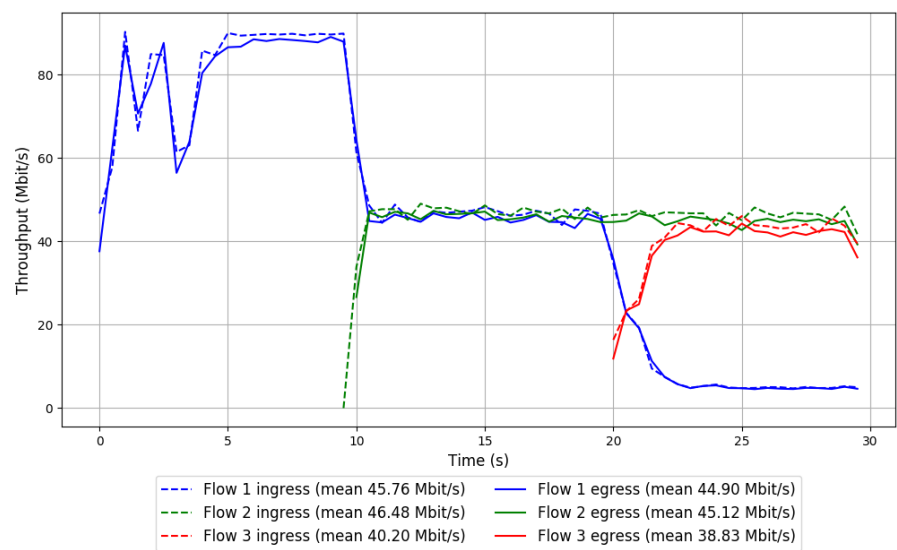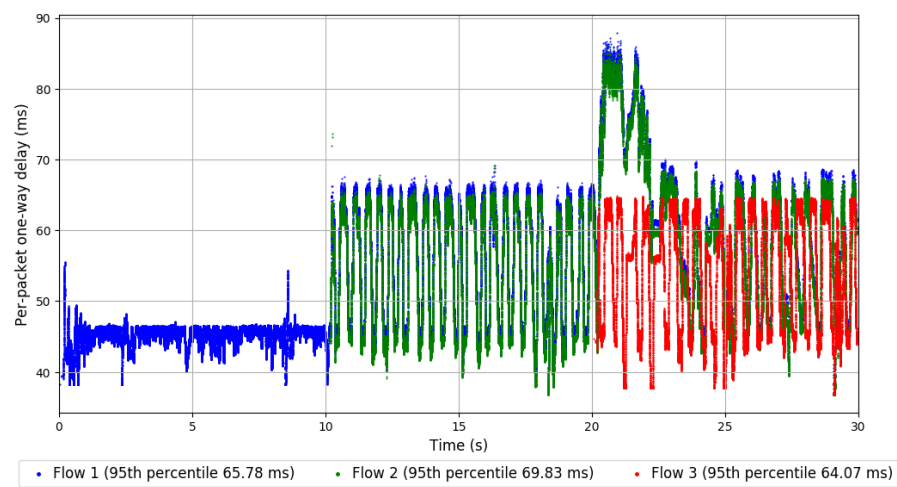
Run 10: Report of Sprout — Data Link

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

Start at: 2018-04-17 13:12:37
End at: 2018-04-17 13:13:07
Local clock offset: -0.18 ms
Remote clock offset: -2.075 ms


# Below is generated by plot.py at 2018-04-17 21:54:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.68 Mbit/s
95th percentile per-packet one-way delay: 63.557 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 51.55 Mbit/s
95th percentile per-packet one-way delay: 62.513 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 46.21 Mbit/s
95th percentile per-packet one-way delay: 63.179 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 81.480 ms
Loss rate: 1.34%
```
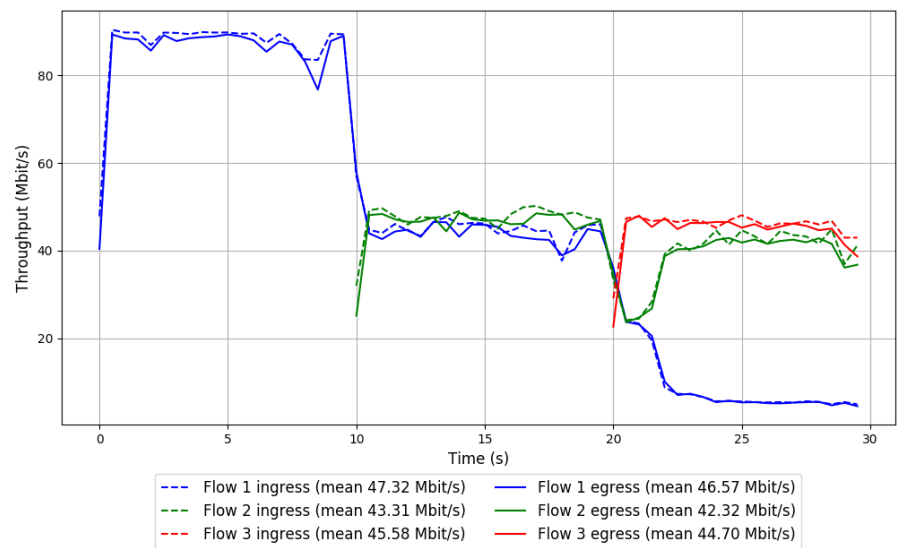
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 13:36:45
End at: 2018-04-17 13:37:15
Local clock offset: 2.452 ms
Remote clock offset: -2.283 ms


# Below is generated by plot.py at 2018-04-17 21:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 76.883 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 58.435 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 35.48 Mbit/s
95th percentile per-packet one-way delay: 79.611 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 23.66 Mbit/s
95th percentile per-packet one-way delay: 81.678 ms
Loss rate: 1.21%
```
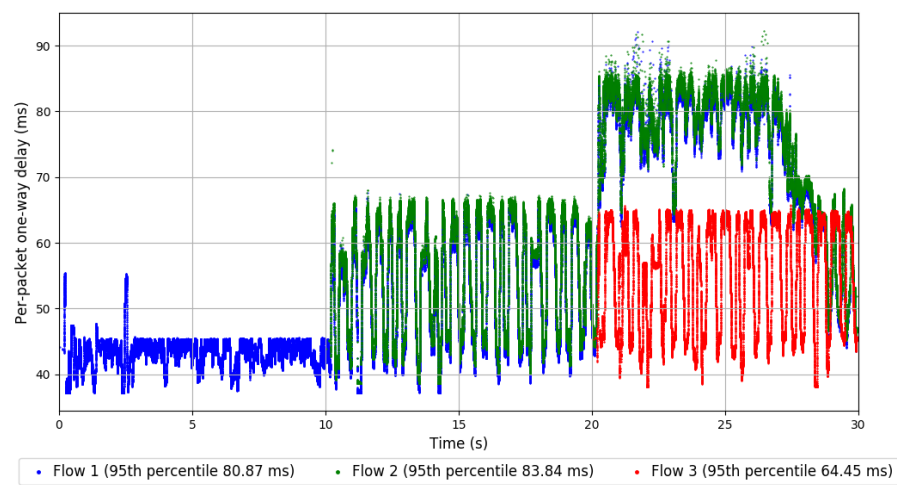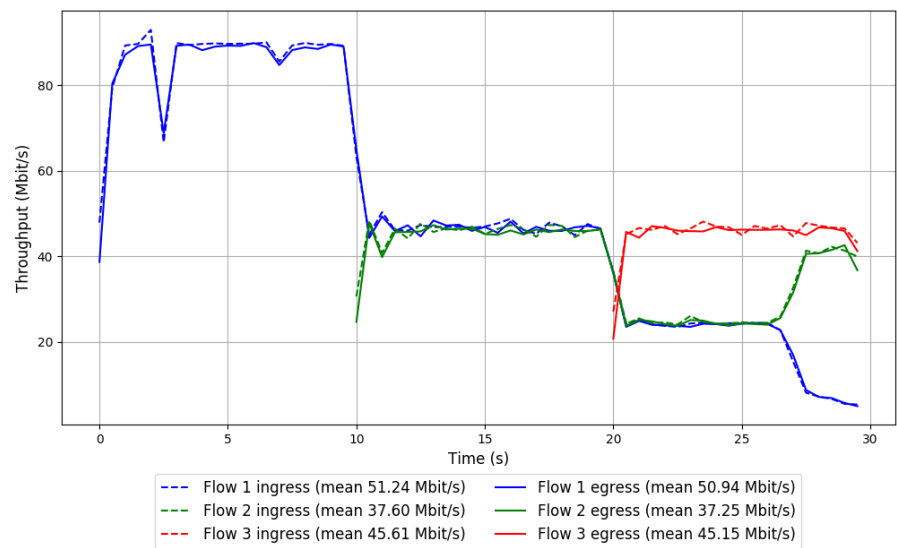
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 14:00:12
End at: 2018-04-17 14:00:42
Local clock offset: 4.837 ms
Remote clock offset: -2.43 ms


# Below is generated by plot.py at 2018-04-17 21:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.72 Mbit/s
95th percentile per-packet one-way delay: 65.686 ms
Loss rate: 2.84%
-- Flow 1:
Average throughput: 44.90 Mbit/s
95th percentile per-packet one-way delay: 64.233 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 45.12 Mbit/s
95th percentile per-packet one-way delay: 65.589 ms
Loss rate: 3.28%
-- Flow 3:
Average throughput: 38.83 Mbit/s
95th percentile per-packet one-way delay: 67.351 ms
Loss rate: 4.33%
```

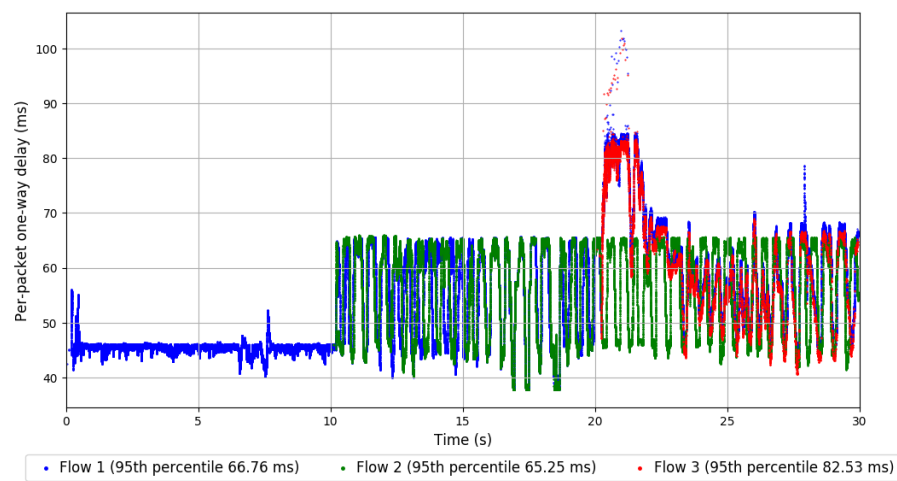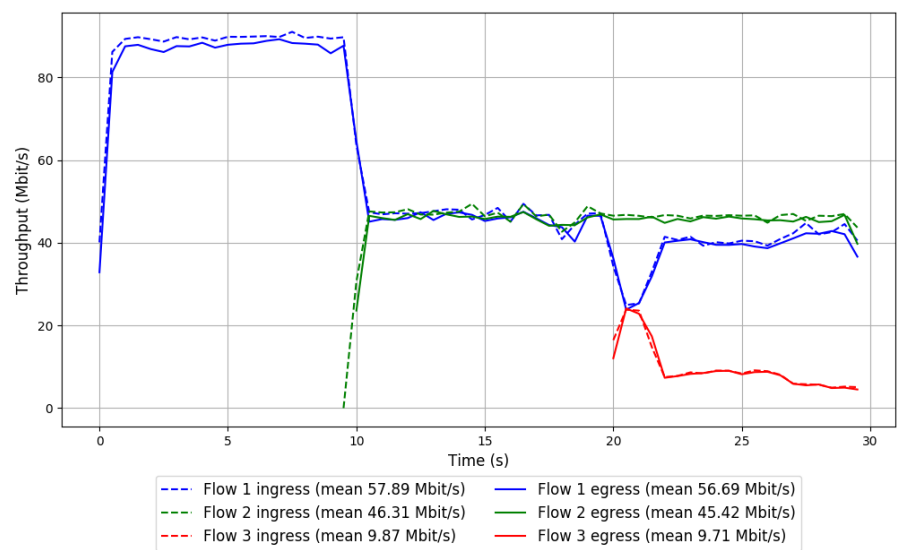Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 14:25:47
End at: 2018-04-17 14:26:17
Local clock offset: 11.163 ms
Remote clock offset: -1.198 ms


# Below is generated by plot.py at 2018-04-17 21:55:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.49 Mbit/s
95th percentile per-packet one-way delay: 66.065 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 46.57 Mbit/s
95th percentile per-packet one-way delay: 65.776 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 42.32 Mbit/s
95th percentile per-packet one-way delay: 69.831 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 64.071 ms
Loss rate: 2.72%
```
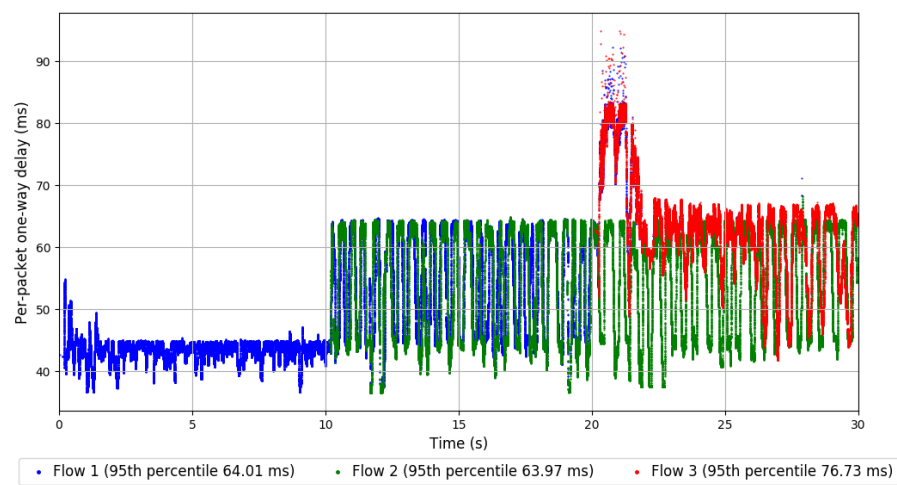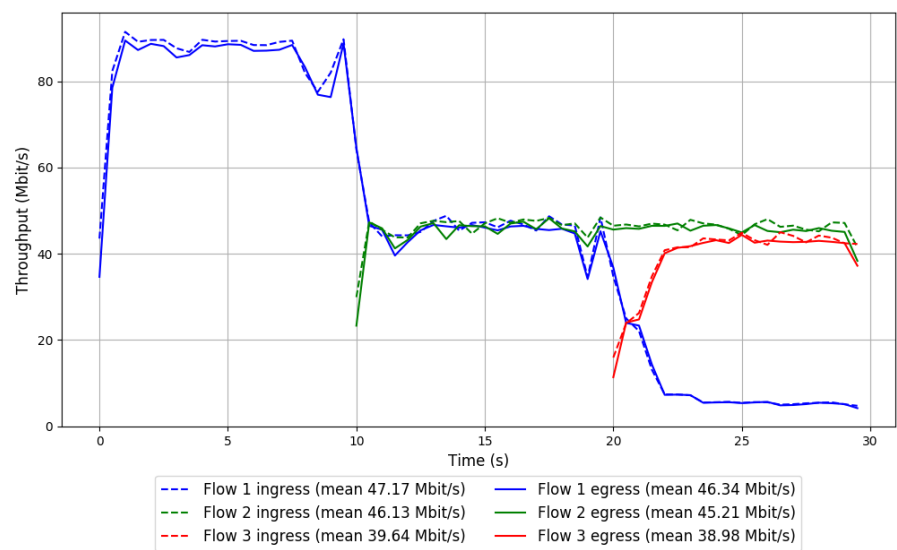
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 14:54:28
End at: 2018-04-17 14:54:58
Local clock offset: 0.293 ms
Remote clock offset: -0.319 ms


# Below is generated by plot.py at 2018-04-17 21:55:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.63 Mbit/s
95th percentile per-packet one-way delay: 81.905 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 50.94 Mbit/s
95th percentile per-packet one-way delay: 80.870 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 37.25 Mbit/s
95th percentile per-packet one-way delay: 83.836 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 45.15 Mbit/s
95th percentile per-packet one-way delay: 64.446 ms
Loss rate: 1.76%
```

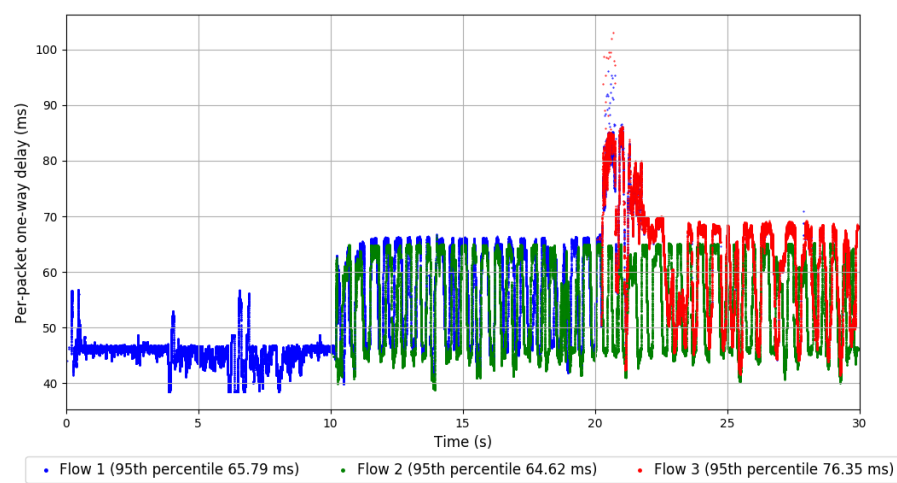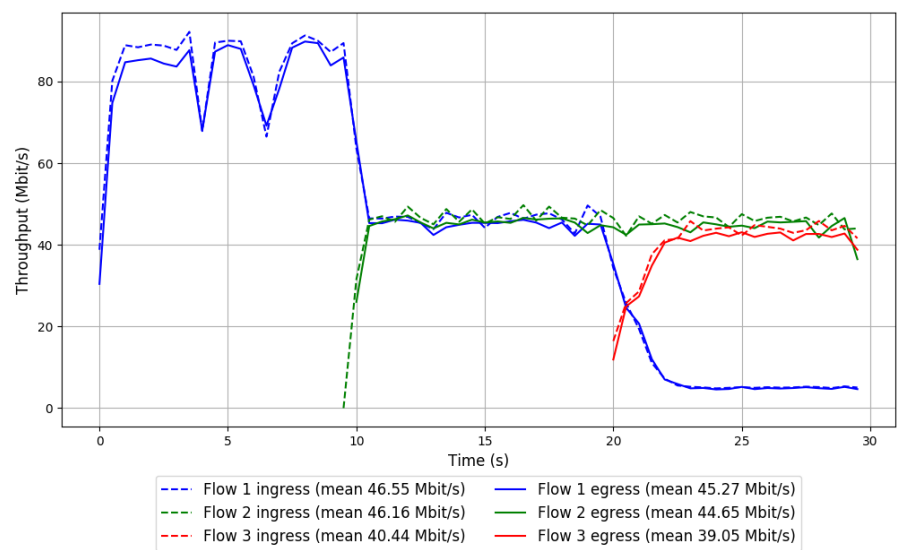## Run 5: Report of TaoVA-100x — Data Link

174

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

Start at: 2018-04-17 15:22:33
End at: 2018-04-17 15:23:03
Local clock offset: -1.565 ms
Remote clock offset: -4.174 ms


# Below is generated by plot.py at 2018-04-17 21:55:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.12 Mbit/s
95th percentile per-packet one-way delay: 66.133 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 56.69 Mbit/s
95th percentile per-packet one-way delay: 66.758 ms
Loss rate: 2.31%
-- Flow 2:
Average throughput: 45.42 Mbit/s
95th percentile per-packet one-way delay: 65.247 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 82.527 ms
Loss rate: 2.46%
```

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

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

Start at: 2018-04-17 15:49:58
End at: 2018-04-17 15:50:28
Local clock offset: -0.813 ms
Remote clock offset: -6.803 ms


# Below is generated by plot.py at 2018-04-17 21:55:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.27 Mbit/s
95th percentile per-packet one-way delay: 65.538 ms
Loss rate: 2.21%
-- Flow 1:
Average throughput: 46.34 Mbit/s
95th percentile per-packet one-way delay: 64.013 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 45.21 Mbit/s
95th percentile per-packet one-way delay: 63.965 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 38.98 Mbit/s
95th percentile per-packet one-way delay: 76.735 ms
Loss rate: 2.59%
```
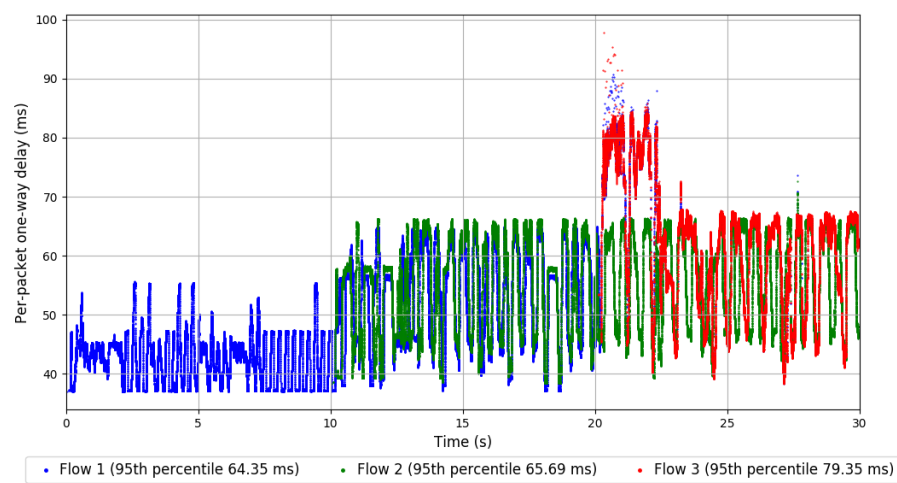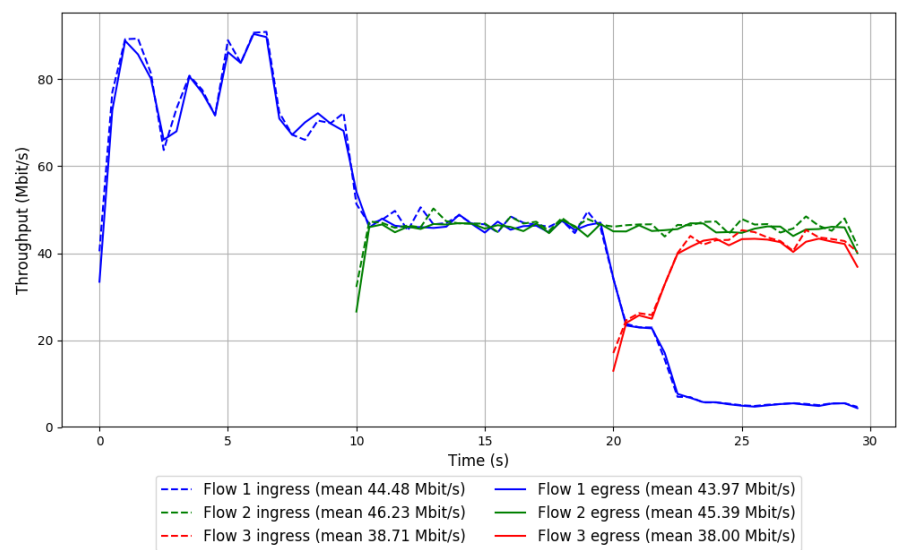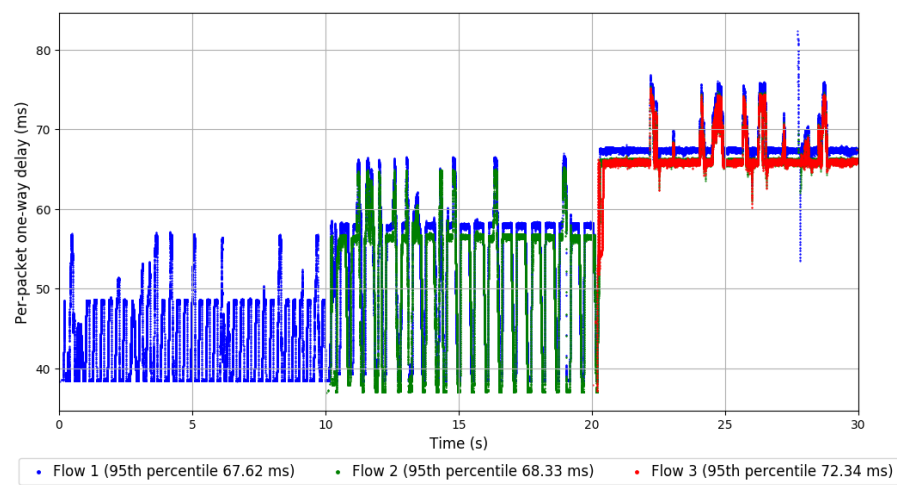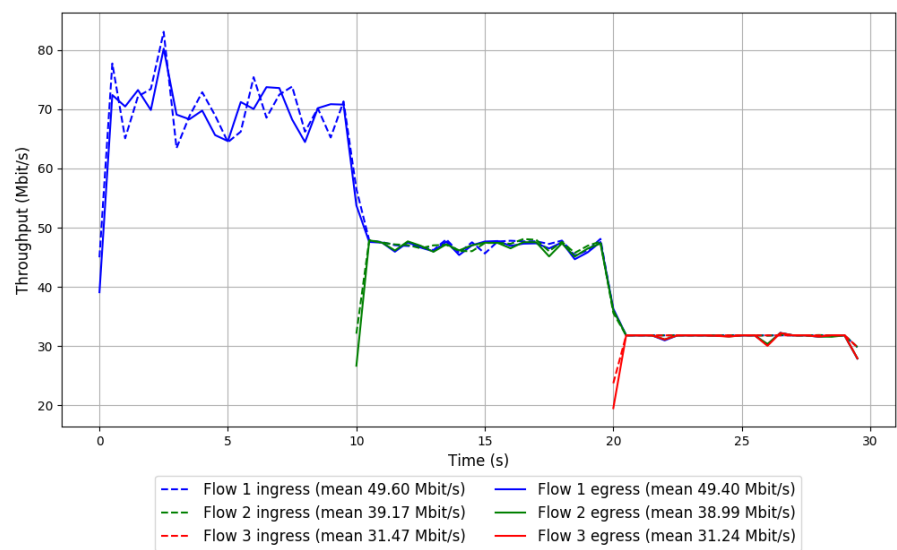
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 47.17 Mbit/s) --- Flow 1 egress (mean 46.34 Mbit/s)
Flow 2 ingress (mean 46.13 Mbit/s) --- Flow 2 egress (mean 45.21 Mbit/s)
Flow 3 ingress (mean 39.64 Mbit/s) --- Flow 3 egress (mean 38.98 Mbit/s)

Flow 1 (95th percentile 64.01 ms) • Flow 2 (95th percentile 63.97 ms) • Flow 3 (95th percentile 76.73 ms)

```
Run 8: Statistics of TaoVA-100x

Start at: 2018-04-17 16:19:32
End at: 2018-04-17 16:20:02
Local clock offset: -0.159 ms
Remote clock offset: -6.852 ms


# Below is generated by plot.py at 2018-04-17 21:55:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.86 Mbit/s
95th percentile per-packet one-way delay: 67.673 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 45.27 Mbit/s
95th percentile per-packet one-way delay: 65.787 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 44.65 Mbit/s
95th percentile per-packet one-way delay: 64.617 ms
Loss rate: 3.63%
-- Flow 3:
Average throughput: 39.05 Mbit/s
95th percentile per-packet one-way delay: 76.354 ms
Loss rate: 4.47%
```
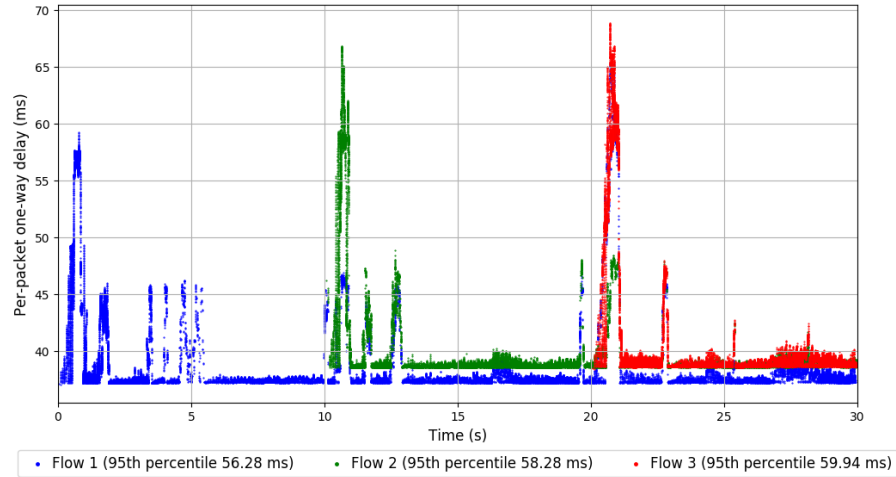
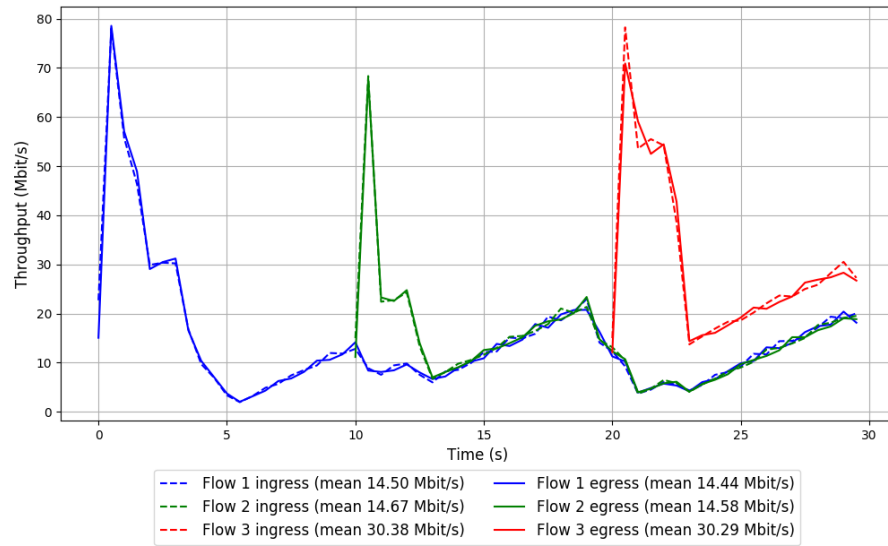Run 8: Report of TaoVA-100x — Data Link

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

Start at: 2018-04-17 16:44:48
End at: 2018-04-17 16:45:18
Local clock offset: -0.222 ms
Remote clock offset: -1.79 ms

# Below is generated by plot.py at 2018-04-17 21:57:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.72 Mbit/s
95th percentile per-packet one-way delay: 66.288 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 43.97 Mbit/s
95th percentile per-packet one-way delay: 64.354 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 45.39 Mbit/s
95th percentile per-packet one-way delay: 65.688 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 38.00 Mbit/s
95th percentile per-packet one-way delay: 79.352 ms
Loss rate: 2.72%
```

