Pantheon Report

Generated at 2018-02-16 18:53:20 (UTC).

Data path: Colombia Ethernet (*remote*) →AWS Brazil 2 Ethernet (*local*).

Repeated the test of 17 congestion control schemes 10 times.

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

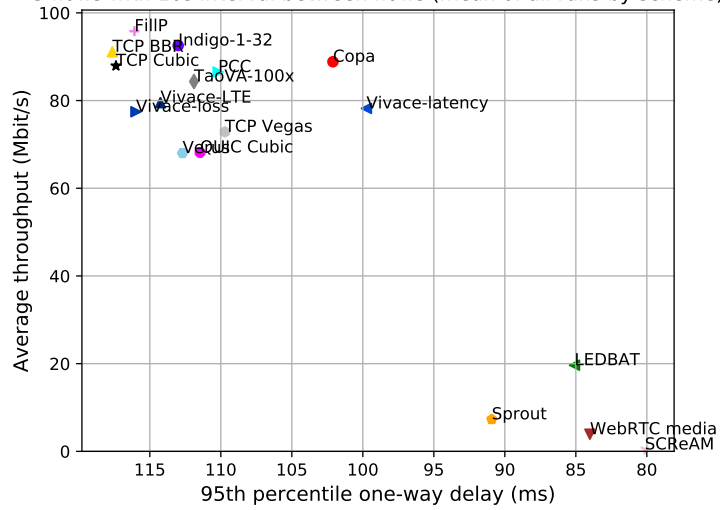Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

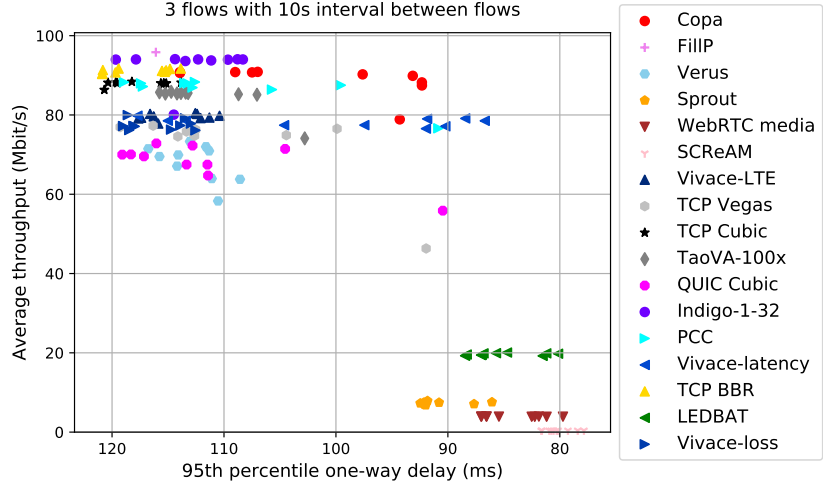NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ cccb2d77344969a7bac1df6edf6c0cfb6c77a6f8
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/fillp @ 828bbf95fd4941149b5cec90f281d1c69ae1a5c6
third_party/genericCC @ 8400b8926887fc4cf8c795a1d7ce2c8ac041ec72
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/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 @ a488197ddd041ace68a42849b2540ad834825f42
```

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

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

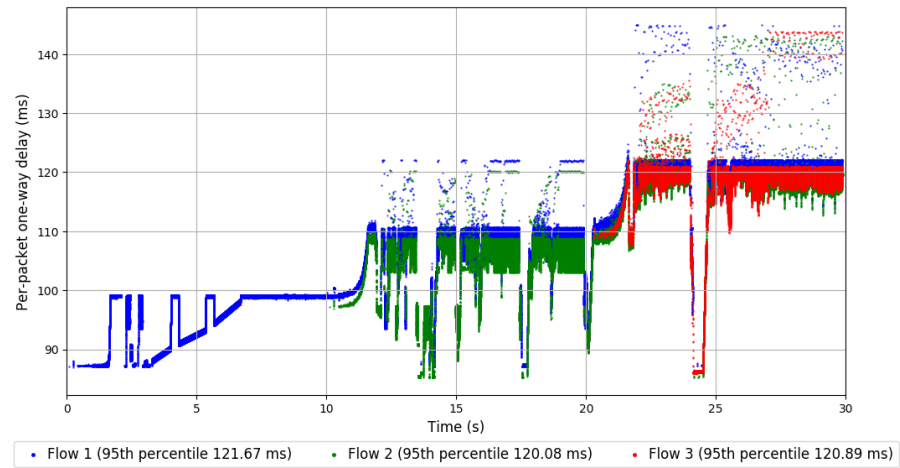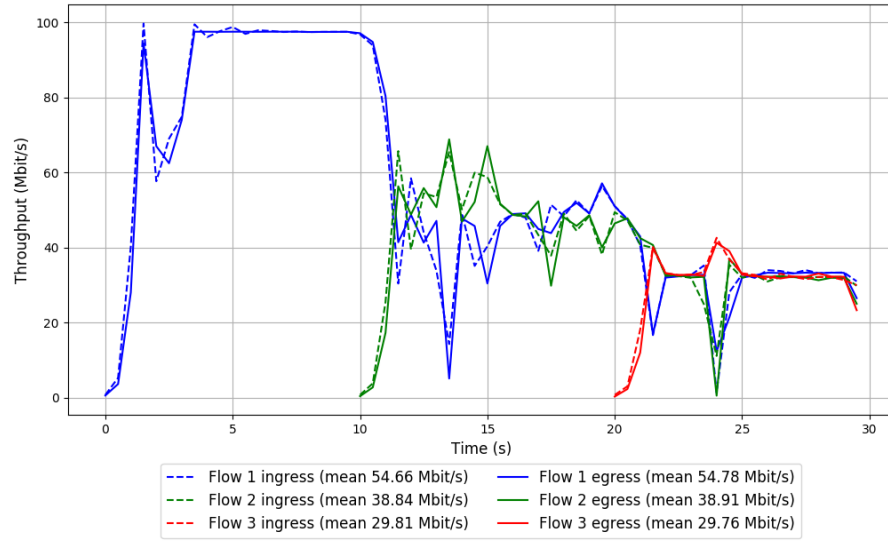| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	55.62	38.99	29.45	117.46	117.35	117.59	0.38	0.94	2.59
TCP Cubic	10	52.78	38.87	28.54	117.53	117.35	117.06	0.48	1.37	3.55
LEDBAT	10	12.71	8.45	4.08	84.82	84.88	84.47	1.12	1.68	3.41
PCC	10	59.17	30.15	23.31	109.48	110.89	112.38	2.49	2.38	7.13
QUIC Cubic	10	38.20	33.92	23.02	110.88	111.69	111.42	0.67	1.26	2.34
SCReAM	10	0.22	0.22	0.22	79.49	79.56	79.35	0.63	0.84	1.50
WebRTC media	10	2.11	1.32	0.50	83.42	82.68	83.30	0.76	0.85	2.66
Sprout	10	4.01	3.60	2.81	90.50	91.47	90.48	0.67	1.17	2.35
TaoVA-100x	10	50.88	37.74	26.35	111.11	111.87	112.61	1.43	2.29	3.68
TCP Vegas	10	38.69	41.09	21.03	109.17	109.63	110.55	0.68	0.94	2.21
Verus	10	35.99	35.56	25.97	110.35	113.02	115.57	1.78	2.10	3.20
Copa	10	69.66	20.54	16.91	101.02	102.25	102.24	1.96	3.10	10.63
FillP	1	59.24	39.87	30.99	114.97	116.80	116.86	0.41	8.51	14.27
Indigo-1-32	10	62.36	32.56	26.72	111.80	113.07	114.85	1.38	2.69	3.18
Vivace-latency	10	64.29	16.36	9.44	98.93	100.51	101.04	0.74	1.45	4.37
Vivace-loss	10	48.88	30.94	24.70	115.21	115.93	115.74	1.22	3.24	8.97
Vivace-LTE	10	51.53	31.32	22.23	112.79	114.84	115.57	1.23	2.21	4.42

3

```
Run 1: Statistics of TCP BBR

Start at: 2018-02-16 10:40:01
End at: 2018-02-16 10:40:32
Local clock offset: -6.803 ms
Remote clock offset: -4.013 ms


# Below is generated by plot.py at 2018-02-16 18:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.34 Mbit/s
95th percentile per-packet one-way delay: 120.888 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 54.78 Mbit/s
95th percentile per-packet one-way delay: 121.668 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 38.91 Mbit/s
95th percentile per-packet one-way delay: 120.084 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 29.76 Mbit/s
95th percentile per-packet one-way delay: 120.894 ms
Loss rate: 2.15%
```
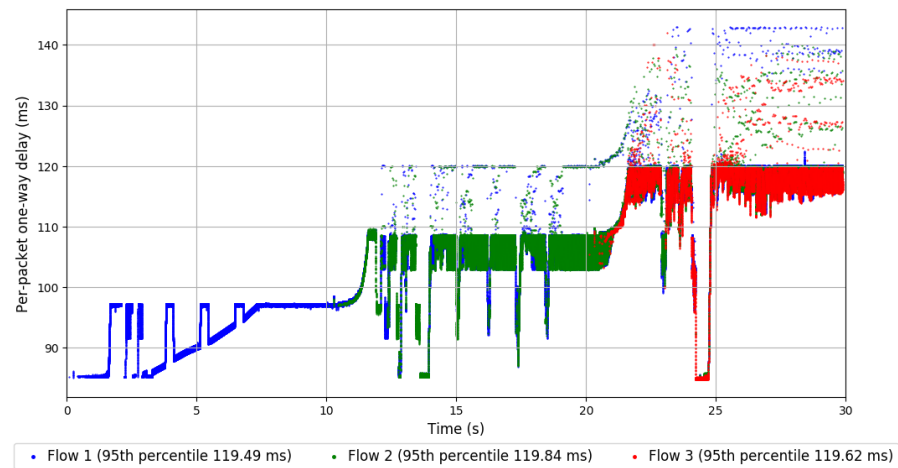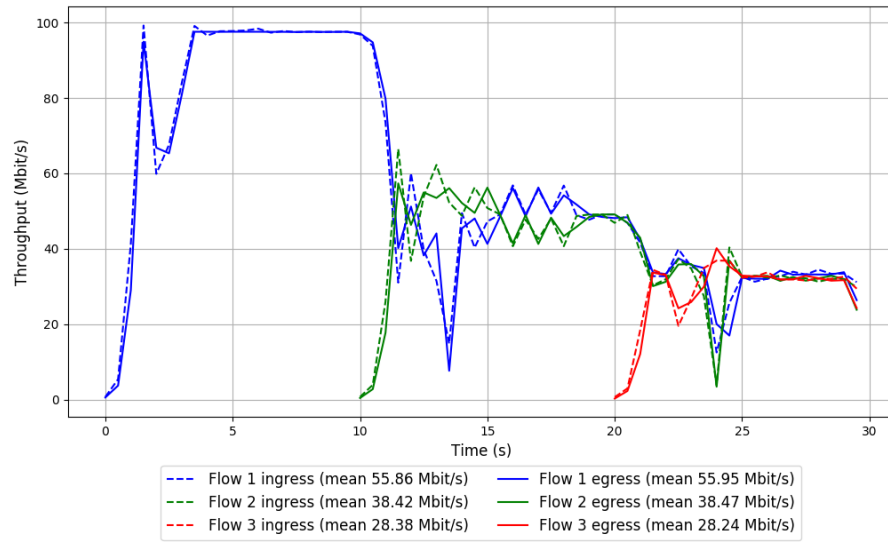
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 54.66 Mbit/s) — Flow 1 egress (mean 54.78 Mbit/s)
Flow 2 ingress (mean 38.84 Mbit/s) — Flow 2 egress (mean 38.91 Mbit/s)
Flow 3 ingress (mean 29.81 Mbit/s) — Flow 3 egress (mean 29.76 Mbit/s)

Flow 1 (95th percentile 121.67 ms)   Flow 2 (95th percentile 120.08 ms)   Flow 3 (95th percentile 120.89 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2018-02-16 11:03:32
End at: 2018-02-16 11:04:02
Local clock offset: -7.035 ms
Remote clock offset: -3.064 ms


# Below is generated by plot.py at 2018-02-16 18:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.72 Mbit/s
95th percentile per-packet one-way delay: 119.698 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 55.95 Mbit/s
95th percentile per-packet one-way delay: 119.487 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.47 Mbit/s
95th percentile per-packet one-way delay: 119.845 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 28.24 Mbit/s
95th percentile per-packet one-way delay: 119.622 ms
Loss rate: 2.36%
```
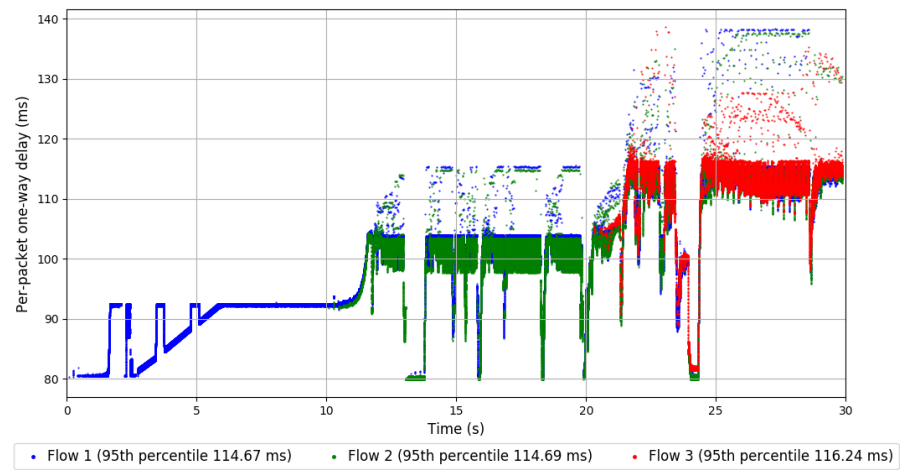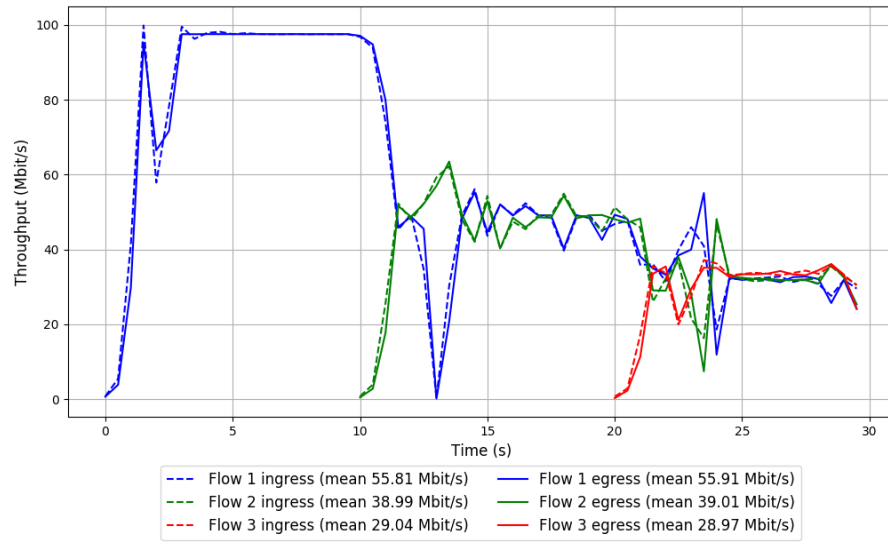
Run 2: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 55.86 Mbit/s) —— Flow 1 egress (mean 55.95 Mbit/s)
- - - Flow 2 ingress (mean 38.42 Mbit/s) —— Flow 2 egress (mean 38.47 Mbit/s)
- - - Flow 3 ingress (mean 28.38 Mbit/s) —— Flow 3 egress (mean 28.24 Mbit/s)

• Flow 1 (95th percentile 119.49 ms)   • Flow 2 (95th percentile 119.84 ms)   • Flow 3 (95th percentile 119.62 ms)

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```
Run 3: Statistics of TCP BBR

Start at: 2018-02-16 11:27:02
End at: 2018-02-16 11:27:32
Local clock offset: -7.365 ms
Remote clock offset: 1.676 ms


# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.27 Mbit/s
95th percentile per-packet one-way delay: 115.171 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 55.91 Mbit/s
95th percentile per-packet one-way delay: 114.673 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 114.692 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 28.97 Mbit/s
95th percentile per-packet one-way delay: 116.243 ms
Loss rate: 2.32%
```
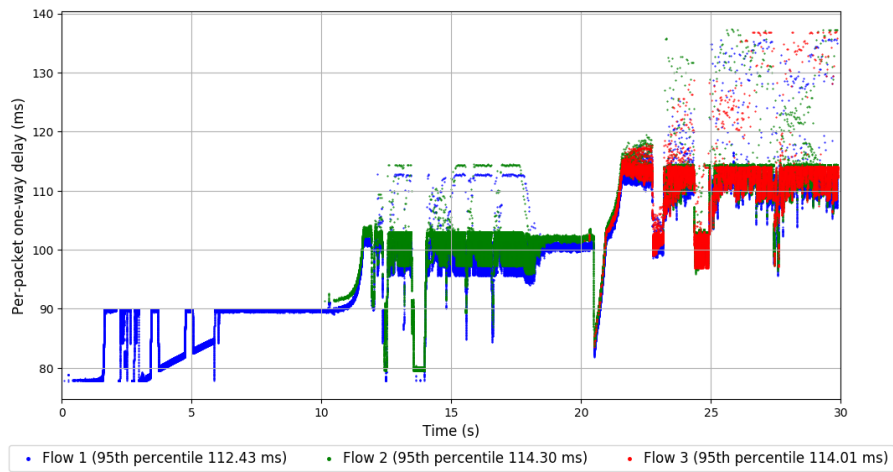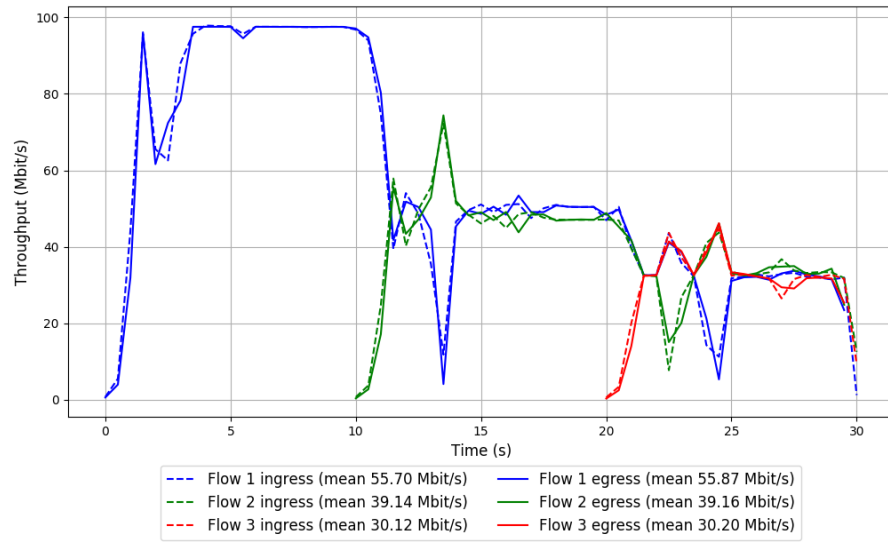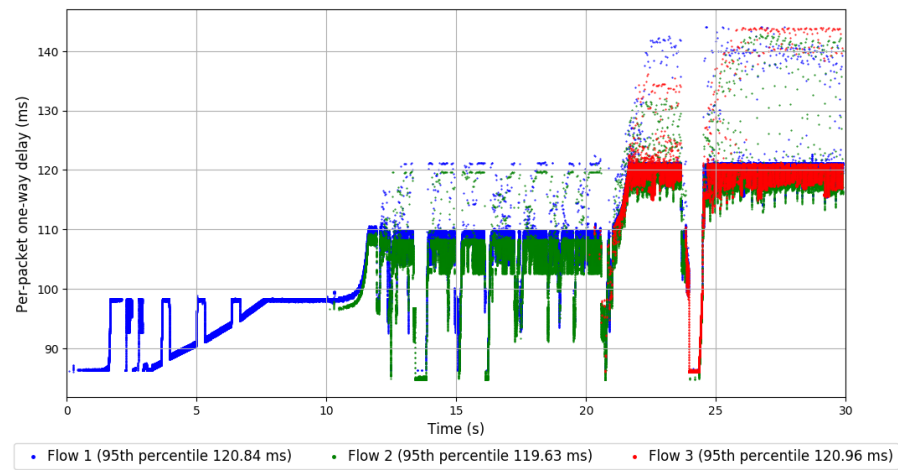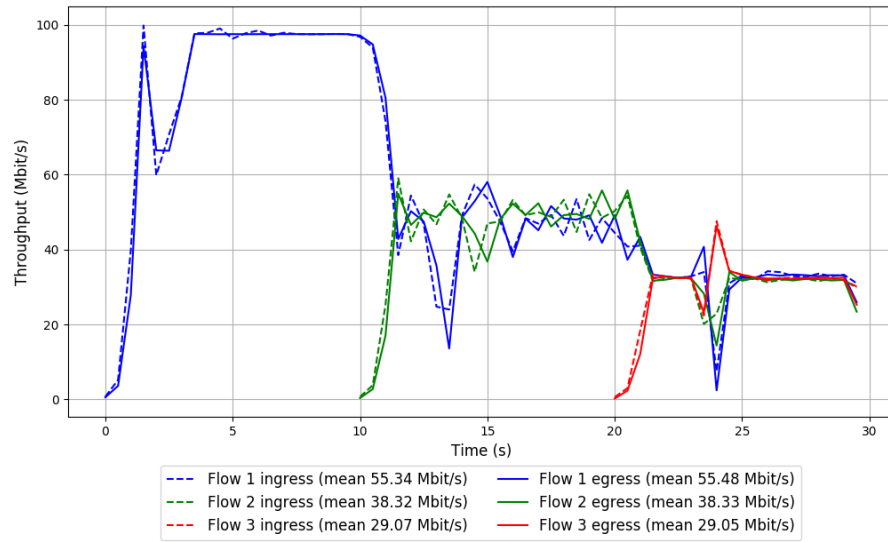
Run 3: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 55.81 Mbit/s)   —— Flow 1 egress (mean 55.91 Mbit/s)
- - - Flow 2 ingress (mean 38.99 Mbit/s)   —— Flow 2 egress (mean 39.01 Mbit/s)
- - - Flow 3 ingress (mean 29.04 Mbit/s)   —— Flow 3 egress (mean 28.97 Mbit/s)

• Flow 1 (95th percentile 114.67 ms)   • Flow 2 (95th percentile 114.69 ms)   • Flow 3 (95th percentile 116.24 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2018-02-16 11:50:31
End at: 2018-02-16 11:51:01
Local clock offset: -7.89 ms
Remote clock offset: 2.266 ms


# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.69 Mbit/s
95th percentile per-packet one-way delay: 113.862 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 55.87 Mbit/s
95th percentile per-packet one-way delay: 112.426 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 39.16 Mbit/s
95th percentile per-packet one-way delay: 114.302 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 30.20 Mbit/s
95th percentile per-packet one-way delay: 114.010 ms
Loss rate: 3.88%
```
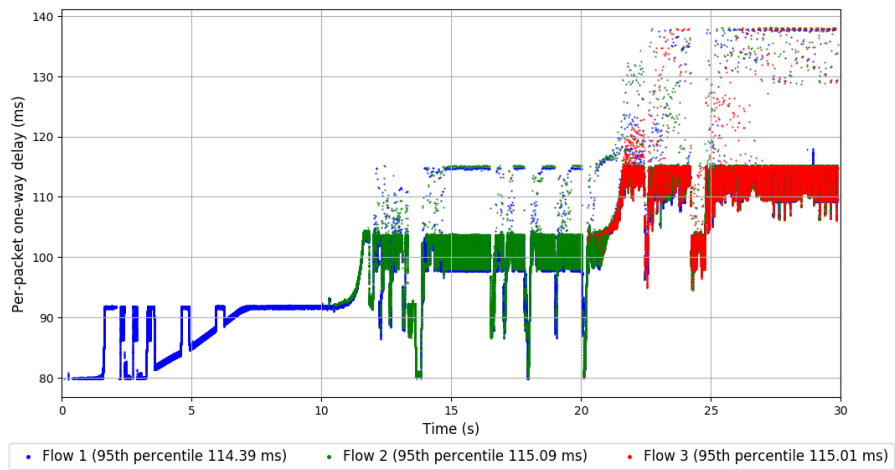
Run 4: Report of TCP BBR — Data Link

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Run 5: Statistics of TCP BBR

Start at: 2018-02-16 12:13:58
End at: 2018-02-16 12:14:28
Local clock offset: -4.764 ms
Remote clock offset: -3.758 ms


# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.42 Mbit/s
95th percentile per-packet one-way delay: 120.861 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 55.48 Mbit/s
95th percentile per-packet one-way delay: 120.838 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 119.627 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 29.05 Mbit/s
95th percentile per-packet one-way delay: 120.964 ms
Loss rate: 2.23%
```
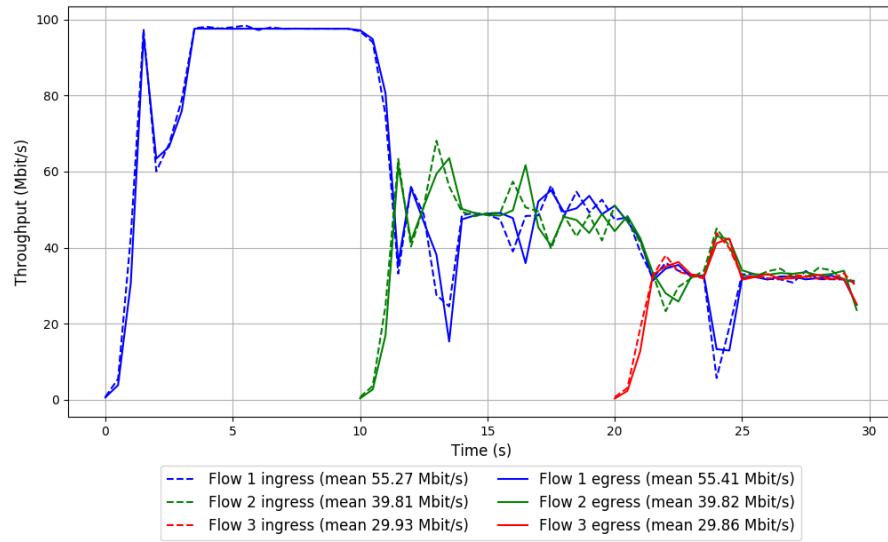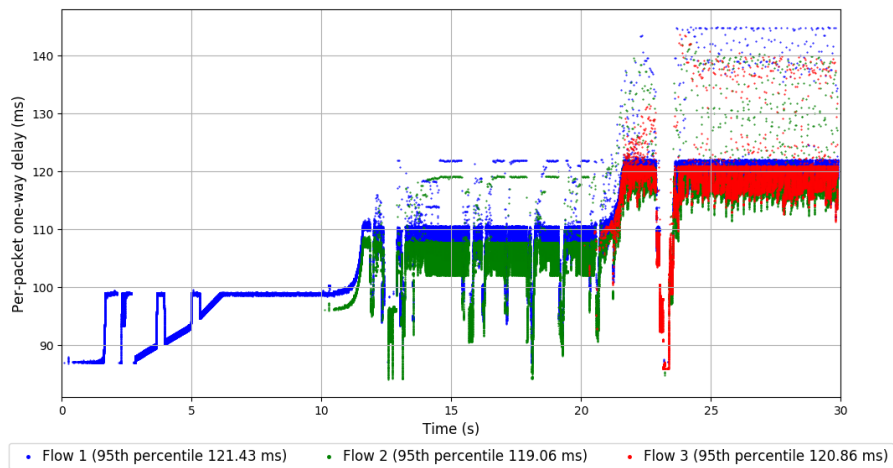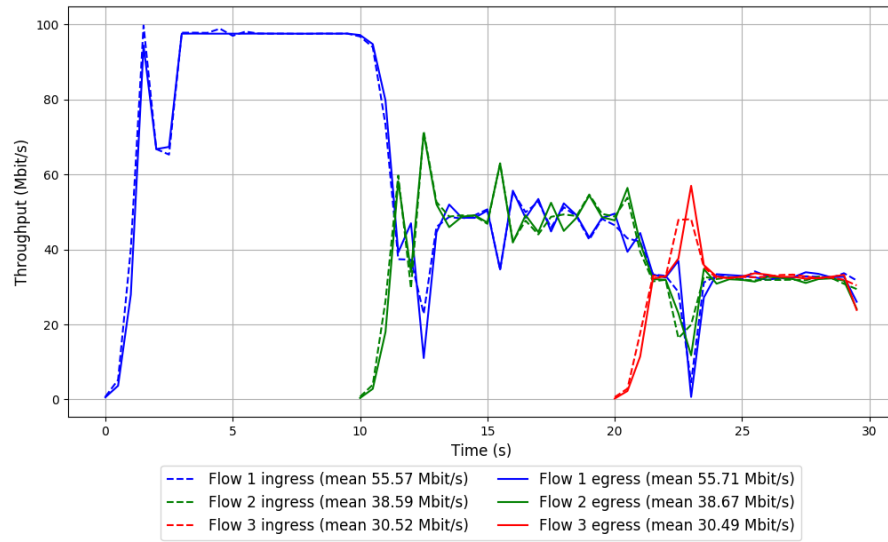
Run 5: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 55.34 Mbit/s) —— Flow 1 egress (mean 55.48 Mbit/s)
- - - Flow 2 ingress (mean 38.32 Mbit/s) —— Flow 2 egress (mean 38.33 Mbit/s)
- - - Flow 3 ingress (mean 29.07 Mbit/s) —— Flow 3 egress (mean 29.05 Mbit/s)

• Flow 1 (95th percentile 120.84 ms)   • Flow 2 (95th percentile 119.63 ms)   • Flow 3 (95th percentile 120.96 ms)

```
Run 6: Statistics of TCP BBR

Start at: 2018-02-16 12:37:26
End at: 2018-02-16 12:37:56
Local clock offset: -4.903 ms
Remote clock offset: 0.347 ms

# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.61 Mbit/s
95th percentile per-packet one-way delay: 114.825 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 55.41 Mbit/s
95th percentile per-packet one-way delay: 114.391 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 39.82 Mbit/s
95th percentile per-packet one-way delay: 115.090 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 115.009 ms
Loss rate: 2.13%
```
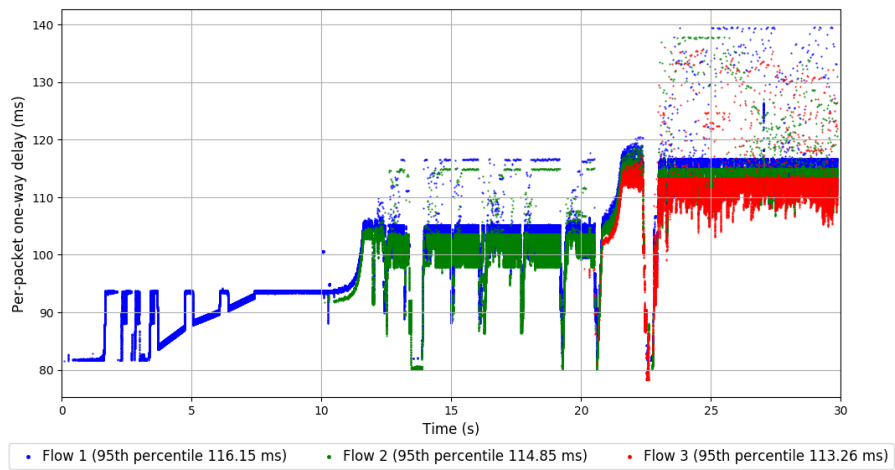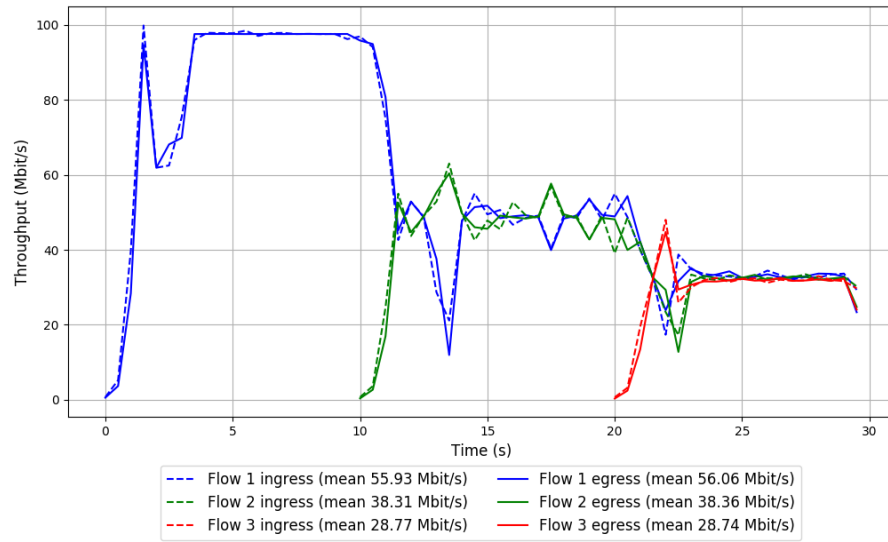
Run 6: Report of TCP BBR — Data Link

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Run 7: Statistics of TCP BBR

Start at: 2018-02-16 13:00:57
End at: 2018-02-16 13:01:27
Local clock offset: -6.88 ms
Remote clock offset: -5.808 ms


# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.32 Mbit/s
95th percentile per-packet one-way delay: 120.821 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 55.71 Mbit/s
95th percentile per-packet one-way delay: 121.428 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.67 Mbit/s
95th percentile per-packet one-way delay: 119.063 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 30.49 Mbit/s
95th percentile per-packet one-way delay: 120.865 ms
Loss rate: 2.21%
```
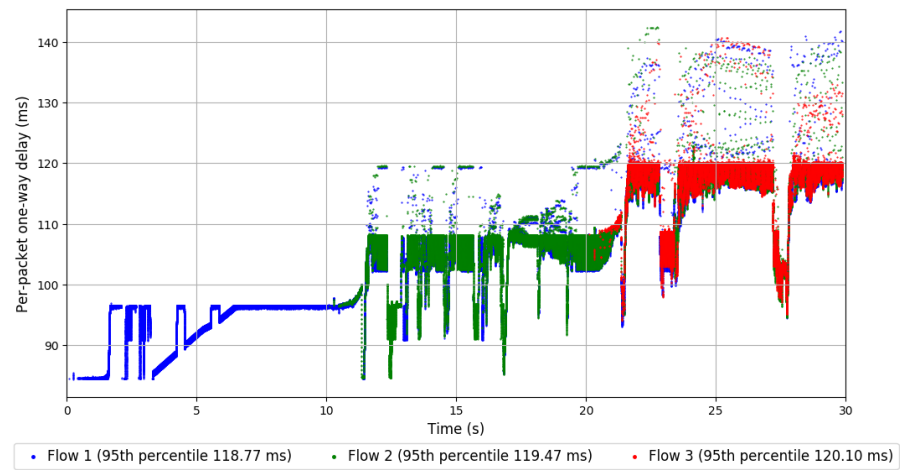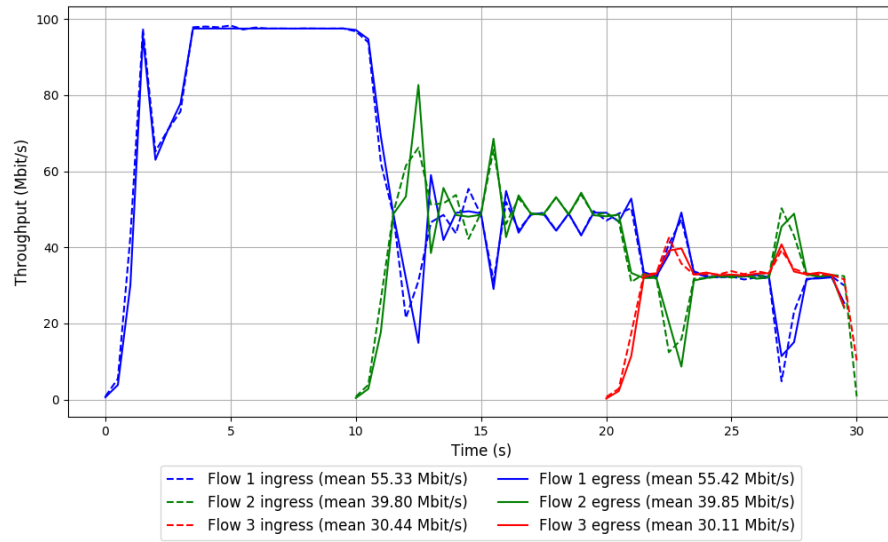
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 55.57 Mbit/s) Flow 1 egress (mean 55.71 Mbit/s)
Flow 2 ingress (mean 38.59 Mbit/s) Flow 2 egress (mean 38.67 Mbit/s)
Flow 3 ingress (mean 30.52 Mbit/s) Flow 3 egress (mean 30.49 Mbit/s)

Flow 1 (95th percentile 121.43 ms) Flow 2 (95th percentile 119.06 ms) Flow 3 (95th percentile 120.86 ms)

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```
Run 8: Statistics of TCP BBR

Start at: 2018-02-16 13:24:43
End at: 2018-02-16 13:25:13
Local clock offset: -7.226 ms
Remote clock offset: -0.211 ms


# Below is generated by plot.py at 2018-02-16 18:32:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.88 Mbit/s
95th percentile per-packet one-way delay: 115.287 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 56.06 Mbit/s
95th percentile per-packet one-way delay: 116.151 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 114.848 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 28.74 Mbit/s
95th percentile per-packet one-way delay: 113.257 ms
Loss rate: 2.23%
```
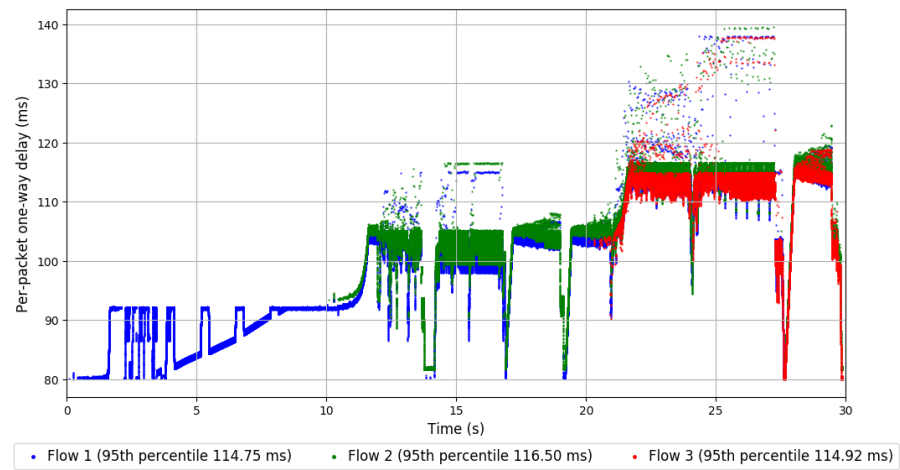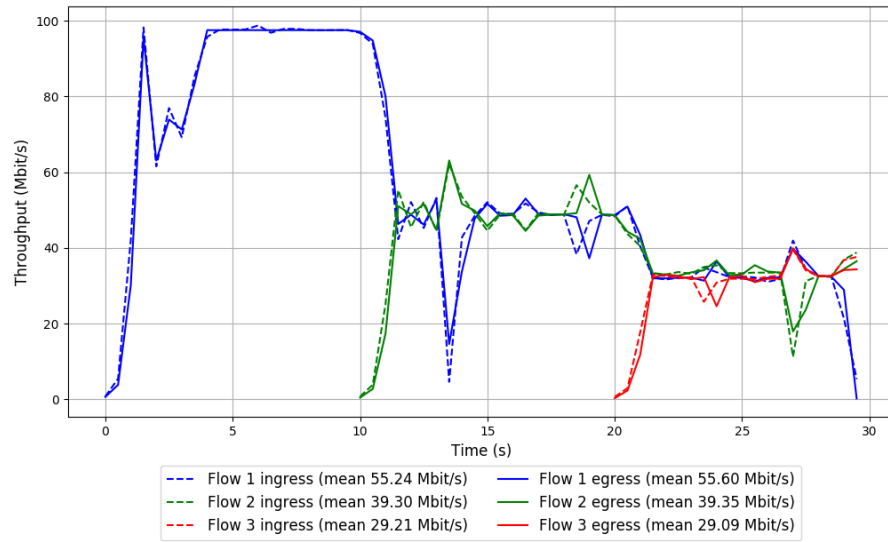
Run 8: Report of TCP BBR — Data Link

- Flow 1 ingress (mean 55.93 Mbit/s)
- Flow 1 egress (mean 56.06 Mbit/s)
- Flow 2 ingress (mean 38.31 Mbit/s)
- Flow 2 egress (mean 38.36 Mbit/s)
- Flow 3 ingress (mean 28.77 Mbit/s)
- Flow 3 egress (mean 28.74 Mbit/s)

- Flow 1 (95th percentile 116.15 ms)
- Flow 2 (95th percentile 114.85 ms)
- Flow 3 (95th percentile 113.26 ms)

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```
Run 9: Statistics of TCP BBR

Start at: 2018-02-16 13:48:23
End at: 2018-02-16 13:48:53
Local clock offset: -6.963 ms
Remote clock offset: -4.432 ms


# Below is generated by plot.py at 2018-02-16 18:33:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.70 Mbit/s
95th percentile per-packet one-way delay: 119.411 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 55.42 Mbit/s
95th percentile per-packet one-way delay: 118.767 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 39.85 Mbit/s
95th percentile per-packet one-way delay: 119.472 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 30.11 Mbit/s
95th percentile per-packet one-way delay: 120.100 ms
Loss rate: 4.09%
```
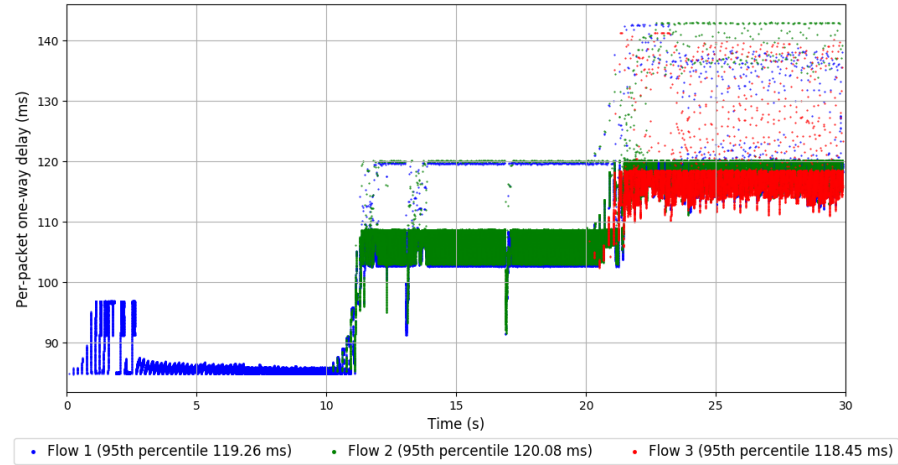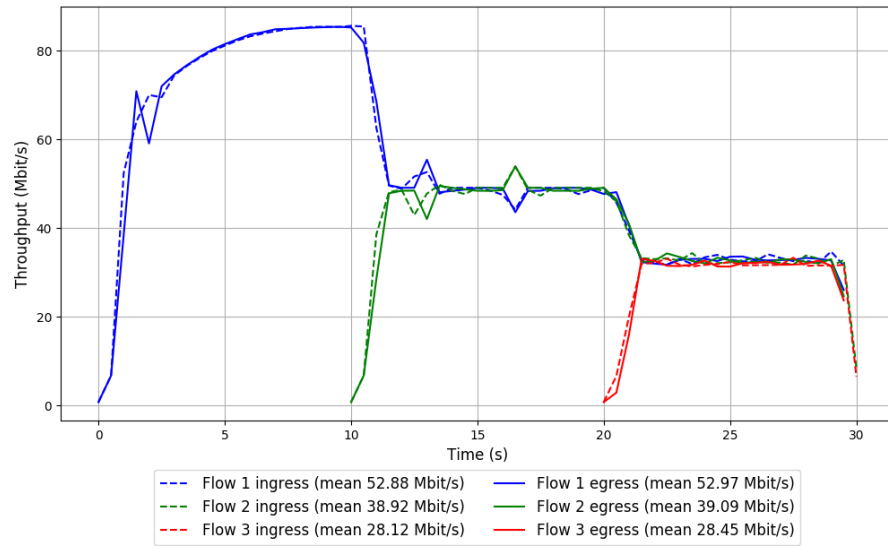
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 55.33 Mbit/s)   Flow 1 egress (mean 55.42 Mbit/s)
Flow 2 ingress (mean 39.80 Mbit/s)   Flow 2 egress (mean 39.85 Mbit/s)
Flow 3 ingress (mean 30.44 Mbit/s)   Flow 3 egress (mean 30.11 Mbit/s)

Flow 1 (95th percentile 118.77 ms)   Flow 2 (95th percentile 119.47 ms)   Flow 3 (95th percentile 120.10 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2018-02-16 14:11:57
End at: 2018-02-16 14:12:27
Local clock offset: -6.636 ms
Remote clock offset: 1.573 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.12 Mbit/s
95th percentile per-packet one-way delay: 115.541 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 55.60 Mbit/s
95th percentile per-packet one-way delay: 114.750 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 39.35 Mbit/s
95th percentile per-packet one-way delay: 116.499 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 29.09 Mbit/s
95th percentile per-packet one-way delay: 114.917 ms
Loss rate: 2.29%
```
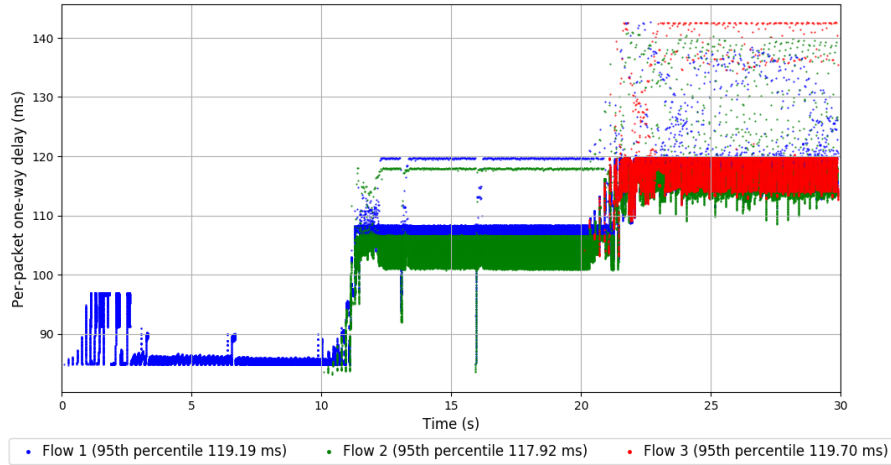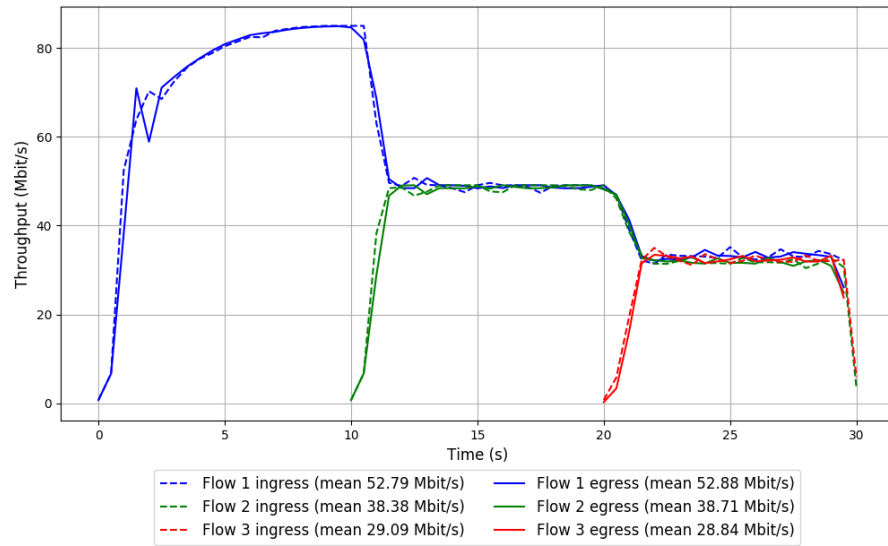
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 55.24 Mbit/s) --- Flow 1 egress (mean 55.60 Mbit/s)
Flow 2 ingress (mean 39.30 Mbit/s) --- Flow 2 egress (mean 39.35 Mbit/s)
Flow 3 ingress (mean 29.21 Mbit/s) --- Flow 3 egress (mean 29.09 Mbit/s)

Flow 1 (95th percentile 114.75 ms) Flow 2 (95th percentile 116.50 ms) Flow 3 (95th percentile 114.92 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2018-02-16 10:45:09
End at: 2018-02-16 10:45:39
Local clock offset: -6.737 ms
Remote clock offset: -3.238 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.24 Mbit/s
95th percentile per-packet one-way delay: 119.670 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 52.97 Mbit/s
95th percentile per-packet one-way delay: 119.259 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 39.09 Mbit/s
95th percentile per-packet one-way delay: 120.079 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 28.45 Mbit/s
95th percentile per-packet one-way delay: 118.446 ms
Loss rate: 3.68%
```
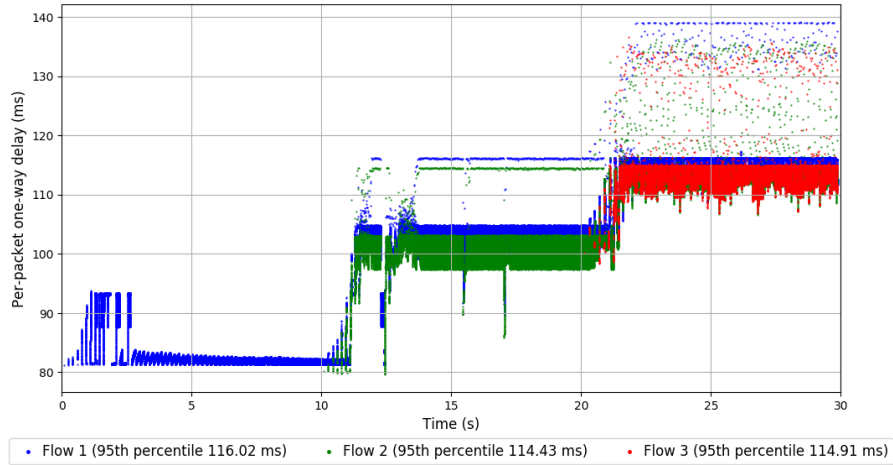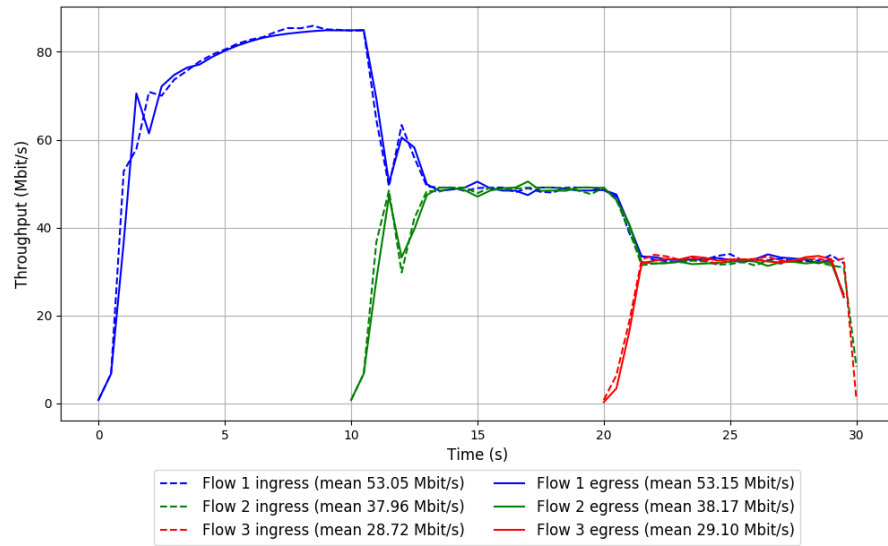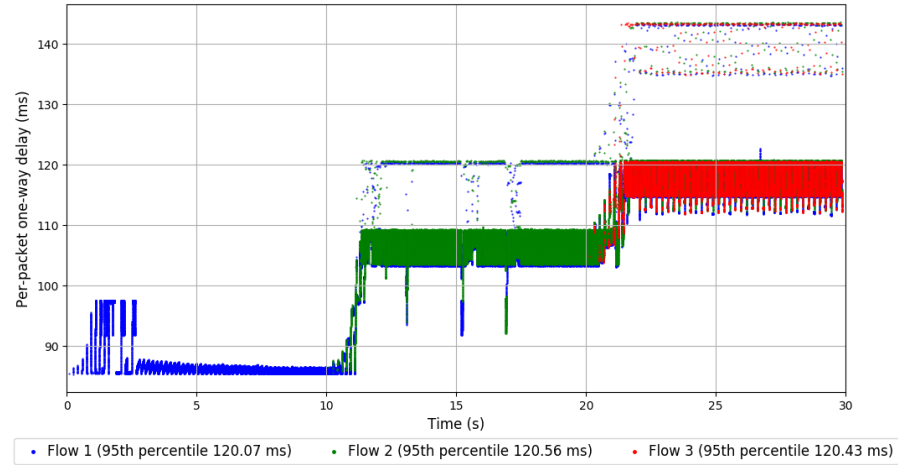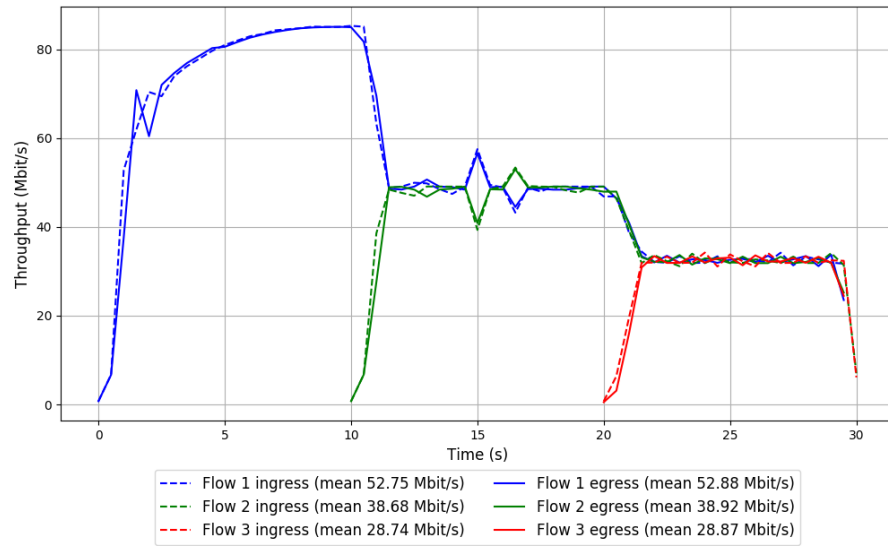
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-02-16 11:08:39
End at: 2018-02-16 11:09:09
Local clock offset: -7.079 ms
Remote clock offset: -2.94 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.01 Mbit/s
95th percentile per-packet one-way delay: 119.529 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 52.88 Mbit/s
95th percentile per-packet one-way delay: 119.192 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 38.71 Mbit/s
95th percentile per-packet one-way delay: 117.921 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 28.84 Mbit/s
95th percentile per-packet one-way delay: 119.703 ms
Loss rate: 3.67%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-02-16 11:32:09
End at: 2018-02-16 11:32:39
Local clock offset: -7.538 ms
Remote clock offset: 1.764 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.00 Mbit/s
95th percentile per-packet one-way delay: 115.376 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 53.15 Mbit/s
95th percentile per-packet one-way delay: 116.022 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 38.17 Mbit/s
95th percentile per-packet one-way delay: 114.427 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 29.10 Mbit/s
95th percentile per-packet one-way delay: 114.908 ms
Loss rate: 2.80%
```
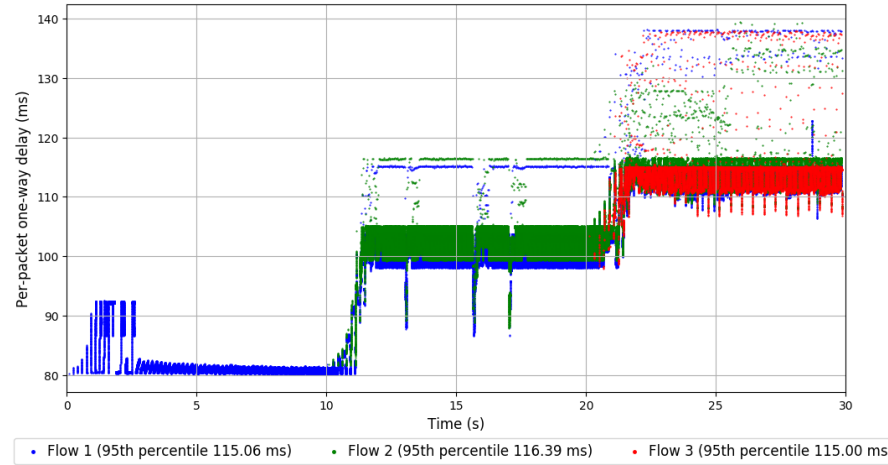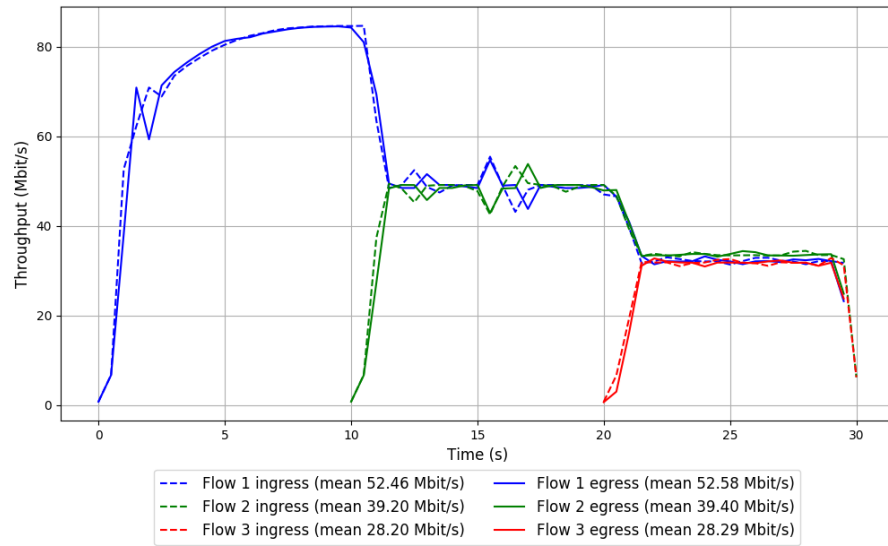
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 53.05 Mbit/s) --- Flow 1 egress (mean 53.15 Mbit/s)
Flow 2 ingress (mean 37.96 Mbit/s) --- Flow 2 egress (mean 38.17 Mbit/s)
Flow 3 ingress (mean 28.72 Mbit/s) --- Flow 3 egress (mean 29.10 Mbit/s)

Flow 1 (95th percentile 116.02 ms)   Flow 2 (95th percentile 114.43 ms)   Flow 3 (95th percentile 114.91 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-02-16 11:55:38
End at: 2018-02-16 11:56:08
Local clock offset: -8.032 ms
Remote clock offset: -4.369 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.14 Mbit/s
95th percentile per-packet one-way delay: 120.358 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 52.88 Mbit/s
95th percentile per-packet one-way delay: 120.067 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 120.563 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 28.87 Mbit/s
95th percentile per-packet one-way delay: 120.433 ms
Loss rate: 3.65%
```
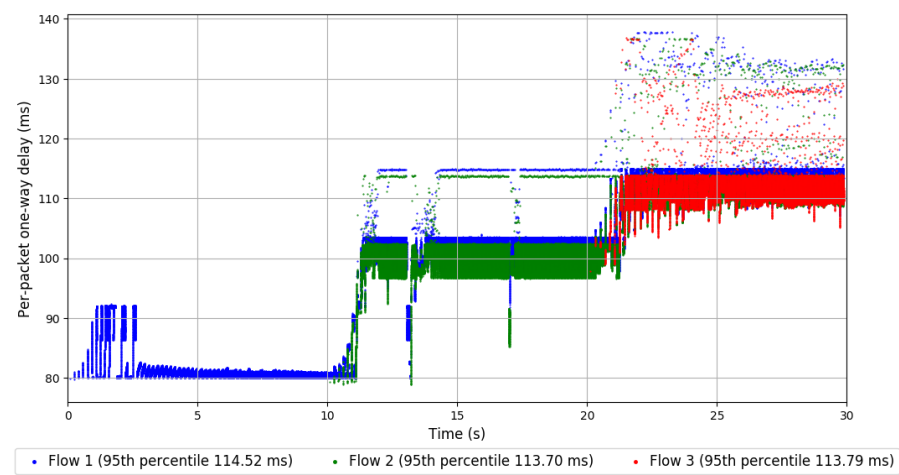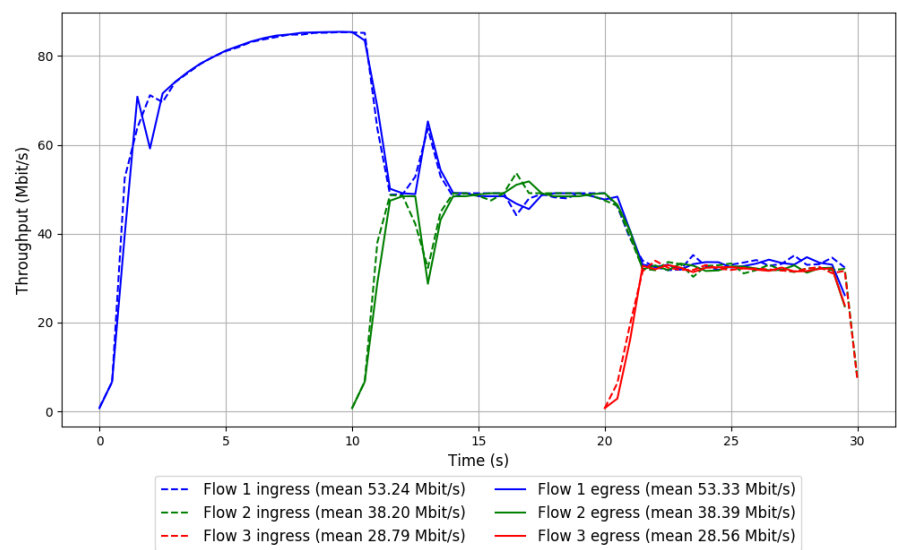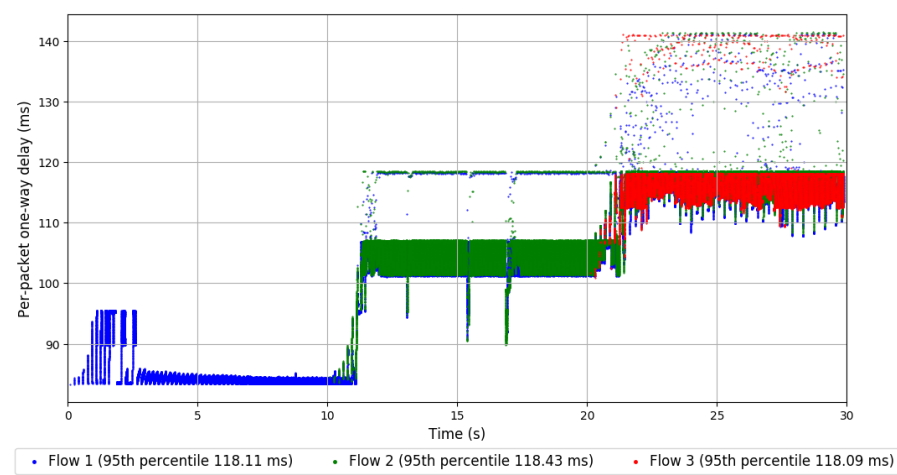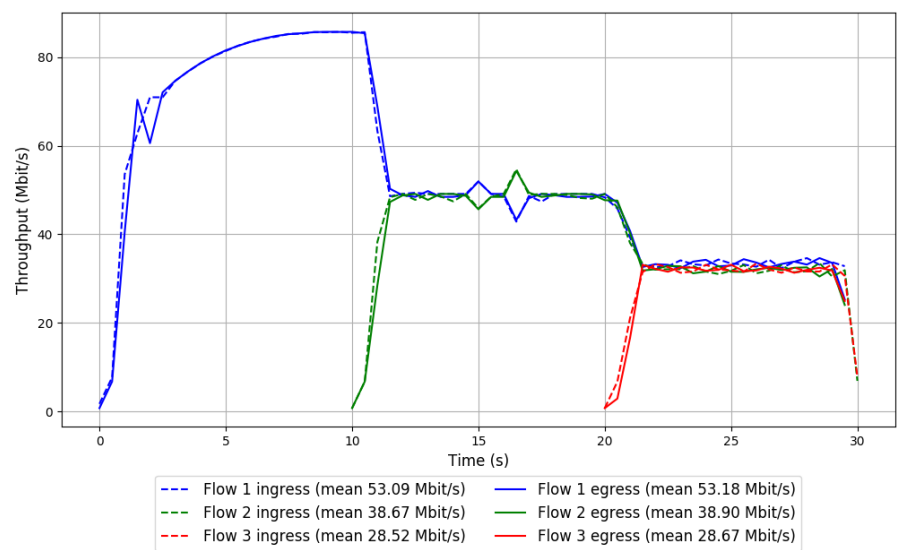
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 52.75 Mbit/s) ---- Flow 1 egress (mean 52.88 Mbit/s) ——
Flow 2 ingress (mean 38.68 Mbit/s) ---- Flow 2 egress (mean 38.92 Mbit/s) ——
Flow 3 ingress (mean 28.74 Mbit/s) ---- Flow 3 egress (mean 28.87 Mbit/s) ——

Flow 1 (95th percentile 120.07 ms)   Flow 2 (95th percentile 120.56 ms)   Flow 3 (95th percentile 120.43 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-02-16 12:19:05
End at: 2018-02-16 12:19:35
Local clock offset: -4.308 ms
Remote clock offset: 0.894 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 115.158 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 52.58 Mbit/s
95th percentile per-packet one-way delay: 115.056 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 39.40 Mbit/s
95th percentile per-packet one-way delay: 116.387 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 114.996 ms
Loss rate: 3.74%
```
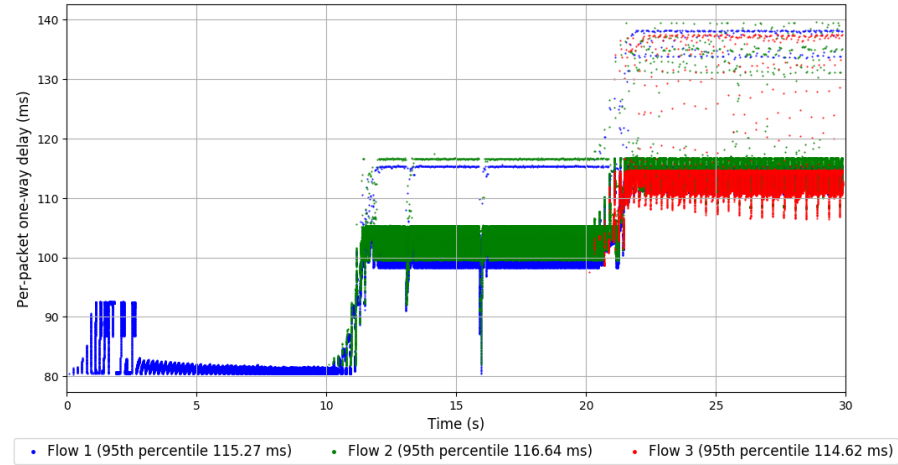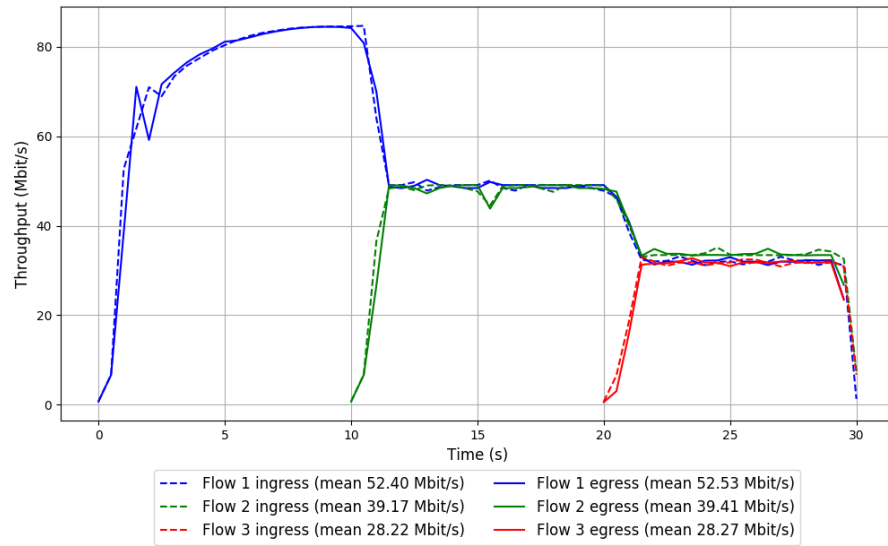
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 52.46 Mbit/s) --- Flow 1 egress (mean 52.58 Mbit/s)
Flow 2 ingress (mean 39.20 Mbit/s) --- Flow 2 egress (mean 39.40 Mbit/s)
Flow 3 ingress (mean 28.20 Mbit/s) --- Flow 3 egress (mean 28.29 Mbit/s)

Flow 1 (95th percentile 115.06 ms)   Flow 2 (95th percentile 116.39 ms)   Flow 3 (95th percentile 115.00 ms)

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```
Run 6: Statistics of TCP Cubic

Start at: 2018-02-16 12:42:36
End at: 2018-02-16 12:43:06
Local clock offset: -5.776 ms
Remote clock offset: 0.085 ms


# Below is generated by plot.py at 2018-02-16 18:33:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.16 Mbit/s
95th percentile per-packet one-way delay: 113.822 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 53.33 Mbit/s
95th percentile per-packet one-way delay: 114.523 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 38.39 Mbit/s
95th percentile per-packet one-way delay: 113.698 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 113.786 ms
Loss rate: 3.71%
```

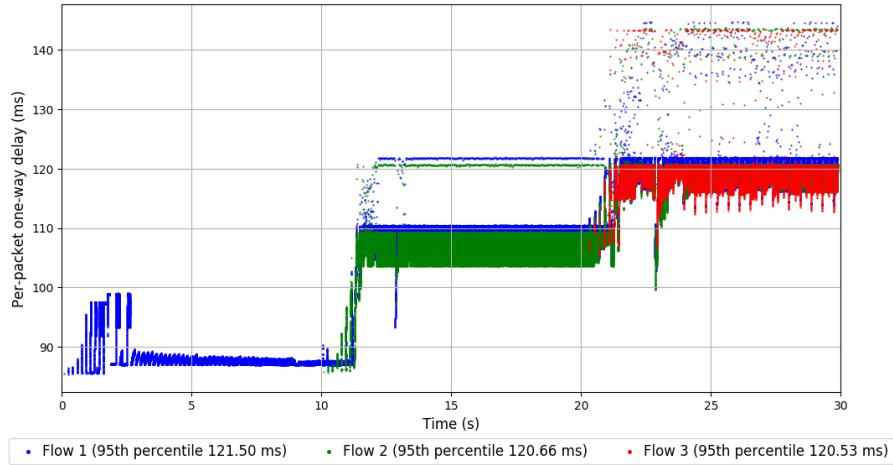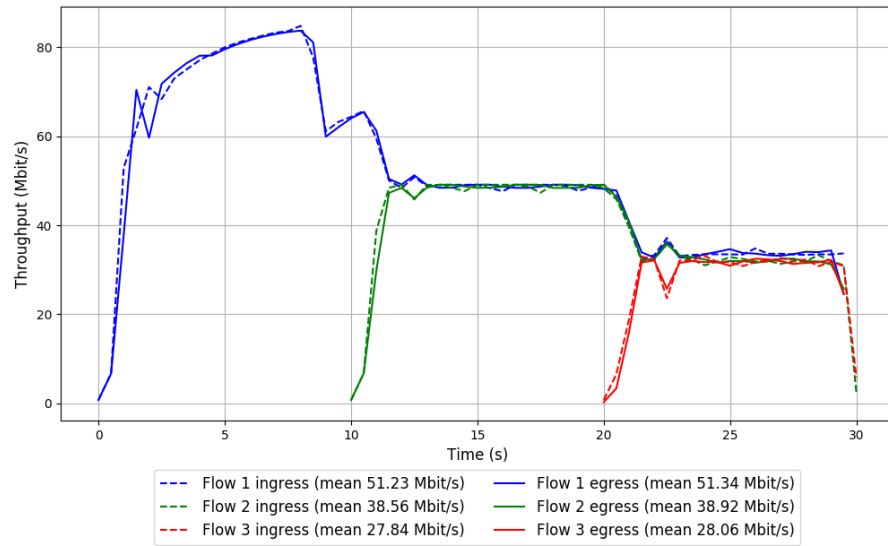# Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 53.24 Mbit/s) Flow 1 egress (mean 53.33 Mbit/s)
Flow 2 ingress (mean 38.20 Mbit/s) Flow 2 egress (mean 38.39 Mbit/s)
Flow 3 ingress (mean 28.79 Mbit/s) Flow 3 egress (mean 28.56 Mbit/s)

