Pantheon Report

Generated at 2017-08-12 06:02:55 (UTC).

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

Repeated the test of 15 congestion control schemes 10 times.

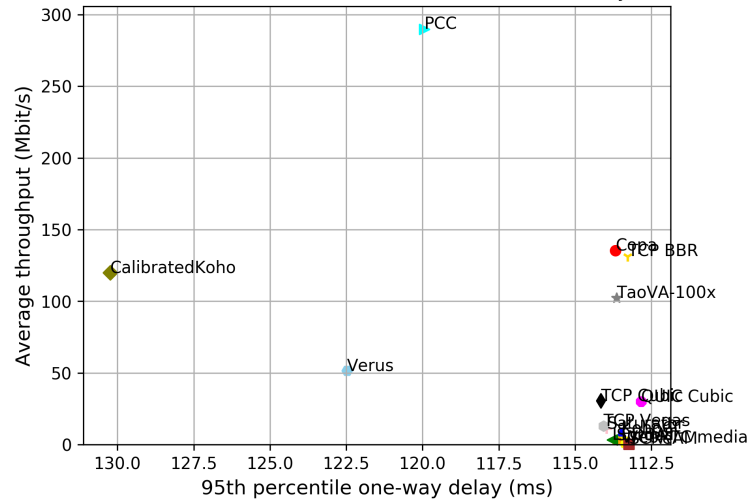Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

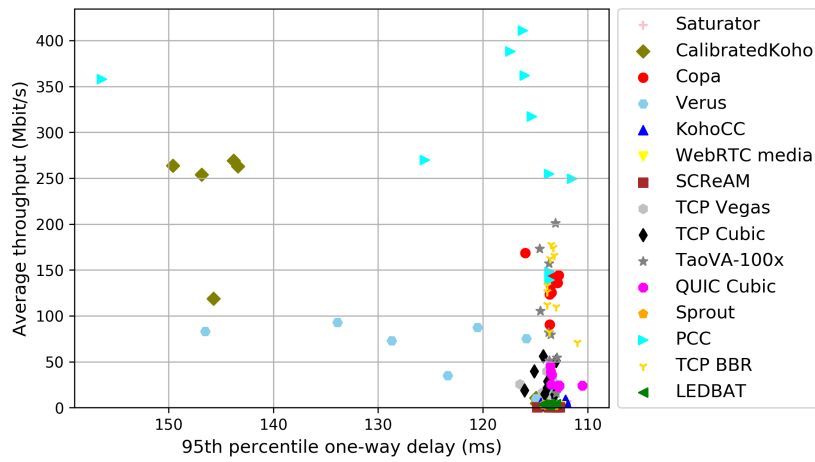Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

```
Git summary:
branch: master @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
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 Tokyo Ethernet to GCE London Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

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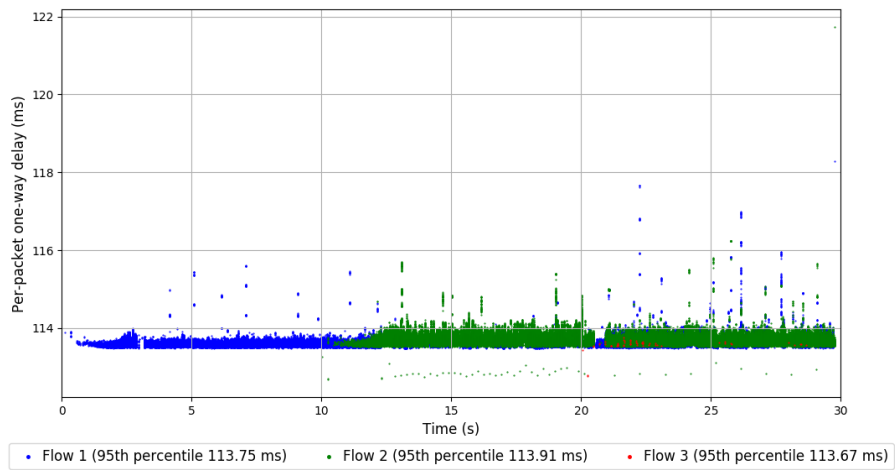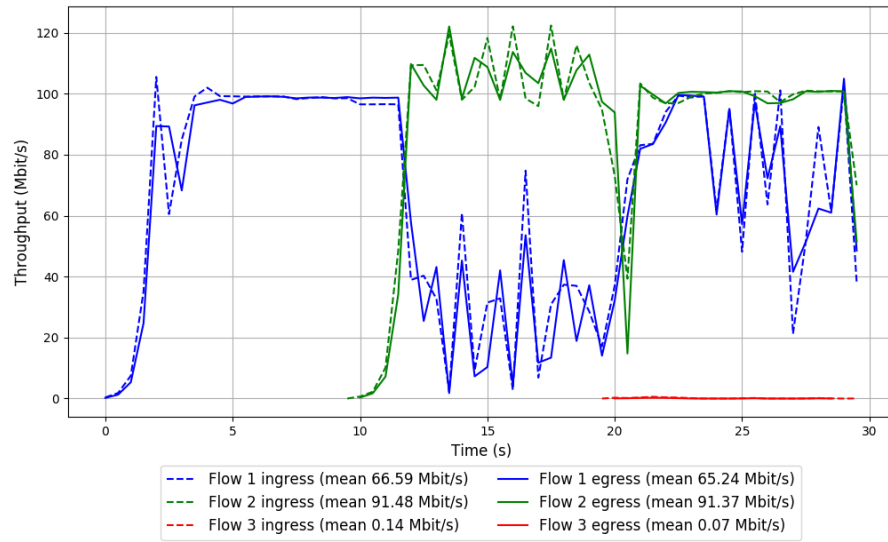### 3 flows with 10s interval between flows

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	72.32	61.49	55.63	113.05	113.14	113.50	4.53	8.46	13.05
CalibratedKoho	10	84.93	47.56	10.33	127.38	126.14	114.97	41.26	39.42	38.59
Copa	10	89.23	59.43	23.96	113.85	113.10	112.92	10.41	10.31	27.37
TCP Cubic	8	12.76	17.56	18.61	113.36	113.77	114.20	2.73	4.31	7.79
KohoCC	10	4.19	4.19	3.16	210.76	113.50	113.42	11.41	17.62	35.27
LEDBAT	10	1.98	1.53	1.34	113.57	113.68	113.53	3.18	4.66	6.16
PCC	10	233.96	61.66	47.21	120.17	114.02	115.01	13.48	33.08	17.09
QUIC Cubic	8	8.20	21.45	24.14	112.14	112.37	112.17	0.27	1.24	1.99
Saturator	9	7.11	5.67	5.47	114.24	113.64	113.72	22.24	35.82	35.30
SCReAM	10	0.21	0.22	0.22	111.81	111.70	112.36	0.69	1.05	2.06
Sprout	10	1.62	1.52	1.47	113.61	113.54	113.34	2.63	3.83	5.01
TaoVA-100x	9	64.91	67.98	21.90	113.48	113.82	112.84	11.72	18.19	26.96
TCP Vegas	10	5.75	8.57	4.73	113.74	113.91	113.66	2.29	3.94	8.38
Verus	10	37.91	12.37	17.92	121.45	118.71	115.10	55.52	64.27	53.93
WebRTC media	10	0.48	1.07	0.21	113.43	113.06	114.07	1.08	1.52	7.85

```
Run 1: Statistics of TCP BBR

Start at: 2017-08-12 00:45:52
End at: 2017-08-12 00:46:22


# Below is generated by plot.py at 2017-08-12 05:43:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.04 Mbit/s
95th percentile per-packet one-way delay: 113.864 ms
Loss rate: 1.74%
-- Flow 1:
Average throughput: 65.24 Mbit/s
95th percentile per-packet one-way delay: 113.750 ms
Loss rate: 2.18%
-- Flow 2:
Average throughput: 91.37 Mbit/s
95th percentile per-packet one-way delay: 113.911 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 113.671 ms
Loss rate: 54.29%
```
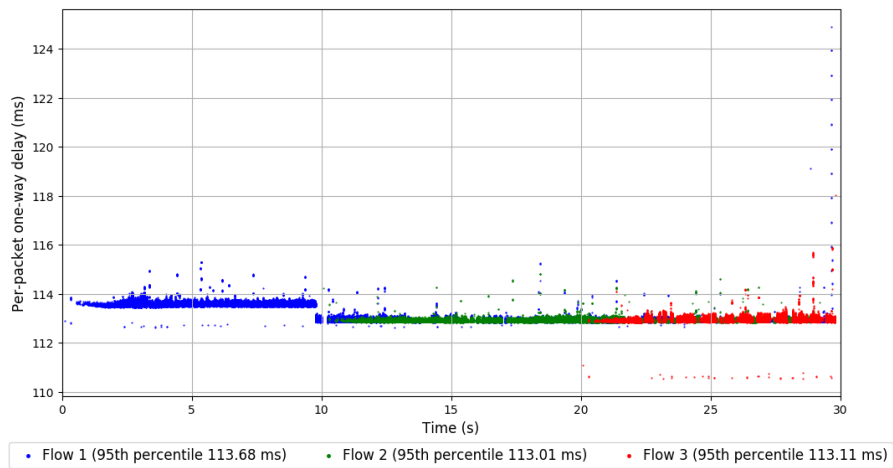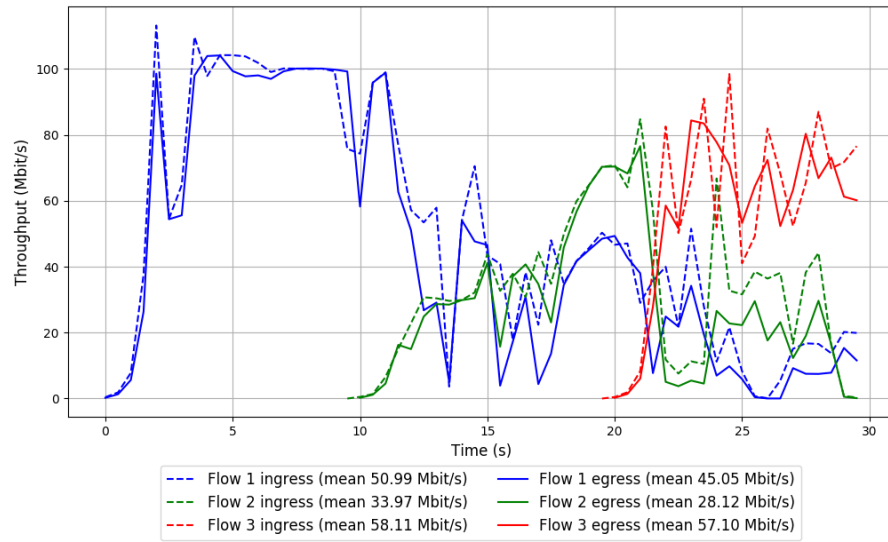
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-08-12 00:58:28
End at: 2017-08-12 00:58:58


# Below is generated by plot.py at 2017-08-12 05:43:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.28 Mbit/s
95th percentile per-packet one-way delay: 113.649 ms
Loss rate: 12.00%
-- Flow 1:
Average throughput: 45.05 Mbit/s
95th percentile per-packet one-way delay: 113.680 ms
Loss rate: 12.35%
-- Flow 2:
Average throughput: 28.12 Mbit/s
95th percentile per-packet one-way delay: 113.012 ms
Loss rate: 18.16%
-- Flow 3:
Average throughput: 57.10 Mbit/s
95th percentile per-packet one-way delay: 113.107 ms
Loss rate: 3.88%
```
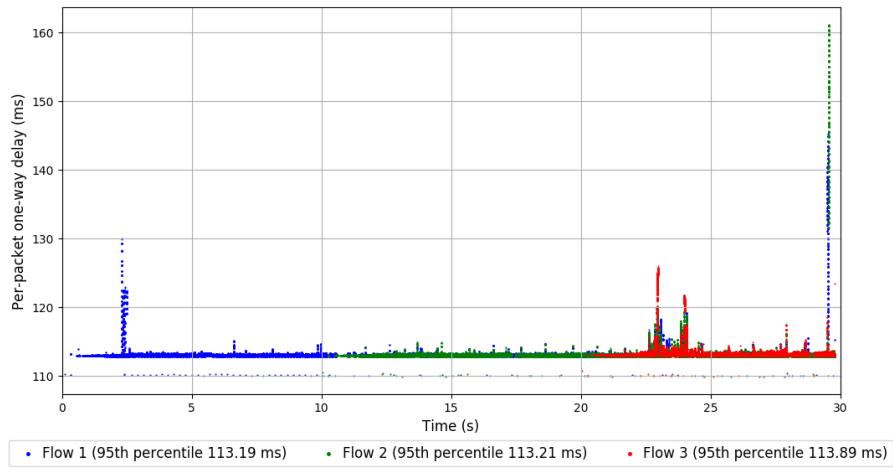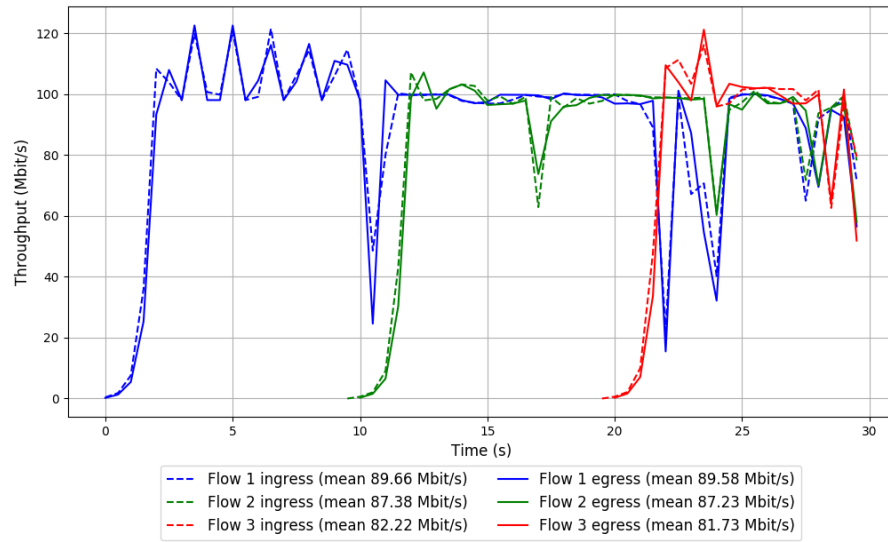
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 50.99 Mbit/s) --- Flow 1 egress (mean 45.05 Mbit/s)
Flow 2 ingress (mean 33.97 Mbit/s) --- Flow 2 egress (mean 28.12 Mbit/s)
Flow 3 ingress (mean 58.11 Mbit/s) --- Flow 3 egress (mean 57.10 Mbit/s)

Flow 1 (95th percentile 113.68 ms)   Flow 2 (95th percentile 113.01 ms)   Flow 3 (95th percentile 113.11 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2017-08-12 01:11:41
End at: 2017-08-12 01:12:11

# Below is generated by plot.py at 2017-08-12 05:43:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 174.33 Mbit/s
95th percentile per-packet one-way delay: 113.270 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 89.58 Mbit/s
95th percentile per-packet one-way delay: 113.190 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 87.23 Mbit/s
95th percentile per-packet one-way delay: 113.207 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 81.73 Mbit/s
95th percentile per-packet one-way delay: 113.890 ms
Loss rate: 2.91%
```
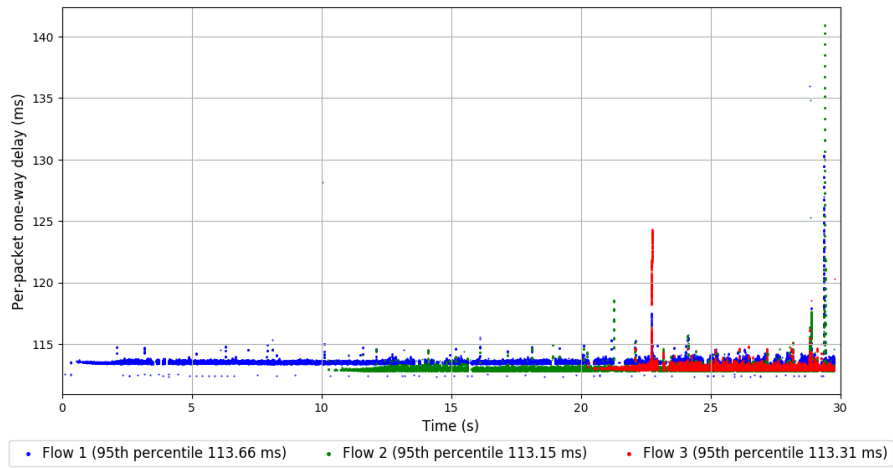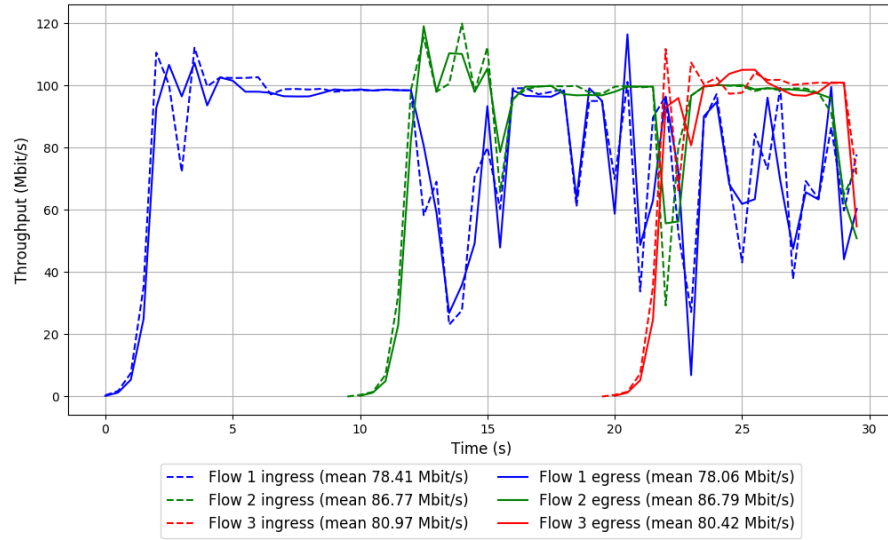
Run 3: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 89.66 Mbit/s) —— Flow 1 egress (mean 89.58 Mbit/s)
- - - Flow 2 ingress (mean 87.38 Mbit/s) —— Flow 2 egress (mean 87.23 Mbit/s)
- - - Flow 3 ingress (mean 82.22 Mbit/s) —— Flow 3 egress (mean 81.73 Mbit/s)

• Flow 1 (95th percentile 113.19 ms) • Flow 2 (95th percentile 113.21 ms) • Flow 3 (95th percentile 113.89 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2017-08-12 01:24:55
End at: 2017-08-12 01:25:25


# Below is generated by plot.py at 2017-08-12 05:44:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 162.06 Mbit/s
95th percentile per-packet one-way delay: 113.610 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 78.06 Mbit/s
95th percentile per-packet one-way delay: 113.656 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 86.79 Mbit/s
95th percentile per-packet one-way delay: 113.153 ms
Loss rate: 1.26%
-- Flow 3:
Average throughput: 80.42 Mbit/s
95th percentile per-packet one-way delay: 113.309 ms
Loss rate: 2.89%
```
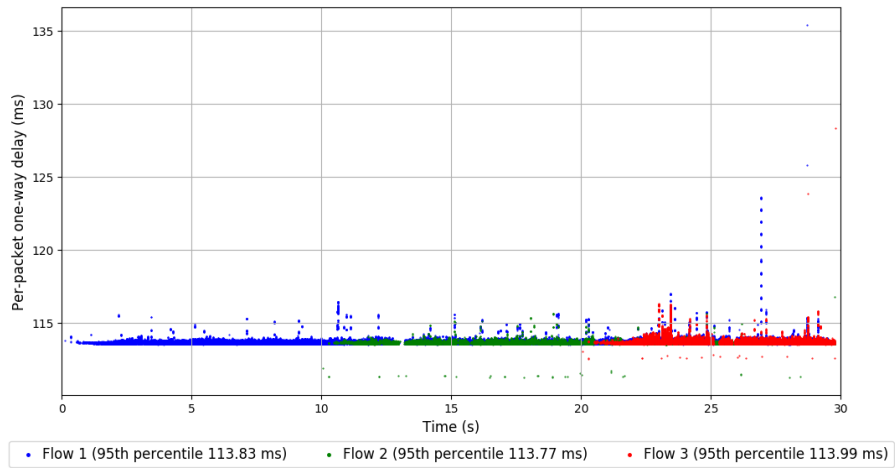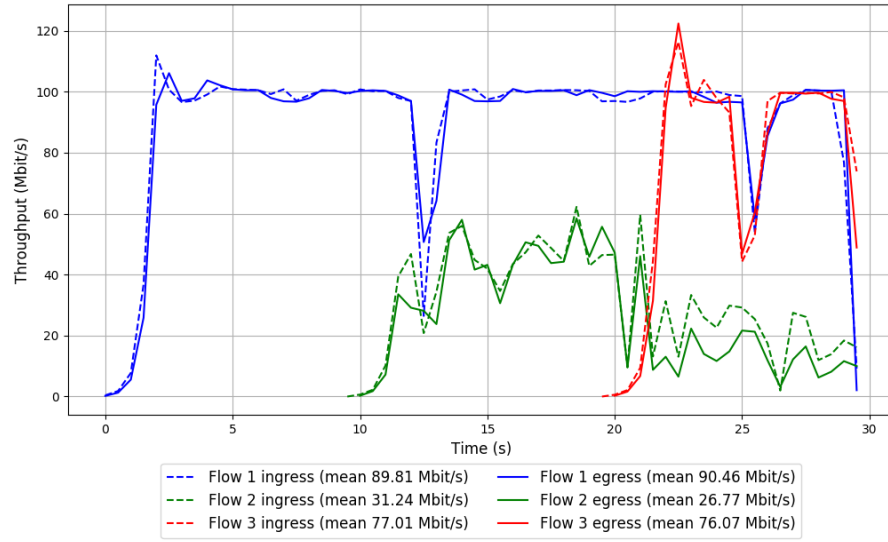
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 78.41 Mbit/s)   Flow 1 egress (mean 78.06 Mbit/s)
Flow 2 ingress (mean 86.77 Mbit/s)   Flow 2 egress (mean 86.79 Mbit/s)
Flow 3 ingress (mean 80.97 Mbit/s)   Flow 3 egress (mean 80.42 Mbit/s)

Flow 1 (95th percentile 113.66 ms)   Flow 2 (95th percentile 113.15 ms)   Flow 3 (95th percentile 113.31 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2017-08-12 01:37:28
End at: 2017-08-12 01:37:58

# Below is generated by plot.py at 2017-08-12 05:44:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.08 Mbit/s
95th percentile per-packet one-way delay: 113.859 ms
Loss rate: 3.04%
-- Flow 1:
Average throughput: 90.46 Mbit/s
95th percentile per-packet one-way delay: 113.832 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 26.77 Mbit/s
95th percentile per-packet one-way delay: 113.768 ms
Loss rate: 15.27%
-- Flow 3:
Average throughput: 76.07 Mbit/s
95th percentile per-packet one-way delay: 113.990 ms
Loss rate: 3.12%
```
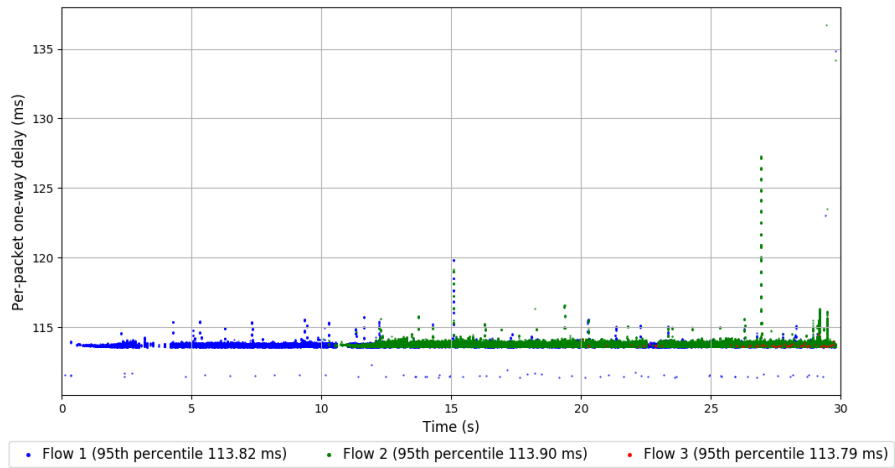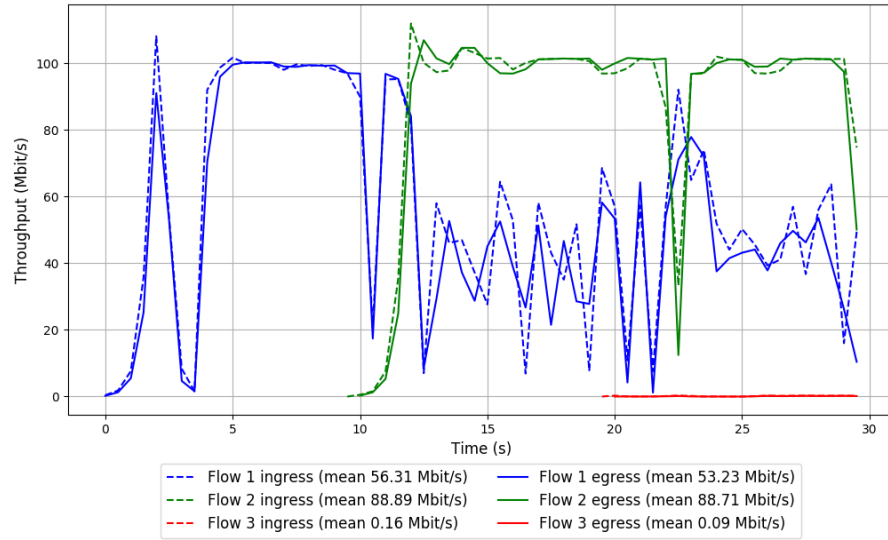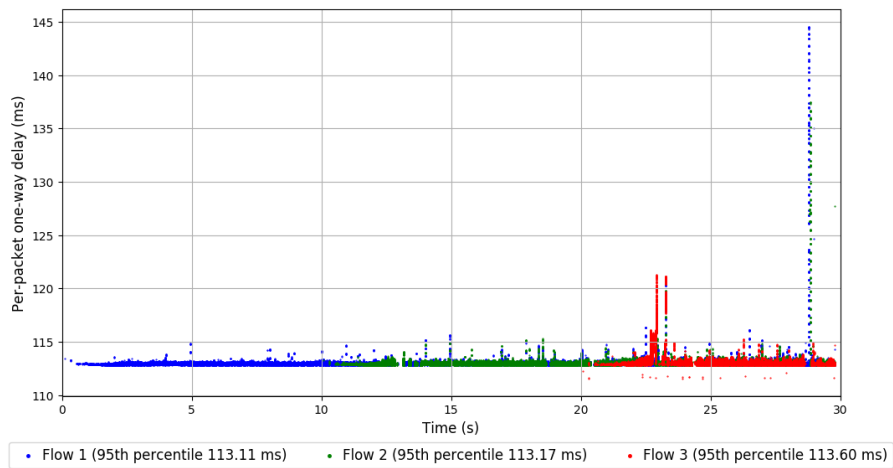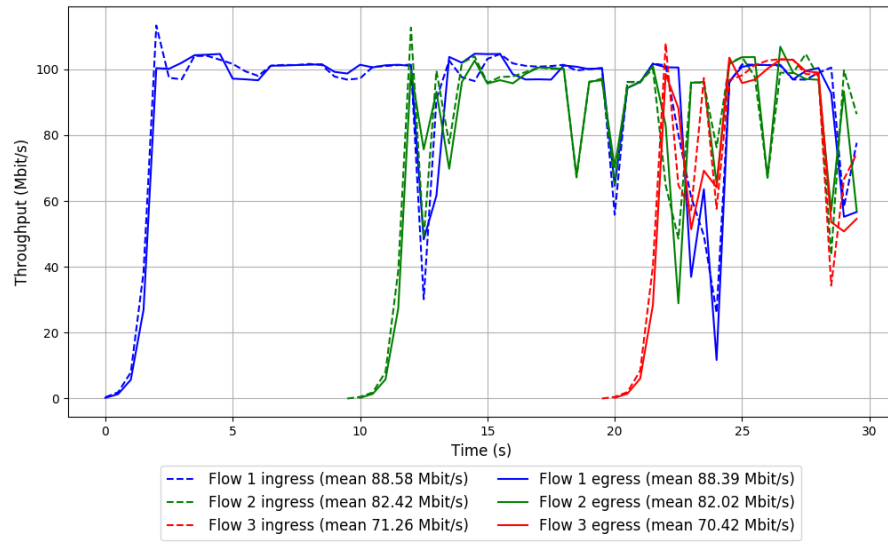
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 89.81 Mbit/s) --- Flow 1 egress (mean 90.46 Mbit/s)
Flow 2 ingress (mean 31.24 Mbit/s) --- Flow 2 egress (mean 26.77 Mbit/s)
Flow 3 ingress (mean 77.01 Mbit/s) --- Flow 3 egress (mean 76.07 Mbit/s)

Flow 1 (95th percentile 113.83 ms)   Flow 2 (95th percentile 113.77 ms)   Flow 3 (95th percentile 113.99 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2017-08-12 01:50:07
End at: 2017-08-12 01:50:37

# Below is generated by plot.py at 2017-08-12 05:44:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.28 Mbit/s
95th percentile per-packet one-way delay: 113.868 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 53.23 Mbit/s
95th percentile per-packet one-way delay: 113.817 ms
Loss rate: 6.13%
-- Flow 2:
Average throughput: 88.71 Mbit/s
95th percentile per-packet one-way delay: 113.897 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 113.791 ms
Loss rate: 45.86%
```
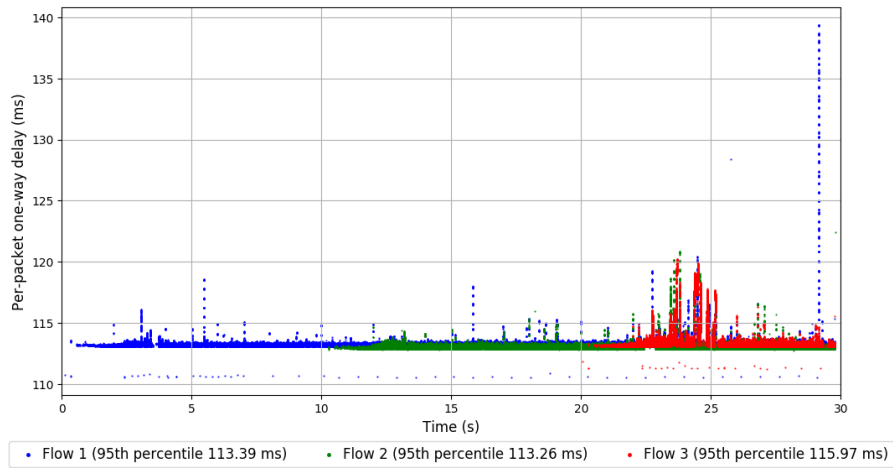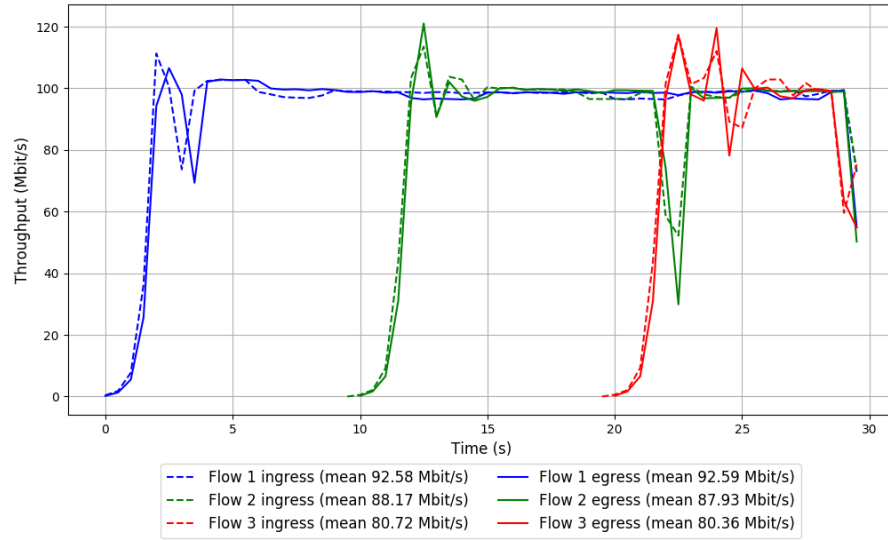
Run 6: Report of TCP BBR — Data Link

```
Run 7: Statistics of TCP BBR

Start at: 2017-08-12 02:03:03
End at: 2017-08-12 02:03:33


# Below is generated by plot.py at 2017-08-12 05:44:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 165.86 Mbit/s
95th percentile per-packet one-way delay: 113.172 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 113.111 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 82.02 Mbit/s
95th percentile per-packet one-way delay: 113.171 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 113.598 ms
Loss rate: 3.25%
```
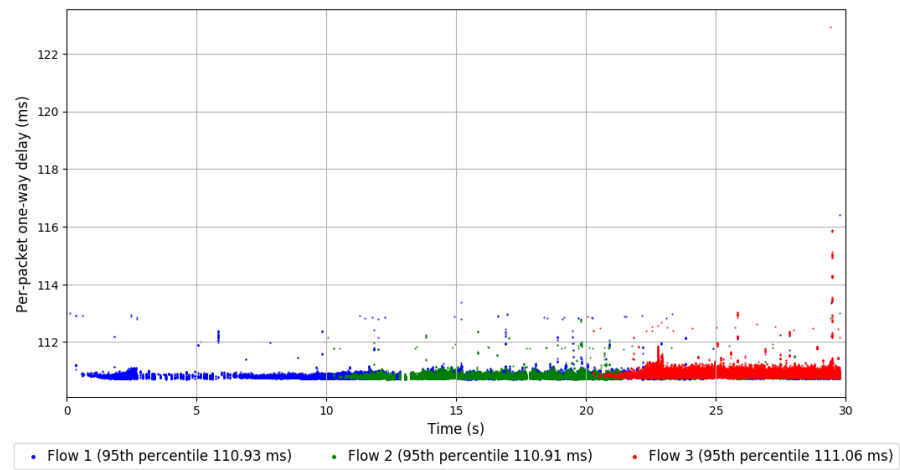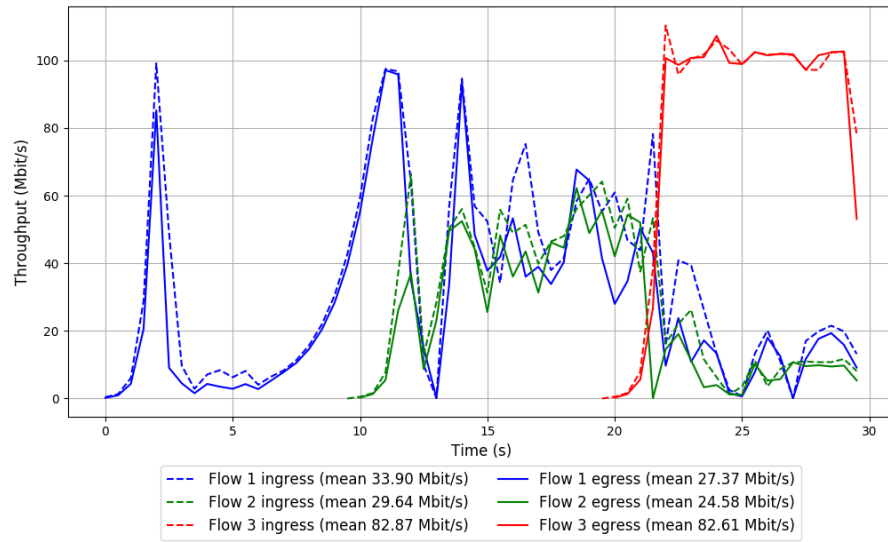
Run 7: Report of TCP BBR — Data Link

Flow 1 ingress (mean 88.58 Mbit/s) --- Flow 1 egress (mean 88.39 Mbit/s)
Flow 2 ingress (mean 82.42 Mbit/s) --- Flow 2 egress (mean 82.02 Mbit/s)
Flow 3 ingress (mean 71.26 Mbit/s) --- Flow 3 egress (mean 70.42 Mbit/s)

Flow 1 (95th percentile 113.11 ms)   Flow 2 (95th percentile 113.17 ms)   Flow 3 (95th percentile 113.60 ms)

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```
Run 8: Statistics of TCP BBR

Start at: 2017-08-12 02:16:16
End at: 2017-08-12 02:16:46

# Below is generated by plot.py at 2017-08-12 05:45:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.38 Mbit/s
95th percentile per-packet one-way delay: 113.495 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 92.59 Mbit/s
95th percentile per-packet one-way delay: 113.392 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 87.93 Mbit/s
95th percentile per-packet one-way delay: 113.256 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 80.36 Mbit/s
95th percentile per-packet one-way delay: 115.966 ms
Loss rate: 2.70%
```
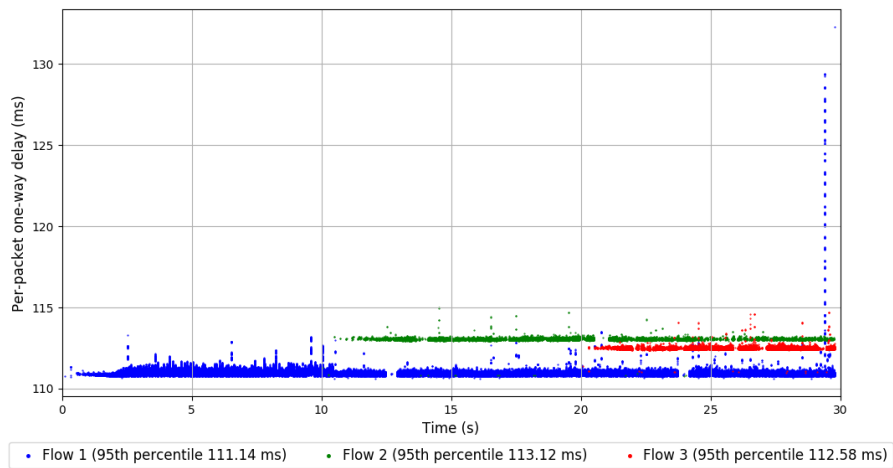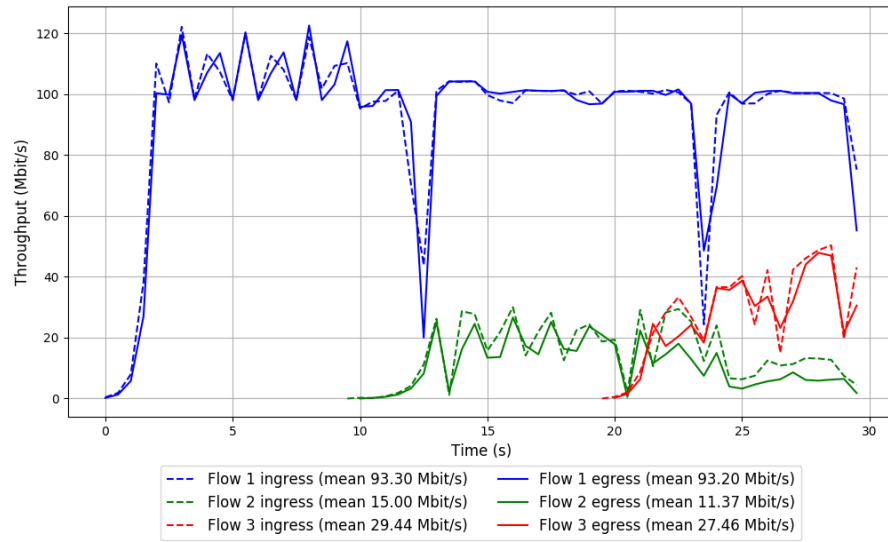
Run 8: Report of TCP BBR — Data Link

Flow 1 ingress (mean 92.58 Mbit/s) Flow 1 egress (mean 92.59 Mbit/s)
Flow 2 ingress (mean 88.17 Mbit/s) Flow 2 egress (mean 87.93 Mbit/s)
Flow 3 ingress (mean 80.72 Mbit/s) Flow 3 egress (mean 80.36 Mbit/s)

Flow 1 (95th percentile 113.39 ms)   Flow 2 (95th percentile 113.26 ms)   Flow 3 (95th percentile 115.97 ms)

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```
Run 9: Statistics of TCP BBR

Start at: 2017-08-12 02:29:02
End at: 2017-08-12 02:29:32


# Below is generated by plot.py at 2017-08-12 05:45:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.78 Mbit/s
95th percentile per-packet one-way delay: 110.996 ms
Loss rate: 13.58%
-- Flow 1:
Average throughput: 27.37 Mbit/s
95th percentile per-packet one-way delay: 110.926 ms
Loss rate: 19.86%
-- Flow 2:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 110.907 ms
Loss rate: 17.99%
-- Flow 3:
Average throughput: 82.61 Mbit/s
95th percentile per-packet one-way delay: 111.058 ms
Loss rate: 2.70%
```
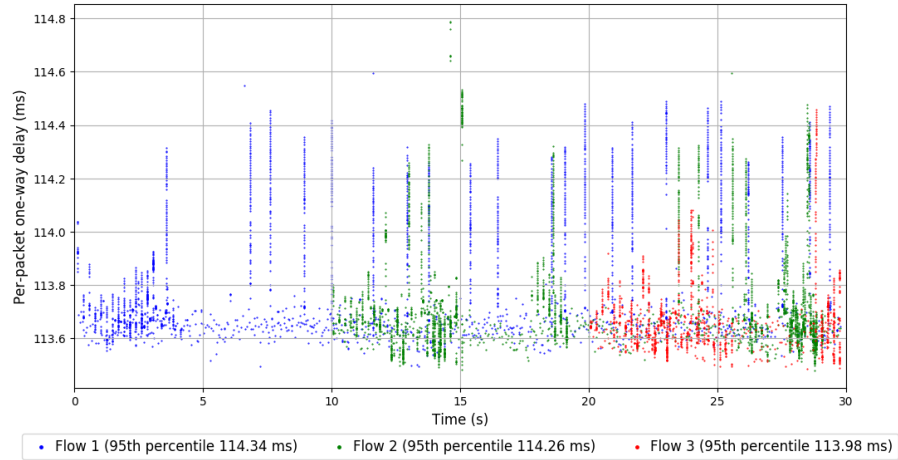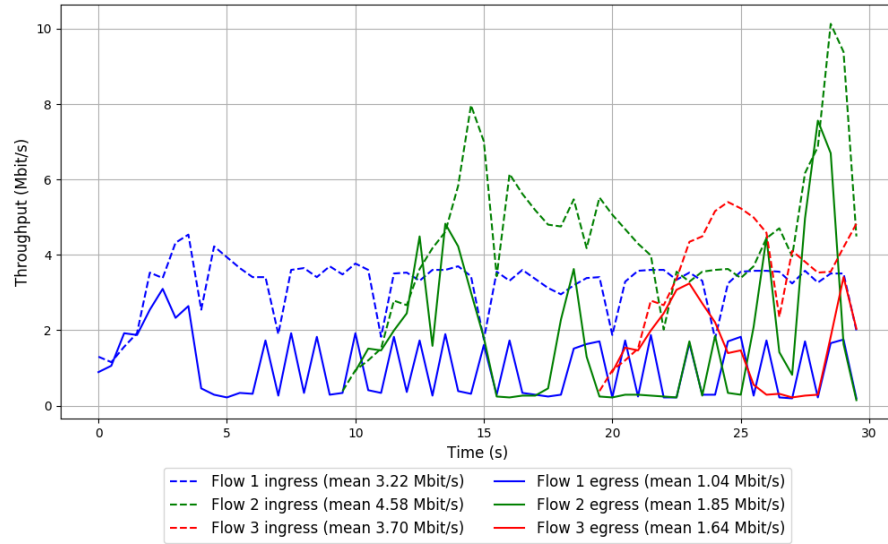
Run 9: Report of TCP BBR — Data Link

```
Run 10: Statistics of TCP BBR

Start at: 2017-08-12 02:41:37
End at: 2017-08-12 02:42:07

# Below is generated by plot.py at 2017-08-12 05:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.73 Mbit/s
95th percentile per-packet one-way delay: 113.004 ms
Loss rate: 3.65%
-- Flow 1:
Average throughput: 93.20 Mbit/s
95th percentile per-packet one-way delay: 111.141 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 11.37 Mbit/s
95th percentile per-packet one-way delay: 113.116 ms
Loss rate: 25.16%
-- Flow 3:
Average throughput: 27.46 Mbit/s
95th percentile per-packet one-way delay: 112.582 ms
Loss rate: 8.87%
```
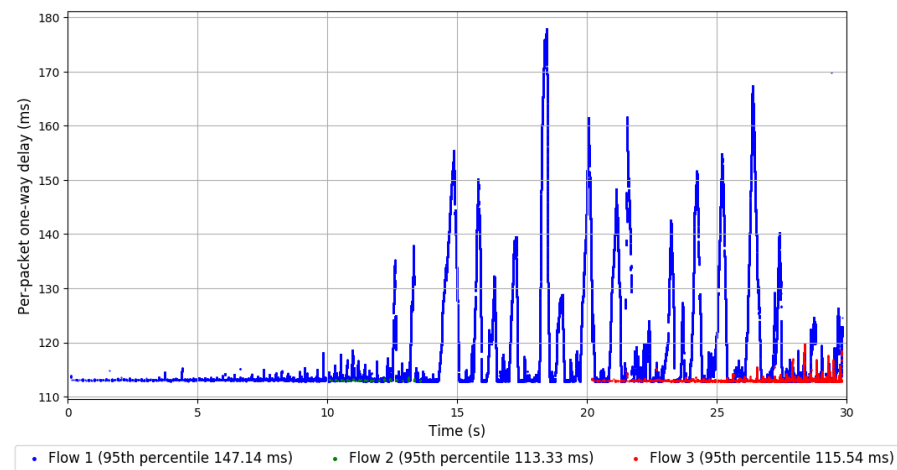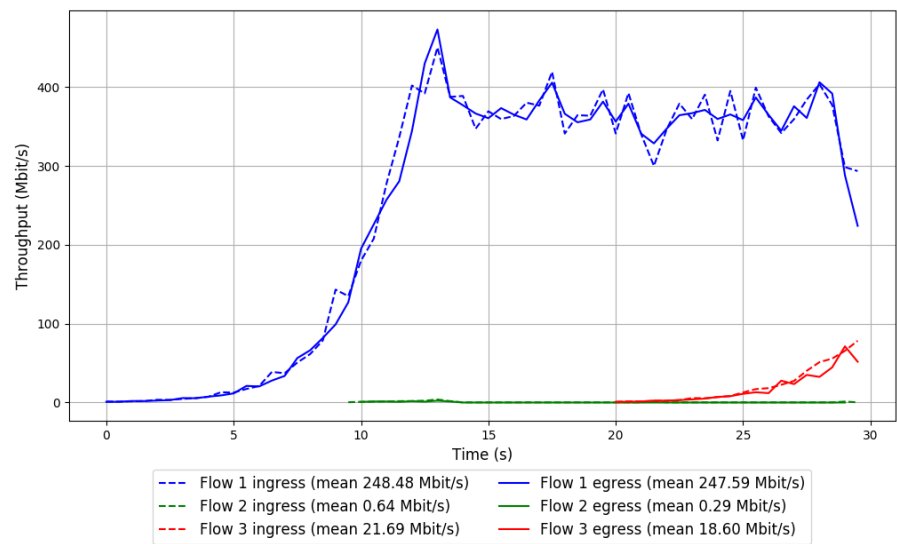
Run 10: Report of TCP BBR — Data Link

Flow 1 ingress (mean 93.30 Mbit/s) — Flow 1 egress (mean 93.20 Mbit/s)
Flow 2 ingress (mean 15.00 Mbit/s) — Flow 2 egress (mean 11.37 Mbit/s)
Flow 3 ingress (mean 29.44 Mbit/s) — Flow 3 egress (mean 27.46 Mbit/s)

Flow 1 (95th percentile 111.14 ms) • Flow 2 (95th percentile 113.12 ms) • Flow 3 (95th percentile 112.58 ms)

```
Run 1: Statistics of CalibratedKoho

Start at: 2017-08-12 00:53:18
End at: 2017-08-12 00:53:48

# Below is generated by plot.py at 2017-08-12 05:45:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.80 Mbit/s
95th percentile per-packet one-way delay: 114.295 ms
Loss rate: 62.92%
-- Flow 1:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 114.339 ms
Loss rate: 67.87%
-- Flow 2:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 114.258 ms
Loss rate: 60.11%
-- Flow 3:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 113.983 ms
Loss rate: 56.95%
```
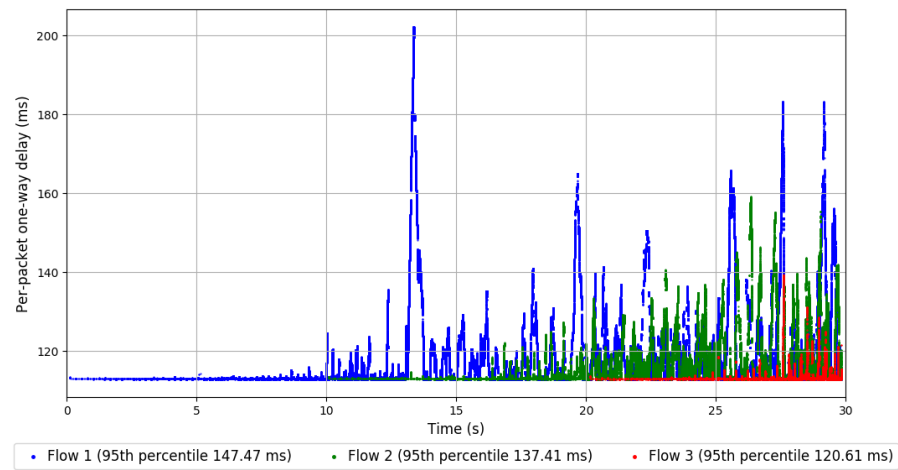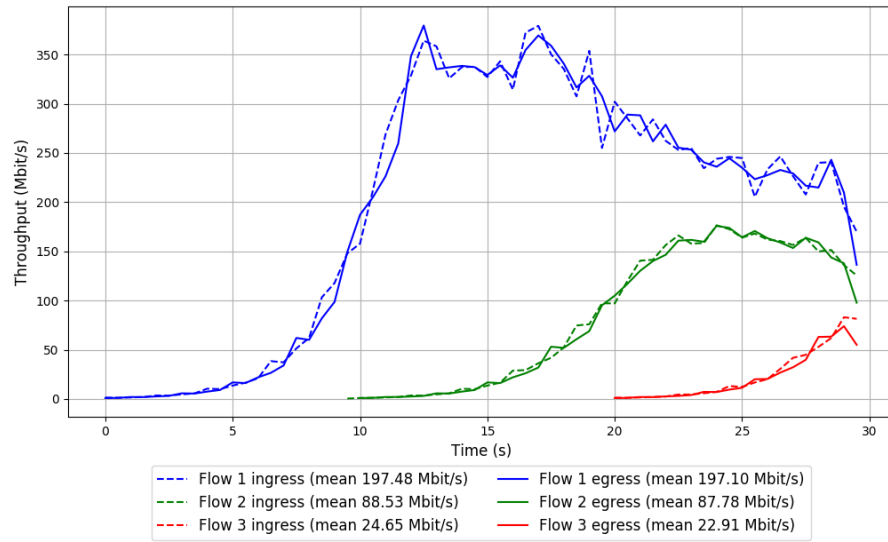
Run 1: Report of CalibratedKoho — Data Link

```
Run 2: Statistics of CalibratedKoho

Start at: 2017-08-12 01:05:59
End at: 2017-08-12 01:06:29

# Below is generated by plot.py at 2017-08-12 05:45:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.80 Mbit/s
95th percentile per-packet one-way delay: 146.851 ms
Loss rate: 1.61%
-- Flow 1:
Average throughput: 247.59 Mbit/s
95th percentile per-packet one-way delay: 147.144 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 0.29 Mbit/s
95th percentile per-packet one-way delay: 113.327 ms
Loss rate: 56.39%
-- Flow 3:
Average throughput: 18.60 Mbit/s
95th percentile per-packet one-way delay: 115.540 ms
Loss rate: 16.22%
```
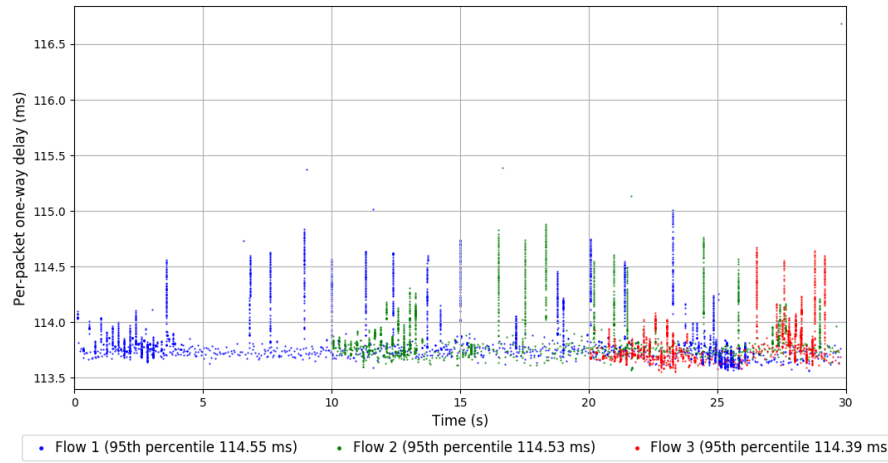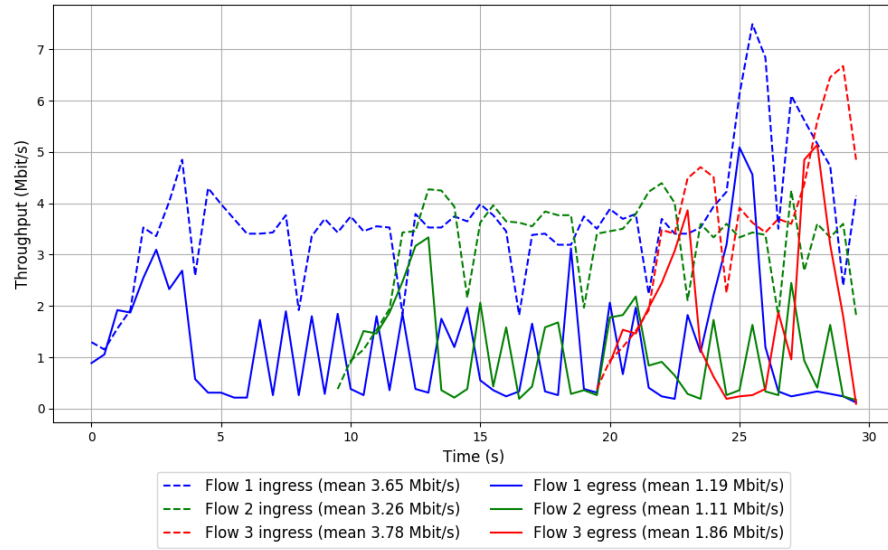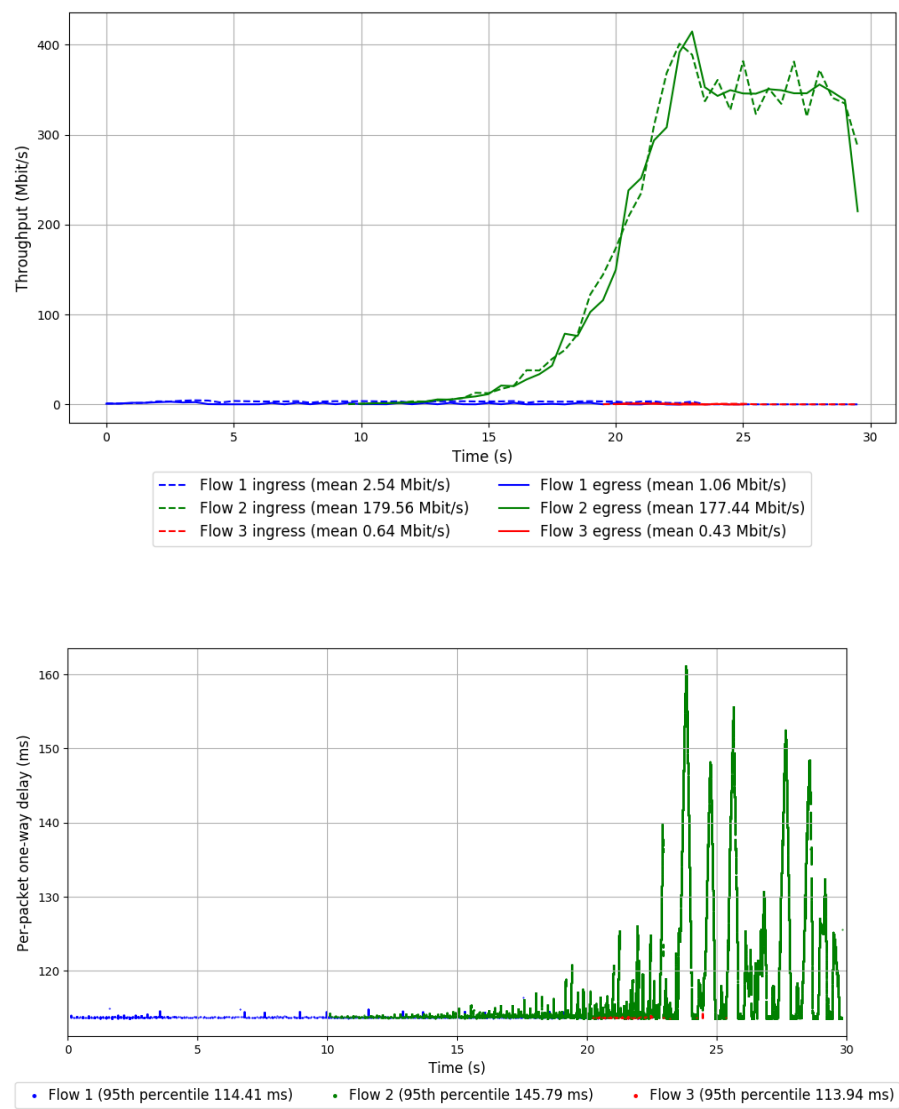
Run 2: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 248.48 Mbit/s)   Flow 1 egress (mean 247.59 Mbit/s)
Flow 2 ingress (mean 0.64 Mbit/s)   Flow 2 egress (mean 0.29 Mbit/s)
Flow 3 ingress (mean 21.69 Mbit/s)   Flow 3 egress (mean 18.60 Mbit/s)

