Pantheon Report

Generated at 2018-06-05 15:07:41 (UTC).

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

Repeated the test of 16 congestion control schemes 10 times.

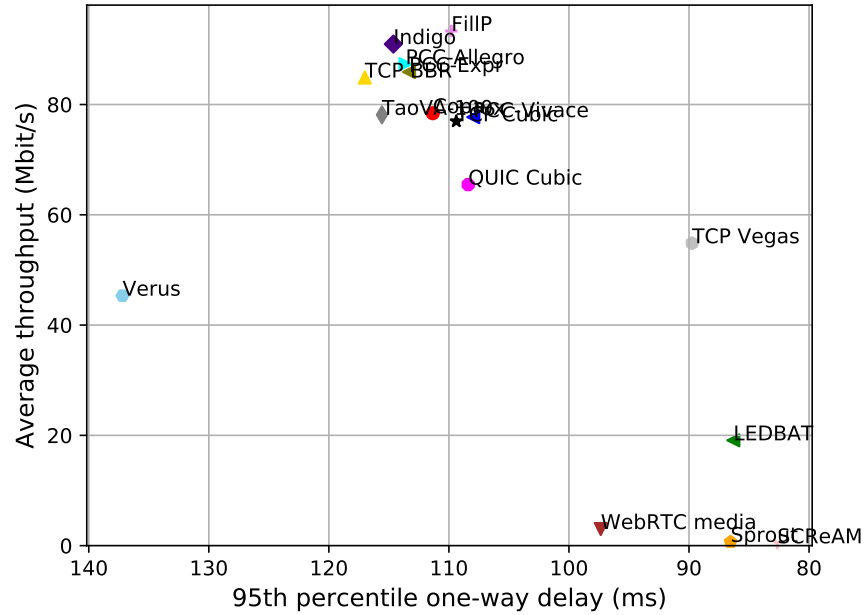Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.
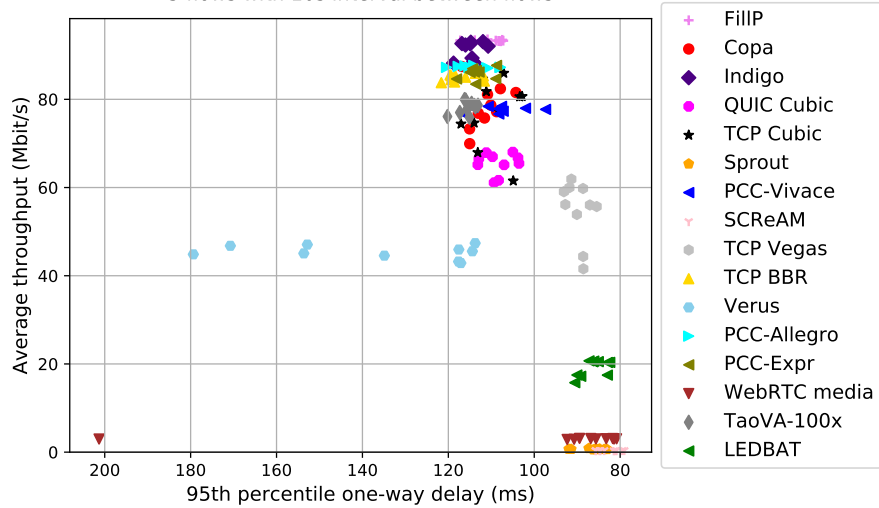
```
Git summary:
branch: master @ 227fdf9a3757f17b88537cceed5743a33037a3d2
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ c838669682f0c19f6baf92afc9a596a406d48c1f
 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 @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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

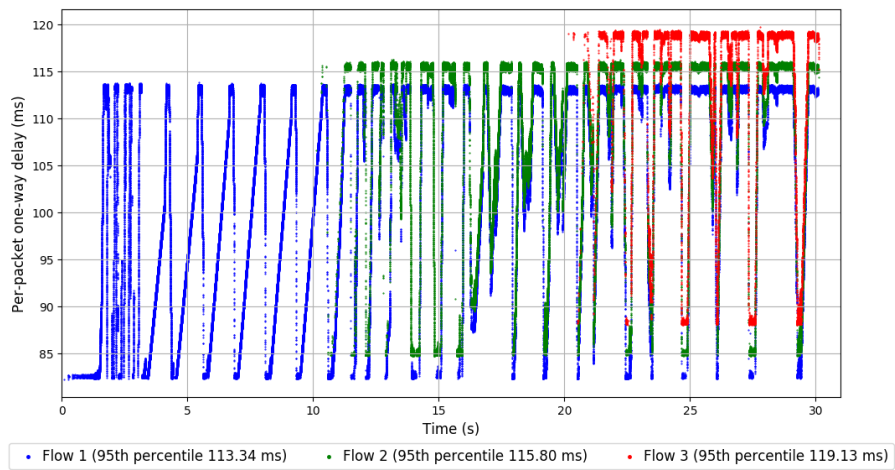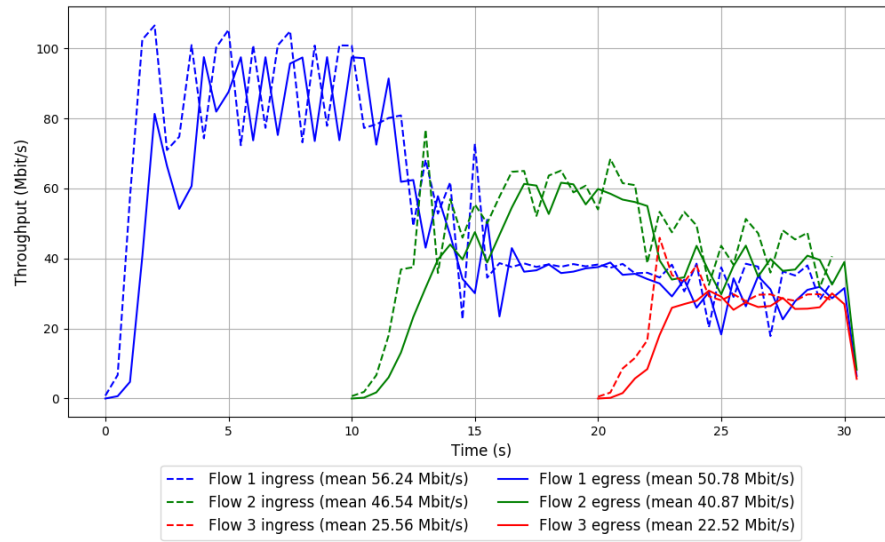| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	52.89	35.22	25.76	114.95	115.21	114.17	8.59	12.56	13.23
Copa	10	55.28	21.51	26.58	112.15	102.89	107.89	2.60	0.73	0.87
TCP Cubic	10	42.89	37.30	27.72	107.32	110.18	111.32	0.43	0.75	1.06
FillP	10	58.44	38.20	28.54	109.65	108.36	109.29	17.84	20.94	22.03
Indigo	10	61.42	32.53	24.97	112.12	114.42	112.69	9.14	18.00	45.63
LEDBAT	10	12.01	8.56	4.20	84.92	84.34	85.53	0.00	0.00	0.00
PCC-Allegro	10	79.15	8.37	7.87	113.58	113.85	113.56	2.83	4.97	6.44
PCC-Expr	10	74.10	14.26	6.98	113.03	150.77	112.70	4.21	4.24	6.71
QUIC Cubic	10	47.85	21.14	11.04	108.20	106.42	103.67	0.95	0.61	4.65
SCReAM	10	0.22	0.22	0.22	81.60	80.76	81.50	0.00	0.00	0.00
Sprout	10	0.30	0.38	0.39	84.15	85.59	85.68	0.00	0.00	0.00
TaoVA-100x	10	49.17	30.83	25.52	114.76	114.96	113.34	4.01	8.34	8.89
TCP Vegas	10	25.09	27.70	34.01	90.26	88.99	90.77	0.61	0.65	1.33
Verus	10	27.40	19.56	17.59	130.01	119.20	132.52	39.16	34.04	47.02
PCC-Vivace	10	66.94	12.96	6.50	108.11	107.25	101.42	0.21	0.41	0.18
WebRTC media	10	1.75	1.04	0.23	86.24	106.38	84.47	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-06-05 11:32:46
End at: 2018-06-05 11:33:16
Local clock offset: -6.972 ms
Remote clock offset: 11.959 ms


# Below is generated by plot.py at 2018-06-05 14:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.46 Mbit/s
95th percentile per-packet one-way delay: 118.418 ms
Loss rate: 10.64%
-- Flow 1:
Average throughput: 50.78 Mbit/s
95th percentile per-packet one-way delay: 113.336 ms
Loss rate: 9.62%
-- Flow 2:
Average throughput: 40.87 Mbit/s
95th percentile per-packet one-way delay: 115.803 ms
Loss rate: 12.14%
-- Flow 3:
Average throughput: 22.52 Mbit/s
95th percentile per-packet one-way delay: 119.131 ms
Loss rate: 11.94%
```
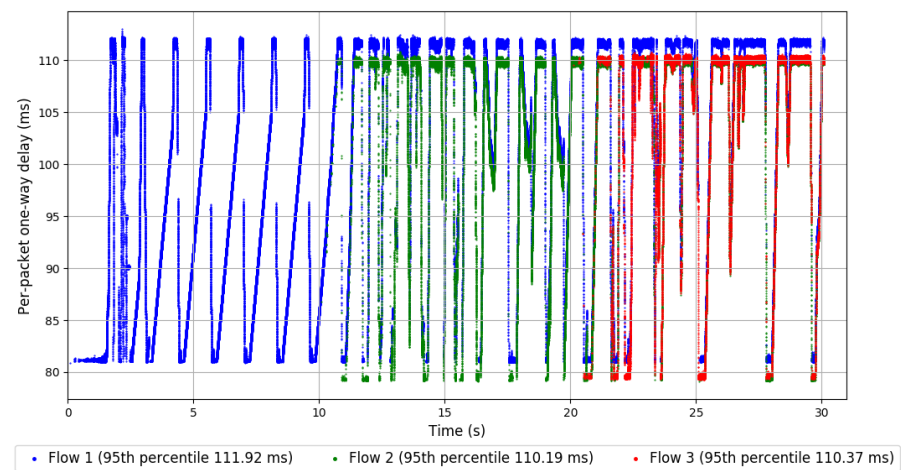
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-06-05 11:52:47
End at: 2018-06-05 11:53:17
Local clock offset: -6.406 ms
Remote clock offset: 9.382 ms


# Below is generated by plot.py at 2018-06-05 14:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.31 Mbit/s
95th percentile per-packet one-way delay: 111.857 ms
Loss rate: 10.01%
-- Flow 1:
Average throughput: 53.80 Mbit/s
95th percentile per-packet one-way delay: 111.921 ms
Loss rate: 7.45%
-- Flow 2:
Average throughput: 33.43 Mbit/s
95th percentile per-packet one-way delay: 110.188 ms
Loss rate: 12.84%
-- Flow 3:
Average throughput: 27.86 Mbit/s
95th percentile per-packet one-way delay: 110.369 ms
Loss rate: 16.90%
```
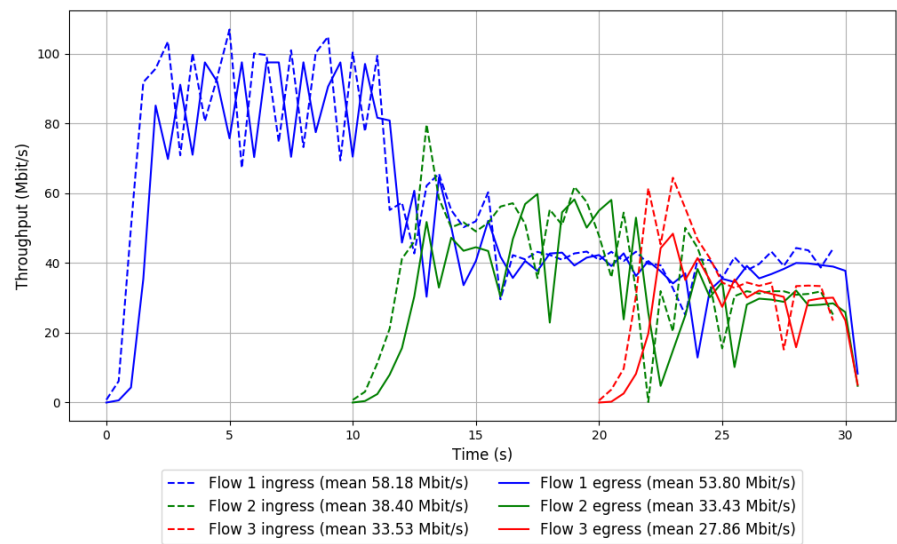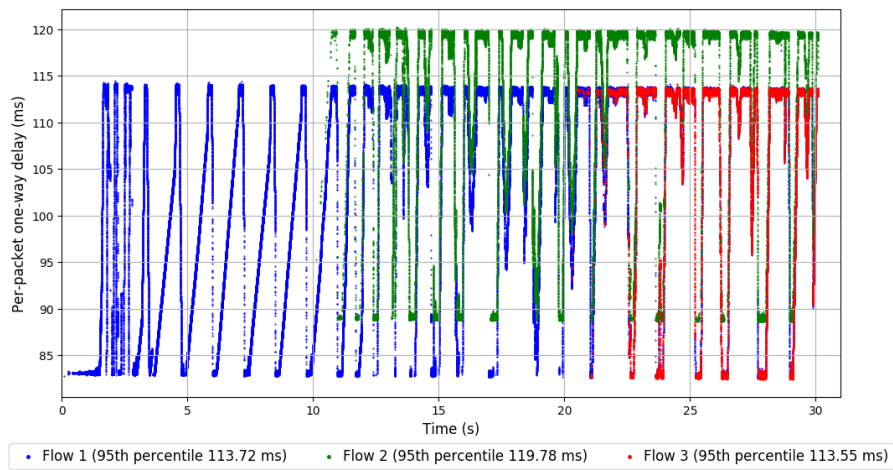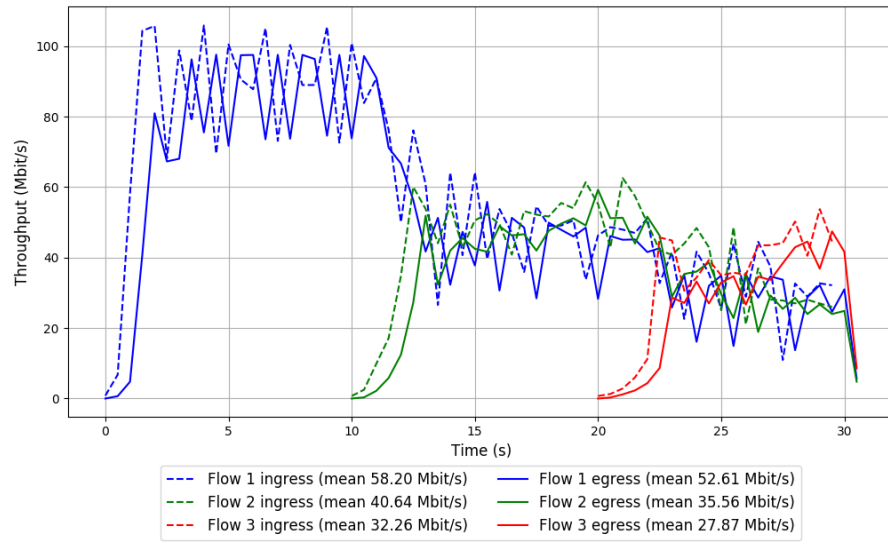
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 58.18 Mbit/s) --- Flow 1 egress (mean 53.80 Mbit/s)
Flow 2 ingress (mean 38.40 Mbit/s) --- Flow 2 egress (mean 33.43 Mbit/s)
Flow 3 ingress (mean 33.53 Mbit/s) --- Flow 3 egress (mean 27.86 Mbit/s)

Flow 1 (95th percentile 111.92 ms)   Flow 2 (95th percentile 110.19 ms)   Flow 3 (95th percentile 110.37 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2018-06-05 12:12:48
End at: 2018-06-05 12:13:18
Local clock offset: -6.418 ms
Remote clock offset: 24.834 ms


# Below is generated by plot.py at 2018-06-05 14:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.55 Mbit/s
95th percentile per-packet one-way delay: 119.591 ms
Loss rate: 10.78%
-- Flow 1:
Average throughput: 52.61 Mbit/s
95th percentile per-packet one-way delay: 113.717 ms
Loss rate: 9.51%
-- Flow 2:
Average throughput: 35.56 Mbit/s
95th percentile per-packet one-way delay: 119.777 ms
Loss rate: 12.40%
-- Flow 3:
Average throughput: 27.87 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 13.56%
```

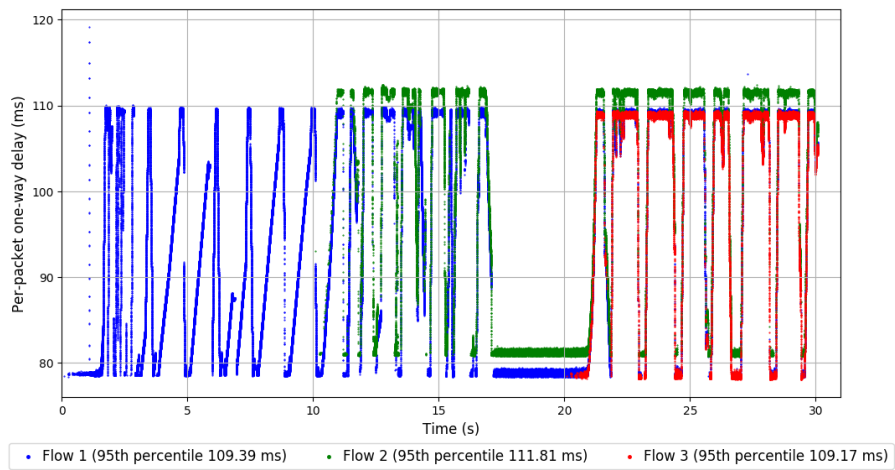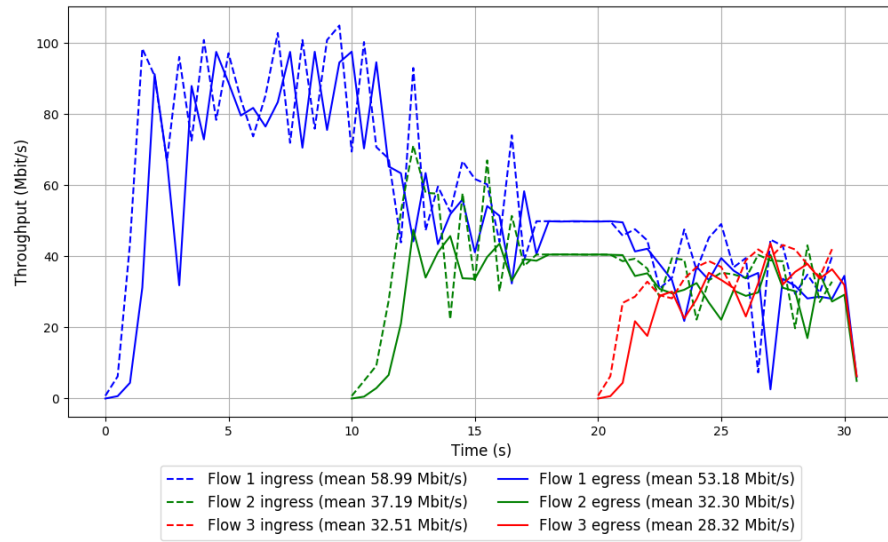Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-06-05 12:32:50
End at: 2018-06-05 12:33:20
Local clock offset: -6.444 ms
Remote clock offset: 29.609 ms


# Below is generated by plot.py at 2018-06-05 14:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.14 Mbit/s
95th percentile per-packet one-way delay: 111.615 ms
Loss rate: 10.96%
-- Flow 1:
Average throughput: 53.18 Mbit/s
95th percentile per-packet one-way delay: 109.392 ms
Loss rate: 9.75%
-- Flow 2:
Average throughput: 32.30 Mbit/s
95th percentile per-packet one-way delay: 111.812 ms
Loss rate: 13.08%
-- Flow 3:
Average throughput: 28.32 Mbit/s
95th percentile per-packet one-way delay: 109.170 ms
Loss rate: 12.66%
```

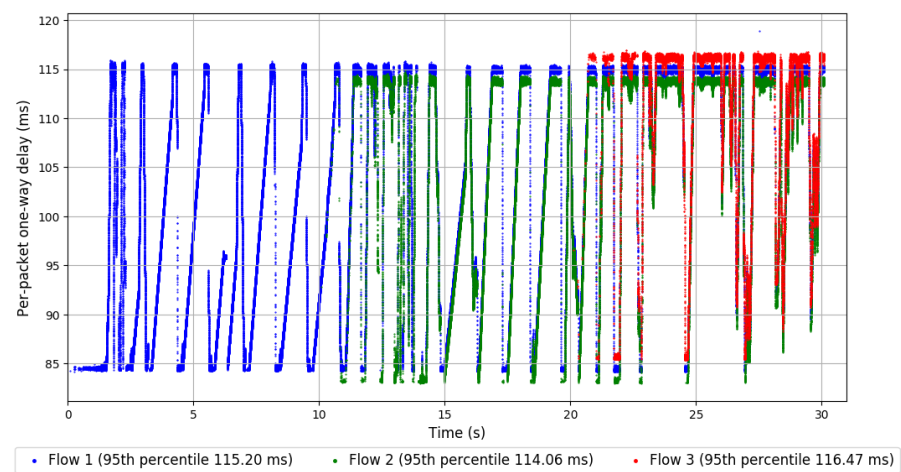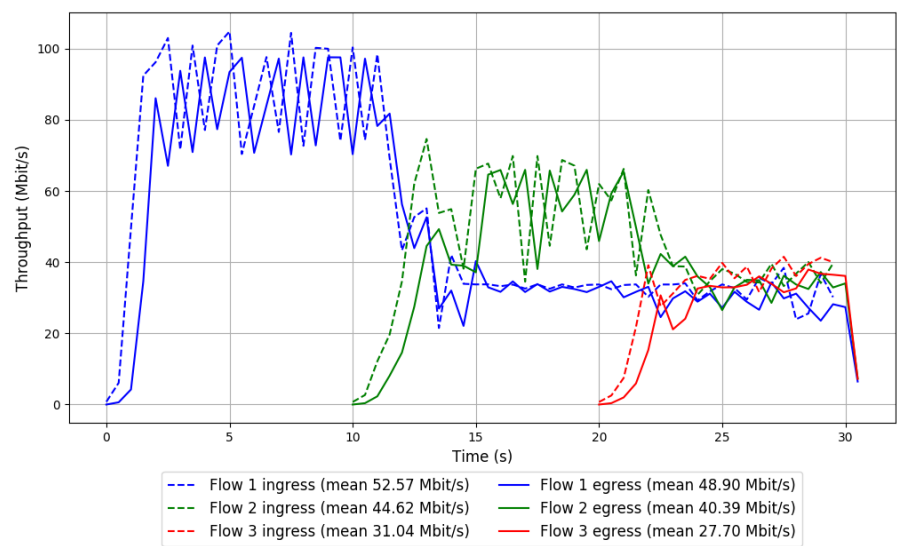# Run 4: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 58.99 Mbit/s)   ── Flow 1 egress (mean 53.18 Mbit/s)
- - - Flow 2 ingress (mean 37.19 Mbit/s)   ── Flow 2 egress (mean 32.30 Mbit/s)
- - - Flow 3 ingress (mean 32.51 Mbit/s)   ── Flow 3 egress (mean 28.32 Mbit/s)

• Flow 1 (95th percentile 109.39 ms)   • Flow 2 (95th percentile 111.81 ms)   • Flow 3 (95th percentile 109.17 ms)

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```
Run 5: Statistics of TCP BBR

Start at: 2018-06-05 12:52:48
End at: 2018-06-05 12:53:18
Local clock offset: -7.548 ms
Remote clock offset: 39.679 ms


# Below is generated by plot.py at 2018-06-05 14:48:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.02 Mbit/s
95th percentile per-packet one-way delay: 115.992 ms
Loss rate: 8.10%
-- Flow 1:
Average throughput: 48.90 Mbit/s
95th percentile per-packet one-way delay: 115.204 ms
Loss rate: 6.89%
-- Flow 2:
Average throughput: 40.39 Mbit/s
95th percentile per-packet one-way delay: 114.061 ms
Loss rate: 9.39%
-- Flow 3:
Average throughput: 27.70 Mbit/s
95th percentile per-packet one-way delay: 116.467 ms
Loss rate: 10.60%
```
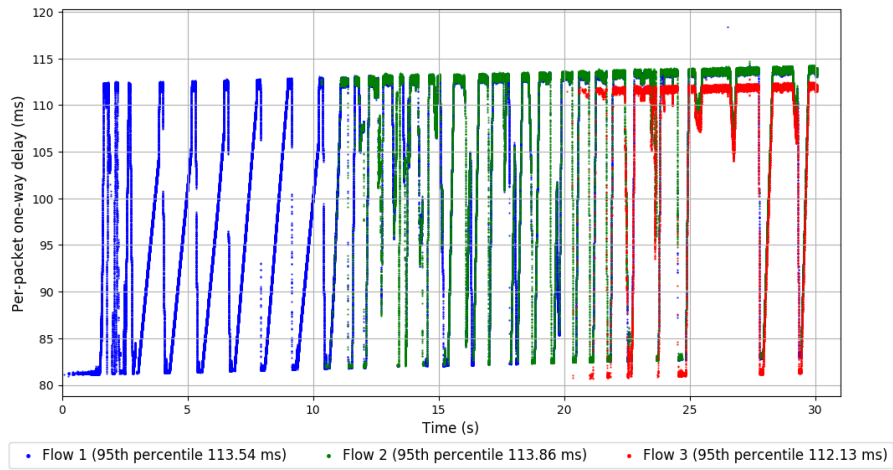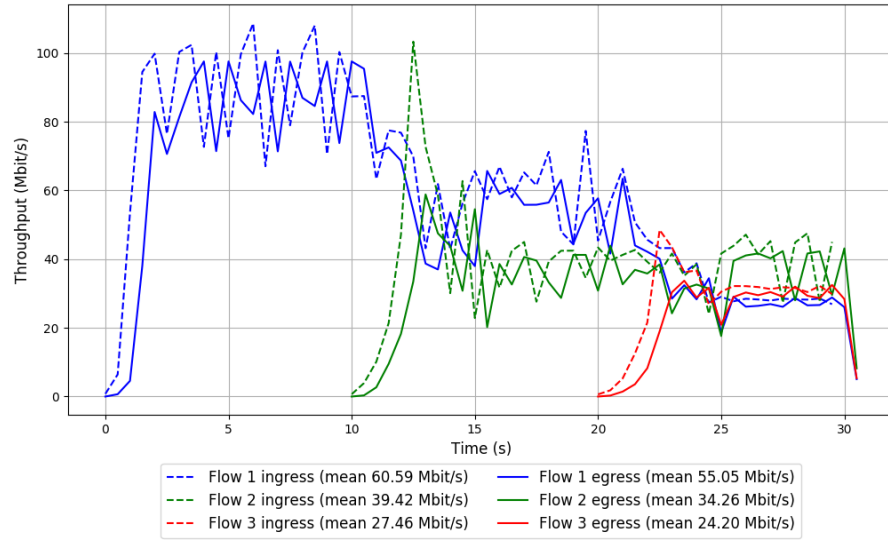
Run 5: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 52.57 Mbit/s) ——— Flow 1 egress (mean 48.90 Mbit/s)
- - - Flow 2 ingress (mean 44.62 Mbit/s) ——— Flow 2 egress (mean 40.39 Mbit/s)
- - - Flow 3 ingress (mean 31.04 Mbit/s) ——— Flow 3 egress (mean 27.70 Mbit/s)

• Flow 1 (95th percentile 115.20 ms)   • Flow 2 (95th percentile 114.06 ms)   • Flow 3 (95th percentile 116.47 ms)

```
Run 6: Statistics of TCP BBR

Start at: 2018-06-05 13:12:53
End at: 2018-06-05 13:13:23
Local clock offset: -6.857 ms
Remote clock offset: 36.091 ms


# Below is generated by plot.py at 2018-06-05 14:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.89 Mbit/s
95th percentile per-packet one-way delay: 113.687 ms
Loss rate: 10.41%
-- Flow 1:
Average throughput: 55.05 Mbit/s
95th percentile per-packet one-way delay: 113.541 ms
Loss rate: 9.04%
-- Flow 2:
Average throughput: 34.26 Mbit/s
95th percentile per-packet one-way delay: 113.860 ms
Loss rate: 13.05%
-- Flow 3:
Average throughput: 24.20 Mbit/s
95th percentile per-packet one-way delay: 112.132 ms
Loss rate: 11.87%
```
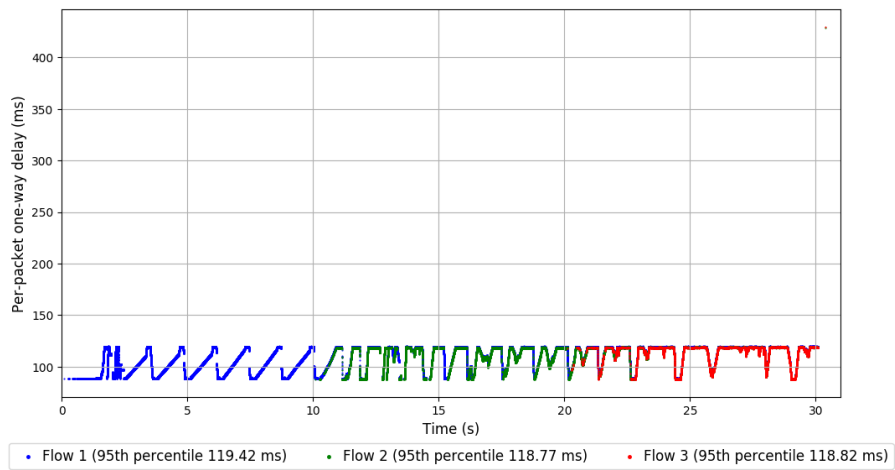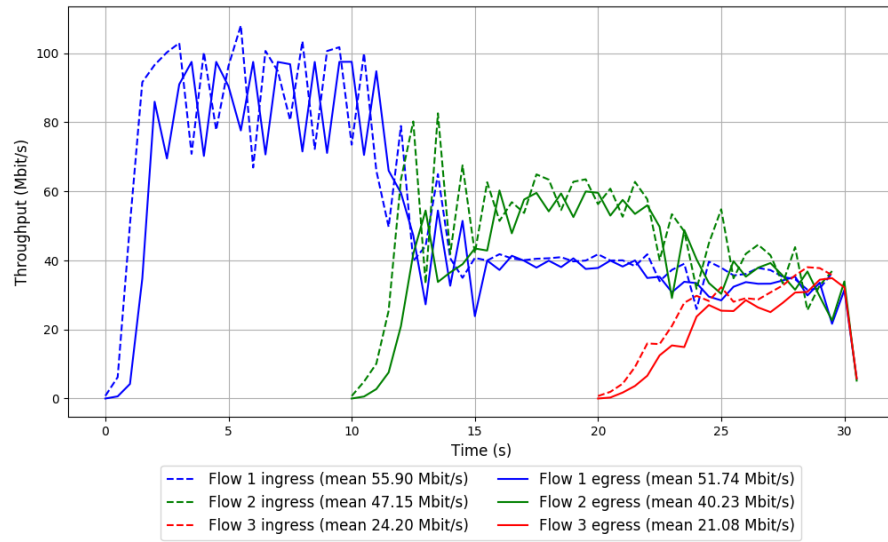
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 60.59 Mbit/s) --- Flow 1 egress (mean 55.05 Mbit/s)
Flow 2 ingress (mean 39.42 Mbit/s) --- Flow 2 egress (mean 34.26 Mbit/s)
Flow 3 ingress (mean 27.46 Mbit/s) --- Flow 3 egress (mean 24.20 Mbit/s)

Flow 1 (95th percentile 113.54 ms) • Flow 2 (95th percentile 113.86 ms) • Flow 3 (95th percentile 112.13 ms)

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```
Run 7: Statistics of TCP BBR

Start at: 2018-06-05 13:32:59
End at: 2018-06-05 13:33:29
Local clock offset: -7.682 ms
Remote clock offset: 4.985 ms


# Below is generated by plot.py at 2018-06-05 14:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.31 Mbit/s
95th percentile per-packet one-way delay: 119.340 ms
Loss rate: 9.62%
-- Flow 1:
Average throughput: 51.74 Mbit/s
95th percentile per-packet one-way delay: 119.422 ms
Loss rate: 7.43%
-- Flow 2:
Average throughput: 40.23 Mbit/s
95th percentile per-packet one-way delay: 118.766 ms
Loss rate: 13.32%
-- Flow 3:
Average throughput: 21.08 Mbit/s
95th percentile per-packet one-way delay: 118.818 ms
Loss rate: 10.38%
```
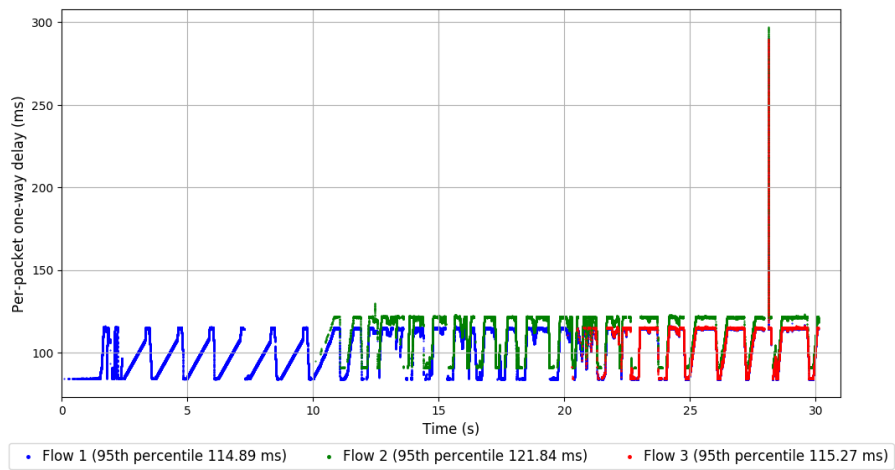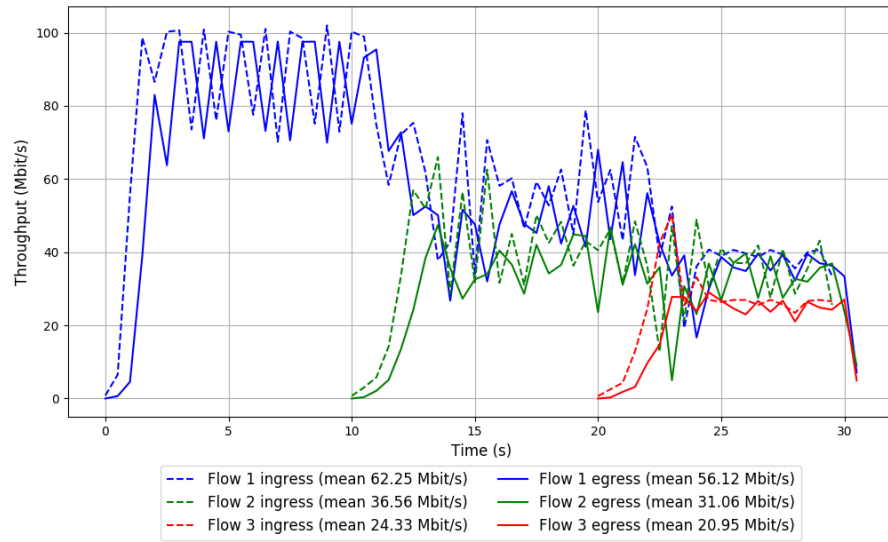
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 55.90 Mbit/s) ---- Flow 1 egress (mean 51.74 Mbit/s)
Flow 2 ingress (mean 47.15 Mbit/s) ---- Flow 2 egress (mean 40.23 Mbit/s)
Flow 3 ingress (mean 24.20 Mbit/s) ---- Flow 3 egress (mean 21.08 Mbit/s)

Flow 1 (95th percentile 119.42 ms)   Flow 2 (95th percentile 118.77 ms)   Flow 3 (95th percentile 118.82 ms)

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```
Run 8: Statistics of TCP BBR

Start at: 2018-06-05 13:53:14
End at: 2018-06-05 13:53:44
Local clock offset: -7.455 ms
Remote clock offset: 5.996 ms


# Below is generated by plot.py at 2018-06-05 14:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.77 Mbit/s
95th percentile per-packet one-way delay: 121.637 ms
Loss rate: 11.44%
-- Flow 1:
Average throughput: 56.12 Mbit/s
95th percentile per-packet one-way delay: 114.890 ms
Loss rate: 9.76%
-- Flow 2:
Average throughput: 31.06 Mbit/s
95th percentile per-packet one-way delay: 121.844 ms
Loss rate: 14.94%
-- Flow 3:
Average throughput: 20.95 Mbit/s
95th percentile per-packet one-way delay: 115.268 ms
Loss rate: 13.86%
```
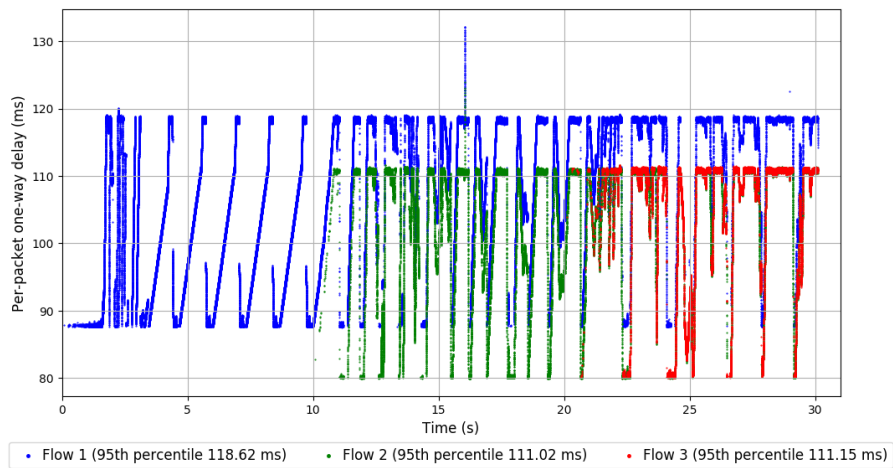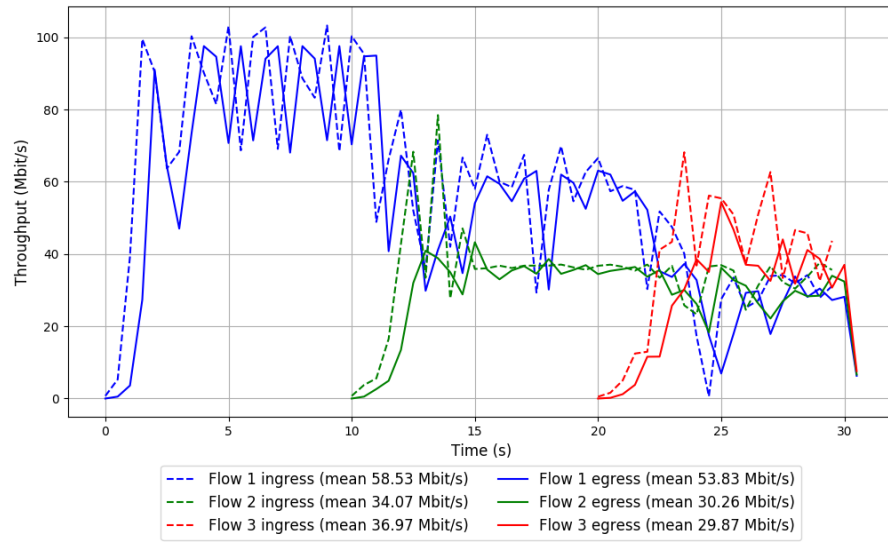
Run 8: Report of TCP BBR — Data Link

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```
Run 9: Statistics of TCP BBR

Start at: 2018-06-05 14:13:16
End at: 2018-06-05 14:13:46
Local clock offset: -6.616 ms
Remote clock offset: 7.126 ms


# Below is generated by plot.py at 2018-06-05 14:49:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.93 Mbit/s
95th percentile per-packet one-way delay: 118.553 ms
Loss rate: 10.18%
-- Flow 1:
Average throughput: 53.83 Mbit/s
95th percentile per-packet one-way delay: 118.622 ms
Loss rate: 7.96%
-- Flow 2:
Average throughput: 30.26 Mbit/s
95th percentile per-packet one-way delay: 111.022 ms
Loss rate: 11.05%
-- Flow 3:
Average throughput: 29.87 Mbit/s
95th percentile per-packet one-way delay: 111.152 ms
Loss rate: 19.15%
```
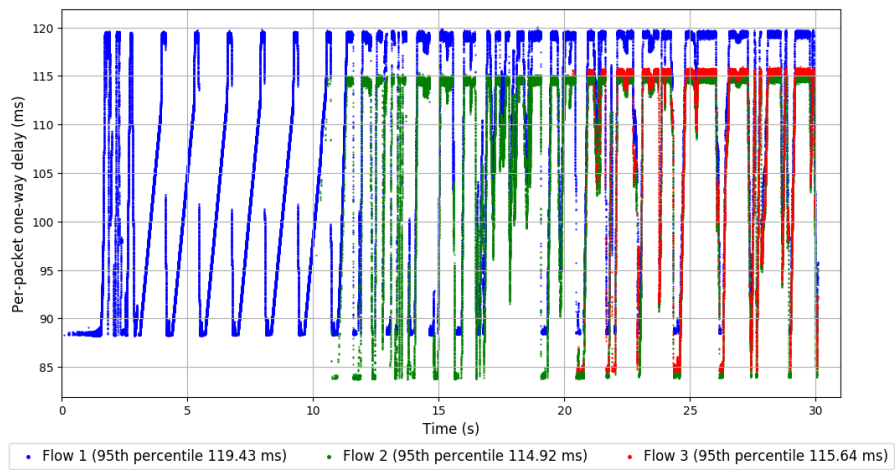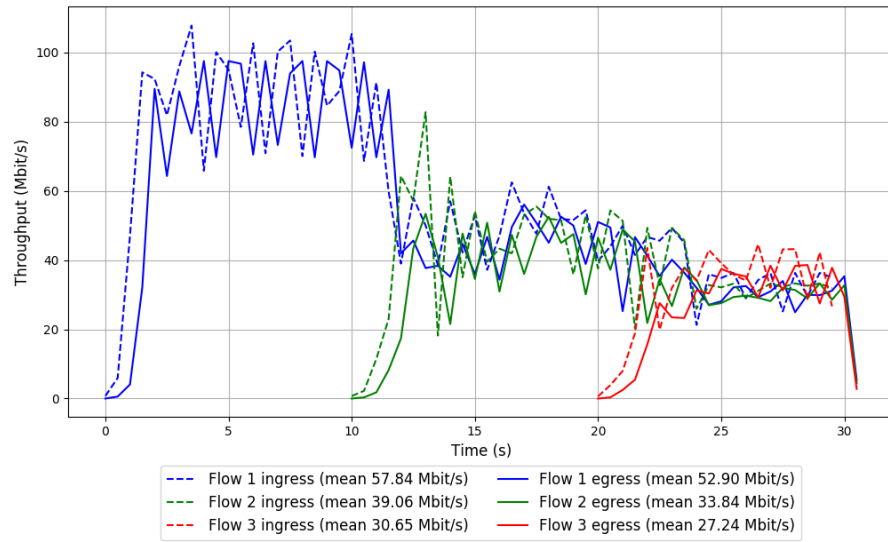
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 58.53 Mbit/s) --- Flow 1 egress (mean 53.83 Mbit/s)
Flow 2 ingress (mean 34.07 Mbit/s) --- Flow 2 egress (mean 30.26 Mbit/s)
Flow 3 ingress (mean 36.97 Mbit/s) --- Flow 3 egress (mean 29.87 Mbit/s)

Flow 1 (95th percentile 118.62 ms)   Flow 2 (95th percentile 111.02 ms)   Flow 3 (95th percentile 111.15 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2018-06-05 14:33:39
End at: 2018-06-05 14:34:09
Local clock offset: -4.353 ms
Remote clock offset: 7.071 ms


# Below is generated by plot.py at 2018-06-05 14:49:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.47 Mbit/s
95th percentile per-packet one-way delay: 119.363 ms
Loss rate: 10.17%
-- Flow 1:
Average throughput: 52.90 Mbit/s
95th percentile per-packet one-way delay: 119.430 ms
Loss rate: 8.52%
-- Flow 2:
Average throughput: 33.84 Mbit/s
95th percentile per-packet one-way delay: 114.924 ms
Loss rate: 13.38%
-- Flow 3:
Average throughput: 27.24 Mbit/s
95th percentile per-packet one-way delay: 115.642 ms
Loss rate: 11.35%
```
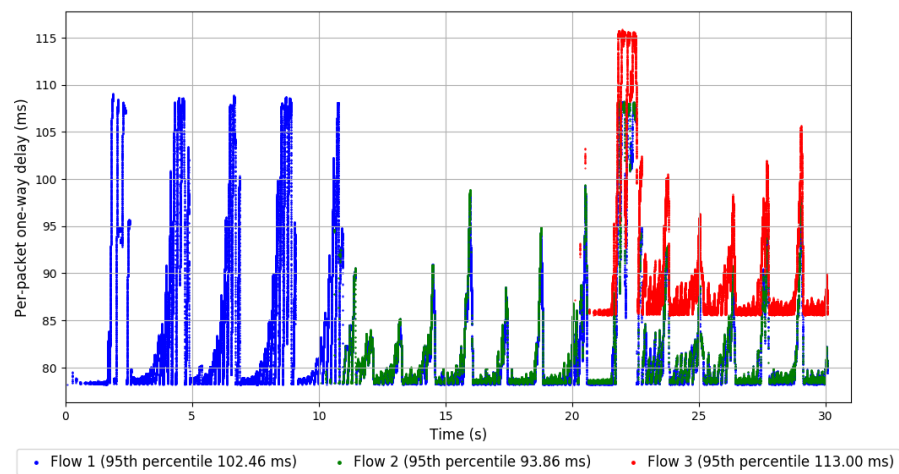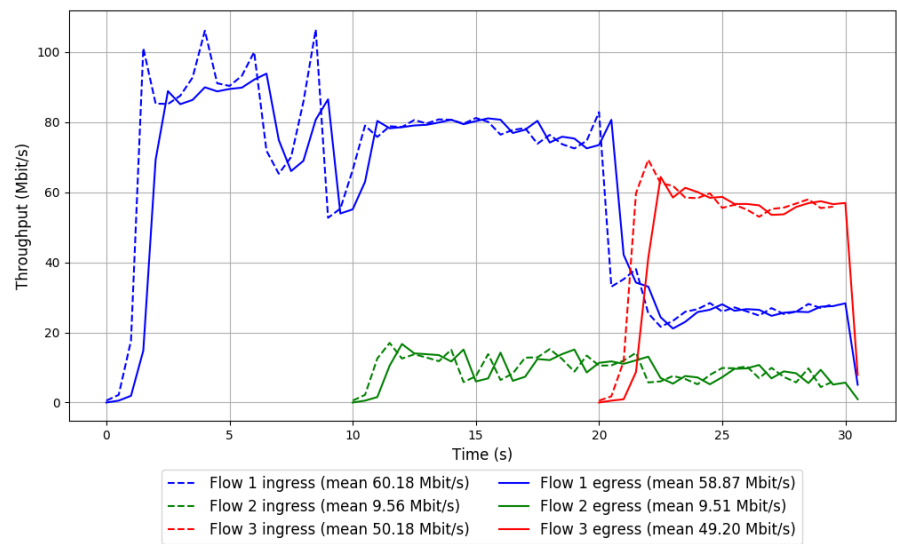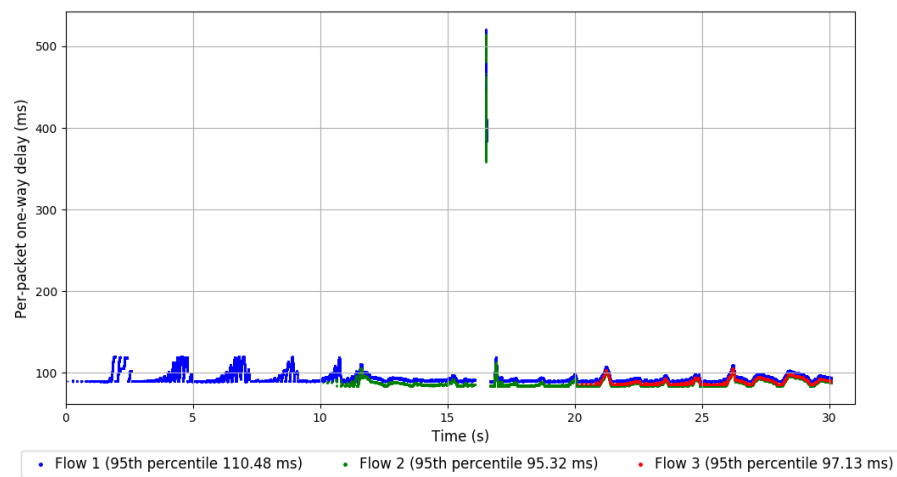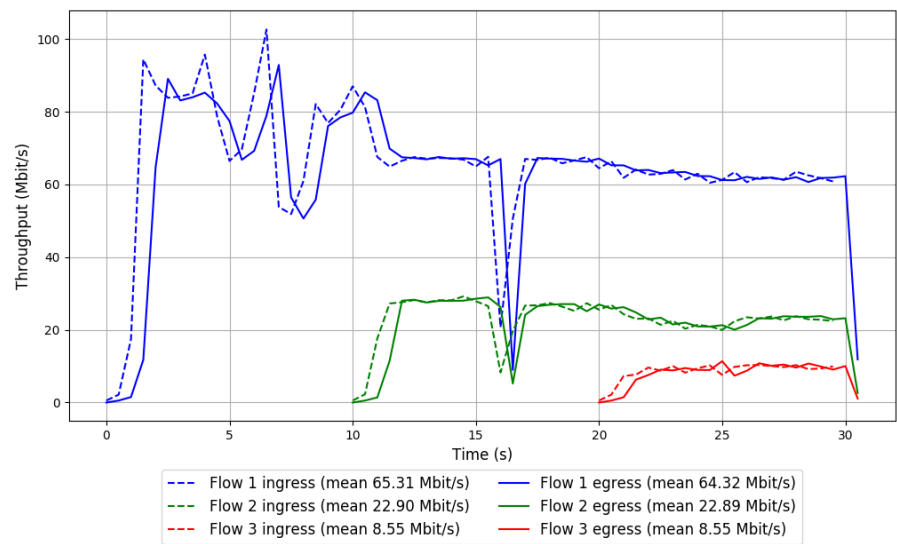
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-06-05 11:41:29
End at: 2018-06-05 11:41:59
Local clock offset: -6.63 ms
Remote clock offset: 8.139 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.54 Mbit/s
95th percentile per-packet one-way delay: 104.268 ms
Loss rate: 2.01%
-- Flow 1:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 102.463 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 93.855 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 49.20 Mbit/s
95th percentile per-packet one-way delay: 112.998 ms
Loss rate: 1.99%
```
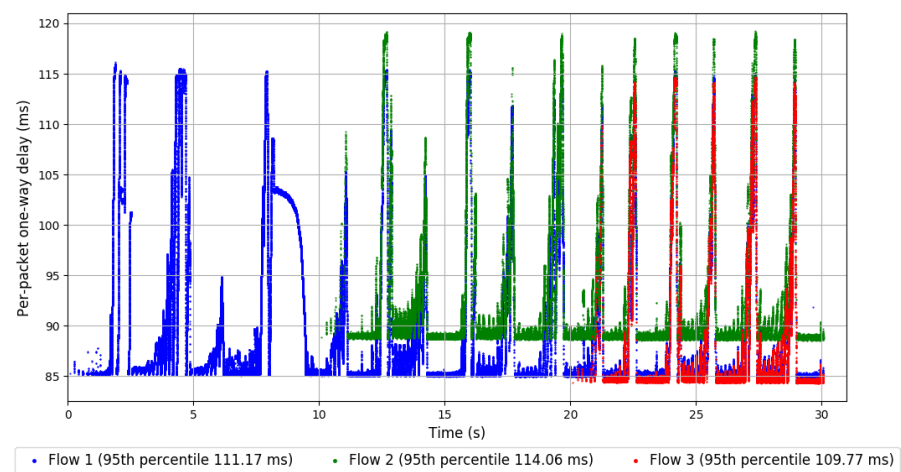
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2018-06-05 12:01:31
End at: 2018-06-05 12:02:01
Local clock offset: -5.577 ms
Remote clock offset: 14.352 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.41 Mbit/s
95th percentile per-packet one-way delay: 107.879 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 64.32 Mbit/s
95th percentile per-packet one-way delay: 110.477 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 22.89 Mbit/s
95th percentile per-packet one-way delay: 95.316 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.55 Mbit/s
95th percentile per-packet one-way delay: 97.132 ms
Loss rate: 0.00%
```
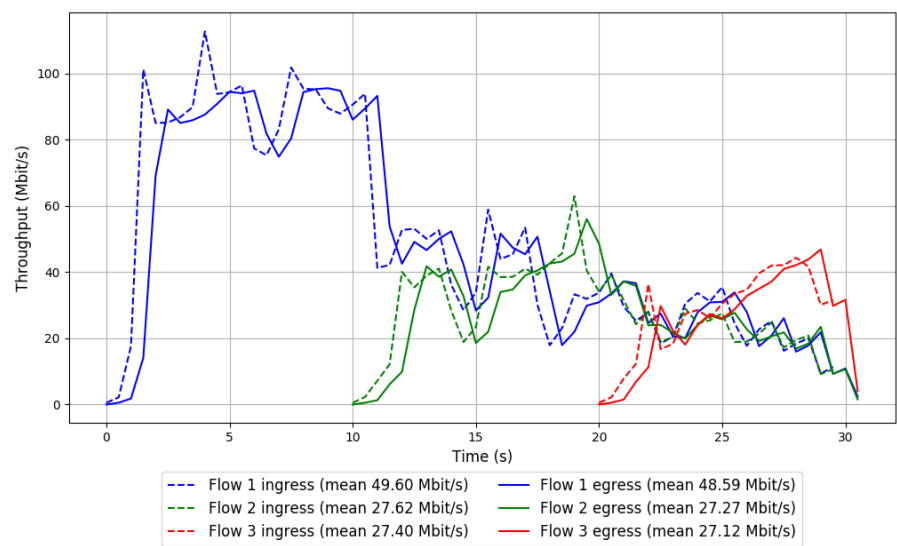
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 65.31 Mbit/s) --- Flow 1 egress (mean 64.32 Mbit/s)
Flow 2 ingress (mean 22.90 Mbit/s) --- Flow 2 egress (mean 22.89 Mbit/s)
Flow 3 ingress (mean 8.55 Mbit/s) --- Flow 3 egress (mean 8.55 Mbit/s)

Flow 1 (95th percentile 110.48 ms)   Flow 2 (95th percentile 95.32 ms)   Flow 3 (95th percentile 97.13 ms)
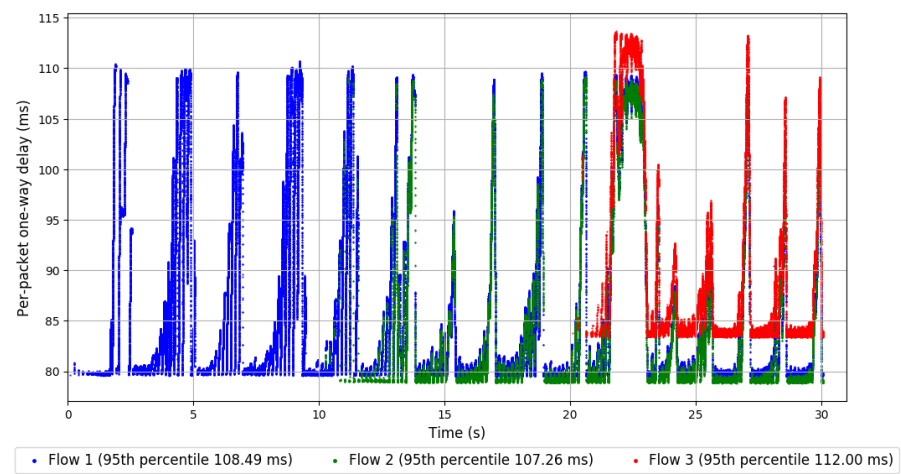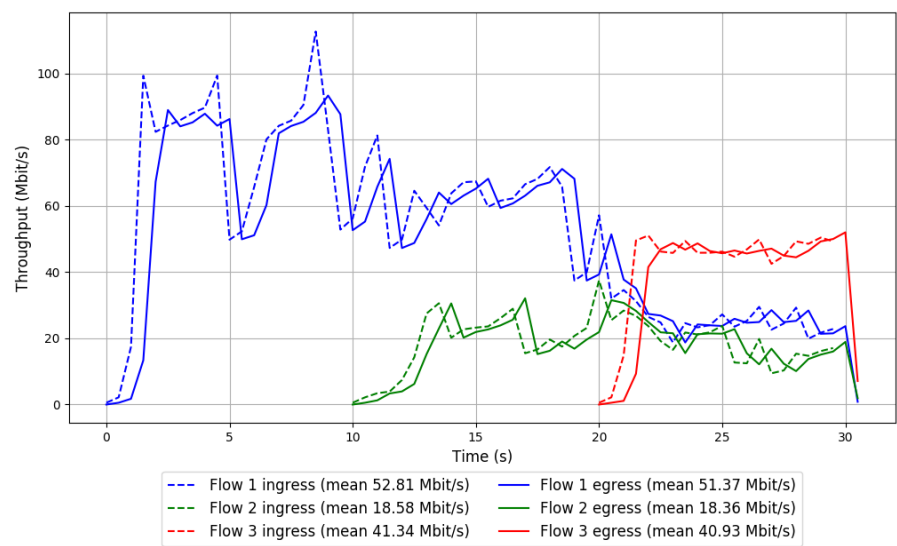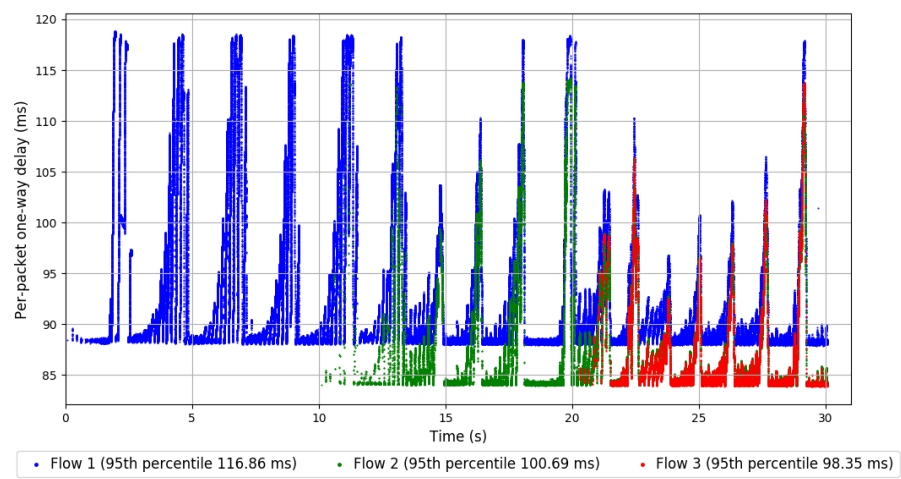
```
Run 3: Statistics of Copa

Start at: 2018-06-05 12:21:31
End at: 2018-06-05 12:22:01
Local clock offset: -6.447 ms
Remote clock offset: 30.097 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.76 Mbit/s
95th percentile per-packet one-way delay: 111.578 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 48.59 Mbit/s
95th percentile per-packet one-way delay: 111.165 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 27.27 Mbit/s
95th percentile per-packet one-way delay: 114.064 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 27.12 Mbit/s
95th percentile per-packet one-way delay: 109.773 ms
Loss rate: 1.03%
```

Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 49.60 Mbit/s)   Flow 1 egress (mean 48.59 Mbit/s)
Flow 2 ingress (mean 27.62 Mbit/s)   Flow 2 egress (mean 27.27 Mbit/s)
Flow 3 ingress (mean 27.40 Mbit/s)   Flow 3 egress (mean 27.12 Mbit/s)

Flow 1 (95th percentile 111.17 ms)   Flow 2 (95th percentile 114.06 ms)   Flow 3 (95th percentile 109.77 ms)
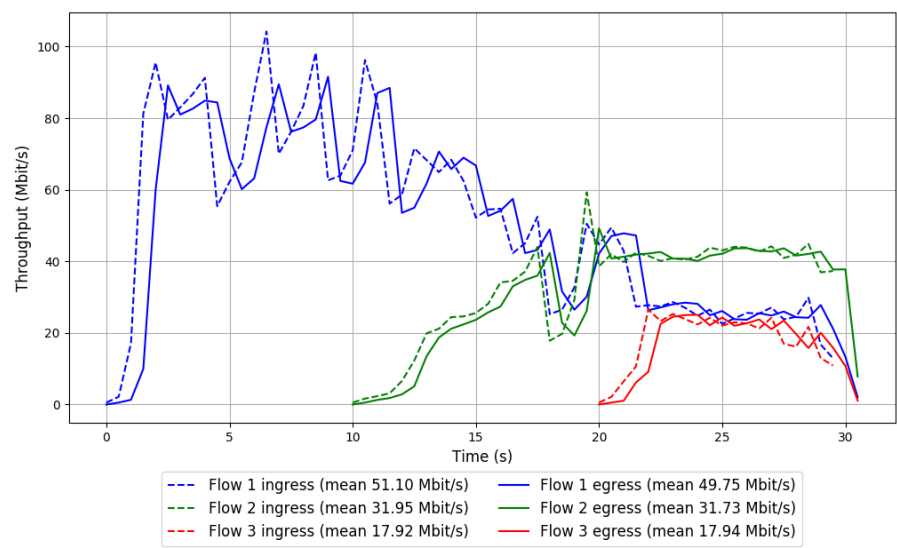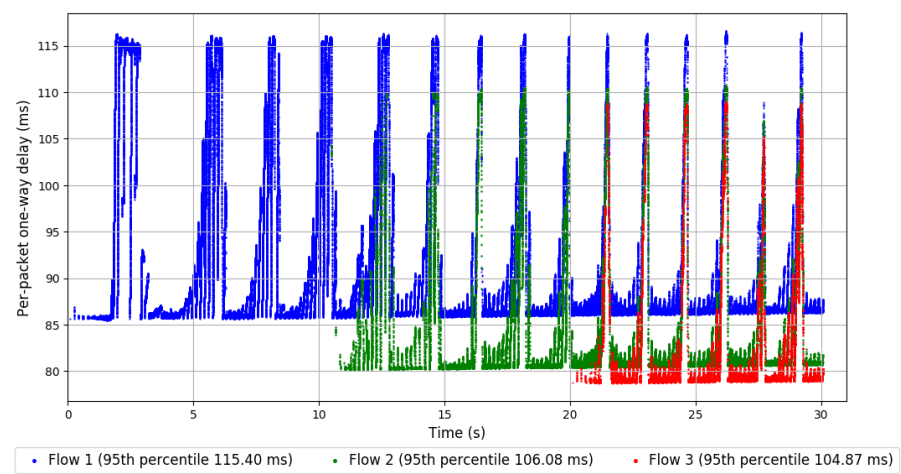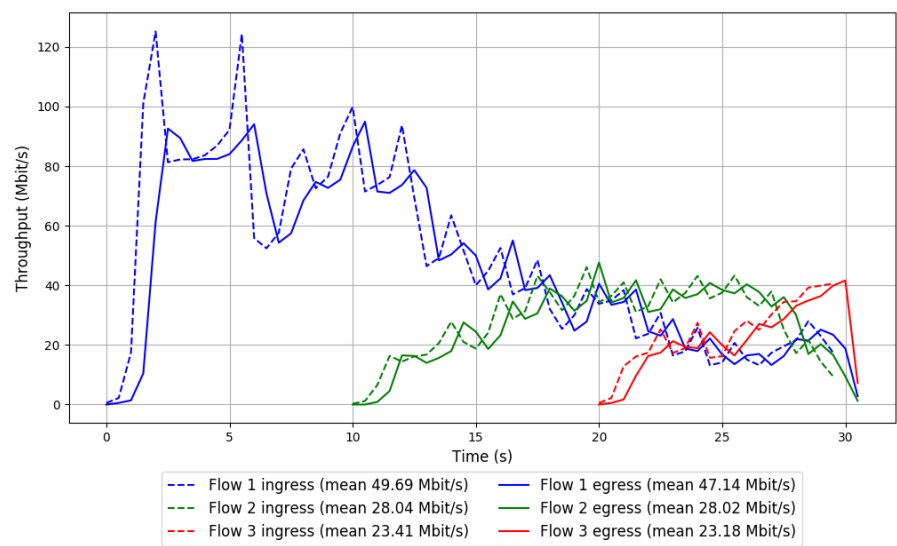
```
Run 4: Statistics of Copa

Start at: 2018-06-05 12:41:31
End at: 2018-06-05 12:42:01
Local clock offset: -6.646 ms
Remote clock offset: 32.421 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.20 Mbit/s
95th percentile per-packet one-way delay: 108.763 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 51.37 Mbit/s
95th percentile per-packet one-way delay: 108.492 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 18.36 Mbit/s
95th percentile per-packet one-way delay: 107.259 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 40.93 Mbit/s
95th percentile per-packet one-way delay: 111.999 ms
Loss rate: 0.99%
```

Run 4: Report of Copa — Data Link

Legend:
- Flow 1 ingress (mean 52.81 Mbit/s) — Flow 1 egress (mean 51.37 Mbit/s)
- Flow 2 ingress (mean 18.58 Mbit/s) — Flow 2 egress (mean 18.36 Mbit/s)
- Flow 3 ingress (mean 41.34 Mbit/s) — Flow 3 egress (mean 40.93 Mbit/s)

Legend:
- Flow 1 (95th percentile 108.49 ms)
- Flow 2 (95th percentile 107.26 ms)
- Flow 3 (95th percentile 112.00 ms)

```
Run 5: Statistics of Copa

Start at: 2018-06-05 13:01:34
End at: 2018-06-05 13:02:04
Local clock offset: -6.068 ms
Remote clock offset: 43.497 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.84 Mbit/s
95th percentile per-packet one-way delay: 113.027 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 49.75 Mbit/s
95th percentile per-packet one-way delay: 116.861 ms
Loss rate: 2.64%
-- Flow 2:
Average throughput: 31.73 Mbit/s
95th percentile per-packet one-way delay: 100.685 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 17.94 Mbit/s
95th percentile per-packet one-way delay: 98.348 ms
Loss rate: 0.15%
```

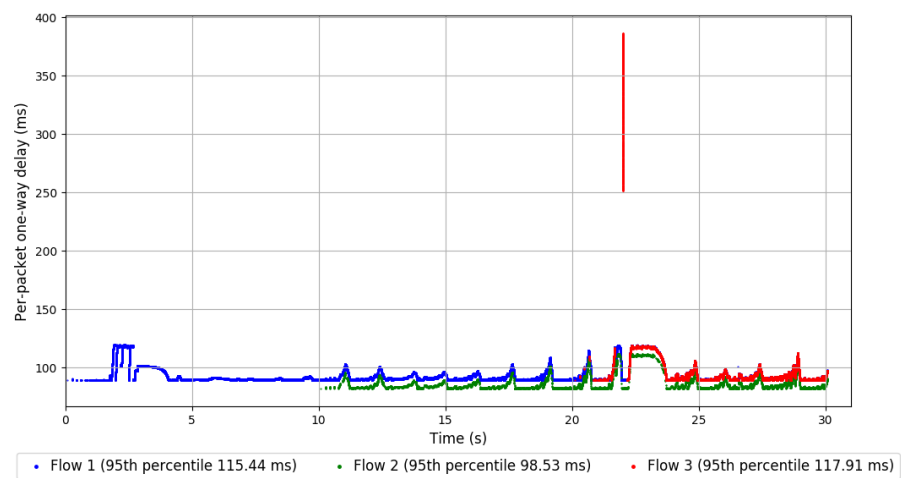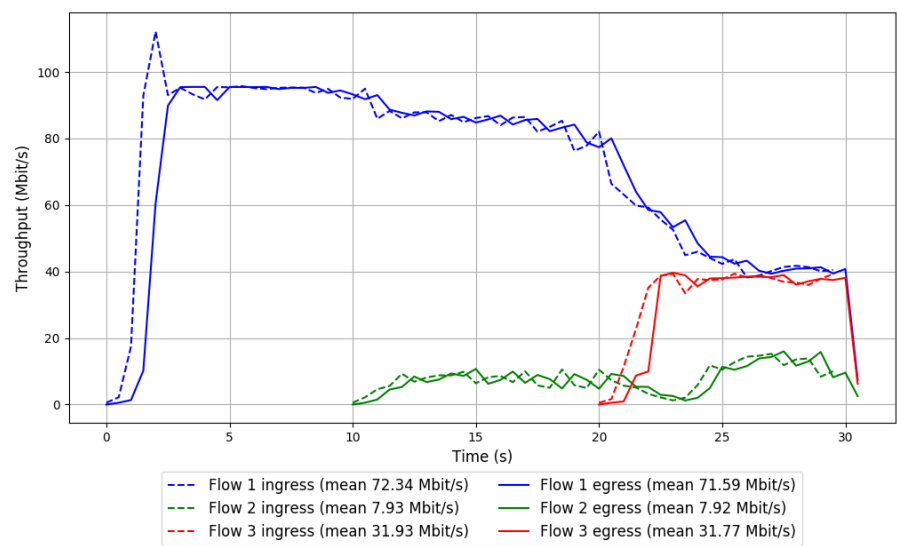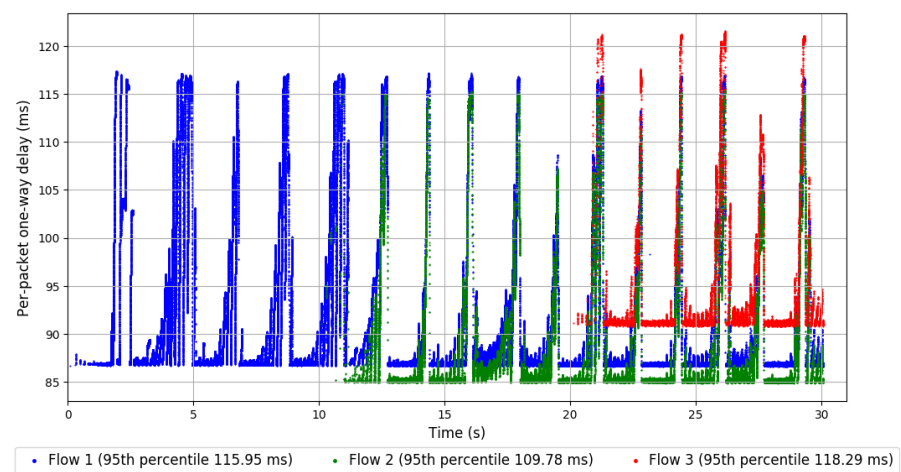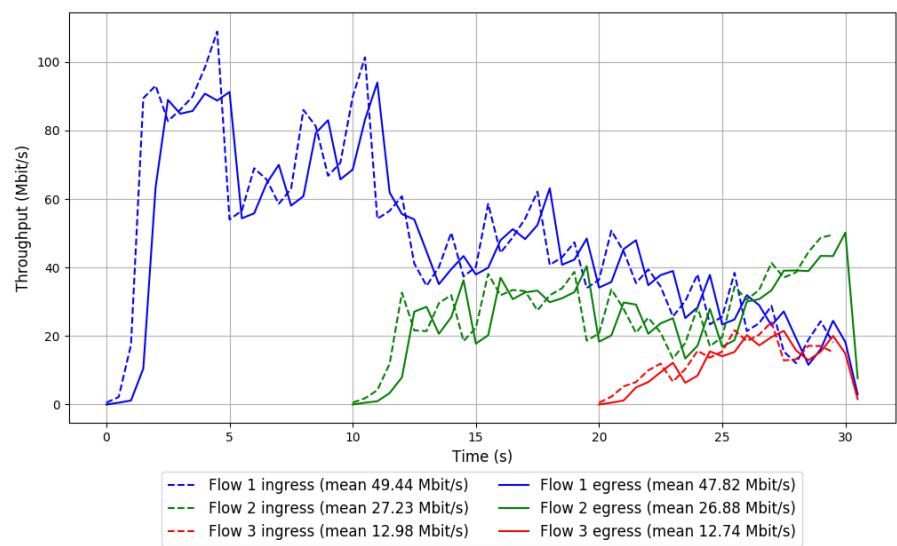Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2018-06-05 13:21:36
End at: 2018-06-05 13:22:06
Local clock offset: -6.863 ms
Remote clock offset: 11.384 ms


# Below is generated by plot.py at 2018-06-05 14:50:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.30 Mbit/s
95th percentile per-packet one-way delay: 115.057 ms
Loss rate: 3.74%
-- Flow 1:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 115.401 ms
Loss rate: 5.14%
-- Flow 2:
Average throughput: 28.02 Mbit/s
95th percentile per-packet one-way delay: 106.077 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 23.18 Mbit/s
95th percentile per-packet one-way delay: 104.871 ms
Loss rate: 0.96%
```

Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 49.69 Mbit/s) --- Flow 1 egress (mean 47.14 Mbit/s)
Flow 2 ingress (mean 28.04 Mbit/s) --- Flow 2 egress (mean 28.02 Mbit/s)
Flow 3 ingress (mean 23.41 Mbit/s) --- Flow 3 egress (mean 23.18 Mbit/s)

Flow 1 (95th percentile 115.40 ms)   Flow 2 (95th percentile 106.08 ms)   Flow 3 (95th percentile 104.87 ms)