Flow 1 (95th percentile 114.52 ms)   Flow 2 (95th percentile 113.70 ms)   Flow 3 (95th percentile 113.79 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-02-16 13:06:04
End at: 2018-02-16 13:06:35
Local clock offset: -6.98 ms
Remote clock offset: -5.031 ms


# Below is generated by plot.py at 2018-02-16 18:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.37 Mbit/s
95th percentile per-packet one-way delay: 118.229 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 118.112 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 38.90 Mbit/s
95th percentile per-packet one-way delay: 118.426 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 28.67 Mbit/s
95th percentile per-packet one-way delay: 118.092 ms
Loss rate: 3.70%
```
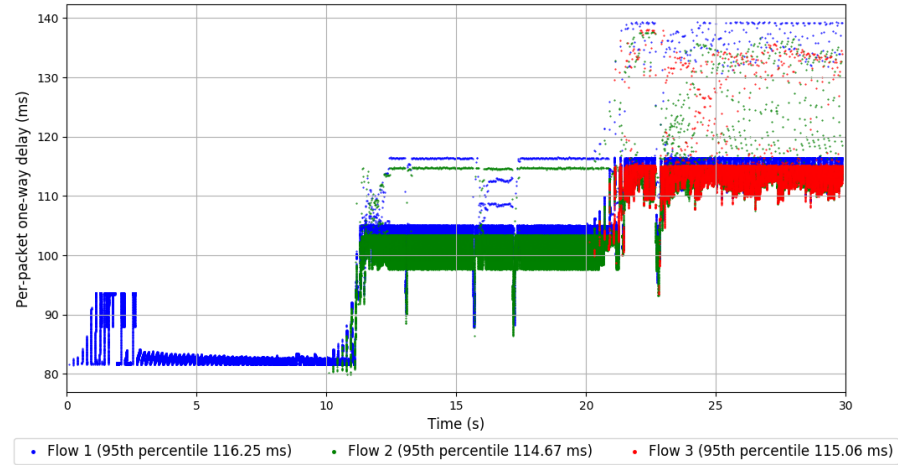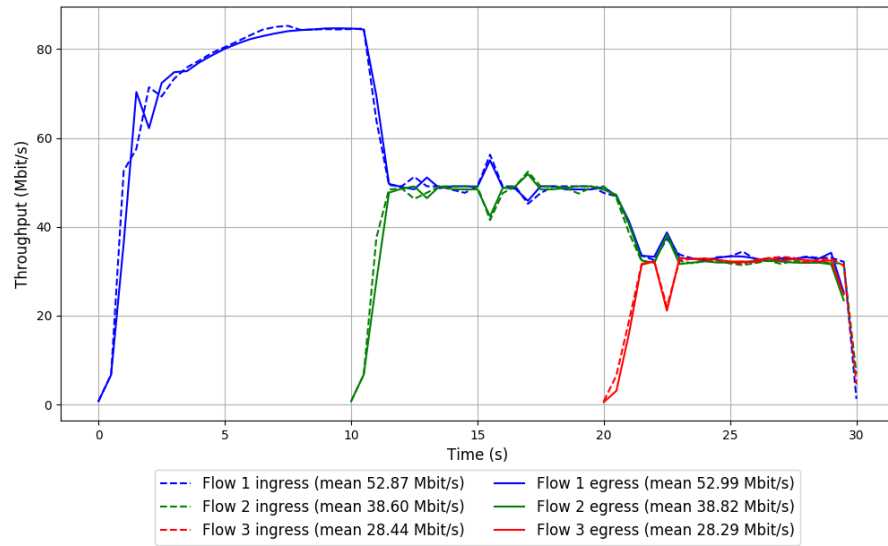
Run 7: Report of TCP Cubic — Data Link

- Flow 1 ingress (mean 53.09 Mbit/s)
- Flow 1 egress (mean 53.18 Mbit/s)
- Flow 2 ingress (mean 38.67 Mbit/s)
- Flow 2 egress (mean 38.90 Mbit/s)
- Flow 3 ingress (mean 28.52 Mbit/s)
- Flow 3 egress (mean 28.67 Mbit/s)

- Flow 1 (95th percentile 118.11 ms)
- Flow 2 (95th percentile 118.43 ms)
- Flow 3 (95th percentile 118.09 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2018-02-16 13:29:52
End at: 2018-02-16 13:30:22
Local clock offset: -7.302 ms
Remote clock offset: -0.018 ms

# Below is generated by plot.py at 2018-02-16 18:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.92 Mbit/s
95th percentile per-packet one-way delay: 115.380 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 52.53 Mbit/s
95th percentile per-packet one-way delay: 115.270 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 116.637 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 28.27 Mbit/s
95th percentile per-packet one-way delay: 114.617 ms
Loss rate: 3.72%
```

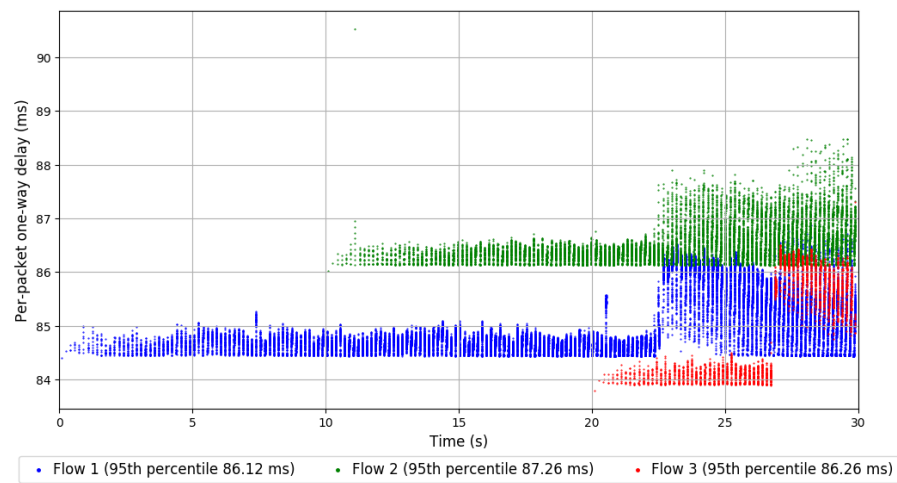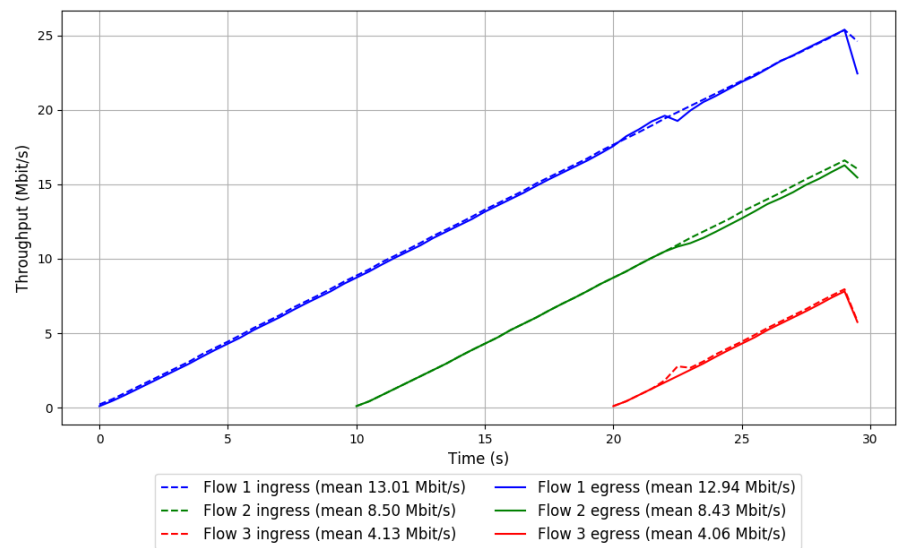## Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2018-02-16 13:53:31
End at: 2018-02-16 13:54:01
Local clock offset: -6.811 ms
Remote clock offset: -5.219 ms


# Below is generated by plot.py at 2018-02-16 18:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 120.690 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 51.34 Mbit/s
95th percentile per-packet one-way delay: 121.502 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 120.660 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 120.534 ms
Loss rate: 3.47%
```
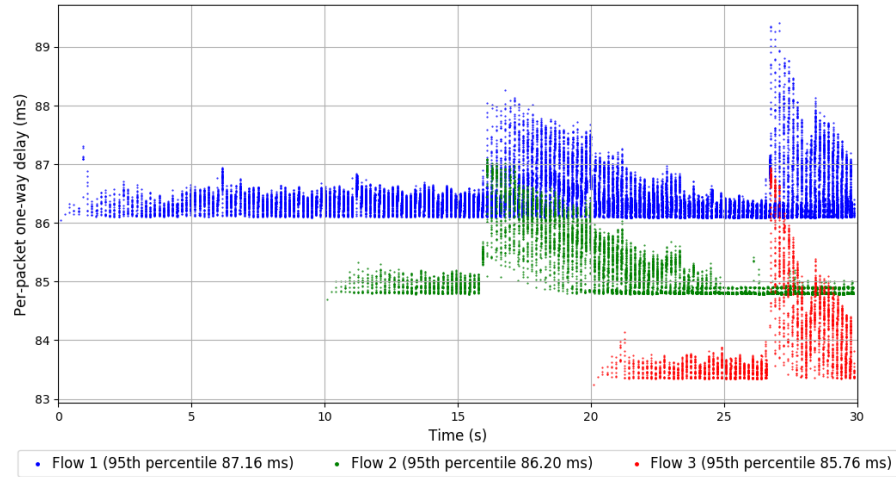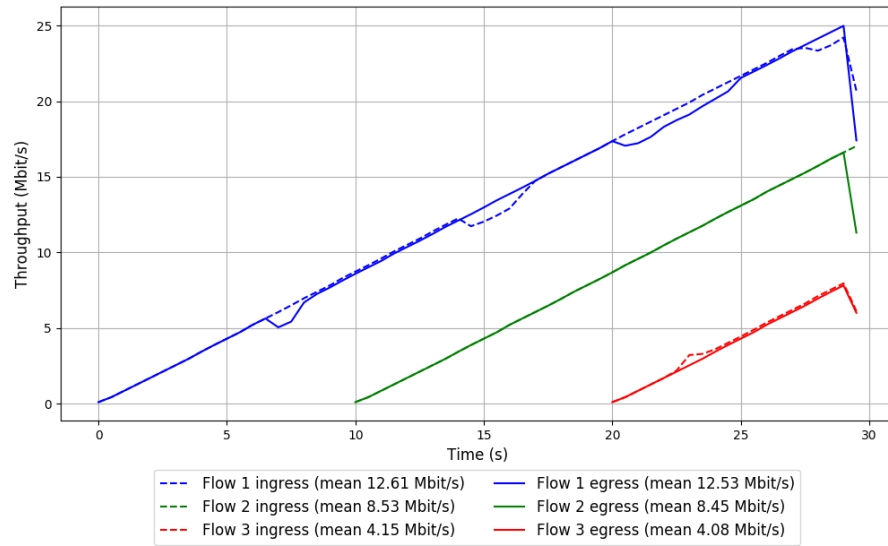
Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 51.23 Mbit/s)   Flow 1 egress (mean 51.34 Mbit/s)
Flow 2 ingress (mean 38.56 Mbit/s)   Flow 2 egress (mean 38.92 Mbit/s)
Flow 3 ingress (mean 27.84 Mbit/s)   Flow 3 egress (mean 28.06 Mbit/s)

Flow 1 (95th percentile 121.50 ms)   Flow 2 (95th percentile 120.66 ms)   Flow 3 (95th percentile 120.53 ms)

41

```
Run 10: Statistics of TCP Cubic

Start at: 2018-02-16 14:17:05
End at: 2018-02-16 14:17:35
Local clock offset: -6.166 ms
Remote clock offset: 1.702 ms


# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.00 Mbit/s
95th percentile per-packet one-way delay: 115.639 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 52.99 Mbit/s
95th percentile per-packet one-way delay: 116.255 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 114.665 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 115.064 ms
Loss rate: 3.36%
```

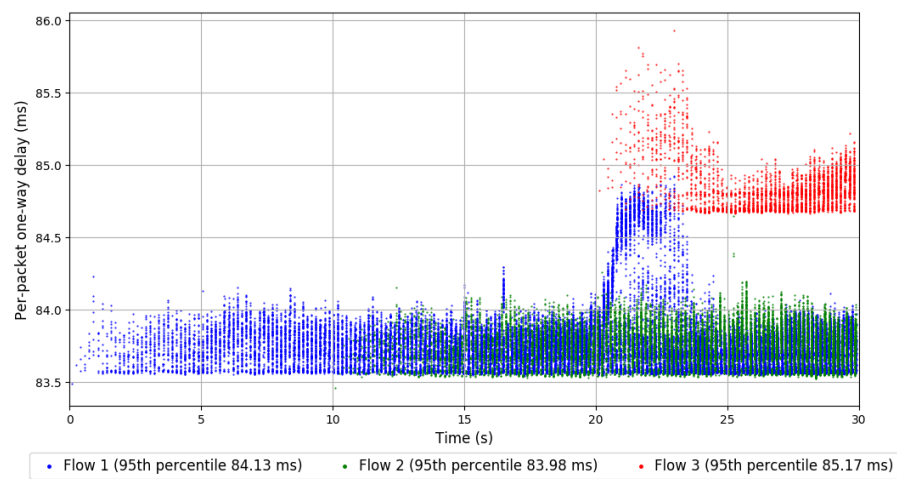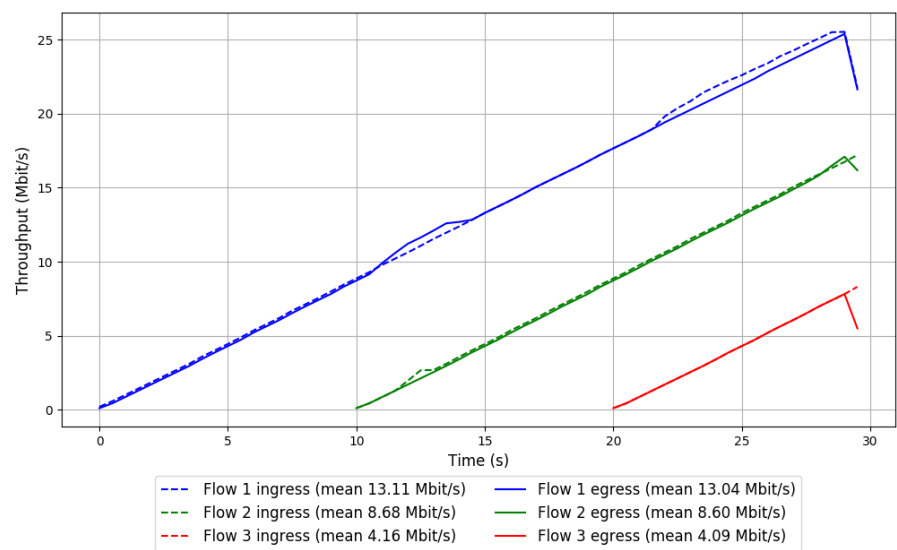Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2018-02-16 10:46:28
End at: 2018-02-16 10:46:58
Local clock offset: -6.726 ms
Remote clock offset: -4.118 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.86 Mbit/s
95th percentile per-packet one-way delay: 86.820 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 86.124 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 87.263 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 86.264 ms
Loss rate: 3.37%
```
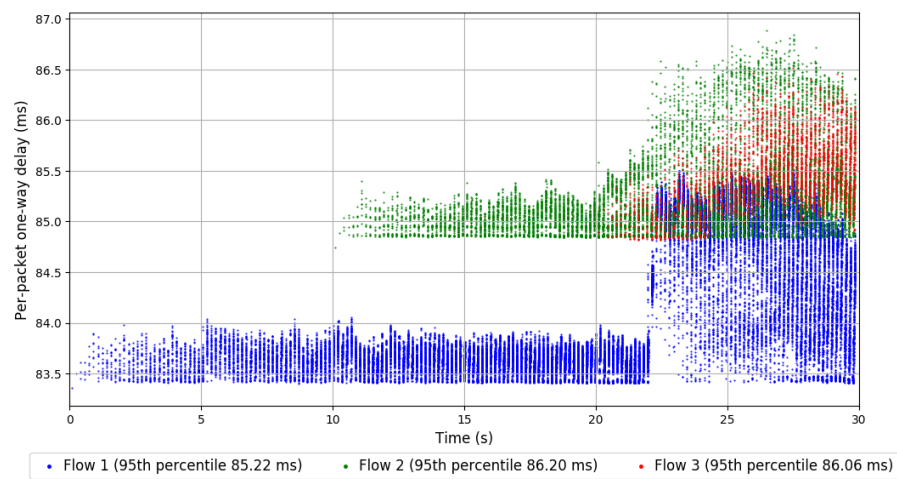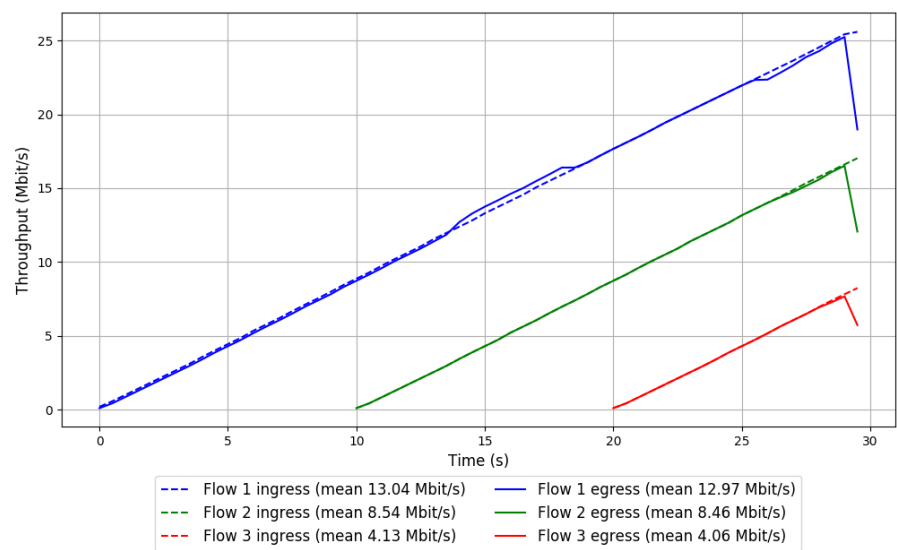
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 13.01 Mbit/s) --- Flow 1 egress (mean 12.94 Mbit/s)
Flow 2 ingress (mean 8.50 Mbit/s) --- Flow 2 egress (mean 8.43 Mbit/s)
Flow 3 ingress (mean 4.13 Mbit/s) --- Flow 3 egress (mean 4.06 Mbit/s)

Flow 1 (95th percentile 86.12 ms) · Flow 2 (95th percentile 87.26 ms) · Flow 3 (95th percentile 86.26 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2018-02-16 11:09:57
End at: 2018-02-16 11:10:27
Local clock offset: -7.111 ms
Remote clock offset: -3.001 ms


# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.47 Mbit/s
95th percentile per-packet one-way delay: 86.984 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 87.159 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 86.198 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 85.757 ms
Loss rate: 3.41%
```
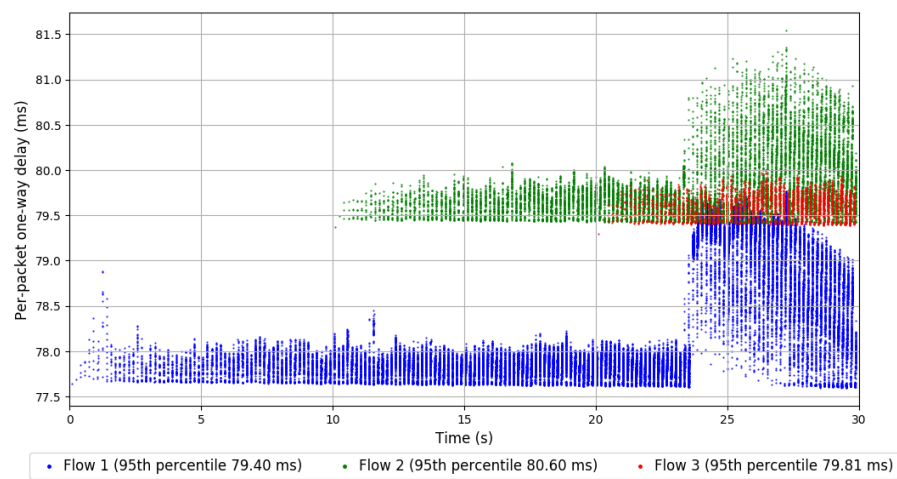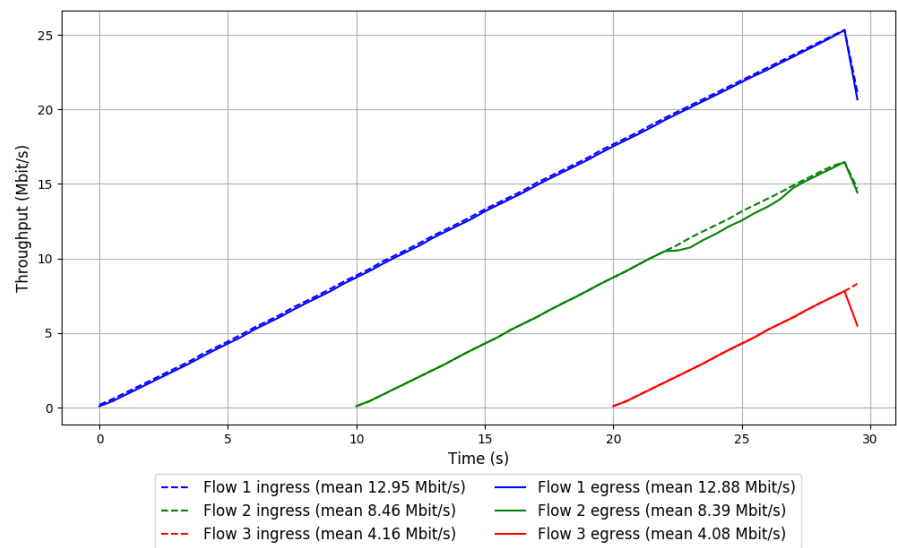
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-02-16 11:33:28
End at: 2018-02-16 11:33:58
Local clock offset: -7.564 ms
Remote clock offset: -3.095 ms


# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 84.720 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 84.130 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 8.60 Mbit/s
95th percentile per-packet one-way delay: 83.976 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 85.166 ms
Loss rate: 3.43%
```
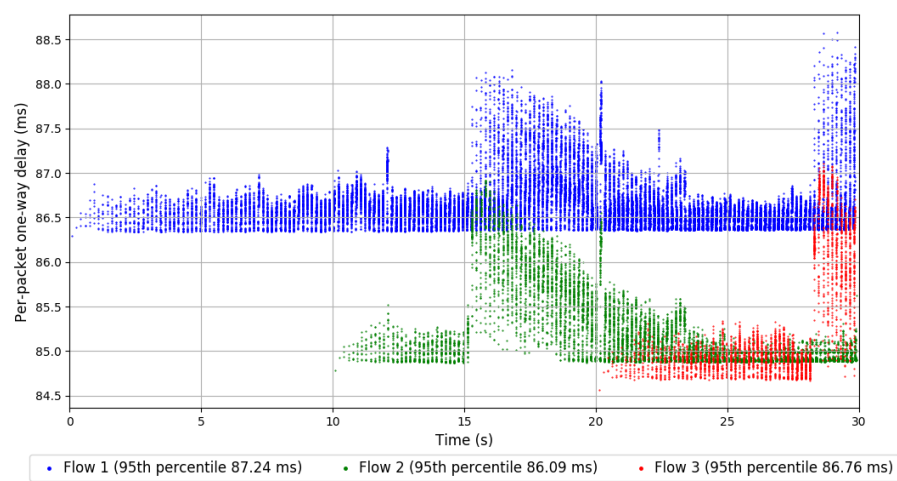
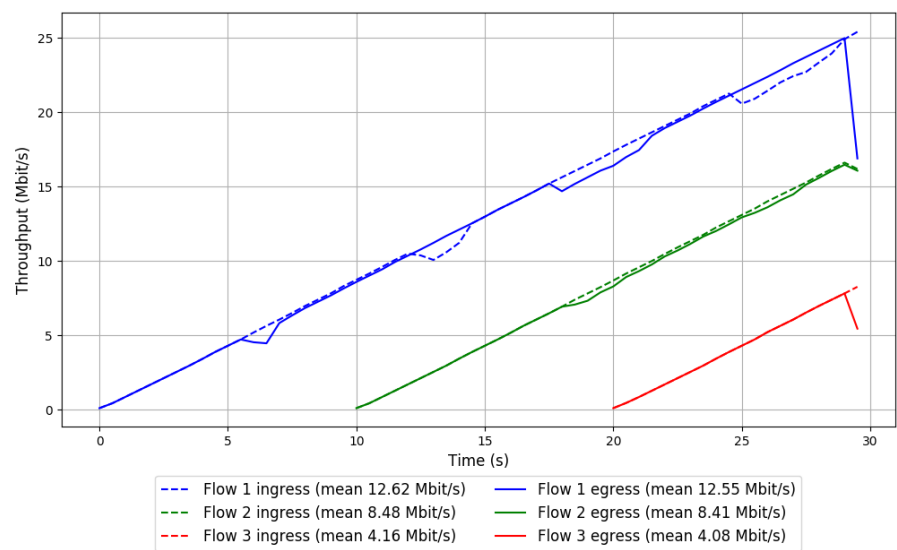# Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-02-16 11:56:56
End at: 2018-02-16 11:57:26
Local clock offset: -7.985 ms
Remote clock offset: -3.611 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.91 Mbit/s
95th percentile per-packet one-way delay: 85.705 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 12.97 Mbit/s
95th percentile per-packet one-way delay: 85.215 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 86.196 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 86.063 ms
Loss rate: 3.41%
```
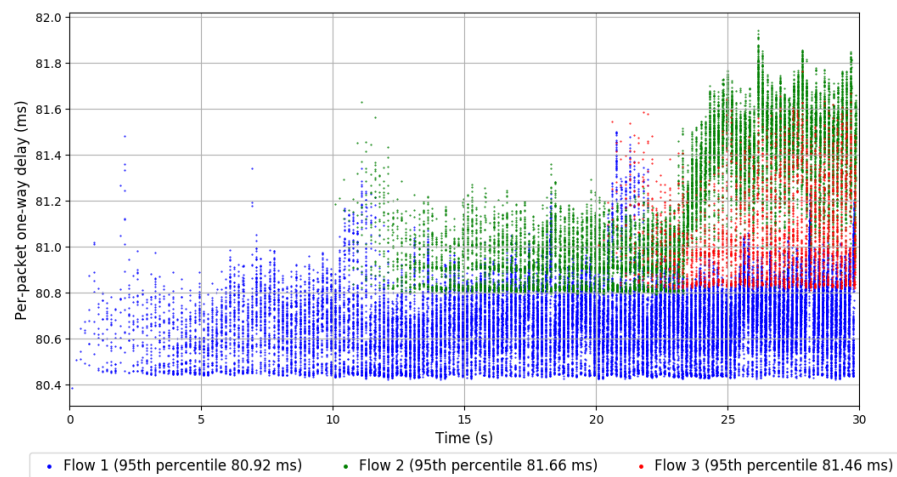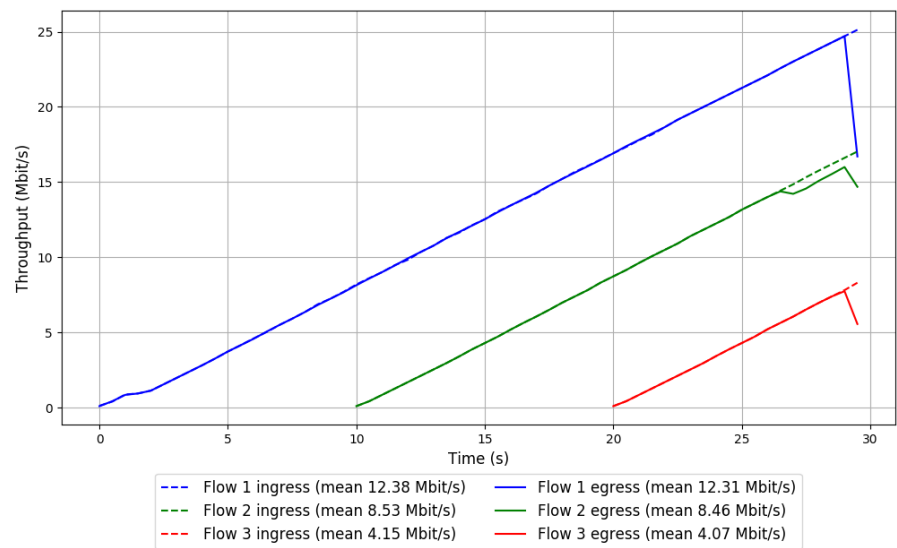
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 13.04 Mbit/s)   Flow 1 egress (mean 12.97 Mbit/s)
Flow 2 ingress (mean 8.54 Mbit/s)   Flow 2 egress (mean 8.46 Mbit/s)
Flow 3 ingress (mean 4.13 Mbit/s)   Flow 3 egress (mean 4.06 Mbit/s)

Flow 1 (95th percentile 85.22 ms)   Flow 2 (95th percentile 86.20 ms)   Flow 3 (95th percentile 86.06 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-02-16 12:20:24
End at: 2018-02-16 12:20:54
Local clock offset: -4.294 ms
Remote clock offset: 1.609 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.78 Mbit/s
95th percentile per-packet one-way delay: 80.158 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 12.88 Mbit/s
95th percentile per-packet one-way delay: 79.401 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 80.604 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 79.814 ms
Loss rate: 3.43%
```
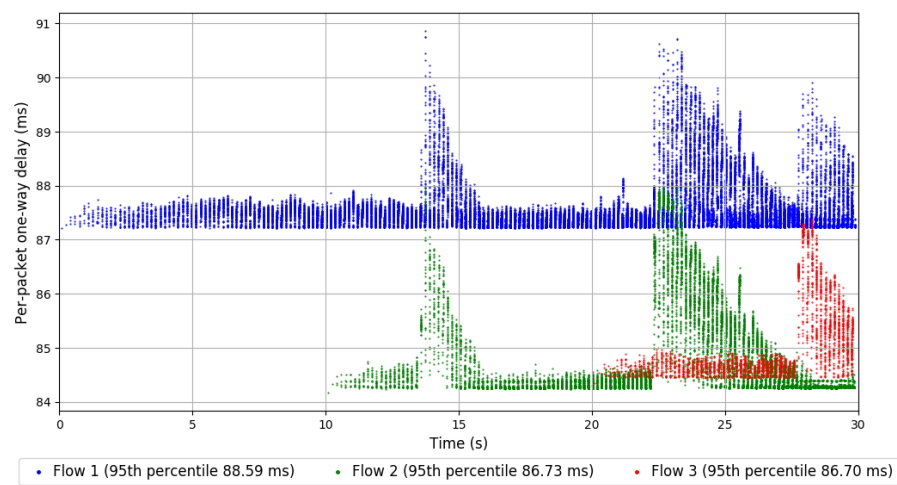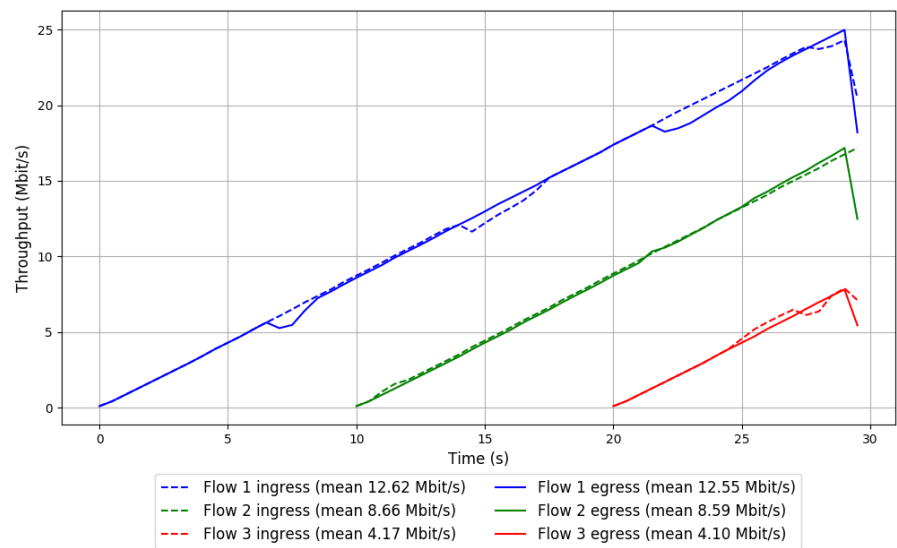
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2018-02-16 12:43:55
End at: 2018-02-16 12:44:25
Local clock offset: -5.977 ms
Remote clock offset: -4.664 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.44 Mbit/s
95th percentile per-packet one-way delay: 87.039 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 87.240 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 8.41 Mbit/s
95th percentile per-packet one-way delay: 86.094 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 86.761 ms
Loss rate: 3.43%
```
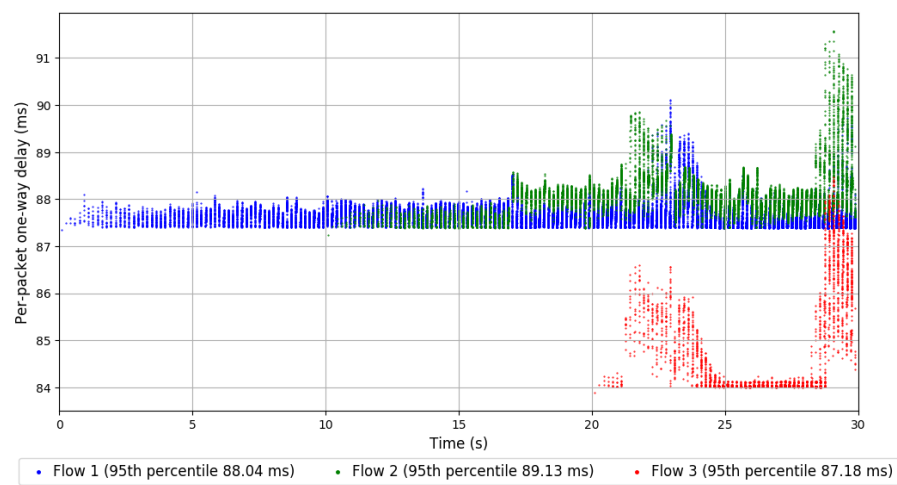
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.62 Mbit/s)   Flow 1 egress (mean 12.55 Mbit/s)
Flow 2 ingress (mean 8.48 Mbit/s)   Flow 2 egress (mean 8.41 Mbit/s)
Flow 3 ingress (mean 4.16 Mbit/s)   Flow 3 egress (mean 4.08 Mbit/s)

Flow 1 (95th percentile 87.24 ms)   Flow 2 (95th percentile 86.09 ms)   Flow 3 (95th percentile 86.76 ms)

```
Run 7: Statistics of LEDBAT

Start at: 2018-02-16 13:07:23
End at: 2018-02-16 13:07:53
Local clock offset: -7.011 ms
Remote clock offset: -0.987 ms


# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.23 Mbit/s
95th percentile per-packet one-way delay: 81.540 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 12.31 Mbit/s
95th percentile per-packet one-way delay: 80.923 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 81.663 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 81.459 ms
Loss rate: 3.43%
```
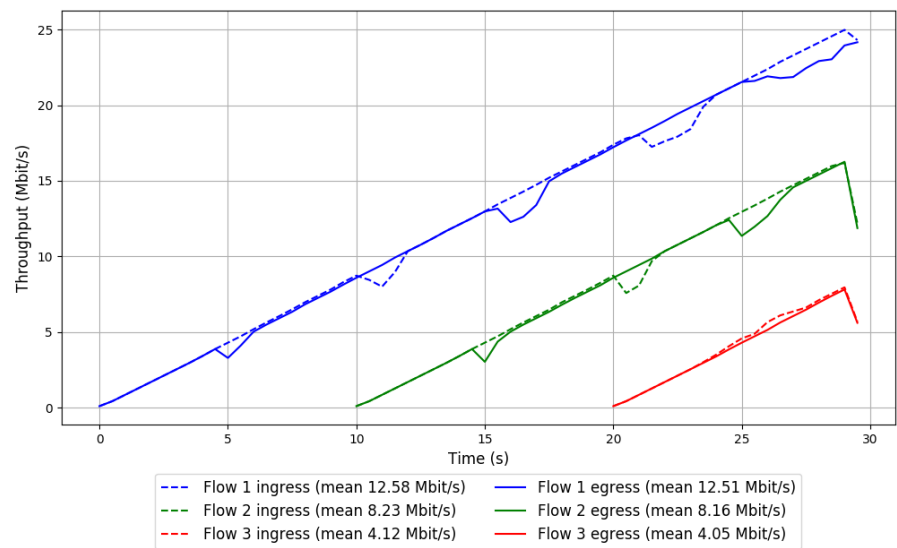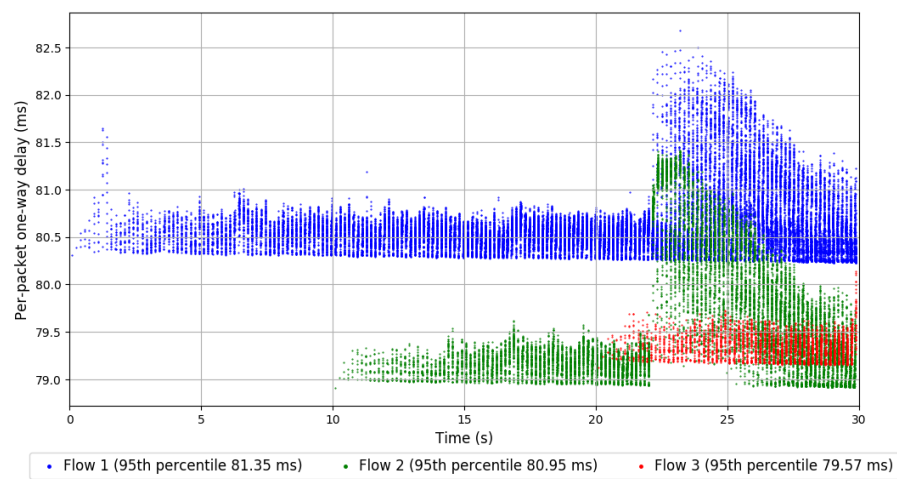
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-02-16 13:31:11
End at: 2018-02-16 13:31:41
Local clock offset: -7.318 ms
Remote clock offset: -5.616 ms


# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.57 Mbit/s
95th percentile per-packet one-way delay: 88.319 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 88.586 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 86.728 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 86.697 ms
Loss rate: 3.43%
```
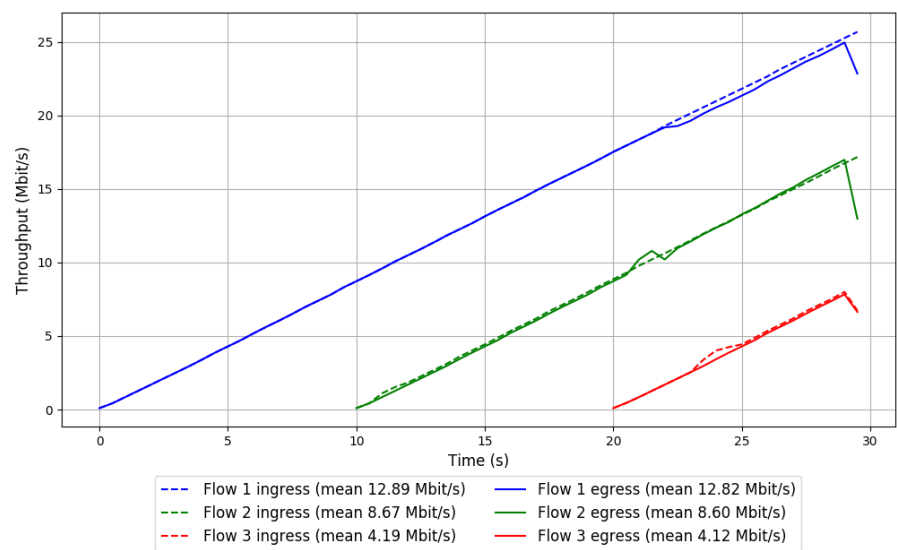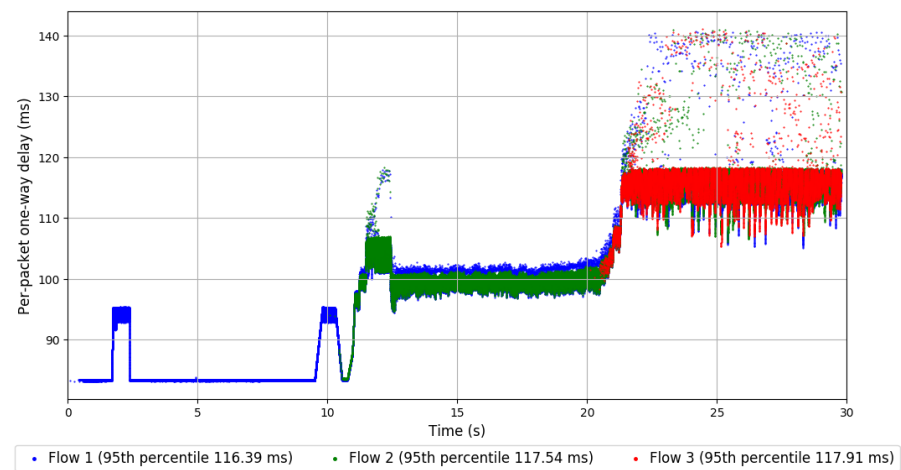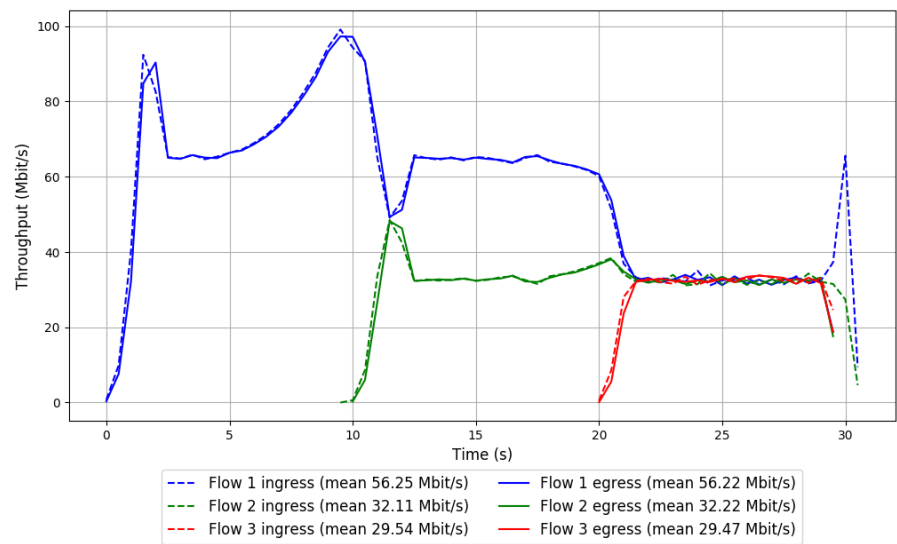
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.62 Mbit/s)   Flow 1 egress (mean 12.55 Mbit/s)
Flow 2 ingress (mean 8.66 Mbit/s)   Flow 2 egress (mean 8.59 Mbit/s)
Flow 3 ingress (mean 4.17 Mbit/s)   Flow 3 egress (mean 4.10 Mbit/s)

Flow 1 (95th percentile 88.59 ms)   Flow 2 (95th percentile 86.73 ms)   Flow 3 (95th percentile 86.70 ms)

```
Run 9: Statistics of LEDBAT

Start at: 2018-02-16 13:54:50
End at: 2018-02-16 13:55:20
Local clock offset: -6.773 ms
Remote clock offset: -5.27 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.26 Mbit/s
95th percentile per-packet one-way delay: 88.467 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 88.036 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 89.134 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 87.177 ms
Loss rate: 3.38%
```
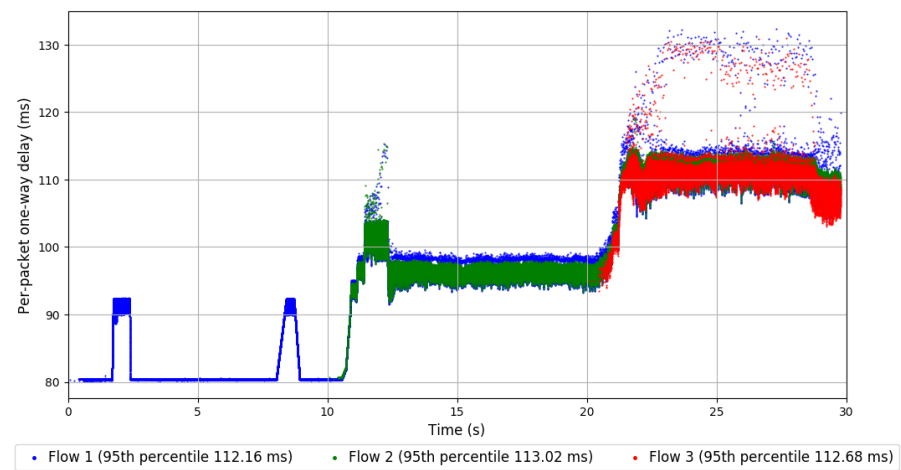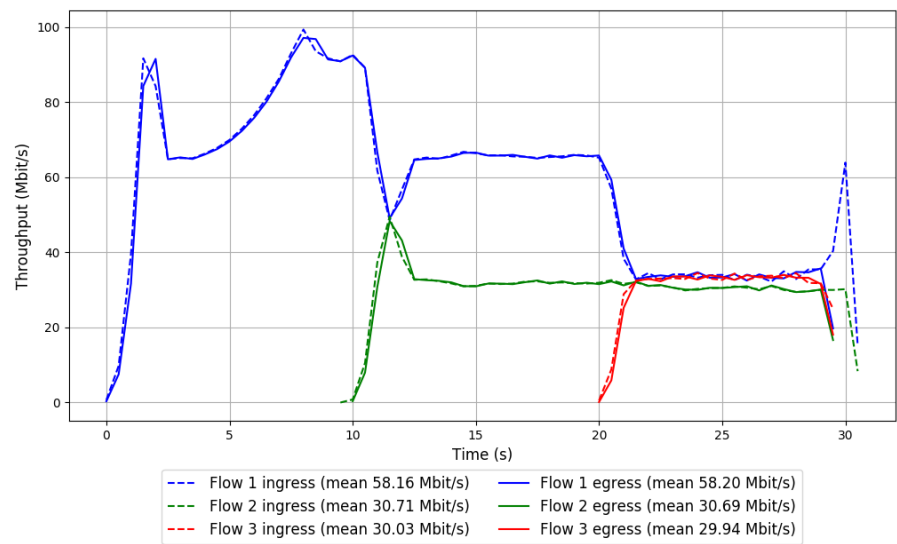
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.58 Mbit/s)   Flow 1 egress (mean 12.51 Mbit/s)
Flow 2 ingress (mean 8.23 Mbit/s)   Flow 2 egress (mean 8.16 Mbit/s)
Flow 3 ingress (mean 4.12 Mbit/s)   Flow 3 egress (mean 4.05 Mbit/s)

Flow 1 (95th percentile 88.04 ms)   Flow 2 (95th percentile 89.13 ms)   Flow 3 (95th percentile 87.18 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2018-02-16 14:18:24
End at: 2018-02-16 14:18:54
Local clock offset: -5.885 ms
Remote clock offset: 0.886 ms

# Below is generated by plot.py at 2018-02-16 18:34:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.86 Mbit/s
95th percentile per-packet one-way delay: 81.212 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 81.353 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 8.60 Mbit/s
95th percentile per-packet one-way delay: 80.951 ms
Loss rate: 1.67%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 79.566 ms
Loss rate: 3.38%
```
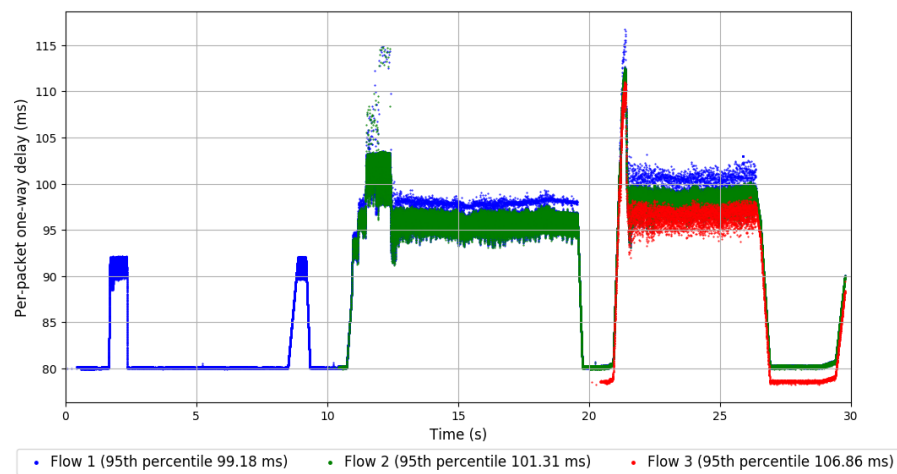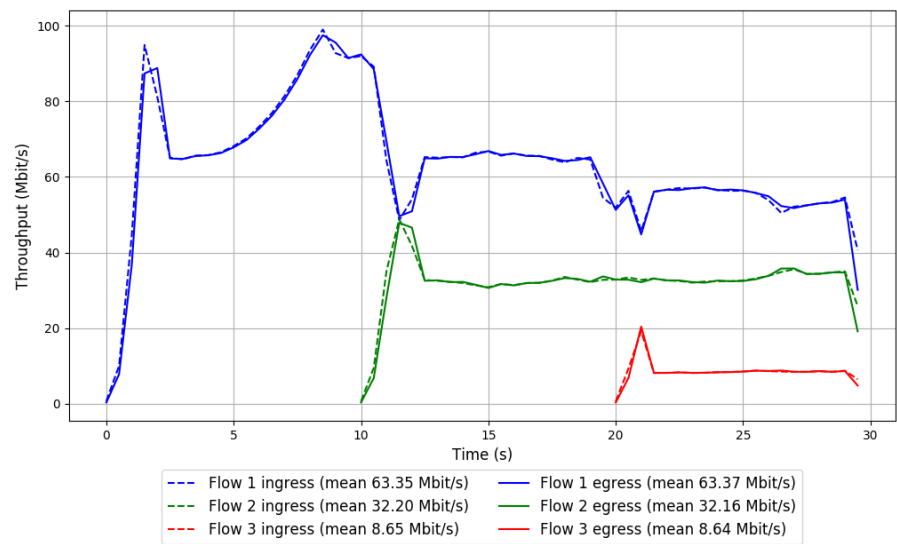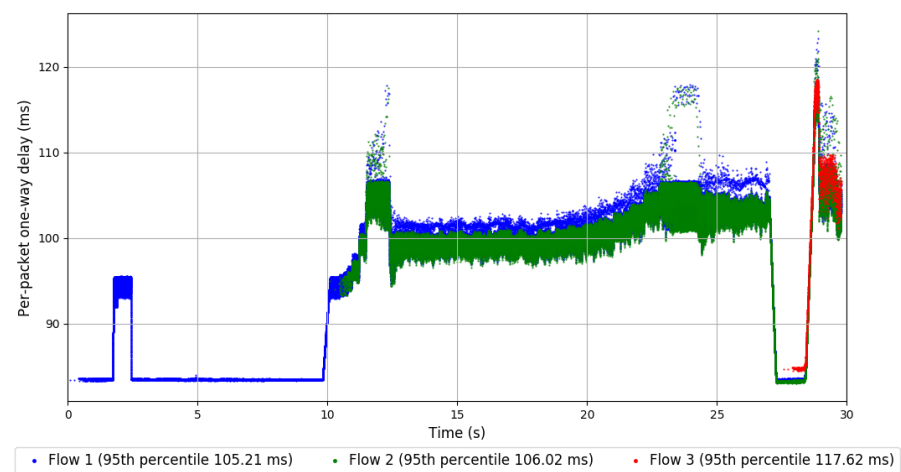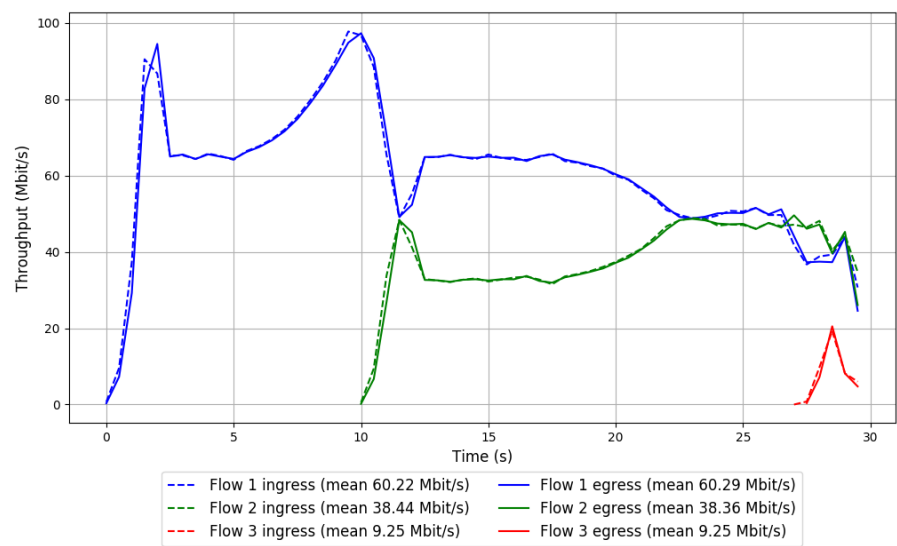
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2018-02-16 10:53:06
End at: 2018-02-16 10:53:36
Local clock offset: -6.809 ms
Remote clock offset: -3.187 ms


# Below is generated by plot.py at 2018-02-16 18:35:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.17 Mbit/s
95th percentile per-packet one-way delay: 117.245 ms
Loss rate: 3.14%
-- Flow 1:
Average throughput: 56.22 Mbit/s
95th percentile per-packet one-way delay: 116.391 ms
Loss rate: 2.93%
-- Flow 2:
Average throughput: 32.22 Mbit/s
95th percentile per-packet one-way delay: 117.542 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 29.47 Mbit/s
95th percentile per-packet one-way delay: 117.909 ms
Loss rate: 2.34%
```

Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 56.25 Mbit/s) — — —   Flow 1 egress (mean 56.22 Mbit/s) ———
Flow 2 ingress (mean 32.11 Mbit/s) — — —   Flow 2 egress (mean 32.22 Mbit/s) ———
Flow 3 ingress (mean 29.54 Mbit/s) — — —   Flow 3 egress (mean 29.47 Mbit/s) ———

• Flow 1 (95th percentile 116.39 ms)   • Flow 2 (95th percentile 117.54 ms)   • Flow 3 (95th percentile 117.91 ms)

65

```
Run 2: Statistics of PCC

Start at: 2018-02-16 11:16:36
End at: 2018-02-16 11:17:06
Local clock offset: -7.233 ms
Remote clock offset: 0.852 ms


# Below is generated by plot.py at 2018-02-16 18:35:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.31 Mbit/s
95th percentile per-packet one-way delay: 112.595 ms
Loss rate: 3.30%
-- Flow 1:
Average throughput: 58.20 Mbit/s
95th percentile per-packet one-way delay: 112.160 ms
Loss rate: 3.00%
-- Flow 2:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 113.015 ms
Loss rate: 4.61%
-- Flow 3:
Average throughput: 29.94 Mbit/s
95th percentile per-packet one-way delay: 112.683 ms
Loss rate: 2.34%
```
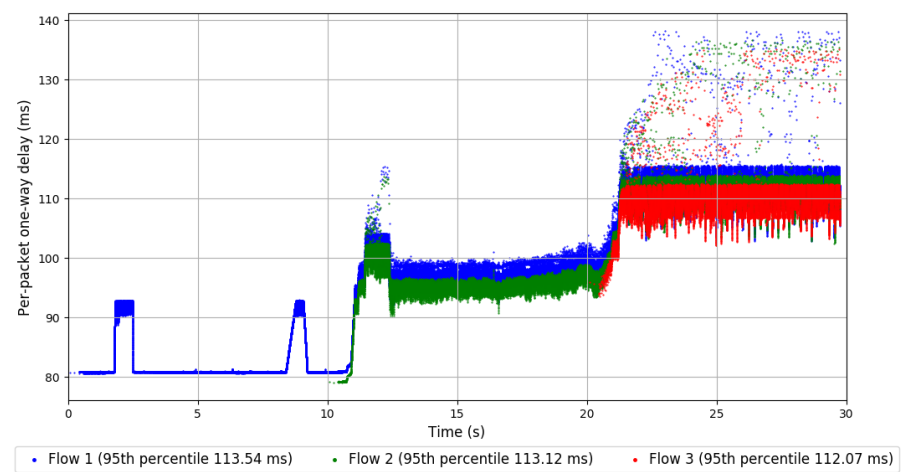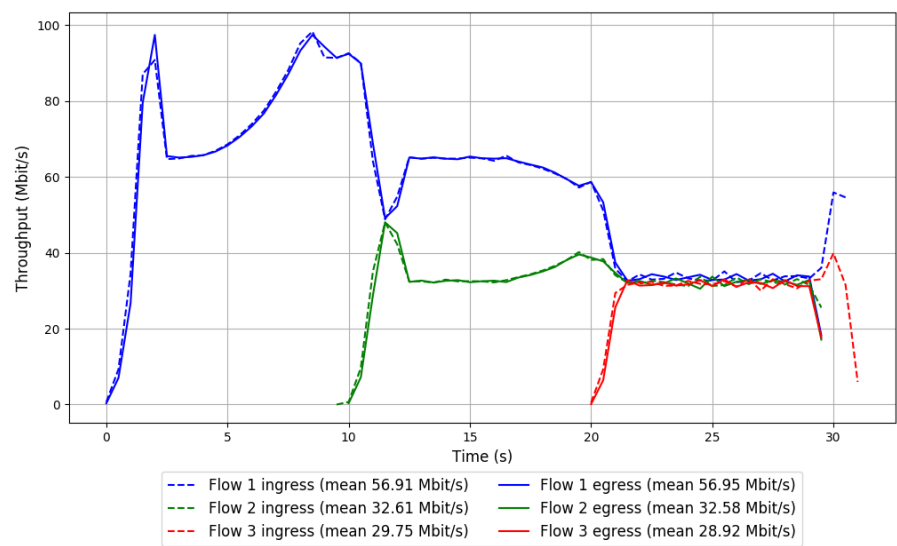
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2018-02-16 11:40:05
End at: 2018-02-16 11:40:35
Local clock offset: -7.769 ms
Remote clock offset: 1.757 ms


# Below is generated by plot.py at 2018-02-16 18:35:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.51 Mbit/s
95th percentile per-packet one-way delay: 99.561 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 63.37 Mbit/s
95th percentile per-packet one-way delay: 99.184 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 101.310 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 8.64 Mbit/s
95th percentile per-packet one-way delay: 106.860 ms
Loss rate: 1.81%
```
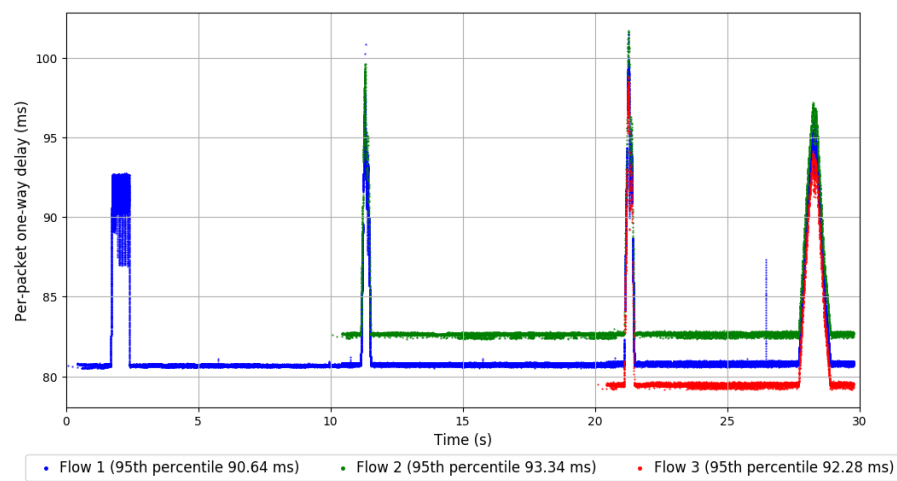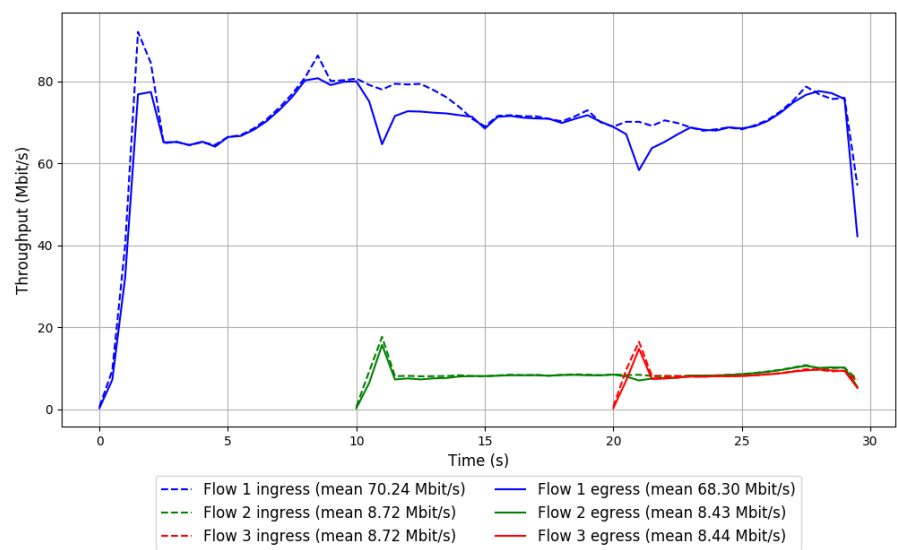
Run 3: Report of PCC — Data Link

- - - Flow 1 ingress (mean 63.35 Mbit/s)   —— Flow 1 egress (mean 63.37 Mbit/s)
- - - Flow 2 ingress (mean 32.20 Mbit/s)   —— Flow 2 egress (mean 32.16 Mbit/s)
- - - Flow 3 ingress (mean 8.65 Mbit/s)   —— Flow 3 egress (mean 8.64 Mbit/s)

• Flow 1 (95th percentile 99.18 ms)   • Flow 2 (95th percentile 101.31 ms)   • Flow 3 (95th percentile 106.86 ms)

```
Run 4: Statistics of PCC

Start at: 2018-02-16 12:03:33
End at: 2018-02-16 12:04:03
Local clock offset: -6.452 ms
Remote clock offset: -3.785 ms


# Below is generated by plot.py at 2018-02-16 18:35:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.40 Mbit/s
95th percentile per-packet one-way delay: 105.714 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 60.29 Mbit/s
95th percentile per-packet one-way delay: 105.207 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 106.023 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 9.25 Mbit/s
95th percentile per-packet one-way delay: 117.617 ms
Loss rate: 6.90%
```
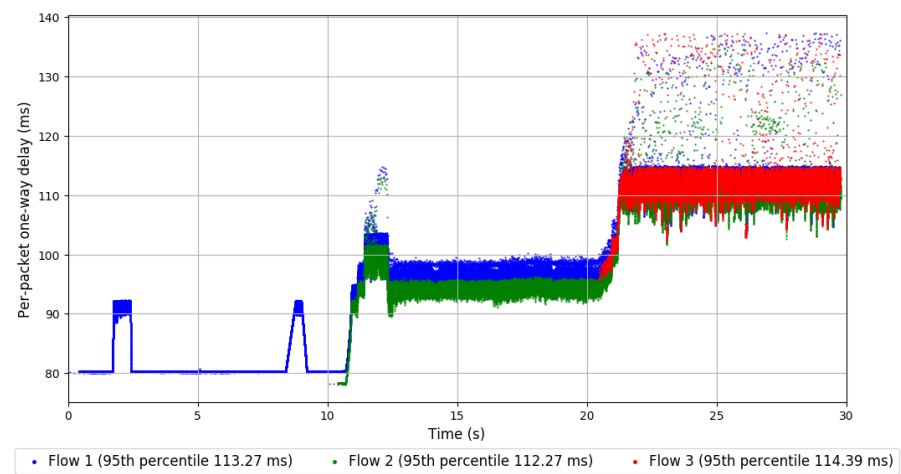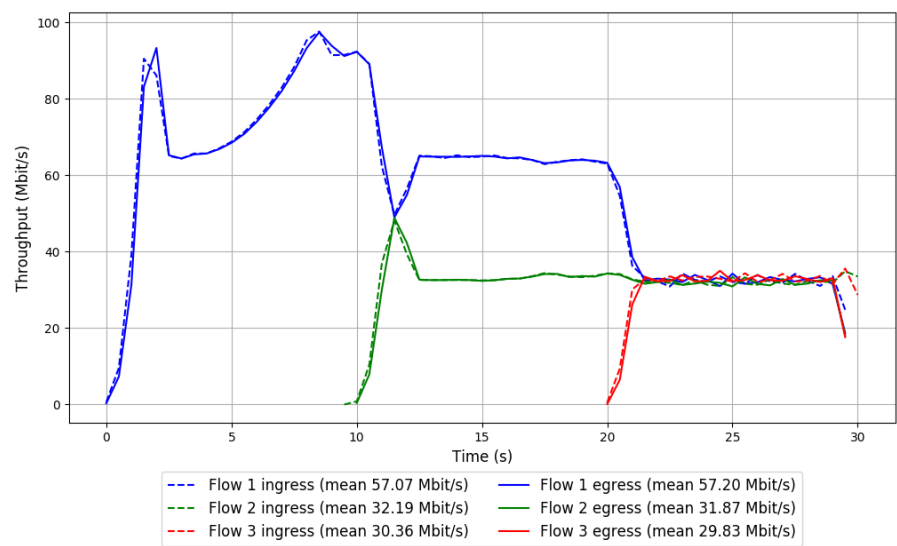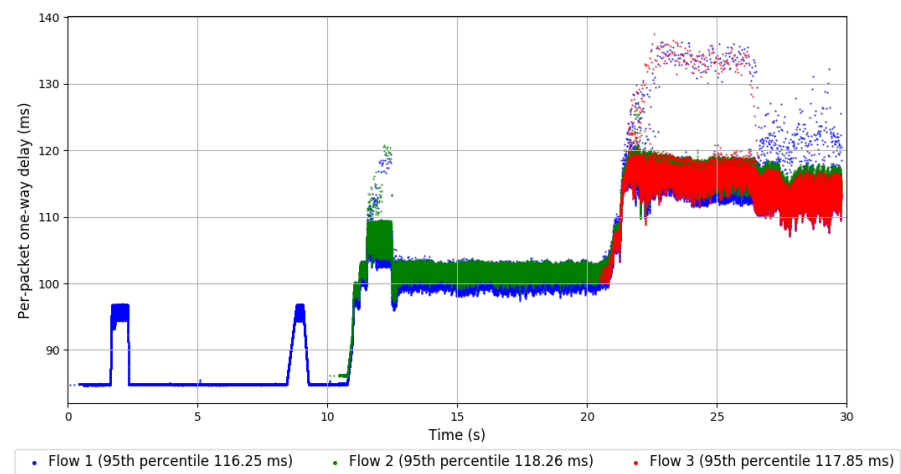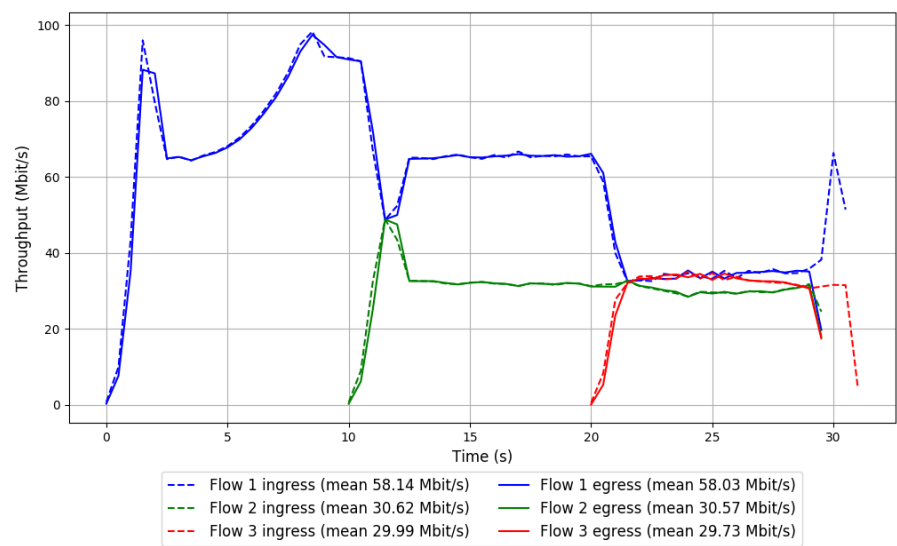
Run 4: Report of PCC — Data Link

```
Run 5: Statistics of PCC

Start at: 2018-02-16 12:27:01
End at: 2018-02-16 12:27:31
Local clock offset: -3.852 ms
Remote clock offset: 1.362 ms


# Below is generated by plot.py at 2018-02-16 18:36:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 113.239 ms
Loss rate: 4.59%
-- Flow 1:
Average throughput: 56.95 Mbit/s
95th percentile per-packet one-way delay: 113.542 ms
Loss rate: 3.85%
-- Flow 2:
Average throughput: 32.58 Mbit/s
95th percentile per-packet one-way delay: 113.119 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 28.92 Mbit/s
95th percentile per-packet one-way delay: 112.066 ms
Loss rate: 15.25%
```

Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 56.91 Mbit/s) --- Flow 1 egress (mean 56.95 Mbit/s)
Flow 2 ingress (mean 32.61 Mbit/s) --- Flow 2 egress (mean 32.58 Mbit/s)
Flow 3 ingress (mean 29.75 Mbit/s) --- Flow 3 egress (mean 28.92 Mbit/s)

Flow 1 (95th percentile 113.54 ms) · Flow 2 (95th percentile 113.12 ms) · Flow 3 (95th percentile 112.07 ms)

```
Run 6: Statistics of PCC

Start at: 2018-02-16 12:50:32
End at: 2018-02-16 12:51:02
Local clock offset: -6.476 ms
Remote clock offset: -0.844 ms


# Below is generated by plot.py at 2018-02-16 18:36:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.64 Mbit/s
95th percentile per-packet one-way delay: 90.850 ms
Loss rate: 3.43%
-- Flow 1:
Average throughput: 68.30 Mbit/s
95th percentile per-packet one-way delay: 90.642 ms
Loss rate: 3.31%
-- Flow 2:
Average throughput: 8.43 Mbit/s
95th percentile per-packet one-way delay: 93.340 ms
Loss rate: 4.19%
-- Flow 3:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 92.283 ms
Loss rate: 4.78%
```
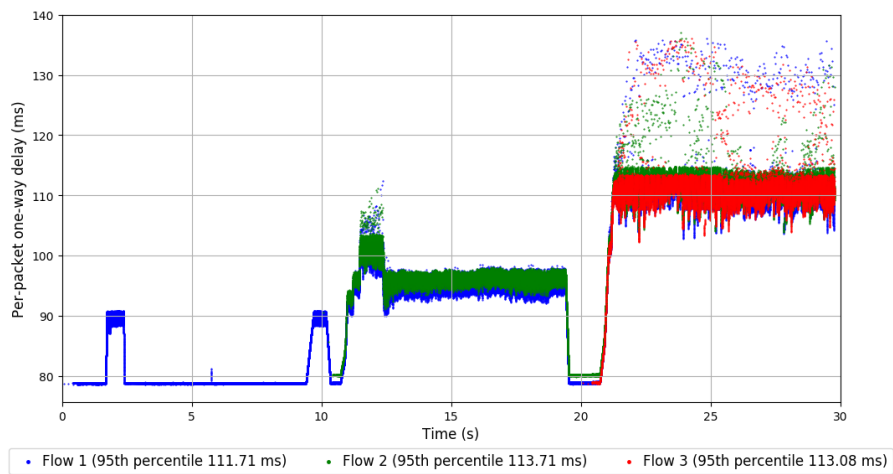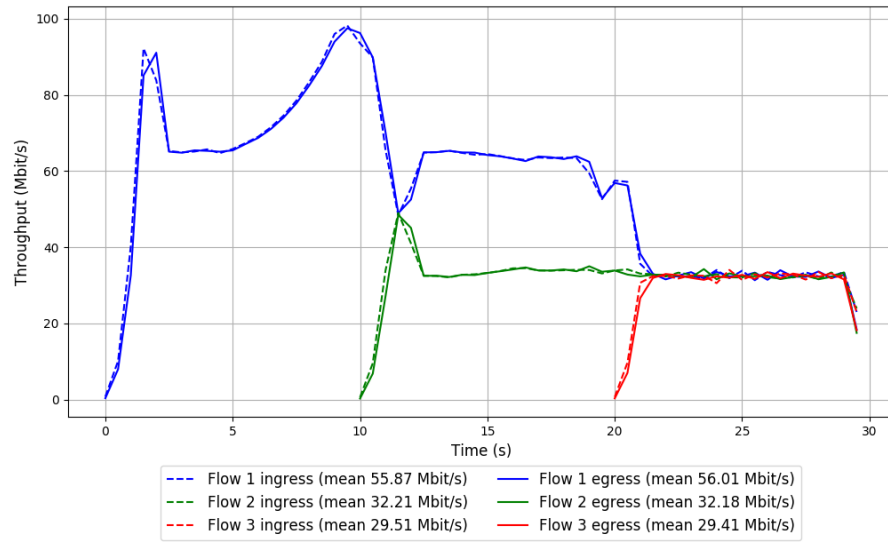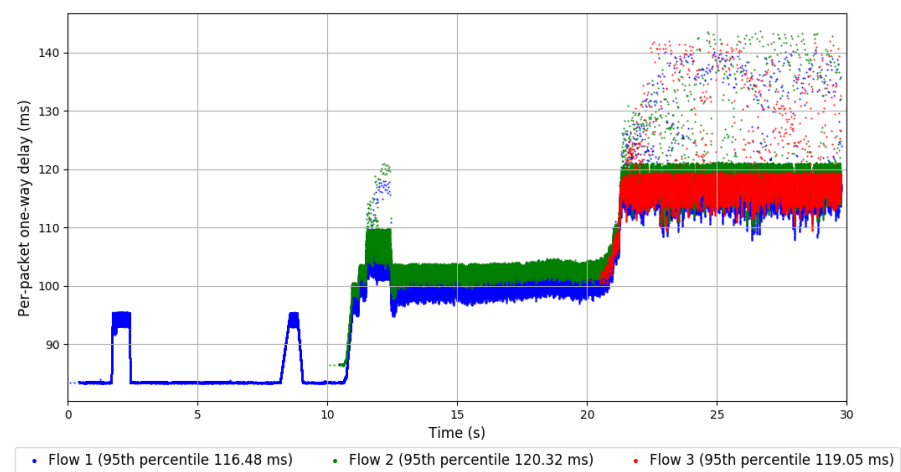
Run 6: Report of PCC — Data Link