Run 9: Report of TaoVA-100x — Data Link

182

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

Start at: 2018-04-17 17:09:54
End at: 2018-04-17 17:10:24
Local clock offset: 0.77 ms
Remote clock offset: -2.659 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.68 Mbit/s
95th percentile per-packet one-way delay: 68.271 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 67.623 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 38.99 Mbit/s
95th percentile per-packet one-way delay: 68.328 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 72.337 ms
Loss rate: 1.38%
```
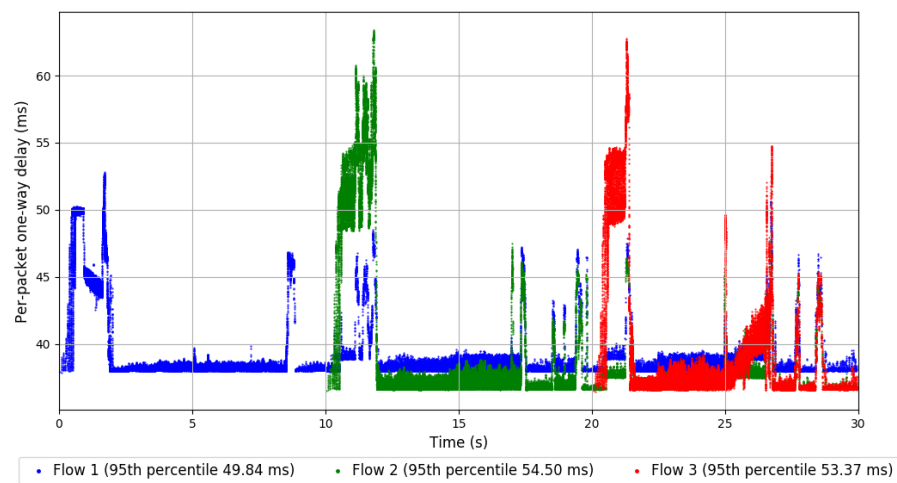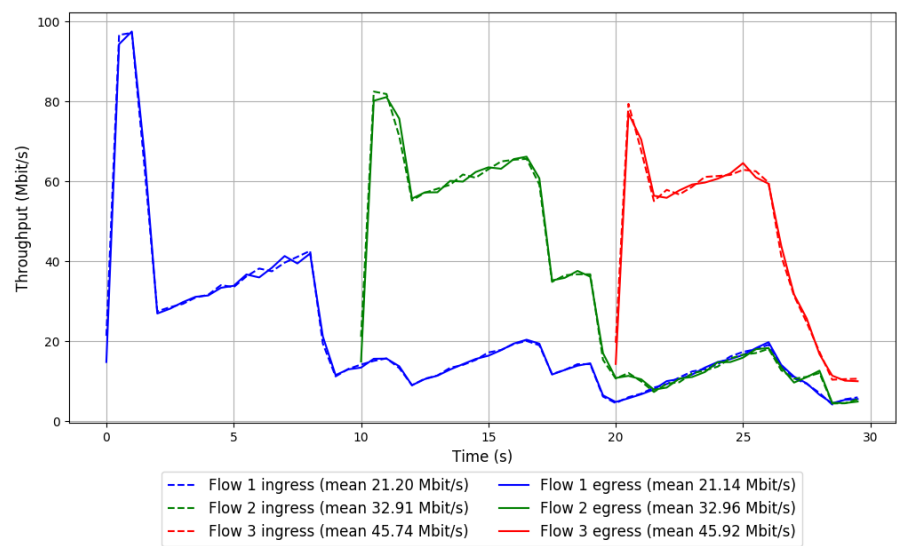
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 49.60 Mbit/s)   Flow 1 egress (mean 49.40 Mbit/s)
Flow 2 ingress (mean 39.17 Mbit/s)   Flow 2 egress (mean 38.99 Mbit/s)
Flow 3 ingress (mean 31.47 Mbit/s)   Flow 3 egress (mean 31.24 Mbit/s)

Flow 1 (95th percentile 67.62 ms)   Flow 2 (95th percentile 68.33 ms)   Flow 3 (95th percentile 72.34 ms)
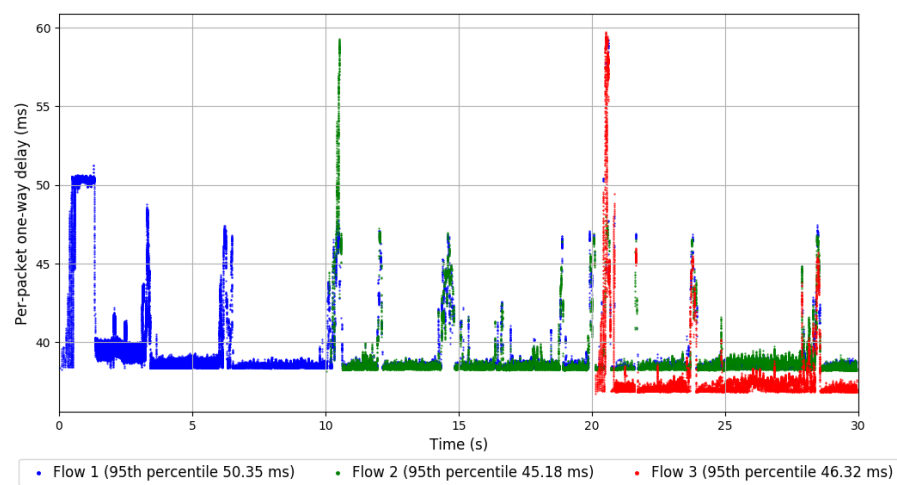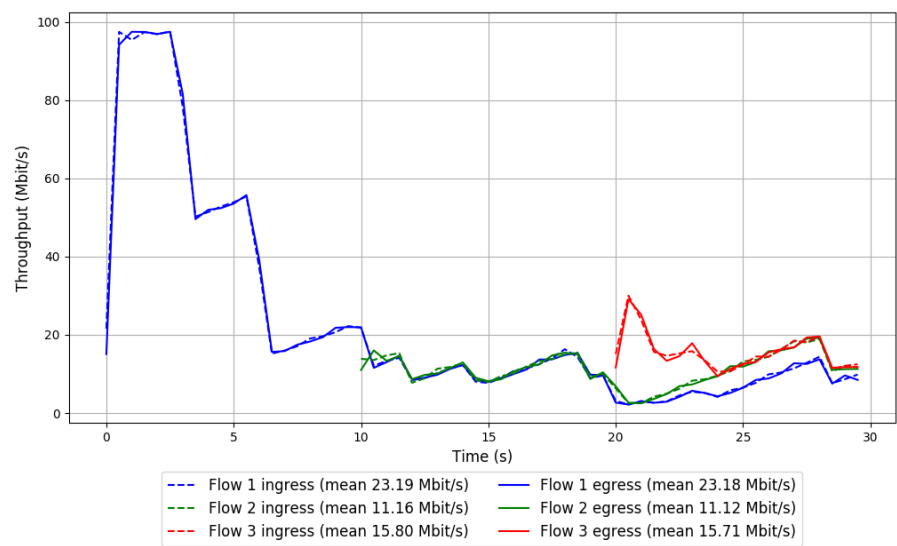
```
Run 1: Statistics of TCP Vegas

Start at: 2018-04-17 13:20:03
End at: 2018-04-17 13:20:33
Local clock offset: -0.336 ms
Remote clock offset: -1.848 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 57.467 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 14.44 Mbit/s
95th percentile per-packet one-way delay: 56.282 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 14.58 Mbit/s
95th percentile per-packet one-way delay: 58.283 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 59.935 ms
Loss rate: 1.00%
```
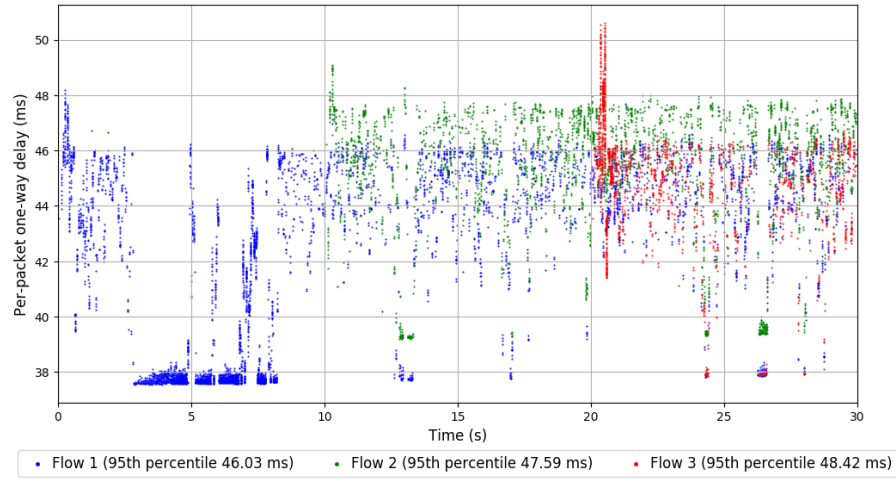
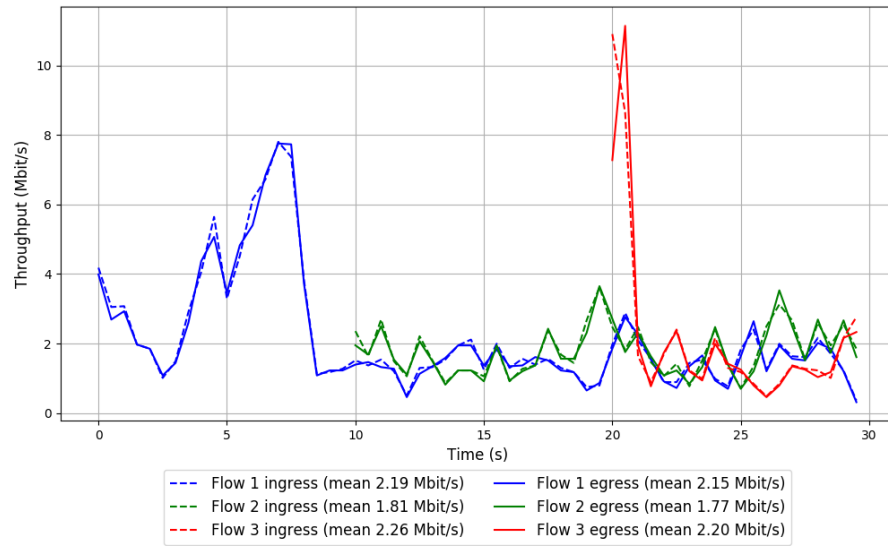Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-04-17 13:43:49
End at: 2018-04-17 13:44:19
Local clock offset: 2.98 ms
Remote clock offset: -1.98 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.24 Mbit/s
95th percentile per-packet one-way delay: 52.467 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 21.14 Mbit/s
95th percentile per-packet one-way delay: 49.842 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 32.96 Mbit/s
95th percentile per-packet one-way delay: 54.498 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 45.92 Mbit/s
95th percentile per-packet one-way delay: 53.371 ms
Loss rate: 0.27%
```

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-04-17 14:08:18
End at: 2018-04-17 14:08:48
Local clock offset: 7.905 ms
Remote clock offset: -1.948 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.75 Mbit/s
95th percentile per-packet one-way delay: 50.308 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 23.18 Mbit/s
95th percentile per-packet one-way delay: 50.348 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 45.179 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 15.71 Mbit/s
95th percentile per-packet one-way delay: 46.320 ms
Loss rate: 1.36%
```
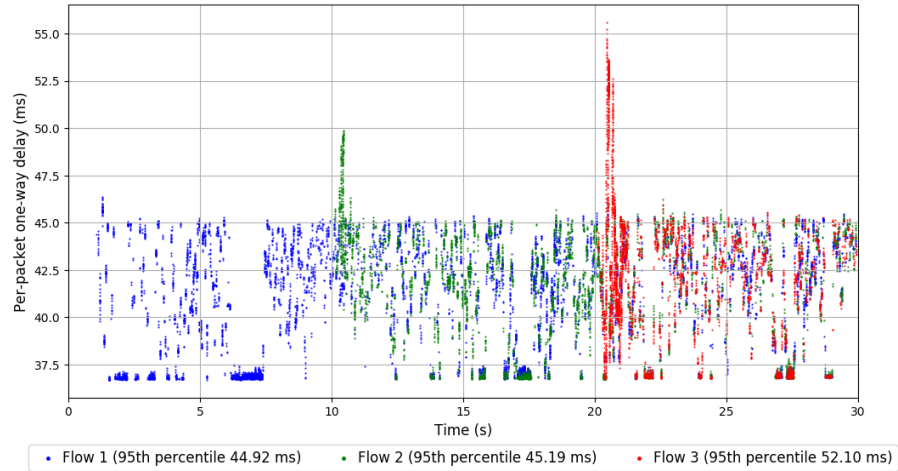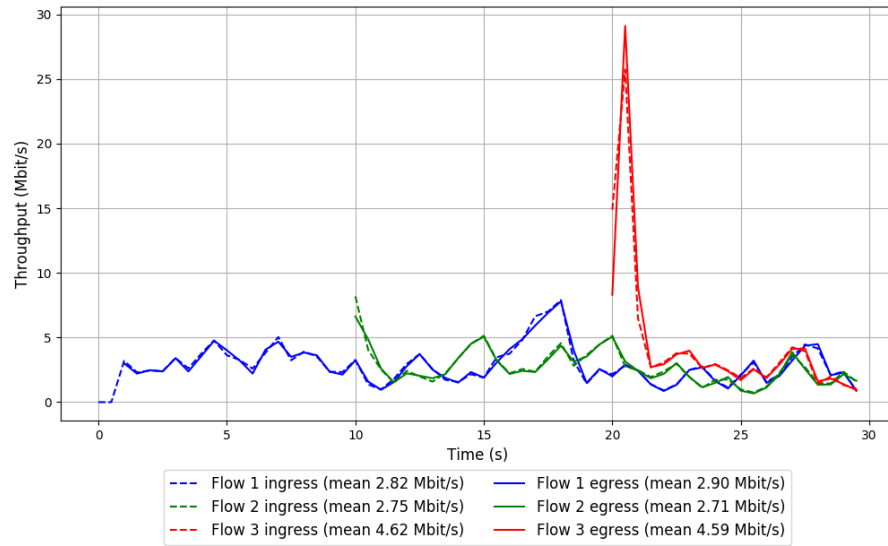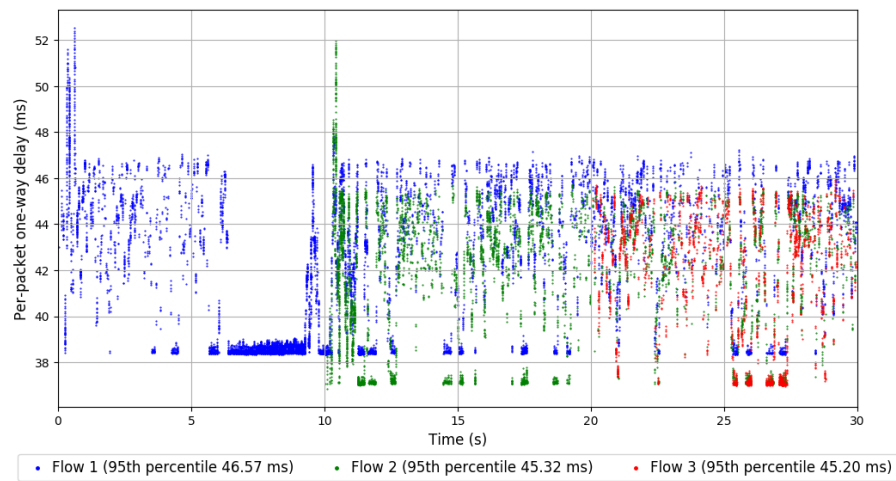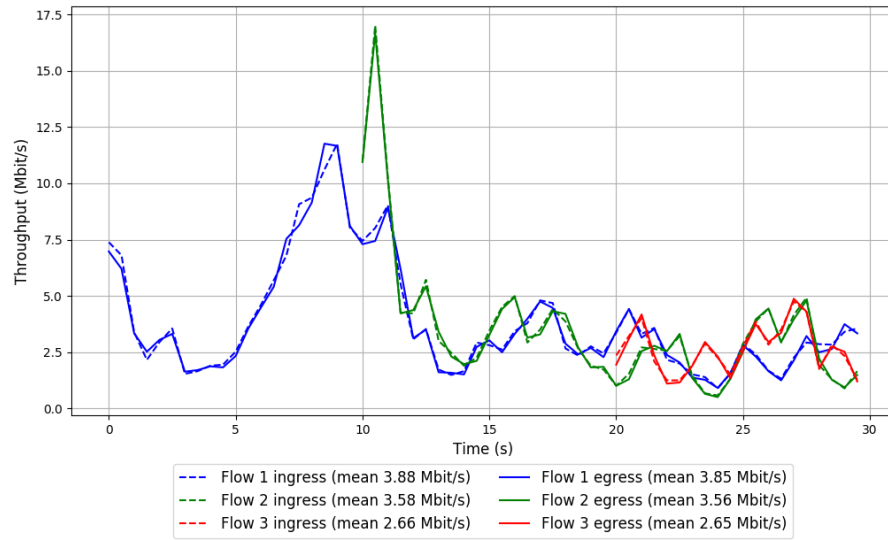
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 23.19 Mbit/s)   Flow 1 egress (mean 23.18 Mbit/s)
Flow 2 ingress (mean 11.16 Mbit/s)   Flow 2 egress (mean 11.12 Mbit/s)
Flow 3 ingress (mean 15.80 Mbit/s)   Flow 3 egress (mean 15.71 Mbit/s)

Flow 1 (95th percentile 50.35 ms)   Flow 2 (95th percentile 45.18 ms)   Flow 3 (95th percentile 46.32 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-04-17 14:37:16
End at: 2018-04-17 14:37:46
Local clock offset: 7.005 ms
Remote clock offset: -0.954 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 47.485 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 46.032 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 47.586 ms
Loss rate: 2.26%
-- Flow 3:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 48.420 ms
Loss rate: 3.58%
```
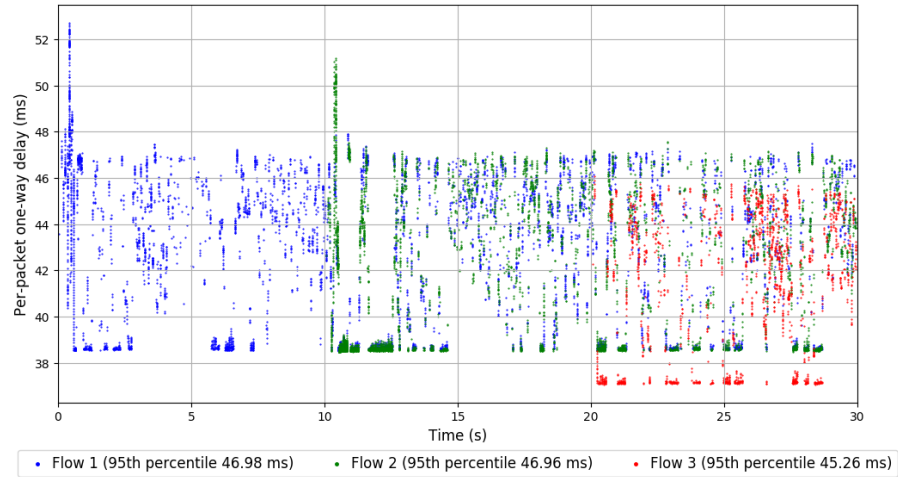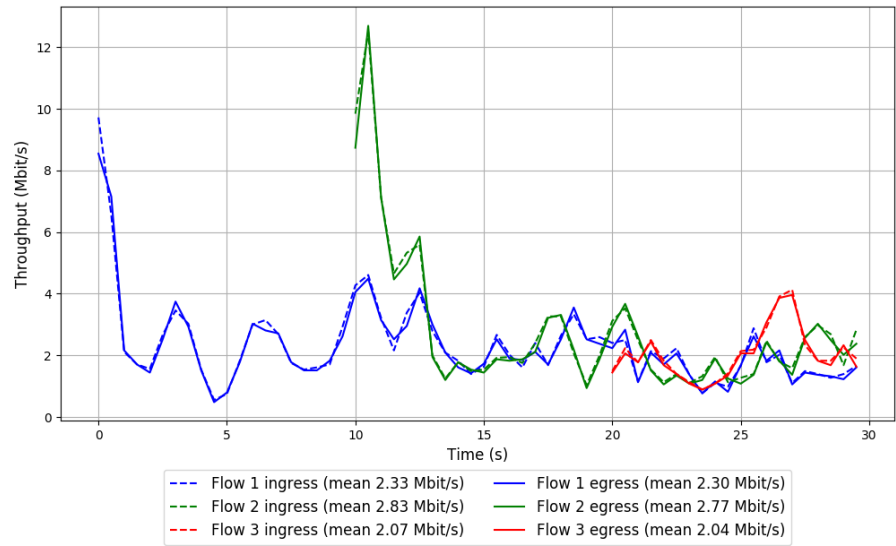
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-04-17 15:03:57
End at: 2018-04-17 15:04:27
Local clock offset: -1.223 ms
Remote clock offset: 0.43 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.33 Mbit/s
95th percentile per-packet one-way delay: 45.328 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 44.917 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 45.190 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 4.59 Mbit/s
95th percentile per-packet one-way delay: 52.100 ms
Loss rate: 1.36%
```
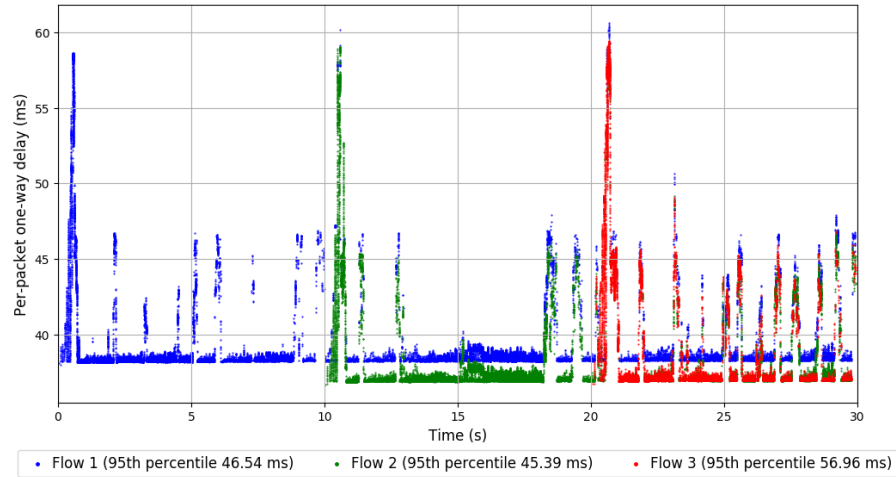
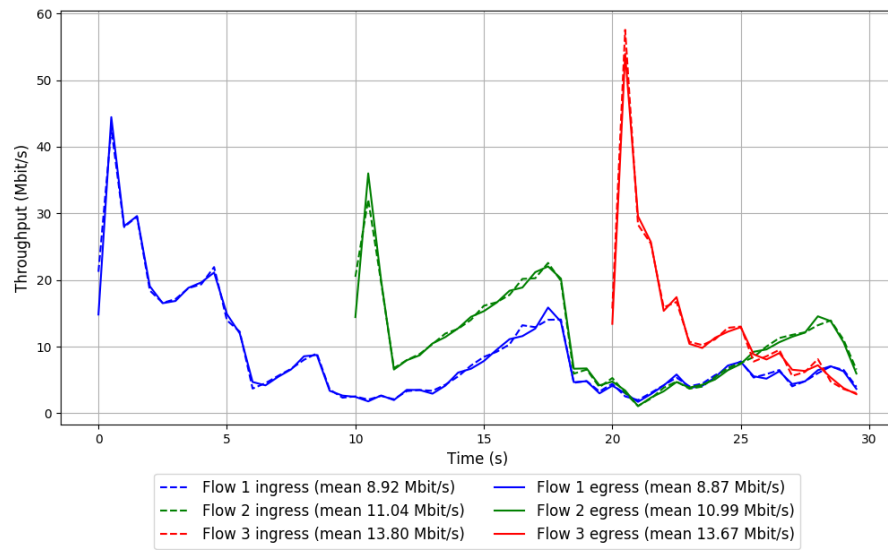Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-04-17 15:31:56
End at: 2018-04-17 15:32:26
Local clock offset: -2.303 ms
Remote clock offset: -6.601 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 46.381 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 46.573 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 45.317 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 2.65 Mbit/s
95th percentile per-packet one-way delay: 45.205 ms
Loss rate: 1.04%
```

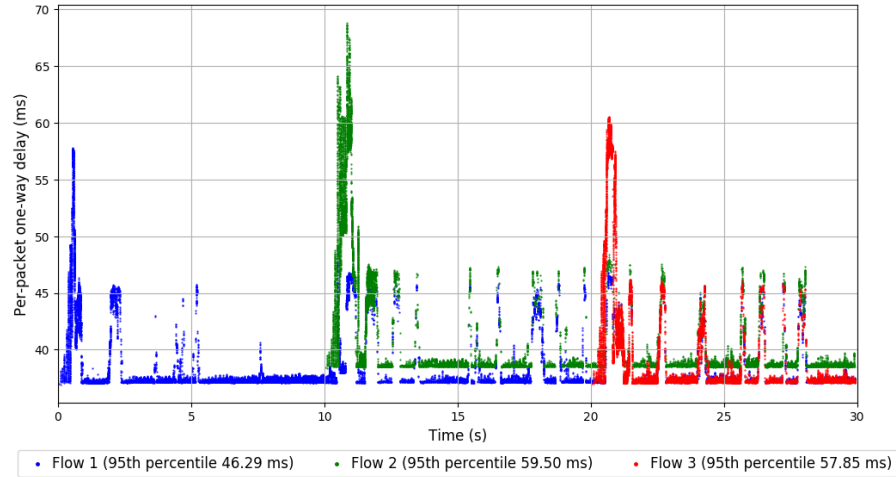Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-04-17 16:00:40
End at: 2018-04-17 16:01:10
Local clock offset: -0.355 ms
Remote clock offset: -6.473 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.81 Mbit/s
95th percentile per-packet one-way delay: 46.905 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 46.977 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 46.958 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 45.256 ms
Loss rate: 2.28%
```
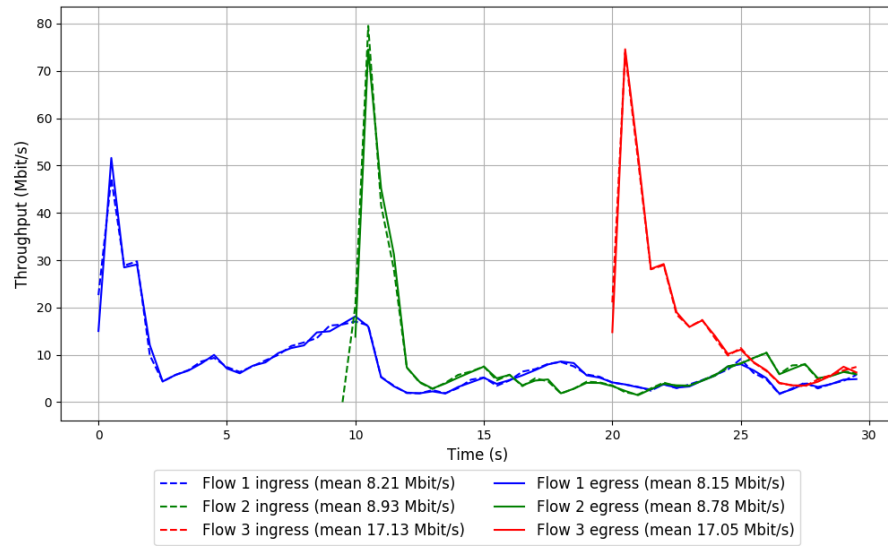
Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2018-04-17 16:27:35
End at: 2018-04-17 16:28:05
Local clock offset: 0.015 ms
Remote clock offset: -3.589 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.69 Mbit/s
95th percentile per-packet one-way delay: 48.625 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 8.87 Mbit/s
95th percentile per-packet one-way delay: 46.536 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 45.390 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 13.67 Mbit/s
95th percentile per-packet one-way delay: 56.963 ms
Loss rate: 1.63%
```
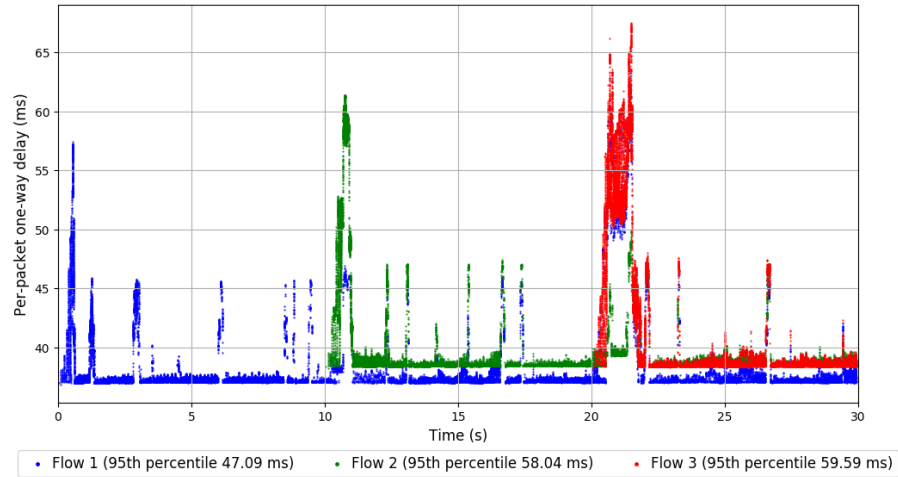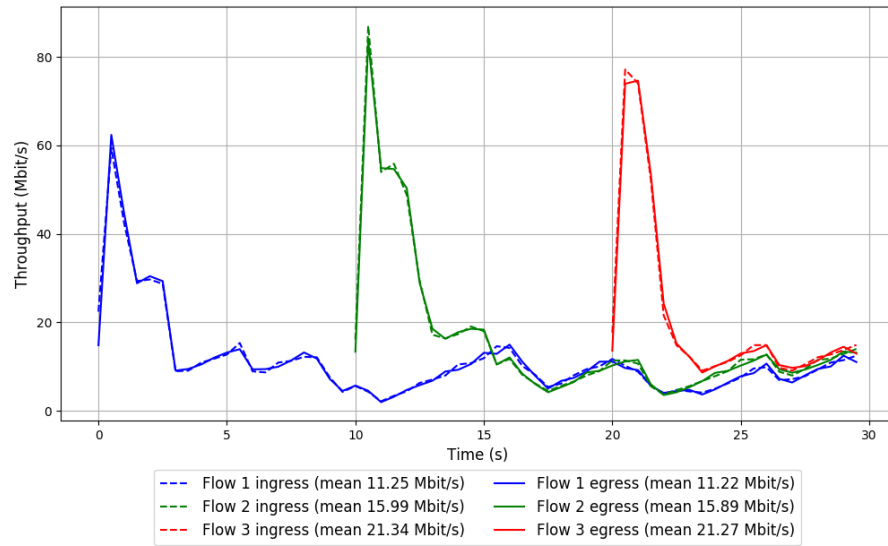
Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-04-17 16:53:08
End at: 2018-04-17 16:53:38
Local clock offset: 0.227 ms
Remote clock offset: -1.238 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.62 Mbit/s
95th percentile per-packet one-way delay: 57.589 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 46.292 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 59.496 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 17.05 Mbit/s
95th percentile per-packet one-way delay: 57.852 ms
Loss rate: 1.10%
```
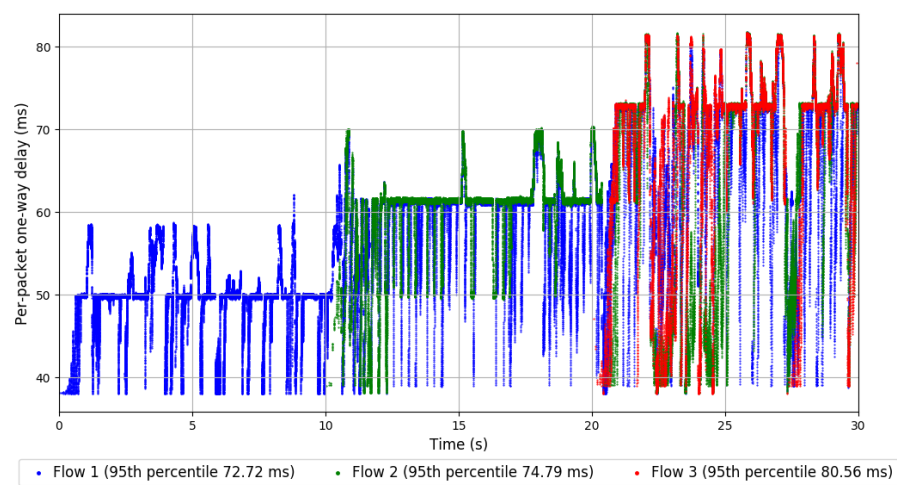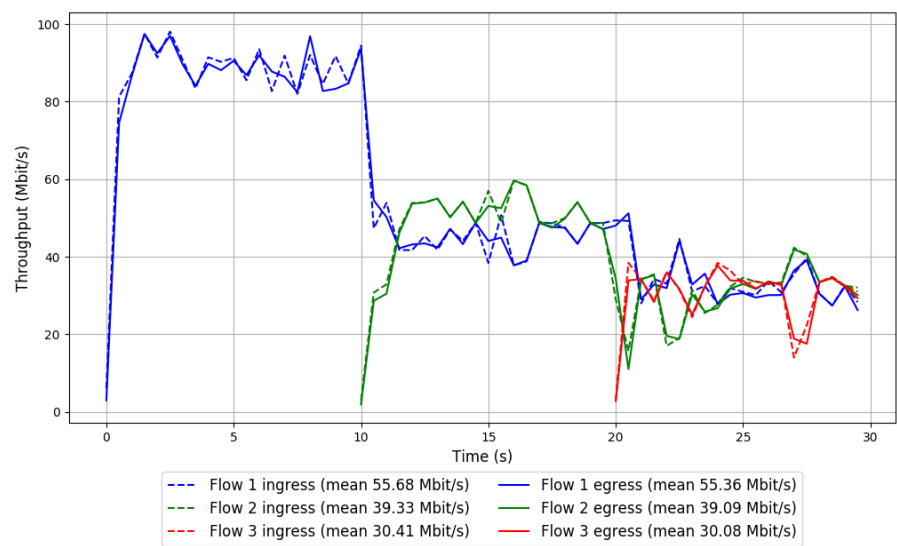
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 8.21 Mbit/s) --- Flow 1 egress (mean 8.15 Mbit/s)
Flow 2 ingress (mean 8.93 Mbit/s) --- Flow 2 egress (mean 8.78 Mbit/s)
Flow 3 ingress (mean 17.13 Mbit/s) --- Flow 3 egress (mean 17.05 Mbit/s)

Flow 1 (95th percentile 46.29 ms) Flow 2 (95th percentile 59.50 ms) Flow 3 (95th percentile 57.85 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2018-04-17 17:17:17
End at: 2018-04-17 17:17:47
Local clock offset: 0.845 ms
Remote clock offset: -2.689 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.81 Mbit/s
95th percentile per-packet one-way delay: 57.442 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 11.22 Mbit/s
95th percentile per-packet one-way delay: 47.092 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 15.89 Mbit/s
95th percentile per-packet one-way delay: 58.040 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 21.27 Mbit/s
95th percentile per-packet one-way delay: 59.585 ms
Loss rate: 1.02%
```

