Pantheon Report

Generated at 2017-09-08 07:48:01 (UTC).

Data path: Stanford Ethernet (*remote*) →AWS California 1 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.

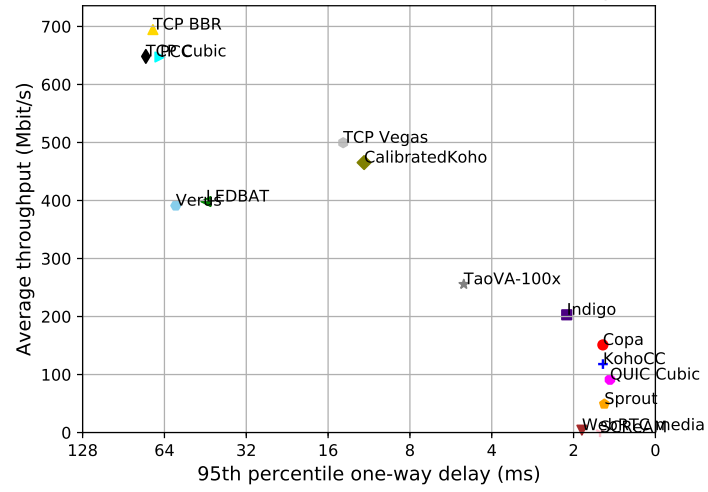Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

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

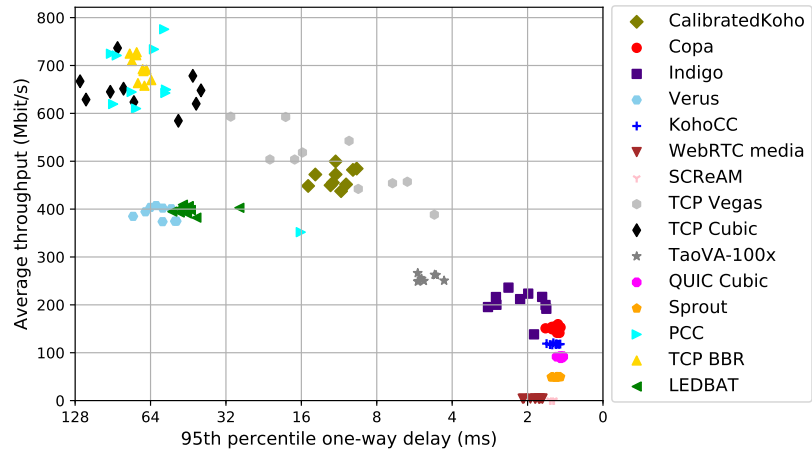NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ 2a98508c2457474d84cd2966a42b80b0bc62ecaf
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ f7ca42f251bf49b432bb71de6d13fa903515c366
third_party/indigo @ 10192113fb6902d25c86e0e3e4c85d7a05e43d7e
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
 M scripts/merge-tunnel-logs
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 Stanford Ethernet to AWS California 1 Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from Stanford Ethernet to AWS California 1 Ethernet, 10 runs of 30s each per scheme
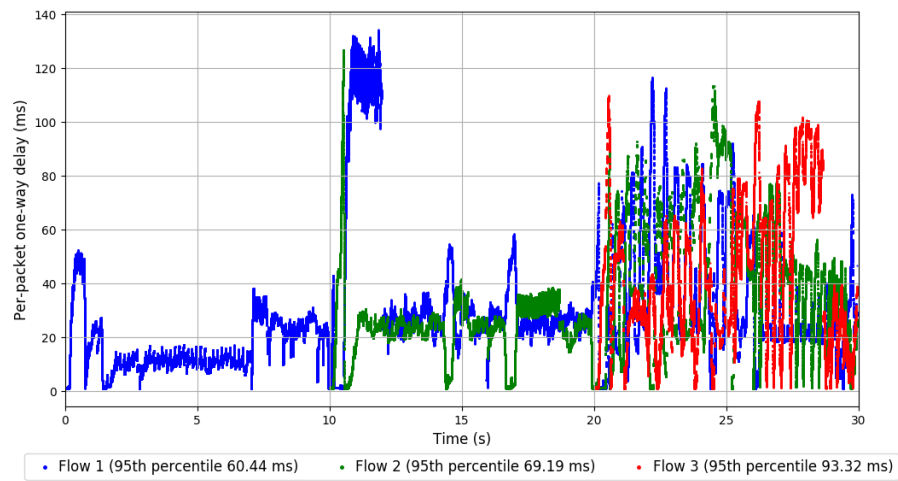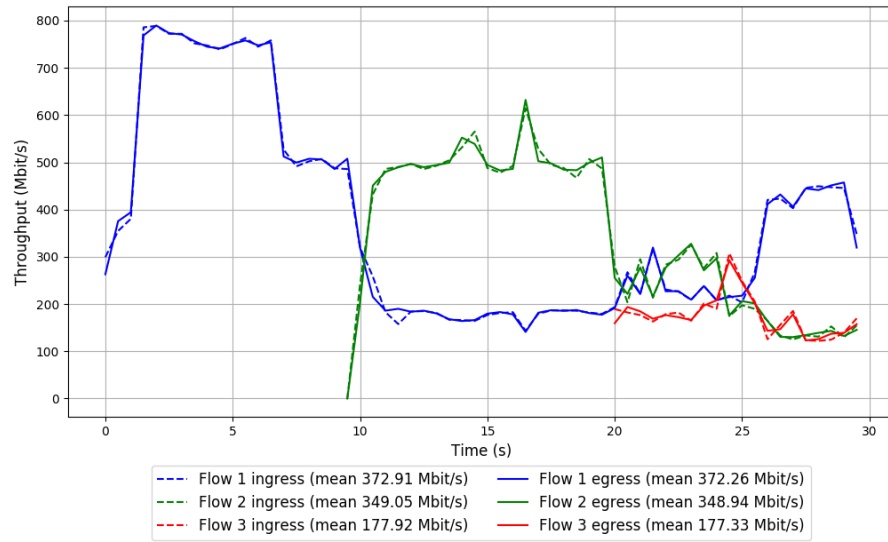### 3 flows with 10s interval between flows

2

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	388.91	342.91	234.35	57.92	74.50	86.94	0.11	0.21	0.59
CalibratedKoho	10	277.12	214.15	138.17	10.49	12.67	15.43	0.06	0.09	0.28
Copa	10	80.97	78.83	69.41	1.26	1.22	1.74	0.05	0.09	0.19
TCP Cubic	10	377.00	294.36	227.89	48.16	67.83	131.38	0.11	0.21	0.65
Indigo	10	108.67	85.53	113.93	1.62	2.12	2.84	0.04	0.07	0.16
KohoCC	10	59.10	59.43	59.05	1.24	1.30	1.41	0.07	0.10	0.20
LEDBAT	10	236.19	179.60	128.57	37.04	57.96	43.98	0.12	0.24	0.55
PCC	10	447.30	222.47	159.31	69.19	32.18	16.99	4.02	0.95	0.73
QUIC Cubic	10	53.96	39.95	33.15	1.11	1.11	1.12	0.06	0.07	0.23
SCReAM	4	0.22	0.22	0.22	1.37	1.34	1.33	0.07	0.00	0.09
Sprout	10	24.75	24.72	24.44	1.24	1.27	1.28	0.05	0.13	0.29
TaoVA-100x	8	147.30	118.08	115.50	4.43	5.91	5.55	0.06	0.10	0.27
TCP Vegas	10	245.84	263.76	236.36	10.01	14.43	15.10	0.06	0.08	0.23
Verus	10	235.99	169.78	129.57	55.58	60.95	55.81	1.25	0.49	2.08
WebRTC media	10	2.31	1.41	0.43	1.70	1.95	1.86	0.09	0.18	0.11

```
Run 1: Statistics of TCP BBR

Start at: 2017-09-07 22:05:00
End at: 2017-09-07 22:05:30
Local clock offset: 0.963 ms
Remote clock offset: -2.433 ms


# Below is generated by plot.py at 2017-09-08 06:53:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 663.24 Mbit/s
95th percentile per-packet one-way delay: 71.858 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 372.26 Mbit/s
95th percentile per-packet one-way delay: 60.437 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 348.94 Mbit/s
95th percentile per-packet one-way delay: 69.188 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 177.33 Mbit/s
95th percentile per-packet one-way delay: 93.319 ms
Loss rate: 0.53%
```

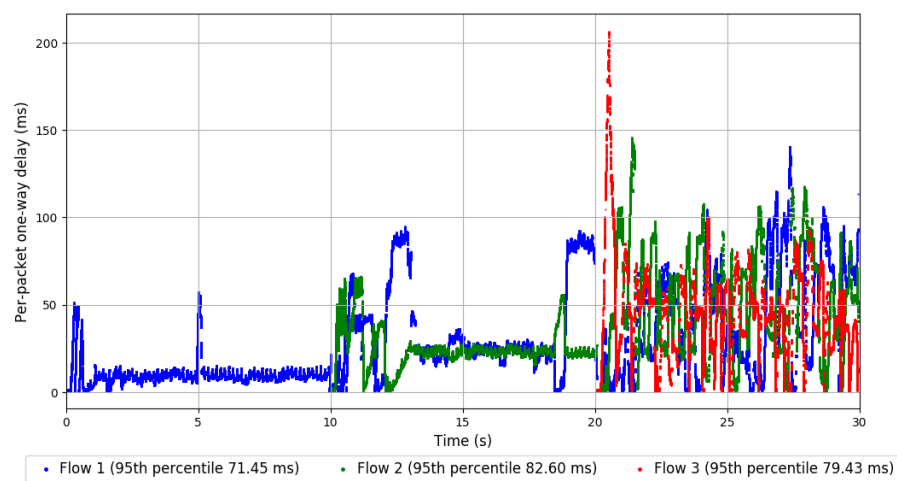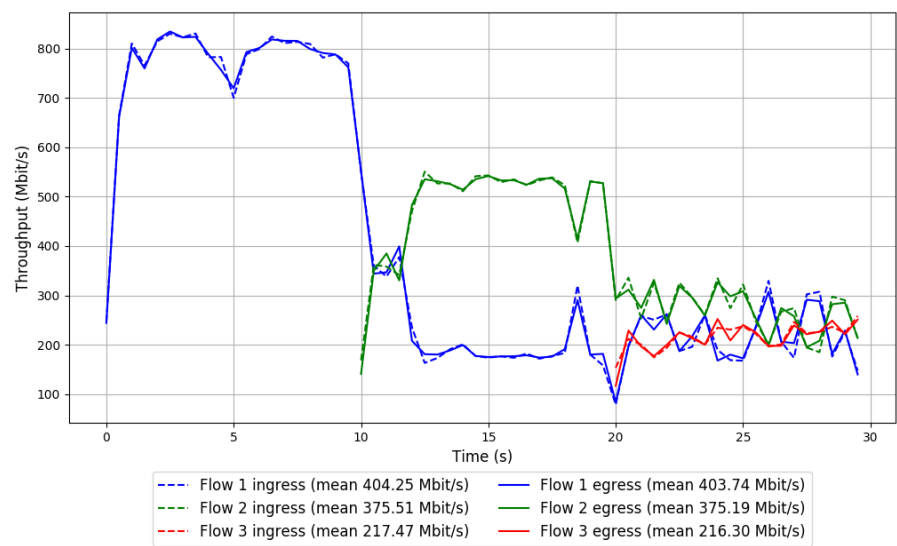Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2017-09-07 22:26:59
End at: 2017-09-07 22:27:29
Local clock offset: 1.078 ms
Remote clock offset: -1.632 ms


# Below is generated by plot.py at 2017-09-08 06:54:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.85 Mbit/s
95th percentile per-packet one-way delay: 77.484 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 403.74 Mbit/s
95th percentile per-packet one-way delay: 71.449 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 375.19 Mbit/s
95th percentile per-packet one-way delay: 82.600 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 216.30 Mbit/s
95th percentile per-packet one-way delay: 79.430 ms
Loss rate: 0.57%
```

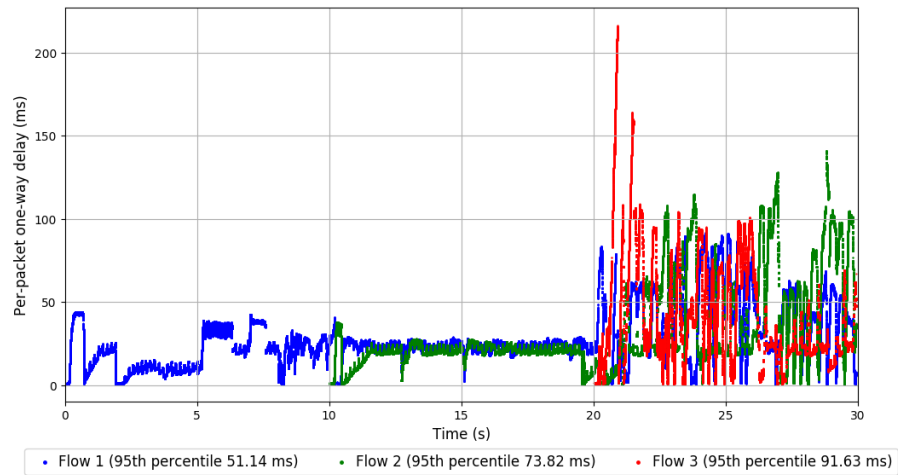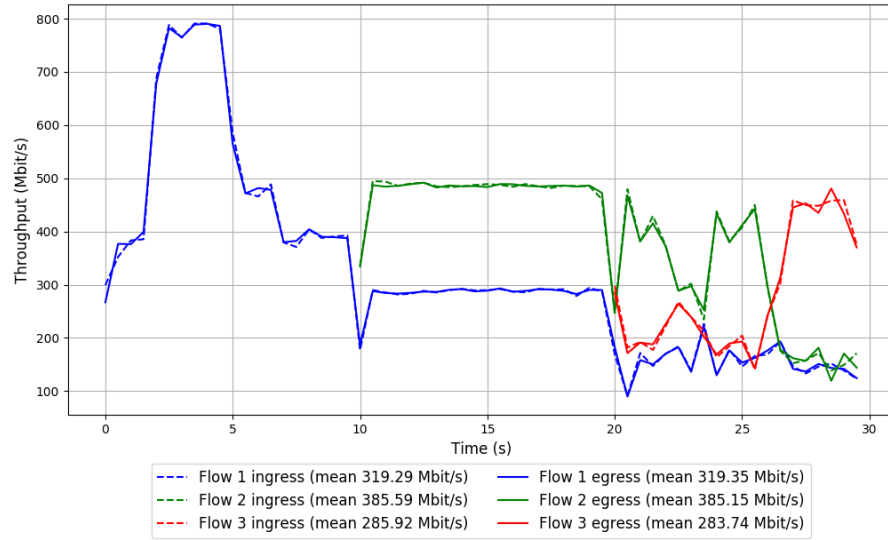Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2017-09-07 22:49:07
End at: 2017-09-07 22:49:37
Local clock offset: 1.03 ms
Remote clock offset: -1.499 ms


# Below is generated by plot.py at 2017-09-08 06:55:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 669.51 Mbit/s
95th percentile per-packet one-way delay: 63.581 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 319.35 Mbit/s
95th percentile per-packet one-way delay: 51.142 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 385.15 Mbit/s
95th percentile per-packet one-way delay: 73.820 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 283.74 Mbit/s
95th percentile per-packet one-way delay: 91.631 ms
Loss rate: 0.77%
```

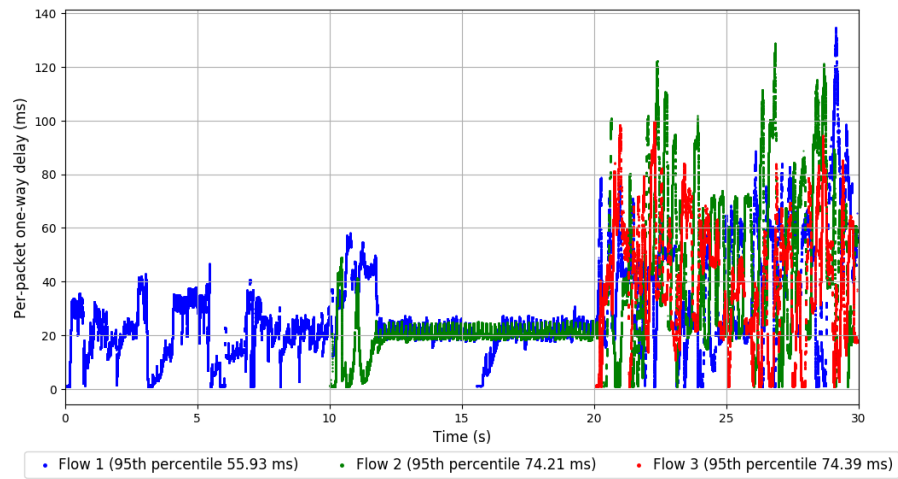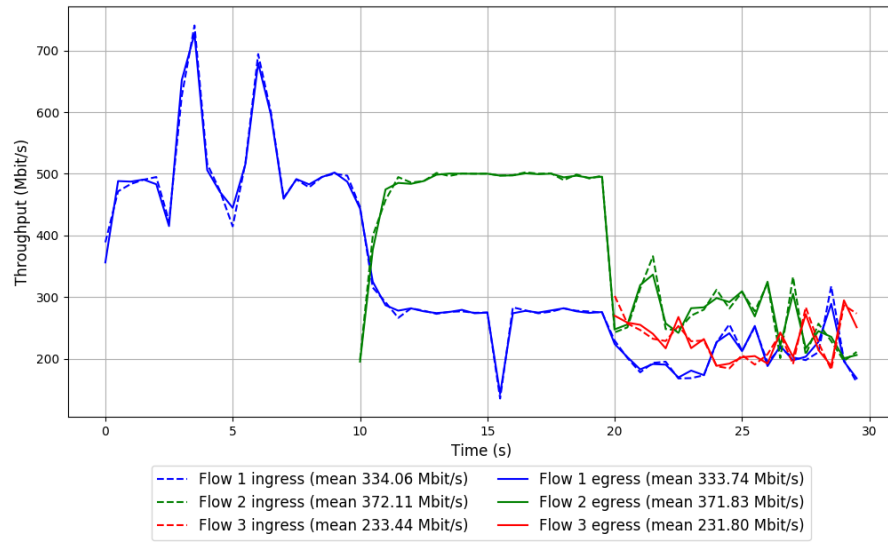Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2017-09-07 23:11:18
End at: 2017-09-07 23:11:48
Local clock offset: 1.024 ms
Remote clock offset: -1.205 ms


# Below is generated by plot.py at 2017-09-08 06:55:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 657.82 Mbit/s
95th percentile per-packet one-way delay: 67.692 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 333.74 Mbit/s
95th percentile per-packet one-way delay: 55.931 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 371.83 Mbit/s
95th percentile per-packet one-way delay: 74.210 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 231.80 Mbit/s
95th percentile per-packet one-way delay: 74.394 ms
Loss rate: 0.73%
```
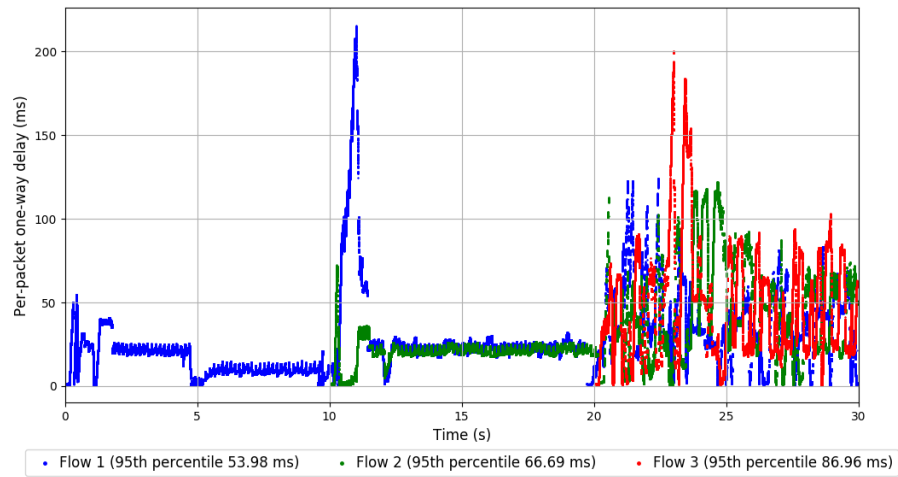
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 334.06 Mbit/s)   Flow 1 egress (mean 333.74 Mbit/s)
Flow 2 ingress (mean 372.11 Mbit/s)   Flow 2 egress (mean 371.83 Mbit/s)
Flow 3 ingress (mean 233.44 Mbit/s)   Flow 3 egress (mean 231.80 Mbit/s)

Flow 1 (95th percentile 55.93 ms)   Flow 2 (95th percentile 74.21 ms)   Flow 3 (95th percentile 74.39 ms)

Run 5: Statistics of TCP BBR

Start at: 2017-09-07 23:33:19
End at: 2017-09-07 23:33:49
Local clock offset: 0.922 ms
Remote clock offset: -1.05 ms

Below is generated by plot.py at 2017-09-08 06:56:49
Datalink statistics
-- Total of 3 flows:
Average throughput: 692.27 Mbit/s
95th percentile per-packet one-way delay: 68.788 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 347.54 Mbit/s
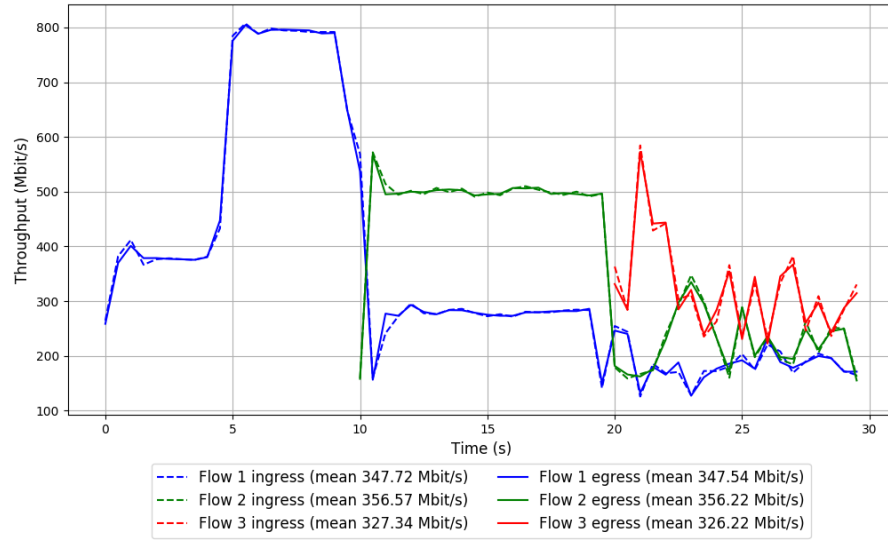95th percentile per-packet one-way delay: 53.982 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 356.22 Mbit/s
95th percentile per-packet one-way delay: 66.694 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 326.22 Mbit/s
95th percentile per-packet one-way delay: 86.956 ms
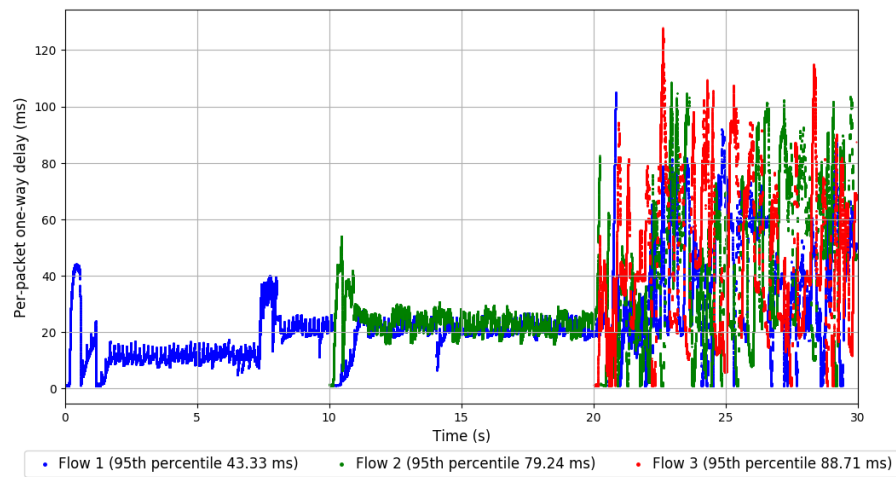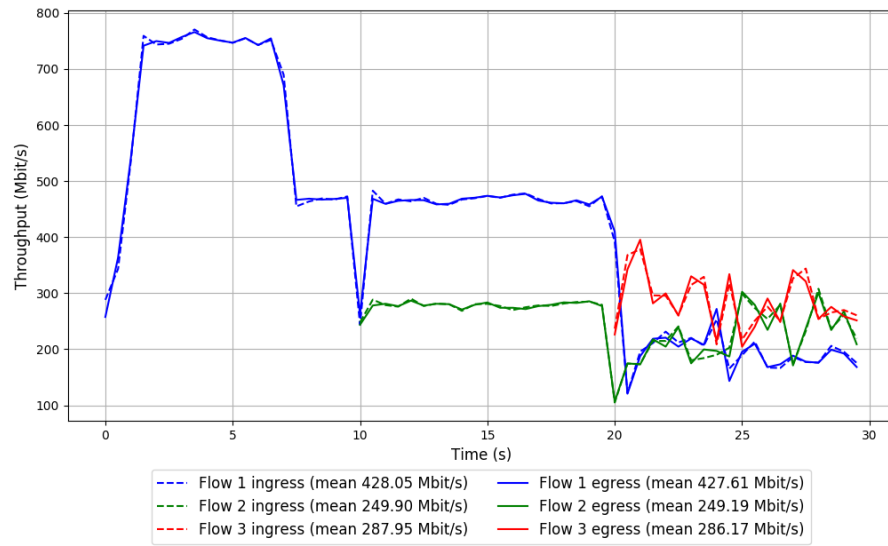Loss rate: 0.52%

Run 5: Report of TCP BBR — Data Link

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Run 6: Statistics of TCP BBR

Start at: 2017-09-07 23:55:22
End at: 2017-09-07 23:55:52
Local clock offset: 0.846 ms
Remote clock offset: -1.314 ms


# Below is generated by plot.py at 2017-09-08 06:56:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 688.34 Mbit/s
95th percentile per-packet one-way delay: 68.225 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 427.61 Mbit/s
95th percentile per-packet one-way delay: 43.330 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 249.19 Mbit/s
95th percentile per-packet one-way delay: 79.243 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 286.17 Mbit/s
95th percentile per-packet one-way delay: 88.708 ms
Loss rate: 0.62%
```
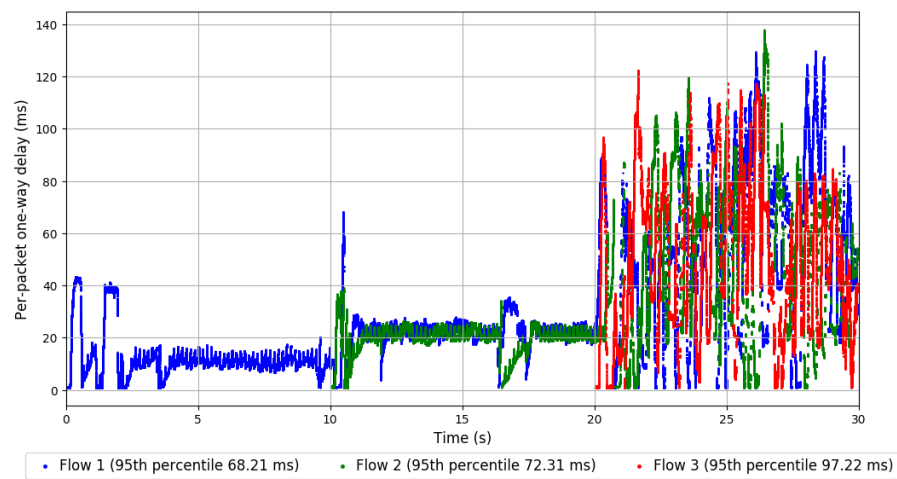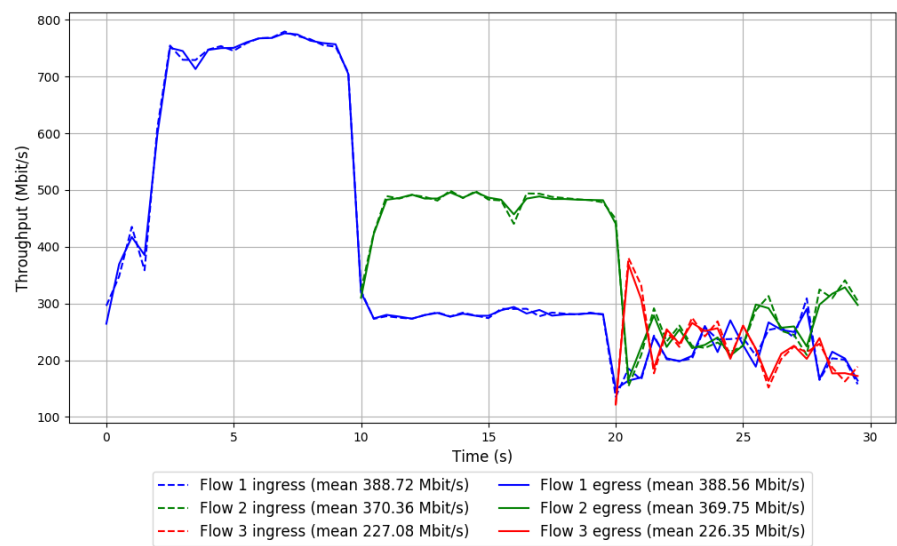
Run 6: Report of TCP BBR — Data Link

Flow 1 ingress (mean 428.05 Mbit/s) ----- Flow 1 egress (mean 427.61 Mbit/s)
Flow 2 ingress (mean 249.90 Mbit/s) ----- Flow 2 egress (mean 249.19 Mbit/s)
Flow 3 ingress (mean 287.95 Mbit/s) ----- Flow 3 egress (mean 286.17 Mbit/s)

Flow 1 (95th percentile 43.33 ms)   Flow 2 (95th percentile 79.24 ms)   Flow 3 (95th percentile 88.71 ms)

15

```
Run 7: Statistics of TCP BBR

Start at: 2017-09-08 00:17:22
End at: 2017-09-08 00:17:52
Local clock offset: 0.798 ms
Remote clock offset: -1.227 ms


# Below is generated by plot.py at 2017-09-08 06:58:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 709.53 Mbit/s
95th percentile per-packet one-way delay: 75.921 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 388.56 Mbit/s
95th percentile per-packet one-way delay: 68.209 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 369.75 Mbit/s
95th percentile per-packet one-way delay: 72.311 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 226.35 Mbit/s
95th percentile per-packet one-way delay: 97.223 ms
Loss rate: 0.52%
```

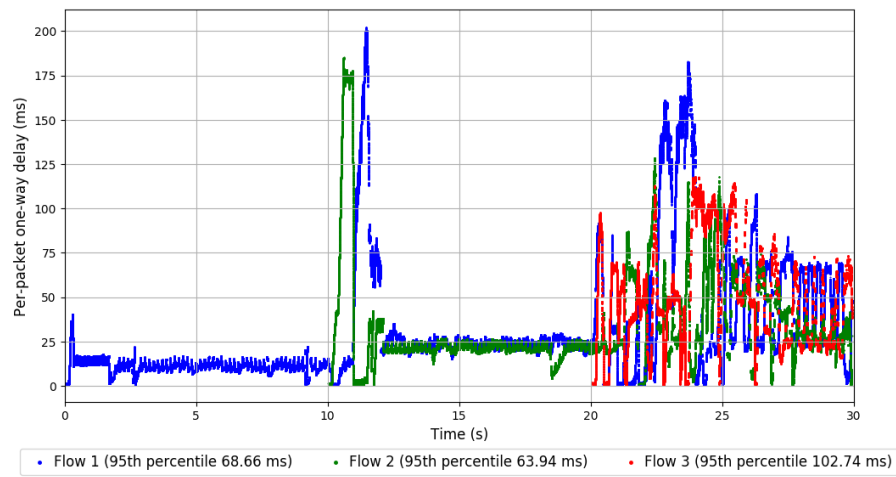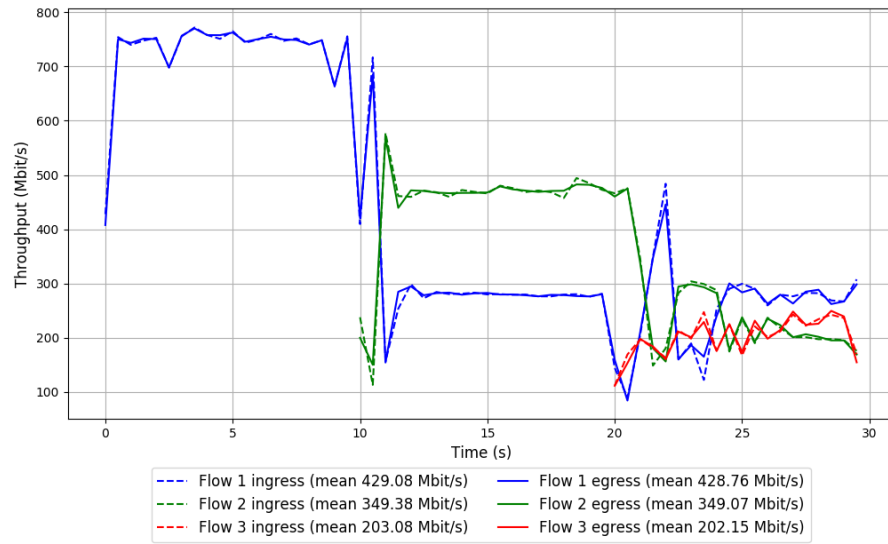Run 7: Report of TCP BBR — Data Link

```
Run 8: Statistics of TCP BBR

Start at: 2017-09-08 00:39:26
End at: 2017-09-08 00:39:56
Local clock offset: 0.846 ms
Remote clock offset: -1.389 ms

# Below is generated by plot.py at 2017-09-08 06:58:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 727.81 Mbit/s
95th percentile per-packet one-way delay: 72.706 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 428.76 Mbit/s
95th percentile per-packet one-way delay: 68.658 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 349.07 Mbit/s
95th percentile per-packet one-way delay: 63.942 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 202.15 Mbit/s
95th percentile per-packet one-way delay: 102.744 ms
Loss rate: 0.62%
```

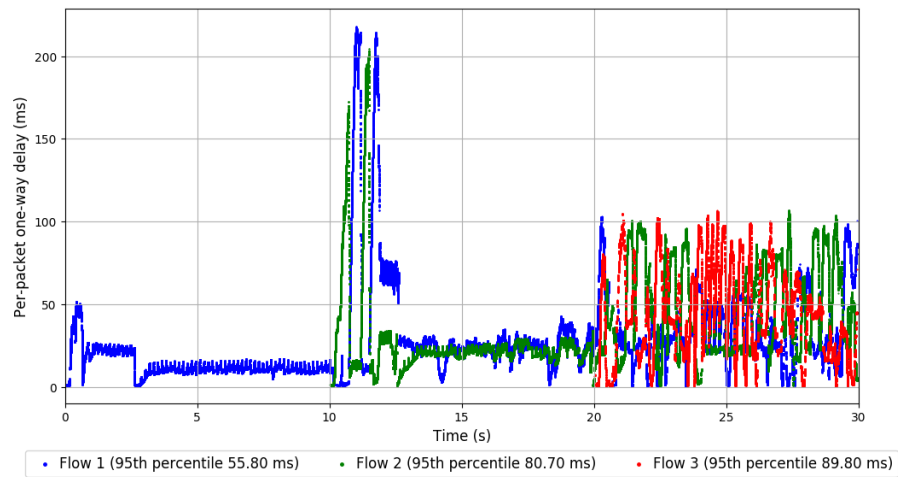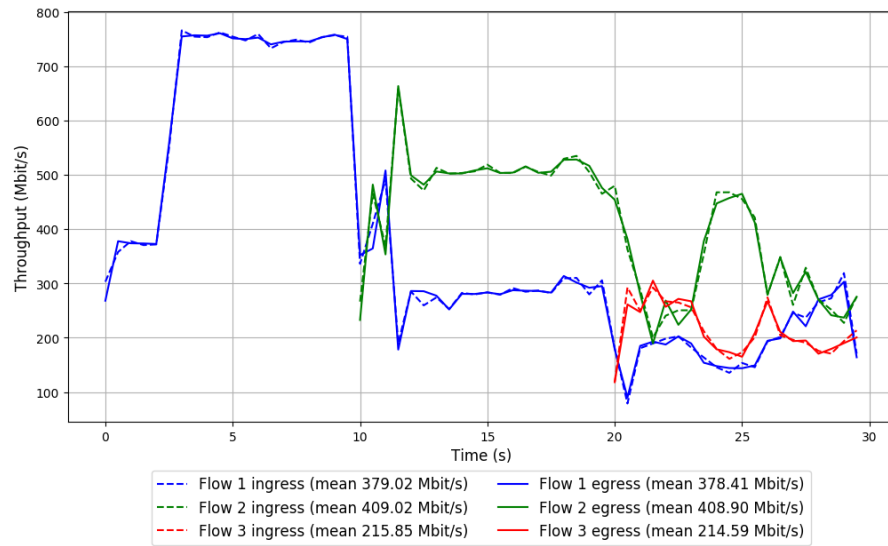Run 8: Report of TCP BBR — Data Link

```
Run 9: Statistics of TCP BBR

Start at: 2017-09-08 01:01:31
End at: 2017-09-08 01:02:01
Local clock offset: 0.919 ms
Remote clock offset: -0.962 ms

# Below is generated by plot.py at 2017-09-08 06:59:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.51 Mbit/s
95th percentile per-packet one-way delay: 72.981 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 378.41 Mbit/s
95th percentile per-packet one-way delay: 55.797 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 408.90 Mbit/s
95th percentile per-packet one-way delay: 80.699 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 214.59 Mbit/s
95th percentile per-packet one-way delay: 89.802 ms
Loss rate: 0.58%
```
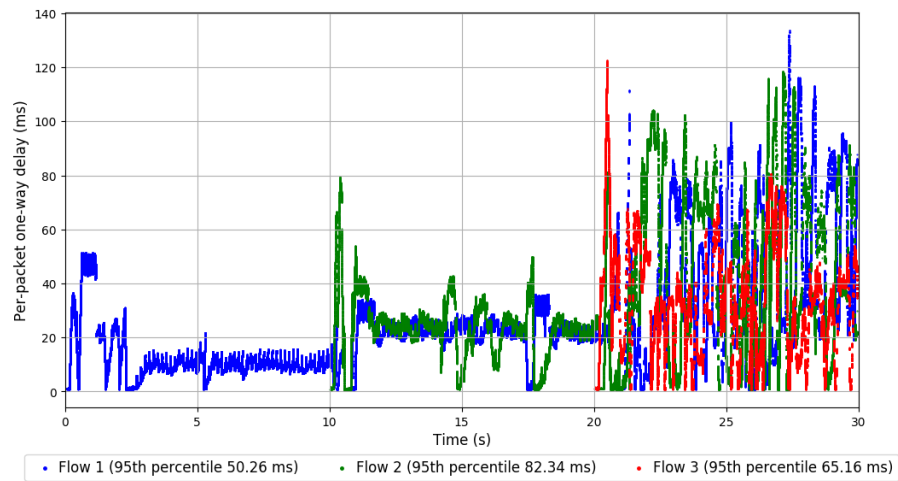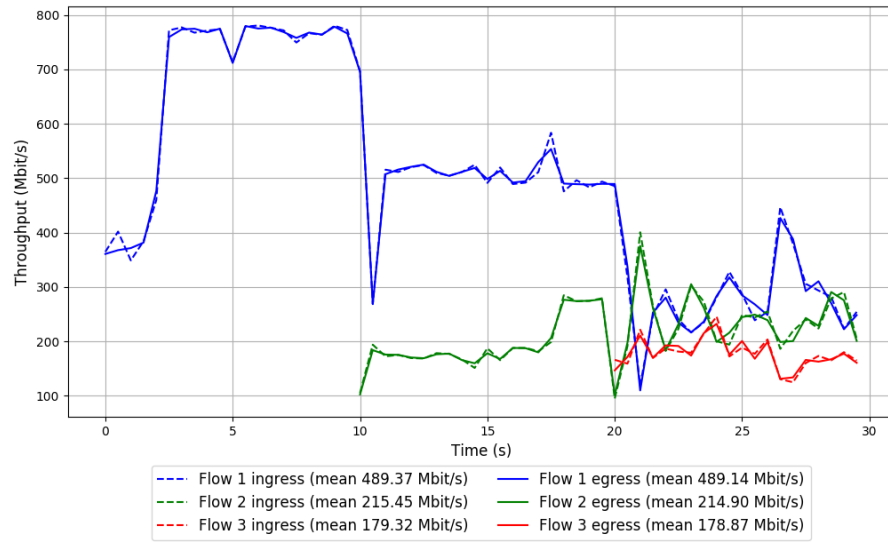
Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 379.02 Mbit/s) — Flow 1 egress (mean 378.41 Mbit/s)
Flow 2 ingress (mean 409.02 Mbit/s) — Flow 2 egress (mean 408.90 Mbit/s)
Flow 3 ingress (mean 215.85 Mbit/s) — Flow 3 egress (mean 214.59 Mbit/s)

Flow 1 (95th percentile 55.80 ms) Flow 2 (95th percentile 80.70 ms) Flow 3 (95th percentile 89.80 ms)

21

```
Run 10: Statistics of TCP BBR

Start at: 2017-09-08 01:23:15
End at: 2017-09-08 01:23:45
Local clock offset: 0.797 ms
Remote clock offset: -1.278 ms


# Below is generated by plot.py at 2017-09-08 07:00:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 691.31 Mbit/s
95th percentile per-packet one-way delay: 66.444 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 489.14 Mbit/s
95th percentile per-packet one-way delay: 50.262 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 214.90 Mbit/s
95th percentile per-packet one-way delay: 82.342 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 178.87 Mbit/s
95th percentile per-packet one-way delay: 65.161 ms
Loss rate: 0.48%
```

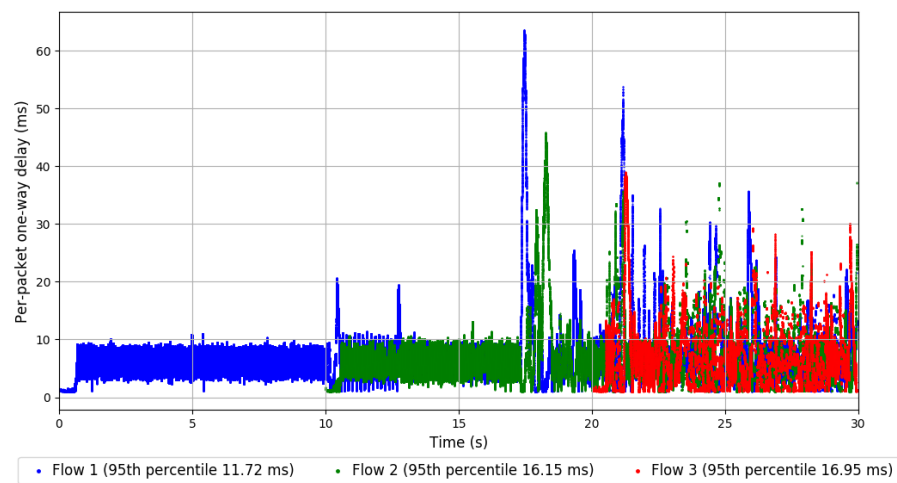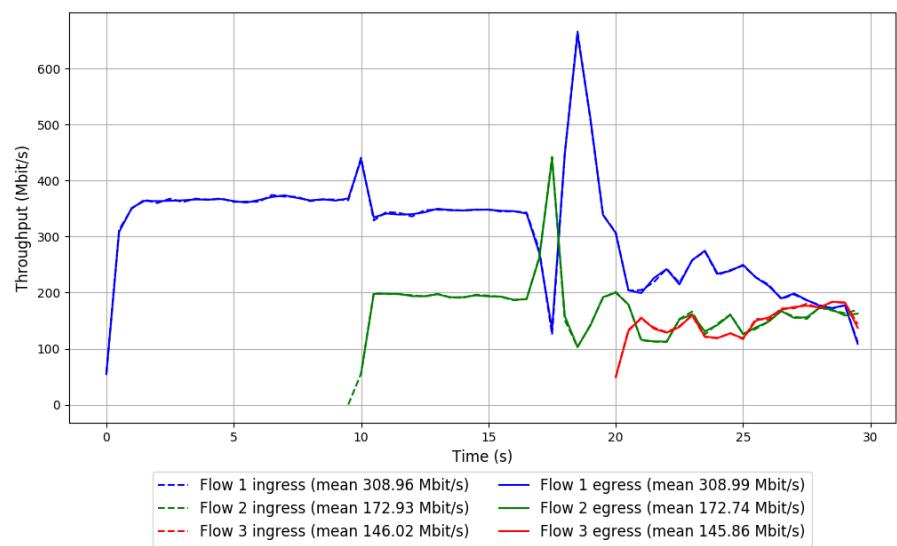Run 10: Report of TCP BBR — Data Link

```
Run 1: Statistics of CalibratedKoho

Start at: 2017-09-07 21:58:25
End at: 2017-09-07 21:58:55
Local clock offset: 0.938 ms
Remote clock offset: -2.744 ms

# Below is generated by plot.py at 2017-09-08 07:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 472.28 Mbit/s
95th percentile per-packet one-way delay: 14.071 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 308.99 Mbit/s
95th percentile per-packet one-way delay: 11.716 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 172.74 Mbit/s
95th percentile per-packet one-way delay: 16.153 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 145.86 Mbit/s
95th percentile per-packet one-way delay: 16.954 ms
Loss rate: 0.29%
```

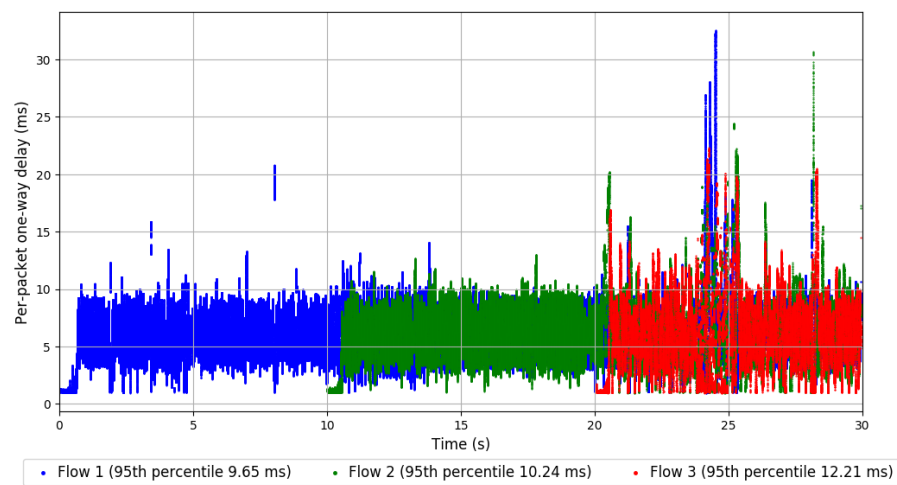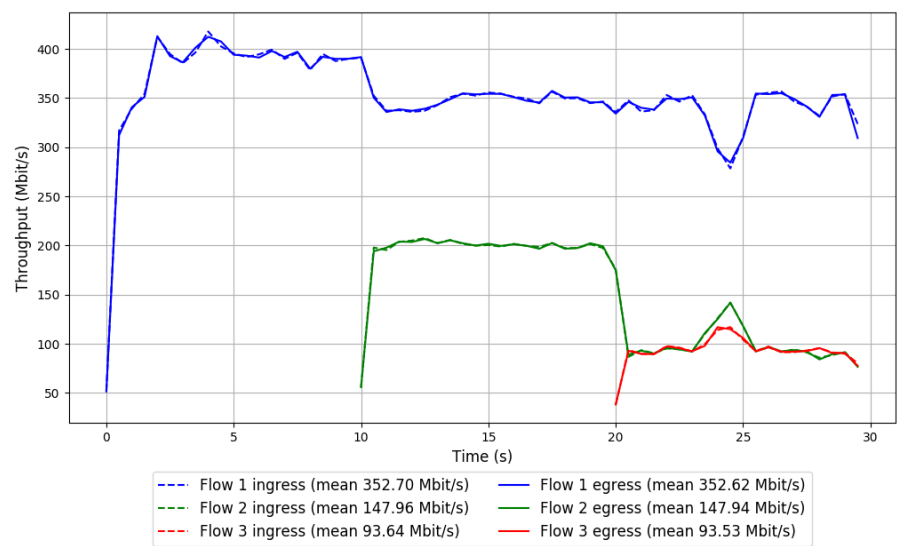Run 1: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 308.96 Mbit/s) ----- Flow 1 egress (mean 308.99 Mbit/s) ——
Flow 2 ingress (mean 172.93 Mbit/s) ----- Flow 2 egress (mean 172.74 Mbit/s) ——
Flow 3 ingress (mean 146.02 Mbit/s) ----- Flow 3 egress (mean 145.86 Mbit/s) ——

Flow 1 (95th percentile 11.72 ms) • Flow 2 (95th percentile 16.15 ms) • Flow 3 (95th percentile 16.95 ms)

25

```
Run 2: Statistics of CalibratedKoho

Start at: 2017-09-07 22:20:26
End at: 2017-09-07 22:20:56
Local clock offset: 0.976 ms
Remote clock offset: -1.784 ms


# Below is generated by plot.py at 2017-09-08 07:01:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.94 Mbit/s
95th percentile per-packet one-way delay: 9.959 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 352.62 Mbit/s
95th percentile per-packet one-way delay: 9.655 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 147.94 Mbit/s
95th percentile per-packet one-way delay: 10.243 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 93.53 Mbit/s
95th percentile per-packet one-way delay: 12.210 ms
Loss rate: 0.21%
```

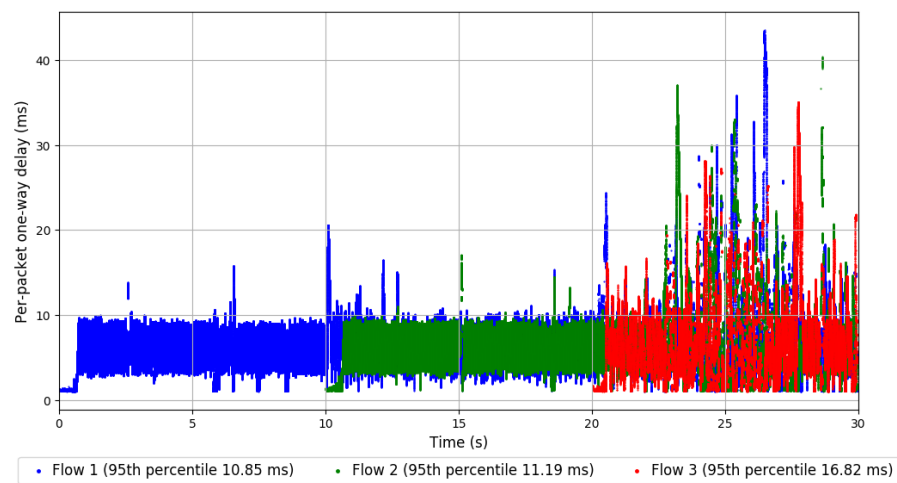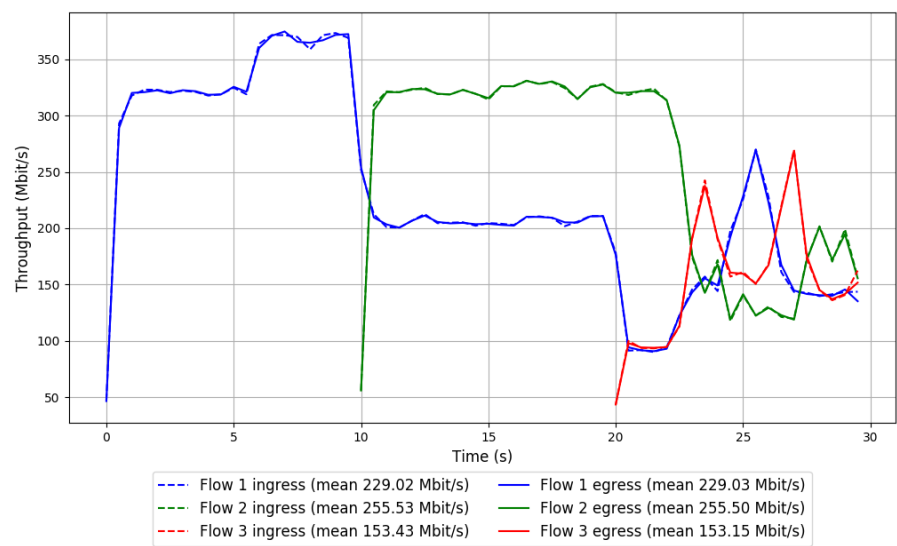Run 2: Report of CalibratedKoho — Data Link

```
Run 3: Statistics of CalibratedKoho

Start at: 2017-09-07 22:42:37
End at: 2017-09-07 22:43:07
Local clock offset: 1.018 ms
Remote clock offset: -1.797 ms

# Below is generated by plot.py at 2017-09-08 07:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.76 Mbit/s
95th percentile per-packet one-way delay: 12.233 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 229.03 Mbit/s
95th percentile per-packet one-way delay: 10.853 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 255.50 Mbit/s
95th percentile per-packet one-way delay: 11.188 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 153.15 Mbit/s
95th percentile per-packet one-way delay: 16.821 ms
Loss rate: 0.36%
```

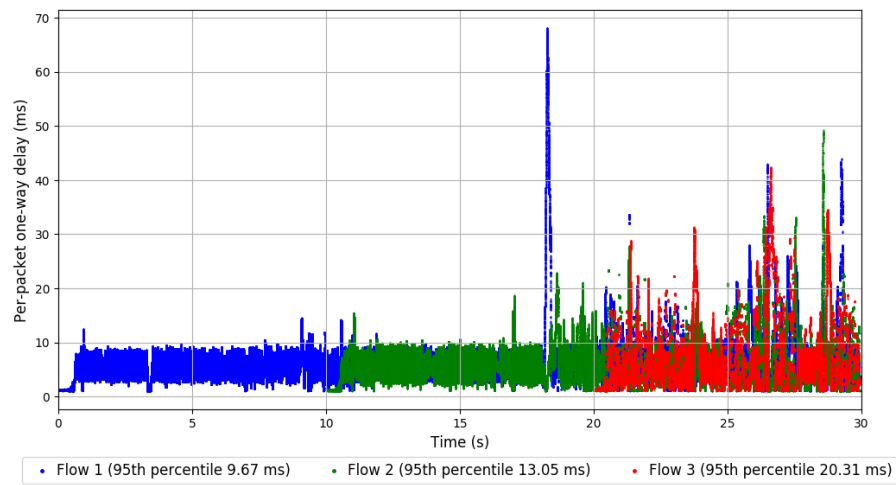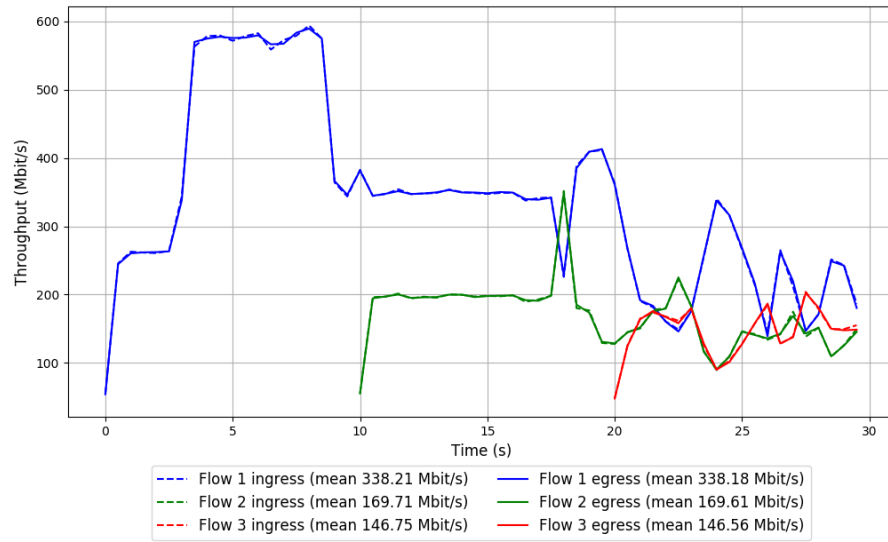Run 3: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 229.02 Mbit/s) --- Flow 1 egress (mean 229.03 Mbit/s)
Flow 2 ingress (mean 255.53 Mbit/s) --- Flow 2 egress (mean 255.50 Mbit/s)
Flow 3 ingress (mean 153.43 Mbit/s) --- Flow 3 egress (mean 153.15 Mbit/s)

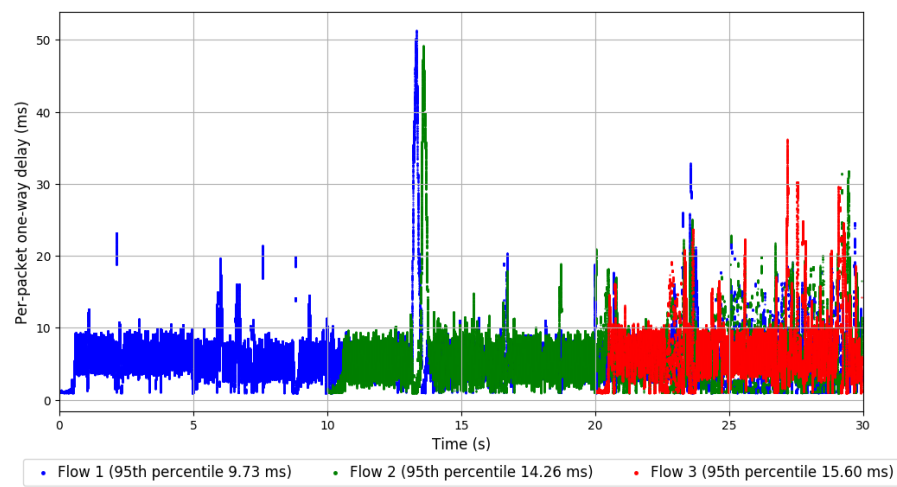Flow 1 (95th percentile 10.85 ms)　　Flow 2 (95th percentile 11.19 ms)　　Flow 3 (95th percentile 16.82 ms)

```
Run 4: Statistics of CalibratedKoho

Start at: 2017-09-07 23:04:39
End at: 2017-09-07 23:05:09
Local clock offset: 1.098 ms
Remote clock offset: -1.236 ms

# Below is generated by plot.py at 2017-09-08 07:02:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.63 Mbit/s
95th percentile per-packet one-way delay: 11.679 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 338.18 Mbit/s
95th percentile per-packet one-way delay: 9.667 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 169.61 Mbit/s
95th percentile per-packet one-way delay: 13.053 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 146.56 Mbit/s
95th percentile per-packet one-way delay: 20.307 ms
Loss rate: 0.30%
```

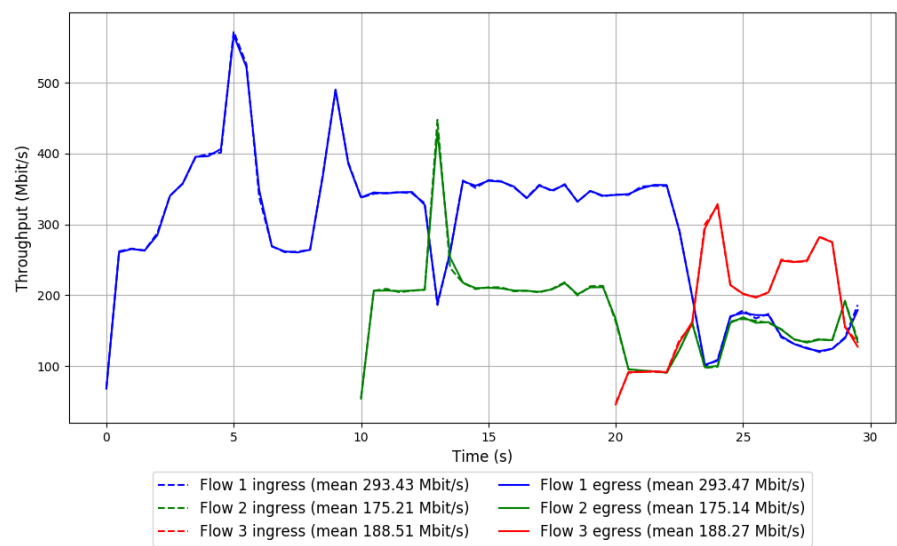Run 4: Report of CalibratedKoho — Data Link

```
Run 5: Statistics of CalibratedKoho

Start at: 2017-09-07 23:26:47
End at: 2017-09-07 23:27:17
Local clock offset: 1.038 ms
Remote clock offset: -0.991 ms

# Below is generated by plot.py at 2017-09-08 07:02:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 472.40 Mbit/s
95th percentile per-packet one-way delay: 11.676 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 293.47 Mbit/s
95th percentile per-packet one-way delay: 9.730 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 175.14 Mbit/s
95th percentile per-packet one-way delay: 14.260 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 188.27 Mbit/s
95th percentile per-packet one-way delay: 15.604 ms
Loss rate: 0.24%
```

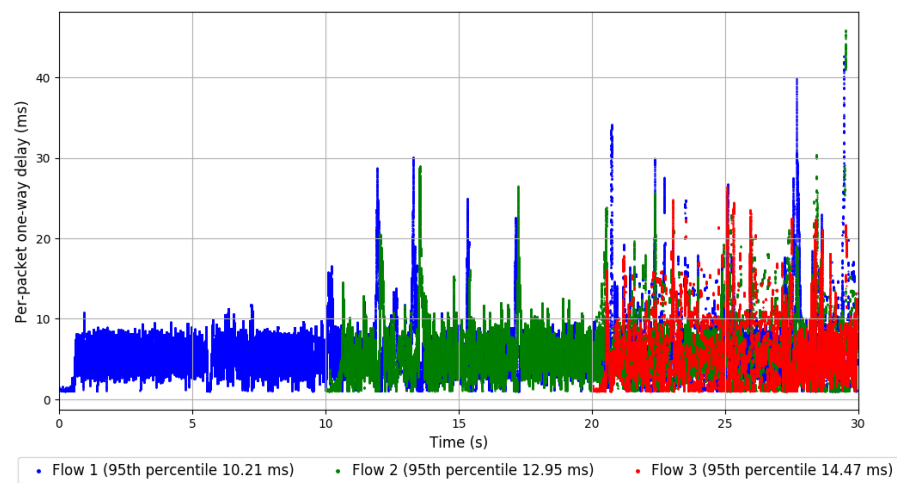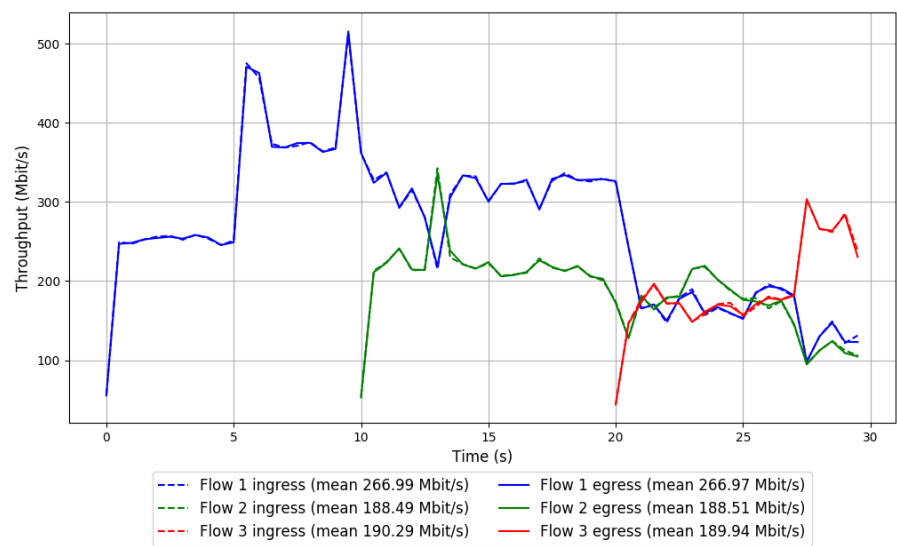Run 5: Report of CalibratedKoho — Data Link

```
Run 6: Statistics of CalibratedKoho

Start at: 2017-09-07 23:48:48
End at: 2017-09-07 23:49:18
Local clock offset: 0.873 ms
Remote clock offset: -1.252 ms

# Below is generated by plot.py at 2017-09-08 07:03:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.28 Mbit/s
95th percentile per-packet one-way delay: 11.973 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 266.97 Mbit/s
95th percentile per-packet one-way delay: 10.210 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 188.51 Mbit/s
95th percentile per-packet one-way delay: 12.951 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 189.94 Mbit/s
95th percentile per-packet one-way delay: 14.469 ms
Loss rate: 0.32%
```

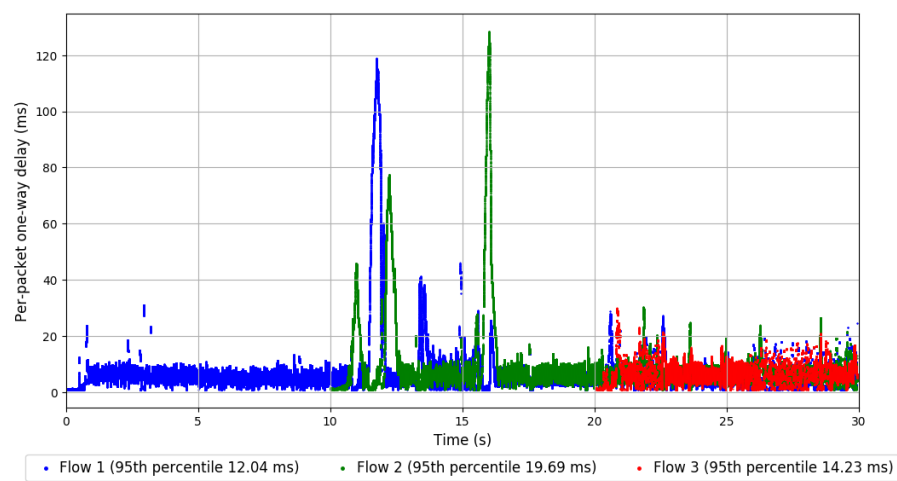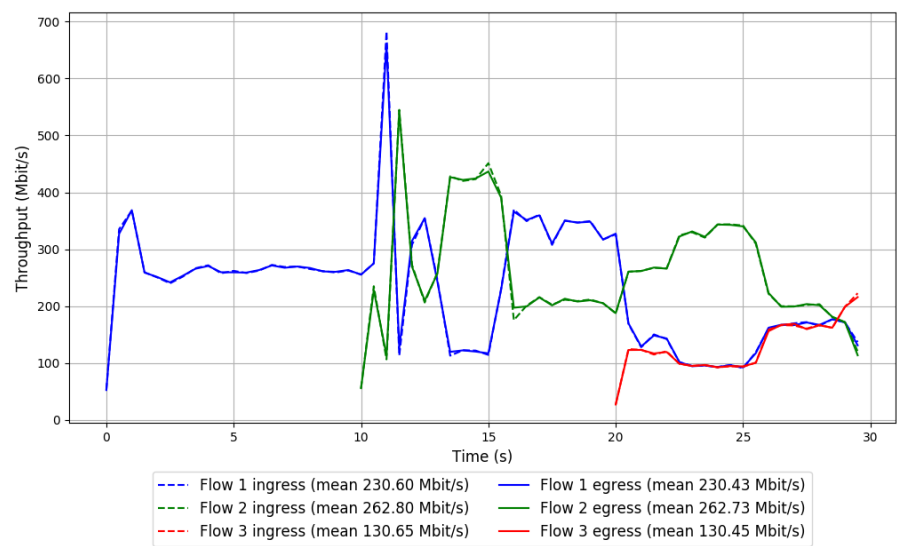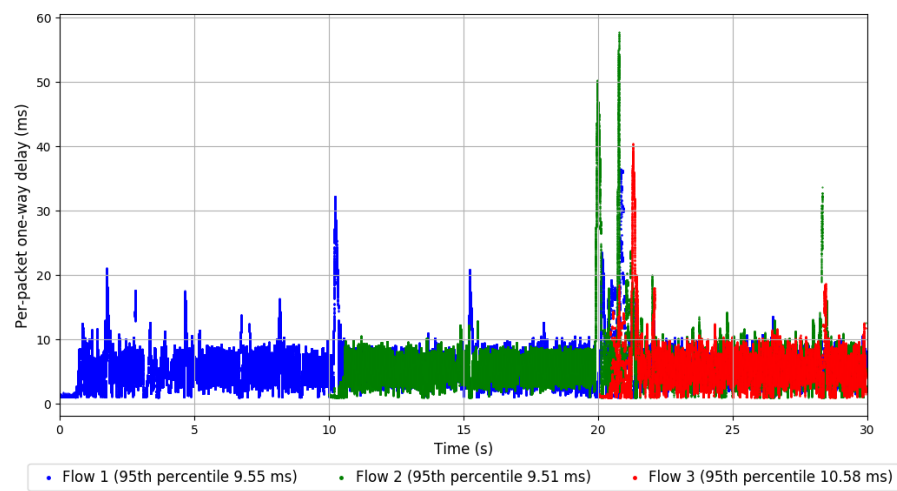Run 6: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 266.99 Mbit/s) --- Flow 1 egress (mean 266.97 Mbit/s) ---
Flow 2 ingress (mean 188.49 Mbit/s) --- Flow 2 egress (mean 188.51 Mbit/s) ---
Flow 3 ingress (mean 190.29 Mbit/s) --- Flow 3 egress (mean 189.94 Mbit/s) ---