```
Run 7: Statistics of PCC

Start at: 2018-02-16 13:14:15
End at: 2018-02-16 13:14:45
Local clock offset: -7.183 ms
Remote clock offset: -0.24 ms


# Below is generated by plot.py at 2018-02-16 18:36:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.06 Mbit/s
95th percentile per-packet one-way delay: 113.542 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 57.20 Mbit/s
95th percentile per-packet one-way delay: 113.270 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 31.87 Mbit/s
95th percentile per-packet one-way delay: 112.268 ms
Loss rate: 4.34%
-- Flow 3:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 114.386 ms
Loss rate: 8.46%
```
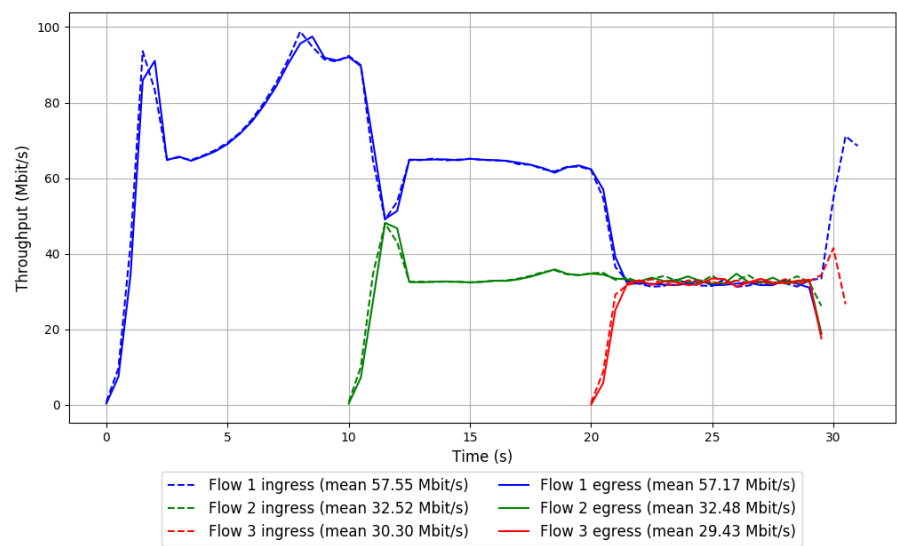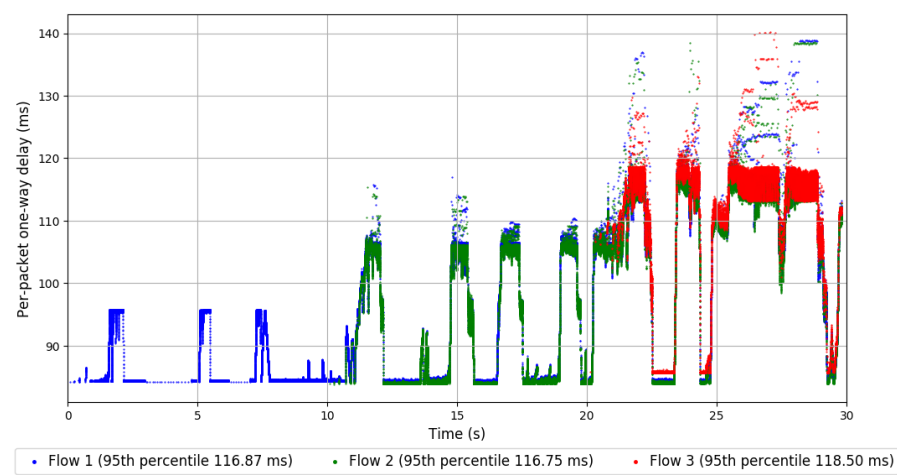
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 57.07 Mbit/s) Flow 1 egress (mean 57.20 Mbit/s)
Flow 2 ingress (mean 32.19 Mbit/s) Flow 2 egress (mean 31.87 Mbit/s)
Flow 3 ingress (mean 30.36 Mbit/s) Flow 3 egress (mean 29.83 Mbit/s)

Flow 1 (95th percentile 113.27 ms) Flow 2 (95th percentile 112.27 ms) Flow 3 (95th percentile 114.39 ms)

```
Run 8: Statistics of PCC

Start at: 2018-02-16 13:37:53
End at: 2018-02-16 13:38:23
Local clock offset: -7.388 ms
Remote clock offset: -4.536 ms


# Below is generated by plot.py at 2018-02-16 18:36:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.97 Mbit/s
95th percentile per-packet one-way delay: 117.412 ms
Loss rate: 4.51%
-- Flow 1:
Average throughput: 58.03 Mbit/s
95th percentile per-packet one-way delay: 116.246 ms
Loss rate: 4.02%
-- Flow 2:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 118.258 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 29.73 Mbit/s
95th percentile per-packet one-way delay: 117.850 ms
Loss rate: 13.36%
```
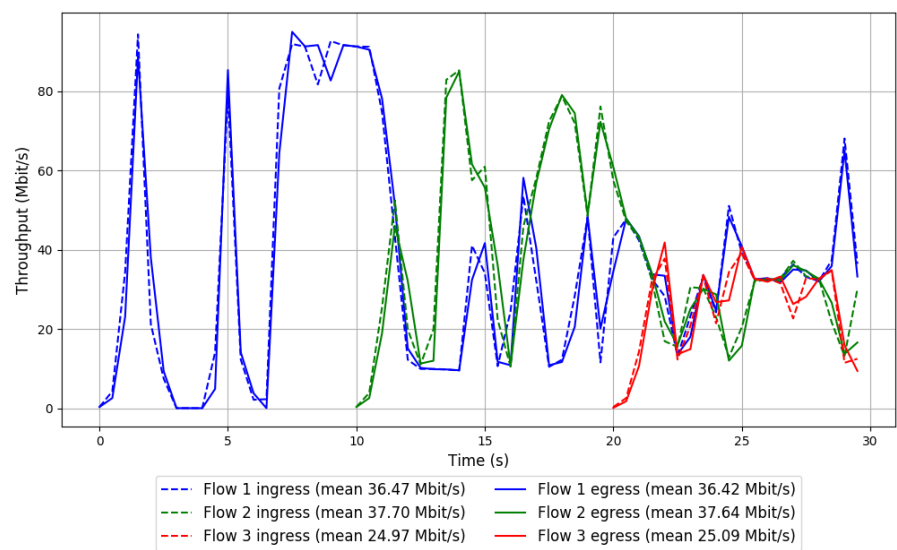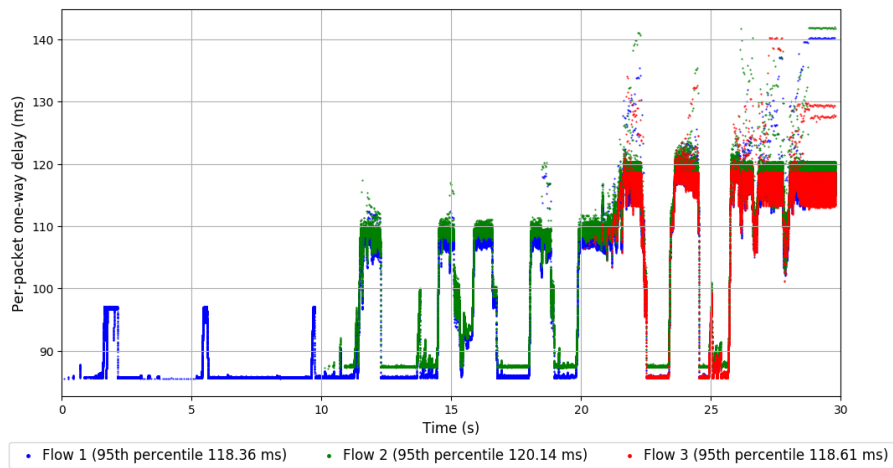
Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2018-02-16 14:01:30
End at: 2018-02-16 14:02:00
Local clock offset: -6.695 ms
Remote clock offset: 0.728 ms


# Below is generated by plot.py at 2018-02-16 18:36:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 112.808 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 56.01 Mbit/s
95th percentile per-packet one-way delay: 111.712 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 113.706 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 29.41 Mbit/s
95th percentile per-packet one-way delay: 113.077 ms
Loss rate: 2.16%
```
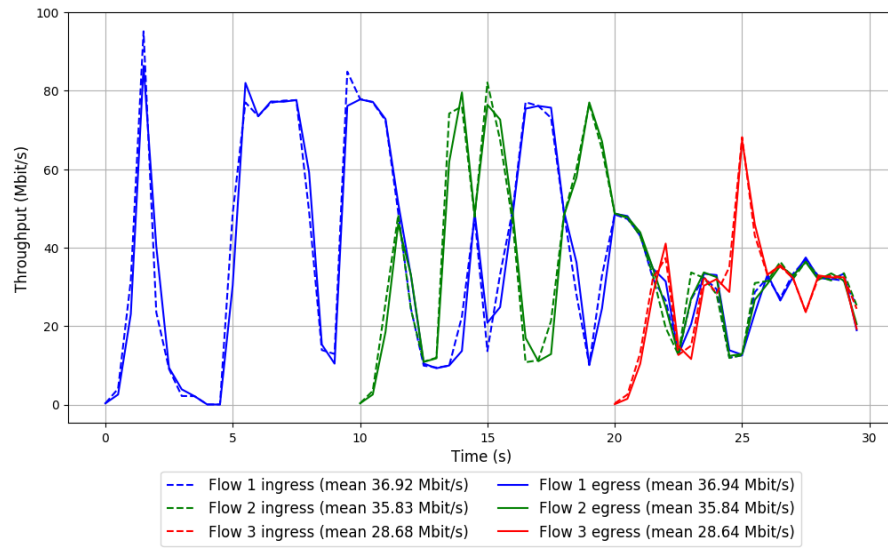
Run 9: Report of PCC — Data Link

```
Run 10: Statistics of PCC

Start at: 2018-02-16 14:25:03
End at: 2018-02-16 14:25:33
Local clock offset: -4.748 ms
Remote clock offset: -2.988 ms


# Below is generated by plot.py at 2018-02-16 18:36:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.27 Mbit/s
95th percentile per-packet one-way delay: 118.935 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 116.476 ms
Loss rate: 6.02%
-- Flow 2:
Average throughput: 32.48 Mbit/s
95th percentile per-packet one-way delay: 120.317 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 29.43 Mbit/s
95th percentile per-packet one-way delay: 119.052 ms
Loss rate: 13.88%
```
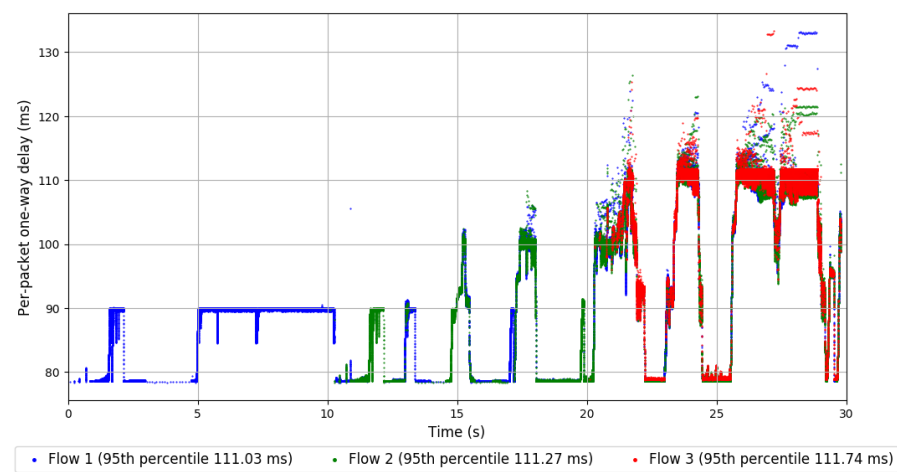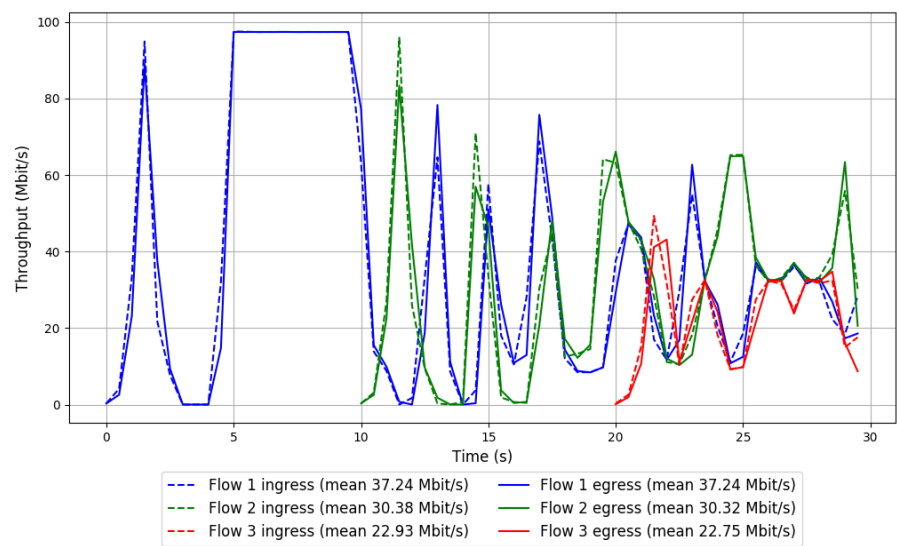
Run 10: Report of PCC — Data Link

- - - Flow 1 ingress (mean 57.55 Mbit/s) ——— Flow 1 egress (mean 57.17 Mbit/s)
- - - Flow 2 ingress (mean 32.52 Mbit/s) ——— Flow 2 egress (mean 32.48 Mbit/s)
- - - Flow 3 ingress (mean 30.30 Mbit/s) ——— Flow 3 egress (mean 29.43 Mbit/s)

- Flow 1 (95th percentile 116.48 ms)   • Flow 2 (95th percentile 120.32 ms)   • Flow 3 (95th percentile 119.05 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-02-16 10:37:24
End at: 2018-02-16 10:37:54
Local clock offset: -6.916 ms
Remote clock offset: -4.063 ms


# Below is generated by plot.py at 2018-02-16 18:36:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.55 Mbit/s
95th percentile per-packet one-way delay: 117.153 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 116.870 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 37.64 Mbit/s
95th percentile per-packet one-way delay: 116.749 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 118.498 ms
Loss rate: 1.19%
```
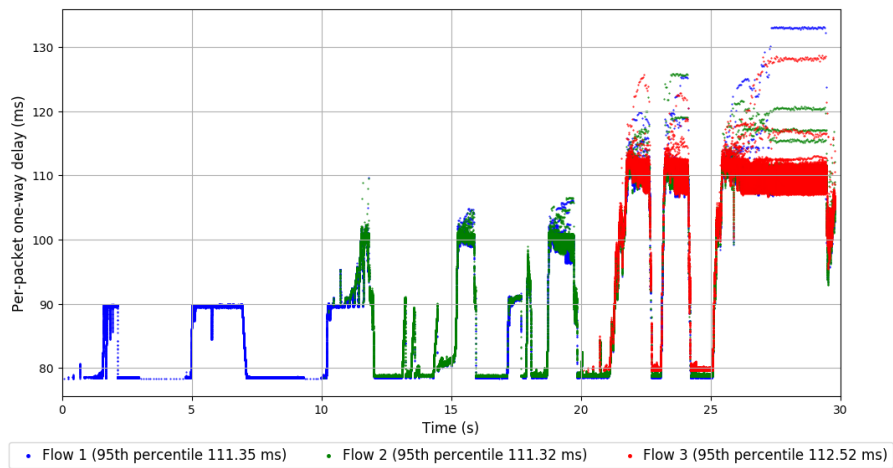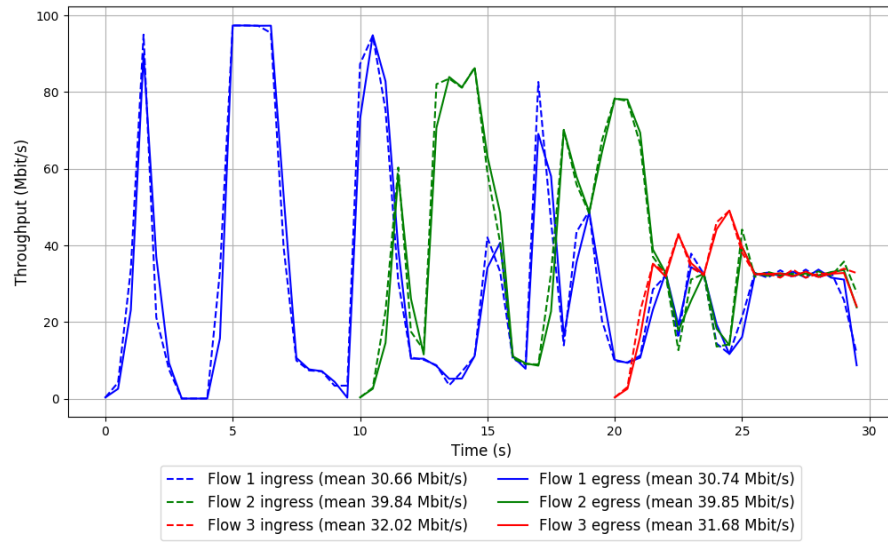
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 36.47 Mbit/s)   Flow 1 egress (mean 36.42 Mbit/s)
Flow 2 ingress (mean 37.70 Mbit/s)   Flow 2 egress (mean 37.64 Mbit/s)
Flow 3 ingress (mean 24.97 Mbit/s)   Flow 3 egress (mean 25.09 Mbit/s)

Flow 1 (95th percentile 116.87 ms)   Flow 2 (95th percentile 116.75 ms)   Flow 3 (95th percentile 118.50 ms)
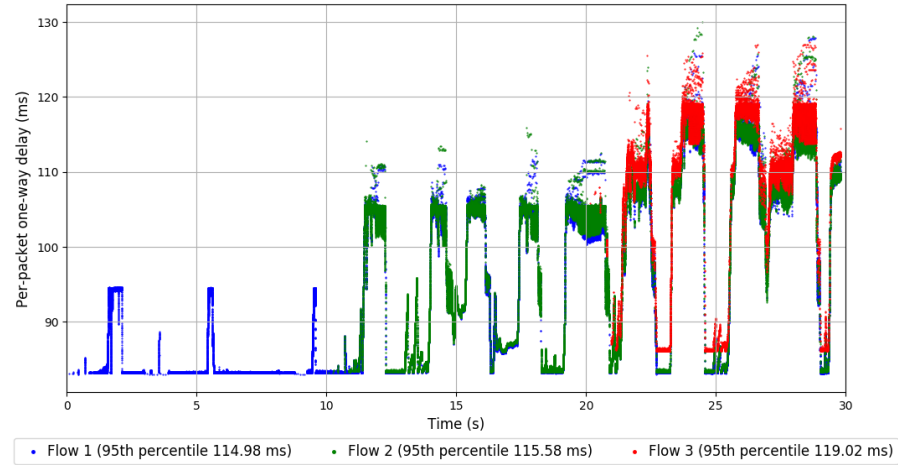
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-02-16 11:00:55
End at: 2018-02-16 11:01:25
Local clock offset: -6.975 ms
Remote clock offset: -3.858 ms


# Below is generated by plot.py at 2018-02-16 18:36:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.00 Mbit/s
95th percentile per-packet one-way delay: 119.088 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 36.94 Mbit/s
95th percentile per-packet one-way delay: 118.365 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 35.84 Mbit/s
95th percentile per-packet one-way delay: 120.143 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 118.613 ms
Loss rate: 2.24%
```

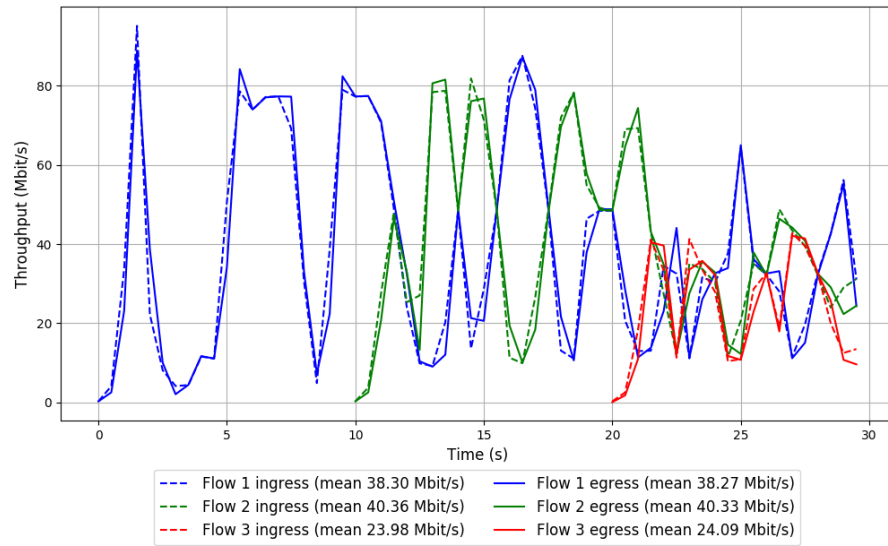Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 36.92 Mbit/s)   Flow 1 egress (mean 36.94 Mbit/s)
Flow 2 ingress (mean 35.83 Mbit/s)   Flow 2 egress (mean 35.84 Mbit/s)
Flow 3 ingress (mean 28.68 Mbit/s)   Flow 3 egress (mean 28.64 Mbit/s)

Flow 1 (95th percentile 118.36 ms)   Flow 2 (95th percentile 120.14 ms)   Flow 3 (95th percentile 118.61 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-02-16 11:24:25
End at: 2018-02-16 11:24:55
Local clock offset: -7.277 ms
Remote clock offset: 1.647 ms


# Below is generated by plot.py at 2018-02-16 18:37:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.73 Mbit/s
95th percentile per-packet one-way delay: 111.425 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 37.24 Mbit/s
95th percentile per-packet one-way delay: 111.030 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 30.32 Mbit/s
95th percentile per-packet one-way delay: 111.270 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 22.75 Mbit/s
95th percentile per-packet one-way delay: 111.739 ms
Loss rate: 2.63%
```
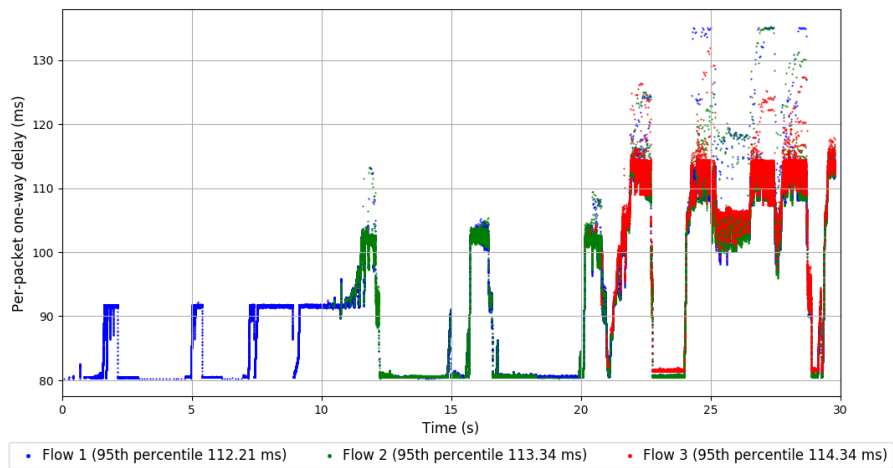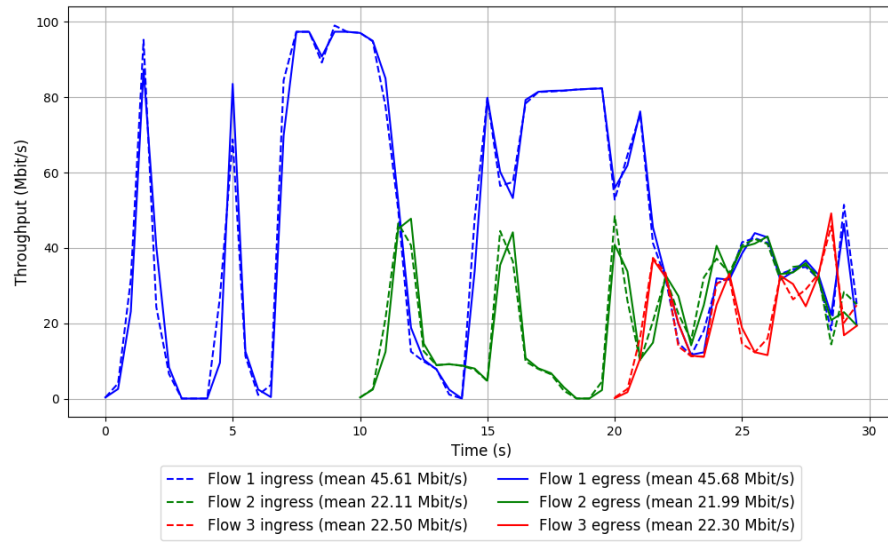
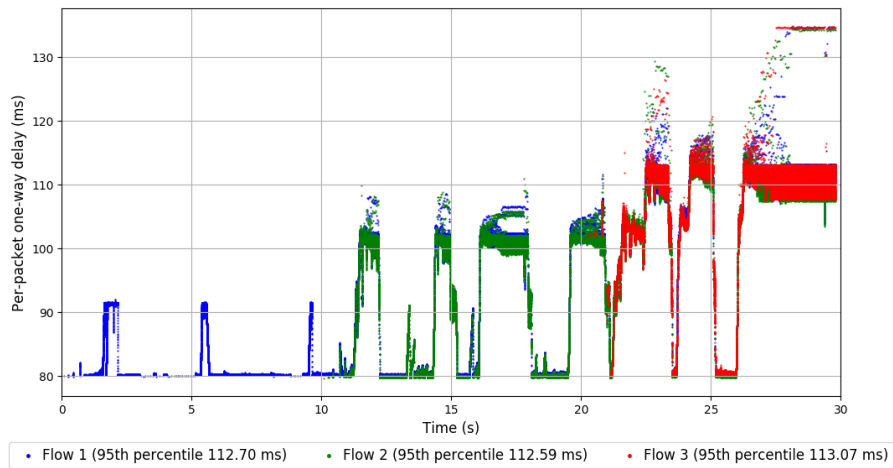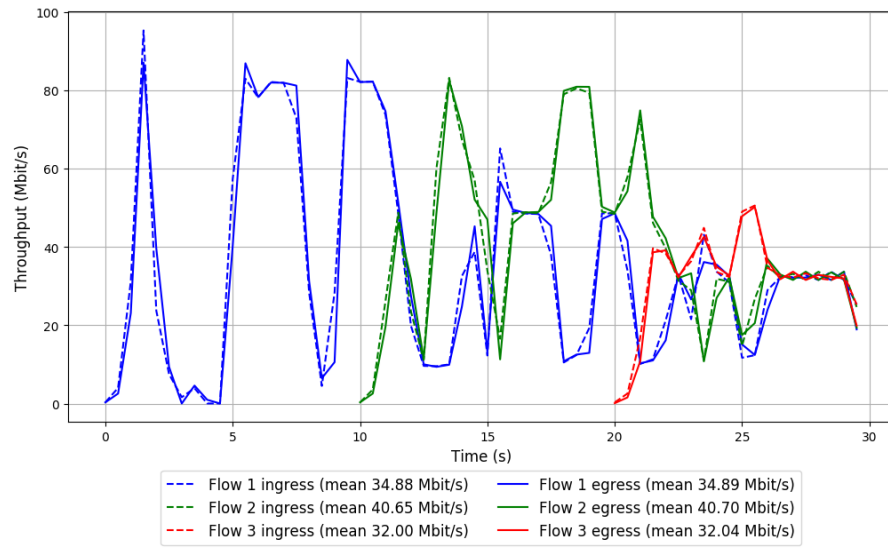## Run 3: Report of QUIC Cubic — Data Link

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```
Run 4: Statistics of QUIC Cubic

Start at: 2018-02-16 11:47:54
End at: 2018-02-16 11:48:24
Local clock offset: -7.831 ms
Remote clock offset: 1.464 ms


# Below is generated by plot.py at 2018-02-16 18:37:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.47 Mbit/s
95th percentile per-packet one-way delay: 111.479 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 30.74 Mbit/s
95th percentile per-packet one-way delay: 111.346 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 39.85 Mbit/s
95th percentile per-packet one-way delay: 111.317 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 112.521 ms
Loss rate: 2.73%
```
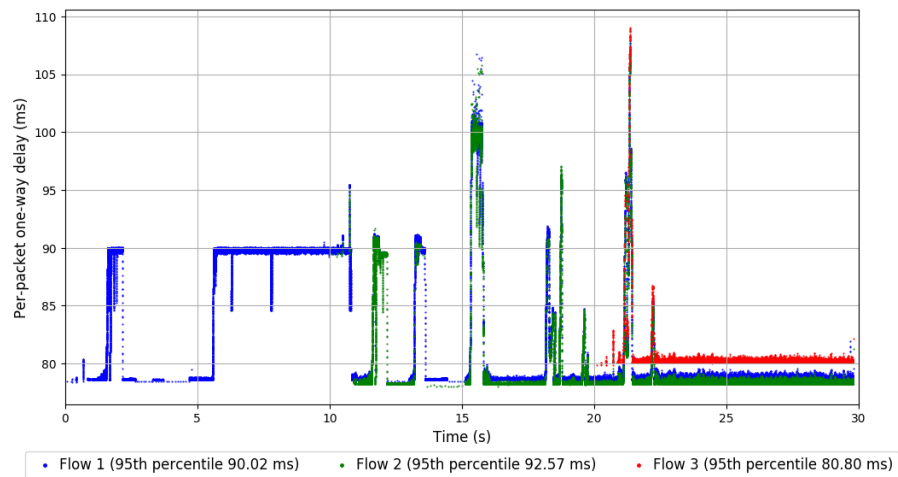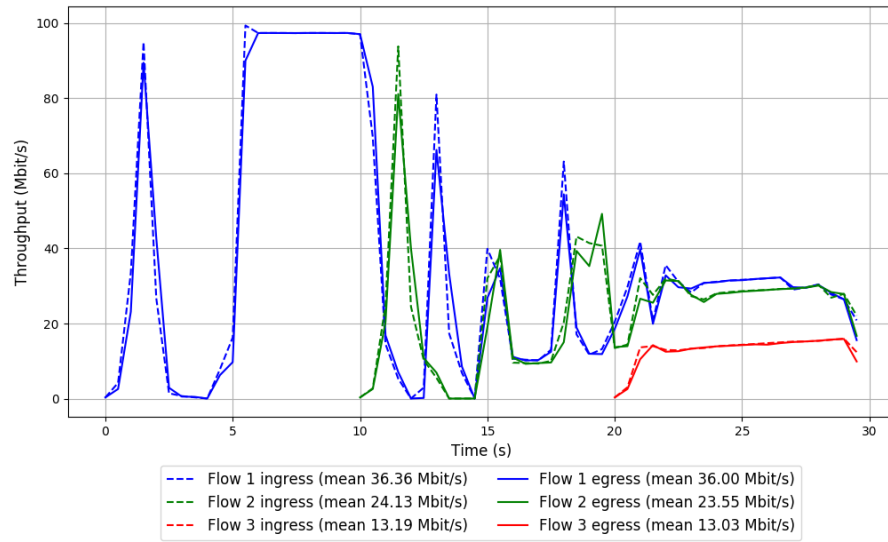
Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 30.66 Mbit/s)   Flow 1 egress (mean 30.74 Mbit/s)
Flow 2 ingress (mean 39.84 Mbit/s)   Flow 2 egress (mean 39.85 Mbit/s)
Flow 3 ingress (mean 32.02 Mbit/s)   Flow 3 egress (mean 31.68 Mbit/s)

Flow 1 (95th percentile 111.35 ms)   Flow 2 (95th percentile 111.32 ms)   Flow 3 (95th percentile 112.52 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-02-16 12:11:21
End at: 2018-02-16 12:11:51
Local clock offset: -5.035 ms
Remote clock offset: -3.781 ms


# Below is generated by plot.py at 2018-02-16 18:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.83 Mbit/s
95th percentile per-packet one-way delay: 116.042 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 38.27 Mbit/s
95th percentile per-packet one-way delay: 114.981 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 40.33 Mbit/s
95th percentile per-packet one-way delay: 115.575 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 119.020 ms
Loss rate: 1.57%
```

Run 5: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 38.30 Mbit/s)
- Flow 1 egress (mean 38.27 Mbit/s)
- Flow 2 ingress (mean 40.36 Mbit/s)
- Flow 2 egress (mean 40.33 Mbit/s)
- Flow 3 ingress (mean 23.98 Mbit/s)
- Flow 3 egress (mean 24.09 Mbit/s)

- Flow 1 (95th percentile 114.98 ms)
- Flow 2 (95th percentile 115.58 ms)
- Flow 3 (95th percentile 119.02 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2018-02-16 12:34:50
End at: 2018-02-16 12:35:20
Local clock offset: -4.223 ms
Remote clock offset: 0.406 ms


# Below is generated by plot.py at 2018-02-16 18:37:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.49 Mbit/s
95th percentile per-packet one-way delay: 113.343 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 45.68 Mbit/s
95th percentile per-packet one-way delay: 112.210 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 21.99 Mbit/s
95th percentile per-packet one-way delay: 113.336 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 114.344 ms
Loss rate: 2.92%
```
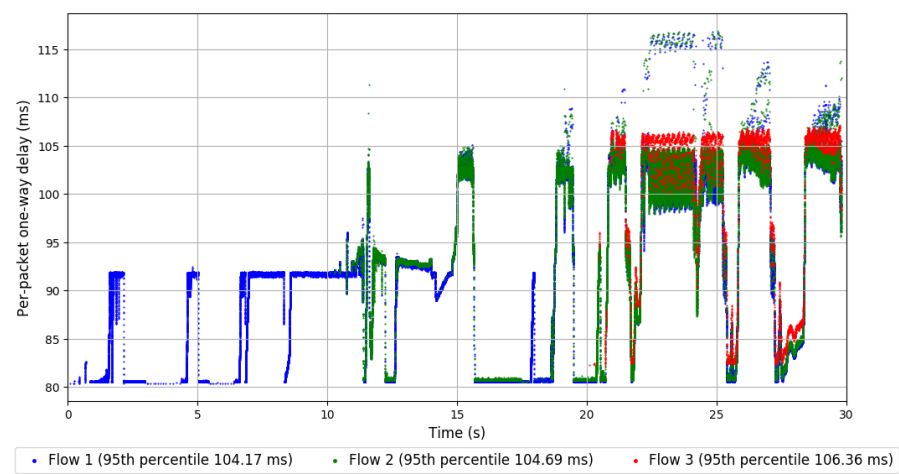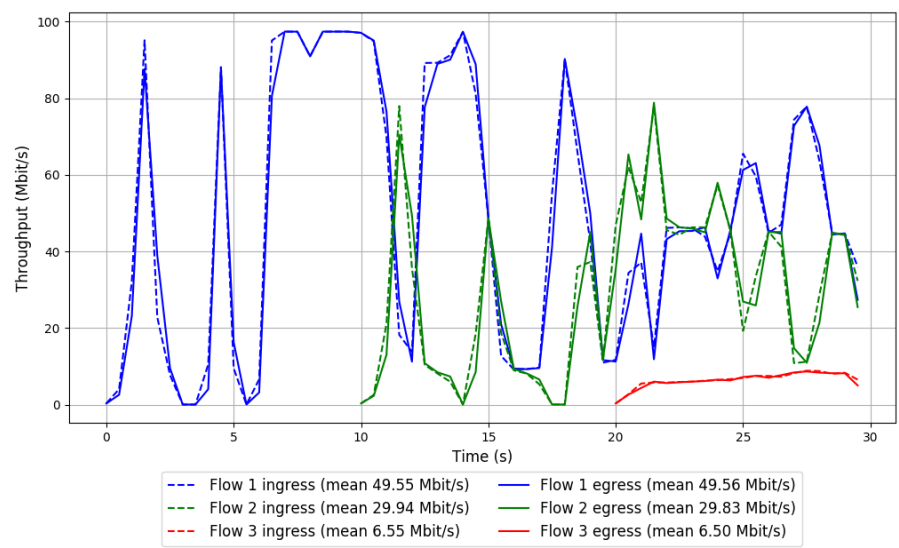
Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-02-16 12:58:20
End at: 2018-02-16 12:58:50
Local clock offset: -6.788 ms
Remote clock offset: -0.002 ms


# Below is generated by plot.py at 2018-02-16 18:38:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.27 Mbit/s
95th percentile per-packet one-way delay: 112.807 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 34.89 Mbit/s
95th percentile per-packet one-way delay: 112.700 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 40.70 Mbit/s
95th percentile per-packet one-way delay: 112.592 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 32.04 Mbit/s
95th percentile per-packet one-way delay: 113.067 ms
Loss rate: 2.01%
```
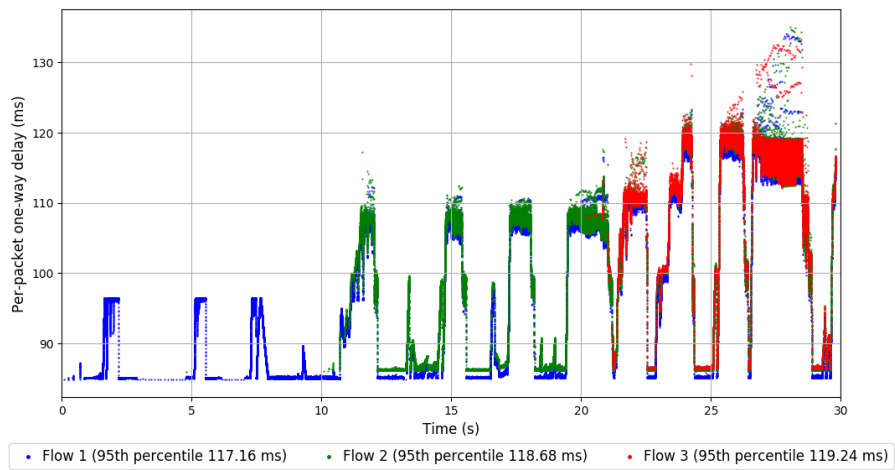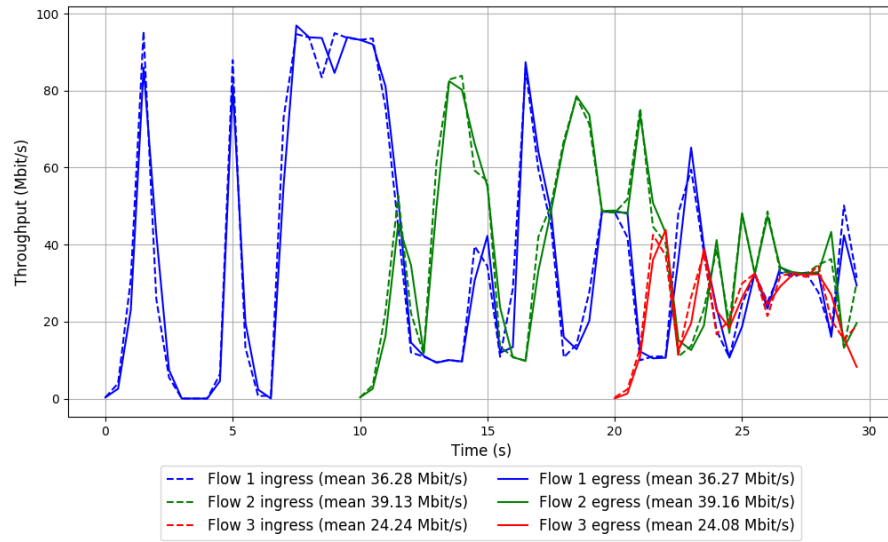
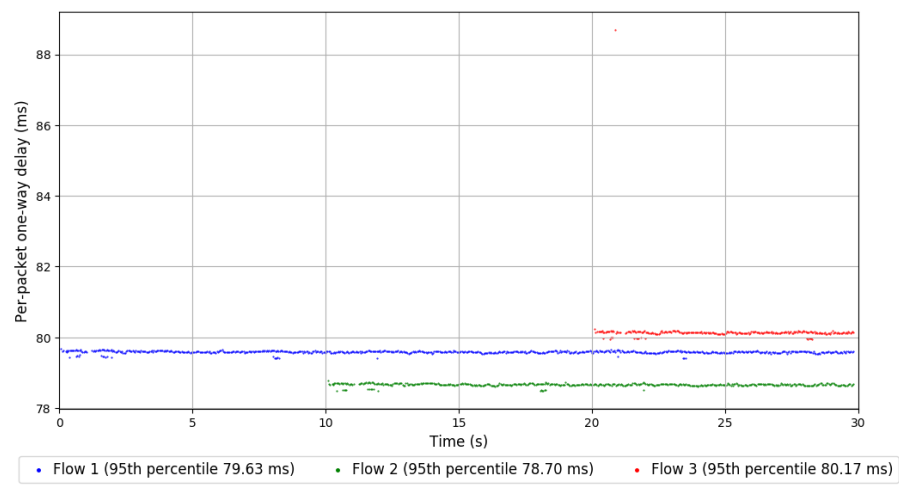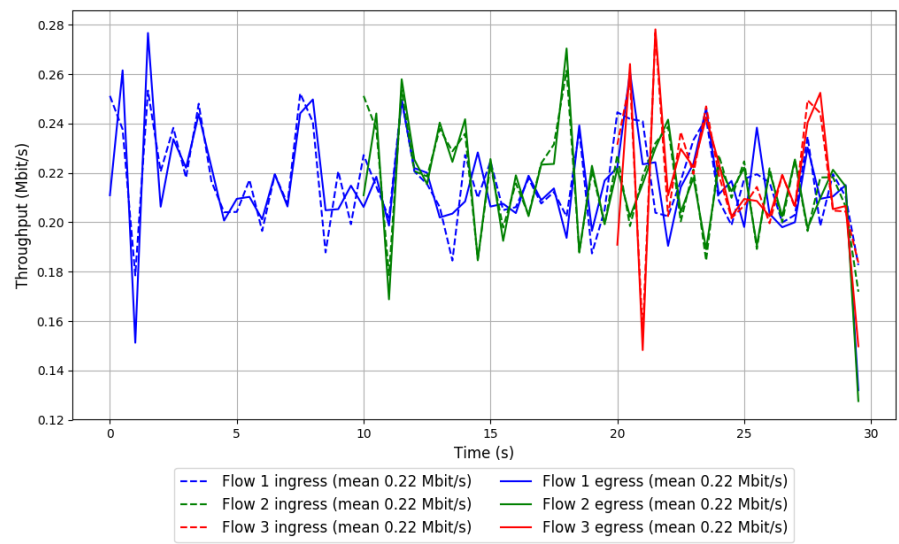Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2018-02-16 13:22:07
End at: 2018-02-16 13:22:37
Local clock offset: -7.195 ms
Remote clock offset: -0.335 ms


# Below is generated by plot.py at 2018-02-16 18:38:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.86 Mbit/s
95th percentile per-packet one-way delay: 90.451 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 36.00 Mbit/s
95th percentile per-packet one-way delay: 90.018 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 92.574 ms
Loss rate: 3.22%
-- Flow 3:
Average throughput: 13.03 Mbit/s
95th percentile per-packet one-way delay: 80.800 ms
Loss rate: 2.85%
```
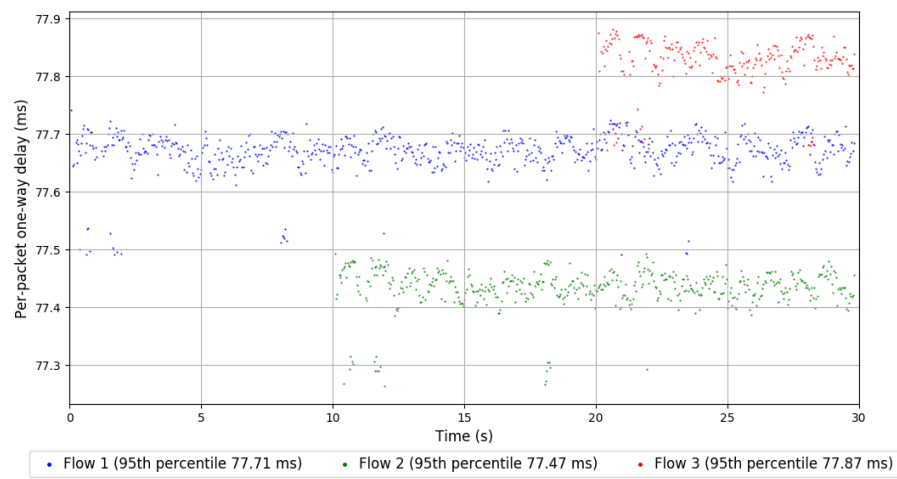
Run 8: Report of QUIC Cubic — Data Link
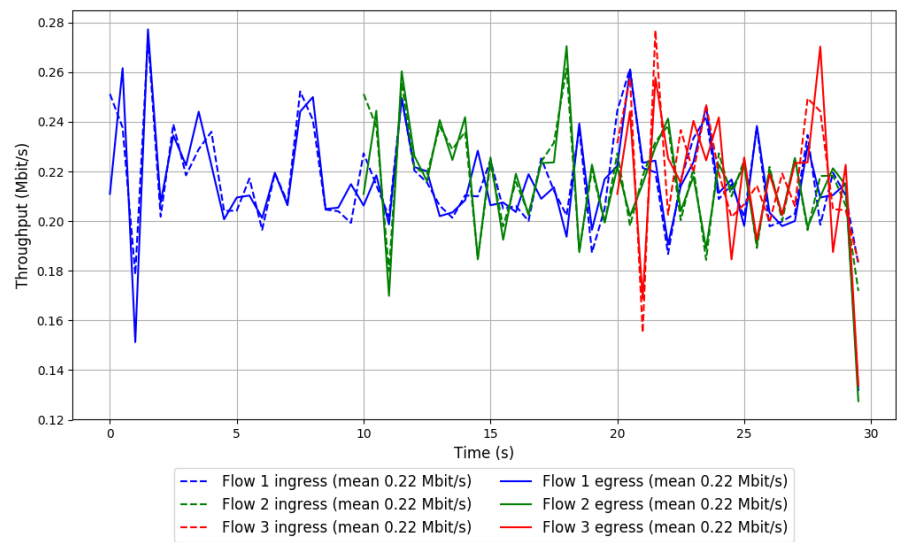
```
Run 9: Statistics of QUIC Cubic

Start at: 2018-02-16 13:45:45
End at: 2018-02-16 13:46:15
Local clock offset: -7.167 ms
Remote clock offset: -0.4 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.44 Mbit/s
95th percentile per-packet one-way delay: 104.538 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 49.56 Mbit/s
95th percentile per-packet one-way delay: 104.167 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 104.687 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 106.364 ms
Loss rate: 2.56%
```
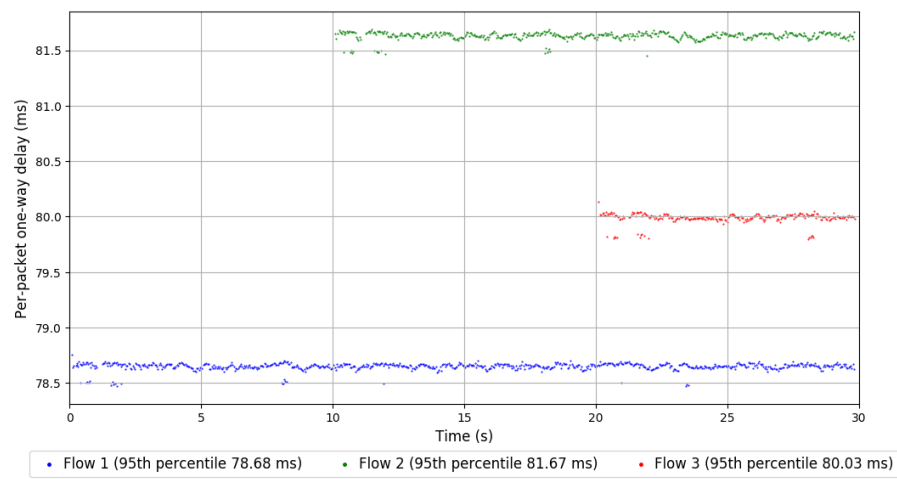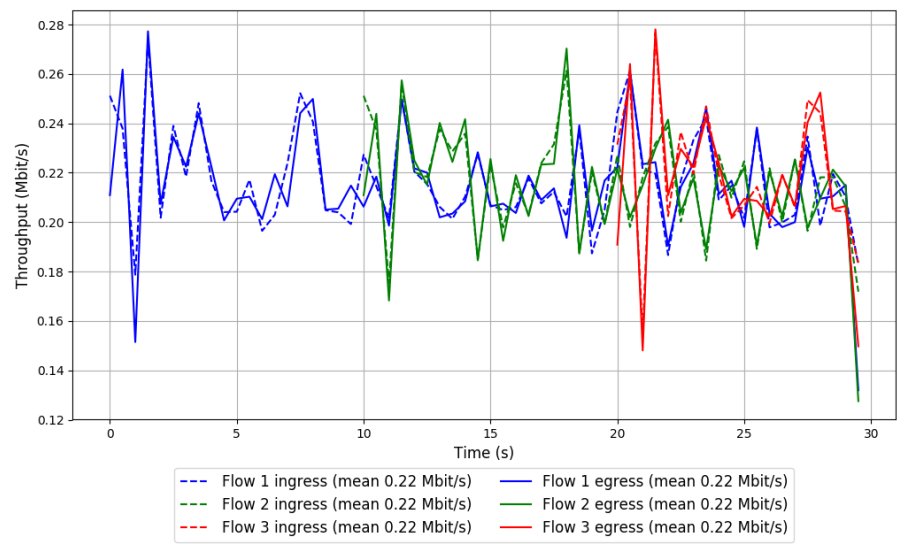
Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.55 Mbit/s) --- Flow 1 egress (mean 49.56 Mbit/s)
Flow 2 ingress (mean 29.94 Mbit/s) --- Flow 2 egress (mean 29.83 Mbit/s)
Flow 3 ingress (mean 6.55 Mbit/s) --- Flow 3 egress (mean 6.50 Mbit/s)

Flow 1 (95th percentile 104.17 ms)   Flow 2 (95th percentile 104.69 ms)   Flow 3 (95th percentile 106.36 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-02-16 14:09:20
End at: 2018-02-16 14:09:50
Local clock offset: -6.644 ms
Remote clock offset: -3.48 ms

# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.05 Mbit/s
95th percentile per-packet one-way delay: 118.312 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 117.156 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 39.16 Mbit/s
95th percentile per-packet one-way delay: 118.681 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 24.08 Mbit/s
95th percentile per-packet one-way delay: 119.241 ms
Loss rate: 2.72%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 36.28 Mbit/s) — Flow 1 egress (mean 36.27 Mbit/s)
Flow 2 ingress (mean 39.13 Mbit/s) — Flow 2 egress (mean 39.16 Mbit/s)
Flow 3 ingress (mean 24.24 Mbit/s) — Flow 3 egress (mean 24.08 Mbit/s)

Flow 1 (95th percentile 117.16 ms) — Flow 2 (95th percentile 118.68 ms) — Flow 3 (95th percentile 119.24 ms)

```
Run 1: Statistics of SCReAM

Start at: 2018-02-16 10:42:38
End at: 2018-02-16 10:43:08
Local clock offset: -6.771 ms
Remote clock offset: 1.658 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.149 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.627 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.702 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.175 ms
Loss rate: 1.50%
```
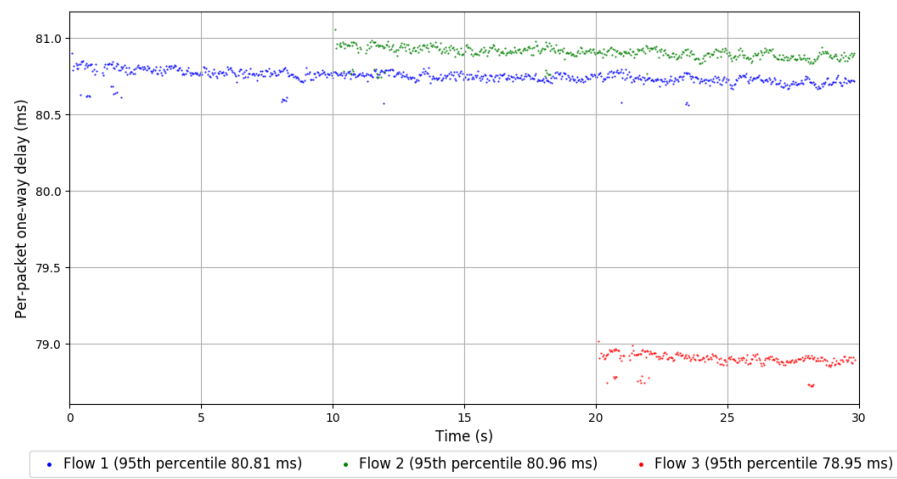
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-02-16 11:06:08
End at: 2018-02-16 11:06:38
Local clock offset: -7.073 ms
Remote clock offset: 2.77 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 77.846 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.706 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.474 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.869 ms
Loss rate: 1.50%
```
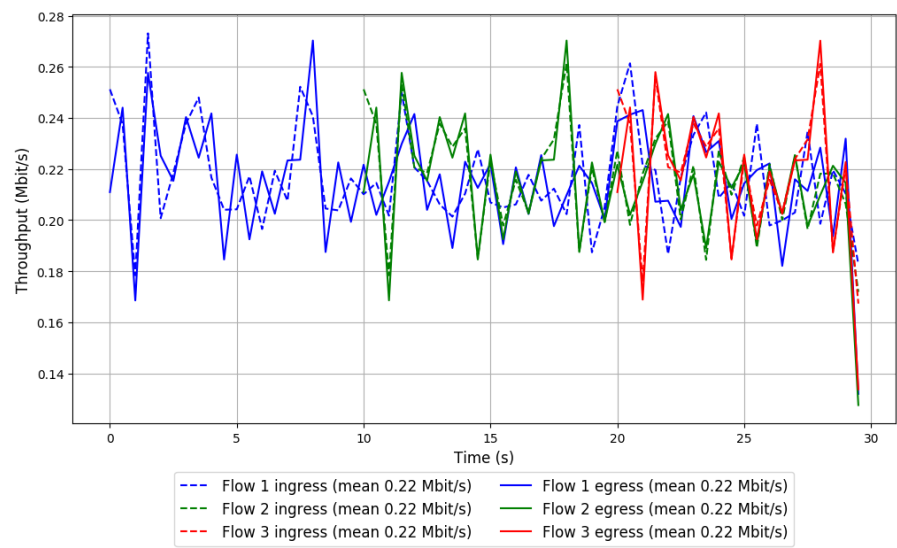
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-02-16 11:29:39
End at: 2018-02-16 11:30:09
Local clock offset: -7.513 ms
Remote clock offset: 1.762 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 81.658 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.682 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.669 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.032 ms
Loss rate: 1.50%
```
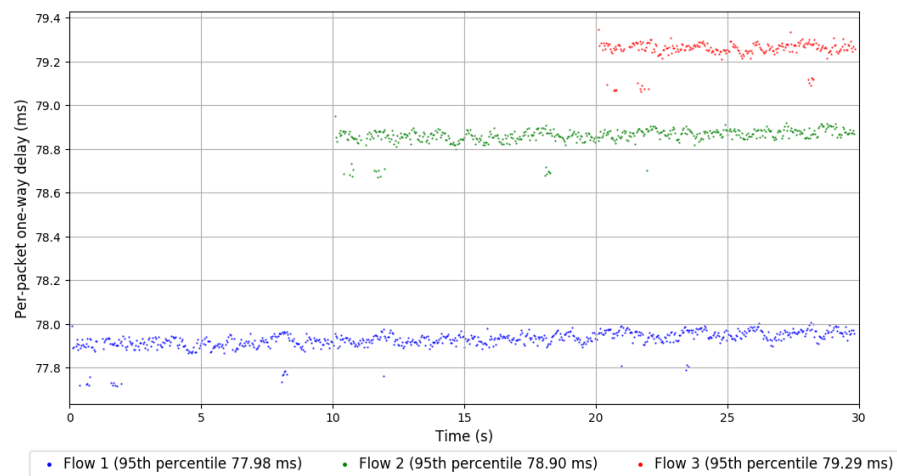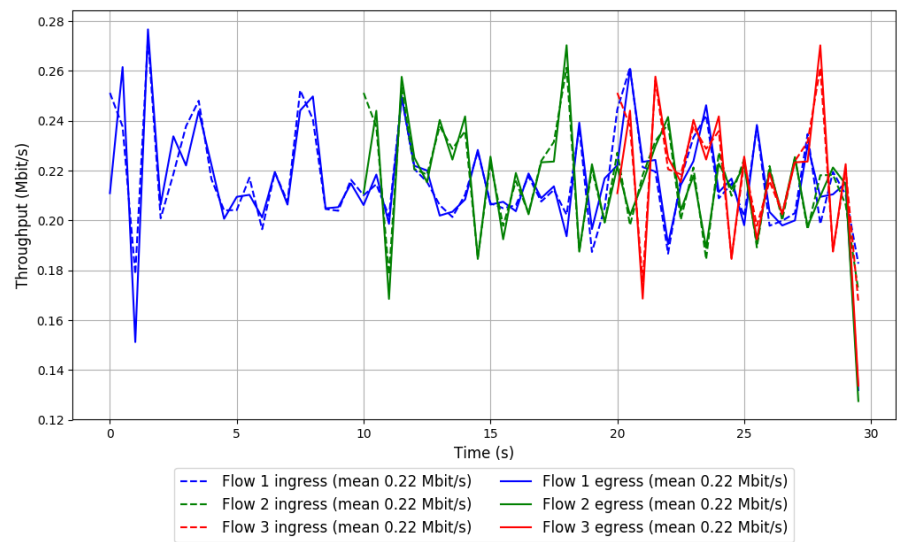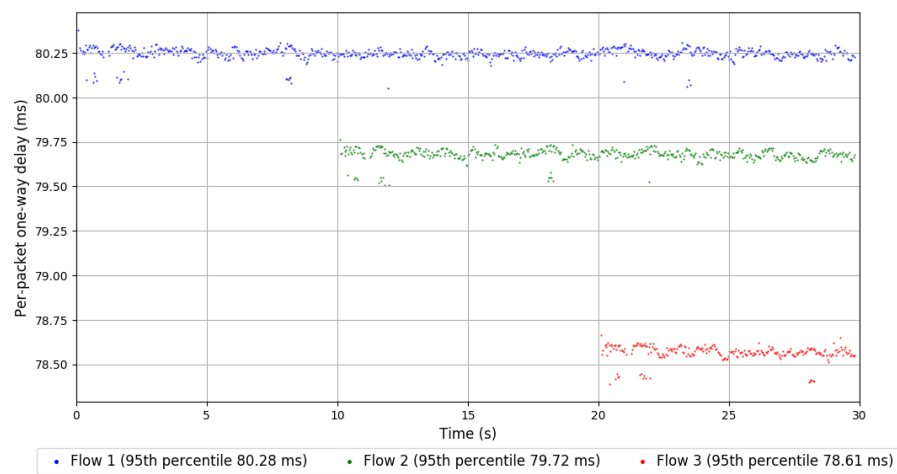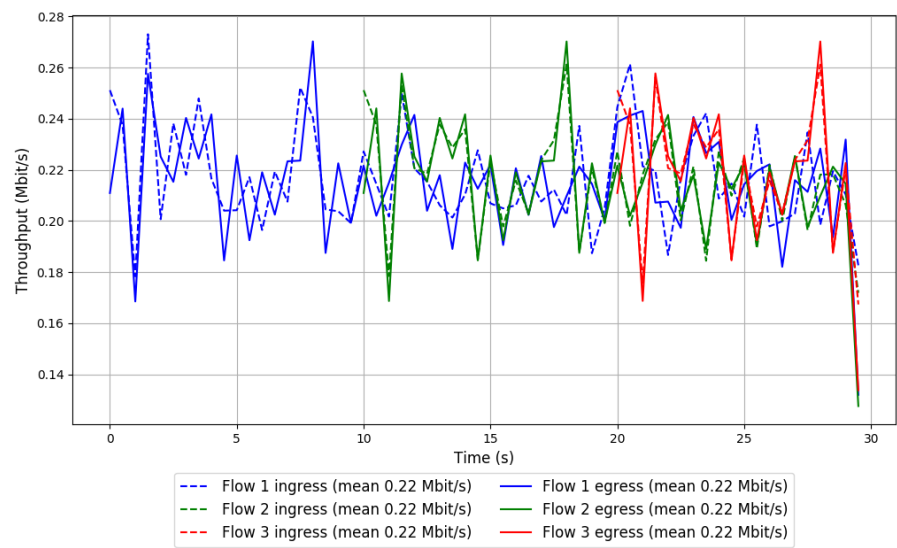
Run 3: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 78.68 ms)   Flow 2 (95th percentile 81.67 ms)   Flow 3 (95th percentile 80.03 ms)

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```
Run 4: Statistics of SCReAM

Start at: 2018-02-16 11:53:07
End at: 2018-02-16 11:53:37
Local clock offset: -7.914 ms
Remote clock offset: 1.318 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 78.398 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.400 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.383 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.398 ms
Loss rate: 1.49%
```
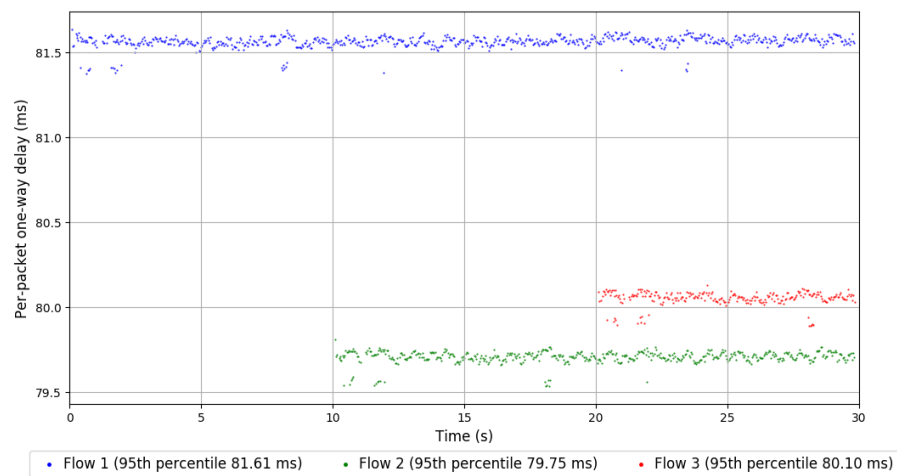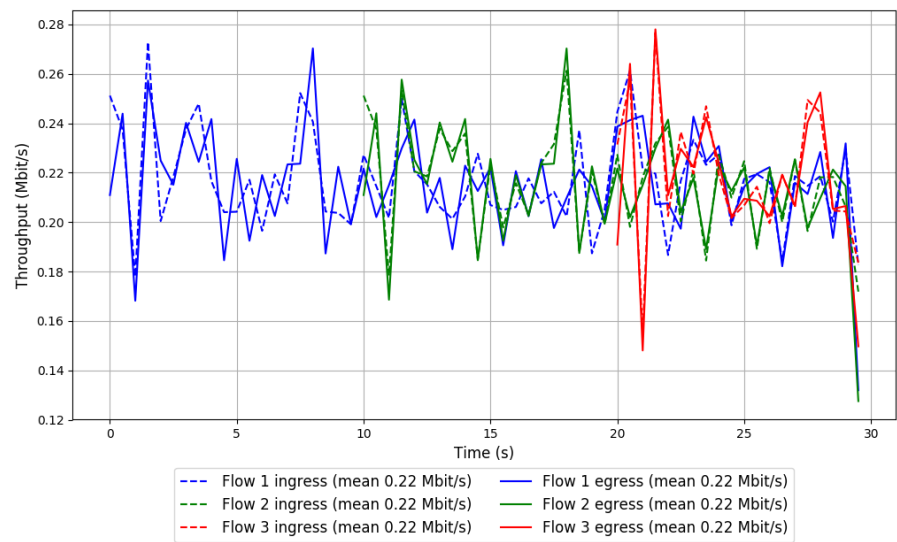
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-02-16 12:16:35
End at: 2018-02-16 12:17:05
Local clock offset: -4.521 ms
Remote clock offset: 0.216 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.942 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.813 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.958 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.955 ms
Loss rate: 1.50%
```
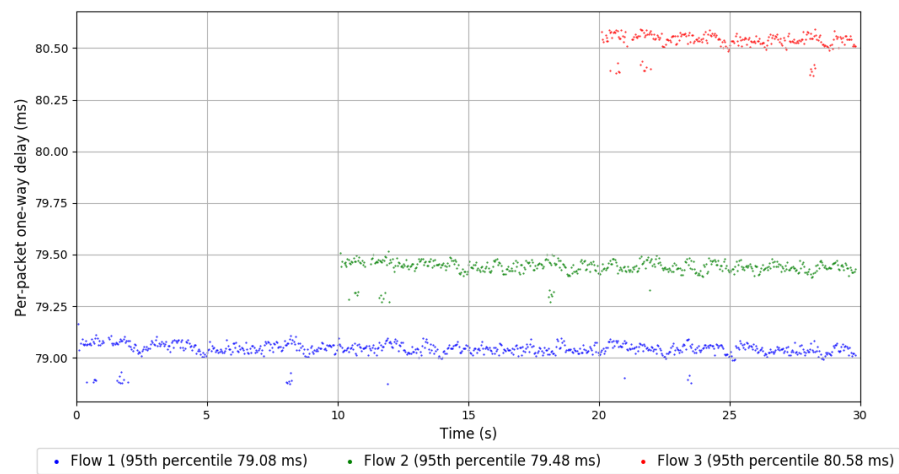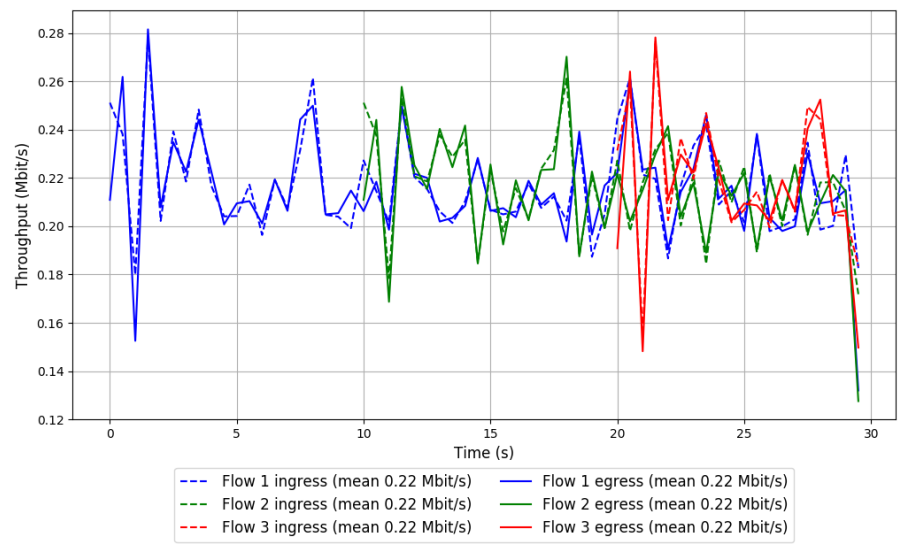
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-02-16 12:40:03
End at: 2018-02-16 12:40:33
Local clock offset: -5.422 ms
Remote clock offset: 1.139 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 79.274 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.977 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.899 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.294 ms
Loss rate: 1.50%
```

Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2018-02-16 13:03:34
End at: 2018-02-16 13:04:04
Local clock offset: -6.947 ms
Remote clock offset: -0.164 ms

# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.278 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.284 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.721 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.611 ms
Loss rate: 1.50%
```
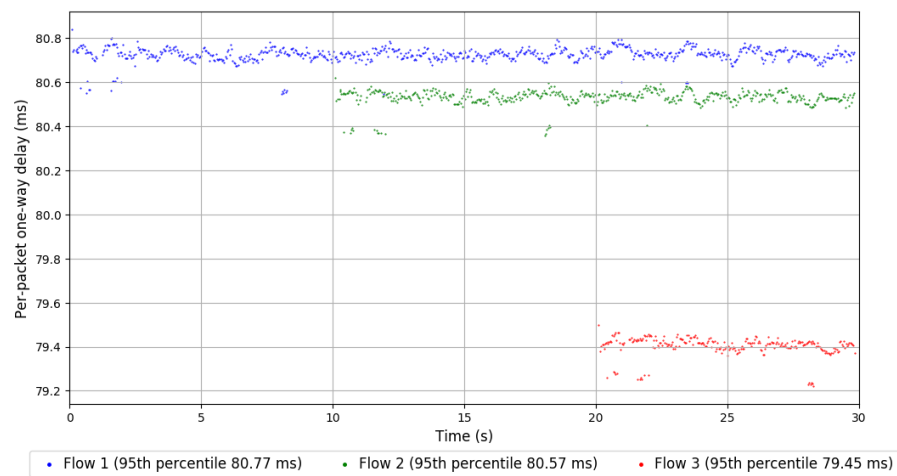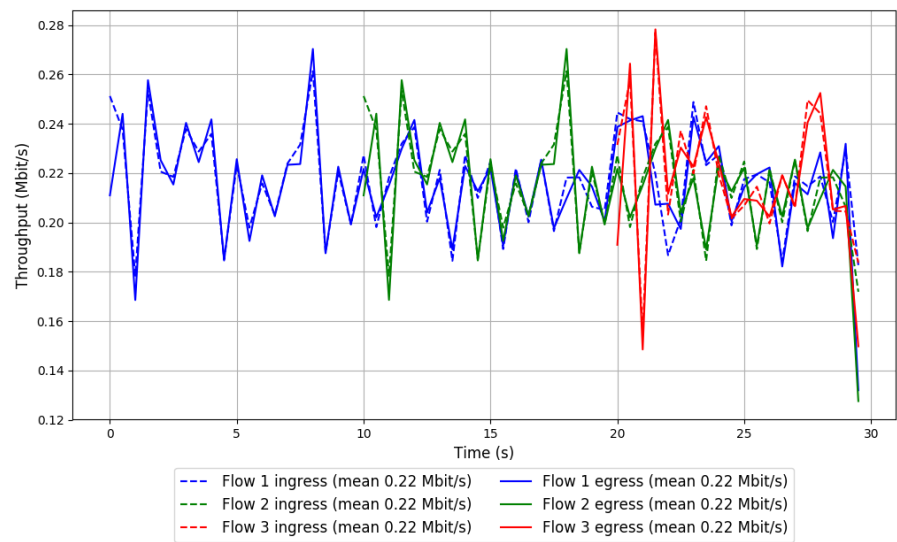
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2018-02-16 13:27:21
End at: 2018-02-16 13:27:51
Local clock offset: -7.264 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 81.600 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.607 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.750 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.101 ms
Loss rate: 1.50%
```
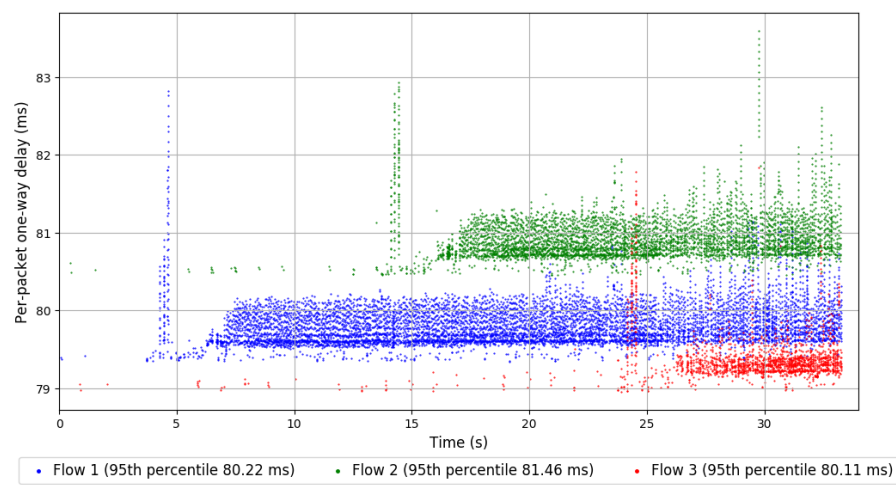
Run 8: Report of SCReAM — Data Link

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```
Run 9: Statistics of SCReAM

Start at: 2018-02-16 13:51:00
End at: 2018-02-16 13:51:30
Local clock offset: -6.951 ms
Remote clock offset: -0.371 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.558 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.082 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.480 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.581 ms
Loss rate: 1.50%
```
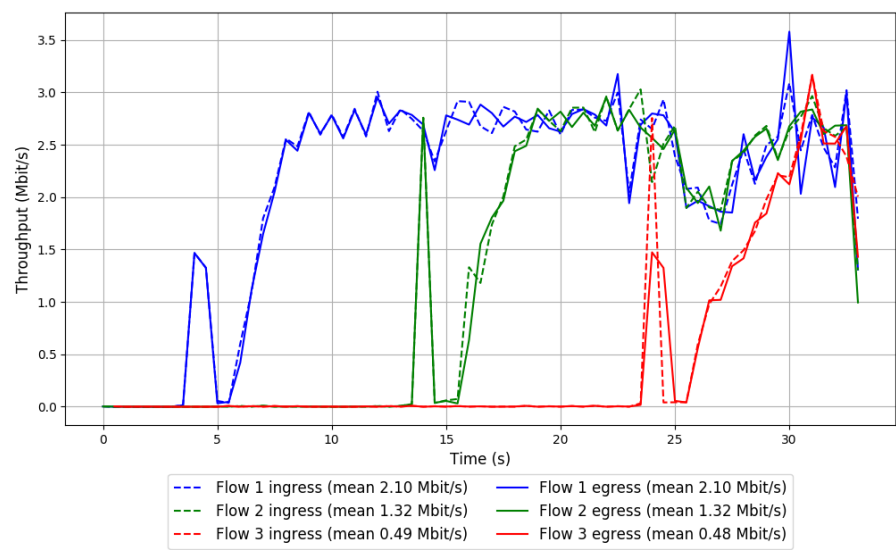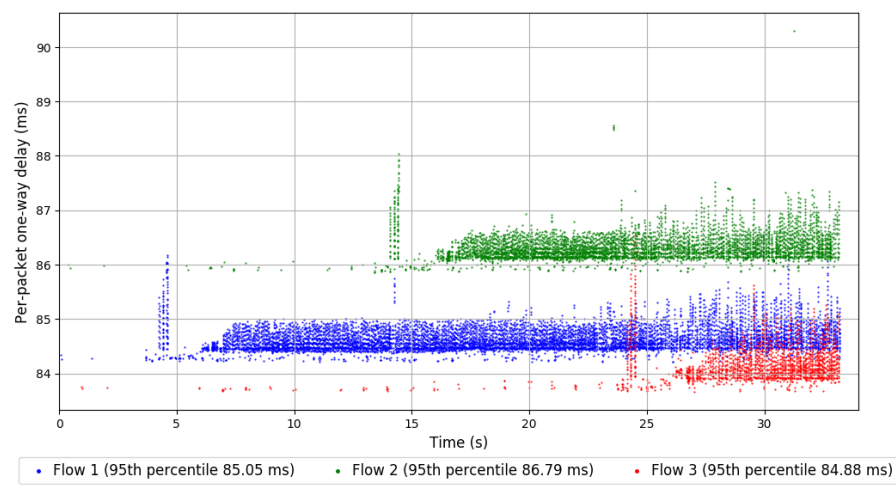
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-02-16 14:14:34
End at: 2018-02-16 14:15:04
Local clock offset: -6.637 ms
Remote clock offset: 0.764 ms

# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 80.758 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.768 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.569 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.449 ms
Loss rate: 1.50%
```
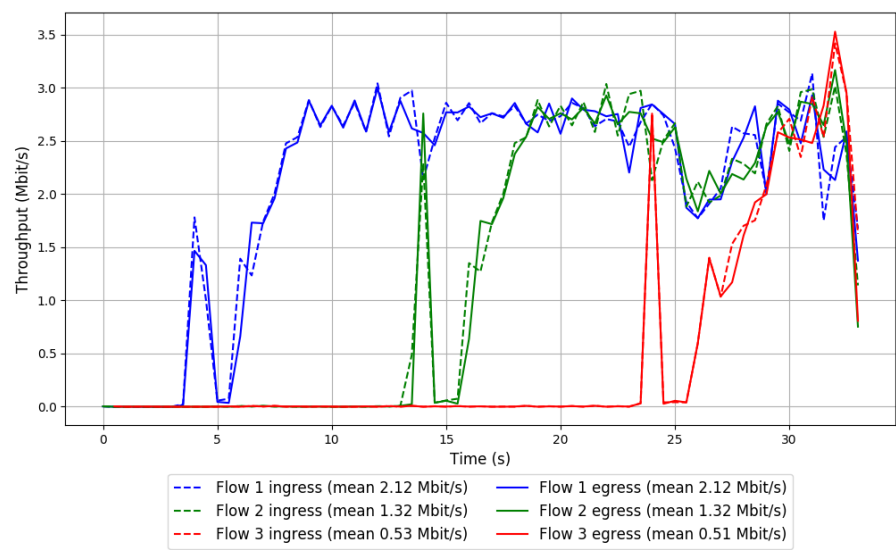
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-02-16 10:55:44
End at: 2018-02-16 10:56:14
Local clock offset: -6.876 ms
Remote clock offset: 0.859 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 81.182 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 80.216 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 81.460 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 80.107 ms
Loss rate: 2.71%
```
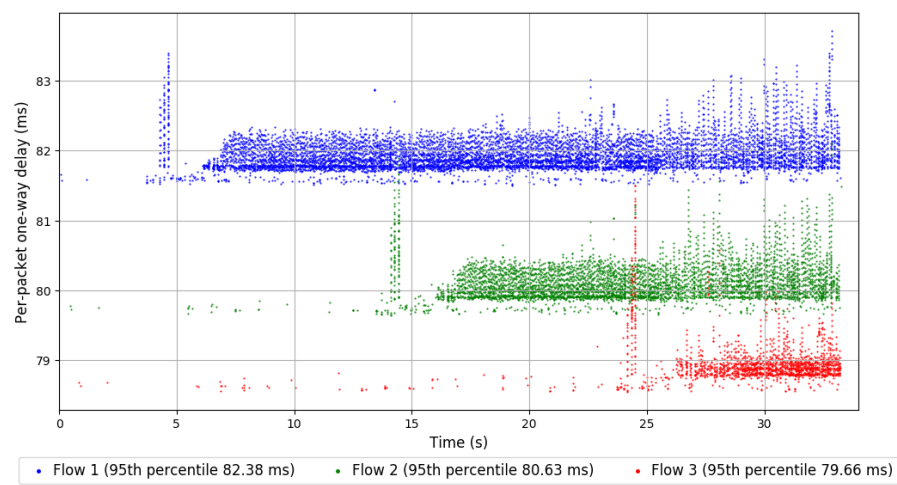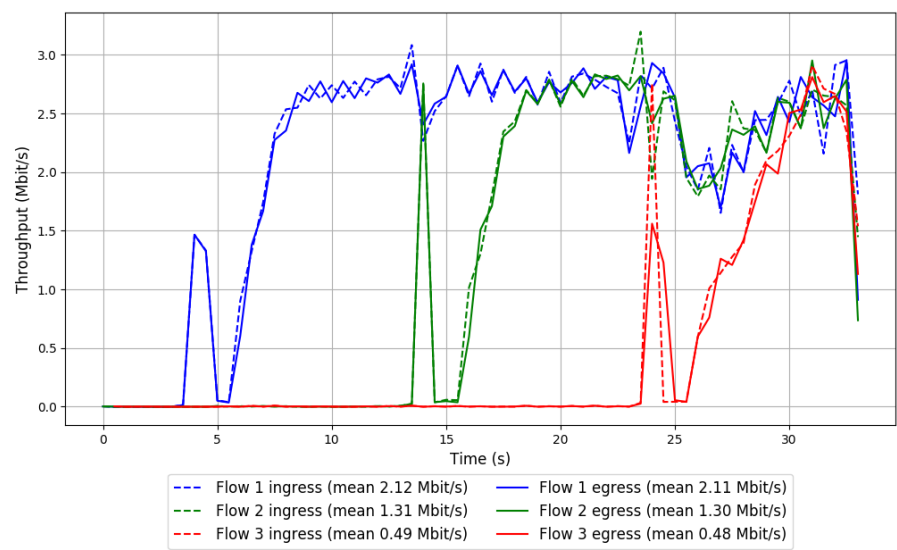
Run 1: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.10 Mbit/s)   Flow 1 egress (mean 2.10 Mbit/s)
Flow 2 ingress (mean 1.32 Mbit/s)   Flow 2 egress (mean 1.32 Mbit/s)
Flow 3 ingress (mean 0.49 Mbit/s)   Flow 3 egress (mean 0.48 Mbit/s)

Flow 1 (95th percentile 80.22 ms)   Flow 2 (95th percentile 81.46 ms)   Flow 3 (95th percentile 80.11 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2018-02-16 11:19:14
End at: 2018-02-16 11:19:44
Local clock offset: -7.219 ms
Remote clock offset: -4.042 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 86.541 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 85.049 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 86.793 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 84.879 ms
Loss rate: 3.60%
```
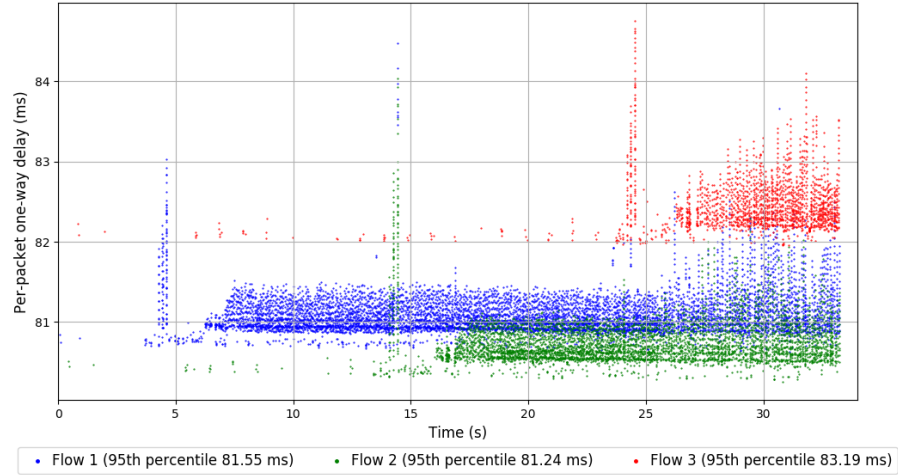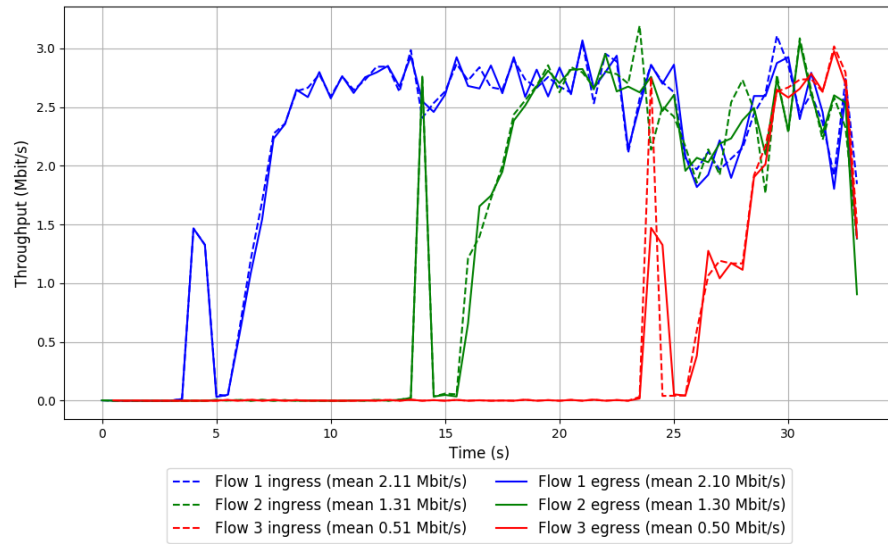
Run 2: Report of WebRTC media — Data Link
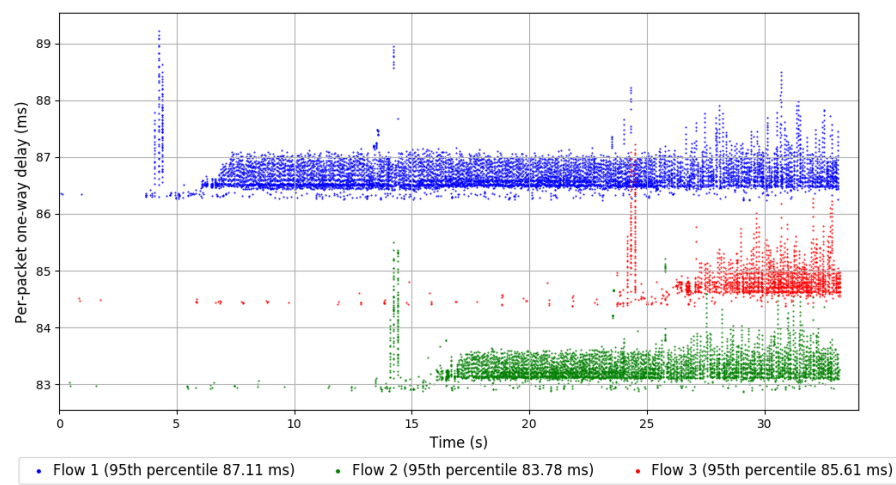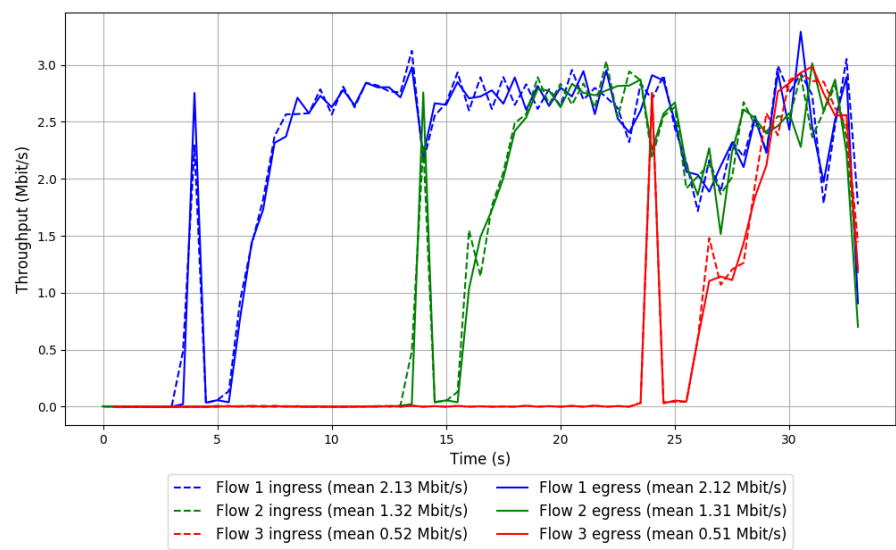
```
Run 3: Statistics of WebRTC media

Start at: 2018-02-16 11:42:43
End at: 2018-02-16 11:43:13
Local clock offset: -7.775 ms
Remote clock offset: 1.604 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.86 Mbit/s
95th percentile per-packet one-way delay: 82.241 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 82.375 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 80.628 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 79.663 ms
Loss rate: 2.45%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-02-16 12:06:10
End at: 2018-02-16 12:06:40
Local clock offset: -5.909 ms
Remote clock offset: 0.234 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 82.513 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 81.545 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 81.237 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 83.190 ms
Loss rate: 2.19%
```
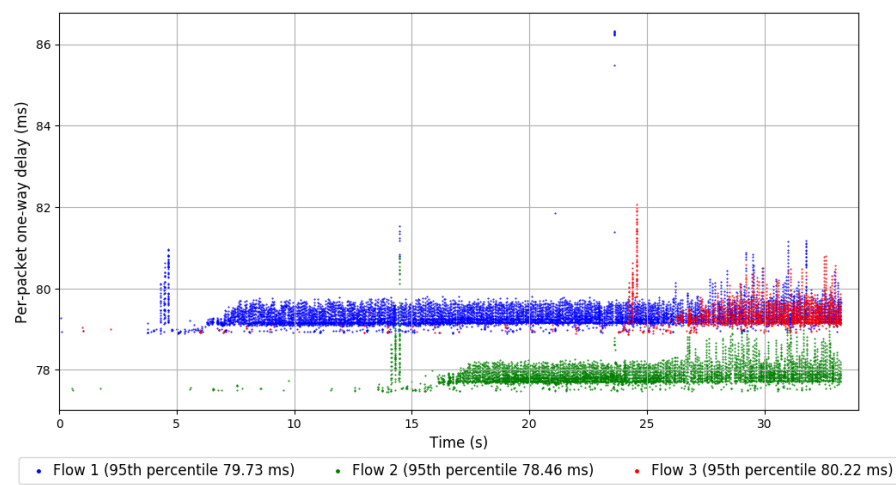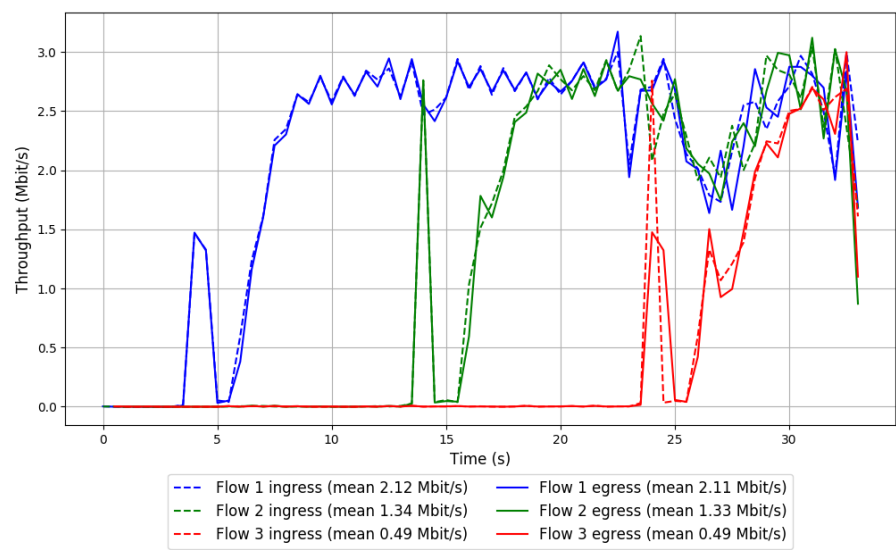
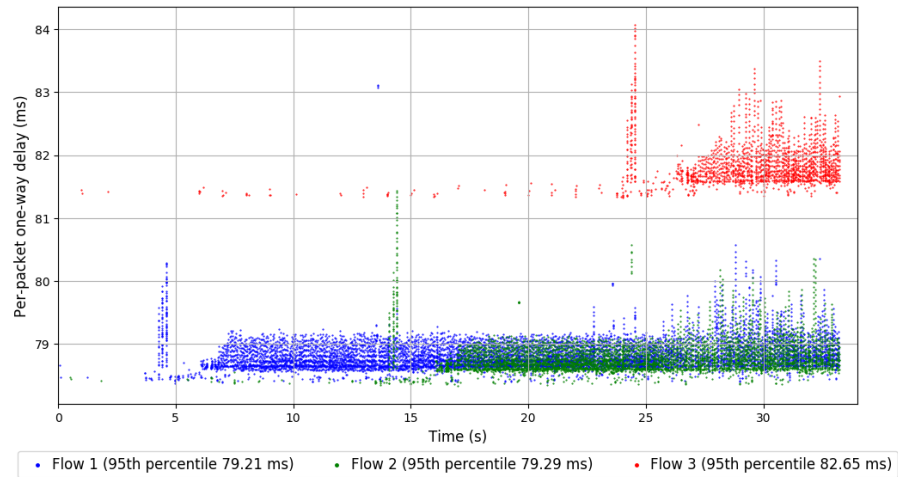Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-02-16 12:29:39
End at: 2018-02-16 12:30:09
Local clock offset: -3.77 ms
Remote clock offset: -4.428 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 86.999 ms
Loss rate: 1.15%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 87.111 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 83.777 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 85.607 ms
Loss rate: 1.85%
```
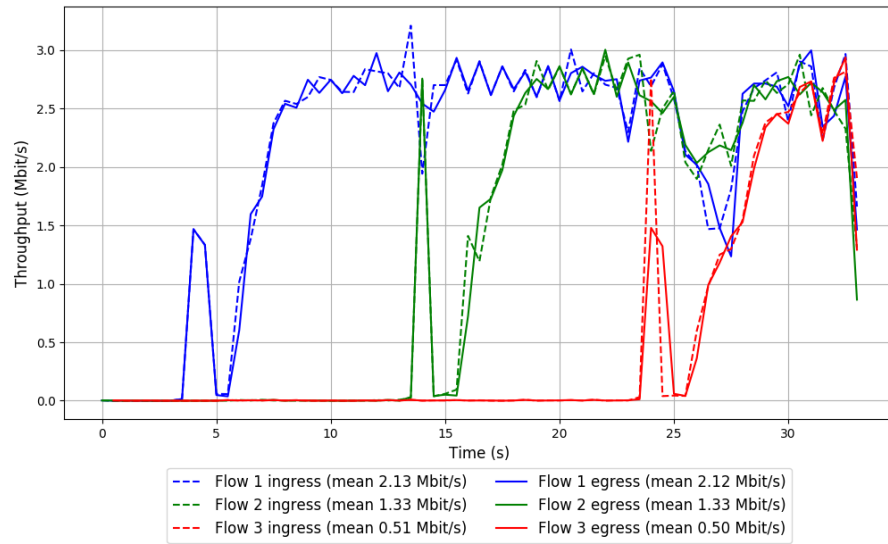
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-02-16 12:53:09
End at: 2018-02-16 12:53:39
Local clock offset: -6.669 ms
Remote clock offset: 0.833 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 79.719 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 79.732 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 78.462 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 80.221 ms
Loss rate: 2.49%
```
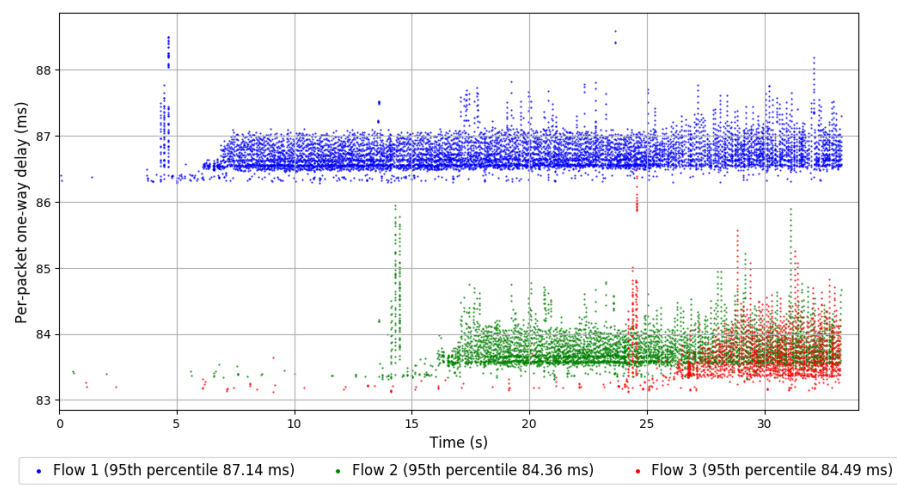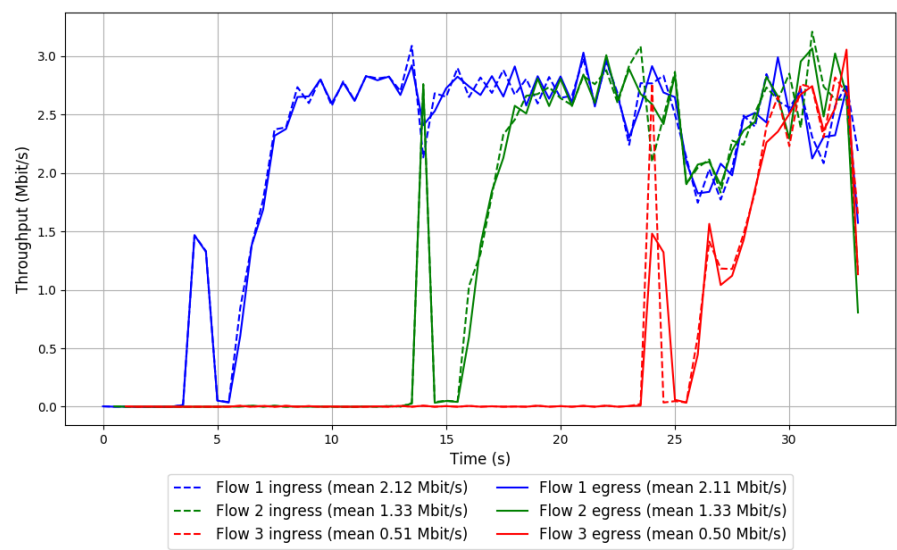
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-02-16 13:16:54
End at: 2018-02-16 13:17:24
Local clock offset: -7.128 ms
Remote clock offset: -0.337 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 81.872 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 79.207 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 79.293 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 82.650 ms
Loss rate: 3.00%
```
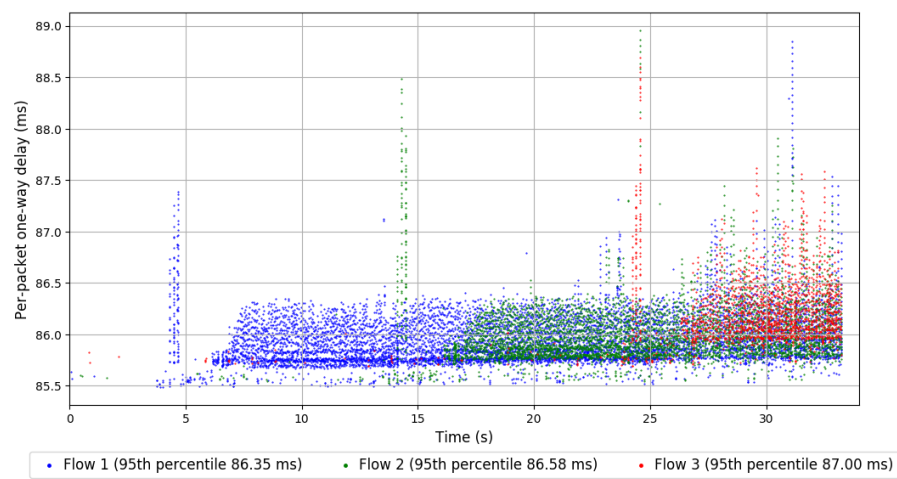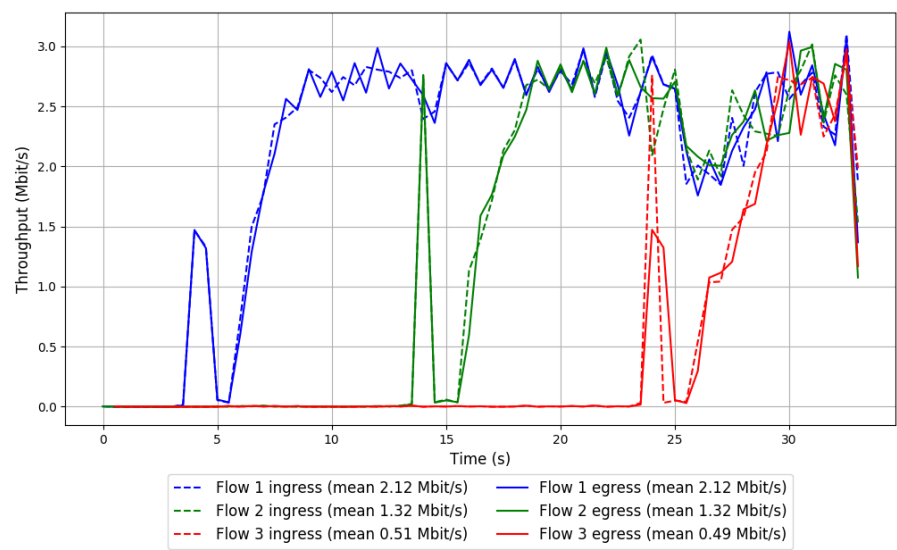
Run 7: Report of WebRTC media — Data Link

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```
Run 8: Statistics of WebRTC media

Start at: 2018-02-16 13:40:33
End at: 2018-02-16 13:41:03
Local clock offset: -7.495 ms
Remote clock offset: -4.582 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 87.028 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 87.138 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 84.360 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 84.493 ms
Loss rate: 2.45%
```
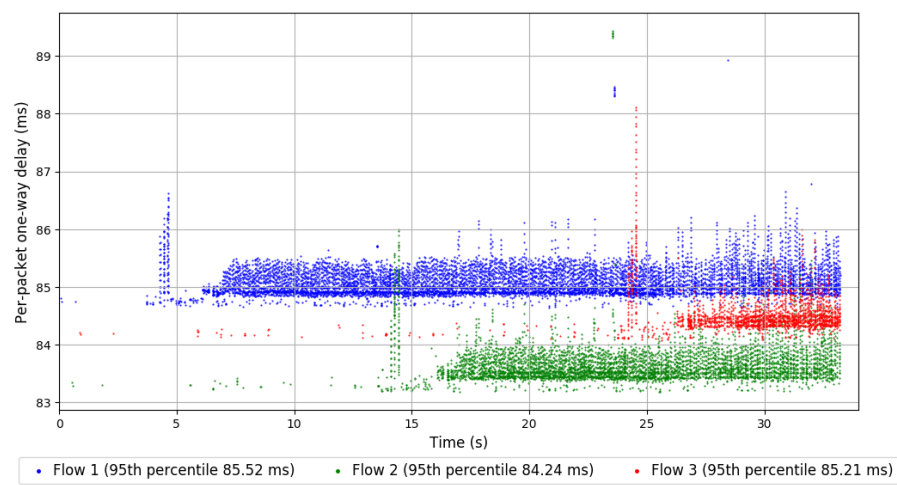
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-02-16 14:04:08
End at: 2018-02-16 14:04:38
Local clock offset: -6.666 ms
Remote clock offset: -4.646 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 86.560 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 2.12 Mbit/s
95th percentile per-packet one-way delay: 86.352 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 86.576 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 87.003 ms
Loss rate: 3.63%
```
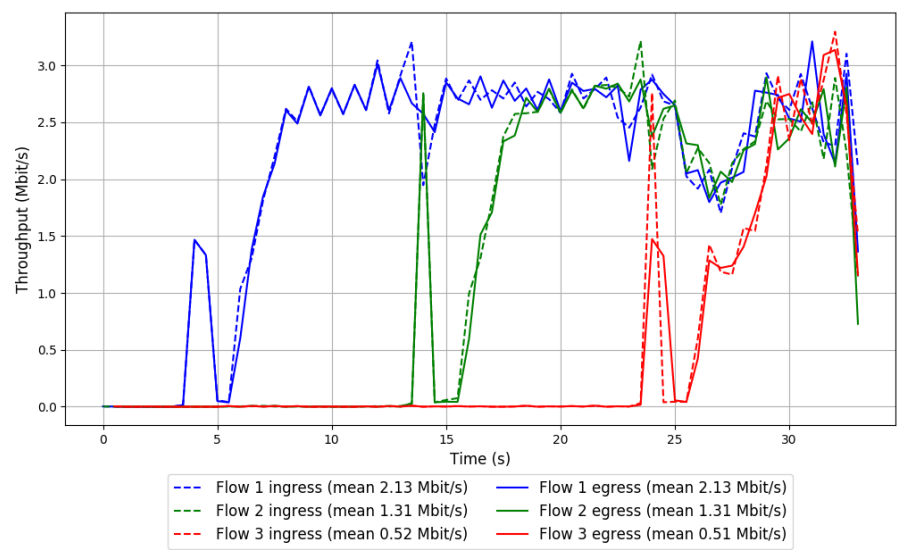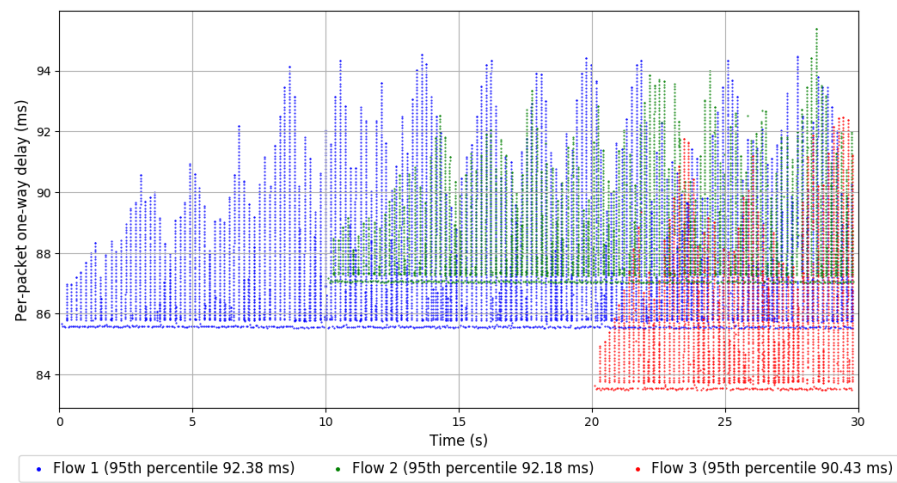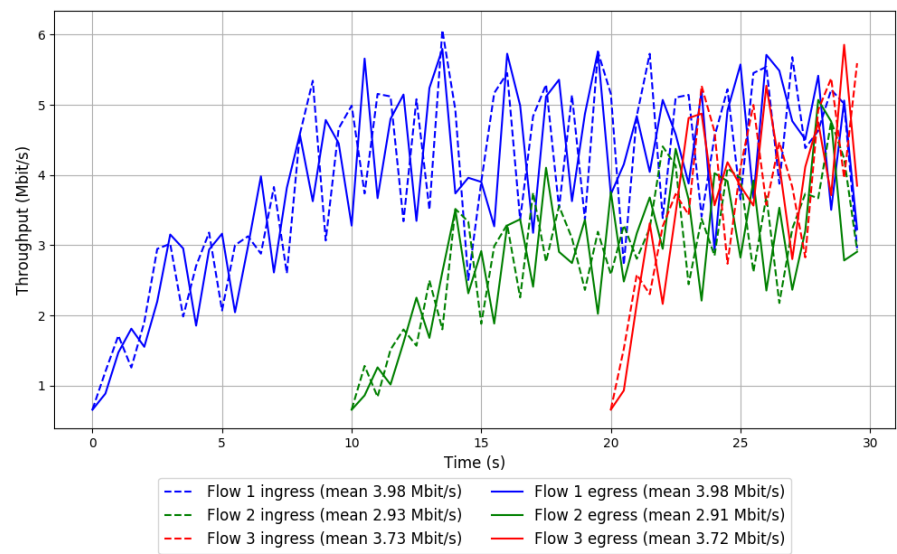
Run 9: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.12 Mbit/s) --- Flow 1 egress (mean 2.12 Mbit/s) ——
Flow 2 ingress (mean 1.32 Mbit/s) --- Flow 2 egress (mean 1.32 Mbit/s) ——
Flow 3 ingress (mean 0.51 Mbit/s) --- Flow 3 egress (mean 0.49 Mbit/s) ——

Flow 1 (95th percentile 86.35 ms) • Flow 2 (95th percentile 86.58 ms) • Flow 3 (95th percentile 87.00 ms)

```
Run 10: Statistics of WebRTC media

Start at: 2018-02-16 14:27:42
End at: 2018-02-16 14:28:12
Local clock offset: -4.494 ms
Remote clock offset: -2.917 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 85.439 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 2.13 Mbit/s
95th percentile per-packet one-way delay: 85.519 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 84.241 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 85.210 ms
Loss rate: 2.22%
```

Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-02-16 10:36:10
End at: 2018-02-16 10:36:40
Local clock offset: -6.944 ms
Remote clock offset: -3.944 ms

# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 92.128 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 92.380 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 92.184 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 3.72 Mbit/s
95th percentile per-packet one-way delay: 90.426 ms
Loss rate: 2.37%
```
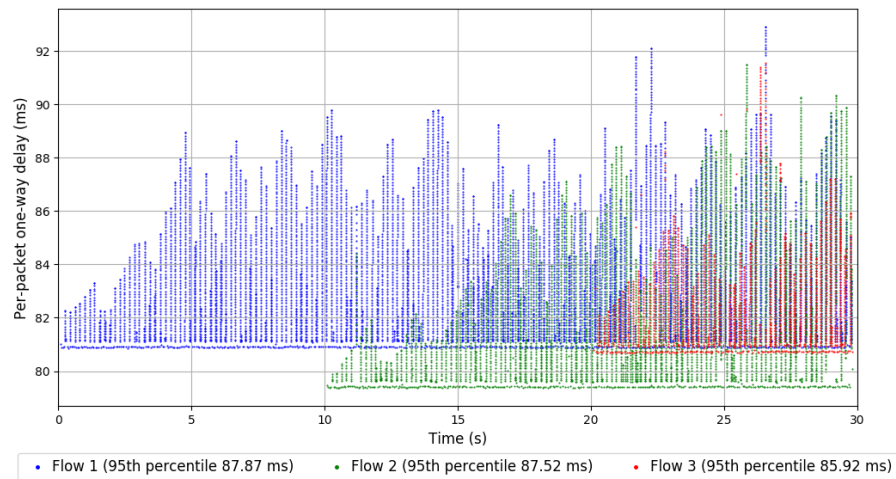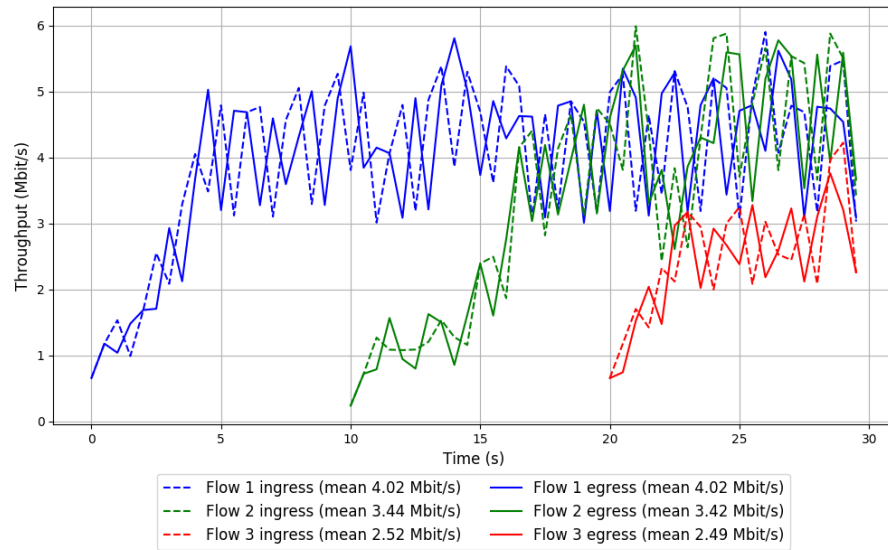
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-02-16 10:59:41
End at: 2018-02-16 11:00:11
Local clock offset: -6.98 ms
Remote clock offset: 0.914 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 87.662 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 87.873 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 3.42 Mbit/s
95th percentile per-packet one-way delay: 87.519 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 2.49 Mbit/s
95th percentile per-packet one-way delay: 85.915 ms
Loss rate: 2.43%
```
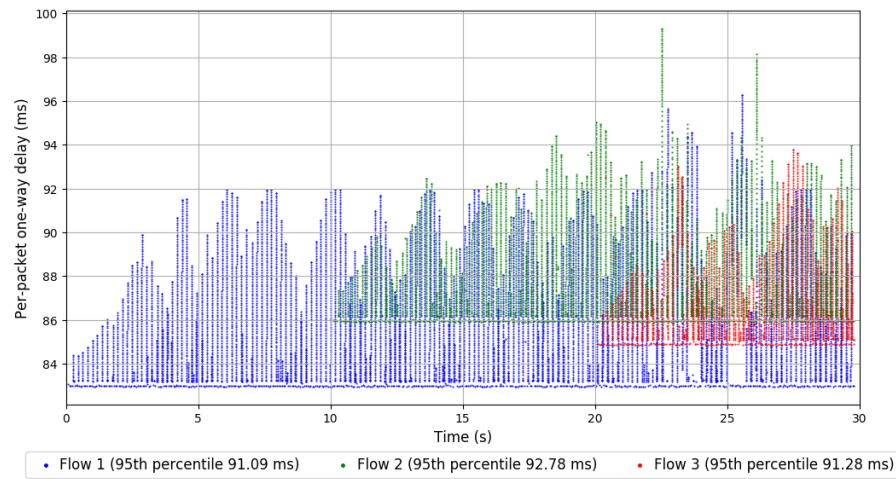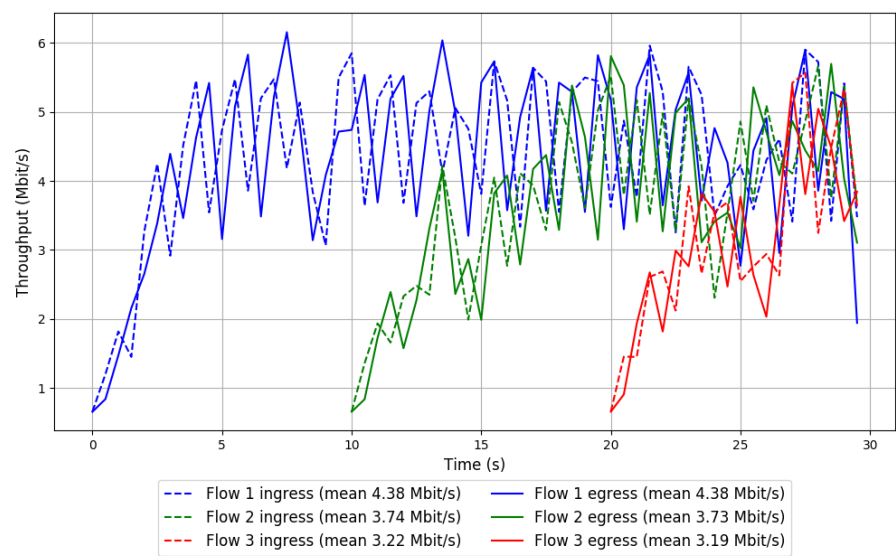
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-02-16 11:23:11
End at: 2018-02-16 11:23:41
Local clock offset: -7.322 ms
Remote clock offset: -3.169 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.89 Mbit/s
95th percentile per-packet one-way delay: 91.821 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 91.090 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 92.777 ms
Loss rate: 1.28%
-- Flow 3:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 91.280 ms
Loss rate: 2.68%
```
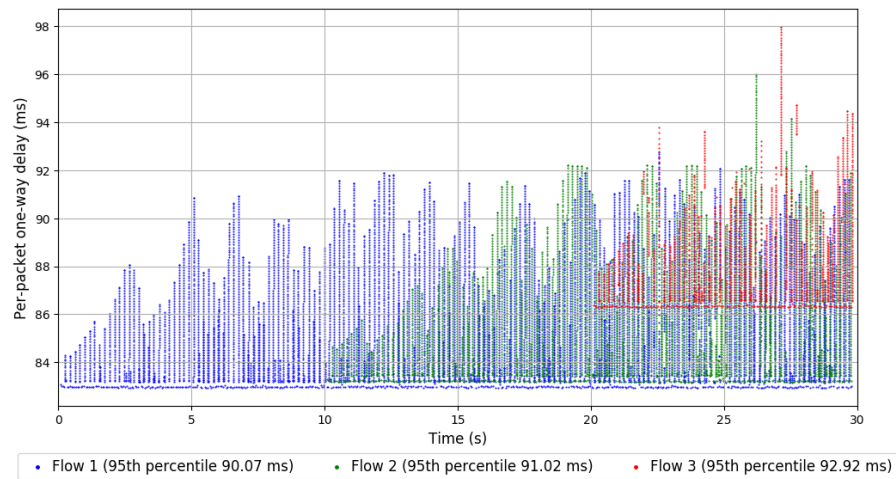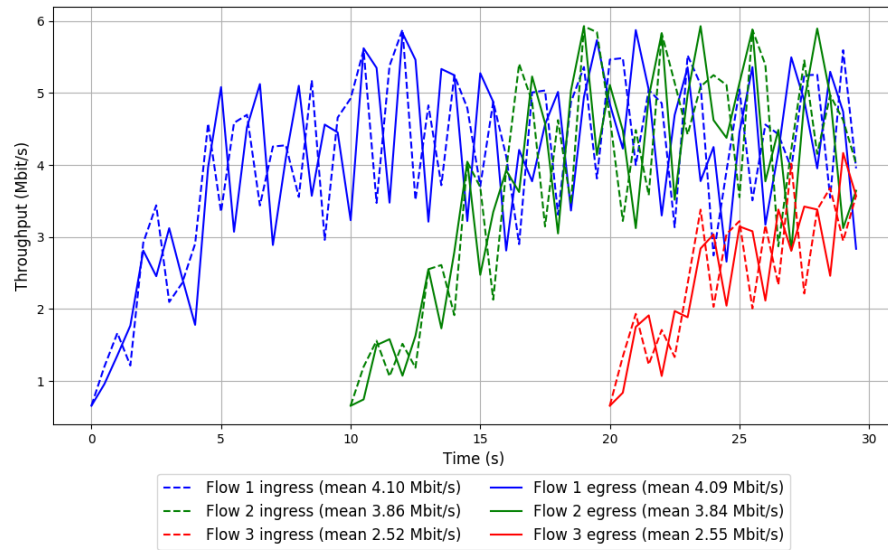
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-02-16 11:46:40
End at: 2018-02-16 11:47:10
Local clock offset: -7.82 ms
Remote clock offset: -3.294 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 90.788 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 90.074 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 91.018 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 92.921 ms
Loss rate: 0.01%
```
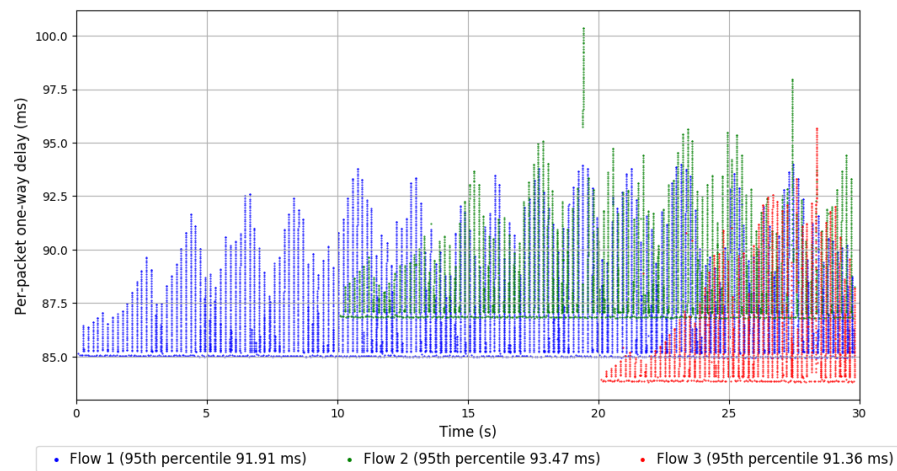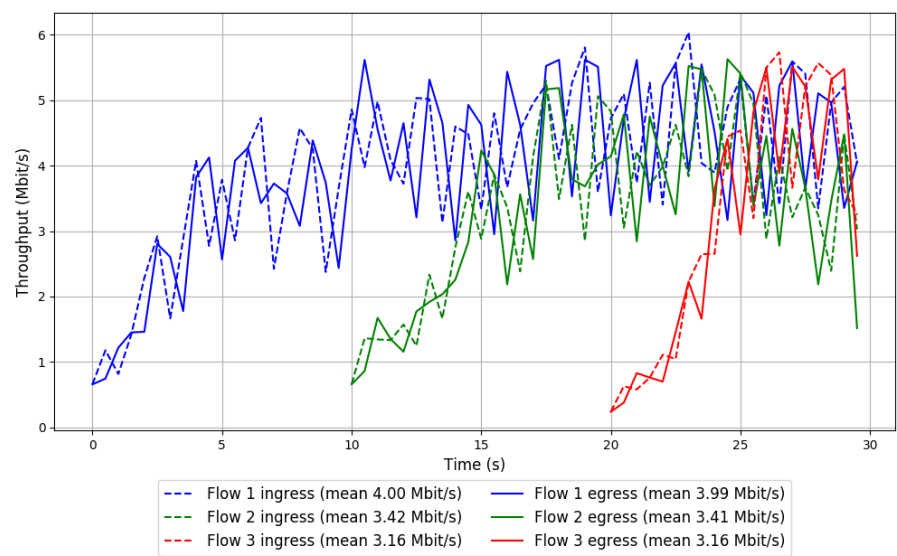
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-02-16 12:10:07
End at: 2018-02-16 12:10:37
Local clock offset: -5.21 ms
Remote clock offset: -4.508 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.28 Mbit/s
95th percentile per-packet one-way delay: 92.462 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 91.906 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 93.467 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 91.355 ms
Loss rate: 1.02%
```
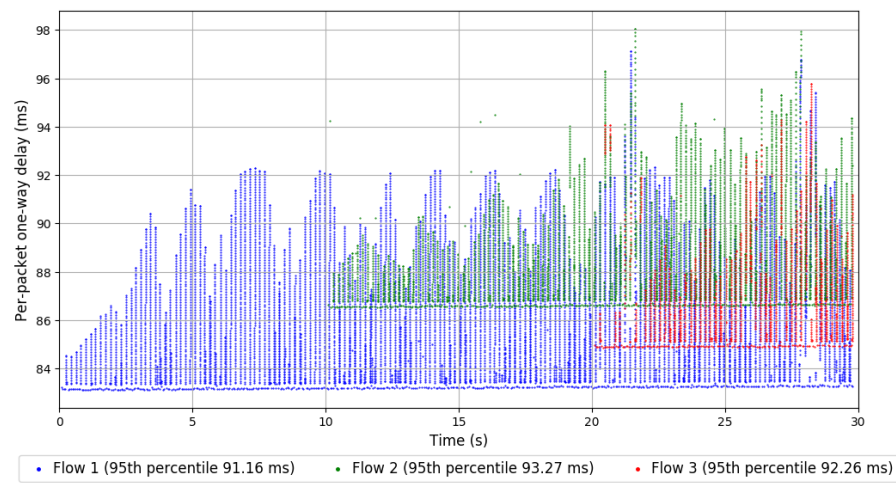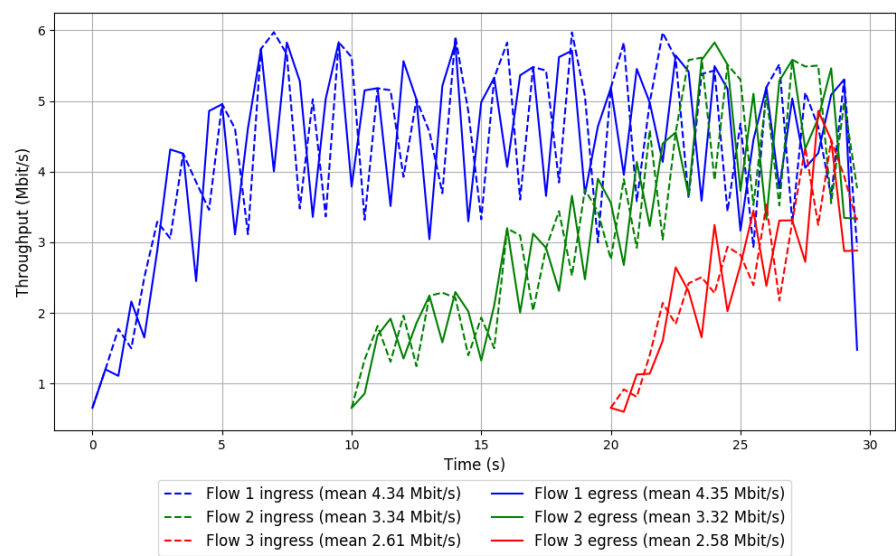
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2018-02-16 12:33:36
End at: 2018-02-16 12:34:06
Local clock offset: -3.793 ms
Remote clock offset: -4.477 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.39 Mbit/s
95th percentile per-packet one-way delay: 92.058 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 91.156 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 3.32 Mbit/s
95th percentile per-packet one-way delay: 93.265 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 2.58 Mbit/s
95th percentile per-packet one-way delay: 92.260 ms
Loss rate: 2.83%
```
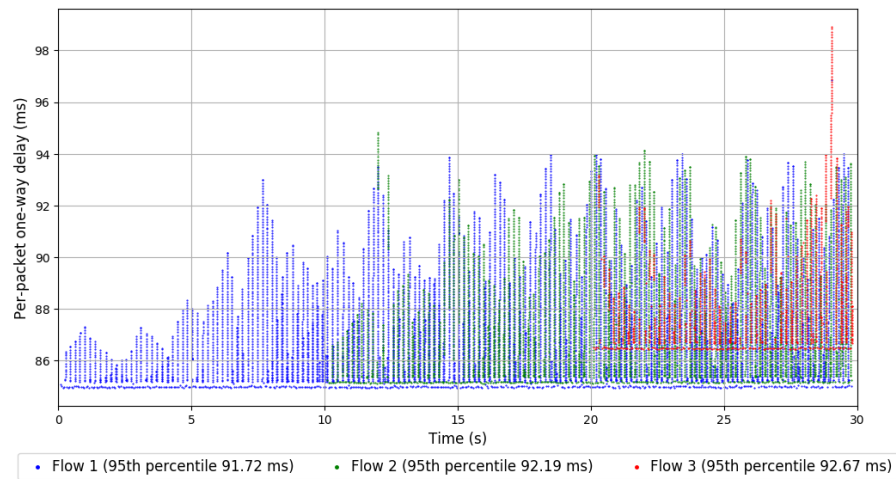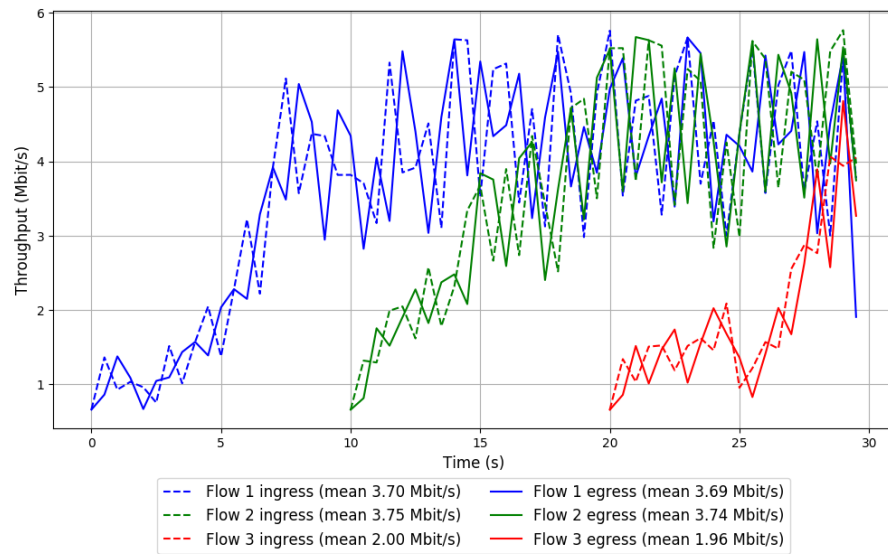
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2018-02-16 12:57:06
End at: 2018-02-16 12:57:36
Local clock offset: -6.749 ms
Remote clock offset: -4.96 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 91.980 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 91.716 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 92.187 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 92.670 ms
Loss rate: 3.56%
```
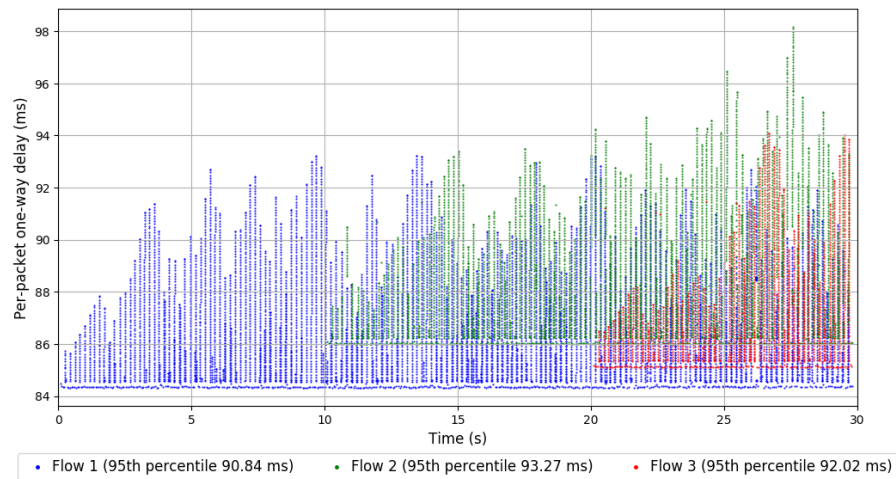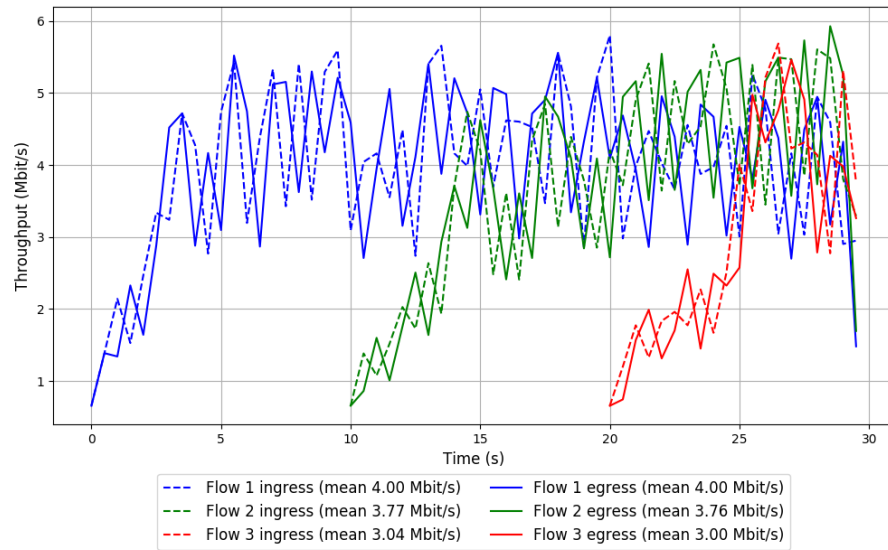
Run 7: Report of Sprout — Data Link

Flow 1 ingress (mean 3.70 Mbit/s) --- Flow 1 egress (mean 3.69 Mbit/s)
Flow 2 ingress (mean 3.75 Mbit/s) --- Flow 2 egress (mean 3.74 Mbit/s)
Flow 3 ingress (mean 2.00 Mbit/s) --- Flow 3 egress (mean 1.96 Mbit/s)

Flow 1 (95th percentile 91.72 ms) Flow 2 (95th percentile 92.19 ms) Flow 3 (95th percentile 92.67 ms)

```
Run 8: Statistics of Sprout

Start at: 2018-02-16 13:20:53
End at: 2018-02-16 13:21:23
Local clock offset: -7.17 ms
Remote clock offset: -5.159 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.46 Mbit/s
95th percentile per-packet one-way delay: 92.150 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 90.840 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 3.76 Mbit/s
95th percentile per-packet one-way delay: 93.270 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 92.020 ms
Loss rate: 3.06%
```
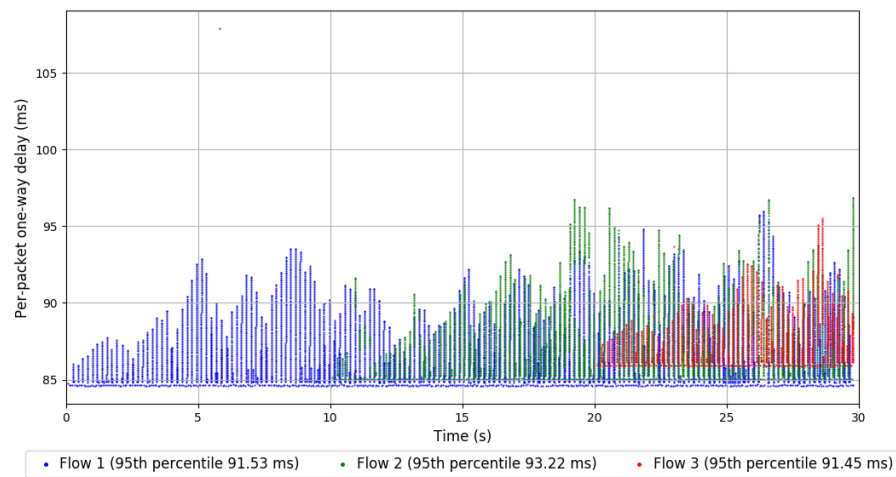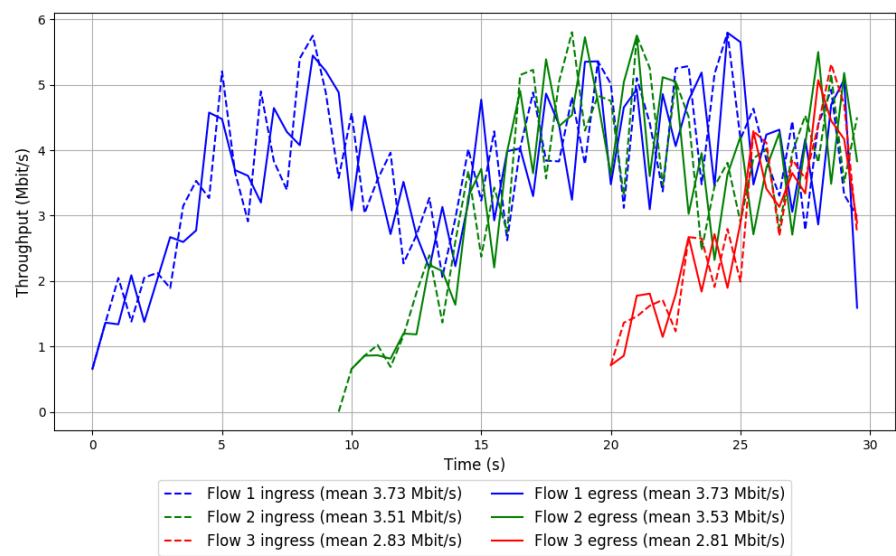
Run 8: Report of Sprout — Data Link

```
Run 9: Statistics of Sprout

Start at: 2018-02-16 13:44:31
End at: 2018-02-16 13:45:01
Local clock offset: -7.171 ms
Remote clock offset: -4.438 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.98 Mbit/s
95th percentile per-packet one-way delay: 92.089 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 91.534 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 93.222 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 2.81 Mbit/s
95th percentile per-packet one-way delay: 91.451 ms
Loss rate: 2.21%
```
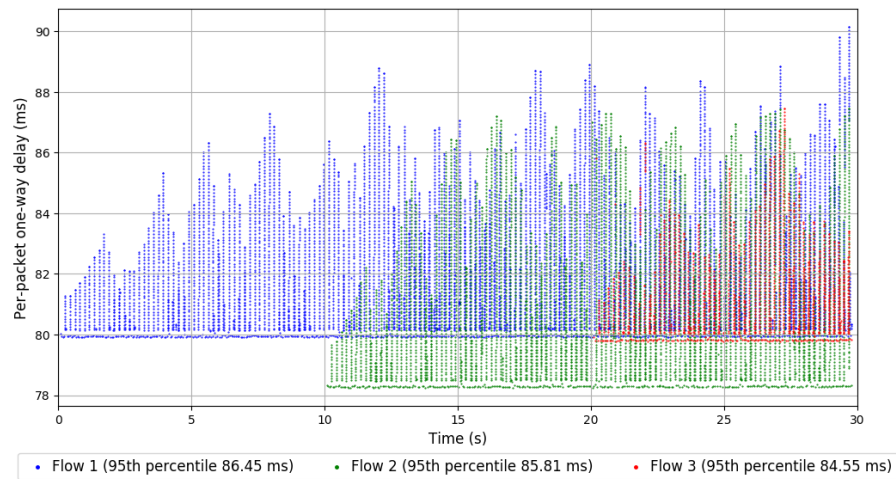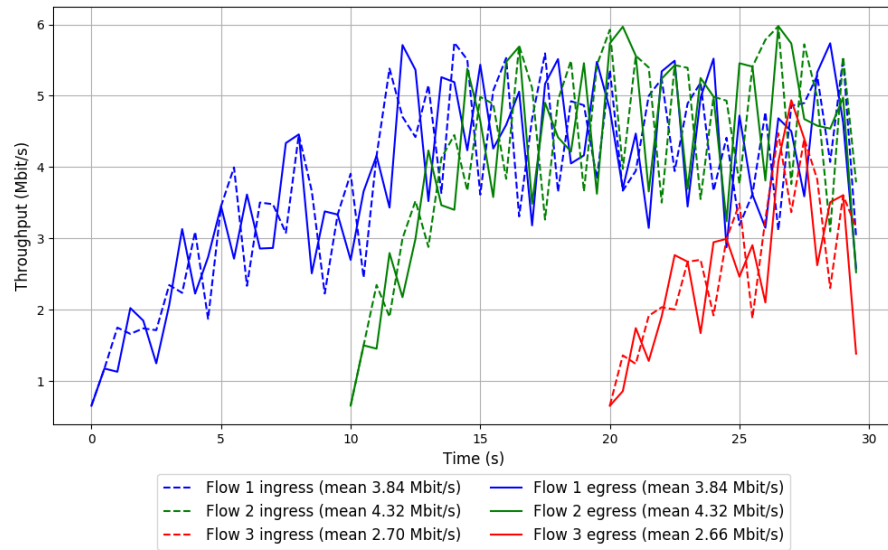
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-02-16 14:08:05
End at: 2018-02-16 14:08:35
Local clock offset: -6.673 ms
Remote clock offset: 1.412 ms


# Below is generated by plot.py at 2018-02-16 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 86.062 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 86.446 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 85.806 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 84.549 ms
Loss rate: 3.32%
```
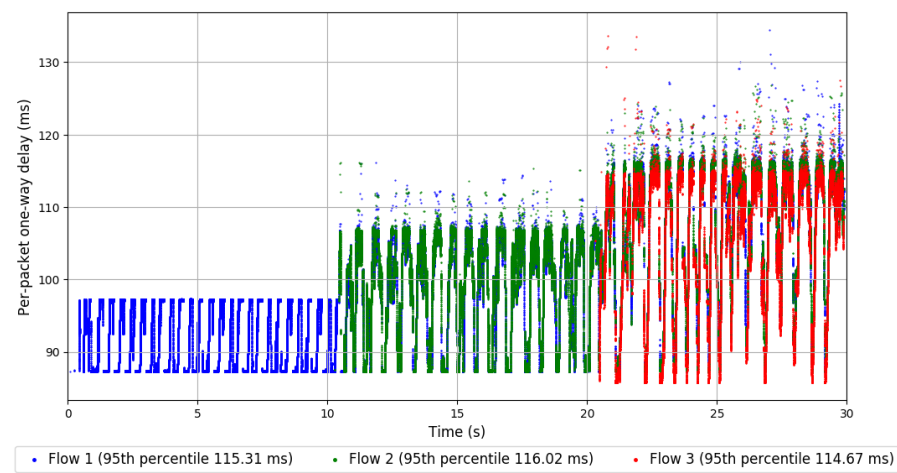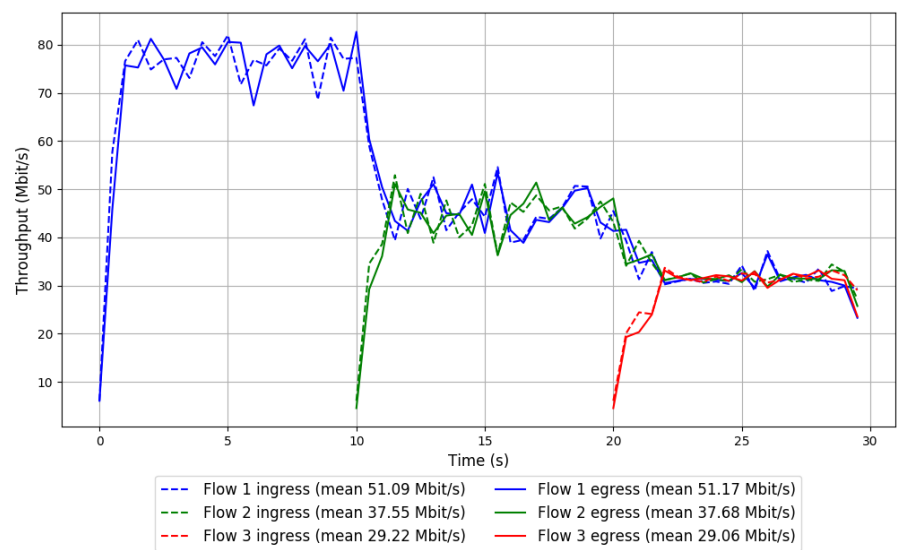
Run 10: Report of Sprout — Data Link

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

Start at: 2018-02-16 10:47:43
End at: 2018-02-16 10:48:13
Local clock offset: -6.733 ms
Remote clock offset: -4.032 ms

# Below is generated by plot.py at 2018-02-16 18:40:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.71 Mbit/s
95th percentile per-packet one-way delay: 115.765 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 51.17 Mbit/s
95th percentile per-packet one-way delay: 115.315 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 116.021 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 114.666 ms
Loss rate: 2.37%
```

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

Flow 1 ingress (mean 51.09 Mbit/s) --- Flow 1 egress (mean 51.17 Mbit/s)
Flow 2 ingress (mean 37.55 Mbit/s) --- Flow 2 egress (mean 37.68 Mbit/s)
Flow 3 ingress (mean 29.22 Mbit/s) --- Flow 3 egress (mean 29.06 Mbit/s)

Flow 1 (95th percentile 115.31 ms)   Flow 2 (95th percentile 116.02 ms)   Flow 3 (95th percentile 114.67 ms)

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

Start at: 2018-02-16 11:11:13
End at: 2018-02-16 11:11:43
Local clock offset: -7.137 ms
Remote clock offset: 1.788 ms

# Below is generated by plot.py at 2018-02-16 18:40:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.22 Mbit/s
95th percentile per-packet one-way delay: 108.702 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 51.07 Mbit/s
95th percentile per-packet one-way delay: 109.044 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 38.44 Mbit/s
95th percentile per-packet one-way delay: 107.092 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 26.34 Mbit/s
95th percentile per-packet one-way delay: 109.006 ms
Loss rate: 1.90%
```
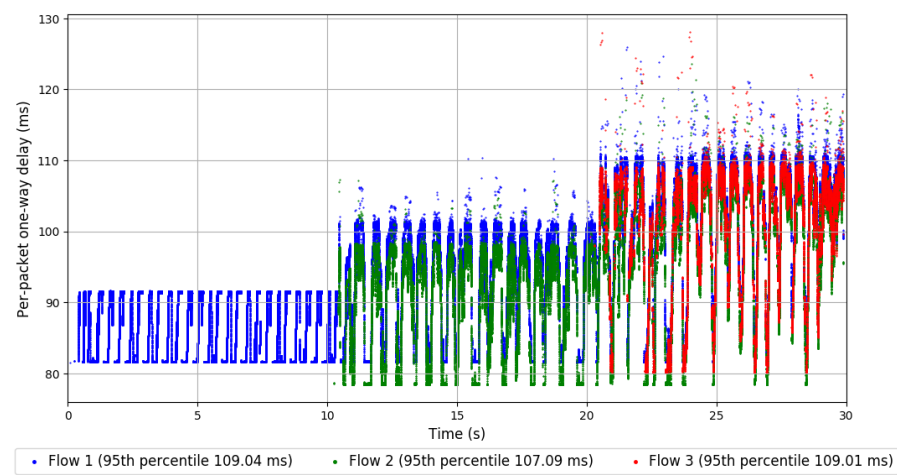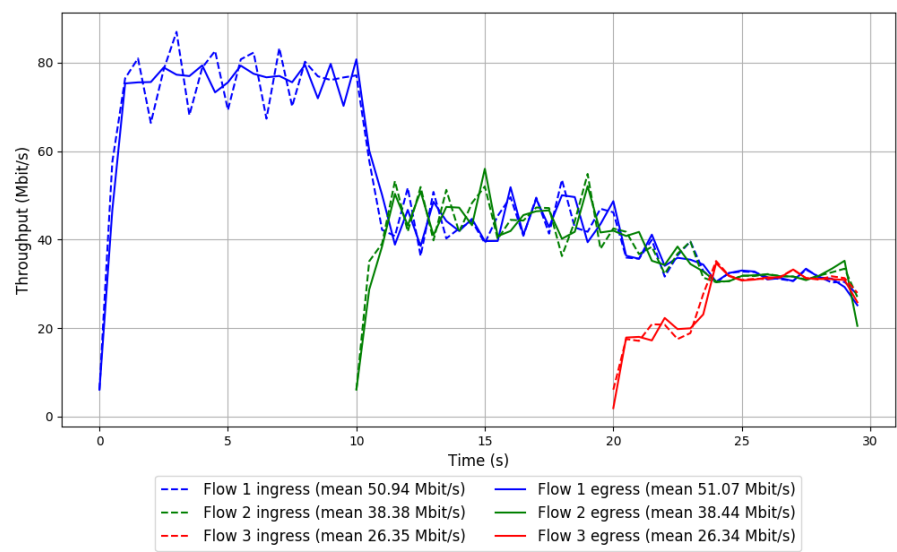
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 50.94 Mbit/s)   Flow 1 egress (mean 51.07 Mbit/s)
Flow 2 ingress (mean 38.38 Mbit/s)   Flow 2 egress (mean 38.44 Mbit/s)
Flow 3 ingress (mean 26.35 Mbit/s)   Flow 3 egress (mean 26.34 Mbit/s)