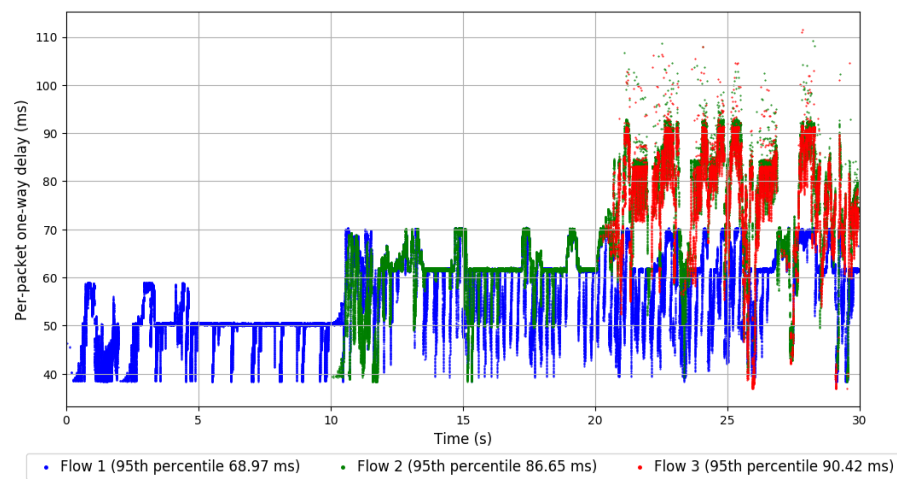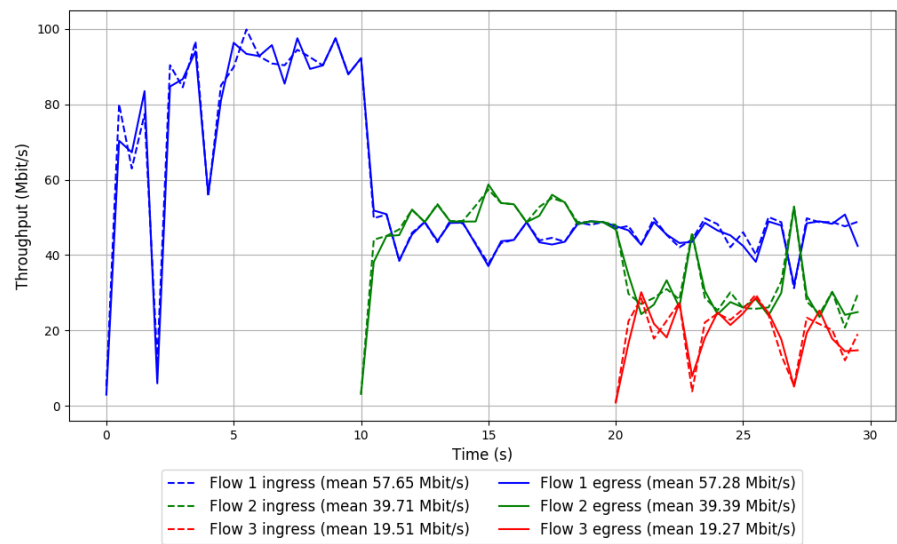Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-04-17 13:09:34
End at: 2018-04-17 13:10:04
Local clock offset: 0.108 ms
Remote clock offset: -1.683 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.28 Mbit/s
95th percentile per-packet one-way delay: 73.915 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 55.36 Mbit/s
95th percentile per-packet one-way delay: 72.716 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 39.09 Mbit/s
95th percentile per-packet one-way delay: 74.788 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 30.08 Mbit/s
95th percentile per-packet one-way delay: 80.564 ms
Loss rate: 1.77%
```
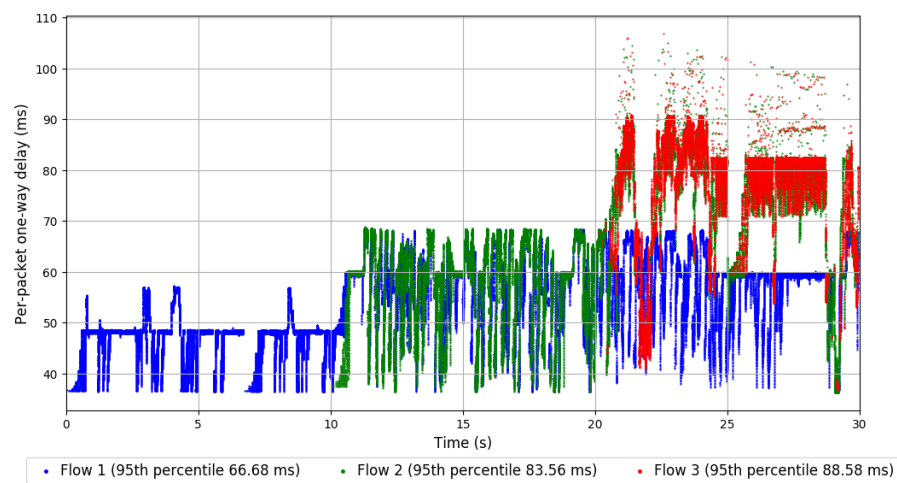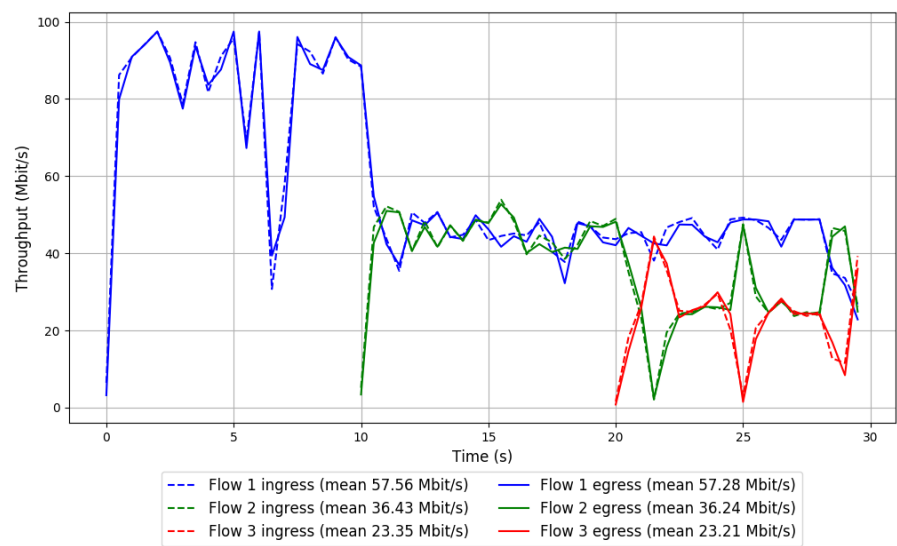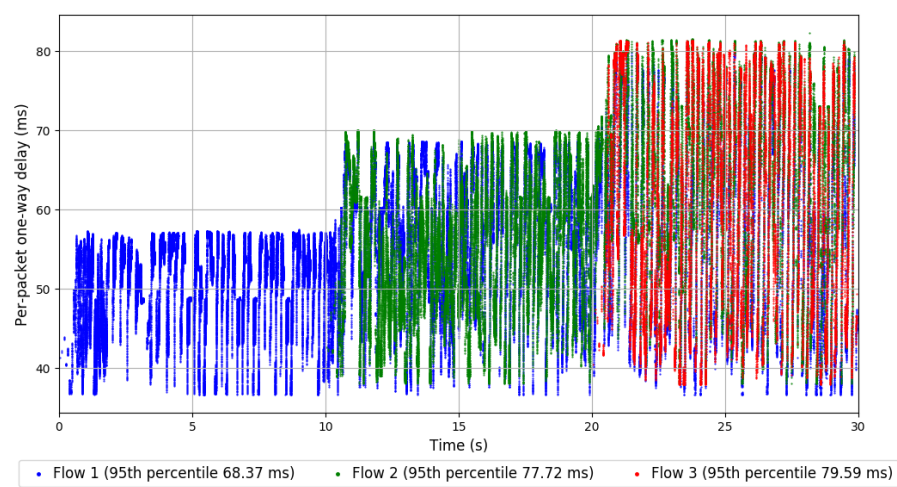
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-04-17 13:33:55
End at: 2018-04-17 13:34:25
Local clock offset: 2.117 ms
Remote clock offset: -2.133 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.84 Mbit/s
95th percentile per-packet one-way delay: 82.903 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 57.28 Mbit/s
95th percentile per-packet one-way delay: 68.970 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 39.39 Mbit/s
95th percentile per-packet one-way delay: 86.647 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 19.27 Mbit/s
95th percentile per-packet one-way delay: 90.420 ms
Loss rate: 2.08%
```
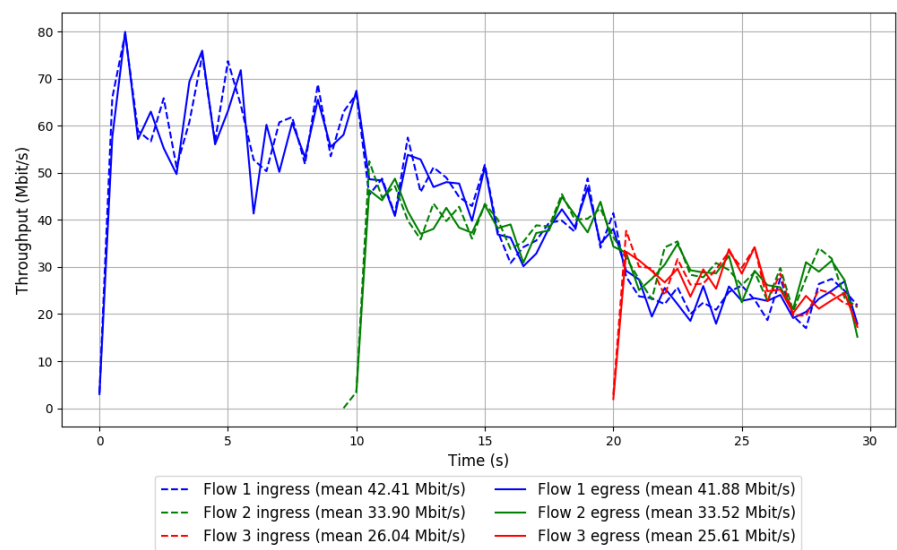
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-04-17 13:57:27
End at: 2018-04-17 13:57:57
Local clock offset: 3.5 ms
Remote clock offset: -1.974 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.01 Mbit/s
95th percentile per-packet one-way delay: 81.965 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 57.28 Mbit/s
95th percentile per-packet one-way delay: 66.678 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 36.24 Mbit/s
95th percentile per-packet one-way delay: 83.562 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 88.575 ms
Loss rate: 1.75%
```
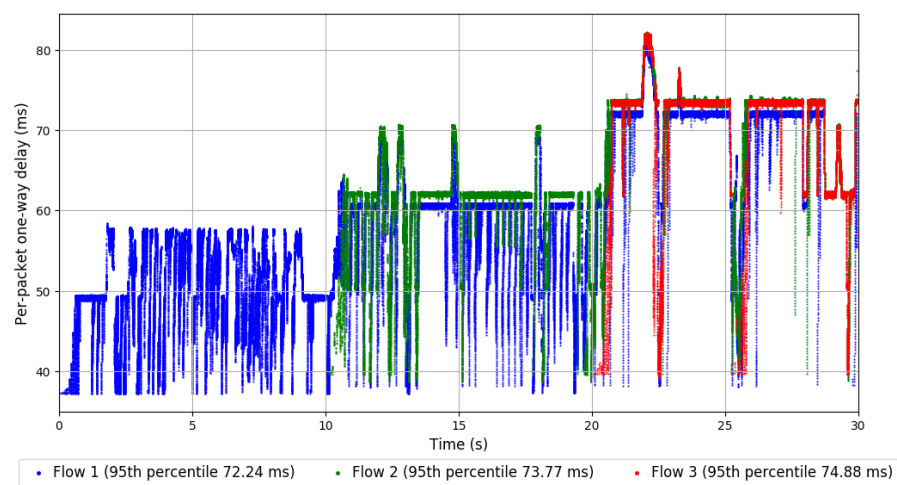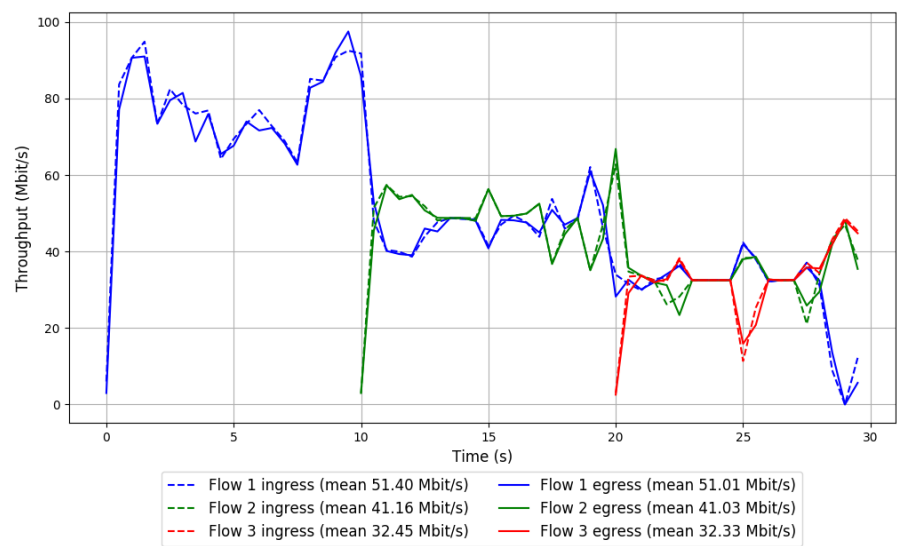
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-04-17 14:22:27
End at: 2018-04-17 14:22:57
Local clock offset: 10.794 ms
Remote clock offset: -0.883 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.65 Mbit/s
95th percentile per-packet one-way delay: 76.347 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 41.88 Mbit/s
95th percentile per-packet one-way delay: 68.370 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 33.52 Mbit/s
95th percentile per-packet one-way delay: 77.715 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 25.61 Mbit/s
95th percentile per-packet one-way delay: 79.588 ms
Loss rate: 2.41%
```
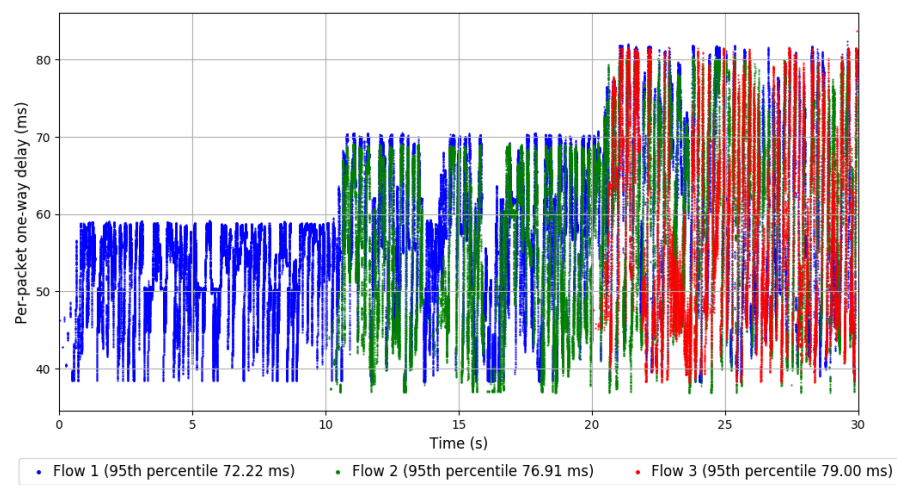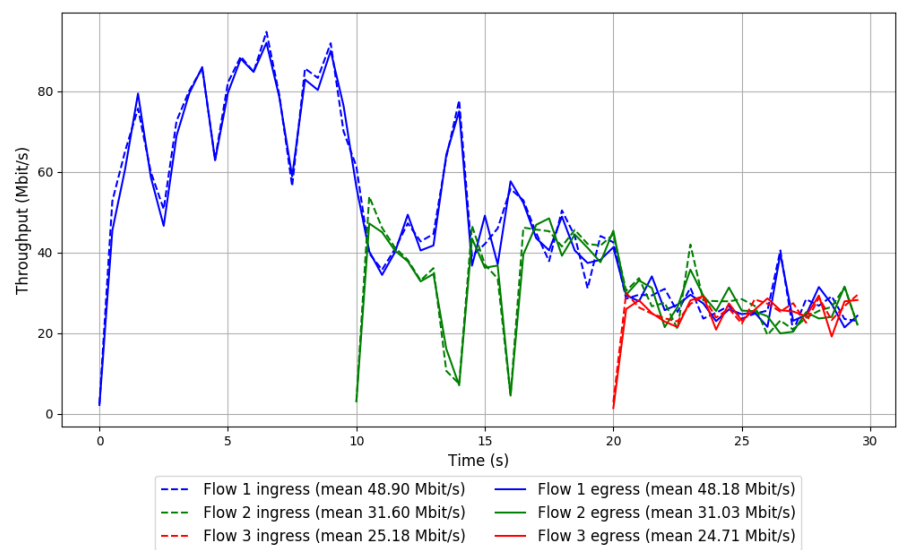
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-04-17 14:51:41
End at: 2018-04-17 14:52:11
Local clock offset: 0.92 ms
Remote clock offset: -0.441 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.98 Mbit/s
95th percentile per-packet one-way delay: 73.713 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 51.01 Mbit/s
95th percentile per-packet one-way delay: 72.241 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 73.773 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 74.877 ms
Loss rate: 1.21%
```
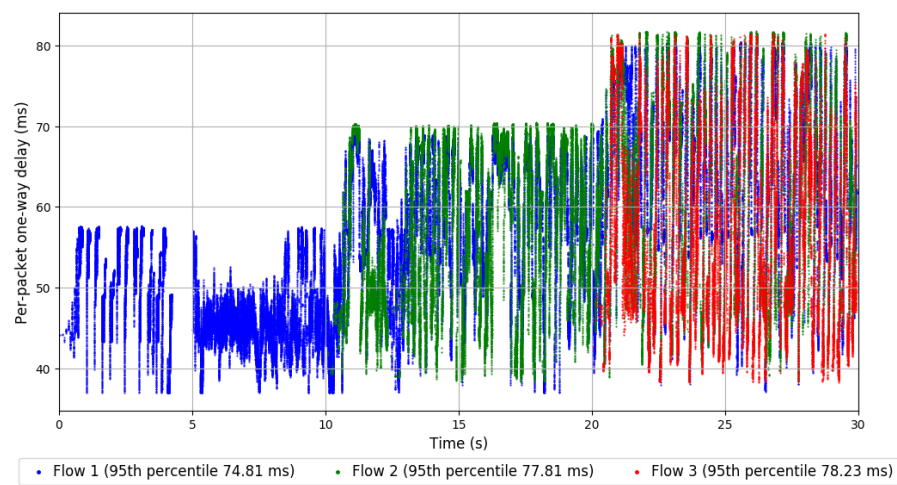
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2018-04-17 15:19:11
End at: 2018-04-17 15:19:41
Local clock offset: -1.435 ms
Remote clock offset: -3.694 ms


# Below is generated by plot.py at 2018-04-17 21:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.98 Mbit/s
95th percentile per-packet one-way delay: 75.909 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 48.18 Mbit/s
95th percentile per-packet one-way delay: 72.223 ms
Loss rate: 1.57%
-- Flow 2:
Average throughput: 31.03 Mbit/s
95th percentile per-packet one-way delay: 76.909 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 78.997 ms
Loss rate: 2.18%
```
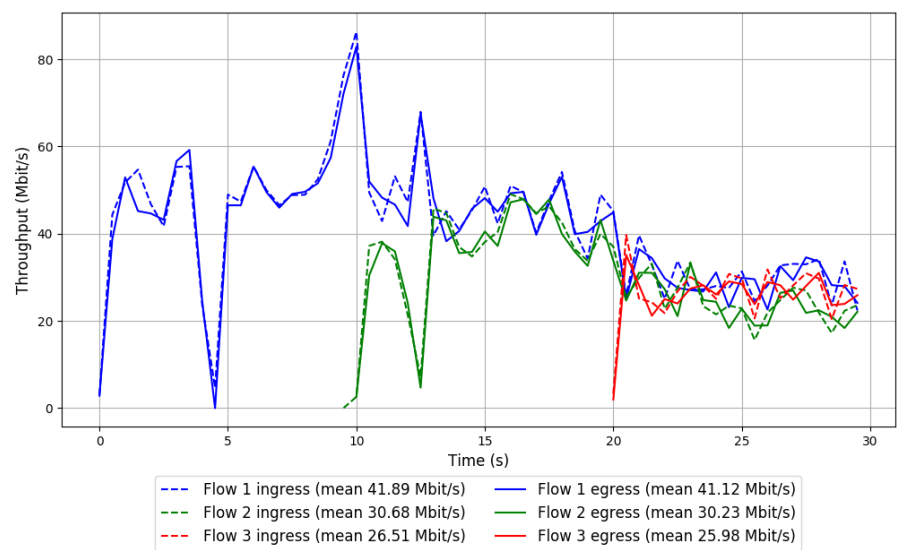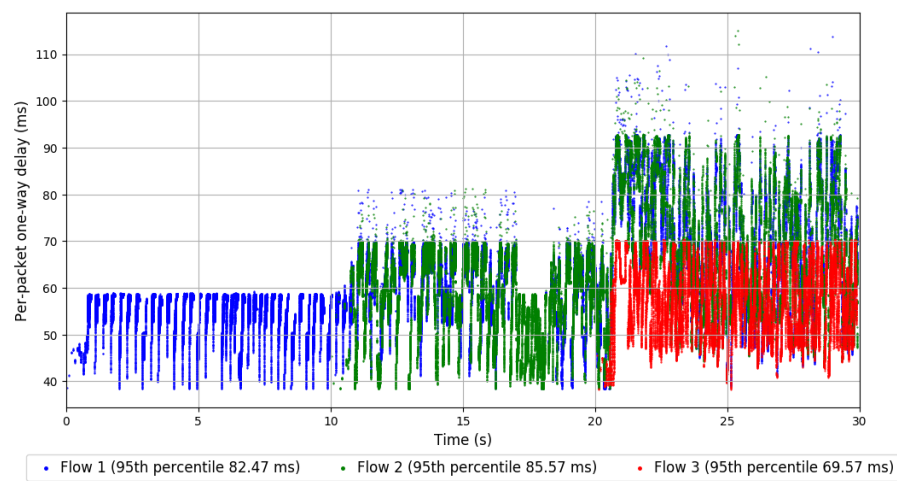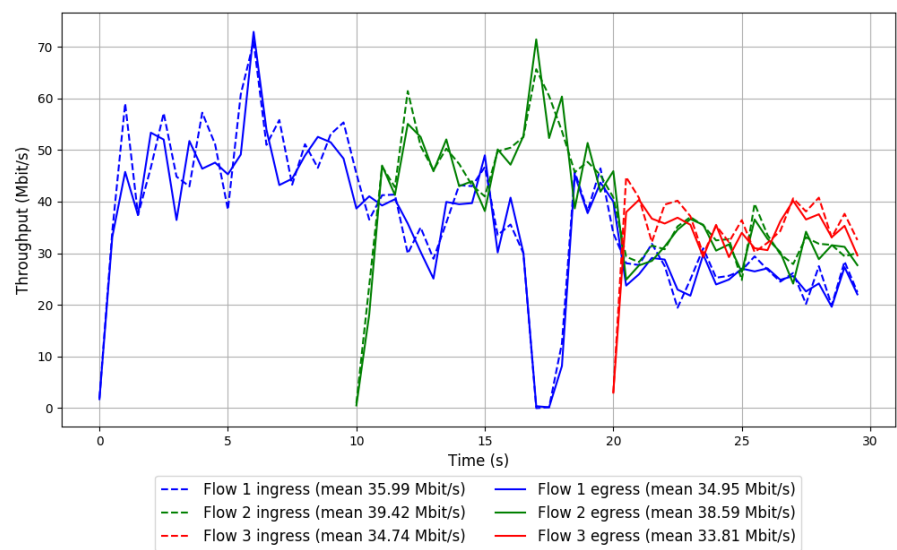
Run 6: Report of Verus — Data Link

- Flow 1 ingress (mean 48.90 Mbit/s)
- Flow 1 egress (mean 48.18 Mbit/s)
- Flow 2 ingress (mean 31.60 Mbit/s)
- Flow 2 egress (mean 31.03 Mbit/s)
- Flow 3 ingress (mean 25.18 Mbit/s)
- Flow 3 egress (mean 24.71 Mbit/s)

- Flow 1 (95th percentile 72.22 ms)
- Flow 2 (95th percentile 76.91 ms)
- Flow 3 (95th percentile 79.00 ms)

```
Run 7: Statistics of Verus

Start at: 2018-04-17 15:46:36
End at: 2018-04-17 15:47:06
Local clock offset: -1.362 ms
Remote clock offset: -7.983 ms


# Below is generated by plot.py at 2018-04-17 21:58:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.78 Mbit/s
95th percentile per-packet one-way delay: 76.604 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 41.12 Mbit/s
95th percentile per-packet one-way delay: 74.809 ms
Loss rate: 1.87%
-- Flow 2:
Average throughput: 30.23 Mbit/s
95th percentile per-packet one-way delay: 77.810 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 25.98 Mbit/s
95th percentile per-packet one-way delay: 78.227 ms
Loss rate: 2.70%
```

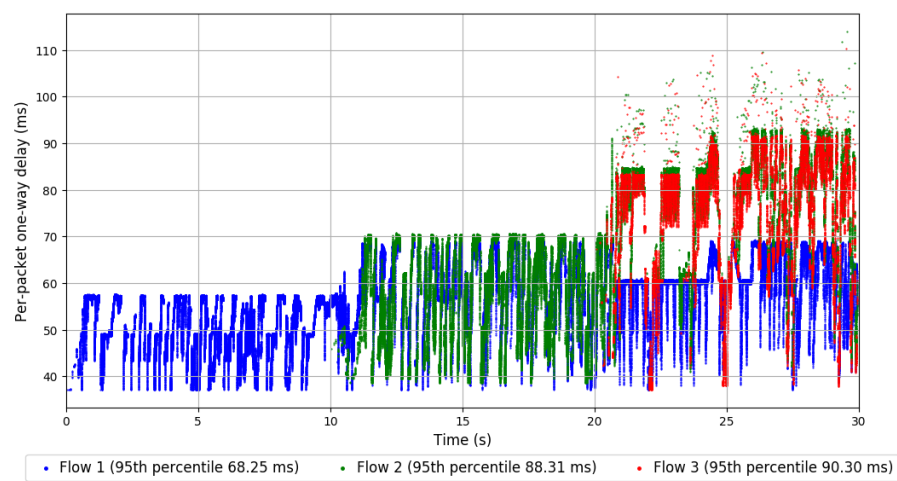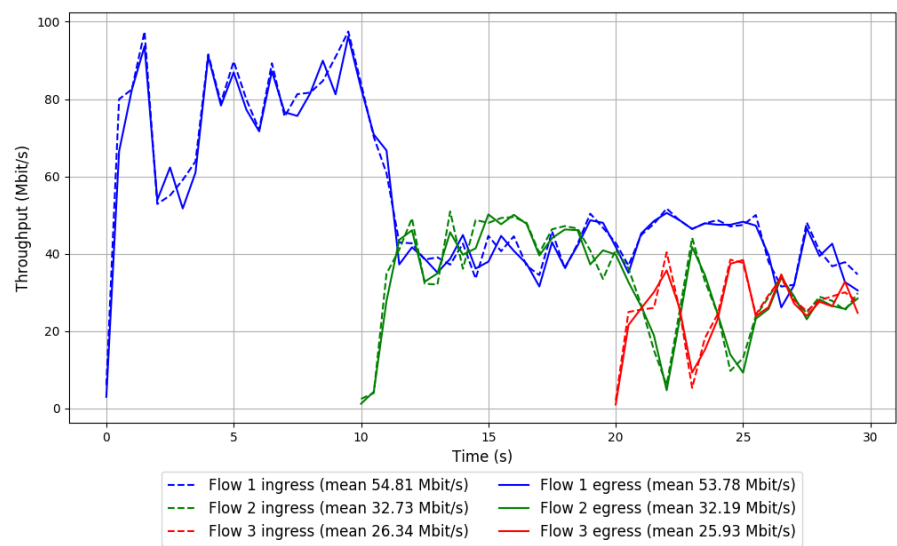# Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2018-04-17 16:15:48
End at: 2018-04-17 16:16:18
Local clock offset: -0.486 ms
Remote clock offset: -6.734 ms