Flow 1 (95th percentile 10.21 ms)   Flow 2 (95th percentile 12.95 ms)   Flow 3 (95th percentile 14.47 ms)

```
Run 7: Statistics of CalibratedKoho

Start at: 2017-09-08 00:10:55
End at: 2017-09-08 00:11:25
Local clock offset: 0.748 ms
Remote clock offset: -1.278 ms

# Below is generated by plot.py at 2017-09-08 07:03:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.37 Mbit/s
95th percentile per-packet one-way delay: 15.033 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 230.43 Mbit/s
95th percentile per-packet one-way delay: 12.043 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 262.73 Mbit/s
95th percentile per-packet one-way delay: 19.691 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 130.45 Mbit/s
95th percentile per-packet one-way delay: 14.226 ms
Loss rate: 0.34%
```

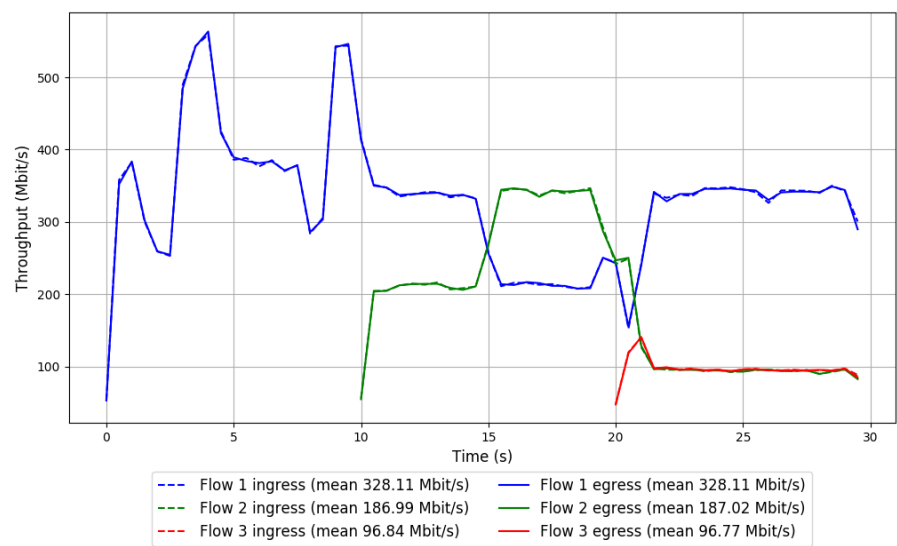Run 7: Report of CalibratedKoho — Data Link

```
Run 8: Statistics of CalibratedKoho

Start at: 2017-09-08 00:33:00
End at: 2017-09-08 00:33:30
Local clock offset: 0.87 ms
Remote clock offset: -1.195 ms

# Below is generated by plot.py at 2017-09-08 07:04:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.64 Mbit/s
95th percentile per-packet one-way delay: 9.622 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 328.11 Mbit/s
95th percentile per-packet one-way delay: 9.549 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 187.02 Mbit/s
95th percentile per-packet one-way delay: 9.508 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 96.77 Mbit/s
95th percentile per-packet one-way delay: 10.577 ms
Loss rate: 0.24%
```

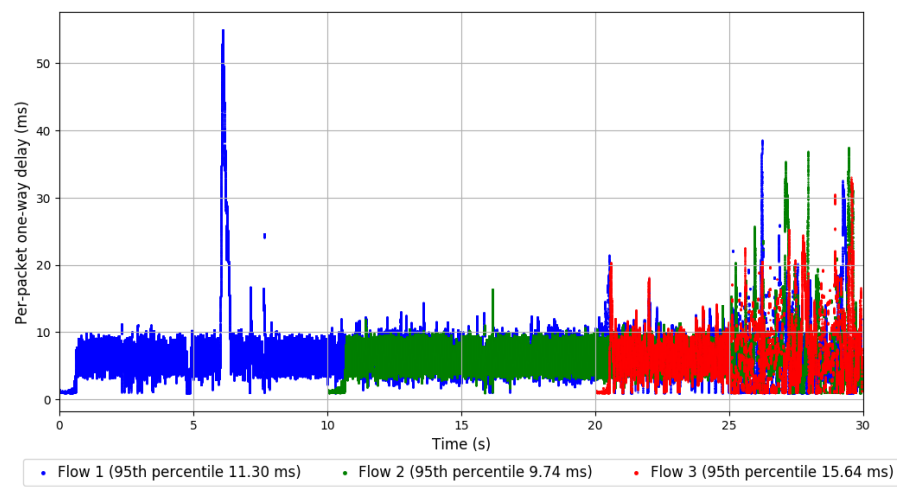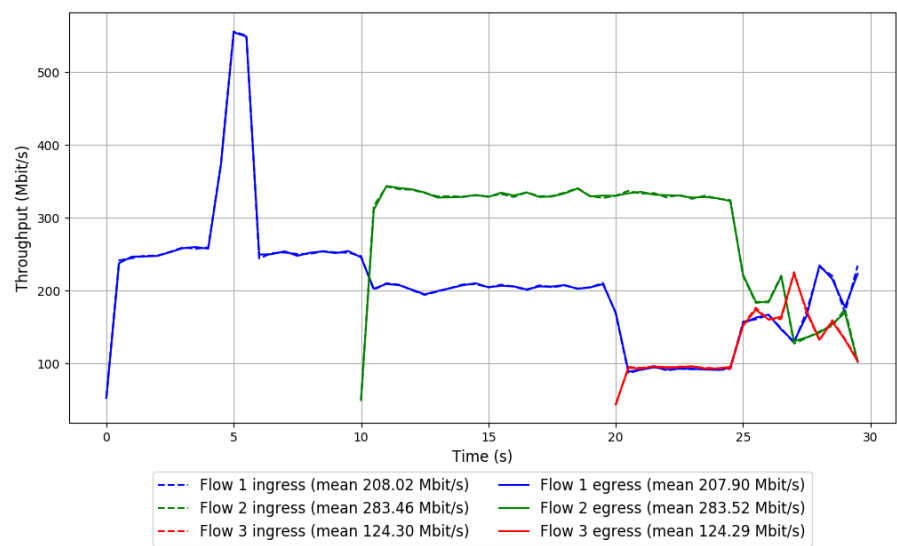Run 8: Report of CalibratedKoho — Data Link

```
Run 9: Statistics of CalibratedKoho

Start at: 2017-09-08 00:54:58
End at: 2017-09-08 00:55:28
Local clock offset: 0.875 ms
Remote clock offset: -1.116 ms


# Below is generated by plot.py at 2017-09-08 07:04:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.54 Mbit/s
95th percentile per-packet one-way delay: 11.106 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 207.90 Mbit/s
95th percentile per-packet one-way delay: 11.296 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 283.52 Mbit/s
95th percentile per-packet one-way delay: 9.738 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 124.29 Mbit/s
95th percentile per-packet one-way delay: 15.638 ms
Loss rate: 0.20%
```

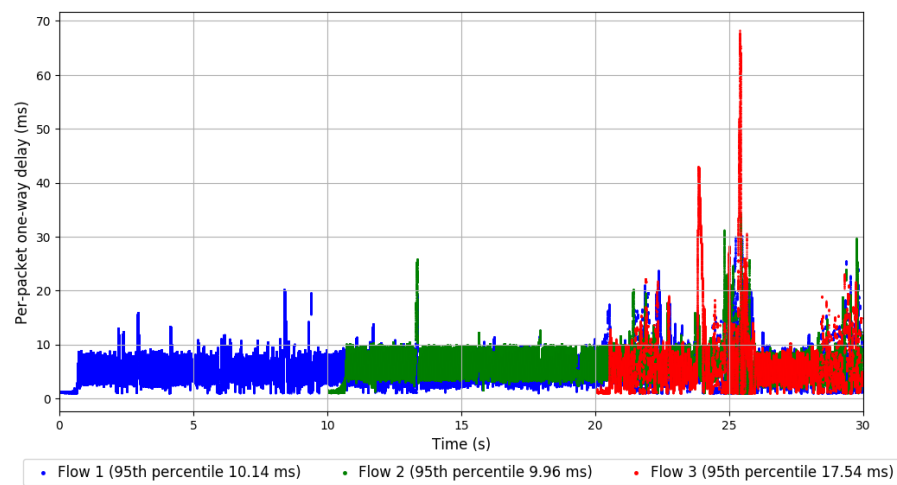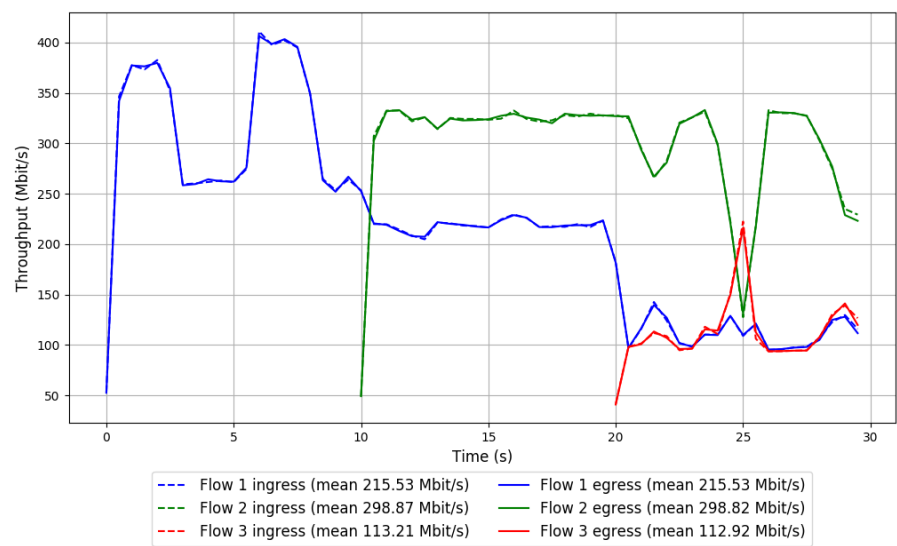Run 9: Report of CalibratedKoho — Data Link

```
Run 10: Statistics of CalibratedKoho

Start at: 2017-09-08 01:16:55
End at: 2017-09-08 01:17:25
Local clock offset: 0.898 ms
Remote clock offset: -1.203 ms


# Below is generated by plot.py at 2017-09-08 07:05:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.58 Mbit/s
95th percentile per-packet one-way delay: 10.604 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 215.53 Mbit/s
95th percentile per-packet one-way delay: 10.141 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 298.82 Mbit/s
95th percentile per-packet one-way delay: 9.956 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 112.92 Mbit/s
95th percentile per-packet one-way delay: 17.537 ms
Loss rate: 0.33%
```

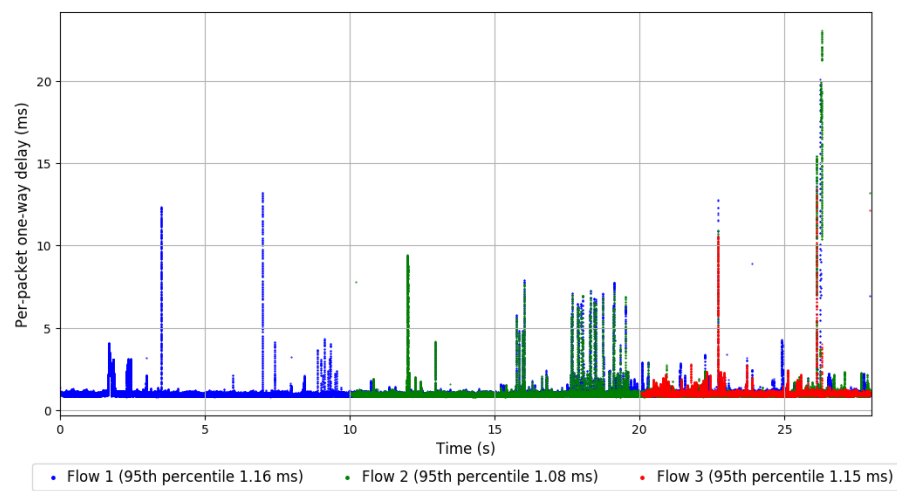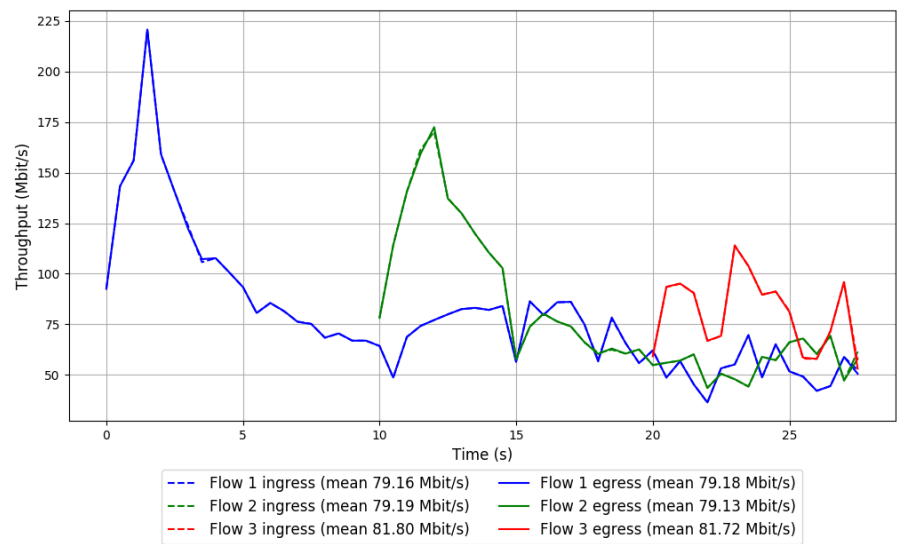## Run 10: Report of CalibratedKoho — Data Link

Flow 1 ingress (mean 215.53 Mbit/s) --- Flow 1 egress (mean 215.53 Mbit/s) ——
Flow 2 ingress (mean 298.87 Mbit/s) --- Flow 2 egress (mean 298.82 Mbit/s) ——
Flow 3 ingress (mean 113.21 Mbit/s) --- Flow 3 egress (mean 112.92 Mbit/s) ——

Flow 1 (95th percentile 10.14 ms) • Flow 2 (95th percentile 9.96 ms) • Flow 3 (95th percentile 17.54 ms)
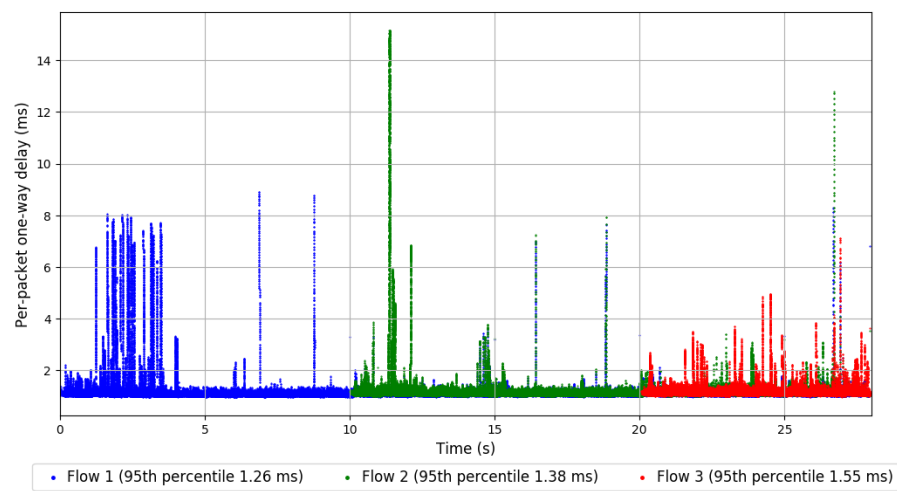
43

```
Run 1: Statistics of Copa

Start at: 2017-09-07 21:50:21
End at: 2017-09-07 21:50:51
Local clock offset: 0.856 ms
Remote clock offset: -2.788 ms

# Below is generated by plot.py at 2017-09-08 07:05:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 153.06 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 79.18 Mbit/s
95th percentile per-packet one-way delay: 1.160 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 79.13 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 81.72 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.22%
```
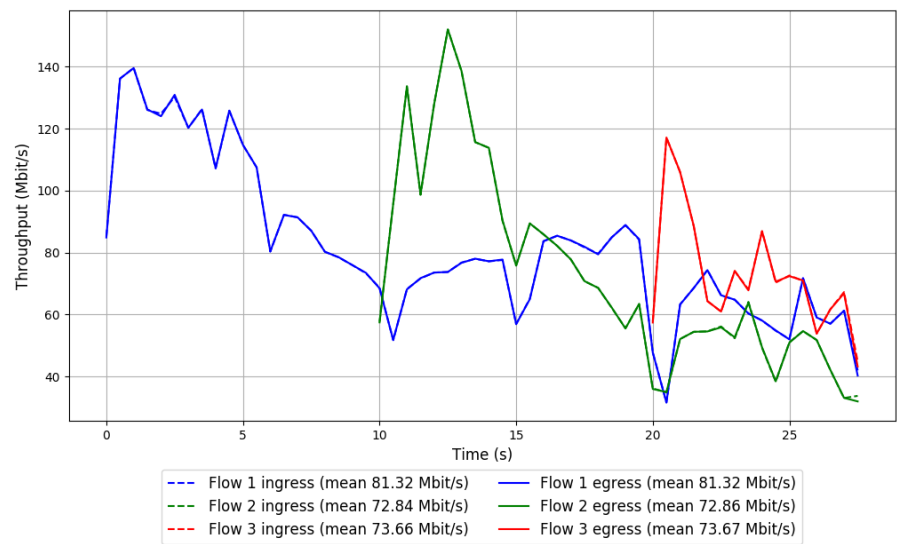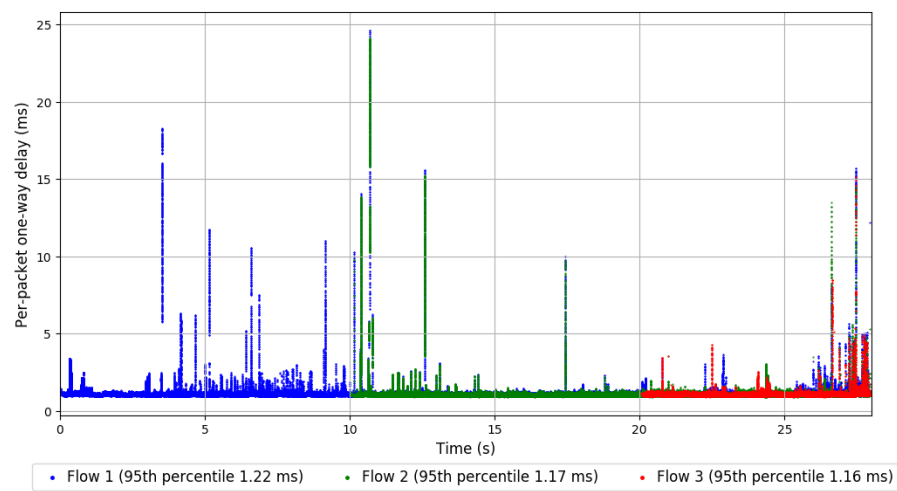
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2017-09-07 22:12:29
End at: 2017-09-07 22:12:59
Local clock offset: 1.043 ms
Remote clock offset: -2.139 ms

# Below is generated by plot.py at 2017-09-08 07:06:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.86 Mbit/s
95th percentile per-packet one-way delay: 1.346 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 81.32 Mbit/s
95th percentile per-packet one-way delay: 1.261 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 72.86 Mbit/s
95th percentile per-packet one-way delay: 1.378 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 73.67 Mbit/s
95th percentile per-packet one-way delay: 1.549 ms
Loss rate: 0.19%
```
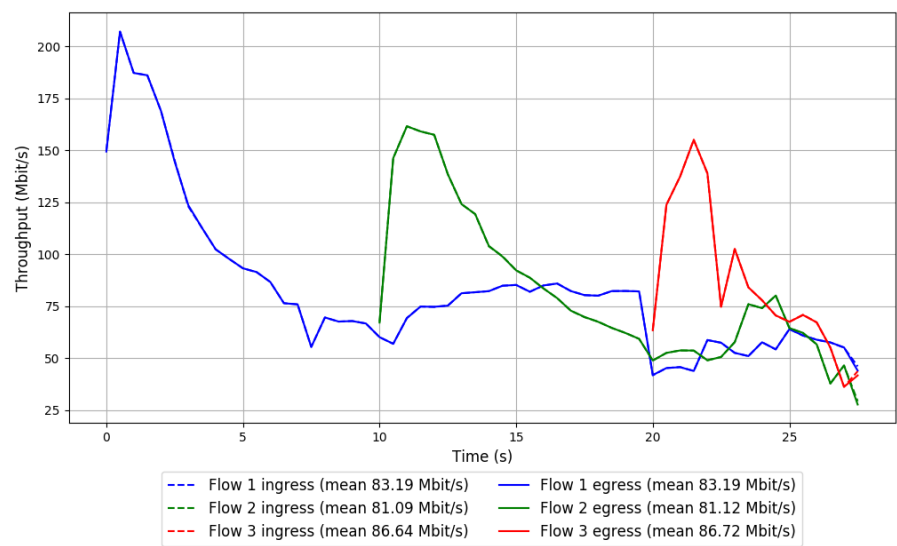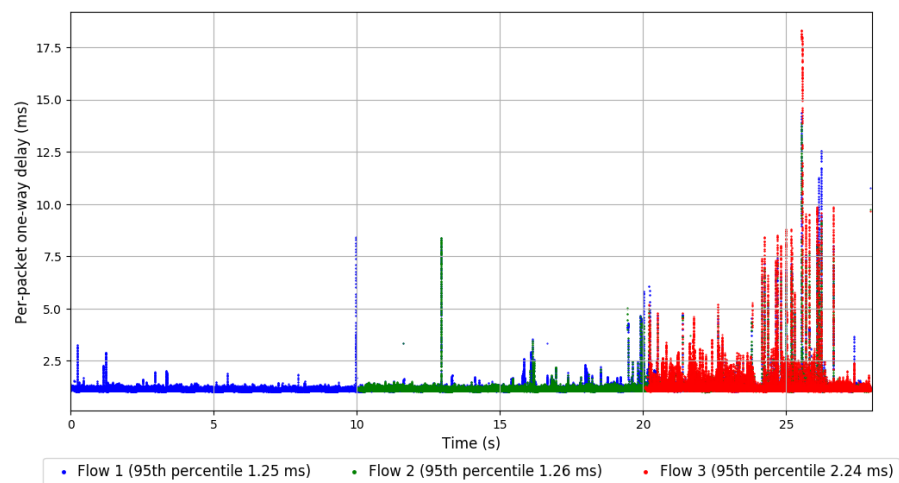
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 81.32 Mbit/s) — Flow 1 egress (mean 81.32 Mbit/s)
Flow 2 ingress (mean 72.84 Mbit/s) — Flow 2 egress (mean 72.86 Mbit/s)
Flow 3 ingress (mean 73.66 Mbit/s) — Flow 3 egress (mean 73.67 Mbit/s)

Flow 1 (95th percentile 1.26 ms) • Flow 2 (95th percentile 1.38 ms) • Flow 3 (95th percentile 1.55 ms)

47

```
Run 3: Statistics of Copa

Start at: 2017-09-07 22:34:31
End at: 2017-09-07 22:35:01
Local clock offset: 0.941 ms
Remote clock offset: -1.793 ms


# Below is generated by plot.py at 2017-09-08 07:06:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 159.68 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 83.19 Mbit/s
95th percentile per-packet one-way delay: 1.222 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 81.12 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 86.72 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.15%
```
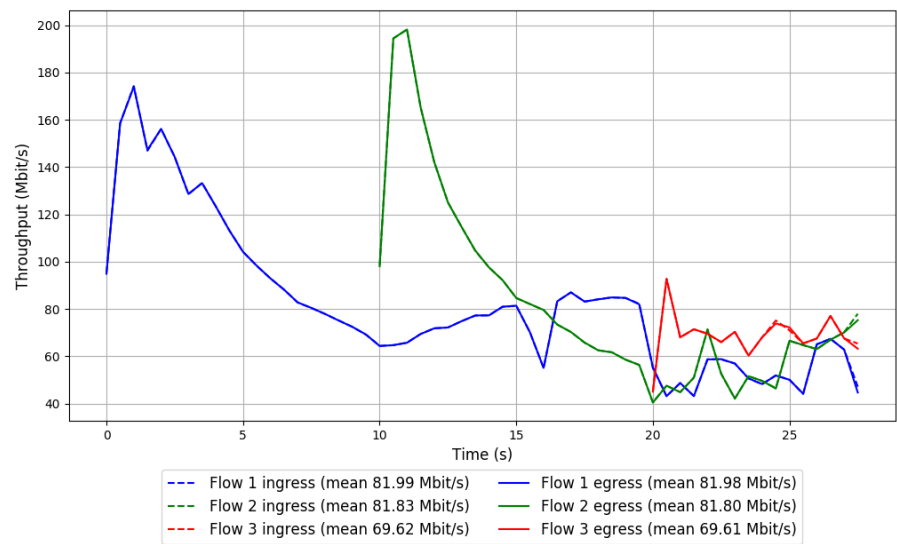
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2017-09-07 22:56:38
End at: 2017-09-07 22:57:08
Local clock offset: 1.058 ms
Remote clock offset: -1.361 ms


# Below is generated by plot.py at 2017-09-08 07:06:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.12 Mbit/s
95th percentile per-packet one-way delay: 1.304 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 81.98 Mbit/s
95th percentile per-packet one-way delay: 1.248 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 81.80 Mbit/s
95th percentile per-packet one-way delay: 1.256 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 69.61 Mbit/s
95th percentile per-packet one-way delay: 2.243 ms
Loss rate: 0.21%
```
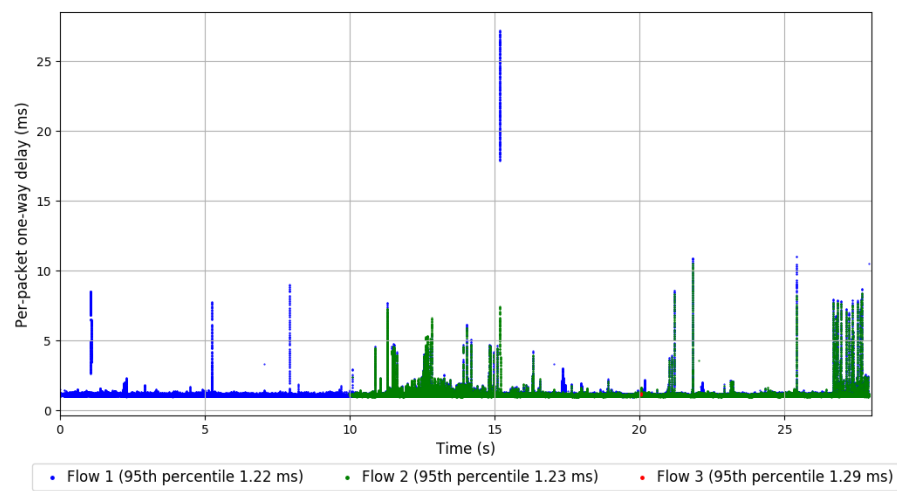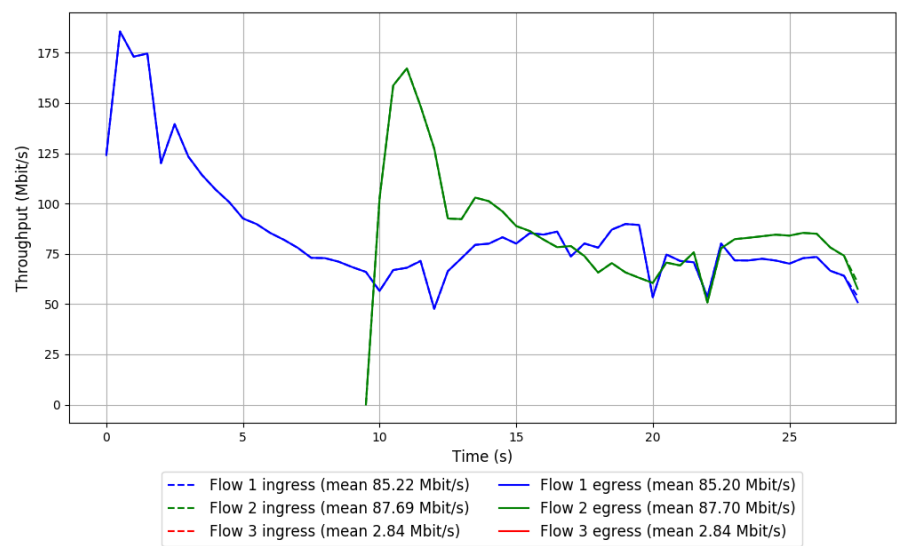
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2017-09-07 23:18:47
End at: 2017-09-07 23:19:17
Local clock offset: 1.125 ms
Remote clock offset: -1.106 ms


# Below is generated by plot.py at 2017-09-08 07:06:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.53 Mbit/s
95th percentile per-packet one-way delay: 1.220 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 85.20 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 87.70 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 2.84 Mbit/s
95th percentile per-packet one-way delay: 1.290 ms
Loss rate: 0.00%
```
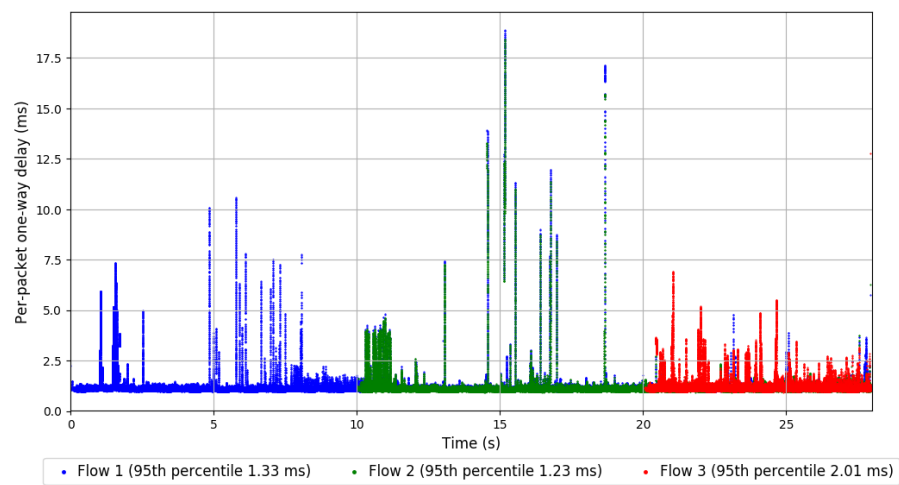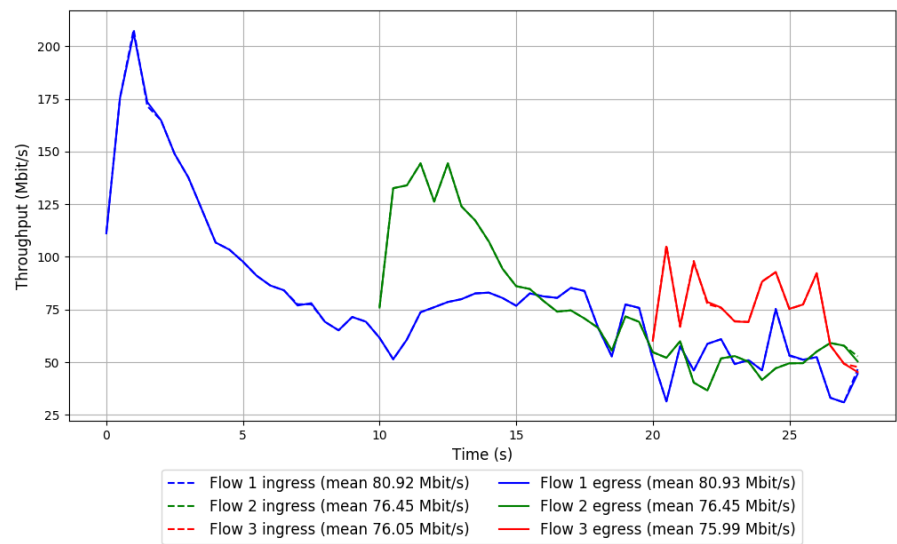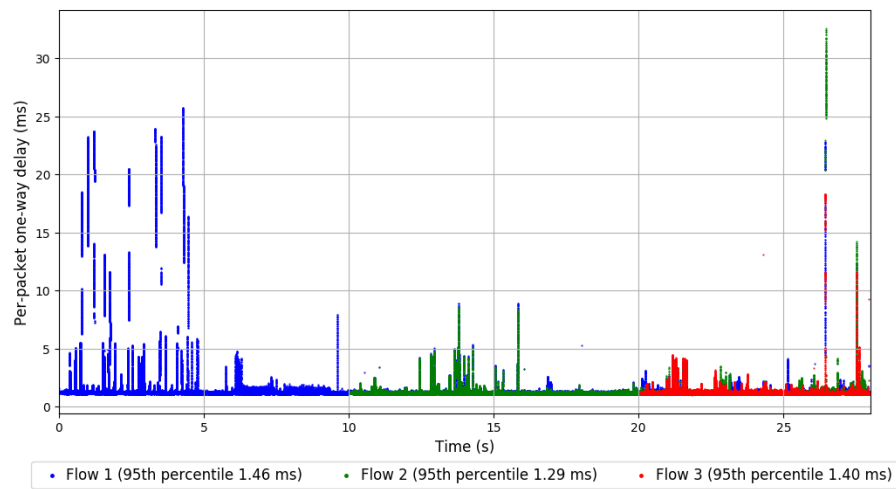
Run 5: Report of Copa — Data Link

- - - Flow 1 ingress (mean 85.22 Mbit/s)   —— Flow 1 egress (mean 85.20 Mbit/s)
- - - Flow 2 ingress (mean 87.69 Mbit/s)   —— Flow 2 egress (mean 87.70 Mbit/s)
- - - Flow 3 ingress (mean 2.84 Mbit/s)   —— Flow 3 egress (mean 2.84 Mbit/s)

• Flow 1 (95th percentile 1.22 ms)   • Flow 2 (95th percentile 1.23 ms)   • Flow 3 (95th percentile 1.29 ms)

53

```
Run 6: Statistics of Copa

Start at: 2017-09-07 23:40:50
End at: 2017-09-07 23:41:20
Local clock offset: 0.861 ms
Remote clock offset: -1.232 ms


# Below is generated by plot.py at 2017-09-08 07:07:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.42 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 80.93 Mbit/s
95th percentile per-packet one-way delay: 1.330 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 76.45 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 75.99 Mbit/s
95th percentile per-packet one-way delay: 2.010 ms
Loss rate: 0.20%
```
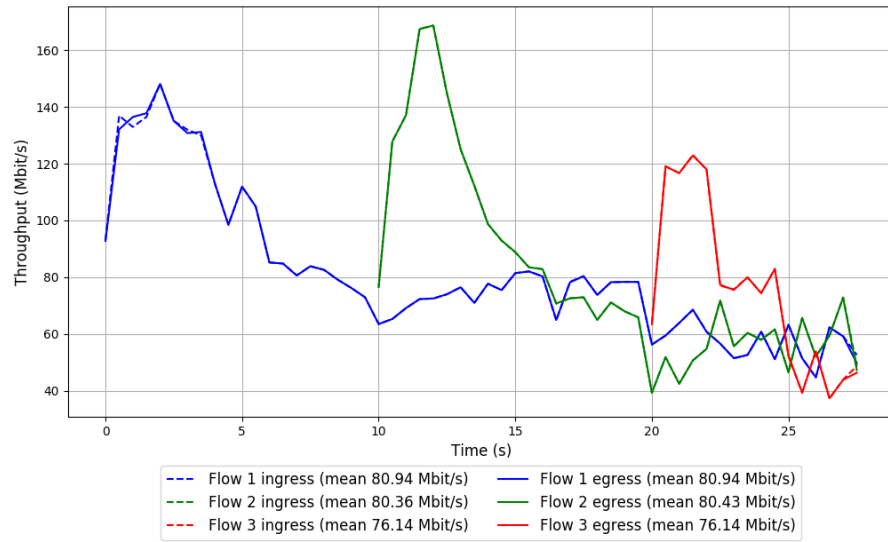
Run 6: Report of Copa — Data Link

```
Run 7: Statistics of Copa

Start at: 2017-09-08 00:02:52
End at: 2017-09-08 00:03:22
Local clock offset: 0.843 ms
Remote clock offset: -1.314 ms


# Below is generated by plot.py at 2017-09-08 07:07:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.03 Mbit/s
95th percentile per-packet one-way delay: 1.355 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 80.94 Mbit/s
95th percentile per-packet one-way delay: 1.463 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 80.43 Mbit/s
95th percentile per-packet one-way delay: 1.287 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 76.14 Mbit/s
95th percentile per-packet one-way delay: 1.395 ms
Loss rate: 0.21%
```
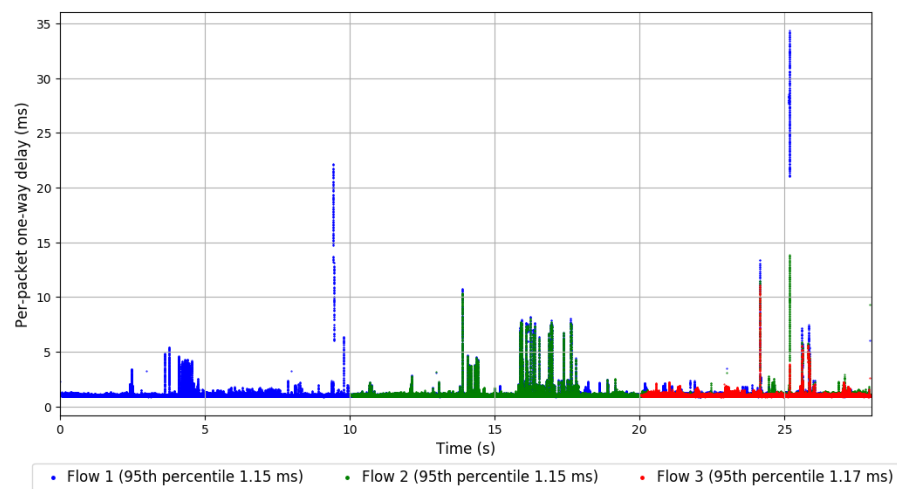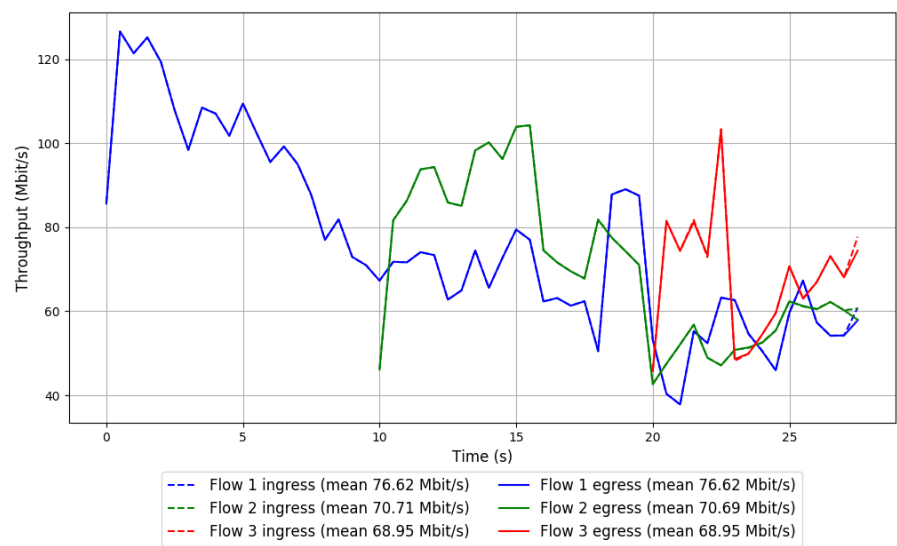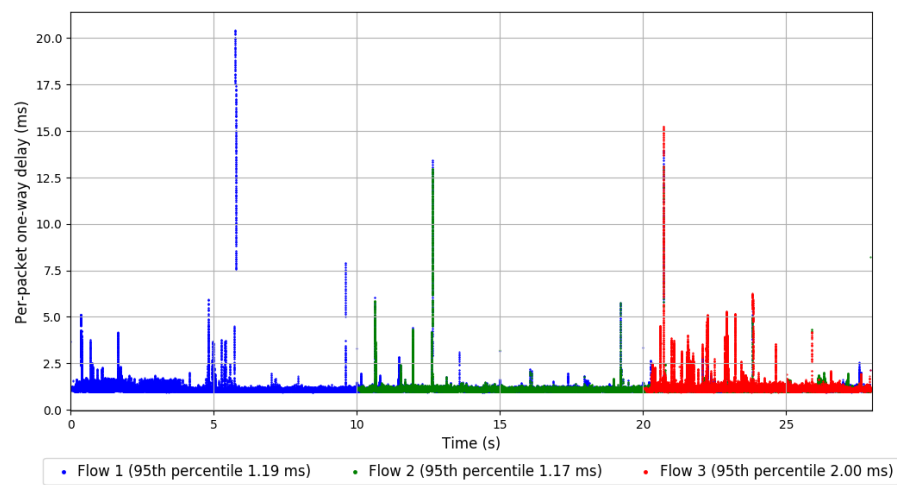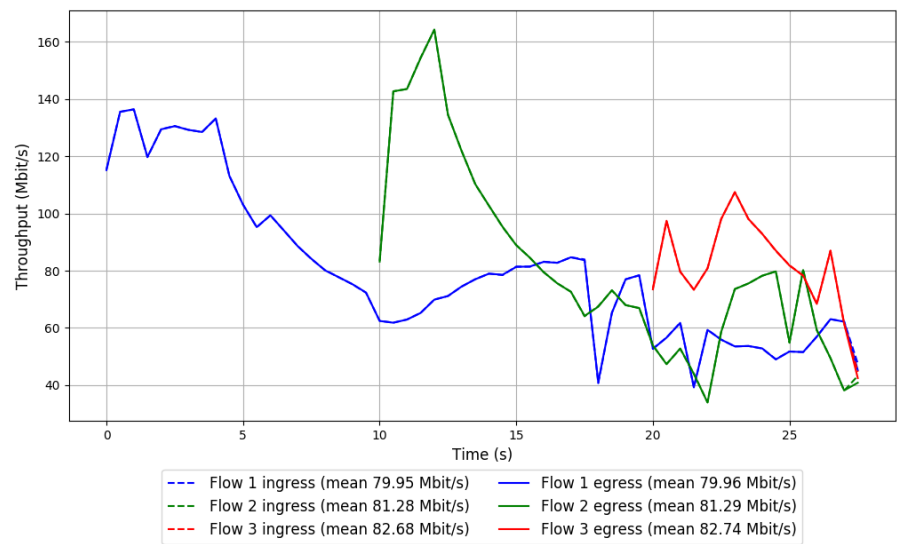
Run 7: Report of Copa — Data Link

- - - Flow 1 ingress (mean 80.94 Mbit/s)   —— Flow 1 egress (mean 80.94 Mbit/s)
- - - Flow 2 ingress (mean 80.36 Mbit/s)   —— Flow 2 egress (mean 80.43 Mbit/s)
- - - Flow 3 ingress (mean 76.14 Mbit/s)   —— Flow 3 egress (mean 76.14 Mbit/s)

• Flow 1 (95th percentile 1.46 ms)   • Flow 2 (95th percentile 1.29 ms)   • Flow 3 (95th percentile 1.40 ms)

57

```
Run 8: Statistics of Copa

Start at: 2017-09-08 00:24:54
End at: 2017-09-08 00:25:24
Local clock offset: 0.828 ms
Remote clock offset: -1.141 ms


# Below is generated by plot.py at 2017-09-08 07:07:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.44 Mbit/s
95th percentile per-packet one-way delay: 1.154 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 76.62 Mbit/s
95th percentile per-packet one-way delay: 1.154 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 70.69 Mbit/s
95th percentile per-packet one-way delay: 1.149 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 68.95 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.32%
```

Run 8: Report of Copa — Data Link

Flow 1 ingress (mean 76.62 Mbit/s) —— Flow 1 egress (mean 76.62 Mbit/s)
Flow 2 ingress (mean 70.71 Mbit/s) —— Flow 2 egress (mean 70.69 Mbit/s)
Flow 3 ingress (mean 68.95 Mbit/s) —— Flow 3 egress (mean 68.95 Mbit/s)

Flow 1 (95th percentile 1.15 ms) • Flow 2 (95th percentile 1.15 ms) • Flow 3 (95th percentile 1.17 ms)

```
Run 9: Statistics of Copa

Start at: 2017-09-08 00:46:58
End at: 2017-09-08 00:47:28
Local clock offset: 0.842 ms
Remote clock offset: -1.329 ms


# Below is generated by plot.py at 2017-09-08 07:08:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 155.50 Mbit/s
95th percentile per-packet one-way delay: 1.252 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 79.96 Mbit/s
95th percentile per-packet one-way delay: 1.193 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 81.29 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 82.74 Mbit/s
95th percentile per-packet one-way delay: 2.000 ms
Loss rate: 0.18%
```
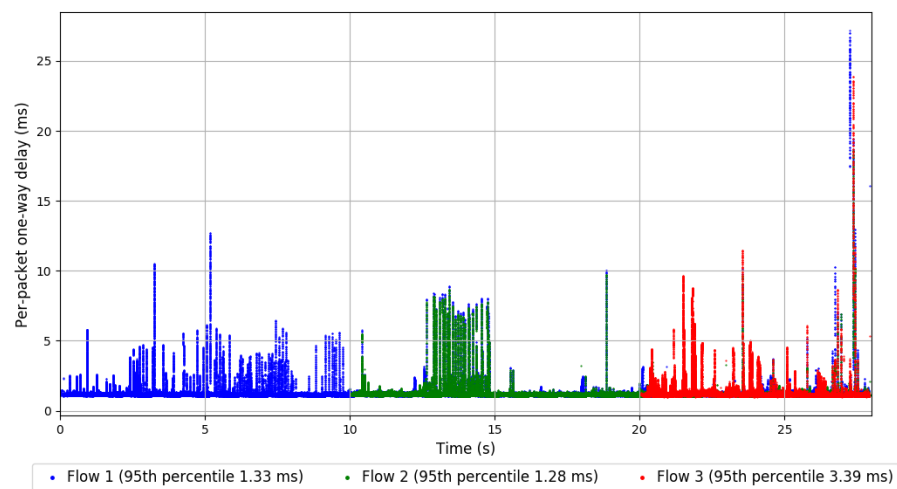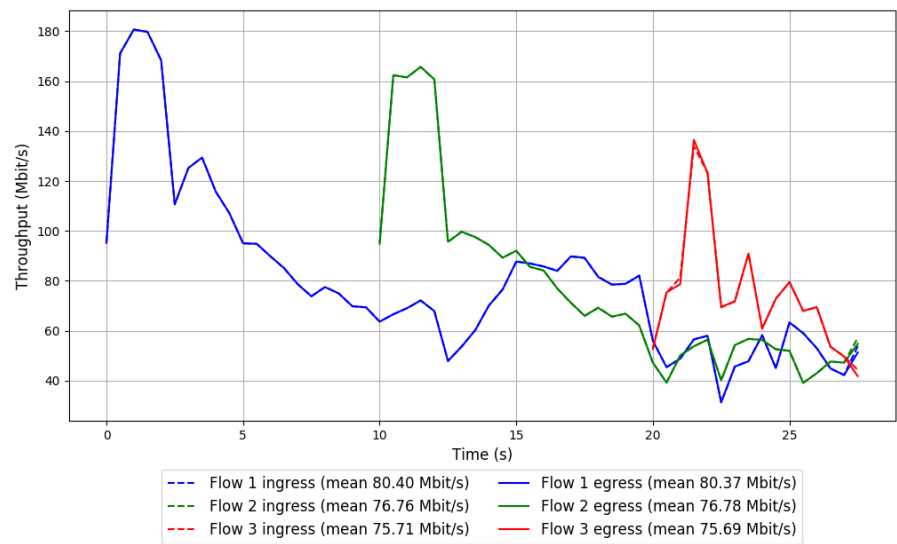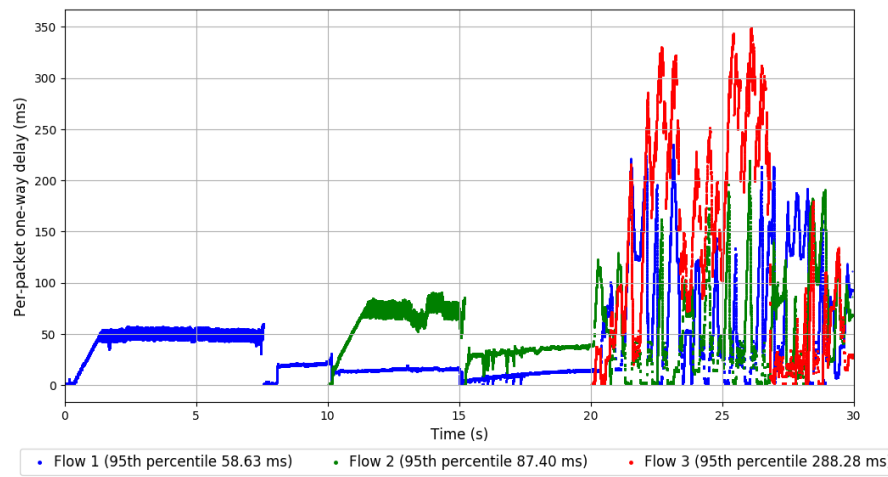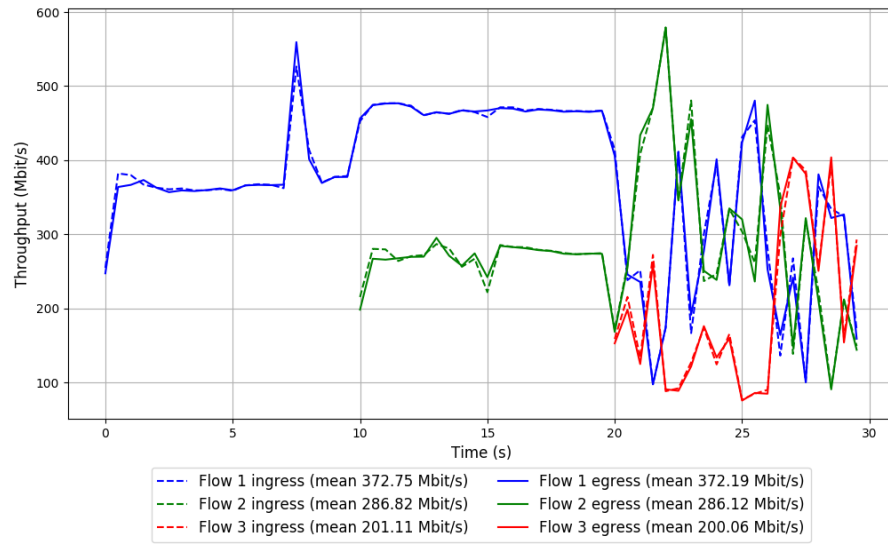
Run 9: Report of Copa — Data Link

Flow 1 ingress (mean 79.95 Mbit/s) --- Flow 1 egress (mean 79.96 Mbit/s)
Flow 2 ingress (mean 81.28 Mbit/s) --- Flow 2 egress (mean 81.29 Mbit/s)
Flow 3 ingress (mean 82.68 Mbit/s) --- Flow 3 egress (mean 82.74 Mbit/s)

Flow 1 (95th percentile 1.19 ms)   Flow 2 (95th percentile 1.17 ms)   Flow 3 (95th percentile 2.00 ms)

```
Run 10: Statistics of Copa

Start at: 2017-09-08 01:09:04
End at: 2017-09-08 01:09:34
Local clock offset: 0.895 ms
Remote clock offset: -1.12 ms

# Below is generated by plot.py at 2017-09-08 07:08:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 151.00 Mbit/s
95th percentile per-packet one-way delay: 1.524 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 80.37 Mbit/s
95th percentile per-packet one-way delay: 1.332 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 76.78 Mbit/s
95th percentile per-packet one-way delay: 1.283 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 75.69 Mbit/s
95th percentile per-packet one-way delay: 3.393 ms
Loss rate: 0.22%
```
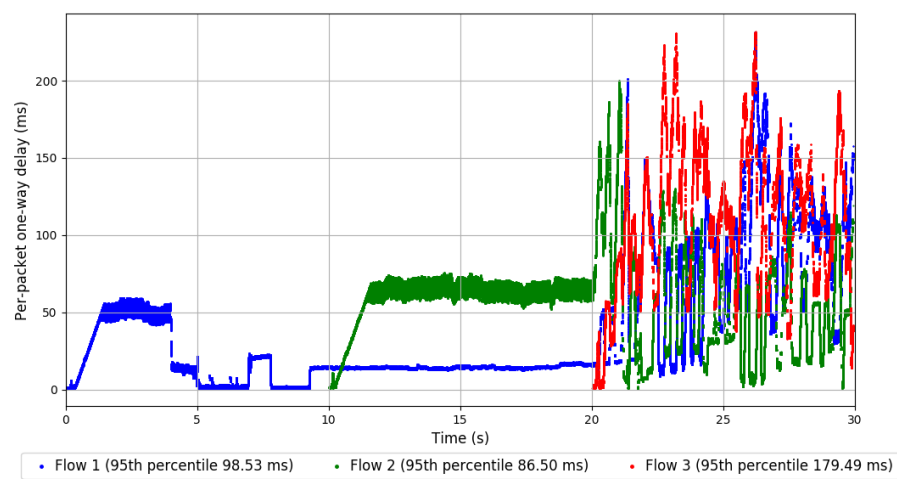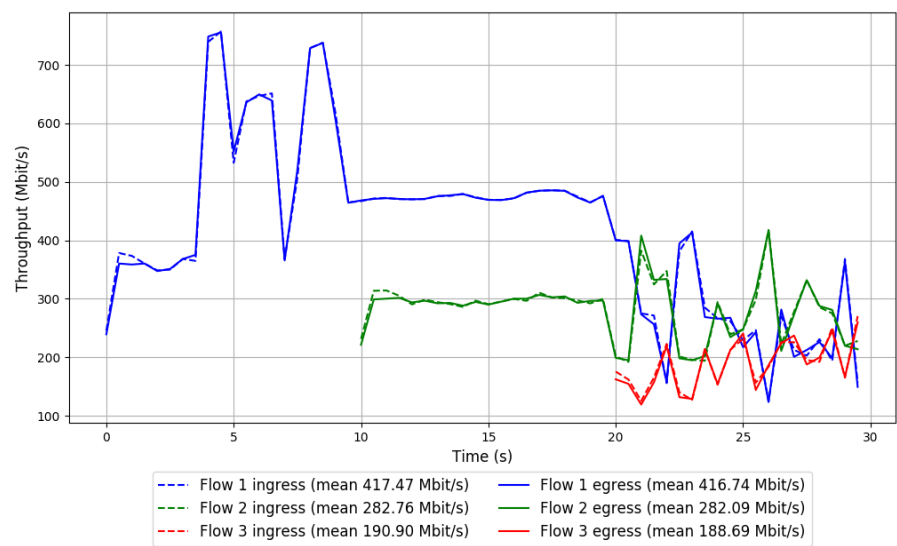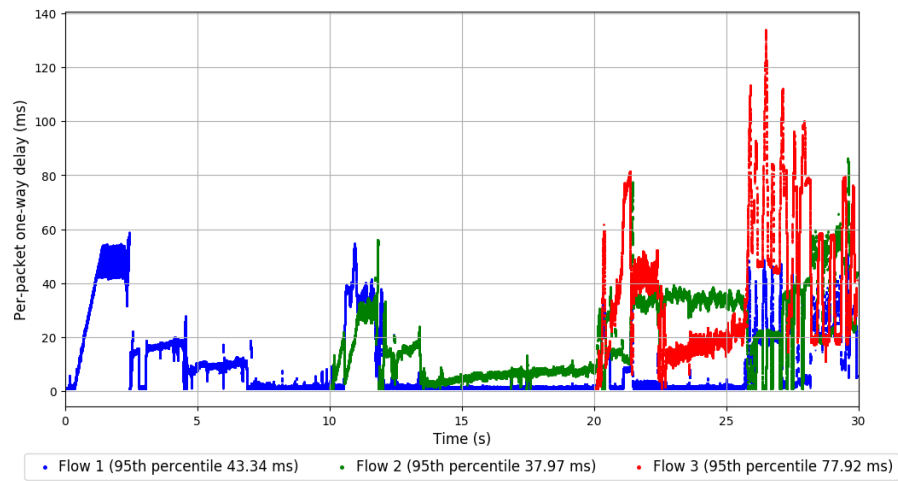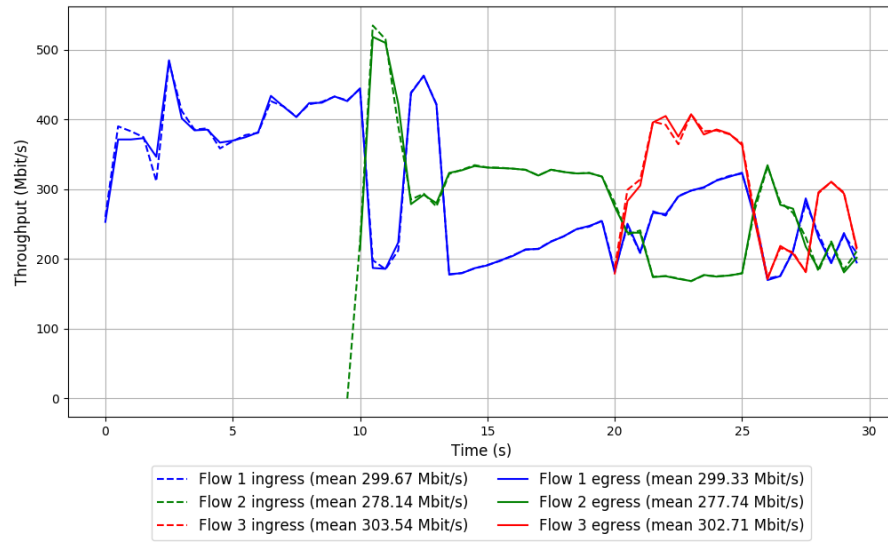
Run 10: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2017-09-07 22:03:18
End at: 2017-09-07 22:03:48
Local clock offset: 0.951 ms
Remote clock offset: -2.504 ms


# Below is generated by plot.py at 2017-09-08 07:09:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 628.83 Mbit/s
95th percentile per-packet one-way delay: 115.790 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 372.19 Mbit/s
95th percentile per-packet one-way delay: 58.629 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 286.12 Mbit/s
95th percentile per-packet one-way delay: 87.396 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 200.06 Mbit/s
95th percentile per-packet one-way delay: 288.284 ms
Loss rate: 0.70%
```

Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 372.75 Mbit/s) --- Flow 1 egress (mean 372.19 Mbit/s)
Flow 2 ingress (mean 286.82 Mbit/s) --- Flow 2 egress (mean 286.12 Mbit/s)
Flow 3 ingress (mean 201.11 Mbit/s) --- Flow 3 egress (mean 200.06 Mbit/s)

Flow 1 (95th percentile 58.63 ms)   Flow 2 (95th percentile 87.40 ms)   Flow 3 (95th percentile 288.28 ms)
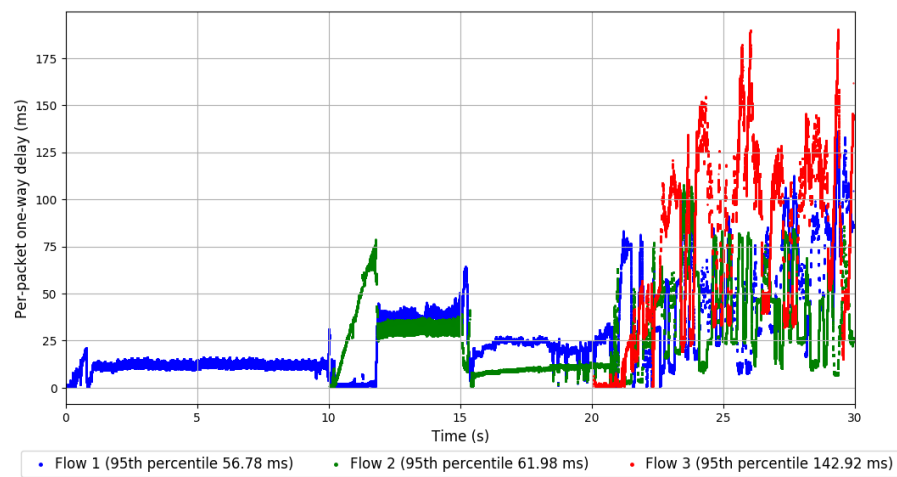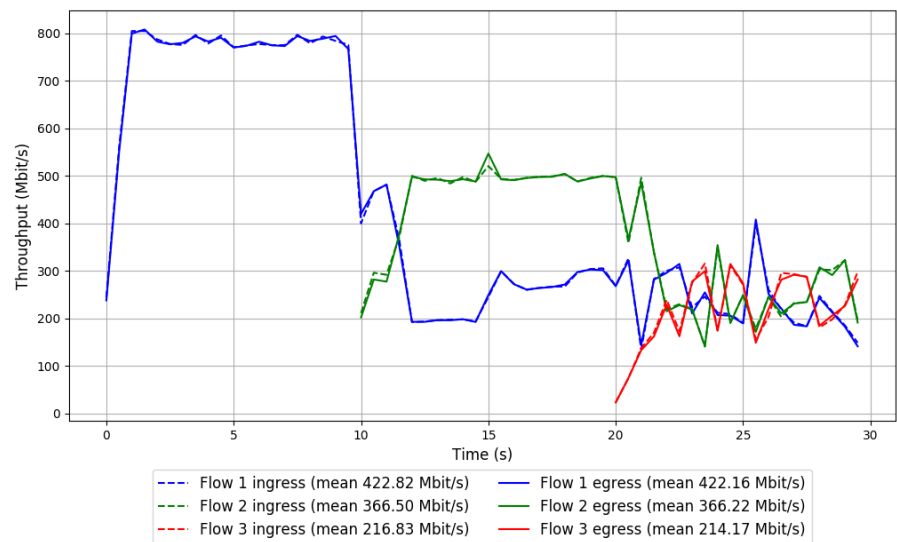
```
Run 2: Statistics of TCP Cubic

Start at: 2017-09-07 22:25:15
End at: 2017-09-07 22:25:45
Local clock offset: 1.019 ms
Remote clock offset: -1.673 ms


# Below is generated by plot.py at 2017-09-08 07:09:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 667.04 Mbit/s
95th percentile per-packet one-way delay: 122.300 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 416.74 Mbit/s
95th percentile per-packet one-way delay: 98.529 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 282.09 Mbit/s
95th percentile per-packet one-way delay: 86.502 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 188.69 Mbit/s
95th percentile per-packet one-way delay: 179.488 ms
Loss rate: 1.35%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2017-09-07 22:47:27
End at: 2017-09-07 22:47:57
Local clock offset: 1.006 ms
Remote clock offset: -1.635 ms


# Below is generated by plot.py at 2017-09-08 07:10:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.49 Mbit/s
95th percentile per-packet one-way delay: 49.543 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 299.33 Mbit/s
95th percentile per-packet one-way delay: 43.344 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 277.74 Mbit/s
95th percentile per-packet one-way delay: 37.966 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 302.71 Mbit/s
95th percentile per-packet one-way delay: 77.919 ms
Loss rate: 0.37%
```
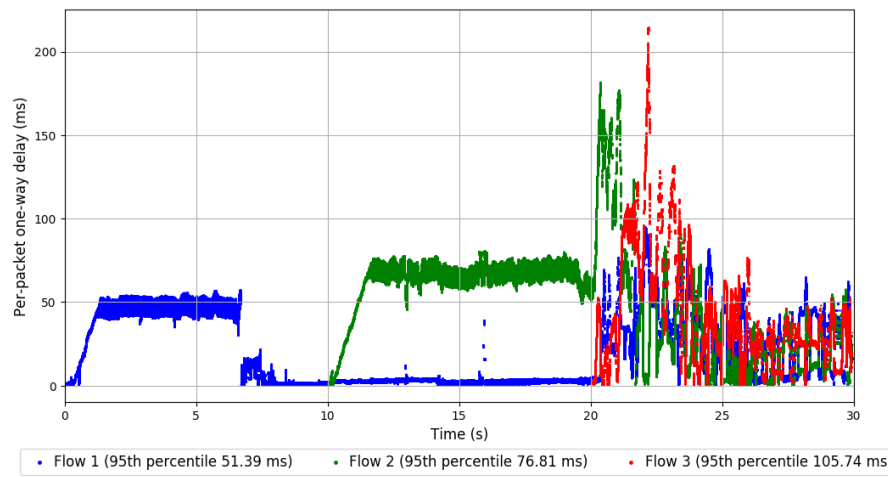
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2017-09-07 23:09:30
End at: 2017-09-07 23:10:00
Local clock offset: 1.023 ms
Remote clock offset: -1.172 ms