```
Run 7: Statistics of Copa

Start at: 2018-06-05 13:41:45
End at: 2018-06-05 13:42:15
Local clock offset: -5.998 ms
Remote clock offset: -2.657 ms


# Below is generated by plot.py at 2018-06-05 14:51:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.43 Mbit/s
95th percentile per-packet one-way delay: 116.850 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 71.59 Mbit/s
95th percentile per-packet one-way delay: 115.441 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 7.92 Mbit/s
95th percentile per-packet one-way delay: 98.531 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 31.77 Mbit/s
95th percentile per-packet one-way delay: 117.910 ms
Loss rate: 0.47%
```

Run 7: Report of Copa — Data Link

```
Run 8: Statistics of Copa

Start at: 2018-06-05 14:02:00
End at: 2018-06-05 14:02:30
Local clock offset: -7.404 ms
Remote clock offset: 11.464 ms


# Below is generated by plot.py at 2018-06-05 14:51:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.95 Mbit/s
95th percentile per-packet one-way delay: 115.023 ms
Loss rate: 2.69%
-- Flow 1:
Average throughput: 47.82 Mbit/s
95th percentile per-packet one-way delay: 115.948 ms
Loss rate: 3.28%
-- Flow 2:
Average throughput: 26.88 Mbit/s
95th percentile per-packet one-way delay: 109.779 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 118.293 ms
Loss rate: 1.79%
```
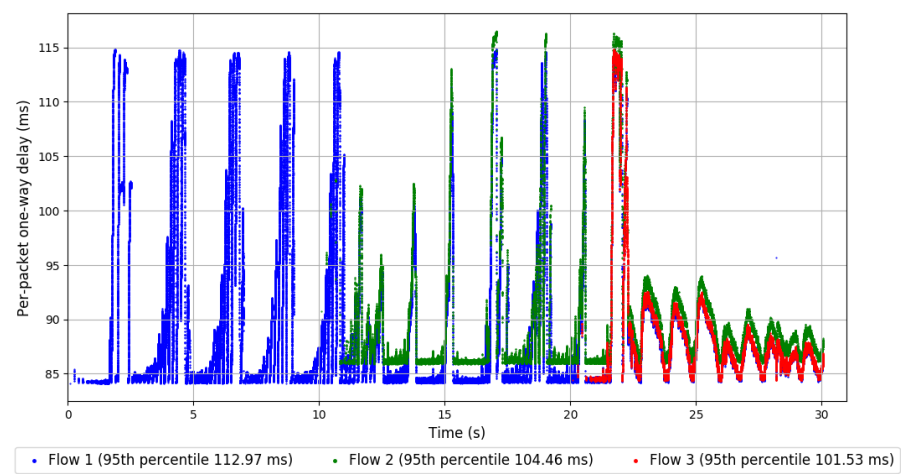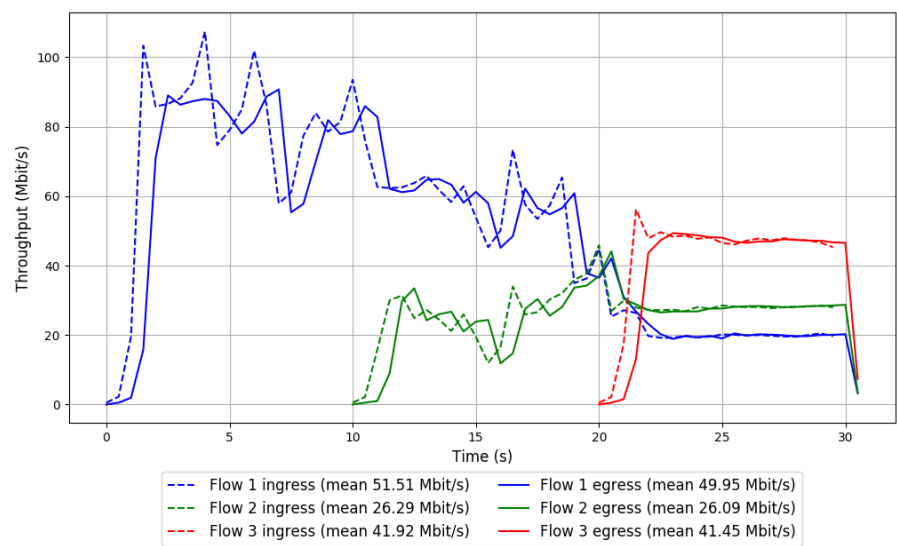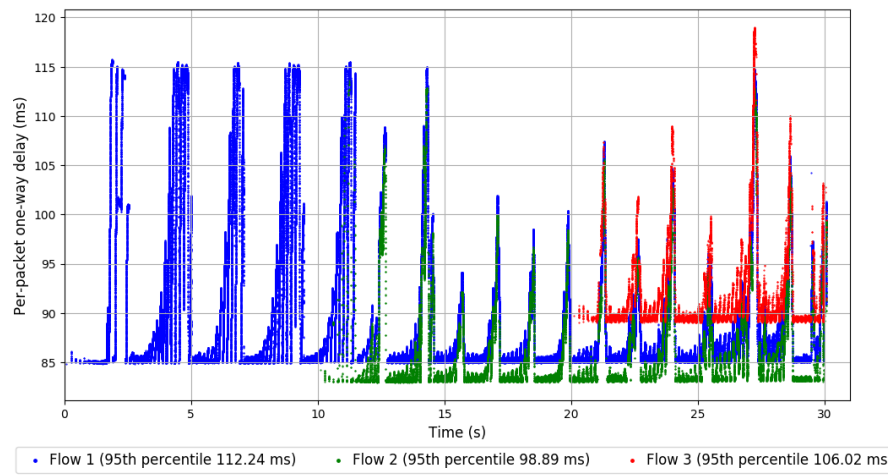
Run 8: Report of Copa — Data Link

- - - Flow 1 ingress (mean 49.44 Mbit/s) —— Flow 1 egress (mean 47.82 Mbit/s)
- - - Flow 2 ingress (mean 27.23 Mbit/s) —— Flow 2 egress (mean 26.88 Mbit/s)
- - - Flow 3 ingress (mean 12.98 Mbit/s) —— Flow 3 egress (mean 12.74 Mbit/s)

- Flow 1 (95th percentile 115.95 ms)   - Flow 2 (95th percentile 109.78 ms)   - Flow 3 (95th percentile 118.29 ms)

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```
Run 9: Statistics of Copa

Start at: 2018-06-05 14:22:20
End at: 2018-06-05 14:22:50
Local clock offset: -6.235 ms
Remote clock offset: 9.809 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.10 Mbit/s
95th percentile per-packet one-way delay: 110.878 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 112.974 ms
Loss rate: 3.02%
-- Flow 2:
Average throughput: 26.09 Mbit/s
95th percentile per-packet one-way delay: 104.460 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 41.45 Mbit/s
95th percentile per-packet one-way delay: 101.529 ms
Loss rate: 1.11%
```
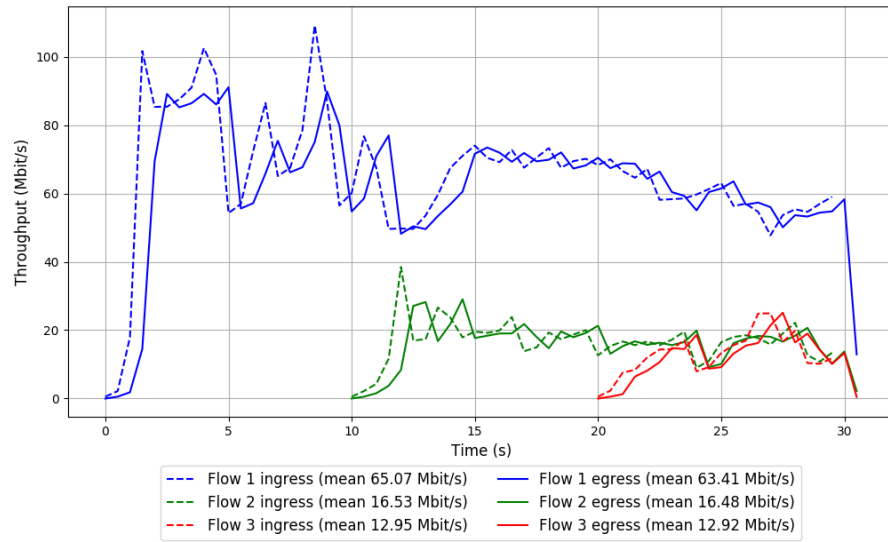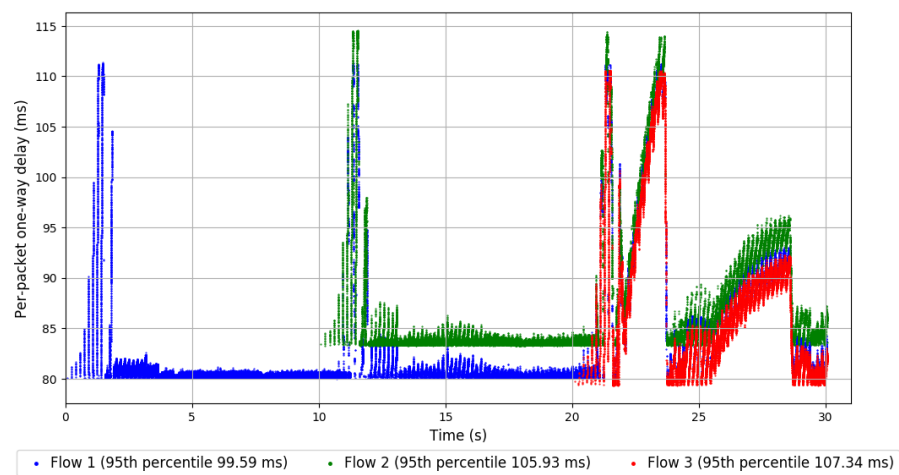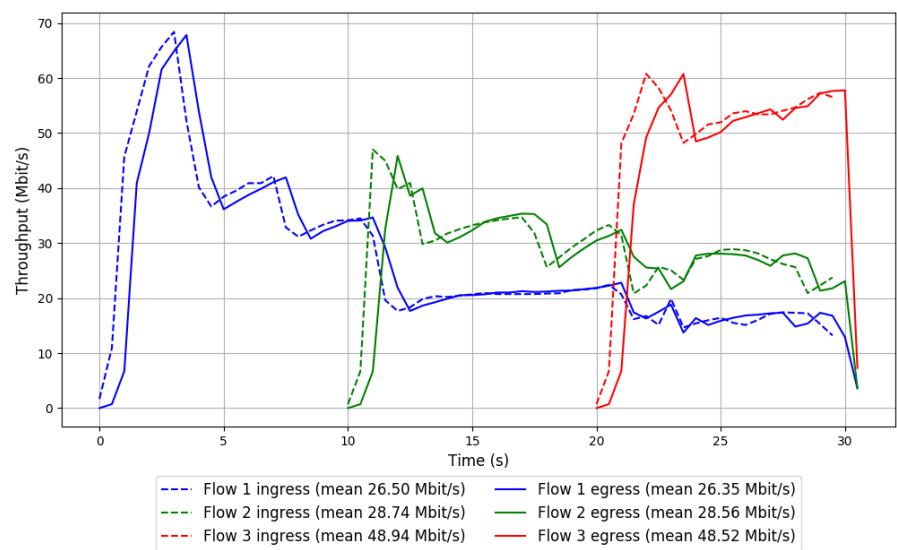
Run 9: Report of Copa — Data Link

Legend:
- Flow 1 ingress (mean 51.51 Mbit/s) — Flow 1 egress (mean 49.95 Mbit/s)
- Flow 2 ingress (mean 26.29 Mbit/s) — Flow 2 egress (mean 26.09 Mbit/s)
- Flow 3 ingress (mean 41.92 Mbit/s) — Flow 3 egress (mean 41.45 Mbit/s)

Legend:
- Flow 1 (95th percentile 112.97 ms)
- Flow 2 (95th percentile 104.46 ms)
- Flow 3 (95th percentile 101.53 ms)

```
Run 10: Statistics of Copa

Start at: 2018-06-05 14:42:24
End at: 2018-06-05 14:42:54
Local clock offset: -2.679 ms
Remote clock offset: 5.312 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.68 Mbit/s
95th percentile per-packet one-way delay: 110.113 ms
Loss rate: 2.10%
-- Flow 1:
Average throughput: 63.41 Mbit/s
95th percentile per-packet one-way delay: 112.242 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 98.892 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 106.020 ms
Loss rate: 0.21%
```
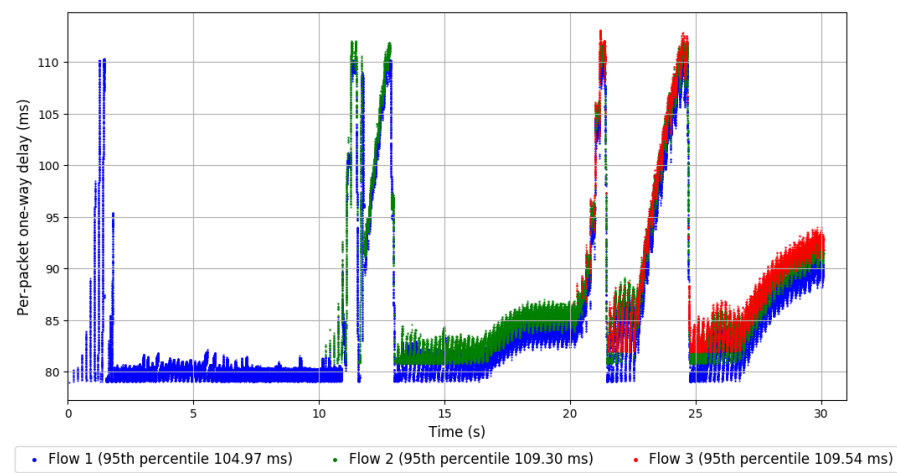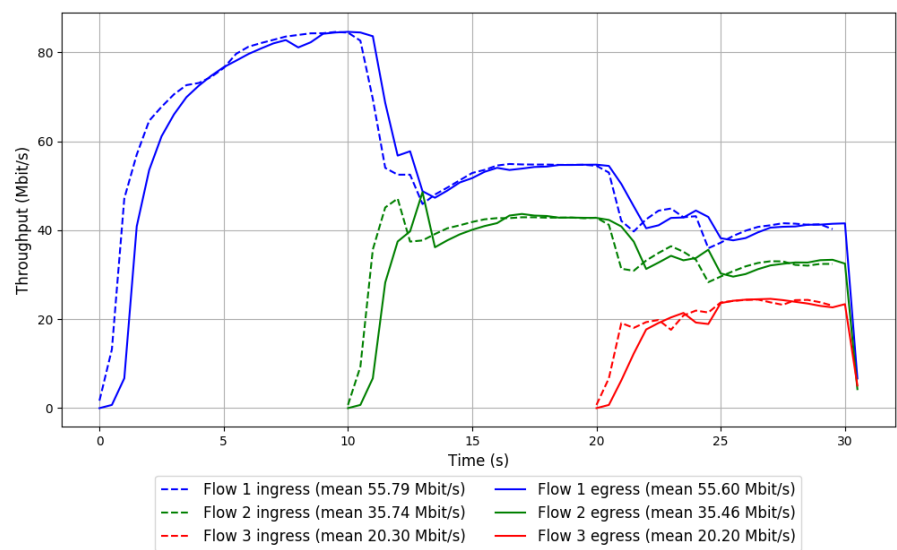
Run 10: Report of Copa — Data Link

Flow 1 ingress (mean 65.07 Mbit/s) --- Flow 1 egress (mean 63.41 Mbit/s)
Flow 2 ingress (mean 16.53 Mbit/s) --- Flow 2 egress (mean 16.48 Mbit/s)
Flow 3 ingress (mean 12.95 Mbit/s) --- Flow 3 egress (mean 12.92 Mbit/s)

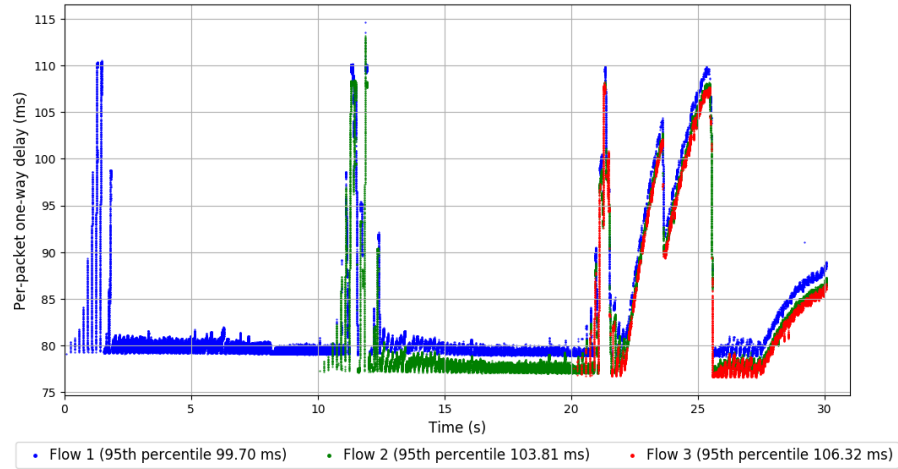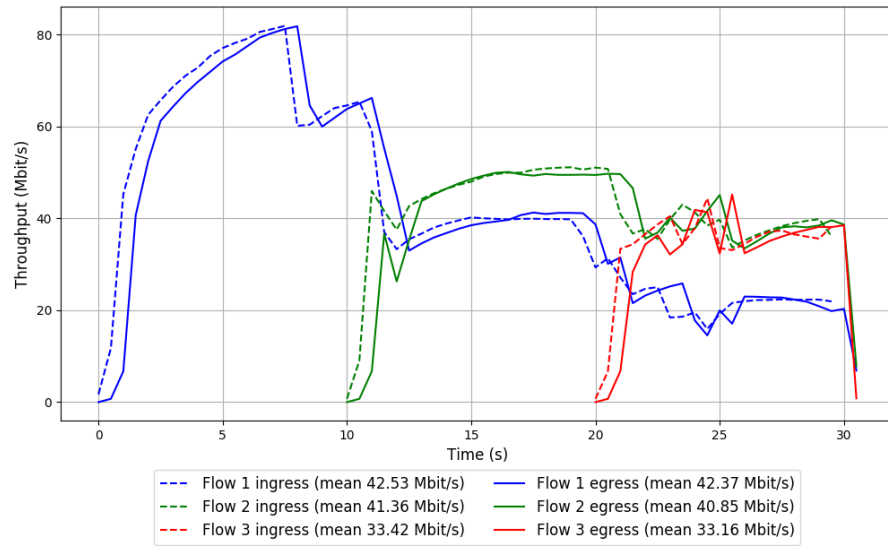Flow 1 (95th percentile 112.24 ms)   Flow 2 (95th percentile 98.89 ms)   Flow 3 (95th percentile 106.02 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2018-06-05 11:30:17
End at: 2018-06-05 11:30:47
Local clock offset: -6.169 ms
Remote clock offset: 7.994 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.52 Mbit/s
95th percentile per-packet one-way delay: 104.884 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 99.588 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 28.56 Mbit/s
95th percentile per-packet one-way delay: 105.933 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 48.52 Mbit/s
95th percentile per-packet one-way delay: 107.337 ms
Loss rate: 0.82%
```

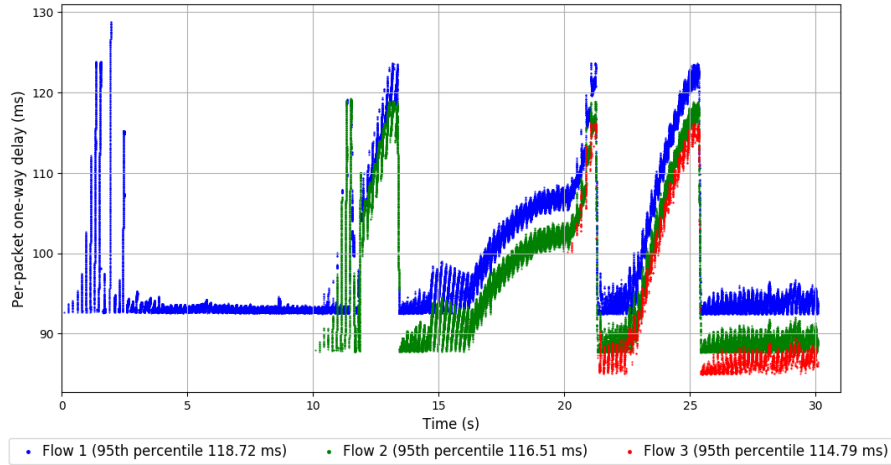Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-06-05 11:50:16
End at: 2018-06-05 11:50:46
Local clock offset: -6.438 ms
Remote clock offset: 9.259 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.94 Mbit/s
95th percentile per-packet one-way delay: 107.107 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 55.60 Mbit/s
95th percentile per-packet one-way delay: 104.966 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 35.46 Mbit/s
95th percentile per-packet one-way delay: 109.297 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 20.20 Mbit/s
95th percentile per-packet one-way delay: 109.544 ms
Loss rate: 0.42%
```

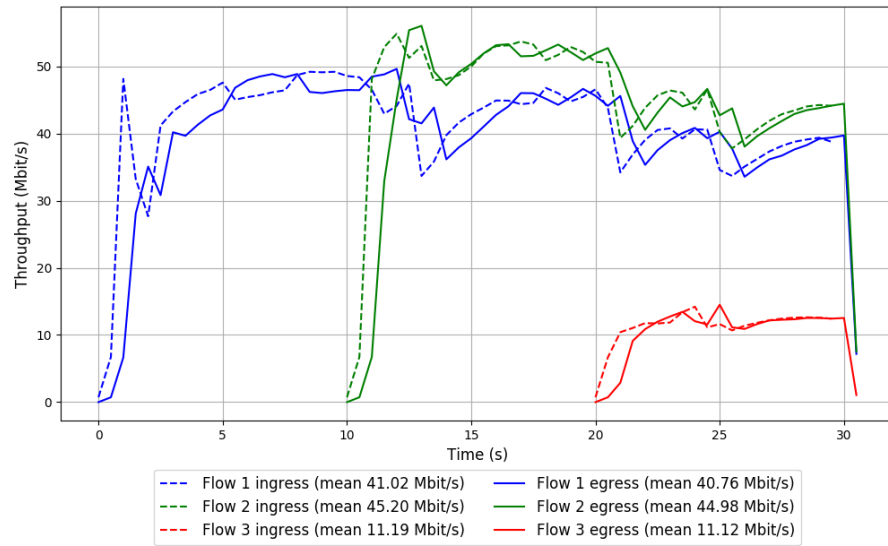Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-06-05 12:10:19
End at: 2018-06-05 12:10:49
Local clock offset: -5.636 ms
Remote clock offset: 17.559 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.60 Mbit/s
95th percentile per-packet one-way delay: 103.382 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 42.37 Mbit/s
95th percentile per-packet one-way delay: 99.701 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 40.85 Mbit/s
95th percentile per-packet one-way delay: 103.812 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 33.16 Mbit/s
95th percentile per-packet one-way delay: 106.317 ms
Loss rate: 0.69%
```
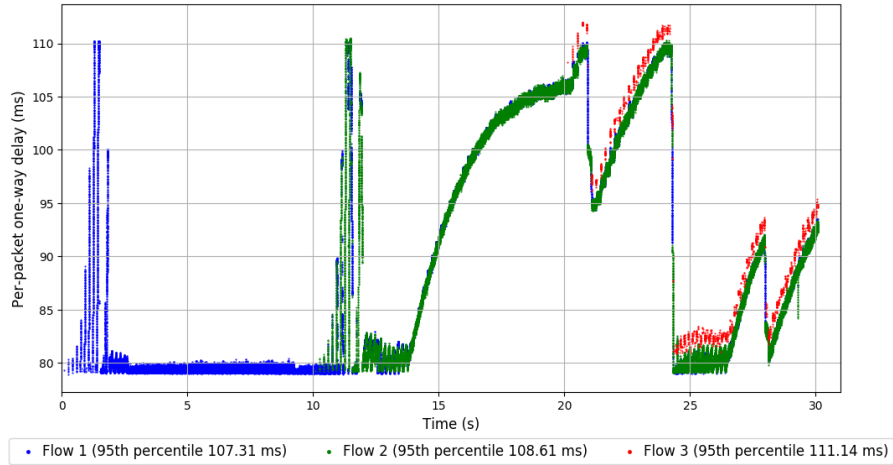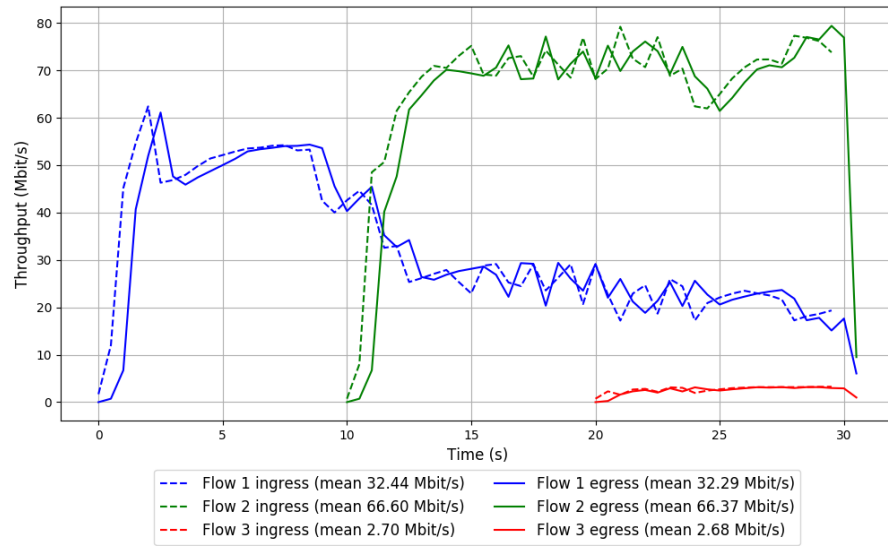
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 42.53 Mbit/s) ---- Flow 1 egress (mean 42.37 Mbit/s)
Flow 2 ingress (mean 41.36 Mbit/s) ---- Flow 2 egress (mean 40.85 Mbit/s)
Flow 3 ingress (mean 33.42 Mbit/s) ---- Flow 3 egress (mean 33.16 Mbit/s)

Flow 1 (95th percentile 99.70 ms)   Flow 2 (95th percentile 103.81 ms)   Flow 3 (95th percentile 106.32 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-06-05 12:30:17
End at: 2018-06-05 12:30:47
Local clock offset: -7.212 ms
Remote clock offset: 34.851 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.42 Mbit/s
95th percentile per-packet one-way delay: 117.047 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 40.76 Mbit/s
95th percentile per-packet one-way delay: 118.715 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 44.98 Mbit/s
95th percentile per-packet one-way delay: 116.513 ms
Loss rate: 0.50%
-- Flow 3:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 114.787 ms
Loss rate: 0.84%
```
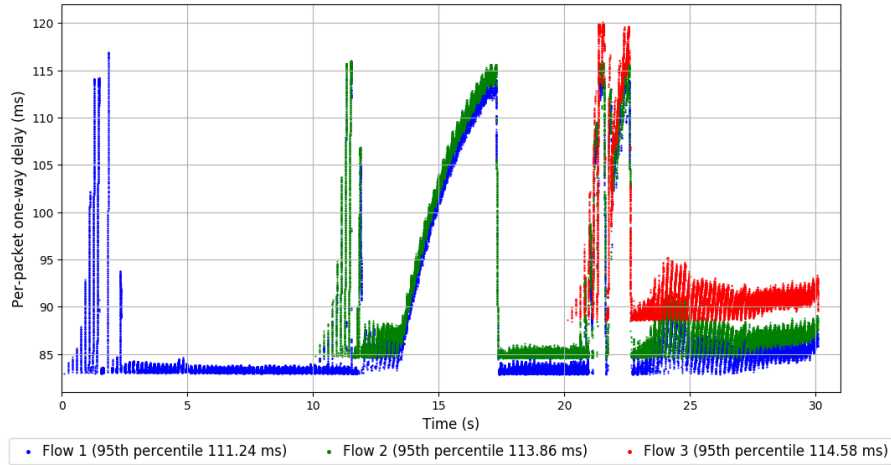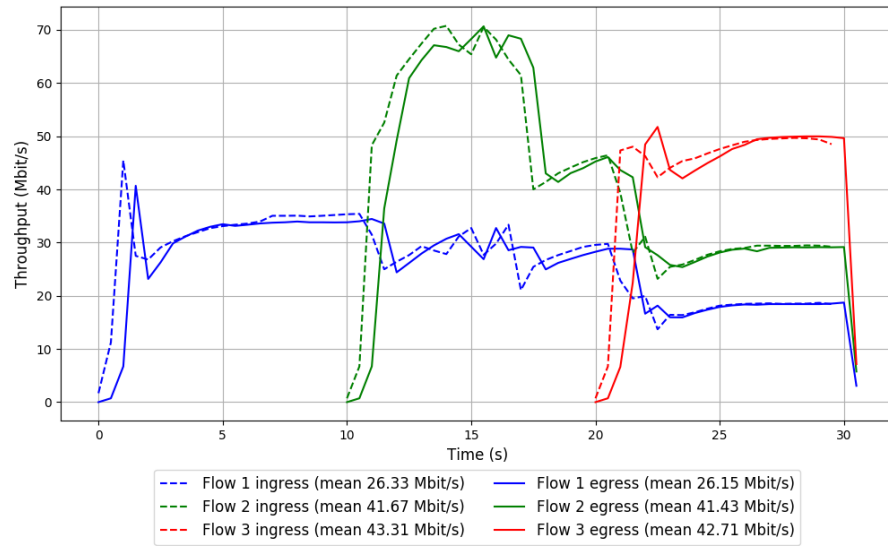
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-06-05 12:50:18
End at: 2018-06-05 12:50:48
Local clock offset: -6.75 ms
Remote clock offset: 36.283 ms


# Below is generated by plot.py at 2018-06-05 14:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 108.319 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 32.29 Mbit/s
95th percentile per-packet one-way delay: 107.311 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 66.37 Mbit/s
95th percentile per-packet one-way delay: 108.610 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 2.68 Mbit/s
95th percentile per-packet one-way delay: 111.136 ms
Loss rate: 0.85%
```
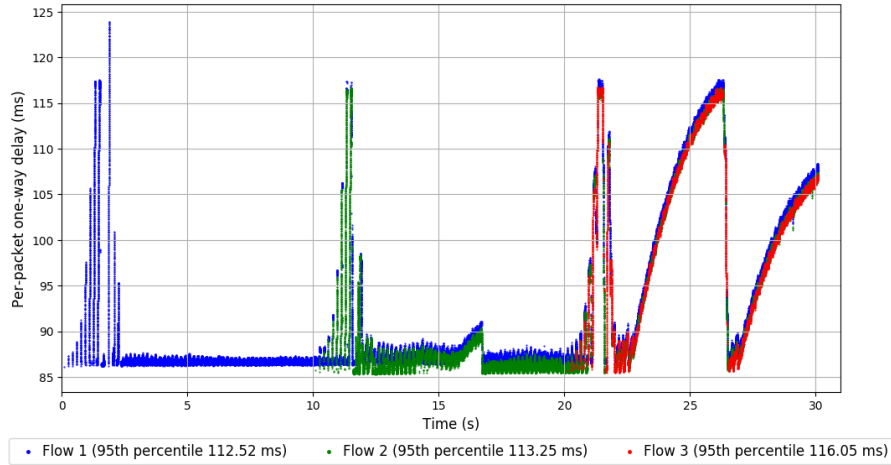
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2018-06-05 13:10:21
End at: 2018-06-05 13:10:51
Local clock offset: -6.845 ms
Remote clock offset: 46.076 ms


# Below is generated by plot.py at 2018-06-05 14:52:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.94 Mbit/s
95th percentile per-packet one-way delay: 113.141 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 26.15 Mbit/s
95th percentile per-packet one-way delay: 111.236 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 41.43 Mbit/s
95th percentile per-packet one-way delay: 113.859 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 42.71 Mbit/s
95th percentile per-packet one-way delay: 114.581 ms
Loss rate: 1.38%
```
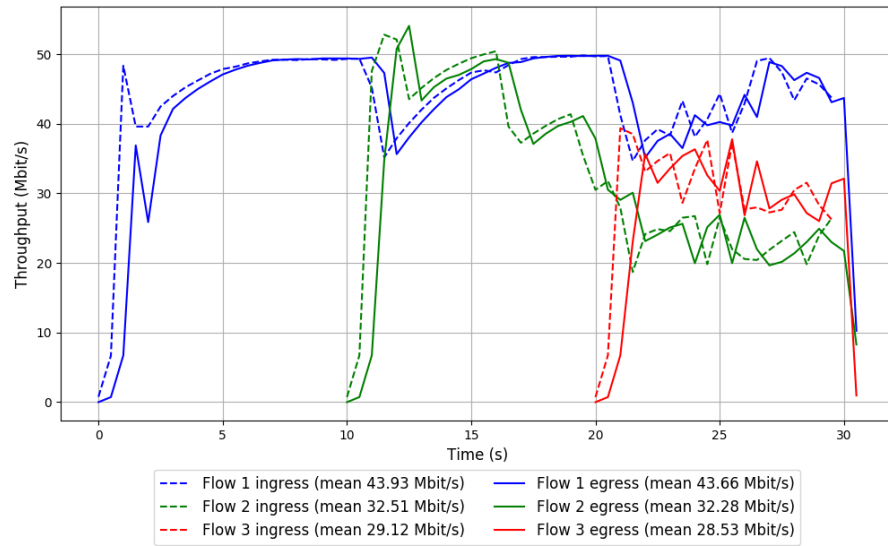
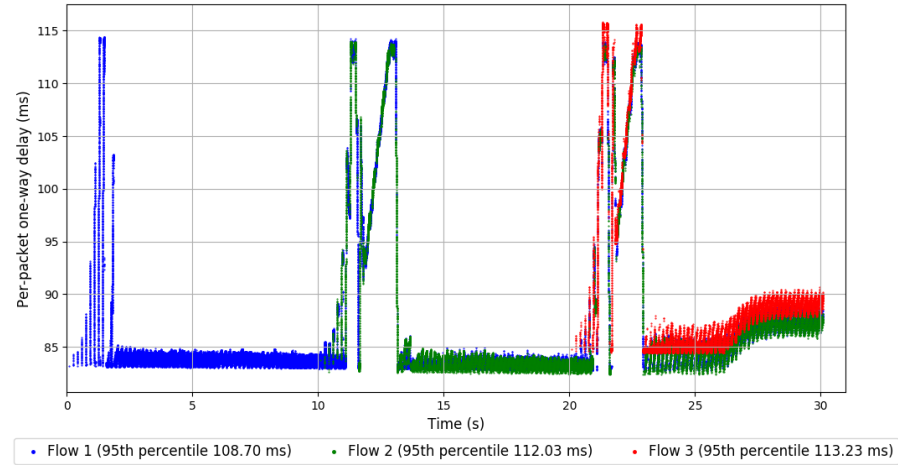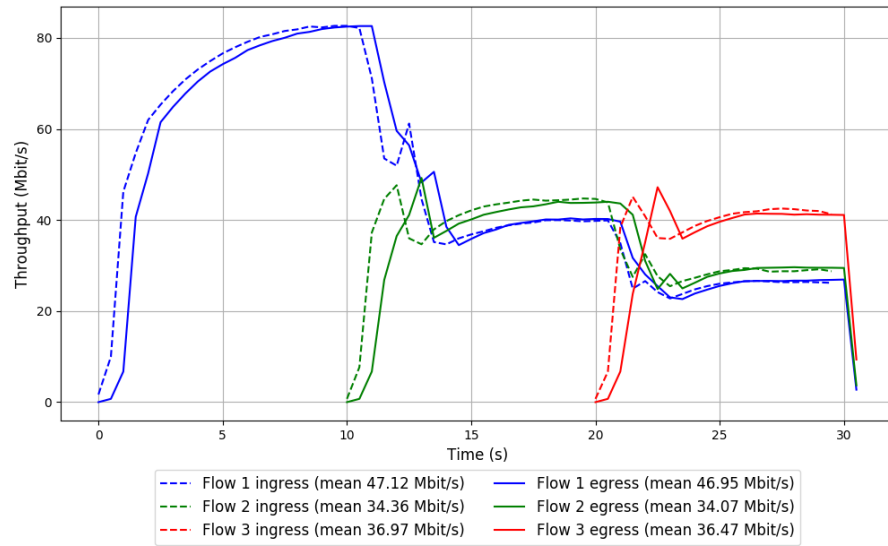## Run 6: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 26.33 Mbit/s)   Flow 1 egress (mean 26.15 Mbit/s)
Flow 2 ingress (mean 41.67 Mbit/s)   Flow 2 egress (mean 41.43 Mbit/s)
Flow 3 ingress (mean 43.31 Mbit/s)   Flow 3 egress (mean 42.71 Mbit/s)

Flow 1 (95th percentile 111.24 ms)   Flow 2 (95th percentile 113.86 ms)   Flow 3 (95th percentile 114.58 ms)

```
Run 7: Statistics of TCP Cubic

Start at: 2018-06-05 13:30:29
End at: 2018-06-05 13:30:59
Local clock offset: -6.883 ms
Remote clock offset: 5.962 ms


# Below is generated by plot.py at 2018-06-05 14:52:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.65 Mbit/s
95th percentile per-packet one-way delay: 114.000 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 43.66 Mbit/s
95th percentile per-packet one-way delay: 112.518 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 32.28 Mbit/s
95th percentile per-packet one-way delay: 113.252 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 28.53 Mbit/s
95th percentile per-packet one-way delay: 116.051 ms
Loss rate: 1.84%
```

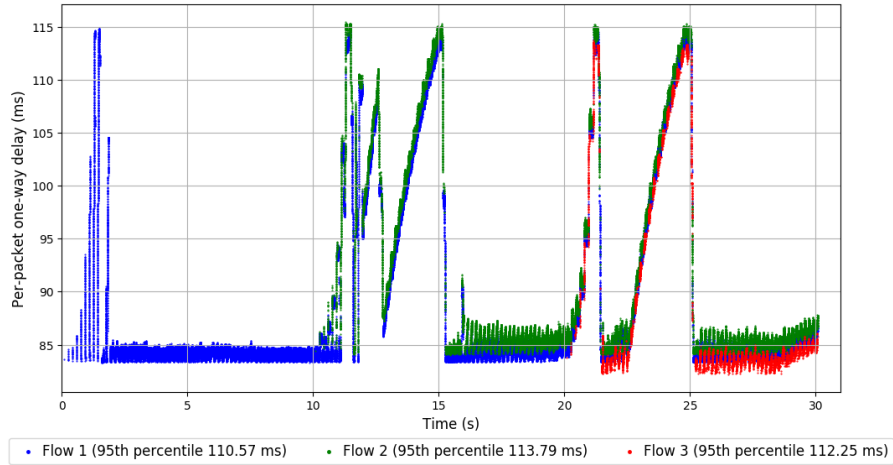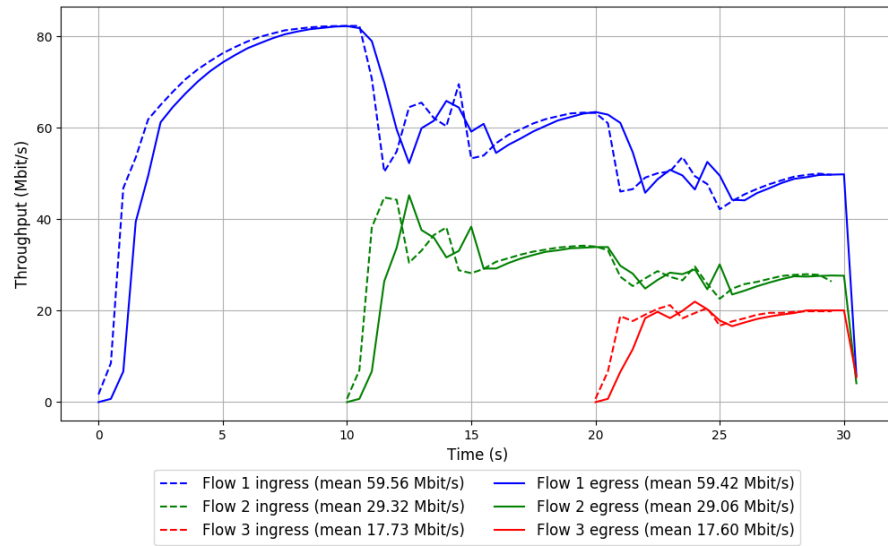# Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 43.93 Mbit/s) --- Flow 1 egress (mean 43.66 Mbit/s)
Flow 2 ingress (mean 32.51 Mbit/s) --- Flow 2 egress (mean 32.28 Mbit/s)
Flow 3 ingress (mean 29.12 Mbit/s) --- Flow 3 egress (mean 28.53 Mbit/s)

Flow 1 (95th percentile 112.52 ms) · Flow 2 (95th percentile 113.25 ms) · Flow 3 (95th percentile 116.05 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2018-06-05 13:50:34
End at: 2018-06-05 13:51:04
Local clock offset: -6.648 ms
Remote clock offset: 3.956 ms


# Below is generated by plot.py at 2018-06-05 14:52:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.79 Mbit/s
95th percentile per-packet one-way delay: 111.156 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 46.95 Mbit/s
95th percentile per-packet one-way delay: 108.702 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 34.07 Mbit/s
95th percentile per-packet one-way delay: 112.026 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 36.47 Mbit/s
95th percentile per-packet one-way delay: 113.233 ms
Loss rate: 1.31%
```
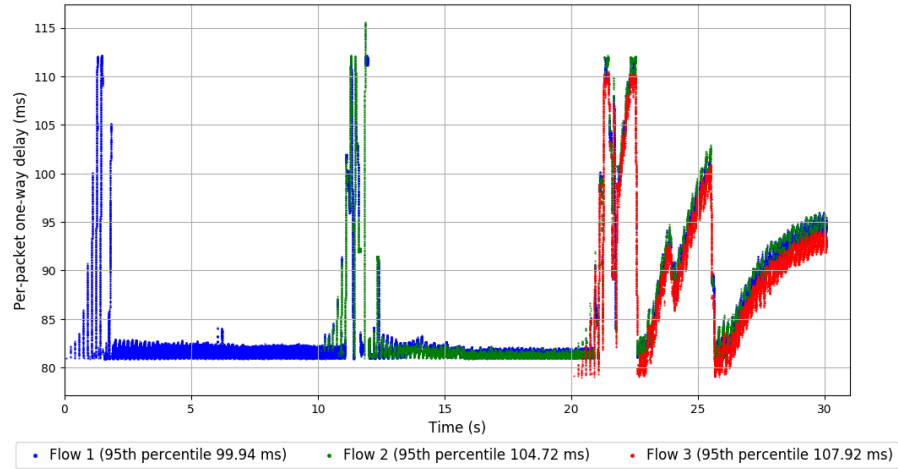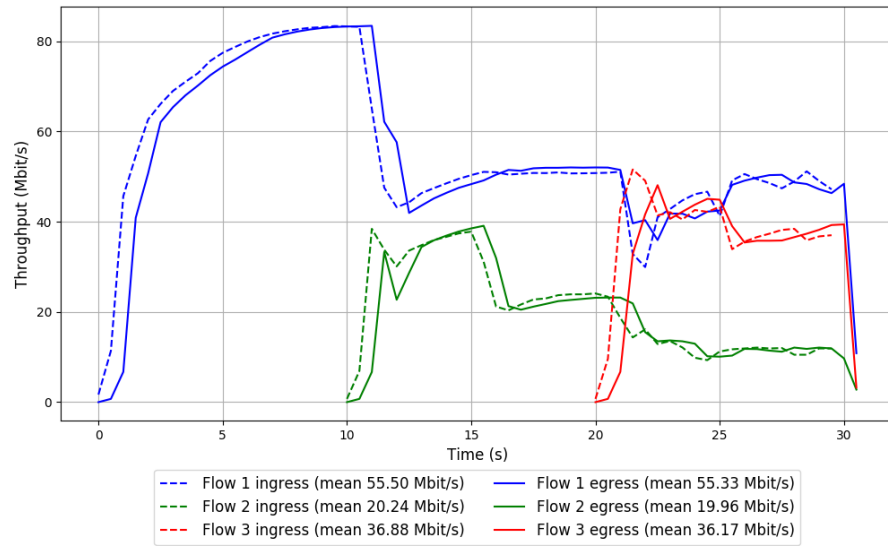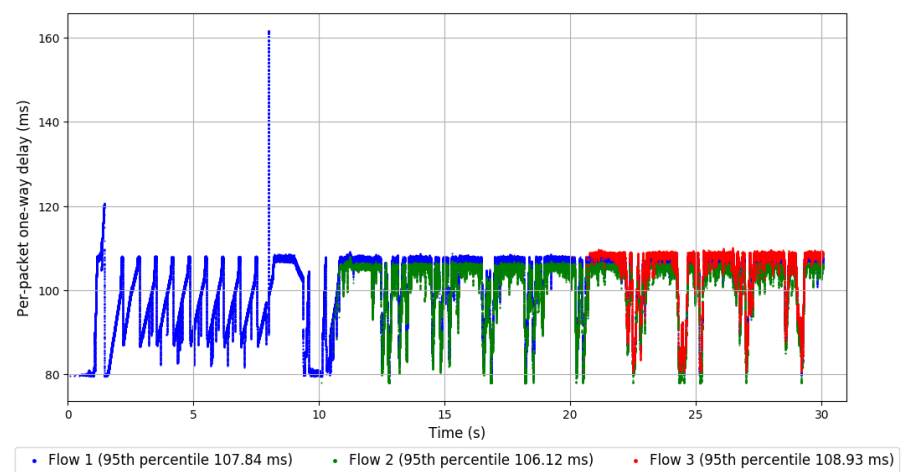
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 47.12 Mbit/s) Flow 1 egress (mean 46.95 Mbit/s)
Flow 2 ingress (mean 34.36 Mbit/s) Flow 2 egress (mean 34.07 Mbit/s)
Flow 3 ingress (mean 36.97 Mbit/s) Flow 3 egress (mean 36.47 Mbit/s)

Flow 1 (95th percentile 108.70 ms)   Flow 2 (95th percentile 112.03 ms)   Flow 3 (95th percentile 113.23 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2018-06-05 14:10:47
End at: 2018-06-05 14:11:17
Local clock offset: -5.232 ms
Remote clock offset: 10.738 ms


# Below is generated by plot.py at 2018-06-05 14:52:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.62 Mbit/s
95th percentile per-packet one-way delay: 112.001 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 59.42 Mbit/s
95th percentile per-packet one-way delay: 110.569 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 113.794 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 17.60 Mbit/s
95th percentile per-packet one-way delay: 112.248 ms
Loss rate: 0.71%
```

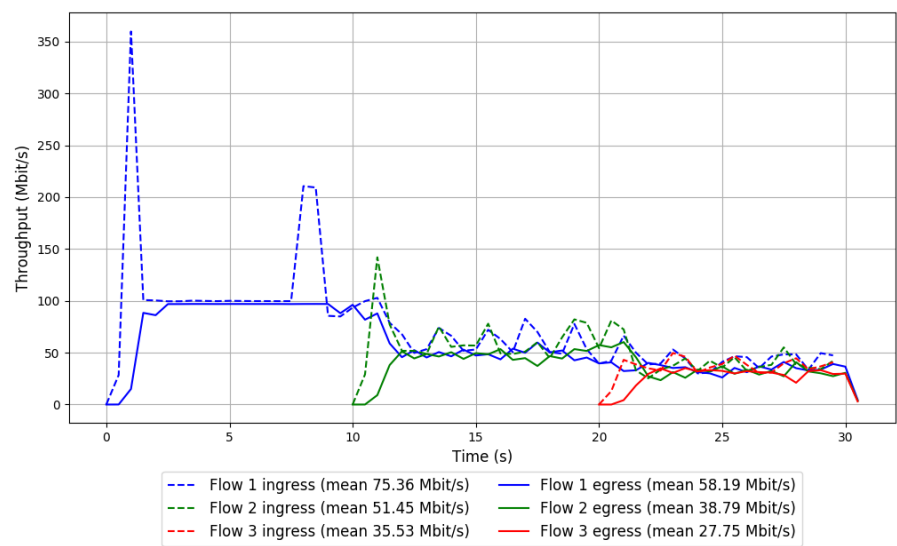# Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2018-06-05 14:31:08
End at: 2018-06-05 14:31:38
Local clock offset: -5.998 ms
Remote clock offset: 2.545 ms


# Below is generated by plot.py at 2018-06-05 14:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 102.820 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 55.33 Mbit/s
95th percentile per-packet one-way delay: 99.941 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 104.721 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 107.922 ms
Loss rate: 1.78%
```
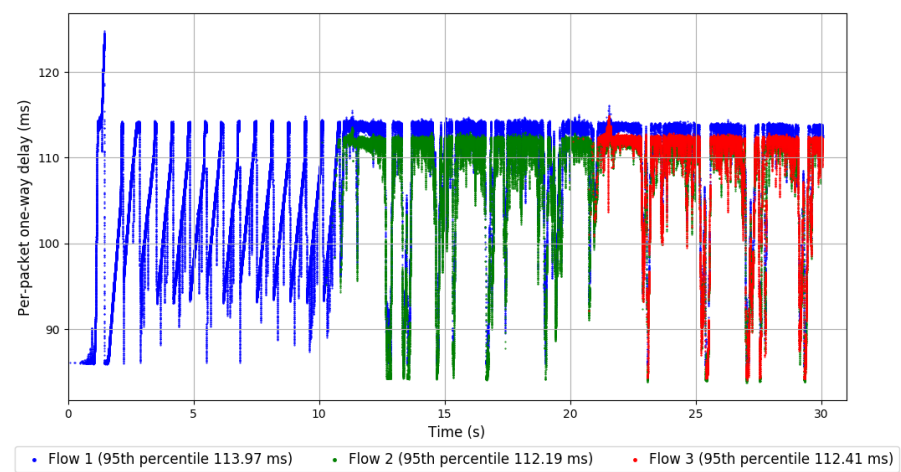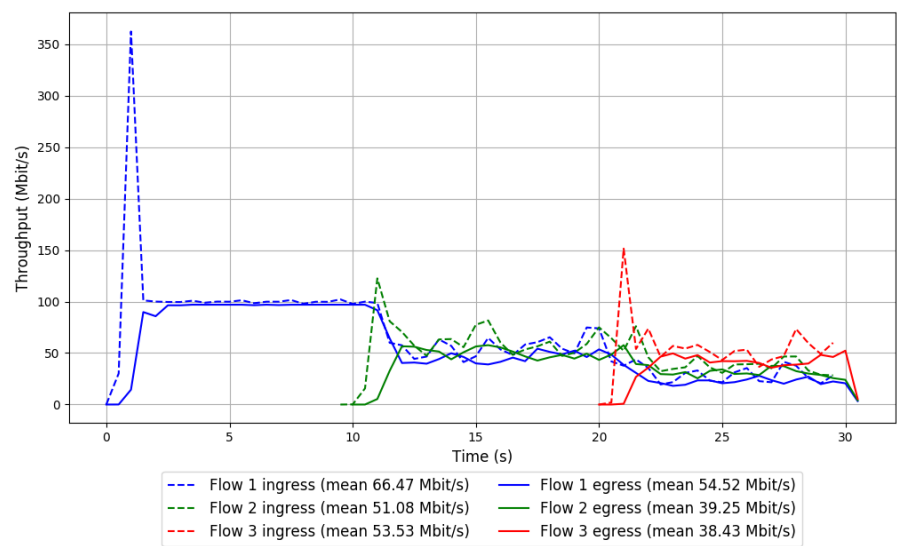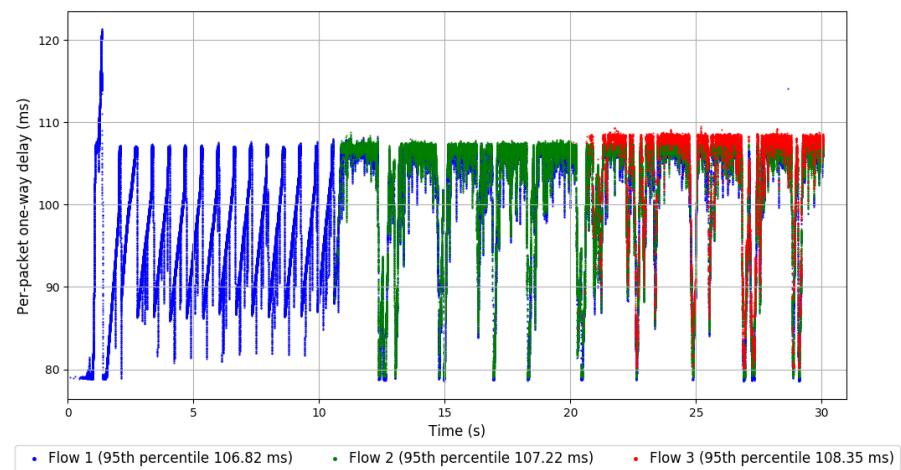
Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-06-05 11:42:47
End at: 2018-06-05 11:43:17
Local clock offset: -6.582 ms
Remote clock offset: 8.107 ms


# Below is generated by plot.py at 2018-06-05 14:53:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.24 Mbit/s
95th percentile per-packet one-way delay: 108.325 ms
Loss rate: 23.14%
-- Flow 1:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 107.840 ms
Loss rate: 22.72%
-- Flow 2:
Average throughput: 38.79 Mbit/s
95th percentile per-packet one-way delay: 106.123 ms
Loss rate: 24.51%
-- Flow 3:
Average throughput: 27.75 Mbit/s
95th percentile per-packet one-way delay: 108.931 ms
Loss rate: 21.89%
```

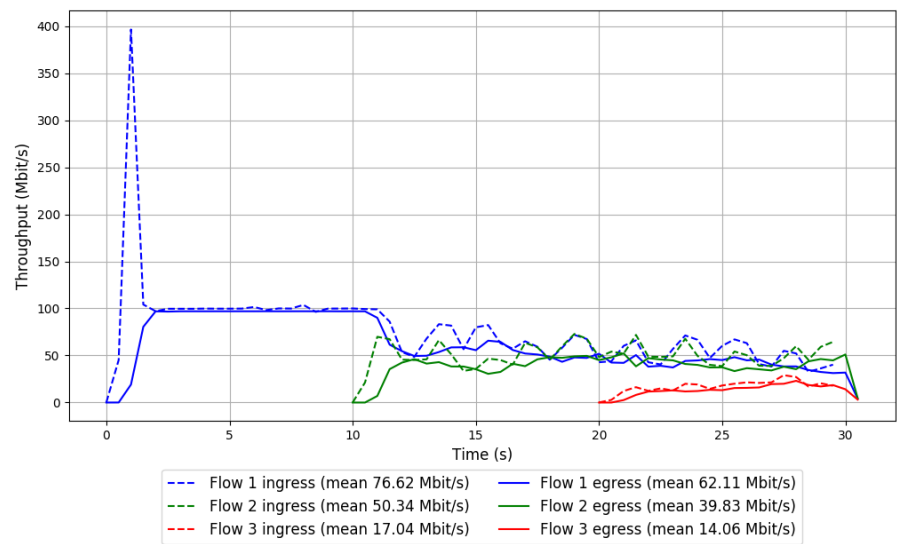Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-06-05 12:02:50
End at: 2018-06-05 12:03:20
Local clock offset: -6.328 ms
Remote clock offset: 14.588 ms


# Below is generated by plot.py at 2018-06-05 14:53:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.40 Mbit/s
95th percentile per-packet one-way delay: 113.844 ms
Loss rate: 20.97%
-- Flow 1:
Average throughput: 54.52 Mbit/s
95th percentile per-packet one-way delay: 113.965 ms
Loss rate: 17.91%
-- Flow 2:
Average throughput: 39.25 Mbit/s
95th percentile per-packet one-way delay: 112.188 ms
Loss rate: 23.17%
-- Flow 3:
Average throughput: 38.43 Mbit/s
95th percentile per-packet one-way delay: 112.406 ms
Loss rate: 28.20%
```

Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-06-05 12:22:49
End at: 2018-06-05 12:23:19
Local clock offset: -7.277 ms
Remote clock offset: 25.665 ms


# Below is generated by plot.py at 2018-06-05 14:53:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.29 Mbit/s
95th percentile per-packet one-way delay: 107.211 ms
Loss rate: 19.37%
-- Flow 1:
Average throughput: 62.11 Mbit/s
95th percentile per-packet one-way delay: 106.816 ms
Loss rate: 18.87%
-- Flow 2:
Average throughput: 39.83 Mbit/s
95th percentile per-packet one-way delay: 107.220 ms
Loss rate: 20.82%
-- Flow 3:
Average throughput: 14.06 Mbit/s
95th percentile per-packet one-way delay: 108.353 ms
Loss rate: 17.50%
```
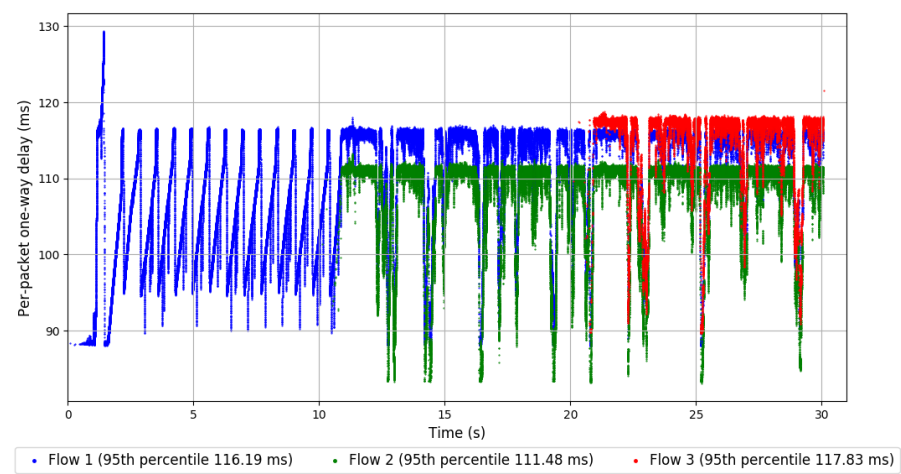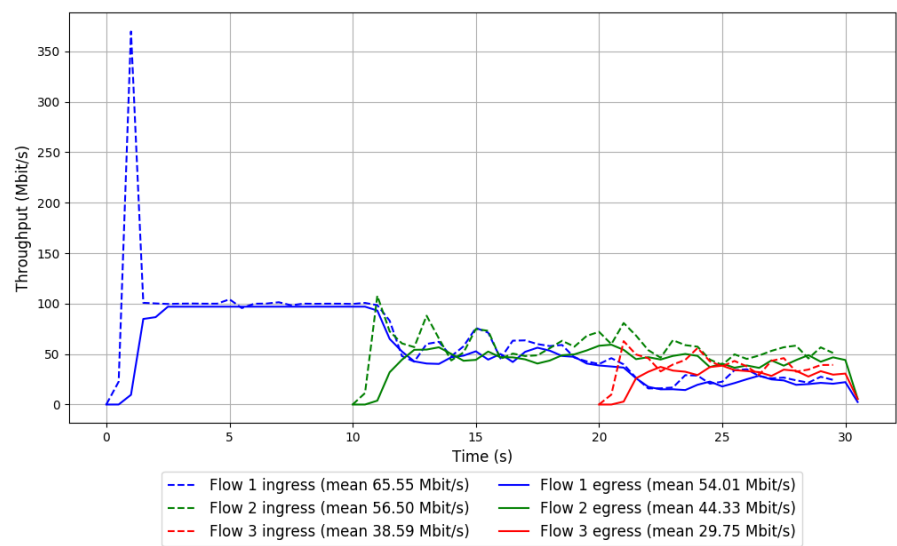
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2018-06-05 12:42:49
End at: 2018-06-05 12:43:19
Local clock offset: -5.911 ms
Remote clock offset: 37.74 ms

# Below is generated by plot.py at 2018-06-05 14:53:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.35 Mbit/s
95th percentile per-packet one-way delay: 117.226 ms
Loss rate: 19.41%
-- Flow 1:
Average throughput: 54.01 Mbit/s
95th percentile per-packet one-way delay: 116.192 ms
Loss rate: 17.54%
-- Flow 2:
Average throughput: 44.33 Mbit/s
95th percentile per-packet one-way delay: 111.483 ms
Loss rate: 21.49%
-- Flow 3:
Average throughput: 29.75 Mbit/s
95th percentile per-packet one-way delay: 117.829 ms
Loss rate: 22.84%
```
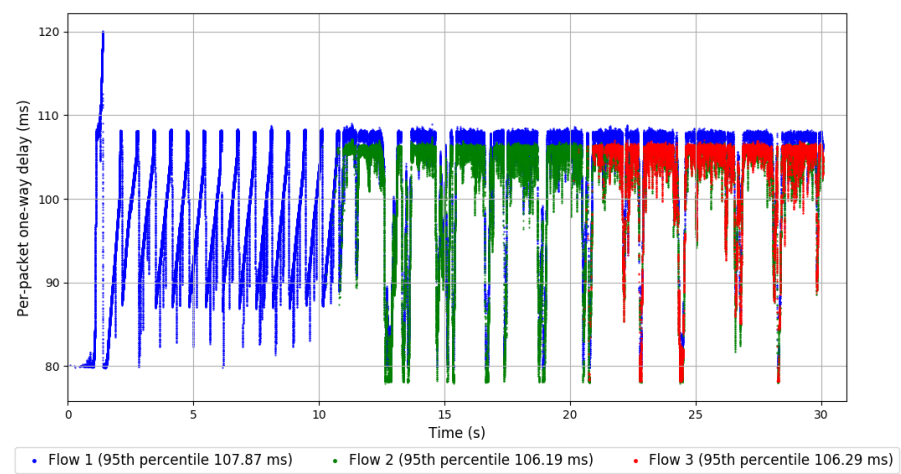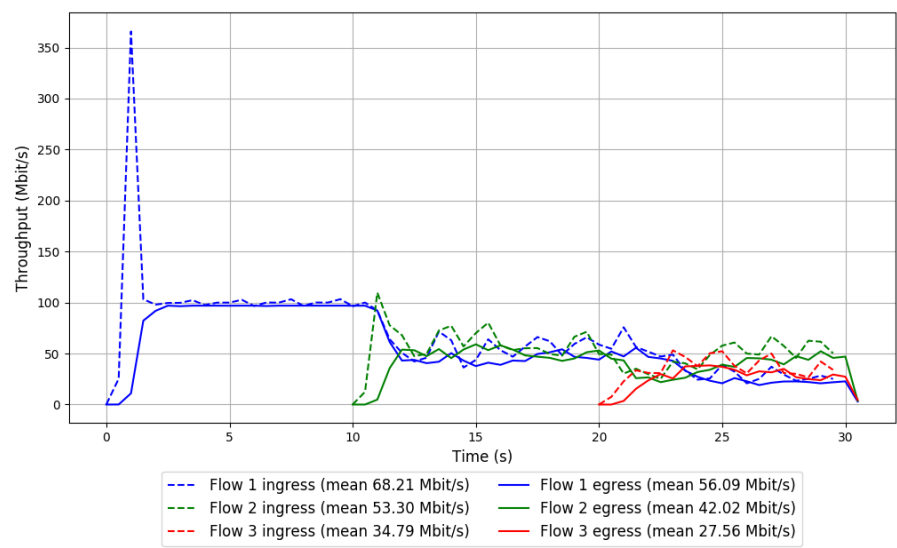
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-06-05 13:02:52
End at: 2018-06-05 13:03:22
Local clock offset: -6.883 ms
Remote clock offset: 38.89 ms


# Below is generated by plot.py at 2018-06-05 14:53:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.17 Mbit/s
95th percentile per-packet one-way delay: 107.778 ms
Loss rate: 19.07%
-- Flow 1:
Average throughput: 56.09 Mbit/s
95th percentile per-packet one-way delay: 107.871 ms
Loss rate: 17.68%
-- Flow 2:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 106.187 ms
Loss rate: 21.17%
-- Flow 3:
Average throughput: 27.56 Mbit/s
95th percentile per-packet one-way delay: 106.291 ms
Loss rate: 20.77%
```
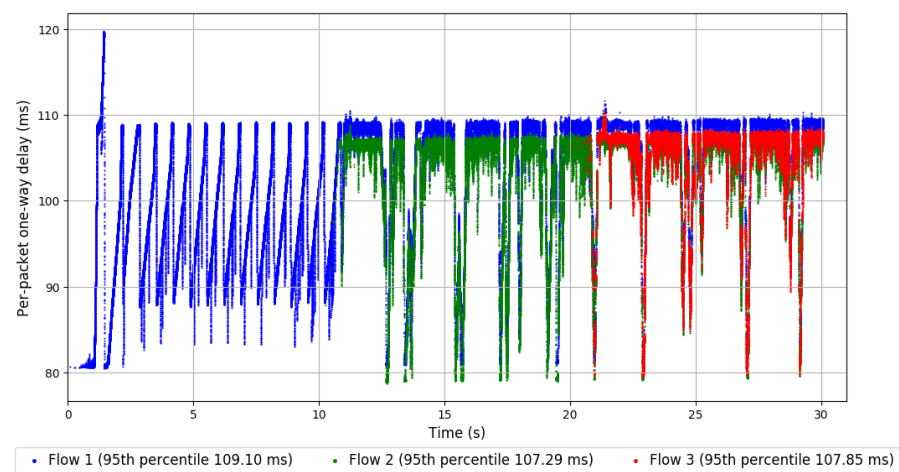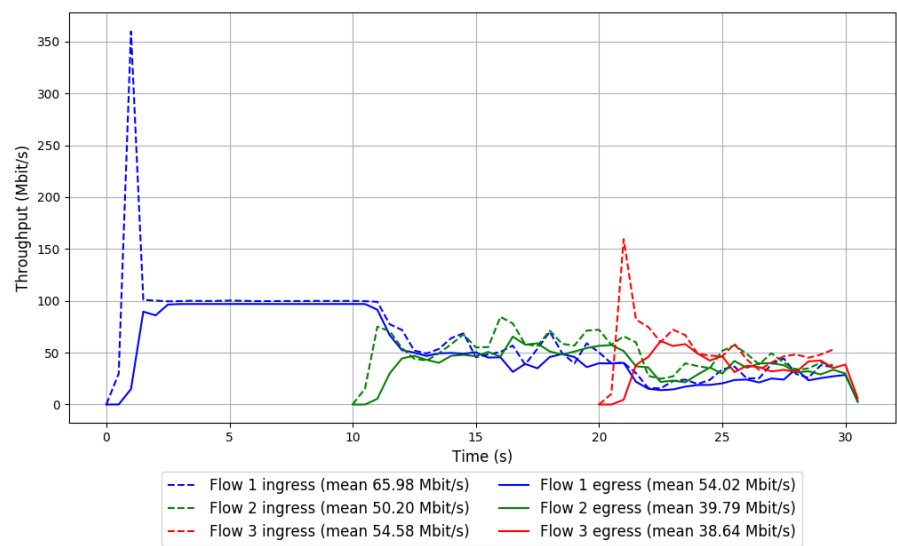
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 68.21 Mbit/s) --- Flow 1 egress (mean 56.09 Mbit/s)
Flow 2 ingress (mean 53.30 Mbit/s) --- Flow 2 egress (mean 42.02 Mbit/s)
Flow 3 ingress (mean 34.79 Mbit/s) --- Flow 3 egress (mean 27.56 Mbit/s)

Flow 1 (95th percentile 107.87 ms) • Flow 2 (95th percentile 106.19 ms) • Flow 3 (95th percentile 106.29 ms)
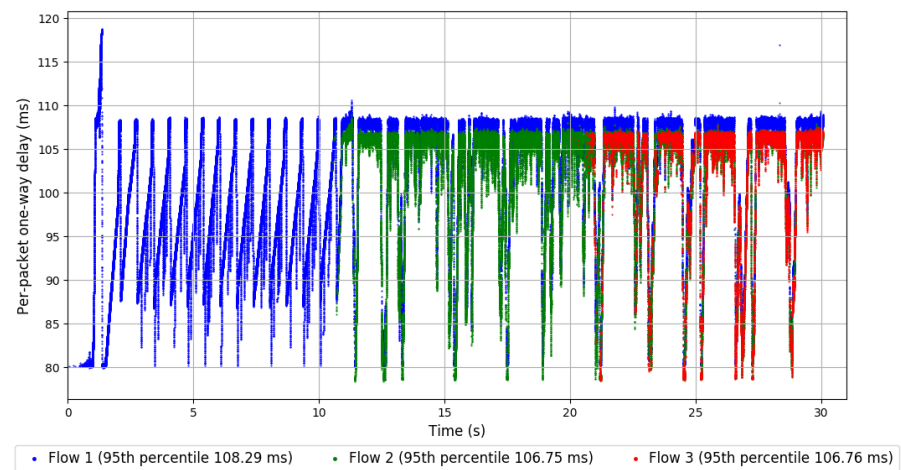
```
Run 6: Statistics of FillP

Start at: 2018-06-05 13:22:58
End at: 2018-06-05 13:23:28
Local clock offset: -6.105 ms
Remote clock offset: 10.624 ms


# Below is generated by plot.py at 2018-06-05 14:54:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.32 Mbit/s
95th percentile per-packet one-way delay: 108.959 ms
Loss rate: 20.54%
-- Flow 1:
Average throughput: 54.02 Mbit/s
95th percentile per-packet one-way delay: 109.099 ms
Loss rate: 18.06%
-- Flow 2:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 107.290 ms
Loss rate: 20.73%
-- Flow 3:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 107.850 ms
Loss rate: 29.20%
```
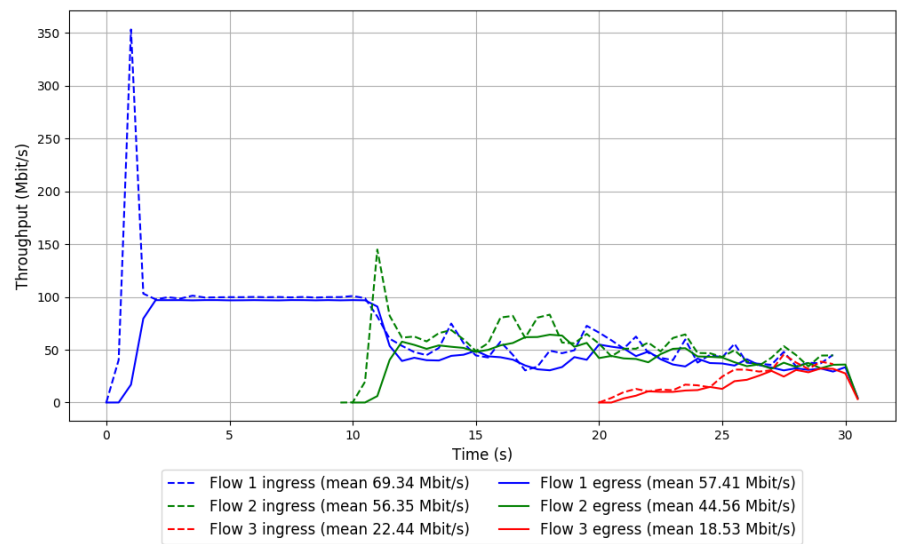
Run 6: Report of FillP — Data Link

Flow 1 ingress (mean 65.98 Mbit/s) Flow 1 egress (mean 54.02 Mbit/s)
Flow 2 ingress (mean 50.20 Mbit/s) Flow 2 egress (mean 39.79 Mbit/s)
Flow 3 ingress (mean 54.58 Mbit/s) Flow 3 egress (mean 38.64 Mbit/s)