Flow 1 (95th percentile 147.14 ms)   Flow 2 (95th percentile 113.33 ms)   Flow 3 (95th percentile 115.54 ms)

```
Run 3: Statistics of CalibratedKoho

Start at: 2017-08-12 01:19:18
End at: 2017-08-12 01:19:48

# Below is generated by plot.py at 2017-08-12 05:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.83 Mbit/s
95th percentile per-packet one-way delay: 143.398 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 197.10 Mbit/s
95th percentile per-packet one-way delay: 147.471 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 87.78 Mbit/s
95th percentile per-packet one-way delay: 137.413 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 120.613 ms
Loss rate: 9.09%
```
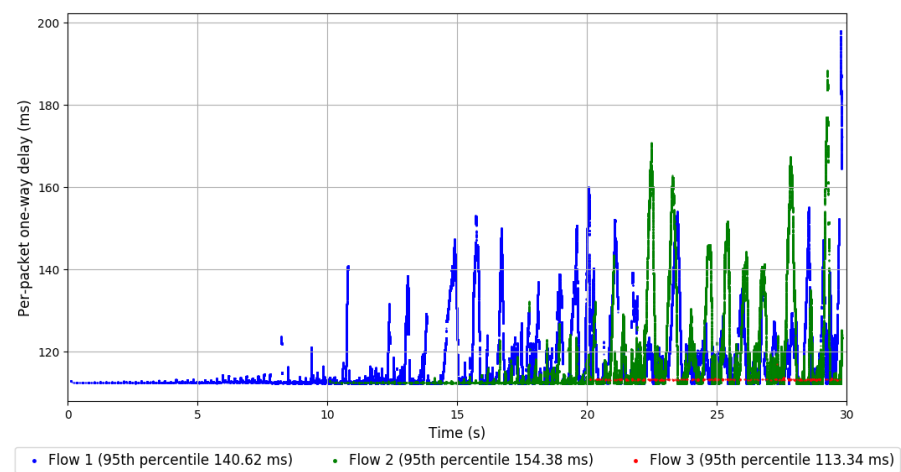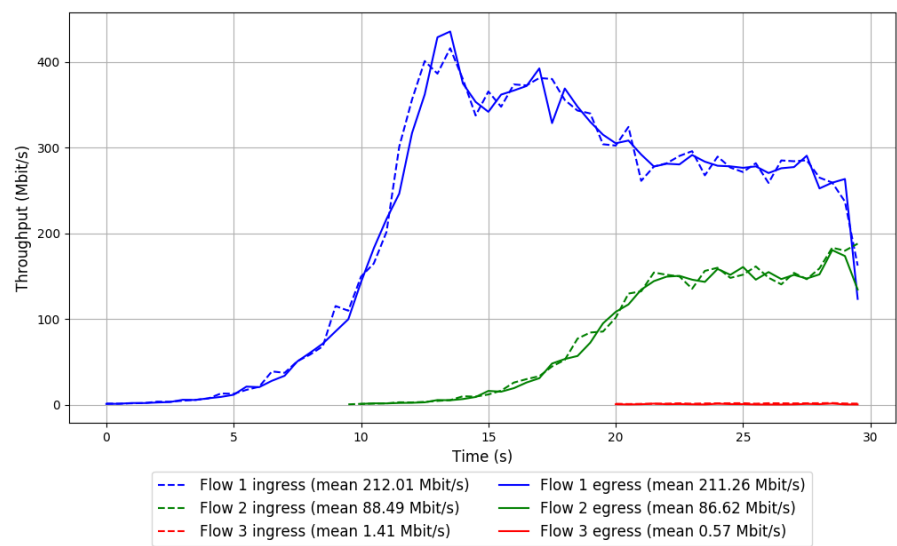
Run 3: Report of CalibratedKoho — Data Link

```
Run 4: Statistics of CalibratedKoho

Start at: 2017-08-12 01:32:18
End at: 2017-08-12 01:32:49

# Below is generated by plot.py at 2017-08-12 05:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.53 Mbit/s
95th percentile per-packet one-way delay: 114.514 ms
Loss rate: 64.53%
-- Flow 1:
Average throughput: 1.19 Mbit/s
95th percentile per-packet one-way delay: 114.548 ms
Loss rate: 67.72%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 114.531 ms
Loss rate: 66.41%
-- Flow 3:
Average throughput: 1.86 Mbit/s
95th percentile per-packet one-way delay: 114.385 ms
Loss rate: 52.00%
```
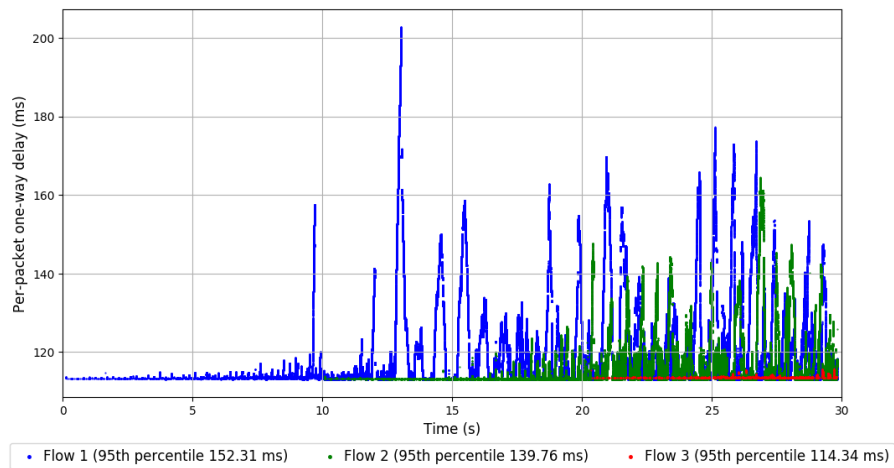
Run 4: Report of CalibratedKoho — Data Link

```
Run 5: Statistics of CalibratedKoho

Start at: 2017-08-12 01:44:54
End at: 2017-08-12 01:45:24


# Below is generated by plot.py at 2017-08-12 05:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.77 Mbit/s
95th percentile per-packet one-way delay: 145.733 ms
Loss rate: 3.70%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 114.405 ms
Loss rate: 67.75%
-- Flow 2:
Average throughput: 177.44 Mbit/s
95th percentile per-packet one-way delay: 145.786 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.936 ms
Loss rate: 65.23%
```
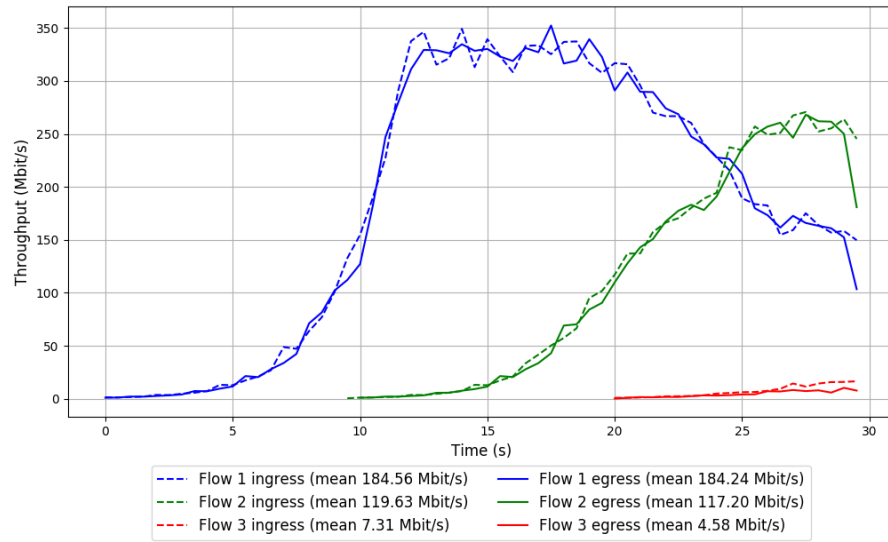
Run 5: Report of CalibratedKoho — Data Link

```
Run 6: Statistics of CalibratedKoho

Start at: 2017-08-12 01:57:26
End at: 2017-08-12 01:57:56

# Below is generated by plot.py at 2017-08-12 05:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.98 Mbit/s
95th percentile per-packet one-way delay: 143.784 ms
Loss rate: 1.64%
-- Flow 1:
Average throughput: 211.26 Mbit/s
95th percentile per-packet one-way delay: 140.622 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 86.62 Mbit/s
95th percentile per-packet one-way delay: 154.379 ms
Loss rate: 3.21%
-- Flow 3:
Average throughput: 0.57 Mbit/s
95th percentile per-packet one-way delay: 113.337 ms
Loss rate: 61.00%
```
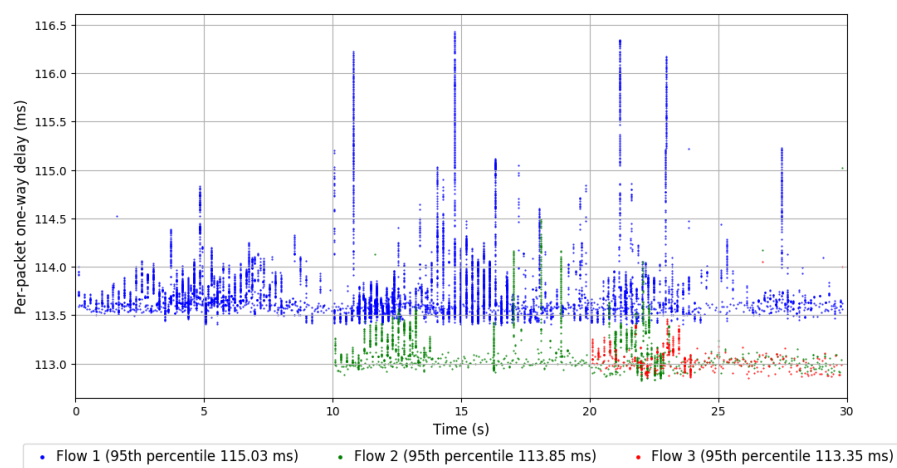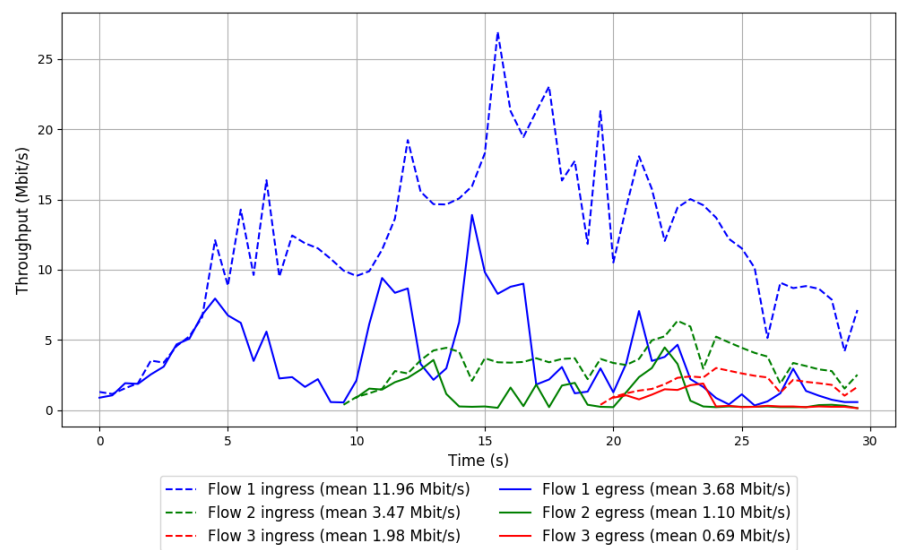
Run 6: Report of CalibratedKoho — Data Link

```
Run 7: Statistics of CalibratedKoho

Start at: 2017-08-12 02:10:39
End at: 2017-08-12 02:11:09


# Below is generated by plot.py at 2017-08-12 05:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 263.48 Mbit/s
95th percentile per-packet one-way delay: 149.603 ms
Loss rate: 1.91%
-- Flow 1:
Average throughput: 184.24 Mbit/s
95th percentile per-packet one-way delay: 152.315 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 117.20 Mbit/s
95th percentile per-packet one-way delay: 139.760 ms
Loss rate: 3.10%
-- Flow 3:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 114.344 ms
Loss rate: 38.49%
```
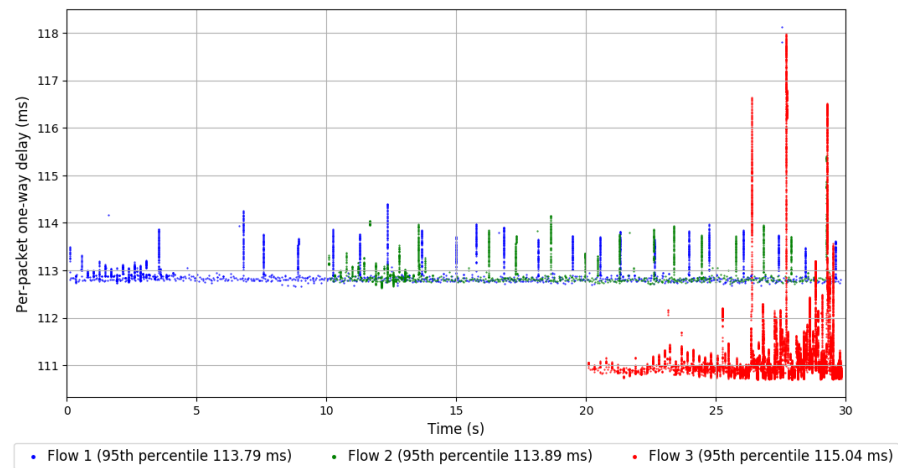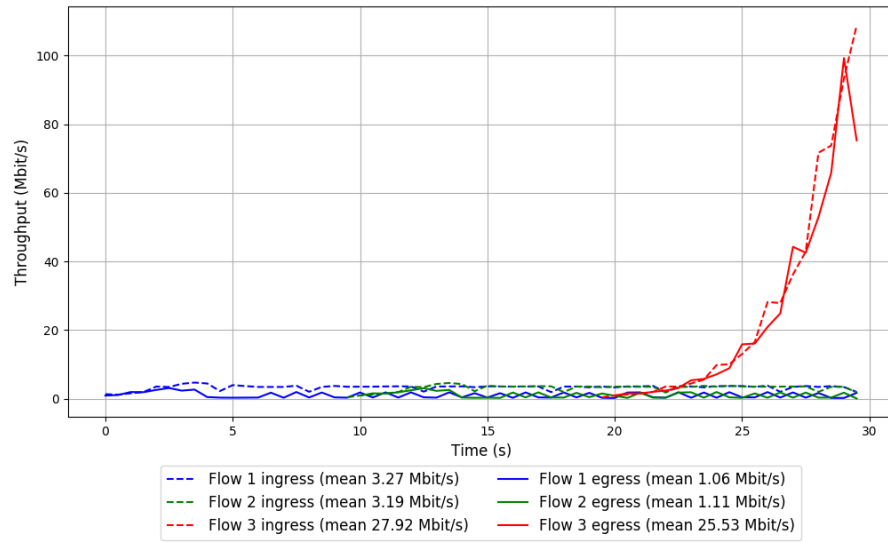
Run 7: Report of CalibratedKoho — Data Link

```
Run 8: Statistics of CalibratedKoho

Start at: 2017-08-12 02:23:48
End at: 2017-08-12 02:24:18

# Below is generated by plot.py at 2017-08-12 05:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.64 Mbit/s
95th percentile per-packet one-way delay: 114.859 ms
Loss rate: 69.16%
-- Flow 1:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 115.035 ms
Loss rate: 69.46%
-- Flow 2:
Average throughput: 1.10 Mbit/s
95th percentile per-packet one-way delay: 113.852 ms
Loss rate: 68.51%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 113.347 ms
Loss rate: 65.95%
```
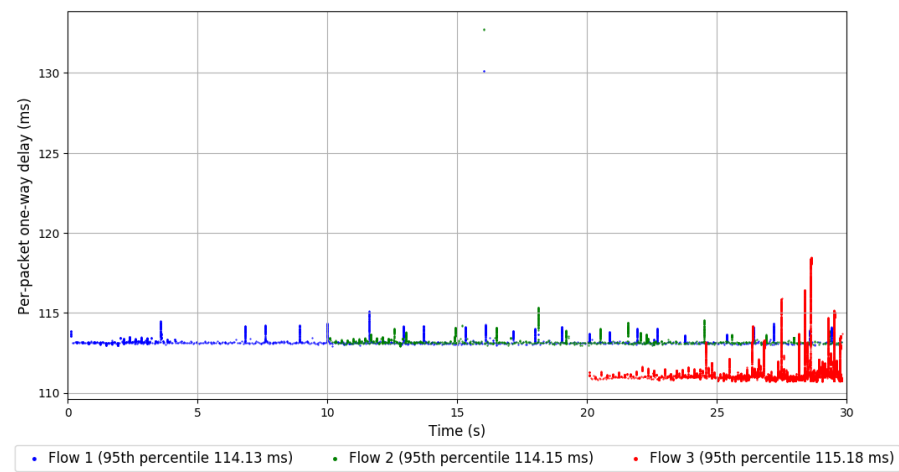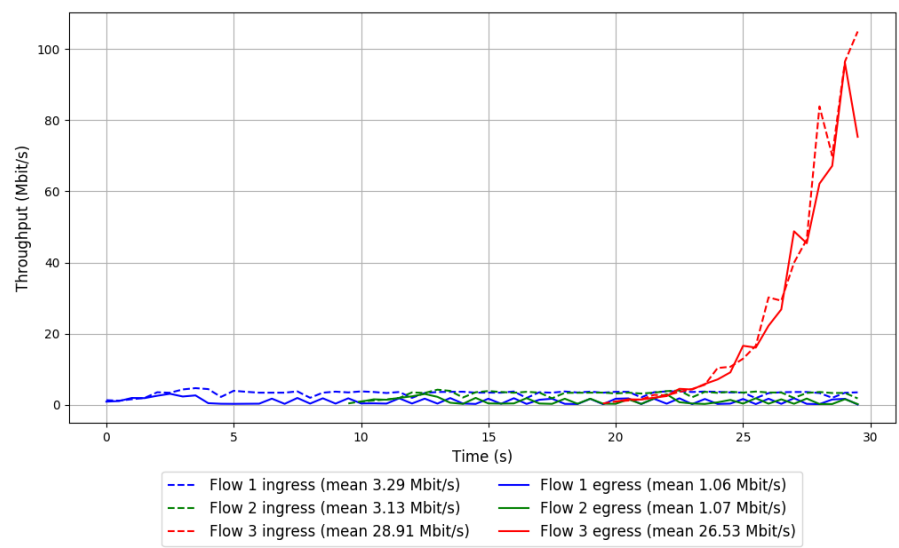
Run 8: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 11.96 Mbit/s)   Flow 1 egress (mean 3.68 Mbit/s)
Flow 2 ingress (mean 3.47 Mbit/s)   Flow 2 egress (mean 1.10 Mbit/s)
Flow 3 ingress (mean 1.98 Mbit/s)   Flow 3 egress (mean 0.69 Mbit/s)

Flow 1 (95th percentile 115.03 ms)   Flow 2 (95th percentile 113.85 ms)   Flow 3 (95th percentile 113.35 ms)

```
Run 9: Statistics of CalibratedKoho

Start at: 2017-08-12 02:36:24
End at: 2017-08-12 02:36:54

# Below is generated by plot.py at 2017-08-12 05:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.13 Mbit/s
95th percentile per-packet one-way delay: 114.375 ms
Loss rate: 31.41%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 113.788 ms
Loss rate: 67.77%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 113.895 ms
Loss rate: 66.13%
-- Flow 3:
Average throughput: 25.53 Mbit/s
95th percentile per-packet one-way delay: 115.039 ms
Loss rate: 10.63%
```
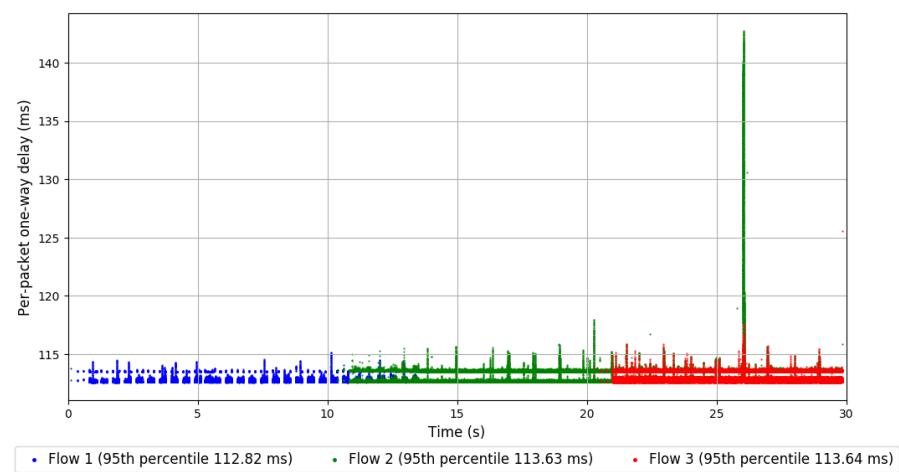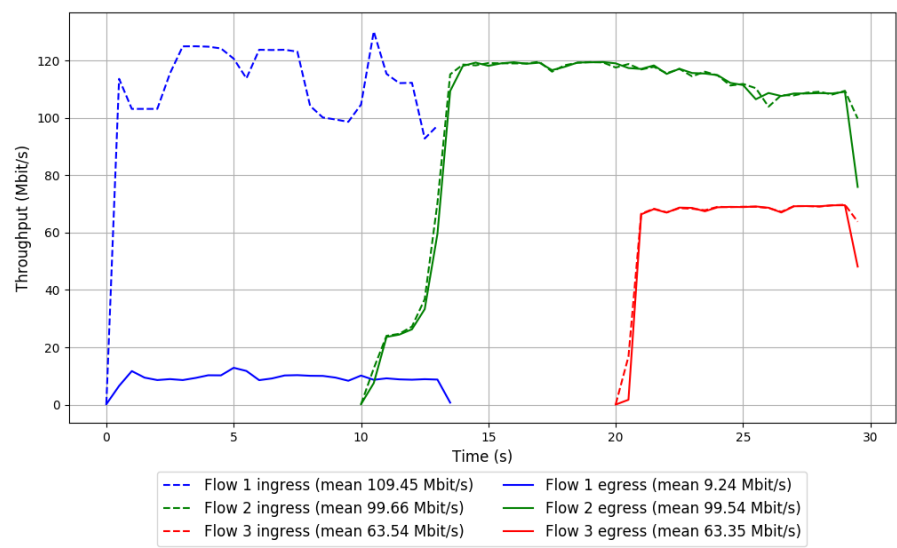
Run 9: Report of CalibratedKoho — Data Link

```
Run 10: Statistics of CalibratedKoho

Start at: 2017-08-12 02:48:59
End at: 2017-08-12 02:49:29


# Below is generated by plot.py at 2017-08-12 05:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 114.939 ms
Loss rate: 30.74%
-- Flow 1:
Average throughput: 1.06 Mbit/s
95th percentile per-packet one-way delay: 114.127 ms
Loss rate: 68.02%
-- Flow 2:
Average throughput: 1.07 Mbit/s
95th percentile per-packet one-way delay: 114.150 ms
Loss rate: 66.17%
-- Flow 3:
Average throughput: 26.53 Mbit/s
95th percentile per-packet one-way delay: 115.183 ms
Loss rate: 10.29%
```
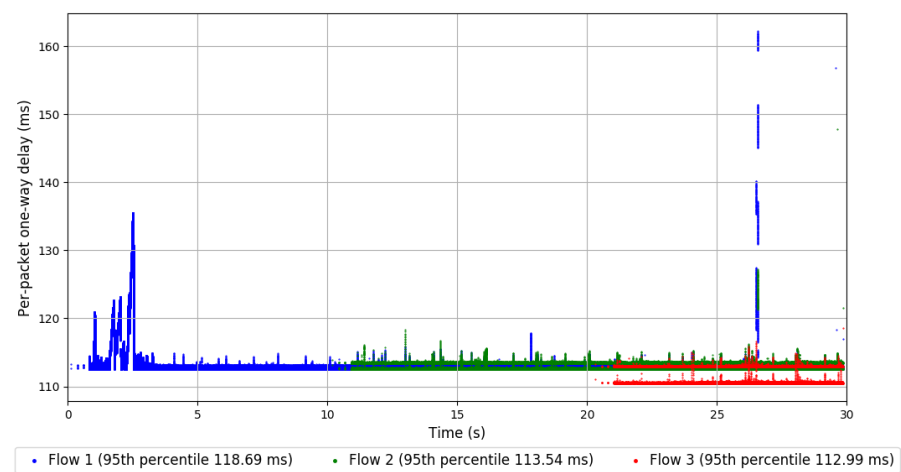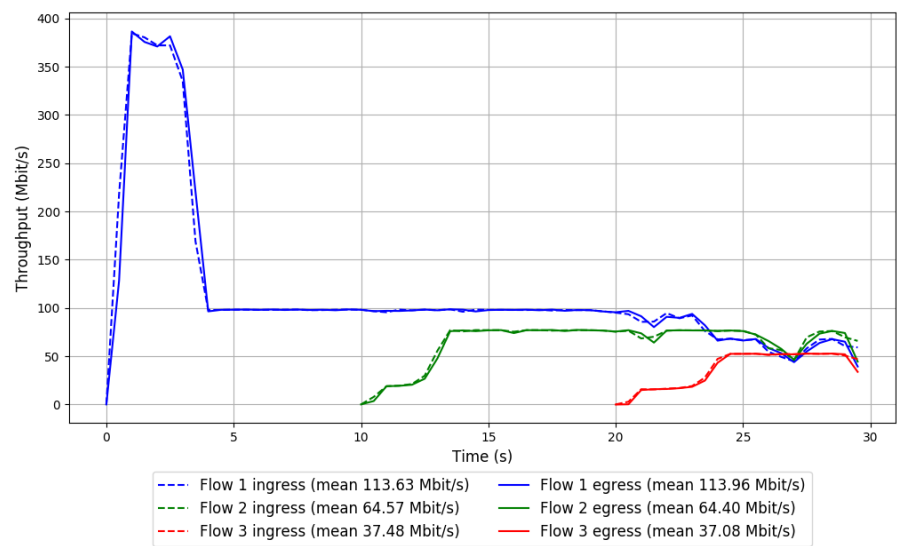
Run 10: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 3.29 Mbit/s)   Flow 1 egress (mean 1.06 Mbit/s)
Flow 2 ingress (mean 3.13 Mbit/s)   Flow 2 egress (mean 1.07 Mbit/s)
Flow 3 ingress (mean 28.91 Mbit/s)   Flow 3 egress (mean 26.53 Mbit/s)

Flow 1 (95th percentile 114.13 ms)   Flow 2 (95th percentile 114.15 ms)   Flow 3 (95th percentile 115.18 ms)

```
Run 1: Statistics of Copa

Start at: 2017-08-12 00:54:05
End at: 2017-08-12 00:54:35


# Below is generated by plot.py at 2017-08-12 05:47:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 113.628 ms
Loss rate: 33.93%
-- Flow 1:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 112.817 ms
Loss rate: 91.55%
-- Flow 2:
Average throughput: 99.54 Mbit/s
95th percentile per-packet one-way delay: 113.633 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 63.35 Mbit/s
95th percentile per-packet one-way delay: 113.644 ms
Loss rate: 2.53%
```
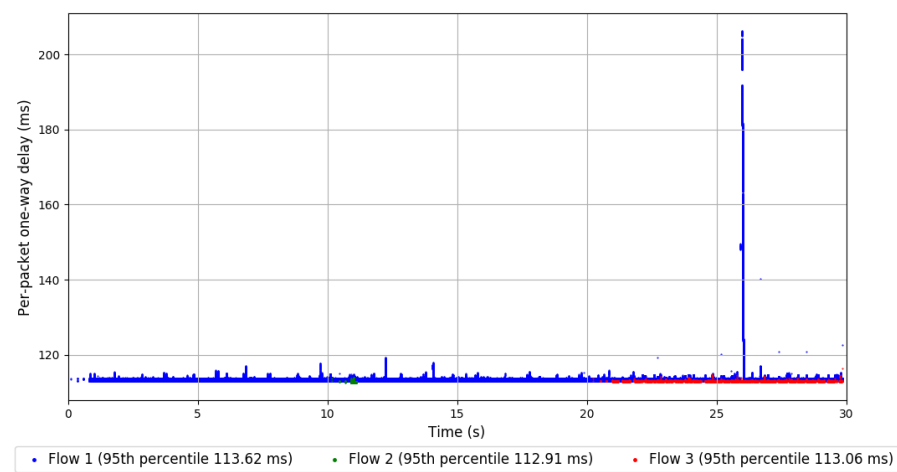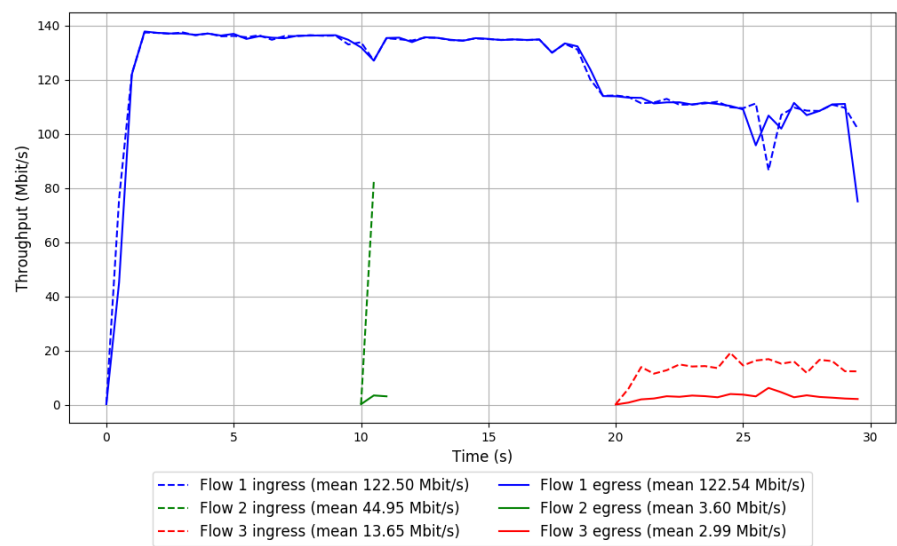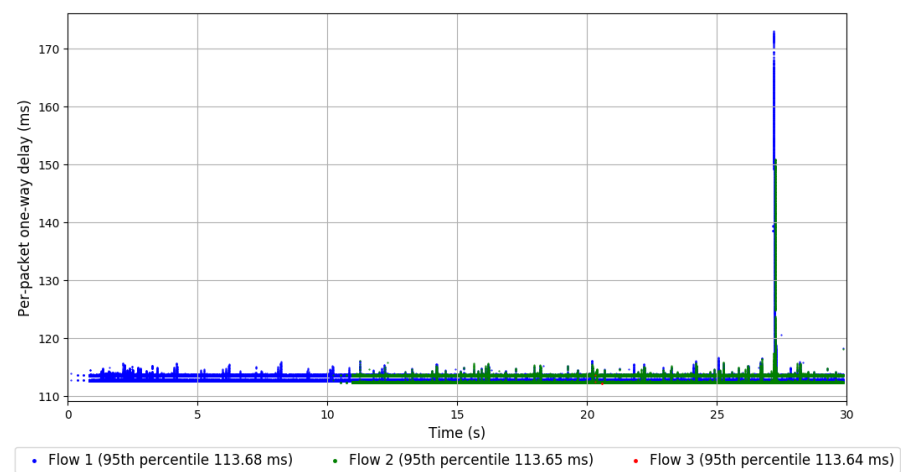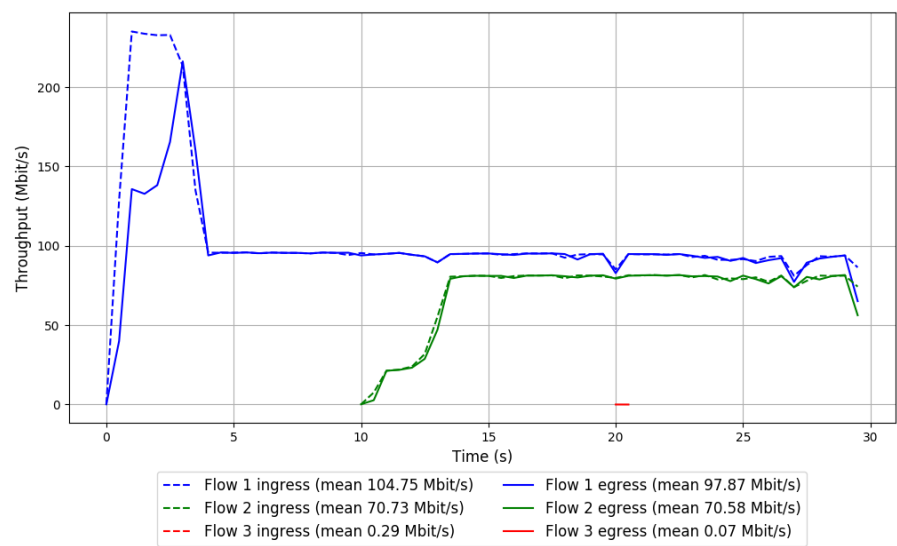
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 109.45 Mbit/s) ---- Flow 1 egress (mean 9.24 Mbit/s) ——
Flow 2 ingress (mean 99.66 Mbit/s) ---- Flow 2 egress (mean 99.54 Mbit/s) ——
Flow 3 ingress (mean 63.54 Mbit/s) ---- Flow 3 egress (mean 63.35 Mbit/s) ——

- Flow 1 (95th percentile 112.82 ms) - Flow 2 (95th percentile 113.63 ms) - Flow 3 (95th percentile 113.64 ms)

```
Run 2: Statistics of Copa

Start at: 2017-08-12 01:07:05
End at: 2017-08-12 01:07:35


# Below is generated by plot.py at 2017-08-12 05:48:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 168.46 Mbit/s
95th percentile per-packet one-way delay: 115.974 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 113.96 Mbit/s
95th percentile per-packet one-way delay: 118.689 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 64.40 Mbit/s
95th percentile per-packet one-way delay: 113.543 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 37.08 Mbit/s
95th percentile per-packet one-way delay: 112.991 ms
Loss rate: 3.24%
```
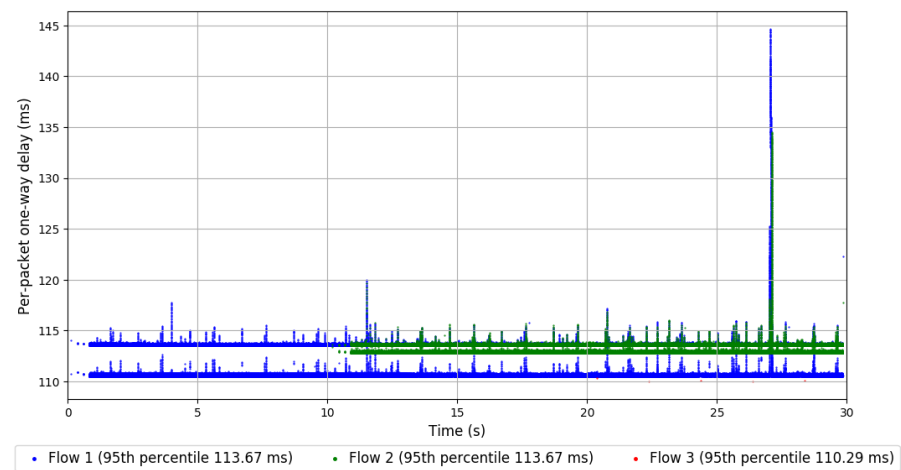
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2017-08-12 01:20:26
End at: 2017-08-12 01:20:56

# Below is generated by plot.py at 2017-08-12 05:48:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 123.61 Mbit/s
95th percentile per-packet one-way delay: 113.621 ms
Loss rate: 4.38%
-- Flow 1:
Average throughput: 122.54 Mbit/s
95th percentile per-packet one-way delay: 113.622 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 3.60 Mbit/s
95th percentile per-packet one-way delay: 112.911 ms
Loss rate: 92.00%
-- Flow 3:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 113.057 ms
Loss rate: 78.54%
```
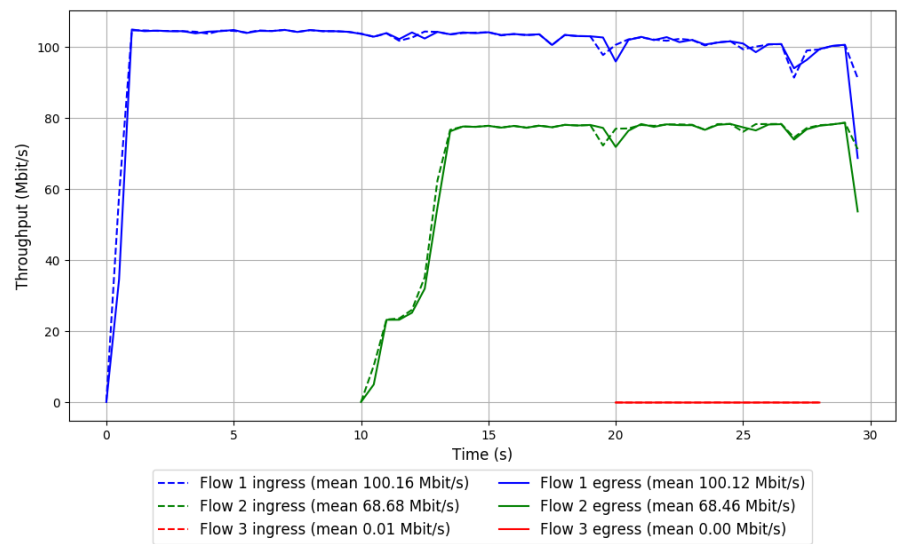
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2017-08-12 01:33:05
End at: 2017-08-12 01:33:35


# Below is generated by plot.py at 2017-08-12 05:49:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.45 Mbit/s
95th percentile per-packet one-way delay: 113.678 ms
Loss rate: 5.42%
-- Flow 1:
Average throughput: 97.87 Mbit/s
95th percentile per-packet one-way delay: 113.684 ms
Loss rate: 7.26%
-- Flow 2:
Average throughput: 70.58 Mbit/s
95th percentile per-packet one-way delay: 113.654 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 113.645 ms
Loss rate: 76.95%
```
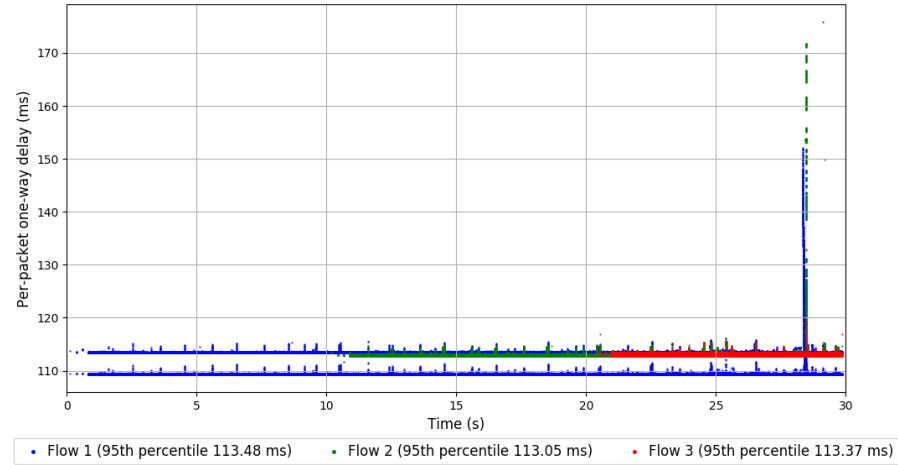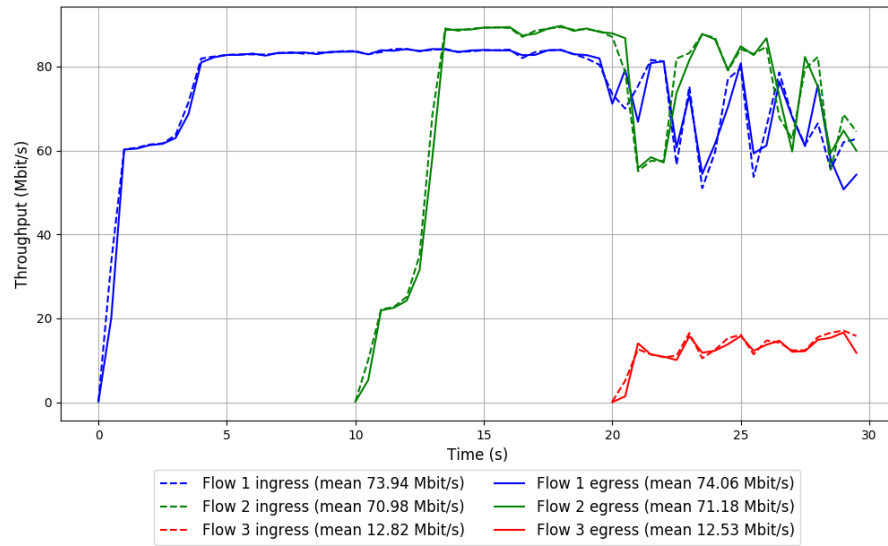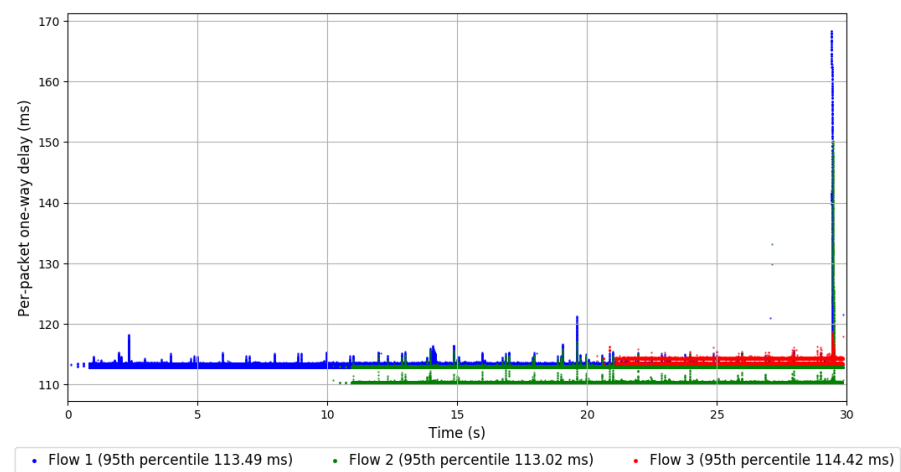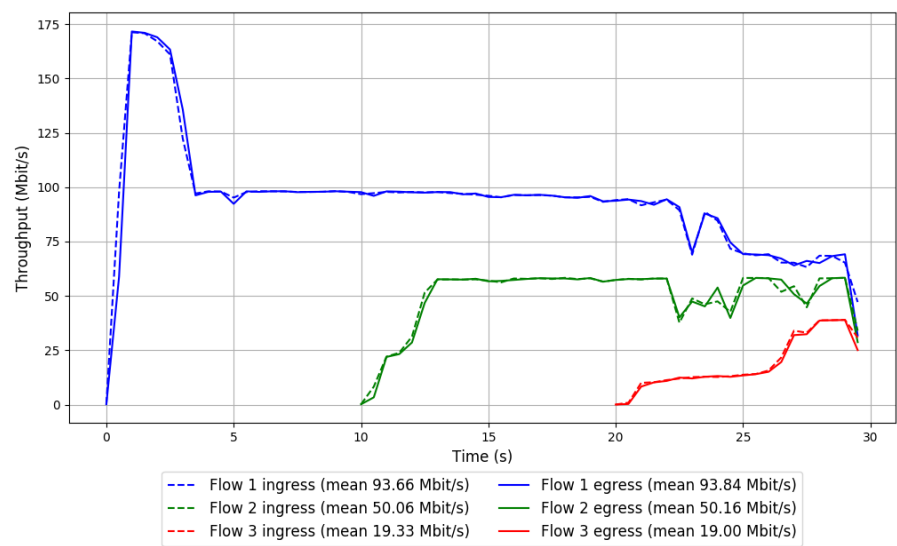
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 104.75 Mbit/s)   Flow 1 egress (mean 97.87 Mbit/s)
Flow 2 ingress (mean 70.73 Mbit/s)   Flow 2 egress (mean 70.58 Mbit/s)
Flow 3 ingress (mean 0.29 Mbit/s)   Flow 3 egress (mean 0.07 Mbit/s)

Flow 1 (95th percentile 113.68 ms)   Flow 2 (95th percentile 113.65 ms)   Flow 3 (95th percentile 113.64 ms)

```
Run 5: Statistics of Copa

Start at: 2017-08-12 01:45:50
End at: 2017-08-12 01:46:20


# Below is generated by plot.py at 2017-08-12 05:49:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.42 Mbit/s
95th percentile per-packet one-way delay: 113.668 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 100.12 Mbit/s
95th percentile per-packet one-way delay: 113.669 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 68.46 Mbit/s
95th percentile per-packet one-way delay: 113.665 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 110.289 ms
Loss rate: 92.35%
```
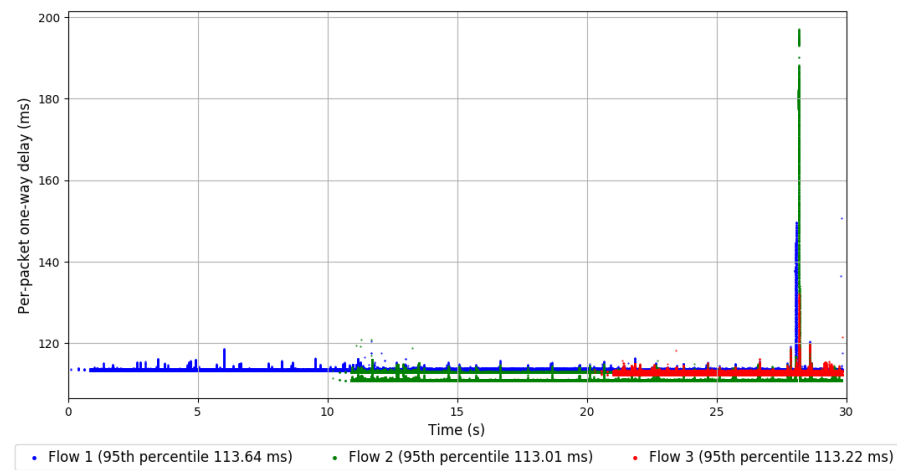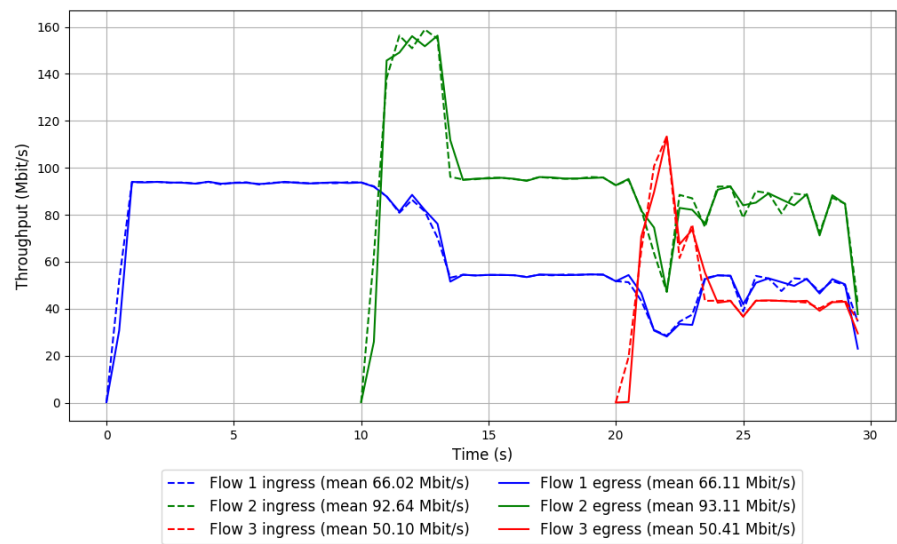
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 100.16 Mbit/s) Flow 1 egress (mean 100.12 Mbit/s)
Flow 2 ingress (mean 68.68 Mbit/s)   Flow 2 egress (mean 68.46 Mbit/s)
Flow 3 ingress (mean 0.01 Mbit/s)   Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 113.67 ms)   Flow 2 (95th percentile 113.67 ms)   Flow 3 (95th percentile 110.29 ms)

```
Run 6: Statistics of Copa

Start at: 2017-08-12 01:58:35
End at: 2017-08-12 01:59:05

# Below is generated by plot.py at 2017-08-12 05:49:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 125.21 Mbit/s
95th percentile per-packet one-way delay: 113.470 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 74.06 Mbit/s
95th percentile per-packet one-way delay: 113.485 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 71.18 Mbit/s
95th percentile per-packet one-way delay: 113.050 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 113.373 ms
Loss rate: 4.49%
```
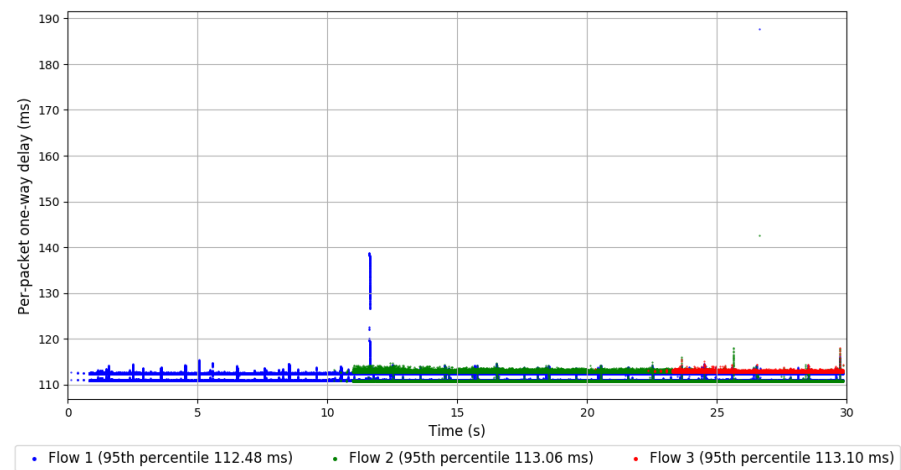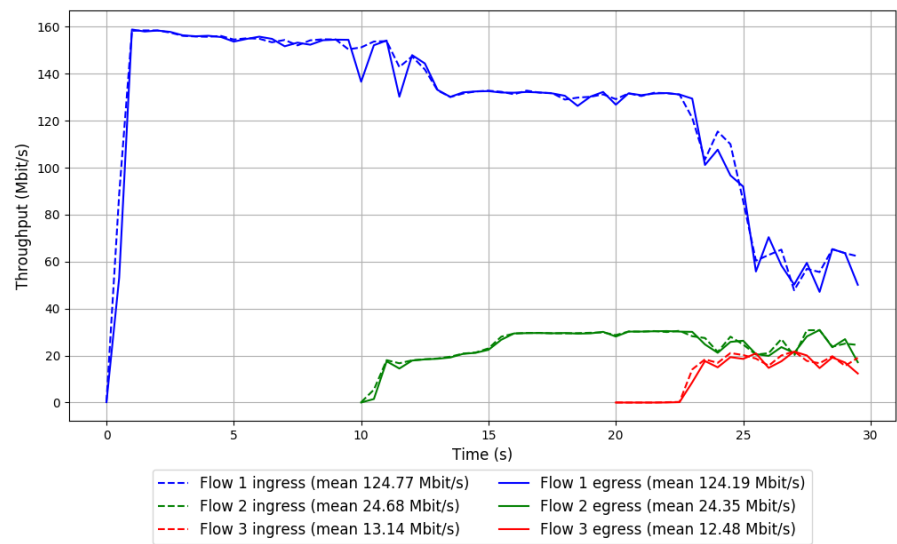
Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 73.94 Mbit/s) — Flow 1 egress (mean 74.06 Mbit/s)
Flow 2 ingress (mean 70.98 Mbit/s) — Flow 2 egress (mean 71.18 Mbit/s)
Flow 3 ingress (mean 12.82 Mbit/s) — Flow 3 egress (mean 12.53 Mbit/s)

Flow 1 (95th percentile 113.48 ms)   Flow 2 (95th percentile 113.05 ms)   Flow 3 (95th percentile 113.37 ms)

```
Run 7: Statistics of Copa

Start at: 2017-08-12 02:11:48
End at: 2017-08-12 02:12:18


# Below is generated by plot.py at 2017-08-12 05:50:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.04 Mbit/s
95th percentile per-packet one-way delay: 113.519 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 93.84 Mbit/s
95th percentile per-packet one-way delay: 113.491 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 113.020 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 19.00 Mbit/s
95th percentile per-packet one-way delay: 114.423 ms
Loss rate: 3.90%
```
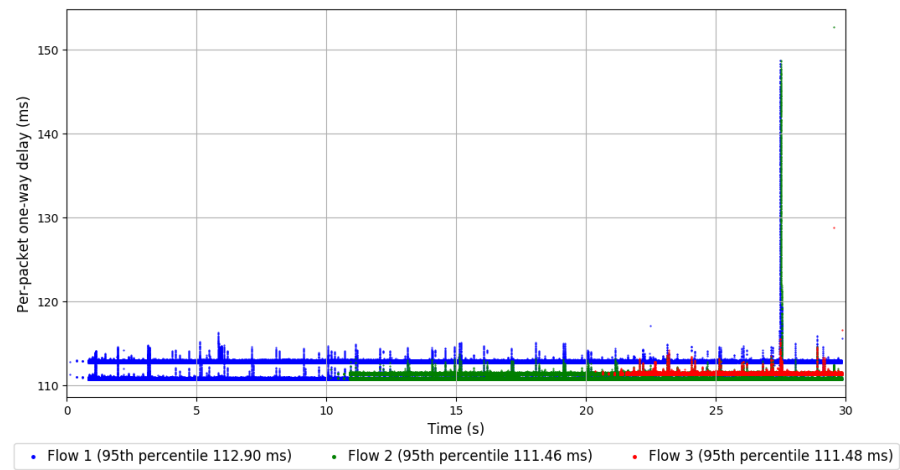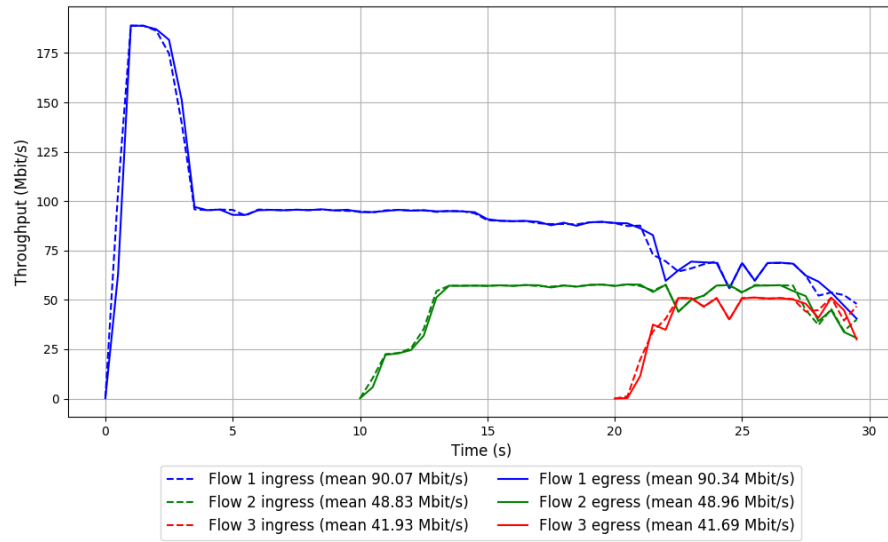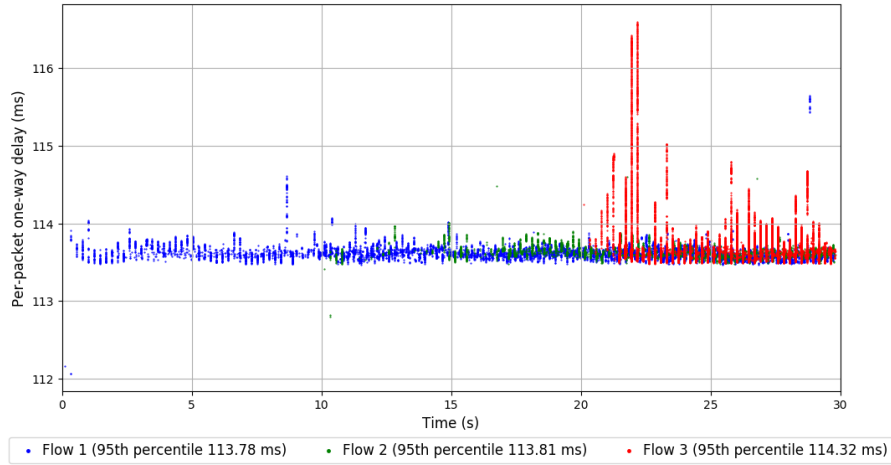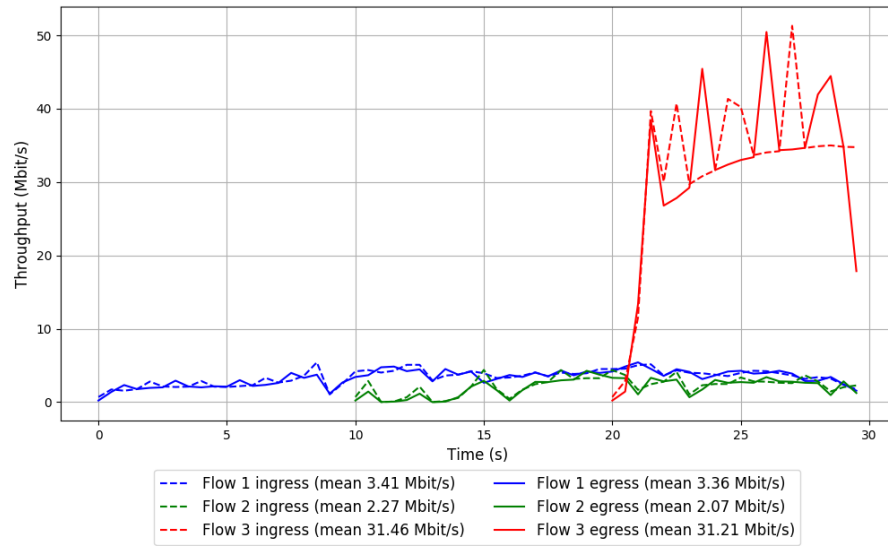
Run 7: Report of Copa — Data Link

Flow 1 ingress (mean 93.66 Mbit/s) Flow 1 egress (mean 93.84 Mbit/s)
Flow 2 ingress (mean 50.06 Mbit/s) Flow 2 egress (mean 50.16 Mbit/s)
Flow 3 ingress (mean 19.33 Mbit/s) Flow 3 egress (mean 19.00 Mbit/s)

Flow 1 (95th percentile 113.49 ms)   Flow 2 (95th percentile 113.02 ms)   Flow 3 (95th percentile 114.42 ms)

```
Run 8: Statistics of Copa

Start at: 2017-08-12 02:24:35
End at: 2017-08-12 02:25:05

# Below is generated by plot.py at 2017-08-12 05:50:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.78 Mbit/s
95th percentile per-packet one-way delay: 113.586 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 66.11 Mbit/s
95th percentile per-packet one-way delay: 113.643 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 93.11 Mbit/s
95th percentile per-packet one-way delay: 113.006 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 50.41 Mbit/s
95th percentile per-packet one-way delay: 113.219 ms
Loss rate: 1.65%
```

Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 66.02 Mbit/s) --- Flow 1 egress (mean 66.11 Mbit/s)
Flow 2 ingress (mean 92.64 Mbit/s) --- Flow 2 egress (mean 93.11 Mbit/s)
Flow 3 ingress (mean 50.10 Mbit/s) --- Flow 3 egress (mean 50.41 Mbit/s)

Flow 1 (95th percentile 113.64 ms) Flow 2 (95th percentile 113.01 ms) Flow 3 (95th percentile 113.22 ms)

59

```
Run 9: Statistics of Copa

Start at: 2017-08-12 02:37:11
End at: 2017-08-12 02:37:41


# Below is generated by plot.py at 2017-08-12 05:51:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 144.23 Mbit/s
95th percentile per-packet one-way delay: 112.765 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 124.19 Mbit/s
95th percentile per-packet one-way delay: 112.484 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 24.35 Mbit/s
95th percentile per-packet one-way delay: 113.058 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 113.097 ms
Loss rate: 7.24%
```
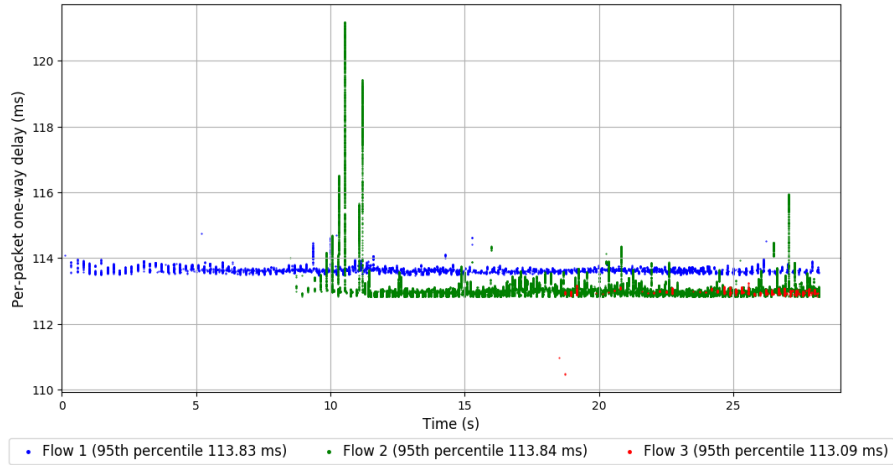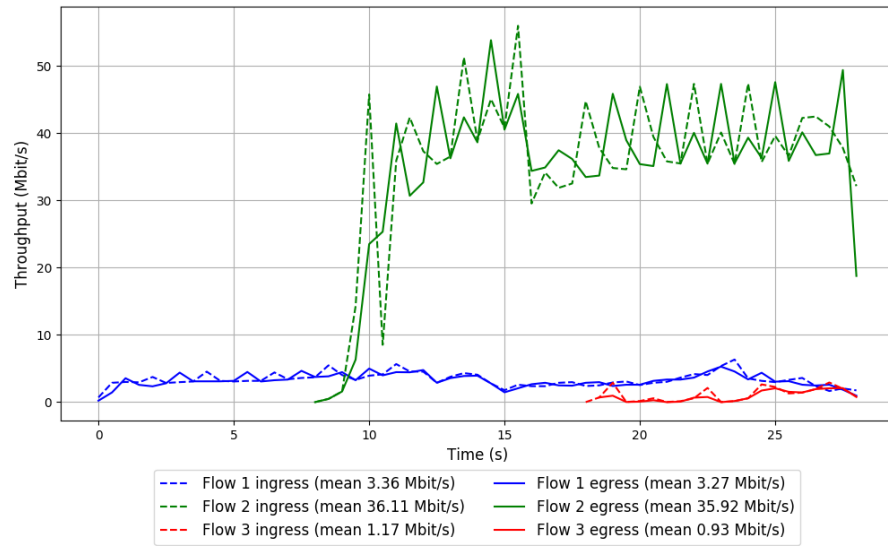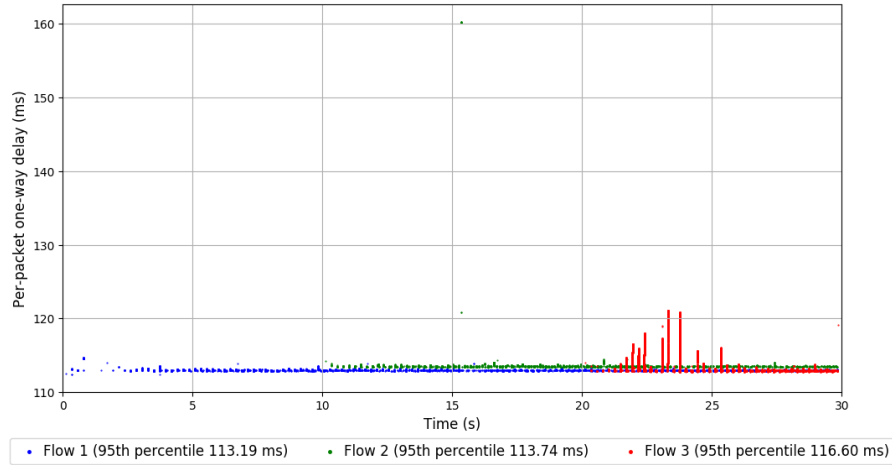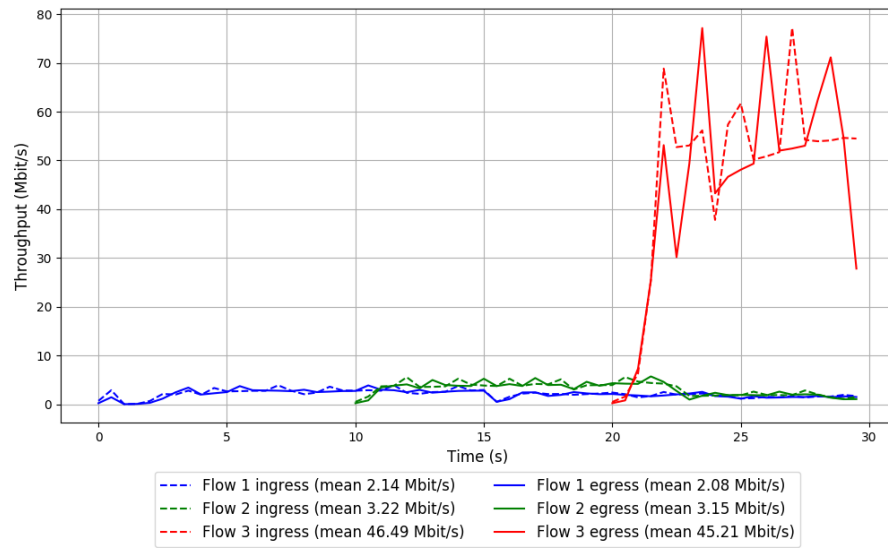
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 124.77 Mbit/s)   Flow 1 egress (mean 124.19 Mbit/s)
Flow 2 ingress (mean 24.68 Mbit/s)   Flow 2 egress (mean 24.35 Mbit/s)
Flow 3 ingress (mean 13.14 Mbit/s)   Flow 3 egress (mean 12.48 Mbit/s)

Flow 1 (95th percentile 112.48 ms)   Flow 2 (95th percentile 113.06 ms)   Flow 3 (95th percentile 113.10 ms)

```
Run 10: Statistics of Copa

Start at: 2017-08-12 02:49:46
End at: 2017-08-12 02:50:16


# Below is generated by plot.py at 2017-08-12 05:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.07 Mbit/s
95th percentile per-packet one-way delay: 112.880 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 90.34 Mbit/s
95th percentile per-packet one-way delay: 112.899 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 48.96 Mbit/s
95th percentile per-packet one-way delay: 111.459 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 41.69 Mbit/s
95th percentile per-packet one-way delay: 111.479 ms
Loss rate: 2.81%
```
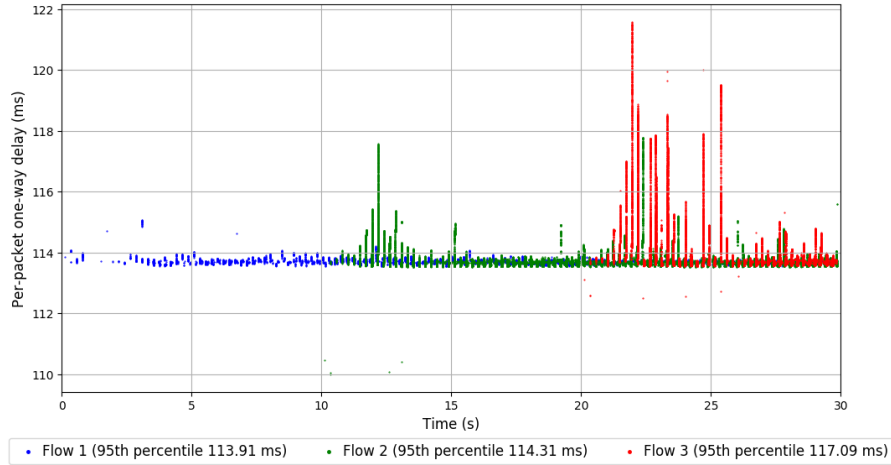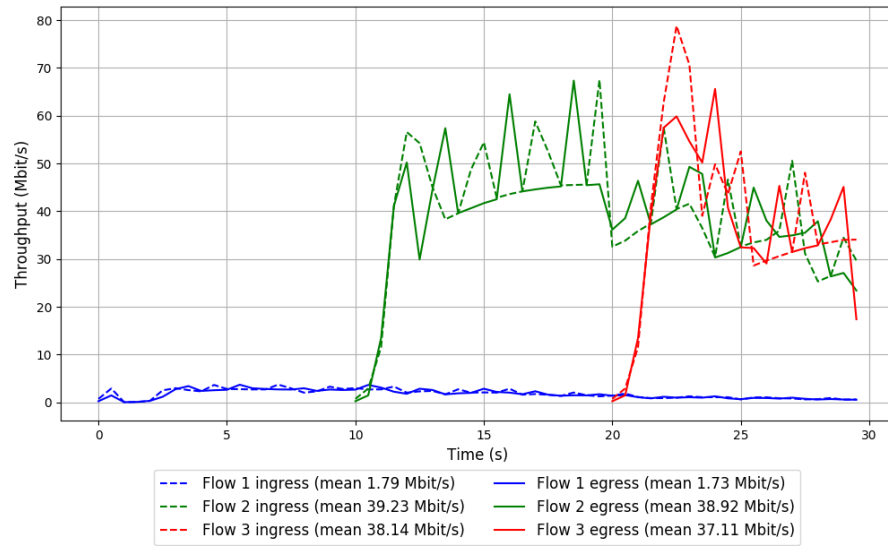
Run 10: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-12 00:50:09
End at: 2017-08-12 00:50:39

# Below is generated by plot.py at 2017-08-12 05:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 114.092 ms
Loss rate: 3.76%
-- Flow 1:
Average throughput: 3.36 Mbit/s
95th percentile per-packet one-way delay: 113.775 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 2.07 Mbit/s
95th percentile per-packet one-way delay: 113.807 ms
Loss rate: 10.10%
-- Flow 3:
Average throughput: 31.21 Mbit/s
95th percentile per-packet one-way delay: 114.317 ms
Loss rate: 3.27%
```
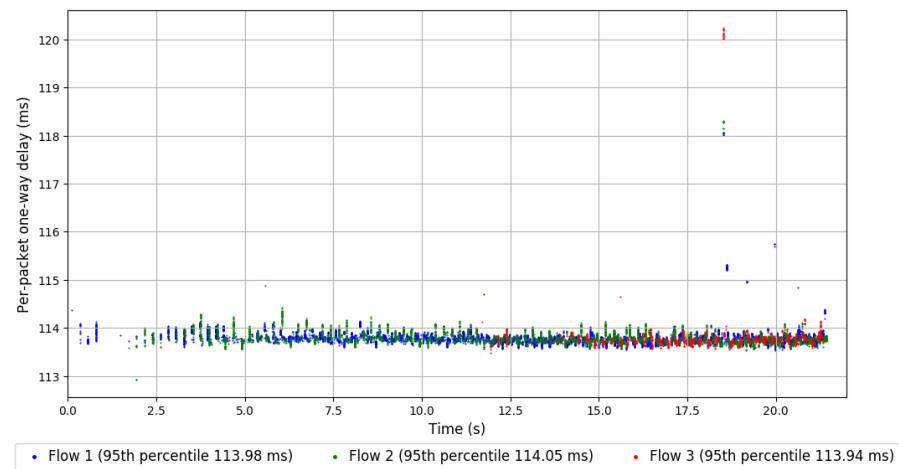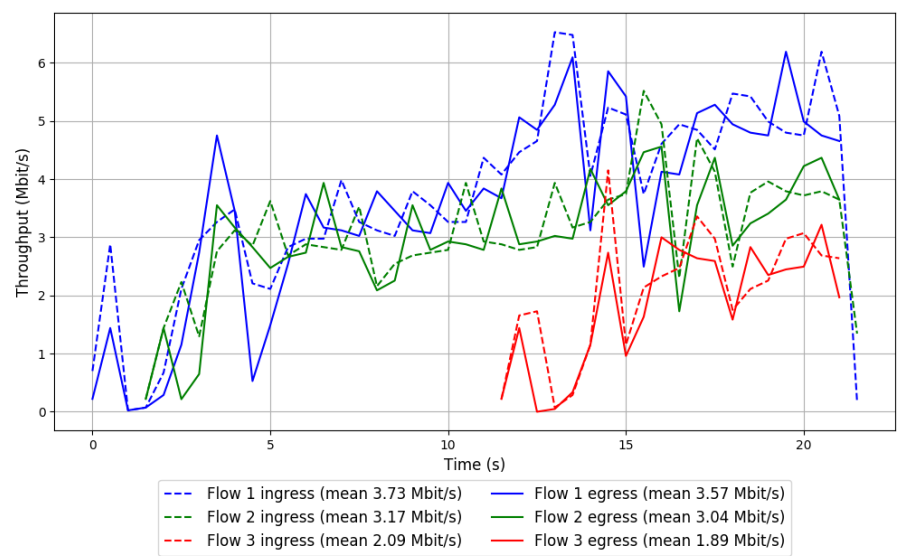
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-08-12 01:02:49
End at: 2017-08-12 01:03:19


# Below is generated by plot.py at 2017-08-12 05:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.78 Mbit/s
95th percentile per-packet one-way delay: 113.830 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 113.825 ms
Loss rate: 3.55%
-- Flow 2:
Average throughput: 35.92 Mbit/s
95th percentile per-packet one-way delay: 113.841 ms
Loss rate: 1.88%
-- Flow 3:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 113.092 ms
Loss rate: 22.91%
```
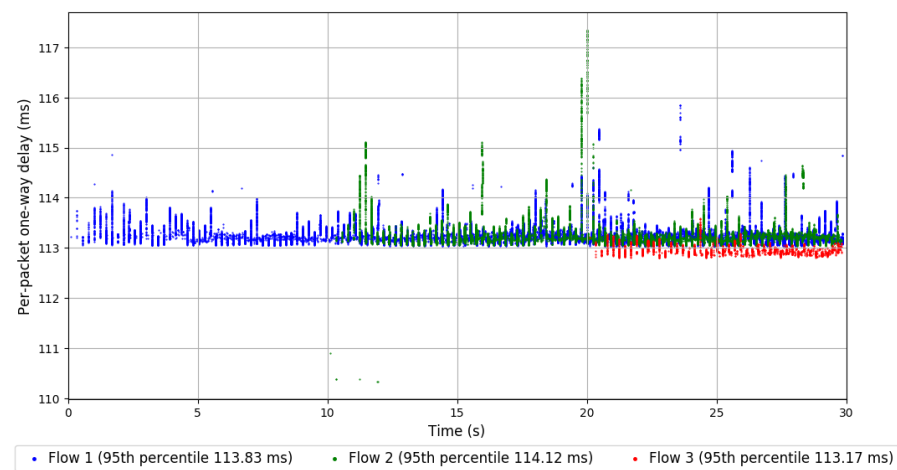
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-08-12 01:16:07
End at: 2017-08-12 01:16:37