# Below is generated by plot.py at 2017-09-08 07:11:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.48 Mbit/s
95th percentile per-packet one-way delay: 86.667 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 422.16 Mbit/s
95th percentile per-packet one-way delay: 56.781 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 366.22 Mbit/s
95th percentile per-packet one-way delay: 61.979 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 214.17 Mbit/s
95th percentile per-packet one-way delay: 142.920 ms
Loss rate: 1.23%
```
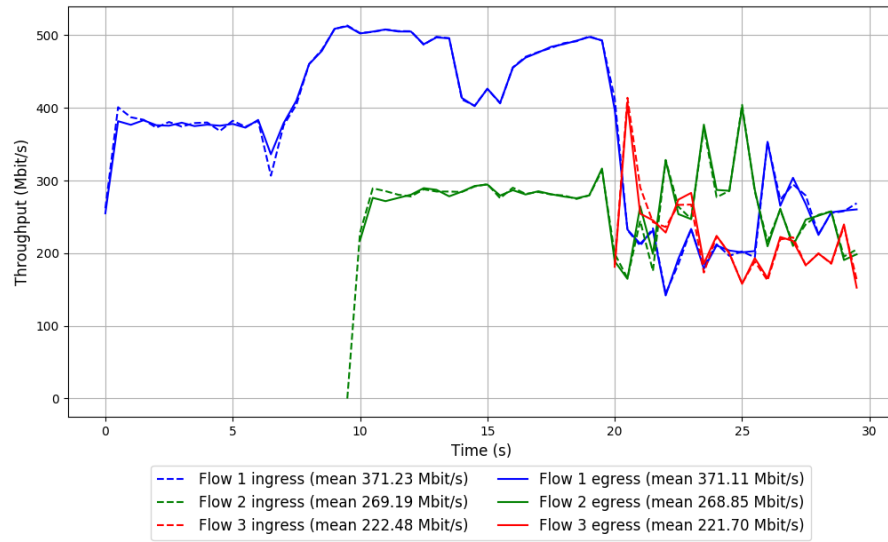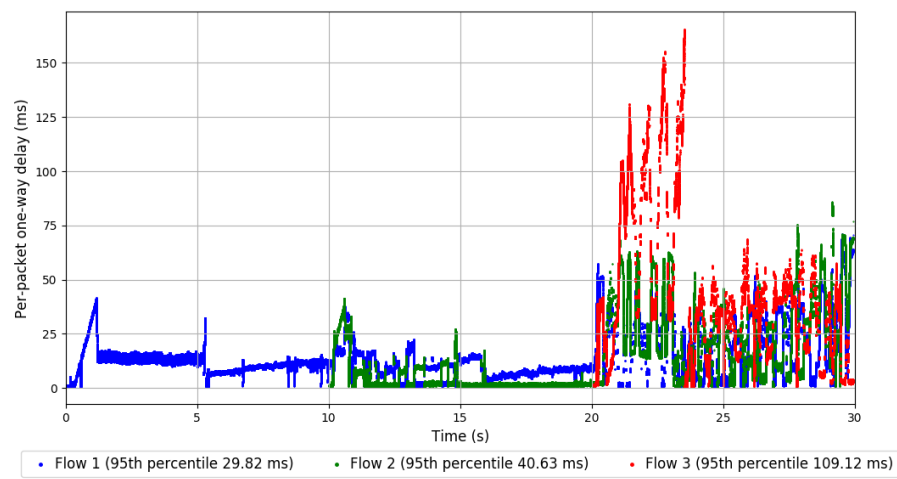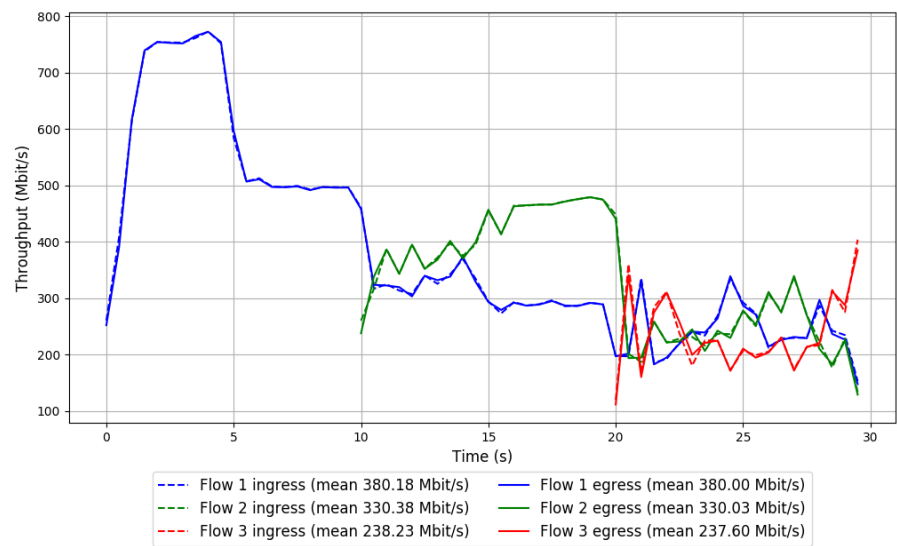
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 422.82 Mbit/s)
Flow 1 egress (mean 422.16 Mbit/s)
Flow 2 ingress (mean 366.50 Mbit/s)
Flow 2 egress (mean 366.22 Mbit/s)
Flow 3 ingress (mean 216.83 Mbit/s)
Flow 3 egress (mean 214.17 Mbit/s)

Flow 1 (95th percentile 56.78 ms)
Flow 2 (95th percentile 61.98 ms)
Flow 3 (95th percentile 142.92 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2017-09-07 23:31:37
End at: 2017-09-07 23:32:07
Local clock offset: 0.969 ms
Remote clock offset: -0.99 ms


# Below is generated by plot.py at 2017-09-08 07:12:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 623.54 Mbit/s
95th percentile per-packet one-way delay: 74.567 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 371.11 Mbit/s
95th percentile per-packet one-way delay: 51.394 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 268.85 Mbit/s
95th percentile per-packet one-way delay: 76.810 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 221.70 Mbit/s
95th percentile per-packet one-way delay: 105.743 ms
Loss rate: 0.39%
```
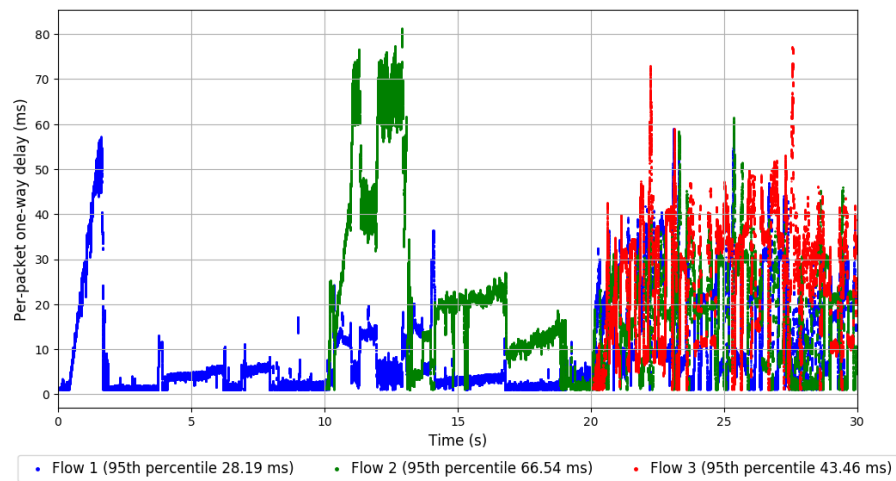
Run 5: Report of TCP Cubic — Data Link

```
Run 6: Statistics of TCP Cubic

Start at: 2017-09-07 23:53:37
End at: 2017-09-07 23:54:07
Local clock offset: 0.741 ms
Remote clock offset: -1.344 ms


# Below is generated by plot.py at 2017-09-08 07:13:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 678.37 Mbit/s
95th percentile per-packet one-way delay: 43.379 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 380.00 Mbit/s
95th percentile per-packet one-way delay: 29.819 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 330.03 Mbit/s
95th percentile per-packet one-way delay: 40.631 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 237.60 Mbit/s
95th percentile per-packet one-way delay: 109.116 ms
Loss rate: 0.47%
```
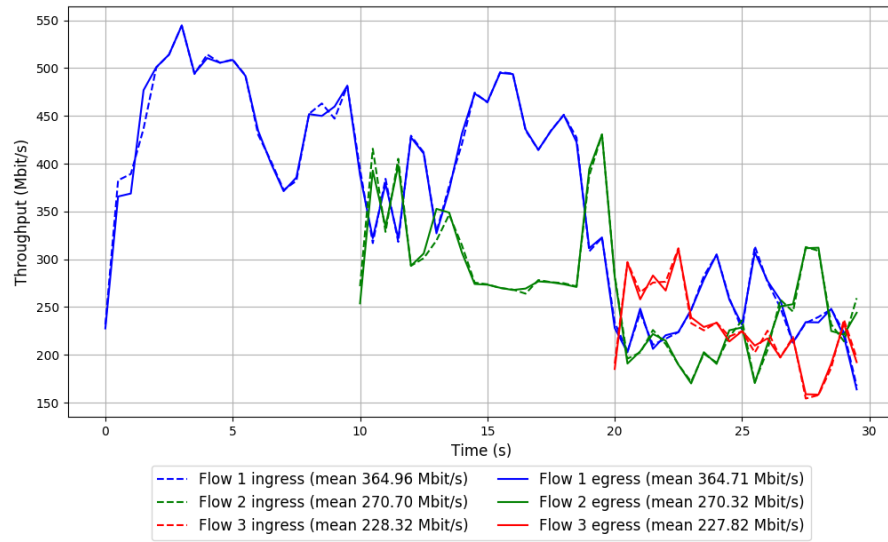
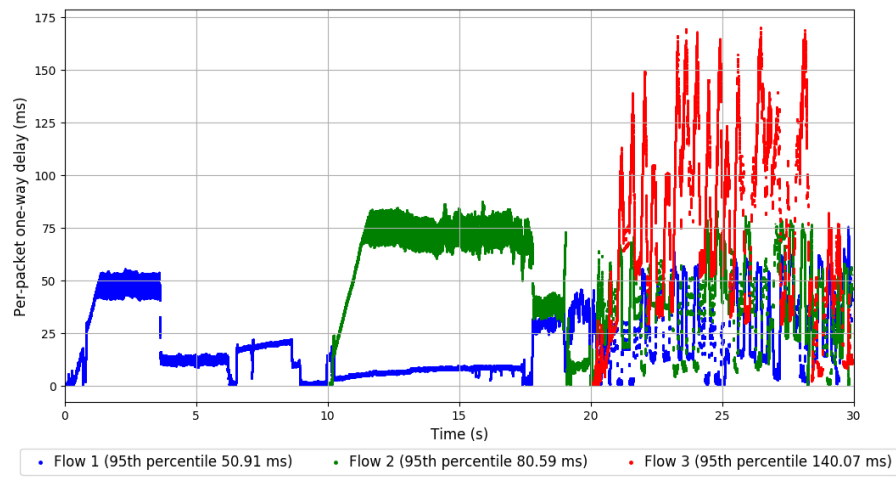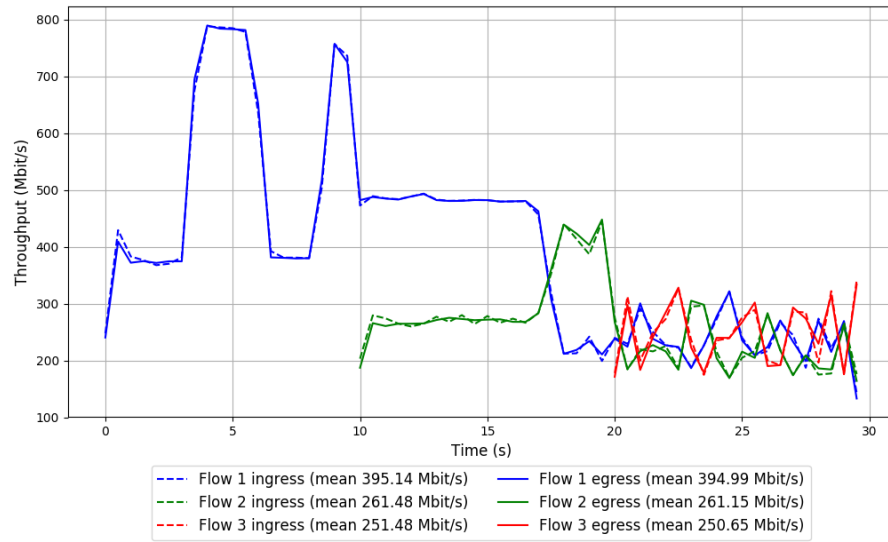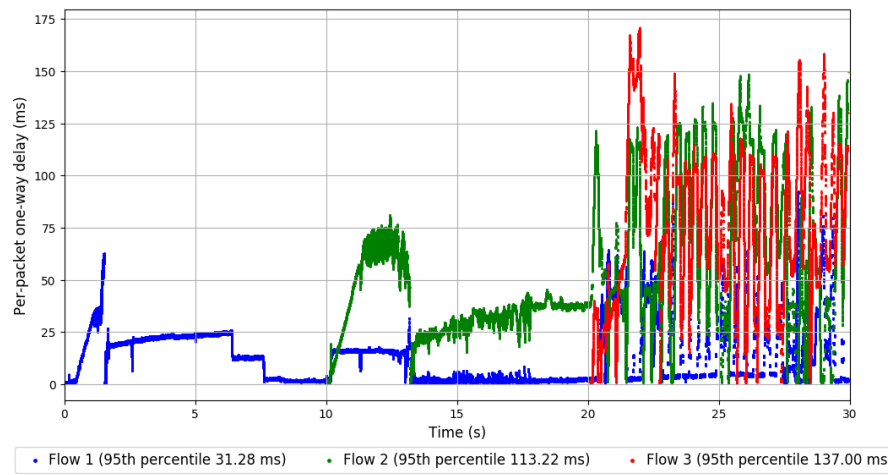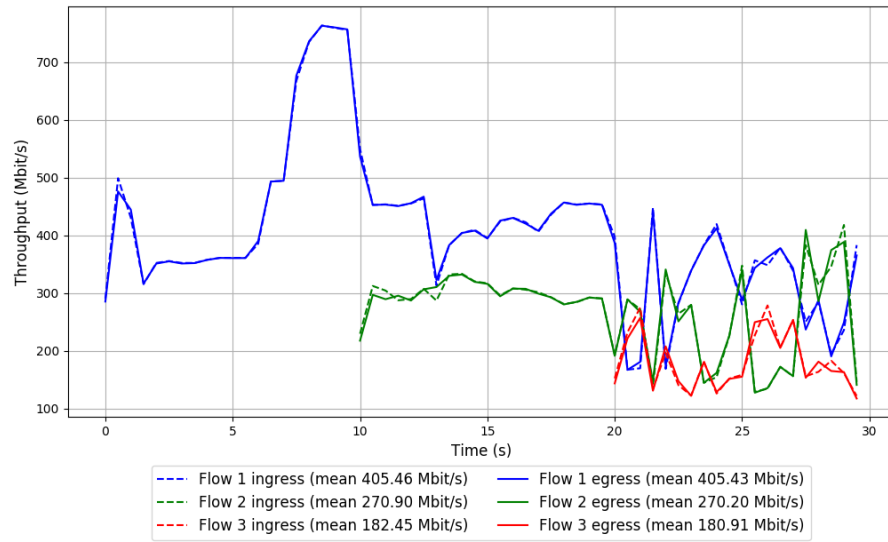Run 6: Report of TCP Cubic — Data Link

```
Run 7: Statistics of TCP Cubic

Start at: 2017-09-08 00:15:41
End at: 2017-09-08 00:16:11
Local clock offset: 0.86 ms
Remote clock offset: -1.23 ms


# Below is generated by plot.py at 2017-09-08 07:13:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.07 Mbit/s
95th percentile per-packet one-way delay: 42.063 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 364.71 Mbit/s
95th percentile per-packet one-way delay: 28.189 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 270.32 Mbit/s
95th percentile per-packet one-way delay: 66.536 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 227.82 Mbit/s
95th percentile per-packet one-way delay: 43.461 ms
Loss rate: 0.31%
```

Run 7: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 364.96 Mbit/s) --- Flow 1 egress (mean 364.71 Mbit/s)
Flow 2 ingress (mean 270.70 Mbit/s) --- Flow 2 egress (mean 270.32 Mbit/s)
Flow 3 ingress (mean 228.32 Mbit/s) --- Flow 3 egress (mean 227.82 Mbit/s)

Flow 1 (95th percentile 28.19 ms)   Flow 2 (95th percentile 66.54 ms)   Flow 3 (95th percentile 43.46 ms)

```
Run 8: Statistics of TCP Cubic

Start at: 2017-09-08 00:37:43
End at: 2017-09-08 00:38:13
Local clock offset: 0.795 ms
Remote clock offset: -1.258 ms


# Below is generated by plot.py at 2017-09-08 07:14:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 651.49 Mbit/s
95th percentile per-packet one-way delay: 82.029 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 394.99 Mbit/s
95th percentile per-packet one-way delay: 50.912 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 261.15 Mbit/s
95th percentile per-packet one-way delay: 80.587 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 250.65 Mbit/s
95th percentile per-packet one-way delay: 140.075 ms
Loss rate: 0.54%
```
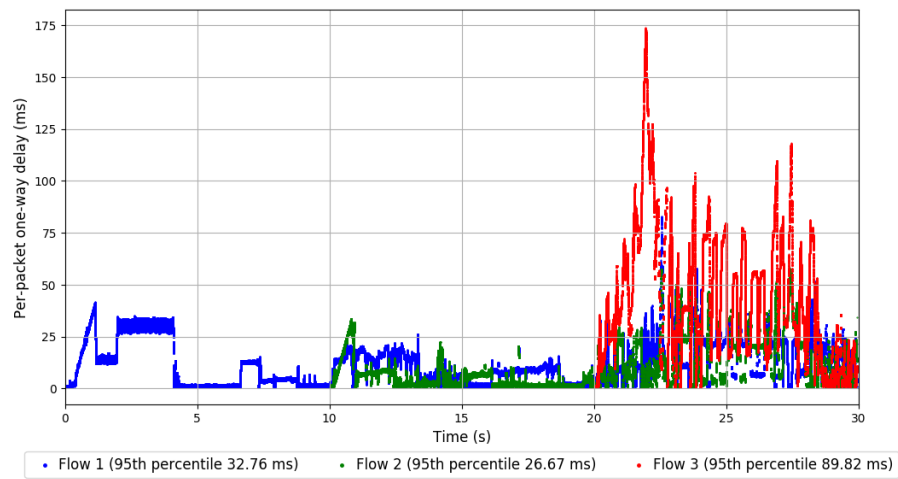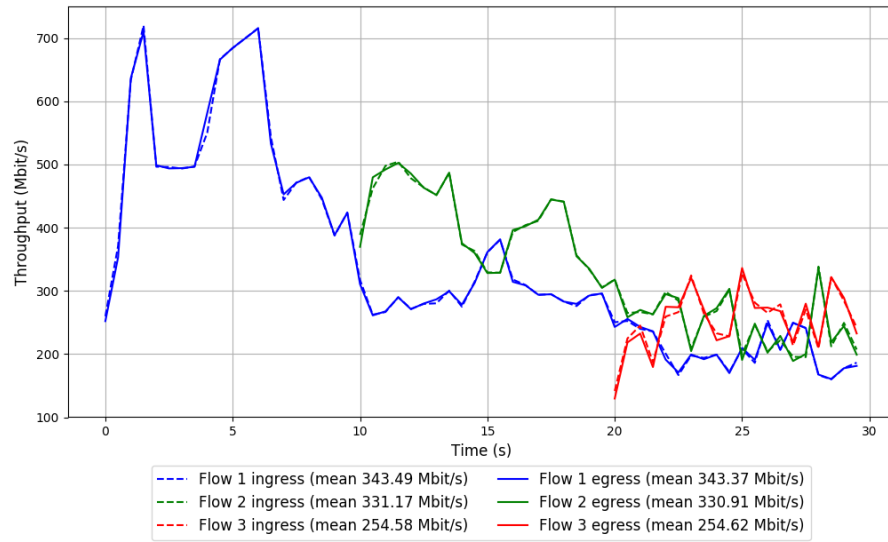
Run 8: Report of TCP Cubic — Data Link

```
Run 9: Statistics of TCP Cubic

Start at: 2017-09-08 00:59:47
End at: 2017-09-08 01:00:17
Local clock offset: 0.832 ms
Remote clock offset: -1.029 ms


# Below is generated by plot.py at 2017-09-08 07:14:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 645.02 Mbit/s
95th percentile per-packet one-way delay: 92.607 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 405.43 Mbit/s
95th percentile per-packet one-way delay: 31.276 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 270.20 Mbit/s
95th percentile per-packet one-way delay: 113.218 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 180.91 Mbit/s
95th percentile per-packet one-way delay: 137.004 ms
Loss rate: 0.88%
```

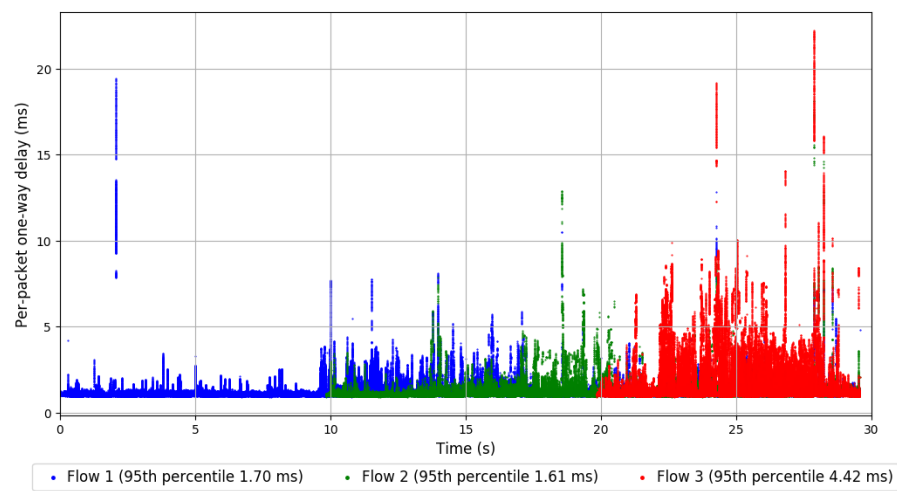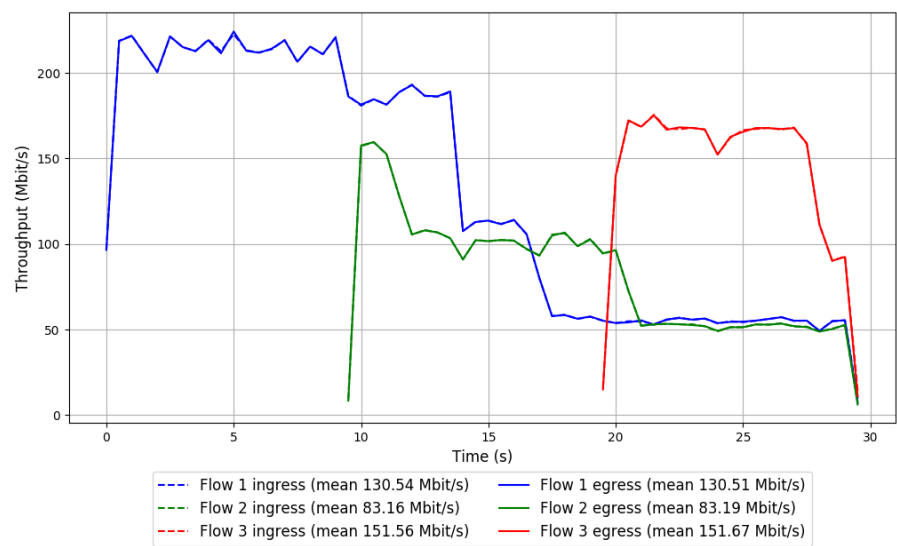Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 405.46 Mbit/s)   Flow 1 egress (mean 405.43 Mbit/s)
Flow 2 ingress (mean 270.90 Mbit/s)   Flow 2 egress (mean 270.20 Mbit/s)
Flow 3 ingress (mean 182.45 Mbit/s)   Flow 3 egress (mean 180.91 Mbit/s)

Flow 1 (95th percentile 31.28 ms)   Flow 2 (95th percentile 113.22 ms)   Flow 3 (95th percentile 137.00 ms)

```
Run 10: Statistics of TCP Cubic

Start at: 2017-09-08 01:21:32
End at: 2017-09-08 01:22:02
Local clock offset: 0.781 ms
Remote clock offset: -1.35 ms


# Below is generated by plot.py at 2017-09-08 07:16:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.07 Mbit/s
95th percentile per-packet one-way delay: 40.242 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 343.37 Mbit/s
95th percentile per-packet one-way delay: 32.758 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 330.91 Mbit/s
95th percentile per-packet one-way delay: 26.666 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 254.62 Mbit/s
95th percentile per-packet one-way delay: 89.818 ms
Loss rate: 0.26%
```

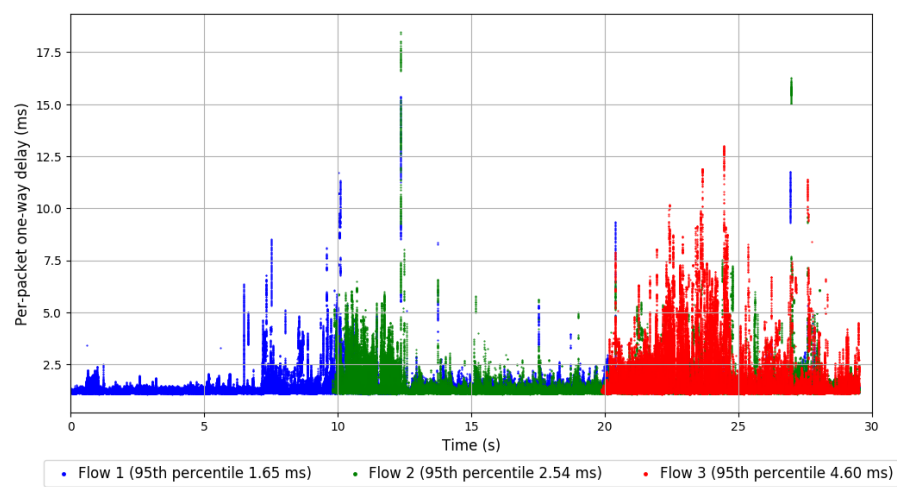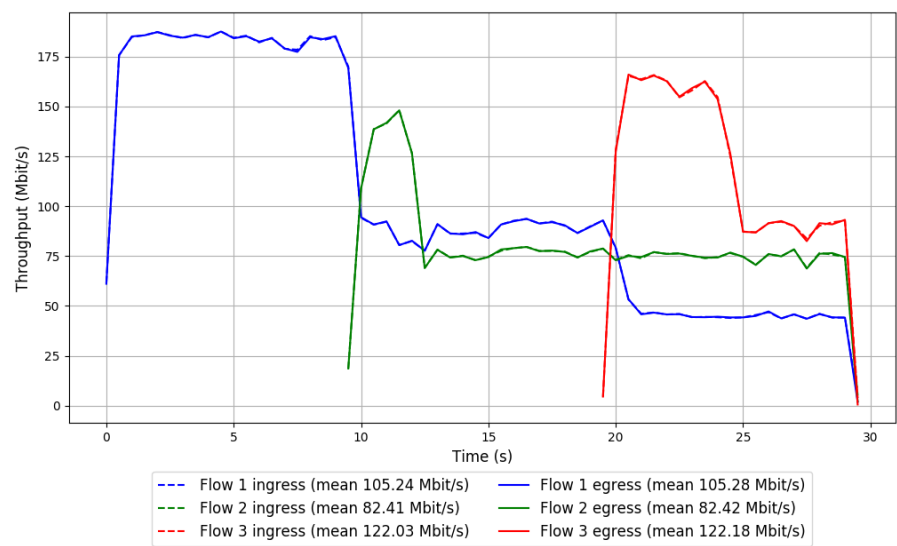Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of Indigo

Start at: 2017-09-07 21:51:46
End at: 2017-09-07 21:52:16
Local clock offset: 0.952 ms
Remote clock offset: -2.743 ms


# Below is generated by plot.py at 2017-09-08 07:16:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.99 Mbit/s
95th percentile per-packet one-way delay: 2.384 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 130.51 Mbit/s
95th percentile per-packet one-way delay: 1.697 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 83.19 Mbit/s
95th percentile per-packet one-way delay: 1.611 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 151.67 Mbit/s
95th percentile per-packet one-way delay: 4.424 ms
Loss rate: 0.12%
```
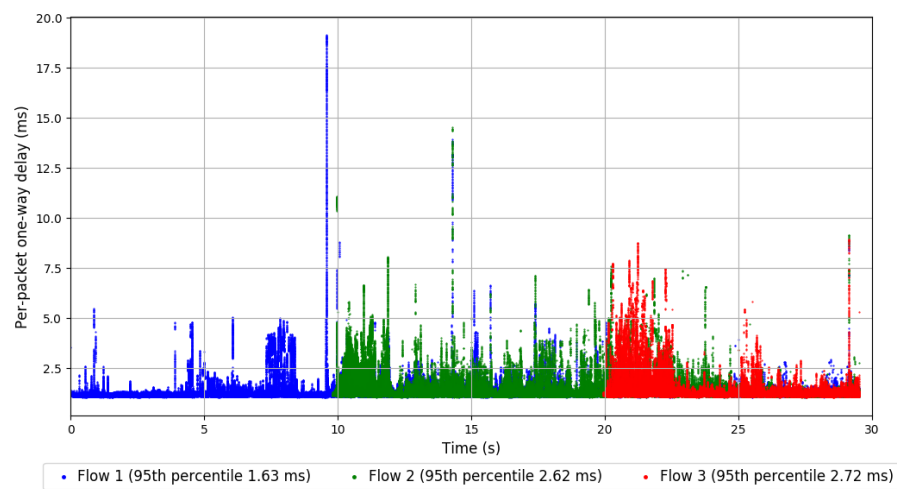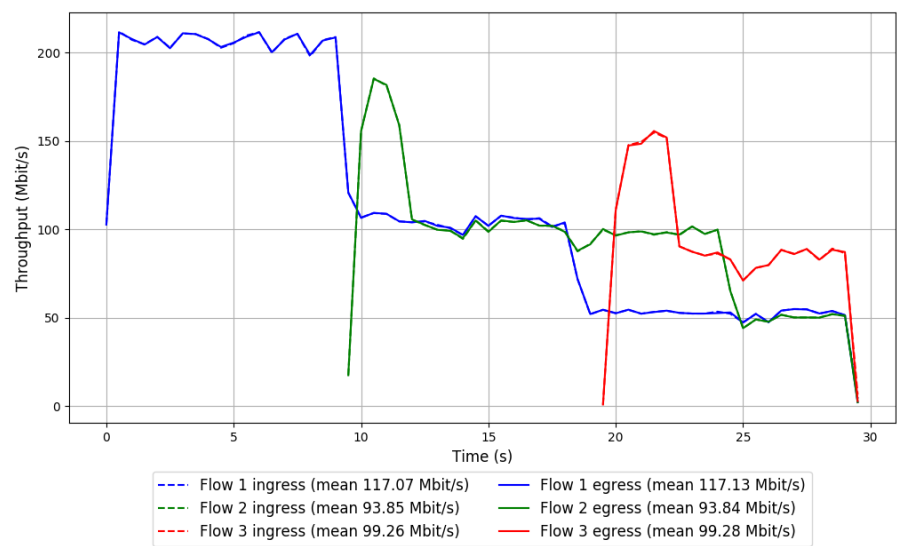
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2017-09-07 22:13:52
End at: 2017-09-07 22:14:22
Local clock offset: 1.127 ms
Remote clock offset: -2.076 ms

# Below is generated by plot.py at 2017-09-08 07:16:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.18 Mbit/s
95th percentile per-packet one-way delay: 2.663 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 105.28 Mbit/s
95th percentile per-packet one-way delay: 1.651 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 82.42 Mbit/s
95th percentile per-packet one-way delay: 2.542 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 122.18 Mbit/s
95th percentile per-packet one-way delay: 4.602 ms
Loss rate: 0.17%
```
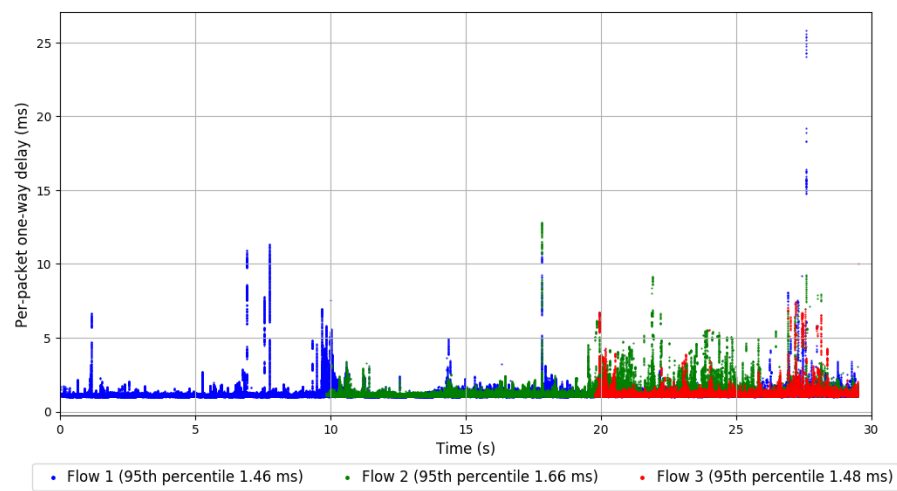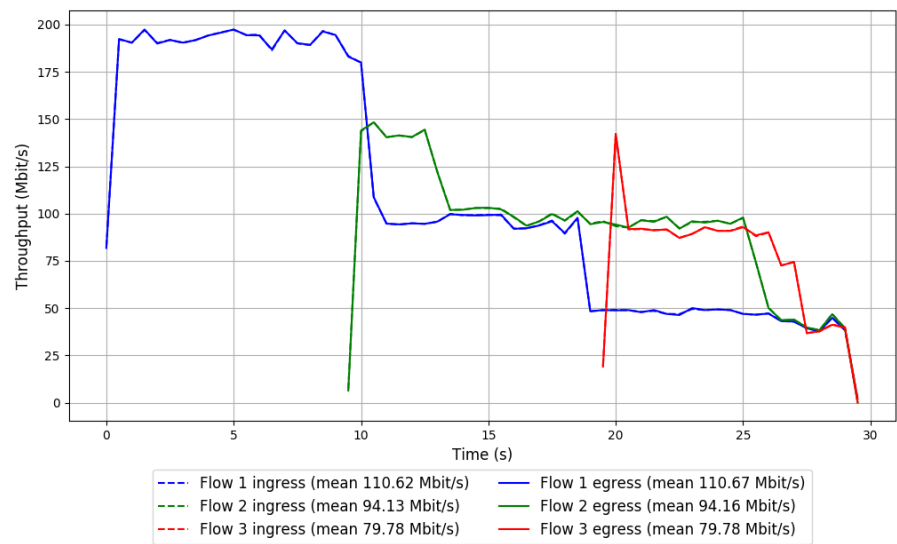
Run 2: Report of Indigo — Data Link

87

```
Run 3: Statistics of Indigo

Start at: 2017-09-07 22:35:55
End at: 2017-09-07 22:36:25
Local clock offset: 1.039 ms
Remote clock offset: -1.822 ms

# Below is generated by plot.py at 2017-09-08 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.99 Mbit/s
95th percentile per-packet one-way delay: 2.142 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 117.13 Mbit/s
95th percentile per-packet one-way delay: 1.629 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 93.84 Mbit/s
95th percentile per-packet one-way delay: 2.616 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 99.28 Mbit/s
95th percentile per-packet one-way delay: 2.722 ms
Loss rate: 0.19%
```
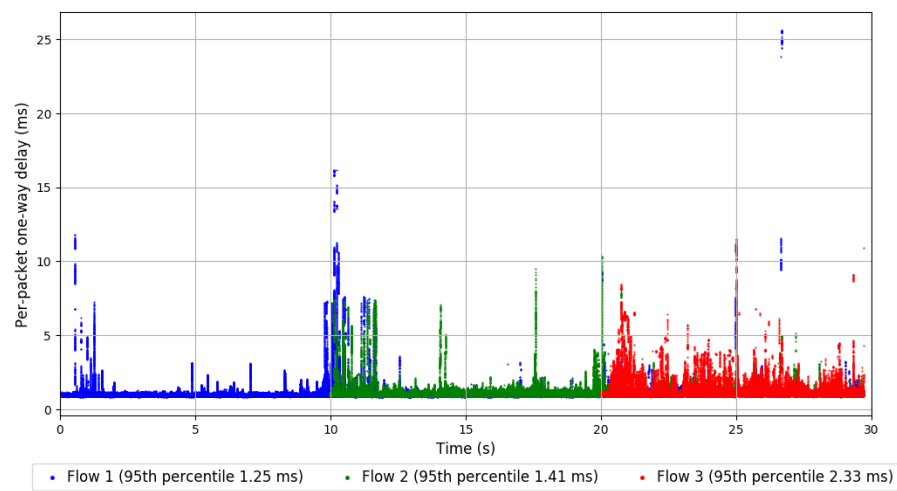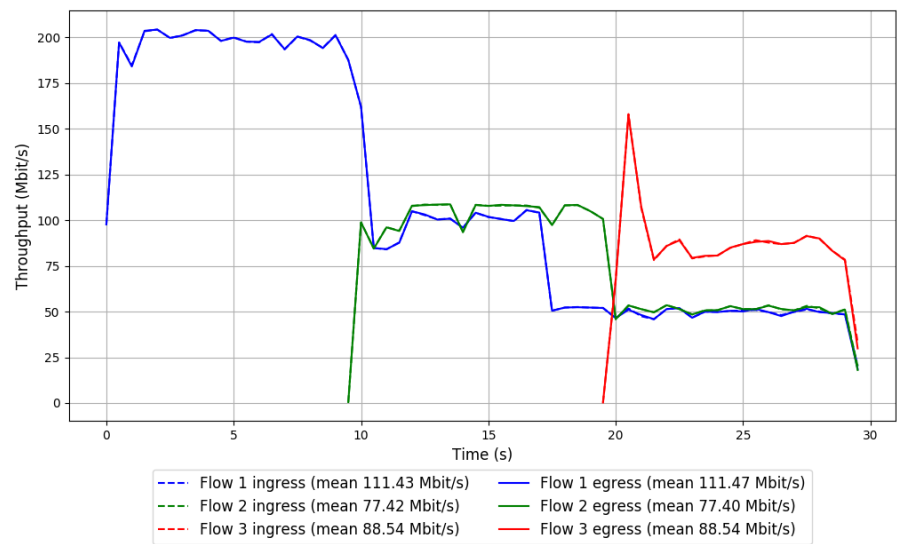
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2017-09-07 22:58:02
End at: 2017-09-07 22:58:32
Local clock offset: 1.051 ms
Remote clock offset: -1.304 ms


# Below is generated by plot.py at 2017-09-08 07:16:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 199.64 Mbit/s
95th percentile per-packet one-way delay: 1.524 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 110.67 Mbit/s
95th percentile per-packet one-way delay: 1.455 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 94.16 Mbit/s
95th percentile per-packet one-way delay: 1.658 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 79.78 Mbit/s
95th percentile per-packet one-way delay: 1.477 ms
Loss rate: 0.12%
```

Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2017-09-07 23:20:09
End at: 2017-09-07 23:20:39
Local clock offset: 1.01 ms
Remote clock offset: -1.045 ms


# Below is generated by plot.py at 2017-09-08 07:16:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.85 Mbit/s
95th percentile per-packet one-way delay: 1.503 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 111.47 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 77.40 Mbit/s
95th percentile per-packet one-way delay: 1.408 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 88.54 Mbit/s
95th percentile per-packet one-way delay: 2.327 ms
Loss rate: 0.21%
```
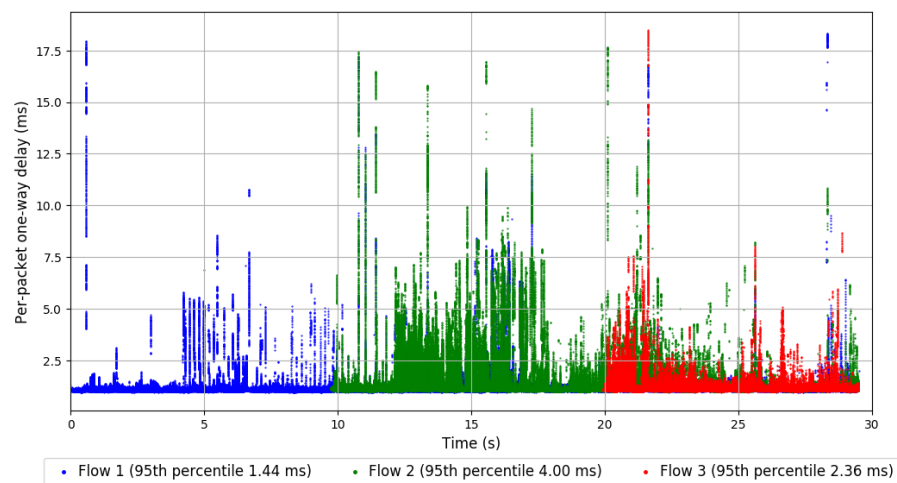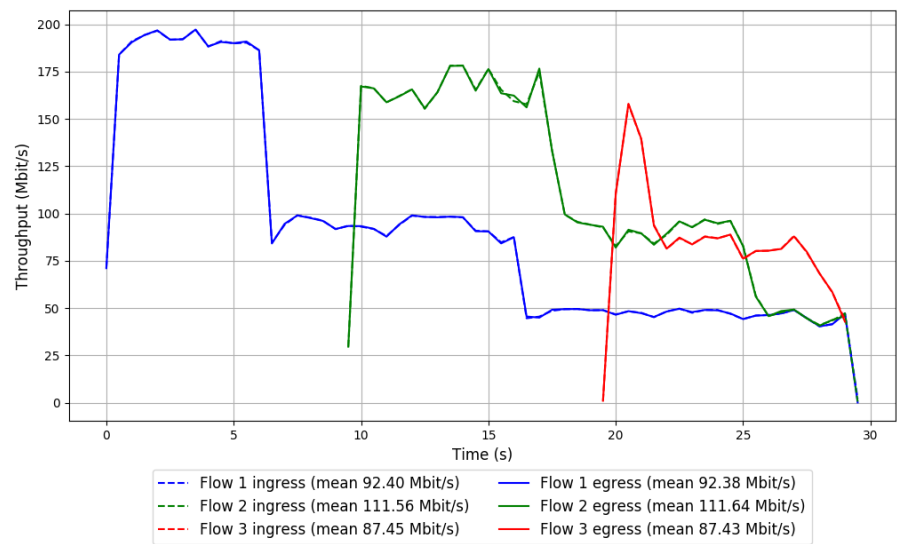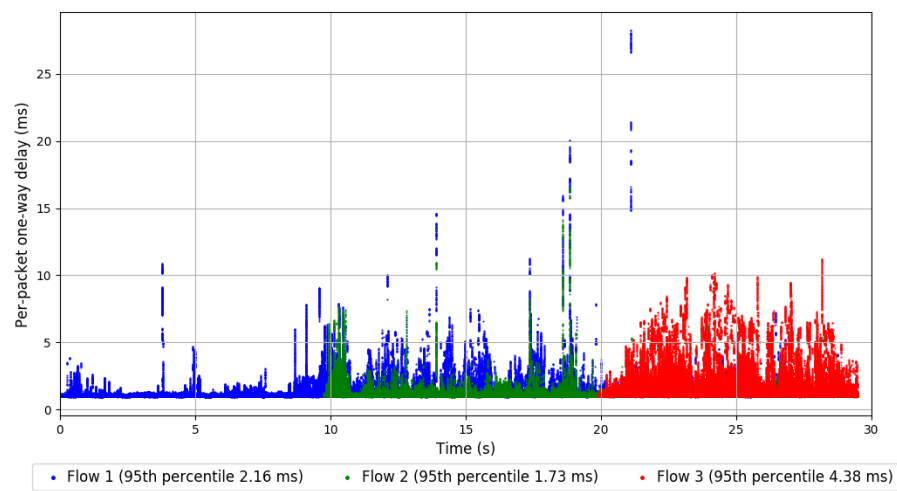
Run 5: Report of Indigo — Data Link

```
Run 6: Statistics of Indigo

Start at: 2017-09-07 23:42:14
End at: 2017-09-07 23:42:44
Local clock offset: 0.848 ms
Remote clock offset: -1.26 ms

# Below is generated by plot.py at 2017-09-08 07:16:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 195.41 Mbit/s
95th percentile per-packet one-way delay: 2.878 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 92.38 Mbit/s
95th percentile per-packet one-way delay: 1.438 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 111.64 Mbit/s
95th percentile per-packet one-way delay: 3.998 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 87.43 Mbit/s
95th percentile per-packet one-way delay: 2.361 ms
Loss rate: 0.06%
```
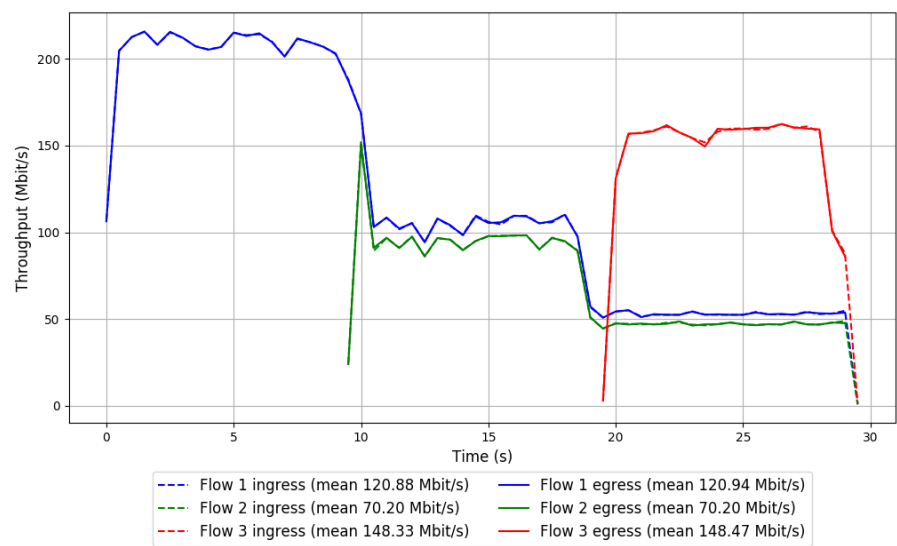
Run 6: Report of Indigo — Data Link

```
Run 7: Statistics of Indigo

Start at: 2017-09-08 00:04:16
End at: 2017-09-08 00:04:46
Local clock offset: 0.832 ms
Remote clock offset: -1.196 ms

# Below is generated by plot.py at 2017-09-08 07:17:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.34 Mbit/s
95th percentile per-packet one-way delay: 2.675 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 120.94 Mbit/s
95th percentile per-packet one-way delay: 2.163 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 70.20 Mbit/s
95th percentile per-packet one-way delay: 1.732 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 148.47 Mbit/s
95th percentile per-packet one-way delay: 4.383 ms
Loss rate: 0.13%
```
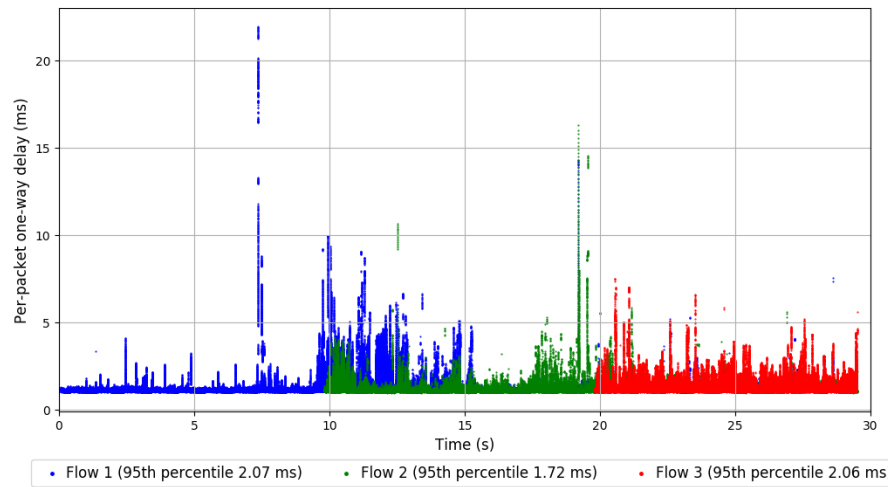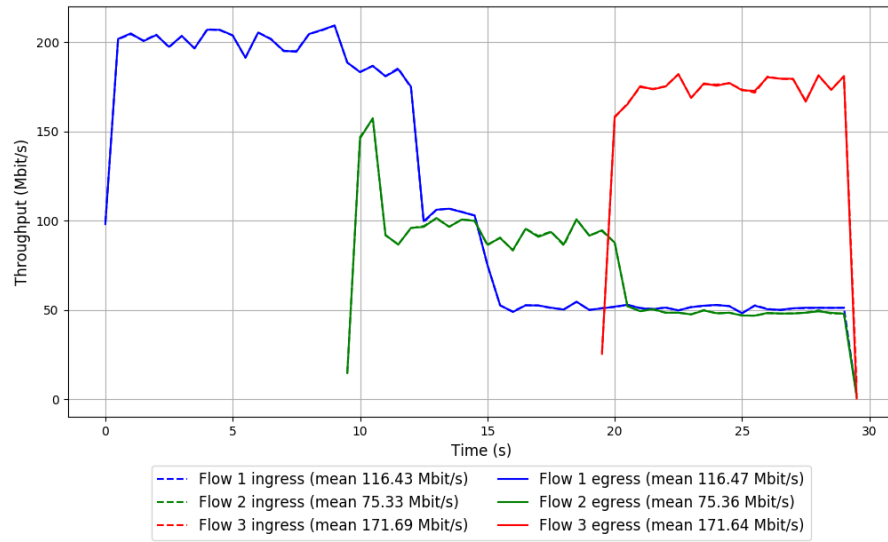
Run 7: Report of Indigo — Data Link

```
Run 8: Statistics of Indigo

Start at: 2017-09-08 00:26:17
End at: 2017-09-08 00:26:47
Local clock offset: 0.832 ms
Remote clock offset: -1.232 ms


# Below is generated by plot.py at 2017-09-08 07:17:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 223.43 Mbit/s
95th percentile per-packet one-way delay: 1.983 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 116.47 Mbit/s
95th percentile per-packet one-way delay: 2.067 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 75.36 Mbit/s
95th percentile per-packet one-way delay: 1.720 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 171.64 Mbit/s
95th percentile per-packet one-way delay: 2.061 ms
Loss rate: 0.23%
```
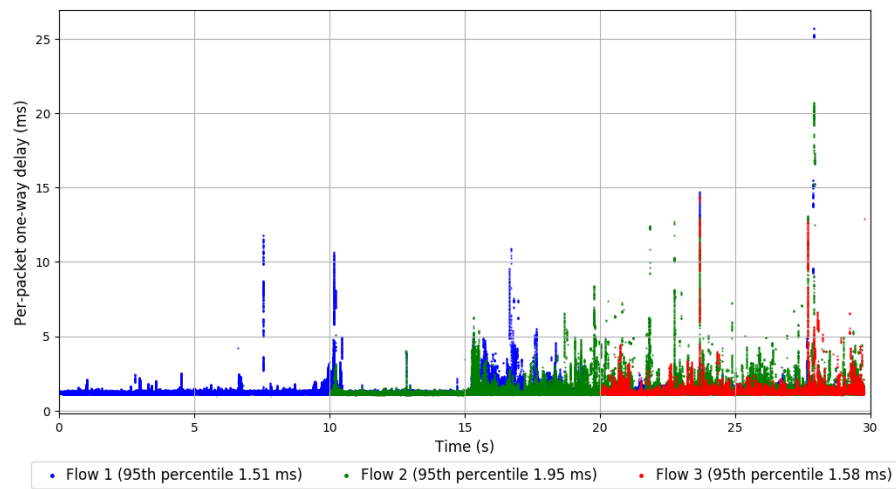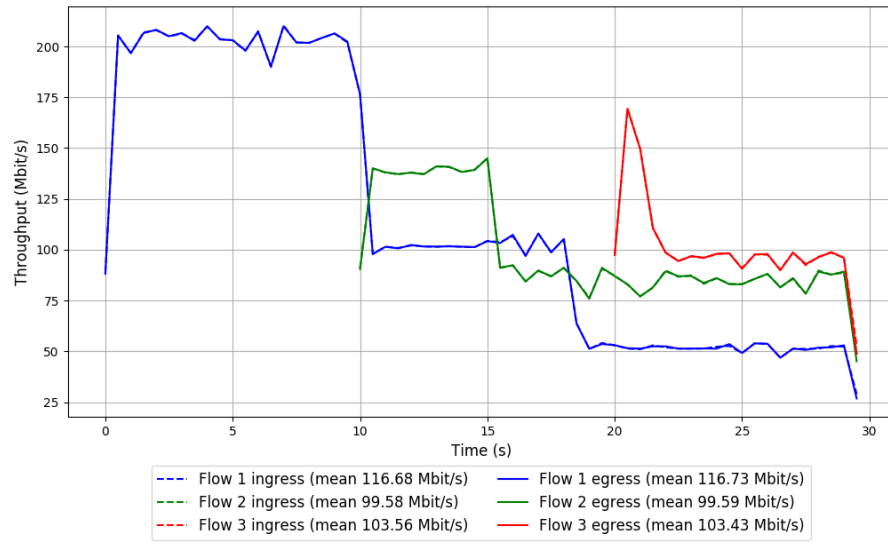
Run 8: Report of Indigo — Data Link

```
Run 9: Statistics of Indigo

Start at: 2017-09-08 00:48:22
End at: 2017-09-08 00:48:52
Local clock offset: 0.92 ms
Remote clock offset: -1.338 ms


# Below is generated by plot.py at 2017-09-08 07:17:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 216.59 Mbit/s
95th percentile per-packet one-way delay: 1.614 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 116.73 Mbit/s
95th percentile per-packet one-way delay: 1.510 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 99.59 Mbit/s
95th percentile per-packet one-way delay: 1.945 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 103.43 Mbit/s
95th percentile per-packet one-way delay: 1.582 ms
Loss rate: 0.21%
```

Run 9: Report of Indigo — Data Link

```
Run 10: Statistics of Indigo

Start at: 2017-09-08 01:10:28
End at: 2017-09-08 01:10:58
Local clock offset: 0.814 ms
Remote clock offset: -1.149 ms


# Below is generated by plot.py at 2017-09-08 07:17:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.37 Mbit/s
95th percentile per-packet one-way delay: 1.830 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 65.13 Mbit/s
95th percentile per-packet one-way delay: 1.300 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 67.49 Mbit/s
95th percentile per-packet one-way delay: 1.976 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 2.416 ms
Loss rate: 0.19%
```
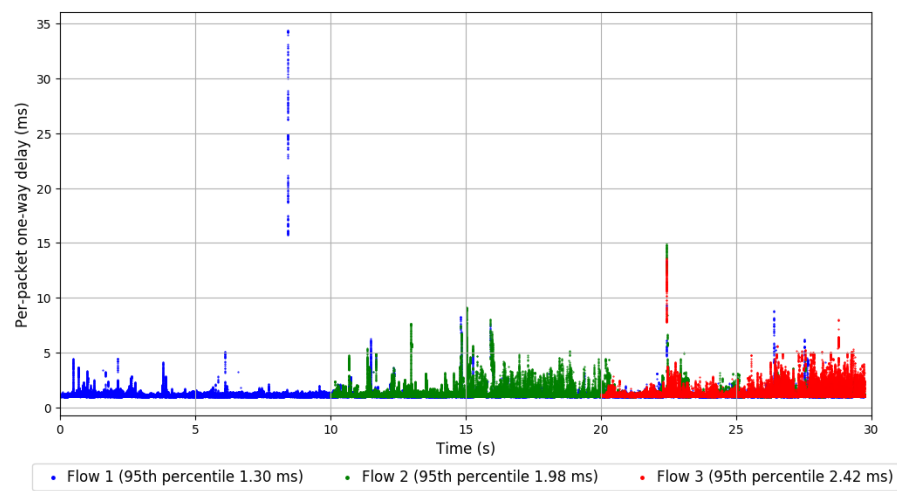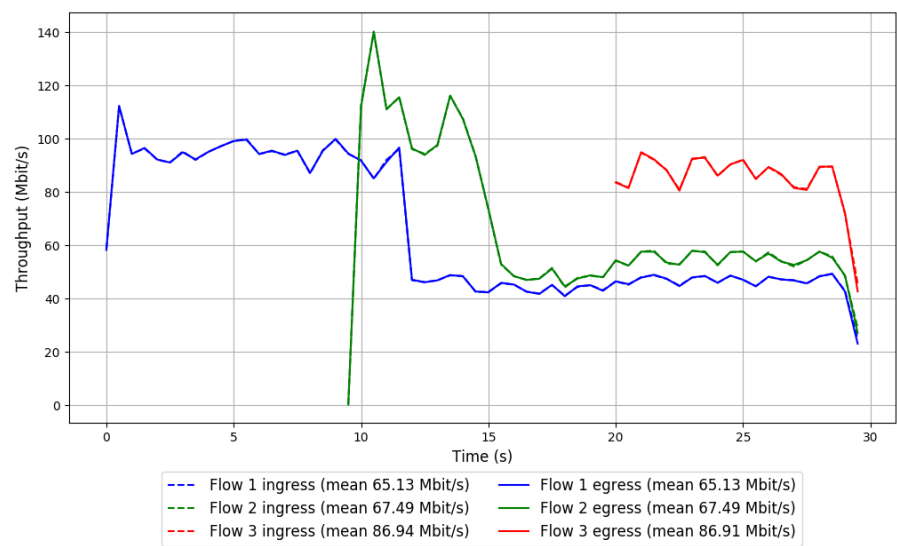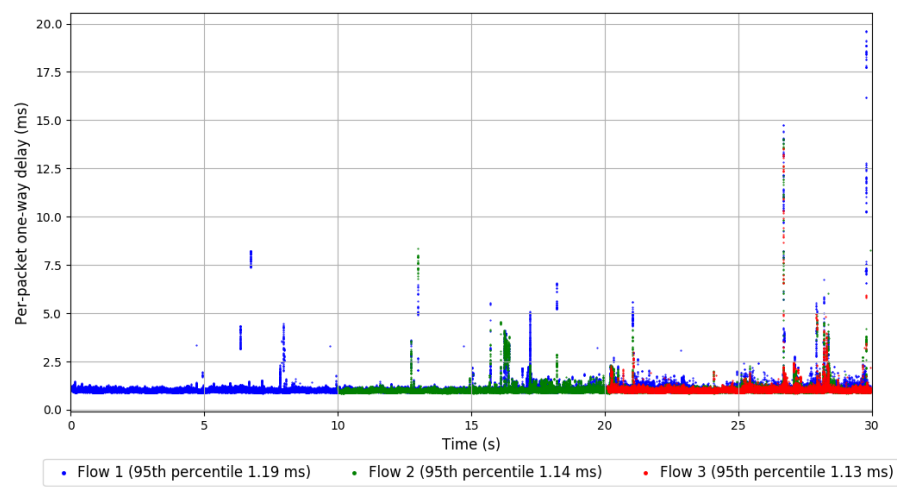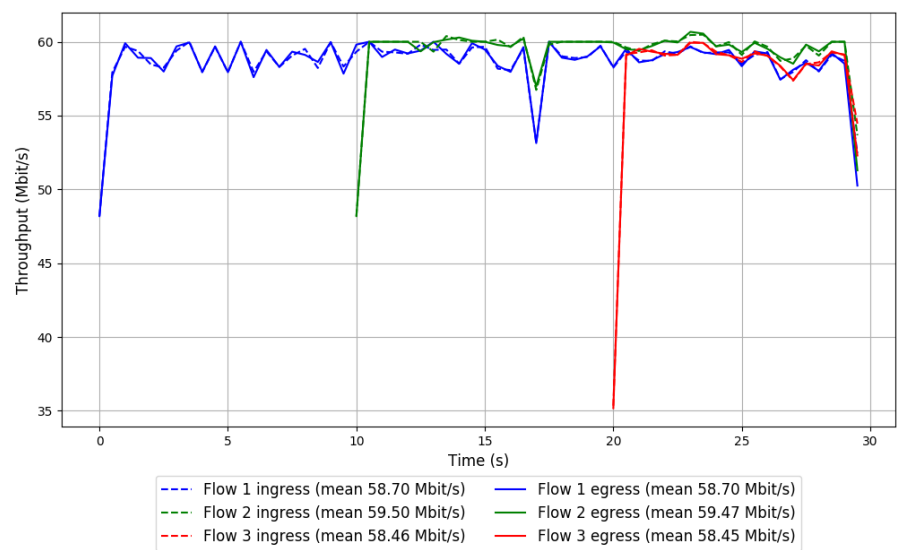
Run 10: Report of Indigo — Data Link

```
Run 1: Statistics of KohoCC

Start at: 2017-09-07 22:06:44
End at: 2017-09-07 22:07:14
Local clock offset: 0.965 ms
Remote clock offset: -2.263 ms

# Below is generated by plot.py at 2017-09-08 07:18:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.47 Mbit/s
95th percentile per-packet one-way delay: 1.165 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 1.189 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 59.47 Mbit/s
95th percentile per-packet one-way delay: 1.142 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.45 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 0.20%
```
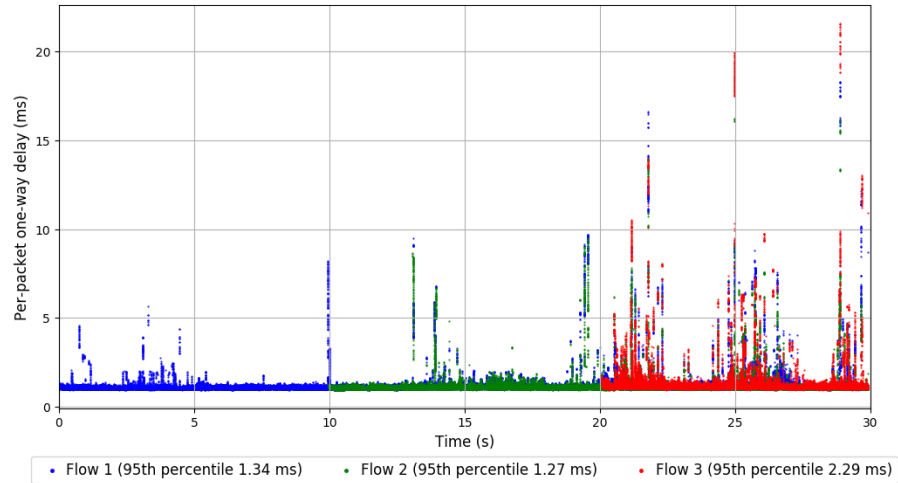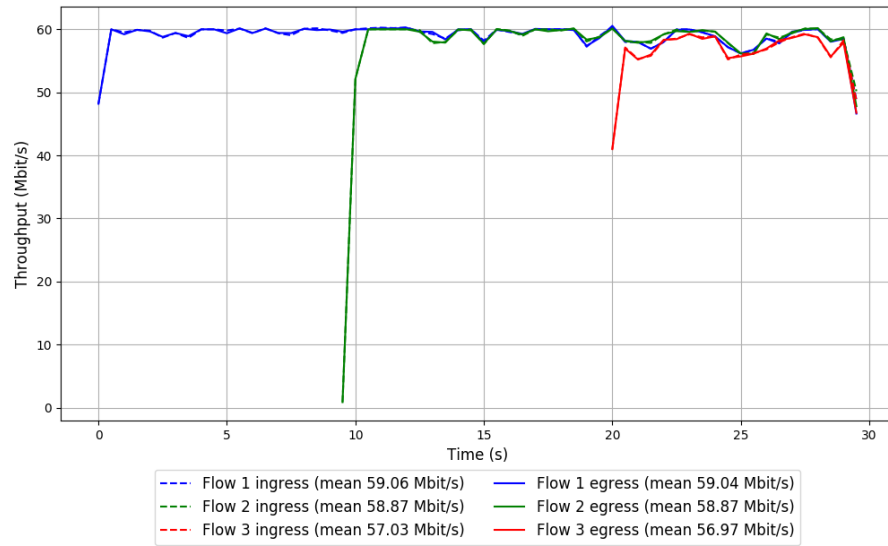
Run 1: Report of KohoCC — Data Link

Flow 1 ingress (mean 58.70 Mbit/s) — Flow 1 egress (mean 58.70 Mbit/s)
Flow 2 ingress (mean 59.50 Mbit/s) — Flow 2 egress (mean 59.47 Mbit/s)
Flow 3 ingress (mean 58.46 Mbit/s) — Flow 3 egress (mean 58.45 Mbit/s)

Flow 1 (95th percentile 1.19 ms)   Flow 2 (95th percentile 1.14 ms)   Flow 3 (95th percentile 1.13 ms)

```
Run 2: Statistics of KohoCC

Start at: 2017-09-07 22:28:46
End at: 2017-09-07 22:29:16
Local clock offset: 0.993 ms
Remote clock offset: -1.742 ms


# Below is generated by plot.py at 2017-09-08 07:18:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.02 Mbit/s
95th percentile per-packet one-way delay: 1.407 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.04 Mbit/s
95th percentile per-packet one-way delay: 1.342 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 56.97 Mbit/s
95th percentile per-packet one-way delay: 2.289 ms
Loss rate: 0.21%
```
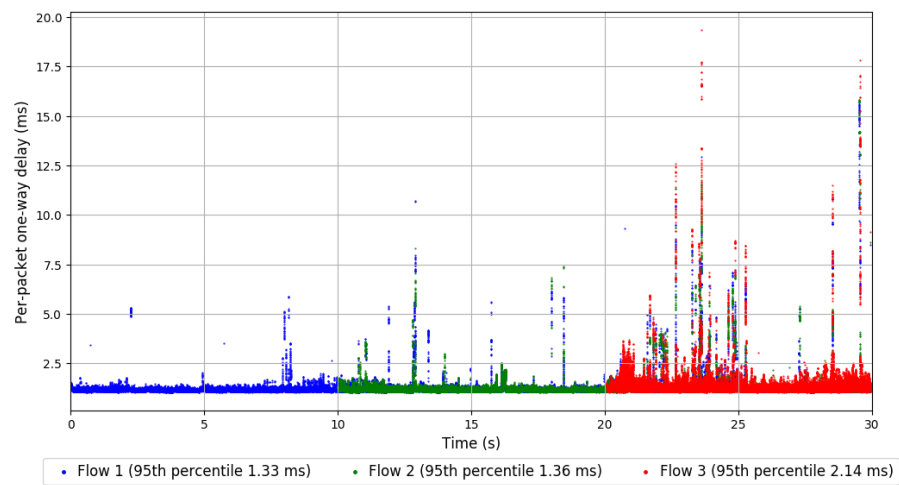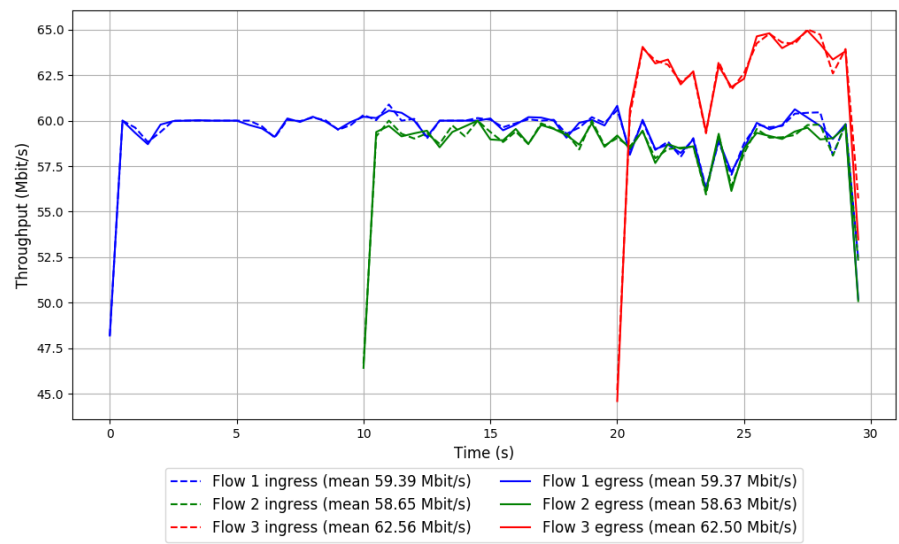
Run 2: Report of KohoCC — Data Link

Flow 1 ingress (mean 59.06 Mbit/s) --- Flow 1 egress (mean 59.04 Mbit/s)
Flow 2 ingress (mean 58.87 Mbit/s) --- Flow 2 egress (mean 58.87 Mbit/s)
Flow 3 ingress (mean 57.03 Mbit/s) --- Flow 3 egress (mean 56.97 Mbit/s)