Flow 1 (95th percentile 109.10 ms)   Flow 2 (95th percentile 107.29 ms)   Flow 3 (95th percentile 107.85 ms)

```
Run 7: Statistics of FillP

Start at: 2018-06-05 13:43:05
End at: 2018-06-05 13:43:35
Local clock offset: -6.791 ms
Remote clock offset: -7.313 ms


# Below is generated by plot.py at 2018-06-05 14:54:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.23 Mbit/s
95th percentile per-packet one-way delay: 108.191 ms
Loss rate: 18.38%
-- Flow 1:
Average throughput: 57.41 Mbit/s
95th percentile per-packet one-way delay: 108.287 ms
Loss rate: 17.13%
-- Flow 2:
Average throughput: 44.56 Mbit/s
95th percentile per-packet one-way delay: 106.746 ms
Loss rate: 20.86%
-- Flow 3:
Average throughput: 18.53 Mbit/s
95th percentile per-packet one-way delay: 106.764 ms
Loss rate: 17.45%
```
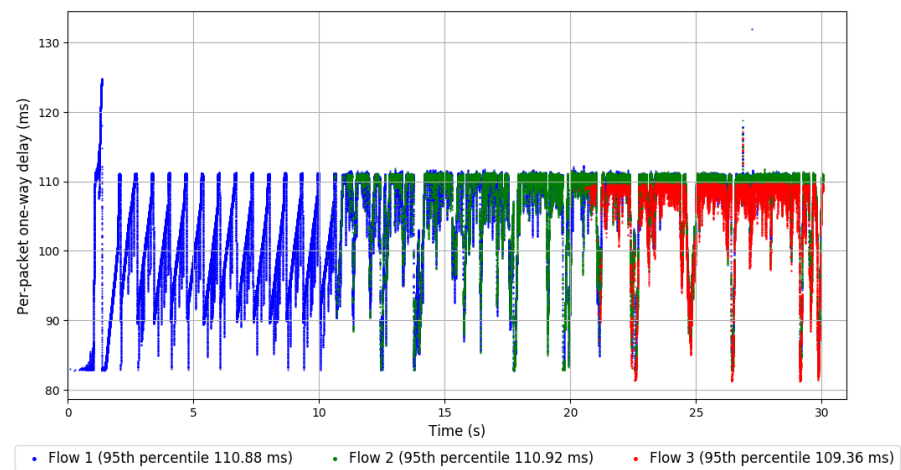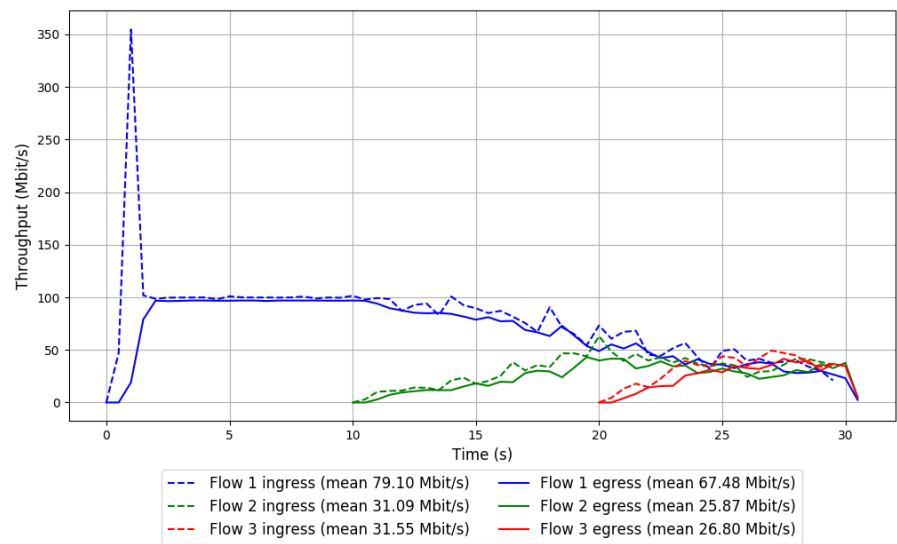
Run 7: Report of FillP — Data Link

- - - - Flow 1 ingress (mean 69.34 Mbit/s) ——— Flow 1 egress (mean 57.41 Mbit/s)
- - - - Flow 2 ingress (mean 56.35 Mbit/s) ——— Flow 2 egress (mean 44.56 Mbit/s)
- - - - Flow 3 ingress (mean 22.44 Mbit/s) ——— Flow 3 egress (mean 18.53 Mbit/s)

• Flow 1 (95th percentile 108.29 ms)   • Flow 2 (95th percentile 106.75 ms)   • Flow 3 (95th percentile 106.76 ms)

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```
Run 8: Statistics of FillP

Start at: 2018-06-05 14:03:17
End at: 2018-06-05 14:03:48
Local clock offset: -5.793 ms
Remote clock offset: 9.417 ms

# Below is generated by plot.py at 2018-06-05 14:54:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.59 Mbit/s
95th percentile per-packet one-way delay: 110.878 ms
Loss rate: 15.06%
-- Flow 1:
Average throughput: 67.48 Mbit/s
95th percentile per-packet one-way delay: 110.883 ms
Loss rate: 14.62%
-- Flow 2:
Average throughput: 25.87 Mbit/s
95th percentile per-packet one-way delay: 110.916 ms
Loss rate: 16.73%
-- Flow 3:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 109.364 ms
Loss rate: 15.04%
```
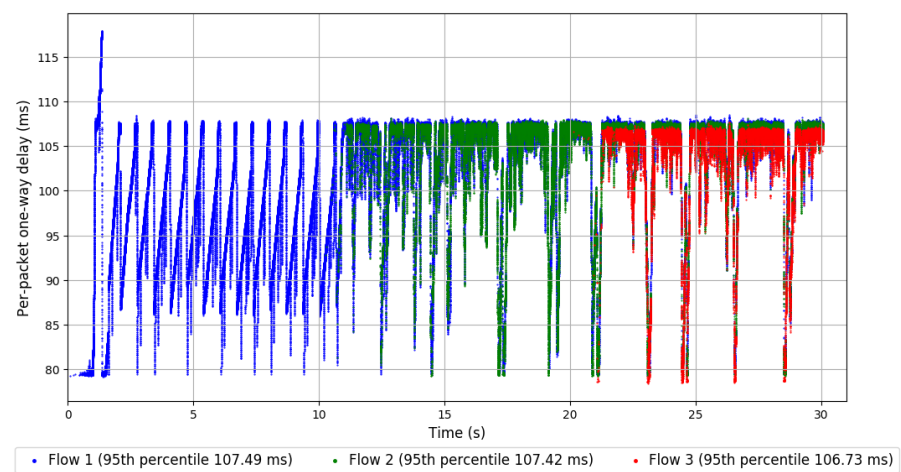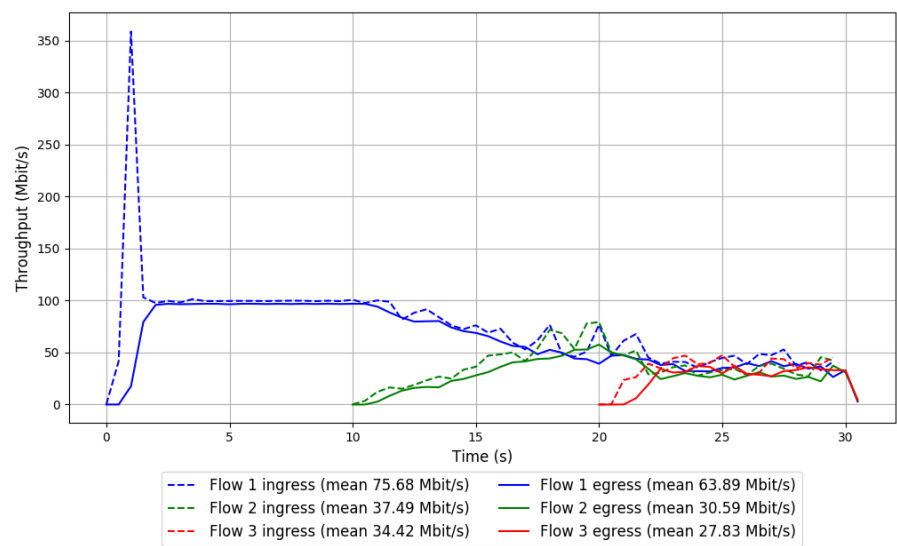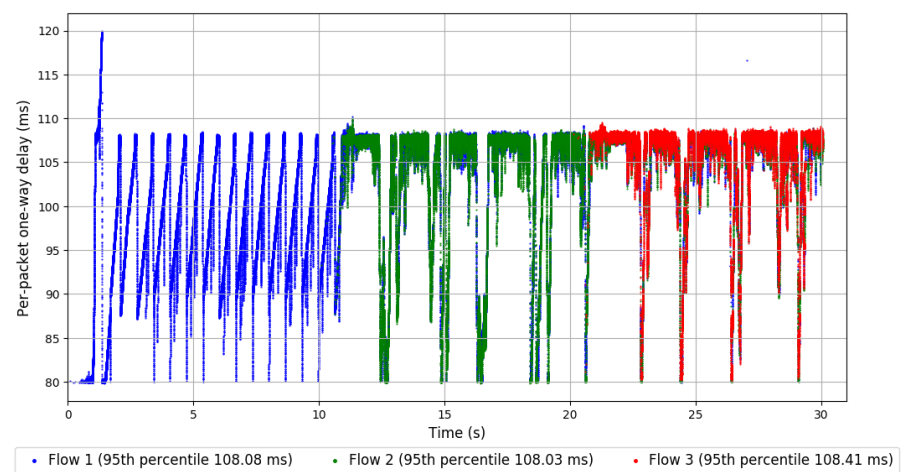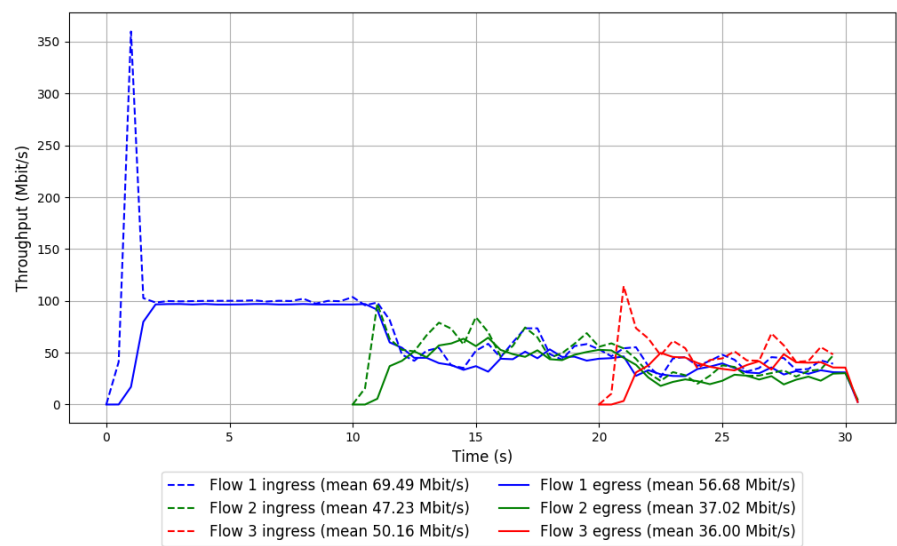
Run 8: Report of FillP — Data Link

- - - Flow 1 ingress (mean 79.10 Mbit/s) —— Flow 1 egress (mean 67.48 Mbit/s)
- - - Flow 2 ingress (mean 31.09 Mbit/s) —— Flow 2 egress (mean 25.87 Mbit/s)
- - - Flow 3 ingress (mean 31.55 Mbit/s) —— Flow 3 egress (mean 26.80 Mbit/s)

• Flow 1 (95th percentile 110.88 ms)   • Flow 2 (95th percentile 110.92 ms)   • Flow 3 (95th percentile 109.36 ms)

```
Run 9: Statistics of FillP

Start at: 2018-06-05 14:23:39
End at: 2018-06-05 14:24:09
Local clock offset: -4.599 ms
Remote clock offset: 4.483 ms

# Below is generated by plot.py at 2018-06-05 14:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.49 Mbit/s
95th percentile per-packet one-way delay: 107.457 ms
Loss rate: 16.50%
-- Flow 1:
Average throughput: 63.89 Mbit/s
95th percentile per-packet one-way delay: 107.489 ms
Loss rate: 15.50%
-- Flow 2:
Average throughput: 30.59 Mbit/s
95th percentile per-packet one-way delay: 107.420 ms
Loss rate: 18.33%
-- Flow 3:
Average throughput: 27.83 Mbit/s
95th percentile per-packet one-way delay: 106.728 ms
Loss rate: 19.14%
```
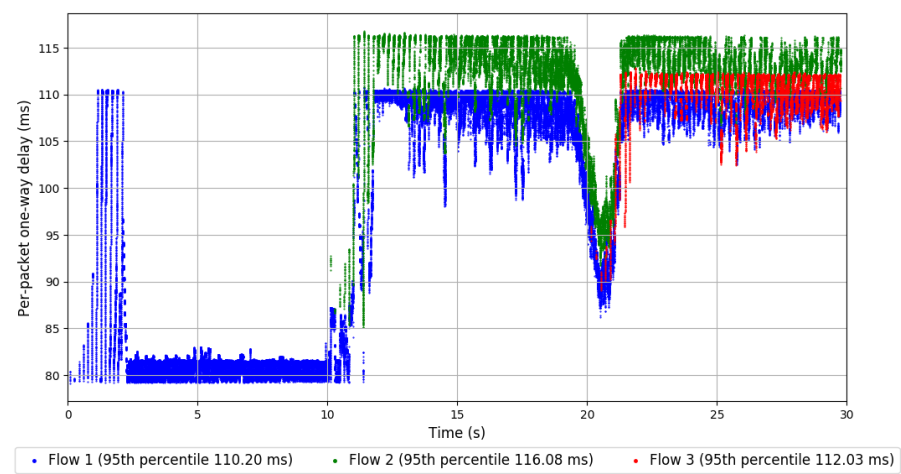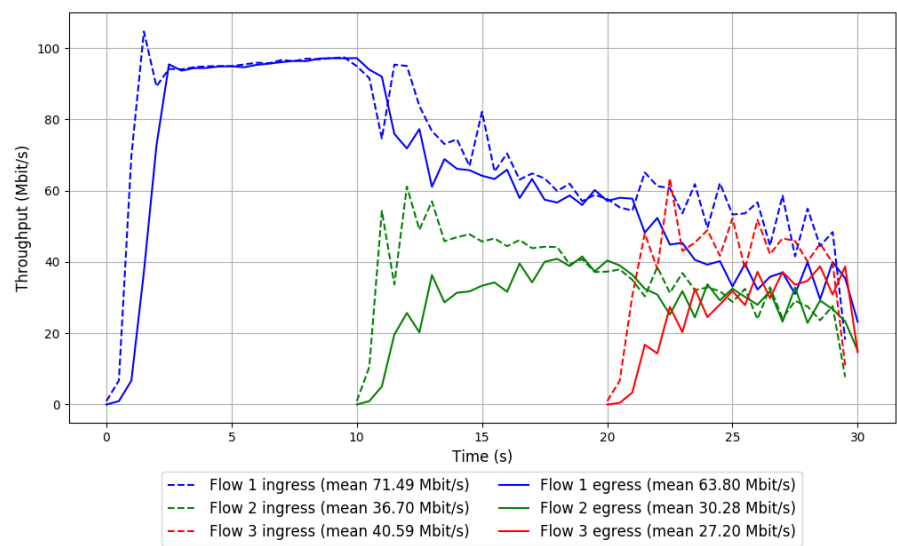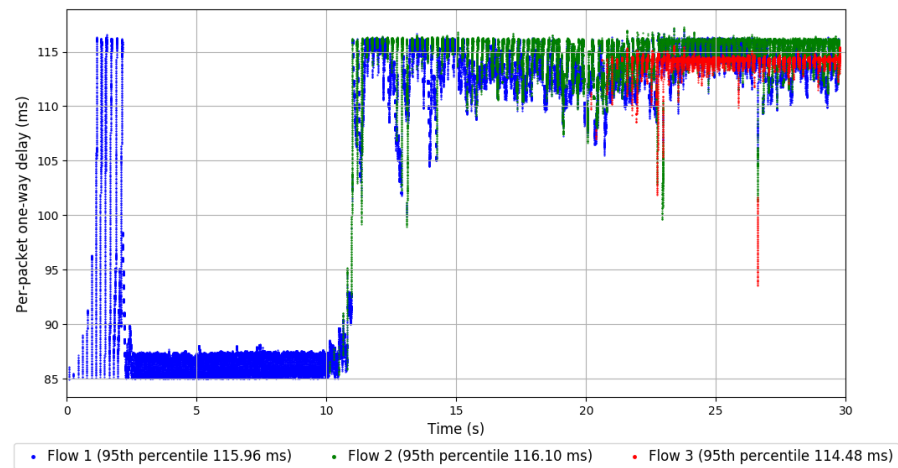
Run 9: Report of FillP — Data Link

- - - Flow 1 ingress (mean 75.68 Mbit/s)   —— Flow 1 egress (mean 63.89 Mbit/s)
- - - Flow 2 ingress (mean 37.49 Mbit/s)   —— Flow 2 egress (mean 30.59 Mbit/s)
- - - Flow 3 ingress (mean 34.42 Mbit/s)   —— Flow 3 egress (mean 27.83 Mbit/s)

- Flow 1 (95th percentile 107.49 ms)   • Flow 2 (95th percentile 107.42 ms)   • Flow 3 (95th percentile 106.73 ms)

```
Run 10: Statistics of FillP

Start at: 2018-06-05 14:43:43
End at: 2018-06-05 14:44:13
Local clock offset: -2.522 ms
Remote clock offset: 0.2 ms


# Below is generated by plot.py at 2018-06-05 14:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.24 Mbit/s
95th percentile per-packet one-way delay: 108.154 ms
Loss rate: 20.61%
-- Flow 1:
Average throughput: 56.68 Mbit/s
95th percentile per-packet one-way delay: 108.075 ms
Loss rate: 18.36%
-- Flow 2:
Average throughput: 37.02 Mbit/s
95th percentile per-packet one-way delay: 108.033 ms
Loss rate: 21.57%
-- Flow 3:
Average throughput: 36.00 Mbit/s
95th percentile per-packet one-way delay: 108.409 ms
Loss rate: 28.23%
```
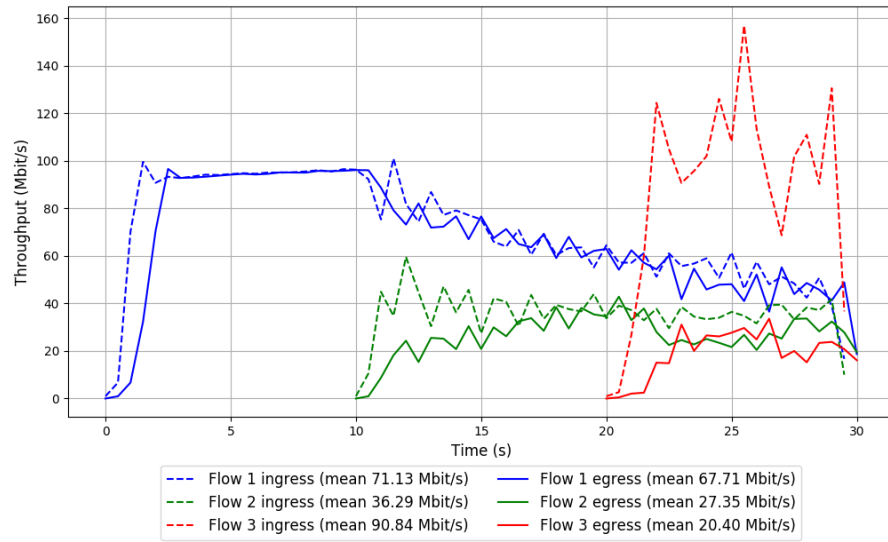
Run 10: Report of FillP — Data Link

```
Run 1: Statistics of Indigo

Start at: 2018-06-05 11:26:29
End at: 2018-06-05 11:26:59
Local clock offset: -6.916 ms
Remote clock offset: 8.981 ms


# Below is generated by plot.py at 2018-06-05 14:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.59 Mbit/s
95th percentile per-packet one-way delay: 114.894 ms
Loss rate: 14.85%
-- Flow 1:
Average throughput: 63.80 Mbit/s
95th percentile per-packet one-way delay: 110.204 ms
Loss rate: 10.67%
-- Flow 2:
Average throughput: 30.28 Mbit/s
95th percentile per-packet one-way delay: 116.078 ms
Loss rate: 17.39%
-- Flow 3:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 112.028 ms
Loss rate: 32.89%
```
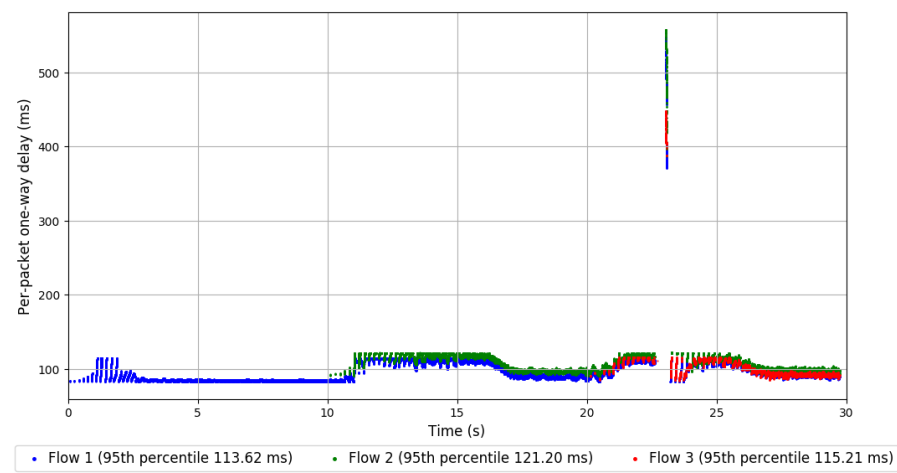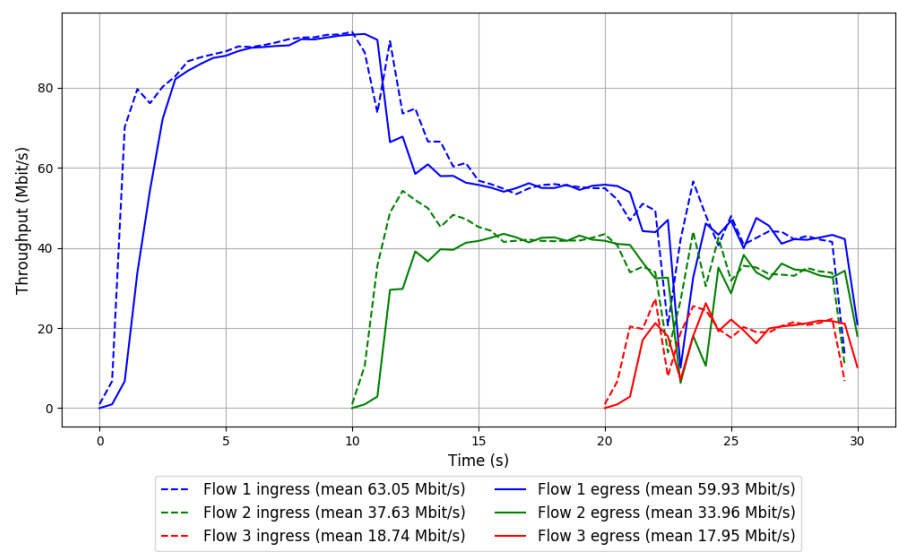
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-06-05 11:46:29
End at: 2018-06-05 11:46:59
Local clock offset: -6.512 ms
Remote clock offset: 13.295 ms


# Below is generated by plot.py at 2018-06-05 14:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.32 Mbit/s
95th percentile per-packet one-way delay: 116.010 ms
Loss rate: 25.71%
-- Flow 1:
Average throughput: 67.71 Mbit/s
95th percentile per-packet one-way delay: 115.960 ms
Loss rate: 4.71%
-- Flow 2:
Average throughput: 27.35 Mbit/s
95th percentile per-packet one-way delay: 116.103 ms
Loss rate: 24.53%
-- Flow 3:
Average throughput: 20.40 Mbit/s
95th percentile per-packet one-way delay: 114.480 ms
Loss rate: 77.53%
```
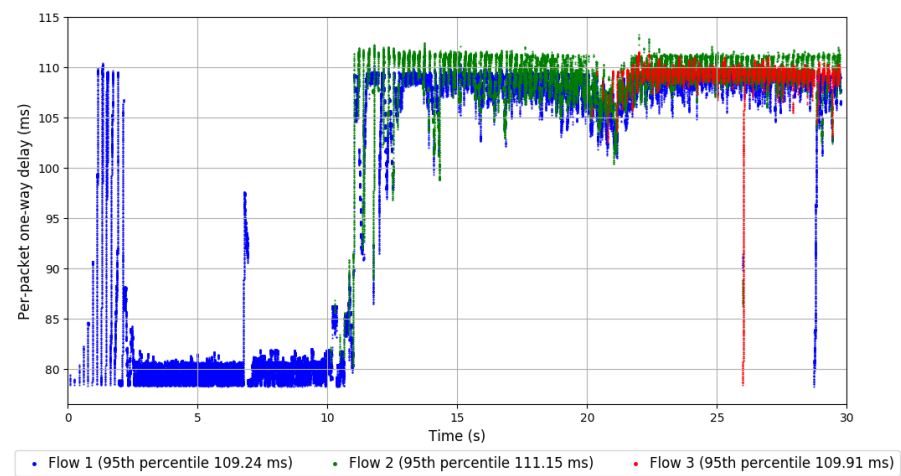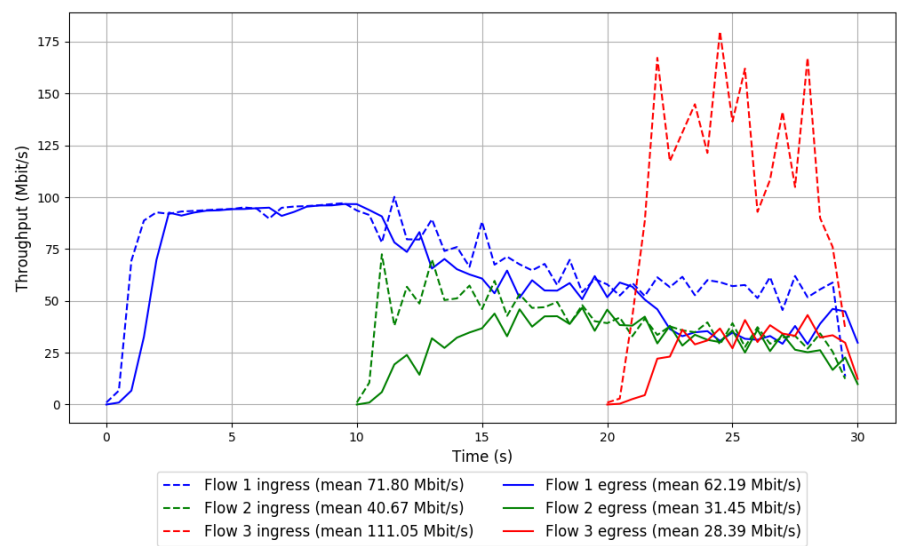
Run 2: Report of Indigo — Data Link

Flow 1 ingress (mean 71.13 Mbit/s)   Flow 1 egress (mean 67.71 Mbit/s)
Flow 2 ingress (mean 36.29 Mbit/s)   Flow 2 egress (mean 27.35 Mbit/s)
Flow 3 ingress (mean 90.84 Mbit/s)   Flow 3 egress (mean 20.40 Mbit/s)

Flow 1 (95th percentile 115.96 ms)   Flow 2 (95th percentile 116.10 ms)   Flow 3 (95th percentile 114.48 ms)
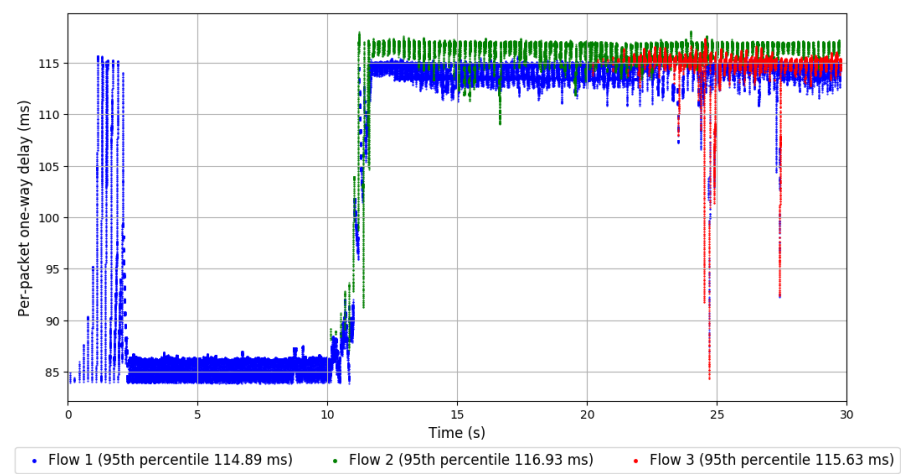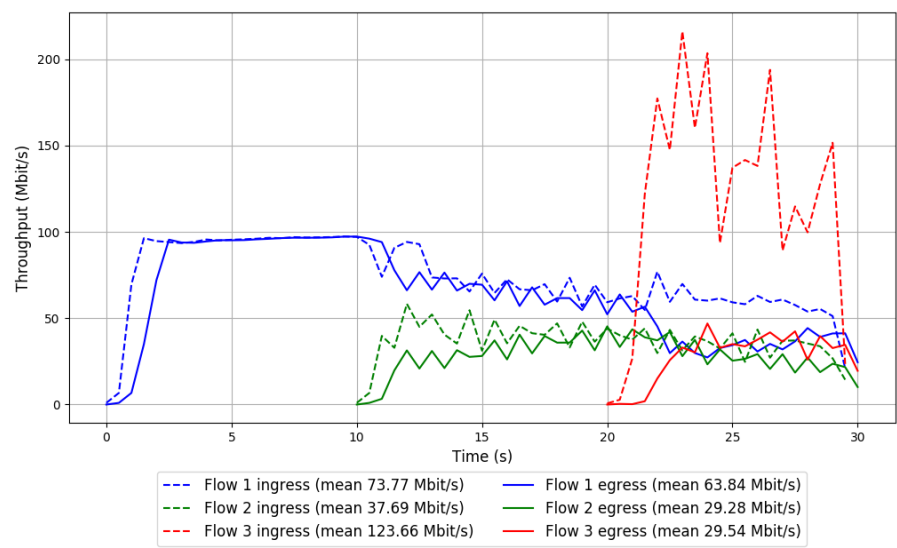
```
Run 3: Statistics of Indigo

Start at: 2018-06-05 12:06:32
End at: 2018-06-05 12:07:02
Local clock offset: -6.412 ms
Remote clock offset: 18.399 ms


# Below is generated by plot.py at 2018-06-05 14:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.21 Mbit/s
95th percentile per-packet one-way delay: 118.791 ms
Loss rate: 6.16%
-- Flow 1:
Average throughput: 59.93 Mbit/s
95th percentile per-packet one-way delay: 113.619 ms
Loss rate: 4.93%
-- Flow 2:
Average throughput: 33.96 Mbit/s
95th percentile per-packet one-way delay: 121.196 ms
Loss rate: 9.75%
-- Flow 3:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 115.212 ms
Loss rate: 4.19%
```

Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 63.05 Mbit/s) — — —   Flow 1 egress (mean 59.93 Mbit/s) ———
Flow 2 ingress (mean 37.63 Mbit/s) — — —   Flow 2 egress (mean 33.96 Mbit/s) ———
Flow 3 ingress (mean 18.74 Mbit/s) — — —   Flow 3 egress (mean 17.95 Mbit/s) ———

• Flow 1 (95th percentile 113.62 ms)   • Flow 2 (95th percentile 121.20 ms)   • Flow 3 (95th percentile 115.21 ms)
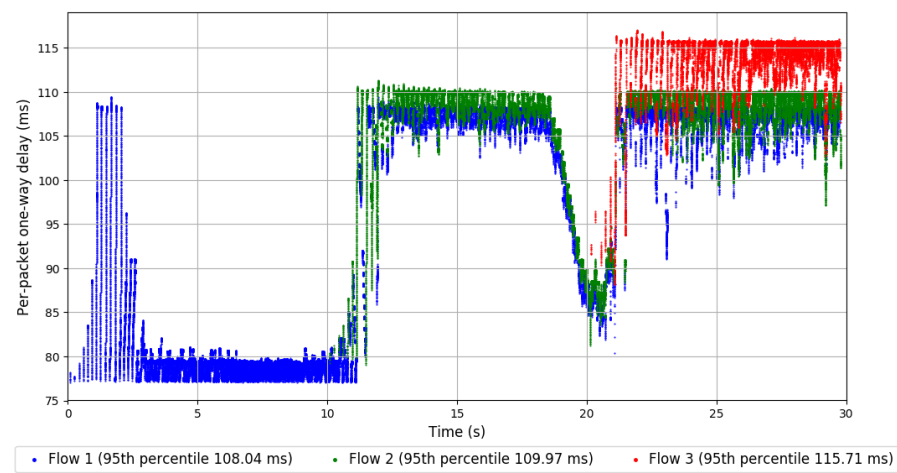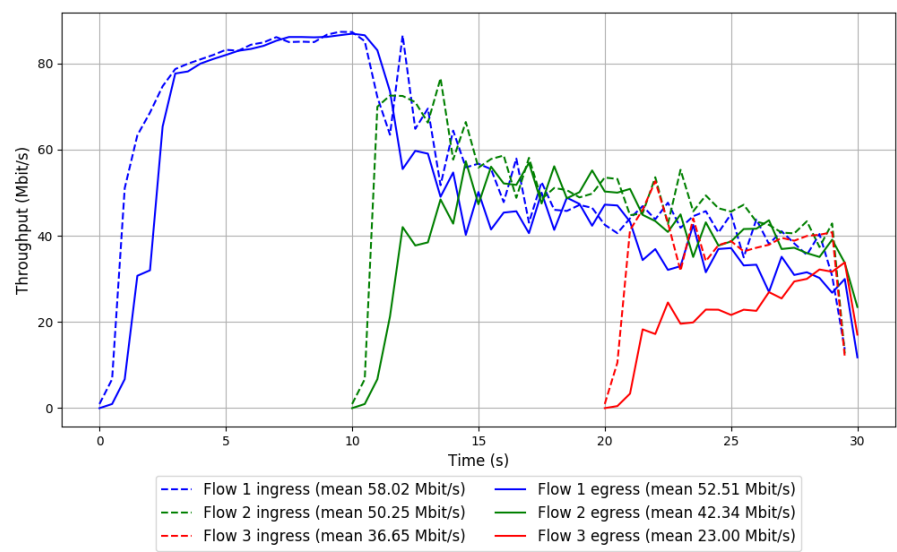
```
Run 4: Statistics of Indigo

Start at: 2018-06-05 12:26:30
End at: 2018-06-05 12:27:00
Local clock offset: -5.737 ms
Remote clock offset: 28.407 ms


# Below is generated by plot.py at 2018-06-05 14:55:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.05 Mbit/s
95th percentile per-packet one-way delay: 110.736 ms
Loss rate: 31.37%
-- Flow 1:
Average throughput: 62.19 Mbit/s
95th percentile per-packet one-way delay: 109.243 ms
Loss rate: 13.31%
-- Flow 2:
Average throughput: 31.45 Mbit/s
95th percentile per-packet one-way delay: 111.146 ms
Loss rate: 22.55%
-- Flow 3:
Average throughput: 28.39 Mbit/s
95th percentile per-packet one-way delay: 109.909 ms
Loss rate: 74.42%
```

Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 71.80 Mbit/s) --- Flow 1 egress (mean 62.19 Mbit/s)
Flow 2 ingress (mean 40.67 Mbit/s) --- Flow 2 egress (mean 31.45 Mbit/s)
Flow 3 ingress (mean 111.05 Mbit/s) --- Flow 3 egress (mean 28.39 Mbit/s)

Flow 1 (95th percentile 109.24 ms)   Flow 2 (95th percentile 111.15 ms)   Flow 3 (95th percentile 109.91 ms)
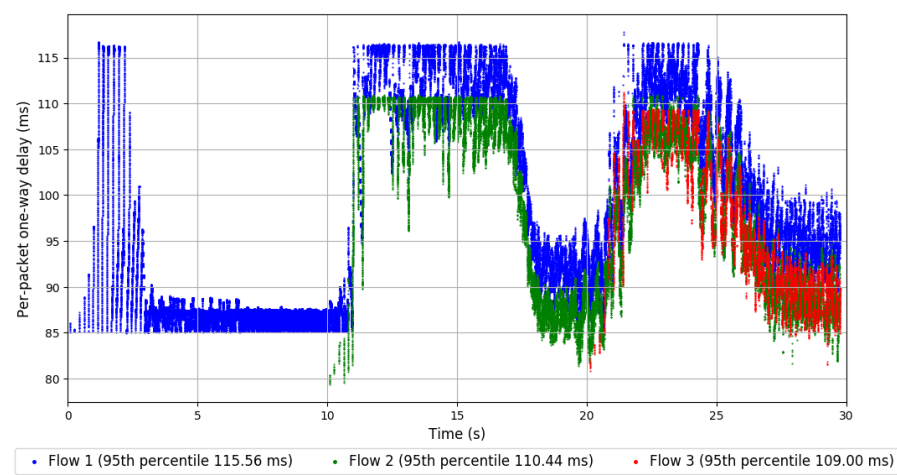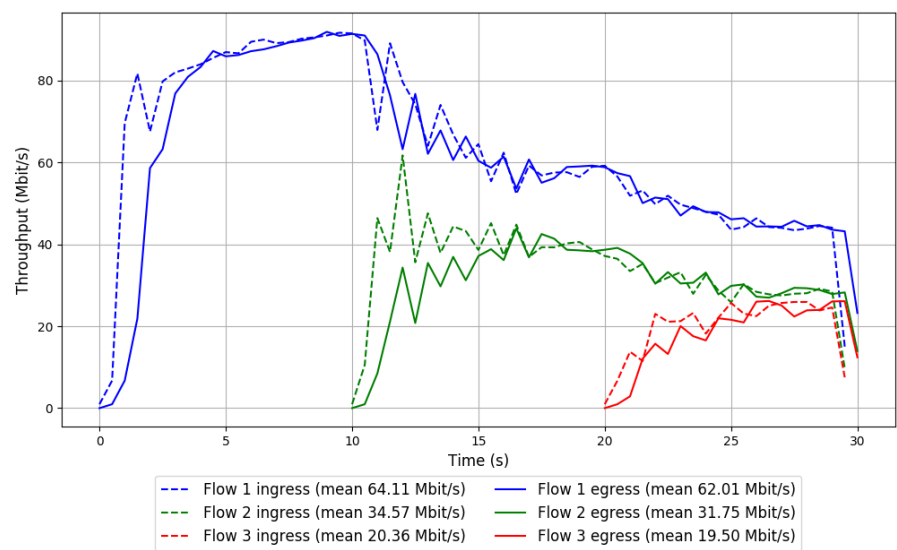
```
Run 5: Statistics of Indigo

Start at: 2018-06-05 12:46:31
End at: 2018-06-05 12:47:01
Local clock offset: -6.784 ms
Remote clock offset: 39.944 ms


# Below is generated by plot.py at 2018-06-05 14:55:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.64 Mbit/s
95th percentile per-packet one-way delay: 116.839 ms
Loss rate: 33.03%
-- Flow 1:
Average throughput: 63.84 Mbit/s
95th percentile per-packet one-way delay: 114.892 ms
Loss rate: 13.37%
-- Flow 2:
Average throughput: 29.28 Mbit/s
95th percentile per-packet one-way delay: 116.931 ms
Loss rate: 22.19%
-- Flow 3:
Average throughput: 29.54 Mbit/s
95th percentile per-packet one-way delay: 115.634 ms
Loss rate: 76.11%
```

Run 5: Report of Indigo — Data Link

Legend:
- --- Flow 1 ingress (mean 73.77 Mbit/s)
- --- Flow 2 ingress (mean 37.69 Mbit/s)
- --- Flow 3 ingress (mean 123.66 Mbit/s)
- — Flow 1 egress (mean 63.84 Mbit/s)
- — Flow 2 egress (mean 29.28 Mbit/s)
- — Flow 3 egress (mean 29.54 Mbit/s)

Legend:
- Flow 1 (95th percentile 114.89 ms)
- Flow 2 (95th percentile 116.93 ms)
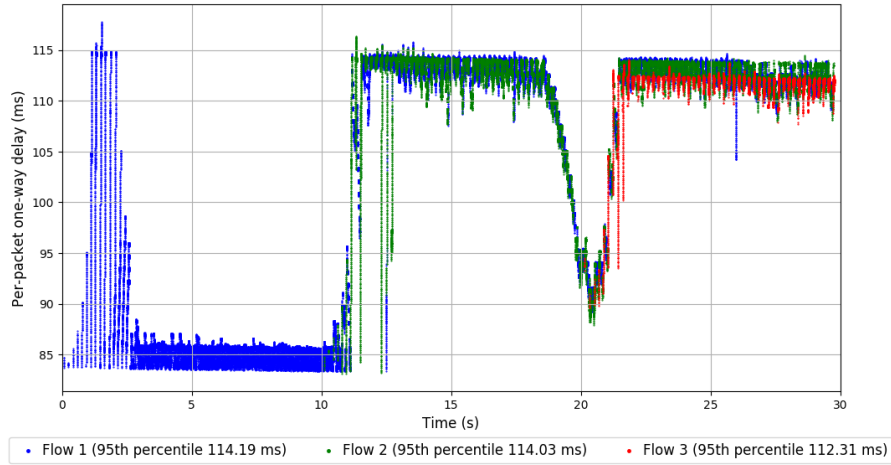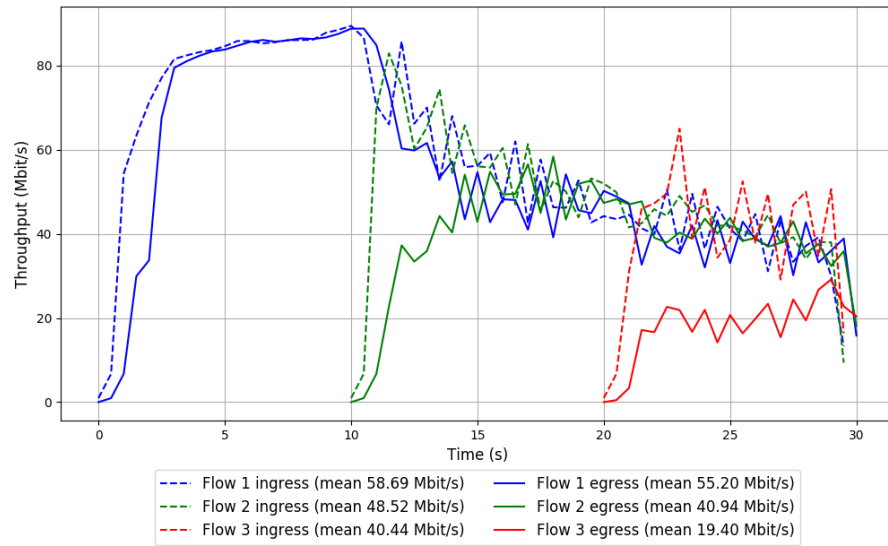- Flow 3 (95th percentile 115.63 ms)

```
Run 6: Statistics of Indigo

Start at: 2018-06-05 13:06:33
End at: 2018-06-05 13:07:04
Local clock offset: -6.069 ms
Remote clock offset: 39.907 ms


# Below is generated by plot.py at 2018-06-05 14:55:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.96 Mbit/s
95th percentile per-packet one-way delay: 113.676 ms
Loss rate: 14.60%
-- Flow 1:
Average throughput: 52.51 Mbit/s
95th percentile per-packet one-way delay: 108.040 ms
Loss rate: 9.39%
-- Flow 2:
Average throughput: 42.34 Mbit/s
95th percentile per-packet one-way delay: 109.965 ms
Loss rate: 15.64%
-- Flow 3:
Average throughput: 23.00 Mbit/s
95th percentile per-packet one-way delay: 115.714 ms
Loss rate: 37.14%
```

Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2018-06-05 13:26:40
End at: 2018-06-05 13:27:10
Local clock offset: -6.113 ms
Remote clock offset: 4.56 ms


# Below is generated by plot.py at 2018-06-05 14:56:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.36 Mbit/s
95th percentile per-packet one-way delay: 114.486 ms
Loss rate: 4.51%
-- Flow 1:
Average throughput: 62.01 Mbit/s
95th percentile per-packet one-way delay: 115.555 ms
Loss rate: 3.27%
-- Flow 2:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 110.441 ms
Loss rate: 8.10%
-- Flow 3:
Average throughput: 19.50 Mbit/s
95th percentile per-packet one-way delay: 108.999 ms
Loss rate: 4.11%
```
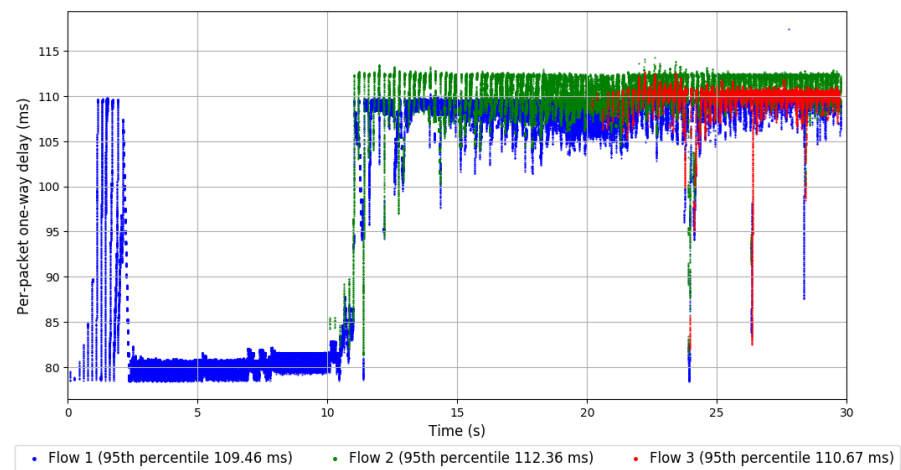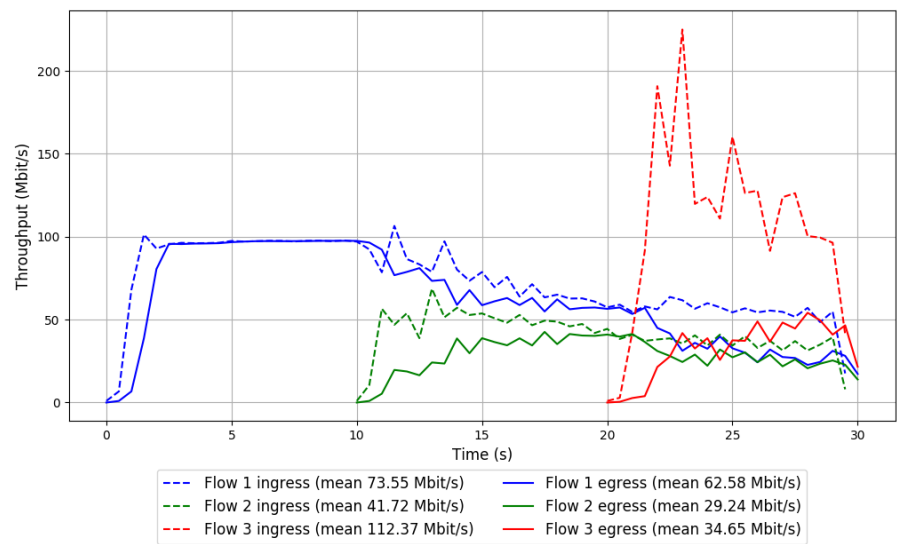
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2018-06-05 13:46:47
End at: 2018-06-05 13:47:17
Local clock offset: -5.917 ms
Remote clock offset: -1.784 ms

# Below is generated by plot.py at 2018-06-05 14:56:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.43 Mbit/s
95th percentile per-packet one-way delay: 114.133 ms
Loss rate: 14.66%
-- Flow 1:
Average throughput: 55.20 Mbit/s
95th percentile per-packet one-way delay: 114.188 ms
Loss rate: 5.86%
-- Flow 2:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 114.031 ms
Loss rate: 15.51%
-- Flow 3:
Average throughput: 19.40 Mbit/s
95th percentile per-packet one-way delay: 112.309 ms
Loss rate: 51.92%
```
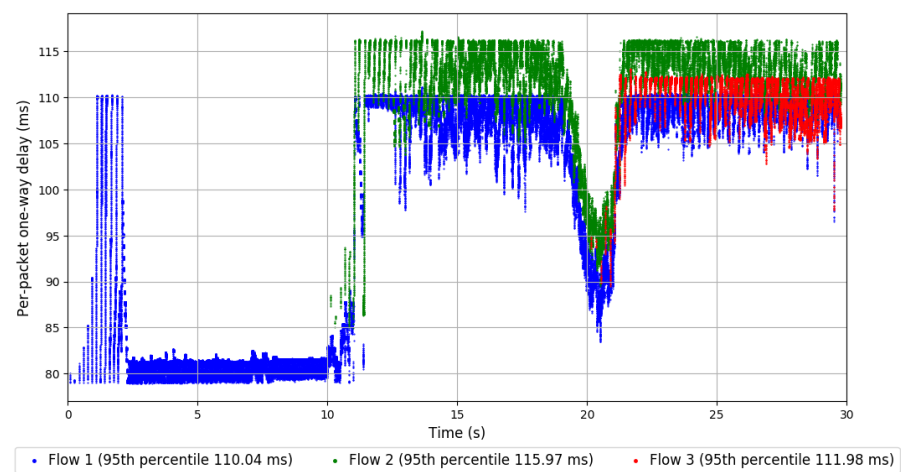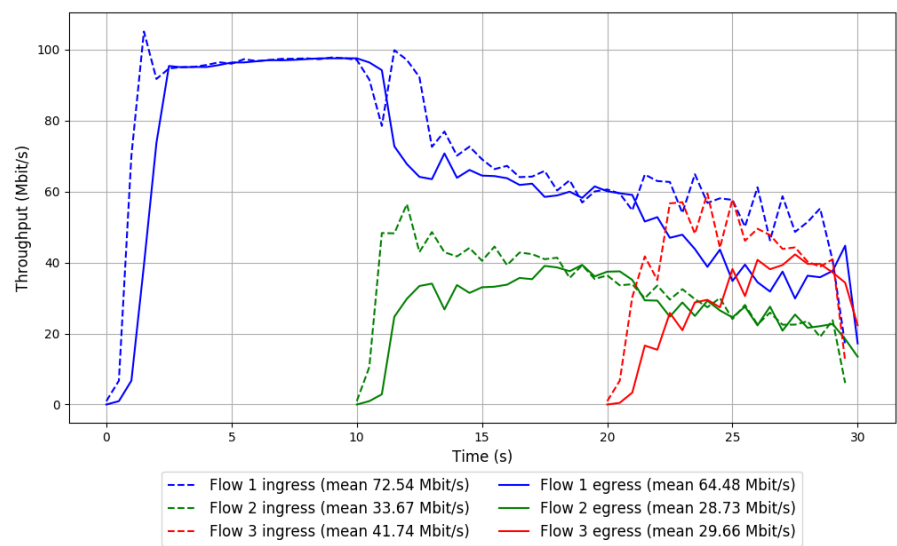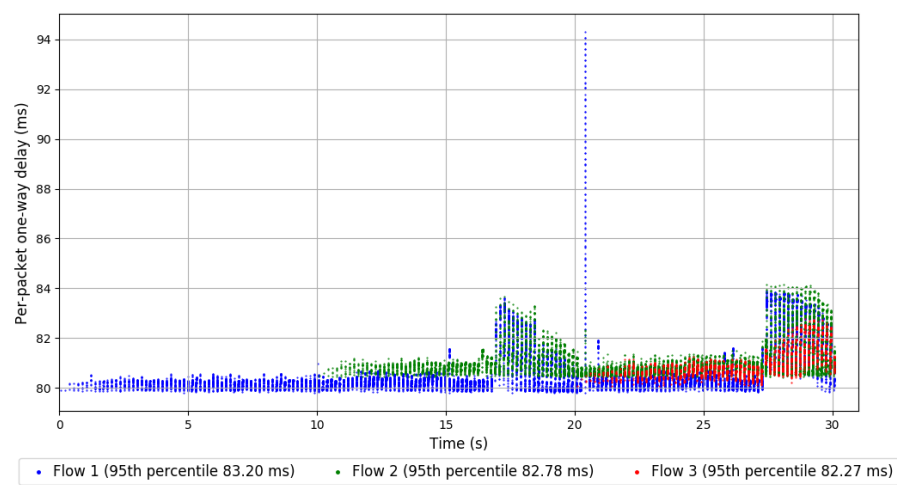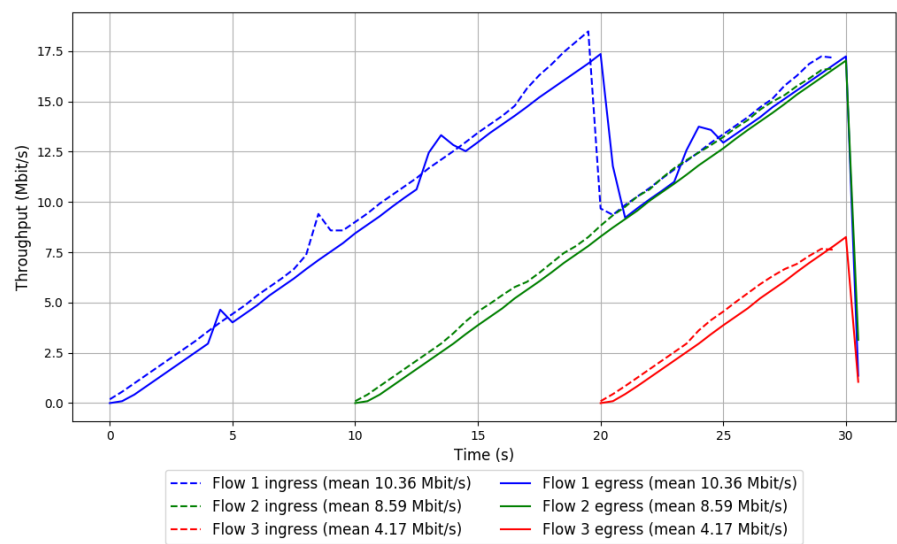
Run 8: Report of Indigo — Data Link

Flow 1 ingress (mean 58.69 Mbit/s) --- Flow 1 egress (mean 55.20 Mbit/s)
Flow 2 ingress (mean 48.52 Mbit/s) --- Flow 2 egress (mean 40.94 Mbit/s)
Flow 3 ingress (mean 40.44 Mbit/s) --- Flow 3 egress (mean 19.40 Mbit/s)

Flow 1 (95th percentile 114.19 ms) • Flow 2 (95th percentile 114.03 ms) • Flow 3 (95th percentile 112.31 ms)

```
Run 9: Statistics of Indigo

Start at: 2018-06-05 14:06:59
End at: 2018-06-05 14:07:29
Local clock offset: -5.46 ms
Remote clock offset: 6.988 ms


# Below is generated by plot.py at 2018-06-05 14:56:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 111.934 ms
Loss rate: 32.15%
-- Flow 1:
Average throughput: 62.58 Mbit/s
95th percentile per-packet one-way delay: 109.463 ms
Loss rate: 14.82%
-- Flow 2:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 112.362 ms
Loss rate: 29.82%
-- Flow 3:
Average throughput: 34.65 Mbit/s
95th percentile per-packet one-way delay: 110.666 ms
Loss rate: 69.16%
```

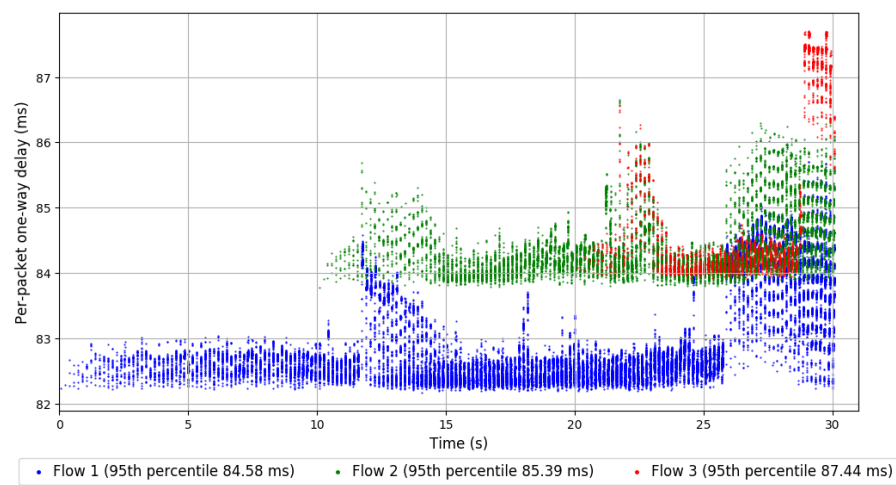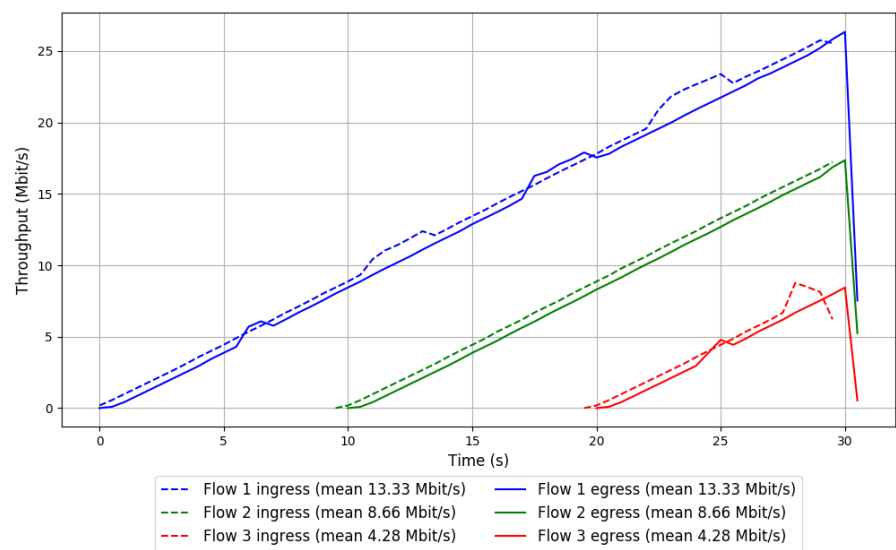## Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2018-06-05 14:27:21
End at: 2018-06-05 14:27:51
Local clock offset: -6.045 ms
Remote clock offset: 3.388 ms

# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.95 Mbit/s
95th percentile per-packet one-way delay: 114.775 ms
Loss rate: 13.98%
-- Flow 1:
Average throughput: 64.48 Mbit/s
95th percentile per-packet one-way delay: 110.039 ms
Loss rate: 11.02%
-- Flow 2:
Average throughput: 28.73 Mbit/s
95th percentile per-packet one-way delay: 115.975 ms
Loss rate: 14.57%
-- Flow 3:
Average throughput: 29.66 Mbit/s
95th percentile per-packet one-way delay: 111.981 ms
Loss rate: 28.83%
```

Run 10: Report of Indigo — Data Link

Flow 1 ingress (mean 72.54 Mbit/s) ---- Flow 1 egress (mean 64.48 Mbit/s) ——
Flow 2 ingress (mean 33.67 Mbit/s) ---- Flow 2 egress (mean 28.73 Mbit/s) ——
Flow 3 ingress (mean 41.74 Mbit/s) ---- Flow 3 egress (mean 29.66 Mbit/s) ——

Flow 1 (95th percentile 110.04 ms)   Flow 2 (95th percentile 115.97 ms)   Flow 3 (95th percentile 111.98 ms)
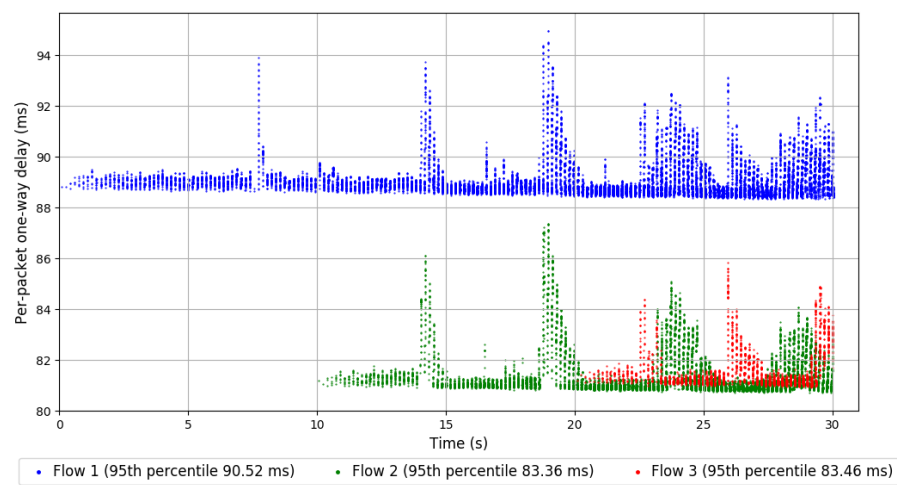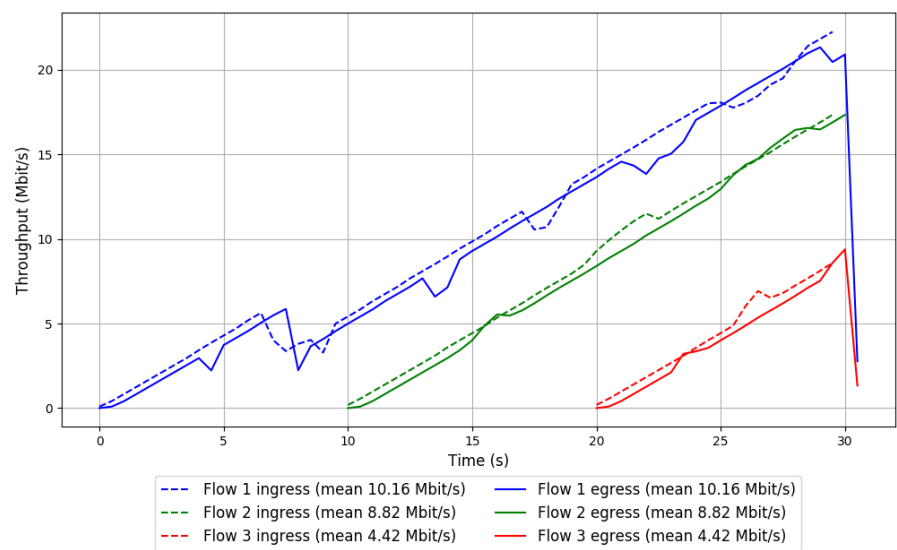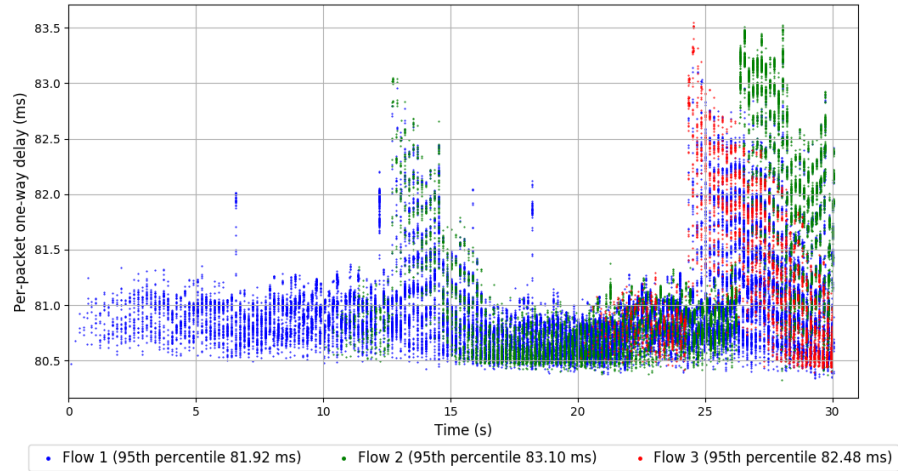
```
Run 1: Statistics of LEDBAT

Start at: 2018-06-05 11:34:03
End at: 2018-06-05 11:34:33
Local clock offset: -6.966 ms
Remote clock offset: 8.053 ms

# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.46 Mbit/s
95th percentile per-packet one-way delay: 82.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 83.202 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 82.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 82.270 ms
Loss rate: 0.00%
```
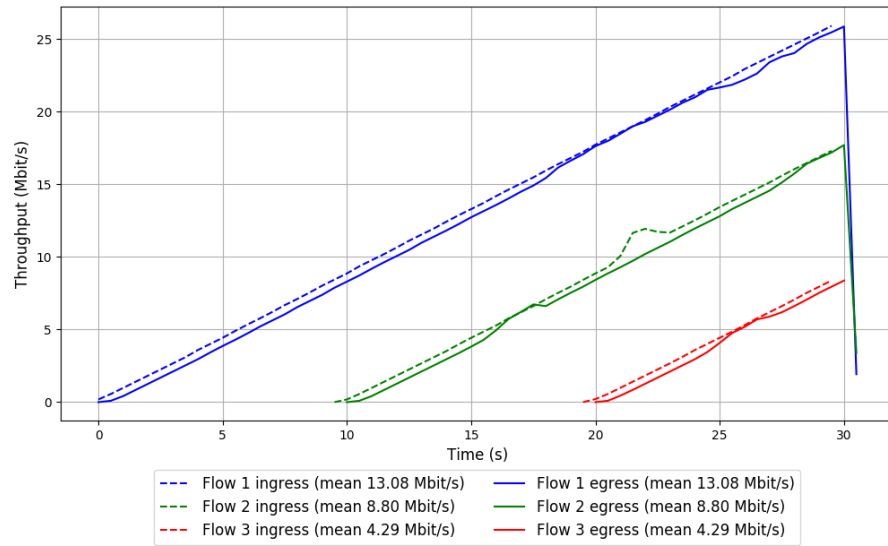
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 10.36 Mbit/s)   Flow 1 egress (mean 10.36 Mbit/s)
Flow 2 ingress (mean 8.59 Mbit/s)   Flow 2 egress (mean 8.59 Mbit/s)
Flow 3 ingress (mean 4.17 Mbit/s)   Flow 3 egress (mean 4.17 Mbit/s)

Flow 1 (95th percentile 83.20 ms)   Flow 2 (95th percentile 82.78 ms)   Flow 3 (95th percentile 82.27 ms)

```
Run 2: Statistics of LEDBAT

Start at: 2018-06-05 11:54:03
End at: 2018-06-05 11:54:33
Local clock offset: -6.4 ms
Remote clock offset: 12.314 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.52 Mbit/s
95th percentile per-packet one-way delay: 85.096 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 84.583 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 85.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 87.442 ms
Loss rate: 0.00%
```
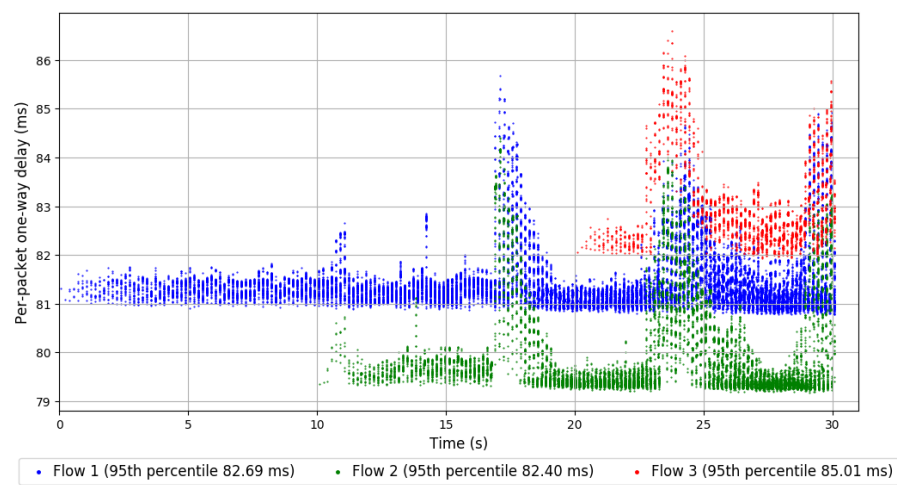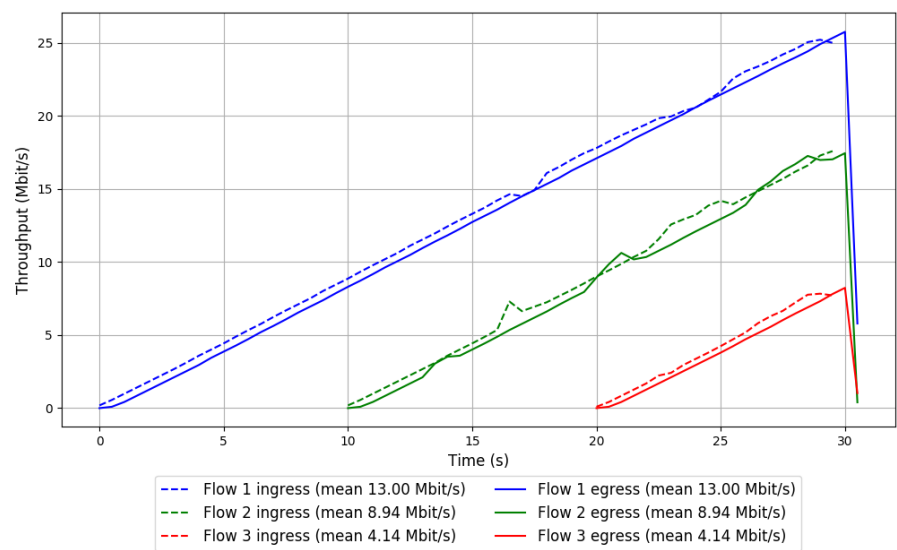
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-06-05 12:14:05
End at: 2018-06-05 12:14:35
Local clock offset: -5.666 ms
Remote clock offset: 24.696 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.49 Mbit/s
95th percentile per-packet one-way delay: 90.079 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.16 Mbit/s
95th percentile per-packet one-way delay: 90.519 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 83.355 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 83.459 ms
Loss rate: 0.00%
```
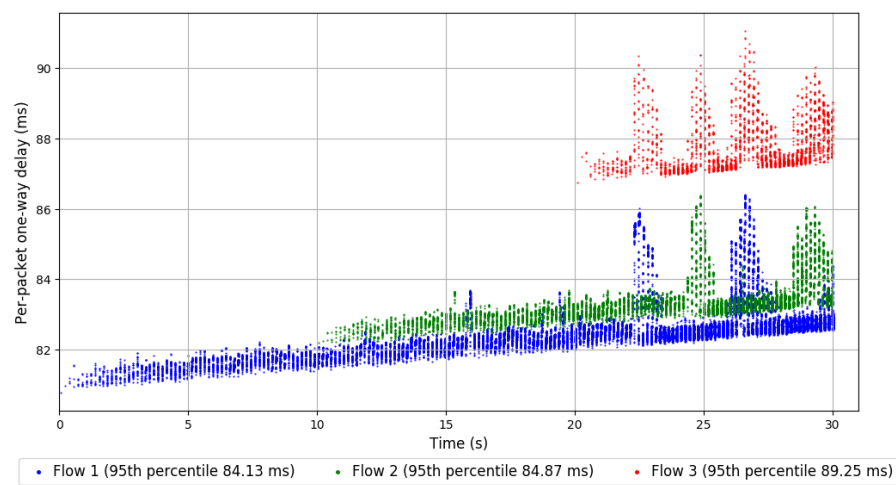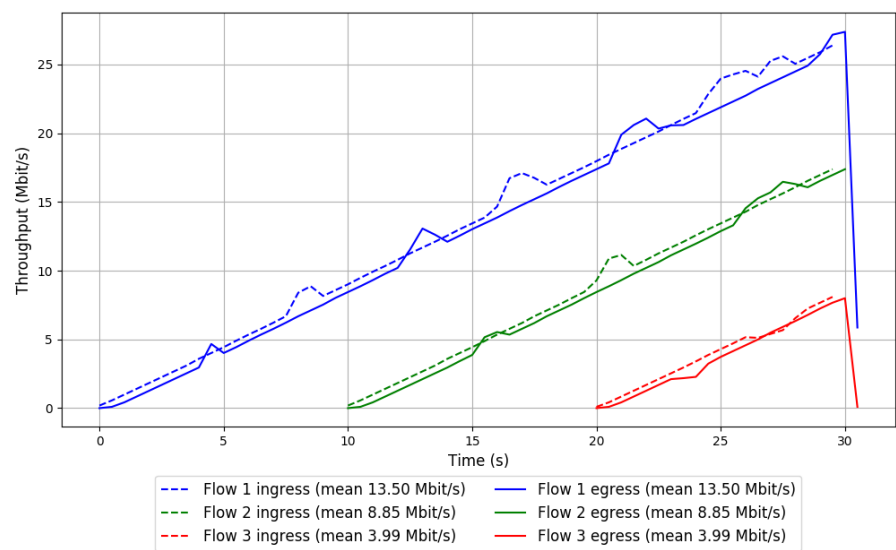
Run 3: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 10.16 Mbit/s) —— Flow 1 egress (mean 10.16 Mbit/s)
- - - Flow 2 ingress (mean 8.82 Mbit/s) —— Flow 2 egress (mean 8.82 Mbit/s)
- - - Flow 3 ingress (mean 4.42 Mbit/s) —— Flow 3 egress (mean 4.42 Mbit/s)

- Flow 1 (95th percentile 90.52 ms)   - Flow 2 (95th percentile 83.36 ms)   - Flow 3 (95th percentile 83.46 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2018-06-05 12:34:05
End at: 2018-06-05 12:34:35
Local clock offset: -7.221 ms
Remote clock offset: 30.064 ms

# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.35 Mbit/s
95th percentile per-packet one-way delay: 82.430 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.08 Mbit/s
95th percentile per-packet one-way delay: 81.923 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 83.104 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 82.478 ms
Loss rate: 0.00%
```

Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2018-06-05 12:54:05
End at: 2018-06-05 12:54:35
Local clock offset: -6.784 ms
Remote clock offset: 37.388 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.33 Mbit/s
95th percentile per-packet one-way delay: 82.958 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 82.693 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 82.398 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 85.013 ms
Loss rate: 0.00%
```
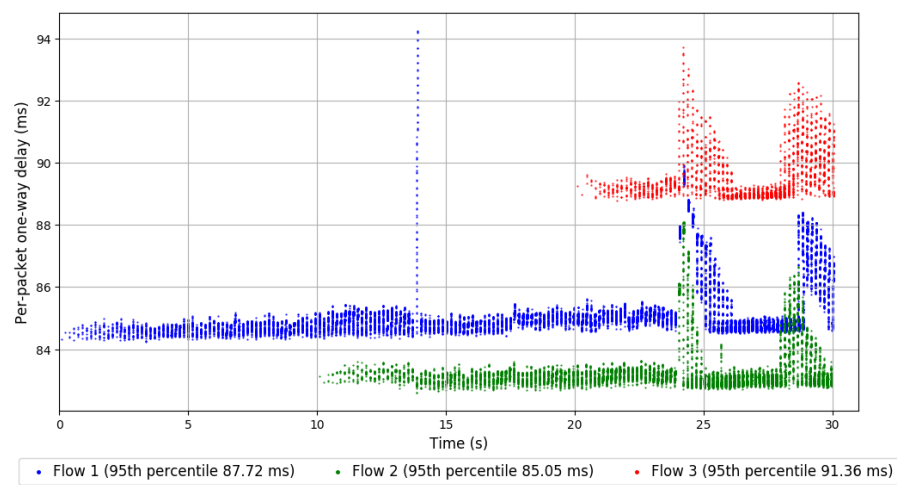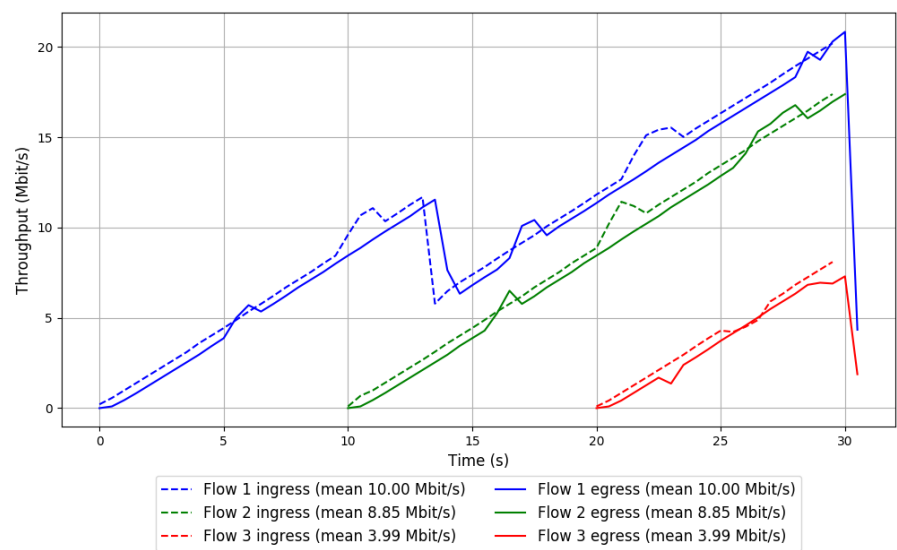
Run 5: Report of LEDBAT — Data Link

```
Run 6: Statistics of LEDBAT

Start at: 2018-06-05 13:14:10
End at: 2018-06-05 13:14:40
Local clock offset: -6.861 ms
Remote clock offset: 31.733 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.70 Mbit/s
95th percentile per-packet one-way delay: 87.256 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.50 Mbit/s
95th percentile per-packet one-way delay: 84.129 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 84.868 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 89.254 ms
Loss rate: 0.00%
```
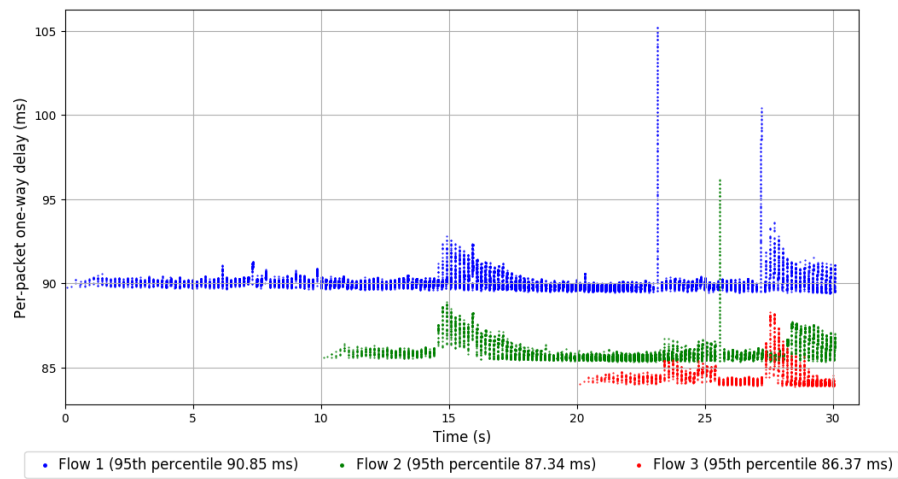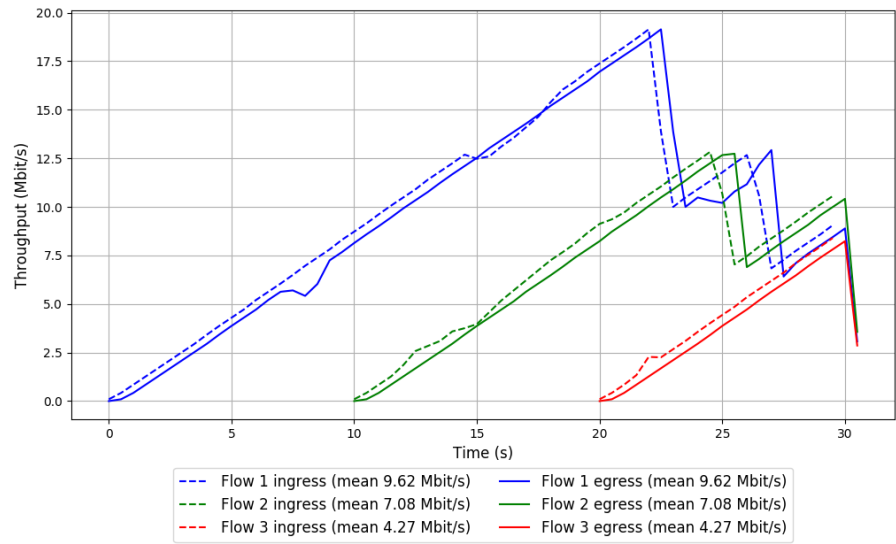
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2018-06-05 13:34:16
End at: 2018-06-05 13:34:46
Local clock offset: -6.142 ms
Remote clock offset: 2.796 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.20 Mbit/s
95th percentile per-packet one-way delay: 89.180 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 87.724 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 85.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 91.358 ms
Loss rate: 0.00%
```
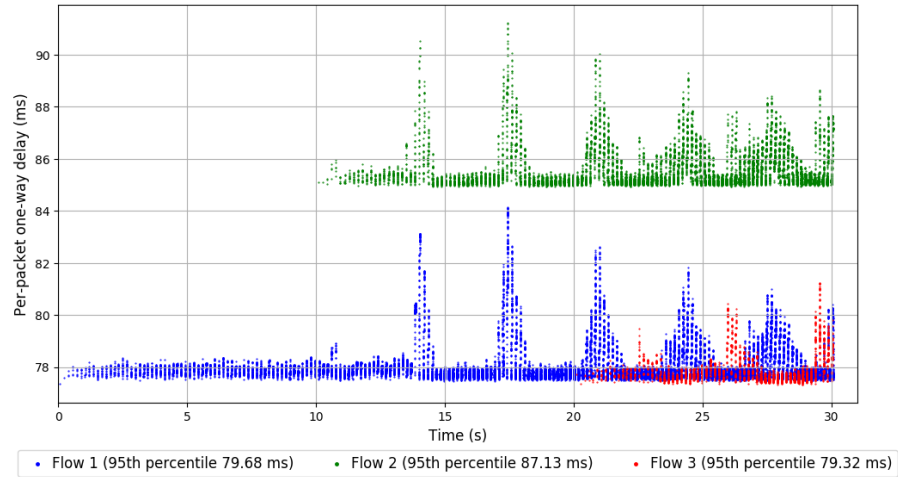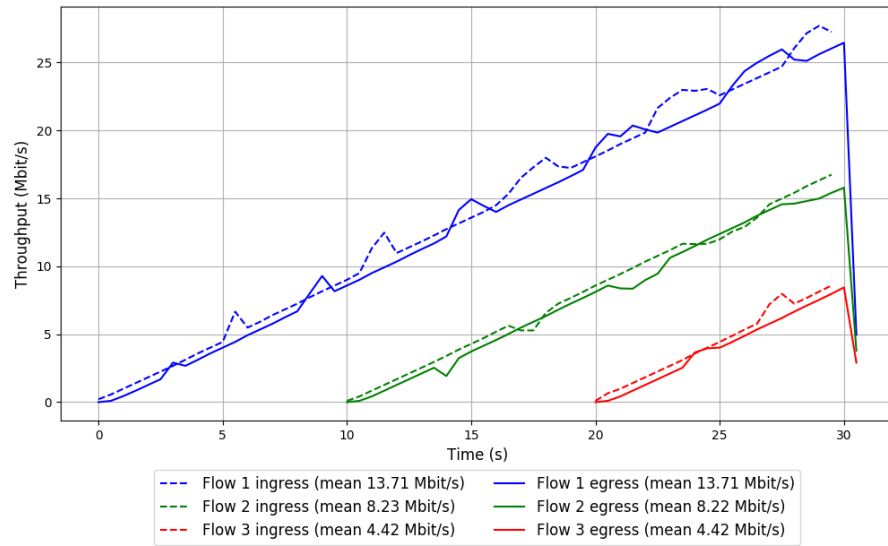
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2018-06-05 13:54:31
End at: 2018-06-05 13:55:01
Local clock offset: -6.606 ms
Remote clock offset: 8.378 ms

# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 90.567 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 9.62 Mbit/s
95th percentile per-packet one-way delay: 90.853 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 7.08 Mbit/s
95th percentile per-packet one-way delay: 87.339 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 86.370 ms
Loss rate: 0.00%
```
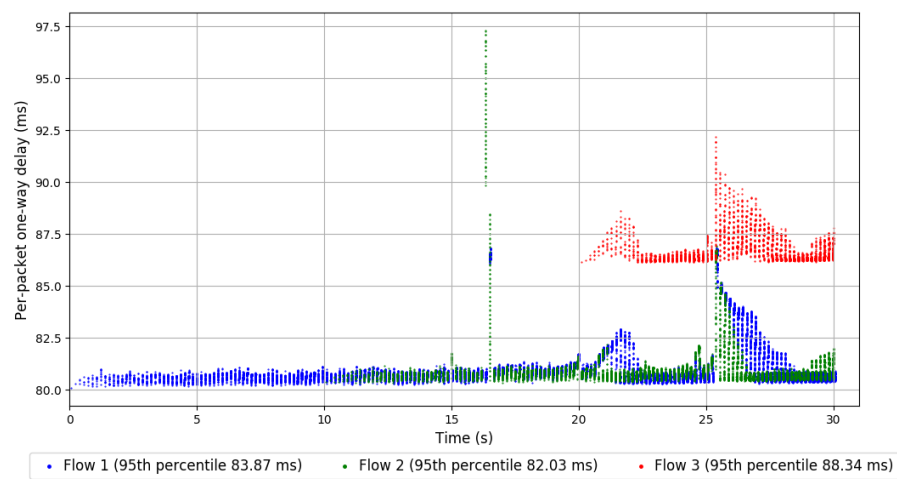
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2018-06-05 14:14:32
End at: 2018-06-05 14:15:02
Local clock offset: -4.949 ms
Remote clock offset: 5.896 ms

# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.64 Mbit/s
95th percentile per-packet one-way delay: 86.138 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.71 Mbit/s
95th percentile per-packet one-way delay: 79.682 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 87.128 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 79.316 ms
Loss rate: 0.00%
```
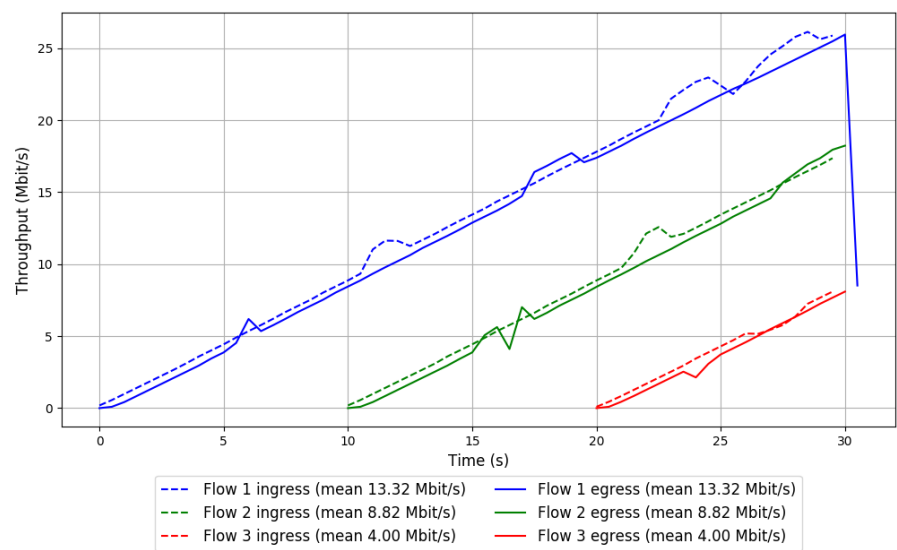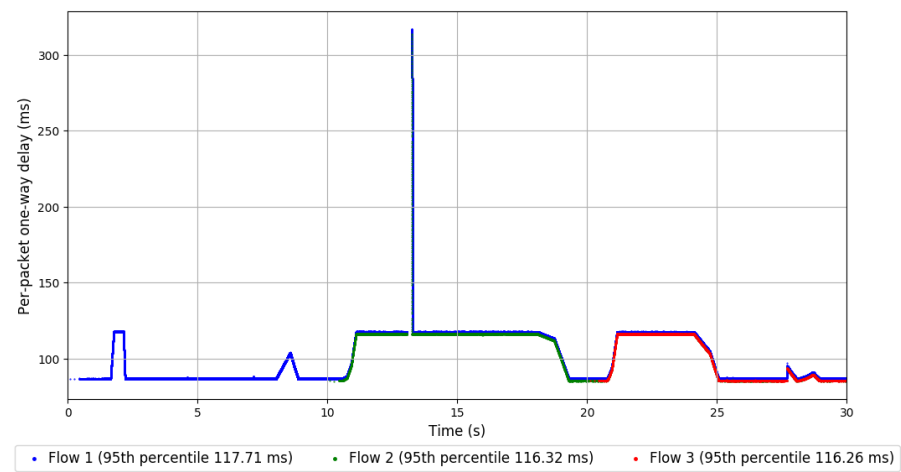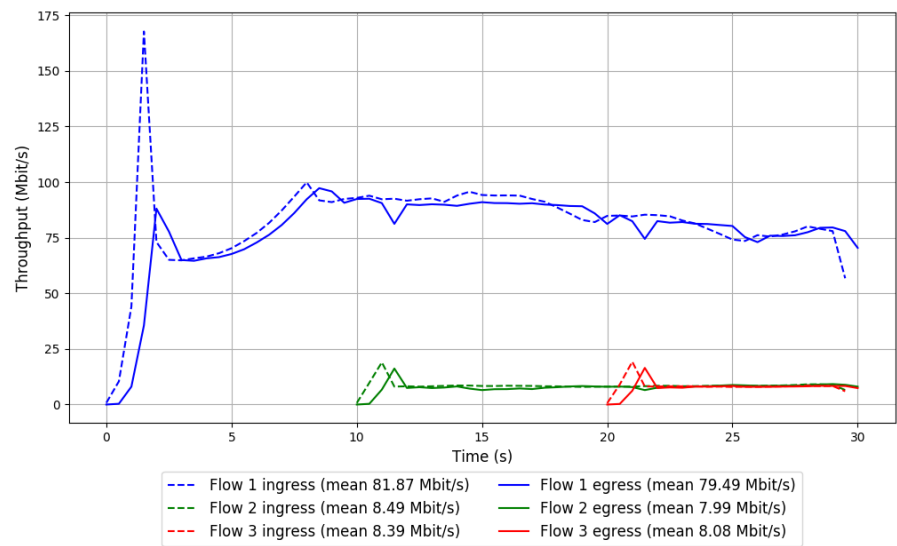
Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2018-06-05 14:34:55
End at: 2018-06-05 14:35:25
Local clock offset: -4.774 ms
Remote clock offset: 1.879 ms


# Below is generated by plot.py at 2018-06-05 14:56:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.50 Mbit/s
95th percentile per-packet one-way delay: 86.370 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 83.874 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 82.035 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 88.338 ms
Loss rate: 0.00%
```

Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-06-05 11:25:15
End at: 2018-06-05 11:25:45
Local clock offset: -7.672 ms
Remote clock offset: 14.117 ms


# Below is generated by plot.py at 2018-06-05 14:57:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.47 Mbit/s
95th percentile per-packet one-way delay: 117.706 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 79.49 Mbit/s
95th percentile per-packet one-way delay: 117.711 ms
Loss rate: 2.91%
-- Flow 2:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 116.324 ms
Loss rate: 5.98%
-- Flow 3:
Average throughput: 8.08 Mbit/s
95th percentile per-packet one-way delay: 116.260 ms
Loss rate: 3.67%
```
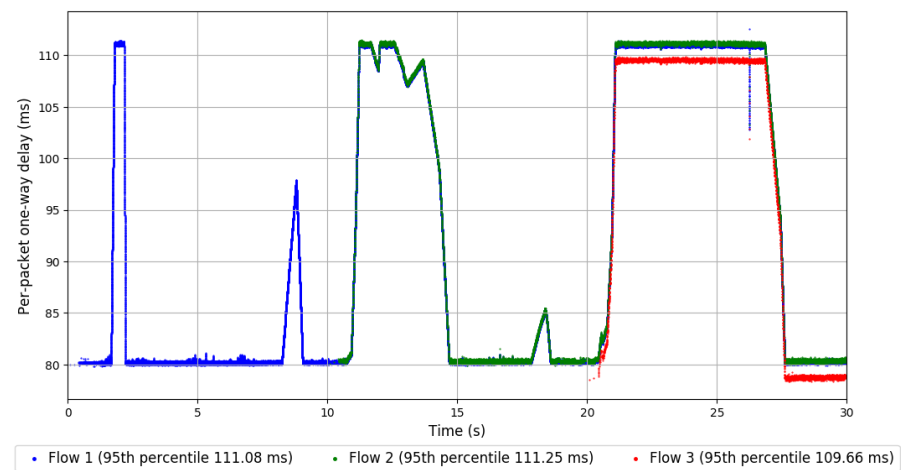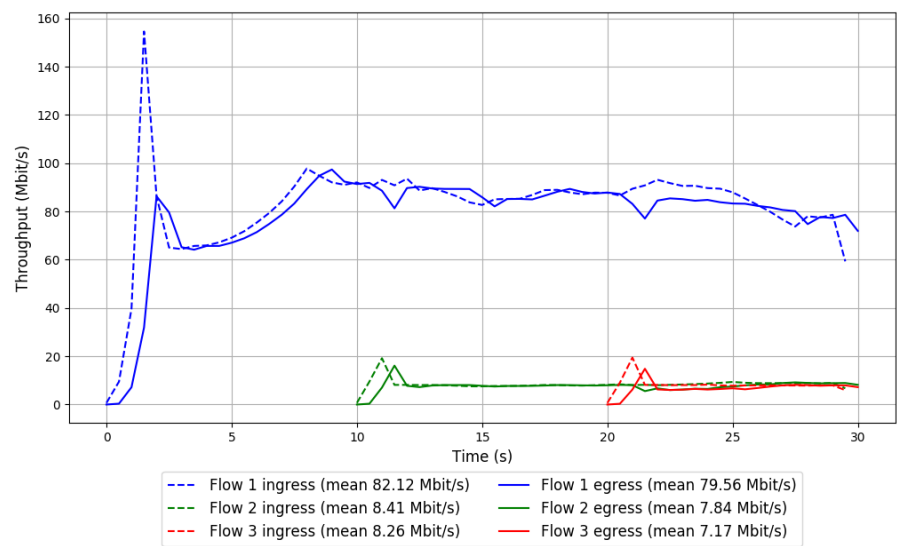
Run 1: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 81.87 Mbit/s)
- Flow 1 egress (mean 79.49 Mbit/s)
- Flow 2 ingress (mean 8.49 Mbit/s)
- Flow 2 egress (mean 7.99 Mbit/s)
- Flow 3 ingress (mean 8.39 Mbit/s)
- Flow 3 egress (mean 8.08 Mbit/s)

- Flow 1 (95th percentile 117.71 ms)
- Flow 2 (95th percentile 116.32 ms)
- Flow 3 (95th percentile 116.26 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-06-05 11:45:14
End at: 2018-06-05 11:45:44
Local clock offset: -5.762 ms
Remote clock offset: 9.2 ms


# Below is generated by plot.py at 2018-06-05 14:57:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.13 Mbit/s
95th percentile per-packet one-way delay: 111.096 ms
Loss rate: 3.66%
-- Flow 1:
Average throughput: 79.56 Mbit/s
95th percentile per-packet one-way delay: 111.084 ms
Loss rate: 3.12%
-- Flow 2:
Average throughput: 7.84 Mbit/s
95th percentile per-packet one-way delay: 111.246 ms
Loss rate: 6.84%
-- Flow 3:
Average throughput: 7.17 Mbit/s
95th percentile per-packet one-way delay: 109.661 ms
Loss rate: 13.22%
```
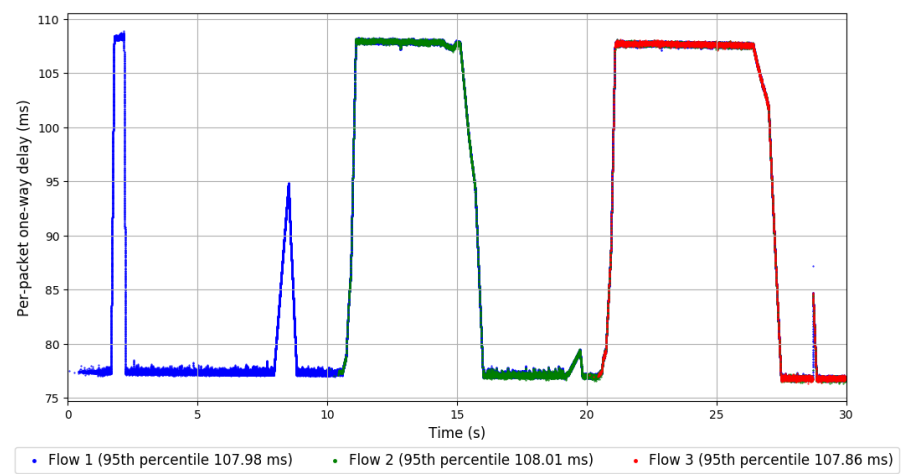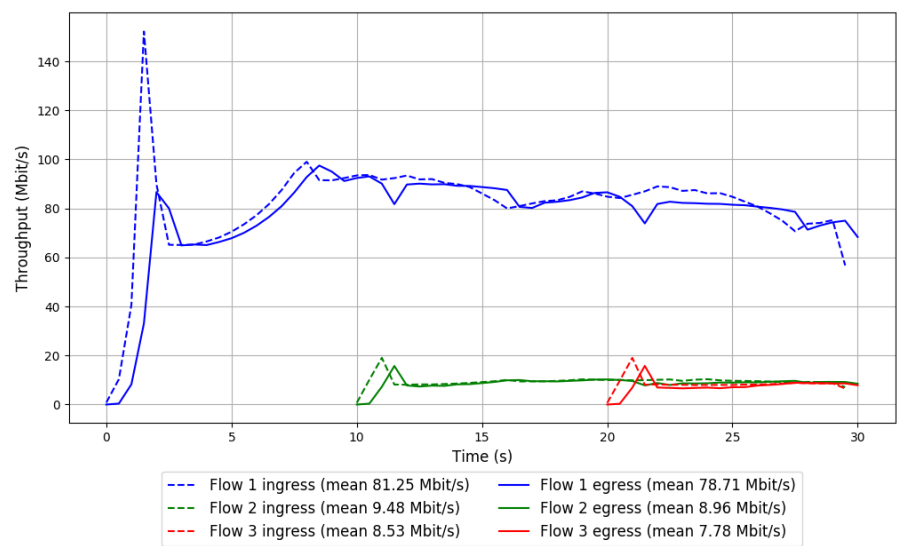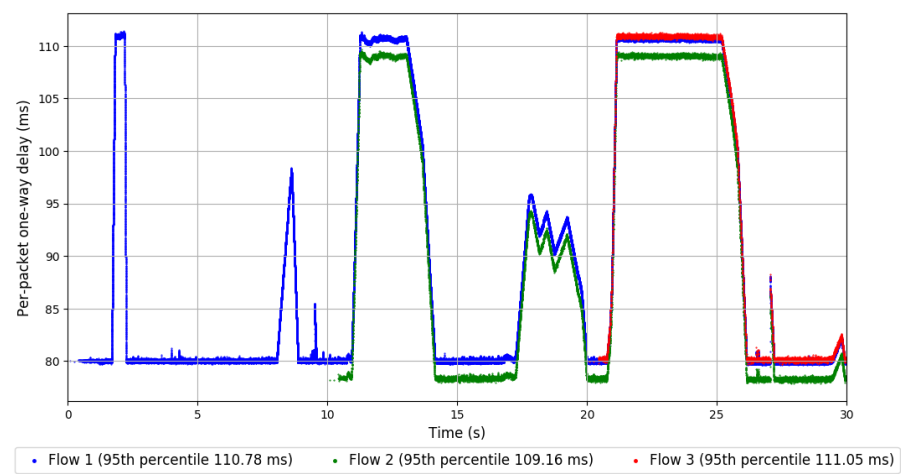
Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 82.12 Mbit/s) --- Flow 1 egress (mean 79.56 Mbit/s)
Flow 2 ingress (mean 8.41 Mbit/s) --- Flow 2 egress (mean 7.84 Mbit/s)
Flow 3 ingress (mean 8.26 Mbit/s) --- Flow 3 egress (mean 7.17 Mbit/s)

Flow 1 (95th percentile 111.08 ms) · Flow 2 (95th percentile 111.25 ms) · Flow 3 (95th percentile 109.66 ms)
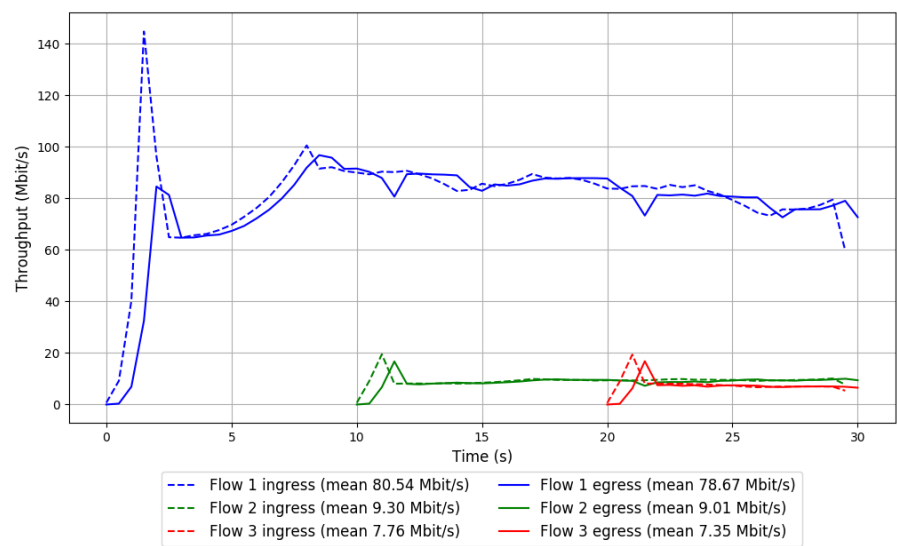
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-06-05 12:05:17
End at: 2018-06-05 12:05:47
Local clock offset: -5.647 ms
Remote clock offset: 11.624 ms


# Below is generated by plot.py at 2018-06-05 14:57:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.24 Mbit/s
95th percentile per-packet one-way delay: 107.981 ms
Loss rate: 3.46%
-- Flow 1:
Average throughput: 78.71 Mbit/s
95th percentile per-packet one-way delay: 107.982 ms
Loss rate: 3.12%
-- Flow 2:
Average throughput: 8.96 Mbit/s
95th percentile per-packet one-way delay: 108.006 ms
Loss rate: 5.41%
-- Flow 3:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 107.855 ms
Loss rate: 8.79%
```

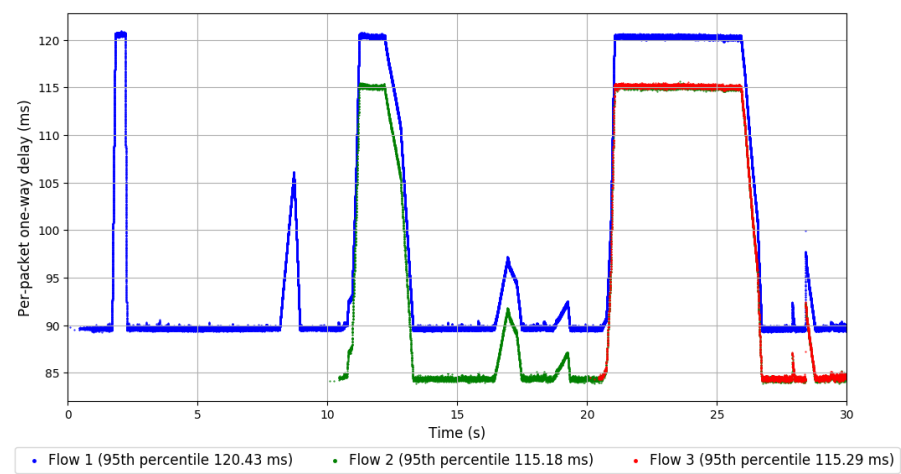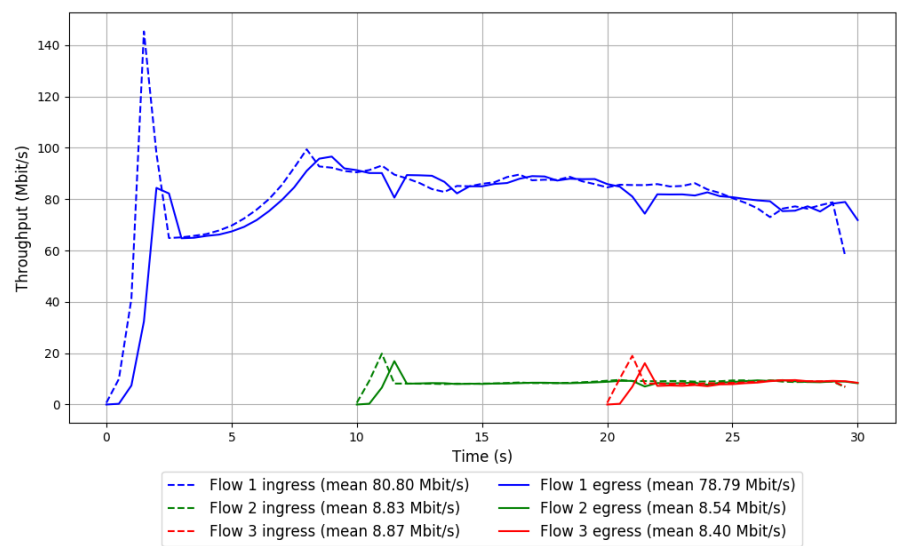Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-06-05 12:25:16
End at: 2018-06-05 12:25:46
Local clock offset: -5.678 ms
Remote clock offset: 27.843 ms


# Below is generated by plot.py at 2018-06-05 14:57:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.08 Mbit/s
95th percentile per-packet one-way delay: 110.790 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 78.67 Mbit/s
95th percentile per-packet one-way delay: 110.777 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 9.01 Mbit/s
95th percentile per-packet one-way delay: 109.162 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 7.35 Mbit/s
95th percentile per-packet one-way delay: 111.052 ms
Loss rate: 5.29%
```

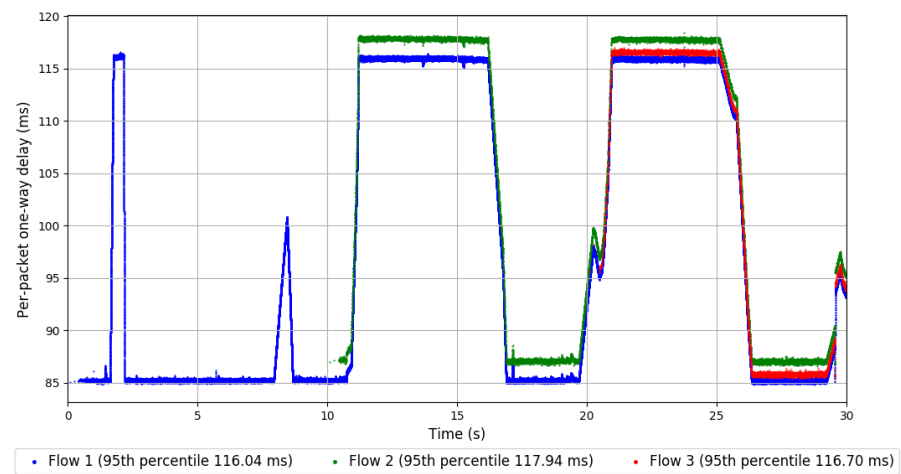Run 4: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 80.54 Mbit/s) —— Flow 1 egress (mean 78.67 Mbit/s)
- - - Flow 2 ingress (mean 9.30 Mbit/s) —— Flow 2 egress (mean 9.01 Mbit/s)
- - - Flow 3 ingress (mean 7.76 Mbit/s) —— Flow 3 egress (mean 7.35 Mbit/s)

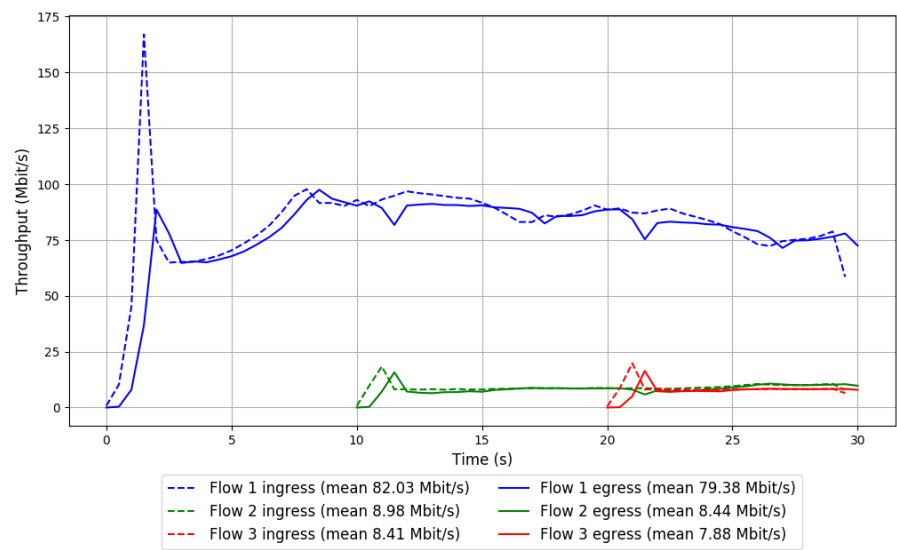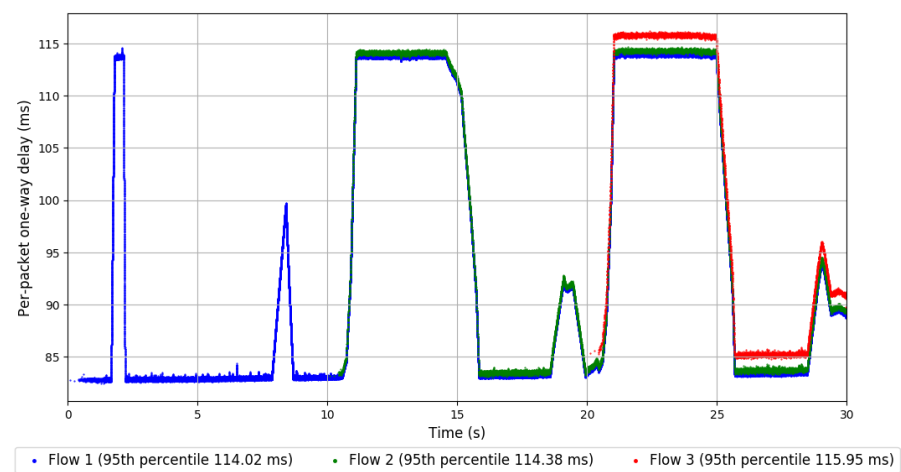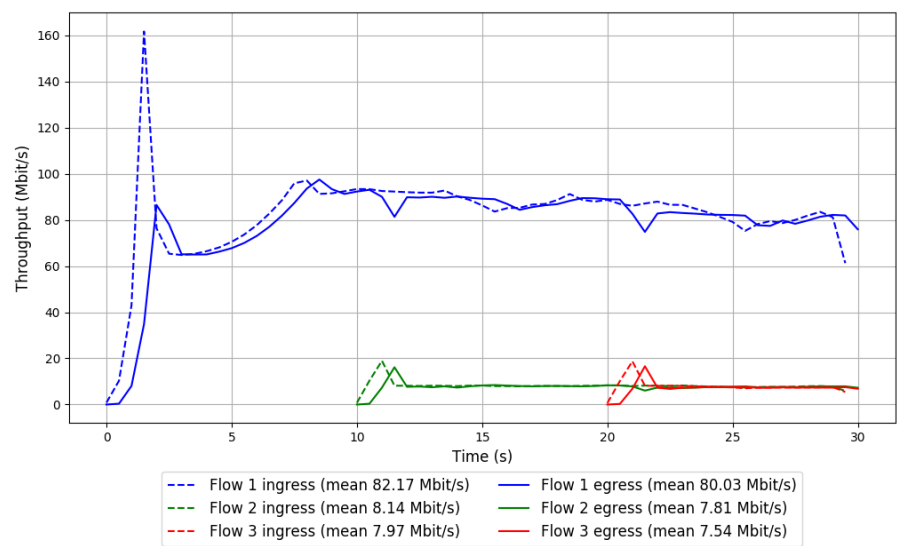- Flow 1 (95th percentile 110.78 ms)   - Flow 2 (95th percentile 109.16 ms)   - Flow 3 (95th percentile 111.05 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-06-05 12:45:16
End at: 2018-06-05 12:45:46
Local clock offset: -7.479 ms
Remote clock offset: 38.588 ms


# Below is generated by plot.py at 2018-06-05 14:57:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.24 Mbit/s
95th percentile per-packet one-way delay: 120.421 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 78.79 Mbit/s
95th percentile per-packet one-way delay: 120.431 ms
Loss rate: 2.49%
-- Flow 2:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 115.179 ms
Loss rate: 3.29%
-- Flow 3:
Average throughput: 8.40 Mbit/s
95th percentile per-packet one-way delay: 115.288 ms
Loss rate: 5.22%
```

Run 5: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 80.80 Mbit/s)
- Flow 1 egress (mean 78.79 Mbit/s)
- Flow 2 ingress (mean 8.83 Mbit/s)
- Flow 2 egress (mean 8.54 Mbit/s)
- Flow 3 ingress (mean 8.87 Mbit/s)
- Flow 3 egress (mean 8.40 Mbit/s)

- Flow 1 (95th percentile 120.43 ms)
- Flow 2 (95th percentile 115.18 ms)
- Flow 3 (95th percentile 115.29 ms)

```
Run 6: Statistics of PCC-Allegro

Start at: 2018-06-05 13:05:19
End at: 2018-06-05 13:05:49
Local clock offset: -7.679 ms
Remote clock offset: 44.734 ms


# Below is generated by plot.py at 2018-06-05 14:57:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.58 Mbit/s
95th percentile per-packet one-way delay: 116.131 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 79.38 Mbit/s
95th percentile per-packet one-way delay: 116.038 ms
Loss rate: 3.21%
-- Flow 2:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 117.942 ms
Loss rate: 5.98%
-- Flow 3:
Average throughput: 7.88 Mbit/s
95th percentile per-packet one-way delay: 116.699 ms
Loss rate: 6.38%
```

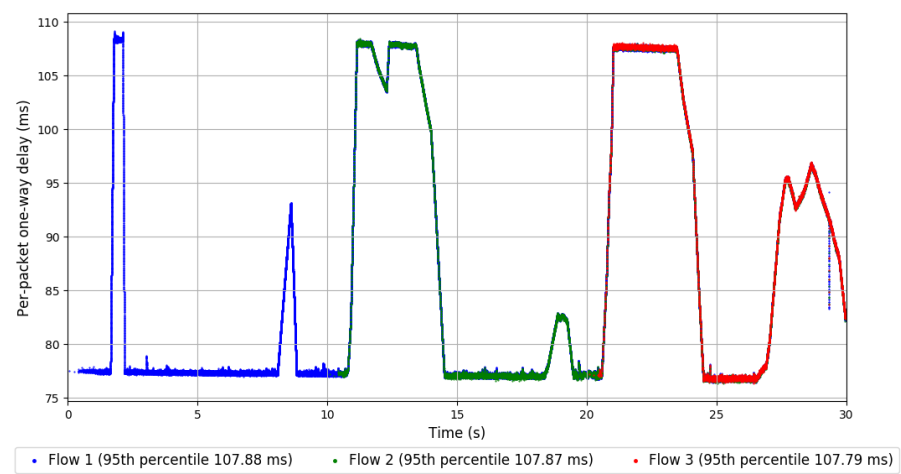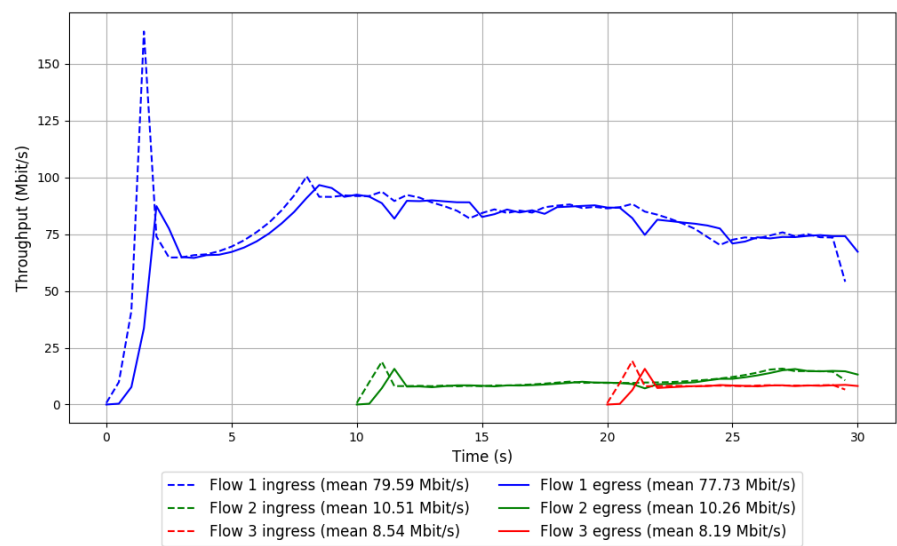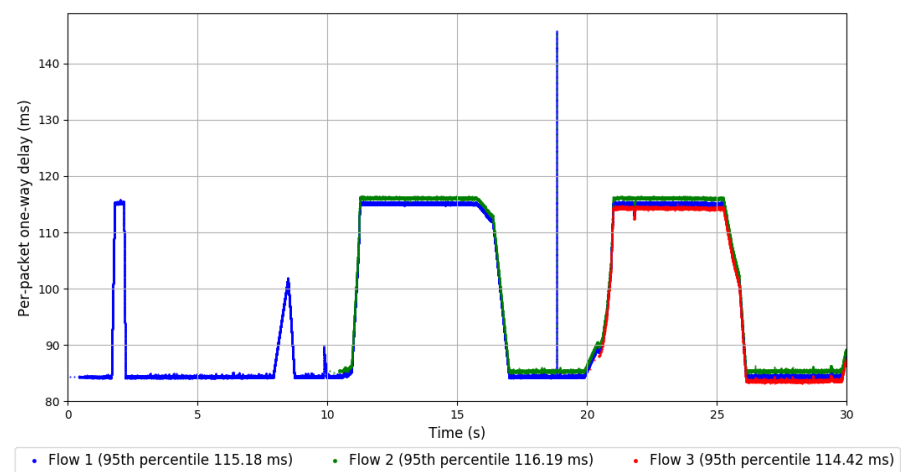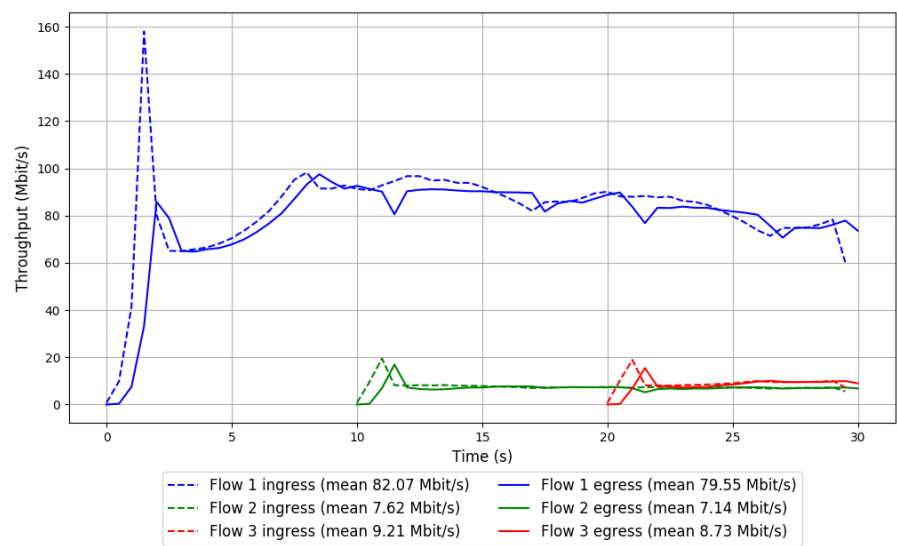Run 6: Report of PCC-Allegro — Data Link

```
Run 7: Statistics of PCC-Allegro

Start at: 2018-06-05 13:25:25
End at: 2018-06-05 13:25:55
Local clock offset: -6.117 ms
Remote clock offset: 11.209 ms


# Below is generated by plot.py at 2018-06-05 14:57:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.70 Mbit/s
95th percentile per-packet one-way delay: 114.091 ms
Loss rate: 2.76%
-- Flow 1:
Average throughput: 80.03 Mbit/s
95th percentile per-packet one-way delay: 114.023 ms
Loss rate: 2.59%
-- Flow 2:
Average throughput: 7.81 Mbit/s
95th percentile per-packet one-way delay: 114.384 ms
Loss rate: 4.02%
-- Flow 3:
Average throughput: 7.54 Mbit/s
95th percentile per-packet one-way delay: 115.952 ms
Loss rate: 5.31%
```

Run 7: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 82.17 Mbit/s) — — — Flow 1 egress (mean 80.03 Mbit/s)
Flow 2 ingress (mean 8.14 Mbit/s) — — — Flow 2 egress (mean 7.81 Mbit/s)
Flow 3 ingress (mean 7.97 Mbit/s) — — — Flow 3 egress (mean 7.54 Mbit/s)

Flow 1 (95th percentile 114.02 ms)   Flow 2 (95th percentile 114.38 ms)   Flow 3 (95th percentile 115.95 ms)

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```
Run 8: Statistics of PCC-Allegro

Start at: 2018-06-05 13:45:33
End at: 2018-06-05 13:46:03
Local clock offset: -5.932 ms
Remote clock offset: -8.671 ms

# Below is generated by plot.py at 2018-06-05 14:57:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.25 Mbit/s
95th percentile per-packet one-way delay: 107.870 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 77.73 Mbit/s
95th percentile per-packet one-way delay: 107.876 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 107.873 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 8.19 Mbit/s
95th percentile per-packet one-way delay: 107.793 ms
Loss rate: 4.11%
```

Run 8: Report of PCC-Allegro — Data Link

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```
Run 9: Statistics of PCC-Allegro

Start at: 2018-06-05 14:05:44
End at: 2018-06-05 14:06:14
Local clock offset: -5.589 ms
Remote clock offset: 11.904 ms


# Below is generated by plot.py at 2018-06-05 14:58:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.18 Mbit/s
95th percentile per-packet one-way delay: 115.211 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 79.55 Mbit/s
95th percentile per-packet one-way delay: 115.177 ms
Loss rate: 3.06%
-- Flow 2:
Average throughput: 7.14 Mbit/s
95th percentile per-packet one-way delay: 116.185 ms
Loss rate: 6.28%
-- Flow 3:
Average throughput: 8.73 Mbit/s
95th percentile per-packet one-way delay: 114.424 ms
Loss rate: 5.16%
```
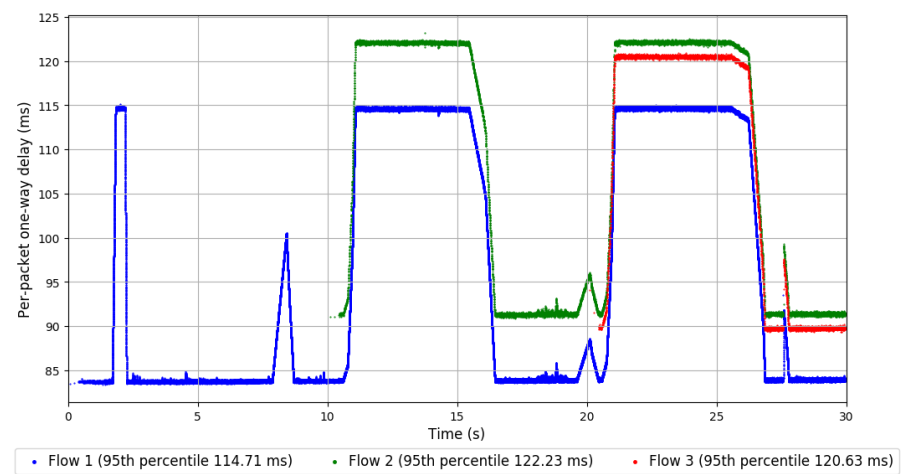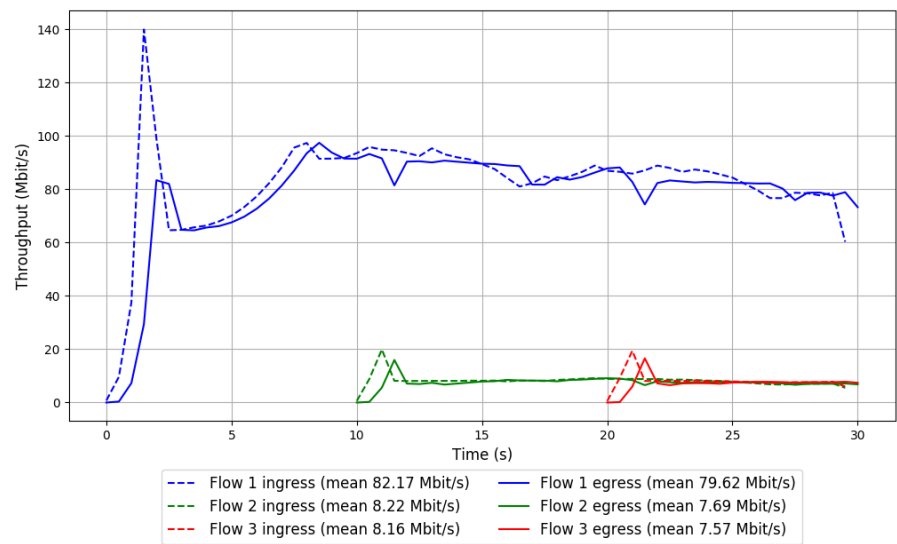
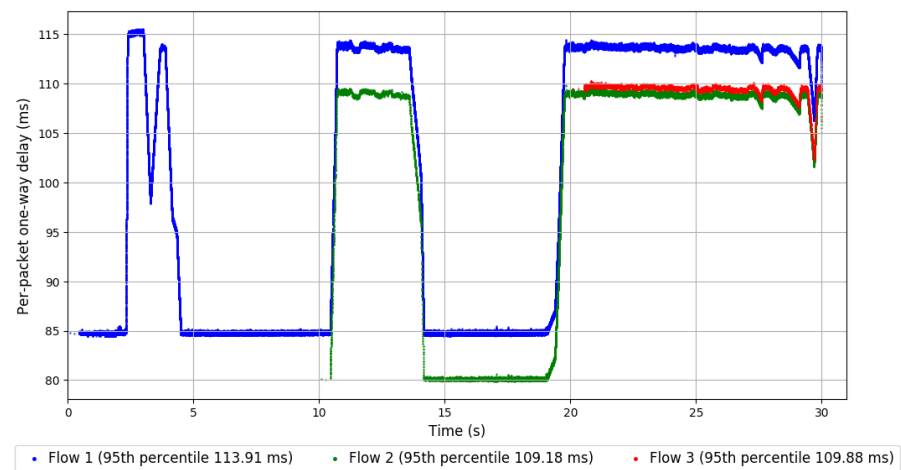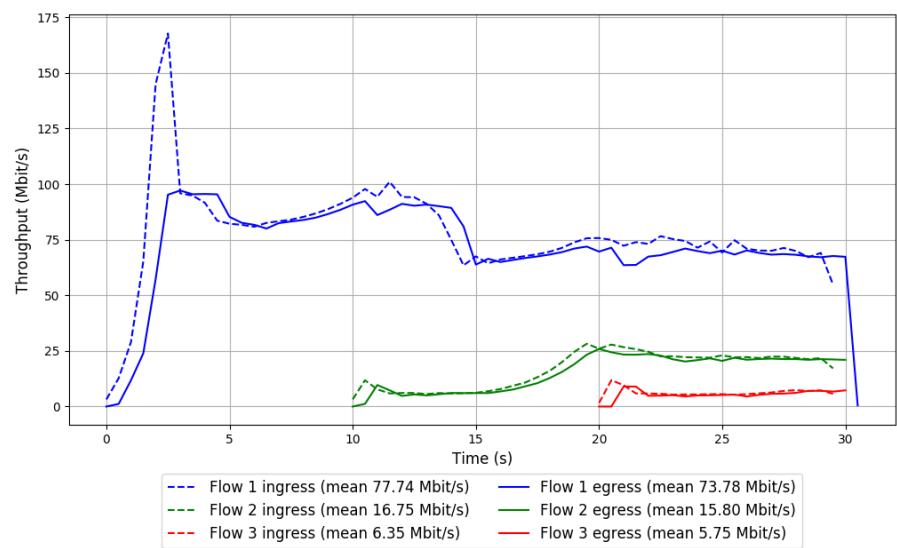## Run 9: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 82.07 Mbit/s) --- Flow 1 egress (mean 79.55 Mbit/s)
Flow 2 ingress (mean 7.62 Mbit/s) --- Flow 2 egress (mean 7.14 Mbit/s)
Flow 3 ingress (mean 9.21 Mbit/s) --- Flow 3 egress (mean 8.73 Mbit/s)

Flow 1 (95th percentile 115.18 ms) · Flow 2 (95th percentile 116.19 ms) · Flow 3 (95th percentile 114.42 ms)

```
Run 10: Statistics of PCC-Allegro

Start at: 2018-06-05 14:26:06
End at: 2018-06-05 14:26:36
Local clock offset: -5.36 ms
Remote clock offset: 8.909 ms

# Below is generated by plot.py at 2018-06-05 14:58:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.22 Mbit/s
95th percentile per-packet one-way delay: 114.834 ms
Loss rate: 3.42%
-- Flow 1:
Average throughput: 79.62 Mbit/s
95th percentile per-packet one-way delay: 114.710 ms
Loss rate: 3.10%
-- Flow 2:
Average throughput: 7.69 Mbit/s
95th percentile per-packet one-way delay: 122.228 ms
Loss rate: 6.42%
-- Flow 3:
Average throughput: 7.57 Mbit/s
95th percentile per-packet one-way delay: 120.630 ms
Loss rate: 7.27%
```
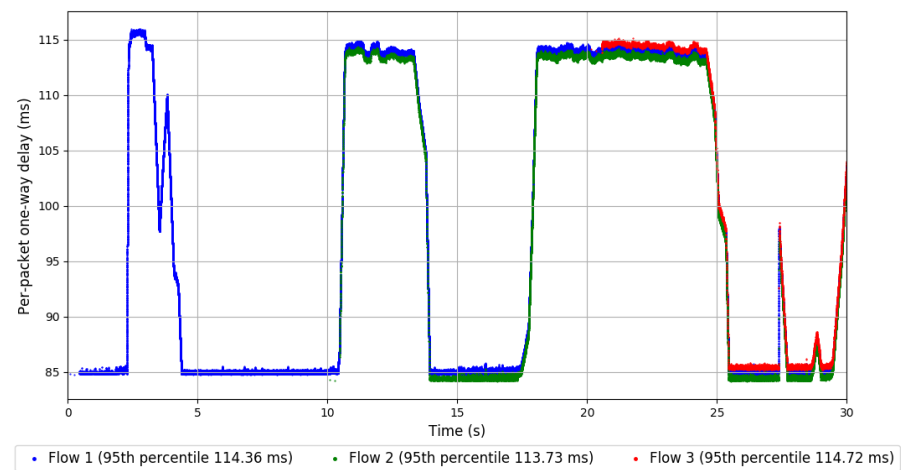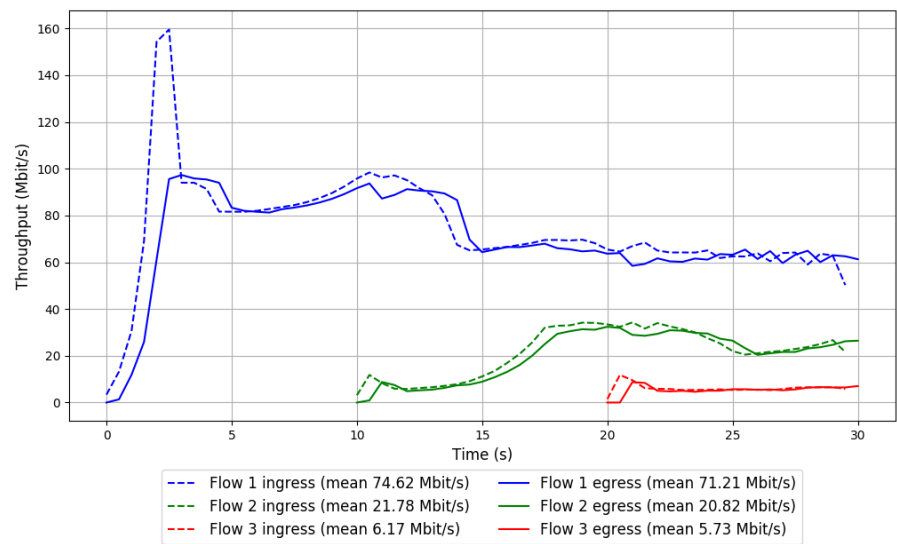
Run 10: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 82.17 Mbit/s) — Flow 1 egress (mean 79.62 Mbit/s)
Flow 2 ingress (mean 8.22 Mbit/s) — Flow 2 egress (mean 7.69 Mbit/s)
Flow 3 ingress (mean 8.16 Mbit/s) — Flow 3 egress (mean 7.57 Mbit/s)

Flow 1 (95th percentile 114.71 ms) · Flow 2 (95th percentile 122.23 ms) · Flow 3 (95th percentile 120.63 ms)

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```
Run 1: Statistics of PCC-Expr

Start at: 2018-06-05 11:27:47
End at: 2018-06-05 11:28:17
Local clock offset: -7.682 ms
Remote clock offset: 7.998 ms


# Below is generated by plot.py at 2018-06-05 14:59:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.19 Mbit/s
95th percentile per-packet one-way delay: 113.891 ms
Loss rate: 5.17%
-- Flow 1:
Average throughput: 73.78 Mbit/s
95th percentile per-packet one-way delay: 113.914 ms
Loss rate: 5.01%
-- Flow 2:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 109.179 ms
Loss rate: 5.54%
-- Flow 3:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 109.875 ms
Loss rate: 9.37%
```
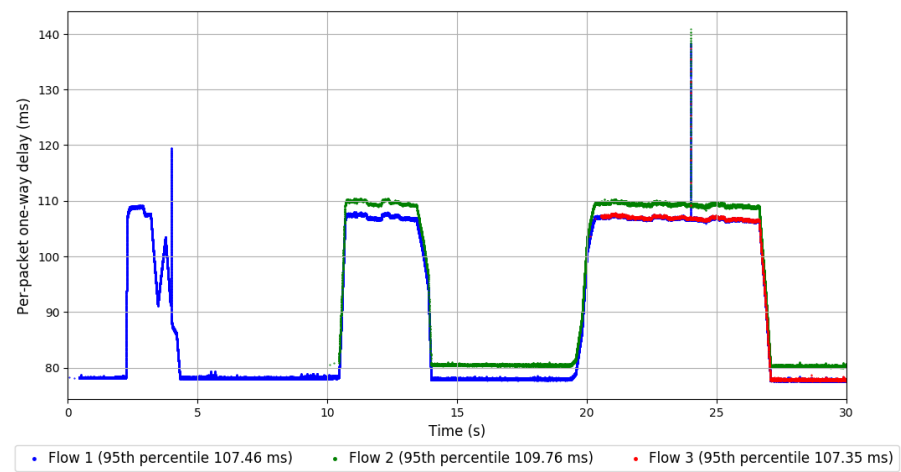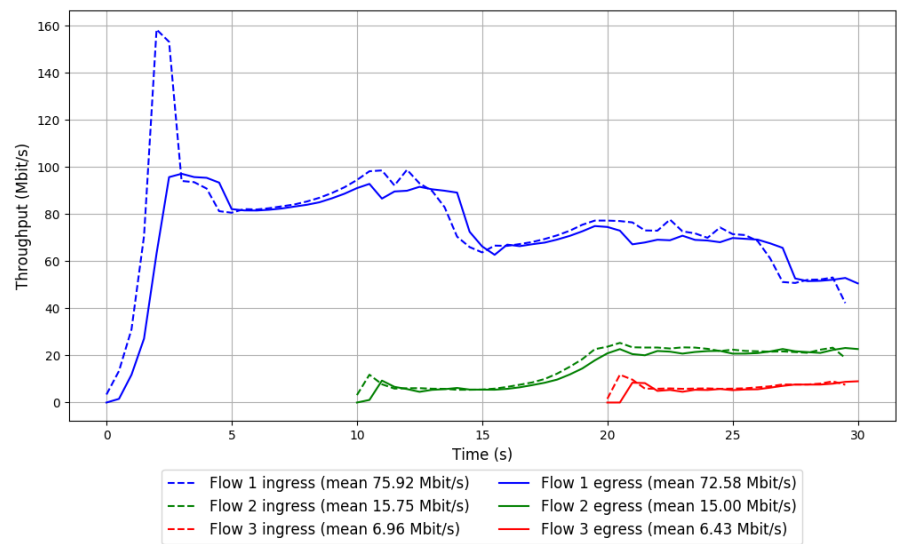
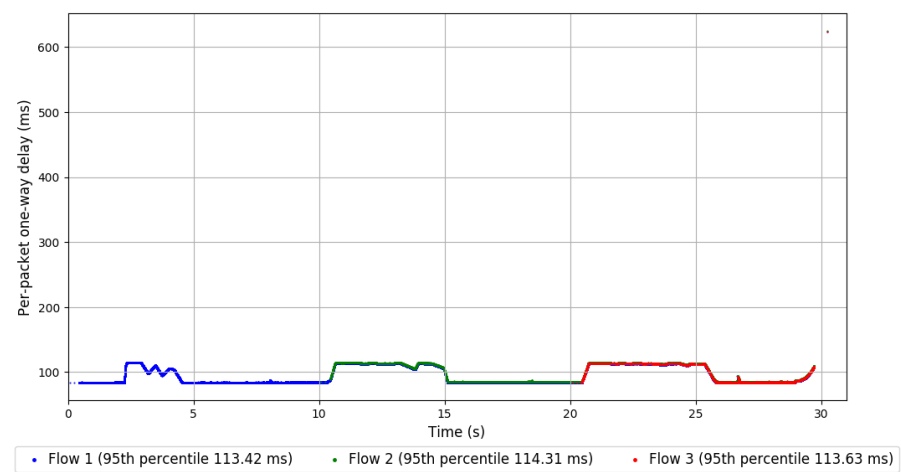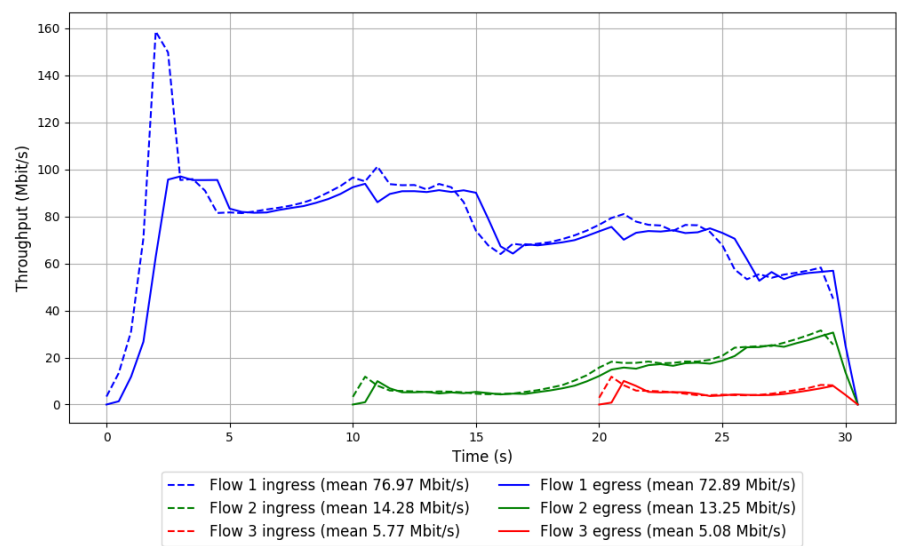Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-06-05 11:47:47
End at: 2018-06-05 11:48:17
Local clock offset: -5.707 ms
Remote clock offset: 13.295 ms


# Below is generated by plot.py at 2018-06-05 14:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.95 Mbit/s
95th percentile per-packet one-way delay: 114.342 ms
Loss rate: 4.54%
-- Flow 1:
Average throughput: 71.21 Mbit/s
95th percentile per-packet one-way delay: 114.361 ms
Loss rate: 4.51%
-- Flow 2:
Average throughput: 20.82 Mbit/s
95th percentile per-packet one-way delay: 113.733 ms
Loss rate: 4.32%
-- Flow 3:
Average throughput: 5.73 Mbit/s
95th percentile per-packet one-way delay: 114.719 ms
Loss rate: 7.30%
```

Run 2: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 74.62 Mbit/s)   Flow 1 egress (mean 71.21 Mbit/s)
Flow 2 ingress (mean 21.78 Mbit/s)   Flow 2 egress (mean 20.82 Mbit/s)
Flow 3 ingress (mean 6.17 Mbit/s)   Flow 3 egress (mean 5.73 Mbit/s)

Flow 1 (95th percentile 114.36 ms)   Flow 2 (95th percentile 113.73 ms)   Flow 3 (95th percentile 114.72 ms)
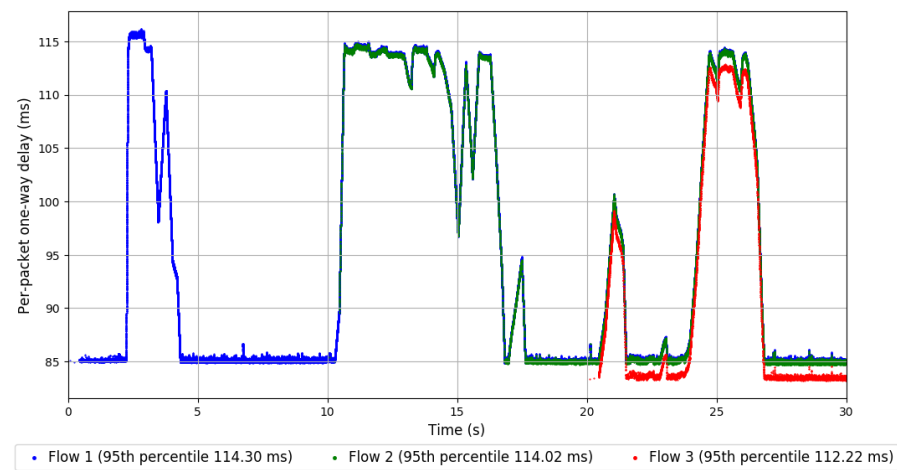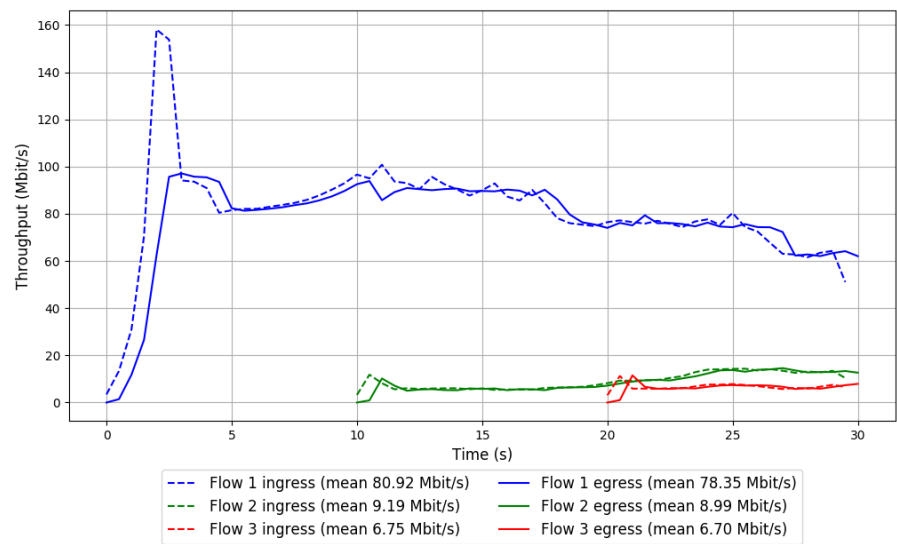
```
Run 3: Statistics of PCC-Expr

Start at: 2018-06-05 12:07:49
End at: 2018-06-05 12:08:19
Local clock offset: -5.681 ms
Remote clock offset: 16.061 ms


# Below is generated by plot.py at 2018-06-05 14:59:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.67 Mbit/s
95th percentile per-packet one-way delay: 108.969 ms
Loss rate: 4.53%
-- Flow 1:
Average throughput: 72.58 Mbit/s
95th percentile per-packet one-way delay: 107.456 ms
Loss rate: 4.40%
-- Flow 2:
Average throughput: 15.00 Mbit/s
95th percentile per-packet one-way delay: 109.757 ms
Loss rate: 4.79%
-- Flow 3:
Average throughput: 6.43 Mbit/s
95th percentile per-packet one-way delay: 107.354 ms
Loss rate: 7.81%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 75.92 Mbit/s) — Flow 1 egress (mean 72.58 Mbit/s)
Flow 2 ingress (mean 15.75 Mbit/s) — Flow 2 egress (mean 15.00 Mbit/s)
Flow 3 ingress (mean 6.96 Mbit/s) — Flow 3 egress (mean 6.43 Mbit/s)

Flow 1 (95th percentile 107.46 ms) · Flow 2 (95th percentile 109.76 ms) · Flow 3 (95th percentile 107.35 ms)
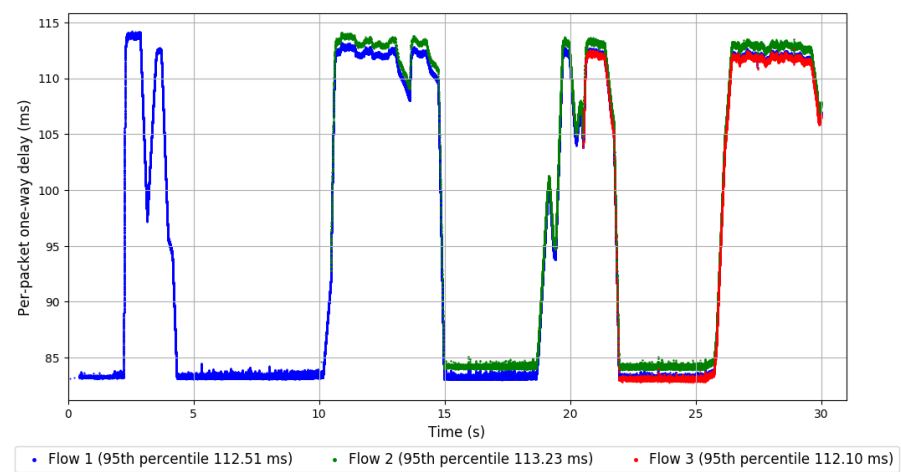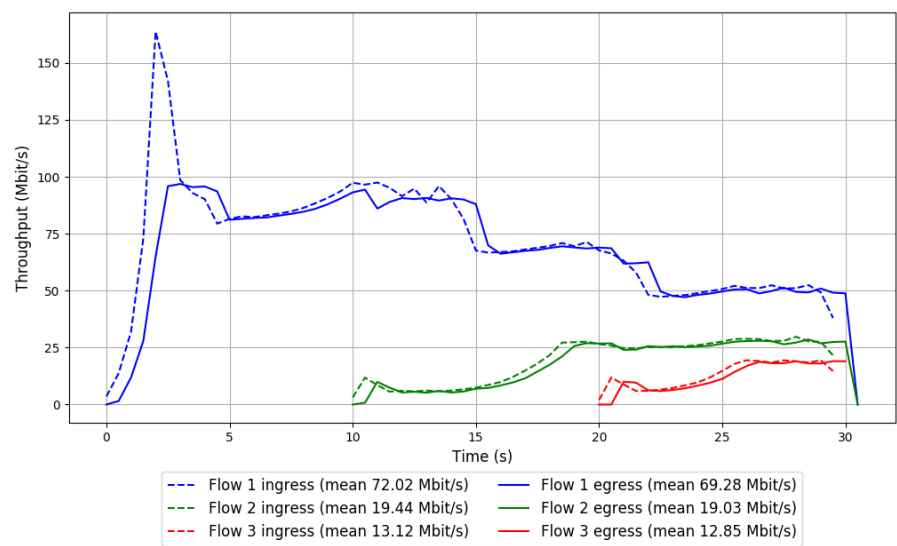
```
Run 4: Statistics of PCC-Expr

Start at: 2018-06-05 12:27:48
End at: 2018-06-05 12:28:18
Local clock offset: -6.515 ms
Remote clock offset: 33.798 ms


# Below is generated by plot.py at 2018-06-05 14:59:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.45 Mbit/s
95th percentile per-packet one-way delay: 113.638 ms
Loss rate: 4.73%
-- Flow 1:
Average throughput: 72.89 Mbit/s
95th percentile per-packet one-way delay: 113.418 ms
Loss rate: 4.46%
-- Flow 2:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 114.313 ms
Loss rate: 5.99%
-- Flow 3:
Average throughput: 5.08 Mbit/s
95th percentile per-packet one-way delay: 113.626 ms
Loss rate: 9.58%
```

Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 76.97 Mbit/s) — Flow 1 egress (mean 72.89 Mbit/s)
Flow 2 ingress (mean 14.28 Mbit/s) — Flow 2 egress (mean 13.25 Mbit/s)
Flow 3 ingress (mean 5.77 Mbit/s) — Flow 3 egress (mean 5.08 Mbit/s)

Flow 1 (95th percentile 113.42 ms) • Flow 2 (95th percentile 114.31 ms) • Flow 3 (95th percentile 113.63 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2018-06-05 12:47:48
End at: 2018-06-05 12:48:18
Local clock offset: -6.73 ms
Remote clock offset: 39.447 ms


# Below is generated by plot.py at 2018-06-05 14:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.55 Mbit/s
95th percentile per-packet one-way delay: 114.277 ms
Loss rate: 3.04%
-- Flow 1:
Average throughput: 78.35 Mbit/s
95th percentile per-packet one-way delay: 114.300 ms
Loss rate: 3.17%
-- Flow 2:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 114.017 ms
Loss rate: 2.21%
-- Flow 3:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 112.218 ms
Loss rate: 0.74%
```
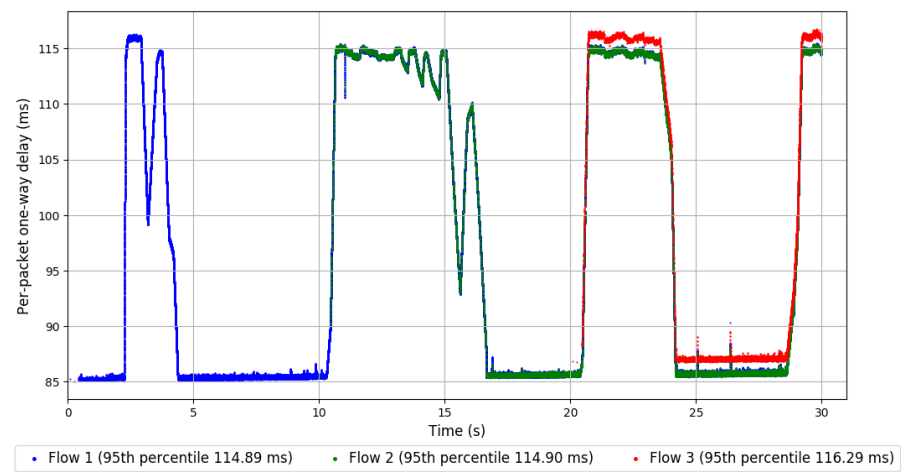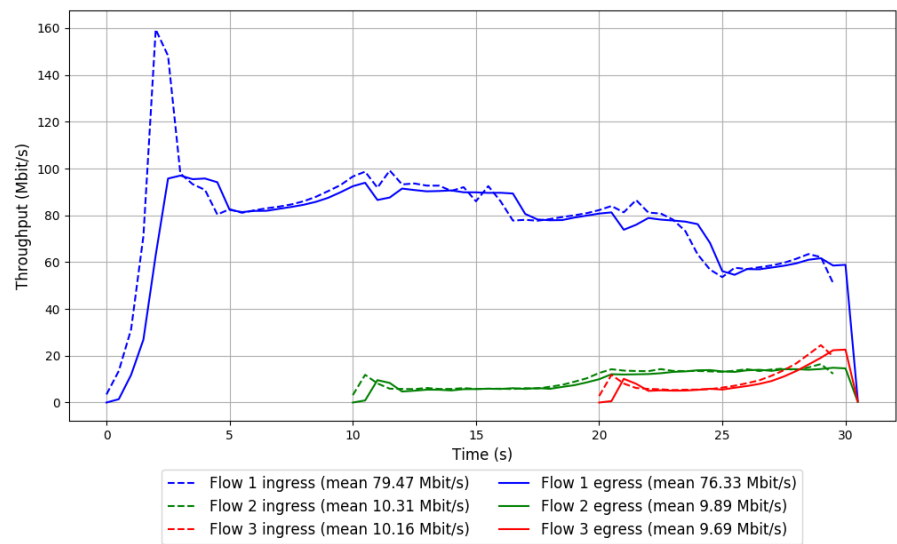
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 80.92 Mbit/s)
Flow 1 egress (mean 78.35 Mbit/s)
Flow 2 ingress (mean 9.19 Mbit/s)
Flow 2 egress (mean 8.99 Mbit/s)
Flow 3 ingress (mean 6.75 Mbit/s)
Flow 3 egress (mean 6.70 Mbit/s)

Flow 1 (95th percentile 114.30 ms)
Flow 2 (95th percentile 114.02 ms)
Flow 3 (95th percentile 112.22 ms)

```
Run 6: Statistics of PCC-Expr

Start at: 2018-06-05 13:07:51
End at: 2018-06-05 13:08:21
Local clock offset: -6.895 ms
Remote clock offset: 45.308 ms


# Below is generated by plot.py at 2018-06-05 14:59:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 112.853 ms
Loss rate: 3.40%
-- Flow 1:
Average throughput: 69.28 Mbit/s
95th percentile per-packet one-way delay: 112.510 ms
Loss rate: 3.73%
-- Flow 2:
Average throughput: 19.03 Mbit/s
95th percentile per-packet one-way delay: 113.233 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 12.85 Mbit/s
95th percentile per-packet one-way delay: 112.101 ms
Loss rate: 2.01%
```
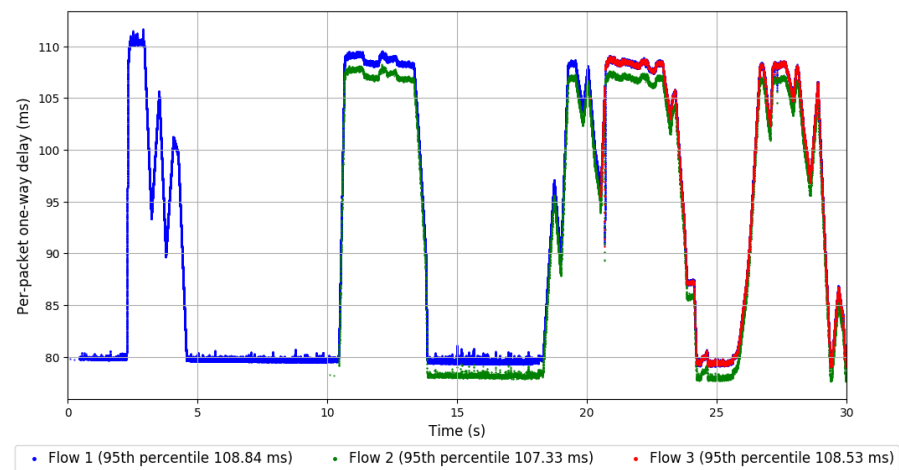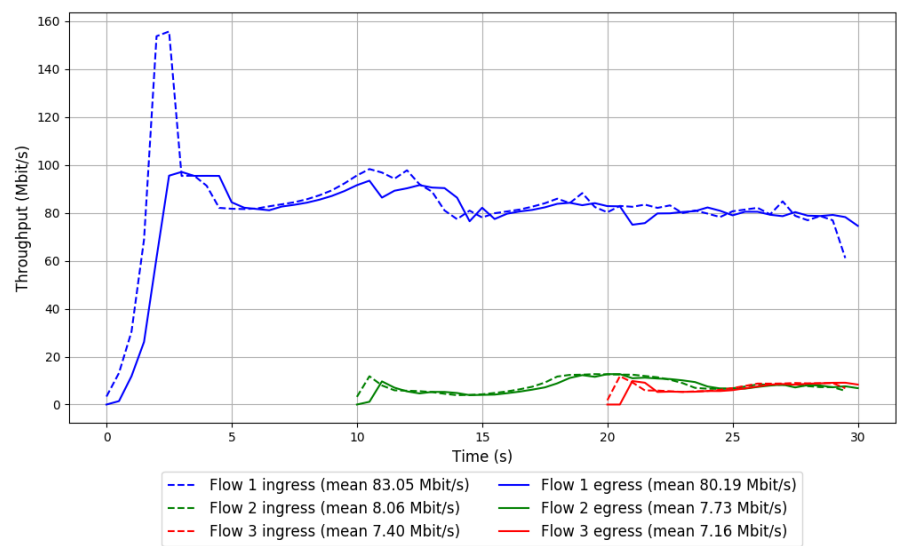
Run 6: Report of PCC-Expr — Data Link

- - - Flow 1 ingress (mean 72.02 Mbit/s) —— Flow 1 egress (mean 69.28 Mbit/s)
- - - Flow 2 ingress (mean 19.44 Mbit/s) —— Flow 2 egress (mean 19.03 Mbit/s)
- - - Flow 3 ingress (mean 13.12 Mbit/s) —— Flow 3 egress (mean 12.85 Mbit/s)

- Flow 1 (95th percentile 112.51 ms)   • Flow 2 (95th percentile 113.23 ms)   • Flow 3 (95th percentile 112.10 ms)

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```
Run 7: Statistics of PCC-Expr

Start at: 2018-06-05 13:27:58
End at: 2018-06-05 13:28:28
Local clock offset: -6.861 ms
Remote clock offset: 8.363 ms


# Below is generated by plot.py at 2018-06-05 15:00:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.12 Mbit/s
95th percentile per-packet one-way delay: 114.942 ms
Loss rate: 3.87%
-- Flow 1:
Average throughput: 76.33 Mbit/s
95th percentile per-packet one-way delay: 114.891 ms
Loss rate: 3.85%
-- Flow 2:
Average throughput: 9.89 Mbit/s
95th percentile per-packet one-way delay: 114.903 ms
Loss rate: 3.94%
-- Flow 3:
Average throughput: 9.69 Mbit/s
95th percentile per-packet one-way delay: 116.294 ms
Loss rate: 4.34%
```
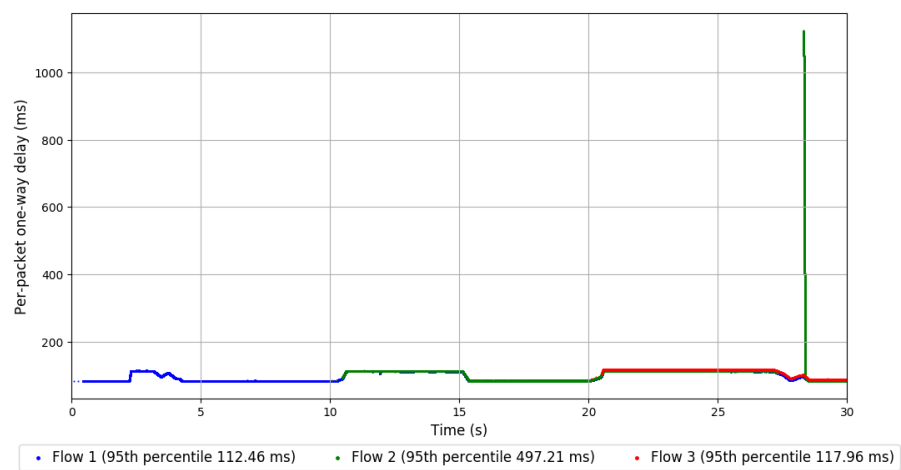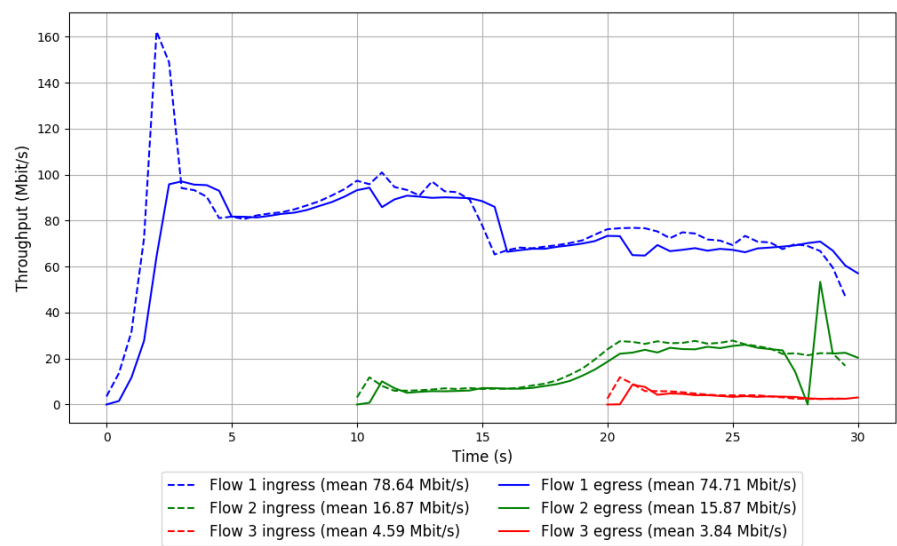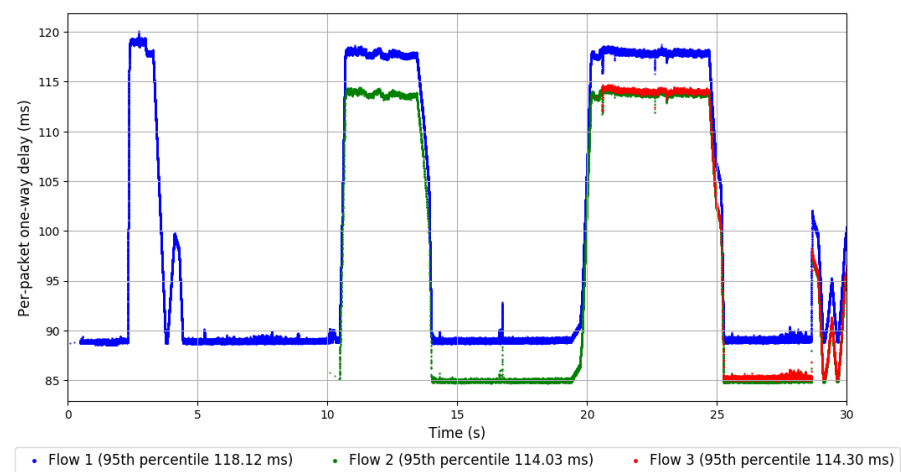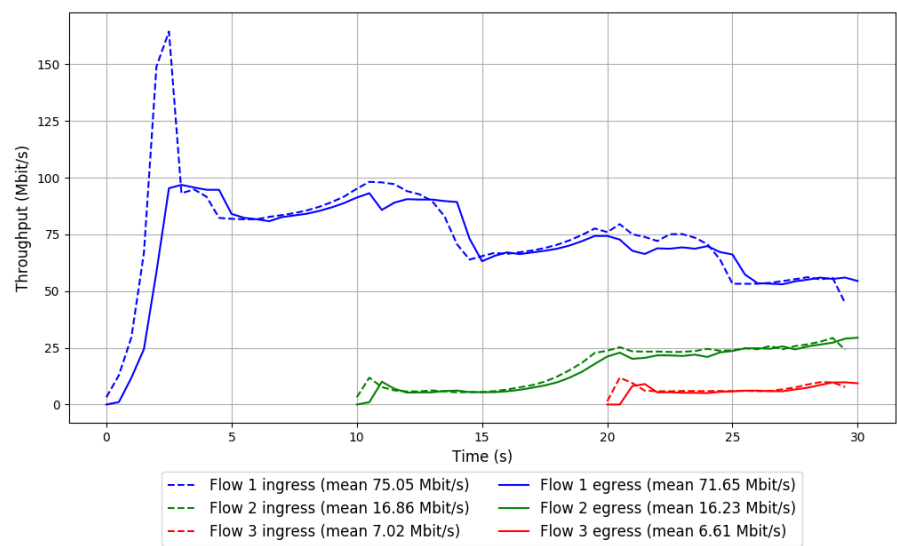
Run 7: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 79.47 Mbit/s) --- Flow 1 egress (mean 76.33 Mbit/s)
Flow 2 ingress (mean 10.31 Mbit/s) --- Flow 2 egress (mean 9.89 Mbit/s)
Flow 3 ingress (mean 10.16 Mbit/s) --- Flow 3 egress (mean 9.69 Mbit/s)

Flow 1 (95th percentile 114.89 ms) • Flow 2 (95th percentile 114.90 ms) • Flow 3 (95th percentile 116.29 ms)

```
Run 8: Statistics of PCC-Expr

Start at: 2018-06-05 13:48:05
End at: 2018-06-05 13:48:35
Local clock offset: -5.91 ms
Remote clock offset: -3.41 ms

# Below is generated by plot.py at 2018-06-05 15:00:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.69 Mbit/s
95th percentile per-packet one-way delay: 108.778 ms
Loss rate: 3.48%
-- Flow 1:
Average throughput: 80.19 Mbit/s
95th percentile per-packet one-way delay: 108.836 ms
Loss rate: 3.44%
-- Flow 2:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 107.332 ms
Loss rate: 4.07%
-- Flow 3:
Average throughput: 7.16 Mbit/s
95th percentile per-packet one-way delay: 108.533 ms
Loss rate: 3.48%
```
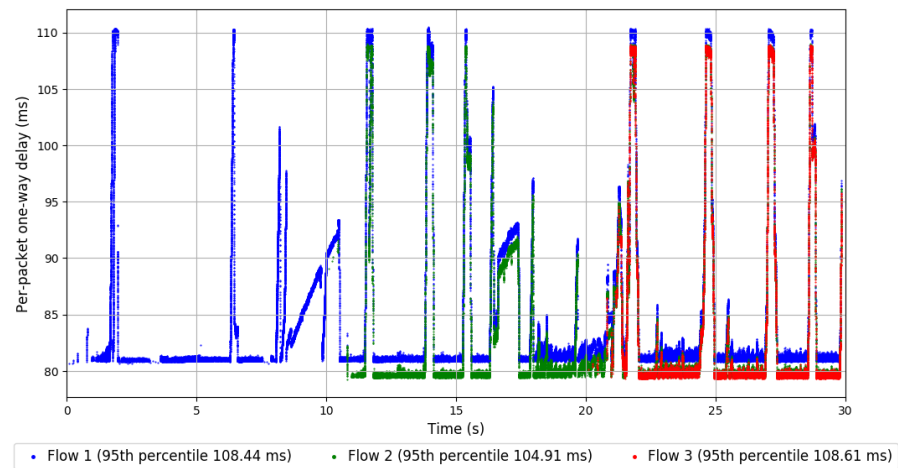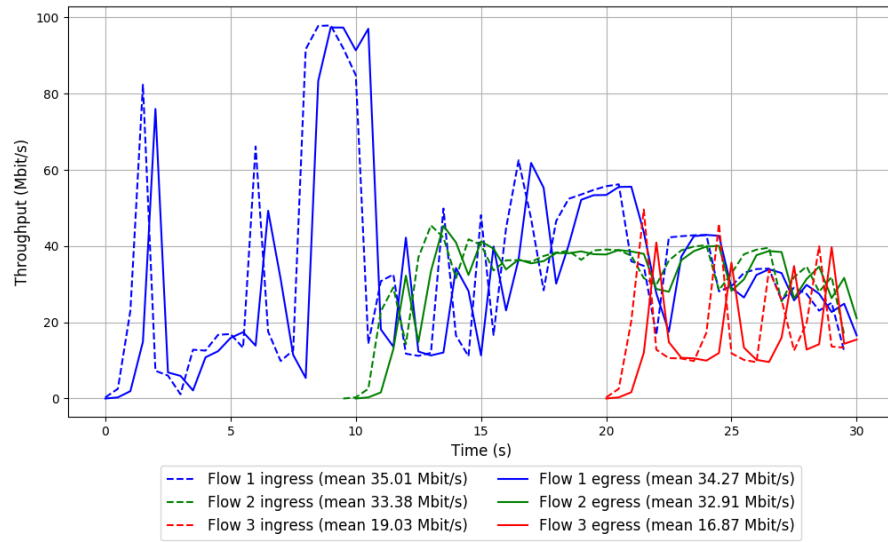
Run 8: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 83.05 Mbit/s) — — —   Flow 1 egress (mean 80.19 Mbit/s)
Flow 2 ingress (mean 8.06 Mbit/s) — — —   Flow 2 egress (mean 7.73 Mbit/s)
Flow 3 ingress (mean 7.40 Mbit/s) — — —   Flow 3 egress (mean 7.16 Mbit/s)

Flow 1 (95th percentile 108.84 ms)   Flow 2 (95th percentile 107.33 ms)   Flow 3 (95th percentile 108.53 ms)

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```
Run 9: Statistics of PCC-Expr

Start at: 2018-06-05 14:08:17
End at: 2018-06-05 14:08:47
Local clock offset: -5.447 ms
Remote clock offset: 10.95 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.52 Mbit/s
95th percentile per-packet one-way delay: 113.453 ms
Loss rate: 5.30%
-- Flow 1:
Average throughput: 74.71 Mbit/s
95th percentile per-packet one-way delay: 112.462 ms
Loss rate: 5.00%
-- Flow 2:
Average throughput: 15.87 Mbit/s
95th percentile per-packet one-way delay: 497.210 ms
Loss rate: 5.90%
-- Flow 3:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 117.962 ms
Loss rate: 16.43%
```
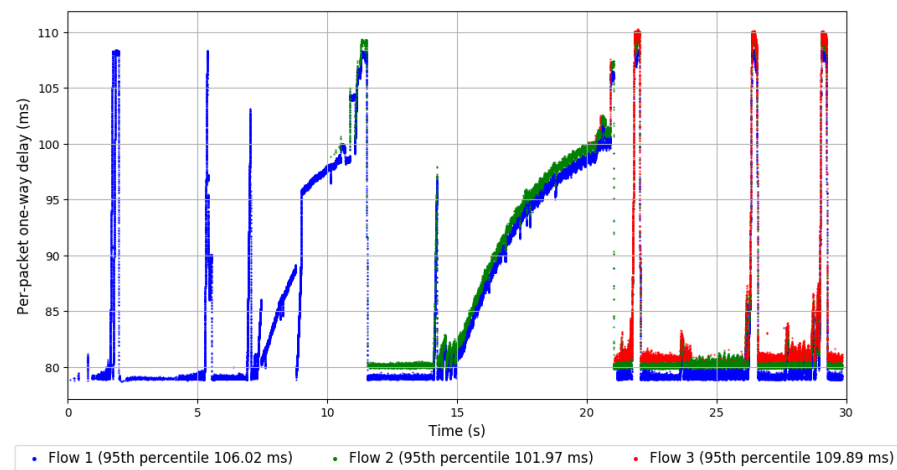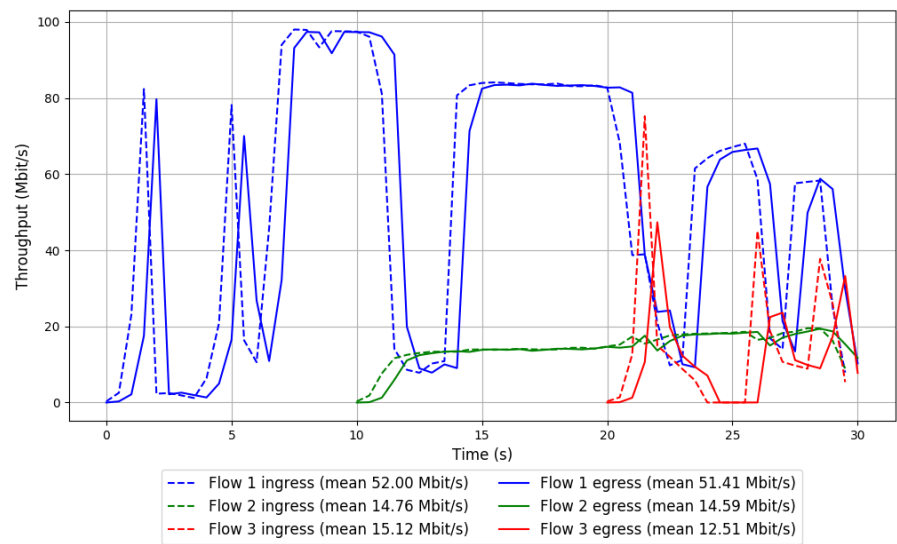
Run 9: Report of PCC-Expr — Data Link

- Flow 1 ingress (mean 78.64 Mbit/s)
- Flow 1 egress (mean 74.71 Mbit/s)
- Flow 2 ingress (mean 16.87 Mbit/s)
- Flow 2 egress (mean 15.87 Mbit/s)
- Flow 3 ingress (mean 4.59 Mbit/s)
- Flow 3 egress (mean 3.84 Mbit/s)

- Flow 1 (95th percentile 112.46 ms)
- Flow 2 (95th percentile 497.21 ms)
- Flow 3 (95th percentile 117.96 ms)

```
Run 10: Statistics of PCC-Expr

Start at: 2018-06-05 14:28:39
End at: 2018-06-05 14:29:09
Local clock offset: -5.22 ms
Remote clock offset: 8.04 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.62 Mbit/s
95th percentile per-packet one-way delay: 118.087 ms
Loss rate: 4.43%
-- Flow 1:
Average throughput: 71.65 Mbit/s
95th percentile per-packet one-way delay: 118.119 ms
Loss rate: 4.50%
-- Flow 2:
Average throughput: 16.23 Mbit/s
95th percentile per-packet one-way delay: 114.028 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 6.61 Mbit/s
95th percentile per-packet one-way delay: 114.304 ms
Loss rate: 6.00%
```
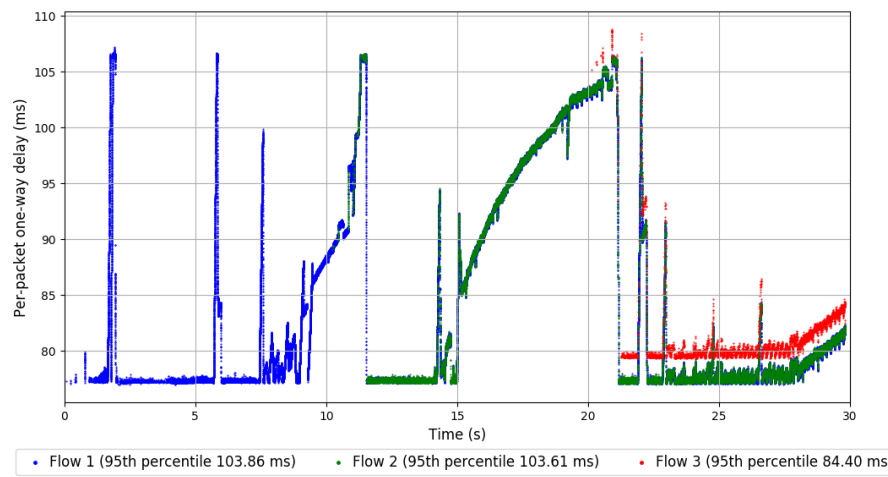
Run 10: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 75.05 Mbit/s) Flow 1 egress (mean 71.65 Mbit/s)
Flow 2 ingress (mean 16.86 Mbit/s) Flow 2 egress (mean 16.23 Mbit/s)
Flow 3 ingress (mean 7.02 Mbit/s) Flow 3 egress (mean 6.61 Mbit/s)

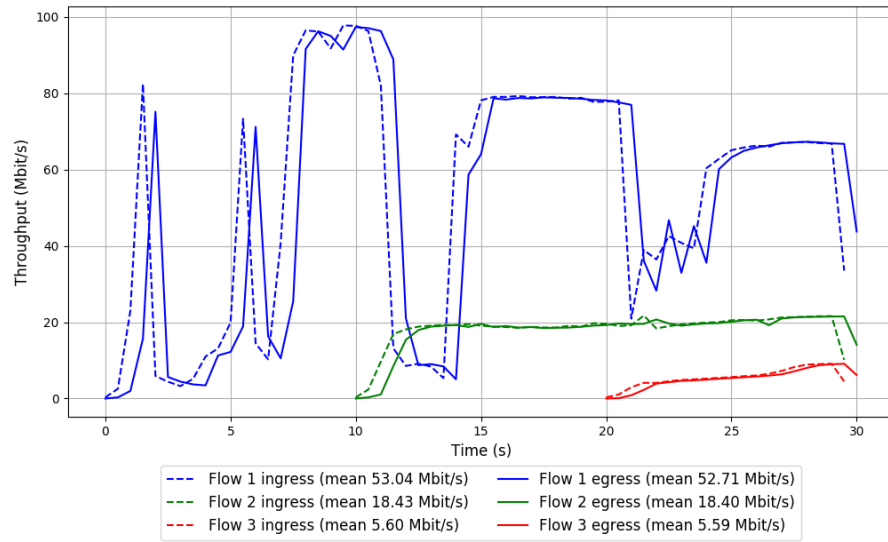Flow 1 (95th percentile 118.12 ms) Flow 2 (95th percentile 114.03 ms) Flow 3 (95th percentile 114.30 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-06-05 11:40:15
End at: 2018-06-05 11:40:45
Local clock offset: -6.672 ms
Remote clock offset: 9.149 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.64 Mbit/s
95th percentile per-packet one-way delay: 108.302 ms
Loss rate: 2.71%
-- Flow 1:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 108.445 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 32.91 Mbit/s
95th percentile per-packet one-way delay: 104.908 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 16.87 Mbit/s
95th percentile per-packet one-way delay: 108.613 ms
Loss rate: 11.20%
```
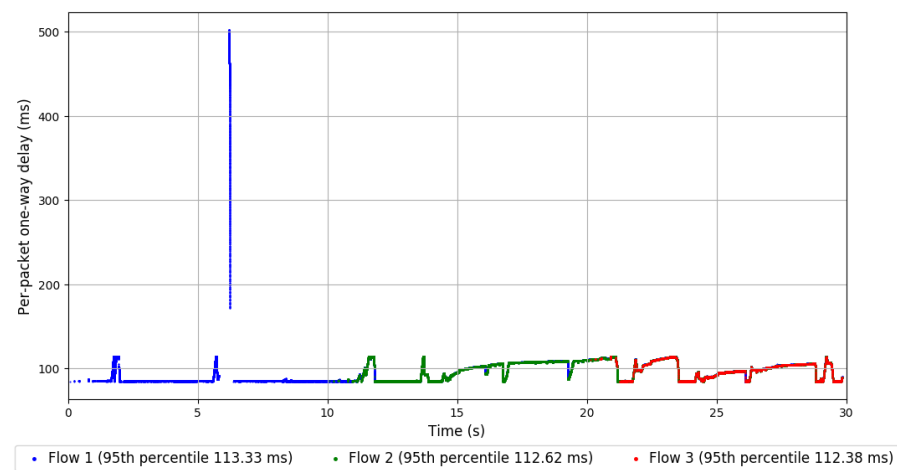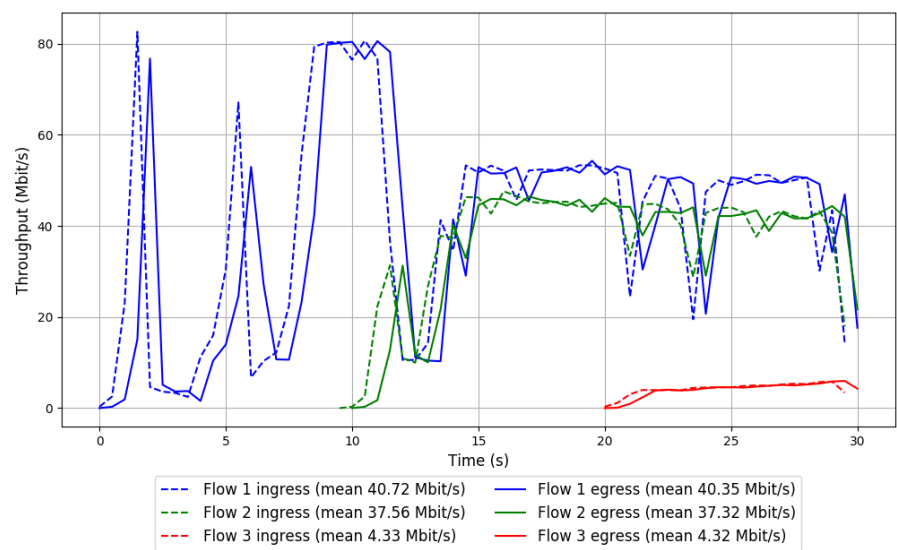
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-06-05 12:00:16
End at: 2018-06-05 12:00:46
Local clock offset: -7.124 ms
Remote clock offset: 8.374 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.15 Mbit/s
95th percentile per-packet one-way delay: 107.021 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 51.41 Mbit/s
95th percentile per-packet one-way delay: 106.021 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 14.59 Mbit/s
95th percentile per-packet one-way delay: 101.969 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 109.895 ms
Loss rate: 17.44%
```
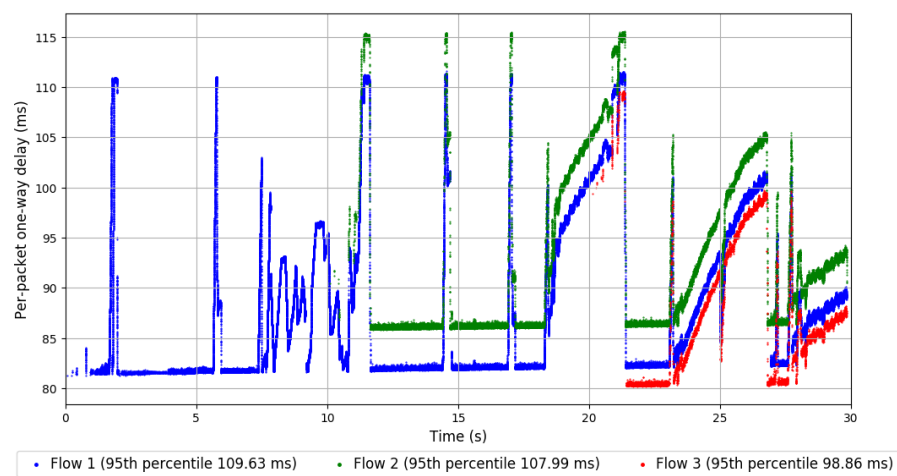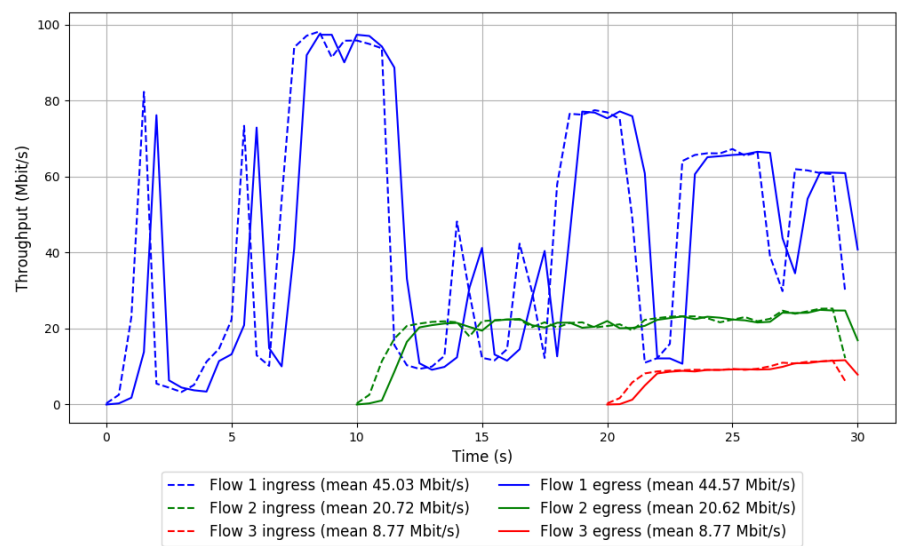
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-06-05 12:20:17
End at: 2018-06-05 12:20:47
Local clock offset: -6.44 ms
Remote clock offset: 25.586 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.47 Mbit/s
95th percentile per-packet one-way delay: 103.555 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 49.29 Mbit/s
95th percentile per-packet one-way delay: 104.849 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 16.04 Mbit/s
95th percentile per-packet one-way delay: 97.990 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 16.95 Mbit/s
95th percentile per-packet one-way delay: 94.636 ms
Loss rate: 0.40%
```

Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.70 Mbit/s) — — — Flow 1 egress (mean 49.29 Mbit/s)
Flow 2 ingress (mean 16.08 Mbit/s) — — — Flow 2 egress (mean 16.04 Mbit/s)
Flow 3 ingress (mean 17.03 Mbit/s) — — — Flow 3 egress (mean 16.95 Mbit/s)

Flow 1 (95th percentile 104.85 ms)   Flow 2 (95th percentile 97.99 ms)   Flow 3 (95th percentile 94.64 ms)
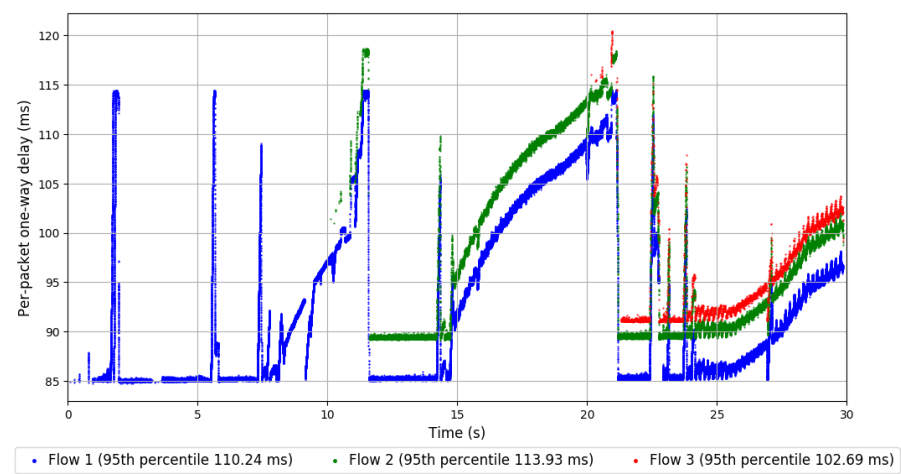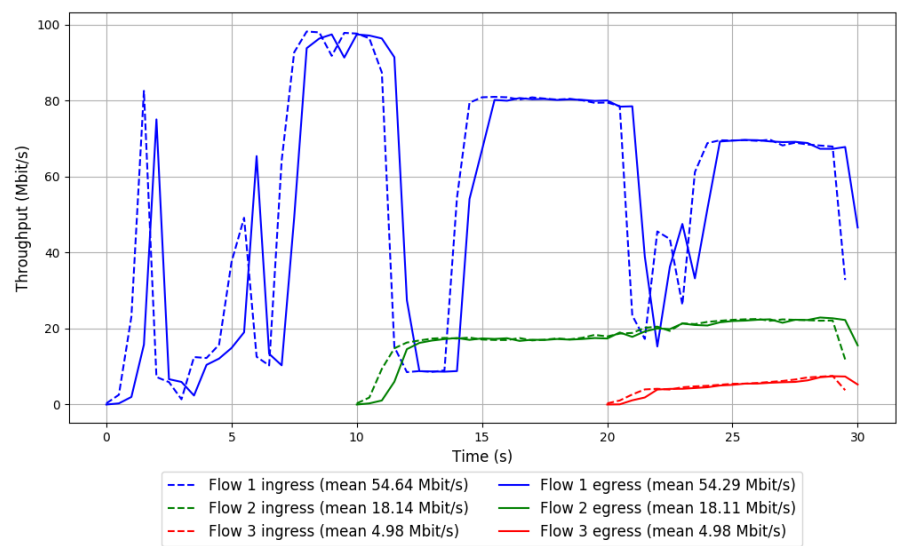
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```
Run 4: Statistics of QUIC Cubic

Start at: 2018-06-05 12:40:17
End at: 2018-06-05 12:40:47
Local clock offset: -5.844 ms
Remote clock offset: 32.014 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.74 Mbit/s
95th percentile per-packet one-way delay: 103.780 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 52.71 Mbit/s
95th percentile per-packet one-way delay: 103.865 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 18.40 Mbit/s
95th percentile per-packet one-way delay: 103.615 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 84.398 ms
Loss rate: 0.37%
```

Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-06-05 13:00:19
End at: 2018-06-05 13:00:49
Local clock offset: -6.804 ms
Remote clock offset: 43.093 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.54 Mbit/s
95th percentile per-packet one-way delay: 112.902 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 40.35 Mbit/s
95th percentile per-packet one-way delay: 113.327 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 37.32 Mbit/s
95th percentile per-packet one-way delay: 112.621 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 112.379 ms
Loss rate: 0.43%
```
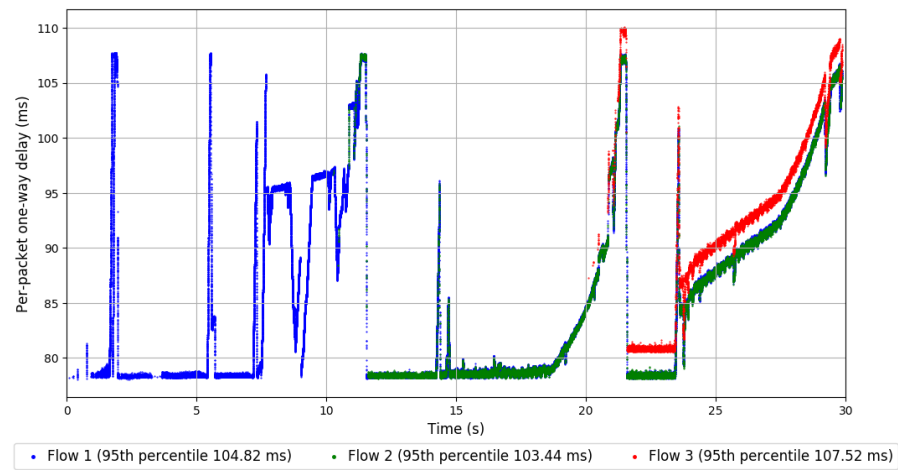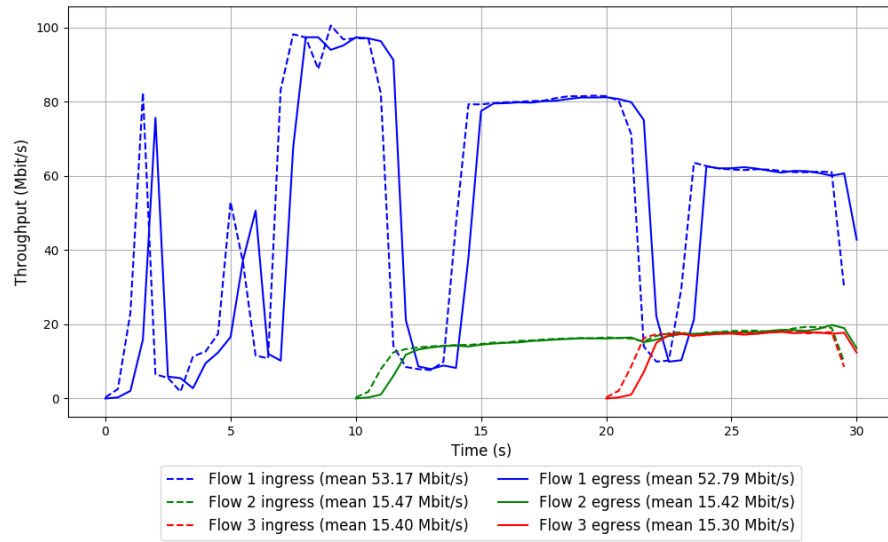
Run 5: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 40.72 Mbit/s) —— Flow 1 egress (mean 40.35 Mbit/s)
- - - Flow 2 ingress (mean 37.56 Mbit/s) —— Flow 2 egress (mean 37.32 Mbit/s)
- - - Flow 3 ingress (mean 4.33 Mbit/s) —— Flow 3 egress (mean 4.32 Mbit/s)

• Flow 1 (95th percentile 113.33 ms)　• Flow 2 (95th percentile 112.62 ms)　• Flow 3 (95th percentile 112.38 ms)

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```
Run 6: Statistics of QUIC Cubic

Start at: 2018-06-05 13:20:22
End at: 2018-06-05 13:20:52
Local clock offset: -6.873 ms
Remote clock offset: 15.078 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.10 Mbit/s
95th percentile per-packet one-way delay: 109.354 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 44.57 Mbit/s
95th percentile per-packet one-way delay: 109.631 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 20.62 Mbit/s
95th percentile per-packet one-way delay: 107.994 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 8.77 Mbit/s
95th percentile per-packet one-way delay: 98.856 ms
Loss rate: 0.15%
```
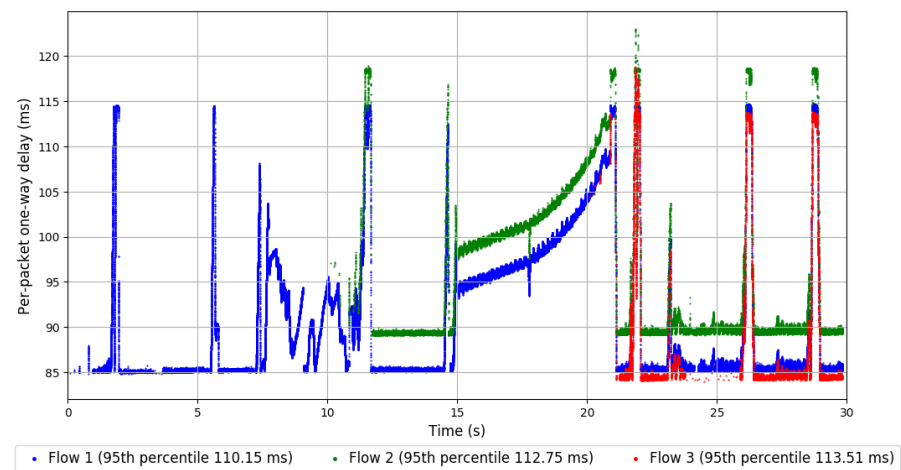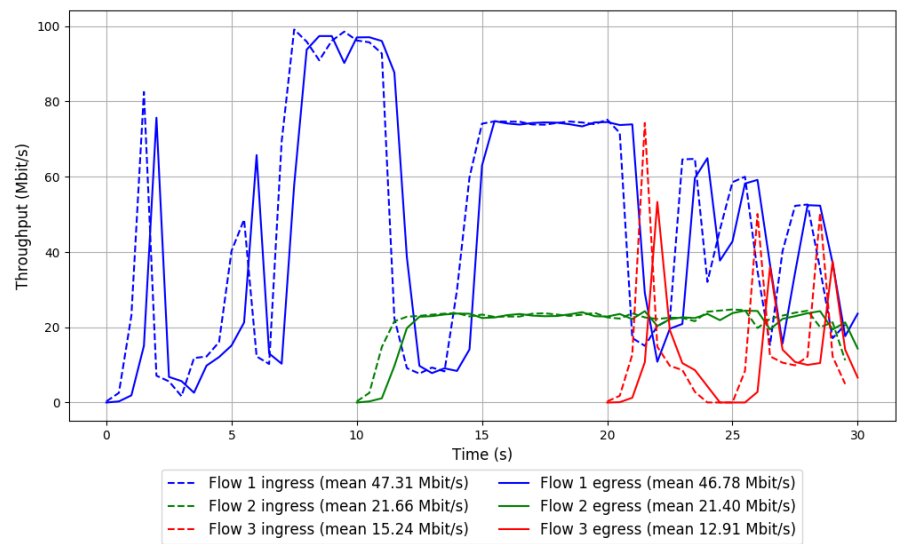
Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2018-06-05 13:40:30
End at: 2018-06-05 13:41:00
Local clock offset: -6.761 ms
Remote clock offset: -1.052 ms


# Below is generated by plot.py at 2018-06-05 15:01:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.91 Mbit/s
95th percentile per-packet one-way delay: 111.165 ms
Loss rate: 0.52%
-- Flow 1:
Average throughput: 54.29 Mbit/s
95th percentile per-packet one-way delay: 110.240 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 18.11 Mbit/s
95th percentile per-packet one-way delay: 113.932 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 4.98 Mbit/s
95th percentile per-packet one-way delay: 102.691 ms
Loss rate: 0.21%
```
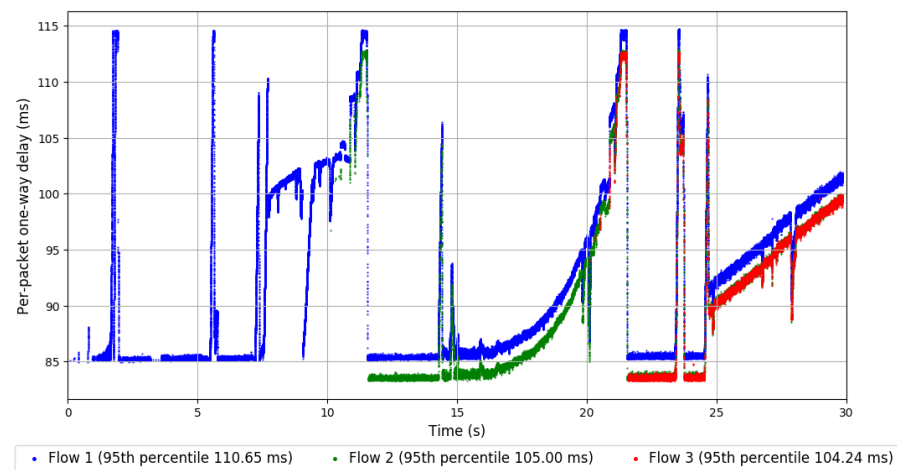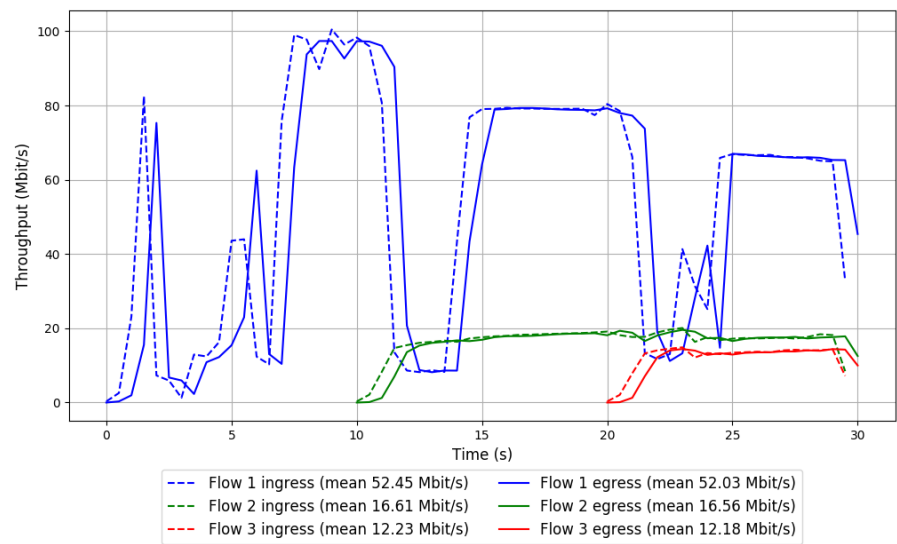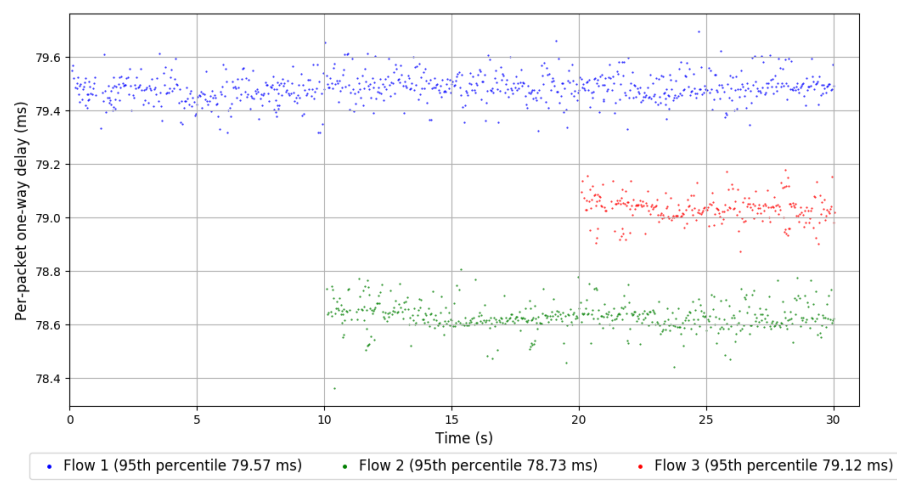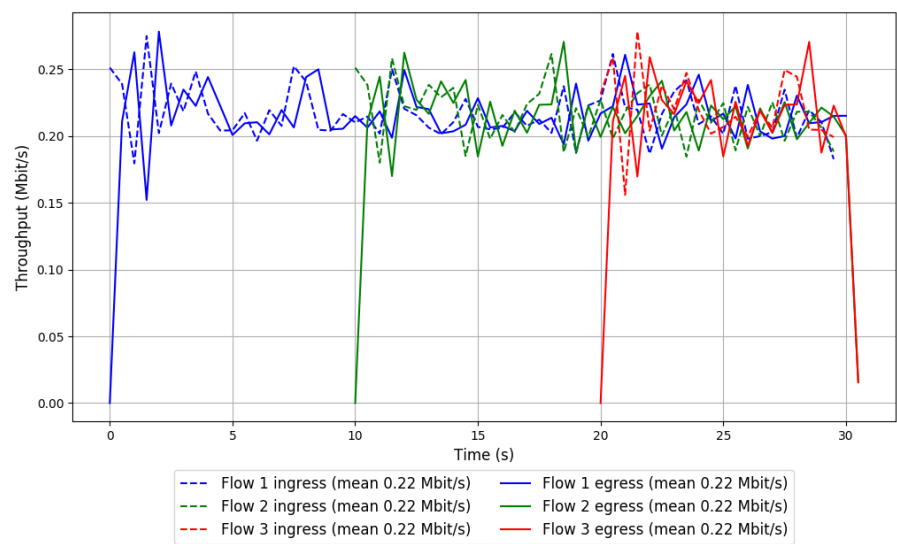
Run 7: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 54.64 Mbit/s)
- Flow 1 egress (mean 54.29 Mbit/s)
- Flow 2 ingress (mean 18.14 Mbit/s)
- Flow 2 egress (mean 18.11 Mbit/s)
- Flow 3 ingress (mean 4.98 Mbit/s)
- Flow 3 egress (mean 4.98 Mbit/s)

- Flow 1 (95th percentile 110.24 ms)
- Flow 2 (95th percentile 113.93 ms)
- Flow 3 (95th percentile 102.69 ms)

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```
Run 8: Statistics of QUIC Cubic

Start at: 2018-06-05 14:00:45
End at: 2018-06-05 14:01:15
Local clock offset: -5.809 ms
Remote clock offset: 6.051 ms


# Below is generated by plot.py at 2018-06-05 15:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.03 Mbit/s
95th percentile per-packet one-way delay: 104.979 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 52.79 Mbit/s
95th percentile per-packet one-way delay: 104.823 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 15.42 Mbit/s
95th percentile per-packet one-way delay: 103.440 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 15.30 Mbit/s
95th percentile per-packet one-way delay: 107.522 ms
Loss rate: 0.43%
```
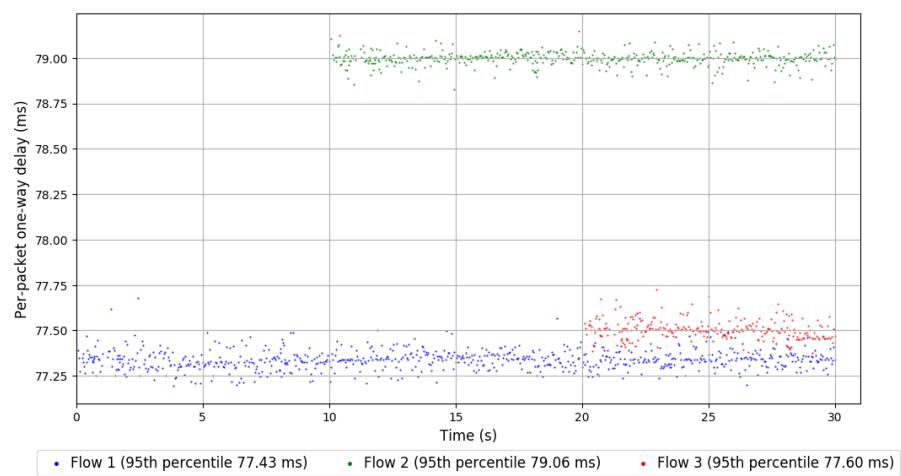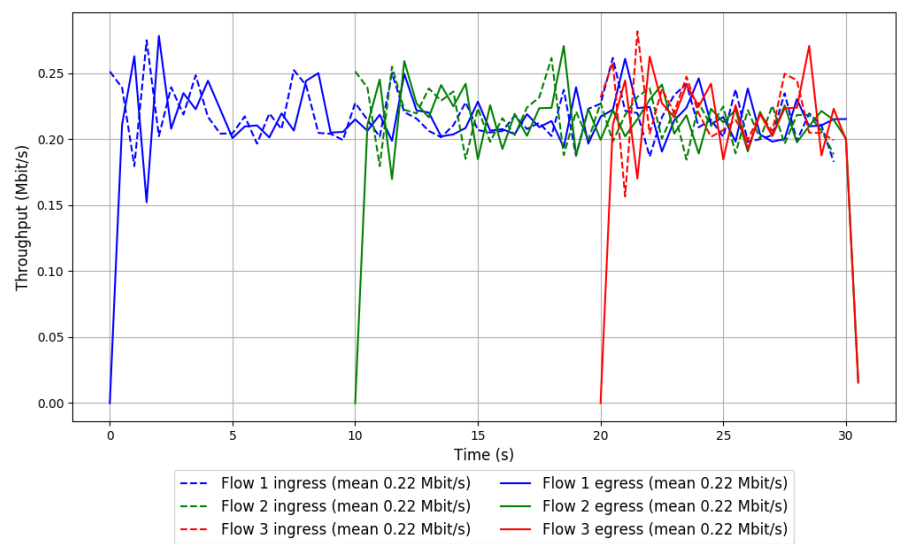
Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 53.17 Mbit/s) --- Flow 1 egress (mean 52.79 Mbit/s)
Flow 2 ingress (mean 15.47 Mbit/s) --- Flow 2 egress (mean 15.42 Mbit/s)
Flow 3 ingress (mean 15.40 Mbit/s) --- Flow 3 egress (mean 15.30 Mbit/s)

Flow 1 (95th percentile 104.82 ms) • Flow 2 (95th percentile 103.44 ms) • Flow 3 (95th percentile 107.52 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2018-06-05 14:21:05
End at: 2018-06-05 14:21:35
Local clock offset: -5.445 ms
Remote clock offset: 10.34 ms


# Below is generated by plot.py at 2018-06-05 15:01:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.18 Mbit/s
95th percentile per-packet one-way delay: 113.132 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 46.78 Mbit/s
95th percentile per-packet one-way delay: 110.154 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 21.40 Mbit/s
95th percentile per-packet one-way delay: 112.749 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 113.512 ms
Loss rate: 15.47%
```

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 47.31 Mbit/s)   Flow 1 egress (mean 46.78 Mbit/s)
Flow 2 ingress (mean 21.66 Mbit/s)   Flow 2 egress (mean 21.40 Mbit/s)
Flow 3 ingress (mean 15.24 Mbit/s)   Flow 3 egress (mean 12.91 Mbit/s)

Flow 1 (95th percentile 110.15 ms)   Flow 2 (95th percentile 112.75 ms)   Flow 3 (95th percentile 113.51 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2018-06-05 14:41:09
End at: 2018-06-05 14:41:39
Local clock offset: -3.05 ms
Remote clock offset: 5.648 ms


# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.98 Mbit/s
95th percentile per-packet one-way delay: 109.722 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 52.03 Mbit/s
95th percentile per-packet one-way delay: 110.651 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 105.004 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 104.238 ms
Loss rate: 0.35%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 52.45 Mbit/s)   Flow 1 egress (mean 52.03 Mbit/s)
Flow 2 ingress (mean 16.61 Mbit/s)   Flow 2 egress (mean 16.56 Mbit/s)
Flow 3 ingress (mean 12.23 Mbit/s)   Flow 3 egress (mean 12.18 Mbit/s)

Flow 1 (95th percentile 110.65 ms)   Flow 2 (95th percentile 105.00 ms)   Flow 3 (95th percentile 104.24 ms)

```
Run 1: Statistics of SCReAM

Start at: 2018-06-05 11:29:06
End at: 2018-06-05 11:29:36
Local clock offset: -6.231 ms
Remote clock offset: 8.993 ms

# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 79.547 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.571 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.728 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.117 ms
Loss rate: 0.00%
```
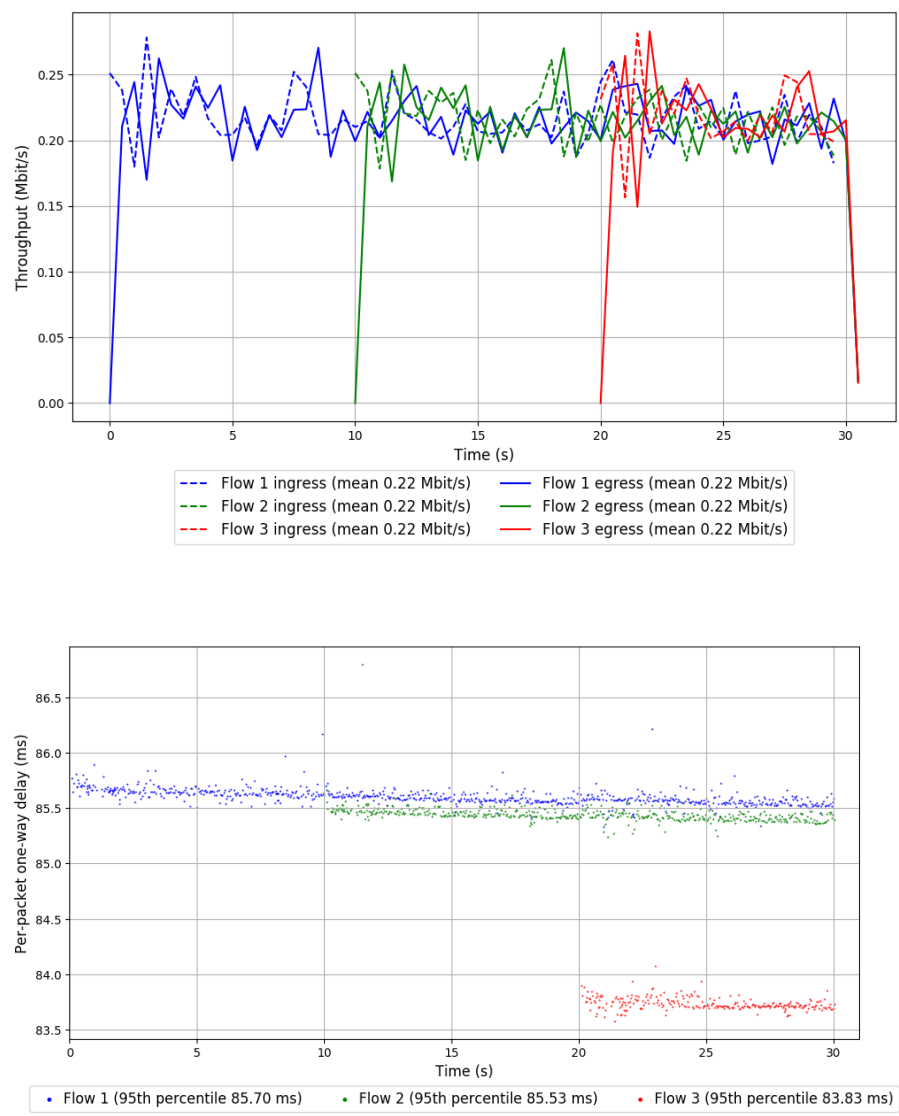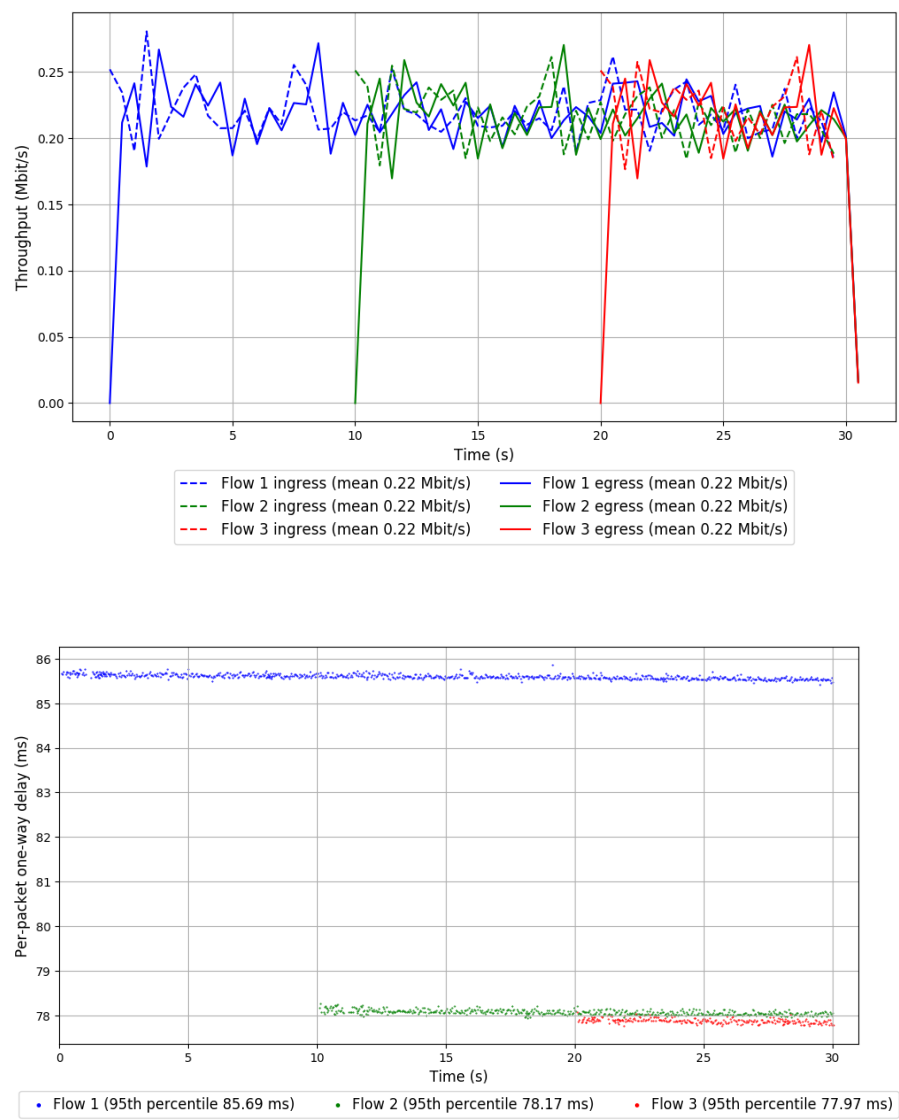
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-06-05 11:49:06
End at: 2018-06-05 11:49:36
Local clock offset: -5.688 ms
Remote clock offset: 8.196 ms

# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 79.031 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.429 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.599 ms
Loss rate: 0.00%
```
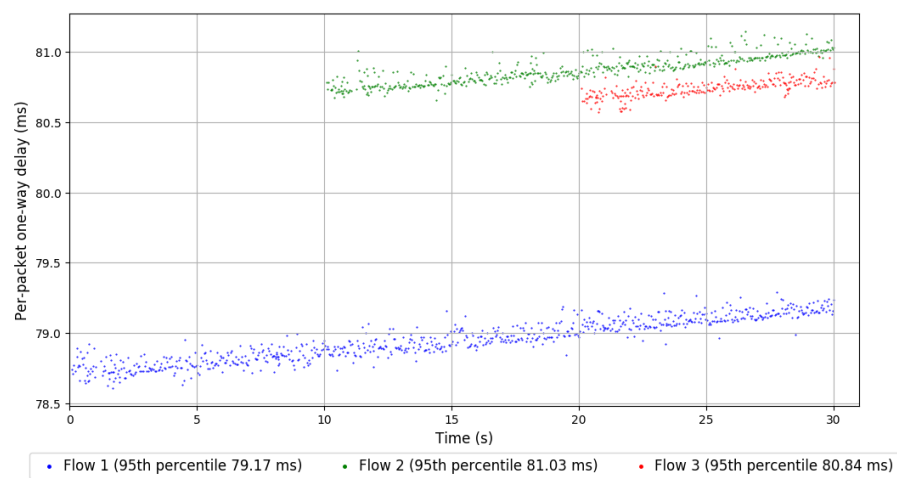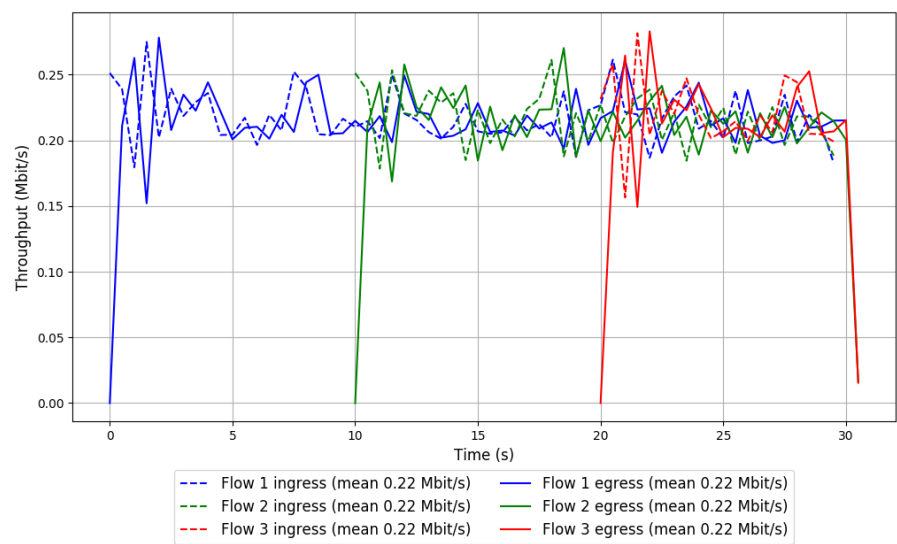
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2018-06-05 12:09:08
End at: 2018-06-05 12:09:38
Local clock offset: -5.642 ms
Remote clock offset: 21.477 ms


# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 84.789 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.086 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.853 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.840 ms
Loss rate: 0.00%
```

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 84.09 ms)   Flow 2 (95th percentile 83.85 ms)   Flow 3 (95th percentile 84.84 ms)

```
Run 4: Statistics of SCReAM

Start at: 2018-06-05 12:29:07
End at: 2018-06-05 12:29:37
Local clock offset: -6.468 ms
Remote clock offset: 29.153 ms

# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 80.874 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.898 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.064 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.825 ms
Loss rate: 0.00%
```
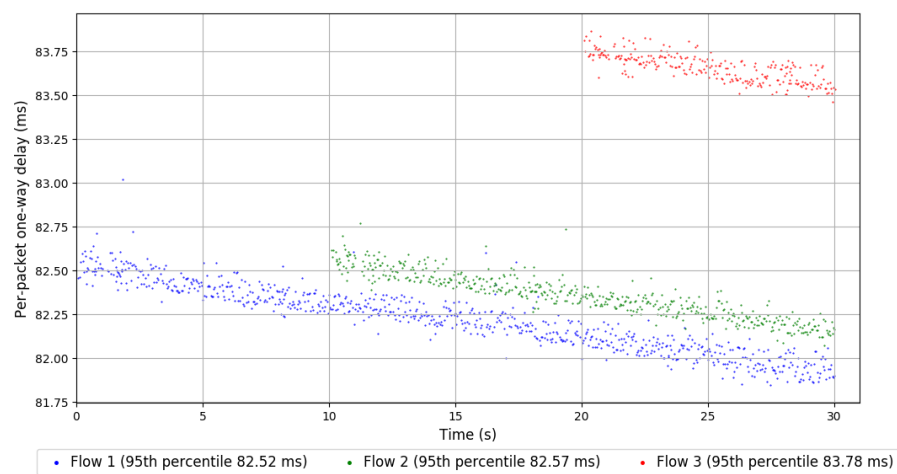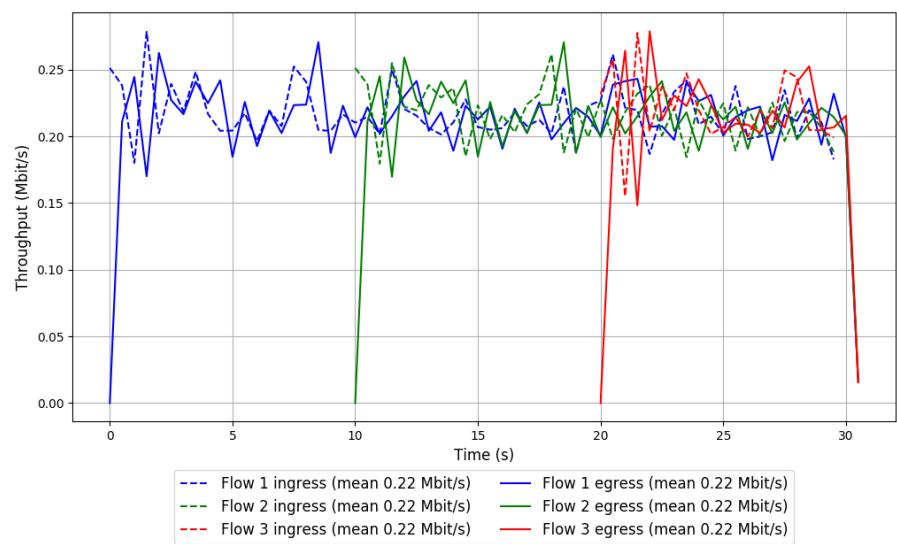
Run 4: Report of SCReAM — Data Link