# Below is generated by plot.py at 2017-08-12 05:51:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 116.015 ms
Loss rate: 4.40%
-- Flow 1:
Average throughput: 2.08 Mbit/s
95th percentile per-packet one-way delay: 113.191 ms
Loss rate: 3.79%
-- Flow 2:
Average throughput: 3.15 Mbit/s
95th percentile per-packet one-way delay: 113.743 ms
Loss rate: 3.38%
-- Flow 3:
Average throughput: 45.21 Mbit/s
95th percentile per-packet one-way delay: 116.599 ms
Loss rate: 4.63%
```
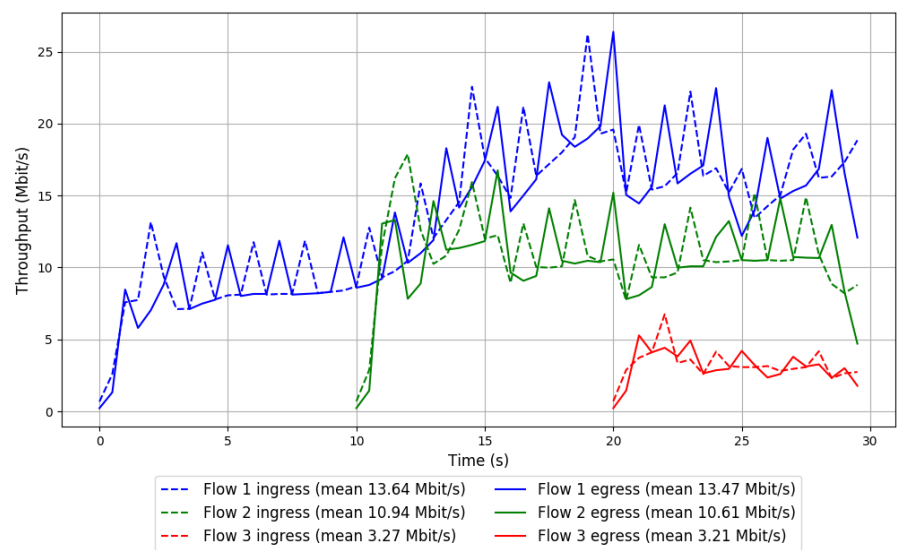
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-08-12 01:29:08
End at: 2017-08-12 01:29:38


# Below is generated by plot.py at 2017-08-12 05:51:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.65 Mbit/s
95th percentile per-packet one-way delay: 115.098 ms
Loss rate: 2.92%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 113.908 ms
Loss rate: 3.90%
-- Flow 2:
Average throughput: 38.92 Mbit/s
95th percentile per-packet one-way delay: 114.313 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 117.089 ms
Loss rate: 4.92%
```
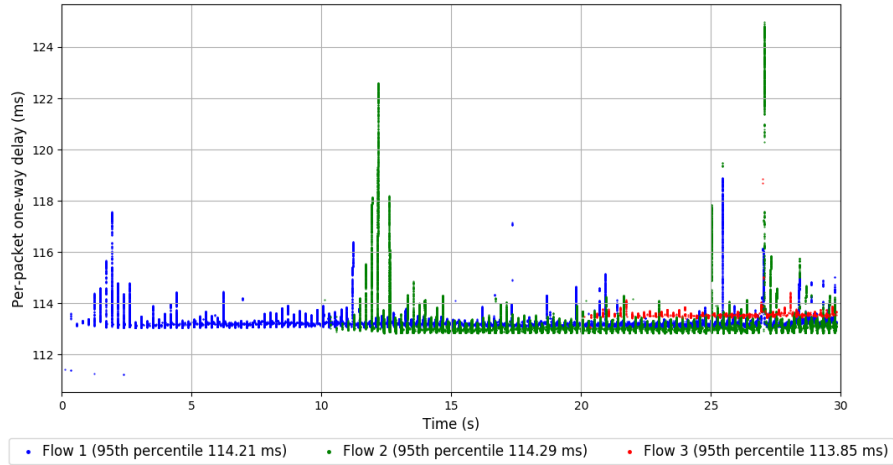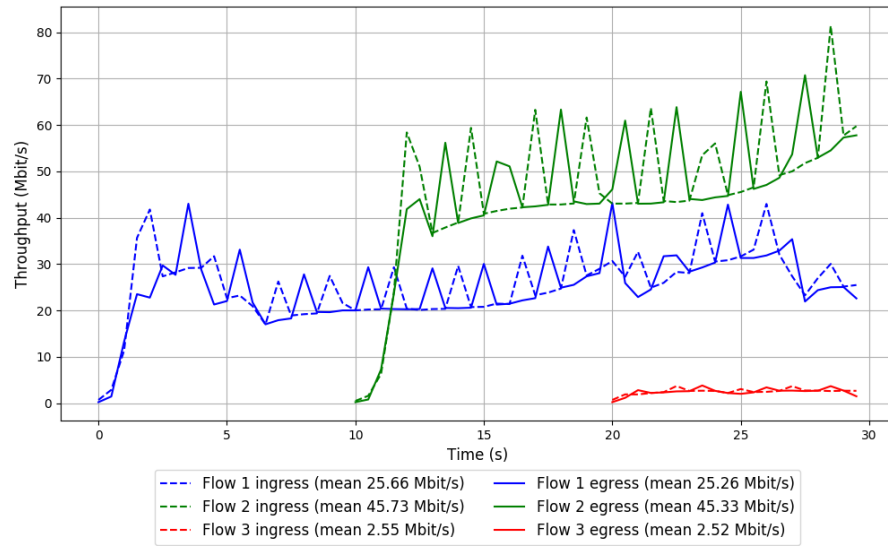
Run 4: Report of TCP Cubic — Data Link

Run 5: Statistics of TCP Cubic

Start at: 2017-08-12 01:41:47
End at: 2017-08-12 01:42:17

Run 5: Report of TCP Cubic — Data Link

Run 6: Statistics of TCP Cubic

Start at: 2017-08-12 01:54:19
End at: 2017-08-12 01:54:49

Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2017-08-12 02:07:31
End at: 2017-08-12 02:08:01


# Below is generated by plot.py at 2017-08-12 05:51:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 113.862 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 13.47 Mbit/s
95th percentile per-packet one-way delay: 113.832 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 114.125 ms
Loss rate: 4.04%
-- Flow 3:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 113.166 ms
Loss rate: 4.14%
```
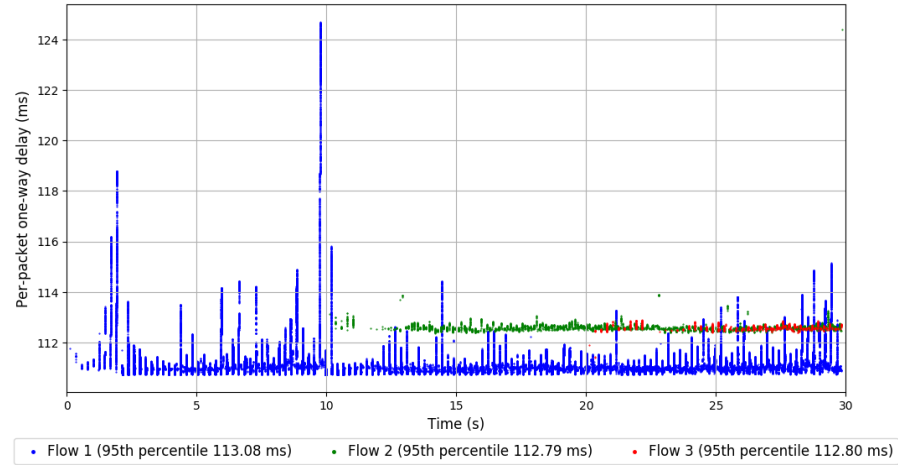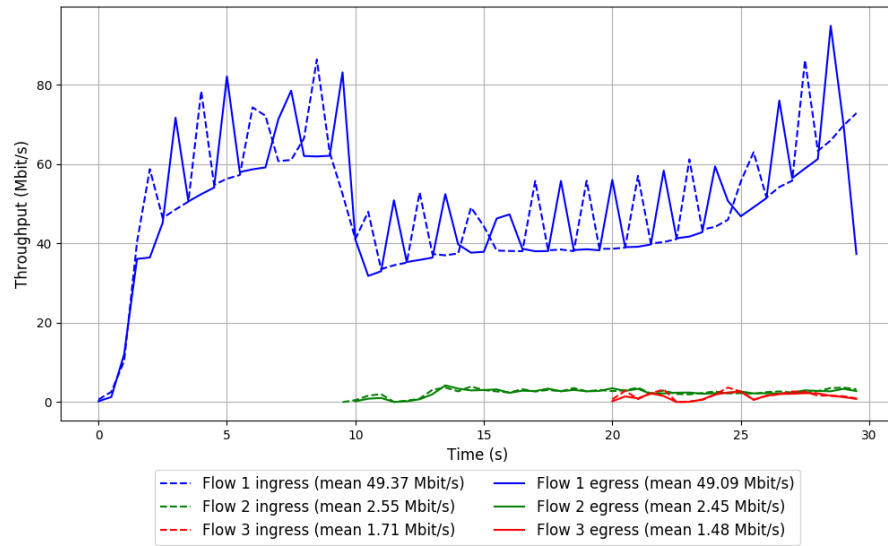
Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-08-12 02:20:36
End at: 2017-08-12 02:21:06


# Below is generated by plot.py at 2017-08-12 05:51:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.13 Mbit/s
95th percentile per-packet one-way delay: 114.234 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 25.26 Mbit/s
95th percentile per-packet one-way delay: 114.209 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 45.33 Mbit/s
95th percentile per-packet one-way delay: 114.292 ms
Loss rate: 1.99%
-- Flow 3:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 113.850 ms
Loss rate: 3.33%
```
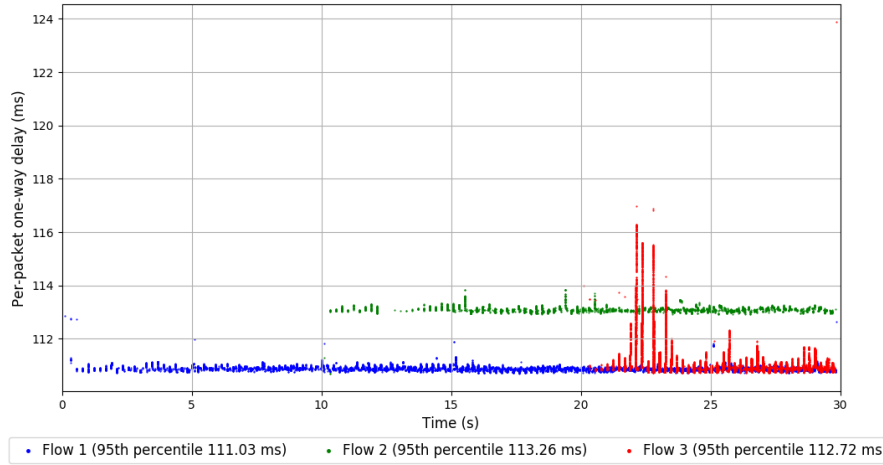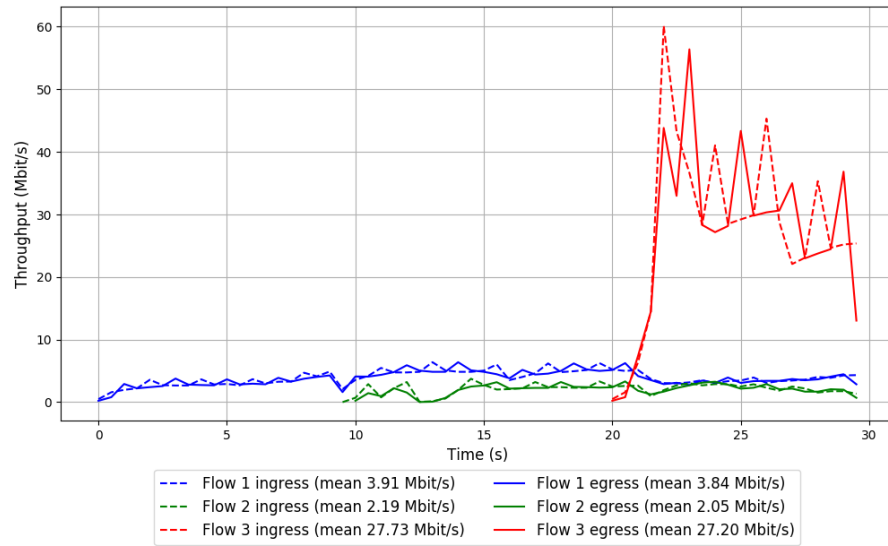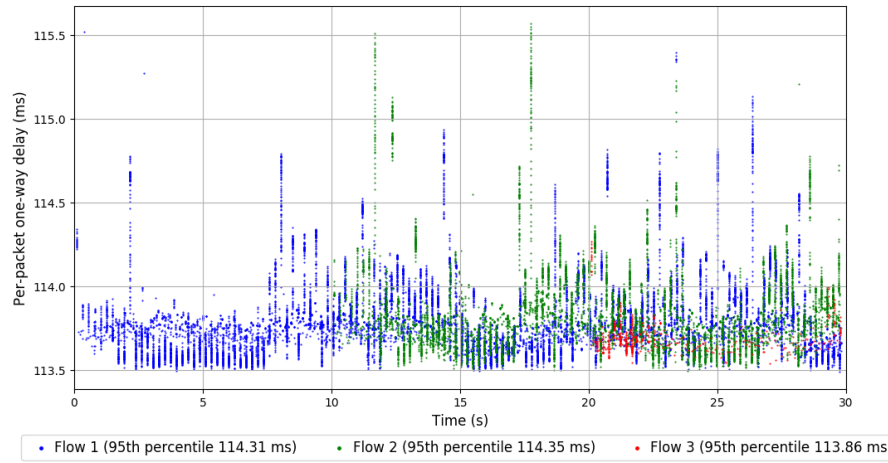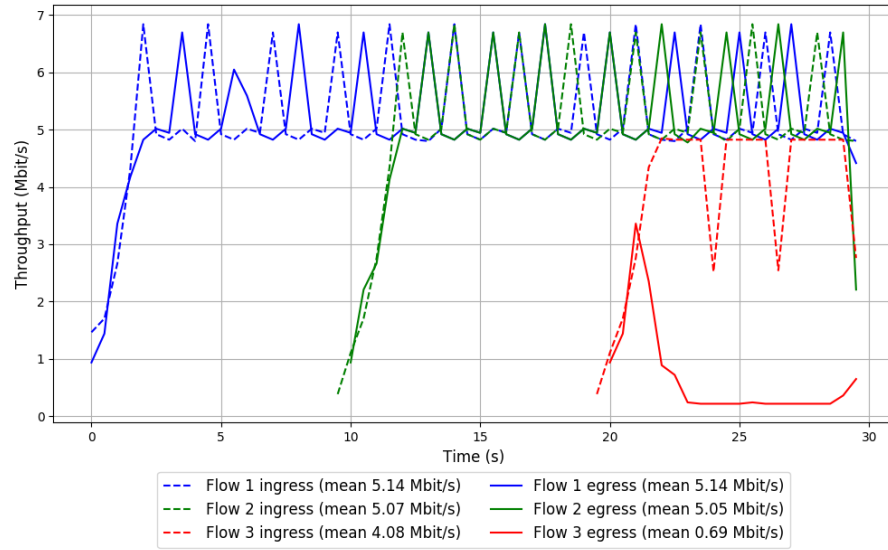
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-08-12 02:33:14
End at: 2017-08-12 02:33:44


# Below is generated by plot.py at 2017-08-12 05:51:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 113.025 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 113.080 ms
Loss rate: 1.40%
-- Flow 2:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 112.787 ms
Loss rate: 4.77%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 112.800 ms
Loss rate: 15.55%
```
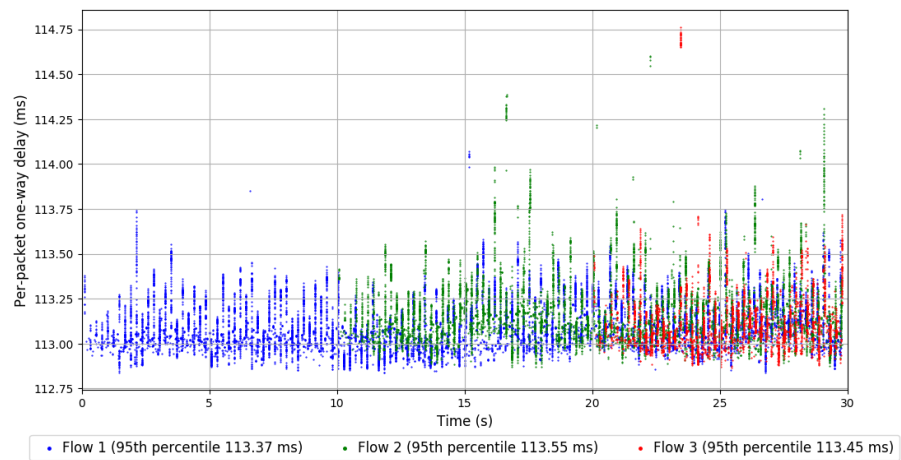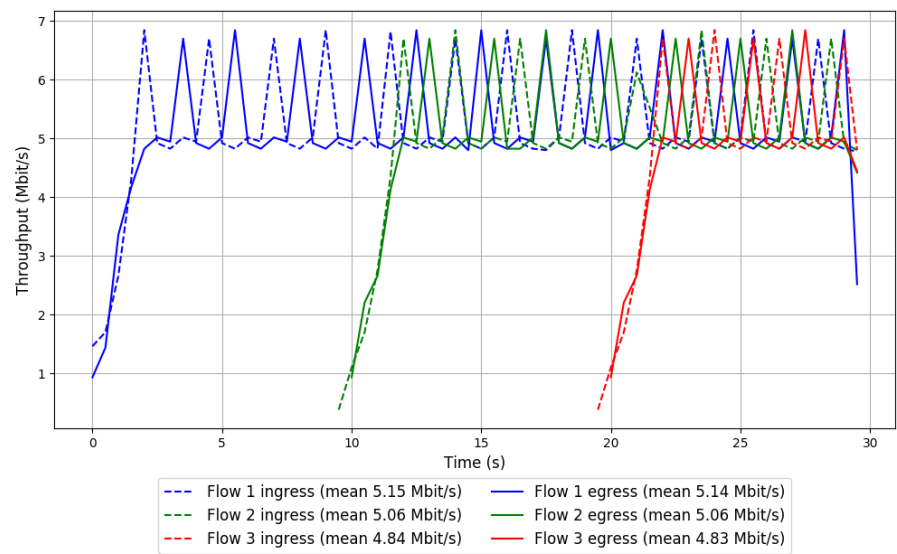
Run 9: Report of TCP Cubic — Data Link

```
Run 10: Statistics of TCP Cubic

Start at: 2017-08-12 02:45:51
End at: 2017-08-12 02:46:21


# Below is generated by plot.py at 2017-08-12 05:51:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.11 Mbit/s
95th percentile per-packet one-way delay: 113.141 ms
Loss rate: 3.58%
-- Flow 1:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 111.026 ms
Loss rate: 2.44%
-- Flow 2:
Average throughput: 2.05 Mbit/s
95th percentile per-packet one-way delay: 113.264 ms
Loss rate: 6.43%
-- Flow 3:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 112.724 ms
Loss rate: 3.61%
```

Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of KohoCC

Start at: 2017-08-12 00:51:43
End at: 2017-08-12 00:52:13

# Below is generated by plot.py at 2017-08-12 05:52:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.72 Mbit/s
95th percentile per-packet one-way delay: 114.312 ms
Loss rate: 12.32%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 114.309 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 5.05 Mbit/s
95th percentile per-packet one-way delay: 114.348 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 0.69 Mbit/s
95th percentile per-packet one-way delay: 113.856 ms
Loss rate: 83.50%
```
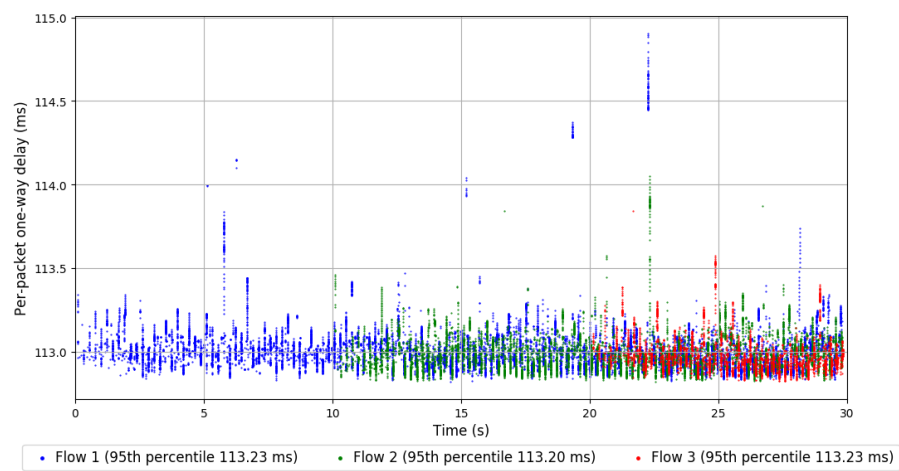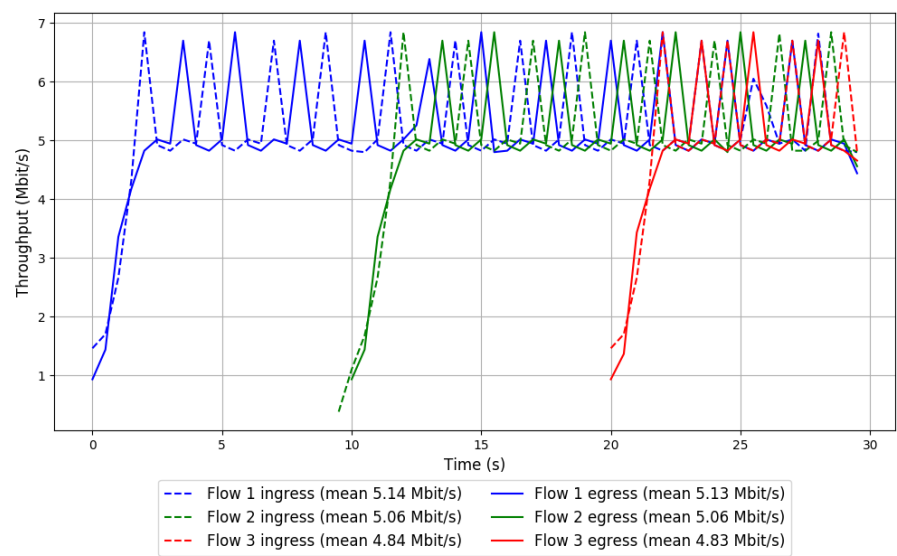
Run 1: Report of KohoCC — Data Link

```
Run 2: Statistics of KohoCC

Start at: 2017-08-12 01:04:24
End at: 2017-08-12 01:04:54

# Below is generated by plot.py at 2017-08-12 05:52:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 113.453 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 113.373 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 113.452 ms
Loss rate: 2.50%
```
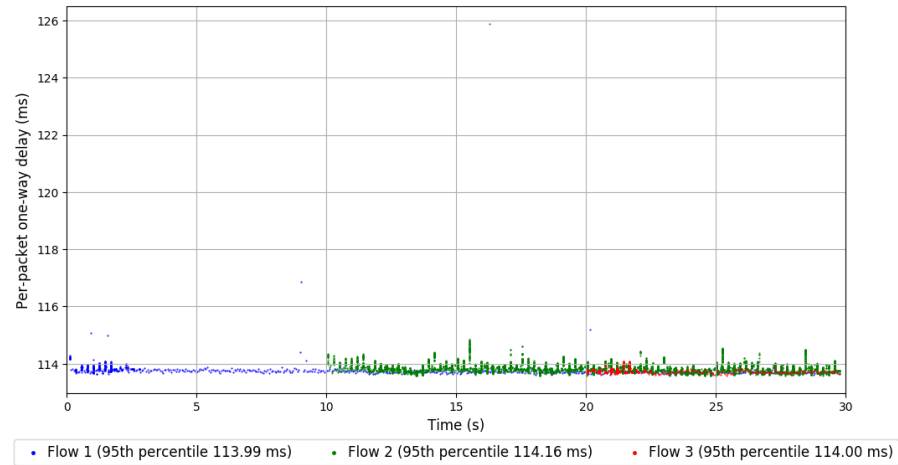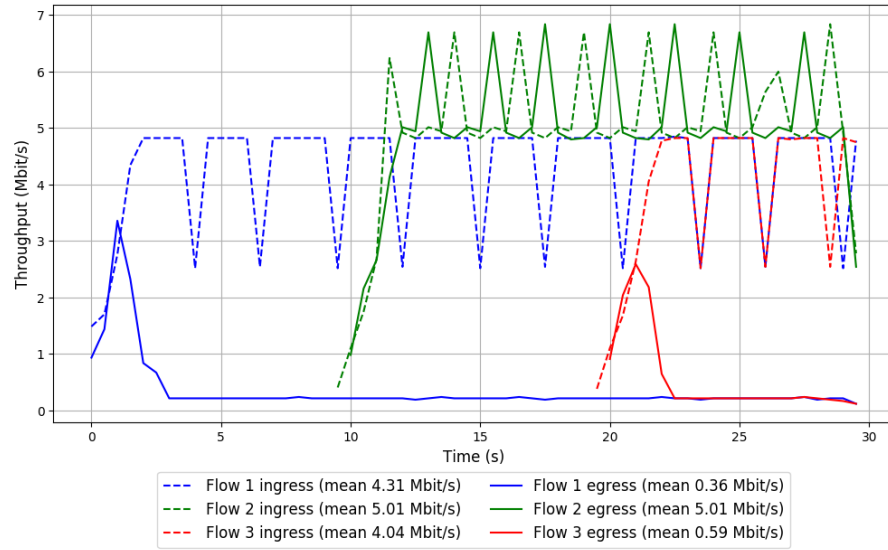
Run 2: Report of KohoCC — Data Link

Flow 1 ingress (mean 5.15 Mbit/s) Flow 1 egress (mean 5.14 Mbit/s)
Flow 2 ingress (mean 5.06 Mbit/s) Flow 2 egress (mean 5.06 Mbit/s)
Flow 3 ingress (mean 4.84 Mbit/s) Flow 3 egress (mean 4.83 Mbit/s)

Flow 1 (95th percentile 113.37 ms)   Flow 2 (95th percentile 113.55 ms)   Flow 3 (95th percentile 113.45 ms)

```
Run 3: Statistics of KohoCC

Start at: 2017-08-12 01:17:41
End at: 2017-08-12 01:18:11


# Below is generated by plot.py at 2017-08-12 05:52:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.07 Mbit/s
95th percentile per-packet one-way delay: 113.218 ms
Loss rate: 1.21%
-- Flow 1:
Average throughput: 5.13 Mbit/s
95th percentile per-packet one-way delay: 113.226 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 113.199 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 113.233 ms
Loss rate: 2.50%
```
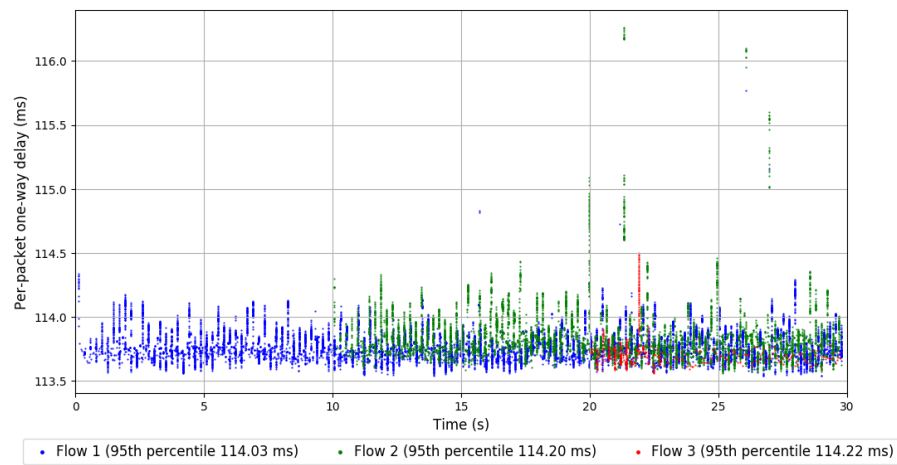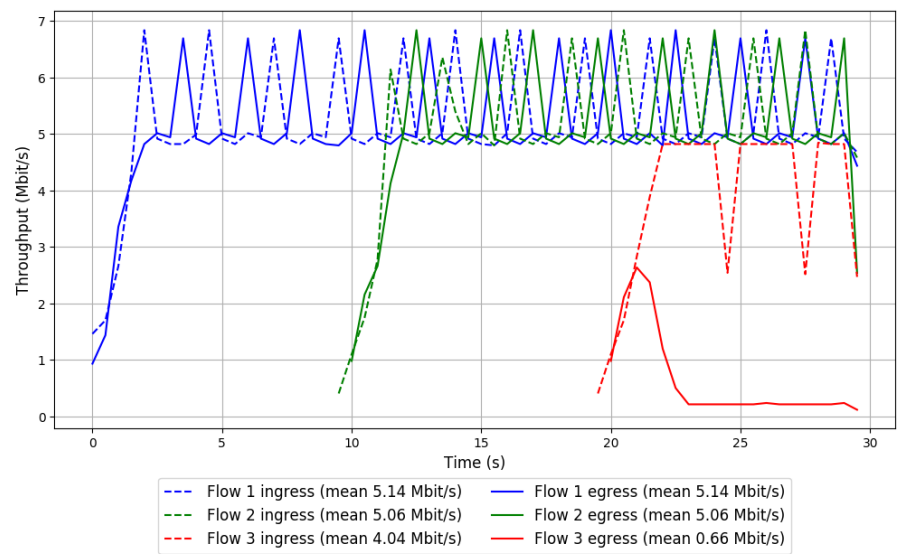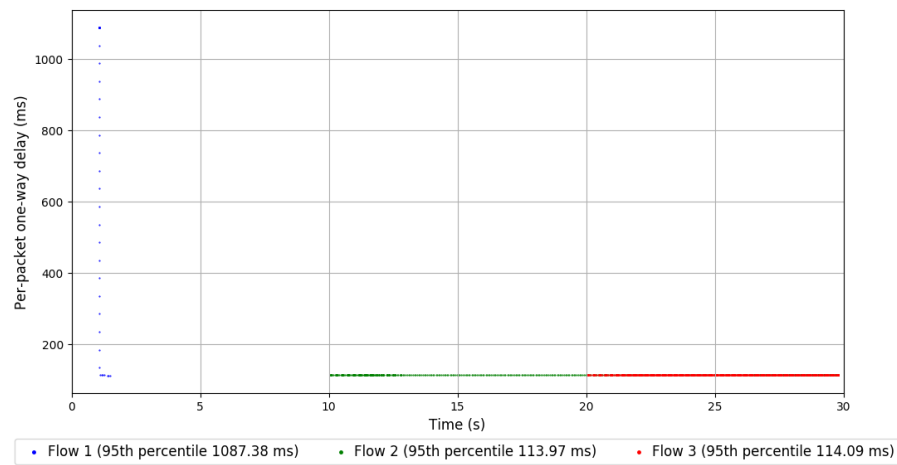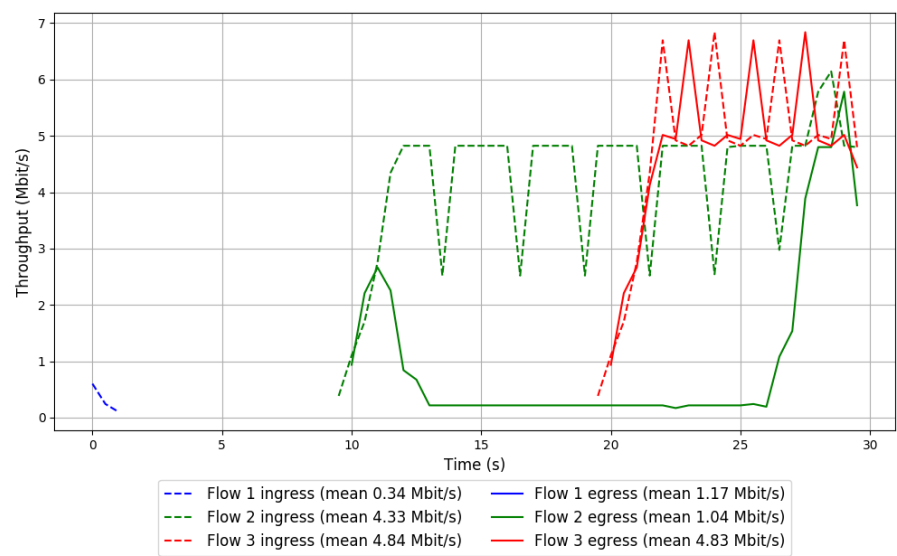
Run 3: Report of KohoCC — Data Link

```
Run 4: Statistics of KohoCC

Start at: 2017-08-12 01:30:43
End at: 2017-08-12 01:31:13


# Below is generated by plot.py at 2017-08-12 05:52:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.88 Mbit/s
95th percentile per-packet one-way delay: 114.140 ms
Loss rate: 57.18%
-- Flow 1:
Average throughput: 0.36 Mbit/s
95th percentile per-packet one-way delay: 113.993 ms
Loss rate: 91.78%
-- Flow 2:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 114.157 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 0.59 Mbit/s
95th percentile per-packet one-way delay: 114.004 ms
Loss rate: 85.67%
```

Run 4: Report of KohoCC — Data Link

```
Run 5: Statistics of KohoCC

Start at: 2017-08-12 01:43:21
End at: 2017-08-12 01:43:51

# Below is generated by plot.py at 2017-08-12 05:52:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.72 Mbit/s
95th percentile per-packet one-way delay: 114.093 ms
Loss rate: 12.25%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 114.025 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 114.201 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 0.66 Mbit/s
95th percentile per-packet one-way delay: 114.221 ms
Loss rate: 84.05%
```
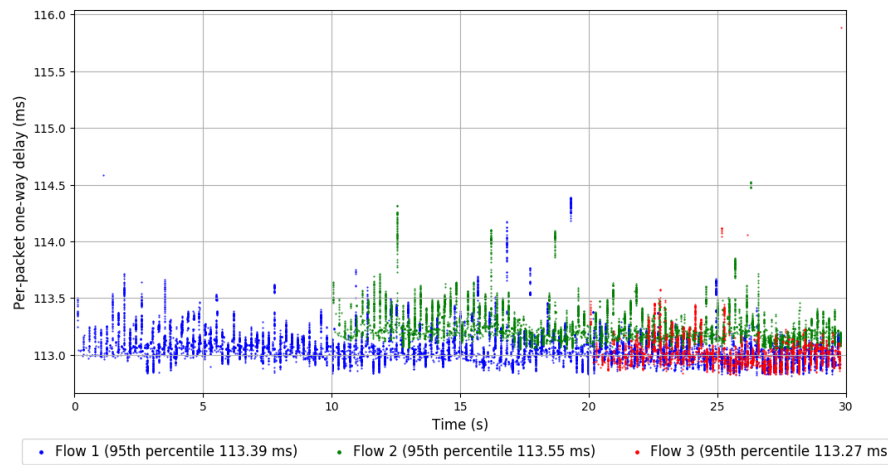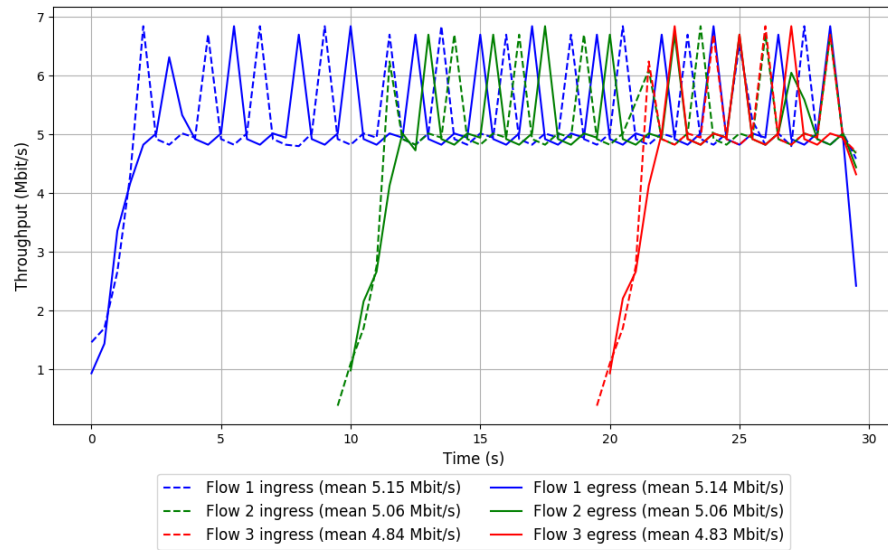
Run 5: Report of KohoCC — Data Link

Flow 1 ingress (mean 5.14 Mbit/s)   Flow 1 egress (mean 5.14 Mbit/s)
Flow 2 ingress (mean 5.06 Mbit/s)   Flow 2 egress (mean 5.06 Mbit/s)
Flow 3 ingress (mean 4.04 Mbit/s)   Flow 3 egress (mean 0.66 Mbit/s)

Flow 1 (95th percentile 114.03 ms)   Flow 2 (95th percentile 114.20 ms)   Flow 3 (95th percentile 114.22 ms)

```
Run 6: Statistics of KohoCC

Start at: 2017-08-12 01:55:53
End at: 2017-08-12 01:56:23

# Below is generated by plot.py at 2017-08-12 05:52:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.36 Mbit/s
95th percentile per-packet one-way delay: 114.081 ms
Loss rate: 49.72%
-- Flow 1:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 1087.384 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 113.969 ms
Loss rate: 76.27%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 114.086 ms
Loss rate: 2.50%
```
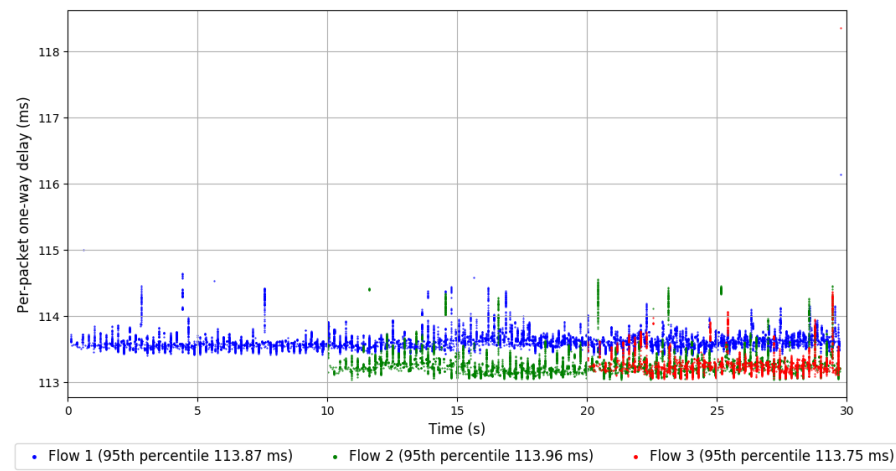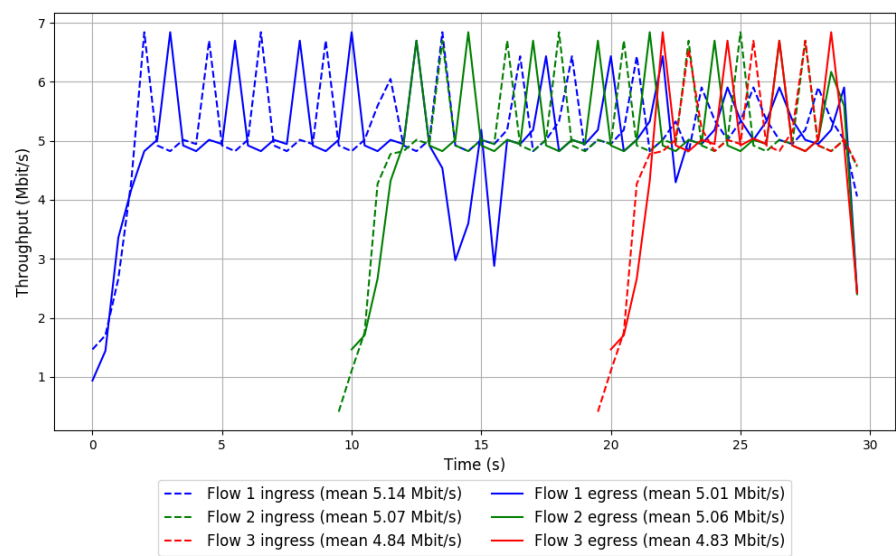
Run 6: Report of KohoCC — Data Link

```
Run 7: Statistics of KohoCC

Start at: 2017-08-12 02:09:05
End at: 2017-08-12 02:09:35


# Below is generated by plot.py at 2017-08-12 05:52:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 113.481 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 113.386 ms
Loss rate: 0.78%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 113.553 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 113.273 ms
Loss rate: 2.49%
```
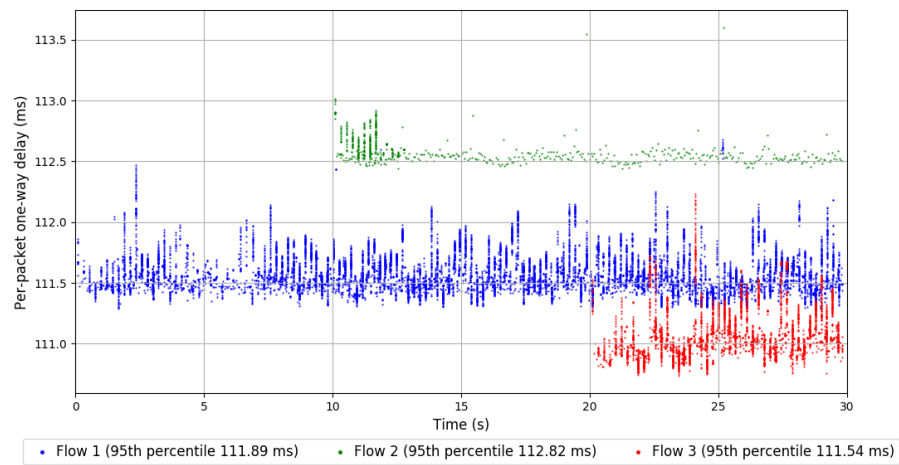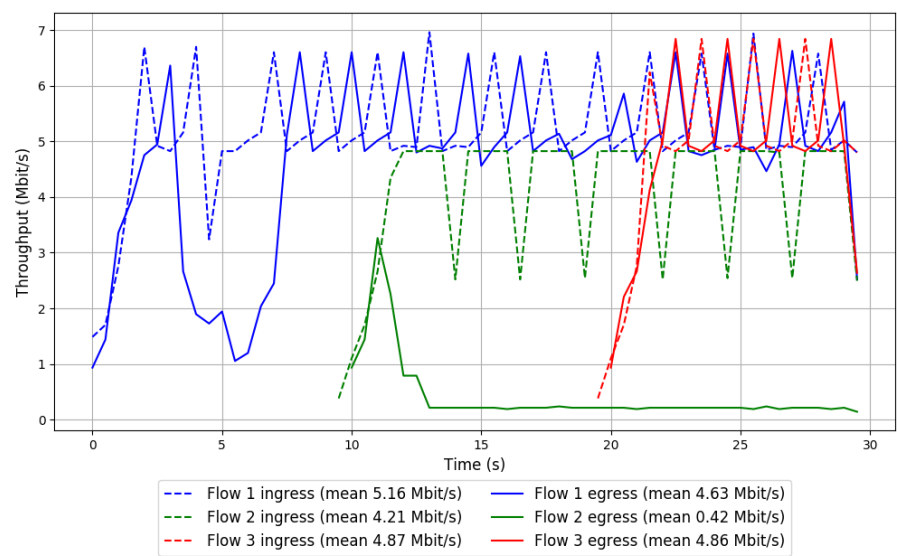
Run 7: Report of KohoCC — Data Link

```
Run 8: Statistics of KohoCC

Start at: 2017-08-12 02:22:13
End at: 2017-08-12 02:22:43

# Below is generated by plot.py at 2017-08-12 05:52:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 9.96 Mbit/s
95th percentile per-packet one-way delay: 113.868 ms
Loss rate: 2.47%
-- Flow 1:
Average throughput: 5.01 Mbit/s
95th percentile per-packet one-way delay: 113.874 ms
Loss rate: 3.31%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 113.964 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 4.83 Mbit/s
95th percentile per-packet one-way delay: 113.745 ms
Loss rate: 2.49%
```
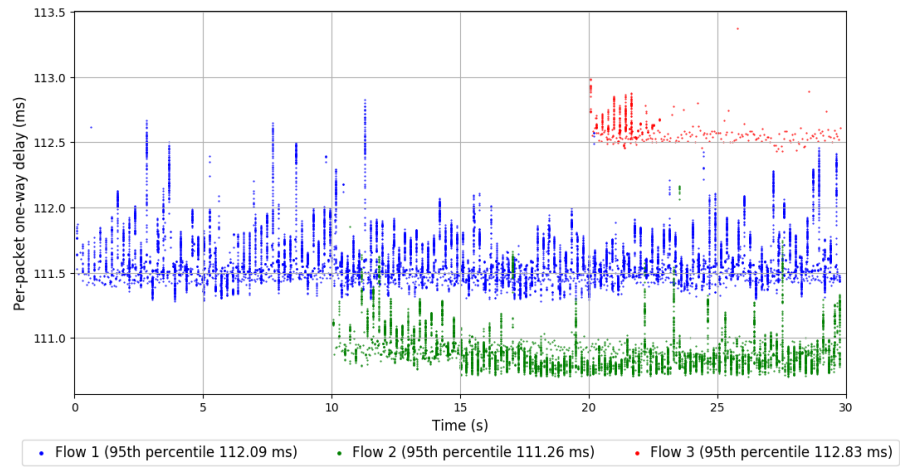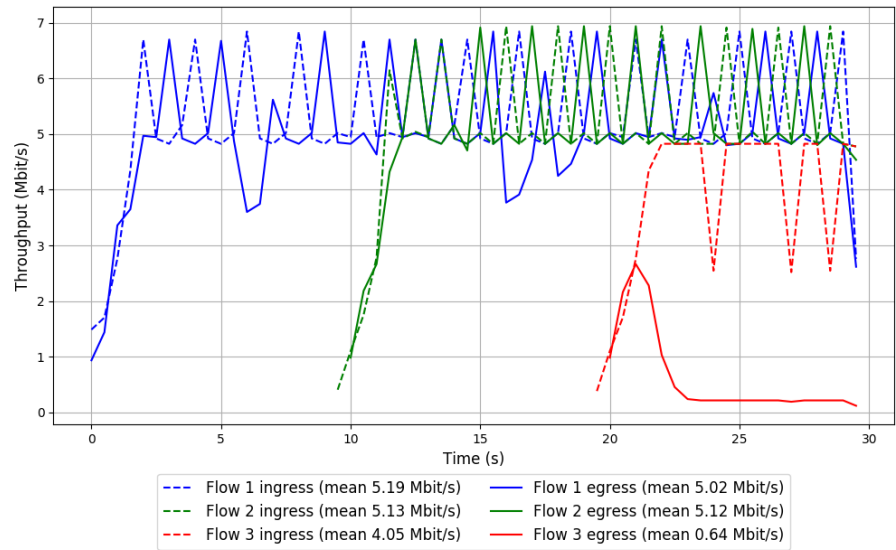
Run 8: Report of KohoCC — Data Link

```
Run 9: Statistics of KohoCC

Start at: 2017-08-12 02:34:50
End at: 2017-08-12 02:35:20

# Below is generated by plot.py at 2017-08-12 05:52:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 112.098 ms
Loss rate: 32.66%
-- Flow 1:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 111.895 ms
Loss rate: 10.90%
-- Flow 2:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 112.821 ms
Loss rate: 90.06%
-- Flow 3:
Average throughput: 4.86 Mbit/s
95th percentile per-packet one-way delay: 111.539 ms
Loss rate: 2.49%
```
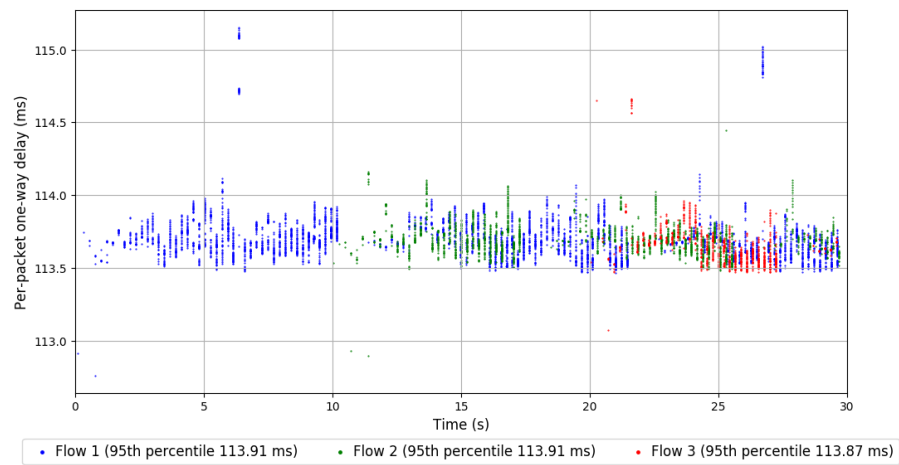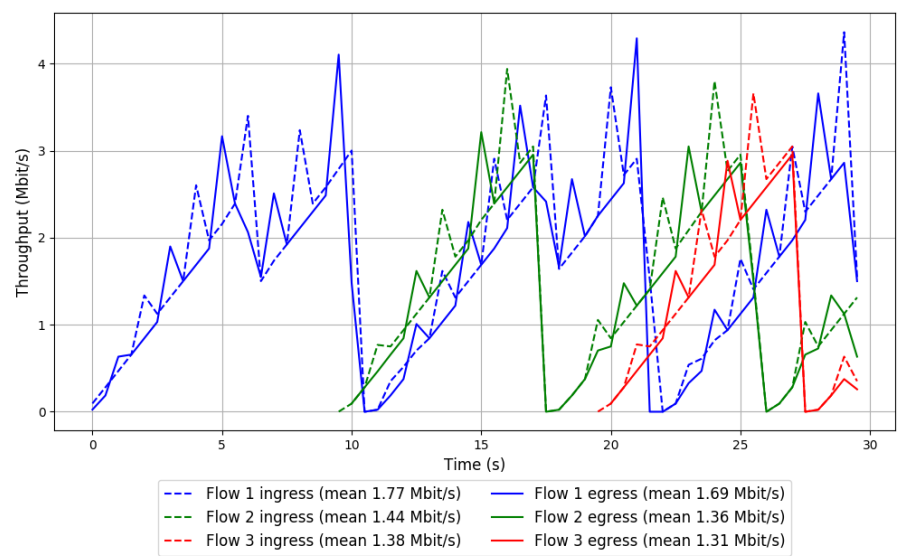
Run 9: Report of KohoCC — Data Link

- Flow 1 ingress (mean 5.16 Mbit/s)
- Flow 1 egress (mean 4.63 Mbit/s)
- Flow 2 ingress (mean 4.21 Mbit/s)
- Flow 2 egress (mean 0.42 Mbit/s)
- Flow 3 ingress (mean 4.87 Mbit/s)
- Flow 3 egress (mean 4.86 Mbit/s)

- Flow 1 (95th percentile 111.89 ms)
- Flow 2 (95th percentile 112.82 ms)
- Flow 3 (95th percentile 111.54 ms)

```
Run 10: Statistics of KohoCC

Start at: 2017-08-12 02:47:25
End at: 2017-08-12 02:47:55

# Below is generated by plot.py at 2017-08-12 05:52:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 112.132 ms
Loss rate: 14.01%
-- Flow 1:
Average throughput: 5.02 Mbit/s
95th percentile per-packet one-way delay: 112.090 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 5.12 Mbit/s
95th percentile per-packet one-way delay: 111.256 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 112.833 ms
Loss rate: 84.48%
```
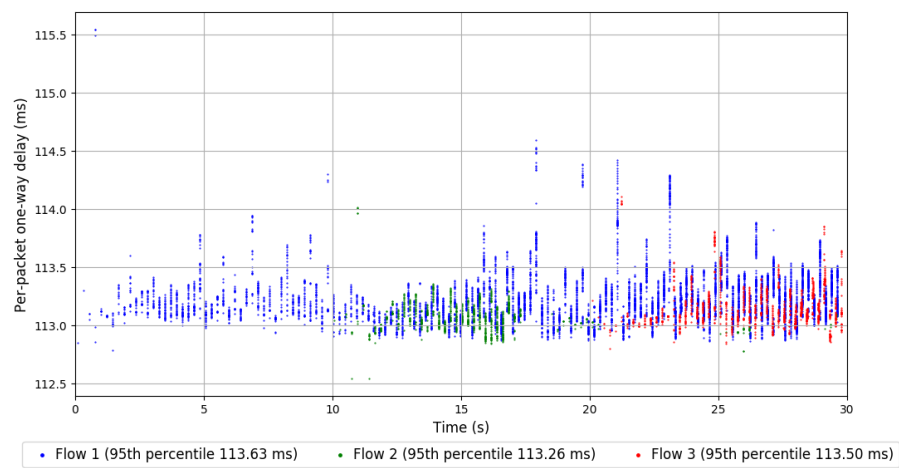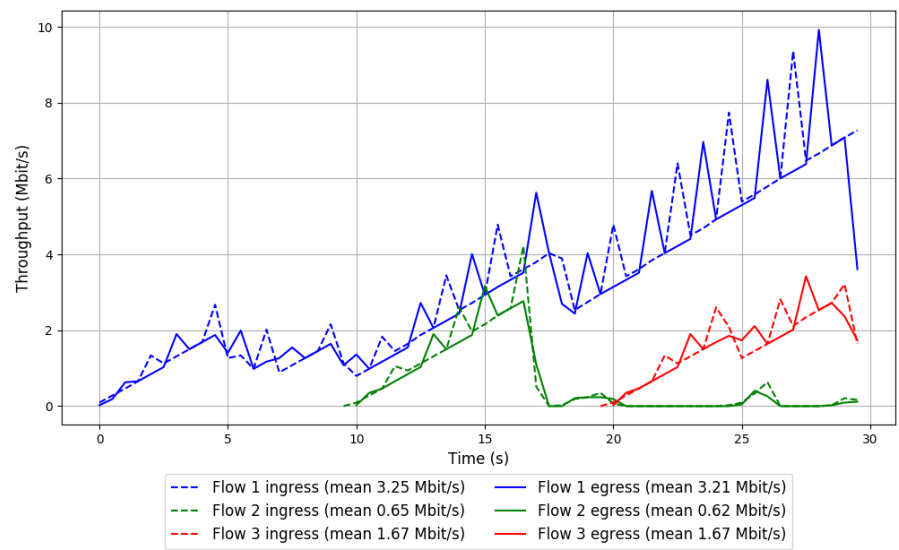
Run 10: Report of KohoCC — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2017-08-12 00:47:33
End at: 2017-08-12 00:48:03


# Below is generated by plot.py at 2017-08-12 05:52:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 113.901 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 113.906 ms
Loss rate: 5.19%
-- Flow 2:
Average throughput: 1.36 Mbit/s
95th percentile per-packet one-way delay: 113.906 ms
Loss rate: 6.59%
-- Flow 3:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 113.870 ms
Loss rate: 7.04%
```
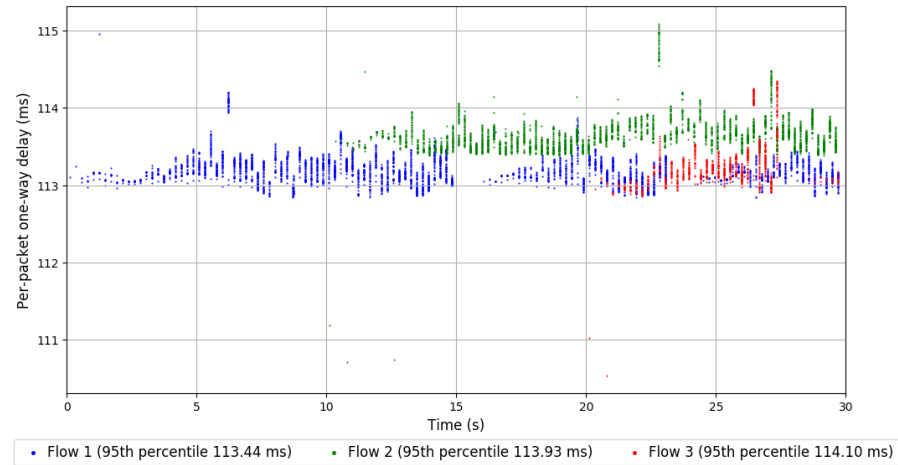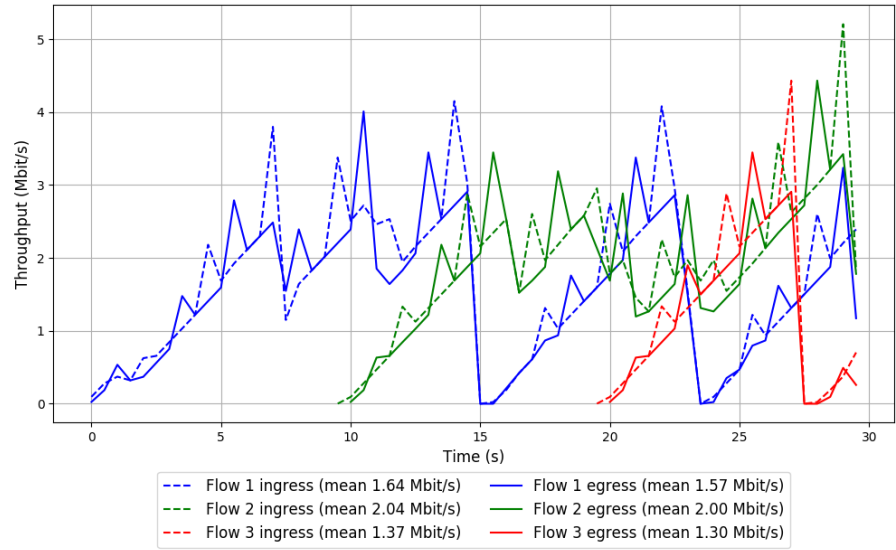
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-08-12 01:00:07
End at: 2017-08-12 01:00:37

# Below is generated by plot.py at 2017-08-12 05:52:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 113.588 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 113.626 ms
Loss rate: 1.89%
-- Flow 2:
Average throughput: 0.62 Mbit/s
95th percentile per-packet one-way delay: 113.259 ms
Loss rate: 5.50%
-- Flow 3:
Average throughput: 1.67 Mbit/s
95th percentile per-packet one-way delay: 113.495 ms
Loss rate: 2.33%
```
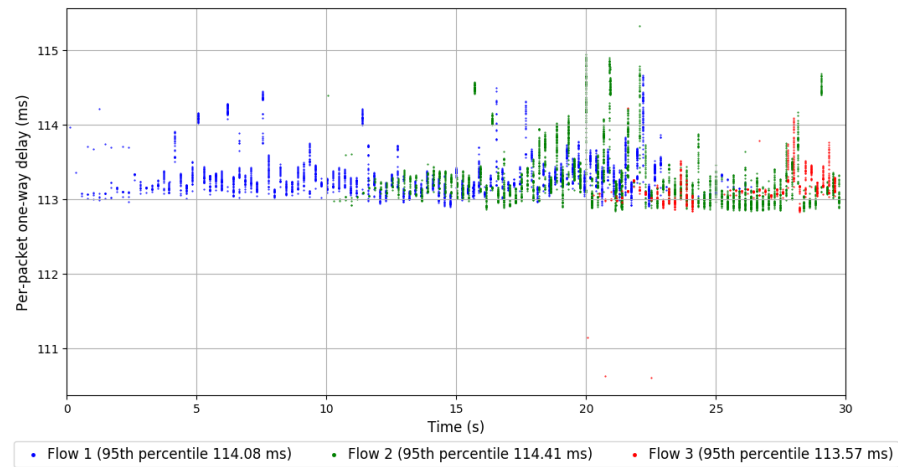
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2017-08-12 01:13:25
End at: 2017-08-12 01:13:55


# Below is generated by plot.py at 2017-08-12 05:52:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.30 Mbit/s
95th percentile per-packet one-way delay: 113.861 ms
Loss rate: 4.64%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 5.19%
-- Flow 2:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 113.930 ms
Loss rate: 3.07%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 114.098 ms
Loss rate: 7.34%
```
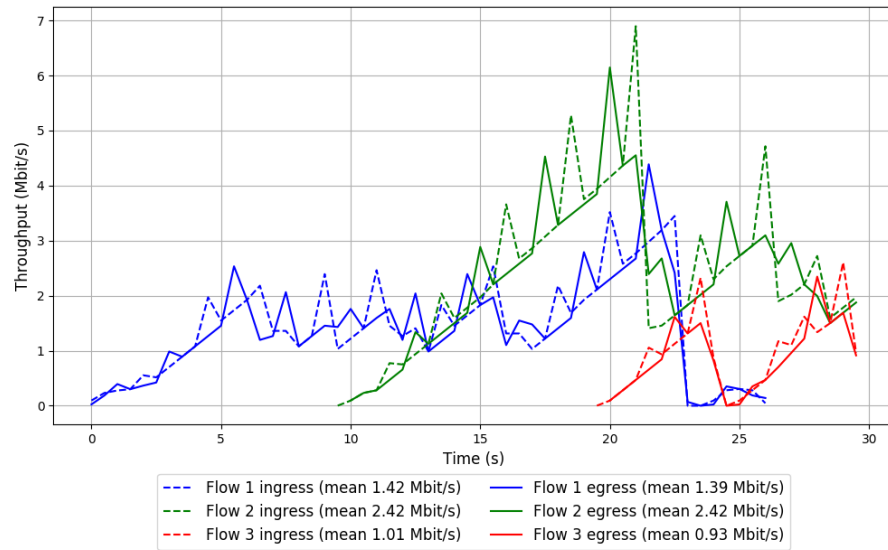
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-08-12 01:26:38
End at: 2017-08-12 01:27:08

# Below is generated by plot.py at 2017-08-12 05:52:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.14 Mbit/s
95th percentile per-packet one-way delay: 114.116 ms
Loss rate: 2.32%
-- Flow 1:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 114.084 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 114.406 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 113.573 ms
Loss rate: 9.33%
```
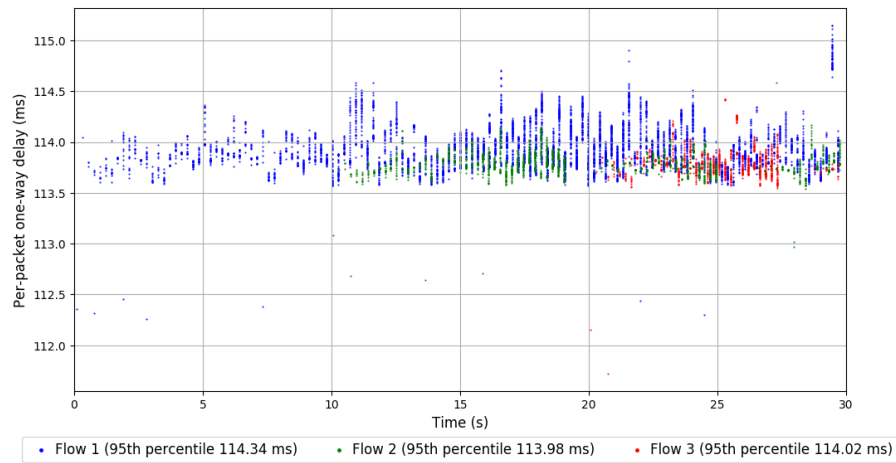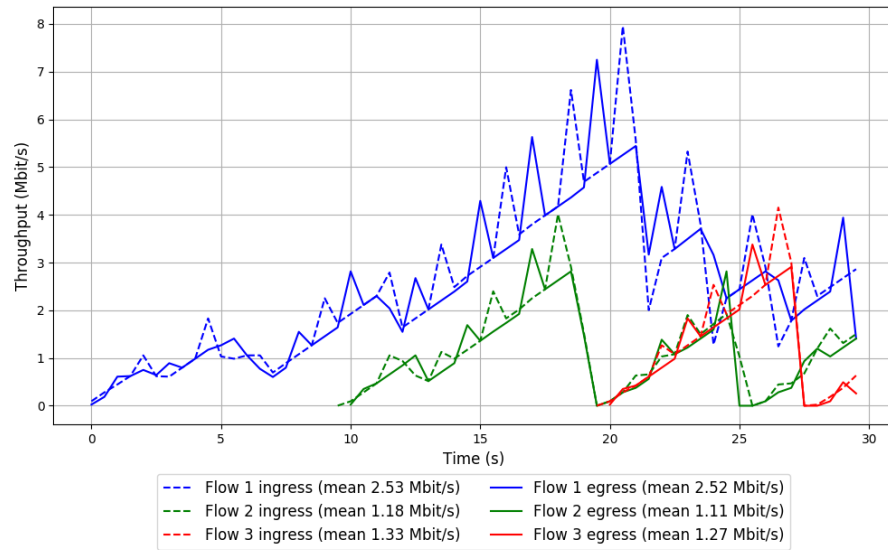
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-08-12 01:39:10
End at: 2017-08-12 01:39:40