Flow 1 (95th percentile 1.34 ms) Flow 2 (95th percentile 1.27 ms) Flow 3 (95th percentile 2.29 ms)

```
Run 3: Statistics of KohoCC

Start at: 2017-09-07 22:50:51
End at: 2017-09-07 22:51:21
Local clock offset: 1.003 ms
Remote clock offset: -1.558 ms


# Below is generated by plot.py at 2017-09-08 07:18:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 119.01 Mbit/s
95th percentile per-packet one-way delay: 1.496 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.37 Mbit/s
95th percentile per-packet one-way delay: 1.335 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 58.63 Mbit/s
95th percentile per-packet one-way delay: 1.360 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 62.50 Mbit/s
95th percentile per-packet one-way delay: 2.137 ms
Loss rate: 0.19%
```
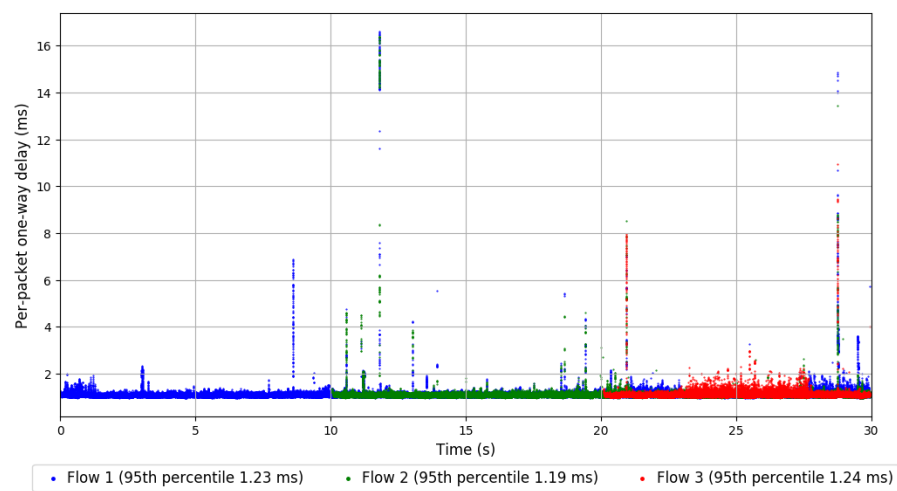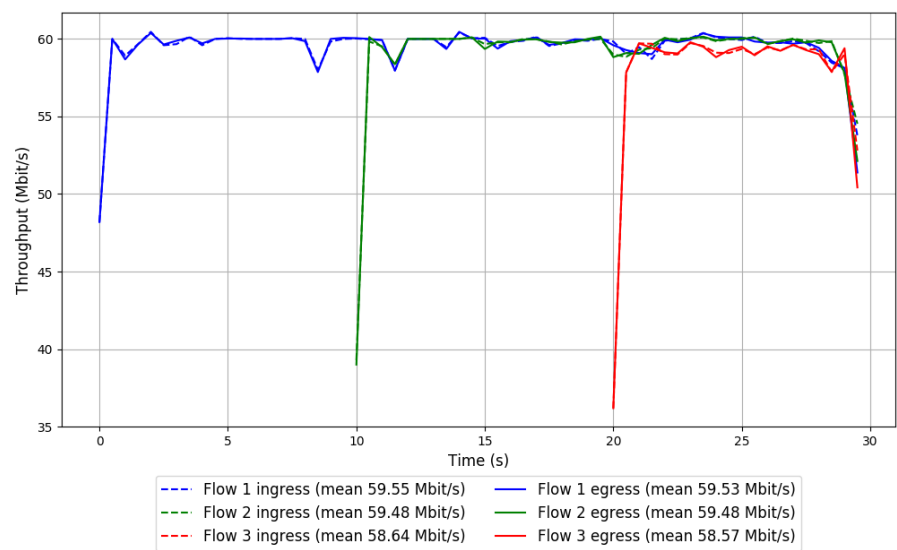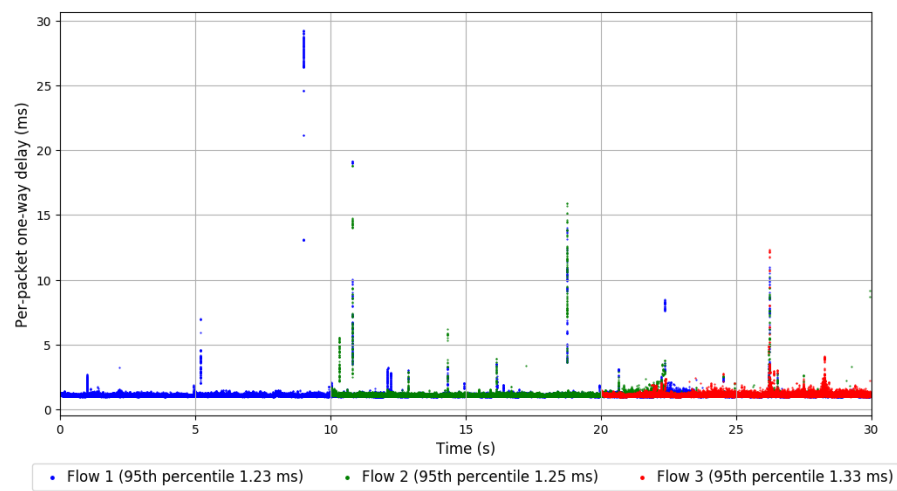
Run 3: Report of KohoCC — Data Link

Flow 1 ingress (mean 59.39 Mbit/s)   Flow 1 egress (mean 59.37 Mbit/s)
Flow 2 ingress (mean 58.65 Mbit/s)   Flow 2 egress (mean 58.63 Mbit/s)
Flow 3 ingress (mean 62.56 Mbit/s)   Flow 3 egress (mean 62.50 Mbit/s)

Flow 1 (95th percentile 1.33 ms)   Flow 2 (95th percentile 1.36 ms)   Flow 3 (95th percentile 2.14 ms)

```
Run 4: Statistics of KohoCC

Start at: 2017-09-07 23:13:02
End at: 2017-09-07 23:13:32
Local clock offset: 1.047 ms
Remote clock offset: -1.21 ms


# Below is generated by plot.py at 2017-09-08 07:18:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.20 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 1.228 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 59.48 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.57 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.21%
```
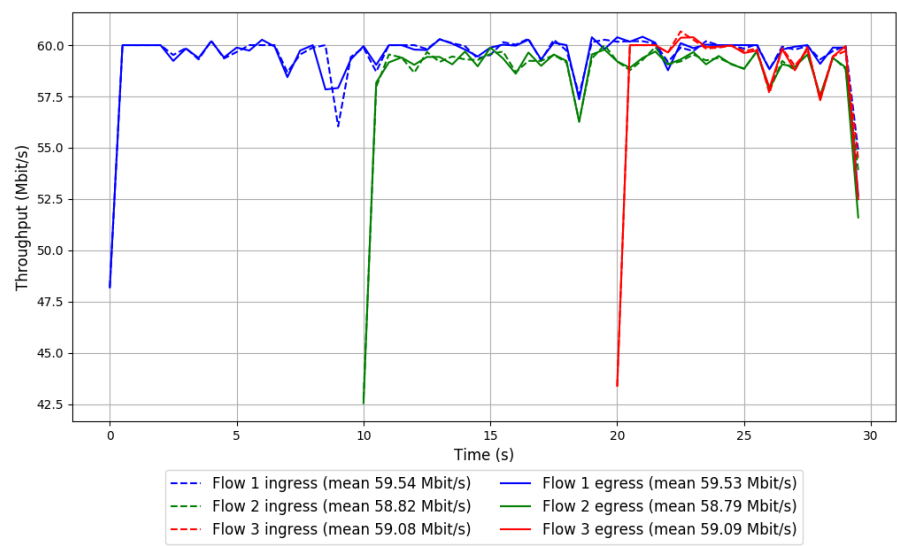
Run 4: Report of KohoCC — Data Link

```
Run 5: Statistics of KohoCC

Start at: 2017-09-07 23:35:04
End at: 2017-09-07 23:35:34
Local clock offset: 0.938 ms
Remote clock offset: -1.098 ms

# Below is generated by plot.py at 2017-09-08 07:18:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.11 Mbit/s
95th percentile per-packet one-way delay: 1.256 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 59.53 Mbit/s
95th percentile per-packet one-way delay: 1.231 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 58.79 Mbit/s
95th percentile per-packet one-way delay: 1.251 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 59.09 Mbit/s
95th percentile per-packet one-way delay: 1.332 ms
Loss rate: 0.17%
```
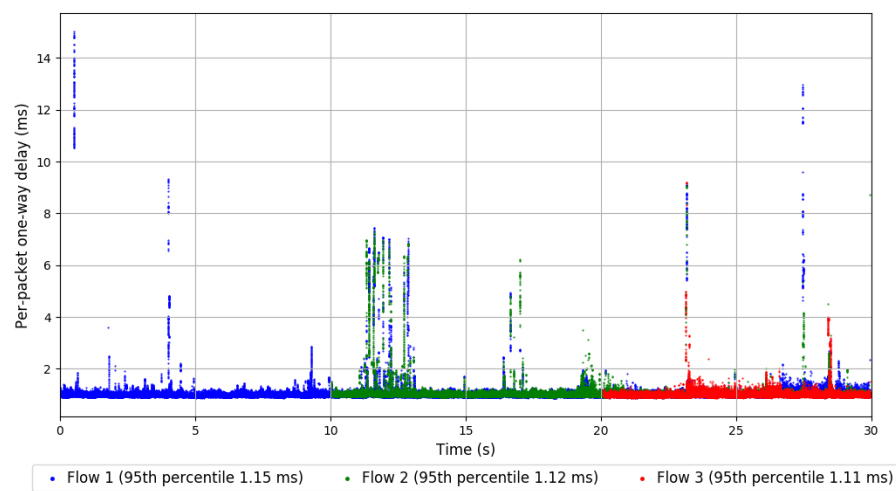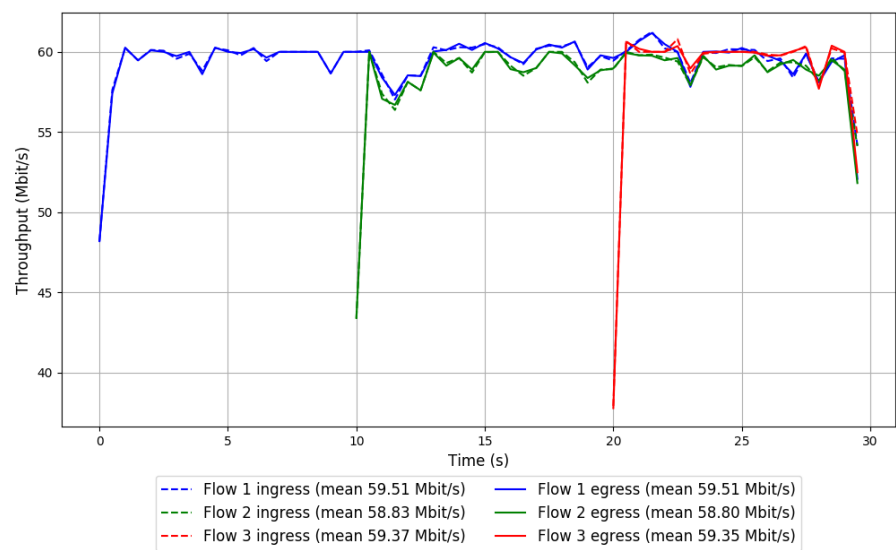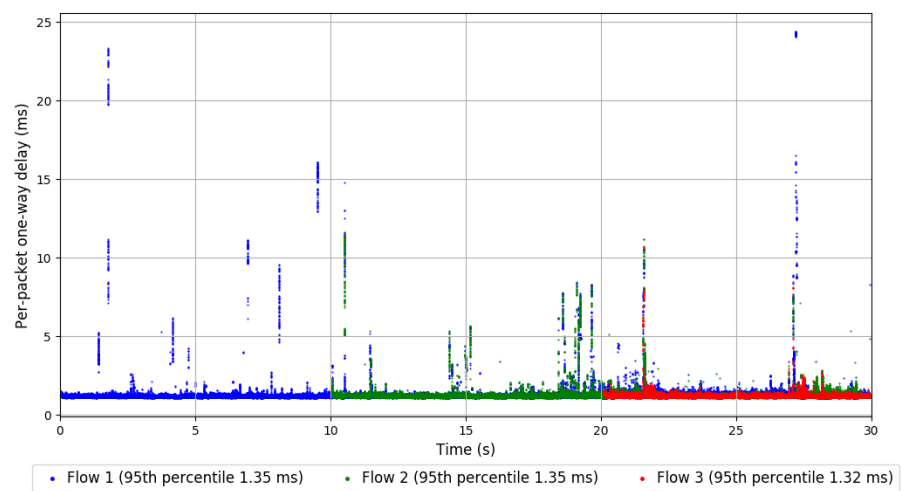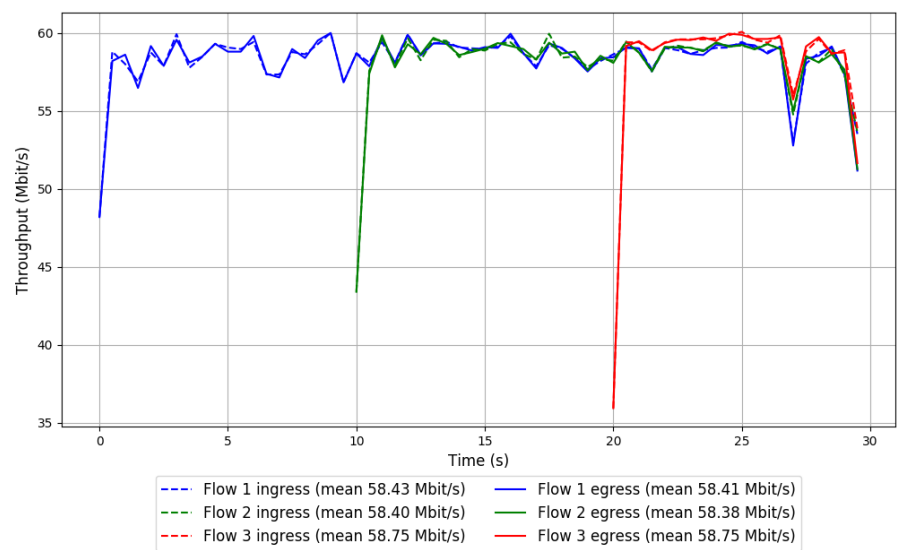
Run 5: Report of KohoCC — Data Link

Flow 1 ingress (mean 59.54 Mbit/s) --- Flow 1 egress (mean 59.53 Mbit/s)
Flow 2 ingress (mean 58.82 Mbit/s) --- Flow 2 egress (mean 58.79 Mbit/s)
Flow 3 ingress (mean 59.08 Mbit/s) --- Flow 3 egress (mean 59.09 Mbit/s)

Flow 1 (95th percentile 1.23 ms) Flow 2 (95th percentile 1.25 ms) Flow 3 (95th percentile 1.33 ms)

```
Run 6: Statistics of KohoCC

Start at: 2017-09-07 23:57:06
End at: 2017-09-07 23:57:36
Local clock offset: 0.73 ms
Remote clock offset: -1.22 ms

# Below is generated by plot.py at 2017-09-08 07:18:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.09 Mbit/s
95th percentile per-packet one-way delay: 1.134 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.51 Mbit/s
95th percentile per-packet one-way delay: 1.146 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.20%
```
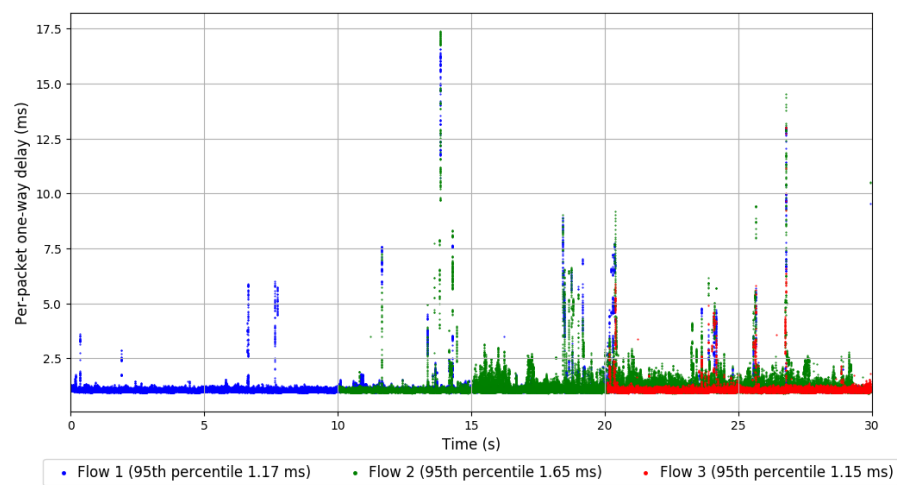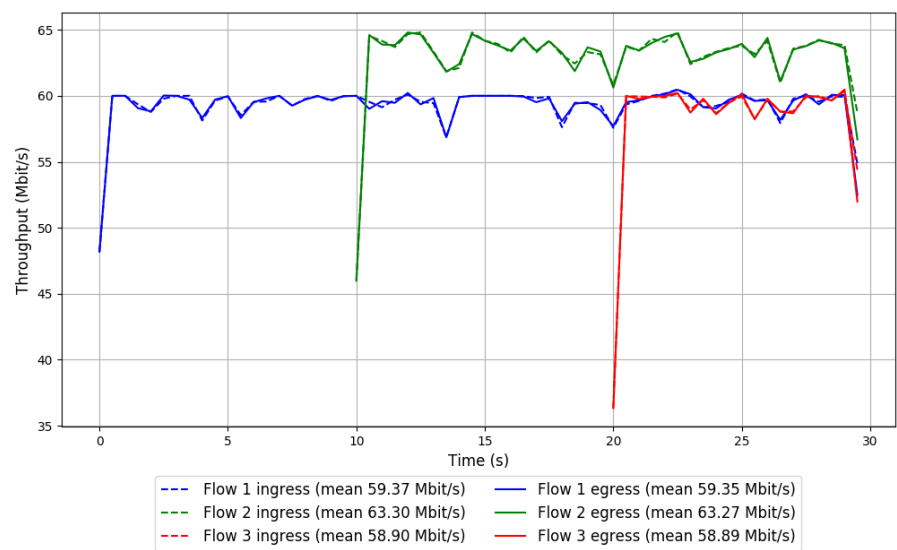
Run 6: Report of KohoCC — Data Link

Flow 1 ingress (mean 59.51 Mbit/s) --- Flow 1 egress (mean 59.51 Mbit/s)
Flow 2 ingress (mean 58.83 Mbit/s) --- Flow 2 egress (mean 58.80 Mbit/s)
Flow 3 ingress (mean 59.37 Mbit/s) --- Flow 3 egress (mean 59.35 Mbit/s)

Flow 1 (95th percentile 1.15 ms)   Flow 2 (95th percentile 1.12 ms)   Flow 3 (95th percentile 1.11 ms)

```
Run 7: Statistics of KohoCC

Start at: 2017-09-08 00:19:08
End at: 2017-09-08 00:19:38
Local clock offset: 0.872 ms
Remote clock offset: -1.242 ms


# Below is generated by plot.py at 2017-09-08 07:18:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.48 Mbit/s
95th percentile per-packet one-way delay: 1.346 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 58.41 Mbit/s
95th percentile per-packet one-way delay: 1.352 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 58.38 Mbit/s
95th percentile per-packet one-way delay: 1.351 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.75 Mbit/s
95th percentile per-packet one-way delay: 1.323 ms
Loss rate: 0.21%
```
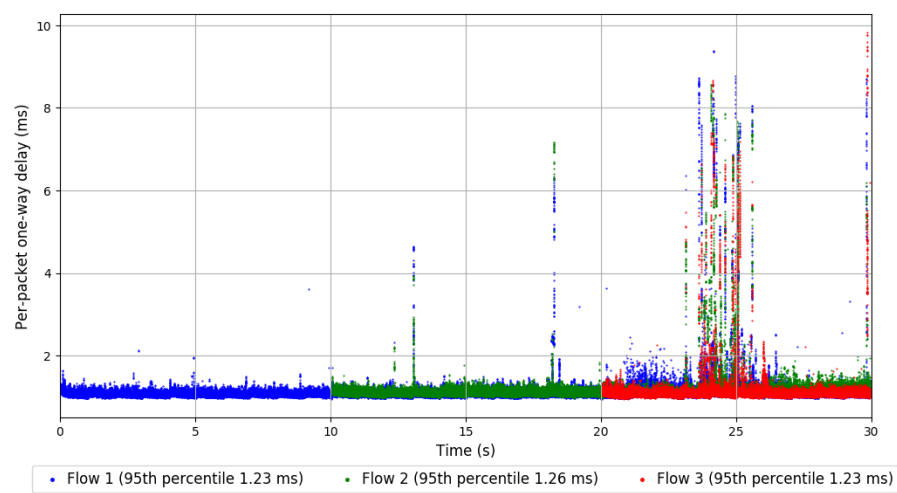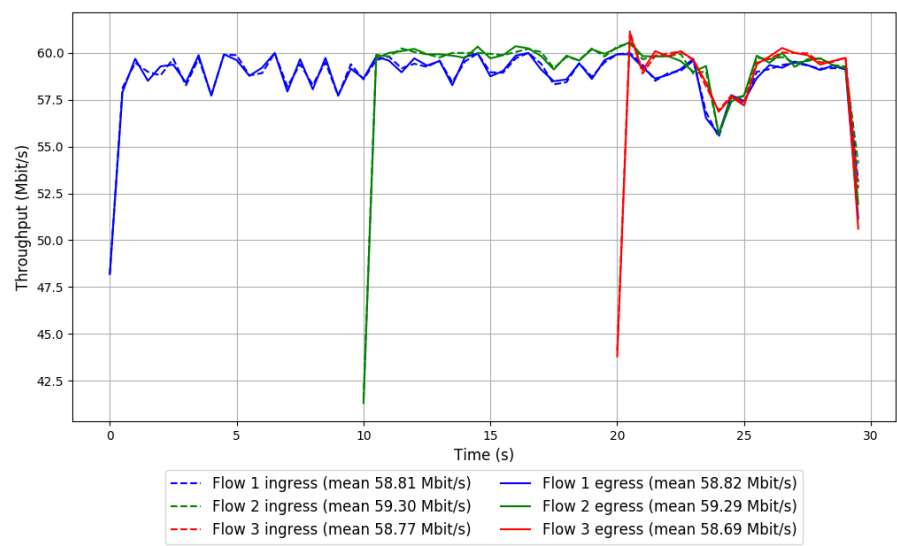
Run 7: Report of KohoCC — Data Link

Flow 1 ingress (mean 58.43 Mbit/s)   Flow 1 egress (mean 58.41 Mbit/s)
Flow 2 ingress (mean 58.40 Mbit/s)   Flow 2 egress (mean 58.38 Mbit/s)
Flow 3 ingress (mean 58.75 Mbit/s)   Flow 3 egress (mean 58.75 Mbit/s)

Flow 1 (95th percentile 1.35 ms)   Flow 2 (95th percentile 1.35 ms)   Flow 3 (95th percentile 1.32 ms)

```
Run 8: Statistics of KohoCC

Start at: 2017-09-08 00:41:13
End at: 2017-09-08 00:41:43
Local clock offset: 0.789 ms
Remote clock offset: -1.398 ms


# Below is generated by plot.py at 2017-09-08 07:18:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.76 Mbit/s
95th percentile per-packet one-way delay: 1.317 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 1.174 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 63.27 Mbit/s
95th percentile per-packet one-way delay: 1.653 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 58.89 Mbit/s
95th percentile per-packet one-way delay: 1.147 ms
Loss rate: 0.20%
```
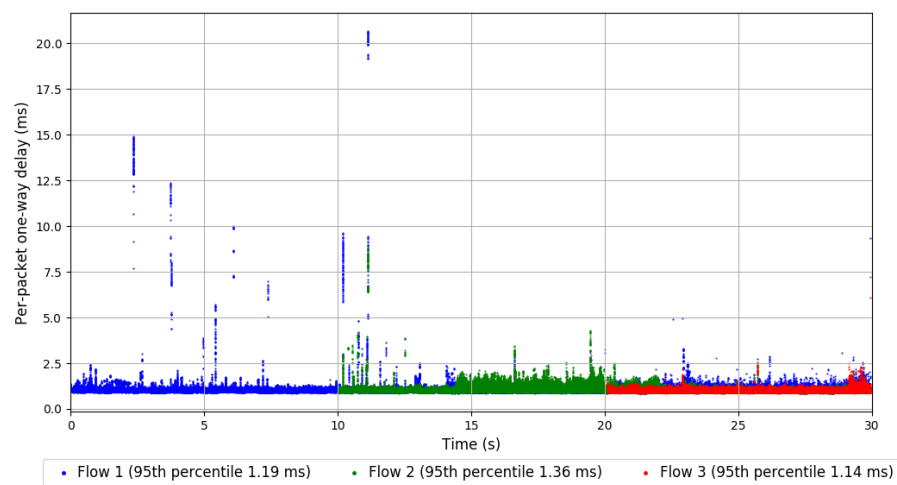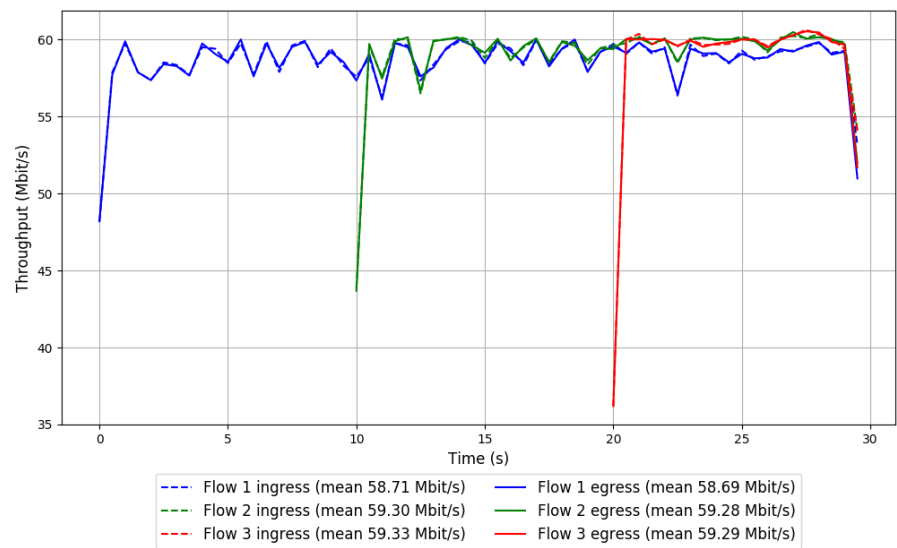
Run 8: Report of KohoCC — Data Link

Flow 1 ingress (mean 59.37 Mbit/s) --- Flow 1 egress (mean 59.35 Mbit/s)
Flow 2 ingress (mean 63.30 Mbit/s) --- Flow 2 egress (mean 63.27 Mbit/s)
Flow 3 ingress (mean 58.90 Mbit/s) --- Flow 3 egress (mean 58.89 Mbit/s)

Flow 1 (95th percentile 1.17 ms)   Flow 2 (95th percentile 1.65 ms)   Flow 3 (95th percentile 1.15 ms)

```
Run 9: Statistics of KohoCC

Start at: 2017-09-08 01:03:17
End at: 2017-09-08 01:03:47
Local clock offset: 0.829 ms
Remote clock offset: -1.032 ms

# Below is generated by plot.py at 2017-09-08 07:19:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.58 Mbit/s
95th percentile per-packet one-way delay: 1.241 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 58.82 Mbit/s
95th percentile per-packet one-way delay: 1.225 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 59.29 Mbit/s
95th percentile per-packet one-way delay: 1.263 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 0.20%
```
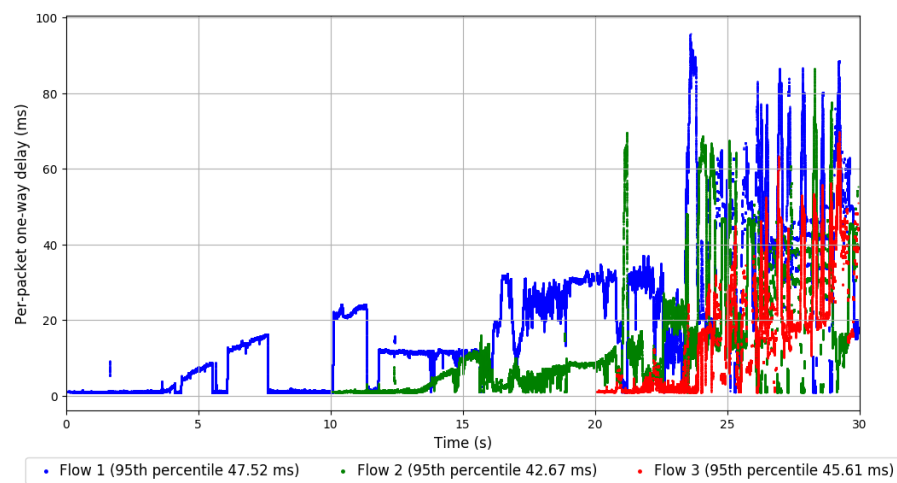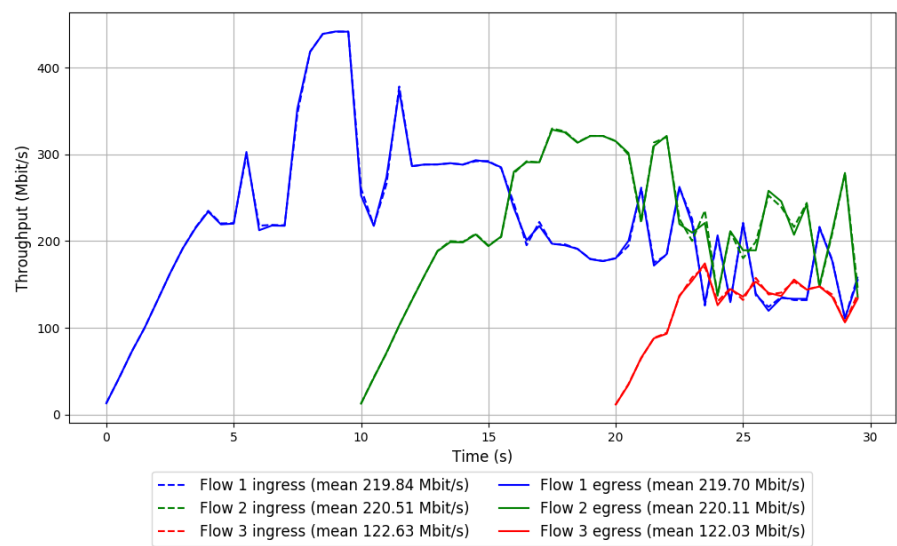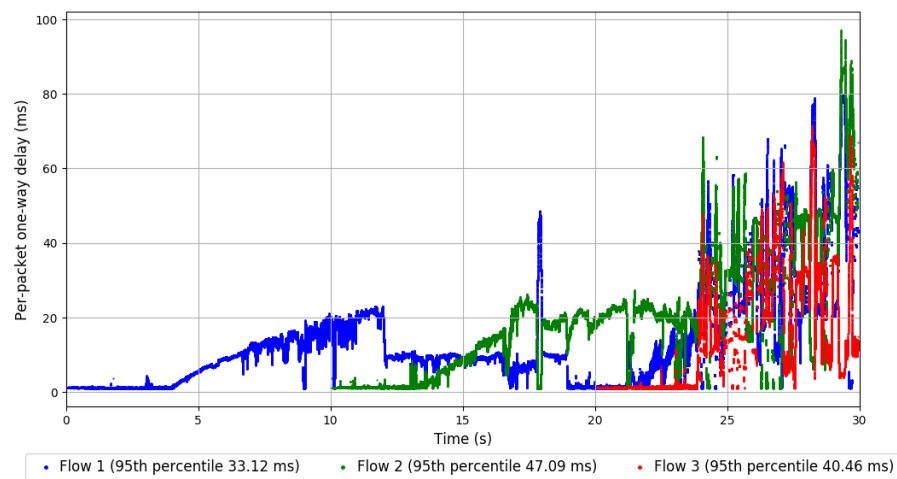
Run 9: Report of KohoCC — Data Link

Flow 1 ingress (mean 58.81 Mbit/s)   Flow 1 egress (mean 58.82 Mbit/s)
Flow 2 ingress (mean 59.30 Mbit/s)   Flow 2 egress (mean 59.29 Mbit/s)
Flow 3 ingress (mean 58.77 Mbit/s)   Flow 3 egress (mean 58.69 Mbit/s)

Flow 1 (95th percentile 1.23 ms)   Flow 2 (95th percentile 1.26 ms)   Flow 3 (95th percentile 1.23 ms)

```
Run 10: Statistics of KohoCC

Start at: 2017-09-08 01:25:01
End at: 2017-09-08 01:25:31
Local clock offset: 0.778 ms
Remote clock offset: -1.32 ms


# Below is generated by plot.py at 2017-09-08 07:19:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 117.58 Mbit/s
95th percentile per-packet one-way delay: 1.245 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 58.69 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 1.357 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 59.29 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.20%
```
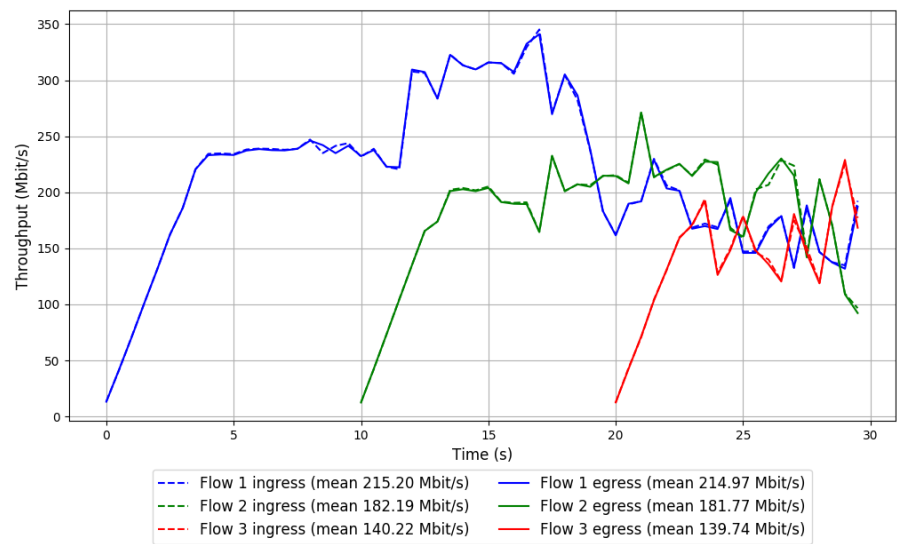
Run 10: Report of KohoCC — Data Link

- Flow 1 ingress (mean 58.71 Mbit/s) — Flow 1 egress (mean 58.69 Mbit/s)
- Flow 2 ingress (mean 59.30 Mbit/s) — Flow 2 egress (mean 59.28 Mbit/s)
- Flow 3 ingress (mean 59.33 Mbit/s) — Flow 3 egress (mean 59.29 Mbit/s)

- Flow 1 (95th percentile 1.19 ms) • Flow 2 (95th percentile 1.36 ms) • Flow 3 (95th percentile 1.14 ms)
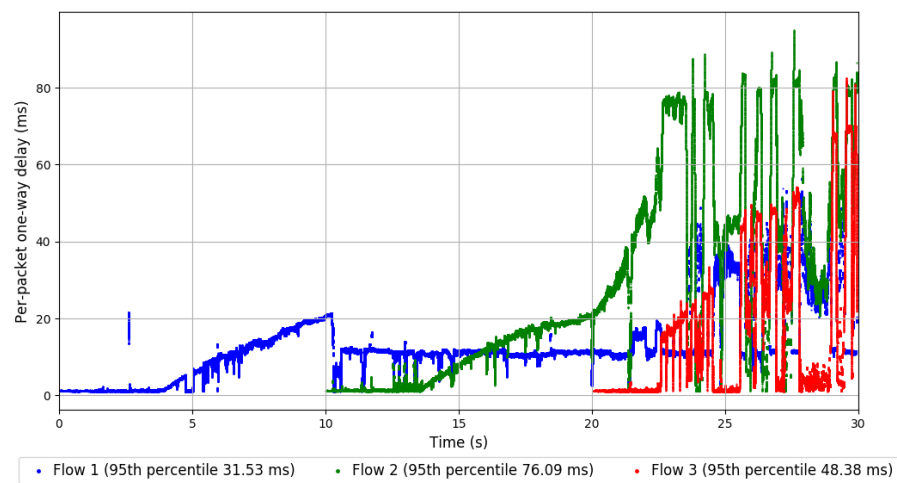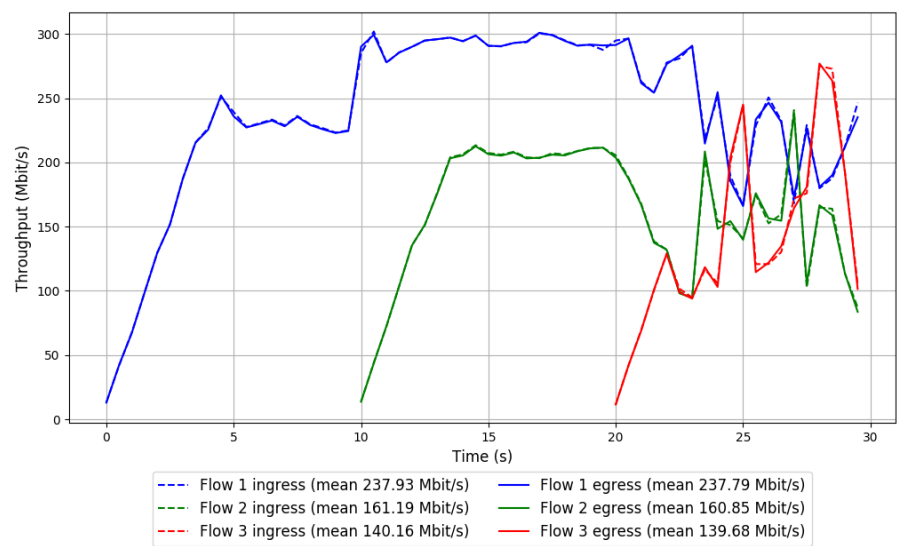
```
Run 1: Statistics of LEDBAT

Start at: 2017-09-07 21:48:44
End at: 2017-09-07 21:49:14
Local clock offset: 0.827 ms
Remote clock offset: -2.927 ms


# Below is generated by plot.py at 2017-09-08 07:20:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.34 Mbit/s
95th percentile per-packet one-way delay: 45.039 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 219.70 Mbit/s
95th percentile per-packet one-way delay: 47.515 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 220.11 Mbit/s
95th percentile per-packet one-way delay: 42.673 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 122.03 Mbit/s
95th percentile per-packet one-way delay: 45.608 ms
Loss rate: 0.57%
```
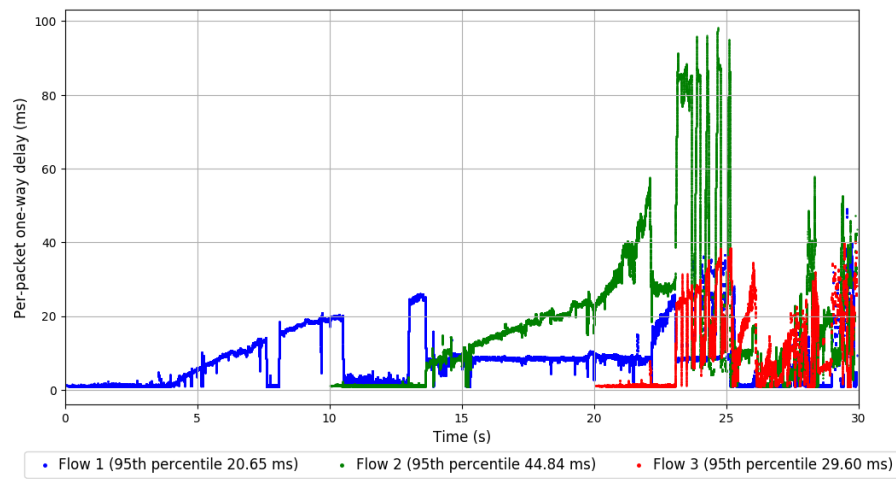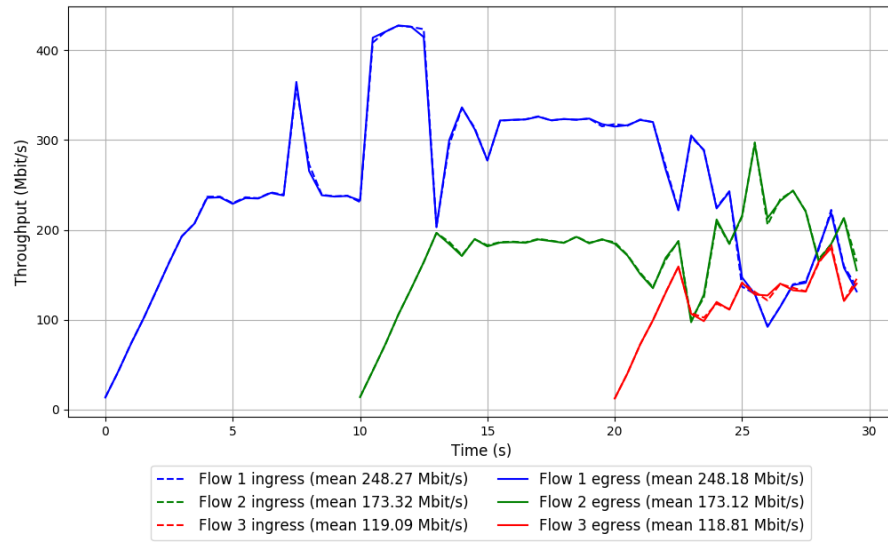
Run 1: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 219.84 Mbit/s) —— Flow 1 egress (mean 219.70 Mbit/s)
- - - Flow 2 ingress (mean 220.51 Mbit/s) —— Flow 2 egress (mean 220.11 Mbit/s)
- - - Flow 3 ingress (mean 122.63 Mbit/s) —— Flow 3 egress (mean 122.03 Mbit/s)

• Flow 1 (95th percentile 47.52 ms)   • Flow 2 (95th percentile 42.67 ms)   • Flow 3 (95th percentile 45.61 ms)
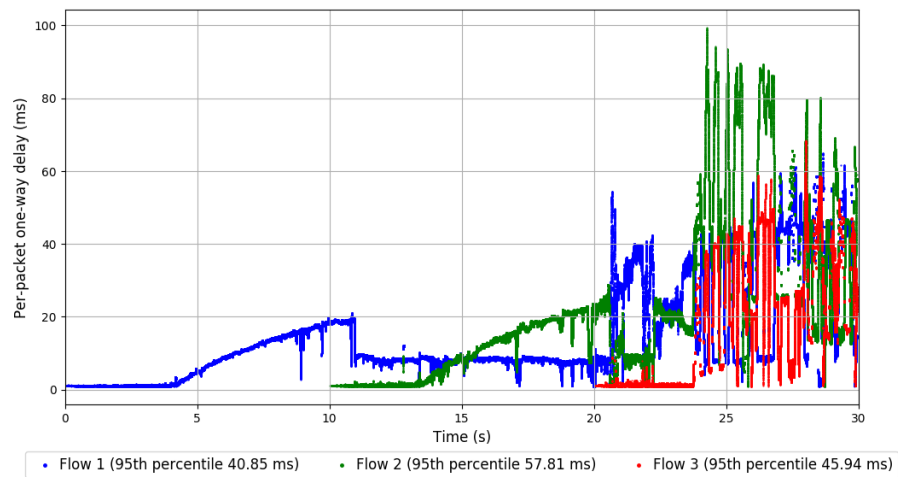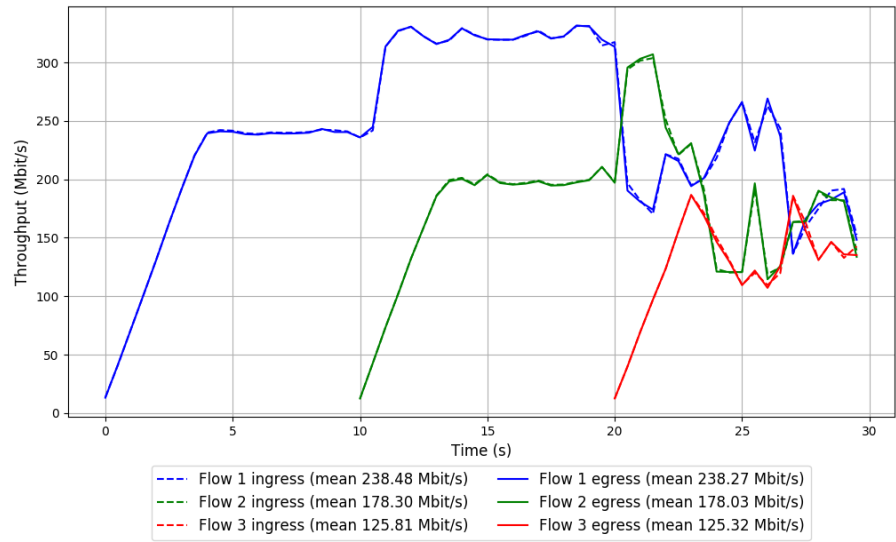
```
Run 2: Statistics of LEDBAT

Start at: 2017-09-07 22:10:53
End at: 2017-09-07 22:11:23
Local clock offset: 1.006 ms
Remote clock offset: -2.185 ms


# Below is generated by plot.py at 2017-09-08 07:20:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.18 Mbit/s
95th percentile per-packet one-way delay: 42.003 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 214.97 Mbit/s
95th percentile per-packet one-way delay: 33.116 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 181.77 Mbit/s
95th percentile per-packet one-way delay: 47.090 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 139.74 Mbit/s
95th percentile per-packet one-way delay: 40.461 ms
Loss rate: 0.51%
```

Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 215.20 Mbit/s)   Flow 1 egress (mean 214.97 Mbit/s)
Flow 2 ingress (mean 182.19 Mbit/s)   Flow 2 egress (mean 181.77 Mbit/s)
Flow 3 ingress (mean 140.22 Mbit/s)   Flow 3 egress (mean 139.74 Mbit/s)

Flow 1 (95th percentile 33.12 ms)   Flow 2 (95th percentile 47.09 ms)   Flow 3 (95th percentile 40.46 ms)
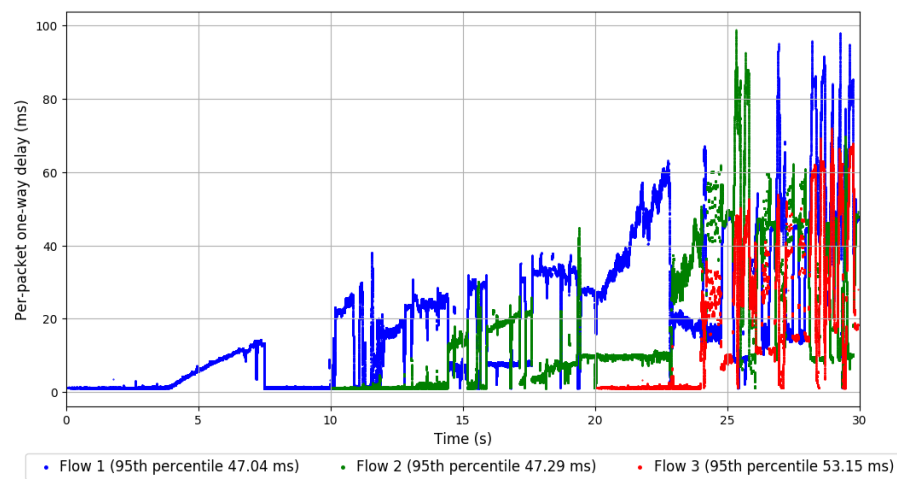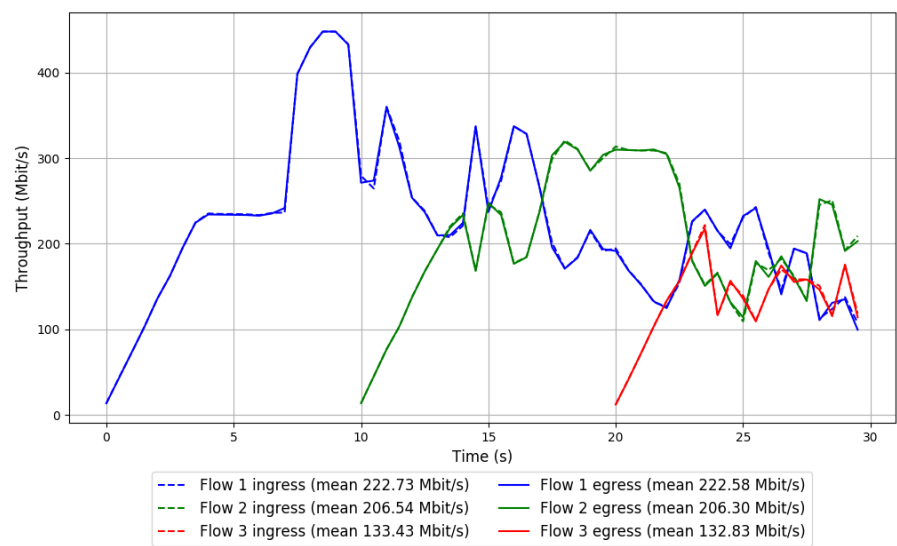
127

```
Run 3: Statistics of LEDBAT

Start at: 2017-09-07 22:32:54
End at: 2017-09-07 22:33:24
Local clock offset: 1.01 ms
Remote clock offset: -1.699 ms


# Below is generated by plot.py at 2017-09-08 07:20:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 390.99 Mbit/s
95th percentile per-packet one-way delay: 45.806 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 237.79 Mbit/s
95th percentile per-packet one-way delay: 31.534 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 160.85 Mbit/s
95th percentile per-packet one-way delay: 76.093 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 139.68 Mbit/s
95th percentile per-packet one-way delay: 48.379 ms
Loss rate: 0.55%
```
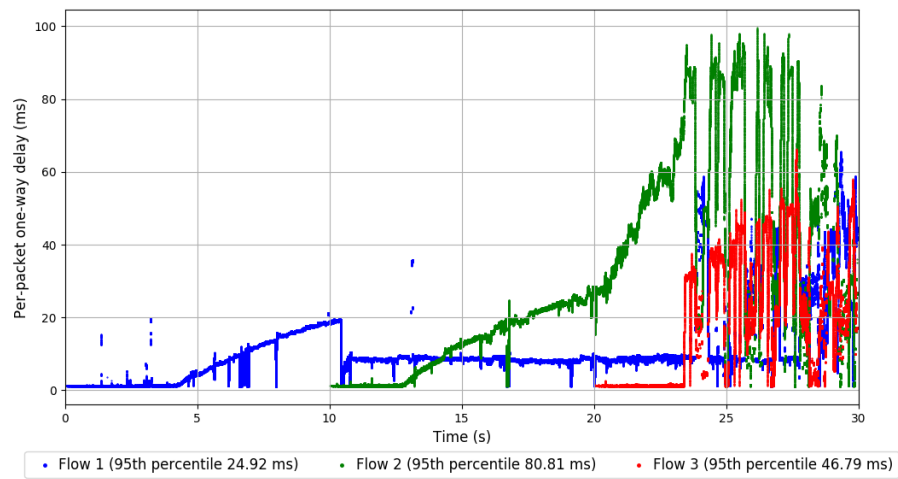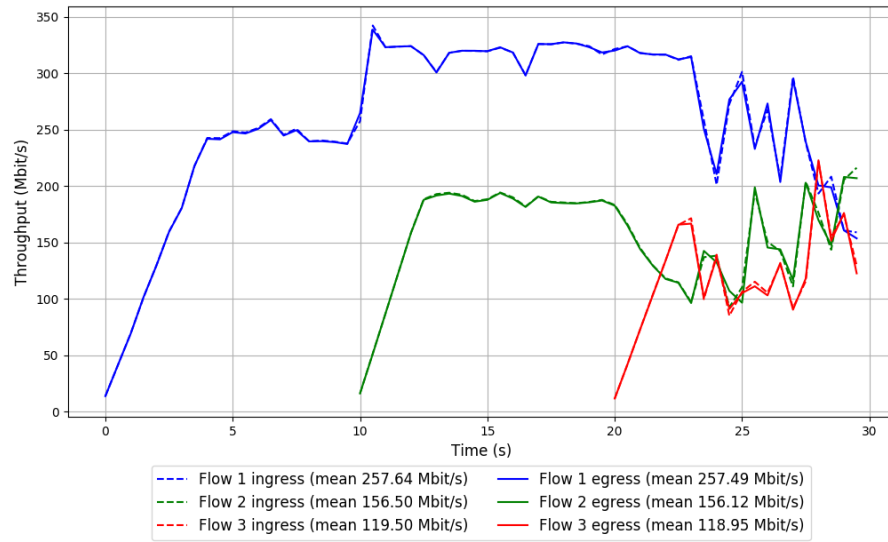
Run 3: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 237.93 Mbit/s) —— Flow 1 egress (mean 237.79 Mbit/s)
- - - Flow 2 ingress (mean 161.19 Mbit/s) —— Flow 2 egress (mean 160.85 Mbit/s)
- - - Flow 3 ingress (mean 140.16 Mbit/s) —— Flow 3 egress (mean 139.68 Mbit/s)

- Flow 1 (95th percentile 31.53 ms)   - Flow 2 (95th percentile 76.09 ms)   - Flow 3 (95th percentile 48.38 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2017-09-07 22:55:01
End at: 2017-09-07 22:55:31
Local clock offset: 0.961 ms
Remote clock offset: -1.384 ms


# Below is generated by plot.py at 2017-09-08 07:21:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.71 Mbit/s
95th percentile per-packet one-way delay: 28.291 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 248.18 Mbit/s
95th percentile per-packet one-way delay: 20.653 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 173.12 Mbit/s
95th percentile per-packet one-way delay: 44.838 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 118.81 Mbit/s
95th percentile per-packet one-way delay: 29.596 ms
Loss rate: 0.47%
```
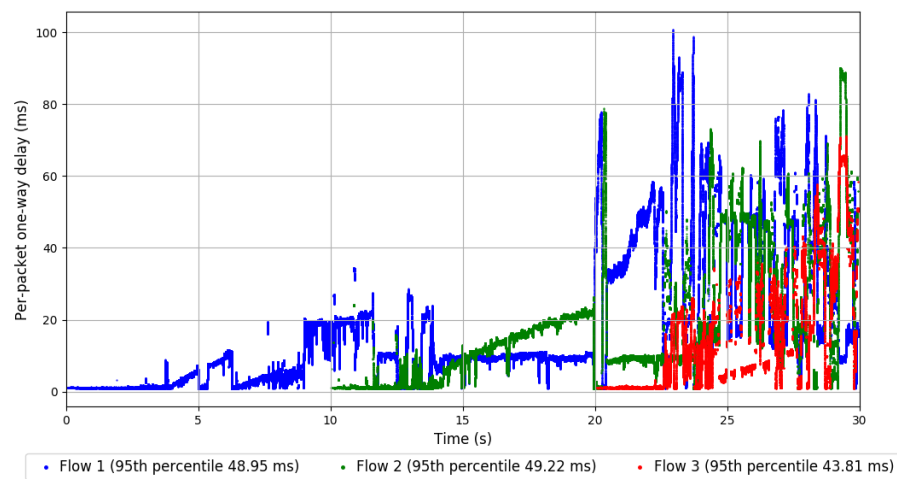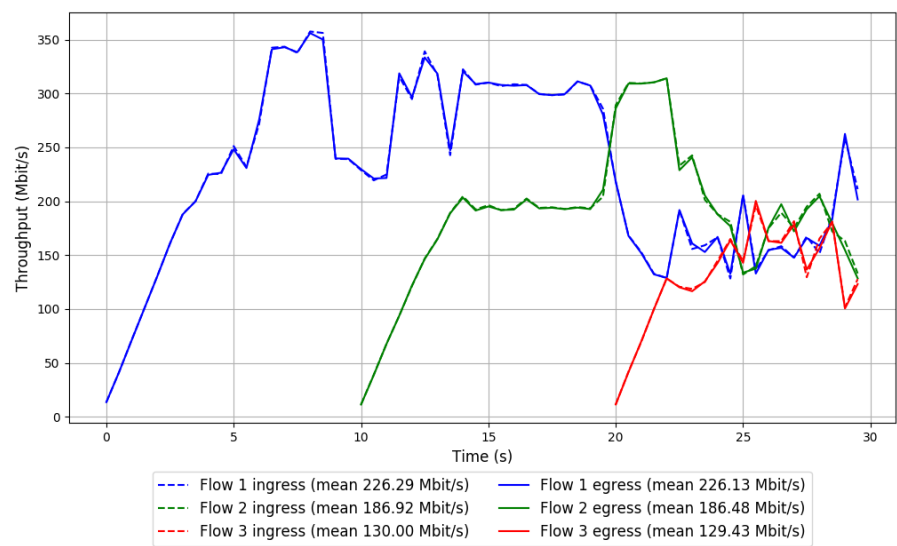
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2017-09-07 23:17:09
End at: 2017-09-07 23:17:39
Local clock offset: 1.021 ms
Remote clock offset: -1.111 ms


# Below is generated by plot.py at 2017-09-08 07:21:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.14 Mbit/s
95th percentile per-packet one-way delay: 44.193 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 238.27 Mbit/s
95th percentile per-packet one-way delay: 40.855 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 178.03 Mbit/s
95th percentile per-packet one-way delay: 57.806 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 125.32 Mbit/s
95th percentile per-packet one-way delay: 45.936 ms
Loss rate: 0.56%
```

Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 238.48 Mbit/s)   Flow 1 egress (mean 238.27 Mbit/s)
Flow 2 ingress (mean 178.30 Mbit/s)   Flow 2 egress (mean 178.03 Mbit/s)
Flow 3 ingress (mean 125.81 Mbit/s)   Flow 3 egress (mean 125.32 Mbit/s)

Flow 1 (95th percentile 40.85 ms)   Flow 2 (95th percentile 57.81 ms)   Flow 3 (95th percentile 45.94 ms)

```
Run 6: Statistics of LEDBAT

Start at: 2017-09-07 23:39:13
End at: 2017-09-07 23:39:43
Local clock offset: 0.943 ms
Remote clock offset: -1.212 ms


# Below is generated by plot.py at 2017-09-08 07:21:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.78 Mbit/s
95th percentile per-packet one-way delay: 47.424 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 222.58 Mbit/s
95th percentile per-packet one-way delay: 47.039 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 206.30 Mbit/s
95th percentile per-packet one-way delay: 47.290 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 132.83 Mbit/s
95th percentile per-packet one-way delay: 53.154 ms
Loss rate: 0.55%
```
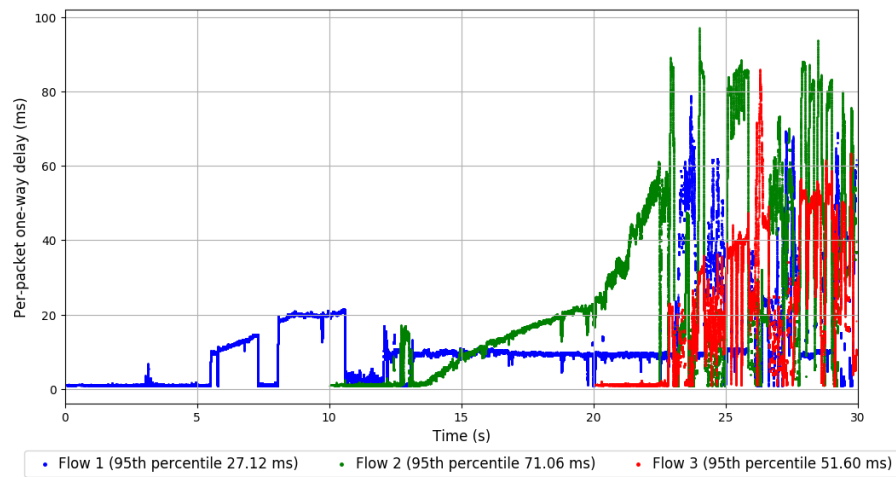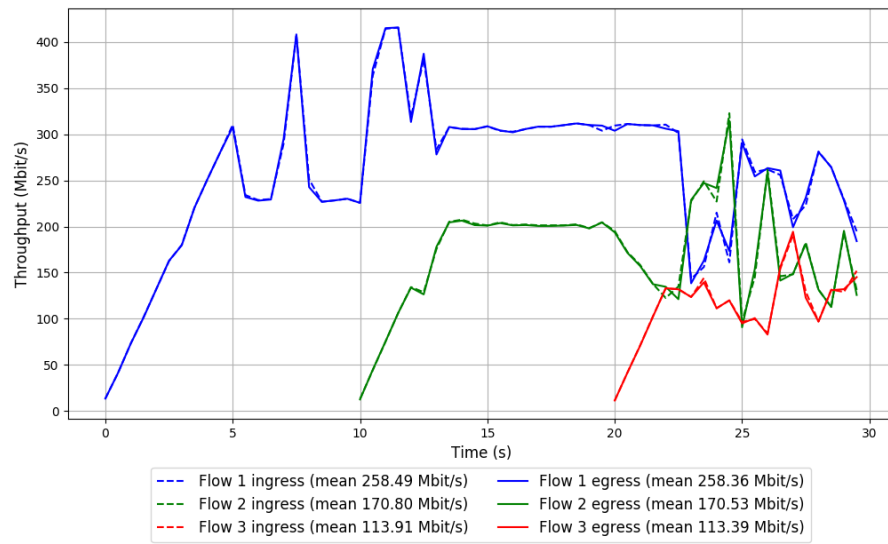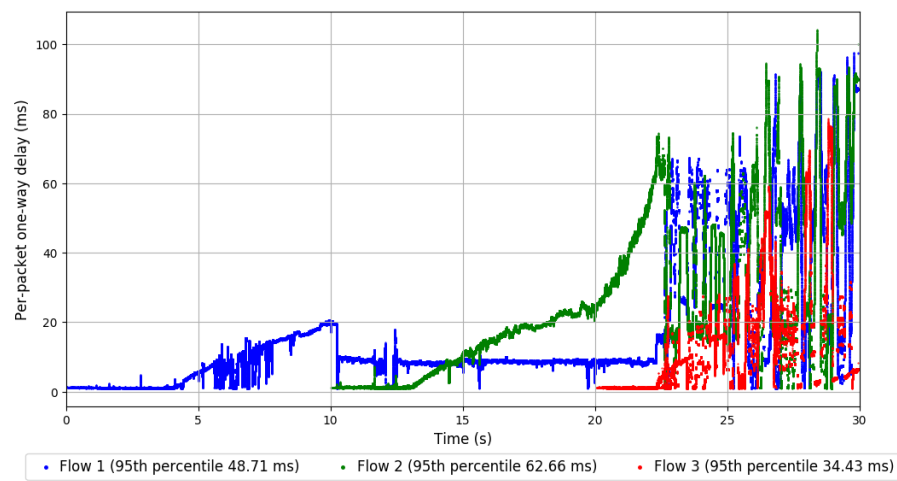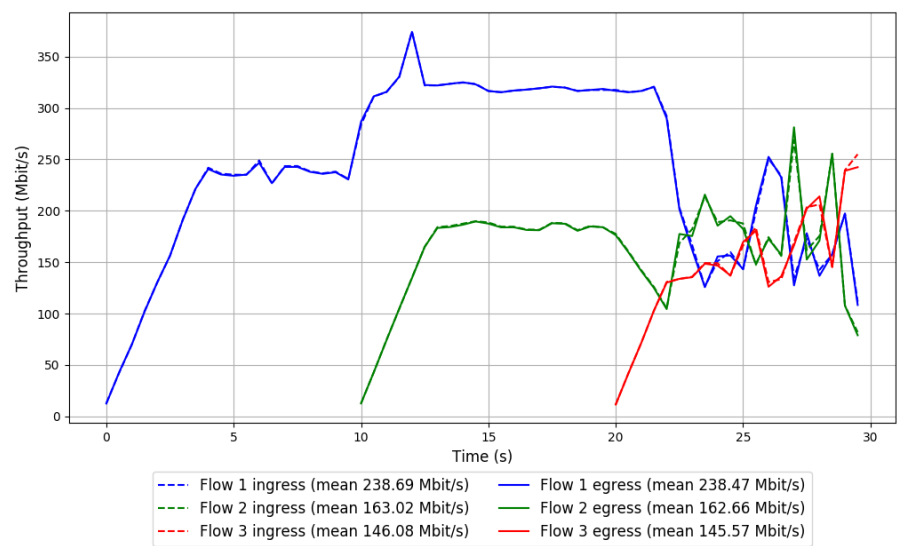
Run 6: Report of LEDBAT — Data Link

Flow 1 ingress (mean 222.73 Mbit/s) --- Flow 1 egress (mean 222.58 Mbit/s)
Flow 2 ingress (mean 206.54 Mbit/s) --- Flow 2 egress (mean 206.30 Mbit/s)
Flow 3 ingress (mean 133.43 Mbit/s) --- Flow 3 egress (mean 132.83 Mbit/s)

Flow 1 (95th percentile 47.04 ms)   Flow 2 (95th percentile 47.29 ms)   Flow 3 (95th percentile 53.15 ms)

135

```
Run 7: Statistics of LEDBAT

Start at: 2017-09-08 00:01:14
End at: 2017-09-08 00:01:44
Local clock offset: 0.822 ms
Remote clock offset: -1.262 ms


# Below is generated by plot.py at 2017-09-08 07:22:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 400.70 Mbit/s
95th percentile per-packet one-way delay: 48.874 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 257.49 Mbit/s
95th percentile per-packet one-way delay: 24.921 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 156.12 Mbit/s
95th percentile per-packet one-way delay: 80.814 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 118.95 Mbit/s
95th percentile per-packet one-way delay: 46.788 ms
Loss rate: 0.58%
```
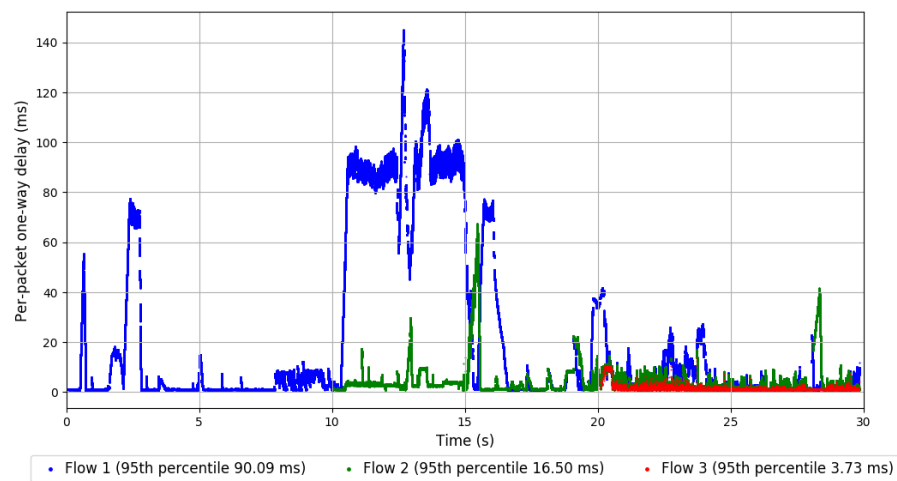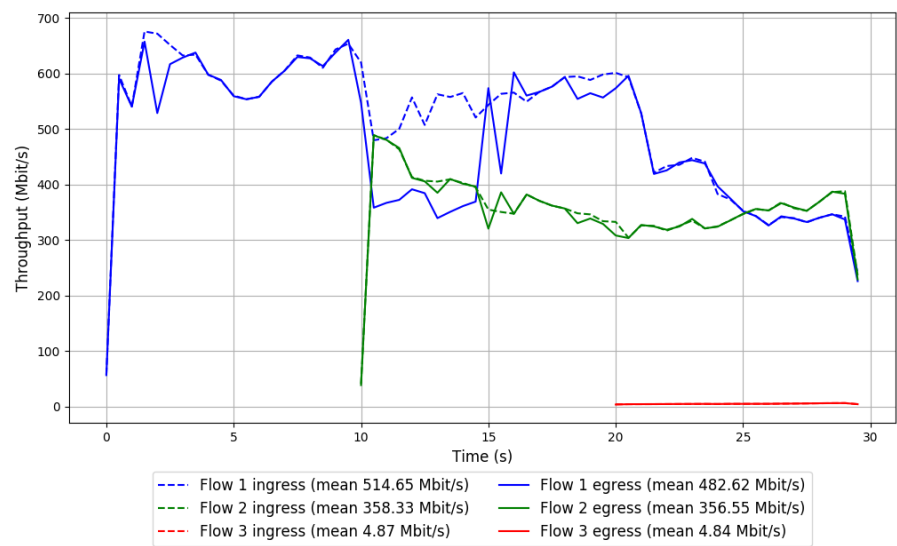
Run 7: Report of LEDBAT — Data Link

Flow 1 ingress (mean 257.64 Mbit/s) — Flow 1 egress (mean 257.49 Mbit/s)
Flow 2 ingress (mean 156.50 Mbit/s) — Flow 2 egress (mean 156.12 Mbit/s)
Flow 3 ingress (mean 119.50 Mbit/s) — Flow 3 egress (mean 118.95 Mbit/s)

