Pantheon Report

Generated at 2017-08-11 13:29:00 (UTC).

Data path: AWS California 2 Ethernet (*local*) →Mexico Ethernet (*remote*).

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 @ e43be7582298d552838afcf6382342bf187fbbd6
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ dae96123232f1bcb37725348fa2378691ce26725
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-stimuli @ fc73a85ca16c34366d1888dc8a0d0d88d4ebf2a7
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```

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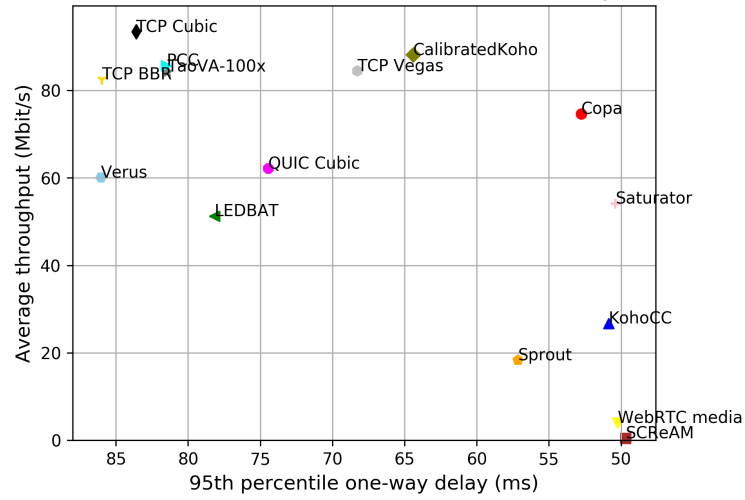
test from AWS California 2 Ethernet to Mexico Ethernet, 10 runs of 30s each per scheme
### 3 flows with 10s interval between flows

2
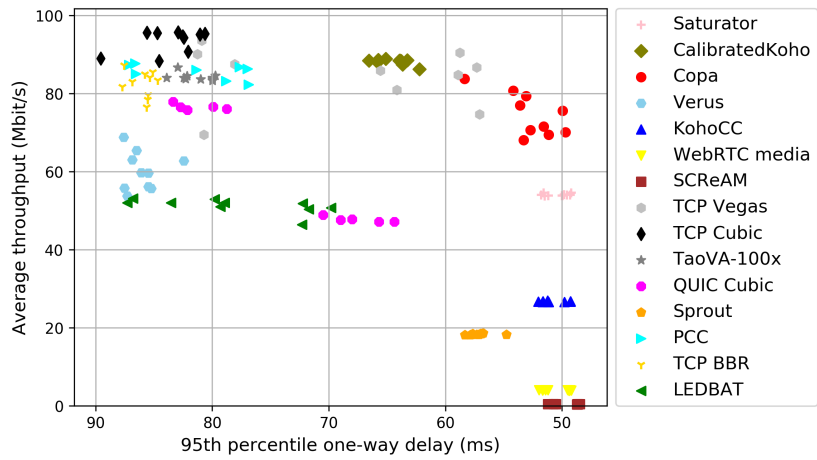
scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	71.52	13.68	6.85	85.93	86.35	78.53	27.44	31.16	44.88
CalibratedKoho	10	83.98	4.15	4.29	64.37	64.33	64.55	0.05	0.05	0.03
Copa	10	46.05	31.10	24.03	51.60	53.58	59.25	0.08	0.12	0.27
TCP Cubic	10	66.08	27.05	28.28	83.24	83.69	82.19	0.42	0.70	0.72
KohoCC	10	13.48	13.41	13.12	50.84	50.64	50.93	0.02	0.01	0.01
LEDBAT	10	32.88	22.61	10.17	77.34	78.87	79.29	0.09	0.13	0.18
PCC	8	74.22	10.72	12.67	81.24	82.63	76.74	4.91	4.18	2.10
QUIC Cubic	10	24.09	45.74	23.57	64.74	74.69	74.94	0.81	2.13	1.54
Saturator	10	27.25	26.98	26.80	50.06	50.59	50.37	0.03	0.03	0.01
SCReAM	10	0.22	0.22	0.22	49.53	49.61	49.61	0.04	0.07	0.12
Sprout	10	9.24	9.21	9.03	56.94	57.22	57.53	0.09	0.09	0.08
TaoVA-100x	10	51.14	37.58	25.91	79.73	83.14	80.17	11.61	20.07	25.13
TCP Vegas	10	55.38	29.35	28.70	68.16	64.14	64.43	0.88	0.36	0.29
Verus	10	39.60	25.31	12.72	85.74	86.03	85.84	32.79	35.47	44.51
WebRTC media	10	2.24	1.31	0.44	50.20	50.08	50.62	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2017-08-11 09:20:40
End at: 2017-08-11 09:21:10
Local clock offset: 0.063 ms
Remote clock offset: -0.119 ms


# Below is generated by plot.py at 2017-08-11 13:17:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.29 Mbit/s
95th percentile per-packet one-way delay: 87.561 ms
Loss rate: 28.17%
-- Flow 1:
Average throughput: 68.32 Mbit/s
95th percentile per-packet one-way delay: 87.511 ms
Loss rate: 26.78%
-- Flow 2:
Average throughput: 16.31 Mbit/s
95th percentile per-packet one-way delay: 88.485 ms
Loss rate: 35.93%
-- Flow 3:
Average throughput: 26.94 Mbit/s
95th percentile per-packet one-way delay: 86.787 ms
Loss rate: 28.03%
```

Run 1: Report of TCP BBR — Data Link
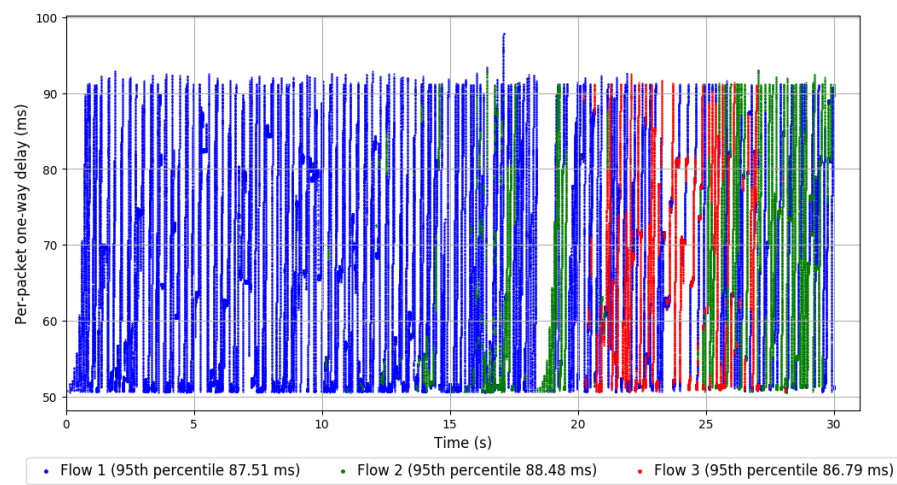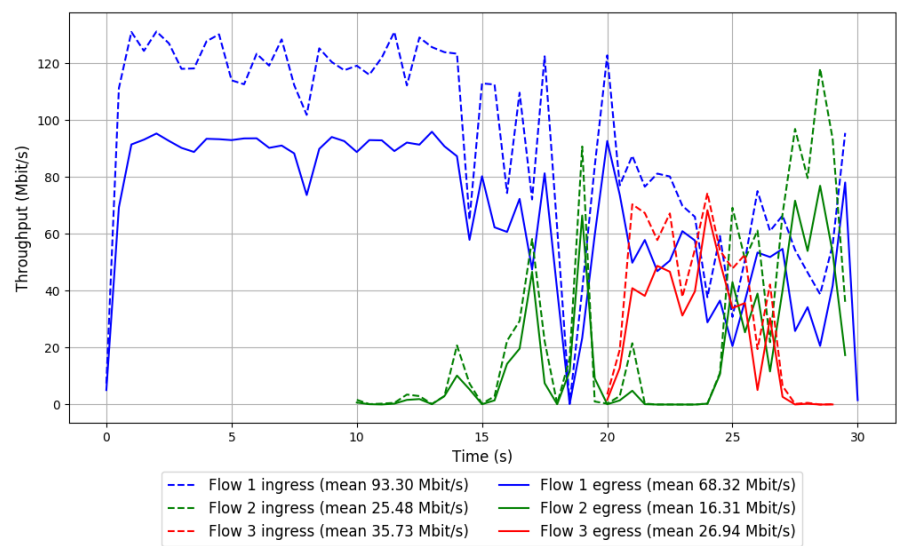
```
Run 2: Statistics of TCP BBR

Start at: 2017-08-11 09:41:38
End at: 2017-08-11 09:42:08
Local clock offset: 0.193 ms
Remote clock offset: -2.763 ms


# Below is generated by plot.py at 2017-08-11 13:17:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.68 Mbit/s
95th percentile per-packet one-way delay: 85.510 ms
Loss rate: 28.63%
-- Flow 1:
Average throughput: 77.46 Mbit/s
95th percentile per-packet one-way delay: 85.537 ms
Loss rate: 28.25%
-- Flow 2:
Average throughput: 1.44 Mbit/s
95th percentile per-packet one-way delay: 86.144 ms
Loss rate: 44.10%
-- Flow 3:
Average throughput: 6.78 Mbit/s
95th percentile per-packet one-way delay: 83.413 ms
Loss rate: 36.16%
```

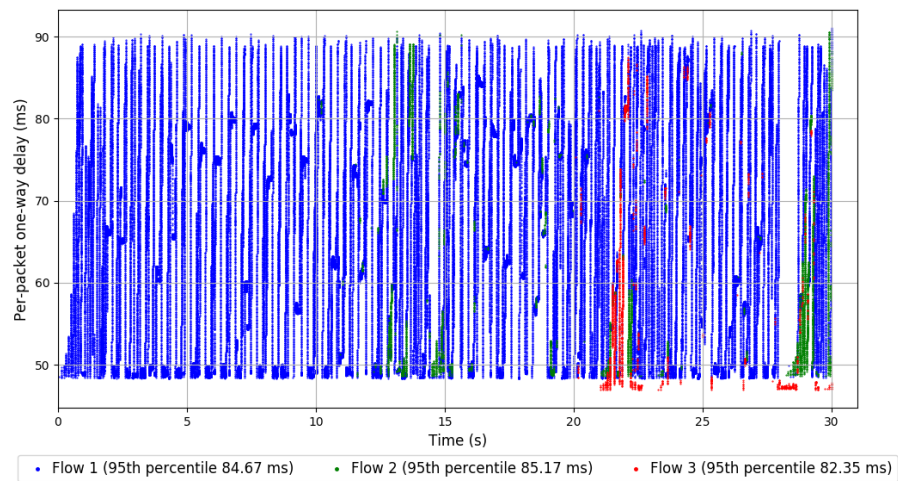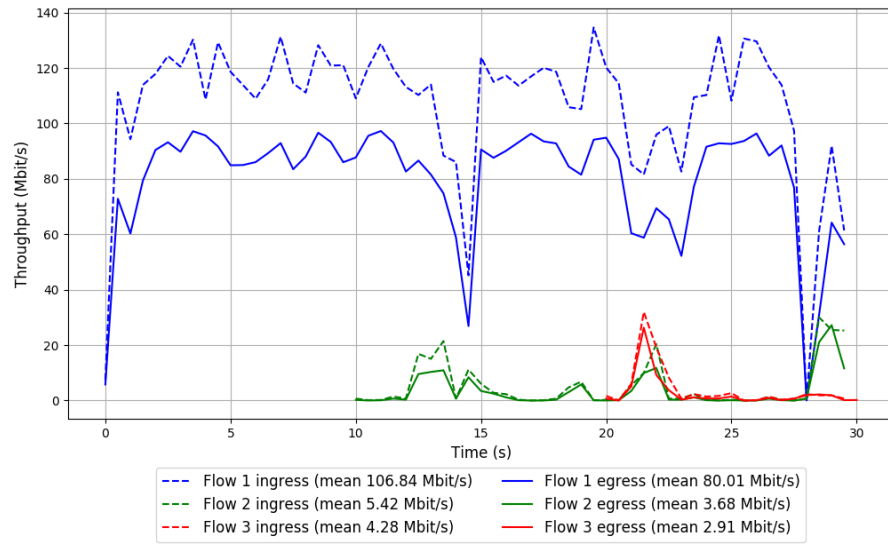Run 2: Report of TCP BBR — Data Link
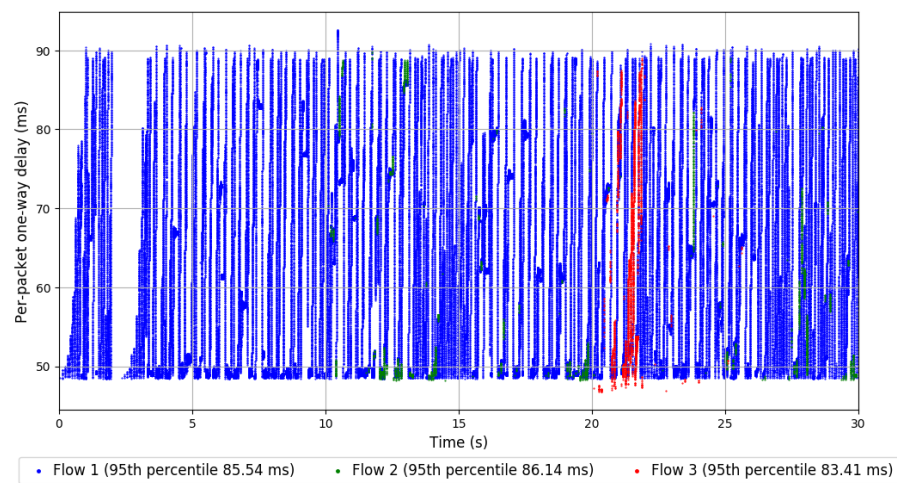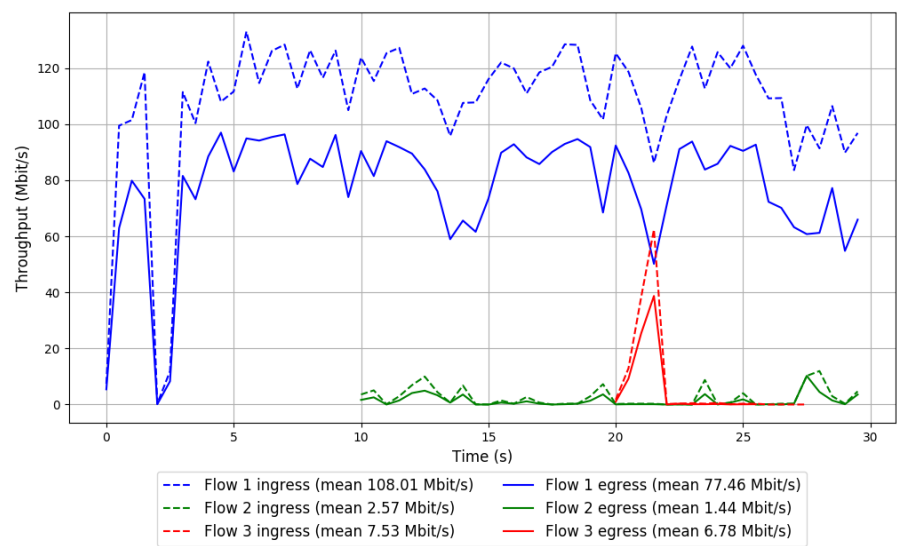
```
Run 3: Statistics of TCP BBR

Start at: 2017-08-11 10:02:33
End at: 2017-08-11 10:03:03
Local clock offset: 0.13 ms
Remote clock offset: -3.162 ms


# Below is generated by plot.py at 2017-08-11 13:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.39 Mbit/s
95th percentile per-packet one-way delay: 84.667 ms
Loss rate: 25.37%
-- Flow 1:
Average throughput: 80.01 Mbit/s
95th percentile per-packet one-way delay: 84.672 ms
Loss rate: 25.04%
-- Flow 2:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 85.167 ms
Loss rate: 32.26%
-- Flow 3:
Average throughput: 2.91 Mbit/s
95th percentile per-packet one-way delay: 82.346 ms
Loss rate: 32.33%
```

Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 106.84 Mbit/s) --- Flow 1 egress (mean 80.01 Mbit/s)
Flow 2 ingress (mean 5.42 Mbit/s) --- Flow 2 egress (mean 3.68 Mbit/s)
Flow 3 ingress (mean 4.28 Mbit/s) --- Flow 3 egress (mean 2.91 Mbit/s)

Flow 1 (95th percentile 84.67 ms)   Flow 2 (95th percentile 85.17 ms)   Flow 3 (95th percentile 82.35 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2017-08-11 10:23:33
End at: 2017-08-11 10:24:03
Local clock offset: 0.283 ms
Remote clock offset: -1.559 ms


# Below is generated by plot.py at 2017-08-11 13:17:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.06 Mbit/s
95th percentile per-packet one-way delay: 86.856 ms
Loss rate: 27.30%
-- Flow 1:
Average throughput: 75.14 Mbit/s
95th percentile per-packet one-way delay: 86.724 ms
Loss rate: 27.15%
-- Flow 2:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 87.801 ms
Loss rate: 28.59%
-- Flow 3:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 66.907 ms
Loss rate: 54.63%
```

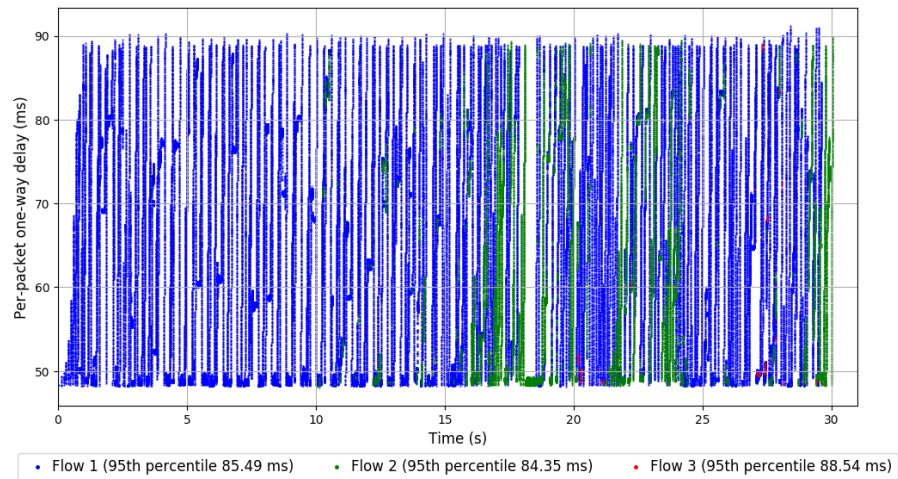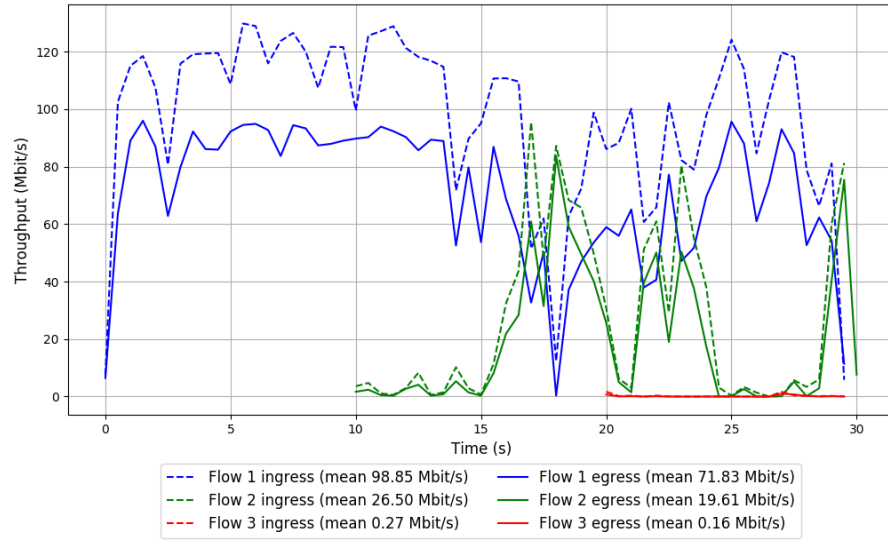Run 4: Report of TCP BBR — Data Link
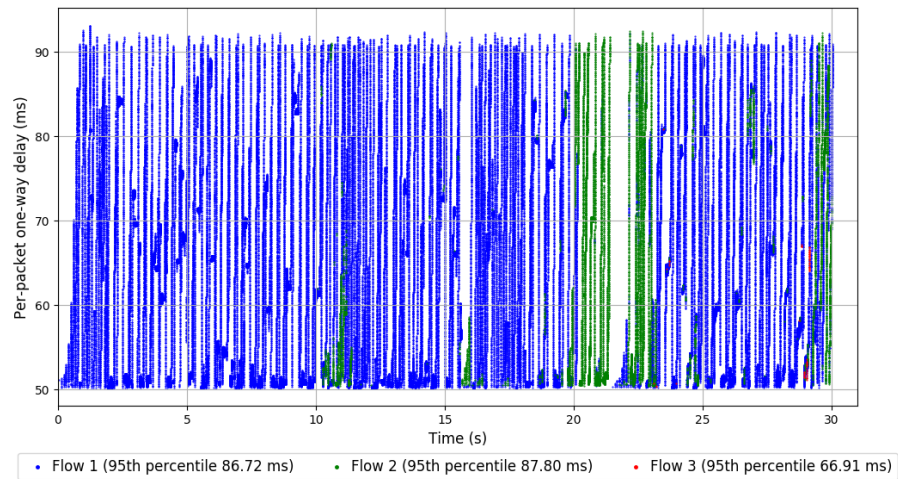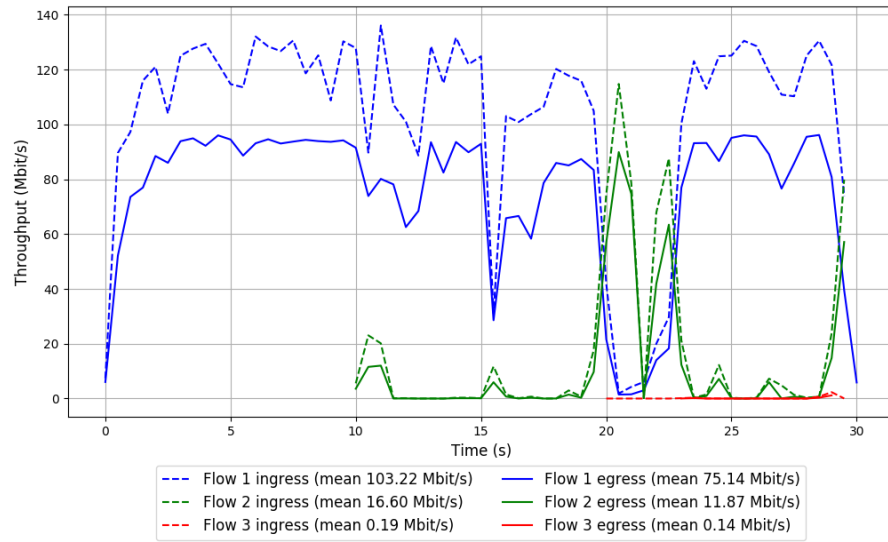
```
Run 5: Statistics of TCP BBR

Start at: 2017-08-11 10:44:32
End at: 2017-08-11 10:45:02
Local clock offset: 0.3 ms
Remote clock offset: -3.788 ms


# Below is generated by plot.py at 2017-08-11 13:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.11 Mbit/s
95th percentile per-packet one-way delay: 85.370 ms
Loss rate: 27.31%
-- Flow 1:
Average throughput: 71.83 Mbit/s
95th percentile per-packet one-way delay: 85.486 ms
Loss rate: 27.54%
-- Flow 2:
Average throughput: 19.61 Mbit/s
95th percentile per-packet one-way delay: 84.347 ms
Loss rate: 25.94%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 88.544 ms
Loss rate: 40.05%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 98.85 Mbit/s) --- Flow 1 egress (mean 71.83 Mbit/s)
Flow 2 ingress (mean 26.50 Mbit/s) --- Flow 2 egress (mean 19.61 Mbit/s)
Flow 3 ingress (mean 0.27 Mbit/s) --- Flow 3 egress (mean 0.16 Mbit/s)

Flow 1 (95th percentile 85.49 ms) • Flow 2 (95th percentile 84.35 ms) • Flow 3 (95th percentile 88.54 ms)

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```
Run 6: Statistics of TCP BBR

Start at: 2017-08-11 11:05:29
End at: 2017-08-11 11:05:59
Local clock offset: 0.309 ms
Remote clock offset: -1.42 ms

# Below is generated by plot.py at 2017-08-11 13:17:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.74 Mbit/s
95th percentile per-packet one-way delay: 87.718 ms
Loss rate: 26.82%
-- Flow 1:
Average throughput: 69.21 Mbit/s
95th percentile per-packet one-way delay: 87.496 ms
Loss rate: 26.81%
-- Flow 2:
Average throughput: 9.91 Mbit/s
95th percentile per-packet one-way delay: 87.725 ms
Loss rate: 21.81%
-- Flow 3:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 88.638 ms
Loss rate: 31.72%
```

Run 6: Report of TCP BBR — Data Link
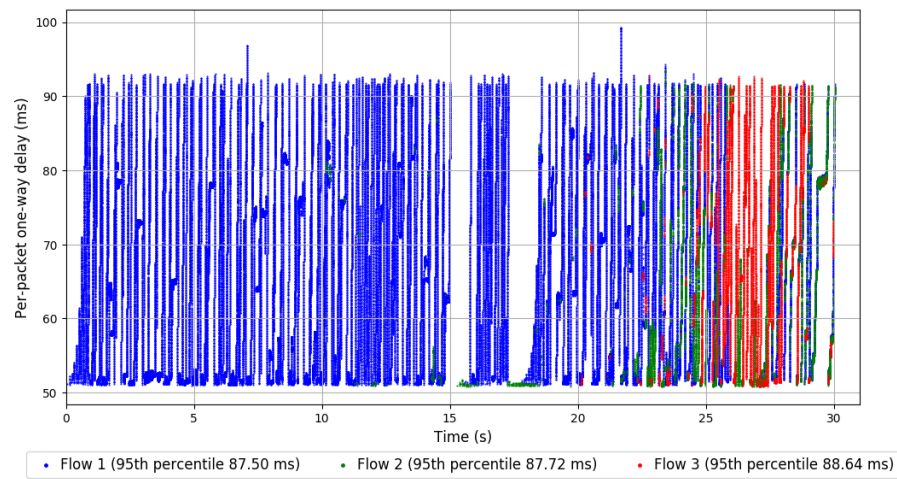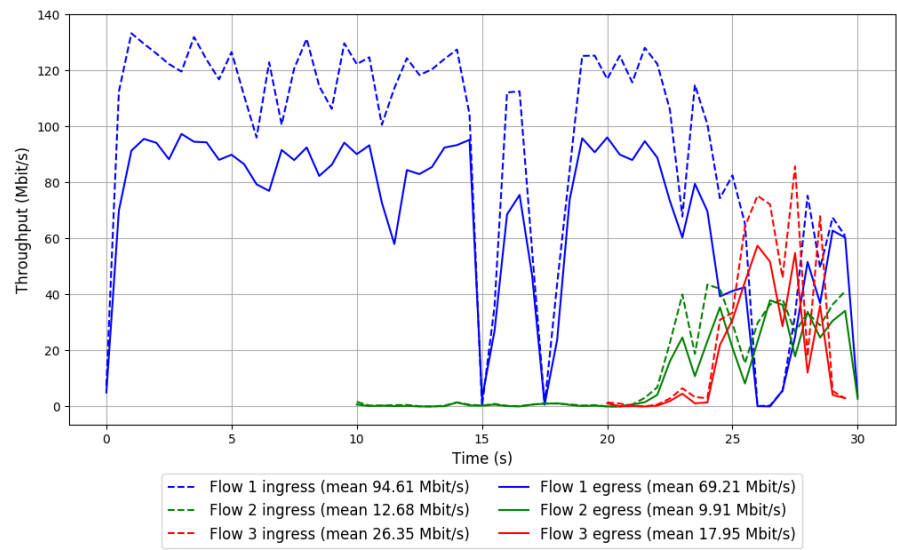
```
Run 7: Statistics of TCP BBR

Start at: 2017-08-11 11:26:30
End at: 2017-08-11 11:27:00
Local clock offset: 0.481 ms
Remote clock offset: -3.718 ms

# Below is generated by plot.py at 2017-08-11 13:17:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.58 Mbit/s
95th percentile per-packet one-way delay: 85.617 ms
Loss rate: 28.74%
-- Flow 1:
Average throughput: 71.59 Mbit/s
95th percentile per-packet one-way delay: 85.598 ms
Loss rate: 28.11%
-- Flow 2:
Average throughput: 7.53 Mbit/s
95th percentile per-packet one-way delay: 86.383 ms
Loss rate: 36.63%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 63.711 ms
Loss rate: 98.84%
```

Run 7: Report of TCP BBR — Data Link
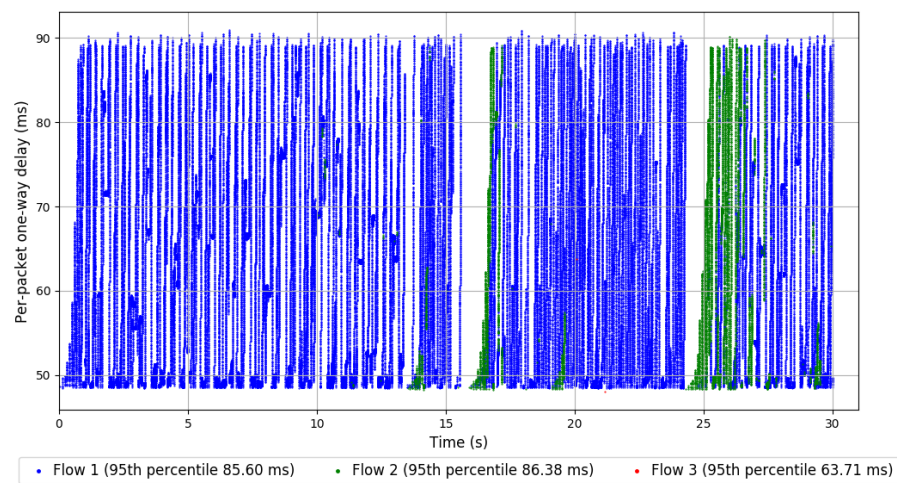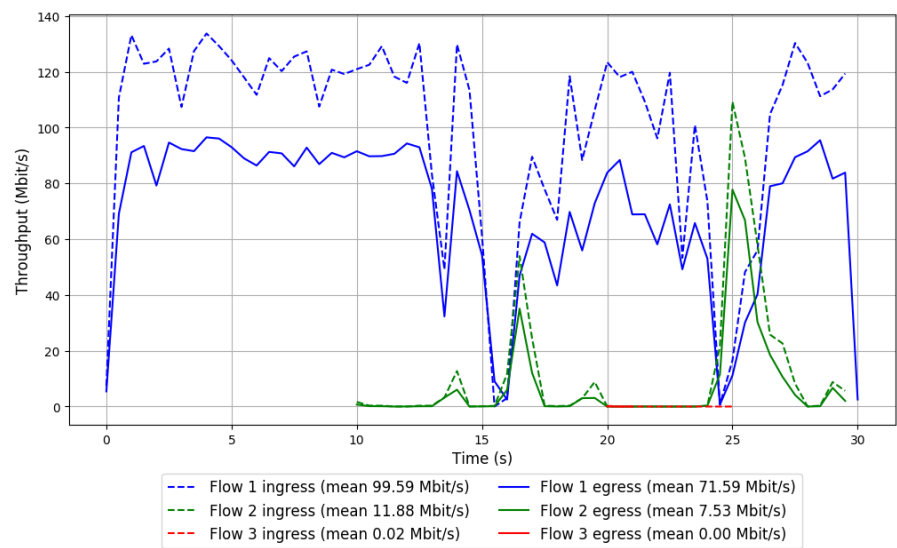
```
Run 8: Statistics of TCP BBR

Start at: 2017-08-11 11:47:32
End at: 2017-08-11 11:48:02
Local clock offset: 0.484 ms
Remote clock offset: -3.302 ms

# Below is generated by plot.py at 2017-08-11 13:17:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.57 Mbit/s
95th percentile per-packet one-way delay: 85.110 ms
Loss rate: 27.37%
-- Flow 1:
Average throughput: 51.44 Mbit/s
95th percentile per-packet one-way delay: 84.986 ms
Loss rate: 27.76%
-- Flow 2:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 85.109 ms
Loss rate: 25.83%
-- Flow 3:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 86.489 ms
Loss rate: 37.78%
```

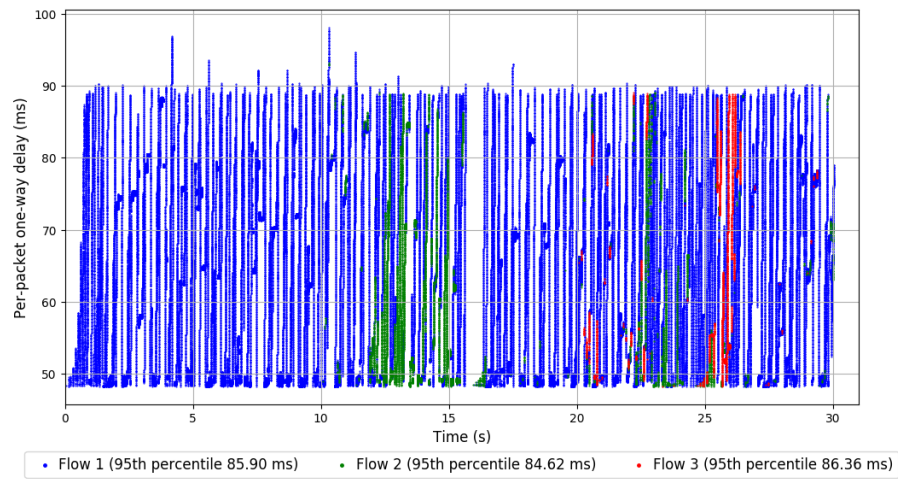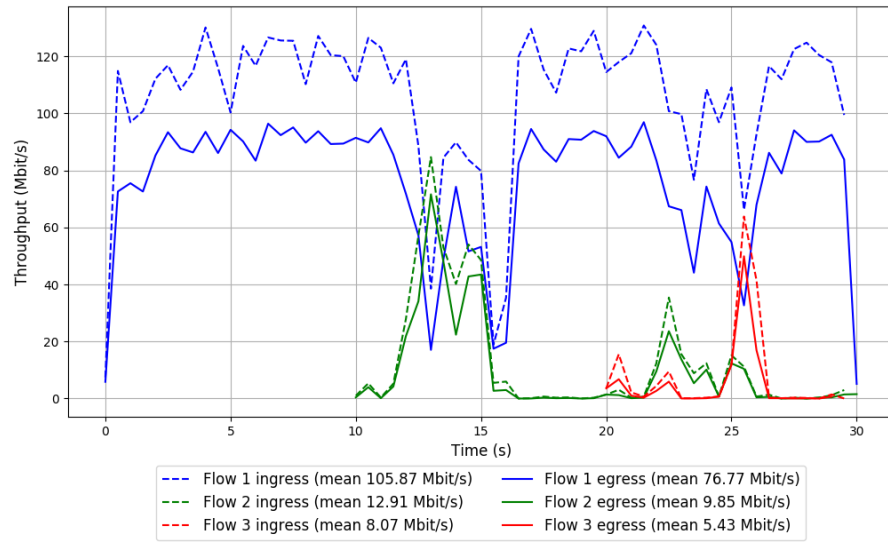Run 8: Report of TCP BBR — Data Link
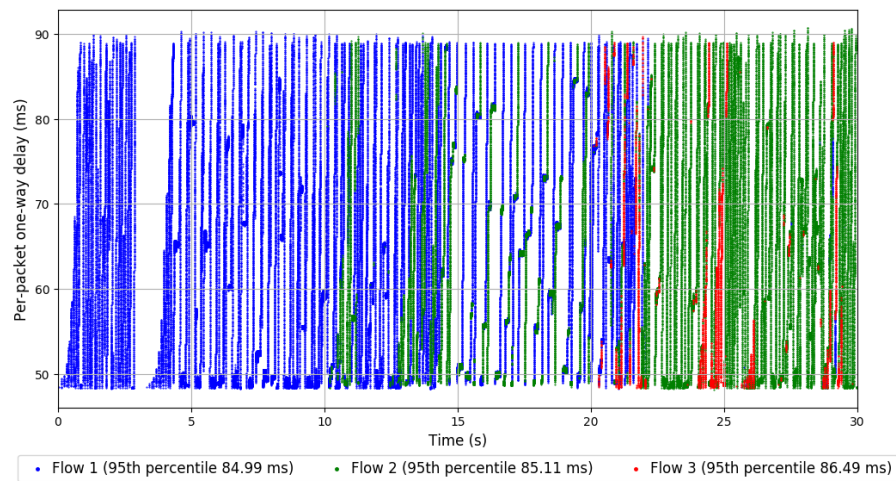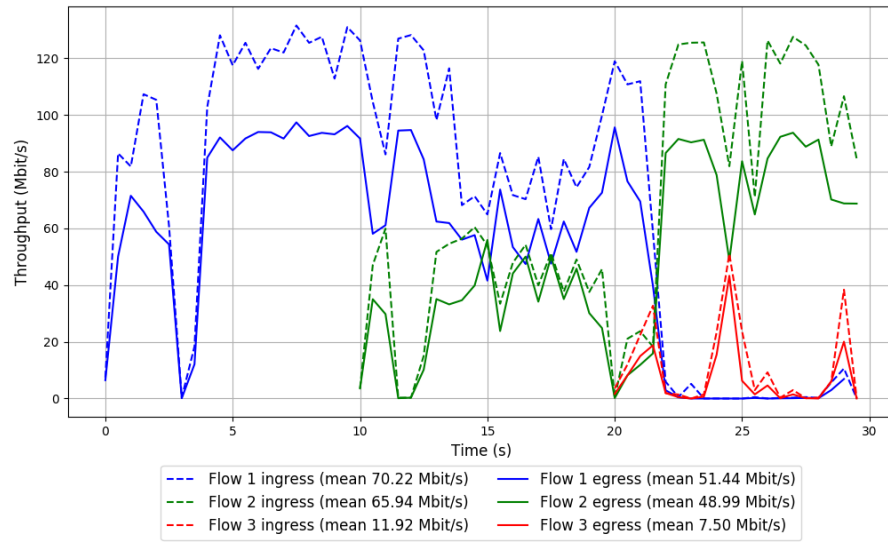
```
Run 9: Statistics of TCP BBR

Start at: 2017-08-11 12:08:32
End at: 2017-08-11 12:09:02
Local clock offset: 0.524 ms
Remote clock offset: -2.735 ms


# Below is generated by plot.py at 2017-08-11 13:17:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.00 Mbit/s
95th percentile per-packet one-way delay: 85.781 ms
Loss rate: 27.32%
-- Flow 1:
Average throughput: 76.77 Mbit/s
95th percentile per-packet one-way delay: 85.899 ms
Loss rate: 27.42%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 84.625 ms
Loss rate: 23.60%
-- Flow 3:
Average throughput: 5.43 Mbit/s
95th percentile per-packet one-way delay: 86.357 ms
Loss rate: 35.67%
```

Run 9: Report of TCP BBR — Data Link

Flow 1 ingress (mean 105.87 Mbit/s) --- Flow 1 egress (mean 76.77 Mbit/s)
Flow 2 ingress (mean 12.91 Mbit/s) --- Flow 2 egress (mean 9.85 Mbit/s)
Flow 3 ingress (mean 8.07 Mbit/s) --- Flow 3 egress (mean 5.43 Mbit/s)

Flow 1 (95th percentile 85.90 ms)   Flow 2 (95th percentile 84.62 ms)   Flow 3 (95th percentile 86.36 ms)

```
Run 10: Statistics of TCP BBR

Start at: 2017-08-11 12:29:41
End at: 2017-08-11 12:30:11
Local clock offset: 0.572 ms
Remote clock offset: -2.316 ms


# Below is generated by plot.py at 2017-08-11 13:18:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.49 Mbit/s
95th percentile per-packet one-way delay: 85.547 ms
Loss rate: 30.09%
-- Flow 1:
Average throughput: 73.41 Mbit/s
95th percentile per-packet one-way delay: 85.402 ms
Loss rate: 29.54%
-- Flow 2:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 87.732 ms
Loss rate: 36.92%
-- Flow 3:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 52.133 ms
Loss rate: 53.54%
```
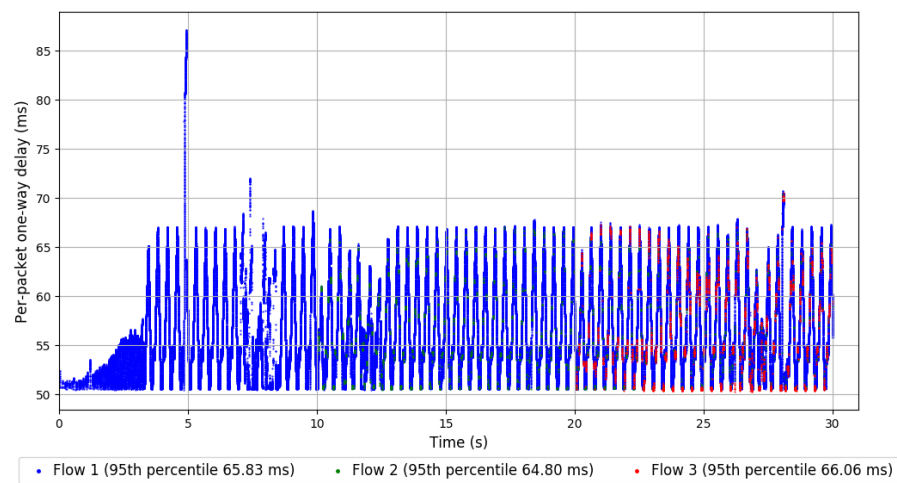
Run 10: Report of TCP BBR — Data Link
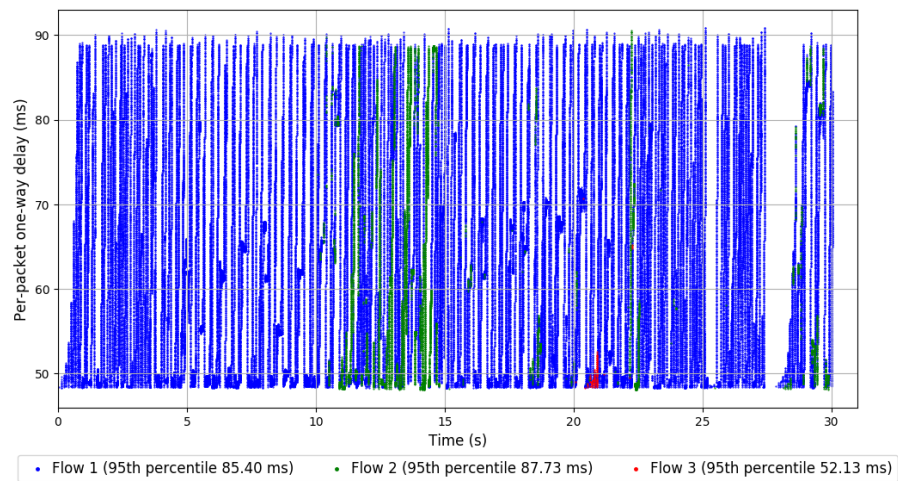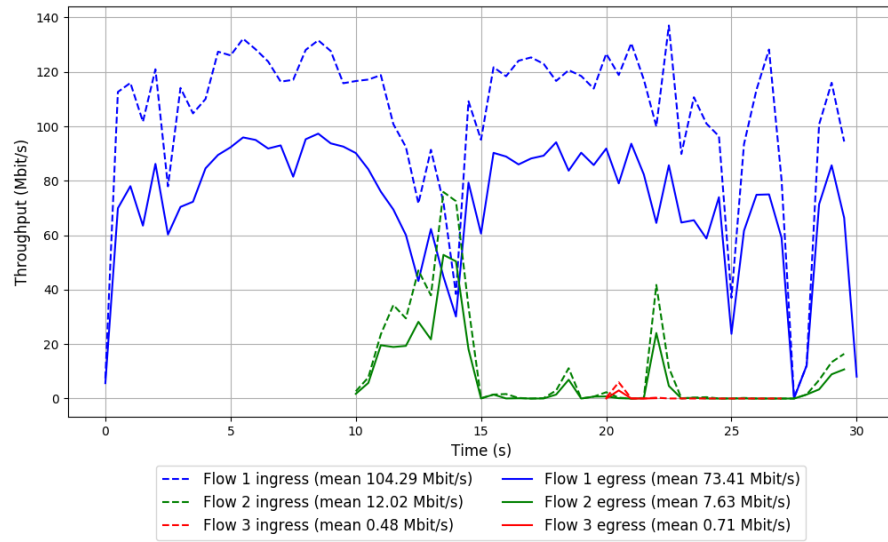
```
Run 1: Statistics of CalibratedKoho

Start at: 2017-08-11 09:12:20
End at: 2017-08-11 09:12:50
Local clock offset: 0.183 ms
Remote clock offset: 0.043 ms

# Below is generated by plot.py at 2017-08-11 13:18:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 65.830 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 85.95 Mbit/s
95th percentile per-packet one-way delay: 65.832 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 64.795 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 66.065 ms
Loss rate: 0.00%
```
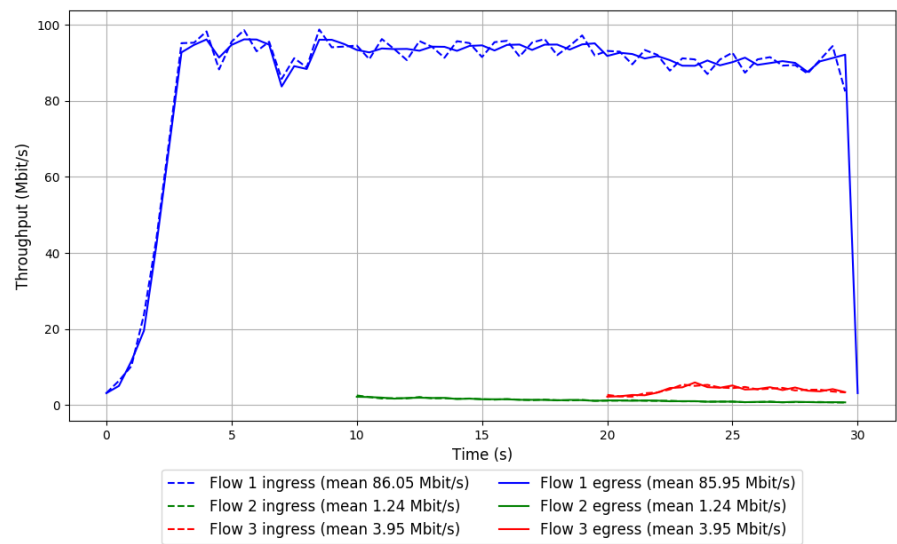
Run 1: Report of CalibratedKoho — Data Link

```
Run 2: Statistics of CalibratedKoho

Start at: 2017-08-11 09:33:18
End at: 2017-08-11 09:33:48
Local clock offset: 0.065 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2017-08-11 13:18:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.48 Mbit/s
95th percentile per-packet one-way delay: 66.558 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 87.18 Mbit/s
95th percentile per-packet one-way delay: 66.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.04 Mbit/s
95th percentile per-packet one-way delay: 66.513 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 65.794 ms
Loss rate: 0.00%
```
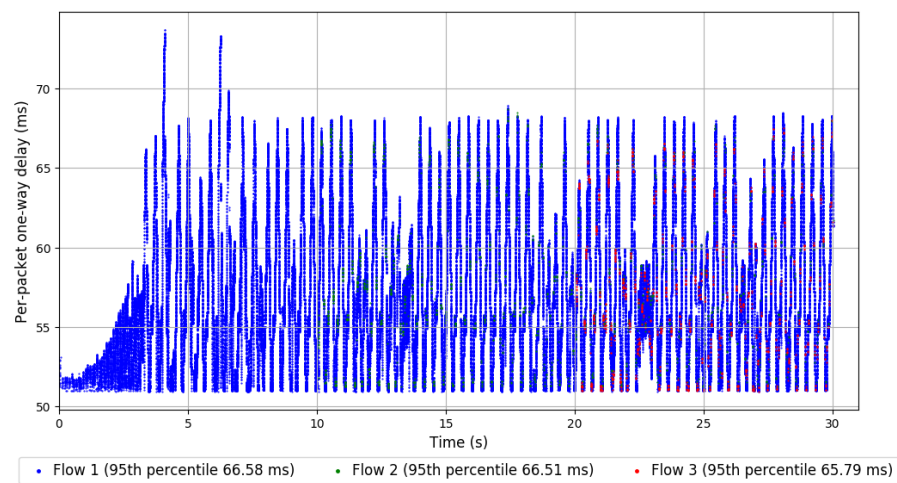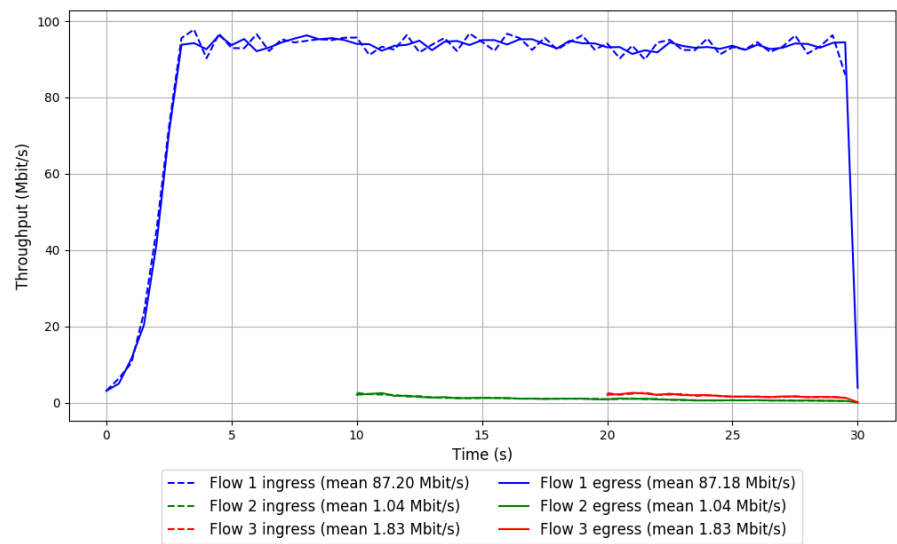
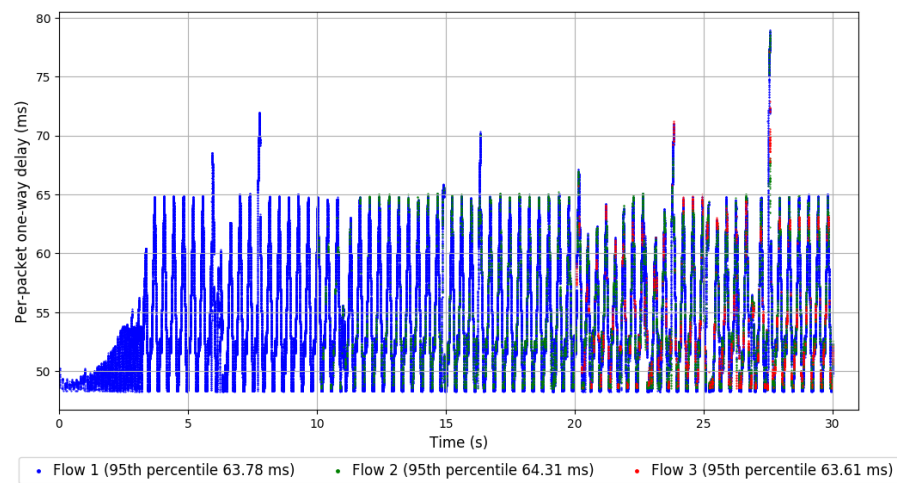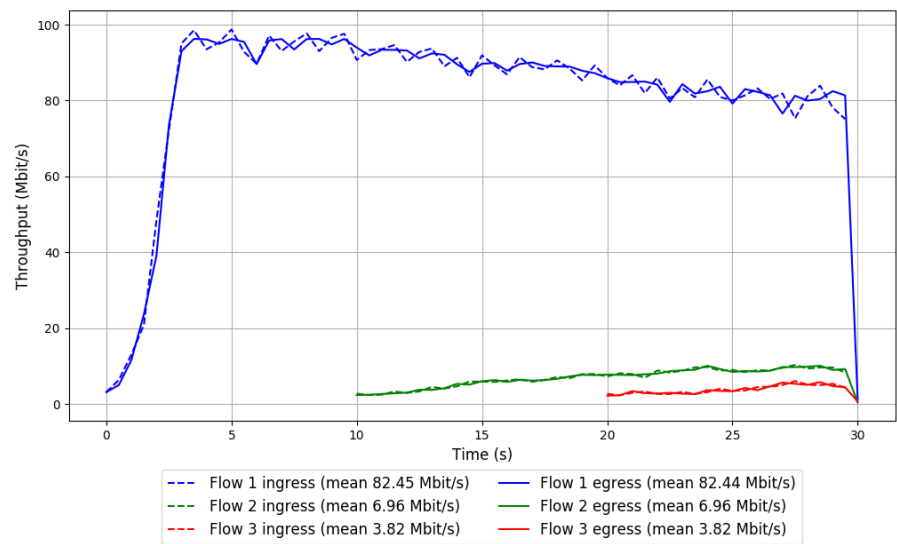Run 2: Report of CalibratedKoho — Data Link

```
Run 3: Statistics of CalibratedKoho

Start at: 2017-08-11 09:54:14
End at: 2017-08-11 09:54:44
Local clock offset: 0.199 ms
Remote clock offset: -3.003 ms

# Below is generated by plot.py at 2017-08-11 13:18:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.34 Mbit/s
95th percentile per-packet one-way delay: 63.802 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 82.44 Mbit/s
95th percentile per-packet one-way delay: 63.785 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 64.308 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.82 Mbit/s
95th percentile per-packet one-way delay: 63.614 ms
Loss rate: 0.00%
```

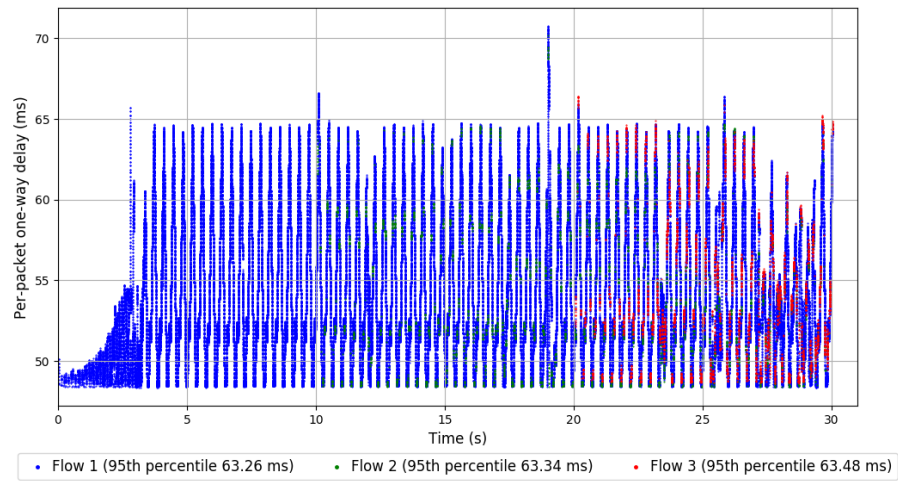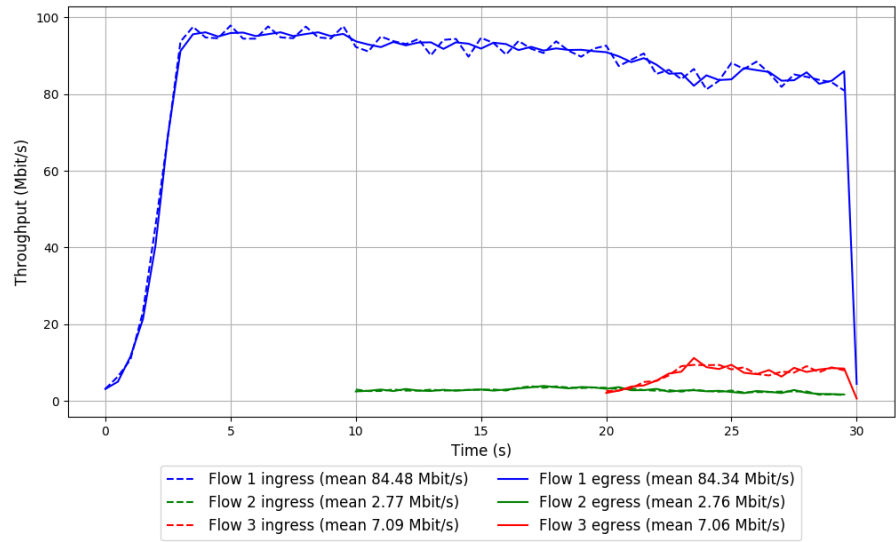Run 3: Report of CalibratedKoho — Data Link

```
Run 4: Statistics of CalibratedKoho

Start at: 2017-08-11 10:15:12
End at: 2017-08-11 10:15:42
Local clock offset: 0.172 ms
Remote clock offset: -3.337 ms

# Below is generated by plot.py at 2017-08-11 13:18:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.53 Mbit/s
95th percentile per-packet one-way delay: 63.275 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 84.34 Mbit/s
95th percentile per-packet one-way delay: 63.258 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 63.338 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 7.06 Mbit/s
95th percentile per-packet one-way delay: 63.484 ms
Loss rate: 0.31%
```

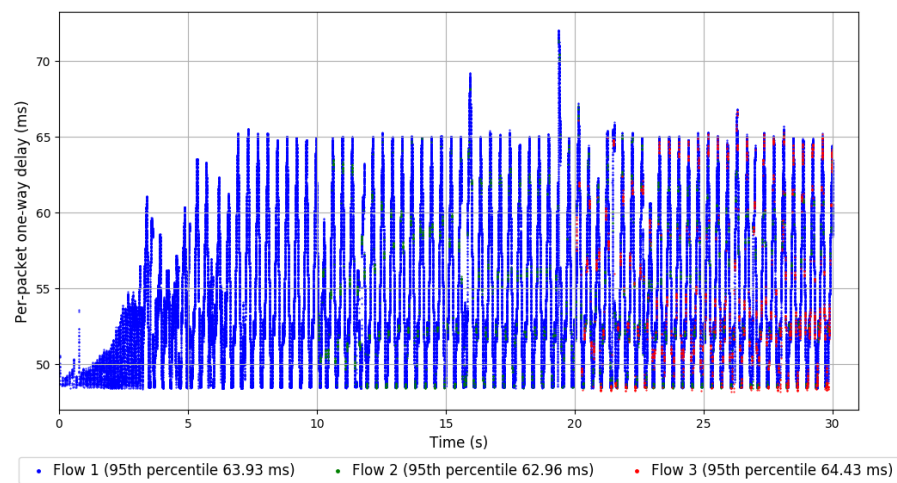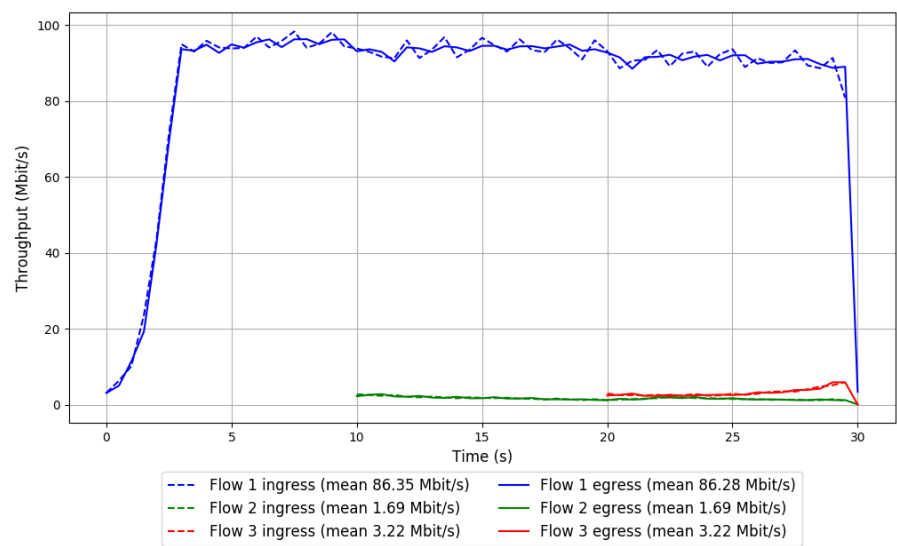Run 4: Report of CalibratedKoho — Data Link

```
Run 5: Statistics of CalibratedKoho

Start at: 2017-08-11 10:36:12
End at: 2017-08-11 10:36:42
Local clock offset: 0.362 ms
Remote clock offset: -3.744 ms


# Below is generated by plot.py at 2017-08-11 13:18:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.47 Mbit/s
95th percentile per-packet one-way delay: 63.937 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 86.28 Mbit/s
95th percentile per-packet one-way delay: 63.931 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 62.961 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 3.22 Mbit/s
95th percentile per-packet one-way delay: 64.434 ms
Loss rate: 0.00%
```

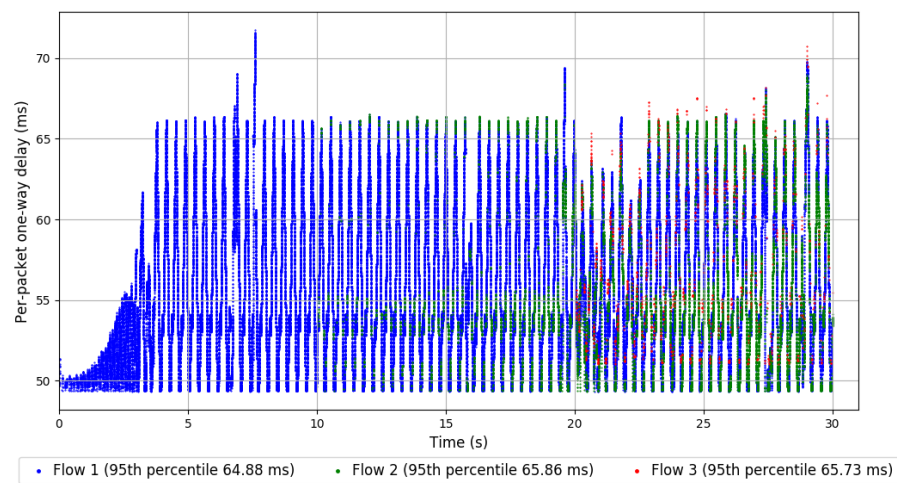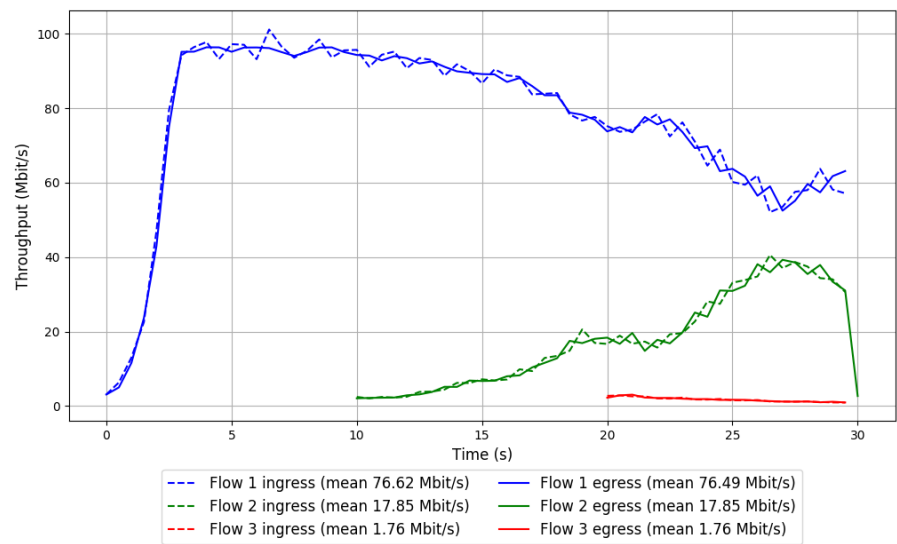Run 5: Report of CalibratedKoho — Data Link

```
Run 6: Statistics of CalibratedKoho

Start at: 2017-08-11 10:57:10
End at: 2017-08-11 10:57:40
Local clock offset: 0.389 ms
Remote clock offset: -1.367 ms

# Below is generated by plot.py at 2017-08-11 13:18:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.91 Mbit/s
95th percentile per-packet one-way delay: 65.108 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 76.49 Mbit/s
95th percentile per-packet one-way delay: 64.876 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 17.85 Mbit/s
95th percentile per-packet one-way delay: 65.855 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 1.76 Mbit/s
95th percentile per-packet one-way delay: 65.730 ms
Loss rate: 0.00%
```

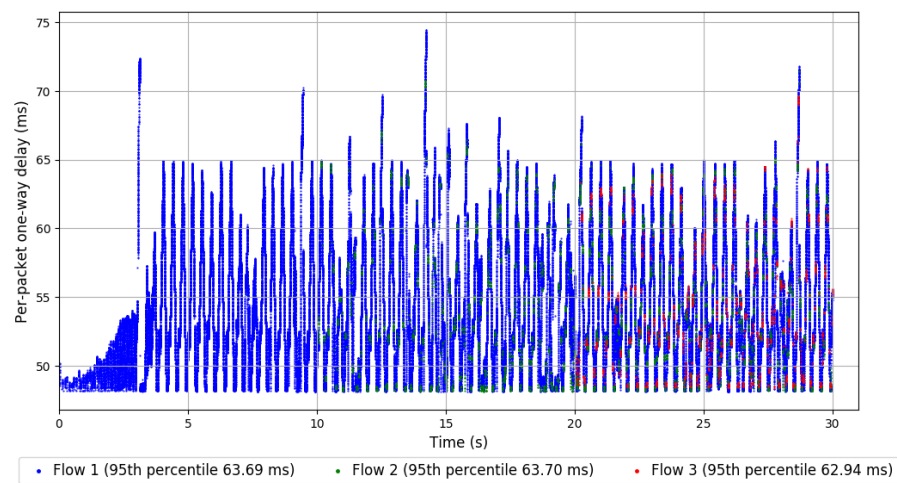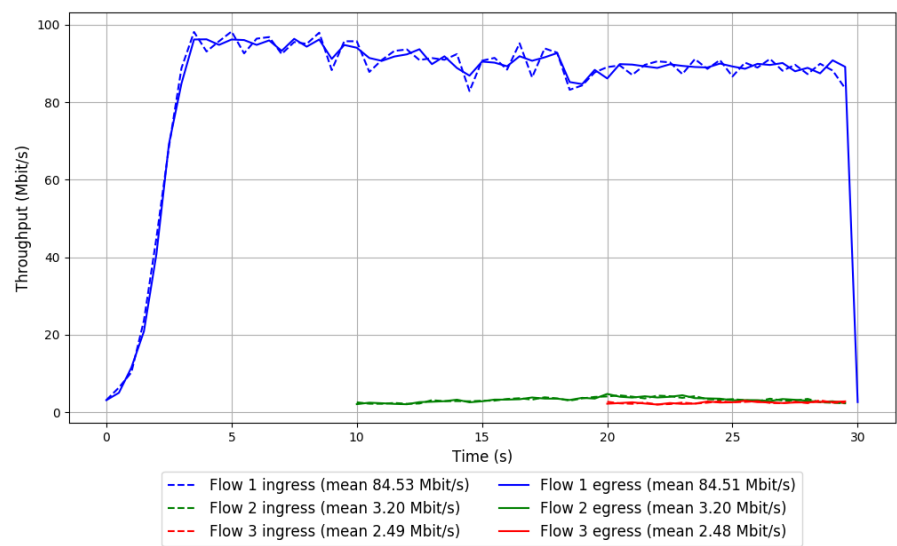Run 6: Report of CalibratedKoho — Data Link

```
Run 7: Statistics of CalibratedKoho

Start at: 2017-08-11 11:18:09
End at: 2017-08-11 11:18:39
Local clock offset: 0.449 ms
Remote clock offset: -3.884 ms

# Below is generated by plot.py at 2017-08-11 13:18:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.46 Mbit/s
95th percentile per-packet one-way delay: 63.687 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 84.51 Mbit/s
95th percentile per-packet one-way delay: 63.689 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 63.702 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.48 Mbit/s
95th percentile per-packet one-way delay: 62.935 ms
Loss rate: 0.00%
```

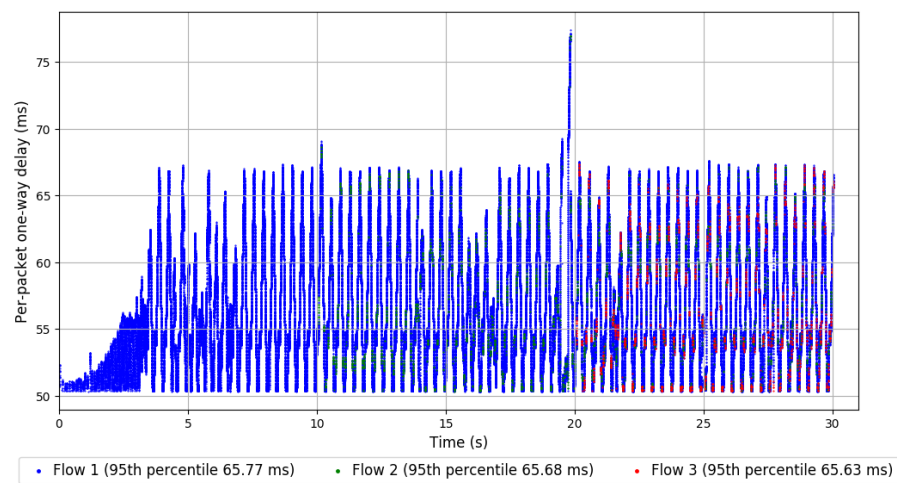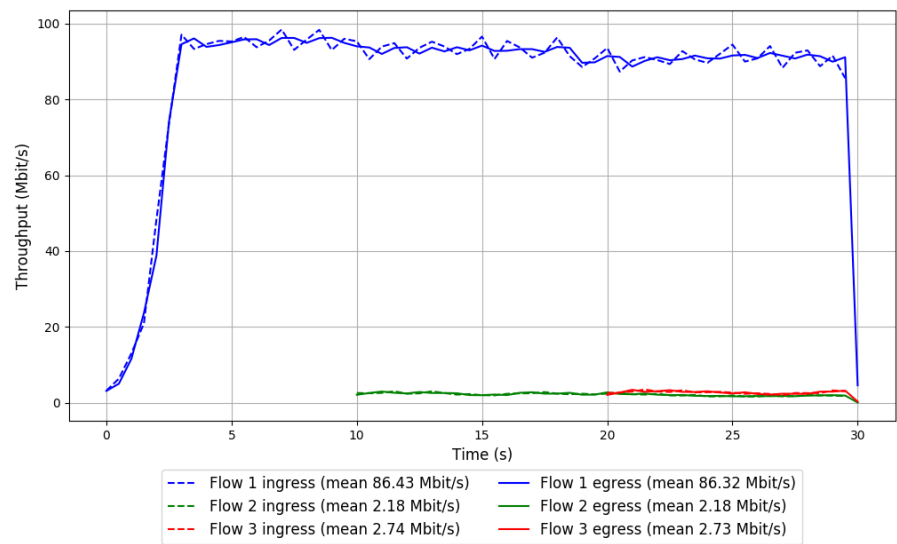Run 7: Report of CalibratedKoho — Data Link

```
Run 8: Statistics of CalibratedKoho

Start at: 2017-08-11 11:39:12
End at: 2017-08-11 11:39:42
Local clock offset: 0.443 ms
Remote clock offset: -1.584 ms


# Below is generated by plot.py at 2017-08-11 13:18:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.67 Mbit/s
95th percentile per-packet one-way delay: 65.765 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 65.766 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 65.677 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 65.631 ms
Loss rate: 0.04%
```