# Below is generated by plot.py at 2018-04-17 21:58:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.72 Mbit/s
95th percentile per-packet one-way delay: 82.619 ms
Loss rate: 2.94%
-- Flow 1:
Average throughput: 34.95 Mbit/s
95th percentile per-packet one-way delay: 82.473 ms
Loss rate: 3.12%
-- Flow 2:
Average throughput: 38.59 Mbit/s
95th percentile per-packet one-way delay: 85.573 ms
Loss rate: 2.31%
-- Flow 3:
Average throughput: 33.81 Mbit/s
95th percentile per-packet one-way delay: 69.574 ms
Loss rate: 3.81%
```
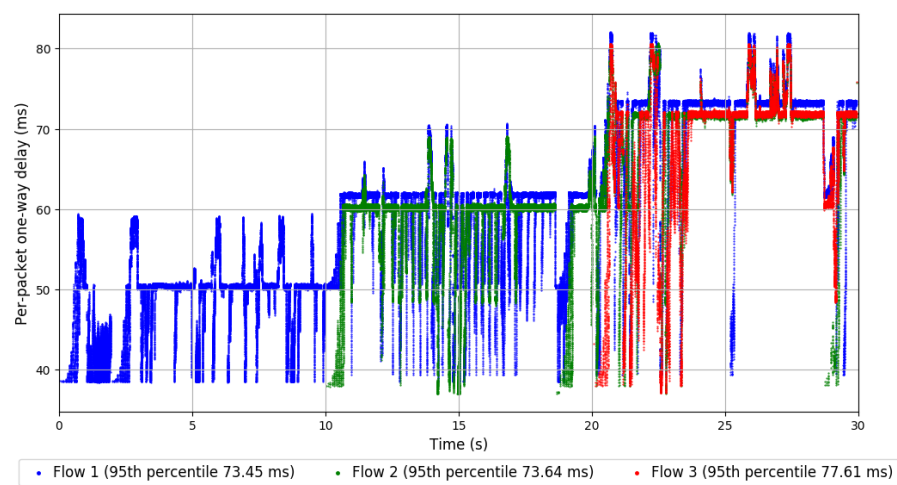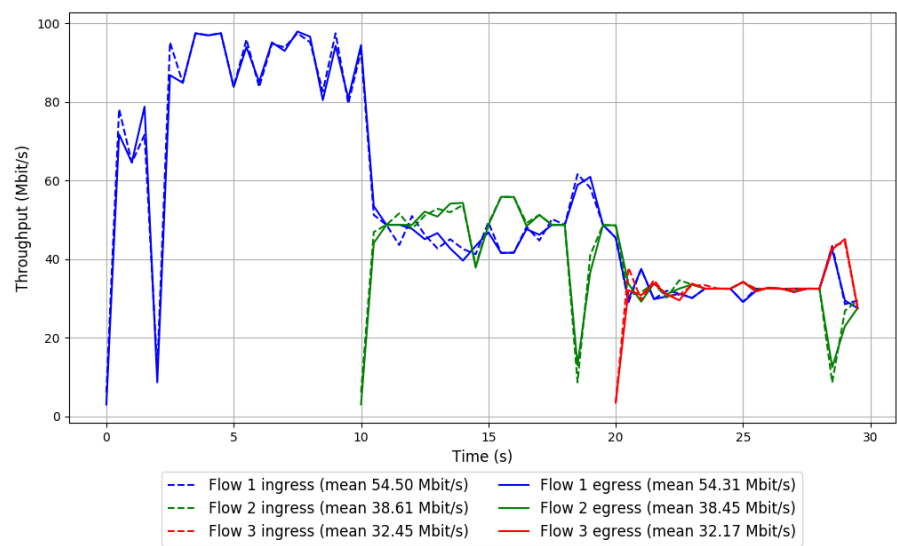
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 35.99 Mbit/s)   Flow 1 egress (mean 34.95 Mbit/s)
Flow 2 ingress (mean 39.42 Mbit/s)   Flow 2 egress (mean 38.59 Mbit/s)
Flow 3 ingress (mean 34.74 Mbit/s)   Flow 3 egress (mean 33.81 Mbit/s)

Flow 1 (95th percentile 82.47 ms)   Flow 2 (95th percentile 85.57 ms)   Flow 3 (95th percentile 69.57 ms)

```
Run 9: Statistics of Verus

Start at: 2018-04-17 16:41:39
End at: 2018-04-17 16:42:09
Local clock offset: -0.103 ms
Remote clock offset: -2.111 ms


# Below is generated by plot.py at 2018-04-17 21:58:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.72 Mbit/s
95th percentile per-packet one-way delay: 83.758 ms
Loss rate: 2.13%
-- Flow 1:
Average throughput: 53.78 Mbit/s
95th percentile per-packet one-way delay: 68.255 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 88.315 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 25.93 Mbit/s
95th percentile per-packet one-way delay: 90.303 ms
Loss rate: 2.47%
```
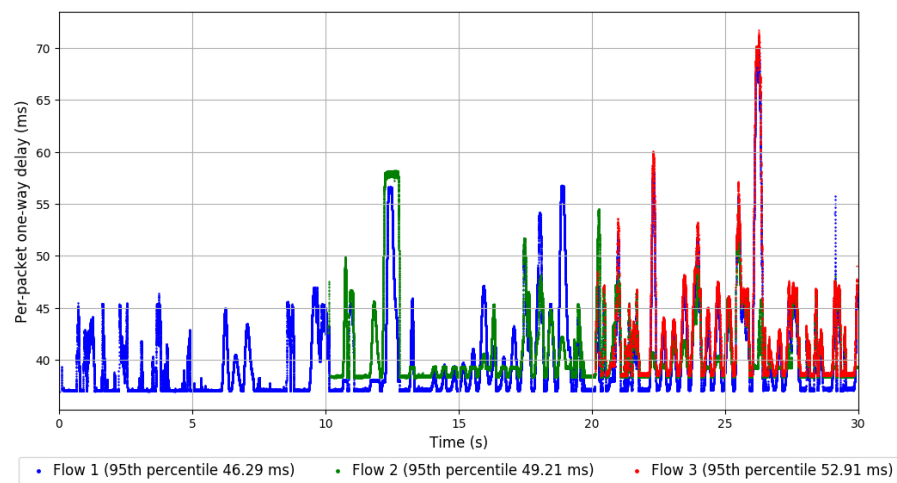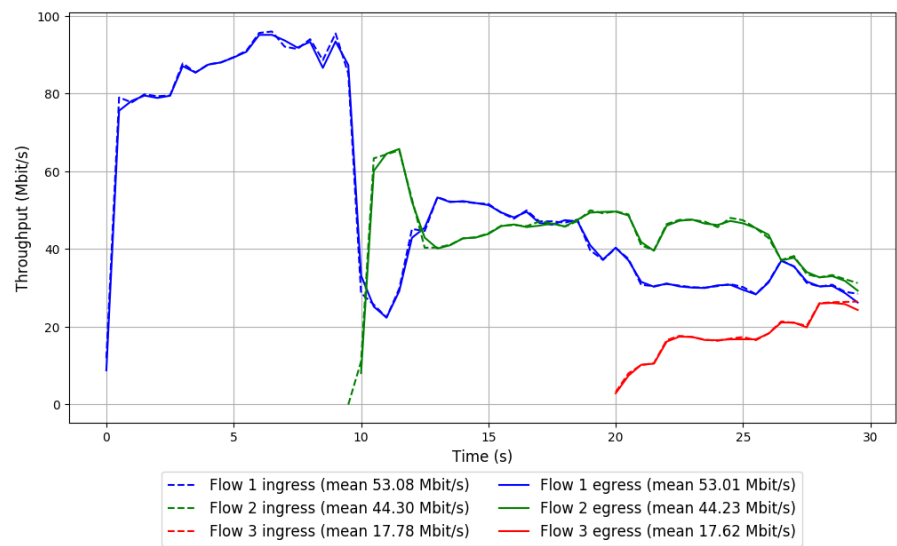
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-04-17 17:07:06
End at: 2018-04-17 17:07:36
Local clock offset: 0.855 ms
Remote clock offset: -2.583 ms


# Below is generated by plot.py at 2018-04-17 21:58:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.50 Mbit/s
95th percentile per-packet one-way delay: 73.484 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 54.31 Mbit/s
95th percentile per-packet one-way delay: 73.446 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 38.45 Mbit/s
95th percentile per-packet one-way delay: 73.638 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 77.607 ms
Loss rate: 1.25%
```

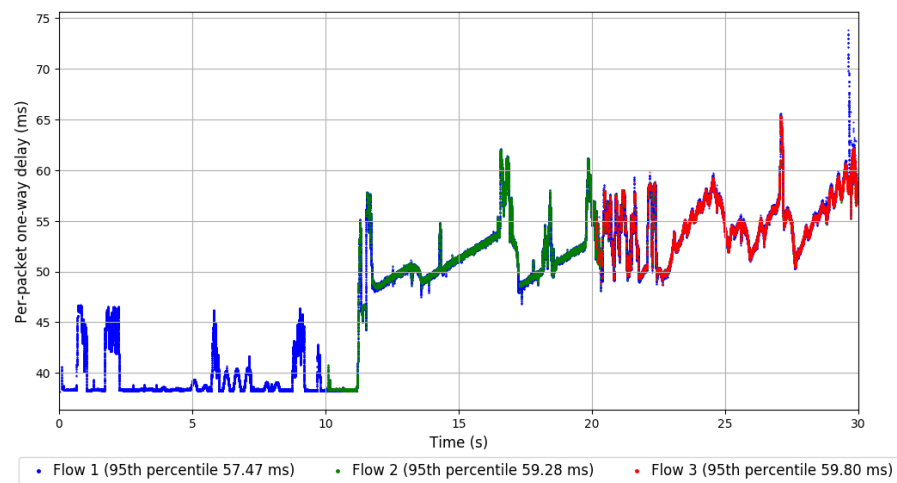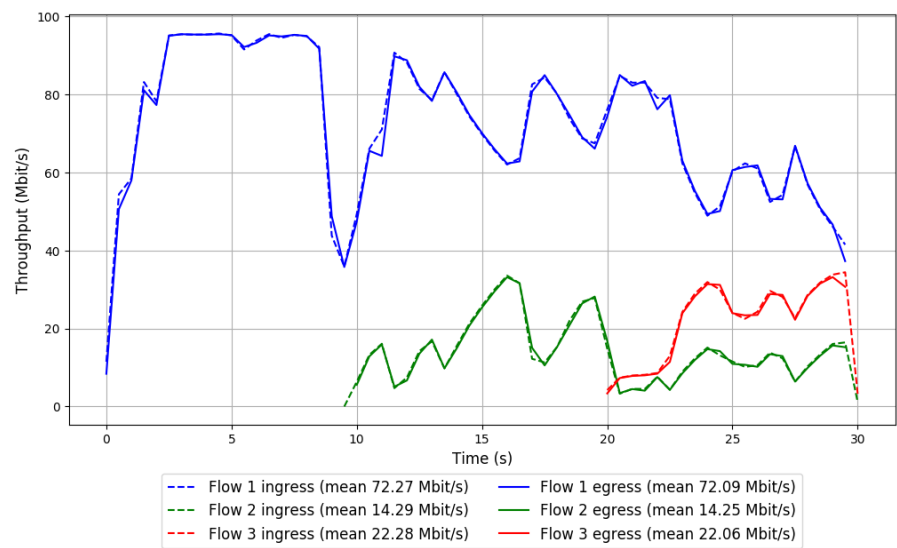## Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-04-17 13:05:25
End at: 2018-04-17 13:05:55
Local clock offset: 0.265 ms
Remote clock offset: -2.159 ms


# Below is generated by plot.py at 2018-04-17 21:59:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.26 Mbit/s
95th percentile per-packet one-way delay: 47.346 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 53.01 Mbit/s
95th percentile per-packet one-way delay: 46.294 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 44.23 Mbit/s
95th percentile per-packet one-way delay: 49.213 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 17.62 Mbit/s
95th percentile per-packet one-way delay: 52.911 ms
Loss rate: 1.59%
```
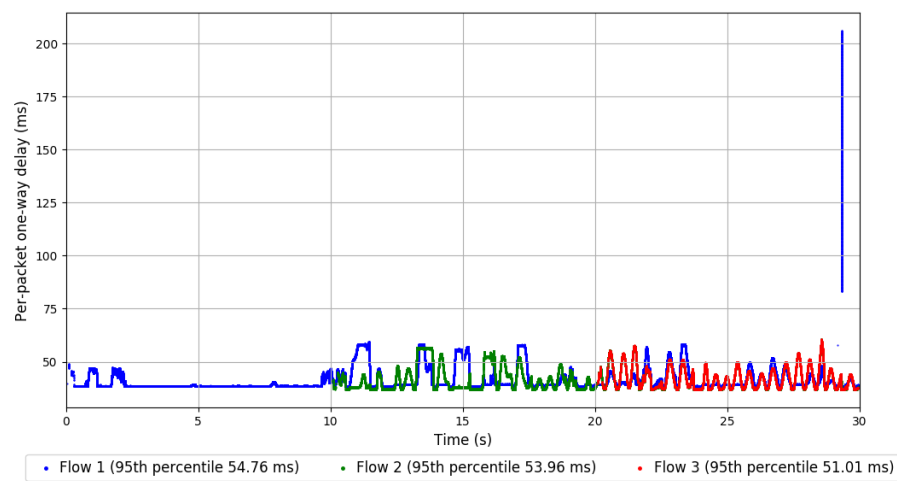
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-04-17 13:29:28
End at: 2018-04-17 13:29:58
Local clock offset: 1.353 ms
Remote clock offset: -1.691 ms


# Below is generated by plot.py at 2018-04-17 21:59:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.85 Mbit/s
95th percentile per-packet one-way delay: 58.071 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 72.09 Mbit/s
95th percentile per-packet one-way delay: 57.472 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 14.25 Mbit/s
95th percentile per-packet one-way delay: 59.278 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 22.06 Mbit/s
95th percentile per-packet one-way delay: 59.801 ms
Loss rate: 2.68%
```
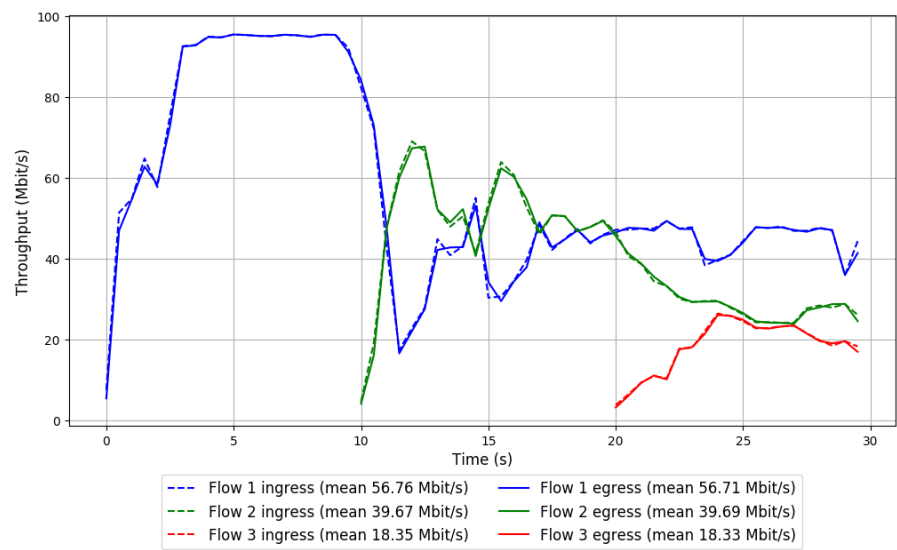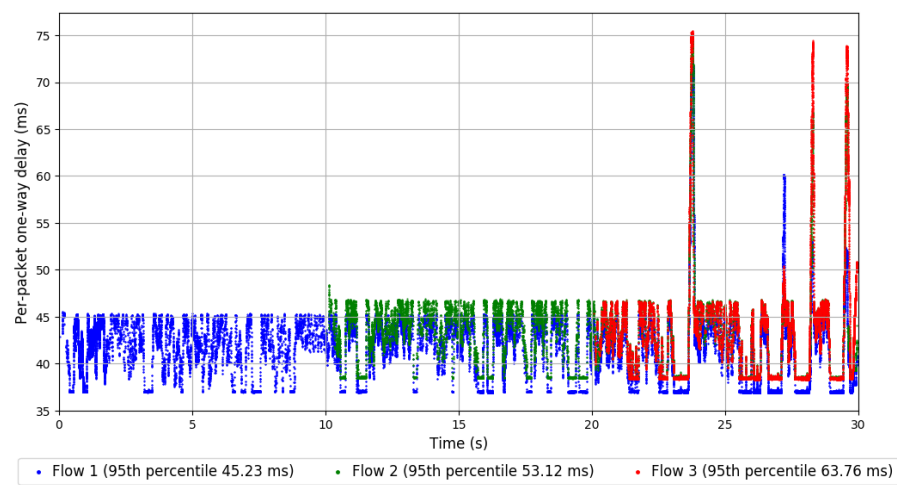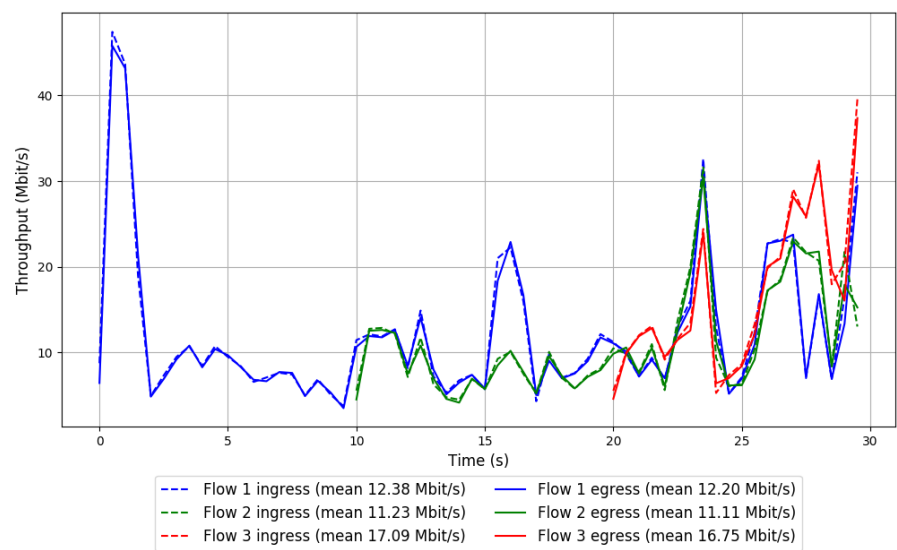
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 72.27 Mbit/s) ----   Flow 1 egress (mean 72.09 Mbit/s) ——
Flow 2 ingress (mean 14.29 Mbit/s) ----   Flow 2 egress (mean 14.25 Mbit/s) ——
Flow 3 ingress (mean 22.28 Mbit/s) ----   Flow 3 egress (mean 22.06 Mbit/s) ——

Flow 1 (95th percentile 57.47 ms)   Flow 2 (95th percentile 59.28 ms)   Flow 3 (95th percentile 59.80 ms)

```
Run 3: Statistics of Copa

Start at: 2018-04-17 13:53:17
End at: 2018-04-17 13:53:47
Local clock offset: 3.402 ms
Remote clock offset: -2.506 ms


# Below is generated by plot.py at 2018-04-17 21:59:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.19 Mbit/s
95th percentile per-packet one-way delay: 54.070 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 56.71 Mbit/s
95th percentile per-packet one-way delay: 54.764 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 39.69 Mbit/s
95th percentile per-packet one-way delay: 53.961 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 18.33 Mbit/s
95th percentile per-packet one-way delay: 51.011 ms
Loss rate: 0.80%
```
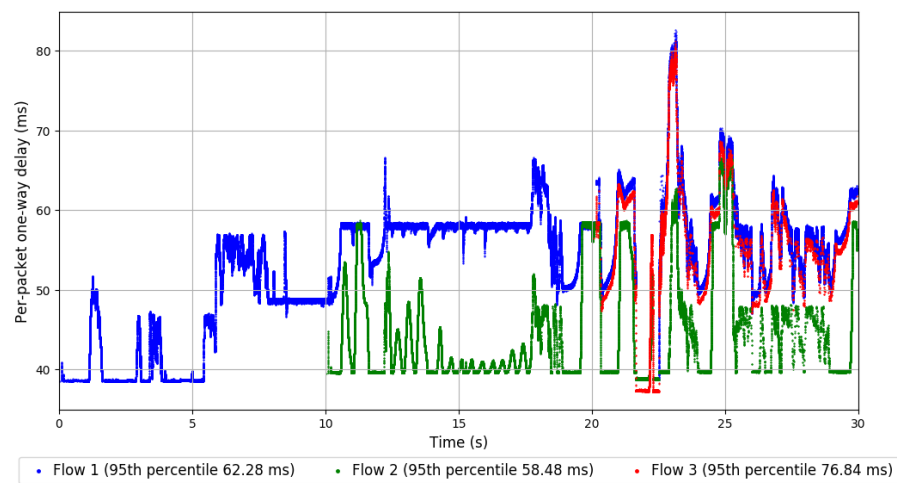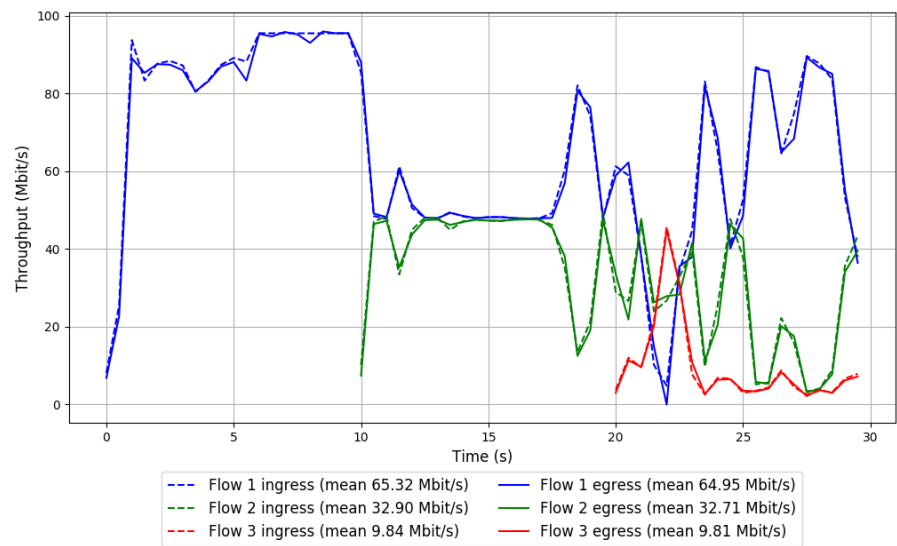
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-04-17 14:17:59
End at: 2018-04-17 14:18:29
Local clock offset: 10.03 ms
Remote clock offset: -1.489 ms


# Below is generated by plot.py at 2018-04-17 21:59:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.12 Mbit/s
95th percentile per-packet one-way delay: 51.457 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 12.20 Mbit/s
95th percentile per-packet one-way delay: 45.234 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 11.11 Mbit/s
95th percentile per-packet one-way delay: 53.117 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 16.75 Mbit/s
95th percentile per-packet one-way delay: 63.756 ms
Loss rate: 2.72%
```
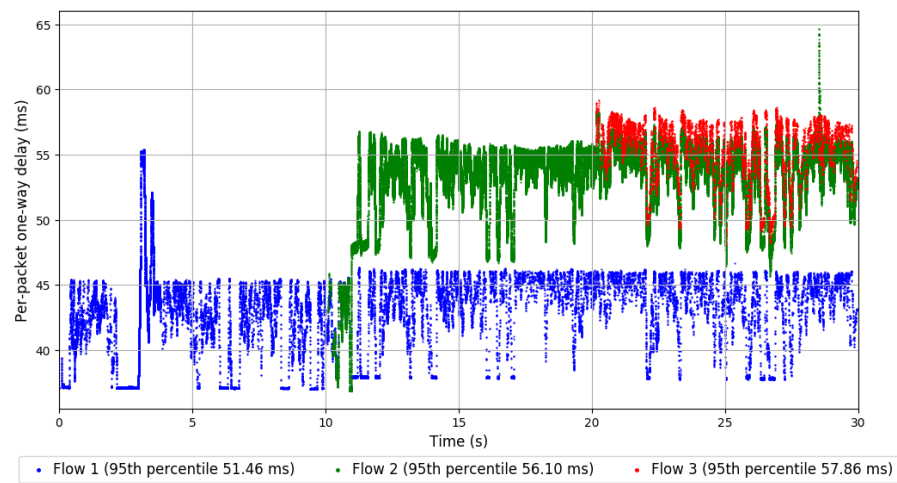
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2018-04-17 14:47:14
End at: 2018-04-17 14:47:44
Local clock offset: 2.095 ms
Remote clock offset: -0.509 ms


# Below is generated by plot.py at 2018-04-17 22:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.95 Mbit/s
95th percentile per-packet one-way delay: 62.164 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 64.95 Mbit/s
95th percentile per-packet one-way delay: 62.278 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 58.480 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 9.81 Mbit/s
95th percentile per-packet one-way delay: 76.839 ms
Loss rate: 1.14%
```
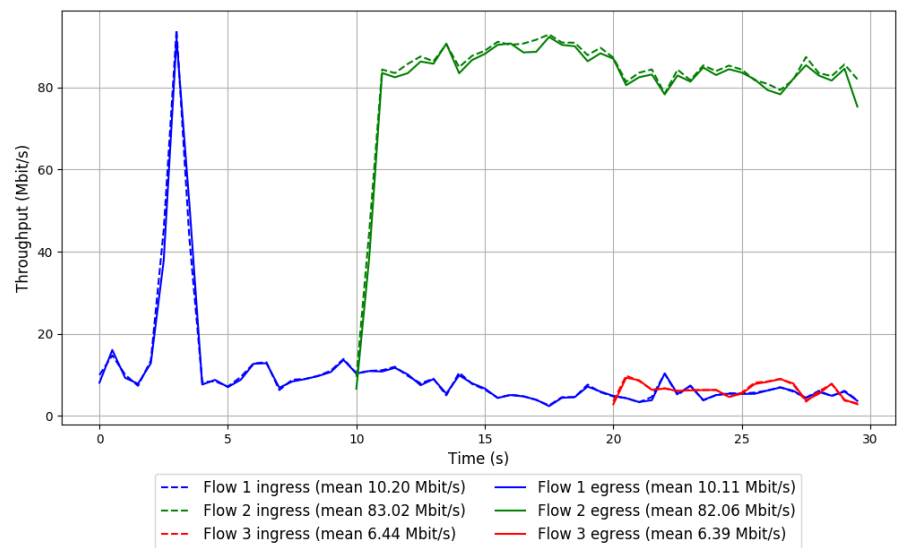
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-04-17 15:14:00
End at: 2018-04-17 15:14:30
Local clock offset: -1.222 ms
Remote clock offset: -1.382 ms