Flow 1 (95th percentile 24.92 ms)   Flow 2 (95th percentile 80.81 ms)   Flow 3 (95th percentile 46.79 ms)

```
Run 8: Statistics of LEDBAT

Start at: 2017-09-08 00:23:17
End at: 2017-09-08 00:23:47
Local clock offset: 0.773 ms
Remote clock offset: -1.198 ms


# Below is generated by plot.py at 2017-09-08 07:22:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.96 Mbit/s
95th percentile per-packet one-way delay: 48.953 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 226.13 Mbit/s
95th percentile per-packet one-way delay: 48.945 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 186.48 Mbit/s
95th percentile per-packet one-way delay: 49.221 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 129.43 Mbit/s
95th percentile per-packet one-way delay: 43.808 ms
Loss rate: 0.56%
```
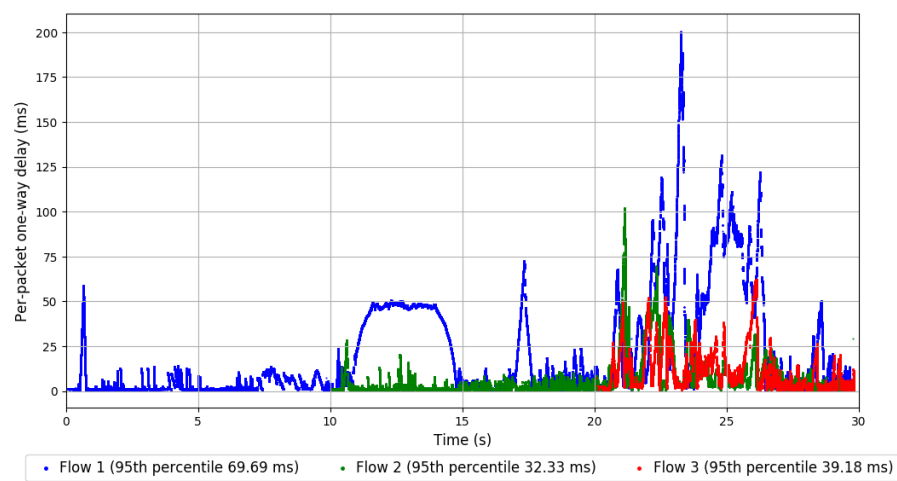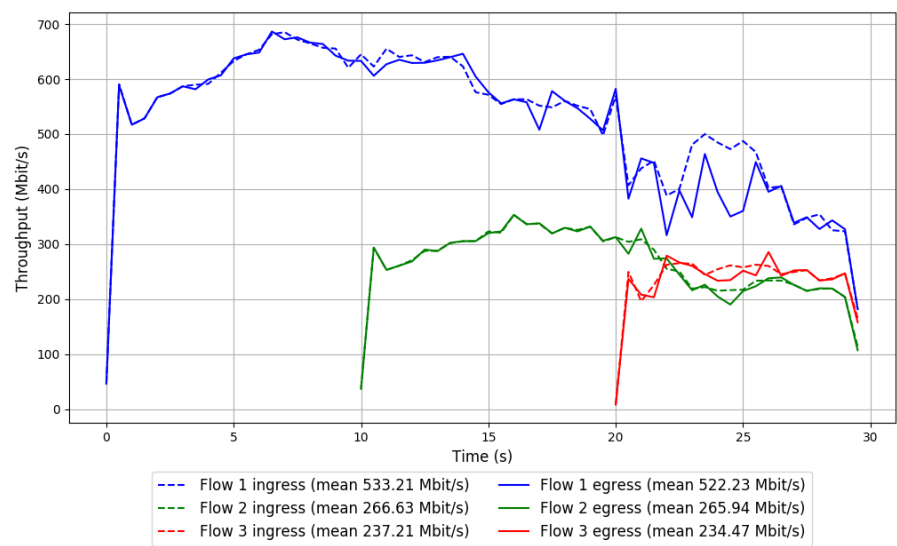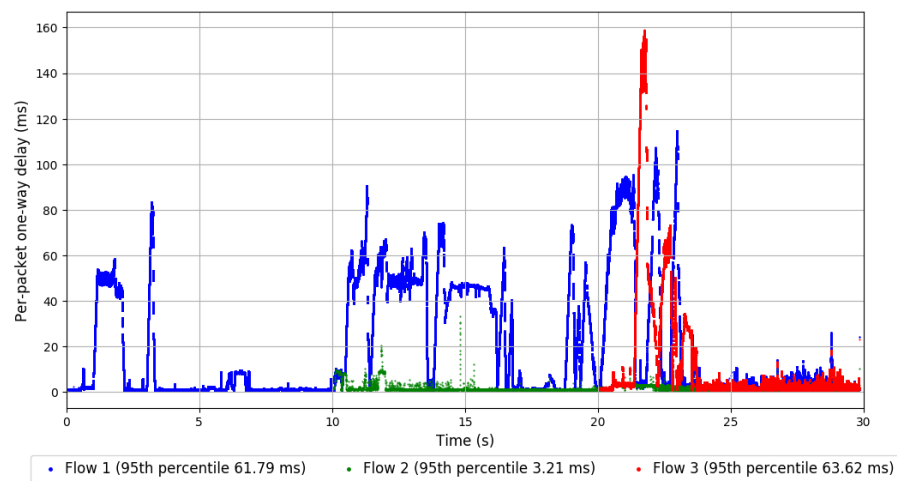
Run 8: Report of LEDBAT — Data Link

Flow 1 ingress (mean 226.29 Mbit/s)   Flow 1 egress (mean 226.13 Mbit/s)
Flow 2 ingress (mean 186.92 Mbit/s)   Flow 2 egress (mean 186.48 Mbit/s)
Flow 3 ingress (mean 130.00 Mbit/s)   Flow 3 egress (mean 129.43 Mbit/s)

Flow 1 (95th percentile 48.95 ms)   Flow 2 (95th percentile 49.22 ms)   Flow 3 (95th percentile 43.81 ms)
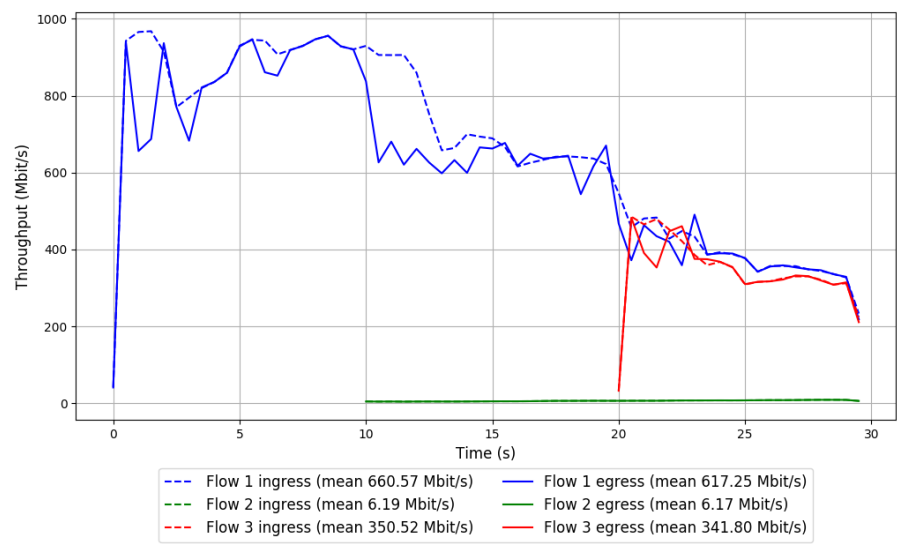
```
Run 9: Statistics of LEDBAT

Start at: 2017-09-08 00:45:21
End at: 2017-09-08 00:45:51
Local clock offset: 0.87 ms
Remote clock offset: -1.3 ms


# Below is generated by plot.py at 2017-09-08 07:23:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 409.20 Mbit/s
95th percentile per-packet one-way delay: 47.538 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 258.36 Mbit/s
95th percentile per-packet one-way delay: 27.125 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 170.53 Mbit/s
95th percentile per-packet one-way delay: 71.065 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 113.39 Mbit/s
95th percentile per-packet one-way delay: 51.596 ms
Loss rate: 0.58%
```

Run 9: Report of LEDBAT — Data Link

```
Run 10: Statistics of LEDBAT

Start at: 2017-09-08 01:07:27
End at: 2017-09-08 01:07:57
Local clock offset: 0.824 ms
Remote clock offset: -1.097 ms


# Below is generated by plot.py at 2017-09-08 07:23:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.79 Mbit/s
95th percentile per-packet one-way delay: 52.381 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 238.47 Mbit/s
95th percentile per-packet one-way delay: 48.714 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 162.66 Mbit/s
95th percentile per-packet one-way delay: 62.662 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 145.57 Mbit/s
95th percentile per-packet one-way delay: 34.432 ms
Loss rate: 0.53%
```

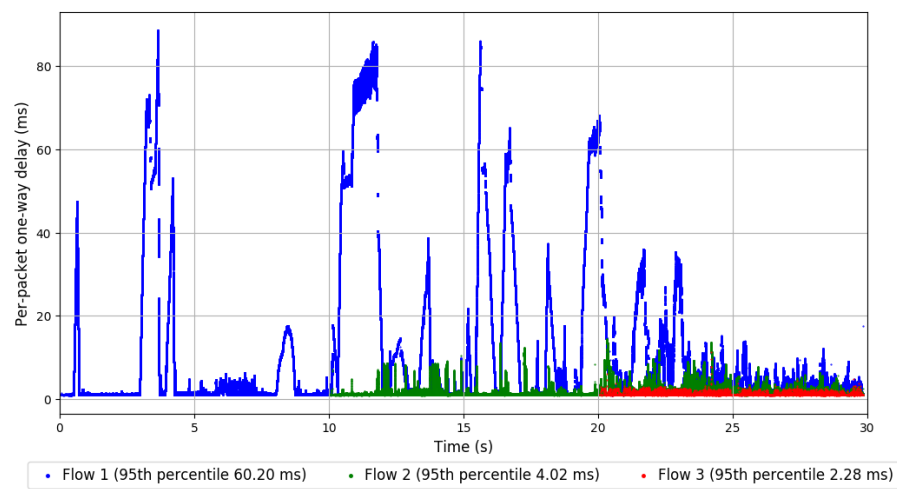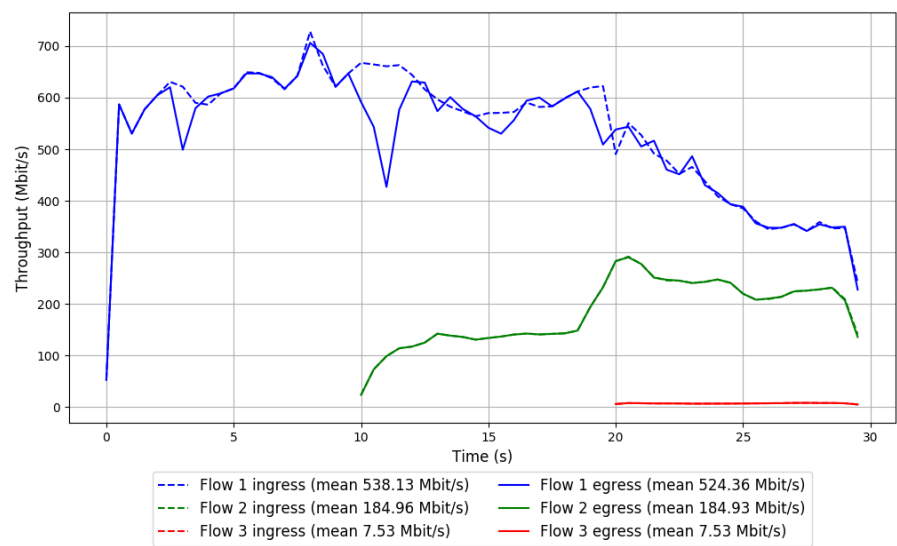Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-09-07 22:01:41
End at: 2017-09-07 22:02:11
Local clock offset: 0.952 ms
Remote clock offset: -2.507 ms


# Below is generated by plot.py at 2017-09-08 07:25:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.01 Mbit/s
95th percentile per-packet one-way delay: 87.316 ms
Loss rate: 4.48%
-- Flow 1:
Average throughput: 482.62 Mbit/s
95th percentile per-packet one-way delay: 90.090 ms
Loss rate: 6.29%
-- Flow 2:
Average throughput: 356.55 Mbit/s
95th percentile per-packet one-way delay: 16.502 ms
Loss rate: 0.60%
-- Flow 3:
Average throughput: 4.84 Mbit/s
95th percentile per-packet one-way delay: 3.729 ms
Loss rate: 0.71%
```
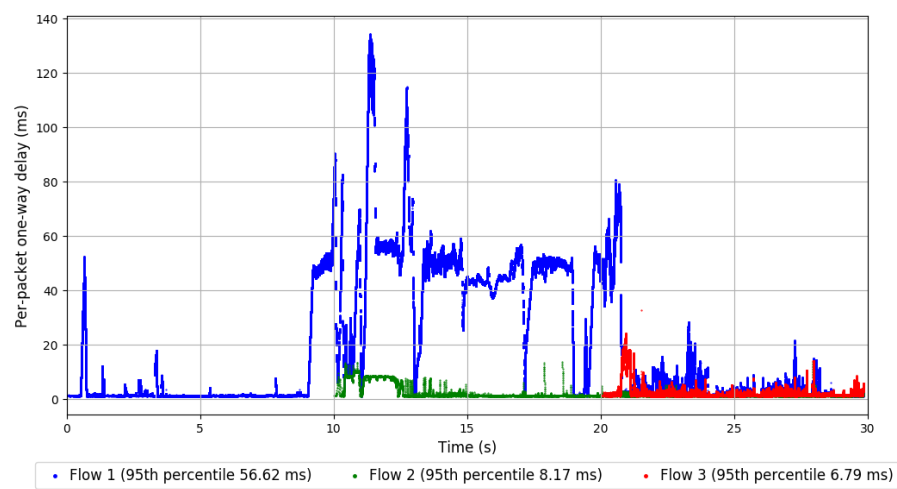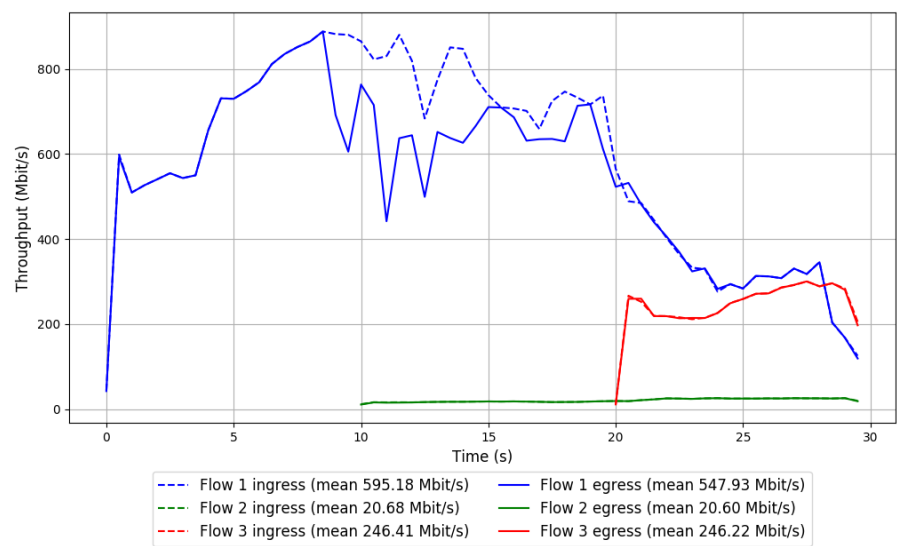
Run 1: Report of PCC — Data Link

```
Run 2: Statistics of PCC

Start at: 2017-09-07 22:23:36
End at: 2017-09-07 22:24:06
Local clock offset: 0.992 ms
Remote clock offset: -1.654 ms


# Below is generated by plot.py at 2017-09-08 07:25:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 775.66 Mbit/s
95th percentile per-packet one-way delay: 56.453 ms
Loss rate: 1.67%
-- Flow 1:
Average throughput: 522.23 Mbit/s
95th percentile per-packet one-way delay: 69.689 ms
Loss rate: 2.10%
-- Flow 2:
Average throughput: 265.94 Mbit/s
95th percentile per-packet one-way delay: 32.330 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 234.47 Mbit/s
95th percentile per-packet one-way delay: 39.177 ms
Loss rate: 1.37%
```
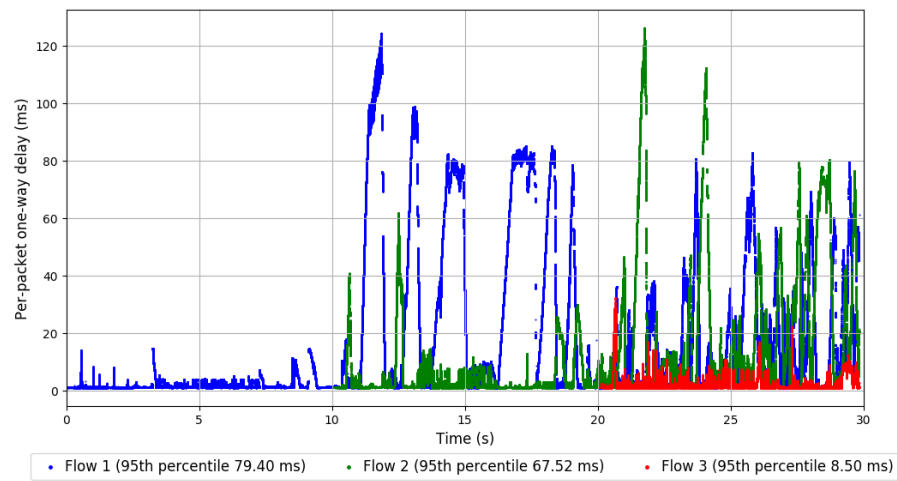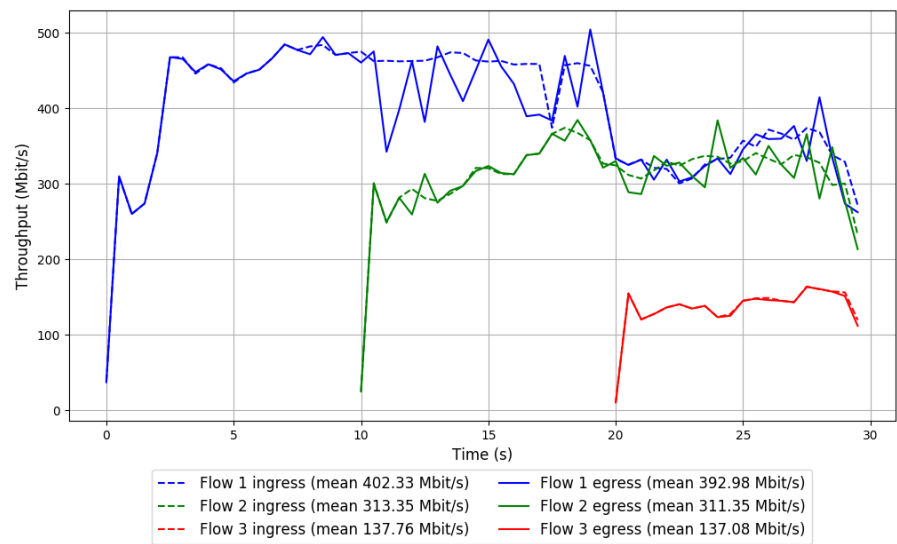
Run 2: Report of PCC — Data Link

147

```
Run 3: Statistics of PCC

Start at: 2017-09-07 22:45:49
End at: 2017-09-07 22:46:19
Local clock offset: 0.922 ms
Remote clock offset: -1.702 ms


# Below is generated by plot.py at 2017-09-08 07:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 733.84 Mbit/s
95th percentile per-packet one-way delay: 62.022 ms
Loss rate: 5.94%
-- Flow 1:
Average throughput: 617.25 Mbit/s
95th percentile per-packet one-way delay: 61.790 ms
Loss rate: 6.56%
-- Flow 2:
Average throughput: 6.17 Mbit/s
95th percentile per-packet one-way delay: 3.213 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 341.80 Mbit/s
95th percentile per-packet one-way delay: 63.624 ms
Loss rate: 2.56%
```
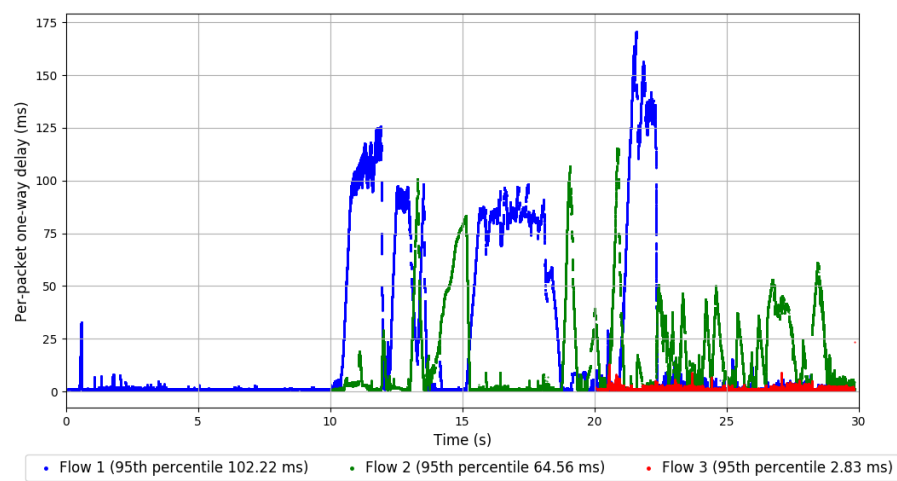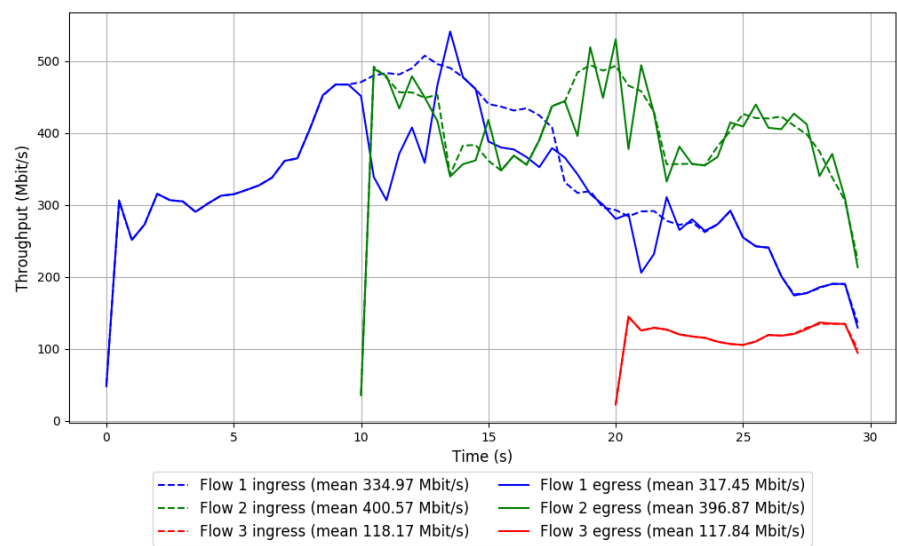
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 660.57 Mbit/s)   Flow 1 egress (mean 617.25 Mbit/s)
Flow 2 ingress (mean 6.19 Mbit/s)   Flow 2 egress (mean 6.17 Mbit/s)
Flow 3 ingress (mean 350.52 Mbit/s)   Flow 3 egress (mean 341.80 Mbit/s)

Flow 1 (95th percentile 61.79 ms)   Flow 2 (95th percentile 3.21 ms)   Flow 3 (95th percentile 63.62 ms)

149

```
Run 4: Statistics of PCC

Start at: 2017-09-07 23:07:56
End at: 2017-09-07 23:08:26
Local clock offset: 0.997 ms
Remote clock offset: -1.243 ms


# Below is generated by plot.py at 2017-09-08 07:27:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 649.61 Mbit/s
95th percentile per-packet one-way delay: 55.533 ms
Loss rate: 2.12%
-- Flow 1:
Average throughput: 524.36 Mbit/s
95th percentile per-packet one-way delay: 60.198 ms
Loss rate: 2.58%
-- Flow 2:
Average throughput: 184.93 Mbit/s
95th percentile per-packet one-way delay: 4.019 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 2.281 ms
Loss rate: 0.25%
```
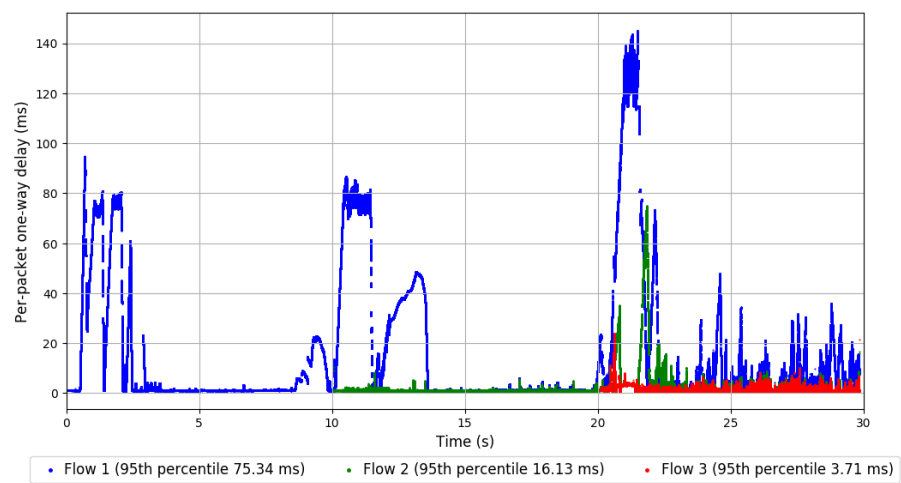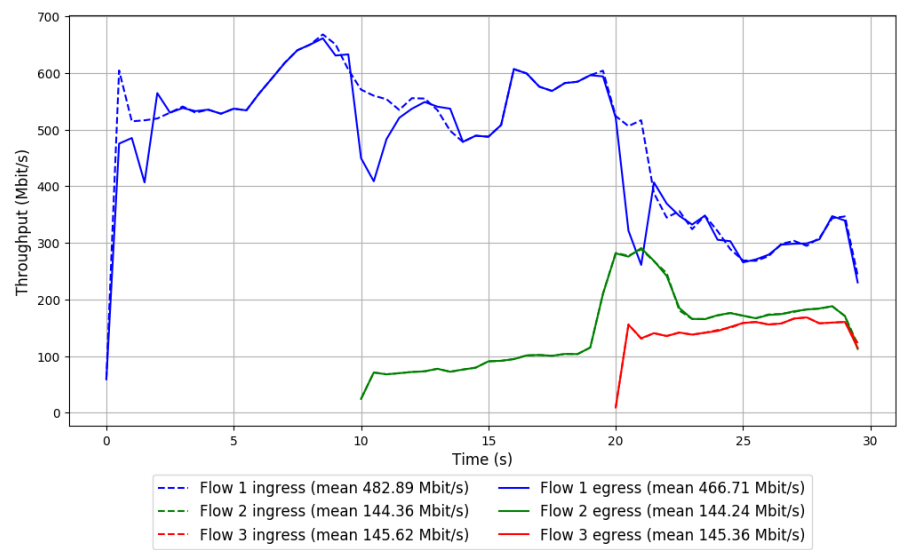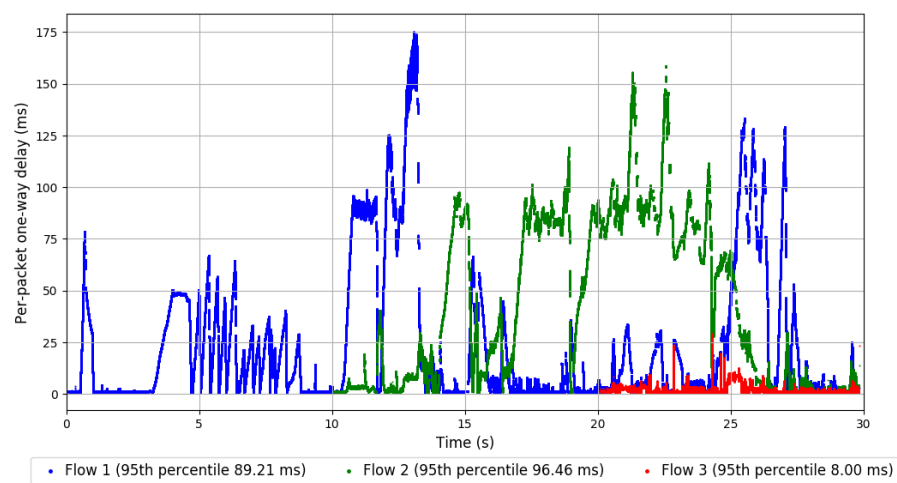
Run 4: Report of PCC — Data Link

- - - Flow 1 ingress (mean 538.13 Mbit/s) ——— Flow 1 egress (mean 524.36 Mbit/s)
- - - Flow 2 ingress (mean 184.96 Mbit/s) ——— Flow 2 egress (mean 184.93 Mbit/s)
- - - Flow 3 ingress (mean 7.53 Mbit/s) ——— Flow 3 egress (mean 7.53 Mbit/s)

- Flow 1 (95th percentile 60.20 ms)   - Flow 2 (95th percentile 4.02 ms)   - Flow 3 (95th percentile 2.28 ms)

```
Run 5: Statistics of PCC

Start at: 2017-09-07 23:30:02
End at: 2017-09-07 23:30:32
Local clock offset: 1.052 ms
Remote clock offset: -1.052 ms


# Below is generated by plot.py at 2017-09-08 07:28:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 642.56 Mbit/s
95th percentile per-packet one-way delay: 55.831 ms
Loss rate: 6.93%
-- Flow 1:
Average throughput: 547.93 Mbit/s
95th percentile per-packet one-way delay: 56.618 ms
Loss rate: 7.99%
-- Flow 2:
Average throughput: 20.60 Mbit/s
95th percentile per-packet one-way delay: 8.171 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 246.22 Mbit/s
95th percentile per-packet one-way delay: 6.790 ms
Loss rate: 0.25%
```
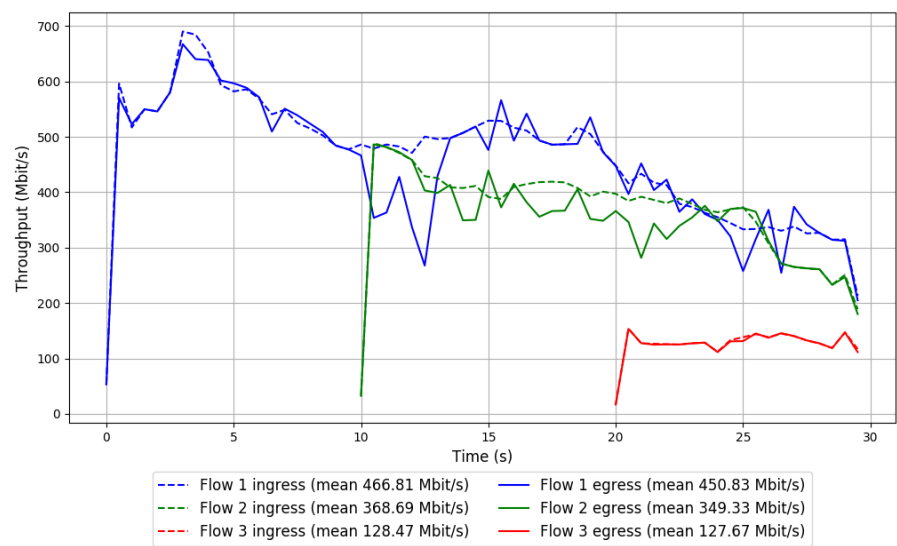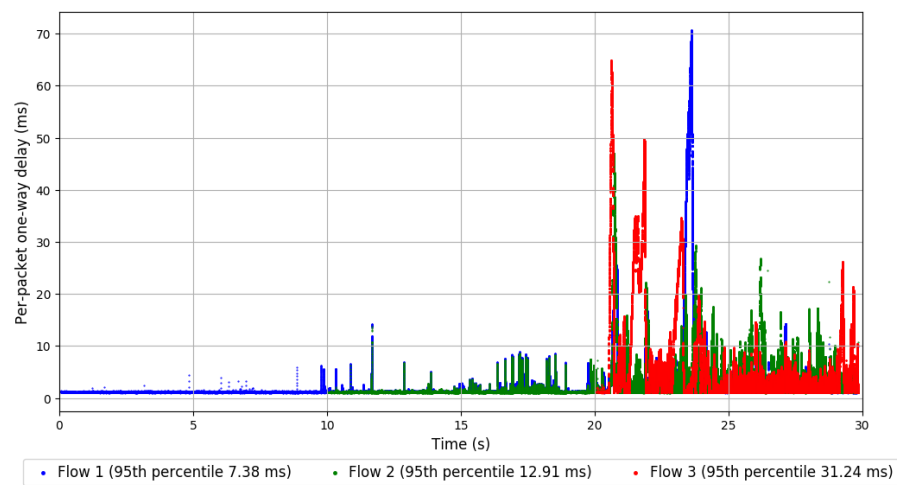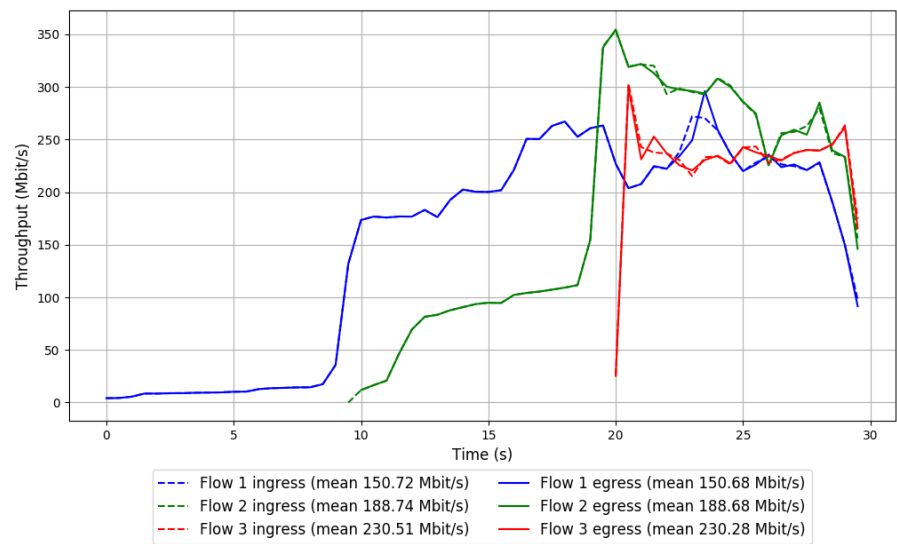
Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 595.18 Mbit/s) — Flow 1 egress (mean 547.93 Mbit/s)
Flow 2 ingress (mean 20.68 Mbit/s) — Flow 2 egress (mean 20.60 Mbit/s)
Flow 3 ingress (mean 246.41 Mbit/s) — Flow 3 egress (mean 246.22 Mbit/s)

Flow 1 (95th percentile 56.62 ms) • Flow 2 (95th percentile 8.17 ms) • Flow 3 (95th percentile 6.79 ms)

```
Run 6: Statistics of PCC

Start at: 2017-09-07 23:52:02
End at: 2017-09-07 23:52:32
Local clock offset: 0.737 ms
Remote clock offset: -1.381 ms


# Below is generated by plot.py at 2017-09-08 07:28:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 644.63 Mbit/s
95th percentile per-packet one-way delay: 76.134 ms
Loss rate: 1.75%
-- Flow 1:
Average throughput: 392.98 Mbit/s
95th percentile per-packet one-way delay: 79.404 ms
Loss rate: 2.38%
-- Flow 2:
Average throughput: 311.35 Mbit/s
95th percentile per-packet one-way delay: 67.519 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 137.08 Mbit/s
95th percentile per-packet one-way delay: 8.500 ms
Loss rate: 0.70%
```
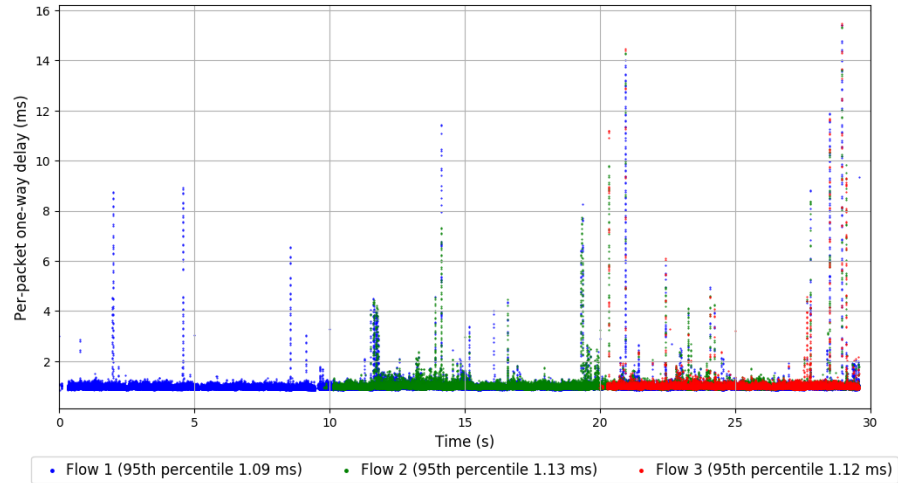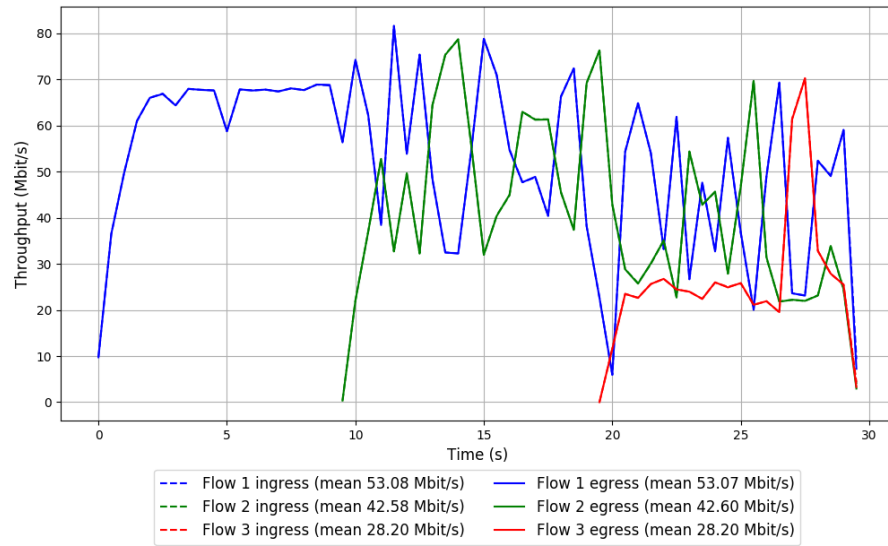
Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 402.33 Mbit/s) Flow 1 egress (mean 392.98 Mbit/s)
Flow 2 ingress (mean 313.35 Mbit/s) Flow 2 egress (mean 311.35 Mbit/s)
Flow 3 ingress (mean 137.76 Mbit/s) Flow 3 egress (mean 137.08 Mbit/s)

Flow 1 (95th percentile 79.40 ms)   Flow 2 (95th percentile 67.52 ms)   Flow 3 (95th percentile 8.50 ms)

155

```
Run 7: Statistics of PCC

Start at: 2017-09-08 00:14:07
End at: 2017-09-08 00:14:37
Local clock offset: 0.84 ms
Remote clock offset: -1.26 ms


# Below is generated by plot.py at 2017-09-08 07:29:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 619.42 Mbit/s
95th percentile per-packet one-way delay: 90.244 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 317.45 Mbit/s
95th percentile per-packet one-way delay: 102.224 ms
Loss rate: 5.29%
-- Flow 2:
Average throughput: 396.87 Mbit/s
95th percentile per-packet one-way delay: 64.555 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 117.84 Mbit/s
95th percentile per-packet one-way delay: 2.834 ms
Loss rate: 0.26%
```
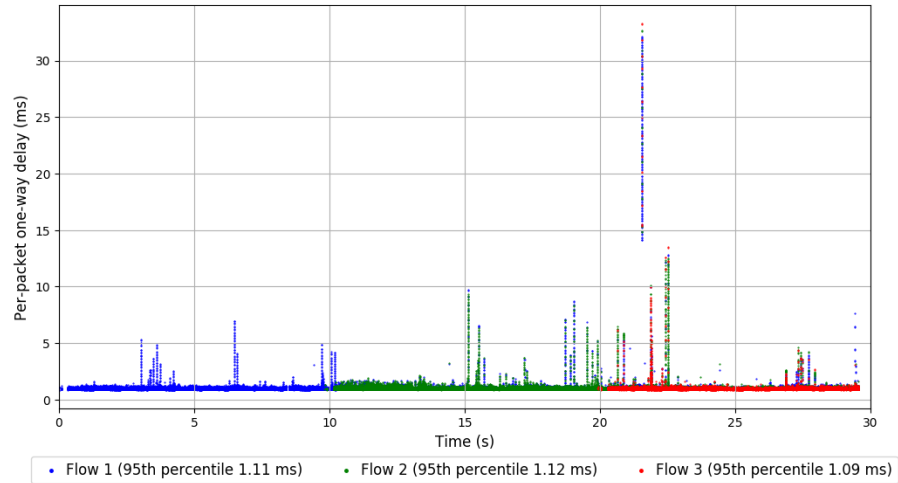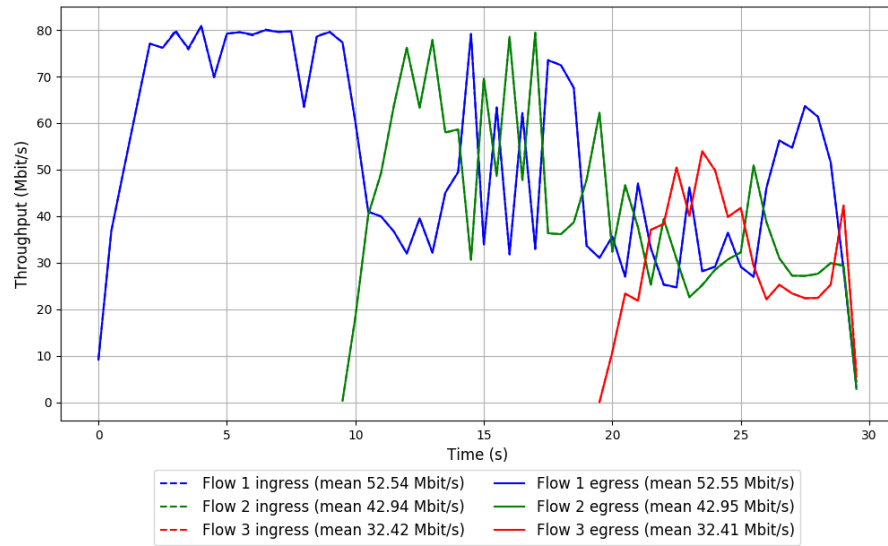
Run 7: Report of PCC — Data Link

```
Run 8: Statistics of PCC

Start at: 2017-09-08 00:36:09
End at: 2017-09-08 00:36:39
Local clock offset: 0.88 ms
Remote clock offset: -1.296 ms

# Below is generated by plot.py at 2017-09-08 07:29:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 609.96 Mbit/s
95th percentile per-packet one-way delay: 73.098 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 466.71 Mbit/s
95th percentile per-packet one-way delay: 75.338 ms
Loss rate: 3.44%
-- Flow 2:
Average throughput: 144.24 Mbit/s
95th percentile per-packet one-way delay: 16.133 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 145.36 Mbit/s
95th percentile per-packet one-way delay: 3.714 ms
Loss rate: 0.31%
```
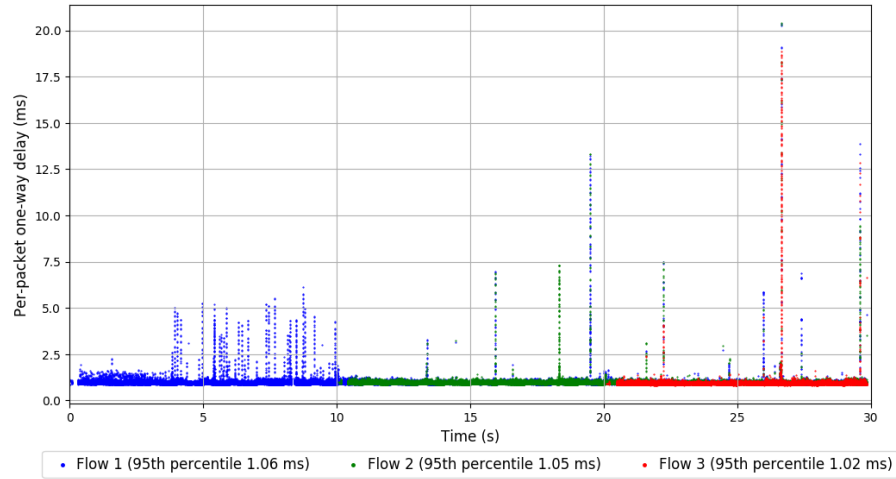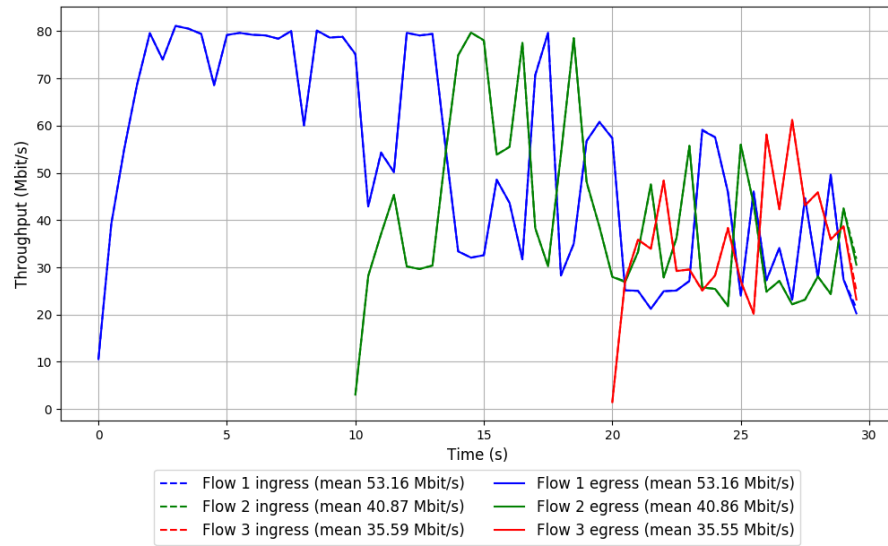
Run 8: Report of PCC — Data Link

```
Run 9: Statistics of PCC

Start at: 2017-09-08 00:58:10
End at: 2017-09-08 00:58:40
Local clock offset: 0.906 ms
Remote clock offset: -1.075 ms


# Below is generated by plot.py at 2017-09-08 07:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.58 Mbit/s
95th percentile per-packet one-way delay: 92.081 ms
Loss rate: 3.94%
-- Flow 1:
Average throughput: 450.83 Mbit/s
95th percentile per-packet one-way delay: 89.207 ms
Loss rate: 3.49%
-- Flow 2:
Average throughput: 349.33 Mbit/s
95th percentile per-packet one-way delay: 96.460 ms
Loss rate: 5.37%
-- Flow 3:
Average throughput: 127.67 Mbit/s
95th percentile per-packet one-way delay: 7.998 ms
Loss rate: 0.65%
```
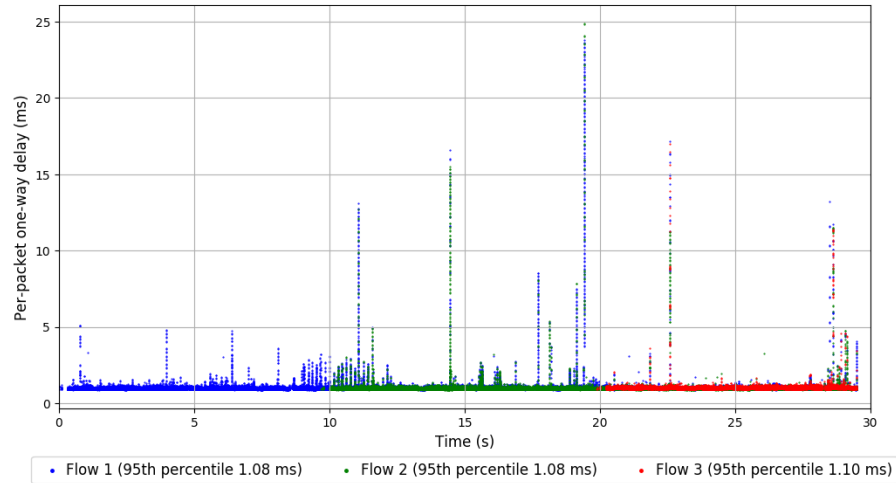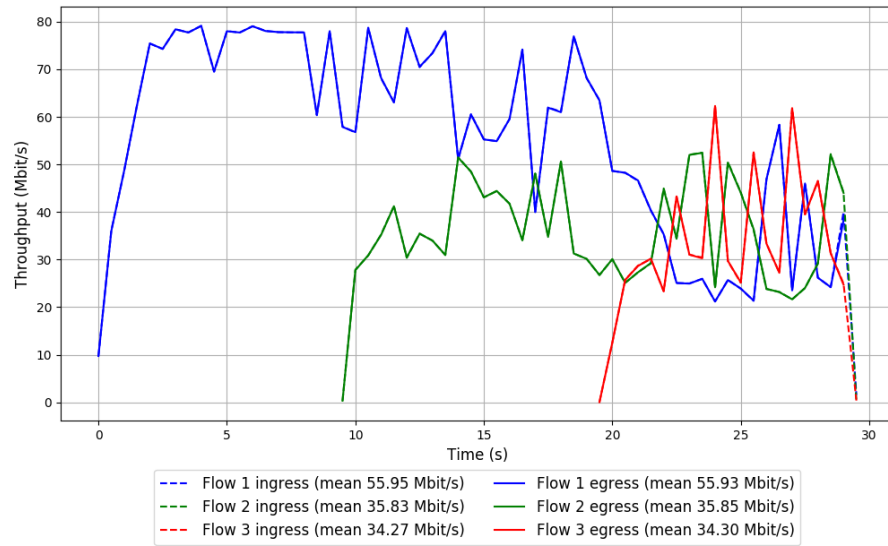
Run 9: Report of PCC — Data Link

Flow 1 ingress (mean 466.81 Mbit/s) — Flow 1 egress (mean 450.83 Mbit/s)
Flow 2 ingress (mean 368.69 Mbit/s) — Flow 2 egress (mean 349.33 Mbit/s)
Flow 3 ingress (mean 128.47 Mbit/s) — Flow 3 egress (mean 127.67 Mbit/s)

Flow 1 (95th percentile 89.21 ms)   Flow 2 (95th percentile 96.46 ms)   Flow 3 (95th percentile 8.00 ms)

```
Run 10: Statistics of PCC

Start at: 2017-09-08 01:20:08
End at: 2017-09-08 01:20:38
Local clock offset: 0.895 ms
Remote clock offset: -1.324 ms


# Below is generated by plot.py at 2017-09-08 07:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 351.86 Mbit/s
95th percentile per-packet one-way delay: 16.084 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 150.68 Mbit/s
95th percentile per-packet one-way delay: 7.378 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 188.68 Mbit/s
95th percentile per-packet one-way delay: 12.912 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 230.28 Mbit/s
95th percentile per-packet one-way delay: 31.243 ms
Loss rate: 0.25%
```
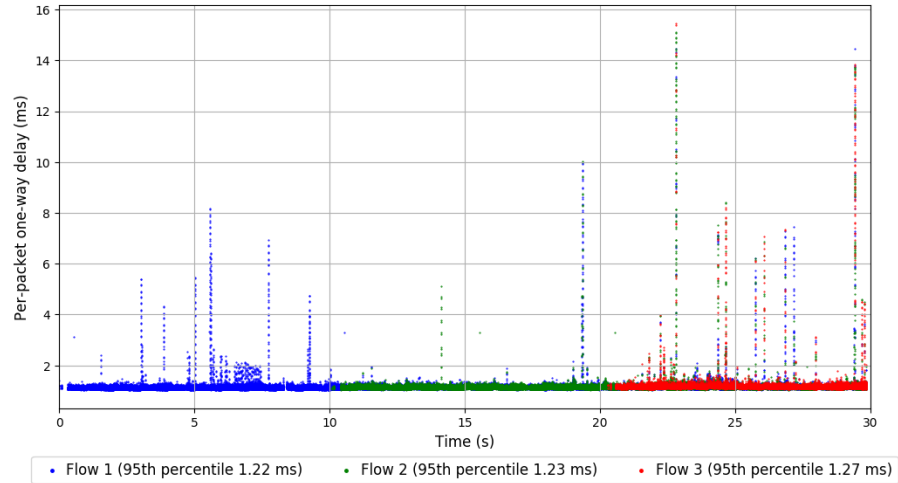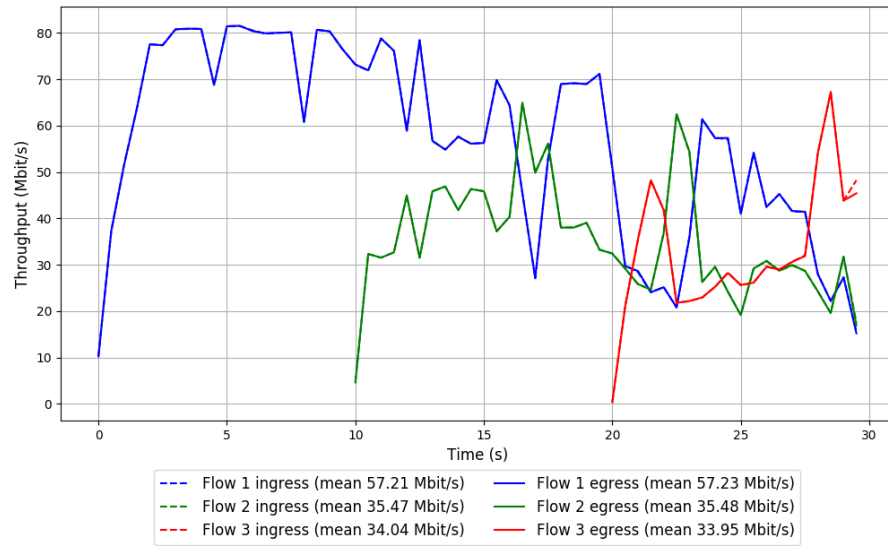
Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 150.72 Mbit/s) Flow 1 egress (mean 150.68 Mbit/s)
Flow 2 ingress (mean 188.74 Mbit/s) Flow 2 egress (mean 188.68 Mbit/s)
Flow 3 ingress (mean 230.51 Mbit/s) Flow 3 egress (mean 230.28 Mbit/s)

Flow 1 (95th percentile 7.38 ms)   Flow 2 (95th percentile 12.91 ms)   Flow 3 (95th percentile 31.24 ms)

163

```
Run 1: Statistics of QUIC Cubic

Start at: 2017-09-07 21:54:48
End at: 2017-09-07 21:55:18
Local clock offset: 0.901 ms
Remote clock offset: -2.734 ms


# Below is generated by plot.py at 2017-09-08 07:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.75 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 53.07 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 42.60 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.20 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.20%
```
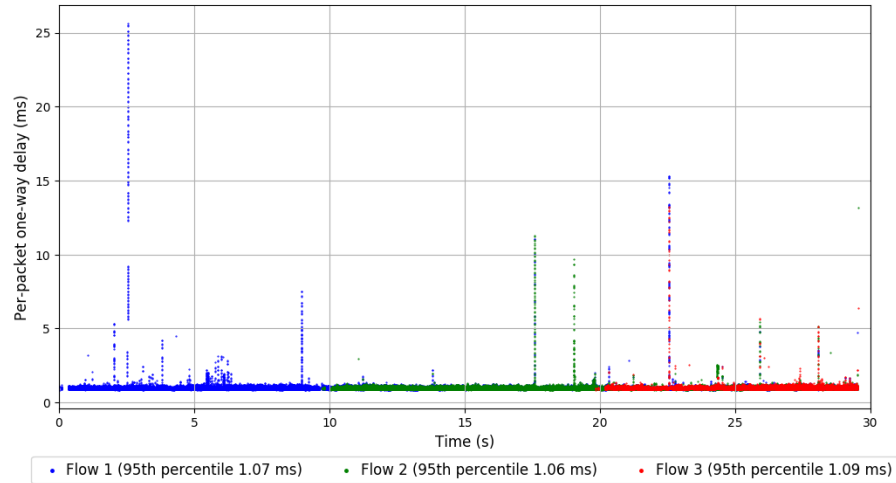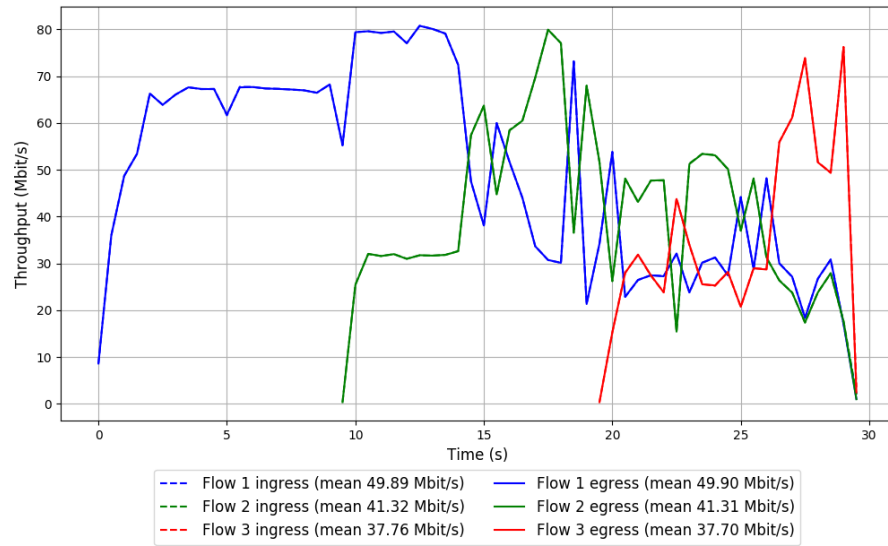
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2017-09-07 22:16:49
End at: 2017-09-07 22:17:19
Local clock offset: 1.032 ms
Remote clock offset: -1.833 ms


# Below is generated by plot.py at 2017-09-08 07:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.83 Mbit/s
95th percentile per-packet one-way delay: 1.111 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 52.55 Mbit/s
95th percentile per-packet one-way delay: 1.109 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 42.95 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 32.41 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.21%
```
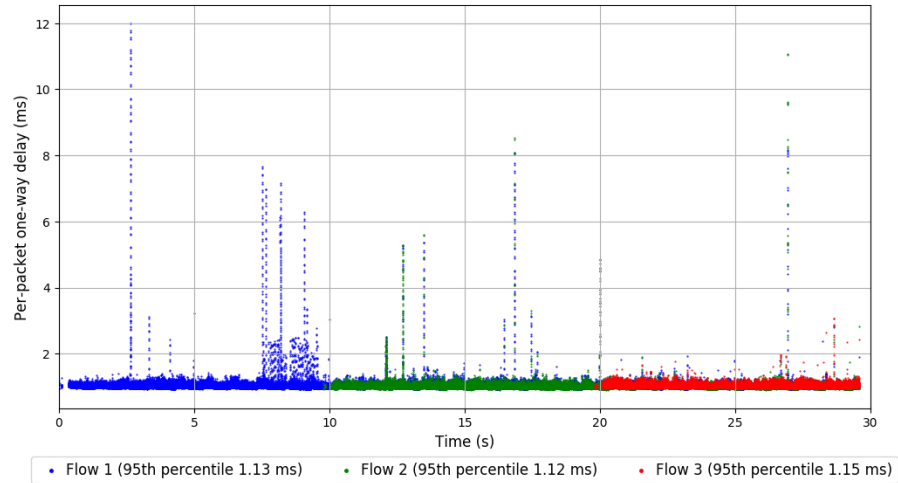
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-09-07 22:39:00
End at: 2017-09-07 22:39:30
Local clock offset: 0.935 ms
Remote clock offset: -1.718 ms


# Below is generated by plot.py at 2017-09-08 07:31:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.84 Mbit/s
95th percentile per-packet one-way delay: 1.055 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 53.16 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 40.86 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 35.55 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.28%
```
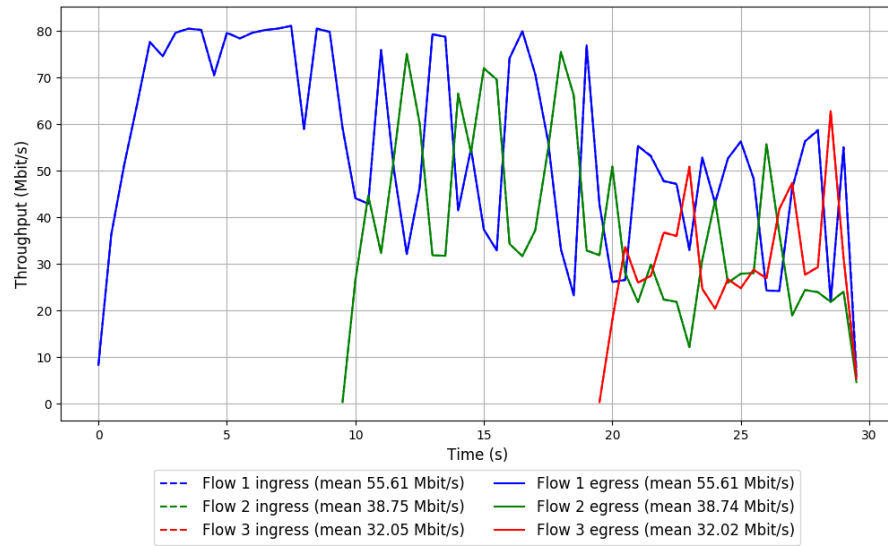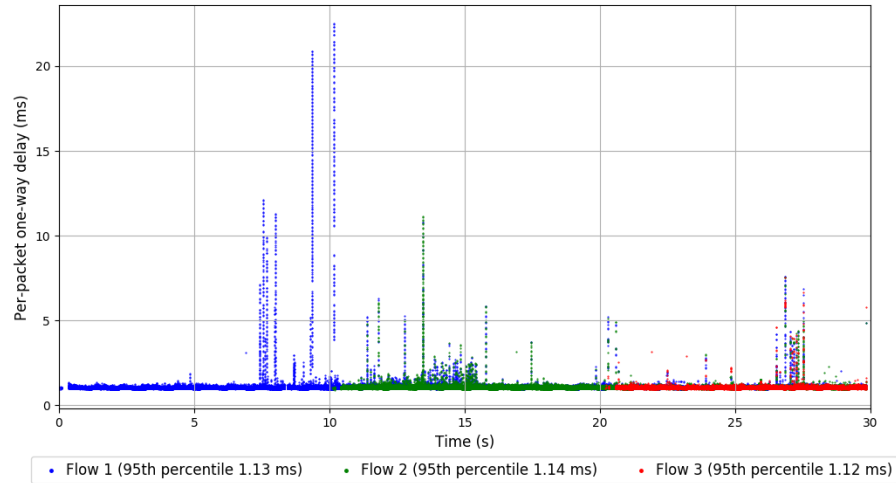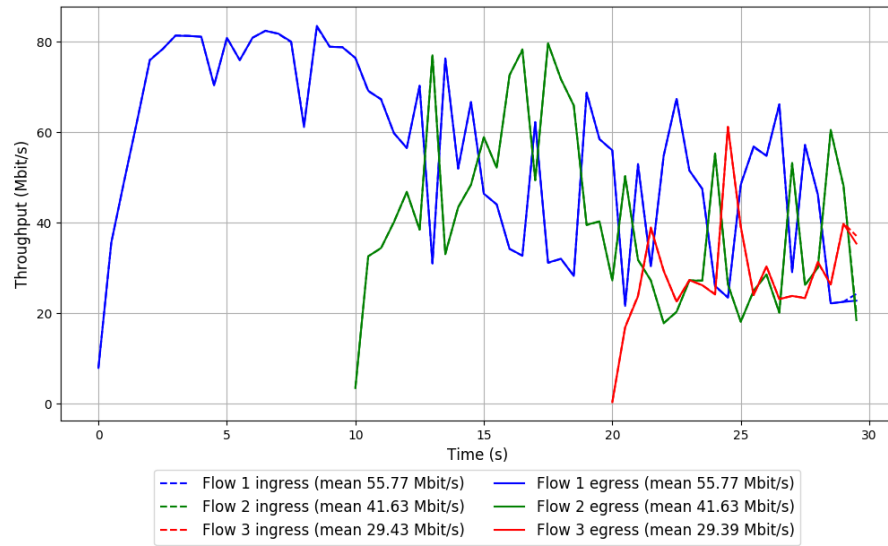
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2017-09-07 23:01:01
End at: 2017-09-07 23:01:31
Local clock offset: 0.966 ms
Remote clock offset: -1.253 ms


# Below is generated by plot.py at 2017-09-08 07:31:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.17 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 55.93 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 35.85 Mbit/s
95th percentile per-packet one-way delay: 1.077 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 34.30 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.11%
```
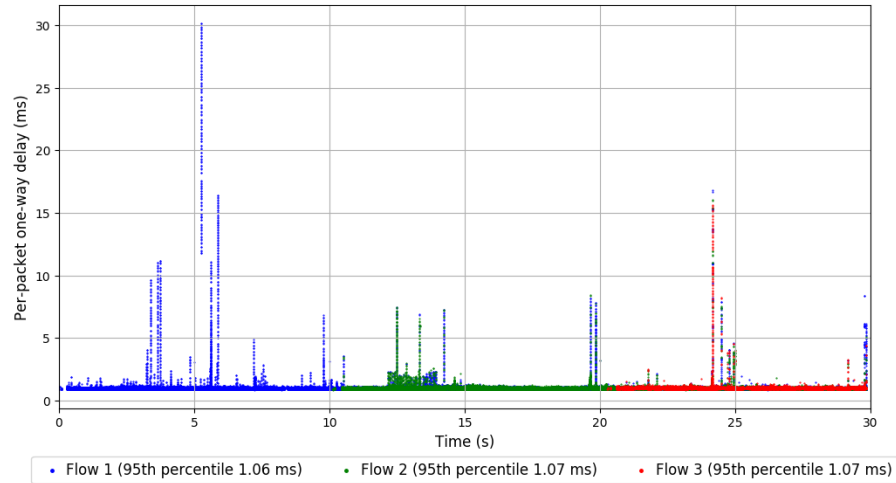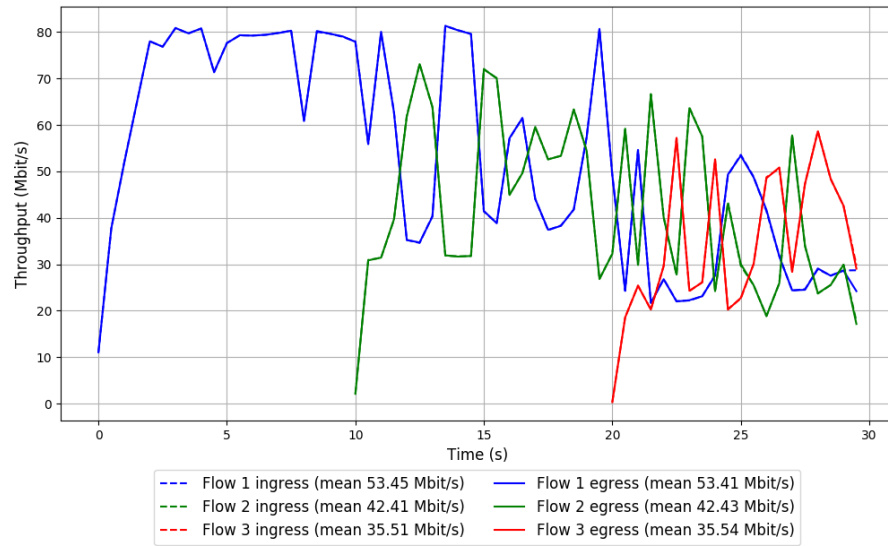
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-09-07 23:23:10
End at: 2017-09-07 23:23:40
Local clock offset: 1.105 ms
Remote clock offset: -1.109 ms


# Below is generated by plot.py at 2017-09-08 07:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.66 Mbit/s
95th percentile per-packet one-way delay: 1.231 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 57.23 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 35.48 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 33.95 Mbit/s
95th percentile per-packet one-way delay: 1.273 ms
Loss rate: 0.45%
```
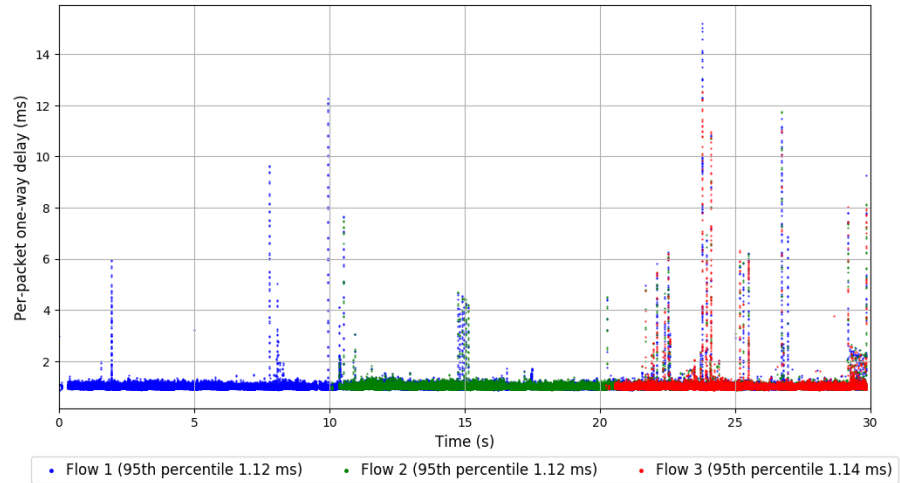
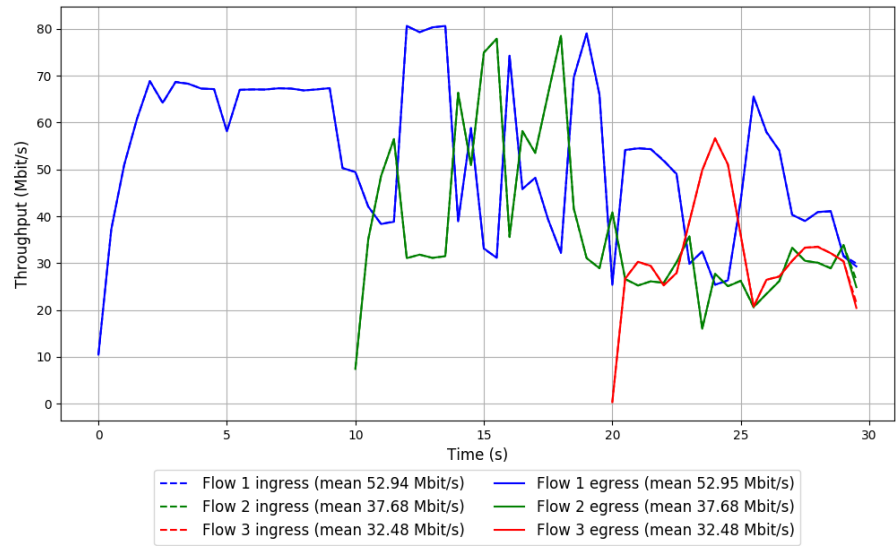Run 5: Report of QUIC Cubic — Data Link