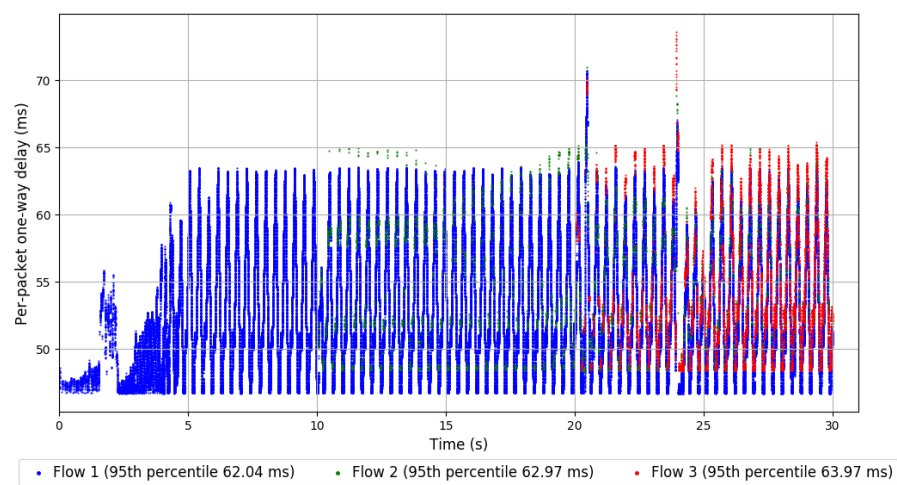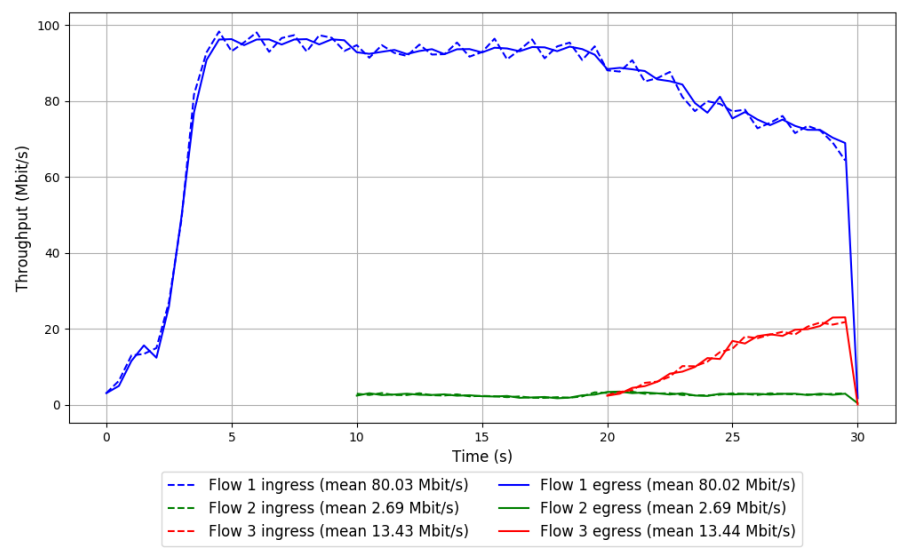Run 8: Report of CalibratedKoho — Data Link

```
Run 9: Statistics of CalibratedKoho

Start at: 2017-08-11 12:00:12
End at: 2017-08-11 12:00:42
Local clock offset: 0.517 ms
Remote clock offset: -3.128 ms


# Below is generated by plot.py at 2017-08-11 13:18:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.26 Mbit/s
95th percentile per-packet one-way delay: 62.235 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 80.02 Mbit/s
95th percentile per-packet one-way delay: 62.040 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 2.69 Mbit/s
95th percentile per-packet one-way delay: 62.972 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 63.974 ms
Loss rate: 0.00%
```

Run 9: Report of CalibratedKoho — Data Link

```
Run 10: Statistics of CalibratedKoho

Start at: 2017-08-11 12:21:19
End at: 2017-08-11 12:21:49
Local clock offset: 0.578 ms
Remote clock offset: -2.377 ms


# Below is generated by plot.py at 2017-08-11 13:19:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.46 Mbit/s
95th percentile per-packet one-way delay: 63.884 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 86.32 Mbit/s
95th percentile per-packet one-way delay: 63.910 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 63.136 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 63.877 ms
Loss rate: 0.00%
```

Run 10: Report of CalibratedKoho — Data Link
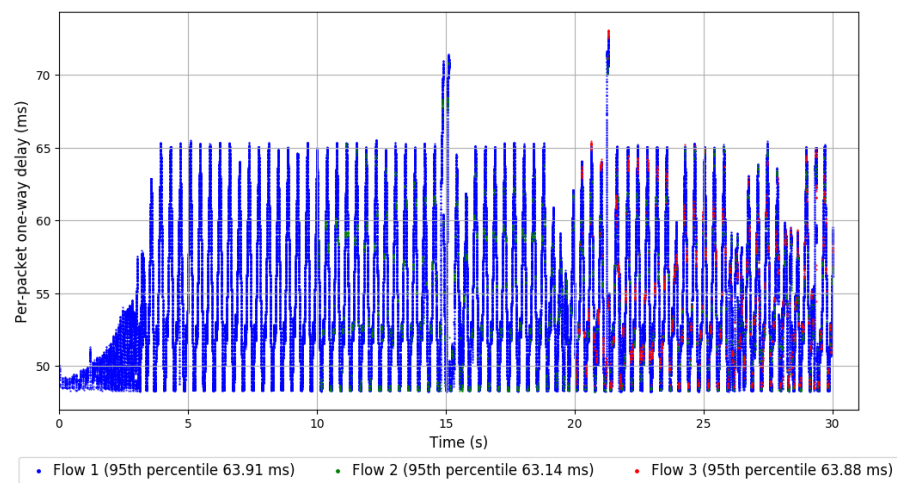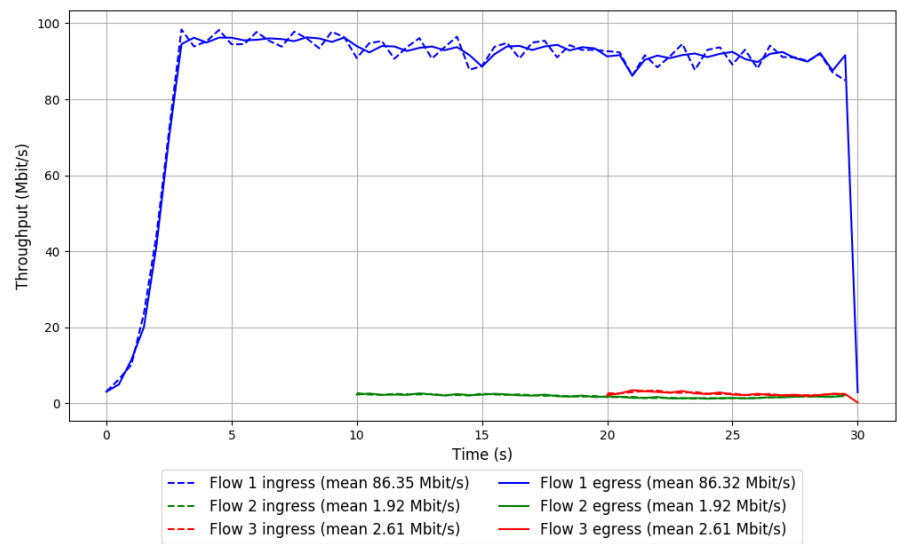
```
Run 1: Statistics of Copa

Start at: 2017-08-11 09:10:52
End at: 2017-08-11 09:11:22
Local clock offset: 0.161 ms
Remote clock offset: -2.028 ms

# Below is generated by plot.py at 2017-08-11 13:19:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.99 Mbit/s
95th percentile per-packet one-way delay: 53.607 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 51.371 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 30.11 Mbit/s
95th percentile per-packet one-way delay: 54.674 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.39 Mbit/s
95th percentile per-packet one-way delay: 61.100 ms
Loss rate: 0.01%
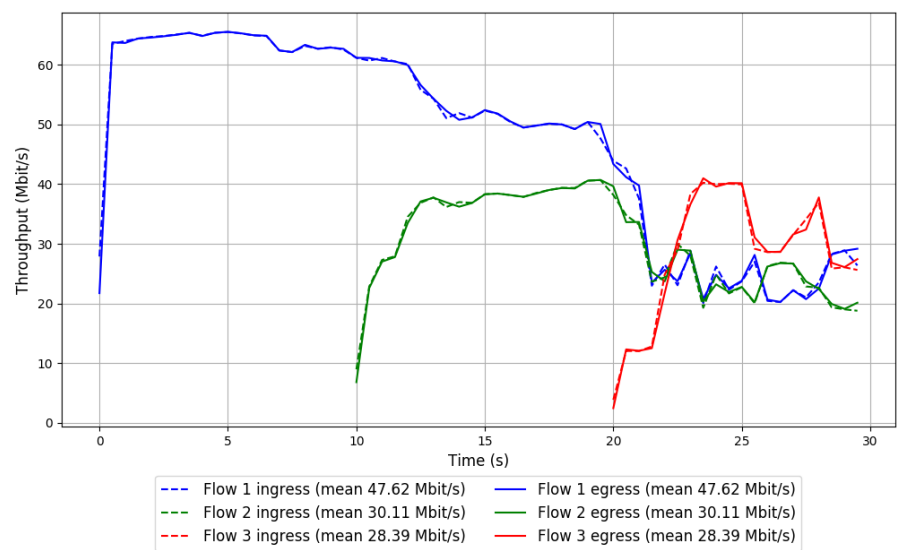```

Run 1: Report of Copa — Data Link
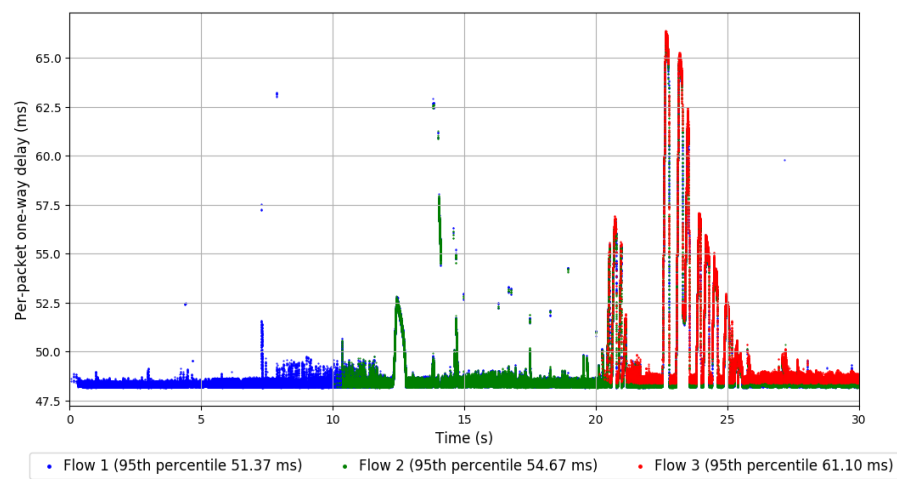
```
Run 2: Statistics of Copa

Start at: 2017-08-11 09:31:50
End at: 2017-08-11 09:32:20
Local clock offset: 0.136 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2017-08-11 13:19:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 80.74 Mbit/s
95th percentile per-packet one-way delay: 54.189 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.28 Mbit/s
95th percentile per-packet one-way delay: 53.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.75 Mbit/s
95th percentile per-packet one-way delay: 55.131 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 56.071 ms
Loss rate: 0.11%
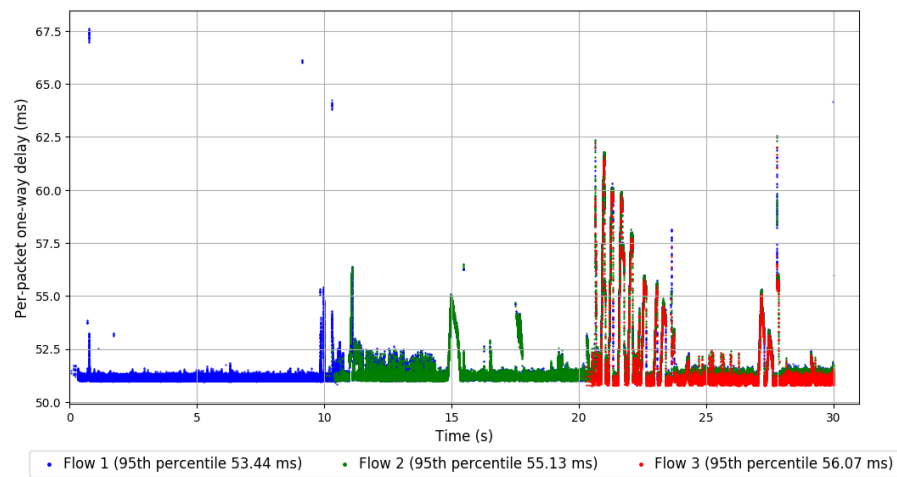```
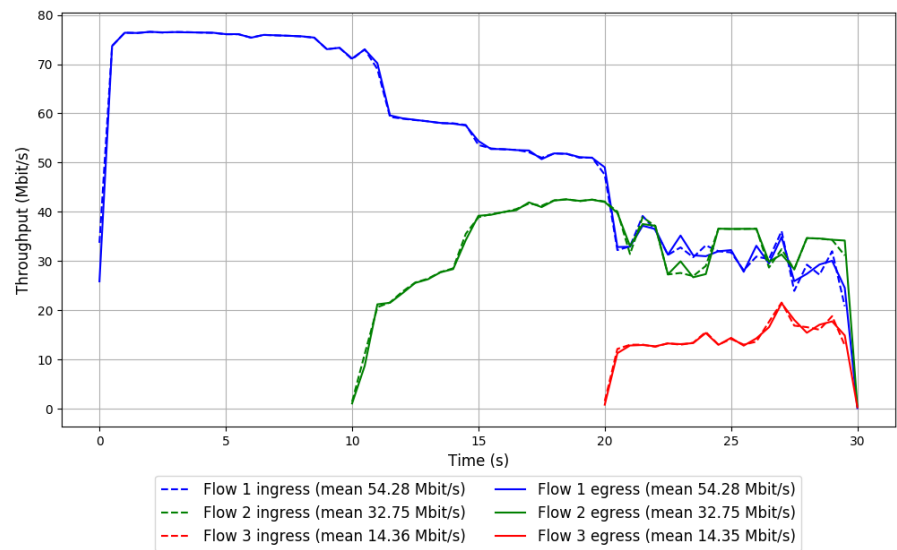
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2017-08-11 09:52:47
End at: 2017-08-11 09:53:17
Local clock offset: 0.192 ms
Remote clock offset: -0.97 ms


# Below is generated by plot.py at 2017-08-11 13:19:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.48 Mbit/s
95th percentile per-packet one-way delay: 51.158 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 40.76 Mbit/s
95th percentile per-packet one-way delay: 51.083 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 34.03 Mbit/s
95th percentile per-packet one-way delay: 51.208 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 18.40 Mbit/s
95th percentile per-packet one-way delay: 54.033 ms
Loss rate: 0.19%
```
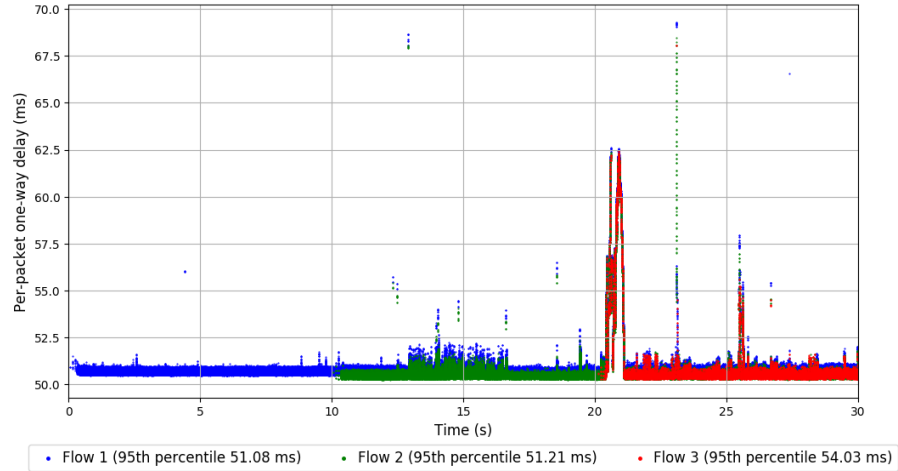
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2017-08-11 10:13:43
End at: 2017-08-11 10:14:14
Local clock offset: 0.271 ms
Remote clock offset: -1.295 ms


# Below is generated by plot.py at 2017-08-11 13:19:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.74 Mbit/s
95th percentile per-packet one-way delay: 58.359 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 57.46 Mbit/s
95th percentile per-packet one-way delay: 56.489 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 23.66 Mbit/s
95th percentile per-packet one-way delay: 58.955 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 65.866 ms
Loss rate: 0.17%
```

Run 4: Report of Copa — Data Link
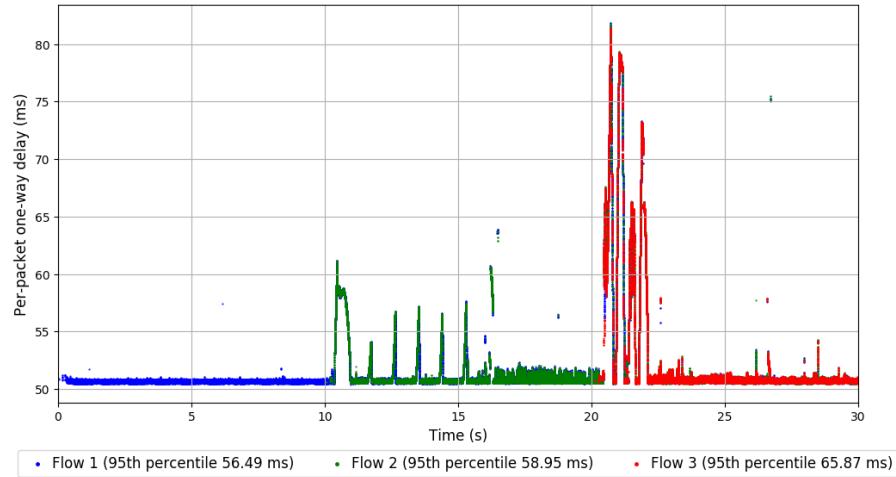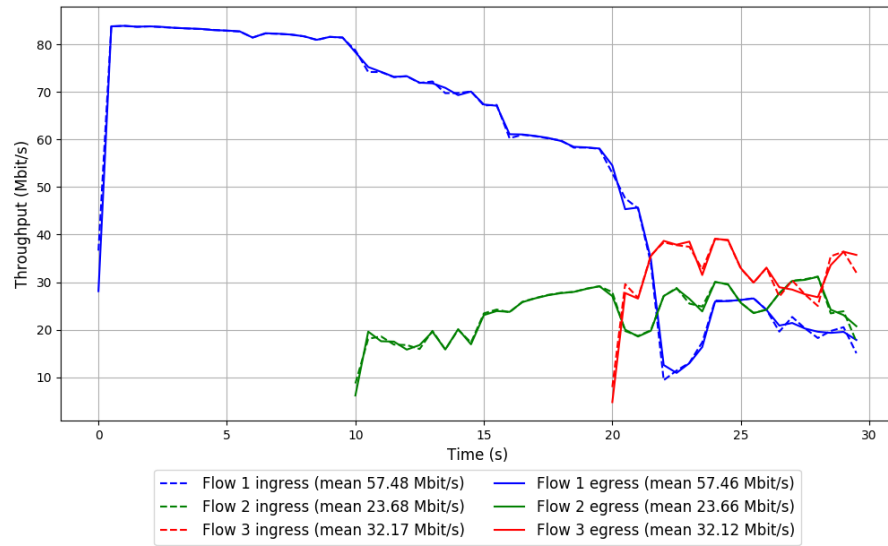
```
Run 5: Statistics of Copa

Start at: 2017-08-11 10:34:45
End at: 2017-08-11 10:35:15
Local clock offset: 0.336 ms
Remote clock offset: -3.738 ms


# Below is generated by plot.py at 2017-08-11 13:19:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.61 Mbit/s
95th percentile per-packet one-way delay: 51.572 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 44.26 Mbit/s
95th percentile per-packet one-way delay: 49.311 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 53.015 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 17.65 Mbit/s
95th percentile per-packet one-way delay: 54.499 ms
Loss rate: 0.05%
```
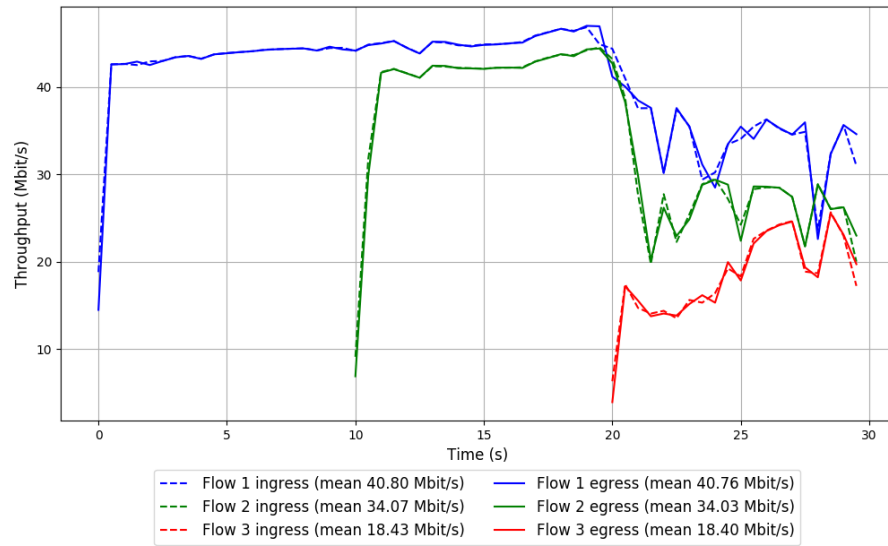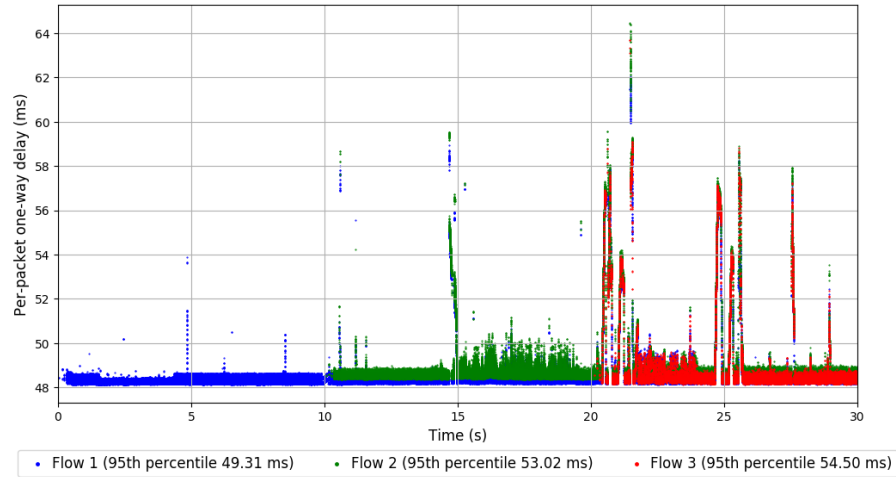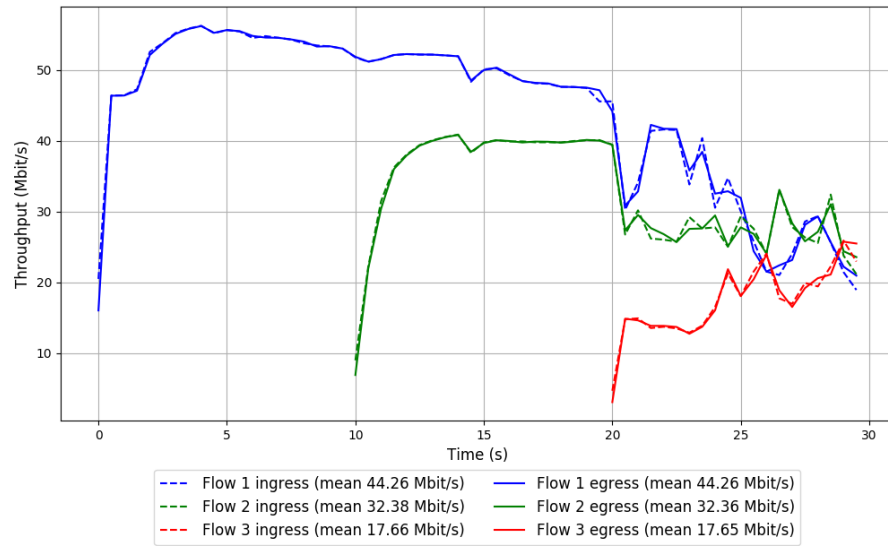
Run 5: Report of Copa — Data Link

```
Run 6: Statistics of Copa

Start at: 2017-08-11 10:55:43
End at: 2017-08-11 10:56:13
Local clock offset: 0.412 ms
Remote clock offset: -3.995 ms

# Below is generated by plot.py at 2017-08-11 13:19:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.66 Mbit/s
95th percentile per-packet one-way delay: 52.713 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 50.943 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 36.57 Mbit/s
95th percentile per-packet one-way delay: 53.430 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 61.903 ms
Loss rate: 0.00%
```

Run 6: Report of Copa — Data Link

Flow 1 ingress (mean 40.25 Mbit/s) --- Flow 1 egress (mean 40.24 Mbit/s)
Flow 2 ingress (mean 36.58 Mbit/s) --- Flow 2 egress (mean 36.57 Mbit/s)
Flow 3 ingress (mean 18.51 Mbit/s) --- Flow 3 egress (mean 18.51 Mbit/s)

Flow 1 (95th percentile 50.94 ms)   Flow 2 (95th percentile 53.43 ms)   Flow 3 (95th percentile 61.90 ms)
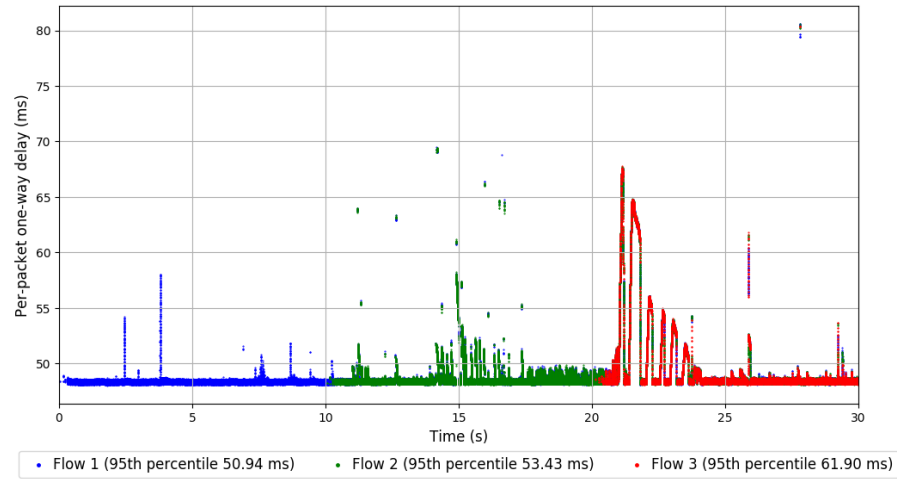
```
Run 7: Statistics of Copa

Start at: 2017-08-11 11:16:41
End at: 2017-08-11 11:17:11
Local clock offset: 0.437 ms
Remote clock offset: -3.912 ms


# Below is generated by plot.py at 2017-08-11 13:20:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.64 Mbit/s
95th percentile per-packet one-way delay: 49.932 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 44.77 Mbit/s
95th percentile per-packet one-way delay: 49.333 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 27.62 Mbit/s
95th percentile per-packet one-way delay: 51.090 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 37.93 Mbit/s
95th percentile per-packet one-way delay: 55.520 ms
Loss rate: 1.71%
```
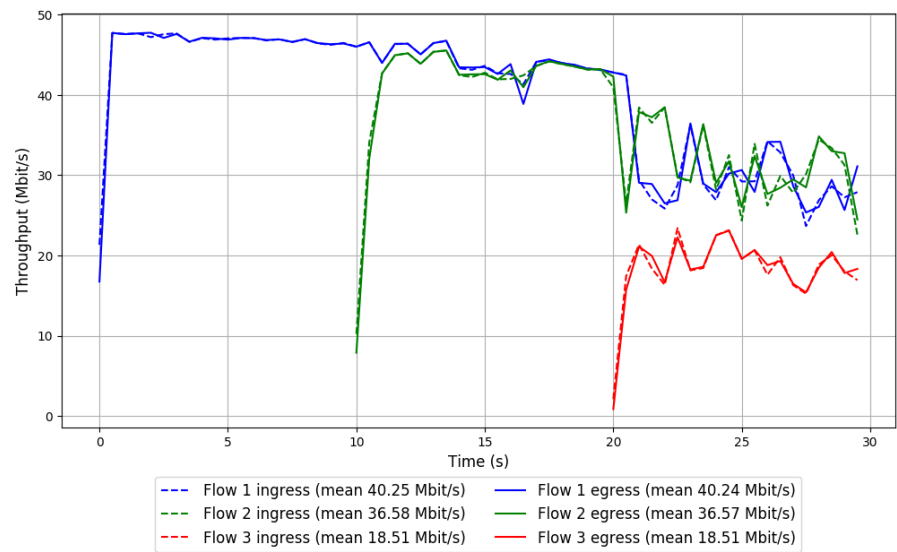
Run 7: Report of Copa — Data Link
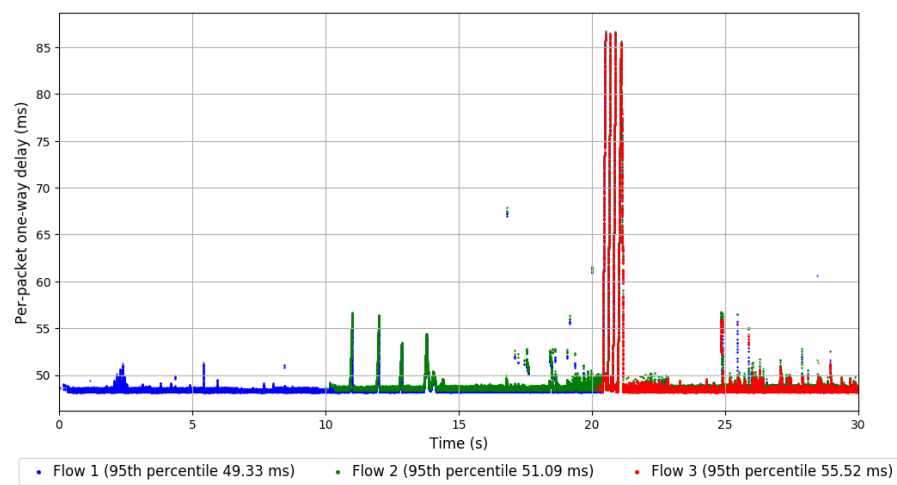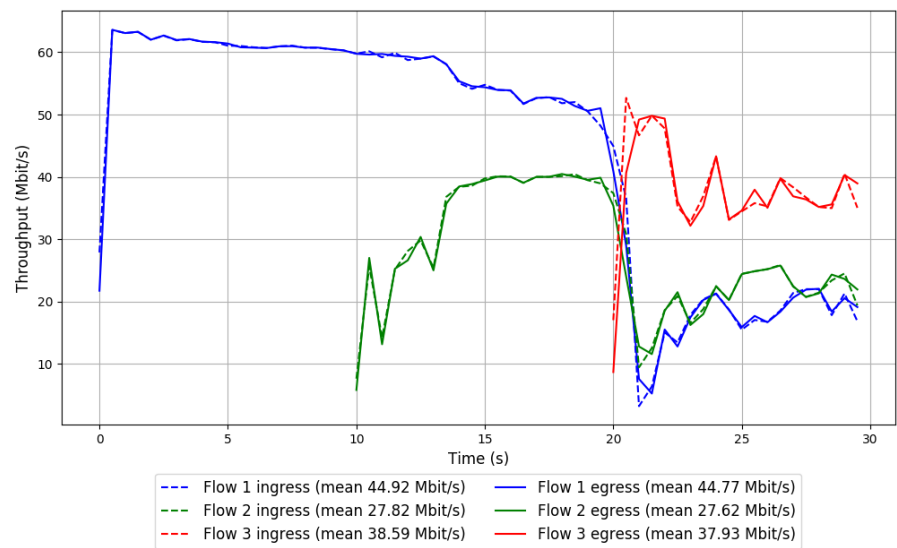
```
Run 8: Statistics of Copa

Start at: 2017-08-11 11:37:44
End at: 2017-08-11 11:38:14
Local clock offset: 0.437 ms
Remote clock offset: -1.552 ms

# Below is generated by plot.py at 2017-08-11 13:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.34 Mbit/s
95th percentile per-packet one-way delay: 53.064 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 49.29 Mbit/s
95th percentile per-packet one-way delay: 52.168 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 31.04 Mbit/s
95th percentile per-packet one-way delay: 54.397 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 28.79 Mbit/s
95th percentile per-packet one-way delay: 70.010 ms
Loss rate: 0.47%
```

Run 8: Report of Copa — Data Link
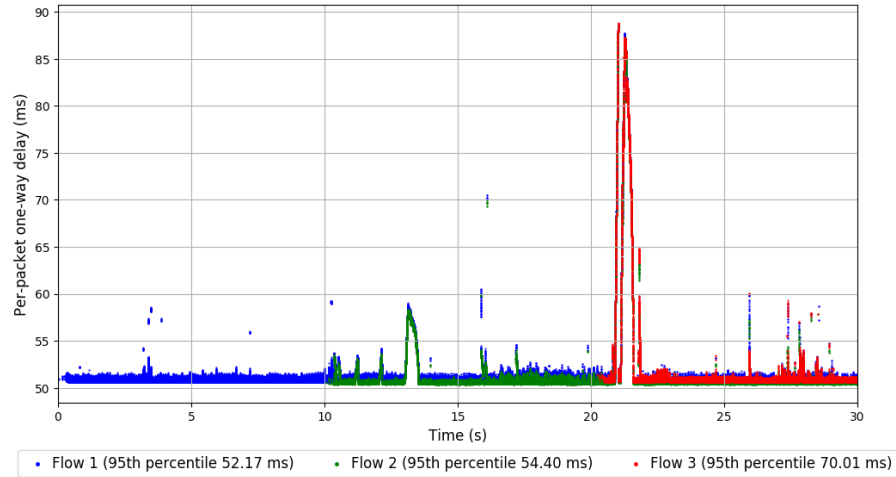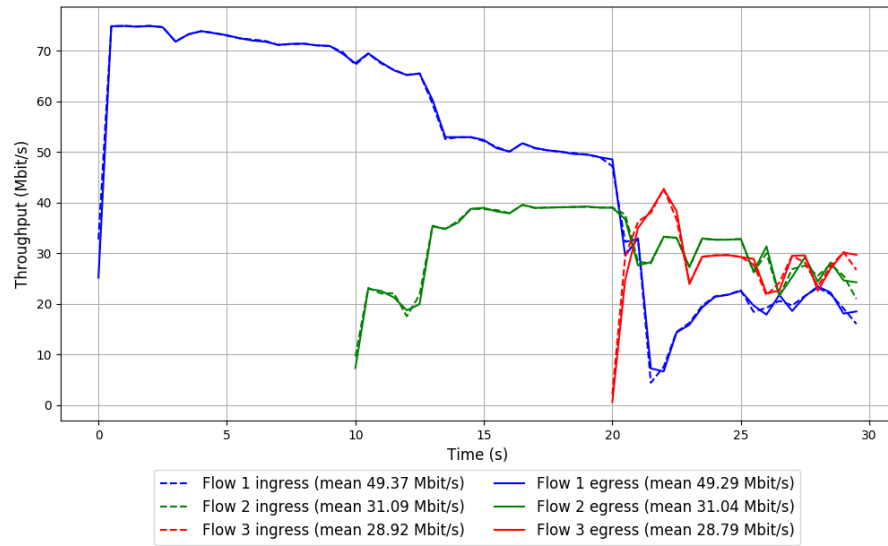
```
Run 9: Statistics of Copa

Start at: 2017-08-11 11:58:45
End at: 2017-08-11 11:59:15
Local clock offset: 0.612 ms
Remote clock offset: -3.052 ms


# Below is generated by plot.py at 2017-08-11 13:20:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.13 Mbit/s
95th percentile per-packet one-way delay: 49.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 49.342 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 49.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 56.531 ms
Loss rate: 0.00%
```

Run 9: Report of Copa — Data Link
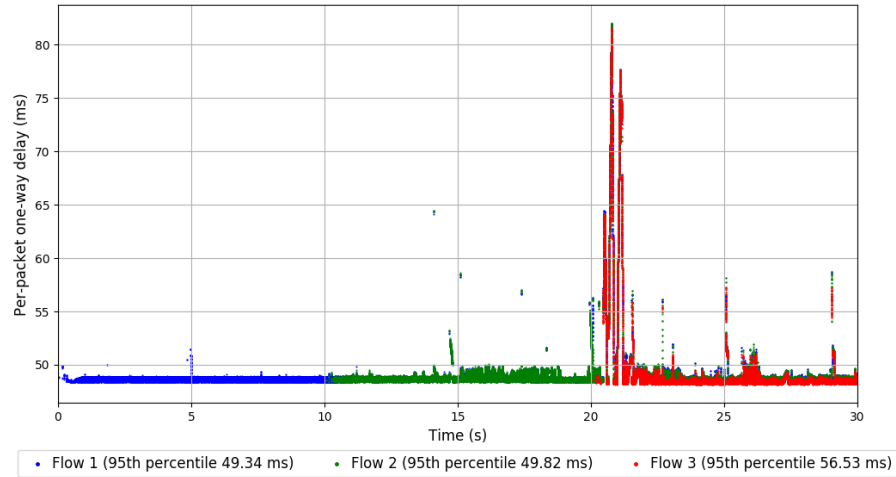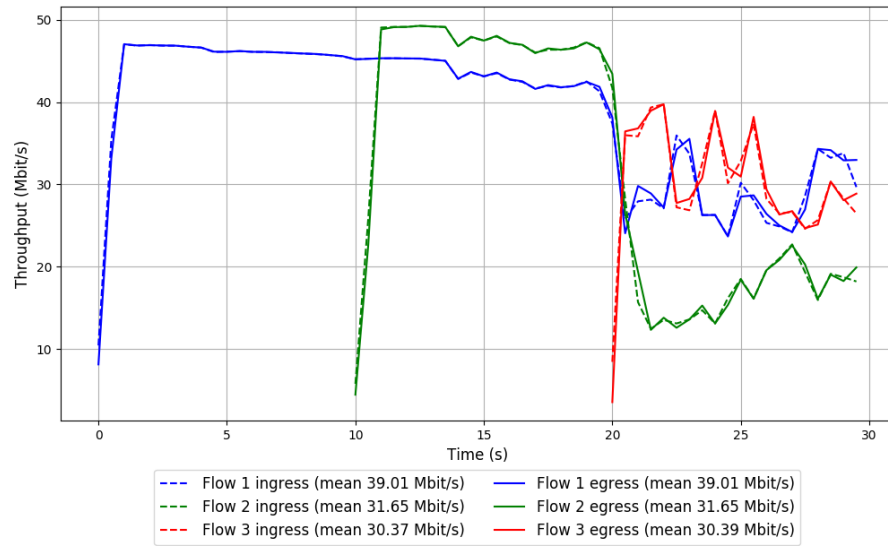
```
Run 10: Statistics of Copa

Start at: 2017-08-11 12:19:52
End at: 2017-08-11 12:20:22
Local clock offset: 0.504 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2017-08-11 13:20:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.09 Mbit/s
95th percentile per-packet one-way delay: 53.285 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 52.520 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 31.26 Mbit/s
95th percentile per-packet one-way delay: 54.039 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 13.80 Mbit/s
95th percentile per-packet one-way delay: 56.922 ms
Loss rate: 0.00%
```

Run 10: Report of Copa — Data Link
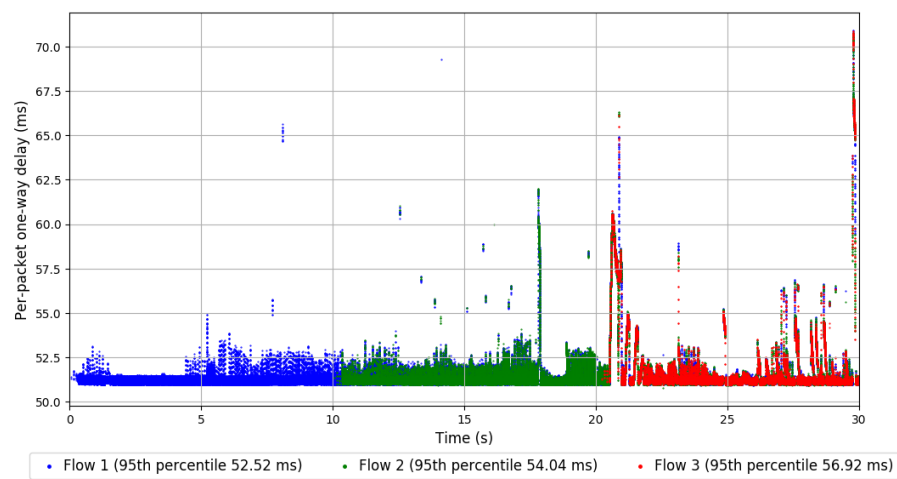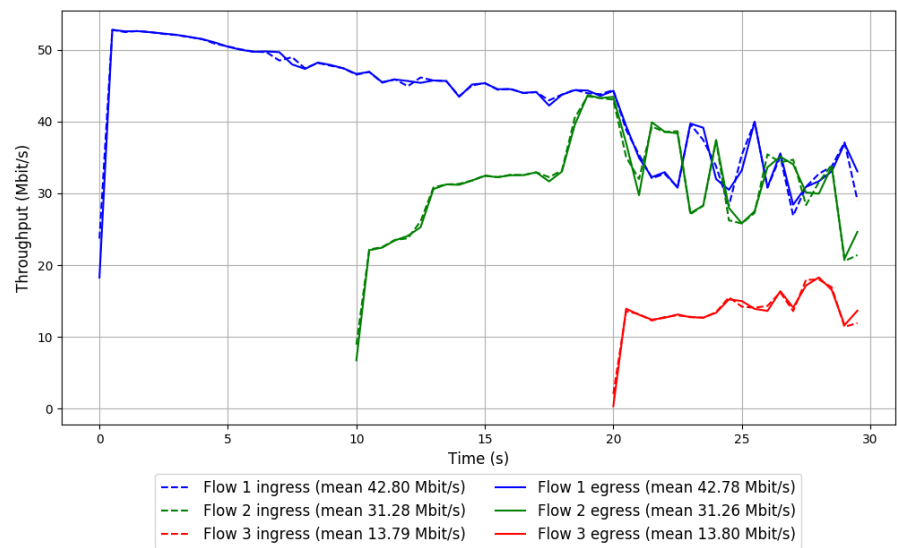
```
Run 1: Statistics of TCP Cubic

Start at: 2017-08-11 09:22:06
End at: 2017-08-11 09:22:36
Local clock offset: 0.157 ms
Remote clock offset: -0.297 ms


# Below is generated by plot.py at 2017-08-11 13:20:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.54 Mbit/s
95th percentile per-packet one-way delay: 84.717 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 71.67 Mbit/s
95th percentile per-packet one-way delay: 84.358 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 27.84 Mbit/s
95th percentile per-packet one-way delay: 86.733 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 16.15 Mbit/s
95th percentile per-packet one-way delay: 78.959 ms
Loss rate: 0.07%
```

Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2017-08-11 09:43:03
End at: 2017-08-11 09:43:33
Local clock offset: 0.086 ms
Remote clock offset: -0.753 ms


# Below is generated by plot.py at 2017-08-11 13:20:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.60 Mbit/s
95th percentile per-packet one-way delay: 85.612 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 76.70 Mbit/s
95th percentile per-packet one-way delay: 85.722 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 20.88 Mbit/s
95th percentile per-packet one-way delay: 85.324 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 15.22 Mbit/s
95th percentile per-packet one-way delay: 86.020 ms
Loss rate: 0.11%
```

Run 2: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 77.04 Mbit/s) ——— Flow 1 egress (mean 76.70 Mbit/s)
- - - Flow 2 ingress (mean 21.04 Mbit/s) ——— Flow 2 egress (mean 20.88 Mbit/s)
- - - Flow 3 ingress (mean 15.20 Mbit/s) ——— Flow 3 egress (mean 15.22 Mbit/s)

• Flow 1 (95th percentile 85.72 ms)   • Flow 2 (95th percentile 85.32 ms)   • Flow 3 (95th percentile 86.02 ms)
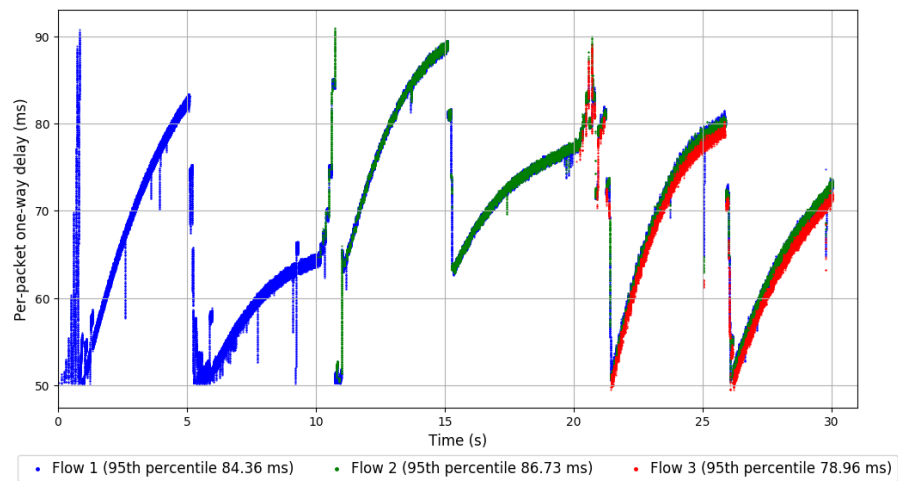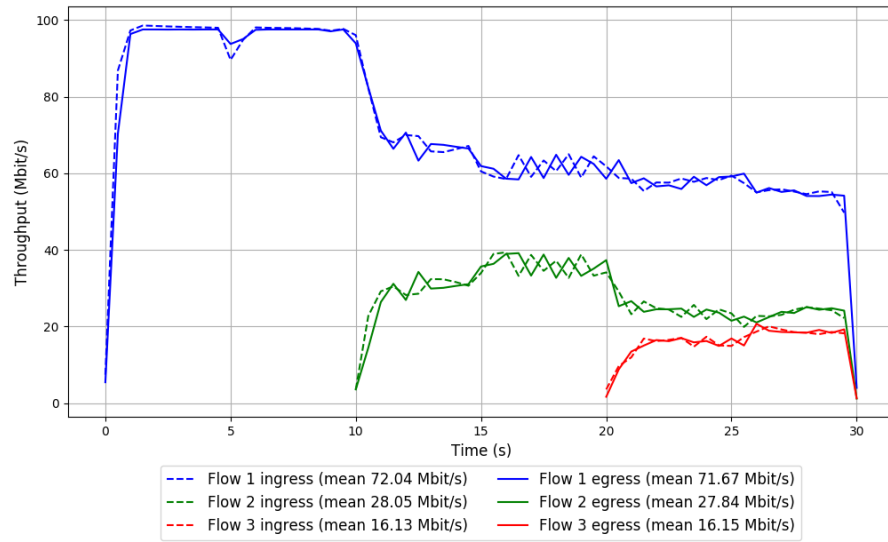
```
Run 3: Statistics of TCP Cubic

Start at: 2017-08-11 10:03:59
End at: 2017-08-11 10:04:29
Local clock offset: 0.147 ms
Remote clock offset: -1.12 ms


# Below is generated by plot.py at 2017-08-11 13:20:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.33 Mbit/s
95th percentile per-packet one-way delay: 80.622 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 70.72 Mbit/s
95th percentile per-packet one-way delay: 80.312 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 25.30 Mbit/s
95th percentile per-packet one-way delay: 82.153 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 23.58 Mbit/s
95th percentile per-packet one-way delay: 81.439 ms
Loss rate: 1.01%
```
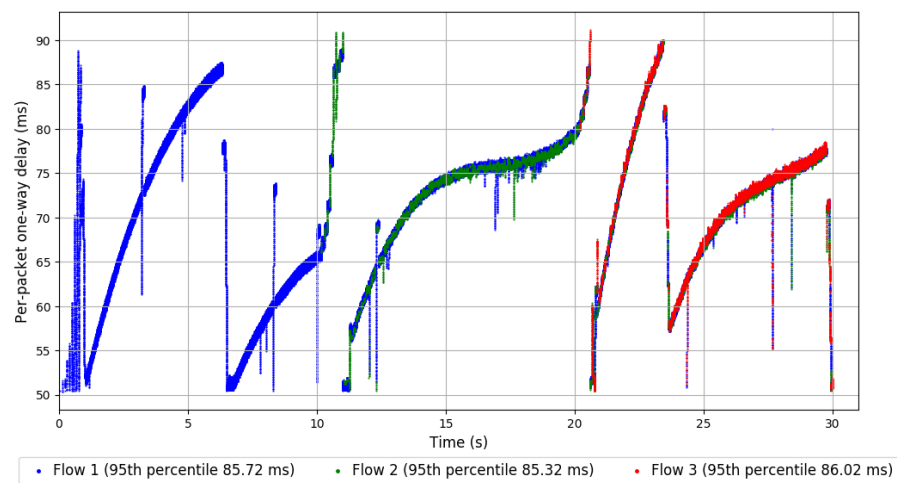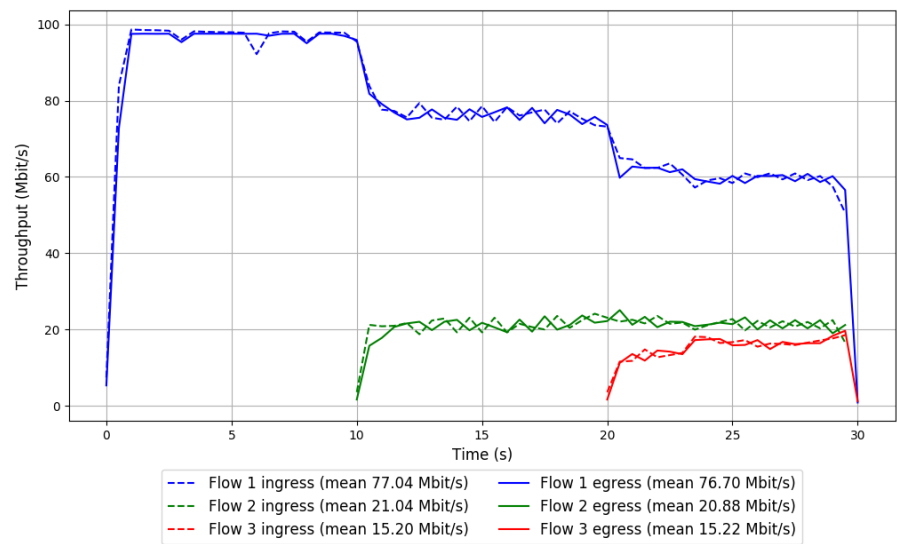
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 71.08 Mbit/s) --- Flow 1 egress (mean 70.72 Mbit/s)
Flow 2 ingress (mean 25.56 Mbit/s) --- Flow 2 egress (mean 25.30 Mbit/s)
Flow 3 ingress (mean 23.77 Mbit/s) --- Flow 3 egress (mean 23.58 Mbit/s)

Flow 1 (95th percentile 80.31 ms)   Flow 2 (95th percentile 82.15 ms)   Flow 3 (95th percentile 81.44 ms)

69

```
Run 4: Statistics of TCP Cubic

Start at: 2017-08-11 10:24:59
End at: 2017-08-11 10:25:29
Local clock offset: 0.284 ms
Remote clock offset: -3.676 ms


# Below is generated by plot.py at 2017-08-11 13:20:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.34 Mbit/s
95th percentile per-packet one-way delay: 82.443 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 49.94 Mbit/s
95th percentile per-packet one-way delay: 80.709 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 47.91 Mbit/s
95th percentile per-packet one-way delay: 83.484 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 37.64 Mbit/s
95th percentile per-packet one-way delay: 83.353 ms
Loss rate: 0.92%
```
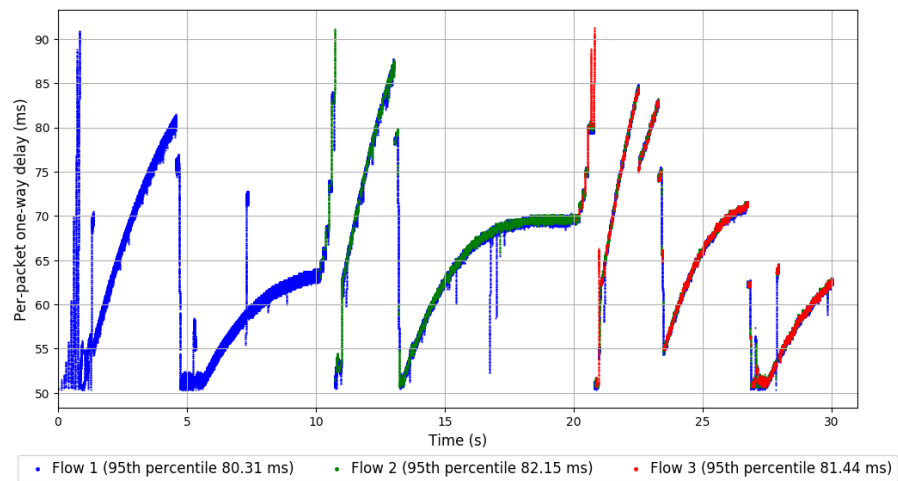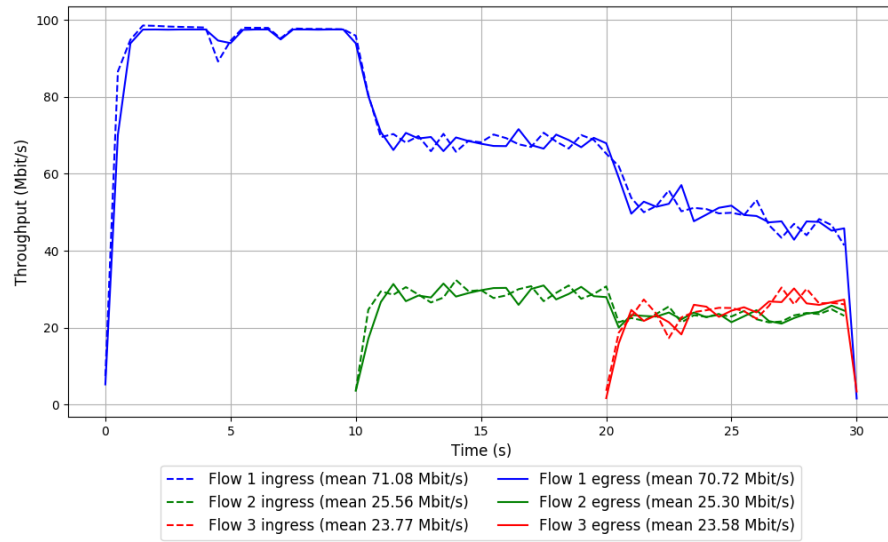
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 50.17 Mbit/s)   Flow 1 egress (mean 49.94 Mbit/s)
Flow 2 ingress (mean 48.38 Mbit/s)   Flow 2 egress (mean 47.91 Mbit/s)
Flow 3 ingress (mean 38.04 Mbit/s)   Flow 3 egress (mean 37.64 Mbit/s)

Flow 1 (95th percentile 80.71 ms)   Flow 2 (95th percentile 83.48 ms)   Flow 3 (95th percentile 83.35 ms)
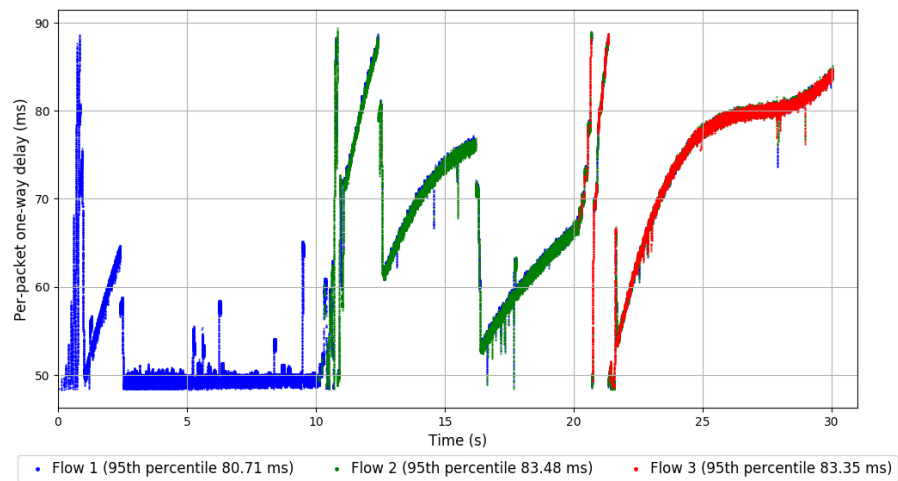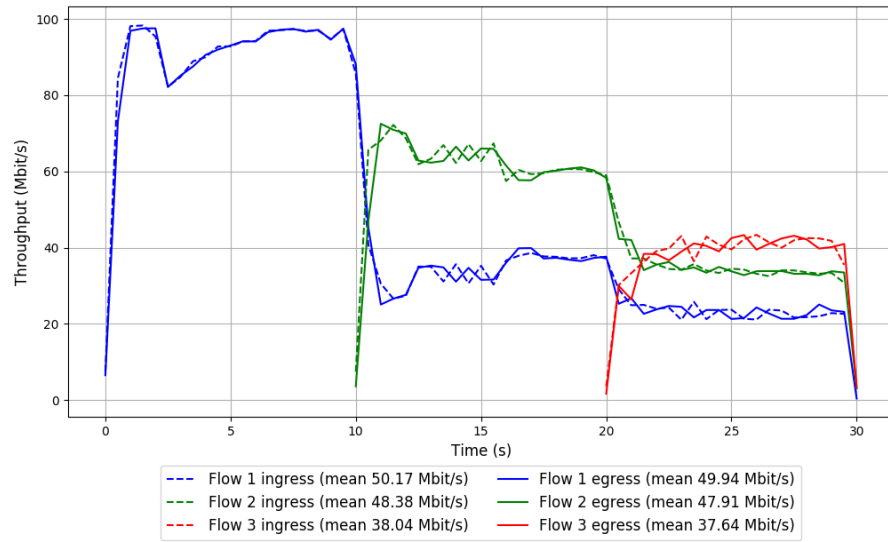
71

```
Run 5: Statistics of TCP Cubic

Start at: 2017-08-11 10:45:59
End at: 2017-08-11 10:46:29
Local clock offset: 0.292 ms
Remote clock offset: -1.742 ms


# Below is generated by plot.py at 2017-08-11 13:21:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.20 Mbit/s
95th percentile per-packet one-way delay: 81.059 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 69.12 Mbit/s
95th percentile per-packet one-way delay: 81.082 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 23.70 Mbit/s
95th percentile per-packet one-way delay: 82.878 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 31.06 Mbit/s
95th percentile per-packet one-way delay: 70.506 ms
Loss rate: 0.46%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 69.54 Mbit/s) Flow 1 egress (mean 69.12 Mbit/s)
Flow 2 ingress (mean 23.88 Mbit/s) Flow 2 egress (mean 23.70 Mbit/s)
Flow 3 ingress (mean 31.21 Mbit/s) Flow 3 egress (mean 31.06 Mbit/s)

Flow 1 (95th percentile 81.08 ms) Flow 2 (95th percentile 82.88 ms) Flow 3 (95th percentile 70.51 ms)
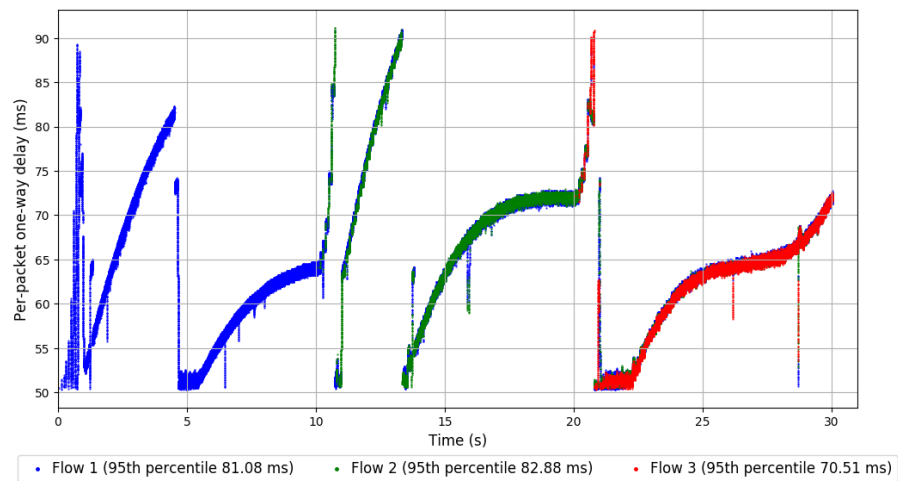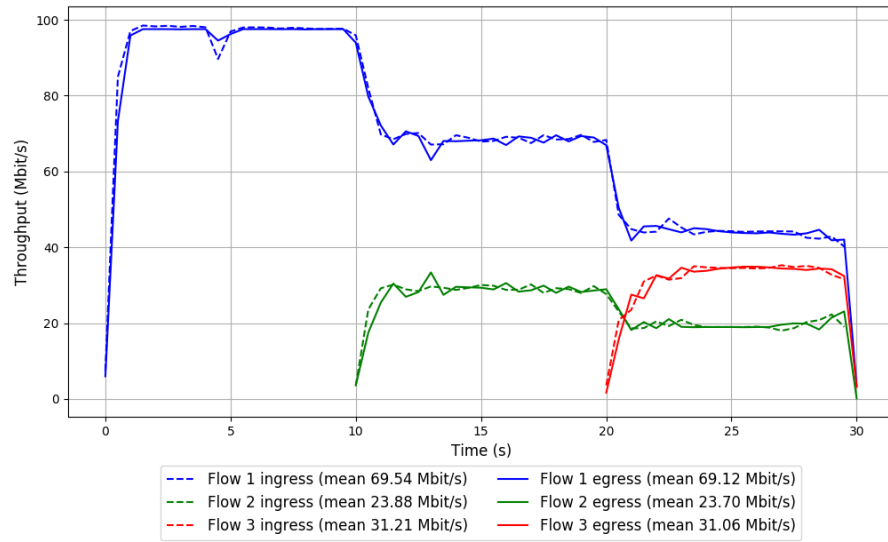
73

```
Run 6: Statistics of TCP Cubic

Start at: 2017-08-11 11:06:55
End at: 2017-08-11 11:07:25
Local clock offset: 0.476 ms
Remote clock offset: -1.357 ms


# Below is generated by plot.py at 2017-08-11 13:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.67 Mbit/s
95th percentile per-packet one-way delay: 82.917 ms
Loss rate: 0.45%
-- Flow 1:
Average throughput: 68.43 Mbit/s
95th percentile per-packet one-way delay: 82.895 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 30.75 Mbit/s
95th percentile per-packet one-way delay: 82.471 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 20.53 Mbit/s
95th percentile per-packet one-way delay: 84.699 ms
Loss rate: 0.60%
```

Run 6: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 68.69 Mbit/s) ——— Flow 1 egress (mean 68.43 Mbit/s)
- - - - Flow 2 ingress (mean 30.93 Mbit/s) ——— Flow 2 egress (mean 30.75 Mbit/s)
- - - - Flow 3 ingress (mean 20.65 Mbit/s) ——— Flow 3 egress (mean 20.53 Mbit/s)

• Flow 1 (95th percentile 82.89 ms) • Flow 2 (95th percentile 82.47 ms) • Flow 3 (95th percentile 84.70 ms)
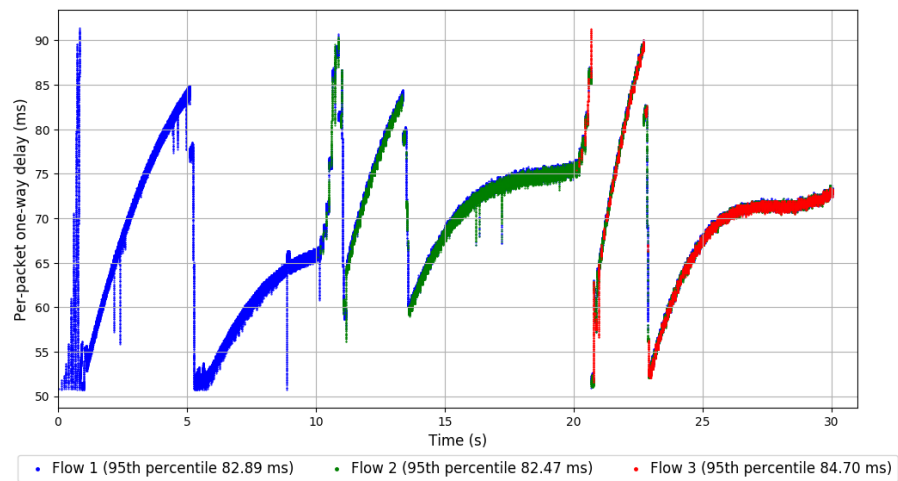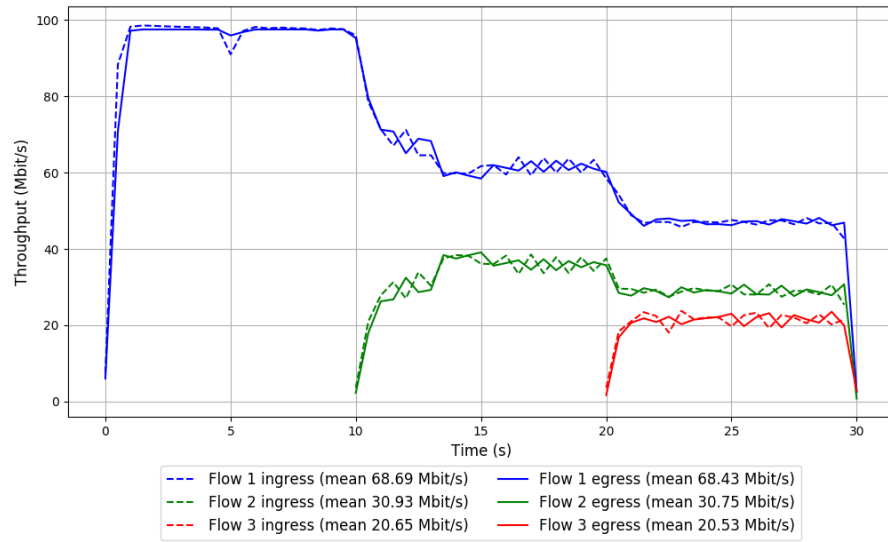
```
Run 7: Statistics of TCP Cubic

Start at: 2017-08-11 11:27:56
End at: 2017-08-11 11:28:26
Local clock offset: 0.474 ms
Remote clock offset: -1.309 ms


# Below is generated by plot.py at 2017-08-11 13:21:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.06 Mbit/s
95th percentile per-packet one-way delay: 89.547 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 63.31 Mbit/s
95th percentile per-packet one-way delay: 88.571 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 23.75 Mbit/s
95th percentile per-packet one-way delay: 89.767 ms
Loss rate: 0.49%
-- Flow 3:
Average throughput: 30.01 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 1.18%
```
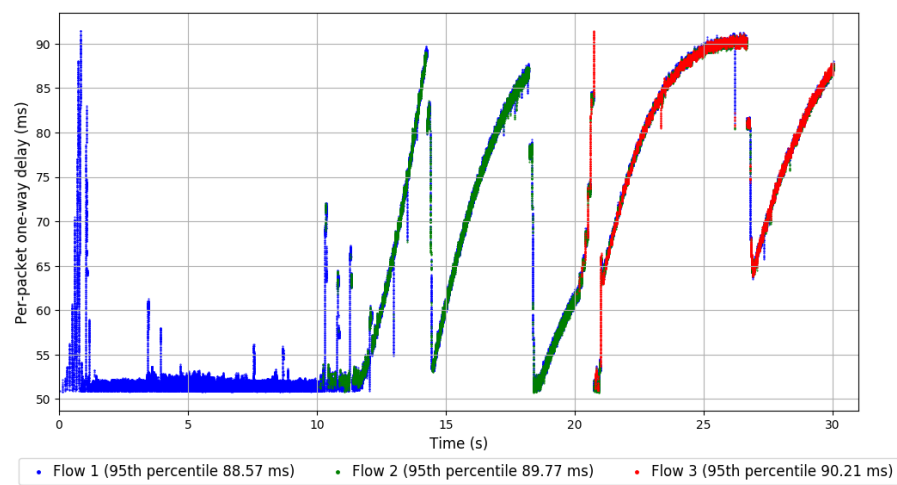
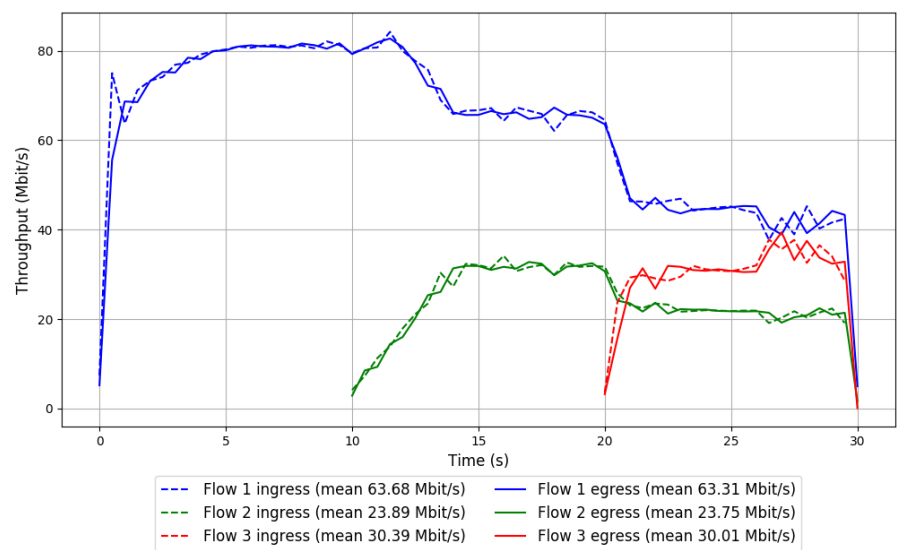Run 7: Report of TCP Cubic — Data Link

```
Run 8: Statistics of TCP Cubic

Start at: 2017-08-11 11:48:59
End at: 2017-08-11 11:49:29
Local clock offset: 0.499 ms
Remote clock offset: -3.294 ms


# Below is generated by plot.py at 2017-08-11 13:21:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.71 Mbit/s
95th percentile per-packet one-way delay: 82.542 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 64.02 Mbit/s
95th percentile per-packet one-way delay: 80.267 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 33.69 Mbit/s
95th percentile per-packet one-way delay: 83.932 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 25.04 Mbit/s
95th percentile per-packet one-way delay: 84.696 ms
Loss rate: 0.33%
```