# Below is generated by plot.py at 2017-08-12 05:52:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 114.289 ms
Loss rate: 3.15%
-- Flow 1:
Average throughput: 2.52 Mbit/s
95th percentile per-packet one-way delay: 114.341 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 113.979 ms
Loss rate: 7.21%
-- Flow 3:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 114.016 ms
Loss rate: 7.24%
```
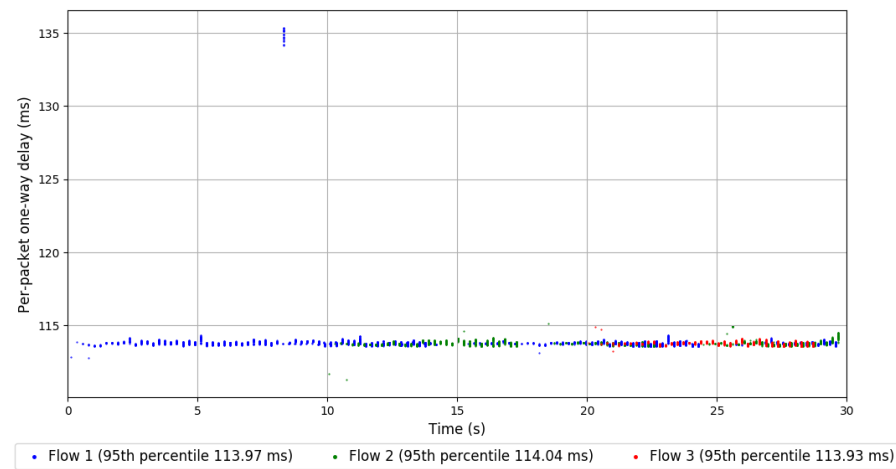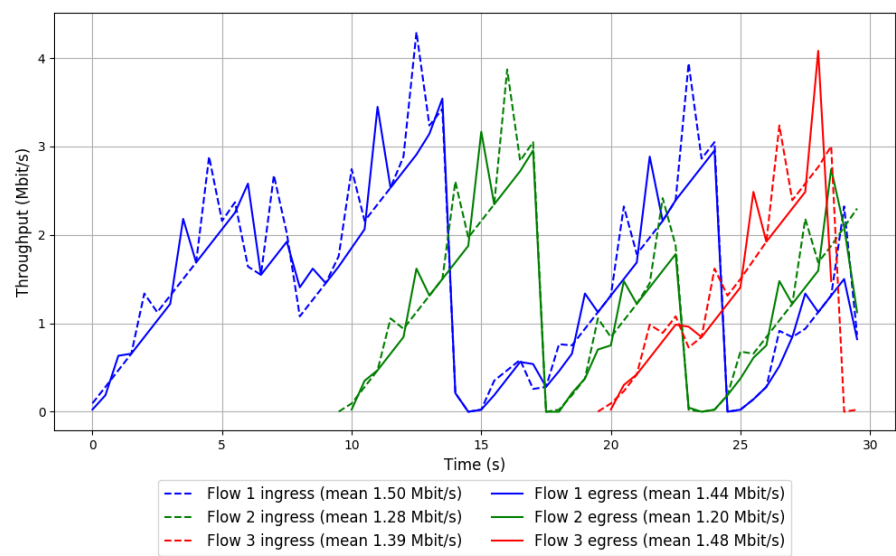
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 2.53 Mbit/s) ---- Flow 1 egress (mean 2.52 Mbit/s) ——
Flow 2 ingress (mean 1.18 Mbit/s) ---- Flow 2 egress (mean 1.11 Mbit/s) ——
Flow 3 ingress (mean 1.33 Mbit/s) ---- Flow 3 egress (mean 1.27 Mbit/s) ——

Flow 1 (95th percentile 114.34 ms) • Flow 2 (95th percentile 113.98 ms) • Flow 3 (95th percentile 114.02 ms)

```
Run 6: Statistics of LEDBAT

Start at: 2017-08-12 01:51:47
End at: 2017-08-12 01:52:17

# Below is generated by plot.py at 2017-08-12 05:52:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.66 Mbit/s
95th percentile per-packet one-way delay: 113.997 ms
Loss rate: 6.04%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 113.970 ms
Loss rate: 5.12%
-- Flow 2:
Average throughput: 1.20 Mbit/s
95th percentile per-packet one-way delay: 114.044 ms
Loss rate: 7.19%
-- Flow 3:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 113.934 ms
Loss rate: 6.86%
```
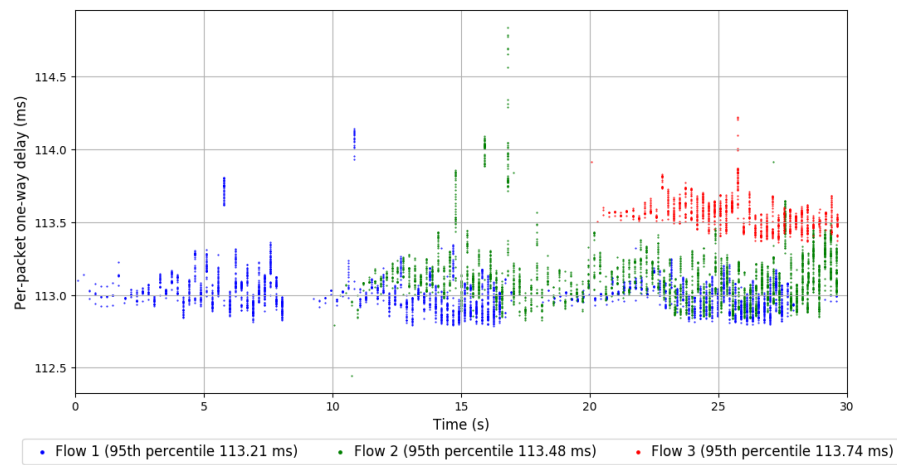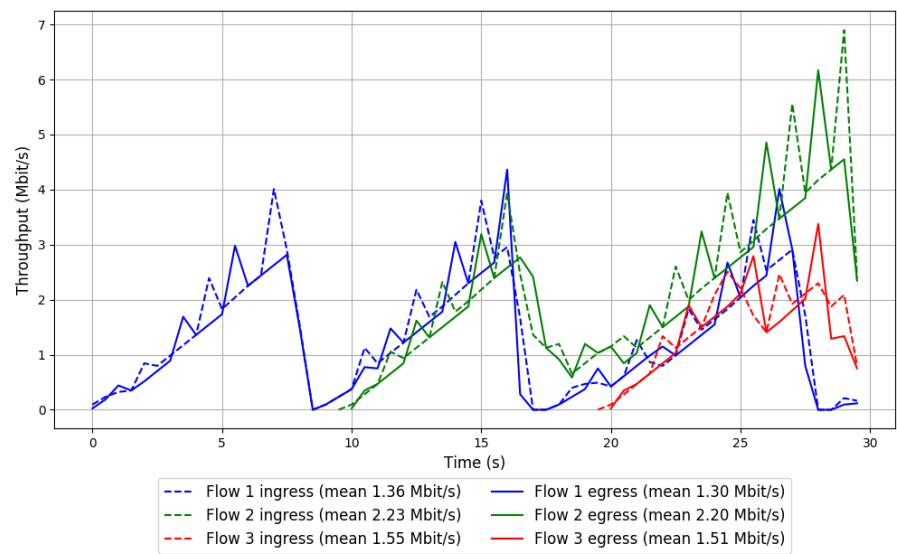
Run 6: Report of LEDBAT — Data Link

```
Run 7: Statistics of LEDBAT

Start at: 2017-08-12 02:04:46
End at: 2017-08-12 02:05:16

# Below is generated by plot.py at 2017-08-12 05:52:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.24 Mbit/s
95th percentile per-packet one-way delay: 113.630 ms
Loss rate: 3.92%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 113.211 ms
Loss rate: 4.94%
-- Flow 2:
Average throughput: 2.20 Mbit/s
95th percentile per-packet one-way delay: 113.484 ms
Loss rate: 2.71%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 113.738 ms
Loss rate: 4.73%
```
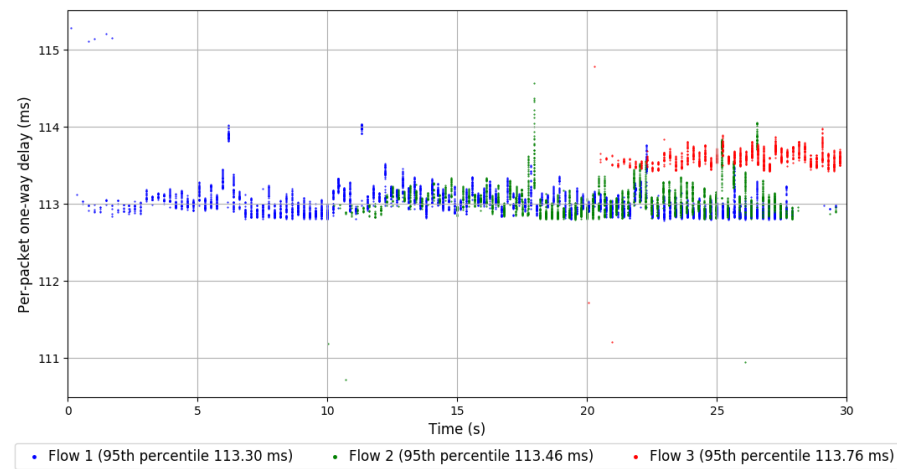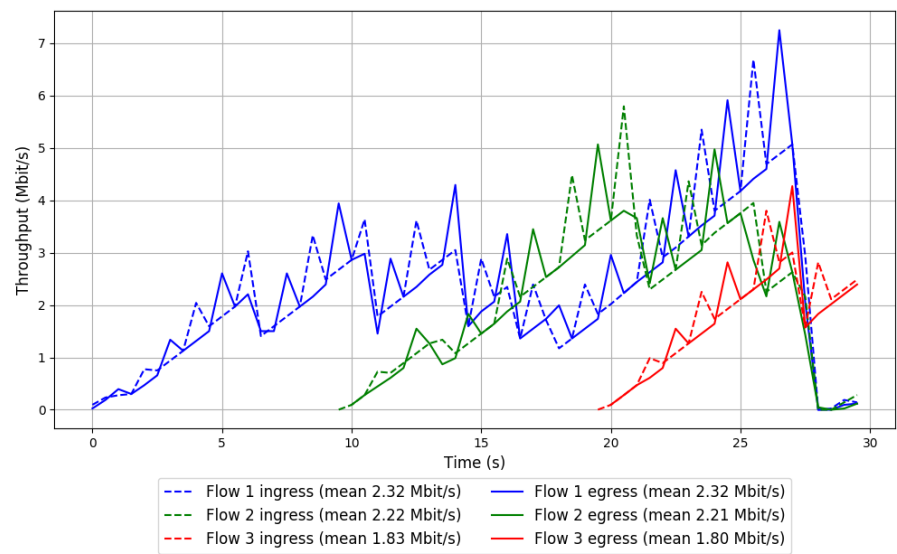
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-08-12 02:18:00
End at: 2017-08-12 02:18:30

# Below is generated by plot.py at 2017-08-12 05:52:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 113.668 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 113.295 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 2.21 Mbit/s
95th percentile per-packet one-way delay: 113.460 ms
Loss rate: 1.55%
-- Flow 3:
Average throughput: 1.80 Mbit/s
95th percentile per-packet one-way delay: 113.760 ms
Loss rate: 3.94%
```
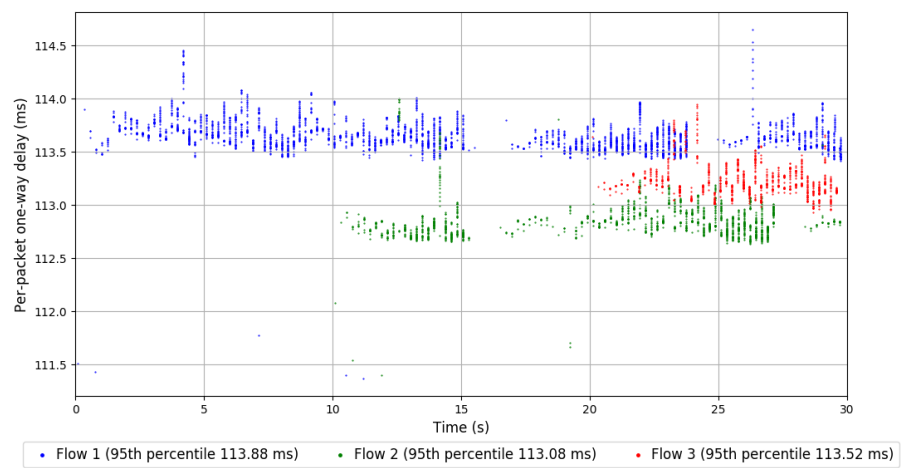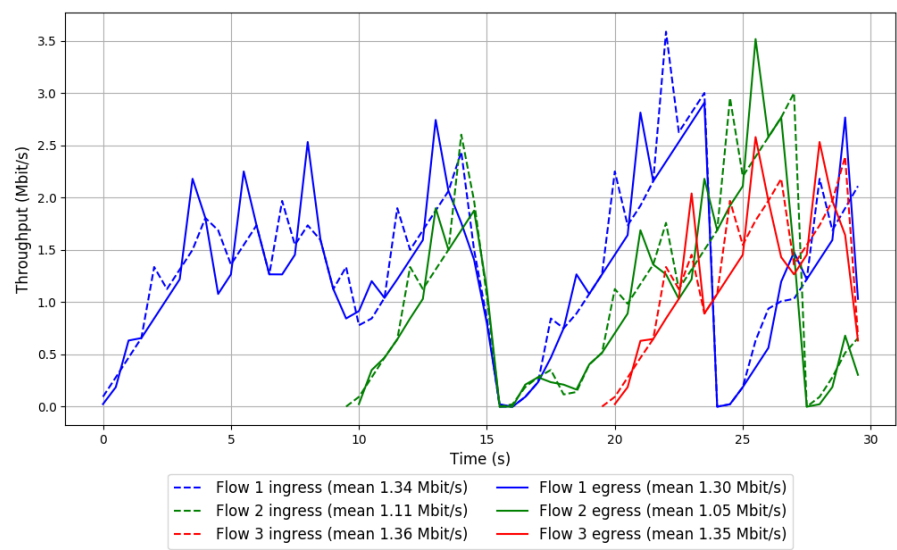
Run 8: Report of LEDBAT — Data Link

```
Run 9: Statistics of LEDBAT

Start at: 2017-08-12 02:30:39
End at: 2017-08-12 02:31:09

# Below is generated by plot.py at 2017-08-12 05:52:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.42 Mbit/s
95th percentile per-packet one-way delay: 113.821 ms
Loss rate: 4.75%
-- Flow 1:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 113.875 ms
Loss rate: 4.24%
-- Flow 2:
Average throughput: 1.05 Mbit/s
95th percentile per-packet one-way delay: 113.085 ms
Loss rate: 6.41%
-- Flow 3:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 113.517 ms
Loss rate: 3.54%
```
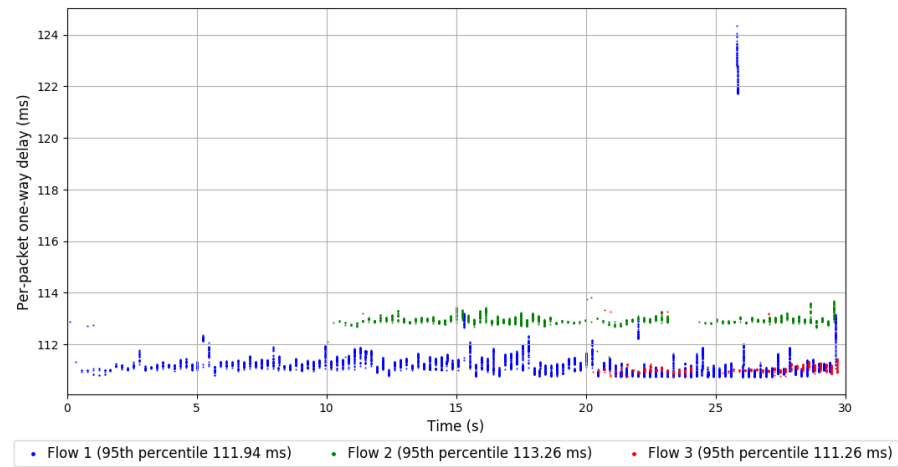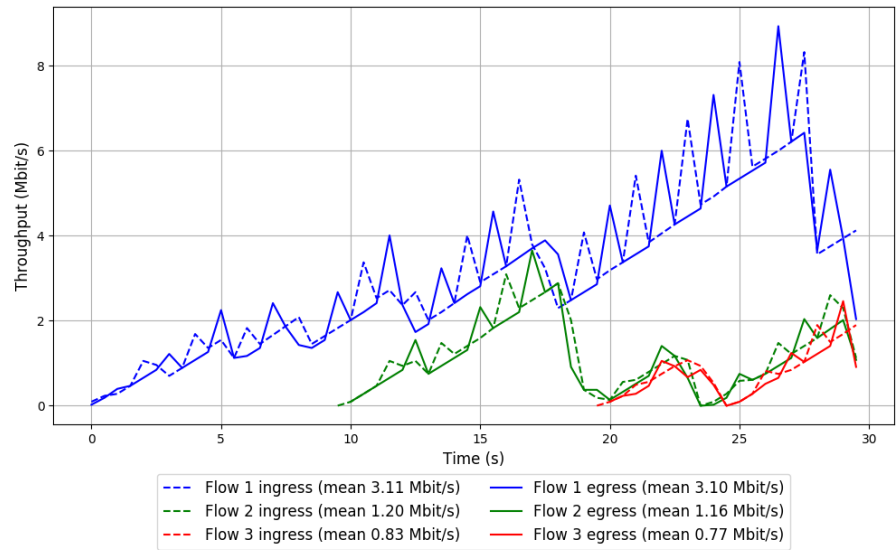
Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2017-08-12 02:43:17
End at: 2017-08-12 02:43:47

# Below is generated by plot.py at 2017-08-12 05:52:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 113.045 ms
Loss rate: 2.45%
-- Flow 1:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 111.941 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 1.16 Mbit/s
95th percentile per-packet one-way delay: 113.259 ms
Loss rate: 5.18%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 111.261 ms
Loss rate: 9.28%
```
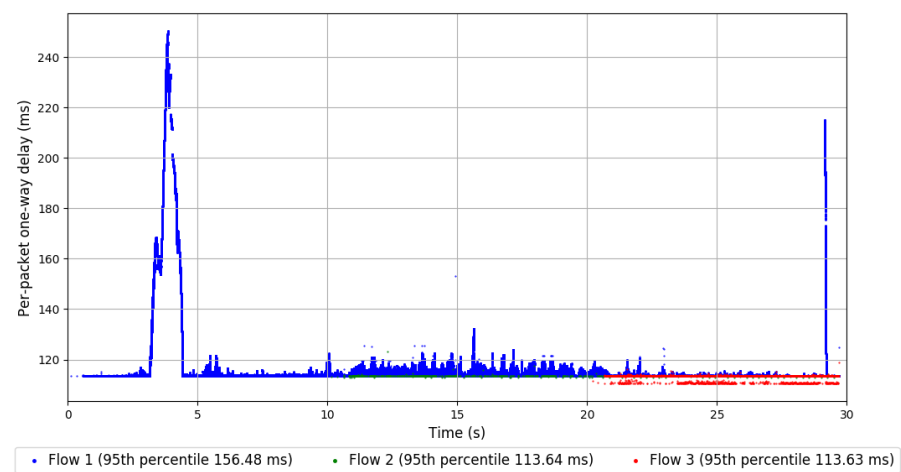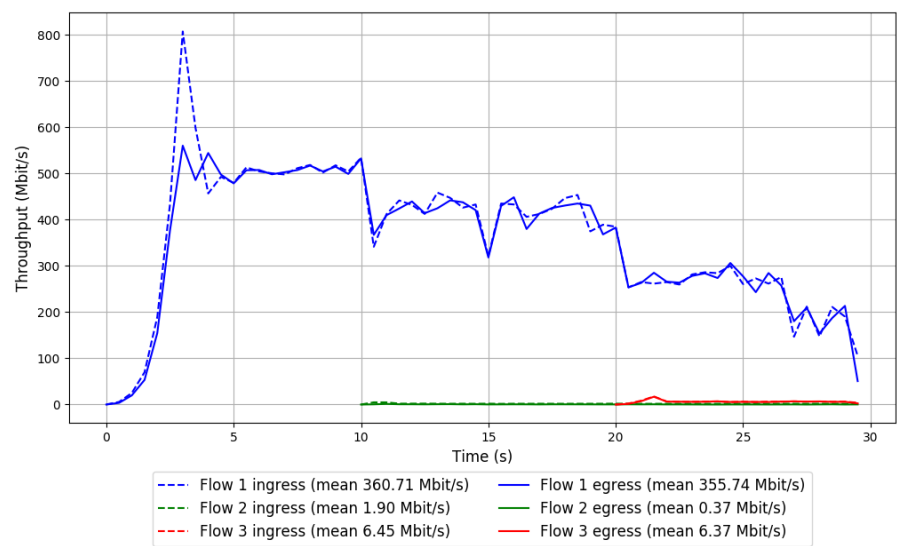
Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-08-12 00:44:00
End at: 2017-08-12 00:44:30


# Below is generated by plot.py at 2017-08-12 05:53:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 358.03 Mbit/s
95th percentile per-packet one-way delay: 156.391 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 355.74 Mbit/s
95th percentile per-packet one-way delay: 156.482 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 0.37 Mbit/s
95th percentile per-packet one-way delay: 113.642 ms
Loss rate: 80.91%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 113.632 ms
Loss rate: 3.37%
```
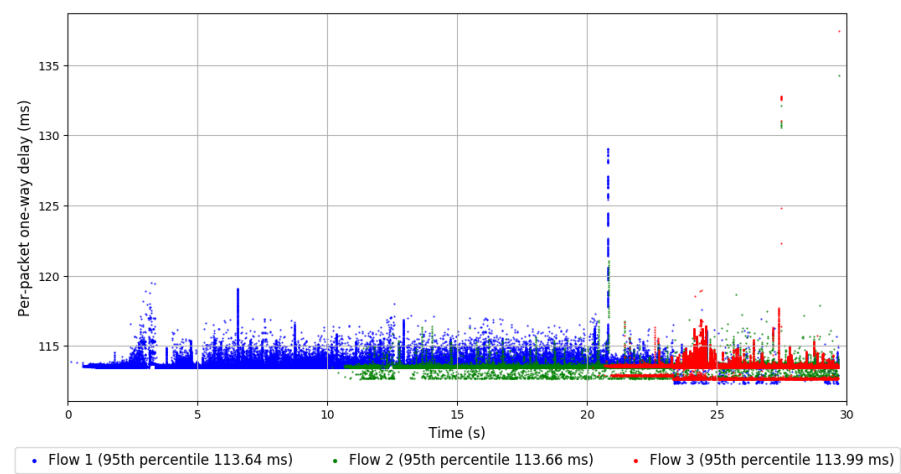
Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 360.71 Mbit/s) — Flow 1 egress (mean 355.74 Mbit/s)
Flow 2 ingress (mean 1.90 Mbit/s) — Flow 2 egress (mean 0.37 Mbit/s)
Flow 3 ingress (mean 6.45 Mbit/s) — Flow 3 egress (mean 6.37 Mbit/s)

Flow 1 (95th percentile 156.48 ms) • Flow 2 (95th percentile 113.64 ms) • Flow 3 (95th percentile 113.63 ms)

```
Run 2: Statistics of PCC

Start at: 2017-08-12 00:56:39
End at: 2017-08-12 00:57:09


# Below is generated by plot.py at 2017-08-12 05:53:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.60 Mbit/s
95th percentile per-packet one-way delay: 113.690 ms
Loss rate: 14.23%
-- Flow 1:
Average throughput: 175.22 Mbit/s
95th percentile per-packet one-way delay: 113.640 ms
Loss rate: 17.27%
-- Flow 2:
Average throughput: 55.55 Mbit/s
95th percentile per-packet one-way delay: 113.663 ms
Loss rate: 10.71%
-- Flow 3:
Average throughput: 133.80 Mbit/s
95th percentile per-packet one-way delay: 113.992 ms
Loss rate: 2.99%
```
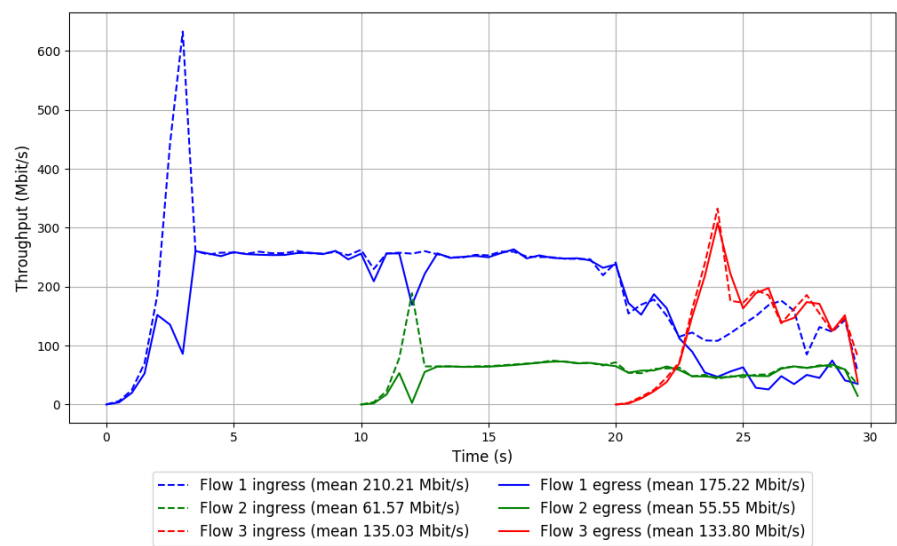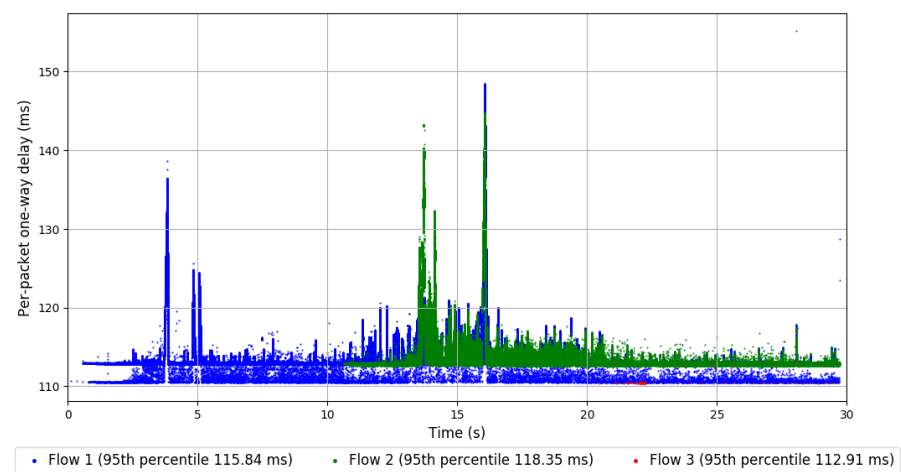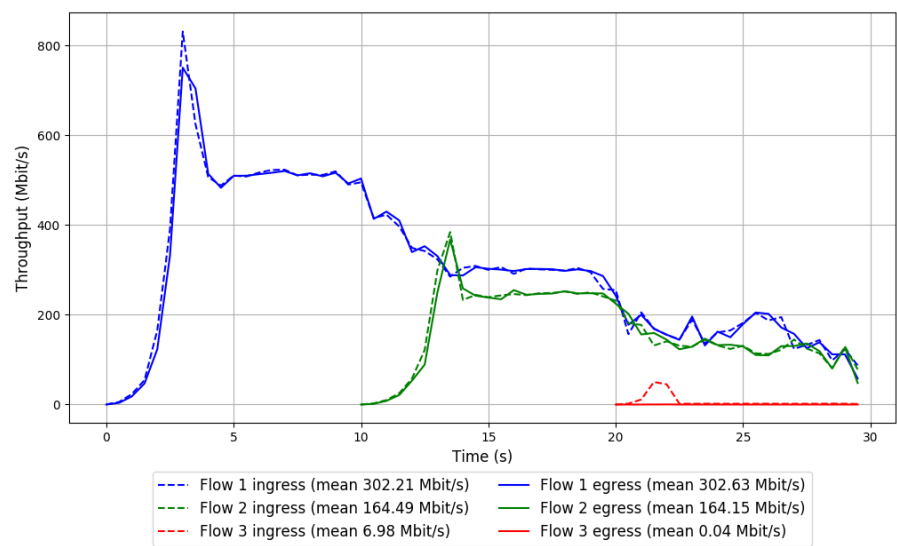
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 210.21 Mbit/s) --- Flow 1 egress (mean 175.22 Mbit/s)
Flow 2 ingress (mean 61.57 Mbit/s) --- Flow 2 egress (mean 55.55 Mbit/s)
Flow 3 ingress (mean 135.03 Mbit/s) --- Flow 3 egress (mean 133.80 Mbit/s)

Flow 1 (95th percentile 113.64 ms)   Flow 2 (95th percentile 113.66 ms)   Flow 3 (95th percentile 113.99 ms)

```
Run 3: Statistics of PCC

Start at: 2017-08-12 01:09:46
End at: 2017-08-12 01:10:16


# Below is generated by plot.py at 2017-08-12 05:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.10 Mbit/s
95th percentile per-packet one-way delay: 116.212 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 302.63 Mbit/s
95th percentile per-packet one-way delay: 115.840 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 164.15 Mbit/s
95th percentile per-packet one-way delay: 118.348 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 112.908 ms
Loss rate: 99.48%
```
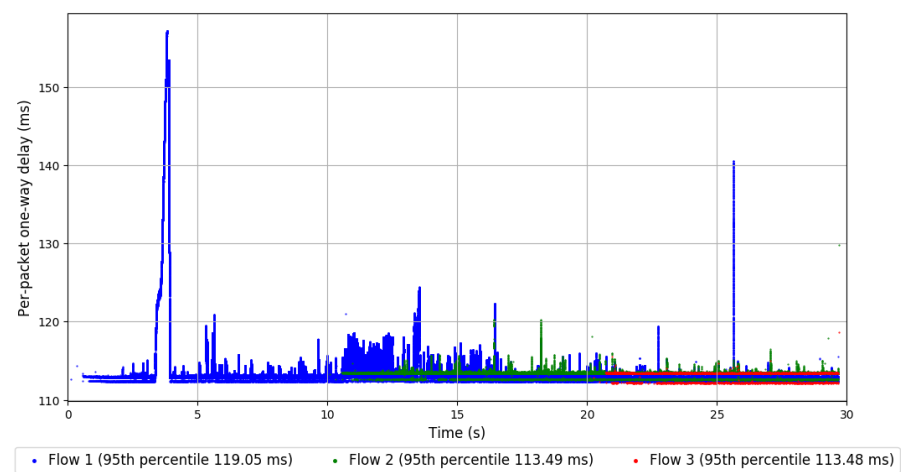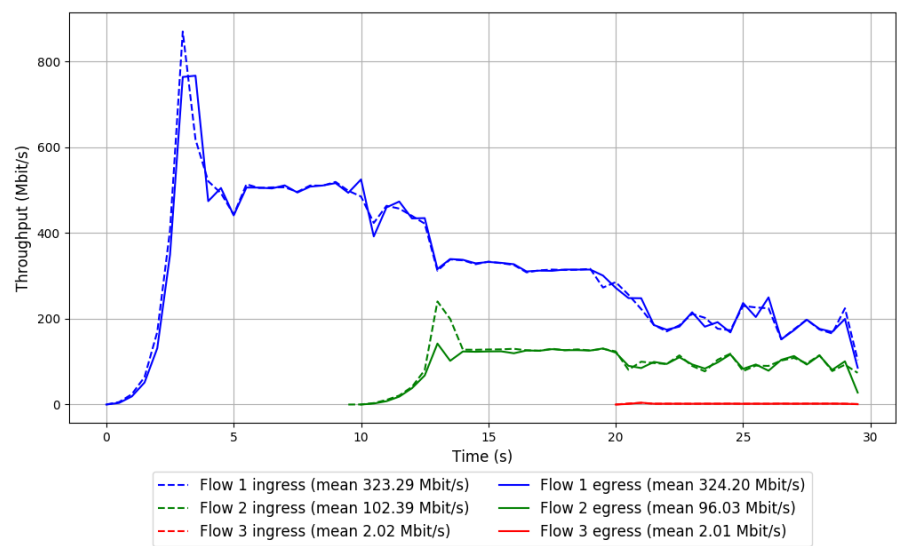
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 302.21 Mbit/s) ——— Flow 1 egress (mean 302.63 Mbit/s)
Flow 2 ingress (mean 164.49 Mbit/s) ——— Flow 2 egress (mean 164.15 Mbit/s)
Flow 3 ingress (mean 6.98 Mbit/s) ——— Flow 3 egress (mean 0.04 Mbit/s)

Flow 1 (95th percentile 115.84 ms) • Flow 2 (95th percentile 118.35 ms) • Flow 3 (95th percentile 112.91 ms)

```
Run 4: Statistics of PCC

Start at: 2017-08-12 01:23:00
End at: 2017-08-12 01:23:30


# Below is generated by plot.py at 2017-08-12 05:54:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.34 Mbit/s
95th percentile per-packet one-way delay: 117.390 ms
Loss rate: 1.66%
-- Flow 1:
Average throughput: 324.20 Mbit/s
95th percentile per-packet one-way delay: 119.045 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 96.03 Mbit/s
95th percentile per-packet one-way delay: 113.490 ms
Loss rate: 7.23%
-- Flow 3:
Average throughput: 2.01 Mbit/s
95th percentile per-packet one-way delay: 113.485 ms
Loss rate: 2.99%
```
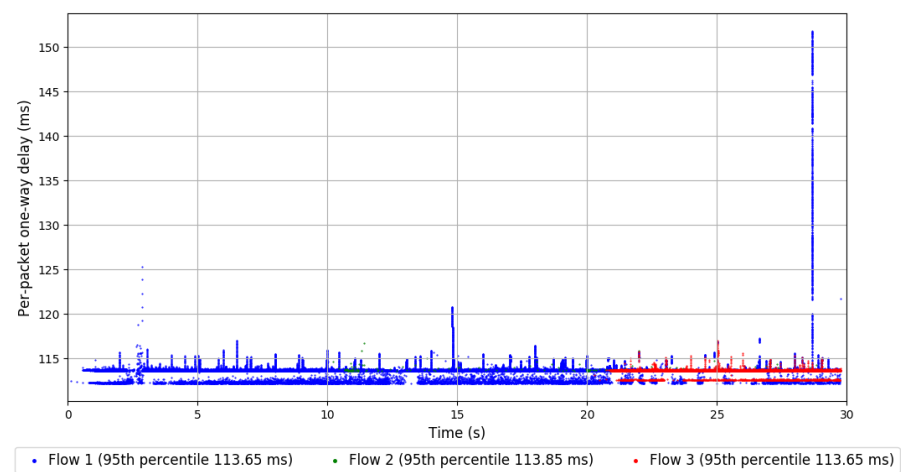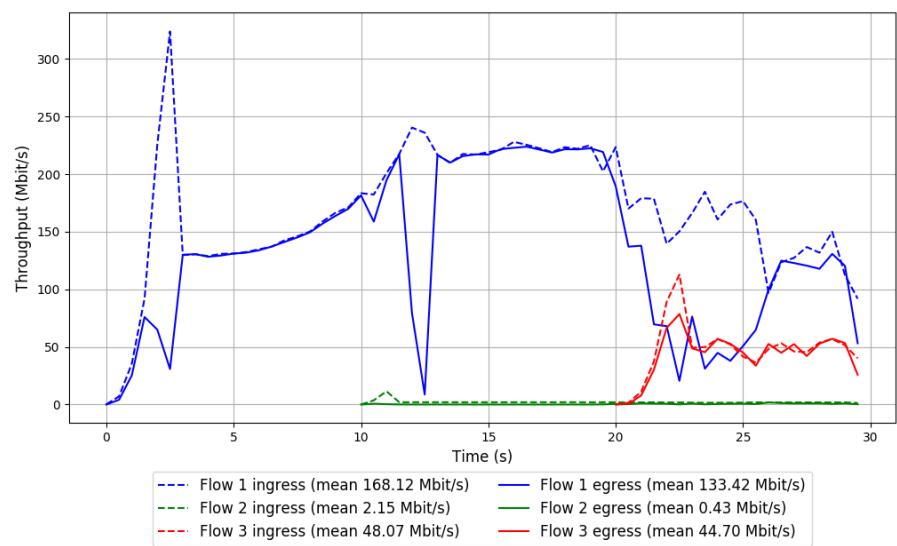
Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 323.29 Mbit/s) --- Flow 1 egress (mean 324.20 Mbit/s)
Flow 2 ingress (mean 102.39 Mbit/s) --- Flow 2 egress (mean 96.03 Mbit/s)
Flow 3 ingress (mean 2.02 Mbit/s) --- Flow 3 egress (mean 2.01 Mbit/s)

Flow 1 (95th percentile 119.05 ms)   Flow 2 (95th percentile 113.49 ms)   Flow 3 (95th percentile 113.48 ms)

```
Run 5: Statistics of PCC

Start at: 2017-08-12 01:35:44
End at: 2017-08-12 01:36:14


# Below is generated by plot.py at 2017-08-12 05:55:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.00 Mbit/s
95th percentile per-packet one-way delay: 113.651 ms
Loss rate: 20.65%
-- Flow 1:
Average throughput: 133.42 Mbit/s
95th percentile per-packet one-way delay: 113.651 ms
Loss rate: 21.22%
-- Flow 2:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.846 ms
Loss rate: 80.33%
-- Flow 3:
Average throughput: 44.70 Mbit/s
95th percentile per-packet one-way delay: 113.648 ms
Loss rate: 9.18%
```
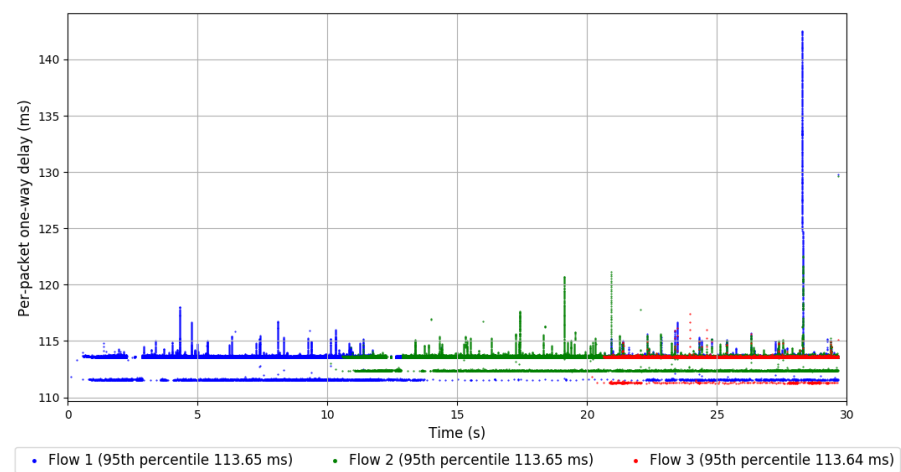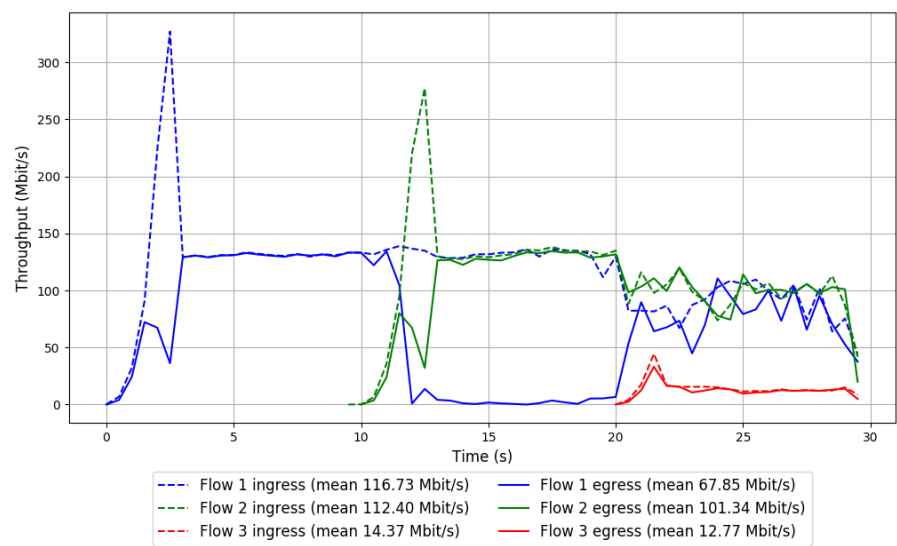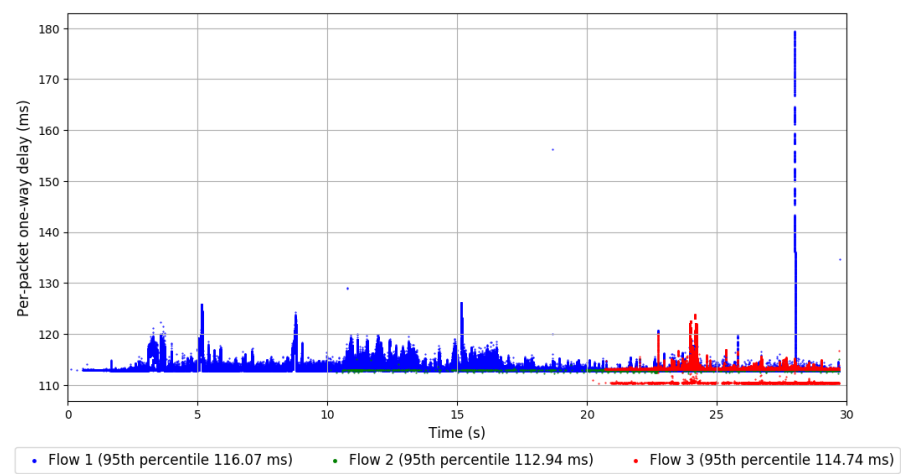
Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 168.12 Mbit/s) --- Flow 1 egress (mean 133.42 Mbit/s)
Flow 2 ingress (mean 2.15 Mbit/s) --- Flow 2 egress (mean 0.43 Mbit/s)
Flow 3 ingress (mean 48.07 Mbit/s) --- Flow 3 egress (mean 44.70 Mbit/s)

Flow 1 (95th percentile 113.65 ms) Flow 2 (95th percentile 113.85 ms) Flow 3 (95th percentile 113.65 ms)

```
Run 6: Statistics of PCC

Start at: 2017-08-12 01:48:23
End at: 2017-08-12 01:48:53


# Below is generated by plot.py at 2017-08-12 05:55:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.05 Mbit/s
95th percentile per-packet one-way delay: 113.650 ms
Loss rate: 29.59%
-- Flow 1:
Average throughput: 67.85 Mbit/s
95th percentile per-packet one-way delay: 113.652 ms
Loss rate: 42.29%
-- Flow 2:
Average throughput: 101.34 Mbit/s
95th percentile per-packet one-way delay: 113.647 ms
Loss rate: 10.79%
-- Flow 3:
Average throughput: 12.77 Mbit/s
95th percentile per-packet one-way delay: 113.645 ms
Loss rate: 13.16%
```
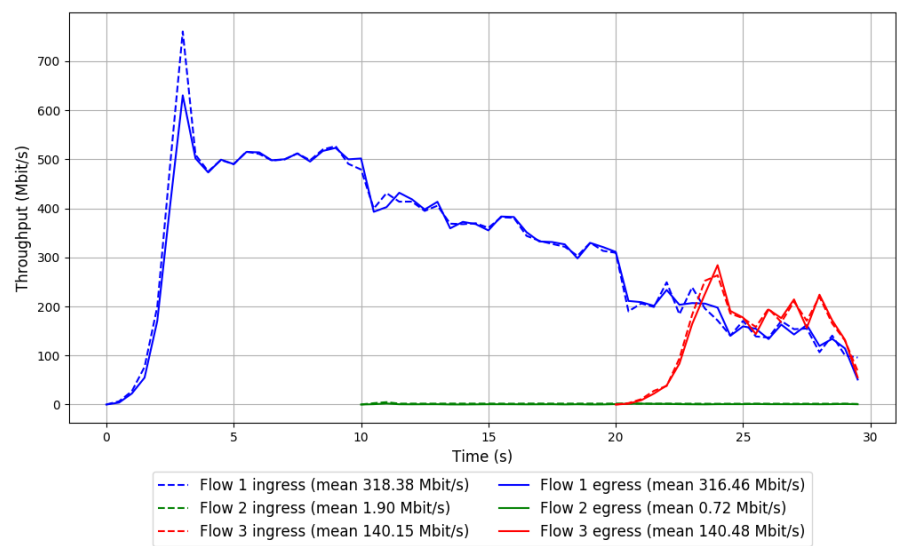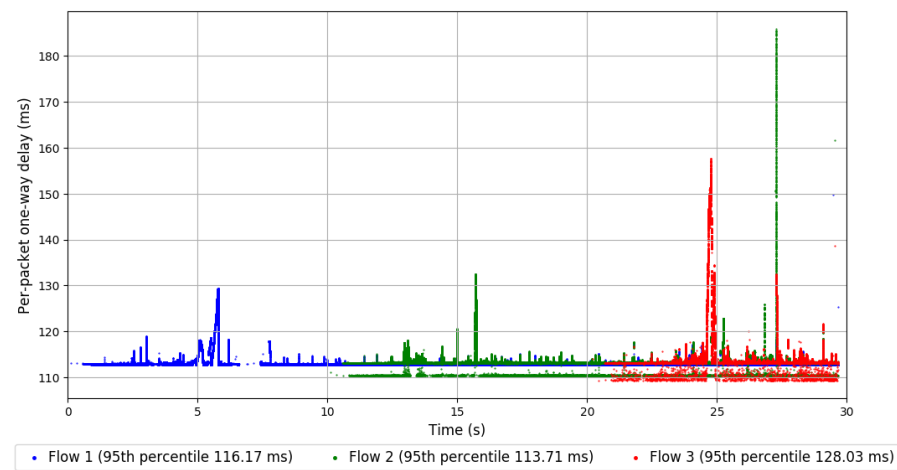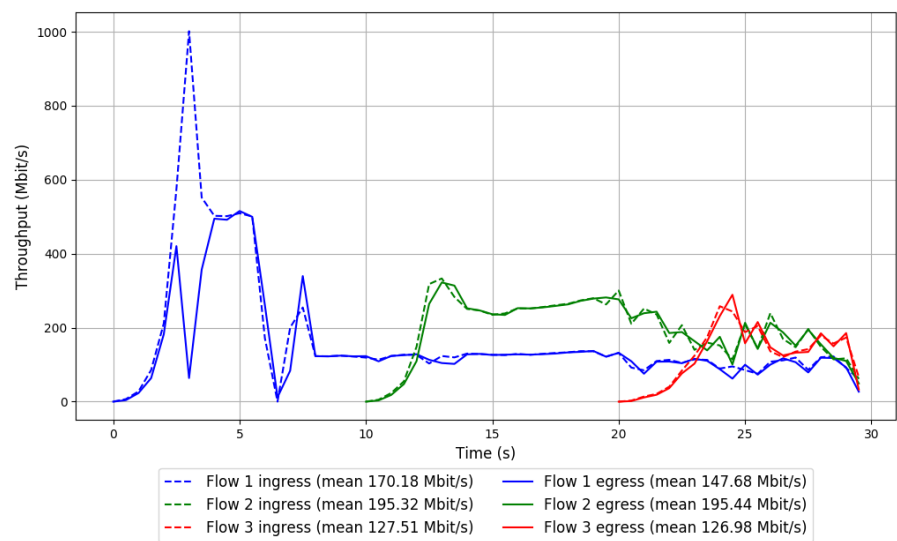
Run 6: Report of PCC — Data Link

```
Run 7: Statistics of PCC

Start at: 2017-08-12 02:01:10
End at: 2017-08-12 02:01:40

# Below is generated by plot.py at 2017-08-12 05:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.89 Mbit/s
95th percentile per-packet one-way delay: 116.028 ms
Loss rate: 1.60%
-- Flow 1:
Average throughput: 316.46 Mbit/s
95th percentile per-packet one-way delay: 116.074 ms
Loss rate: 1.29%
-- Flow 2:
Average throughput: 0.72 Mbit/s
95th percentile per-packet one-way delay: 112.941 ms
Loss rate: 62.58%
-- Flow 3:
Average throughput: 140.48 Mbit/s
95th percentile per-packet one-way delay: 114.737 ms
Loss rate: 2.08%
```
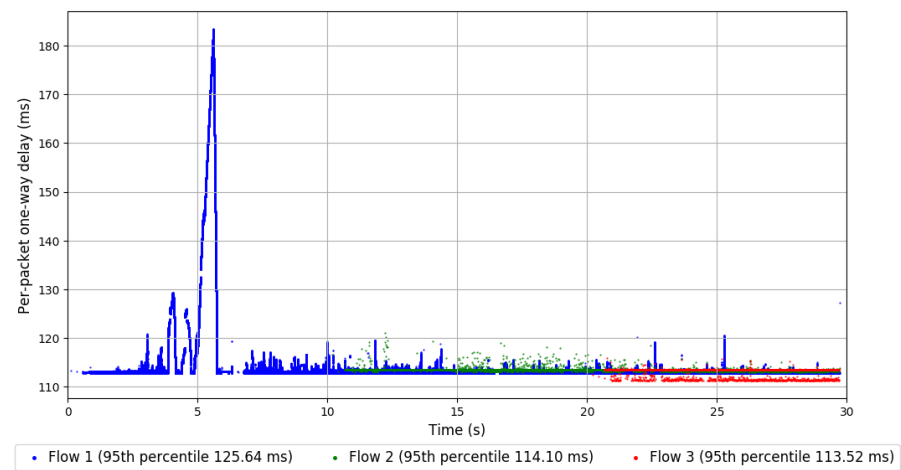
Run 7: Report of PCC — Data Link

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```
Run 8: Statistics of PCC

Start at: 2017-08-12 02:14:24
End at: 2017-08-12 02:14:54


# Below is generated by plot.py at 2017-08-12 05:56:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 317.34 Mbit/s
95th percentile per-packet one-way delay: 115.351 ms
Loss rate: 7.64%
-- Flow 1:
Average throughput: 147.68 Mbit/s
95th percentile per-packet one-way delay: 116.174 ms
Loss rate: 13.85%
-- Flow 2:
Average throughput: 195.44 Mbit/s
95th percentile per-packet one-way delay: 113.711 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 126.98 Mbit/s
95th percentile per-packet one-way delay: 128.028 ms
Loss rate: 2.82%
```
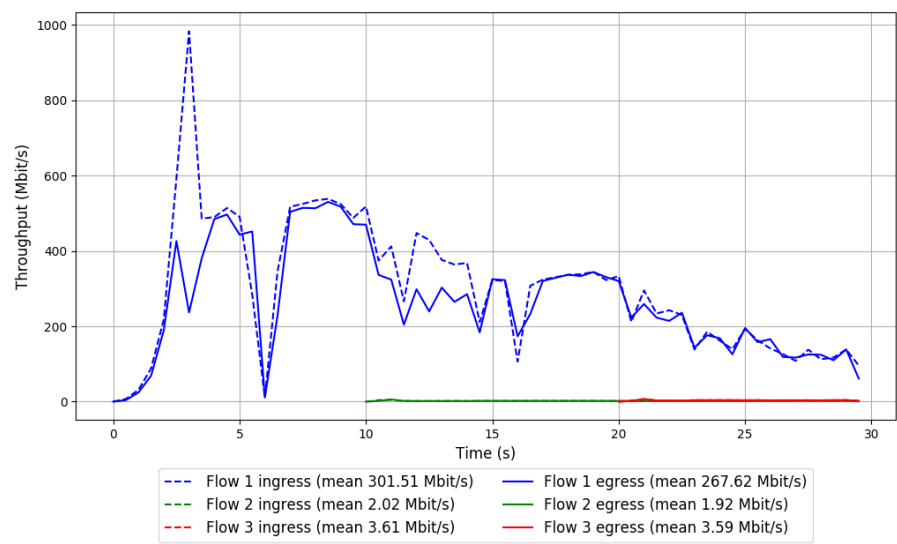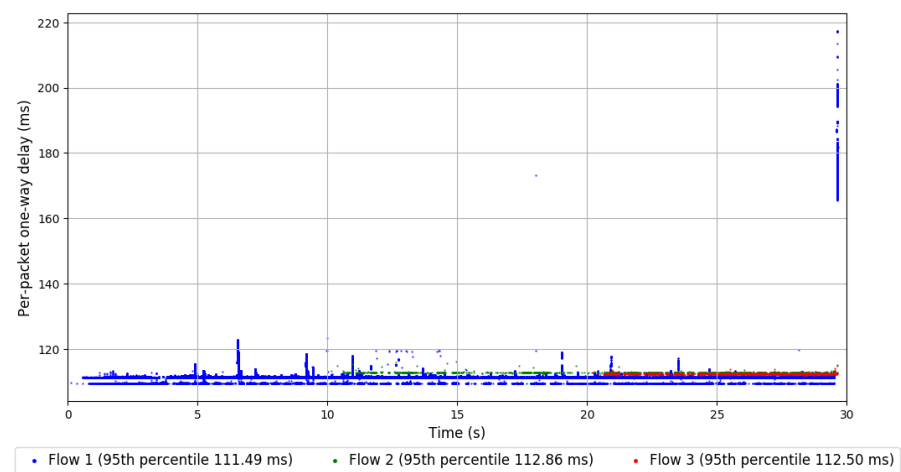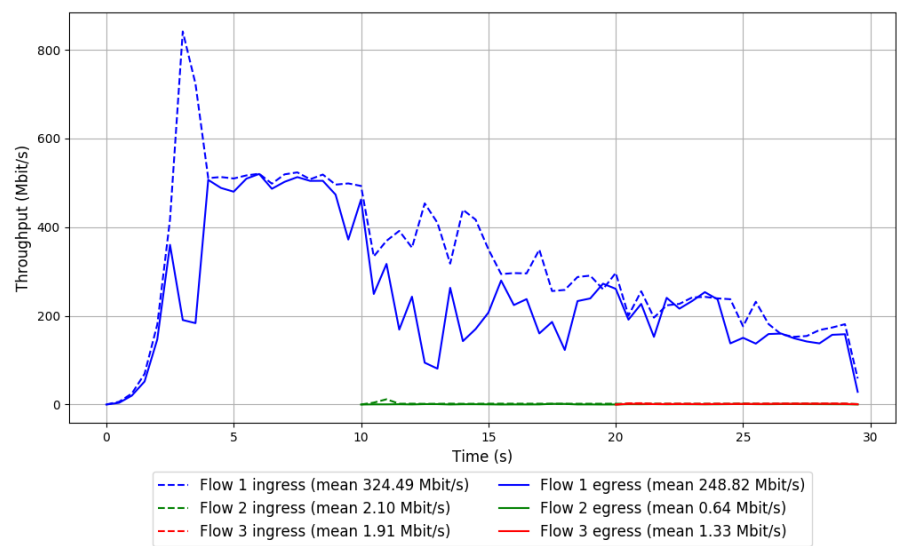
Run 8: Report of PCC — Data Link

Flow 1 ingress (mean 170.18 Mbit/s)   Flow 1 egress (mean 147.68 Mbit/s)
Flow 2 ingress (mean 195.32 Mbit/s)   Flow 2 egress (mean 195.44 Mbit/s)
Flow 3 ingress (mean 127.51 Mbit/s)   Flow 3 egress (mean 126.98 Mbit/s)

Flow 1 (95th percentile 116.17 ms)   Flow 2 (95th percentile 113.71 ms)   Flow 3 (95th percentile 128.03 ms)

```
Run 9: Statistics of PCC

Start at: 2017-08-12 02:27:13
End at: 2017-08-12 02:27:43


# Below is generated by plot.py at 2017-08-12 05:57:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.04 Mbit/s
95th percentile per-packet one-way delay: 125.561 ms
Loss rate: 11.81%
-- Flow 1:
Average throughput: 267.62 Mbit/s
95th percentile per-packet one-way delay: 125.645 ms
Loss rate: 11.87%
-- Flow 2:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 114.101 ms
Loss rate: 5.87%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 113.523 ms
Loss rate: 2.96%
```
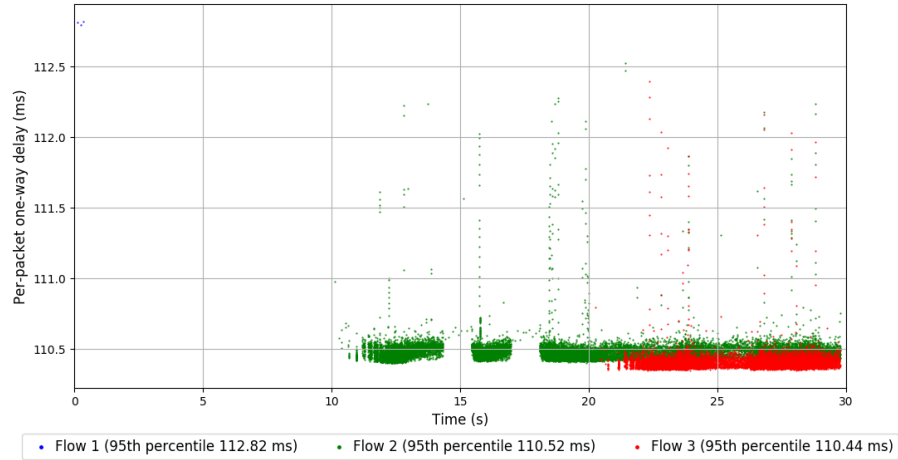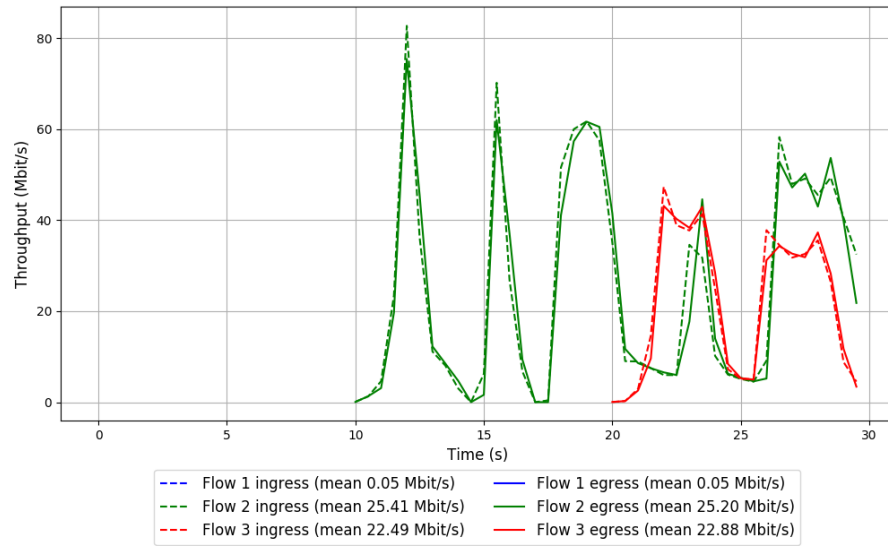
Run 9: Report of PCC — Data Link

- - - Flow 1 ingress (mean 301.51 Mbit/s) ——— Flow 1 egress (mean 267.62 Mbit/s)
- - - Flow 2 ingress (mean 2.02 Mbit/s) ——— Flow 2 egress (mean 1.92 Mbit/s)
- - - Flow 3 ingress (mean 3.61 Mbit/s) ——— Flow 3 egress (mean 3.59 Mbit/s)

- Flow 1 (95th percentile 125.64 ms) • Flow 2 (95th percentile 114.10 ms) • Flow 3 (95th percentile 113.52 ms)

```
Run 10: Statistics of PCC

Start at: 2017-08-12 02:39:48
End at: 2017-08-12 02:40:18


# Below is generated by plot.py at 2017-08-12 05:57:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.67 Mbit/s
95th percentile per-packet one-way delay: 111.506 ms
Loss rate: 24.06%
-- Flow 1:
Average throughput: 248.82 Mbit/s
95th percentile per-packet one-way delay: 111.492 ms
Loss rate: 23.85%
-- Flow 2:
Average throughput: 0.64 Mbit/s
95th percentile per-packet one-way delay: 112.860 ms
Loss rate: 70.07%
-- Flow 3:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 112.496 ms
Loss rate: 31.87%
```
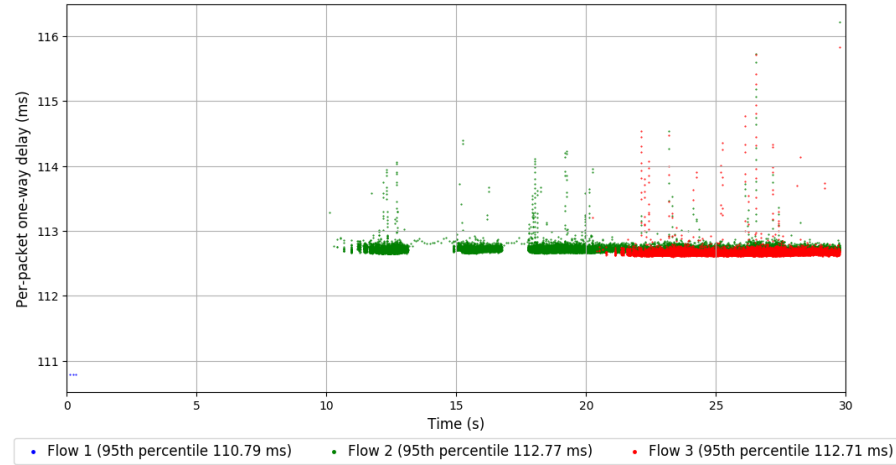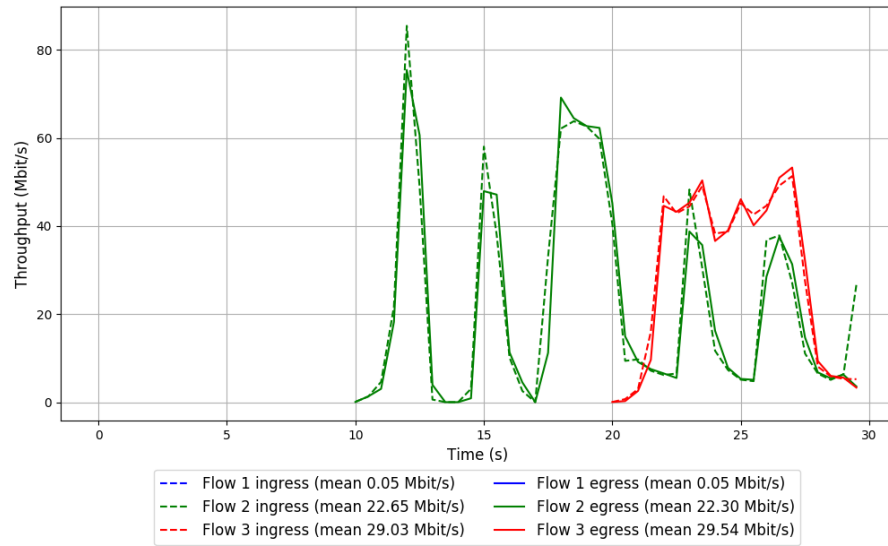
Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 324.49 Mbit/s) — Flow 1 egress (mean 248.82 Mbit/s)
Flow 2 ingress (mean 2.10 Mbit/s) — Flow 2 egress (mean 0.64 Mbit/s)
Flow 3 ingress (mean 1.91 Mbit/s) — Flow 3 egress (mean 1.33 Mbit/s)

Flow 1 (95th percentile 111.49 ms)   Flow 2 (95th percentile 112.86 ms)   Flow 3 (95th percentile 112.50 ms)

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```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-12 00:45:03
End at: 2017-08-12 00:45:33

# Below is generated by plot.py at 2017-08-12 05:57:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 110.511 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.817 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.20 Mbit/s
95th percentile per-packet one-way delay: 110.520 ms
Loss rate: 1.94%
-- Flow 3:
Average throughput: 22.88 Mbit/s
95th percentile per-packet one-way delay: 110.445 ms
Loss rate: 0.58%
```
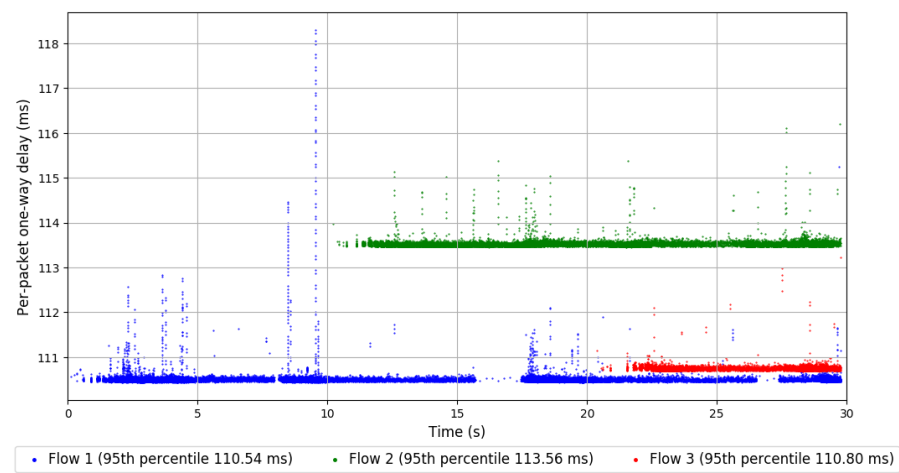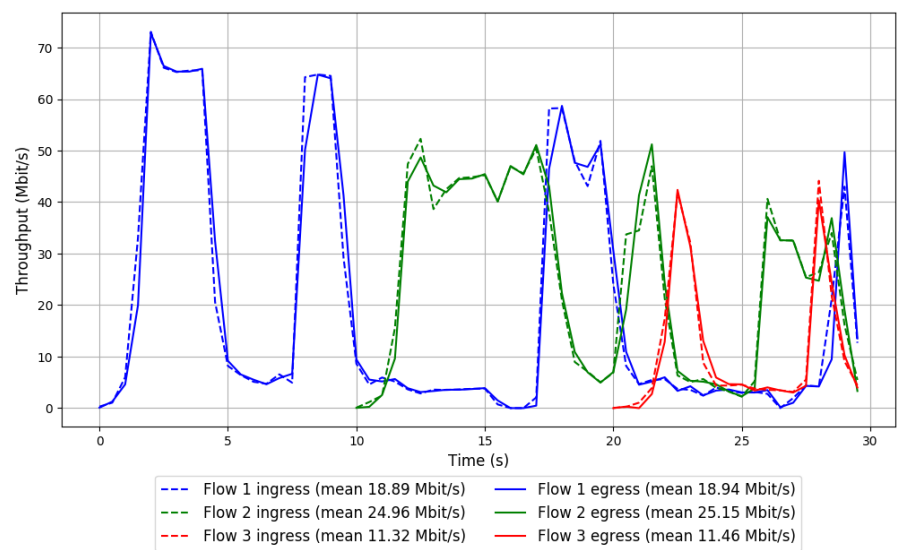
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-08-12 00:57:38
End at: 2017-08-12 00:58:08