Flow 1 (95th percentile 109.04 ms)   Flow 2 (95th percentile 107.09 ms)   Flow 3 (95th percentile 109.01 ms)
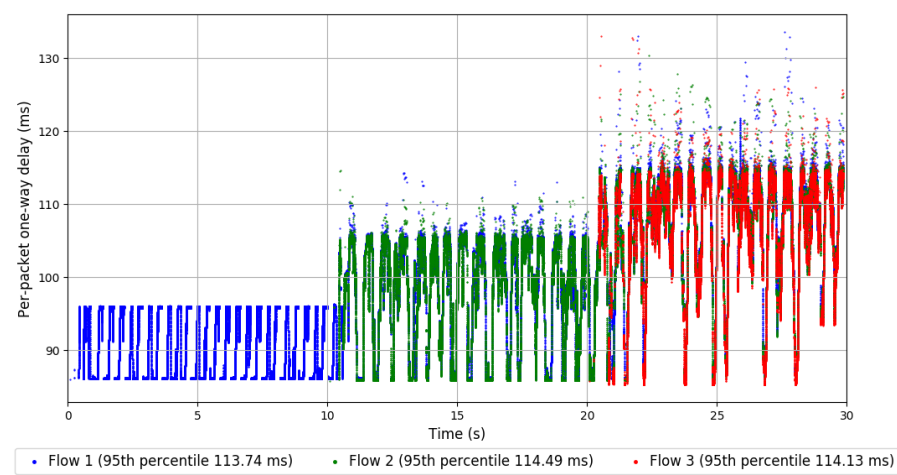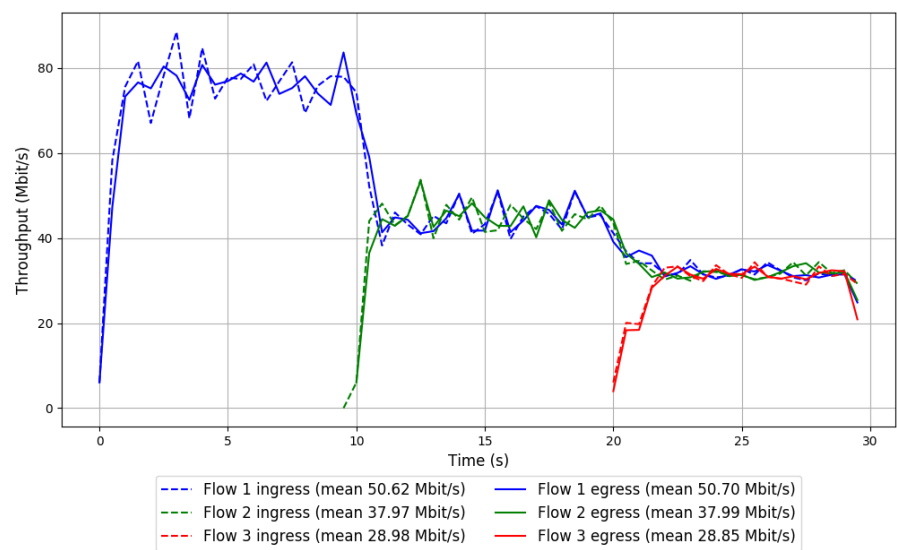
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-02-16 11:34:43
End at: 2018-02-16 11:35:13
Local clock offset: -7.588 ms
Remote clock offset: -3.933 ms


# Below is generated by plot.py at 2018-02-16 18:40:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.42 Mbit/s
95th percentile per-packet one-way delay: 114.200 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 50.70 Mbit/s
95th percentile per-packet one-way delay: 113.739 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 37.99 Mbit/s
95th percentile per-packet one-way delay: 114.487 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 114.131 ms
Loss rate: 2.21%
```

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

- - - - Flow 1 ingress (mean 50.62 Mbit/s) ——— Flow 1 egress (mean 50.70 Mbit/s)
- - - - Flow 2 ingress (mean 37.97 Mbit/s) ——— Flow 2 egress (mean 37.99 Mbit/s)
- - - - Flow 3 ingress (mean 28.98 Mbit/s) ——— Flow 3 egress (mean 28.85 Mbit/s)

• Flow 1 (95th percentile 113.74 ms)   • Flow 2 (95th percentile 114.49 ms)   • Flow 3 (95th percentile 114.13 ms)
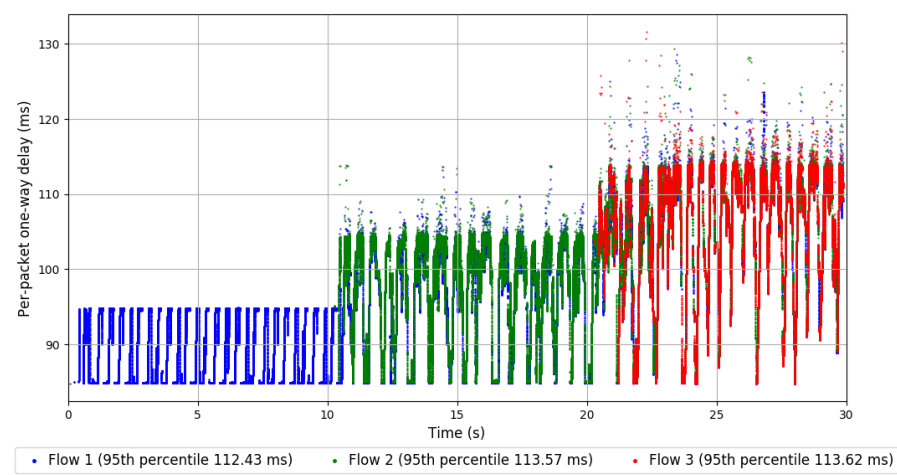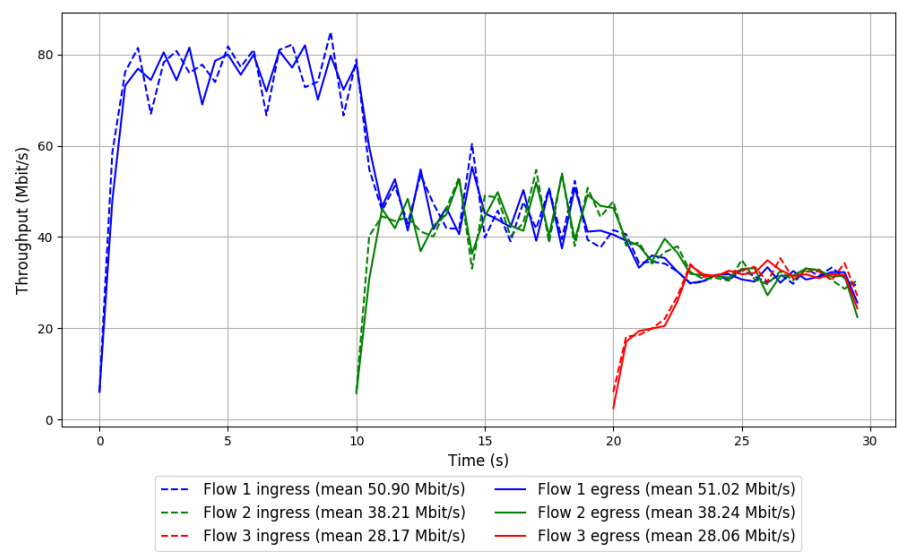
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```
Run 4: Statistics of TaoVA-100x

Start at: 2018-02-16 11:58:12
End at: 2018-02-16 11:58:42
Local clock offset: -8.008 ms
Remote clock offset: -3.635 ms


# Below is generated by plot.py at 2018-02-16 18:40:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.62 Mbit/s
95th percentile per-packet one-way delay: 113.426 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 51.02 Mbit/s
95th percentile per-packet one-way delay: 112.433 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 38.24 Mbit/s
95th percentile per-packet one-way delay: 113.574 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 28.06 Mbit/s
95th percentile per-packet one-way delay: 113.621 ms
Loss rate: 2.10%
```

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

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

Start at: 2018-02-16 12:21:39
End at: 2018-02-16 12:22:09
Local clock offset: -4.143 ms
Remote clock offset: 0.691 ms


# Below is generated by plot.py at 2018-02-16 18:40:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.10 Mbit/s
95th percentile per-packet one-way delay: 107.053 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 51.73 Mbit/s
95th percentile per-packet one-way delay: 105.541 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 106.227 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 22.12 Mbit/s
95th percentile per-packet one-way delay: 110.139 ms
Loss rate: 2.83%
```
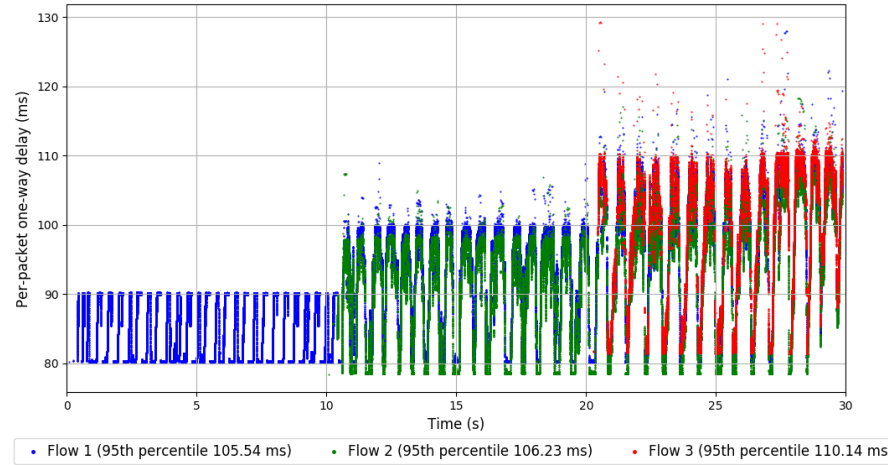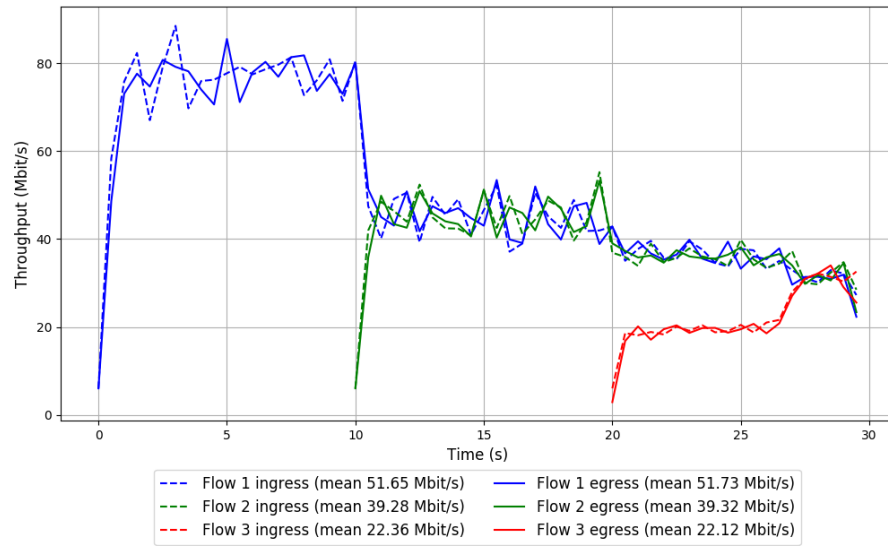
Run 5: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 51.65 Mbit/s)
- Flow 1 egress (mean 51.73 Mbit/s)
- Flow 2 ingress (mean 39.28 Mbit/s)
- Flow 2 egress (mean 39.32 Mbit/s)
- Flow 3 ingress (mean 22.36 Mbit/s)
- Flow 3 egress (mean 22.12 Mbit/s)

- Flow 1 (95th percentile 105.54 ms)
- Flow 2 (95th percentile 106.23 ms)
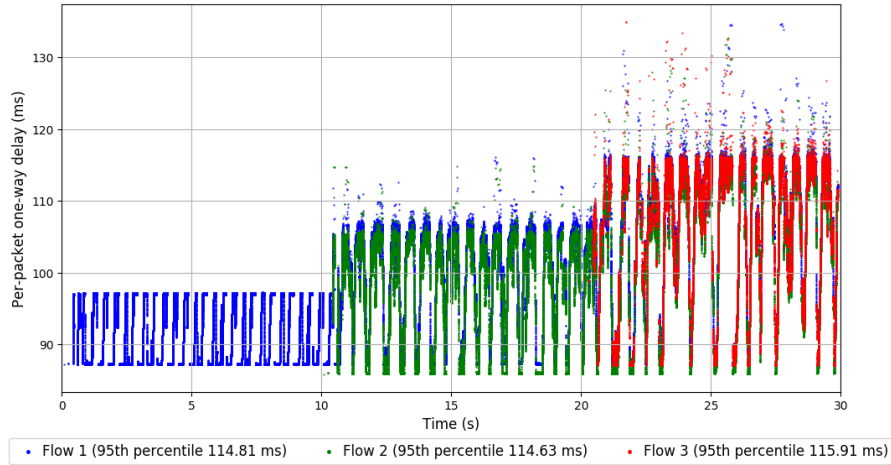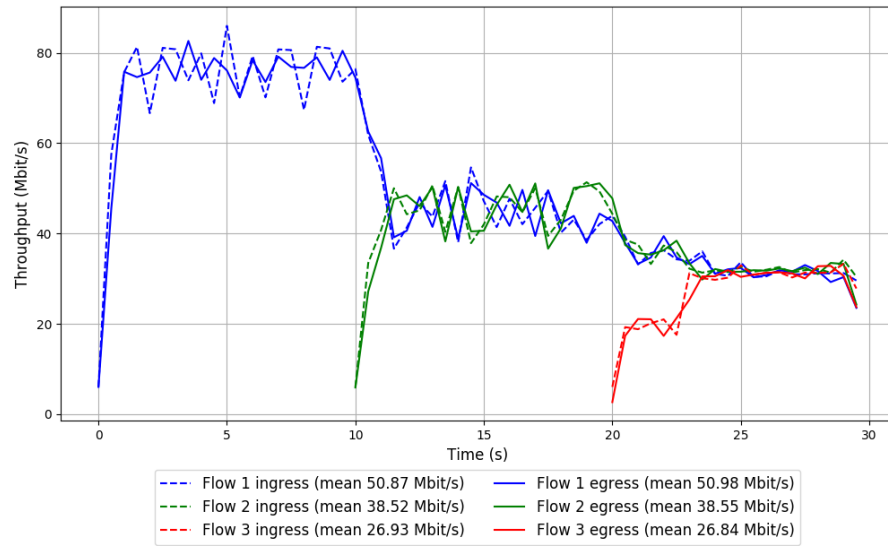- Flow 3 (95th percentile 110.14 ms)

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

Start at: 2018-02-16 12:45:10
End at: 2018-02-16 12:45:40
Local clock offset: -6.153 ms
Remote clock offset: -5.473 ms


# Below is generated by plot.py at 2018-02-16 18:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 115.236 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 114.806 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 38.55 Mbit/s
95th percentile per-packet one-way delay: 114.632 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 115.907 ms
Loss rate: 2.21%
```

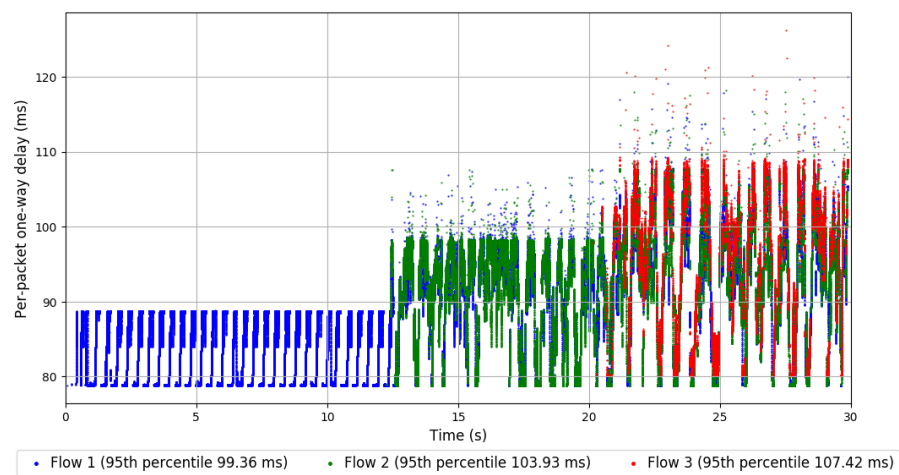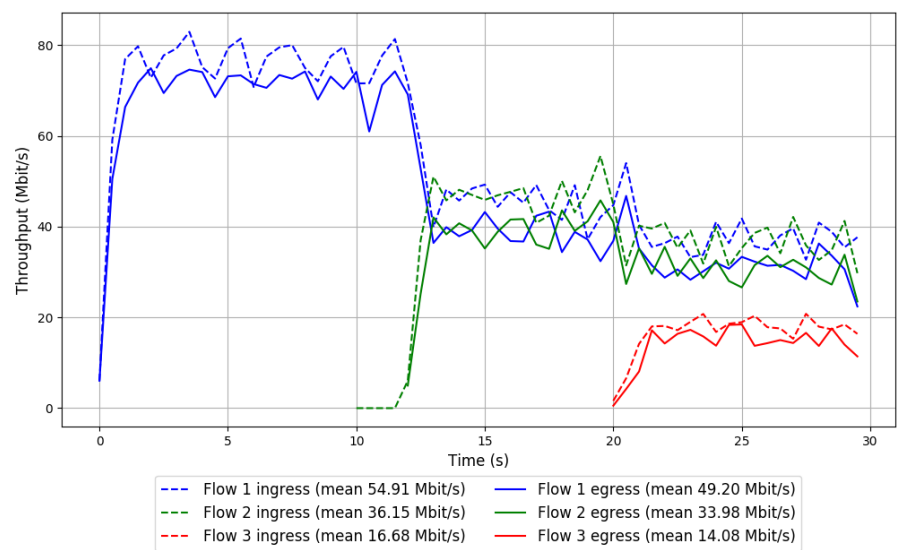# Run 6: Report of TaoVA-100x — Data Link

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

Start at: 2018-02-16 13:08:38
End at: 2018-02-16 13:09:08
Local clock offset: -7.023 ms
Remote clock offset: -0.305 ms

# Below is generated by plot.py at 2018-02-16 18:40:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.10 Mbit/s
95th percentile per-packet one-way delay: 102.789 ms
Loss rate: 12.79%
-- Flow 1:
Average throughput: 49.20 Mbit/s
95th percentile per-packet one-way delay: 99.361 ms
Loss rate: 10.84%
-- Flow 2:
Average throughput: 33.98 Mbit/s
95th percentile per-packet one-way delay: 103.926 ms
Loss rate: 16.25%
-- Flow 3:
Average throughput: 14.08 Mbit/s
95th percentile per-packet one-way delay: 107.422 ms
Loss rate: 17.13%
```

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

- Flow 1 ingress (mean 54.91 Mbit/s)
- Flow 1 egress (mean 49.20 Mbit/s)
- Flow 2 ingress (mean 36.15 Mbit/s)
- Flow 2 egress (mean 33.98 Mbit/s)
- Flow 3 ingress (mean 16.68 Mbit/s)
- Flow 3 egress (mean 14.08 Mbit/s)

- Flow 1 (95th percentile 99.36 ms)
- Flow 2 (95th percentile 103.93 ms)
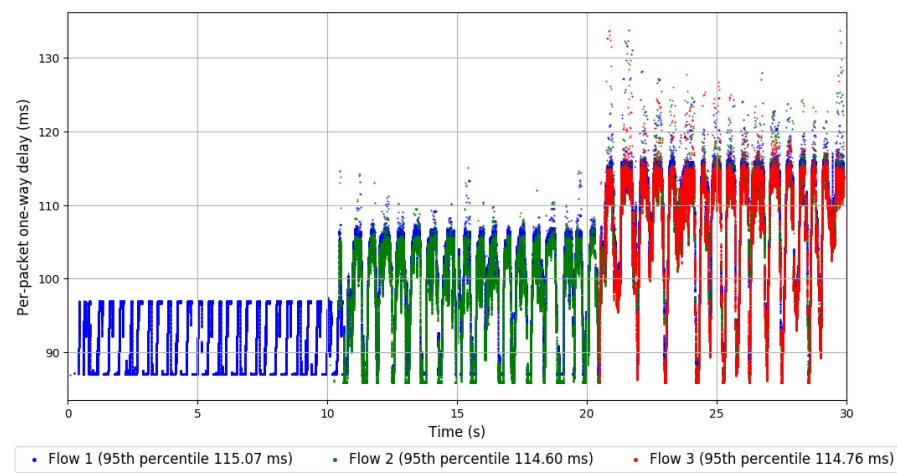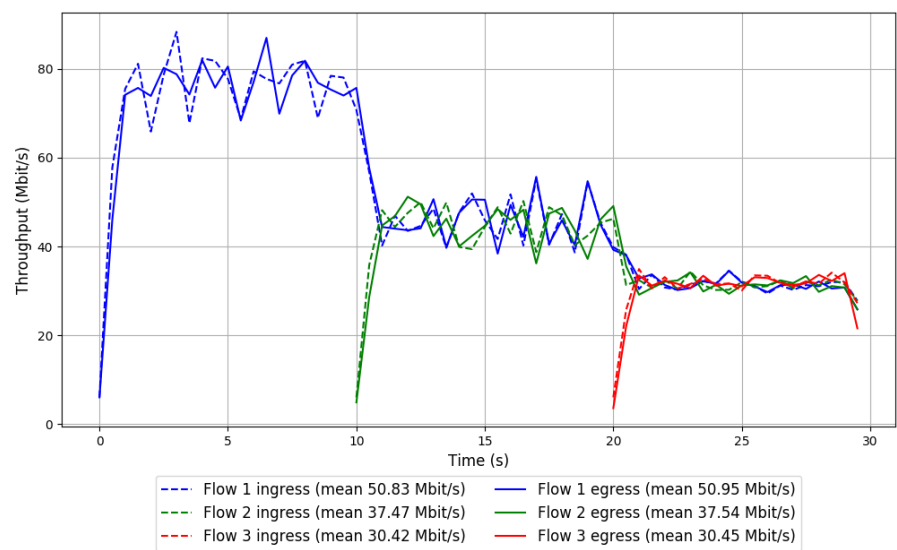- Flow 3 (95th percentile 107.42 ms)

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

Start at: 2018-02-16 13:32:27
End at: 2018-02-16 13:32:57
Local clock offset: -7.329 ms
Remote clock offset: -5.567 ms


# Below is generated by plot.py at 2018-02-16 18:40:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.84 Mbit/s
95th percentile per-packet one-way delay: 114.714 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 50.95 Mbit/s
95th percentile per-packet one-way delay: 115.066 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 37.54 Mbit/s
95th percentile per-packet one-way delay: 114.604 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 114.761 ms
Loss rate: 1.77%
```
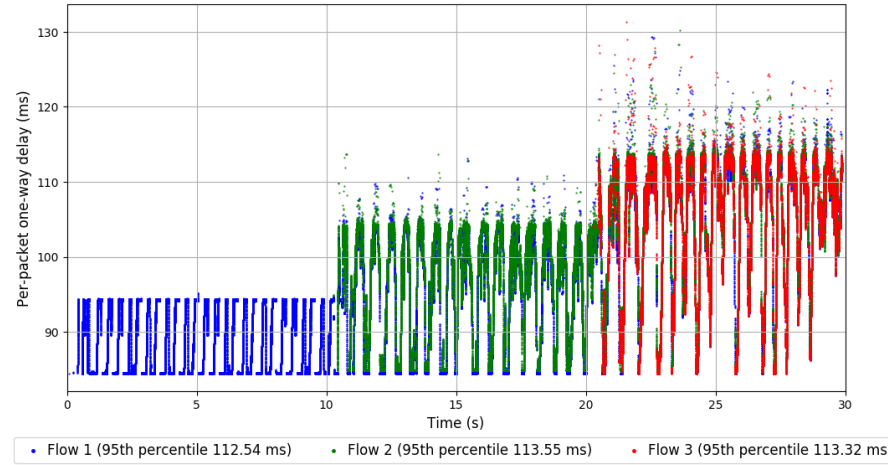
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 50.83 Mbit/s) — Flow 1 egress (mean 50.95 Mbit/s)
Flow 2 ingress (mean 37.47 Mbit/s) — Flow 2 egress (mean 37.54 Mbit/s)
Flow 3 ingress (mean 30.42 Mbit/s) — Flow 3 egress (mean 30.45 Mbit/s)

Flow 1 (95th percentile 115.07 ms) • Flow 2 (95th percentile 114.60 ms) • Flow 3 (95th percentile 114.76 ms)

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

Start at: 2018-02-16 13:56:05
End at: 2018-02-16 13:56:35
Local clock offset: -6.758 ms
Remote clock offset: -4.45 ms


# Below is generated by plot.py at 2018-02-16 18:42:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.52 Mbit/s
95th percentile per-packet one-way delay: 113.202 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 50.67 Mbit/s
95th percentile per-packet one-way delay: 112.537 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 38.02 Mbit/s
95th percentile per-packet one-way delay: 113.554 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 113.321 ms
Loss rate: 1.99%
```
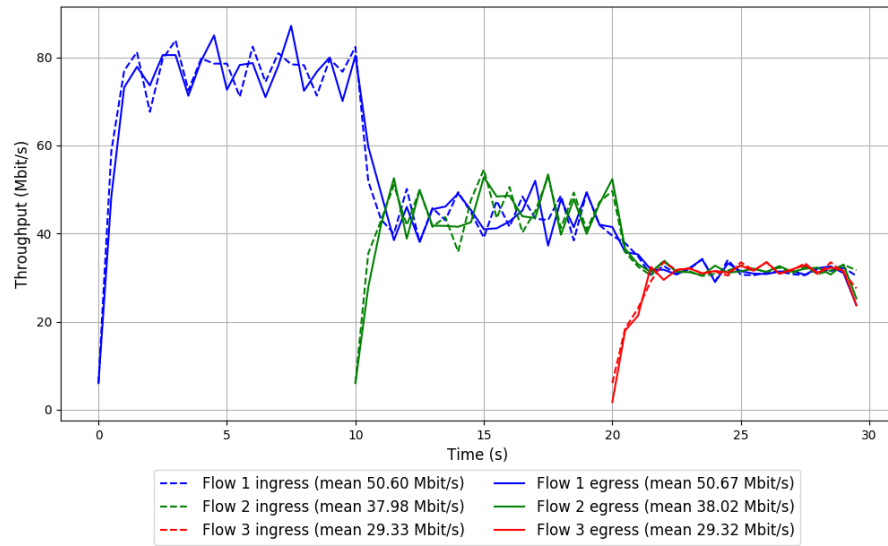
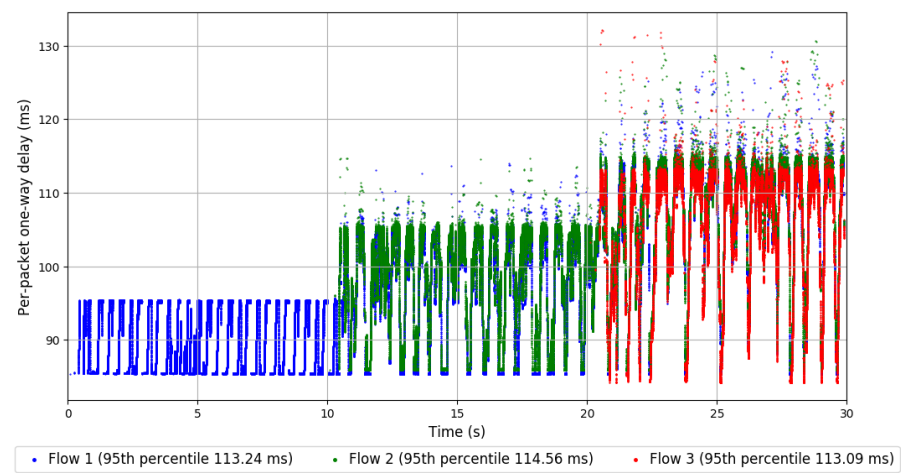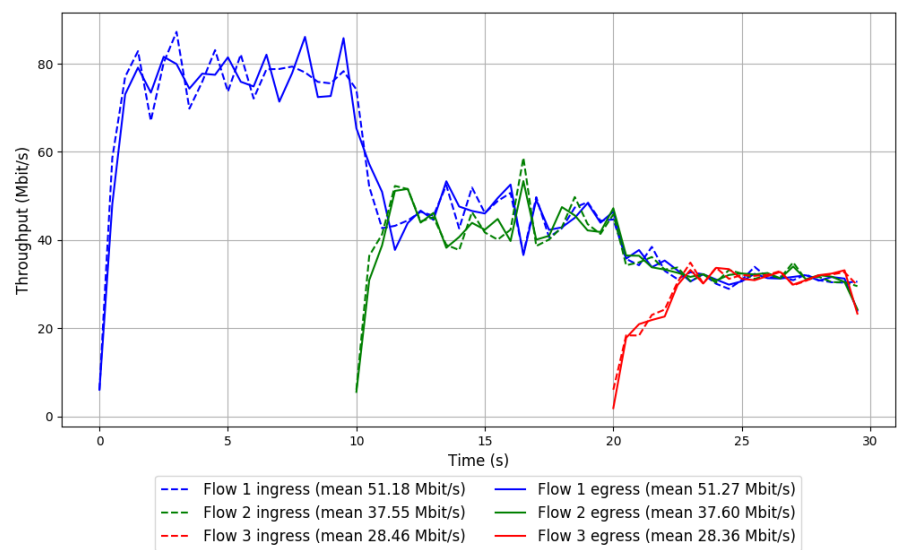## Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 50.60 Mbit/s) --- Flow 1 egress (mean 50.67 Mbit/s)
Flow 2 ingress (mean 37.98 Mbit/s) --- Flow 2 egress (mean 38.02 Mbit/s)
Flow 3 ingress (mean 29.33 Mbit/s) --- Flow 3 egress (mean 29.32 Mbit/s)

Flow 1 (95th percentile 112.54 ms)   Flow 2 (95th percentile 113.55 ms)   Flow 3 (95th percentile 113.32 ms)

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

Start at: 2018-02-16 14:19:39
End at: 2018-02-16 14:20:09
Local clock offset: -5.552 ms
Remote clock offset: -3.937 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.54 Mbit/s
95th percentile per-packet one-way delay: 113.846 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 113.240 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 37.60 Mbit/s
95th percentile per-packet one-way delay: 114.564 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 113.088 ms
Loss rate: 2.26%
```

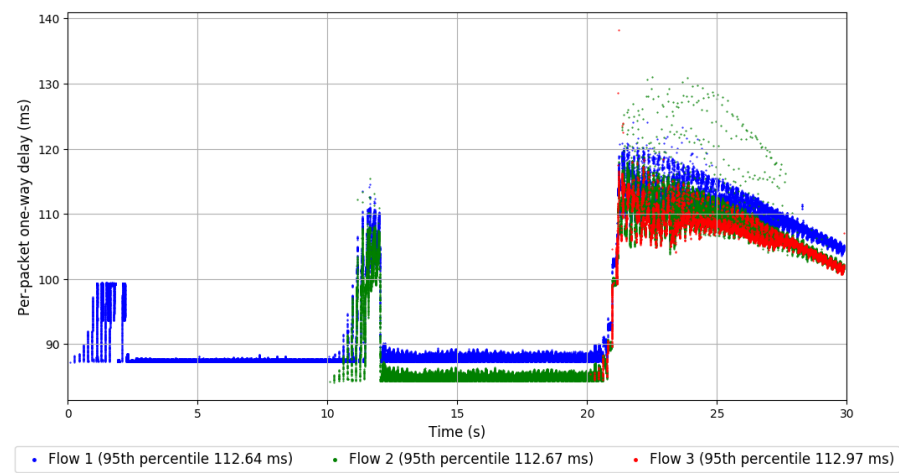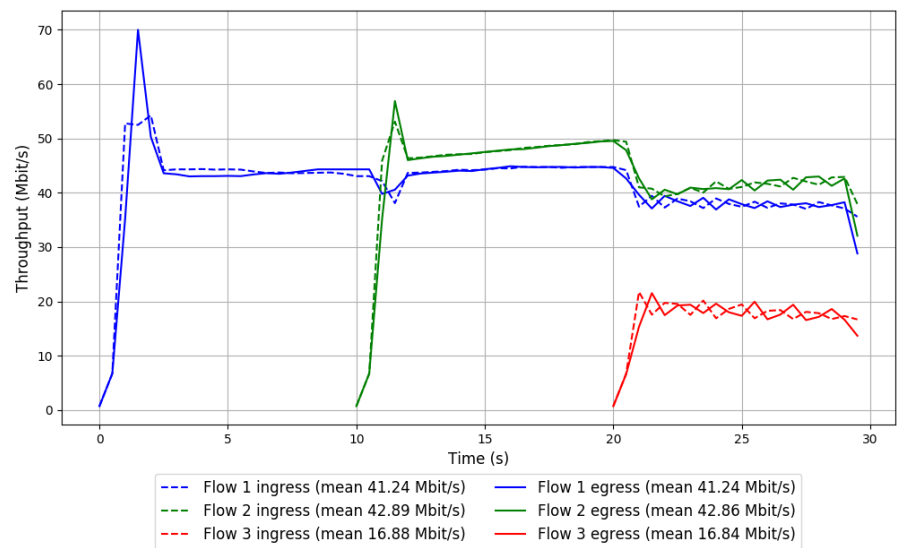Run 10: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-02-16 10:41:21
End at: 2018-02-16 10:41:51
Local clock offset: -6.788 ms
Remote clock offset: -4.024 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.21 Mbit/s
95th percentile per-packet one-way delay: 112.692 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 41.24 Mbit/s
95th percentile per-packet one-way delay: 112.638 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 42.86 Mbit/s
95th percentile per-packet one-way delay: 112.673 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 16.84 Mbit/s
95th percentile per-packet one-way delay: 112.967 ms
Loss rate: 1.87%
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-02-16 11:04:51
End at: 2018-02-16 11:05:21
Local clock offset: -7.105 ms
Remote clock offset: 1.928 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.58 Mbit/s
95th percentile per-packet one-way delay: 114.121 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 39.65 Mbit/s
95th percentile per-packet one-way delay: 113.121 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 38.37 Mbit/s
95th percentile per-packet one-way delay: 114.898 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 28.86 Mbit/s
95th percentile per-packet one-way delay: 113.483 ms
Loss rate: 2.15%
```
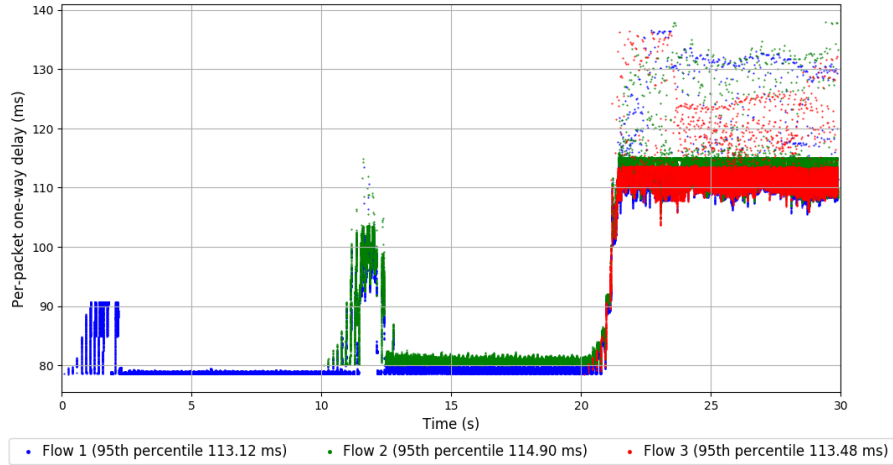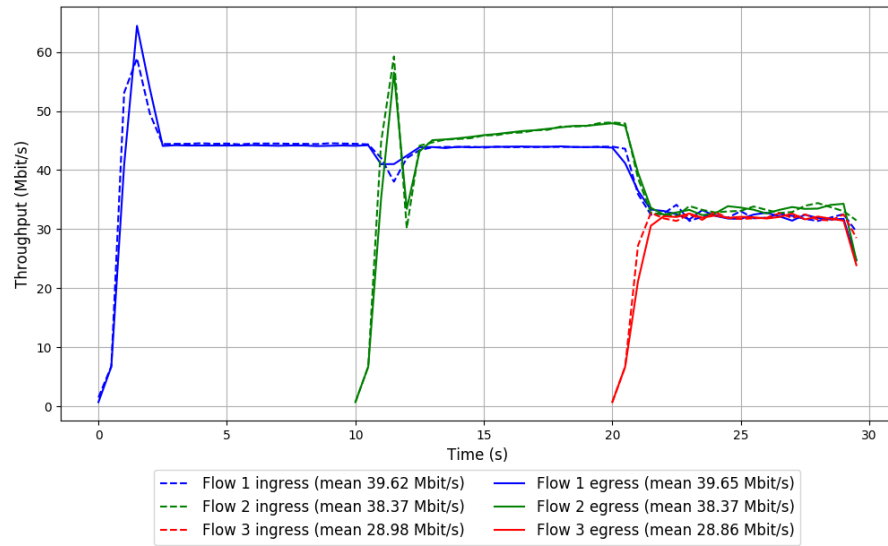
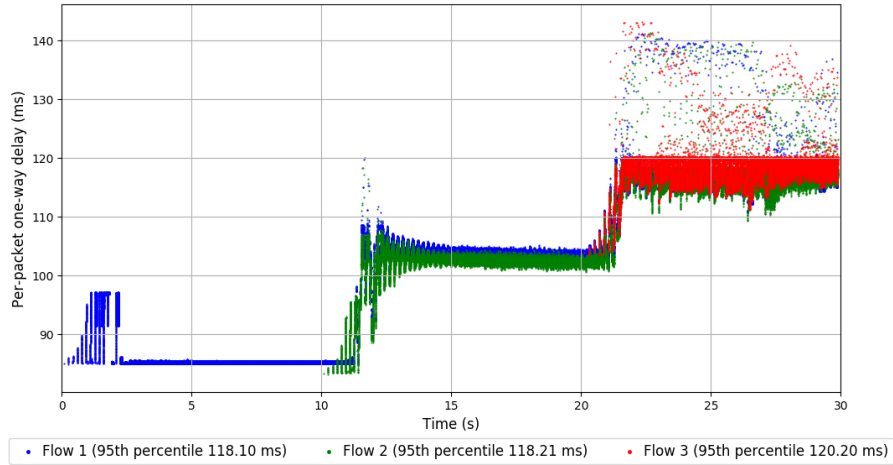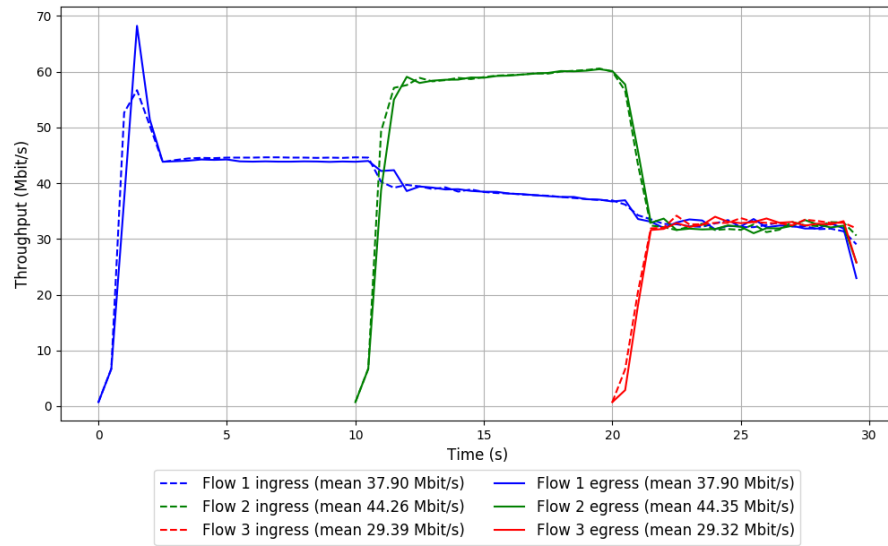Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 39.62 Mbit/s)   Flow 1 egress (mean 39.65 Mbit/s)
Flow 2 ingress (mean 38.37 Mbit/s)   Flow 2 egress (mean 38.37 Mbit/s)
Flow 3 ingress (mean 28.98 Mbit/s)   Flow 3 egress (mean 28.86 Mbit/s)

• Flow 1 (95th percentile 113.12 ms)   • Flow 2 (95th percentile 114.90 ms)   • Flow 3 (95th percentile 113.48 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2018-02-16 11:28:21
End at: 2018-02-16 11:28:51
Local clock offset: -7.413 ms
Remote clock offset: -3.154 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 119.274 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 37.90 Mbit/s
95th percentile per-packet one-way delay: 118.099 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 44.35 Mbit/s
95th percentile per-packet one-way delay: 118.209 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 29.32 Mbit/s
95th percentile per-packet one-way delay: 120.197 ms
Loss rate: 2.45%
```

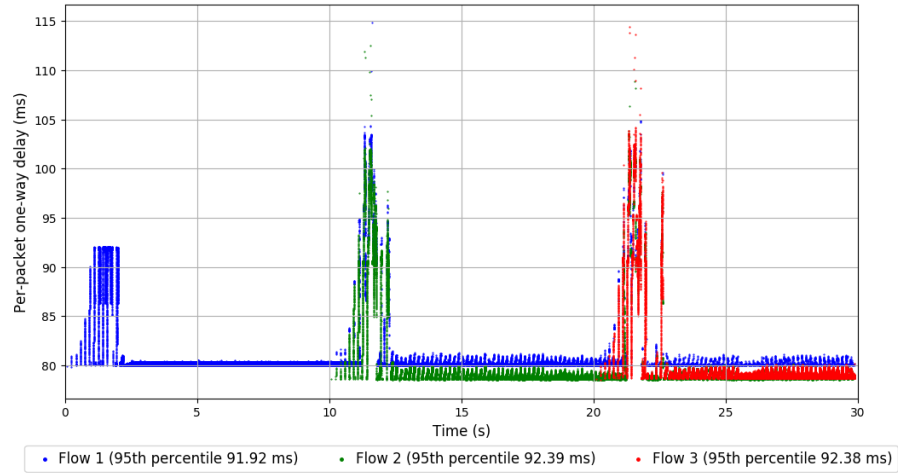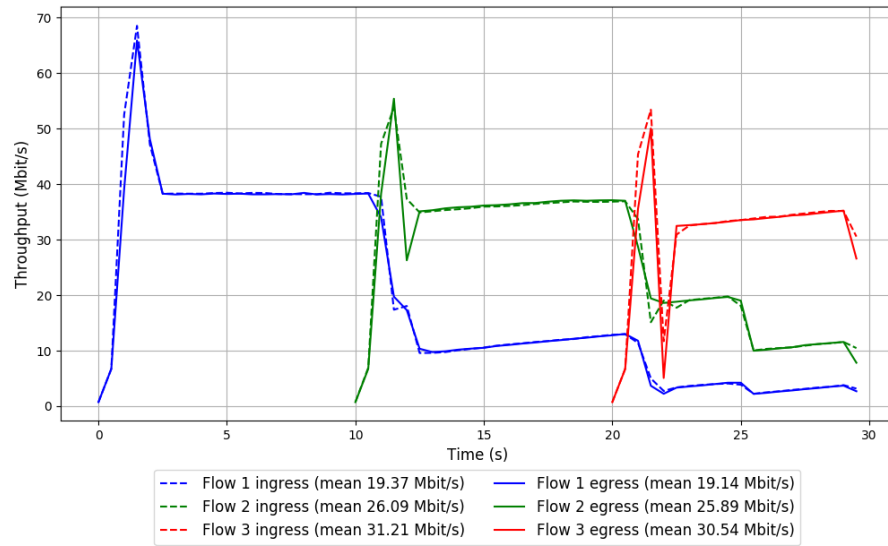Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 37.90 Mbit/s) — Flow 1 egress (mean 37.90 Mbit/s)
Flow 2 ingress (mean 44.26 Mbit/s) — Flow 2 egress (mean 44.35 Mbit/s)
Flow 3 ingress (mean 29.39 Mbit/s) — Flow 3 egress (mean 29.32 Mbit/s)

Flow 1 (95th percentile 118.10 ms) • Flow 2 (95th percentile 118.21 ms) • Flow 3 (95th percentile 120.20 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-02-16 11:51:51
End at: 2018-02-16 11:52:21
Local clock offset: -7.919 ms
Remote clock offset: 1.384 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.32 Mbit/s
95th percentile per-packet one-way delay: 91.942 ms
Loss rate: 2.14%
-- Flow 1:
Average throughput: 19.14 Mbit/s
95th percentile per-packet one-way delay: 91.921 ms
Loss rate: 1.76%
-- Flow 2:
Average throughput: 25.89 Mbit/s
95th percentile per-packet one-way delay: 92.387 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 30.54 Mbit/s
95th percentile per-packet one-way delay: 92.380 ms
Loss rate: 3.77%
```
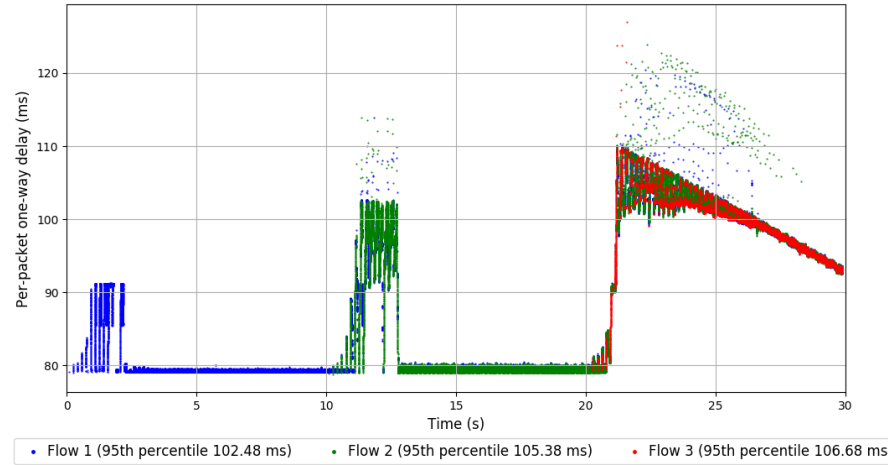
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-02-16 12:15:17
End at: 2018-02-16 12:15:47
Local clock offset: -4.707 ms
Remote clock offset: 1.879 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.89 Mbit/s
95th percentile per-packet one-way delay: 104.431 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 102.480 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 42.91 Mbit/s
95th percentile per-packet one-way delay: 105.383 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 17.38 Mbit/s
95th percentile per-packet one-way delay: 106.684 ms
Loss rate: 1.87%
```
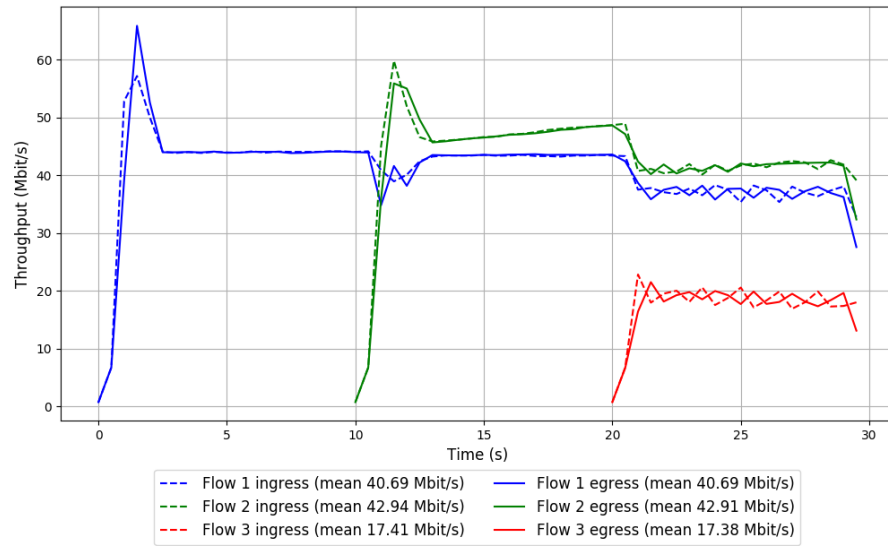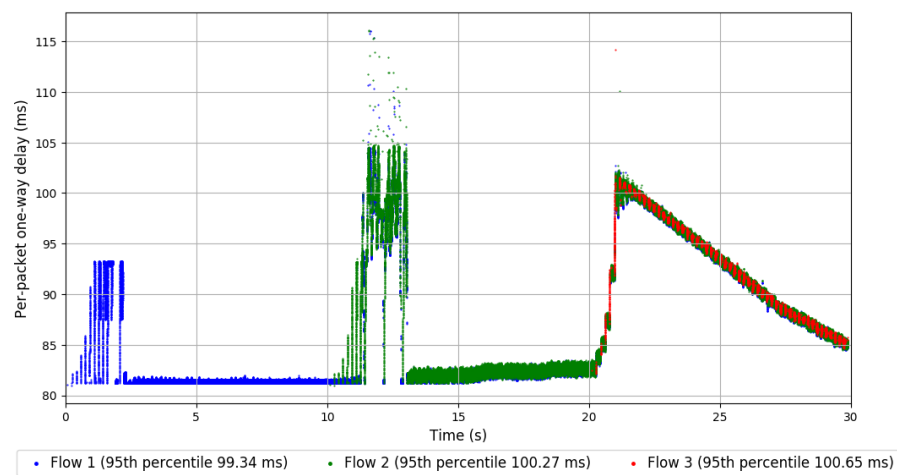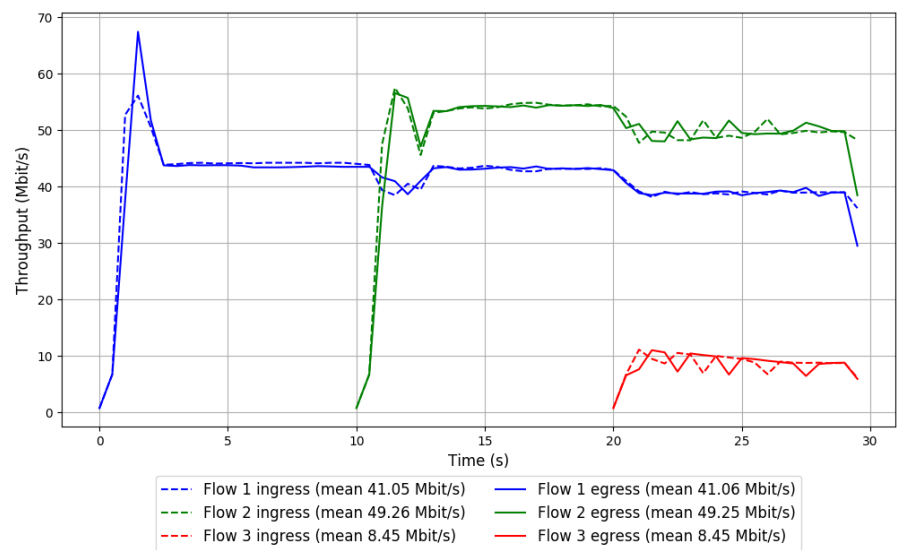
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 40.69 Mbit/s)   Flow 1 egress (mean 40.69 Mbit/s)
Flow 2 ingress (mean 42.94 Mbit/s)   Flow 2 egress (mean 42.91 Mbit/s)
Flow 3 ingress (mean 17.41 Mbit/s)   Flow 3 egress (mean 17.38 Mbit/s)

Flow 1 (95th percentile 102.48 ms)   Flow 2 (95th percentile 105.38 ms)   Flow 3 (95th percentile 106.68 ms)

```
Run 6: Statistics of TCP Vegas

Start at: 2018-02-16 12:38:46
End at: 2018-02-16 12:39:16
Local clock offset: -5.129 ms
Remote clock offset: -0.541 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.52 Mbit/s
95th percentile per-packet one-way delay: 99.899 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 41.06 Mbit/s
95th percentile per-packet one-way delay: 99.336 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 100.269 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 100.648 ms
Loss rate: 1.75%
```

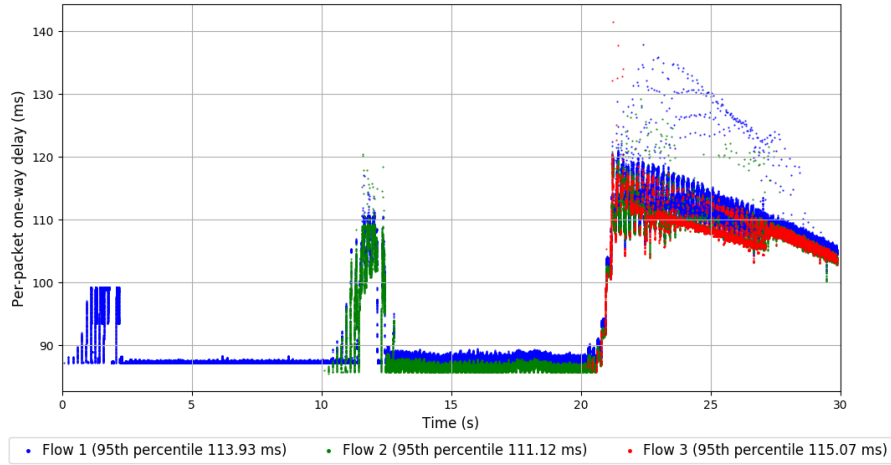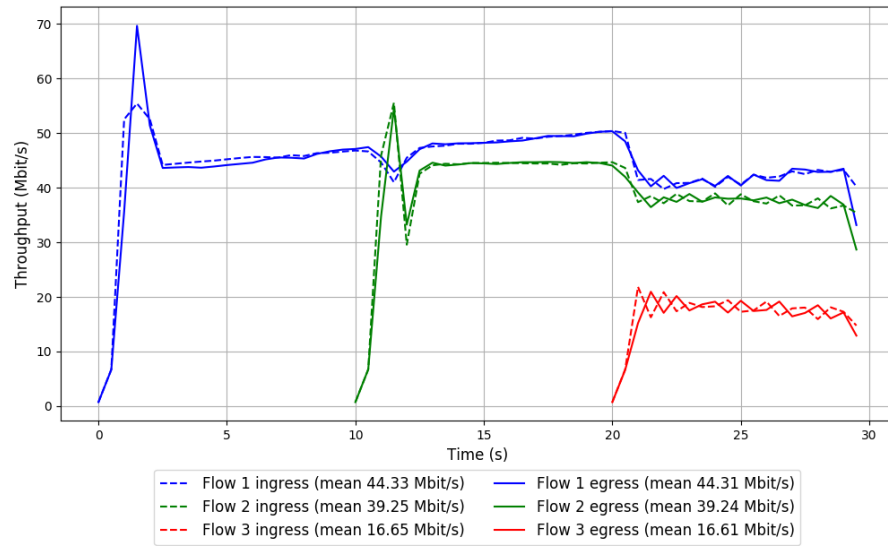# Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2018-02-16 13:02:16
End at: 2018-02-16 13:02:46
Local clock offset: -6.906 ms
Remote clock offset: -5.695 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 113.356 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 44.31 Mbit/s
95th percentile per-packet one-way delay: 113.926 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 39.24 Mbit/s
95th percentile per-packet one-way delay: 111.118 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 115.073 ms
Loss rate: 1.89%
```

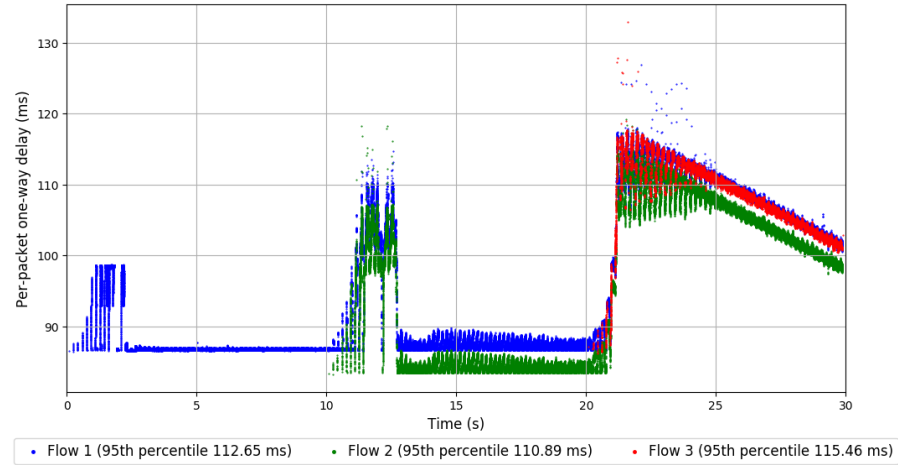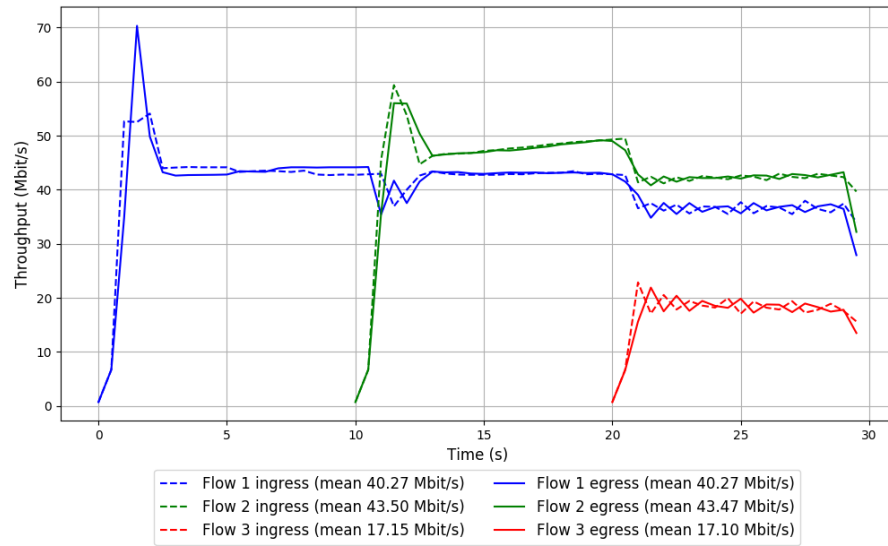Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 44.33 Mbit/s) ---- Flow 1 egress (mean 44.31 Mbit/s)
Flow 2 ingress (mean 39.25 Mbit/s) ---- Flow 2 egress (mean 39.24 Mbit/s)
Flow 3 ingress (mean 16.65 Mbit/s) ---- Flow 3 egress (mean 16.61 Mbit/s)

Flow 1 (95th percentile 113.93 ms)   Flow 2 (95th percentile 111.12 ms)   Flow 3 (95th percentile 115.07 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2018-02-16 13:26:03
End at: 2018-02-16 13:26:33
Local clock offset: -7.252 ms
Remote clock offset: -5.012 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.75 Mbit/s
95th percentile per-packet one-way delay: 112.629 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 40.27 Mbit/s
95th percentile per-packet one-way delay: 112.650 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 43.47 Mbit/s
95th percentile per-packet one-way delay: 110.885 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 17.10 Mbit/s
95th percentile per-packet one-way delay: 115.457 ms
Loss rate: 1.91%
```

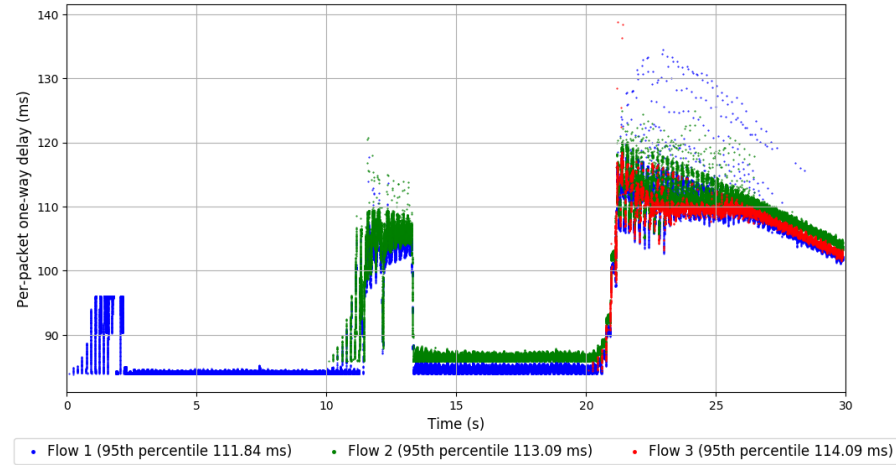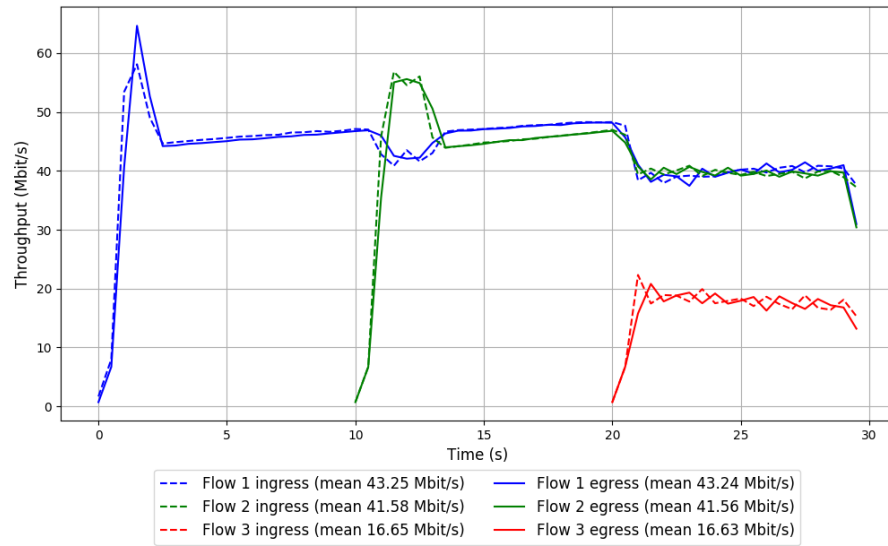# Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2018-02-16 13:49:42
End at: 2018-02-16 13:50:12
Local clock offset: -7.008 ms
Remote clock offset: -5.259 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.31 Mbit/s
95th percentile per-packet one-way delay: 112.533 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 43.24 Mbit/s
95th percentile per-packet one-way delay: 111.842 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 41.56 Mbit/s
95th percentile per-packet one-way delay: 113.091 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 16.63 Mbit/s
95th percentile per-packet one-way delay: 114.091 ms
Loss rate: 1.89%
```
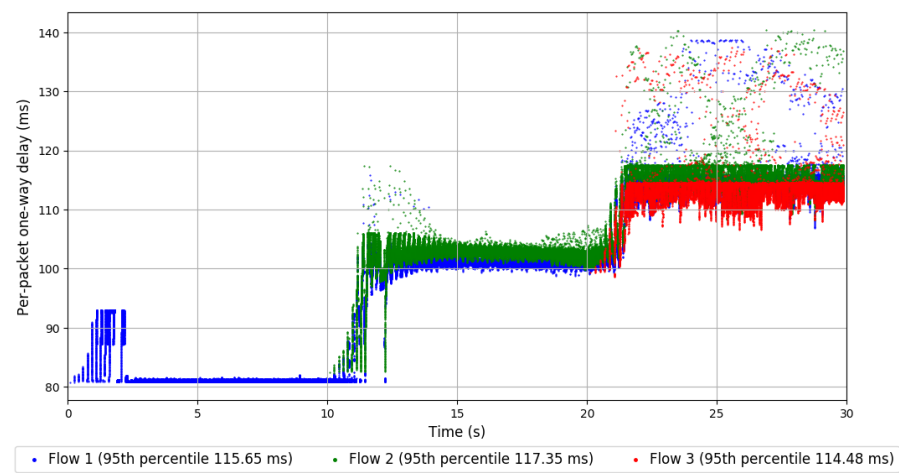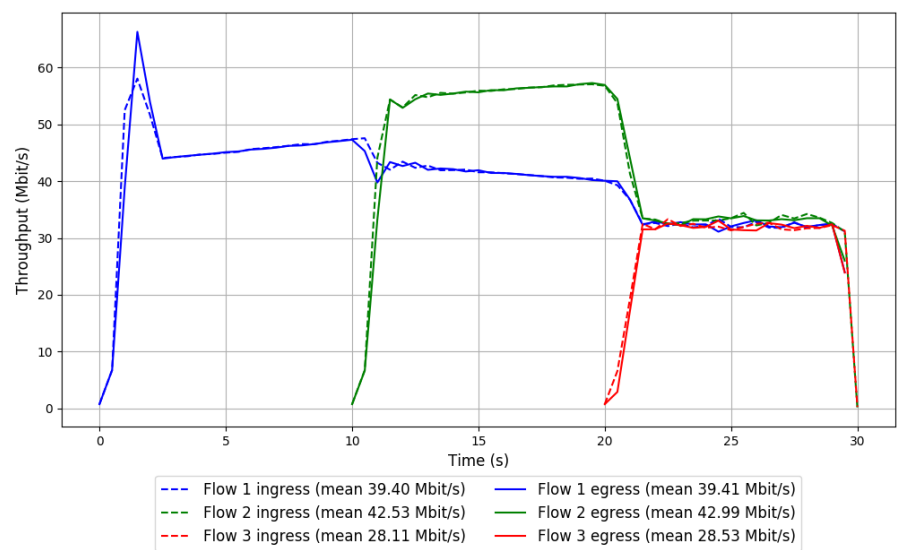
Run 9: Report of TCP Vegas — Data Link

- Flow 1 ingress (mean 43.25 Mbit/s)
- Flow 1 egress (mean 43.24 Mbit/s)
- Flow 2 ingress (mean 41.58 Mbit/s)
- Flow 2 egress (mean 41.56 Mbit/s)
- Flow 3 ingress (mean 16.65 Mbit/s)
- Flow 3 egress (mean 16.63 Mbit/s)

- Flow 1 (95th percentile 111.84 ms)
- Flow 2 (95th percentile 113.09 ms)
- Flow 3 (95th percentile 114.09 ms)

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```
Run 10: Statistics of TCP Vegas

Start at: 2018-02-16 14:13:16
End at: 2018-02-16 14:13:46
Local clock offset: -6.624 ms
Remote clock offset: 0.776 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.28 Mbit/s
95th percentile per-packet one-way delay: 116.331 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 115.648 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 42.99 Mbit/s
95th percentile per-packet one-way delay: 117.353 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 28.53 Mbit/s
95th percentile per-packet one-way delay: 114.479 ms
Loss rate: 2.51%
```
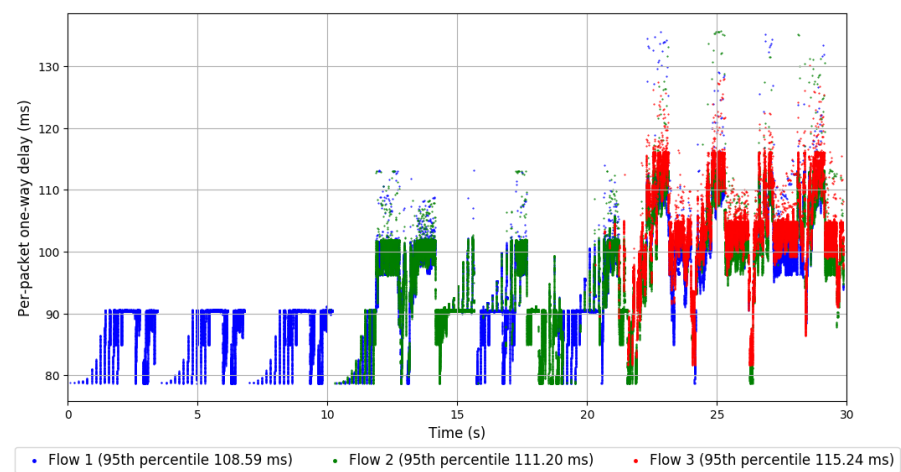
Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-02-16 10:38:42
End at: 2018-02-16 10:39:12
Local clock offset: -6.825 ms
Remote clock offset: 1.633 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.99 Mbit/s
95th percentile per-packet one-way delay: 111.605 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 36.28 Mbit/s
95th percentile per-packet one-way delay: 108.586 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 34.32 Mbit/s
95th percentile per-packet one-way delay: 111.204 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 39.52 Mbit/s
95th percentile per-packet one-way delay: 115.243 ms
Loss rate: 2.43%
```
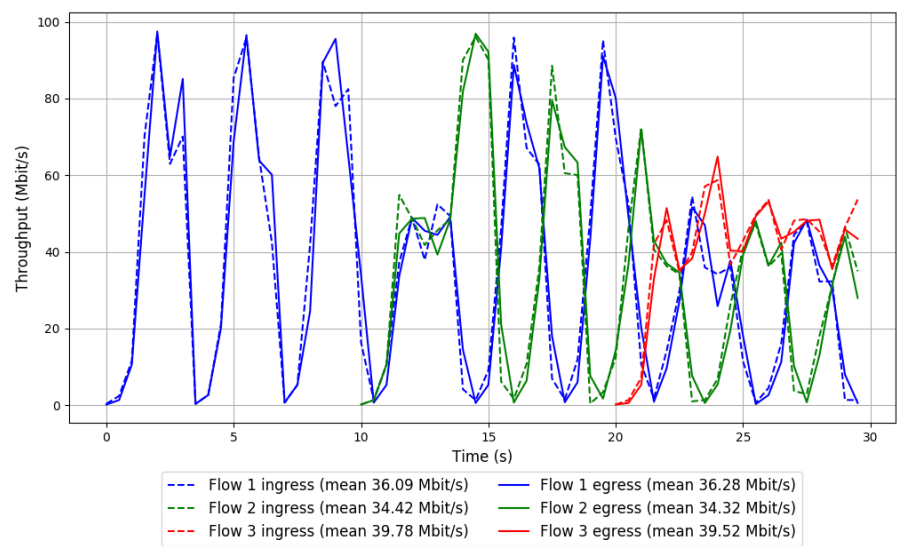
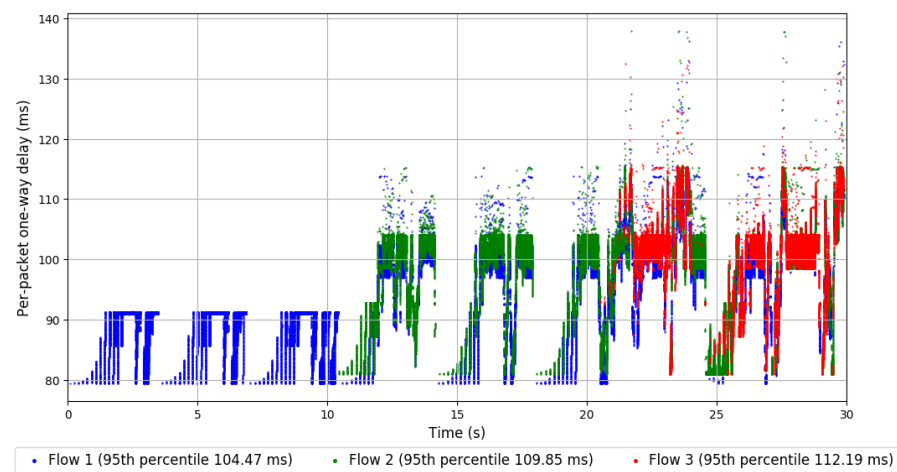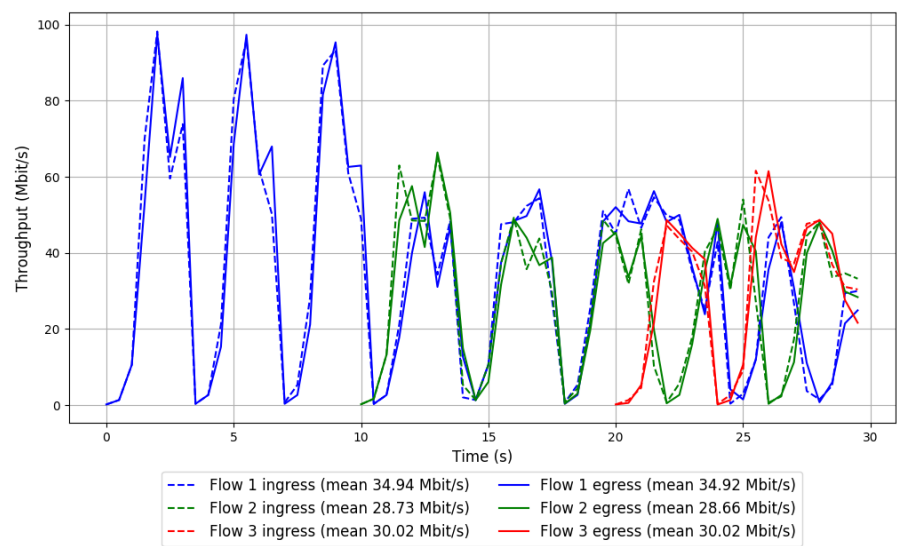Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-02-16 11:02:13
End at: 2018-02-16 11:02:43
Local clock offset: -6.989 ms
Remote clock offset: 2.646 ms


# Below is generated by plot.py at 2018-02-16 18:42:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.77 Mbit/s
95th percentile per-packet one-way delay: 108.570 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 34.92 Mbit/s
95th percentile per-packet one-way delay: 104.471 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 28.66 Mbit/s
95th percentile per-packet one-way delay: 109.848 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 112.193 ms
Loss rate: 2.21%
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-02-16 11:25:43
End at: 2018-02-16 11:26:13
Local clock offset: -7.318 ms
Remote clock offset: 2.533 ms


# Below is generated by plot.py at 2018-02-16 18:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.93 Mbit/s
95th percentile per-packet one-way delay: 111.332 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 35.60 Mbit/s
95th percentile per-packet one-way delay: 108.871 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 38.41 Mbit/s
95th percentile per-packet one-way delay: 112.122 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 112.175 ms
Loss rate: 1.40%
```
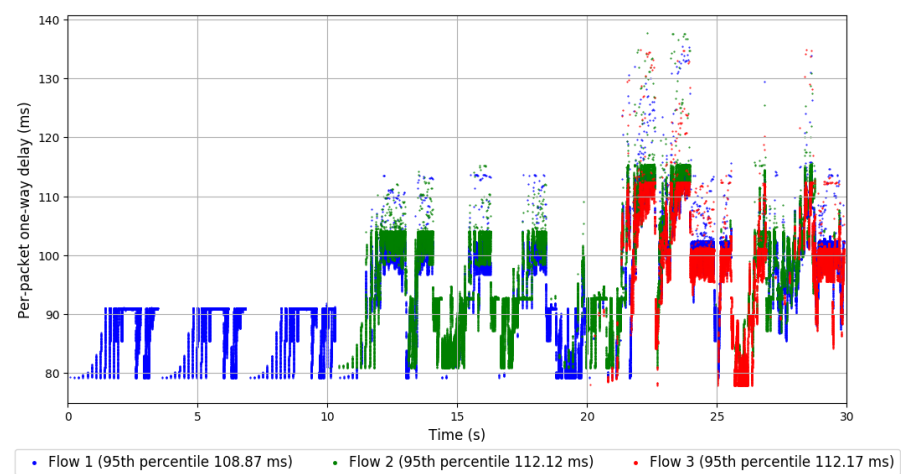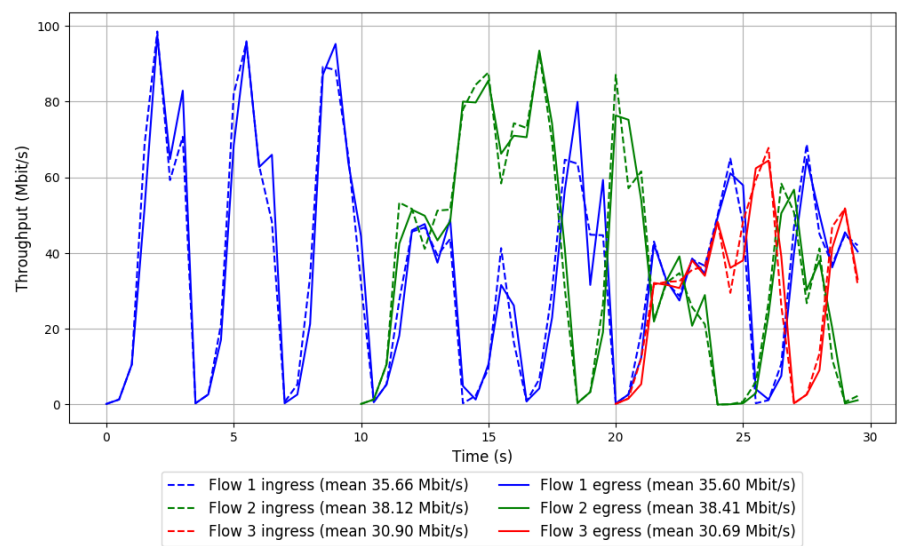
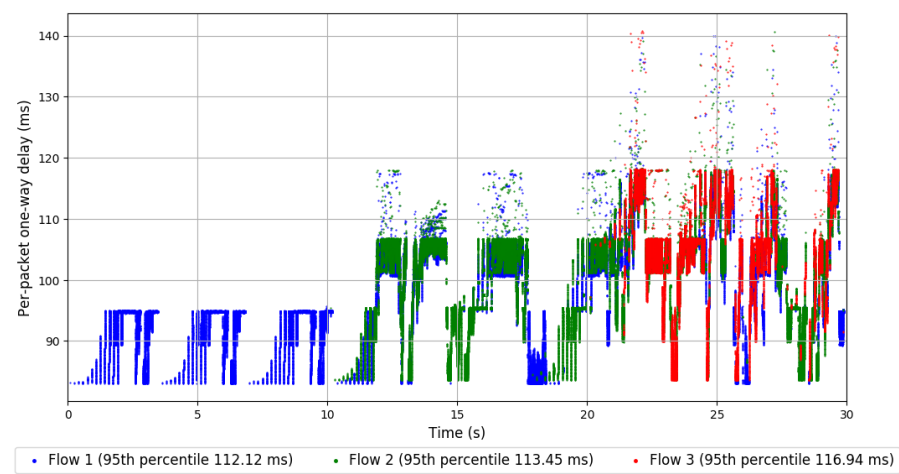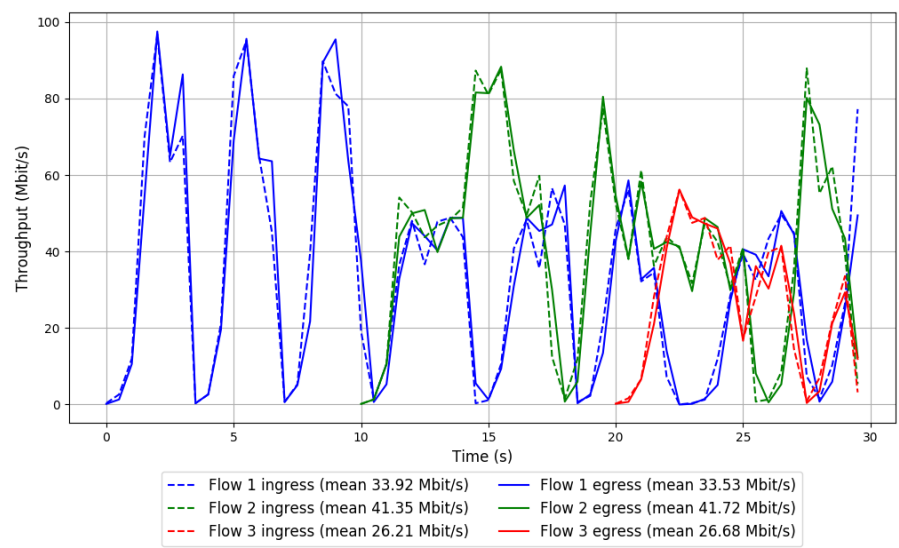Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-02-16 11:49:12
End at: 2018-02-16 11:49:42
Local clock offset: -7.856 ms
Remote clock offset: -3.44 ms