Run 8: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 64.16 Mbit/s)   —— Flow 1 egress (mean 64.02 Mbit/s)
- - - Flow 2 ingress (mean 33.89 Mbit/s)   —— Flow 2 egress (mean 33.69 Mbit/s)
- - - Flow 3 ingress (mean 25.12 Mbit/s)   —— Flow 3 egress (mean 25.04 Mbit/s)

• Flow 1 (95th percentile 80.27 ms)   • Flow 2 (95th percentile 83.93 ms)   • Flow 3 (95th percentile 84.70 ms)
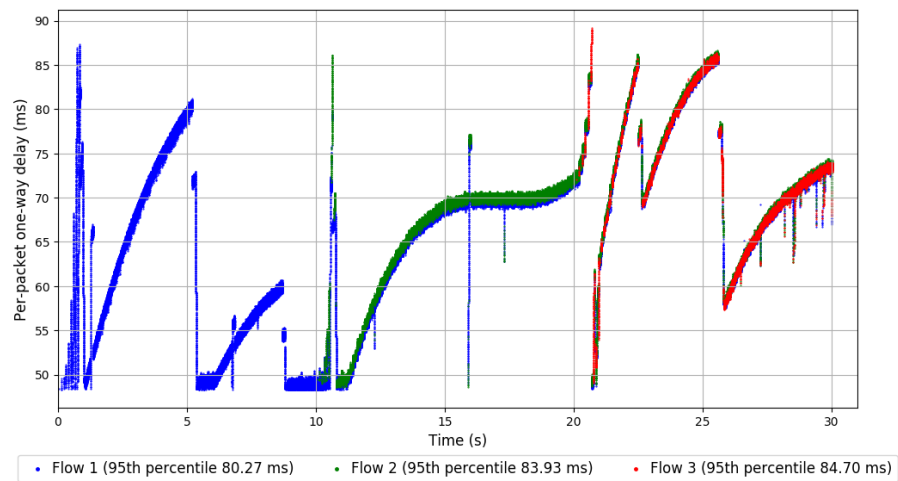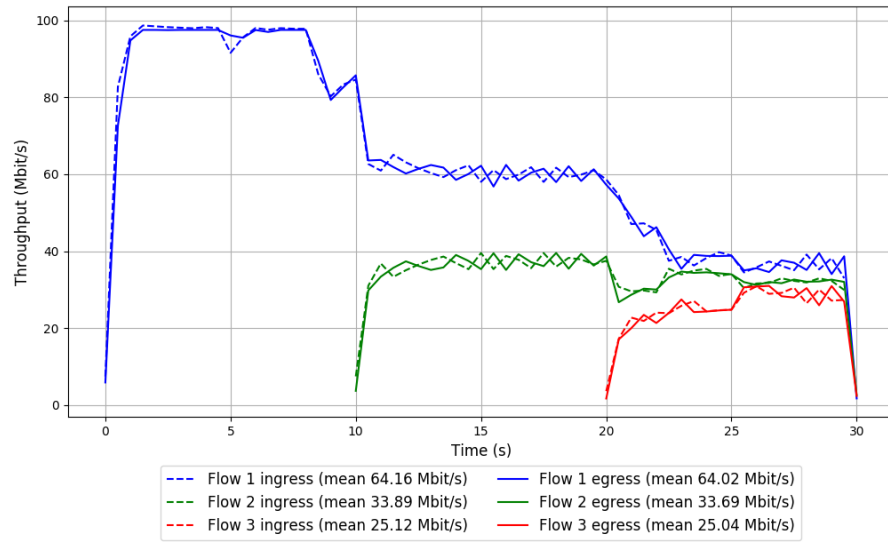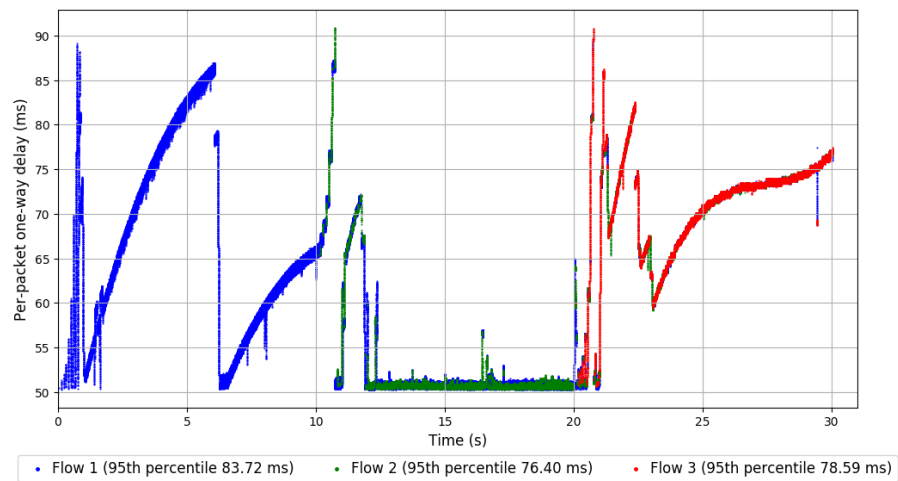
79

```
Run 9: Statistics of TCP Cubic

Start at: 2017-08-11 12:09:58
End at: 2017-08-11 12:10:28
Local clock offset: 0.516 ms
Remote clock offset: -0.671 ms


# Below is generated by plot.py at 2017-08-11 13:21:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.73 Mbit/s
95th percentile per-packet one-way delay: 82.055 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 83.720 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 25.04 Mbit/s
95th percentile per-packet one-way delay: 76.401 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 46.27 Mbit/s
95th percentile per-packet one-way delay: 78.591 ms
Loss rate: 1.40%
```

Run 9: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 58.99 Mbit/s) --- Flow 1 egress (mean 58.70 Mbit/s)
Flow 2 ingress (mean 25.20 Mbit/s) --- Flow 2 egress (mean 25.04 Mbit/s)
Flow 3 ingress (mean 47.01 Mbit/s) --- Flow 3 egress (mean 46.27 Mbit/s)

Flow 1 (95th percentile 83.72 ms)   Flow 2 (95th percentile 76.40 ms)   Flow 3 (95th percentile 78.59 ms)
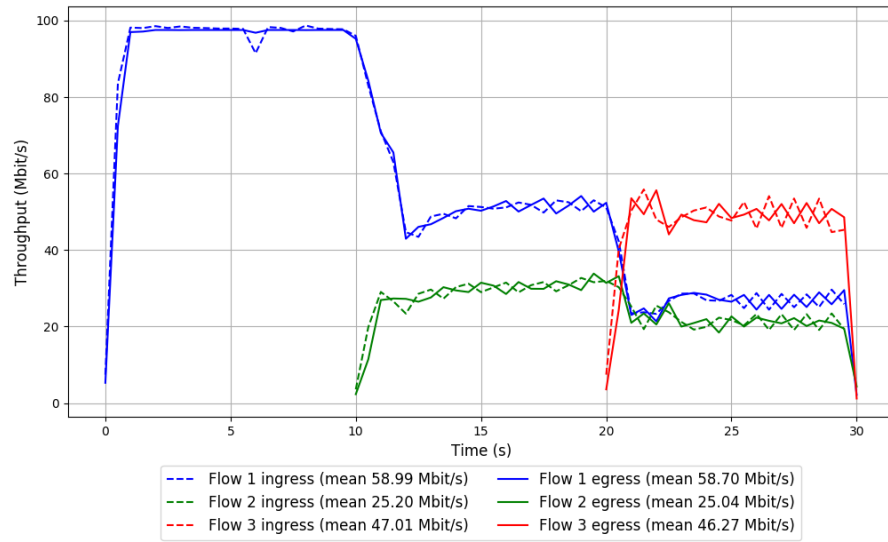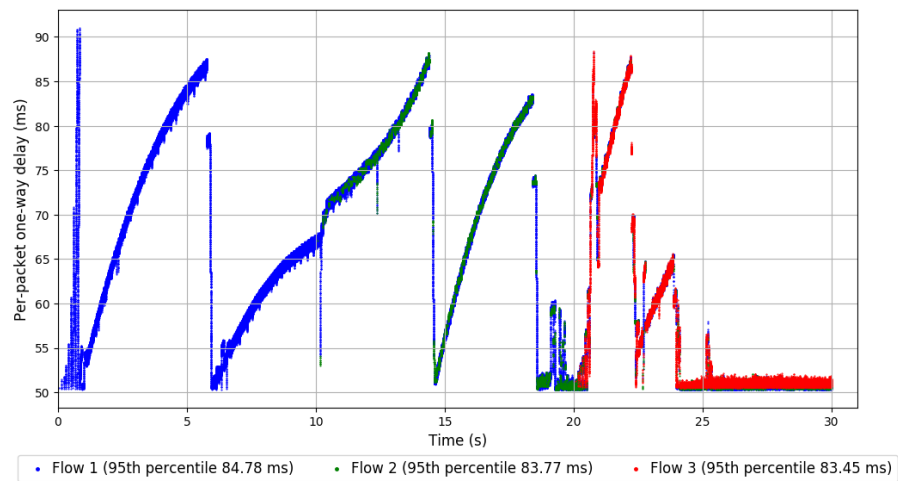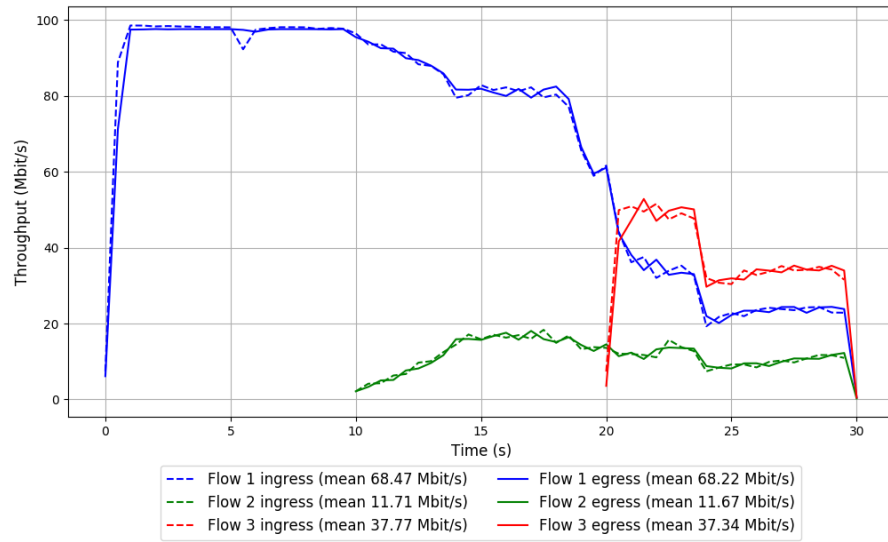
```
Run 10: Statistics of TCP Cubic

Start at: 2017-08-11 12:31:08
End at: 2017-08-11 12:31:38
Local clock offset: 0.583 ms
Remote clock offset: -0.049 ms


# Below is generated by plot.py at 2017-08-11 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.36 Mbit/s
95th percentile per-packet one-way delay: 84.560 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 68.22 Mbit/s
95th percentile per-packet one-way delay: 84.778 ms
Loss rate: 0.37%
-- Flow 2:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 83.772 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 37.34 Mbit/s
95th percentile per-packet one-way delay: 83.449 ms
Loss rate: 1.17%
```

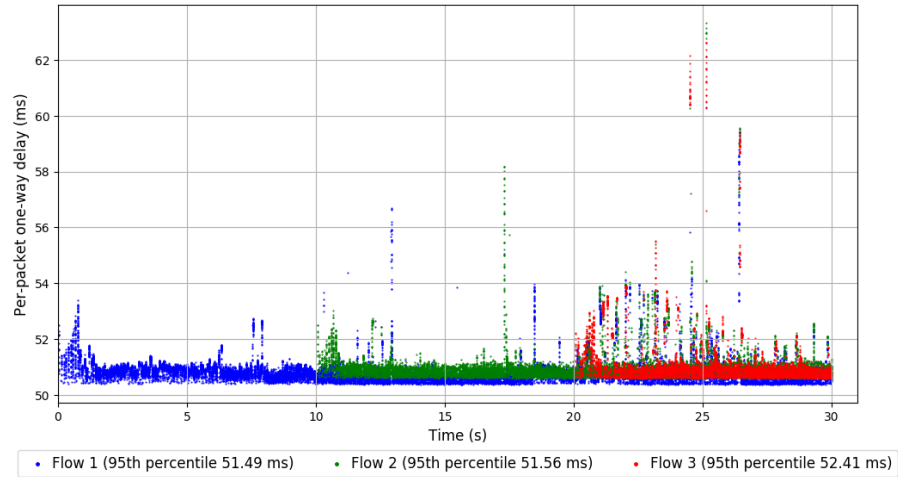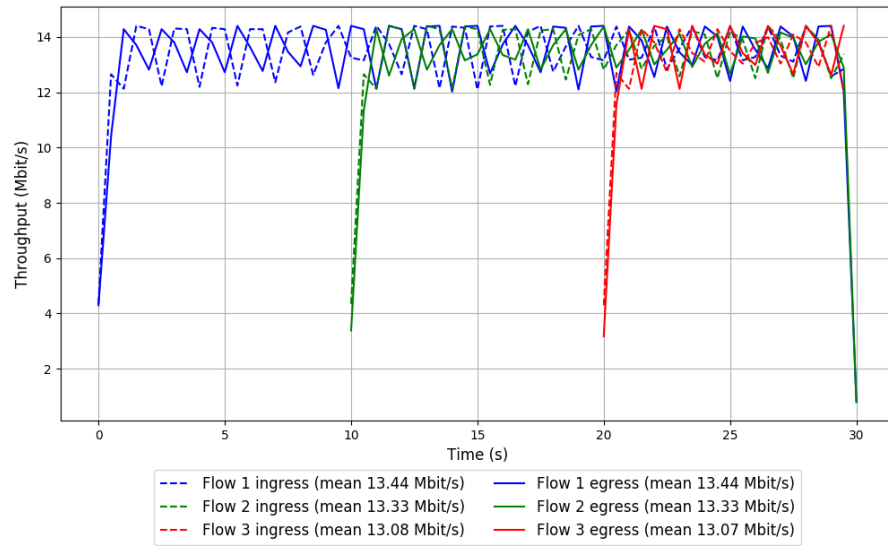Run 10: Report of TCP Cubic — Data Link

```
Run 1: Statistics of KohoCC

Start at: 2017-08-11 09:05:21
End at: 2017-08-11 09:05:51
Local clock offset: 0.104 ms
Remote clock offset: 0.115 ms

# Below is generated by plot.py at 2017-08-11 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.65 Mbit/s
95th percentile per-packet one-way delay: 51.666 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 51.487 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 51.557 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 52.407 ms
Loss rate: 0.03%
```

Run 1: Report of KohoCC — Data Link

Flow 1 ingress (mean 13.44 Mbit/s)   Flow 1 egress (mean 13.44 Mbit/s)
Flow 2 ingress (mean 13.33 Mbit/s)   Flow 2 egress (mean 13.33 Mbit/s)
Flow 3 ingress (mean 13.08 Mbit/s)   Flow 3 egress (mean 13.07 Mbit/s)

Flow 1 (95th percentile 51.49 ms)   Flow 2 (95th percentile 51.56 ms)   Flow 3 (95th percentile 52.41 ms)

```
Run 2: Statistics of KohoCC

Start at: 2017-08-11 09:26:17
End at: 2017-08-11 09:26:47
Local clock offset: 0.148 ms
Remote clock offset: -0.35 ms

# Below is generated by plot.py at 2017-08-11 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 51.267 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.43 Mbit/s
95th percentile per-packet one-way delay: 51.267 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 51.216 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 51.322 ms
Loss rate: 0.00%
```
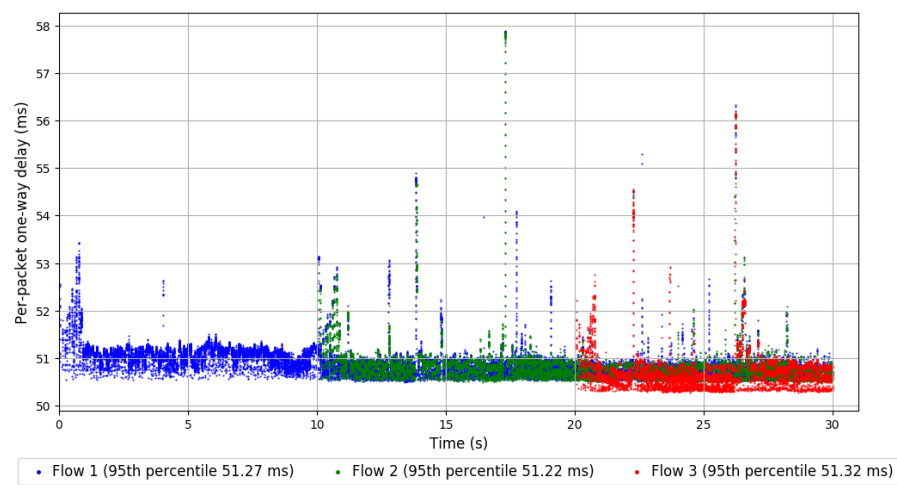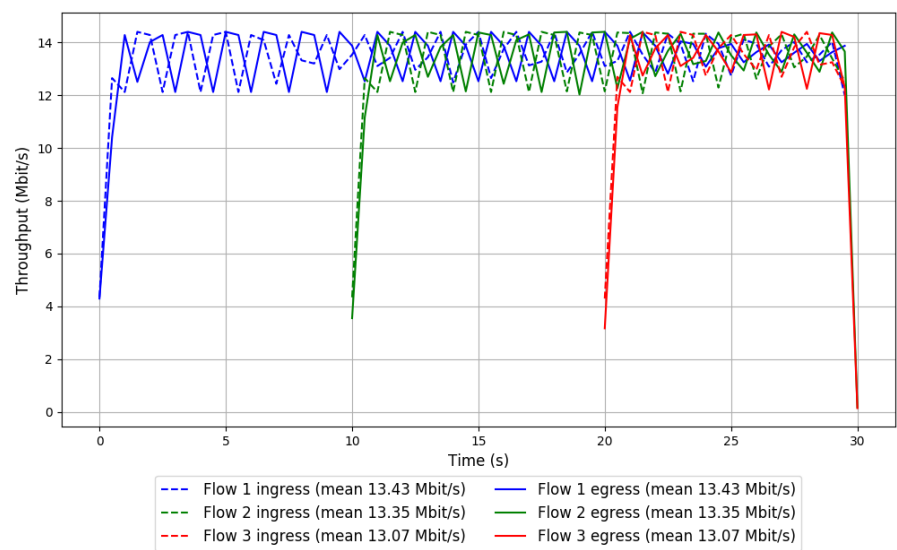
Run 2: Report of KohoCC — Data Link

- - - Flow 1 ingress (mean 13.43 Mbit/s) —— Flow 1 egress (mean 13.43 Mbit/s)
- - - Flow 2 ingress (mean 13.35 Mbit/s) —— Flow 2 egress (mean 13.35 Mbit/s)
- - - Flow 3 ingress (mean 13.07 Mbit/s) —— Flow 3 egress (mean 13.07 Mbit/s)

• Flow 1 (95th percentile 51.27 ms)   • Flow 2 (95th percentile 51.22 ms)   • Flow 3 (95th percentile 51.32 ms)
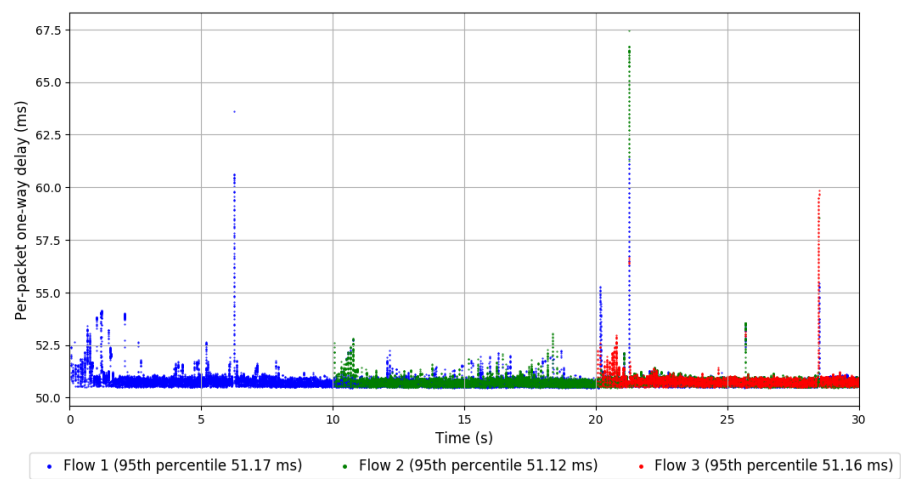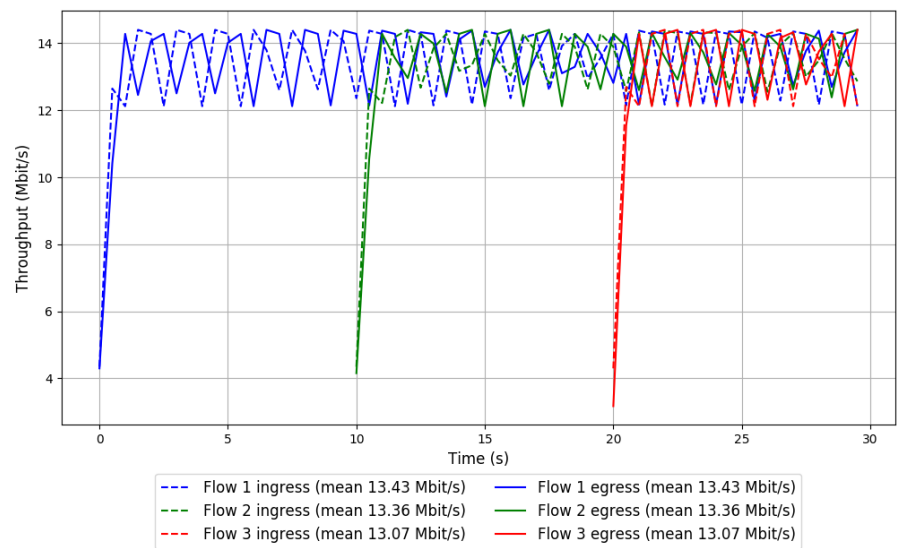
```
Run 3: Statistics of KohoCC

Start at: 2017-08-11 09:47:14
End at: 2017-08-11 09:47:44
Local clock offset: 0.089 ms
Remote clock offset: -0.932 ms


# Below is generated by plot.py at 2017-08-11 13:21:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.66 Mbit/s
95th percentile per-packet one-way delay: 51.144 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.43 Mbit/s
95th percentile per-packet one-way delay: 51.171 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.36 Mbit/s
95th percentile per-packet one-way delay: 51.124 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 51.155 ms
Loss rate: 0.00%
```

# Run 3: Report of KohoCC — Data Link

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```
Run 4: Statistics of KohoCC

Start at: 2017-08-11 10:08:11
End at: 2017-08-11 10:08:41
Local clock offset: 0.129 ms
Remote clock offset: -1.214 ms


# Below is generated by plot.py at 2017-08-11 13:21:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.85 Mbit/s
95th percentile per-packet one-way delay: 51.241 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.44 Mbit/s
95th percentile per-packet one-way delay: 51.378 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 50.197 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.16 Mbit/s
95th percentile per-packet one-way delay: 51.142 ms
Loss rate: 0.05%
```
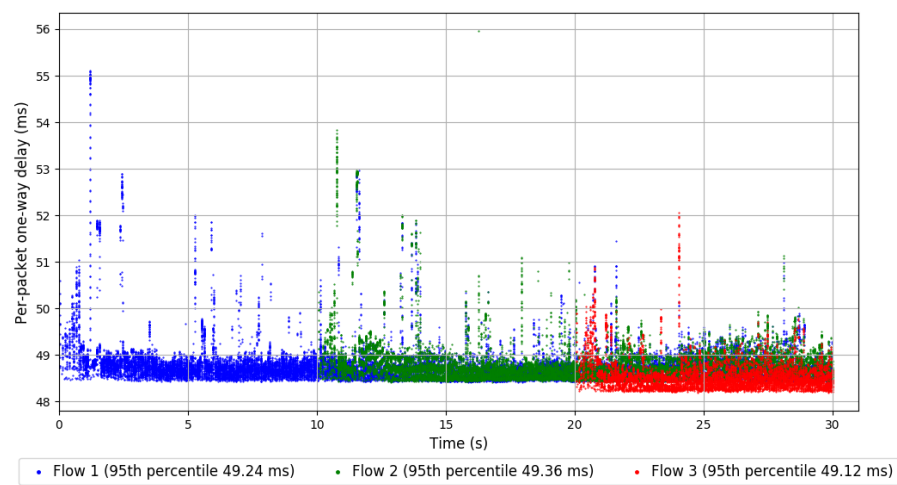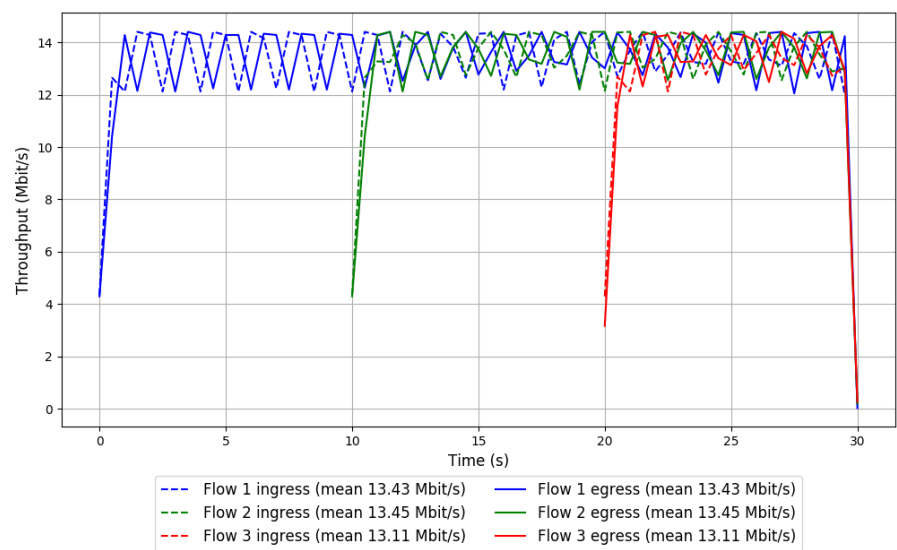
Run 4: Report of KohoCC — Data Link
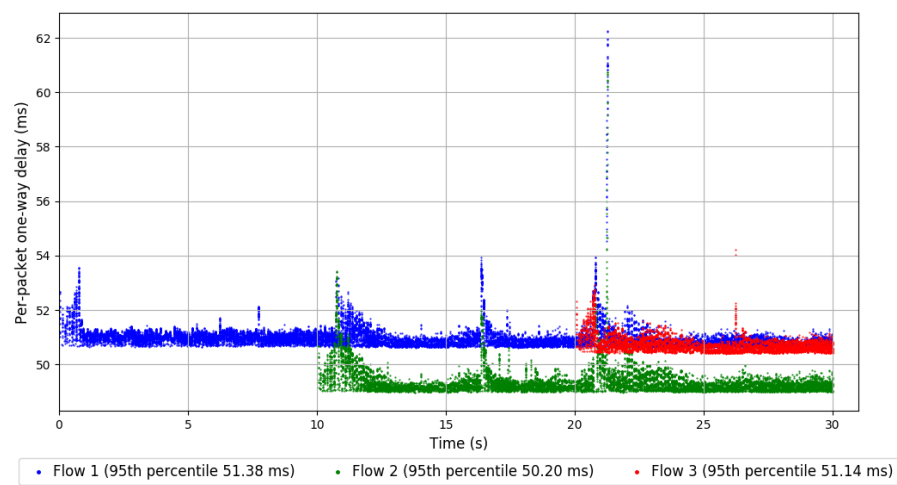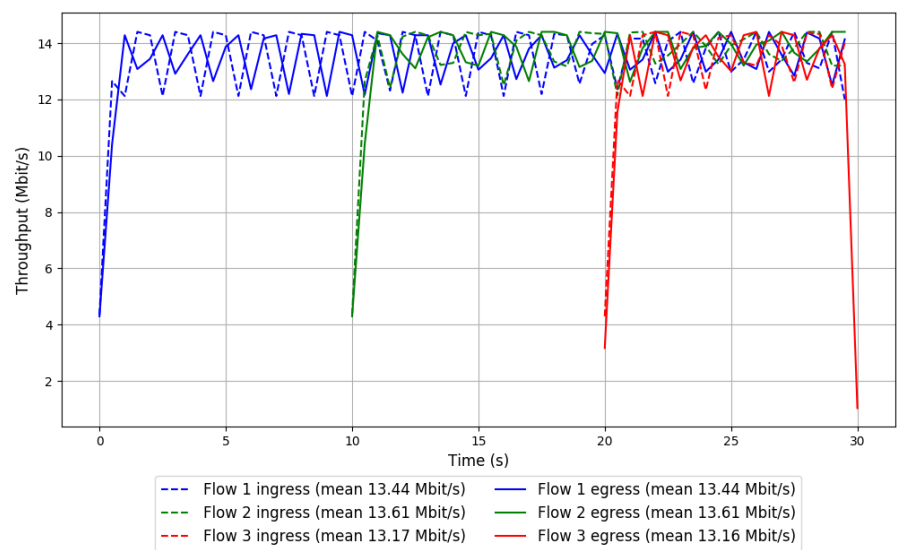
```
Run 5: Statistics of KohoCC

Start at: 2017-08-11 10:29:12
End at: 2017-08-11 10:29:42
Local clock offset: 0.307 ms
Remote clock offset: -3.676 ms


# Below is generated by plot.py at 2017-08-11 13:21:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.73 Mbit/s
95th percentile per-packet one-way delay: 49.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.43 Mbit/s
95th percentile per-packet one-way delay: 49.237 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 49.359 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.11 Mbit/s
95th percentile per-packet one-way delay: 49.117 ms
Loss rate: 0.00%
```

Run 5: Report of KohoCC — Data Link

Flow 1 ingress (mean 13.43 Mbit/s) --- Flow 1 egress (mean 13.43 Mbit/s)
Flow 2 ingress (mean 13.45 Mbit/s) --- Flow 2 egress (mean 13.45 Mbit/s)
Flow 3 ingress (mean 13.11 Mbit/s) --- Flow 3 egress (mean 13.11 Mbit/s)

Flow 1 (95th percentile 49.24 ms)   Flow 2 (95th percentile 49.36 ms)   Flow 3 (95th percentile 49.12 ms)
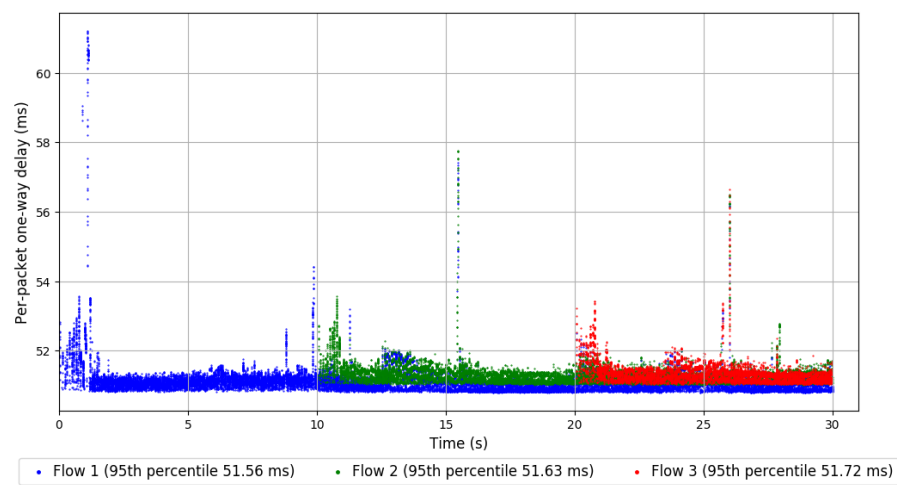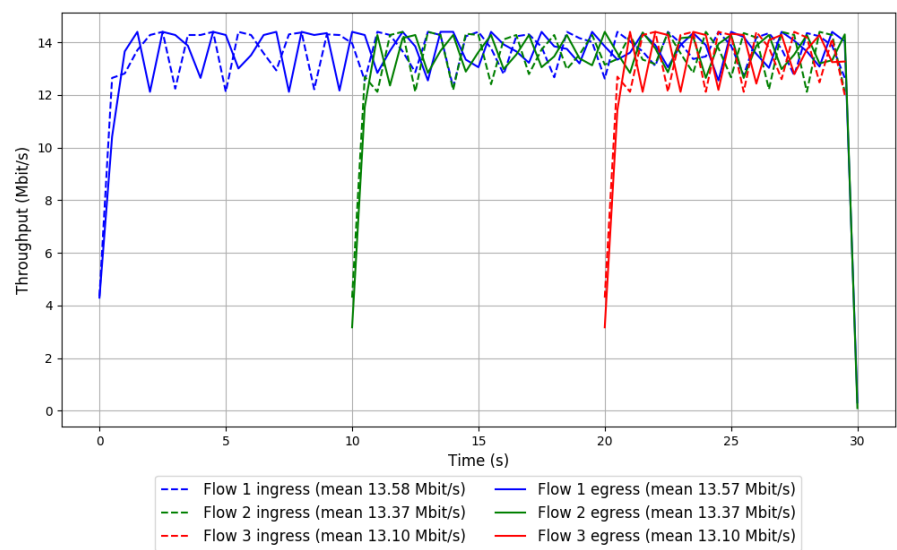
```
Run 6: Statistics of KohoCC

Start at: 2017-08-11 10:50:10
End at: 2017-08-11 10:50:40
Local clock offset: 0.3 ms
Remote clock offset: -1.273 ms


# Below is generated by plot.py at 2017-08-11 13:21:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 51.640 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 13.57 Mbit/s
95th percentile per-packet one-way delay: 51.558 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 13.37 Mbit/s
95th percentile per-packet one-way delay: 51.633 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.10 Mbit/s
95th percentile per-packet one-way delay: 51.721 ms
Loss rate: 0.00%
```

Run 6: Report of KohoCC — Data Link

```
Run 7: Statistics of KohoCC

Start at: 2017-08-11 11:11:07
End at: 2017-08-11 11:11:37
Local clock offset: 0.347 ms
Remote clock offset: -3.949 ms


# Below is generated by plot.py at 2017-08-11 13:21:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 49.803 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.43 Mbit/s
95th percentile per-packet one-way delay: 49.587 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 49.808 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.14 Mbit/s
95th percentile per-packet one-way delay: 50.145 ms
Loss rate: 0.04%
```
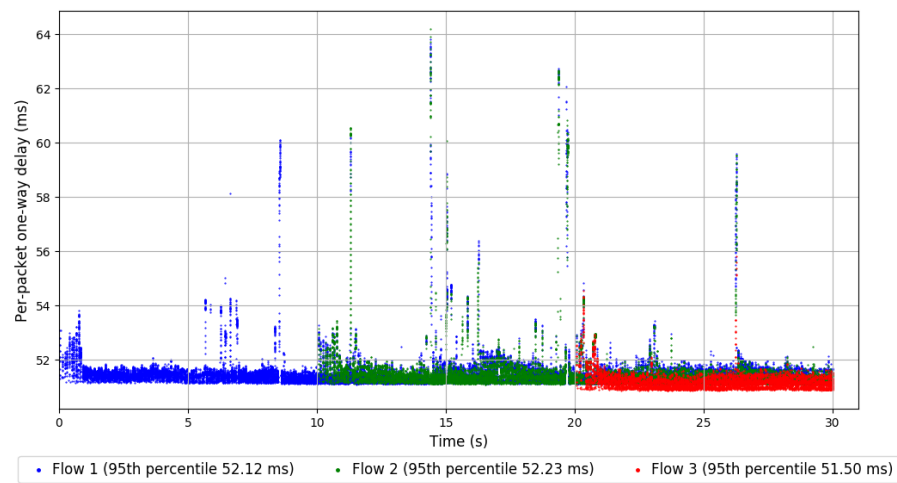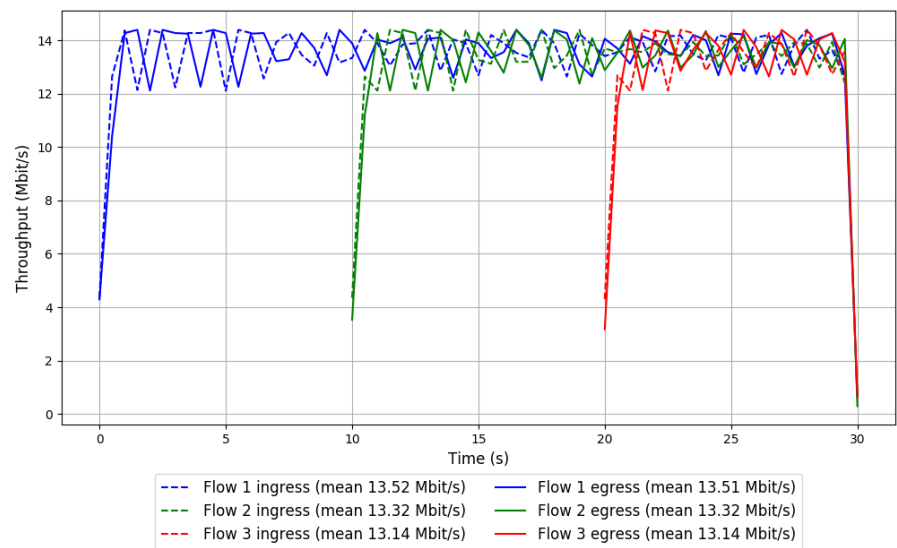
Run 7: Report of KohoCC — Data Link
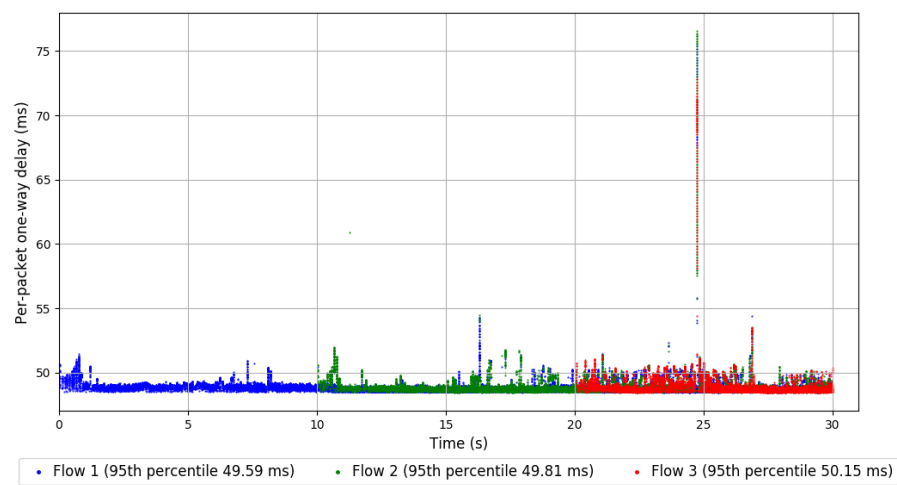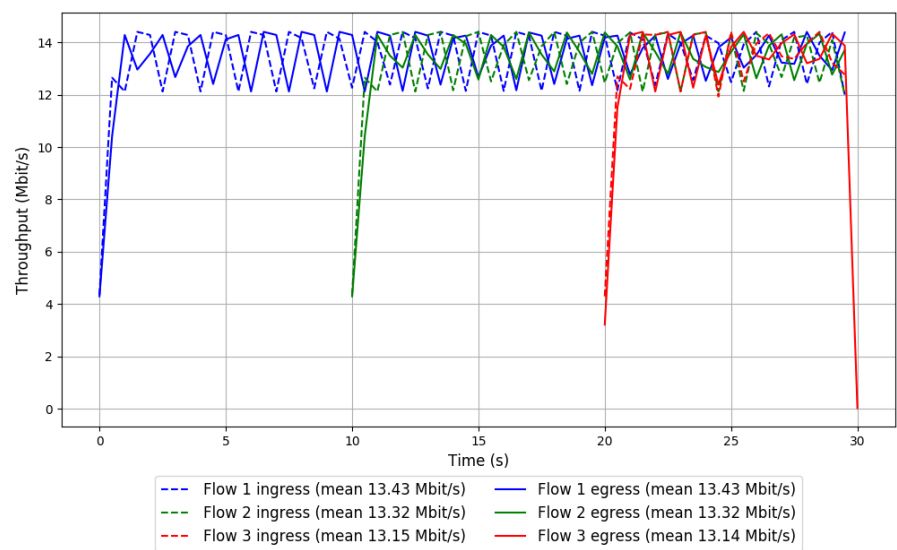
```
Run 8: Statistics of KohoCC

Start at: 2017-08-11 11:32:09
End at: 2017-08-11 11:32:39
Local clock offset: 0.385 ms
Remote clock offset: -1.179 ms


# Below is generated by plot.py at 2017-08-11 13:21:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.73 Mbit/s
95th percentile per-packet one-way delay: 52.043 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 13.51 Mbit/s
95th percentile per-packet one-way delay: 52.119 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 13.32 Mbit/s
95th percentile per-packet one-way delay: 52.228 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 13.14 Mbit/s
95th percentile per-packet one-way delay: 51.500 ms
Loss rate: 0.00%
```

Run 8: Report of KohoCC — Data Link

Flow 1 ingress (mean 13.52 Mbit/s) --- Flow 1 egress (mean 13.51 Mbit/s)
Flow 2 ingress (mean 13.32 Mbit/s) --- Flow 2 egress (mean 13.32 Mbit/s)
Flow 3 ingress (mean 13.14 Mbit/s) --- Flow 3 egress (mean 13.14 Mbit/s)

Flow 1 (95th percentile 52.12 ms) • Flow 2 (95th percentile 52.23 ms) • Flow 3 (95th percentile 51.50 ms)

```
Run 9: Statistics of KohoCC

Start at: 2017-08-11 11:53:12
End at: 2017-08-11 11:53:42
Local clock offset: 0.584 ms
Remote clock offset: -1.13 ms


# Below is generated by plot.py at 2017-08-11 13:21:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.95 Mbit/s
95th percentile per-packet one-way delay: 51.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.55 Mbit/s
95th percentile per-packet one-way delay: 51.339 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.61 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.10 Mbit/s
95th percentile per-packet one-way delay: 51.427 ms
Loss rate: 0.00%
```
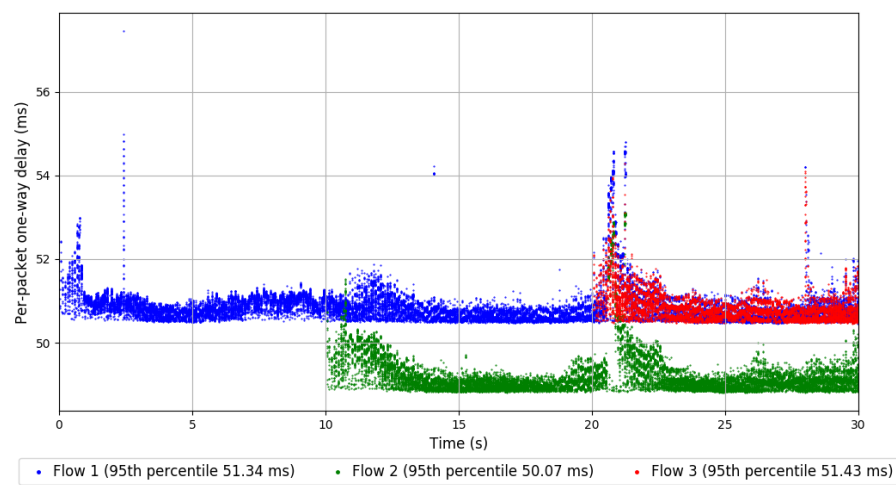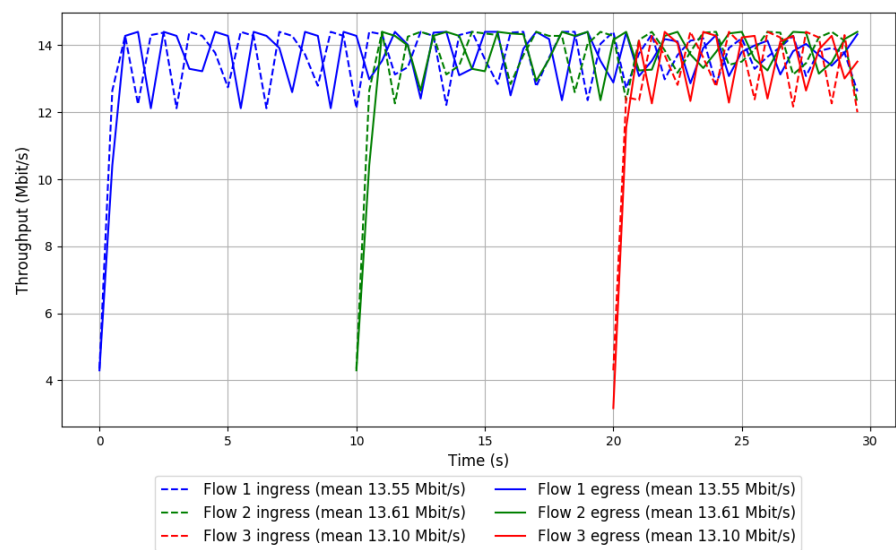
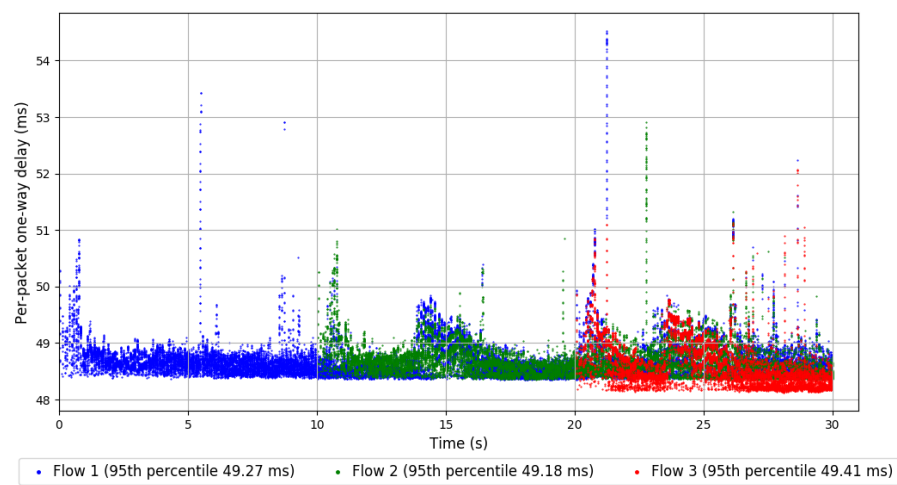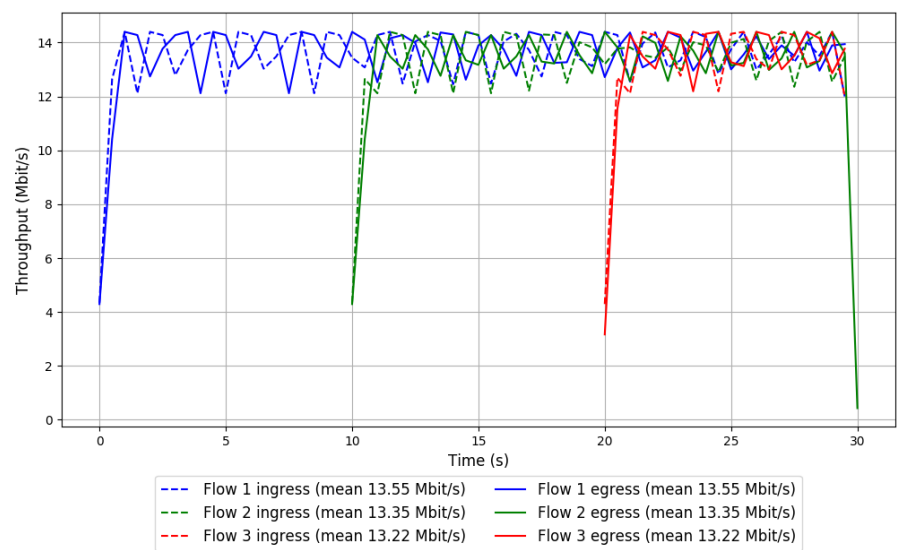# Run 9: Report of KohoCC — Data Link

```
Run 10: Statistics of KohoCC

Start at: 2017-08-11 12:14:15
End at: 2017-08-11 12:14:45
Local clock offset: 0.518 ms
Remote clock offset: -2.739 ms


# Below is generated by plot.py at 2017-08-11 13:21:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.81 Mbit/s
95th percentile per-packet one-way delay: 49.270 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.55 Mbit/s
95th percentile per-packet one-way delay: 49.273 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.35 Mbit/s
95th percentile per-packet one-way delay: 49.180 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 49.408 ms
Loss rate: 0.00%
```

Run 10: Report of KohoCC — Data Link

Flow 1 ingress (mean 13.55 Mbit/s)   Flow 1 egress (mean 13.55 Mbit/s)
Flow 2 ingress (mean 13.35 Mbit/s)   Flow 2 egress (mean 13.35 Mbit/s)
Flow 3 ingress (mean 13.22 Mbit/s)   Flow 3 egress (mean 13.22 Mbit/s)

Flow 1 (95th percentile 49.27 ms)   Flow 2 (95th percentile 49.18 ms)   Flow 3 (95th percentile 49.41 ms)
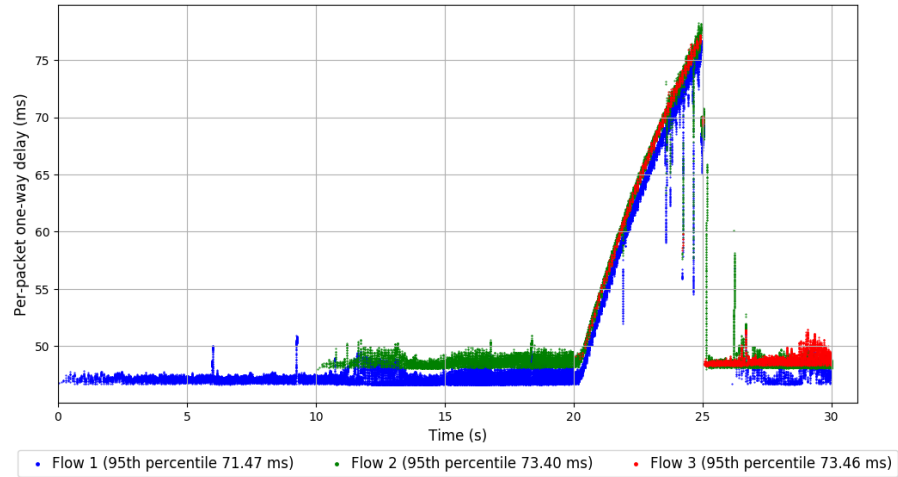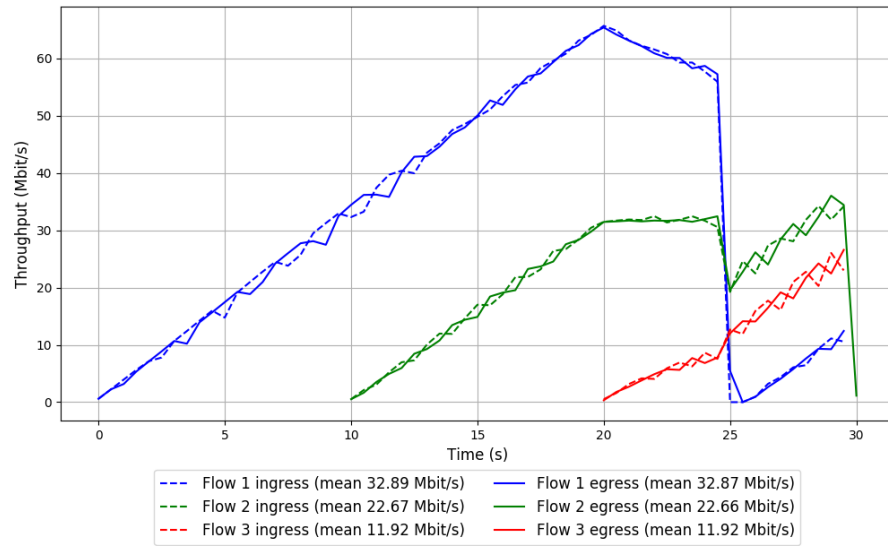
```
Run 1: Statistics of LEDBAT

Start at: 2017-08-11 09:23:32
End at: 2017-08-11 09:24:02
Local clock offset: 0.142 ms
Remote clock offset: -2.459 ms

# Below is generated by plot.py at 2017-08-11 13:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.84 Mbit/s
95th percentile per-packet one-way delay: 72.227 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 32.87 Mbit/s
95th percentile per-packet one-way delay: 71.471 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 22.66 Mbit/s
95th percentile per-packet one-way delay: 73.397 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 11.92 Mbit/s
95th percentile per-packet one-way delay: 73.459 ms
Loss rate: 0.00%
```

Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2017-08-11 09:44:28
End at: 2017-08-11 09:44:58
Local clock offset: 0.156 ms
Remote clock offset: -0.243 ms

# Below is generated by plot.py at 2017-08-11 13:22:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.03 Mbit/s
95th percentile per-packet one-way delay: 78.937 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 78.605 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 23.03 Mbit/s
95th percentile per-packet one-way delay: 79.438 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 79.280 ms
Loss rate: 0.00%
```
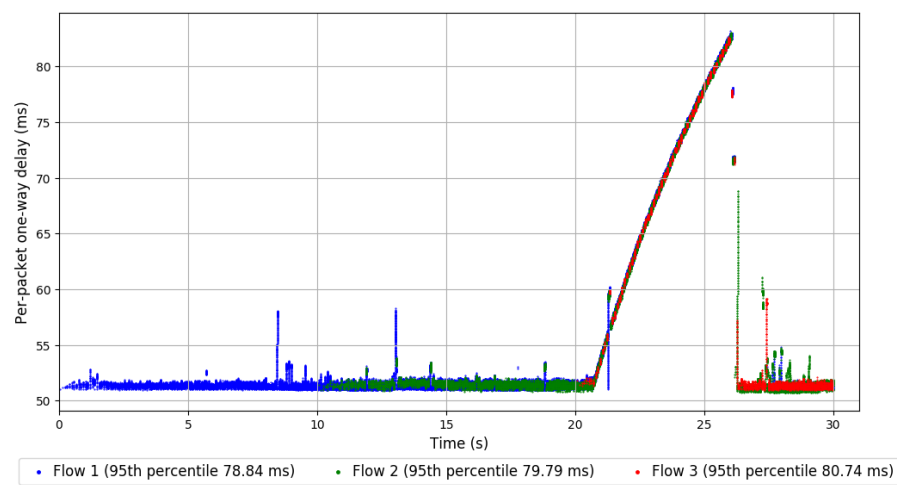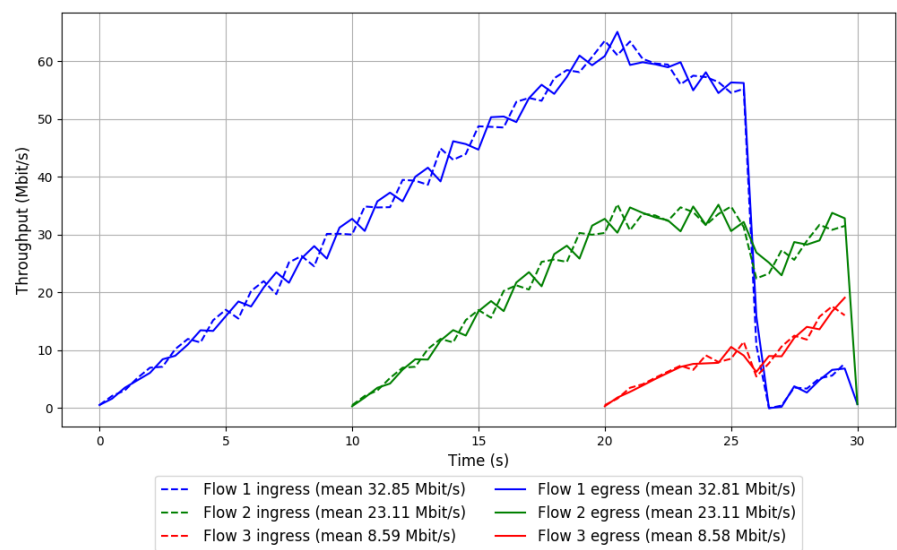
Run 2: Report of LEDBAT — Data Link
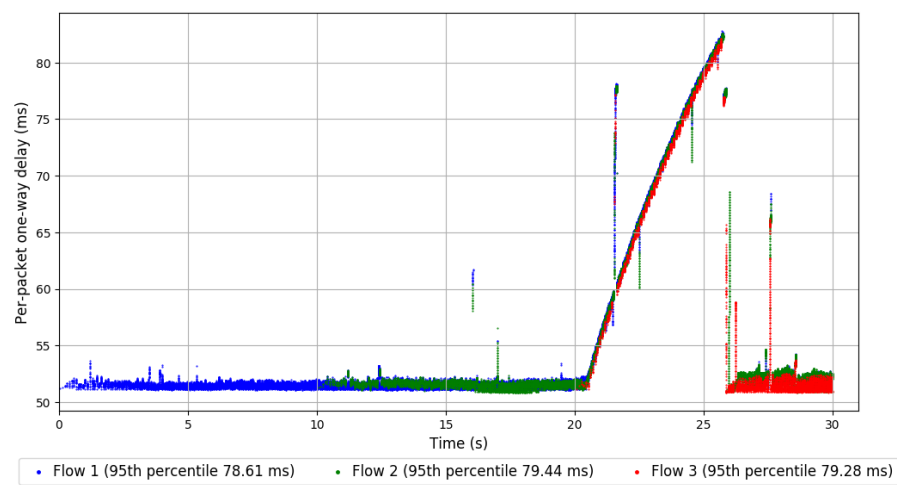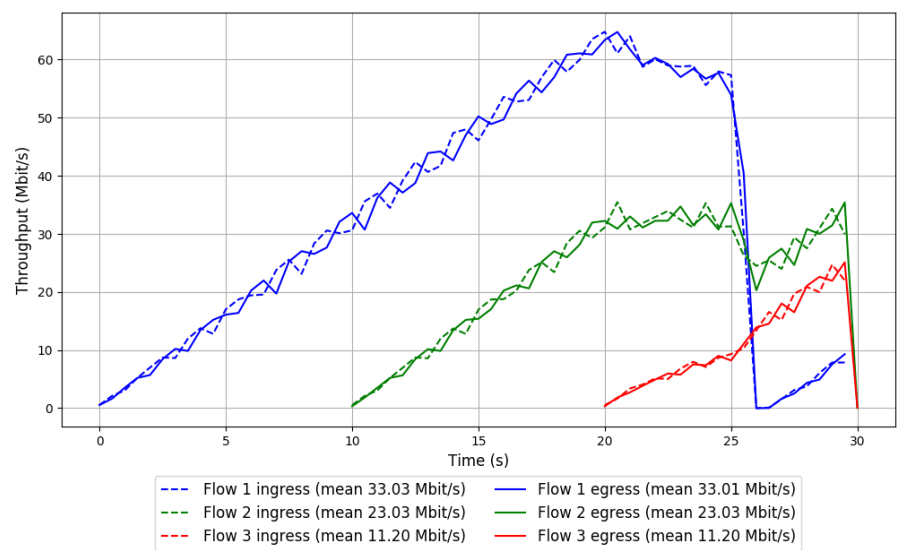
```
Run 3: Statistics of LEDBAT

Start at: 2017-08-11 10:05:24
End at: 2017-08-11 10:05:54
Local clock offset: 0.214 ms
Remote clock offset: -0.692 ms


# Below is generated by plot.py at 2017-08-11 13:22:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.03 Mbit/s
95th percentile per-packet one-way delay: 79.309 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 78.837 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 23.11 Mbit/s
95th percentile per-packet one-way delay: 79.788 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 80.736 ms
Loss rate: 0.11%
```

Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2017-08-11 10:26:24
End at: 2017-08-11 10:26:54
Local clock offset: 0.221 ms
Remote clock offset: -1.178 ms


# Below is generated by plot.py at 2017-08-11 13:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.38 Mbit/s
95th percentile per-packet one-way delay: 71.721 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 30.69 Mbit/s
95th percentile per-packet one-way delay: 71.435 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 23.32 Mbit/s
95th percentile per-packet one-way delay: 72.446 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 12.84 Mbit/s
95th percentile per-packet one-way delay: 70.919 ms
Loss rate: 0.01%
```

Run 4: Report of LEDBAT — Data Link
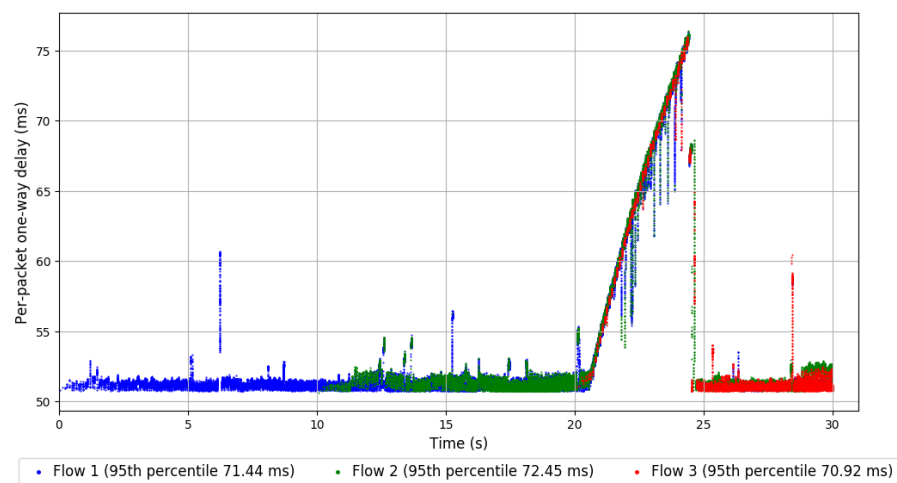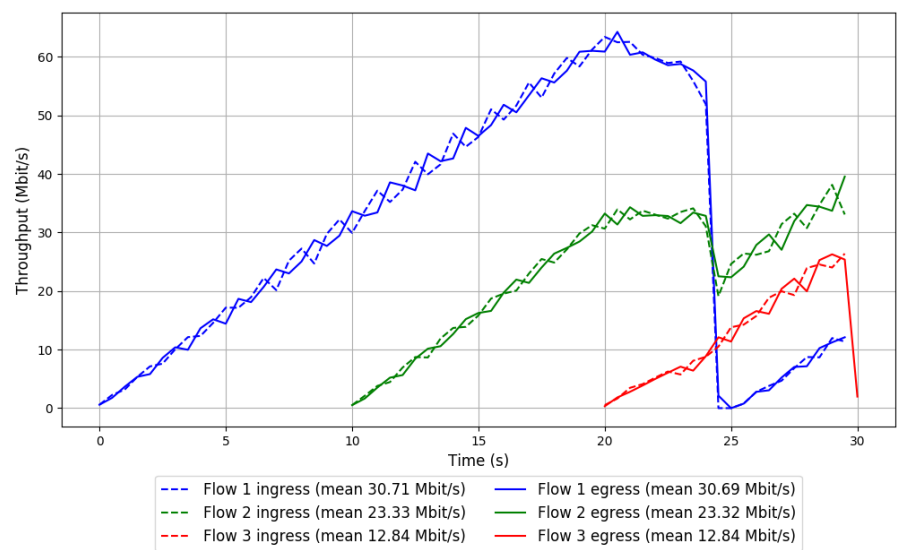
```
Run 5: Statistics of LEDBAT

Start at: 2017-08-11 10:47:24
End at: 2017-08-11 10:47:54
Local clock offset: 0.385 ms
Remote clock offset: -3.856 ms

# Below is generated by plot.py at 2017-08-11 13:22:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.78 Mbit/s
95th percentile per-packet one-way delay: 69.819 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 26.61 Mbit/s
95th percentile per-packet one-way delay: 66.640 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 29.59 Mbit/s
95th percentile per-packet one-way delay: 70.766 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 72.116 ms
Loss rate: 0.00%
```
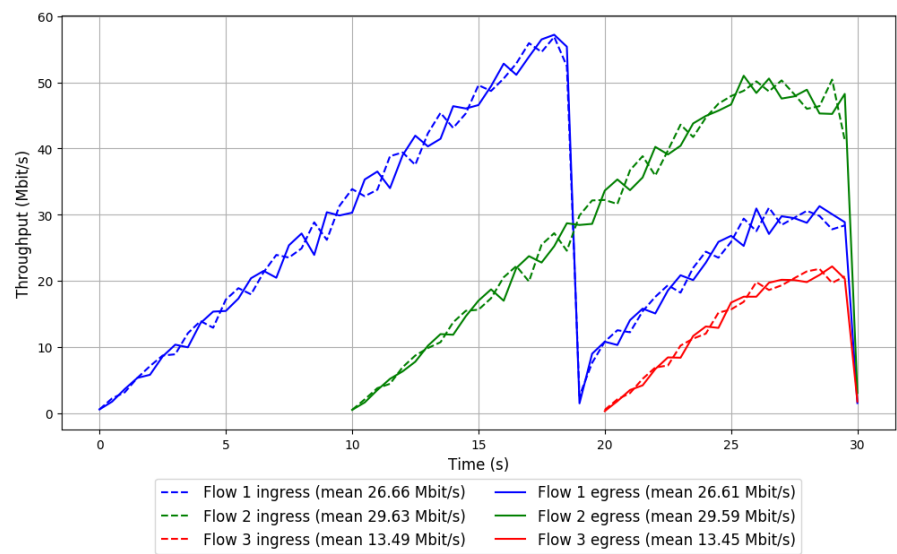
Run 5: Report of LEDBAT — Data Link

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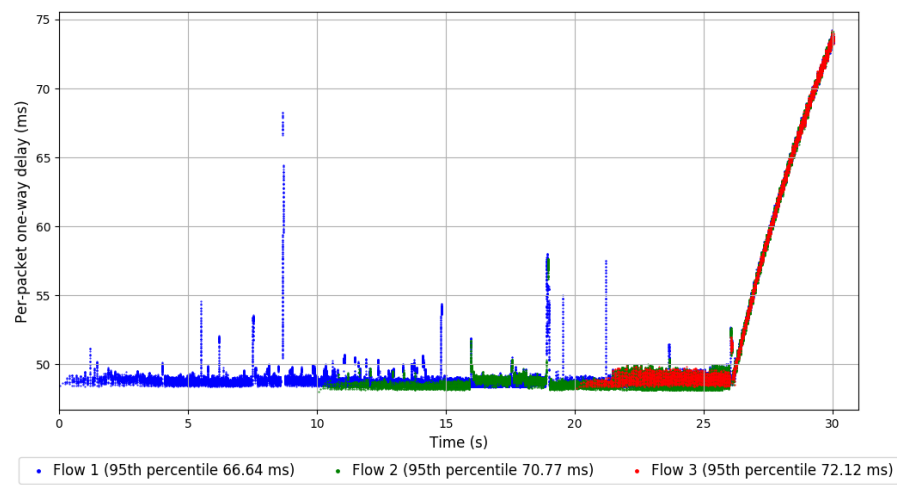
```
Run 6: Statistics of LEDBAT

Start at: 2017-08-11 11:08:21
End at: 2017-08-11 11:08:51
Local clock offset: 0.351 ms
Remote clock offset: -1.843 ms

