Pantheon Report

Generated at 2017-12-12 16:57:15 (UTC).

Data path: GCE London Ethernet (*remote*) →GCE Sydney Ethernet (*local*).

Repeated the test of 14 congestion control schemes 10 times.

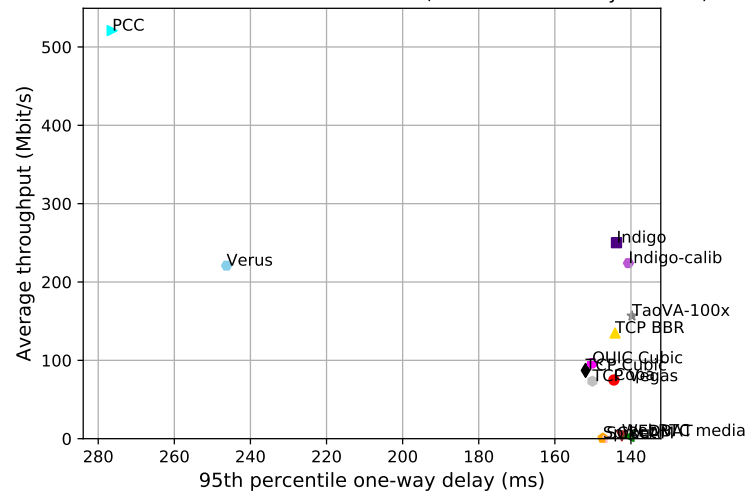Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

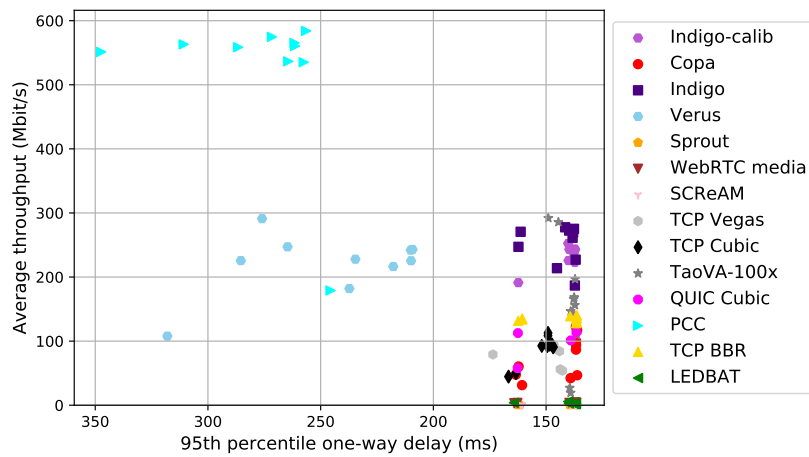Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

test from GCE London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE London Ethernet to GCE Sydney Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

2

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	70.62	66.43	60.82	144.17	144.17	139.93	0.93	1.46	3.57
TCP Cubic	10	46.02	43.40	38.62	150.19	151.86	153.71	1.39	2.33	4.43
LEDBAT	10	1.69	1.24	1.02	140.55	140.42	140.32	1.51	2.38	4.40
PCC	10	388.48	146.61	109.71	273.64	241.10	248.48	5.88	4.90	6.62
QUIC Cubic	4	59.09	138.58	28.60	150.13	136.23	136.13	1.12	0.69	0.84
SCReAM	10	0.22	0.22	0.22	141.59	144.09	138.59	0.88	1.35	2.54
WebRTC media	10	2.00	1.17	0.40	136.86	142.38	139.25	1.06	2.00	5.69
Sprout	10	0.37	0.45	0.45	142.19	140.07	147.32	0.94	1.07	2.12
TaoVA-100x	10	65.16	107.28	84.67	144.28	142.06	144.93	1.15	1.45	4.03
TCP Vegas	5	44.04	29.21	31.04	149.12	147.69	144.90	0.83	1.32	2.96
Verus	10	129.80	113.07	52.14	229.54	237.28	248.38	2.19	3.33	5.66
Copa	10	35.09	50.03	28.71	144.36	142.09	137.07	1.22	1.99	6.90
Indigo	10	128.19	130.92	111.47	142.92	141.72	143.24	0.89	1.38	3.71
Indigo-calib	10	118.87	115.10	91.57	140.36	140.83	141.54	0.98	1.51	3.75

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-12 11:37:23
End at: 2017-12-12 11:37:53

# Below is generated by plot.py at 2017-12-12 16:16:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.02 Mbit/s
95th percentile per-packet one-way delay: 160.571 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 71.04 Mbit/s
95th percentile per-packet one-way delay: 160.550 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 65.89 Mbit/s
95th percentile per-packet one-way delay: 160.631 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 62.40 Mbit/s
95th percentile per-packet one-way delay: 139.352 ms
Loss rate: 3.53%
```
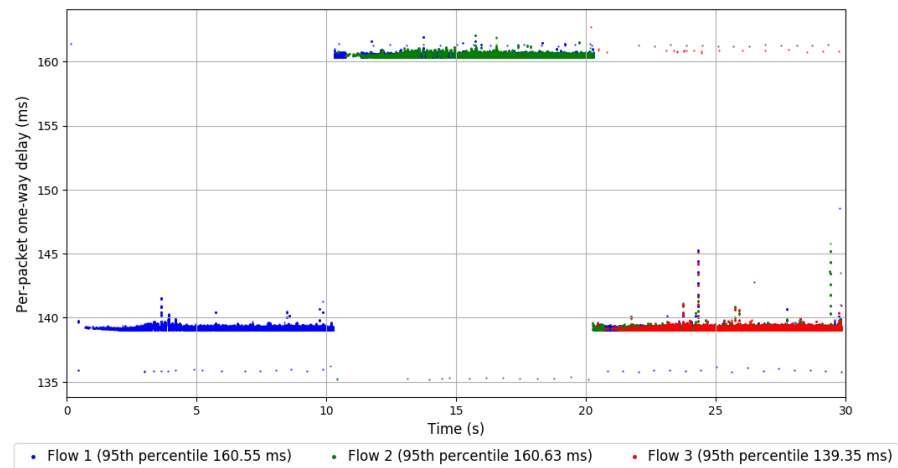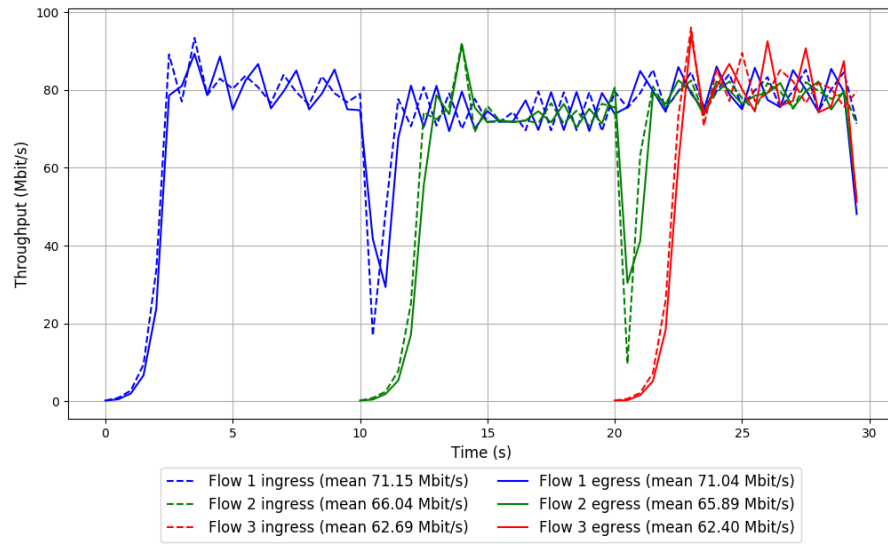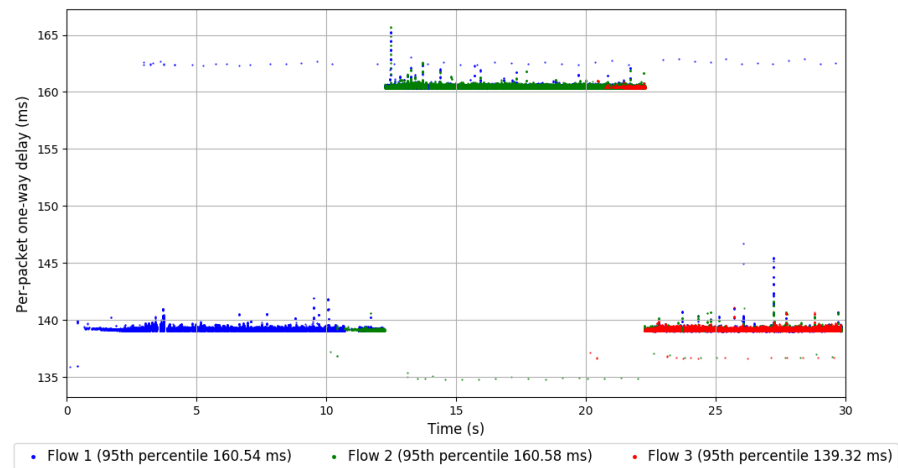
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-12-12 11:51:01
End at: 2017-12-12 11:51:32

# Below is generated by plot.py at 2017-12-12 16:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.76 Mbit/s
95th percentile per-packet one-way delay: 160.546 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 69.54 Mbit/s
95th percentile per-packet one-way delay: 160.538 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 66.47 Mbit/s
95th percentile per-packet one-way delay: 160.579 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 61.96 Mbit/s
95th percentile per-packet one-way delay: 139.316 ms
Loss rate: 3.62%
```
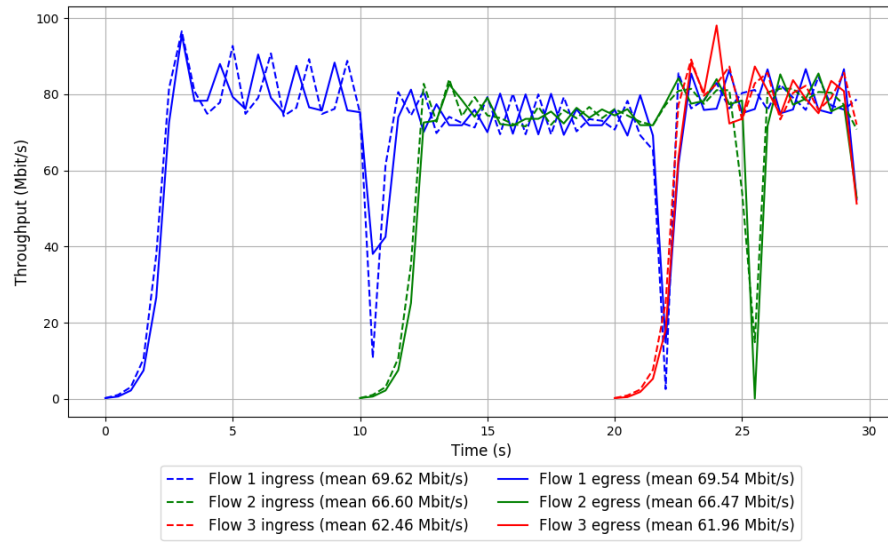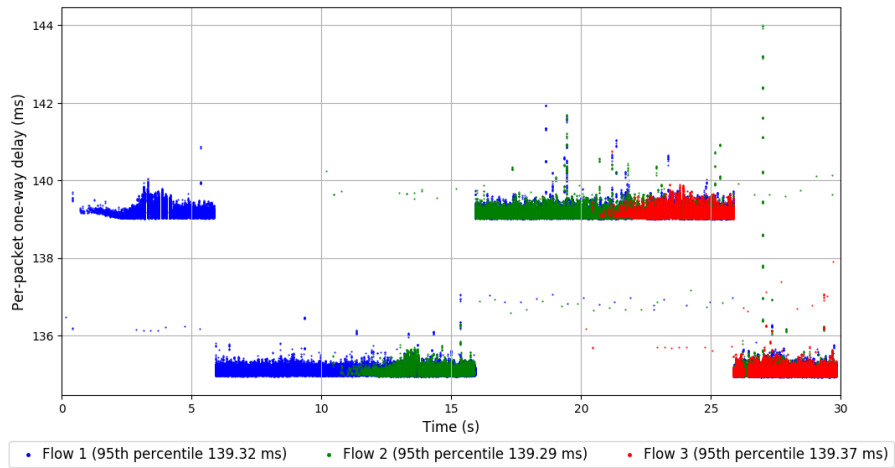
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-12-12 12:04:48
End at: 2017-12-12 12:05:18

# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.77 Mbit/s
95th percentile per-packet one-way delay: 139.318 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 73.54 Mbit/s
95th percentile per-packet one-way delay: 139.323 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 68.26 Mbit/s
95th percentile per-packet one-way delay: 139.288 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 61.71 Mbit/s
95th percentile per-packet one-way delay: 139.367 ms
Loss rate: 3.92%
```
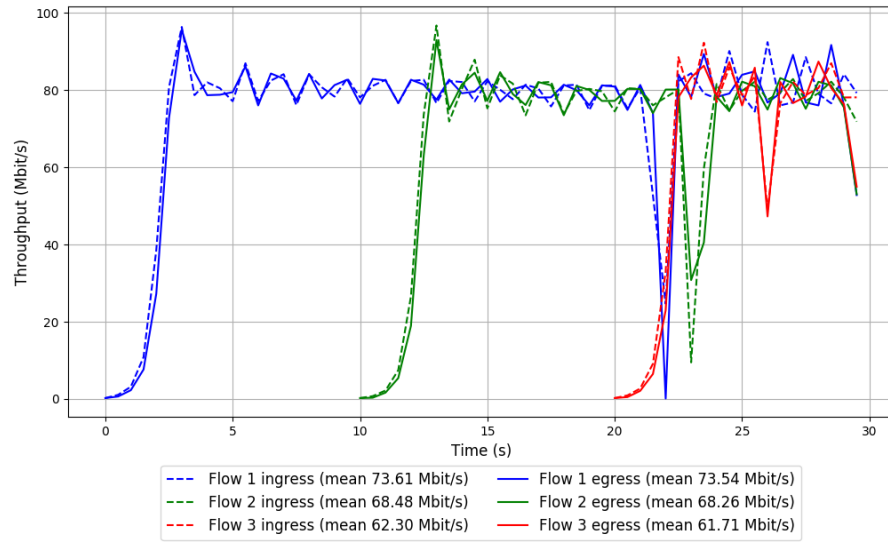
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2017-12-12 12:18:29
End at: 2017-12-12 12:18:59


# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.98 Mbit/s
95th percentile per-packet one-way delay: 136.502 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 73.09 Mbit/s
95th percentile per-packet one-way delay: 136.512 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 62.32 Mbit/s
95th percentile per-packet one-way delay: 136.483 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 63.17 Mbit/s
95th percentile per-packet one-way delay: 136.504 ms
Loss rate: 3.32%
```
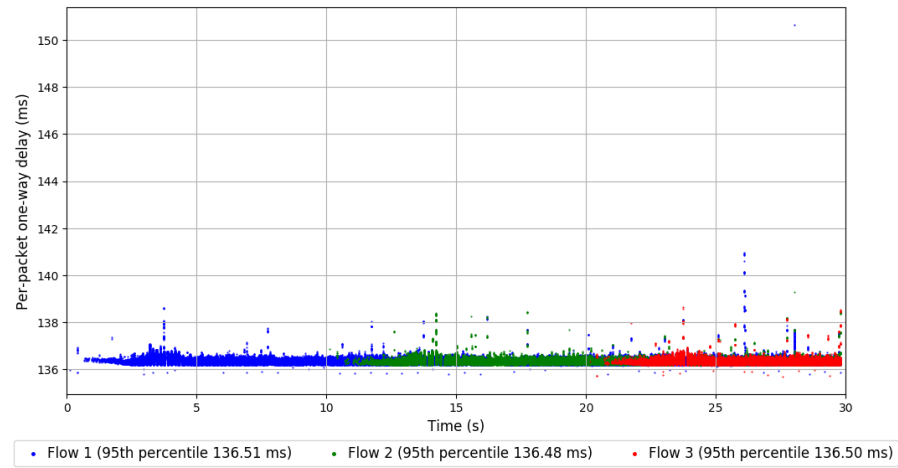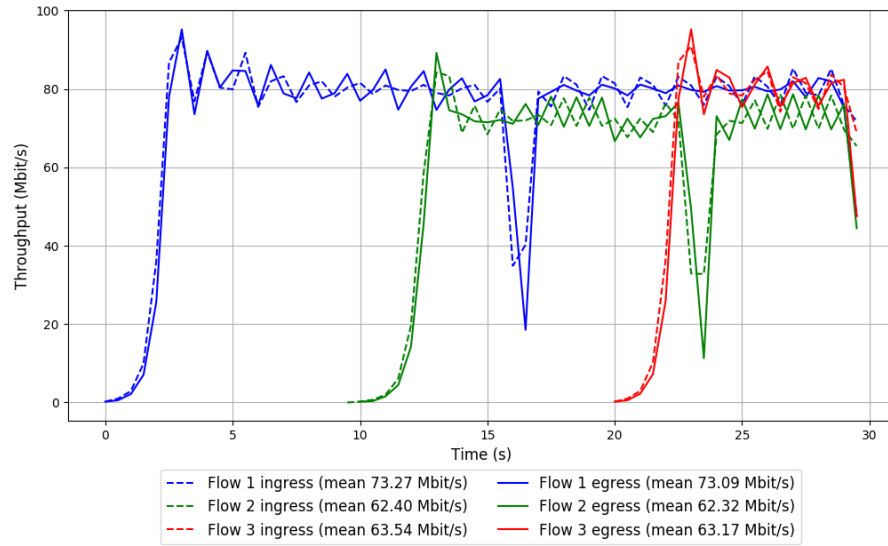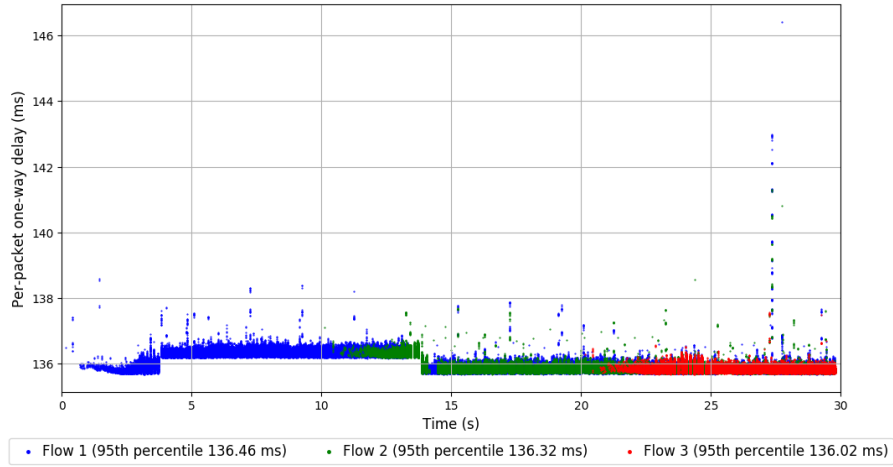
Run 4: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 73.27 Mbit/s)   —— Flow 1 egress (mean 73.09 Mbit/s)
- - - Flow 2 ingress (mean 62.40 Mbit/s)   —— Flow 2 egress (mean 62.32 Mbit/s)
- - - Flow 3 ingress (mean 63.54 Mbit/s)   —— Flow 3 egress (mean 63.17 Mbit/s)

- Flow 1 (95th percentile 136.51 ms)   • Flow 2 (95th percentile 136.48 ms)   • Flow 3 (95th percentile 136.50 ms)

11

```
Run 5: Statistics of TCP BBR

Start at: 2017-12-12 12:32:30
End at: 2017-12-12 12:33:00

# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 130.90 Mbit/s
95th percentile per-packet one-way delay: 136.425 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 70.25 Mbit/s
95th percentile per-packet one-way delay: 136.457 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 63.66 Mbit/s
95th percentile per-packet one-way delay: 136.316 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 56.79 Mbit/s
95th percentile per-packet one-way delay: 136.018 ms
Loss rate: 3.80%
```
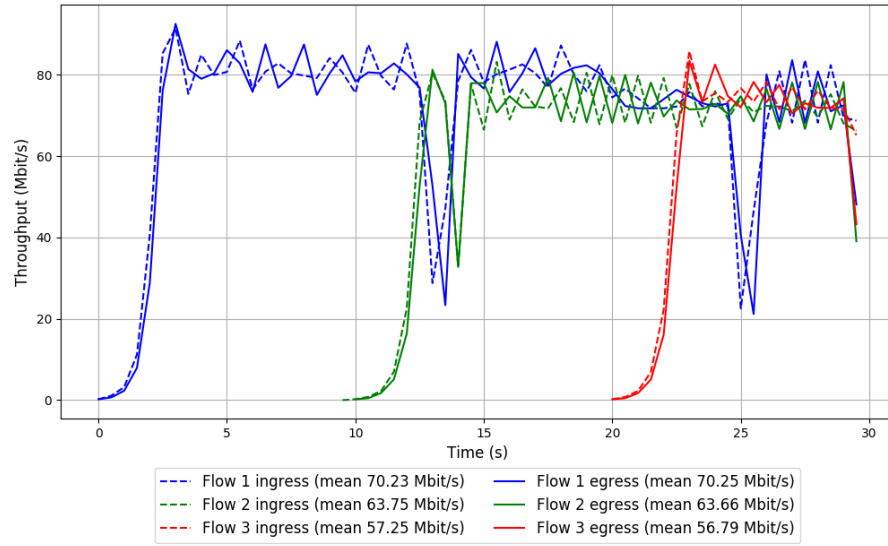
Run 5: Report of TCP BBR — Data Link

13

```
Run 6: Statistics of TCP BBR

Start at: 2017-12-12 12:46:48
End at: 2017-12-12 12:47:18

# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 131.65 Mbit/s
95th percentile per-packet one-way delay: 162.386 ms
Loss rate: 1.70%
-- Flow 1:
Average throughput: 68.65 Mbit/s
95th percentile per-packet one-way delay: 162.350 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 68.54 Mbit/s
95th percentile per-packet one-way delay: 162.381 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 54.06 Mbit/s
95th percentile per-packet one-way delay: 162.459 ms
Loss rate: 3.88%
```
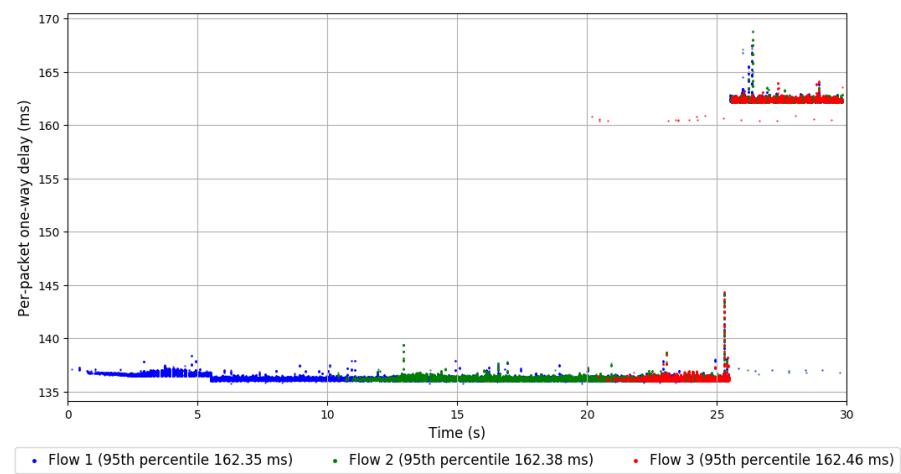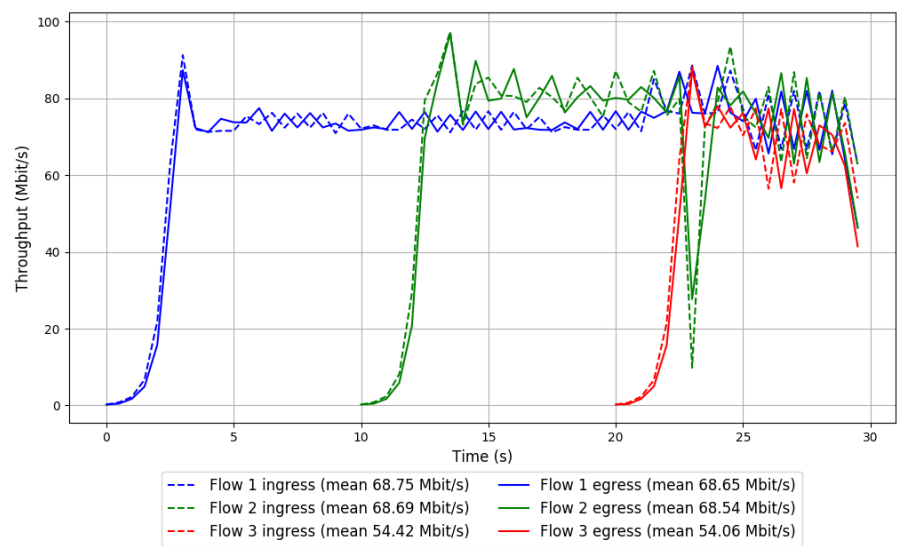
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 68.75 Mbit/s) --- Flow 1 egress (mean 68.65 Mbit/s)
Flow 2 ingress (mean 68.69 Mbit/s) --- Flow 2 egress (mean 68.54 Mbit/s)
Flow 3 ingress (mean 54.42 Mbit/s) --- Flow 3 egress (mean 54.06 Mbit/s)

Flow 1 (95th percentile 162.35 ms)   Flow 2 (95th percentile 162.38 ms)   Flow 3 (95th percentile 162.46 ms)

15

```
Run 7: Statistics of TCP BBR

Start at: 2017-12-12 13:01:10
End at: 2017-12-12 13:01:40


# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.07 Mbit/s
95th percentile per-packet one-way delay: 136.327 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 136.323 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.65 Mbit/s
95th percentile per-packet one-way delay: 136.326 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 64.27 Mbit/s
95th percentile per-packet one-way delay: 136.346 ms
Loss rate: 3.33%
```
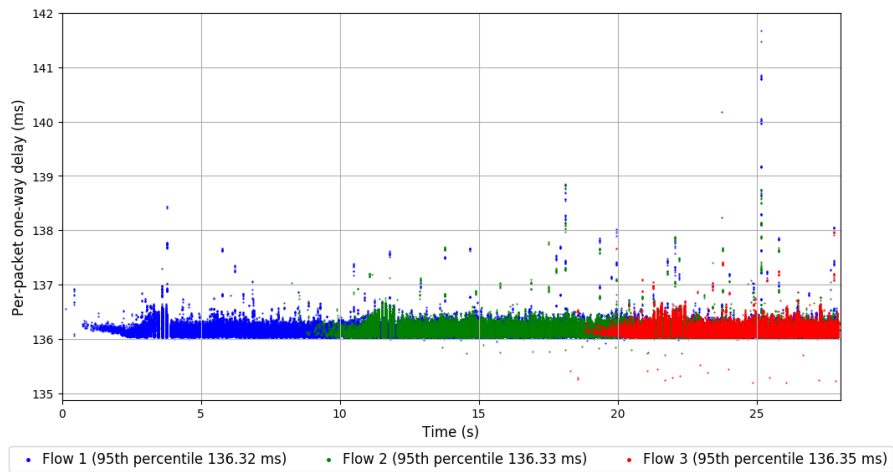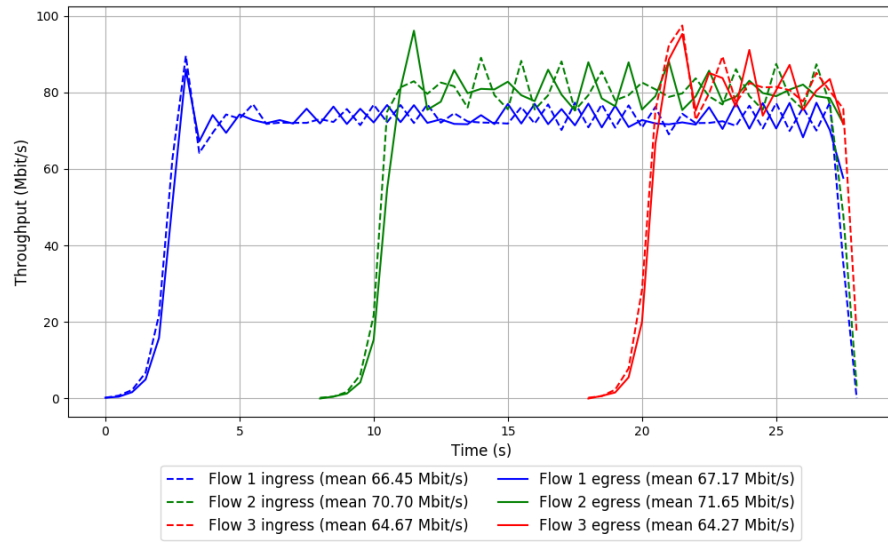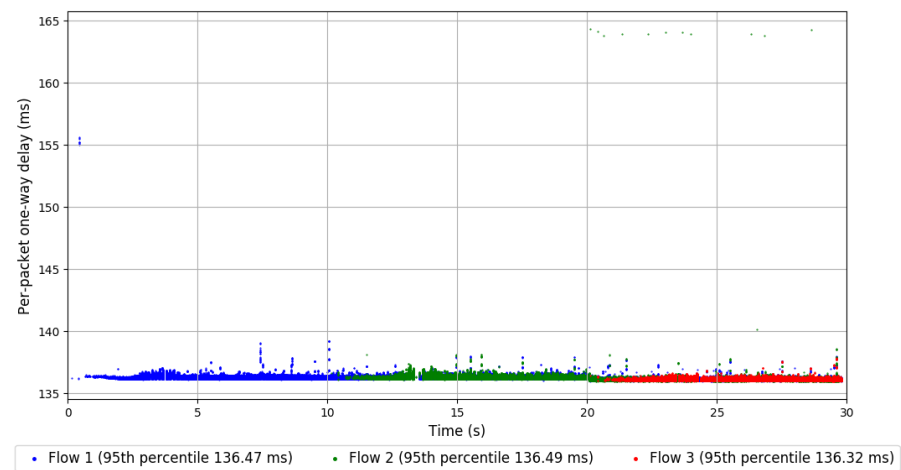
Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2017-12-12 13:15:04
End at: 2017-12-12 13:15:34


# Below is generated by plot.py at 2017-12-12 16:16:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.93 Mbit/s
95th percentile per-packet one-way delay: 136.456 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 72.15 Mbit/s
95th percentile per-packet one-way delay: 136.467 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 65.15 Mbit/s
95th percentile per-packet one-way delay: 136.485 ms
Loss rate: 1.84%
-- Flow 3:
Average throughput: 63.60 Mbit/s
95th percentile per-packet one-way delay: 136.318 ms
Loss rate: 3.36%
```
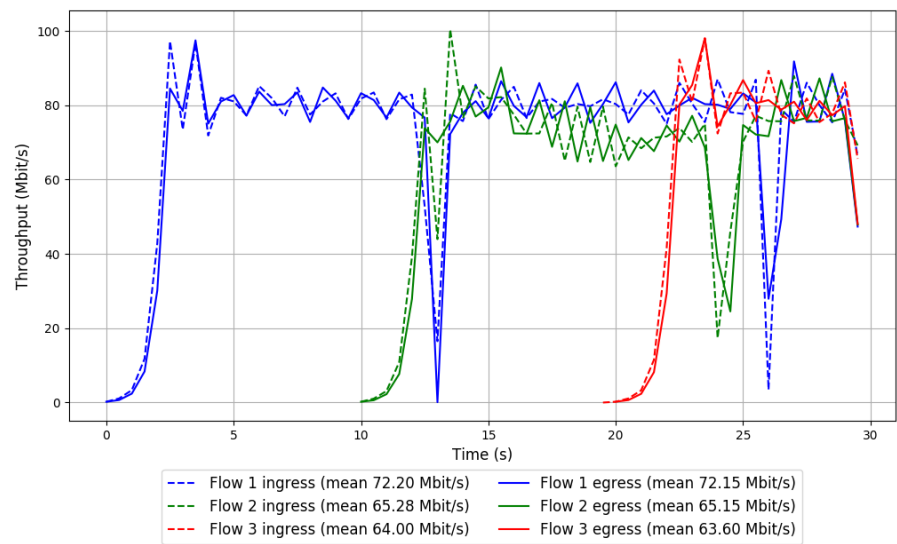
Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2017-12-12 13:29:20
End at: 2017-12-12 13:29:50


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.61 Mbit/s
95th percentile per-packet one-way delay: 136.552 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 72.77 Mbit/s
95th percentile per-packet one-way delay: 136.504 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 69.75 Mbit/s
95th percentile per-packet one-way delay: 136.545 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 63.46 Mbit/s
95th percentile per-packet one-way delay: 136.846 ms
Loss rate: 3.20%
```
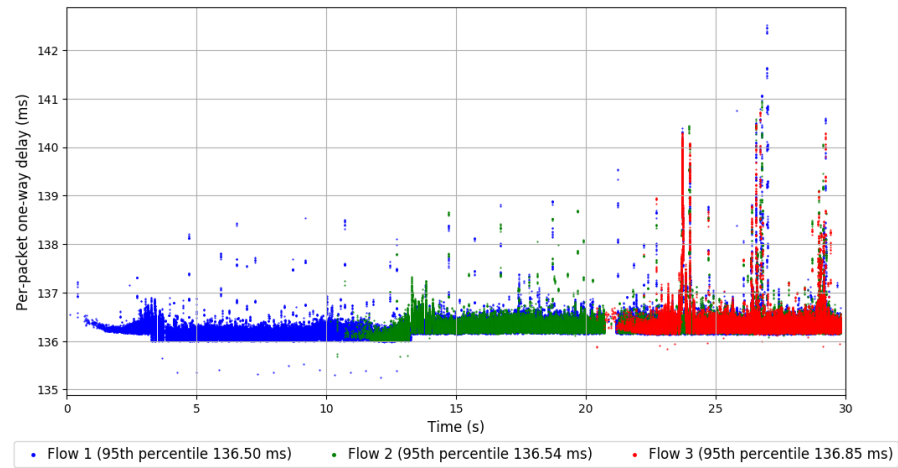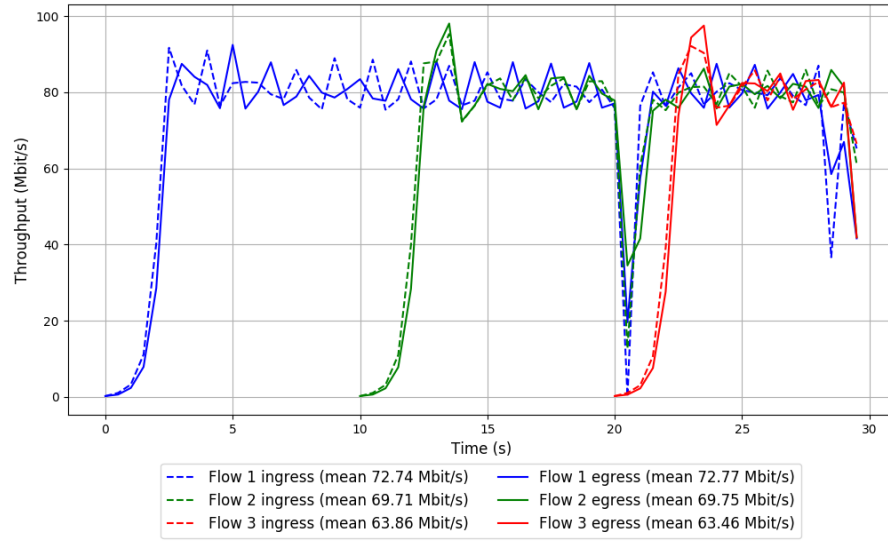
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2017-12-12 13:43:54
End at: 2017-12-12 13:44:24


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.97 Mbit/s
95th percentile per-packet one-way delay: 136.677 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 68.00 Mbit/s
95th percentile per-packet one-way delay: 136.661 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 62.61 Mbit/s
95th percentile per-packet one-way delay: 136.657 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 56.78 Mbit/s
95th percentile per-packet one-way delay: 136.746 ms
Loss rate: 3.78%
```
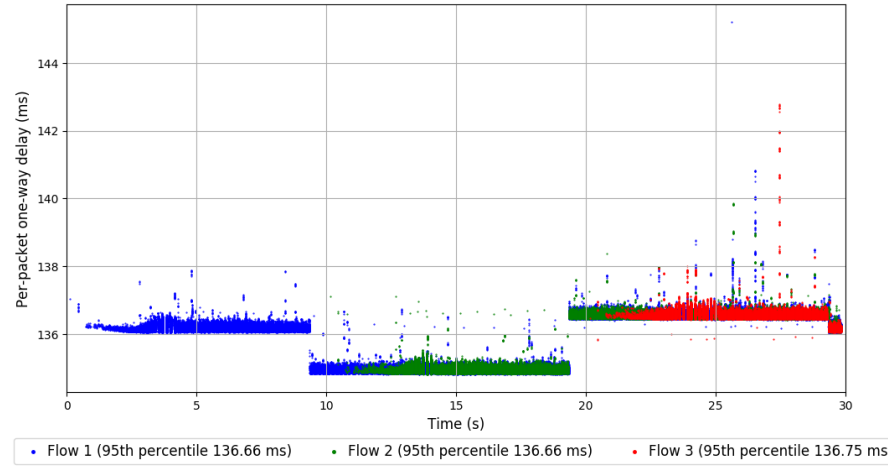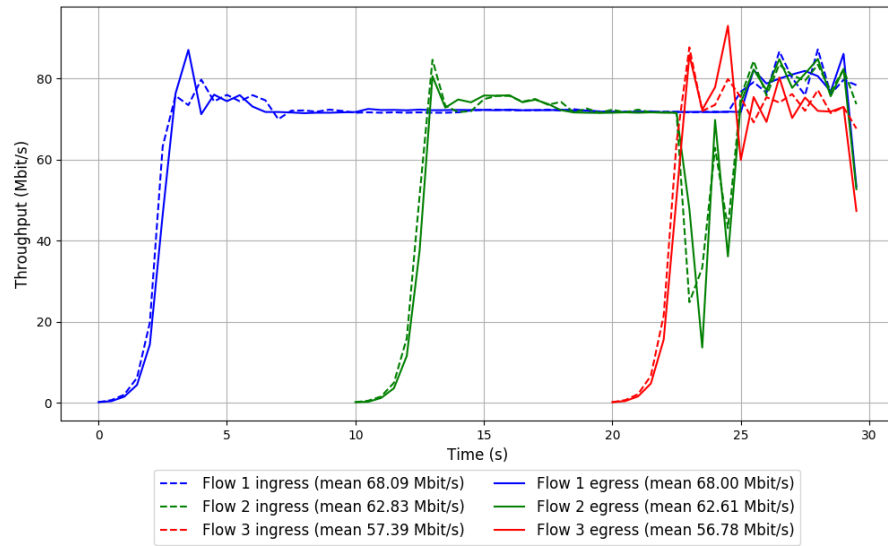
Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-12 11:42:56
End at: 2017-12-12 11:43:26

# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.60 Mbit/s
95th percentile per-packet one-way delay: 149.163 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 53.74 Mbit/s
95th percentile per-packet one-way delay: 148.511 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 61.76 Mbit/s
95th percentile per-packet one-way delay: 149.025 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 42.93 Mbit/s
95th percentile per-packet one-way delay: 151.351 ms
Loss rate: 3.54%
```
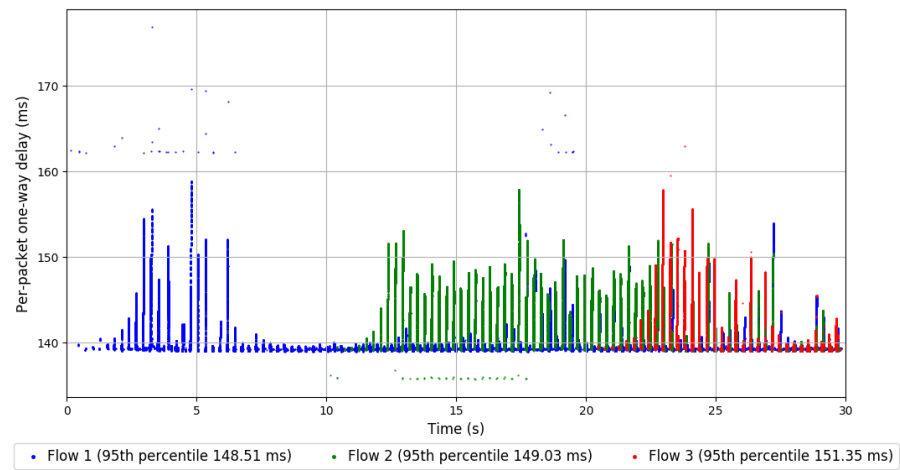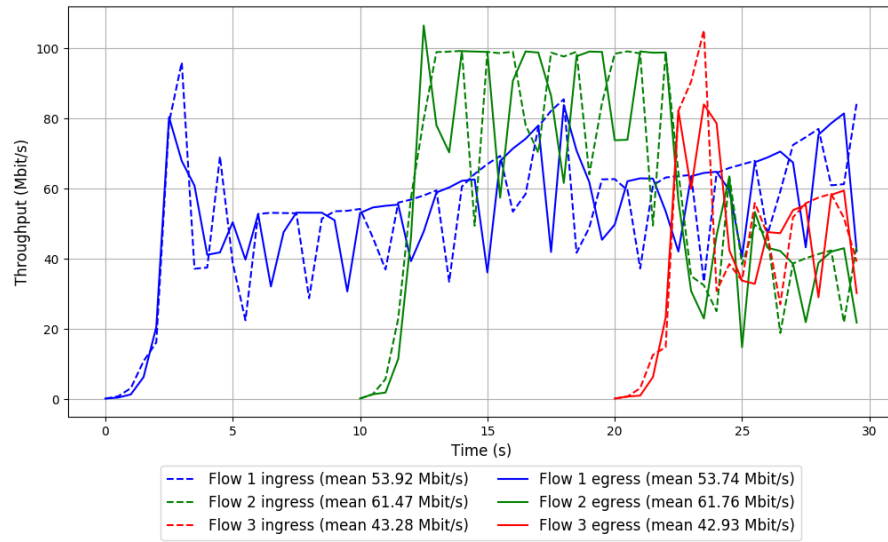
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 53.92 Mbit/s)   Flow 1 egress (mean 53.74 Mbit/s)
Flow 2 ingress (mean 61.47 Mbit/s)   Flow 2 egress (mean 61.76 Mbit/s)
Flow 3 ingress (mean 43.28 Mbit/s)   Flow 3 egress (mean 42.93 Mbit/s)

Flow 1 (95th percentile 148.51 ms)   Flow 2 (95th percentile 149.03 ms)   Flow 3 (95th percentile 151.35 ms)

25

```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-12 11:56:38
End at: 2017-12-12 11:57:08


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.46 Mbit/s
95th percentile per-packet one-way delay: 148.405 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 51.61 Mbit/s
95th percentile per-packet one-way delay: 143.191 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 42.93 Mbit/s
95th percentile per-packet one-way delay: 149.107 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 44.79 Mbit/s
95th percentile per-packet one-way delay: 151.033 ms
Loss rate: 2.32%
```
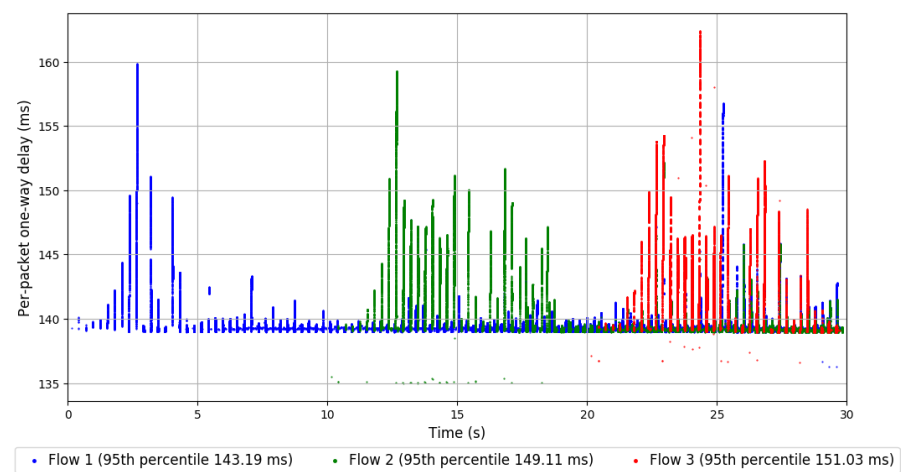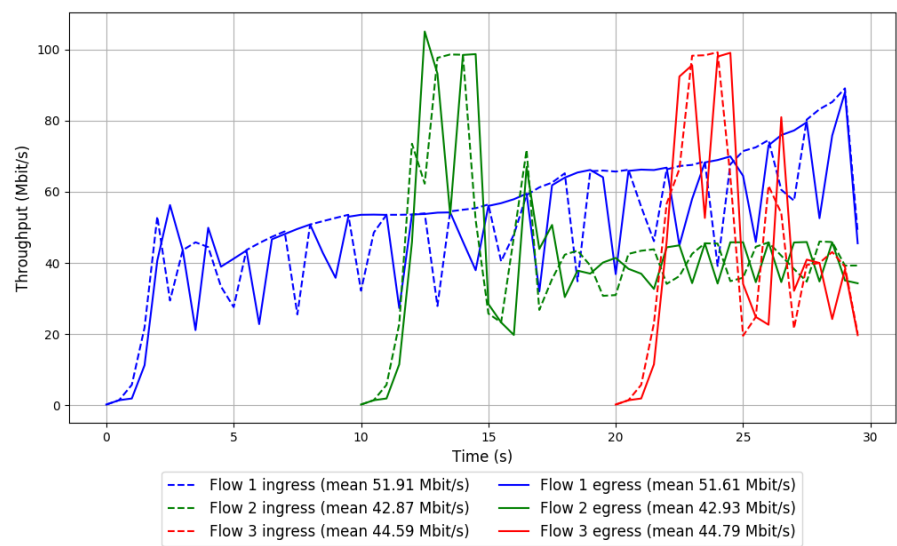
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-12 12:10:10
End at: 2017-12-12 12:10:40


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.78 Mbit/s
95th percentile per-packet one-way delay: 147.416 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 66.07 Mbit/s
95th percentile per-packet one-way delay: 146.867 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 14.83 Mbit/s
95th percentile per-packet one-way delay: 148.475 ms
Loss rate: 6.50%
-- Flow 3:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 148.726 ms
Loss rate: 2.77%
```
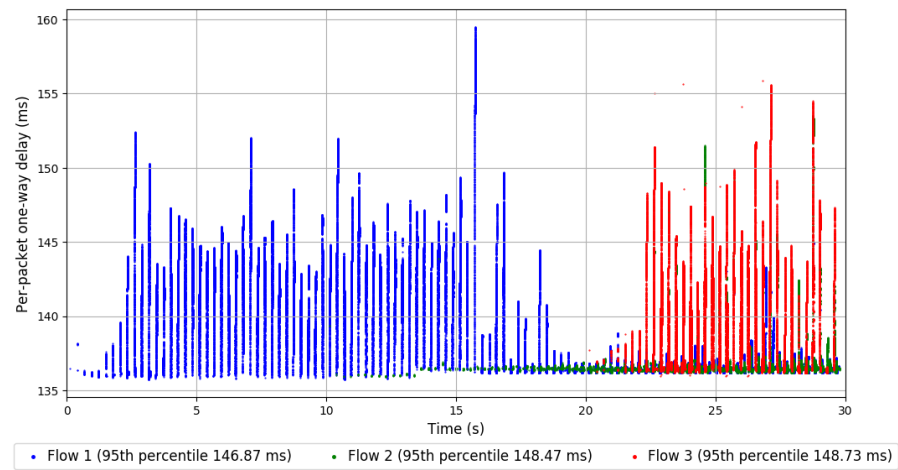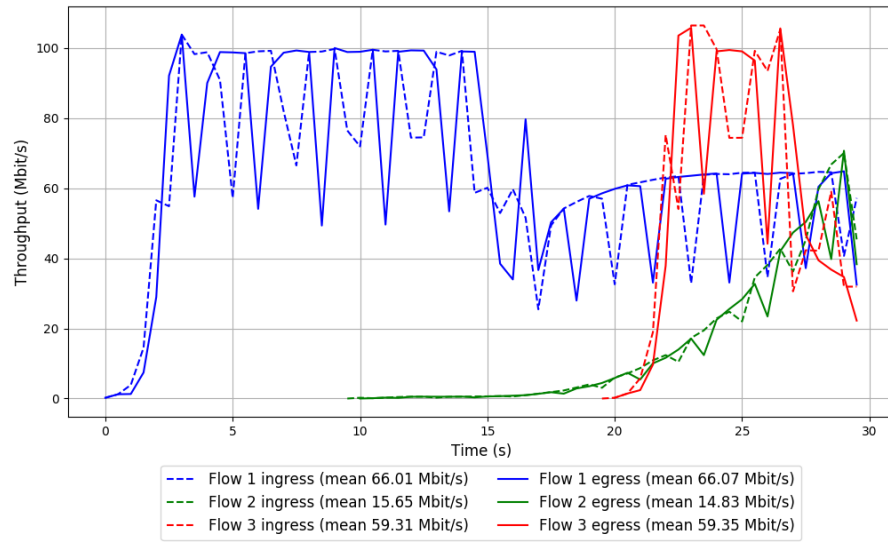
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 66.01 Mbit/s) — Flow 1 egress (mean 66.07 Mbit/s)
Flow 2 ingress (mean 15.65 Mbit/s) — Flow 2 egress (mean 14.83 Mbit/s)
Flow 3 ingress (mean 59.31 Mbit/s) — Flow 3 egress (mean 59.35 Mbit/s)

Flow 1 (95th percentile 146.87 ms) · Flow 2 (95th percentile 148.47 ms) · Flow 3 (95th percentile 148.73 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-12 12:24:05
End at: 2017-12-12 12:24:35


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.08 Mbit/s
95th percentile per-packet one-way delay: 163.393 ms
Loss rate: 1.73%
-- Flow 1:
Average throughput: 23.53 Mbit/s
95th percentile per-packet one-way delay: 163.639 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 38.16 Mbit/s
95th percentile per-packet one-way delay: 163.091 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 162.936 ms
Loss rate: 9.43%
```
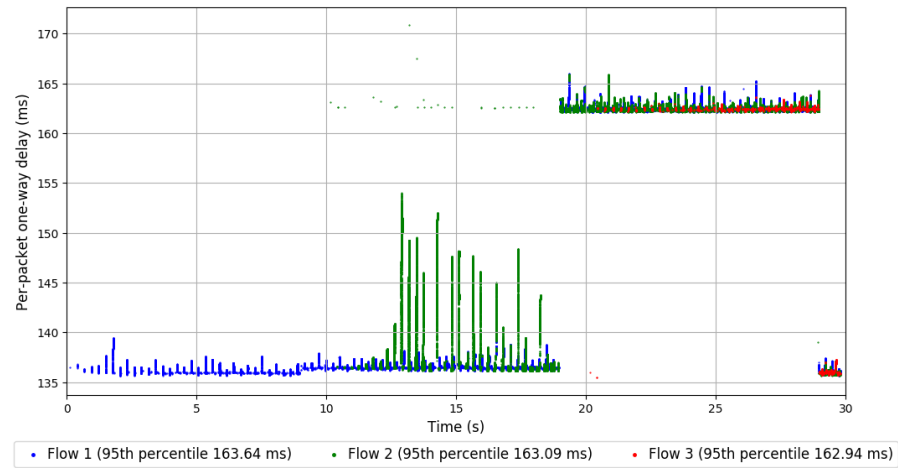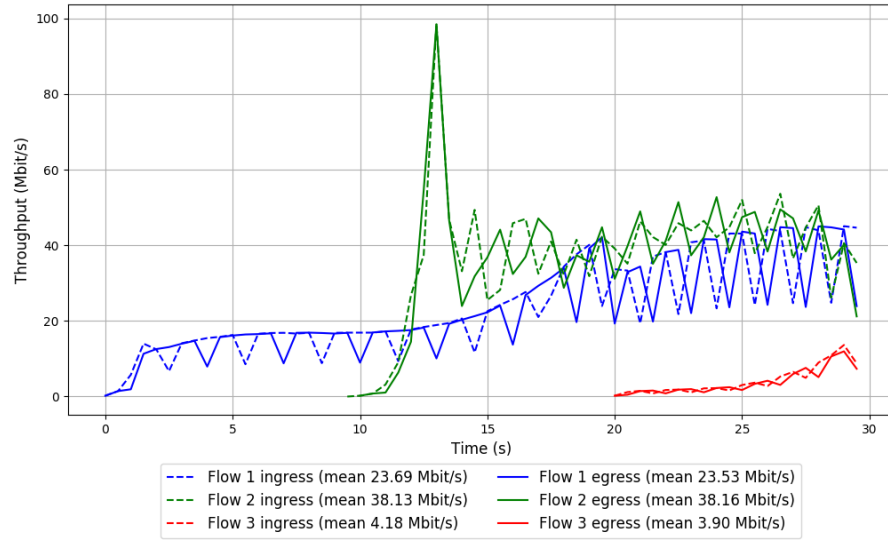
Run 4: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 23.69 Mbit/s) —— Flow 1 egress (mean 23.53 Mbit/s)
- - - Flow 2 ingress (mean 38.13 Mbit/s) —— Flow 2 egress (mean 38.16 Mbit/s)
- - - Flow 3 ingress (mean 4.18 Mbit/s) —— Flow 3 egress (mean 3.90 Mbit/s)

- Flow 1 (95th percentile 163.64 ms) · Flow 2 (95th percentile 163.09 ms) · Flow 3 (95th percentile 162.94 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-12 12:38:16
End at: 2017-12-12 12:38:46


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.25 Mbit/s
95th percentile per-packet one-way delay: 146.873 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 36.83 Mbit/s
95th percentile per-packet one-way delay: 141.495 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 51.52 Mbit/s
95th percentile per-packet one-way delay: 146.926 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 62.23 Mbit/s
95th percentile per-packet one-way delay: 149.315 ms
Loss rate: 4.09%
```
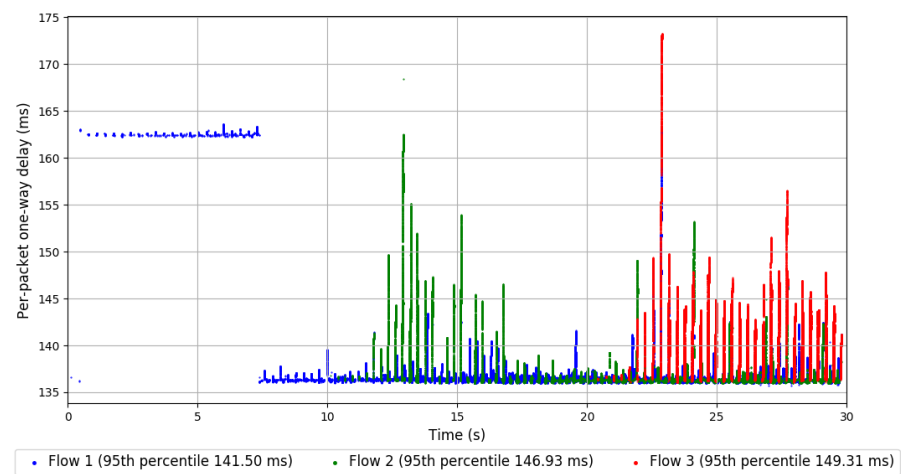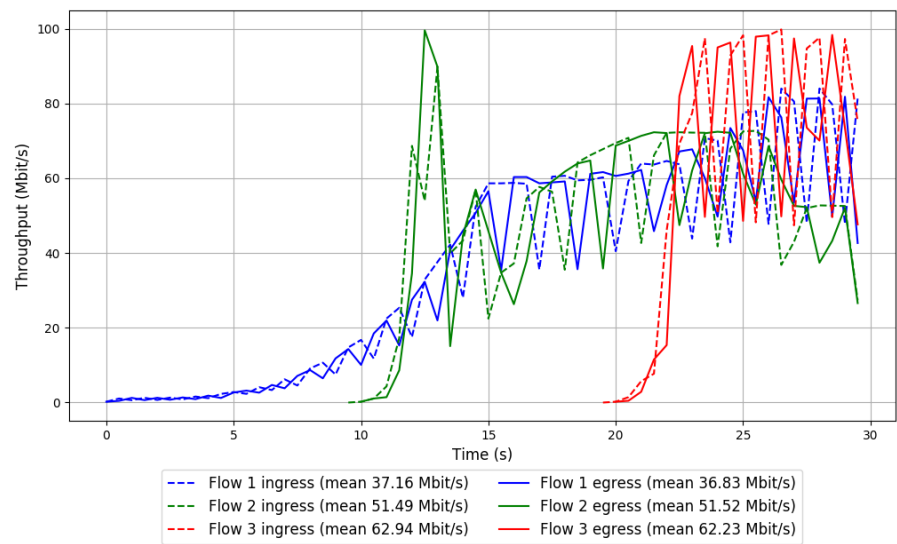
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-12 12:52:30
End at: 2017-12-12 12:53:00


# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.76 Mbit/s
95th percentile per-packet one-way delay: 149.126 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 52.74 Mbit/s
95th percentile per-packet one-way delay: 148.235 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 73.80 Mbit/s
95th percentile per-packet one-way delay: 149.452 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 150.194 ms
Loss rate: 3.01%
```
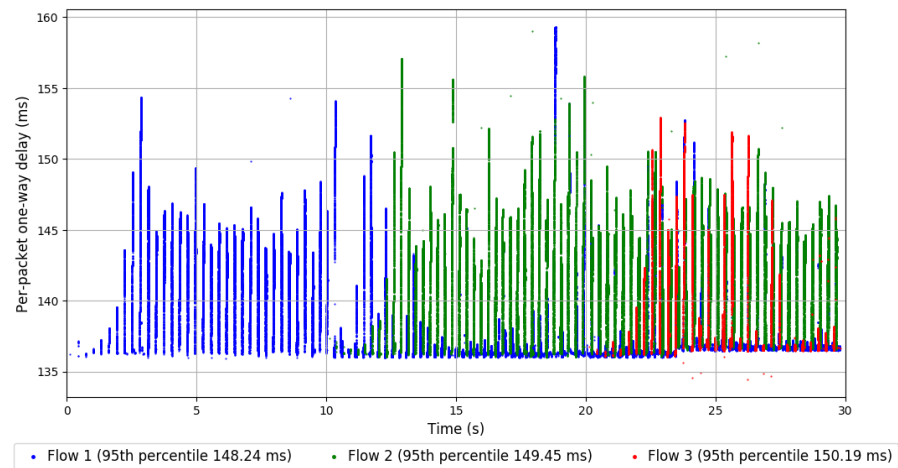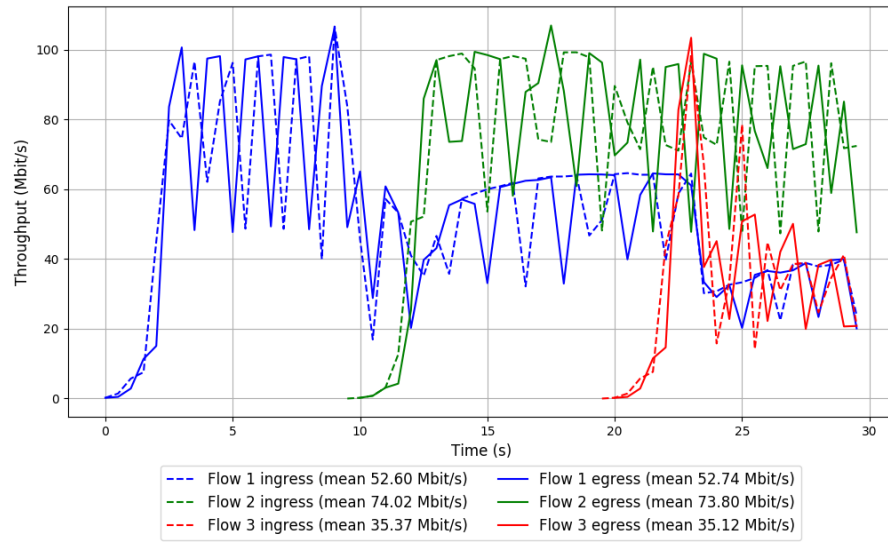
Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-12 13:06:38
End at: 2017-12-12 13:07:08