# Below is generated by plot.py at 2018-04-17 22:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.82 Mbit/s
95th percentile per-packet one-way delay: 56.162 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 10.11 Mbit/s
95th percentile per-packet one-way delay: 51.456 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 82.06 Mbit/s
95th percentile per-packet one-way delay: 56.099 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 6.39 Mbit/s
95th percentile per-packet one-way delay: 57.864 ms
Loss rate: 1.55%
```
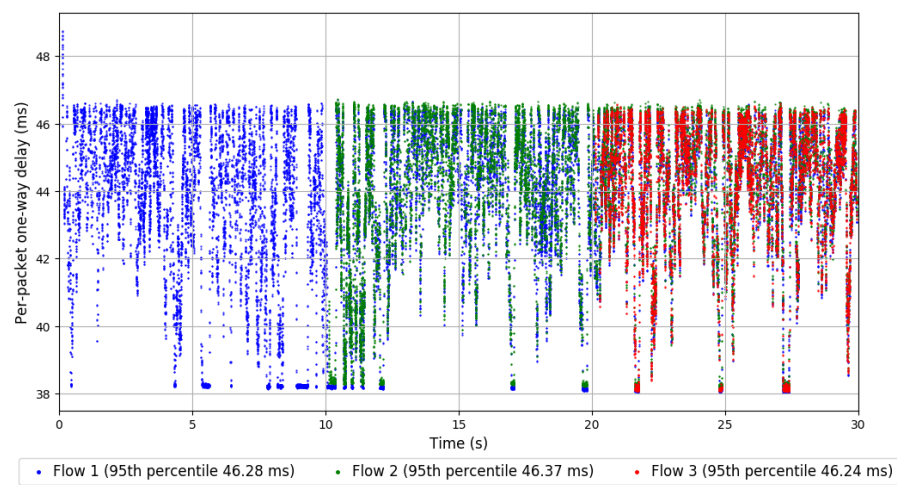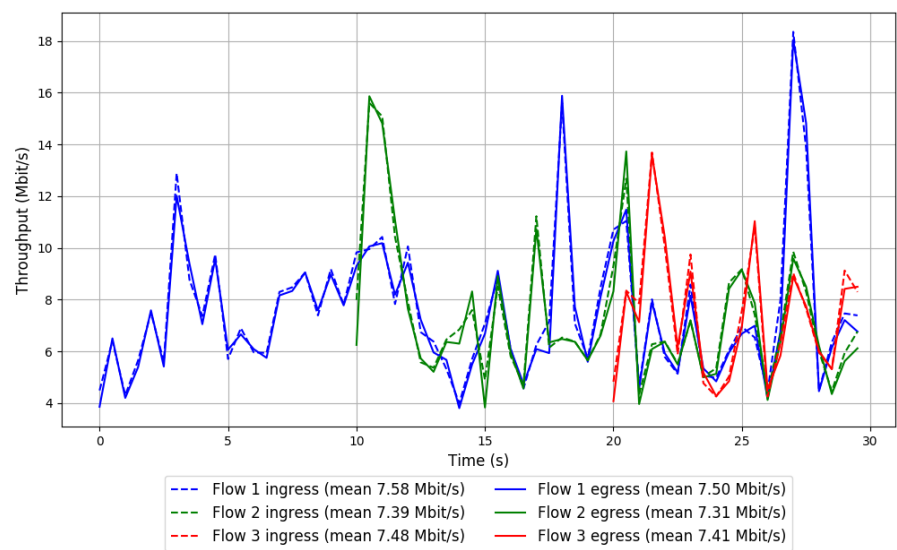
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2018-04-17 15:41:53
End at: 2018-04-17 15:42:23
Local clock offset: -2.422 ms
Remote clock offset: -7.845 ms


# Below is generated by plot.py at 2018-04-17 22:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.80 Mbit/s
95th percentile per-packet one-way delay: 46.300 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 46.277 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 7.31 Mbit/s
95th percentile per-packet one-way delay: 46.367 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 7.41 Mbit/s
95th percentile per-packet one-way delay: 46.239 ms
Loss rate: 1.68%
```
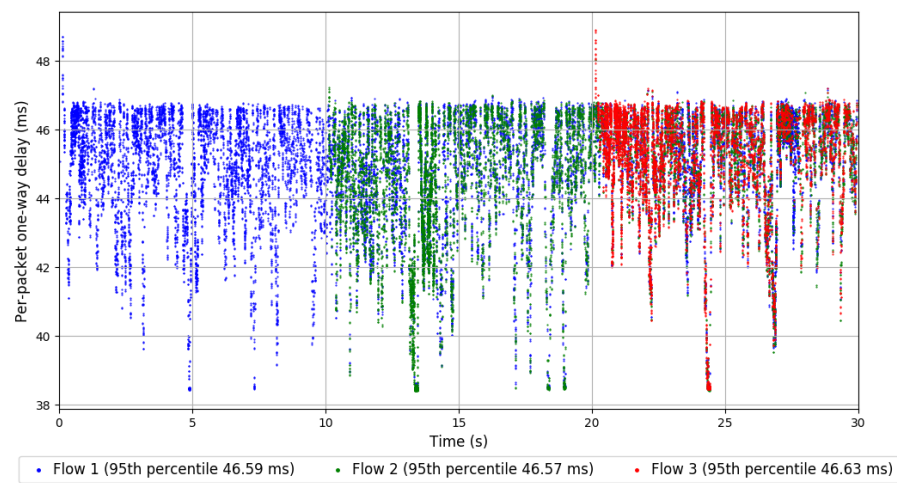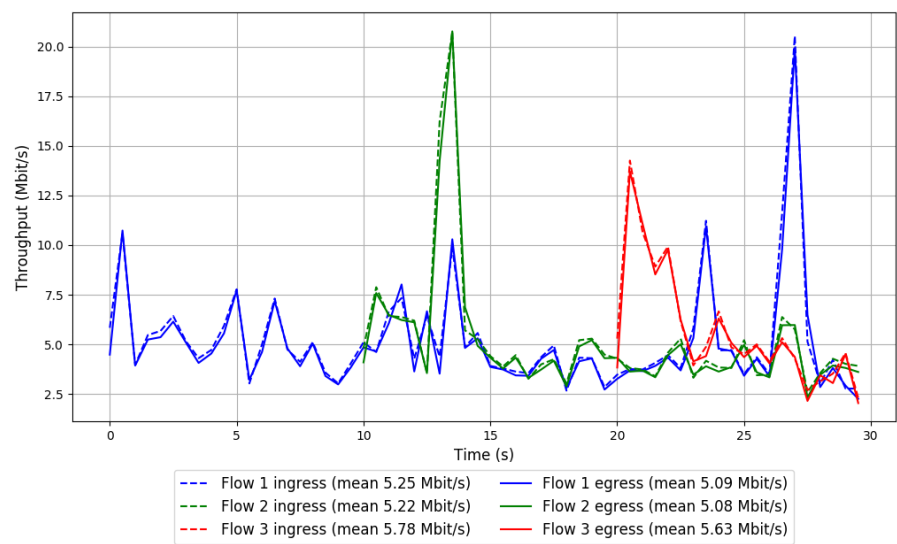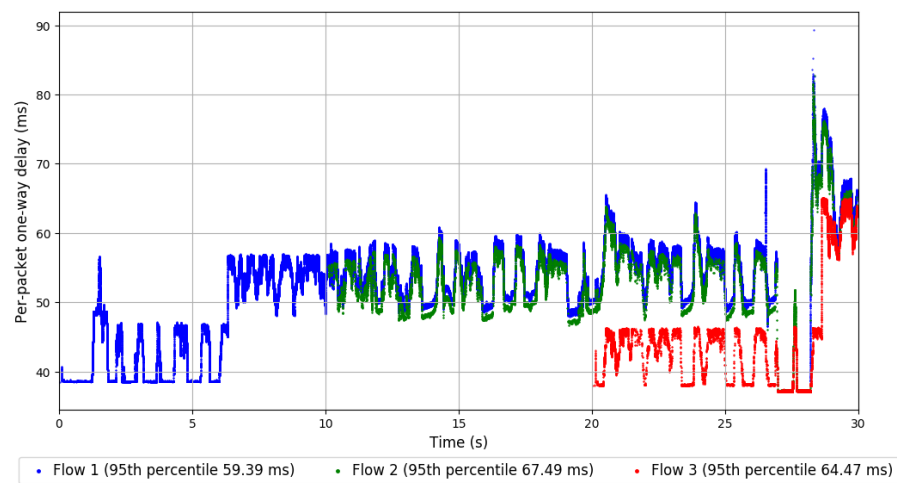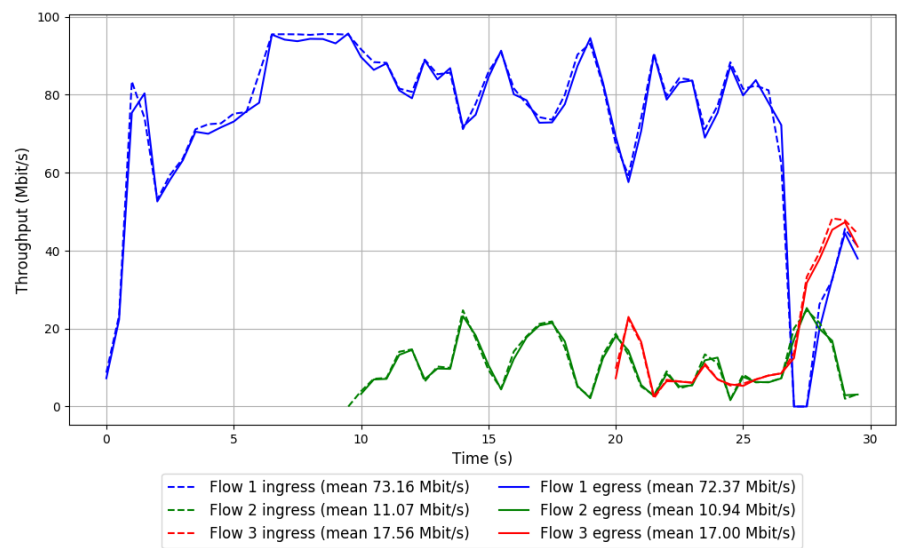
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 7.58 Mbit/s)   Flow 1 egress (mean 7.50 Mbit/s)
Flow 2 ingress (mean 7.39 Mbit/s)   Flow 2 egress (mean 7.31 Mbit/s)
Flow 3 ingress (mean 7.48 Mbit/s)   Flow 3 egress (mean 7.41 Mbit/s)

Flow 1 (95th percentile 46.28 ms)   Flow 2 (95th percentile 46.37 ms)   Flow 3 (95th percentile 46.24 ms)

```
Run 8: Statistics of Copa

Start at: 2018-04-17 16:10:38
End at: 2018-04-17 16:11:08
Local clock offset: -0.423 ms
Remote clock offset: -6.495 ms


# Below is generated by plot.py at 2018-04-17 22:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.33 Mbit/s
95th percentile per-packet one-way delay: 46.594 ms
Loss rate: 3.16%
-- Flow 1:
Average throughput: 5.09 Mbit/s
95th percentile per-packet one-way delay: 46.595 ms
Loss rate: 3.20%
-- Flow 2:
Average throughput: 5.08 Mbit/s
95th percentile per-packet one-way delay: 46.569 ms
Loss rate: 2.97%
-- Flow 3:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 46.633 ms
Loss rate: 3.39%
```
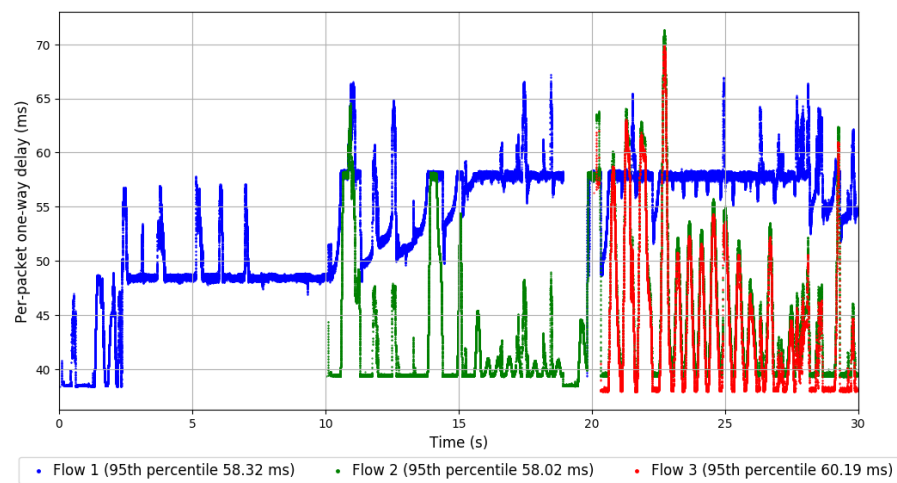
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2018-04-17 16:37:19
End at: 2018-04-17 16:37:49
Local clock offset: -0.048 ms
Remote clock offset: -2.526 ms


# Below is generated by plot.py at 2018-04-17 22:01:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.27 Mbit/s
95th percentile per-packet one-way delay: 61.267 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 72.37 Mbit/s
95th percentile per-packet one-way delay: 59.393 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 10.94 Mbit/s
95th percentile per-packet one-way delay: 67.489 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 17.00 Mbit/s
95th percentile per-packet one-way delay: 64.465 ms
Loss rate: 3.87%
```
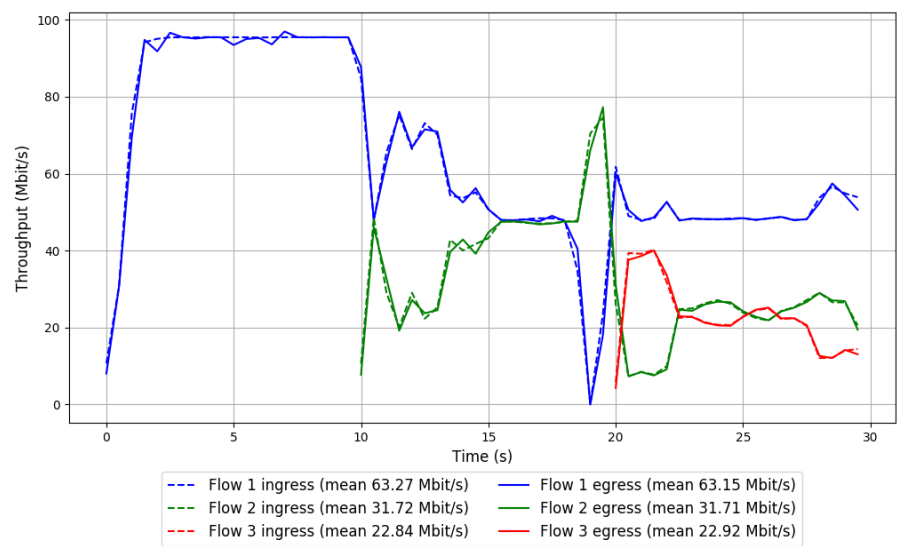
Run 9: Report of Copa — Data Link

- - - - Flow 1 ingress (mean 73.16 Mbit/s)   —— Flow 1 egress (mean 72.37 Mbit/s)
- - - - Flow 2 ingress (mean 11.07 Mbit/s)   —— Flow 2 egress (mean 10.94 Mbit/s)
- - - - Flow 3 ingress (mean 17.56 Mbit/s)   —— Flow 3 egress (mean 17.00 Mbit/s)

- Flow 1 (95th percentile 59.39 ms)   • Flow 2 (95th percentile 67.49 ms)   • Flow 3 (95th percentile 64.47 ms)
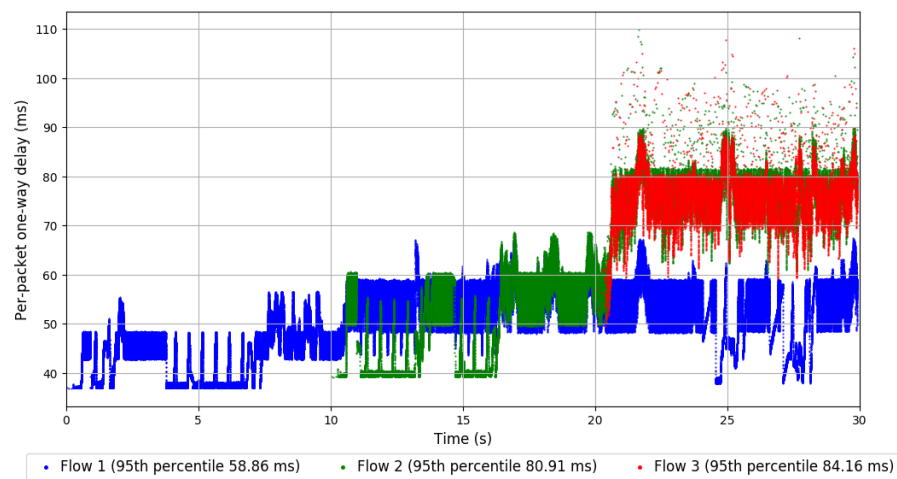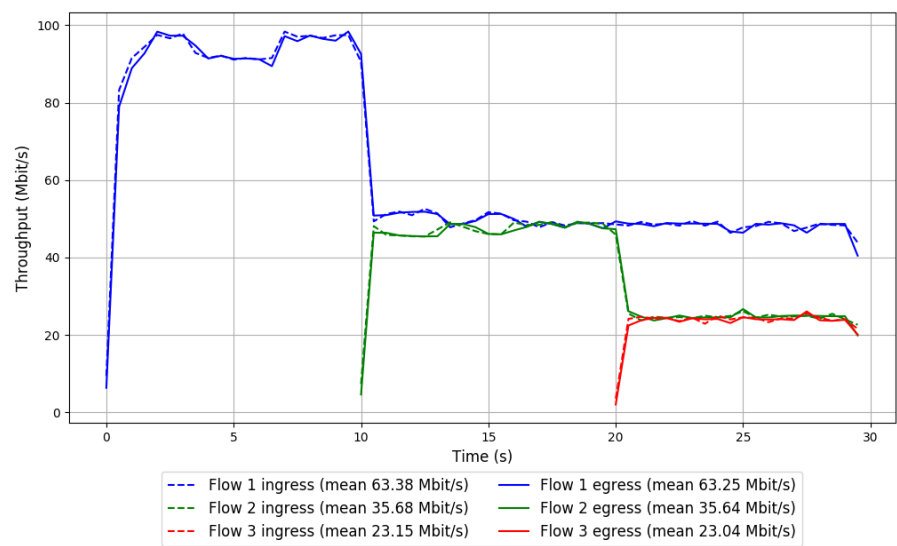
```
Run 10: Statistics of Copa

Start at: 2018-04-17 17:02:45
End at: 2018-04-17 17:03:15
Local clock offset: 0.763 ms
Remote clock offset: -2.366 ms


# Below is generated by plot.py at 2018-04-17 22:01:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.82 Mbit/s
95th percentile per-packet one-way delay: 58.296 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 58.320 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 58.017 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 22.92 Mbit/s
95th percentile per-packet one-way delay: 60.194 ms
Loss rate: 0.53%
```
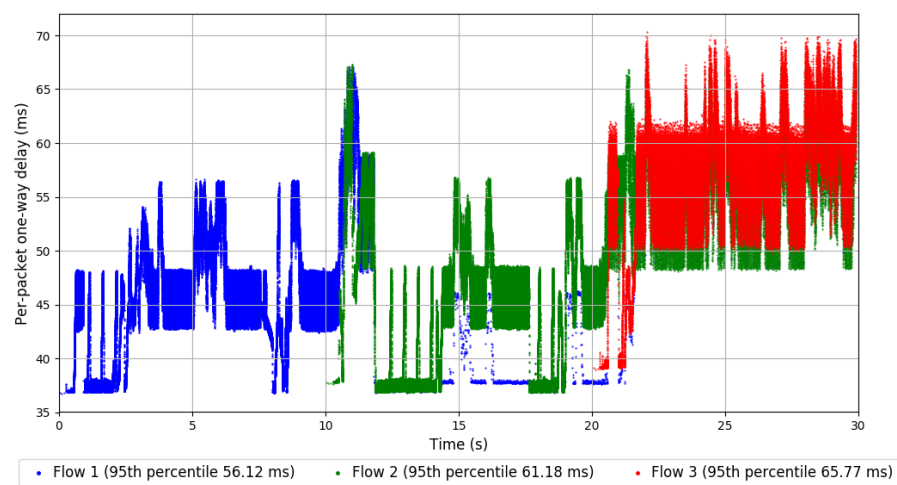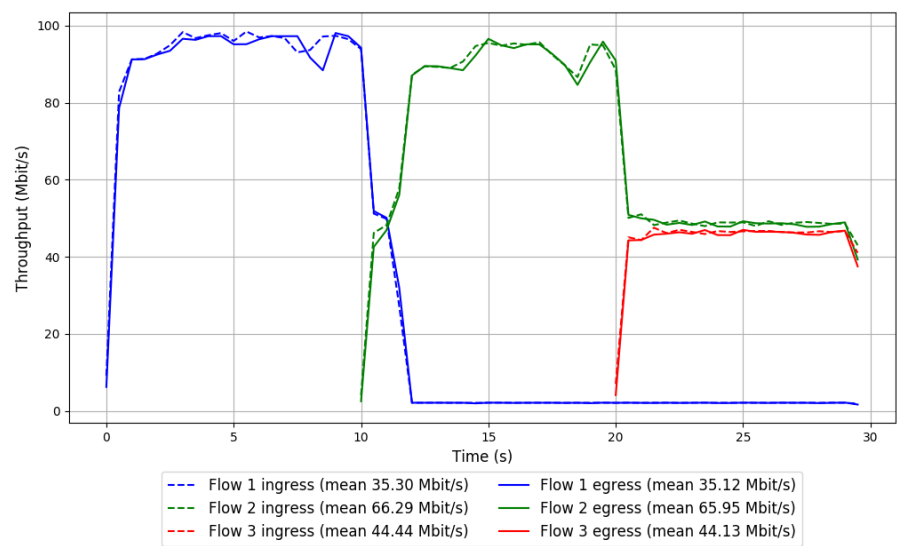
Run 10: Report of Copa — Data Link

- - - Flow 1 ingress (mean 63.27 Mbit/s) —— Flow 1 egress (mean 63.15 Mbit/s)
- - - Flow 2 ingress (mean 31.72 Mbit/s) —— Flow 2 egress (mean 31.71 Mbit/s)
- - - Flow 3 ingress (mean 22.84 Mbit/s) —— Flow 3 egress (mean 22.92 Mbit/s)

- Flow 1 (95th percentile 58.32 ms)   - Flow 2 (95th percentile 58.02 ms)   - Flow 3 (95th percentile 60.19 ms)
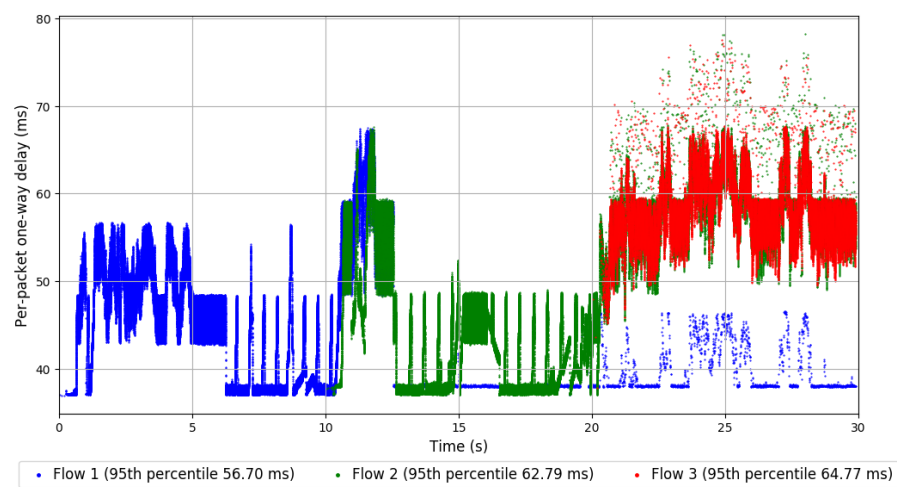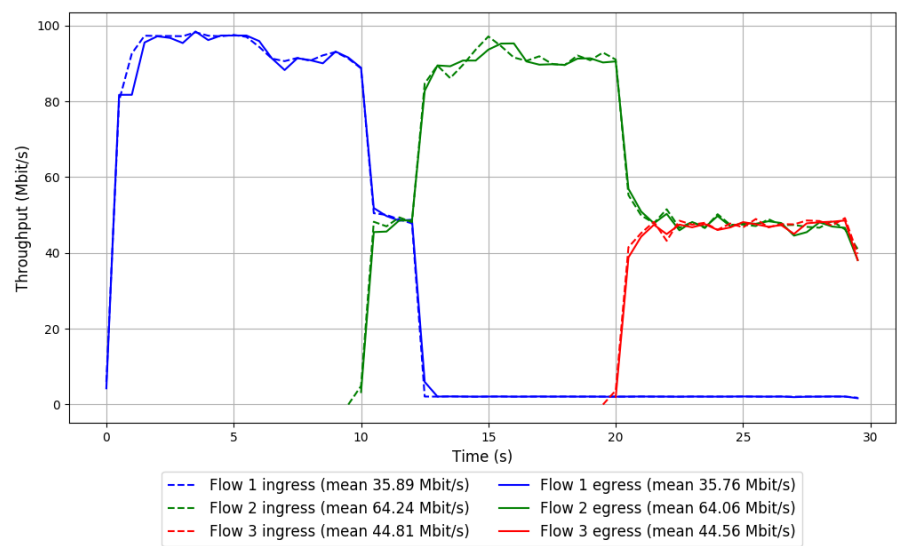
```
Run 1: Statistics of FillP

Start at: 2018-04-17 13:06:51
End at: 2018-04-17 13:07:21
Local clock offset: 0.195 ms
Remote clock offset: -2.089 ms


# Below is generated by plot.py at 2018-04-17 22:01:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.54 Mbit/s
95th percentile per-packet one-way delay: 78.371 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 58.860 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 35.64 Mbit/s
95th percentile per-packet one-way delay: 80.905 ms
Loss rate: 0.54%
-- Flow 3:
Average throughput: 23.04 Mbit/s
95th percentile per-packet one-way delay: 84.160 ms
Loss rate: 1.50%
```

Run 1: Report of FillP — Data Link

- Flow 1 ingress (mean 63.38 Mbit/s)
- Flow 1 egress (mean 63.25 Mbit/s)
- Flow 2 ingress (mean 35.68 Mbit/s)
- Flow 2 egress (mean 35.64 Mbit/s)
- Flow 3 ingress (mean 23.15 Mbit/s)
- Flow 3 egress (mean 23.04 Mbit/s)

- Flow 1 (95th percentile 58.86 ms)
- Flow 2 (95th percentile 80.91 ms)
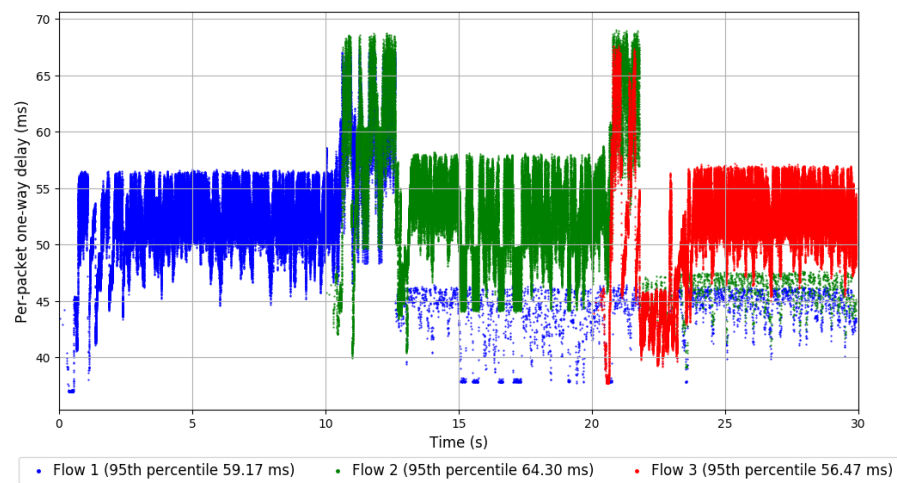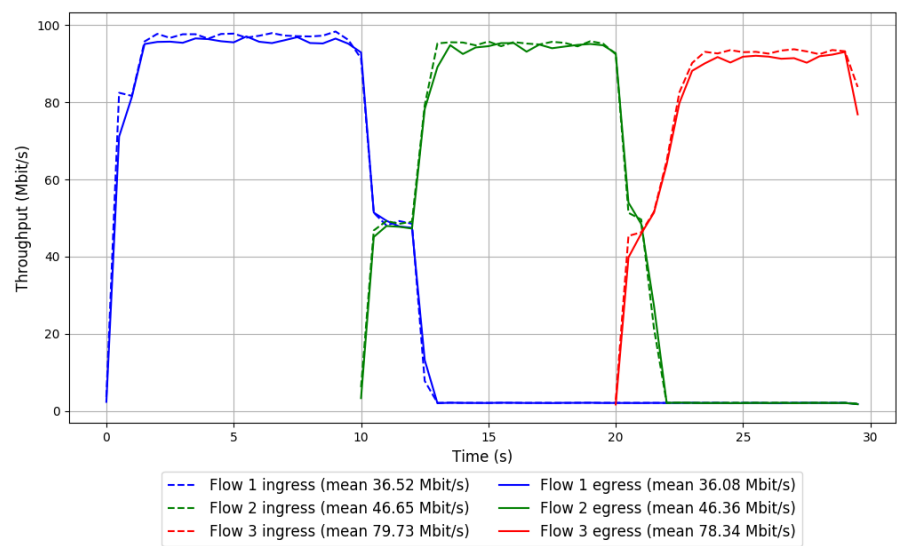- Flow 3 (95th percentile 84.16 ms)

246

```
Run 2: Statistics of FillP

Start at: 2018-04-17 13:31:07
End at: 2018-04-17 13:31:37
Local clock offset: 1.603 ms
Remote clock offset: -1.913 ms


# Below is generated by plot.py at 2018-04-17 22:01:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 61.931 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 56.115 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 65.95 Mbit/s
95th percentile per-packet one-way delay: 61.181 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 44.13 Mbit/s
95th percentile per-packet one-way delay: 65.769 ms
Loss rate: 1.42%
```

Run 2: Report of FillP — Data Link

- - - - Flow 1 ingress (mean 35.30 Mbit/s)   —— Flow 1 egress (mean 35.12 Mbit/s)
- - - - Flow 2 ingress (mean 66.29 Mbit/s)   —— Flow 2 egress (mean 65.95 Mbit/s)
- - - - Flow 3 ingress (mean 44.44 Mbit/s)   —— Flow 3 egress (mean 44.13 Mbit/s)

• Flow 1 (95th percentile 56.12 ms)   • Flow 2 (95th percentile 61.18 ms)   • Flow 3 (95th percentile 65.77 ms)
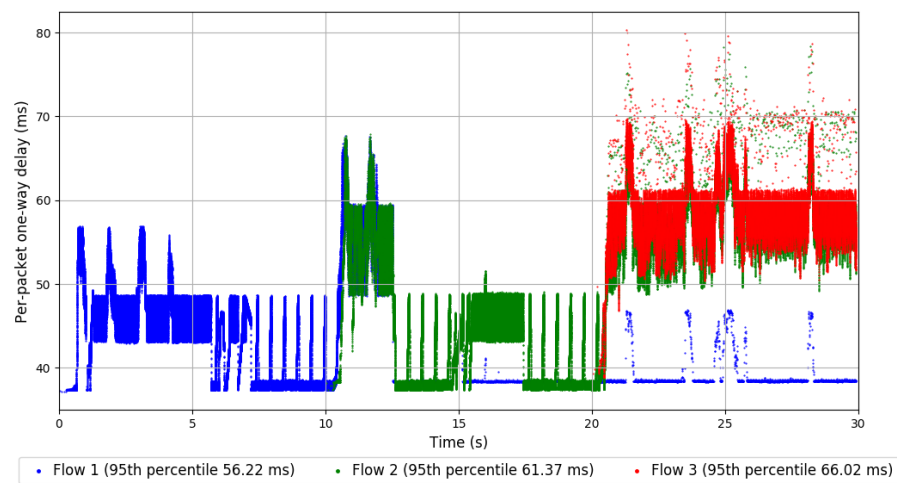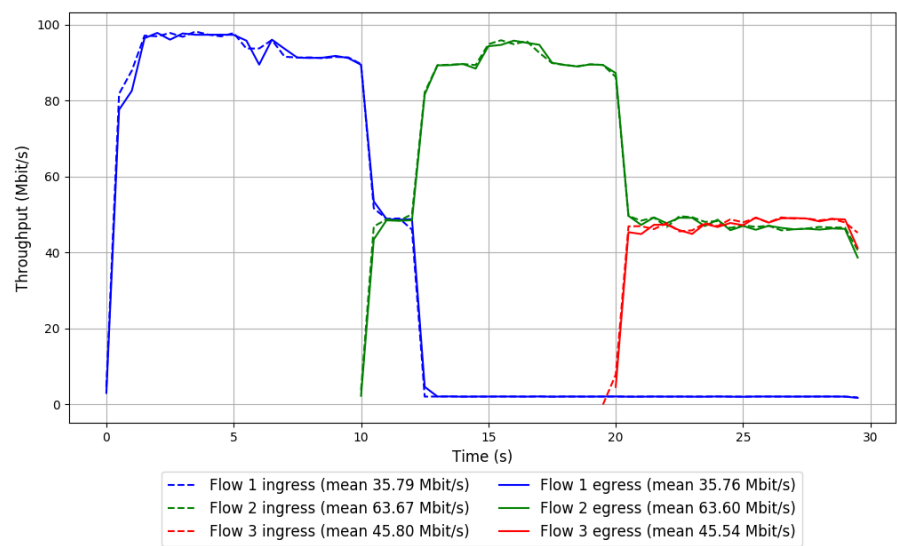
248

```
Run 3: Statistics of FillP

Start at: 2018-04-17 13:54:43
End at: 2018-04-17 13:55:13
Local clock offset: 3.401 ms
Remote clock offset: -2.442 ms