# Below is generated by plot.py at 2017-08-11 13:22:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.07 Mbit/s
95th percentile per-packet one-way delay: 83.533 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 34.79 Mbit/s
95th percentile per-packet one-way delay: 82.785 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 23.36 Mbit/s
95th percentile per-packet one-way delay: 84.093 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 5.29 Mbit/s
95th percentile per-packet one-way delay: 85.686 ms
Loss rate: 0.84%
```
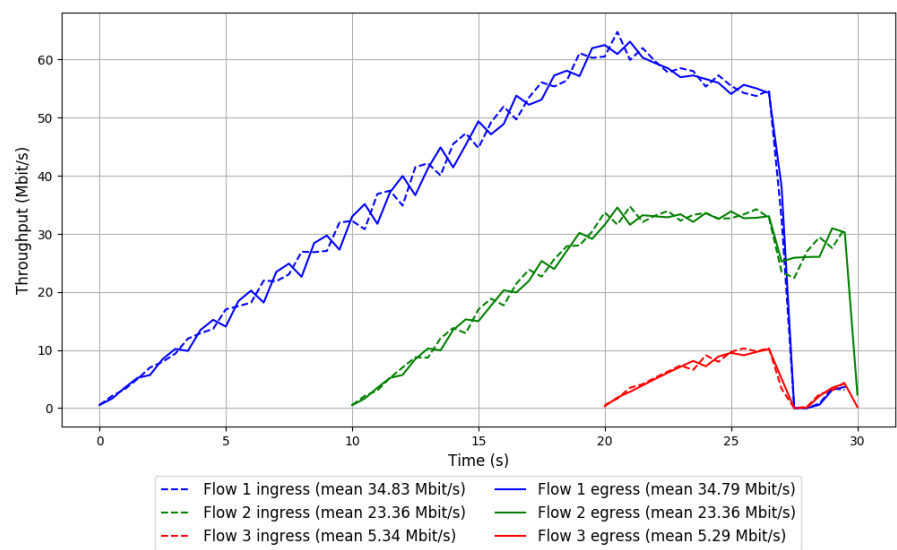
Run 6: Report of LEDBAT — Data Link
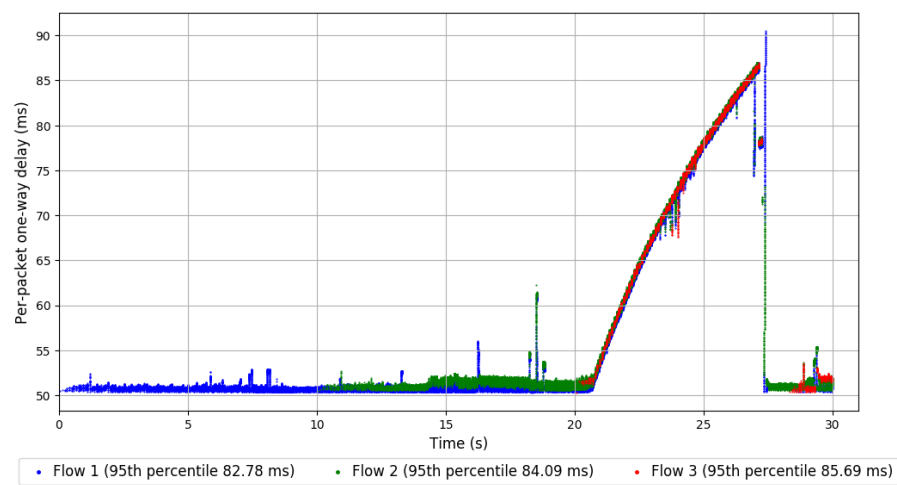
```
Run 7: Statistics of LEDBAT

Start at: 2017-08-11 11:29:21
End at: 2017-08-11 11:29:51
Local clock offset: 0.454 ms
Remote clock offset: -1.689 ms

# Below is generated by plot.py at 2017-08-11 13:22:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.12 Mbit/s
95th percentile per-packet one-way delay: 86.783 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 85.942 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 20.60 Mbit/s
95th percentile per-packet one-way delay: 87.347 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 88.382 ms
Loss rate: 0.00%
```
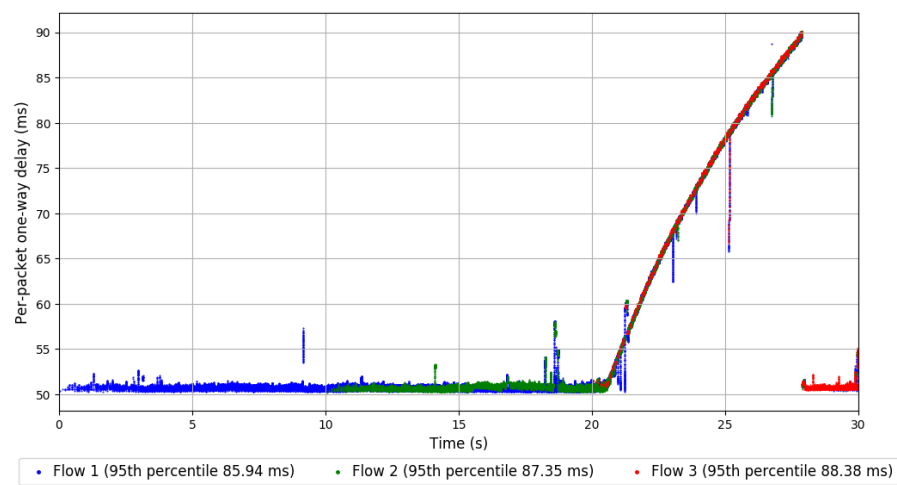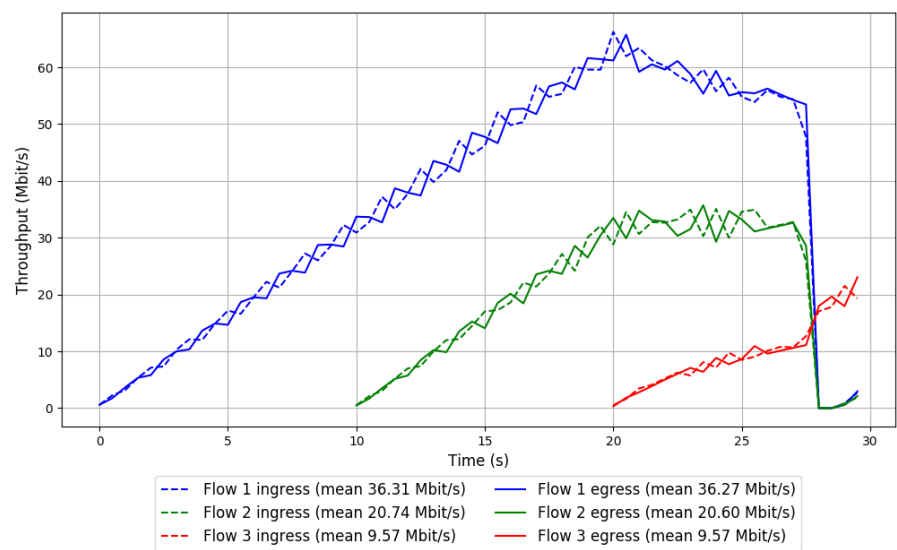
Run 7: Report of LEDBAT — Data Link

```
Run 8: Statistics of LEDBAT

Start at: 2017-08-11 11:50:24
End at: 2017-08-11 11:50:54
Local clock offset: 0.581 ms
Remote clock offset: -0.8 ms

# Below is generated by plot.py at 2017-08-11 13:22:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.07 Mbit/s
95th percentile per-packet one-way delay: 87.279 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 36.40 Mbit/s
95th percentile per-packet one-way delay: 86.571 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 20.71 Mbit/s
95th percentile per-packet one-way delay: 87.761 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 5.76 Mbit/s
95th percentile per-packet one-way delay: 89.273 ms
Loss rate: 0.82%
```
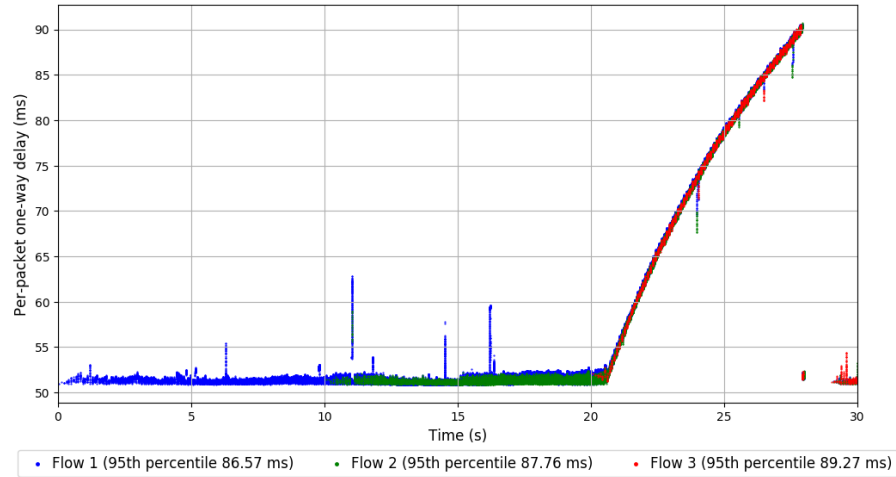
Run 8: Report of LEDBAT — Data Link
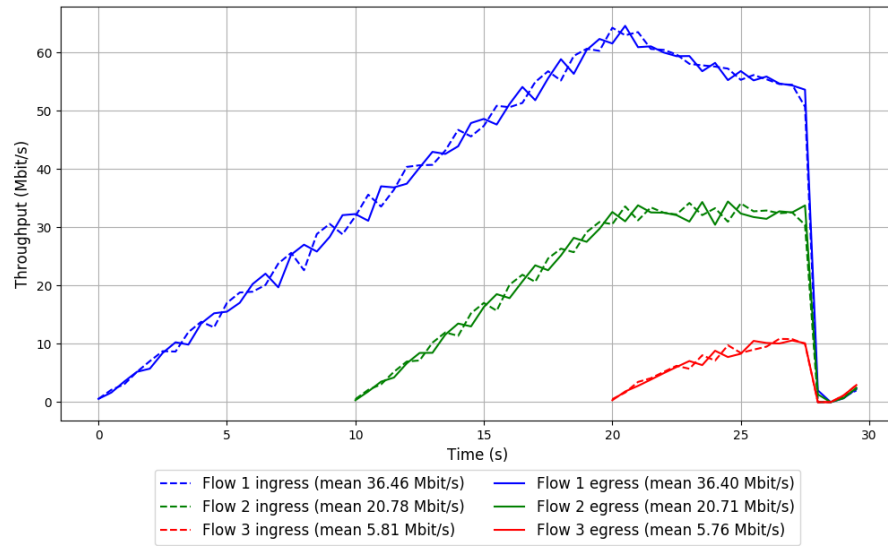
```
Run 9: Statistics of LEDBAT

Start at: 2017-08-11 12:11:24
End at: 2017-08-11 12:11:54
Local clock offset: 0.595 ms
Remote clock offset: -2.812 ms

# Below is generated by plot.py at 2017-08-11 13:22:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.00 Mbit/s
95th percentile per-packet one-way delay: 79.794 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 34.16 Mbit/s
95th percentile per-packet one-way delay: 79.285 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 23.13 Mbit/s
95th percentile per-packet one-way delay: 80.243 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 10.56 Mbit/s
95th percentile per-packet one-way delay: 81.206 ms
Loss rate: 0.00%
```

Run 9: Report of LEDBAT — Data Link
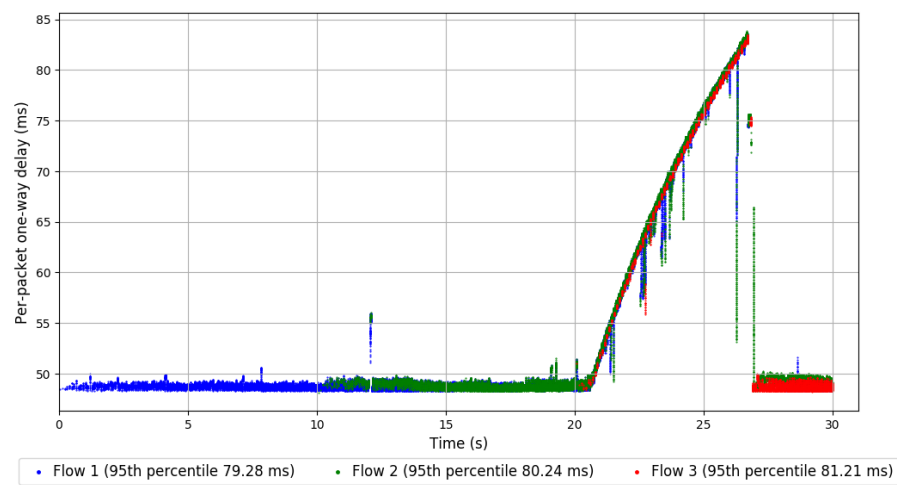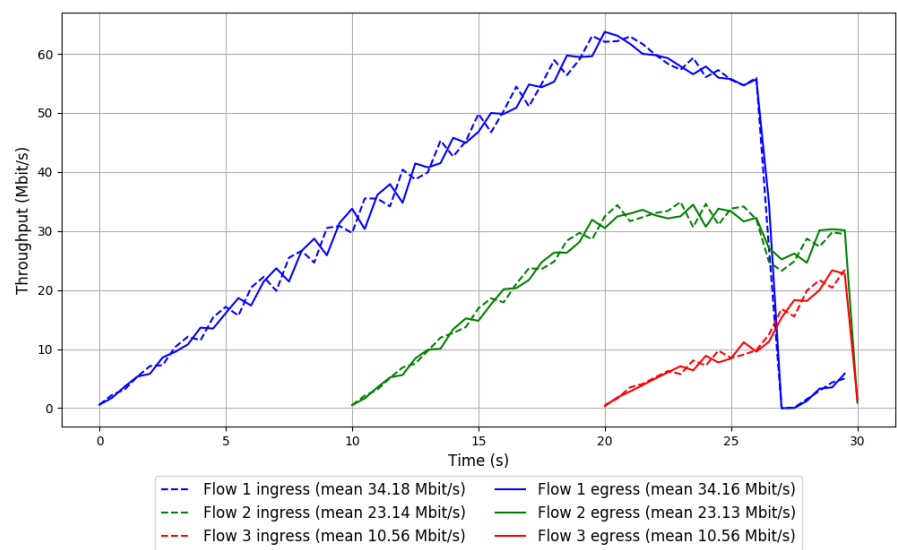
```
Run 10: Statistics of LEDBAT

Start at: 2017-08-11 12:32:33
End at: 2017-08-11 12:33:03
Local clock offset: 0.486 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2017-08-11 13:22:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 46.41 Mbit/s
95th percentile per-packet one-way delay: 72.301 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 31.20 Mbit/s
95th percentile per-packet one-way delay: 71.784 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 73.461 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 12.56 Mbit/s
95th percentile per-packet one-way delay: 71.795 ms
Loss rate: 0.00%
```

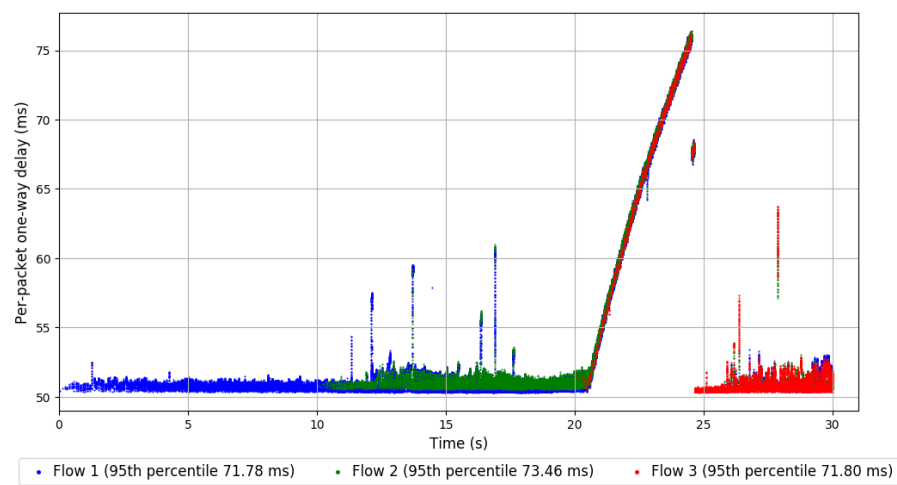Run 10: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC

Start at: 2017-08-11 09:06:43
End at: 2017-08-11 09:07:13
Local clock offset: 0.097 ms
Remote clock offset: 0.466 ms
```

Run 1: Report of PCC — Data Link

Flow 1 ingress (mean 27.23 Mbit/s) Flow 1 egress (mean 25.40 Mbit/s)
Flow 2 ingress (mean 26.62 Mbit/s) Flow 2 egress (mean 24.99 Mbit/s)
Flow 3 ingress (mean 48.97 Mbit/s) Flow 3 egress (mean 43.72 Mbit/s)

Flow 1 (95th percentile 84.08 ms)   Flow 2 (95th percentile 84.41 ms)   Flow 3 (95th percentile 86.19 ms)
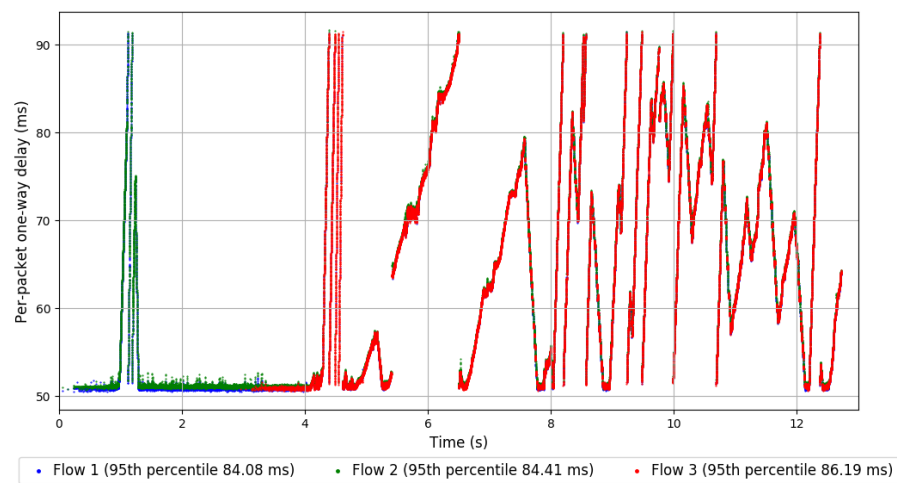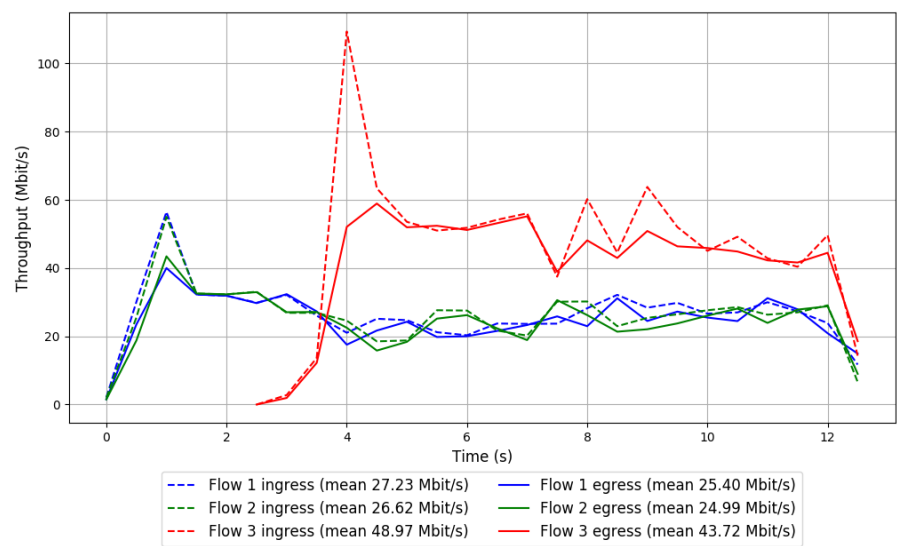
```
Run 2: Statistics of PCC

Start at: 2017-08-11 09:27:39
End at: 2017-08-11 09:28:09
Local clock offset: 0.141 ms
Remote clock offset: -2.556 ms


# Below is generated by plot.py at 2017-08-11 13:22:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.39 Mbit/s
95th percentile per-packet one-way delay: 76.957 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 77.15 Mbit/s
95th percentile per-packet one-way delay: 76.859 ms
Loss rate: 1.59%
-- Flow 2:
Average throughput: 7.78 Mbit/s
95th percentile per-packet one-way delay: 79.849 ms
Loss rate: 1.24%
-- Flow 3:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 75.458 ms
Loss rate: 2.09%
```
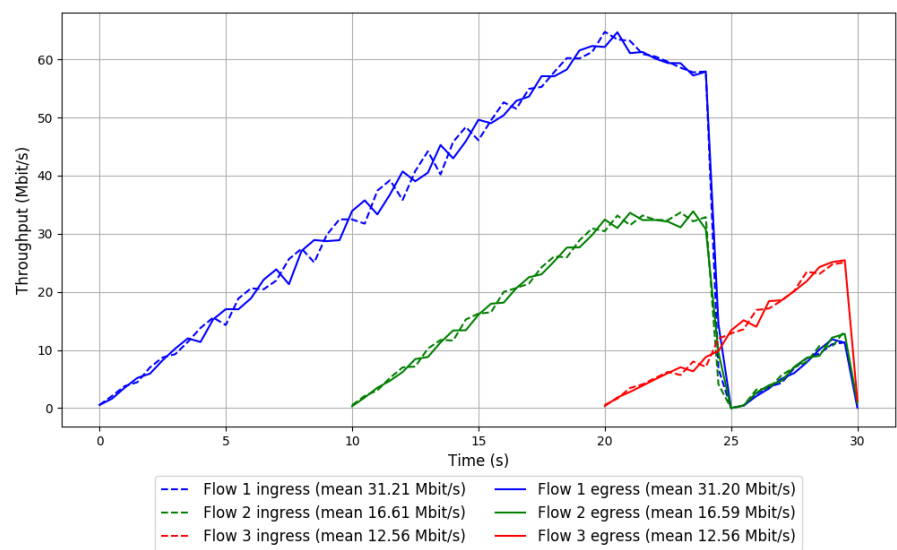
Run 2: Report of PCC — Data Link

Flow 1 ingress (mean 78.41 Mbit/s) Flow 1 egress (mean 77.15 Mbit/s)
Flow 2 ingress (mean 7.87 Mbit/s)   Flow 2 egress (mean 7.78 Mbit/s)
Flow 3 ingress (mean 12.69 Mbit/s) Flow 3 egress (mean 12.42 Mbit/s)

Flow 1 (95th percentile 76.86 ms)   Flow 2 (95th percentile 79.85 ms)   Flow 3 (95th percentile 75.46 ms)
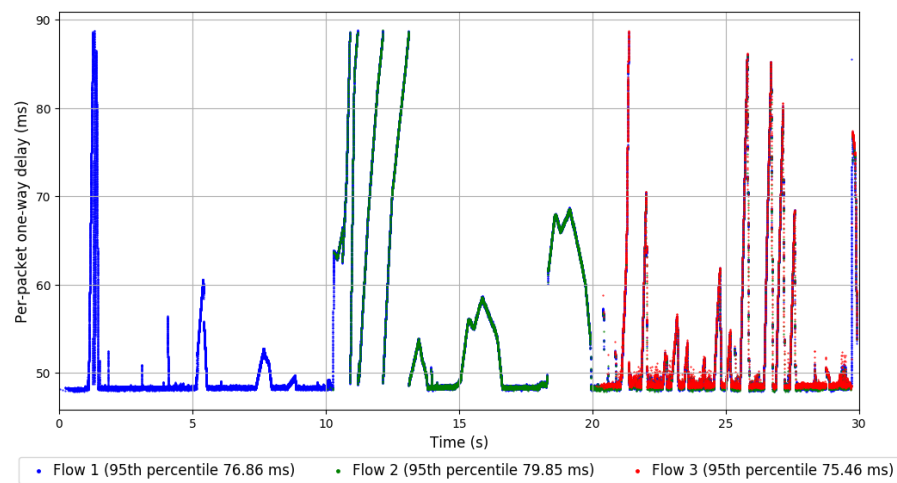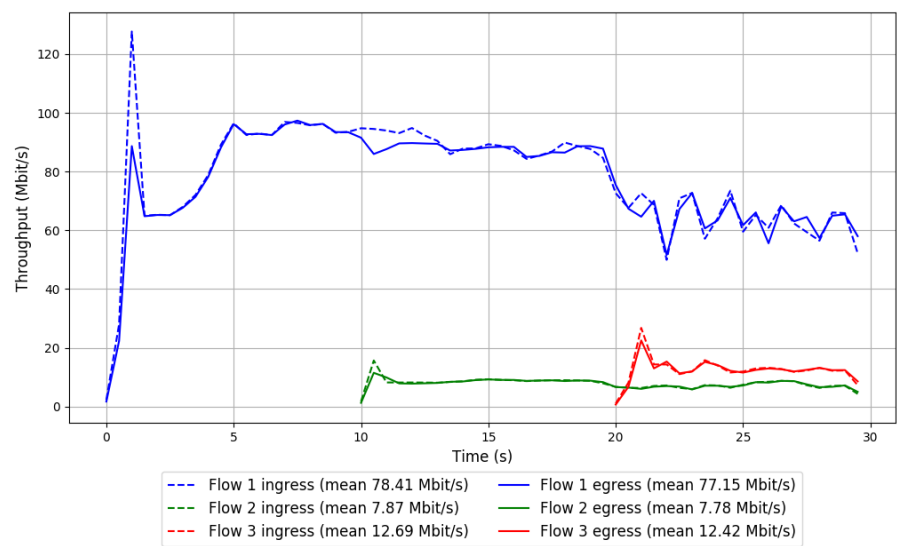
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```
Run 3: Statistics of PCC

Start at: 2017-08-11 09:48:36
End at: 2017-08-11 09:49:06
Local clock offset: 0.185 ms
Remote clock offset: -0.445 ms

# Below is generated by plot.py at 2017-08-11 13:22:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.32 Mbit/s
95th percentile per-packet one-way delay: 76.882 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 66.40 Mbit/s
95th percentile per-packet one-way delay: 75.462 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 17.49 Mbit/s
95th percentile per-packet one-way delay: 78.363 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 82.567 ms
Loss rate: 2.35%
```
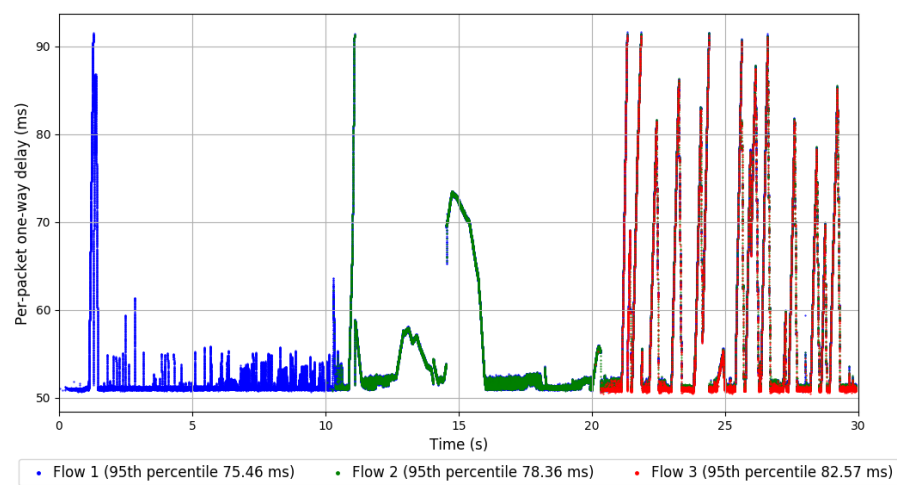
Run 3: Report of PCC — Data Link

Flow 1 ingress (mean 67.50 Mbit/s) ------ Flow 1 egress (mean 66.40 Mbit/s)
Flow 2 ingress (mean 17.74 Mbit/s) ------ Flow 2 egress (mean 17.49 Mbit/s)
Flow 3 ingress (mean 13.46 Mbit/s) ------ Flow 3 egress (mean 13.15 Mbit/s)

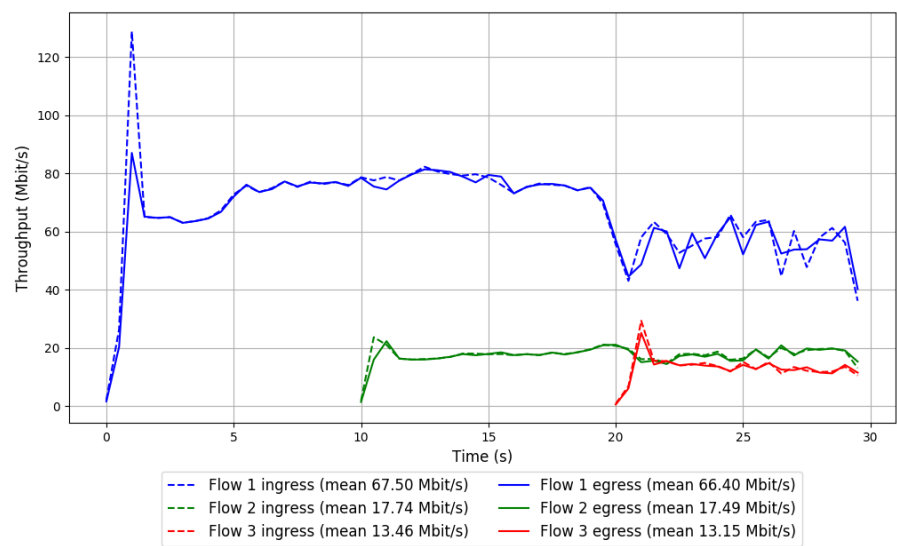Flow 1 (95th percentile 75.46 ms)   Flow 2 (95th percentile 78.36 ms)   Flow 3 (95th percentile 82.57 ms)

```
Run 4: Statistics of PCC

Start at: 2017-08-11 10:09:33
End at: 2017-08-11 10:10:03
Local clock offset: 0.148 ms
Remote clock offset: -1.353 ms
```

Run 4: Report of PCC — Data Link

Flow 1 ingress (mean 0.00 Mbit/s) — Flow 1 egress (mean 58.79 Mbit/s)
Flow 2 ingress (mean 73.50 Mbit/s) — Flow 2 egress (mean 79.01 Mbit/s)
Flow 3 ingress (mean 8.56 Mbit/s) — Flow 3 egress (mean 8.38 Mbit/s)

Flow 1 (95th percentile 11525.92 ms) • Flow 2 (95th percentile 68.28 ms) • Flow 3 (95th percentile 78.98 ms)

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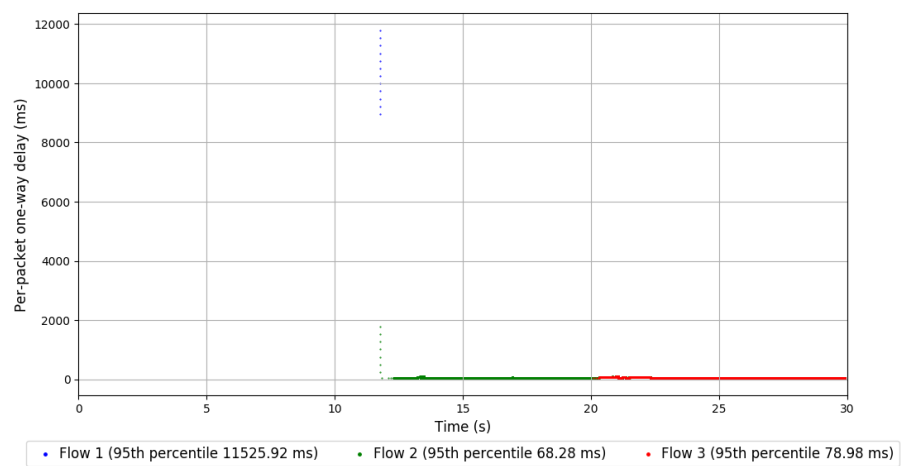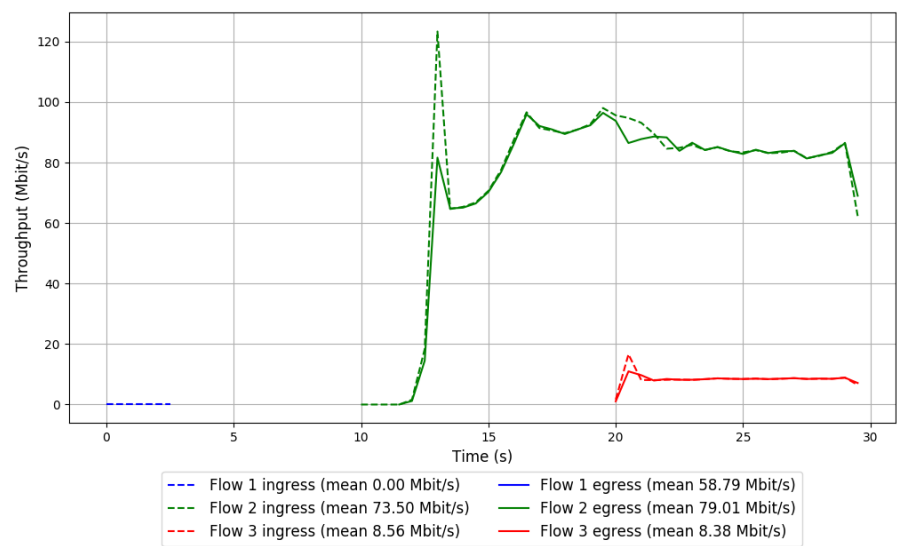
```
Run 5: Statistics of PCC

Start at: 2017-08-11 10:30:34
End at: 2017-08-11 10:31:04
Local clock offset: 0.323 ms
Remote clock offset: -3.742 ms


# Below is generated by plot.py at 2017-08-11 13:22:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.22 Mbit/s
95th percentile per-packet one-way delay: 78.806 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 68.07 Mbit/s
95th percentile per-packet one-way delay: 78.846 ms
Loss rate: 2.71%
-- Flow 2:
Average throughput: 16.31 Mbit/s
95th percentile per-packet one-way delay: 80.232 ms
Loss rate: 2.82%
-- Flow 3:
Average throughput: 13.13 Mbit/s
95th percentile per-packet one-way delay: 74.491 ms
Loss rate: 0.00%
```

Run 5: Report of PCC — Data Link

Flow 1 ingress (mean 69.97 Mbit/s) --- Flow 1 egress (mean 68.07 Mbit/s)
Flow 2 ingress (mean 16.78 Mbit/s) --- Flow 2 egress (mean 16.31 Mbit/s)
Flow 3 ingress (mean 13.13 Mbit/s) --- Flow 3 egress (mean 13.13 Mbit/s)

Flow 1 (95th percentile 78.85 ms) • Flow 2 (95th percentile 80.23 ms) • Flow 3 (95th percentile 74.49 ms)
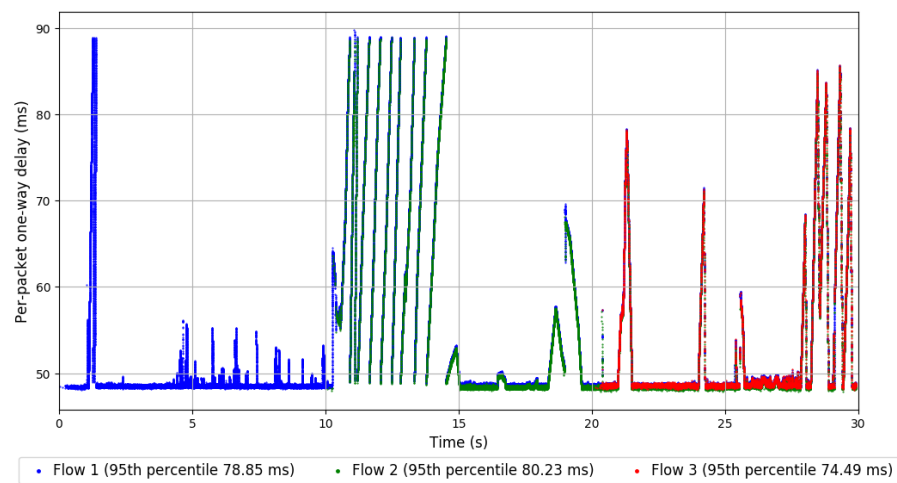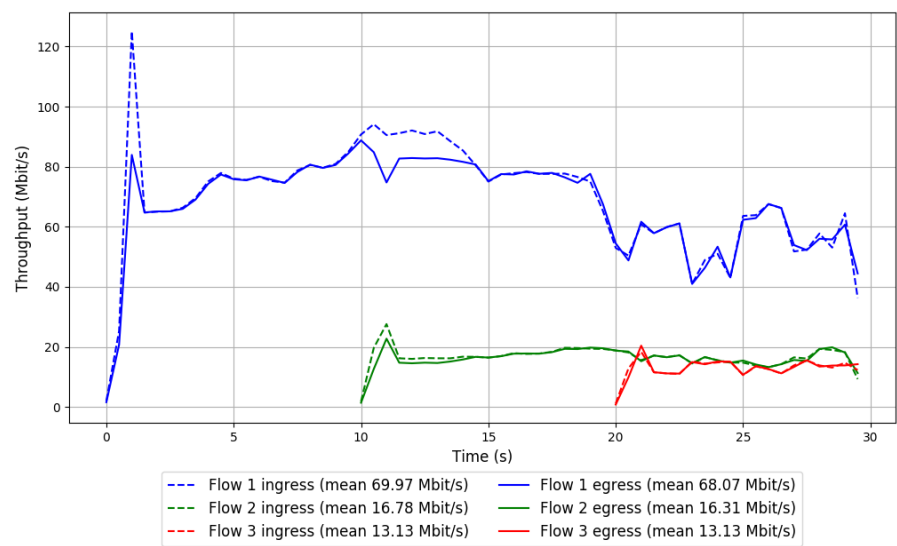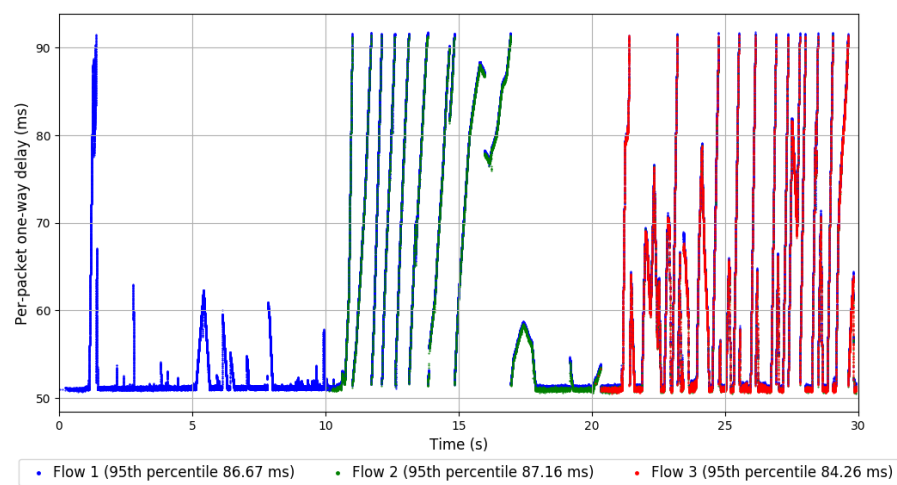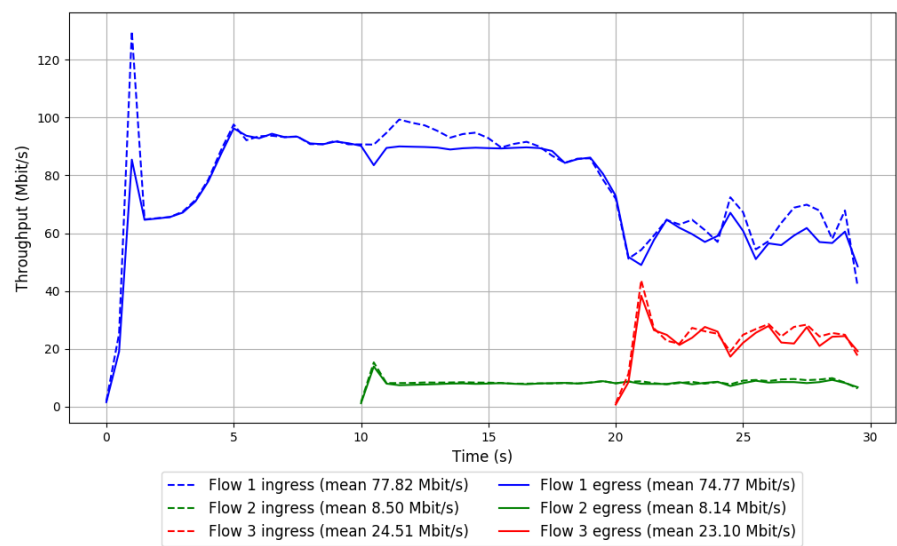
```
Run 6: Statistics of PCC

Start at: 2017-08-11 10:51:31
End at: 2017-08-11 10:52:01
Local clock offset: 0.392 ms
Remote clock offset: -1.254 ms


# Below is generated by plot.py at 2017-08-11 13:23:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.72 Mbit/s
95th percentile per-packet one-way delay: 86.606 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 74.77 Mbit/s
95th percentile per-packet one-way delay: 86.667 ms
Loss rate: 3.93%
-- Flow 2:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 87.164 ms
Loss rate: 4.21%
-- Flow 3:
Average throughput: 23.10 Mbit/s
95th percentile per-packet one-way delay: 84.257 ms
Loss rate: 5.74%
```

Run 6: Report of PCC — Data Link

Flow 1 ingress (mean 77.82 Mbit/s)   Flow 1 egress (mean 74.77 Mbit/s)
Flow 2 ingress (mean 8.50 Mbit/s)   Flow 2 egress (mean 8.14 Mbit/s)
Flow 3 ingress (mean 24.51 Mbit/s)   Flow 3 egress (mean 23.10 Mbit/s)

Flow 1 (95th percentile 86.67 ms)   Flow 2 (95th percentile 87.16 ms)   Flow 3 (95th percentile 84.26 ms)
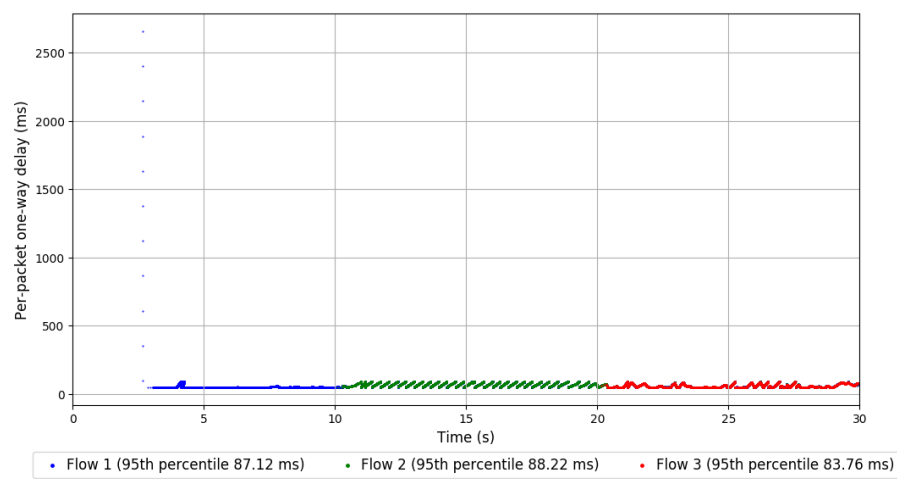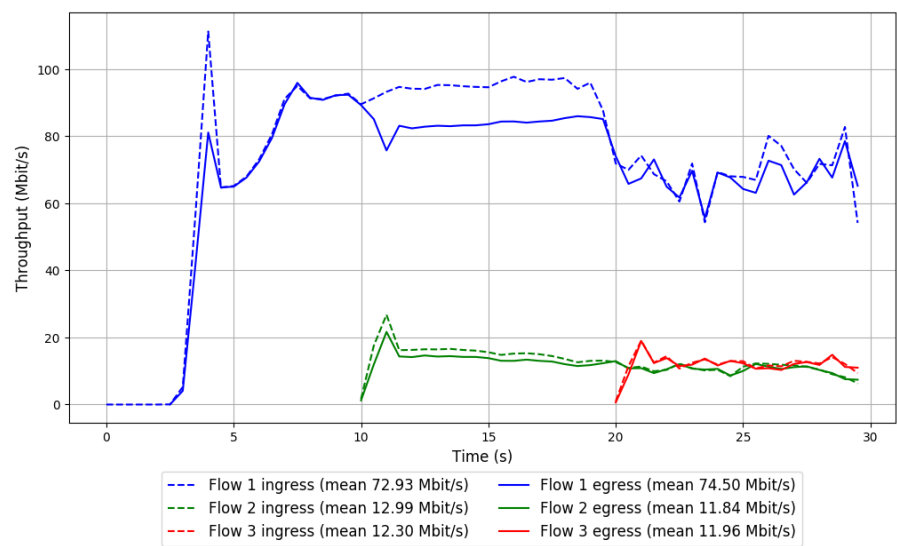
```
Run 7: Statistics of PCC

Start at: 2017-08-11 11:12:29
End at: 2017-08-11 11:12:59
Local clock offset: 0.363 ms
Remote clock offset: -1.396 ms


# Below is generated by plot.py at 2017-08-11 13:23:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.38 Mbit/s
95th percentile per-packet one-way delay: 87.132 ms
Loss rate: 6.70%
-- Flow 1:
Average throughput: 74.50 Mbit/s
95th percentile per-packet one-way delay: 87.118 ms
Loss rate: 6.69%
-- Flow 2:
Average throughput: 11.84 Mbit/s
95th percentile per-packet one-way delay: 88.225 ms
Loss rate: 8.69%
-- Flow 3:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 83.757 ms
Loss rate: 2.54%
```

Run 7: Report of PCC — Data Link

Flow 1 ingress (mean 72.93 Mbit/s) — — —   Flow 1 egress (mean 74.50 Mbit/s)
Flow 2 ingress (mean 12.99 Mbit/s) — — —   Flow 2 egress (mean 11.84 Mbit/s)
Flow 3 ingress (mean 12.30 Mbit/s) — — —   Flow 3 egress (mean 11.96 Mbit/s)

Flow 1 (95th percentile 87.12 ms)   Flow 2 (95th percentile 88.22 ms)   Flow 3 (95th percentile 83.76 ms)
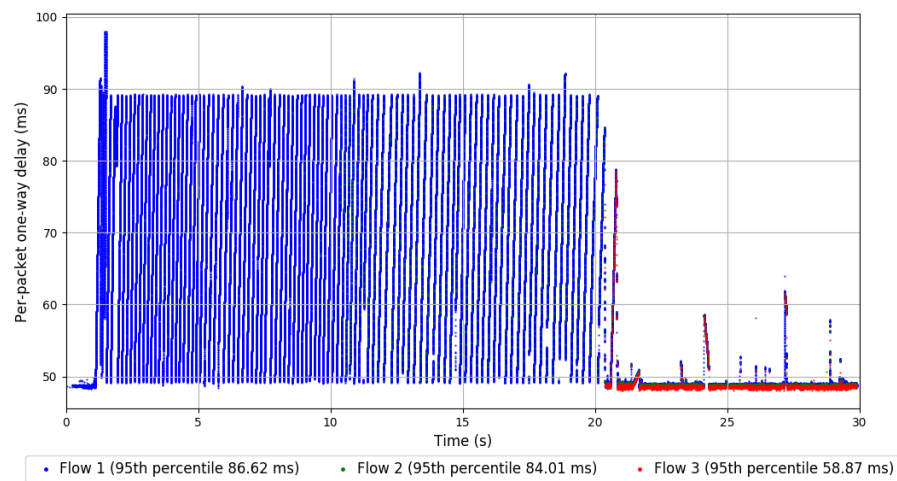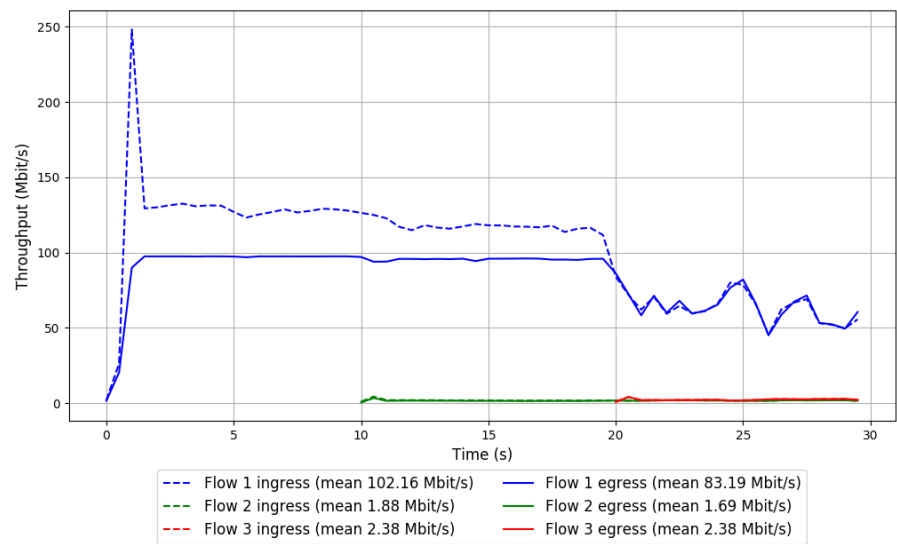
137

```
Run 8: Statistics of PCC

Start at: 2017-08-11 11:33:31
End at: 2017-08-11 11:34:01
Local clock offset: 0.393 ms
Remote clock offset: -3.711 ms


# Below is generated by plot.py at 2017-08-11 13:23:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.08 Mbit/s
95th percentile per-packet one-way delay: 86.560 ms
Loss rate: 18.33%
-- Flow 1:
Average throughput: 83.19 Mbit/s
95th percentile per-packet one-way delay: 86.618 ms
Loss rate: 18.57%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 84.014 ms
Loss rate: 10.20%
-- Flow 3:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 58.866 ms
Loss rate: 0.00%
```

Run 8: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 102.16 Mbit/s)   ——— Flow 1 egress (mean 83.19 Mbit/s)
- - - - Flow 2 ingress (mean 1.88 Mbit/s)   ——— Flow 2 egress (mean 1.69 Mbit/s)
- - - - Flow 3 ingress (mean 2.38 Mbit/s)   ——— Flow 3 egress (mean 2.38 Mbit/s)

- Flow 1 (95th percentile 86.62 ms)   • Flow 2 (95th percentile 84.01 ms)   • Flow 3 (95th percentile 58.87 ms)
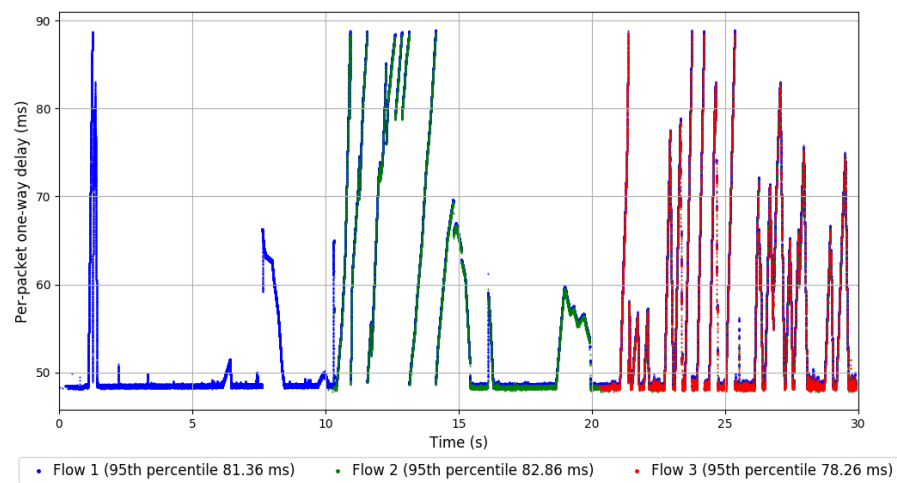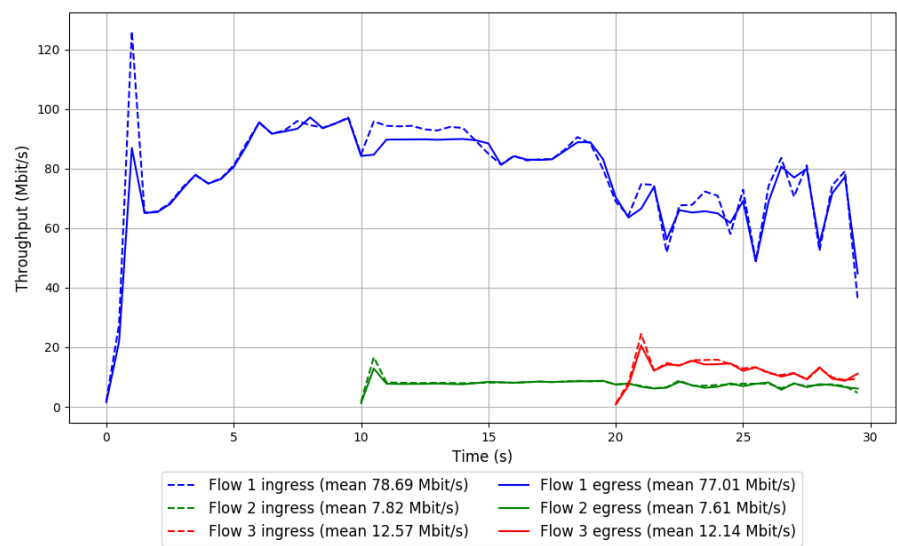
```
Run 9: Statistics of PCC

Start at: 2017-08-11 11:54:33
End at: 2017-08-11 11:55:03
Local clock offset: 0.602 ms
Remote clock offset: -3.283 ms


# Below is generated by plot.py at 2017-08-11 13:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.04 Mbit/s
95th percentile per-packet one-way delay: 81.370 ms
Loss rate: 2.22%
-- Flow 1:
Average throughput: 77.01 Mbit/s
95th percentile per-packet one-way delay: 81.355 ms
Loss rate: 2.13%
-- Flow 2:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 82.859 ms
Loss rate: 2.61%
-- Flow 3:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 78.258 ms
Loss rate: 3.45%
```
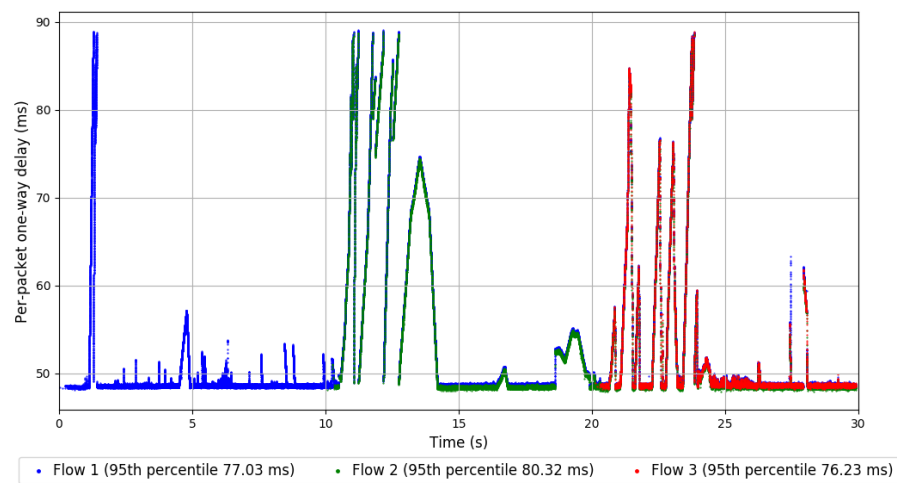
Run 9: Report of PCC — Data Link

- - - - Flow 1 ingress (mean 78.69 Mbit/s)   —— Flow 1 egress (mean 77.01 Mbit/s)
- - - - Flow 2 ingress (mean 7.82 Mbit/s)   —— Flow 2 egress (mean 7.61 Mbit/s)
- - - - Flow 3 ingress (mean 12.57 Mbit/s)   —— Flow 3 egress (mean 12.14 Mbit/s)

• Flow 1 (95th percentile 81.36 ms)   • Flow 2 (95th percentile 82.86 ms)   • Flow 3 (95th percentile 78.26 ms)
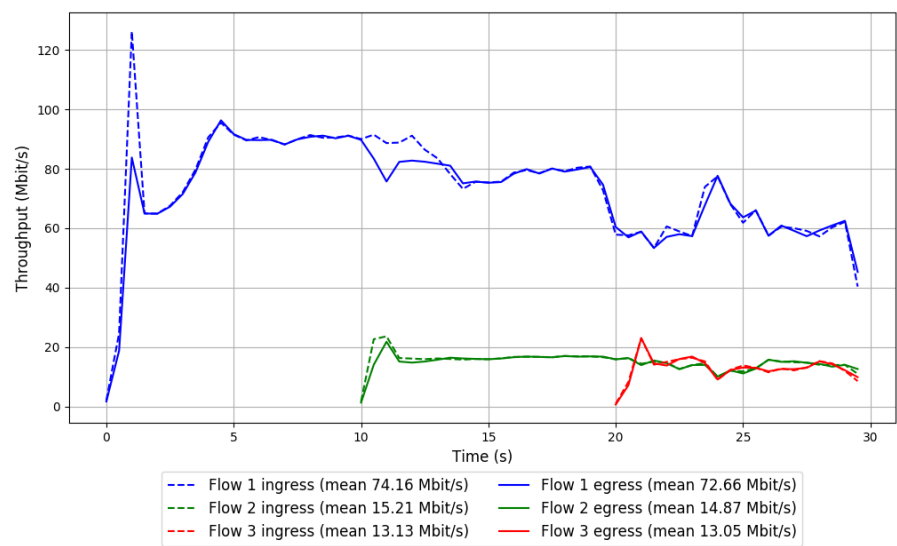
141

```
Run 10: Statistics of PCC

Start at: 2017-08-11 12:15:37
End at: 2017-08-11 12:16:07
Local clock offset: 0.596 ms
Remote clock offset: -2.633 ms

# Below is generated by plot.py at 2017-08-11 13:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.81 Mbit/s
95th percentile per-packet one-way delay: 77.656 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 72.66 Mbit/s
95th percentile per-packet one-way delay: 77.032 ms
Loss rate: 2.03%
-- Flow 2:
Average throughput: 14.87 Mbit/s
95th percentile per-packet one-way delay: 80.316 ms
Loss rate: 2.27%
-- Flow 3:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 76.231 ms
Loss rate: 0.60%
```

Run 10: Report of PCC — Data Link

Flow 1 ingress (mean 74.16 Mbit/s) --- Flow 1 egress (mean 72.66 Mbit/s)
Flow 2 ingress (mean 15.21 Mbit/s) --- Flow 2 egress (mean 14.87 Mbit/s)
Flow 3 ingress (mean 13.13 Mbit/s) --- Flow 3 egress (mean 13.05 Mbit/s)

Flow 1 (95th percentile 77.03 ms)   Flow 2 (95th percentile 80.32 ms)   Flow 3 (95th percentile 76.23 ms)

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```
Run 1: Statistics of QUIC Cubic

Start at: 2017-08-11 09:03:58
End at: 2017-08-11 09:04:28
Local clock offset: 0.182 ms
Remote clock offset: 0.136 ms


# Below is generated by plot.py at 2017-08-11 13:23:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.19 Mbit/s
95th percentile per-packet one-way delay: 64.394 ms
Loss rate: 2.23%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 50.268 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.55 Mbit/s
95th percentile per-packet one-way delay: 64.388 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 35.38 Mbit/s
95th percentile per-packet one-way delay: 64.415 ms
Loss rate: 2.57%
```

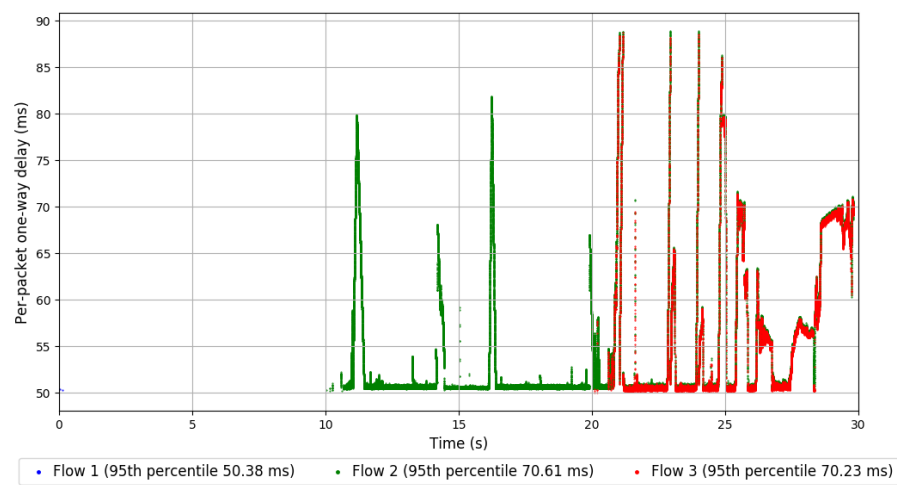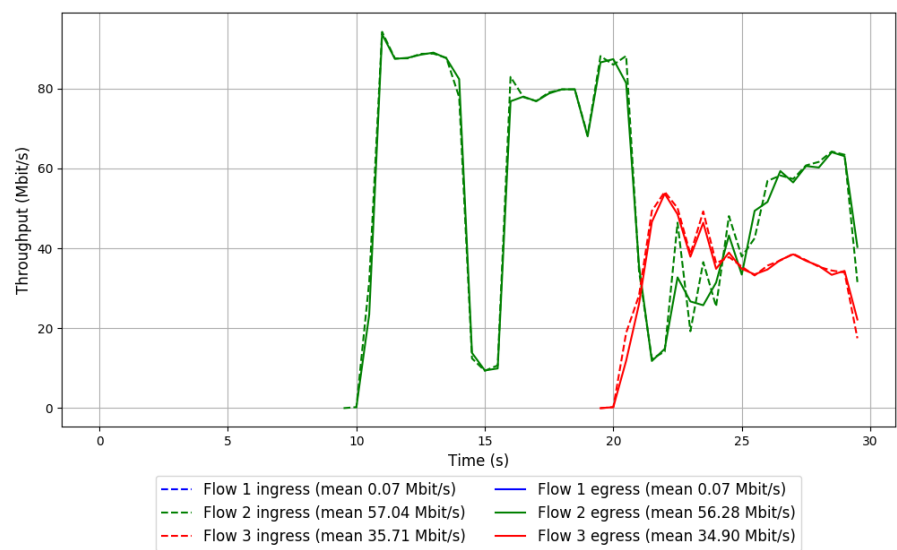Run 1: Report of QUIC Cubic — Data Link
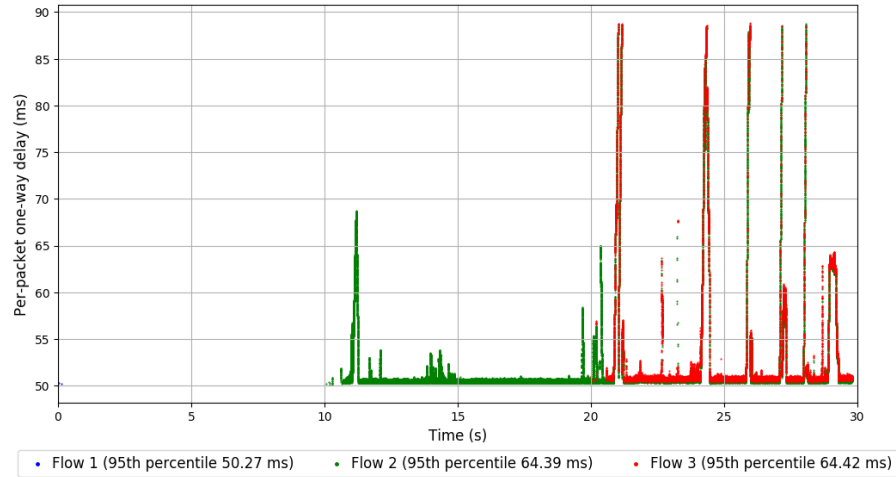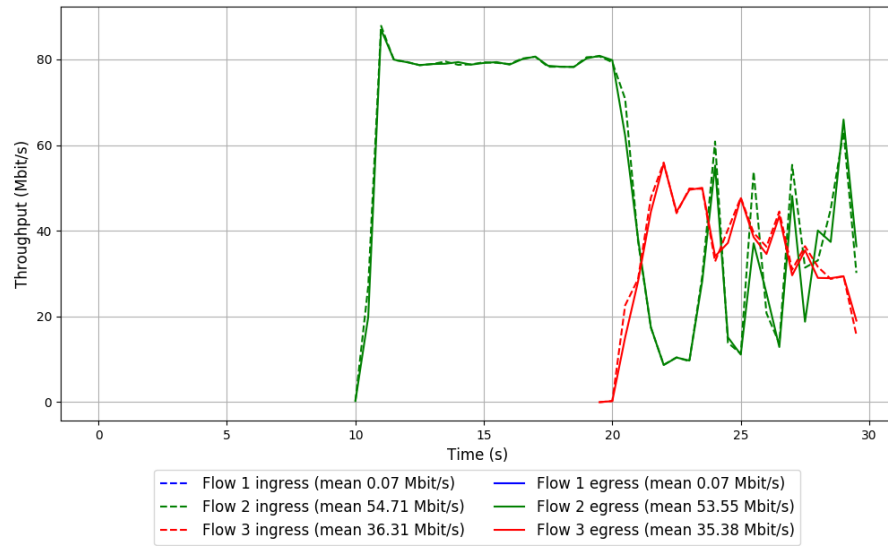
```
Run 2: Statistics of QUIC Cubic

Start at: 2017-08-11 09:24:55
End at: 2017-08-11 09:25:25
Local clock offset: 0.146 ms
Remote clock offset: -0.375 ms


# Below is generated by plot.py at 2017-08-11 13:23:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.90 Mbit/s
95th percentile per-packet one-way delay: 70.479 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 50.381 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.28 Mbit/s
95th percentile per-packet one-way delay: 70.609 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 34.90 Mbit/s
95th percentile per-packet one-way delay: 70.231 ms
Loss rate: 2.13%
```

Run 2: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 0.07 Mbit/s) ——— Flow 1 egress (mean 0.07 Mbit/s)
- - - - Flow 2 ingress (mean 57.04 Mbit/s) ——— Flow 2 egress (mean 56.28 Mbit/s)
- - - - Flow 3 ingress (mean 35.71 Mbit/s) ——— Flow 3 egress (mean 34.90 Mbit/s)

• Flow 1 (95th percentile 50.38 ms)   • Flow 2 (95th percentile 70.61 ms)   • Flow 3 (95th percentile 70.23 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2017-08-11 09:45:52
End at: 2017-08-11 09:46:22
Local clock offset: 0.183 ms
Remote clock offset: -2.95 ms


# Below is generated by plot.py at 2017-08-11 13:23:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.66 Mbit/s
95th percentile per-packet one-way delay: 69.001 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 48.316 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 58.53 Mbit/s
95th percentile per-packet one-way delay: 68.838 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 27.15 Mbit/s
95th percentile per-packet one-way delay: 69.584 ms
Loss rate: 1.61%
```
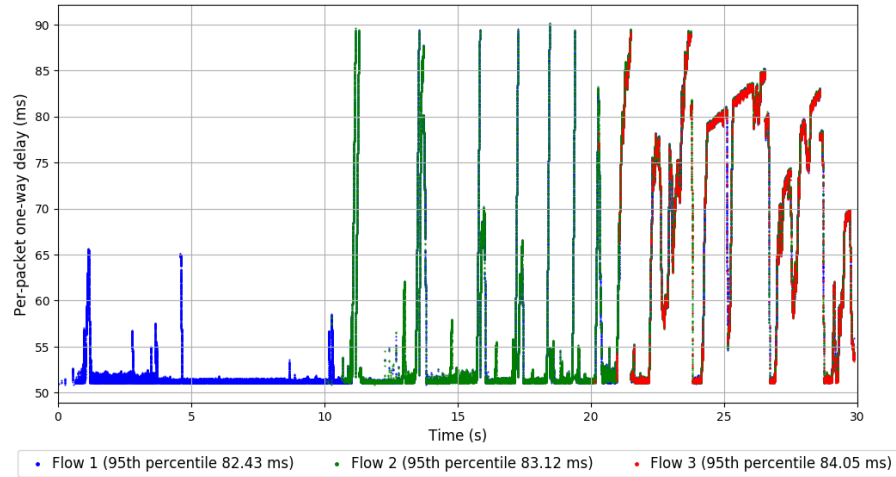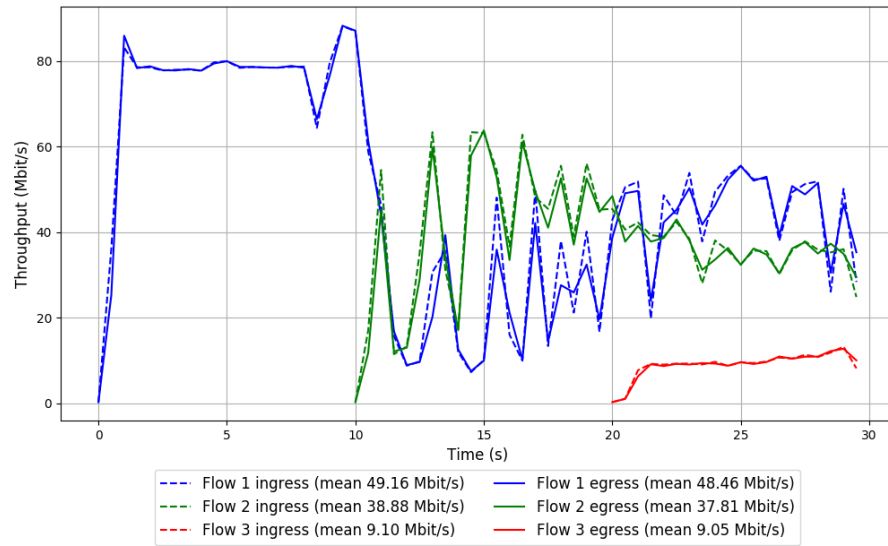
Run 3: Report of QUIC Cubic — Data Link

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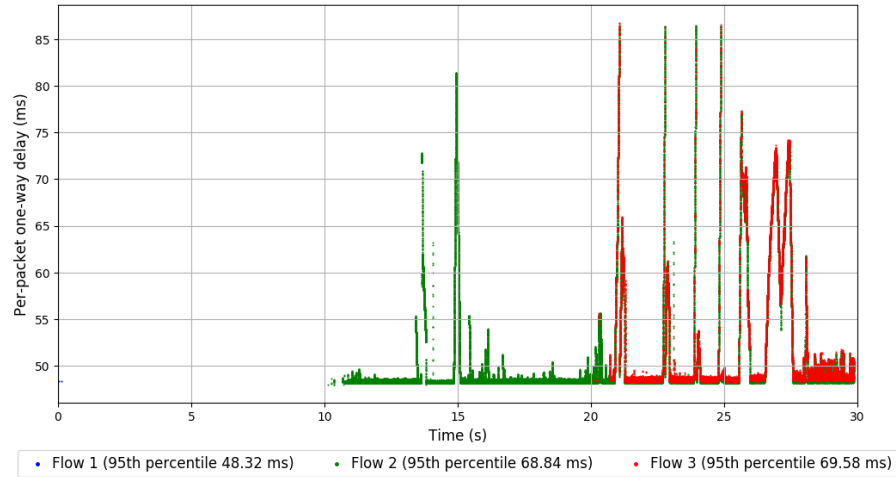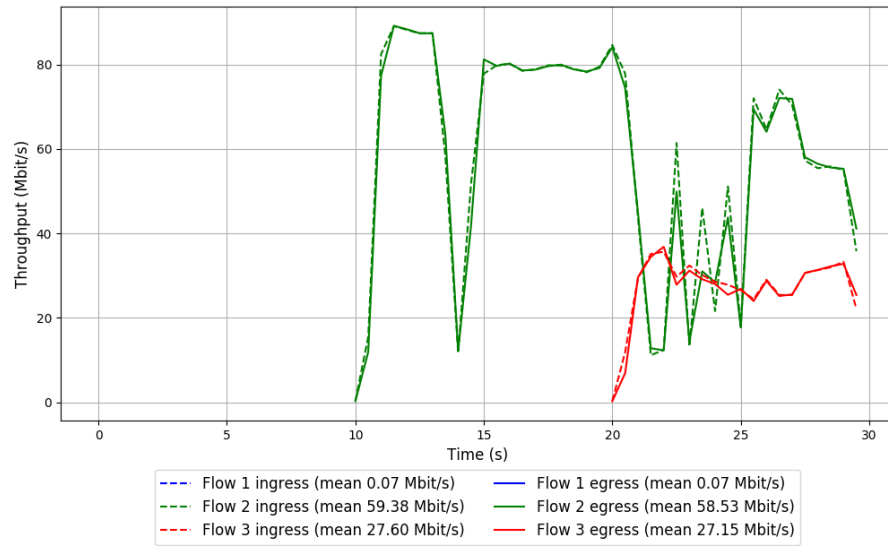
```
Run 4: Statistics of QUIC Cubic