# Below is generated by plot.py at 2017-12-12 16:18:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.60 Mbit/s
95th percentile per-packet one-way delay: 166.657 ms
Loss rate: 3.07%
-- Flow 1:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 166.026 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 25.17 Mbit/s
95th percentile per-packet one-way delay: 167.291 ms
Loss rate: 4.37%
-- Flow 3:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 164.849 ms
Loss rate: 9.66%
```
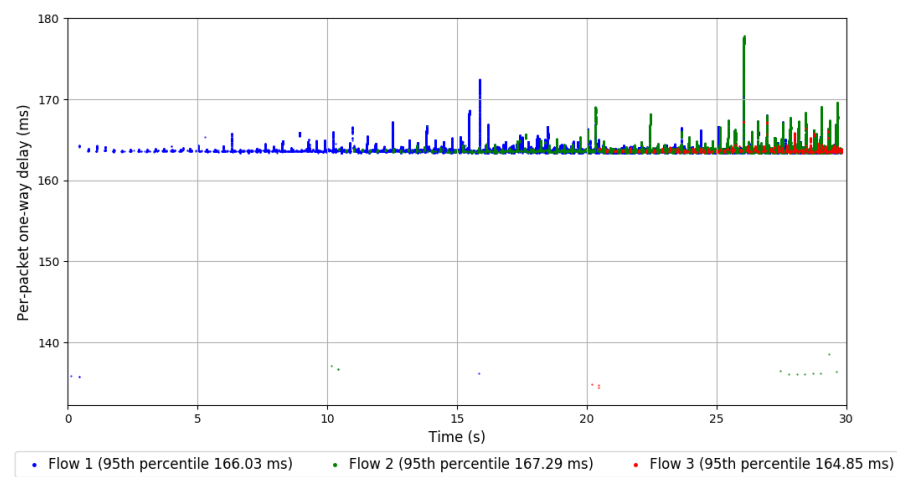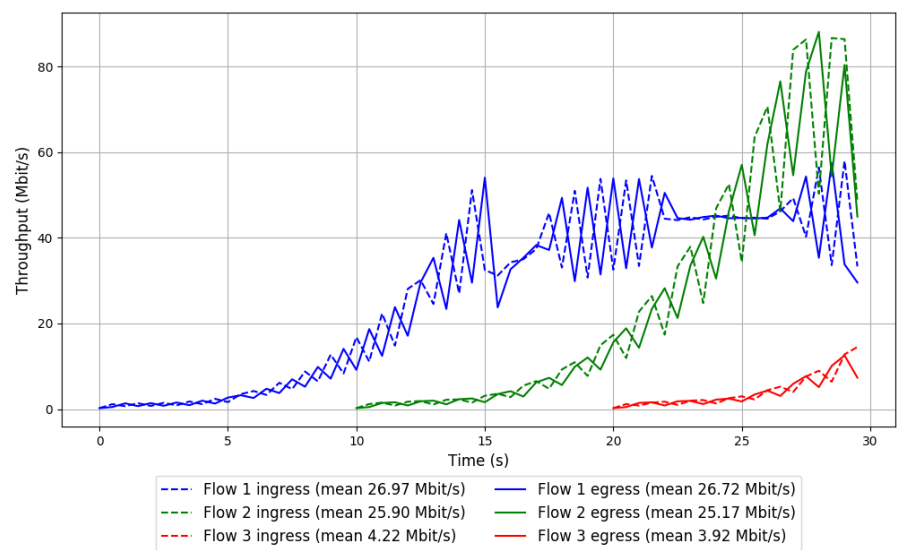
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-12 13:20:44
End at: 2017-12-12 13:21:14


# Below is generated by plot.py at 2017-12-12 16:19:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.56 Mbit/s
95th percentile per-packet one-way delay: 151.916 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 46.92 Mbit/s
95th percentile per-packet one-way delay: 149.548 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 49.26 Mbit/s
95th percentile per-packet one-way delay: 153.535 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 40.16 Mbit/s
95th percentile per-packet one-way delay: 156.838 ms
Loss rate: 2.64%
```
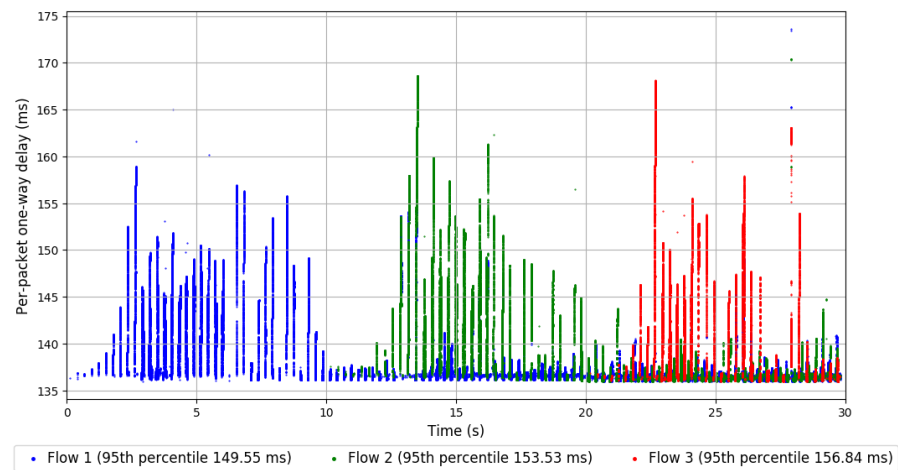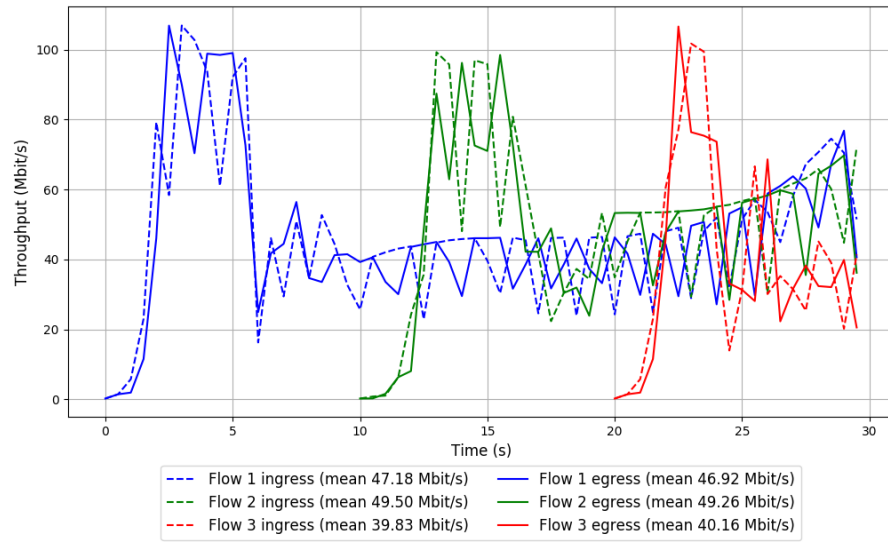
Run 8: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 47.18 Mbit/s)   Flow 1 egress (mean 46.92 Mbit/s)
Flow 2 ingress (mean 49.50 Mbit/s)   Flow 2 egress (mean 49.26 Mbit/s)
Flow 3 ingress (mean 39.83 Mbit/s)   Flow 3 egress (mean 40.16 Mbit/s)

Flow 1 (95th percentile 149.55 ms)   Flow 2 (95th percentile 153.53 ms)   Flow 3 (95th percentile 156.84 ms)

```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-12 13:35:02
End at: 2017-12-12 13:35:32


# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.32 Mbit/s
95th percentile per-packet one-way delay: 149.469 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 149.501 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 43.03 Mbit/s
95th percentile per-packet one-way delay: 148.440 ms
Loss rate: 1.85%
-- Flow 3:
Average throughput: 42.64 Mbit/s
95th percentile per-packet one-way delay: 151.226 ms
Loss rate: 3.44%
```
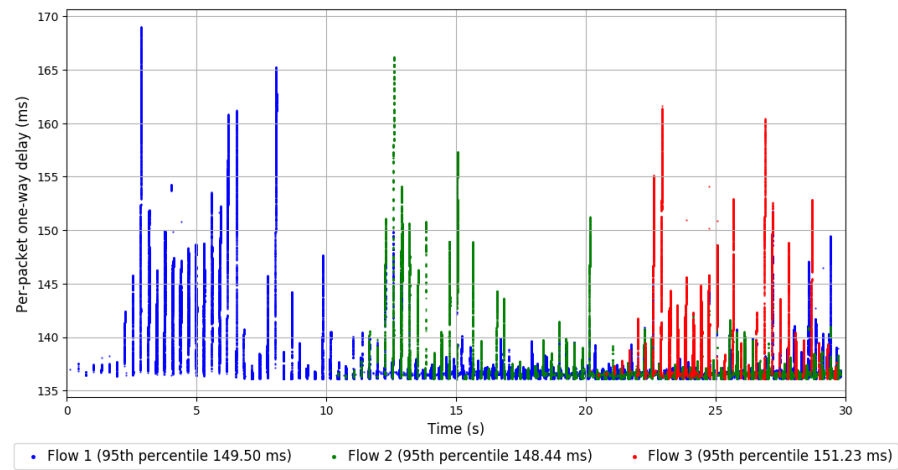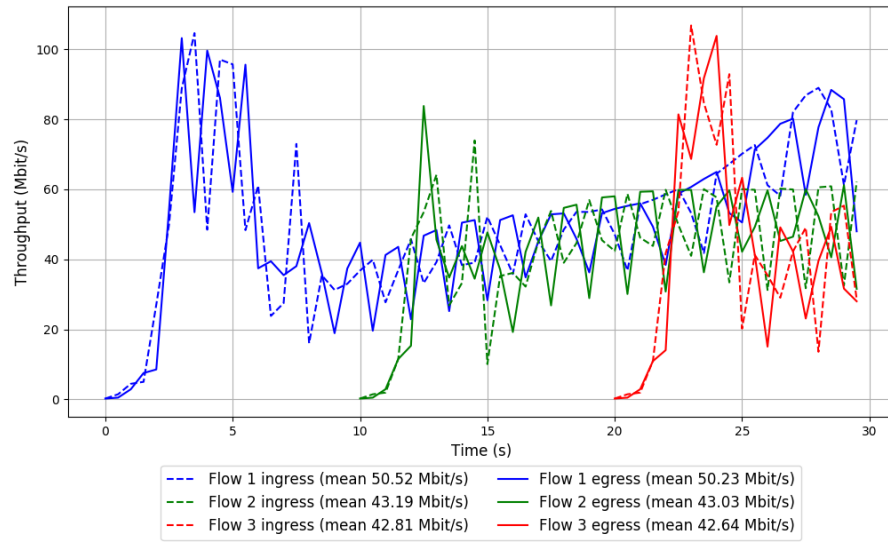
Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-12 13:49:32
End at: 2017-12-12 13:50:02


# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.27 Mbit/s
95th percentile per-packet one-way delay: 146.818 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 144.899 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 33.51 Mbit/s
95th percentile per-packet one-way delay: 143.215 ms
Loss rate: 2.22%
-- Flow 3:
Average throughput: 51.18 Mbit/s
95th percentile per-packet one-way delay: 150.664 ms
Loss rate: 3.39%
```
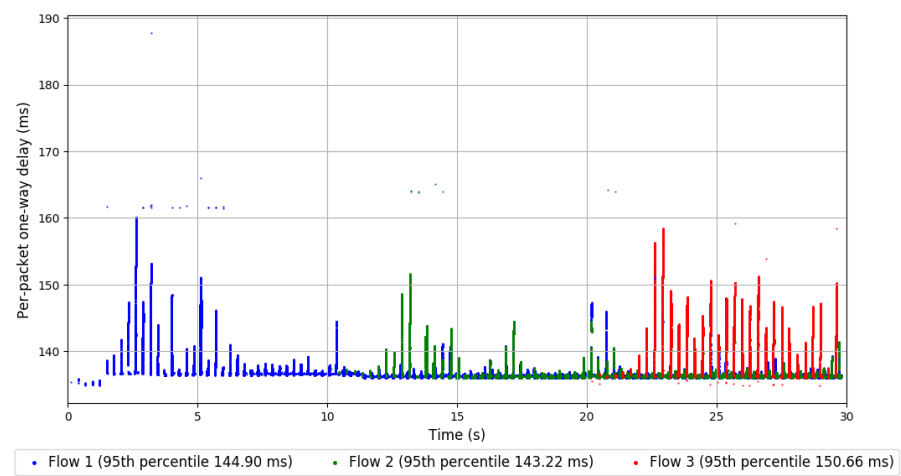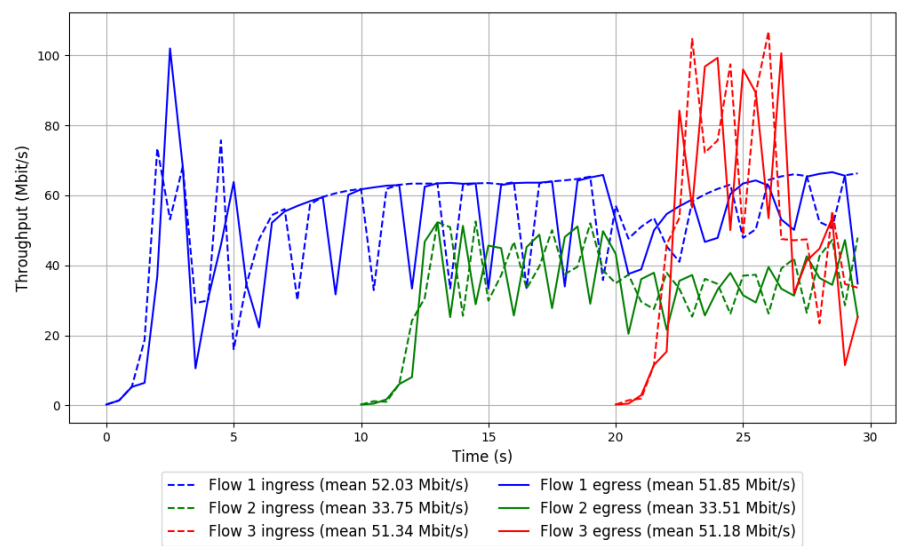
Run 10: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 52.03 Mbit/s) —— Flow 1 egress (mean 51.85 Mbit/s)
- - - Flow 2 ingress (mean 33.75 Mbit/s) —— Flow 2 egress (mean 33.51 Mbit/s)
- - - Flow 3 ingress (mean 51.34 Mbit/s) —— Flow 3 egress (mean 51.18 Mbit/s)

- Flow 1 (95th percentile 144.90 ms)   - Flow 2 (95th percentile 143.22 ms)   - Flow 3 (95th percentile 150.66 ms)
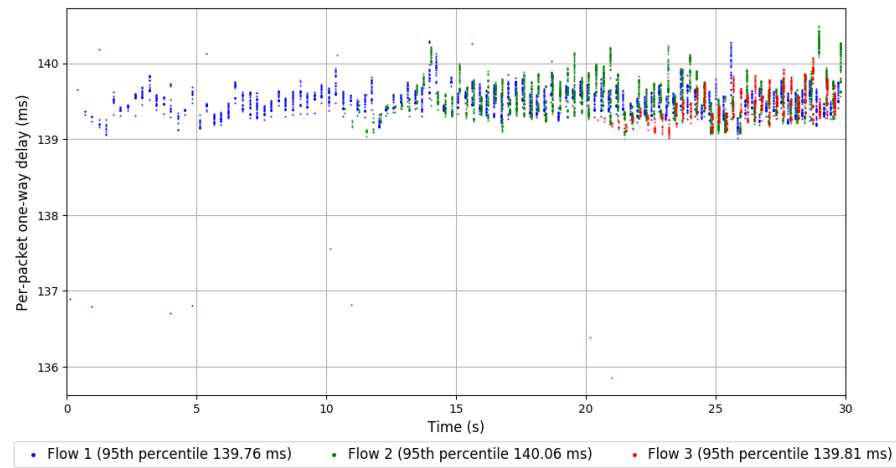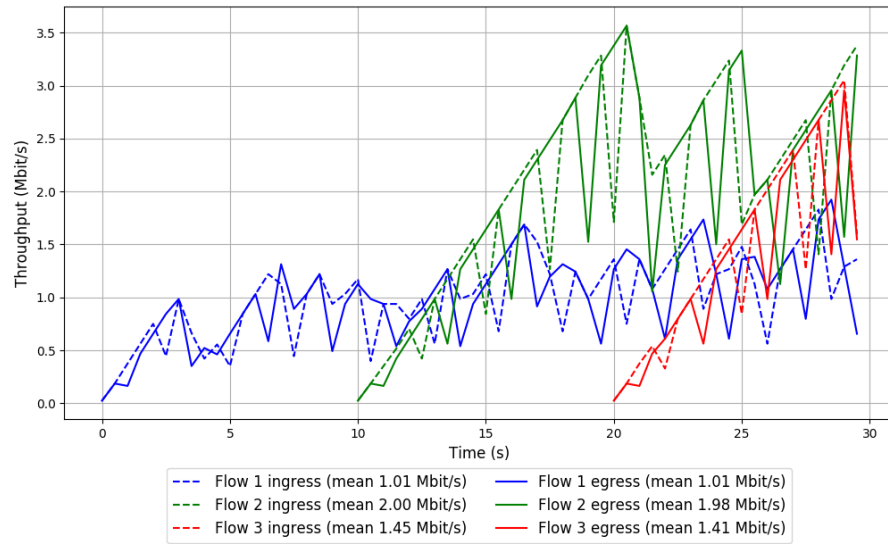
```
Run 1: Statistics of LEDBAT

Start at: 2017-12-12 11:43:53
End at: 2017-12-12 11:44:23

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 139.917 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 1.01 Mbit/s
95th percentile per-packet one-way delay: 139.765 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 140.056 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 139.815 ms
Loss rate: 5.69%
```
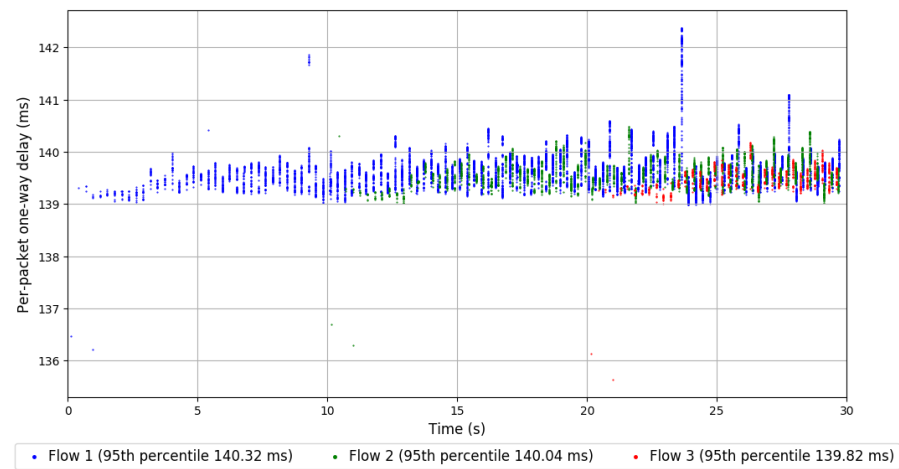
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 1.01 Mbit/s)   Flow 1 egress (mean 1.01 Mbit/s)
Flow 2 ingress (mean 2.00 Mbit/s)   Flow 2 egress (mean 1.98 Mbit/s)
Flow 3 ingress (mean 1.45 Mbit/s)   Flow 3 egress (mean 1.41 Mbit/s)

Flow 1 (95th percentile 139.76 ms)   Flow 2 (95th percentile 140.06 ms)   Flow 3 (95th percentile 139.81 ms)
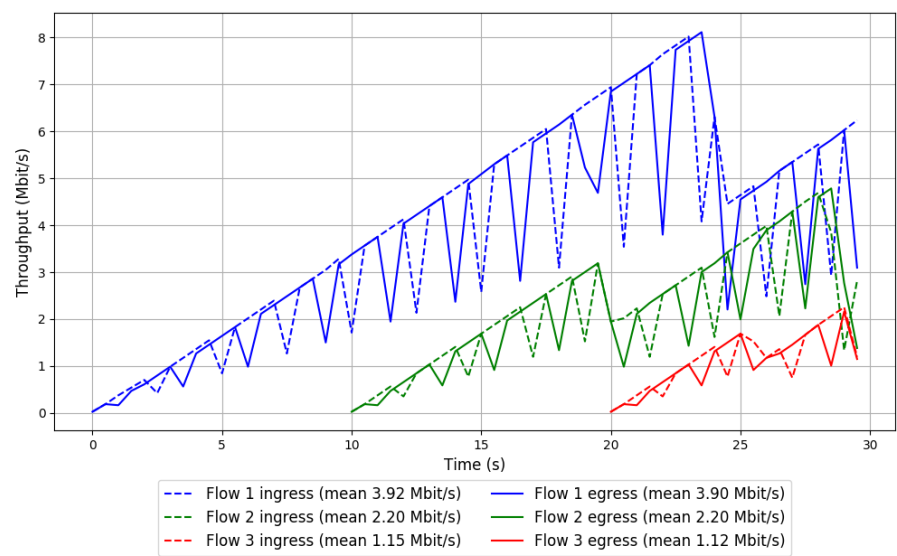
```
Run 2: Statistics of LEDBAT

Start at: 2017-12-12 11:57:34
End at: 2017-12-12 11:58:04

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.71 Mbit/s
95th percentile per-packet one-way delay: 140.244 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 3.90 Mbit/s
95th percentile per-packet one-way delay: 140.317 ms
Loss rate: 1.34%
-- Flow 2:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 140.039 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 1.12 Mbit/s
95th percentile per-packet one-way delay: 139.823 ms
Loss rate: 5.36%
```
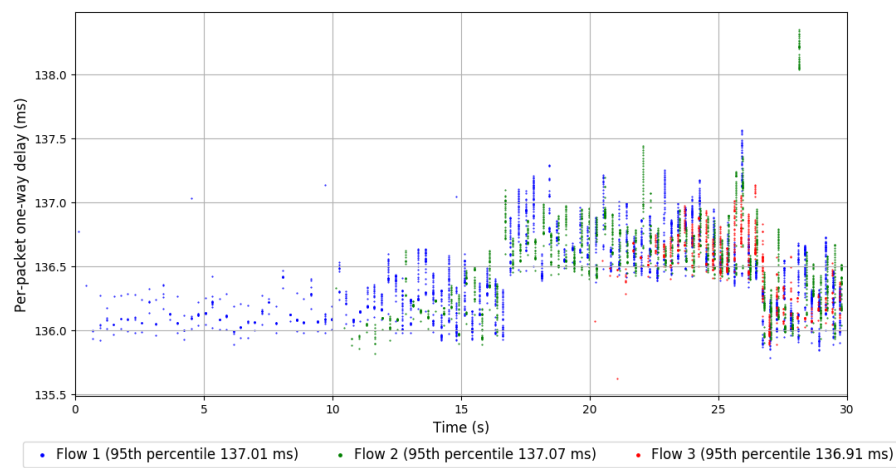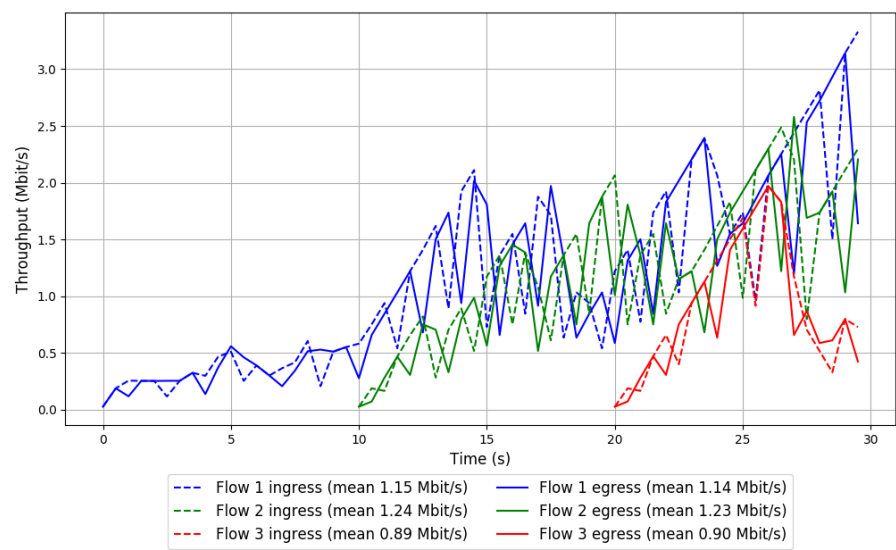
Run 2: Report of LEDBAT — Data Link

- - - - Flow 1 ingress (mean 3.92 Mbit/s) ——— Flow 1 egress (mean 3.90 Mbit/s)
- - - - Flow 2 ingress (mean 2.20 Mbit/s) ——— Flow 2 egress (mean 2.20 Mbit/s)
- - - - Flow 3 ingress (mean 1.15 Mbit/s) ——— Flow 3 egress (mean 1.12 Mbit/s)

- Flow 1 (95th percentile 140.32 ms) - Flow 2 (95th percentile 140.04 ms) - Flow 3 (95th percentile 139.82 ms)

47

```
Run 3: Statistics of LEDBAT

Start at: 2017-12-12 12:11:07
End at: 2017-12-12 12:11:37


# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 137.009 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 137.014 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 137.072 ms
Loss rate: 2.37%
-- Flow 3:
Average throughput: 0.90 Mbit/s
95th percentile per-packet one-way delay: 136.914 ms
Loss rate: 1.75%
```
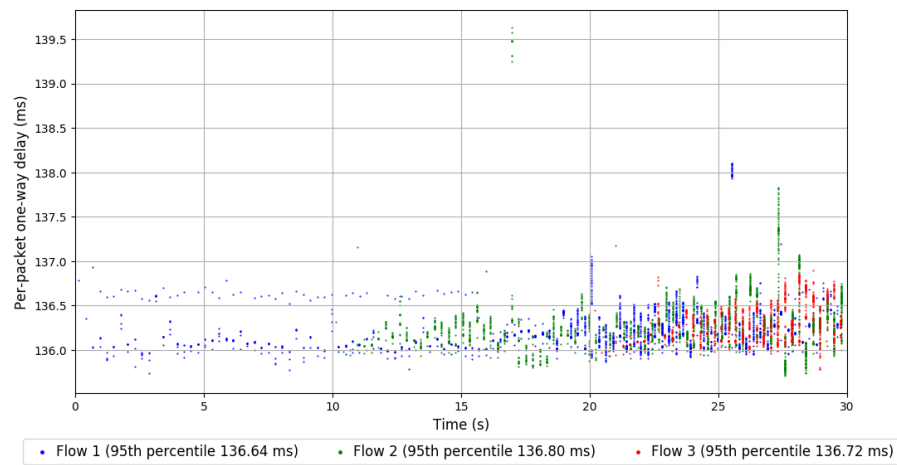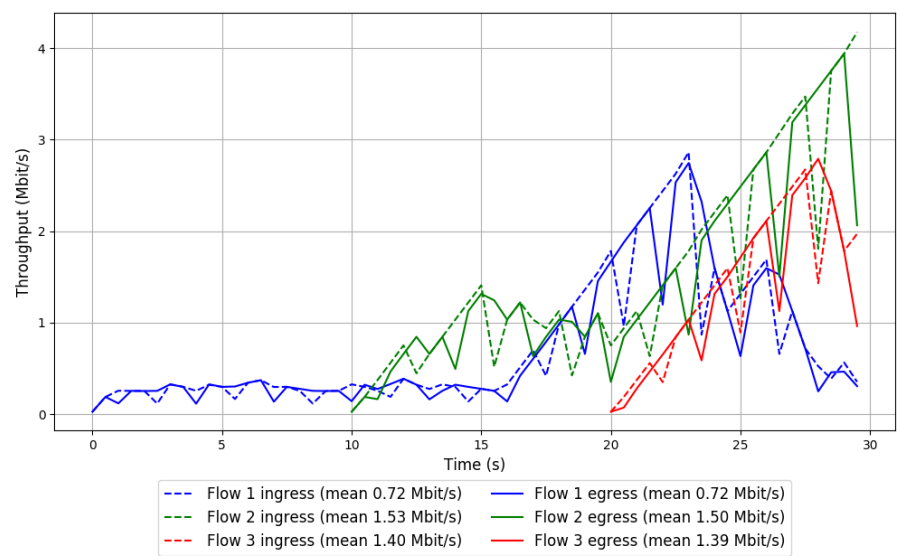
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 1.15 Mbit/s)   Flow 1 egress (mean 1.14 Mbit/s)
Flow 2 ingress (mean 1.24 Mbit/s)   Flow 2 egress (mean 1.23 Mbit/s)
Flow 3 ingress (mean 0.89 Mbit/s)   Flow 3 egress (mean 0.90 Mbit/s)

Flow 1 (95th percentile 137.01 ms)   Flow 2 (95th percentile 137.07 ms)   Flow 3 (95th percentile 136.91 ms)

49

```
Run 4: Statistics of LEDBAT

Start at: 2017-12-12 12:24:58
End at: 2017-12-12 12:25:28

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 136.714 ms
Loss rate: 2.65%
-- Flow 1:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 136.639 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 136.799 ms
Loss rate: 3.47%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 136.715 ms
Loss rate: 3.66%
```
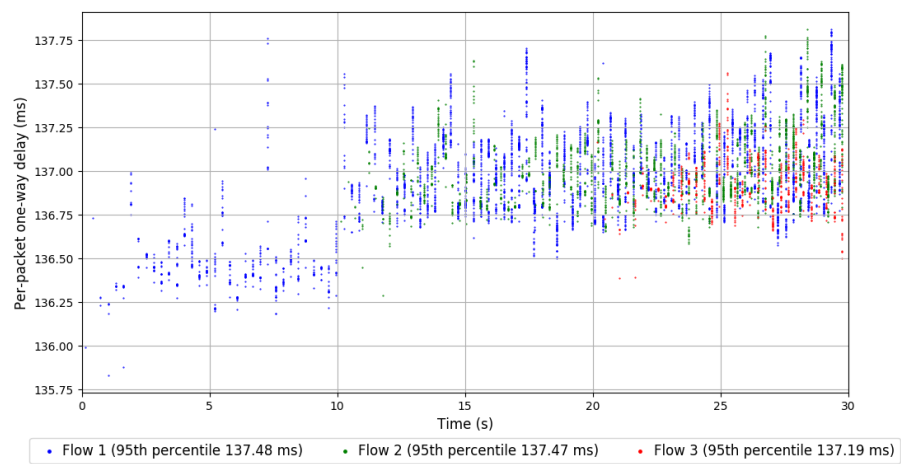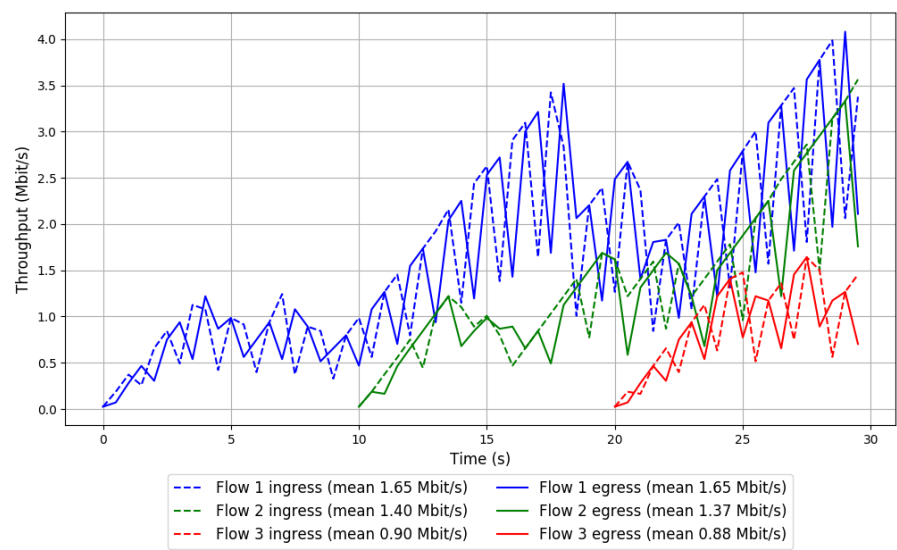
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 0.72 Mbit/s)   Flow 1 egress (mean 0.72 Mbit/s)
Flow 2 ingress (mean 1.53 Mbit/s)   Flow 2 egress (mean 1.50 Mbit/s)
Flow 3 ingress (mean 1.40 Mbit/s)   Flow 3 egress (mean 1.39 Mbit/s)

Flow 1 (95th percentile 136.64 ms)   Flow 2 (95th percentile 136.80 ms)   Flow 3 (95th percentile 136.72 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2017-12-12 12:39:13
End at: 2017-12-12 12:39:43

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 137.462 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 137.480 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 137.473 ms
Loss rate: 3.25%
-- Flow 3:
Average throughput: 0.88 Mbit/s
95th percentile per-packet one-way delay: 137.189 ms
Loss rate: 4.24%
```
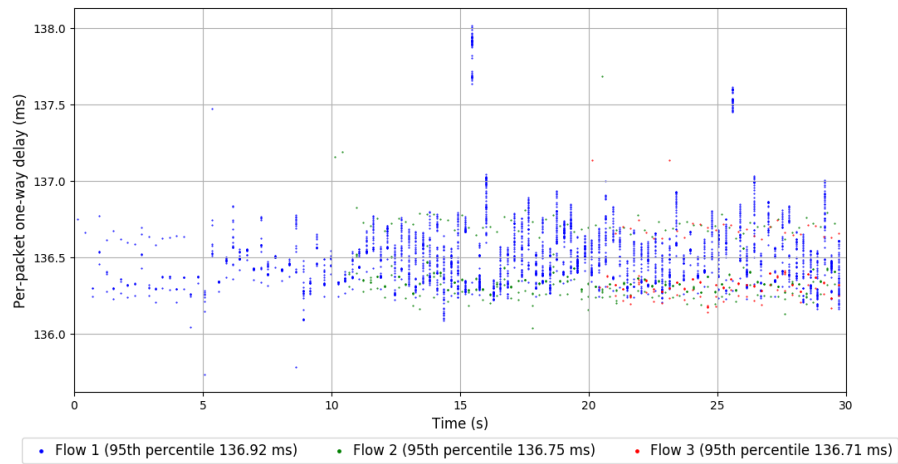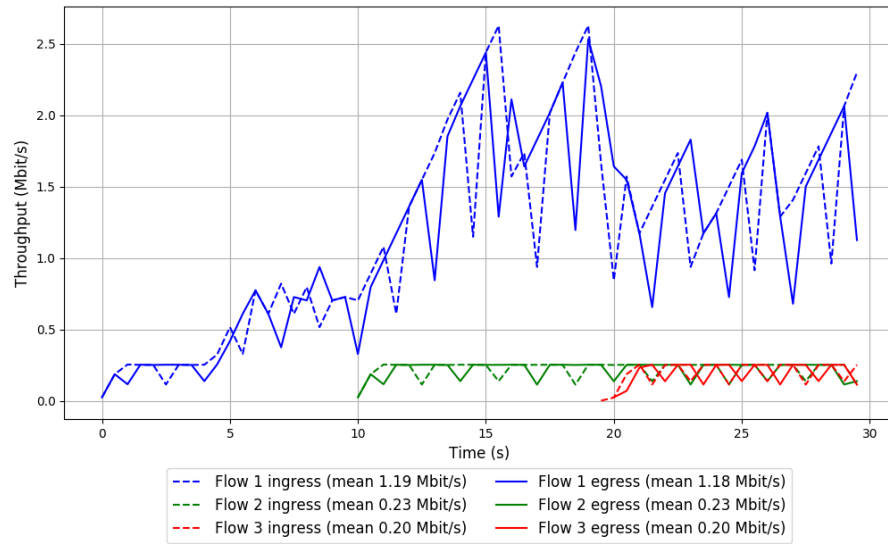
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 1.65 Mbit/s) — — — Flow 1 egress (mean 1.65 Mbit/s)
Flow 2 ingress (mean 1.40 Mbit/s) — — — Flow 2 egress (mean 1.37 Mbit/s)
Flow 3 ingress (mean 0.90 Mbit/s) — — — Flow 3 egress (mean 0.88 Mbit/s)

• Flow 1 (95th percentile 137.48 ms)   • Flow 2 (95th percentile 137.47 ms)   • Flow 3 (95th percentile 137.19 ms)

```
Run 6: Statistics of LEDBAT

Start at: 2017-12-12 12:53:29
End at: 2017-12-12 12:53:59

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 136.881 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 1.18 Mbit/s
95th percentile per-packet one-way delay: 136.917 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 136.749 ms
Loss rate: 1.29%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 136.711 ms
Loss rate: 3.46%
```
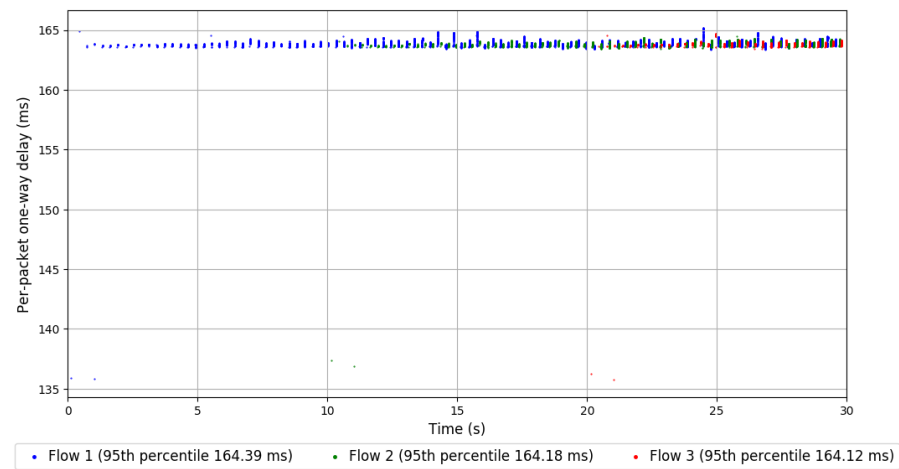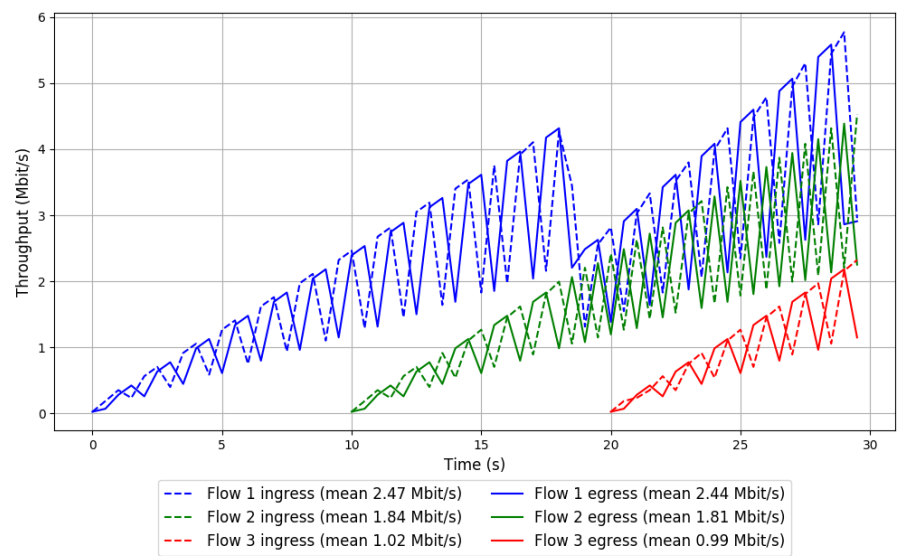
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-12-12 13:07:31
End at: 2017-12-12 13:08:01

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 164.286 ms
Loss rate: 2.67%
-- Flow 1:
Average throughput: 2.44 Mbit/s
95th percentile per-packet one-way delay: 164.392 ms
Loss rate: 2.01%
-- Flow 2:
Average throughput: 1.81 Mbit/s
95th percentile per-packet one-way delay: 164.184 ms
Loss rate: 3.12%
-- Flow 3:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 164.118 ms
Loss rate: 5.79%
```
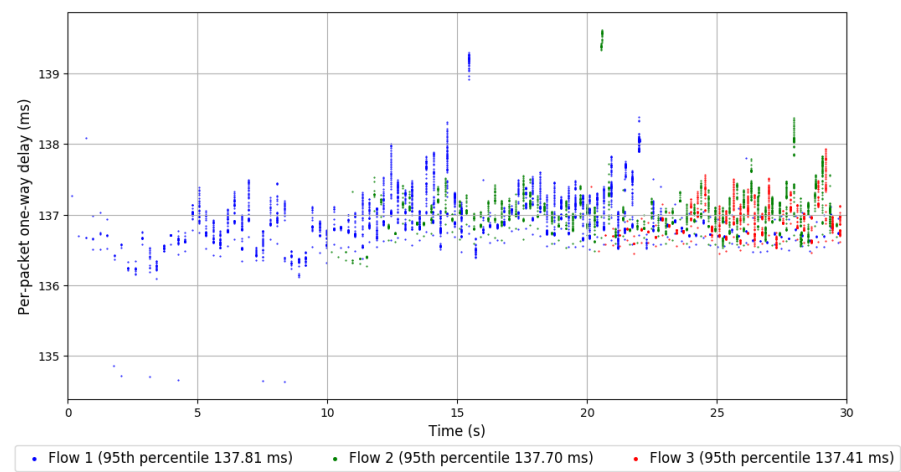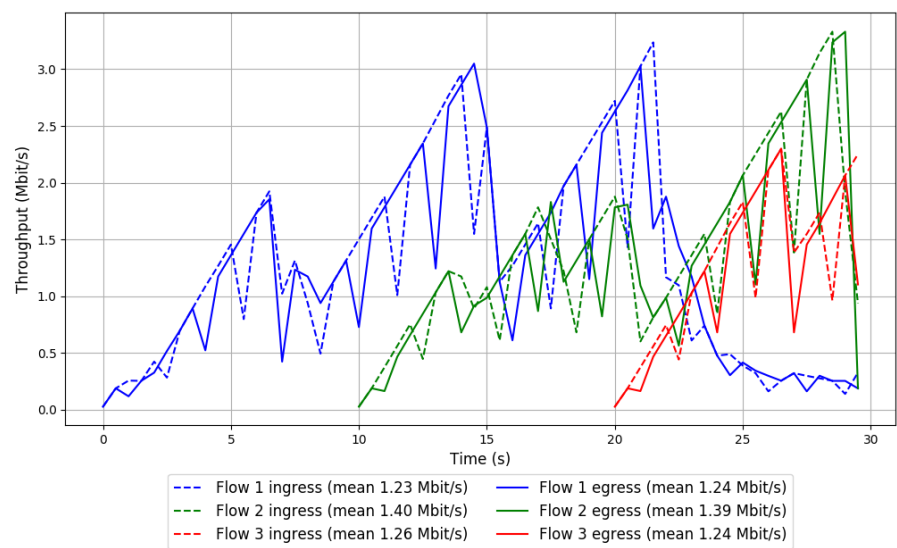
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-12-12 13:21:42
End at: 2017-12-12 13:22:12

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 137.712 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 137.814 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 137.698 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 137.412 ms
Loss rate: 4.63%
```
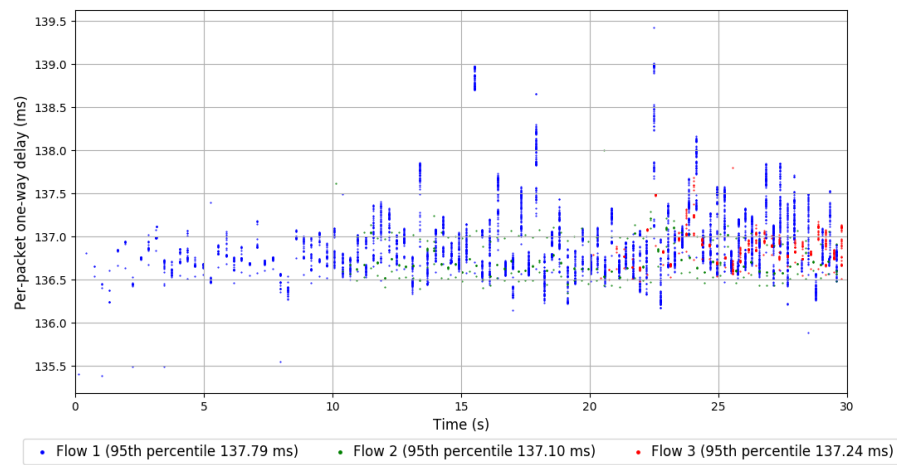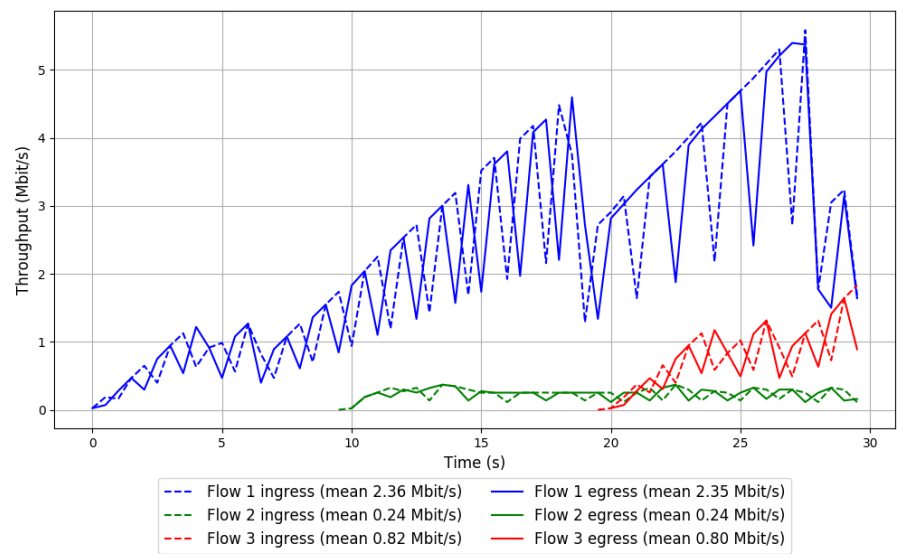
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2017-12-12 13:36:00
End at: 2017-12-12 13:36:30

# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.75 Mbit/s
95th percentile per-packet one-way delay: 137.724 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 2.35 Mbit/s
95th percentile per-packet one-way delay: 137.793 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 137.096 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 0.80 Mbit/s
95th percentile per-packet one-way delay: 137.235 ms
Loss rate: 5.74%
```
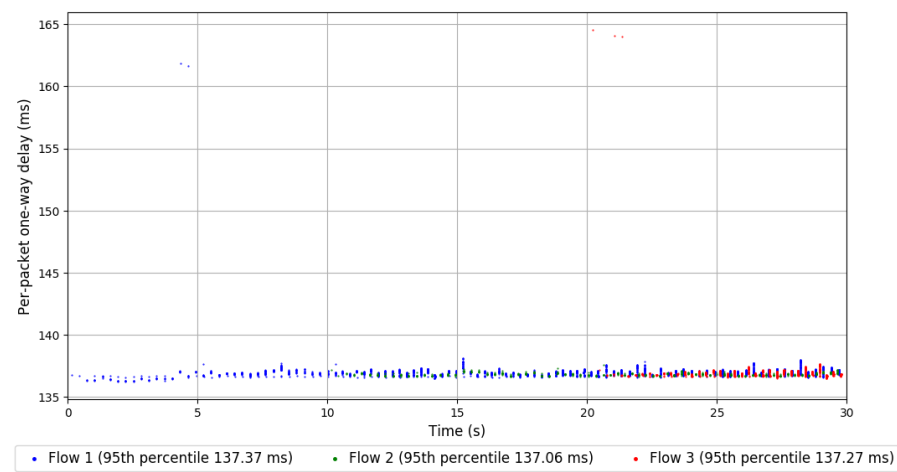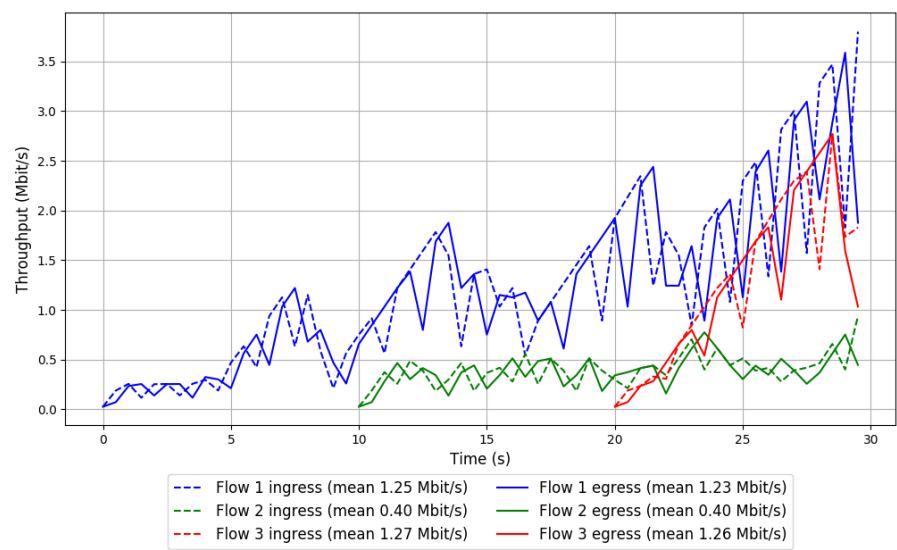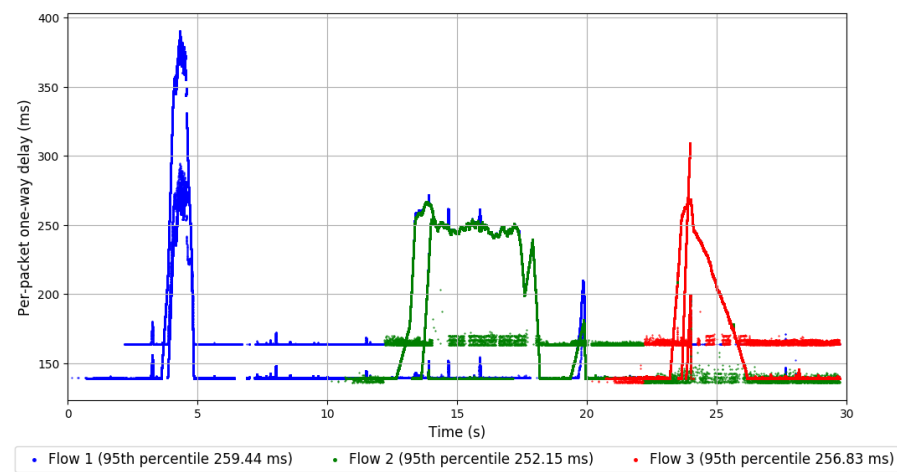
Run 9: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.36 Mbit/s)   Flow 1 egress (mean 2.35 Mbit/s)
Flow 2 ingress (mean 0.24 Mbit/s)   Flow 2 egress (mean 0.24 Mbit/s)
Flow 3 ingress (mean 0.82 Mbit/s)   Flow 3 egress (mean 0.80 Mbit/s)

Flow 1 (95th percentile 137.79 ms)   Flow 2 (95th percentile 137.10 ms)   Flow 3 (95th percentile 137.24 ms)

```
Run 10: Statistics of LEDBAT

Start at: 2017-12-12 13:50:29
End at: 2017-12-12 13:50:59


# Below is generated by plot.py at 2017-12-12 16:19:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 137.318 ms
Loss rate: 2.94%
-- Flow 1:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 137.370 ms
Loss rate: 2.64%
-- Flow 2:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 137.064 ms
Loss rate: 3.09%
-- Flow 3:
Average throughput: 1.26 Mbit/s
95th percentile per-packet one-way delay: 137.270 ms
Loss rate: 3.73%
```
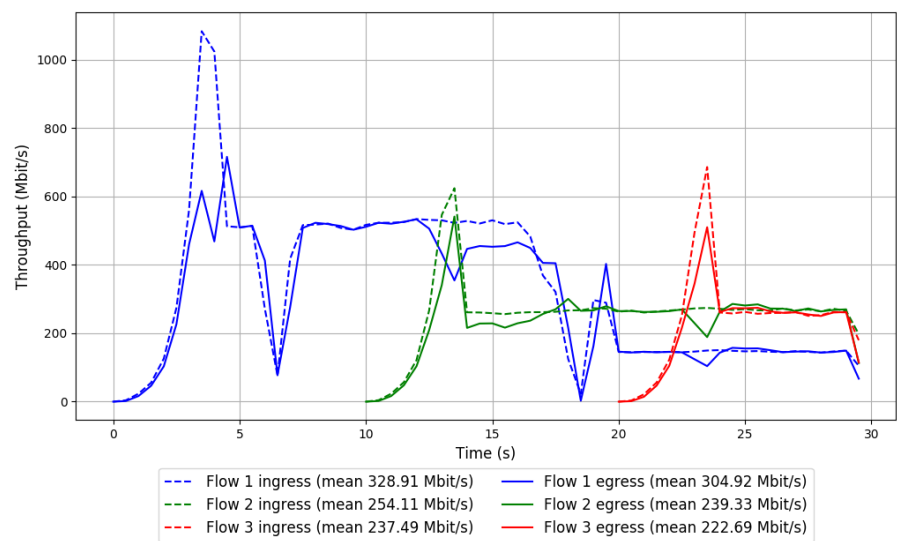
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-12-12 11:38:21
End at: 2017-12-12 11:38:51

# Below is generated by plot.py at 2017-12-12 16:27:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 535.15 Mbit/s
95th percentile per-packet one-way delay: 257.517 ms
Loss rate: 7.94%
-- Flow 1:
Average throughput: 304.92 Mbit/s
95th percentile per-packet one-way delay: 259.436 ms
Loss rate: 8.15%
-- Flow 2:
Average throughput: 239.33 Mbit/s
95th percentile per-packet one-way delay: 252.154 ms
Loss rate: 7.12%
-- Flow 3:
Average throughput: 222.69 Mbit/s
95th percentile per-packet one-way delay: 256.835 ms
Loss rate: 8.85%
```
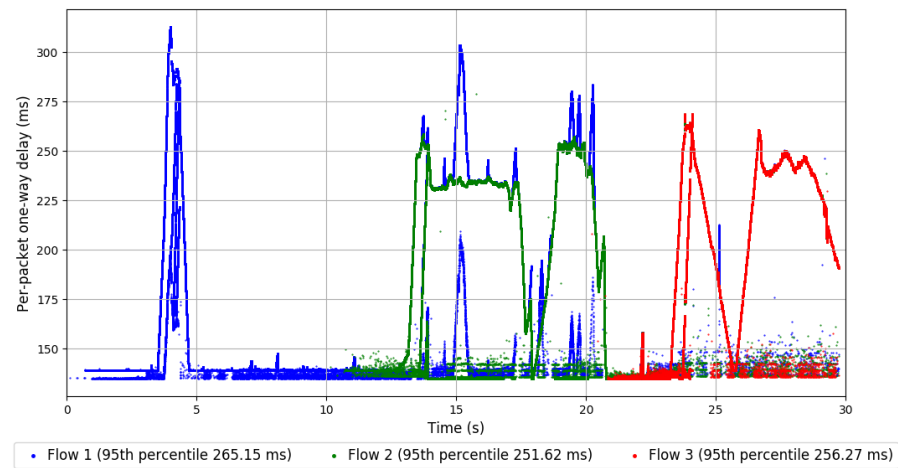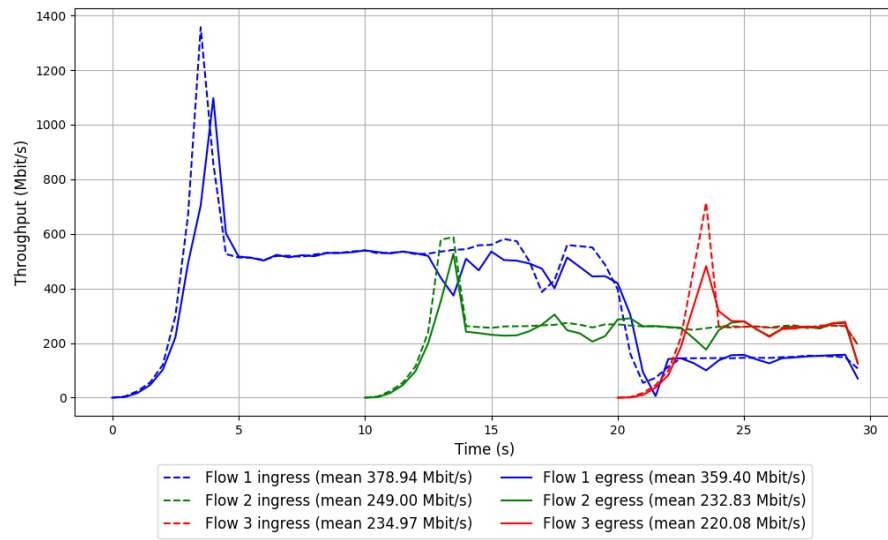
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 328.91 Mbit/s)   Flow 1 egress (mean 304.92 Mbit/s)
Flow 2 ingress (mean 254.11 Mbit/s)   Flow 2 egress (mean 239.33 Mbit/s)
Flow 3 ingress (mean 237.49 Mbit/s)   Flow 3 egress (mean 222.69 Mbit/s)

Flow 1 (95th percentile 259.44 ms)   Flow 2 (95th percentile 252.15 ms)   Flow 3 (95th percentile 256.83 ms)

```
Run 2: Statistics of PCC

Start at: 2017-12-12 11:52:00
End at: 2017-12-12 11:52:30

# Below is generated by plot.py at 2017-12-12 16:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.04 Mbit/s
95th percentile per-packet one-way delay: 256.456 ms
Loss rate: 6.94%
-- Flow 1:
Average throughput: 359.40 Mbit/s
95th percentile per-packet one-way delay: 265.148 ms
Loss rate: 6.02%
-- Flow 2:
Average throughput: 232.83 Mbit/s
95th percentile per-packet one-way delay: 251.624 ms
Loss rate: 7.80%
-- Flow 3:
Average throughput: 220.08 Mbit/s
95th percentile per-packet one-way delay: 256.266 ms
Loss rate: 9.62%
```
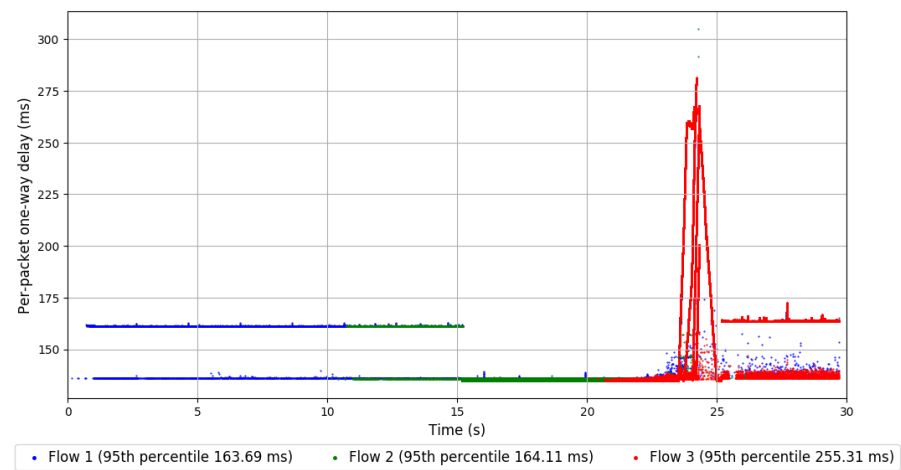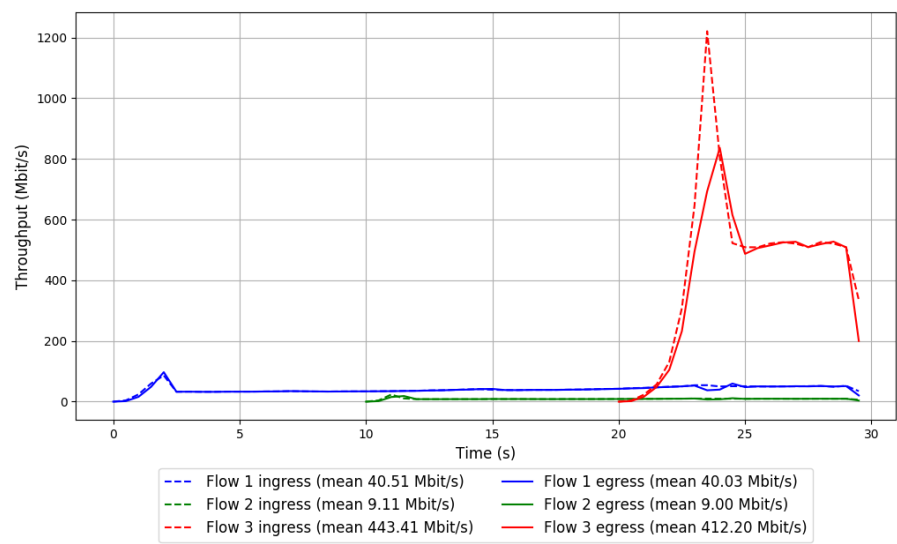
Run 2: Report of PCC — Data Link

```
Run 3: Statistics of PCC

Start at: 2017-12-12 12:05:48
End at: 2017-12-12 12:06:18


# Below is generated by plot.py at 2017-12-12 16:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 179.03 Mbit/s
95th percentile per-packet one-way delay: 245.629 ms
Loss rate: 7.81%
-- Flow 1:
Average throughput: 40.03 Mbit/s
95th percentile per-packet one-way delay: 163.694 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 164.110 ms
Loss rate: 2.58%
-- Flow 3:
Average throughput: 412.20 Mbit/s
95th percentile per-packet one-way delay: 255.306 ms
Loss rate: 9.62%
```
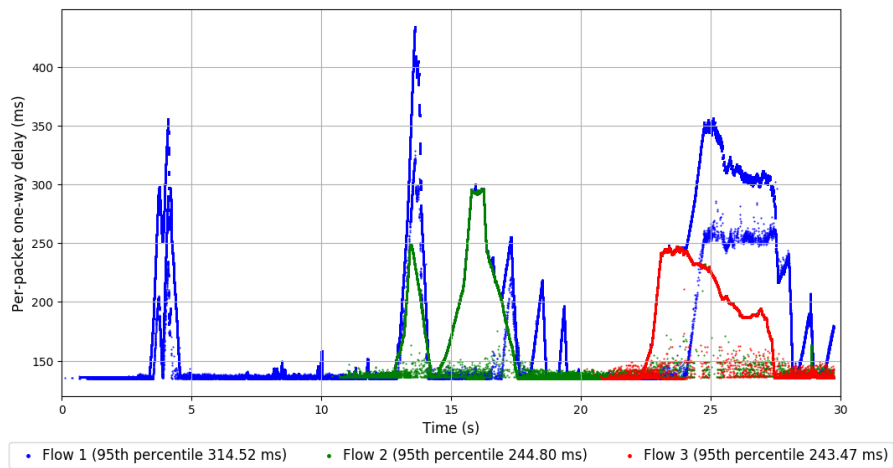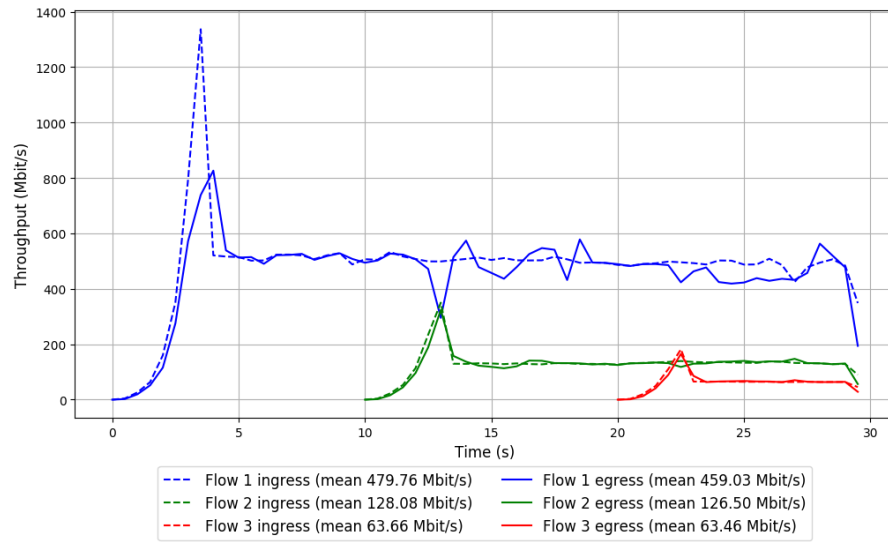
Run 3: Report of PCC — Data Link