```
Run 6: Statistics of QUIC Cubic

Start at: 2017-09-07 23:45:11
End at: 2017-09-07 23:45:41
Local clock offset: 0.796 ms
Remote clock offset: -1.221 ms

# Below is generated by plot.py at 2017-09-08 07:31:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.01 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 49.90 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 41.31 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 37.70 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.17%
```

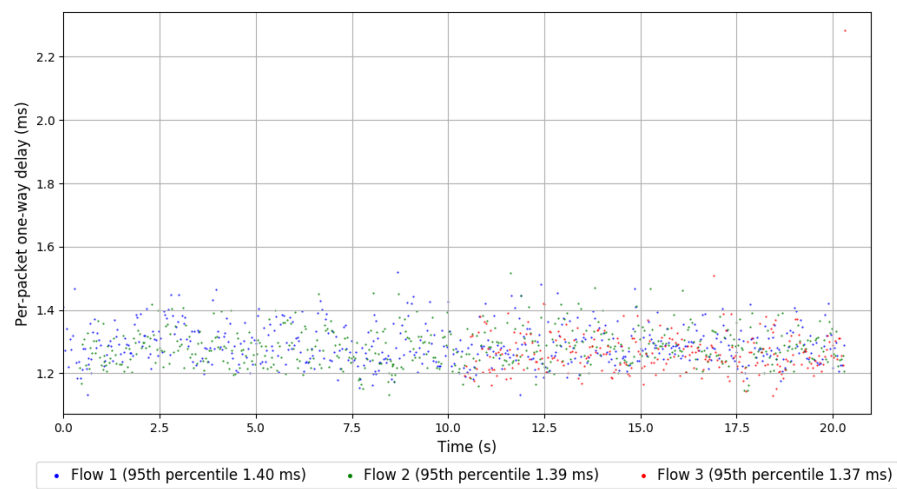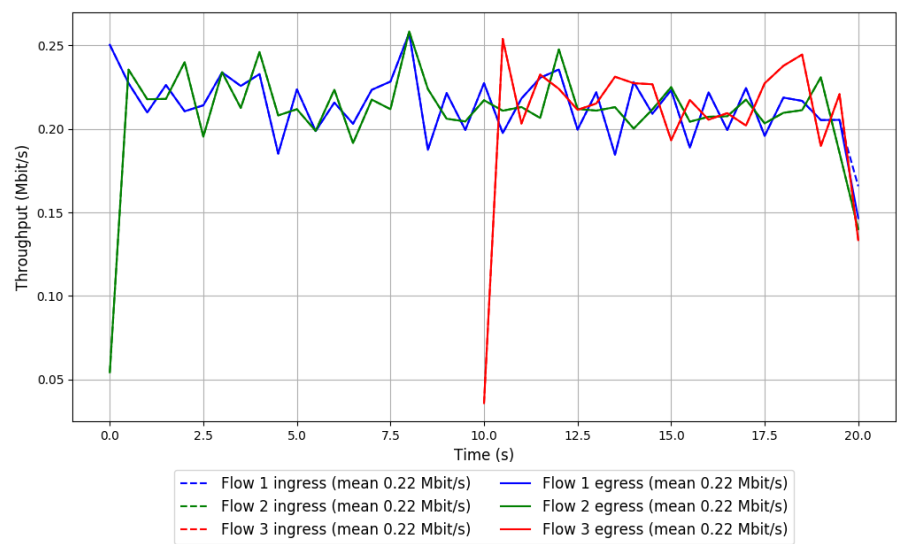Run 6: Report of QUIC Cubic — Data Link

```
Run 7: Statistics of QUIC Cubic

Start at: 2017-09-08 00:07:17
End at: 2017-09-08 00:07:47
Local clock offset: 0.818 ms
Remote clock offset: -1.2 ms


# Below is generated by plot.py at 2017-09-08 07:32:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.17 Mbit/s
95th percentile per-packet one-way delay: 1.132 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 55.61 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 1.149 ms
Loss rate: 0.24%
```

Run 7: Report of QUIC Cubic — Data Link

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-09-08 00:29:23
End at: 2017-09-08 00:29:53
Local clock offset: 0.868 ms
Remote clock offset: -1.146 ms


# Below is generated by plot.py at 2017-09-08 07:32:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.82 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 55.77 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 41.63 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 29.39 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.33%
```
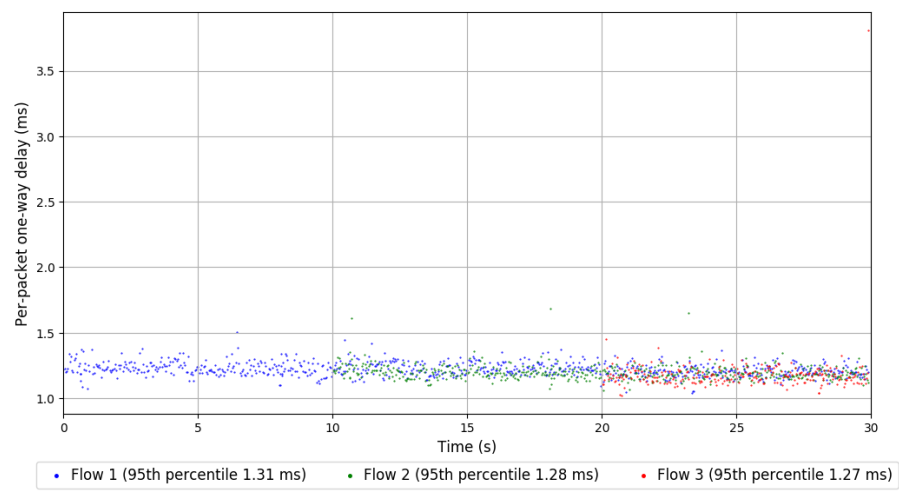
Run 8: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 55.77 Mbit/s) ——— Flow 1 egress (mean 55.77 Mbit/s)
- - - Flow 2 ingress (mean 41.63 Mbit/s) ——— Flow 2 egress (mean 41.63 Mbit/s)
- - - Flow 3 ingress (mean 29.43 Mbit/s) ——— Flow 3 egress (mean 29.39 Mbit/s)

- Flow 1 (95th percentile 1.13 ms)　　• Flow 2 (95th percentile 1.14 ms)　　• Flow 3 (95th percentile 1.12 ms)

```
Run 9: Statistics of QUIC Cubic

Start at: 2017-09-08 00:51:20
End at: 2017-09-08 00:51:50
Local clock offset: 0.807 ms
Remote clock offset: -1.205 ms


# Below is generated by plot.py at 2017-09-08 07:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.91 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 42.43 Mbit/s
95th percentile per-packet one-way delay: 1.073 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 35.54 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.12%
```
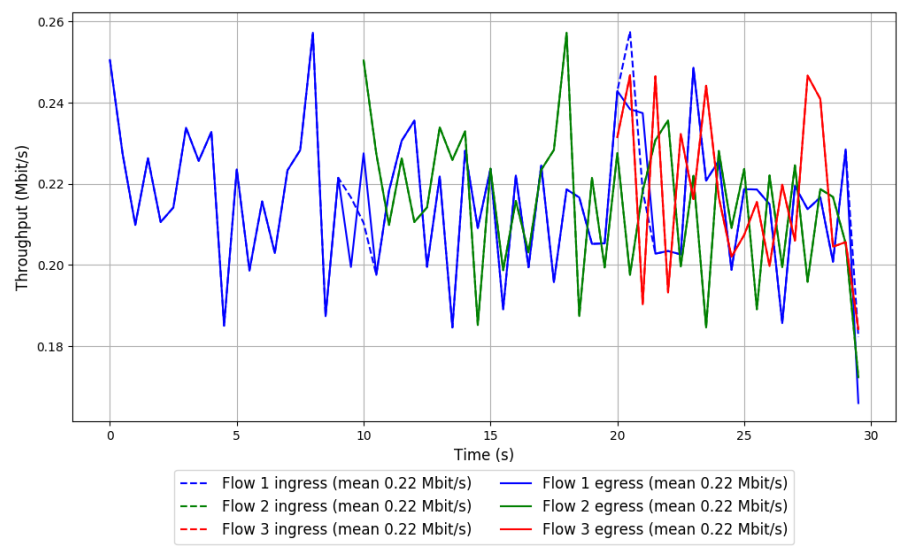
Run 9: Report of QUIC Cubic — Data Link

```
Run 10: Statistics of QUIC Cubic

Start at: 2017-09-08 01:13:18
End at: 2017-09-08 01:13:48
Local clock offset: 0.799 ms
Remote clock offset: -1.148 ms


# Below is generated by plot.py at 2017-09-08 07:32:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 1.122 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 52.95 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 1.124 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 32.48 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.18%
```

Run 10: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2017-09-07 21:56:03
End at: 2017-09-07 21:56:33
Local clock offset: 0.991 ms
Remote clock offset: -2.81 ms
```

Run 1: Report of SCReAM — Data Link
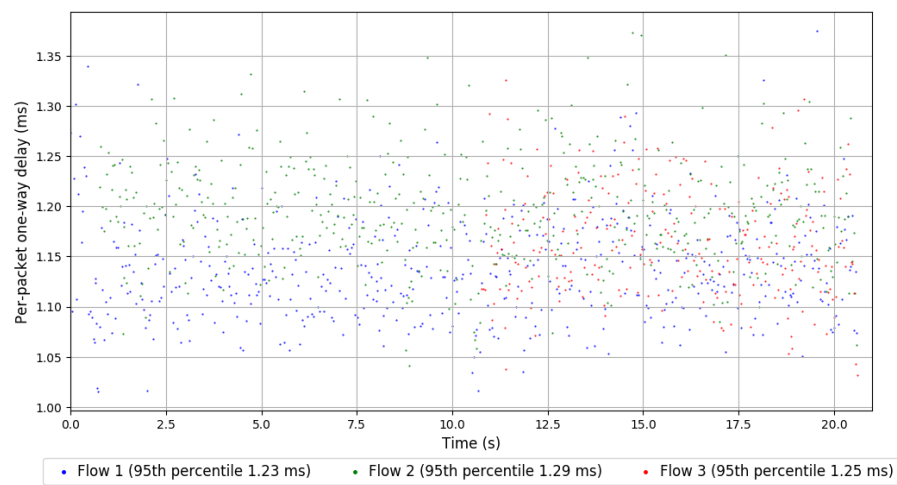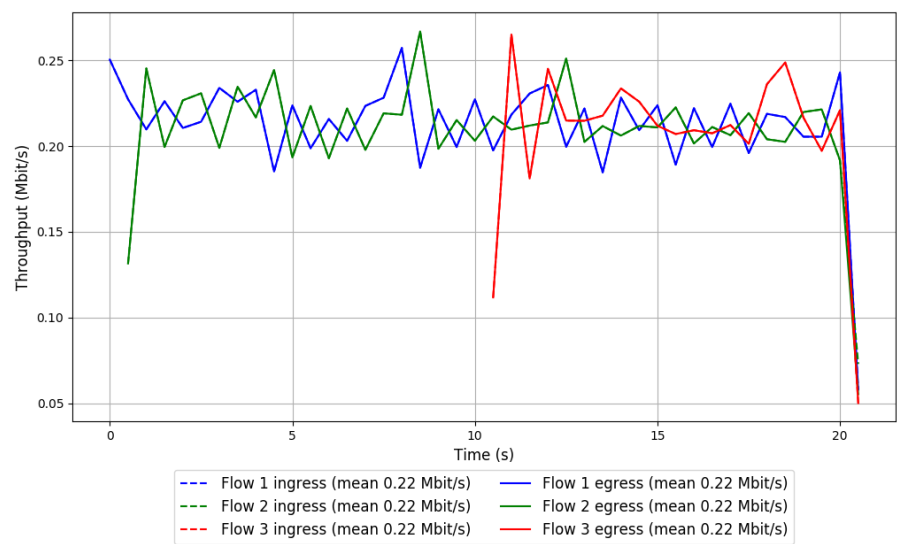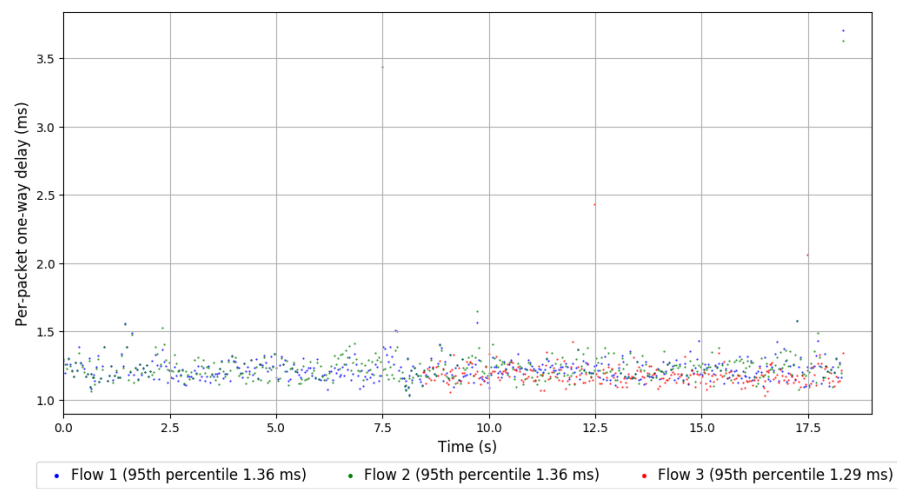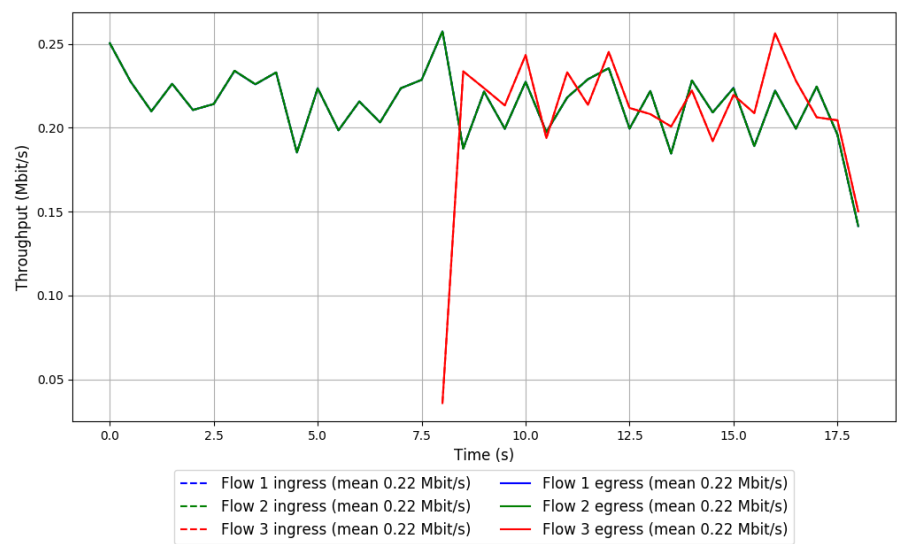
Run 2: Statistics of SCReAM

Start at: 2017-09-07 22:18:05
End at: 2017-09-07 22:18:35
Local clock offset: 0.986 ms
Remote clock offset: -1.777 ms

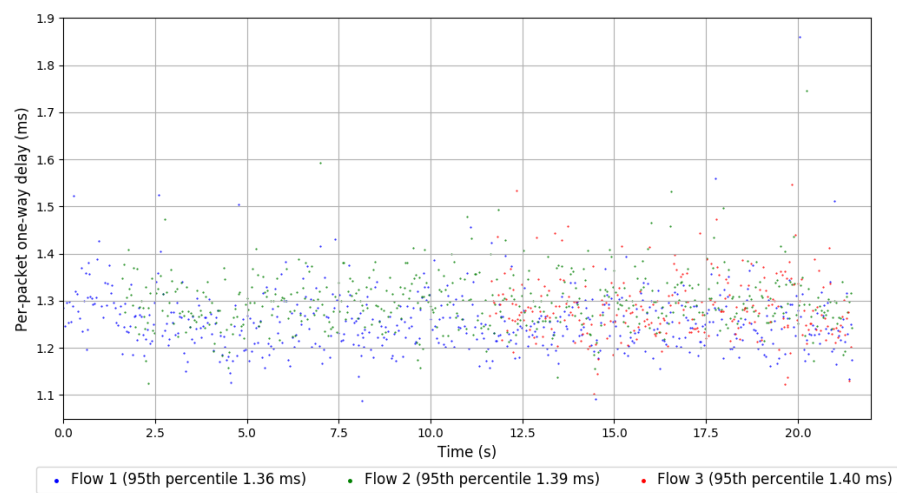Run 2: Report of SCReAM — Data Link
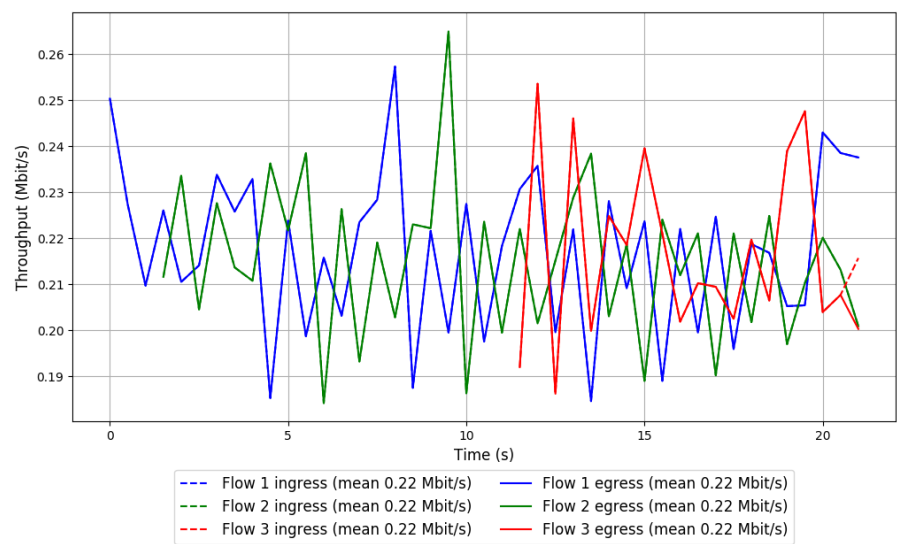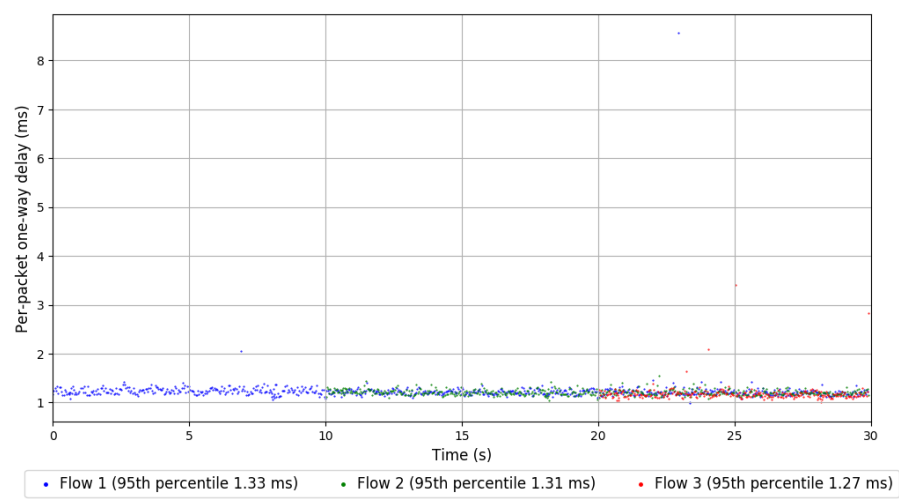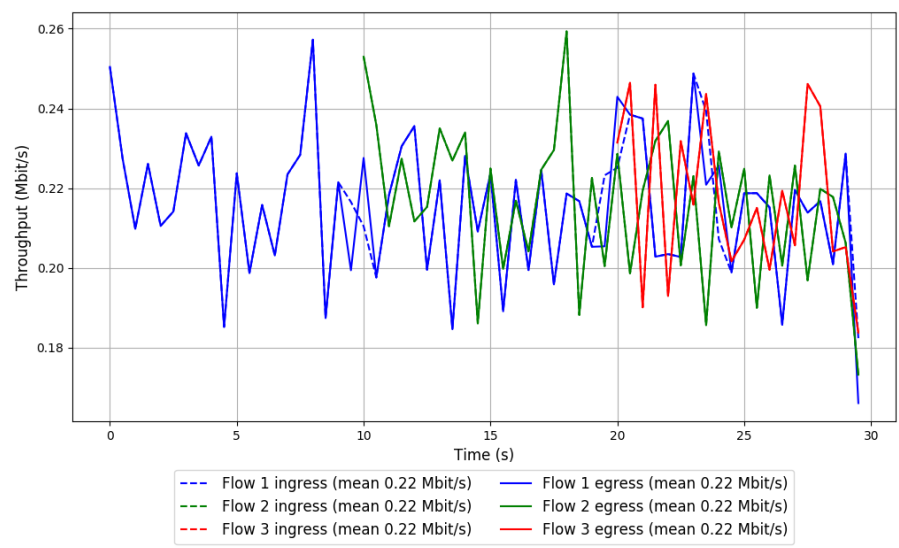
```
Run 3: Statistics of SCReAM

Start at: 2017-09-07 22:40:16
End at: 2017-09-07 22:40:46
Local clock offset: 1.023 ms
Remote clock offset: -1.807 ms

# Below is generated by plot.py at 2017-09-08 07:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.390 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.409 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.359 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.385 ms
Loss rate: 0.35%
```

Run 3: Report of SCReAM — Data Link

189

```
Run 4: Statistics of SCReAM

Start at: 2017-09-07 23:02:17
End at: 2017-09-07 23:02:47
Local clock offset: 1.077 ms
Remote clock offset: -1.186 ms


# Below is generated by plot.py at 2017-09-08 07:32:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.300 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.311 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.280 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.267 ms
Loss rate: 0.00%
```
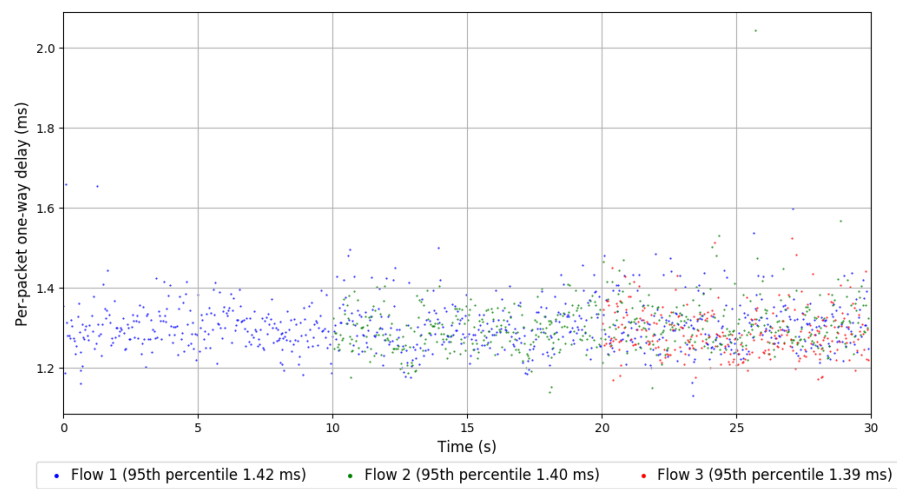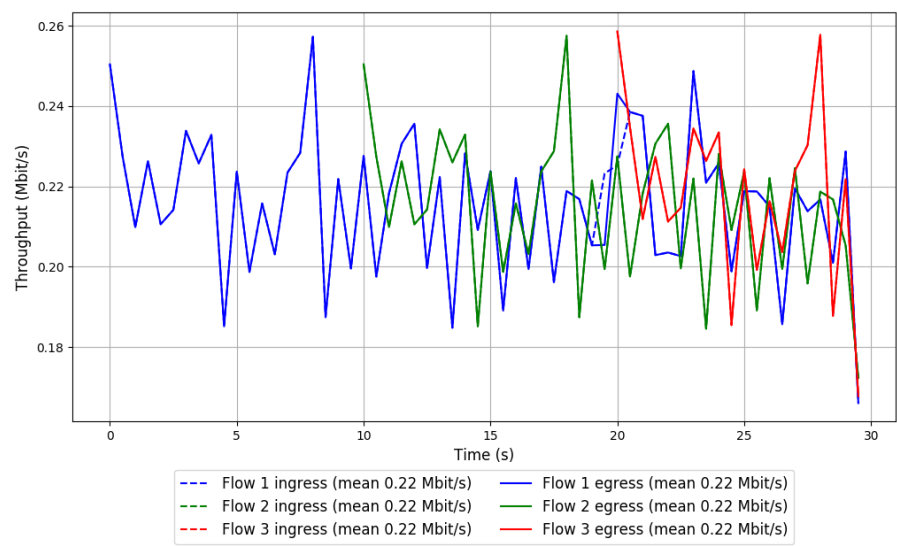
Run 4: Report of SCReAM — Data Link

191

```
Run 5: Statistics of SCReAM

Start at: 2017-09-07 23:24:26
End at: 2017-09-07 23:24:56
Local clock offset: 1.012 ms
Remote clock offset: -1.048 ms
```

Run 5: Report of SCReAM — Data Link

```
Run 6: Statistics of SCReAM

Start at: 2017-09-07 23:46:27
End at: 2017-09-07 23:46:57
Local clock offset: 0.804 ms
Remote clock offset: -1.316 ms
```

Run 6: Report of SCReAM — Data Link
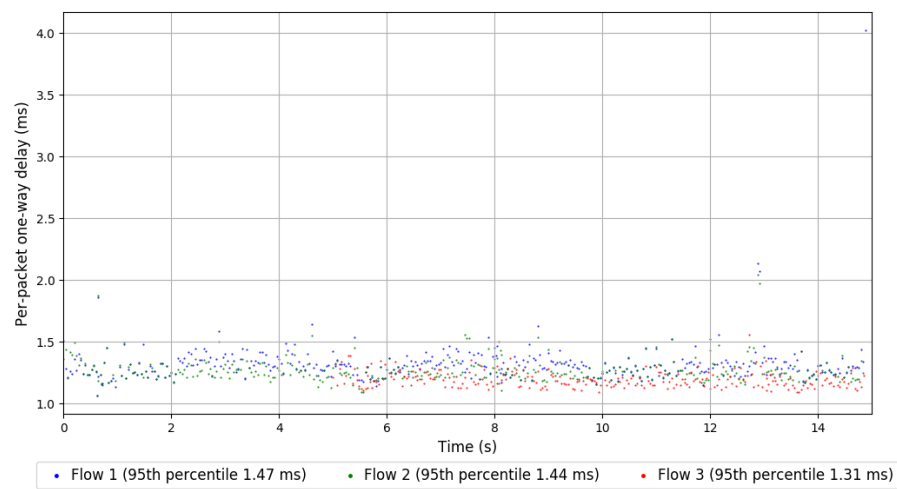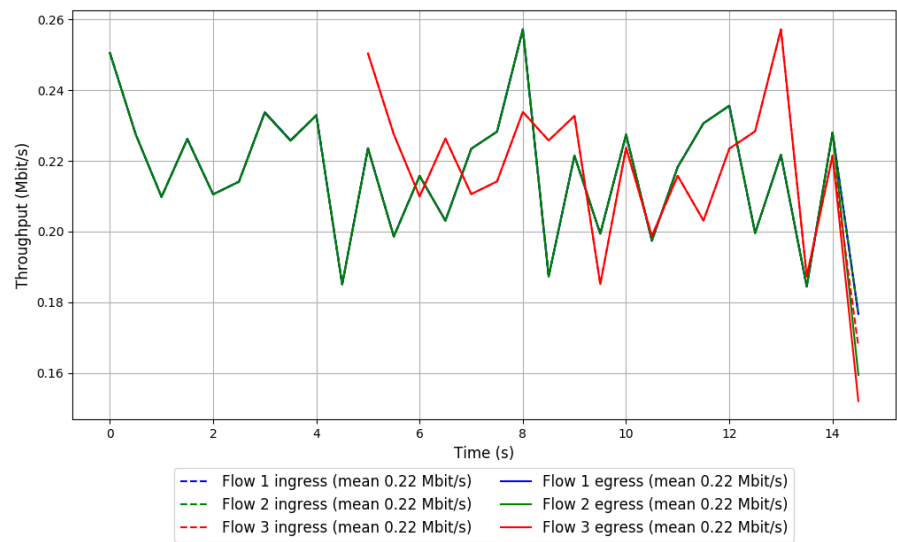
```
Run 7: Statistics of SCReAM

Start at: 2017-09-08 00:08:33
End at: 2017-09-08 00:09:03
Local clock offset: 0.844 ms
Remote clock offset: -1.281 ms
```

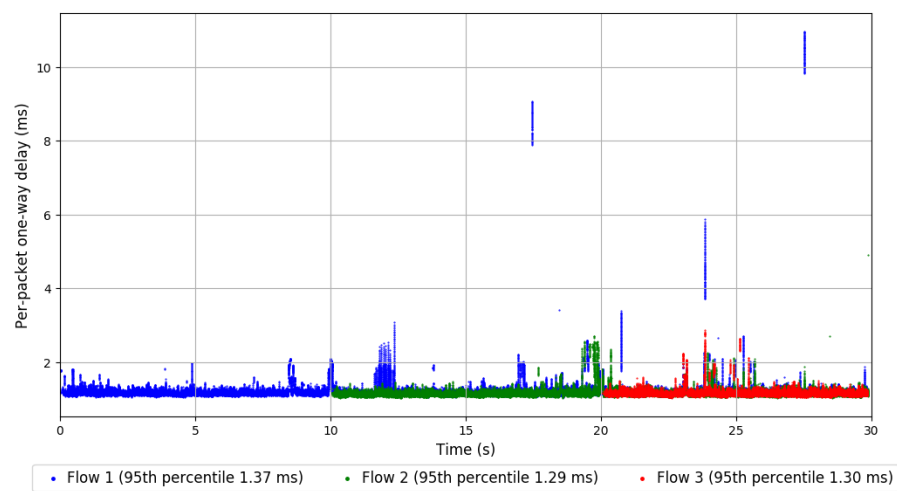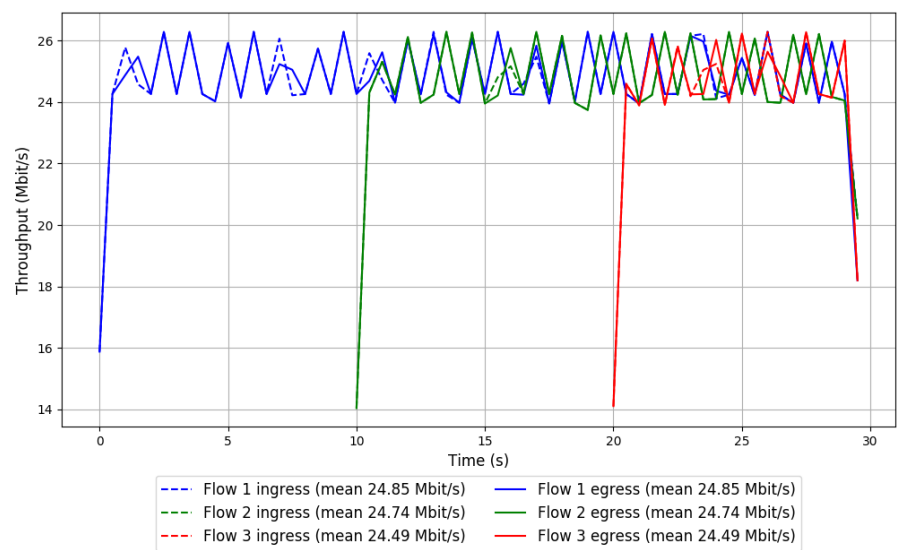## Run 7: Report of SCReAM — Data Link

```
Run 8: Statistics of SCReAM

Start at: 2017-09-08 00:30:39
End at: 2017-09-08 00:31:09
Local clock offset: 0.885 ms
Remote clock offset: -1.147 ms


# Below is generated by plot.py at 2017-09-08 07:32:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.331 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.309 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link

199

```
Run 9: Statistics of SCReAM

Start at: 2017-09-08 00:52:36
End at: 2017-09-08 00:53:06
Local clock offset: 0.9 ms
Remote clock offset: -1.254 ms


# Below is generated by plot.py at 2017-09-08 07:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.405 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.415 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.397 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.390 ms
Loss rate: 0.00%
```

Run 9: Report of SCReAM — Data Link

Run 10: Statistics of SCReAM

Start at: 2017-09-08 01:14:33
End at: 2017-09-08 01:15:03
Local clock offset: 0.897 ms
Remote clock offset: -1.159 ms

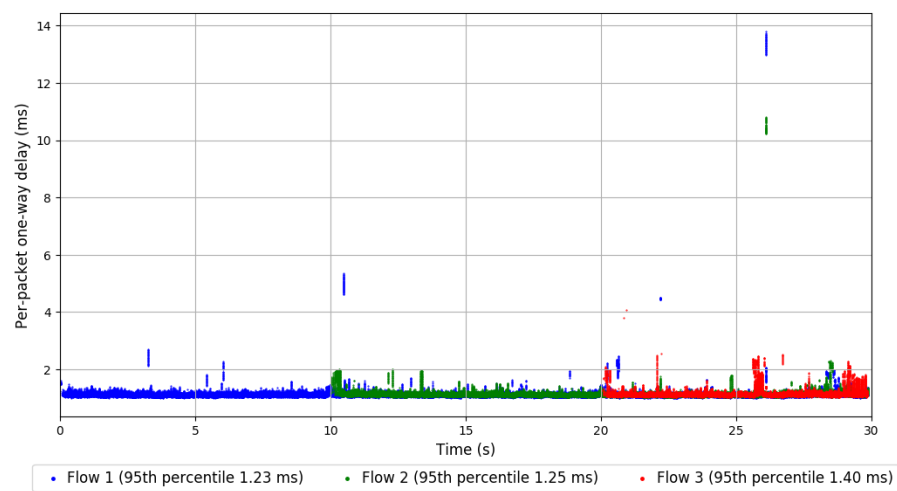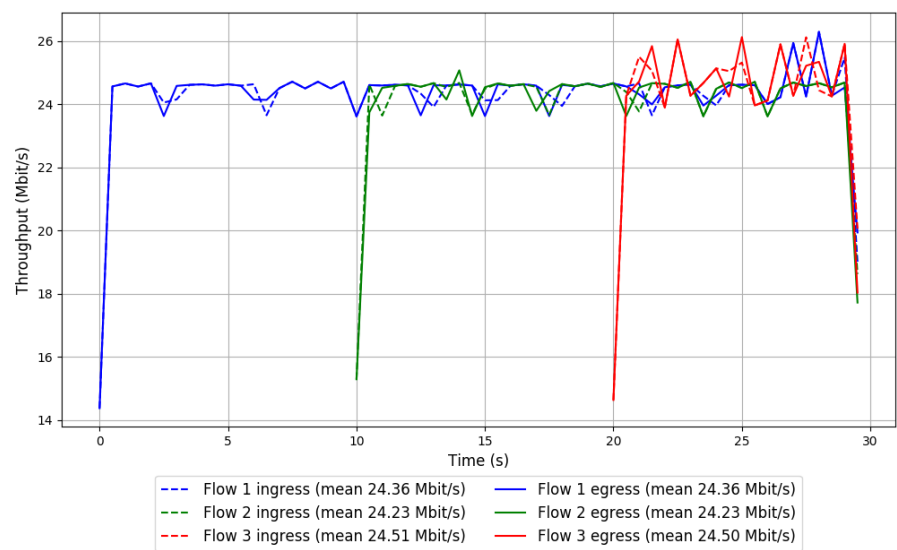## Run 10: Report of SCReAM — Data Link

203

```
Run 1: Statistics of Sprout

Start at: 2017-09-07 22:08:02
End at: 2017-09-07 22:08:32
Local clock offset: 1.075 ms
Remote clock offset: -2.299 ms


# Below is generated by plot.py at 2017-09-08 07:32:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.29 Mbit/s
95th percentile per-packet one-way delay: 1.328 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.85 Mbit/s
95th percentile per-packet one-way delay: 1.366 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 24.74 Mbit/s
95th percentile per-packet one-way delay: 1.295 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.49 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.00%
```
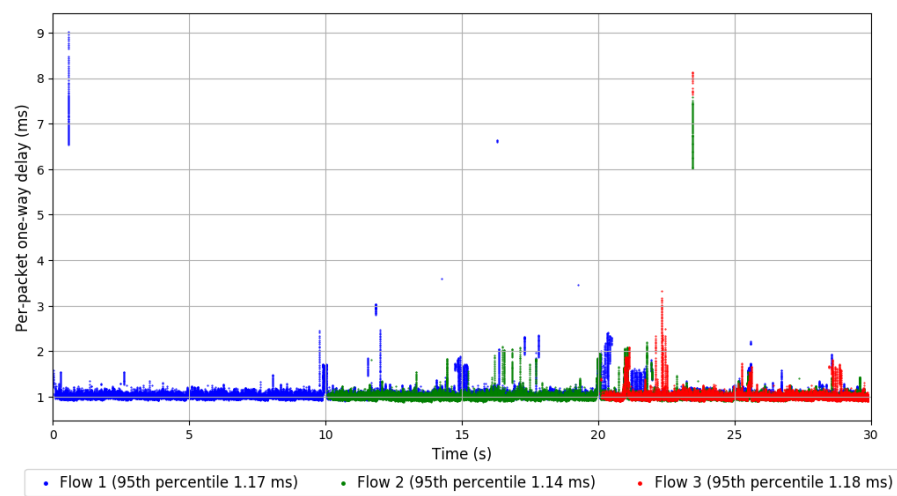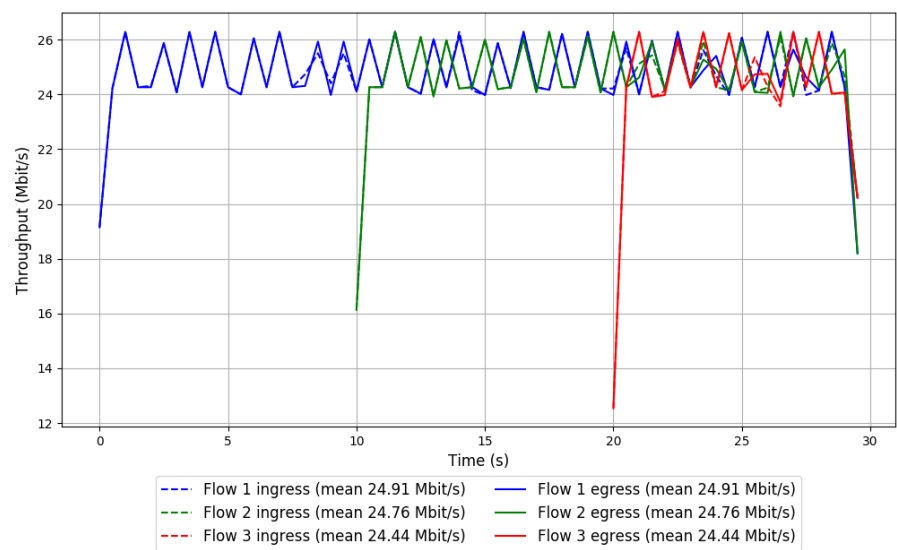
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2017-09-07 22:30:04
End at: 2017-09-07 22:30:34
Local clock offset: 1.027 ms
Remote clock offset: -1.756 ms


# Below is generated by plot.py at 2017-09-08 07:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.51 Mbit/s
95th percentile per-packet one-way delay: 1.252 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 24.36 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.23 Mbit/s
95th percentile per-packet one-way delay: 1.246 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 24.50 Mbit/s
95th percentile per-packet one-way delay: 1.404 ms
Loss rate: 0.42%
```
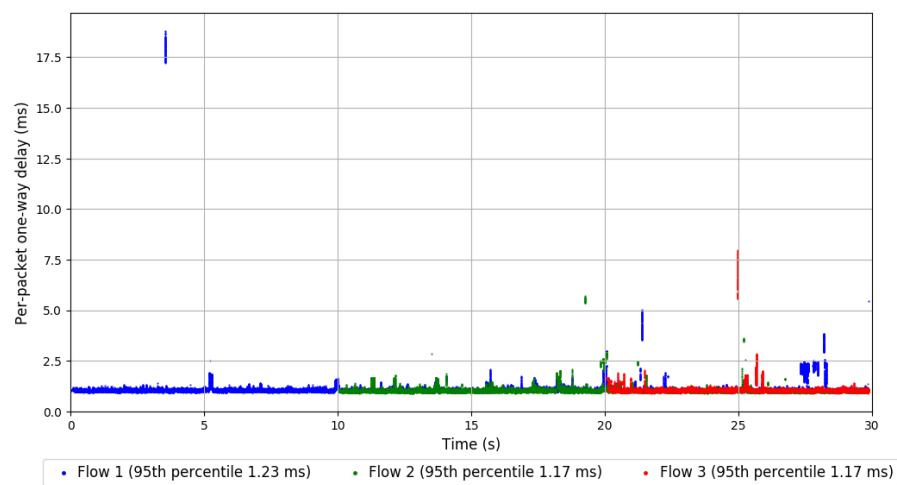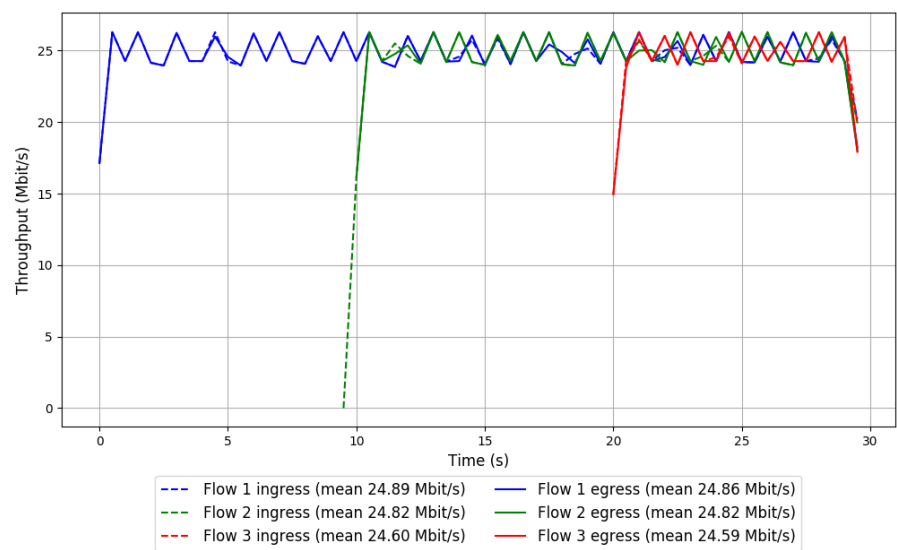
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-09-07 22:52:10
End at: 2017-09-07 22:52:40
Local clock offset: 0.954 ms
Remote clock offset: -1.431 ms


# Below is generated by plot.py at 2017-09-08 07:32:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.38 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.91 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 24.76 Mbit/s
95th percentile per-packet one-way delay: 1.144 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.44 Mbit/s
95th percentile per-packet one-way delay: 1.178 ms
Loss rate: 0.00%
```
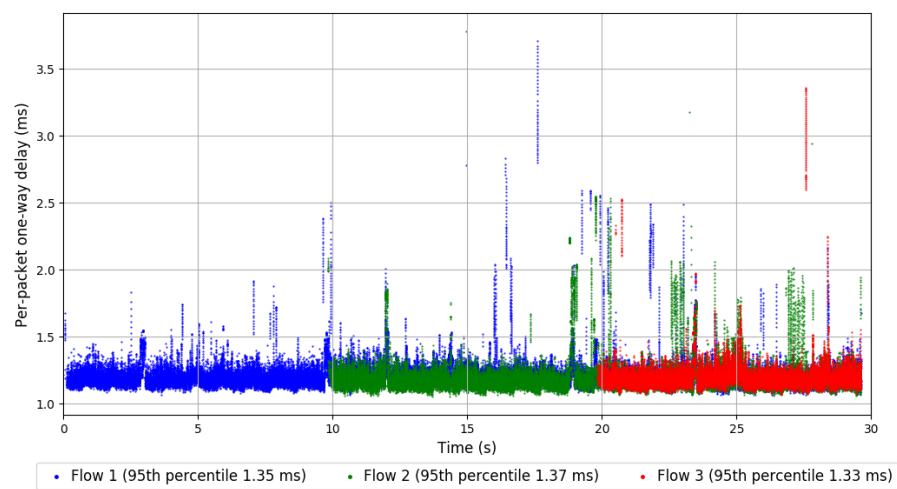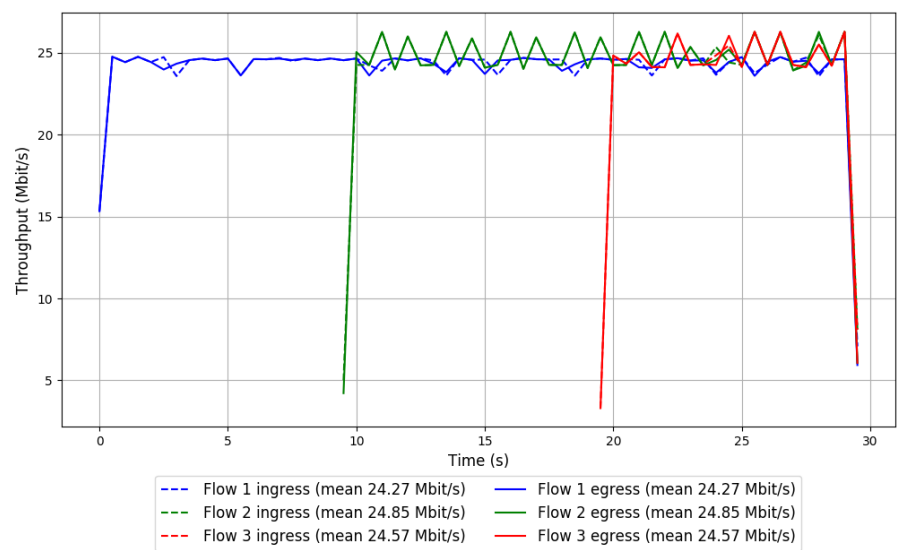
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2017-09-07 23:14:21
End at: 2017-09-07 23:14:51
Local clock offset: 1.058 ms
Remote clock offset: -1.122 ms

# Below is generated by plot.py at 2017-09-08 07:32:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.43 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 24.86 Mbit/s
95th percentile per-packet one-way delay: 1.229 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 24.82 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.59 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 0.41%
```
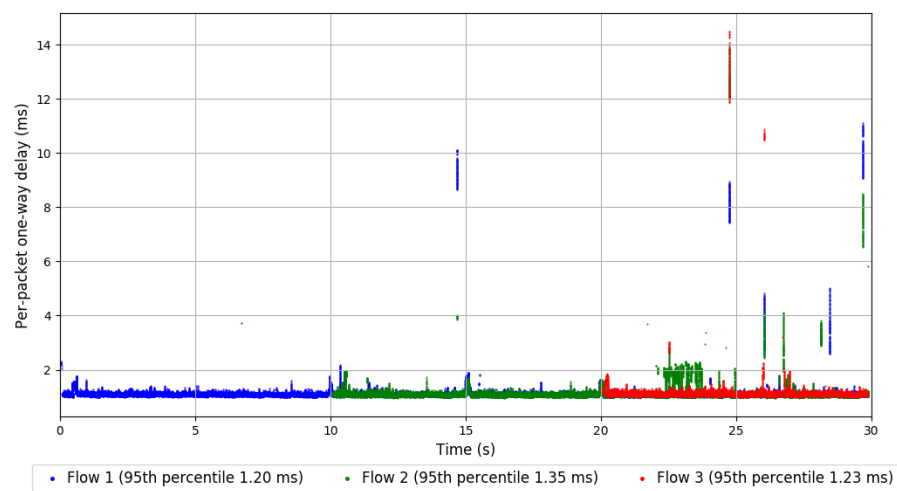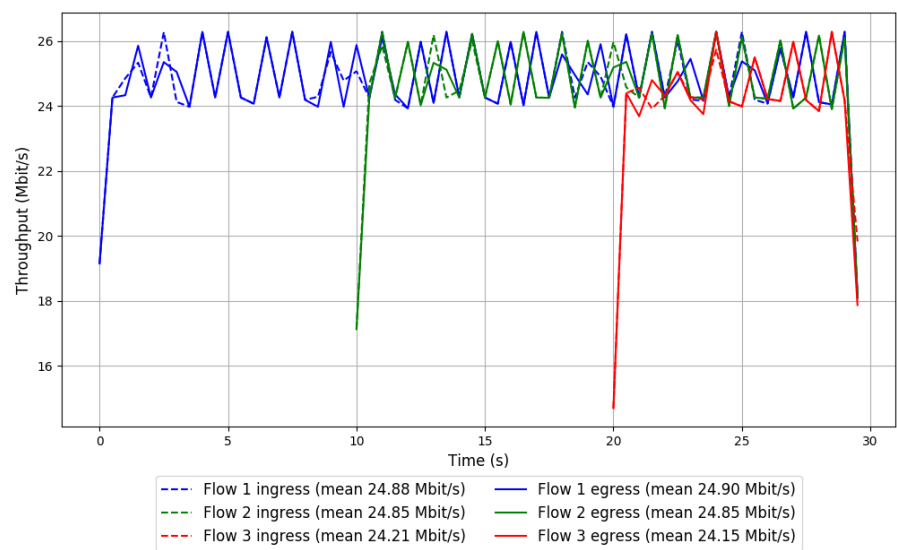
Run 4: Report of Sprout — Data Link

- - - Flow 1 ingress (mean 24.89 Mbit/s) —— Flow 1 egress (mean 24.86 Mbit/s)
- - - Flow 2 ingress (mean 24.82 Mbit/s) —— Flow 2 egress (mean 24.82 Mbit/s)
- - - Flow 3 ingress (mean 24.60 Mbit/s) —— Flow 3 egress (mean 24.59 Mbit/s)

- Flow 1 (95th percentile 1.23 ms)   • Flow 2 (95th percentile 1.17 ms)   • Flow 3 (95th percentile 1.17 ms)

```
Run 5: Statistics of Sprout

Start at: 2017-09-07 23:36:23
End at: 2017-09-07 23:36:53
Local clock offset: 0.999 ms
Remote clock offset: -1.137 ms


# Below is generated by plot.py at 2017-09-08 07:32:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.03 Mbit/s
95th percentile per-packet one-way delay: 1.350 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 1.349 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 24.85 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 24.57 Mbit/s
95th percentile per-packet one-way delay: 1.331 ms
Loss rate: 0.42%
```
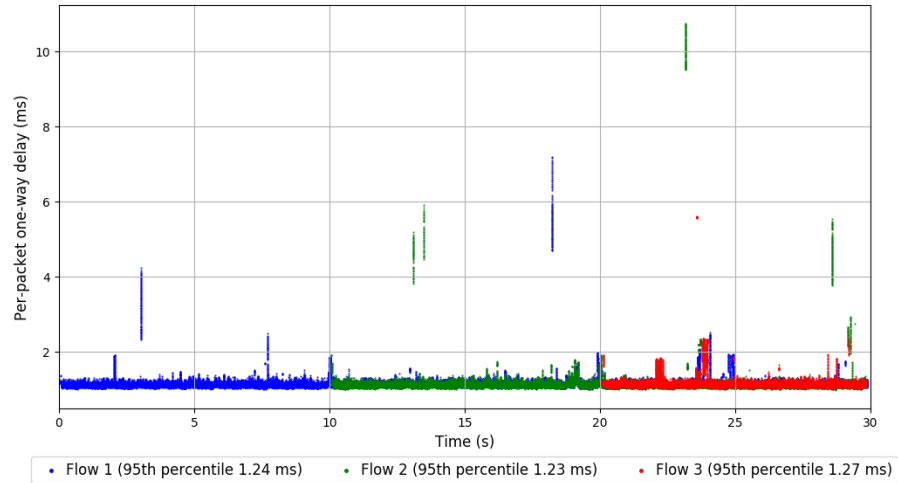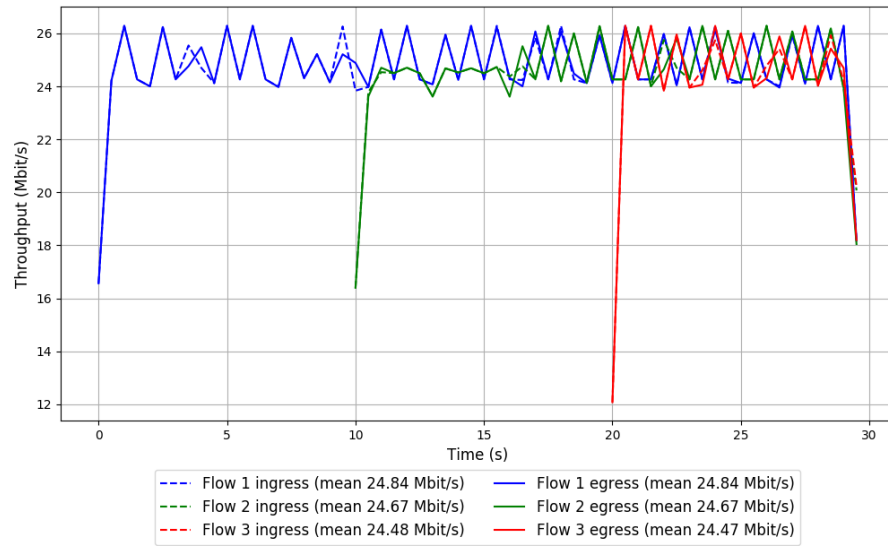
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 24.27 Mbit/s)   Flow 1 egress (mean 24.27 Mbit/s)
Flow 2 ingress (mean 24.85 Mbit/s)   Flow 2 egress (mean 24.85 Mbit/s)
Flow 3 ingress (mean 24.57 Mbit/s)   Flow 3 egress (mean 24.57 Mbit/s)

• Flow 1 (95th percentile 1.35 ms)   • Flow 2 (95th percentile 1.37 ms)   • Flow 3 (95th percentile 1.33 ms)

```
Run 6: Statistics of Sprout

Start at: 2017-09-07 23:58:25
End at: 2017-09-07 23:58:55
Local clock offset: 0.817 ms
Remote clock offset: -1.244 ms


# Below is generated by plot.py at 2017-09-08 07:32:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.34 Mbit/s
95th percentile per-packet one-way delay: 1.229 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 24.90 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.85 Mbit/s
95th percentile per-packet one-way delay: 1.353 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.15 Mbit/s
95th percentile per-packet one-way delay: 1.226 ms
Loss rate: 0.41%
```
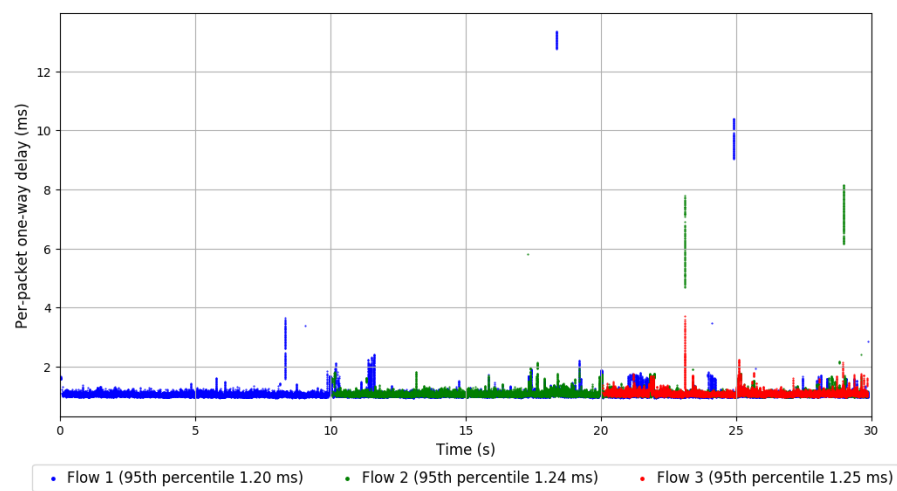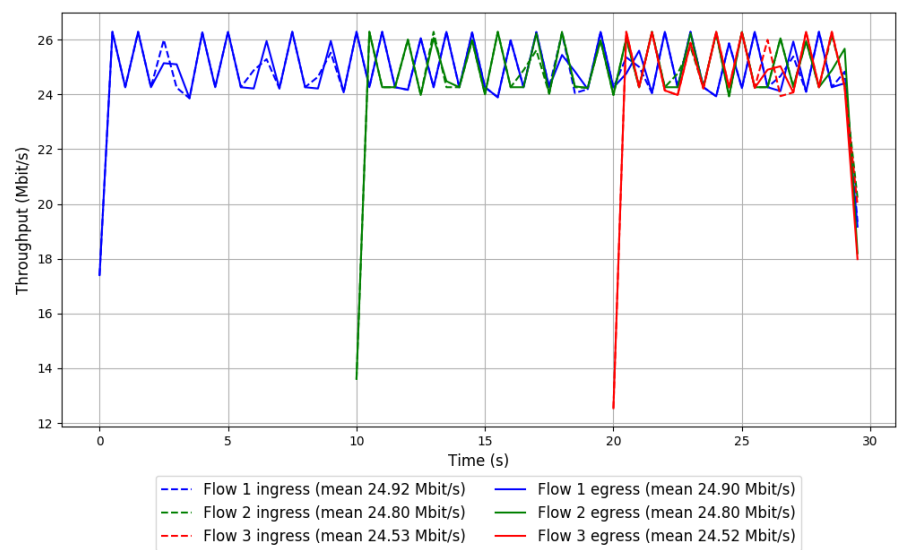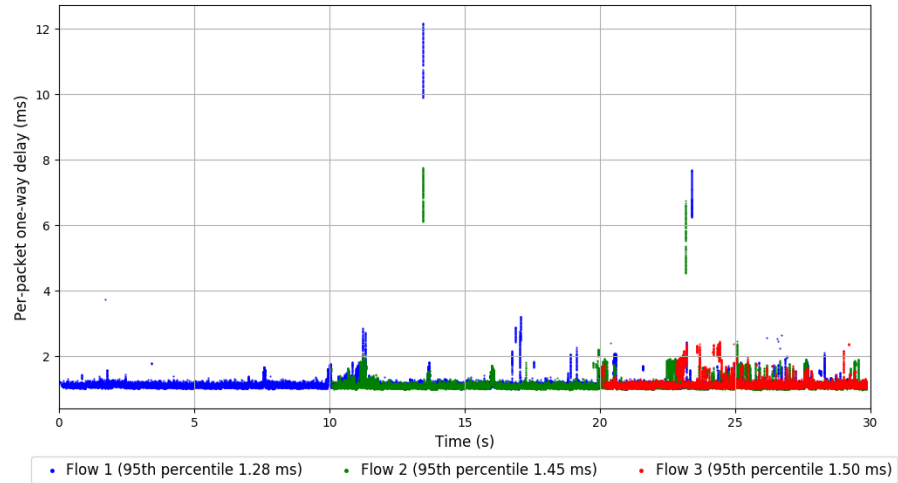
Run 6: Report of Sprout — Data Link

- - - Flow 1 ingress (mean 24.88 Mbit/s) —— Flow 1 egress (mean 24.90 Mbit/s)
- - - Flow 2 ingress (mean 24.85 Mbit/s) —— Flow 2 egress (mean 24.85 Mbit/s)
- - - Flow 3 ingress (mean 24.21 Mbit/s) —— Flow 3 egress (mean 24.15 Mbit/s)

- Flow 1 (95th percentile 1.20 ms)   • Flow 2 (95th percentile 1.35 ms)   • Flow 3 (95th percentile 1.23 ms)

```
Run 7: Statistics of Sprout

Start at: 2017-09-08 00:20:27
End at: 2017-09-08 00:20:57
Local clock offset: 0.826 ms
Remote clock offset: -1.236 ms


# Below is generated by plot.py at 2017-09-08 07:32:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.25 Mbit/s
95th percentile per-packet one-way delay: 1.240 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 1.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.67 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.47 Mbit/s
95th percentile per-packet one-way delay: 1.267 ms
Loss rate: 0.42%
```
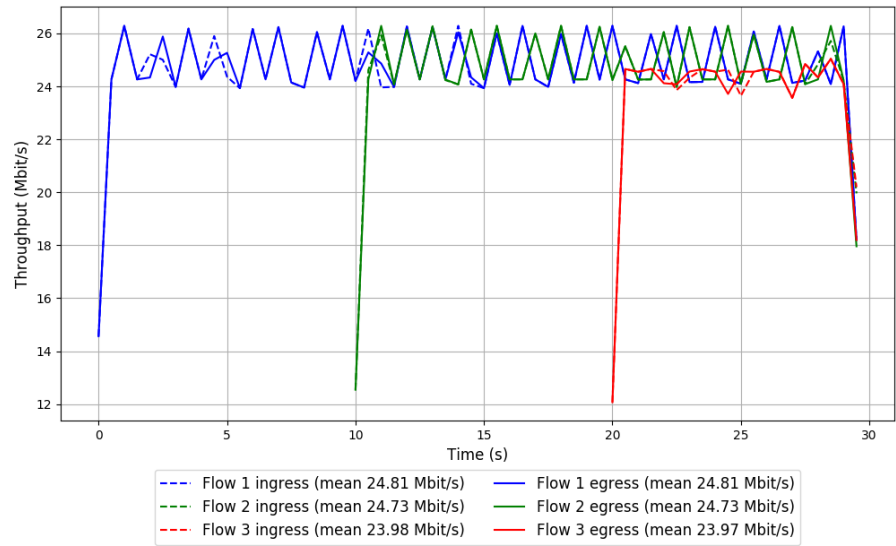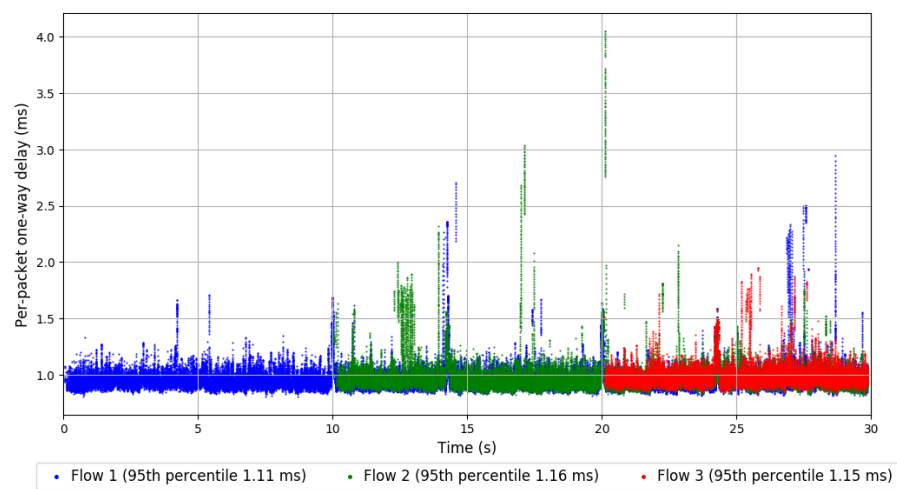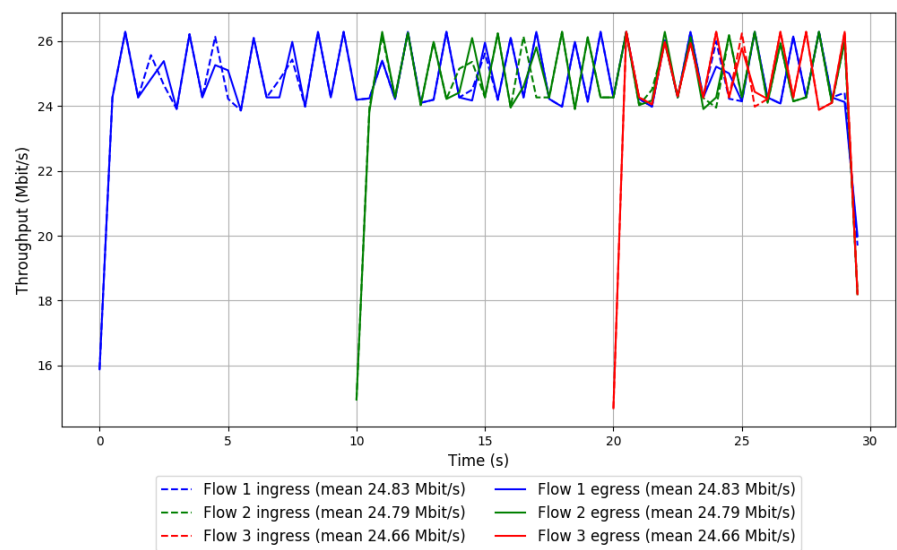
Run 7: Report of Sprout — Data Link

217

```
Run 8: Statistics of Sprout

Start at: 2017-09-08 00:42:32
End at: 2017-09-08 00:43:02
Local clock offset: 0.828 ms
Remote clock offset: -1.388 ms


# Below is generated by plot.py at 2017-09-08 07:32:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.42 Mbit/s
95th percentile per-packet one-way delay: 1.224 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 24.90 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 24.80 Mbit/s
95th percentile per-packet one-way delay: 1.238 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 24.52 Mbit/s
95th percentile per-packet one-way delay: 1.249 ms
Loss rate: 0.41%
```
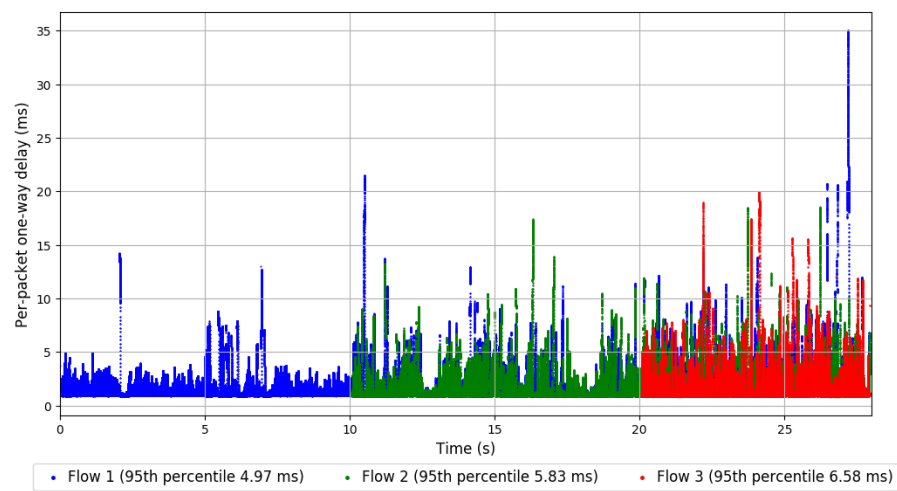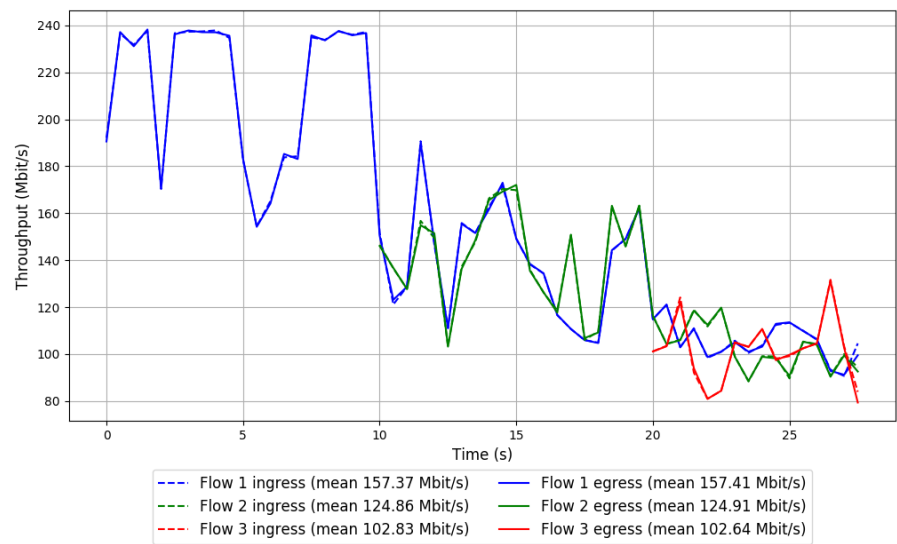
Run 8: Report of Sprout — Data Link

Flow 1 ingress (mean 24.92 Mbit/s)   Flow 1 egress (mean 24.90 Mbit/s)
Flow 2 ingress (mean 24.80 Mbit/s)   Flow 2 egress (mean 24.80 Mbit/s)
Flow 3 ingress (mean 24.53 Mbit/s)   Flow 3 egress (mean 24.52 Mbit/s)

Flow 1 (95th percentile 1.20 ms)   Flow 2 (95th percentile 1.24 ms)   Flow 3 (95th percentile 1.25 ms)

219