Start at: 2017-08-11 10:06:47
End at: 2017-08-11 10:07:17
Local clock offset: 0.112 ms
Remote clock offset: -0.71 ms


# Below is generated by plot.py at 2017-08-11 13:23:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.56 Mbit/s
95th percentile per-packet one-way delay: 82.729 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 48.46 Mbit/s
95th percentile per-packet one-way delay: 82.433 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 37.81 Mbit/s
95th percentile per-packet one-way delay: 83.118 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 9.05 Mbit/s
95th percentile per-packet one-way delay: 84.048 ms
Loss rate: 0.54%
```

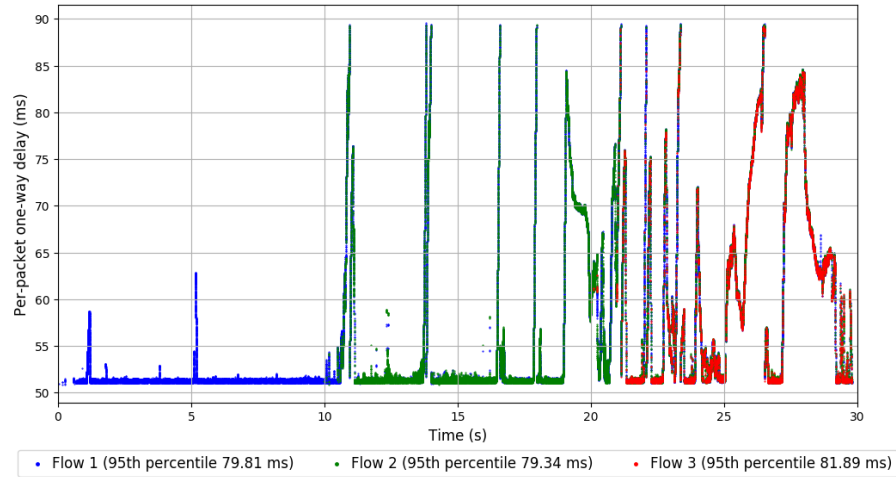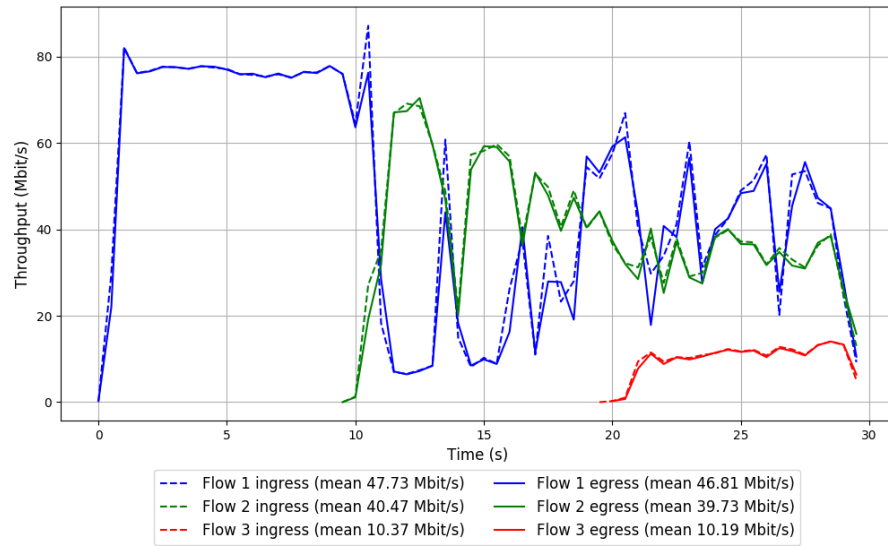Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2017-08-11 10:27:48
End at: 2017-08-11 10:28:18
Local clock offset: 0.206 ms
Remote clock offset: -1.117 ms


# Below is generated by plot.py at 2017-08-11 13:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.64 Mbit/s
95th percentile per-packet one-way delay: 79.910 ms
Loss rate: 1.89%
-- Flow 1:
Average throughput: 46.81 Mbit/s
95th percentile per-packet one-way delay: 79.806 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 39.73 Mbit/s
95th percentile per-packet one-way delay: 79.340 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 81.886 ms
Loss rate: 1.84%
```
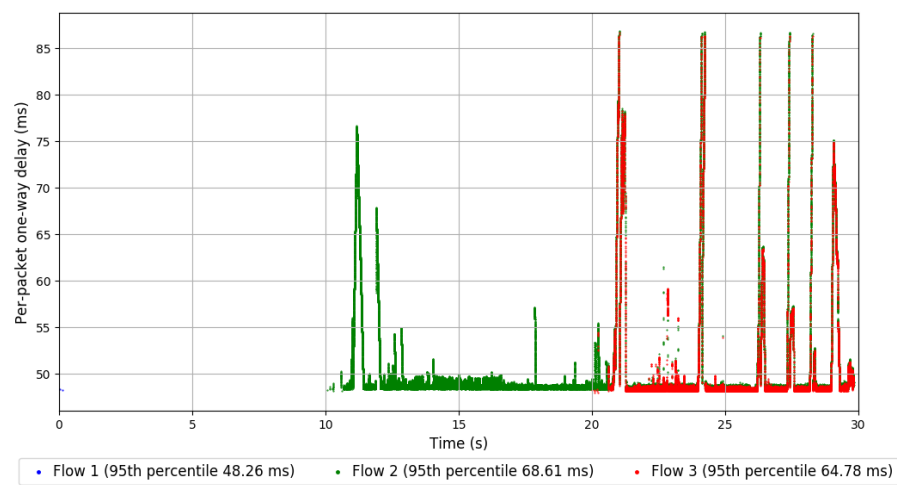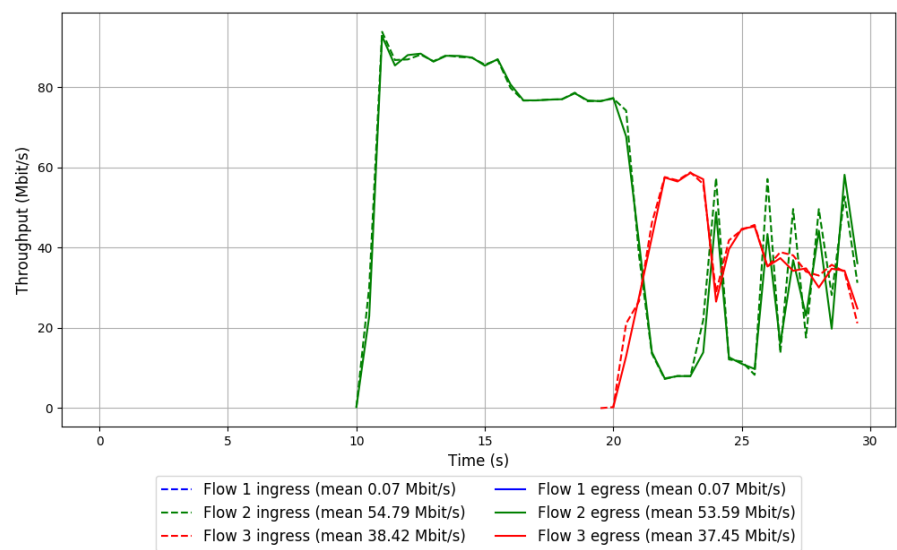
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 47.73 Mbit/s) --- Flow 1 egress (mean 46.81 Mbit/s) ---
Flow 2 ingress (mean 40.47 Mbit/s) --- Flow 2 egress (mean 39.73 Mbit/s) ---
Flow 3 ingress (mean 10.37 Mbit/s) --- Flow 3 egress (mean 10.19 Mbit/s) ---

Flow 1 (95th percentile 79.81 ms)   Flow 2 (95th percentile 79.34 ms)   Flow 3 (95th percentile 81.89 ms)

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```
Run 6: Statistics of QUIC Cubic

Start at: 2017-08-11 10:48:47
End at: 2017-08-11 10:49:17
Local clock offset: 0.279 ms
Remote clock offset: -4.003 ms


# Below is generated by plot.py at 2017-08-11 13:23:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.86 Mbit/s
95th percentile per-packet one-way delay: 67.993 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 48.264 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.59 Mbit/s
95th percentile per-packet one-way delay: 68.606 ms
Loss rate: 2.19%
-- Flow 3:
Average throughput: 37.45 Mbit/s
95th percentile per-packet one-way delay: 64.776 ms
Loss rate: 2.54%
```
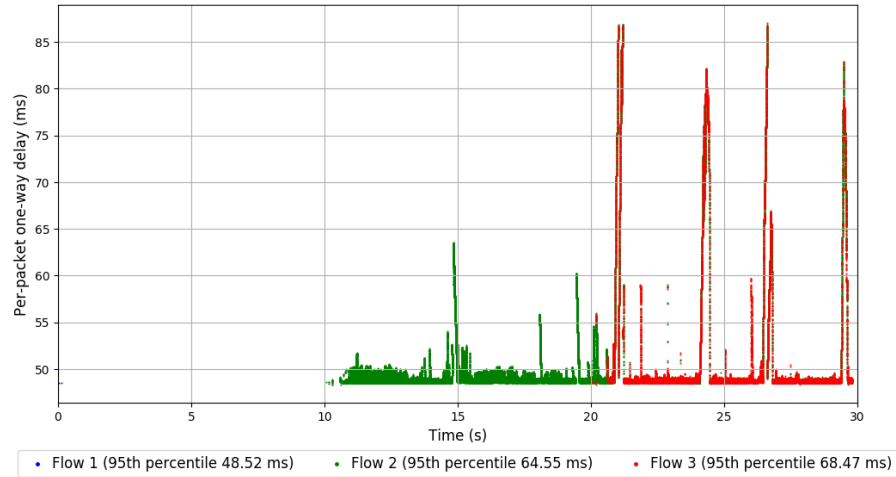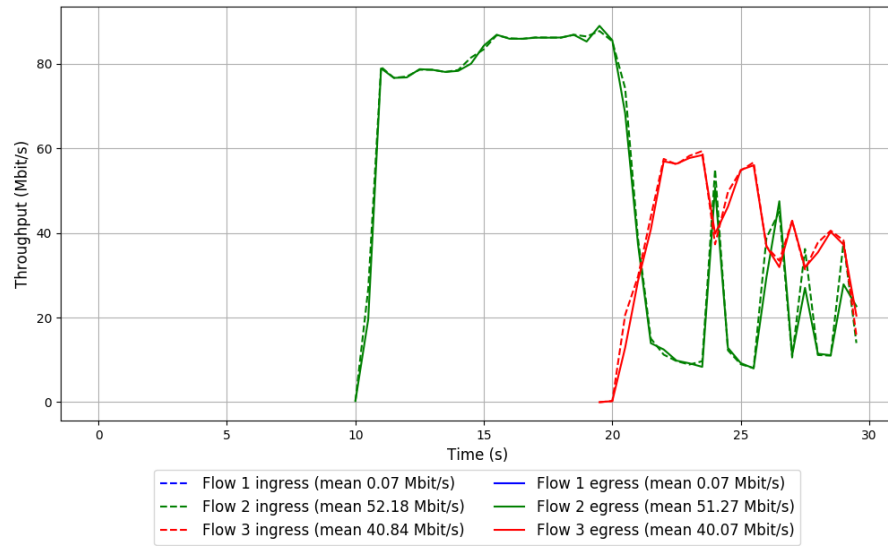
Run 6: Report of QUIC Cubic — Data Link

- - - - Flow 1 ingress (mean 0.07 Mbit/s)   —— Flow 1 egress (mean 0.07 Mbit/s)
- - - - Flow 2 ingress (mean 54.79 Mbit/s)   —— Flow 2 egress (mean 53.59 Mbit/s)
- - - - Flow 3 ingress (mean 38.42 Mbit/s)   —— Flow 3 egress (mean 37.45 Mbit/s)

- Flow 1 (95th percentile 48.26 ms)   • Flow 2 (95th percentile 68.61 ms)   • Flow 3 (95th percentile 64.78 ms)

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```
Run 7: Statistics of QUIC Cubic

Start at: 2017-08-11 11:09:45
End at: 2017-08-11 11:10:15
Local clock offset: 0.356 ms
Remote clock offset: -3.862 ms


# Below is generated by plot.py at 2017-08-11 13:23:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.22 Mbit/s
95th percentile per-packet one-way delay: 65.685 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 48.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 64.549 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 40.07 Mbit/s
95th percentile per-packet one-way delay: 68.465 ms
Loss rate: 1.88%
```
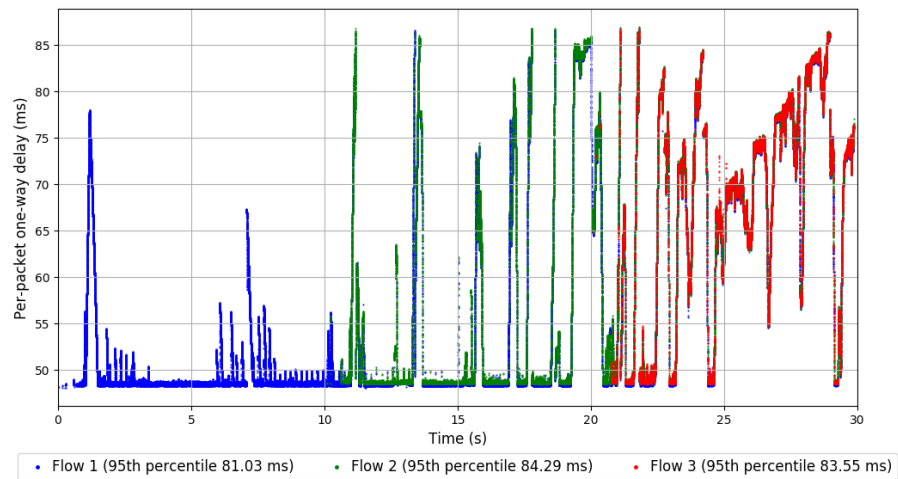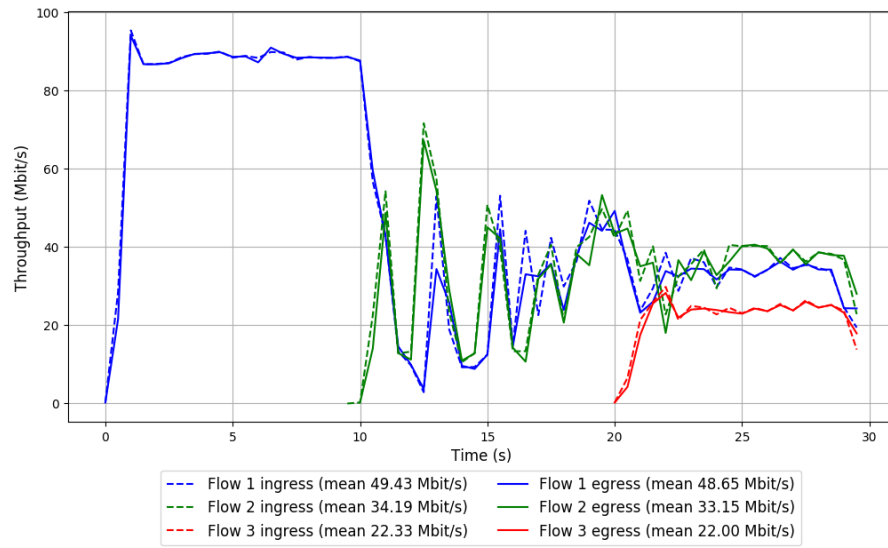
Run 7: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 0.07 Mbit/s)
Flow 1 egress (mean 0.07 Mbit/s)
Flow 2 ingress (mean 52.18 Mbit/s)
Flow 2 egress (mean 51.27 Mbit/s)
Flow 3 ingress (mean 40.84 Mbit/s)
Flow 3 egress (mean 40.07 Mbit/s)

Flow 1 (95th percentile 48.52 ms)
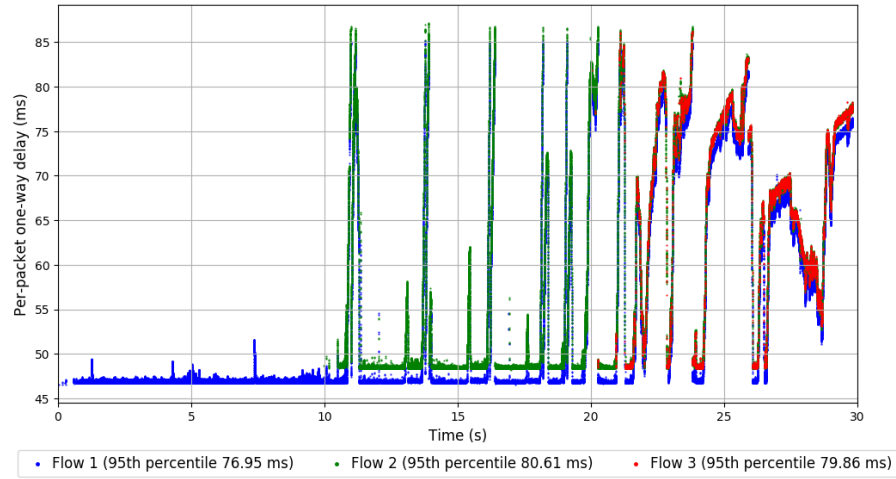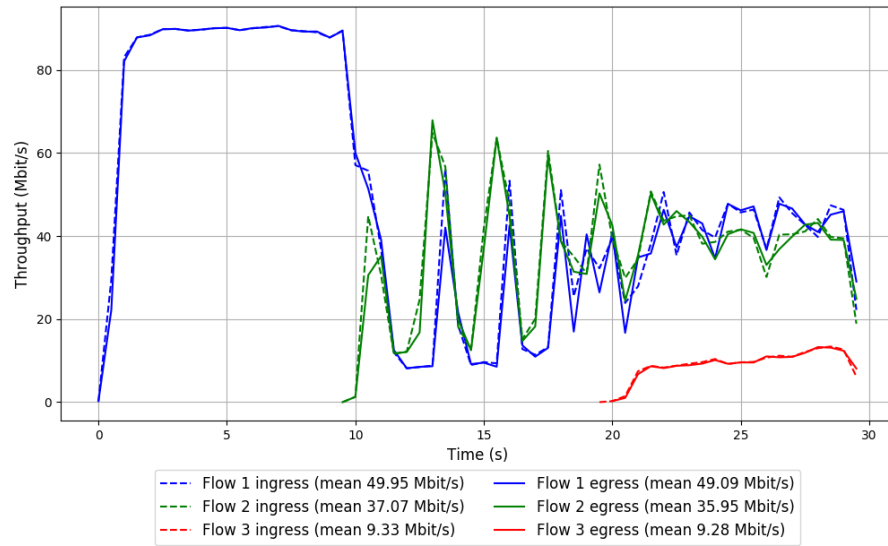Flow 2 (95th percentile 64.55 ms)
Flow 3 (95th percentile 68.47 ms)

```
Run 8: Statistics of QUIC Cubic

Start at: 2017-08-11 11:30:44
End at: 2017-08-11 11:31:14
Local clock offset: 0.416 ms
Remote clock offset: -3.76 ms


# Below is generated by plot.py at 2017-08-11 13:24:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.93 Mbit/s
95th percentile per-packet one-way delay: 83.362 ms
Loss rate: 1.87%
-- Flow 1:
Average throughput: 48.65 Mbit/s
95th percentile per-packet one-way delay: 81.031 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 33.15 Mbit/s
95th percentile per-packet one-way delay: 84.289 ms
Loss rate: 2.89%
-- Flow 3:
Average throughput: 22.00 Mbit/s
95th percentile per-packet one-way delay: 83.549 ms
Loss rate: 1.34%
```

Run 8: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.43 Mbit/s) --- Flow 1 egress (mean 48.65 Mbit/s)
Flow 2 ingress (mean 34.19 Mbit/s) --- Flow 2 egress (mean 33.15 Mbit/s)
Flow 3 ingress (mean 22.33 Mbit/s) --- Flow 3 egress (mean 22.00 Mbit/s)

Flow 1 (95th percentile 81.03 ms)   Flow 2 (95th percentile 84.29 ms)   Flow 3 (95th percentile 83.55 ms)

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```
Run 9: Statistics of QUIC Cubic

Start at: 2017-08-11 11:51:48
End at: 2017-08-11 11:52:18
Local clock offset: 0.592 ms
Remote clock offset: -3.321 ms


# Below is generated by plot.py at 2017-08-11 13:24:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.81 Mbit/s
95th percentile per-packet one-way delay: 82.140 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 47.53 Mbit/s
95th percentile per-packet one-way delay: 81.437 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 37.51 Mbit/s
95th percentile per-packet one-way delay: 82.588 ms
Loss rate: 2.25%
-- Flow 3:
Average throughput: 10.26 Mbit/s
95th percentile per-packet one-way delay: 82.565 ms
Loss rate: 0.35%
```
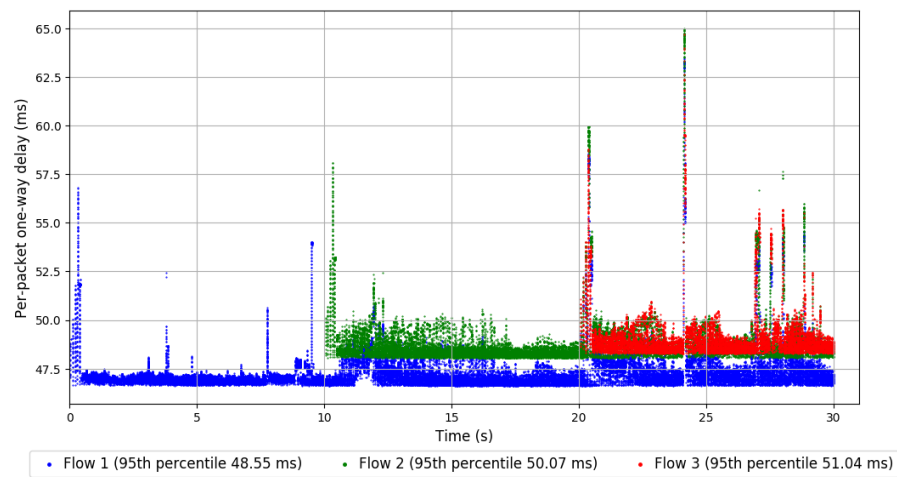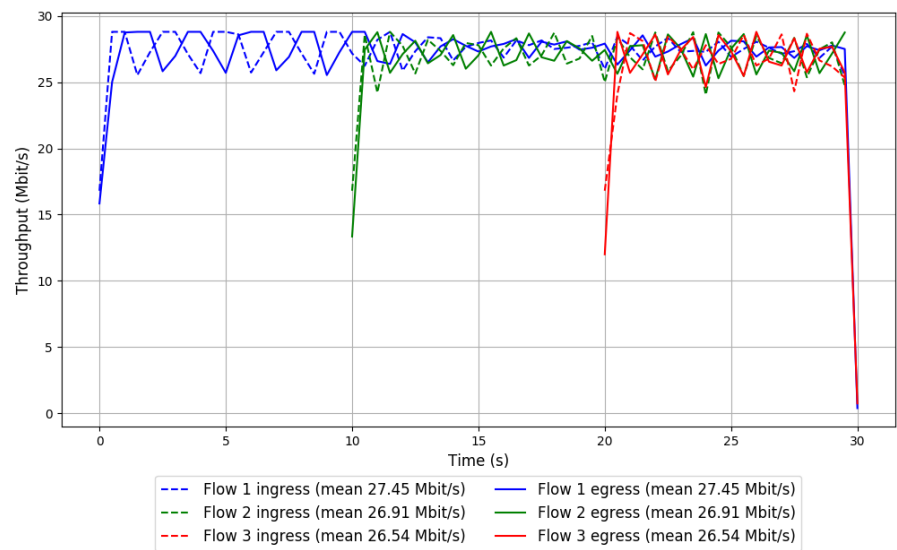
Run 9: Report of QUIC Cubic — Data Link
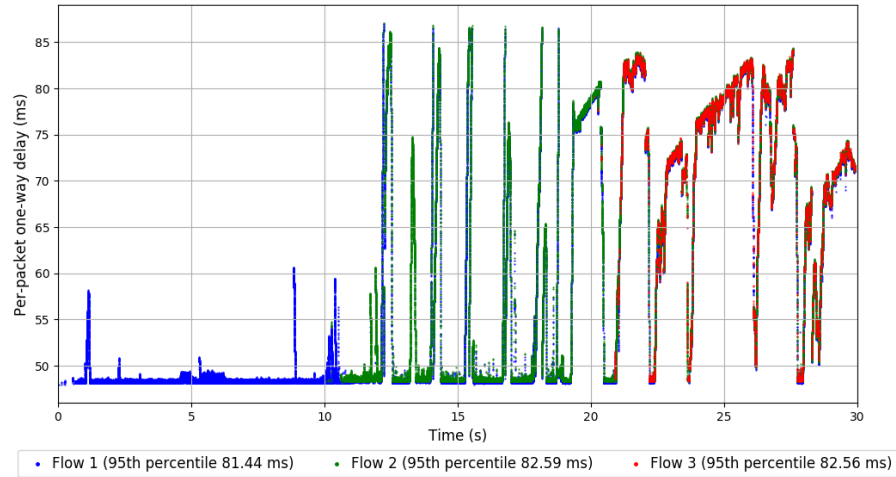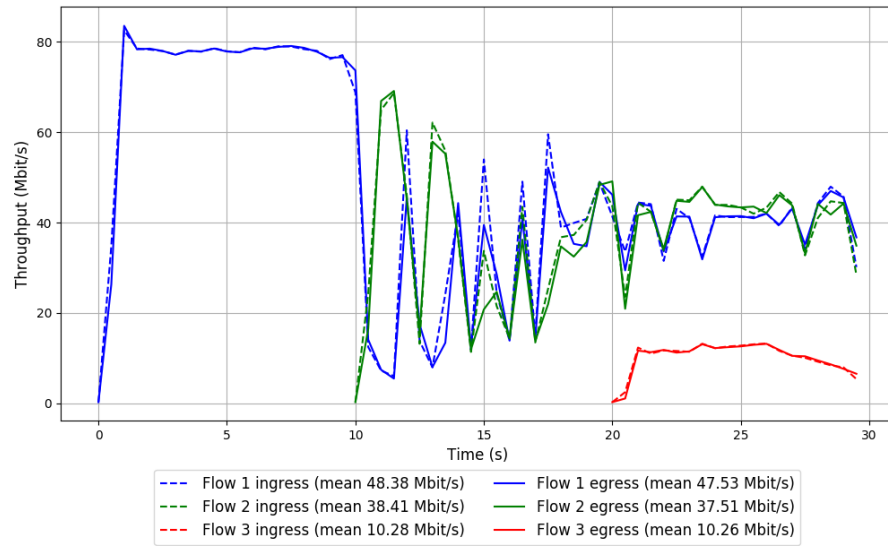
```
Run 10: Statistics of QUIC Cubic

Start at: 2017-08-11 12:12:48
End at: 2017-08-11 12:13:18
Local clock offset: 0.541 ms
Remote clock offset: -2.717 ms


# Below is generated by plot.py at 2017-08-11 13:24:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.11 Mbit/s
95th percentile per-packet one-way delay: 78.741 ms
Loss rate: 1.98%
-- Flow 1:
Average throughput: 49.09 Mbit/s
95th percentile per-packet one-way delay: 76.954 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 35.95 Mbit/s
95th percentile per-packet one-way delay: 80.610 ms
Loss rate: 2.86%
-- Flow 3:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 79.859 ms
Loss rate: 0.61%
```

Run 10: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 49.95 Mbit/s)   Flow 1 egress (mean 49.09 Mbit/s)
Flow 2 ingress (mean 37.07 Mbit/s)   Flow 2 egress (mean 35.95 Mbit/s)
Flow 3 ingress (mean 9.33 Mbit/s)   Flow 3 egress (mean 9.28 Mbit/s)

Flow 1 (95th percentile 76.95 ms)   Flow 2 (95th percentile 80.61 ms)   Flow 3 (95th percentile 79.86 ms)

```
Run 1: Statistics of Saturator

Start at: 2017-08-11 09:08:04
End at: 2017-08-11 09:08:34
Local clock offset: 0.173 ms
Remote clock offset: -2.126 ms


# Below is generated by plot.py at 2017-08-11 13:24:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.16 Mbit/s
95th percentile per-packet one-way delay: 49.818 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.45 Mbit/s
95th percentile per-packet one-way delay: 48.549 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.91 Mbit/s
95th percentile per-packet one-way delay: 50.066 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 51.044 ms
Loss rate: 0.00%
```

Run 1: Report of Saturator — Data Link

Flow 1 ingress (mean 27.45 Mbit/s) --- Flow 1 egress (mean 27.45 Mbit/s)
Flow 2 ingress (mean 26.91 Mbit/s) --- Flow 2 egress (mean 26.91 Mbit/s)
Flow 3 ingress (mean 26.54 Mbit/s) --- Flow 3 egress (mean 26.54 Mbit/s)

Flow 1 (95th percentile 48.55 ms)   Flow 2 (95th percentile 50.07 ms)   Flow 3 (95th percentile 51.04 ms)

```
Run 2: Statistics of Saturator

Start at: 2017-08-11 09:29:02
End at: 2017-08-11 09:29:32
Local clock offset: 0.153 ms
Remote clock offset: -0.398 ms


# Below is generated by plot.py at 2017-08-11 13:24:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.09 Mbit/s
95th percentile per-packet one-way delay: 51.799 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.21 Mbit/s
95th percentile per-packet one-way delay: 51.623 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.96 Mbit/s
95th percentile per-packet one-way delay: 51.852 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.90 Mbit/s
95th percentile per-packet one-way delay: 52.534 ms
Loss rate: 0.00%
```

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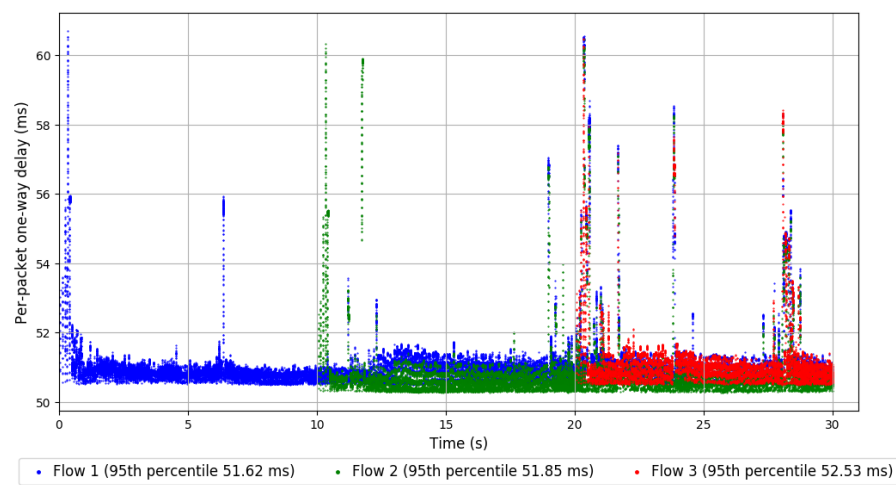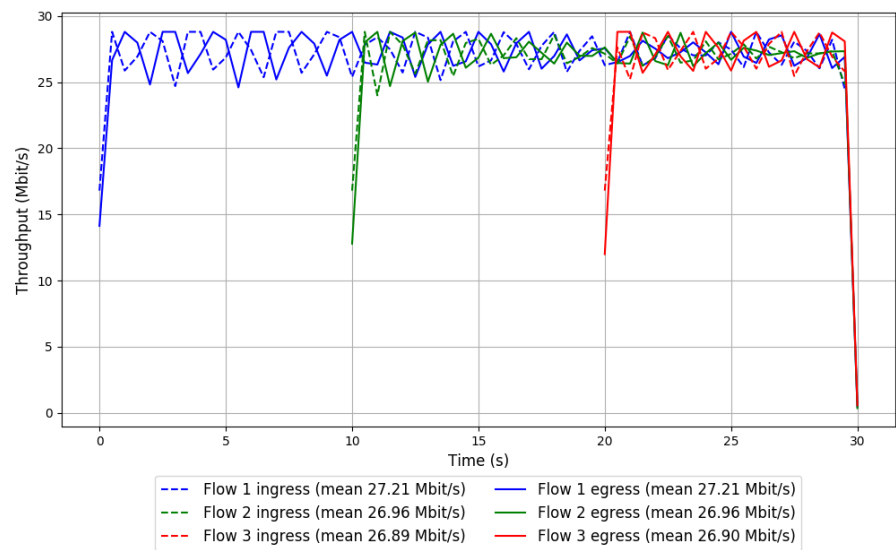
```
Run 3: Statistics of Saturator

Start at: 2017-08-11 09:49:59
End at: 2017-08-11 09:50:29
Local clock offset: 0.072 ms
Remote clock offset: -0.87 ms


# Below is generated by plot.py at 2017-08-11 13:24:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.81 Mbit/s
95th percentile per-packet one-way delay: 51.492 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 27.05 Mbit/s
95th percentile per-packet one-way delay: 51.609 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 51.325 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 26.80 Mbit/s
95th percentile per-packet one-way delay: 51.316 ms
Loss rate: 0.00%
```
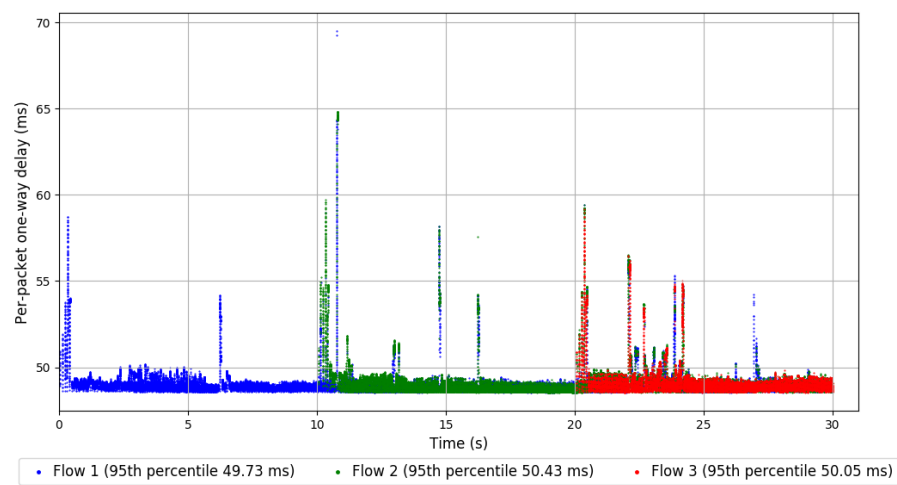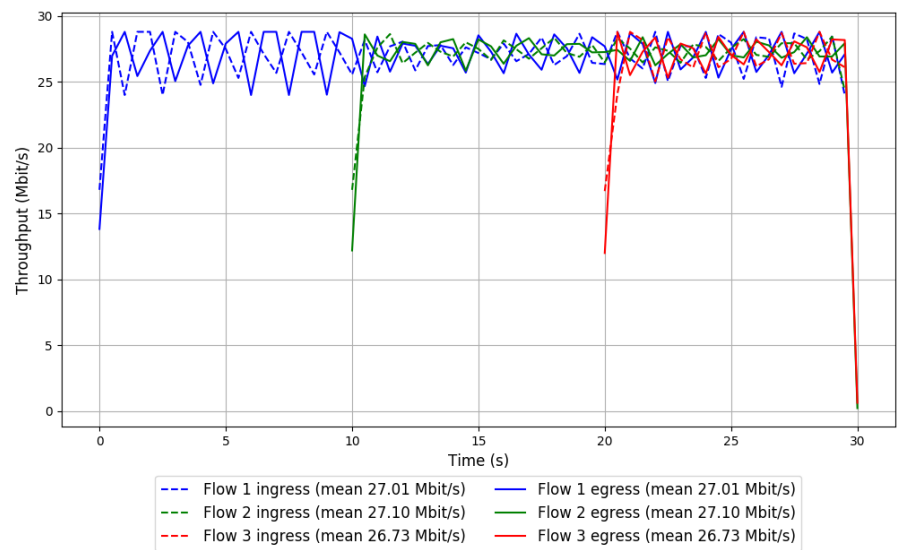
Run 3: Report of Saturator — Data Link
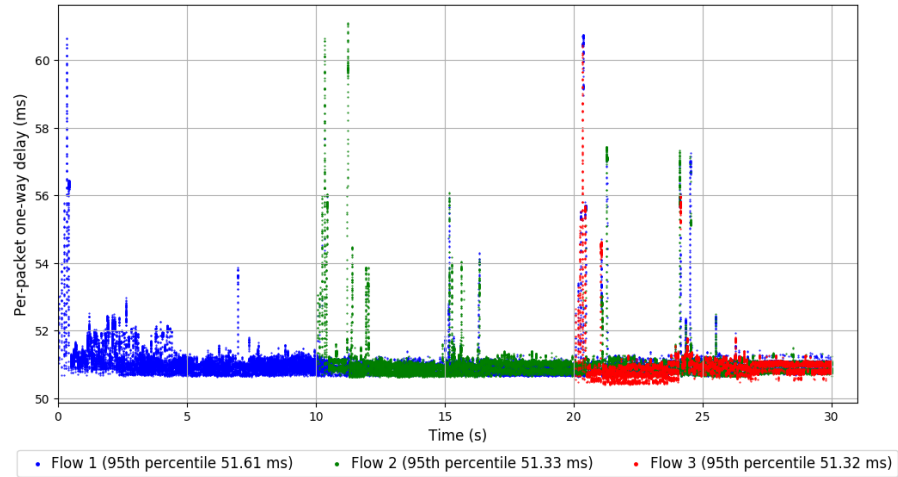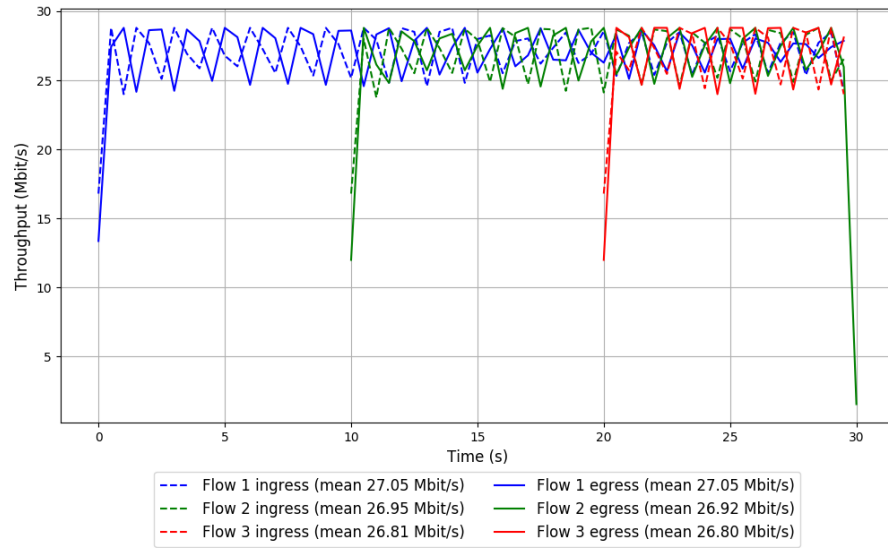
```
Run 4: Statistics of Saturator

Start at: 2017-08-11 10:10:55
End at: 2017-08-11 10:11:25
Local clock offset: 0.125 ms
Remote clock offset: -1.359 ms


# Below is generated by plot.py at 2017-08-11 13:24:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.89 Mbit/s
95th percentile per-packet one-way delay: 51.164 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.06 Mbit/s
95th percentile per-packet one-way delay: 51.221 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.02 Mbit/s
95th percentile per-packet one-way delay: 51.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.69 Mbit/s
95th percentile per-packet one-way delay: 51.062 ms
Loss rate: 0.00%
```

Run 4: Report of Saturator — Data Link
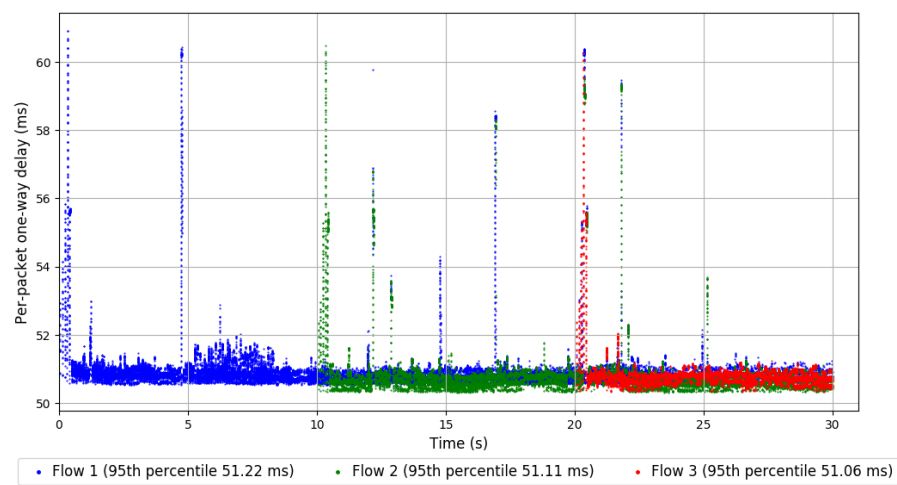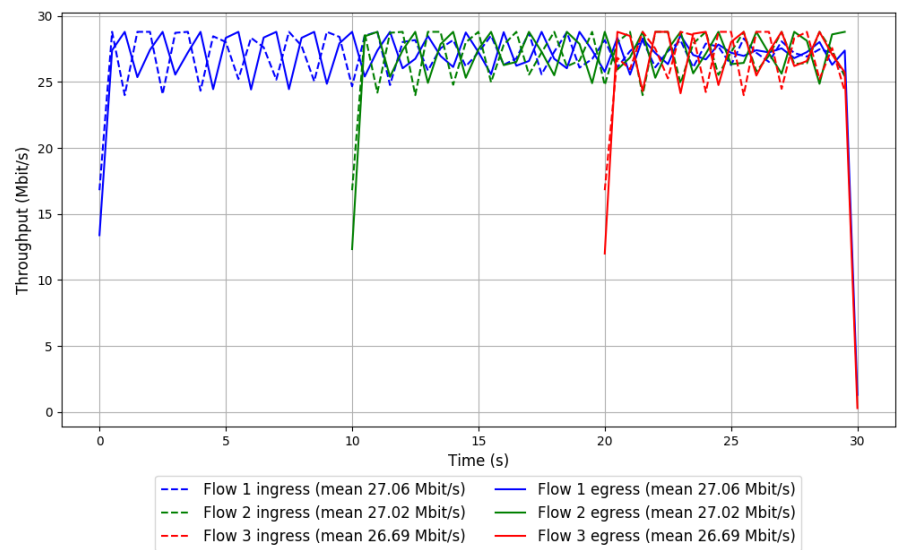
```
Run 5: Statistics of Saturator

Start at: 2017-08-11 10:31:57
End at: 2017-08-11 10:32:27
Local clock offset: 0.254 ms
Remote clock offset: -3.587 ms


# Below is generated by plot.py at 2017-08-11 13:24:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.88 Mbit/s
95th percentile per-packet one-way delay: 49.953 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.01 Mbit/s
95th percentile per-packet one-way delay: 49.734 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 50.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.73 Mbit/s
95th percentile per-packet one-way delay: 50.046 ms
Loss rate: 0.00%
```

Run 5: Report of Saturator — Data Link

Flow 1 ingress (mean 27.01 Mbit/s) — Flow 1 egress (mean 27.01 Mbit/s)
Flow 2 ingress (mean 27.10 Mbit/s) — Flow 2 egress (mean 27.10 Mbit/s)
Flow 3 ingress (mean 26.73 Mbit/s) — Flow 3 egress (mean 26.73 Mbit/s)

Flow 1 (95th percentile 49.73 ms) · Flow 2 (95th percentile 50.43 ms) · Flow 3 (95th percentile 50.05 ms)

```
Run 6: Statistics of Saturator

Start at: 2017-08-11 10:52:54
End at: 2017-08-11 10:53:24
Local clock offset: 0.388 ms
Remote clock offset: -3.969 ms


# Below is generated by plot.py at 2017-08-11 13:24:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.06 Mbit/s
95th percentile per-packet one-way delay: 49.312 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.01 Mbit/s
95th percentile per-packet one-way delay: 49.320 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.20 Mbit/s
95th percentile per-packet one-way delay: 49.417 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.91 Mbit/s
95th percentile per-packet one-way delay: 49.133 ms
Loss rate: 0.00%
```
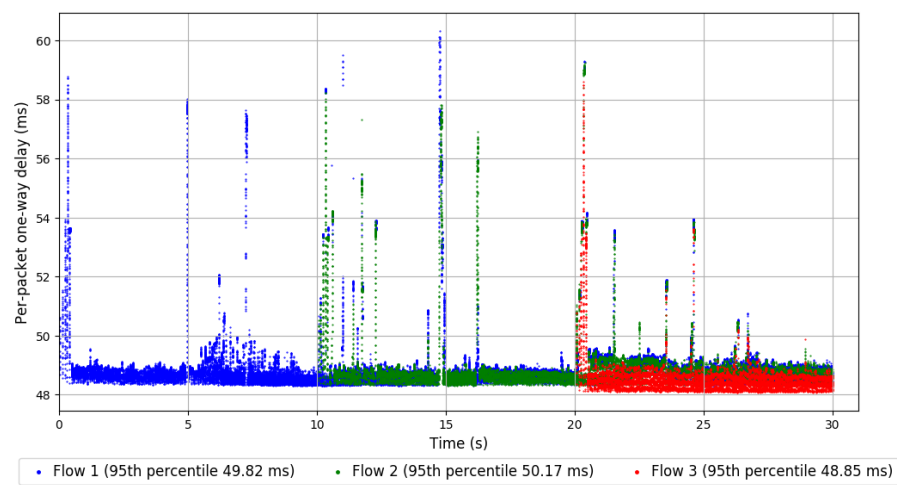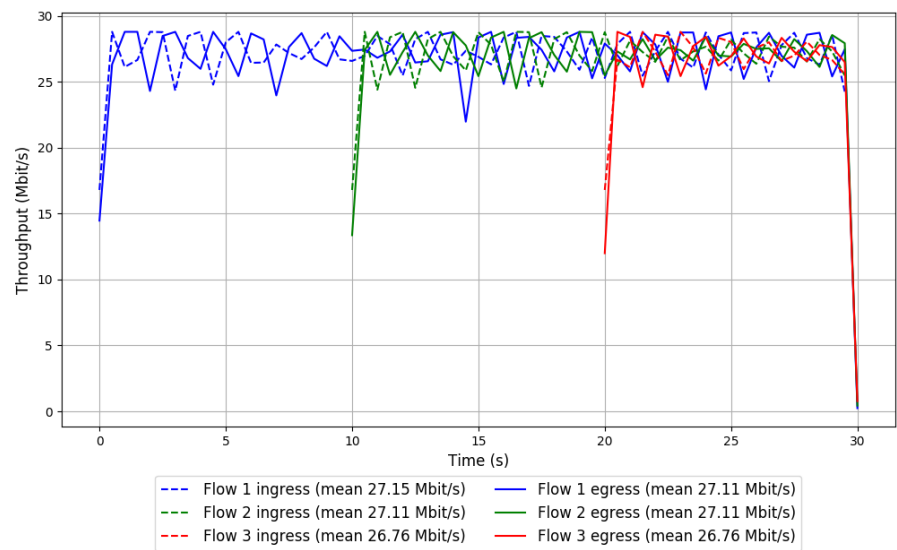
Run 6: Report of Saturator — Data Link
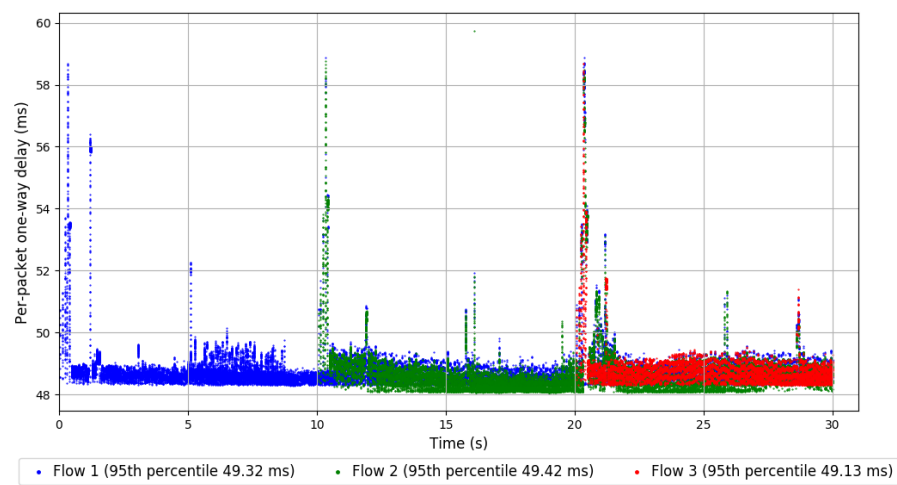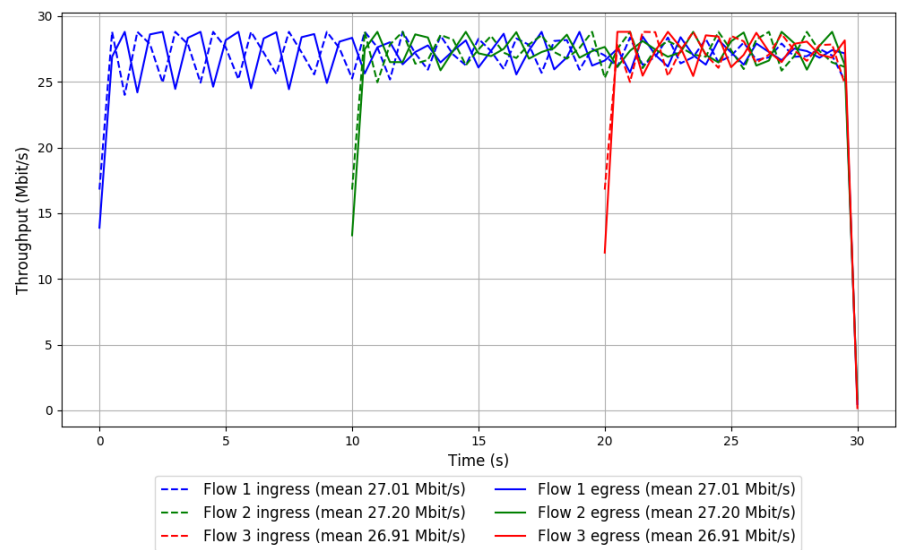
```
Run 7: Statistics of Saturator

Start at: 2017-08-11 11:13:52
End at: 2017-08-11 11:14:22
Local clock offset: 0.442 ms
Remote clock offset: -3.88 ms


# Below is generated by plot.py at 2017-08-11 13:24:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.56 Mbit/s
95th percentile per-packet one-way delay: 49.215 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 27.74 Mbit/s
95th percentile per-packet one-way delay: 48.423 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 27.00 Mbit/s
95th percentile per-packet one-way delay: 49.583 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 26.72 Mbit/s
95th percentile per-packet one-way delay: 49.095 ms
Loss rate: 0.01%
```

## Run 7: Report of Saturator — Data Link
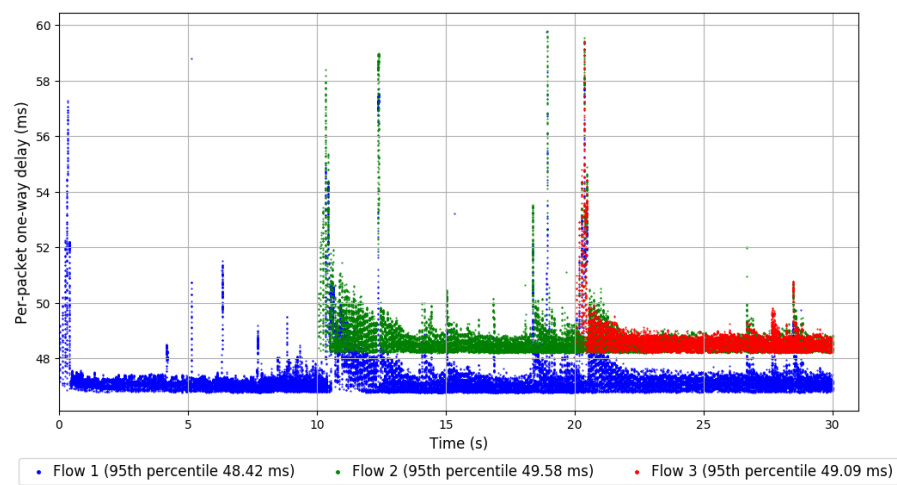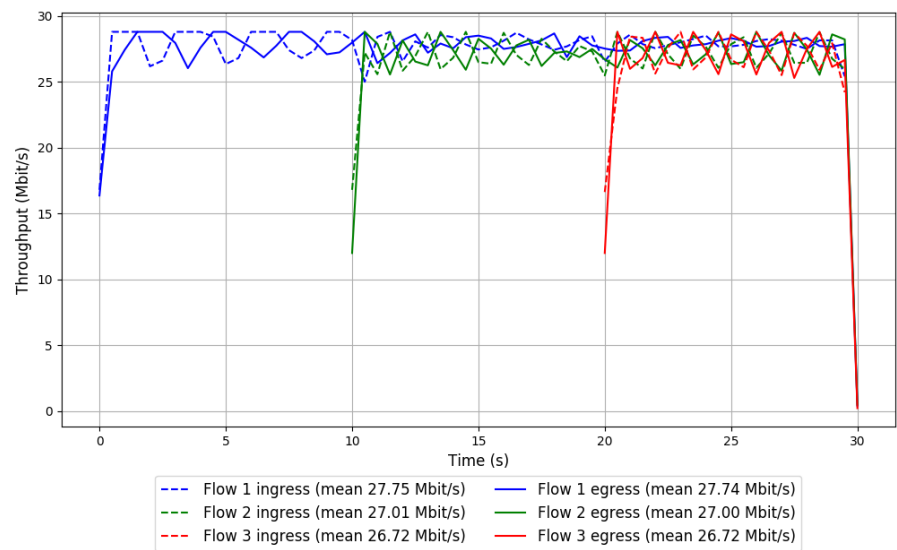
```
Run 8: Statistics of Saturator

Start at: 2017-08-11 11:34:55
End at: 2017-08-11 11:35:25
Local clock offset: 0.509 ms
Remote clock offset: -3.799 ms


# Below is generated by plot.py at 2017-08-11 13:24:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.04 Mbit/s
95th percentile per-packet one-way delay: 49.589 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 49.821 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 27.11 Mbit/s
95th percentile per-packet one-way delay: 50.166 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 26.76 Mbit/s
95th percentile per-packet one-way delay: 48.849 ms
Loss rate: 0.00%
```

Run 8: Report of Saturator — Data Link

- - - Flow 1 ingress (mean 27.15 Mbit/s)   —— Flow 1 egress (mean 27.11 Mbit/s)
- - - Flow 2 ingress (mean 27.11 Mbit/s)   —— Flow 2 egress (mean 27.11 Mbit/s)
- - - Flow 3 ingress (mean 26.76 Mbit/s)   —— Flow 3 egress (mean 26.76 Mbit/s)

  • Flow 1 (95th percentile 49.82 ms)   • Flow 2 (95th percentile 50.17 ms)   • Flow 3 (95th percentile 48.85 ms)

```
Run 9: Statistics of Saturator

Start at: 2017-08-11 11:55:57
End at: 2017-08-11 11:56:27
Local clock offset: 0.504 ms
Remote clock offset: -3.135 ms


# Below is generated by plot.py at 2017-08-11 13:24:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.87 Mbit/s
95th percentile per-packet one-way delay: 50.010 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 27.21 Mbit/s
95th percentile per-packet one-way delay: 49.834 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 26.76 Mbit/s
95th percentile per-packet one-way delay: 50.028 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 50.460 ms
Loss rate: 0.12%
```

Run 9: Report of Saturator — Data Link
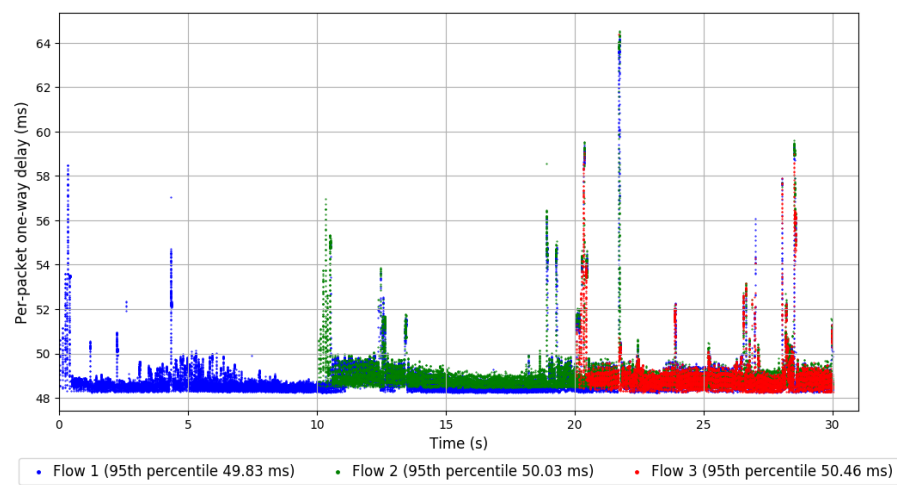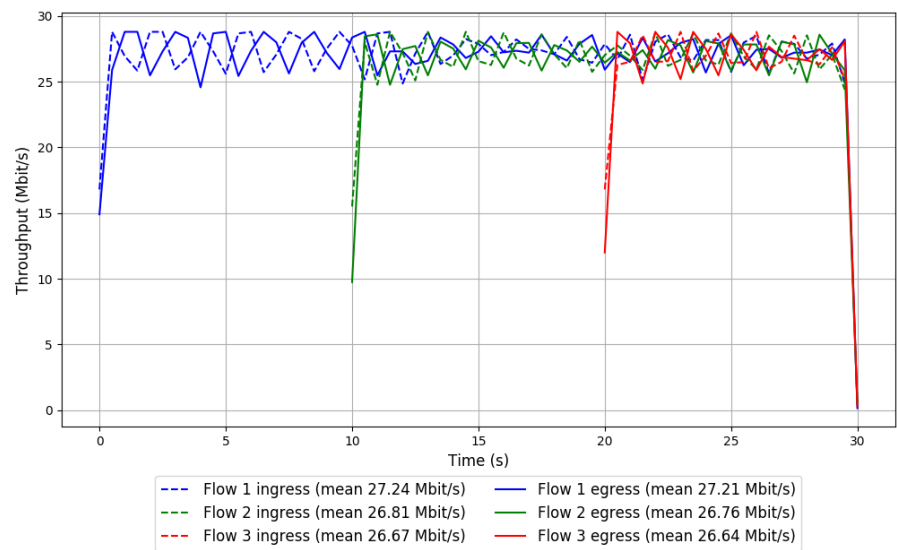
```
Run 10: Statistics of Saturator

Start at: 2017-08-11 12:17:02
End at: 2017-08-11 12:17:32
Local clock offset: 0.517 ms
Remote clock offset: -0.479 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.62 Mbit/s
95th percentile per-packet one-way delay: 51.558 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 27.69 Mbit/s
95th percentile per-packet one-way delay: 50.498 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.81 Mbit/s
95th percentile per-packet one-way delay: 51.939 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.36 Mbit/s
95th percentile per-packet one-way delay: 50.139 ms
Loss rate: 0.00%
```

Run 10: Report of Saturator — Data Link
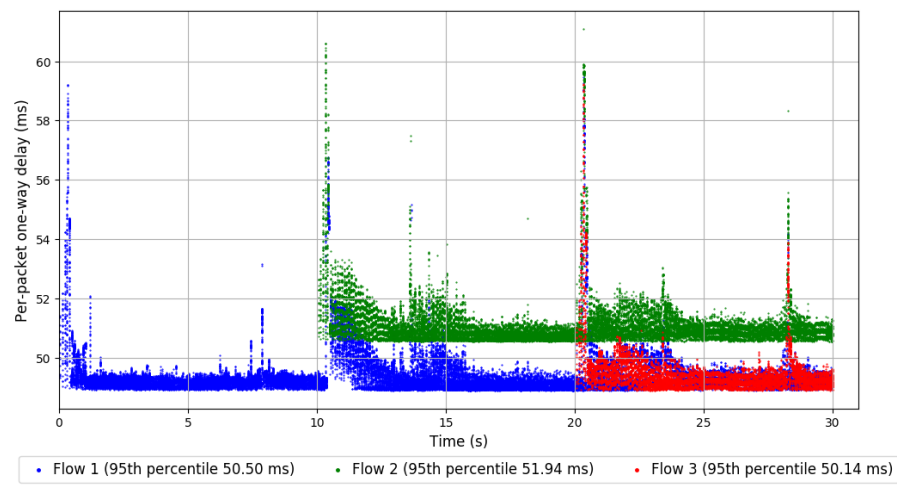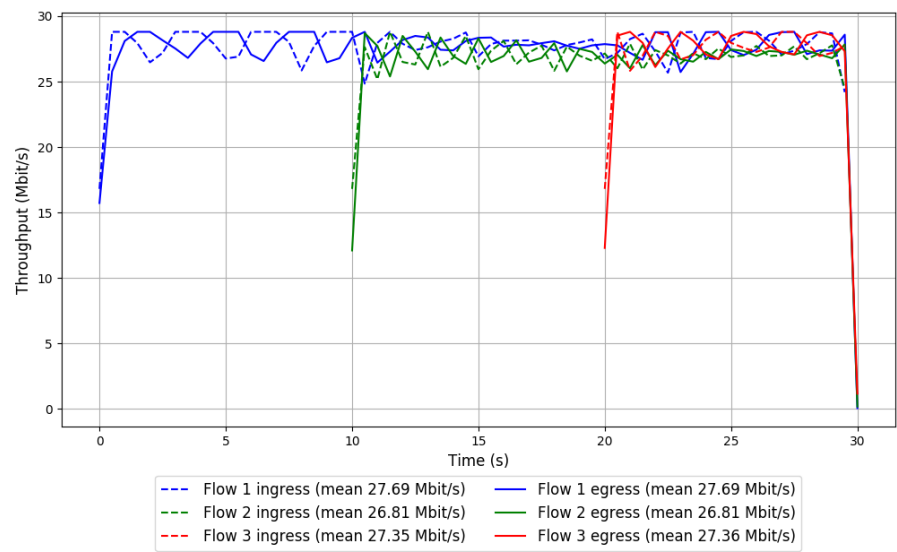
```
Run 1: Statistics of SCReAM

Start at: 2017-08-11 09:19:20
End at: 2017-08-11 09:19:50
Local clock offset: 0.149 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.739 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.762 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.635 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.540 ms
Loss rate: 0.00%
```

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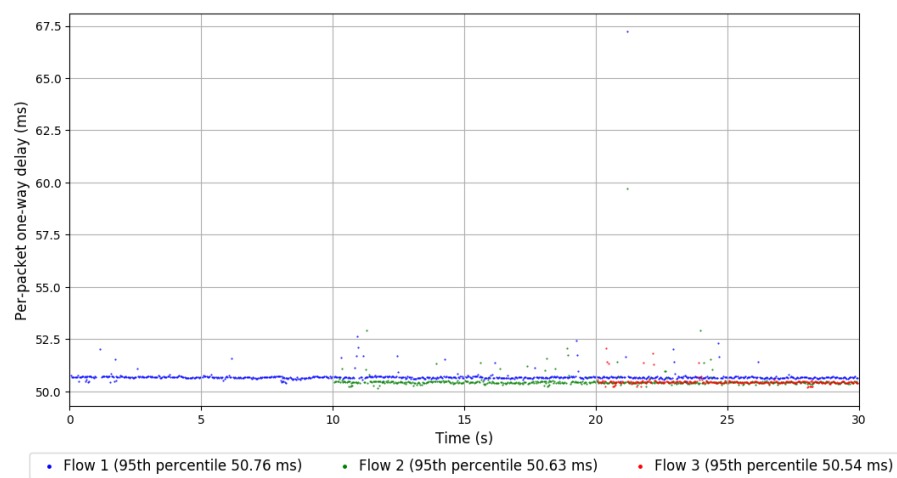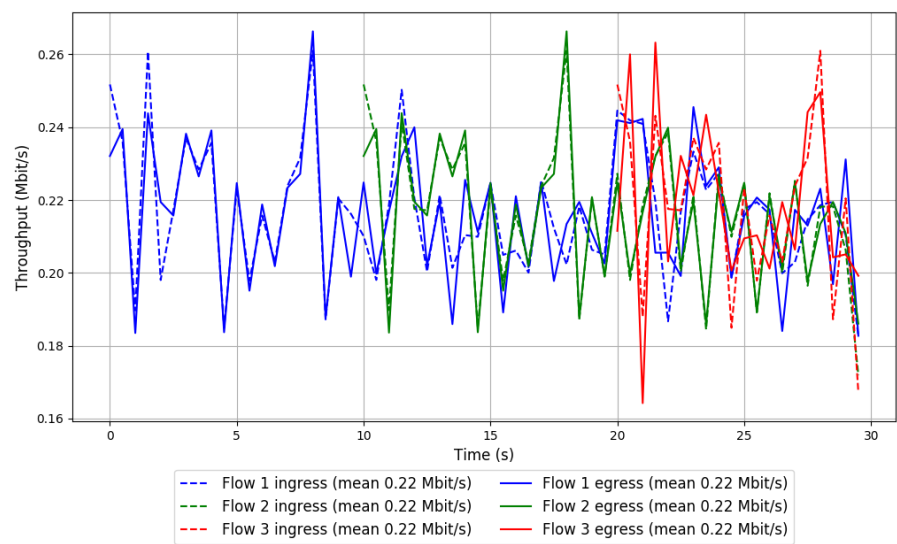
```
Run 2: Statistics of SCReAM

Start at: 2017-08-11 09:40:18
End at: 2017-08-11 09:40:48
Local clock offset: 0.157 ms
Remote clock offset: -0.237 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 51.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.215 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.204 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.188 ms
Loss rate: 0.00%
```

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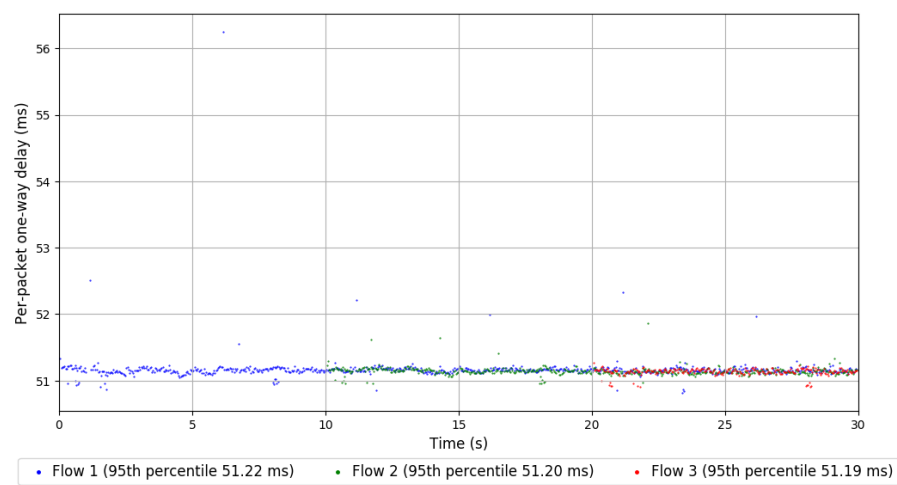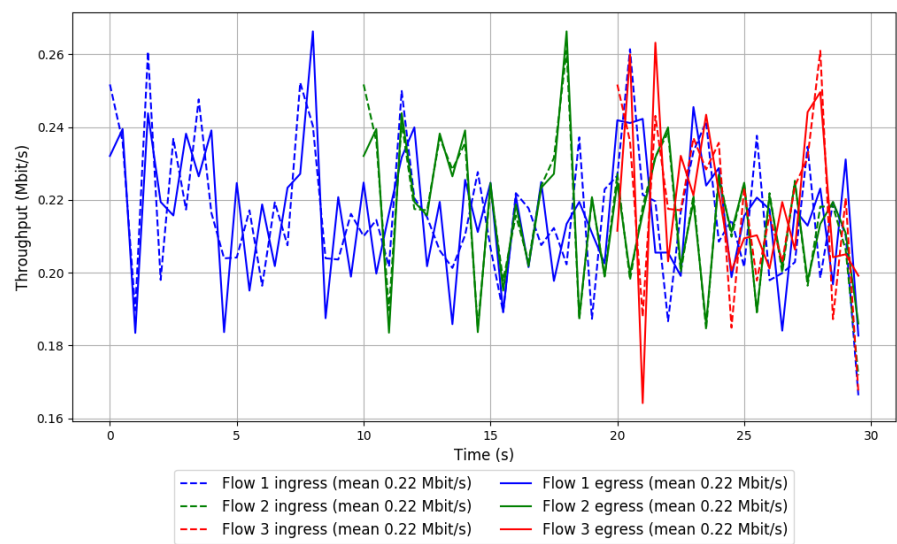
```
Run 3: Statistics of SCReAM