- - - Flow 1 ingress (mean 40.51 Mbit/s)   —— Flow 1 egress (mean 40.03 Mbit/s)
- - - Flow 2 ingress (mean 9.11 Mbit/s)   —— Flow 2 egress (mean 9.00 Mbit/s)
- - - Flow 3 ingress (mean 443.41 Mbit/s)   —— Flow 3 egress (mean 412.20 Mbit/s)

• Flow 1 (95th percentile 163.69 ms)   • Flow 2 (95th percentile 164.11 ms)   • Flow 3 (95th percentile 255.31 ms)

```
Run 4: Statistics of PCC

Start at: 2017-12-12 12:19:28
End at: 2017-12-12 12:19:58


# Below is generated by plot.py at 2017-12-12 16:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.10 Mbit/s
95th percentile per-packet one-way delay: 310.762 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 459.03 Mbit/s
95th percentile per-packet one-way delay: 314.516 ms
Loss rate: 5.20%
-- Flow 2:
Average throughput: 126.50 Mbit/s
95th percentile per-packet one-way delay: 244.804 ms
Loss rate: 2.59%
-- Flow 3:
Average throughput: 63.46 Mbit/s
95th percentile per-packet one-way delay: 243.474 ms
Loss rate: 3.18%
```
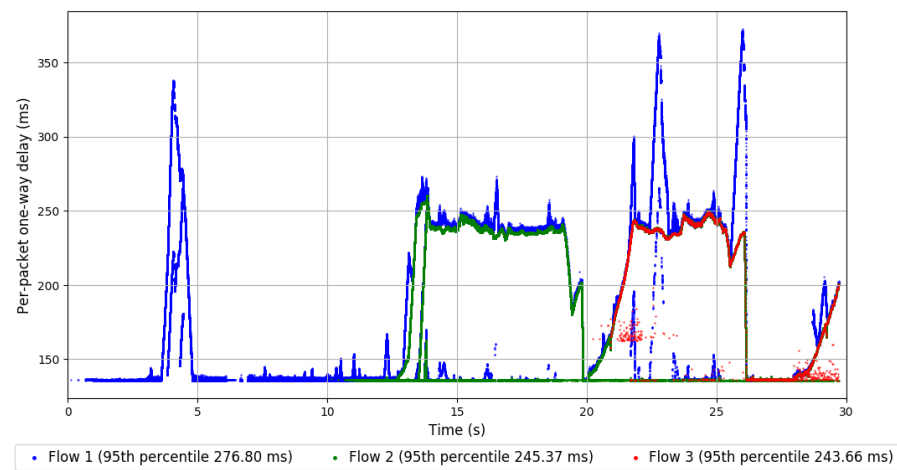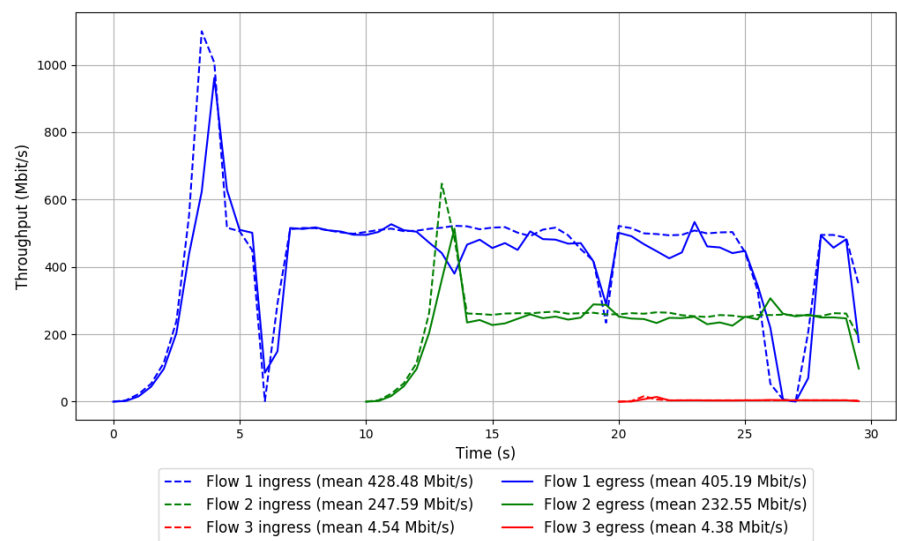
Run 4: Report of PCC — Data Link

```
Run 5: Statistics of PCC

Start at: 2017-12-12 12:33:30
End at: 2017-12-12 12:34:00

# Below is generated by plot.py at 2017-12-12 16:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.39 Mbit/s
95th percentile per-packet one-way delay: 261.351 ms
Loss rate: 6.69%
-- Flow 1:
Average throughput: 405.19 Mbit/s
95th percentile per-packet one-way delay: 276.803 ms
Loss rate: 6.38%
-- Flow 2:
Average throughput: 232.55 Mbit/s
95th percentile per-packet one-way delay: 245.366 ms
Loss rate: 7.49%
-- Flow 3:
Average throughput: 4.38 Mbit/s
95th percentile per-packet one-way delay: 243.660 ms
Loss rate: 6.75%
```
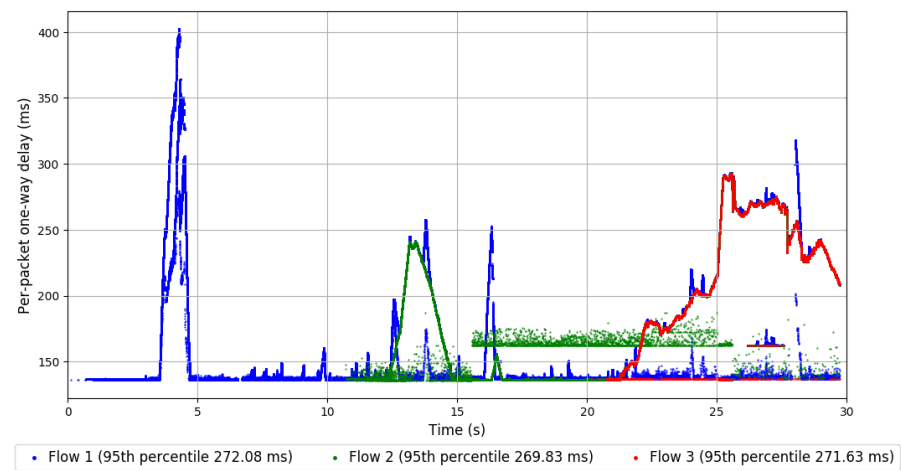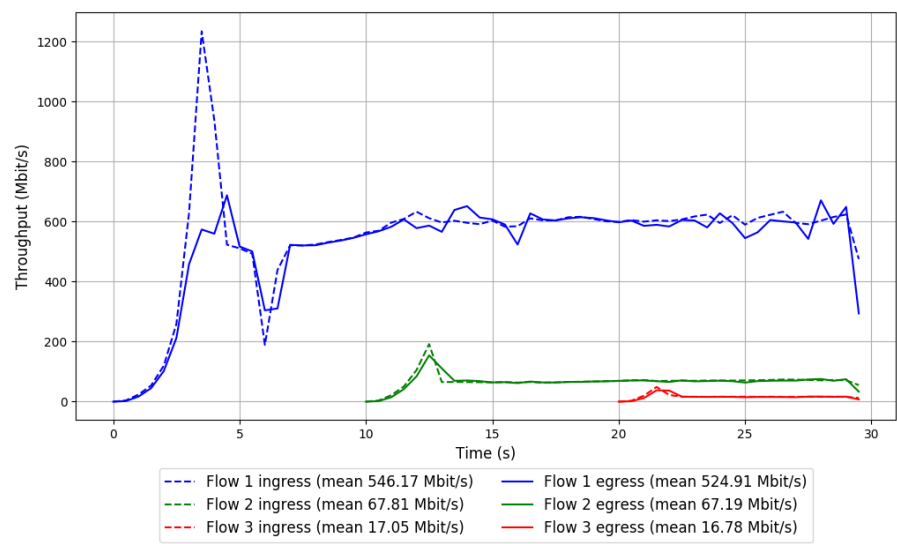
Run 5: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 428.48 Mbit/s)   —— Flow 1 egress (mean 405.19 Mbit/s)
- - - - Flow 2 ingress (mean 247.59 Mbit/s)   —— Flow 2 egress (mean 232.55 Mbit/s)
- - - - Flow 3 ingress (mean 4.54 Mbit/s)   —— Flow 3 egress (mean 4.38 Mbit/s)

• Flow 1 (95th percentile 276.80 ms)   • Flow 2 (95th percentile 245.37 ms)   • Flow 3 (95th percentile 243.66 ms)
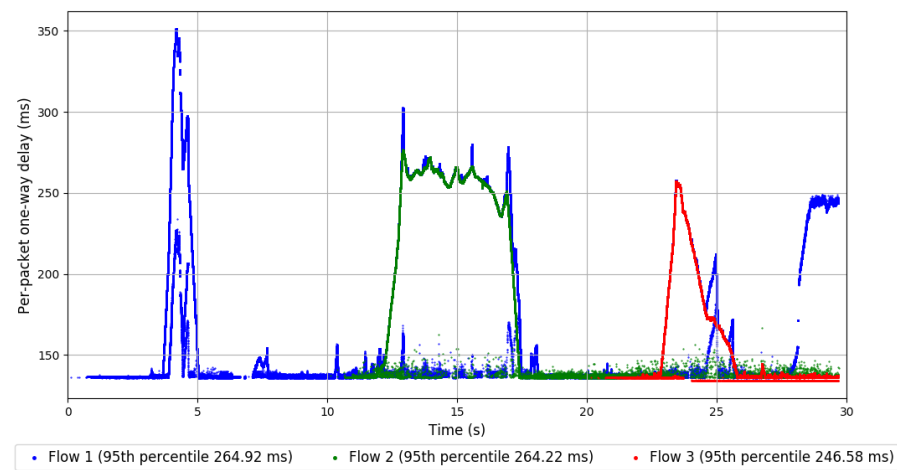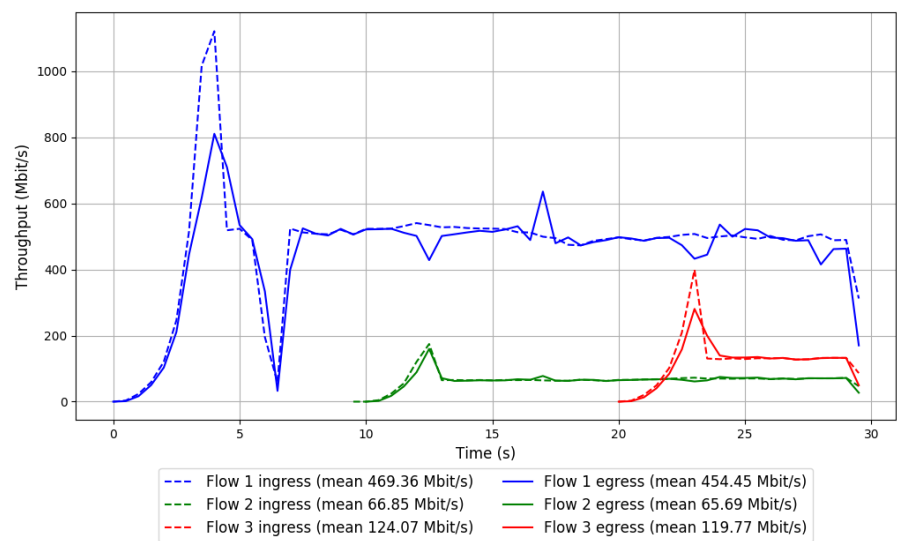
```
Run 6: Statistics of PCC

Start at: 2017-12-12 12:47:48
End at: 2017-12-12 12:48:18


# Below is generated by plot.py at 2017-12-12 16:29:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.72 Mbit/s
95th percentile per-packet one-way delay: 271.611 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 524.91 Mbit/s
95th percentile per-packet one-way delay: 272.085 ms
Loss rate: 4.86%
-- Flow 2:
Average throughput: 67.19 Mbit/s
95th percentile per-packet one-way delay: 269.831 ms
Loss rate: 2.41%
-- Flow 3:
Average throughput: 16.78 Mbit/s
95th percentile per-packet one-way delay: 271.627 ms
Loss rate: 4.61%
```

Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 546.17 Mbit/s) --- Flow 1 egress (mean 524.91 Mbit/s)
Flow 2 ingress (mean 67.81 Mbit/s) --- Flow 2 egress (mean 67.19 Mbit/s)
Flow 3 ingress (mean 17.05 Mbit/s) --- Flow 3 egress (mean 16.78 Mbit/s)

Flow 1 (95th percentile 272.08 ms)   Flow 2 (95th percentile 269.83 ms)   Flow 3 (95th percentile 271.63 ms)

```
Run 7: Statistics of PCC

Start at: 2017-12-12 13:02:10
End at: 2017-12-12 13:02:40


# Below is generated by plot.py at 2017-12-12 16:29:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.55 Mbit/s
95th percentile per-packet one-way delay: 264.375 ms
Loss rate: 4.14%
-- Flow 1:
Average throughput: 454.45 Mbit/s
95th percentile per-packet one-way delay: 264.924 ms
Loss rate: 4.06%
-- Flow 2:
Average throughput: 65.69 Mbit/s
95th percentile per-packet one-way delay: 264.218 ms
Loss rate: 3.06%
-- Flow 3:
Average throughput: 119.77 Mbit/s
95th percentile per-packet one-way delay: 246.577 ms
Loss rate: 6.19%
```
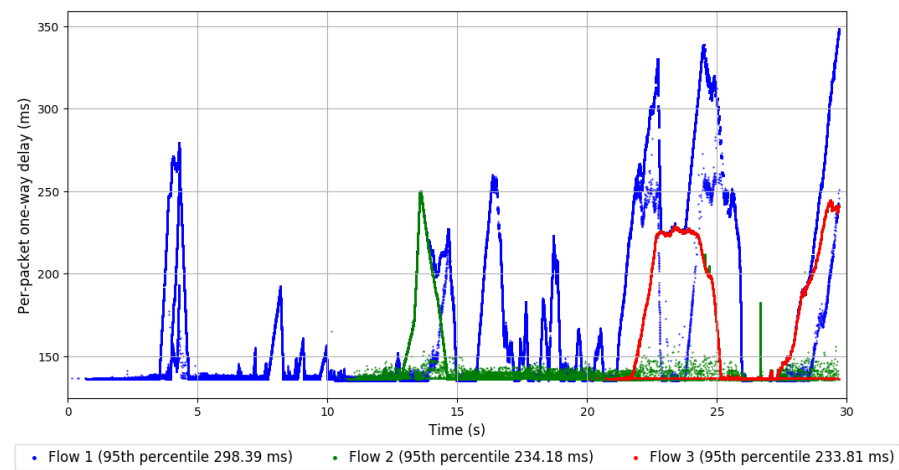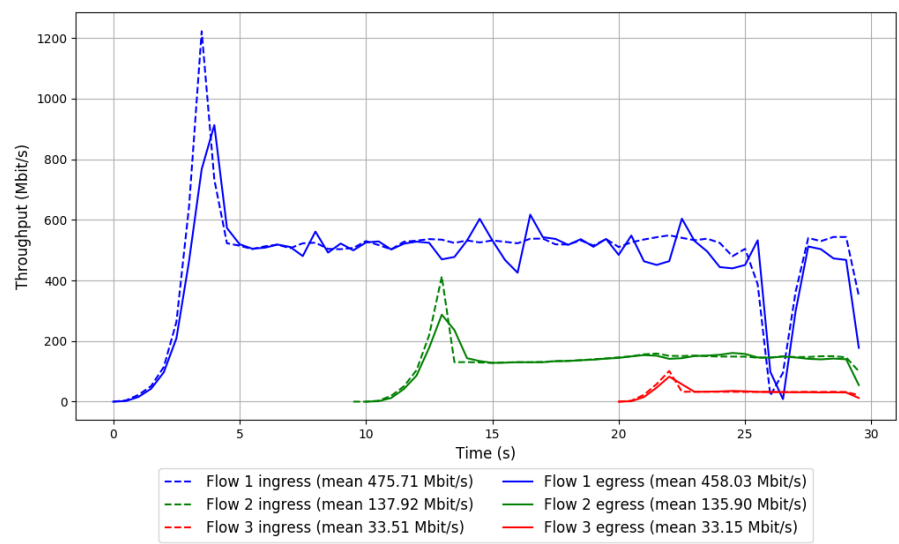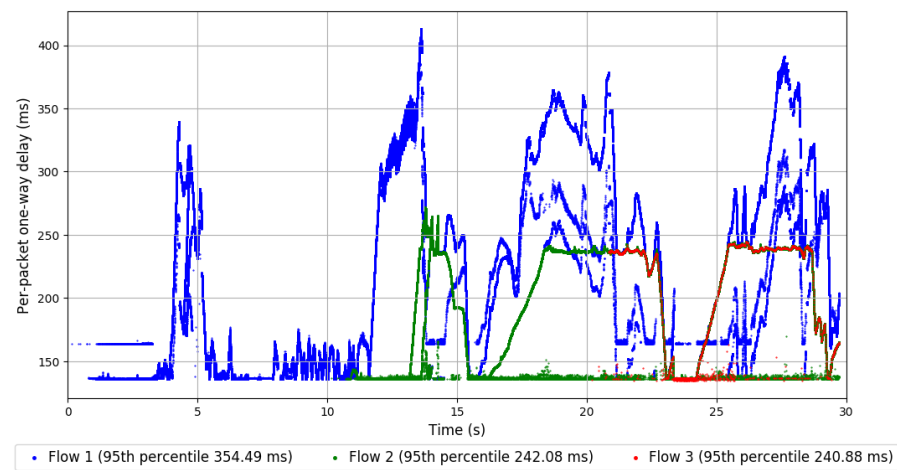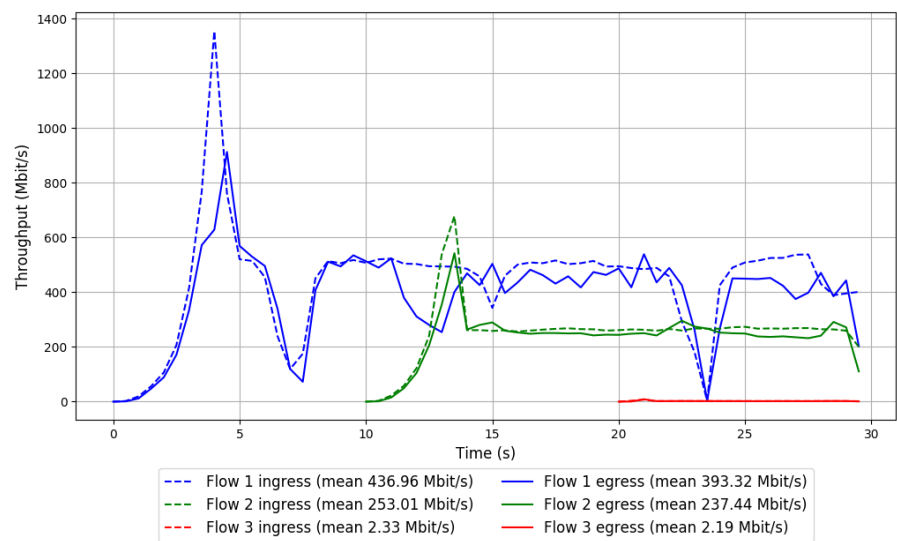
Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 469.36 Mbit/s)   Flow 1 egress (mean 454.45 Mbit/s)
Flow 2 ingress (mean 66.85 Mbit/s)   Flow 2 egress (mean 65.69 Mbit/s)
Flow 3 ingress (mean 124.07 Mbit/s)   Flow 3 egress (mean 119.77 Mbit/s)

Flow 1 (95th percentile 264.92 ms)   Flow 2 (95th percentile 264.22 ms)   Flow 3 (95th percentile 246.58 ms)

```
Run 8: Statistics of PCC

Start at: 2017-12-12 13:16:03
End at: 2017-12-12 13:16:33

# Below is generated by plot.py at 2017-12-12 16:29:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.62 Mbit/s
95th percentile per-packet one-way delay: 286.609 ms
Loss rate: 4.33%
-- Flow 1:
Average throughput: 458.03 Mbit/s
95th percentile per-packet one-way delay: 298.392 ms
Loss rate: 4.60%
-- Flow 2:
Average throughput: 135.90 Mbit/s
95th percentile per-packet one-way delay: 234.175 ms
Loss rate: 2.96%
-- Flow 3:
Average throughput: 33.15 Mbit/s
95th percentile per-packet one-way delay: 233.811 ms
Loss rate: 3.84%
```
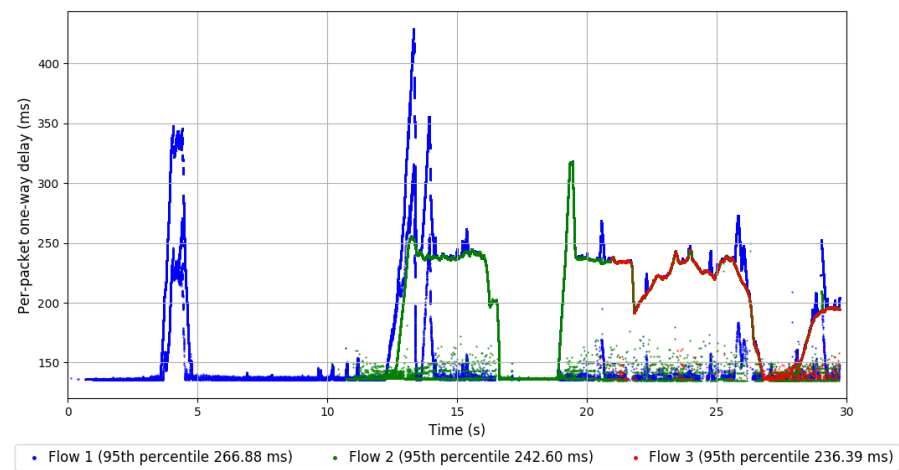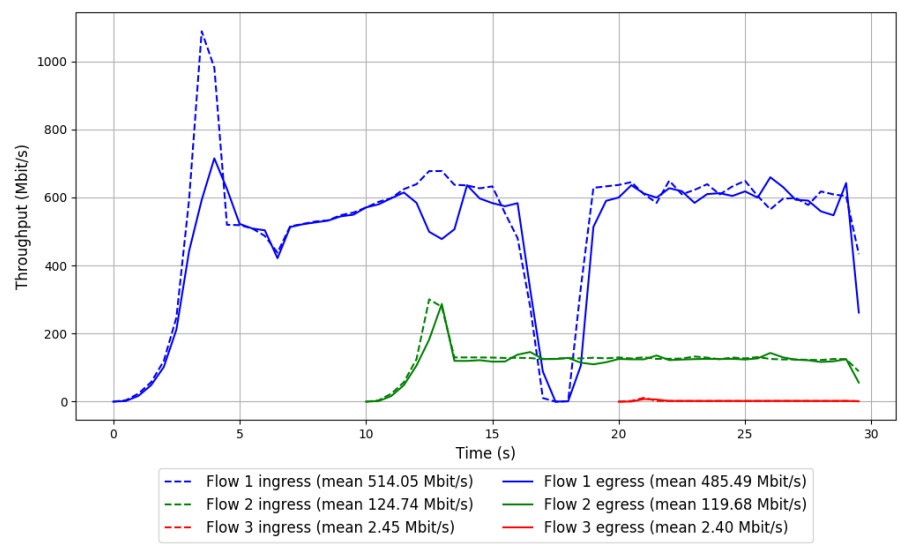
Run 8: Report of PCC — Data Link

Flow 1 ingress (mean 475.71 Mbit/s)   Flow 1 egress (mean 458.03 Mbit/s)
Flow 2 ingress (mean 137.92 Mbit/s)   Flow 2 egress (mean 135.90 Mbit/s)
Flow 3 ingress (mean 33.51 Mbit/s)   Flow 3 egress (mean 33.15 Mbit/s)

Flow 1 (95th percentile 298.39 ms)   Flow 2 (95th percentile 234.18 ms)   Flow 3 (95th percentile 233.81 ms)

79

```
Run 9: Statistics of PCC

Start at: 2017-12-12 13:30:20
End at: 2017-12-12 13:30:50


# Below is generated by plot.py at 2017-12-12 16:32:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.29 Mbit/s
95th percentile per-packet one-way delay: 347.404 ms
Loss rate: 10.03%
-- Flow 1:
Average throughput: 393.32 Mbit/s
95th percentile per-packet one-way delay: 354.488 ms
Loss rate: 10.98%
-- Flow 2:
Average throughput: 237.44 Mbit/s
95th percentile per-packet one-way delay: 242.084 ms
Loss rate: 7.57%
-- Flow 3:
Average throughput: 2.19 Mbit/s
95th percentile per-packet one-way delay: 240.882 ms
Loss rate: 8.86%
```
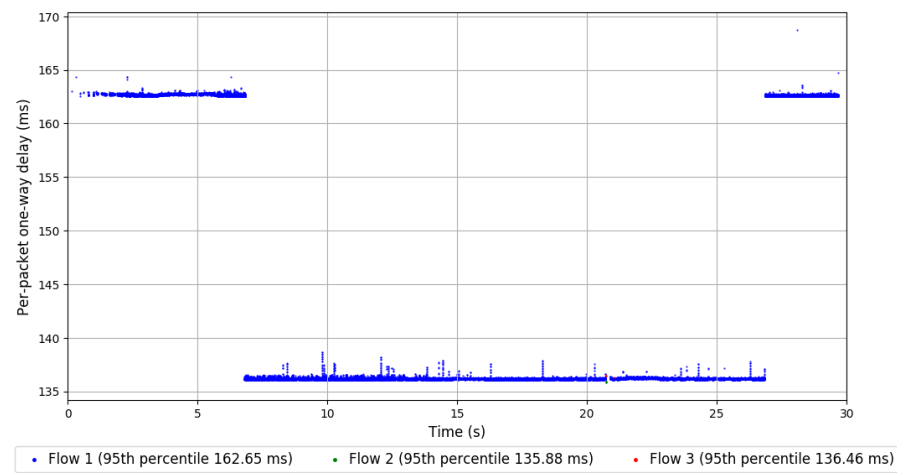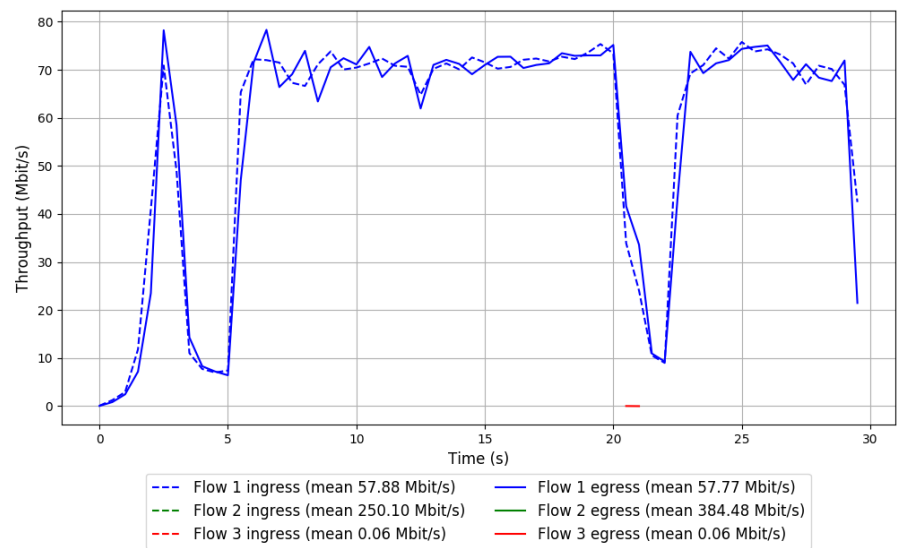
Run 9: Report of PCC — Data Link

```
Run 10: Statistics of PCC

Start at: 2017-12-12 13:44:53
End at: 2017-12-12 13:45:23

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 565.39 Mbit/s
95th percentile per-packet one-way delay: 261.619 ms
Loss rate: 6.28%
-- Flow 1:
Average throughput: 485.49 Mbit/s
95th percentile per-packet one-way delay: 266.885 ms
Loss rate: 6.42%
-- Flow 2:
Average throughput: 119.68 Mbit/s
95th percentile per-packet one-way delay: 242.598 ms
Loss rate: 5.43%
-- Flow 3:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 236.386 ms
Loss rate: 4.71%
```
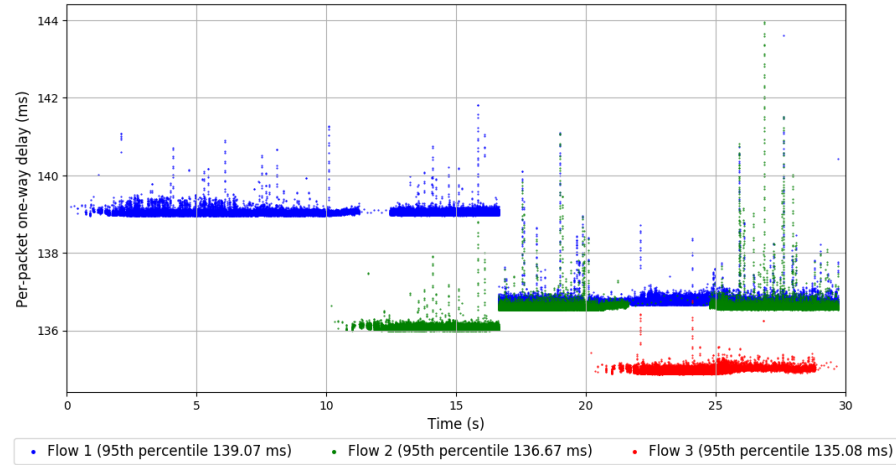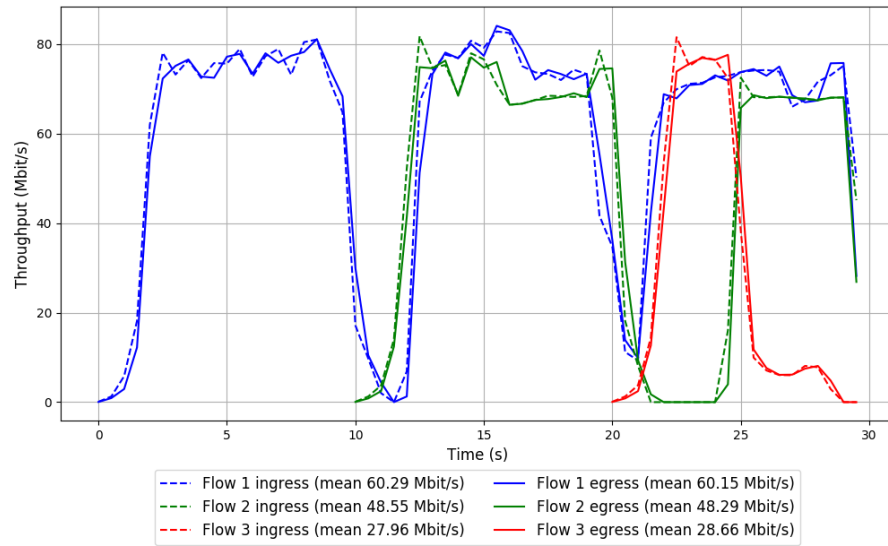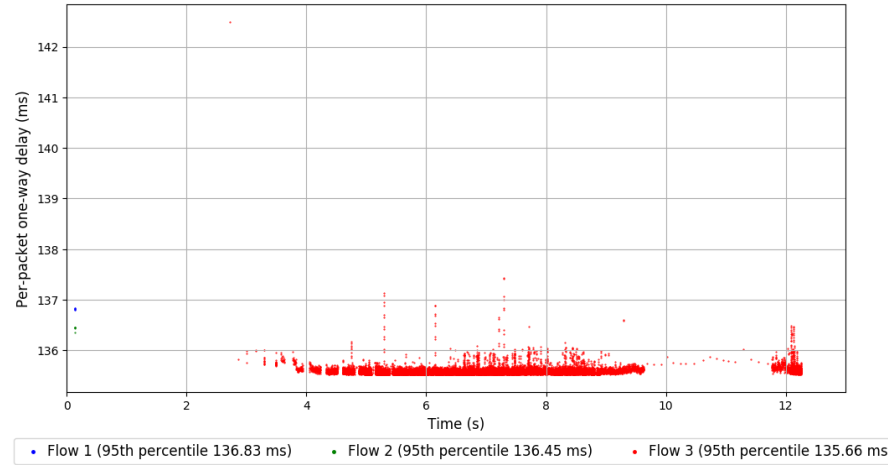
Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 514.05 Mbit/s)   Flow 1 egress (mean 485.49 Mbit/s)
Flow 2 ingress (mean 124.74 Mbit/s)   Flow 2 egress (mean 119.68 Mbit/s)
Flow 3 ingress (mean 2.45 Mbit/s)   Flow 3 egress (mean 2.40 Mbit/s)

Flow 1 (95th percentile 266.88 ms)   Flow 2 (95th percentile 242.60 ms)   Flow 3 (95th percentile 236.39 ms)

83

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-12 11:45:37
End at: 2017-12-12 11:46:07


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 162.645 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 57.77 Mbit/s
95th percentile per-packet one-way delay: 162.645 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 384.48 Mbit/s
95th percentile per-packet one-way delay: 135.882 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 136.456 ms
Loss rate: 0.00%
```

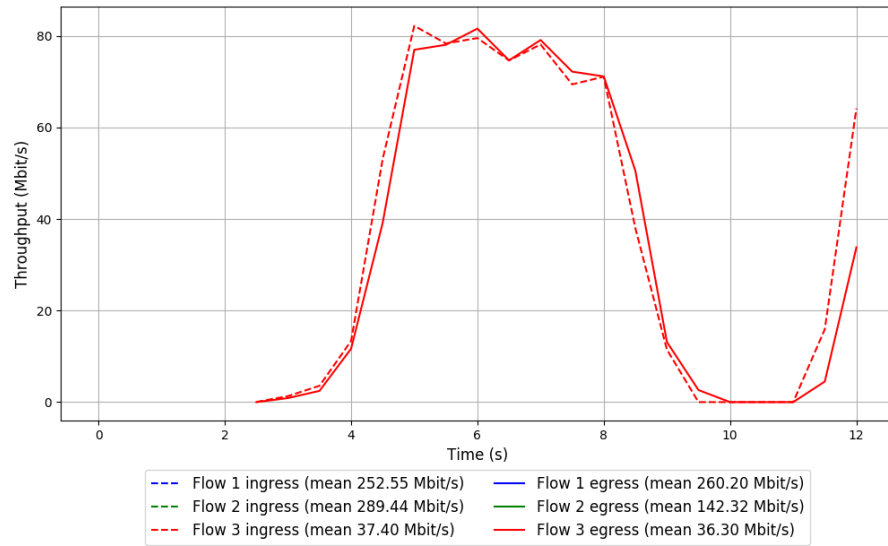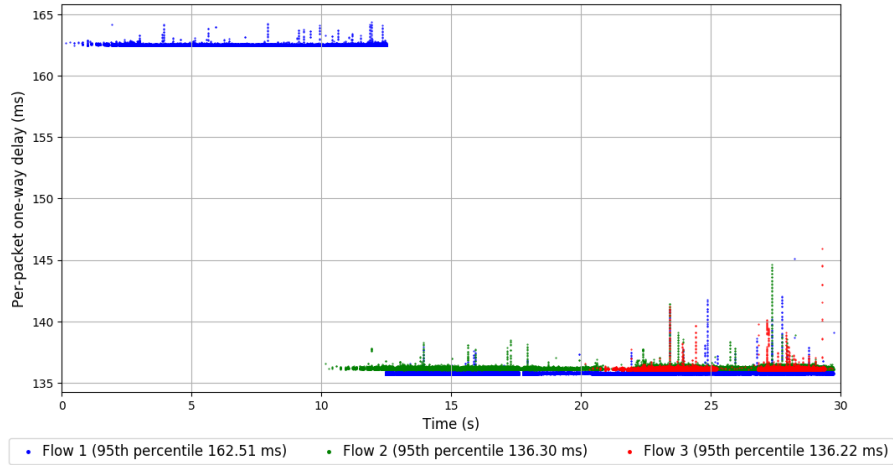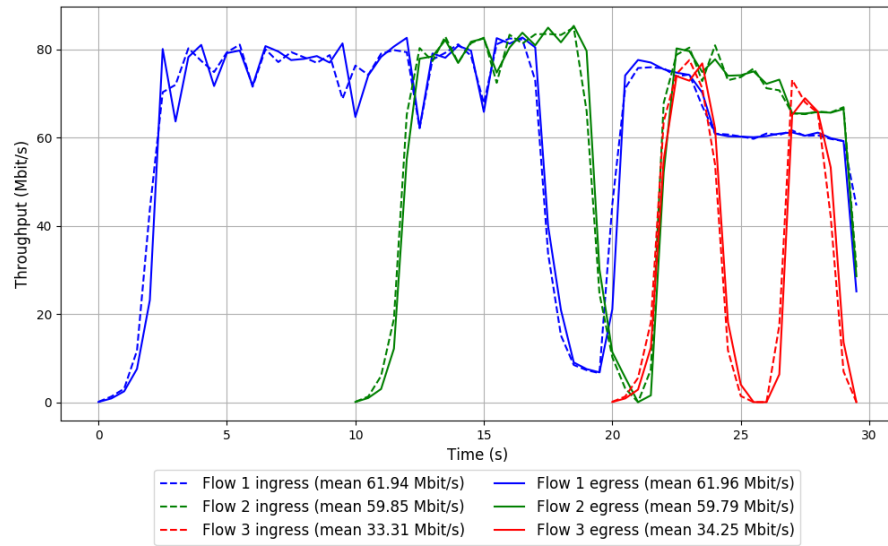Run 1: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 57.88 Mbit/s)   ——— Flow 1 egress (mean 57.77 Mbit/s)
- - - Flow 2 ingress (mean 250.10 Mbit/s)   ——— Flow 2 egress (mean 384.48 Mbit/s)
- - - Flow 3 ingress (mean 0.06 Mbit/s)   ——— Flow 3 egress (mean 0.06 Mbit/s)

- Flow 1 (95th percentile 162.65 ms)   • Flow 2 (95th percentile 135.88 ms)   • Flow 3 (95th percentile 136.46 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-12 11:59:17
End at: 2017-12-12 11:59:47


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.21 Mbit/s
95th percentile per-packet one-way delay: 139.055 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 60.15 Mbit/s
95th percentile per-packet one-way delay: 139.074 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 48.29 Mbit/s
95th percentile per-packet one-way delay: 136.672 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 28.66 Mbit/s
95th percentile per-packet one-way delay: 135.080 ms
Loss rate: 0.00%
```

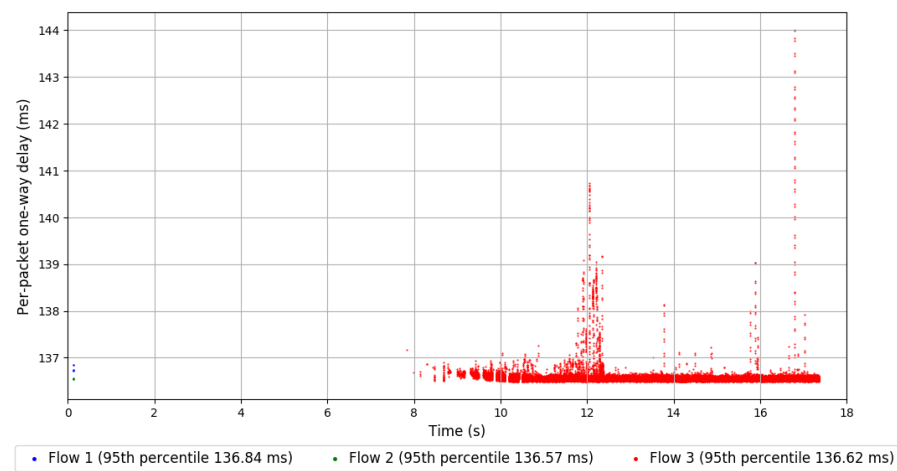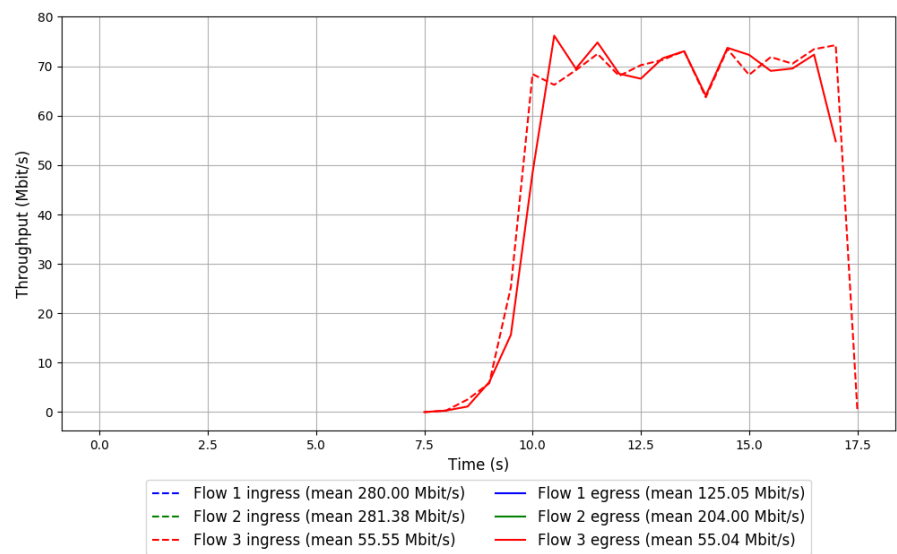Run 2: Report of QUIC Cubic — Data Link

Run 3: Statistics of QUIC Cubic

Start at: 2017-12-12 12:12:52
End at: 2017-12-12 12:13:22
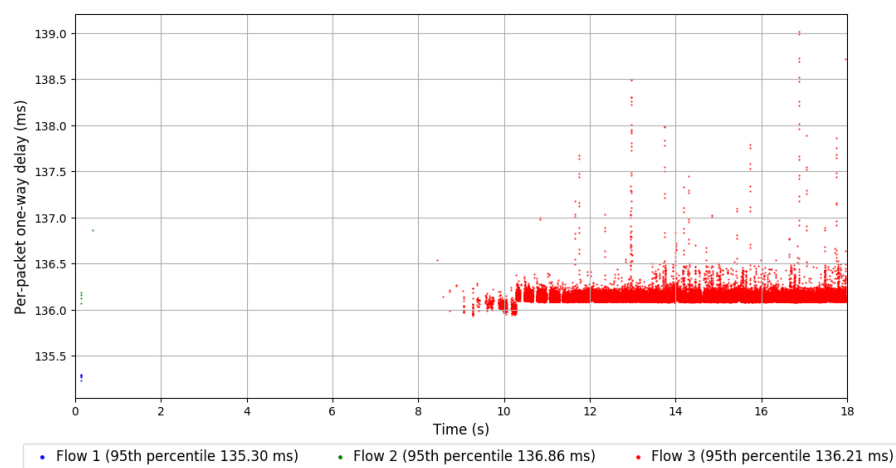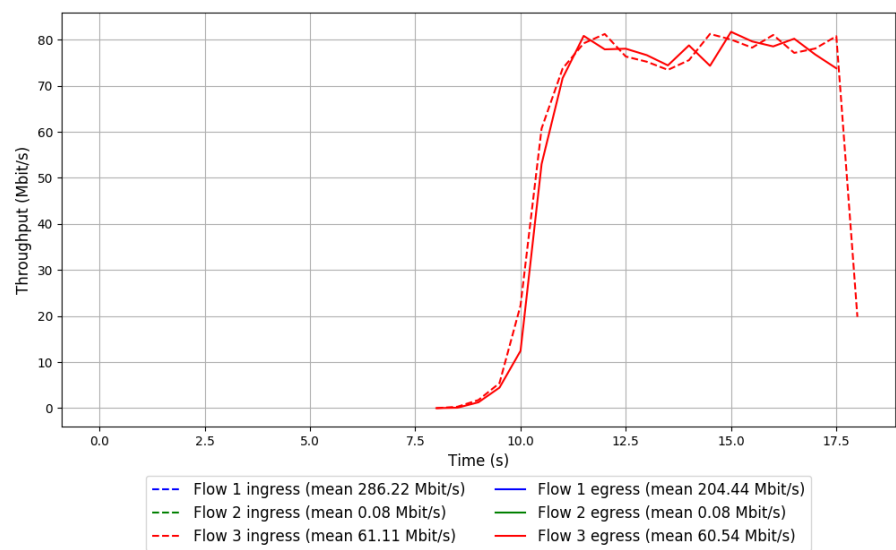
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 252.55 Mbit/s) --- Flow 1 egress (mean 260.20 Mbit/s)
Flow 2 ingress (mean 289.44 Mbit/s) --- Flow 2 egress (mean 142.32 Mbit/s)
Flow 3 ingress (mean 37.40 Mbit/s) --- Flow 3 egress (mean 36.30 Mbit/s)

Flow 1 (95th percentile 136.83 ms)   Flow 2 (95th percentile 136.45 ms)   Flow 3 (95th percentile 135.66 ms)

89

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-12 12:26:41
End at: 2017-12-12 12:27:11


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.59 Mbit/s
95th percentile per-packet one-way delay: 162.488 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 61.96 Mbit/s
95th percentile per-packet one-way delay: 162.509 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 59.79 Mbit/s
95th percentile per-packet one-way delay: 136.303 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 136.222 ms
Loss rate: 0.00%
```
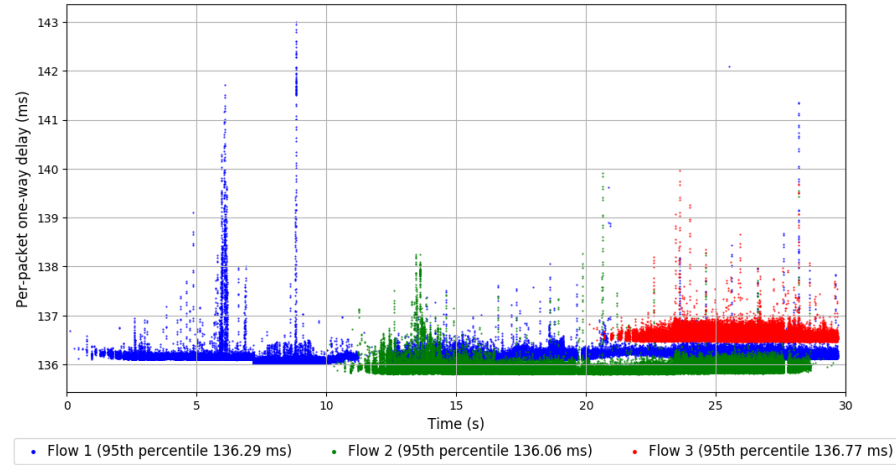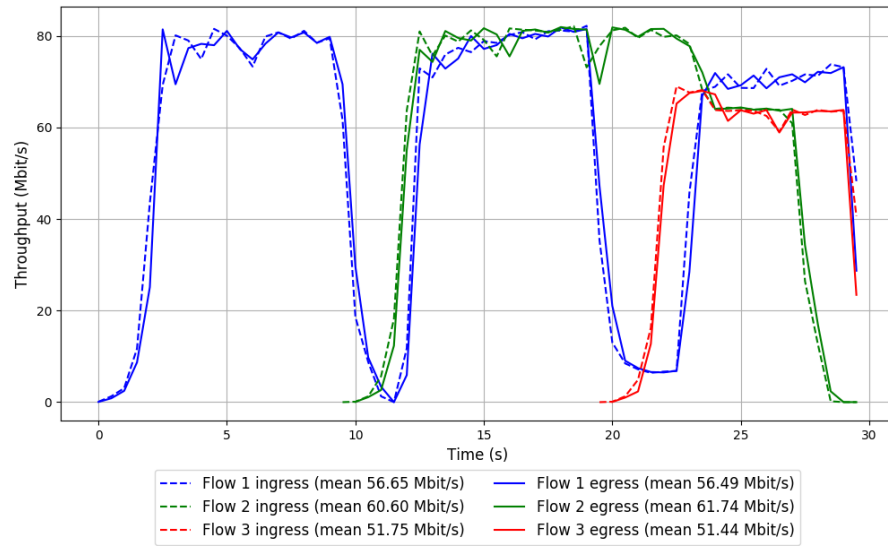
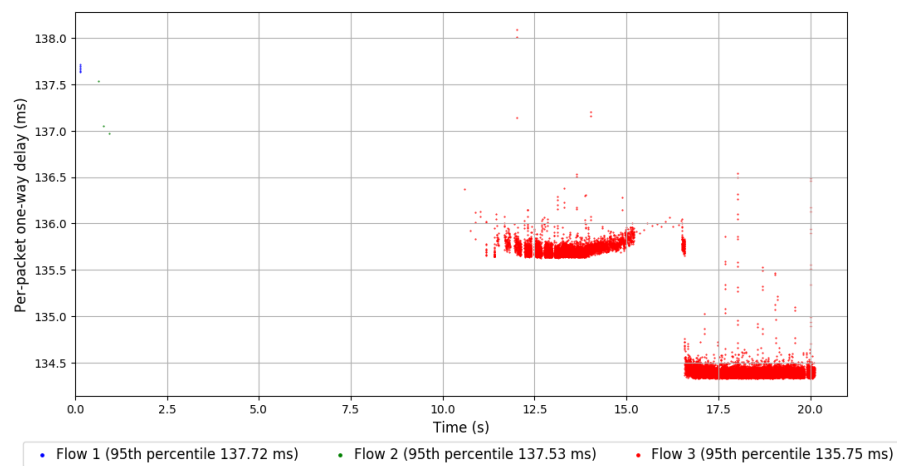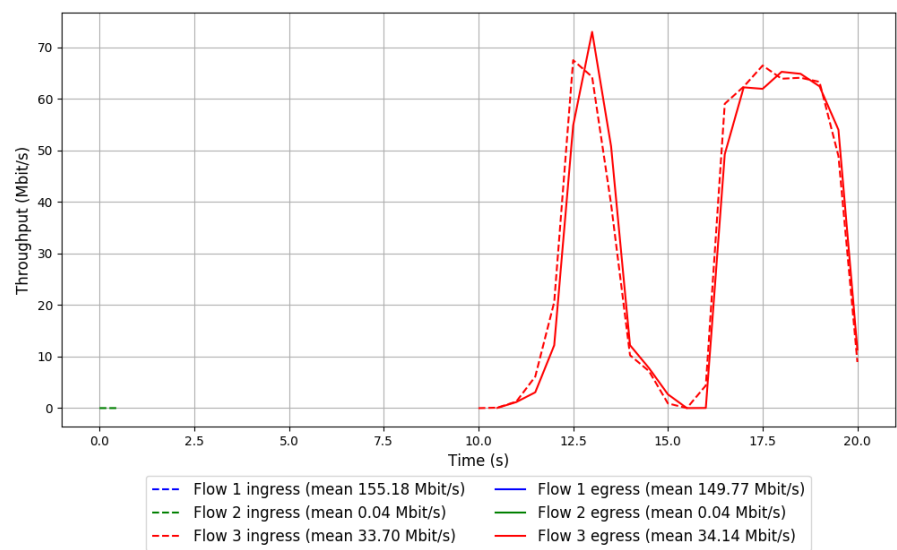# Run 4: Report of QUIC Cubic — Data Link

Run 5: Statistics of QUIC Cubic

Start at: 2017-12-12 12:41:05
End at: 2017-12-12 12:41:35
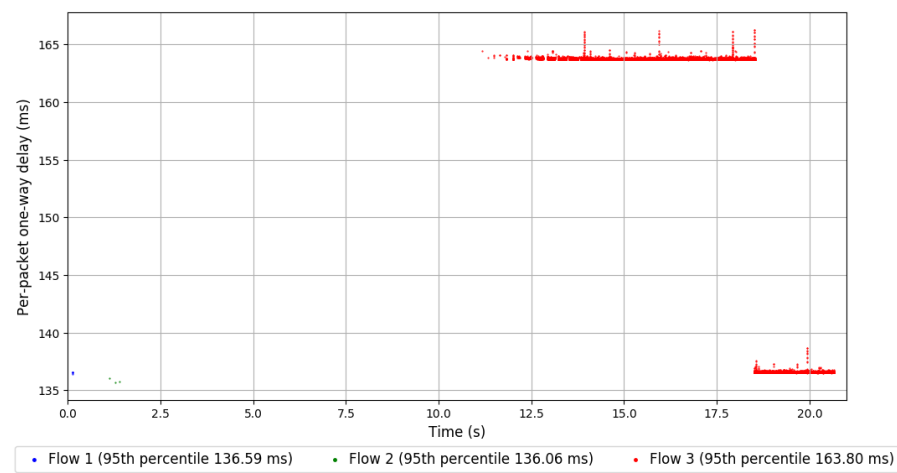
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 280.00 Mbit/s) — Flow 1 egress (mean 125.05 Mbit/s)
Flow 2 ingress (mean 281.38 Mbit/s) — Flow 2 egress (mean 204.00 Mbit/s)
Flow 3 ingress (mean 55.55 Mbit/s)   — Flow 3 egress (mean 55.04 Mbit/s)

Flow 1 (95th percentile 136.84 ms) • Flow 2 (95th percentile 136.57 ms) • Flow 3 (95th percentile 136.62 ms)
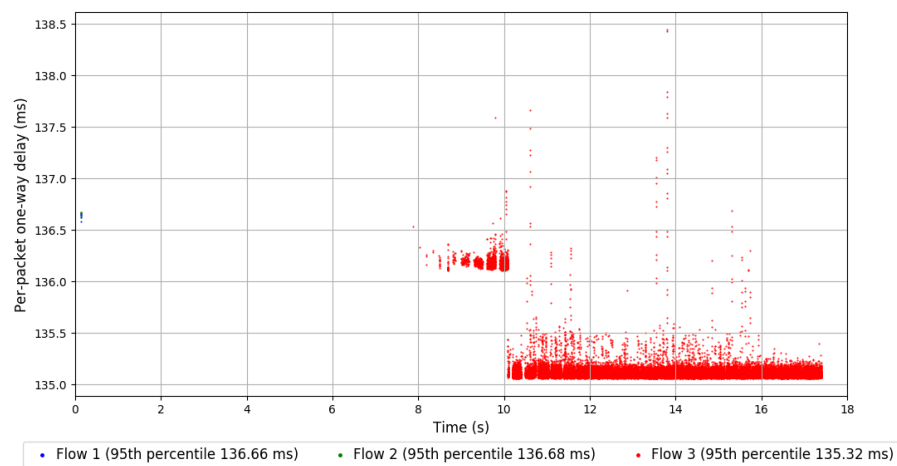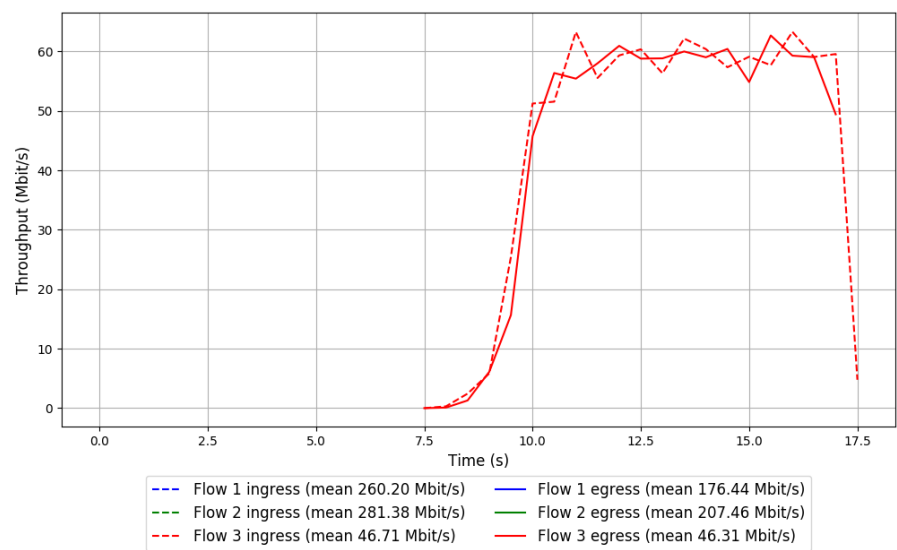
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-12 12:55:22
End at: 2017-12-12 12:55:52

Run 6: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 286.22 Mbit/s) Flow 1 egress (mean 204.44 Mbit/s)
Flow 2 ingress (mean 0.08 Mbit/s) Flow 2 egress (mean 0.08 Mbit/s)
Flow 3 ingress (mean 61.11 Mbit/s) Flow 3 egress (mean 60.54 Mbit/s)

Flow 1 (95th percentile 135.30 ms) Flow 2 (95th percentile 136.86 ms) Flow 3 (95th percentile 136.21 ms)
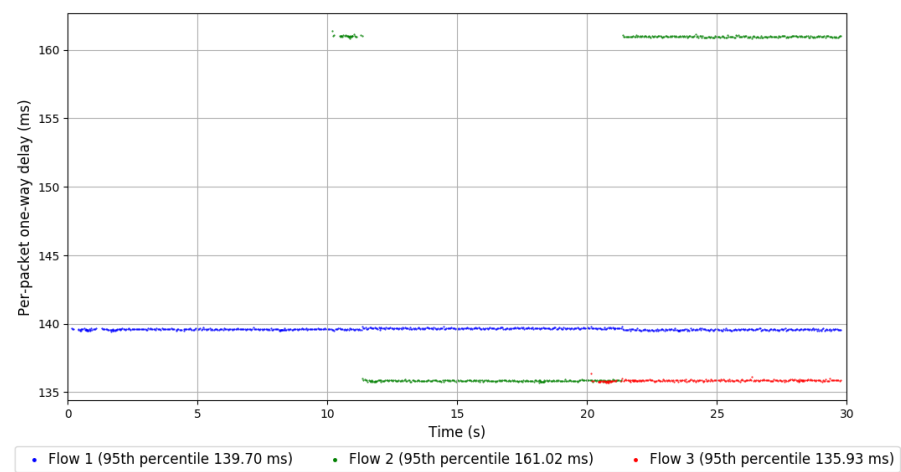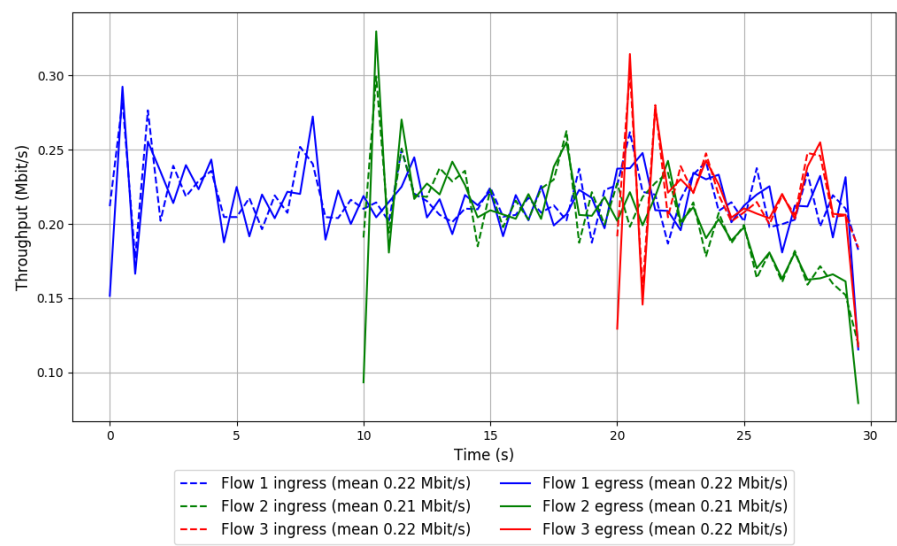
```
Run 7: Statistics of QUIC Cubic