# Below is generated by plot.py at 2017-08-12 05:57:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 112.758 ms
Loss rate: 1.86%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 110.791 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.30 Mbit/s
95th percentile per-packet one-way delay: 112.770 ms
Loss rate: 2.70%
-- Flow 3:
Average throughput: 29.54 Mbit/s
95th percentile per-packet one-way delay: 112.709 ms
Loss rate: 0.53%
```
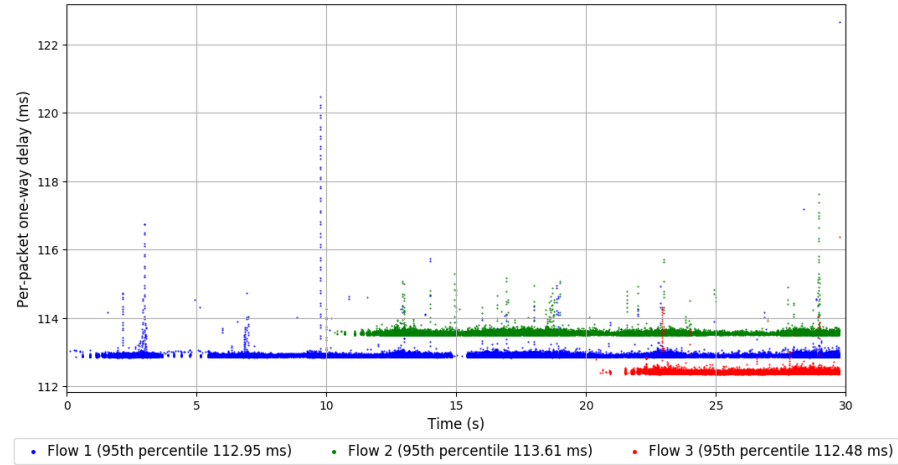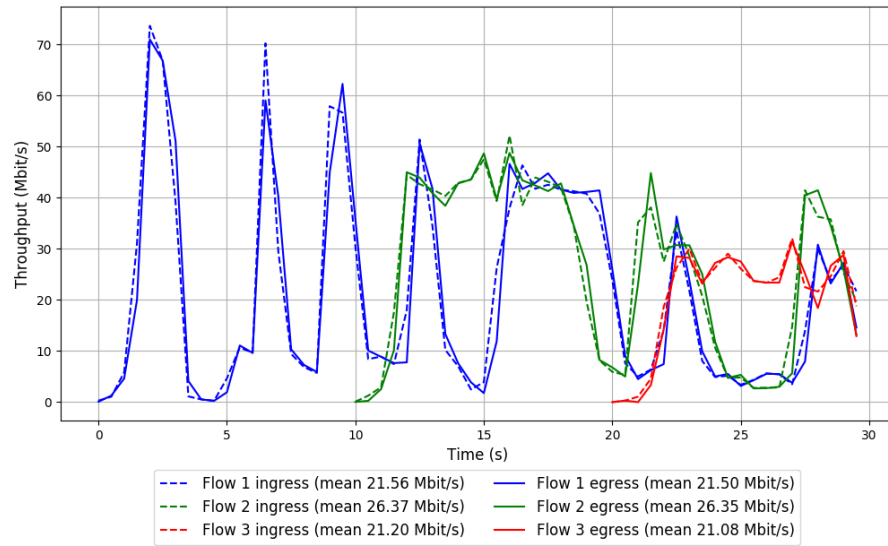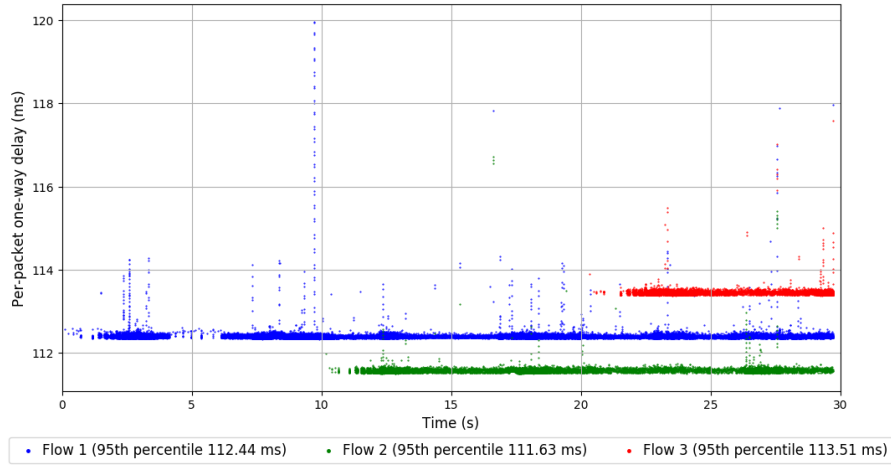
Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.05 Mbit/s) --- Flow 1 egress (mean 0.05 Mbit/s)
Flow 2 ingress (mean 22.65 Mbit/s) --- Flow 2 egress (mean 22.30 Mbit/s)
Flow 3 ingress (mean 29.03 Mbit/s) --- Flow 3 egress (mean 29.54 Mbit/s)

• Flow 1 (95th percentile 110.79 ms)   • Flow 2 (95th percentile 112.77 ms)   • Flow 3 (95th percentile 112.71 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-08-12 01:10:51
End at: 2017-08-12 01:11:21


# Below is generated by plot.py at 2017-08-12 05:57:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 39.13 Mbit/s
95th percentile per-packet one-way delay: 113.538 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 18.94 Mbit/s
95th percentile per-packet one-way delay: 110.539 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 25.15 Mbit/s
95th percentile per-packet one-way delay: 113.562 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 110.800 ms
Loss rate: 1.07%
```
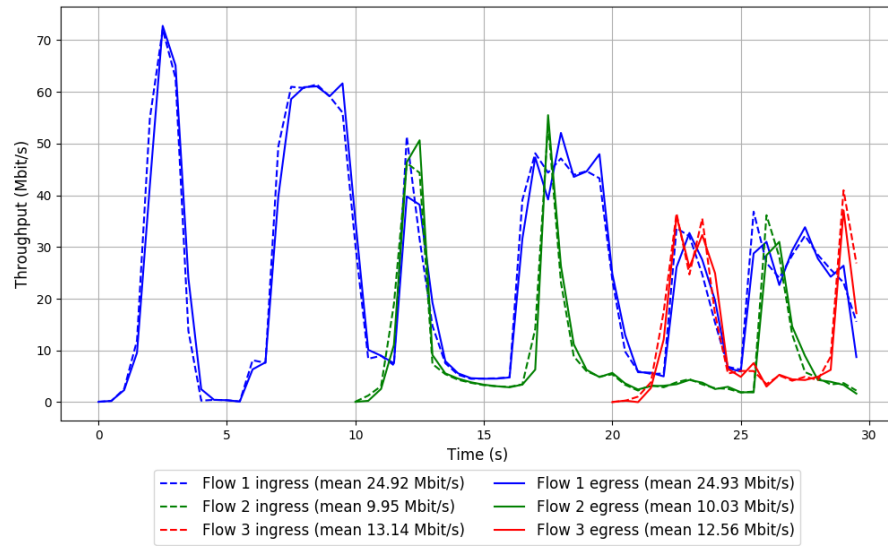
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-08-12 01:24:05
End at: 2017-08-12 01:24:35


# Below is generated by plot.py at 2017-08-12 05:57:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.57 Mbit/s
95th percentile per-packet one-way delay: 113.574 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 21.50 Mbit/s
95th percentile per-packet one-way delay: 112.955 ms
Loss rate: 1.03%
-- Flow 2:
Average throughput: 26.35 Mbit/s
95th percentile per-packet one-way delay: 113.608 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 21.08 Mbit/s
95th percentile per-packet one-way delay: 112.476 ms
Loss rate: 2.87%
```
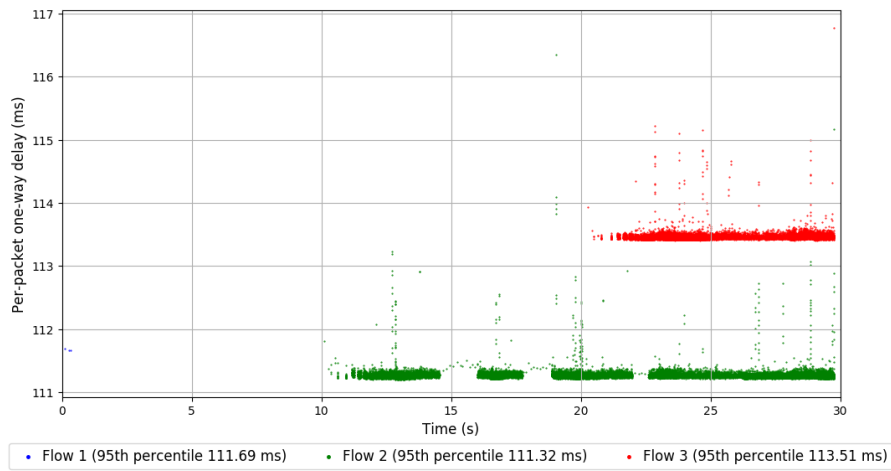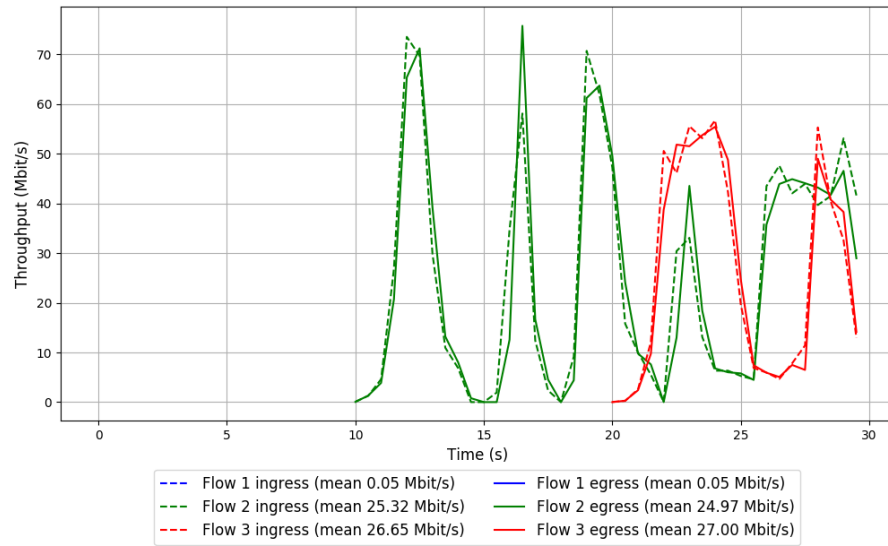
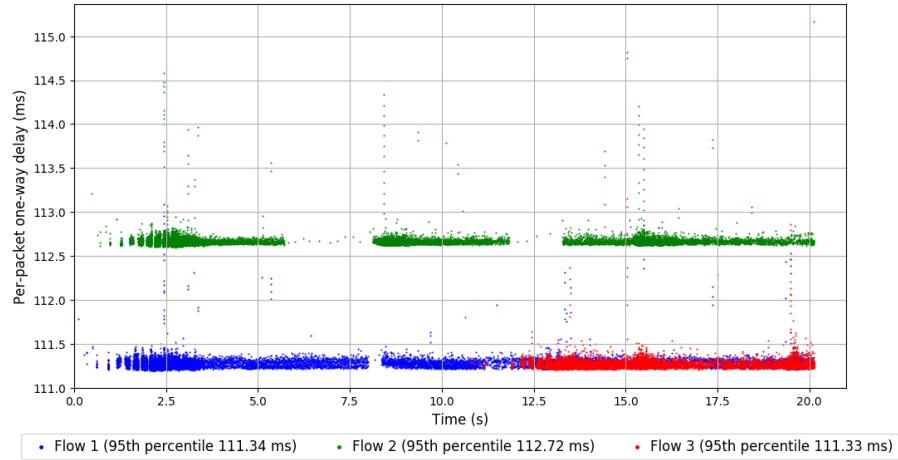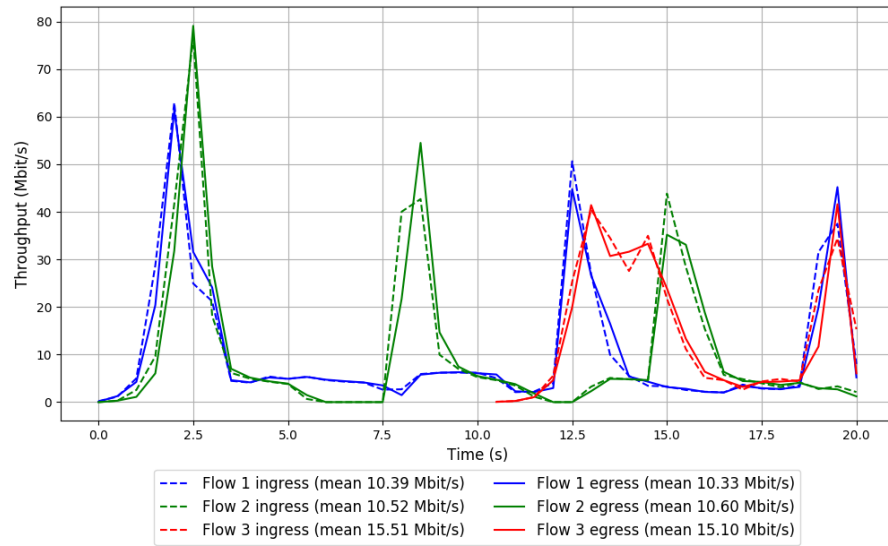Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 21.56 Mbit/s)   Flow 1 egress (mean 21.50 Mbit/s)
Flow 2 ingress (mean 26.37 Mbit/s)   Flow 2 egress (mean 26.35 Mbit/s)
Flow 3 ingress (mean 21.20 Mbit/s)   Flow 3 egress (mean 21.08 Mbit/s)

Flow 1 (95th percentile 112.95 ms)   Flow 2 (95th percentile 113.61 ms)   Flow 3 (95th percentile 112.48 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-08-12 01:36:38
End at: 2017-08-12 01:37:08

# Below is generated by plot.py at 2017-08-12 05:57:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 35.53 Mbit/s
95th percentile per-packet one-way delay: 113.438 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 24.93 Mbit/s
95th percentile per-packet one-way delay: 112.441 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 10.03 Mbit/s
95th percentile per-packet one-way delay: 111.634 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 113.507 ms
Loss rate: 6.69%
```
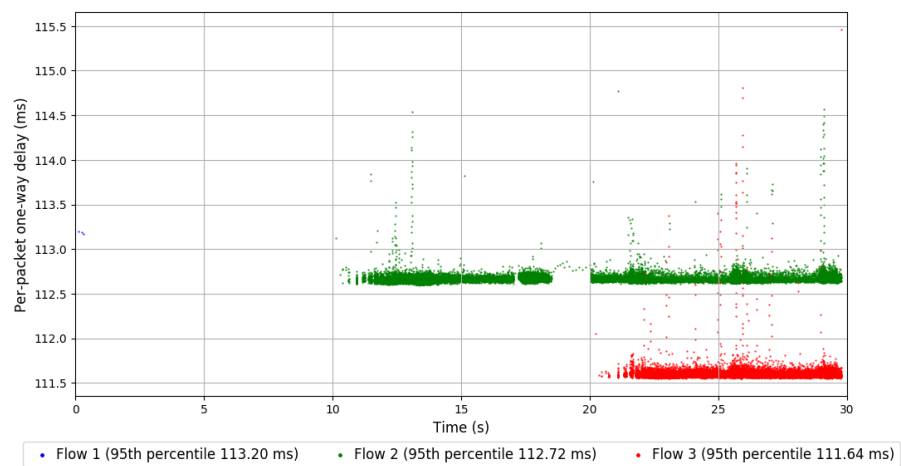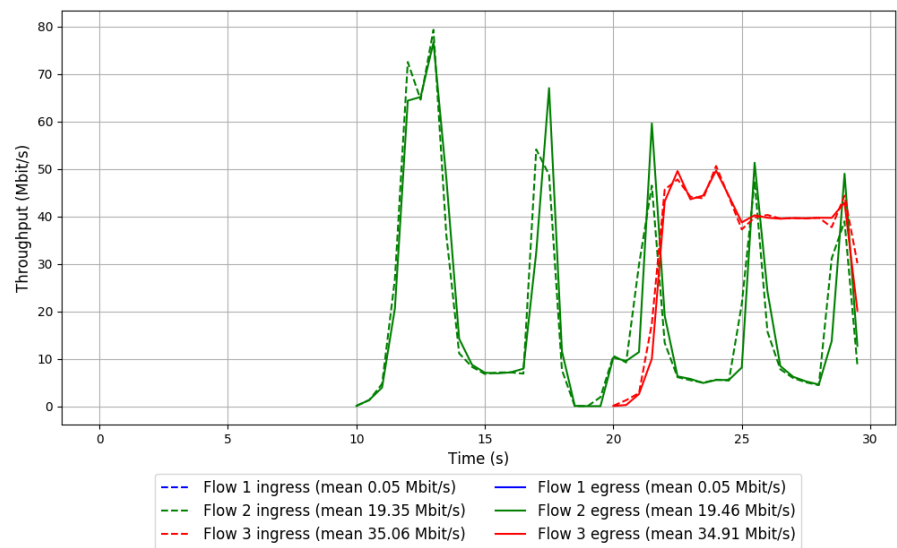
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 24.92 Mbit/s) --- Flow 1 egress (mean 24.93 Mbit/s)
Flow 2 ingress (mean 9.95 Mbit/s) --- Flow 2 egress (mean 10.03 Mbit/s)
Flow 3 ingress (mean 13.14 Mbit/s) --- Flow 3 egress (mean 12.56 Mbit/s)

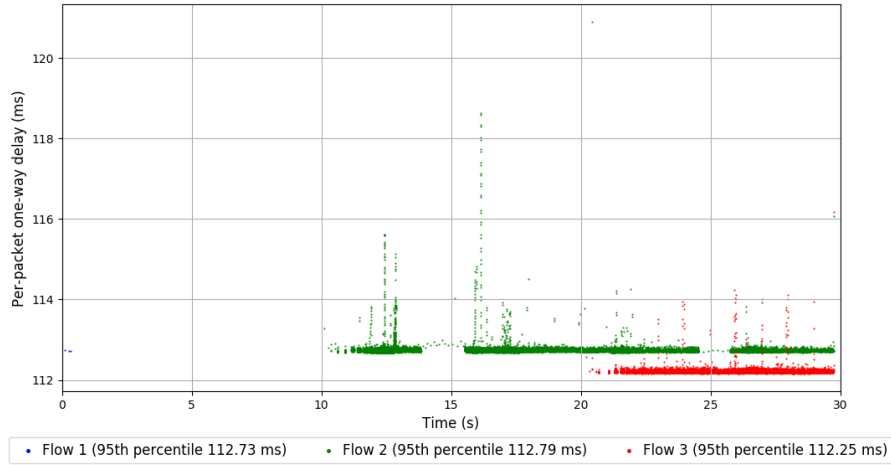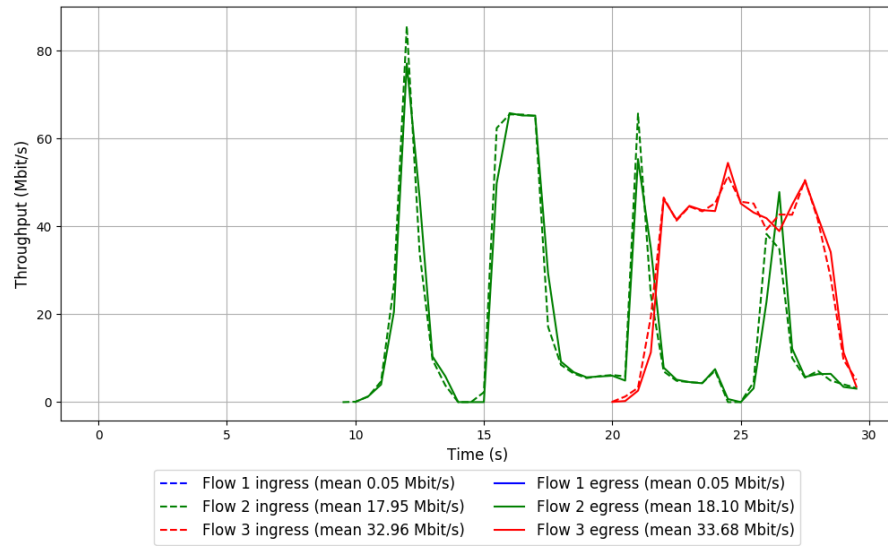Flow 1 (95th percentile 112.44 ms)   Flow 2 (95th percentile 111.63 ms)   Flow 3 (95th percentile 113.51 ms)

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-08-12 01:49:18
End at: 2017-08-12 01:49:48

# Below is generated by plot.py at 2017-08-12 05:57:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 25.17 Mbit/s
95th percentile per-packet one-way delay: 113.482 ms
Loss rate: 2.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 111.688 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.97 Mbit/s
95th percentile per-packet one-way delay: 111.316 ms
Loss rate: 2.49%
-- Flow 3:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 113.511 ms
Loss rate: 1.04%
```
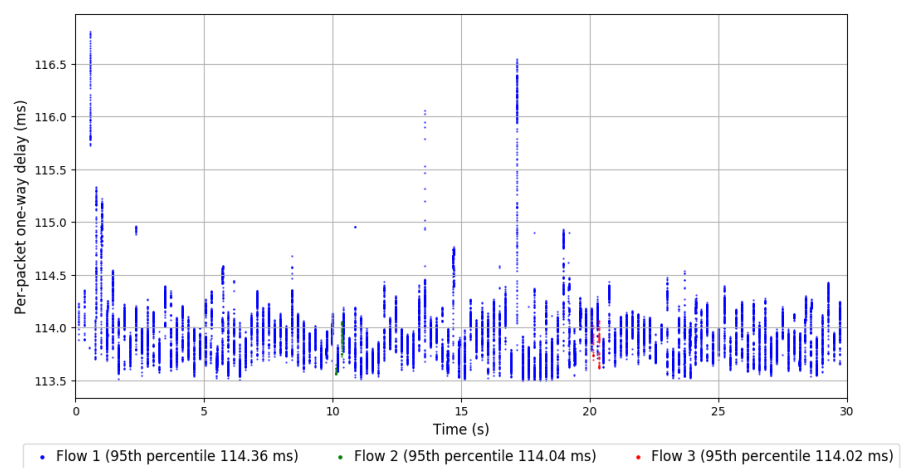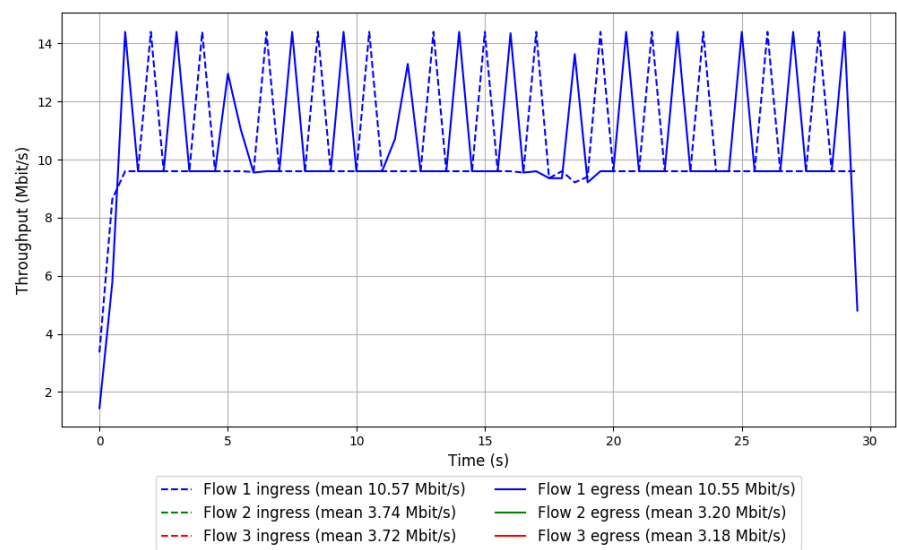
Run 6: Report of QUIC Cubic — Data Link

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Run 7: Statistics of QUIC Cubic

Start at: 2017-08-12 02:02:13
End at: 2017-08-12 02:02:43

Run 7: Report of QUIC Cubic — Data Link

Run 8: Statistics of QUIC Cubic

Start at: 2017-08-12 02:15:26
End at: 2017-08-12 02:15:56

Run 8: Report of QUIC Cubic — Data Link

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-08-12 02:28:12
End at: 2017-08-12 02:28:42


# Below is generated by plot.py at 2017-08-12 05:57:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.13 Mbit/s
95th percentile per-packet one-way delay: 112.702 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.198 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 112.721 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 34.91 Mbit/s
95th percentile per-packet one-way delay: 111.641 ms
Loss rate: 2.66%
```

Run 9: Report of QUIC Cubic — Data Link

Legend:
- Flow 1 ingress (mean 0.05 Mbit/s) — Flow 1 egress (mean 0.05 Mbit/s)
- Flow 2 ingress (mean 19.35 Mbit/s) — Flow 2 egress (mean 19.46 Mbit/s)
- Flow 3 ingress (mean 35.06 Mbit/s) — Flow 3 egress (mean 34.91 Mbit/s)

Legend:
- Flow 1 (95th percentile 113.20 ms)
- Flow 2 (95th percentile 112.72 ms)
- Flow 3 (95th percentile 111.64 ms)

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-12 02:40:48
End at: 2017-08-12 02:41:18


# Below is generated by plot.py at 2017-08-12 05:57:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 112.771 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.731 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.10 Mbit/s
95th percentile per-packet one-way delay: 112.789 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 33.68 Mbit/s
95th percentile per-packet one-way delay: 112.247 ms
Loss rate: 0.49%
```
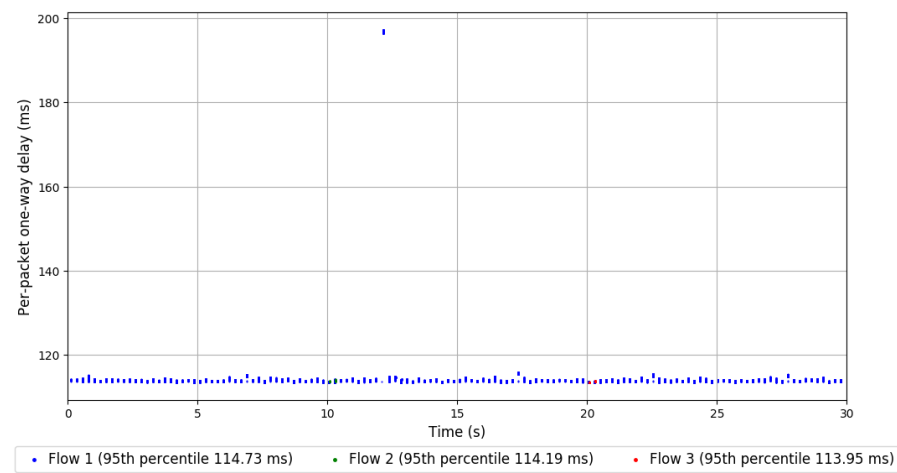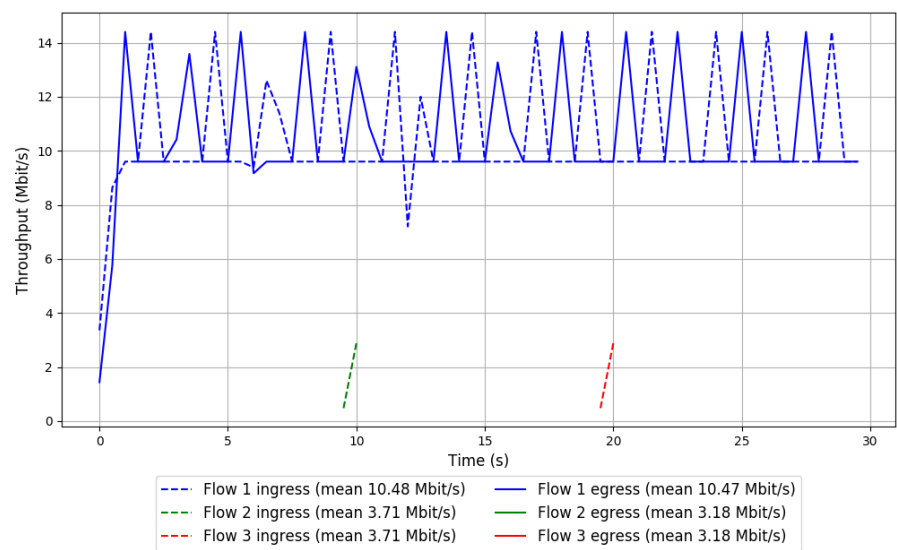
Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.05 Mbit/s)　　　Flow 1 egress (mean 0.05 Mbit/s)
Flow 2 ingress (mean 17.95 Mbit/s)　　　Flow 2 egress (mean 18.10 Mbit/s)
Flow 3 ingress (mean 32.96 Mbit/s)　　　Flow 3 egress (mean 33.68 Mbit/s)

Flow 1 (95th percentile 112.73 ms)　　　Flow 2 (95th percentile 112.79 ms)　　　Flow 3 (95th percentile 112.25 ms)

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```
Run 1: Statistics of Saturator

Start at: 2017-08-12 00:42:26
End at: 2017-08-12 00:42:56

# Below is generated by plot.py at 2017-08-12 05:57:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.60 Mbit/s
95th percentile per-packet one-way delay: 114.355 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 10.55 Mbit/s
95th percentile per-packet one-way delay: 114.356 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 114.041 ms
Loss rate: 57.14%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 114.017 ms
Loss rate: 57.14%
```
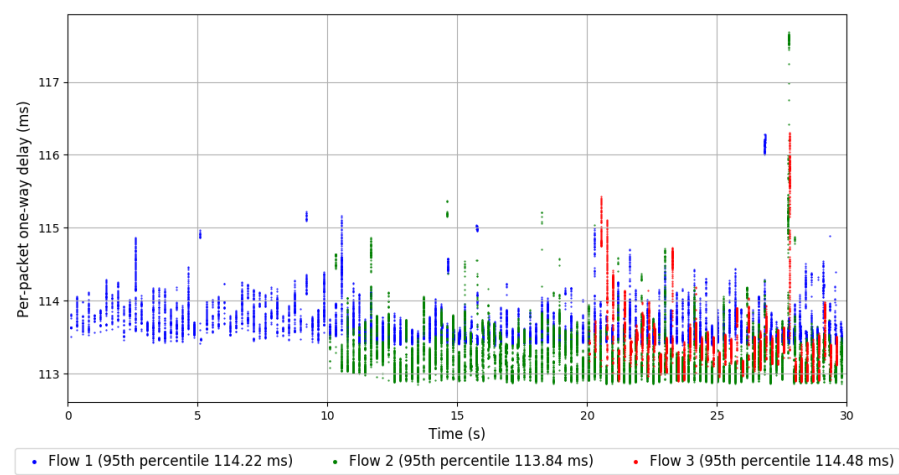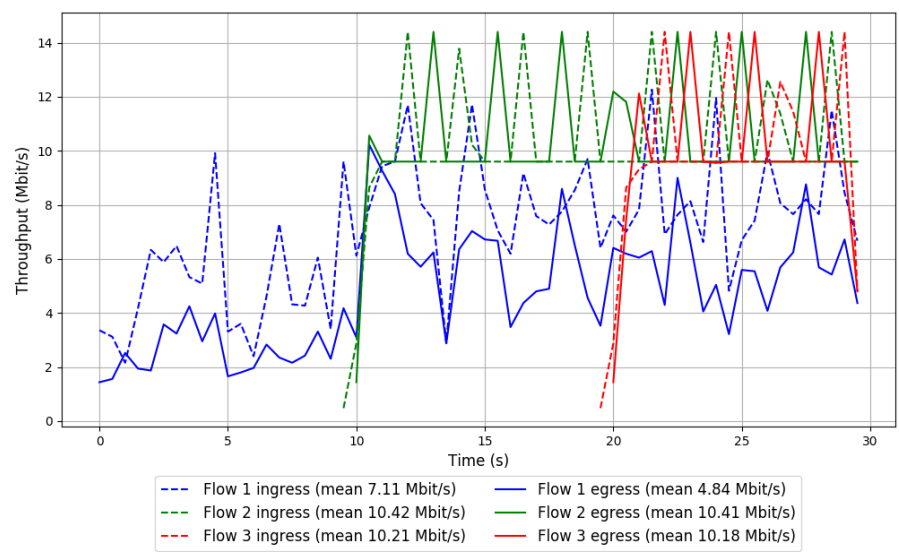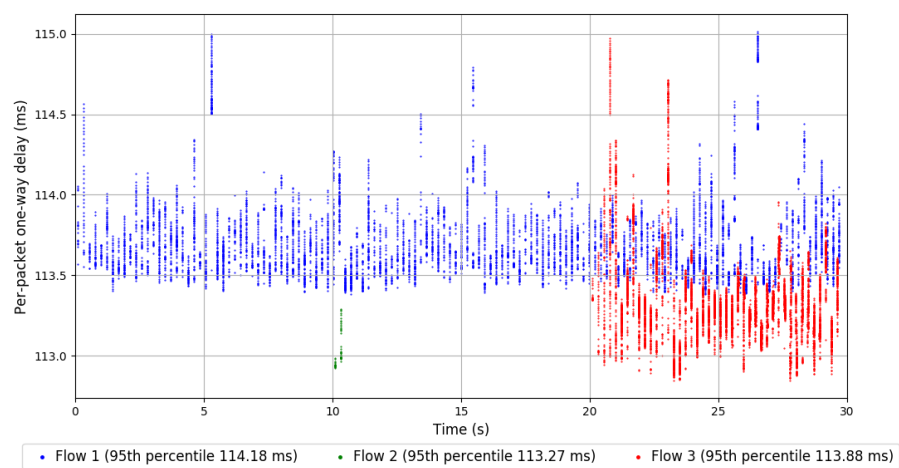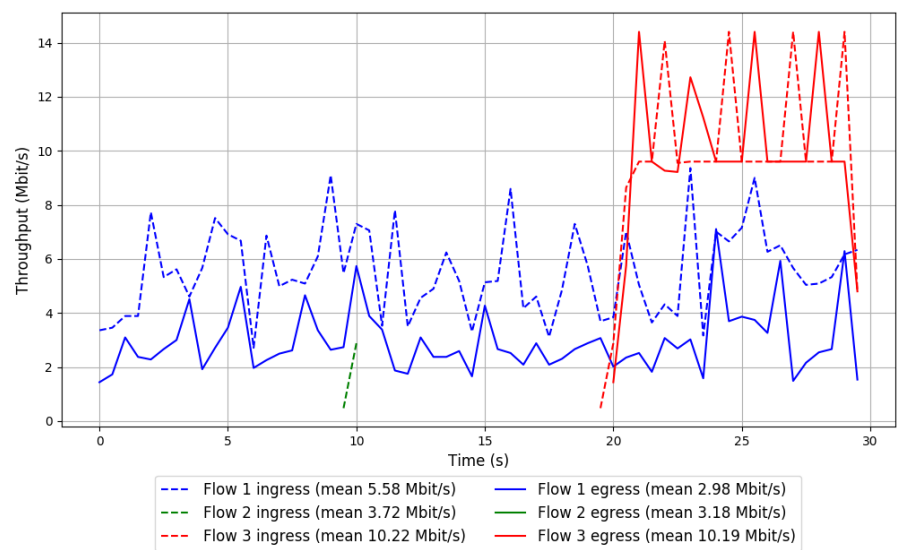
Run 1: Report of Saturator — Data Link

- - - - Flow 1 ingress (mean 10.57 Mbit/s)   ——— Flow 1 egress (mean 10.55 Mbit/s)
- - - - Flow 2 ingress (mean 3.74 Mbit/s)   ——— Flow 2 egress (mean 3.20 Mbit/s)
- - - - Flow 3 ingress (mean 3.72 Mbit/s)   ——— Flow 3 egress (mean 3.18 Mbit/s)

- Flow 1 (95th percentile 114.36 ms)   • Flow 2 (95th percentile 114.04 ms)   • Flow 3 (95th percentile 114.02 ms)

```
Run 2: Statistics of Saturator

Start at: 2017-08-12 00:55:05
End at: 2017-08-12 00:55:35

# Below is generated by plot.py at 2017-08-12 05:57:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 114.732 ms
Loss rate: 1.40%
-- Flow 1:
Average throughput: 10.47 Mbit/s
95th percentile per-packet one-way delay: 114.735 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 114.193 ms
Loss rate: 57.14%
-- Flow 3:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 113.948 ms
Loss rate: 57.14%
```
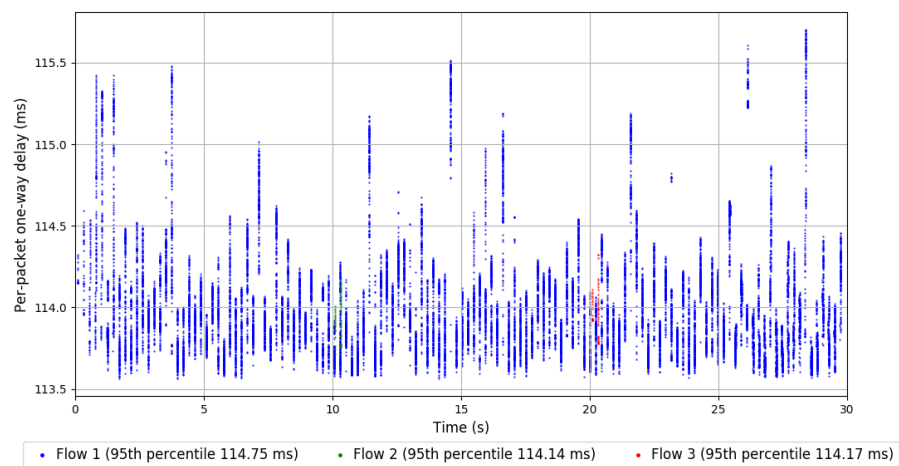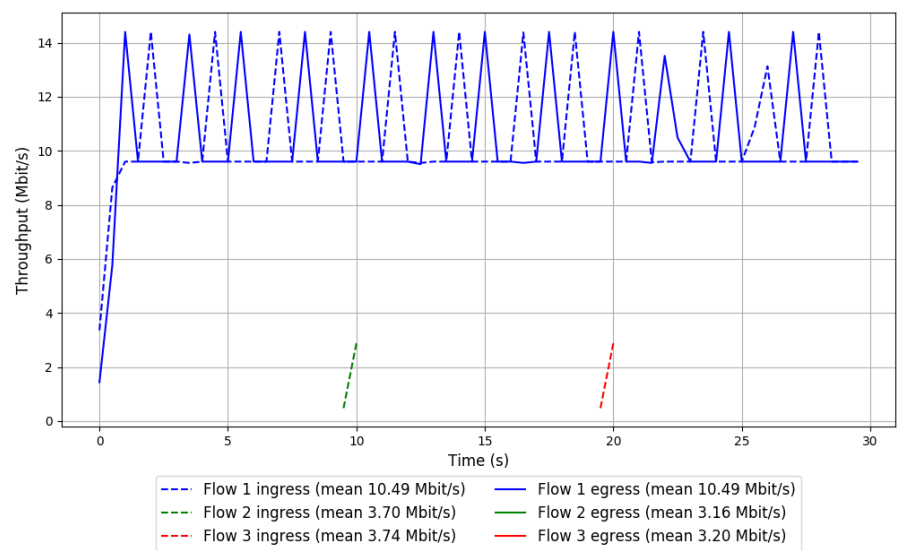
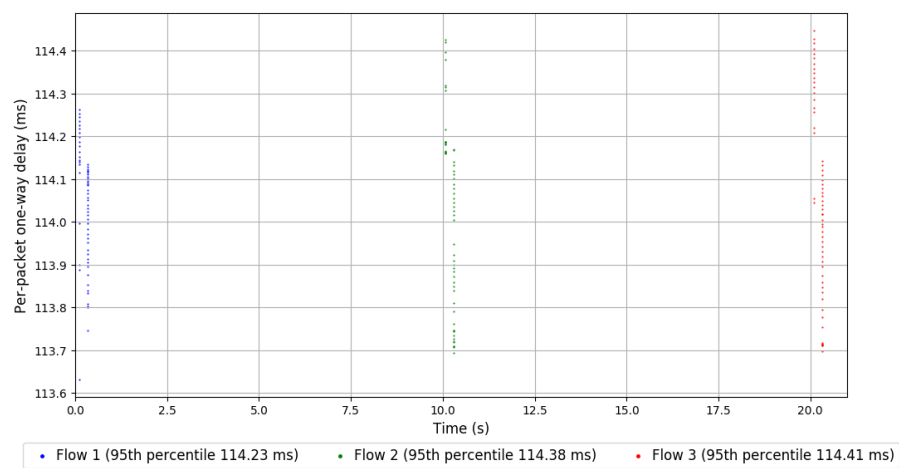## Run 2: Report of Saturator — Data Link

```
Run 3: Statistics of Saturator

Start at: 2017-08-12 01:08:12
End at: 2017-08-12 01:08:42


# Below is generated by plot.py at 2017-08-12 05:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 114.112 ms
Loss rate: 14.25%
-- Flow 1:
Average throughput: 4.84 Mbit/s
95th percentile per-packet one-way delay: 114.216 ms
Loss rate: 32.50%
-- Flow 2:
Average throughput: 10.41 Mbit/s
95th percentile per-packet one-way delay: 113.840 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 114.476 ms
Loss rate: 2.57%
```
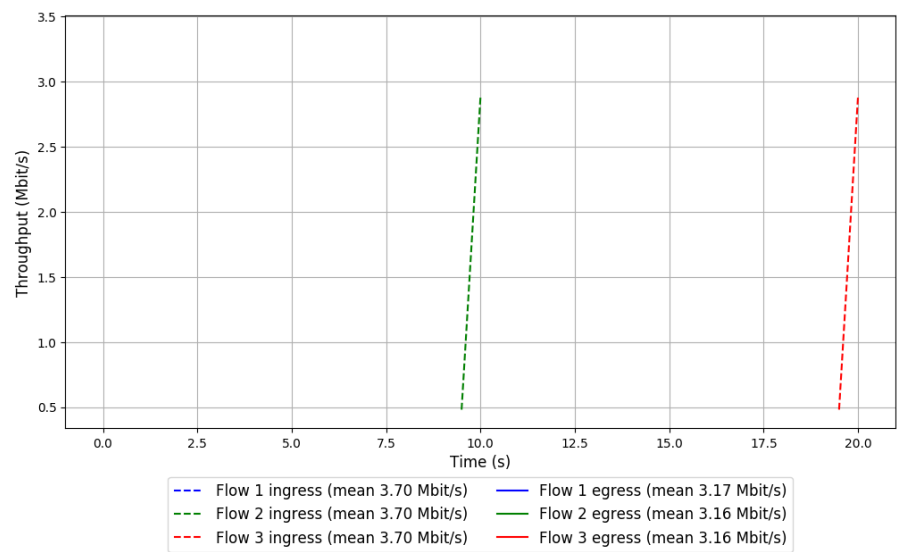
Run 3: Report of Saturator — Data Link

```
Run 4: Statistics of Saturator

Start at: 2017-08-12 01:21:27
End at: 2017-08-12 01:21:57


# Below is generated by plot.py at 2017-08-12 05:57:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.28 Mbit/s
95th percentile per-packet one-way delay: 114.074 ms
Loss rate: 30.52%
-- Flow 1:
Average throughput: 2.98 Mbit/s
95th percentile per-packet one-way delay: 114.180 ms
Loss rate: 46.94%
-- Flow 2:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 113.265 ms
Loss rate: 57.14%
-- Flow 3:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 113.876 ms
Loss rate: 2.61%
```
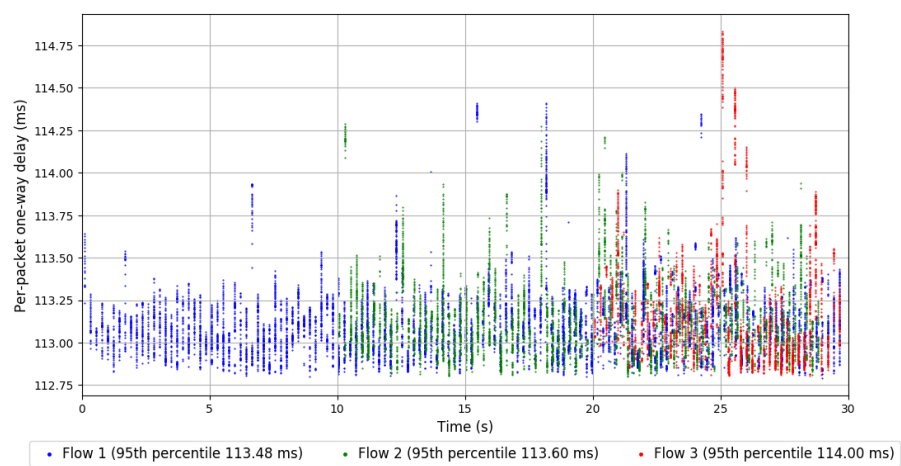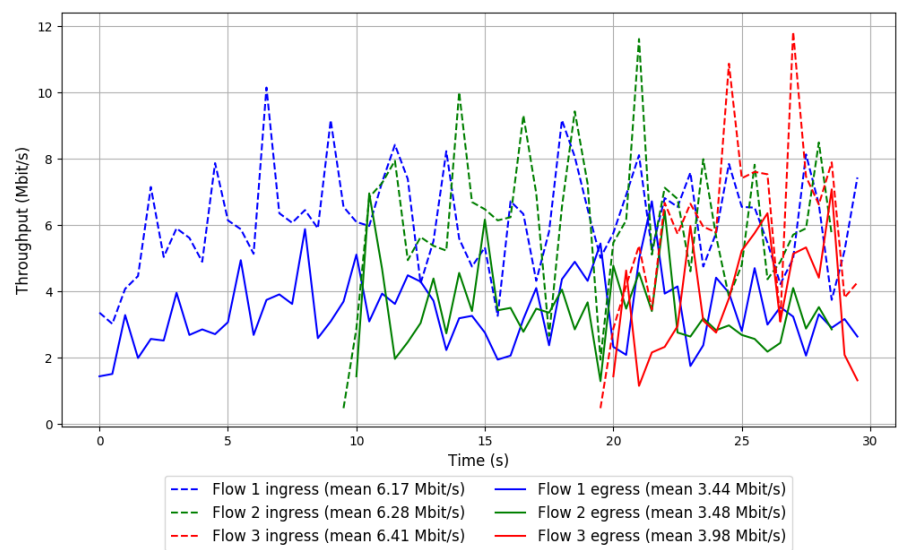
Run 4: Report of Saturator — Data Link

```
Run 5: Statistics of Saturator

Start at: 2017-08-12 01:34:09
End at: 2017-08-12 01:34:39


# Below is generated by plot.py at 2017-08-12 05:57:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.54 Mbit/s
95th percentile per-packet one-way delay: 114.745 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 114.747 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 3.16 Mbit/s
95th percentile per-packet one-way delay: 114.143 ms
Loss rate: 57.14%
-- Flow 3:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 114.174 ms
Loss rate: 57.14%
```
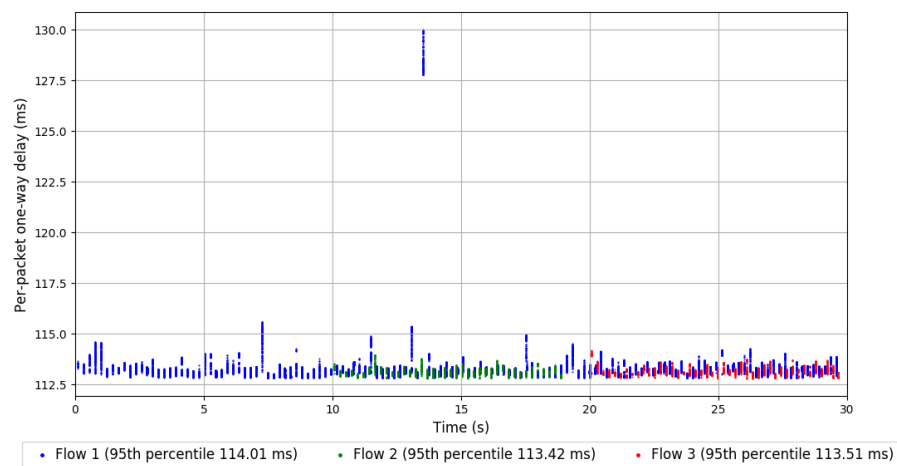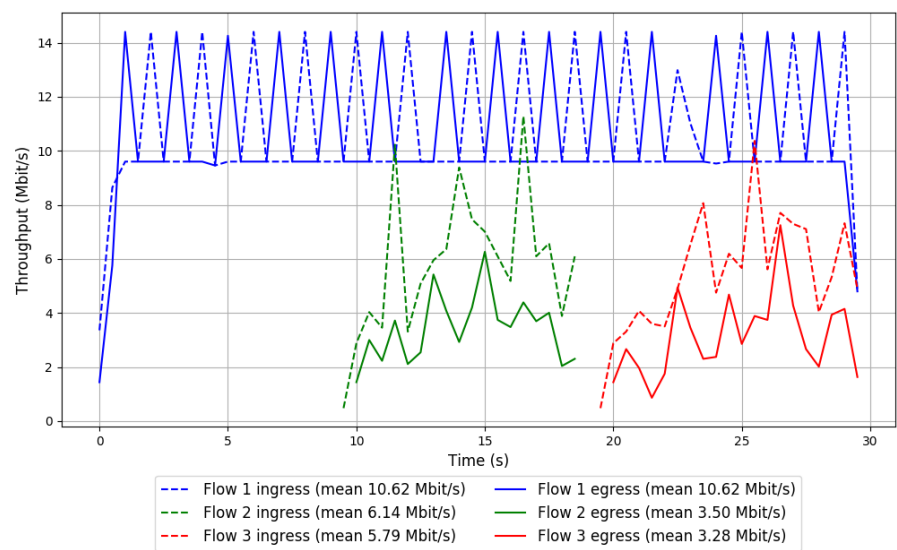
Run 5: Report of Saturator — Data Link

- Flow 1 ingress (mean 10.49 Mbit/s) — Flow 1 egress (mean 10.49 Mbit/s)
- Flow 2 ingress (mean 3.70 Mbit/s) — Flow 2 egress (mean 3.16 Mbit/s)
- Flow 3 ingress (mean 3.74 Mbit/s) — Flow 3 egress (mean 3.20 Mbit/s)

- Flow 1 (95th percentile 114.75 ms)   • Flow 2 (95th percentile 114.14 ms)   • Flow 3 (95th percentile 114.17 ms)

Run 6: Statistics of Saturator

Start at: 2017-08-12 01:46:51
End at: 2017-08-12 01:47:21

Run 6: Report of Saturator — Data Link

Flow 1 ingress (mean 3.70 Mbit/s) --- Flow 1 egress (mean 3.17 Mbit/s)
Flow 2 ingress (mean 3.70 Mbit/s) --- Flow 2 egress (mean 3.16 Mbit/s)
Flow 3 ingress (mean 3.70 Mbit/s) --- Flow 3 egress (mean 3.16 Mbit/s)

Flow 1 (95th percentile 114.23 ms)   Flow 2 (95th percentile 114.38 ms)   Flow 3 (95th percentile 114.41 ms)

```
Run 7: Statistics of Saturator

Start at: 2017-08-12 01:59:36
End at: 2017-08-12 02:00:06

# Below is generated by plot.py at 2017-08-12 05:57:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 113.600 ms
Loss rate: 43.96%
-- Flow 1:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 113.485 ms
Loss rate: 44.70%
-- Flow 2:
Average throughput: 3.48 Mbit/s
95th percentile per-packet one-way delay: 113.599 ms
Loss rate: 45.22%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 114.002 ms
Loss rate: 39.38%
```
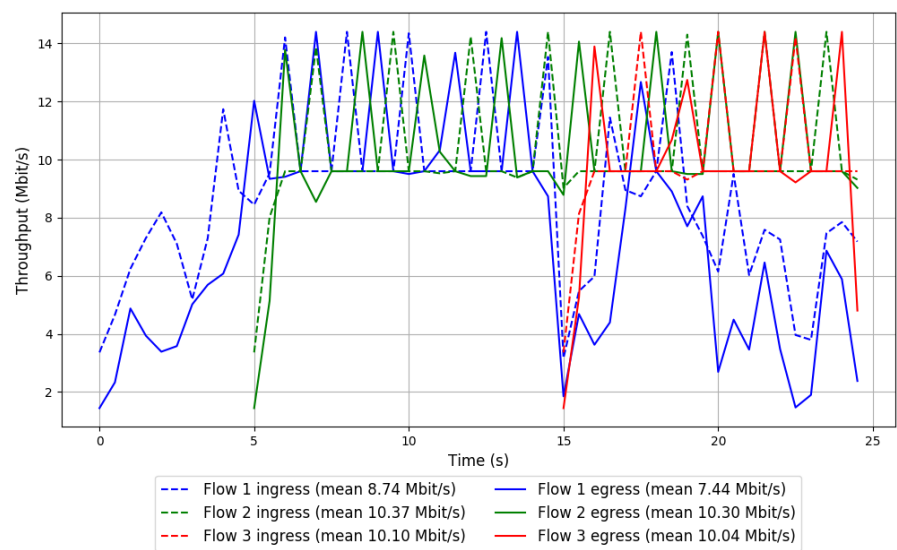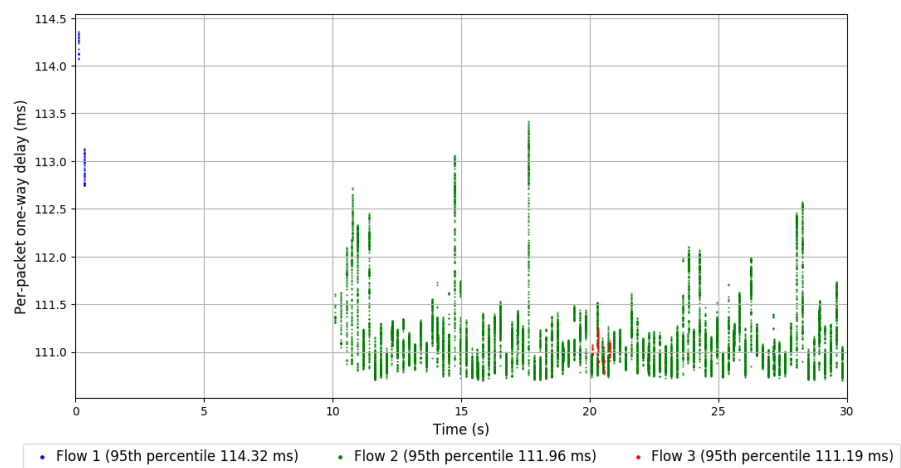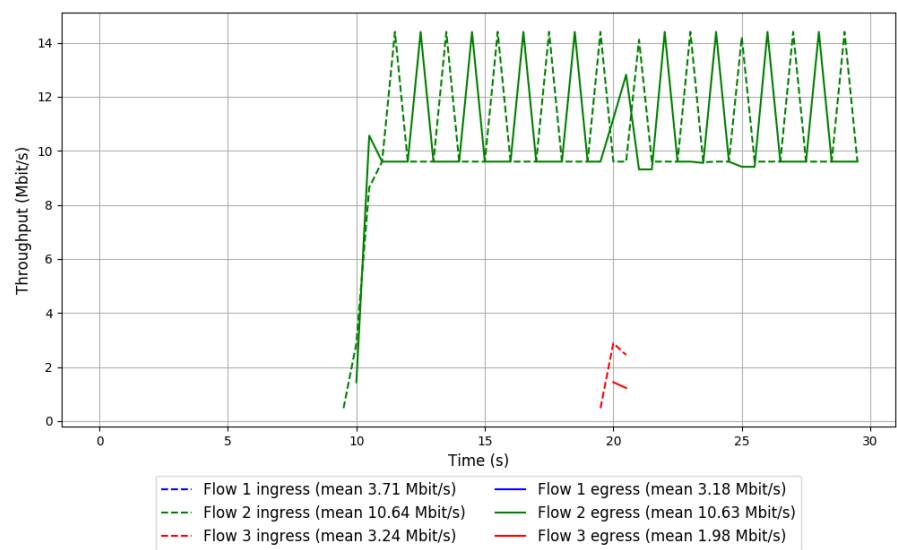
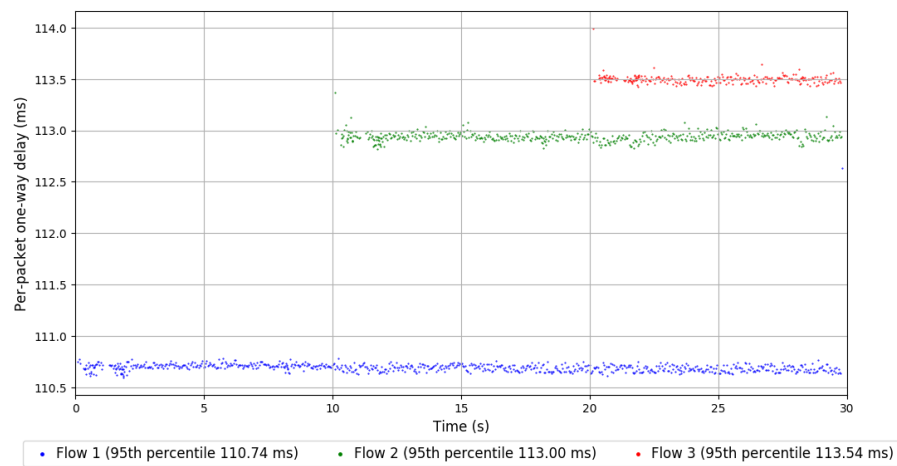# Run 7: Report of Saturator — Data Link

```
Run 8: Statistics of Saturator

Start at: 2017-08-12 02:12:50
End at: 2017-08-12 02:13:20


# Below is generated by plot.py at 2017-08-12 05:57:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.70 Mbit/s
95th percentile per-packet one-way delay: 113.928 ms
Loss rate: 12.28%
-- Flow 1:
Average throughput: 10.62 Mbit/s
95th percentile per-packet one-way delay: 114.007 ms
Loss rate: 0.79%
-- Flow 2:
Average throughput: 3.50 Mbit/s
95th percentile per-packet one-way delay: 113.423 ms
Loss rate: 44.43%
-- Flow 3:
Average throughput: 3.28 Mbit/s
95th percentile per-packet one-way delay: 113.510 ms
Loss rate: 44.68%
```
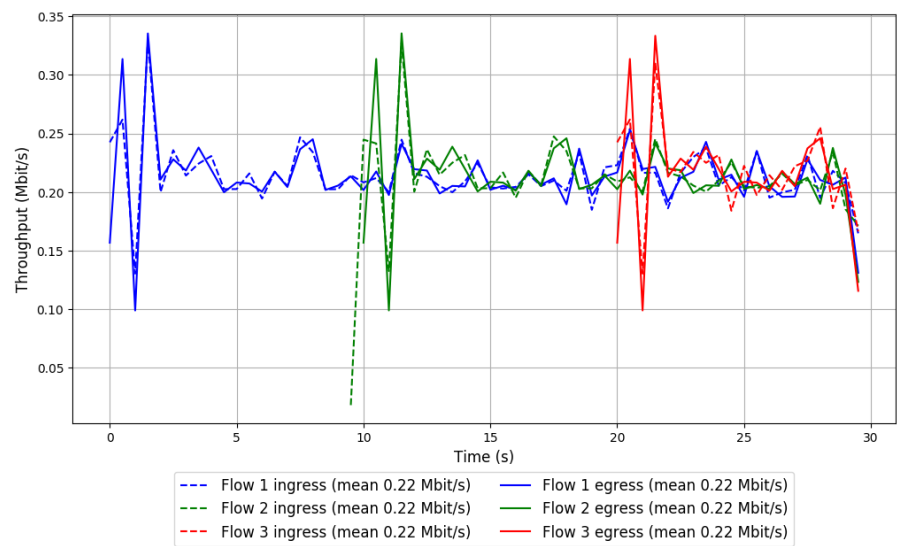
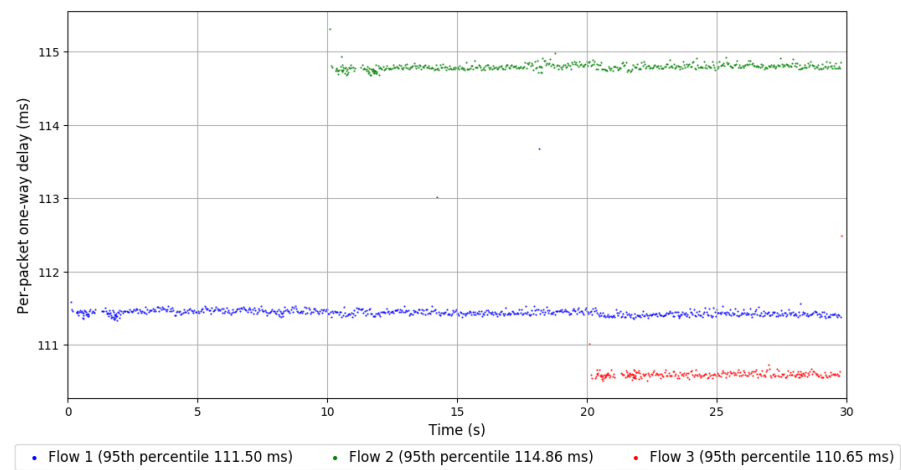## Run 8: Report of Saturator — Data Link

```
Run 9: Statistics of Saturator

Start at: 2017-08-12 02:25:38
End at: 2017-08-12 02:26:08

# Below is generated by plot.py at 2017-08-12 05:58:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 114.195 ms
Loss rate: 7.75%
-- Flow 1:
Average throughput: 7.44 Mbit/s
95th percentile per-packet one-way delay: 114.083 ms
Loss rate: 15.64%
-- Flow 2:
Average throughput: 10.30 Mbit/s
95th percentile per-packet one-way delay: 114.338 ms
Loss rate: 1.79%
-- Flow 3:
Average throughput: 10.04 Mbit/s
95th percentile per-packet one-way delay: 114.273 ms
Loss rate: 2.92%
```

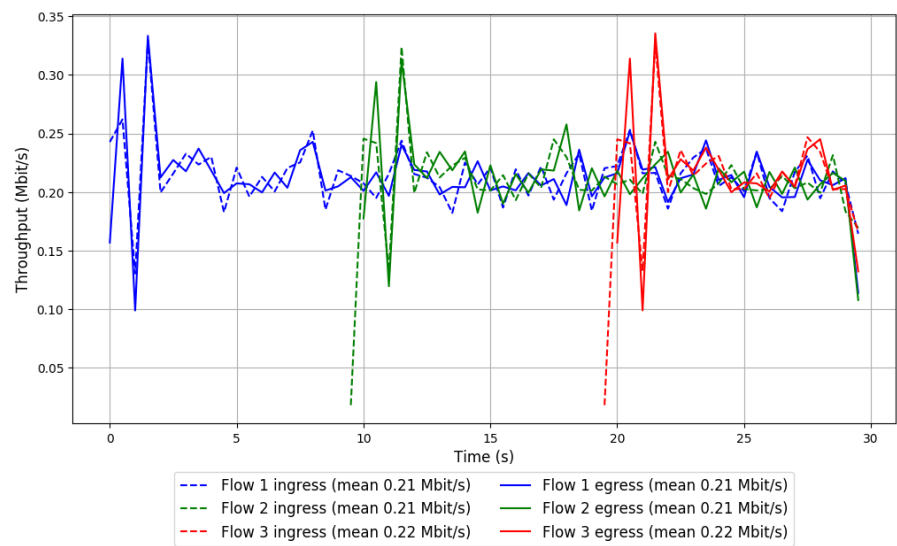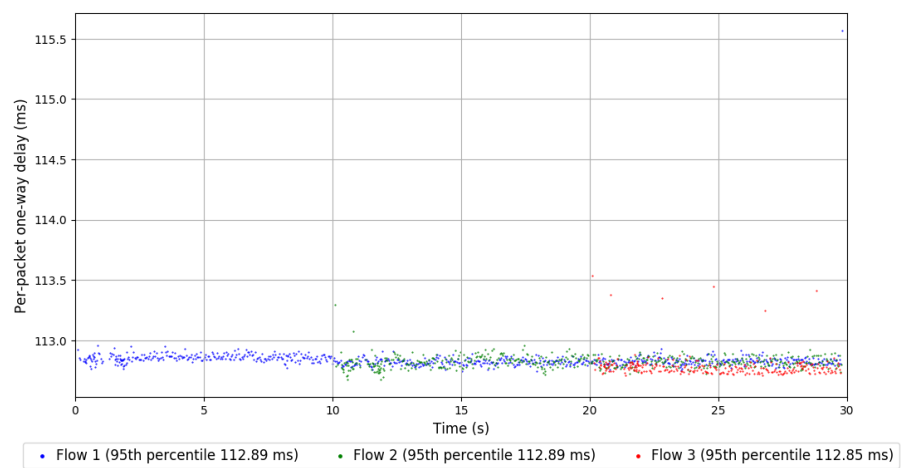# Run 9: Report of Saturator — Data Link

```
Run 10: Statistics of Saturator

Start at: 2017-08-12 02:38:15
End at: 2017-08-12 02:38:45


# Below is generated by plot.py at 2017-08-12 05:58:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 111.987 ms
Loss rate: 2.39%
-- Flow 1:
Average throughput: 3.18 Mbit/s
95th percentile per-packet one-way delay: 114.321 ms
Loss rate: 57.14%
-- Flow 2:
Average throughput: 10.63 Mbit/s
95th percentile per-packet one-way delay: 111.957 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 1.98 Mbit/s
95th percentile per-packet one-way delay: 111.185 ms
Loss rate: 54.13%
```