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```
Run 5: Statistics of SCReAM

Start at: 2018-06-05 12:49:07
End at: 2018-06-05 12:49:37
Local clock offset: -7.582 ms
Remote clock offset: 39.71 ms


# Below is generated by plot.py at 2018-06-05 15:01:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.680 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.705 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.528 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.832 ms
Loss rate: 0.00%
```
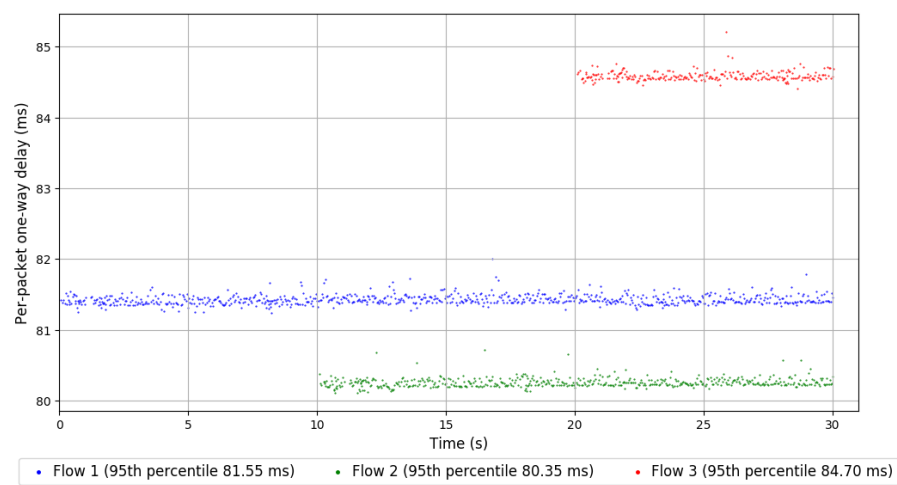
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2018-06-05 13:09:11
End at: 2018-06-05 13:09:41
Local clock offset: -6.845 ms
Remote clock offset: 40.631 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.674 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.693 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 78.173 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 77.973 ms
Loss rate: 0.00%
```
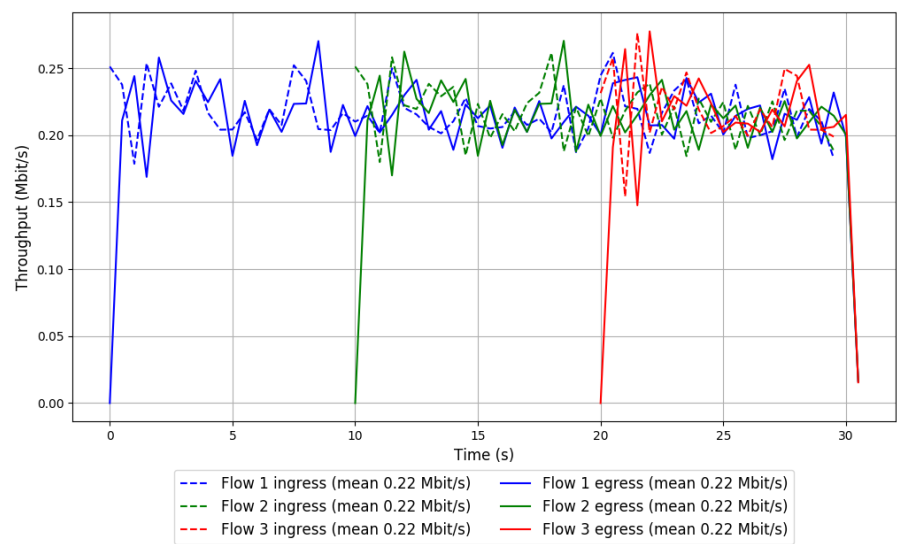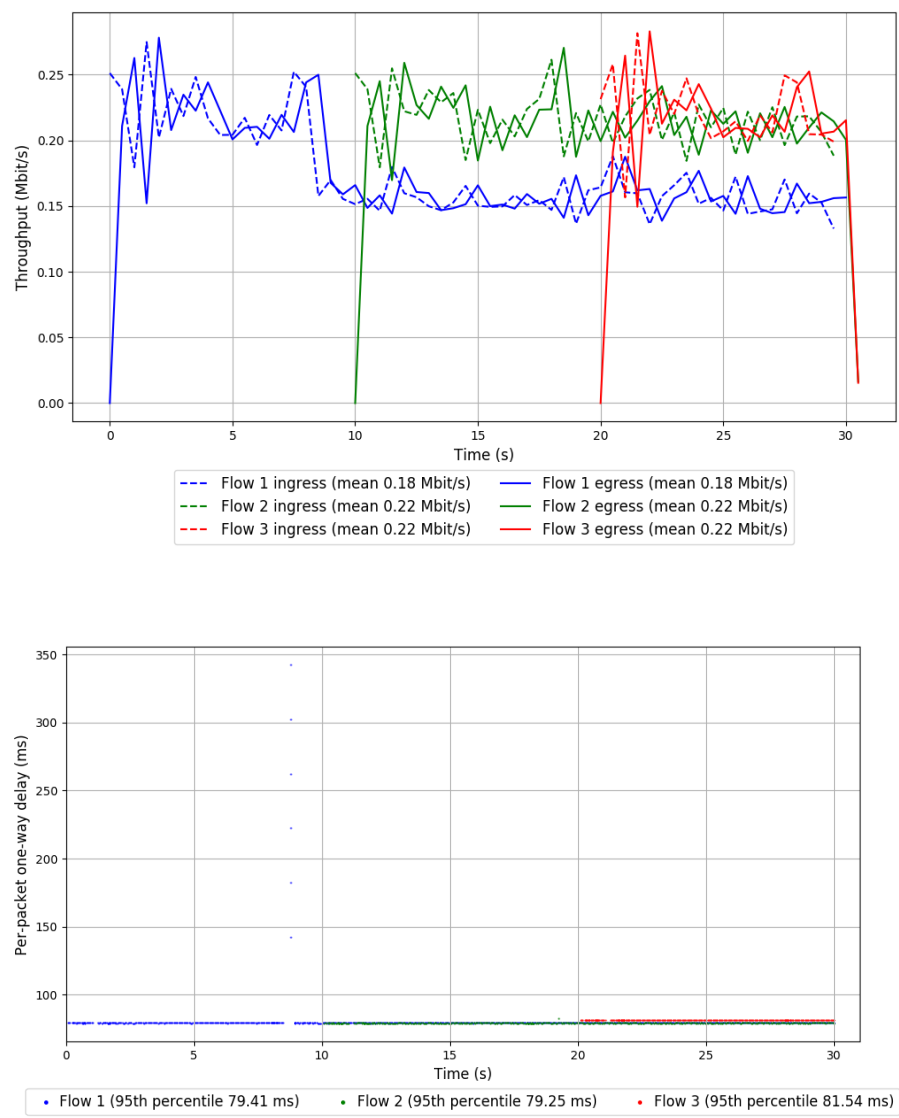
Run 6: Report of SCReAM — Data Link

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 85.69 ms) • Flow 2 (95th percentile 78.17 ms) • Flow 3 (95th percentile 77.97 ms)

```
Run 7: Statistics of SCReAM

Start at: 2018-06-05 13:29:18
End at: 2018-06-05 13:29:48
Local clock offset: -6.127 ms
Remote clock offset: 2.952 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 80.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.171 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.027 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.838 ms
Loss rate: 0.00%
```
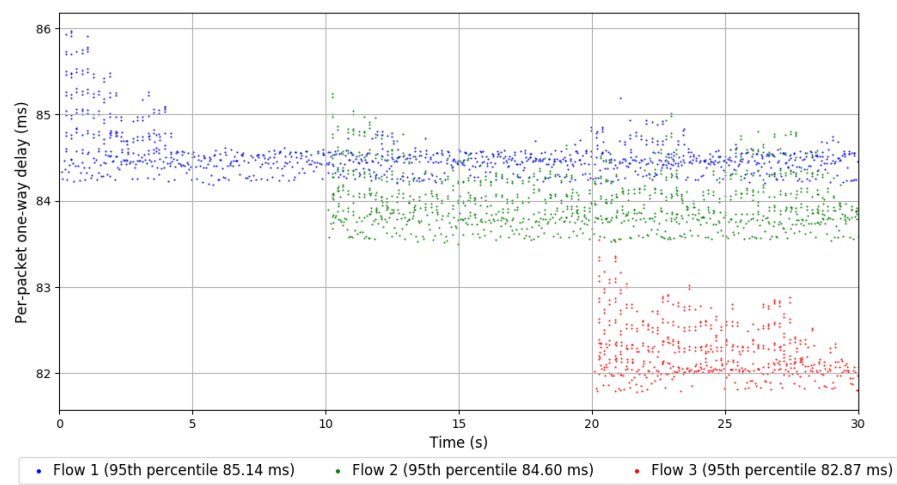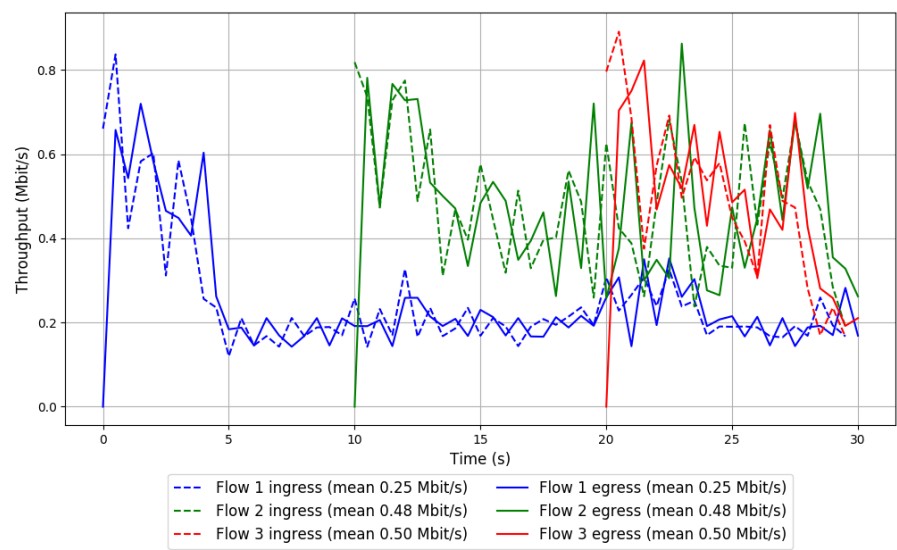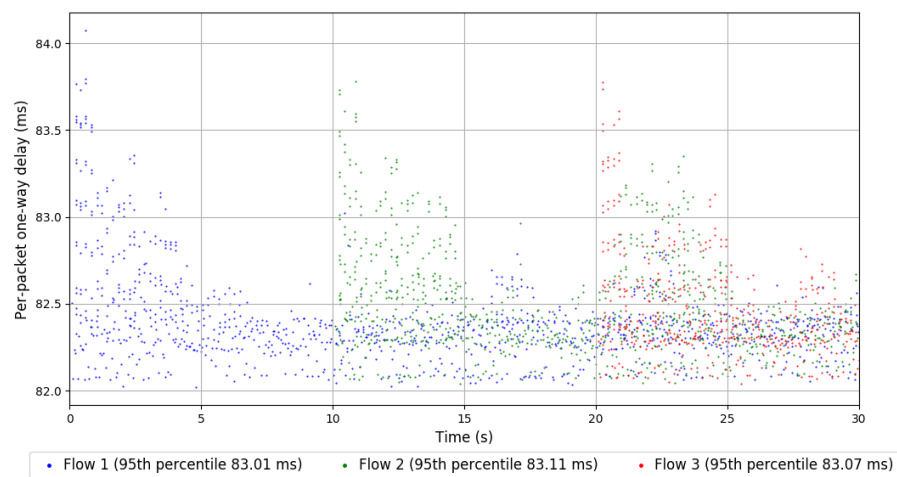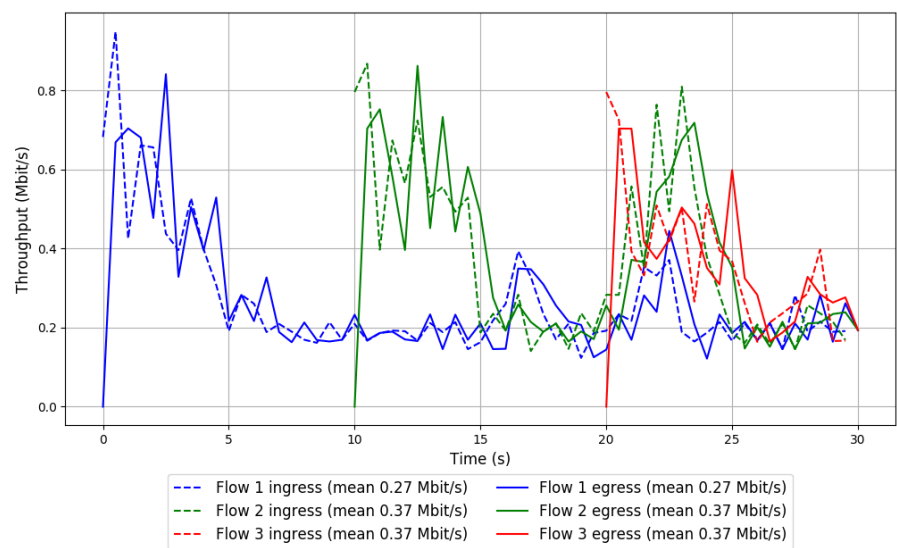
Run 7: Report of SCReAM — Data Link

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 79.17 ms)   Flow 2 (95th percentile 81.03 ms)   Flow 3 (95th percentile 80.84 ms)

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```
Run 8: Statistics of SCReAM

Start at: 2018-06-05 13:49:24
End at: 2018-06-05 13:49:54
Local clock offset: -7.488 ms
Remote clock offset: 1.213 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 83.705 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.519 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 82.567 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.784 ms
Loss rate: 0.00%
```

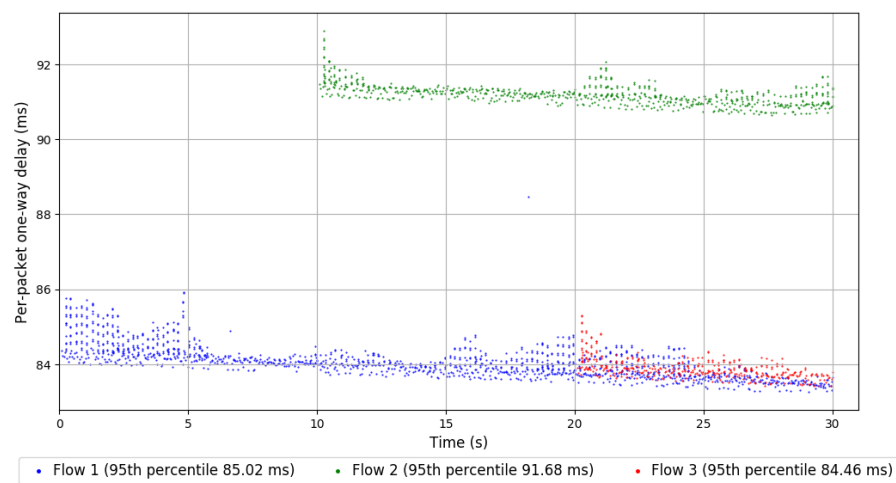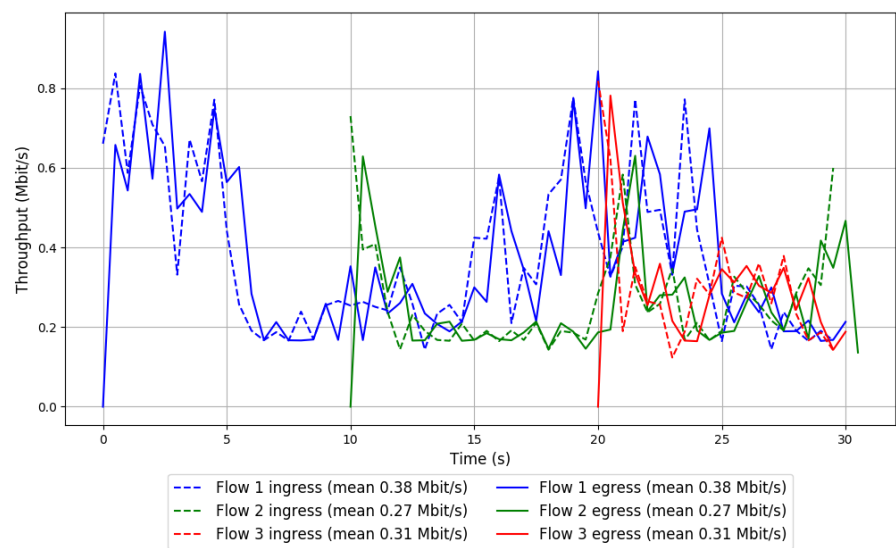# Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2018-06-05 14:09:36
End at: 2018-06-05 14:10:06
Local clock offset: -5.263 ms
Remote clock offset: 7.184 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 84.611 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.547 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 80.352 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.704 ms
Loss rate: 0.00%
```
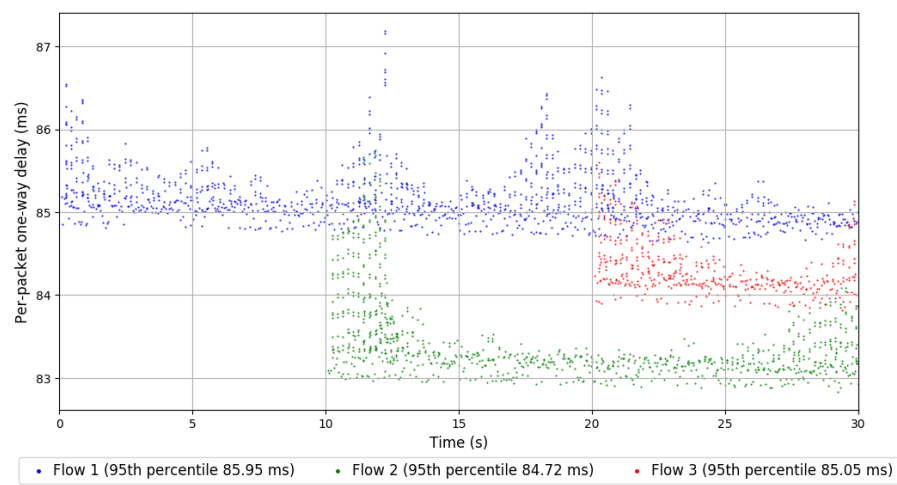
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2018-06-05 14:29:58
End at: 2018-06-05 14:30:28
Local clock offset: -6.038 ms
Remote clock offset: 2.739 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 81.465 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 79.409 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.245 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.538 ms
Loss rate: 0.00%
```
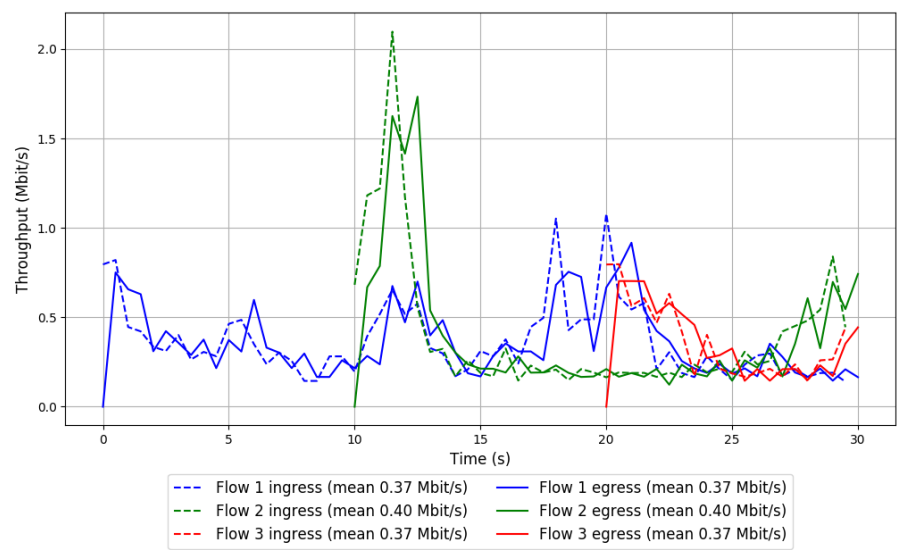
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-06-05 11:24:04
End at: 2018-06-05 11:24:34
Local clock offset: -6.903 ms
Remote clock offset: 11.866 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 84.798 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 85.141 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 84.599 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 82.871 ms
Loss rate: 0.00%
```
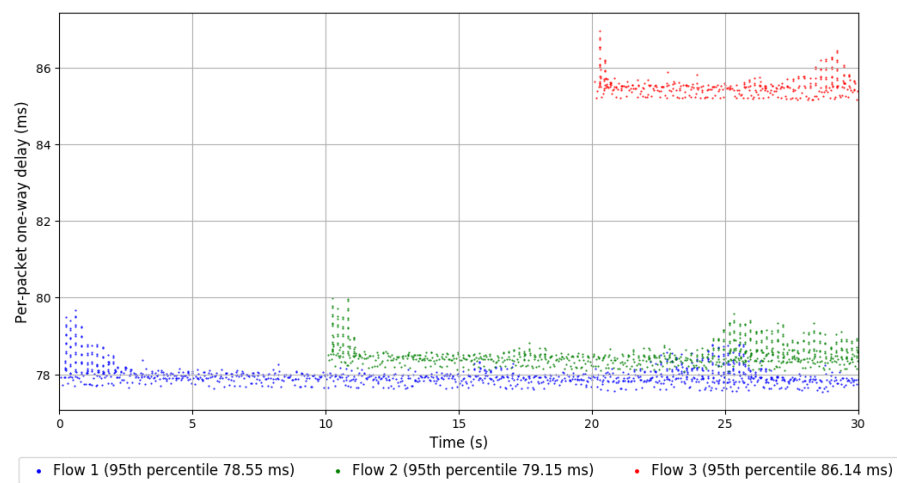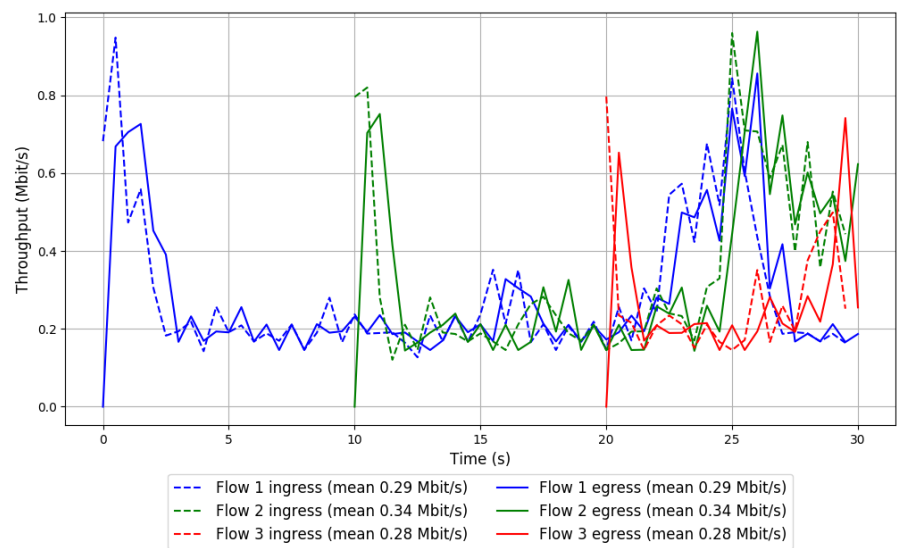
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-06-05 11:44:04
End at: 2018-06-05 11:44:34
Local clock offset: -5.774 ms
Remote clock offset: 13.156 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 83.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 83.012 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 83.106 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 83.072 ms
Loss rate: 0.00%
```
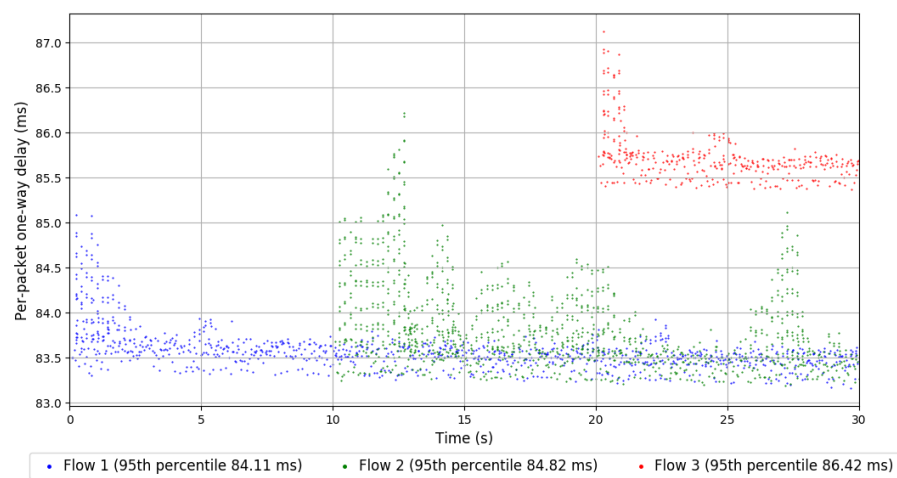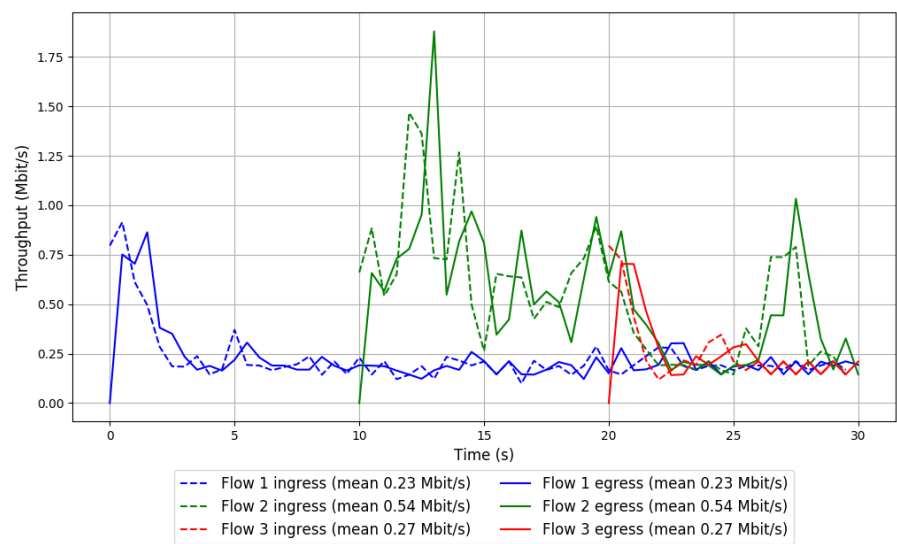
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-06-05 12:04:07
End at: 2018-06-05 12:04:37
Local clock offset: -6.32 ms
Remote clock offset: 16.026 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 91.400 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 85.015 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 91.682 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 84.463 ms
Loss rate: 0.00%
```
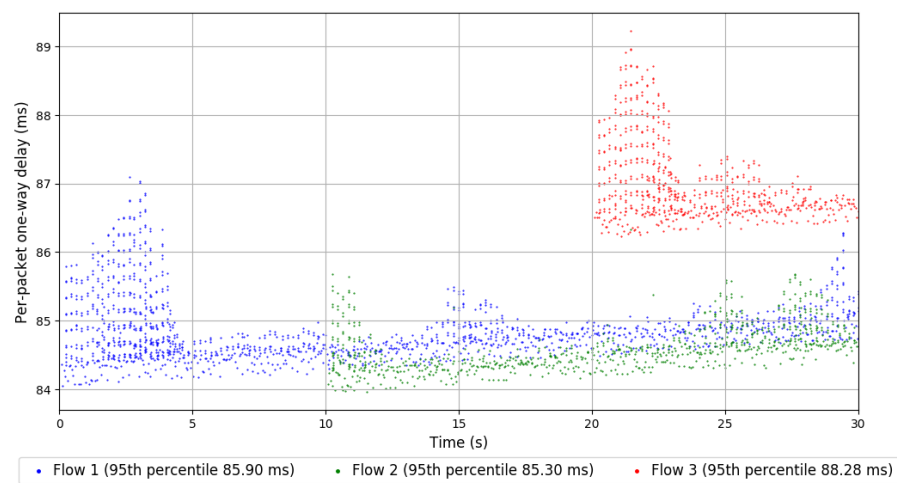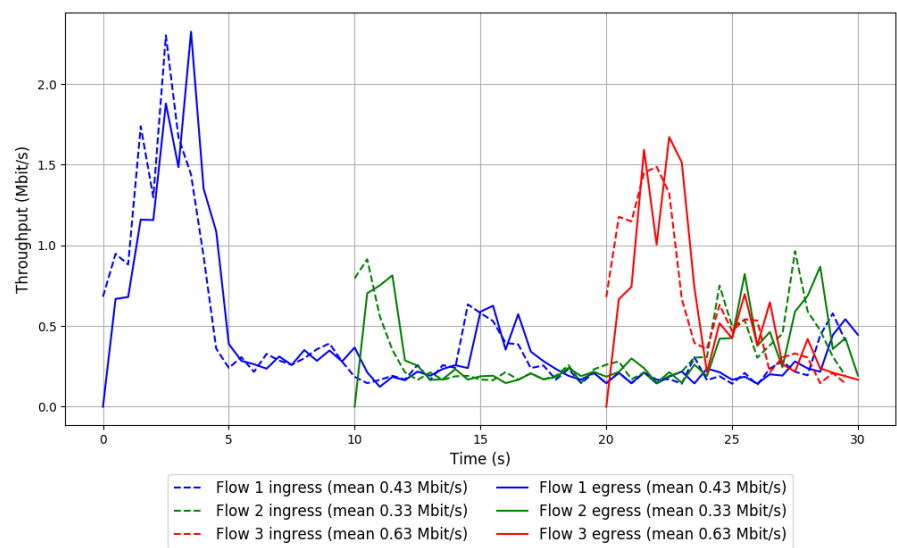
Run 3: Report of Sprout — Data Link

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```
Run 4: Statistics of Sprout

Start at: 2018-06-05 12:24:05
End at: 2018-06-05 12:24:35
Local clock offset: -5.666 ms
Remote clock offset: 32.35 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 85.644 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 85.946 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 84.722 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 85.051 ms
Loss rate: 0.00%
```
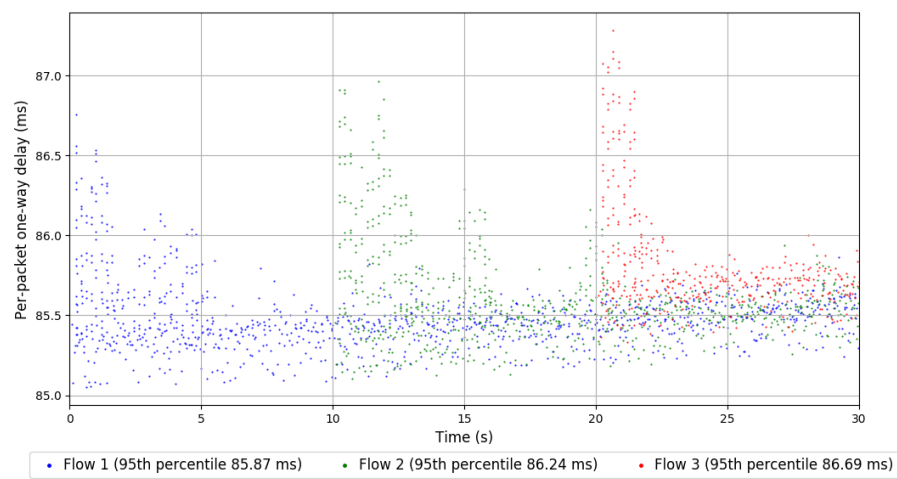
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-06-05 12:44:06
End at: 2018-06-05 12:44:36
Local clock offset: -6.684 ms
Remote clock offset: 33.135 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.61 Mbit/s
95th percentile per-packet one-way delay: 85.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 78.553 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 79.154 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 86.137 ms
Loss rate: 0.00%
```
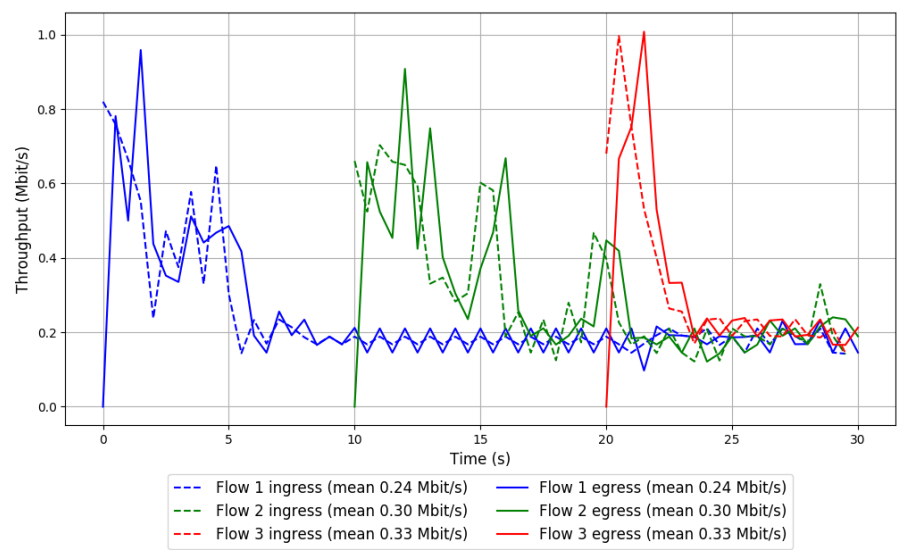
Run 5: Report of Sprout — Data Link

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```
Run 6: Statistics of Sprout

Start at: 2018-06-05 13:04:08
End at: 2018-06-05 13:04:38
Local clock offset: -6.045 ms
Remote clock offset: 45.415 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.68 Mbit/s
95th percentile per-packet one-way delay: 85.733 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 84.107 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.54 Mbit/s
95th percentile per-packet one-way delay: 84.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 86.423 ms
Loss rate: 0.00%
```
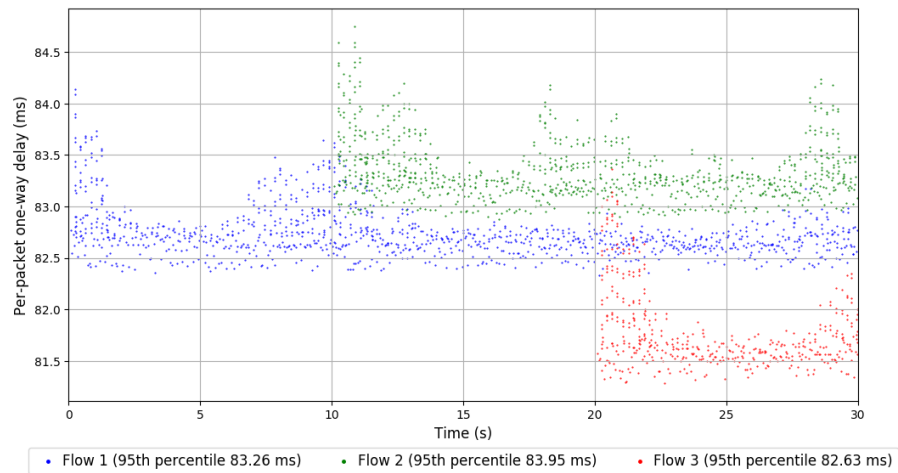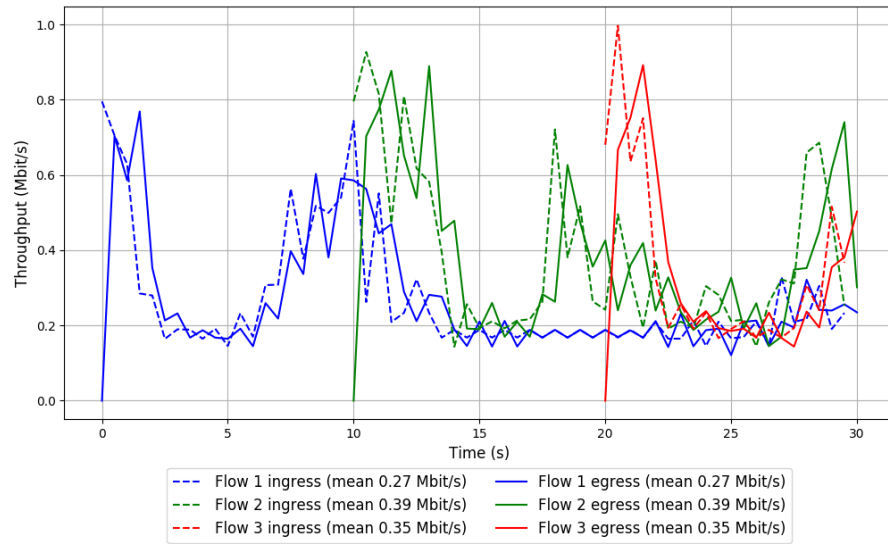
Run 6: Report of Sprout — Data Link

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```
Run 7: Statistics of Sprout

Start at: 2018-06-05 13:24:14
End at: 2018-06-05 13:24:44
Local clock offset: -7.648 ms
Remote clock offset: 12.532 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 87.302 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 85.900 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 85.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 88.279 ms
Loss rate: 0.00%
```

Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2018-06-05 13:44:22
End at: 2018-06-05 13:44:52
Local clock offset: -7.486 ms
Remote clock offset: -1.739 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 86.221 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 85.874 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 86.239 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 86.689 ms
Loss rate: 0.00%
```
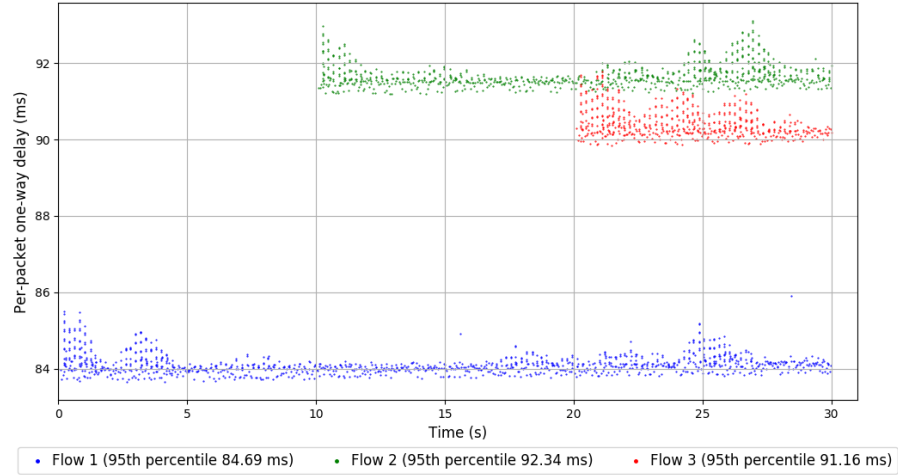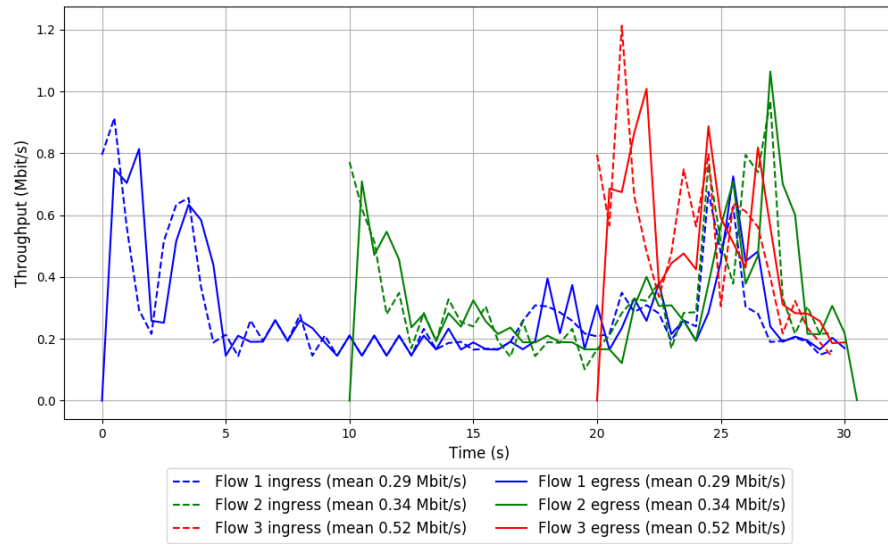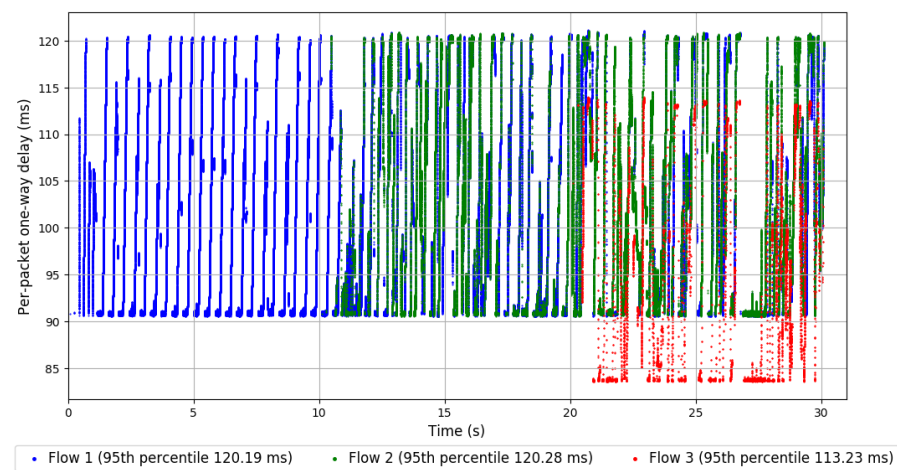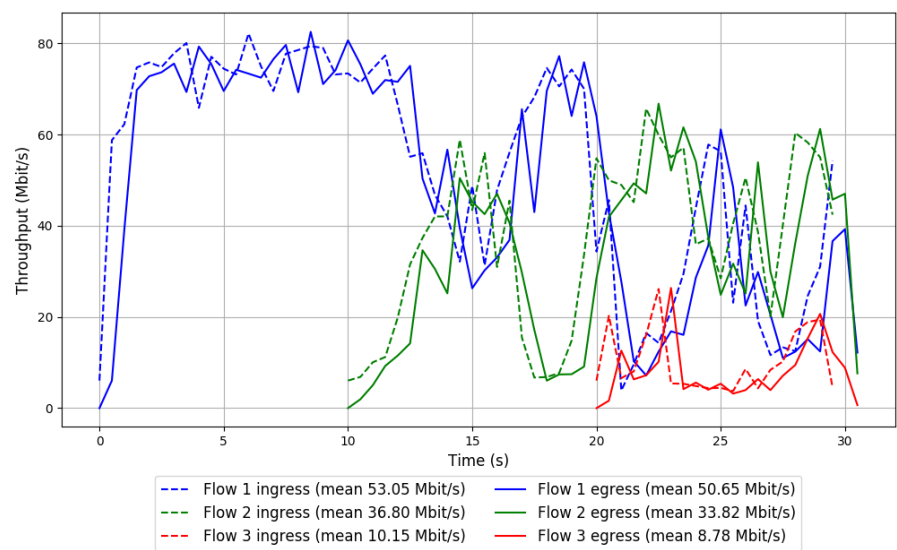
Run 8: Report of Sprout — Data Link

219

```
Run 9: Statistics of Sprout

Start at: 2018-06-05 14:04:34
End at: 2018-06-05 14:05:04
Local clock offset: -5.734 ms
Remote clock offset: 9.69 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 83.690 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 83.263 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 83.952 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 82.634 ms
Loss rate: 0.00%
```

Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2018-06-05 14:24:55
End at: 2018-06-05 14:25:25
Local clock offset: -6.109 ms
Remote clock offset: 9.032 ms


# Below is generated by plot.py at 2018-06-05 15:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 91.947 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 84.686 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 92.336 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 91.159 ms
Loss rate: 0.00%
```
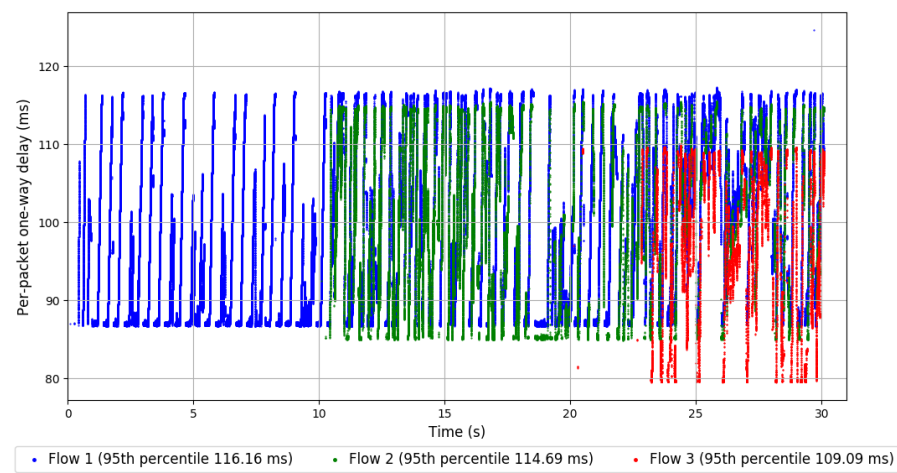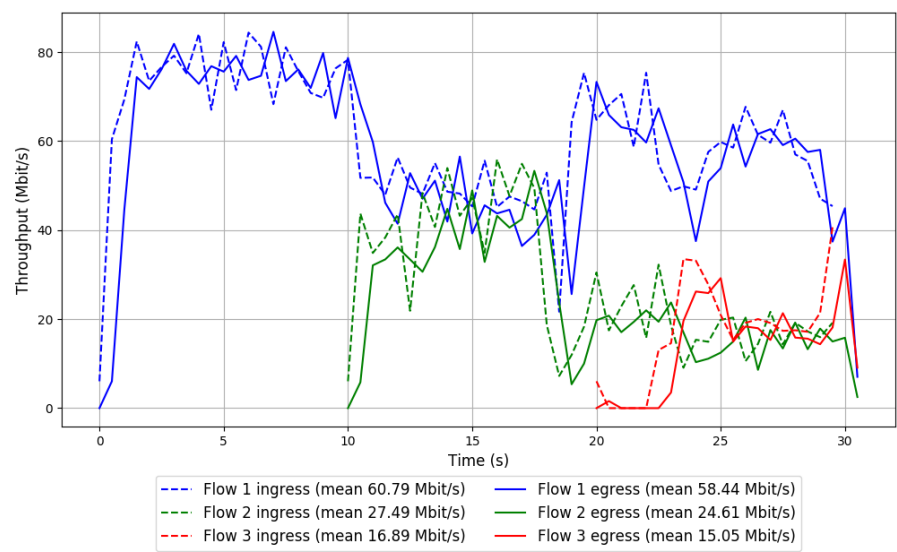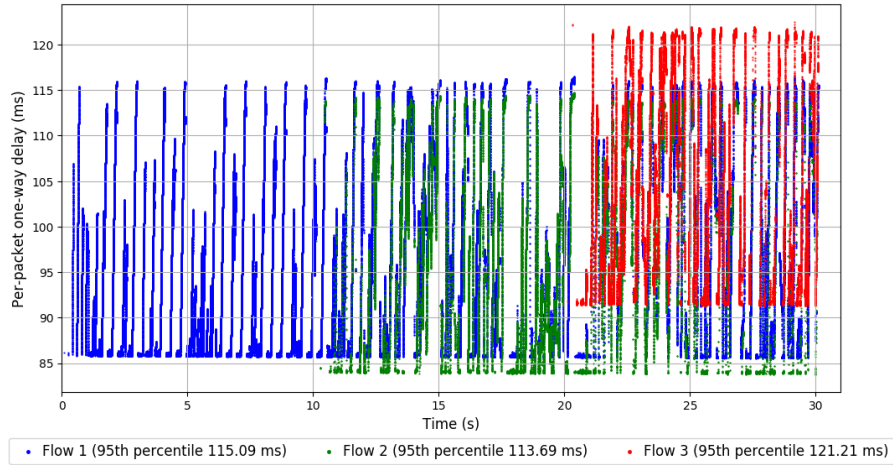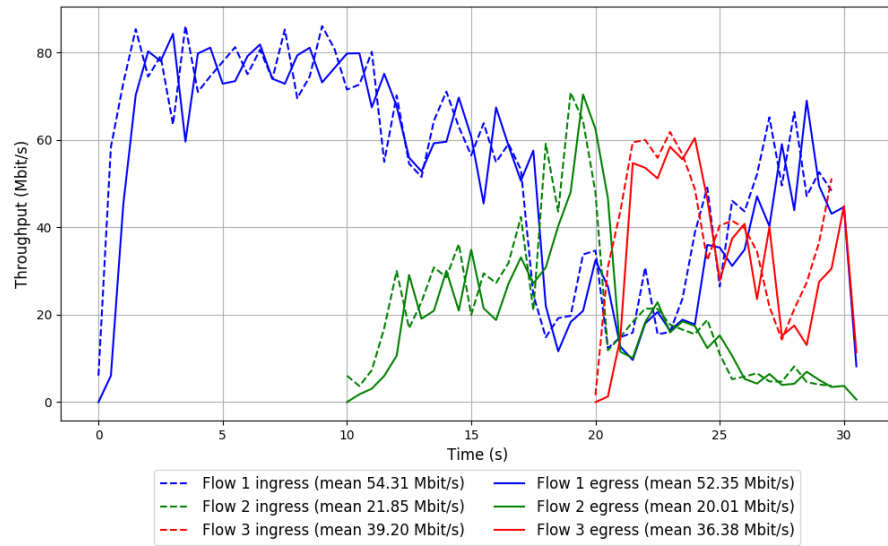
Run 10: Report of Sprout — Data Link

223

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

Start at: 2018-06-05 11:37:40
End at: 2018-06-05 11:38:10
Local clock offset: -6.763 ms
Remote clock offset: 13.167 ms


# Below is generated by plot.py at 2018-06-05 15:03:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.11 Mbit/s
95th percentile per-packet one-way delay: 120.208 ms
Loss rate: 5.89%
-- Flow 1:
Average throughput: 50.65 Mbit/s
95th percentile per-packet one-way delay: 120.187 ms
Loss rate: 4.44%
-- Flow 2:
Average throughput: 33.82 Mbit/s
95th percentile per-packet one-way delay: 120.275 ms
Loss rate: 7.97%
-- Flow 3:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 113.234 ms
Loss rate: 13.44%
```

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

Flow 1 ingress (mean 53.05 Mbit/s)   Flow 1 egress (mean 50.65 Mbit/s)
Flow 2 ingress (mean 36.80 Mbit/s)   Flow 2 egress (mean 33.82 Mbit/s)
Flow 3 ingress (mean 10.15 Mbit/s)   Flow 3 egress (mean 8.78 Mbit/s)

Flow 1 (95th percentile 120.19 ms)   Flow 2 (95th percentile 120.28 ms)   Flow 3 (95th percentile 113.23 ms)
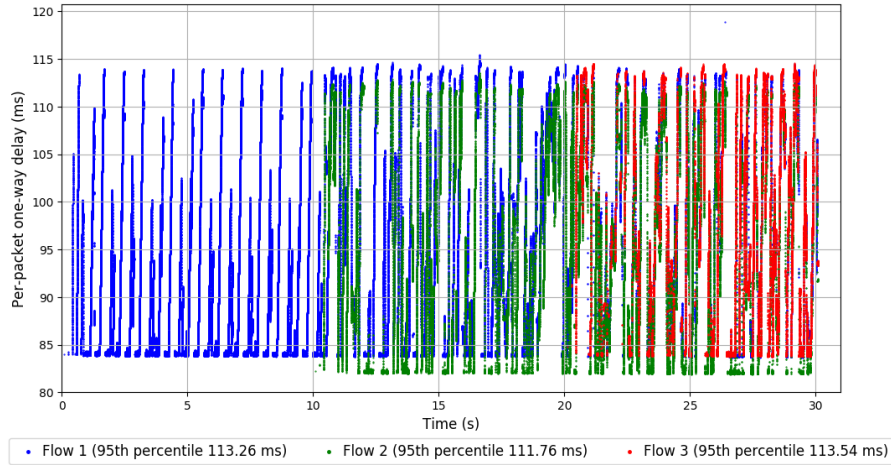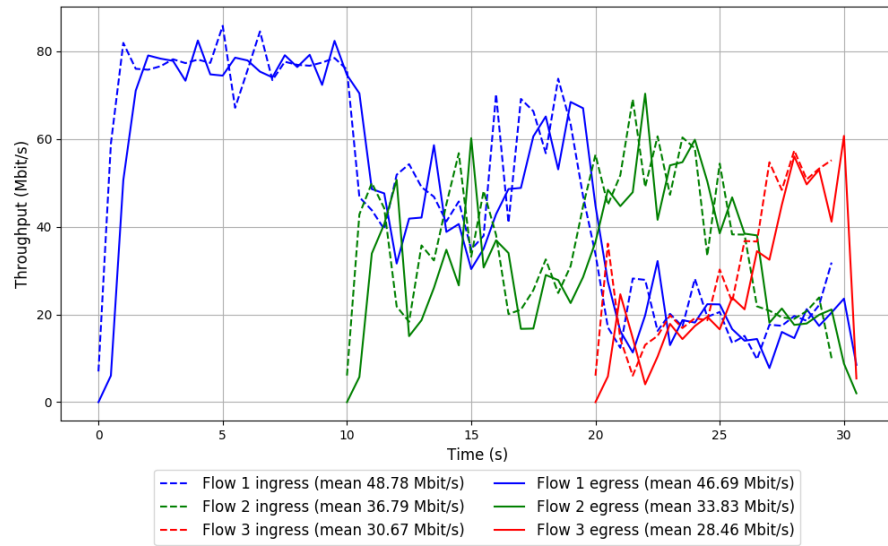
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-06-05 11:57:41
End at: 2018-06-05 11:58:11
Local clock offset: -6.432 ms
Remote clock offset: 9.466 ms


# Below is generated by plot.py at 2018-06-05 15:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.83 Mbit/s
95th percentile per-packet one-way delay: 115.965 ms
Loss rate: 5.70%
-- Flow 1:
Average throughput: 58.44 Mbit/s
95th percentile per-packet one-way delay: 116.157 ms
Loss rate: 3.81%
-- Flow 2:
Average throughput: 24.61 Mbit/s
95th percentile per-packet one-way delay: 114.690 ms
Loss rate: 10.39%
-- Flow 3:
Average throughput: 15.05 Mbit/s
95th percentile per-packet one-way delay: 109.088 ms
Loss rate: 10.84%
```

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

Flow 1 ingress (mean 60.79 Mbit/s) --- Flow 1 egress (mean 58.44 Mbit/s)
Flow 2 ingress (mean 27.49 Mbit/s) --- Flow 2 egress (mean 24.61 Mbit/s)
Flow 3 ingress (mean 16.89 Mbit/s) --- Flow 3 egress (mean 15.05 Mbit/s)

Flow 1 (95th percentile 116.16 ms)   Flow 2 (95th percentile 114.69 ms)   Flow 3 (95th percentile 109.09 ms)
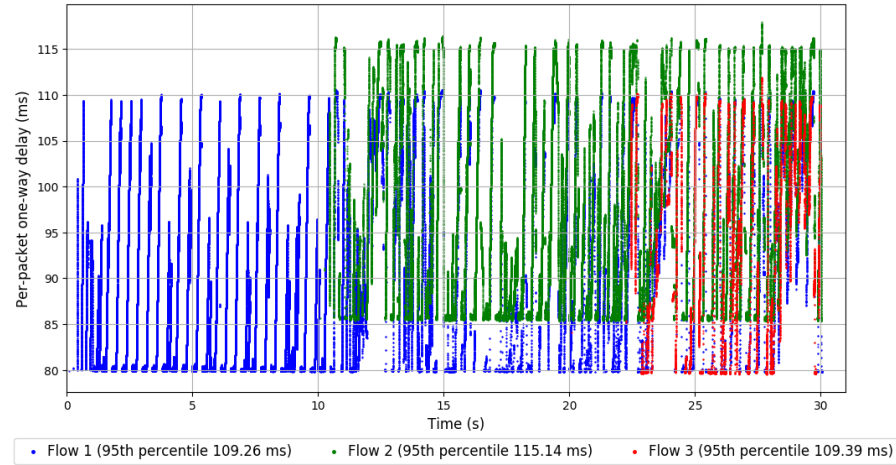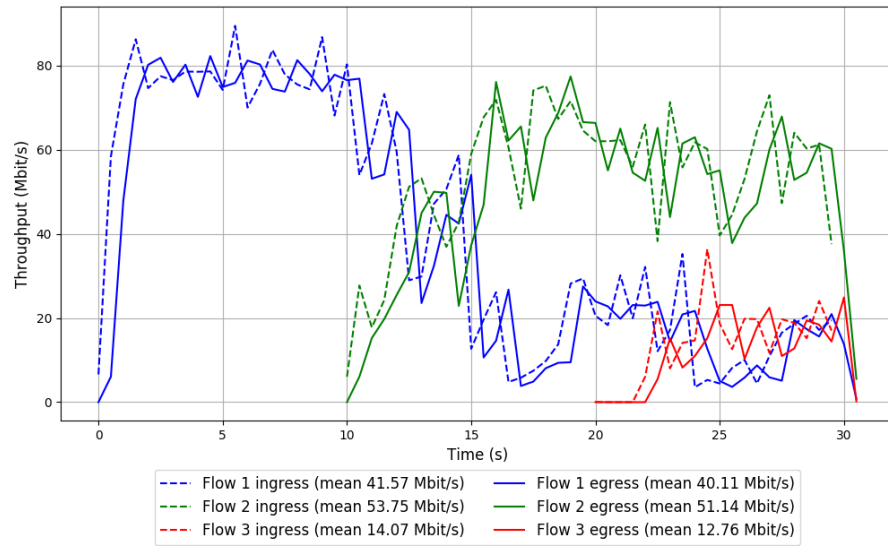
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-06-05 12:17:42
End at: 2018-06-05 12:18:12
Local clock offset: -6.448 ms
Remote clock offset: 29.239 ms


# Below is generated by plot.py at 2018-06-05 15:03:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.74 Mbit/s
95th percentile per-packet one-way delay: 115.659 ms
Loss rate: 4.92%
-- Flow 1:
Average throughput: 52.35 Mbit/s
95th percentile per-packet one-way delay: 115.088 ms
Loss rate: 3.52%
-- Flow 2:
Average throughput: 20.01 Mbit/s
95th percentile per-packet one-way delay: 113.694 ms
Loss rate: 8.34%
-- Flow 3:
Average throughput: 36.38 Mbit/s
95th percentile per-packet one-way delay: 121.214 ms
Loss rate: 6.93%
```

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

Flow 1 ingress (mean 54.31 Mbit/s)   Flow 1 egress (mean 52.35 Mbit/s)
Flow 2 ingress (mean 21.85 Mbit/s)   Flow 2 egress (mean 20.01 Mbit/s)
Flow 3 ingress (mean 39.20 Mbit/s)   Flow 3 egress (mean 36.38 Mbit/s)

Flow 1 (95th percentile 115.09 ms)   Flow 2 (95th percentile 113.69 ms)   Flow 3 (95th percentile 121.21 ms)
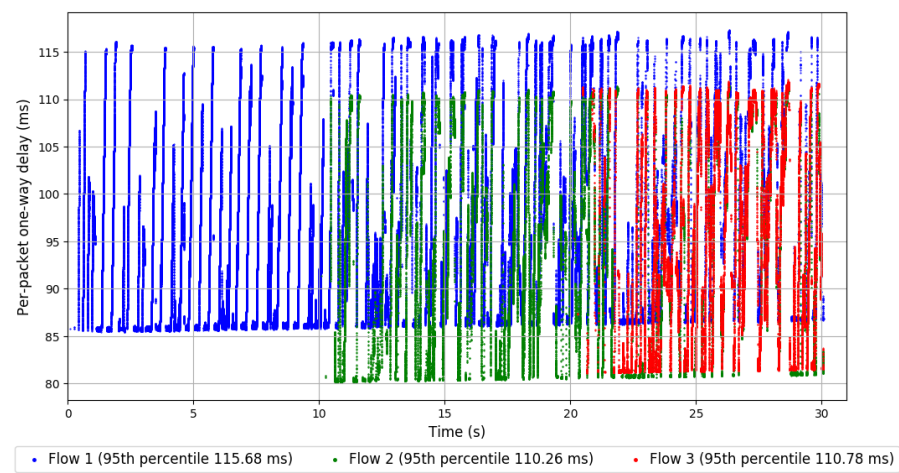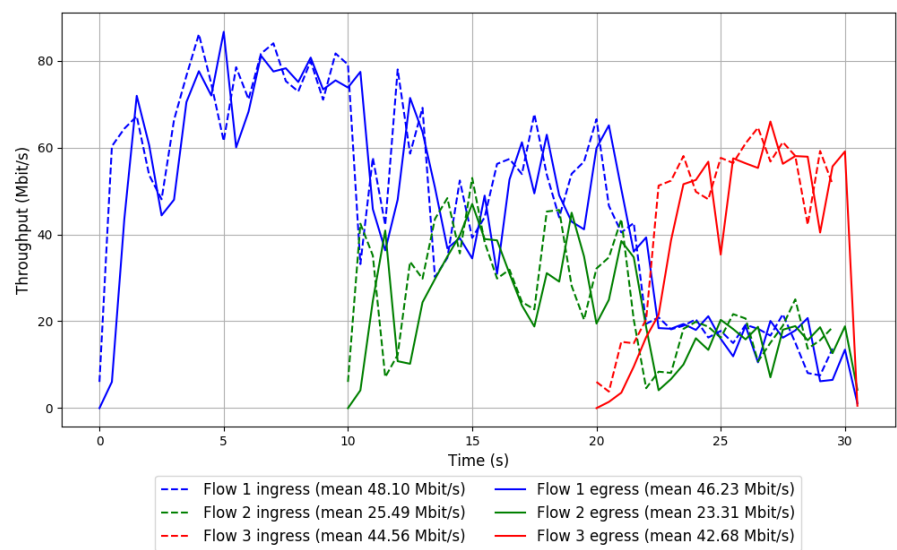
229

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

Start at: 2018-06-05 12:37:42
End at: 2018-06-05 12:38:12
Local clock offset: -5.795 ms
Remote clock offset: 36.096 ms


# Below is generated by plot.py at 2018-06-05 15:03:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.66 Mbit/s
95th percentile per-packet one-way delay: 113.092 ms
Loss rate: 5.69%
-- Flow 1:
Average throughput: 46.69 Mbit/s
95th percentile per-packet one-way delay: 113.257 ms
Loss rate: 4.24%
-- Flow 2:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 111.758 ms
Loss rate: 8.00%
-- Flow 3:
Average throughput: 28.46 Mbit/s
95th percentile per-packet one-way delay: 113.541 ms
Loss rate: 7.11%
```

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

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

Start at: 2018-06-05 12:57:43
End at: 2018-06-05 12:58:13
Local clock offset: -6.8 ms
Remote clock offset: 37.331 ms


# Below is generated by plot.py at 2018-06-05 15:03:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.34 Mbit/s
95th percentile per-packet one-way delay: 113.696 ms
Loss rate: 4.42%
-- Flow 1:
Average throughput: 40.11 Mbit/s
95th percentile per-packet one-way delay: 109.262 ms
Loss rate: 3.52%
-- Flow 2:
Average throughput: 51.14 Mbit/s
95th percentile per-packet one-way delay: 115.140 ms
Loss rate: 4.85%
-- Flow 3:
Average throughput: 12.76 Mbit/s
95th percentile per-packet one-way delay: 109.389 ms
Loss rate: 9.13%
```
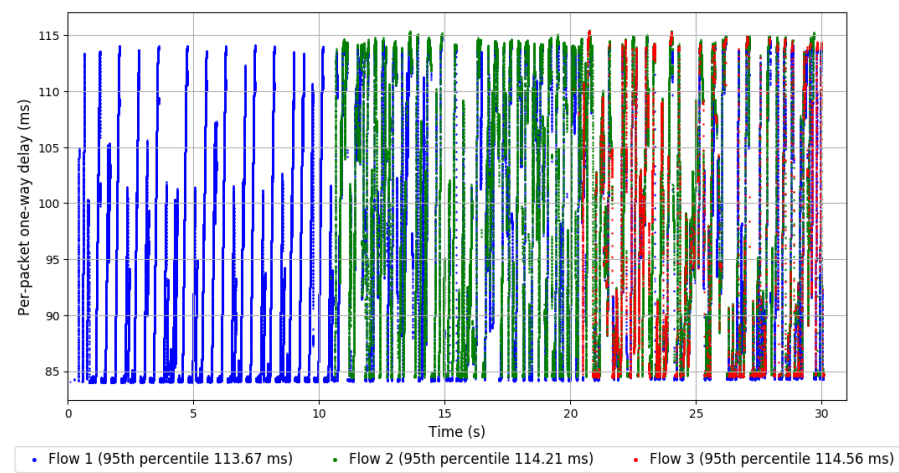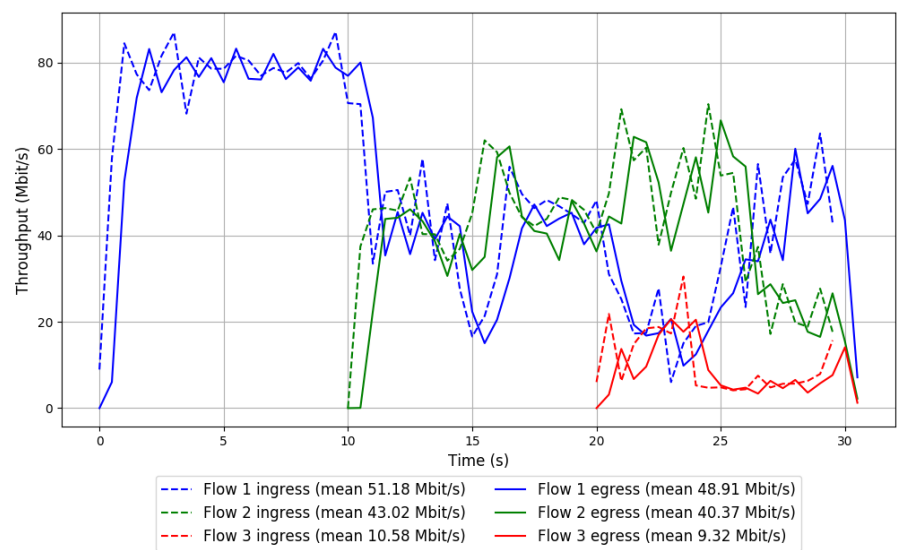
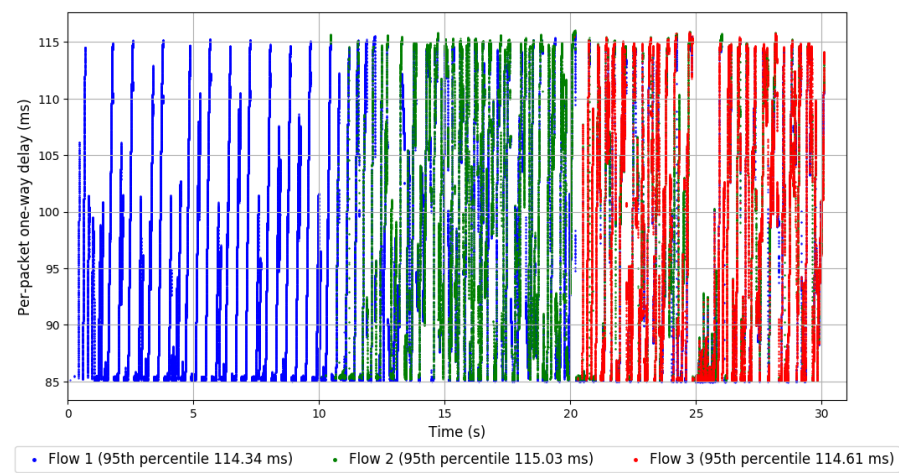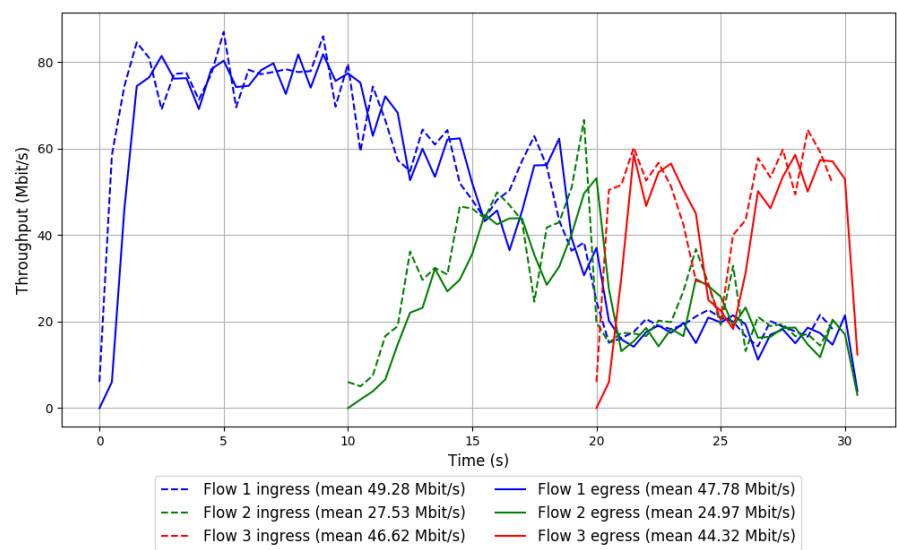# Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2018-06-05 13:17:47
End at: 2018-06-05 13:18:17
Local clock offset: -6.852 ms
Remote clock offset: 20.675 ms

# Below is generated by plot.py at 2018-06-05 15:03:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.92 Mbit/s
95th percentile per-packet one-way delay: 115.095 ms
Loss rate: 4.97%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 115.679 ms
Loss rate: 3.90%
-- Flow 2:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 110.263 ms
Loss rate: 8.57%
-- Flow 3:
Average throughput: 42.68 Mbit/s
95th percentile per-packet one-way delay: 110.778 ms
Loss rate: 4.33%
```

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

Flow 1 ingress (mean 48.10 Mbit/s) — — —   Flow 1 egress (mean 46.23 Mbit/s)
Flow 2 ingress (mean 25.49 Mbit/s) — — —   Flow 2 egress (mean 23.31 Mbit/s)
Flow 3 ingress (mean 44.56 Mbit/s) — — —   Flow 3 egress (mean 42.68 Mbit/s)

Flow 1 (95th percentile 115.68 ms)   Flow 2 (95th percentile 110.26 ms)   Flow 3 (95th percentile 110.78 ms)

235

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

Start at: 2018-06-05 13:37:53
End at: 2018-06-05 13:38:23
Local clock offset: -7.579 ms
Remote clock offset: 0.502 ms