Start at: 2017-12-12 13:09:16
End at: 2017-12-12 13:09:46


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.65 Mbit/s
95th percentile per-packet one-way delay: 136.584 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 56.49 Mbit/s
95th percentile per-packet one-way delay: 136.291 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 61.74 Mbit/s
95th percentile per-packet one-way delay: 136.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 51.44 Mbit/s
95th percentile per-packet one-way delay: 136.773 ms
Loss rate: 3.38%
```
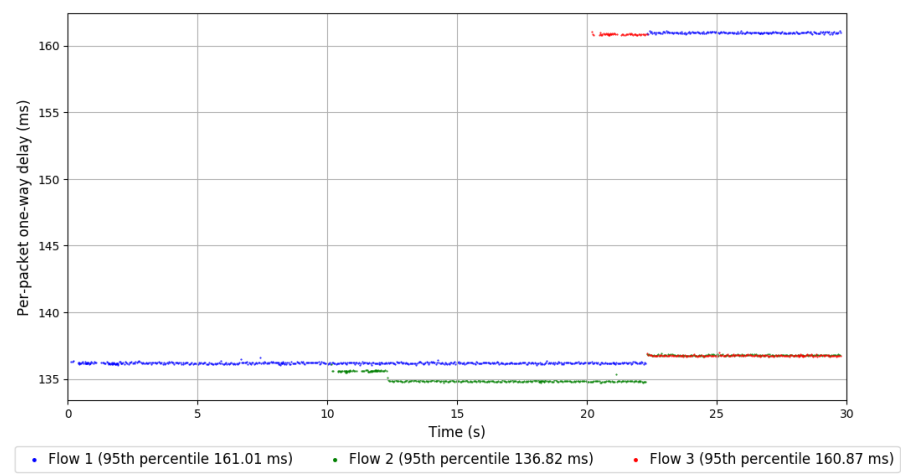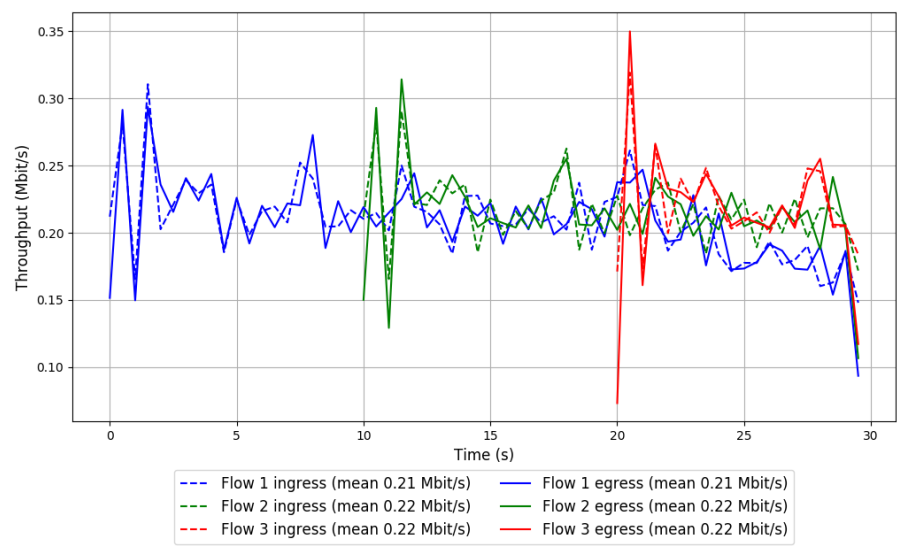
Run 7: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 56.65 Mbit/s)   ——— Flow 1 egress (mean 56.49 Mbit/s)
- - - - Flow 2 ingress (mean 60.60 Mbit/s)   ——— Flow 2 egress (mean 61.74 Mbit/s)
- - - - Flow 3 ingress (mean 51.75 Mbit/s)   ——— Flow 3 egress (mean 51.44 Mbit/s)

• Flow 1 (95th percentile 136.29 ms)   • Flow 2 (95th percentile 136.06 ms)   • Flow 3 (95th percentile 136.77 ms)

Run 8: Statistics of QUIC Cubic

Start at: 2017-12-12 13:23:37
End at: 2017-12-12 13:24:07

Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 155.18 Mbit/s) --- Flow 1 egress (mean 149.77 Mbit/s)
Flow 2 ingress (mean 0.04 Mbit/s) --- Flow 2 egress (mean 0.04 Mbit/s)
Flow 3 ingress (mean 33.70 Mbit/s) --- Flow 3 egress (mean 34.14 Mbit/s)

Flow 1 (95th percentile 137.72 ms) Flow 2 (95th percentile 137.53 ms) Flow 3 (95th percentile 135.75 ms)

99

Run 9: Statistics of QUIC Cubic

Start at: 2017-12-12 13:37:56
End at: 2017-12-12 13:38:26

Run 9: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 236.33 Mbit/s) --- Flow 1 egress (mean 105.14 Mbit/s)
Flow 2 ingress (mean 0.04 Mbit/s) --- Flow 2 egress (mean 0.04 Mbit/s)
Flow 3 ingress (mean 50.94 Mbit/s) --- Flow 3 egress (mean 50.59 Mbit/s)

Flow 1 (95th percentile 136.59 ms) • Flow 2 (95th percentile 136.06 ms) • Flow 3 (95th percentile 163.80 ms)

Run 10: Statistics of QUIC Cubic

Start at: 2017-12-12 13:52:21
End at: 2017-12-12 13:52:51

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 260.20 Mbit/s) Flow 1 egress (mean 176.44 Mbit/s)
Flow 2 ingress (mean 281.38 Mbit/s) Flow 2 egress (mean 207.46 Mbit/s)
Flow 3 ingress (mean 46.71 Mbit/s)   Flow 3 egress (mean 46.31 Mbit/s)

Flow 1 (95th percentile 136.66 ms)   Flow 2 (95th percentile 136.68 ms)   Flow 3 (95th percentile 135.32 ms)

```
Run 1: Statistics of SCReAM

Start at: 2017-12-12 11:35:22
End at: 2017-12-12 11:35:52

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 160.988 ms
Loss rate: 1.24%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.704 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 161.020 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.927 ms
Loss rate: 2.65%
```
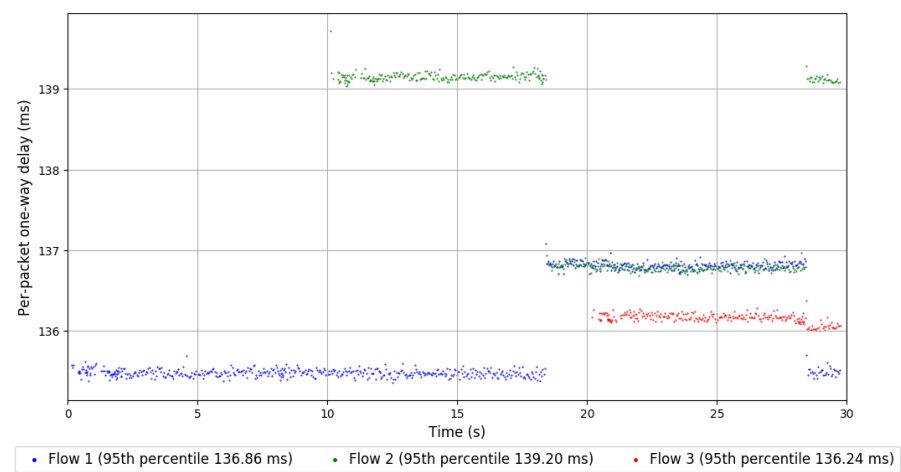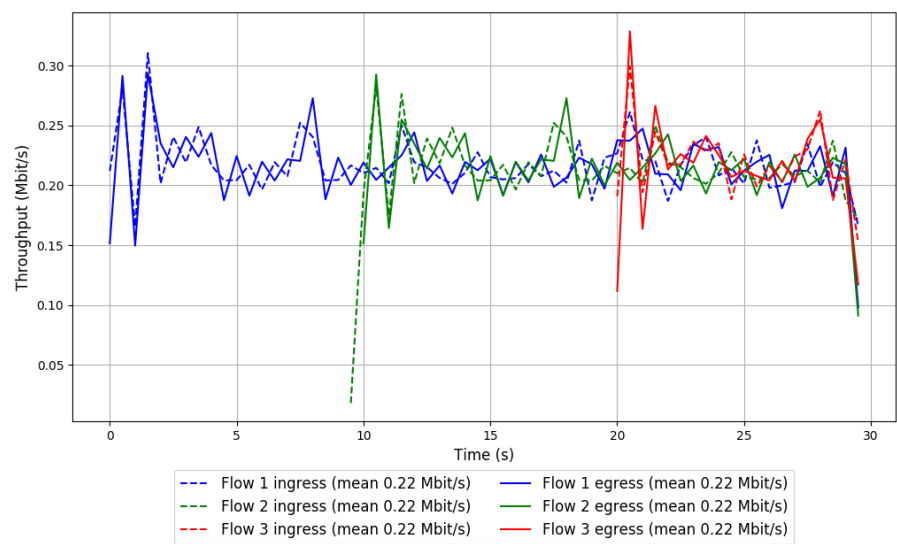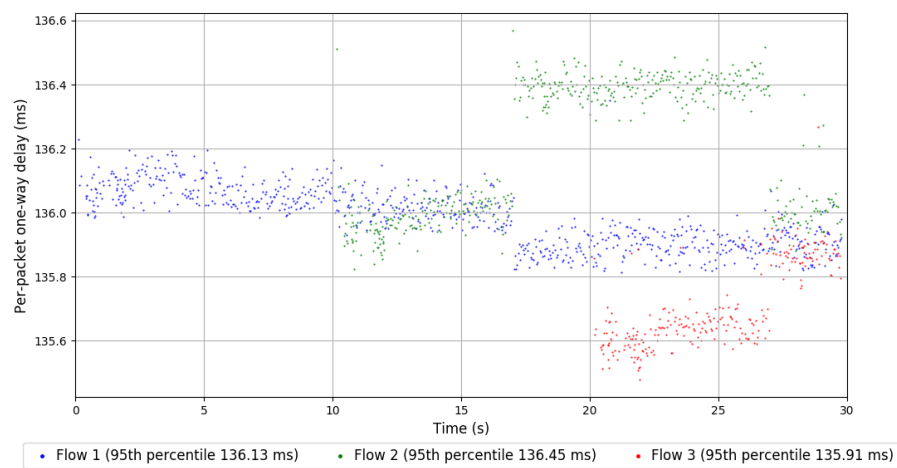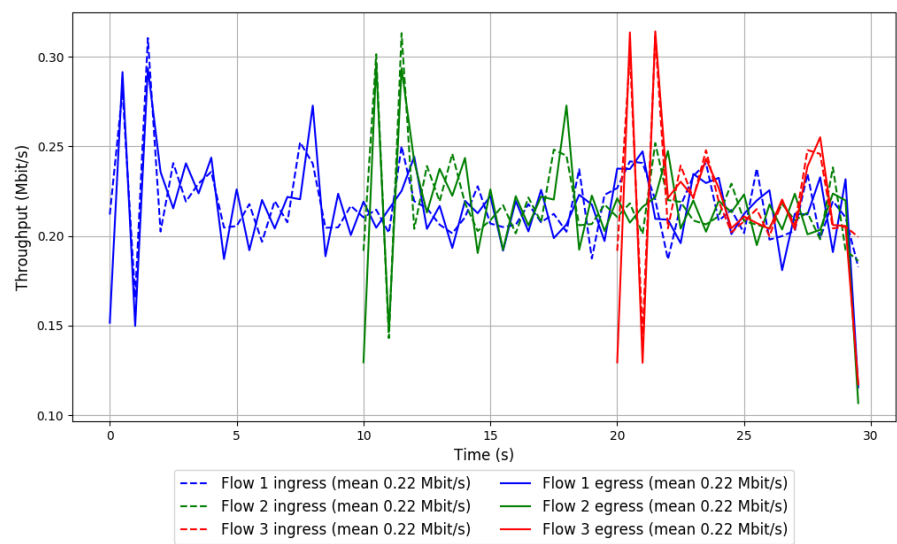
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-12-12 11:49:01
End at: 2017-12-12 11:49:31


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 160.981 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 161.009 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.821 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 160.869 ms
Loss rate: 2.64%
```

Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-12-12 12:02:45
End at: 2017-12-12 12:03:15


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 139.169 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.858 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.198 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.239 ms
Loss rate: 2.31%
```
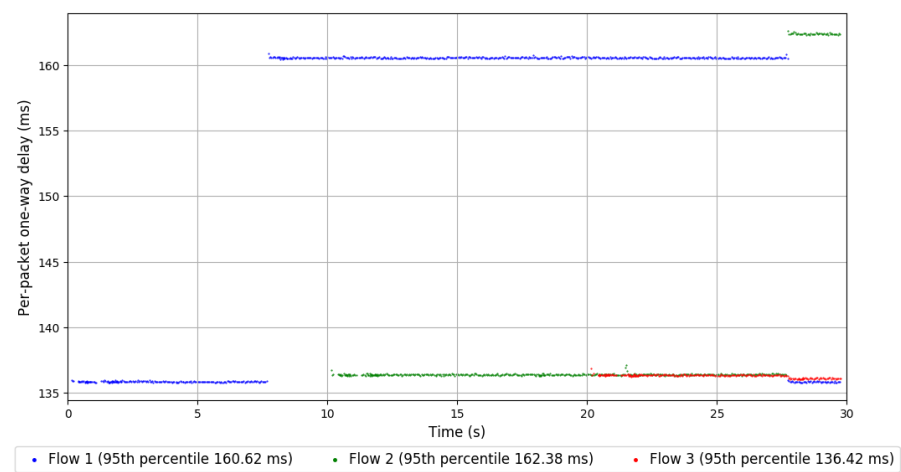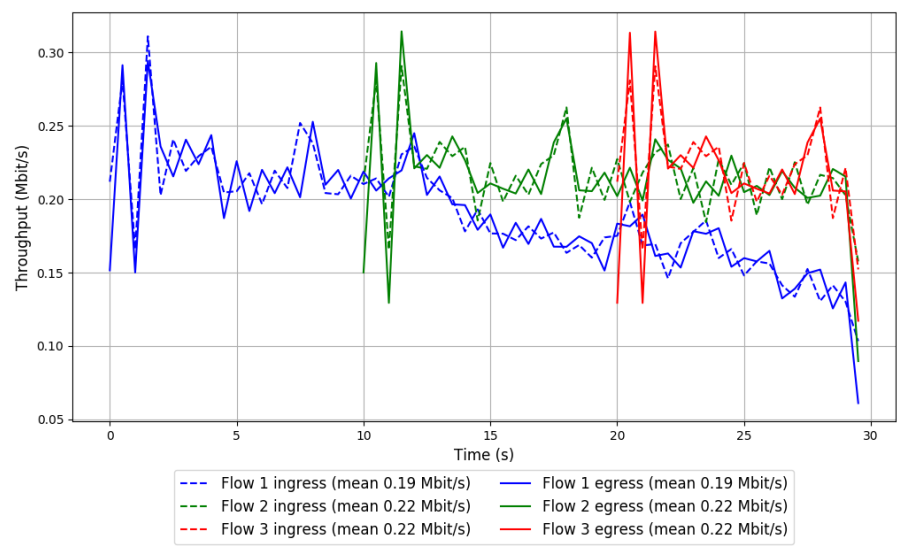
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-12-12 12:16:27
End at: 2017-12-12 12:16:57

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.417 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.126 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.446 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.915 ms
Loss rate: 2.97%
```
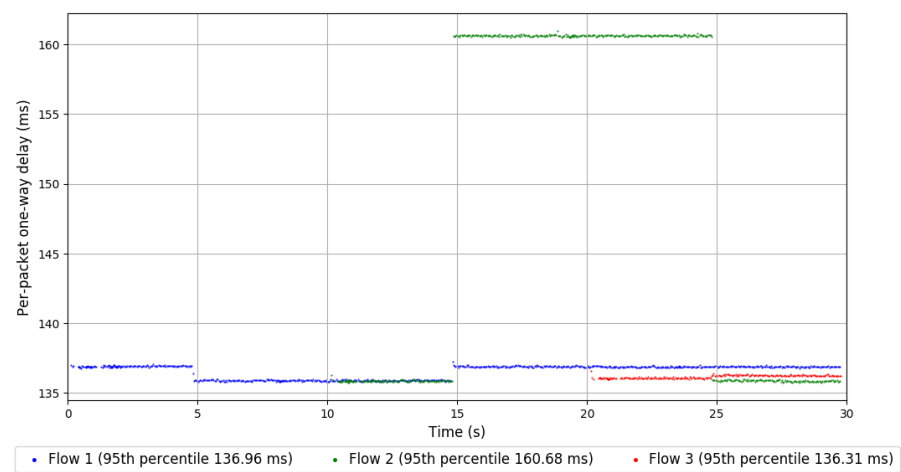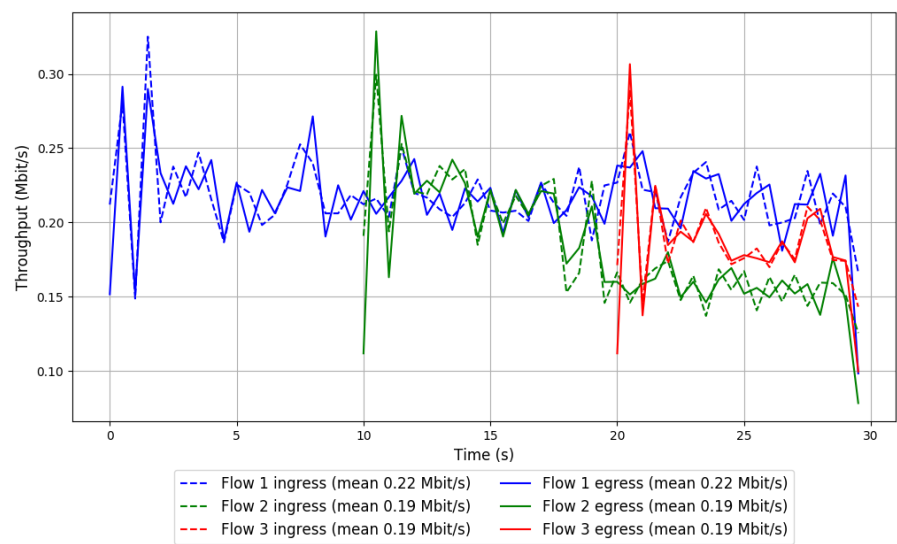
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2017-12-12 12:30:36
End at: 2017-12-12 12:31:06


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 160.626 ms
Loss rate: 1.23%
-- Flow 1:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 160.620 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 162.376 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.417 ms
Loss rate: 2.29%
```
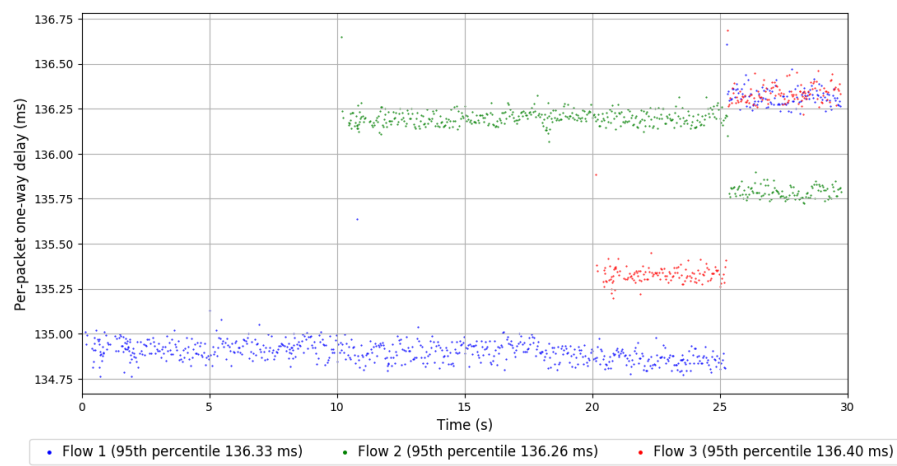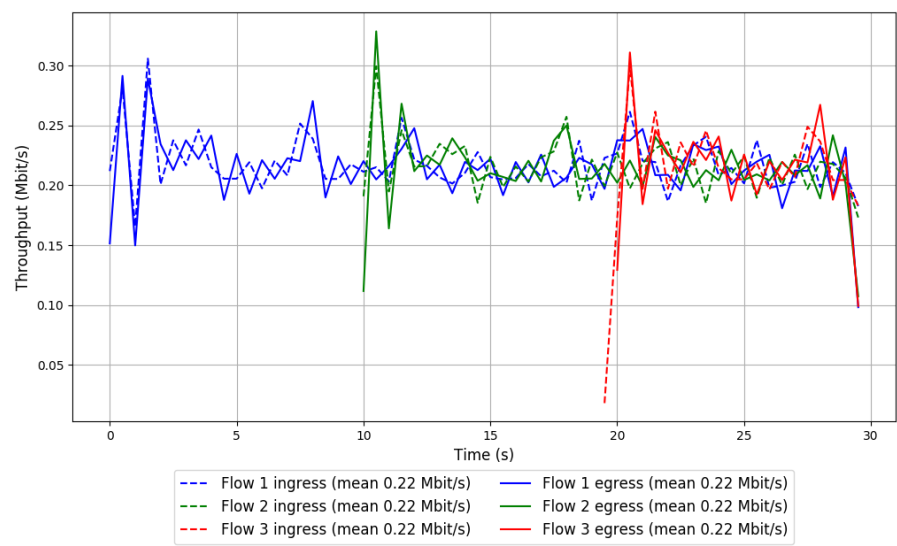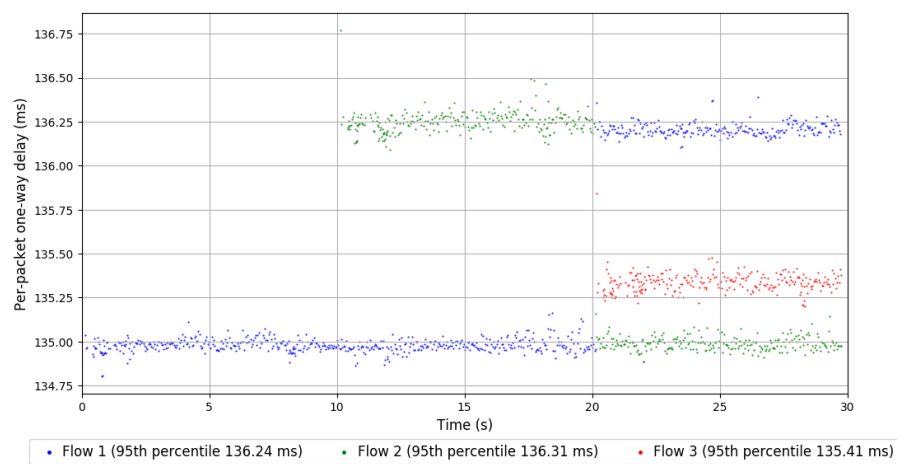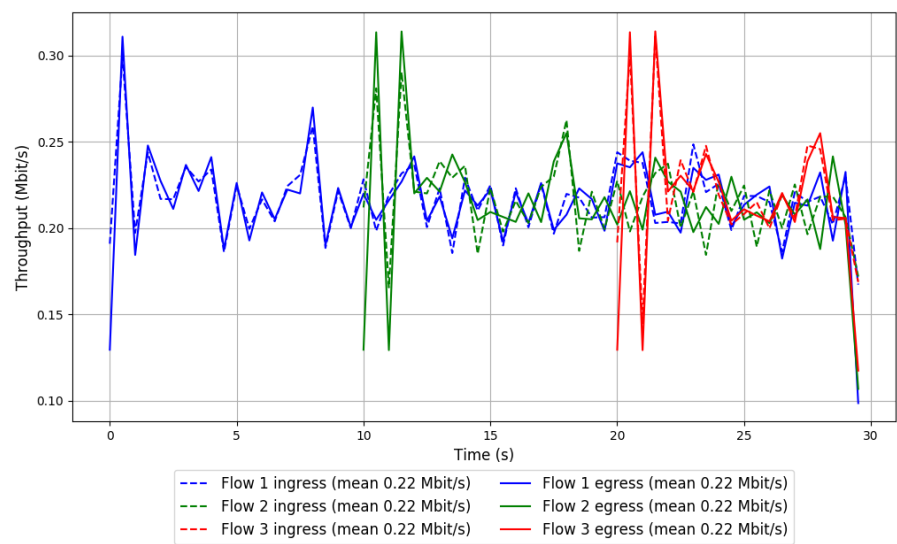
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2017-12-12 12:44:49
End at: 2017-12-12 12:45:19


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 160.647 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.955 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 160.678 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 136.315 ms
Loss rate: 2.28%
```

Run 6: Report of SCReAM — Data Link

115

```
Run 7: Statistics of SCReAM

Start at: 2017-12-12 12:59:08
End at: 2017-12-12 12:59:38

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.346 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.333 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.258 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.398 ms
Loss rate: 3.00%
```
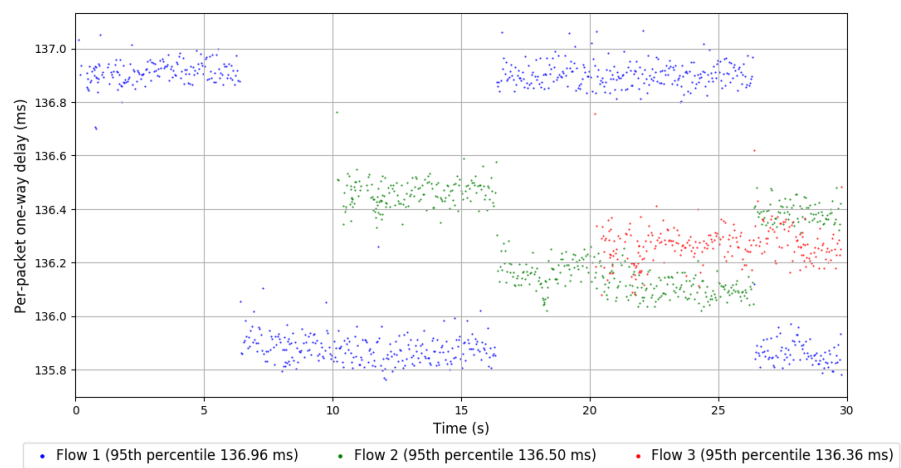
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-12-12 13:13:04
End at: 2017-12-12 13:13:34


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.277 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.241 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.307 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.411 ms
Loss rate: 2.29%
```
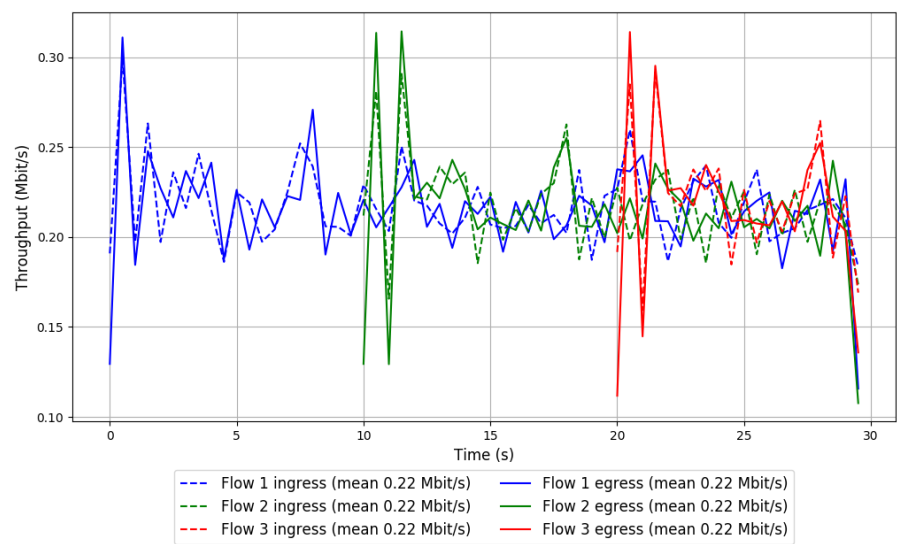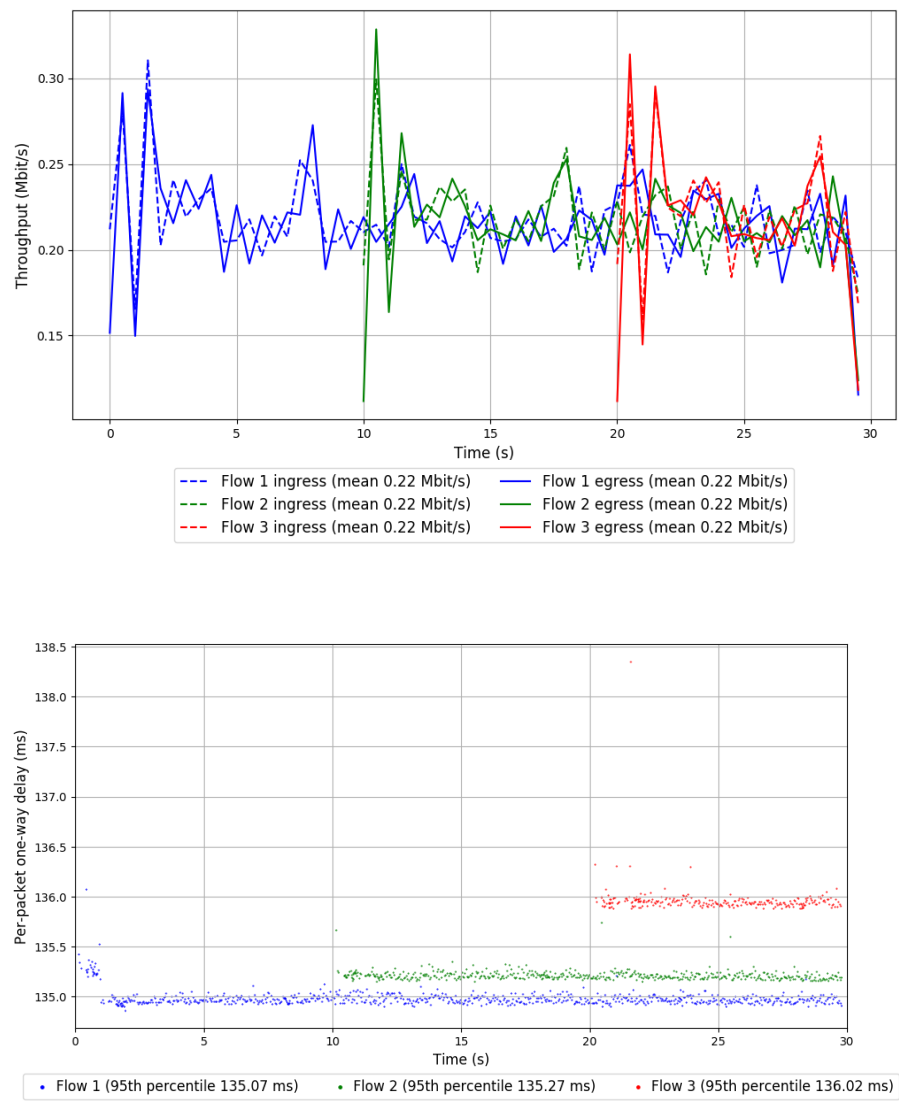
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2017-12-12 13:27:17
End at: 2017-12-12 13:27:47

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.941 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.963 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.502 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.361 ms
Loss rate: 2.30%
```
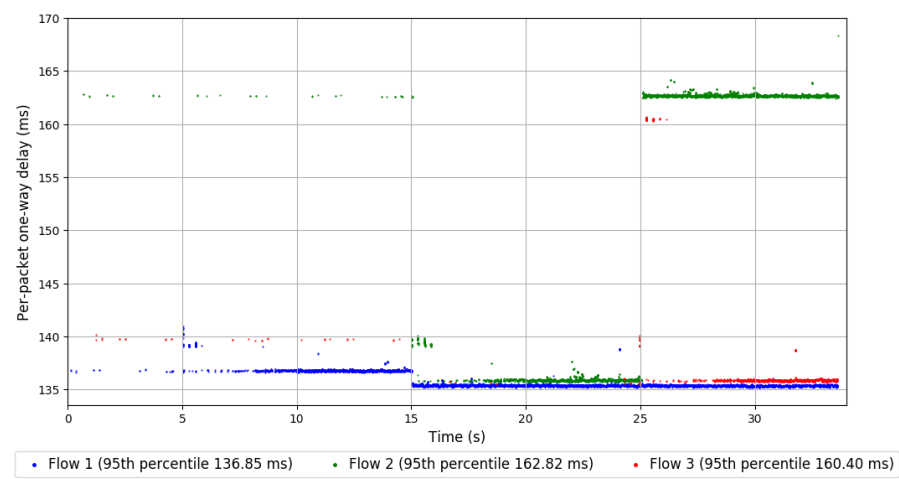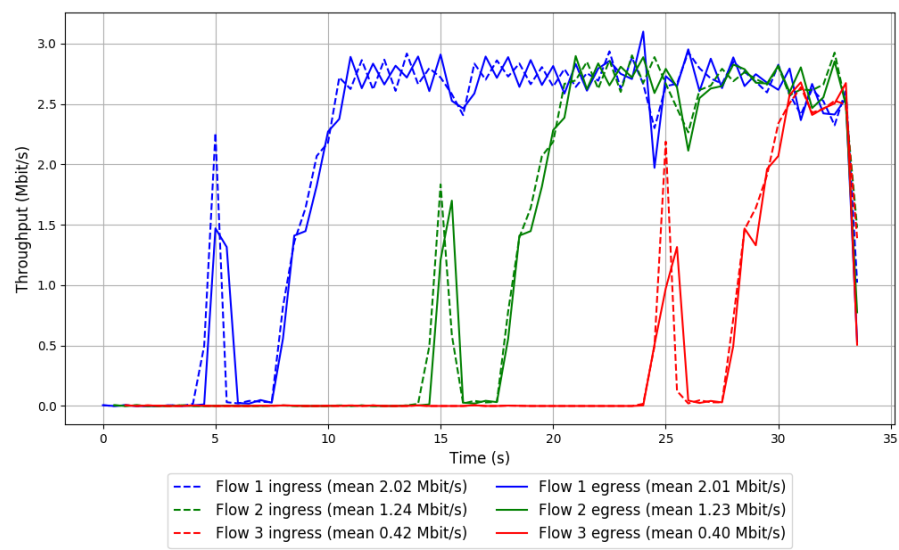
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-12-12 13:41:53
End at: 2017-12-12 13:42:23

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 135.965 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.071 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 135.273 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 136.021 ms
Loss rate: 2.68%
```

Run 10: Report of SCReAM — Data Link

123

```
Run 1: Statistics of WebRTC media

Start at: 2017-12-12 11:47:22
End at: 2017-12-12 11:47:52


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.61 Mbit/s
95th percentile per-packet one-way delay: 162.726 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 136.855 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 162.816 ms
Loss rate: 2.05%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 160.404 ms
Loss rate: 5.05%
```
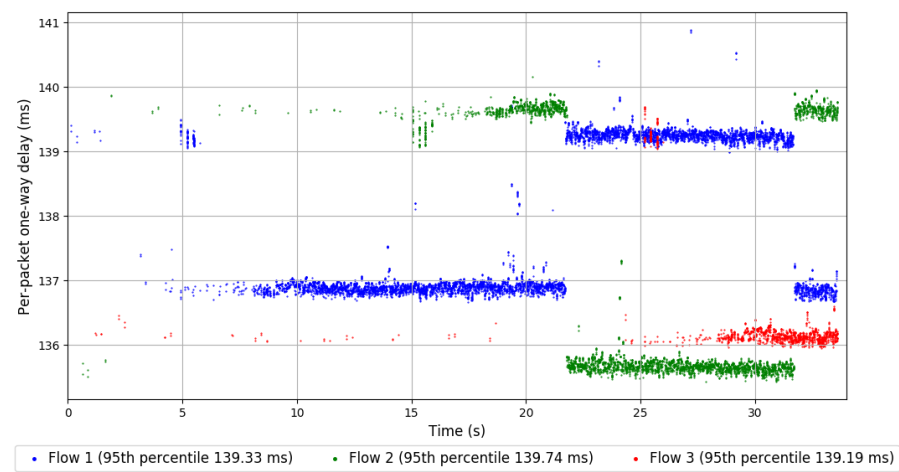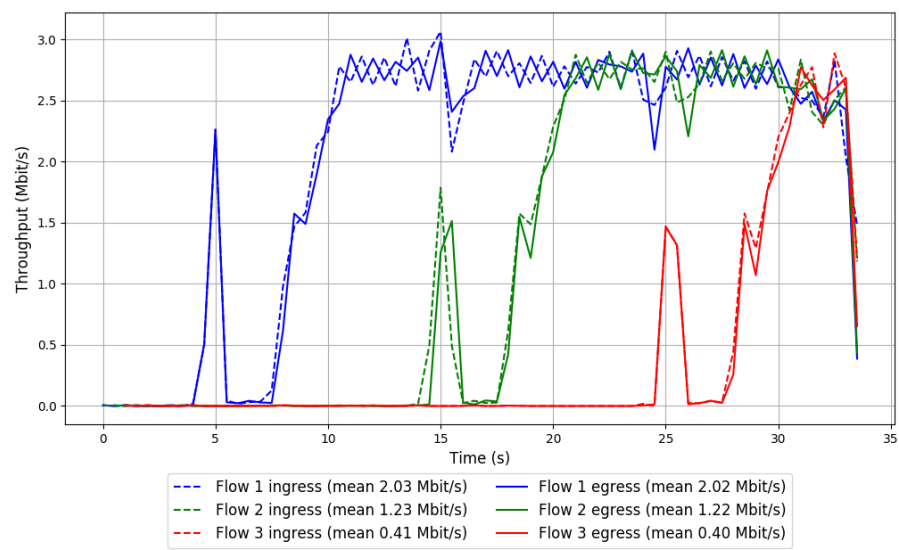
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-12-12 12:01:06
End at: 2017-12-12 12:01:36

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 139.661 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 139.329 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 139.735 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 139.191 ms
Loss rate: 5.02%
```
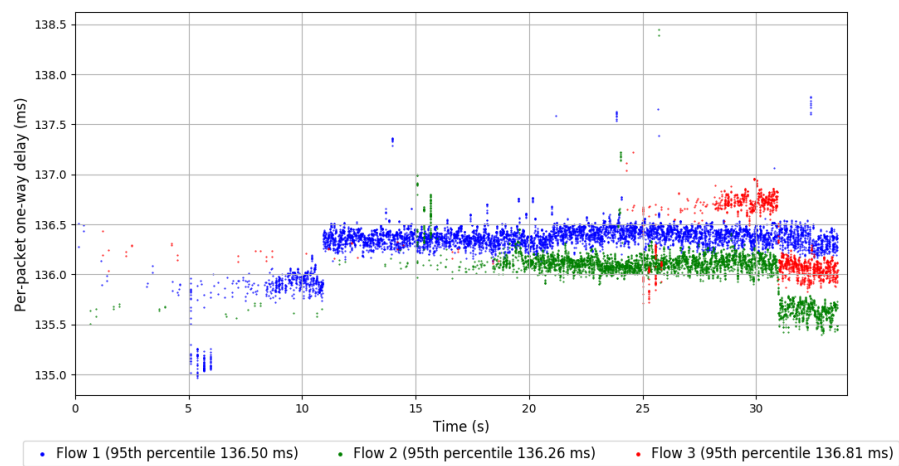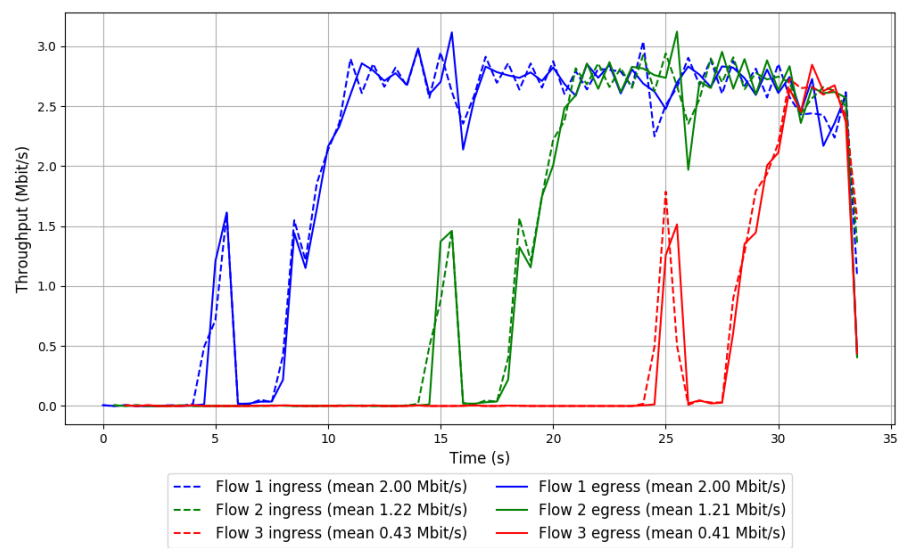
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-12-12 12:14:47
End at: 2017-12-12 12:15:17


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 136.627 ms
Loss rate: 1.88%
-- Flow 1:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 136.499 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 136.259 ms
Loss rate: 1.93%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.805 ms
Loss rate: 6.28%
```
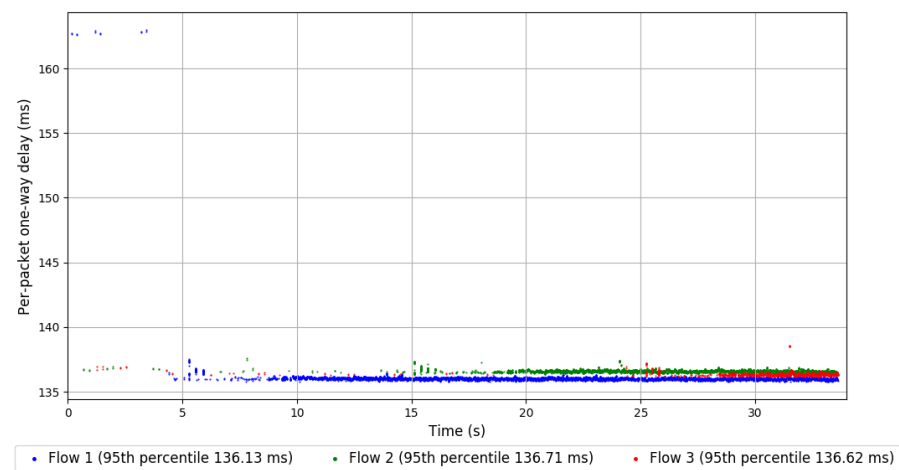
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2017-12-12 12:28:54
End at: 2017-12-12 12:29:24


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.52 Mbit/s
95th percentile per-packet one-way delay: 136.654 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 136.130 ms
Loss rate: 1.38%
-- Flow 2:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 136.709 ms
Loss rate: 2.10%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 136.625 ms
Loss rate: 5.49%
```
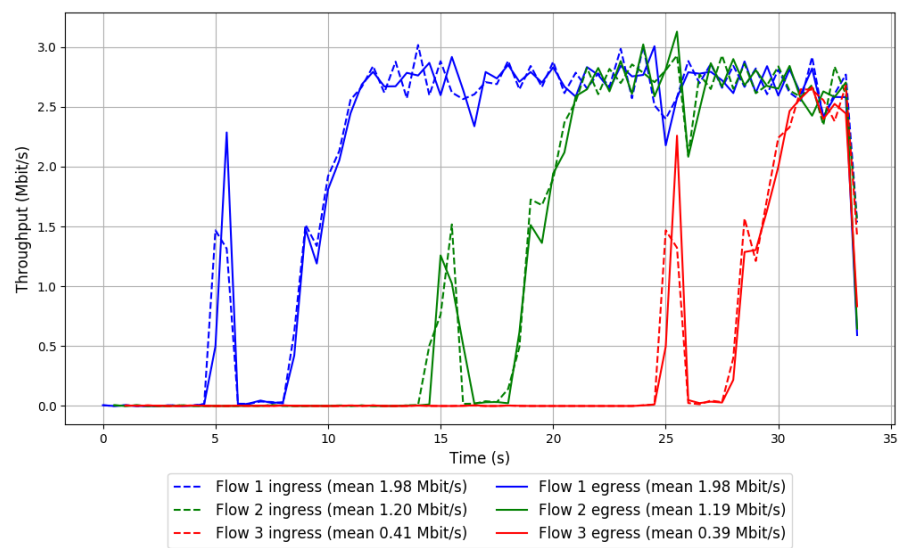
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-12-12 12:43:08
End at: 2017-12-12 12:43:38


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 136.819 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 136.773 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 136.868 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.831 ms
Loss rate: 5.63%
```
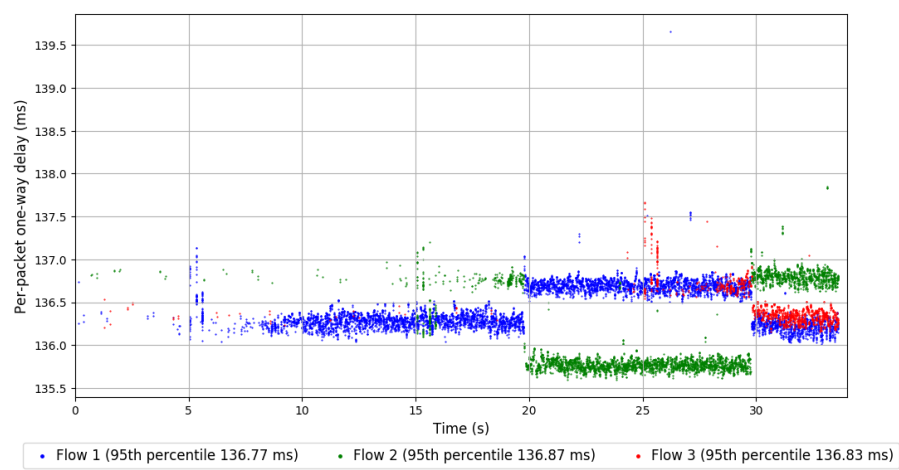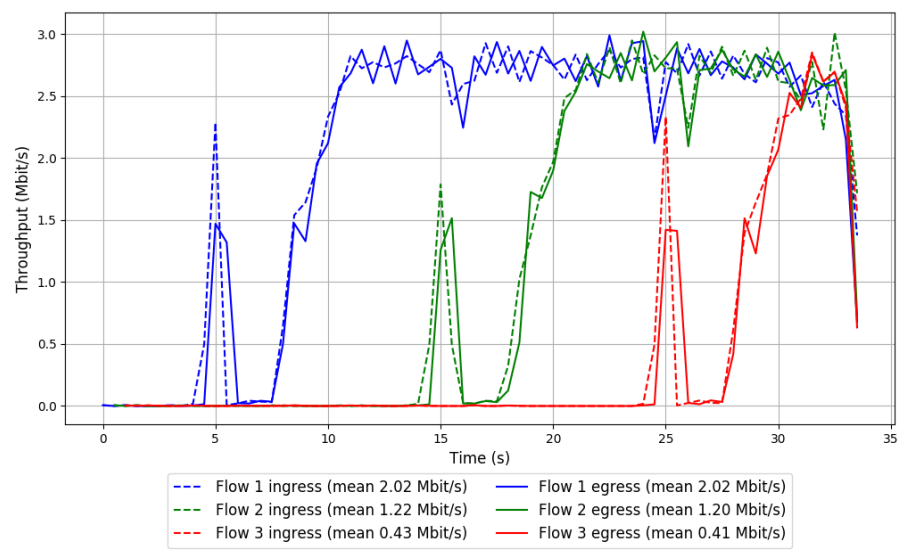
Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-12-12 12:57:26
End at: 2017-12-12 12:57:56

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 136.825 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 135.438 ms
Loss rate: 0.91%
-- Flow 2:
Average throughput: 1.21 Mbit/s
95th percentile per-packet one-way delay: 136.882 ms
Loss rate: 1.95%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.501 ms
Loss rate: 6.42%
```
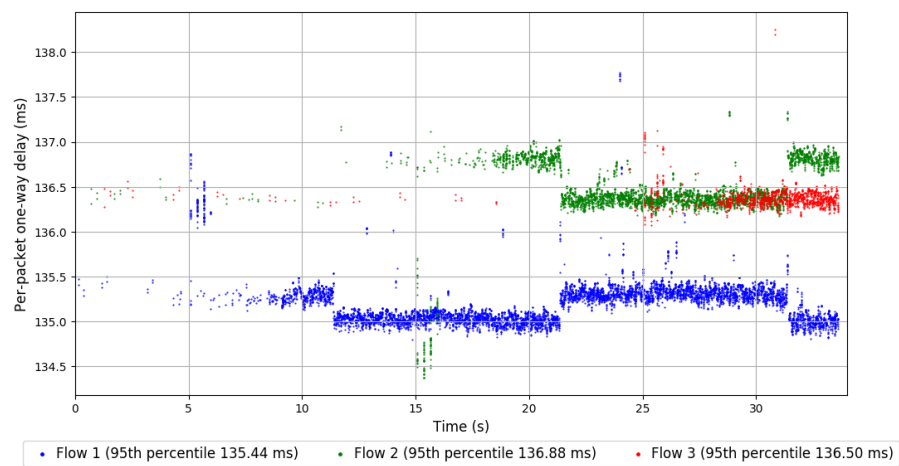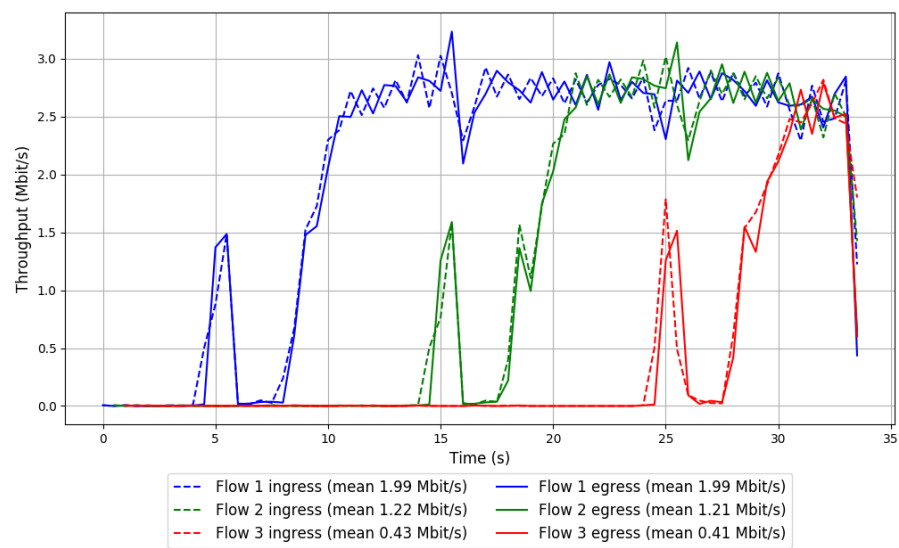
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-12-12 13:11:23
End at: 2017-12-12 13:11:53


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 136.936 ms
Loss rate: 1.82%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 136.886 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 136.982 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.156 ms
Loss rate: 5.53%
```
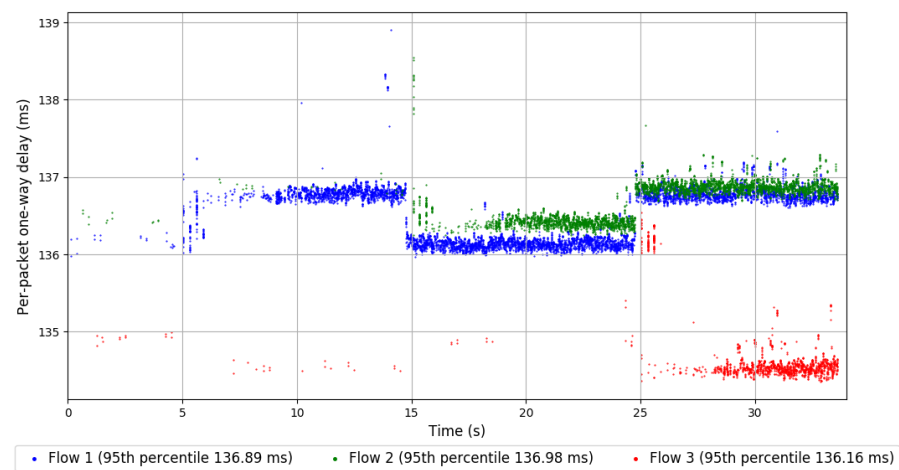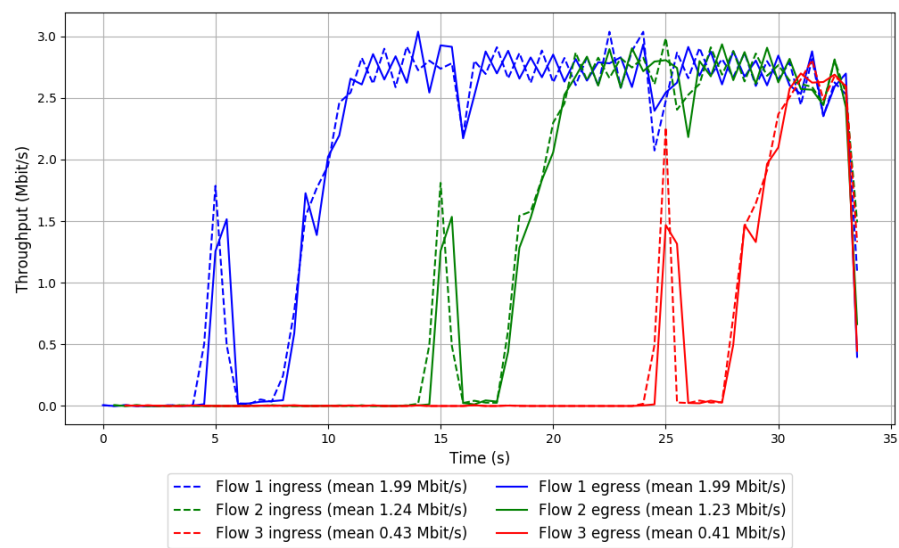
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-12-12 13:25:38
End at: 2017-12-12 13:26:08


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 164.088 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 137.065 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 0.76 Mbit/s
95th percentile per-packet one-way delay: 164.202 ms
Loss rate: 2.67%
-- Flow 3:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 137.238 ms
Loss rate: 5.90%
```
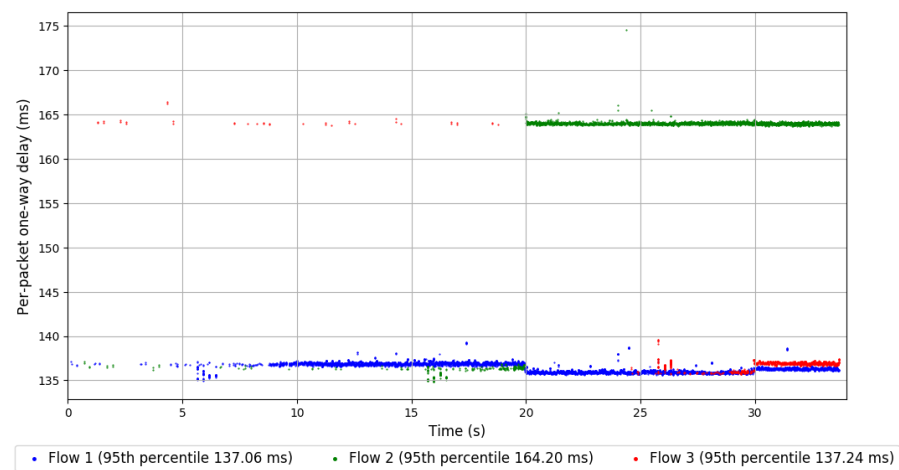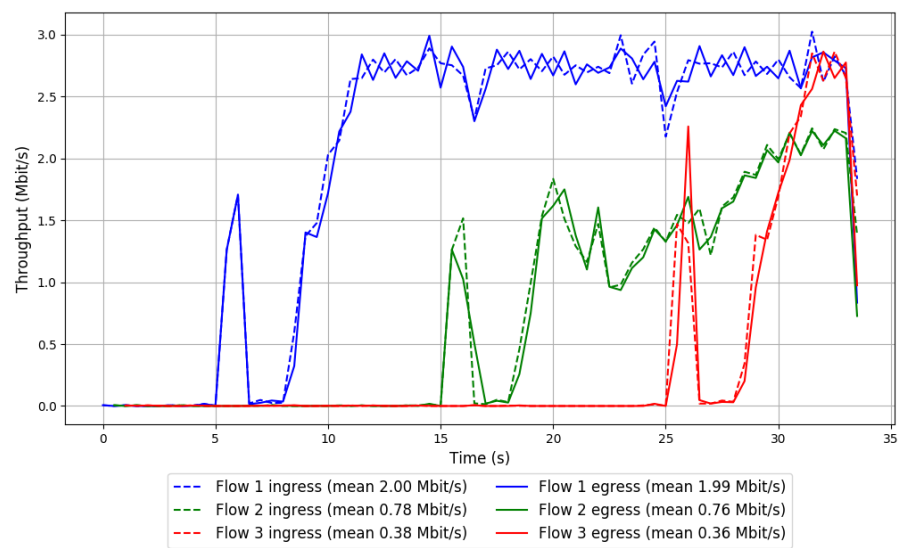
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-12-12 13:40:14
End at: 2017-12-12 13:40:44


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 136.856 ms
Loss rate: 1.77%
-- Flow 1:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 136.877 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 136.459 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 135.774 ms
Loss rate: 5.50%
```
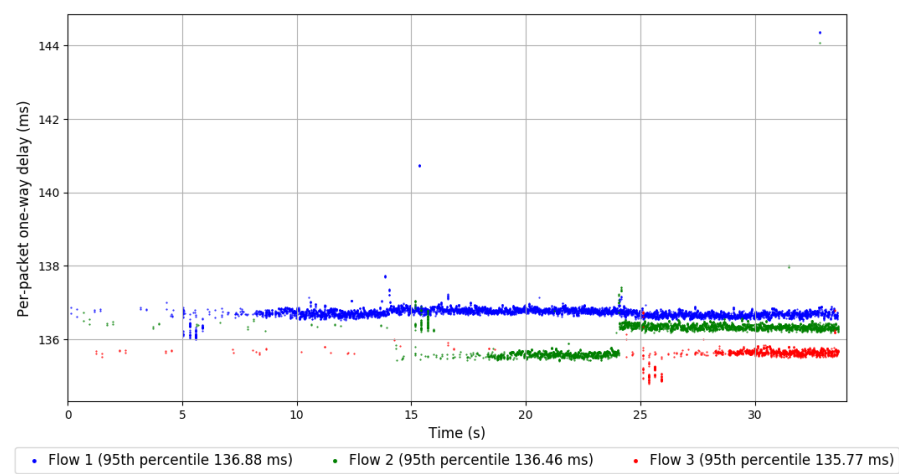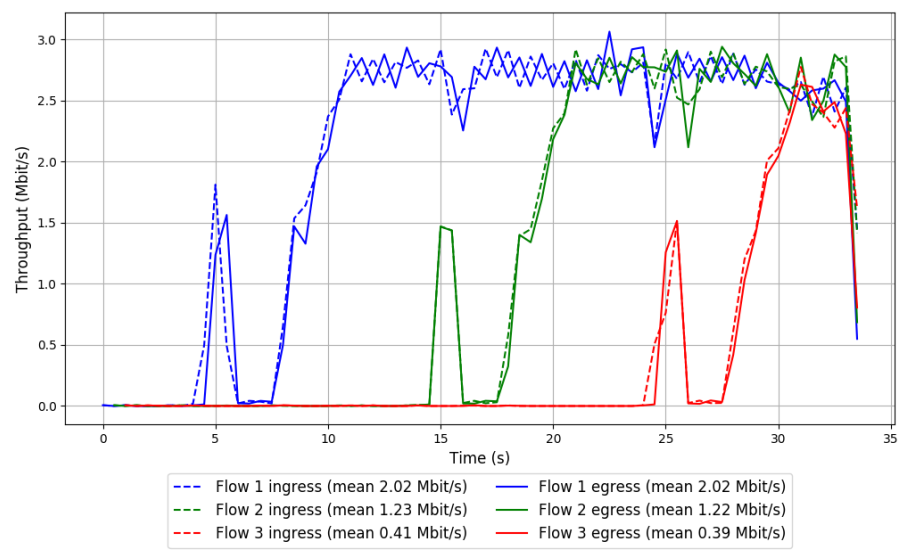
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-12-12 13:54:35
End at: 2017-12-12 13:55:05

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.58 Mbit/s
95th percentile per-packet one-way delay: 136.884 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 2.03 Mbit/s
95th percentile per-packet one-way delay: 136.794 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 136.938 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.940 ms
Loss rate: 6.08%
```
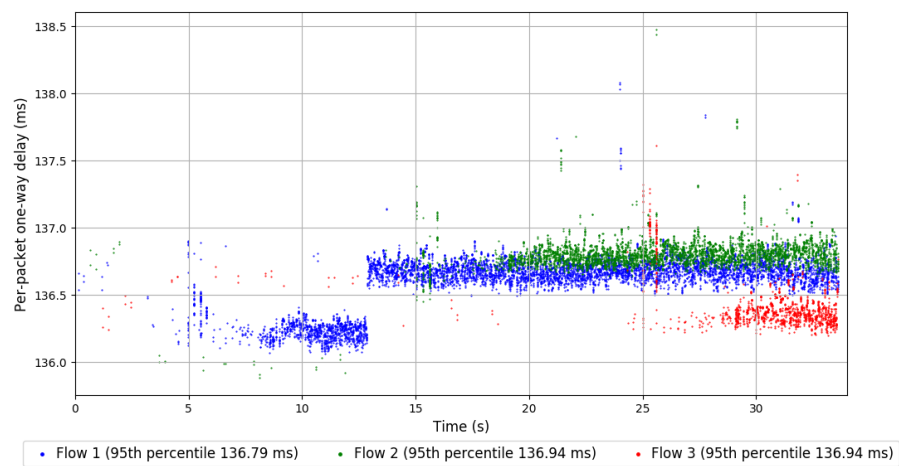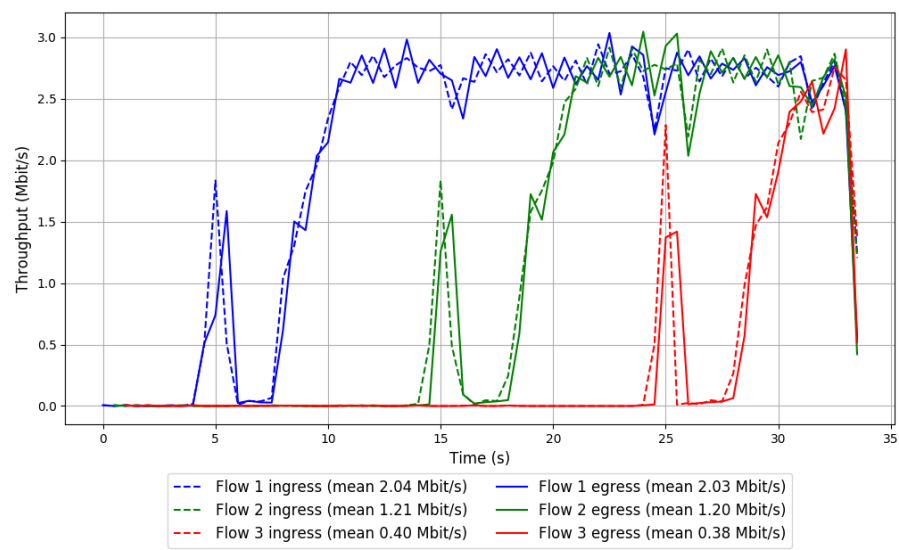
Run 10: Report of WebRTC media — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-12-12 11:34:34
End at: 2017-12-12 11:35:04