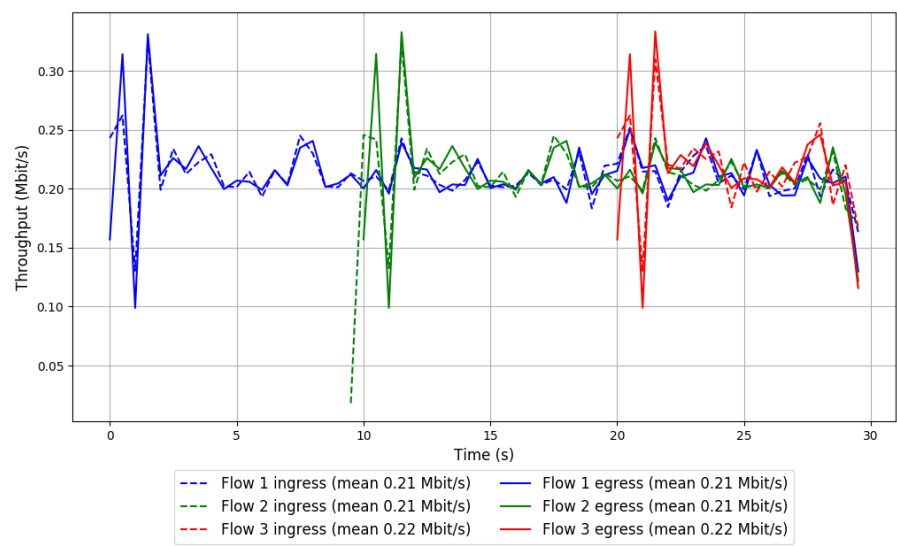## Run 10: Report of Saturator — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2017-08-12 00:46:47
End at: 2017-08-12 00:47:17


# Below is generated by plot.py at 2017-08-12 05:58:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.511 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.742 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.005 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.540 ms
Loss rate: 2.25%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2017-08-12 00:59:21
End at: 2017-08-12 00:59:51


# Below is generated by plot.py at 2017-08-12 05:58:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 114.831 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 111.502 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 114.863 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.653 ms
Loss rate: 1.86%
```
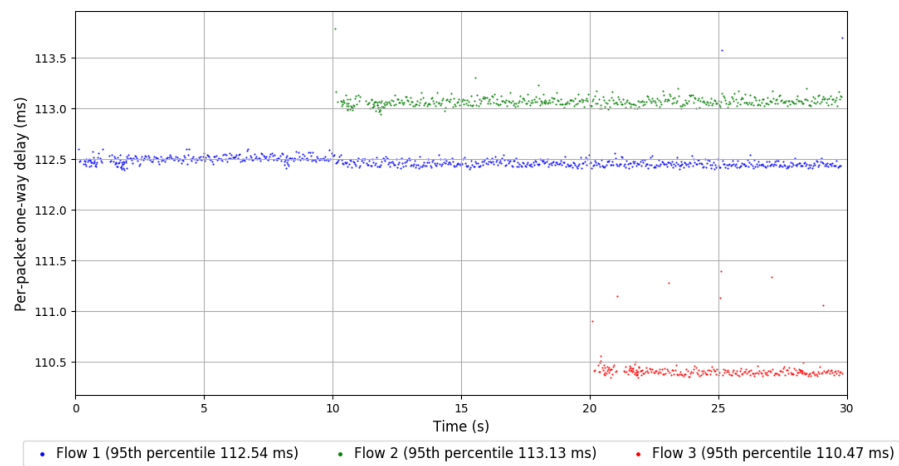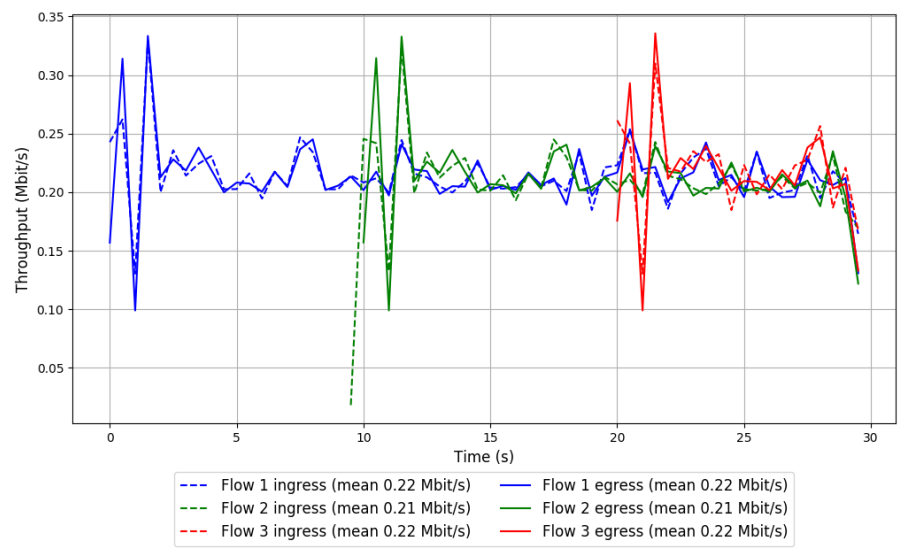
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2017-08-12 01:12:39
End at: 2017-08-12 01:13:09


# Below is generated by plot.py at 2017-08-12 05:58:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.890 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.893 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.893 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.852 ms
Loss rate: 2.25%
```
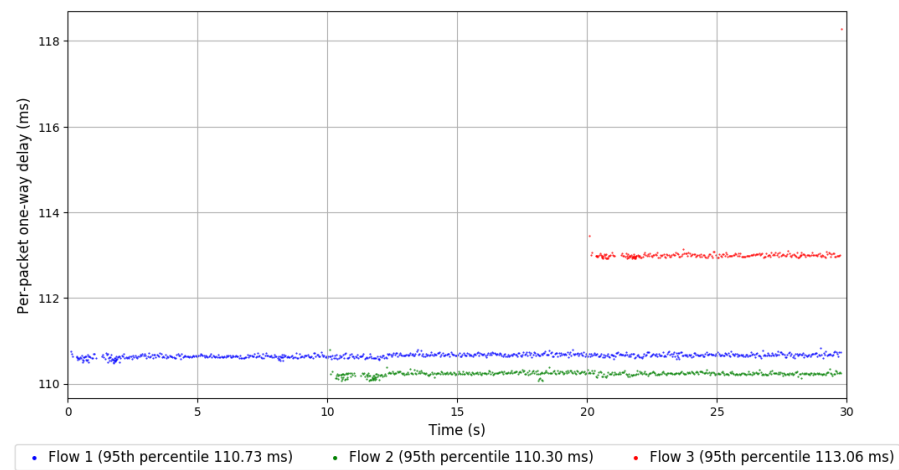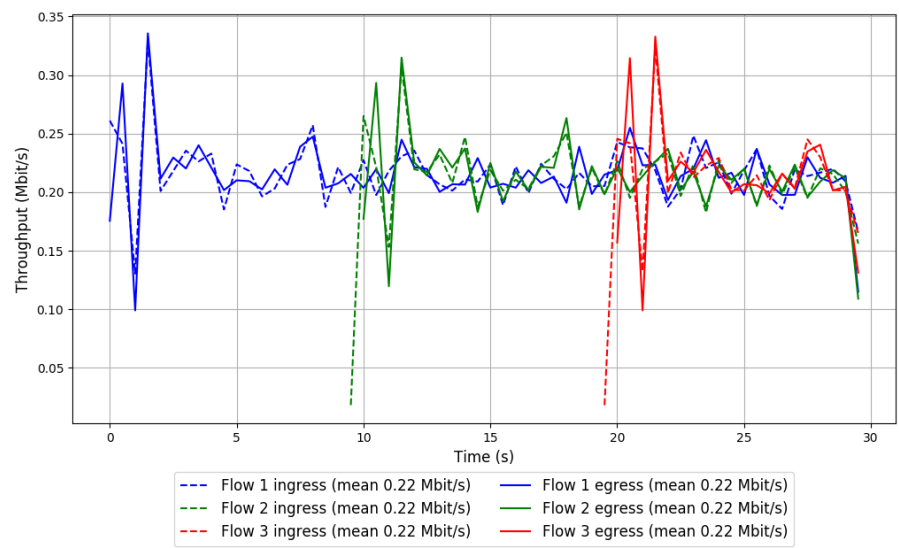
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2017-08-12 01:25:52
End at: 2017-08-12 01:26:22


# Below is generated by plot.py at 2017-08-12 05:58:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.107 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.539 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 113.134 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.468 ms
Loss rate: 1.87%
```
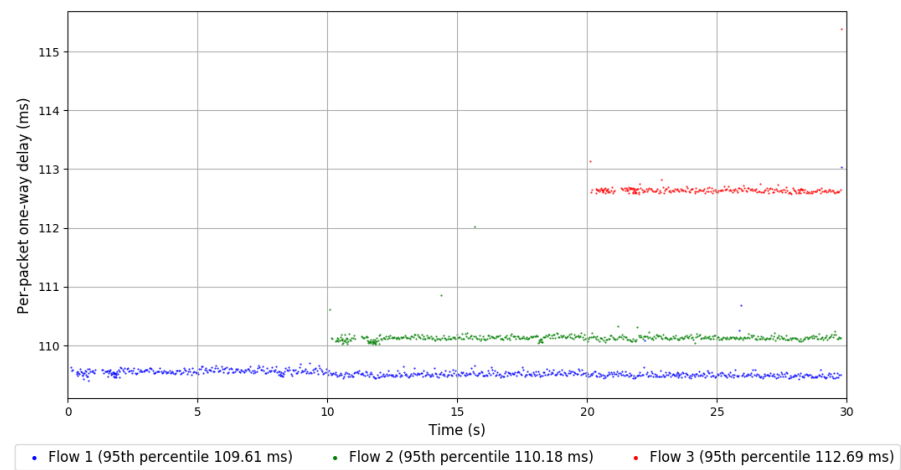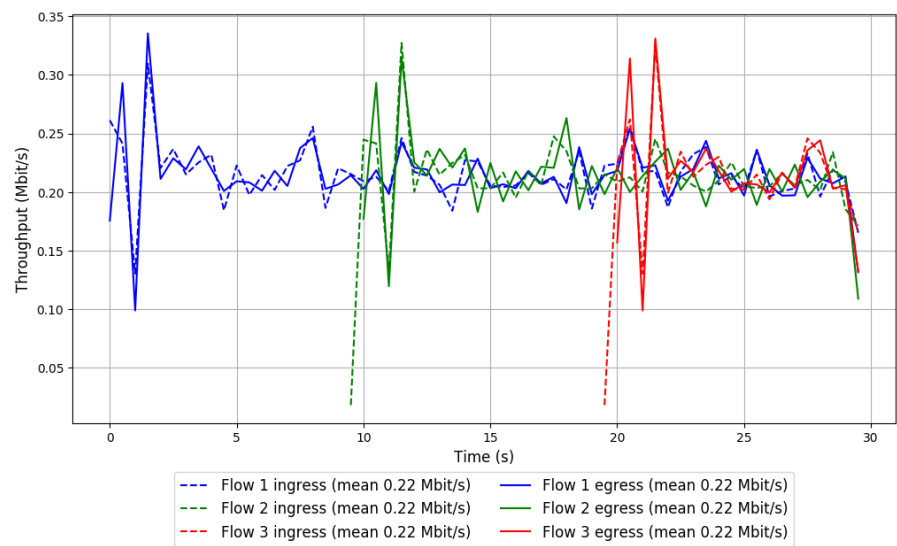
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2017-08-12 01:38:24
End at: 2017-08-12 01:38:54


# Below is generated by plot.py at 2017-08-12 05:58:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.013 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.728 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.297 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.059 ms
Loss rate: 1.86%
```
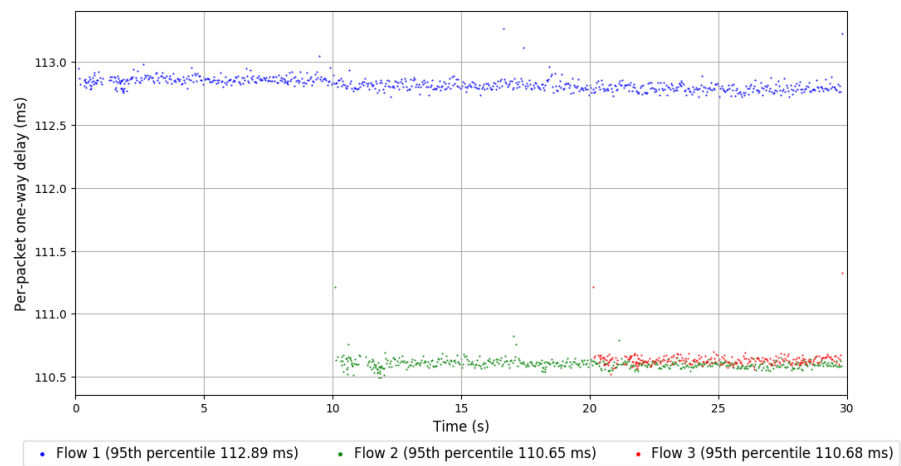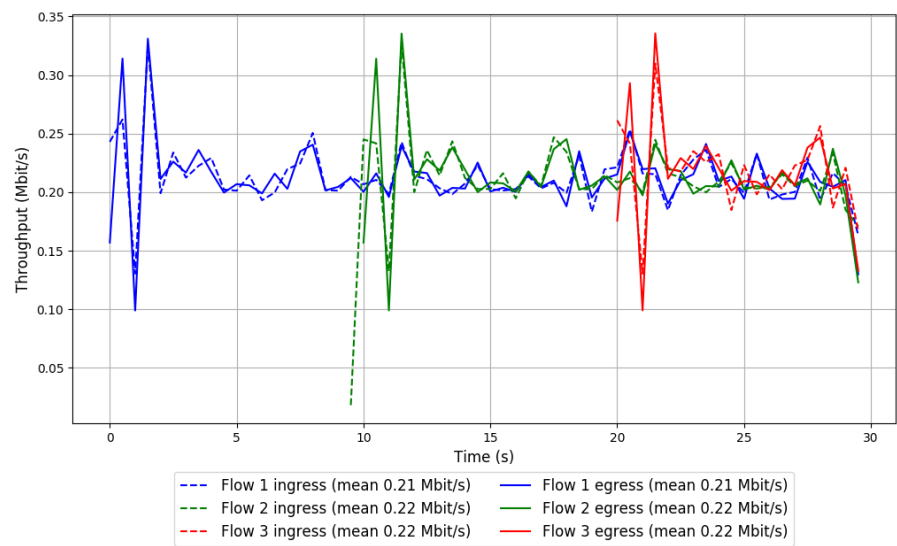
Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2017-08-12 01:51:01
End at: 2017-08-12 01:51:31

# Below is generated by plot.py at 2017-08-12 05:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.656 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.611 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.183 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.693 ms
Loss rate: 1.86%
```
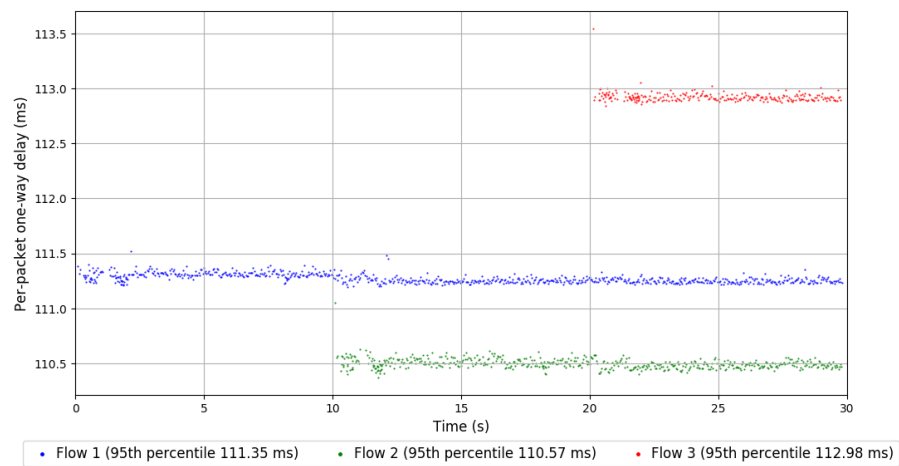
Run 6: Report of SCReAM — Data Link

```
Run 7: Statistics of SCReAM

Start at: 2017-08-12 02:04:00
End at: 2017-08-12 02:04:30

# Below is generated by plot.py at 2017-08-12 05:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.878 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.894 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.654 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.678 ms
Loss rate: 1.87%
```
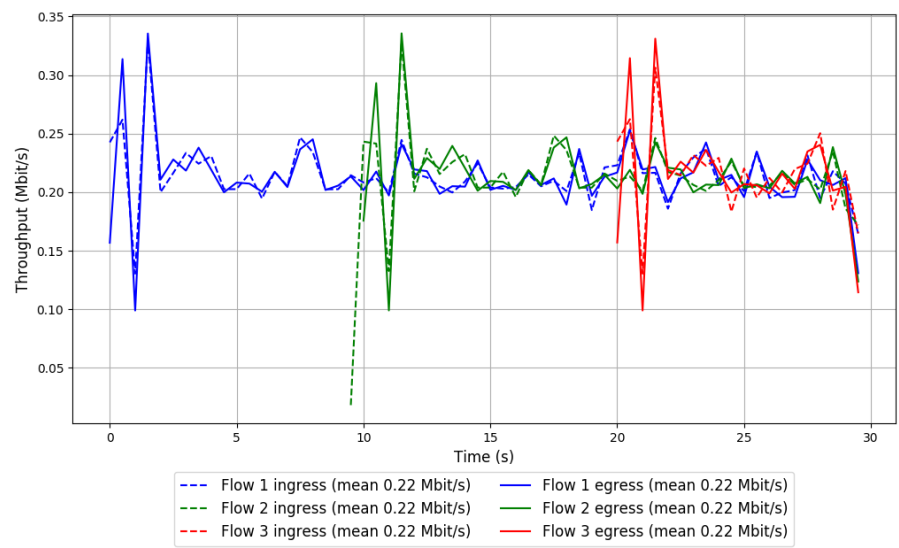
Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-08-12 02:17:14
End at: 2017-08-12 02:17:44

# Below is generated by plot.py at 2017-08-12 05:58:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.935 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.349 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 110.571 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.983 ms
Loss rate: 2.25%
```
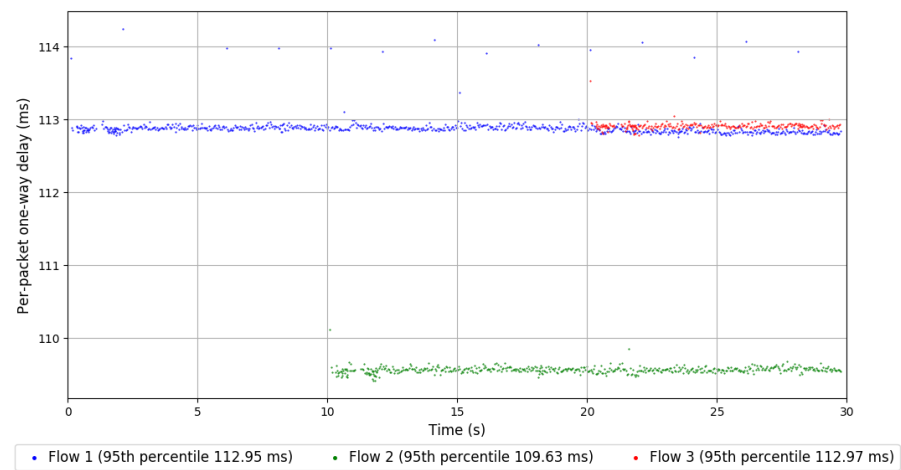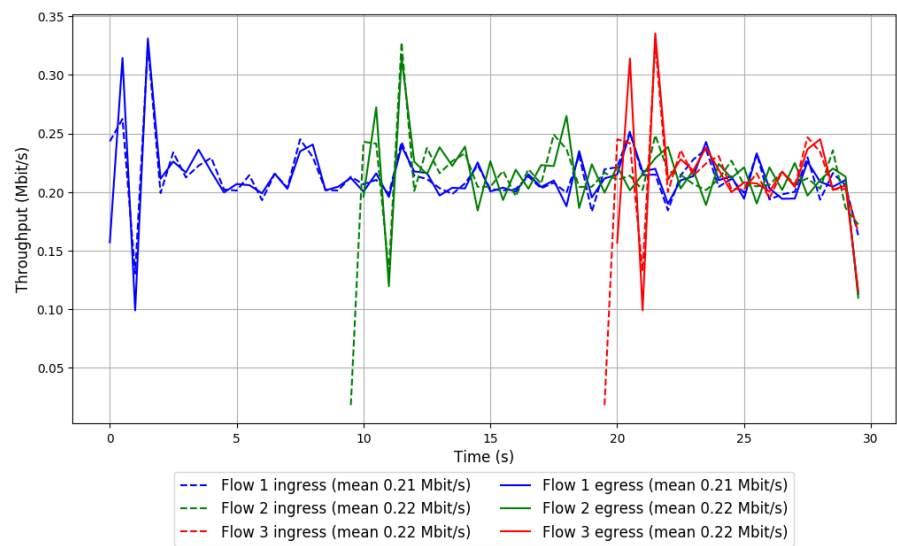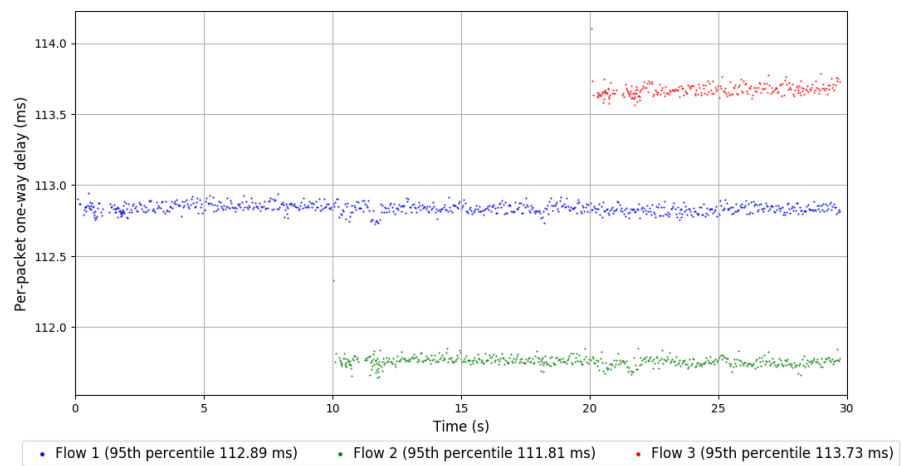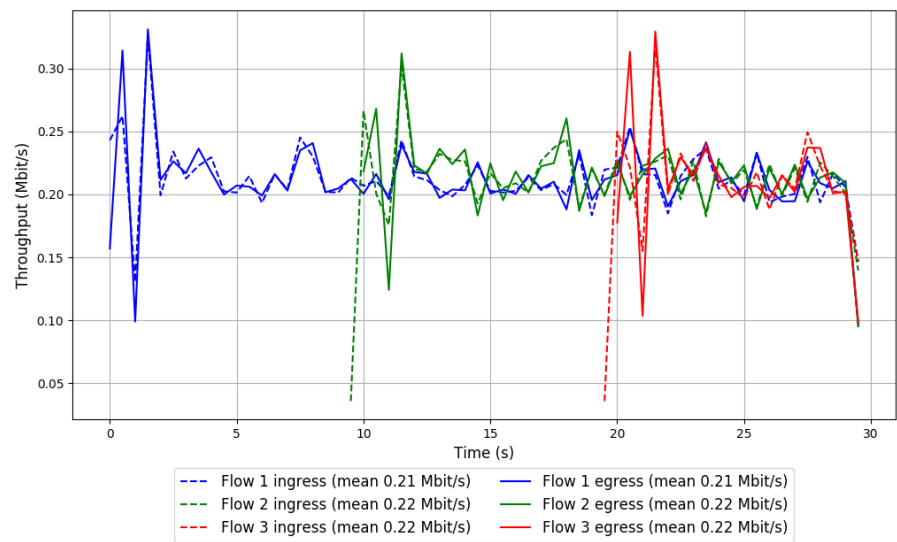
Run 8: Report of SCReAM — Data Link

```
Run 9: Statistics of SCReAM

Start at: 2017-08-12 02:29:53
End at: 2017-08-12 02:30:23


# Below is generated by plot.py at 2017-08-12 05:58:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 112.940 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.947 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 109.628 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 112.968 ms
Loss rate: 2.25%
```
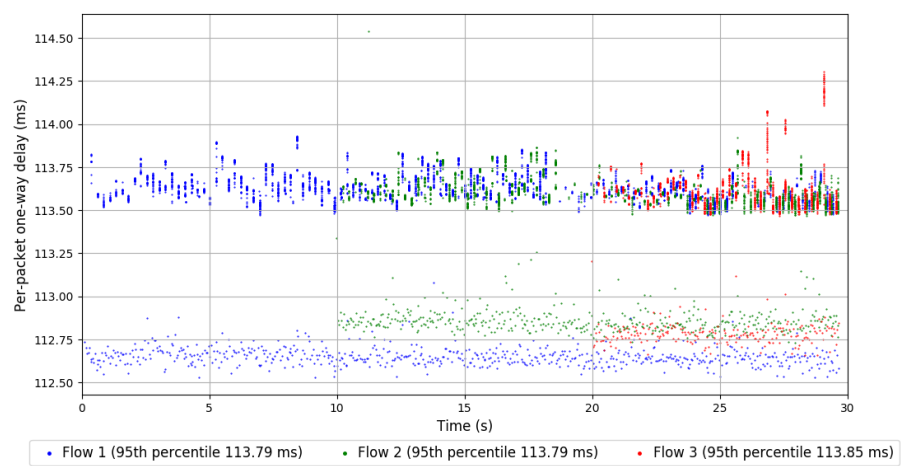
Run 9: Report of SCReAM — Data Link

```
Run 10: Statistics of SCReAM

Start at: 2017-08-12 02:42:31
End at: 2017-08-12 02:43:01


# Below is generated by plot.py at 2017-08-12 05:58:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.689 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 112.890 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 111.813 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 113.735 ms
Loss rate: 2.25%
```
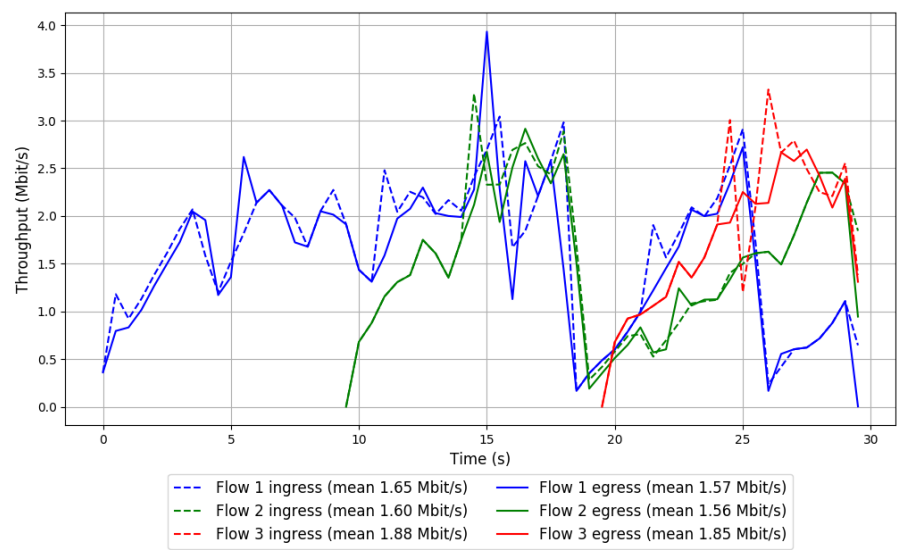
Run 10: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2017-08-12 00:50:56
End at: 2017-08-12 00:51:26

# Below is generated by plot.py at 2017-08-12 05:58:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 113.795 ms
Loss rate: 4.52%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 113.788 ms
Loss rate: 5.19%
-- Flow 2:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 113.790 ms
Loss rate: 3.95%
-- Flow 3:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 113.849 ms
Loss rate: 3.72%
```
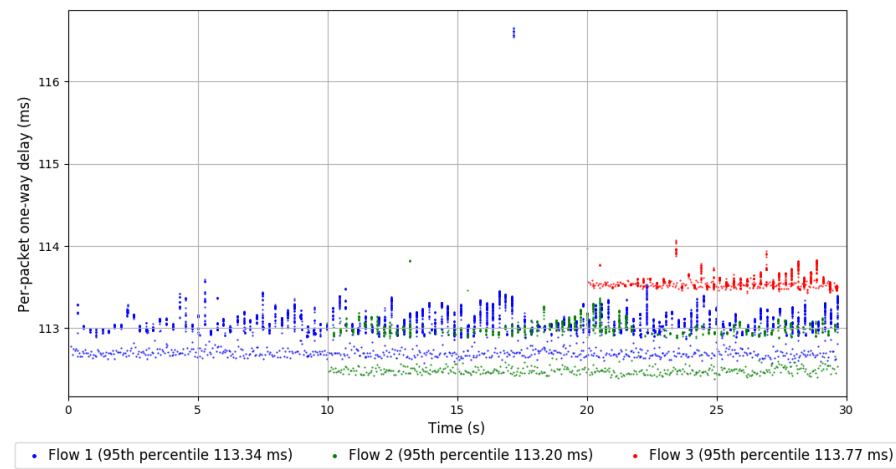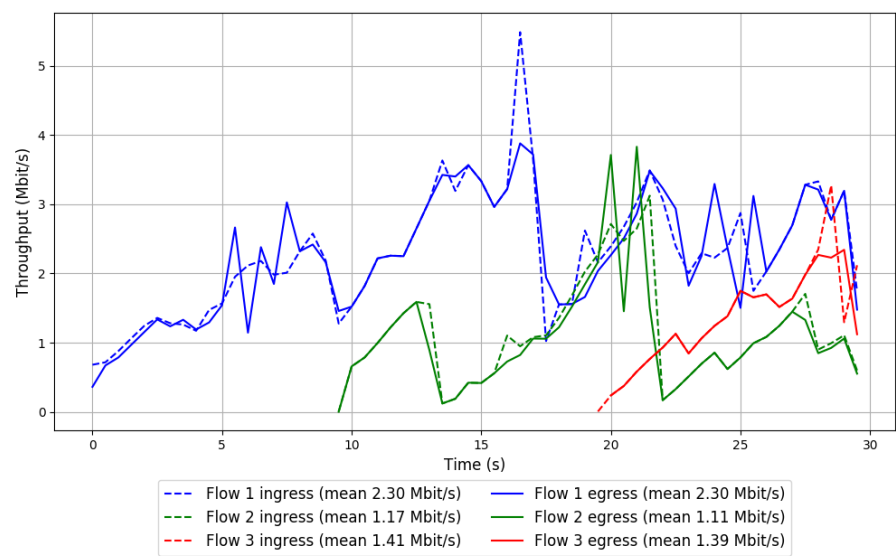
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-08-12 01:03:37
End at: 2017-08-12 01:04:07


# Below is generated by plot.py at 2017-08-12 05:58:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.49 Mbit/s
95th percentile per-packet one-way delay: 113.579 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 113.337 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 113.202 ms
Loss rate: 6.18%
-- Flow 3:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 113.771 ms
Loss rate: 3.86%
```
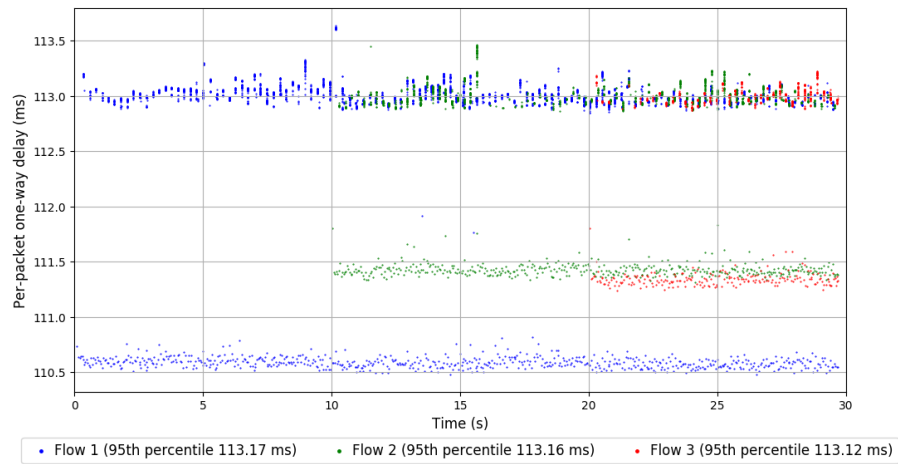
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-08-12 01:16:55
End at: 2017-08-12 01:17:25


# Below is generated by plot.py at 2017-08-12 05:58:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.55 Mbit/s
95th percentile per-packet one-way delay: 113.163 ms
Loss rate: 2.97%
-- Flow 1:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 113.173 ms
Loss rate: 1.41%
-- Flow 2:
Average throughput: 1.17 Mbit/s
95th percentile per-packet one-way delay: 113.162 ms
Loss rate: 4.98%
-- Flow 3:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 113.122 ms
Loss rate: 4.81%
```
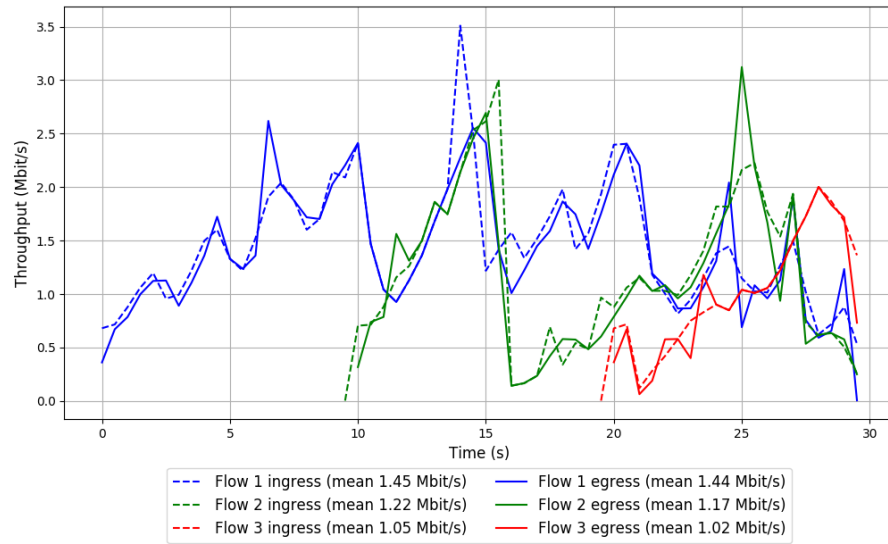
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-08-12 01:29:57
End at: 2017-08-12 01:30:27


# Below is generated by plot.py at 2017-08-12 05:58:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.02 Mbit/s
95th percentile per-packet one-way delay: 114.182 ms
Loss rate: 2.68%
-- Flow 1:
Average throughput: 1.78 Mbit/s
95th percentile per-packet one-way delay: 114.220 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 114.034 ms
Loss rate: 4.11%
-- Flow 3:
Average throughput: 0.56 Mbit/s
95th percentile per-packet one-way delay: 113.962 ms
Loss rate: 9.39%
```
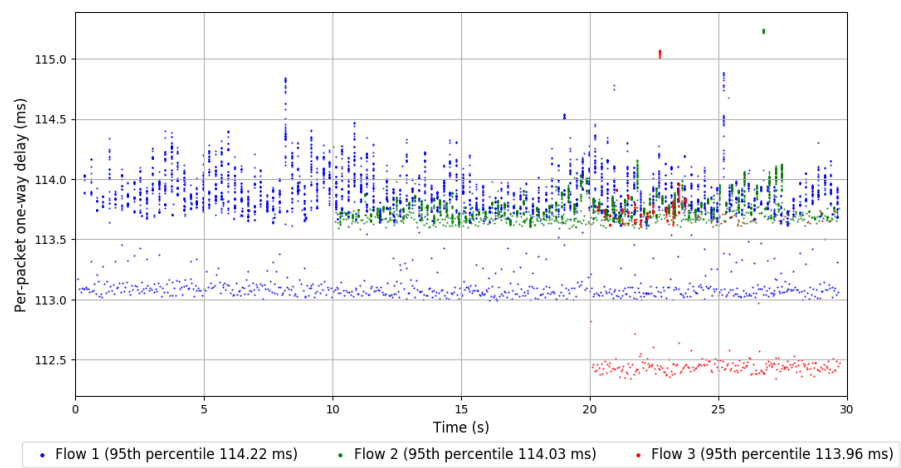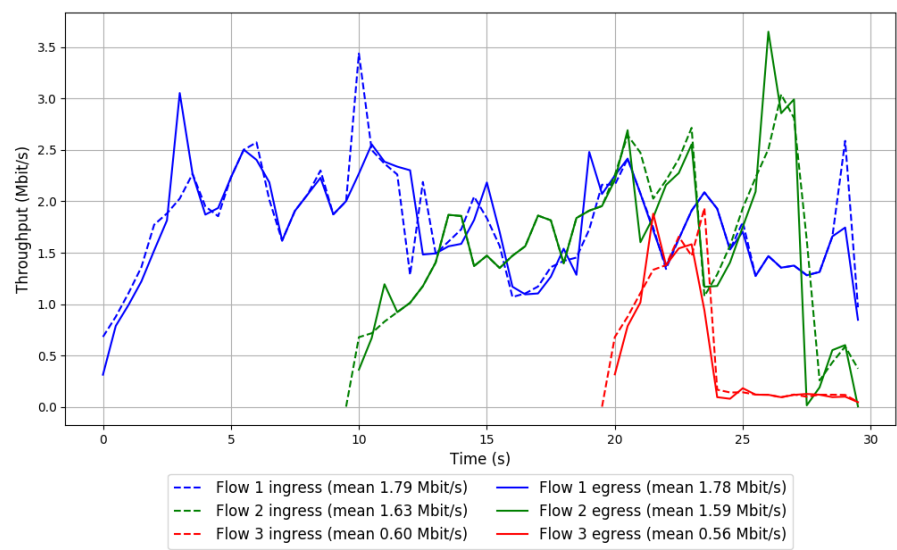
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2017-08-12 01:42:34
End at: 2017-08-12 01:43:04


# Below is generated by plot.py at 2017-08-12 05:58:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 113.949 ms
Loss rate: 4.43%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 113.967 ms
Loss rate: 3.62%
-- Flow 2:
Average throughput: 1.22 Mbit/s
95th percentile per-packet one-way delay: 113.949 ms
Loss rate: 5.79%
-- Flow 3:
Average throughput: 1.30 Mbit/s
95th percentile per-packet one-way delay: 113.879 ms
Loss rate: 5.05%
```
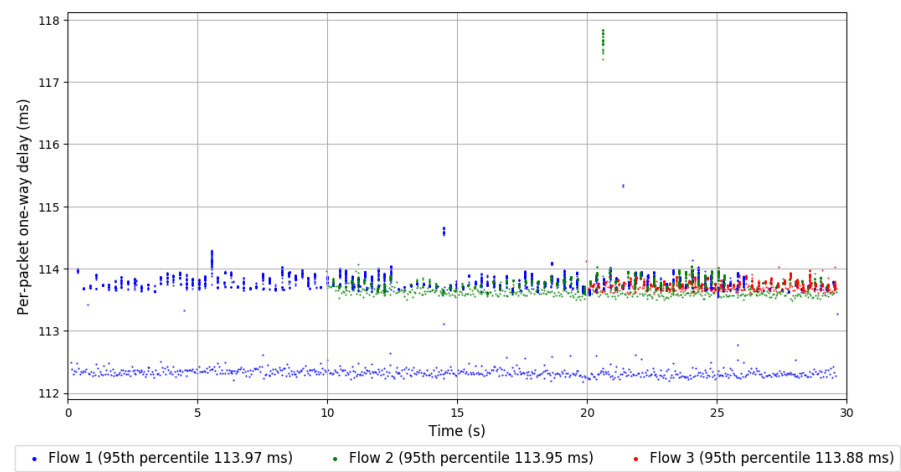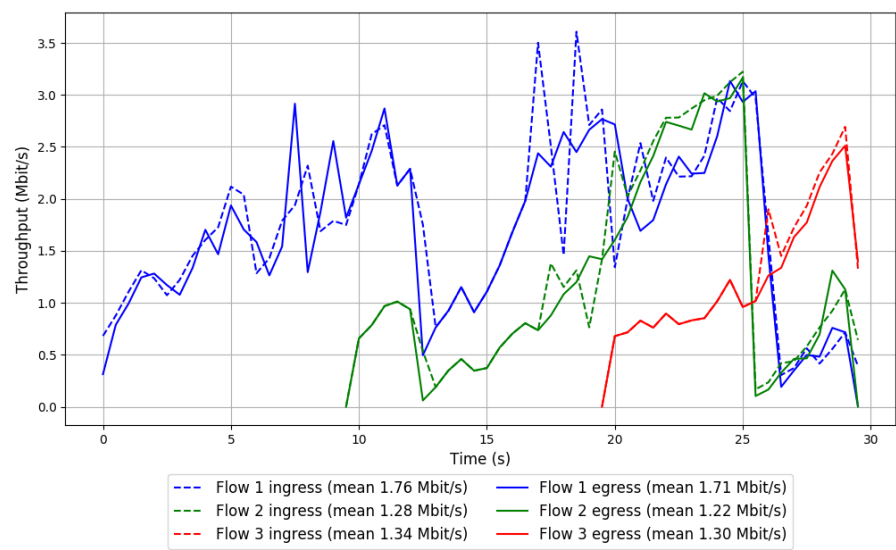
Run 5: Report of Sprout — Data Link

```
Run 6: Statistics of Sprout

Start at: 2017-08-12 01:55:06
End at: 2017-08-12 01:55:36


# Below is generated by plot.py at 2017-08-12 05:58:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.71 Mbit/s
95th percentile per-packet one-way delay: 113.948 ms
Loss rate: 2.82%
-- Flow 1:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 113.858 ms
Loss rate: 2.06%
-- Flow 2:
Average throughput: 1.94 Mbit/s
95th percentile per-packet one-way delay: 113.981 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 113.927 ms
Loss rate: 7.35%
```
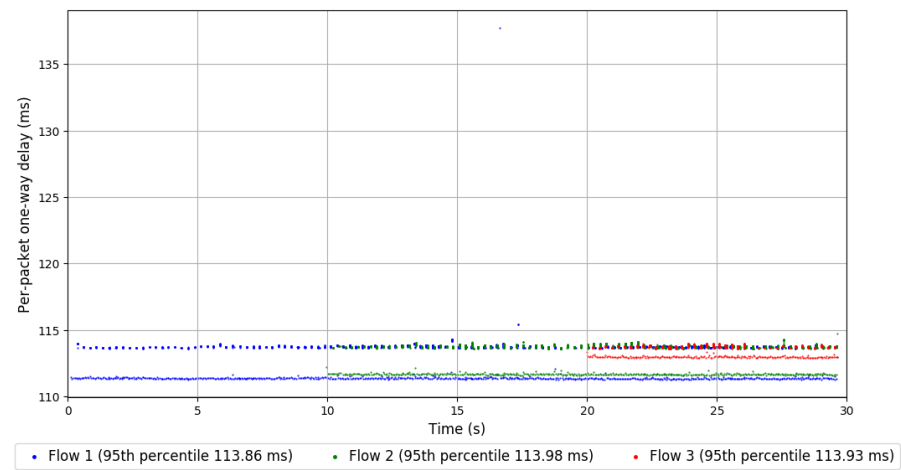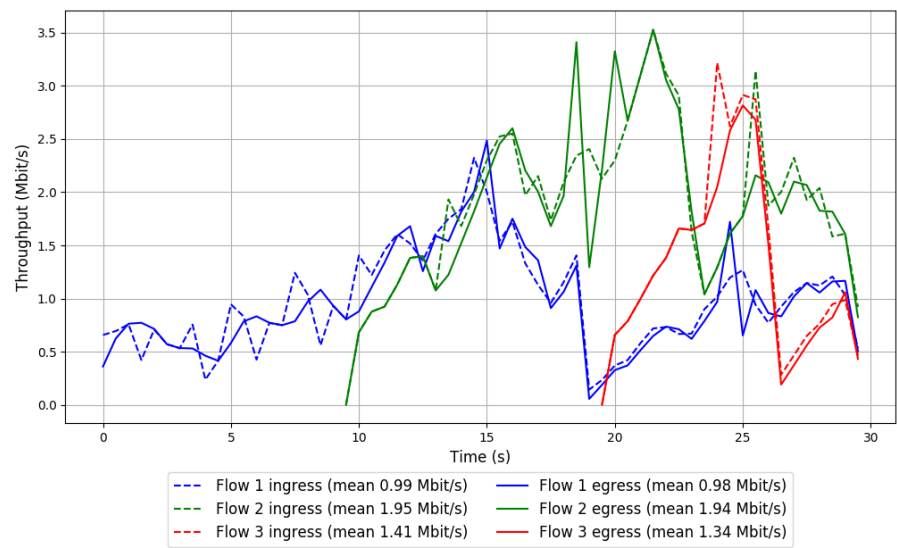
Run 6: Report of Sprout — Data Link

```
Run 7: Statistics of Sprout

Start at: 2017-08-12 02:08:19
End at: 2017-08-12 02:08:49

# Below is generated by plot.py at 2017-08-12 05:58:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.26 Mbit/s
95th percentile per-packet one-way delay: 113.411 ms
Loss rate: 2.24%
-- Flow 1:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 113.477 ms
Loss rate: 2.12%
-- Flow 2:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 113.237 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 1.87 Mbit/s
95th percentile per-packet one-way delay: 113.155 ms
Loss rate: 4.12%
```
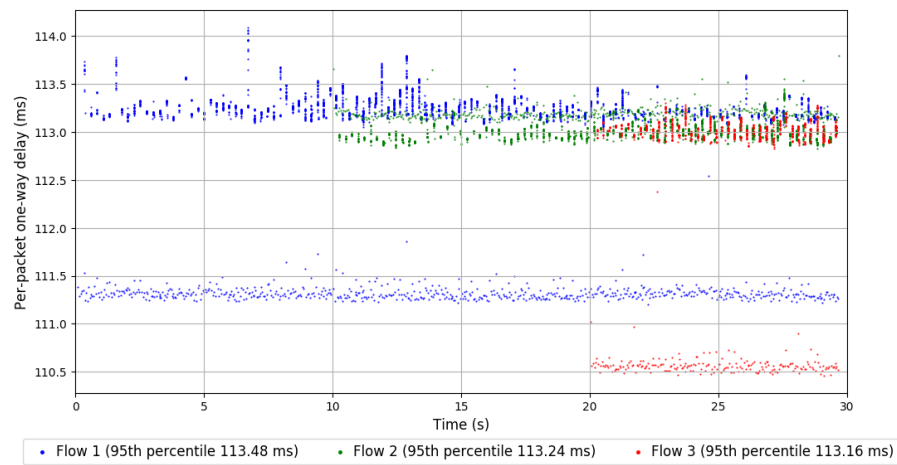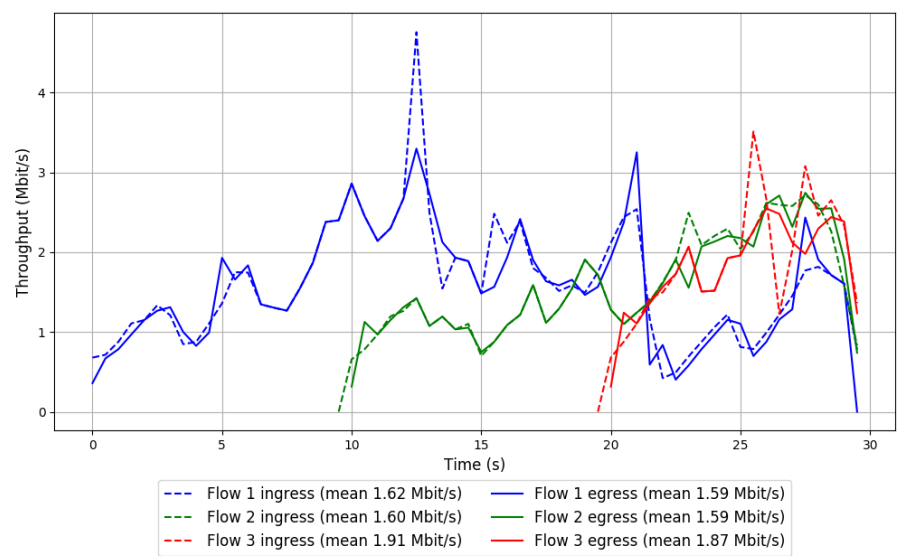
Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-08-12 02:21:26
End at: 2017-08-12 02:21:56

# Below is generated by plot.py at 2017-08-12 05:58:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.11 Mbit/s
95th percentile per-packet one-way delay: 113.676 ms
Loss rate: 4.19%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 113.189 ms
Loss rate: 4.02%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 113.720 ms
Loss rate: 4.64%
-- Flow 3:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 113.502 ms
Loss rate: 3.71%
```
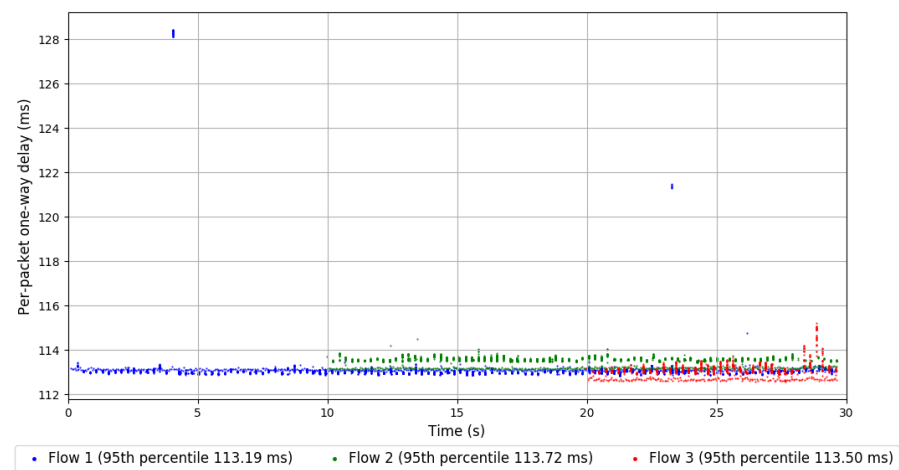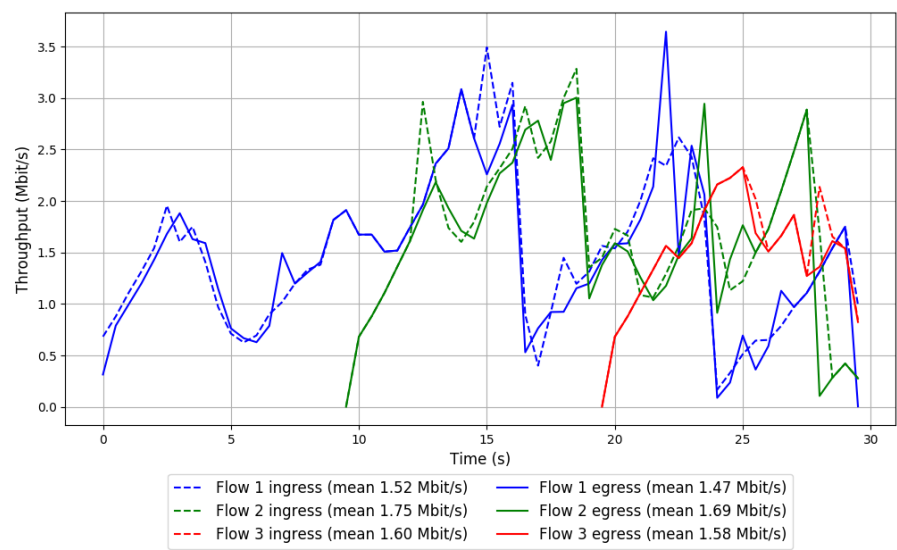
Run 8: Report of Sprout — Data Link

Flow 1 ingress (mean 1.52 Mbit/s)   Flow 1 egress (mean 1.47 Mbit/s)
Flow 2 ingress (mean 1.75 Mbit/s)   Flow 2 egress (mean 1.69 Mbit/s)
Flow 3 ingress (mean 1.60 Mbit/s)   Flow 3 egress (mean 1.58 Mbit/s)

Flow 1 (95th percentile 113.19 ms)   Flow 2 (95th percentile 113.72 ms)   Flow 3 (95th percentile 113.50 ms)

```
Run 9: Statistics of Sprout

Start at: 2017-08-12 02:34:03
End at: 2017-08-12 02:34:33


# Below is generated by plot.py at 2017-08-12 05:58:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.35 Mbit/s
95th percentile per-packet one-way delay: 113.504 ms
Loss rate: 3.83%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 113.586 ms
Loss rate: 3.50%
-- Flow 2:
Average throughput: 1.54 Mbit/s
95th percentile per-packet one-way delay: 113.101 ms
Loss rate: 3.67%
-- Flow 3:
Average throughput: 1.82 Mbit/s
95th percentile per-packet one-way delay: 112.821 ms
Loss rate: 5.01%
```
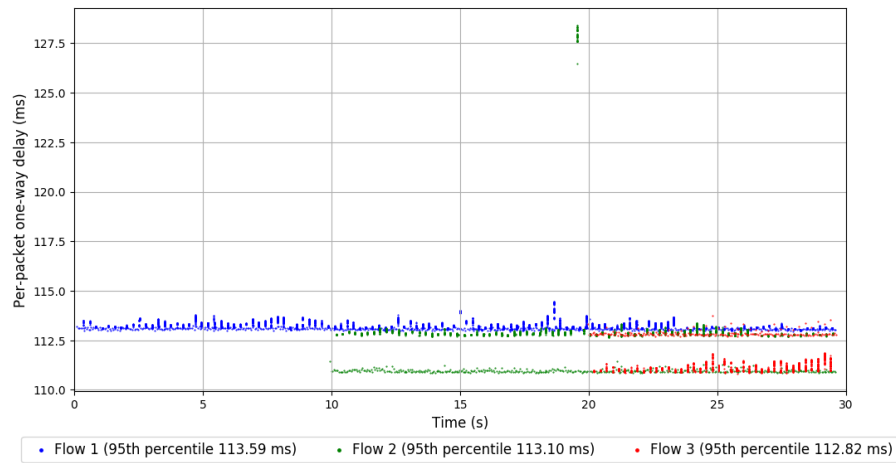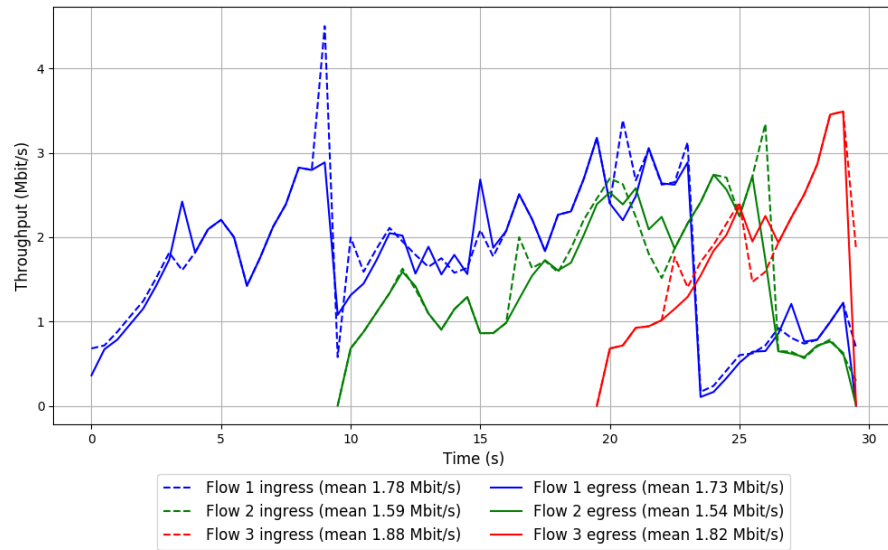
Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-08-12 02:46:38
End at: 2017-08-12 02:47:08


# Below is generated by plot.py at 2017-08-12 05:58:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 113.382 ms
Loss rate: 2.42%
-- Flow 1:
Average throughput: 1.64 Mbit/s
95th percentile per-packet one-way delay: 113.488 ms
Loss rate: 2.55%
-- Flow 2:
Average throughput: 1.75 Mbit/s
95th percentile per-packet one-way delay: 113.197 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 111.444 ms
Loss rate: 3.04%
```
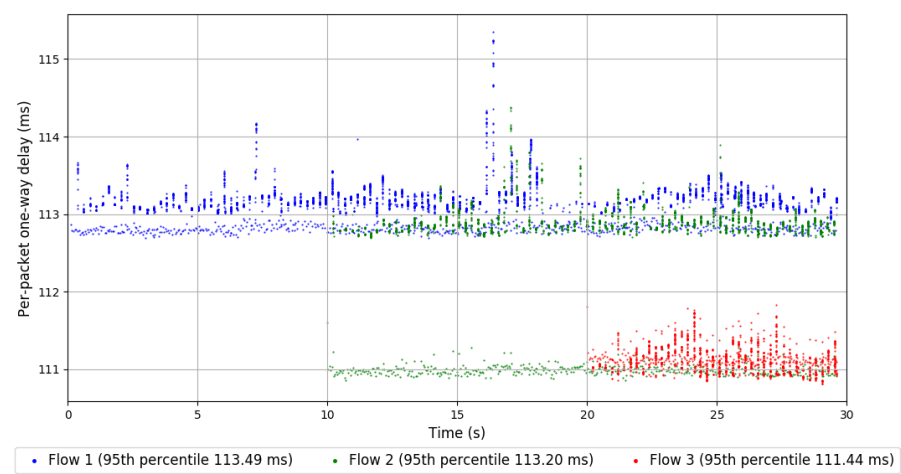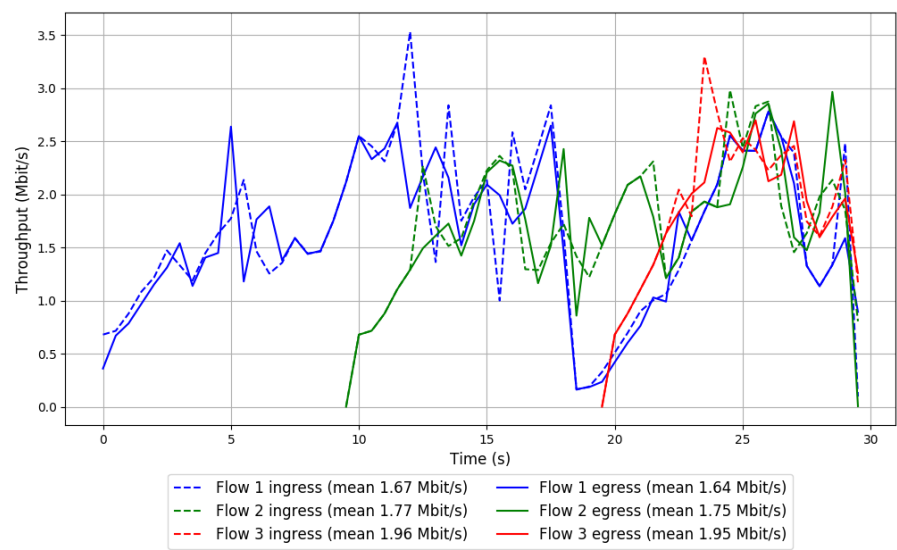
Run 10: Report of Sprout — Data Link

Flow 1 ingress (mean 1.67 Mbit/s) · Flow 1 egress (mean 1.64 Mbit/s)
Flow 2 ingress (mean 1.77 Mbit/s) · Flow 2 egress (mean 1.75 Mbit/s)
Flow 3 ingress (mean 1.96 Mbit/s) · Flow 3 egress (mean 1.95 Mbit/s)

Flow 1 (95th percentile 113.49 ms) · Flow 2 (95th percentile 113.20 ms) · Flow 3 (95th percentile 111.44 ms)
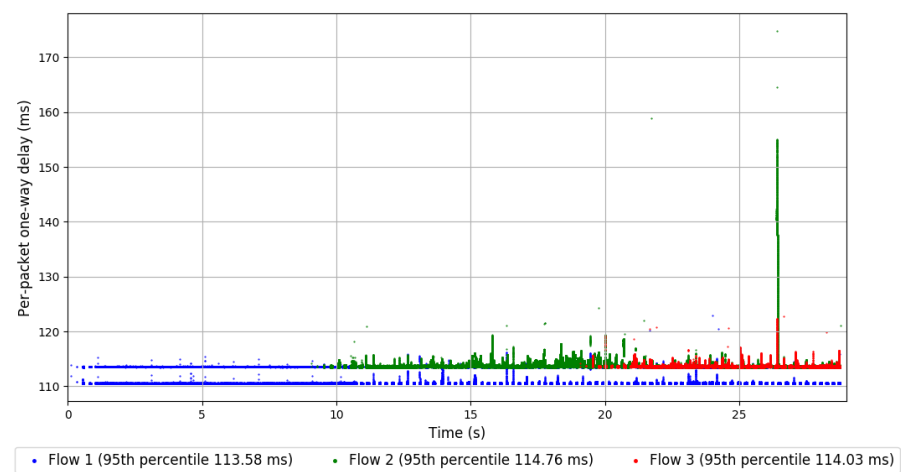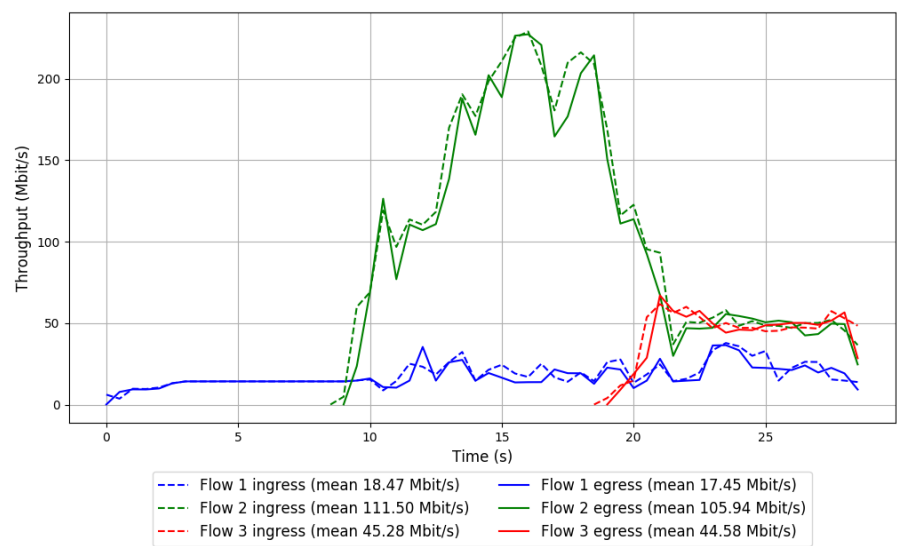
223

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

Start at: 2017-08-12 00:48:19
End at: 2017-08-12 00:48:49

# Below is generated by plot.py at 2017-08-12 05:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.30 Mbit/s
95th percentile per-packet one-way delay: 114.529 ms
Loss rate: 5.79%
-- Flow 1:
Average throughput: 17.45 Mbit/s
95th percentile per-packet one-way delay: 113.581 ms
Loss rate: 6.28%
-- Flow 2:
Average throughput: 105.94 Mbit/s
95th percentile per-packet one-way delay: 114.758 ms
Loss rate: 6.04%
-- Flow 3:
Average throughput: 44.58 Mbit/s
95th percentile per-packet one-way delay: 114.029 ms
Loss rate: 3.97%
```

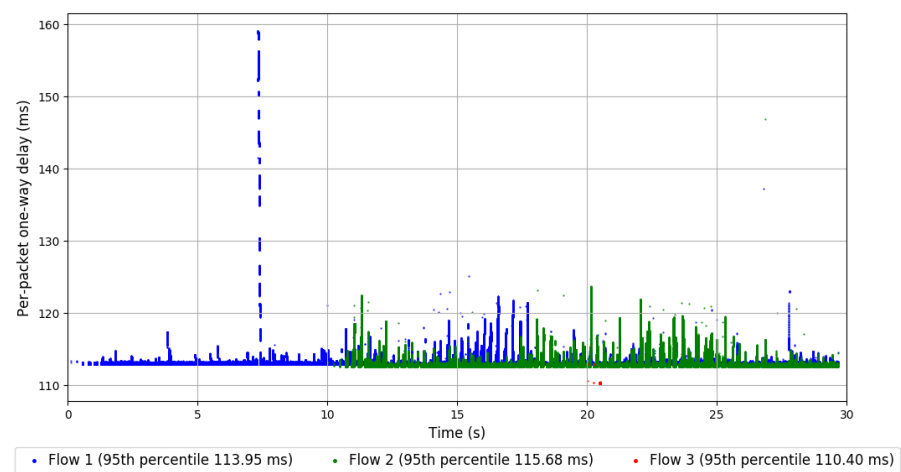# Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 18.47 Mbit/s)   Flow 1 egress (mean 17.45 Mbit/s)
Flow 2 ingress (mean 111.50 Mbit/s)   Flow 2 egress (mean 105.94 Mbit/s)
Flow 3 ingress (mean 45.28 Mbit/s)   Flow 3 egress (mean 44.58 Mbit/s)

Flow 1 (95th percentile 113.58 ms)   Flow 2 (95th percentile 114.76 ms)   Flow 3 (95th percentile 114.03 ms)
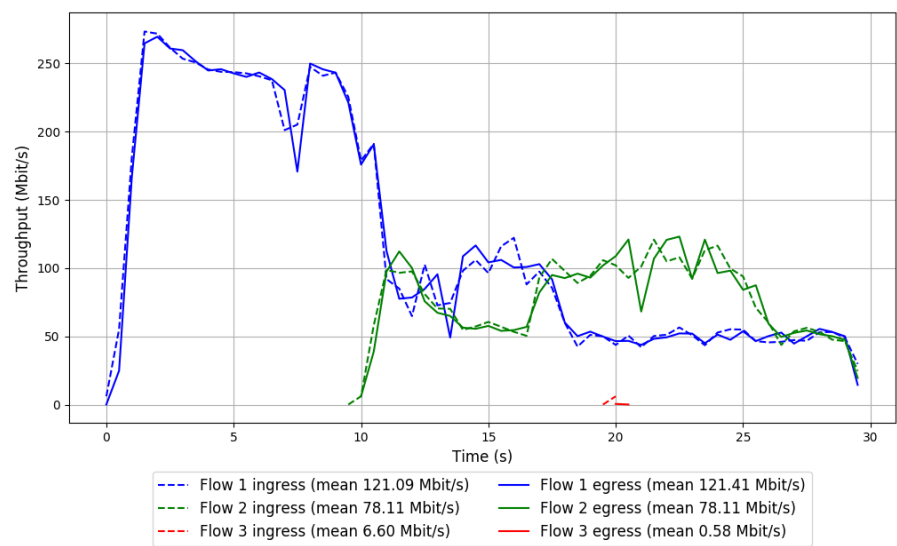
225