```
Run 9: Statistics of Sprout

Start at: 2017-09-08 01:04:36
End at: 2017-09-08 01:05:06
Local clock offset: 0.91 ms
Remote clock offset: -0.936 ms


# Below is generated by plot.py at 2017-09-08 07:33:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 1.367 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 24.81 Mbit/s
95th percentile per-packet one-way delay: 1.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.73 Mbit/s
95th percentile per-packet one-way delay: 1.445 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 23.97 Mbit/s
95th percentile per-packet one-way delay: 1.495 ms
Loss rate: 0.42%
```

Run 9: Report of Sprout — Data Link

```
Run 10: Statistics of Sprout

Start at: 2017-09-08 01:26:20
End at: 2017-09-08 01:26:50
Local clock offset: 0.765 ms
Remote clock offset: -1.328 ms


# Below is generated by plot.py at 2017-09-08 07:33:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.40 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 24.83 Mbit/s
95th percentile per-packet one-way delay: 1.106 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.79 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.66 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.00%
```
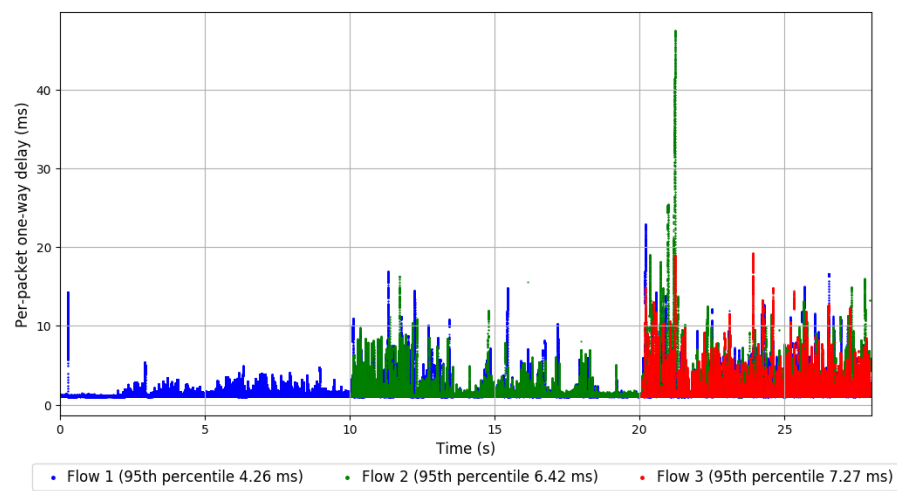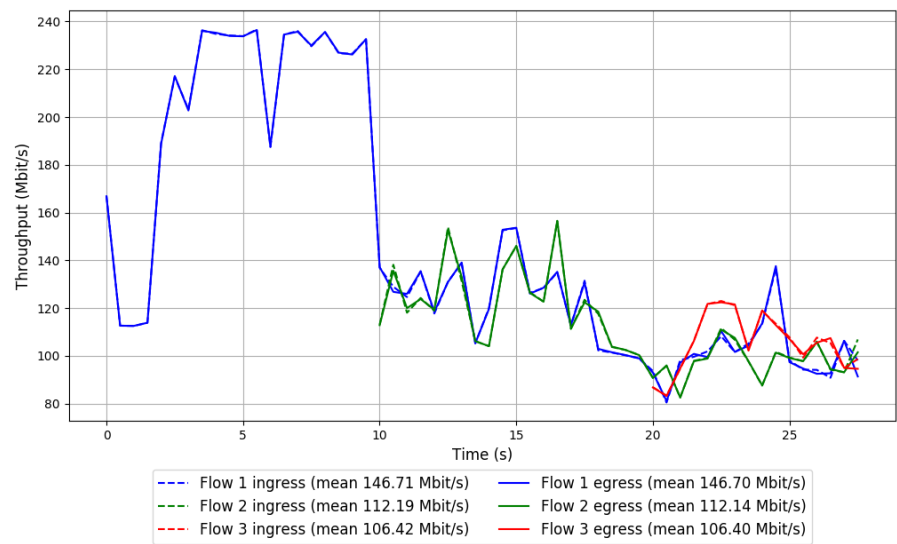
Run 10: Report of Sprout — Data Link

- --- Flow 1 ingress (mean 24.83 Mbit/s)   — Flow 1 egress (mean 24.83 Mbit/s)
- --- Flow 2 ingress (mean 24.79 Mbit/s)   — Flow 2 egress (mean 24.79 Mbit/s)
- --- Flow 3 ingress (mean 24.66 Mbit/s)   — Flow 3 egress (mean 24.66 Mbit/s)

- Flow 1 (95th percentile 1.11 ms)   • Flow 2 (95th percentile 1.16 ms)   • Flow 3 (95th percentile 1.15 ms)
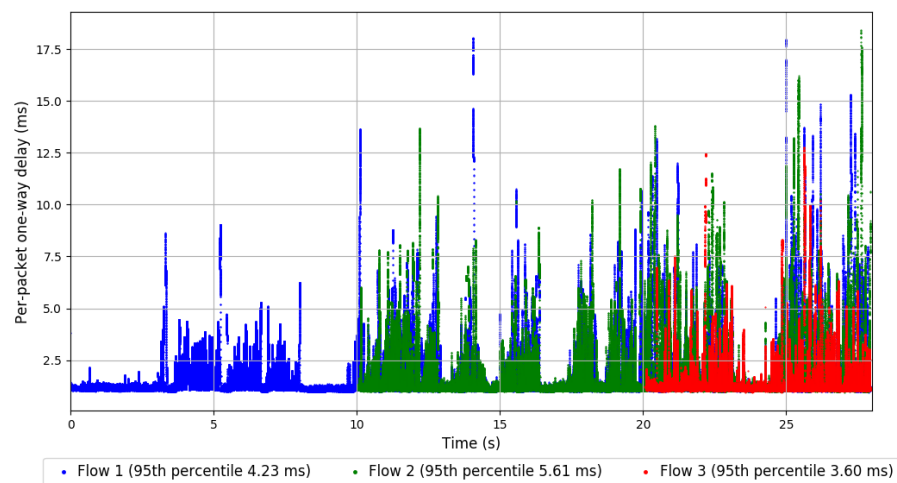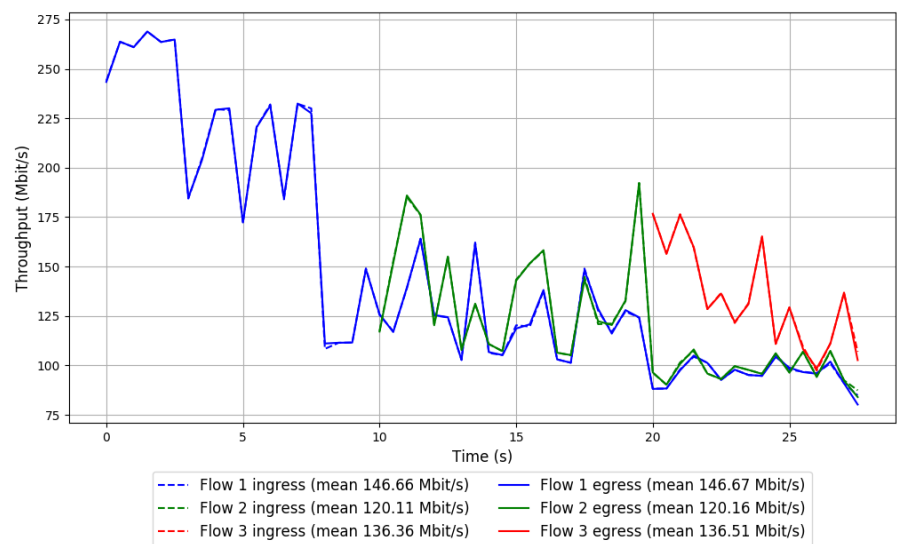
223

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

Start at: 2017-09-07 22:00:07
End at: 2017-09-07 22:00:37
Local clock offset: 0.929 ms
Remote clock offset: -2.558 ms


# Below is generated by plot.py at 2017-09-08 07:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 266.46 Mbit/s
95th percentile per-packet one-way delay: 5.490 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 157.41 Mbit/s
95th percentile per-packet one-way delay: 4.969 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 124.91 Mbit/s
95th percentile per-packet one-way delay: 5.833 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 102.64 Mbit/s
95th percentile per-packet one-way delay: 6.583 ms
Loss rate: 0.36%
```

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

Flow 1 ingress (mean 157.37 Mbit/s) --- Flow 1 egress (mean 157.41 Mbit/s)
Flow 2 ingress (mean 124.86 Mbit/s) --- Flow 2 egress (mean 124.91 Mbit/s)
Flow 3 ingress (mean 102.83 Mbit/s) --- Flow 3 egress (mean 102.64 Mbit/s)

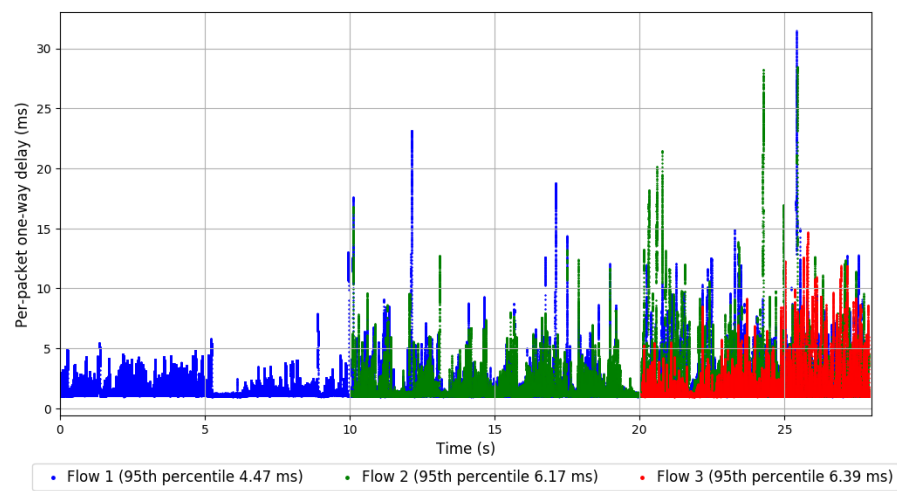Flow 1 (95th percentile 4.97 ms) • Flow 2 (95th percentile 5.83 ms) • Flow 3 (95th percentile 6.58 ms)
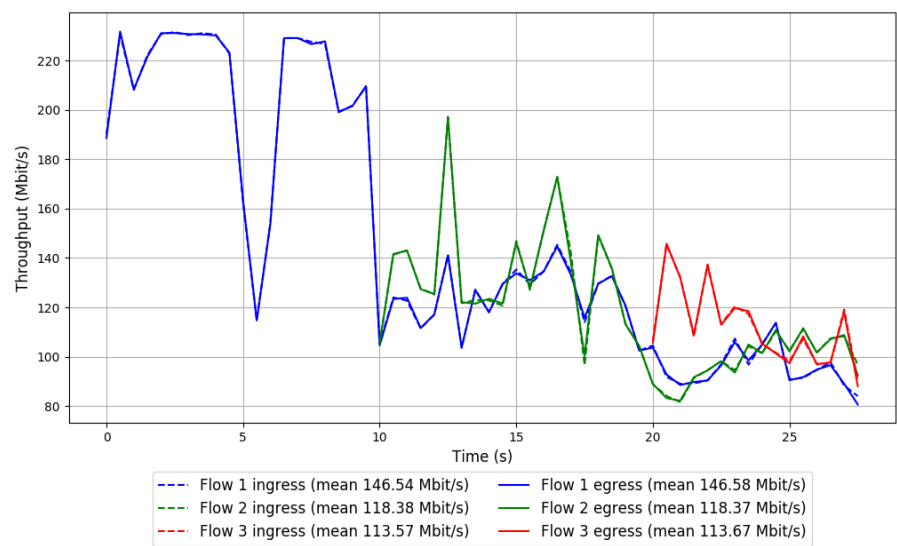
Run 2: Statistics of TaoVA-100x

Start at: 2017-09-07 22:22:09
End at: 2017-09-07 22:22:39
Local clock offset: 0.977 ms
Remote clock offset: -1.697 ms

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

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

Start at: 2017-09-07 22:44:18
End at: 2017-09-07 22:44:48
Local clock offset: 1.01 ms
Remote clock offset: -1.7 ms

# Below is generated by plot.py at 2017-09-08 07:34:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 248.67 Mbit/s
95th percentile per-packet one-way delay: 5.485 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 146.70 Mbit/s
95th percentile per-packet one-way delay: 4.256 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 112.14 Mbit/s
95th percentile per-packet one-way delay: 6.423 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 106.40 Mbit/s
95th percentile per-packet one-way delay: 7.269 ms
Loss rate: 0.26%
```
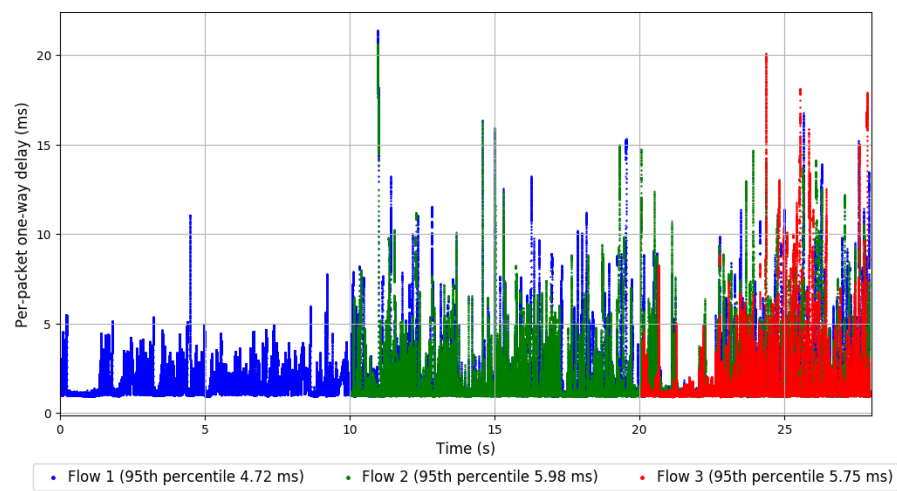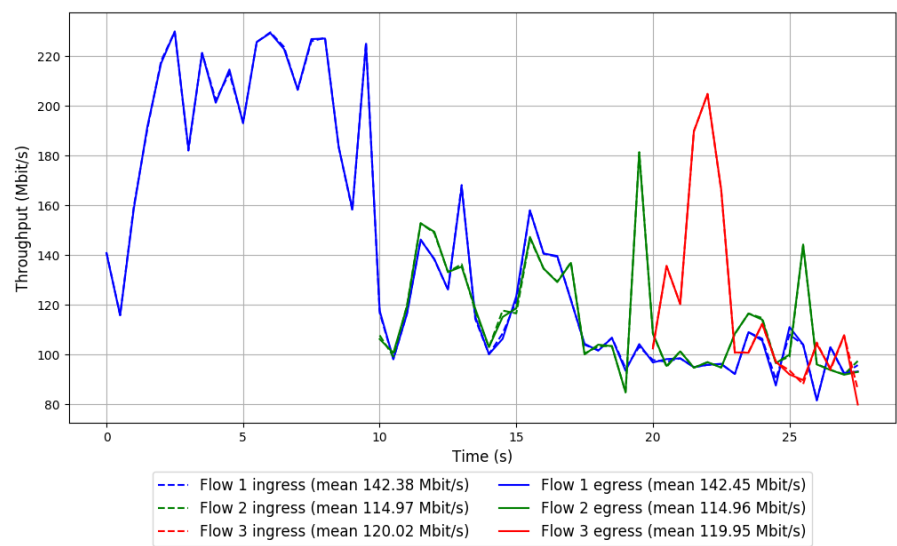
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 146.71 Mbit/s) --- Flow 1 egress (mean 146.70 Mbit/s)
Flow 2 ingress (mean 112.19 Mbit/s) --- Flow 2 egress (mean 112.14 Mbit/s)
Flow 3 ingress (mean 106.42 Mbit/s) --- Flow 3 egress (mean 106.40 Mbit/s)

Flow 1 (95th percentile 4.26 ms)   Flow 2 (95th percentile 6.42 ms)   Flow 3 (95th percentile 7.27 ms)

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

Start at: 2017-09-07 23:06:23
End at: 2017-09-07 23:06:53
Local clock offset: 1.049 ms
Remote clock offset: -1.252 ms


# Below is generated by plot.py at 2017-09-08 07:34:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.19 Mbit/s
95th percentile per-packet one-way delay: 4.640 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 146.67 Mbit/s
95th percentile per-packet one-way delay: 4.231 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 120.16 Mbit/s
95th percentile per-packet one-way delay: 5.608 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 136.51 Mbit/s
95th percentile per-packet one-way delay: 3.600 ms
Loss rate: 0.20%
```
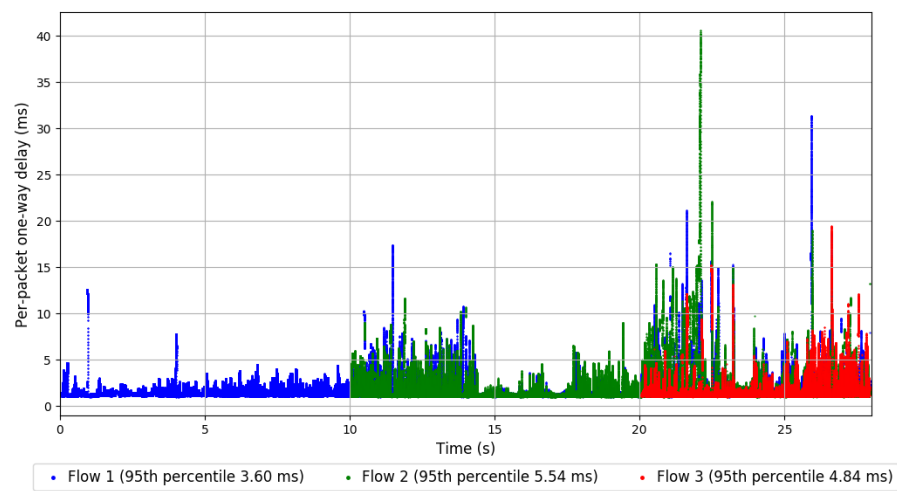
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-07 23:28:29
End at: 2017-09-07 23:28:59
Local clock offset: 1.076 ms
Remote clock offset: -0.971 ms


# Below is generated by plot.py at 2017-09-08 07:35:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.59 Mbit/s
95th percentile per-packet one-way delay: 5.301 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 146.58 Mbit/s
95th percentile per-packet one-way delay: 4.472 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 118.37 Mbit/s
95th percentile per-packet one-way delay: 6.170 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 113.67 Mbit/s
95th percentile per-packet one-way delay: 6.395 ms
Loss rate: 0.16%
```
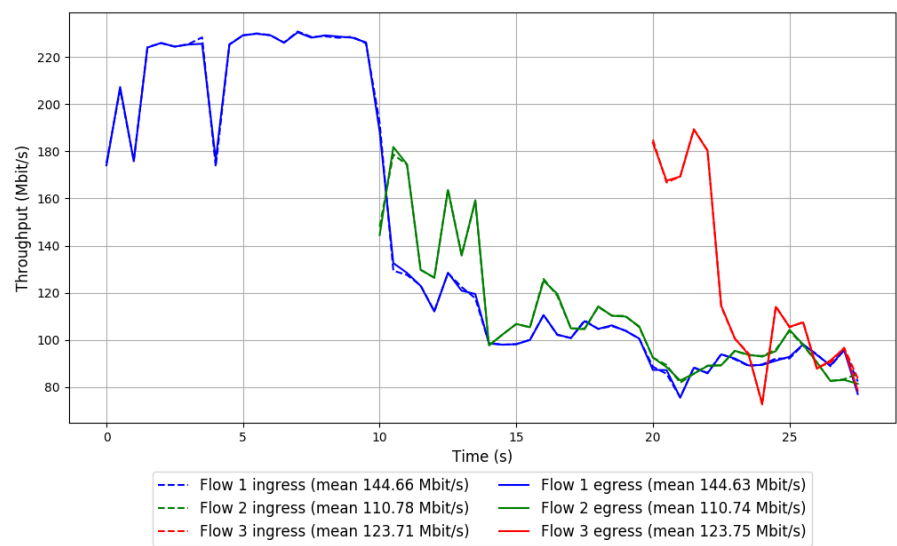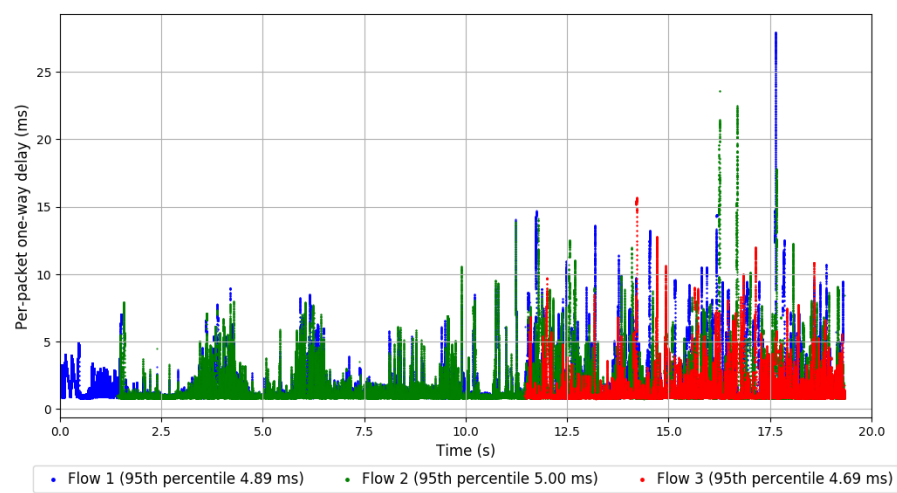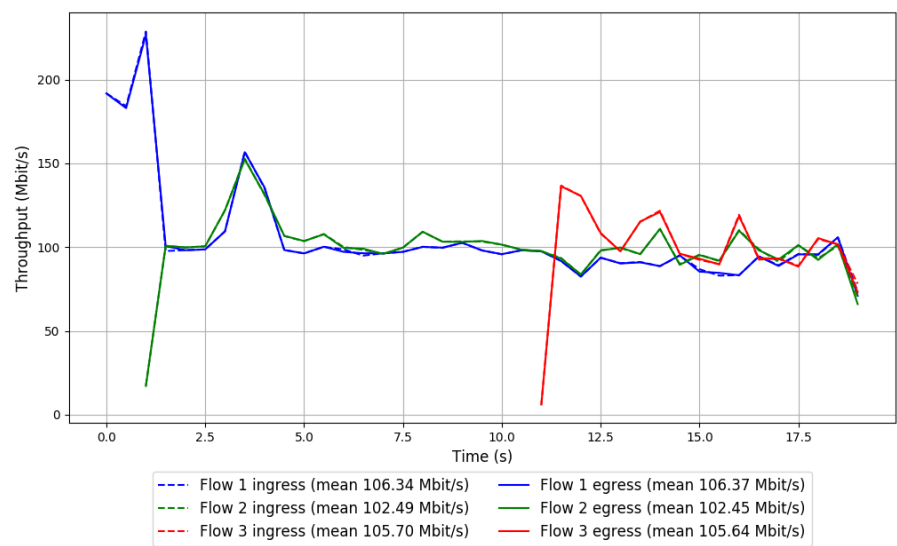
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 146.54 Mbit/s) — Flow 1 egress (mean 146.58 Mbit/s)
Flow 2 ingress (mean 118.38 Mbit/s) — Flow 2 egress (mean 118.37 Mbit/s)
Flow 3 ingress (mean 113.57 Mbit/s) — Flow 3 egress (mean 113.67 Mbit/s)

Flow 1 (95th percentile 4.47 ms) • Flow 2 (95th percentile 6.17 ms) • Flow 3 (95th percentile 6.39 ms)
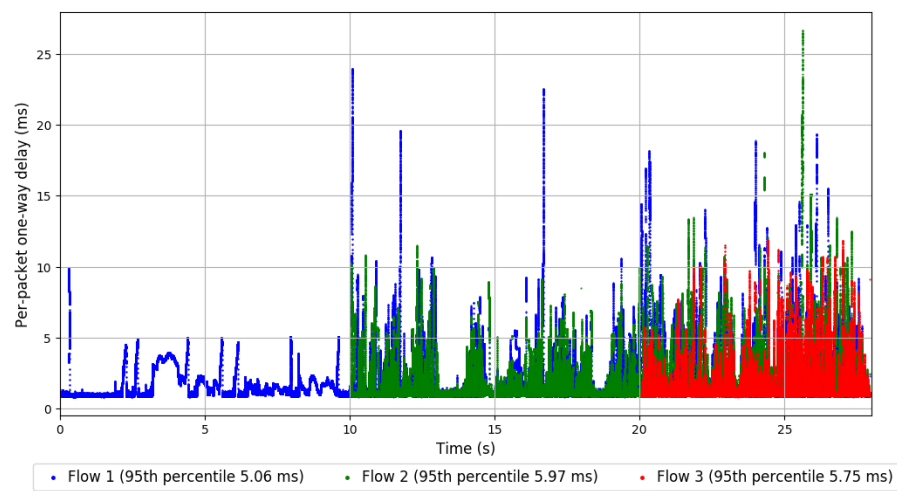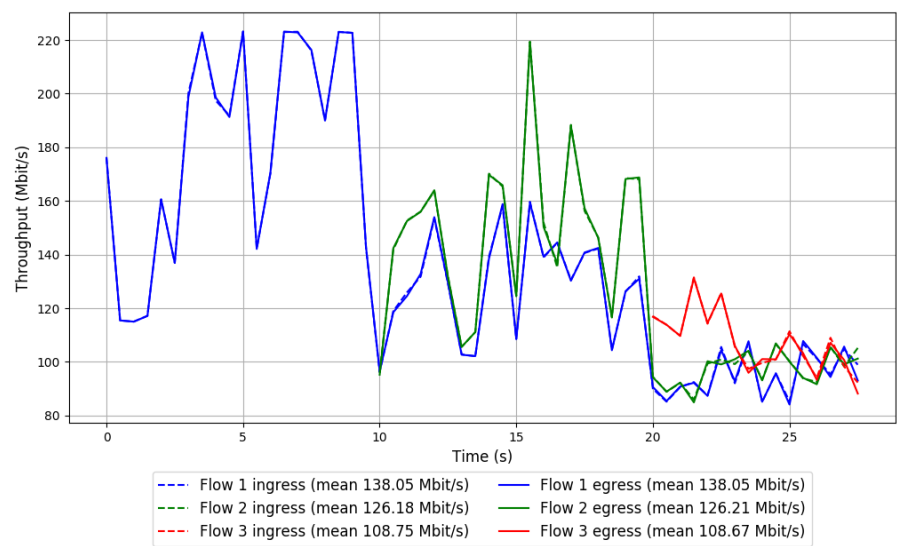
```
Run 6: Statistics of TaoVA-100x

Start at: 2017-09-07 23:50:30
End at: 2017-09-07 23:51:00
Local clock offset: 0.867 ms
Remote clock offset: -1.276 ms

# Below is generated by plot.py at 2017-09-08 07:35:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.09 Mbit/s
95th percentile per-packet one-way delay: 5.188 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 142.45 Mbit/s
95th percentile per-packet one-way delay: 4.721 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 114.96 Mbit/s
95th percentile per-packet one-way delay: 5.978 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 119.95 Mbit/s
95th percentile per-packet one-way delay: 5.750 ms
Loss rate: 0.32%
```
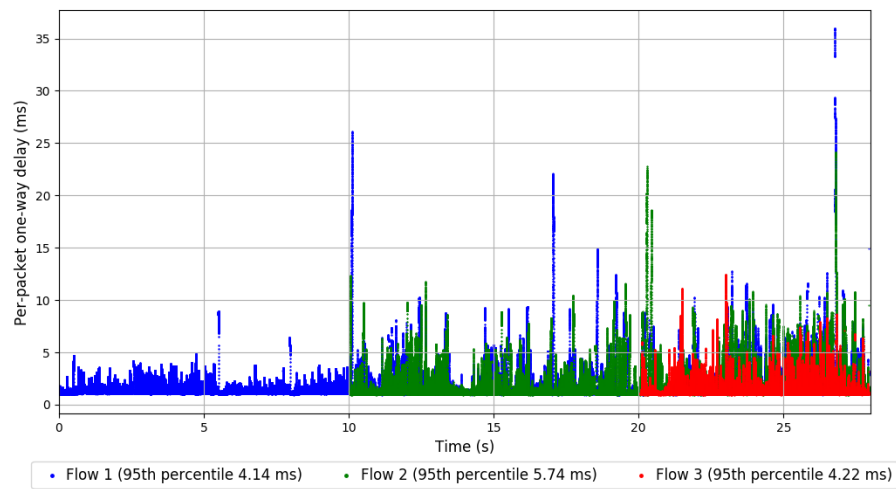
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 142.38 Mbit/s) --- Flow 1 egress (mean 142.45 Mbit/s)
Flow 2 ingress (mean 114.97 Mbit/s) --- Flow 2 egress (mean 114.96 Mbit/s)
Flow 3 ingress (mean 120.02 Mbit/s) --- Flow 3 egress (mean 119.95 Mbit/s)

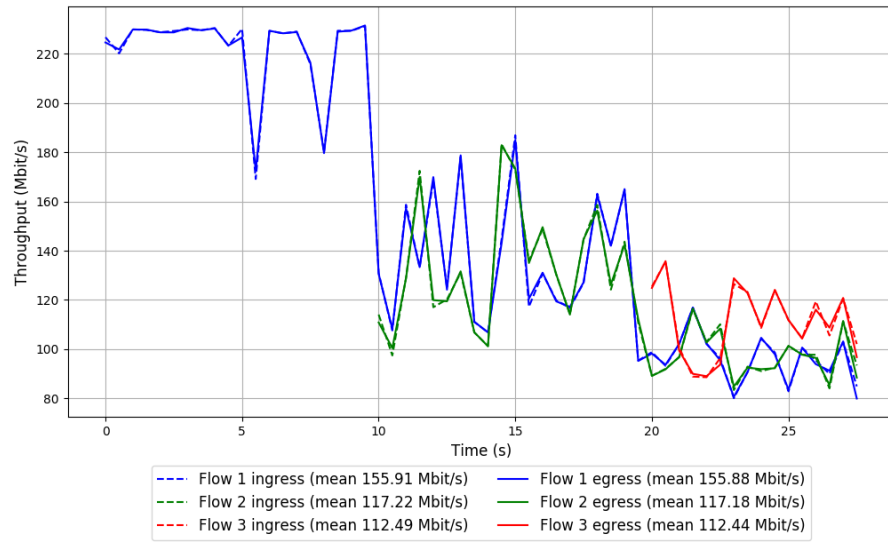Flow 1 (95th percentile 4.72 ms)   Flow 2 (95th percentile 5.98 ms)   Flow 3 (95th percentile 5.75 ms)

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

Start at: 2017-09-08 00:12:35
End at: 2017-09-08 00:13:05
Local clock offset: 0.846 ms
Remote clock offset: -1.24 ms

# Below is generated by plot.py at 2017-09-08 07:36:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.61 Mbit/s
95th percentile per-packet one-way delay: 4.306 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 144.63 Mbit/s
95th percentile per-packet one-way delay: 3.602 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 110.74 Mbit/s
95th percentile per-packet one-way delay: 5.538 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 123.75 Mbit/s
95th percentile per-packet one-way delay: 4.840 ms
Loss rate: 0.28%
```
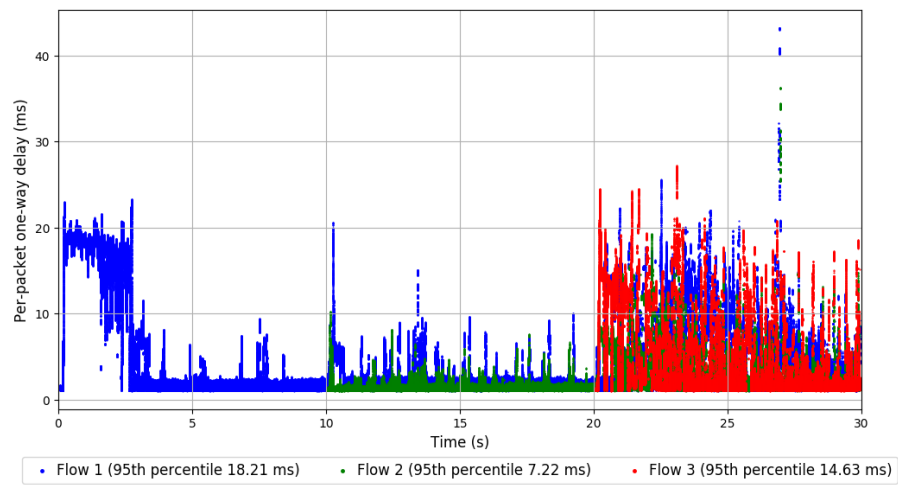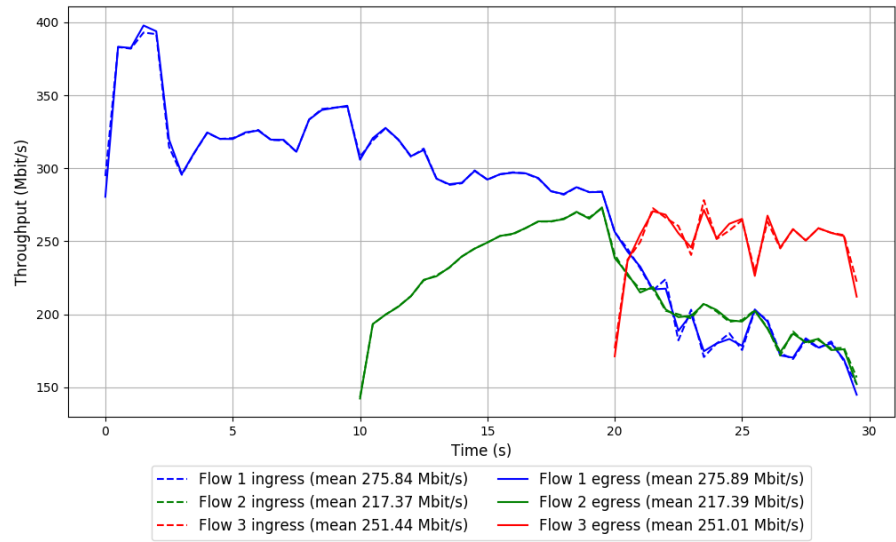
Run 7: Report of TaoVA-100x — Data Link

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

Start at: 2017-09-08 00:34:44
End at: 2017-09-08 00:35:14
Local clock offset: 0.773 ms
Remote clock offset: -1.197 ms
```

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

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

Start at: 2017-09-08 00:56:38
End at: 2017-09-08 00:57:08
Local clock offset: 0.791 ms
Remote clock offset: -1.088 ms


# Below is generated by plot.py at 2017-09-08 07:37:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 249.76 Mbit/s
95th percentile per-packet one-way delay: 5.449 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 138.05 Mbit/s
95th percentile per-packet one-way delay: 5.057 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 126.21 Mbit/s
95th percentile per-packet one-way delay: 5.970 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 108.67 Mbit/s
95th percentile per-packet one-way delay: 5.749 ms
Loss rate: 0.26%
```

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

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

Start at: 2017-09-08 01:18:35
End at: 2017-09-08 01:19:05
Local clock offset: 0.852 ms
Remote clock offset: -1.213 ms

# Below is generated by plot.py at 2017-09-08 07:37:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.88 Mbit/s
95th percentile per-packet one-way delay: 4.701 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 155.88 Mbit/s
95th percentile per-packet one-way delay: 4.142 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 117.18 Mbit/s
95th percentile per-packet one-way delay: 5.743 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 112.44 Mbit/s
95th percentile per-packet one-way delay: 4.217 ms
Loss rate: 0.31%
```
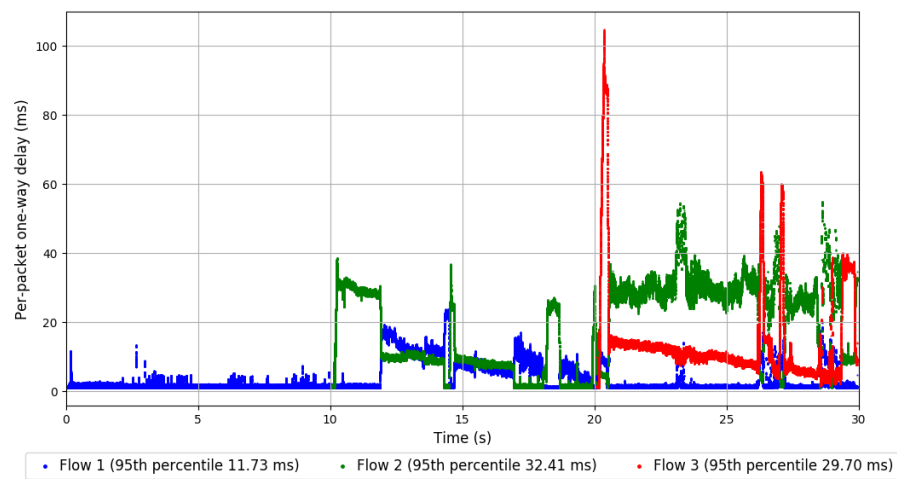
Run 10: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 155.91 Mbit/s) — Flow 1 egress (mean 155.88 Mbit/s)
Flow 2 ingress (mean 117.22 Mbit/s) — Flow 2 egress (mean 117.18 Mbit/s)
Flow 3 ingress (mean 112.49 Mbit/s) — Flow 3 egress (mean 112.44 Mbit/s)

Flow 1 (95th percentile 4.14 ms) — Flow 2 (95th percentile 5.74 ms) — Flow 3 (95th percentile 4.22 ms)

```
Run 1: Statistics of TCP Vegas

Start at: 2017-09-07 21:53:12
End at: 2017-09-07 21:53:42
Local clock offset: 0.958 ms
Remote clock offset: -2.827 ms


# Below is generated by plot.py at 2017-09-08 07:38:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.57 Mbit/s
95th percentile per-packet one-way delay: 17.019 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 275.89 Mbit/s
95th percentile per-packet one-way delay: 18.215 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 217.39 Mbit/s
95th percentile per-packet one-way delay: 7.217 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 251.01 Mbit/s
95th percentile per-packet one-way delay: 14.628 ms
Loss rate: 0.22%
```
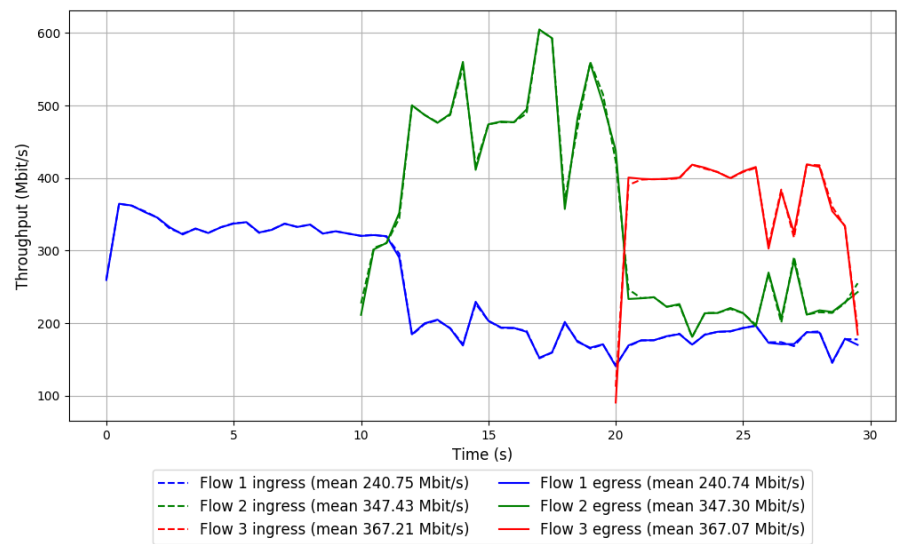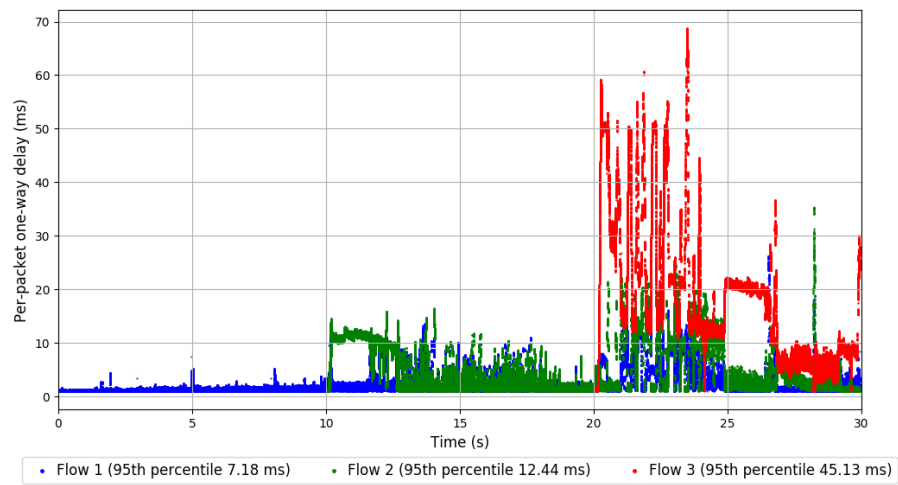
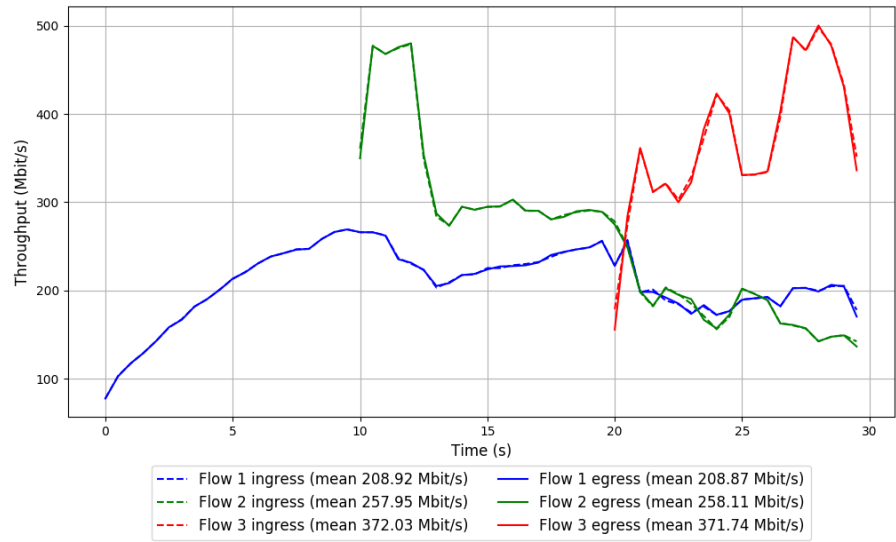Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2017-09-07 22:15:16
End at: 2017-09-07 22:15:46
Local clock offset: 1.104 ms
Remote clock offset: -1.923 ms


# Below is generated by plot.py at 2017-09-08 07:38:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.09 Mbit/s
95th percentile per-packet one-way delay: 6.922 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 214.37 Mbit/s
95th percentile per-packet one-way delay: 5.686 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 268.65 Mbit/s
95th percentile per-packet one-way delay: 8.037 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 183.74 Mbit/s
95th percentile per-packet one-way delay: 7.739 ms
Loss rate: 0.22%
```
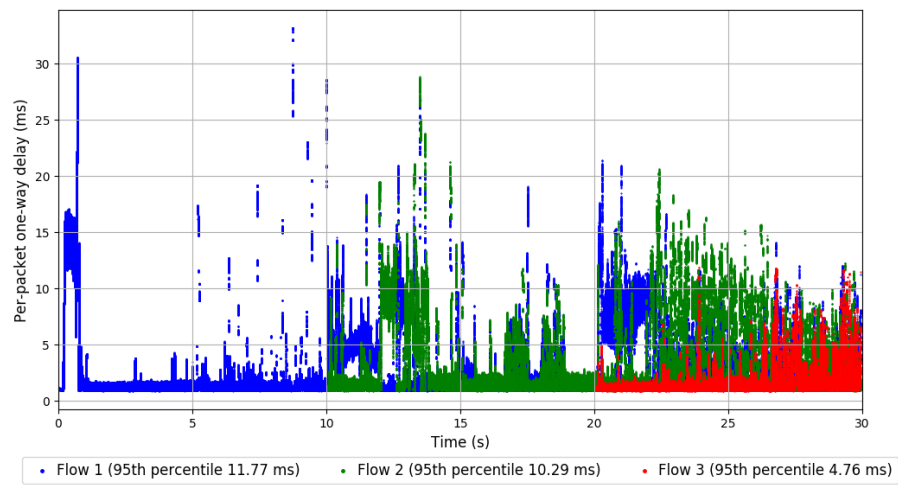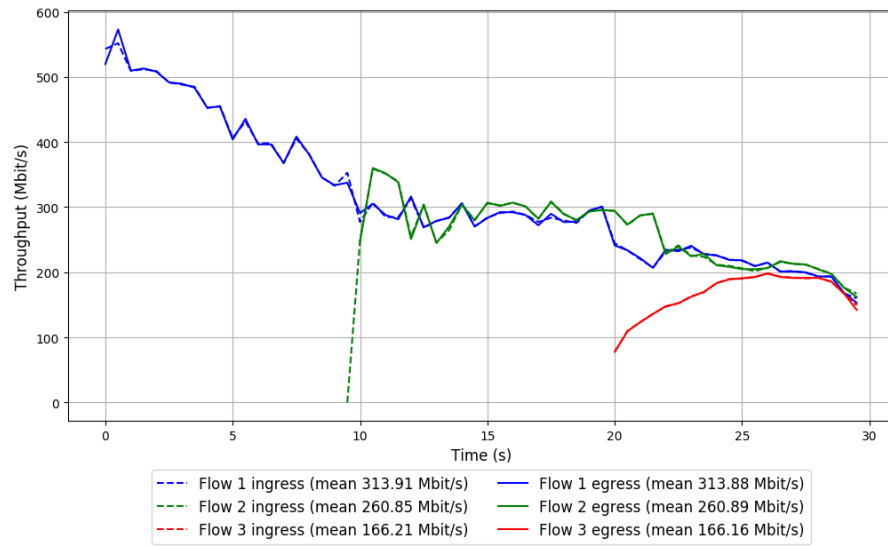
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2017-09-07 22:37:20
End at: 2017-09-07 22:37:50
Local clock offset: 0.984 ms
Remote clock offset: -1.82 ms


# Below is generated by plot.py at 2017-09-08 07:39:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 593.17 Mbit/s
95th percentile per-packet one-way delay: 30.628 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 240.74 Mbit/s
95th percentile per-packet one-way delay: 11.734 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 347.30 Mbit/s
95th percentile per-packet one-way delay: 32.408 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 367.07 Mbit/s
95th percentile per-packet one-way delay: 29.699 ms
Loss rate: 0.26%
```
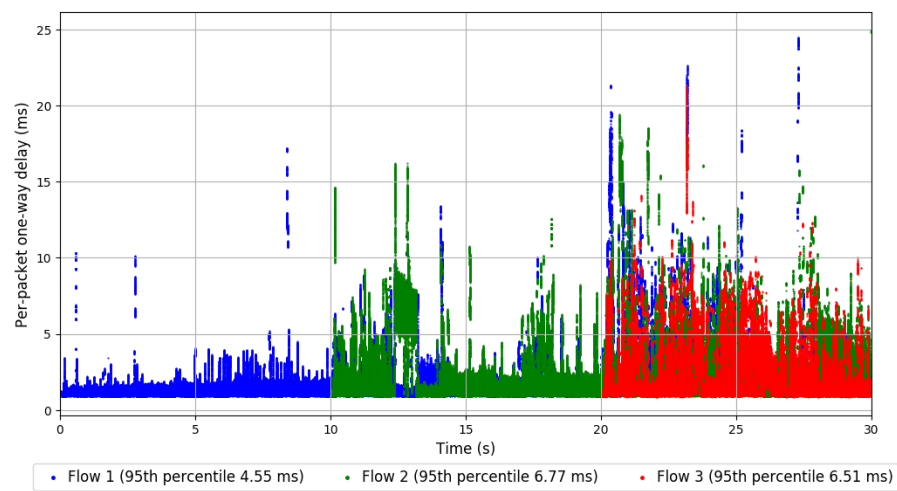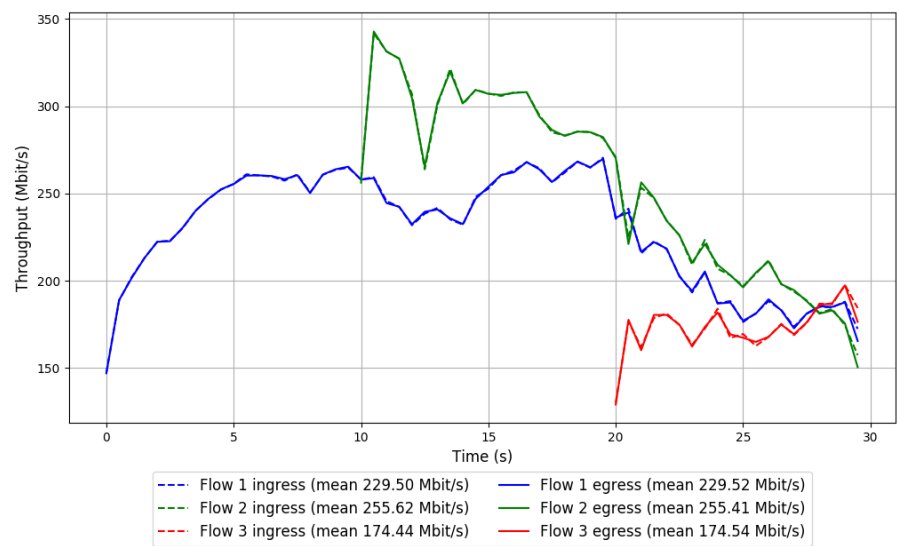
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2017-09-07 22:59:26
End at: 2017-09-07 22:59:56
Local clock offset: 0.969 ms
Remote clock offset: -1.339 ms


# Below is generated by plot.py at 2017-09-08 07:40:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.72 Mbit/s
95th percentile per-packet one-way delay: 21.362 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 208.87 Mbit/s
95th percentile per-packet one-way delay: 7.176 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 258.11 Mbit/s
95th percentile per-packet one-way delay: 12.435 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 371.74 Mbit/s
95th percentile per-packet one-way delay: 45.134 ms
Loss rate: 0.31%
```

Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2017-09-07 23:21:33
End at: 2017-09-07 23:22:03
Local clock offset: 1.026 ms
Remote clock offset: -1.034 ms


# Below is generated by plot.py at 2017-09-08 07:41:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.59 Mbit/s
95th percentile per-packet one-way delay: 10.319 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 313.88 Mbit/s
95th percentile per-packet one-way delay: 11.770 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 260.89 Mbit/s
95th percentile per-packet one-way delay: 10.285 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 166.16 Mbit/s
95th percentile per-packet one-way delay: 4.763 ms
Loss rate: 0.22%
```
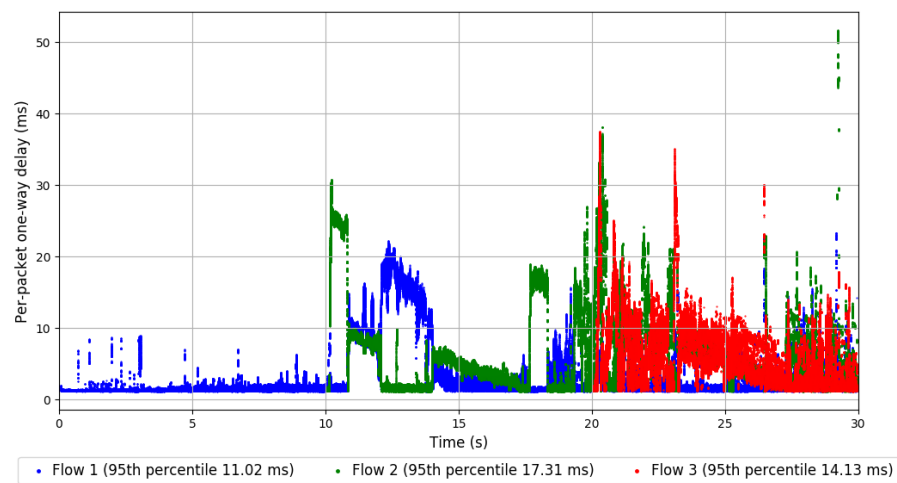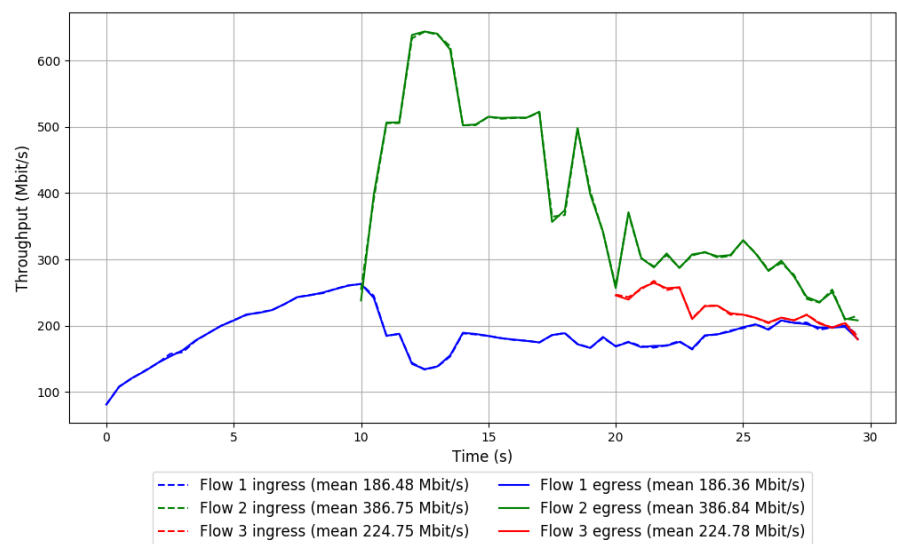
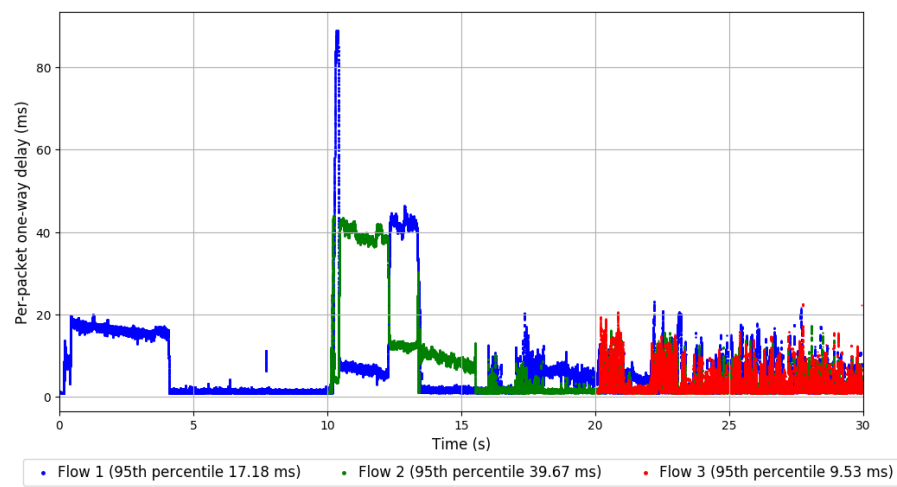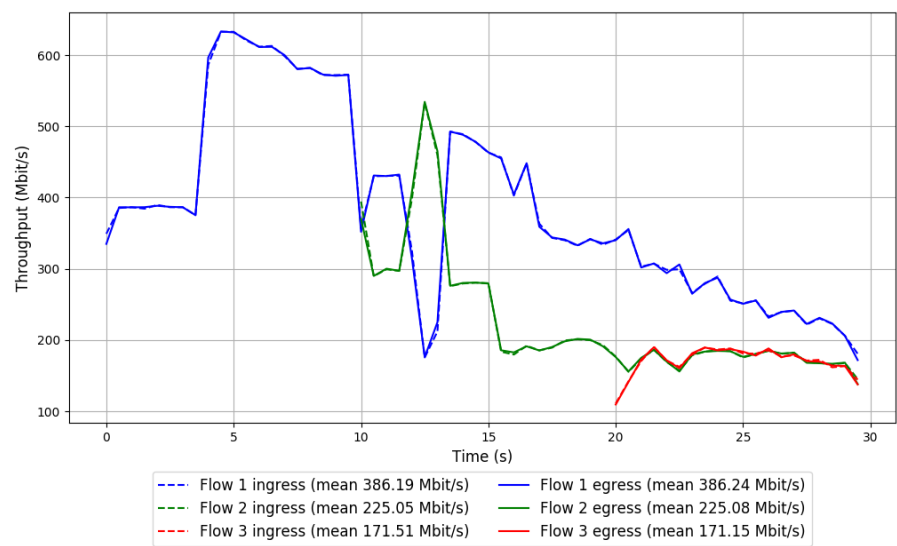## Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2017-09-07 23:43:37
End at: 2017-09-07 23:44:07
Local clock offset: 0.84 ms
Remote clock offset: -1.168 ms


# Below is generated by plot.py at 2017-09-08 07:41:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.18 Mbit/s
95th percentile per-packet one-way delay: 6.041 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 229.52 Mbit/s
95th percentile per-packet one-way delay: 4.548 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 255.41 Mbit/s
95th percentile per-packet one-way delay: 6.769 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 174.54 Mbit/s
95th percentile per-packet one-way delay: 6.511 ms
Loss rate: 0.25%
```
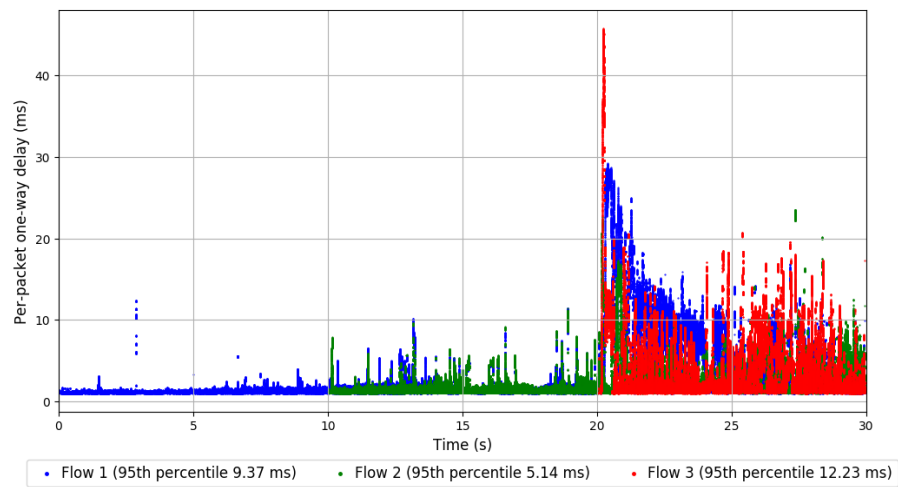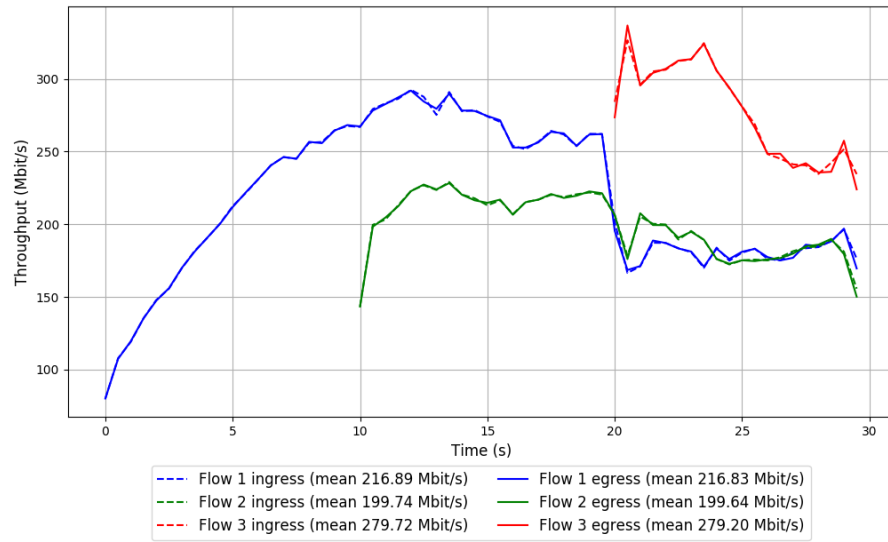
Run 6: Report of TCP Vegas — Data Link

```
Run 7: Statistics of TCP Vegas

Start at: 2017-09-08 00:05:41
End at: 2017-09-08 00:06:11
Local clock offset: 0.851 ms
Remote clock offset: -1.25 ms


# Below is generated by plot.py at 2017-09-08 07:42:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 518.27 Mbit/s
95th percentile per-packet one-way delay: 15.839 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 186.36 Mbit/s
95th percentile per-packet one-way delay: 11.019 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 386.84 Mbit/s
95th percentile per-packet one-way delay: 17.306 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 224.78 Mbit/s
95th percentile per-packet one-way delay: 14.133 ms
Loss rate: 0.17%
```

Run 7: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 186.48 Mbit/s) — Flow 1 egress (mean 186.36 Mbit/s)
Flow 2 ingress (mean 386.75 Mbit/s) — Flow 2 egress (mean 386.84 Mbit/s)
Flow 3 ingress (mean 224.75 Mbit/s) — Flow 3 egress (mean 224.78 Mbit/s)

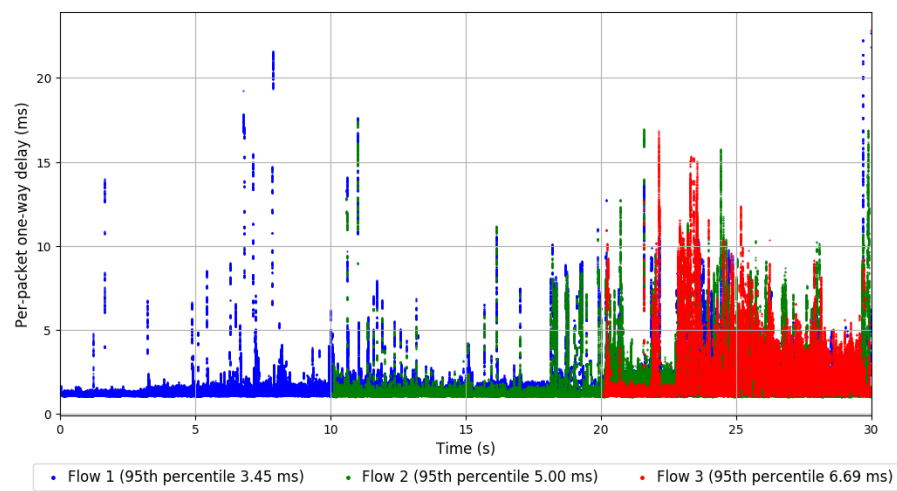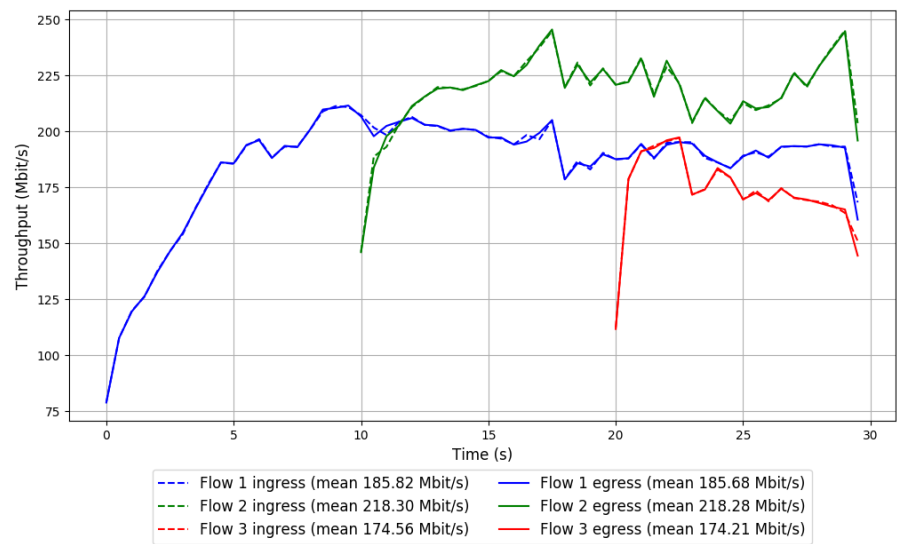Flow 1 (95th percentile 11.02 ms)   Flow 2 (95th percentile 17.31 ms)   Flow 3 (95th percentile 14.13 ms)

```
Run 8: Statistics of TCP Vegas

Start at: 2017-09-08 00:27:43
End at: 2017-09-08 00:28:13
Local clock offset: 0.868 ms
Remote clock offset: -1.117 ms


# Below is generated by plot.py at 2017-09-08 07:42:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 592.51 Mbit/s
95th percentile per-packet one-way delay: 18.482 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 386.24 Mbit/s
95th percentile per-packet one-way delay: 17.182 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 225.08 Mbit/s
95th percentile per-packet one-way delay: 39.675 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 171.15 Mbit/s
95th percentile per-packet one-way delay: 9.526 ms
Loss rate: 0.22%
```

Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-09-08 00:49:47
End at: 2017-09-08 00:50:17
Local clock offset: 0.888 ms
Remote clock offset: -1.241 ms