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.81 Mbit/s
95th percentile per-packet one-way delay: 162.233 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 160.652 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 0.70 Mbit/s
95th percentile per-packet one-way delay: 139.617 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 162.307 ms
Loss rate: 1.96%
```
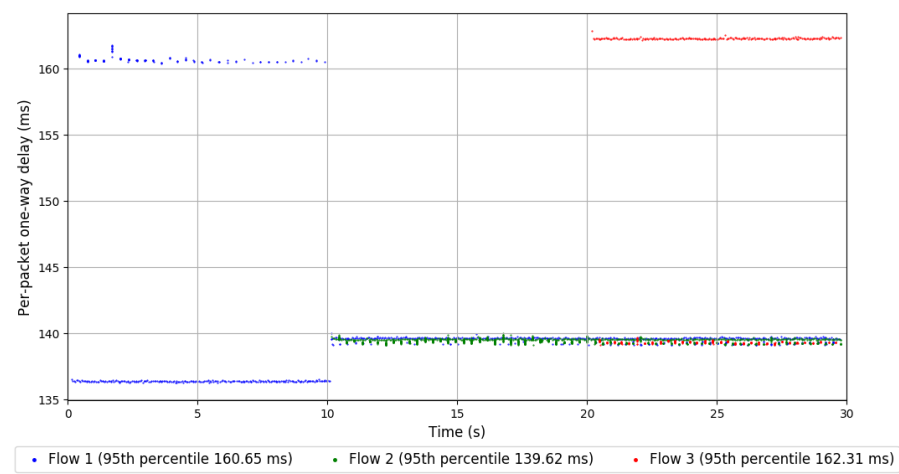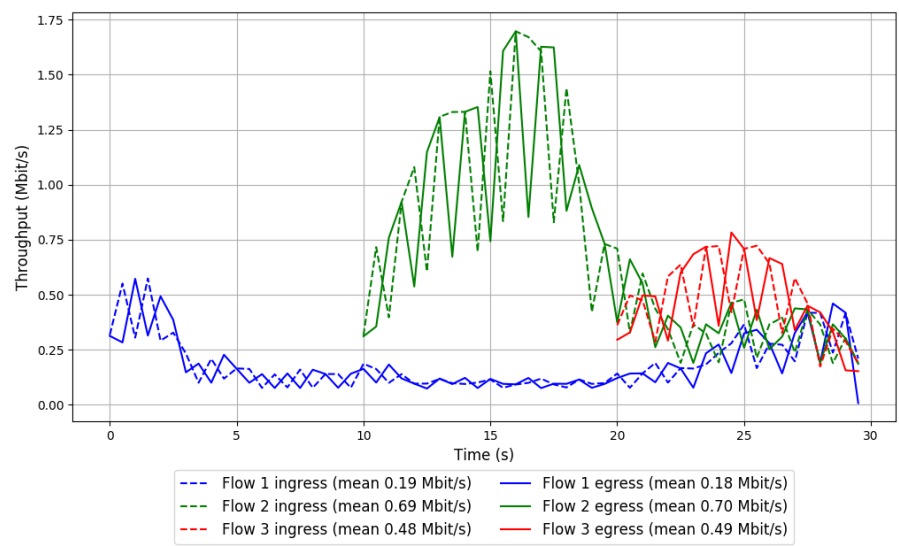
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-12-12 11:48:13
End at: 2017-12-12 11:48:43


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 139.374 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 139.413 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 139.356 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 139.361 ms
Loss rate: 3.14%
```
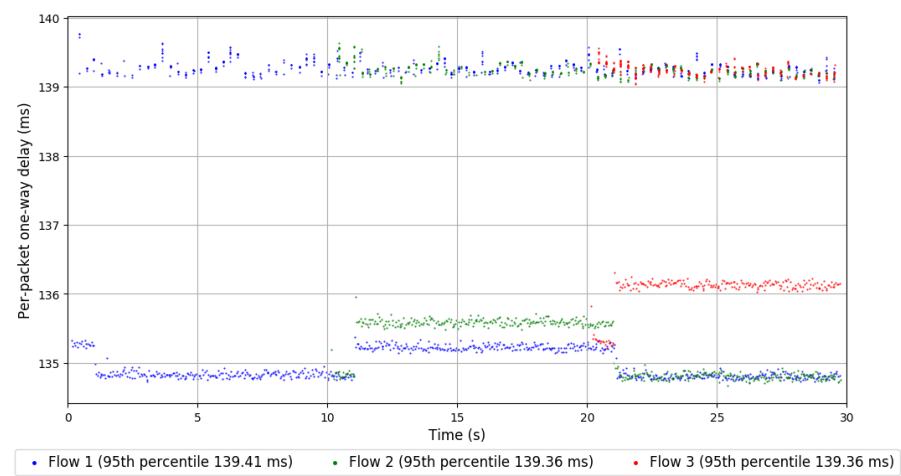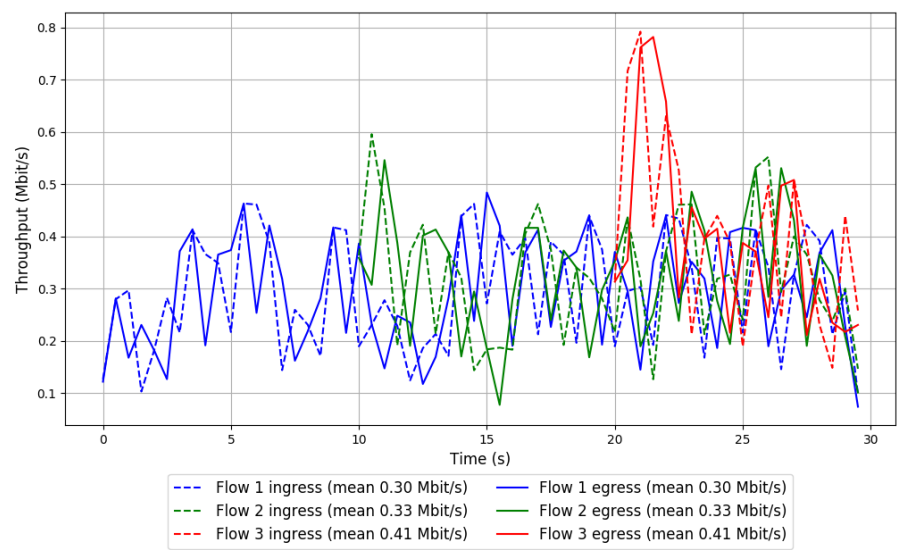
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-12-12 12:01:56
End at: 2017-12-12 12:02:26


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 139.440 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 139.426 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 139.449 ms
Loss rate: 1.53%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 139.329 ms
Loss rate: 1.17%
```
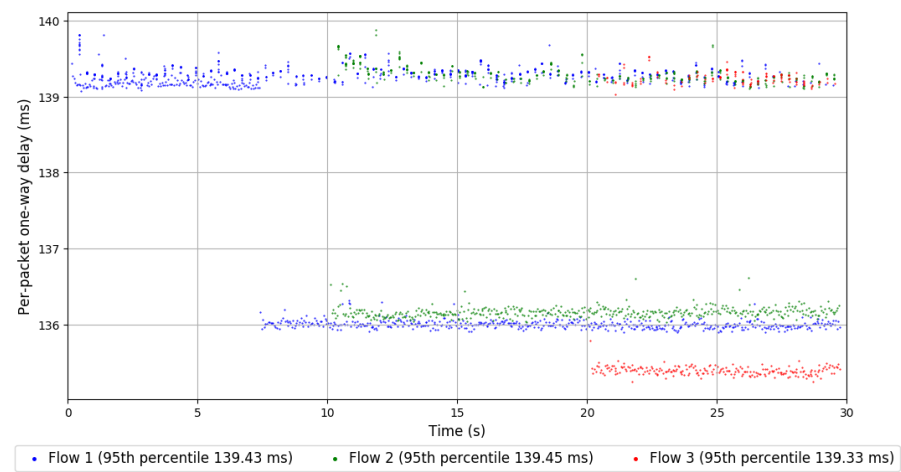
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-12-12 12:15:37
End at: 2017-12-12 12:16:07


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 136.631 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 136.627 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 136.645 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 136.502 ms
Loss rate: 1.89%
```
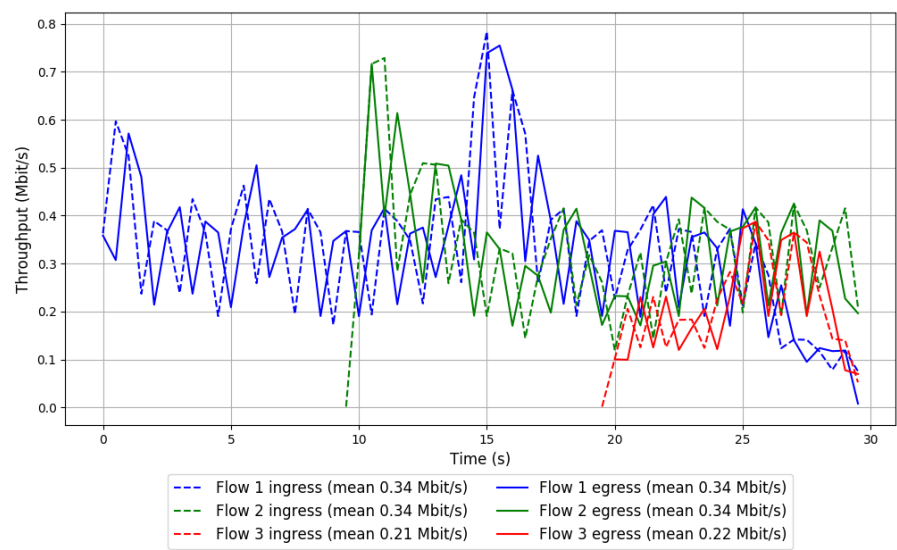
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-12-12 12:29:45
End at: 2017-12-12 12:30:15


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 162.449 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 162.489 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 162.273 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 162.346 ms
Loss rate: 0.10%
```

Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-12-12 12:44:00
End at: 2017-12-12 12:44:30


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 136.736 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.659 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.524 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 136.790 ms
Loss rate: 2.25%
```
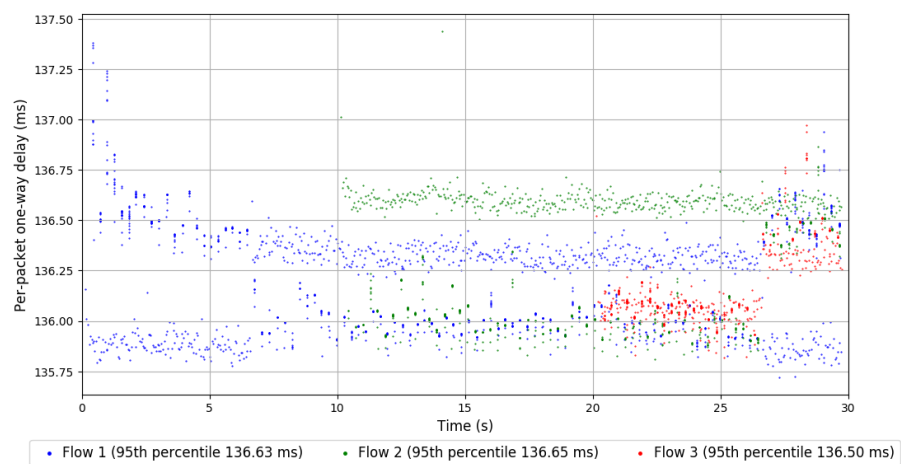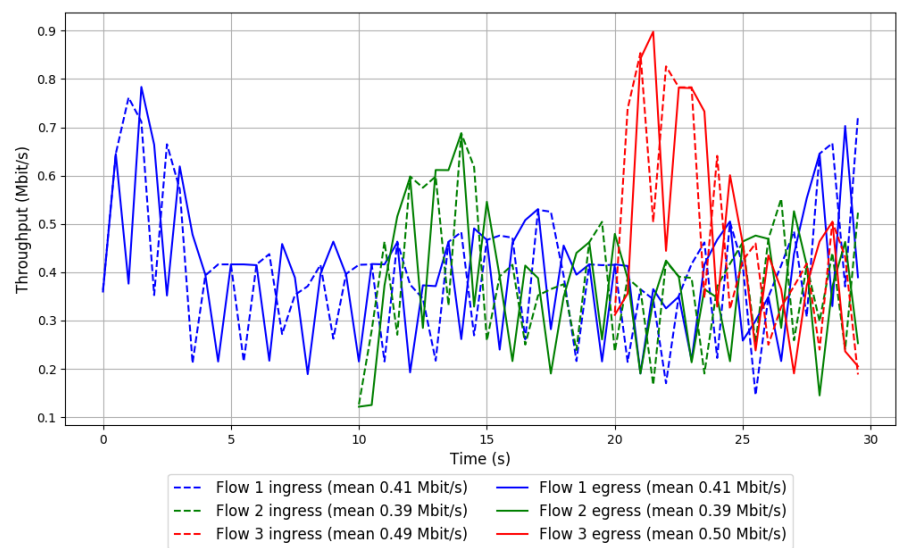
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-12-12 12:58:18
End at: 2017-12-12 12:58:48


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.85 Mbit/s
95th percentile per-packet one-way delay: 136.887 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 136.566 ms
Loss rate: 1.32%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 136.922 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 136.433 ms
Loss rate: 3.22%
```
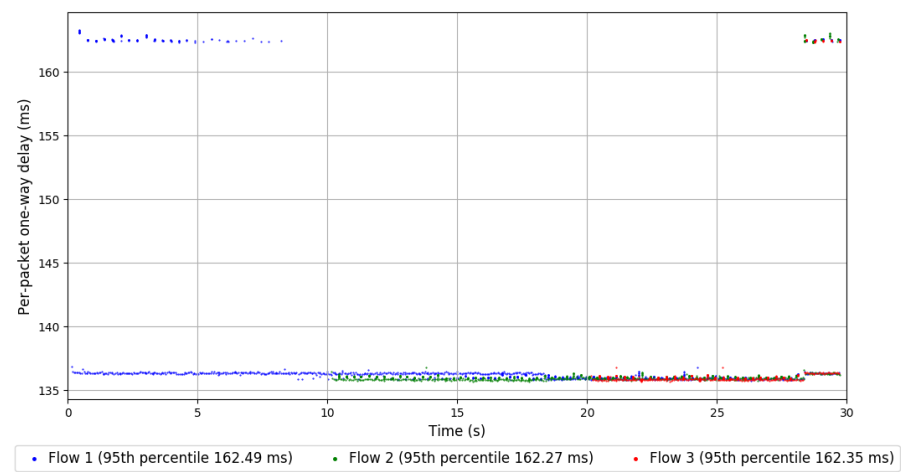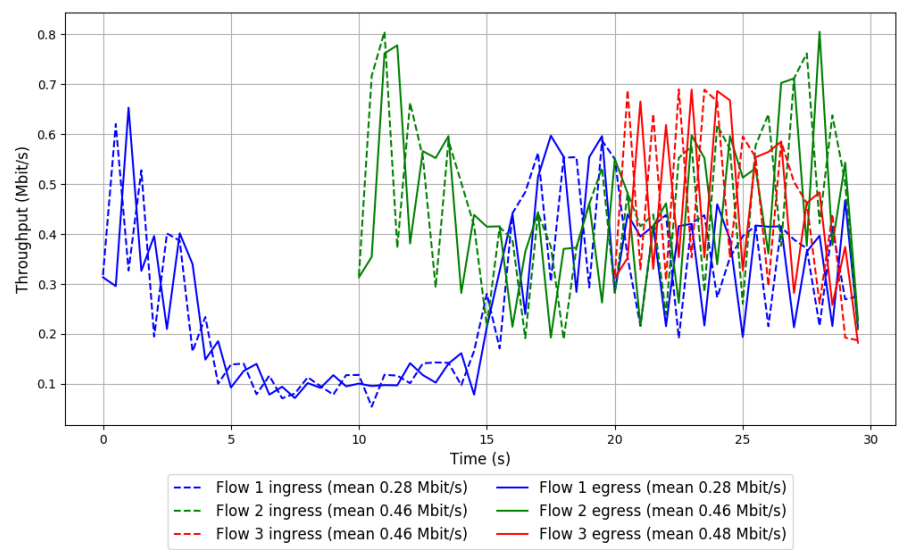
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-12-12 13:12:15
End at: 2017-12-12 13:12:45


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.74 Mbit/s
95th percentile per-packet one-way delay: 161.726 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 136.557 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 0.33 Mbit/s
95th percentile per-packet one-way delay: 136.856 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 161.810 ms
Loss rate: 3.03%
```
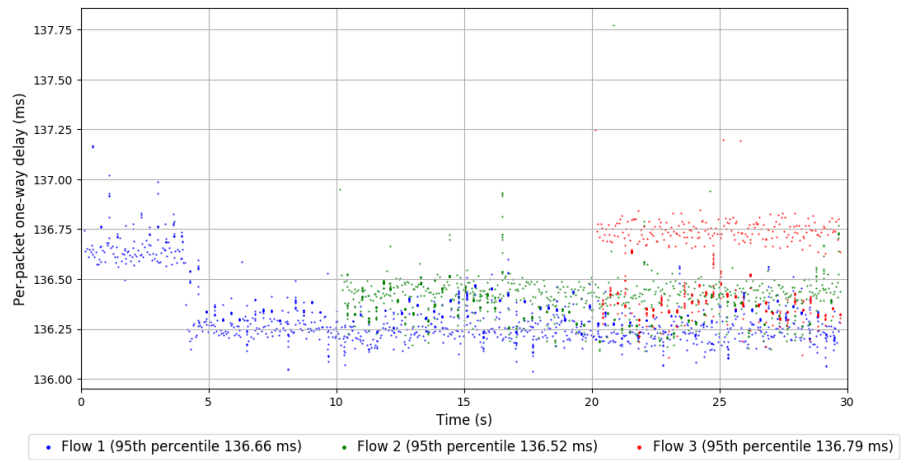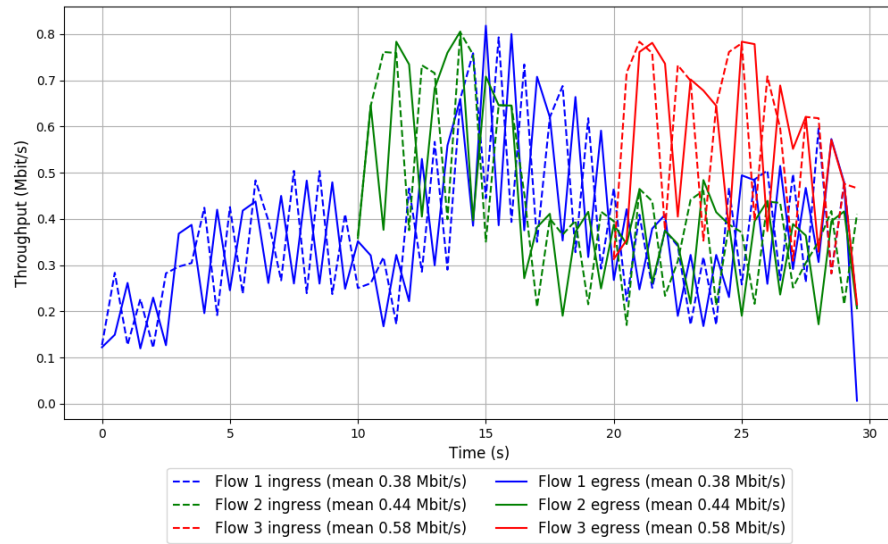
Run 8: Report of Sprout — Data Link

Flow 1 ingress (mean 0.38 Mbit/s) — — — Flow 1 egress (mean 0.38 Mbit/s)
Flow 2 ingress (mean 0.33 Mbit/s) — — — Flow 2 egress (mean 0.33 Mbit/s)
Flow 3 ingress (mean 0.41 Mbit/s) — — — Flow 3 egress (mean 0.41 Mbit/s)

Flow 1 (95th percentile 136.56 ms) Flow 2 (95th percentile 136.86 ms) Flow 3 (95th percentile 161.81 ms)

```
Run 9: Statistics of Sprout

Start at: 2017-12-12 13:26:28
End at: 2017-12-12 13:26:58

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 136.695 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 0.52 Mbit/s
95th percentile per-packet one-way delay: 136.792 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 136.591 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 136.632 ms
Loss rate: 2.86%
```
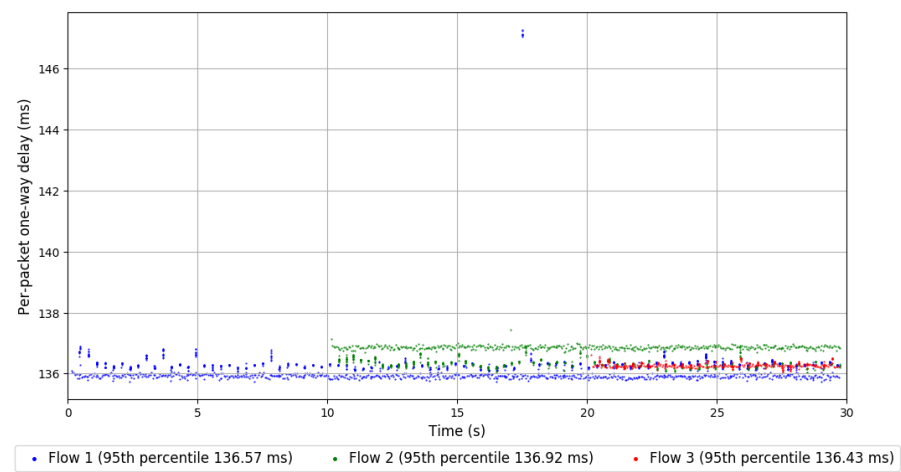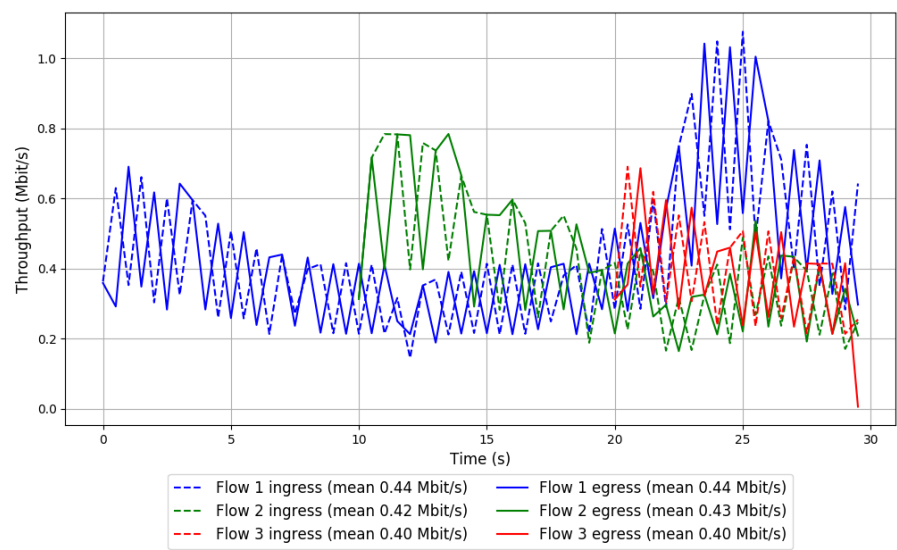
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-12-12 13:41:04
End at: 2017-12-12 13:41:34


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.95 Mbit/s
95th percentile per-packet one-way delay: 161.592 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 136.768 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 0.51 Mbit/s
95th percentile per-packet one-way delay: 136.440 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 161.673 ms
Loss rate: 1.54%
```
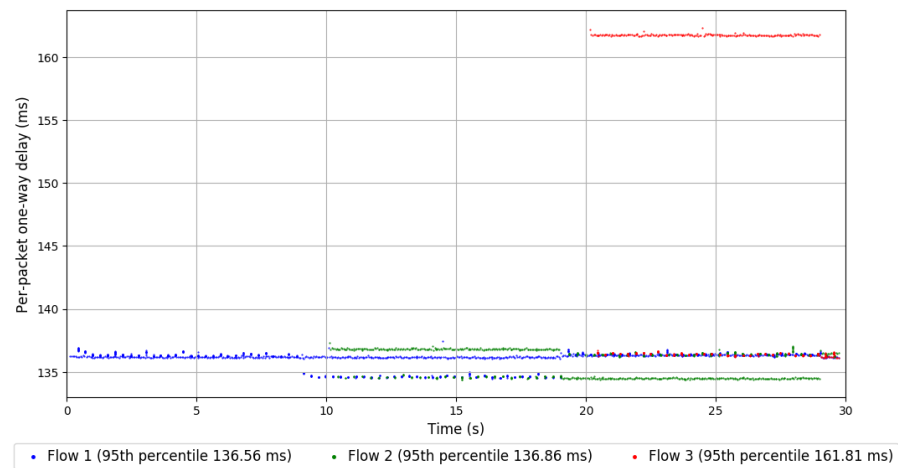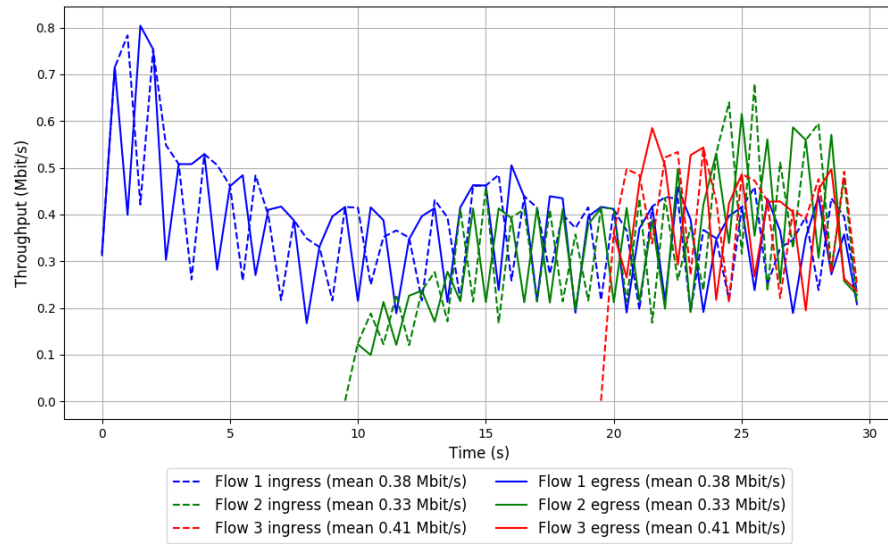
Run 10: Report of Sprout — Data Link

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

Start at: 2017-12-12 11:46:30
End at: 2017-12-12 11:47:00

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.13 Mbit/s
95th percentile per-packet one-way delay: 139.511 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 16.47 Mbit/s
95th percentile per-packet one-way delay: 139.534 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 12.11 Mbit/s
95th percentile per-packet one-way delay: 139.159 ms
Loss rate: 1.66%
-- Flow 3:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 139.123 ms
Loss rate: 4.35%
```
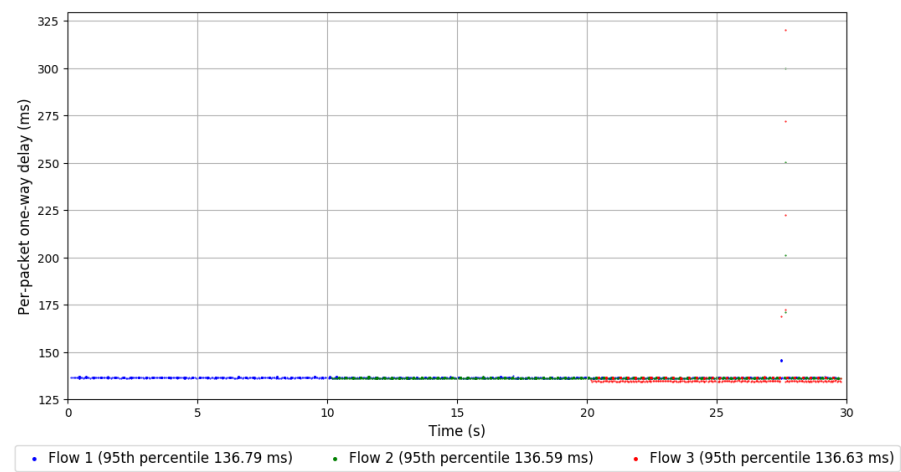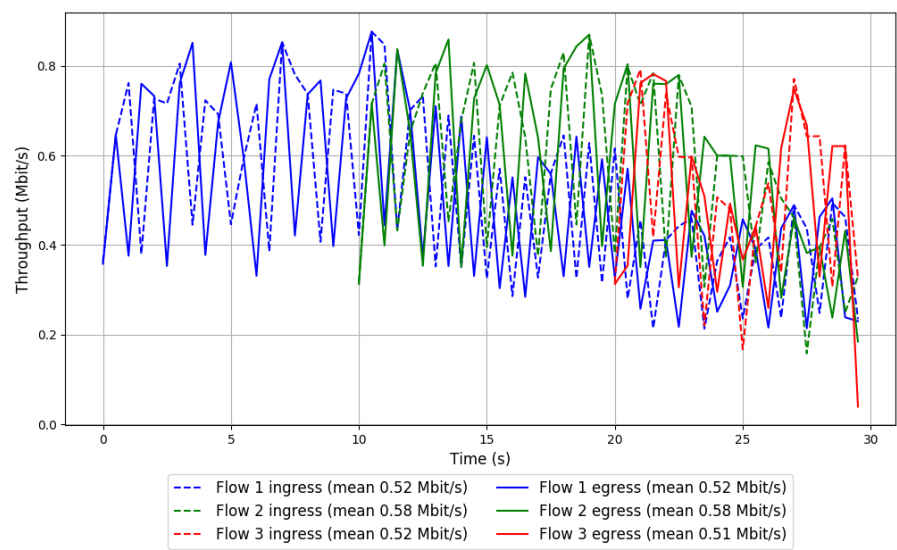
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-12 12:00:14
End at: 2017-12-12 12:00:44

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.34 Mbit/s
95th percentile per-packet one-way delay: 139.126 ms
Loss rate: 1.62%
-- Flow 1:
Average throughput: 12.60 Mbit/s
95th percentile per-packet one-way delay: 139.121 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 139.124 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 7.24 Mbit/s
95th percentile per-packet one-way delay: 139.150 ms
Loss rate: 5.16%
```
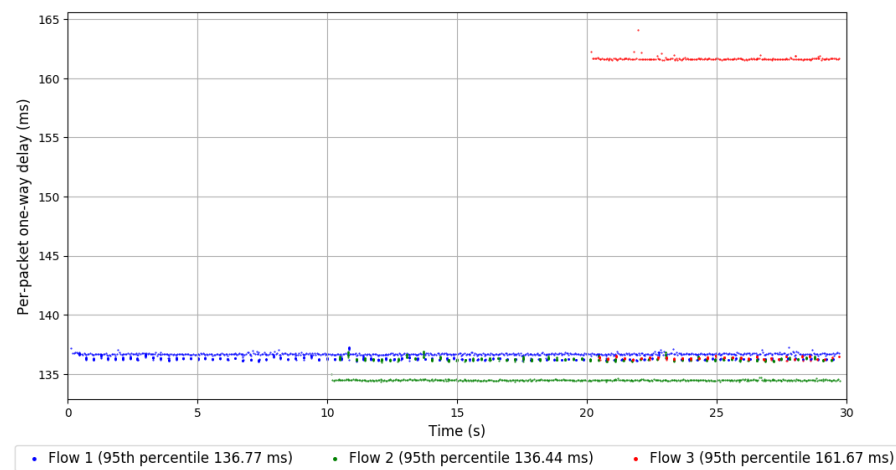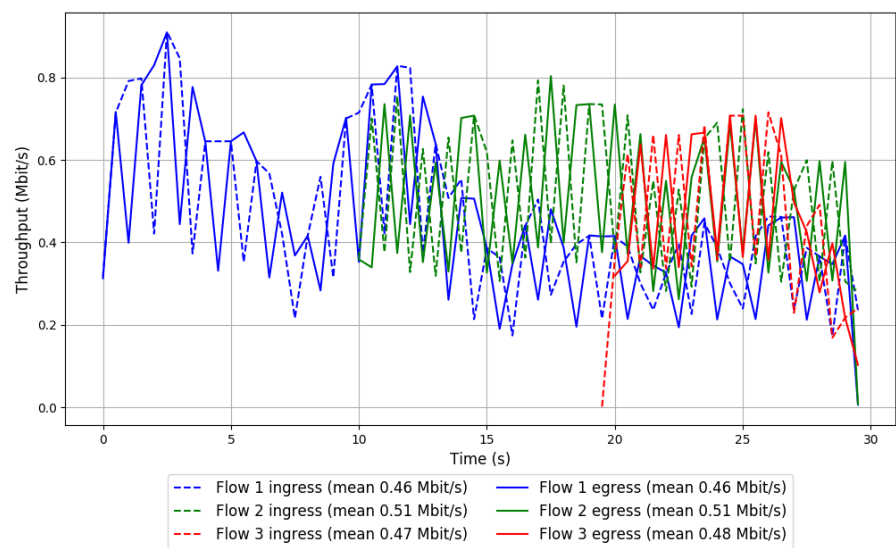
Run 2: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 12.61 Mbit/s)   —— Flow 1 egress (mean 12.60 Mbit/s)
- - - Flow 2 ingress (mean 7.44 Mbit/s)   —— Flow 2 egress (mean 7.44 Mbit/s)
- - - Flow 3 ingress (mean 7.36 Mbit/s)   —— Flow 3 egress (mean 7.24 Mbit/s)

• Flow 1 (95th percentile 139.12 ms)   • Flow 2 (95th percentile 139.12 ms)   • Flow 3 (95th percentile 139.15 ms)
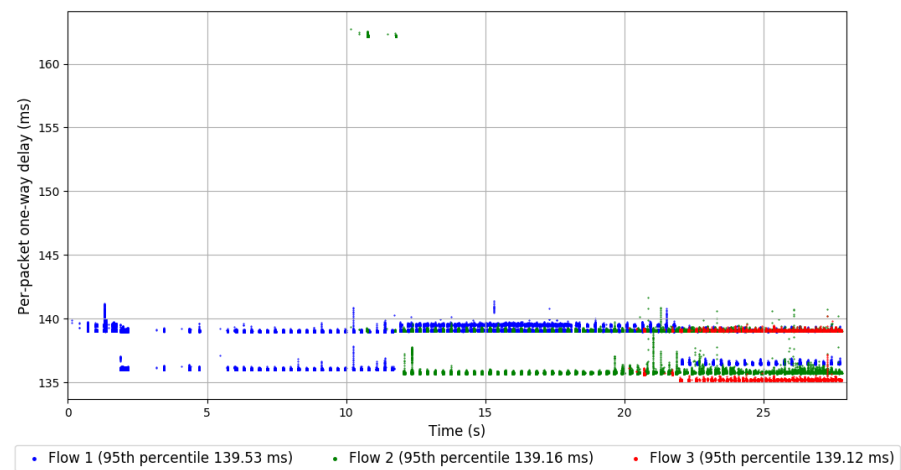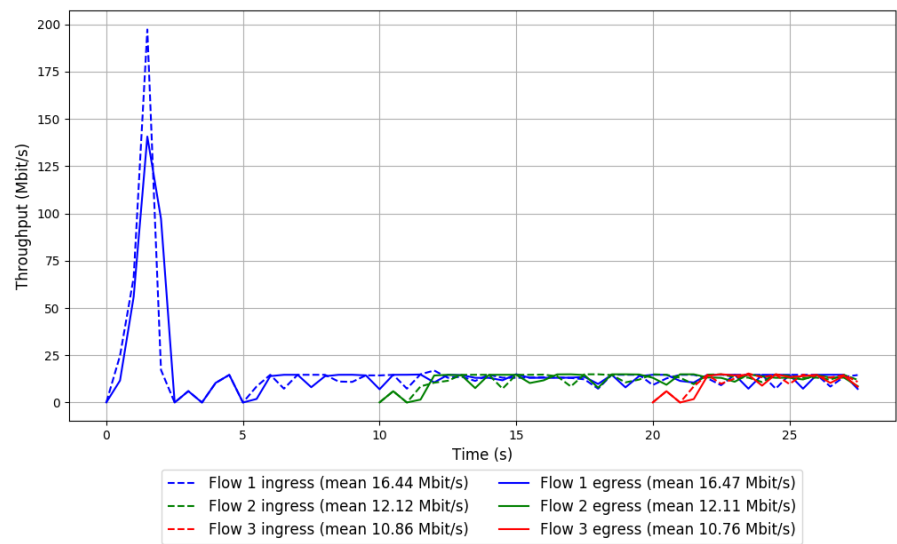
167

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

Start at: 2017-12-12 12:13:43
End at: 2017-12-12 12:14:13

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.73 Mbit/s
95th percentile per-packet one-way delay: 136.331 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 136.330 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 147.11 Mbit/s
95th percentile per-packet one-way delay: 136.325 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 12.73 Mbit/s
95th percentile per-packet one-way delay: 136.605 ms
Loss rate: 3.70%
```

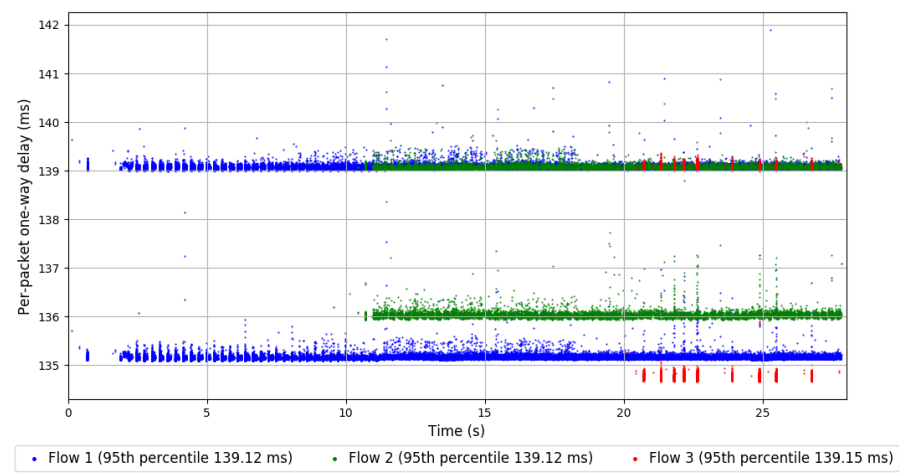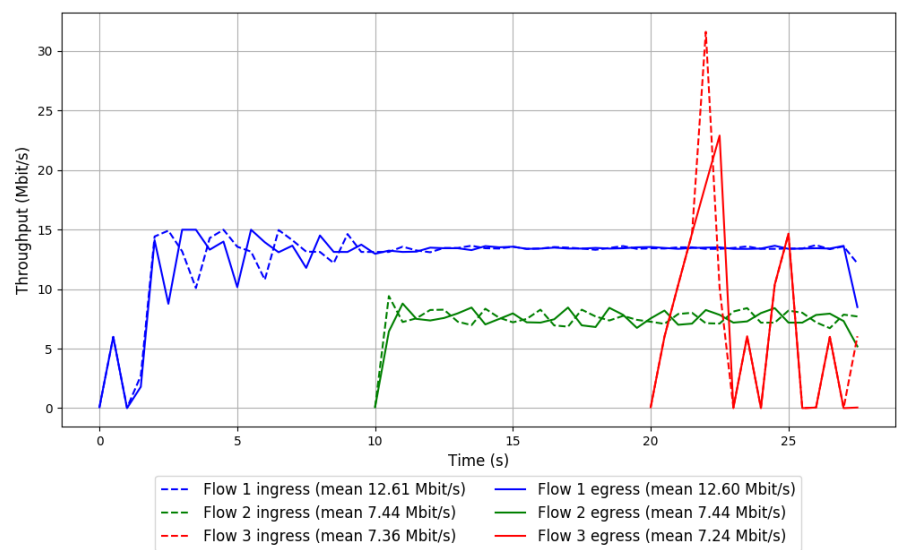# Run 3: Report of TaoVA-100x — Data Link

169

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

Start at: 2017-12-12 12:27:40
End at: 2017-12-12 12:28:10

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.79 Mbit/s
95th percentile per-packet one-way delay: 137.134 ms
Loss rate: 2.49%
-- Flow 1:
Average throughput: 15.43 Mbit/s
95th percentile per-packet one-way delay: 138.284 ms
Loss rate: 4.59%
-- Flow 2:
Average throughput: 202.99 Mbit/s
95th percentile per-packet one-way delay: 136.911 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 187.20 Mbit/s
95th percentile per-packet one-way delay: 137.569 ms
Loss rate: 4.19%
```

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

- - - - Flow 1 ingress (mean 16.00 Mbit/s) — Flow 1 egress (mean 15.43 Mbit/s)
- - - - Flow 2 ingress (mean 202.74 Mbit/s) — Flow 2 egress (mean 202.99 Mbit/s)
- - - - Flow 3 ingress (mean 188.63 Mbit/s) — Flow 3 egress (mean 187.20 Mbit/s)

- Flow 1 (95th percentile 138.28 ms)   • Flow 2 (95th percentile 136.91 ms)   • Flow 3 (95th percentile 137.57 ms)

171

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

Start at: 2017-12-12 12:41:57
End at: 2017-12-12 12:42:27


# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.37 Mbit/s
95th percentile per-packet one-way delay: 137.538 ms
Loss rate: 2.58%
-- Flow 1:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 162.280 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 176.50 Mbit/s
95th percentile per-packet one-way delay: 136.708 ms
Loss rate: 1.96%
-- Flow 3:
Average throughput: 180.73 Mbit/s
95th percentile per-packet one-way delay: 138.331 ms
Loss rate: 4.15%
```
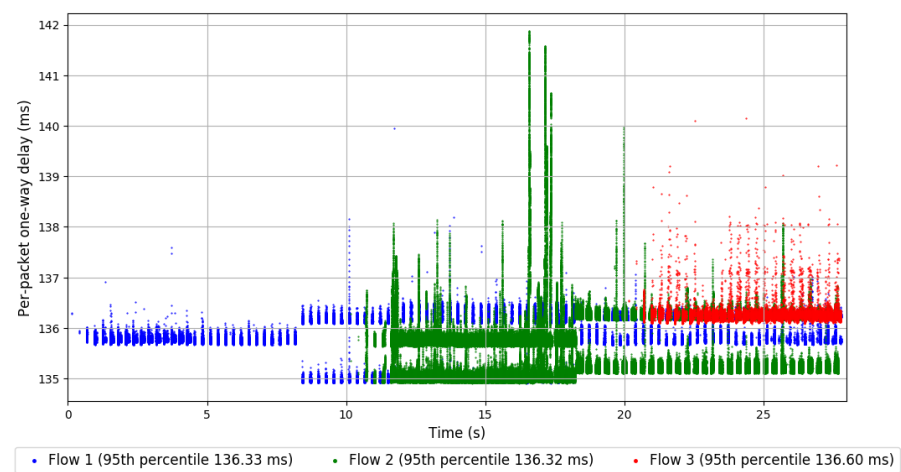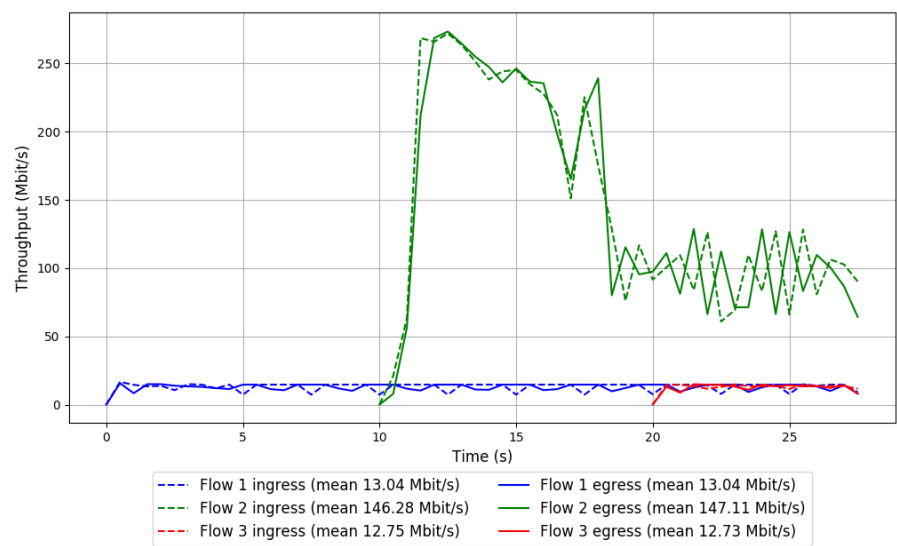
Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2017-12-12 12:56:14
End at: 2017-12-12 12:56:44

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.79 Mbit/s
95th percentile per-packet one-way delay: 137.772 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 138.34 Mbit/s
95th percentile per-packet one-way delay: 138.180 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 38.81 Mbit/s
95th percentile per-packet one-way delay: 136.717 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 136.174 ms
Loss rate: 4.00%
```
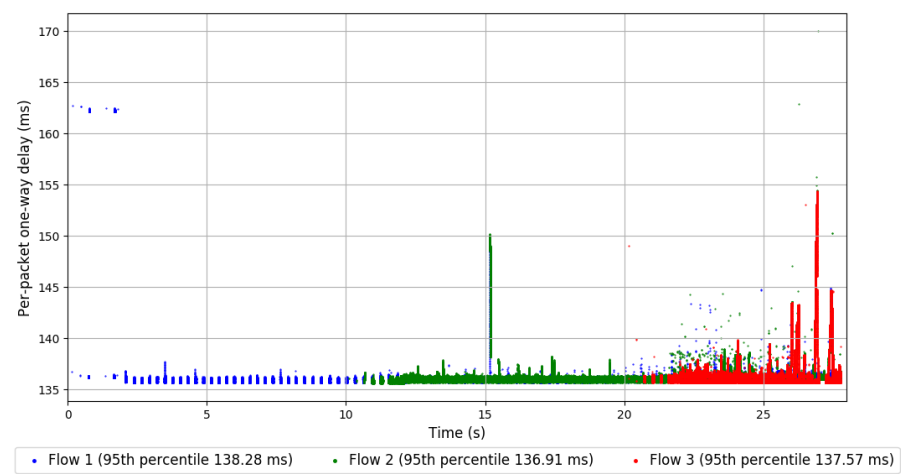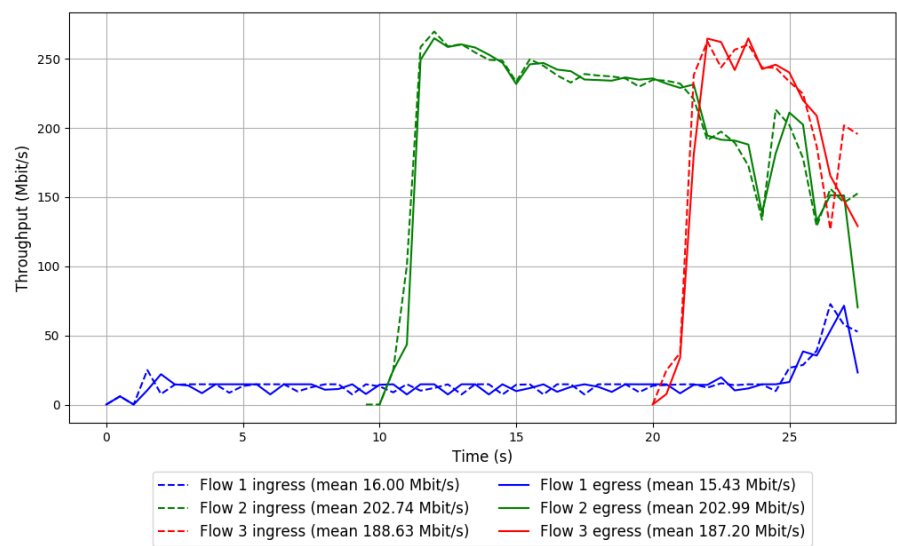
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 138.08 Mbit/s)   Flow 1 egress (mean 138.34 Mbit/s)
Flow 2 ingress (mean 38.37 Mbit/s)   Flow 2 egress (mean 38.81 Mbit/s)
Flow 3 ingress (mean 11.63 Mbit/s)   Flow 3 egress (mean 11.60 Mbit/s)

Flow 1 (95th percentile 138.18 ms)   Flow 2 (95th percentile 136.72 ms)   Flow 3 (95th percentile 136.17 ms)

175

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

Start at: 2017-12-12 13:10:14
End at: 2017-12-12 13:10:44

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.16 Mbit/s
95th percentile per-packet one-way delay: 137.225 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 57.99 Mbit/s
95th percentile per-packet one-way delay: 136.813 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 96.41 Mbit/s
95th percentile per-packet one-way delay: 163.859 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 136.51 Mbit/s
95th percentile per-packet one-way delay: 137.759 ms
Loss rate: 5.57%
```
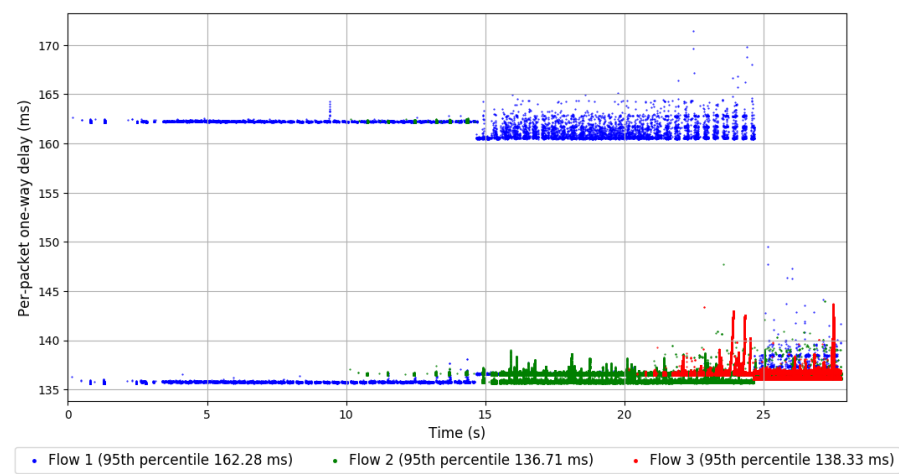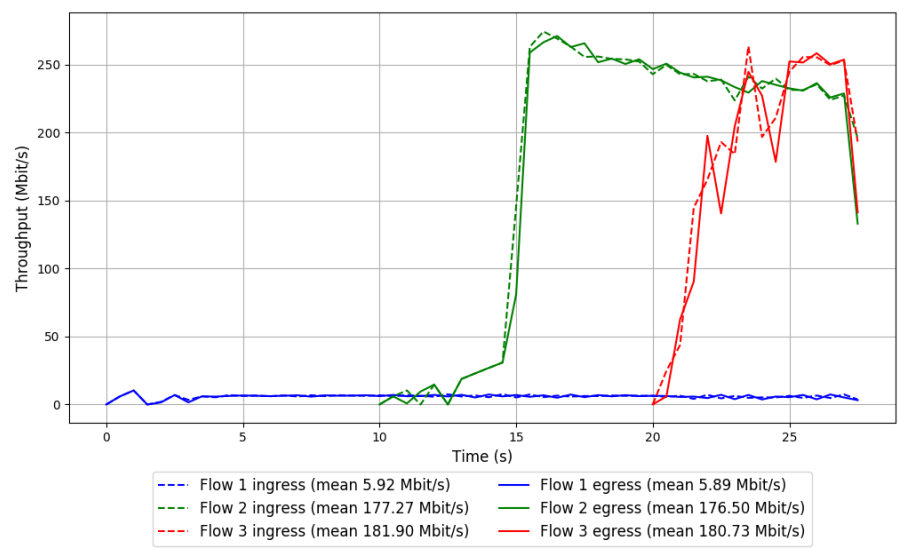
Run 7: Report of TaoVA-100x — Data Link

177

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

Start at: 2017-12-12 13:24:28
End at: 2017-12-12 13:24:58

# Below is generated by plot.py at 2017-12-12 16:38:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 146.62 Mbit/s
95th percentile per-packet one-way delay: 139.102 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 15.08 Mbit/s
95th percentile per-packet one-way delay: 163.707 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 196.00 Mbit/s
95th percentile per-packet one-way delay: 138.408 ms
Loss rate: 1.68%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 163.767 ms
Loss rate: 0.90%
```
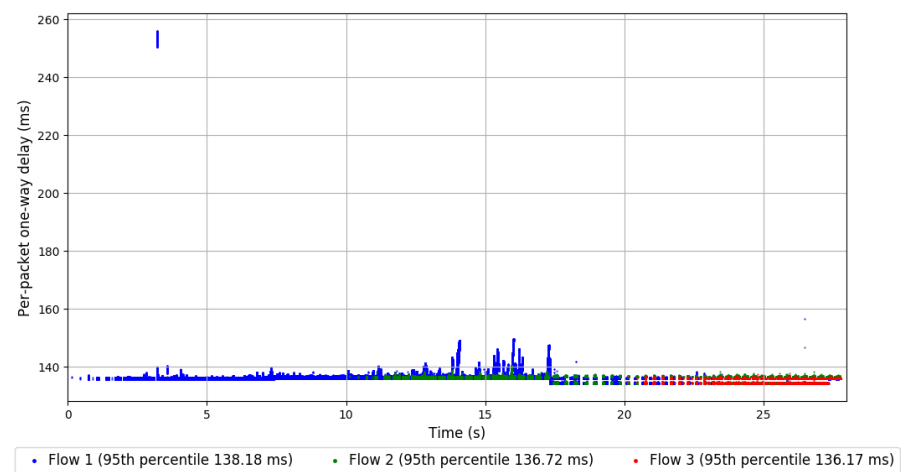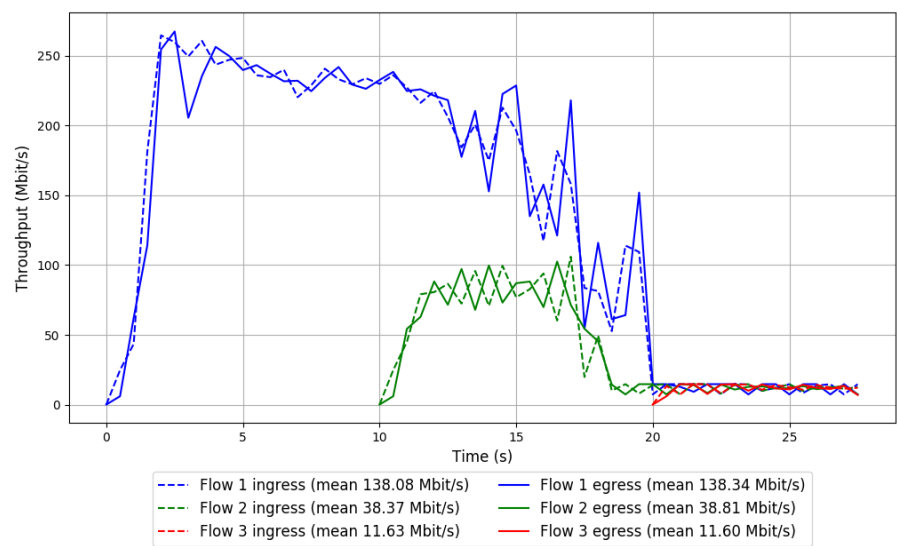
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 14.88 Mbit/s) --- Flow 1 egress (mean 15.08 Mbit/s)
Flow 2 ingress (mean 196.32 Mbit/s) --- Flow 2 egress (mean 196.00 Mbit/s)
Flow 3 ingress (mean 22.85 Mbit/s) --- Flow 3 egress (mean 23.45 Mbit/s)

Flow 1 (95th percentile 163.71 ms) • Flow 2 (95th percentile 138.41 ms) • Flow 3 (95th percentile 163.77 ms)

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

Start at: 2017-12-12 13:38:48
End at: 2017-12-12 13:39:18

# Below is generated by plot.py at 2017-12-12 16:42:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.03 Mbit/s
95th percentile per-packet one-way delay: 149.003 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 168.84 Mbit/s
95th percentile per-packet one-way delay: 144.509 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 140.09 Mbit/s
95th percentile per-packet one-way delay: 156.268 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 121.94 Mbit/s
95th percentile per-packet one-way delay: 163.352 ms
Loss rate: 4.09%
```
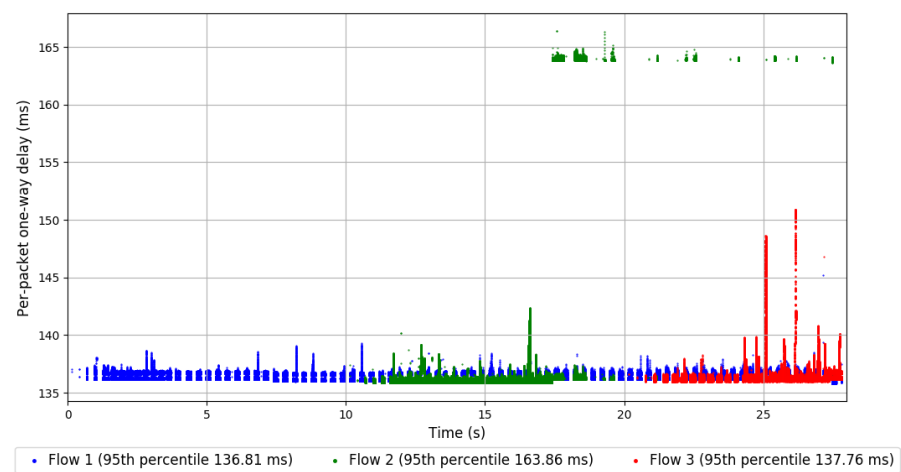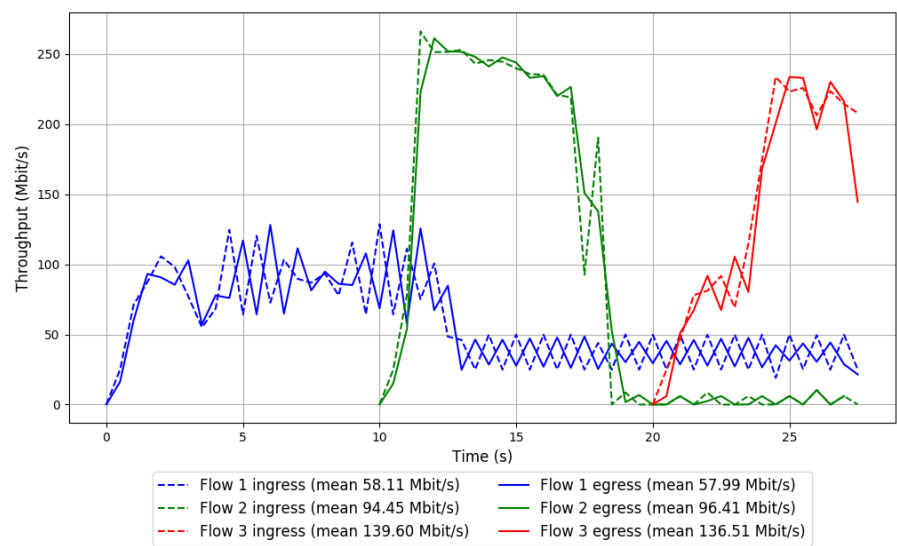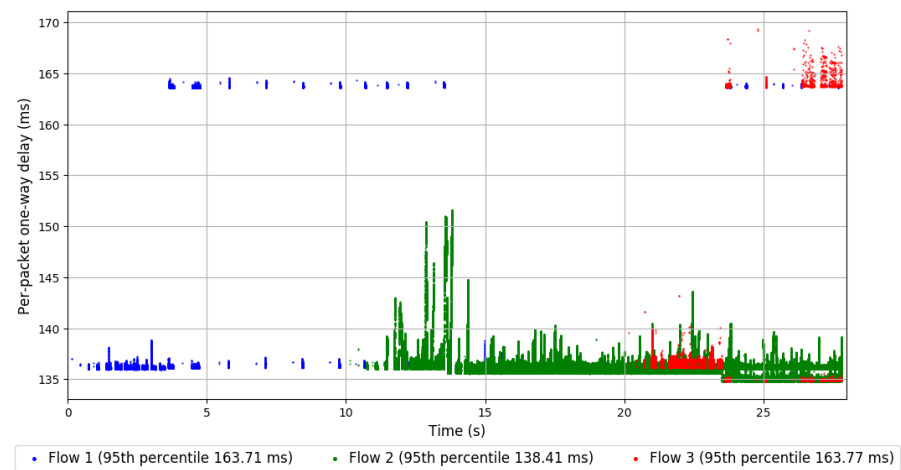
Run 9: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 168.61 Mbit/s)   Flow 1 egress (mean 168.84 Mbit/s)
Flow 2 ingress (mean 140.25 Mbit/s)   Flow 2 egress (mean 140.09 Mbit/s)
Flow 3 ingress (mean 122.79 Mbit/s)   Flow 3 egress (mean 121.94 Mbit/s)

Flow 1 (95th percentile 144.51 ms)   Flow 2 (95th percentile 156.27 ms)   Flow 3 (95th percentile 163.35 ms)