# Below is generated by plot.py at 2018-02-16 18:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.91 Mbit/s
95th percentile per-packet one-way delay: 114.088 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 33.53 Mbit/s
95th percentile per-packet one-way delay: 112.120 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 41.72 Mbit/s
95th percentile per-packet one-way delay: 113.446 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 26.68 Mbit/s
95th percentile per-packet one-way delay: 116.935 ms
Loss rate: 0.02%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-02-16 12:12:39
End at: 2018-02-16 12:13:09
Local clock offset: -4.949 ms
Remote clock offset: -3.81 ms


# Below is generated by plot.py at 2018-02-16 18:43:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.96 Mbit/s
95th percentile per-packet one-way delay: 111.091 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 35.83 Mbit/s
95th percentile per-packet one-way delay: 108.060 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 29.58 Mbit/s
95th percentile per-packet one-way delay: 112.957 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 26.06 Mbit/s
95th percentile per-packet one-way delay: 113.747 ms
Loss rate: 3.67%
```
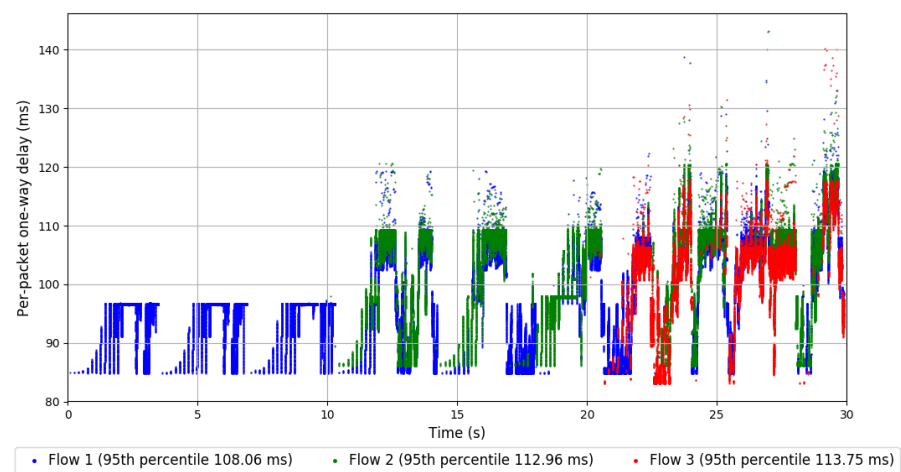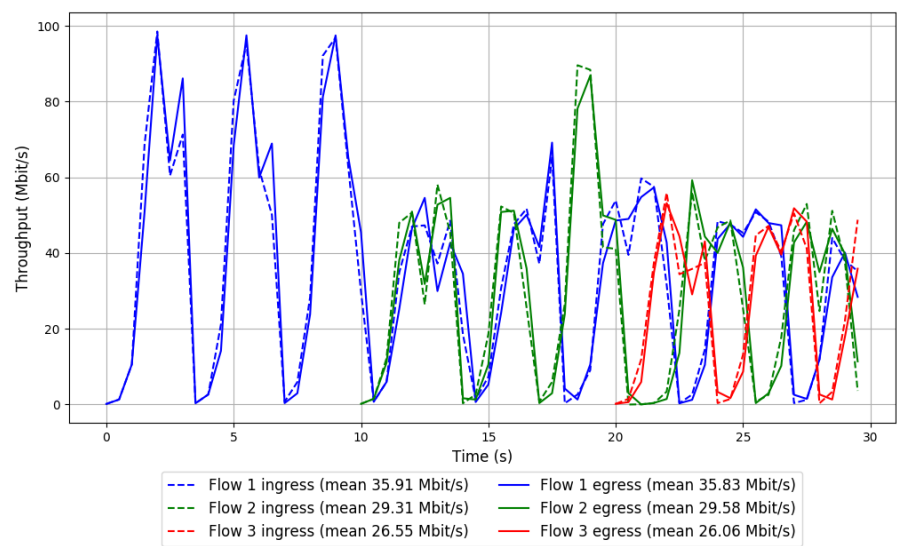
Run 5: Report of Verus — Data Link

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```
Run 6: Statistics of Verus

Start at: 2018-02-16 12:36:08
End at: 2018-02-16 12:36:38
Local clock offset: -4.546 ms
Remote clock offset: 0.256 ms


# Below is generated by plot.py at 2018-02-16 18:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.09 Mbit/s
95th percentile per-packet one-way delay: 114.186 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 44.68 Mbit/s
95th percentile per-packet one-way delay: 112.148 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 24.09 Mbit/s
95th percentile per-packet one-way delay: 115.936 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 19.65 Mbit/s
95th percentile per-packet one-way delay: 114.277 ms
Loss rate: 3.03%
```
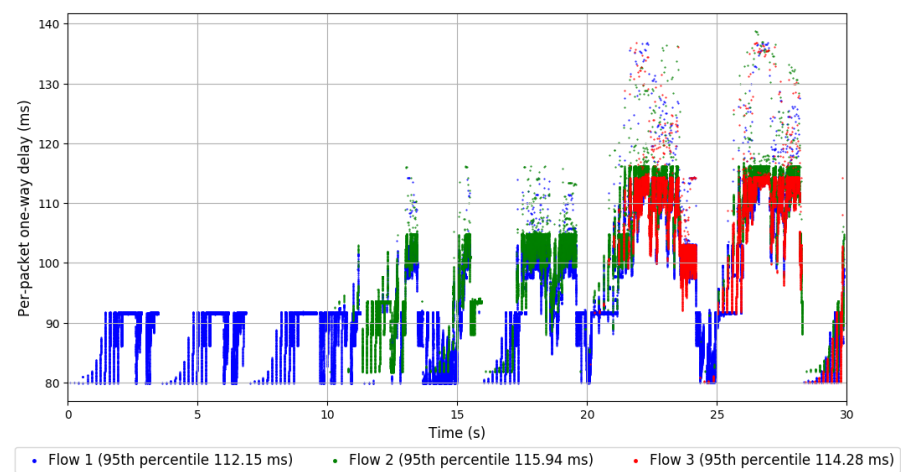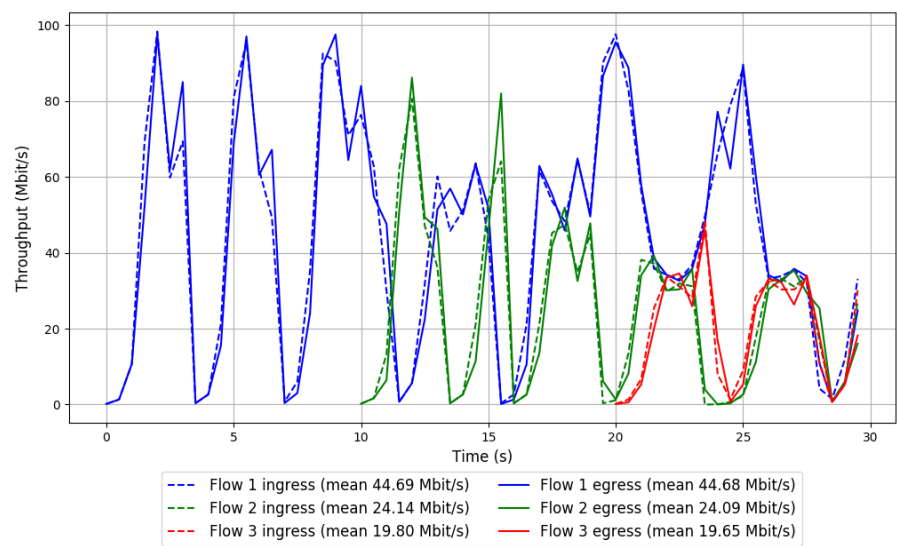
Run 6: Report of Verus — Data Link

Flow 1 ingress (mean 44.69 Mbit/s) --- Flow 1 egress (mean 44.68 Mbit/s)
Flow 2 ingress (mean 24.14 Mbit/s) --- Flow 2 egress (mean 24.09 Mbit/s)
Flow 3 ingress (mean 19.80 Mbit/s) --- Flow 3 egress (mean 19.65 Mbit/s)

Flow 1 (95th percentile 112.15 ms) Flow 2 (95th percentile 115.94 ms) Flow 3 (95th percentile 114.28 ms)
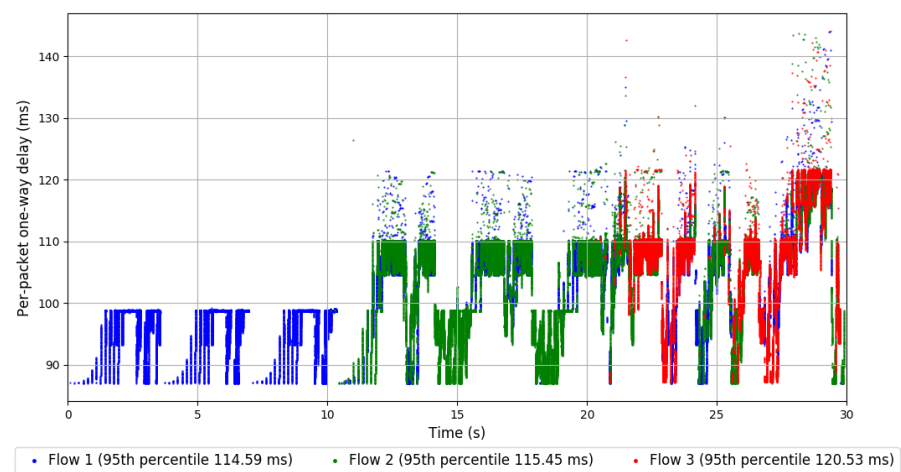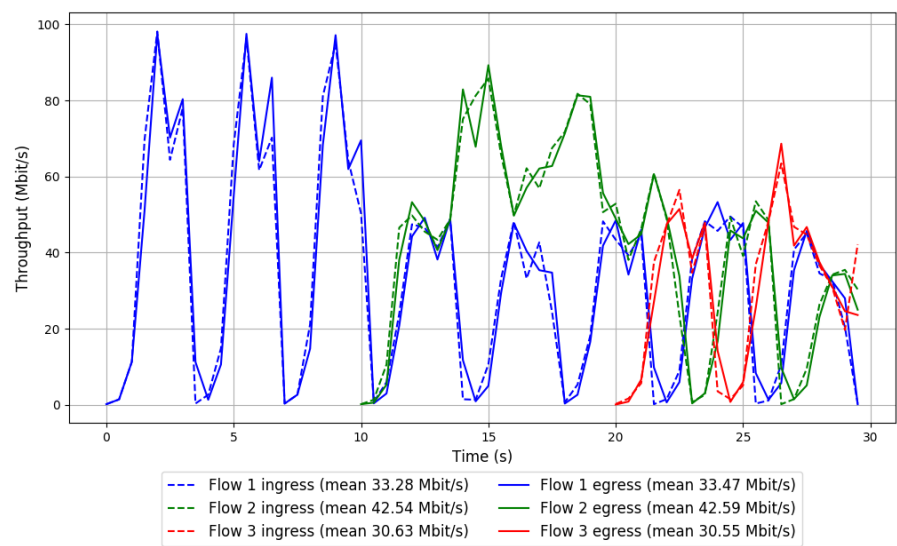
```
Run 7: Statistics of Verus

Start at: 2018-02-16 12:59:38
End at: 2018-02-16 13:00:08
Local clock offset: -6.893 ms
Remote clock offset: -5.793 ms


# Below is generated by plot.py at 2018-02-16 18:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.47 Mbit/s
95th percentile per-packet one-way delay: 116.762 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 114.588 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.59 Mbit/s
95th percentile per-packet one-way delay: 115.452 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 120.526 ms
Loss rate: 3.57%
```
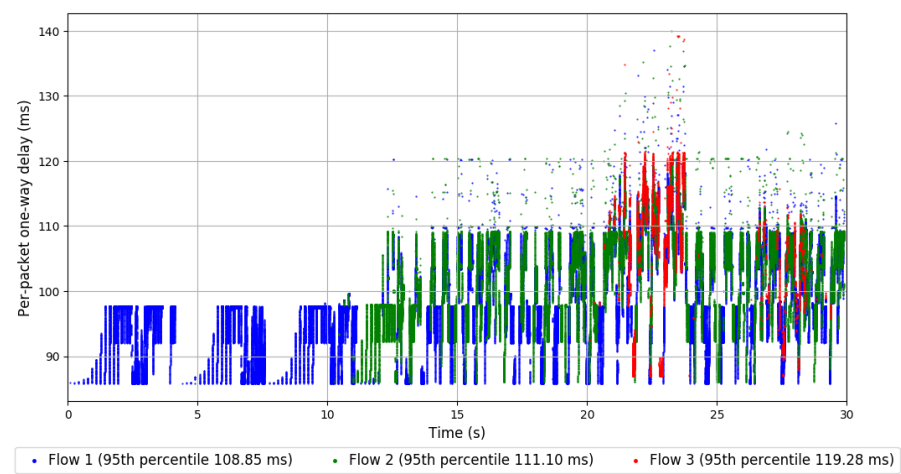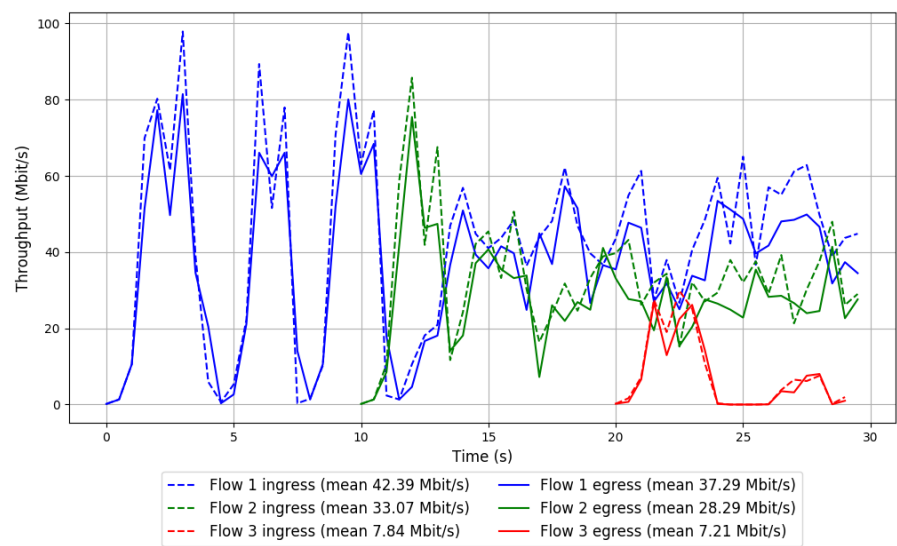
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2018-02-16 13:23:24
End at: 2018-02-16 13:23:54
Local clock offset: -7.287 ms
Remote clock offset: -6.007 ms


# Below is generated by plot.py at 2018-02-16 18:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.31 Mbit/s
95th percentile per-packet one-way delay: 110.530 ms
Loss rate: 13.31%
-- Flow 1:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 108.852 ms
Loss rate: 12.54%
-- Flow 2:
Average throughput: 28.29 Mbit/s
95th percentile per-packet one-way delay: 111.099 ms
Loss rate: 15.19%
-- Flow 3:
Average throughput: 7.21 Mbit/s
95th percentile per-packet one-way delay: 119.281 ms
Loss rate: 9.74%
```

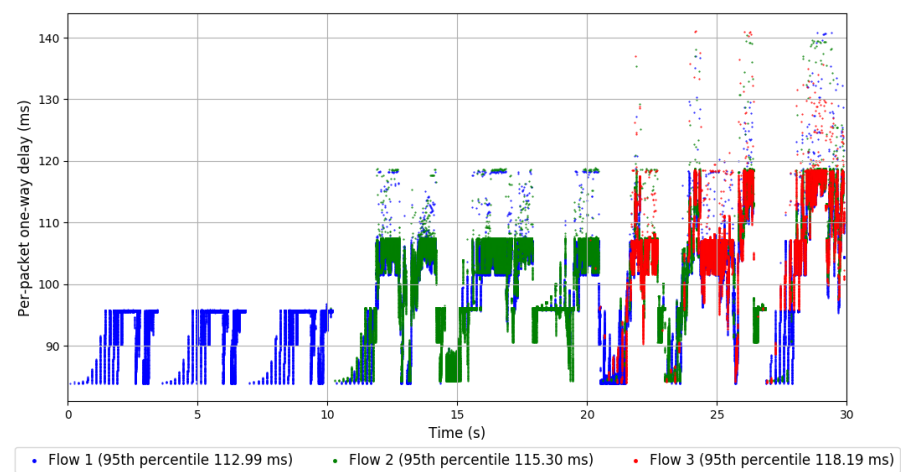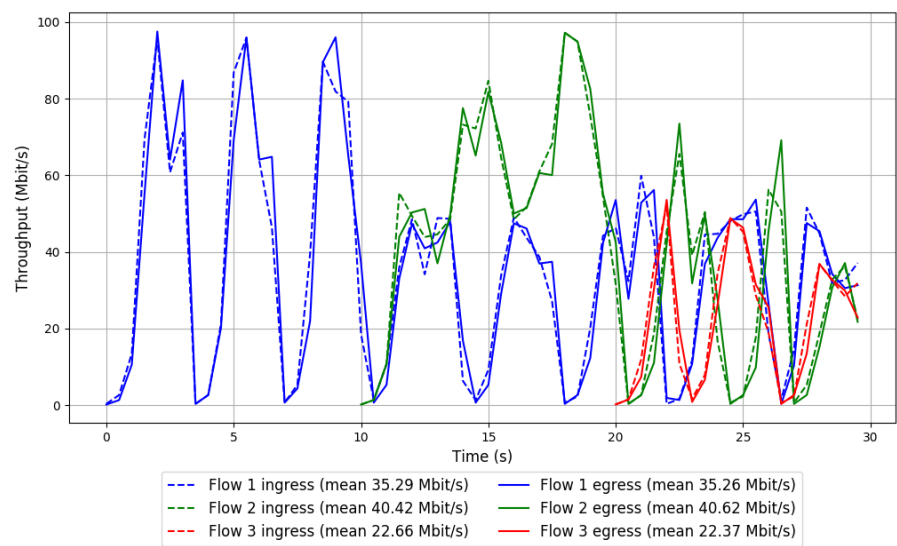Run 8: Report of Verus — Data Link

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```
Run 9: Statistics of Verus

Start at: 2018-02-16 13:47:03
End at: 2018-02-16 13:47:33
Local clock offset: -7.109 ms
Remote clock offset: -5.23 ms


# Below is generated by plot.py at 2018-02-16 18:43:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.51 Mbit/s
95th percentile per-packet one-way delay: 115.763 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 35.26 Mbit/s
95th percentile per-packet one-way delay: 112.987 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 40.62 Mbit/s
95th percentile per-packet one-way delay: 115.295 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 22.37 Mbit/s
95th percentile per-packet one-way delay: 118.193 ms
Loss rate: 3.33%
```

Run 9: Report of Verus — Data Link

Flow 1 ingress (mean 35.29 Mbit/s)   Flow 1 egress (mean 35.26 Mbit/s)
Flow 2 ingress (mean 40.42 Mbit/s)   Flow 2 egress (mean 40.62 Mbit/s)
Flow 3 ingress (mean 22.66 Mbit/s)   Flow 3 egress (mean 22.37 Mbit/s)

Flow 1 (95th percentile 112.99 ms)   Flow 2 (95th percentile 115.30 ms)   Flow 3 (95th percentile 118.19 ms)

```
Run 10: Statistics of Verus

Start at: 2018-02-16 14:10:38
End at: 2018-02-16 14:11:08
Local clock offset: -6.684 ms
Remote clock offset: 1.39 ms


# Below is generated by plot.py at 2018-02-16 18:43:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.32 Mbit/s
95th percentile per-packet one-way delay: 113.040 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 33.07 Mbit/s
95th percentile per-packet one-way delay: 112.817 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 47.30 Mbit/s
95th percentile per-packet one-way delay: 112.863 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 26.99 Mbit/s
95th percentile per-packet one-way delay: 113.115 ms
Loss rate: 2.57%
```
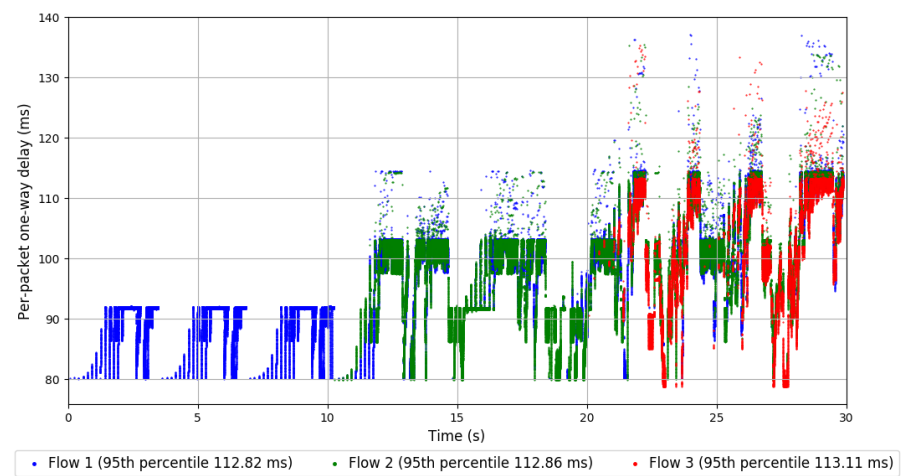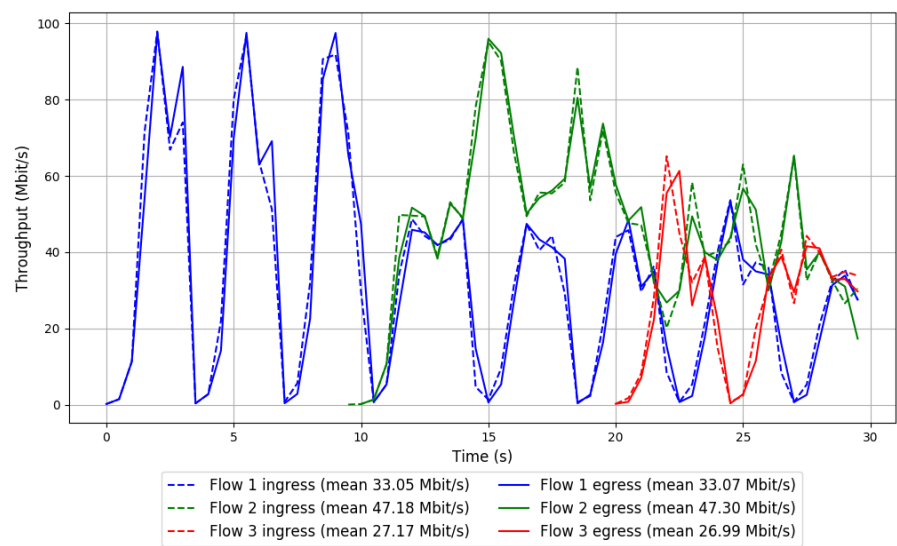
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-02-16 10:58:18
End at: 2018-02-16 10:58:48
Local clock offset: -7.016 ms
Remote clock offset: 1.803 ms


# Below is generated by plot.py at 2018-02-16 18:45:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.87 Mbit/s
95th percentile per-packet one-way delay: 93.136 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 77.49 Mbit/s
95th percentile per-packet one-way delay: 93.211 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 14.58 Mbit/s
95th percentile per-packet one-way delay: 91.843 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 93.106 ms
Loss rate: 2.23%
```
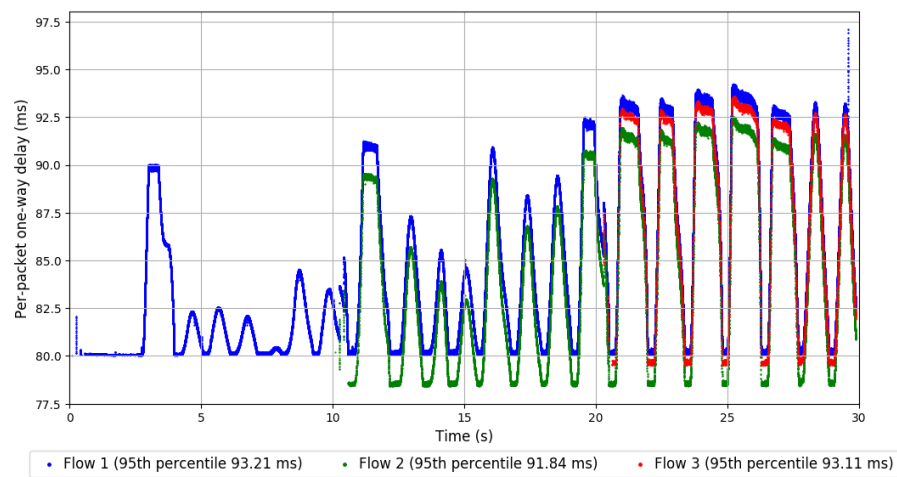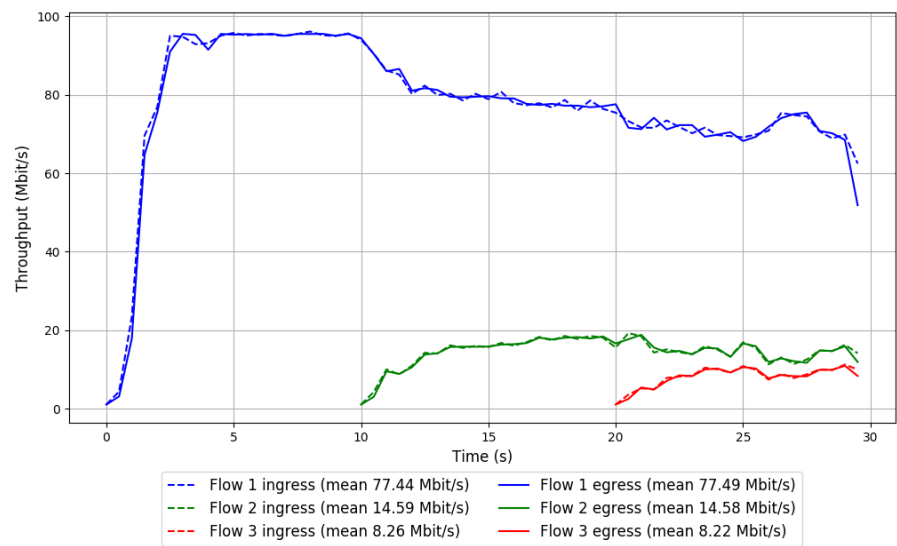
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 77.44 Mbit/s) —— Flow 1 egress (mean 77.49 Mbit/s)
Flow 2 ingress (mean 14.59 Mbit/s) —— Flow 2 egress (mean 14.58 Mbit/s)
Flow 3 ingress (mean 8.26 Mbit/s) —— Flow 3 egress (mean 8.22 Mbit/s)

Flow 1 (95th percentile 93.21 ms)   Flow 2 (95th percentile 91.84 ms)   Flow 3 (95th percentile 93.11 ms)

```
Run 2: Statistics of Copa

Start at: 2018-02-16 11:21:47
End at: 2018-02-16 11:22:17
Local clock offset: -7.296 ms
Remote clock offset: 2.54 ms


# Below is generated by plot.py at 2018-02-16 18:46:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.74 Mbit/s
95th percentile per-packet one-way delay: 107.491 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 65.54 Mbit/s
95th percentile per-packet one-way delay: 105.871 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 26.74 Mbit/s
95th percentile per-packet one-way delay: 109.087 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 22.72 Mbit/s
95th percentile per-packet one-way delay: 106.118 ms
Loss rate: 3.14%
```
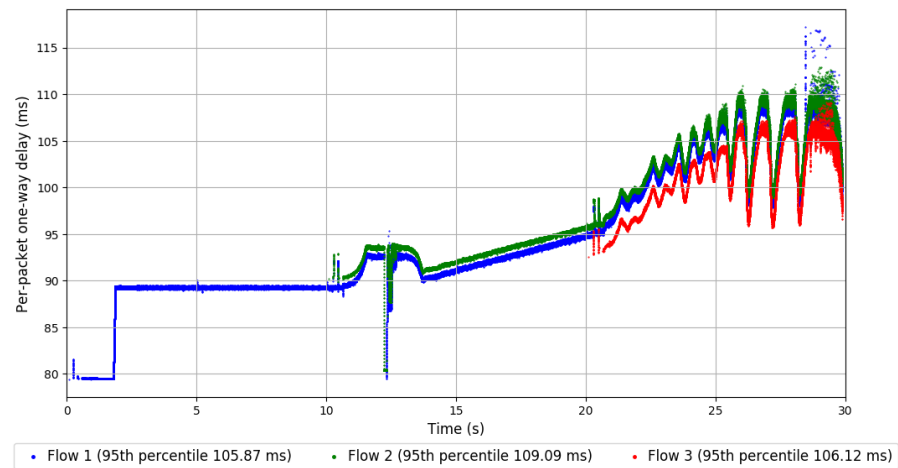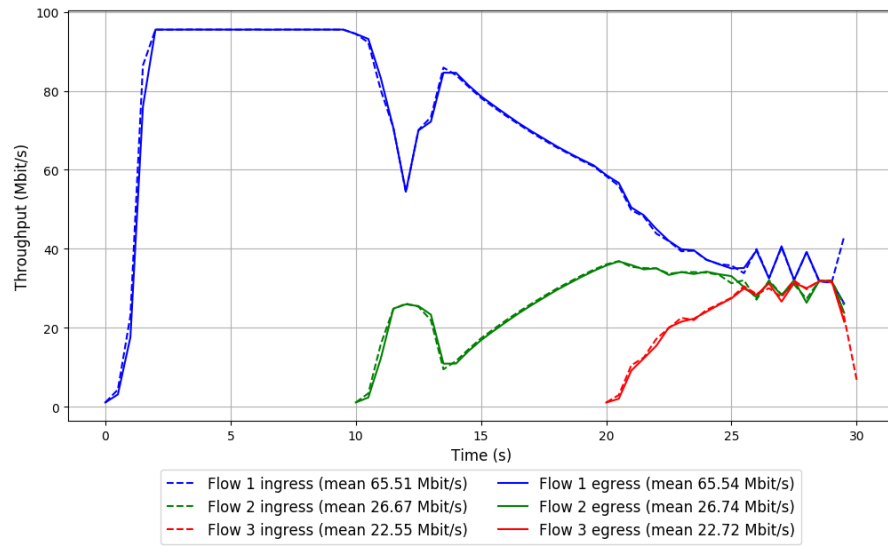
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-02-16 11:45:17
End at: 2018-02-16 11:45:47
Local clock offset: -7.819 ms
Remote clock offset: 1.62 ms


# Below is generated by plot.py at 2018-02-16 18:46:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.87 Mbit/s
95th percentile per-packet one-way delay: 106.992 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 65.76 Mbit/s
95th percentile per-packet one-way delay: 104.582 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 26.21 Mbit/s
95th percentile per-packet one-way delay: 107.068 ms
Loss rate: 2.83%
-- Flow 3:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 109.130 ms
Loss rate: 5.31%
```
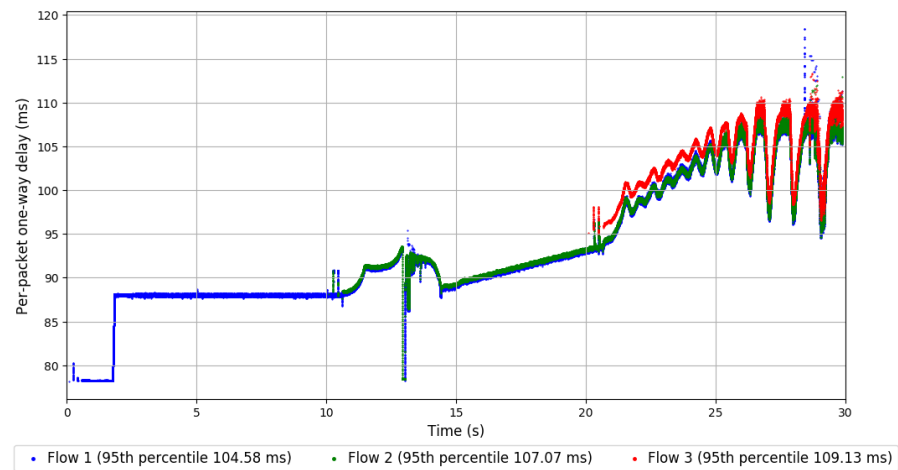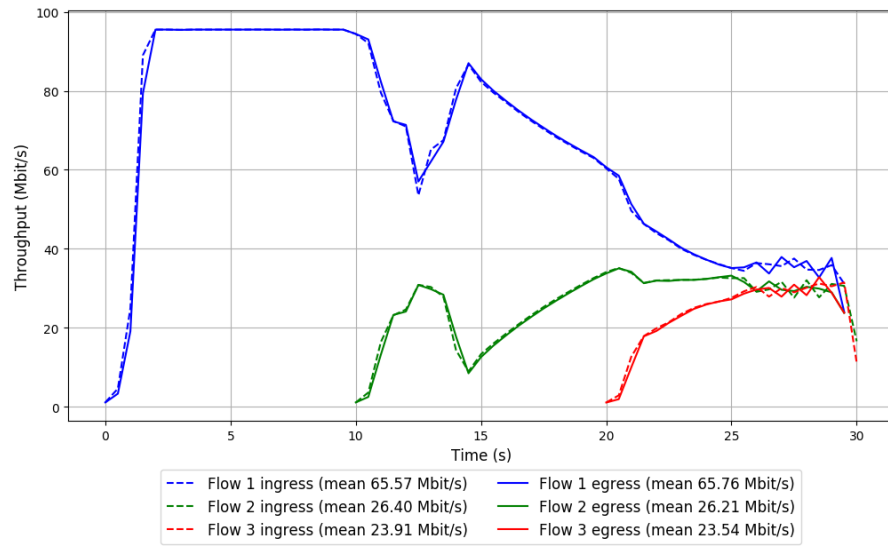
Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 65.57 Mbit/s)   —— Flow 1 egress (mean 65.76 Mbit/s)
- - - Flow 2 ingress (mean 26.40 Mbit/s)   —— Flow 2 egress (mean 26.21 Mbit/s)
- - - Flow 3 ingress (mean 23.91 Mbit/s)   —— Flow 3 egress (mean 23.54 Mbit/s)

- Flow 1 (95th percentile 104.58 ms)   • Flow 2 (95th percentile 107.07 ms)   • Flow 3 (95th percentile 109.13 ms)

229

```
Run 4: Statistics of Copa

Start at: 2018-02-16 12:08:44
End at: 2018-02-16 12:09:14
Local clock offset: -5.507 ms
Remote clock offset: 0.24 ms


# Below is generated by plot.py at 2018-02-16 18:46:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.82 Mbit/s
95th percentile per-packet one-way delay: 108.997 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 65.96 Mbit/s
95th percentile per-packet one-way delay: 106.668 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 25.96 Mbit/s
95th percentile per-packet one-way delay: 108.055 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 23.26 Mbit/s
95th percentile per-packet one-way delay: 111.181 ms
Loss rate: 4.89%
```
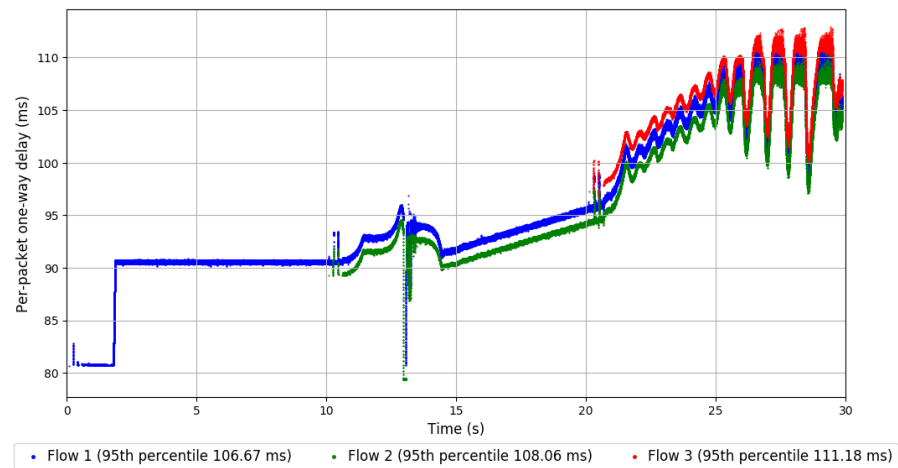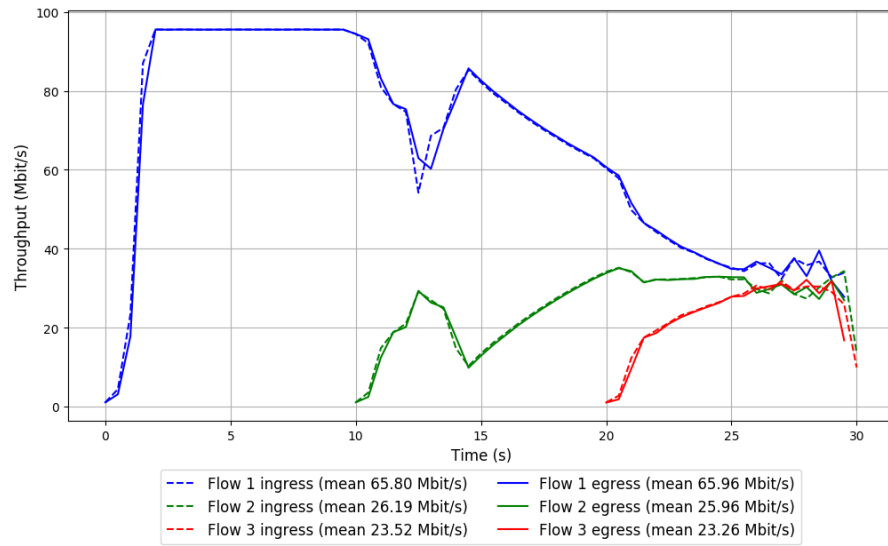
Run 4: Report of Copa — Data Link

- - - Flow 1 ingress (mean 65.80 Mbit/s) —— Flow 1 egress (mean 65.96 Mbit/s)
- - - Flow 2 ingress (mean 26.19 Mbit/s) —— Flow 2 egress (mean 25.96 Mbit/s)
- - - Flow 3 ingress (mean 23.52 Mbit/s) —— Flow 3 egress (mean 23.26 Mbit/s)

- Flow 1 (95th percentile 106.67 ms)   • Flow 2 (95th percentile 108.06 ms)   • Flow 3 (95th percentile 111.18 ms)

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```
Run 5: Statistics of Copa

Start at: 2018-02-16 12:32:13
End at: 2018-02-16 12:32:43
Local clock offset: -3.602 ms
Remote clock offset: 1.165 ms


# Below is generated by plot.py at 2018-02-16 18:46:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.21 Mbit/s
95th percentile per-packet one-way delay: 92.322 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 71.70 Mbit/s
95th percentile per-packet one-way delay: 92.021 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 19.33 Mbit/s
95th percentile per-packet one-way delay: 93.065 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 11.18 Mbit/s
95th percentile per-packet one-way delay: 92.456 ms
Loss rate: 2.35%
```
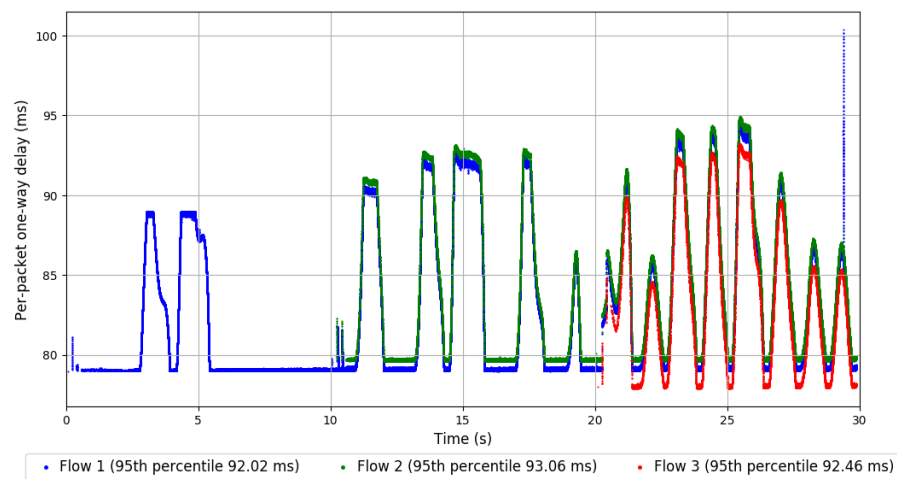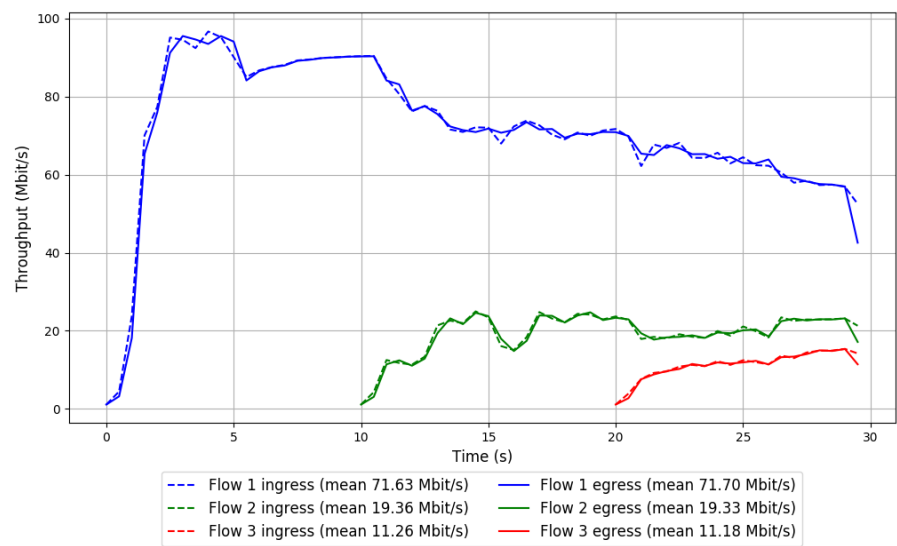
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 71.63 Mbit/s) — Flow 1 egress (mean 71.70 Mbit/s)
Flow 2 ingress (mean 19.36 Mbit/s) — Flow 2 egress (mean 19.33 Mbit/s)
Flow 3 ingress (mean 11.26 Mbit/s) — Flow 3 egress (mean 11.18 Mbit/s)

Flow 1 (95th percentile 92.02 ms) — Flow 2 (95th percentile 93.06 ms) — Flow 3 (95th percentile 92.46 ms)
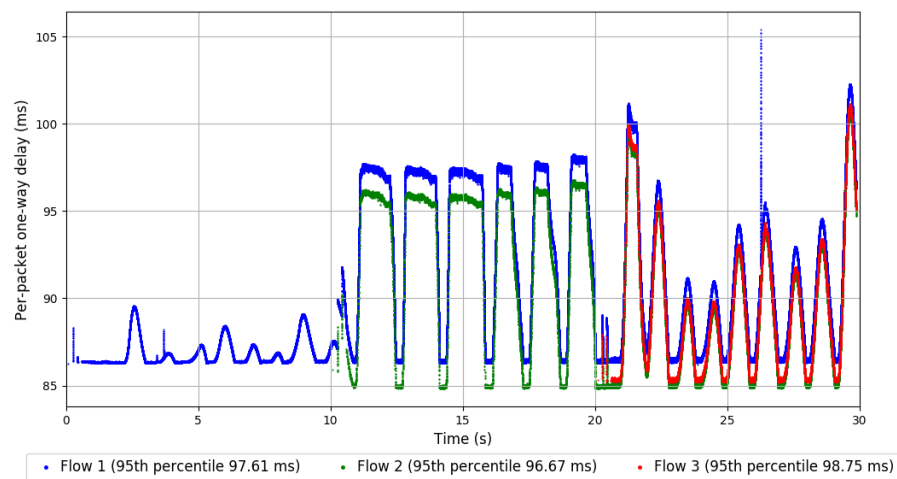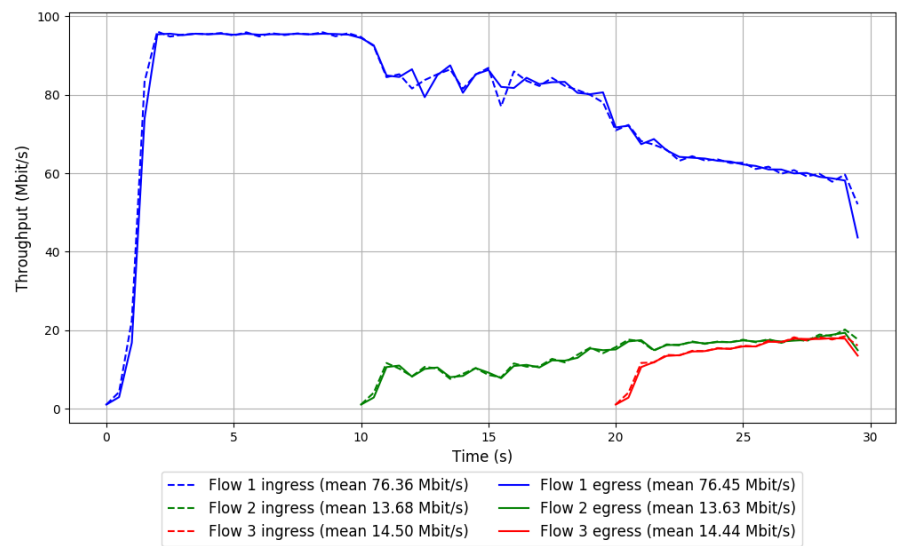
```
Run 6: Statistics of Copa

Start at: 2018-02-16 12:55:43
End at: 2018-02-16 12:56:13
Local clock offset: -6.791 ms
Remote clock offset: -4.906 ms


# Below is generated by plot.py at 2018-02-16 18:46:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 97.613 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 76.45 Mbit/s
95th percentile per-packet one-way delay: 97.607 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 96.672 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 14.44 Mbit/s
95th percentile per-packet one-way delay: 98.748 ms
Loss rate: 2.14%
```
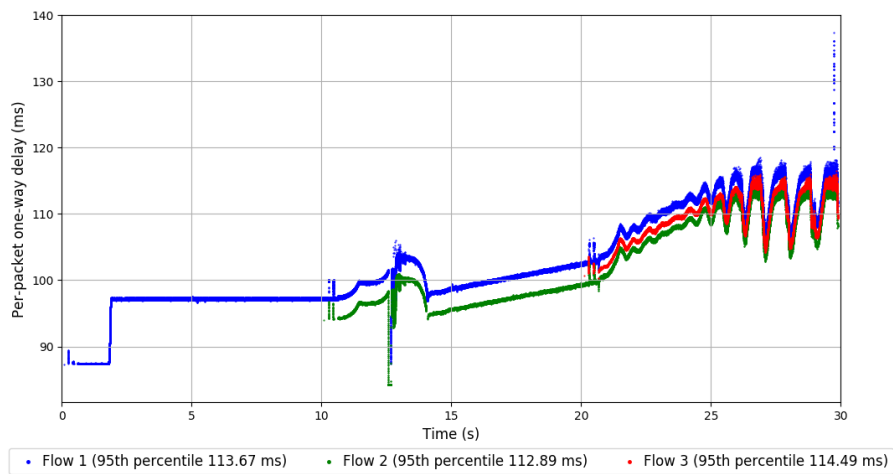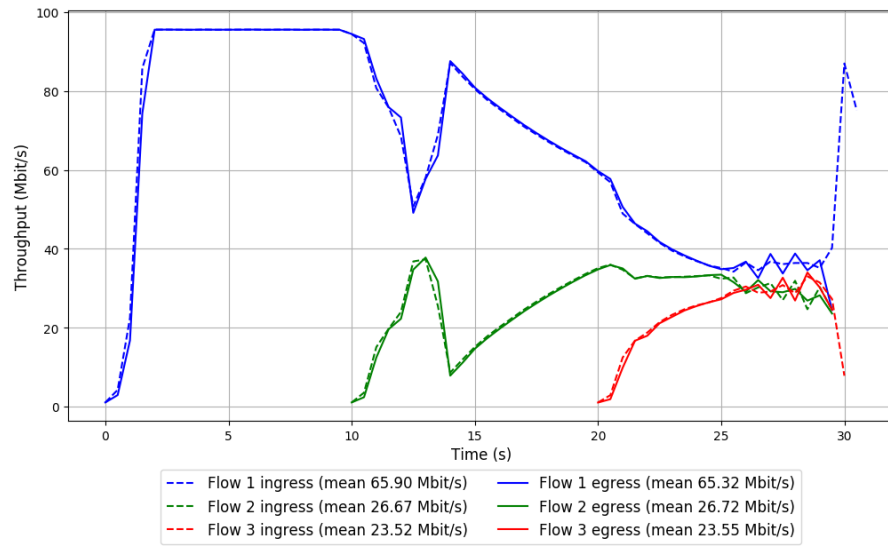
Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 76.36 Mbit/s)   Flow 1 egress (mean 76.45 Mbit/s)
Flow 2 ingress (mean 13.68 Mbit/s)   Flow 2 egress (mean 13.63 Mbit/s)
Flow 3 ingress (mean 14.50 Mbit/s)   Flow 3 egress (mean 14.44 Mbit/s)

Flow 1 (95th percentile 97.61 ms)   Flow 2 (95th percentile 96.67 ms)   Flow 3 (95th percentile 98.75 ms)

```
Run 7: Statistics of Copa

Start at: 2018-02-16 13:19:28
End at: 2018-02-16 13:19:58
Local clock offset: -7.187 ms
Remote clock offset: -6.013 ms


# Below is generated by plot.py at 2018-02-16 18:46:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.79 Mbit/s
95th percentile per-packet one-way delay: 113.940 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 65.32 Mbit/s
95th percentile per-packet one-way delay: 113.669 ms
Loss rate: 4.54%
-- Flow 2:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 112.890 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 114.492 ms
Loss rate: 3.73%
```
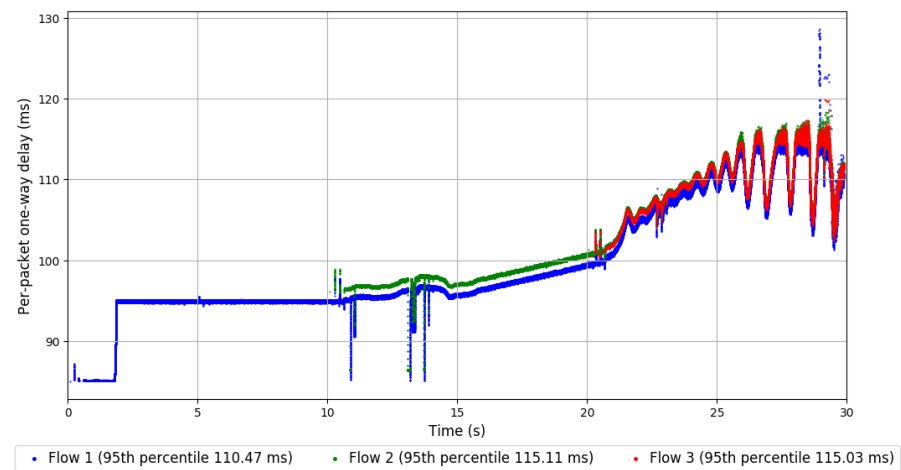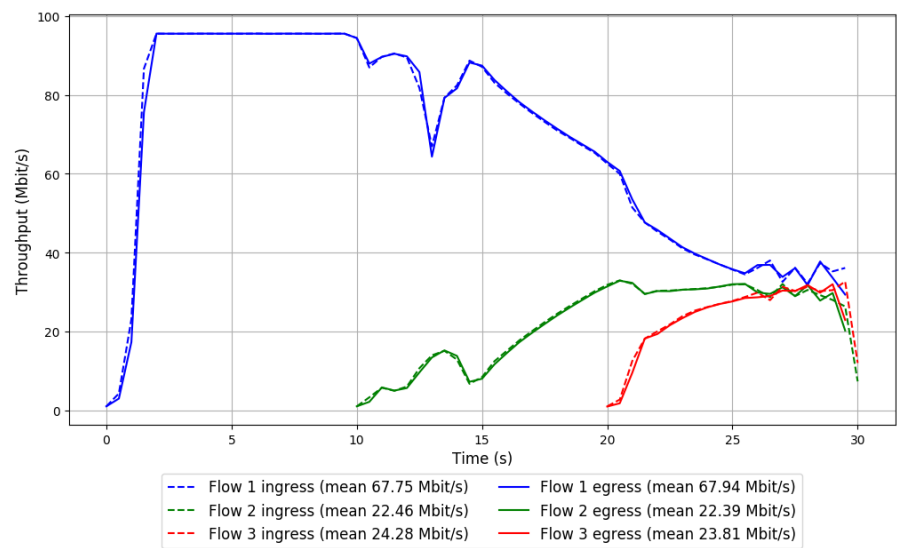
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 65.90 Mbit/s) Flow 1 egress (mean 65.32 Mbit/s)
Flow 2 ingress (mean 26.67 Mbit/s) Flow 2 egress (mean 26.72 Mbit/s)
Flow 3 ingress (mean 23.52 Mbit/s) Flow 3 egress (mean 23.55 Mbit/s)

Flow 1 (95th percentile 113.67 ms)   Flow 2 (95th percentile 112.89 ms)   Flow 3 (95th percentile 114.49 ms)

```
Run 8: Statistics of Copa

Start at: 2018-02-16 13:43:07
End at: 2018-02-16 13:43:37
Local clock offset: -7.265 ms
Remote clock offset: -4.388 ms


# Below is generated by plot.py at 2018-02-16 18:46:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 113.930 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 67.94 Mbit/s
95th percentile per-packet one-way delay: 110.470 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 22.39 Mbit/s
95th percentile per-packet one-way delay: 115.113 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 23.81 Mbit/s
95th percentile per-packet one-way delay: 115.031 ms
Loss rate: 5.60%
```
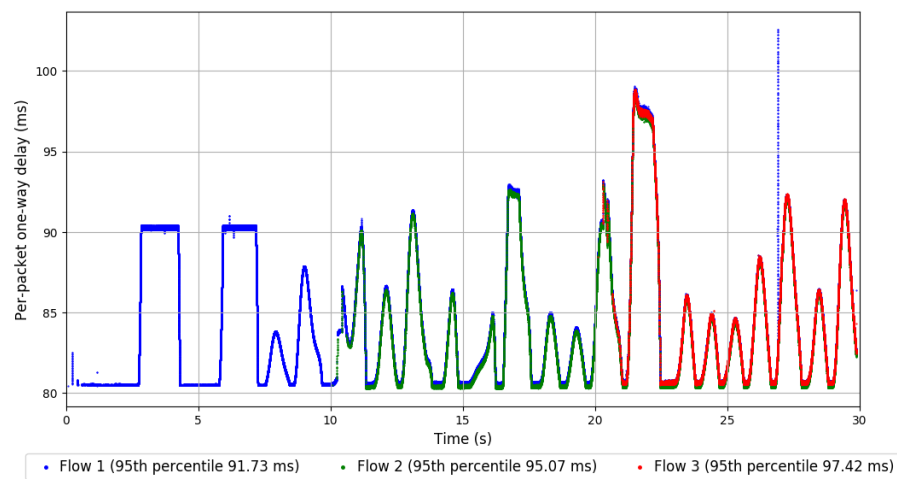
Run 8: Report of Copa — Data Link

```
Run 9: Statistics of Copa

Start at: 2018-02-16 14:06:42
End at: 2018-02-16 14:07:12
Local clock offset: -6.652 ms
Remote clock offset: 1.16 ms


# Below is generated by plot.py at 2018-02-16 18:48:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.45 Mbit/s
95th percentile per-packet one-way delay: 92.319 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 70.44 Mbit/s
95th percentile per-packet one-way delay: 91.734 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 16.57 Mbit/s
95th percentile per-packet one-way delay: 95.069 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 97.424 ms
Loss rate: 1.95%
```
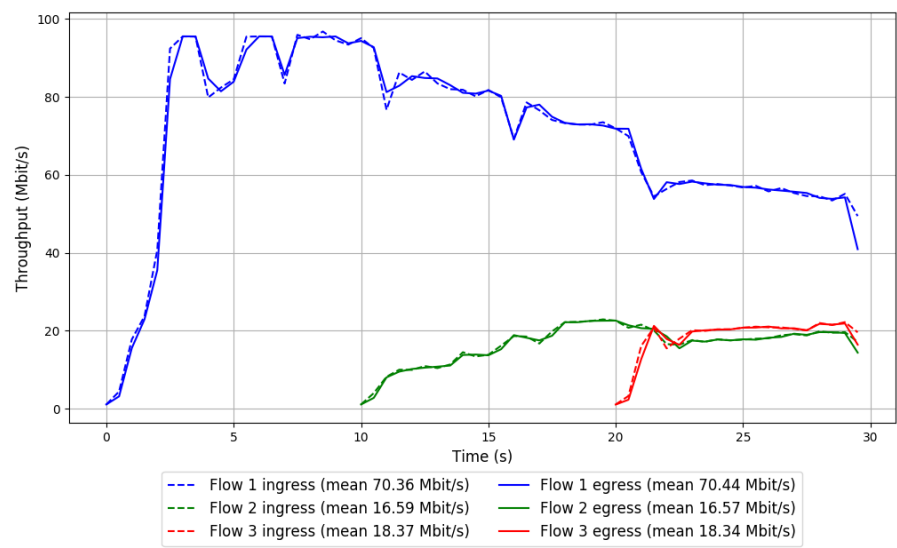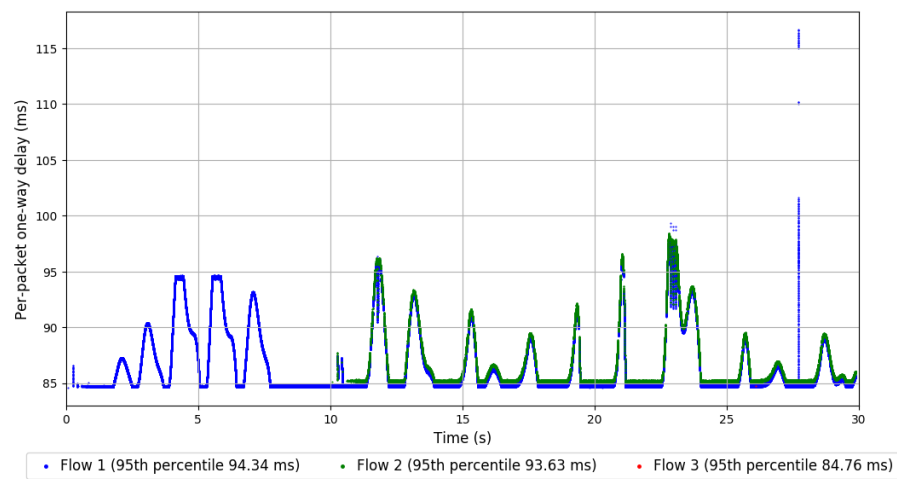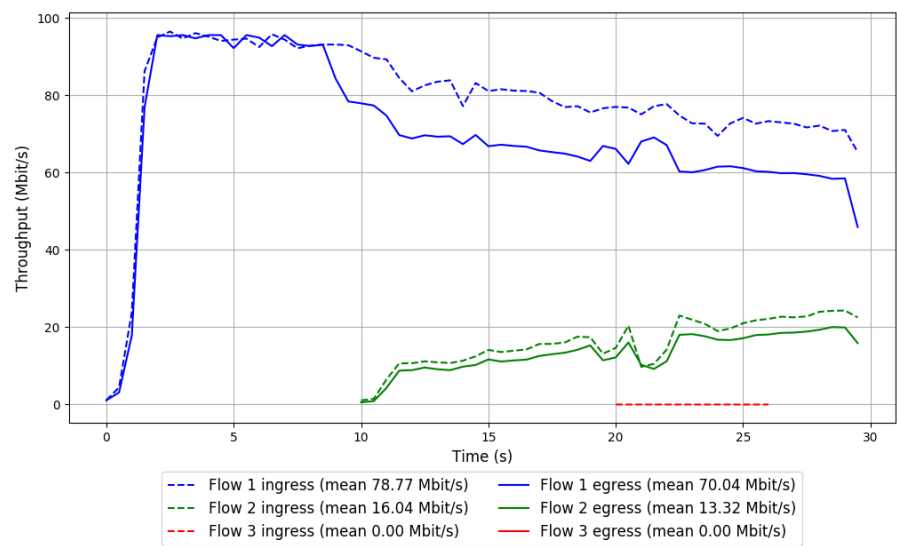
Run 9: Report of Copa — Data Link

```
Run 10: Statistics of Copa

Start at: 2018-02-16 14:30:16
End at: 2018-02-16 14:30:46
Local clock offset: -4.168 ms
Remote clock offset: -2.913 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.88 Mbit/s
95th percentile per-packet one-way delay: 94.300 ms
Loss rate: 12.31%
-- Flow 1:
Average throughput: 70.04 Mbit/s
95th percentile per-packet one-way delay: 94.343 ms
Loss rate: 11.59%
-- Flow 2:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 93.634 ms
Loss rate: 17.65%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 84.757 ms
Loss rate: 75.00%
```

Run 10: Report of Copa — Data Link

Run 1: Statistics of FillP

Start at: 2018-02-16 10:43:52
End at: 2018-02-16 10:44:22
Local clock offset: -6.75 ms
Remote clock offset: 0.822 ms

Run 1: Report of FillP — Data Link

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```
Run 2: Statistics of FillP

Start at: 2018-02-16 11:07:22
End at: 2018-02-16 11:07:52
Local clock offset: -7.085 ms
Remote clock offset: 1.954 ms
```

Run 2: Report of FillP — Data Link

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```
Run 3: Statistics of FillP

Start at: 2018-02-16 11:30:52
End at: 2018-02-16 11:31:22
Local clock offset: -7.522 ms
Remote clock offset: -3.044 ms
```

Run 3: Report of FillP — Data Link

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Run 4: Statistics of FillP

Start at: 2018-02-16 11:54:20
End at: 2018-02-16 11:54:50
Local clock offset: -7.929 ms
Remote clock offset: 1.381 ms

Run 4: Report of FillP — Data Link

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```
Run 5: Statistics of FillP

Start at: 2018-02-16 12:17:48
End at: 2018-02-16 12:18:18
Local clock offset: -4.438 ms
Remote clock offset: -4.723 ms
```

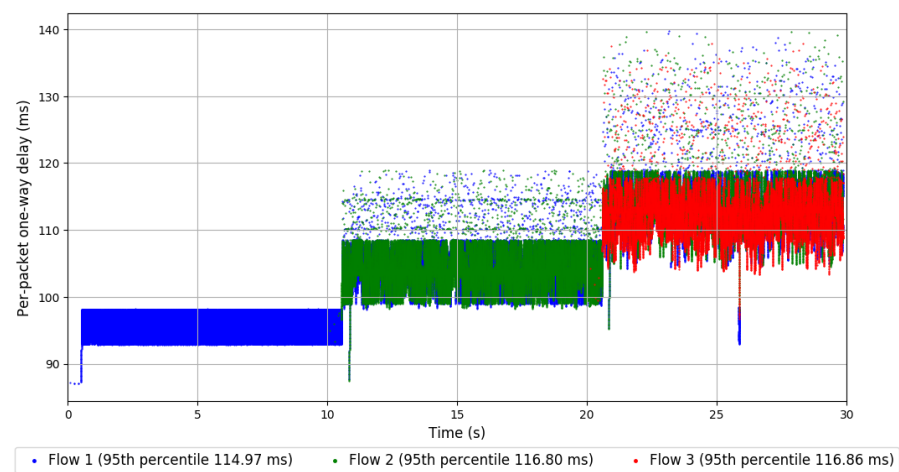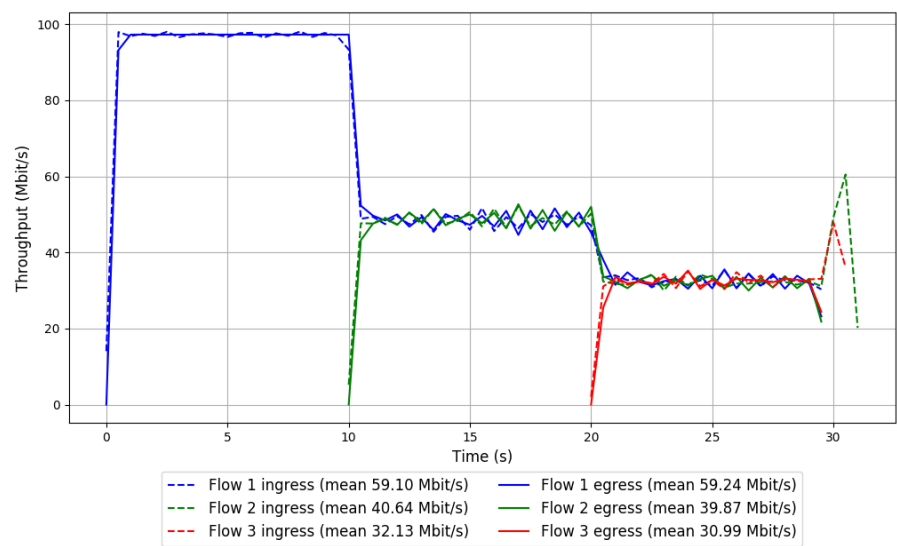Run 5: Report of FillP — Data Link

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```
Run 6: Statistics of FillP