# Below is generated by plot.py at 2018-04-17 22:01:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.08 Mbit/s
95th percentile per-packet one-way delay: 62.655 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 56.695 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 64.06 Mbit/s
95th percentile per-packet one-way delay: 62.792 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 44.56 Mbit/s
95th percentile per-packet one-way delay: 64.774 ms
Loss rate: 1.41%
```
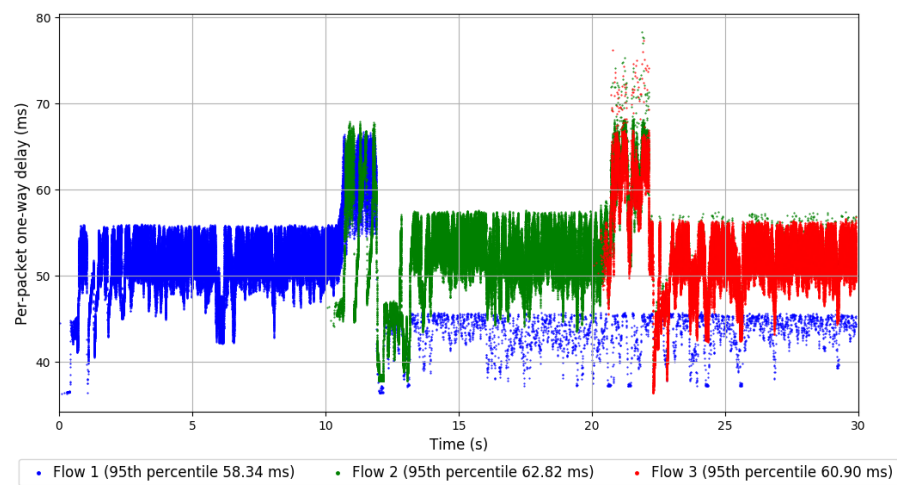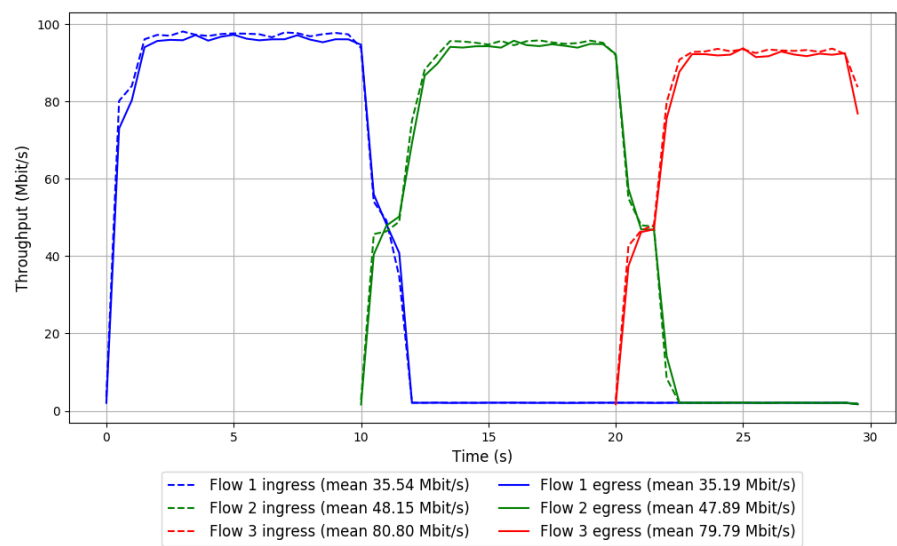
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-04-17 14:19:25
End at: 2018-04-17 14:19:55
Local clock offset: 10.167 ms
Remote clock offset: -1.451 ms

# Below is generated by plot.py at 2018-04-17 22:01:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.76 Mbit/s
95th percentile per-packet one-way delay: 60.915 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 36.08 Mbit/s
95th percentile per-packet one-way delay: 59.167 ms
Loss rate: 1.44%
-- Flow 2:
Average throughput: 46.36 Mbit/s
95th percentile per-packet one-way delay: 64.299 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 78.34 Mbit/s
95th percentile per-packet one-way delay: 56.473 ms
Loss rate: 2.50%
```
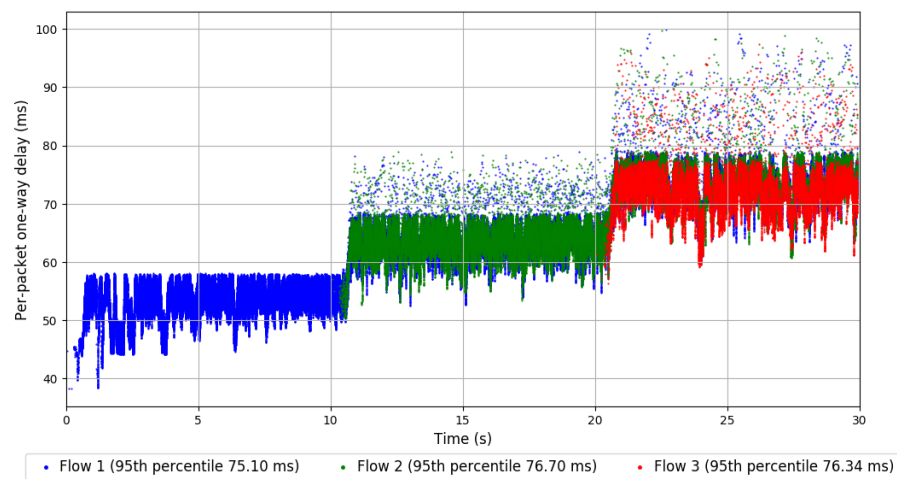
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-04-17 14:48:44
End at: 2018-04-17 14:49:14
Local clock offset: 1.713 ms
Remote clock offset: -0.552 ms

# Below is generated by plot.py at 2018-04-17 22:01:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.14 Mbit/s
95th percentile per-packet one-way delay: 61.423 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 35.76 Mbit/s
95th percentile per-packet one-way delay: 56.220 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 63.60 Mbit/s
95th percentile per-packet one-way delay: 61.368 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 45.54 Mbit/s
95th percentile per-packet one-way delay: 66.018 ms
Loss rate: 1.37%
```
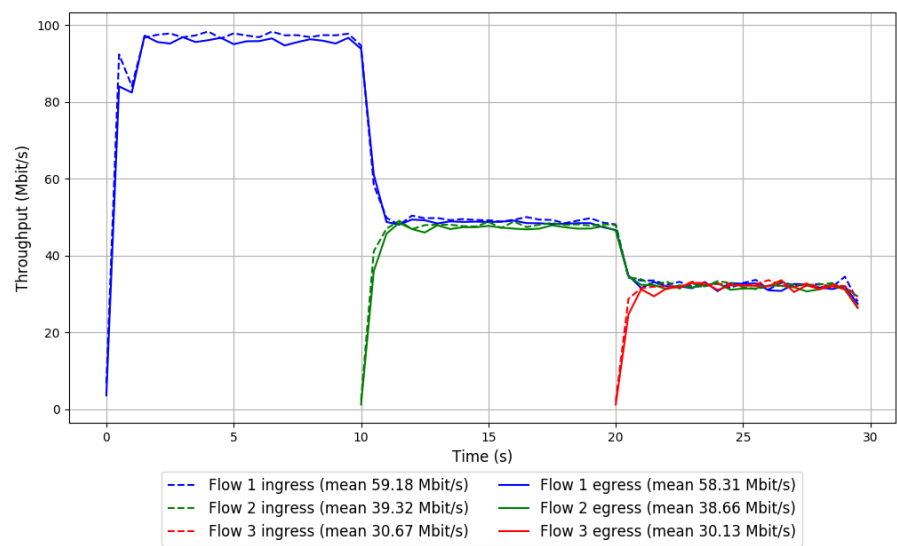
Run 5: Report of FillP — Data Link

```
Run 6: Statistics of FillP

Start at: 2018-04-17 15:16:03
End at: 2018-04-17 15:16:33
Local clock offset: -1.392 ms
Remote clock offset: -1.921 ms


# Below is generated by plot.py at 2018-04-17 22:01:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 61.219 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 58.340 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 47.89 Mbit/s
95th percentile per-packet one-way delay: 62.824 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 79.79 Mbit/s
95th percentile per-packet one-way delay: 60.903 ms
Loss rate: 2.05%
```
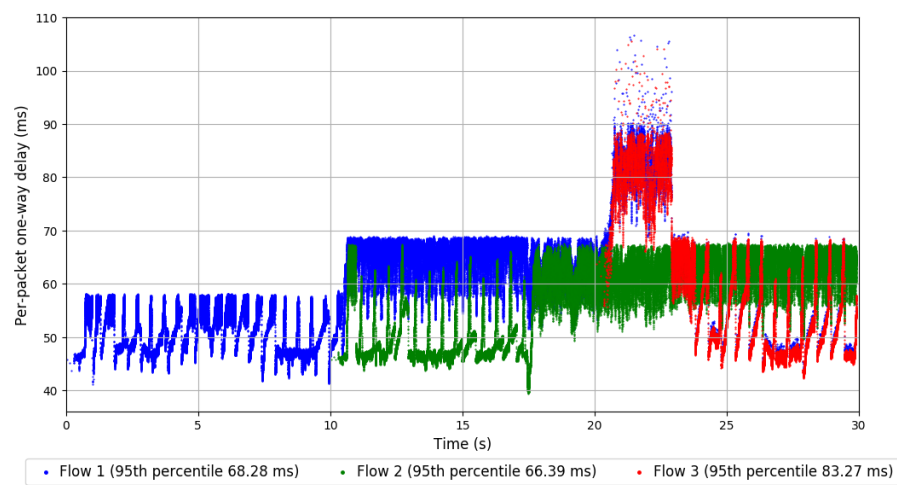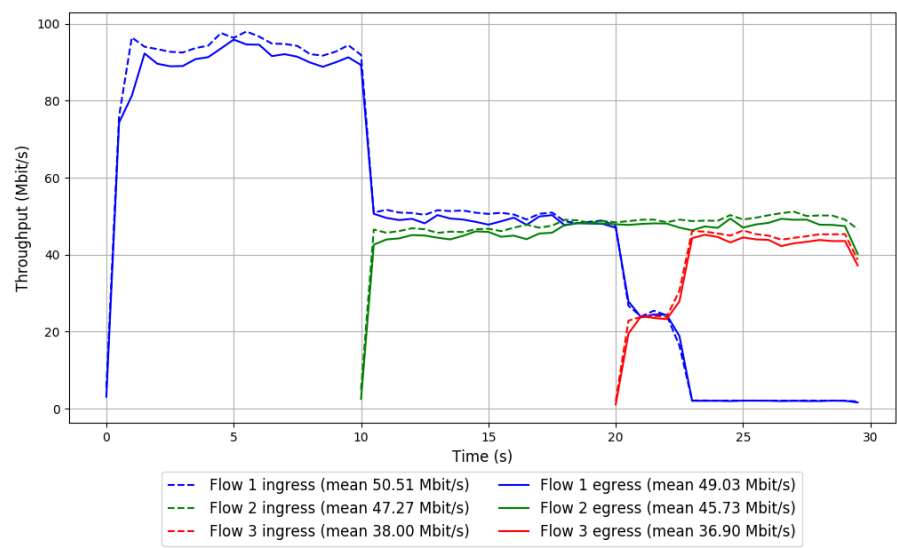
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 35.54 Mbit/s)   Flow 1 egress (mean 35.19 Mbit/s)
Flow 2 ingress (mean 48.15 Mbit/s)   Flow 2 egress (mean 47.89 Mbit/s)
Flow 3 ingress (mean 80.80 Mbit/s)   Flow 3 egress (mean 79.79 Mbit/s)

Flow 1 (95th percentile 58.34 ms)   Flow 2 (95th percentile 62.82 ms)   Flow 3 (95th percentile 60.90 ms)
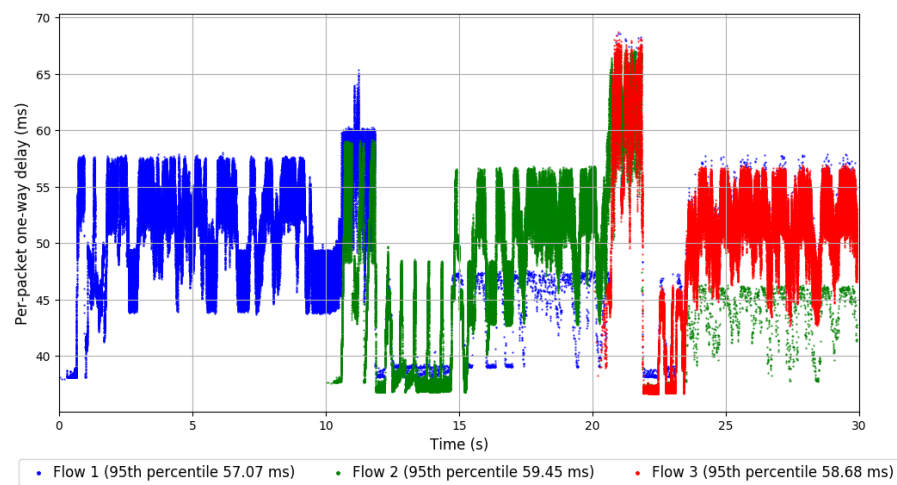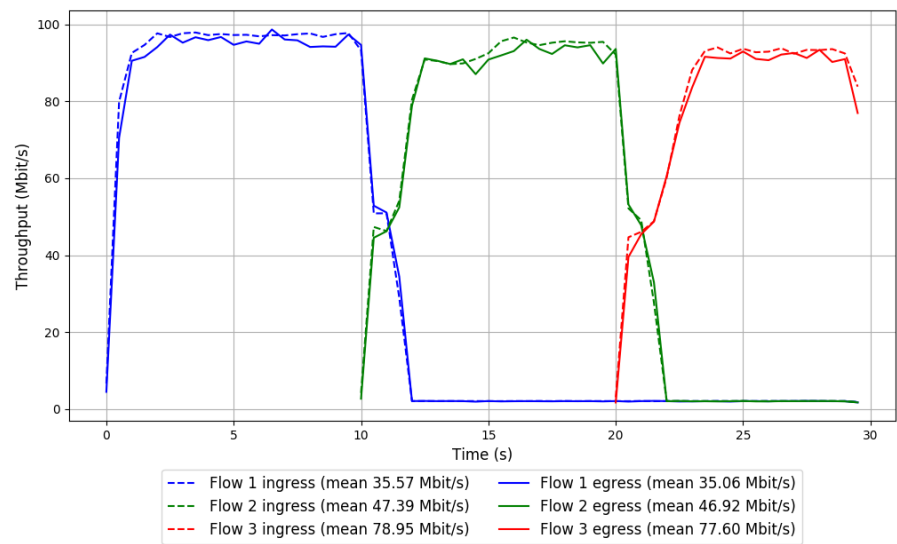
```
Run 7: Statistics of FillP

Start at: 2018-04-17 15:43:20
End at: 2018-04-17 15:43:50
Local clock offset: -1.957 ms
Remote clock offset: -7.994 ms


# Below is generated by plot.py at 2018-04-17 22:02:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.90 Mbit/s
95th percentile per-packet one-way delay: 75.973 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 75.101 ms
Loss rate: 1.73%
-- Flow 2:
Average throughput: 38.66 Mbit/s
95th percentile per-packet one-way delay: 76.699 ms
Loss rate: 2.18%
-- Flow 3:
Average throughput: 30.13 Mbit/s
95th percentile per-packet one-way delay: 76.345 ms
Loss rate: 2.76%
```

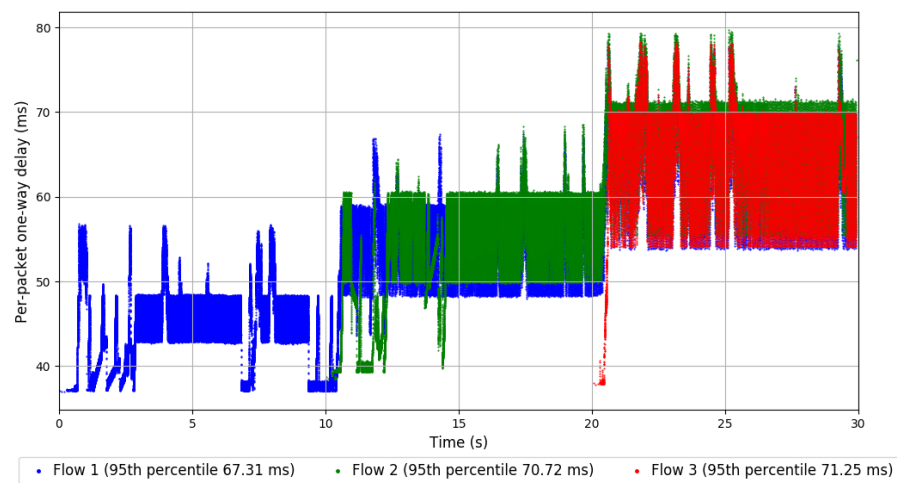## Run 7: Report of FillP — Data Link

```
Run 8: Statistics of FillP

Start at: 2018-04-17 16:12:16
End at: 2018-04-17 16:12:46
Local clock offset: -0.424 ms
Remote clock offset: -6.574 ms


# Below is generated by plot.py at 2018-04-17 22:02:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.56 Mbit/s
95th percentile per-packet one-way delay: 68.144 ms
Loss rate: 3.41%
-- Flow 1:
Average throughput: 49.03 Mbit/s
95th percentile per-packet one-way delay: 68.283 ms
Loss rate: 3.18%
-- Flow 2:
Average throughput: 45.73 Mbit/s
95th percentile per-packet one-way delay: 66.391 ms
Loss rate: 3.63%
-- Flow 3:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 83.270 ms
Loss rate: 3.81%
```
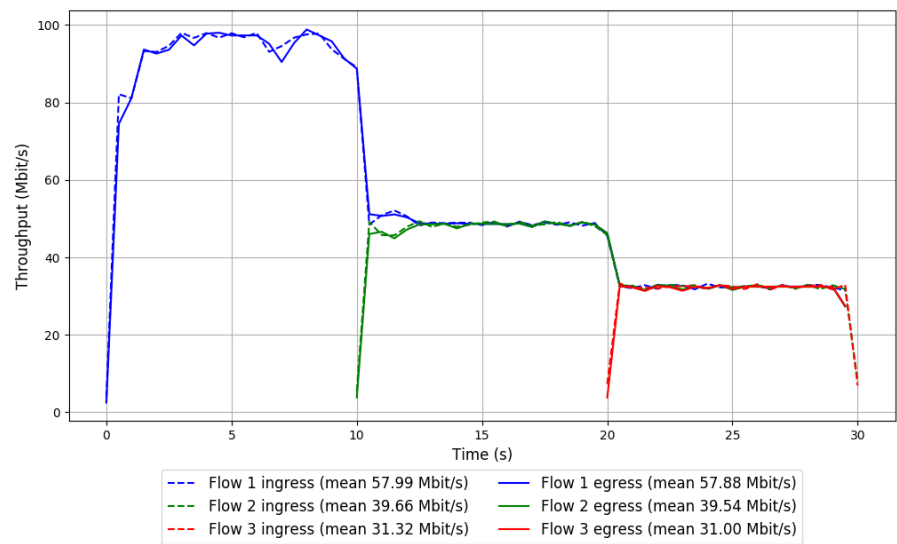
Run 8: Report of FillP — Data Link

```
Run 9: Statistics of FillP

Start at: 2018-04-17 16:38:54
End at: 2018-04-17 16:39:24
Local clock offset: -0.056 ms
Remote clock offset: -1.942 ms


# Below is generated by plot.py at 2018-04-17 22:02:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.86 Mbit/s
95th percentile per-packet one-way delay: 57.375 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 35.06 Mbit/s
95th percentile per-packet one-way delay: 57.069 ms
Loss rate: 1.63%
-- Flow 2:
Average throughput: 46.92 Mbit/s
95th percentile per-packet one-way delay: 59.455 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 77.60 Mbit/s
95th percentile per-packet one-way delay: 58.684 ms
Loss rate: 2.45%
```
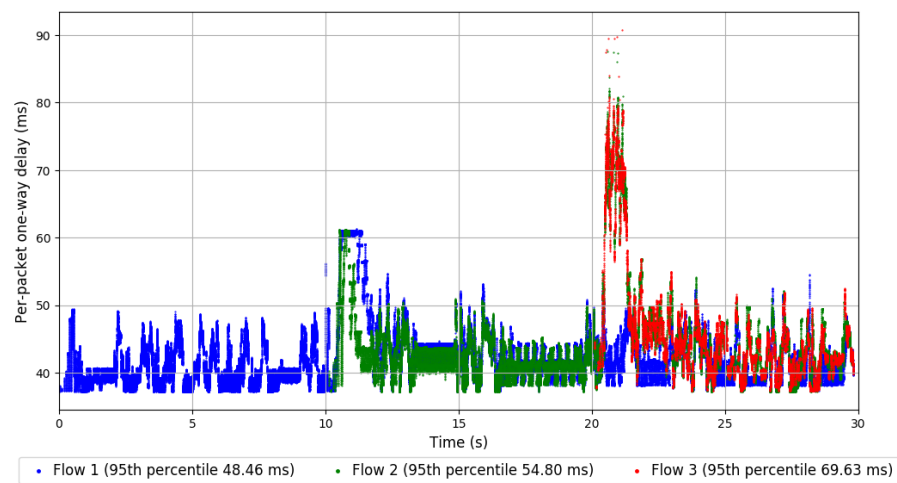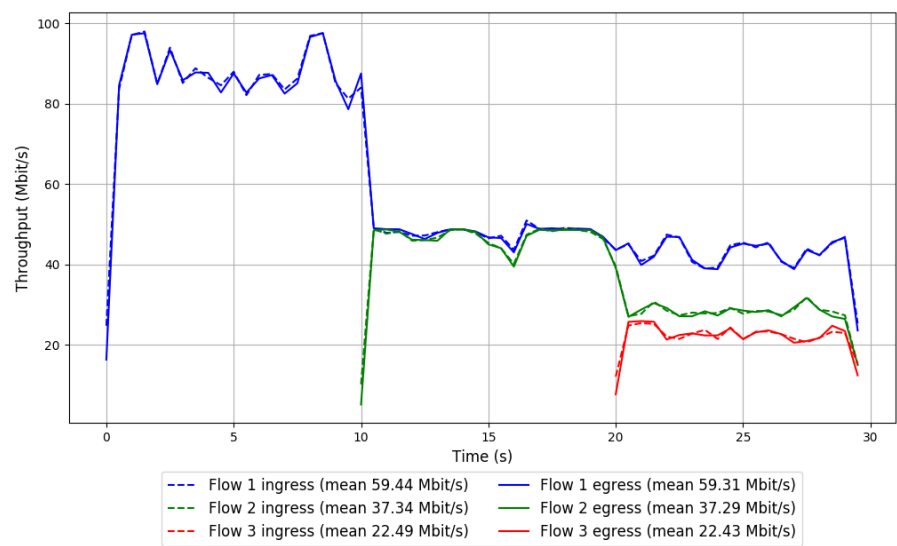
Run 9: Report of FillP — Data Link

```
Run 10: Statistics of FillP

Start at: 2018-04-17 17:04:21
End at: 2018-04-17 17:04:51
Local clock offset: 0.766 ms
Remote clock offset: -2.357 ms


# Below is generated by plot.py at 2018-04-17 22:03:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.41 Mbit/s
95th percentile per-packet one-way delay: 69.418 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 57.88 Mbit/s
95th percentile per-packet one-way delay: 67.313 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 39.54 Mbit/s
95th percentile per-packet one-way delay: 70.716 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 31.00 Mbit/s
95th percentile per-packet one-way delay: 71.249 ms
Loss rate: 2.90%
```

Run 10: Report of FillP — Data Link

```
Run 1: Statistics of Indigo-1-32

Start at: 2018-04-17 13:18:34
End at: 2018-04-17 13:19:04
Local clock offset: -0.293 ms
Remote clock offset: -1.918 ms


# Below is generated by plot.py at 2018-04-17 22:03:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.23 Mbit/s
95th percentile per-packet one-way delay: 51.172 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 59.31 Mbit/s
95th percentile per-packet one-way delay: 48.461 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 54.795 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 22.43 Mbit/s
95th percentile per-packet one-way delay: 69.634 ms
Loss rate: 1.03%
```
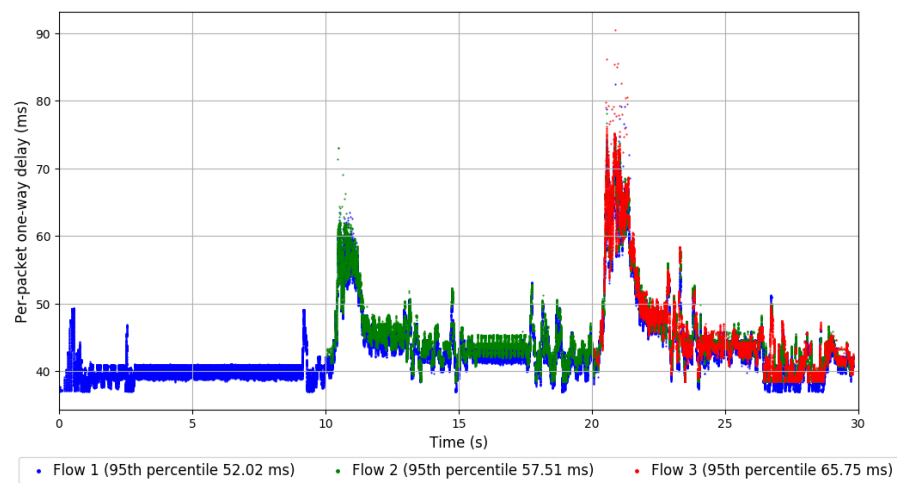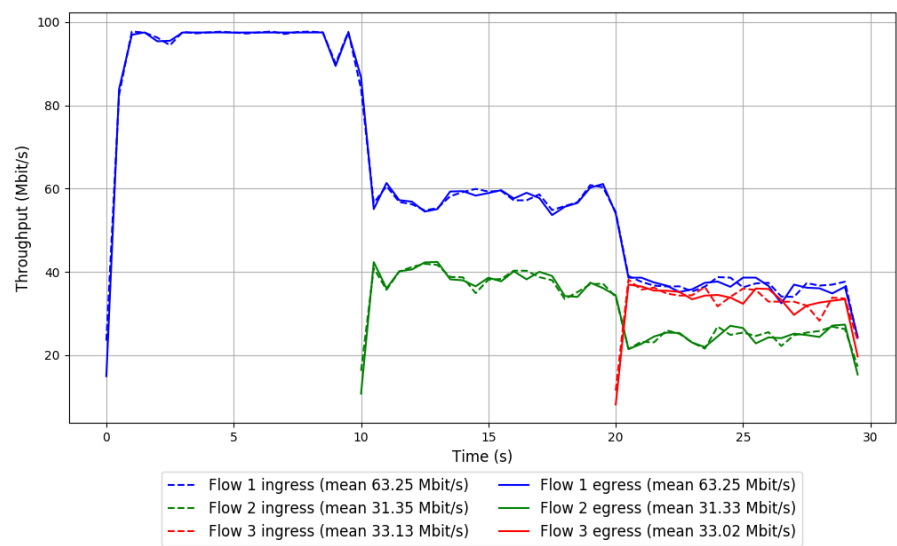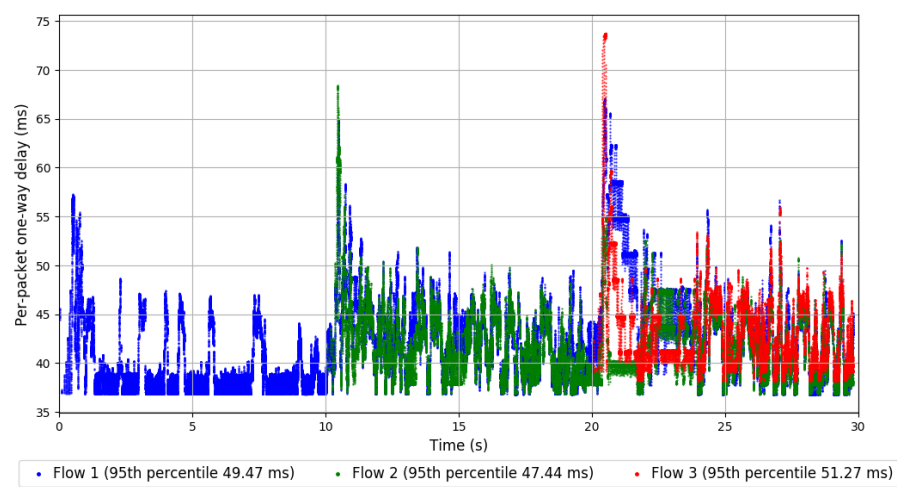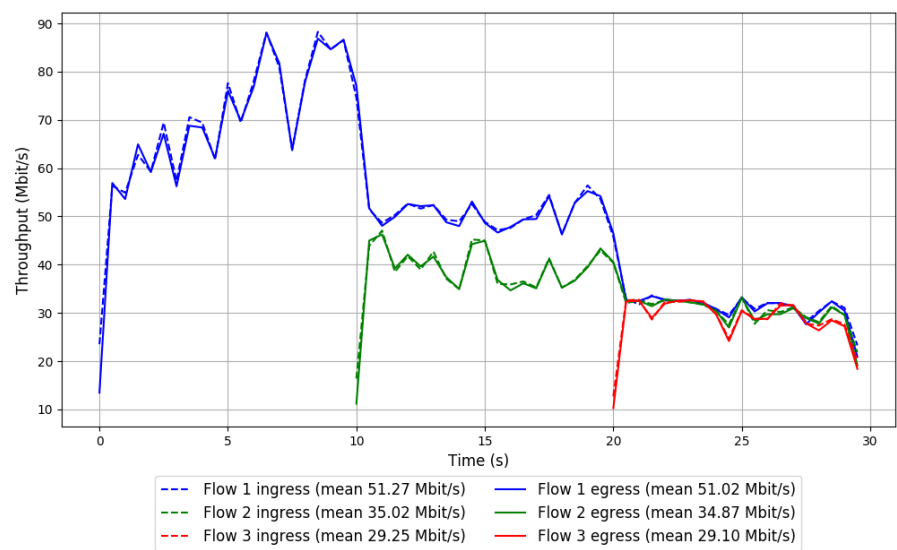
Run 1: Report of Indigo-1-32 — Data Link

```
Run 2: Statistics of Indigo-1-32

Start at: 2018-04-17 13:42:24
End at: 2018-04-17 13:42:54
Local clock offset: 2.862 ms
Remote clock offset: -2.462 ms


# Below is generated by plot.py at 2018-04-17 22:03:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 56.228 ms
Loss rate: 0.37%
-- Flow 1:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 52.022 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 57.514 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 33.02 Mbit/s
95th percentile per-packet one-way delay: 65.748 ms
Loss rate: 1.05%
```

Run 2: Report of Indigo-1-32 — Data Link

```
Run 3: Statistics of Indigo-1-32

Start at: 2018-04-17 14:06:48
End at: 2018-04-17 14:07:18
Local clock offset: 7.486 ms
Remote clock offset: -2.022 ms