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

Start at: 2017-12-12 13:53:12
End at: 2017-12-12 13:53:42

# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 285.74 Mbit/s
95th percentile per-packet one-way delay: 144.528 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 207.96 Mbit/s
95th percentile per-packet one-way delay: 144.070 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 55.32 Mbit/s
95th percentile per-packet one-way delay: 137.073 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 154.53 Mbit/s
95th percentile per-packet one-way delay: 157.459 ms
Loss rate: 4.22%
```
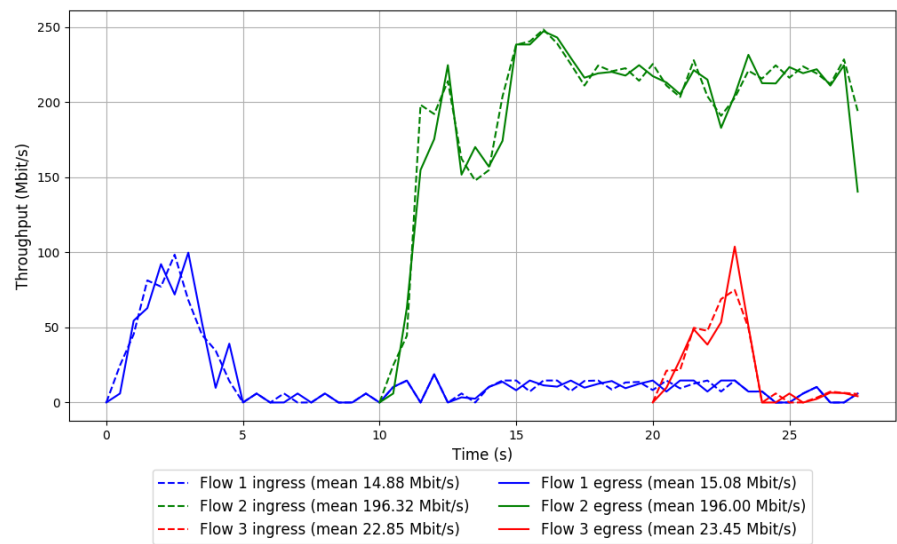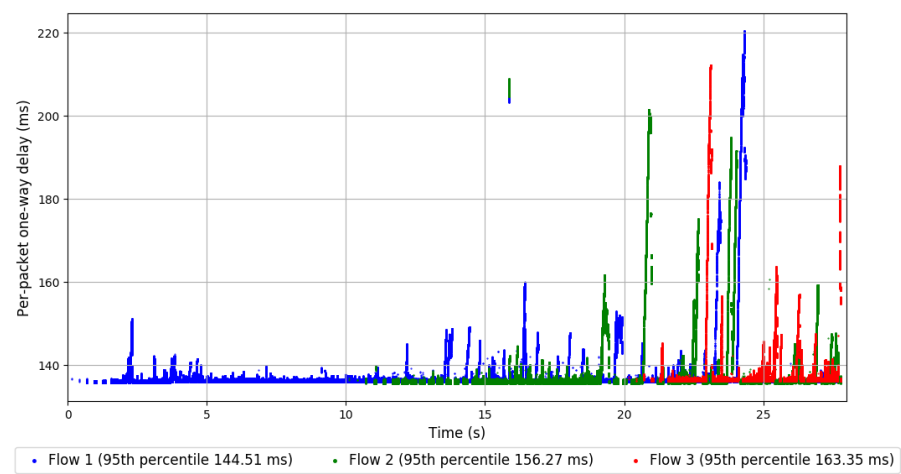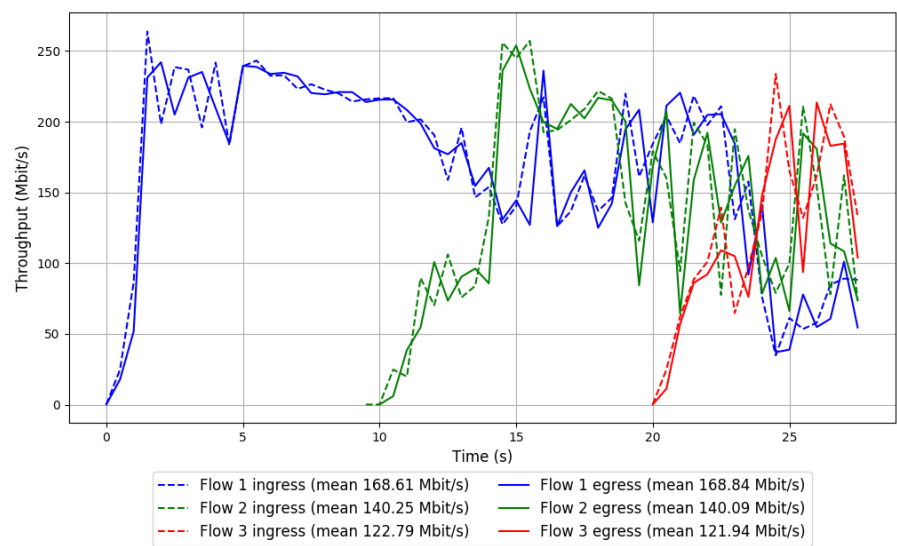
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 207.01 Mbit/s)   Flow 1 egress (mean 207.96 Mbit/s)
Flow 2 ingress (mean 55.92 Mbit/s)   Flow 2 egress (mean 55.32 Mbit/s)
Flow 3 ingress (mean 155.76 Mbit/s)   Flow 3 egress (mean 154.53 Mbit/s)

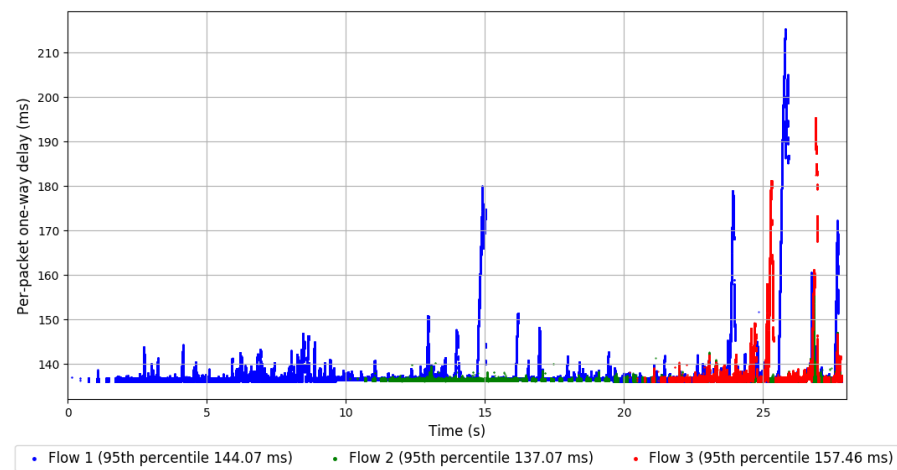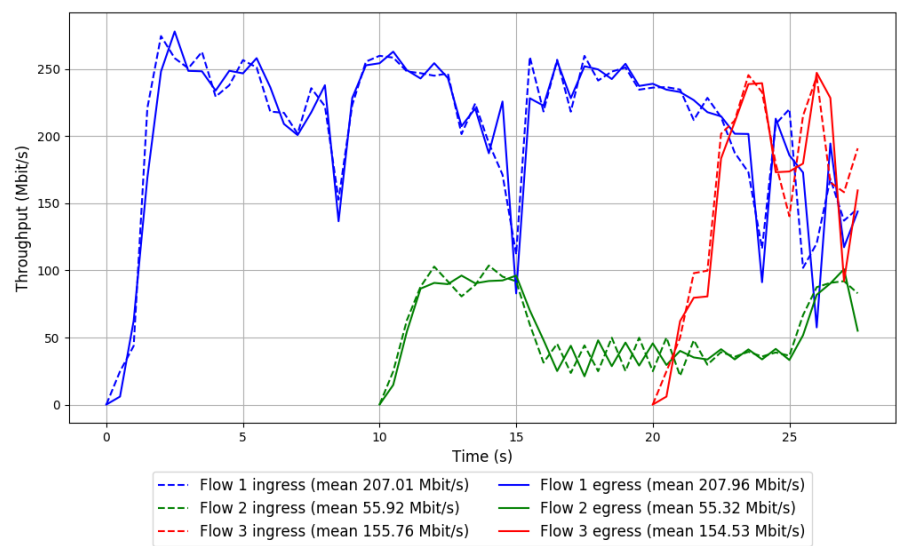Flow 1 (95th percentile 144.07 ms)   Flow 2 (95th percentile 137.07 ms)   Flow 3 (95th percentile 157.46 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-12 11:39:39
End at: 2017-12-12 11:40:09

# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.12 Mbit/s
95th percentile per-packet one-way delay: 143.723 ms
Loss rate: 1.31%
-- Flow 1:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 143.987 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 22.97 Mbit/s
95th percentile per-packet one-way delay: 140.422 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 25.08 Mbit/s
95th percentile per-packet one-way delay: 146.968 ms
Loss rate: 3.23%
```

Run 1: Report of TCP Vegas — Data Link

- - - Flow 1 ingress (mean 32.82 Mbit/s)   —— Flow 1 egress (mean 32.81 Mbit/s)
- - - Flow 2 ingress (mean 22.85 Mbit/s)   —— Flow 2 egress (mean 22.97 Mbit/s)
- - - Flow 3 ingress (mean 25.12 Mbit/s)   —— Flow 3 egress (mean 25.08 Mbit/s)

- Flow 1 (95th percentile 143.99 ms)   • Flow 2 (95th percentile 140.42 ms)   • Flow 3 (95th percentile 146.97 ms)

185

Run 2: Statistics of TCP Vegas

Start at: 2017-12-12 11:53:18
End at: 2017-12-12 11:53:48

Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-12 12:06:47
End at: 2017-12-12 12:07:17


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.21 Mbit/s
95th percentile per-packet one-way delay: 173.589 ms
Loss rate: 1.42%
-- Flow 1:
Average throughput: 64.60 Mbit/s
95th percentile per-packet one-way delay: 174.067 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 164.054 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 42.86 Mbit/s
95th percentile per-packet one-way delay: 148.857 ms
Loss rate: 3.53%
```
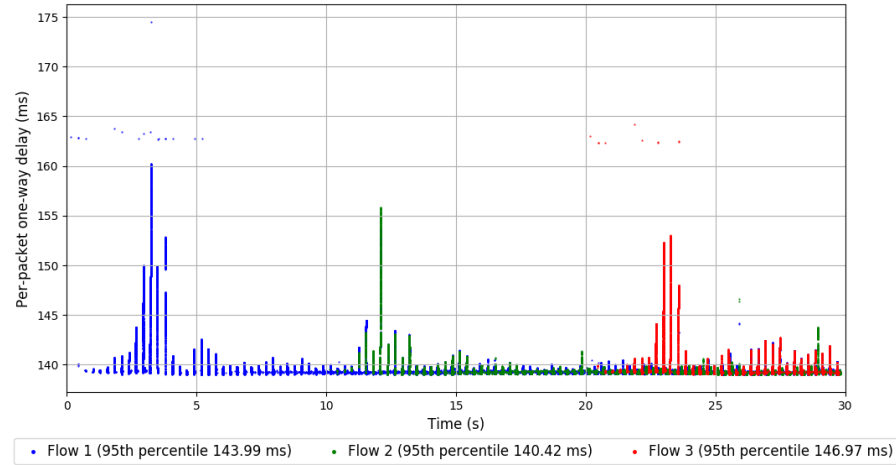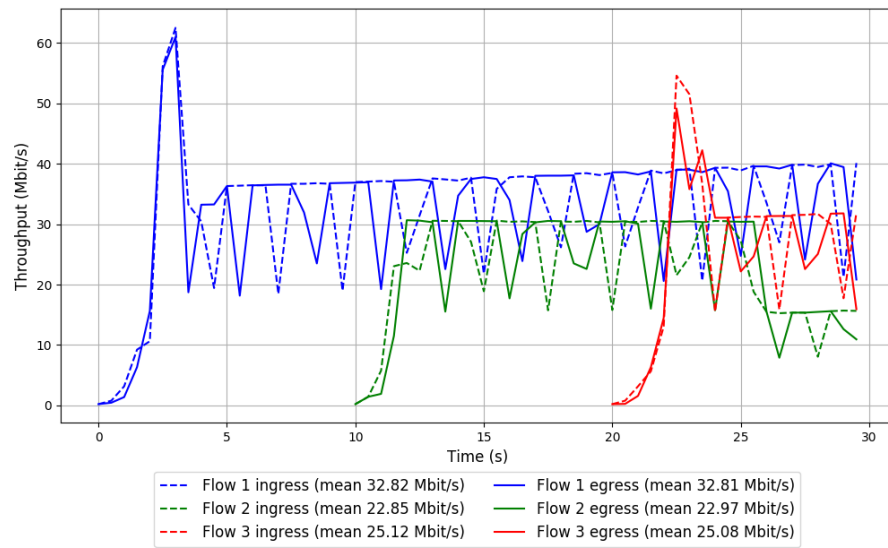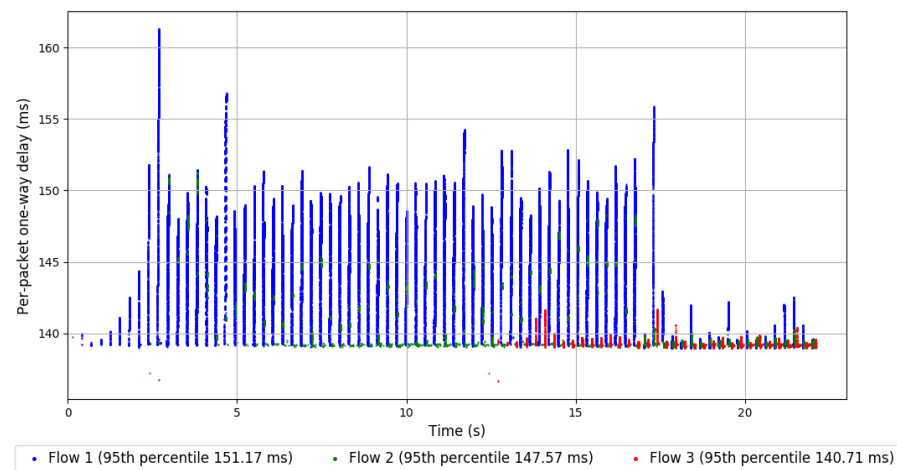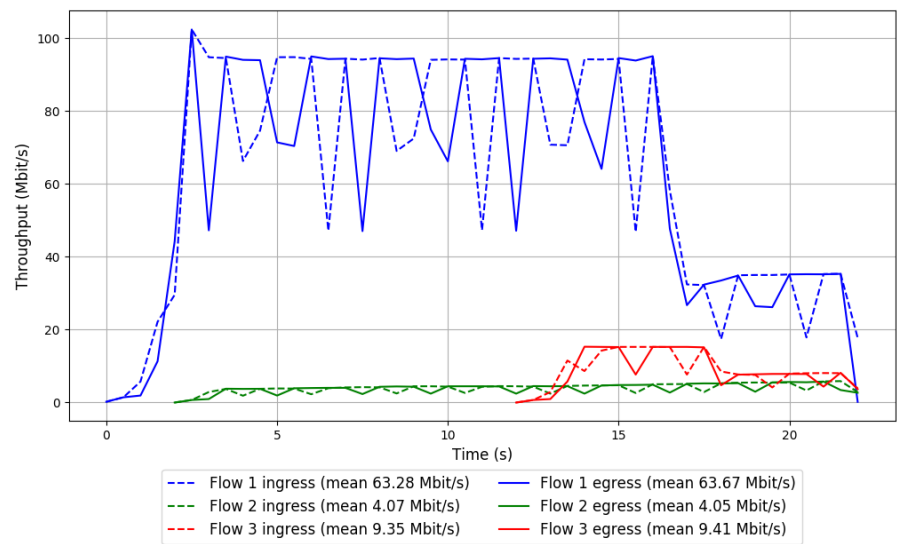
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 64.57 Mbit/s) — — — Flow 1 egress (mean 64.60 Mbit/s)
Flow 2 ingress (mean 1.14 Mbit/s) — — — Flow 2 egress (mean 1.14 Mbit/s)
Flow 3 ingress (mean 42.98 Mbit/s) — — — Flow 3 egress (mean 42.86 Mbit/s)

Flow 1 (95th percentile 174.07 ms)   Flow 2 (95th percentile 164.05 ms)   Flow 3 (95th percentile 148.86 ms)

189

Run 4: Statistics of TCP Vegas

Start at: 2017-12-12 12:20:47
End at: 2017-12-12 12:21:17

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 50.01 Mbit/s)   Flow 1 egress (mean 49.98 Mbit/s)
Flow 2 ingress (mean 49.29 Mbit/s)   Flow 2 egress (mean 49.13 Mbit/s)
Flow 3 ingress (mean 41.26 Mbit/s)   Flow 3 egress (mean 41.69 Mbit/s)

Flow 1 (95th percentile 141.59 ms)   Flow 2 (95th percentile 144.56 ms)   Flow 3 (95th percentile 153.24 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-12 12:34:51
End at: 2017-12-12 12:35:21


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.64 Mbit/s
95th percentile per-packet one-way delay: 146.520 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 54.43 Mbit/s
95th percentile per-packet one-way delay: 142.316 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 33.38 Mbit/s
95th percentile per-packet one-way delay: 147.285 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 53.12 Mbit/s
95th percentile per-packet one-way delay: 150.160 ms
Loss rate: 1.50%
```
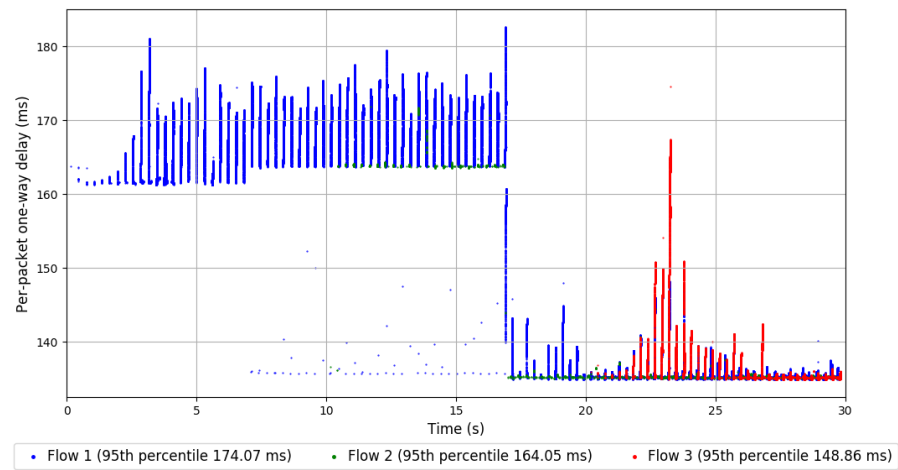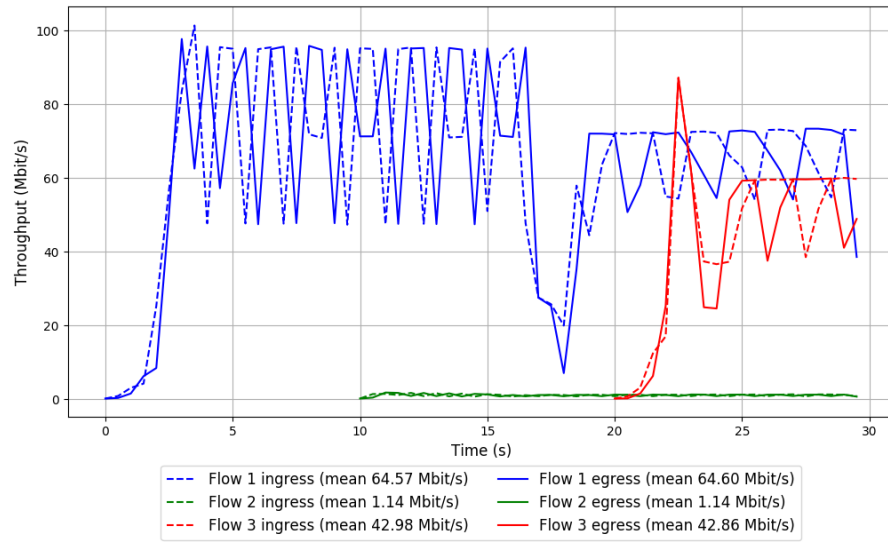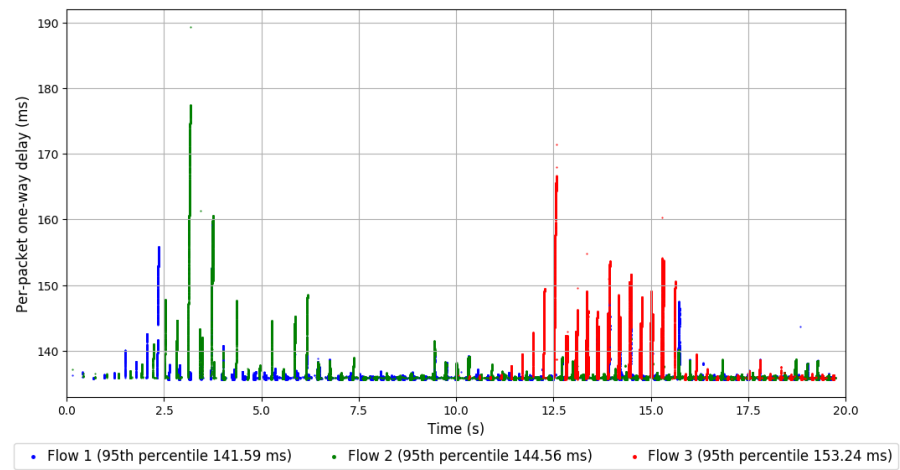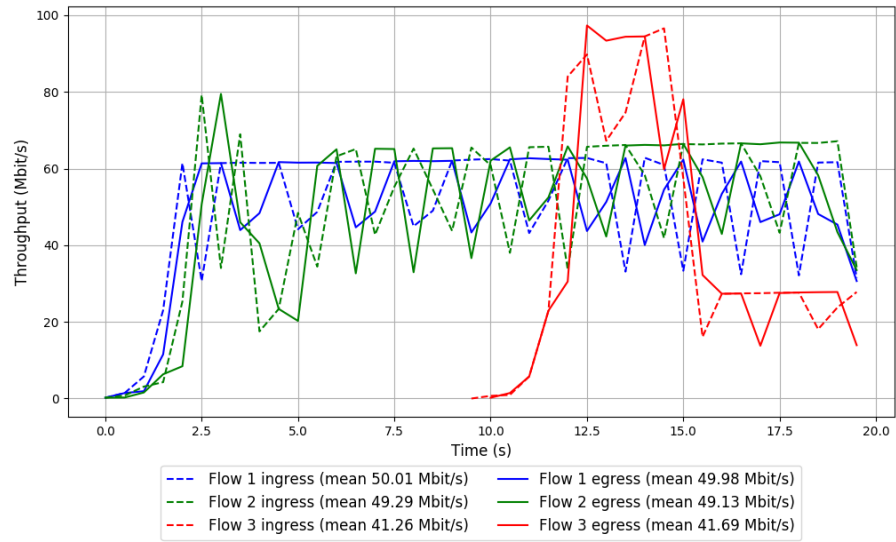
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 54.48 Mbit/s)
Flow 1 egress (mean 54.43 Mbit/s)
Flow 2 ingress (mean 33.34 Mbit/s)
Flow 2 egress (mean 33.38 Mbit/s)
Flow 3 ingress (mean 52.43 Mbit/s)
Flow 3 egress (mean 53.12 Mbit/s)

Flow 1 (95th percentile 142.32 ms)
Flow 2 (95th percentile 147.28 ms)
Flow 3 (95th percentile 150.16 ms)

Run 6: Statistics of TCP Vegas

Start at: 2017-12-12 12:49:08
End at: 2017-12-12 12:49:38

Run 6: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 39.78 Mbit/s)   Flow 1 egress (mean 39.73 Mbit/s)
Flow 2 ingress (mean 32.99 Mbit/s)   Flow 2 egress (mean 33.10 Mbit/s)
Flow 3 ingress (mean 70.98 Mbit/s)   Flow 3 egress (mean 70.45 Mbit/s)

Flow 1 (95th percentile 142.91 ms)   Flow 2 (95th percentile 144.32 ms)   Flow 3 (95th percentile 150.89 ms)

195

```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-12 13:03:27
End at: 2017-12-12 13:03:57


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.21 Mbit/s
95th percentile per-packet one-way delay: 144.041 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 52.16 Mbit/s
95th percentile per-packet one-way delay: 139.401 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 147.381 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 15.16 Mbit/s
95th percentile per-packet one-way delay: 138.760 ms
Loss rate: 3.22%
```
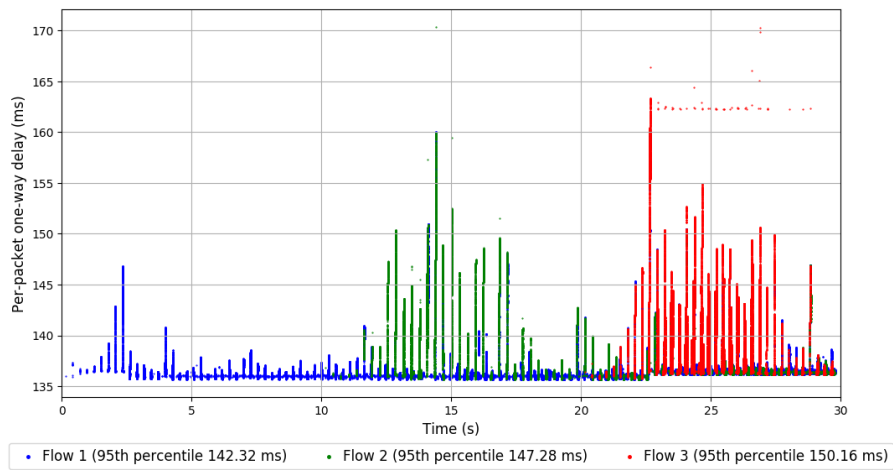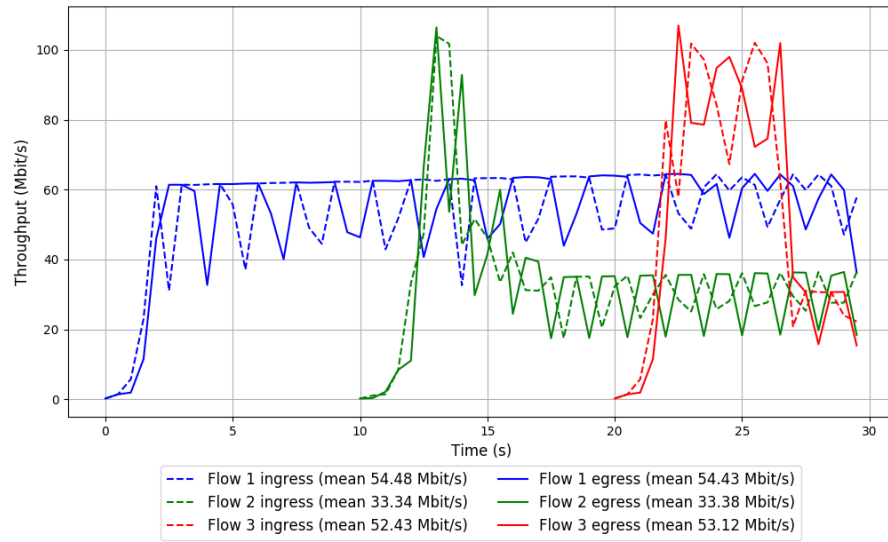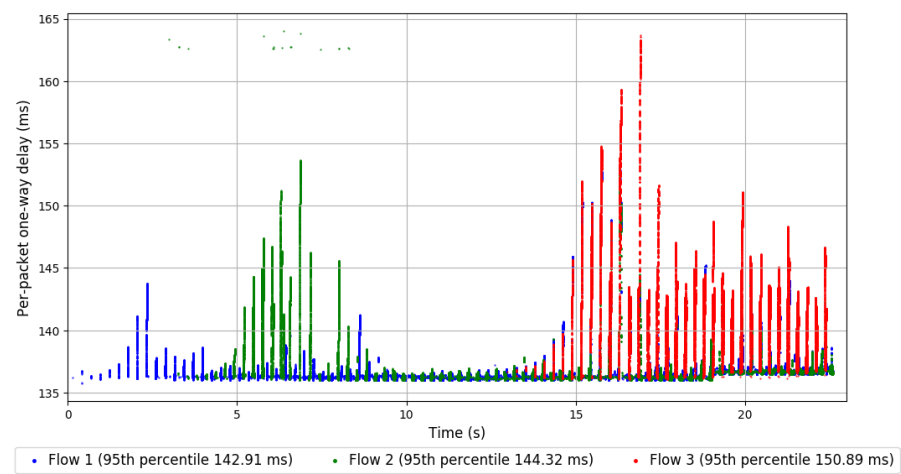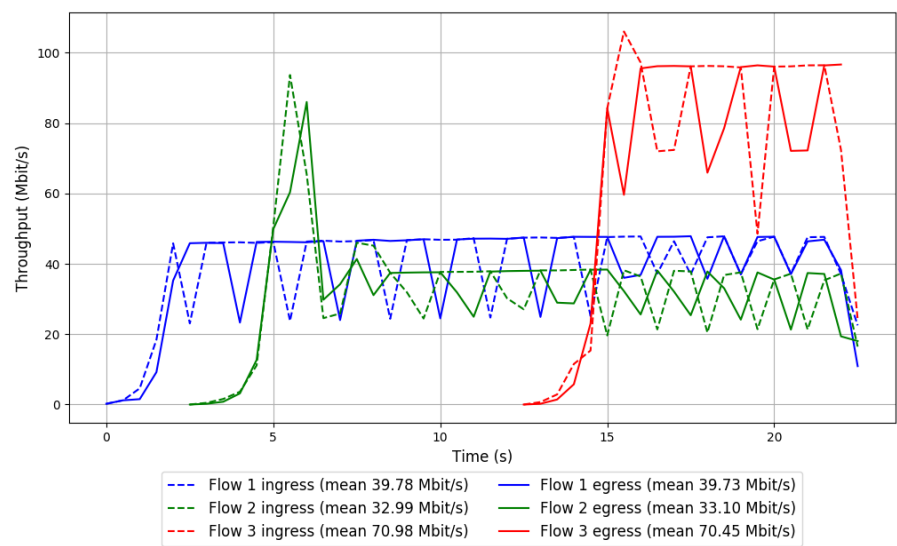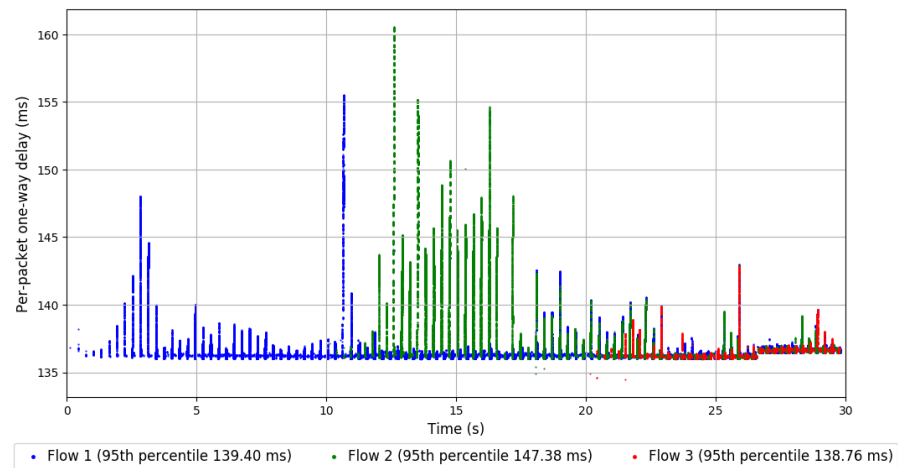
Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 52.05 Mbit/s)   Flow 1 egress (mean 52.16 Mbit/s)
Flow 2 ingress (mean 40.91 Mbit/s)   Flow 2 egress (mean 40.94 Mbit/s)
Flow 3 ingress (mean 15.23 Mbit/s)   Flow 3 egress (mean 15.16 Mbit/s)

Flow 1 (95th percentile 139.40 ms)   Flow 2 (95th percentile 147.38 ms)   Flow 3 (95th percentile 138.76 ms)

197

```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-12 13:17:23
End at: 2017-12-12 13:17:53

# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 142.784 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 16.21 Mbit/s
95th percentile per-packet one-way delay: 145.842 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 139.318 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 18.97 Mbit/s
95th percentile per-packet one-way delay: 139.775 ms
Loss rate: 3.34%
```
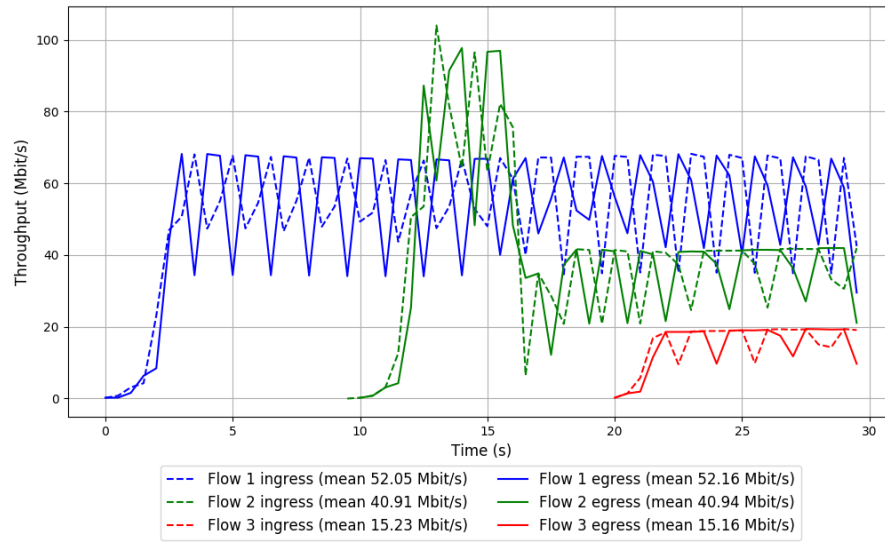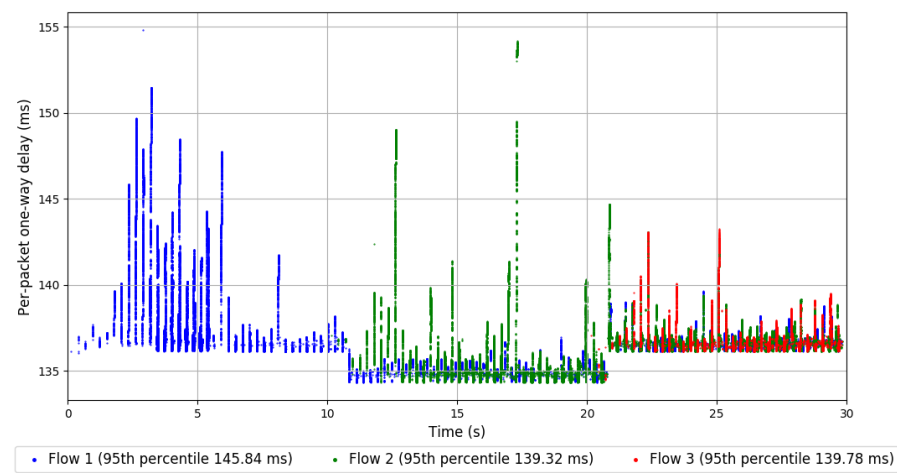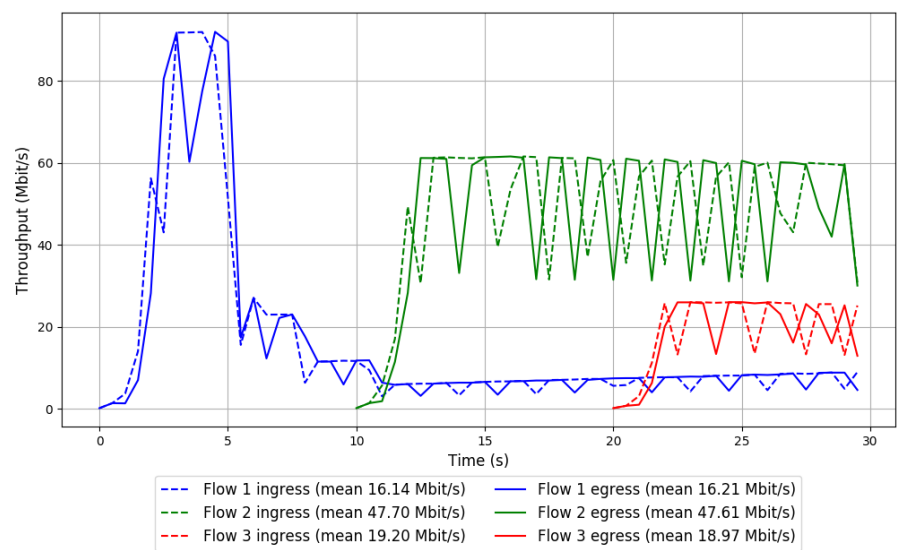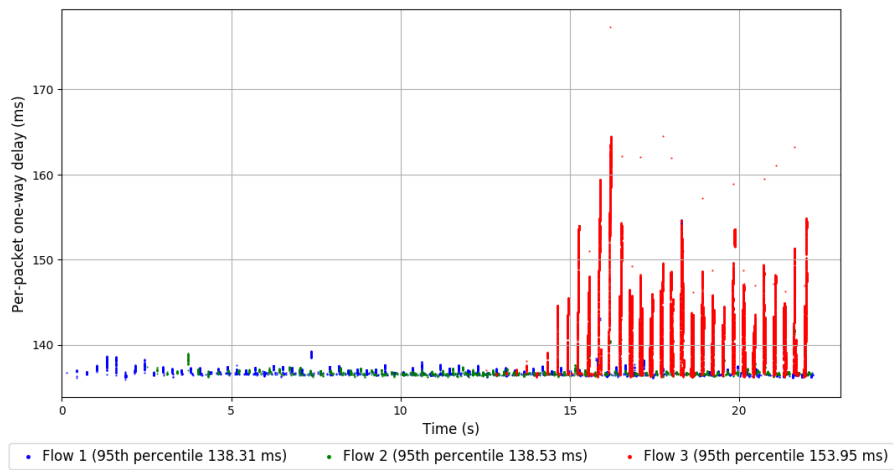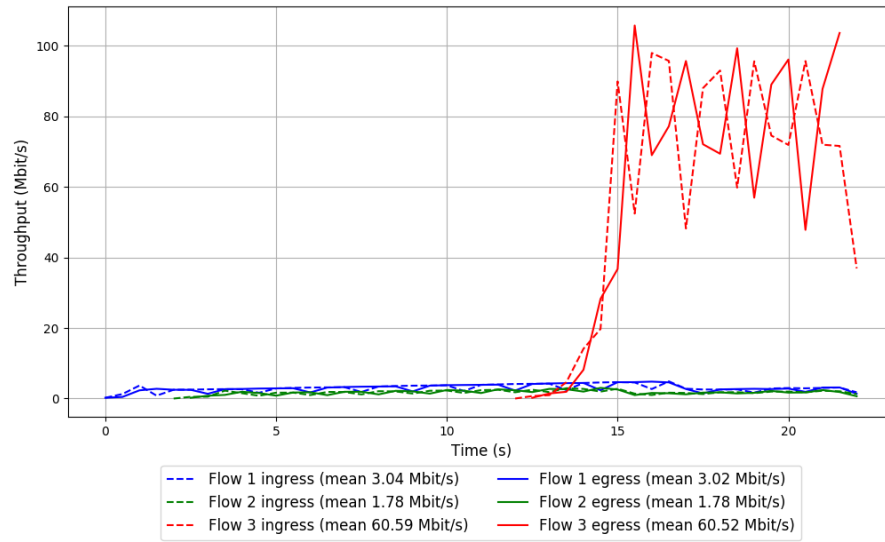
Run 8: Report of TCP Vegas — Data Link

Run 9: Statistics of TCP Vegas

Start at: 2017-12-12 13:31:41
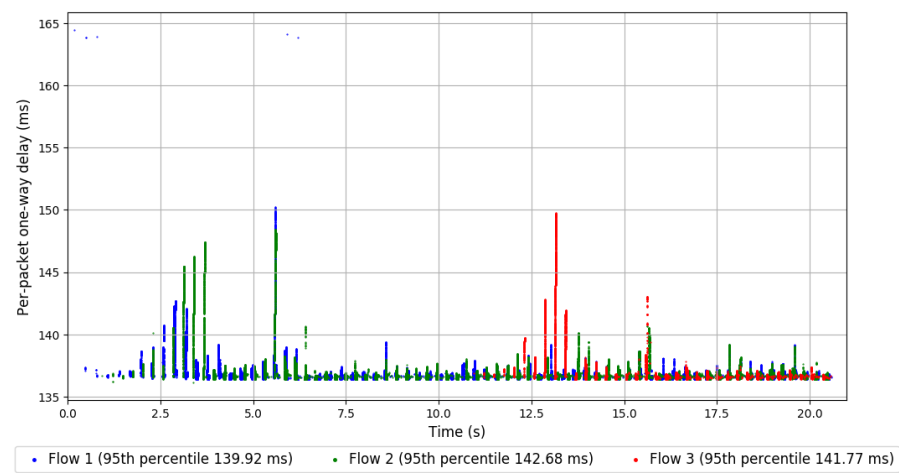End at: 2017-12-12 13:32:11

Run 9: Report of TCP Vegas — Data Link

Run 10: Statistics of TCP Vegas

Start at: 2017-12-12 13:46:12
End at: 2017-12-12 13:46:42

Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-12-12 11:41:46
End at: 2017-12-12 11:42:16


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.83 Mbit/s
95th percentile per-packet one-way delay: 234.580 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 137.53 Mbit/s
95th percentile per-packet one-way delay: 242.796 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 122.03 Mbit/s
95th percentile per-packet one-way delay: 225.828 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 32.59 Mbit/s
95th percentile per-packet one-way delay: 214.051 ms
Loss rate: 7.12%
```

Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-12-12 11:55:26
End at: 2017-12-12 11:55:56


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.19 Mbit/s
95th percentile per-packet one-way delay: 264.676 ms
Loss rate: 4.10%
-- Flow 1:
Average throughput: 113.13 Mbit/s
95th percentile per-packet one-way delay: 264.953 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 155.77 Mbit/s
95th percentile per-packet one-way delay: 205.547 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 94.72 Mbit/s
95th percentile per-packet one-way delay: 339.820 ms
Loss rate: 14.56%
```

Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-12-12 12:08:59
End at: 2017-12-12 12:09:29

# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 225.62 Mbit/s
95th percentile per-packet one-way delay: 285.416 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 205.087 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 183.93 Mbit/s
95th percentile per-packet one-way delay: 293.830 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 43.00 Mbit/s
95th percentile per-packet one-way delay: 443.172 ms
Loss rate: 5.24%
```
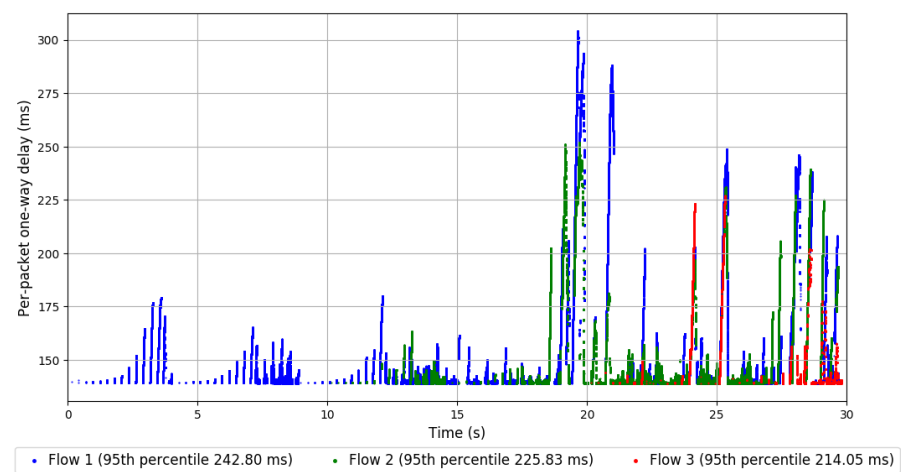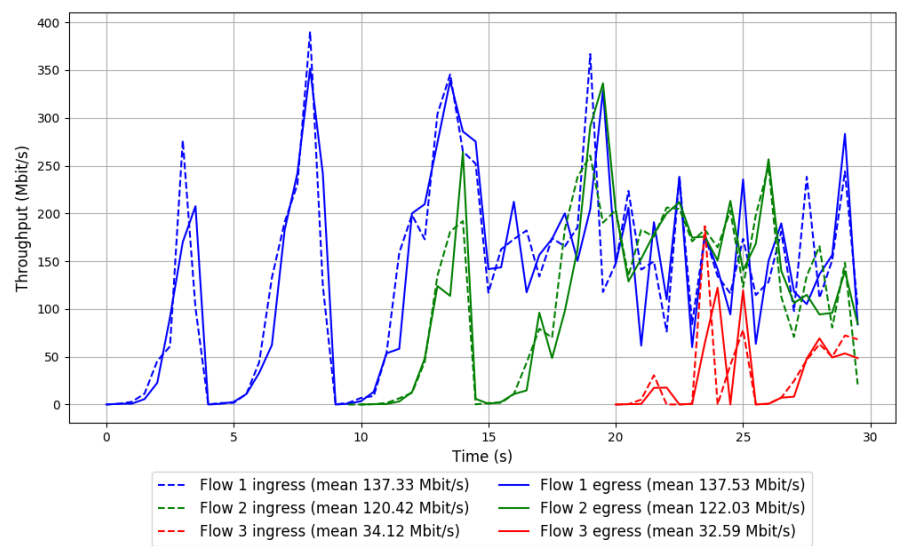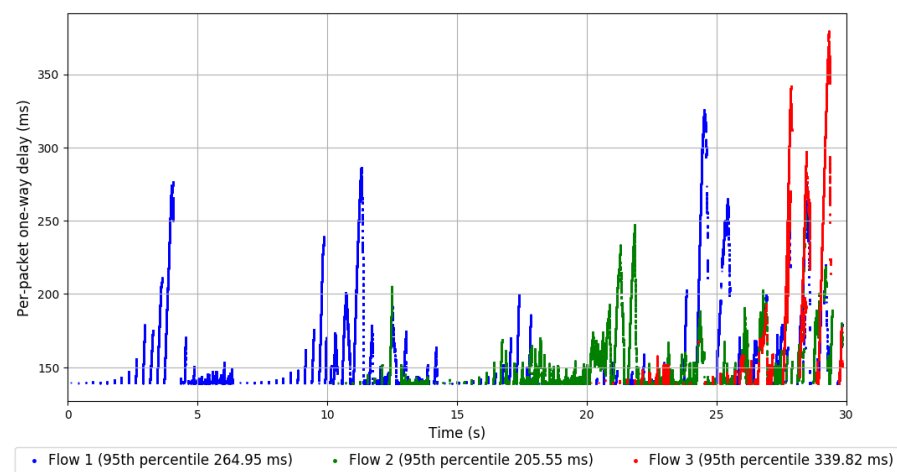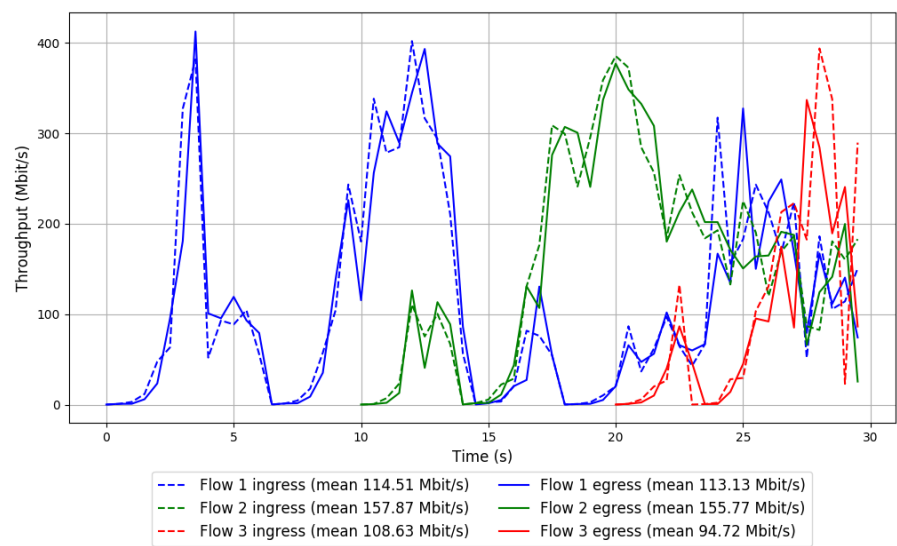
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 91.51 Mbit/s) ---- Flow 1 egress (mean 90.01 Mbit/s) ——
Flow 2 ingress (mean 186.58 Mbit/s) ---- Flow 2 egress (mean 183.93 Mbit/s) ——
Flow 3 ingress (mean 44.10 Mbit/s) ---- Flow 3 egress (mean 43.00 Mbit/s) ——

Flow 1 (95th percentile 205.09 ms) • Flow 2 (95th percentile 293.83 ms) • Flow 3 (95th percentile 443.17 ms) •

```
Run 4: Statistics of Verus

Start at: 2017-12-12 12:23:05
End at: 2017-12-12 12:23:35


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.84 Mbit/s
95th percentile per-packet one-way delay: 318.001 ms
Loss rate: 6.57%
-- Flow 1:
Average throughput: 72.62 Mbit/s
95th percentile per-packet one-way delay: 336.977 ms
Loss rate: 9.39%
-- Flow 2:
Average throughput: 32.94 Mbit/s
95th percentile per-packet one-way delay: 159.463 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 42.53 Mbit/s
95th percentile per-packet one-way delay: 142.085 ms
Loss rate: 0.20%
```
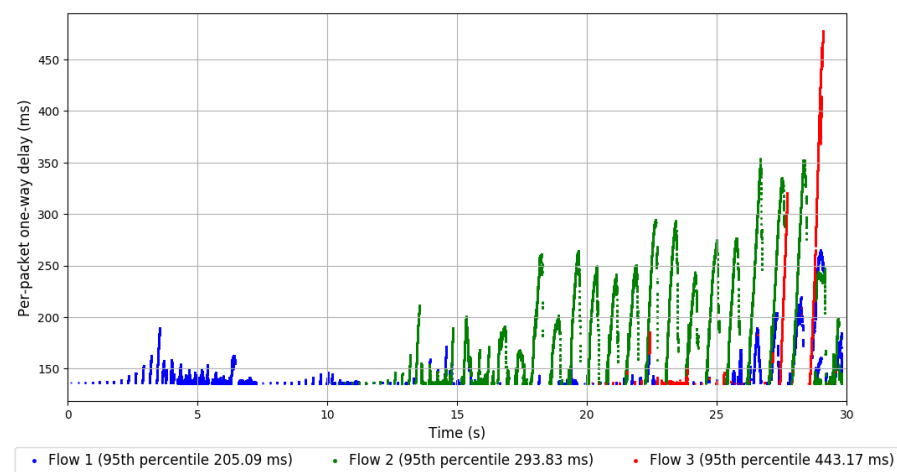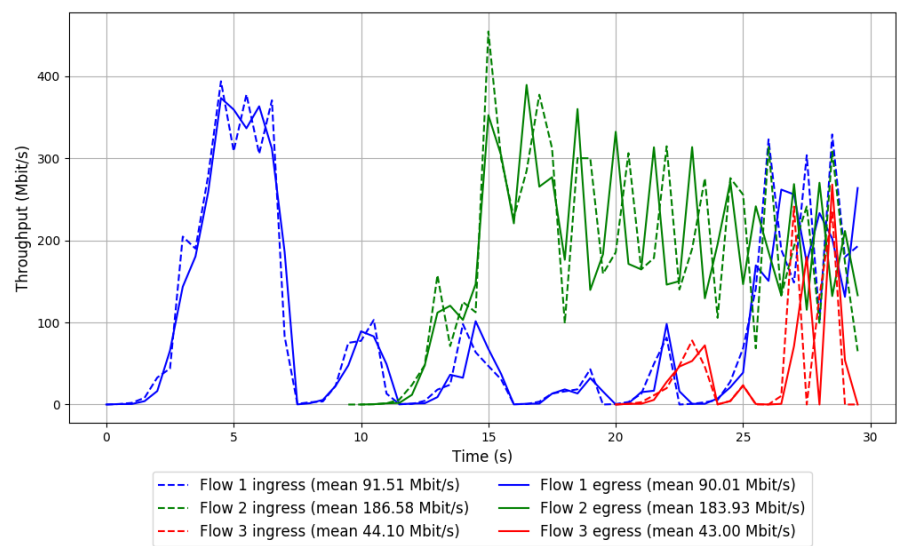
Run 4: Report of Verus — Data Link

- Flow 1 ingress (mean 79.46 Mbit/s) — Flow 1 egress (mean 72.62 Mbit/s)
- Flow 2 ingress (mean 32.52 Mbit/s) — Flow 2 egress (mean 32.94 Mbit/s)
- Flow 3 ingress (mean 41.32 Mbit/s) — Flow 3 egress (mean 42.53 Mbit/s)

- Flow 1 (95th percentile 336.98 ms)
- Flow 2 (95th percentile 159.46 ms)
- Flow 3 (95th percentile 142.09 ms)

```
Run 5: Statistics of Verus

Start at: 2017-12-12 12:37:02
End at: 2017-12-12 12:37:32


# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.98 Mbit/s
95th percentile per-packet one-way delay: 210.020 ms
Loss rate: 0.42%
-- Flow 1:
Average throughput: 133.53 Mbit/s
95th percentile per-packet one-way delay: 178.688 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 129.52 Mbit/s
95th percentile per-packet one-way delay: 188.365 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 76.17 Mbit/s
95th percentile per-packet one-way delay: 275.728 ms
Loss rate: 1.03%
```
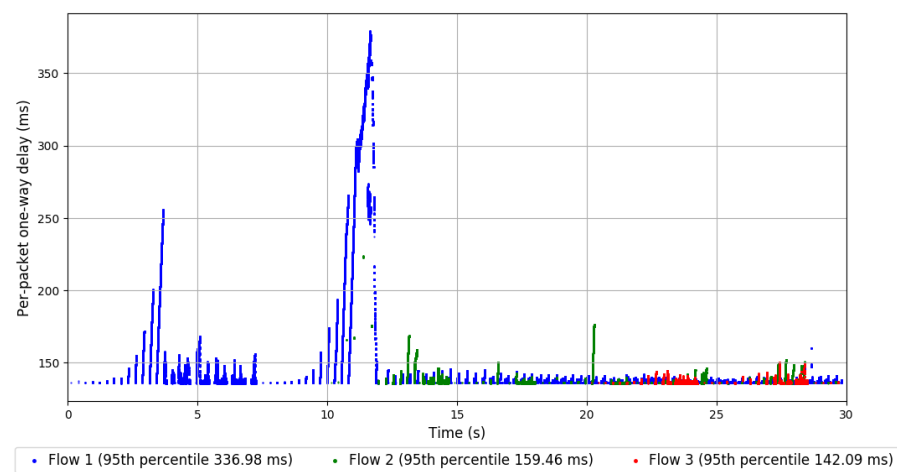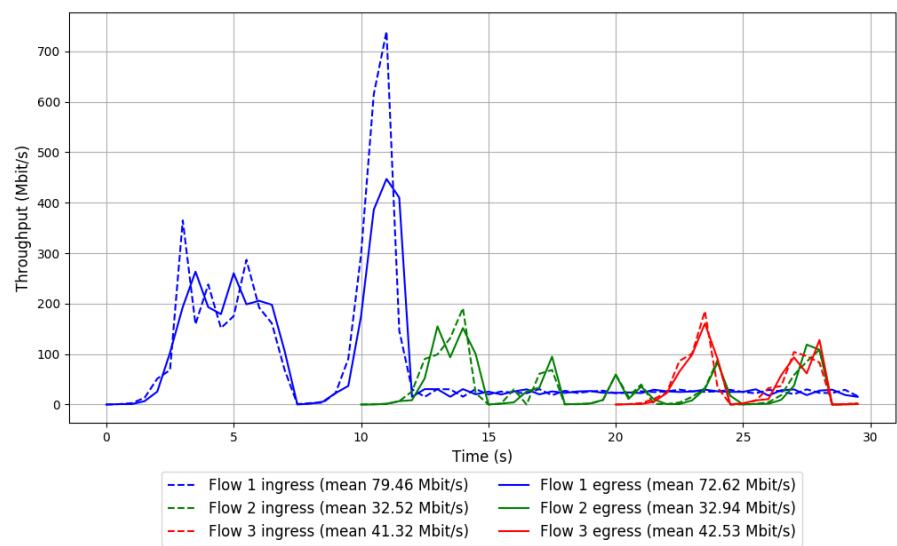
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 131.62 Mbit/s)   Flow 1 egress (mean 133.53 Mbit/s)
Flow 2 ingress (mean 129.58 Mbit/s)   Flow 2 egress (mean 129.52 Mbit/s)
Flow 3 ingress (mean 72.35 Mbit/s)   Flow 3 egress (mean 76.17 Mbit/s)

Flow 1 (95th percentile 178.69 ms)   Flow 2 (95th percentile 188.37 ms)   Flow 3 (95th percentile 275.73 ms)

```
Run 6: Statistics of Verus

Start at: 2017-12-12 12:51:18
End at: 2017-12-12 12:51:48

# Below is generated by plot.py at 2017-12-12 16:43:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 225.45 Mbit/s
95th percentile per-packet one-way delay: 209.886 ms
Loss rate: 1.90%
-- Flow 1:
Average throughput: 145.27 Mbit/s
95th percentile per-packet one-way delay: 208.812 ms
Loss rate: 1.69%
-- Flow 2:
Average throughput: 108.22 Mbit/s
95th percentile per-packet one-way delay: 217.705 ms
Loss rate: 2.40%
-- Flow 3:
Average throughput: 29.21 Mbit/s
95th percentile per-packet one-way delay: 203.824 ms
Loss rate: 1.34%
```
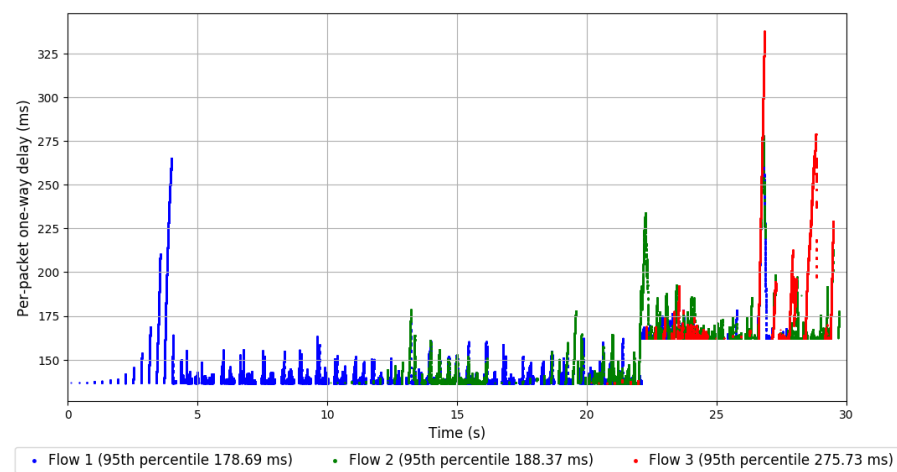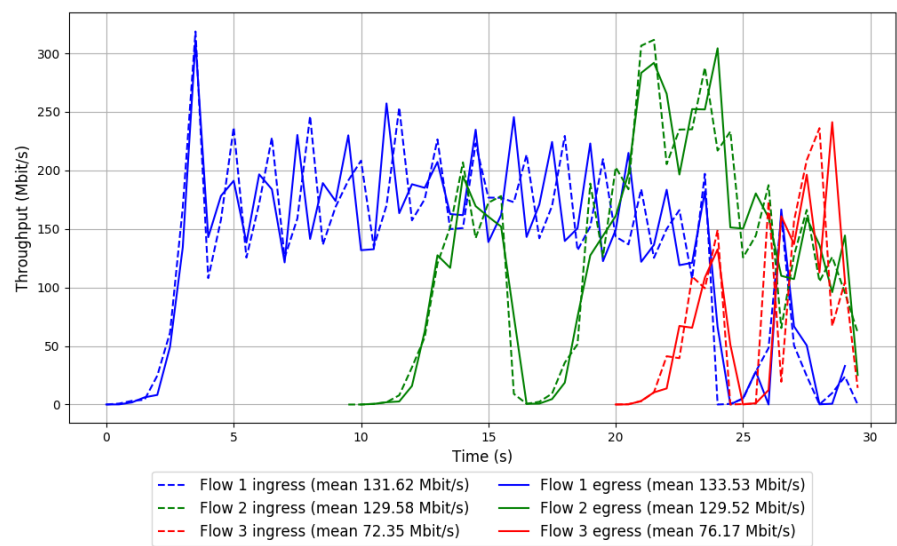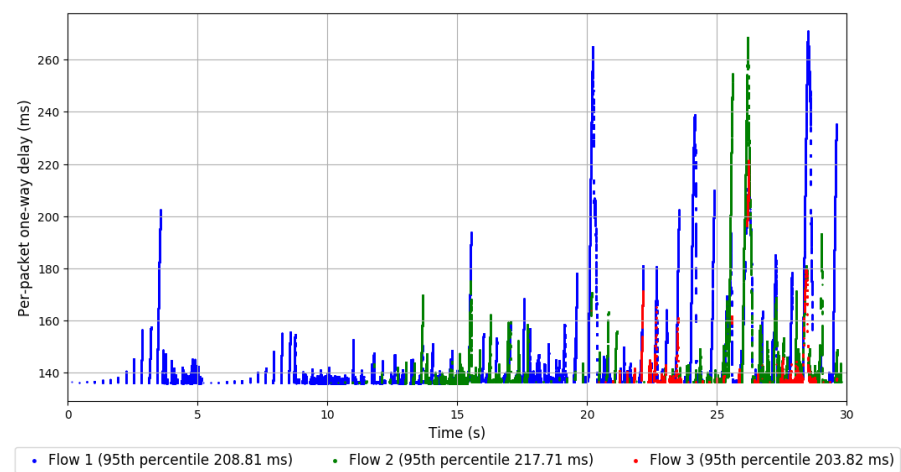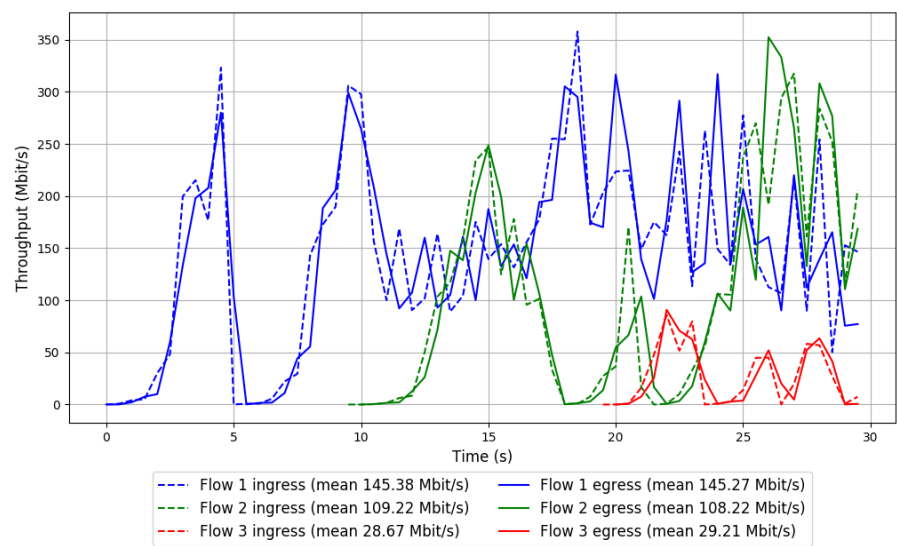
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-12-12 13:05:30
End at: 2017-12-12 13:06:00


# Below is generated by plot.py at 2017-12-12 16:44:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 182.06 Mbit/s
95th percentile per-packet one-way delay: 237.268 ms
Loss rate: 3.34%
-- Flow 1:
Average throughput: 134.92 Mbit/s
95th percentile per-packet one-way delay: 192.785 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 59.88 Mbit/s
95th percentile per-packet one-way delay: 348.704 ms
Loss rate: 12.11%
-- Flow 3:
Average throughput: 27.26 Mbit/s
95th percentile per-packet one-way delay: 177.993 ms
Loss rate: 0.36%
```
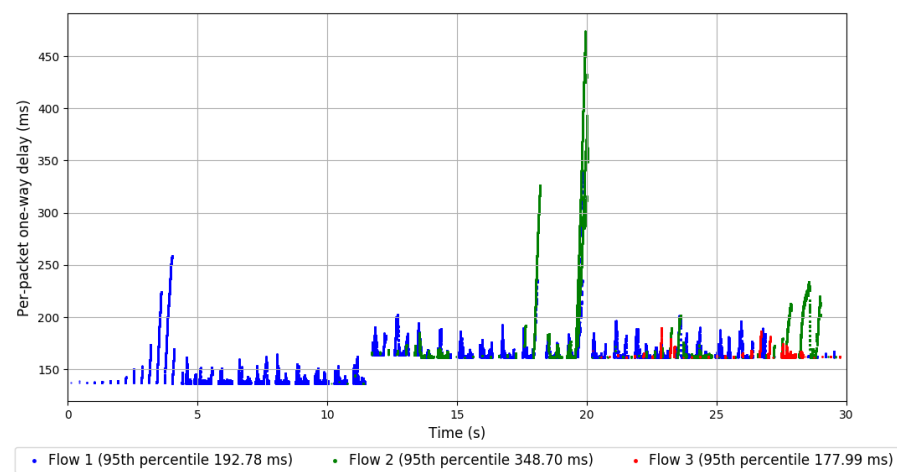
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-12-12 13:19:33
End at: 2017-12-12 13:20:03