# Below is generated by plot.py at 2018-06-05 15:03:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.61 Mbit/s
95th percentile per-packet one-way delay: 113.945 ms
Loss rate: 5.69%
-- Flow 1:
Average throughput: 48.91 Mbit/s
95th percentile per-packet one-way delay: 113.669 ms
Loss rate: 4.45%
-- Flow 2:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 114.209 ms
Loss rate: 7.10%
-- Flow 3:
Average throughput: 9.32 Mbit/s
95th percentile per-packet one-way delay: 114.562 ms
Loss rate: 12.15%
```
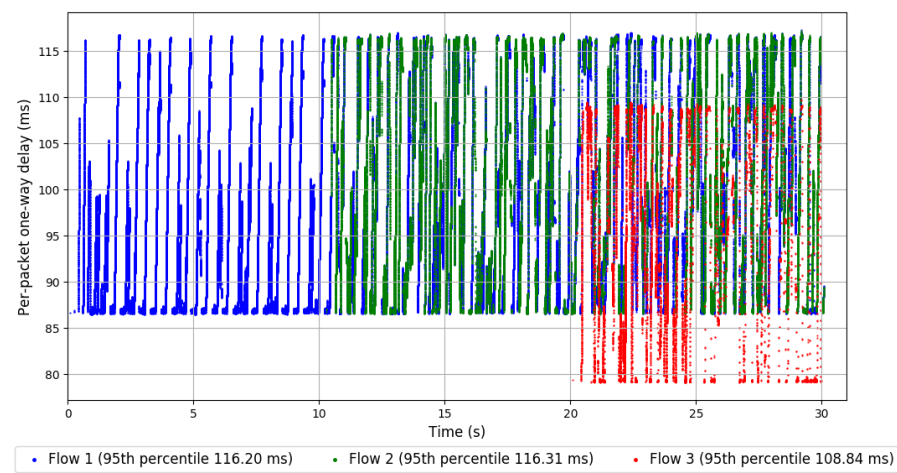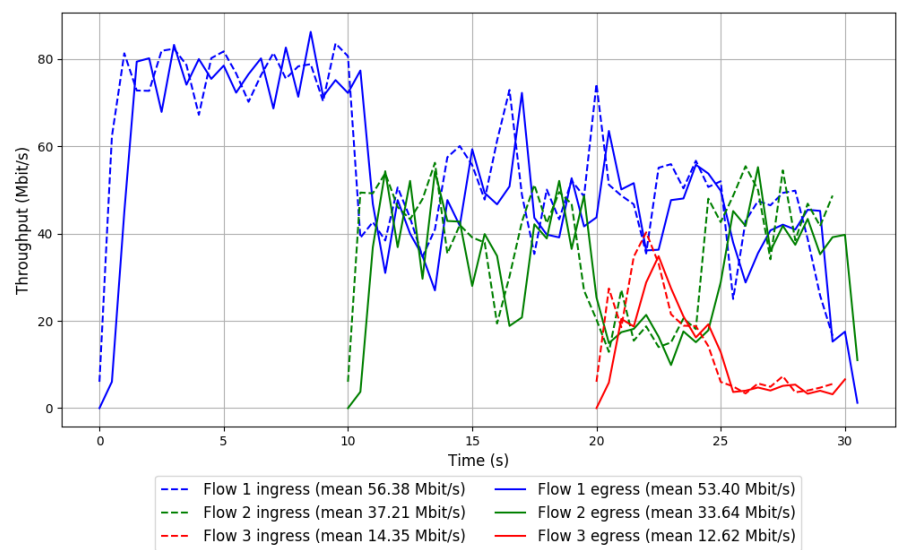
Run 7: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 51.18 Mbit/s) --- Flow 1 egress (mean 48.91 Mbit/s)
Flow 2 ingress (mean 43.02 Mbit/s) --- Flow 2 egress (mean 40.37 Mbit/s)
Flow 3 ingress (mean 10.58 Mbit/s) --- Flow 3 egress (mean 9.32 Mbit/s)

Flow 1 (95th percentile 113.67 ms)   Flow 2 (95th percentile 114.21 ms)   Flow 3 (95th percentile 114.56 ms)

237

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

Start at: 2018-06-05 13:58:08
End at: 2018-06-05 13:58:38
Local clock offset: -5.892 ms
Remote clock offset: 10.284 ms

# Below is generated by plot.py at 2018-06-05 15:03:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.09 Mbit/s
95th percentile per-packet one-way delay: 114.585 ms
Loss rate: 4.70%
-- Flow 1:
Average throughput: 47.78 Mbit/s
95th percentile per-packet one-way delay: 114.340 ms
Loss rate: 2.96%
-- Flow 2:
Average throughput: 24.97 Mbit/s
95th percentile per-packet one-way delay: 115.026 ms
Loss rate: 9.17%
-- Flow 3:
Average throughput: 44.32 Mbit/s
95th percentile per-packet one-way delay: 114.605 ms
Loss rate: 4.95%
```
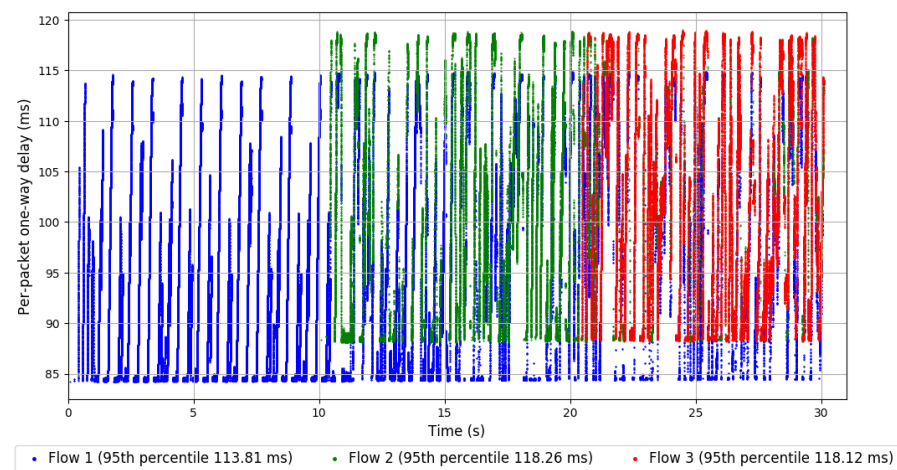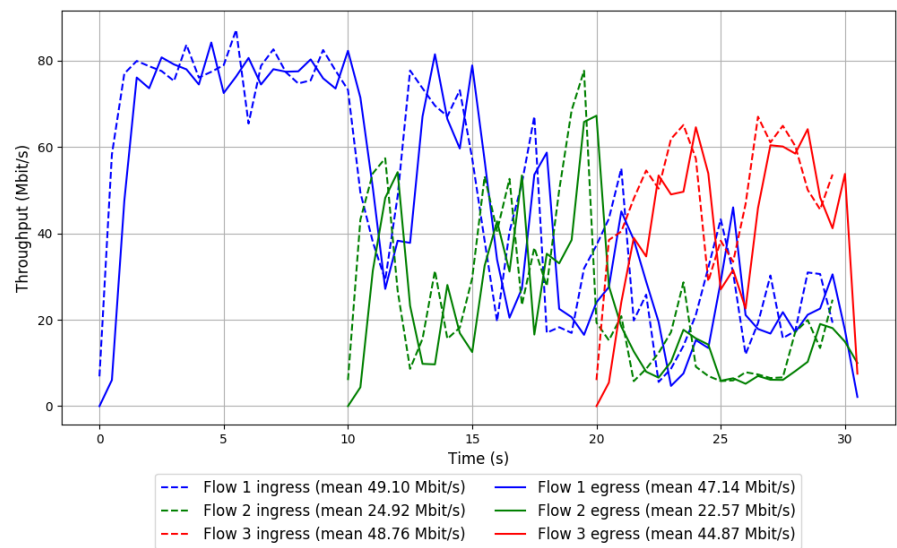
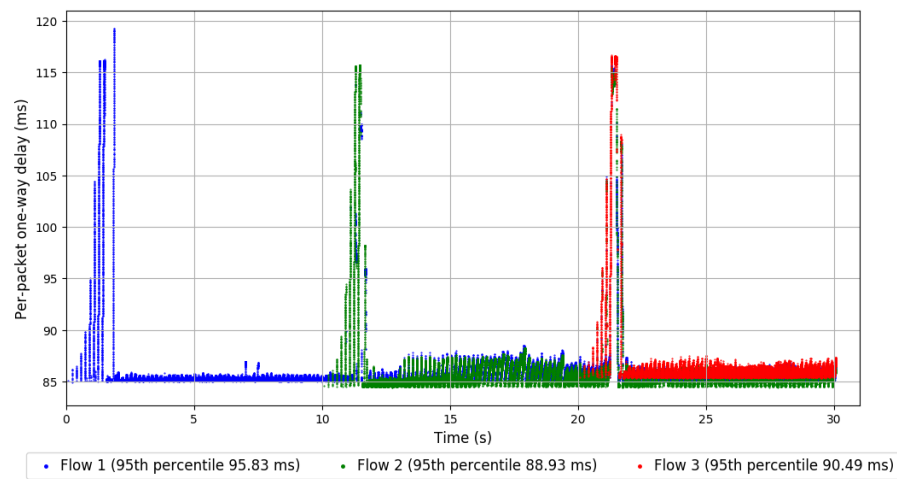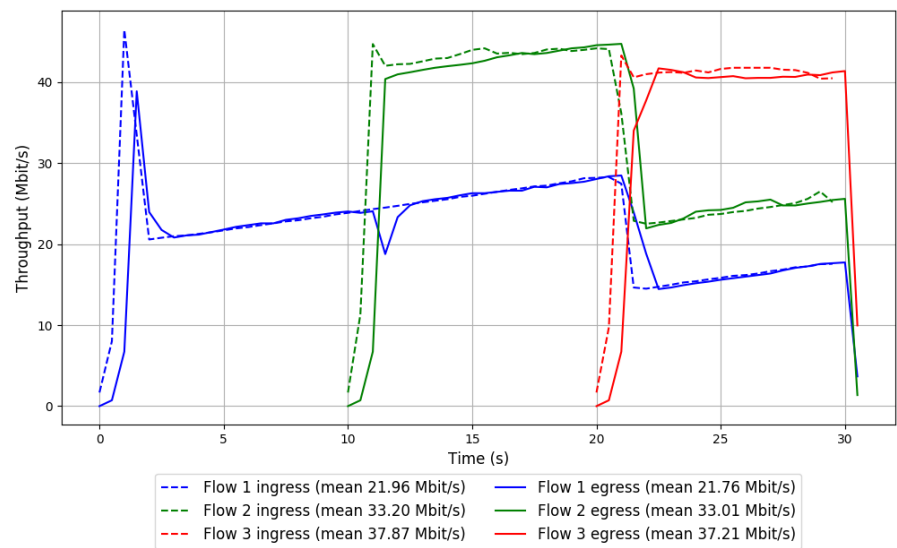# Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 49.28 Mbit/s)   Flow 1 egress (mean 47.78 Mbit/s)
Flow 2 ingress (mean 27.53 Mbit/s)   Flow 2 egress (mean 24.97 Mbit/s)
Flow 3 ingress (mean 46.62 Mbit/s)   Flow 3 egress (mean 44.32 Mbit/s)

Flow 1 (95th percentile 114.34 ms)   Flow 2 (95th percentile 115.03 ms)   Flow 3 (95th percentile 114.61 ms)

239

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

Start at: 2018-06-05 14:18:09
End at: 2018-06-05 14:18:39
Local clock offset: -5.559 ms
Remote clock offset: 6.768 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.94 Mbit/s
95th percentile per-packet one-way delay: 116.225 ms
Loss rate: 6.93%
-- Flow 1:
Average throughput: 53.40 Mbit/s
95th percentile per-packet one-way delay: 116.199 ms
Loss rate: 5.28%
-- Flow 2:
Average throughput: 33.64 Mbit/s
95th percentile per-packet one-way delay: 116.309 ms
Loss rate: 9.69%
-- Flow 3:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 108.843 ms
Loss rate: 12.08%
```
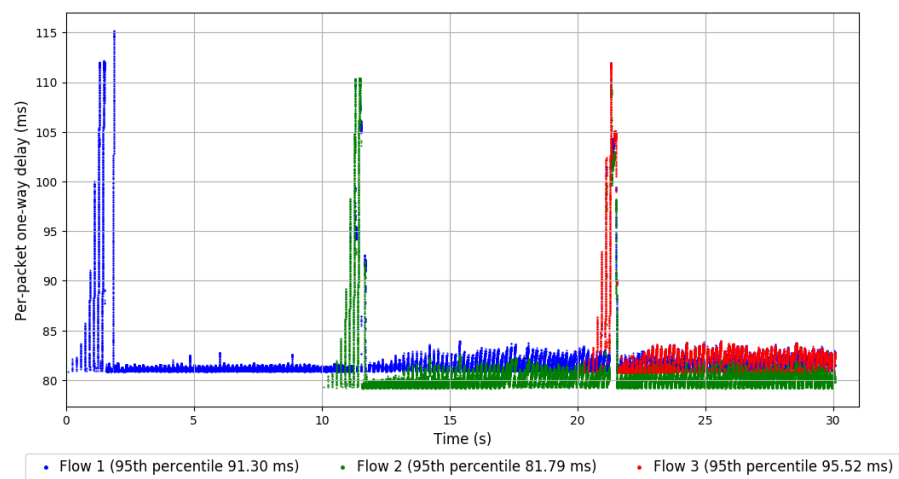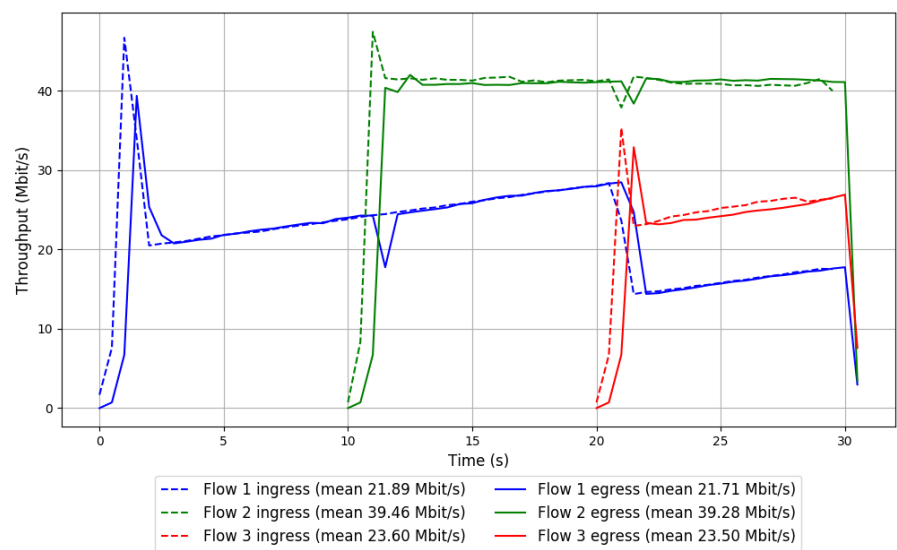
Run 9: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 56.38 Mbit/s)
- Flow 1 egress (mean 53.40 Mbit/s)
- Flow 2 ingress (mean 37.21 Mbit/s)
- Flow 2 egress (mean 33.64 Mbit/s)
- Flow 3 ingress (mean 14.35 Mbit/s)
- Flow 3 egress (mean 12.62 Mbit/s)

- Flow 1 (95th percentile 116.20 ms)
- Flow 2 (95th percentile 116.31 ms)
- Flow 3 (95th percentile 108.84 ms)

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

Start at: 2018-06-05 14:38:33
End at: 2018-06-05 14:39:03
Local clock offset: -2.817 ms
Remote clock offset: 6.077 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.00 Mbit/s
95th percentile per-packet one-way delay: 117.328 ms
Loss rate: 5.83%
-- Flow 1:
Average throughput: 47.14 Mbit/s
95th percentile per-packet one-way delay: 113.809 ms
Loss rate: 3.95%
-- Flow 2:
Average throughput: 22.57 Mbit/s
95th percentile per-packet one-way delay: 118.256 ms
Loss rate: 9.33%
-- Flow 3:
Average throughput: 44.87 Mbit/s
95th percentile per-packet one-way delay: 118.121 ms
Loss rate: 7.97%
```

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

Flow 1 ingress (mean 49.10 Mbit/s)   Flow 1 egress (mean 47.14 Mbit/s)
Flow 2 ingress (mean 24.92 Mbit/s)   Flow 2 egress (mean 22.57 Mbit/s)
Flow 3 ingress (mean 48.76 Mbit/s)   Flow 3 egress (mean 44.87 Mbit/s)

Flow 1 (95th percentile 113.81 ms)   Flow 2 (95th percentile 118.26 ms)   Flow 3 (95th percentile 118.12 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2018-06-05 11:36:26
End at: 2018-06-05 11:36:56
Local clock offset: -6.832 ms
Remote clock offset: 13.108 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 92.767 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 21.76 Mbit/s
95th percentile per-packet one-way delay: 95.829 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 88.934 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 90.494 ms
Loss rate: 1.73%
```
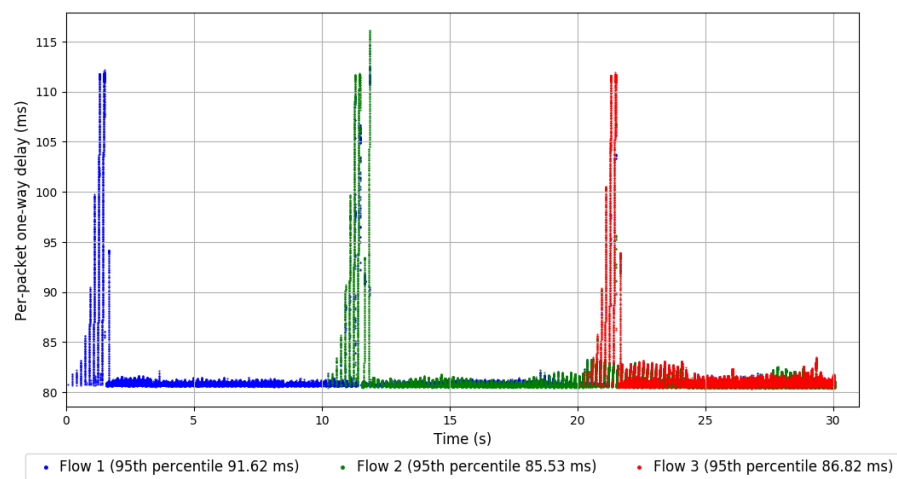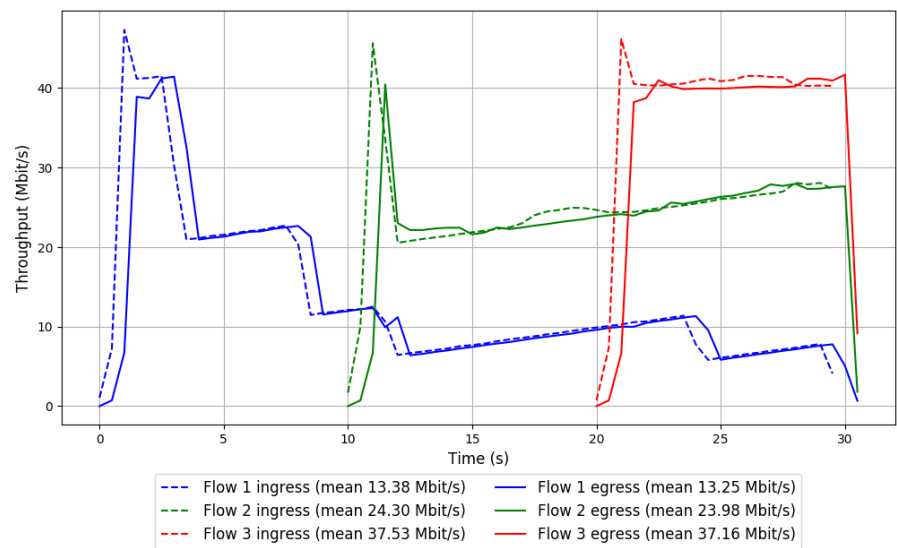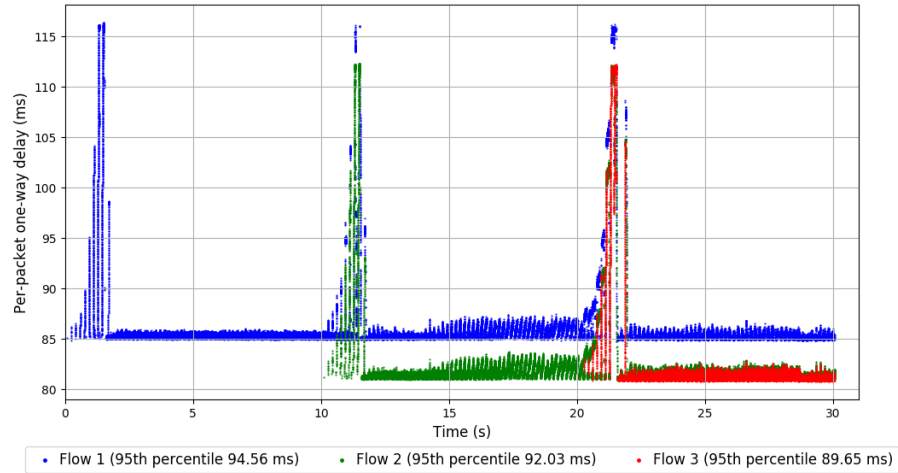
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-06-05 11:56:27
End at: 2018-06-05 11:56:57
Local clock offset: -6.369 ms
Remote clock offset: 9.381 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 85.462 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 21.71 Mbit/s
95th percentile per-packet one-way delay: 91.297 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 81.787 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 23.50 Mbit/s
95th percentile per-packet one-way delay: 95.515 ms
Loss rate: 0.40%
```
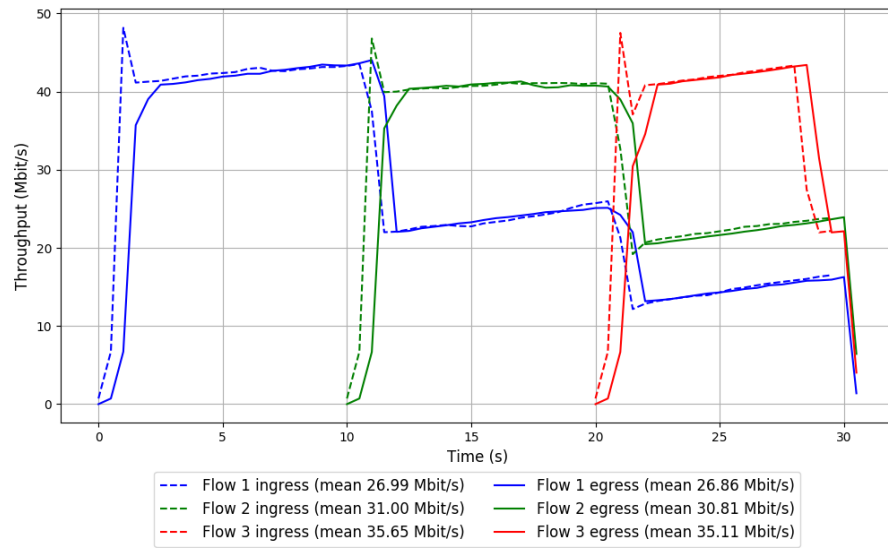
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-06-05 12:16:28
End at: 2018-06-05 12:16:58
Local clock offset: -5.658 ms
Remote clock offset: 22.33 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.78 Mbit/s
95th percentile per-packet one-way delay: 88.643 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 25.75 Mbit/s
95th percentile per-packet one-way delay: 85.706 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 33.05 Mbit/s
95th percentile per-packet one-way delay: 88.906 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 36.13 Mbit/s
95th percentile per-packet one-way delay: 92.463 ms
Loss rate: 1.31%
```
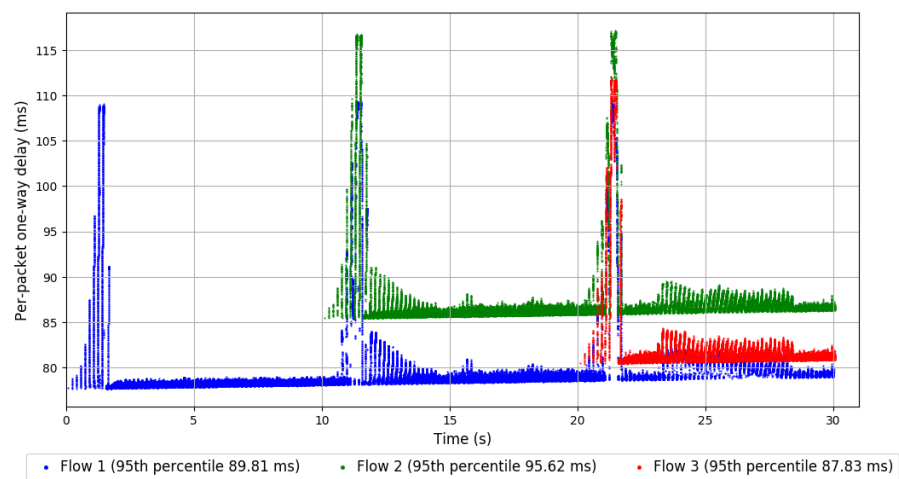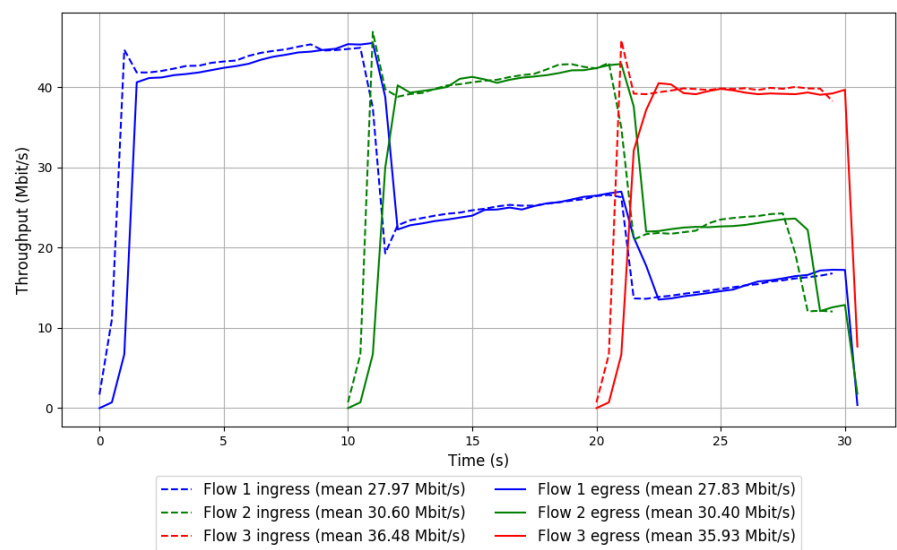
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2018-06-05 12:36:29
End at: 2018-06-05 12:36:59
Local clock offset: -7.359 ms
Remote clock offset: 30.742 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.57 Mbit/s
95th percentile per-packet one-way delay: 88.563 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 13.25 Mbit/s
95th percentile per-packet one-way delay: 91.620 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 23.98 Mbit/s
95th percentile per-packet one-way delay: 85.526 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 37.16 Mbit/s
95th percentile per-packet one-way delay: 86.820 ms
Loss rate: 0.99%
```

Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-06-05 12:56:29
End at: 2018-06-05 12:56:59
Local clock offset: -6.851 ms
Remote clock offset: 38.075 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.05 Mbit/s
95th percentile per-packet one-way delay: 93.100 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 26.86 Mbit/s
95th percentile per-packet one-way delay: 94.564 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 92.033 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 35.11 Mbit/s
95th percentile per-packet one-way delay: 89.646 ms
Loss rate: 1.51%
```
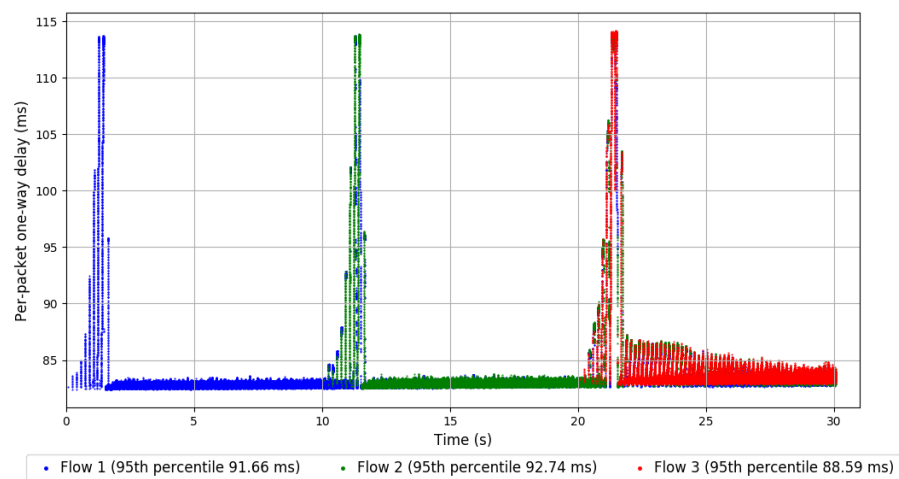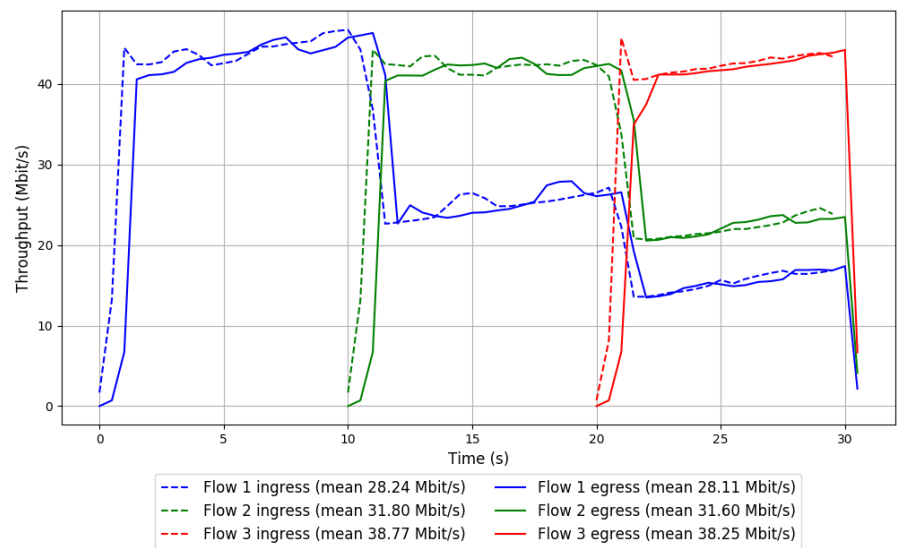
Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2018-06-05 13:16:33
End at: 2018-06-05 13:17:03
Local clock offset: -6.09 ms
Remote clock offset: 22.628 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.99 Mbit/s
95th percentile per-packet one-way delay: 91.804 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 27.83 Mbit/s
95th percentile per-packet one-way delay: 89.809 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 30.40 Mbit/s
95th percentile per-packet one-way delay: 95.617 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 87.825 ms
Loss rate: 1.50%
```
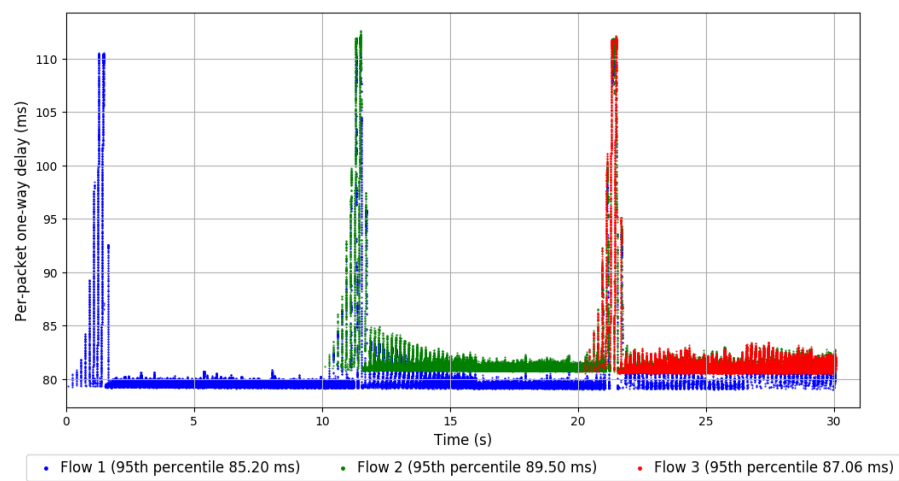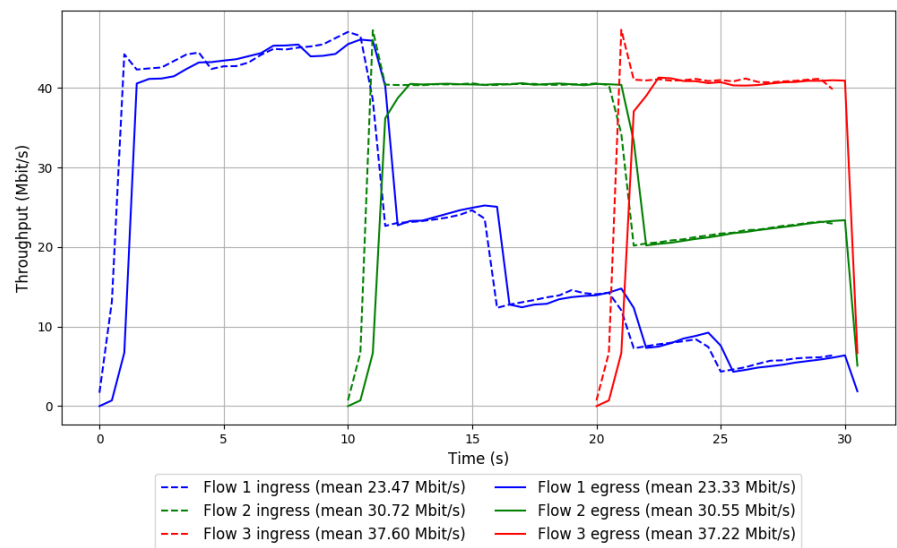
Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 27.97 Mbit/s)   Flow 1 egress (mean 27.83 Mbit/s)
Flow 2 ingress (mean 30.60 Mbit/s)   Flow 2 egress (mean 30.40 Mbit/s)
Flow 3 ingress (mean 36.48 Mbit/s)   Flow 3 egress (mean 35.93 Mbit/s)

Flow 1 (95th percentile 89.81 ms)   Flow 2 (95th percentile 95.62 ms)   Flow 3 (95th percentile 87.83 ms)

```
Run 7: Statistics of TCP Vegas

Start at: 2018-06-05 13:36:39
End at: 2018-06-05 13:37:09
Local clock offset: -6.842 ms
Remote clock offset: 0.191 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 91.359 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 28.11 Mbit/s
95th percentile per-packet one-way delay: 91.656 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 31.60 Mbit/s
95th percentile per-packet one-way delay: 92.738 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 88.594 ms
Loss rate: 1.33%
```
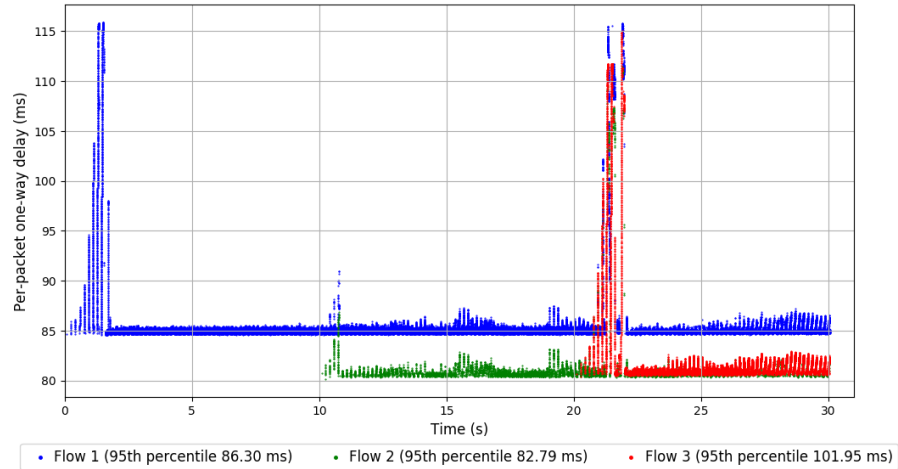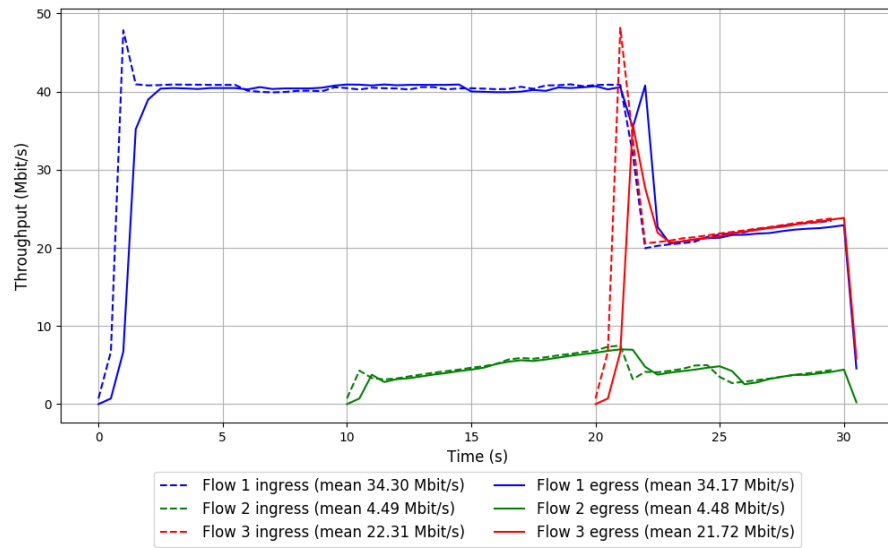
Run 7: Report of TCP Vegas — Data Link

```
Run 8: Statistics of TCP Vegas

Start at: 2018-06-05 13:56:54
End at: 2018-06-05 13:57:24
Local clock offset: -6.665 ms
Remote clock offset: 4.607 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.04 Mbit/s
95th percentile per-packet one-way delay: 87.043 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 23.33 Mbit/s
95th percentile per-packet one-way delay: 85.196 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 30.55 Mbit/s
95th percentile per-packet one-way delay: 89.501 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 87.063 ms
Loss rate: 1.01%
```
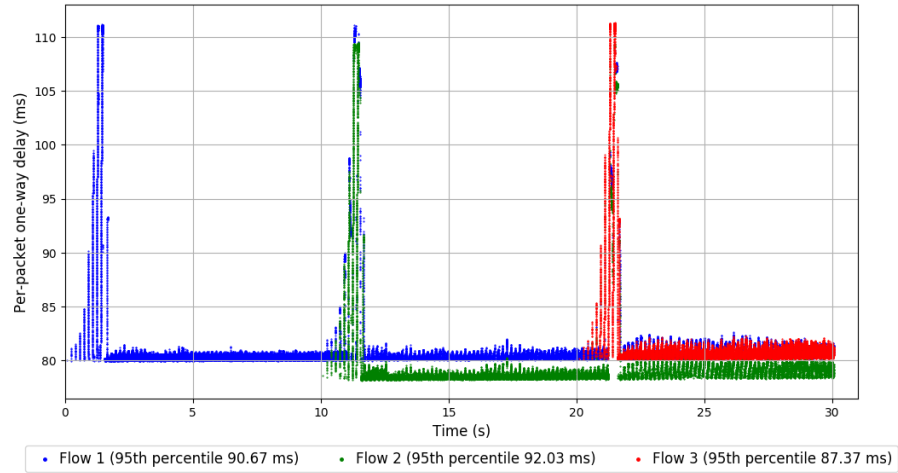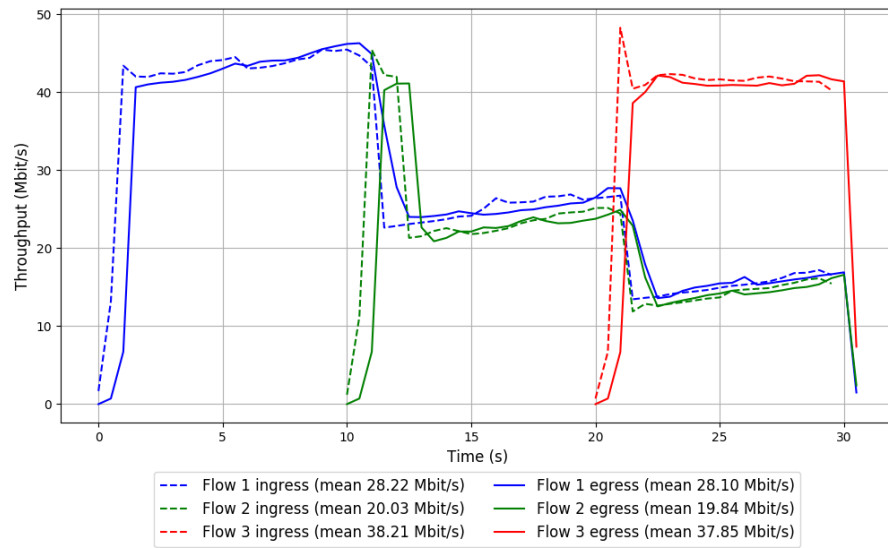
Run 8: Report of TCP Vegas — Data Link

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```
Run 9: Statistics of TCP Vegas

Start at: 2018-06-05 14:16:56
End at: 2018-06-05 14:17:26
Local clock offset: -4.899 ms
Remote clock offset: 7.0 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.37 Mbit/s
95th percentile per-packet one-way delay: 88.606 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 34.17 Mbit/s
95th percentile per-packet one-way delay: 86.302 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 82.793 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 21.72 Mbit/s
95th percentile per-packet one-way delay: 101.948 ms
Loss rate: 2.62%
```
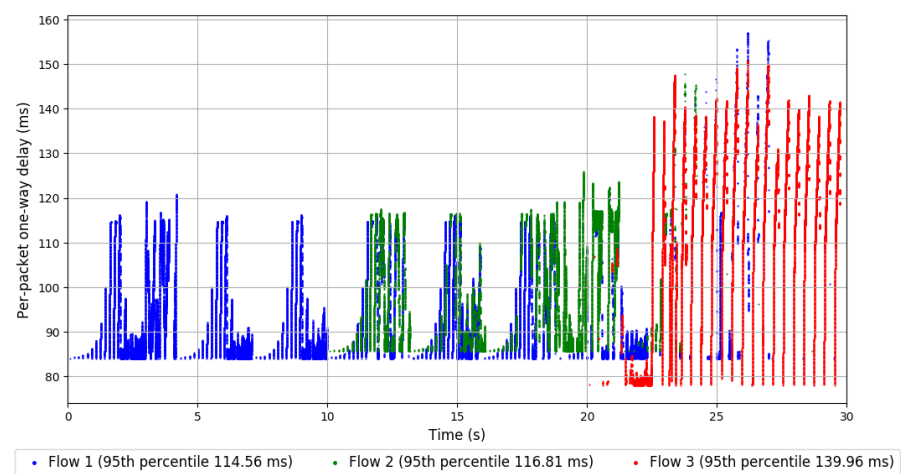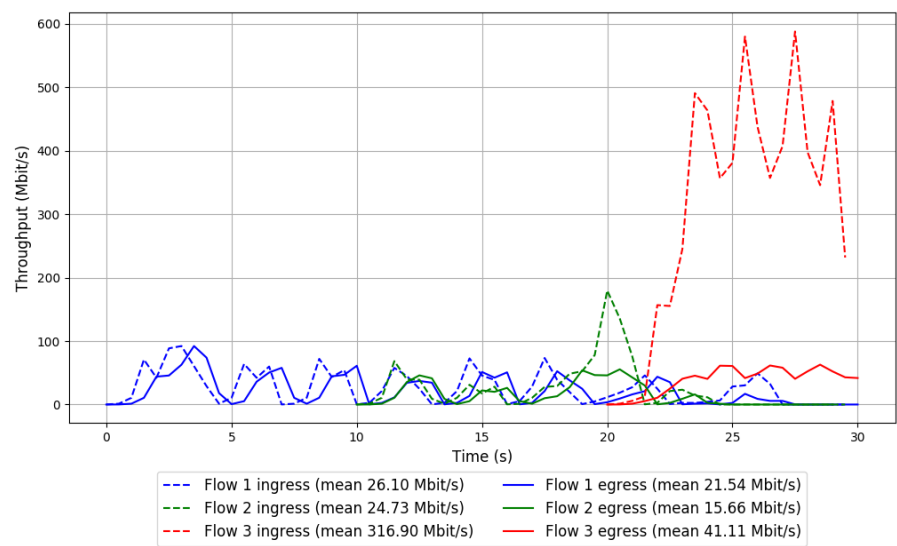
Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2018-06-05 14:37:19
End at: 2018-06-05 14:37:49
Local clock offset: -3.967 ms
Remote clock offset: 1.279 ms


# Below is generated by plot.py at 2018-06-05 15:05:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.89 Mbit/s
95th percentile per-packet one-way delay: 90.072 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 28.10 Mbit/s
95th percentile per-packet one-way delay: 90.668 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 92.032 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 37.85 Mbit/s
95th percentile per-packet one-way delay: 87.366 ms
Loss rate: 0.95%
```

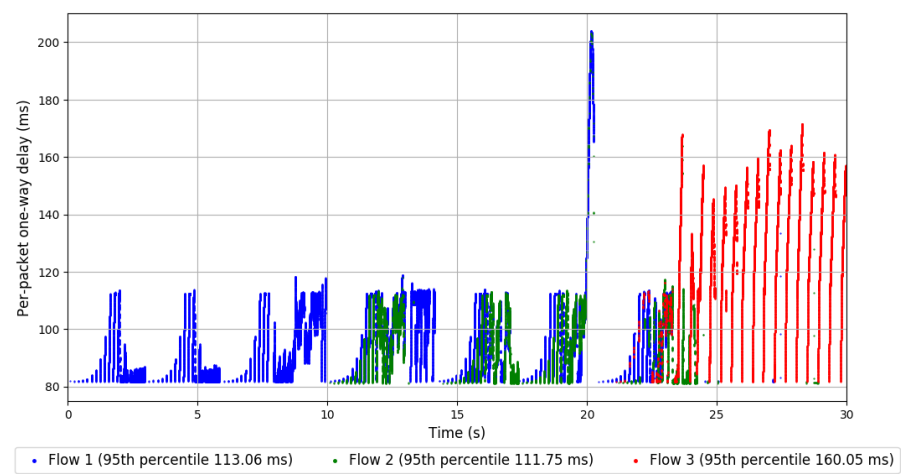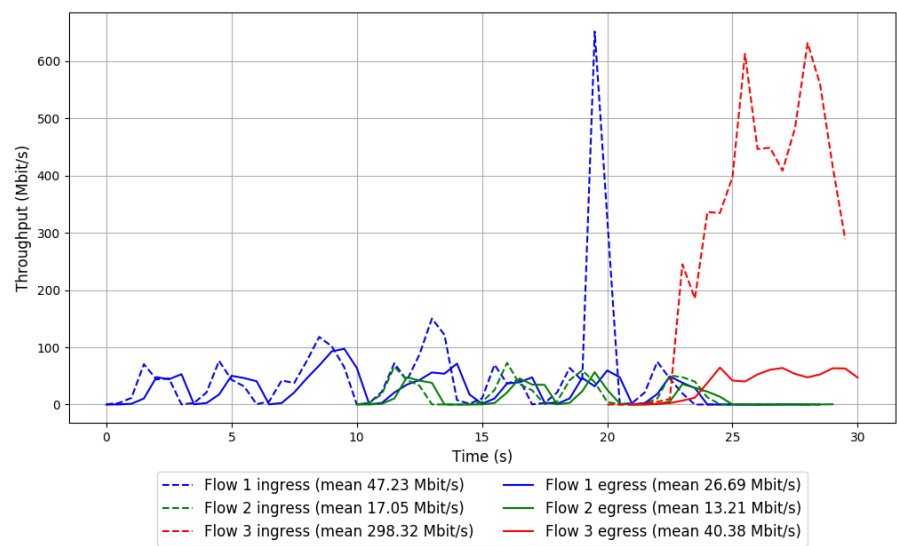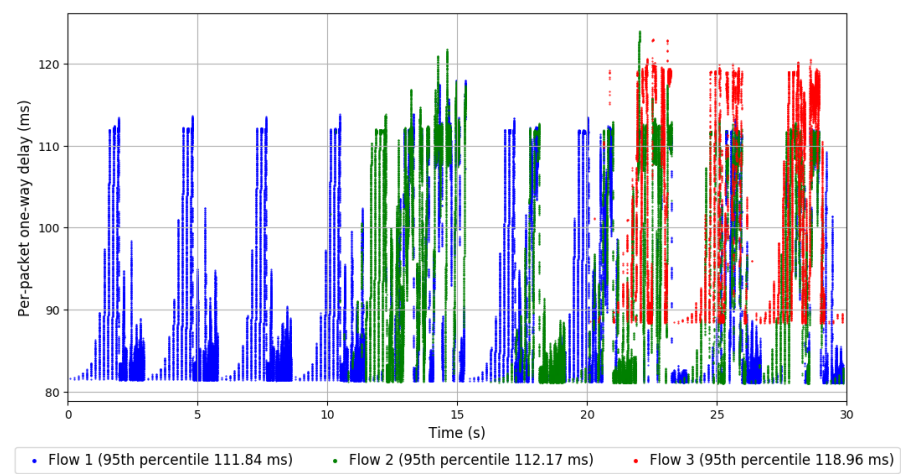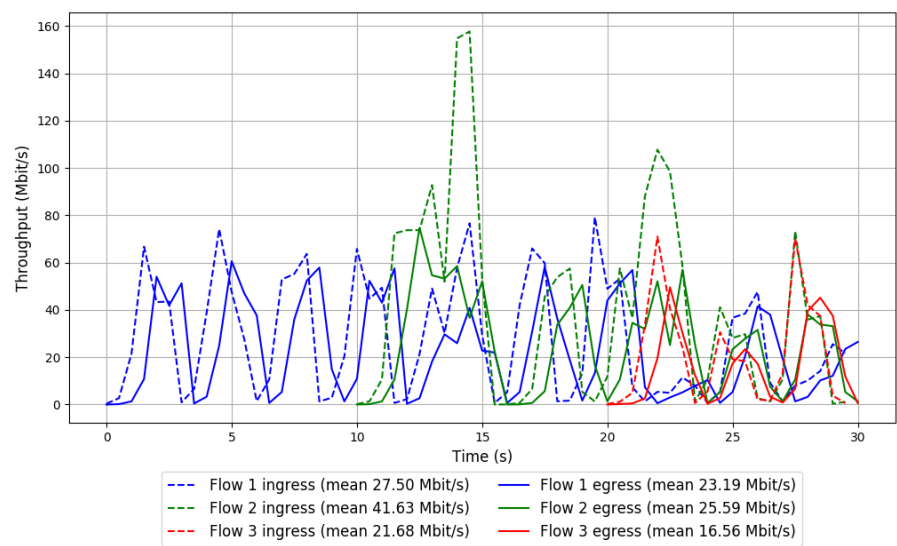## Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-06-05 11:31:31
End at: 2018-06-05 11:32:01
Local clock offset: -6.955 ms
Remote clock offset: 7.919 ms


# Below is generated by plot.py at 2018-06-05 15:05:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.56 Mbit/s
95th percentile per-packet one-way delay: 134.895 ms
Loss rate: 69.28%
-- Flow 1:
Average throughput: 21.54 Mbit/s
95th percentile per-packet one-way delay: 114.560 ms
Loss rate: 17.94%
-- Flow 2:
Average throughput: 15.66 Mbit/s
95th percentile per-packet one-way delay: 116.812 ms
Loss rate: 39.96%
-- Flow 3:
Average throughput: 41.11 Mbit/s
95th percentile per-packet one-way delay: 139.957 ms
Loss rate: 86.97%
```

Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 26.10 Mbit/s)   Flow 1 egress (mean 21.54 Mbit/s)
Flow 2 ingress (mean 24.73 Mbit/s)   Flow 2 egress (mean 15.66 Mbit/s)
Flow 3 ingress (mean 316.90 Mbit/s)   Flow 3 egress (mean 41.11 Mbit/s)

Flow 1 (95th percentile 114.56 ms)   Flow 2 (95th percentile 116.81 ms)   Flow 3 (95th percentile 139.96 ms)
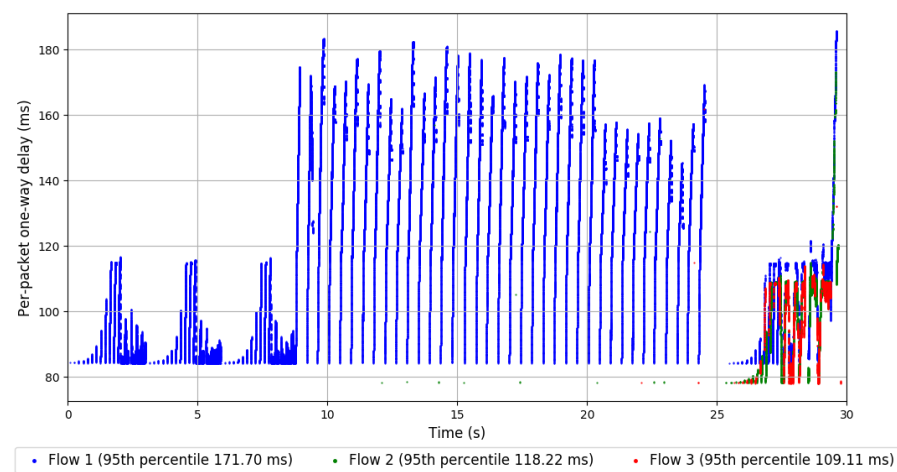
```
Run 2: Statistics of Verus

Start at: 2018-06-05 11:51:32
End at: 2018-06-05 11:52:02
Local clock offset: -7.191 ms
Remote clock offset: 9.276 ms


# Below is generated by plot.py at 2018-06-05 15:05:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.07 Mbit/s
95th percentile per-packet one-way delay: 153.646 ms
Loss rate: 70.73%
-- Flow 1:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 113.059 ms
Loss rate: 45.86%
-- Flow 2:
Average throughput: 13.21 Mbit/s
95th percentile per-packet one-way delay: 111.747 ms
Loss rate: 22.92%
-- Flow 3:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 160.046 ms
Loss rate: 87.75%
```
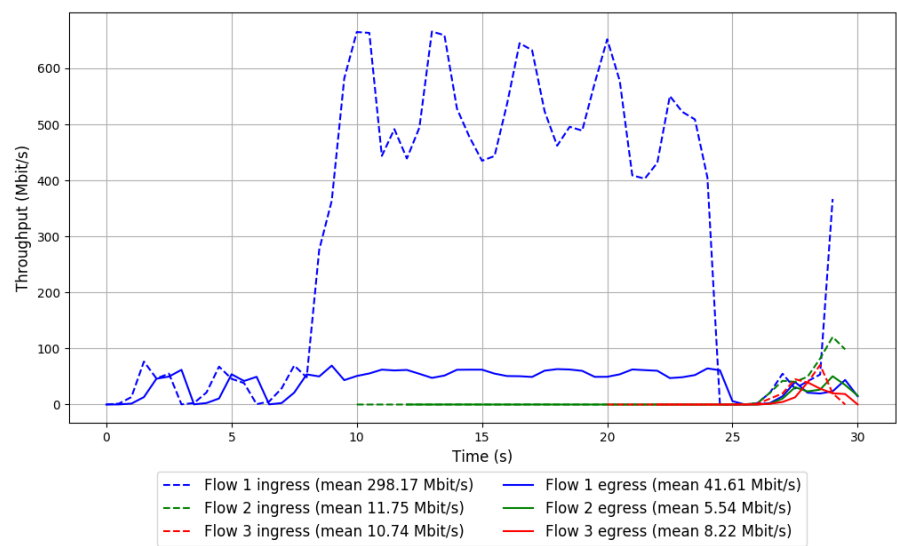
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-06-05 12:11:34
End at: 2018-06-05 12:12:04
Local clock offset: -5.65 ms
Remote clock offset: 22.82 ms


# Below is generated by plot.py at 2018-06-05 15:05:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.55 Mbit/s
95th percentile per-packet one-way delay: 114.399 ms
Loss rate: 26.75%
-- Flow 1:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 111.837 ms
Loss rate: 15.68%
-- Flow 2:
Average throughput: 25.59 Mbit/s
95th percentile per-packet one-way delay: 112.170 ms
Loss rate: 38.57%
-- Flow 3:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 118.964 ms
Loss rate: 23.62%
```

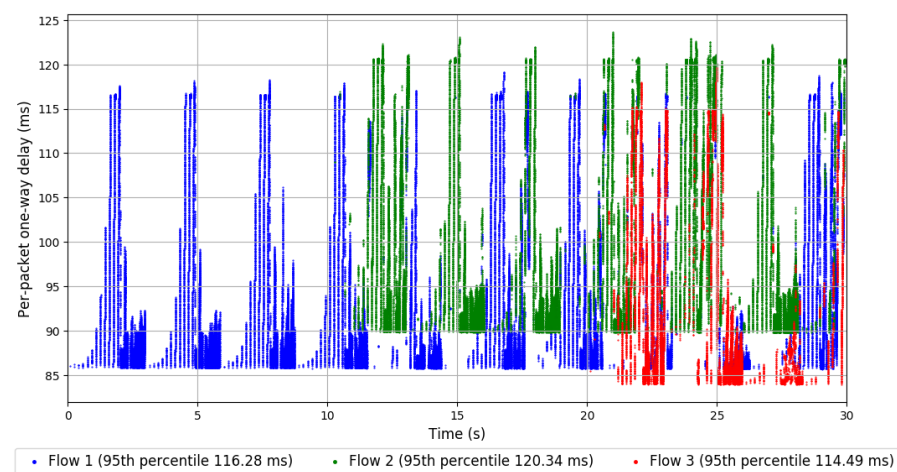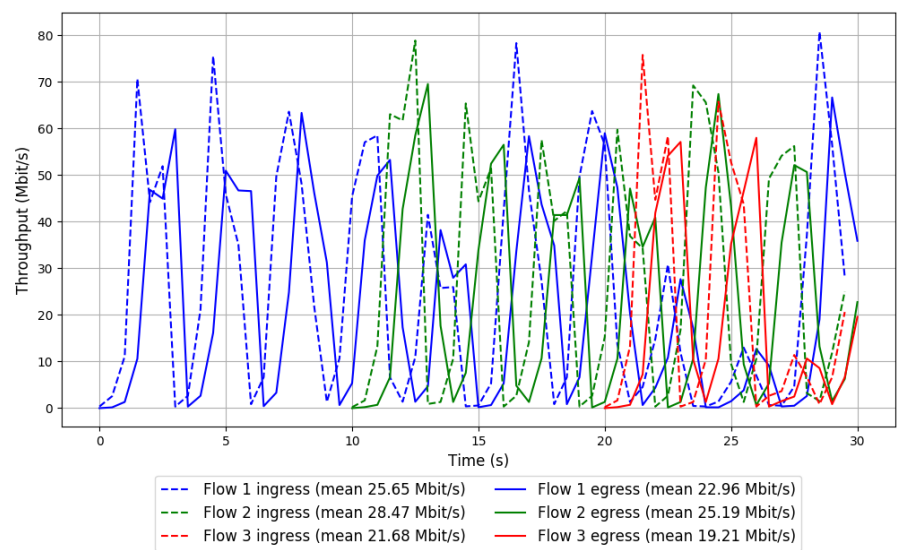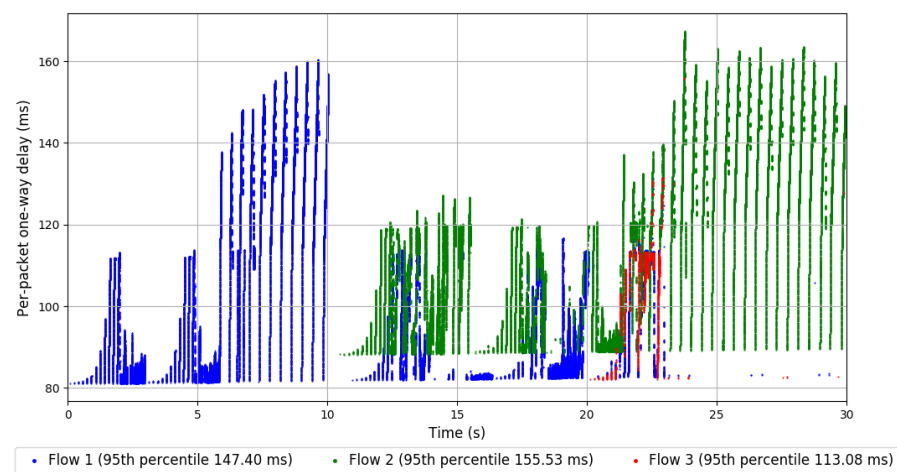Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-06-05 12:31:32
End at: 2018-06-05 12:32:02
Local clock offset: -6.437 ms
Remote clock offset: 29.237 ms


# Below is generated by plot.py at 2018-06-05 15:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 170.750 ms
Loss rate: 84.75%
-- Flow 1:
Average throughput: 41.61 Mbit/s
95th percentile per-packet one-way delay: 171.698 ms
Loss rate: 86.00%
-- Flow 2:
Average throughput: 5.54 Mbit/s
95th percentile per-packet one-way delay: 118.222 ms
Loss rate: 57.57%
-- Flow 3:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 109.106 ms
Loss rate: 39.31%
```

Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 298.17 Mbit/s) --- Flow 1 egress (mean 41.61 Mbit/s)
Flow 2 ingress (mean 11.75 Mbit/s) --- Flow 2 egress (mean 5.54 Mbit/s)
Flow 3 ingress (mean 10.74 Mbit/s) --- Flow 3 egress (mean 8.22 Mbit/s)

Flow 1 (95th percentile 171.70 ms)   Flow 2 (95th percentile 118.22 ms)   Flow 3 (95th percentile 109.11 ms)
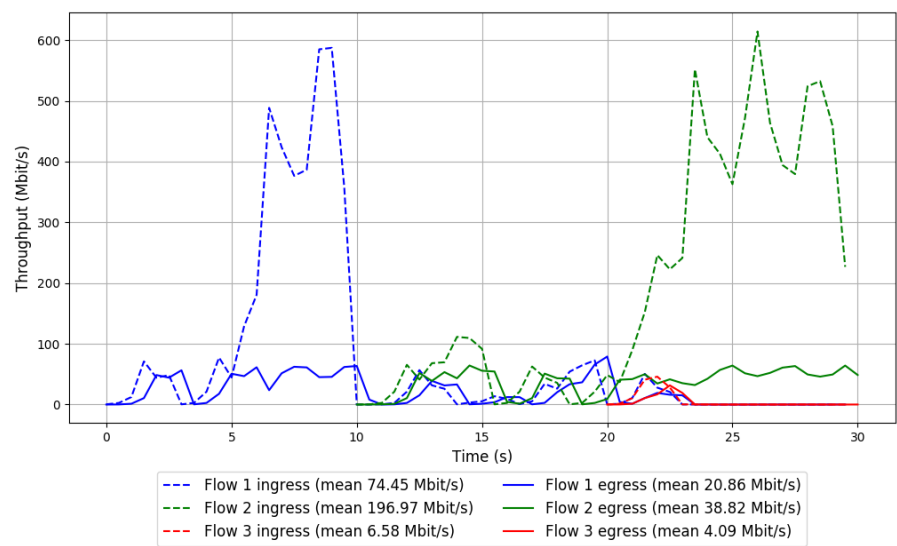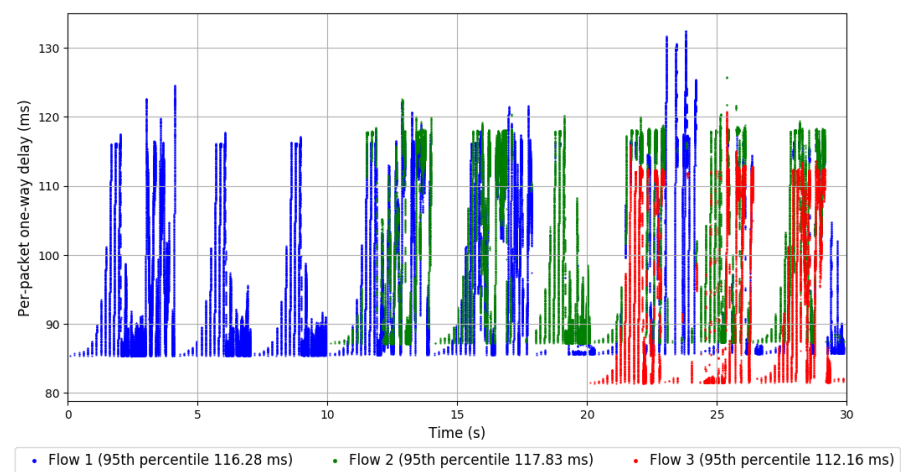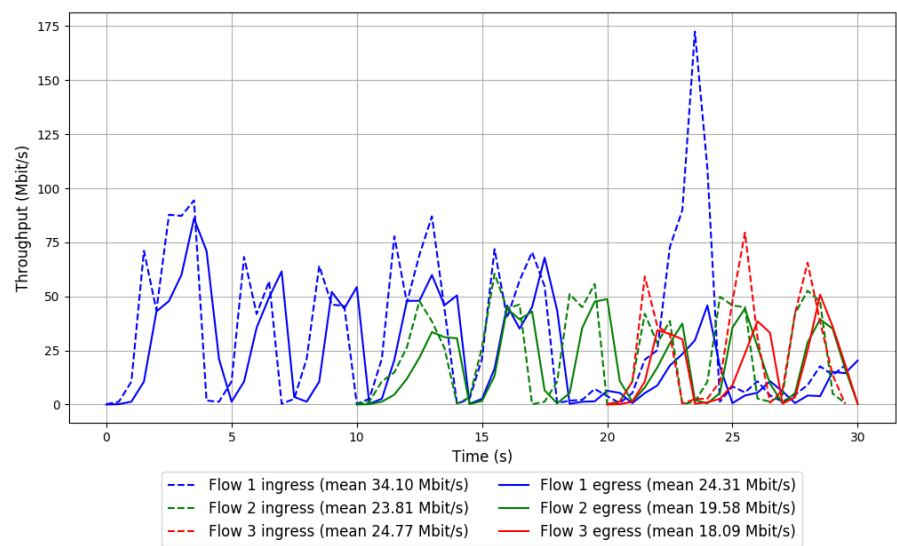
271

```
Run 5: Statistics of Verus

Start at: 2018-06-05 12:51:34
End at: 2018-06-05 12:52:04
Local clock offset: -6.764 ms
Remote clock offset: 41.621 ms


# Below is generated by plot.py at 2018-06-05 15:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.94 Mbit/s
95th percentile per-packet one-way delay: 117.558 ms
Loss rate: 10.86%
-- Flow 1:
Average throughput: 22.96 Mbit/s
95th percentile per-packet one-way delay: 116.276 ms
Loss rate: 10.41%
-- Flow 2:
Average throughput: 25.19 Mbit/s
95th percentile per-packet one-way delay: 120.345 ms
Loss rate: 11.36%
-- Flow 3:
Average throughput: 19.21 Mbit/s
95th percentile per-packet one-way delay: 114.491 ms
Loss rate: 11.17%
```

Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 25.65 Mbit/s) — Flow 1 egress (mean 22.96 Mbit/s)
Flow 2 ingress (mean 28.47 Mbit/s) — Flow 2 egress (mean 25.19 Mbit/s)
Flow 3 ingress (mean 21.68 Mbit/s) — Flow 3 egress (mean 19.21 Mbit/s)

Flow 1 (95th percentile 116.28 ms)   Flow 2 (95th percentile 120.34 ms)   Flow 3 (95th percentile 114.49 ms)
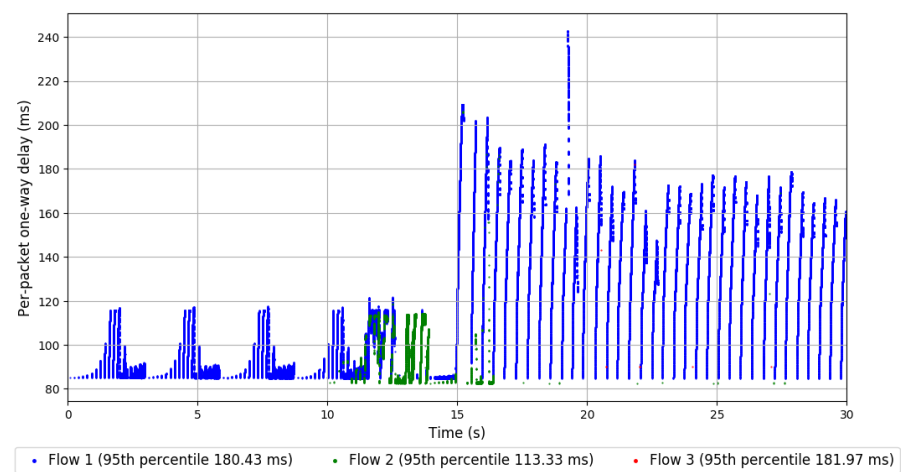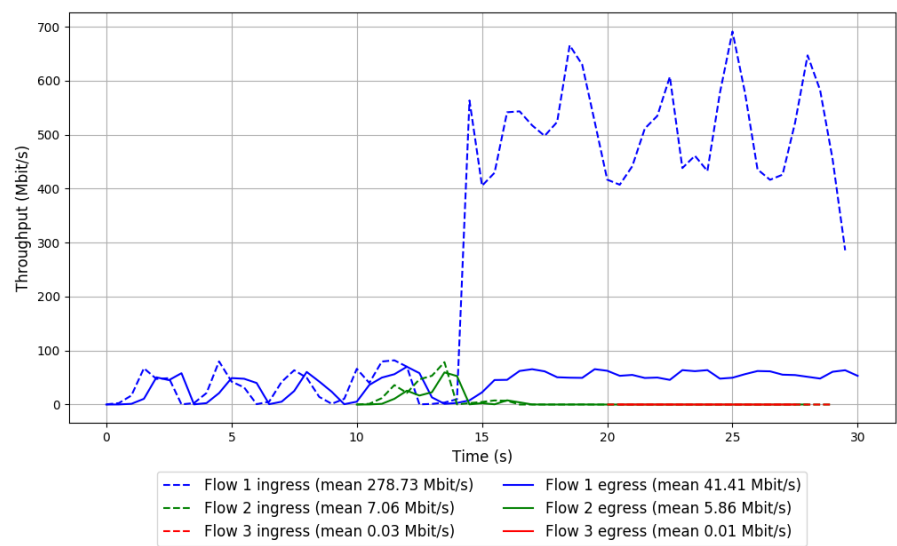
273

```
Run 6: Statistics of Verus

Start at: 2018-06-05 13:11:36
End at: 2018-06-05 13:12:06
Local clock offset: -7.688 ms
Remote clock offset: 41.275 ms


# Below is generated by plot.py at 2018-06-05 15:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.06 Mbit/s
95th percentile per-packet one-way delay: 152.829 ms
Loss rate: 76.86%
-- Flow 1:
Average throughput: 20.86 Mbit/s
95th percentile per-packet one-way delay: 147.398 ms
Loss rate: 72.13%
-- Flow 2:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 155.535 ms
Loss rate: 80.23%
-- Flow 3:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 113.080 ms
Loss rate: 37.52%
```

Run 6: Report of Verus — Data Link

Flow 1 ingress (mean 74.45 Mbit/s) --- Flow 1 egress (mean 20.86 Mbit/s)
Flow 2 ingress (mean 196.97 Mbit/s) --- Flow 2 egress (mean 38.82 Mbit/s)
Flow 3 ingress (mean 6.58 Mbit/s) --- Flow 3 egress (mean 4.09 Mbit/s)

Flow 1 (95th percentile 147.40 ms)   Flow 2 (95th percentile 155.53 ms)   Flow 3 (95th percentile 113.08 ms)

```
Run 7: Statistics of Verus

Start at: 2018-06-05 13:31:44
End at: 2018-06-05 13:32:14
Local clock offset: -6.945 ms
Remote clock offset: 0.692 ms


# Below is generated by plot.py at 2018-06-05 15:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.21 Mbit/s
95th percentile per-packet one-way delay: 117.618 ms
Loss rate: 25.49%
-- Flow 1:
Average throughput: 24.31 Mbit/s
95th percentile per-packet one-way delay: 116.277 ms
Loss rate: 28.71%
-- Flow 2:
Average throughput: 19.58 Mbit/s
95th percentile per-packet one-way delay: 117.830 ms
Loss rate: 17.78%
-- Flow 3:
Average throughput: 18.09 Mbit/s
95th percentile per-packet one-way delay: 112.158 ms
Loss rate: 26.97%
```
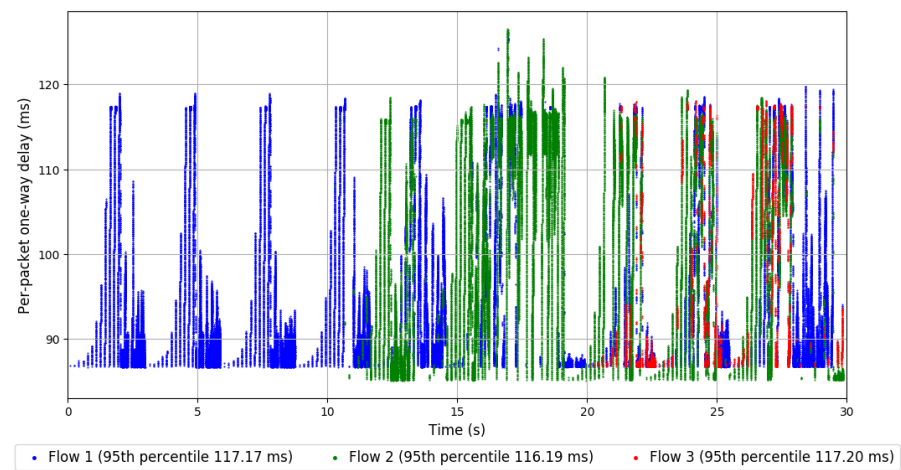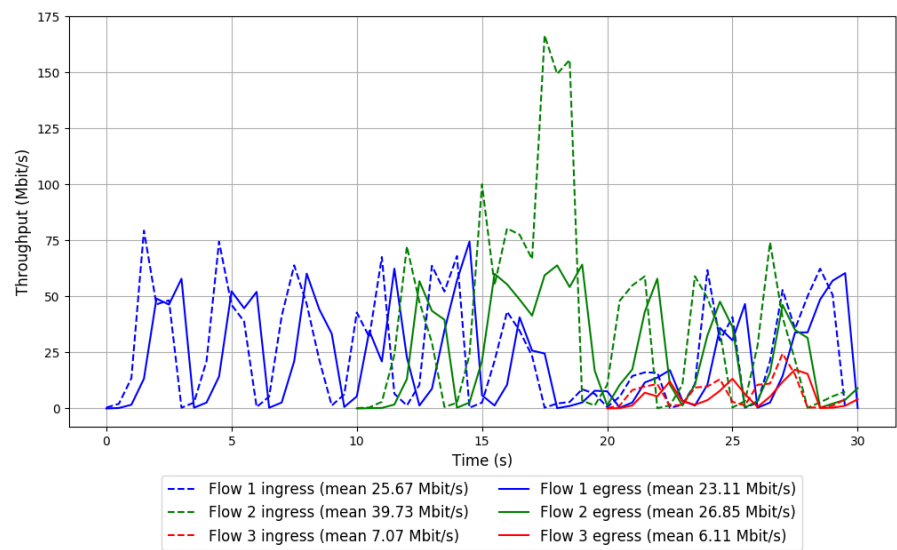
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2018-06-05 13:51:49
End at: 2018-06-05 13:52:19
Local clock offset: -6.633 ms
Remote clock offset: 5.043 ms


# Below is generated by plot.py at 2018-06-05 15:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.85 Mbit/s
95th percentile per-packet one-way delay: 179.368 ms
Loss rate: 84.13%
-- Flow 1:
Average throughput: 41.41 Mbit/s
95th percentile per-packet one-way delay: 180.426 ms
Loss rate: 85.10%
-- Flow 2:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 113.328 ms
Loss rate: 24.77%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 181.968 ms
Loss rate: 68.00%
```
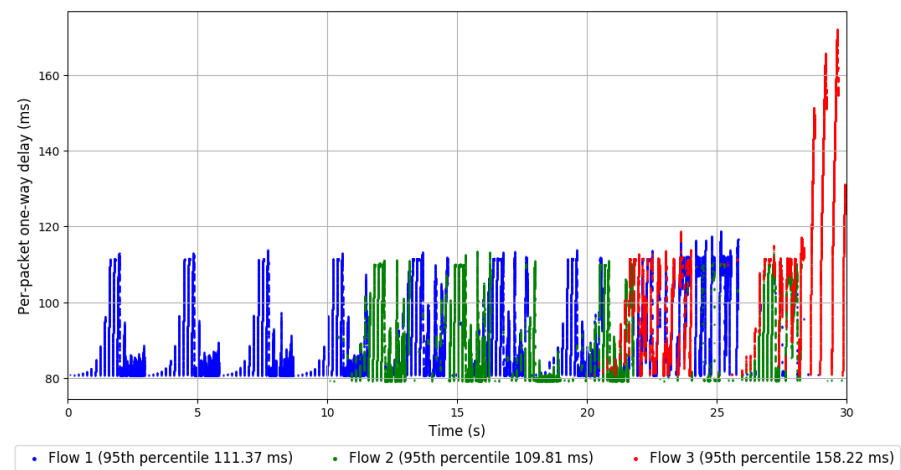
Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2018-06-05 14:12:02
End at: 2018-06-05 14:12:32
Local clock offset: -6.705 ms
Remote clock offset: 12.066 ms