# Below is generated by plot.py at 2018-04-17 22:03:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.68 Mbit/s
95th percentile per-packet one-way delay: 48.889 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 51.02 Mbit/s
95th percentile per-packet one-way delay: 49.465 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 34.87 Mbit/s
95th percentile per-packet one-way delay: 47.436 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 29.10 Mbit/s
95th percentile per-packet one-way delay: 51.265 ms
Loss rate: 1.24%
```
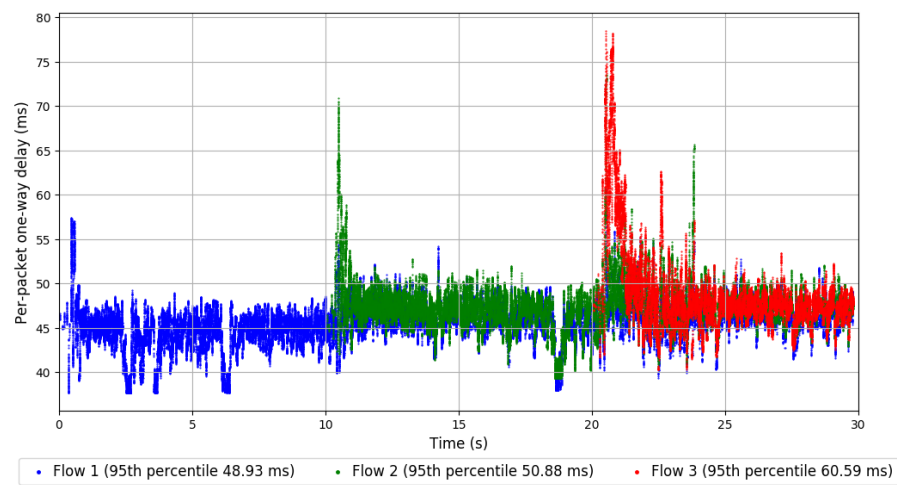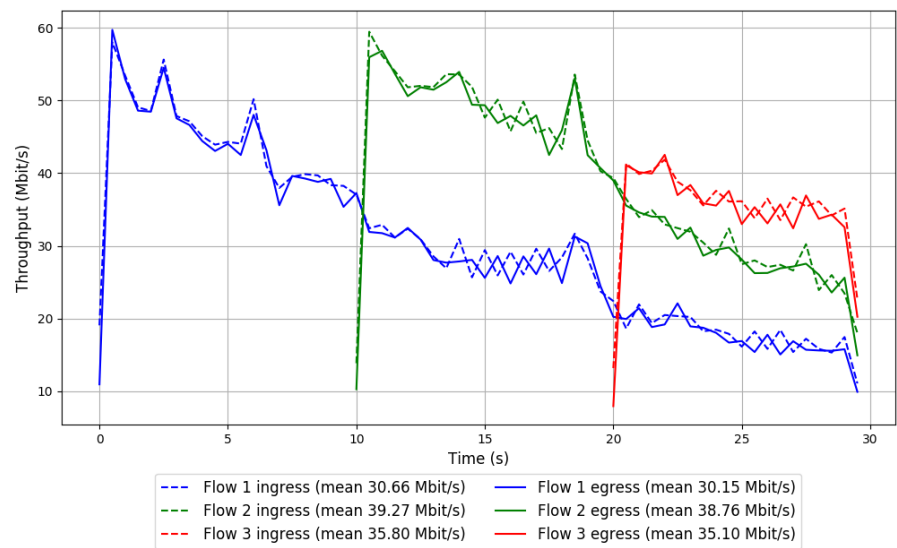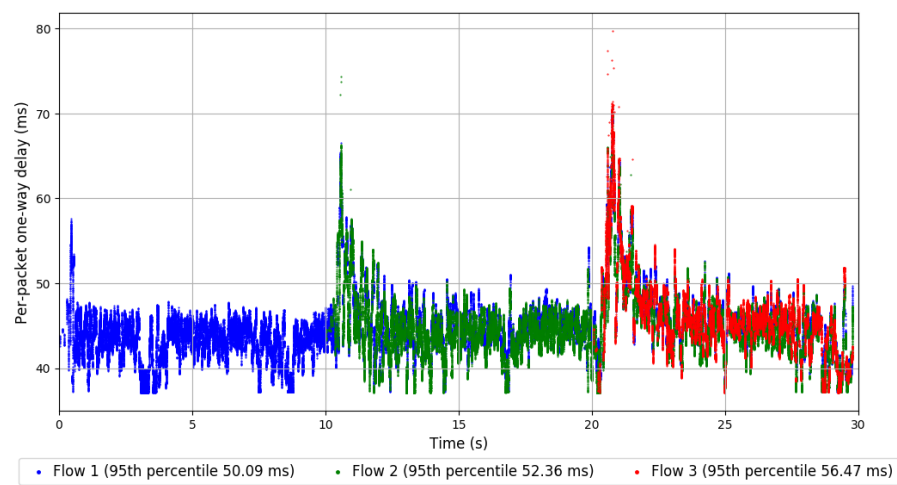
Run 3: Report of Indigo-1-32 — Data Link

```
Run 4: Statistics of Indigo-1-32

Start at: 2018-04-17 14:35:14
End at: 2018-04-17 14:35:44
Local clock offset: 8.851 ms
Remote clock offset: -0.88 ms


# Below is generated by plot.py at 2018-04-17 22:03:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.33 Mbit/s
95th percentile per-packet one-way delay: 51.062 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 30.15 Mbit/s
95th percentile per-packet one-way delay: 48.928 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 38.76 Mbit/s
95th percentile per-packet one-way delay: 50.875 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 35.10 Mbit/s
95th percentile per-packet one-way delay: 60.590 ms
Loss rate: 2.74%
```

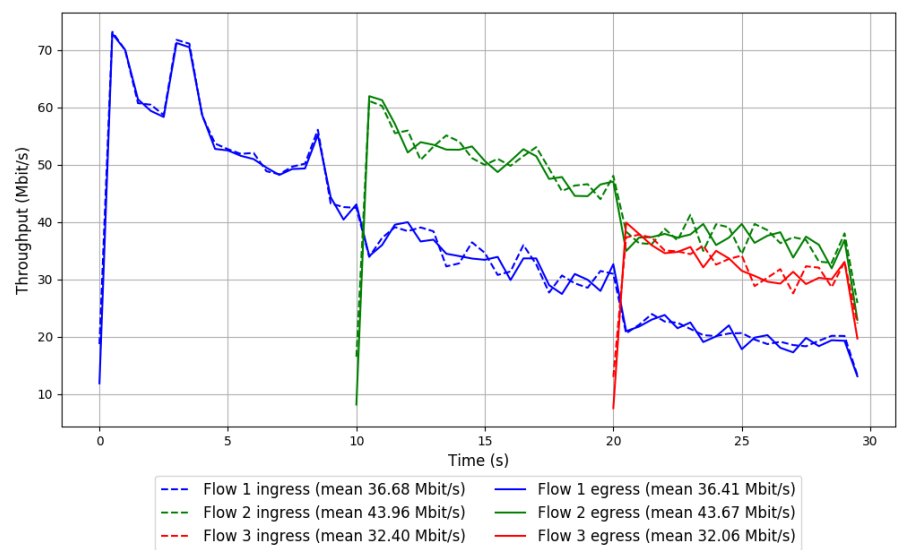Run 4: Report of Indigo-1-32 — Data Link

```
Run 5: Statistics of Indigo-1-32

Start at: 2018-04-17 15:02:03
End at: 2018-04-17 15:02:33
Local clock offset: -0.994 ms
Remote clock offset: -0.054 ms


# Below is generated by plot.py at 2018-04-17 22:03:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.83 Mbit/s
95th percentile per-packet one-way delay: 51.906 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 50.089 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 52.362 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 56.472 ms
Loss rate: 1.76%
```

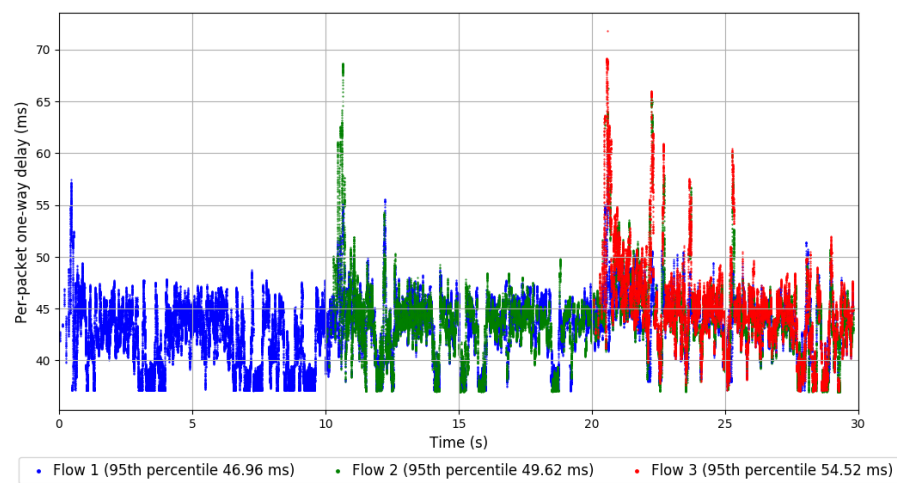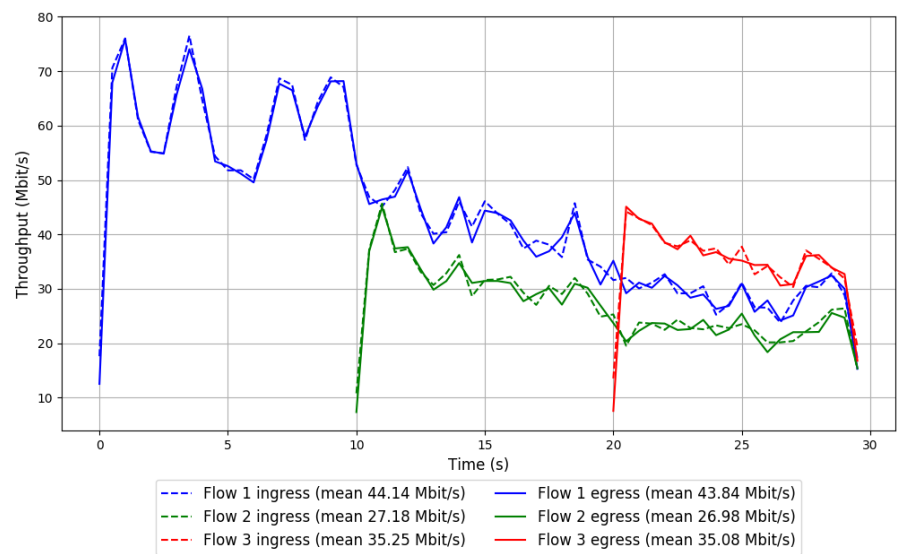Run 5: Report of Indigo-1-32 — Data Link

```
Run 6: Statistics of Indigo-1-32

Start at: 2018-04-17 15:30:10
End at: 2018-04-17 15:30:40
Local clock offset: -2.087 ms
Remote clock offset: -6.299 ms


# Below is generated by plot.py at 2018-04-17 22:03:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.20 Mbit/s
95th percentile per-packet one-way delay: 48.635 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 43.84 Mbit/s
95th percentile per-packet one-way delay: 46.959 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 26.98 Mbit/s
95th percentile per-packet one-way delay: 49.621 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 54.519 ms
Loss rate: 1.25%
```

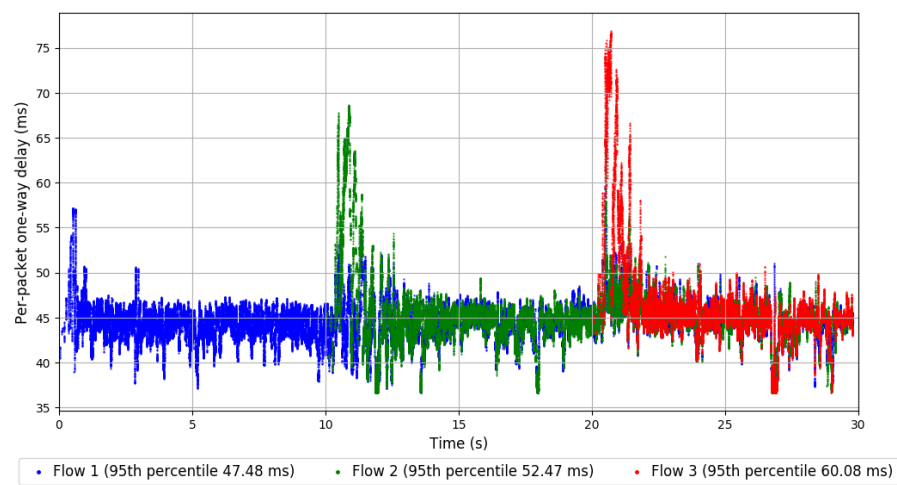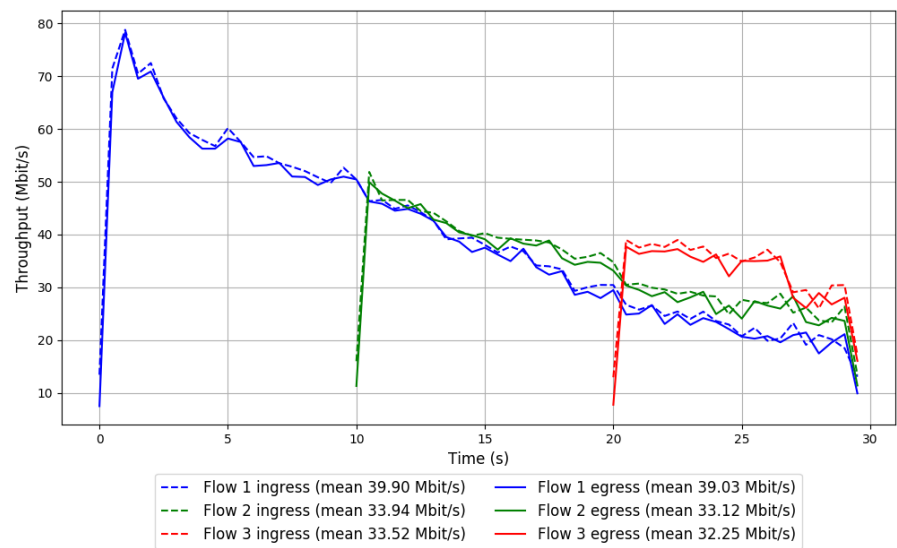Run 6: Report of Indigo-1-32 — Data Link

```
Run 7: Statistics of Indigo-1-32

Start at: 2018-04-17 15:58:25
End at: 2018-04-17 15:58:55
Local clock offset: -0.371 ms
Remote clock offset: -6.051 ms


# Below is generated by plot.py at 2018-04-17 22:03:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.50 Mbit/s
95th percentile per-packet one-way delay: 49.639 ms
Loss rate: 2.85%
-- Flow 1:
Average throughput: 39.03 Mbit/s
95th percentile per-packet one-way delay: 47.483 ms
Loss rate: 2.43%
-- Flow 2:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 52.469 ms
Loss rate: 2.79%
-- Flow 3:
Average throughput: 32.25 Mbit/s
95th percentile per-packet one-way delay: 60.081 ms
Loss rate: 4.52%
```

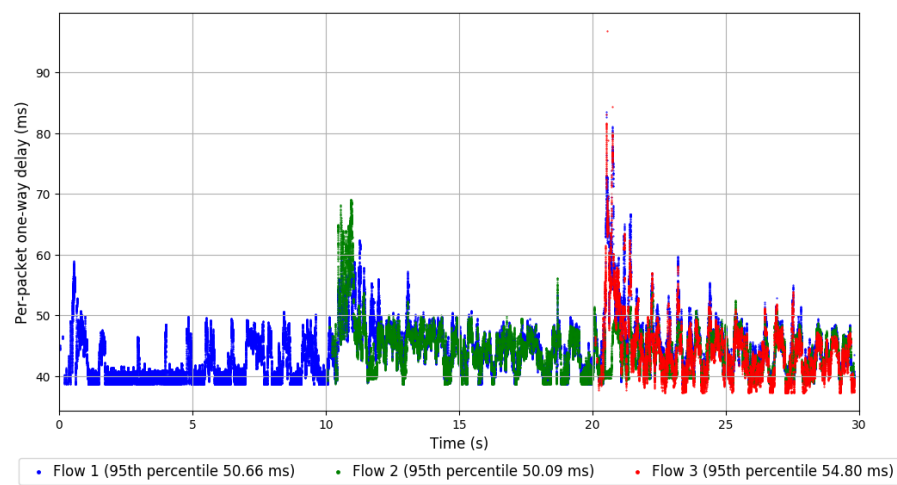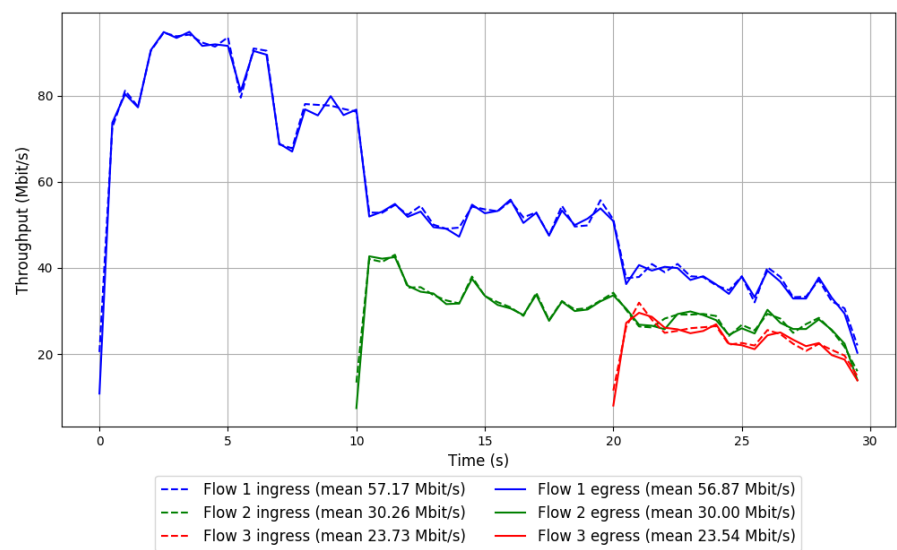Run 7: Report of Indigo-1-32 — Data Link

```
Run 8: Statistics of Indigo-1-32

Start at: 2018-04-17 16:26:01
End at: 2018-04-17 16:26:31
Local clock offset: 0.011 ms
Remote clock offset: -4.441 ms


# Below is generated by plot.py at 2018-04-17 22:04:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.44 Mbit/s
95th percentile per-packet one-way delay: 51.078 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 56.87 Mbit/s
95th percentile per-packet one-way delay: 50.662 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 30.00 Mbit/s
95th percentile per-packet one-way delay: 50.095 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 54.797 ms
Loss rate: 1.55%
```

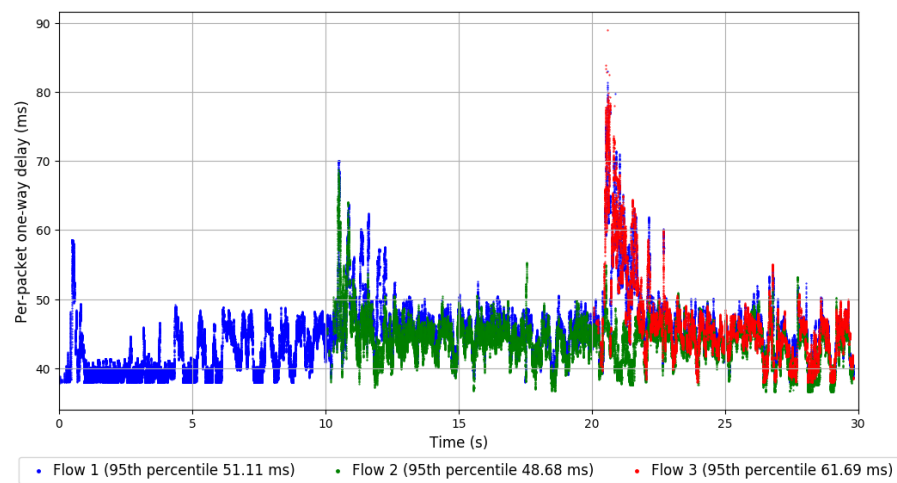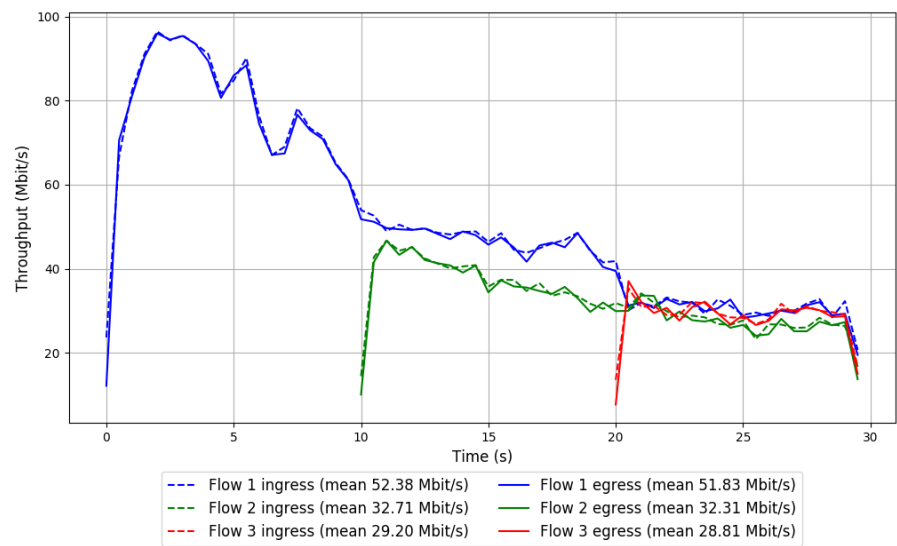Run 8: Report of Indigo-1-32 — Data Link

```
Run 9: Statistics of Indigo-1-32

Start at: 2018-04-17 16:51:27
End at: 2018-04-17 16:51:57
Local clock offset: 0.12 ms
Remote clock offset: -0.924 ms


# Below is generated by plot.py at 2018-04-17 22:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.66 Mbit/s
95th percentile per-packet one-way delay: 51.875 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 51.83 Mbit/s
95th percentile per-packet one-way delay: 51.107 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 48.680 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 28.81 Mbit/s
95th percentile per-packet one-way delay: 61.689 ms
Loss rate: 1.88%
```

Run 9: Report of Indigo-1-32 — Data Link

```
Run 10: Statistics of Indigo-1-32

Start at: 2018-04-17 17:15:47
End at: 2018-04-17 17:16:17
Local clock offset: 0.925 ms
Remote clock offset: -2.72 ms


# Below is generated by plot.py at 2018-04-17 22:04:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.22 Mbit/s
95th percentile per-packet one-way delay: 52.246 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 64.38 Mbit/s
95th percentile per-packet one-way delay: 52.044 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 25.04 Mbit/s
95th percentile per-packet one-way delay: 55.662 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 45.937 ms
Loss rate: 0.98%
```
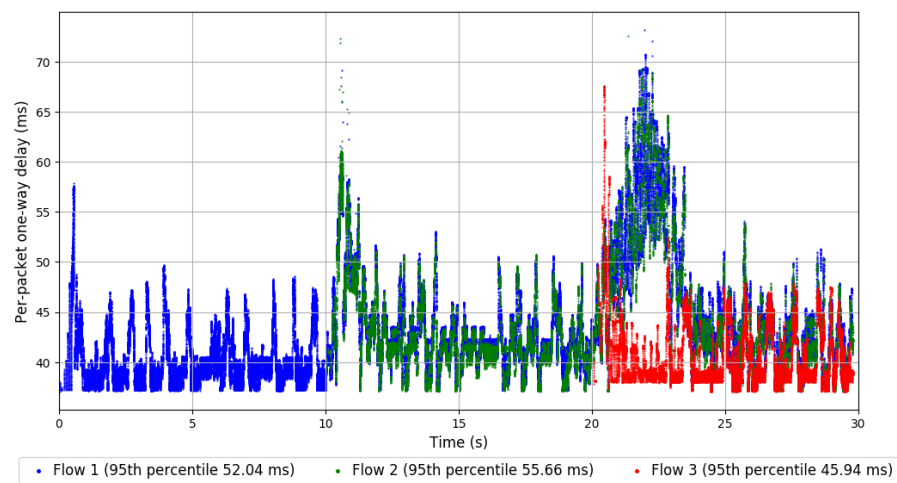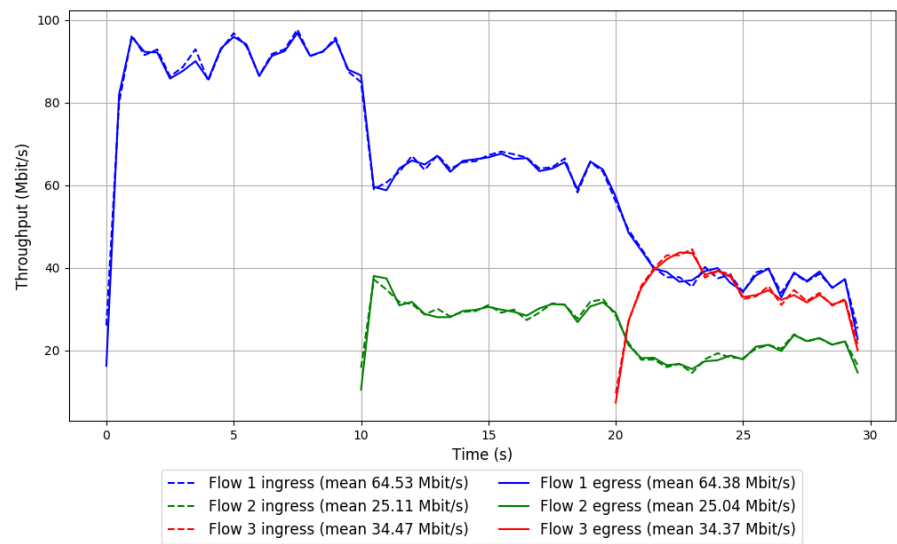
Run 10: Report of Indigo-1-32 — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-04-17 13:21:24
End at: 2018-04-17 13:21:54
Local clock offset: -0.386 ms
Remote clock offset: -1.3 ms


# Below is generated by plot.py at 2018-04-17 22:04:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.45 Mbit/s
95th percentile per-packet one-way delay: 47.887 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 68.85 Mbit/s
95th percentile per-packet one-way delay: 47.829 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 17.46 Mbit/s
95th percentile per-packet one-way delay: 49.881 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 45.030 ms
Loss rate: 1.70%
```
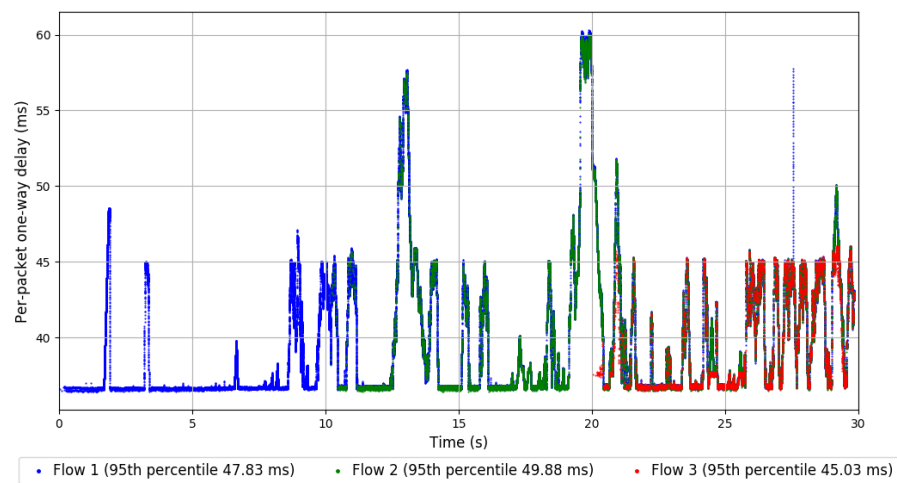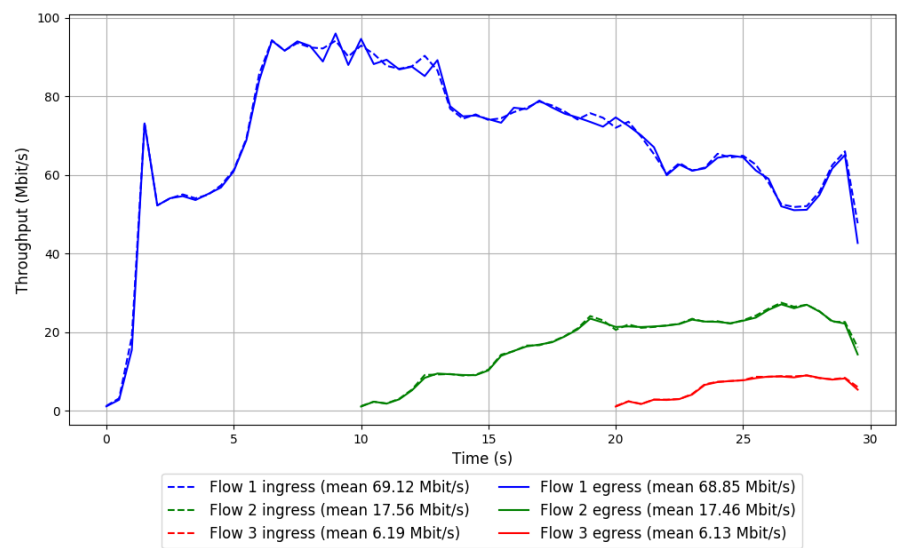
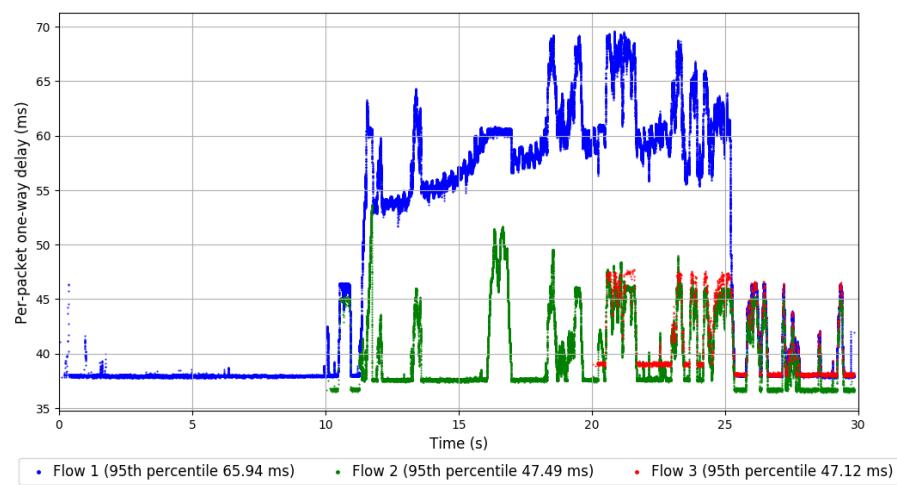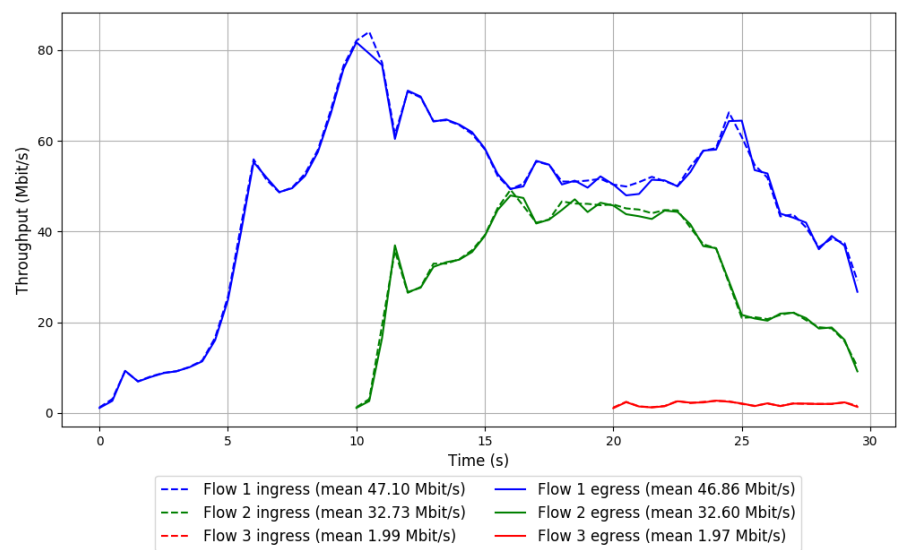# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-04-17 13:45:10
End at: 2018-04-17 13:45:40
Local clock offset: 3.067 ms
Remote clock offset: -2.011 ms