# Below is generated by plot.py at 2017-12-12 16:46:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.42 Mbit/s
95th percentile per-packet one-way delay: 217.783 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 164.55 Mbit/s
95th percentile per-packet one-way delay: 246.479 ms
Loss rate: 2.75%
-- Flow 2:
Average throughput: 48.67 Mbit/s
95th percentile per-packet one-way delay: 218.804 ms
Loss rate: 5.65%
-- Flow 3:
Average throughput: 62.06 Mbit/s
95th percentile per-packet one-way delay: 158.132 ms
Loss rate: 7.87%
```
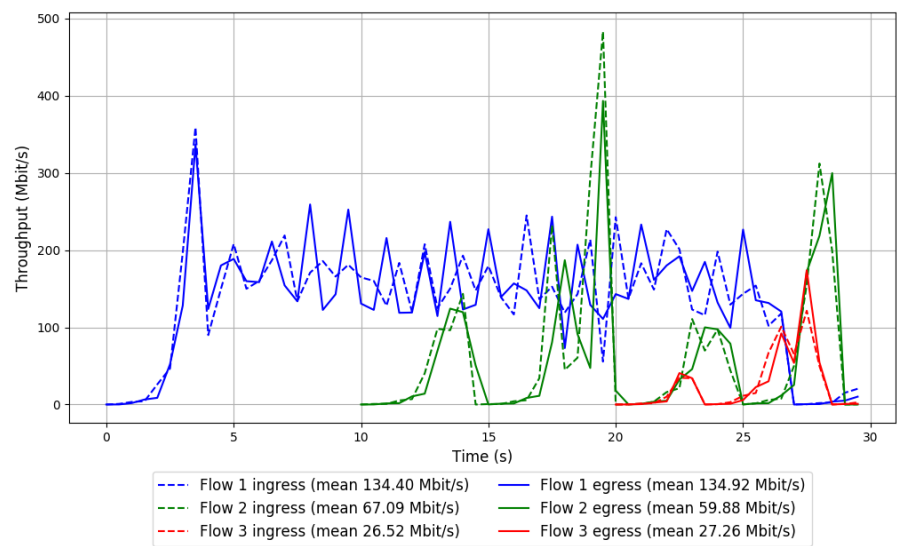
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 167.72 Mbit/s) --- Flow 1 egress (mean 164.55 Mbit/s)
Flow 2 ingress (mean 50.82 Mbit/s) --- Flow 2 egress (mean 48.67 Mbit/s)
Flow 3 ingress (mean 64.11 Mbit/s) --- Flow 3 egress (mean 62.06 Mbit/s)

Flow 1 (95th percentile 246.48 ms)   Flow 2 (95th percentile 218.80 ms)   Flow 3 (95th percentile 158.13 ms)

```
Run 9: Statistics of Verus

Start at: 2017-12-12 13:33:44
End at: 2017-12-12 13:34:14


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.15 Mbit/s
95th percentile per-packet one-way delay: 275.974 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 146.58 Mbit/s
95th percentile per-packet one-way delay: 231.465 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 209.52 Mbit/s
95th percentile per-packet one-way delay: 303.078 ms
Loss rate: 3.80%
-- Flow 3:
Average throughput: 20.61 Mbit/s
95th percentile per-packet one-way delay: 206.682 ms
Loss rate: 13.11%
```
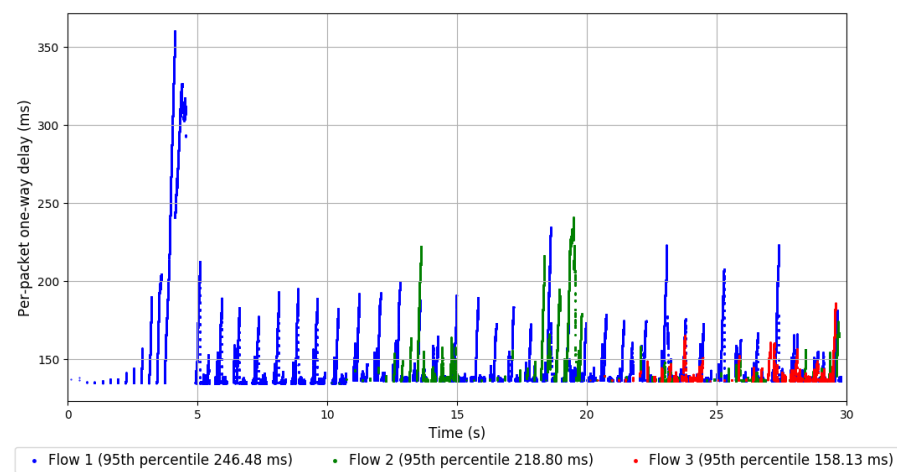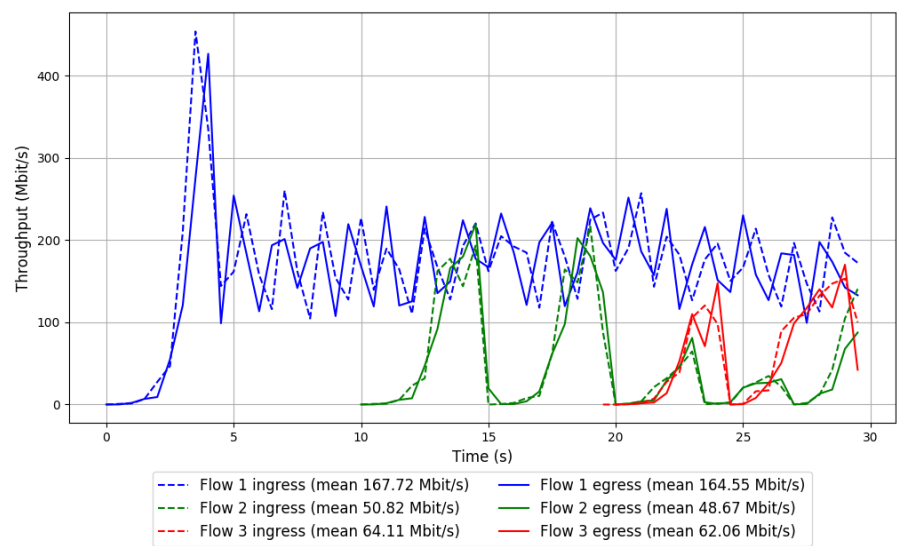
Run 9: Report of Verus — Data Link

- - - - Flow 1 ingress (mean 146.40 Mbit/s)   —— Flow 1 egress (mean 146.58 Mbit/s)
- - - - Flow 2 ingress (mean 218.07 Mbit/s)   —— Flow 2 egress (mean 209.52 Mbit/s)
- - - - Flow 3 ingress (mean 23.05 Mbit/s)   —— Flow 3 egress (mean 20.61 Mbit/s)

• Flow 1 (95th percentile 231.47 ms)   • Flow 2 (95th percentile 303.08 ms)   • Flow 3 (95th percentile 206.68 ms)

```
Run 10: Statistics of Verus

Start at: 2017-12-12 13:48:21
End at: 2017-12-12 13:48:51


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.08 Mbit/s
95th percentile per-packet one-way delay: 209.227 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 159.88 Mbit/s
95th percentile per-packet one-way delay: 187.320 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 80.22 Mbit/s
95th percentile per-packet one-way delay: 211.497 ms
Loss rate: 3.74%
-- Flow 3:
Average throughput: 93.26 Mbit/s
95th percentile per-packet one-way delay: 322.326 ms
Loss rate: 5.73%
```
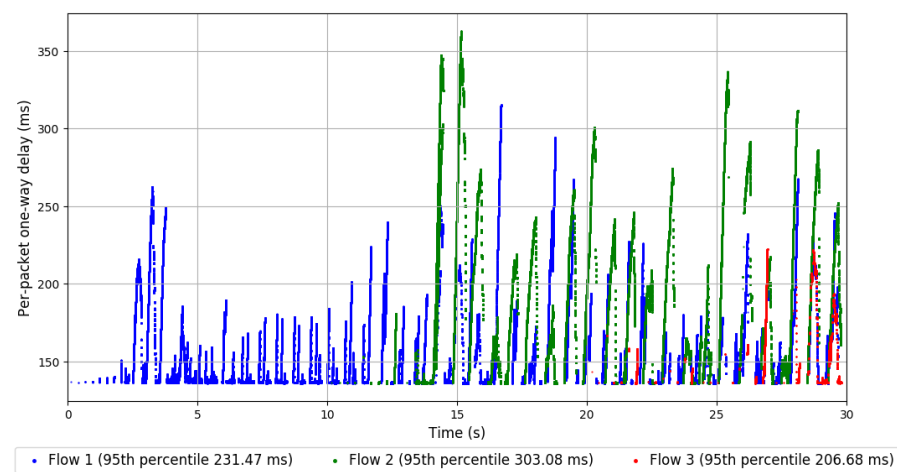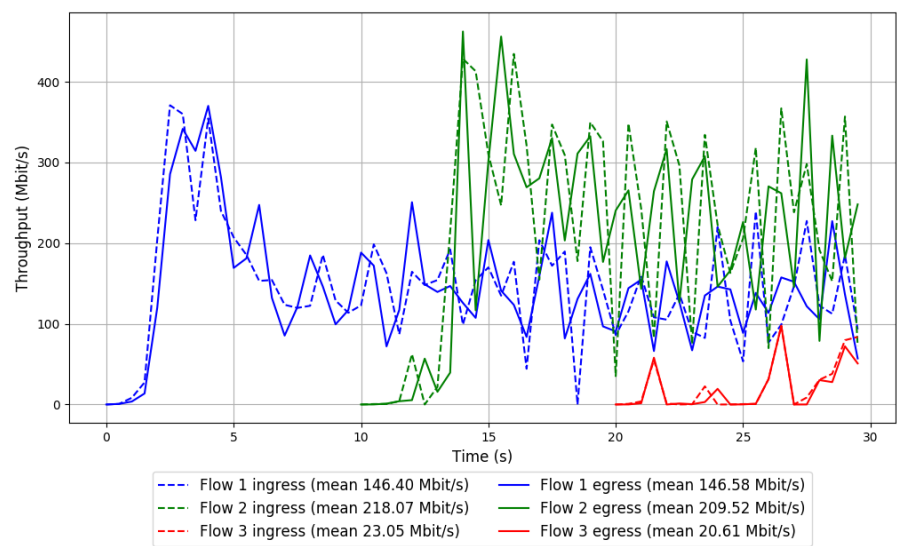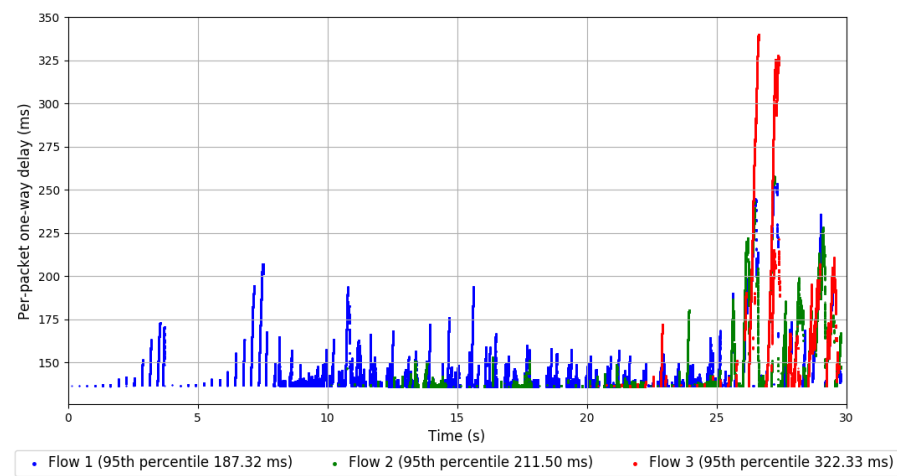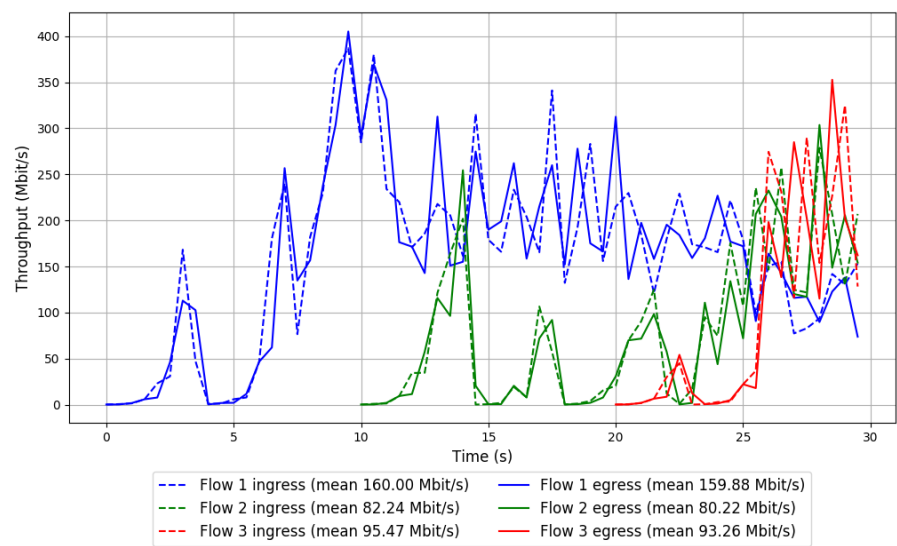
Run 10: Report of Verus — Data Link

```
Run 1: Statistics of Copa

Start at: 2017-12-12 11:44:42
End at: 2017-12-12 11:45:12


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.39 Mbit/s
95th percentile per-packet one-way delay: 162.196 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 162.531 ms
Loss rate: 1.58%
-- Flow 2:
Average throughput: 67.87 Mbit/s
95th percentile per-packet one-way delay: 139.153 ms
Loss rate: 2.00%
-- Flow 3:
Average throughput: 22.76 Mbit/s
95th percentile per-packet one-way delay: 139.153 ms
Loss rate: 2.87%
```

Run 1: Report of Copa — Data Link

- - - - Flow 1 ingress (mean 10.81 Mbit/s) —— Flow 1 egress (mean 10.75 Mbit/s)
- - - - Flow 2 ingress (mean 68.21 Mbit/s) —— Flow 2 egress (mean 67.87 Mbit/s)
- - - - Flow 3 ingress (mean 22.63 Mbit/s) —— Flow 3 egress (mean 22.76 Mbit/s)

- Flow 1 (95th percentile 162.53 ms)   - Flow 2 (95th percentile 139.15 ms)   - Flow 3 (95th percentile 139.15 ms)

```
Run 2: Statistics of Copa

Start at: 2017-12-12 11:58:24
End at: 2017-12-12 11:58:54

# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.28 Mbit/s
95th percentile per-packet one-way delay: 139.136 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 139.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.14 Mbit/s
95th percentile per-packet one-way delay: 139.137 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 28.55 Mbit/s
95th percentile per-packet one-way delay: 139.130 ms
Loss rate: 7.35%
```
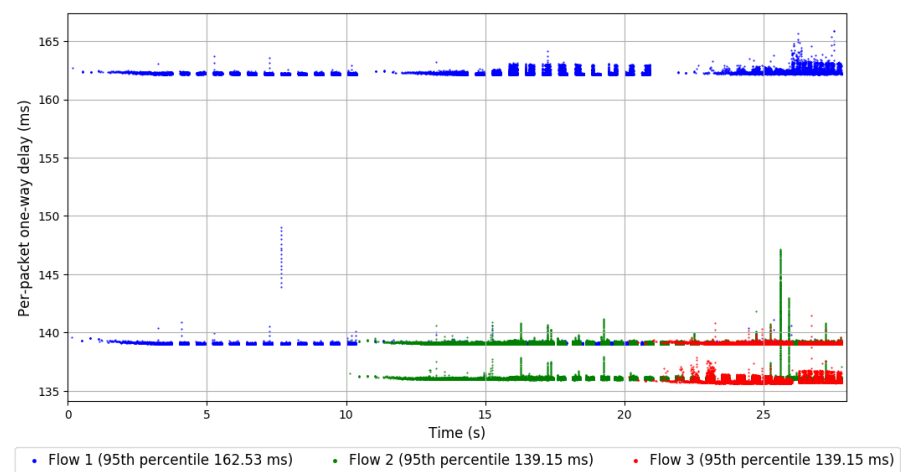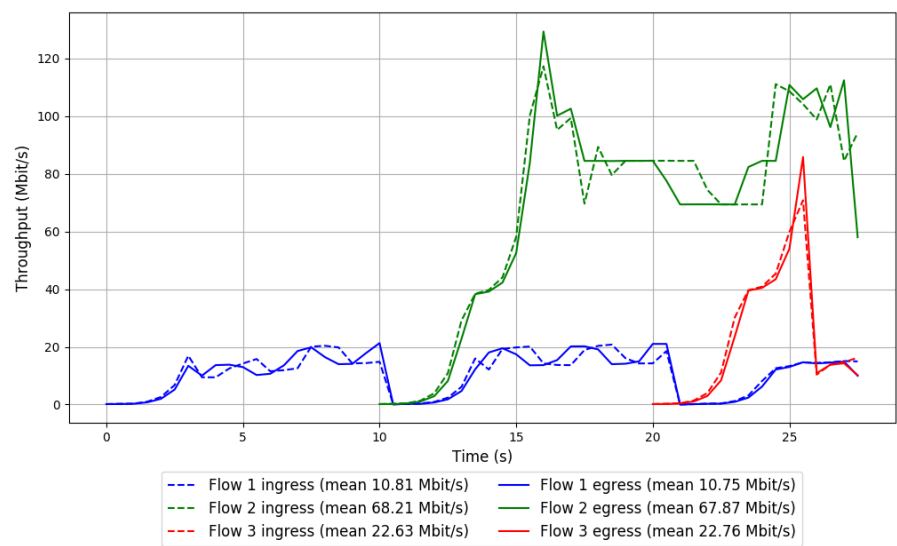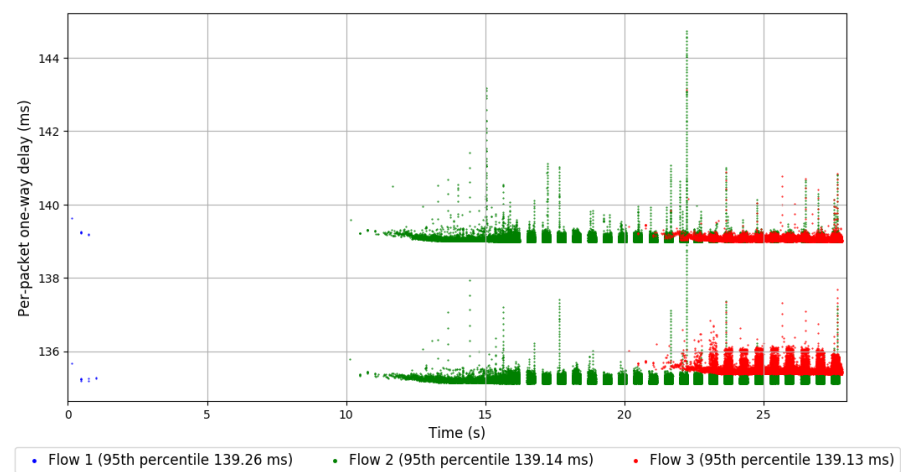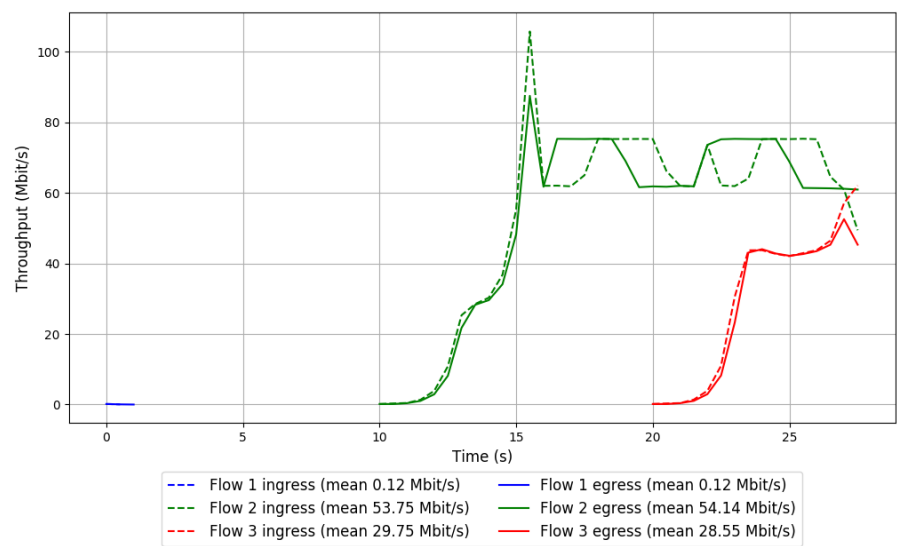
Run 2: Report of Copa — Data Link

- - - Flow 1 ingress (mean 0.12 Mbit/s)   —— Flow 1 egress (mean 0.12 Mbit/s)
- - - Flow 2 ingress (mean 53.75 Mbit/s)   —— Flow 2 egress (mean 54.14 Mbit/s)
- - - Flow 3 ingress (mean 29.75 Mbit/s)   —— Flow 3 egress (mean 28.55 Mbit/s)

- Flow 1 (95th percentile 139.26 ms)   • Flow 2 (95th percentile 139.14 ms)   • Flow 3 (95th percentile 139.13 ms)

```
Run 3: Statistics of Copa

Start at: 2017-12-12 12:11:57
End at: 2017-12-12 12:12:27


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.75 Mbit/s
95th percentile per-packet one-way delay: 136.232 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 0.12 Mbit/s
95th percentile per-packet one-way delay: 135.666 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 71.05 Mbit/s
95th percentile per-packet one-way delay: 136.223 ms
Loss rate: 1.57%
-- Flow 3:
Average throughput: 5.02 Mbit/s
95th percentile per-packet one-way delay: 136.336 ms
Loss rate: 8.28%
```
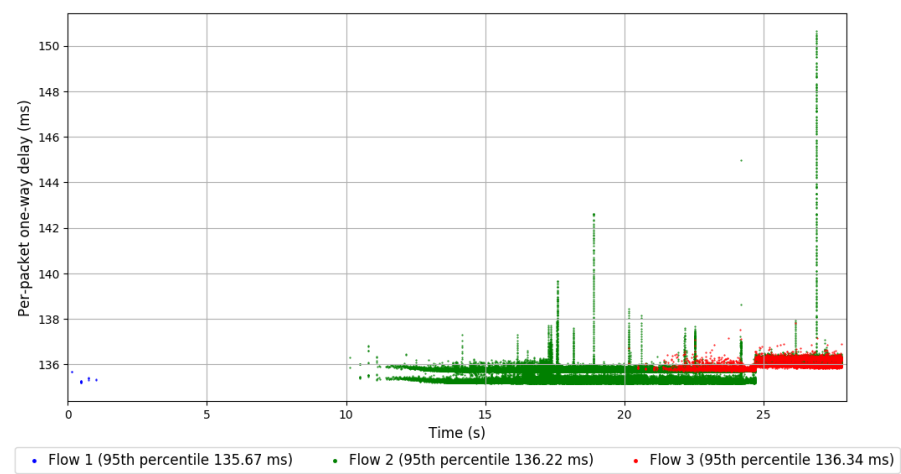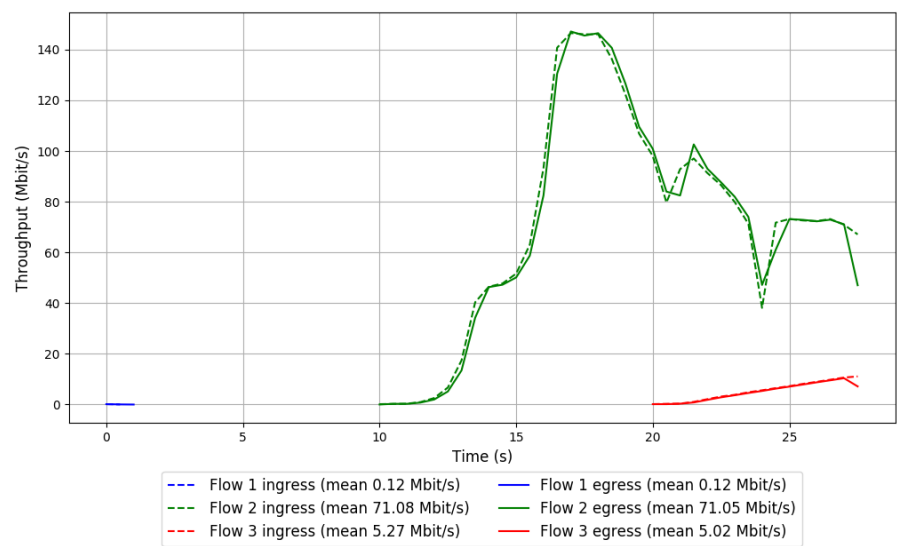
Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 0.12 Mbit/s) ——— Flow 1 egress (mean 0.12 Mbit/s)
- - - Flow 2 ingress (mean 71.08 Mbit/s) ——— Flow 2 egress (mean 71.05 Mbit/s)
- - - Flow 3 ingress (mean 5.27 Mbit/s) ——— Flow 3 egress (mean 5.02 Mbit/s)

• Flow 1 (95th percentile 135.67 ms)   • Flow 2 (95th percentile 136.22 ms)   • Flow 3 (95th percentile 136.34 ms)

229

```
Run 4: Statistics of Copa

Start at: 2017-12-12 12:25:48
End at: 2017-12-12 12:26:18


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.31 Mbit/s
95th percentile per-packet one-way delay: 160.656 ms
Loss rate: 4.21%
-- Flow 1:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 160.772 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 11.22 Mbit/s
95th percentile per-packet one-way delay: 160.389 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 50.10 Mbit/s
95th percentile per-packet one-way delay: 136.331 ms
Loss rate: 7.00%
```
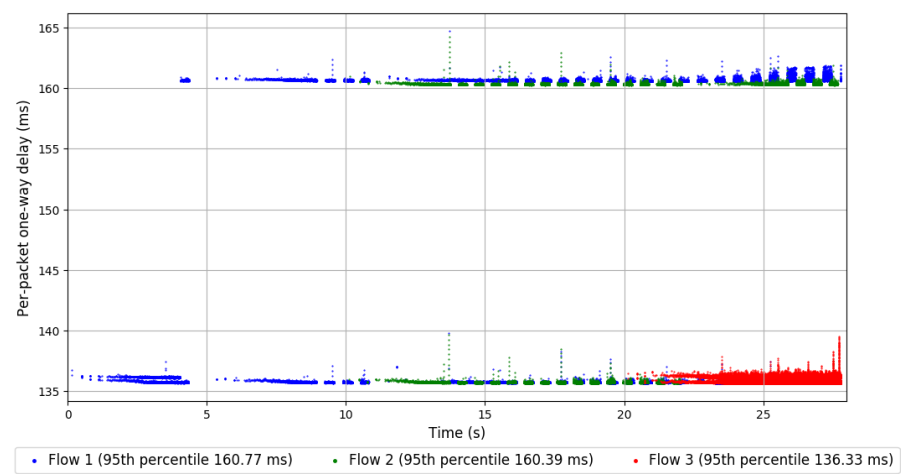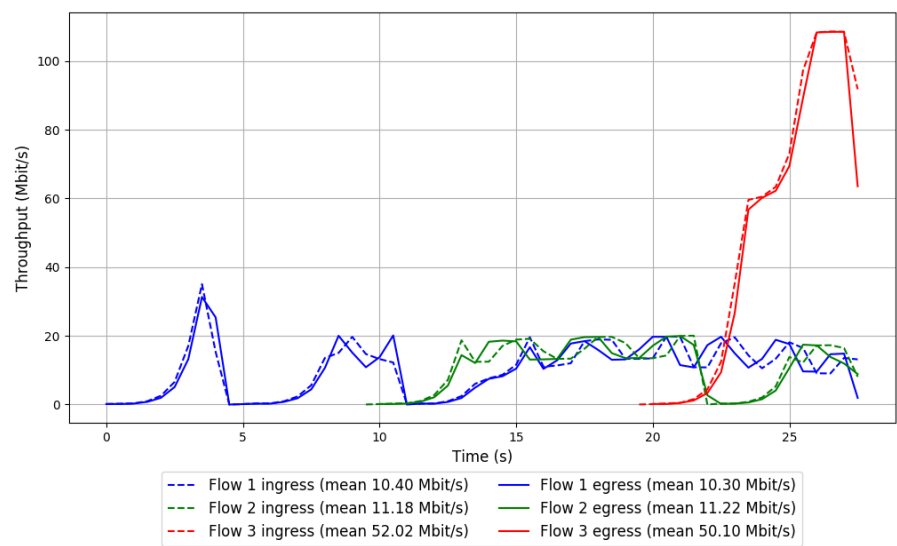
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2017-12-12 12:40:03
End at: 2017-12-12 12:40:33


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.74 Mbit/s
95th percentile per-packet one-way delay: 136.736 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 46.93 Mbit/s
95th percentile per-packet one-way delay: 136.354 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 54.66 Mbit/s
95th percentile per-packet one-way delay: 136.816 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 17.79 Mbit/s
95th percentile per-packet one-way delay: 136.830 ms
Loss rate: 10.80%
```
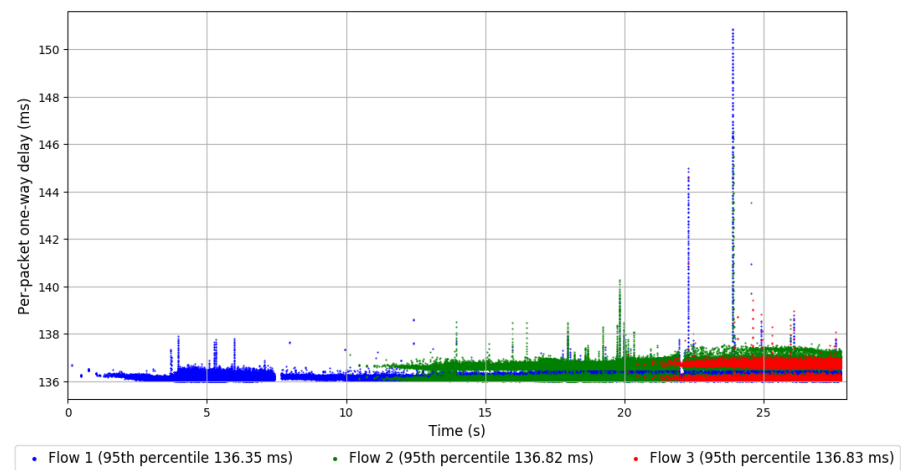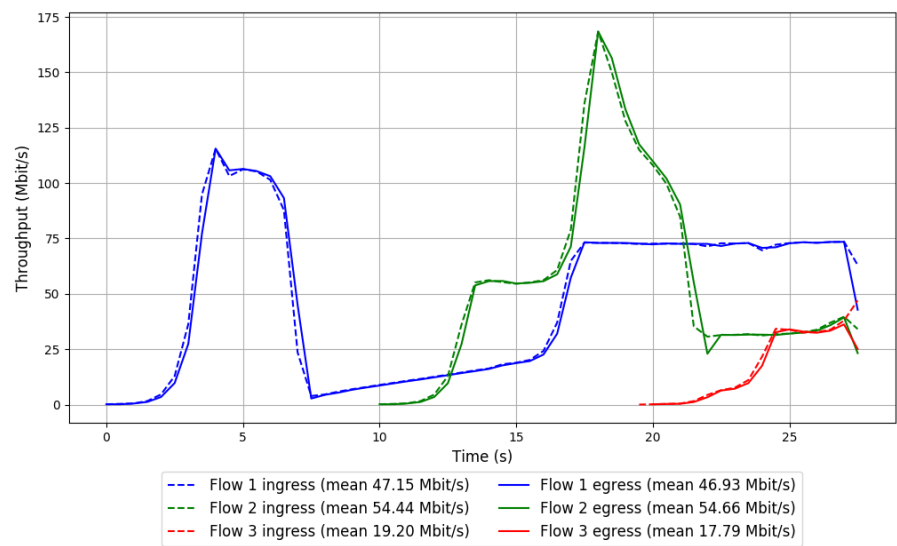
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 47.15 Mbit/s)   Flow 1 egress (mean 46.93 Mbit/s)
Flow 2 ingress (mean 54.44 Mbit/s)   Flow 2 egress (mean 54.66 Mbit/s)
Flow 3 ingress (mean 19.20 Mbit/s)   Flow 3 egress (mean 17.79 Mbit/s)

Flow 1 (95th percentile 136.35 ms)   Flow 2 (95th percentile 136.82 ms)   Flow 3 (95th percentile 136.83 ms)

```
Run 6: Statistics of Copa

Start at: 2017-12-12 12:54:20
End at: 2017-12-12 12:54:50

# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.94 Mbit/s
95th percentile per-packet one-way delay: 136.716 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 45.93 Mbit/s
95th percentile per-packet one-way delay: 136.167 ms
Loss rate: 0.25%
-- Flow 2:
Average throughput: 54.18 Mbit/s
95th percentile per-packet one-way delay: 136.169 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 48.82 Mbit/s
95th percentile per-packet one-way delay: 136.854 ms
Loss rate: 8.47%
```
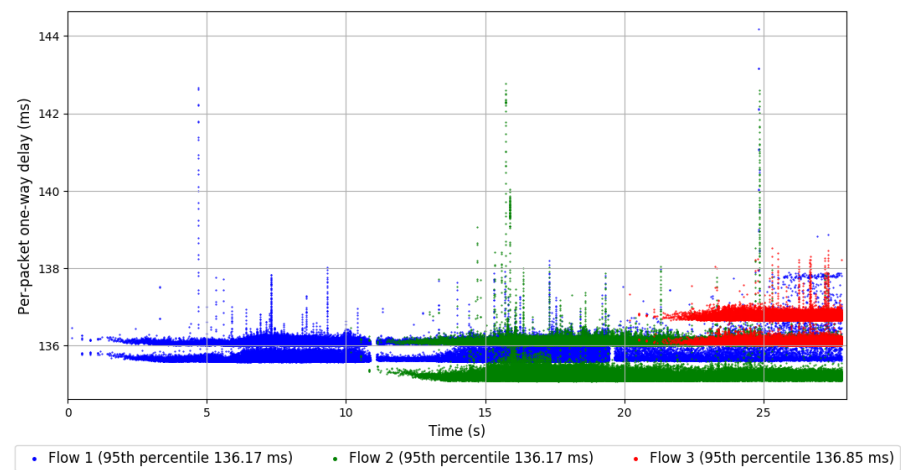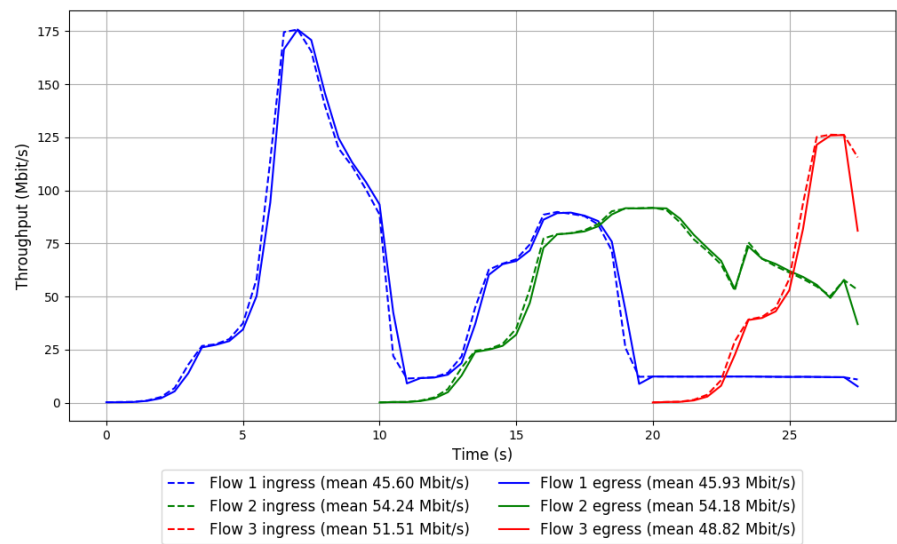
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2017-12-12 13:08:21
End at: 2017-12-12 13:08:51


# Below is generated by plot.py at 2017-12-12 16:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.69 Mbit/s
95th percentile per-packet one-way delay: 163.433 ms
Loss rate: 5.96%
-- Flow 1:
Average throughput: 19.32 Mbit/s
95th percentile per-packet one-way delay: 163.450 ms
Loss rate: 4.20%
-- Flow 2:
Average throughput: 27.68 Mbit/s
95th percentile per-packet one-way delay: 163.428 ms
Loss rate: 6.25%
-- Flow 3:
Average throughput: 38.93 Mbit/s
95th percentile per-packet one-way delay: 136.403 ms
Loss rate: 8.51%
```
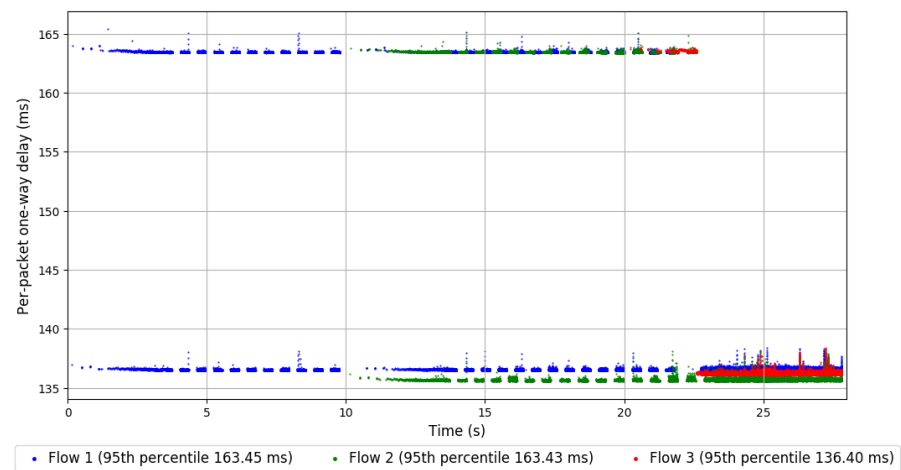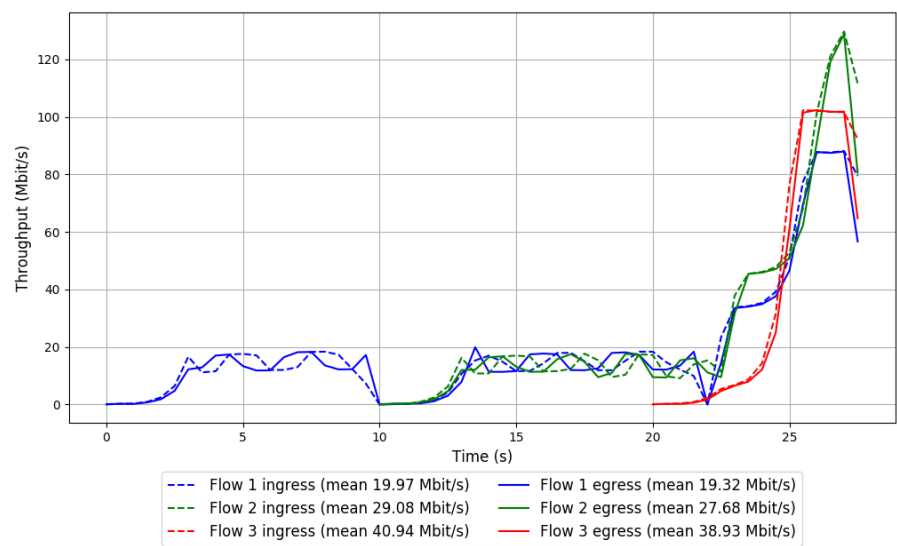
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 19.97 Mbit/s) --- Flow 1 egress (mean 19.32 Mbit/s)
Flow 2 ingress (mean 29.08 Mbit/s) --- Flow 2 egress (mean 27.68 Mbit/s)
Flow 3 ingress (mean 40.94 Mbit/s) --- Flow 3 egress (mean 38.93 Mbit/s)

Flow 1 (95th percentile 163.45 ms)   Flow 2 (95th percentile 163.43 ms)   Flow 3 (95th percentile 136.40 ms)

237

```
Run 8: Statistics of Copa

Start at: 2017-12-12 13:22:31
End at: 2017-12-12 13:23:01


# Below is generated by plot.py at 2017-12-12 16:47:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.17 Mbit/s
95th percentile per-packet one-way delay: 136.245 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 136.242 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 53.06 Mbit/s
95th percentile per-packet one-way delay: 136.192 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 23.13 Mbit/s
95th percentile per-packet one-way delay: 136.463 ms
Loss rate: 9.20%
```
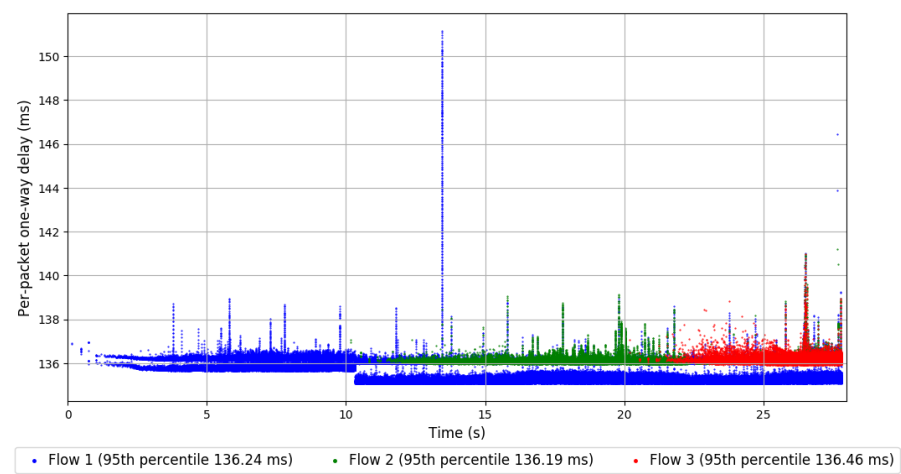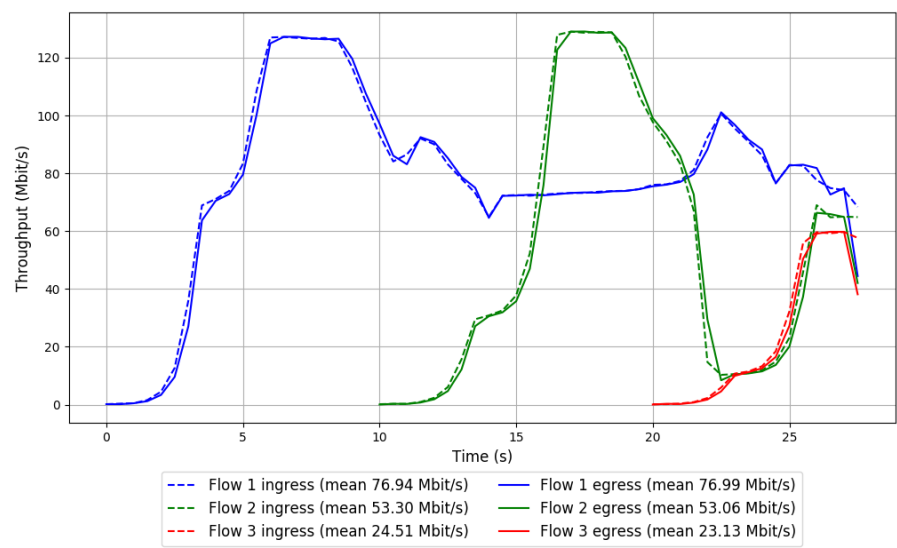
Run 8: Report of Copa — Data Link

- Flow 1 ingress (mean 76.94 Mbit/s)
- Flow 1 egress (mean 76.99 Mbit/s)
- Flow 2 ingress (mean 53.30 Mbit/s)
- Flow 2 egress (mean 53.06 Mbit/s)
- Flow 3 ingress (mean 24.51 Mbit/s)
- Flow 3 egress (mean 23.13 Mbit/s)

- Flow 1 (95th percentile 136.24 ms)
- Flow 2 (95th percentile 136.19 ms)
- Flow 3 (95th percentile 136.46 ms)

```
Run 9: Statistics of Copa

Start at: 2017-12-12 13:36:50
End at: 2017-12-12 13:37:20

# Below is generated by plot.py at 2017-12-12 16:48:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 122.39 Mbit/s
95th percentile per-packet one-way delay: 136.795 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 71.99 Mbit/s
95th percentile per-packet one-way delay: 136.426 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 56.53 Mbit/s
95th percentile per-packet one-way delay: 136.918 ms
Loss rate: 1.72%
-- Flow 3:
Average throughput: 51.85 Mbit/s
95th percentile per-packet one-way delay: 136.831 ms
Loss rate: 6.51%
```
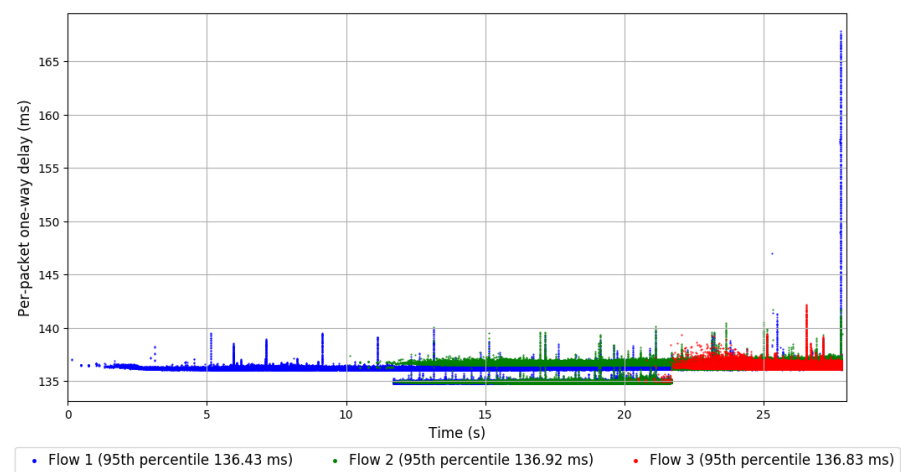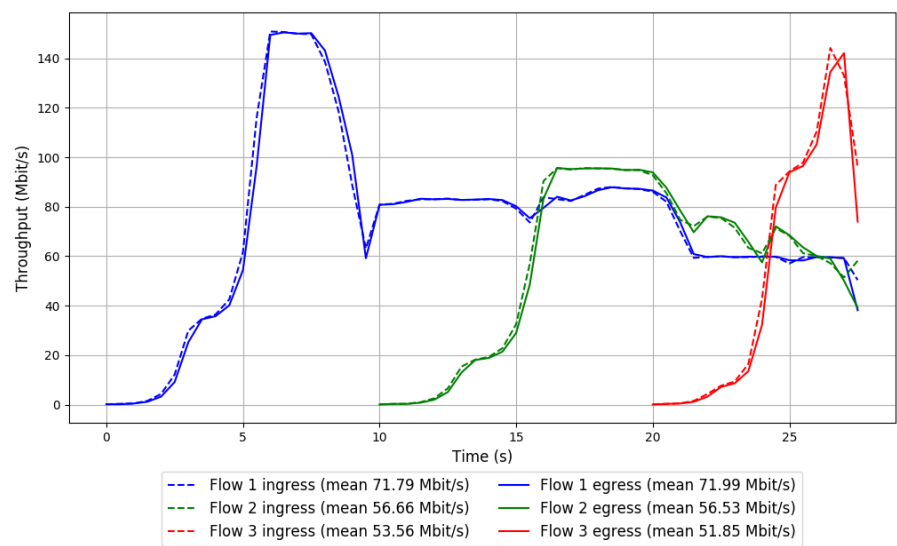
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 71.79 Mbit/s) --- Flow 1 egress (mean 71.99 Mbit/s)
Flow 2 ingress (mean 56.66 Mbit/s) --- Flow 2 egress (mean 56.53 Mbit/s)
Flow 3 ingress (mean 53.56 Mbit/s) --- Flow 3 egress (mean 51.85 Mbit/s)

- Flow 1 (95th percentile 136.43 ms) - Flow 2 (95th percentile 136.92 ms) - Flow 3 (95th percentile 136.83 ms)

241

```
Run 10: Statistics of Copa

Start at: 2017-12-12 13:51:19
End at: 2017-12-12 13:51:49

# Below is generated by plot.py at 2017-12-12 16:48:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.33 Mbit/s
95th percentile per-packet one-way delay: 136.718 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 68.44 Mbit/s
95th percentile per-packet one-way delay: 136.731 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 136.460 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 136.360 ms
Loss rate: 0.00%
```
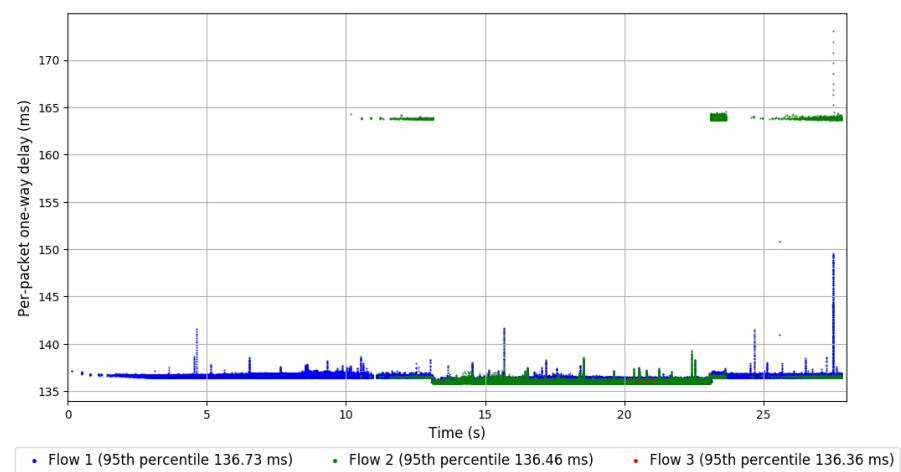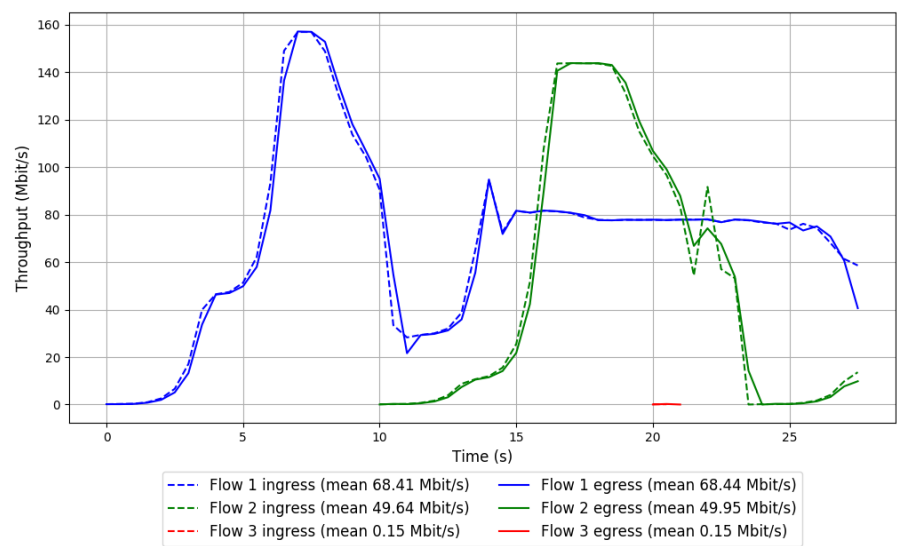
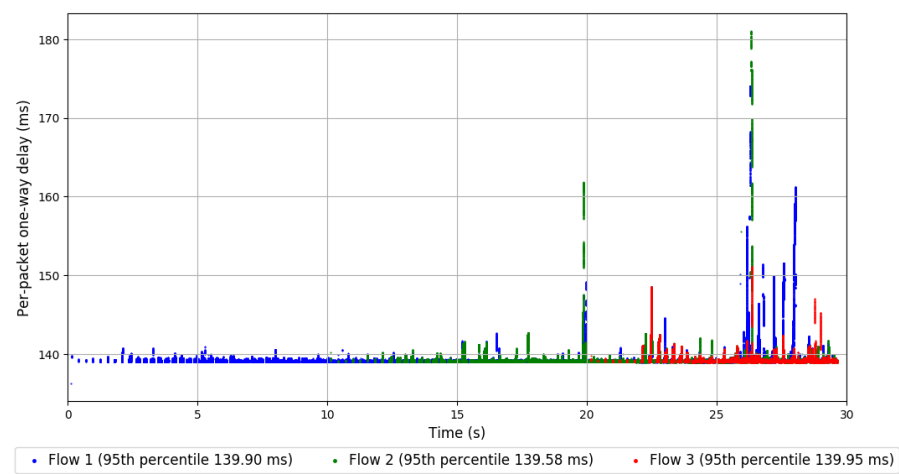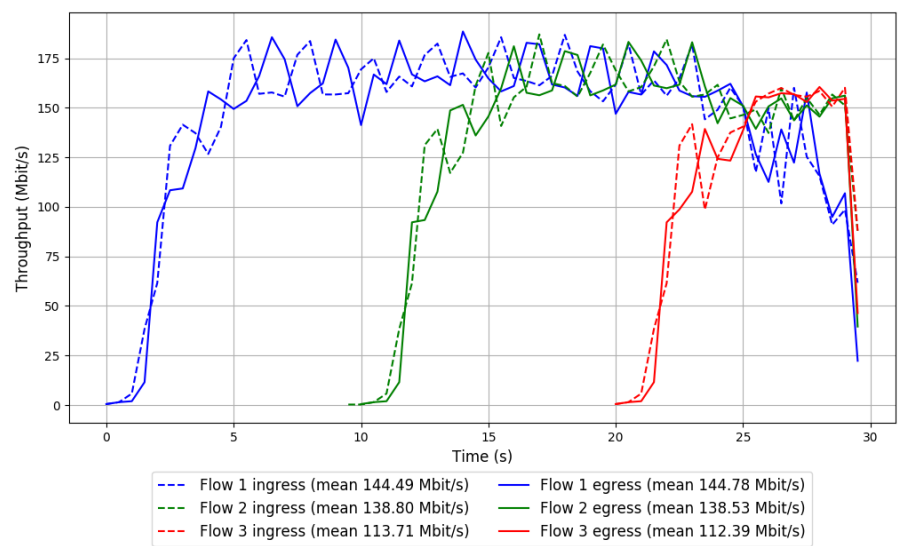## Run 10: Report of Copa — Data Link

243

```
Run 1: Statistics of Indigo

Start at: 2017-12-12 11:40:32
End at: 2017-12-12 11:41:02

# Below is generated by plot.py at 2017-12-12 16:50:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 272.46 Mbit/s
95th percentile per-packet one-way delay: 139.770 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 144.78 Mbit/s
95th percentile per-packet one-way delay: 139.902 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 138.53 Mbit/s
95th percentile per-packet one-way delay: 139.582 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 112.39 Mbit/s
95th percentile per-packet one-way delay: 139.949 ms
Loss rate: 3.99%
```

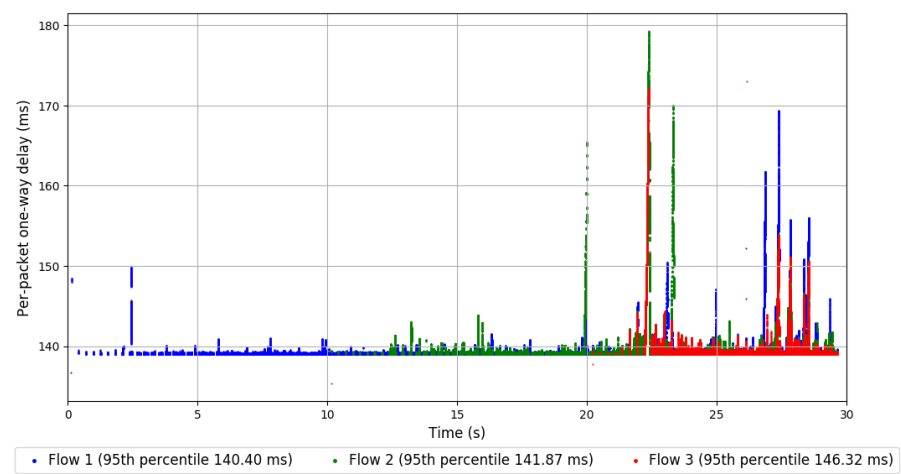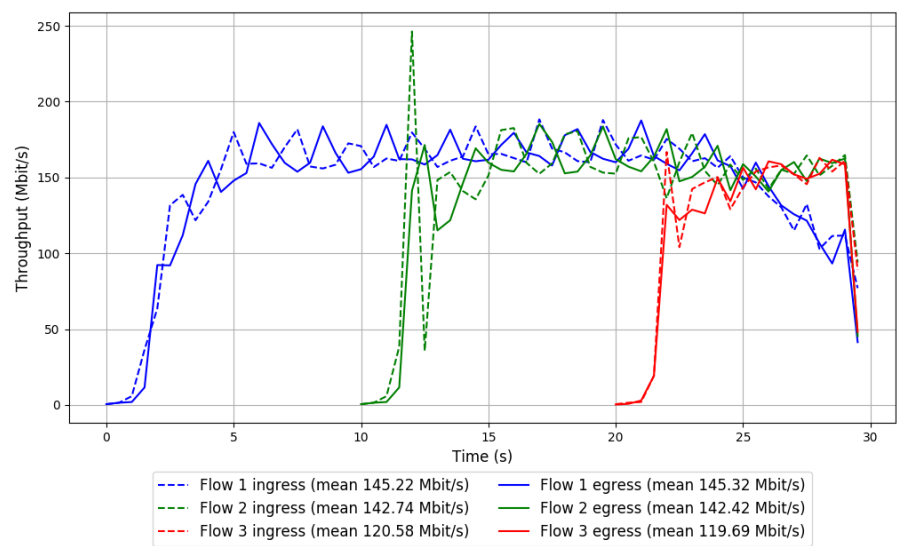Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-12-12 11:54:11
End at: 2017-12-12 11:54:41

# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.66 Mbit/s
95th percentile per-packet one-way delay: 141.534 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 145.32 Mbit/s
95th percentile per-packet one-way delay: 140.399 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 142.42 Mbit/s
95th percentile per-packet one-way delay: 141.873 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 119.69 Mbit/s
95th percentile per-packet one-way delay: 146.324 ms
Loss rate: 3.55%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2017-12-12 12:07:44
End at: 2017-12-12 12:08:14

# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.64 Mbit/s
95th percentile per-packet one-way delay: 161.291 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 145.72 Mbit/s
95th percentile per-packet one-way delay: 161.334 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 135.74 Mbit/s
95th percentile per-packet one-way delay: 137.602 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 109.87 Mbit/s
95th percentile per-packet one-way delay: 136.527 ms
Loss rate: 3.28%
```
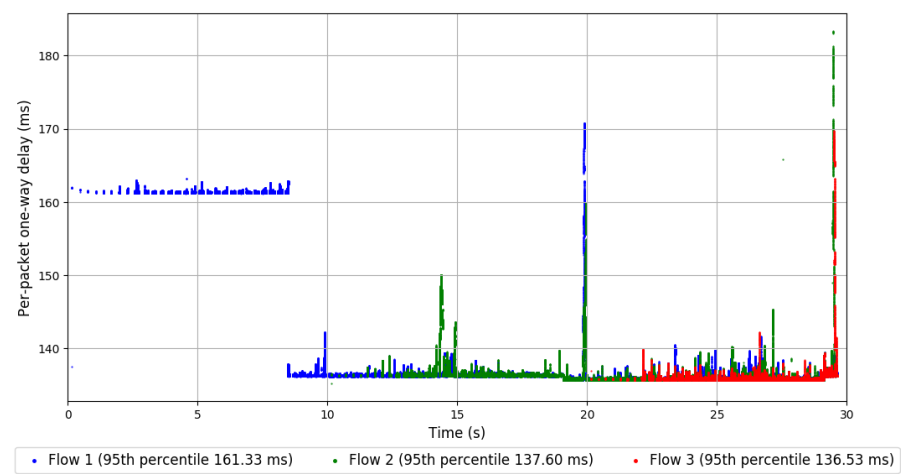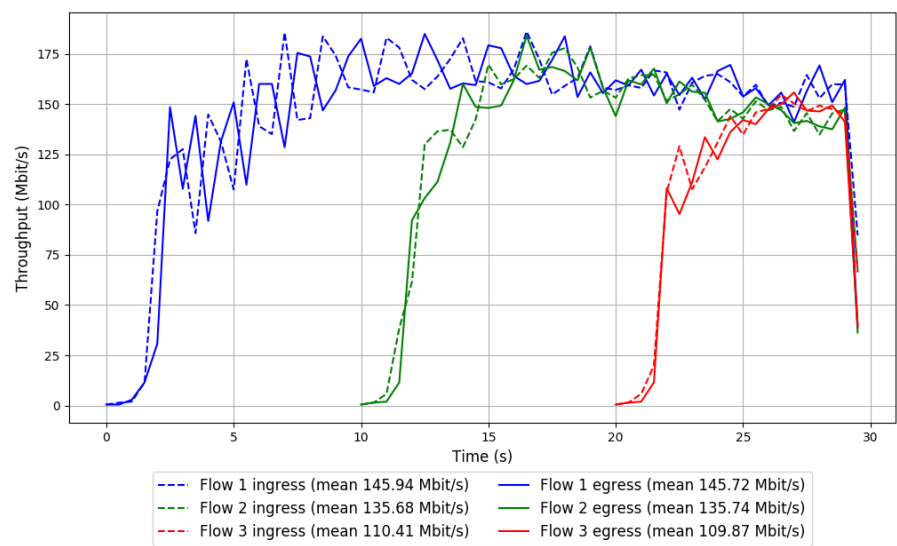
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-12-12 12:21:47
End at: 2017-12-12 12:22:17

# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.16 Mbit/s
95th percentile per-packet one-way delay: 162.262 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 128.99 Mbit/s
95th percentile per-packet one-way delay: 162.255 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 130.99 Mbit/s
95th percentile per-packet one-way delay: 162.249 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 98.85 Mbit/s
95th percentile per-packet one-way delay: 162.318 ms
Loss rate: 2.56%
```
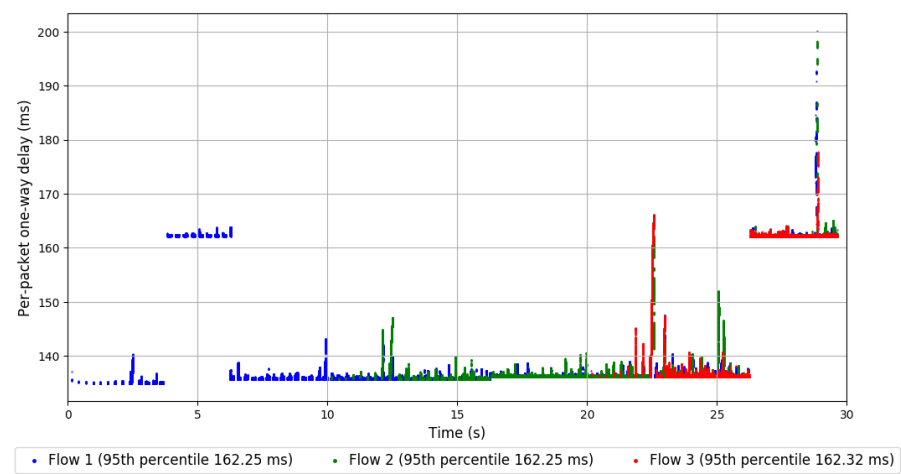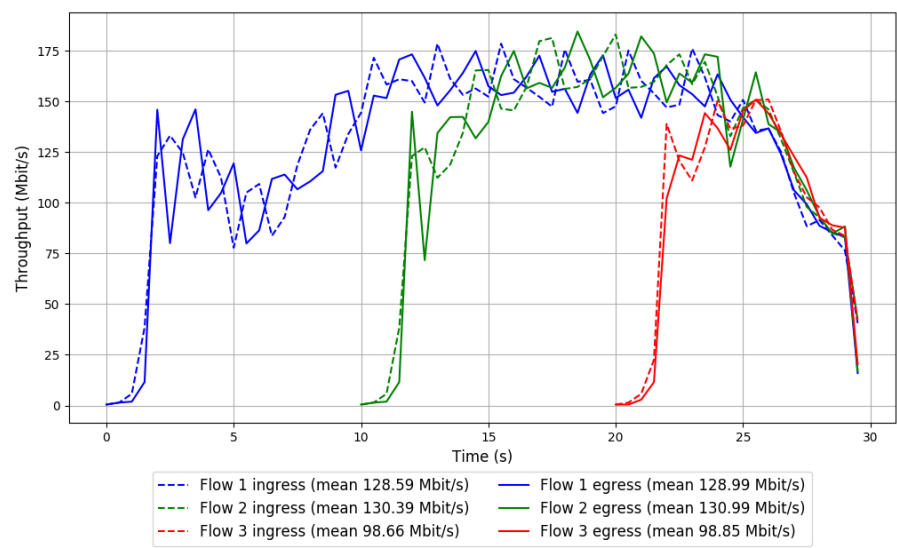
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 128.59 Mbit/s)   Flow 1 egress (mean 128.99 Mbit/s)
Flow 2 ingress (mean 130.39 Mbit/s)   Flow 2 egress (mean 130.99 Mbit/s)
Flow 3 ingress (mean 98.66 Mbit/s)   Flow 3 egress (mean 98.85 Mbit/s)

Flow 1 (95th percentile 162.25 ms)   Flow 2 (95th percentile 162.25 ms)   Flow 3 (95th percentile 162.32 ms)

251

```
Run 5: Statistics of Indigo

Start at: 2017-12-12 12:35:49
End at: 2017-12-12 12:36:19


# Below is generated by plot.py at 2017-12-12 16:51:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 227.11 Mbit/s
95th percentile per-packet one-way delay: 136.872 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 92.78 Mbit/s
95th percentile per-packet one-way delay: 136.779 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 146.06 Mbit/s
95th percentile per-packet one-way delay: 136.923 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 118.25 Mbit/s
95th percentile per-packet one-way delay: 137.002 ms
Loss rate: 3.78%
```
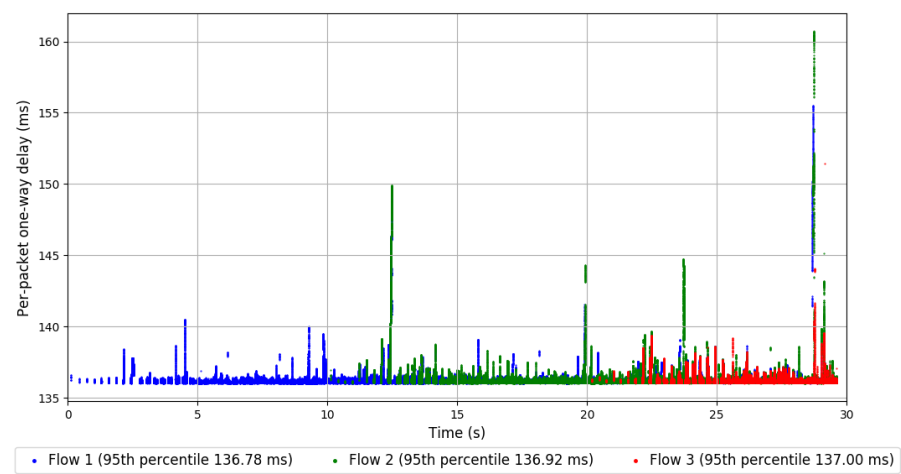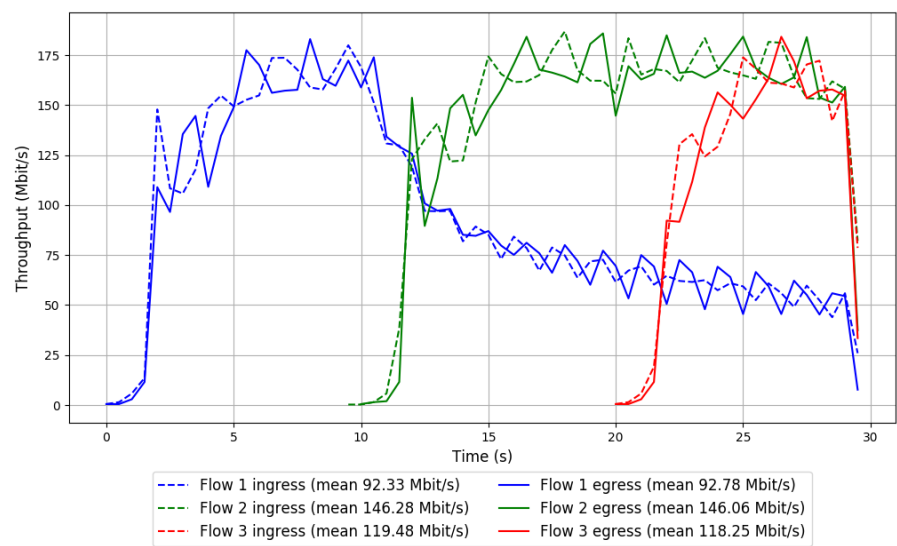
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-12-12 12:50:03
End at: 2017-12-12 12:50:33

# Below is generated by plot.py at 2017-12-12 16:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.32 Mbit/s
95th percentile per-packet one-way delay: 138.240 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 138.75 Mbit/s
95th percentile per-packet one-way delay: 137.597 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 129.33 Mbit/s
95th percentile per-packet one-way delay: 138.408 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 116.29 Mbit/s
95th percentile per-packet one-way delay: 141.345 ms
Loss rate: 3.91%
```
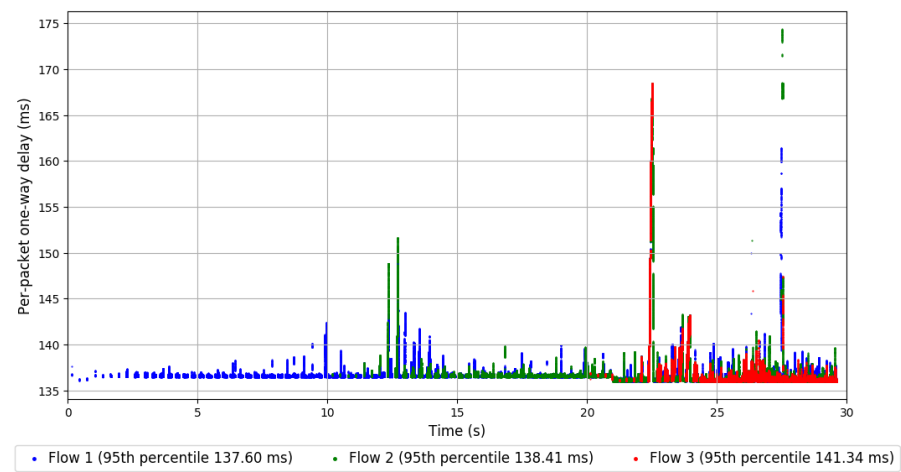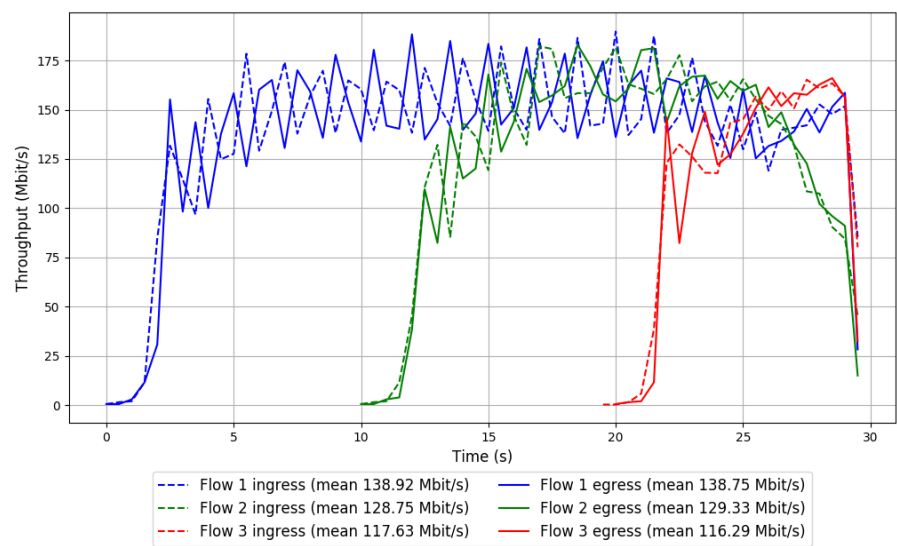
Run 6: Report of Indigo — Data Link

255

```
Run 7: Statistics of Indigo

Start at: 2017-12-12 13:04:23
End at: 2017-12-12 13:04:53


# Below is generated by plot.py at 2017-12-12 16:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.79 Mbit/s
95th percentile per-packet one-way delay: 137.232 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 92.42 Mbit/s
95th percentile per-packet one-way delay: 137.001 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 91.48 Mbit/s
95th percentile per-packet one-way delay: 137.123 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 107.82 Mbit/s
95th percentile per-packet one-way delay: 138.151 ms
Loss rate: 4.27%
```
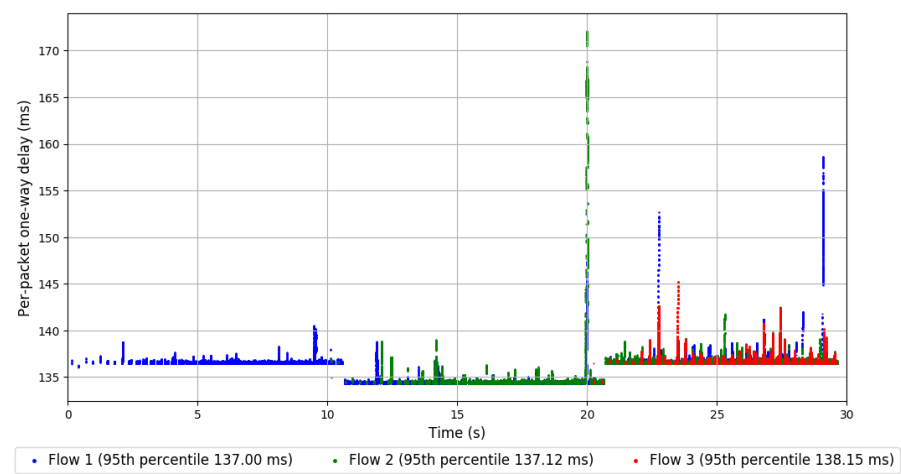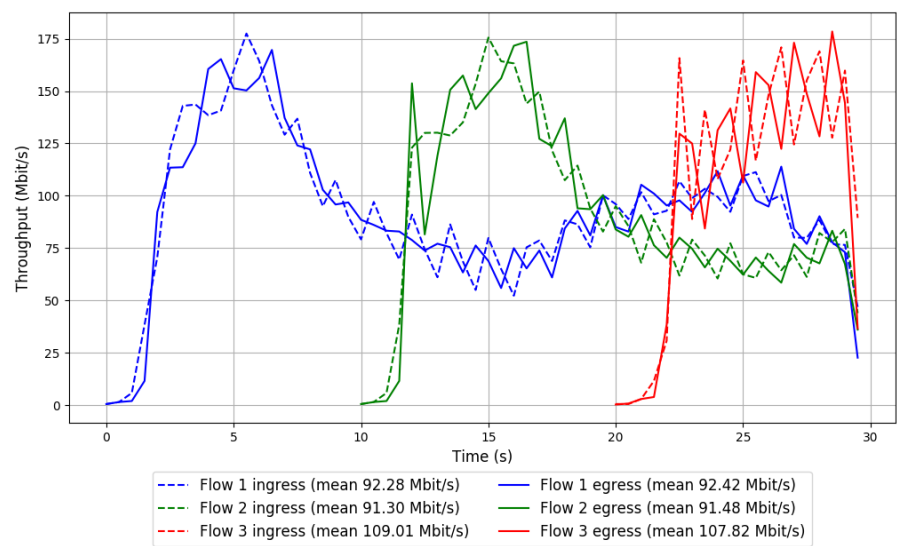
Run 7: Report of Indigo — Data Link

Flow 1 ingress (mean 92.28 Mbit/s)   Flow 1 egress (mean 92.42 Mbit/s)
Flow 2 ingress (mean 91.30 Mbit/s)   Flow 2 egress (mean 91.48 Mbit/s)
Flow 3 ingress (mean 109.01 Mbit/s)   Flow 3 egress (mean 107.82 Mbit/s)

Flow 1 (95th percentile 137.00 ms)   Flow 2 (95th percentile 137.12 ms)   Flow 3 (95th percentile 138.15 ms)

```
Run 8: Statistics of Indigo

Start at: 2017-12-12 13:18:17
End at: 2017-12-12 13:18:47

# Below is generated by plot.py at 2017-12-12 16:53:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 269.69 Mbit/s
95th percentile per-packet one-way delay: 138.001 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 144.35 Mbit/s
95th percentile per-packet one-way delay: 137.541 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 139.99 Mbit/s
95th percentile per-packet one-way delay: 137.775 ms
Loss rate: 1.52%
-- Flow 3:
Average throughput: 104.38 Mbit/s
95th percentile per-packet one-way delay: 144.281 ms
Loss rate: 4.06%
```
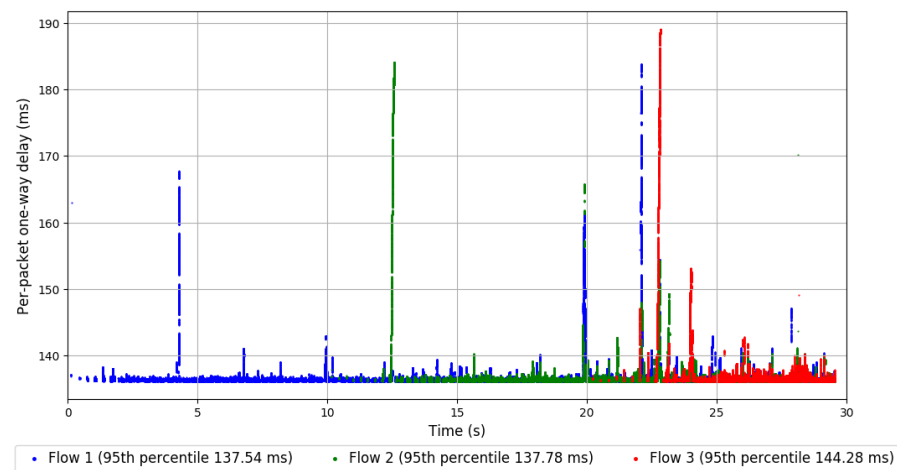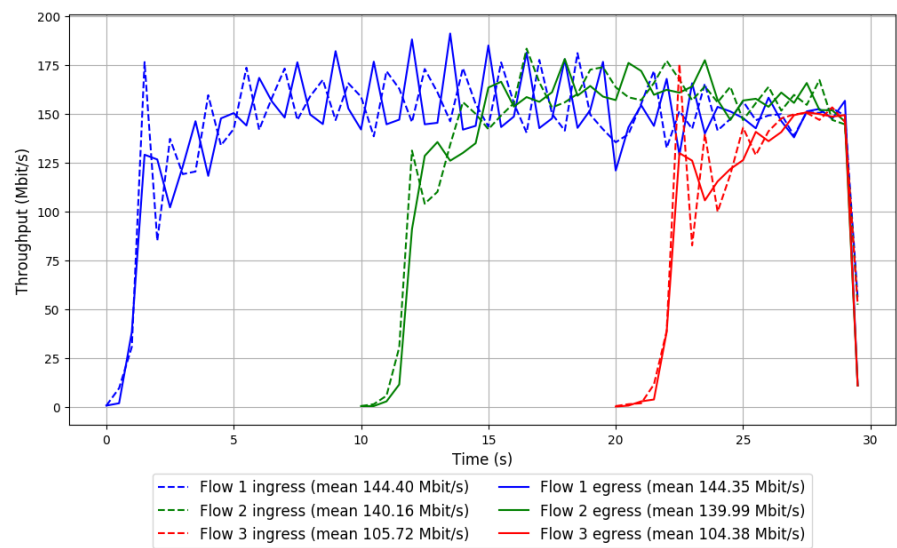
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-12-12 13:32:32
End at: 2017-12-12 13:33:02

# Below is generated by plot.py at 2017-12-12 16:54:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 213.80 Mbit/s
95th percentile per-packet one-way delay: 145.171 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 98.41 Mbit/s
95th percentile per-packet one-way delay: 139.025 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 125.19 Mbit/s
95th percentile per-packet one-way delay: 148.054 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 103.57 Mbit/s
95th percentile per-packet one-way delay: 147.745 ms
Loss rate: 4.03%
```
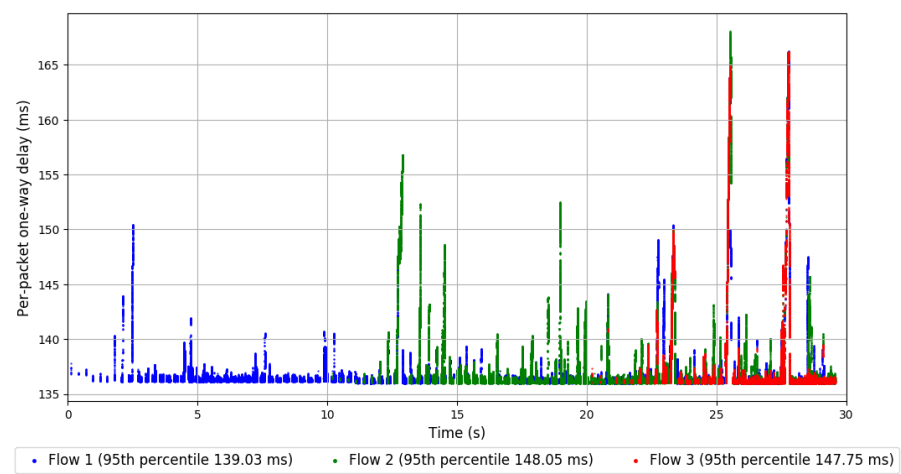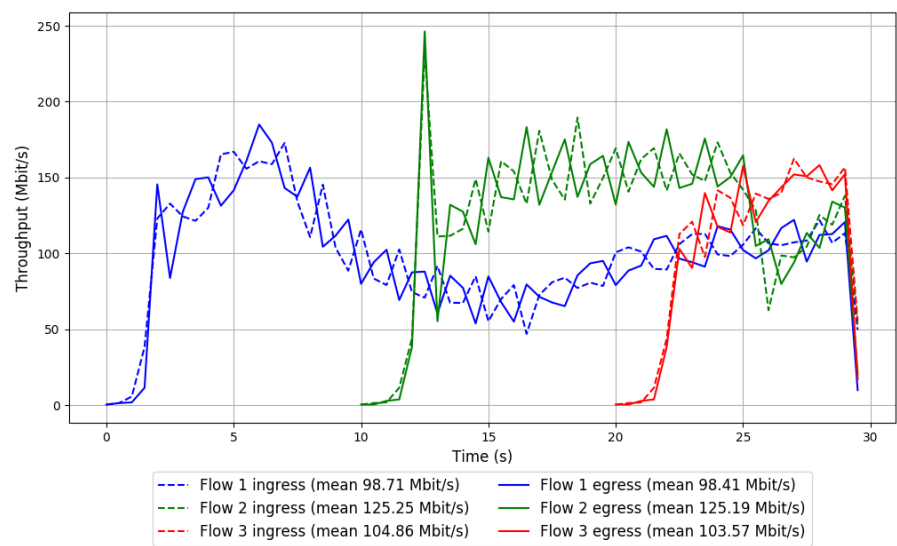
Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-12-12 13:47:06
End at: 2017-12-12 13:47:36

# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 275.24 Mbit/s
95th percentile per-packet one-way delay: 137.624 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 150.34 Mbit/s
95th percentile per-packet one-way delay: 137.352 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 129.48 Mbit/s
95th percentile per-packet one-way delay: 137.569 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 123.64 Mbit/s
95th percentile per-packet one-way delay: 138.776 ms
Loss rate: 3.63%
```
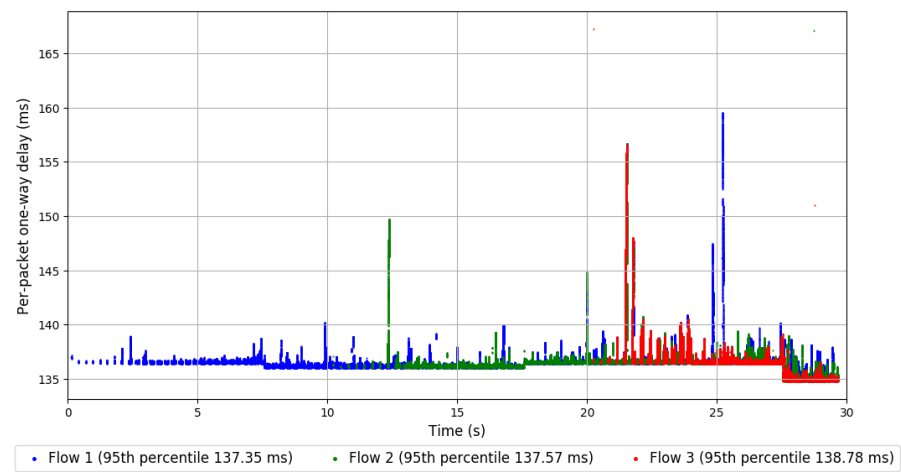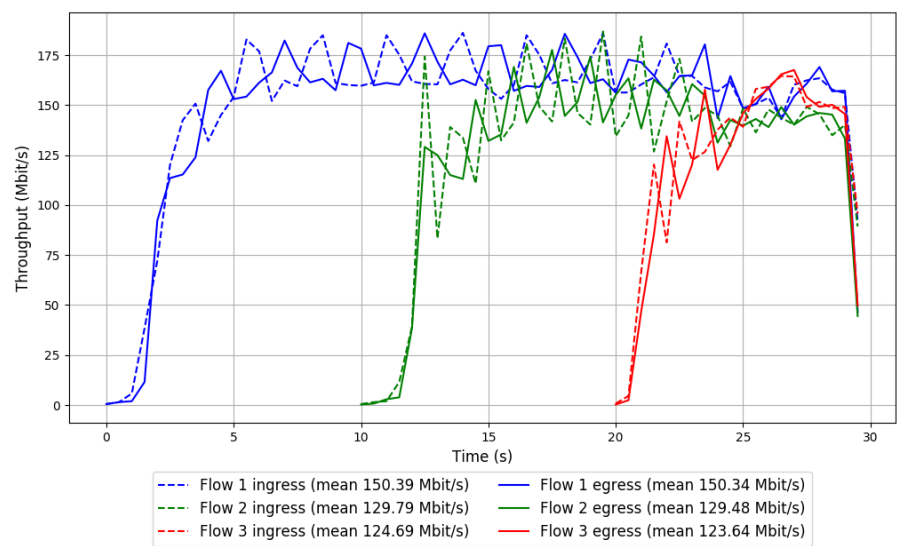
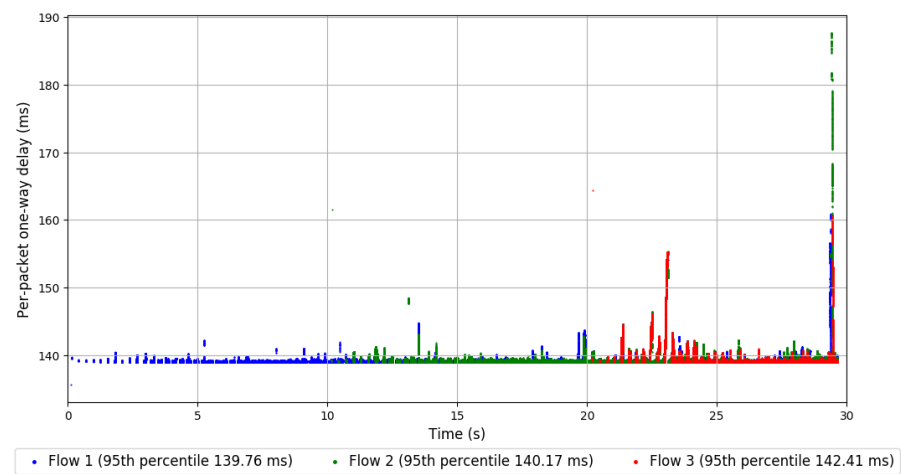Run 10: Report of Indigo — Data Link

263

```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-12 11:36:11
End at: 2017-12-12 11:36:41


# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 252.46 Mbit/s
95th percentile per-packet one-way delay: 140.197 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 129.88 Mbit/s
95th percentile per-packet one-way delay: 139.756 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 130.97 Mbit/s
95th percentile per-packet one-way delay: 140.167 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 112.77 Mbit/s
95th percentile per-packet one-way delay: 142.410 ms
Loss rate: 3.43%
```
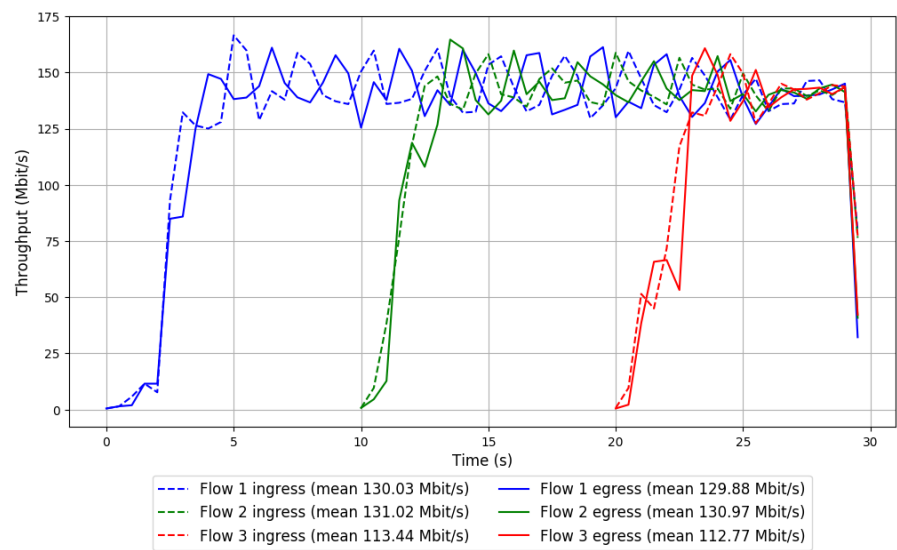
Run 1: Report of Indigo-calib — Data Link

```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-12 11:49:50
End at: 2017-12-12 11:50:20

# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.13 Mbit/s
95th percentile per-packet one-way delay: 139.707 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 127.94 Mbit/s
95th percentile per-packet one-way delay: 139.571 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 123.84 Mbit/s
95th percentile per-packet one-way delay: 139.719 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 103.65 Mbit/s
95th percentile per-packet one-way delay: 139.971 ms
Loss rate: 3.79%
```

Run 2: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 128.08 Mbit/s) --- Flow 1 egress (mean 127.94 Mbit/s)
Flow 2 ingress (mean 124.03 Mbit/s) --- Flow 2 egress (mean 123.84 Mbit/s)
Flow 3 ingress (mean 104.73 Mbit/s) --- Flow 3 egress (mean 103.65 Mbit/s)

Flow 1 (95th percentile 139.57 ms)   Flow 2 (95th percentile 139.72 ms)   Flow 3 (95th percentile 139.97 ms)
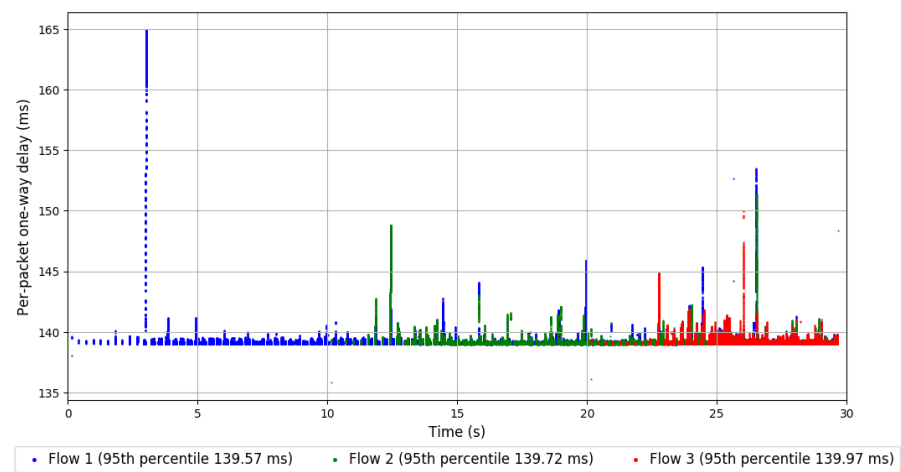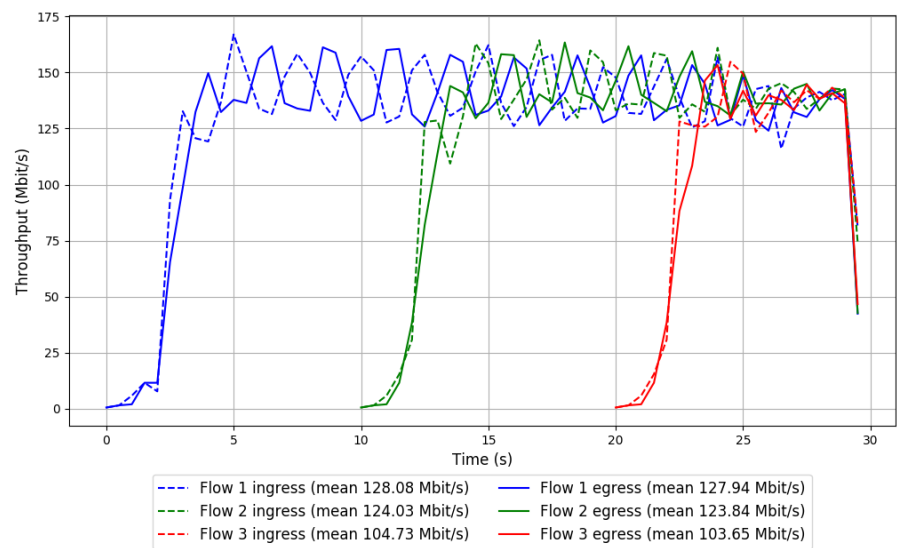
```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-12 12:03:34
End at: 2017-12-12 12:04:04

# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 225.77 Mbit/s
95th percentile per-packet one-way delay: 140.049 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 114.08 Mbit/s
95th percentile per-packet one-way delay: 139.669 ms
Loss rate: 0.98%
-- Flow 2:
Average throughput: 121.42 Mbit/s
95th percentile per-packet one-way delay: 140.214 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 98.96 Mbit/s
95th percentile per-packet one-way delay: 140.668 ms
Loss rate: 3.94%
```
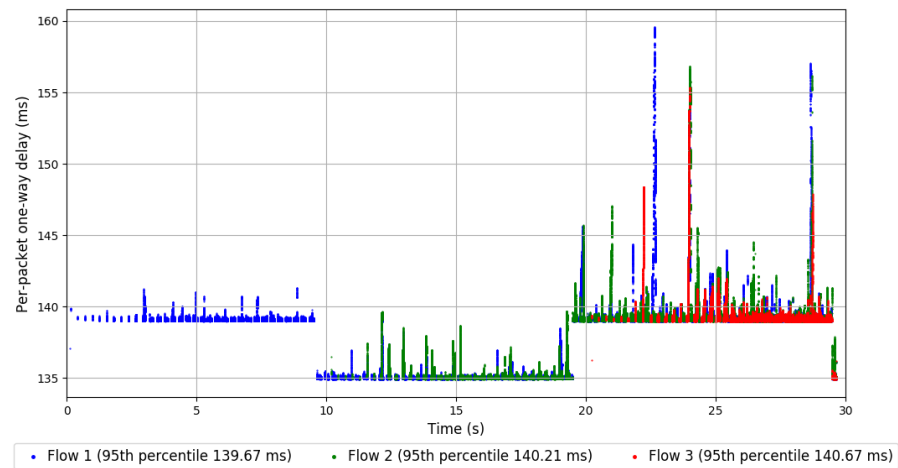
Run 3: Report of Indigo-calib — Data Link

Legend:
- Flow 1 ingress (mean 114.05 Mbit/s)
- Flow 1 egress (mean 114.08 Mbit/s)
- Flow 2 ingress (mean 121.69 Mbit/s)
- Flow 2 egress (mean 121.42 Mbit/s)
- Flow 3 ingress (mean 100.11 Mbit/s)
- Flow 3 egress (mean 98.96 Mbit/s)

Legend:
- Flow 1 (95th percentile 139.67 ms)
- Flow 2 (95th percentile 140.21 ms)
- Flow 3 (95th percentile 140.67 ms)

269

```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-12 12:17:16
End at: 2017-12-12 12:17:46

# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.57 Mbit/s
95th percentile per-packet one-way delay: 137.273 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 130.15 Mbit/s
95th percentile per-packet one-way delay: 136.813 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 123.14 Mbit/s
95th percentile per-packet one-way delay: 137.693 ms
Loss rate: 1.46%
-- Flow 3:
Average throughput: 100.84 Mbit/s
95th percentile per-packet one-way delay: 138.388 ms
Loss rate: 3.93%
```
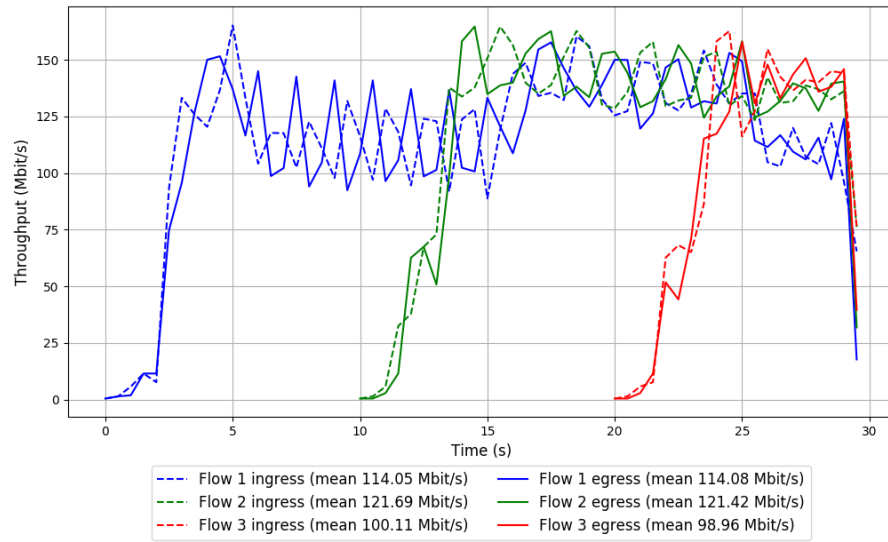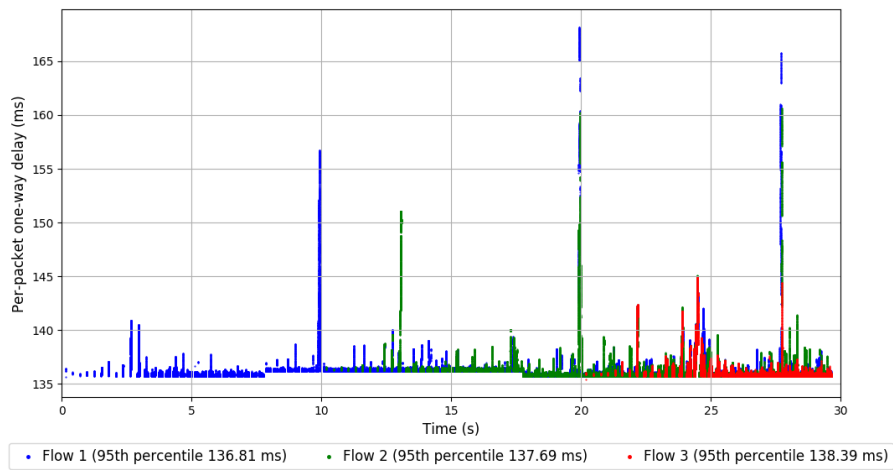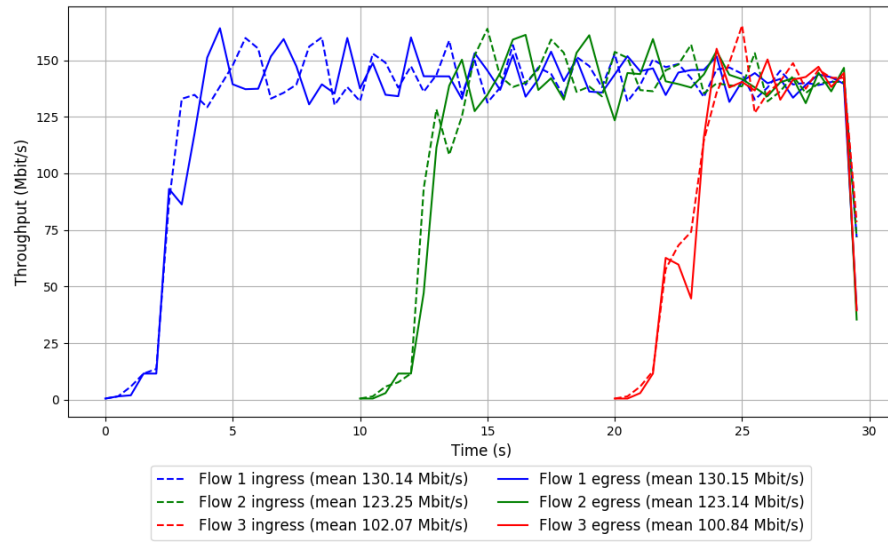
Run 4: Report of Indigo-calib — Data Link

```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-12 12:31:26
End at: 2017-12-12 12:31:56

# Below is generated by plot.py at 2017-12-12 16:55:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.56 Mbit/s
95th percentile per-packet one-way delay: 137.535 ms
Loss rate: 1.80%
-- Flow 1:
Average throughput: 66.78 Mbit/s
95th percentile per-packet one-way delay: 137.370 ms
Loss rate: 0.97%
-- Flow 2:
Average throughput: 61.53 Mbit/s
95th percentile per-packet one-way delay: 137.702 ms
Loss rate: 1.41%
-- Flow 3:
Average throughput: 101.47 Mbit/s
95th percentile per-packet one-way delay: 137.783 ms
Loss rate: 3.96%
```
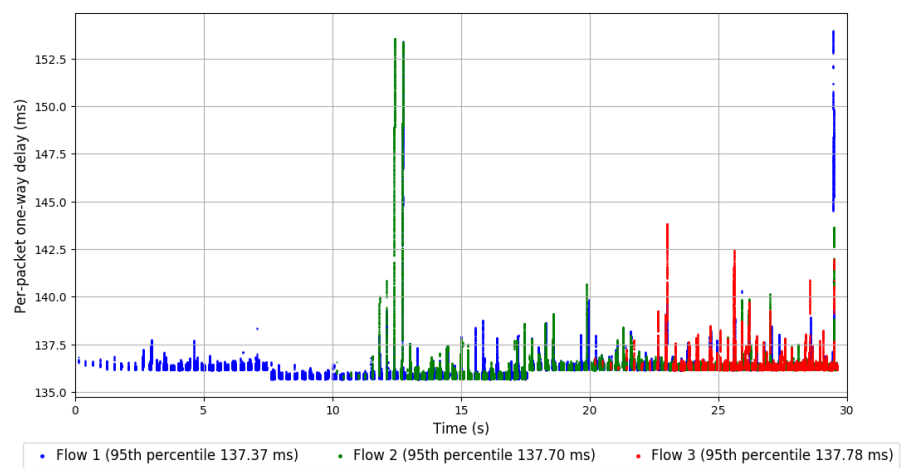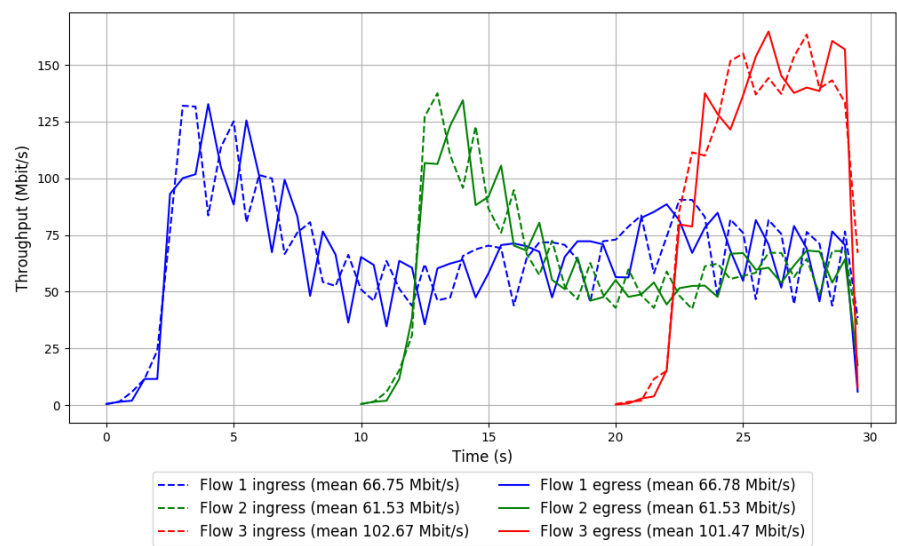
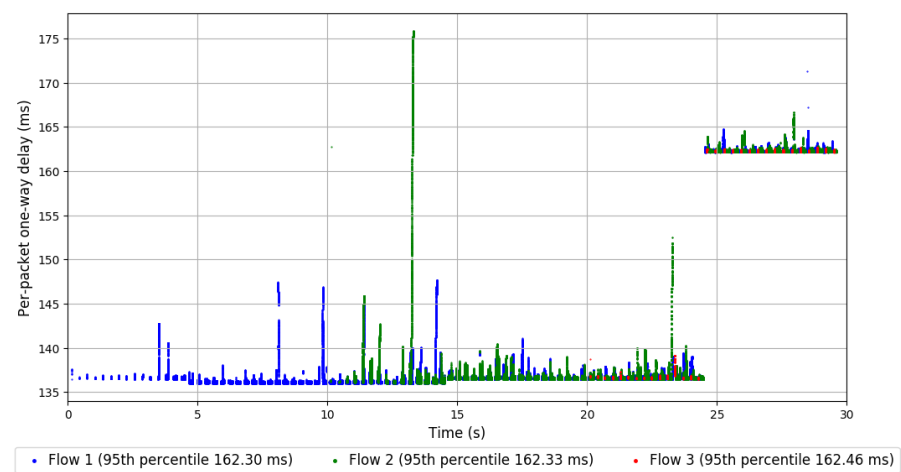Run 5: Report of Indigo-calib — Data Link

```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-12 12:45:39
End at: 2017-12-12 12:46:09


# Below is generated by plot.py at 2017-12-12 16:56:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.25 Mbit/s
95th percentile per-packet one-way delay: 162.312 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 116.58 Mbit/s
95th percentile per-packet one-way delay: 162.297 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 111.91 Mbit/s
95th percentile per-packet one-way delay: 162.330 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 162.463 ms
Loss rate: 2.80%
```

Run 6: Report of Indigo-calib — Data Link

Flow 1 ingress (mean 116.69 Mbit/s)   Flow 1 egress (mean 116.58 Mbit/s)
Flow 2 ingress (mean 111.91 Mbit/s)   Flow 2 egress (mean 111.91 Mbit/s)
Flow 3 ingress (mean 3.54 Mbit/s)   Flow 3 egress (mean 3.55 Mbit/s)

Flow 1 (95th percentile 162.30 ms)   Flow 2 (95th percentile 162.33 ms)   Flow 3 (95th percentile 162.46 ms)
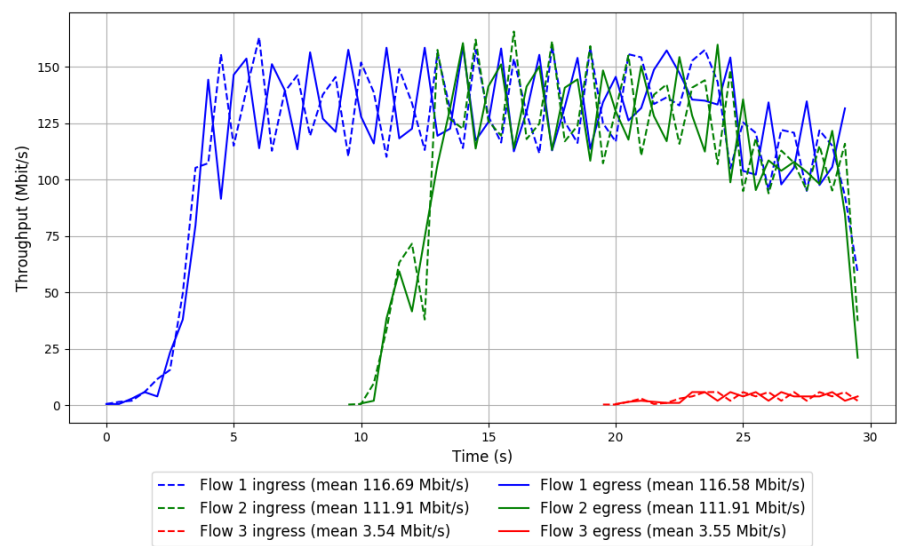
275

```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-12 12:59:57
End at: 2017-12-12 13:00:27

# Below is generated by plot.py at 2017-12-12 16:57:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 237.17 Mbit/s
95th percentile per-packet one-way delay: 137.804 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 129.18 Mbit/s
95th percentile per-packet one-way delay: 137.400 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 114.02 Mbit/s
95th percentile per-packet one-way delay: 137.960 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 101.82 Mbit/s
95th percentile per-packet one-way delay: 138.344 ms
Loss rate: 4.04%
```
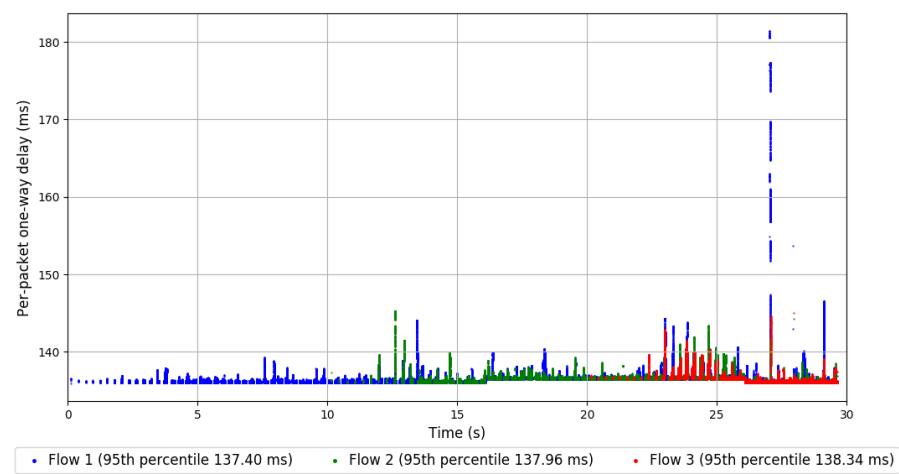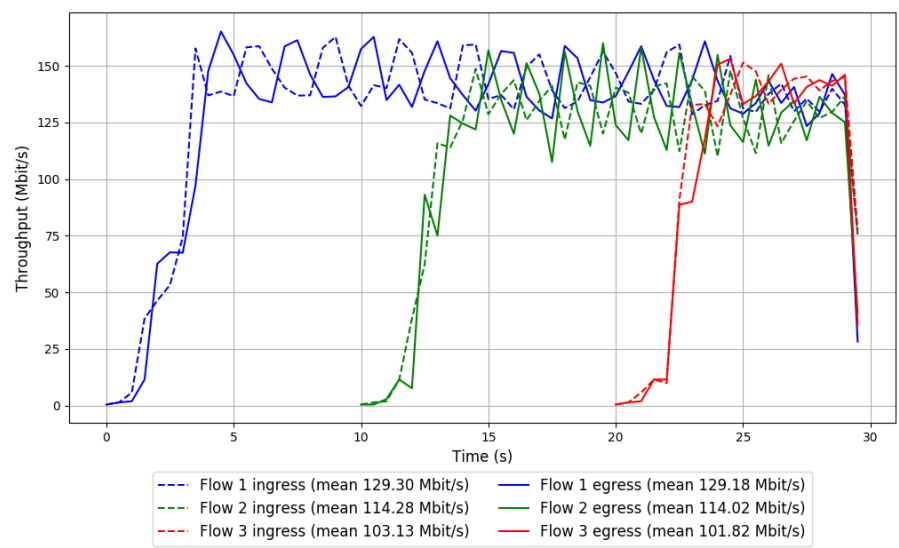
Run 7: Report of Indigo-calib — Data Link

- Flow 1 ingress (mean 129.30 Mbit/s)
- Flow 1 egress (mean 129.18 Mbit/s)
- Flow 2 ingress (mean 114.28 Mbit/s)
- Flow 2 egress (mean 114.02 Mbit/s)
- Flow 3 ingress (mean 103.13 Mbit/s)
- Flow 3 egress (mean 101.82 Mbit/s)

- Flow 1 (95th percentile 137.40 ms)
- Flow 2 (95th percentile 137.96 ms)
- Flow 3 (95th percentile 138.34 ms)

```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-12 13:13:52
End at: 2017-12-12 13:14:22


# Below is generated by plot.py at 2017-12-12 16:57:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 222.98 Mbit/s
95th percentile per-packet one-way delay: 137.225 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 116.49 Mbit/s
95th percentile per-packet one-way delay: 137.035 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 113.19 Mbit/s
95th percentile per-packet one-way delay: 137.200 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 99.65 Mbit/s
95th percentile per-packet one-way delay: 137.528 ms
Loss rate: 3.29%
```
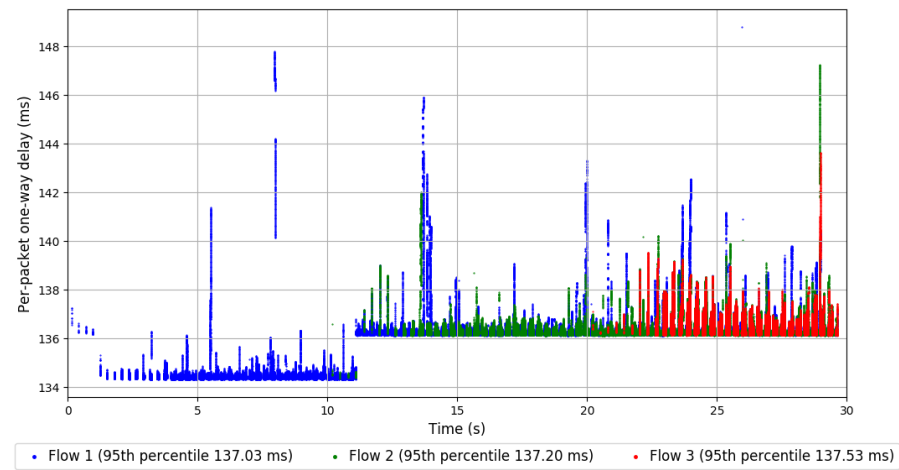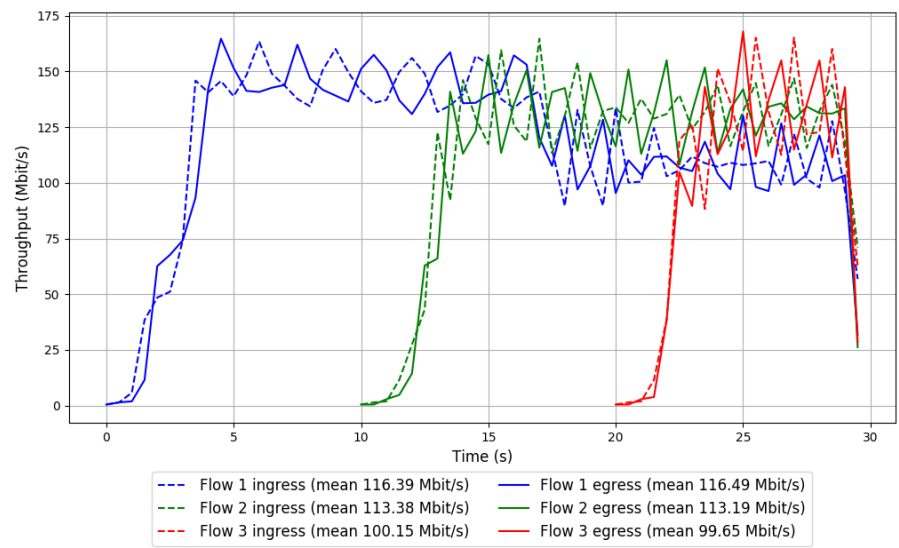
Run 8: Report of Indigo-calib — Data Link

279

```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-12 13:28:07
End at: 2017-12-12 13:28:37

# Below is generated by plot.py at 2017-12-12 16:57:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.33 Mbit/s
95th percentile per-packet one-way delay: 137.126 ms
Loss rate: 1.58%
-- Flow 1:
Average throughput: 130.12 Mbit/s
95th percentile per-packet one-way delay: 136.730 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 125.05 Mbit/s
95th percentile per-packet one-way delay: 137.954 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 96.30 Mbit/s
95th percentile per-packet one-way delay: 137.308 ms
Loss rate: 4.23%
```
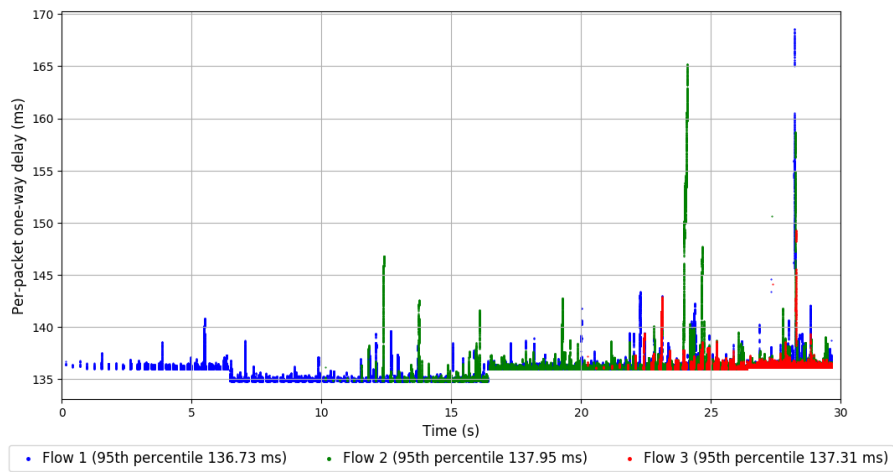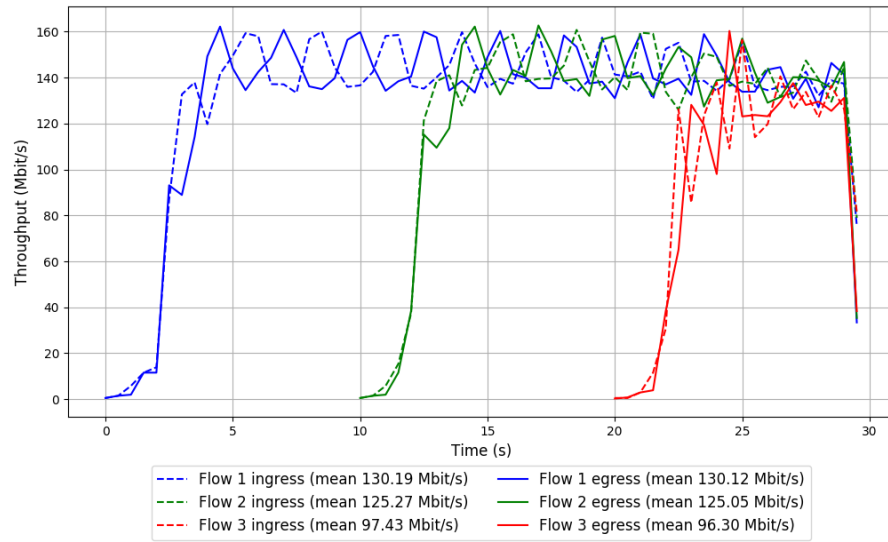
Run 9: Report of Indigo-calib — Data Link

```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-12 13:42:42
End at: 2017-12-12 13:43:12

# Below is generated by plot.py at 2017-12-12 16:57:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 241.73 Mbit/s
95th percentile per-packet one-way delay: 137.344 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 127.45 Mbit/s
95th percentile per-packet one-way delay: 136.973 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 125.95 Mbit/s
95th percentile per-packet one-way delay: 137.323 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 96.73 Mbit/s
95th percentile per-packet one-way delay: 140.577 ms
Loss rate: 4.14%
```

Run 10: Report of Indigo-calib — Data Link

- Flow 1 ingress (mean 127.60 Mbit/s)
- Flow 1 egress (mean 127.45 Mbit/s)
- Flow 2 ingress (mean 125.75 Mbit/s)
- Flow 2 egress (mean 125.95 Mbit/s)
- Flow 3 ingress (mean 98.07 Mbit/s)
- Flow 3 egress (mean 96.73 Mbit/s)

- Flow 1 (95th percentile 136.97 ms)
- Flow 2 (95th percentile 137.32 ms)
- Flow 3 (95th percentile 140.58 ms)