# Below is generated by plot.py at 2017-09-08 07:43:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.18 Mbit/s
95th percentile per-packet one-way delay: 9.482 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 216.83 Mbit/s
95th percentile per-packet one-way delay: 9.368 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 199.64 Mbit/s
95th percentile per-packet one-way delay: 5.139 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 279.20 Mbit/s
95th percentile per-packet one-way delay: 12.227 ms
Loss rate: 0.20%
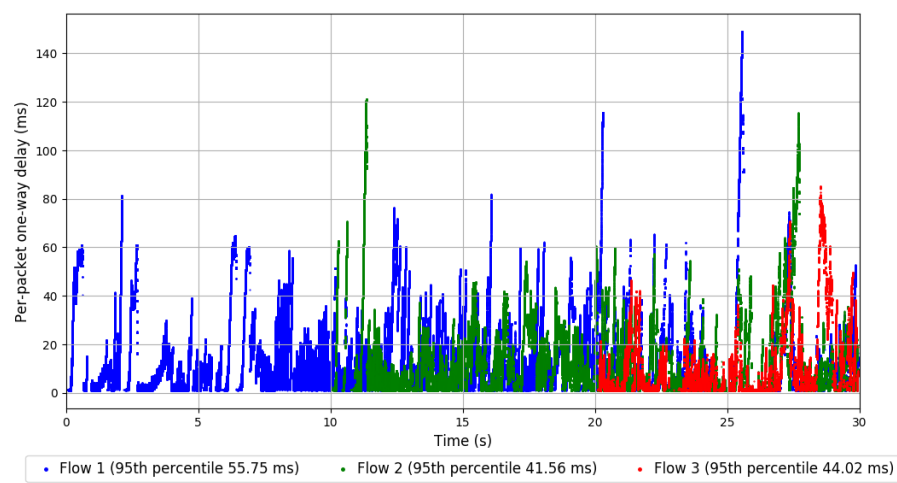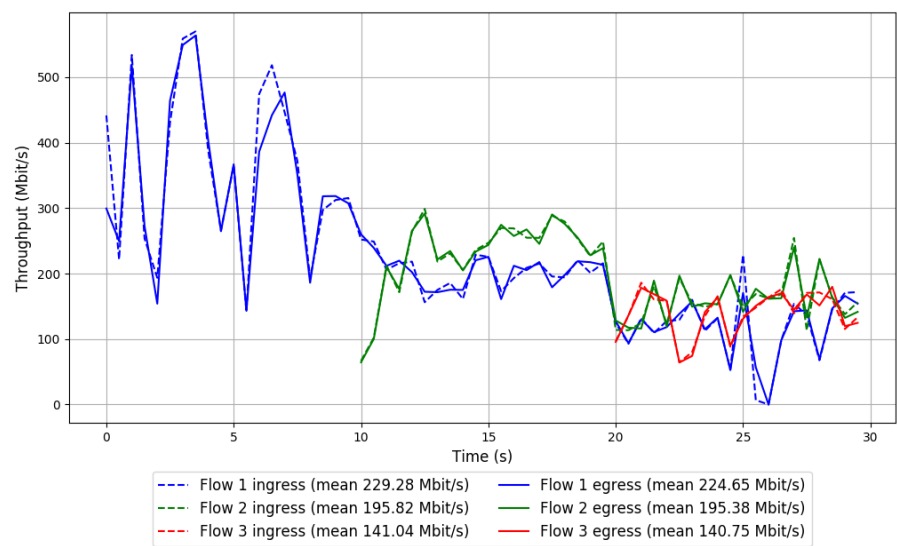```

Run 9: Report of TCP Vegas — Data Link

```
Run 10: Statistics of TCP Vegas

Start at: 2017-09-08 01:11:48
End at: 2017-09-08 01:12:18
Local clock offset: 0.903 ms
Remote clock offset: -1.178 ms

Below is generated by plot.py at 2017-09-08 07:43:18
Datalink statistics
-- Total of 3 flows:
Average throughput: 388.41 Mbit/s
95th percentile per-packet one-way delay: 4.713 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 185.68 Mbit/s
95th percentile per-packet one-way delay: 3.446 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 218.28 Mbit/s
95th percentile per-packet one-way delay: 5.002 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 174.21 Mbit/s
95th percentile per-packet one-way delay: 6.686 ms
Loss rate: 0.20%
```
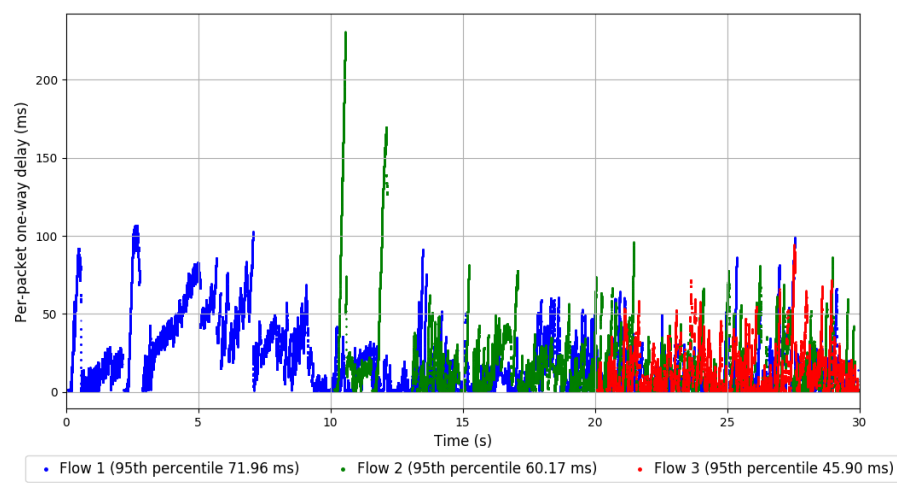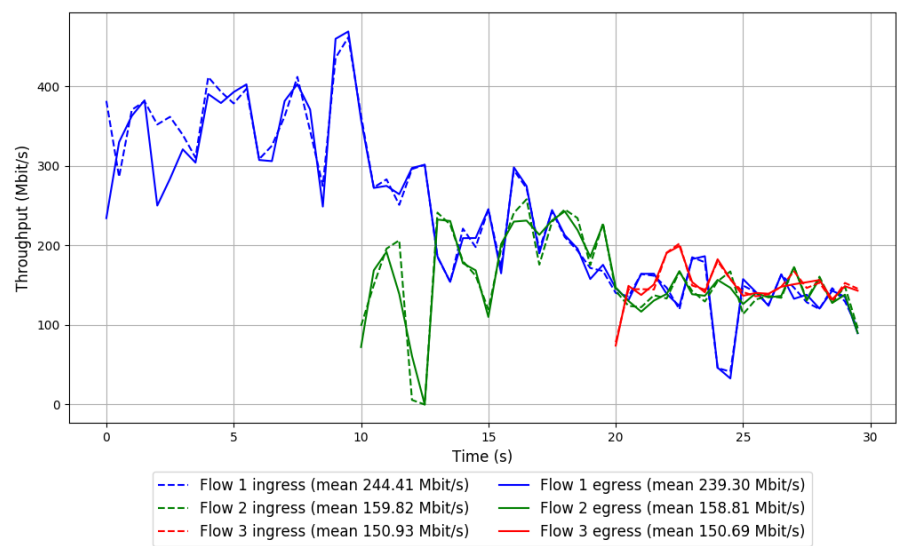
# Run 10: Report of TCP Vegas — Data Link



Flow 1 ingress (mean 185.82 Mbit/s)      Flow 1 egress (mean 185.68 Mbit/s)
Flow 2 ingress (mean 218.30 Mbit/s)      Flow 2 egress (mean 218.28 Mbit/s)
Flow 3 ingress (mean 174.56 Mbit/s)      Flow 3 egress (mean 174.21 Mbit/s)



Flow 1 (95th percentile 3.45 ms)      Flow 2 (95th percentile 5.00 ms)      Flow 3 (95th percentile 6.69 ms)
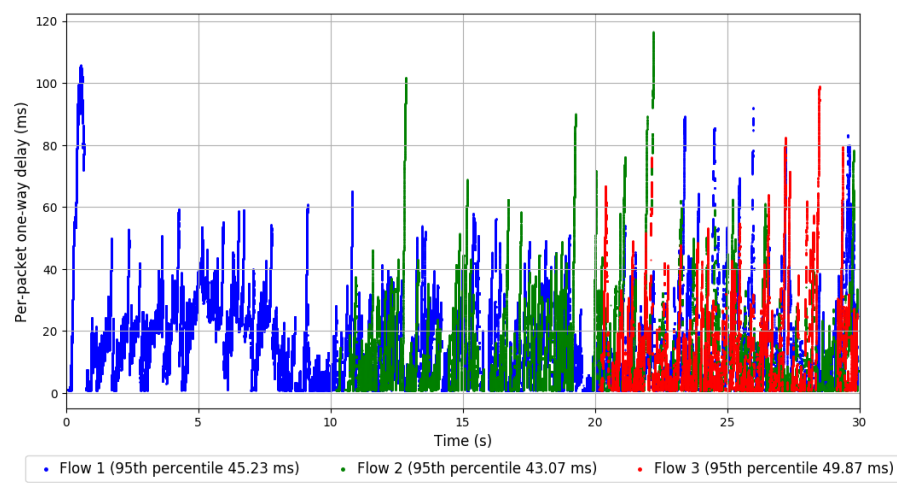
```
Run 1: Statistics of Verus

Start at: 2017-09-07 22:09:15
End at: 2017-09-07 22:09:45
Local clock offset: 0.991 ms
Remote clock offset: -2.27 ms

Below is generated by plot.py at 2017-09-08 07:44:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 400.77 Mbit/s
95th percentile per-packet one-way delay: 52.860 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 224.65 Mbit/s
95th percentile per-packet one-way delay: 55.748 ms
Loss rate: 2.07%
-- Flow 2:
Average throughput: 195.38 Mbit/s
95th percentile per-packet one-way delay: 41.562 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 140.75 Mbit/s
95th percentile per-packet one-way delay: 44.020 ms
Loss rate: 0.31%
```
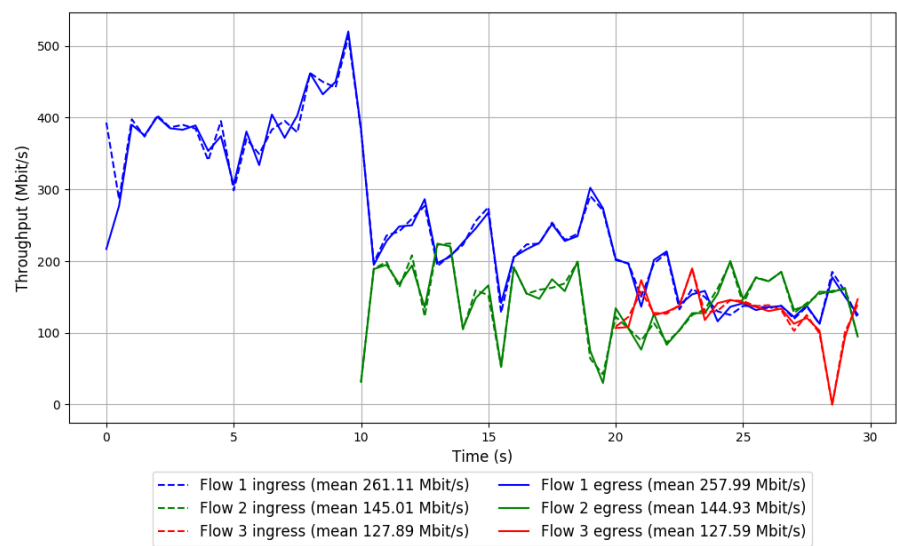
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2017-09-07 22:31:16
End at: 2017-09-07 22:31:46
Local clock offset: 1.044 ms
Remote clock offset: -1.695 ms

Below is generated by plot.py at 2017-09-08 07:44:15
Datalink statistics
-- Total of 3 flows:
Average throughput: 394.38 Mbit/s
95th percentile per-packet one-way delay: 67.078 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 239.30 Mbit/s
95th percentile per-packet one-way delay: 71.962 ms
Loss rate: 2.15%
-- Flow 2:
Average throughput: 158.81 Mbit/s
95th percentile per-packet one-way delay: 60.174 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 150.69 Mbit/s
95th percentile per-packet one-way delay: 45.903 ms
Loss rate: 0.34%
```
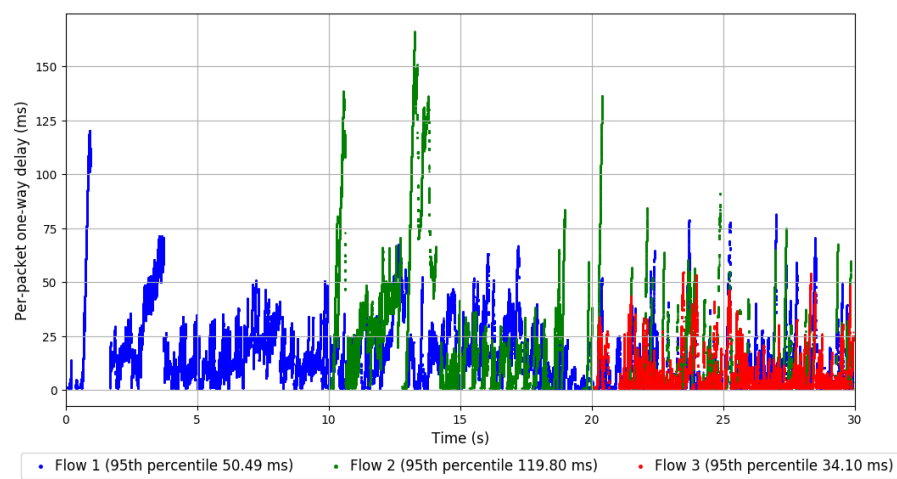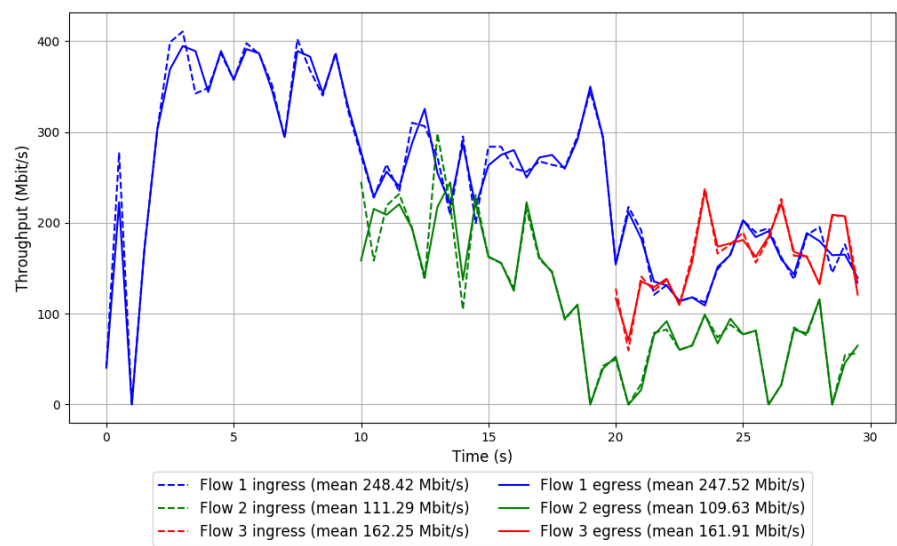
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2017-09-07 22:53:23
End at: 2017-09-07 22:53:53
Local clock offset: 0.943 ms
Remote clock offset: -1.417 ms

Below is generated by plot.py at 2017-09-08 07:45:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 395.21 Mbit/s
95th percentile per-packet one-way delay: 45.390 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 257.99 Mbit/s
95th percentile per-packet one-way delay: 45.235 ms
Loss rate: 1.22%
-- Flow 2:
Average throughput: 144.93 Mbit/s
95th percentile per-packet one-way delay: 43.070 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 127.59 Mbit/s
95th percentile per-packet one-way delay: 49.867 ms
Loss rate: 0.00%
```
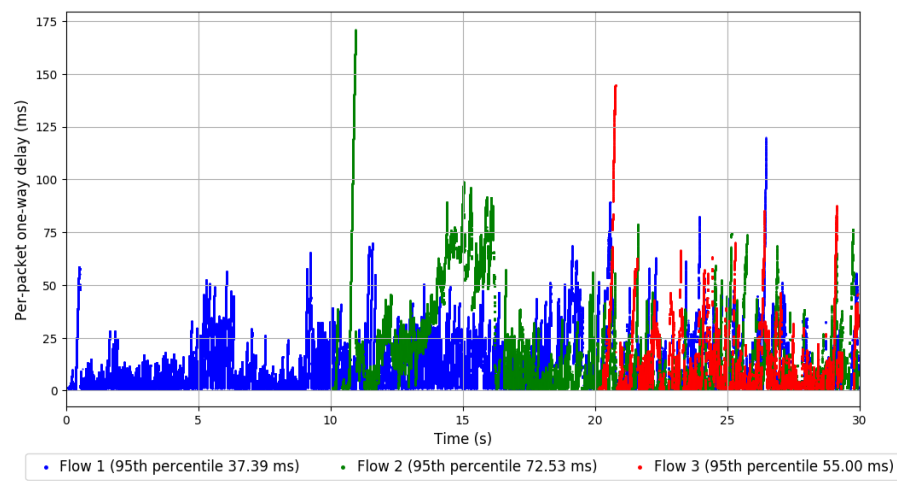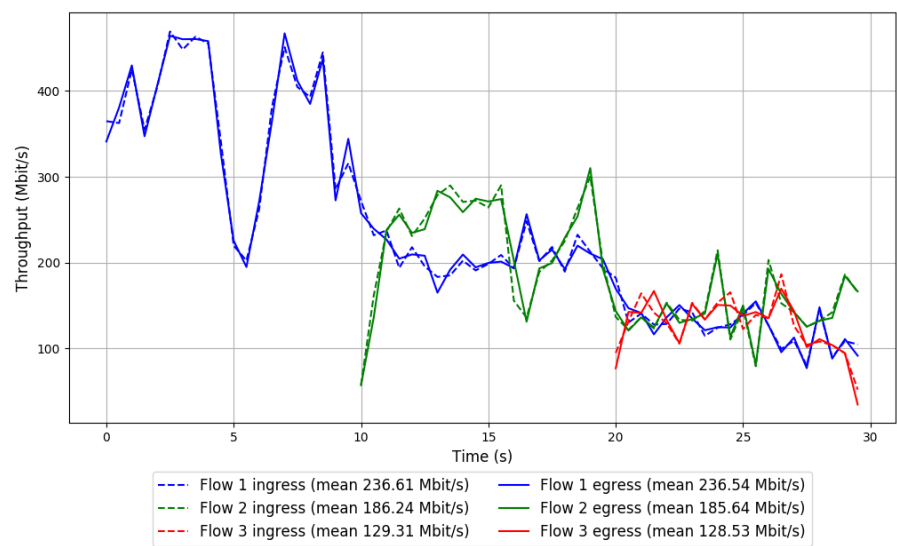
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2017-09-07 23:15:33
End at: 2017-09-07 23:16:03
Local clock offset: 1.135 ms
Remote clock offset: -1.17 ms

Below is generated by plot.py at 2017-09-08 07:45:07
Datalink statistics
-- Total of 3 flows:
Average throughput: 373.79 Mbit/s
95th percentile per-packet one-way delay: 57.298 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 247.52 Mbit/s
95th percentile per-packet one-way delay: 50.494 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 109.63 Mbit/s
95th percentile per-packet one-way delay: 119.797 ms
Loss rate: 1.59%
-- Flow 3:
Average throughput: 161.91 Mbit/s
95th percentile per-packet one-way delay: 34.100 ms
Loss rate: 0.38%
```
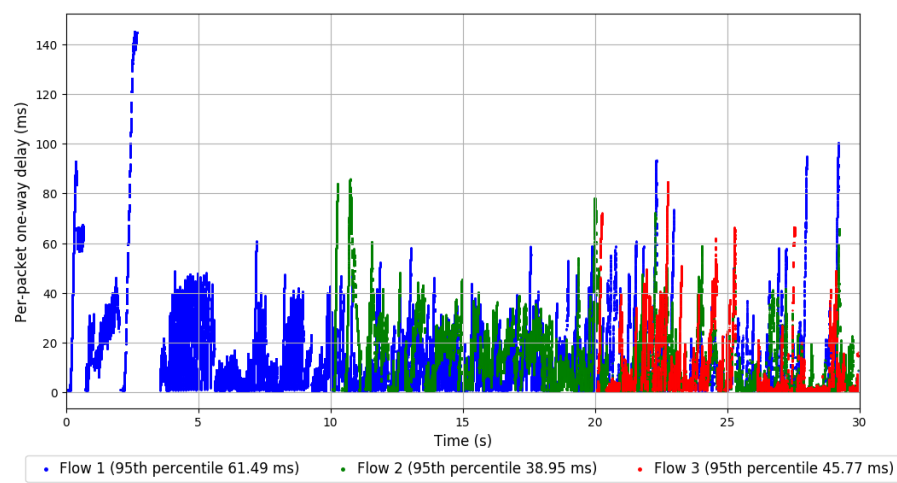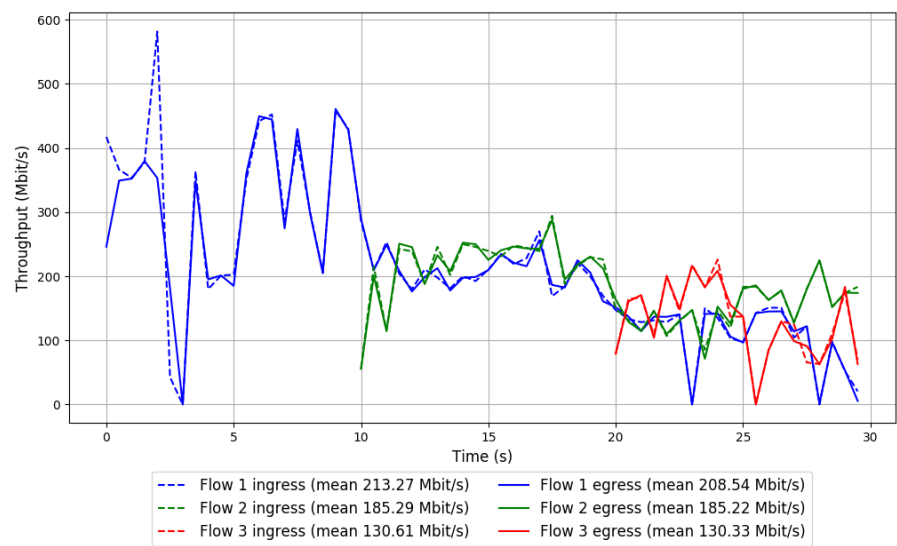
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2017-09-07 23:37:35
End at: 2017-09-07 23:38:05
Local clock offset: 0.985 ms
Remote clock offset: -1.17 ms

Below is generated by plot.py at 2017-09-08 07:45:58
Datalink statistics
-- Total of 3 flows:
Average throughput: 402.09 Mbit/s
95th percentile per-packet one-way delay: 57.209 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 236.54 Mbit/s
95th percentile per-packet one-way delay: 37.390 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 185.64 Mbit/s
95th percentile per-packet one-way delay: 72.535 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 128.53 Mbit/s
95th percentile per-packet one-way delay: 54.998 ms
Loss rate: 0.68%
```
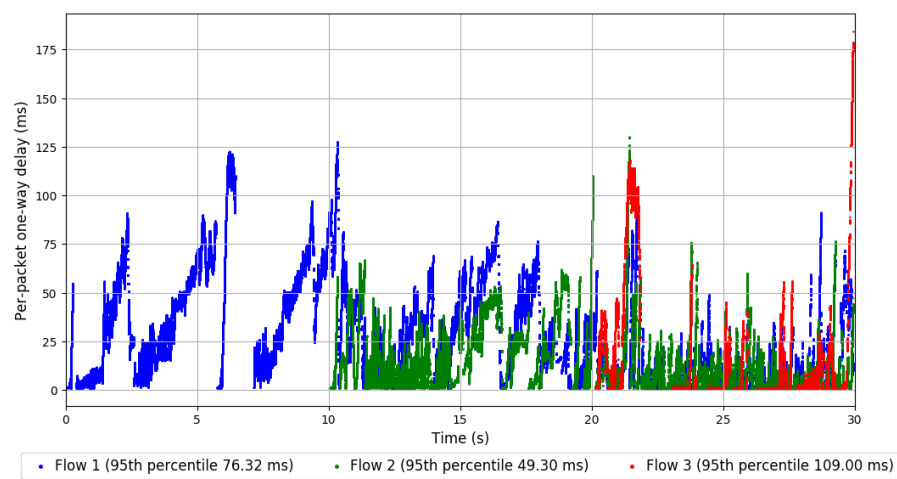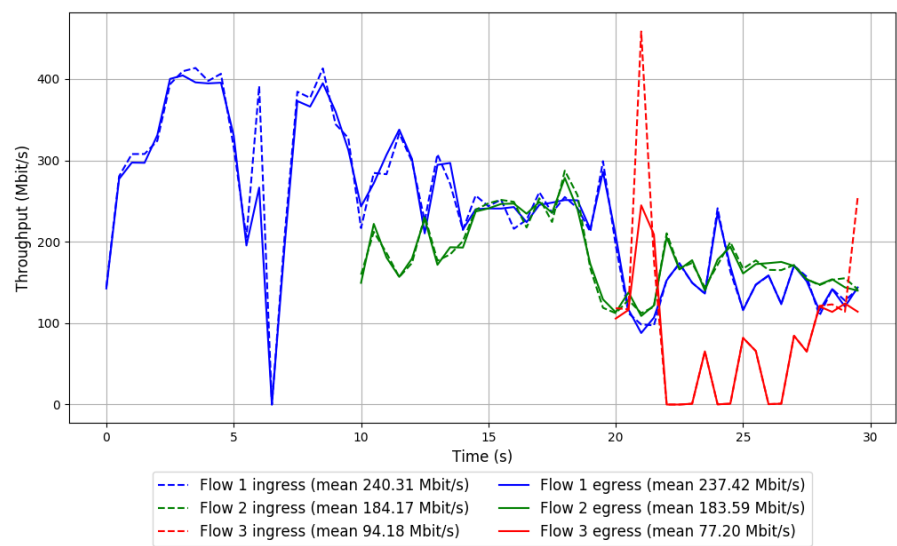
Run 5: Report of Verus — Data Link

```
Run 6: Statistics of Verus

Start at: 2017-09-07 23:59:38
End at: 2017-09-08 00:00:08
Local clock offset: 0.751 ms
Remote clock offset: -1.231 ms


# Below is generated by plot.py at 2017-09-08 07:46:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.71 Mbit/s
95th percentile per-packet one-way delay: 51.091 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 208.54 Mbit/s
95th percentile per-packet one-way delay: 61.491 ms
Loss rate: 2.29%
-- Flow 2:
Average throughput: 185.22 Mbit/s
95th percentile per-packet one-way delay: 38.950 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 130.33 Mbit/s
95th percentile per-packet one-way delay: 45.767 ms
Loss rate: 0.27%
```

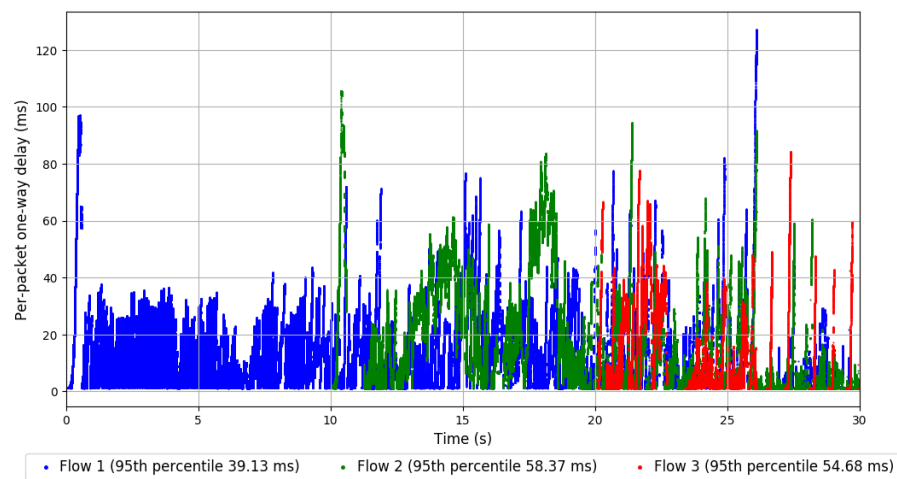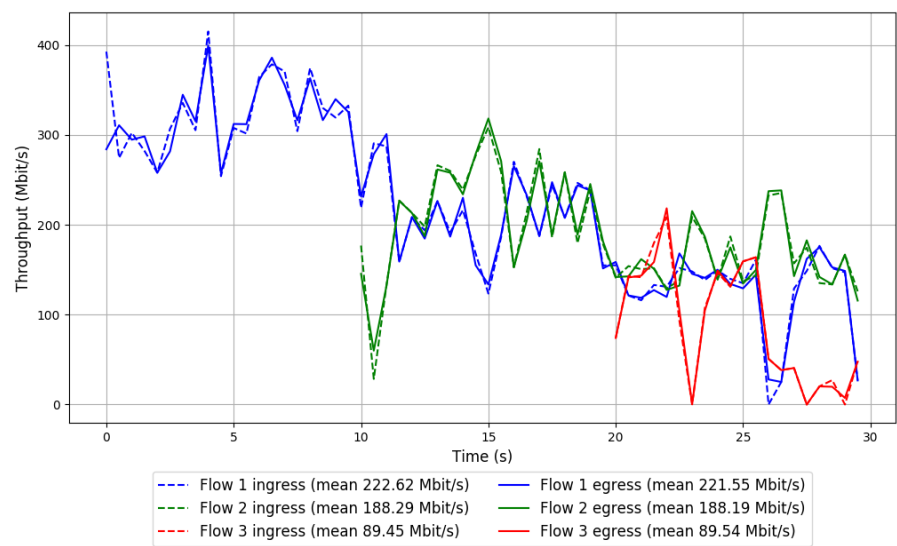# Run 6: Report of Verus — Data Link

```
Run 7: Statistics of Verus

Start at: 2017-09-08 00:21:40
End at: 2017-09-08 00:22:10
Local clock offset: 0.89 ms
Remote clock offset: -1.254 ms


# Below is generated by plot.py at 2017-09-08 07:46:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.89 Mbit/s
95th percentile per-packet one-way delay: 75.125 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 237.42 Mbit/s
95th percentile per-packet one-way delay: 76.318 ms
Loss rate: 1.26%
-- Flow 2:
Average throughput: 183.59 Mbit/s
95th percentile per-packet one-way delay: 49.304 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 77.20 Mbit/s
95th percentile per-packet one-way delay: 108.999 ms
Loss rate: 18.15%
```

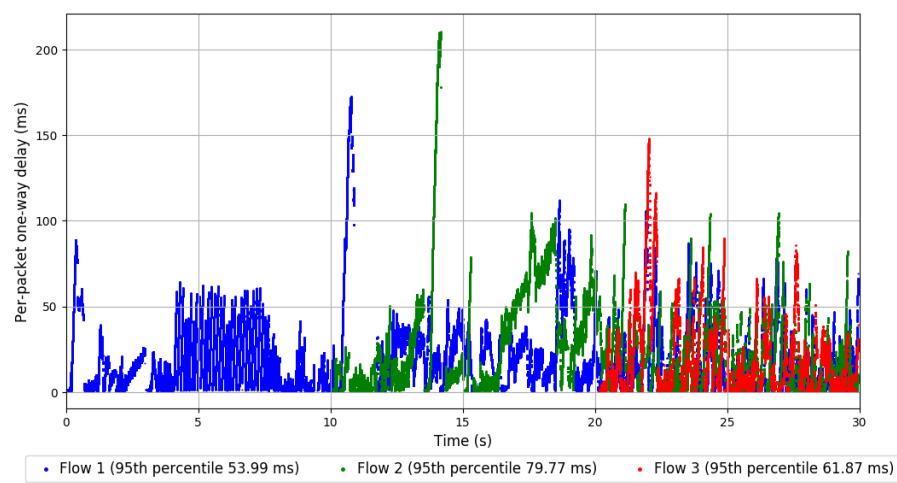# Run 7: Report of Verus — Data Link

```
Run 8: Statistics of Verus

Start at: 2017-09-08 00:43:44
End at: 2017-09-08 00:44:14
Local clock offset: 0.901 ms
Remote clock offset: -1.408 ms


# Below is generated by plot.py at 2017-09-08 07:46:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.82 Mbit/s
95th percentile per-packet one-way delay: 50.416 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 221.55 Mbit/s
95th percentile per-packet one-way delay: 39.128 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 188.19 Mbit/s
95th percentile per-packet one-way delay: 58.370 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 89.54 Mbit/s
95th percentile per-packet one-way delay: 54.679 ms
Loss rate: 0.00%
```
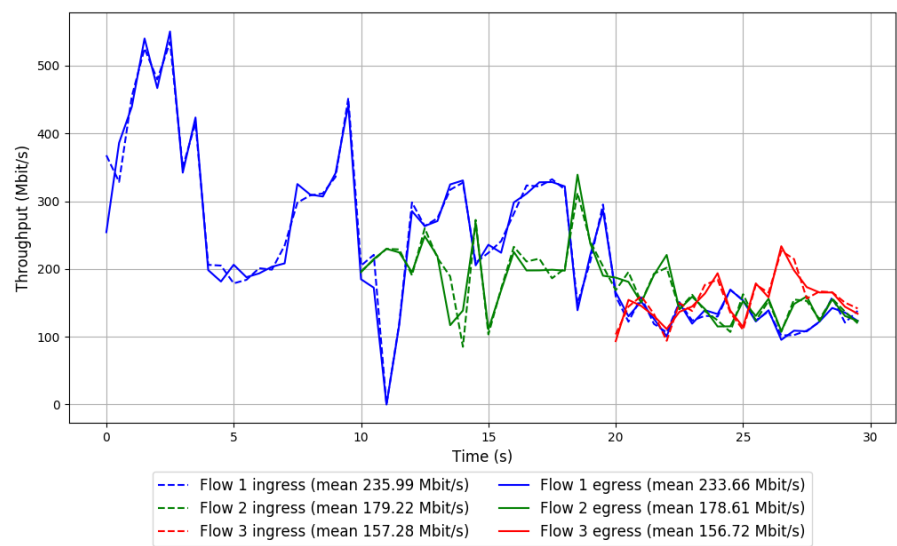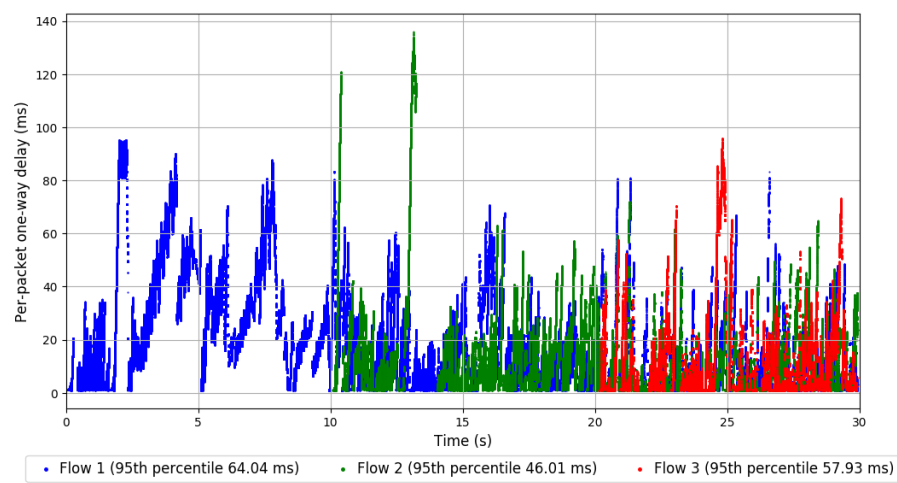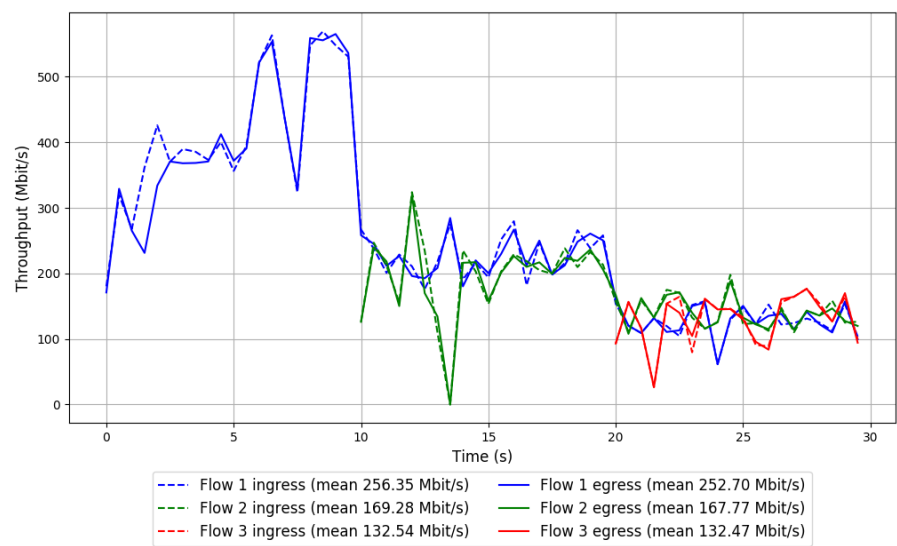
Run 8: Report of Verus — Data Link

Flow 1 ingress (mean 222.62 Mbit/s) --- Flow 1 egress (mean 221.55 Mbit/s)
Flow 2 ingress (mean 188.29 Mbit/s) --- Flow 2 egress (mean 188.19 Mbit/s)
Flow 3 ingress (mean 89.45 Mbit/s) --- Flow 3 egress (mean 89.54 Mbit/s)

Flow 1 (95th percentile 39.13 ms)   Flow 2 (95th percentile 58.37 ms)   Flow 3 (95th percentile 54.68 ms)

279

```
Run 9: Statistics of Verus

Start at: 2017-09-08 01:05:49
End at: 2017-09-08 01:06:19
Local clock offset: 0.891 ms
Remote clock offset: -0.982 ms


# Below is generated by plot.py at 2017-09-08 07:47:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 403.60 Mbit/s
95th percentile per-packet one-way delay: 64.106 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 233.66 Mbit/s
95th percentile per-packet one-way delay: 53.993 ms
Loss rate: 1.05%
-- Flow 2:
Average throughput: 178.61 Mbit/s
95th percentile per-packet one-way delay: 79.770 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 156.72 Mbit/s
95th percentile per-packet one-way delay: 61.870 ms
Loss rate: 0.52%
```
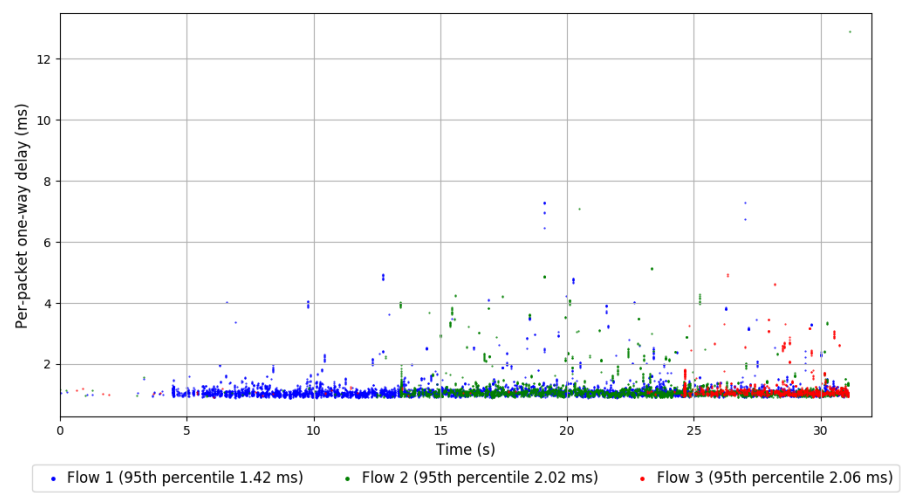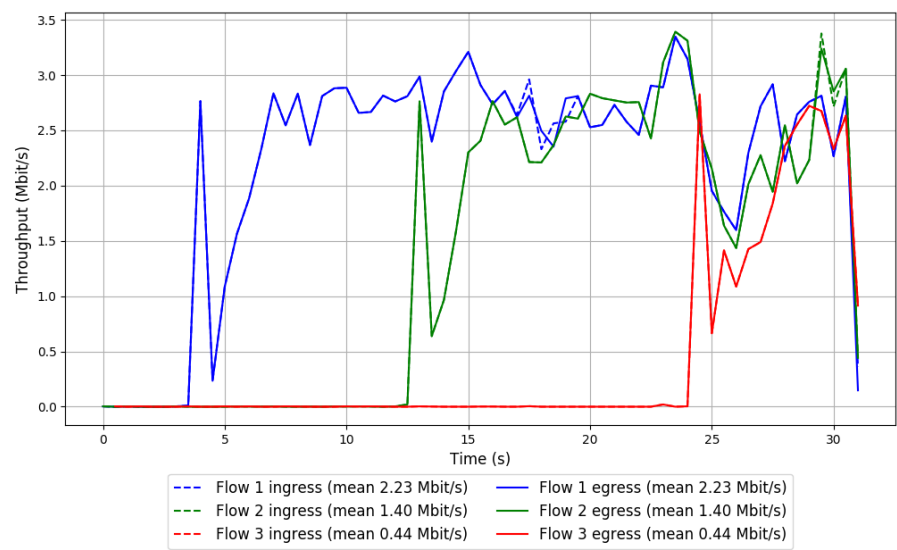
Run 9: Report of Verus — Data Link

```
Run 10: Statistics of Verus

Start at: 2017-09-08 01:27:32
End at: 2017-09-08 01:28:02
Local clock offset: 0.798 ms
Remote clock offset: -1.421 ms

# Below is generated by plot.py at 2017-09-08 07:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 407.37 Mbit/s
95th percentile per-packet one-way delay: 60.776 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 252.70 Mbit/s
95th percentile per-packet one-way delay: 64.039 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 167.77 Mbit/s
95th percentile per-packet one-way delay: 46.008 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 132.47 Mbit/s
95th percentile per-packet one-way delay: 57.933 ms
Loss rate: 0.20%
```

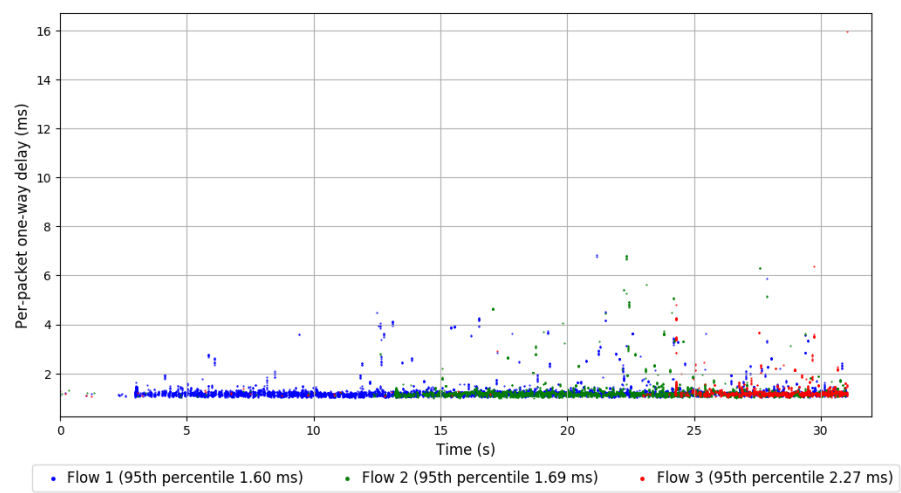# Run 10: Report of Verus — Data Link

283

```
Run 1: Statistics of WebRTC media

Start at: 2017-09-07 21:57:14
End at: 2017-09-07 21:57:44
Local clock offset: 0.913 ms
Remote clock offset: -2.713 ms


# Below is generated by plot.py at 2017-09-08 07:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 1.604 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 1.420 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 1.40 Mbit/s
95th percentile per-packet one-way delay: 2.025 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.062 ms
Loss rate: 0.00%
```

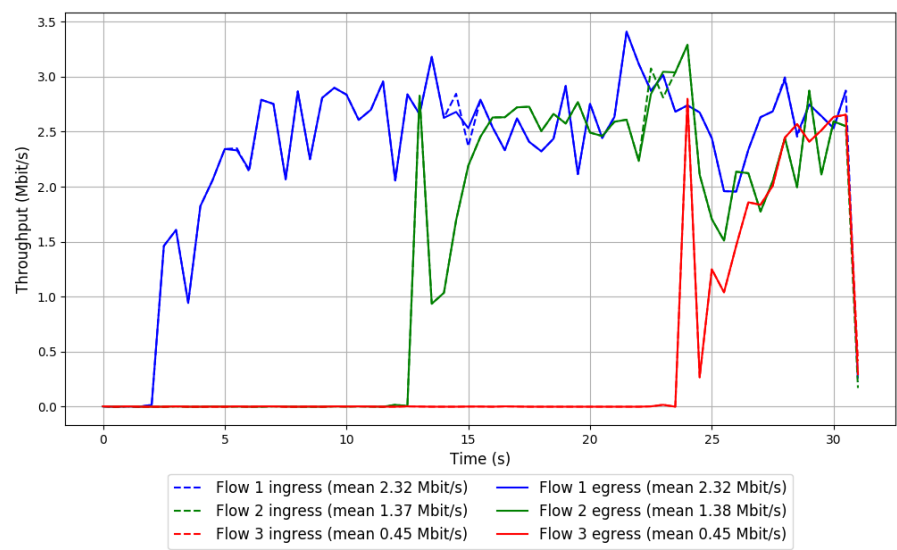Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-09-07 22:19:15
End at: 2017-09-07 22:19:45
Local clock offset: 1.103 ms
Remote clock offset: -1.777 ms


# Below is generated by plot.py at 2017-09-08 07:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 1.704 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 2.32 Mbit/s
95th percentile per-packet one-way delay: 1.601 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 1.688 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 2.271 ms
Loss rate: 0.43%
```

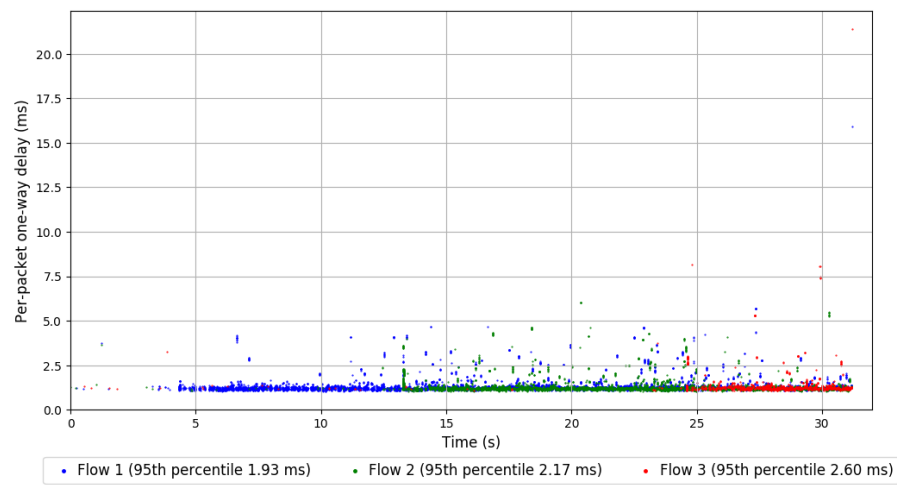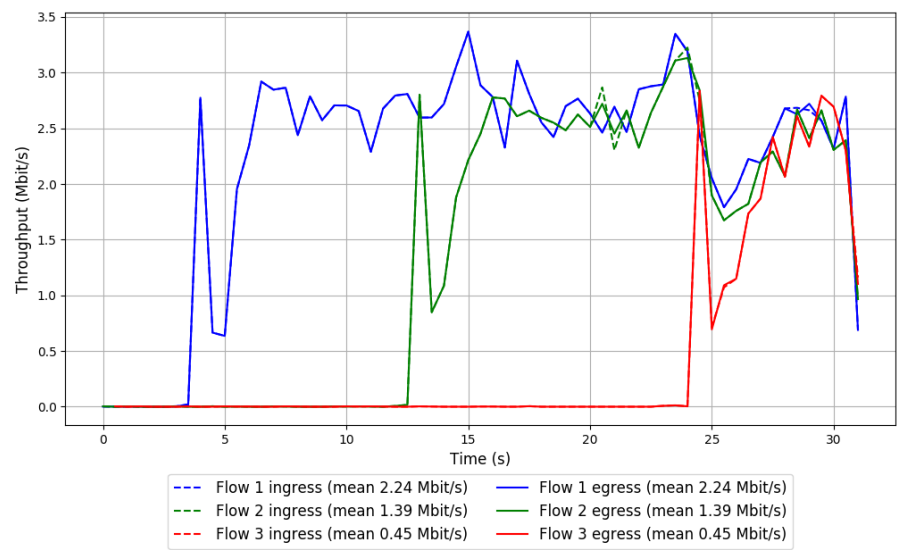Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2017-09-07 22:41:26
End at: 2017-09-07 22:41:56
Local clock offset: 1.0 ms
Remote clock offset: -1.835 ms


# Below is generated by plot.py at 2017-09-08 07:47:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.06 Mbit/s
95th percentile per-packet one-way delay: 2.092 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 2.24 Mbit/s
95th percentile per-packet one-way delay: 1.930 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 2.173 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 2.597 ms
Loss rate: 0.21%
```

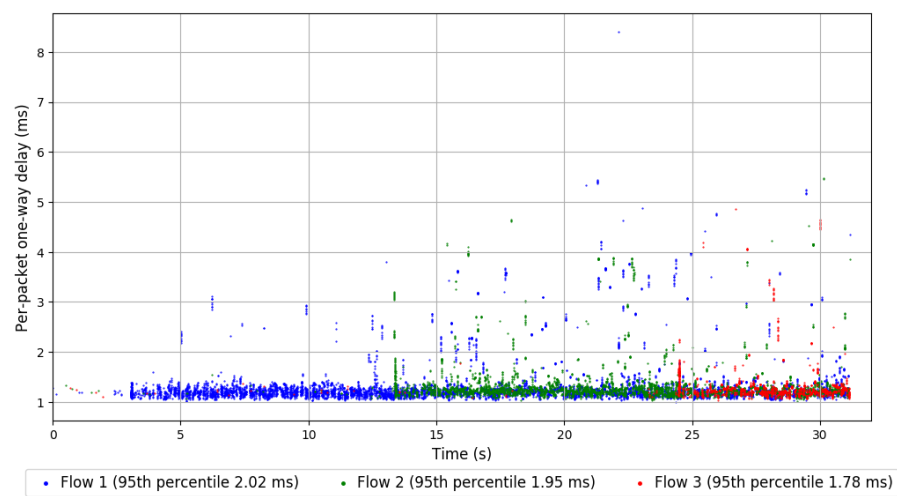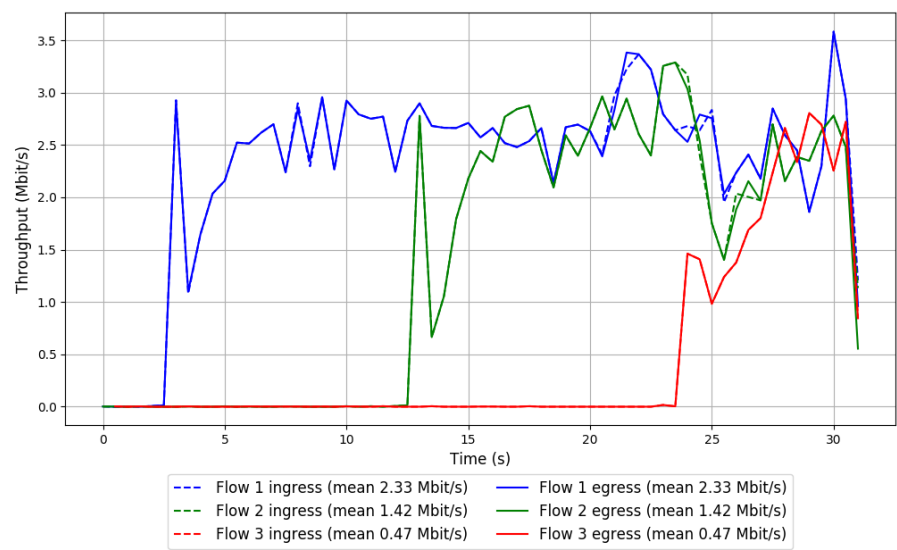Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2017-09-07 23:03:28
End at: 2017-09-07 23:03:58
Local clock offset: 1.076 ms
Remote clock offset: -1.279 ms


# Below is generated by plot.py at 2017-09-08 07:47:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 1.924 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 2.019 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 1.949 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 1.782 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-09-07 23:25:36
End at: 2017-09-07 23:26:06
Local clock offset: 1.087 ms
Remote clock offset: -0.99 ms


# Below is generated by plot.py at 2017-09-08 07:47:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 1.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 1.568 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 1.938 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.033 ms
Loss rate: 0.00%
```
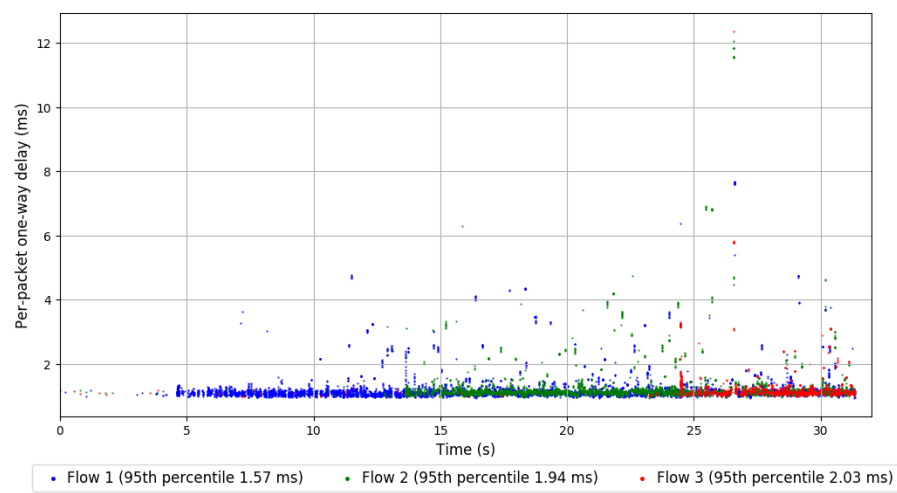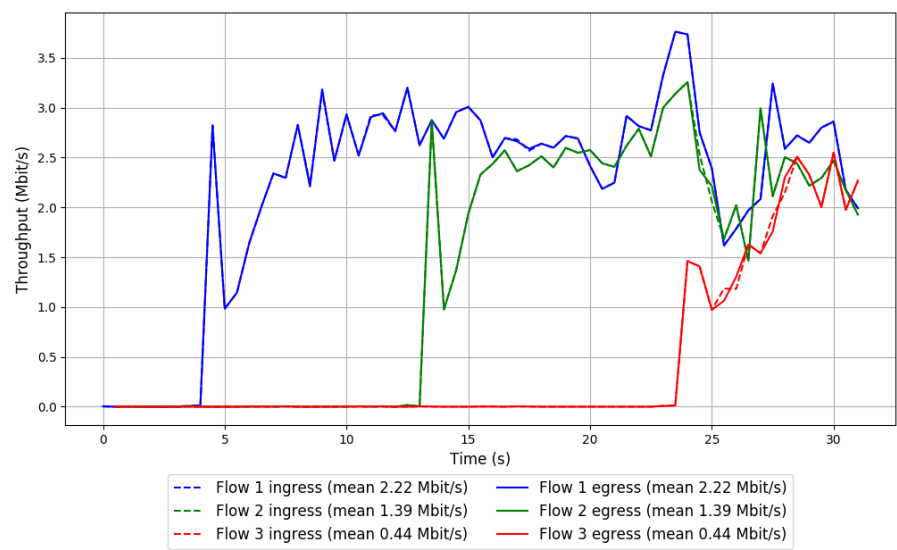
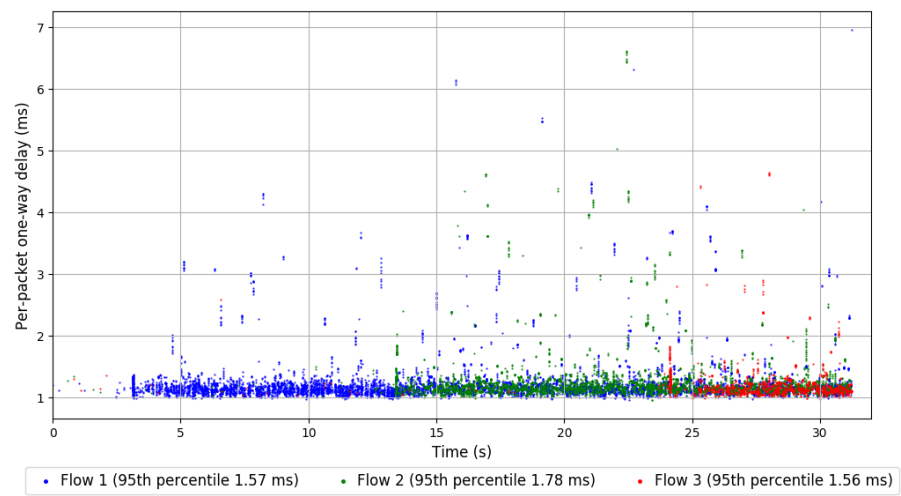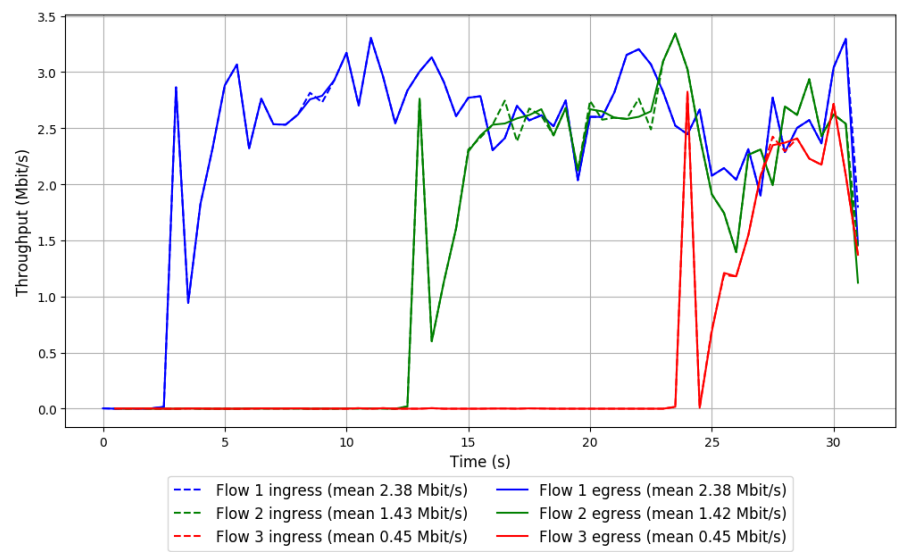Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-09-07 23:47:37
End at: 2017-09-07 23:48:07
Local clock offset: 0.825 ms
Remote clock offset: -1.322 ms


# Below is generated by plot.py at 2017-09-08 07:47:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 1.673 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 1.567 ms
Loss rate: 0.22%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 1.776 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 1.562 ms
Loss rate: 0.00%
```

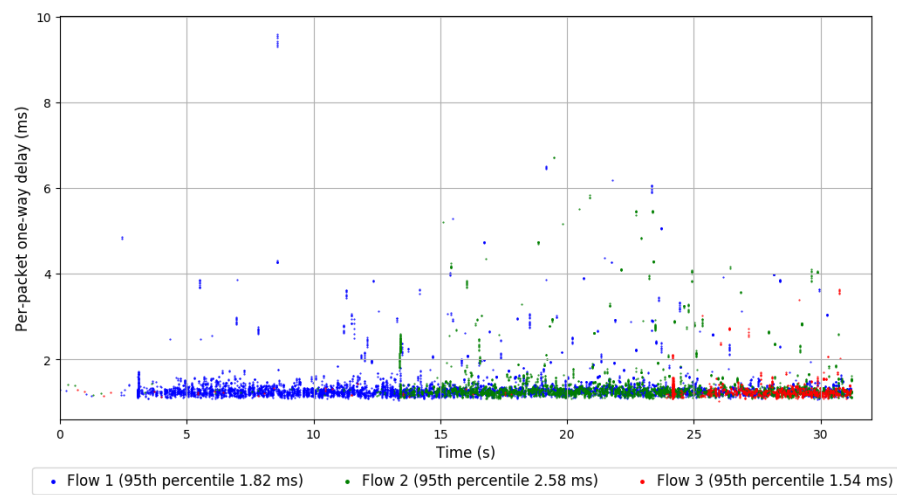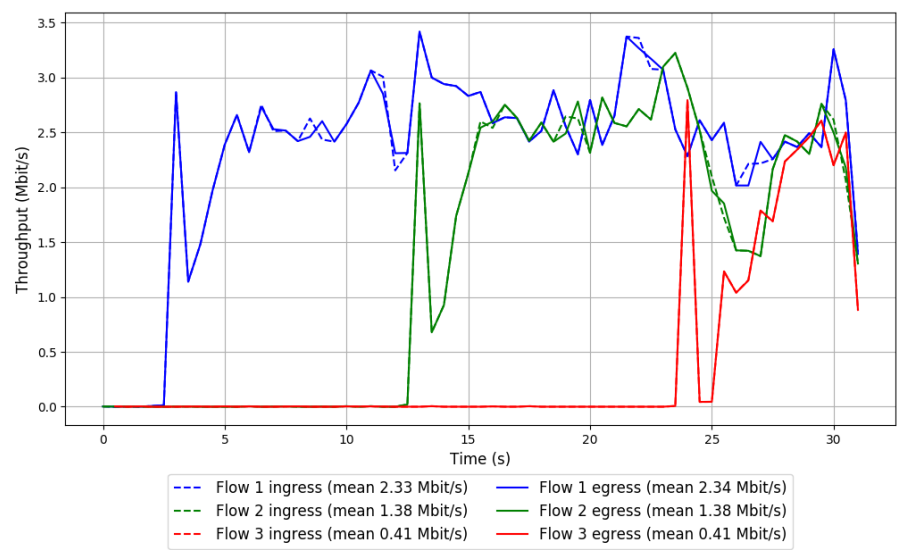Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-09-08 00:09:44
End at: 2017-09-08 00:10:14
Local clock offset: 0.84 ms
Remote clock offset: -1.311 ms


# Below is generated by plot.py at 2017-09-08 07:47:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 2.072 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 1.817 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 1.38 Mbit/s
95th percentile per-packet one-way delay: 2.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 1.544 ms
Loss rate: 0.00%
```

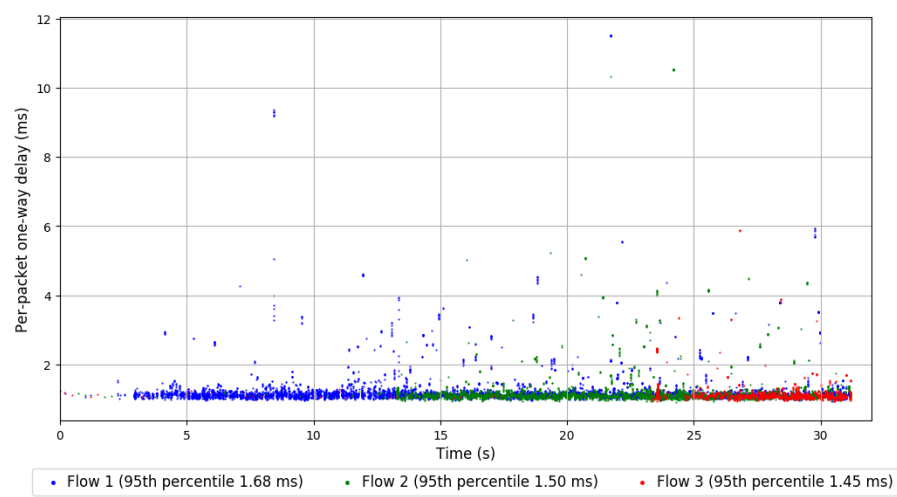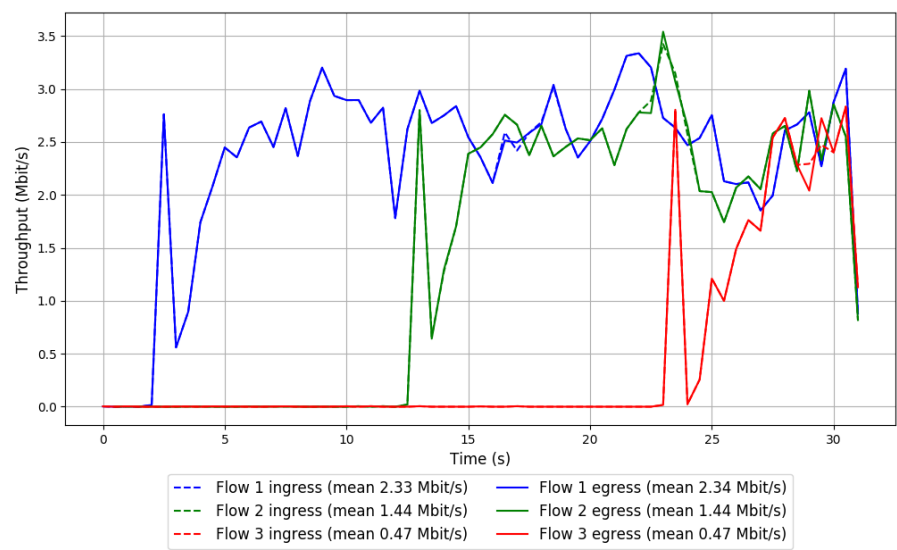Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-09-08 00:31:50
End at: 2017-09-08 00:32:20
Local clock offset: 0.866 ms
Remote clock offset: -1.201 ms


# Below is generated by plot.py at 2017-09-08 07:47:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 1.616 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.34 Mbit/s
95th percentile per-packet one-way delay: 1.675 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 1.500 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 1.449 ms
Loss rate: 0.00%
```

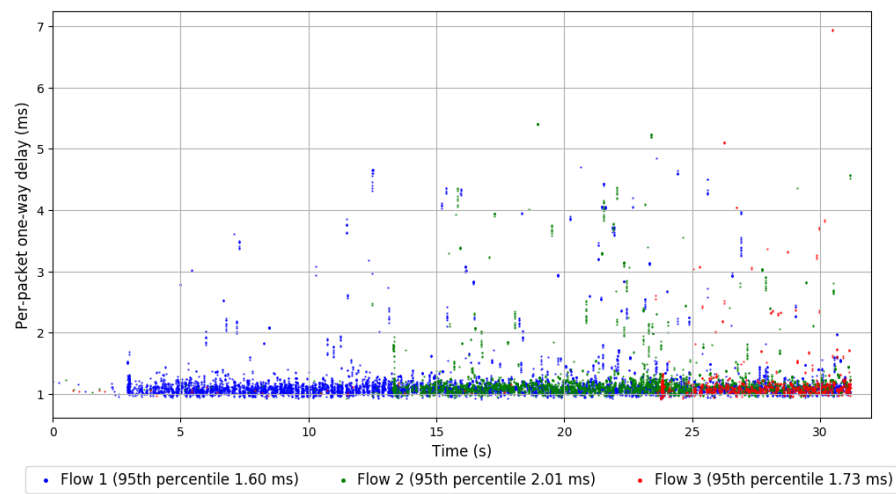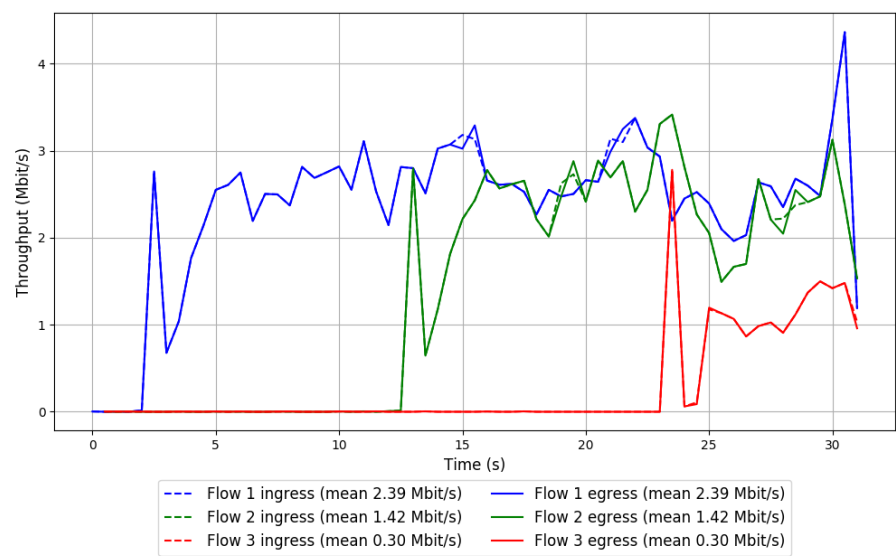Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-09-08 00:53:47
End at: 2017-09-08 00:54:17
Local clock offset: 0.879 ms
Remote clock offset: -1.136 ms


# Below is generated by plot.py at 2017-09-08 07:47:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 1.790 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 2.39 Mbit/s
95th percentile per-packet one-way delay: 1.598 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 2.013 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.30 Mbit/s
95th percentile per-packet one-way delay: 1.732 ms
Loss rate: 0.41%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-09-08 01:15:44
End at: 2017-09-08 01:16:14
Local clock offset: 0.812 ms
Remote clock offset: -1.253 ms


# Below is generated by plot.py at 2017-09-08 07:47:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.18 Mbit/s
95th percentile per-packet one-way delay: 1.806 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 2.33 Mbit/s
95th percentile per-packet one-way delay: 1.811 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 1.42 Mbit/s
95th percentile per-packet one-way delay: 1.820 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 0.47 Mbit/s
95th percentile per-packet one-way delay: 1.593 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link