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

Start at: 2017-08-12 01:00:54
End at: 2017-08-12 01:01:24

# Below is generated by plot.py at 2017-08-12 05:59:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 173.36 Mbit/s
95th percentile per-packet one-way delay: 114.590 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 121.41 Mbit/s
95th percentile per-packet one-way delay: 113.955 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 78.11 Mbit/s
95th percentile per-packet one-way delay: 115.682 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 110.402 ms
Loss rate: 91.17%
```

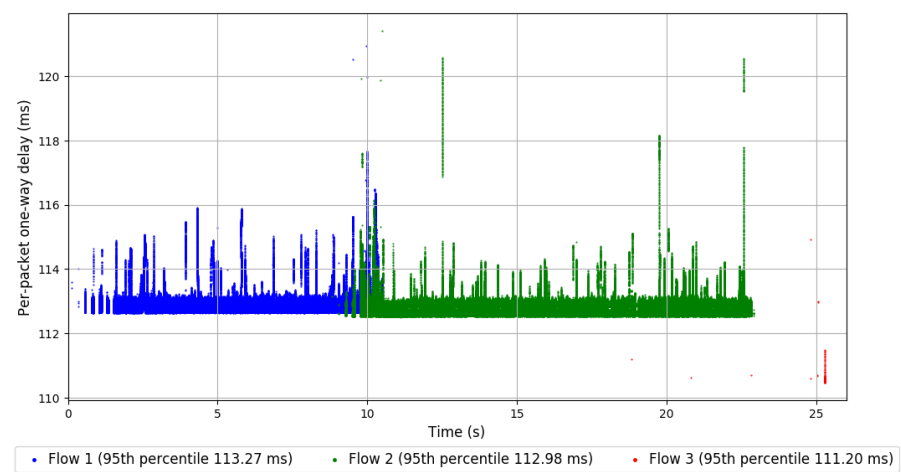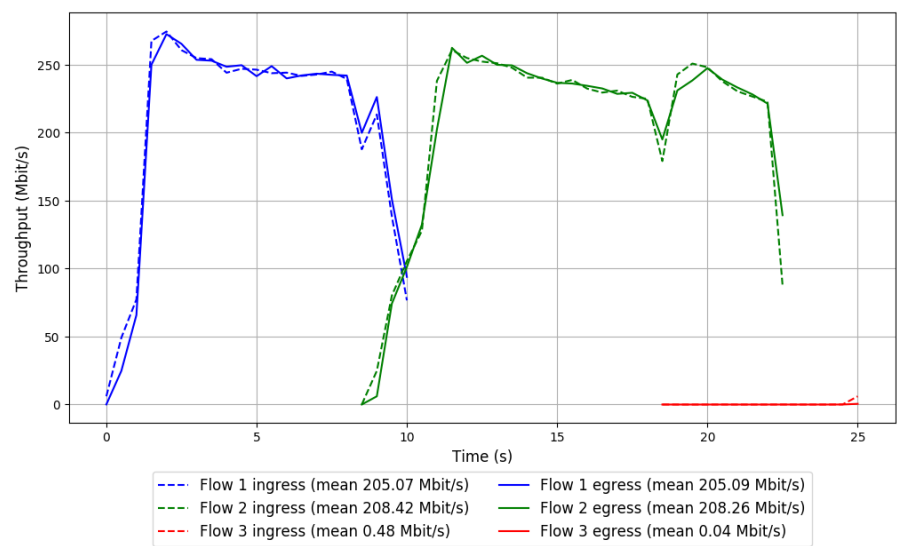## Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 121.09 Mbit/s)   Flow 1 egress (mean 121.41 Mbit/s)
Flow 2 ingress (mean 78.11 Mbit/s)   Flow 2 egress (mean 78.11 Mbit/s)
Flow 3 ingress (mean 6.60 Mbit/s)   Flow 3 egress (mean 0.58 Mbit/s)

Flow 1 (95th percentile 113.95 ms)   Flow 2 (95th percentile 115.68 ms)   Flow 3 (95th percentile 110.40 ms)

227

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

Start at: 2017-08-12 01:14:11
End at: 2017-08-12 01:14:41

# Below is generated by plot.py at 2017-08-12 06:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 201.08 Mbit/s
95th percentile per-packet one-way delay: 113.080 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 205.09 Mbit/s
95th percentile per-packet one-way delay: 113.265 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 208.26 Mbit/s
95th percentile per-packet one-way delay: 112.983 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 111.197 ms
Loss rate: 91.18%
```
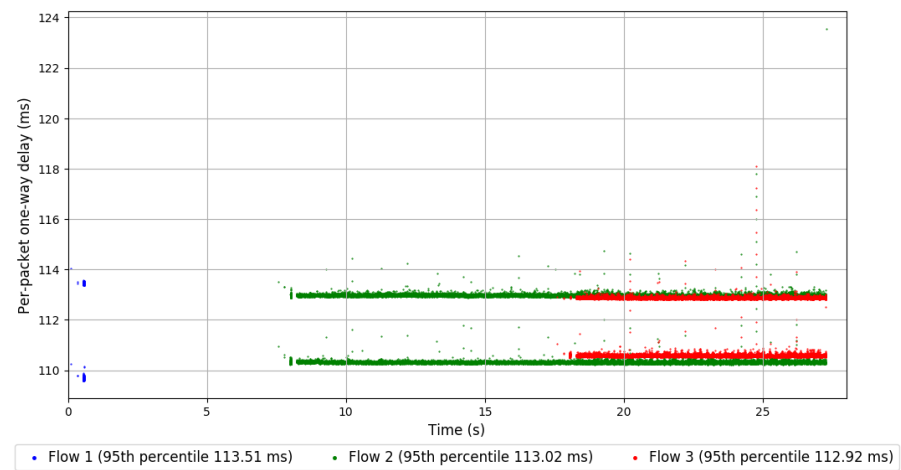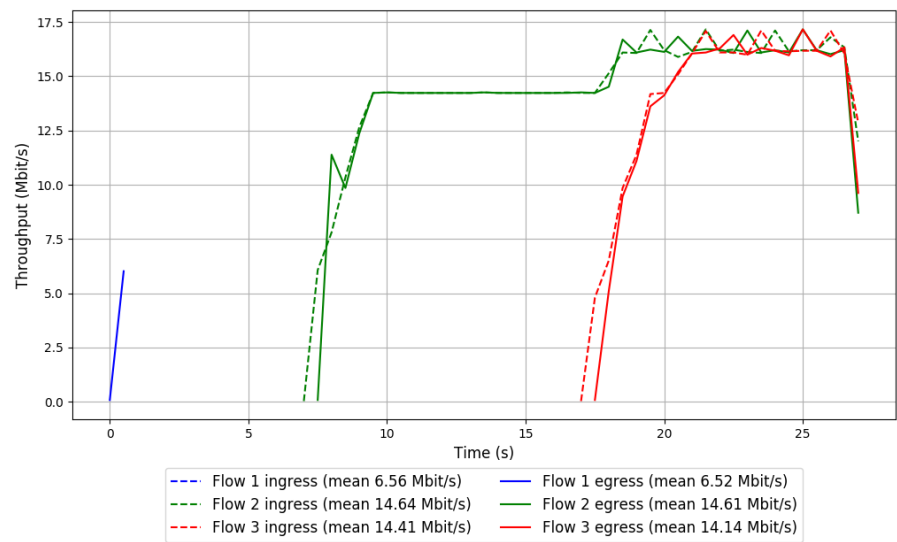
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 205.07 Mbit/s) ---- Flow 1 egress (mean 205.09 Mbit/s)
Flow 2 ingress (mean 208.42 Mbit/s) ---- Flow 2 egress (mean 208.26 Mbit/s)
Flow 3 ingress (mean 0.48 Mbit/s) ---- Flow 3 egress (mean 0.04 Mbit/s)

Flow 1 (95th percentile 113.27 ms) • Flow 2 (95th percentile 112.98 ms) • Flow 3 (95th percentile 111.20 ms)

229

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

Start at: 2017-08-12 01:27:25
End at: 2017-08-12 01:27:55

# Below is generated by plot.py at 2017-08-12 06:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.76 Mbit/s
95th percentile per-packet one-way delay: 113.009 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 6.52 Mbit/s
95th percentile per-packet one-way delay: 113.506 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.61 Mbit/s
95th percentile per-packet one-way delay: 113.018 ms
Loss rate: 1.27%
-- Flow 3:
Average throughput: 14.14 Mbit/s
95th percentile per-packet one-way delay: 112.921 ms
Loss rate: 4.05%
```
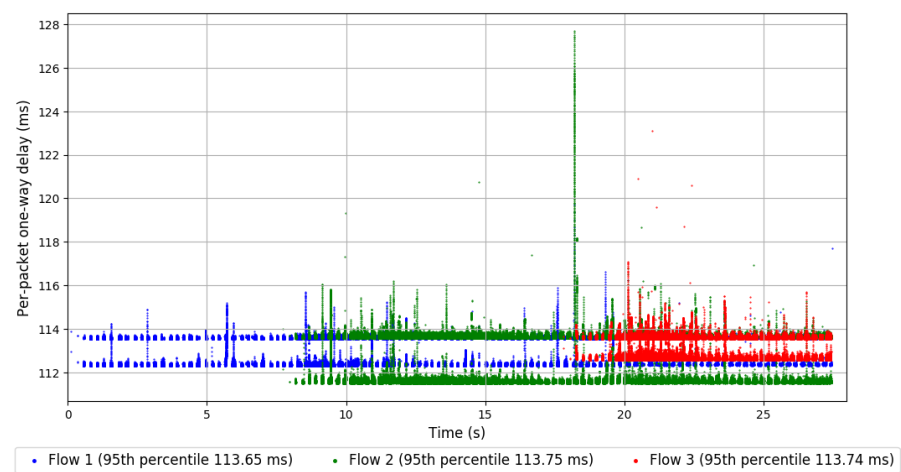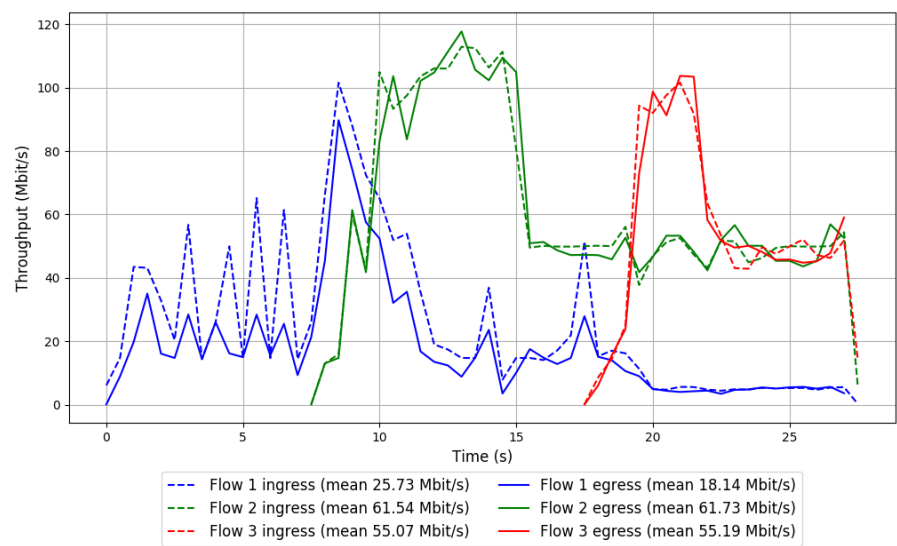
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 6.56 Mbit/s) --- Flow 1 egress (mean 6.52 Mbit/s)
Flow 2 ingress (mean 14.64 Mbit/s) --- Flow 2 egress (mean 14.61 Mbit/s)
Flow 3 ingress (mean 14.41 Mbit/s) --- Flow 3 egress (mean 14.14 Mbit/s)

Flow 1 (95th percentile 113.51 ms)   Flow 2 (95th percentile 113.02 ms)   Flow 3 (95th percentile 112.92 ms)

231

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

Start at: 2017-08-12 01:39:57
End at: 2017-08-12 01:40:27


# Below is generated by plot.py at 2017-08-12 06:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 113.729 ms
Loss rate: 9.55%
-- Flow 1:
Average throughput: 18.14 Mbit/s
95th percentile per-packet one-way delay: 113.651 ms
Loss rate: 30.09%
-- Flow 2:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 113.750 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 55.19 Mbit/s
95th percentile per-packet one-way delay: 113.739 ms
Loss rate: 2.37%
```
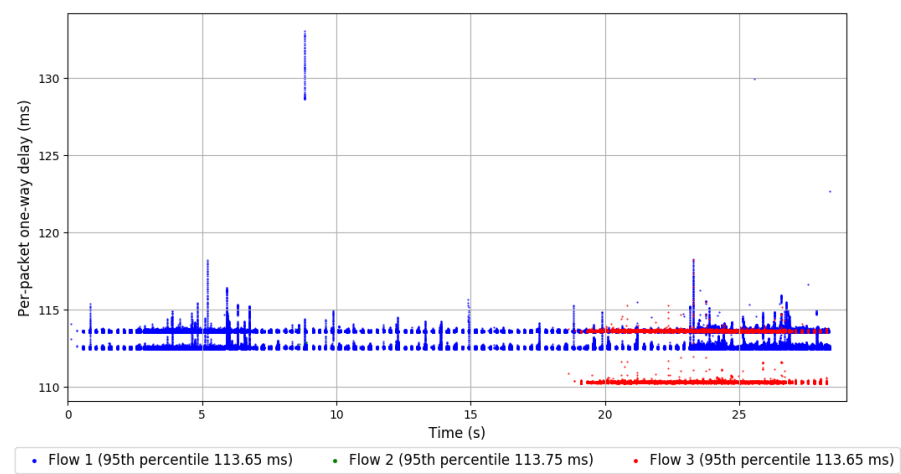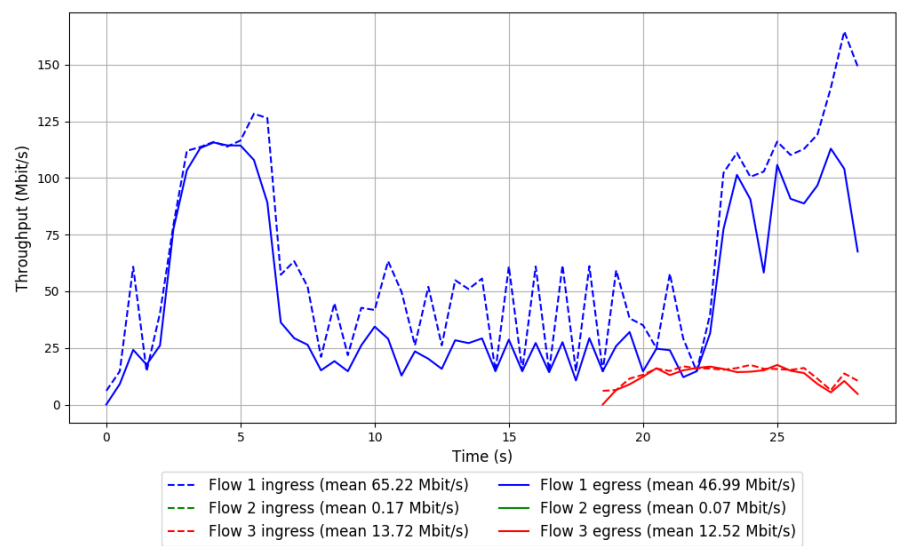
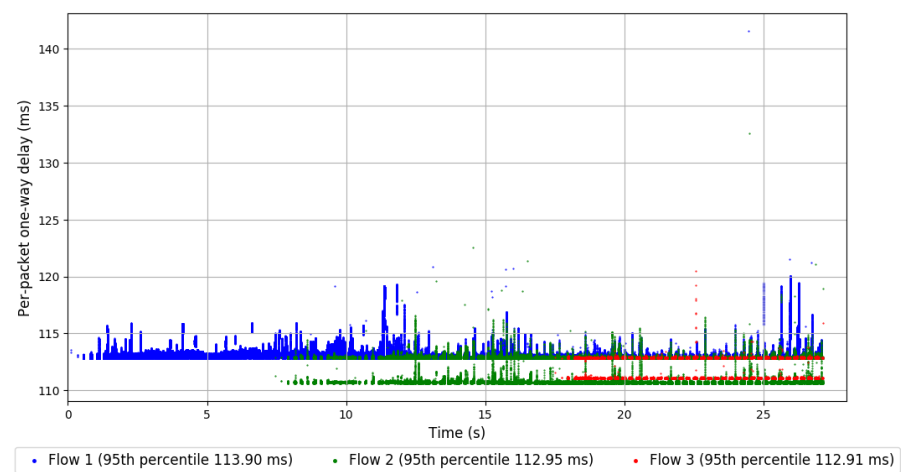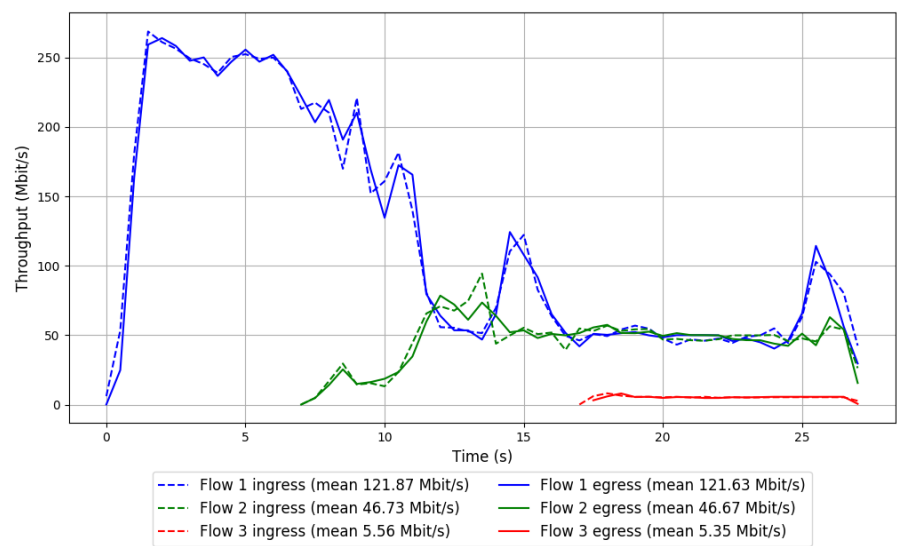# Run 5: Report of TaoVA-100x — Data Link

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

Start at: 2017-08-12 01:52:33
End at: 2017-08-12 01:53:03

# Below is generated by plot.py at 2017-08-12 06:00:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.25 Mbit/s
95th percentile per-packet one-way delay: 113.650 ms
Loss rate: 27.28%
-- Flow 1:
Average throughput: 46.99 Mbit/s
95th percentile per-packet one-way delay: 113.650 ms
Loss rate: 28.46%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 113.748 ms
Loss rate: 61.56%
-- Flow 3:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 113.650 ms
Loss rate: 11.10%
```

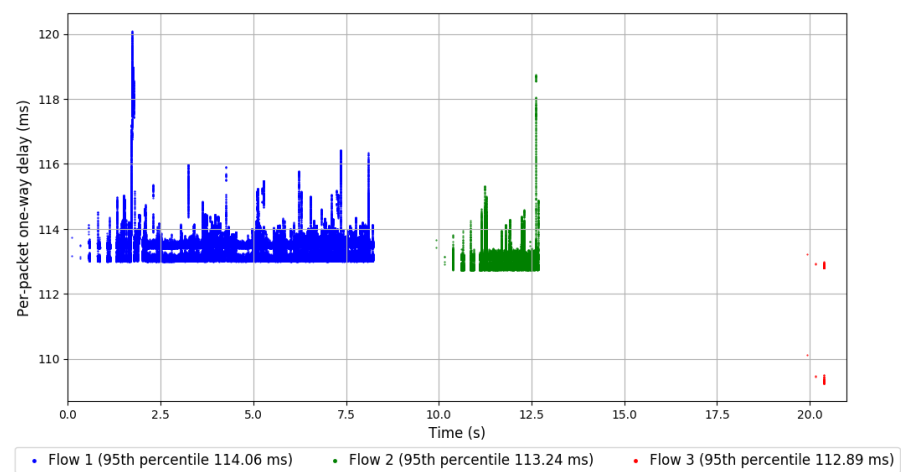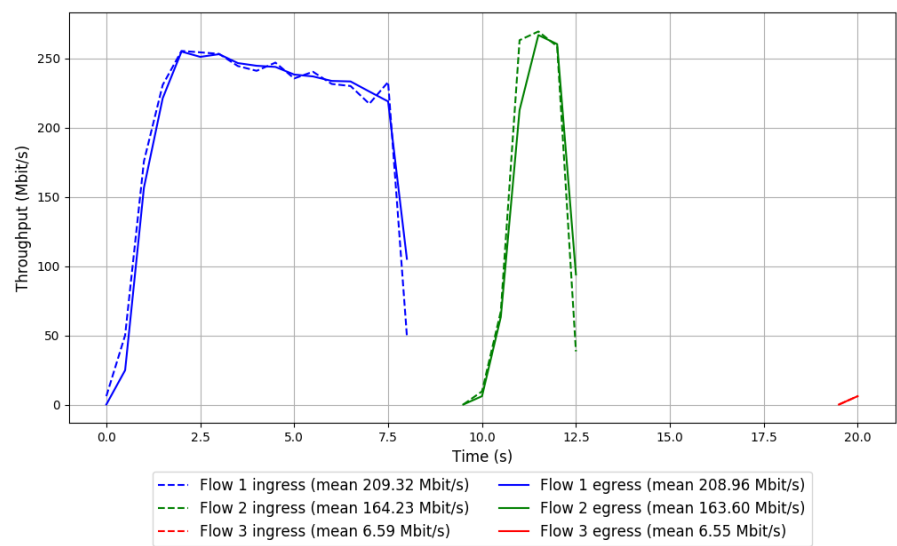# Run 6: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 65.22 Mbit/s) —— Flow 1 egress (mean 46.99 Mbit/s)
- - - - Flow 2 ingress (mean 0.17 Mbit/s) —— Flow 2 egress (mean 0.07 Mbit/s)
- - - - Flow 3 ingress (mean 13.72 Mbit/s) —— Flow 3 egress (mean 12.52 Mbit/s)

- Flow 1 (95th percentile 113.65 ms) • Flow 2 (95th percentile 113.75 ms) • Flow 3 (95th percentile 113.65 ms)
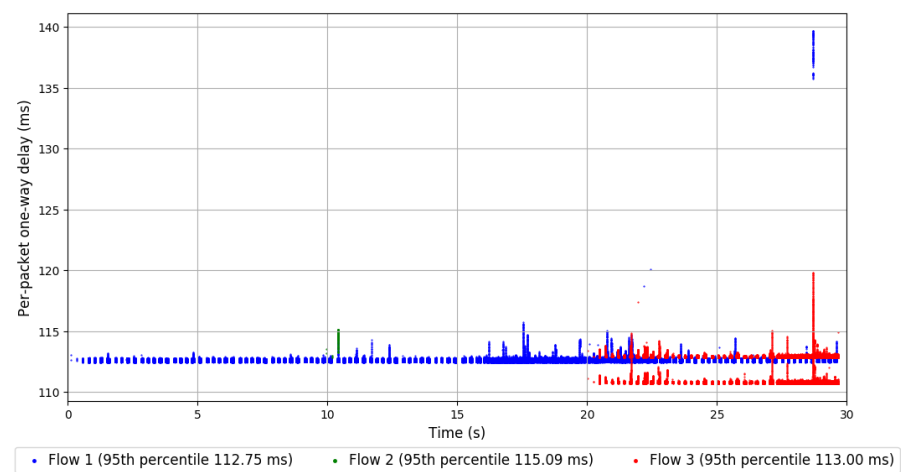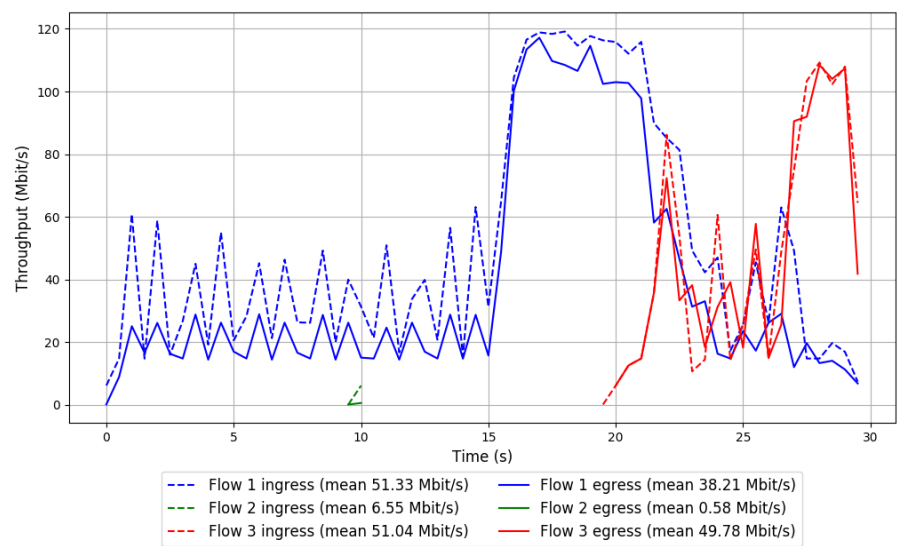
235

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

Start at: 2017-08-12 02:05:32
End at: 2017-08-12 02:06:02

# Below is generated by plot.py at 2017-08-12 06:00:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 157.28 Mbit/s
95th percentile per-packet one-way delay: 113.701 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 121.63 Mbit/s
95th percentile per-packet one-way delay: 113.901 ms
Loss rate: 1.04%
-- Flow 2:
Average throughput: 46.67 Mbit/s
95th percentile per-packet one-way delay: 112.946 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 112.909 ms
Loss rate: 4.86%
```

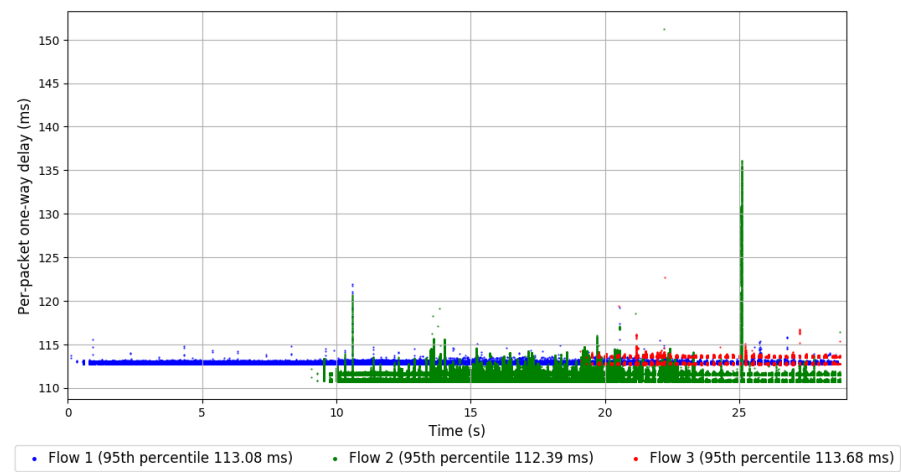# Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2017-08-12 02:18:46
End at: 2017-08-12 02:19:16
```

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

- Flow 1 ingress (mean 209.32 Mbit/s)
- Flow 1 egress (mean 208.96 Mbit/s)
- Flow 2 ingress (mean 164.23 Mbit/s)
- Flow 2 egress (mean 163.60 Mbit/s)
- Flow 3 ingress (mean 6.59 Mbit/s)
- Flow 3 egress (mean 6.55 Mbit/s)

- Flow 1 (95th percentile 114.06 ms)
- Flow 2 (95th percentile 113.24 ms)
- Flow 3 (95th percentile 112.89 ms)

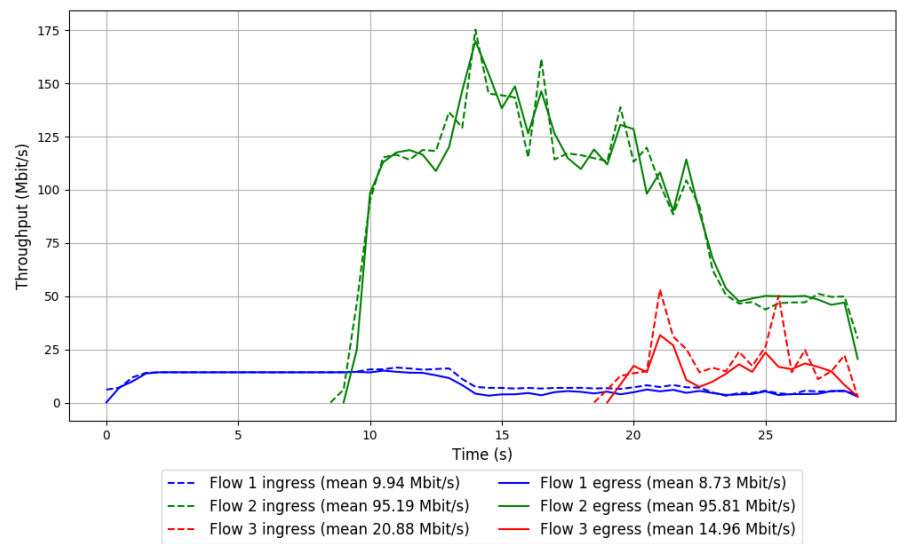```
Run 9: Statistics of TaoVA-100x

Start at: 2017-08-12 02:31:26
End at: 2017-08-12 02:31:56

Below is generated by plot.py at 2017-08-12 06:01:01
Datalink statistics
-- Total of 3 flows:
Average throughput: 54.38 Mbit/s
95th percentile per-packet one-way delay: 112.947 ms
Loss rate: 20.92%
-- Flow 1:
Average throughput: 38.21 Mbit/s
95th percentile per-packet one-way delay: 112.745 ms
Loss rate: 26.13%
-- Flow 2:
Average throughput: 0.58 Mbit/s
95th percentile per-packet one-way delay: 115.092 ms
Loss rate: 91.17%
-- Flow 3:
Average throughput: 49.78 Mbit/s
95th percentile per-packet one-way delay: 113.002 ms
Loss rate: 4.79%
```

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



Flow 1 ingress (mean 51.33 Mbit/s) — — — Flow 1 egress (mean 38.21 Mbit/s)
Flow 2 ingress (mean 6.55 Mbit/s) — — — Flow 2 egress (mean 0.58 Mbit/s)
Flow 3 ingress (mean 51.04 Mbit/s) — — — Flow 3 egress (mean 49.78 Mbit/s)



Flow 1 (95th percentile 112.75 ms) Flow 2 (95th percentile 115.09 ms) Flow 3 (95th percentile 113.00 ms)

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

Start at: 2017-08-12 02:44:04
End at: 2017-08-12 02:44:34

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.60 Mbit/s
95th percentile per-packet one-way delay: 113.531 ms
Loss rate: 4.46%
-- Flow 1:
Average throughput: 8.73 Mbit/s
95th percentile per-packet one-way delay: 113.083 ms
Loss rate: 12.96%
-- Flow 2:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 112.389 ms
Loss rate: 0.51%
-- Flow 3:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 113.677 ms
Loss rate: 29.17%
```
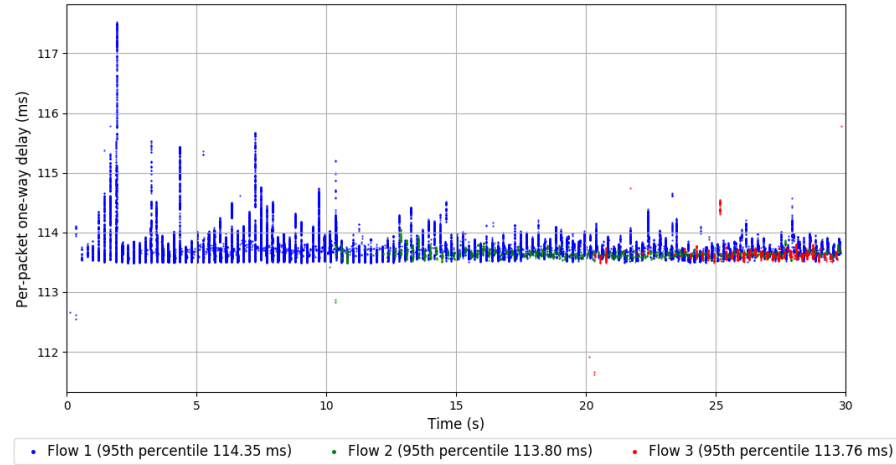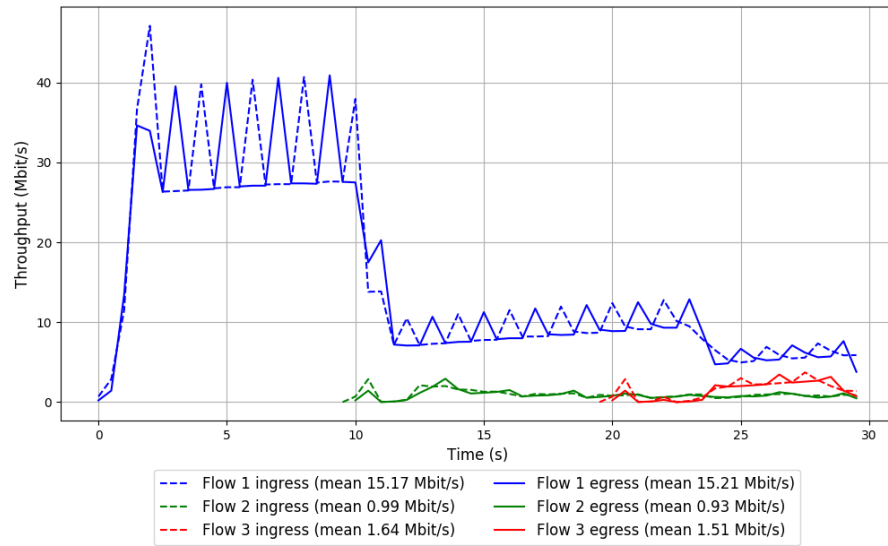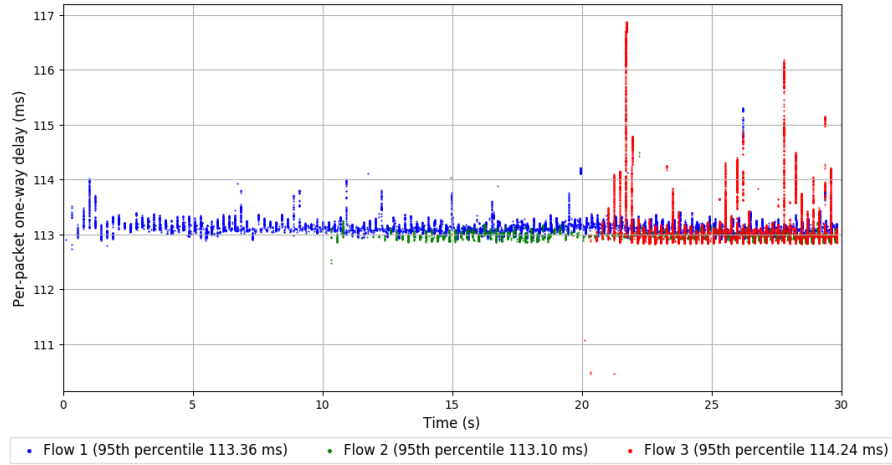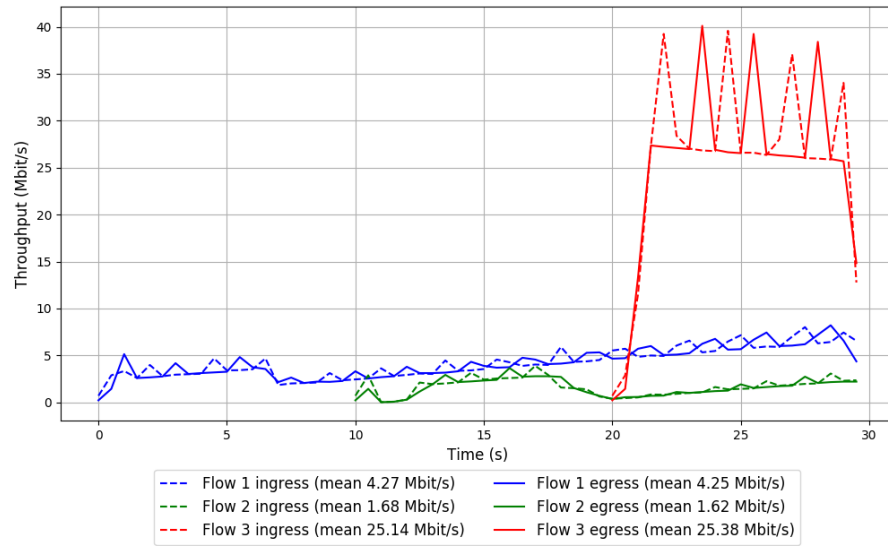
## Run 10: Report of TaoVA-100x — Data Link



Flow 1 ingress (mean 9.94 Mbit/s) --- Flow 1 egress (mean 8.73 Mbit/s)
Flow 2 ingress (mean 95.19 Mbit/s) --- Flow 2 egress (mean 95.81 Mbit/s)
Flow 3 ingress (mean 20.88 Mbit/s) --- Flow 3 egress (mean 14.96 Mbit/s)



Flow 1 (95th percentile 113.08 ms)   Flow 2 (95th percentile 112.39 ms)   Flow 3 (95th percentile 113.68 ms)

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```
Run 1: Statistics of TCP Vegas

Start at: 2017-08-12 00:52:30
End at: 2017-08-12 00:53:00

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 16.31 Mbit/s
95th percentile per-packet one-way delay: 114.332 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 15.21 Mbit/s
95th percentile per-packet one-way delay: 114.352 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 113.798 ms
Loss rate: 7.02%
-- Flow 3:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 113.763 ms
Loss rate: 9.55%
```
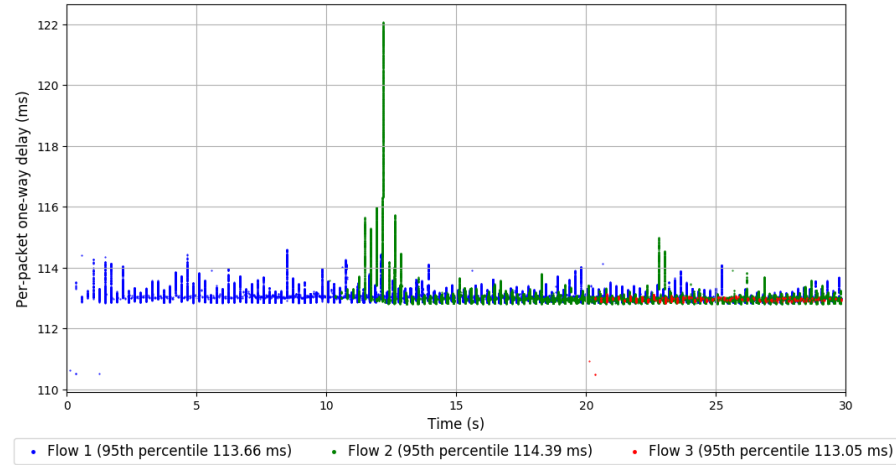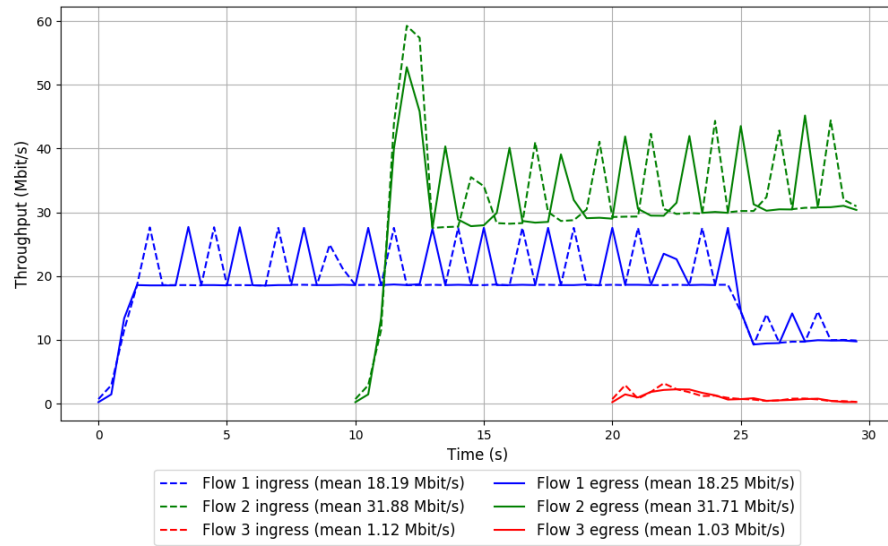
# Run 1: Report of TCP Vegas — Data Link



- Flow 1 ingress (mean 15.17 Mbit/s)
- Flow 1 egress (mean 15.21 Mbit/s)
- Flow 2 ingress (mean 0.99 Mbit/s)
- Flow 2 egress (mean 0.93 Mbit/s)
- Flow 3 ingress (mean 1.64 Mbit/s)
- Flow 3 egress (mean 1.51 Mbit/s)



- Flow 1 (95th percentile 114.35 ms)
- Flow 2 (95th percentile 113.80 ms)
- Flow 3 (95th percentile 113.76 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2017-08-12 01:05:11
End at: 2017-08-12 01:05:41

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 113.992 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 113.355 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 1.62 Mbit/s
95th percentile per-packet one-way delay: 113.098 ms
Loss rate: 4.98%
-- Flow 3:
Average throughput: 25.38 Mbit/s
95th percentile per-packet one-way delay: 114.238 ms
Loss rate: 1.32%
```
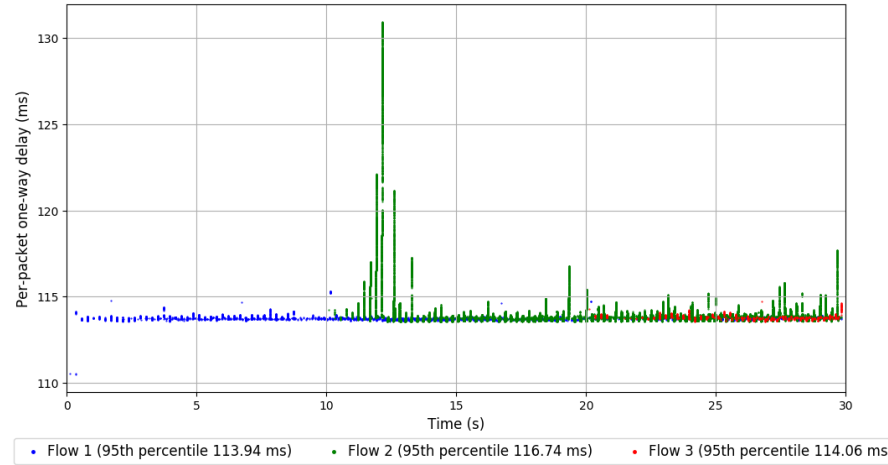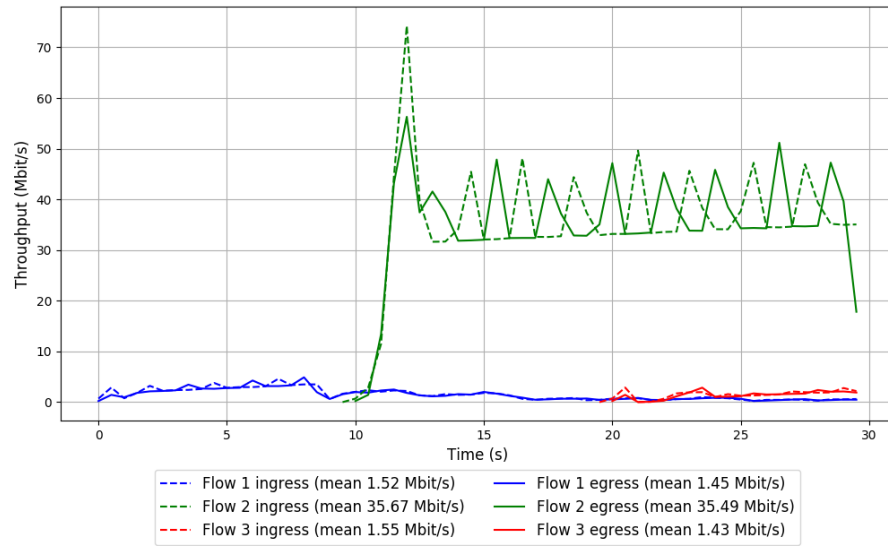
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-08-12 01:18:29
End at: 2017-08-12 01:18:59

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 113.889 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 113.659 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 114.386 ms
Loss rate: 1.86%
-- Flow 3:
Average throughput: 1.03 Mbit/s
95th percentile per-packet one-way delay: 113.049 ms
Loss rate: 9.63%
```
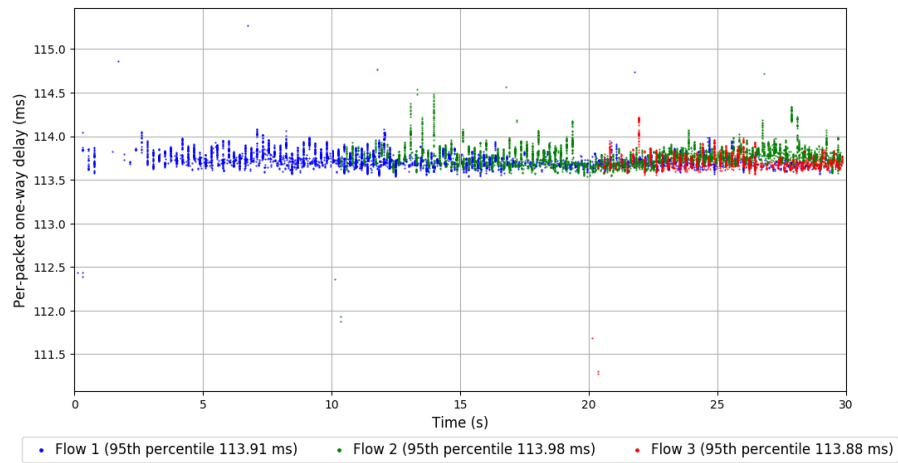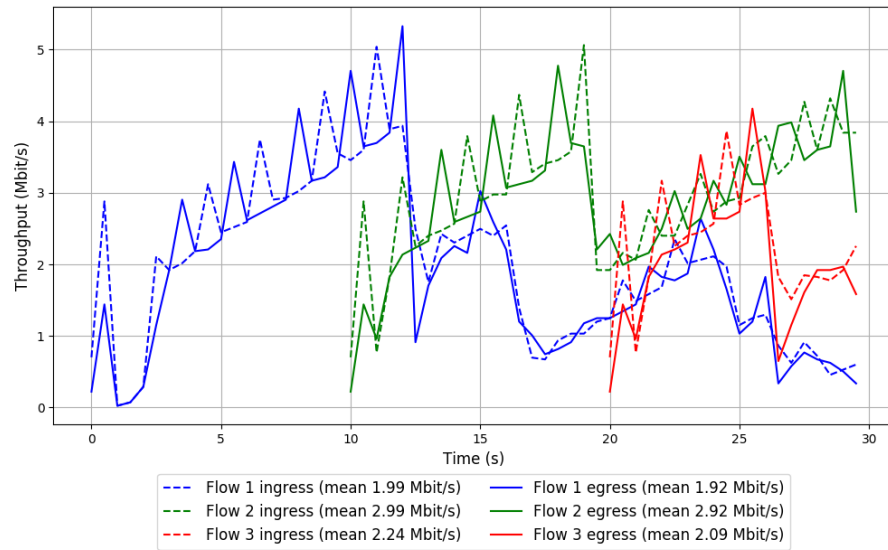
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2017-08-12 01:31:30
End at: 2017-08-12 01:32:00

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 116.487 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 1.45 Mbit/s
95th percentile per-packet one-way delay: 113.943 ms
Loss rate: 4.87%
-- Flow 2:
Average throughput: 35.49 Mbit/s
95th percentile per-packet one-way delay: 116.743 ms
Loss rate: 1.63%
-- Flow 3:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 114.055 ms
Loss rate: 9.93%
```
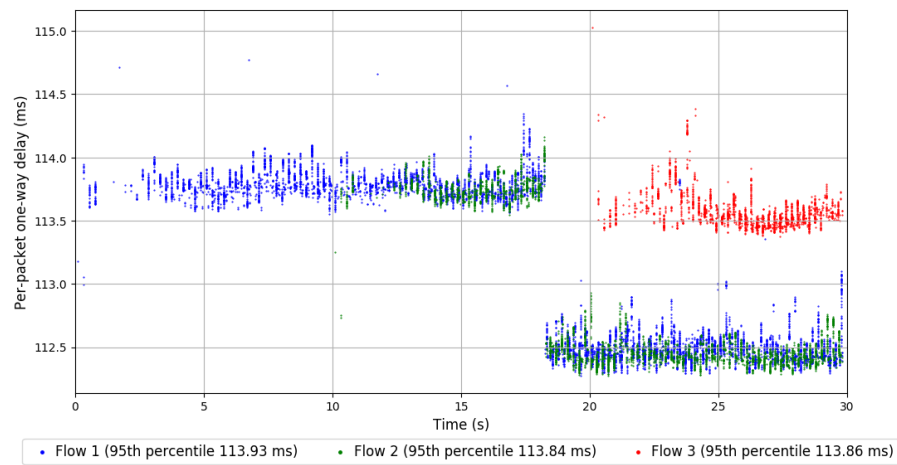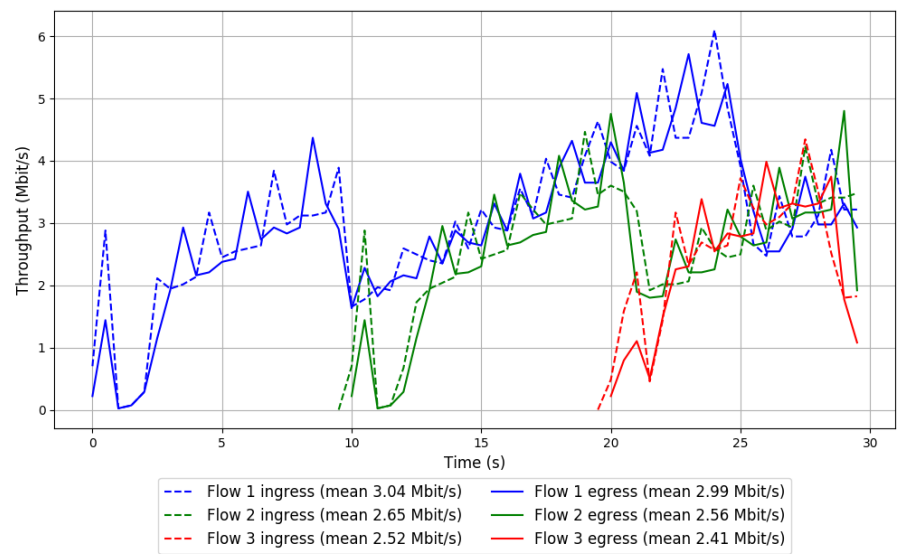
# Run 4: Report of TCP Vegas — Data Link



Legend:
- Flow 1 ingress (mean 1.52 Mbit/s)
- Flow 1 egress (mean 1.45 Mbit/s)
- Flow 2 ingress (mean 35.67 Mbit/s)
- Flow 2 egress (mean 35.49 Mbit/s)
- Flow 3 ingress (mean 1.55 Mbit/s)
- Flow 3 egress (mean 1.43 Mbit/s)



Legend:
- Flow 1 (95th percentile 113.94 ms)
- Flow 2 (95th percentile 116.74 ms)
- Flow 3 (95th percentile 114.06 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2017-08-12 01:44:08
End at: 2017-08-12 01:44:38

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.54 Mbit/s
95th percentile per-packet one-way delay: 113.930 ms
Loss rate: 4.57%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 113.907 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 2.92 Mbit/s
95th percentile per-packet one-way delay: 113.978 ms
Loss rate: 3.54%
-- Flow 3:
Average throughput: 2.09 Mbit/s
95th percentile per-packet one-way delay: 113.883 ms
Loss rate: 8.88%
```
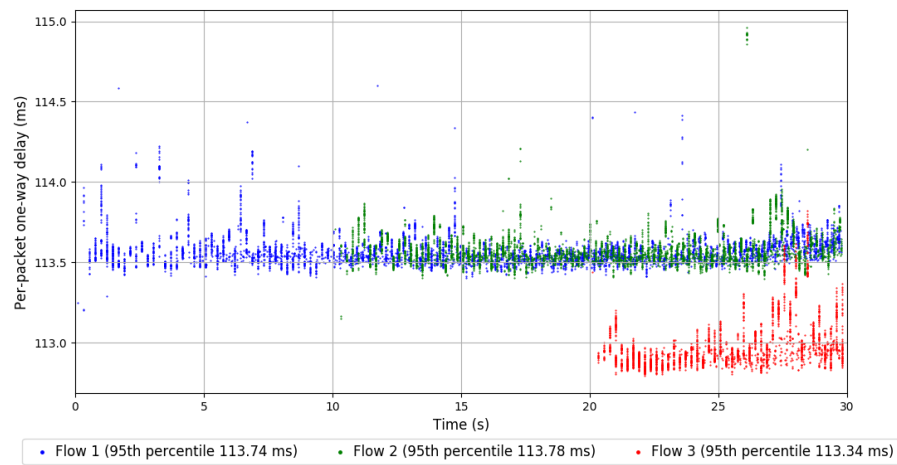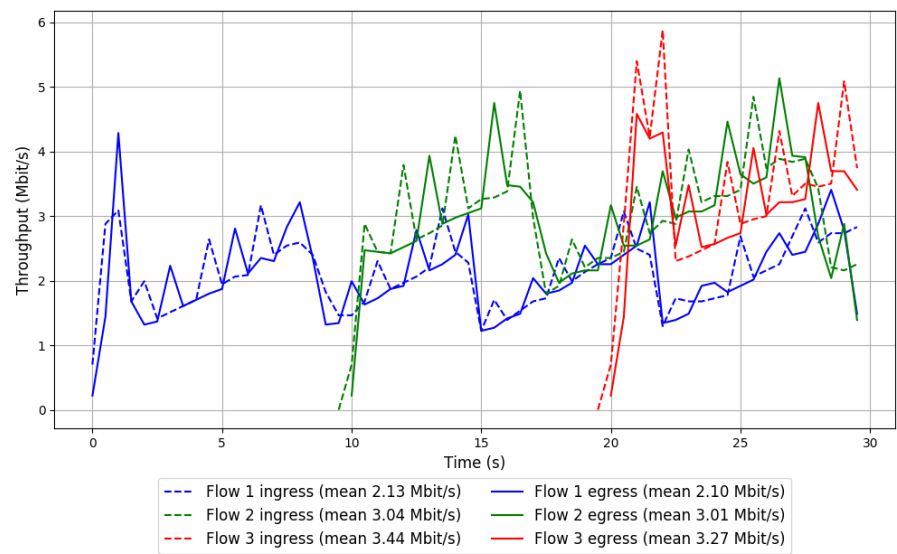
Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2017-08-12 01:56:39
End at: 2017-08-12 01:57:09

Below is generated by plot.py at 2017-08-12 06:01:29
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 113.899 ms
Loss rate: 3.68%
-- Flow 1:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 113.930 ms
Loss rate: 2.59%
-- Flow 2:
Average throughput: 2.56 Mbit/s
95th percentile per-packet one-way delay: 113.838 ms
Loss rate: 4.32%
-- Flow 3:
Average throughput: 2.41 Mbit/s
95th percentile per-packet one-way delay: 113.860 ms
Loss rate: 6.30%
```
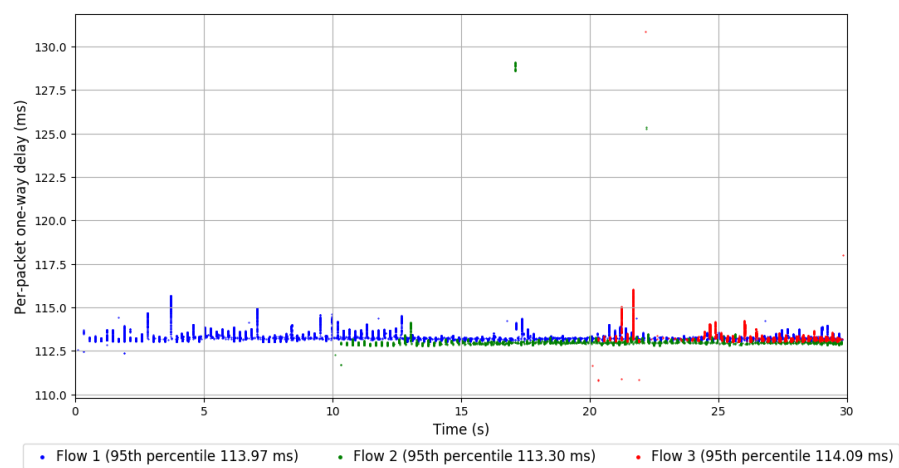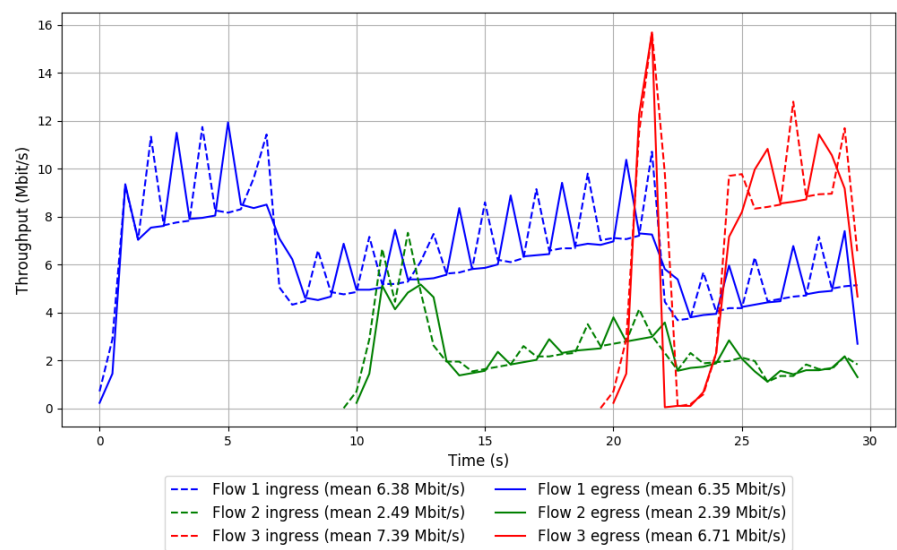
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2017-08-12 02:09:53
End at: 2017-08-12 02:10:23

Below is generated by plot.py at 2017-08-12 06:01:32
Datalink statistics
-- Total of 3 flows:
Average throughput: 5.16 Mbit/s
95th percentile per-packet one-way delay: 113.744 ms
Loss rate: 3.11%
-- Flow 1:
Average throughput: 2.10 Mbit/s
95th percentile per-packet one-way delay: 113.740 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 113.778 ms
Loss rate: 2.06%
-- Flow 3:
Average throughput: 3.27 Mbit/s
95th percentile per-packet one-way delay: 113.338 ms
Loss rate: 7.05%
```
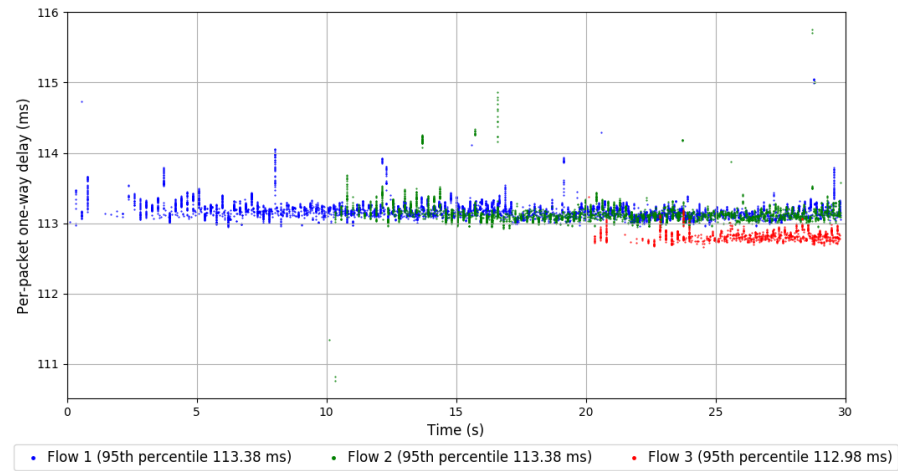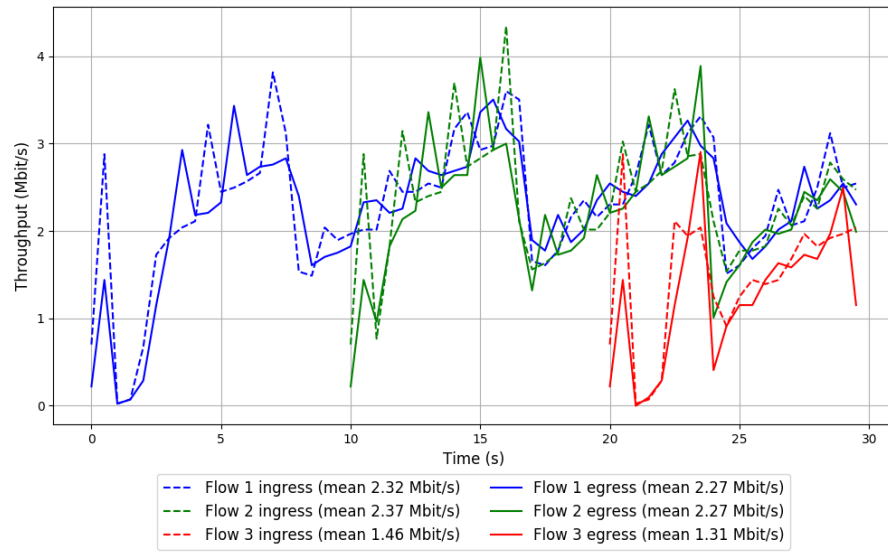
Run 7: Report of TCP Vegas — Data Link





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```
Run 8: Statistics of TCP Vegas

Start at: 2017-08-12 02:23:00
End at: 2017-08-12 02:23:30

Below is generated by plot.py at 2017-08-12 06:01:33
Datalink statistics
-- Total of 3 flows:
Average throughput: 10.13 Mbit/s
95th percentile per-packet one-way delay: 113.944 ms
Loss rate: 4.03%
-- Flow 1:
Average throughput: 6.35 Mbit/s
95th percentile per-packet one-way delay: 113.965 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 113.298 ms
Loss rate: 4.99%
-- Flow 3:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 114.088 ms
Loss rate: 10.57%
```
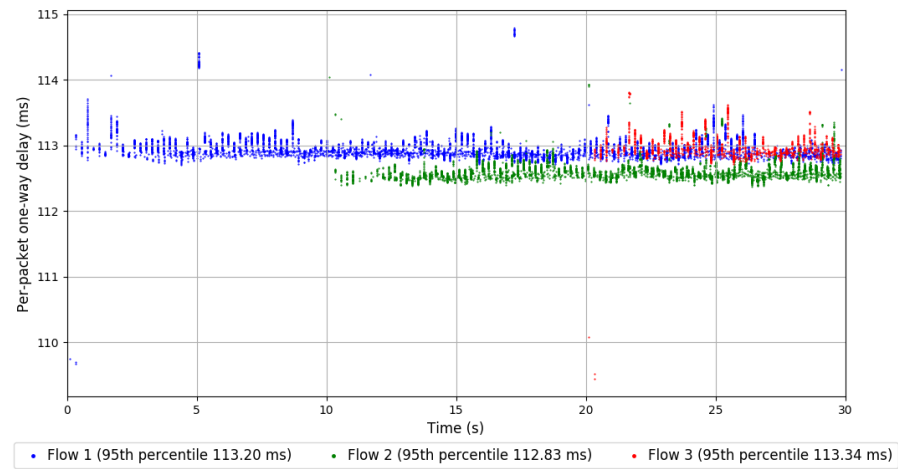
# Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-08-12 02:35:37
End at: 2017-08-12 02:36:07

Below is generated by plot.py at 2017-08-12 06:01:34
Datalink statistics
-- Total of 3 flows:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 113.368 ms
Loss rate: 4.80%
-- Flow 1:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.379 ms
Loss rate: 2.73%
-- Flow 2:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 113.379 ms
Loss rate: 5.28%
-- Flow 3:
Average throughput: 1.31 Mbit/s
95th percentile per-packet one-way delay: 112.976 ms
Loss rate: 13.09%
```
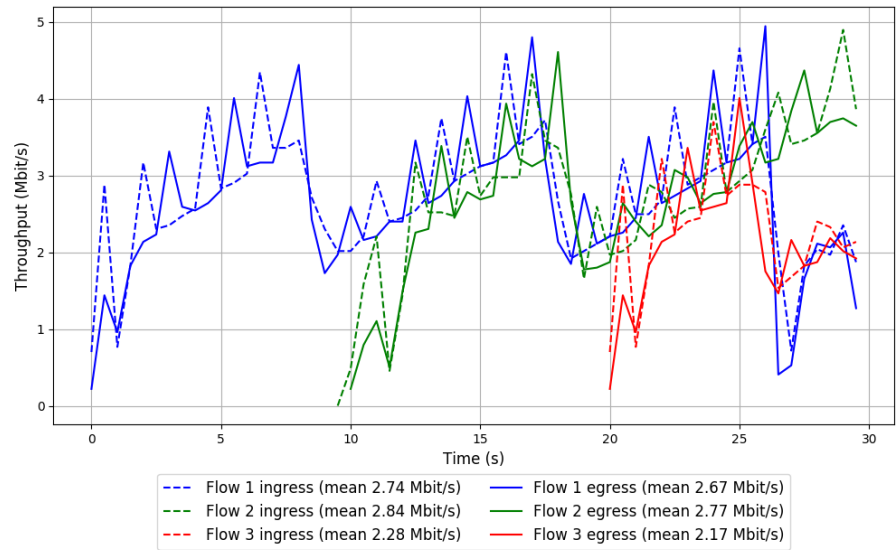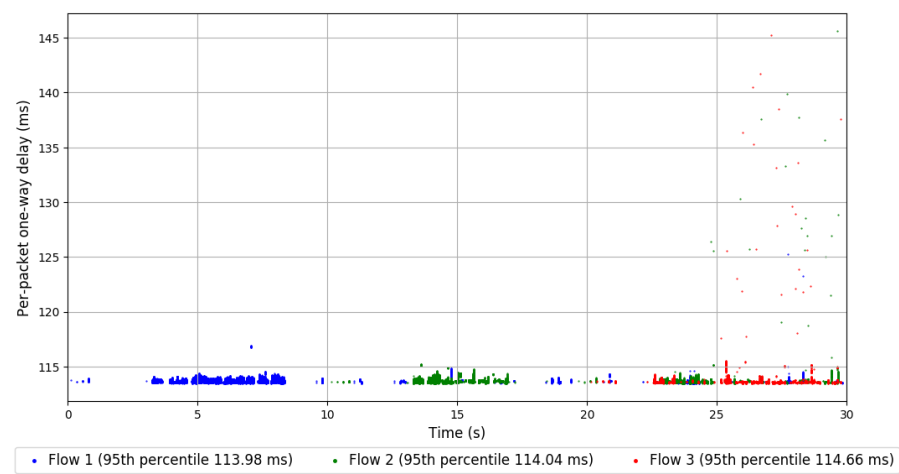
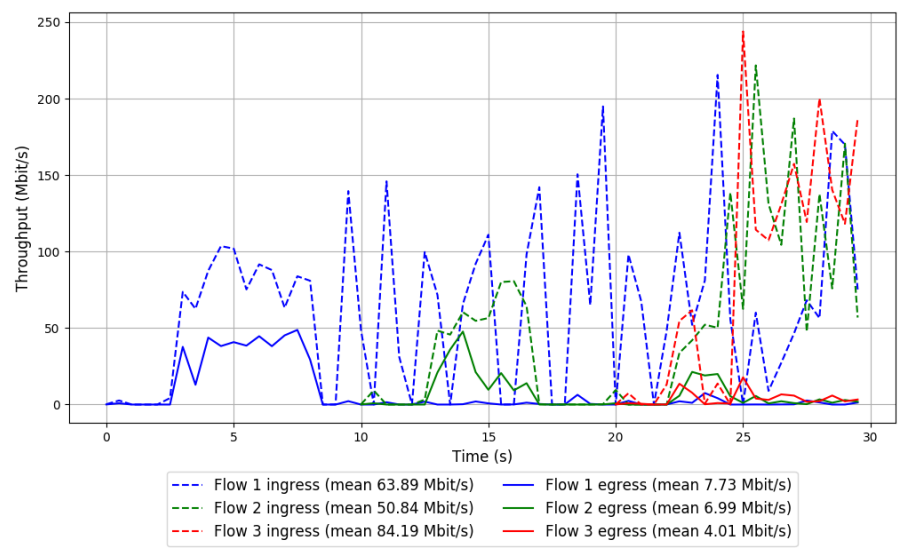Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2017-08-12 02:48:12
End at: 2017-08-12 02:48:42