# Below is generated by plot.py at 2018-04-17 22:04:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.16 Mbit/s
95th percentile per-packet one-way delay: 64.024 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 46.86 Mbit/s
95th percentile per-packet one-way delay: 65.942 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 32.60 Mbit/s
95th percentile per-packet one-way delay: 47.495 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 1.97 Mbit/s
95th percentile per-packet one-way delay: 47.120 ms
Loss rate: 1.60%
```

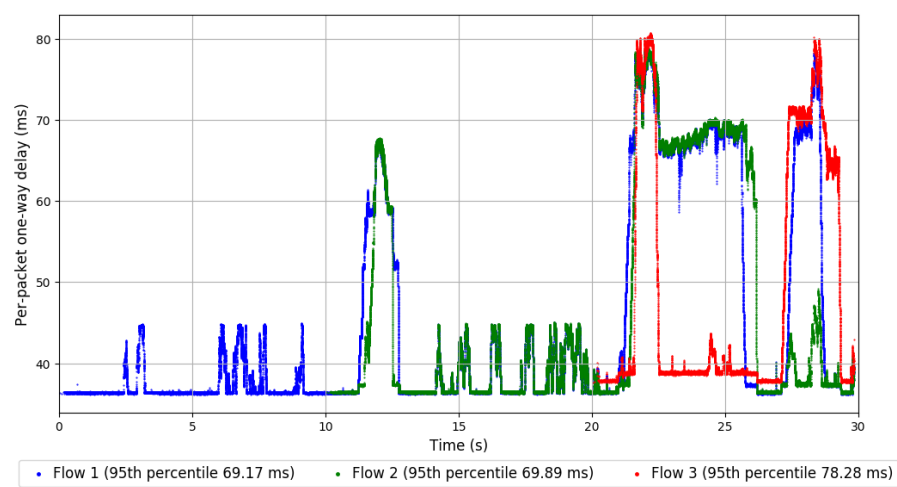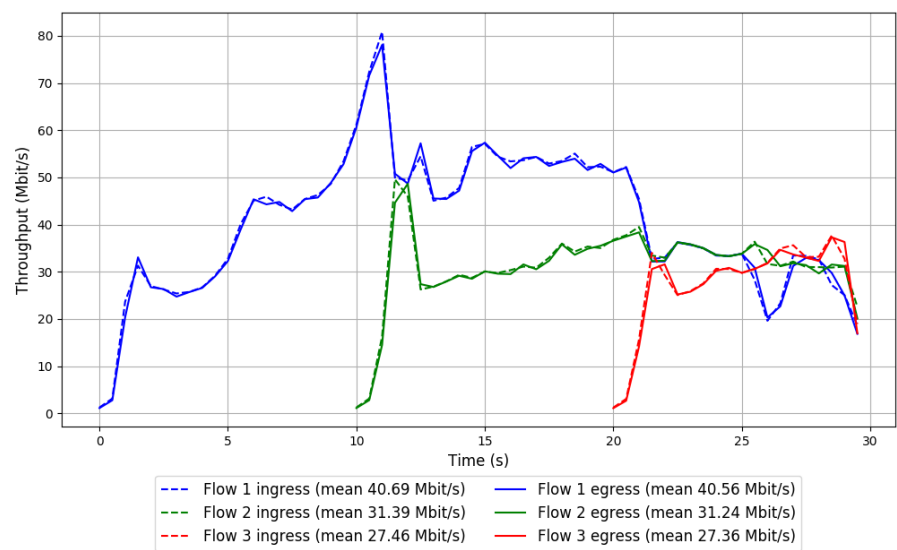Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-04-17 14:09:40
End at: 2018-04-17 14:10:10
Local clock offset: 8.23 ms
Remote clock offset: -1.365 ms


# Below is generated by plot.py at 2018-04-17 22:04:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.30 Mbit/s
95th percentile per-packet one-way delay: 71.284 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 40.56 Mbit/s
95th percentile per-packet one-way delay: 69.171 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 69.888 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 27.36 Mbit/s
95th percentile per-packet one-way delay: 78.279 ms
Loss rate: 1.02%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 40.69 Mbit/s) — Flow 1 egress (mean 40.56 Mbit/s)
Flow 2 ingress (mean 31.39 Mbit/s) — Flow 2 egress (mean 31.24 Mbit/s)
Flow 3 ingress (mean 27.46 Mbit/s) — Flow 3 egress (mean 27.36 Mbit/s)

Flow 1 (95th percentile 69.17 ms)   Flow 2 (95th percentile 69.89 ms)   Flow 3 (95th percentile 78.28 ms)
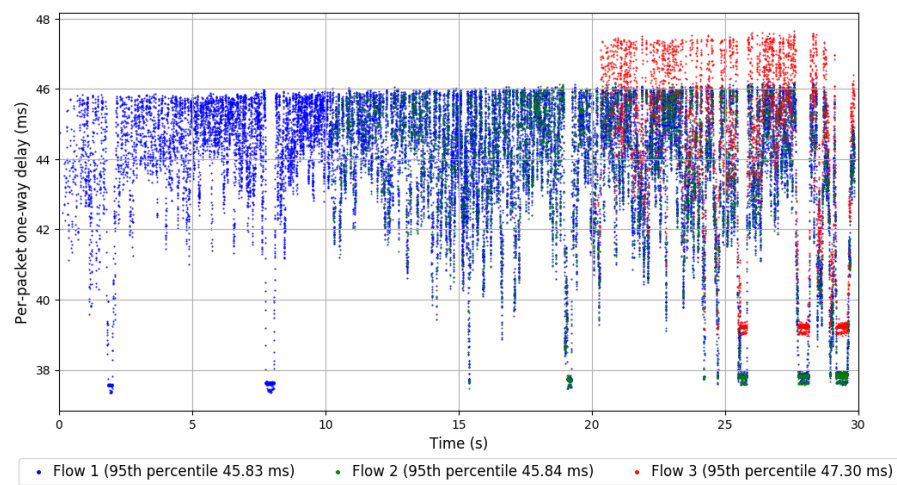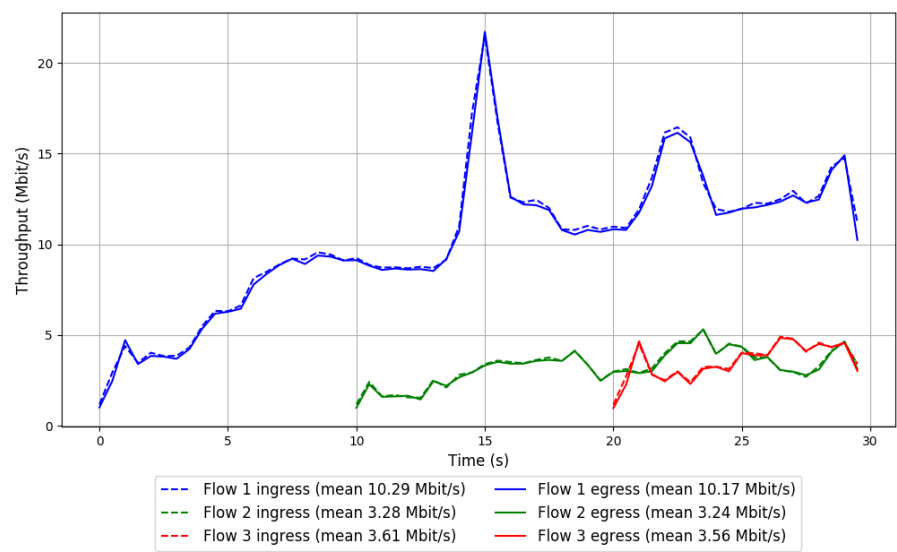
```
Run 4: Statistics of PCC-Vivace

Start at: 2018-04-17 14:38:36
End at: 2018-04-17 14:39:06
Local clock offset: 6.053 ms
Remote clock offset: -0.889 ms


# Below is generated by plot.py at 2018-04-17 22:04:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.49 Mbit/s
95th percentile per-packet one-way delay: 45.944 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 10.17 Mbit/s
95th percentile per-packet one-way delay: 45.831 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 45.842 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 3.56 Mbit/s
95th percentile per-packet one-way delay: 47.303 ms
Loss rate: 2.13%
```

Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-04-17 15:05:20
End at: 2018-04-17 15:05:50
Local clock offset: -1.327 ms
Remote clock offset: 0.5 ms


# Below is generated by plot.py at 2018-04-17 22:04:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 45.964 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 6.67 Mbit/s
95th percentile per-packet one-way delay: 46.205 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 7.01 Mbit/s
95th percentile per-packet one-way delay: 44.870 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 44.778 ms
Loss rate: 1.86%
```
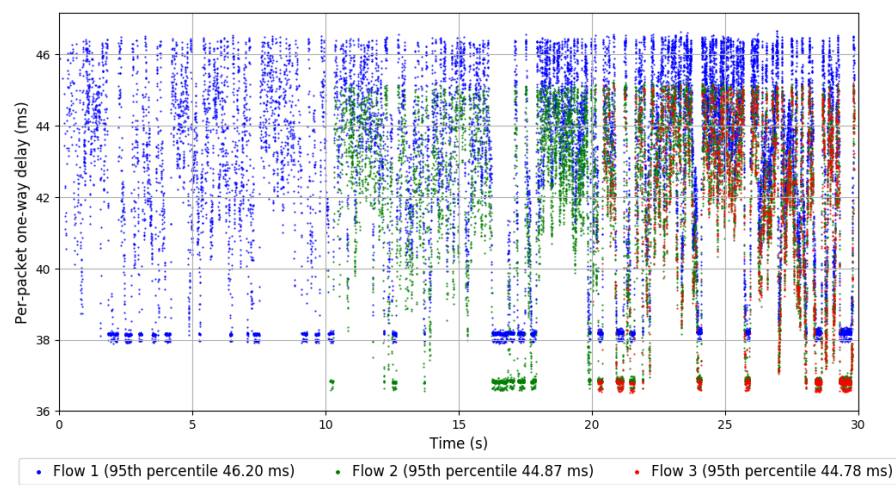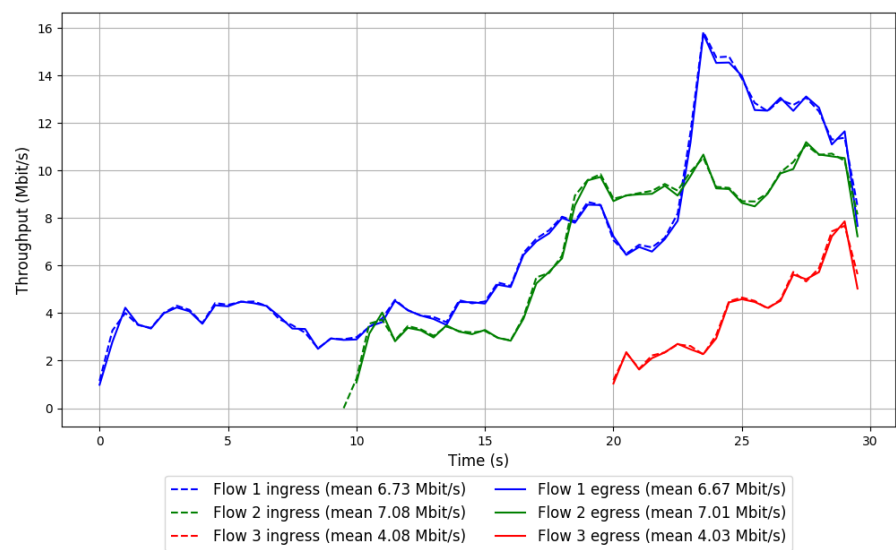
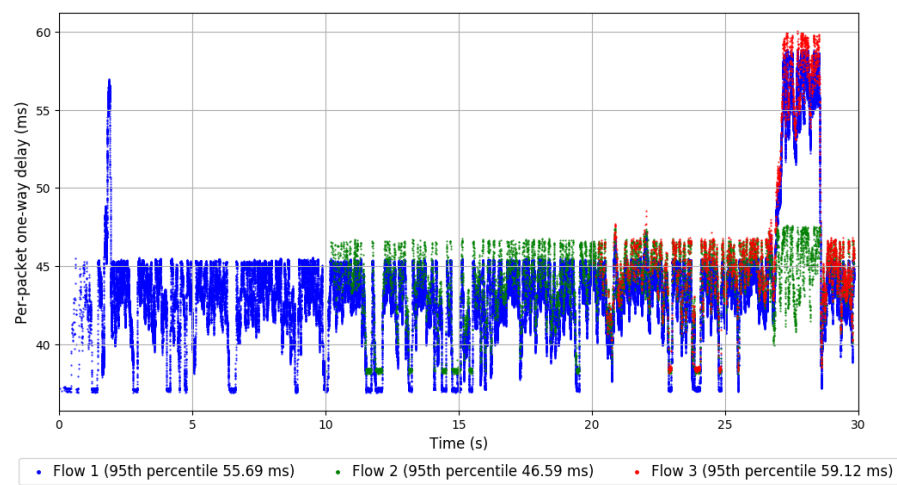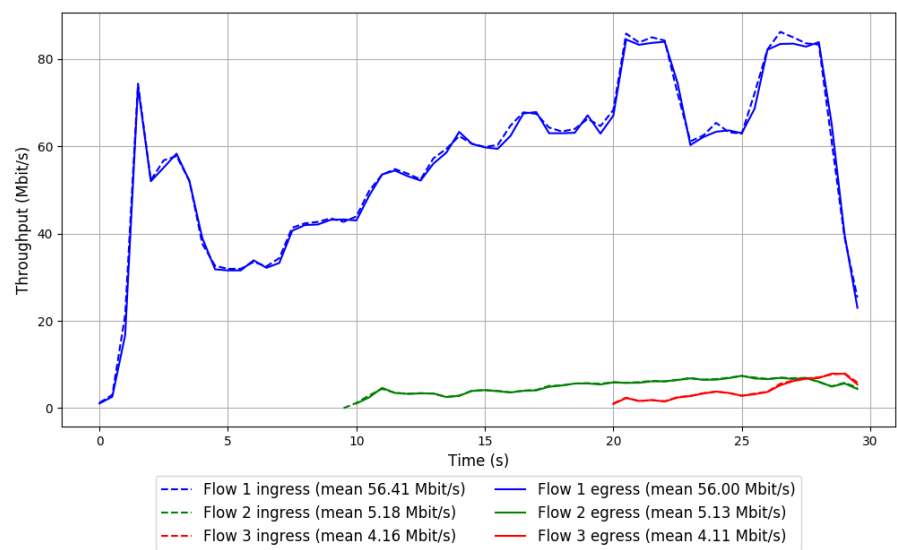Run 5: Report of PCC-Vivace — Data Link

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-04-17 15:33:16
End at: 2018-04-17 15:33:46
Local clock offset: -2.41 ms
Remote clock offset: -6.829 ms


# Below is generated by plot.py at 2018-04-17 22:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.75 Mbit/s
95th percentile per-packet one-way delay: 55.703 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 56.00 Mbit/s
95th percentile per-packet one-way delay: 55.691 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 46.587 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 59.117 ms
Loss rate: 2.07%
```

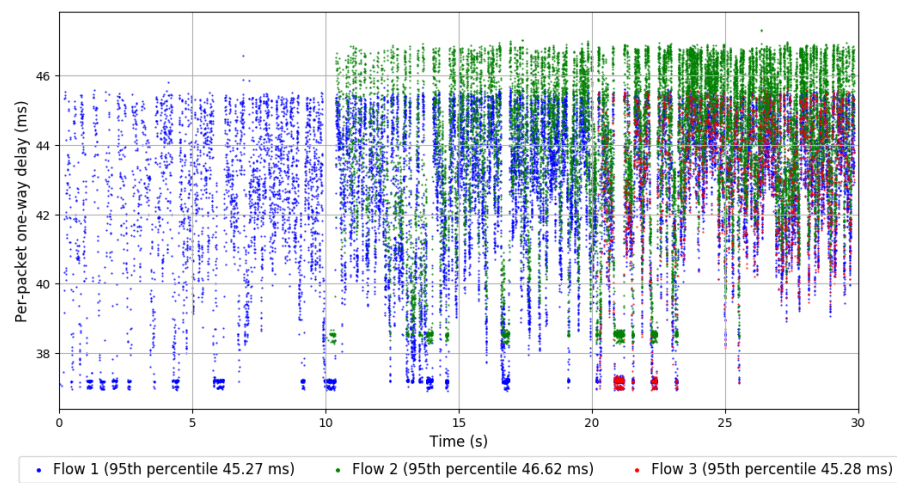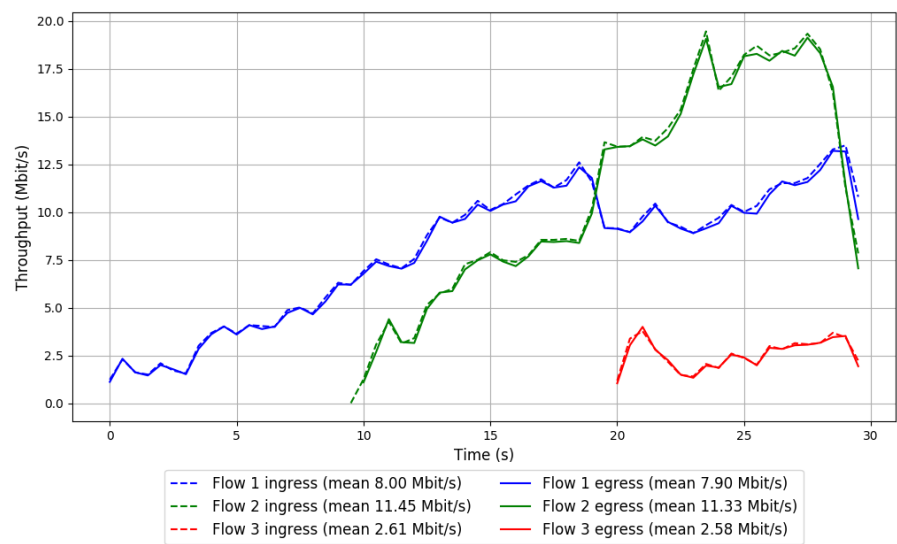Run 6: Report of PCC-Vivace — Data Link

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-04-17 16:02:00
End at: 2018-04-17 16:02:30
Local clock offset: -0.312 ms
Remote clock offset: -6.473 ms


# Below is generated by plot.py at 2018-04-17 22:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.28 Mbit/s
95th percentile per-packet one-way delay: 46.377 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 7.90 Mbit/s
95th percentile per-packet one-way delay: 45.269 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 11.33 Mbit/s
95th percentile per-packet one-way delay: 46.623 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 45.283 ms
Loss rate: 1.93%
```

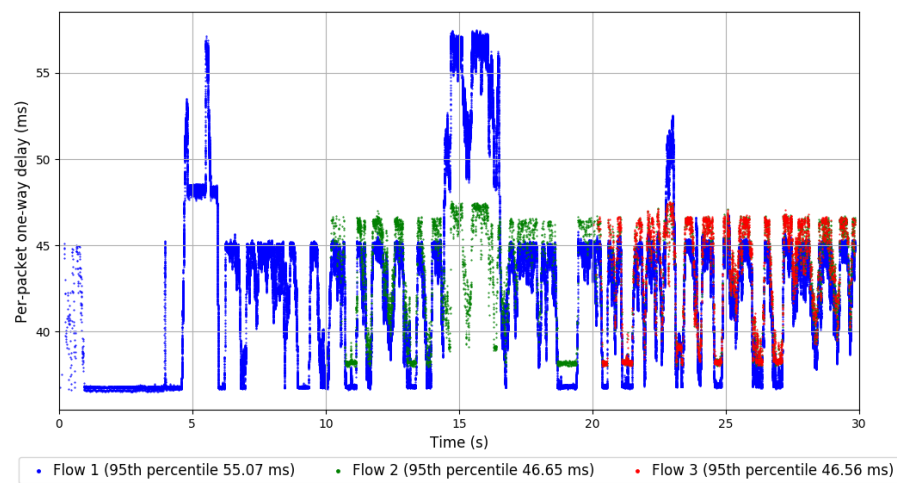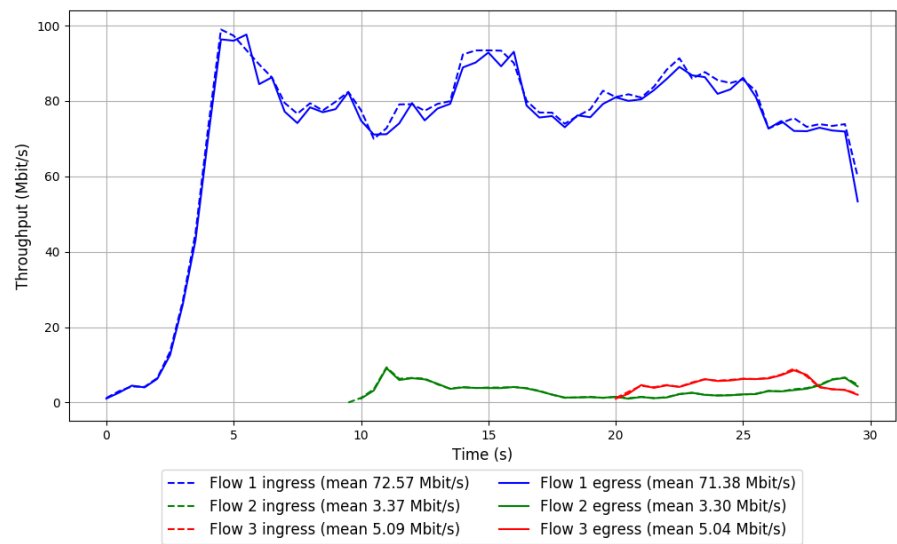Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-04-17 16:28:57
End at: 2018-04-17 16:29:27
Local clock offset: -0.012 ms
Remote clock offset: -3.278 ms


# Below is generated by plot.py at 2018-04-17 22:04:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.23 Mbit/s
95th percentile per-packet one-way delay: 54.538 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 71.38 Mbit/s
95th percentile per-packet one-way delay: 55.073 ms
Loss rate: 1.86%
-- Flow 2:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 46.654 ms
Loss rate: 2.56%
-- Flow 3:
Average throughput: 5.04 Mbit/s
95th percentile per-packet one-way delay: 46.558 ms
Loss rate: 1.77%
```

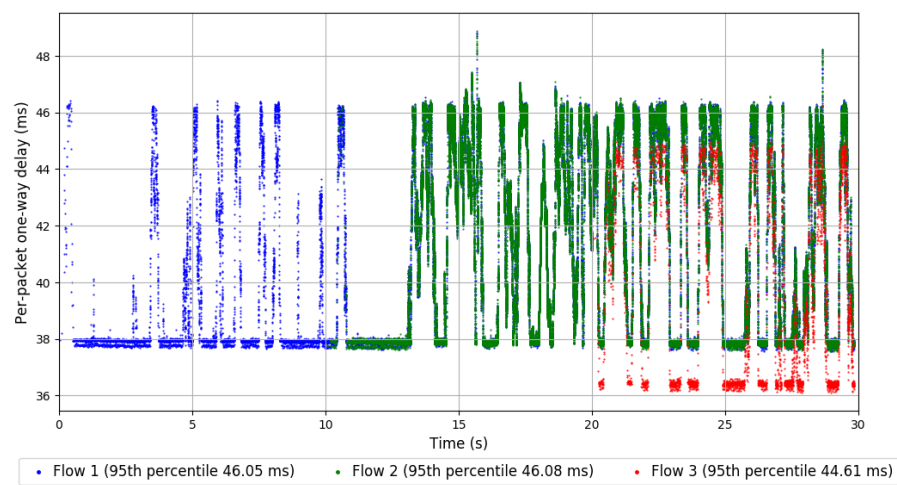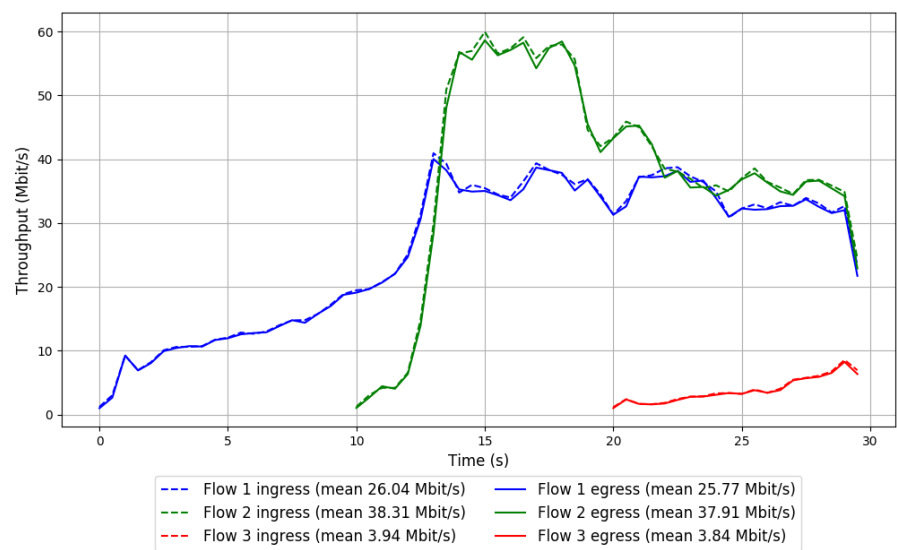Run 8: Report of PCC-Vivace — Data Link

```
Run 9: Statistics of PCC-Vivace

Start at: 2018-04-17 16:54:29
End at: 2018-04-17 16:54:59
Local clock offset: 0.345 ms
Remote clock offset: -0.785 ms


# Below is generated by plot.py at 2018-04-17 22:04:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 46.066 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 25.77 Mbit/s
95th percentile per-packet one-way delay: 46.054 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 37.91 Mbit/s
95th percentile per-packet one-way delay: 46.083 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 44.609 ms
Loss rate: 3.21%
```

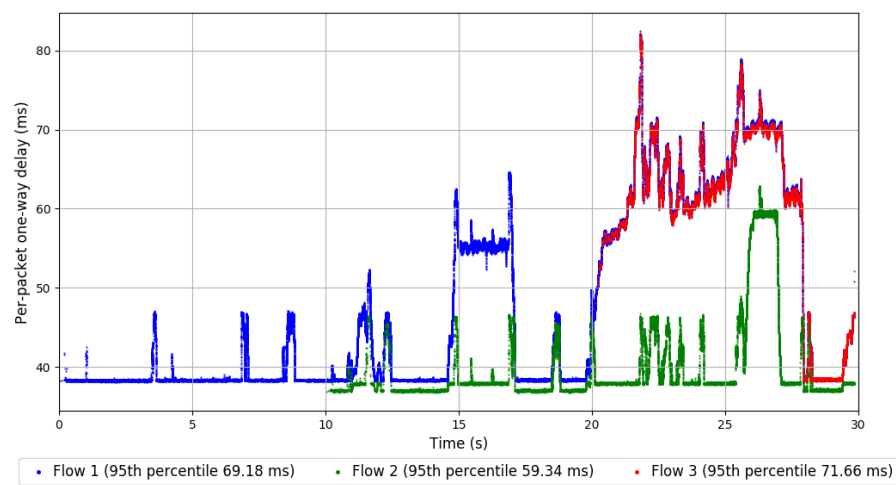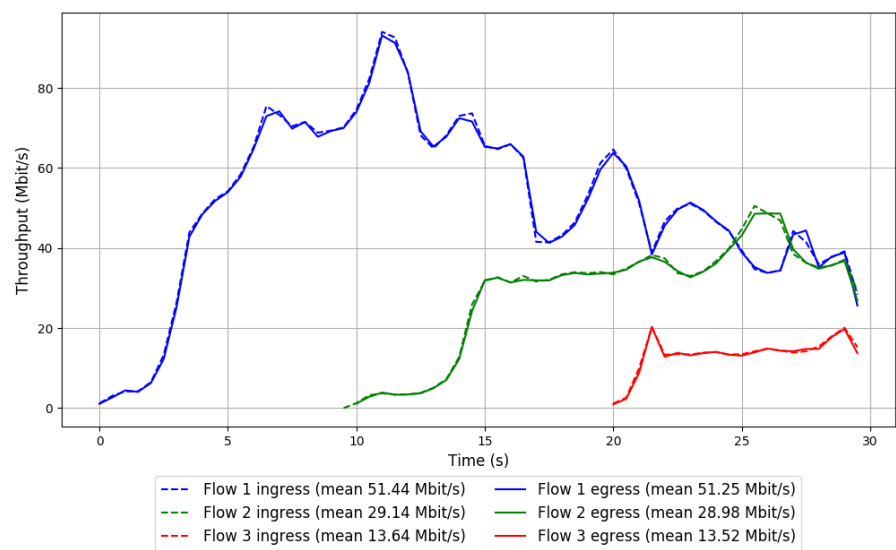Run 9: Report of PCC-Vivace — Data Link

```
Run 10: Statistics of PCC-Vivace

Start at: 2018-04-17 17:18:38
End at: 2018-04-17 17:19:08
Local clock offset: 0.84 ms
Remote clock offset: -2.627 ms


# Below is generated by plot.py at 2018-04-17 22:04:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.94 Mbit/s
95th percentile per-packet one-way delay: 69.057 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 69.176 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 28.98 Mbit/s
95th percentile per-packet one-way delay: 59.344 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 13.52 Mbit/s
95th percentile per-packet one-way delay: 71.658 ms
Loss rate: 1.64%
```

Run 10: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-04-17 13:25:34
End at: 2018-04-17 13:26:04
Local clock offset: 0.316 ms
Remote clock offset: -1.273 ms
```

Run 1: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of PCC-Expr

Start at: 2018-04-17 13:49:24
End at: 2018-04-17 13:49:54
Local clock offset: 3.27 ms
Remote clock offset: -2.016 ms
```

Run 2: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of PCC-Expr

Start at: 2018-04-17 14:14:04
End at: 2018-04-17 14:14:34
Local clock offset: 9.233 ms
Remote clock offset: -1.571 ms
```

Run 3: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of PCC-Expr

Start at: 2018-04-17 14:43:20
End at: 2018-04-17 14:43:50
Local clock offset: 3.519 ms
Remote clock offset: -0.756 ms
```

Run 4: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of PCC-Expr

Start at: 2018-04-17 15:10:04
End at: 2018-04-17 15:10:34
Local clock offset: -1.271 ms
Remote clock offset: 0.586 ms
```

Run 5: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of PCC-Expr

Start at: 2018-04-17 15:37:57
End at: 2018-04-17 15:38:27
Local clock offset: -2.68 ms
Remote clock offset: -6.973 ms
```

Run 6: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

Run 7: Statistics of PCC-Expr

Start at: 2018-04-17 16:06:35
End at: 2018-04-17 16:07:05
Local clock offset: -0.352 ms
Remote clock offset: -6.049 ms

Run 7: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of PCC-Expr

Start at: 2018-04-17 16:33:24
End at: 2018-04-17 16:33:54
Local clock offset: -0.101 ms
Remote clock offset: -3.008 ms
```

Run 8: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of PCC-Expr

Start at: 2018-04-17 16:58:51
End at: 2018-04-17 16:59:21
Local clock offset: 0.509 ms
Remote clock offset: -2.042 ms
```

Run 9: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of PCC-Expr

Start at: 2018-04-17 17:22:58
End at: 2018-04-17 17:23:28
Local clock offset: 0.983 ms
Remote clock offset: -2.113 ms
```

Run 10: Report of PCC-Expr — Data Link

Figure is missing

Figure is missing