# Below is generated by plot.py at 2018-06-05 15:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.88 Mbit/s
95th percentile per-packet one-way delay: 117.087 ms
Loss rate: 21.04%
-- Flow 1:
Average throughput: 23.11 Mbit/s
95th percentile per-packet one-way delay: 117.165 ms
Loss rate: 9.96%
-- Flow 2:
Average throughput: 26.85 Mbit/s
95th percentile per-packet one-way delay: 116.187 ms
Loss rate: 32.45%
-- Flow 3:
Average throughput: 6.11 Mbit/s
95th percentile per-packet one-way delay: 117.204 ms
Loss rate: 13.55%
```
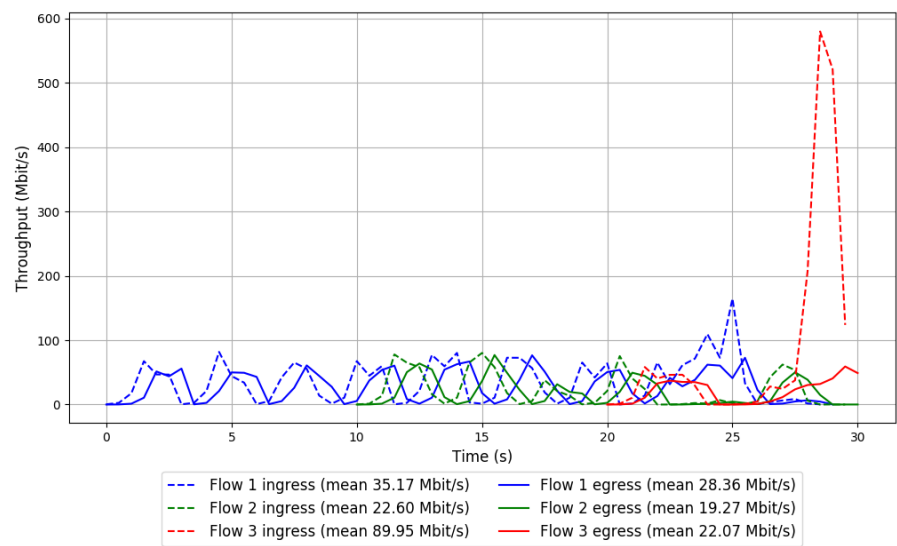
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2018-06-05 14:32:24
End at: 2018-06-05 14:32:54
Local clock offset: -5.971 ms
Remote clock offset: 2.229 ms


# Below is generated by plot.py at 2018-06-05 15:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.39 Mbit/s
95th percentile per-packet one-way delay: 113.753 ms
Loss rate: 39.69%
-- Flow 1:
Average throughput: 28.36 Mbit/s
95th percentile per-packet one-way delay: 111.374 ms
Loss rate: 19.82%
-- Flow 2:
Average throughput: 19.27 Mbit/s
95th percentile per-packet one-way delay: 109.810 ms
Loss rate: 14.75%
-- Flow 3:
Average throughput: 22.07 Mbit/s
95th percentile per-packet one-way delay: 158.218 ms
Loss rate: 75.34%
```
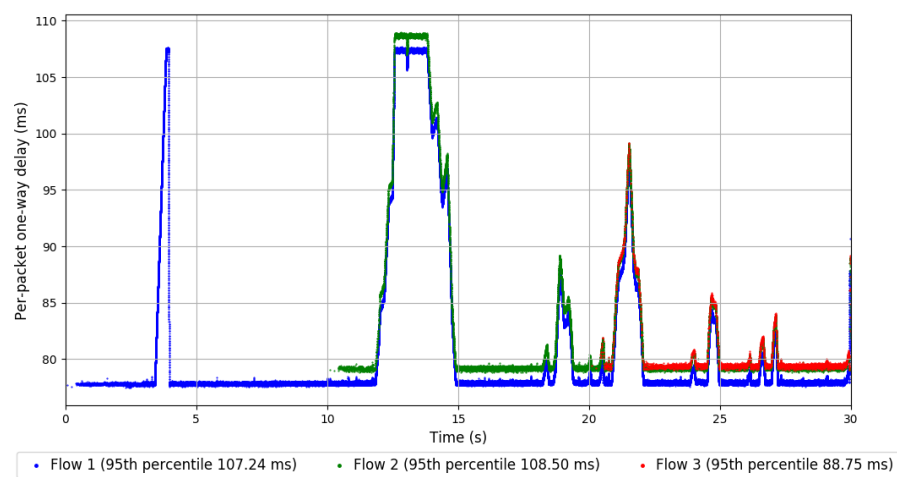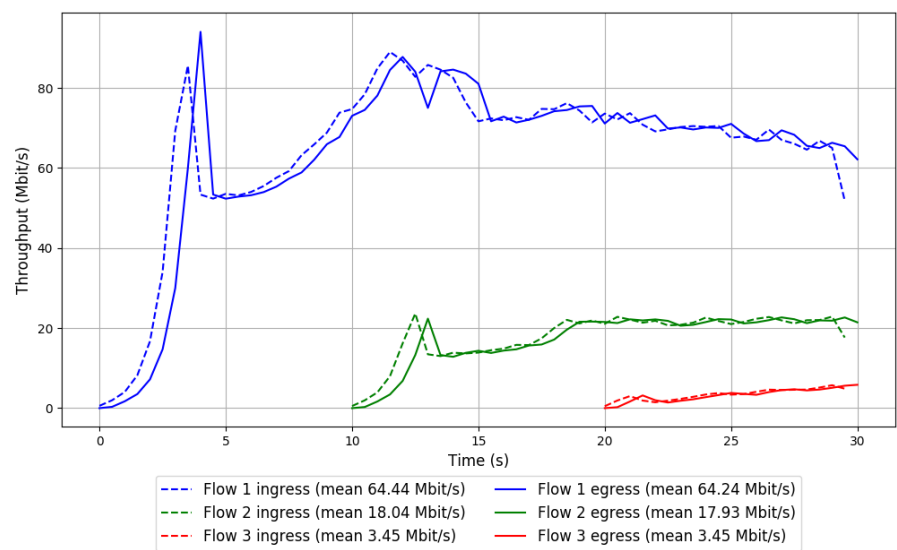
Run 10: Report of Verus — Data Link

Flow 1 ingress (mean 35.17 Mbit/s)   Flow 1 egress (mean 28.36 Mbit/s)
Flow 2 ingress (mean 22.60 Mbit/s)   Flow 2 egress (mean 19.27 Mbit/s)
Flow 3 ingress (mean 89.95 Mbit/s)   Flow 3 egress (mean 22.07 Mbit/s)

Flow 1 (95th percentile 111.37 ms)   Flow 2 (95th percentile 109.81 ms)   Flow 3 (95th percentile 158.22 ms)

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```
Run 1: Statistics of PCC-Vivace

Start at: 2018-06-05 11:38:58
End at: 2018-06-05 11:39:28
Local clock offset: -5.959 ms
Remote clock offset: 8.146 ms


# Below is generated by plot.py at 2018-06-05 15:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.30 Mbit/s
95th percentile per-packet one-way delay: 107.239 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 64.24 Mbit/s
95th percentile per-packet one-way delay: 107.240 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 17.93 Mbit/s
95th percentile per-packet one-way delay: 108.501 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 88.754 ms
Loss rate: 0.00%
```
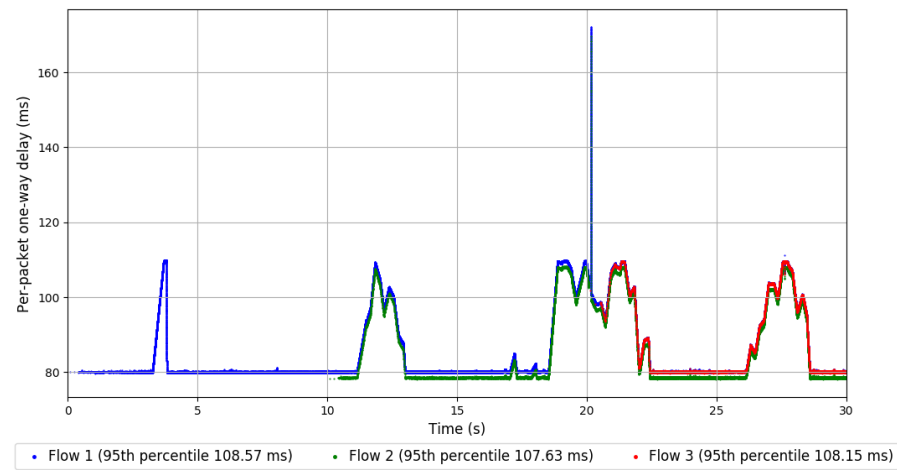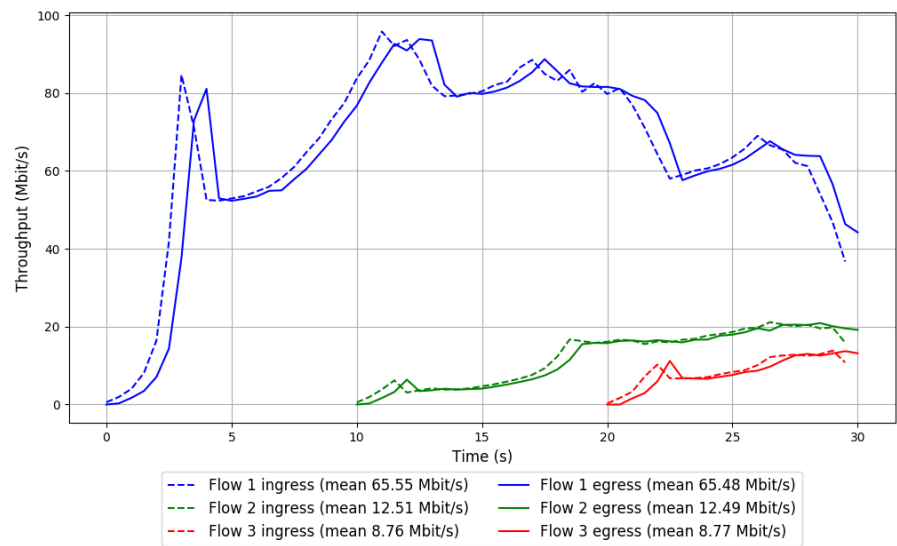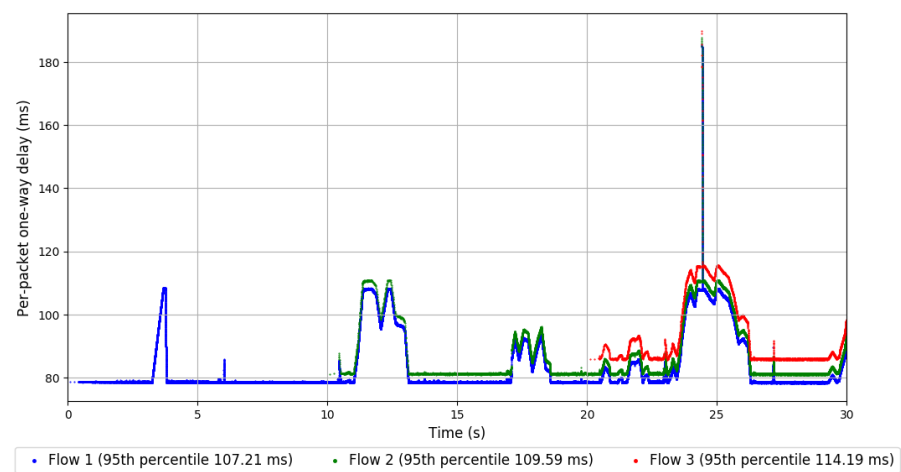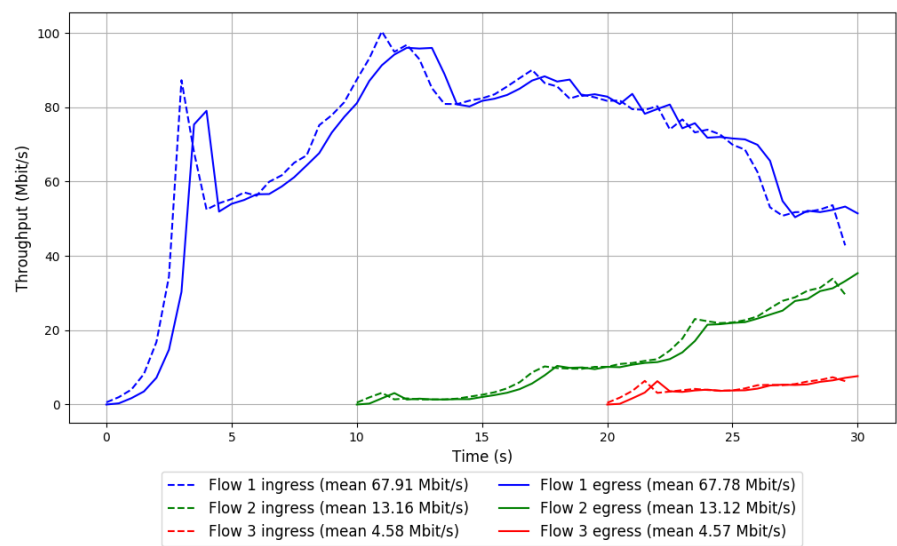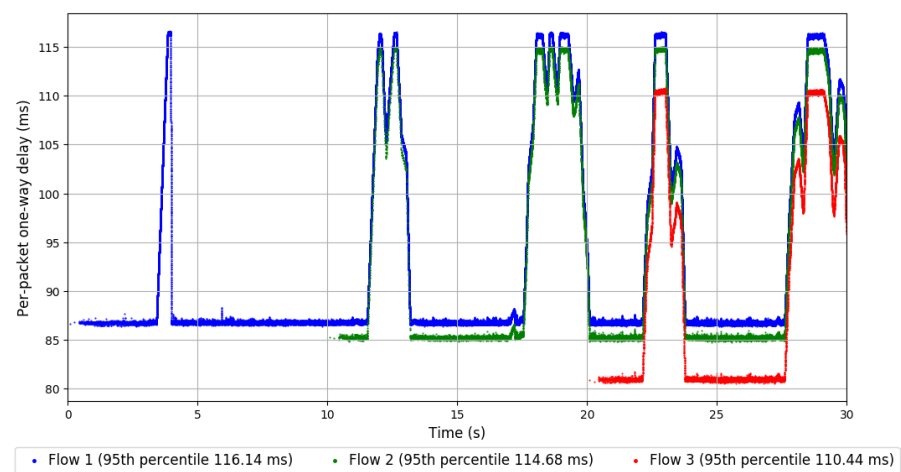
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-06-05 11:59:00
End at: 2018-06-05 11:59:30
Local clock offset: -6.438 ms
Remote clock offset: 8.367 ms


# Below is generated by plot.py at 2018-06-05 15:06:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.68 Mbit/s
95th percentile per-packet one-way delay: 108.251 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 65.48 Mbit/s
95th percentile per-packet one-way delay: 108.571 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 107.634 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 8.77 Mbit/s
95th percentile per-packet one-way delay: 108.151 ms
Loss rate: 0.07%
```

Run 2: Report of PCC-Vivace — Data Link

Legend:
- Flow 1 ingress (mean 65.55 Mbit/s) — Flow 1 egress (mean 65.48 Mbit/s)
- Flow 2 ingress (mean 12.51 Mbit/s) — Flow 2 egress (mean 12.49 Mbit/s)
- Flow 3 ingress (mean 8.76 Mbit/s) — Flow 3 egress (mean 8.77 Mbit/s)

Legend:
- Flow 1 (95th percentile 108.57 ms)
- Flow 2 (95th percentile 107.63 ms)
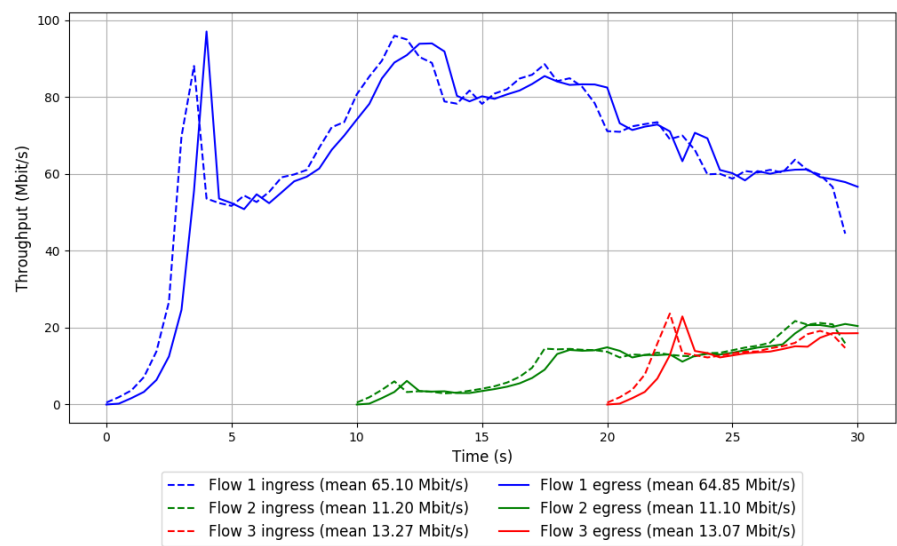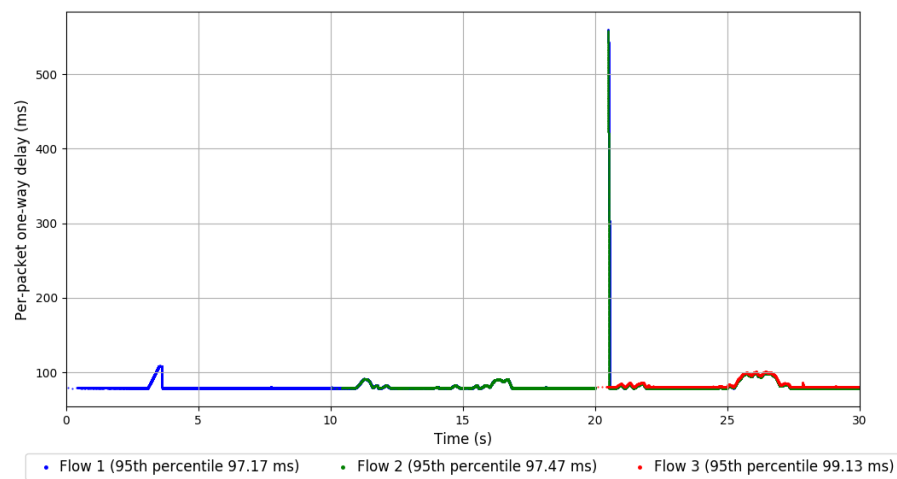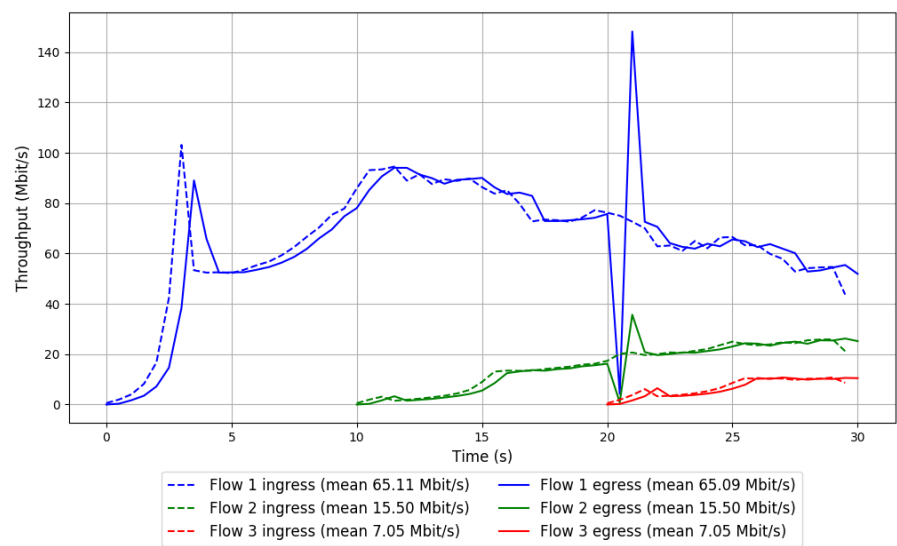- Flow 3 (95th percentile 108.15 ms)

```
Run 3: Statistics of PCC-Vivace

Start at: 2018-06-05 12:19:00
End at: 2018-06-05 12:19:30
Local clock offset: -5.668 ms
Remote clock offset: 25.009 ms


# Below is generated by plot.py at 2018-06-05 15:06:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.02 Mbit/s
95th percentile per-packet one-way delay: 107.695 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 67.78 Mbit/s
95th percentile per-packet one-way delay: 107.211 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 109.591 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 4.57 Mbit/s
95th percentile per-packet one-way delay: 114.191 ms
Loss rate: 0.21%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 67.91 Mbit/s) — Flow 1 egress (mean 67.78 Mbit/s)
Flow 2 ingress (mean 13.16 Mbit/s) — Flow 2 egress (mean 13.12 Mbit/s)
Flow 3 ingress (mean 4.58 Mbit/s) — Flow 3 egress (mean 4.57 Mbit/s)

Flow 1 (95th percentile 107.21 ms) Flow 2 (95th percentile 109.59 ms) Flow 3 (95th percentile 114.19 ms)
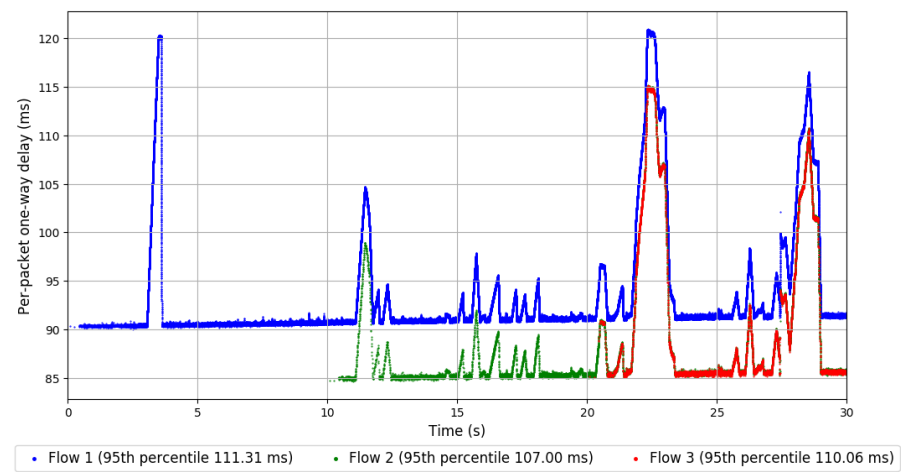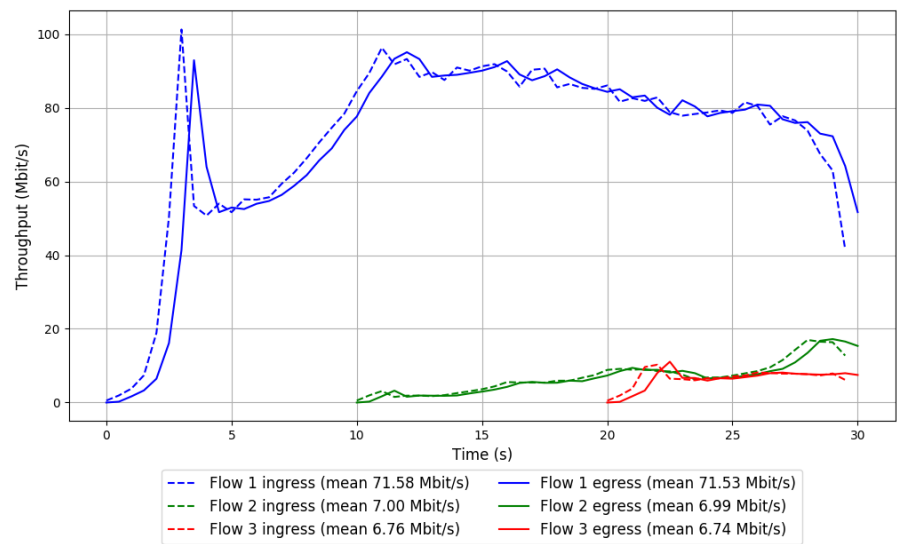
```
Run 4: Statistics of PCC-Vivace

Start at: 2018-06-05 12:39:00
End at: 2018-06-05 12:39:30
Local clock offset: -6.594 ms
Remote clock offset: 32.738 ms


# Below is generated by plot.py at 2018-06-05 15:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.55 Mbit/s
95th percentile per-packet one-way delay: 116.094 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 64.85 Mbit/s
95th percentile per-packet one-way delay: 116.141 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 11.10 Mbit/s
95th percentile per-packet one-way delay: 114.681 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 110.443 ms
Loss rate: 1.34%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 65.10 Mbit/s) — Flow 1 egress (mean 64.85 Mbit/s)
Flow 2 ingress (mean 11.20 Mbit/s) — Flow 2 egress (mean 11.10 Mbit/s)
Flow 3 ingress (mean 13.27 Mbit/s) — Flow 3 egress (mean 13.07 Mbit/s)

Flow 1 (95th percentile 116.14 ms) — Flow 2 (95th percentile 114.68 ms) — Flow 3 (95th percentile 110.44 ms)
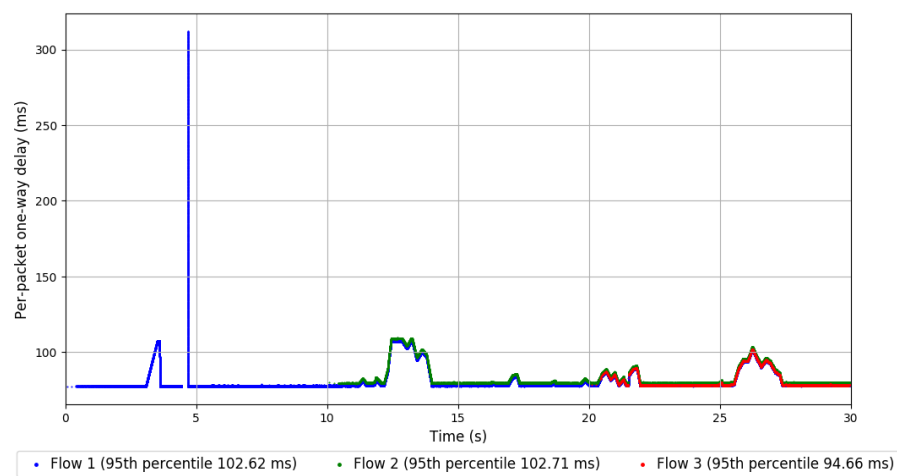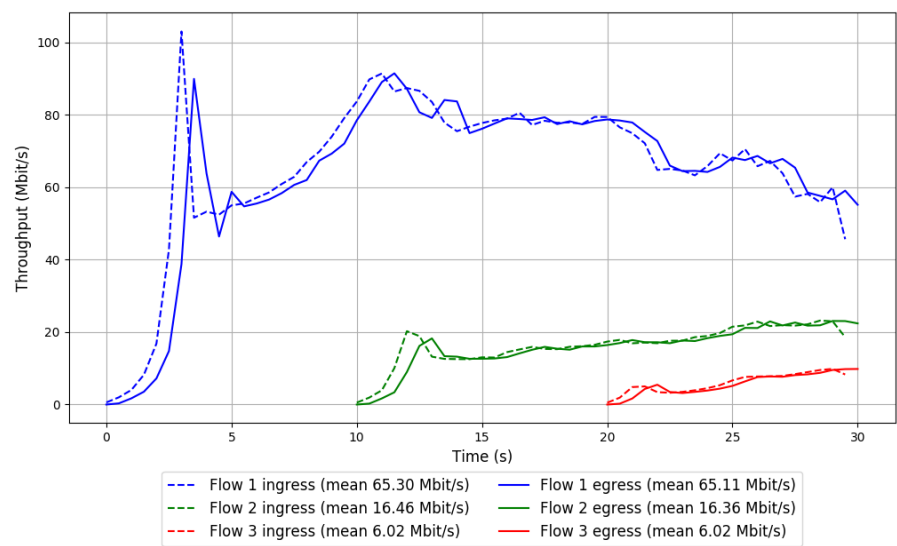
```
Run 5: Statistics of PCC-Vivace

Start at: 2018-06-05 12:59:02
End at: 2018-06-05 12:59:32
Local clock offset: -6.039 ms
Remote clock offset: 38.779 ms


# Below is generated by plot.py at 2018-06-05 15:07:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.72 Mbit/s
95th percentile per-packet one-way delay: 97.366 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 65.09 Mbit/s
95th percentile per-packet one-way delay: 97.168 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 15.50 Mbit/s
95th percentile per-packet one-way delay: 97.470 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 99.128 ms
Loss rate: 0.00%
```

Run 5: Report of PCC-Vivace — Data Link

```
Run 6: Statistics of PCC-Vivace

Start at: 2018-06-05 13:19:05
End at: 2018-06-05 13:19:35
Local clock offset: -6.102 ms
Remote clock offset: 21.545 ms


# Below is generated by plot.py at 2018-06-05 15:07:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.40 Mbit/s
95th percentile per-packet one-way delay: 110.727 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 71.53 Mbit/s
95th percentile per-packet one-way delay: 111.306 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 107.005 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 6.74 Mbit/s
95th percentile per-packet one-way delay: 110.058 ms
Loss rate: 0.23%
```
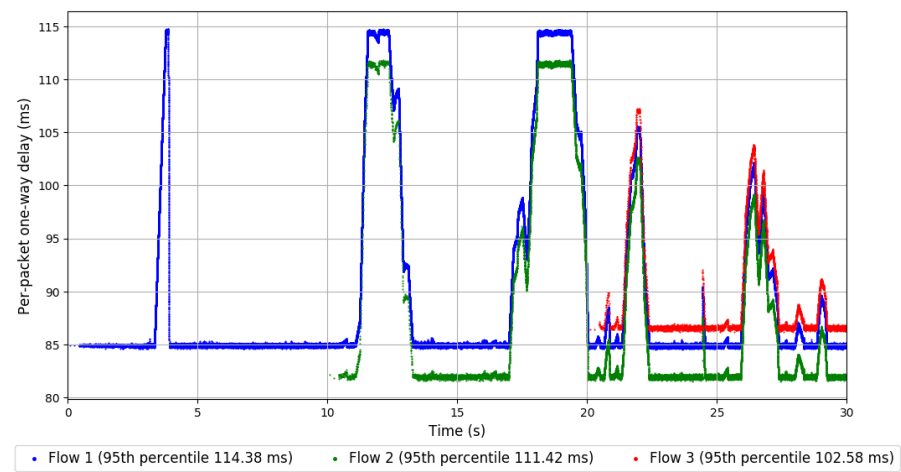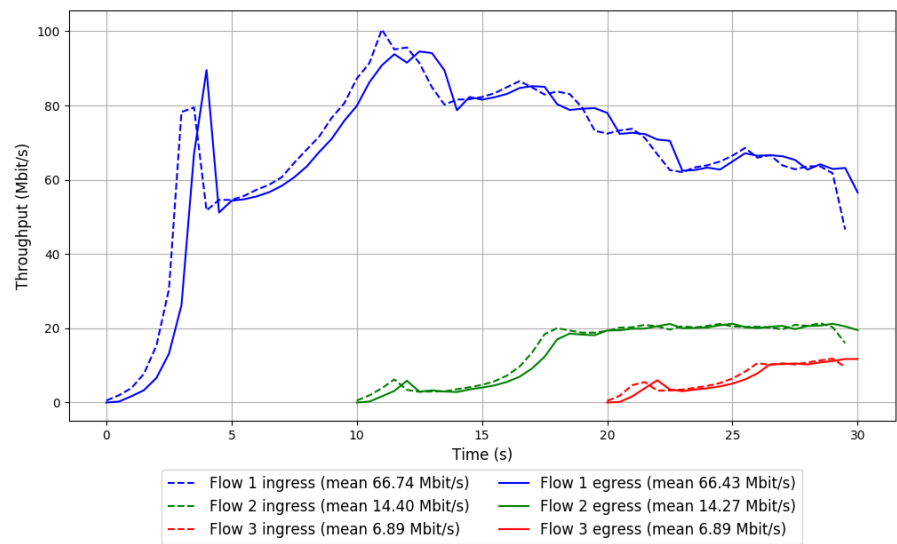
Run 6: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 71.58 Mbit/s) — Flow 1 egress (mean 71.53 Mbit/s)
- Flow 2 ingress (mean 7.00 Mbit/s) — Flow 2 egress (mean 6.99 Mbit/s)
- Flow 3 ingress (mean 6.76 Mbit/s) — Flow 3 egress (mean 6.74 Mbit/s)

- Flow 1 (95th percentile 111.31 ms) • Flow 2 (95th percentile 107.00 ms) • Flow 3 (95th percentile 110.06 ms)

```
Run 7: Statistics of PCC-Vivace

Start at: 2018-06-05 13:39:12
End at: 2018-06-05 13:39:42
Local clock offset: -6.016 ms
Remote clock offset: -5.146 ms


# Below is generated by plot.py at 2018-06-05 15:07:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.98 Mbit/s
95th percentile per-packet one-way delay: 102.044 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 65.11 Mbit/s
95th percentile per-packet one-way delay: 102.622 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 16.36 Mbit/s
95th percentile per-packet one-way delay: 102.710 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 94.658 ms
Loss rate: 0.00%
```
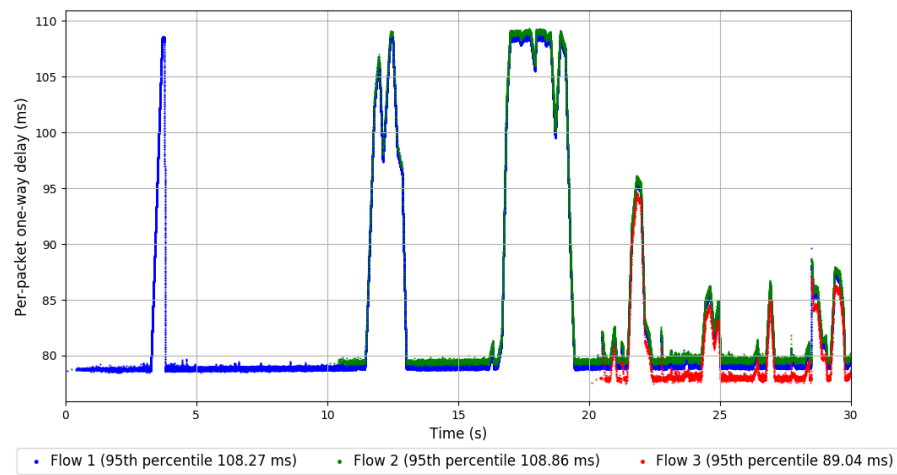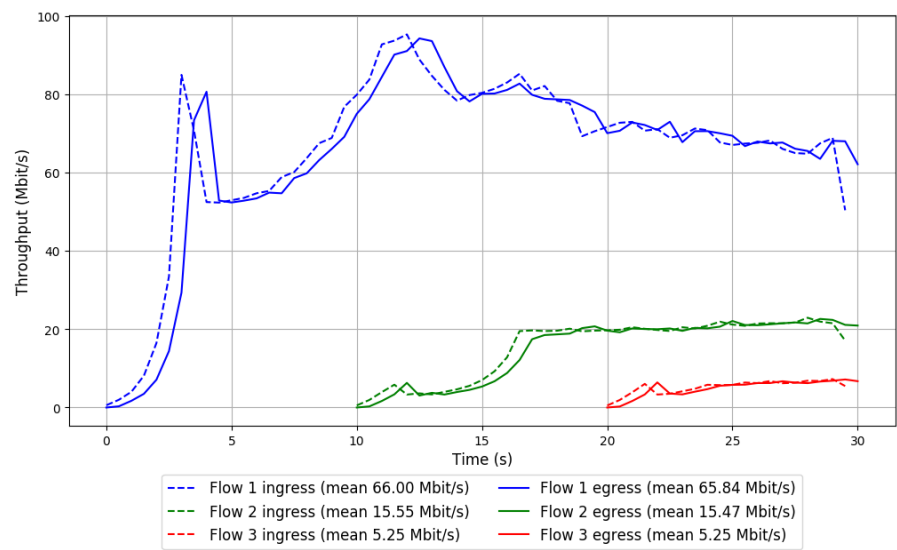
Run 7: Report of PCC-Vivace — Data Link

```
Run 8: Statistics of PCC-Vivace

Start at: 2018-06-05 13:59:27
End at: 2018-06-05 13:59:57
Local clock offset: -6.643 ms
Remote clock offset: 5.657 ms


# Below is generated by plot.py at 2018-06-05 15:07:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.20 Mbit/s
95th percentile per-packet one-way delay: 114.351 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 66.43 Mbit/s
95th percentile per-packet one-way delay: 114.380 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 14.27 Mbit/s
95th percentile per-packet one-way delay: 111.418 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 102.579 ms
Loss rate: 0.00%
```
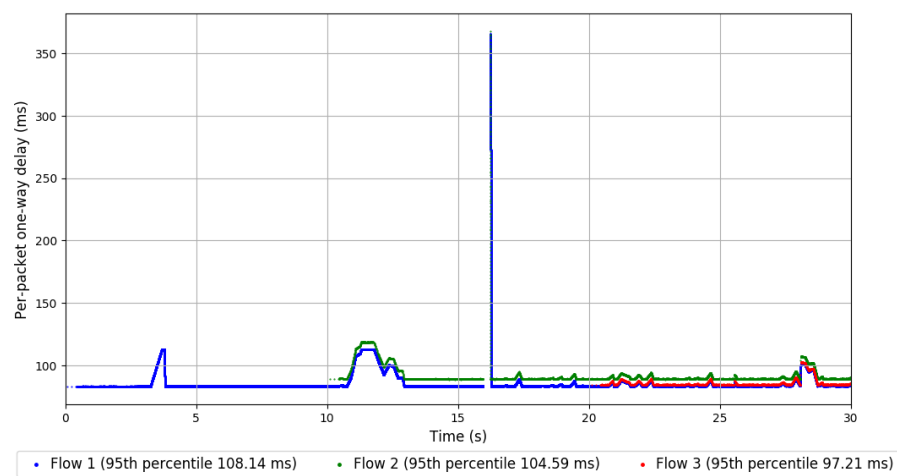
Run 8: Report of PCC-Vivace — Data Link

```
Run 9: Statistics of PCC-Vivace

Start at: 2018-06-05 14:19:40
End at: 2018-06-05 14:20:10
Local clock offset: -4.736 ms
Remote clock offset: 5.65 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.86 Mbit/s
95th percentile per-packet one-way delay: 108.307 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 65.84 Mbit/s
95th percentile per-packet one-way delay: 108.270 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 15.47 Mbit/s
95th percentile per-packet one-way delay: 108.862 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 5.25 Mbit/s
95th percentile per-packet one-way delay: 89.041 ms
Loss rate: 0.00%
```
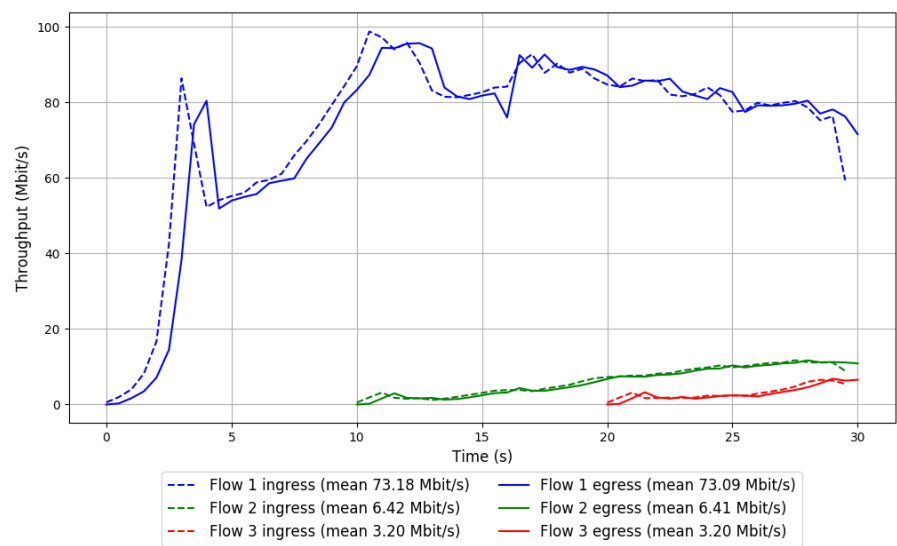
Run 9: Report of PCC-Vivace — Data Link

```
Run 10: Statistics of PCC-Vivace

Start at: 2018-06-05 14:39:51
End at: 2018-06-05 14:40:21
Local clock offset: -3.244 ms
Remote clock offset: 5.832 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.40 Mbit/s
95th percentile per-packet one-way delay: 107.615 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 73.09 Mbit/s
95th percentile per-packet one-way delay: 108.142 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 104.595 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 97.212 ms
Loss rate: 0.00%
```
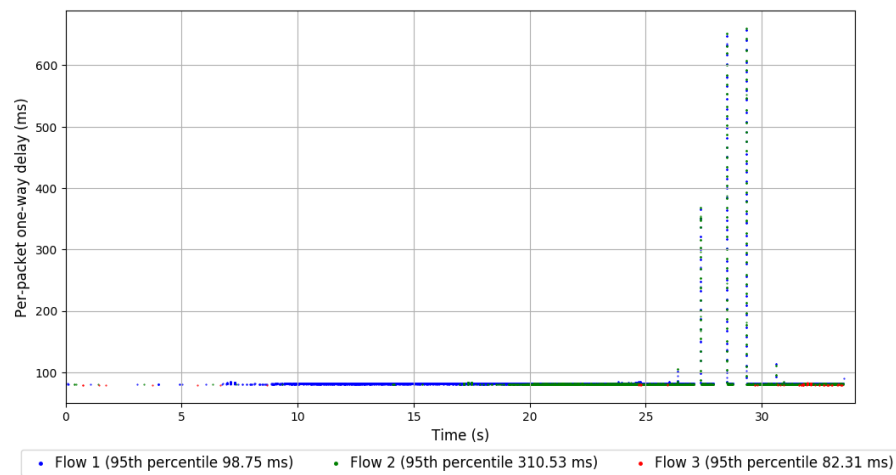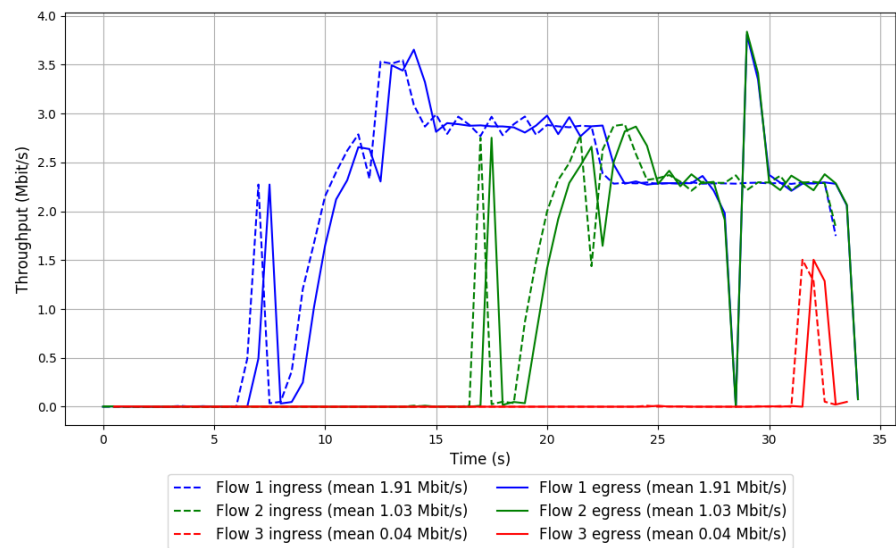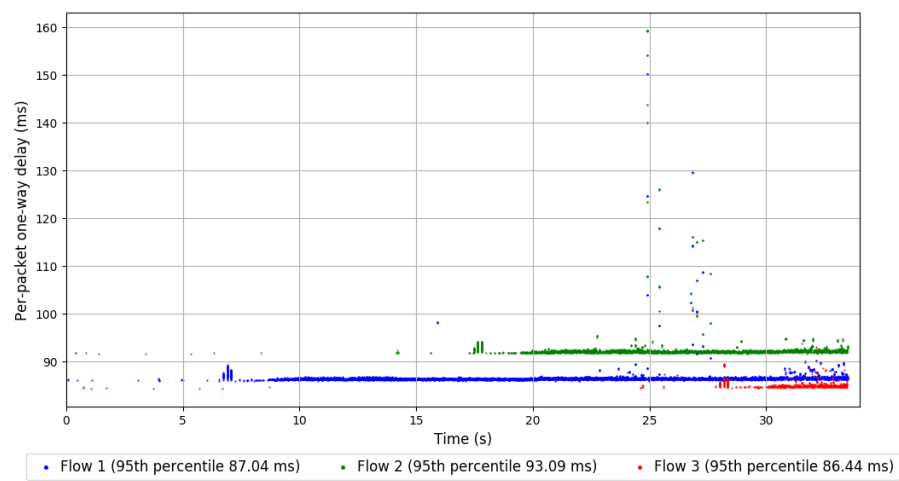
Run 10: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 73.18 Mbit/s) --- Flow 1 egress (mean 73.09 Mbit/s)
Flow 2 ingress (mean 6.42 Mbit/s) --- Flow 2 egress (mean 6.41 Mbit/s)
Flow 3 ingress (mean 3.20 Mbit/s) --- Flow 3 egress (mean 3.20 Mbit/s)

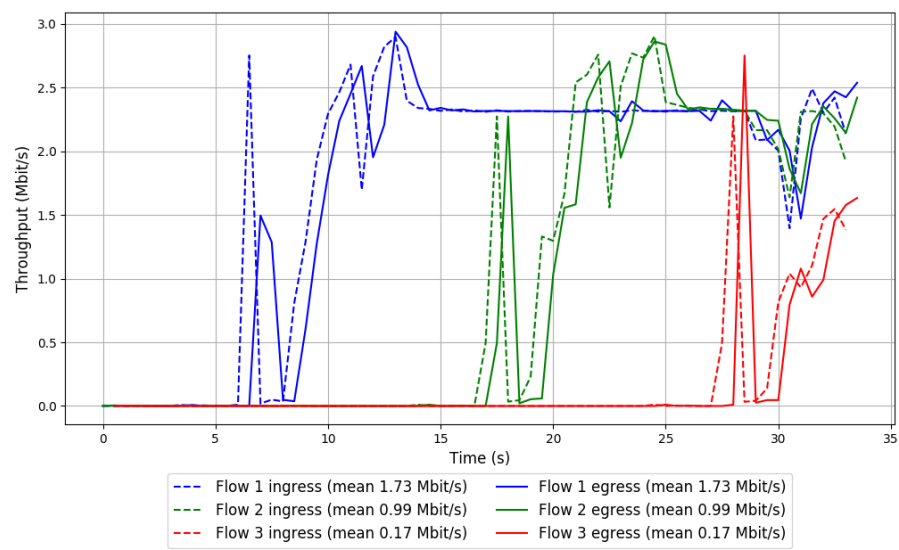Flow 1 (95th percentile 108.14 ms) • Flow 2 (95th percentile 104.59 ms) • Flow 3 (95th percentile 97.21 ms)

```
Run 1: Statistics of WebRTC media

Start at: 2018-06-05 11:35:15
End at: 2018-06-05 11:35:45
Local clock offset: -6.899 ms
Remote clock offset: 9.173 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 201.315 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 1.91 Mbit/s
95th percentile per-packet one-way delay: 98.750 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 310.531 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 82.315 ms
Loss rate: 0.00%
```
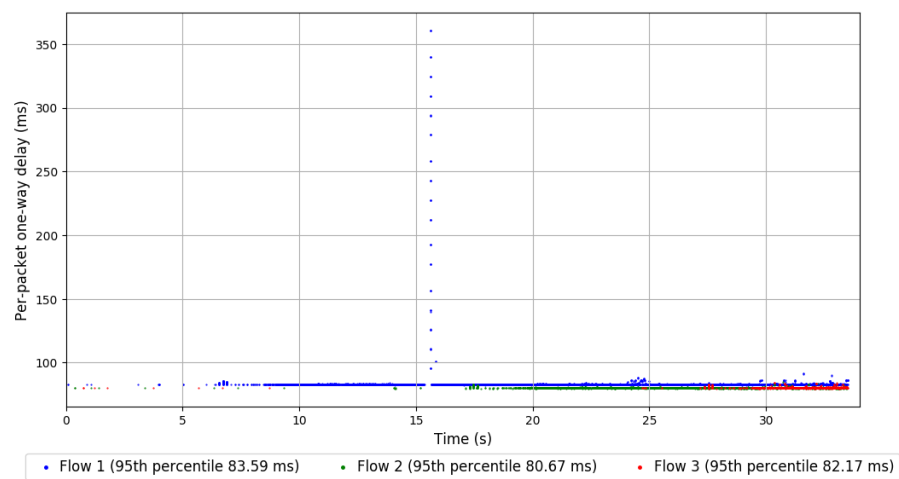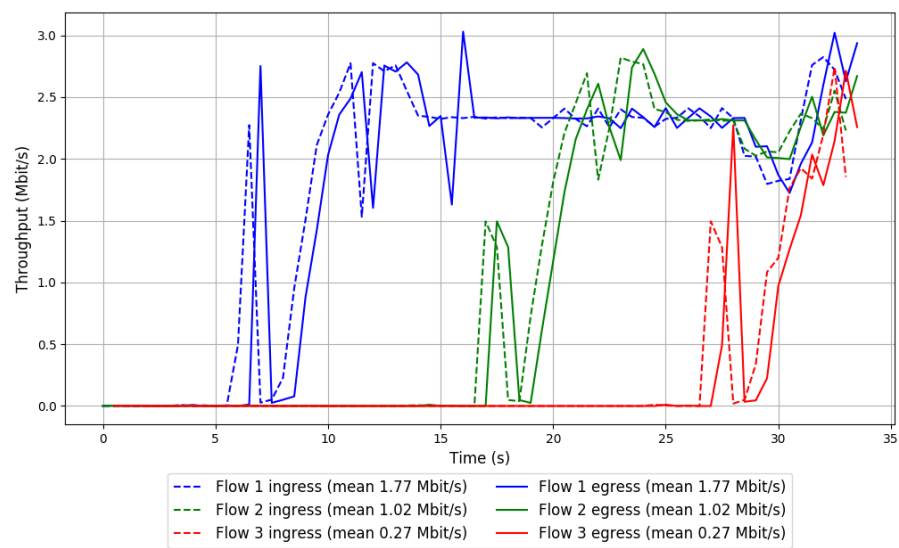
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-06-05 11:55:16
End at: 2018-06-05 11:55:46
Local clock offset: -6.378 ms
Remote clock offset: 14.436 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 92.333 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 87.039 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 93.095 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 86.441 ms
Loss rate: 0.00%
```
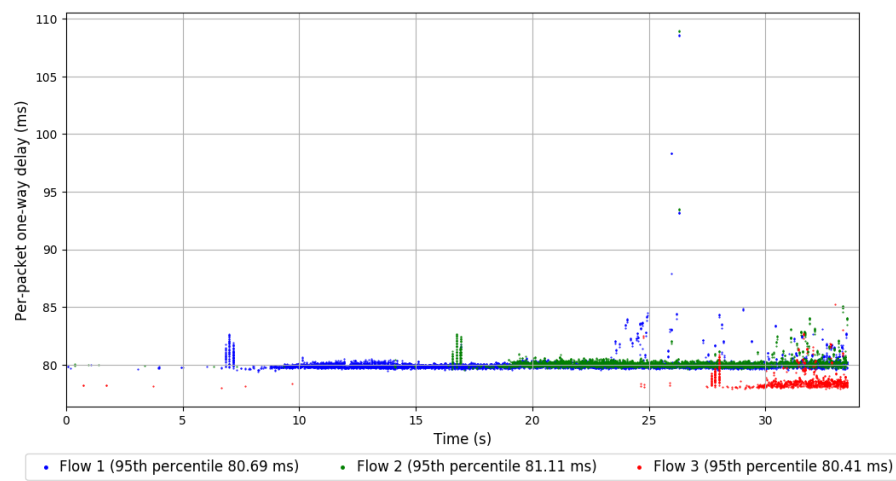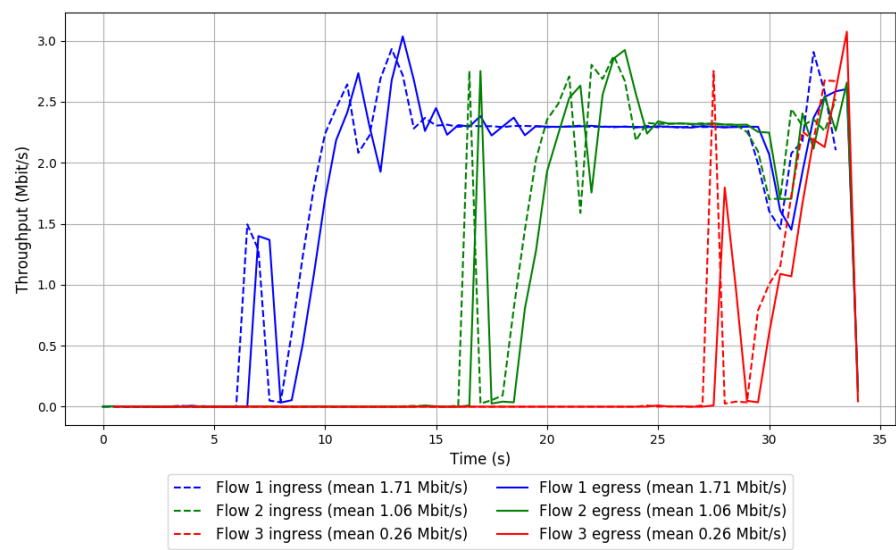
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-06-05 12:15:17
End at: 2018-06-05 12:15:47
Local clock offset: -7.208 ms
Remote clock offset: 22.747 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 83.233 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 83.589 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 80.666 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 82.175 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-06-05 12:35:18
End at: 2018-06-05 12:35:48
Local clock offset: -6.5 ms
Remote clock offset: 30.361 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 80.838 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 80.688 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 81.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 80.414 ms
Loss rate: 0.00%
```

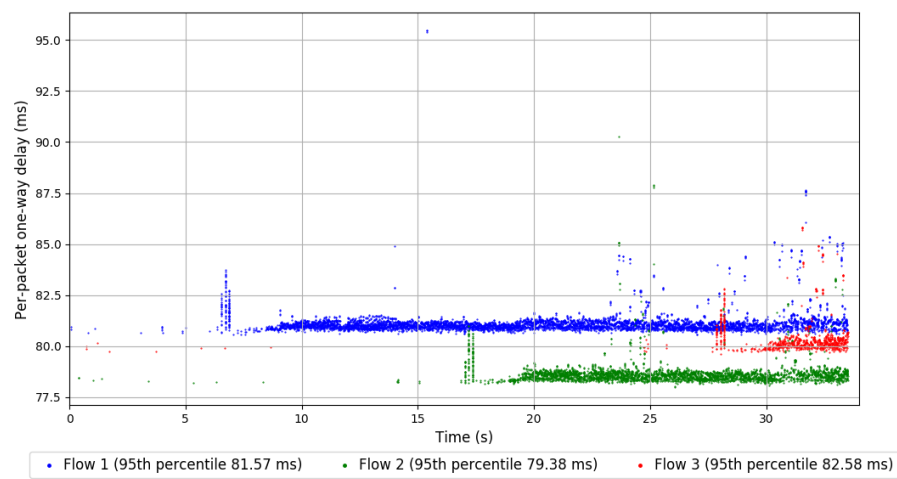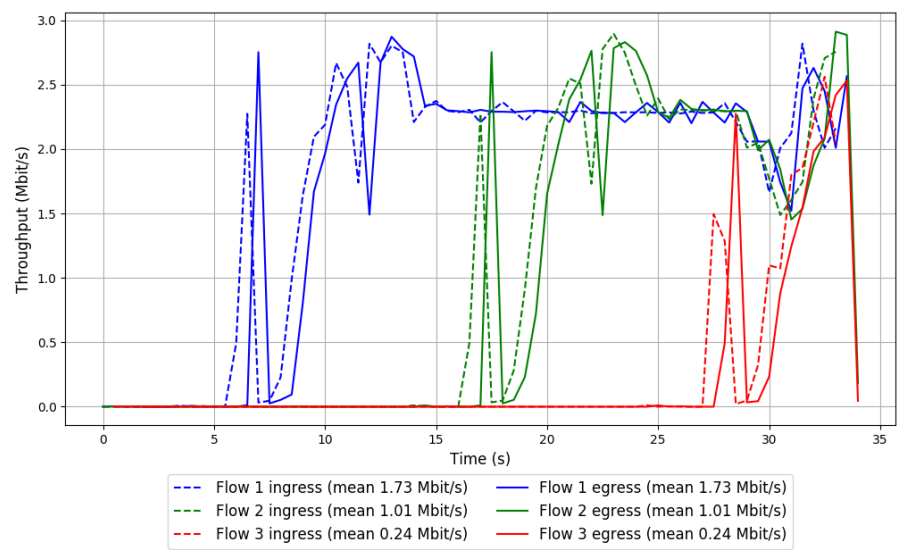Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-06-05 12:55:18
End at: 2018-06-05 12:55:48
Local clock offset: -6.778 ms
Remote clock offset: 36.546 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 81.424 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 81.571 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 79.375 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 82.585 ms
Loss rate: 0.00%
```

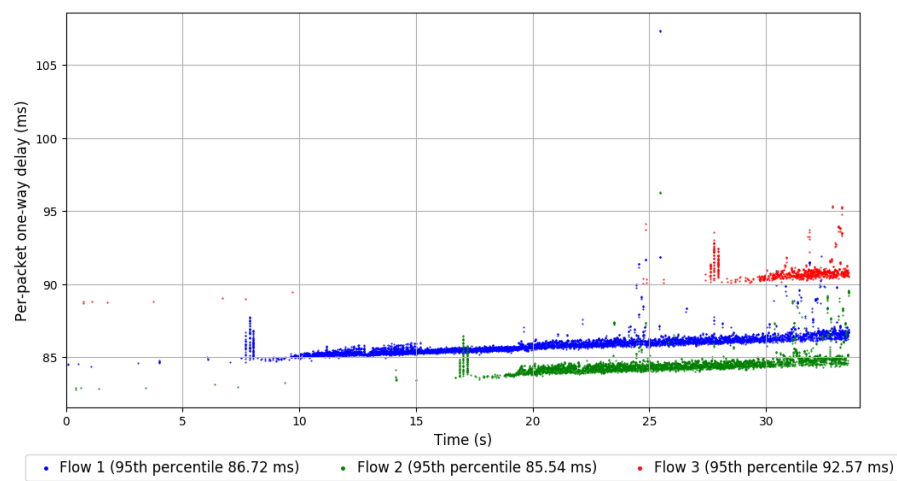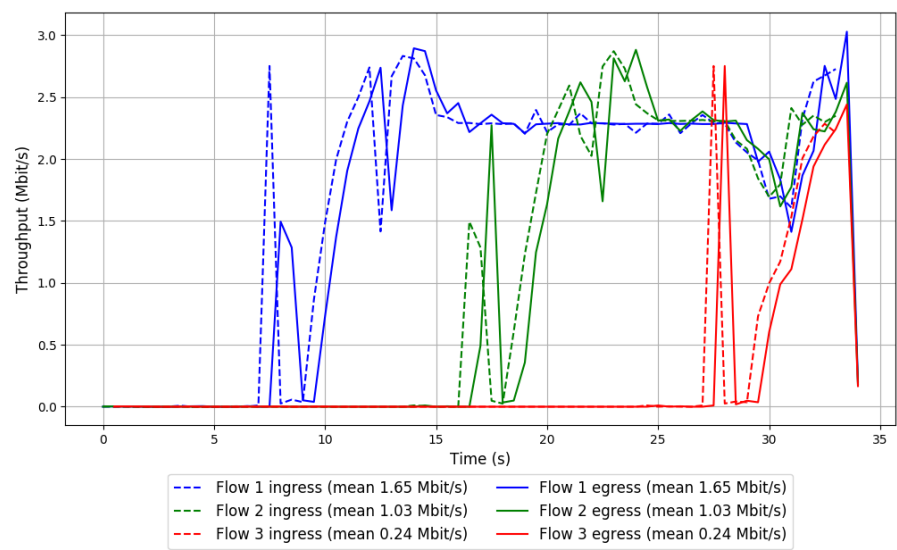Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2018-06-05 13:15:22
End at: 2018-06-05 13:15:52
Local clock offset: -6.081 ms
Remote clock offset: 31.555 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 90.717 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 86.719 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 85.540 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 92.570 ms
Loss rate: 0.00%
```

Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2018-06-05 13:35:28
End at: 2018-06-05 13:35:58
Local clock offset: -6.873 ms
Remote clock offset: 0.814 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.00 Mbit/s
95th percentile per-packet one-way delay: 85.635 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.72 Mbit/s
95th percentile per-packet one-way delay: 85.992 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 85.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 85.431 ms
Loss rate: 0.00%
```
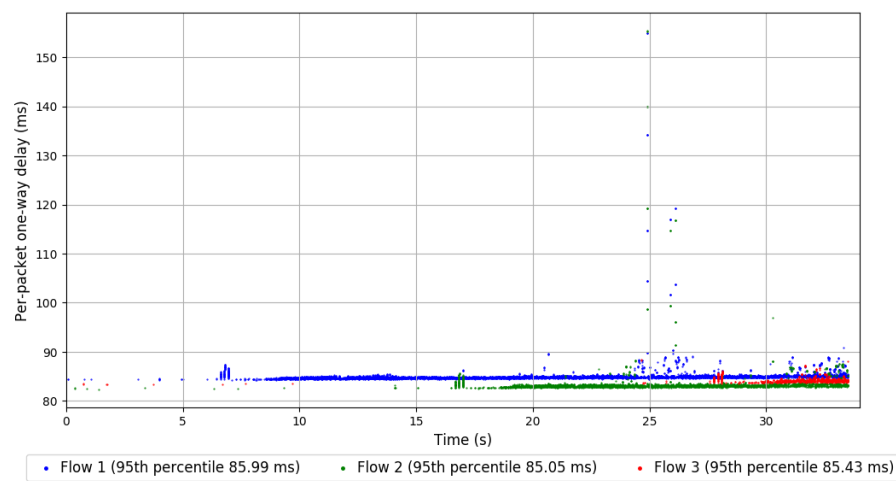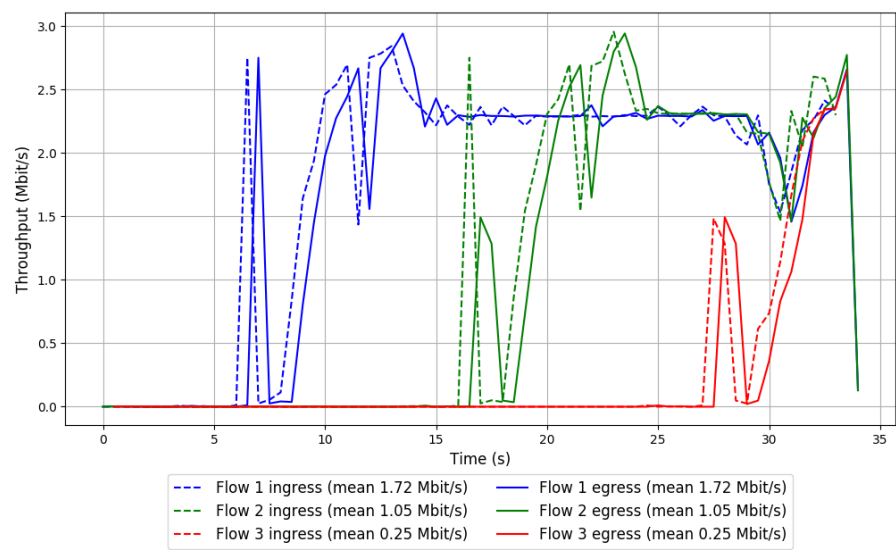
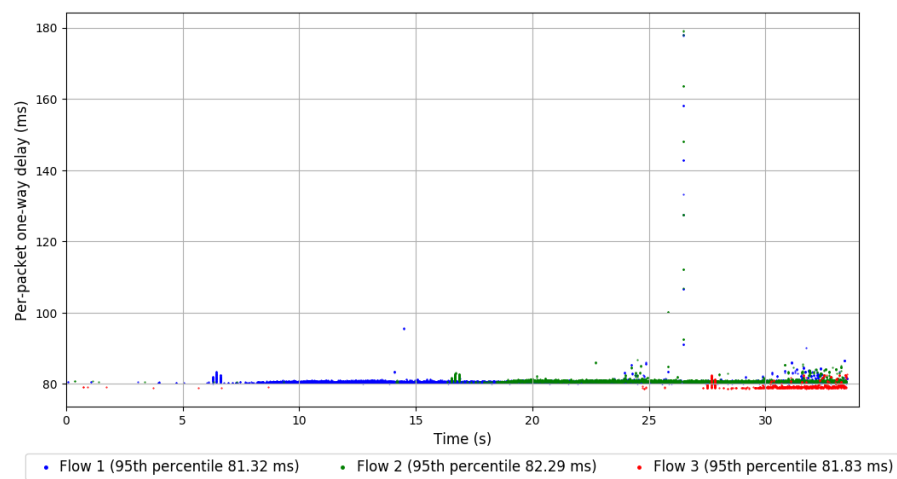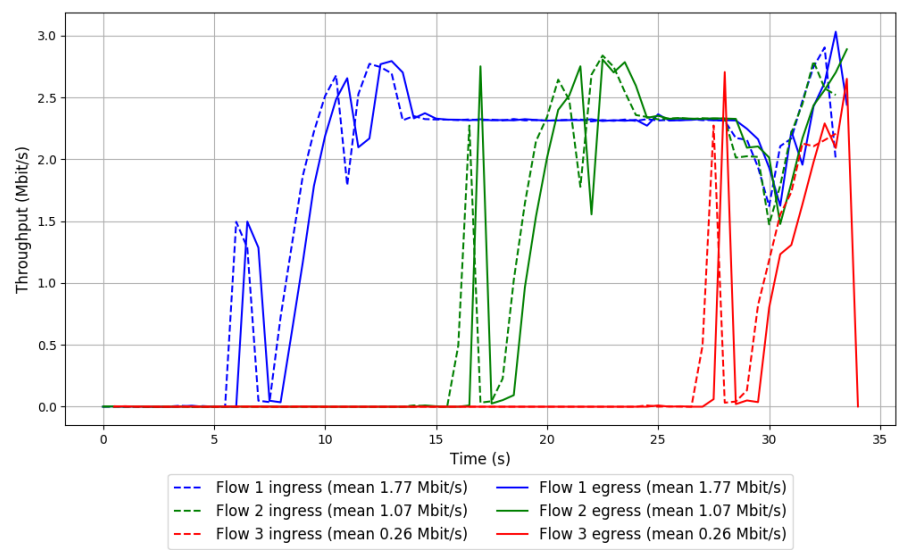Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2018-06-05 13:55:43
End at: 2018-06-05 13:56:13
Local clock offset: -7.435 ms
Remote clock offset: 2.947 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 81.724 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 81.321 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 82.287 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 81.825 ms
Loss rate: 0.00%
```

Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2018-06-05 14:15:45
End at: 2018-06-05 14:16:15
Local clock offset: -6.423 ms
Remote clock offset: 7.037 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 86.831 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.79 Mbit/s
95th percentile per-packet one-way delay: 87.021 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 81.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 83.864 ms
Loss rate: 0.00%
```
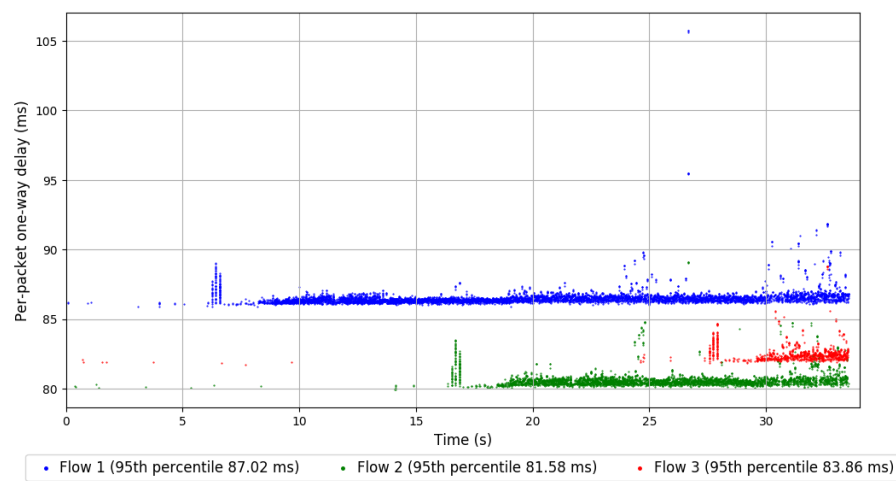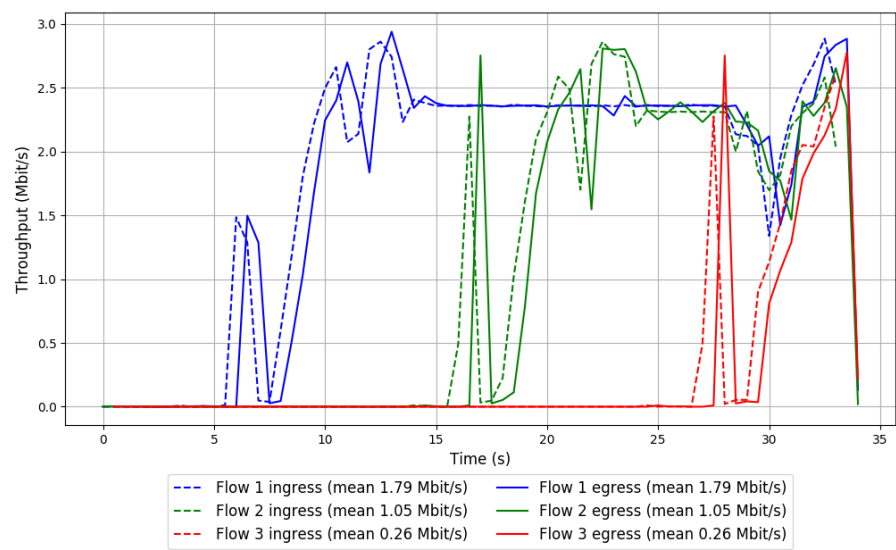
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2018-06-05 14:36:08
End at: 2018-06-05 14:36:38
Local clock offset: -3.584 ms
Remote clock offset: 6.49 ms


# Below is generated by plot.py at 2018-06-05 15:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.12 Mbit/s
95th percentile per-packet one-way delay: 89.455 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.77 Mbit/s
95th percentile per-packet one-way delay: 89.748 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 84.528 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 87.095 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link