# Below is generated by plot.py at 2017-08-12 06:01:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 5.21 Mbit/s
95th percentile per-packet one-way delay: 113.179 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 2.67 Mbit/s
95th percentile per-packet one-way delay: 113.198 ms
Loss rate: 3.05%
-- Flow 2:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 112.825 ms
Loss rate: 3.75%
-- Flow 3:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 113.341 ms
Loss rate: 7.45%
```

Run 10: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2017-08-12 00:49:18
End at: 2017-08-12 00:49:48

# Below is generated by plot.py at 2017-08-12 06:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.62 Mbit/s
95th percentile per-packet one-way delay: 114.015 ms
Loss rate: 89.20%
-- Flow 1:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 113.985 ms
Loss rate: 87.91%
-- Flow 2:
Average throughput: 6.99 Mbit/s
95th percentile per-packet one-way delay: 114.037 ms
Loss rate: 86.53%
-- Flow 3:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 114.664 ms
Loss rate: 95.38%
```
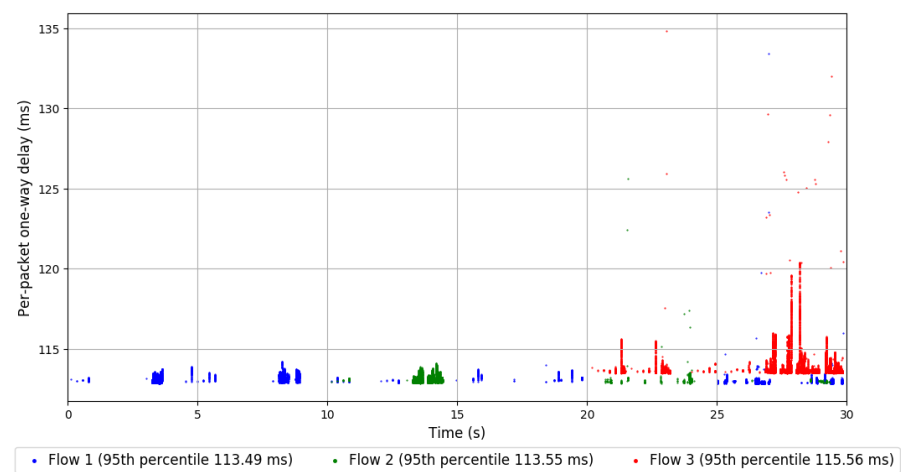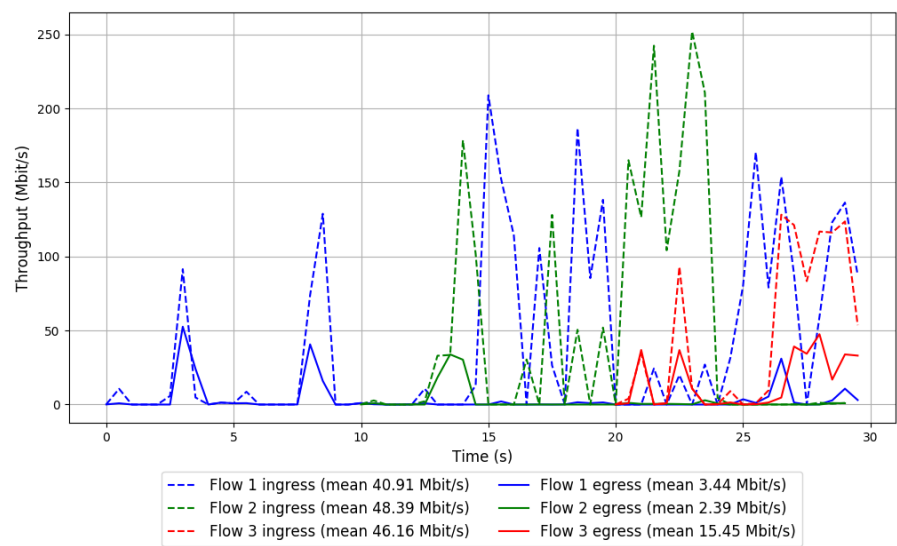
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-08-12 01:02:00
End at: 2017-08-12 01:02:30


# Below is generated by plot.py at 2017-08-12 06:01:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.01 Mbit/s
95th percentile per-packet one-way delay: 114.943 ms
Loss rate: 88.63%
-- Flow 1:
Average throughput: 3.44 Mbit/s
95th percentile per-packet one-way delay: 113.488 ms
Loss rate: 91.65%
-- Flow 2:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 113.552 ms
Loss rate: 95.11%
-- Flow 3:
Average throughput: 15.45 Mbit/s
95th percentile per-packet one-way delay: 115.555 ms
Loss rate: 67.03%
```
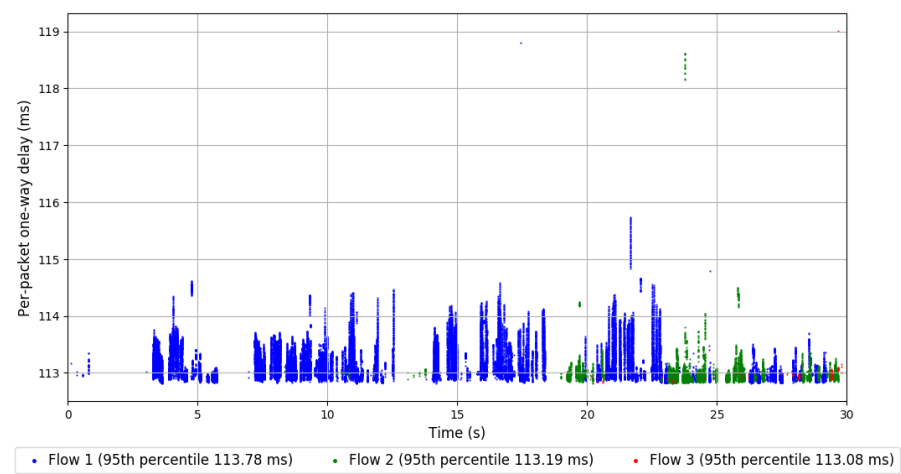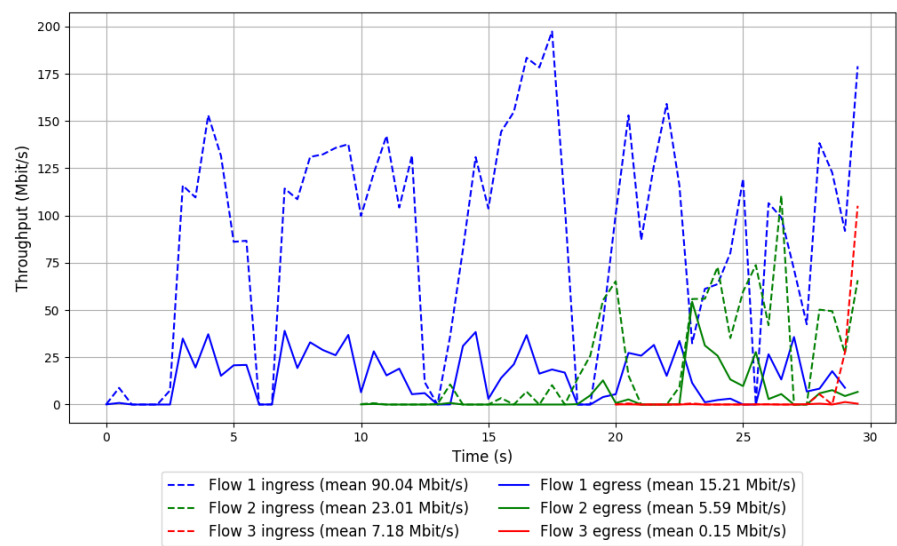
Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 40.91 Mbit/s) — — — Flow 1 egress (mean 3.44 Mbit/s)
Flow 2 ingress (mean 48.39 Mbit/s) — — — Flow 2 egress (mean 2.39 Mbit/s)
Flow 3 ingress (mean 46.16 Mbit/s) — — — Flow 3 egress (mean 15.45 Mbit/s)

Flow 1 (95th percentile 113.49 ms)   Flow 2 (95th percentile 113.55 ms)   Flow 3 (95th percentile 115.56 ms)

```
Run 3: Statistics of Verus

Start at: 2017-08-12 01:15:17
End at: 2017-08-12 01:15:47


# Below is generated by plot.py at 2017-08-12 06:01:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.68 Mbit/s
95th percentile per-packet one-way delay: 113.721 ms
Loss rate: 82.77%
-- Flow 1:
Average throughput: 15.21 Mbit/s
95th percentile per-packet one-way delay: 113.776 ms
Loss rate: 83.50%
-- Flow 2:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 113.190 ms
Loss rate: 76.15%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 113.083 ms
Loss rate: 97.89%
```
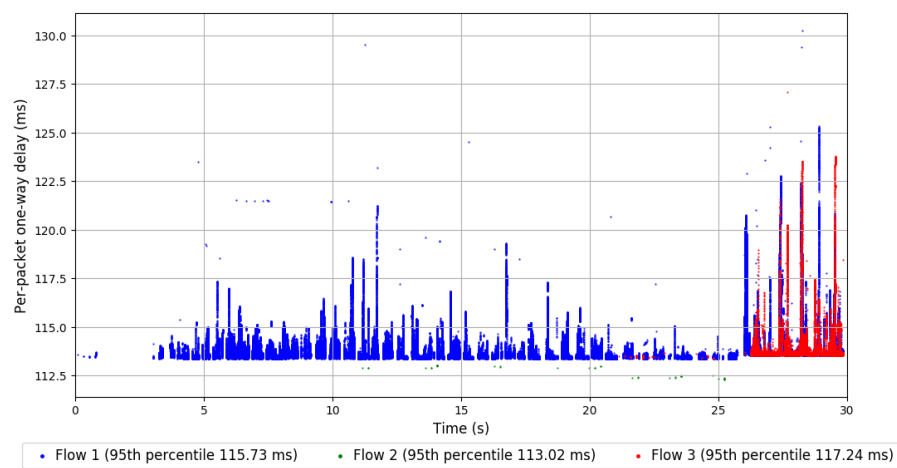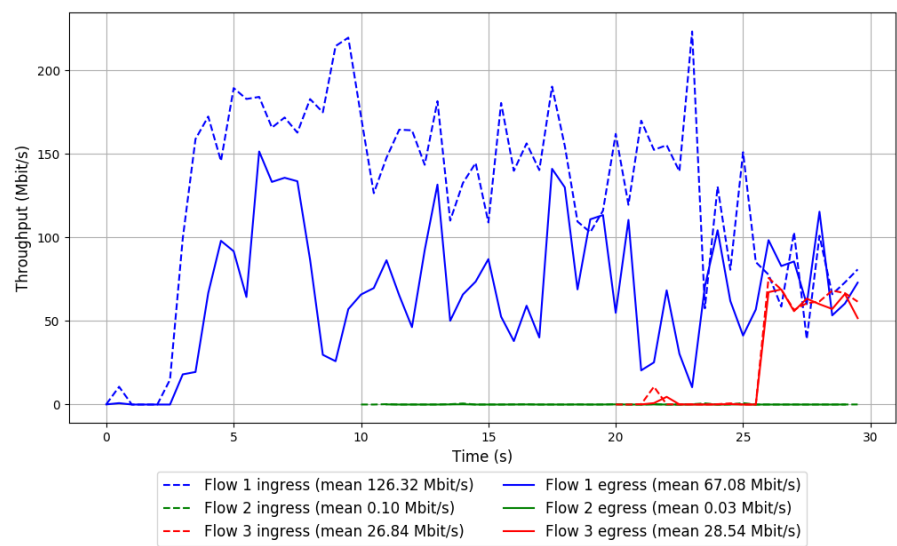
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-08-12 01:28:13
End at: 2017-08-12 01:28:43

# Below is generated by plot.py at 2017-08-12 06:01:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.43 Mbit/s
95th percentile per-packet one-way delay: 115.864 ms
Loss rate: 44.66%
-- Flow 1:
Average throughput: 67.08 Mbit/s
95th percentile per-packet one-way delay: 115.726 ms
Loss rate: 47.31%
-- Flow 2:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 113.020 ms
Loss rate: 73.94%
-- Flow 3:
Average throughput: 28.54 Mbit/s
95th percentile per-packet one-way delay: 117.242 ms
Loss rate: 6.71%
```
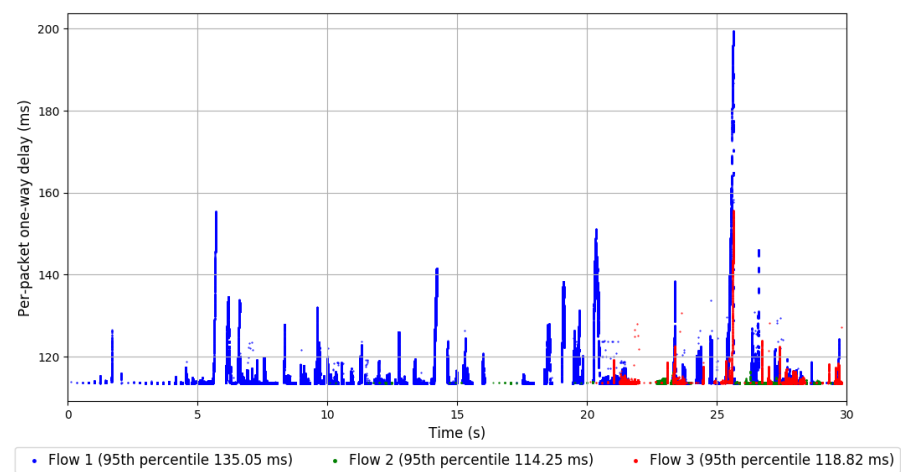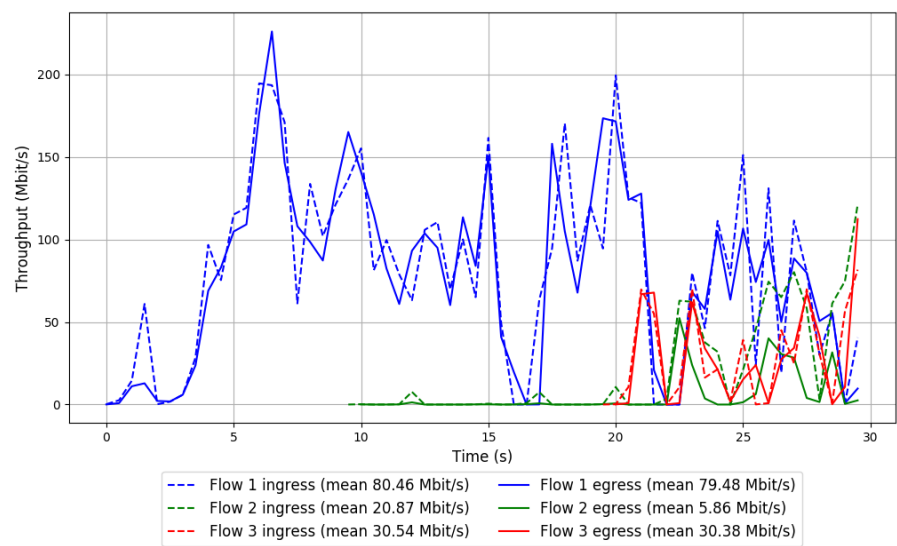
Run 4: Report of Verus — Data Link

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```
Run 5: Statistics of Verus

Start at: 2017-08-12 01:40:52
End at: 2017-08-12 01:41:22


# Below is generated by plot.py at 2017-08-12 06:02:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.97 Mbit/s
95th percentile per-packet one-way delay: 133.896 ms
Loss rate: 11.67%
-- Flow 1:
Average throughput: 79.48 Mbit/s
95th percentile per-packet one-way delay: 135.051 ms
Loss rate: 2.33%
-- Flow 2:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 114.255 ms
Loss rate: 72.30%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 118.822 ms
Loss rate: 2.66%
```
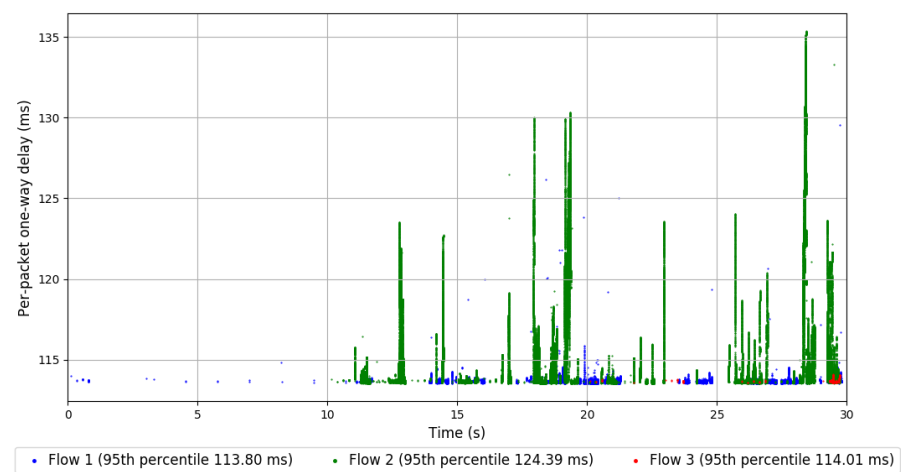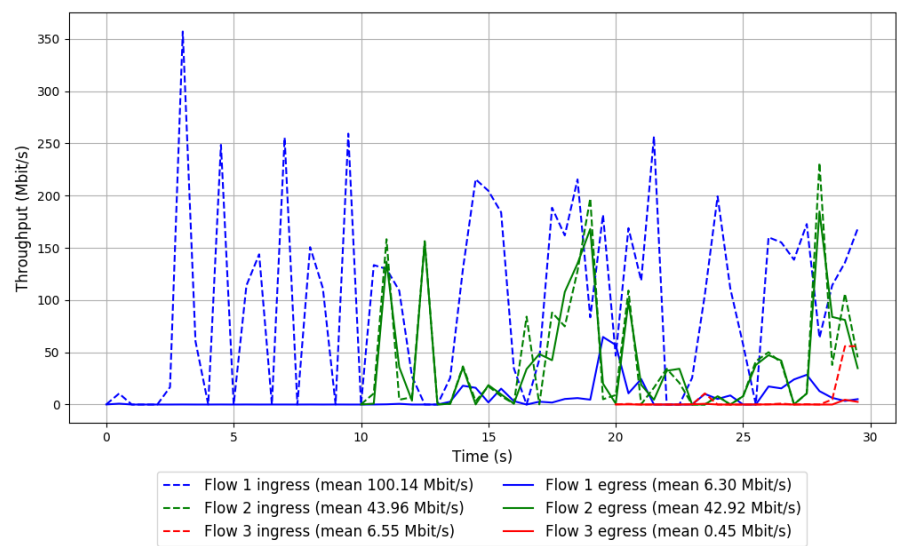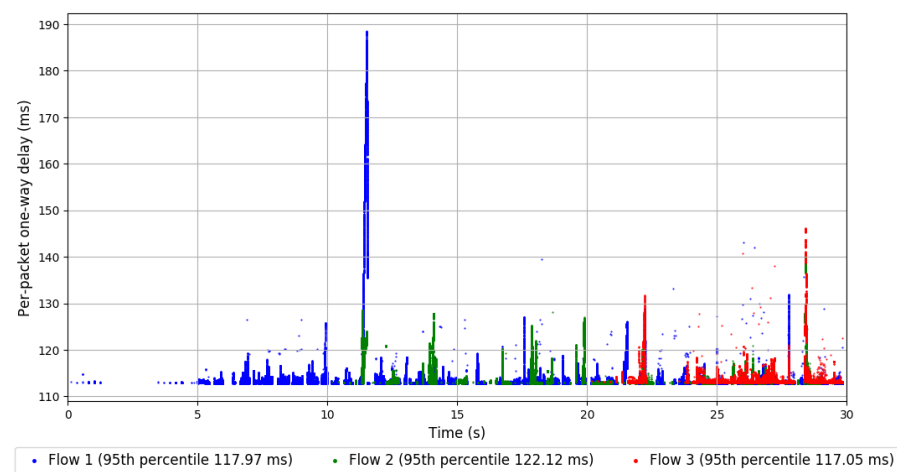
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 80.46 Mbit/s) --- Flow 1 egress (mean 79.48 Mbit/s)
Flow 2 ingress (mean 20.87 Mbit/s) --- Flow 2 egress (mean 5.86 Mbit/s)
Flow 3 ingress (mean 30.54 Mbit/s) --- Flow 3 egress (mean 30.38 Mbit/s)

Flow 1 (95th percentile 135.05 ms)   Flow 2 (95th percentile 114.25 ms)   Flow 3 (95th percentile 118.82 ms)

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```
Run 6: Statistics of Verus

Start at: 2017-08-12 01:53:27
End at: 2017-08-12 01:53:57


# Below is generated by plot.py at 2017-08-12 06:02:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 34.76 Mbit/s
95th percentile per-packet one-way delay: 123.378 ms
Loss rate: 73.78%
-- Flow 1:
Average throughput: 6.30 Mbit/s
95th percentile per-packet one-way delay: 113.804 ms
Loss rate: 93.76%
-- Flow 2:
Average throughput: 42.92 Mbit/s
95th percentile per-packet one-way delay: 124.390 ms
Loss rate: 3.89%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 114.011 ms
Loss rate: 93.34%
```
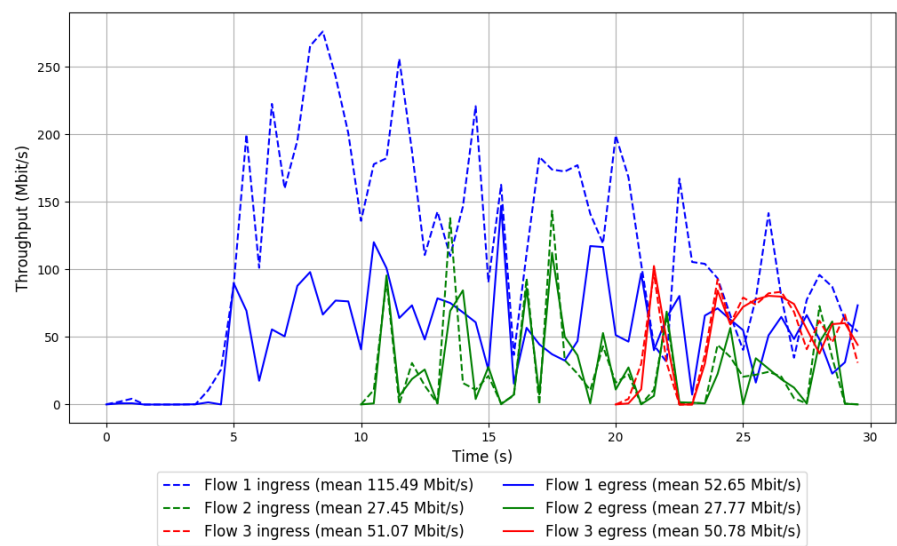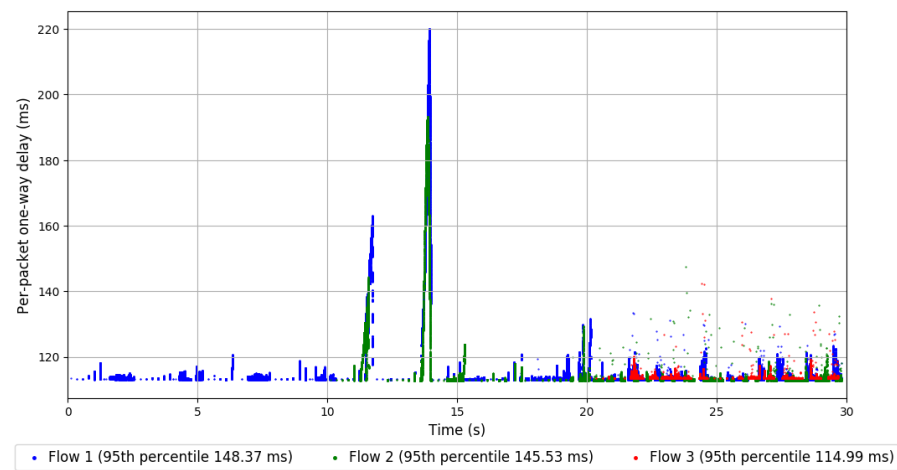
Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-08-12 02:06:35
End at: 2017-08-12 02:07:05


# Below is generated by plot.py at 2017-08-12 06:02:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.39 Mbit/s
95th percentile per-packet one-way delay: 120.505 ms
Loss rate: 41.94%
-- Flow 1:
Average throughput: 52.65 Mbit/s
95th percentile per-packet one-way delay: 117.973 ms
Loss rate: 54.47%
-- Flow 2:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 122.122 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 50.78 Mbit/s
95th percentile per-packet one-way delay: 117.049 ms
Loss rate: 0.73%
```
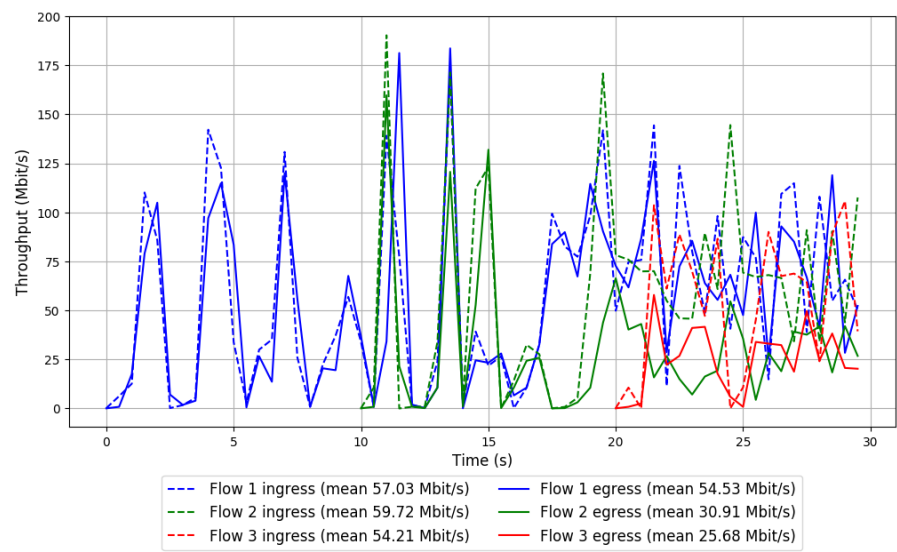
Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-08-12 02:19:41
End at: 2017-08-12 02:20:11


# Below is generated by plot.py at 2017-08-12 06:02:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 146.513 ms
Loss rate: 27.93%
-- Flow 1:
Average throughput: 54.53 Mbit/s
95th percentile per-packet one-way delay: 148.365 ms
Loss rate: 5.10%
-- Flow 2:
Average throughput: 30.91 Mbit/s
95th percentile per-packet one-way delay: 145.529 ms
Loss rate: 48.77%
-- Flow 3:
Average throughput: 25.68 Mbit/s
95th percentile per-packet one-way delay: 114.993 ms
Loss rate: 54.41%
```
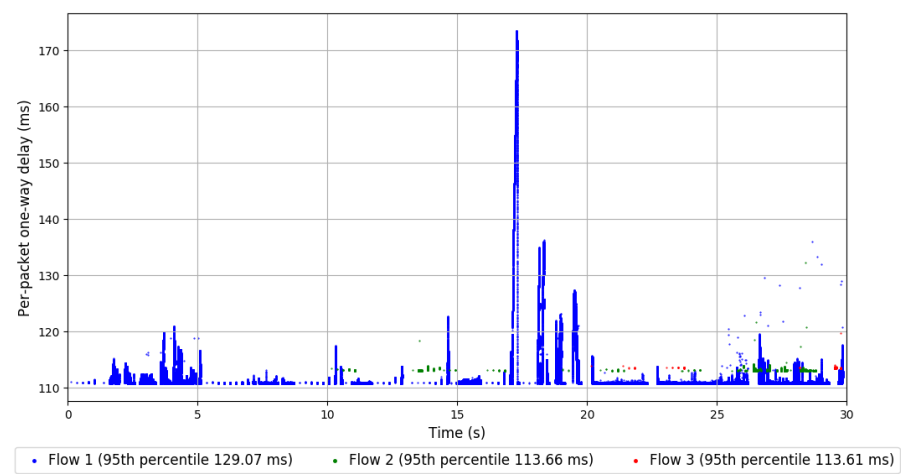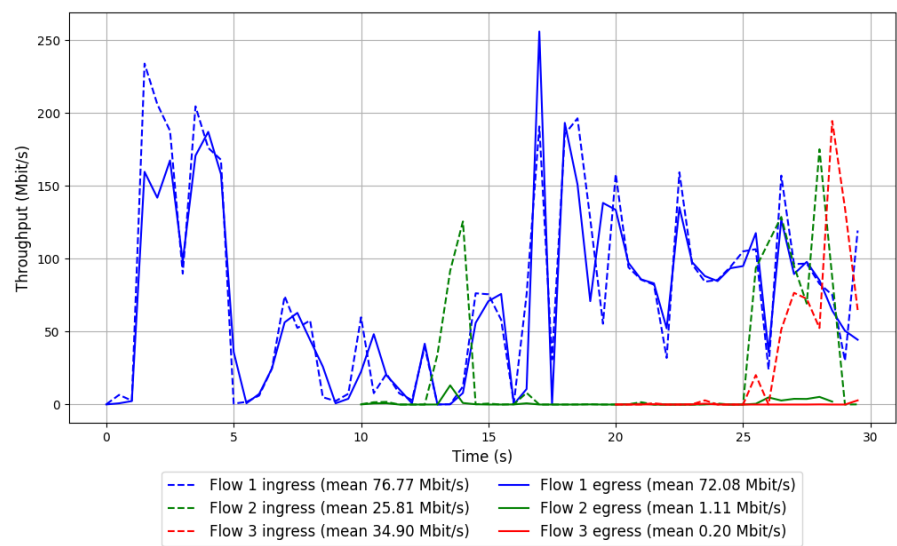
Run 8: Report of Verus — Data Link

```
Run 9: Statistics of Verus

Start at: 2017-08-12 02:32:19
End at: 2017-08-12 02:32:49


# Below is generated by plot.py at 2017-08-12 06:02:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.84 Mbit/s
95th percentile per-packet one-way delay: 128.722 ms
Loss rate: 31.25%
-- Flow 1:
Average throughput: 72.08 Mbit/s
95th percentile per-packet one-way delay: 129.072 ms
Loss rate: 6.83%
-- Flow 2:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 113.662 ms
Loss rate: 95.96%
-- Flow 3:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 113.609 ms
Loss rate: 99.42%
```
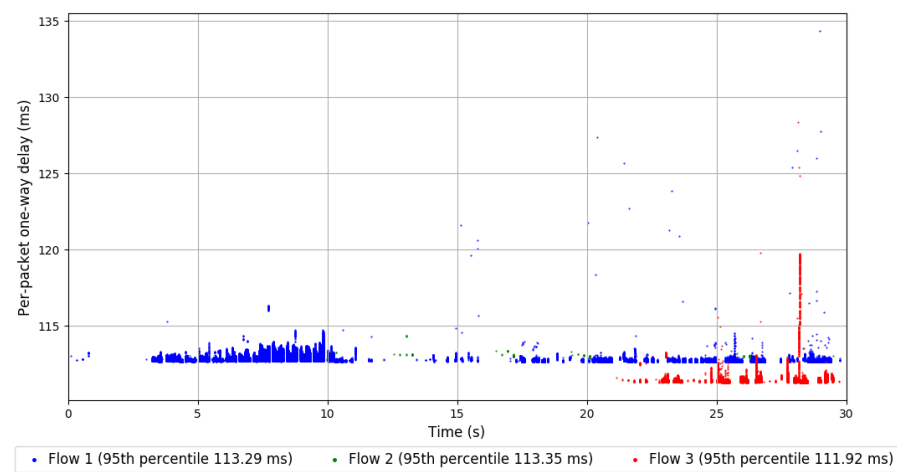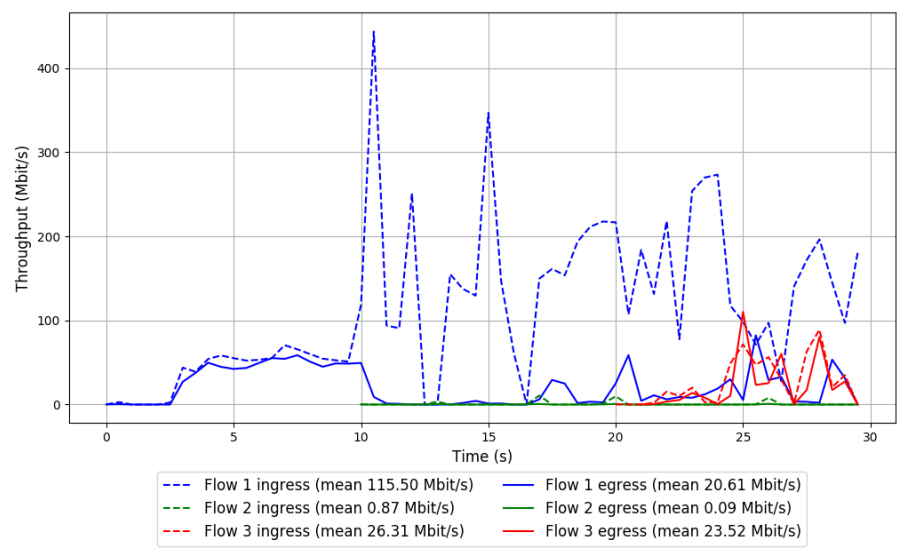
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-08-12 02:45:00
End at: 2017-08-12 02:45:30


# Below is generated by plot.py at 2017-08-12 06:02:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 113.240 ms
Loss rate: 78.16%
-- Flow 1:
Average throughput: 20.61 Mbit/s
95th percentile per-packet one-way delay: 113.288 ms
Loss rate: 82.32%
-- Flow 2:
Average throughput: 0.09 Mbit/s
95th percentile per-packet one-way delay: 113.351 ms
Loss rate: 89.97%
-- Flow 3:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 111.923 ms
Loss rate: 21.70%
```

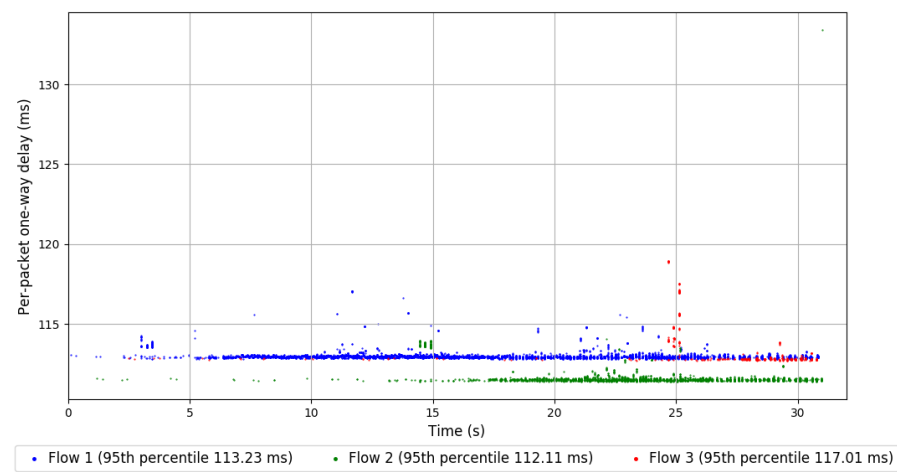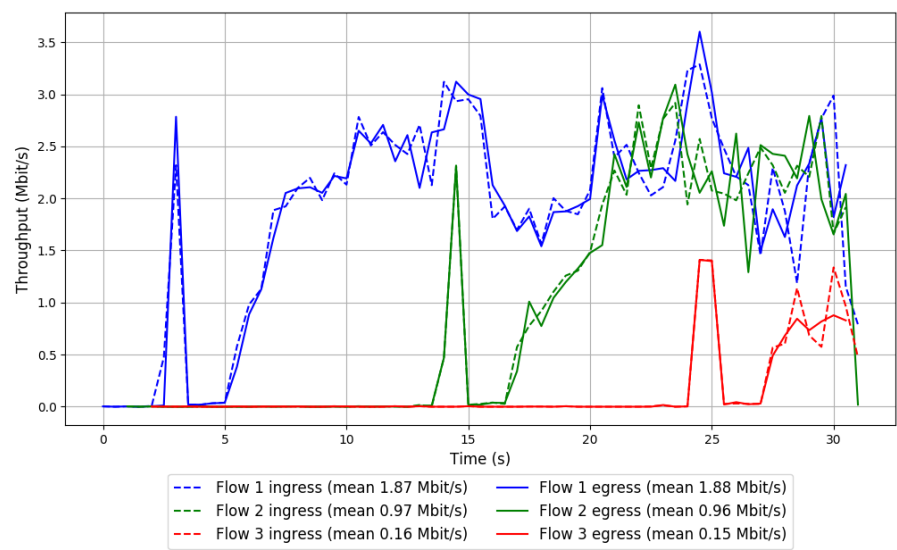## Run 10: Report of Verus — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2017-08-12 00:43:14
End at: 2017-08-12 00:43:44

# Below is generated by plot.py at 2017-08-12 06:02:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.93 Mbit/s
95th percentile per-packet one-way delay: 113.432 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 113.232 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 112.112 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 117.011 ms
Loss rate: 11.46%
```
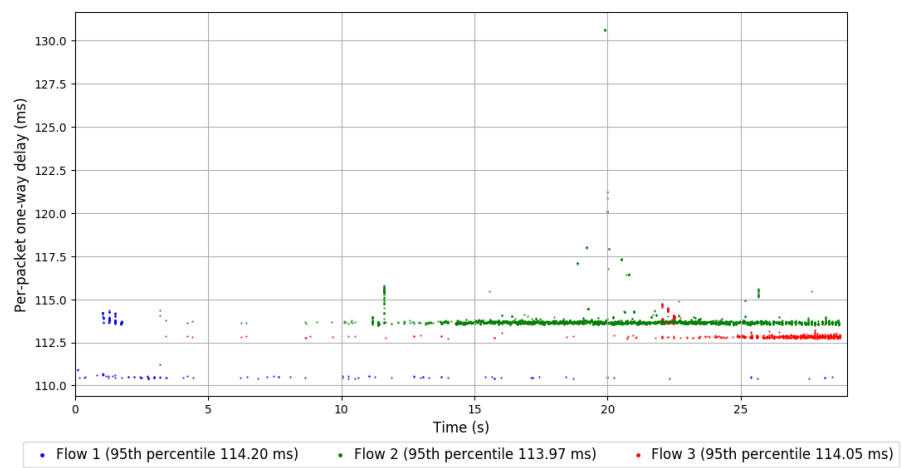
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-08-12 00:55:52
End at: 2017-08-12 00:56:22

# Below is generated by plot.py at 2017-08-12 06:02:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 114.034 ms
Loss rate: 2.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 114.196 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 113.972 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 114.051 ms
Loss rate: 6.94%
```
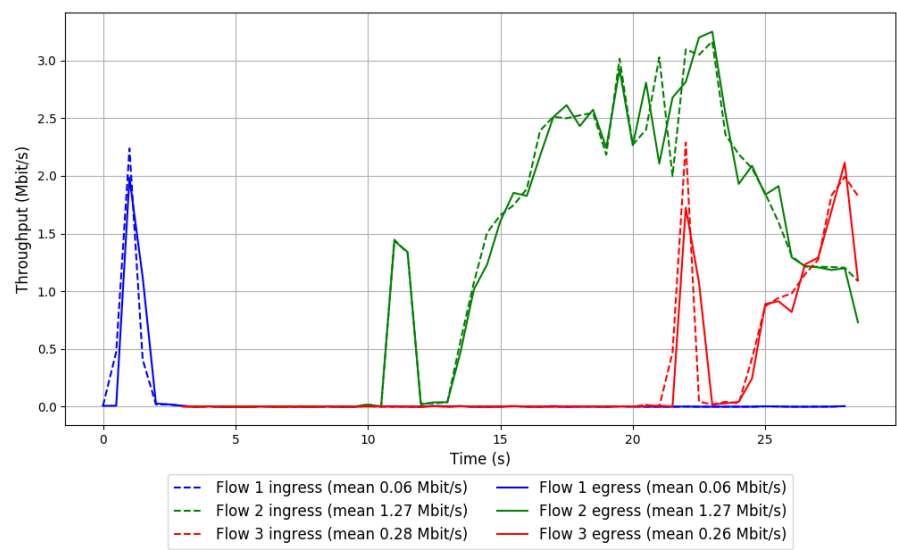
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-08-12 01:09:00
End at: 2017-08-12 01:09:30


# Below is generated by plot.py at 2017-08-12 06:02:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.50 Mbit/s
95th percentile per-packet one-way delay: 113.105 ms
Loss rate: 3.09%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.554 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 110.912 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 0.26 Mbit/s
95th percentile per-packet one-way delay: 113.536 ms
Loss rate: 8.77%
```
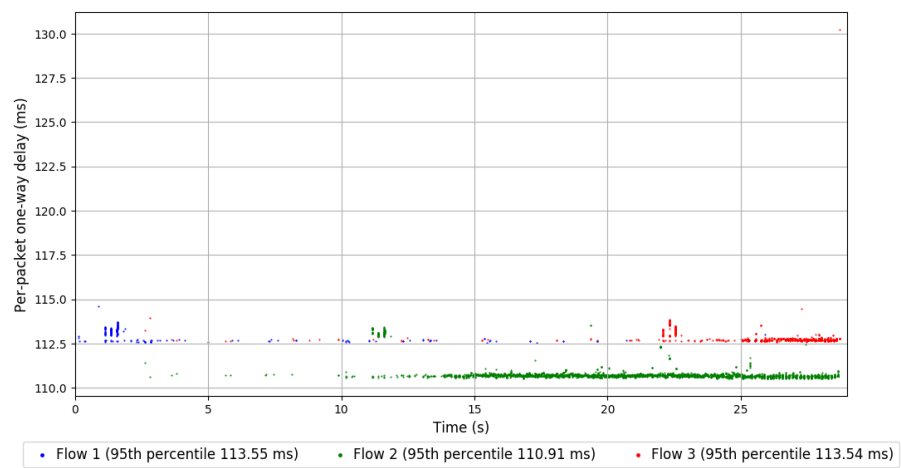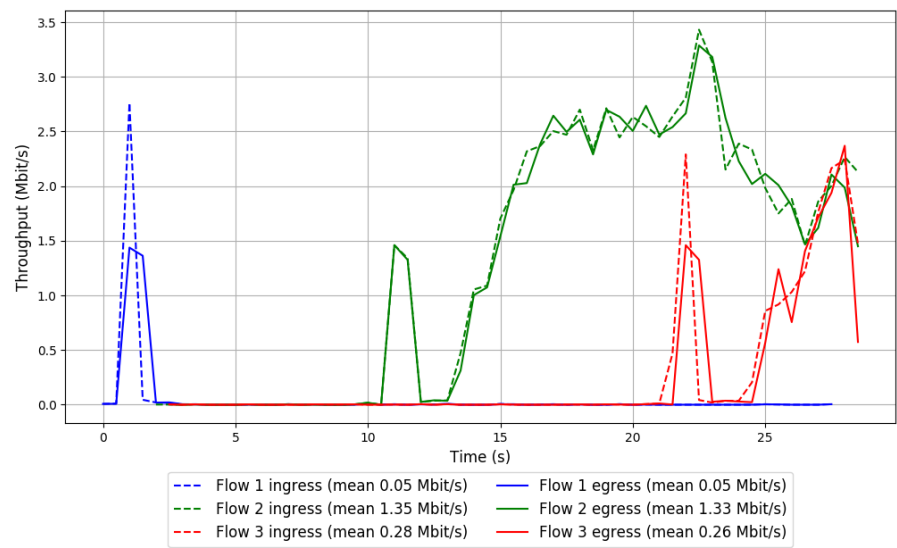
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2017-08-12 01:22:14
End at: 2017-08-12 01:22:44


# Below is generated by plot.py at 2017-08-12 06:02:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.43 Mbit/s
95th percentile per-packet one-way delay: 113.374 ms
Loss rate: 3.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.444 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 113.332 ms
Loss rate: 2.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 114.271 ms
Loss rate: 9.04%
```
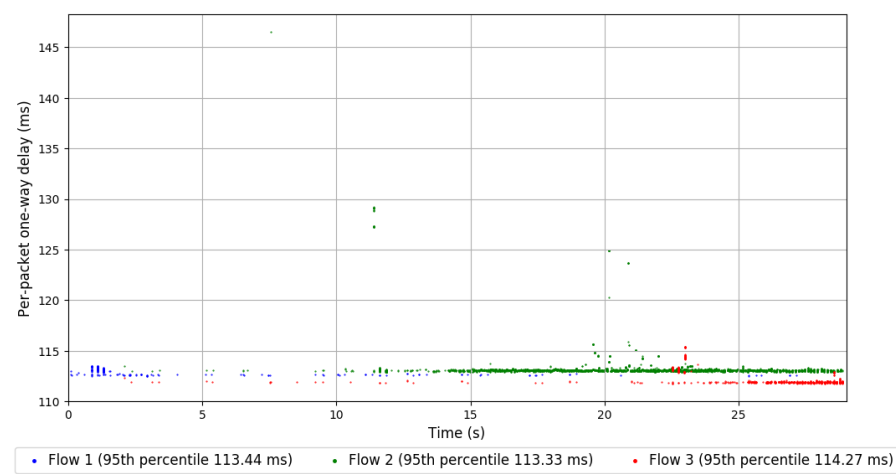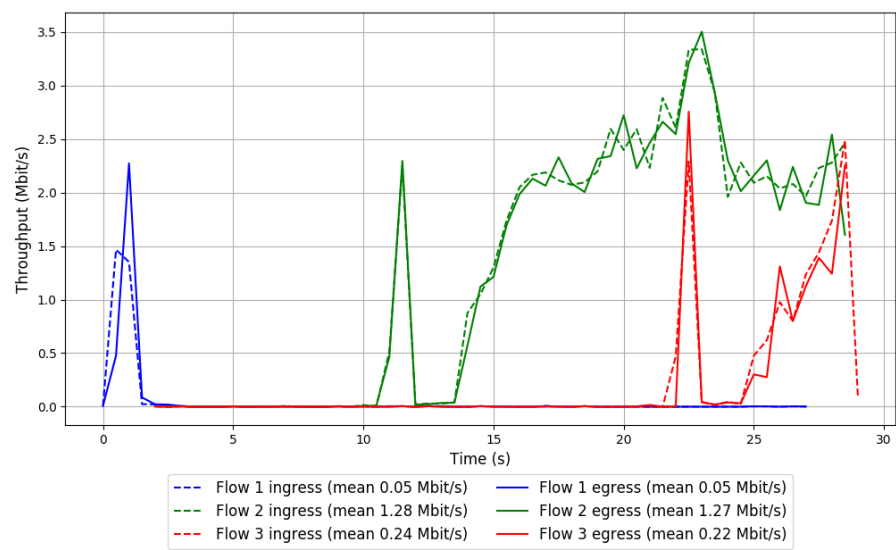
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-08-12 01:34:57
End at: 2017-08-12 01:35:27


# Below is generated by plot.py at 2017-08-12 06:02:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.90 Mbit/s
95th percentile per-packet one-way delay: 113.561 ms
Loss rate: 1.96%
-- Flow 1:
Average throughput: 1.74 Mbit/s
95th percentile per-packet one-way delay: 113.275 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 1.09 Mbit/s
95th percentile per-packet one-way delay: 113.497 ms
Loss rate: 2.65%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 113.987 ms
Loss rate: 6.93%
```
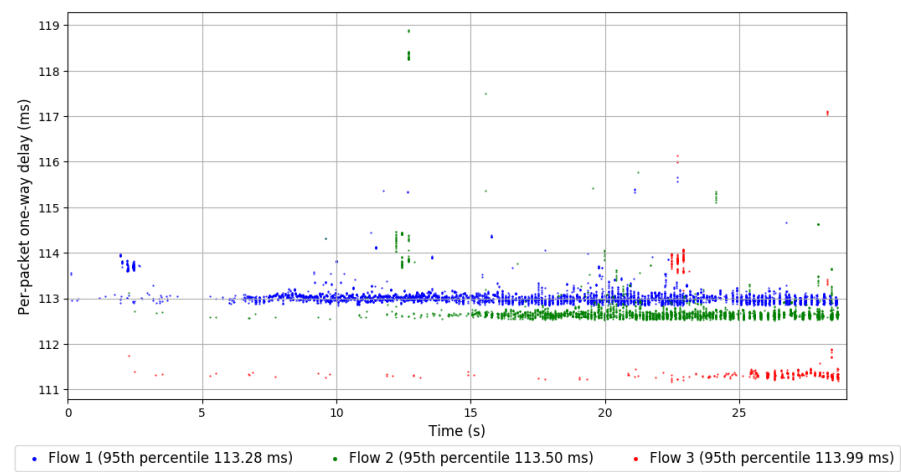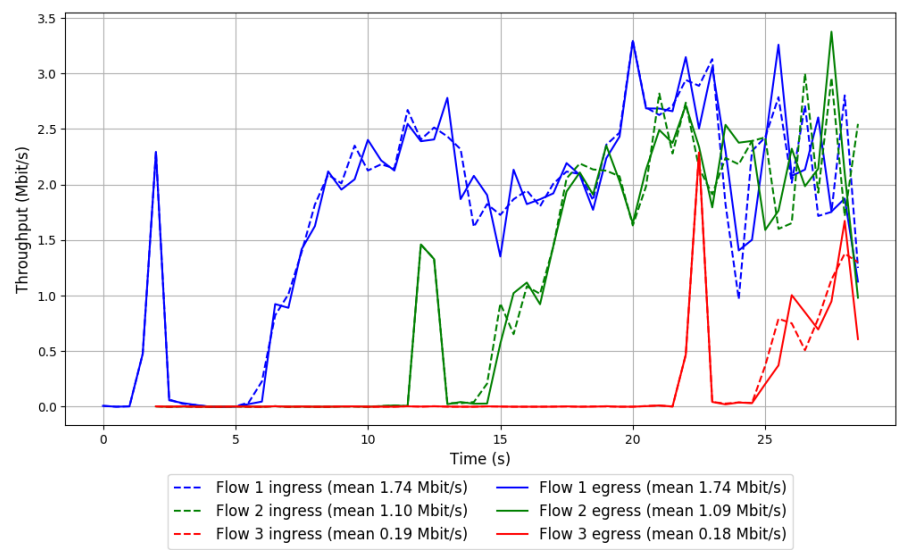
Run 5: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.74 Mbit/s)   Flow 1 egress (mean 1.74 Mbit/s)
Flow 2 ingress (mean 1.10 Mbit/s)   Flow 2 egress (mean 1.09 Mbit/s)
Flow 3 ingress (mean 0.19 Mbit/s)   Flow 3 egress (mean 0.18 Mbit/s)

Flow 1 (95th percentile 113.28 ms)   Flow 2 (95th percentile 113.50 ms)   Flow 3 (95th percentile 113.99 ms)

```
Run 6: Statistics of WebRTC media

Start at: 2017-08-12 01:47:37
End at: 2017-08-12 01:48:07

# Below is generated by plot.py at 2017-08-12 06:02:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.14 Mbit/s
95th percentile per-packet one-way delay: 113.936 ms
Loss rate: 4.53%
-- Flow 1:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 113.808 ms
Loss rate: 4.44%
-- Flow 2:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 113.852 ms
Loss rate: 3.63%
-- Flow 3:
Average throughput: 0.24 Mbit/s
95th percentile per-packet one-way delay: 114.330 ms
Loss rate: 6.37%
```
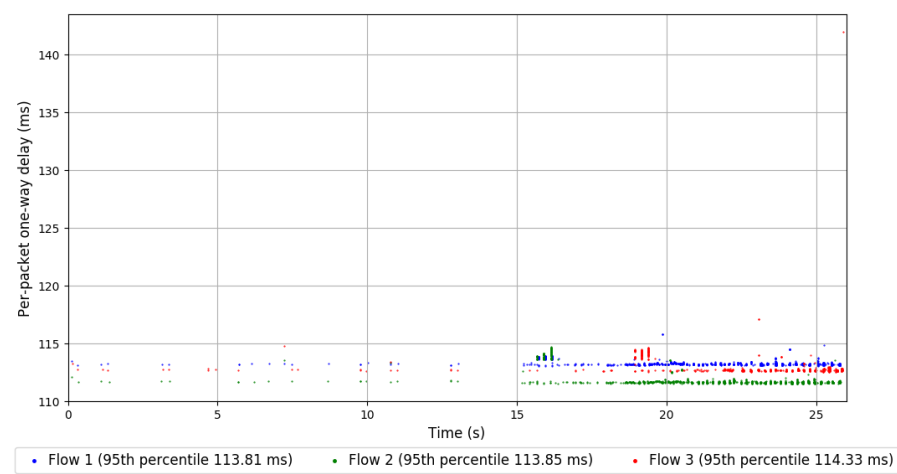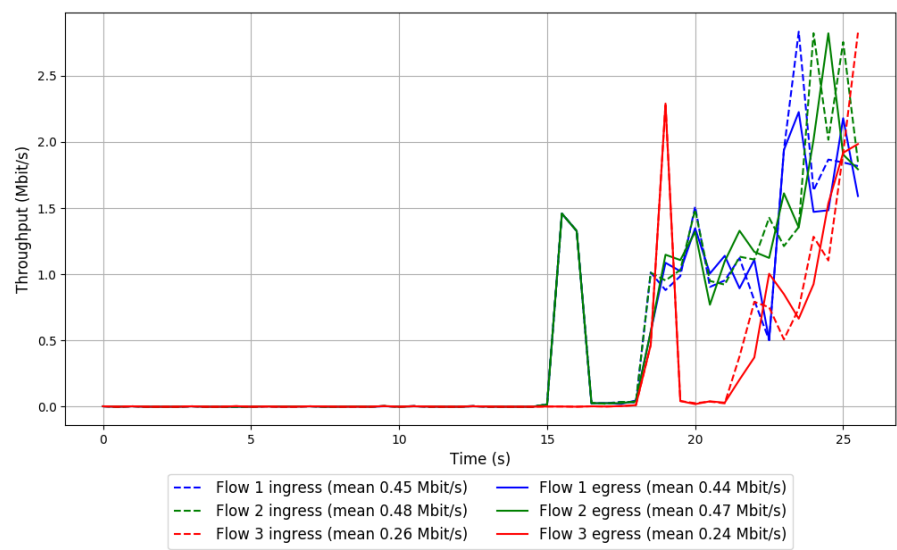
Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-08-12 02:00:23
End at: 2017-08-12 02:00:53

# Below is generated by plot.py at 2017-08-12 06:02:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 113.447 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 113.095 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.34 Mbit/s
95th percentile per-packet one-way delay: 113.458 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 113.470 ms
Loss rate: 9.61%
```
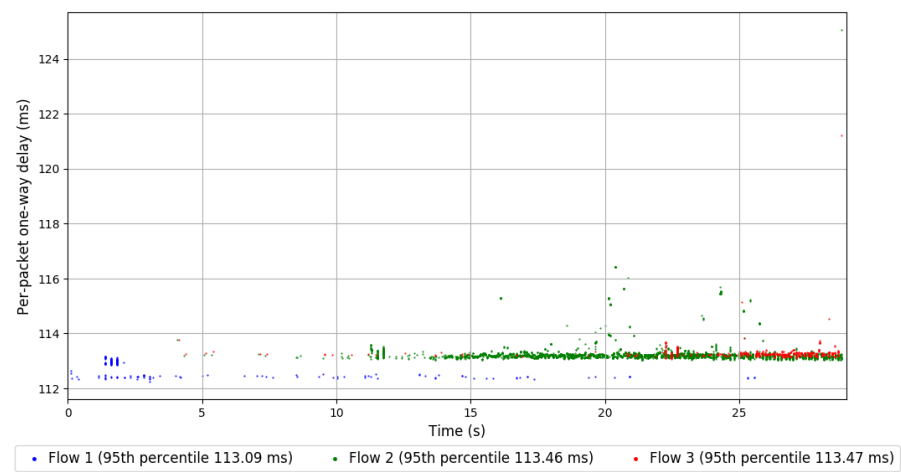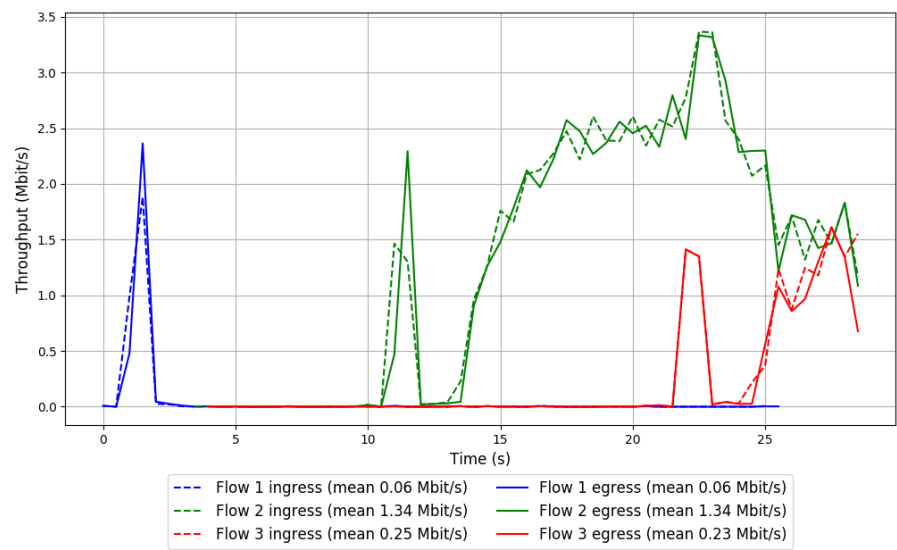
Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-08-12 02:13:38
End at: 2017-08-12 02:14:08


# Below is generated by plot.py at 2017-08-12 06:02:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.41 Mbit/s
95th percentile per-packet one-way delay: 113.570 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 113.249 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 113.563 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 115.091 ms
Loss rate: 5.57%
```
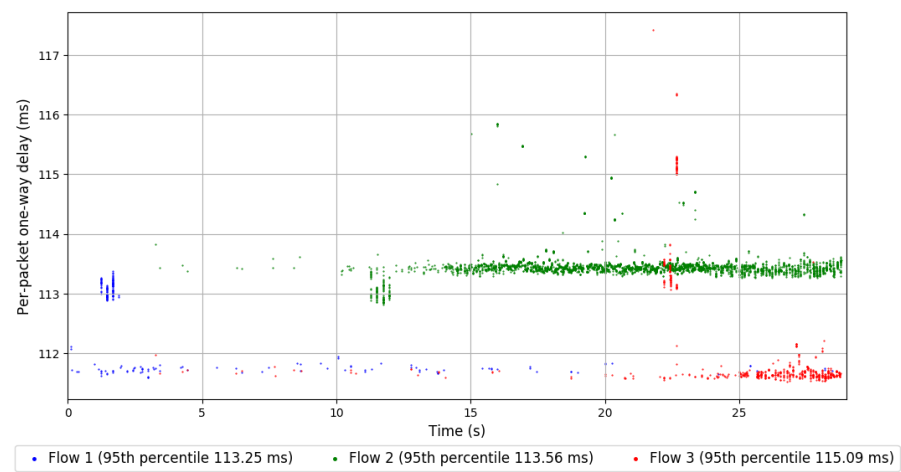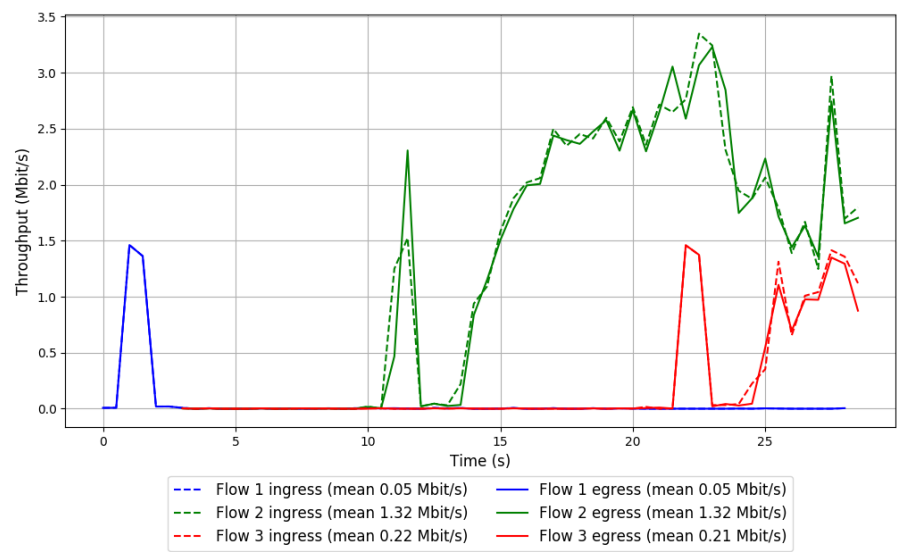
Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-08-12 02:26:27
End at: 2017-08-12 02:26:57


# Below is generated by plot.py at 2017-08-12 06:02:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.92 Mbit/s
95th percentile per-packet one-way delay: 113.688 ms
Loss rate: 3.45%
-- Flow 1:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 113.561 ms
Loss rate: 4.68%
-- Flow 2:
Average throughput: 0.34 Mbit/s
95th percentile per-packet one-way delay: 114.728 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 113.394 ms
Loss rate: 6.93%
```
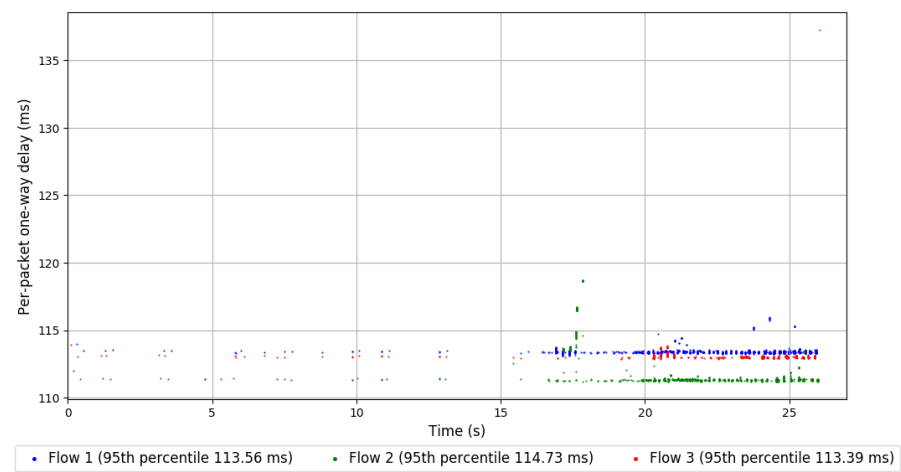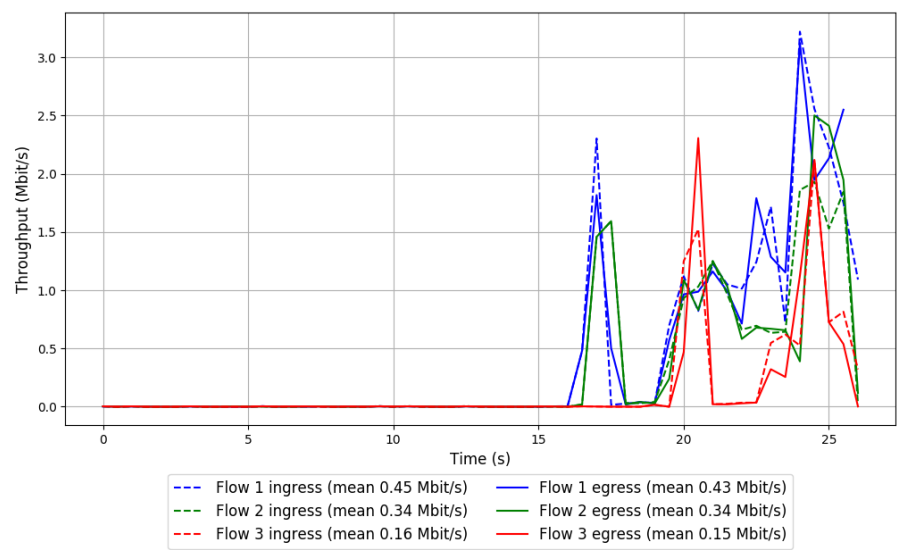
Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-08-12 02:39:02
End at: 2017-08-12 02:39:32


# Below is generated by plot.py at 2017-08-12 06:02:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 112.532 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 112.880 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 111.217 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 0.25 Mbit/s
95th percentile per-packet one-way delay: 111.511 ms
Loss rate: 6.89%
```

Run 10: Report of WebRTC media — Data Link