Start at: 2018-02-16 12:41:17
End at: 2018-02-16 12:41:47
Local clock offset: -5.573 ms
Remote clock offset: -5.406 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.83 Mbit/s
95th percentile per-packet one-way delay: 116.085 ms
Loss rate: 4.38%
-- Flow 1:
Average throughput: 59.24 Mbit/s
95th percentile per-packet one-way delay: 114.970 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 39.87 Mbit/s
95th percentile per-packet one-way delay: 116.796 ms
Loss rate: 8.51%
-- Flow 3:
Average throughput: 30.99 Mbit/s
95th percentile per-packet one-way delay: 116.855 ms
Loss rate: 14.27%
```

Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 59.10 Mbit/s) Flow 1 egress (mean 59.24 Mbit/s)
Flow 2 ingress (mean 40.64 Mbit/s) Flow 2 egress (mean 39.87 Mbit/s)
Flow 3 ingress (mean 32.13 Mbit/s) Flow 3 egress (mean 30.99 Mbit/s)

Flow 1 (95th percentile 114.97 ms)   Flow 2 (95th percentile 116.80 ms)   Flow 3 (95th percentile 116.86 ms)

255

```
Run 7: Statistics of FillP

Start at: 2018-02-16 13:04:48
End at: 2018-02-16 13:05:18
Local clock offset: -7.039 ms
Remote clock offset: -0.114 ms
```

Run 7: Report of FillP — Data Link

Figure is missing

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```
Run 8: Statistics of FillP

Start at: 2018-02-16 13:28:35
End at: 2018-02-16 13:29:05
Local clock offset: -7.269 ms
Remote clock offset: 0.873 ms
```

Run 8: Report of FillP — Data Link

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```
Run 9: Statistics of FillP

Start at: 2018-02-16 13:52:14
End at: 2018-02-16 13:52:44
Local clock offset: -6.825 ms
Remote clock offset: -0.337 ms
```

Run 9: Report of FillP — Data Link

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```
Run 10: Statistics of FillP

Start at: 2018-02-16 14:15:48
End at: 2018-02-16 14:16:18
Local clock offset: -6.494 ms
Remote clock offset: 1.711 ms
```

Run 10: Report of FillP — Data Link

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

Start at: 2018-02-16 10:50:26
End at: 2018-02-16 10:50:56
Local clock offset: -6.751 ms
Remote clock offset: 2.468 ms

# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.04 Mbit/s
95th percentile per-packet one-way delay: 108.789 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 65.16 Mbit/s
95th percentile per-packet one-way delay: 107.188 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 109.517 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 28.30 Mbit/s
95th percentile per-packet one-way delay: 111.344 ms
Loss rate: 2.10%
```
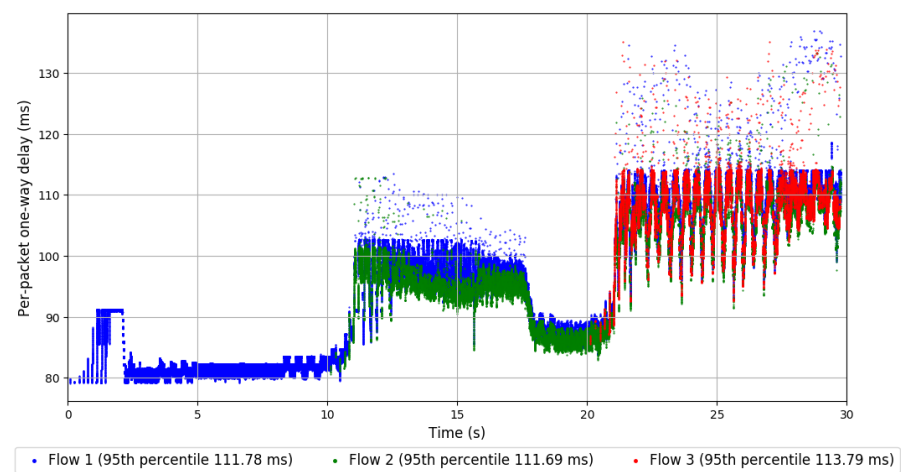
Run 1: Report of Indigo-1-32 — Data Link

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

Start at: 2018-02-16 11:13:55
End at: 2018-02-16 11:14:25
Local clock offset: -7.147 ms
Remote clock offset: 2.527 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 112.312 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 63.63 Mbit/s
95th percentile per-packet one-way delay: 111.783 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 31.70 Mbit/s
95th percentile per-packet one-way delay: 111.686 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 29.05 Mbit/s
95th percentile per-packet one-way delay: 113.790 ms
Loss rate: 2.34%
```
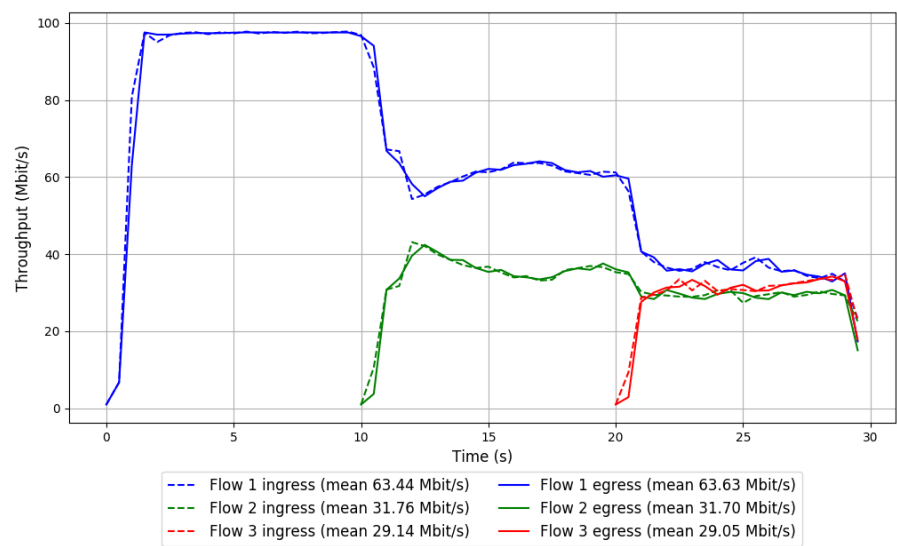
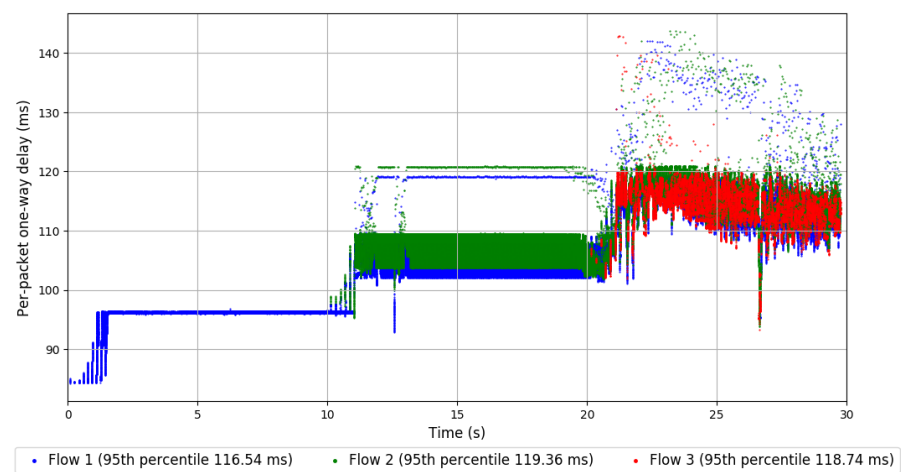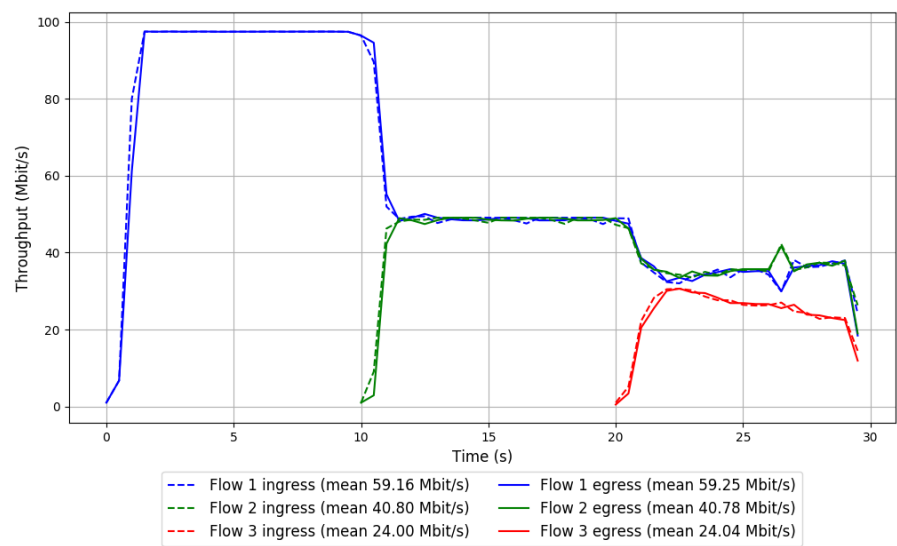Run 2: Report of Indigo-1-32 — Data Link

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

Start at: 2018-02-16 11:37:26
End at: 2018-02-16 11:37:56
Local clock offset: -7.728 ms
Remote clock offset: -3.893 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.01 Mbit/s
95th percentile per-packet one-way delay: 117.864 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 59.25 Mbit/s
95th percentile per-packet one-way delay: 116.538 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 40.78 Mbit/s
95th percentile per-packet one-way delay: 119.360 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 118.736 ms
Loss rate: 1.75%
```
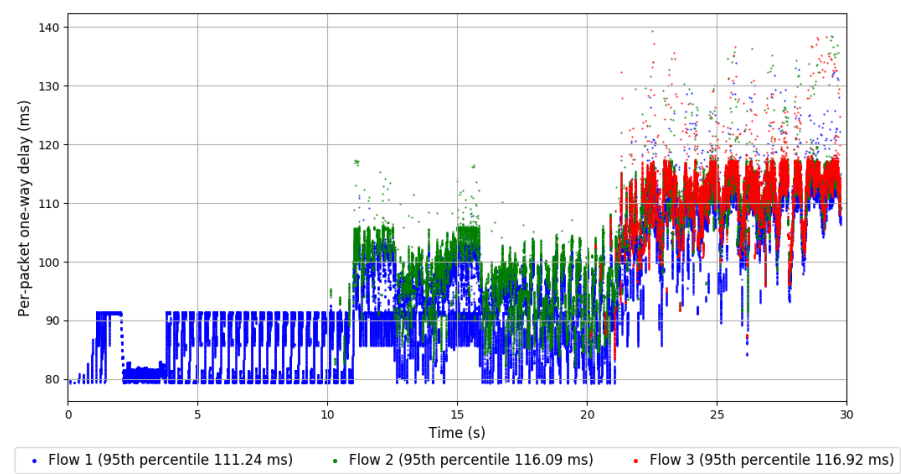
Run 3: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 59.16 Mbit/s) --- Flow 1 egress (mean 59.25 Mbit/s)
Flow 2 ingress (mean 40.80 Mbit/s) --- Flow 2 egress (mean 40.78 Mbit/s)
Flow 3 ingress (mean 24.00 Mbit/s) --- Flow 3 egress (mean 24.04 Mbit/s)

Flow 1 (95th percentile 116.54 ms) • Flow 2 (95th percentile 119.36 ms) • Flow 3 (95th percentile 118.74 ms)

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

Start at: 2018-02-16 12:00:54
End at: 2018-02-16 12:01:24
Local clock offset: -7.257 ms
Remote clock offset: 0.339 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.08 Mbit/s
95th percentile per-packet one-way delay: 114.484 ms
Loss rate: 12.54%
-- Flow 1:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 111.242 ms
Loss rate: 10.37%
-- Flow 2:
Average throughput: 22.58 Mbit/s
95th percentile per-packet one-way delay: 116.092 ms
Loss rate: 19.84%
-- Flow 3:
Average throughput: 24.81 Mbit/s
95th percentile per-packet one-way delay: 116.918 ms
Loss rate: 12.73%
```
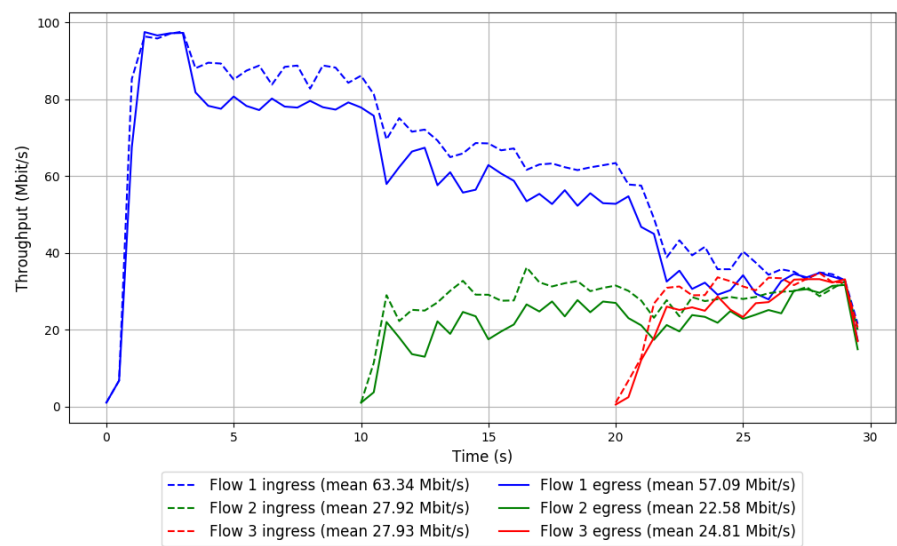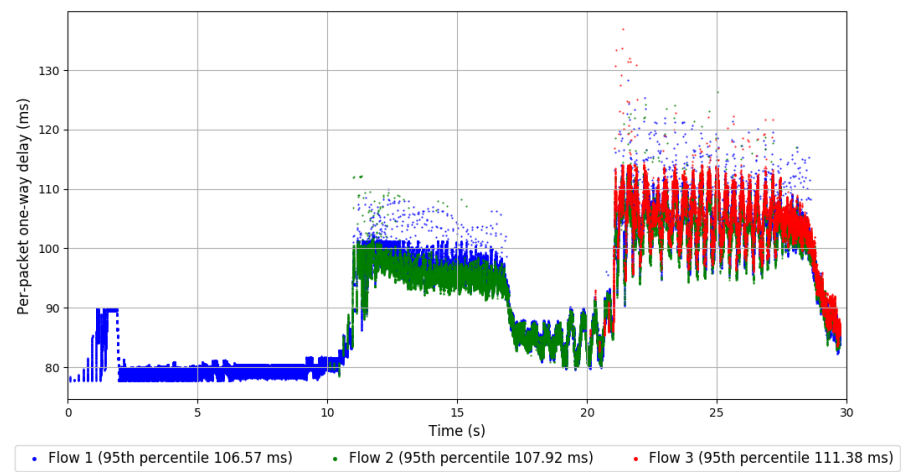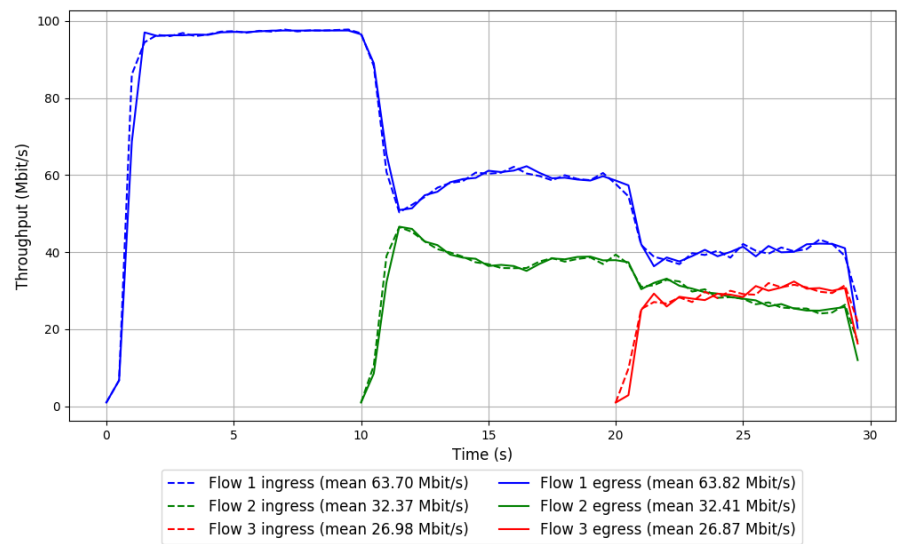
Run 4: Report of Indigo-1-32 — Data Link

- Flow 1 ingress (mean 63.34 Mbit/s) —— Flow 1 egress (mean 57.09 Mbit/s)
- Flow 2 ingress (mean 27.92 Mbit/s) —— Flow 2 egress (mean 22.58 Mbit/s)
- Flow 3 ingress (mean 27.93 Mbit/s) —— Flow 3 egress (mean 24.81 Mbit/s)

- Flow 1 (95th percentile 111.24 ms) - Flow 2 (95th percentile 116.09 ms) - Flow 3 (95th percentile 116.92 ms)

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

Start at: 2018-02-16 12:24:21
End at: 2018-02-16 12:24:51
Local clock offset: -4.026 ms
Remote clock offset: 1.481 ms


# Below is generated by plot.py at 2018-02-16 18:48:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.00 Mbit/s
95th percentile per-packet one-way delay: 108.312 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 106.574 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 32.41 Mbit/s
95th percentile per-packet one-way delay: 107.918 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 26.87 Mbit/s
95th percentile per-packet one-way delay: 111.378 ms
Loss rate: 2.20%
```

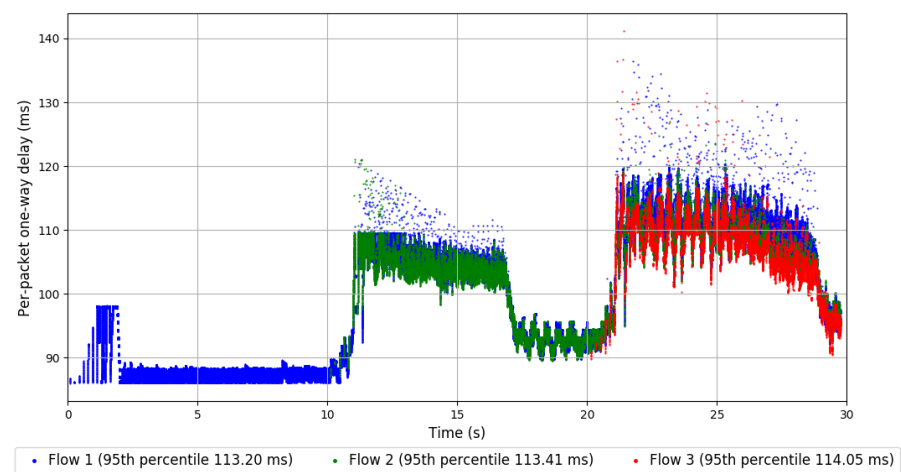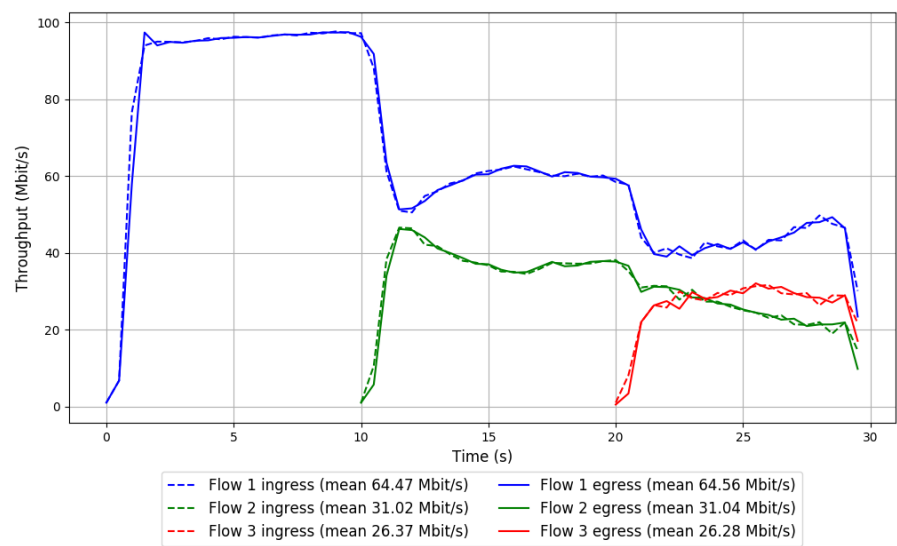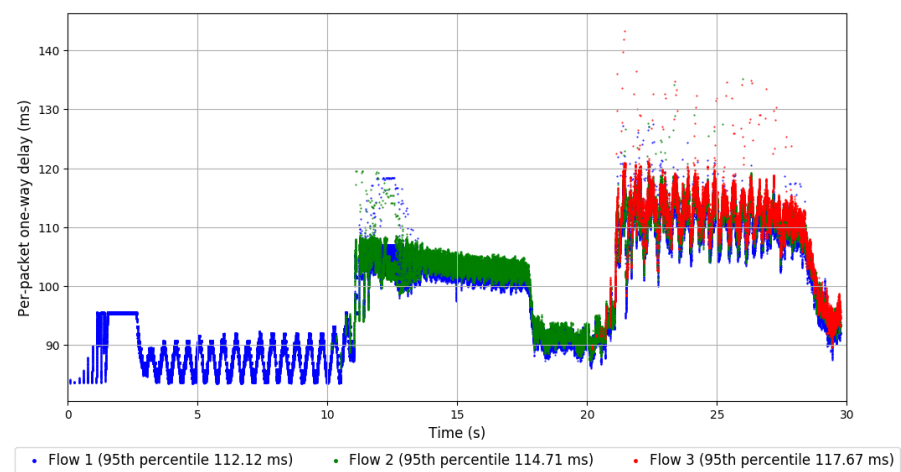Run 5: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 63.70 Mbit/s)   Flow 1 egress (mean 63.82 Mbit/s)
Flow 2 ingress (mean 32.37 Mbit/s)   Flow 2 egress (mean 32.41 Mbit/s)
Flow 3 ingress (mean 26.98 Mbit/s)   Flow 3 egress (mean 26.87 Mbit/s)

Flow 1 (95th percentile 106.57 ms)   Flow 2 (95th percentile 107.92 ms)   Flow 3 (95th percentile 111.38 ms)

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

Start at: 2018-02-16 12:47:52
End at: 2018-02-16 12:48:22
Local clock offset: -6.314 ms
Remote clock offset: -5.591 ms

# Below is generated by plot.py at 2018-02-16 18:48:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.60 Mbit/s
95th percentile per-packet one-way delay: 113.449 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 64.56 Mbit/s
95th percentile per-packet one-way delay: 113.198 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 31.04 Mbit/s
95th percentile per-packet one-way delay: 113.405 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 114.053 ms
Loss rate: 2.12%
```

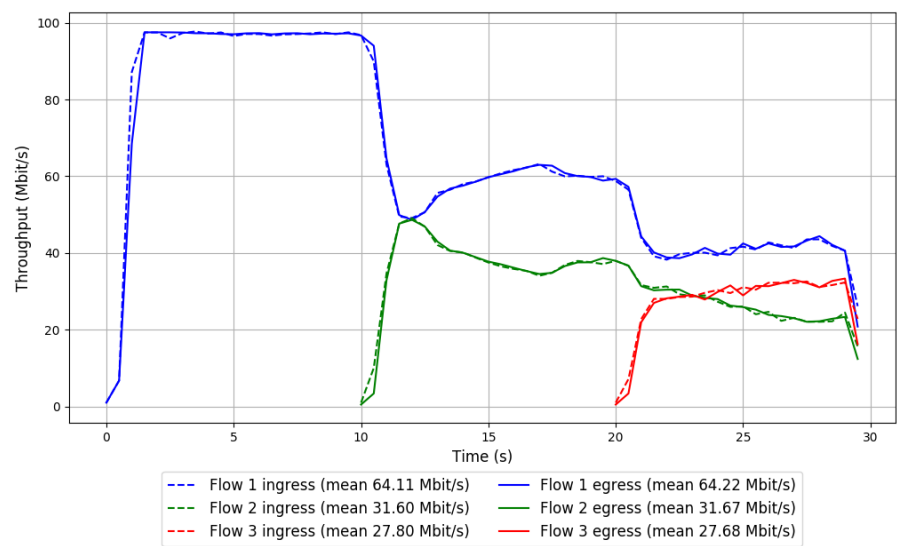Run 6: Report of Indigo-1-32 — Data Link

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

Start at: 2018-02-16 13:11:32
End at: 2018-02-16 13:12:02
Local clock offset: -7.134 ms
Remote clock offset: -5.156 ms

# Below is generated by plot.py at 2018-02-16 18:48:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.08 Mbit/s
95th percentile per-packet one-way delay: 114.372 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 64.22 Mbit/s
95th percentile per-packet one-way delay: 112.123 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 31.67 Mbit/s
95th percentile per-packet one-way delay: 114.711 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 117.668 ms
Loss rate: 2.19%
```
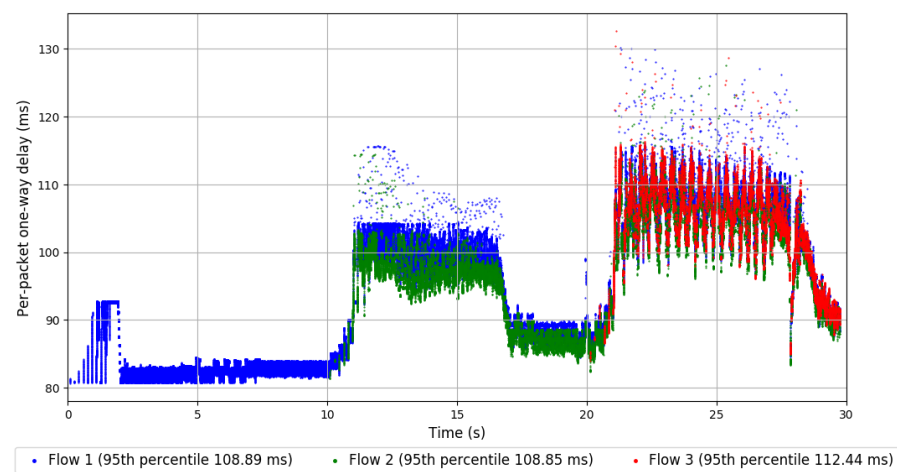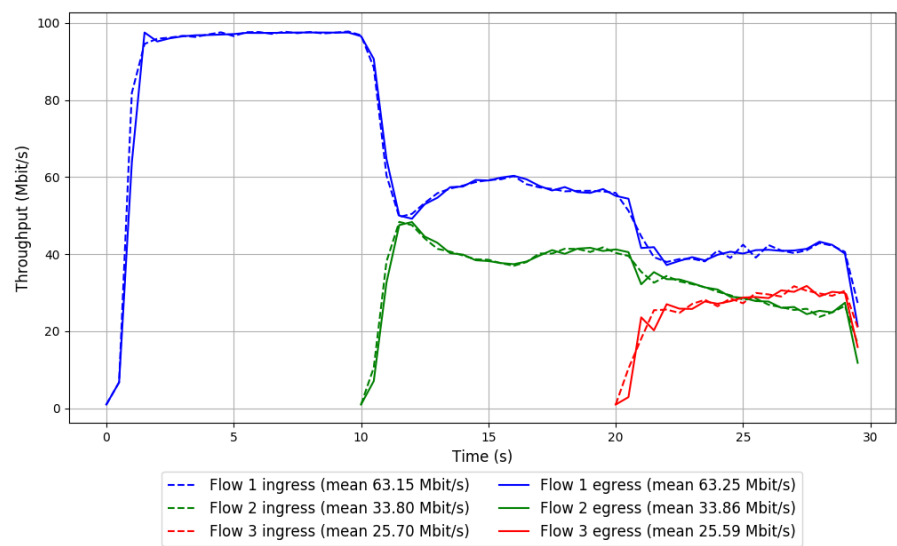
Run 7: Report of Indigo-1-32 — Data Link

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

Start at: 2018-02-16 13:35:11
End at: 2018-02-16 13:35:41
Local clock offset: -7.413 ms
Remote clock offset: -0.62 ms


# Below is generated by plot.py at 2018-02-16 18:48:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.94 Mbit/s
95th percentile per-packet one-way delay: 109.646 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 63.25 Mbit/s
95th percentile per-packet one-way delay: 108.888 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 33.86 Mbit/s
95th percentile per-packet one-way delay: 108.853 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 25.59 Mbit/s
95th percentile per-packet one-way delay: 112.438 ms
Loss rate: 2.17%
```
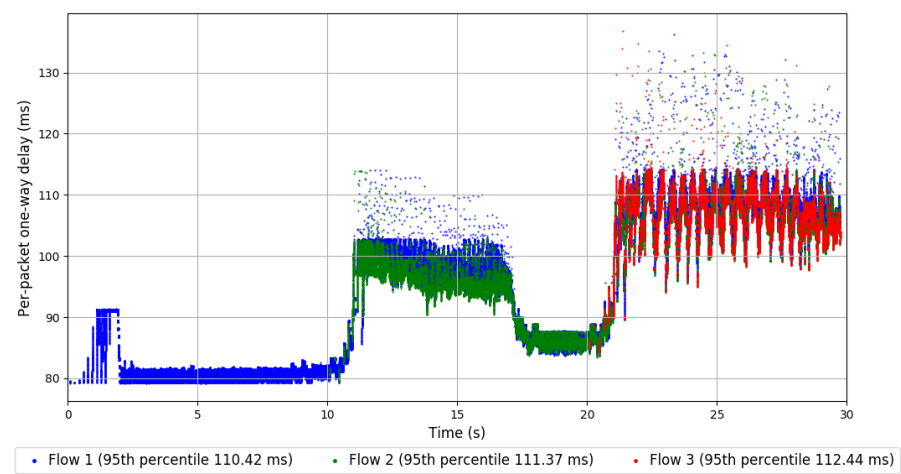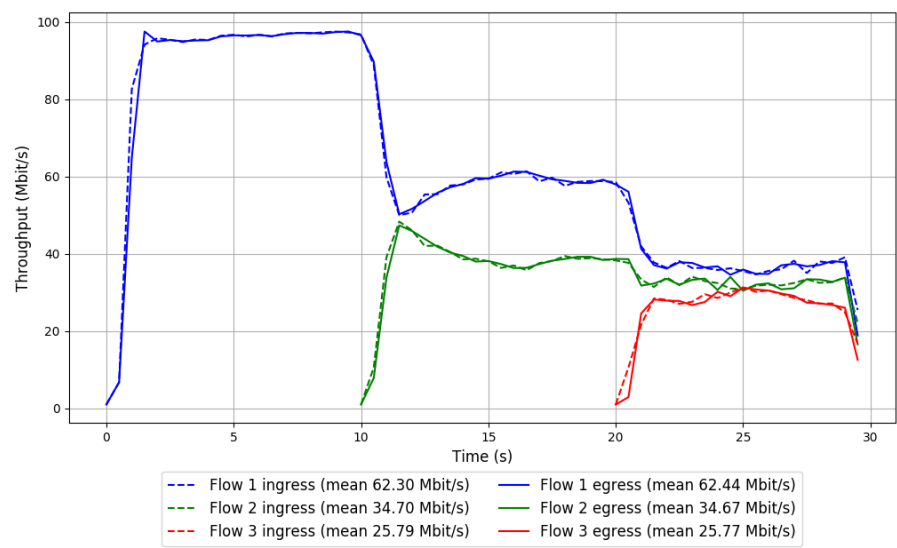
Run 8: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 63.15 Mbit/s)   Flow 1 egress (mean 63.25 Mbit/s)
Flow 2 ingress (mean 33.80 Mbit/s)   Flow 2 egress (mean 33.86 Mbit/s)
Flow 3 ingress (mean 25.70 Mbit/s)   Flow 3 egress (mean 25.59 Mbit/s)

Flow 1 (95th percentile 108.89 ms)   Flow 2 (95th percentile 108.85 ms)   Flow 3 (95th percentile 112.44 ms)

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

Start at: 2018-02-16 13:58:48
End at: 2018-02-16 13:59:18
Local clock offset: -6.723 ms
Remote clock offset: 1.338 ms


# Below is generated by plot.py at 2018-02-16 18:49:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.75 Mbit/s
95th percentile per-packet one-way delay: 111.144 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 62.44 Mbit/s
95th percentile per-packet one-way delay: 110.421 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 34.67 Mbit/s
95th percentile per-packet one-way delay: 111.368 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 25.77 Mbit/s
95th percentile per-packet one-way delay: 112.439 ms
Loss rate: 1.87%
```

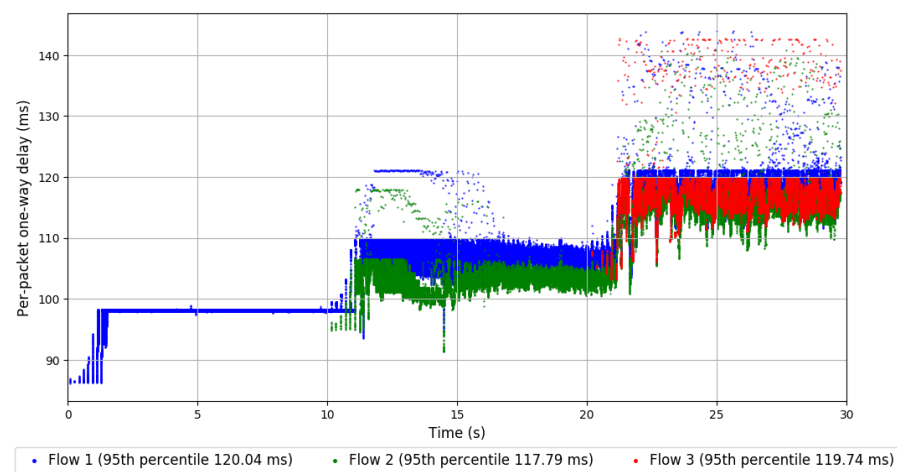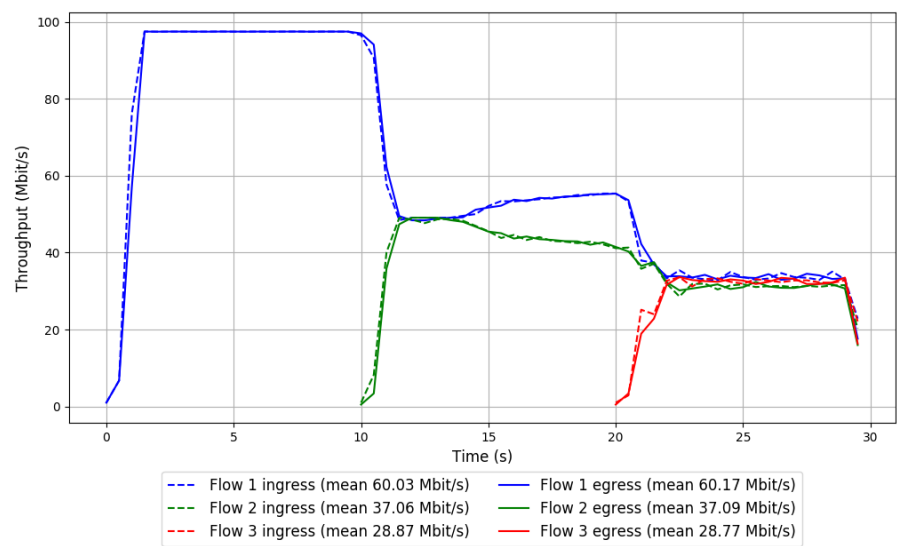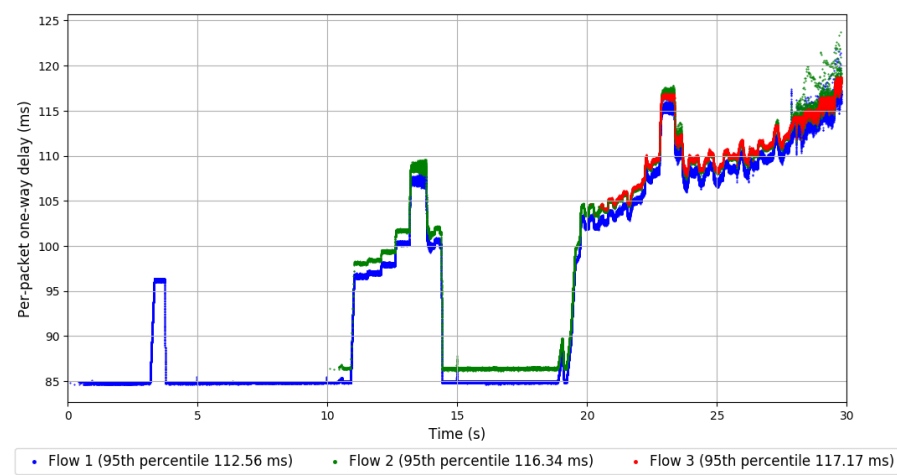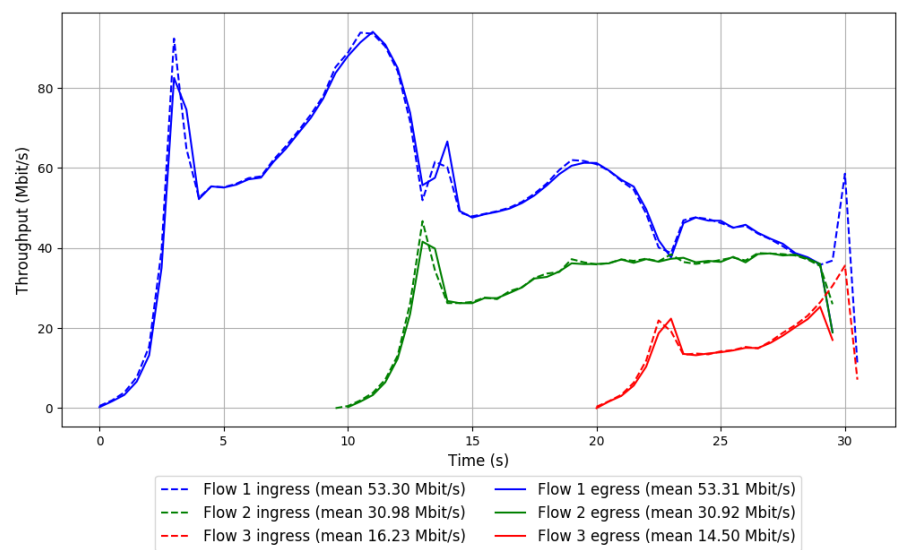# Run 9: Report of Indigo-1-32 — Data Link

Flow 1 ingress (mean 62.30 Mbit/s) --- Flow 1 egress (mean 62.44 Mbit/s)
Flow 2 ingress (mean 34.70 Mbit/s) --- Flow 2 egress (mean 34.67 Mbit/s)
Flow 3 ingress (mean 25.79 Mbit/s) --- Flow 3 egress (mean 25.77 Mbit/s)

Flow 1 (95th percentile 110.42 ms) — Flow 2 (95th percentile 111.37 ms) — Flow 3 (95th percentile 112.44 ms)

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

Start at: 2018-02-16 14:22:22
End at: 2018-02-16 14:22:52
Local clock offset: -5.04 ms
Remote clock offset: -2.967 ms


# Below is generated by plot.py at 2018-02-16 18:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.97 Mbit/s
95th percentile per-packet one-way delay: 119.663 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 60.17 Mbit/s
95th percentile per-packet one-way delay: 120.039 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 37.09 Mbit/s
95th percentile per-packet one-way delay: 117.793 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 28.77 Mbit/s
95th percentile per-packet one-way delay: 119.742 ms
Loss rate: 2.31%
```

Run 10: Report of Indigo-1-32 — Data Link

- - - - Flow 1 ingress (mean 60.03 Mbit/s) ——— Flow 1 egress (mean 60.17 Mbit/s)
- - - - Flow 2 ingress (mean 37.06 Mbit/s) ——— Flow 2 egress (mean 37.09 Mbit/s)
- - - - Flow 3 ingress (mean 28.87 Mbit/s) ——— Flow 3 egress (mean 28.77 Mbit/s)

- Flow 1 (95th percentile 120.04 ms)   • Flow 2 (95th percentile 117.79 ms)   • Flow 3 (95th percentile 119.74 ms)
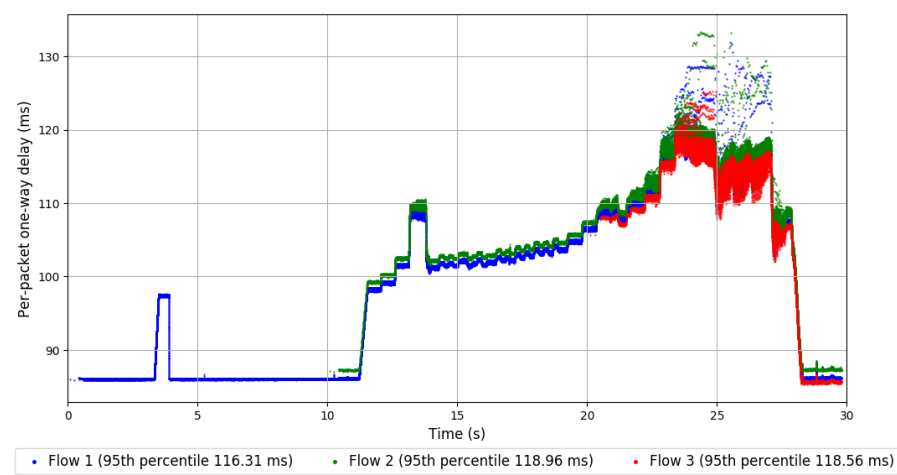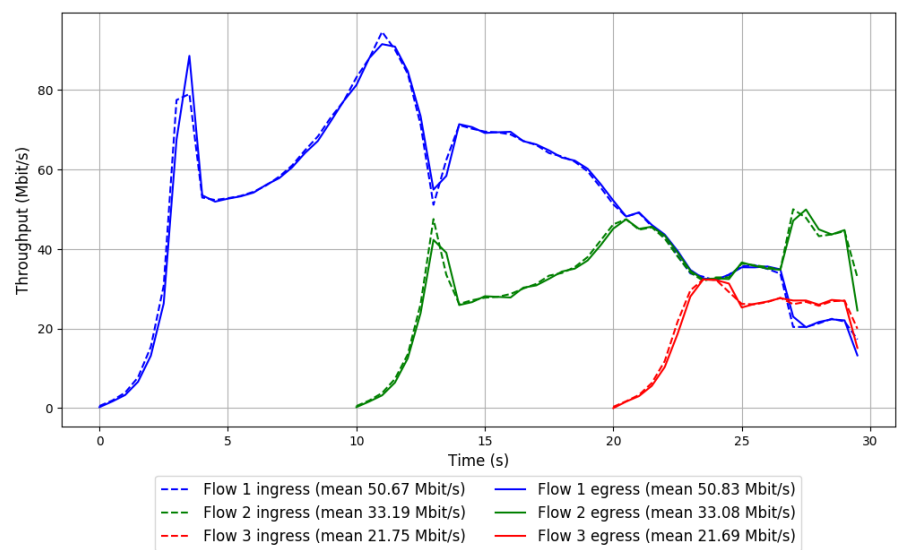
```
Run 1: Statistics of Vivace-latency

Start at: 2018-02-16 10:56:58
End at: 2018-02-16 10:57:28
Local clock offset: -6.892 ms
Remote clock offset: -3.131 ms


# Below is generated by plot.py at 2018-02-16 18:49:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.53 Mbit/s
95th percentile per-packet one-way delay: 115.021 ms
Loss rate: 3.59%
-- Flow 1:
Average throughput: 53.31 Mbit/s
95th percentile per-packet one-way delay: 112.555 ms
Loss rate: 2.92%
-- Flow 2:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 116.338 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 14.50 Mbit/s
95th percentile per-packet one-way delay: 117.174 ms
Loss rate: 18.42%
```

Run 1: Report of Vivace-latency — Data Link

```
Run 2: Statistics of Vivace-latency

Start at: 2018-02-16 11:20:28
End at: 2018-02-16 11:20:58
Local clock offset: -7.219 ms
Remote clock offset: -3.992 ms


# Below is generated by plot.py at 2018-02-16 18:49:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.81 Mbit/s
95th percentile per-packet one-way delay: 117.732 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 50.83 Mbit/s
95th percentile per-packet one-way delay: 116.310 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 33.08 Mbit/s
95th percentile per-packet one-way delay: 118.959 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 21.69 Mbit/s
95th percentile per-packet one-way delay: 118.564 ms
Loss rate: 2.17%
```
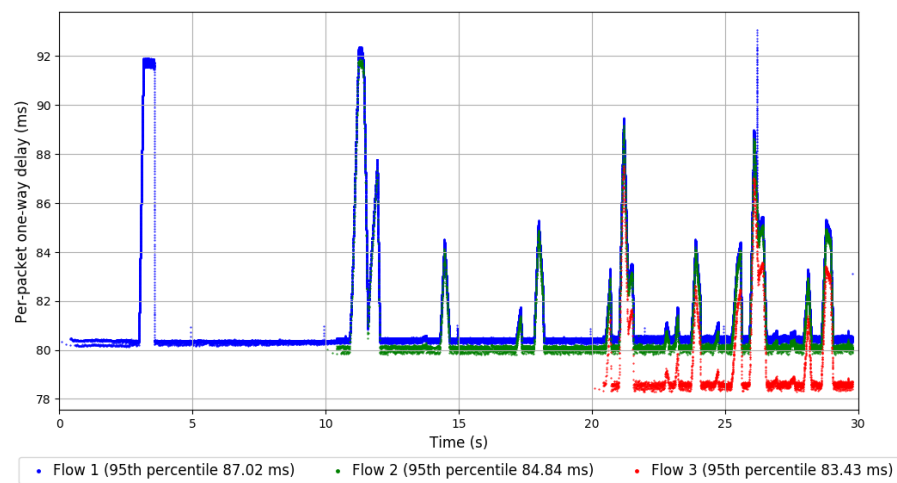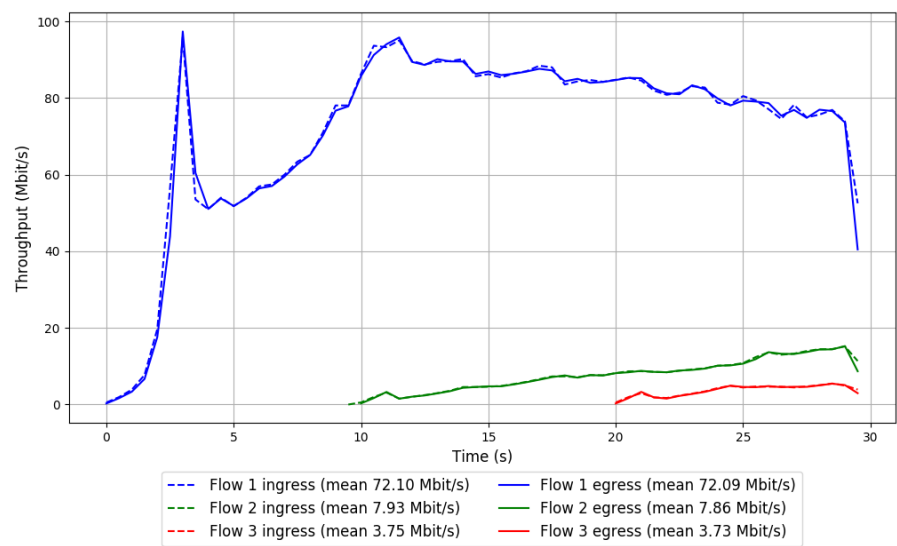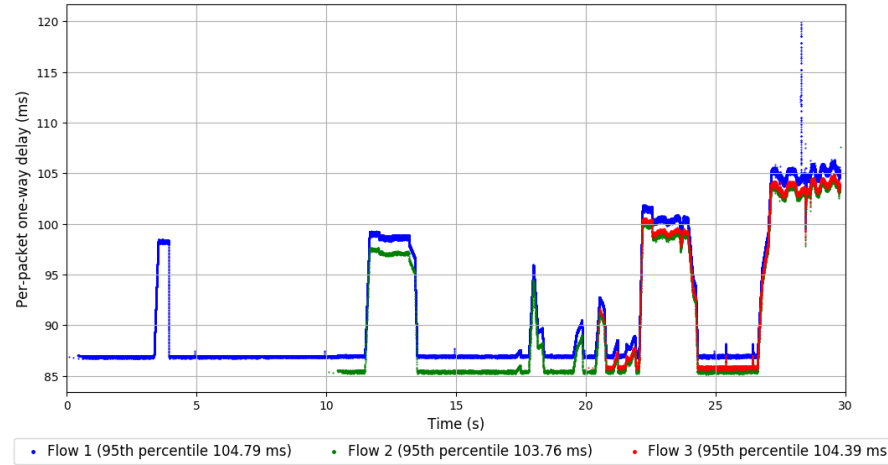
Run 2: Report of Vivace-latency — Data Link

```
Run 3: Statistics of Vivace-latency

Start at: 2018-02-16 11:43:57
End at: 2018-02-16 11:44:27
Local clock offset: -7.76 ms
Remote clock offset: 1.632 ms


# Below is generated by plot.py at 2018-02-16 18:49:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.52 Mbit/s
95th percentile per-packet one-way delay: 86.709 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 72.09 Mbit/s
95th percentile per-packet one-way delay: 87.021 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 84.837 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 3.73 Mbit/s
95th percentile per-packet one-way delay: 83.427 ms
Loss rate: 2.26%
```

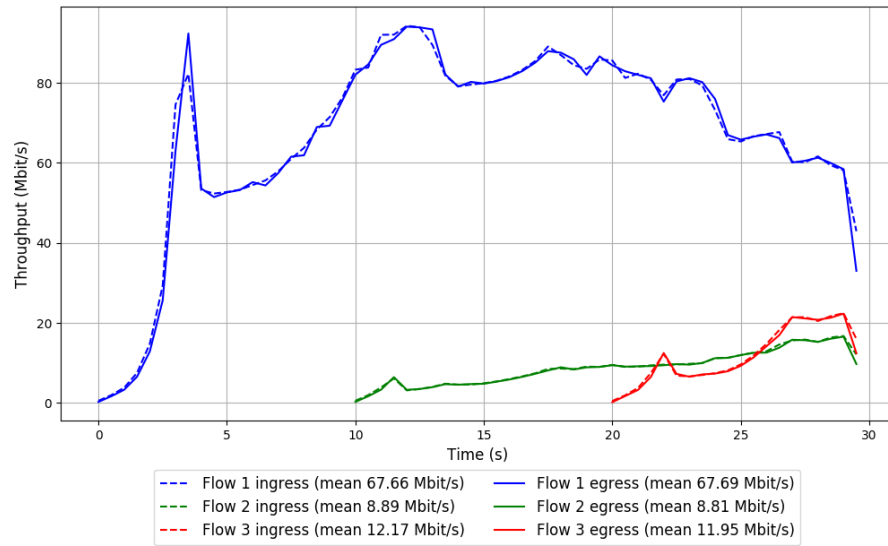Run 3: Report of Vivace-latency — Data Link

```
Run 4: Statistics of Vivace-latency

Start at: 2018-02-16 12:07:24
End at: 2018-02-16 12:07:54
Local clock offset: -5.67 ms
Remote clock offset: -4.463 ms

# Below is generated by plot.py at 2018-02-16 18:50:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.42 Mbit/s
95th percentile per-packet one-way delay: 104.631 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 67.69 Mbit/s
95th percentile per-packet one-way delay: 104.792 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 103.756 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 104.388 ms
Loss rate: 3.47%
```

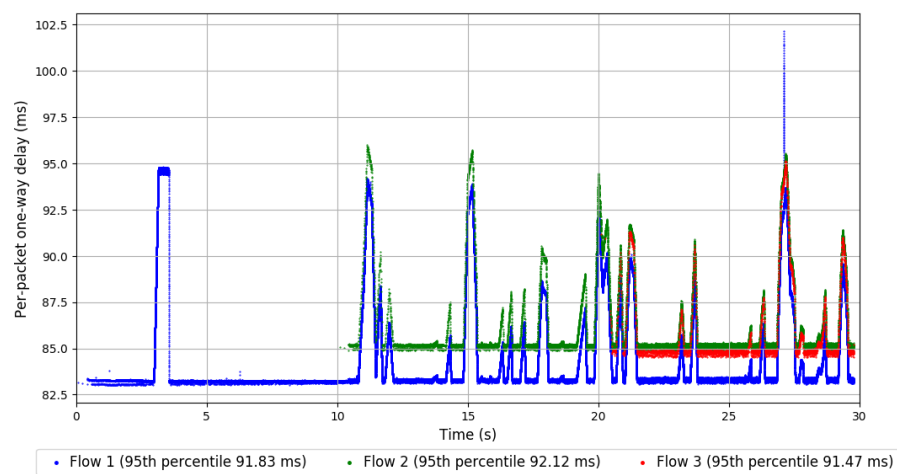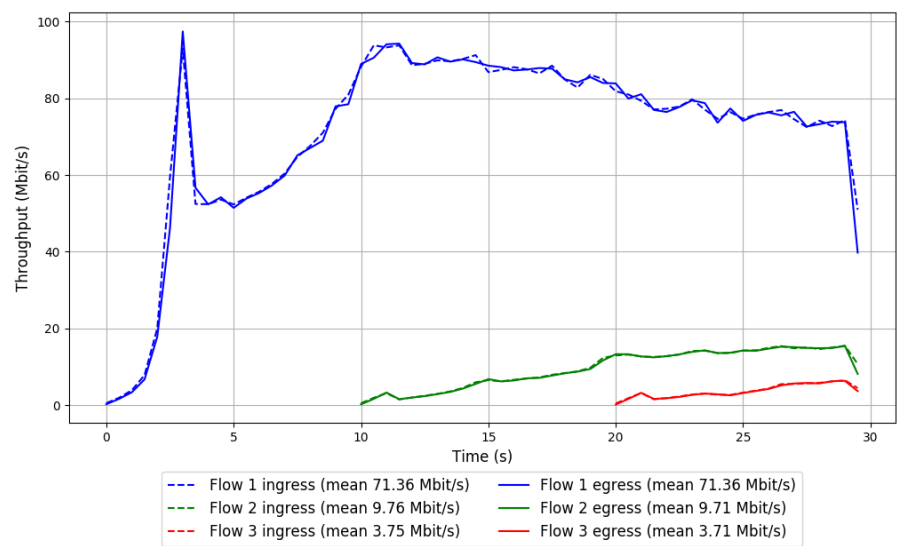# Run 4: Report of Vivace-latency — Data Link

```
Run 5: Statistics of Vivace-latency

Start at: 2018-02-16 12:30:53
End at: 2018-02-16 12:31:23
Local clock offset: -3.655 ms
Remote clock offset: -4.339 ms


# Below is generated by plot.py at 2018-02-16 18:50:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.01 Mbit/s
95th percentile per-packet one-way delay: 91.857 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 71.36 Mbit/s
95th percentile per-packet one-way delay: 91.828 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 92.116 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 3.71 Mbit/s
95th percentile per-packet one-way delay: 91.468 ms
Loss rate: 2.61%
```

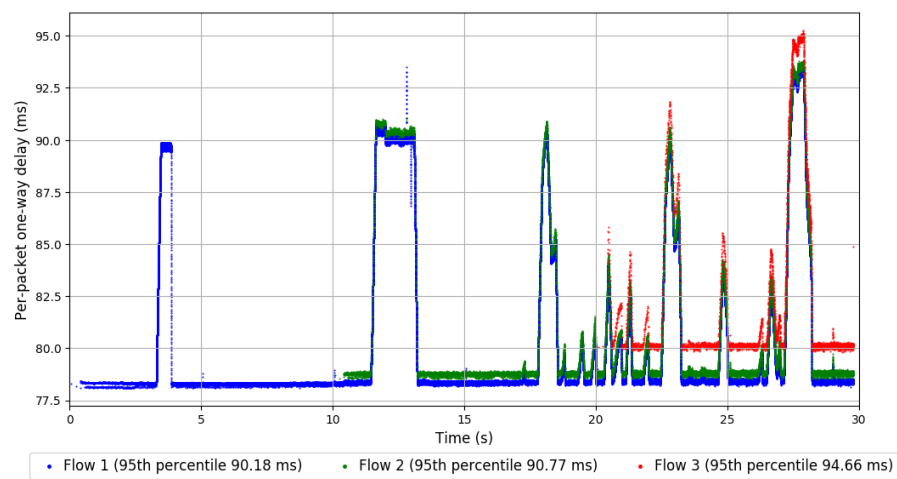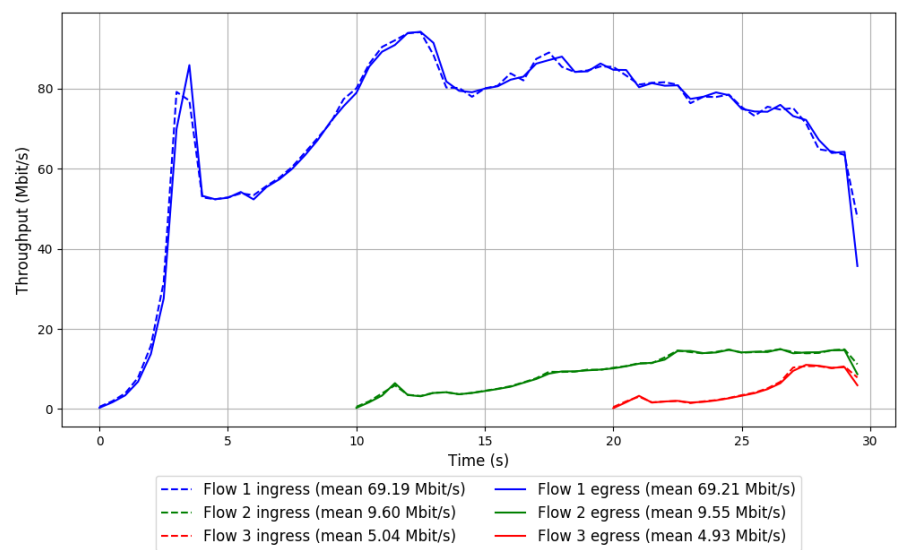# Run 5: Report of Vivace-latency — Data Link

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```
Run 6: Statistics of Vivace-latency

Start at: 2018-02-16 12:54:23
End at: 2018-02-16 12:54:53
Local clock offset: -6.663 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2018-02-16 18:50:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.14 Mbit/s
95th percentile per-packet one-way delay: 90.228 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 69.21 Mbit/s
95th percentile per-packet one-way delay: 90.180 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 9.55 Mbit/s
95th percentile per-packet one-way delay: 90.767 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 4.93 Mbit/s
95th percentile per-packet one-way delay: 94.658 ms
Loss rate: 3.76%
```

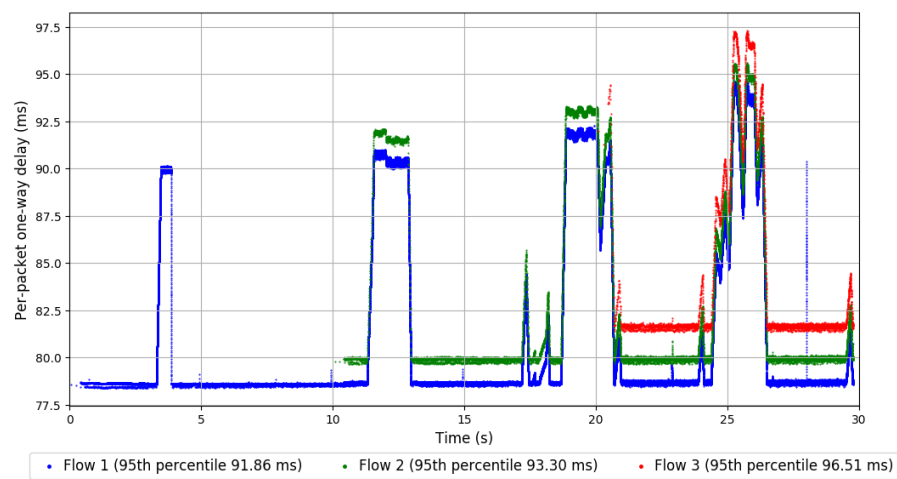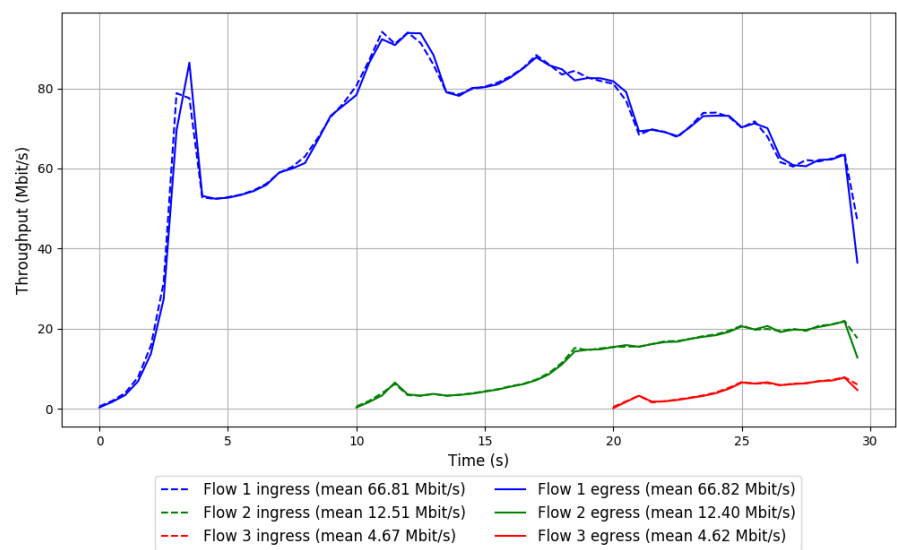Run 6: Report of Vivace-latency — Data Link

```
Run 7: Statistics of Vivace-latency

Start at: 2018-02-16 13:18:08
End at: 2018-02-16 13:18:38
Local clock offset: -7.238 ms
Remote clock offset: -0.276 ms


# Below is generated by plot.py at 2018-02-16 18:50:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.55 Mbit/s
95th percentile per-packet one-way delay: 91.966 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 66.82 Mbit/s
95th percentile per-packet one-way delay: 91.855 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 93.300 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 4.62 Mbit/s
95th percentile per-packet one-way delay: 96.507 ms
Loss rate: 2.96%
```

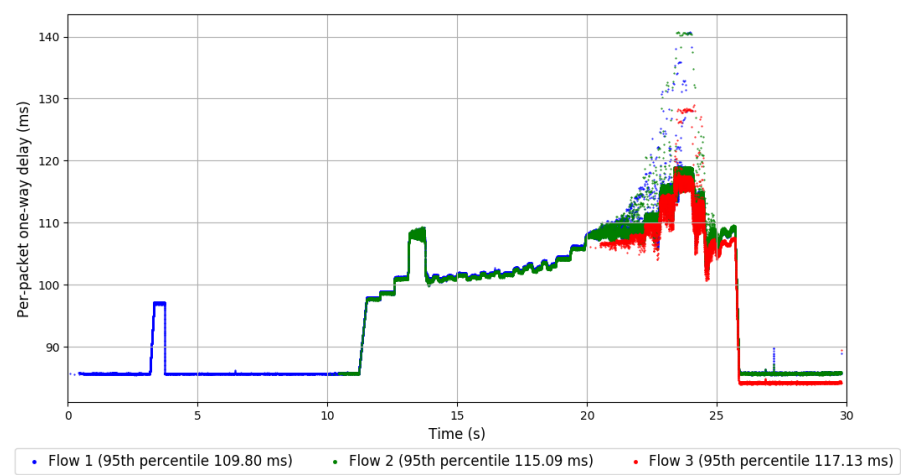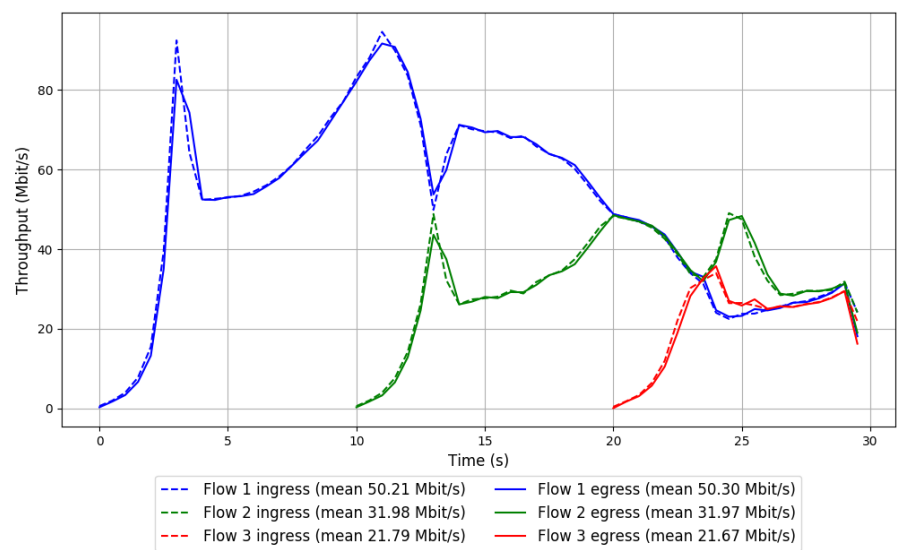Run 7: Report of Vivace-latency — Data Link

```
Run 8: Statistics of Vivace-latency

Start at: 2018-02-16 13:41:47
End at: 2018-02-16 13:42:17
Local clock offset: -7.405 ms
Remote clock offset: -5.364 ms


# Below is generated by plot.py at 2018-02-16 18:50:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.55 Mbit/s
95th percentile per-packet one-way delay: 113.424 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 109.804 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 115.094 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 21.67 Mbit/s
95th percentile per-packet one-way delay: 117.129 ms
Loss rate: 2.41%
```

Run 8: Report of Vivace-latency — Data Link

```
Run 9: Statistics of Vivace-latency

Start at: 2018-02-16 14:05:22
End at: 2018-02-16 14:05:52
Local clock offset: -6.663 ms
Remote clock offset: -4.52 ms

# Below is generated by plot.py at 2018-02-16 18:50:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.44 Mbit/s
95th percentile per-packet one-way delay: 97.466 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 70.06 Mbit/s
95th percentile per-packet one-way delay: 97.286 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 99.279 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 2.59 Mbit/s
95th percentile per-packet one-way delay: 97.861 ms
Loss rate: 2.96%
```
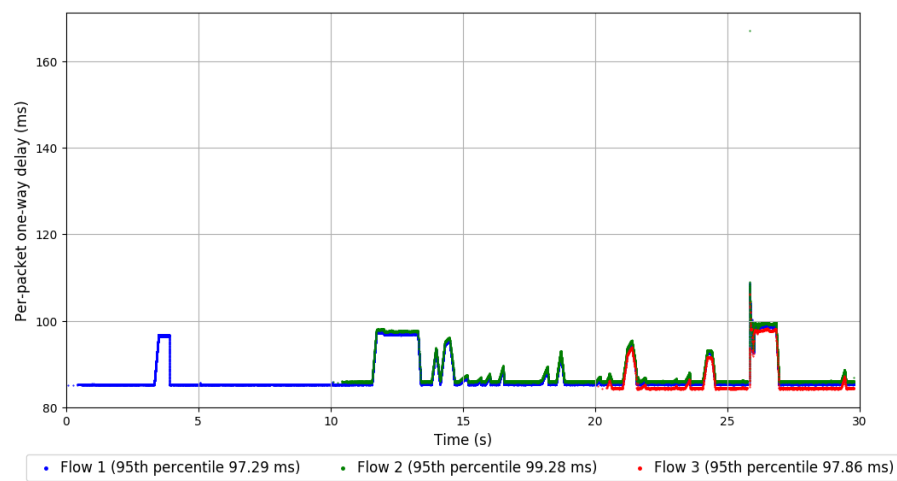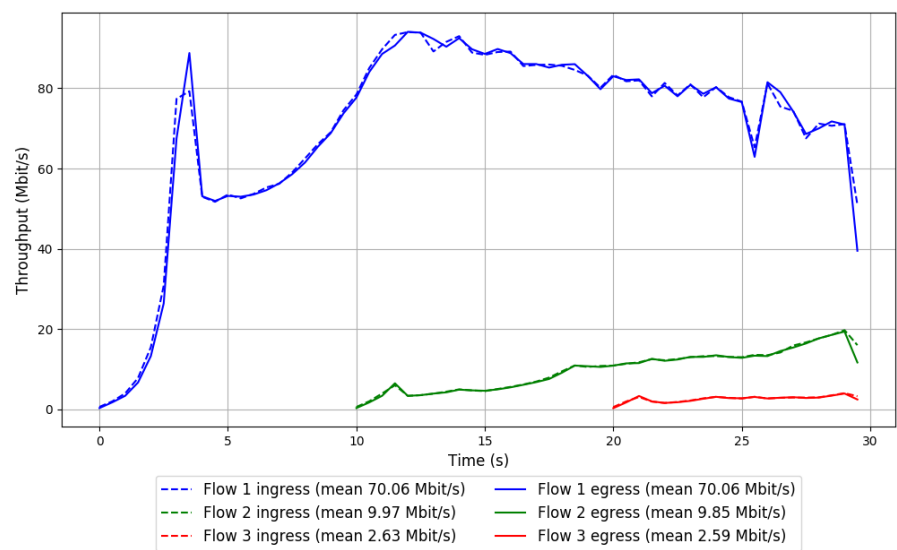
Run 9: Report of Vivace-latency — Data Link

- - - Flow 1 ingress (mean 70.06 Mbit/s)   ——— Flow 1 egress (mean 70.06 Mbit/s)
- - - Flow 2 ingress (mean 9.97 Mbit/s)   ——— Flow 2 egress (mean 9.85 Mbit/s)
- - - Flow 3 ingress (mean 2.63 Mbit/s)   ——— Flow 3 egress (mean 2.59 Mbit/s)

- Flow 1 (95th percentile 97.29 ms)   • Flow 2 (95th percentile 99.28 ms)   • Flow 3 (95th percentile 97.86 ms)

```
Run 10: Statistics of Vivace-latency

Start at: 2018-02-16 14:28:56
End at: 2018-02-16 14:29:26
Local clock offset: -4.378 ms
Remote clock offset: 2.797 ms


# Below is generated by plot.py at 2018-02-16 18:50:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.12 Mbit/s
95th percentile per-packet one-way delay: 88.452 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 71.22 Mbit/s
95th percentile per-packet one-way delay: 87.673 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 90.660 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 4.96 Mbit/s
95th percentile per-packet one-way delay: 89.218 ms
Loss rate: 2.69%
```
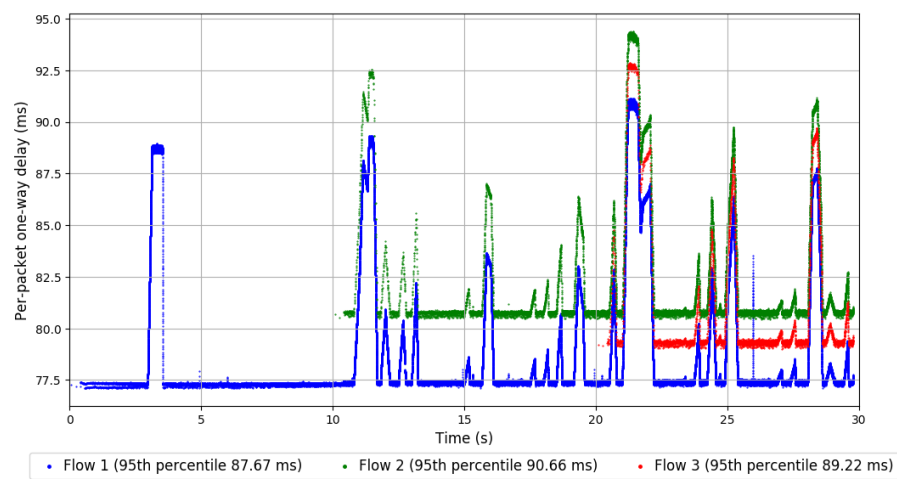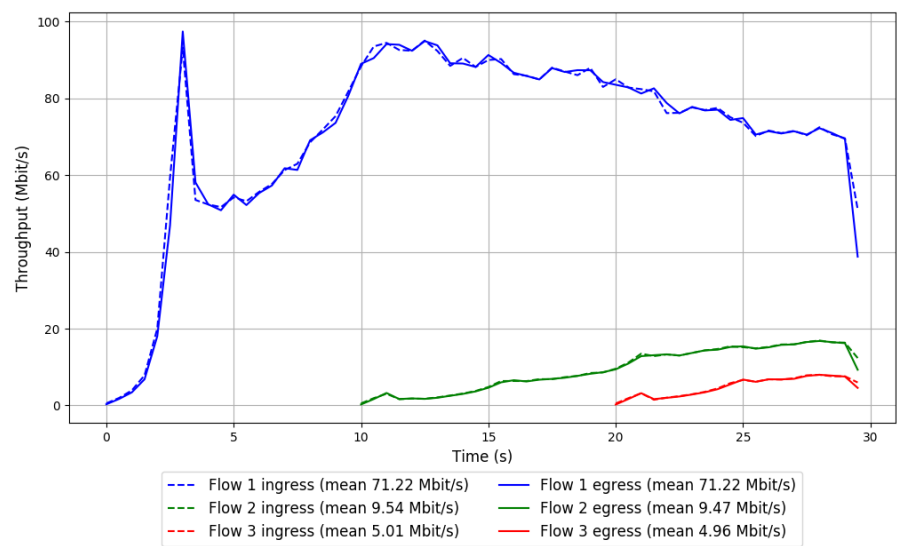
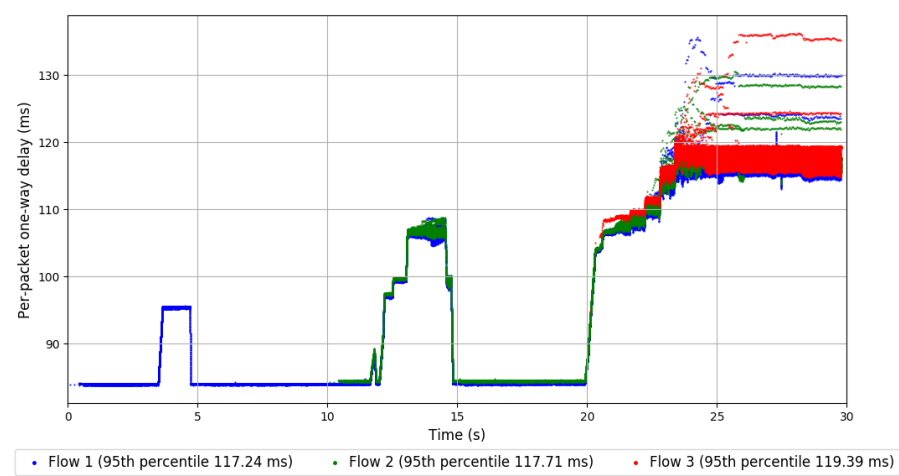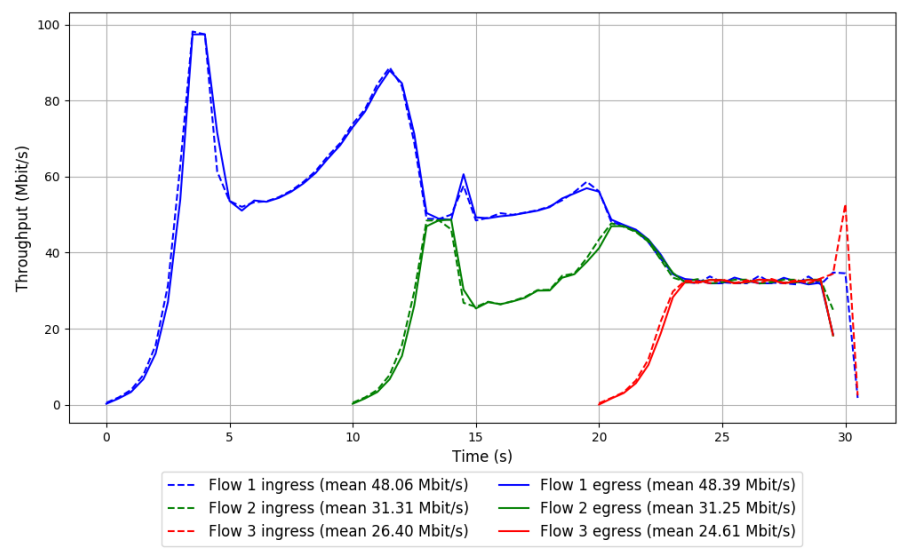Run 10: Report of Vivace-latency — Data Link

303