Start at: 2017-08-11 10:01:13
End at: 2017-08-11 10:01:43
Local clock offset: 0.205 ms
Remote clock offset: -3.156 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 48.707 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 0.20 Mbit/s
95th percentile per-packet one-way delay: 48.723 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.688 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.472 ms
Loss rate: 0.00%
```

Run 3: Report of SCReAM — Data Link
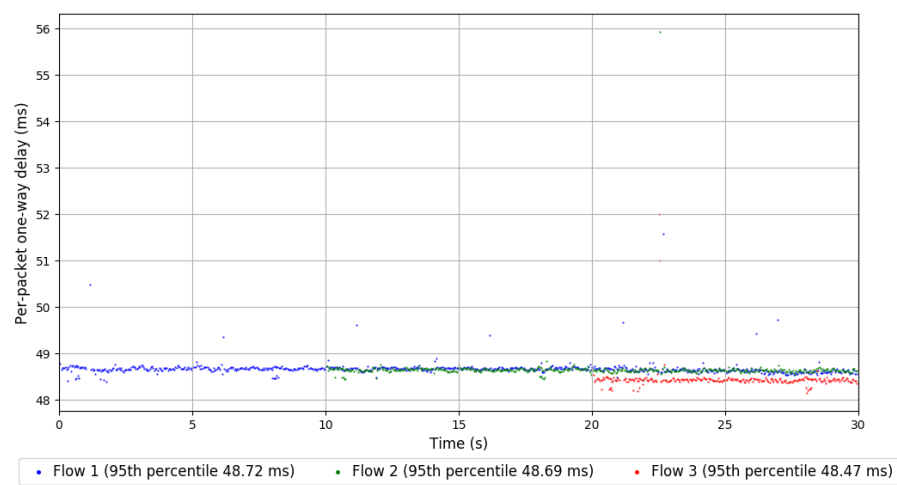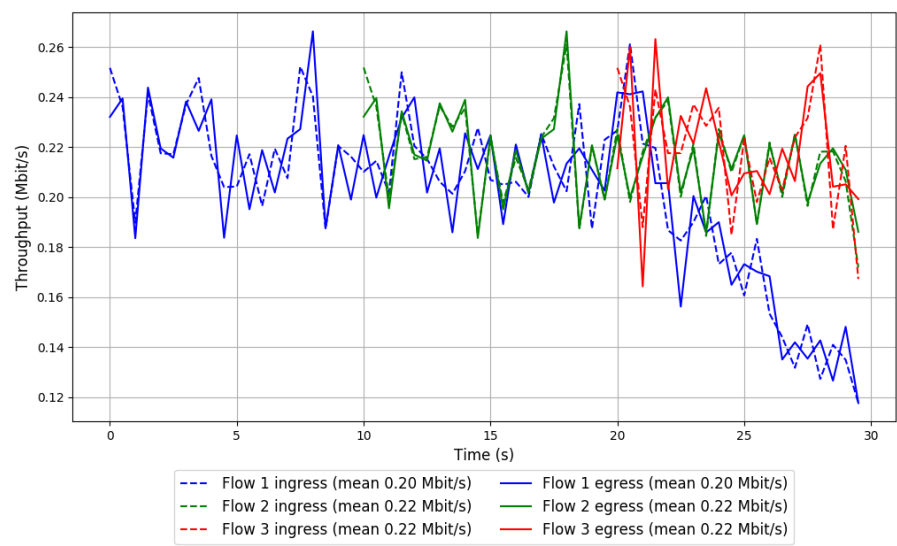
```
Run 4: Statistics of SCReAM

Start at: 2017-08-11 10:22:13
End at: 2017-08-11 10:22:43
Local clock offset: 0.308 ms
Remote clock offset: -3.615 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 48.584 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.596 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.339 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.574 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link
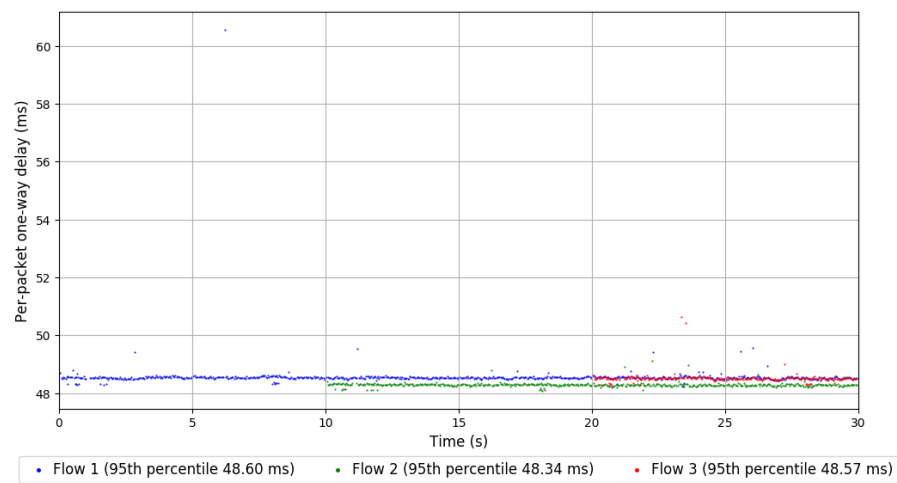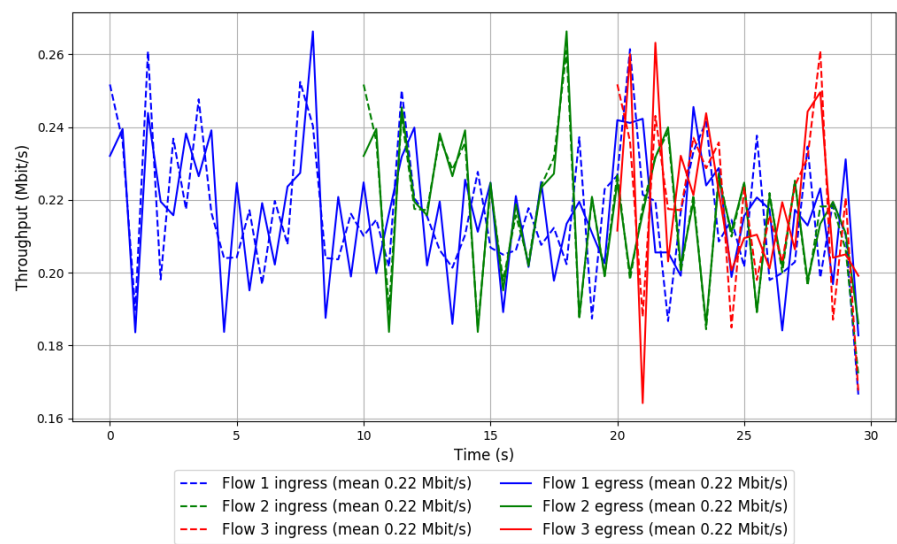
```
Run 5: Statistics of SCReAM

Start at: 2017-08-11 10:43:13
End at: 2017-08-11 10:43:43
Local clock offset: 0.279 ms
Remote clock offset: -1.734 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.524 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.531 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.497 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.522 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link
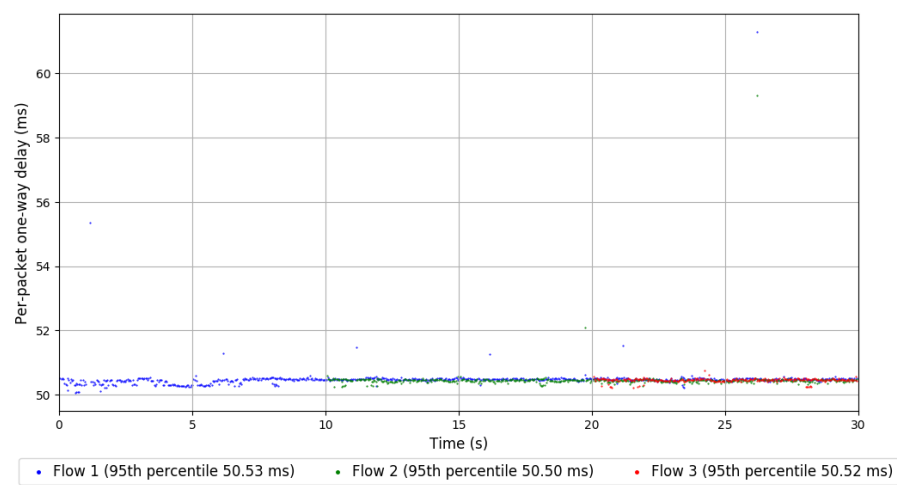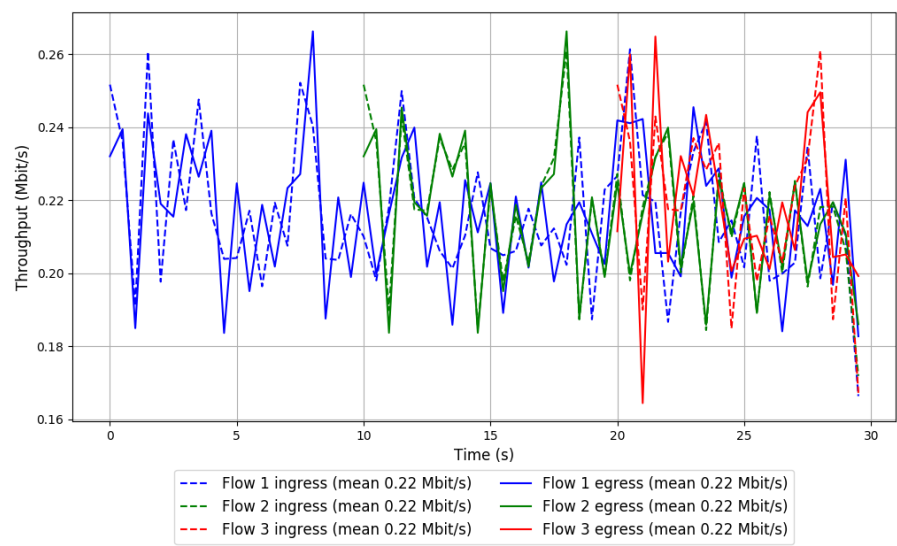
```
Run 6: Statistics of SCReAM

Start at: 2017-08-11 11:04:10
End at: 2017-08-11 11:04:40
Local clock offset: 0.35 ms
Remote clock offset: -1.878 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.589 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.598 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.566 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.559 ms
Loss rate: 0.00%
```

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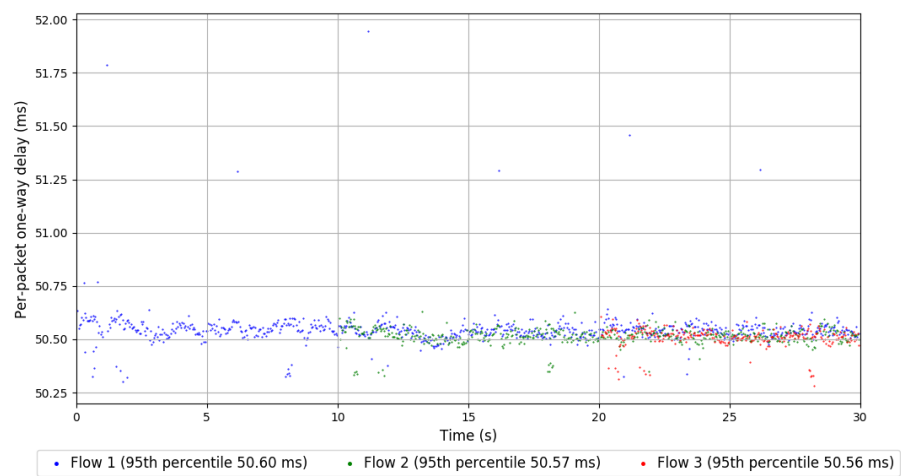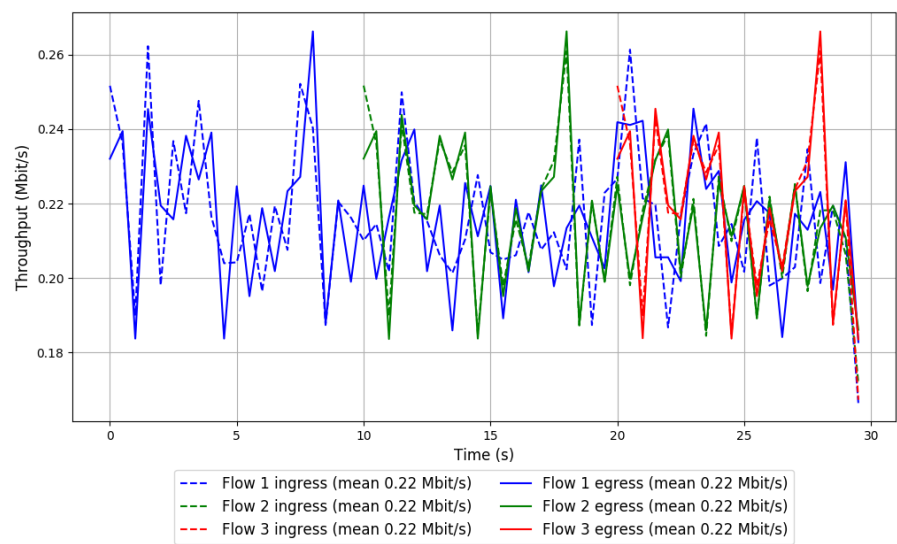
```
Run 7: Statistics of SCReAM

Start at: 2017-08-11 11:25:11
End at: 2017-08-11 11:25:41
Local clock offset: 0.488 ms
Remote clock offset: -3.751 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 48.651 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.045 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.19 Mbit/s
95th percentile per-packet one-way delay: 48.667 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 0.18 Mbit/s
95th percentile per-packet one-way delay: 48.652 ms
Loss rate: 0.41%
```

Run 7: Report of SCReAM — Data Link
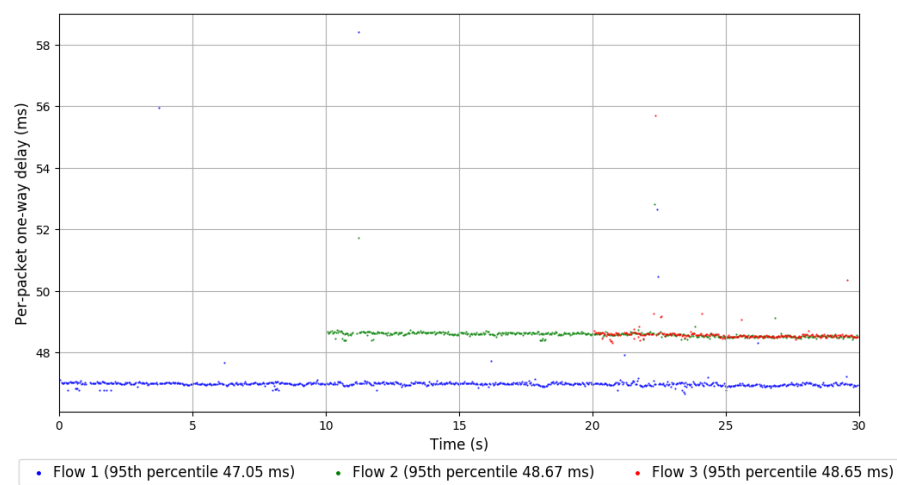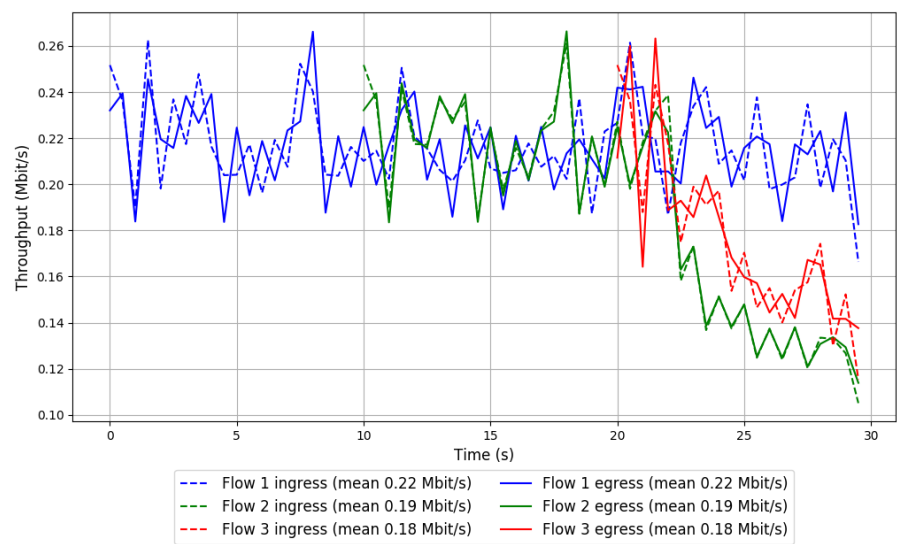
```
Run 8: Statistics of SCReAM

Start at: 2017-08-11 11:46:12
End at: 2017-08-11 11:46:42
Local clock offset: 0.559 ms
Remote clock offset: -3.377 ms

# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 48.681 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.696 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.435 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.429 ms
Loss rate: 0.00%
```

Run 8: Report of SCReAM — Data Link
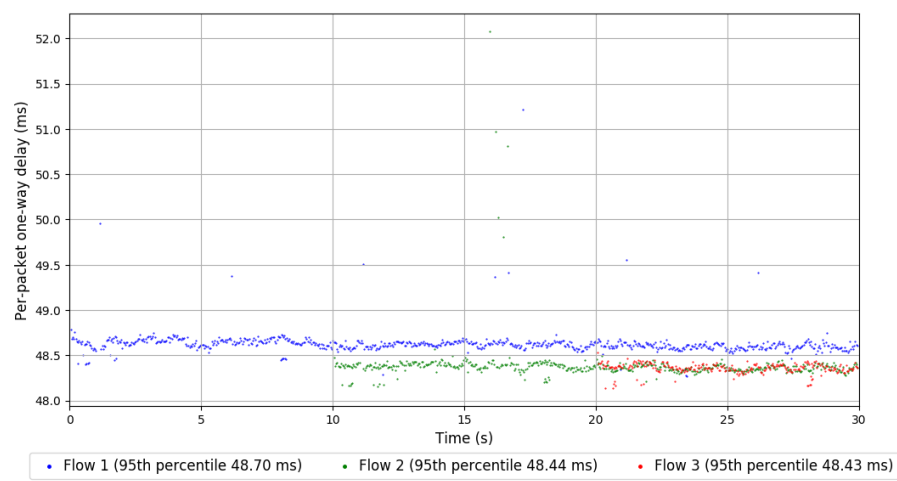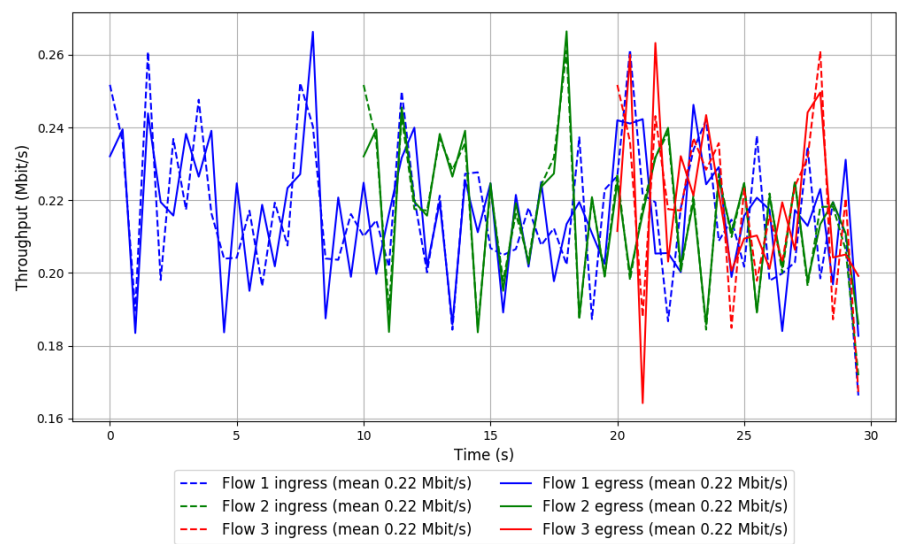
```
Run 9: Statistics of SCReAM

Start at: 2017-08-11 12:07:12
End at: 2017-08-11 12:07:42
Local clock offset: 0.516 ms
Remote clock offset: -0.713 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.721 ms
Loss rate: 0.33%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.600 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.576 ms
Loss rate: 0.43%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.758 ms
Loss rate: 0.76%
```

# Run 9: Report of SCReAM — Data Link
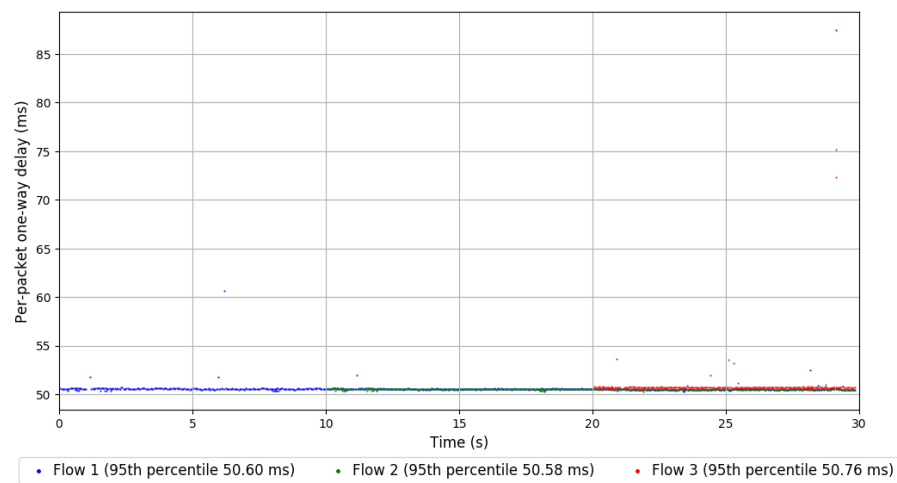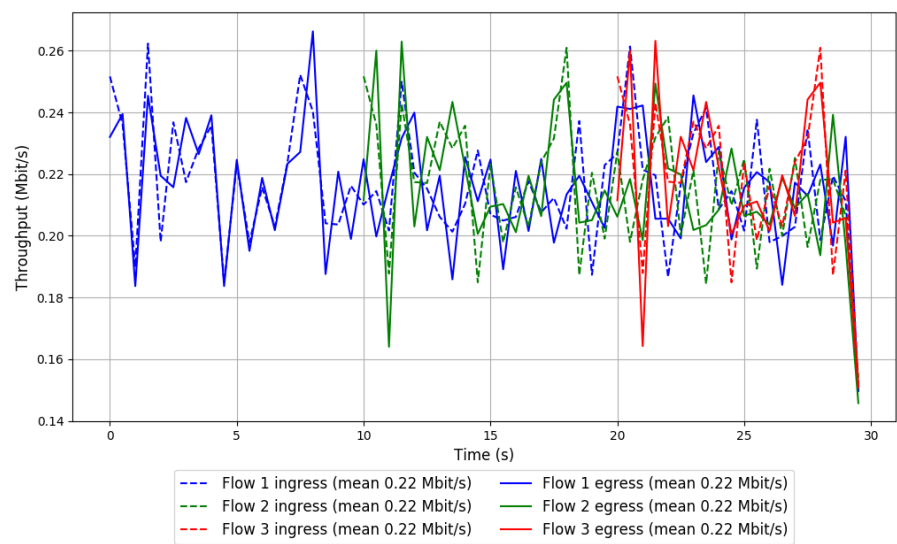
```
Run 10: Statistics of SCReAM

Start at: 2017-08-11 12:28:21
End at: 2017-08-11 12:28:51
Local clock offset: 0.486 ms
Remote clock offset: -2.305 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 48.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.489 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.469 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 48.455 ms
Loss rate: 0.00%
```

Run 10: Report of SCReAM — Data Link
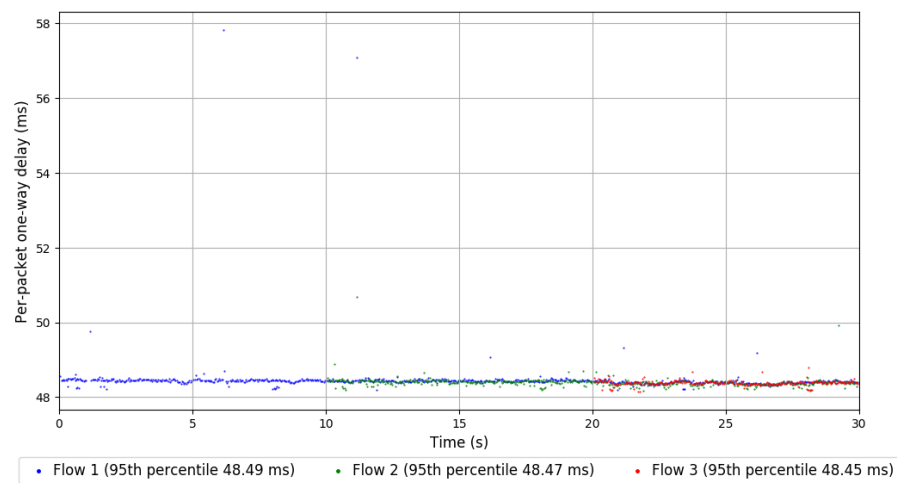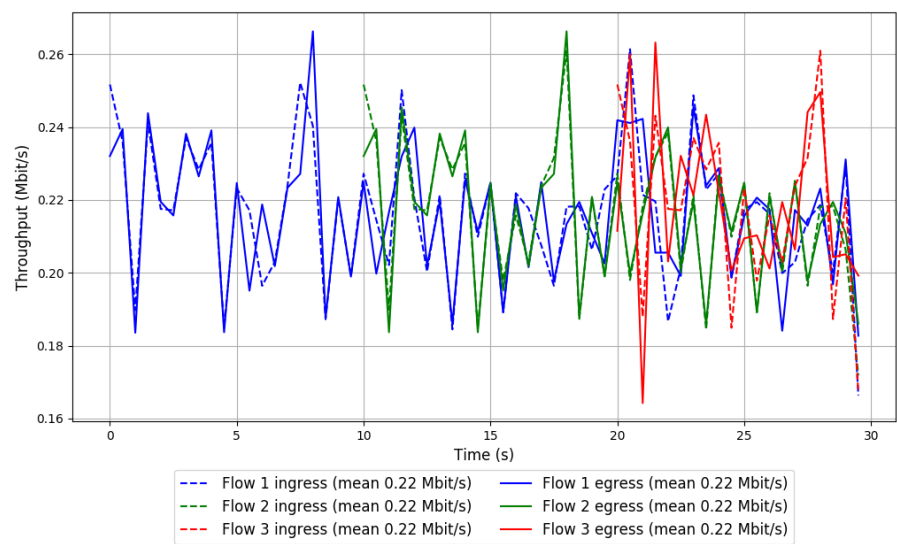
```
Run 1: Statistics of Sprout

Start at: 2017-08-11 09:18:00
End at: 2017-08-11 09:18:30
Local clock offset: 0.069 ms
Remote clock offset: -0.2 ms


# Below is generated by plot.py at 2017-08-11 13:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.30 Mbit/s
95th percentile per-packet one-way delay: 57.132 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.12 Mbit/s
95th percentile per-packet one-way delay: 56.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 57.248 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 57.632 ms
Loss rate: 0.00%
```
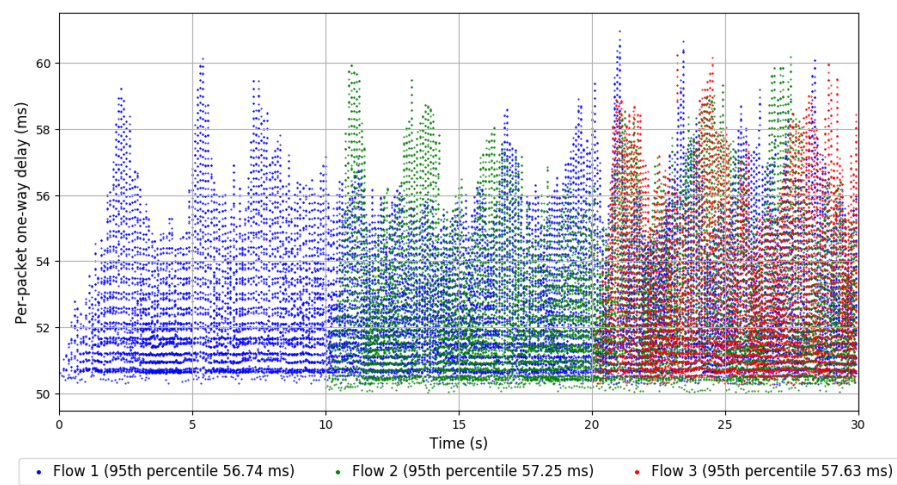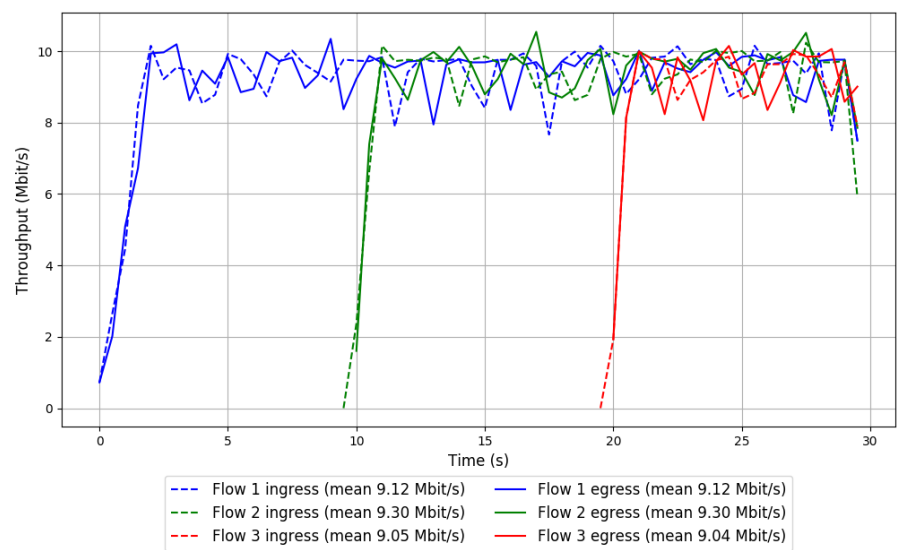
Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 9.12 Mbit/s)   Flow 1 egress (mean 9.12 Mbit/s)
Flow 2 ingress (mean 9.30 Mbit/s)   Flow 2 egress (mean 9.30 Mbit/s)
Flow 3 ingress (mean 9.05 Mbit/s)   Flow 3 egress (mean 9.04 Mbit/s)

Flow 1 (95th percentile 56.74 ms)   Flow 2 (95th percentile 57.25 ms)   Flow 3 (95th percentile 57.63 ms)
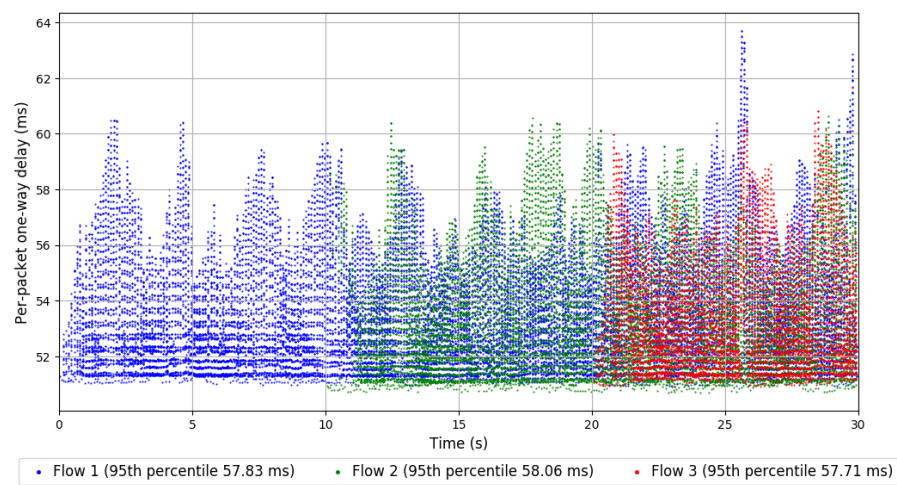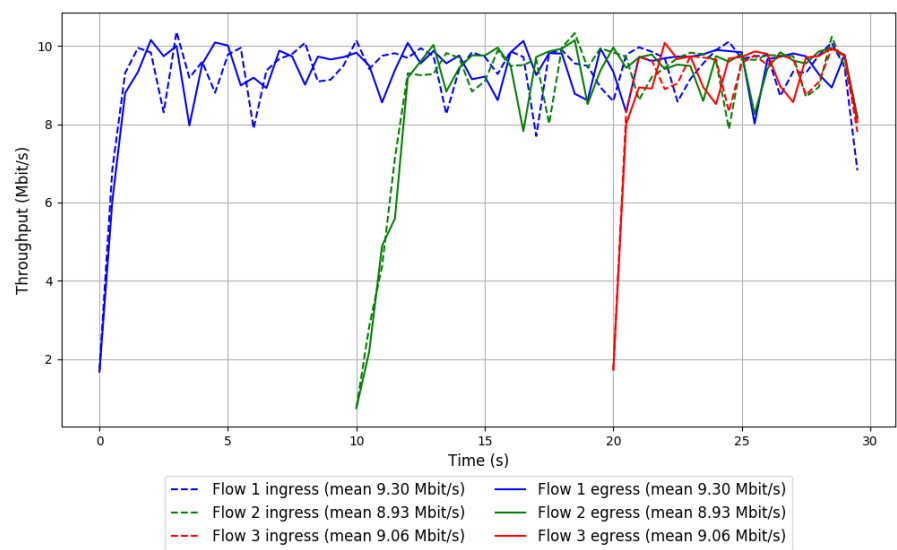
```
Run 2: Statistics of Sprout

Start at: 2017-08-11 09:38:58
End at: 2017-08-11 09:39:28
Local clock offset: 0.085 ms
Remote clock offset: -0.111 ms


# Below is generated by plot.py at 2017-08-11 13:25:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.21 Mbit/s
95th percentile per-packet one-way delay: 57.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.30 Mbit/s
95th percentile per-packet one-way delay: 57.830 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 58.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 57.709 ms
Loss rate: 0.00%
```

Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2017-08-11 09:59:53
End at: 2017-08-11 10:00:23
Local clock offset: 0.216 ms
Remote clock offset: -1.161 ms


# Below is generated by plot.py at 2017-08-11 13:25:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.60 Mbit/s
95th percentile per-packet one-way delay: 56.774 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 56.950 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 56.458 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 56.904 ms
Loss rate: 0.00%
```
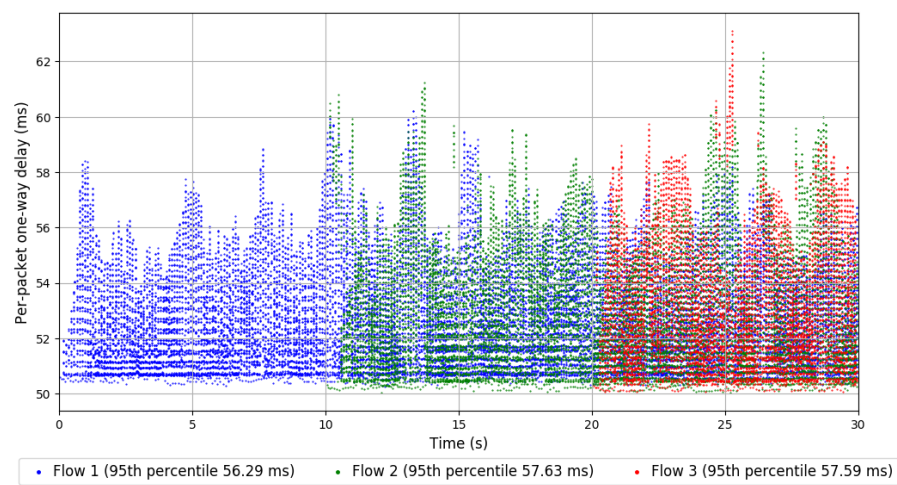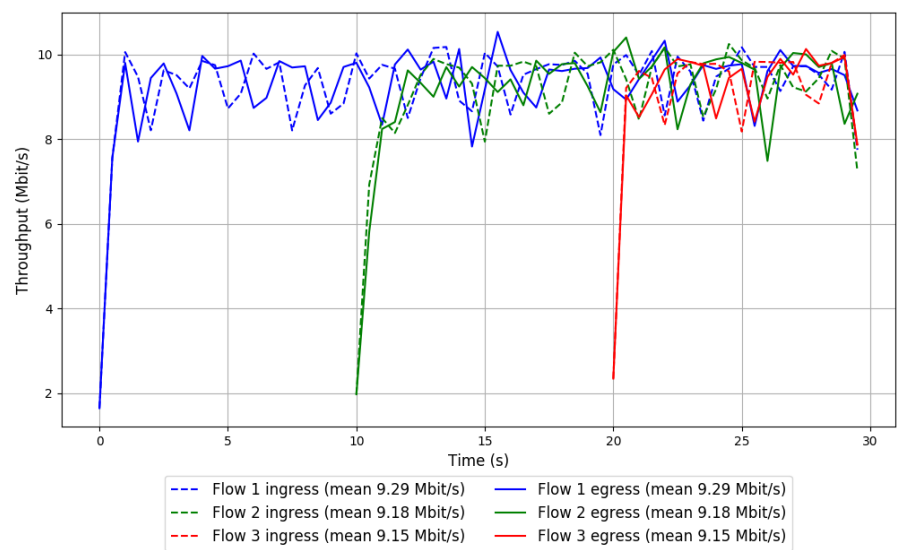
Run 3: Report of Sprout — Data Link
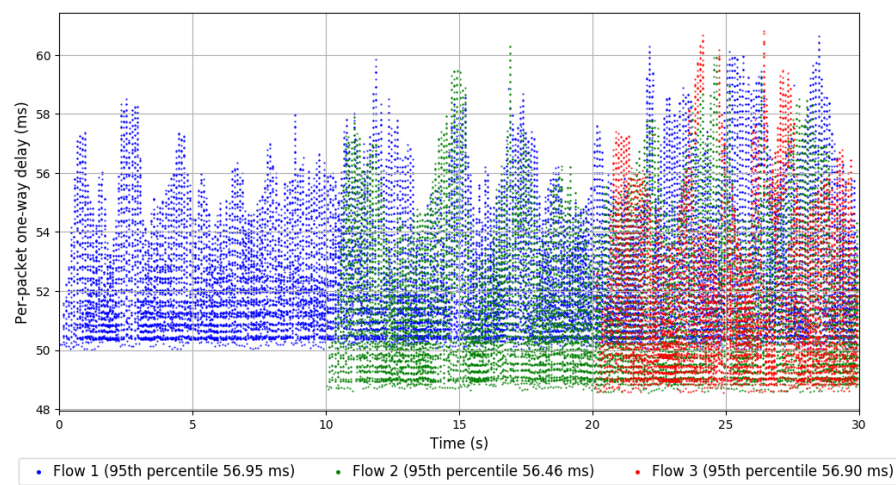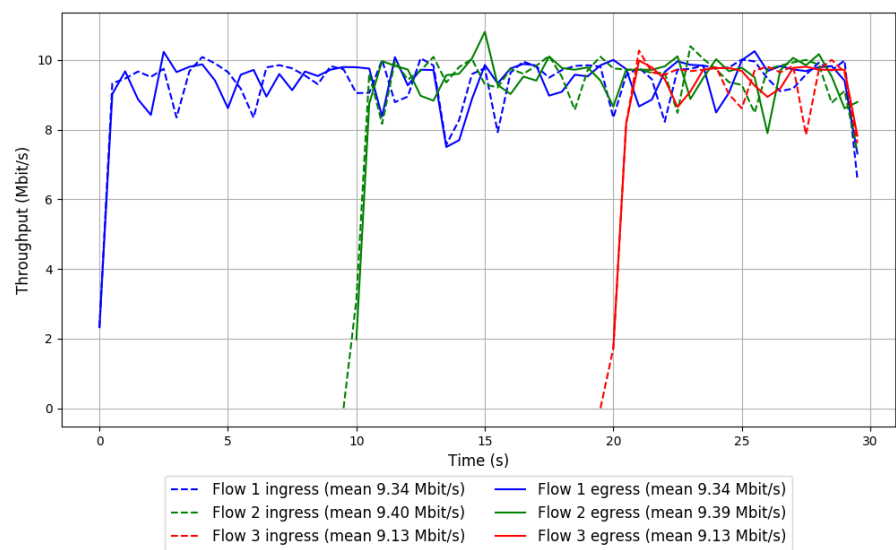
```
Run 4: Statistics of Sprout

Start at: 2017-08-11 10:20:53
End at: 2017-08-11 10:21:23
Local clock offset: 0.205 ms
Remote clock offset: -1.55 ms


# Below is generated by plot.py at 2017-08-11 13:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.41 Mbit/s
95th percentile per-packet one-way delay: 56.997 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 56.290 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 57.633 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.15 Mbit/s
95th percentile per-packet one-way delay: 57.588 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

Run 5: Statistics of Sprout

Start at: 2017-08-11 10:41:53
End at: 2017-08-11 10:42:23
Local clock offset: 0.36 ms
Remote clock offset: -3.755 ms

Below is generated by plot.py at 2017-08-11 13:25:09
Datalink statistics
-- Total of 3 flows:
Average throughput: 18.31 Mbit/s
95th percentile per-packet one-way delay: 54.752 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 54.721 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 54.893 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.13 Mbit/s
95th percentile per-packet one-way delay: 54.523 ms
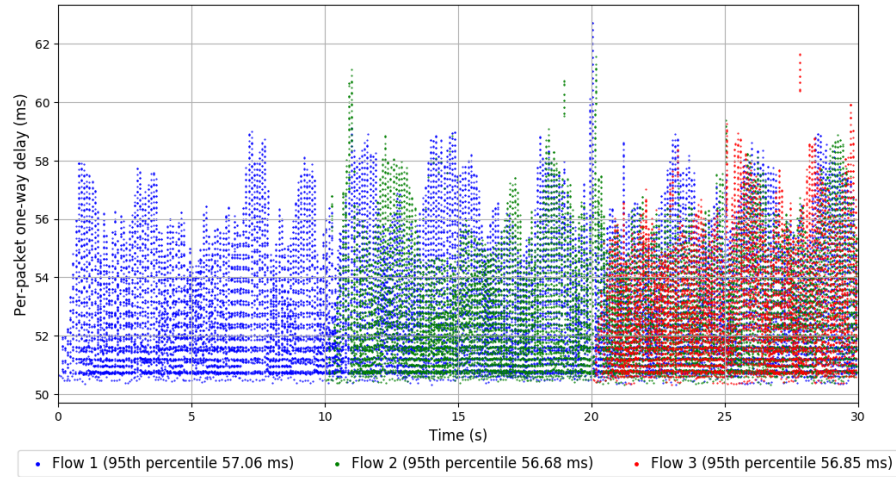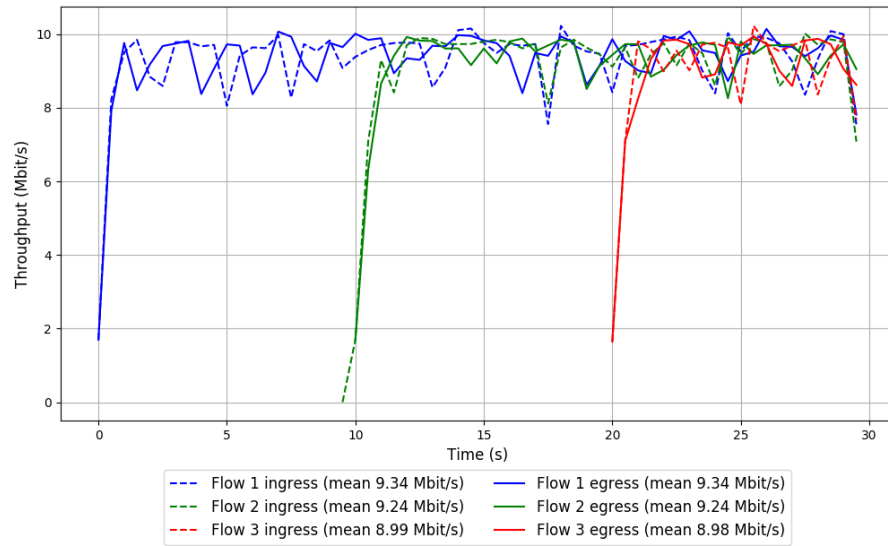Loss rate: 0.00%

Run 5: Report of Sprout — Data Link
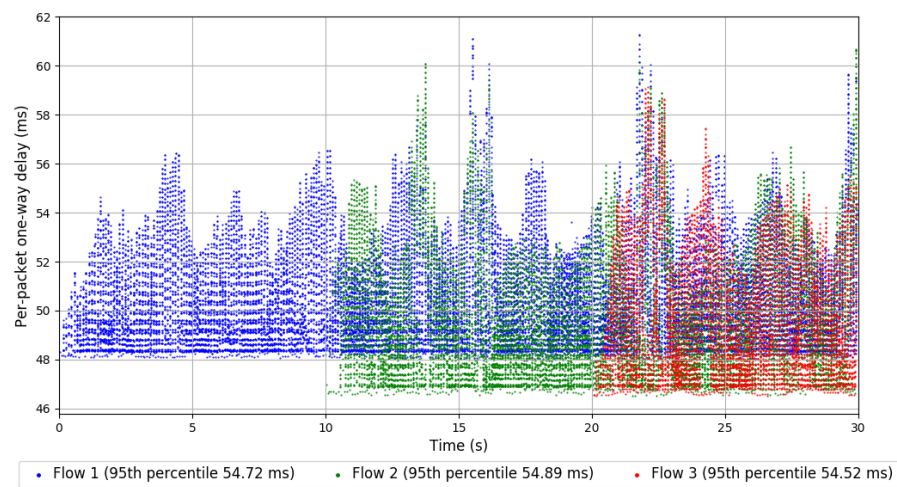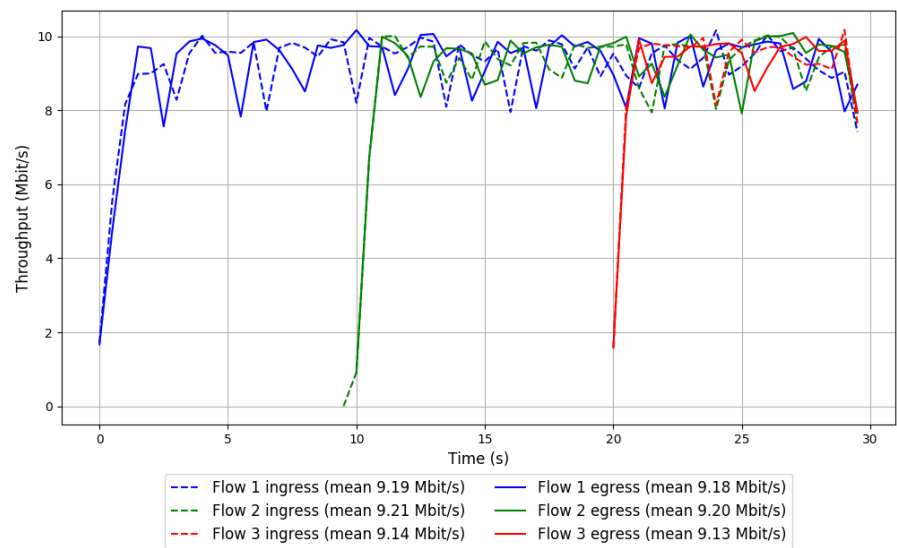
```
Run 6: Statistics of Sprout

Start at: 2017-08-11 11:02:49
End at: 2017-08-11 11:03:20
Local clock offset: 0.409 ms
Remote clock offset: -1.836 ms


# Below is generated by plot.py at 2017-08-11 13:25:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.45 Mbit/s
95th percentile per-packet one-way delay: 56.922 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 57.061 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 56.684 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.98 Mbit/s
95th percentile per-packet one-way delay: 56.847 ms
Loss rate: 0.00%
```

Run 6: Report of Sprout — Data Link

Flow 1 ingress (mean 9.34 Mbit/s) --- Flow 1 egress (mean 9.34 Mbit/s) ———
Flow 2 ingress (mean 9.24 Mbit/s) --- Flow 2 egress (mean 9.24 Mbit/s) ———
Flow 3 ingress (mean 8.99 Mbit/s) --- Flow 3 egress (mean 8.98 Mbit/s) ———

Flow 1 (95th percentile 57.06 ms)   Flow 2 (95th percentile 56.68 ms)   Flow 3 (95th percentile 56.85 ms)
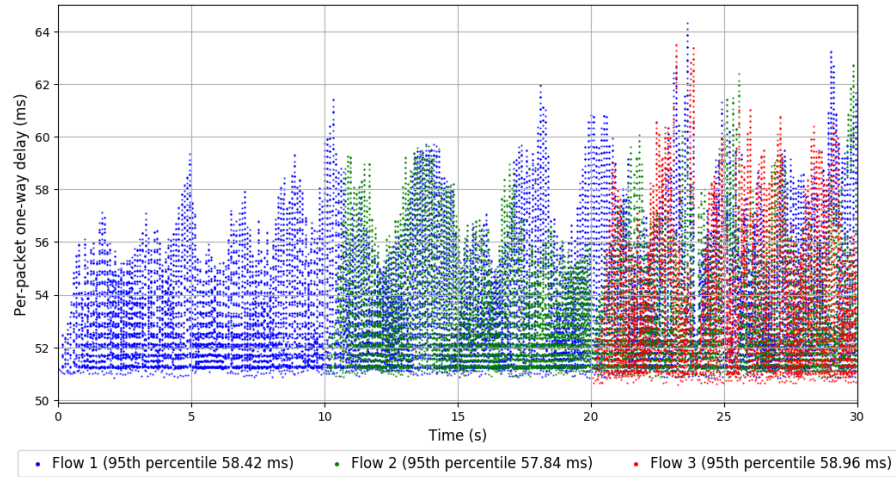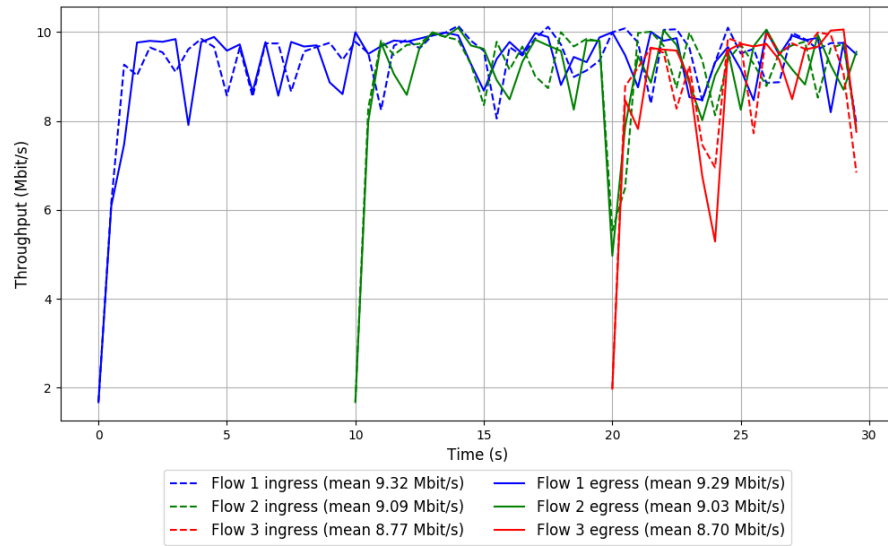
215

```
Run 7: Statistics of Sprout

Start at: 2017-08-11 11:23:50
End at: 2017-08-11 11:24:20
Local clock offset: 0.372 ms
Remote clock offset: -1.278 ms


# Below is generated by plot.py at 2017-08-11 13:25:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.17 Mbit/s
95th percentile per-packet one-way delay: 58.344 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 9.29 Mbit/s
95th percentile per-packet one-way delay: 58.419 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 57.843 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 58.959 ms
Loss rate: 0.77%
```

Run 7: Report of Sprout — Data Link

```
Run 8: Statistics of Sprout

Start at: 2017-08-11 11:44:52
End at: 2017-08-11 11:45:22
Local clock offset: 0.542 ms
Remote clock offset: -0.921 ms


# Below is generated by plot.py at 2017-08-11 13:25:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.46 Mbit/s
95th percentile per-packet one-way delay: 57.663 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 56.656 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 58.088 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 59.419 ms
Loss rate: 0.00%
```

## Run 8: Report of Sprout — Data Link
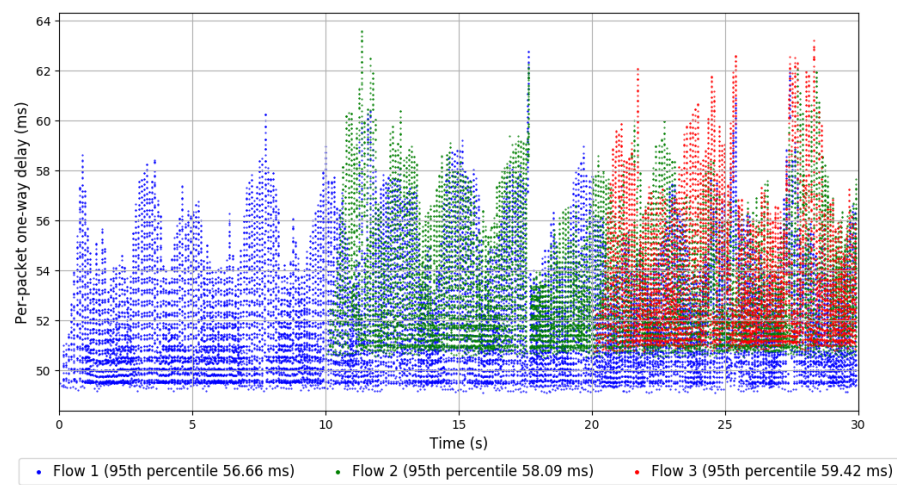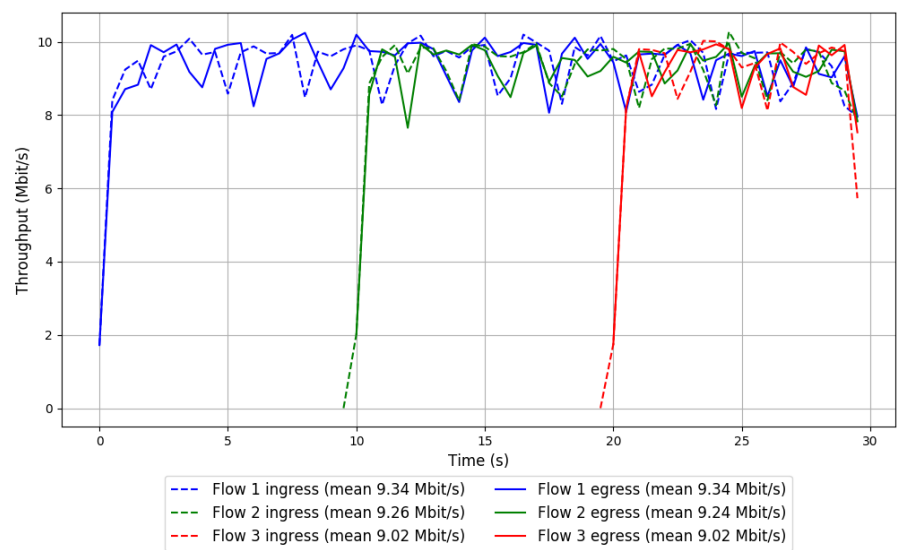
```
Run 9: Statistics of Sprout

Start at: 2017-08-11 12:05:51
End at: 2017-08-11 12:06:21
Local clock offset: 0.507 ms
Remote clock offset: -0.846 ms


# Below is generated by plot.py at 2017-08-11 13:25:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.28 Mbit/s
95th percentile per-packet one-way delay: 57.305 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 9.05 Mbit/s
95th percentile per-packet one-way delay: 57.112 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 57.324 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 9.09 Mbit/s
95th percentile per-packet one-way delay: 58.140 ms
Loss rate: 0.01%
```

Run 9: Report of Sprout — Data Link
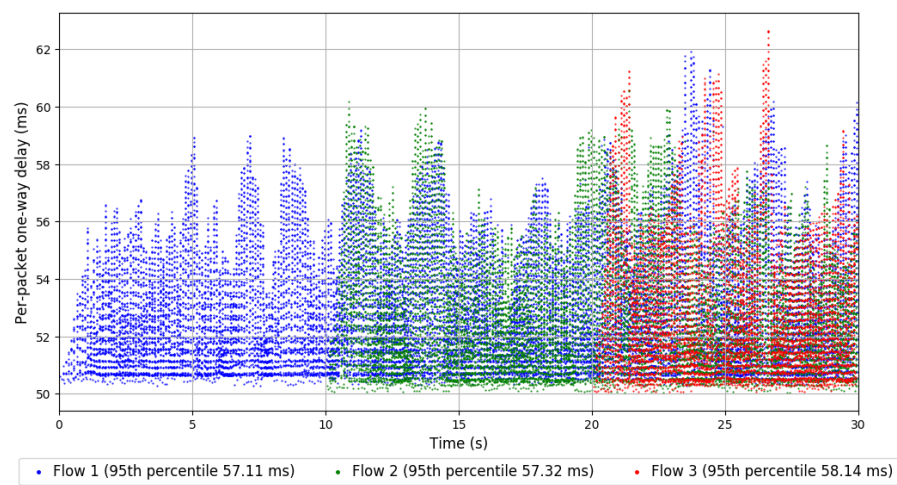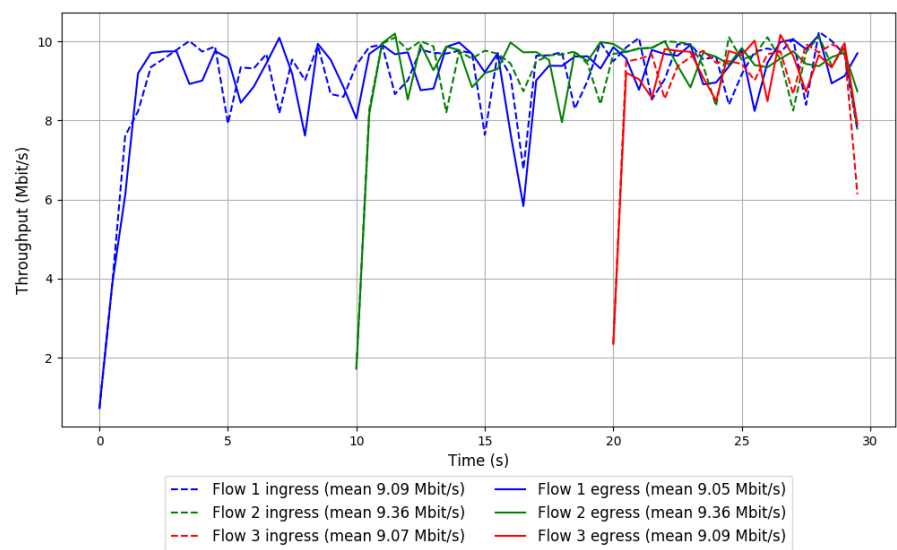
```
Run 10: Statistics of Sprout

Start at: 2017-08-11 12:27:01
End at: 2017-08-11 12:27:31
Local clock offset: 0.496 ms
Remote clock offset: 0.116 ms


# Below is generated by plot.py at 2017-08-11 13:25:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.32 Mbit/s
95th percentile per-packet one-way delay: 57.775 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 57.638 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 58.011 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 57.598 ms
Loss rate: 0.00%
```
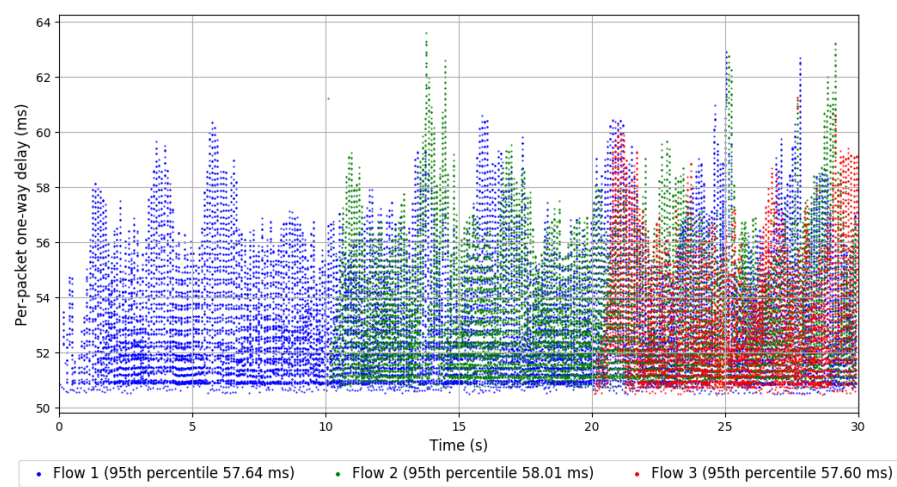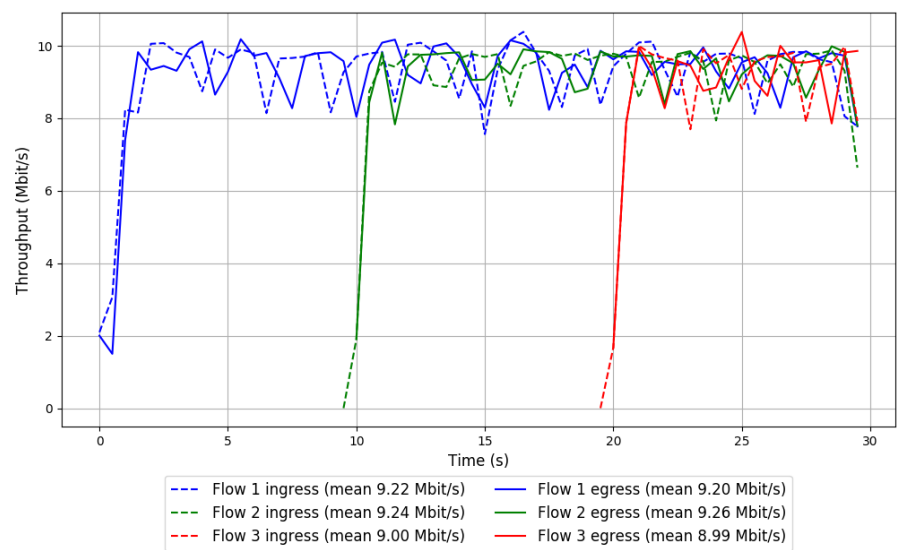
Run 10: Report of Sprout — Data Link

Flow 1 ingress (mean 9.22 Mbit/s) --- Flow 1 egress (mean 9.20 Mbit/s)
Flow 2 ingress (mean 9.24 Mbit/s) --- Flow 2 egress (mean 9.26 Mbit/s)
Flow 3 ingress (mean 9.00 Mbit/s) --- Flow 3 egress (mean 8.99 Mbit/s)

Flow 1 (95th percentile 57.64 ms) Flow 2 (95th percentile 58.01 ms) Flow 3 (95th percentile 57.60 ms)
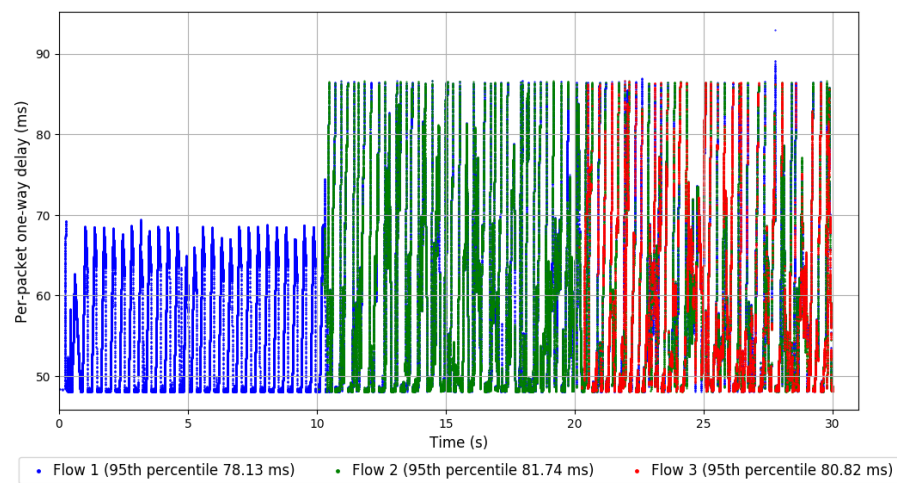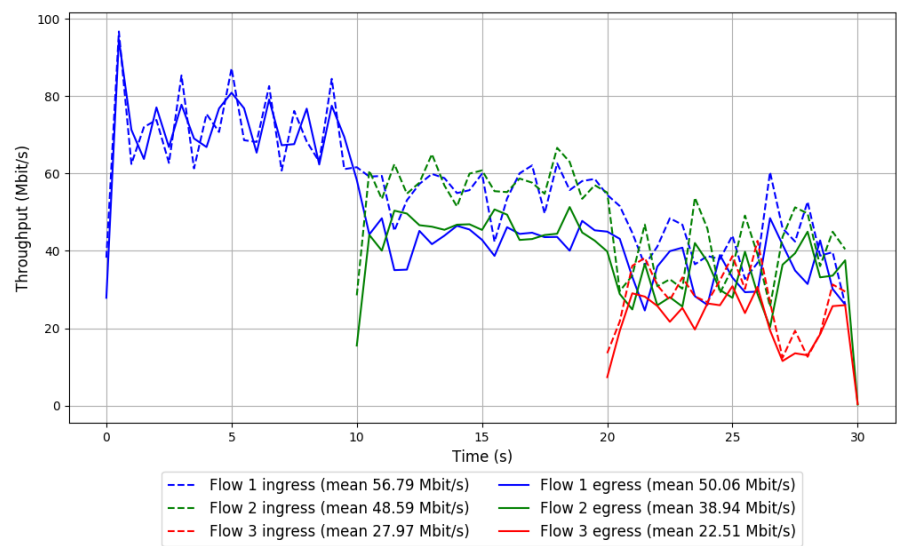
```
Run 1: Statistics of TaoVA-100x

Start at: 2017-08-11 09:13:46
End at: 2017-08-11 09:14:16
Local clock offset: 0.172 ms
Remote clock offset: -2.142 ms


# Below is generated by plot.py at 2017-08-11 13:25:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.32 Mbit/s
95th percentile per-packet one-way delay: 79.973 ms
Loss rate: 15.22%
-- Flow 1:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 78.127 ms
Loss rate: 11.85%
-- Flow 2:
Average throughput: 38.94 Mbit/s
95th percentile per-packet one-way delay: 81.739 ms
Loss rate: 19.87%
-- Flow 3:
Average throughput: 22.51 Mbit/s
95th percentile per-packet one-way delay: 80.817 ms
Loss rate: 19.66%
```

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

- - - - Flow 1 ingress (mean 56.79 Mbit/s) ——— Flow 1 egress (mean 50.06 Mbit/s)
- - - - Flow 2 ingress (mean 48.59 Mbit/s) ——— Flow 2 egress (mean 38.94 Mbit/s)
- - - - Flow 3 ingress (mean 27.97 Mbit/s) ——— Flow 3 egress (mean 22.51 Mbit/s)

• Flow 1 (95th percentile 78.13 ms) • Flow 2 (95th percentile 81.74 ms) • Flow 3 (95th percentile 80.82 ms)
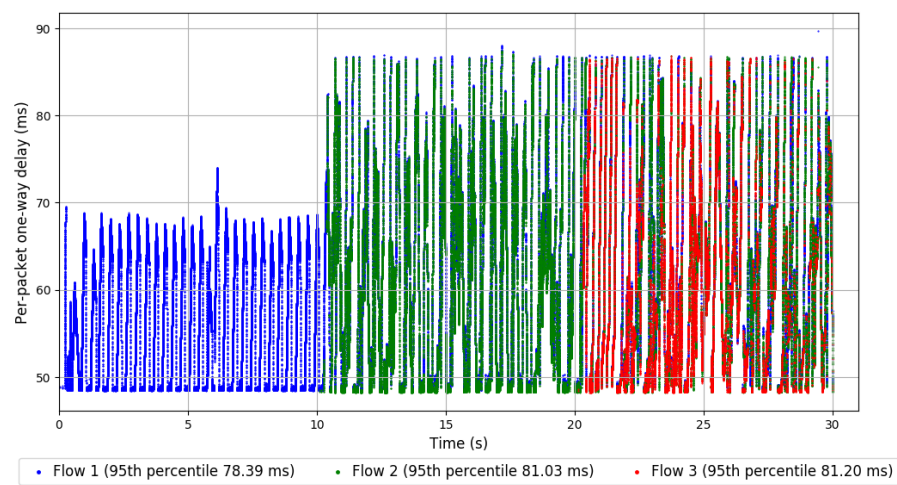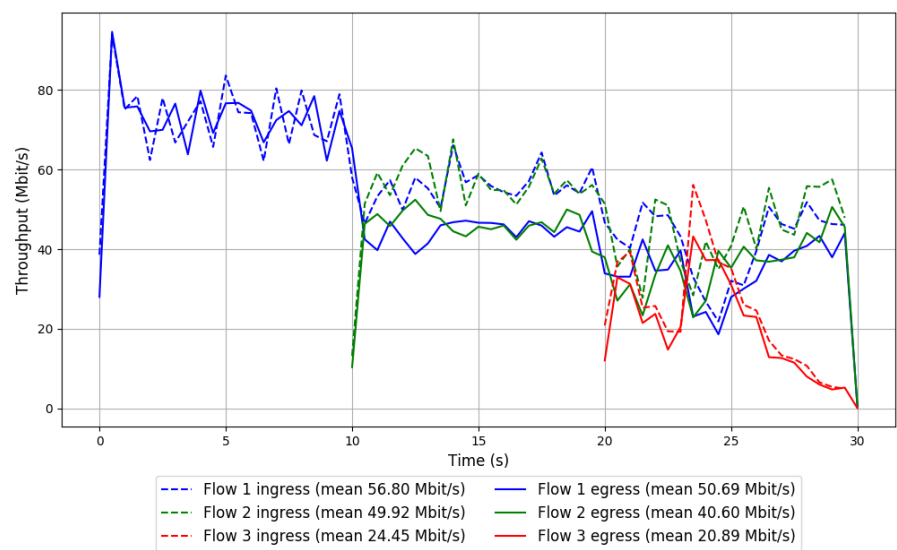
225

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

Start at: 2017-08-11 09:34:44
End at: 2017-08-11 09:35:14
Local clock offset: 0.093 ms
Remote clock offset: -2.712 ms

# Below is generated by plot.py at 2017-08-11 13:25:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.58 Mbit/s
95th percentile per-packet one-way delay: 79.731 ms
Loss rate: 13.73%
-- Flow 1:
Average throughput: 50.69 Mbit/s
95th percentile per-packet one-way delay: 78.394 ms
Loss rate: 10.74%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 81.032 ms
Loss rate: 18.66%
-- Flow 3:
Average throughput: 20.89 Mbit/s
95th percentile per-packet one-way delay: 81.204 ms
Loss rate: 14.54%
```

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

Flow 1 ingress (mean 56.80 Mbit/s) Flow 1 egress (mean 50.69 Mbit/s)
Flow 2 ingress (mean 49.92 Mbit/s) Flow 2 egress (mean 40.60 Mbit/s)
Flow 3 ingress (mean 24.45 Mbit/s) Flow 3 egress (mean 20.89 Mbit/s)

Flow 1 (95th percentile 78.39 ms)   Flow 2 (95th percentile 81.03 ms)   Flow 3 (95th percentile 81.20 ms)
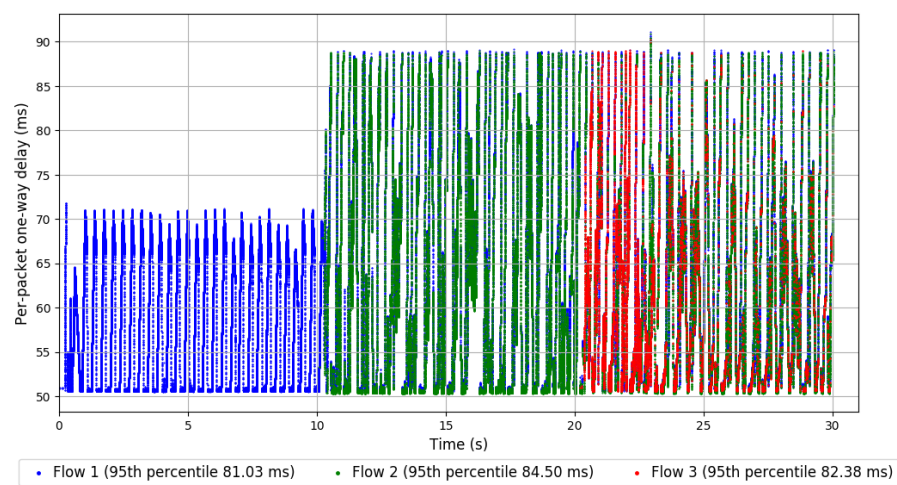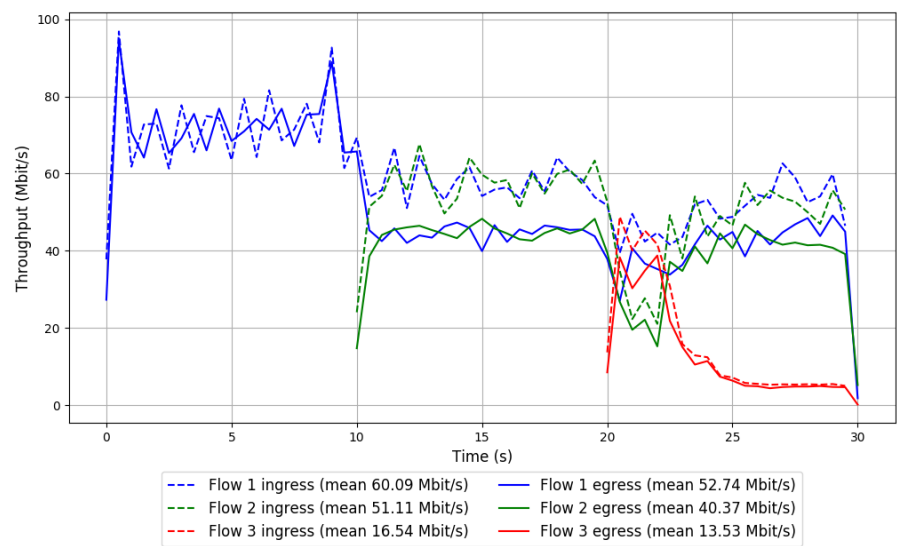
```
Run 3: Statistics of TaoVA-100x

Start at: 2017-08-11 09:55:40
End at: 2017-08-11 09:56:10
Local clock offset: 0.209 ms
Remote clock offset: -0.916 ms


# Below is generated by plot.py at 2017-08-11 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.03 Mbit/s
95th percentile per-packet one-way delay: 82.447 ms
Loss rate: 15.45%
-- Flow 1:
Average throughput: 52.74 Mbit/s
95th percentile per-packet one-way delay: 81.035 ms
Loss rate: 12.14%
-- Flow 2:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 84.499 ms
Loss rate: 20.89%
-- Flow 3:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 82.376 ms
Loss rate: 18.05%
```
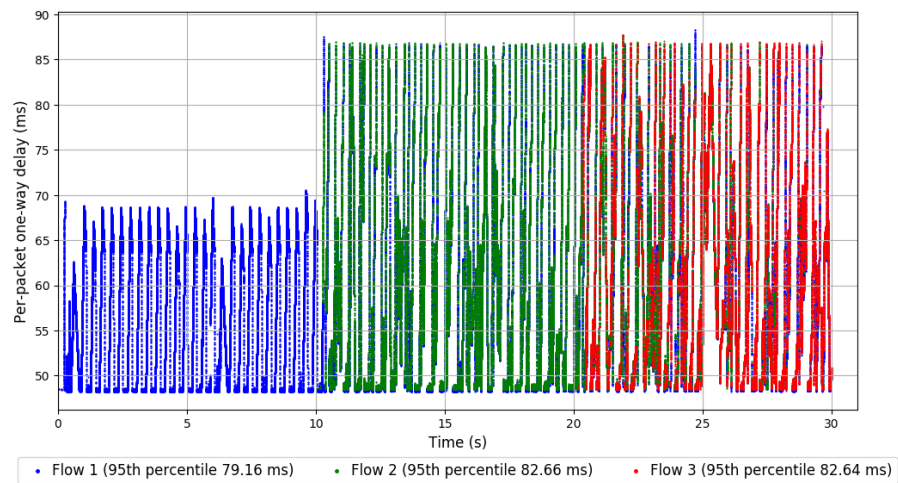
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 60.09 Mbit/s)   Flow 1 egress (mean 52.74 Mbit/s)
Flow 2 ingress (mean 51.11 Mbit/s)   Flow 2 egress (mean 40.37 Mbit/s)
Flow 3 ingress (mean 16.54 Mbit/s)   Flow 3 egress (mean 13.53 Mbit/s)

Flow 1 (95th percentile 81.03 ms)   Flow 2 (95th percentile 84.50 ms)   Flow 3 (95th percentile 82.38 ms)
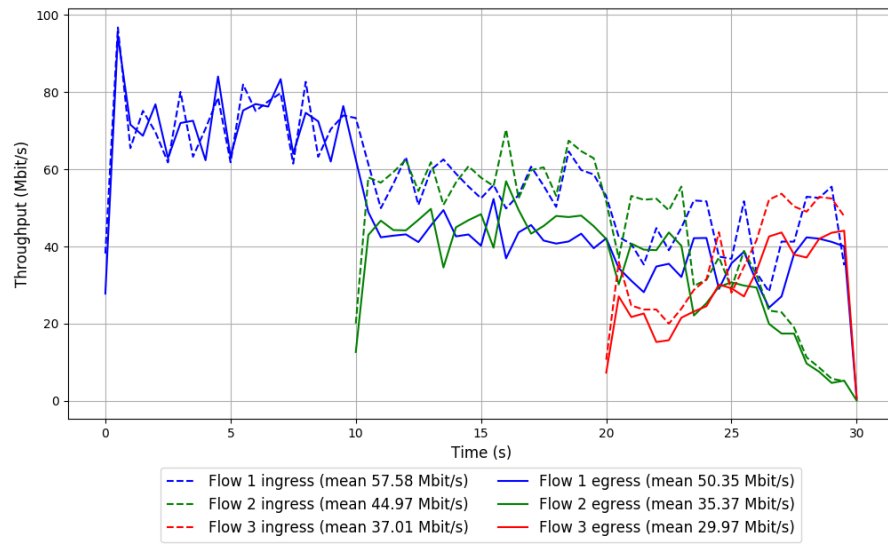
229

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

Start at: 2017-08-11 10:16:39
End at: 2017-08-11 10:17:09
Local clock offset: 0.226 ms
Remote clock offset: -3.437 ms


# Below is generated by plot.py at 2017-08-11 13:26:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.72 Mbit/s
95th percentile per-packet one-way delay: 81.001 ms
Loss rate: 15.98%
-- Flow 1:
Average throughput: 50.35 Mbit/s
95th percentile per-packet one-way delay: 79.163 ms
Loss rate: 12.56%
-- Flow 2:
Average throughput: 35.37 Mbit/s
95th percentile per-packet one-way delay: 82.659 ms
Loss rate: 21.33%
-- Flow 3:
Average throughput: 29.97 Mbit/s
95th percentile per-packet one-way delay: 82.639 ms
Loss rate: 19.03%
```

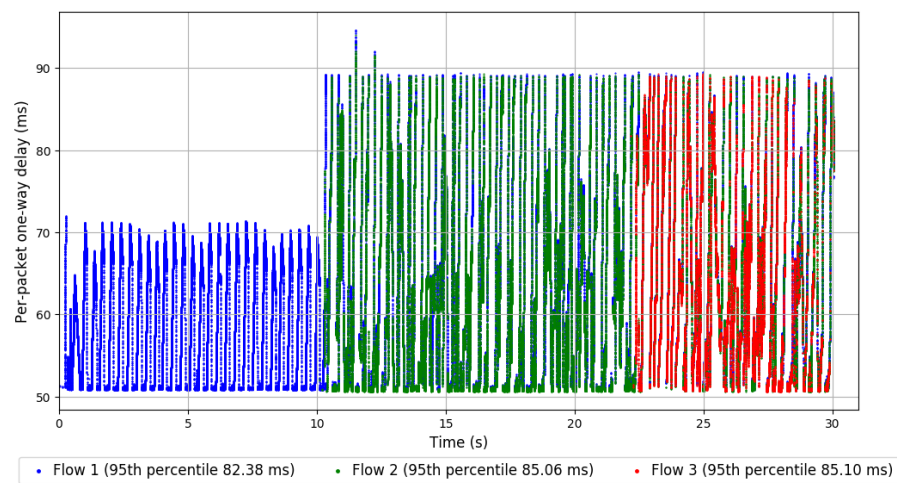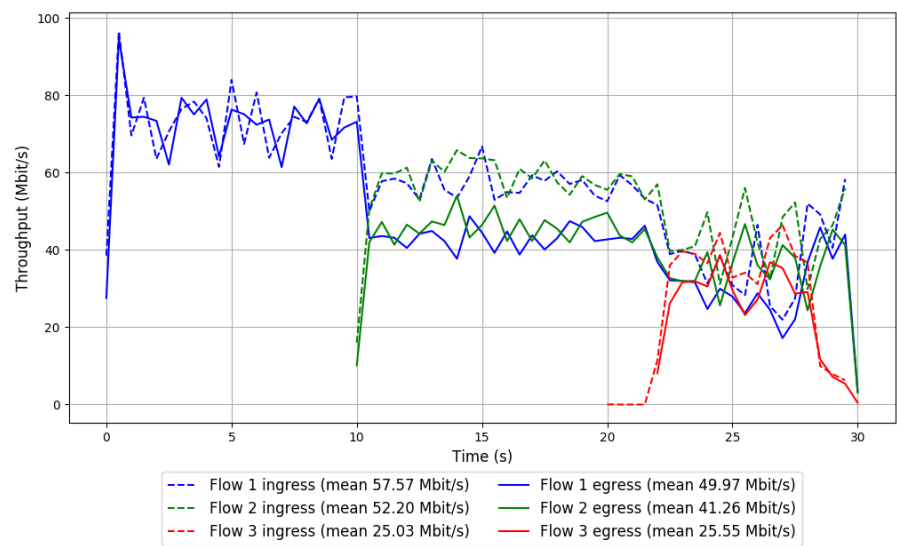Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 57.58 Mbit/s) --- Flow 1 egress (mean 50.35 Mbit/s)
Flow 2 ingress (mean 44.97 Mbit/s) --- Flow 2 egress (mean 35.37 Mbit/s)
Flow 3 ingress (mean 37.01 Mbit/s) --- Flow 3 egress (mean 29.97 Mbit/s)

Flow 1 (95th percentile 79.16 ms)   Flow 2 (95th percentile 82.66 ms)   Flow 3 (95th percentile 82.64 ms)

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

Start at: 2017-08-11 10:37:38
End at: 2017-08-11 10:38:08
Local clock offset: 0.347 ms
Remote clock offset: -1.298 ms


# Below is generated by plot.py at 2017-08-11 13:26:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.10 Mbit/s
95th percentile per-packet one-way delay: 83.908 ms
Loss rate: 16.25%
-- Flow 1:
Average throughput: 49.97 Mbit/s
95th percentile per-packet one-way delay: 82.381 ms
Loss rate: 13.12%
-- Flow 2:
Average throughput: 41.26 Mbit/s
95th percentile per-packet one-way delay: 85.056 ms
Loss rate: 20.86%
-- Flow 3:
Average throughput: 25.55 Mbit/s
95th percentile per-packet one-way delay: 85.104 ms
Loss rate: 18.68%
```
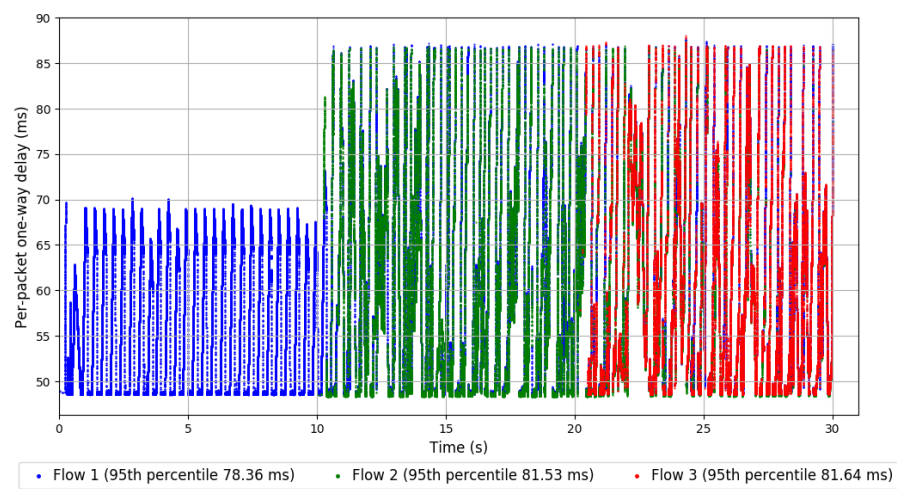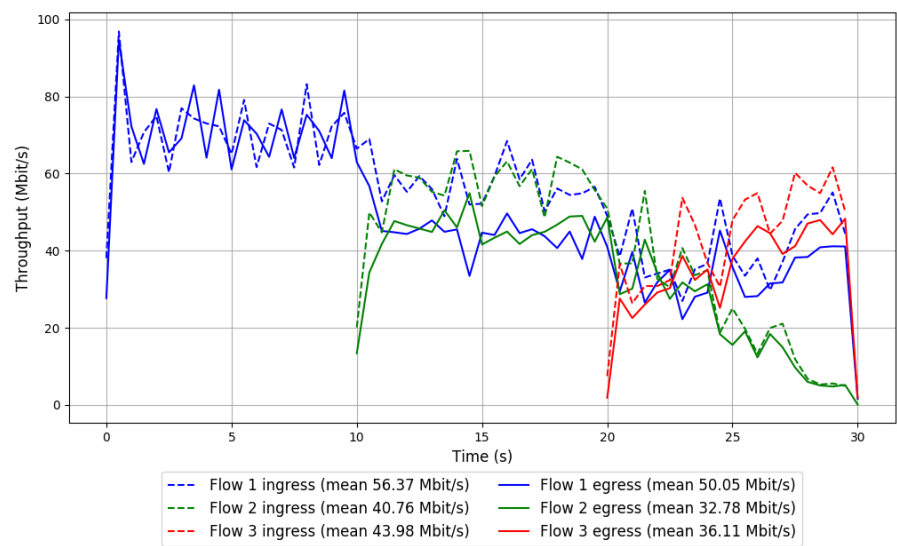
Run 5: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 57.57 Mbit/s) --- Flow 1 egress (mean 49.97 Mbit/s)
Flow 2 ingress (mean 52.20 Mbit/s) --- Flow 2 egress (mean 41.26 Mbit/s)
Flow 3 ingress (mean 25.03 Mbit/s) --- Flow 3 egress (mean 25.55 Mbit/s)

Flow 1 (95th percentile 82.38 ms)   Flow 2 (95th percentile 85.06 ms)   Flow 3 (95th percentile 85.10 ms)

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

Start at: 2017-08-11 10:58:36
End at: 2017-08-11 10:59:06
Local clock offset: 0.321 ms
Remote clock offset: -3.868 ms


# Below is generated by plot.py at 2017-08-11 13:26:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.69 Mbit/s
95th percentile per-packet one-way delay: 79.970 ms
Loss rate: 14.48%
-- Flow 1:
Average throughput: 50.05 Mbit/s
95th percentile per-packet one-way delay: 78.355 ms
Loss rate: 11.18%
-- Flow 2:
Average throughput: 32.78 Mbit/s
95th percentile per-packet one-way delay: 81.534 ms
Loss rate: 19.53%
-- Flow 3:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 81.636 ms
Loss rate: 17.91%
```
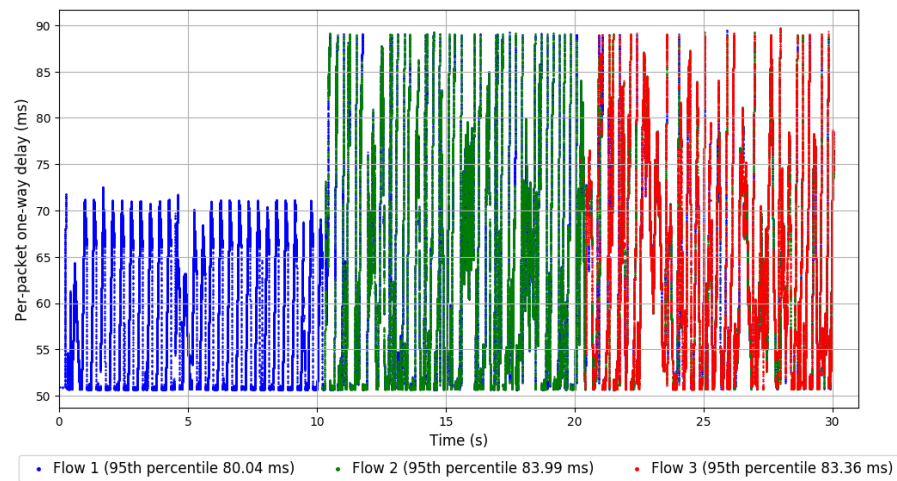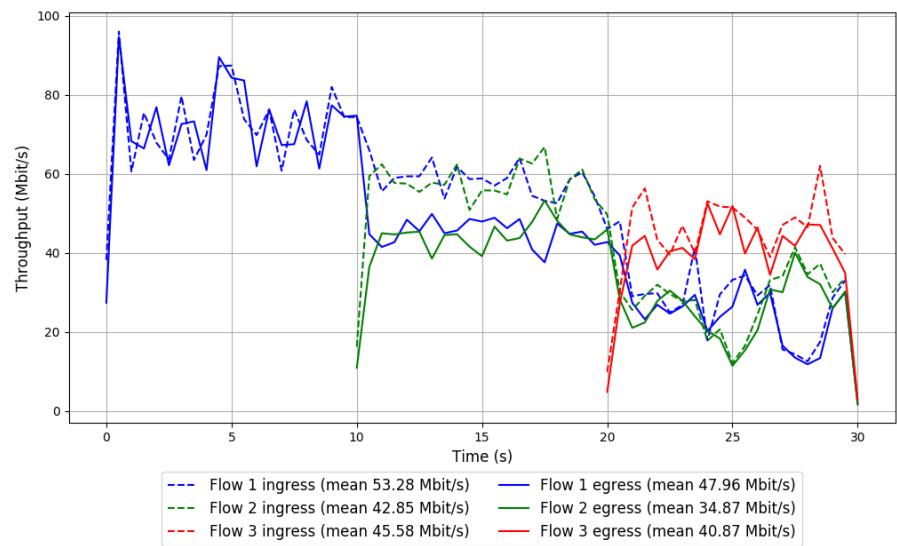
Run 6: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 56.37 Mbit/s) --- Flow 1 egress (mean 50.05 Mbit/s)
Flow 2 ingress (mean 40.76 Mbit/s) --- Flow 2 egress (mean 32.78 Mbit/s)
Flow 3 ingress (mean 43.98 Mbit/s) --- Flow 3 egress (mean 36.11 Mbit/s)

Flow 1 (95th percentile 78.36 ms) · Flow 2 (95th percentile 81.53 ms) · Flow 3 (95th percentile 81.64 ms)
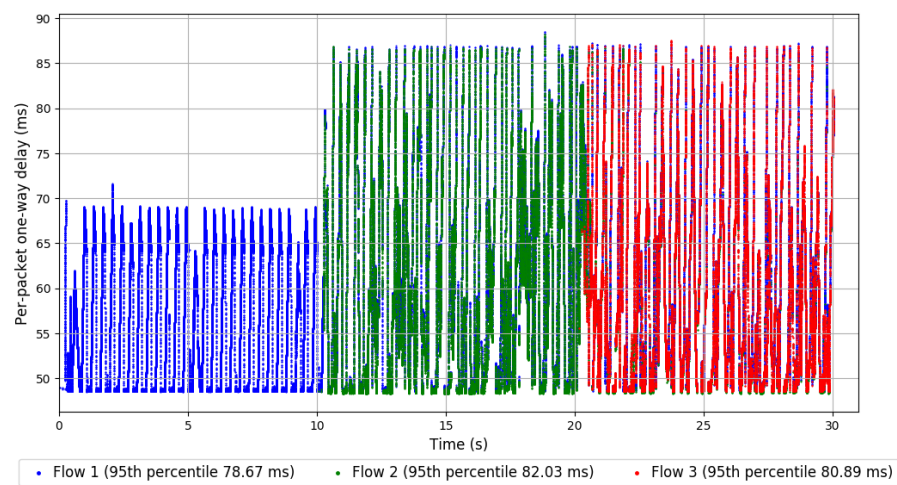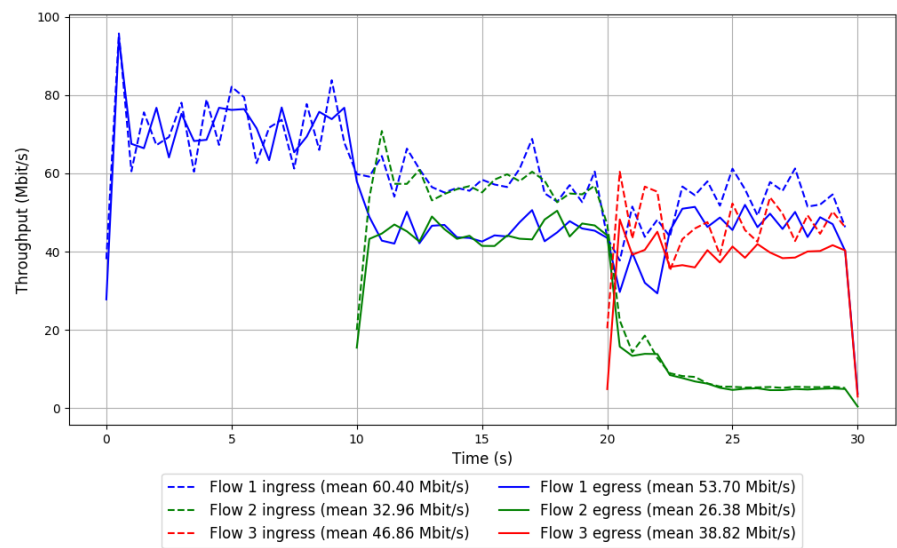
```
Run 7: Statistics of TaoVA-100x

Start at: 2017-08-11 11:19:35
End at: 2017-08-11 11:20:05
Local clock offset: 0.365 ms
Remote clock offset: -1.643 ms


# Below is generated by plot.py at 2017-08-11 13:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.48 Mbit/s
95th percentile per-packet one-way delay: 82.172 ms
Loss rate: 12.54%
-- Flow 1:
Average throughput: 47.96 Mbit/s
95th percentile per-packet one-way delay: 80.042 ms
Loss rate: 9.92%
-- Flow 2:
Average throughput: 34.87 Mbit/s
95th percentile per-packet one-way delay: 83.990 ms
Loss rate: 18.60%
-- Flow 3:
Average throughput: 40.87 Mbit/s
95th percentile per-packet one-way delay: 83.361 ms
Loss rate: 10.36%
```

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

Flow 1 ingress (mean 53.28 Mbit/s) --- Flow 1 egress (mean 47.96 Mbit/s)
Flow 2 ingress (mean 42.85 Mbit/s) --- Flow 2 egress (mean 34.87 Mbit/s)
Flow 3 ingress (mean 45.58 Mbit/s) --- Flow 3 egress (mean 40.87 Mbit/s)

Flow 1 (95th percentile 80.04 ms)   Flow 2 (95th percentile 83.99 ms)   Flow 3 (95th percentile 83.36 ms)
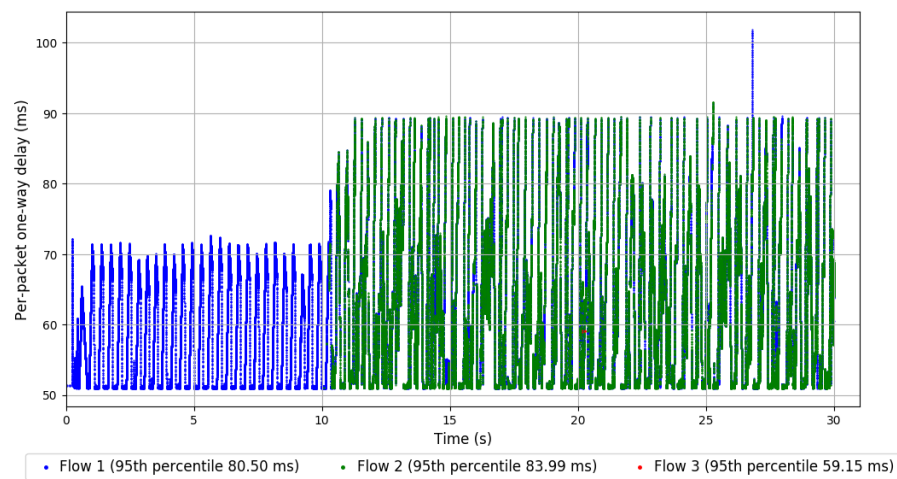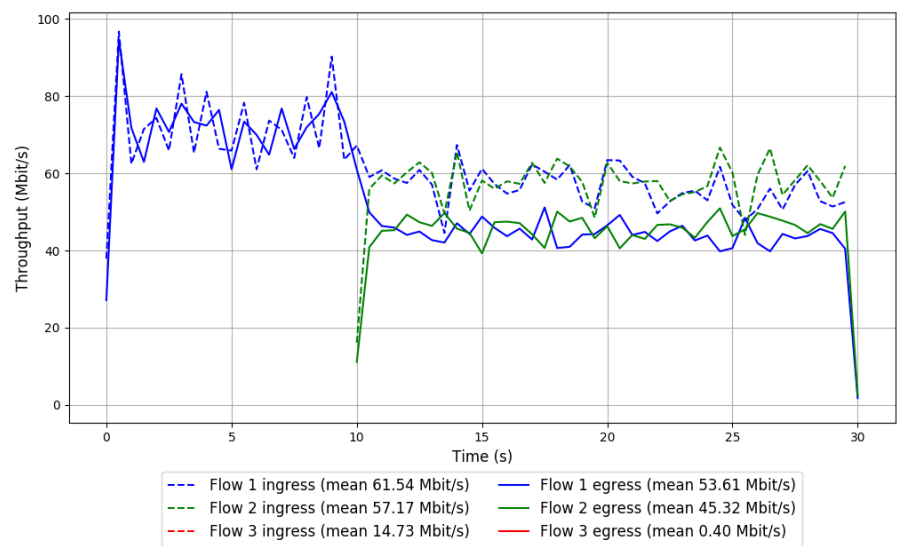
```
Run 8: Statistics of TaoVA-100x

Start at: 2017-08-11 11:40:38
End at: 2017-08-11 11:41:08
Local clock offset: 0.454 ms
Remote clock offset: -3.546 ms


# Below is generated by plot.py at 2017-08-11 13:26:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.05 Mbit/s
95th percentile per-packet one-way delay: 79.971 ms
Loss rate: 13.95%
-- Flow 1:
Average throughput: 53.70 Mbit/s
95th percentile per-packet one-way delay: 78.668 ms
Loss rate: 11.02%
-- Flow 2:
Average throughput: 26.38 Mbit/s
95th percentile per-packet one-way delay: 82.027 ms
Loss rate: 19.86%
-- Flow 3:
Average throughput: 38.82 Mbit/s
95th percentile per-packet one-way delay: 80.891 ms
Loss rate: 16.97%
```
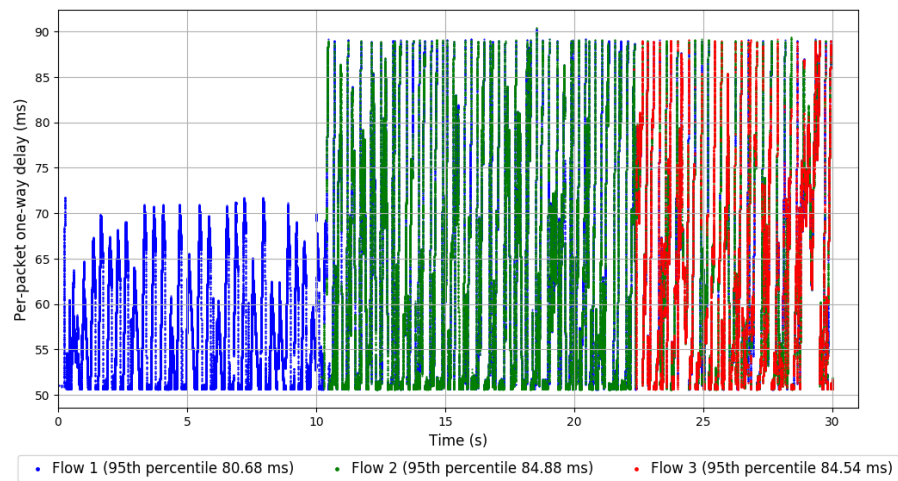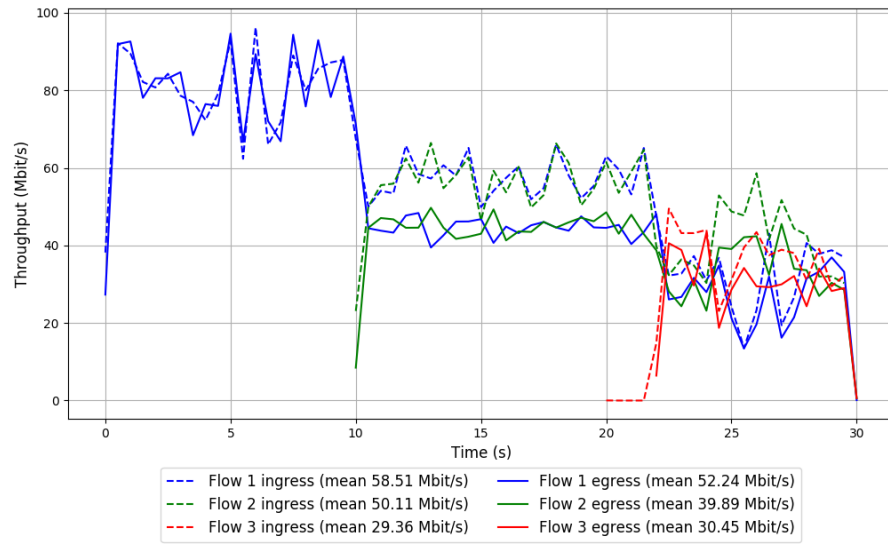
Run 8: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 60.40 Mbit/s) Flow 1 egress (mean 53.70 Mbit/s)
Flow 2 ingress (mean 32.96 Mbit/s) Flow 2 egress (mean 26.38 Mbit/s)
Flow 3 ingress (mean 46.86 Mbit/s) Flow 3 egress (mean 38.82 Mbit/s)

Flow 1 (95th percentile 78.67 ms)   Flow 2 (95th percentile 82.03 ms)   Flow 3 (95th percentile 80.89 ms)

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

Start at: 2017-08-11 12:01:38
End at: 2017-08-11 12:02:08
Local clock offset: 0.608 ms
Remote clock offset: -0.365 ms


# Below is generated by plot.py at 2017-08-11 13:27:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.76 Mbit/s
95th percentile per-packet one-way delay: 82.293 ms
Loss rate: 15.93%
-- Flow 1:
Average throughput: 53.61 Mbit/s
95th percentile per-packet one-way delay: 80.502 ms
Loss rate: 12.86%
-- Flow 2:
Average throughput: 45.32 Mbit/s
95th percentile per-packet one-way delay: 83.992 ms
Loss rate: 20.67%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 59.146 ms
Loss rate: 98.72%
```

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

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

Start at: 2017-08-11 12:22:46
End at: 2017-08-11 12:23:16
Local clock offset: 0.478 ms
Remote clock offset: -0.294 ms


# Below is generated by plot.py at 2017-08-11 13:27:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.71 Mbit/s
95th percentile per-packet one-way delay: 82.960 ms
Loss rate: 14.55%
-- Flow 1:
Average throughput: 52.24 Mbit/s
95th percentile per-packet one-way delay: 80.679 ms
Loss rate: 10.73%
-- Flow 2:
Average throughput: 39.89 Mbit/s
95th percentile per-packet one-way delay: 84.879 ms
Loss rate: 20.42%
-- Flow 3:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 84.538 ms
Loss rate: 17.43%
```

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

Flow 1 ingress (mean 58.51 Mbit/s) — Flow 1 egress (mean 52.24 Mbit/s)
Flow 2 ingress (mean 50.11 Mbit/s) — Flow 2 egress (mean 39.89 Mbit/s)
Flow 3 ingress (mean 29.36 Mbit/s) — Flow 3 egress (mean 30.45 Mbit/s)

Flow 1 (95th percentile 80.68 ms) • Flow 2 (95th percentile 84.88 ms) • Flow 3 (95th percentile 84.54 ms)
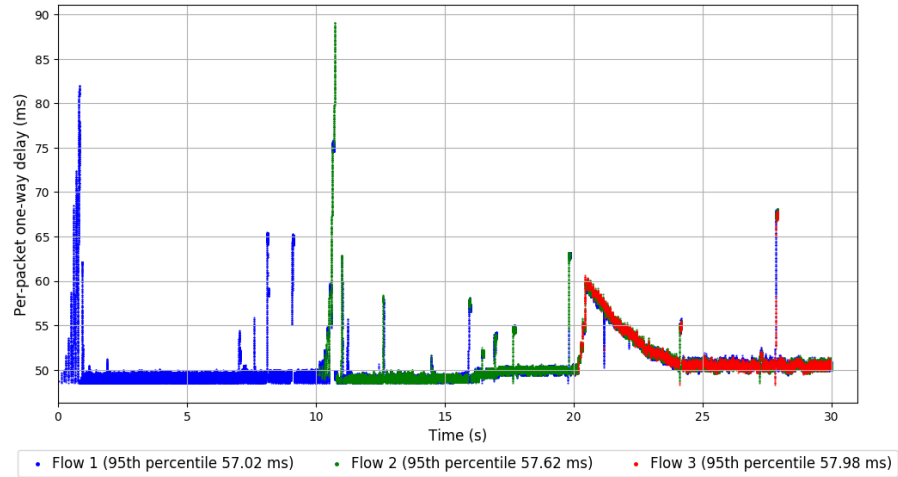
```
Run 1: Statistics of TCP Vegas

Start at: 2017-08-11 09:09:27
End at: 2017-08-11 09:09:57
Local clock offset: 0.07 ms
Remote clock offset: -2.02 ms


# Below is generated by plot.py at 2017-08-11 13:27:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.92 Mbit/s
95th percentile per-packet one-way delay: 65.582 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 51.39 Mbit/s
95th percentile per-packet one-way delay: 64.887 ms
Loss rate: 1.20%
-- Flow 2:
Average throughput: 43.35 Mbit/s
95th percentile per-packet one-way delay: 65.773 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 17.07 Mbit/s
95th percentile per-packet one-way delay: 66.632 ms
Loss rate: 0.00%
```

Run 1: Report of TCP Vegas — Data Link
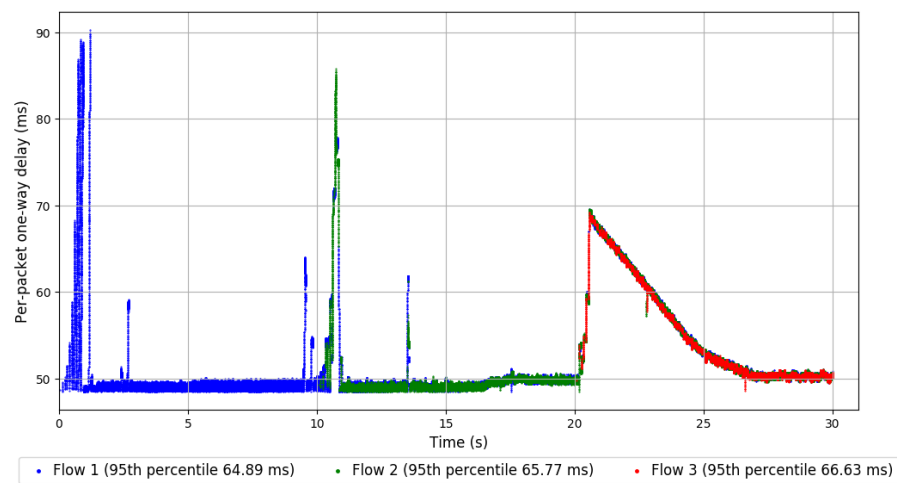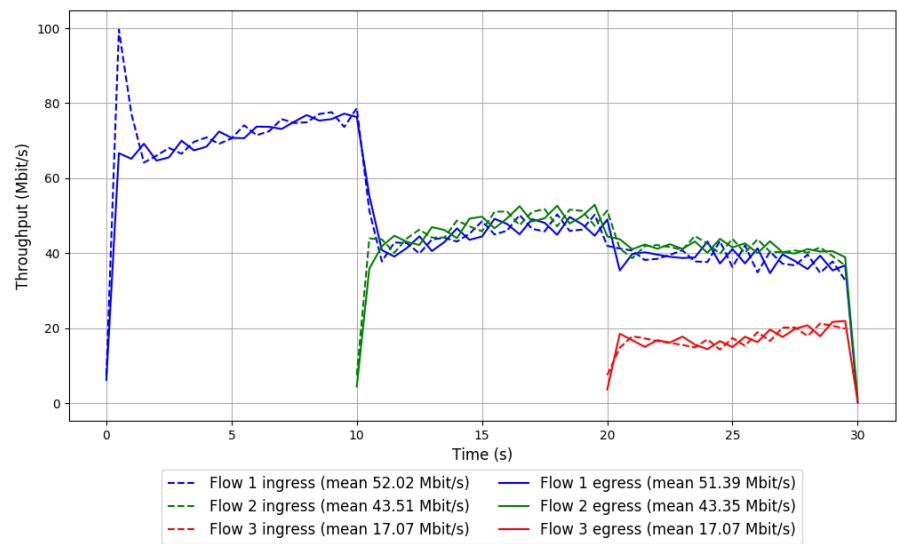
```
Run 2: Statistics of TCP Vegas

Start at: 2017-08-11 09:30:26
End at: 2017-08-11 09:30:56
Local clock offset: 0.187 ms
Remote clock offset: -0.519 ms


# Below is generated by plot.py at 2017-08-11 13:27:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.44 Mbit/s
95th percentile per-packet one-way delay: 80.721 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 81.362 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 60.375 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 60.116 ms
Loss rate: 1.07%
```

Run 2: Report of TCP Vegas — Data Link
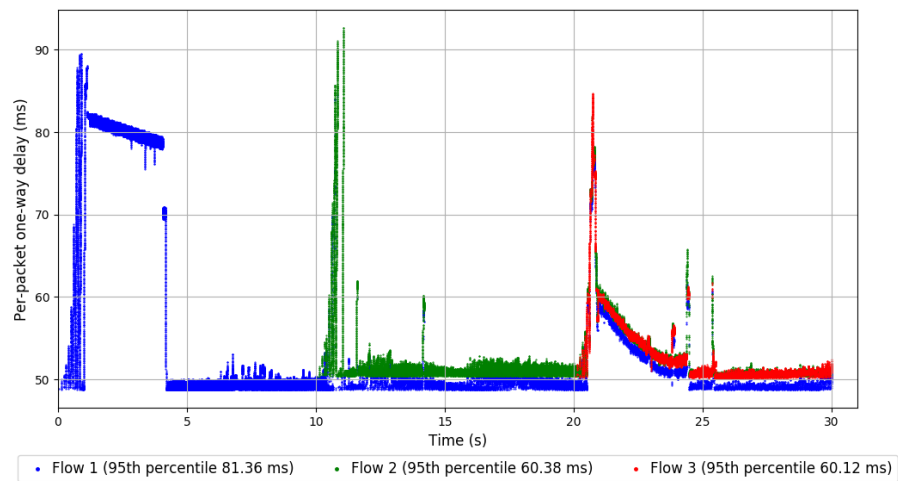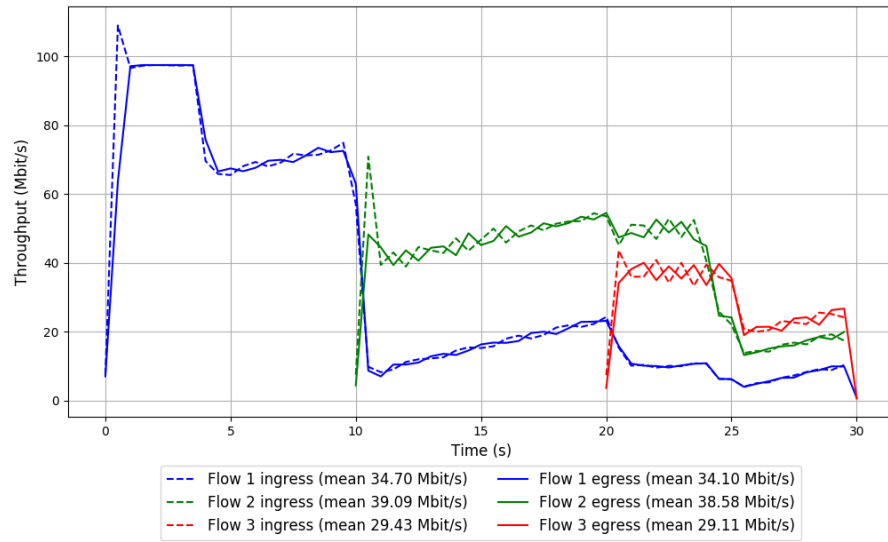
```
Run 3: Statistics of TCP Vegas

Start at: 2017-08-11 09:51:23
End at: 2017-08-11 09:51:53
Local clock offset: 0.081 ms
Remote clock offset: -3.038 ms

# Below is generated by plot.py at 2017-08-11 13:27:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.76 Mbit/s
95th percentile per-packet one-way delay: 57.303 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 54.28 Mbit/s
95th percentile per-packet one-way delay: 57.016 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 42.49 Mbit/s
95th percentile per-packet one-way delay: 57.623 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 12.67 Mbit/s
95th percentile per-packet one-way delay: 57.981 ms
Loss rate: 0.00%
```
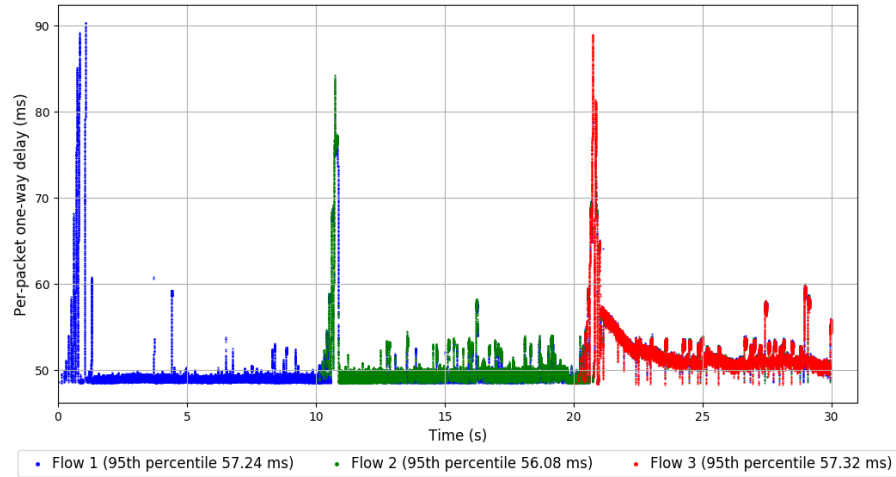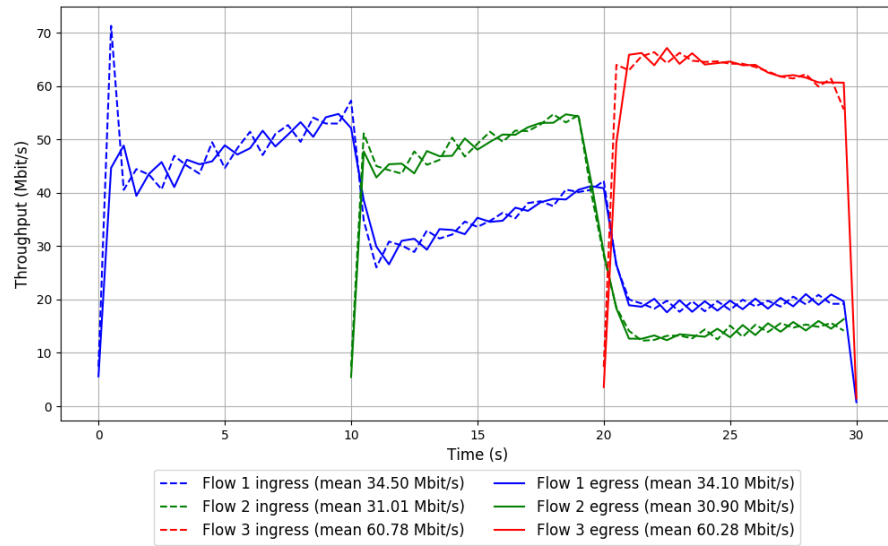
Run 3: Report of TCP Vegas — Data Link
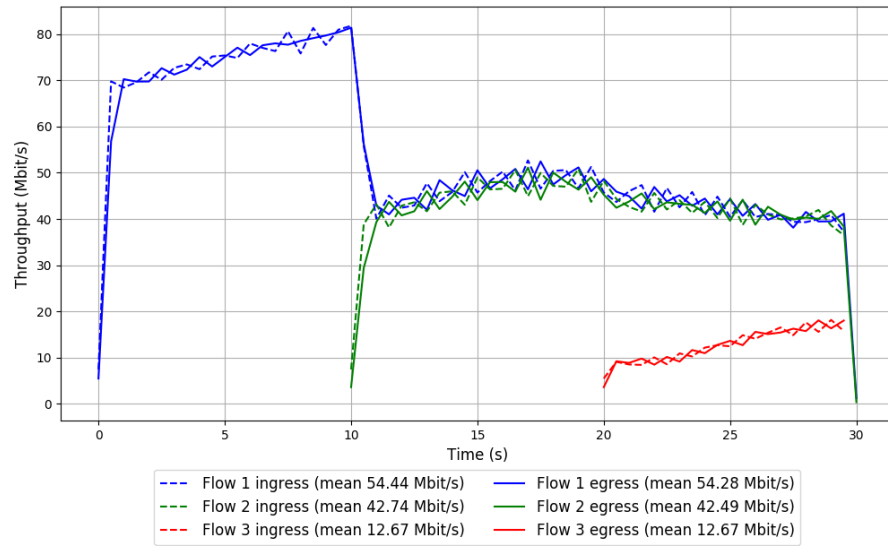
```
Run 4: Statistics of TCP Vegas

Start at: 2017-08-11 10:12:18
End at: 2017-08-11 10:12:48
Local clock offset: 0.165 ms
Remote clock offset: -1.414 ms


# Below is generated by plot.py at 2017-08-11 13:27:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.49 Mbit/s
95th percentile per-packet one-way delay: 58.770 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 74.87 Mbit/s
95th percentile per-packet one-way delay: 59.004 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 15.15 Mbit/s
95th percentile per-packet one-way delay: 58.712 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.71 Mbit/s
95th percentile per-packet one-way delay: 52.930 ms
Loss rate: 0.00%
```

Run 4: Report of TCP Vegas — Data Link
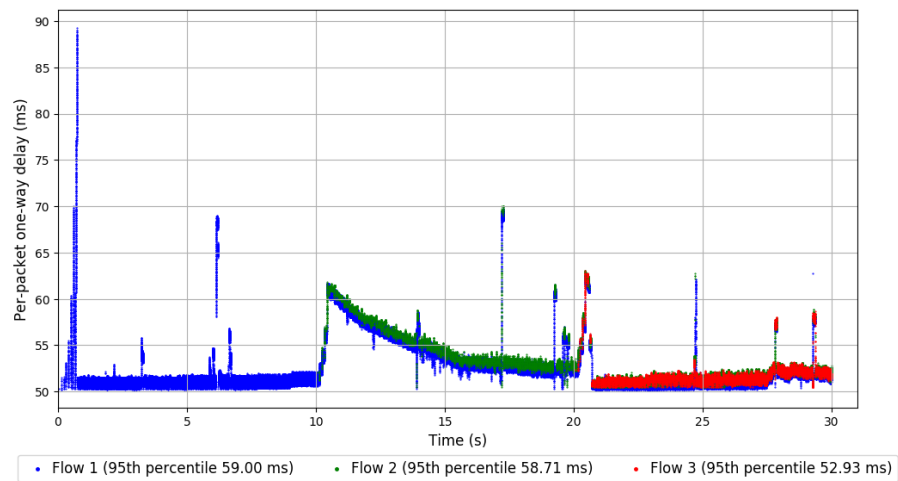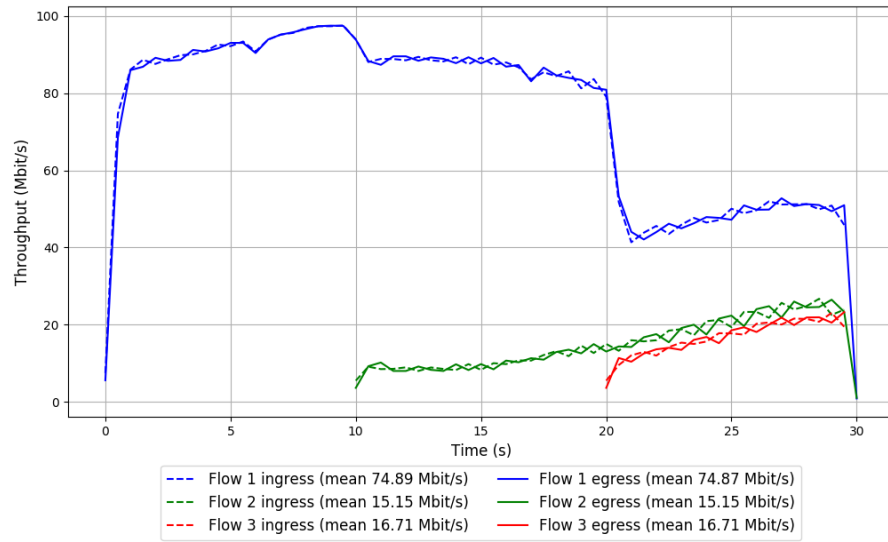
```
Run 5: Statistics of TCP Vegas

Start at: 2017-08-11 10:33:21
End at: 2017-08-11 10:33:51
Local clock offset: 0.223 ms
Remote clock offset: -3.624 ms


# Below is generated by plot.py at 2017-08-11 13:27:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.66 Mbit/s
95th percentile per-packet one-way delay: 57.073 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 57.237 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 30.90 Mbit/s
95th percentile per-packet one-way delay: 56.081 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 60.28 Mbit/s
95th percentile per-packet one-way delay: 57.317 ms
Loss rate: 0.75%
```

Run 5: Report of TCP Vegas — Data Link

```
Run 6: Statistics of TCP Vegas

Start at: 2017-08-11 10:54:18
End at: 2017-08-11 10:54:48
Local clock offset: 0.313 ms
Remote clock offset: -1.446 ms


# Below is generated by plot.py at 2017-08-11 13:27:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.80 Mbit/s
95th percentile per-packet one-way delay: 58.900 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 50.40 Mbit/s
95th percentile per-packet one-way delay: 58.929 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 45.37 Mbit/s
95th percentile per-packet one-way delay: 58.761 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 12.63 Mbit/s
95th percentile per-packet one-way delay: 58.906 ms
Loss rate: 0.10%
```

Run 6: Report of TCP Vegas — Data Link
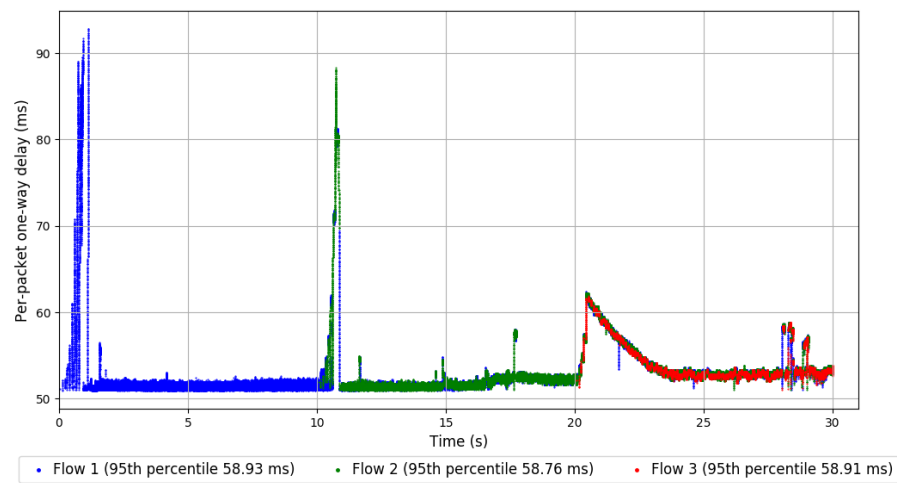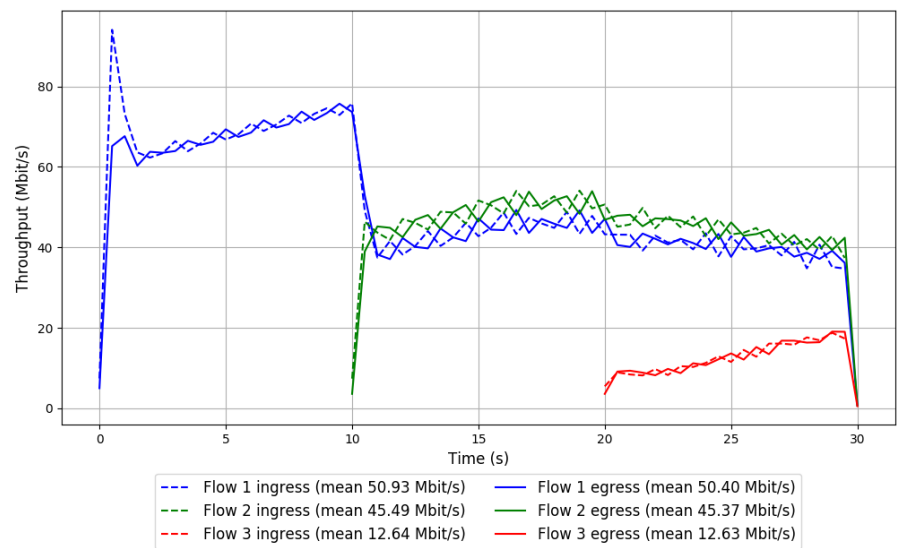
```
Run 7: Statistics of TCP Vegas

Start at: 2017-08-11 11:15:16
End at: 2017-08-11 11:15:46
Local clock offset: 0.442 ms
Remote clock offset: -1.945 ms


# Below is generated by plot.py at 2017-08-11 13:27:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.64 Mbit/s
95th percentile per-packet one-way delay: 80.902 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 81.55 Mbit/s
95th percentile per-packet one-way delay: 80.898 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 7.73 Mbit/s
95th percentile per-packet one-way delay: 79.949 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 21.00 Mbit/s
95th percentile per-packet one-way delay: 81.894 ms
Loss rate: 0.01%
```

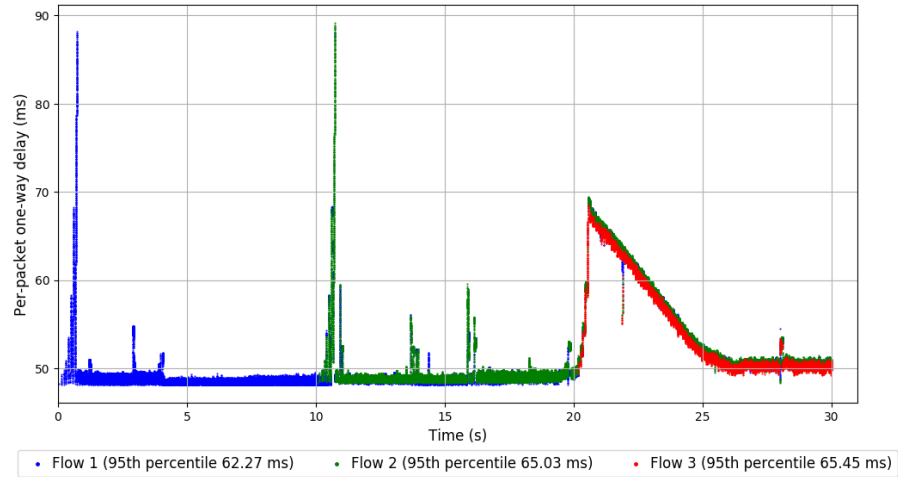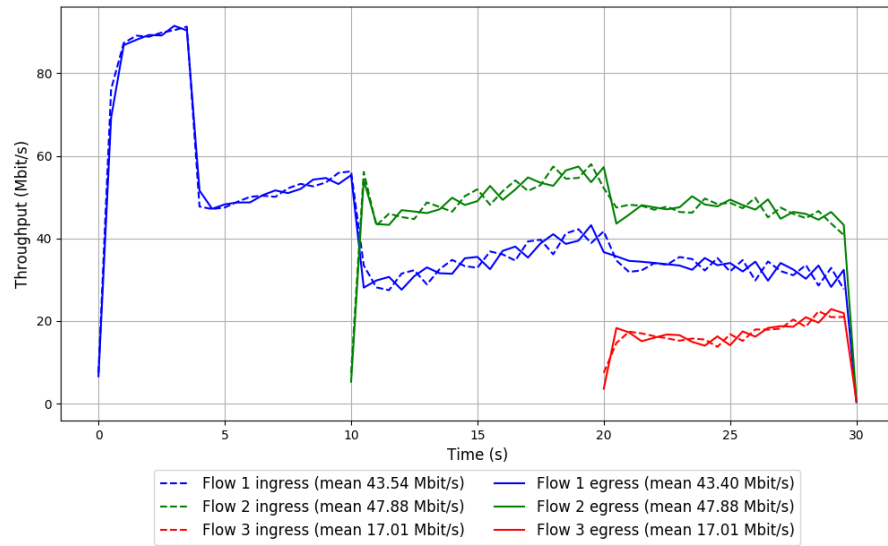Run 7: Report of TCP Vegas — Data Link
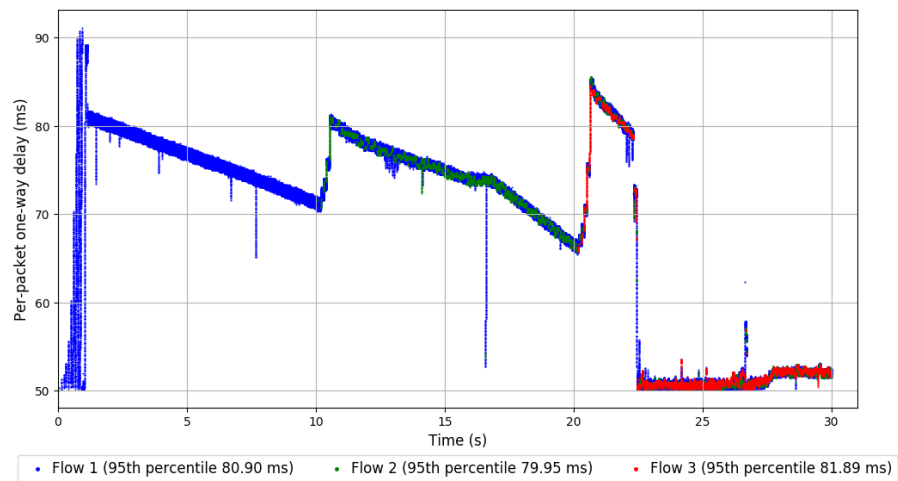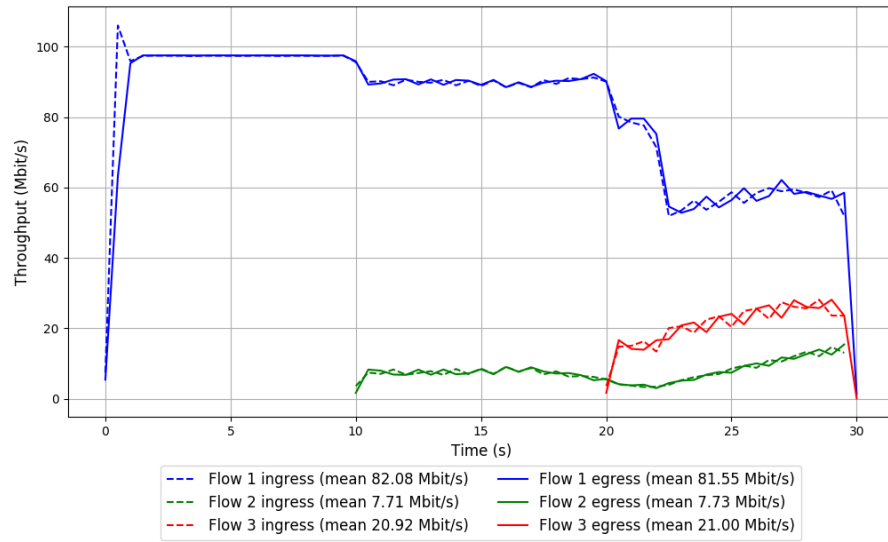
```
Run 8: Statistics of TCP Vegas

Start at: 2017-08-11 11:36:19
End at: 2017-08-11 11:36:49
Local clock offset: 0.501 ms
Remote clock offset: -3.737 ms


# Below is generated by plot.py at 2017-08-11 13:27:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.93 Mbit/s
95th percentile per-packet one-way delay: 64.167 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 43.40 Mbit/s
95th percentile per-packet one-way delay: 62.266 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 47.88 Mbit/s
95th percentile per-packet one-way delay: 65.029 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 17.01 Mbit/s
95th percentile per-packet one-way delay: 65.447 ms
Loss rate: 0.01%
```

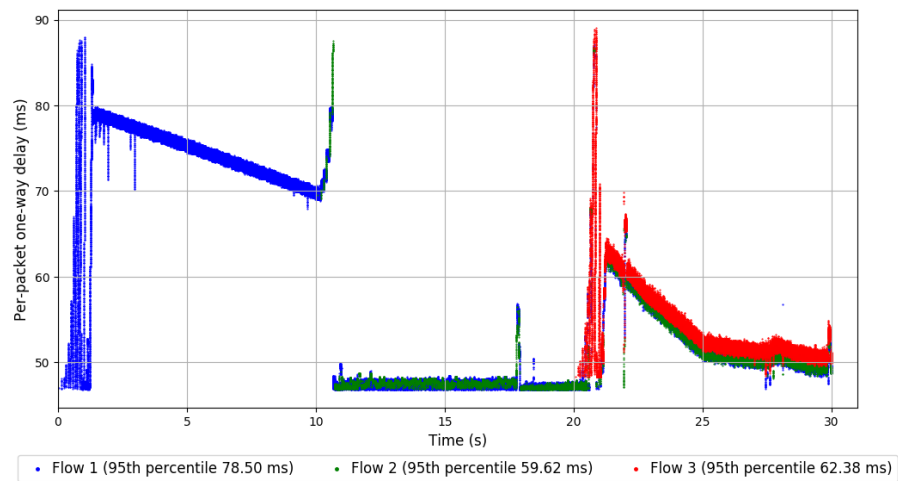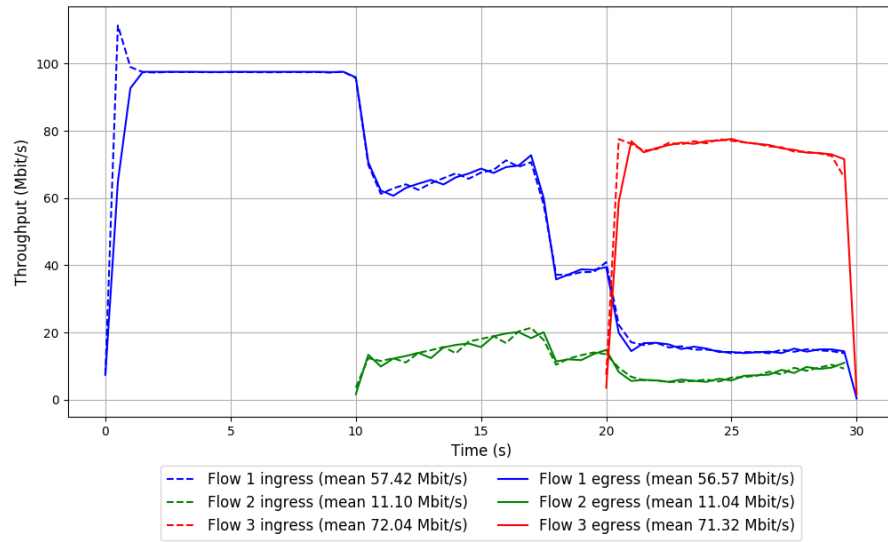Run 8: Report of TCP Vegas — Data Link

```
Run 9: Statistics of TCP Vegas

Start at: 2017-08-11 11:57:20
End at: 2017-08-11 11:57:50
Local clock offset: 0.521 ms
Remote clock offset: -3.044 ms


# Below is generated by plot.py at 2017-08-11 13:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.56 Mbit/s
95th percentile per-packet one-way delay: 78.075 ms
Loss rate: 1.29%
-- Flow 1:
Average throughput: 56.57 Mbit/s
95th percentile per-packet one-way delay: 78.502 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 11.04 Mbit/s
95th percentile per-packet one-way delay: 59.616 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 71.32 Mbit/s
95th percentile per-packet one-way delay: 62.376 ms
Loss rate: 0.97%
```
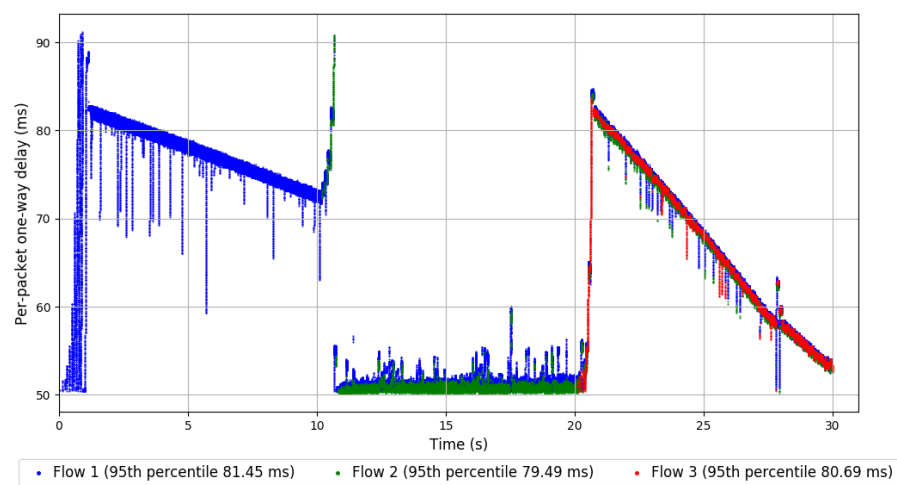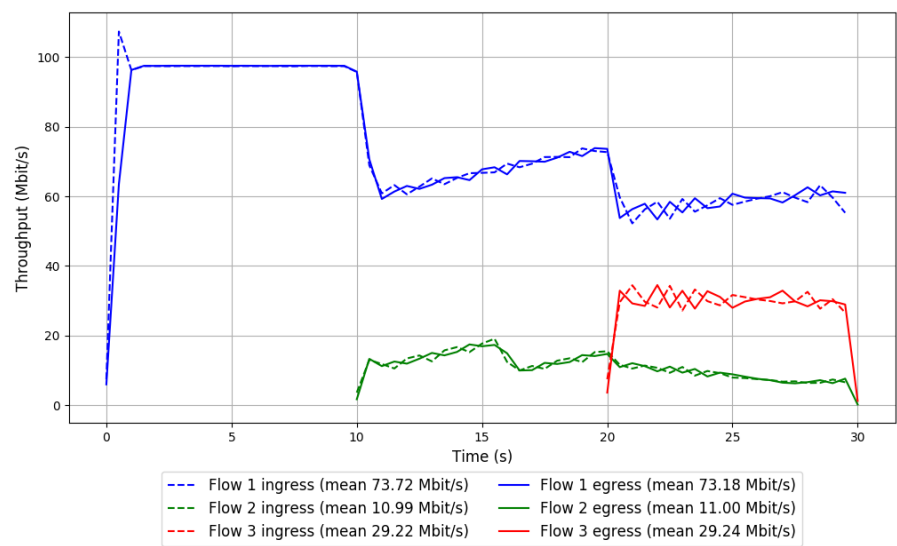
Run 9: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 57.42 Mbit/s) —— Flow 1 egress (mean 56.57 Mbit/s)
Flow 2 ingress (mean 11.10 Mbit/s) —— Flow 2 egress (mean 11.04 Mbit/s)
Flow 3 ingress (mean 72.04 Mbit/s) —— Flow 3 egress (mean 71.32 Mbit/s)

• Flow 1 (95th percentile 78.50 ms)   • Flow 2 (95th percentile 59.62 ms)   • Flow 3 (95th percentile 62.38 ms)

```
Run 10: Statistics of TCP Vegas

Start at: 2017-08-11 12:18:27
End at: 2017-08-11 12:18:57
Local clock offset: 0.597 ms
Remote clock offset: -0.524 ms