```
Run 1: Statistics of Vivace-loss

Start at: 2018-02-16 10:51:46
End at: 2018-02-16 10:52:16
Local clock offset: -6.762 ms
Remote clock offset: -4.022 ms


# Below is generated by plot.py at 2018-02-16 18:50:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.13 Mbit/s
95th percentile per-packet one-way delay: 117.972 ms
Loss rate: 3.25%
-- Flow 1:
Average throughput: 48.39 Mbit/s
95th percentile per-packet one-way delay: 117.240 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 31.25 Mbit/s
95th percentile per-packet one-way delay: 117.707 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 24.61 Mbit/s
95th percentile per-packet one-way delay: 119.394 ms
Loss rate: 14.25%
```

Run 1: Report of Vivace-loss — Data Link

- - - Flow 1 ingress (mean 48.06 Mbit/s)   —— Flow 1 egress (mean 48.39 Mbit/s)
- - - Flow 2 ingress (mean 31.31 Mbit/s)   —— Flow 2 egress (mean 31.25 Mbit/s)
- - - Flow 3 ingress (mean 26.40 Mbit/s)   —— Flow 3 egress (mean 24.61 Mbit/s)

• Flow 1 (95th percentile 117.24 ms)   • Flow 2 (95th percentile 117.71 ms)   • Flow 3 (95th percentile 119.39 ms)
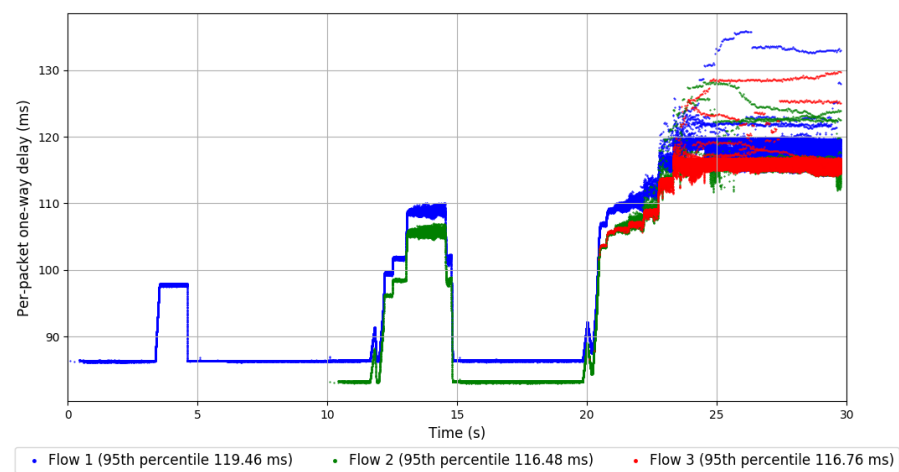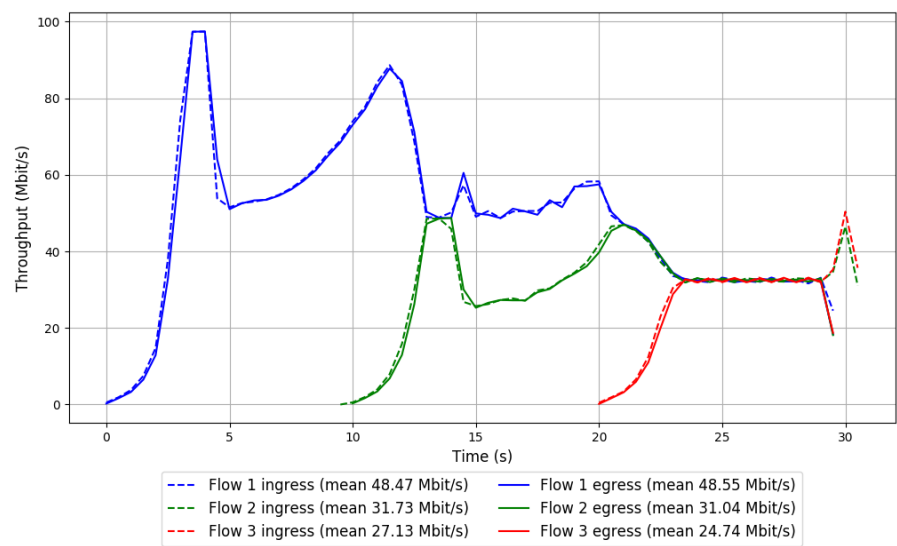
```
Run 2: Statistics of Vivace-loss

Start at: 2018-02-16 11:15:16
End at: 2018-02-16 11:15:46
Local clock offset: -7.169 ms
Remote clock offset: -3.157 ms


# Below is generated by plot.py at 2018-02-16 18:51:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.21 Mbit/s
95th percentile per-packet one-way delay: 119.017 ms
Loss rate: 4.68%
-- Flow 1:
Average throughput: 48.55 Mbit/s
95th percentile per-packet one-way delay: 119.458 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 31.04 Mbit/s
95th percentile per-packet one-way delay: 116.485 ms
Loss rate: 7.66%
-- Flow 3:
Average throughput: 24.74 Mbit/s
95th percentile per-packet one-way delay: 116.756 ms
Loss rate: 18.65%
```

Run 2: Report of Vivace-loss — Data Link

```
Run 3: Statistics of Vivace-loss

Start at: 2018-02-16 11:38:46
End at: 2018-02-16 11:39:16
Local clock offset: -7.684 ms
Remote clock offset: 0.912 ms


# Below is generated by plot.py at 2018-02-16 18:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.34 Mbit/s
95th percentile per-packet one-way delay: 113.902 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 49.01 Mbit/s
95th percentile per-packet one-way delay: 113.494 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 114.804 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 112.956 ms
Loss rate: 2.61%
```
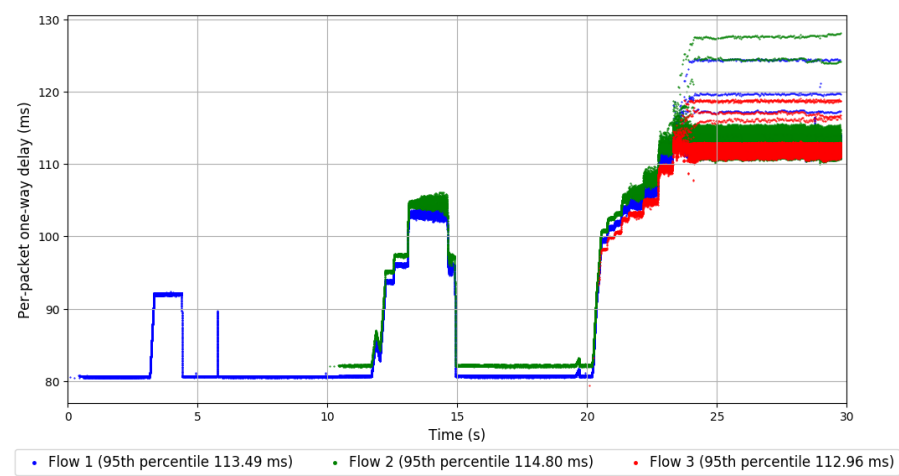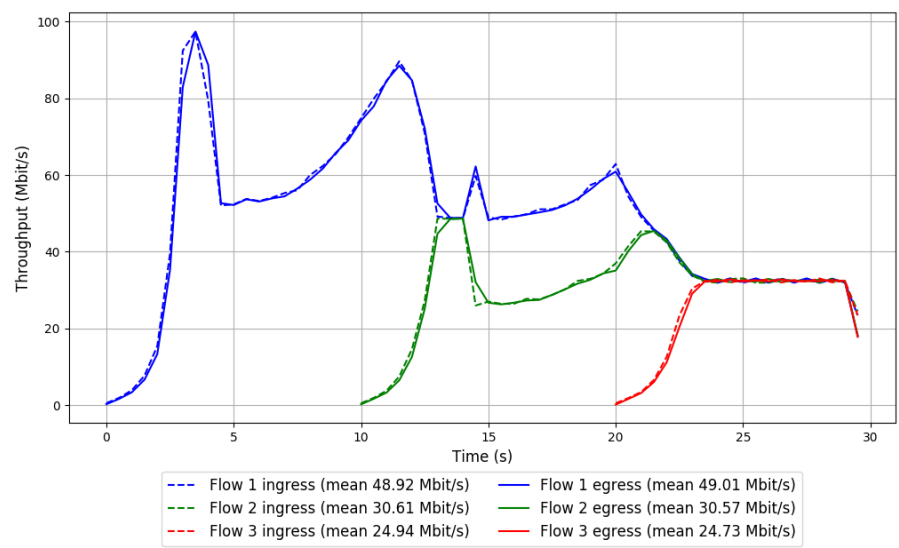
Run 3: Report of Vivace-loss — Data Link

```
Run 4: Statistics of Vivace-loss

Start at: 2018-02-16 12:02:14
End at: 2018-02-16 12:02:44
Local clock offset: -6.817 ms
Remote clock offset: 1.095 ms


# Below is generated by plot.py at 2018-02-16 18:51:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.30 Mbit/s
95th percentile per-packet one-way delay: 114.728 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 47.63 Mbit/s
95th percentile per-packet one-way delay: 111.766 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 31.11 Mbit/s
95th percentile per-packet one-way delay: 114.794 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 24.70 Mbit/s
95th percentile per-packet one-way delay: 114.841 ms
Loss rate: 2.62%
```
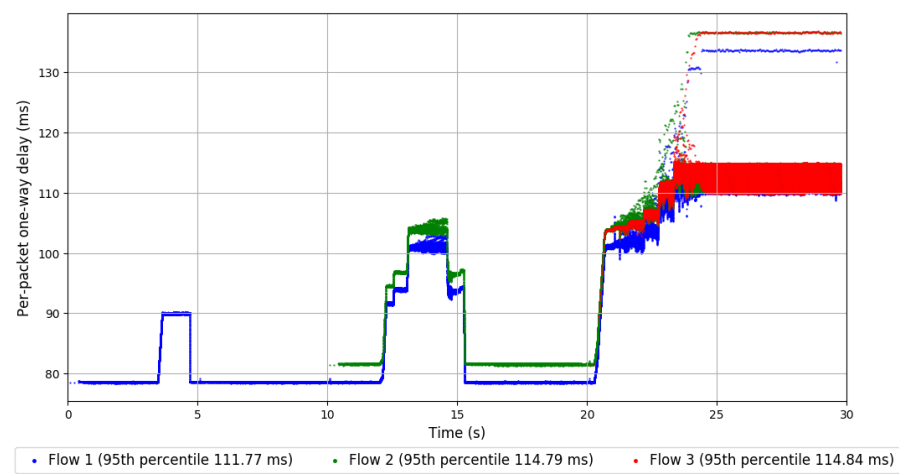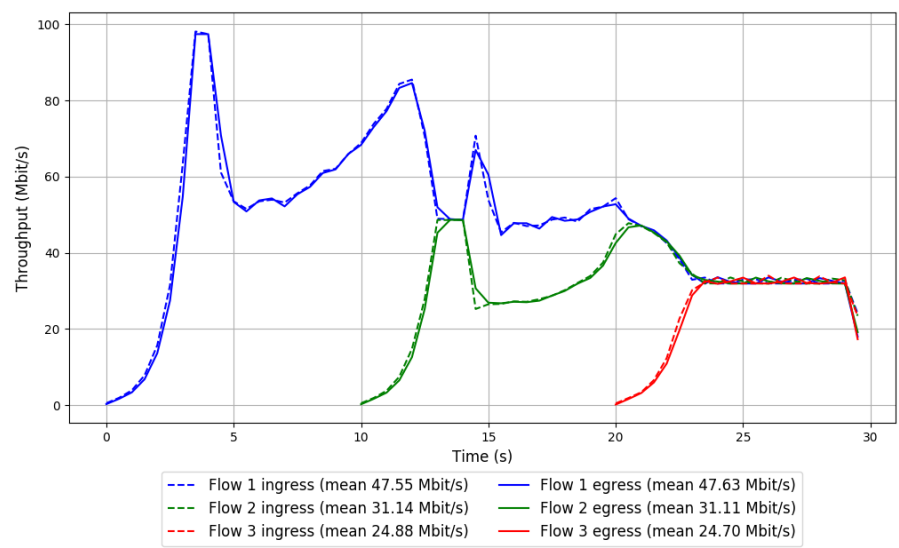
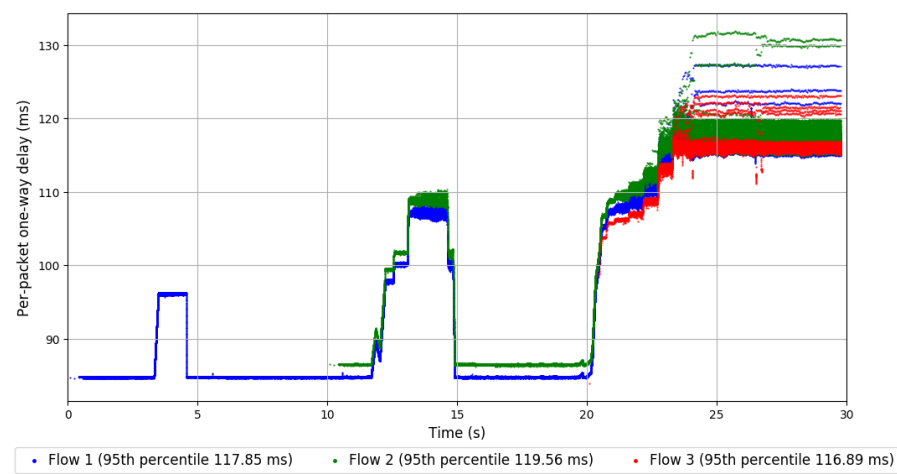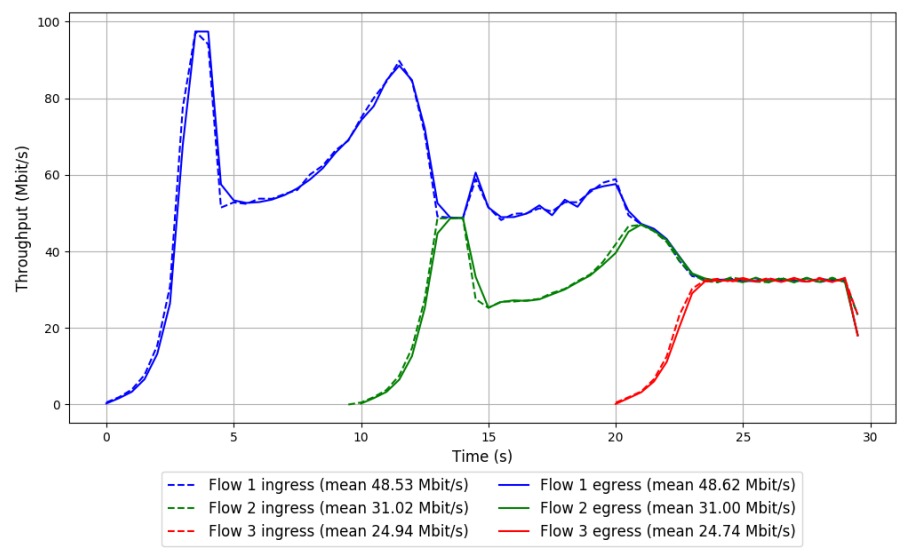Run 4: Report of Vivace-loss — Data Link

```
Run 5: Statistics of Vivace-loss

Start at: 2018-02-16 12:25:42
End at: 2018-02-16 12:26:12
Local clock offset: -3.975 ms
Remote clock offset: -4.325 ms


# Below is generated by plot.py at 2018-02-16 18:51:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.23 Mbit/s
95th percentile per-packet one-way delay: 118.090 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 48.62 Mbit/s
95th percentile per-packet one-way delay: 117.852 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 31.00 Mbit/s
95th percentile per-packet one-way delay: 119.559 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 24.74 Mbit/s
95th percentile per-packet one-way delay: 116.893 ms
Loss rate: 2.61%
```

Run 5: Report of Vivace-loss — Data Link

```
Run 6: Statistics of Vivace-loss

Start at: 2018-02-16 12:49:13
End at: 2018-02-16 12:49:43
Local clock offset: -6.383 ms
Remote clock offset: 0.883 ms


# Below is generated by plot.py at 2018-02-16 18:51:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.12 Mbit/s
95th percentile per-packet one-way delay: 112.550 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 47.50 Mbit/s
95th percentile per-packet one-way delay: 111.154 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 30.99 Mbit/s
95th percentile per-packet one-way delay: 112.824 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 24.74 Mbit/s
95th percentile per-packet one-way delay: 112.914 ms
Loss rate: 2.60%
```
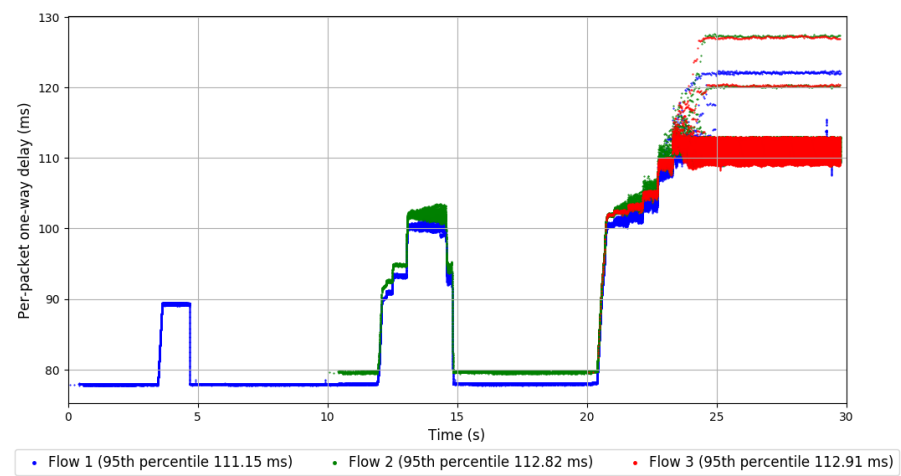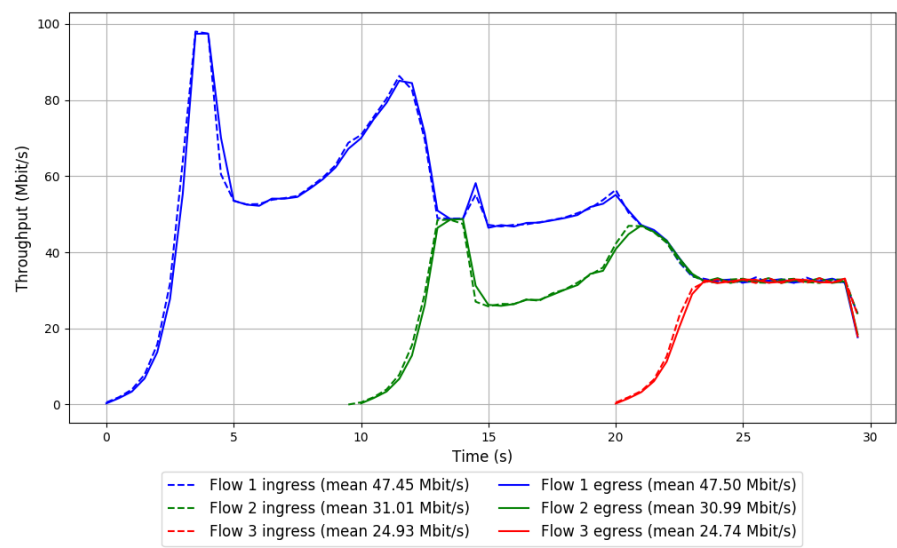
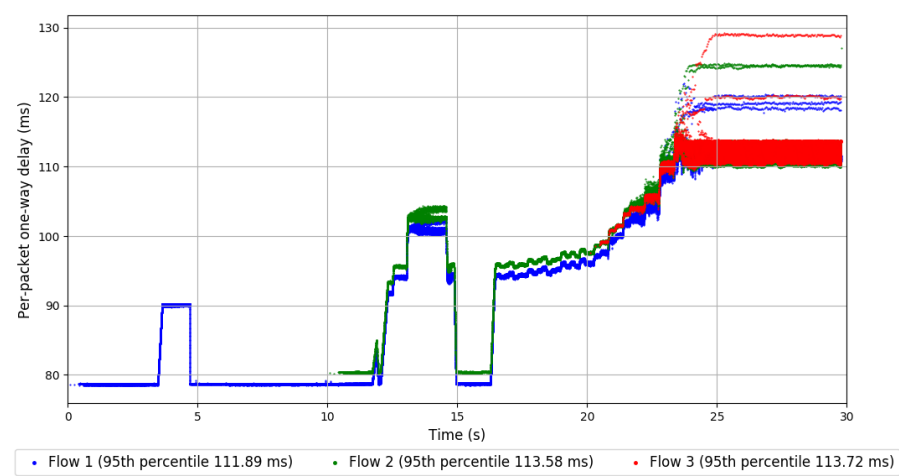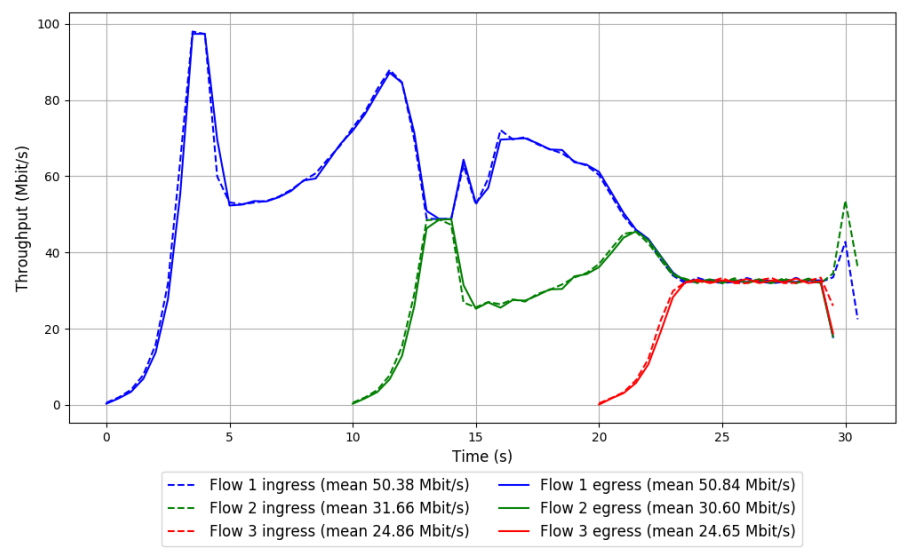## Run 6: Report of Vivace-loss — Data Link

315

```
Run 7: Statistics of Vivace-loss

Start at: 2018-02-16 13:12:53
End at: 2018-02-16 13:13:23
Local clock offset: -7.151 ms
Remote clock offset: -0.312 ms


# Below is generated by plot.py at 2018-02-16 18:51:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.15 Mbit/s
95th percentile per-packet one-way delay: 113.482 ms
Loss rate: 4.41%
-- Flow 1:
Average throughput: 50.84 Mbit/s
95th percentile per-packet one-way delay: 111.887 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 30.60 Mbit/s
95th percentile per-packet one-way delay: 113.579 ms
Loss rate: 8.62%
-- Flow 3:
Average throughput: 24.65 Mbit/s
95th percentile per-packet one-way delay: 113.722 ms
Loss rate: 3.12%
```

Run 7: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 50.38 Mbit/s) --- Flow 1 egress (mean 50.84 Mbit/s)
Flow 2 ingress (mean 31.66 Mbit/s) --- Flow 2 egress (mean 30.60 Mbit/s)
Flow 3 ingress (mean 24.86 Mbit/s) --- Flow 3 egress (mean 24.65 Mbit/s)

Flow 1 (95th percentile 111.89 ms)   Flow 2 (95th percentile 113.58 ms)   Flow 3 (95th percentile 113.72 ms)
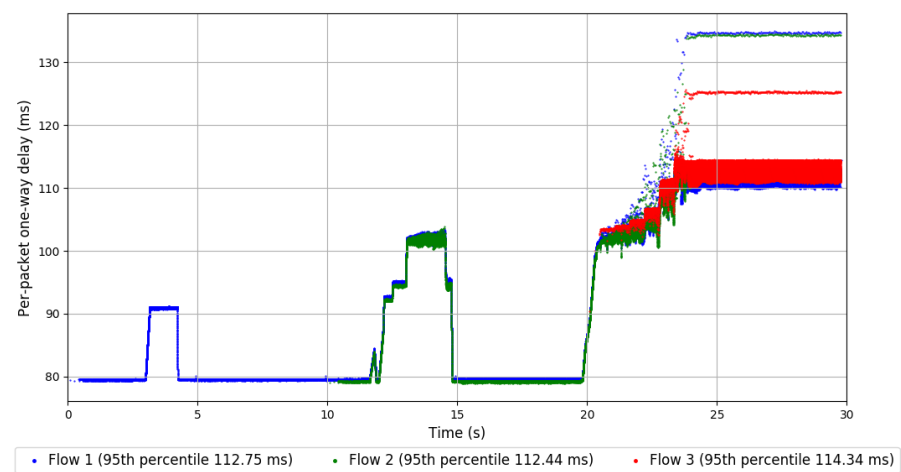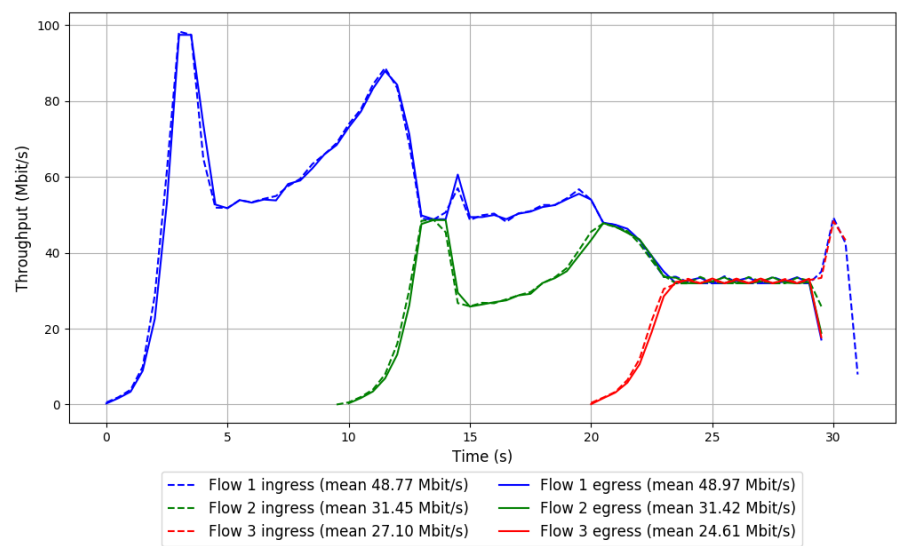
317

```
Run 8: Statistics of Vivace-loss

Start at: 2018-02-16 13:36:32
End at: 2018-02-16 13:37:02
Local clock offset: -7.371 ms
Remote clock offset: -0.552 ms


# Below is generated by plot.py at 2018-02-16 18:51:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.82 Mbit/s
95th percentile per-packet one-way delay: 112.954 ms
Loss rate: 5.20%
-- Flow 1:
Average throughput: 48.97 Mbit/s
95th percentile per-packet one-way delay: 112.751 ms
Loss rate: 4.09%
-- Flow 2:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 112.441 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 24.61 Mbit/s
95th percentile per-packet one-way delay: 114.345 ms
Loss rate: 19.37%
```

Run 8: Report of Vivace-loss — Data Link

Flow 1 ingress (mean 48.77 Mbit/s) --- Flow 1 egress (mean 48.97 Mbit/s)
Flow 2 ingress (mean 31.45 Mbit/s) --- Flow 2 egress (mean 31.42 Mbit/s)
Flow 3 ingress (mean 27.10 Mbit/s) --- Flow 3 egress (mean 24.61 Mbit/s)

Flow 1 (95th percentile 112.75 ms)   Flow 2 (95th percentile 112.44 ms)   Flow 3 (95th percentile 114.34 ms)

319

```
Run 9: Statistics of Vivace-loss

Start at: 2018-02-16 14:00:09
End at: 2018-02-16 14:00:39
Local clock offset: -6.703 ms
Remote clock offset: -4.25 ms


# Below is generated by plot.py at 2018-02-16 18:52:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.97 Mbit/s
95th percentile per-packet one-way delay: 118.591 ms
Loss rate: 5.12%
-- Flow 1:
Average throughput: 51.68 Mbit/s
95th percentile per-packet one-way delay: 118.185 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 30.53 Mbit/s
95th percentile per-packet one-way delay: 119.631 ms
Loss rate: 8.53%
-- Flow 3:
Average throughput: 24.71 Mbit/s
95th percentile per-packet one-way delay: 116.661 ms
Loss rate: 21.26%
```
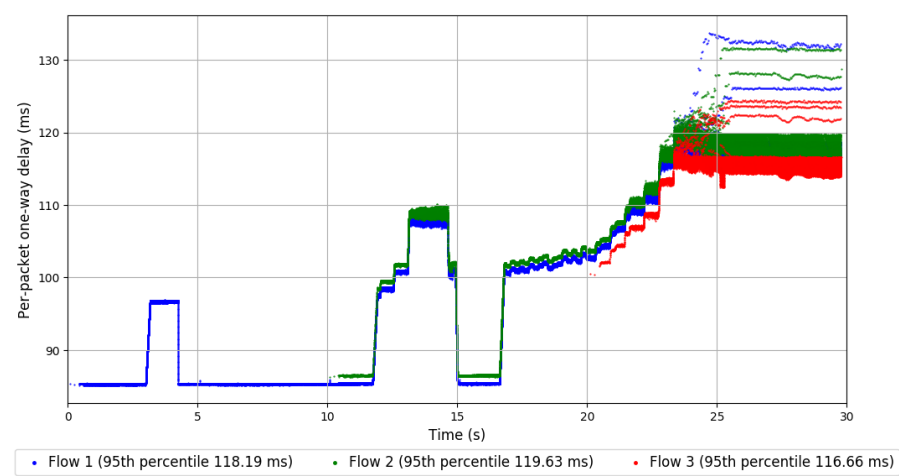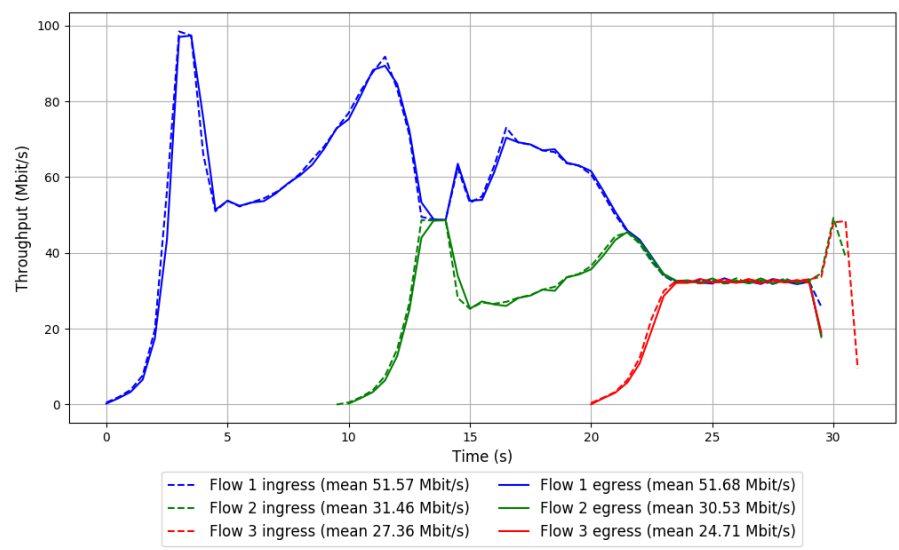
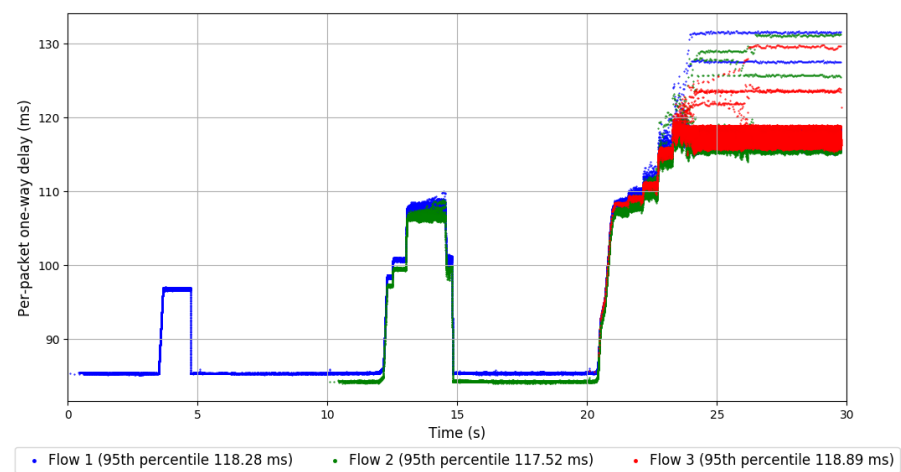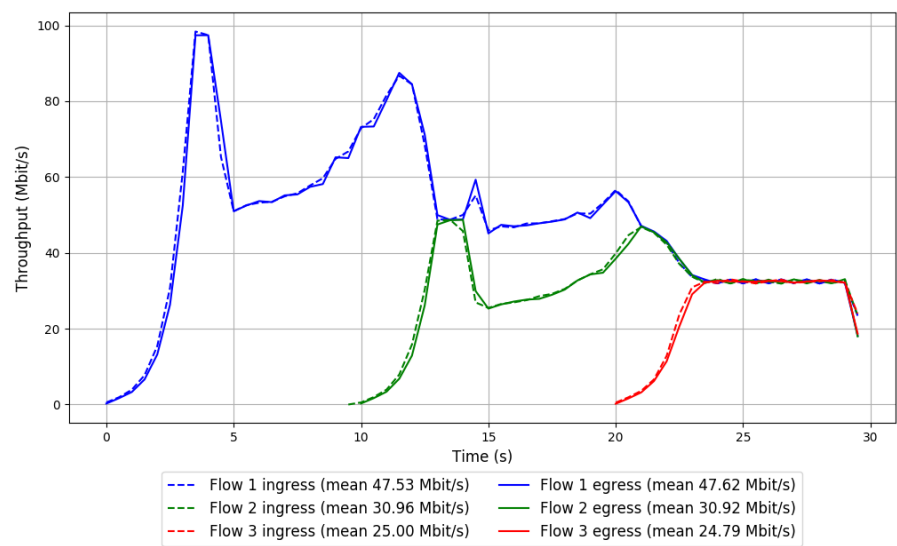Run 9: Report of Vivace-loss — Data Link

321

```
Run 10: Statistics of Vivace-loss

Start at: 2018-02-16 14:23:43
End at: 2018-02-16 14:24:13
Local clock offset: -4.914 ms
Remote clock offset: -3.842 ms


# Below is generated by plot.py at 2018-02-16 18:52:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.19 Mbit/s
95th percentile per-packet one-way delay: 118.465 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 118.281 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 117.517 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 24.79 Mbit/s
95th percentile per-packet one-way delay: 118.893 ms
Loss rate: 2.65%
```

Run 10: Report of Vivace-loss — Data Link

323

```
Run 1: Statistics of Vivace-LTE

Start at: 2018-02-16 10:54:24
End at: 2018-02-16 10:54:54
Local clock offset: -6.853 ms
Remote clock offset: 1.72 ms


# Below is generated by plot.py at 2018-02-16 18:52:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.21 Mbit/s
95th percentile per-packet one-way delay: 112.088 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 51.59 Mbit/s
95th percentile per-packet one-way delay: 109.552 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 113.154 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 22.40 Mbit/s
95th percentile per-packet one-way delay: 114.443 ms
Loss rate: 2.39%
```
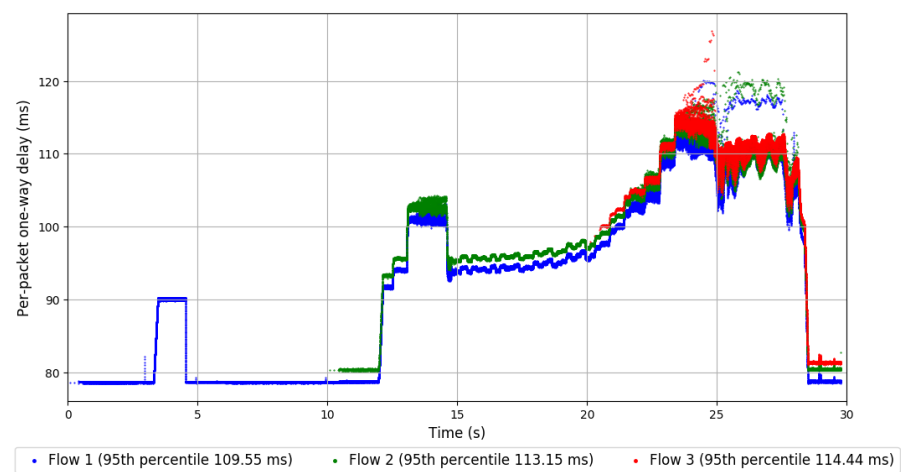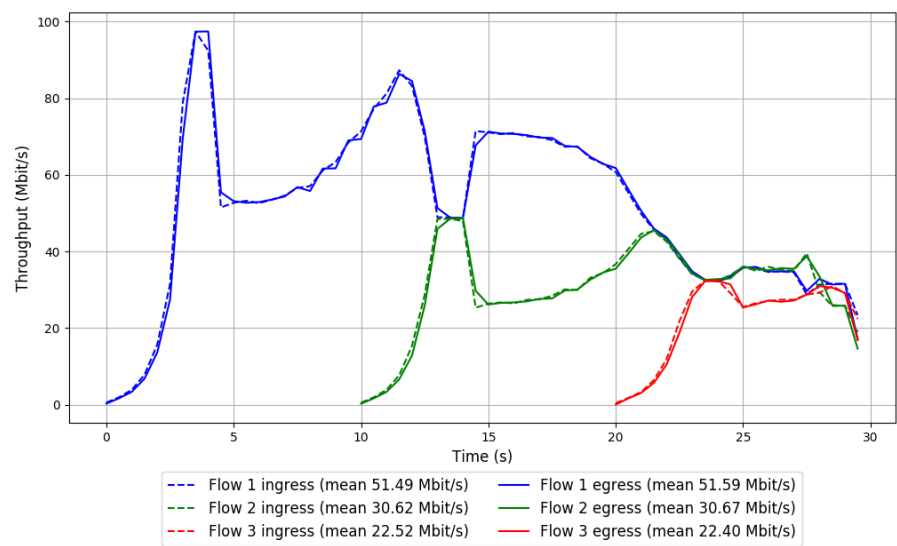
Run 1: Report of Vivace-LTE — Data Link

- Flow 1 ingress (mean 51.49 Mbit/s)
- Flow 1 egress (mean 51.59 Mbit/s)
- Flow 2 ingress (mean 30.62 Mbit/s)
- Flow 2 egress (mean 30.67 Mbit/s)
- Flow 3 ingress (mean 22.52 Mbit/s)
- Flow 3 egress (mean 22.40 Mbit/s)

- Flow 1 (95th percentile 109.55 ms)
- Flow 2 (95th percentile 113.15 ms)
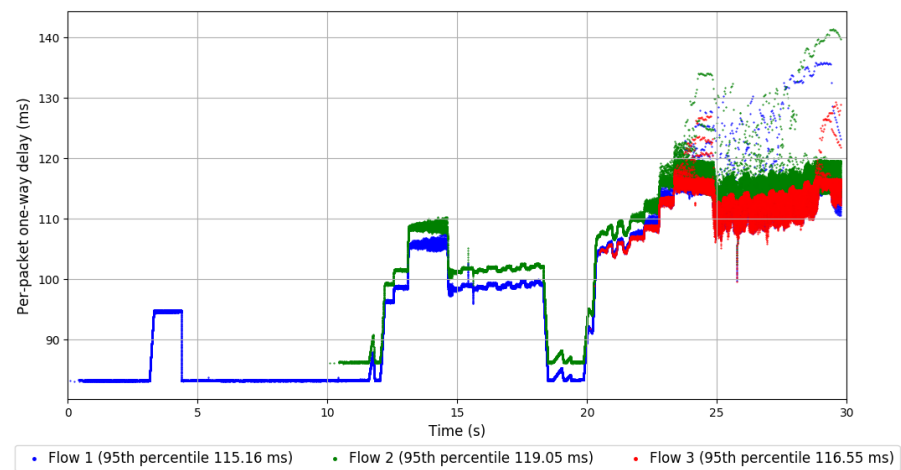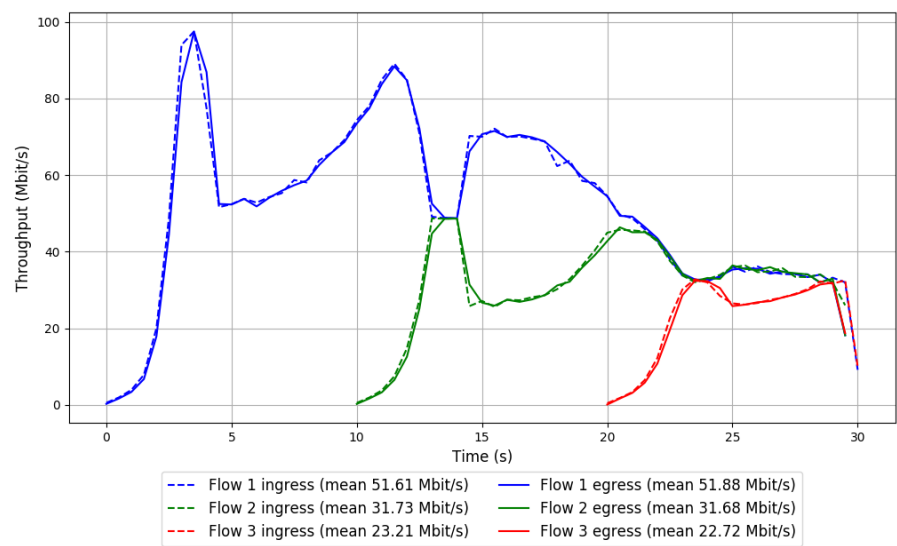- Flow 3 (95th percentile 114.44 ms)

```
Run 2: Statistics of Vivace-LTE

Start at: 2018-02-16 11:17:54
End at: 2018-02-16 11:18:24
Local clock offset: -7.184 ms
Remote clock offset: -3.104 ms


# Below is generated by plot.py at 2018-02-16 18:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.27 Mbit/s
95th percentile per-packet one-way delay: 116.601 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 115.156 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 119.049 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 22.72 Mbit/s
95th percentile per-packet one-way delay: 116.546 ms
Loss rate: 6.60%
```

Run 2: Report of Vivace-LTE — Data Link

```
Run 3: Statistics of Vivace-LTE

Start at: 2018-02-16 11:41:23
End at: 2018-02-16 11:41:53
Local clock offset: -7.731 ms
Remote clock offset: 1.664 ms


# Below is generated by plot.py at 2018-02-16 18:52:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.26 Mbit/s
95th percentile per-packet one-way delay: 112.402 ms
Loss rate: 2.18%
-- Flow 1:
Average throughput: 52.33 Mbit/s
95th percentile per-packet one-way delay: 110.273 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 31.00 Mbit/s
95th percentile per-packet one-way delay: 114.695 ms
Loss rate: 3.93%
-- Flow 3:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 111.878 ms
Loss rate: 3.32%
```
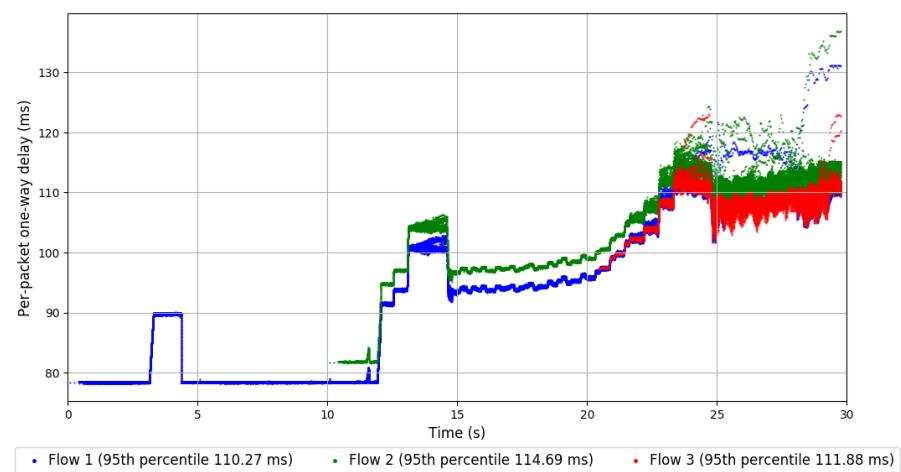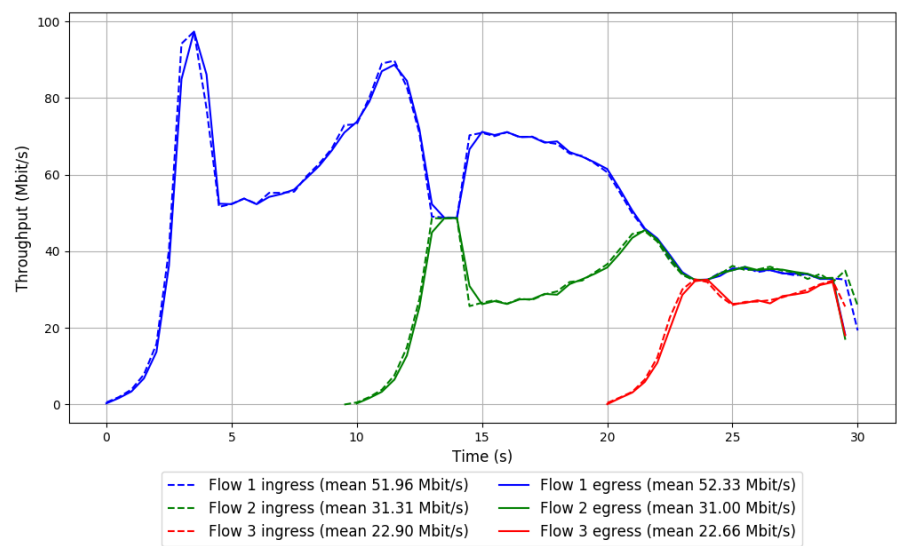
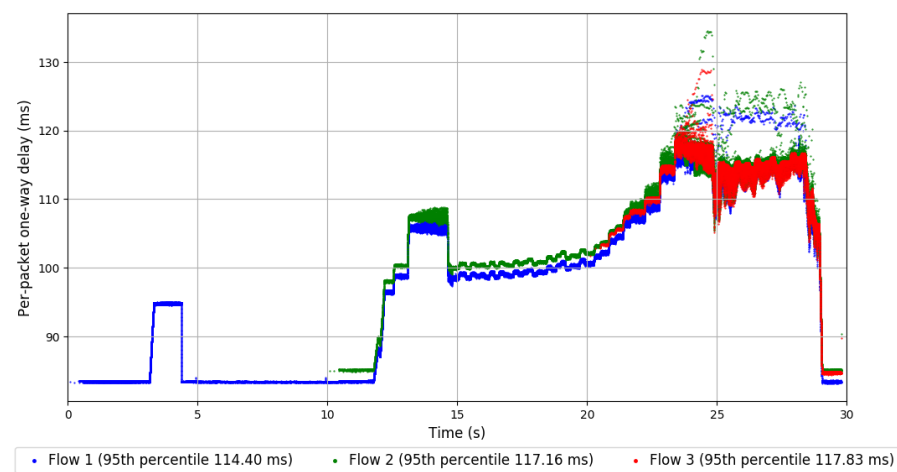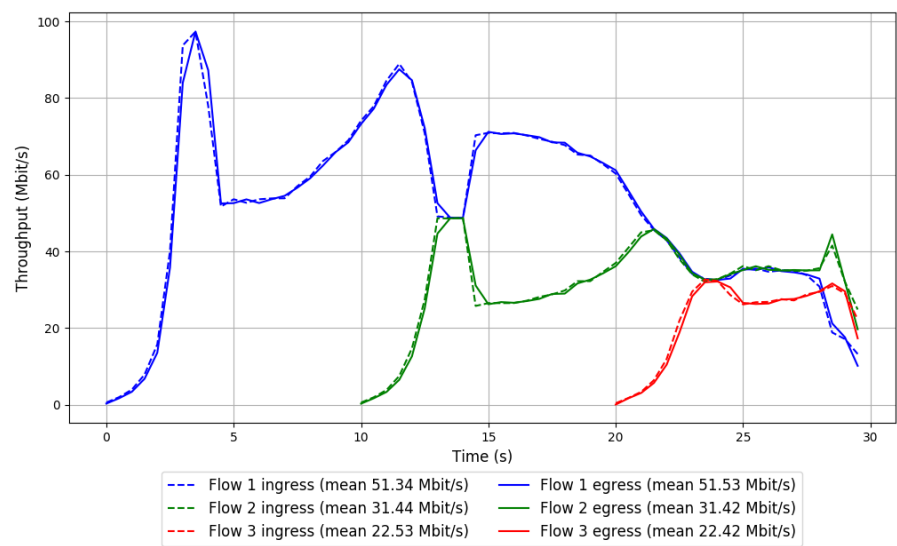# Run 3: Report of Vivace-LTE — Data Link

```
Run 4: Statistics of Vivace-LTE

Start at: 2018-02-16 12:04:50
End at: 2018-02-16 12:05:20
Local clock offset: -6.169 ms
Remote clock offset: -3.727 ms


# Below is generated by plot.py at 2018-02-16 18:52:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.65 Mbit/s
95th percentile per-packet one-way delay: 116.280 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 51.53 Mbit/s
95th percentile per-packet one-way delay: 114.397 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 31.42 Mbit/s
95th percentile per-packet one-way delay: 117.162 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 22.42 Mbit/s
95th percentile per-packet one-way delay: 117.828 ms
Loss rate: 2.31%
```

Run 4: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 51.34 Mbit/s)   Flow 1 egress (mean 51.53 Mbit/s)
Flow 2 ingress (mean 31.44 Mbit/s)   Flow 2 egress (mean 31.42 Mbit/s)
Flow 3 ingress (mean 22.53 Mbit/s)   Flow 3 egress (mean 22.42 Mbit/s)

Flow 1 (95th percentile 114.40 ms)   Flow 2 (95th percentile 117.16 ms)   Flow 3 (95th percentile 117.83 ms)

```
Run 5: Statistics of Vivace-LTE

Start at: 2018-02-16 12:28:20
End at: 2018-02-16 12:28:50
Local clock offset: -3.764 ms
Remote clock offset: 1.276 ms


# Below is generated by plot.py at 2018-02-16 18:52:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.79 Mbit/s
95th percentile per-packet one-way delay: 110.397 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 109.019 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 30.97 Mbit/s
95th percentile per-packet one-way delay: 110.157 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 22.78 Mbit/s
95th percentile per-packet one-way delay: 112.284 ms
Loss rate: 2.42%
```
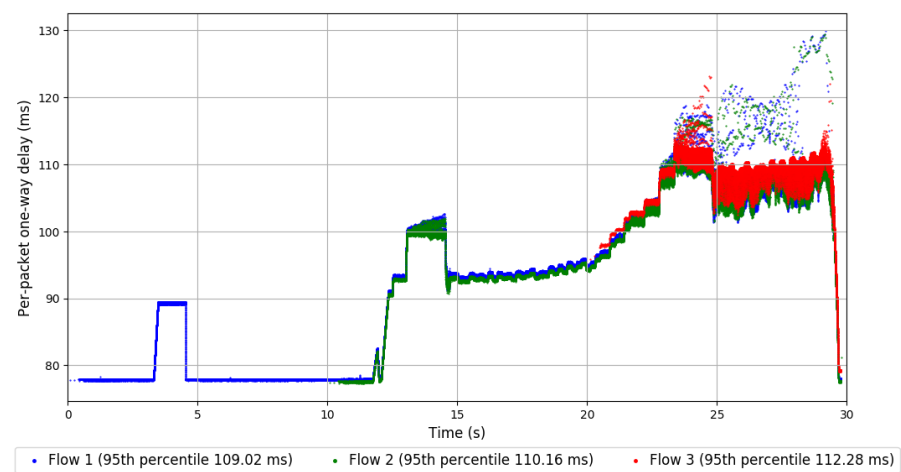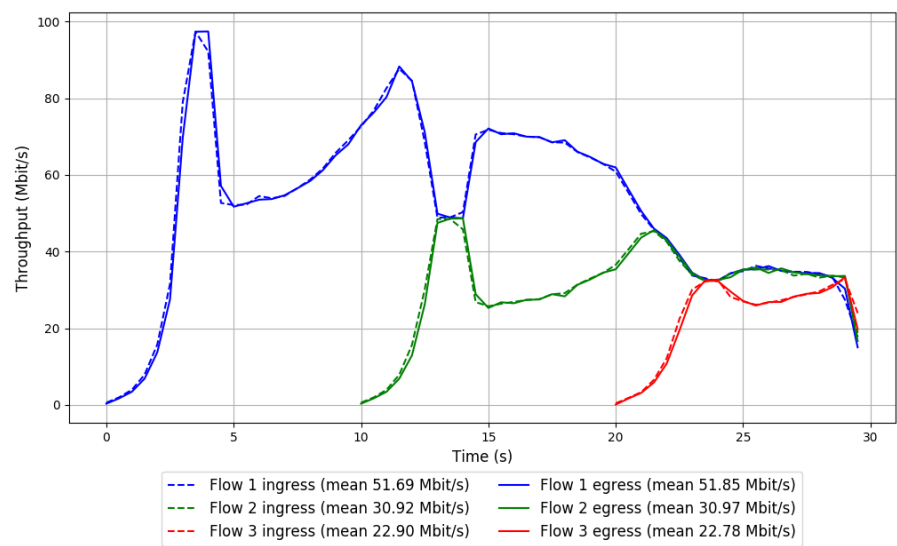
Run 5: Report of Vivace-LTE — Data Link

```
Run 6: Statistics of Vivace-LTE

Start at: 2018-02-16 12:51:49
End at: 2018-02-16 12:52:19
Local clock offset: -6.618 ms
Remote clock offset: 0.734 ms


# Below is generated by plot.py at 2018-02-16 18:53:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.35 Mbit/s
95th percentile per-packet one-way delay: 111.302 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 111.149 ms
Loss rate: 2.95%
-- Flow 2:
Average throughput: 31.76 Mbit/s
95th percentile per-packet one-way delay: 110.628 ms
Loss rate: 5.85%
-- Flow 3:
Average throughput: 21.38 Mbit/s
95th percentile per-packet one-way delay: 112.575 ms
Loss rate: 3.17%
```
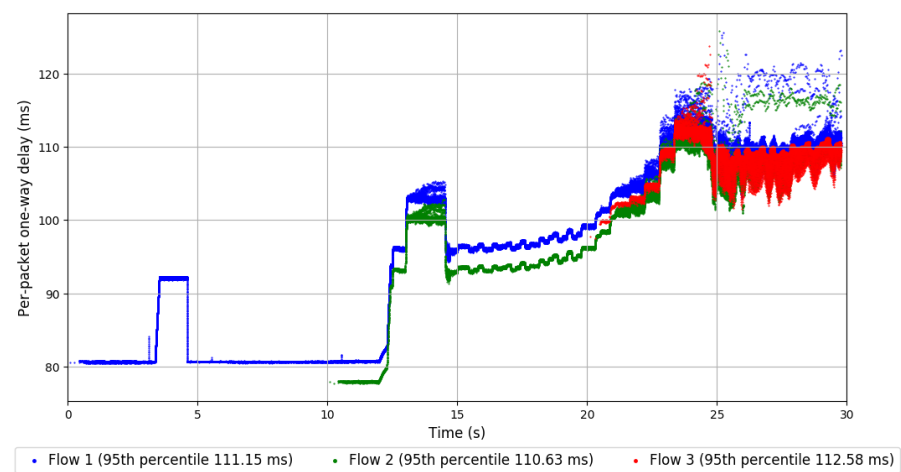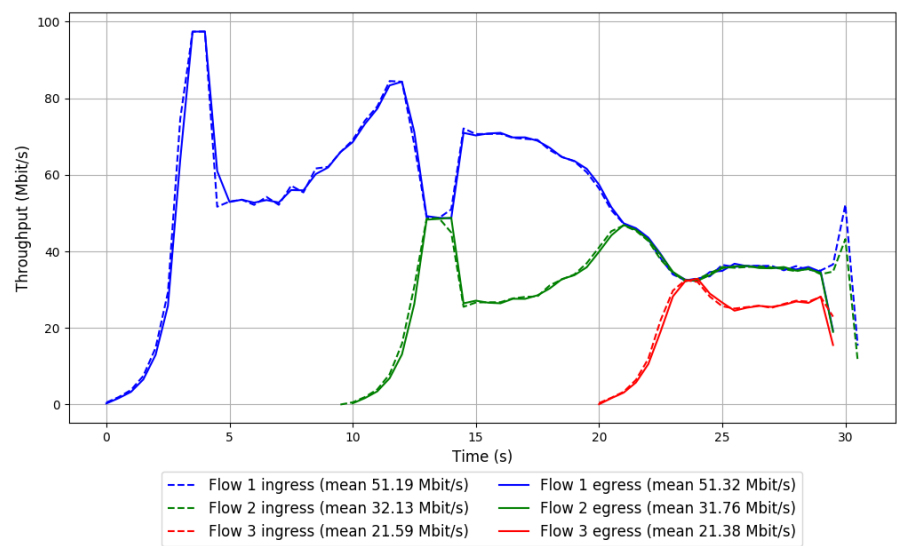
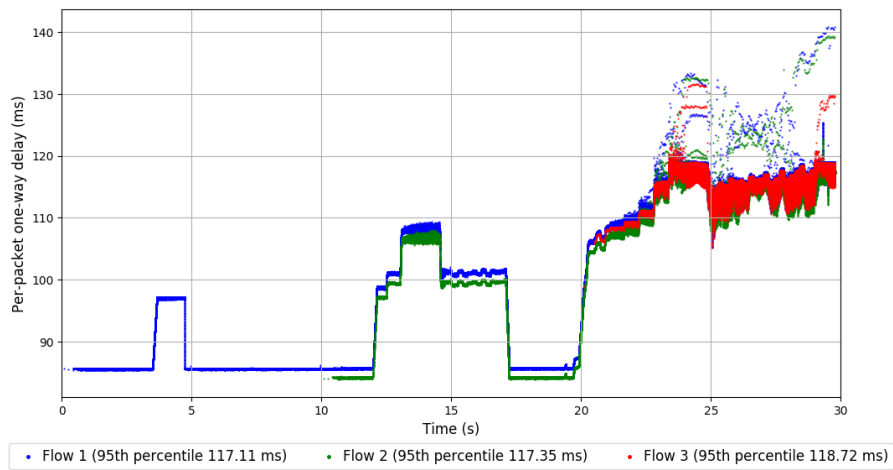# Run 6: Report of Vivace-LTE — Data Link

```
Run 7: Statistics of Vivace-LTE

Start at: 2018-02-16 13:15:33
End at: 2018-02-16 13:16:03
Local clock offset: -7.135 ms
Remote clock offset: -6.002 ms


# Below is generated by plot.py at 2018-02-16 18:53:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.12 Mbit/s
95th percentile per-packet one-way delay: 117.646 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 50.83 Mbit/s
95th percentile per-packet one-way delay: 117.113 ms
Loss rate: 2.65%
-- Flow 2:
Average throughput: 31.63 Mbit/s
95th percentile per-packet one-way delay: 117.352 ms
Loss rate: 5.26%
-- Flow 3:
Average throughput: 22.55 Mbit/s
95th percentile per-packet one-way delay: 118.724 ms
Loss rate: 3.29%
```

Run 7: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 50.67 Mbit/s)   Flow 1 egress (mean 50.83 Mbit/s)
Flow 2 ingress (mean 31.94 Mbit/s)   Flow 2 egress (mean 31.63 Mbit/s)
Flow 3 ingress (mean 22.80 Mbit/s)   Flow 3 egress (mean 22.55 Mbit/s)

Flow 1 (95th percentile 117.11 ms)   Flow 2 (95th percentile 117.35 ms)   Flow 3 (95th percentile 118.72 ms)
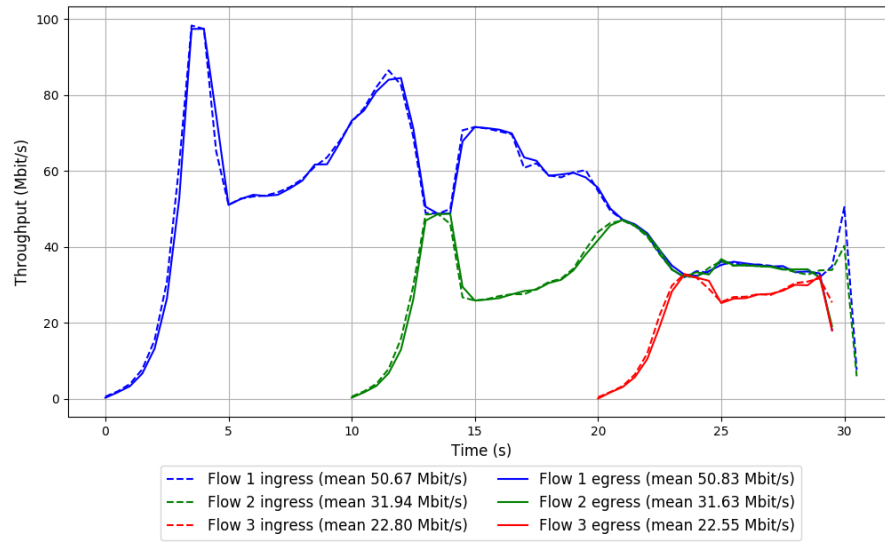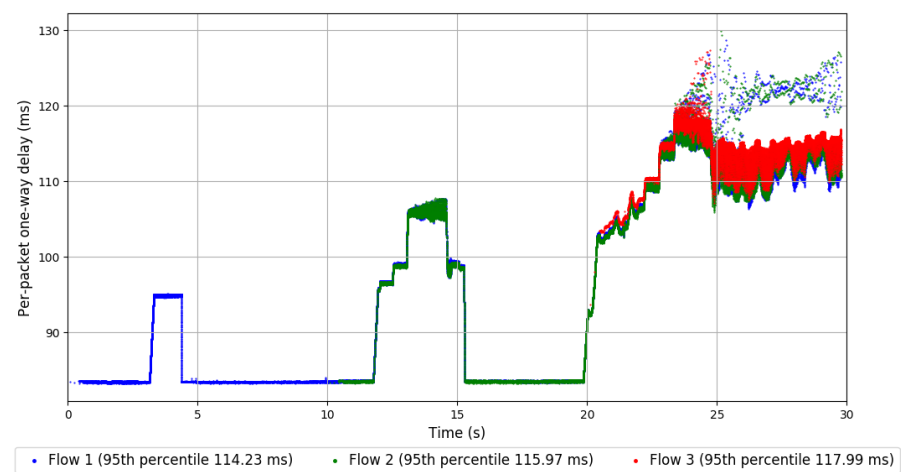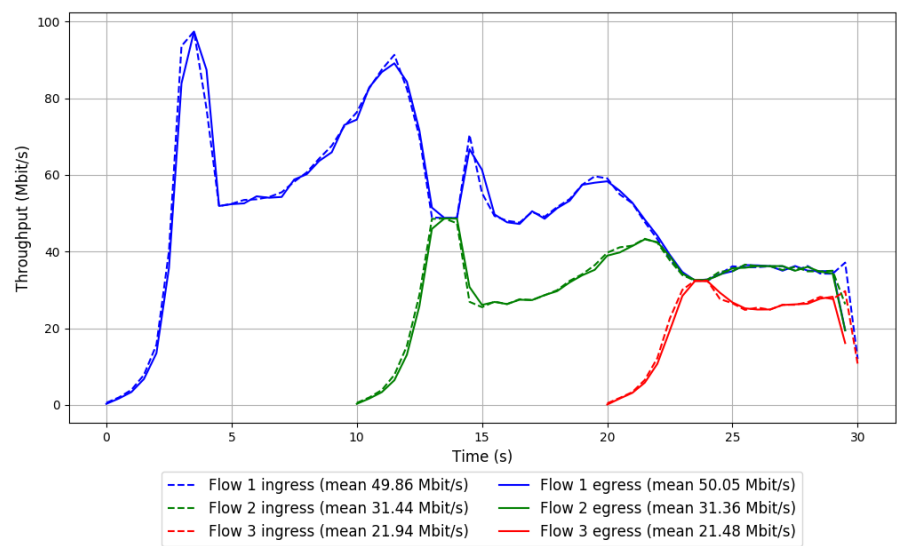
```
Run 8: Statistics of Vivace-LTE

Start at: 2018-02-16 13:39:12
End at: 2018-02-16 13:39:42
Local clock offset: -7.405 ms
Remote clock offset: -4.502 ms


# Below is generated by plot.py at 2018-02-16 18:53:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.84 Mbit/s
95th percentile per-packet one-way delay: 115.873 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 114.235 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 115.971 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 21.48 Mbit/s
95th percentile per-packet one-way delay: 117.988 ms
Loss rate: 6.83%
```

Run 8: Report of Vivace-LTE — Data Link

Flow 1 ingress (mean 49.86 Mbit/s) — Flow 1 egress (mean 50.05 Mbit/s)
Flow 2 ingress (mean 31.44 Mbit/s) — Flow 2 egress (mean 31.36 Mbit/s)
Flow 3 ingress (mean 21.94 Mbit/s) — Flow 3 egress (mean 21.48 Mbit/s)

Flow 1 (95th percentile 114.23 ms) — Flow 2 (95th percentile 115.97 ms) — Flow 3 (95th percentile 117.99 ms)

```
Run 9: Statistics of Vivace-LTE

Start at: 2018-02-16 14:02:48
End at: 2018-02-16 14:03:18
Local clock offset: -6.755 ms
Remote clock offset: 0.84 ms


# Below is generated by plot.py at 2018-02-16 18:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.46 Mbit/s
95th percentile per-packet one-way delay: 112.560 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 52.38 Mbit/s
95th percentile per-packet one-way delay: 110.547 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 113.546 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 113.292 ms
Loss rate: 7.65%
```
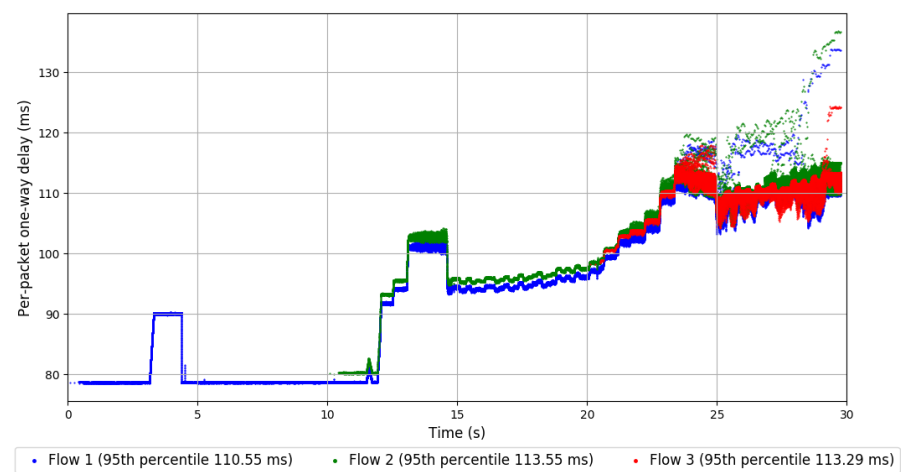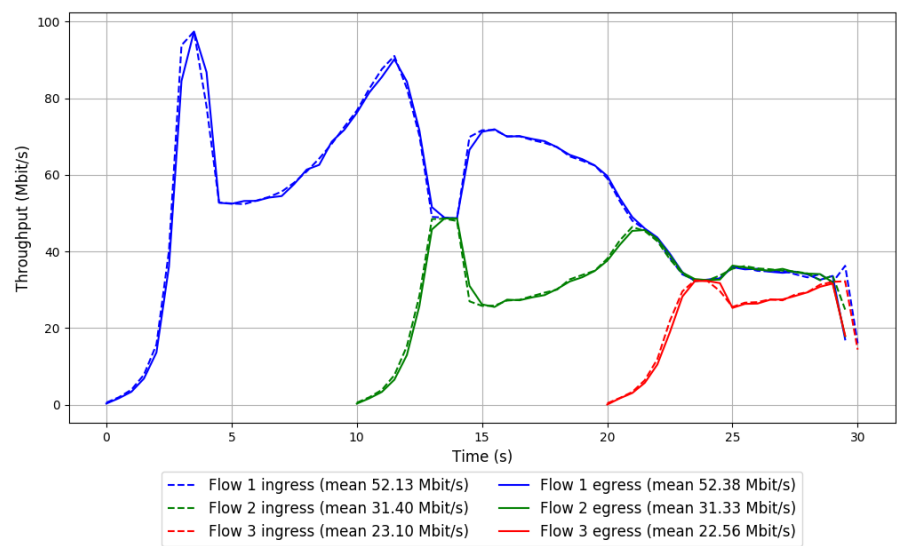
Run 9: Report of Vivace-LTE — Data Link

- - - Flow 1 ingress (mean 52.13 Mbit/s)   —— Flow 1 egress (mean 52.38 Mbit/s)
- - - Flow 2 ingress (mean 31.40 Mbit/s)   —— Flow 2 egress (mean 31.33 Mbit/s)
- - - Flow 3 ingress (mean 23.10 Mbit/s)   —— Flow 3 egress (mean 22.56 Mbit/s)

• Flow 1 (95th percentile 110.55 ms)   • Flow 2 (95th percentile 113.55 ms)   • Flow 3 (95th percentile 113.29 ms)

```
Run 10: Statistics of Vivace-LTE

Start at: 2018-02-16 14:26:22
End at: 2018-02-16 14:26:52
Local clock offset: -4.505 ms
Remote clock offset: -3.832 ms


# Below is generated by plot.py at 2018-02-16 18:53:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.30 Mbit/s
95th percentile per-packet one-way delay: 117.401 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 51.56 Mbit/s
95th percentile per-packet one-way delay: 116.429 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 31.38 Mbit/s
95th percentile per-packet one-way delay: 116.663 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 21.31 Mbit/s
95th percentile per-packet one-way delay: 120.107 ms
Loss rate: 6.23%
```

Run 10: Report of Vivace-LTE — Data Link