# Below is generated by plot.py at 2017-08-11 13:28:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.15 Mbit/s
95th percentile per-packet one-way delay: 81.269 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 73.18 Mbit/s
95th percentile per-packet one-way delay: 81.455 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 11.00 Mbit/s
95th percentile per-packet one-way delay: 79.488 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 29.24 Mbit/s
95th percentile per-packet one-way delay: 80.695 ms
Loss rate: 0.01%
```

Run 10: Report of TCP Vegas — Data Link

- - - Flow 1 ingress (mean 73.72 Mbit/s)   —— Flow 1 egress (mean 73.18 Mbit/s)
- - - Flow 2 ingress (mean 10.99 Mbit/s)   —— Flow 2 egress (mean 11.00 Mbit/s)
- - - Flow 3 ingress (mean 29.22 Mbit/s)   —— Flow 3 egress (mean 29.24 Mbit/s)

• Flow 1 (95th percentile 81.45 ms)   • Flow 2 (95th percentile 79.49 ms)   • Flow 3 (95th percentile 80.69 ms)
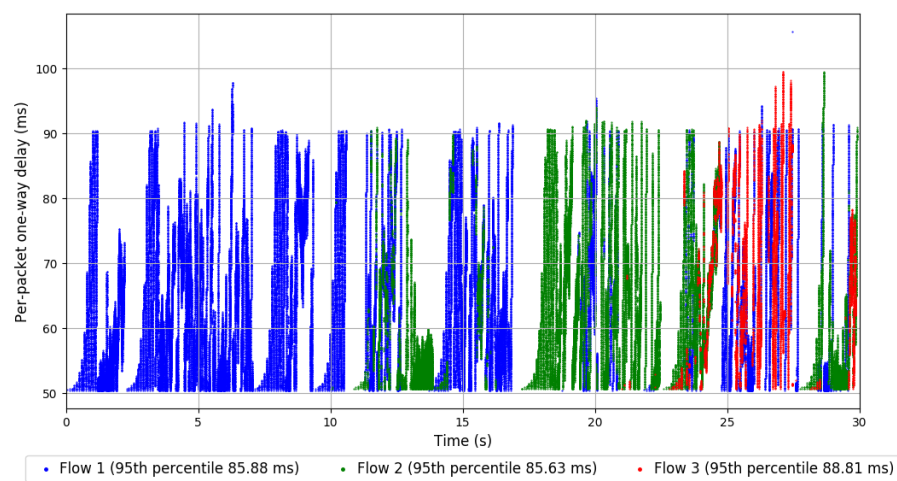
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```
Run 1: Statistics of Verus

Start at: 2017-08-11 09:15:16
End at: 2017-08-11 09:15:46
Local clock offset: 0.07 ms
Remote clock offset: 0.339 ms

# Below is generated by plot.py at 2017-08-11 13:28:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.78 Mbit/s
95th percentile per-packet one-way delay: 87.302 ms
Loss rate: 37.96%
-- Flow 1:
Average throughput: 29.16 Mbit/s
95th percentile per-packet one-way delay: 86.939 ms
Loss rate: 34.03%
-- Flow 2:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 87.696 ms
Loss rate: 41.94%
-- Flow 3:
Average throughput: 2.40 Mbit/s
95th percentile per-packet one-way delay: 87.741 ms
Loss rate: 45.51%
```
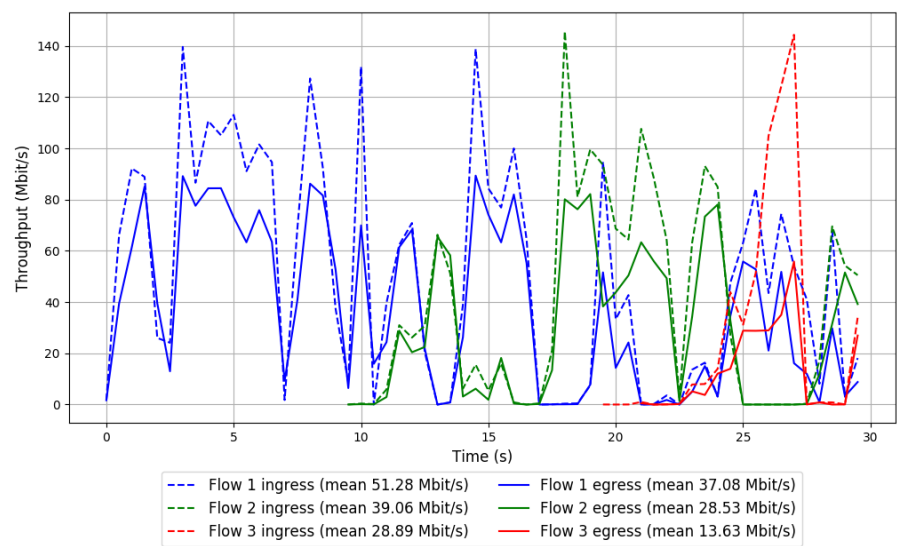
Run 1: Report of Verus — Data Link
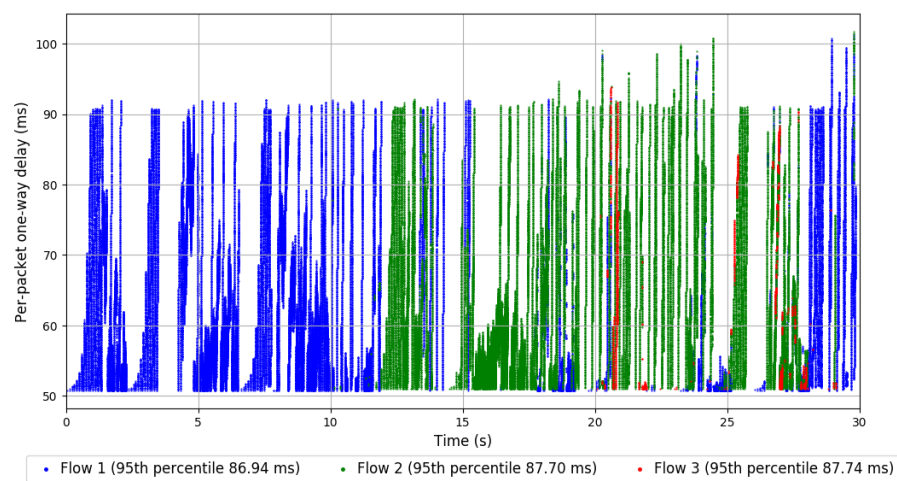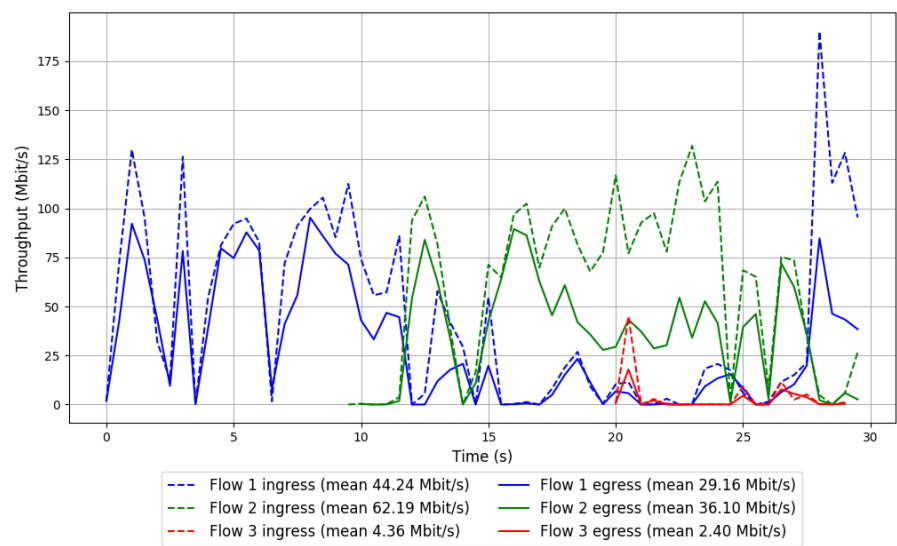
```
Run 2: Statistics of Verus

Start at: 2017-08-11 09:36:14
End at: 2017-08-11 09:36:44
Local clock offset: 0.095 ms
Remote clock offset: -0.514 ms

# Below is generated by plot.py at 2017-08-11 13:28:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.76 Mbit/s
95th percentile per-packet one-way delay: 86.099 ms
Loss rate: 30.69%
-- Flow 1:
Average throughput: 37.08 Mbit/s
95th percentile per-packet one-way delay: 85.881 ms
Loss rate: 27.62%
-- Flow 2:
Average throughput: 28.53 Mbit/s
95th percentile per-packet one-way delay: 85.633 ms
Loss rate: 26.88%
-- Flow 3:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 88.808 ms
Loss rate: 57.52%
```

Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 51.28 Mbit/s)   Flow 1 egress (mean 37.08 Mbit/s)
Flow 2 ingress (mean 39.06 Mbit/s)   Flow 2 egress (mean 28.53 Mbit/s)
Flow 3 ingress (mean 28.89 Mbit/s)   Flow 3 egress (mean 13.63 Mbit/s)

Flow 1 (95th percentile 85.88 ms)   Flow 2 (95th percentile 85.63 ms)   Flow 3 (95th percentile 88.81 ms)

```
Run 3: Statistics of Verus

Start at: 2017-08-11 09:57:10
End at: 2017-08-11 09:57:40
Local clock offset: 0.121 ms
Remote clock offset: -0.964 ms

# Below is generated by plot.py at 2017-08-11 13:28:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.63 Mbit/s
95th percentile per-packet one-way delay: 85.493 ms
Loss rate: 27.76%
-- Flow 1:
Average throughput: 46.57 Mbit/s
95th percentile per-packet one-way delay: 84.474 ms
Loss rate: 21.01%
-- Flow 2:
Average throughput: 11.02 Mbit/s
95th percentile per-packet one-way delay: 87.012 ms
Loss rate: 38.39%
-- Flow 3:
Average throughput: 20.53 Mbit/s
95th percentile per-packet one-way delay: 88.206 ms
Loss rate: 47.95%
```
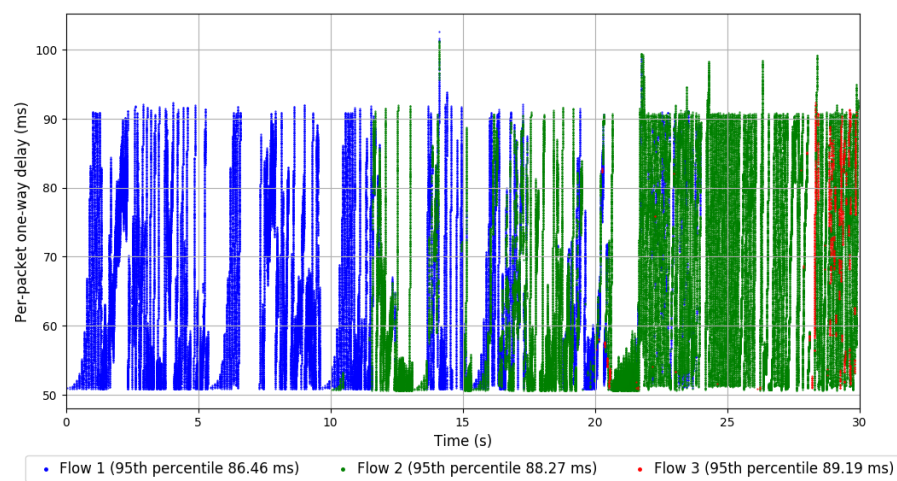
Run 3: Report of Verus — Data Link
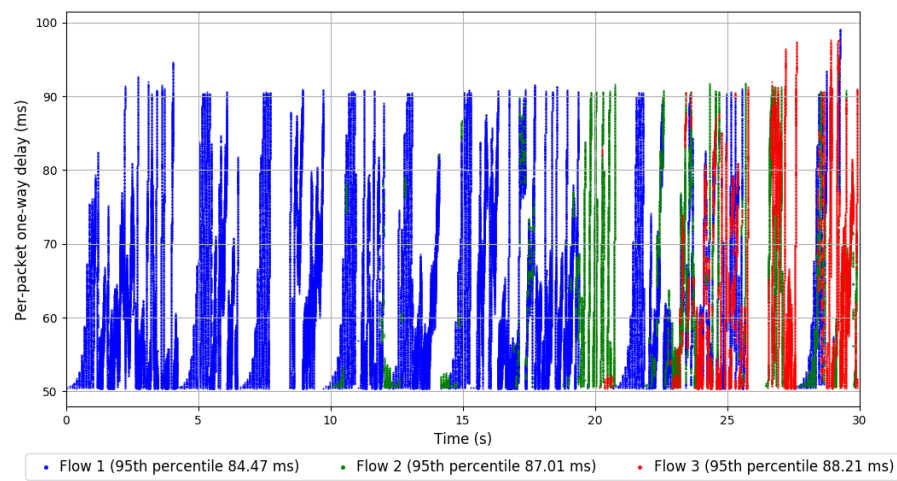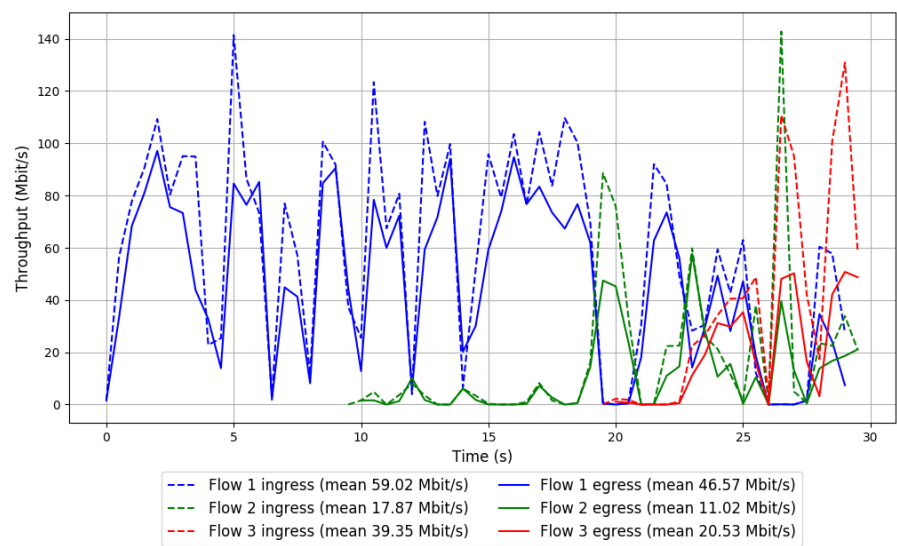
```
Run 4: Statistics of Verus

Start at: 2017-08-11 10:18:08
End at: 2017-08-11 10:18:38
Local clock offset: 0.167 ms
Remote clock offset: -0.948 ms

# Below is generated by plot.py at 2017-08-11 13:28:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.40 Mbit/s
95th percentile per-packet one-way delay: 86.504 ms
Loss rate: 25.90%
-- Flow 1:
Average throughput: 37.62 Mbit/s
95th percentile per-packet one-way delay: 86.629 ms
Loss rate: 22.35%
-- Flow 2:
Average throughput: 31.33 Mbit/s
95th percentile per-packet one-way delay: 85.636 ms
Loss rate: 32.37%
-- Flow 3:
Average throughput: 22.18 Mbit/s
95th percentile per-packet one-way delay: 87.260 ms
Loss rate: 23.04%
```

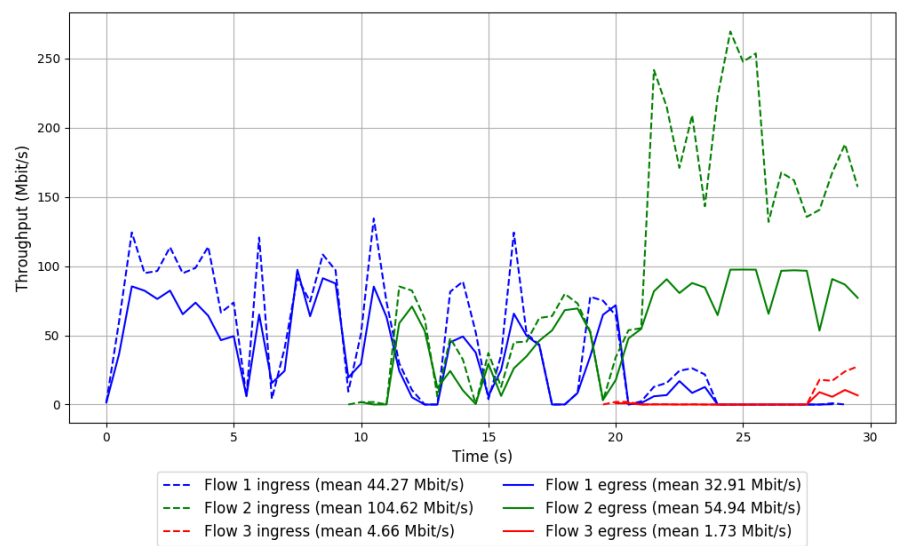Run 4: Report of Verus — Data Link
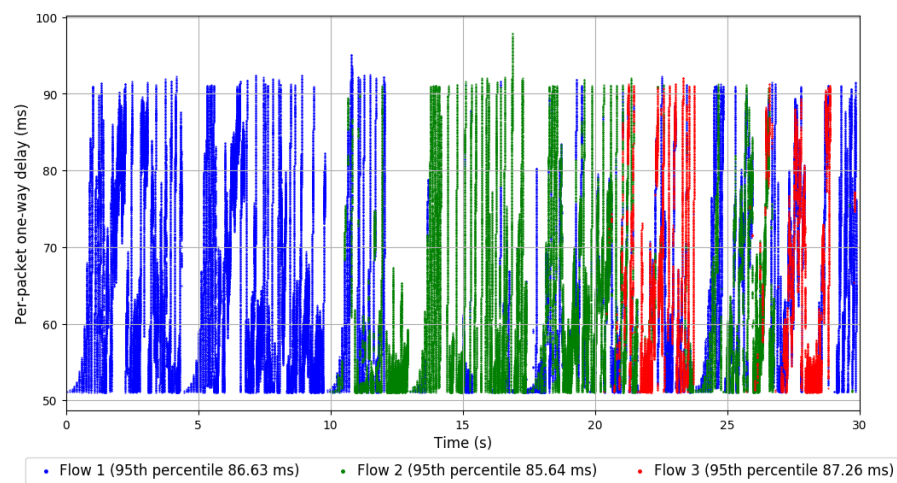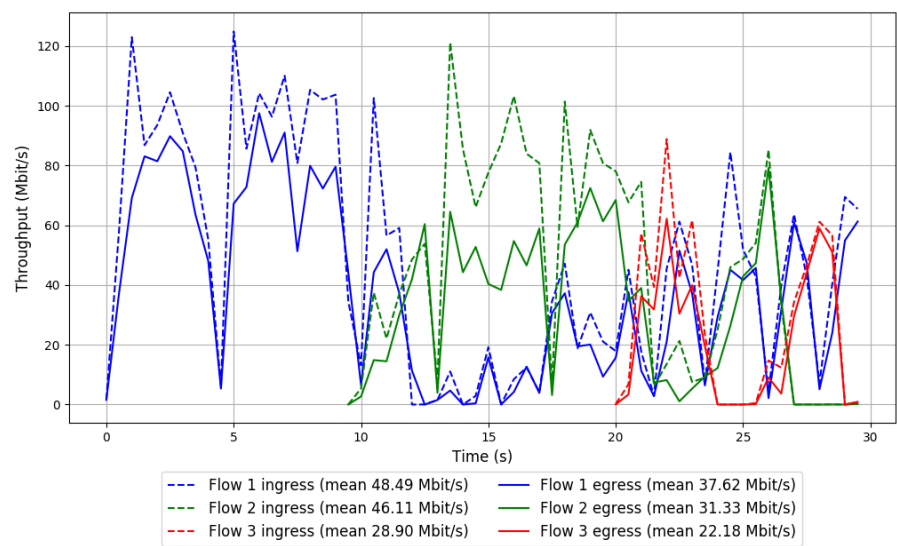
```
Run 5: Statistics of Verus

Start at: 2017-08-11 10:39:07
End at: 2017-08-11 10:39:37
Local clock offset: 0.385 ms
Remote clock offset: -1.271 ms


# Below is generated by plot.py at 2017-08-11 13:28:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.86 Mbit/s
95th percentile per-packet one-way delay: 87.595 ms
Loss rate: 39.97%
-- Flow 1:
Average throughput: 32.91 Mbit/s
95th percentile per-packet one-way delay: 86.456 ms
Loss rate: 27.19%
-- Flow 2:
Average throughput: 54.94 Mbit/s
95th percentile per-packet one-way delay: 88.270 ms
Loss rate: 47.45%
-- Flow 3:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 89.186 ms
Loss rate: 62.83%
```
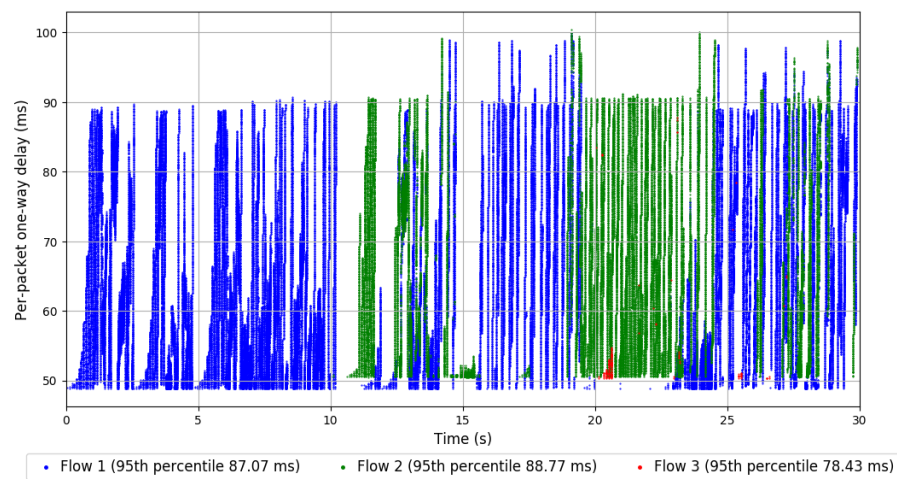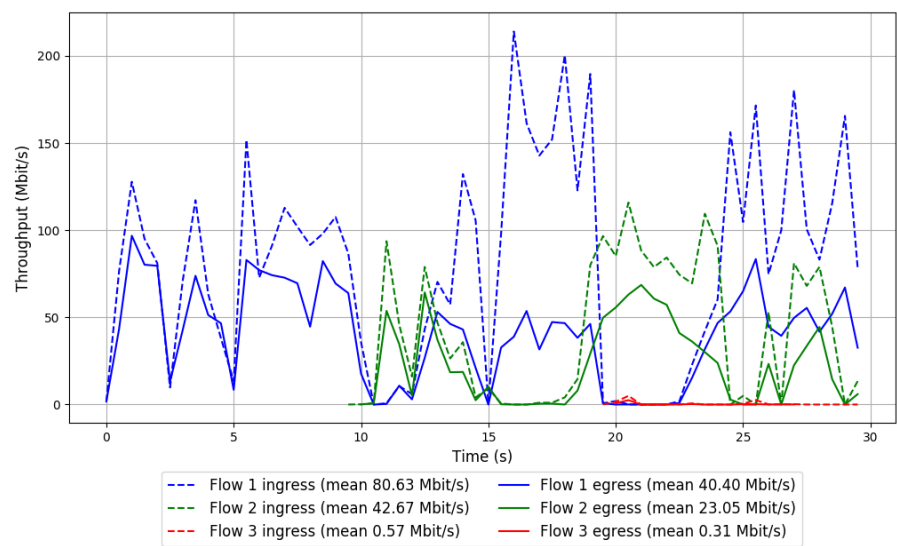
Run 5: Report of Verus — Data Link

Flow 1 ingress (mean 44.27 Mbit/s) --- Flow 1 egress (mean 32.91 Mbit/s)
Flow 2 ingress (mean 104.62 Mbit/s) --- Flow 2 egress (mean 54.94 Mbit/s)
Flow 3 ingress (mean 4.66 Mbit/s) --- Flow 3 egress (mean 1.73 Mbit/s)

Flow 1 (95th percentile 86.46 ms) · Flow 2 (95th percentile 88.27 ms) · Flow 3 (95th percentile 89.19 ms)
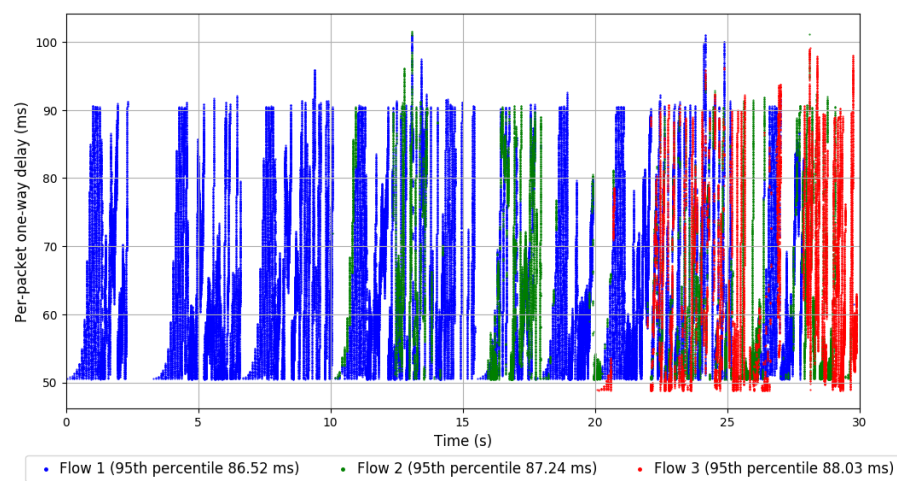
```
Run 6: Statistics of Verus

Start at: 2017-08-11 11:00:05
End at: 2017-08-11 11:00:35
Local clock offset: 0.315 ms
Remote clock offset: -1.929 ms

# Below is generated by plot.py at 2017-08-11 13:28:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.84 Mbit/s
95th percentile per-packet one-way delay: 87.550 ms
Loss rate: 48.87%
-- Flow 1:
Average throughput: 40.40 Mbit/s
95th percentile per-packet one-way delay: 87.074 ms
Loss rate: 49.88%
-- Flow 2:
Average throughput: 23.05 Mbit/s
95th percentile per-packet one-way delay: 88.773 ms
Loss rate: 45.93%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 78.431 ms
Loss rate: 60.84%
```

Run 6: Report of Verus — Data Link

- Flow 1 ingress (mean 80.63 Mbit/s) --- Flow 1 egress (mean 40.40 Mbit/s)
- Flow 2 ingress (mean 42.67 Mbit/s) --- Flow 2 egress (mean 23.05 Mbit/s)
- Flow 3 ingress (mean 0.57 Mbit/s) --- Flow 3 egress (mean 0.31 Mbit/s)

- Flow 1 (95th percentile 87.07 ms)
- Flow 2 (95th percentile 88.77 ms)
- Flow 3 (95th percentile 78.43 ms)

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```
Run 7: Statistics of Verus

Start at: 2017-08-11 11:21:05
End at: 2017-08-11 11:21:35
Local clock offset: 0.371 ms
Remote clock offset: -1.837 ms


# Below is generated by plot.py at 2017-08-11 13:28:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.06 Mbit/s
95th percentile per-packet one-way delay: 86.852 ms
Loss rate: 36.79%
-- Flow 1:
Average throughput: 46.09 Mbit/s
95th percentile per-packet one-way delay: 86.518 ms
Loss rate: 31.24%
-- Flow 2:
Average throughput: 14.55 Mbit/s
95th percentile per-packet one-way delay: 87.238 ms
Loss rate: 40.36%
-- Flow 3:
Average throughput: 22.64 Mbit/s
95th percentile per-packet one-way delay: 88.028 ms
Loss rate: 55.55%
```

Run 7: Report of Verus — Data Link
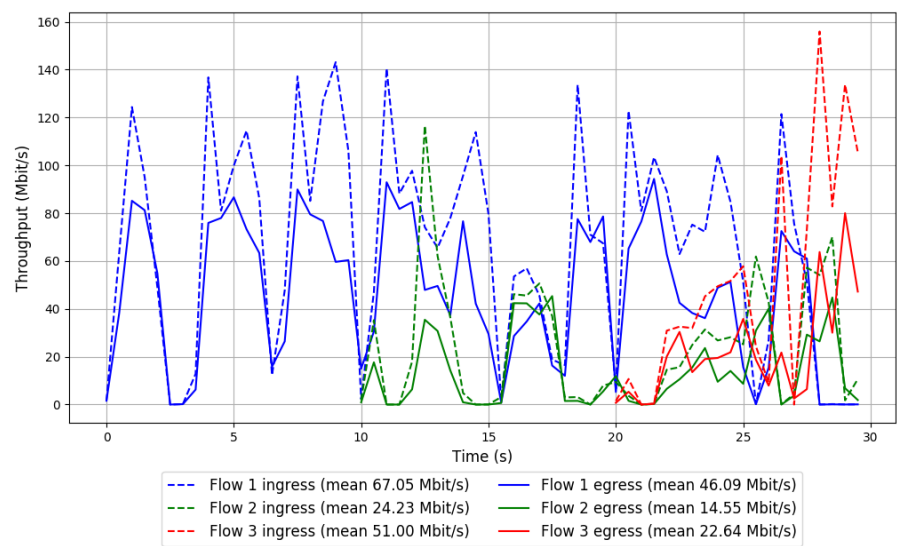
```
Run 8: Statistics of Verus

Start at: 2017-08-11 11:42:07
End at: 2017-08-11 11:42:37
Local clock offset: 0.538 ms
Remote clock offset: -3.603 ms


# Below is generated by plot.py at 2017-08-11 13:28:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.79 Mbit/s
95th percentile per-packet one-way delay: 82.431 ms
Loss rate: 24.57%
-- Flow 1:
Average throughput: 41.73 Mbit/s
95th percentile per-packet one-way delay: 81.905 ms
Loss rate: 24.70%
-- Flow 2:
Average throughput: 22.91 Mbit/s
95th percentile per-packet one-way delay: 83.440 ms
Loss rate: 26.12%
-- Flow 3:
Average throughput: 19.70 Mbit/s
95th percentile per-packet one-way delay: 82.925 ms
Loss rate: 19.97%
```

Run 8: Report of Verus — Data Link
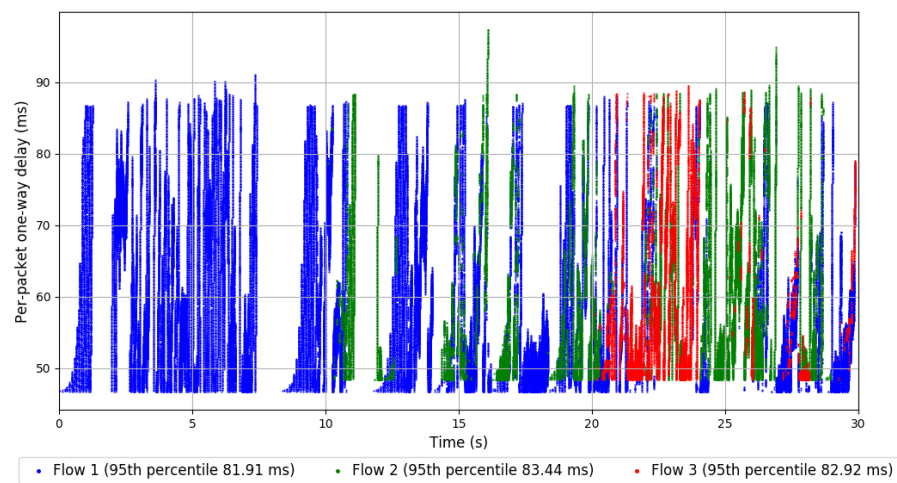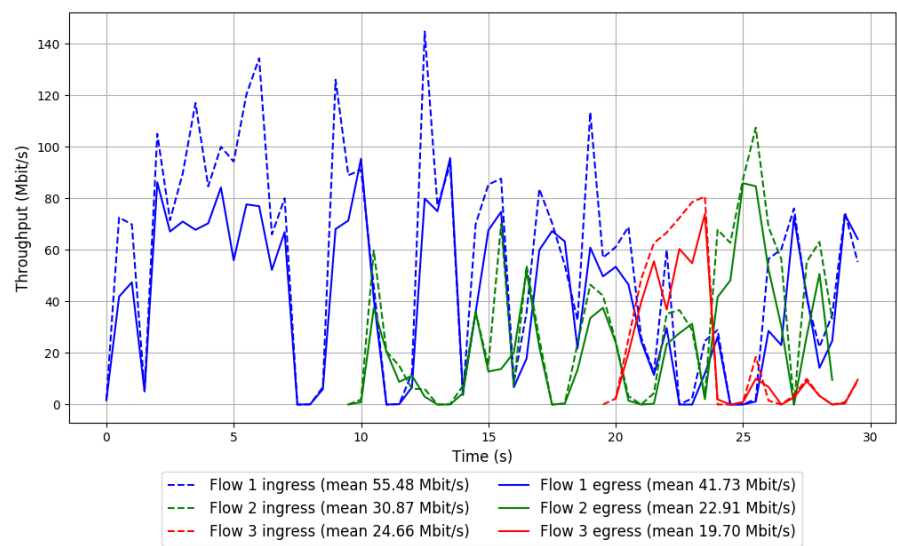
```
Run 9: Statistics of Verus

Start at: 2017-08-11 12:03:07
End at: 2017-08-11 12:03:37
Local clock offset: 0.623 ms
Remote clock offset: -2.904 ms


# Below is generated by plot.py at 2017-08-11 13:28:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.15 Mbit/s
95th percentile per-packet one-way delay: 85.478 ms
Loss rate: 42.77%
-- Flow 1:
Average throughput: 41.27 Mbit/s
95th percentile per-packet one-way delay: 86.018 ms
Loss rate: 46.26%
-- Flow 2:
Average throughput: 18.39 Mbit/s
95th percentile per-packet one-way delay: 83.967 ms
Loss rate: 30.29%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 83.546 ms
Loss rate: 29.73%
```

# Run 9: Report of Verus — Data Link
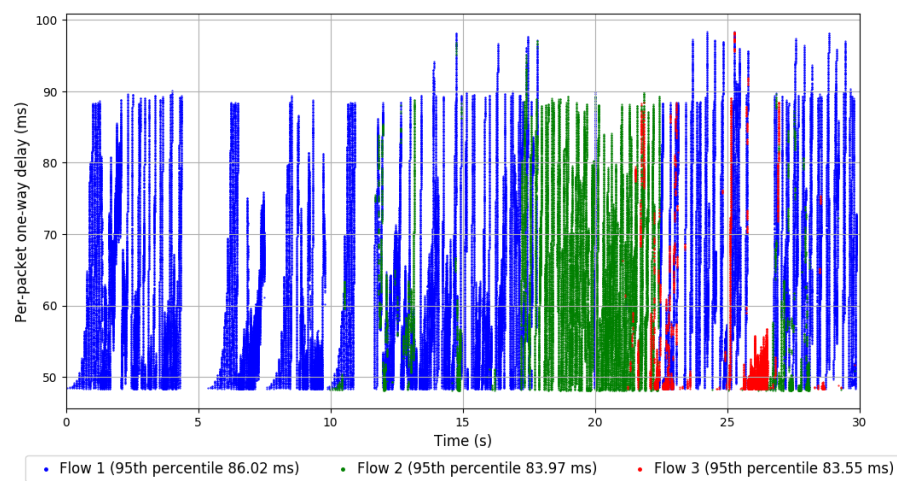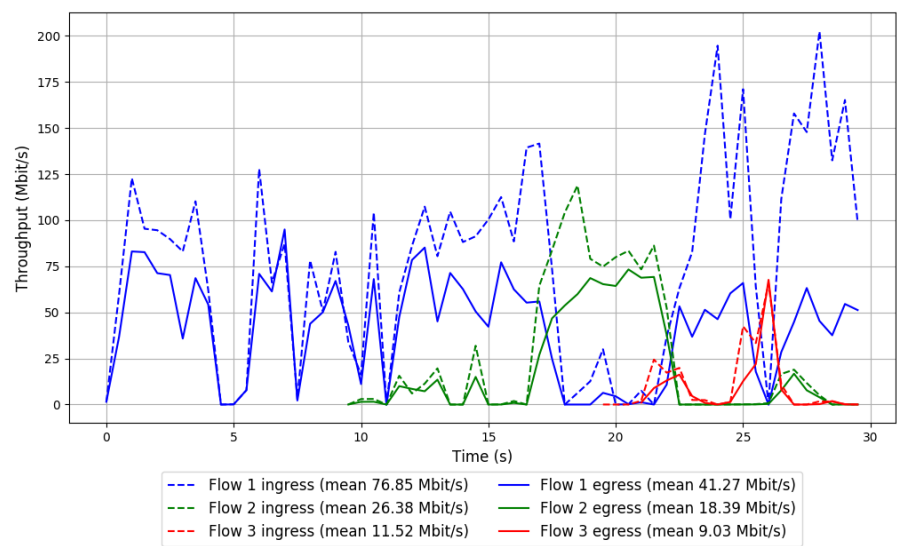
```
Run 10: Statistics of Verus

Start at: 2017-08-11 12:24:16
End at: 2017-08-11 12:24:46
Local clock offset: 0.559 ms
Remote clock offset: -2.303 ms


# Below is generated by plot.py at 2017-08-11 13:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.69 Mbit/s
95th percentile per-packet one-way delay: 85.222 ms
Loss rate: 41.41%
-- Flow 1:
Average throughput: 43.15 Mbit/s
95th percentile per-packet one-way delay: 85.555 ms
Loss rate: 43.62%
-- Flow 2:
Average throughput: 12.27 Mbit/s
95th percentile per-packet one-way delay: 82.653 ms
Loss rate: 24.98%
-- Flow 3:
Average throughput: 15.02 Mbit/s
95th percentile per-packet one-way delay: 84.286 ms
Loss rate: 42.13%
```

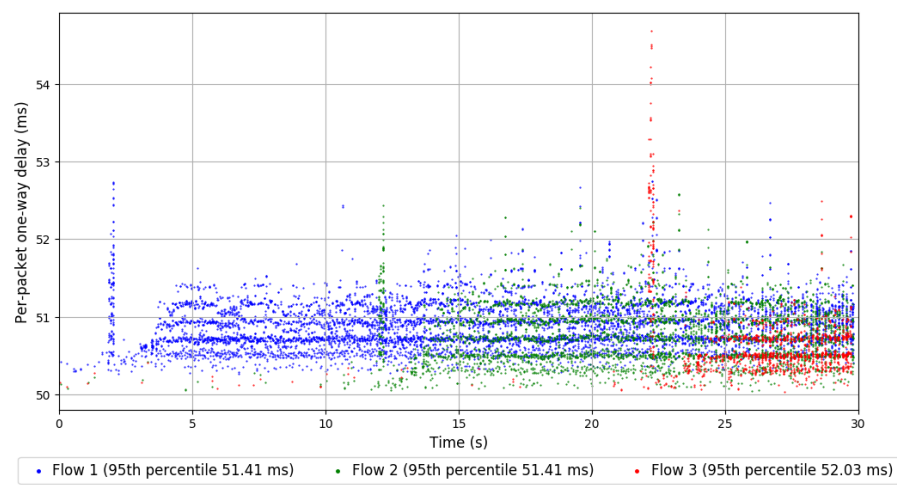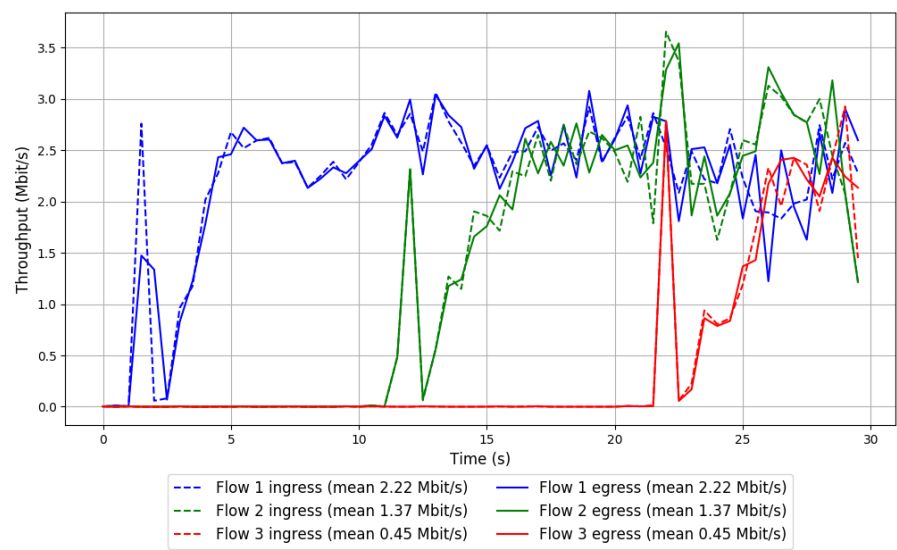## Run 10: Report of Verus — Data Link
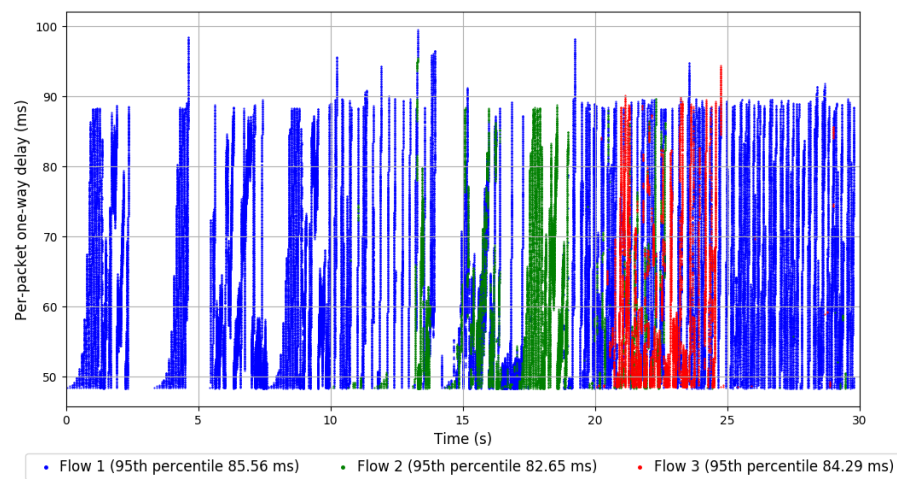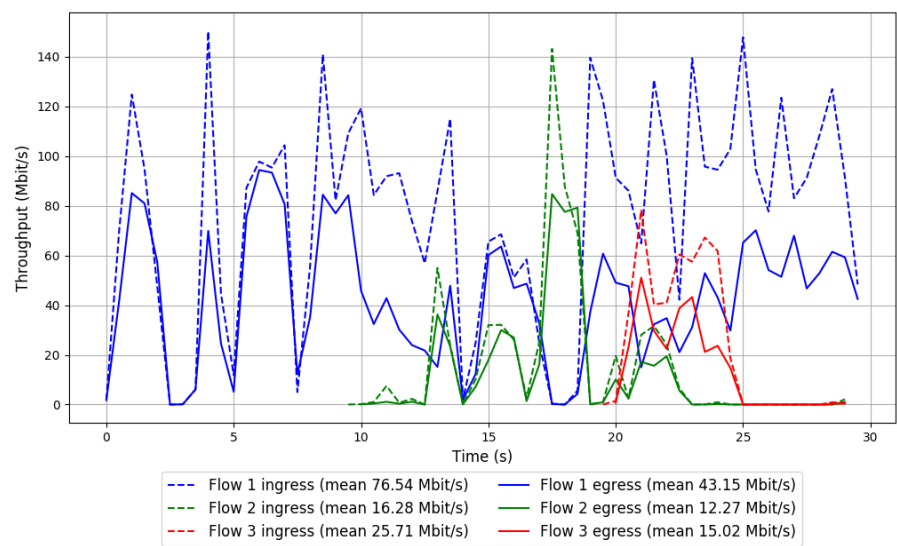
```
Run 1: Statistics of WebRTC media

Start at: 2017-08-11 09:16:41
End at: 2017-08-11 09:17:11
Local clock offset: 0.042 ms
Remote clock offset: -0.188 ms


# Below is generated by plot.py at 2017-08-11 13:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 51.416 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 51.405 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.37 Mbit/s
95th percentile per-packet one-way delay: 51.414 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 52.032 ms
Loss rate: 0.00%
```

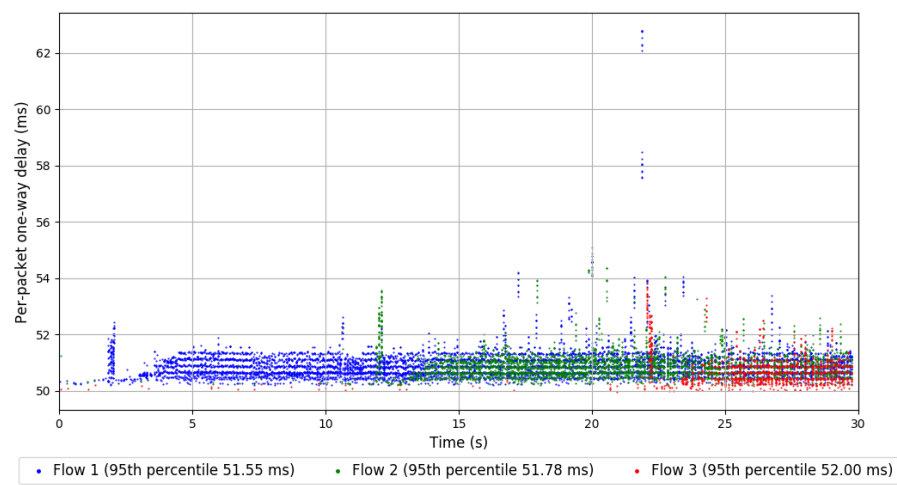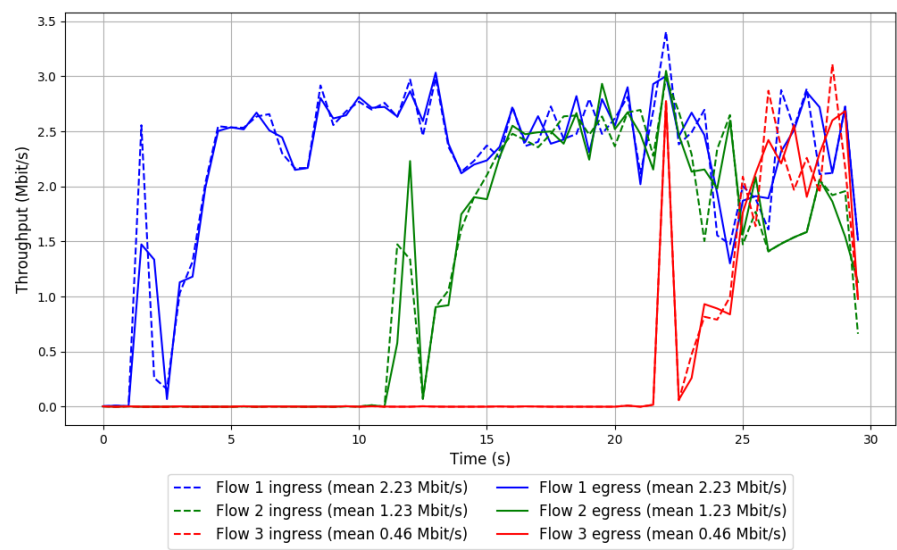Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2017-08-11 09:37:39
End at: 2017-08-11 09:38:09
Local clock offset: 0.148 ms
Remote clock offset: -0.734 ms


# Below is generated by plot.py at 2017-08-11 13:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 51.678 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 51.549 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 51.784 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 51.999 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 2.23 Mbit/s) --- Flow 1 egress (mean 2.23 Mbit/s) ———
Flow 2 ingress (mean 1.23 Mbit/s) --- Flow 2 egress (mean 1.23 Mbit/s) ———
Flow 3 ingress (mean 0.46 Mbit/s) --- Flow 3 egress (mean 0.46 Mbit/s) ———

Flow 1 (95th percentile 51.55 ms) • Flow 2 (95th percentile 51.78 ms) • Flow 3 (95th percentile 52.00 ms)

```
Run 3: Statistics of WebRTC media

Start at: 2017-08-11 09:58:34
End at: 2017-08-11 09:59:04
Local clock offset: 0.118 ms
Remote clock offset: -3.15 ms


# Below is generated by plot.py at 2017-08-11 13:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.99 Mbit/s
95th percentile per-packet one-way delay: 49.420 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.30 Mbit/s
95th percentile per-packet one-way delay: 49.431 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.25 Mbit/s
95th percentile per-packet one-way delay: 49.222 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 49.579 ms
Loss rate: 0.00%
```
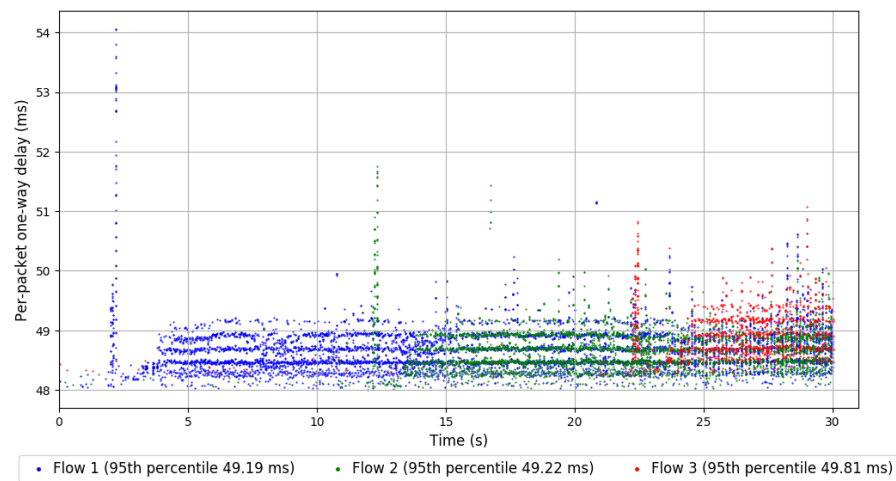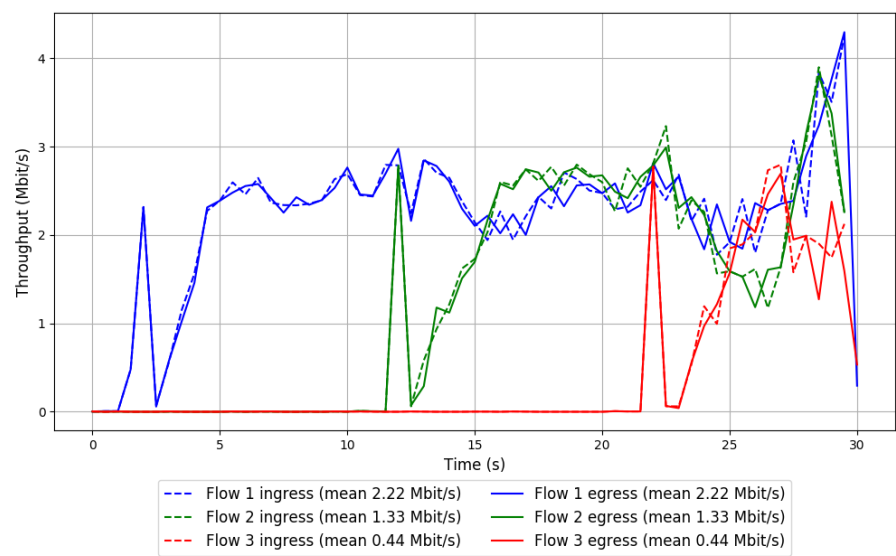
Run 3: Report of WebRTC media — Data Link
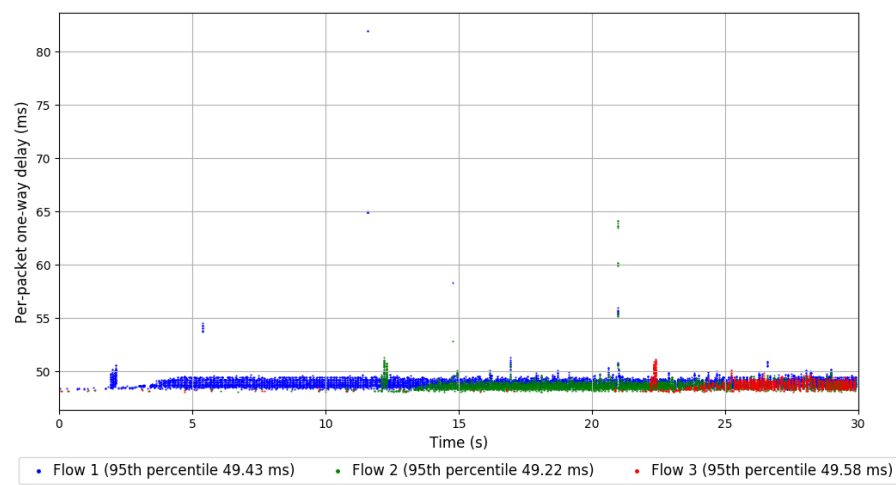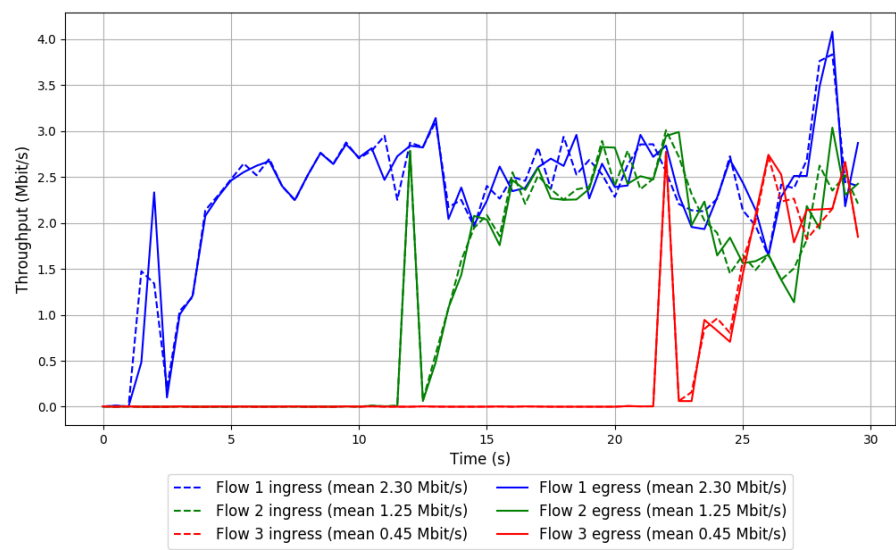
```
Run 4: Statistics of WebRTC media

Start at: 2017-08-11 10:19:33
End at: 2017-08-11 10:20:03
Local clock offset: 0.195 ms
Remote clock offset: -3.57 ms


# Below is generated by plot.py at 2017-08-11 13:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 49.359 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.22 Mbit/s
95th percentile per-packet one-way delay: 49.189 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 49.215 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 49.813 ms
Loss rate: 0.00%
```

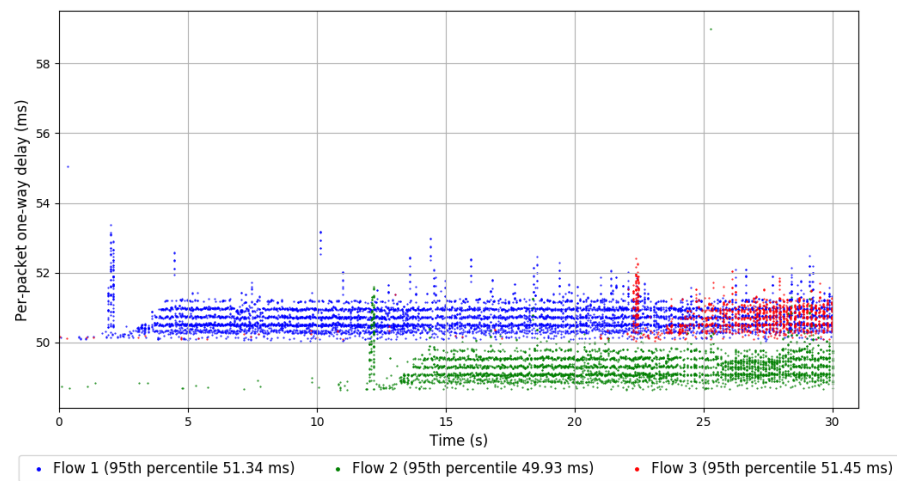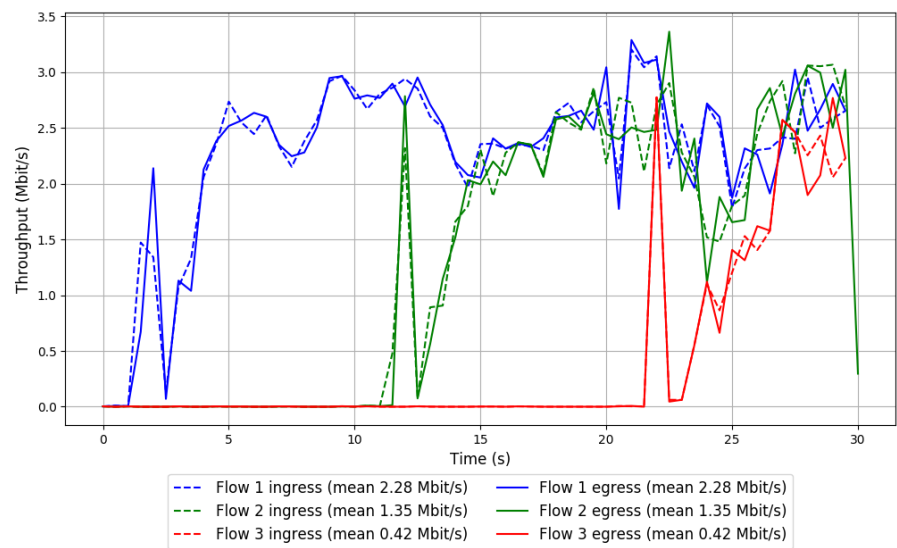Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2017-08-11 10:40:33
End at: 2017-08-11 10:41:03
Local clock offset: 0.363 ms
Remote clock offset: -1.635 ms


# Below is generated by plot.py at 2017-08-11 13:28:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 51.219 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 51.335 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 49.933 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 51.450 ms
Loss rate: 0.00%
```

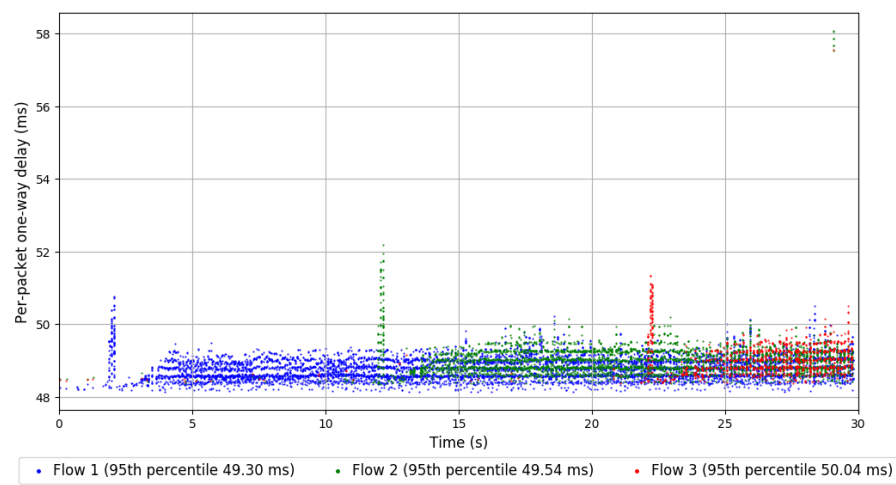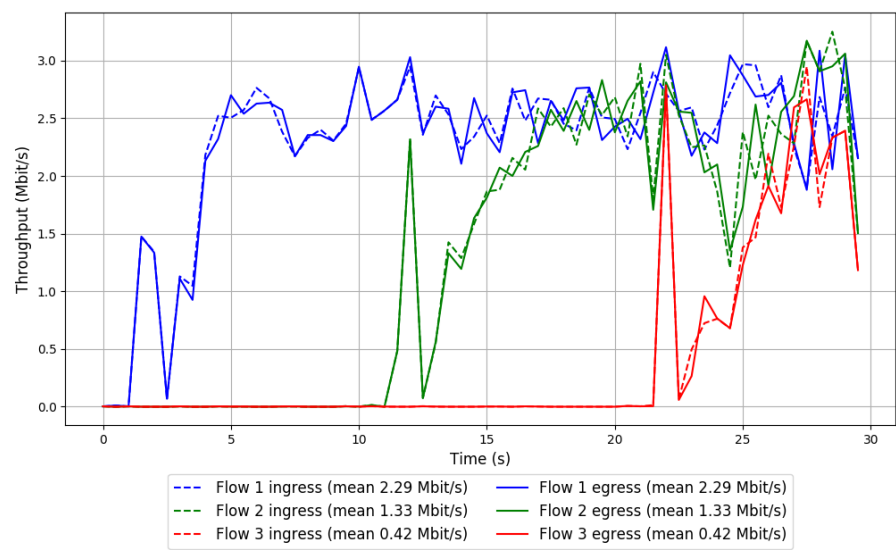Run 5: Report of WebRTC media — Data Link

```
Run 6: Statistics of WebRTC media

Start at: 2017-08-11 11:01:30
End at: 2017-08-11 11:02:00
Local clock offset: 0.296 ms
Remote clock offset: -3.884 ms


# Below is generated by plot.py at 2017-08-11 13:28:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 49.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.29 Mbit/s
95th percentile per-packet one-way delay: 49.301 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.33 Mbit/s
95th percentile per-packet one-way delay: 49.536 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 50.037 ms
Loss rate: 0.00%
```

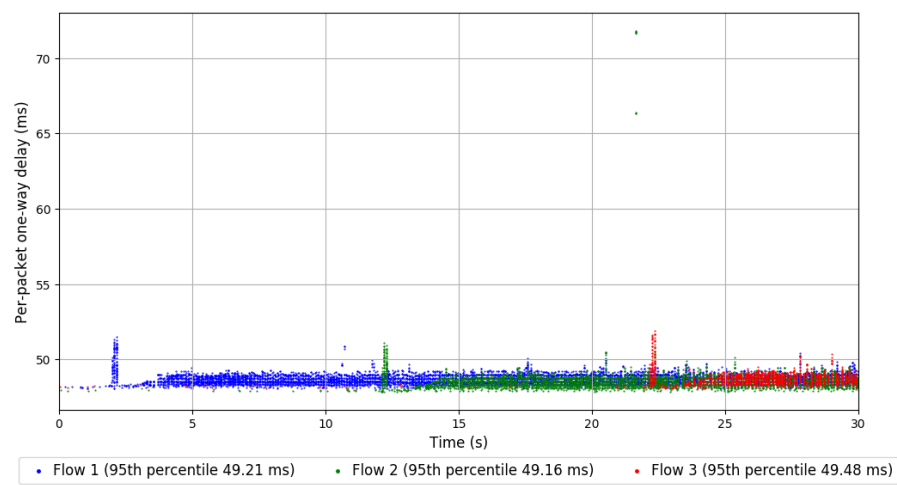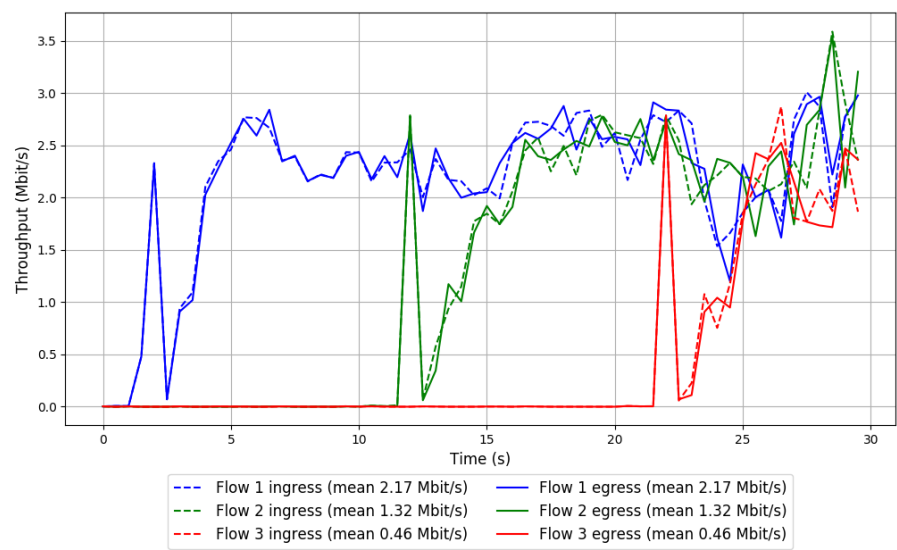Run 6: Report of WebRTC media — Data Link

```
Run 7: Statistics of WebRTC media

Start at: 2017-08-11 11:22:31
End at: 2017-08-11 11:23:01
Local clock offset: 0.452 ms
Remote clock offset: -3.958 ms


# Below is generated by plot.py at 2017-08-11 13:28:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 49.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 49.213 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.32 Mbit/s
95th percentile per-packet one-way delay: 49.165 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.46 Mbit/s
95th percentile per-packet one-way delay: 49.480 ms
Loss rate: 0.00%
```

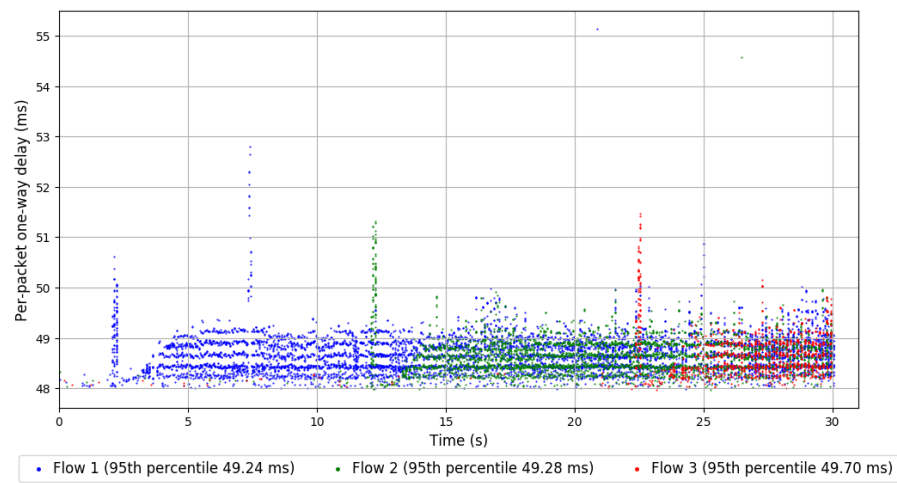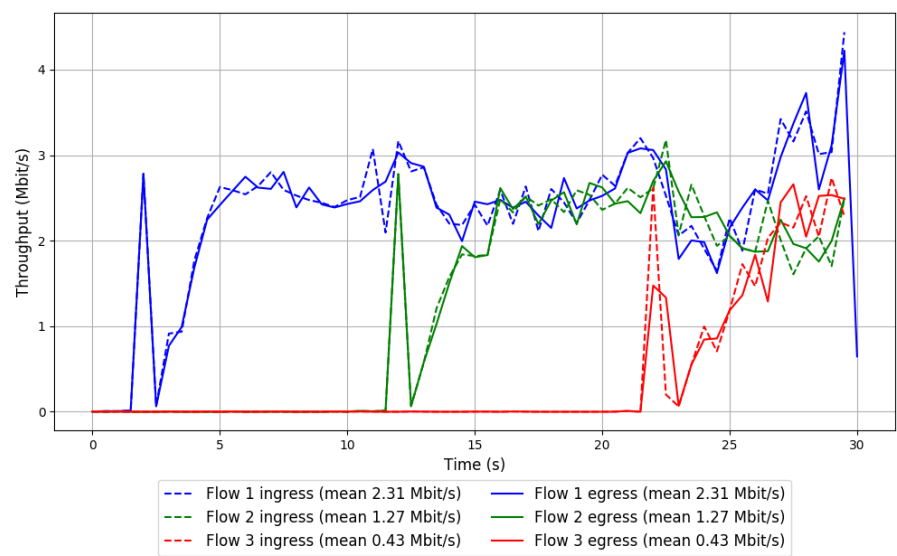Run 7: Report of WebRTC media — Data Link

```
Run 8: Statistics of WebRTC media

Start at: 2017-08-11 11:43:33
End at: 2017-08-11 11:44:03
Local clock offset: 0.449 ms
Remote clock offset: -3.568 ms


# Below is generated by plot.py at 2017-08-11 13:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 49.297 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.31 Mbit/s
95th percentile per-packet one-way delay: 49.238 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.27 Mbit/s
95th percentile per-packet one-way delay: 49.281 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 49.697 ms
Loss rate: 0.00%
```

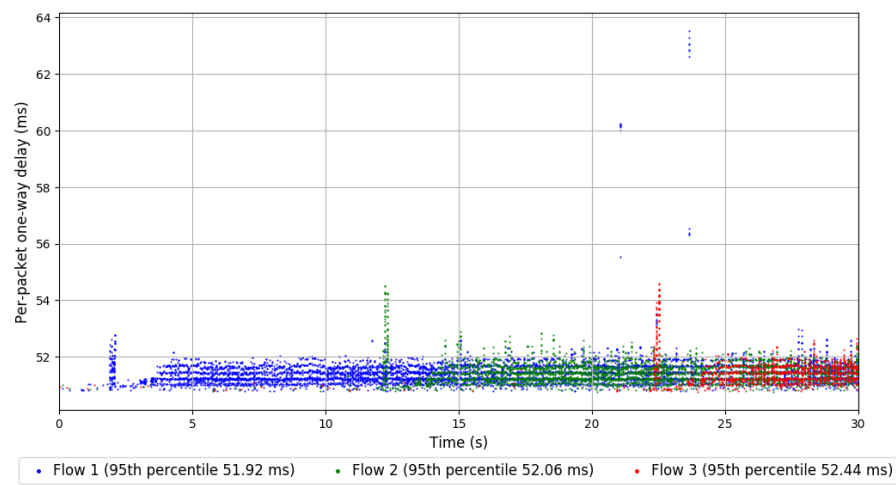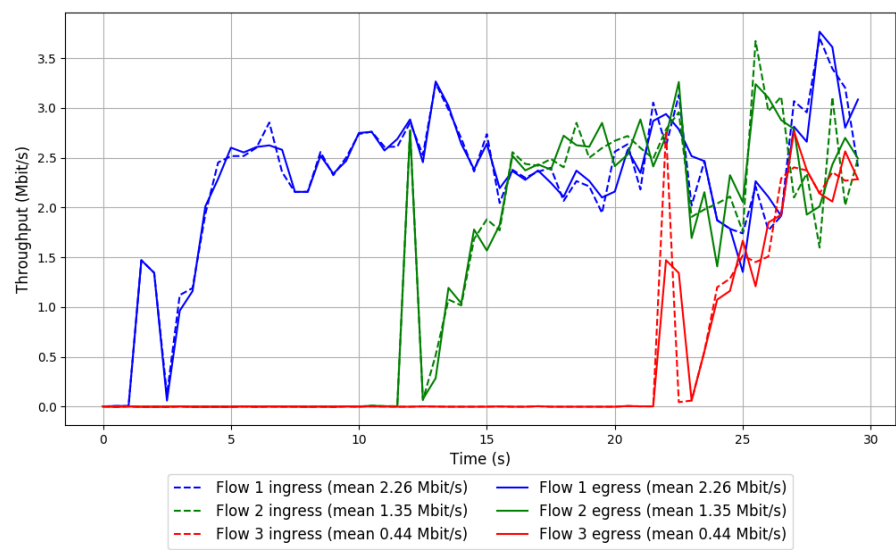Run 8: Report of WebRTC media — Data Link

```
Run 9: Statistics of WebRTC media

Start at: 2017-08-11 12:04:32
End at: 2017-08-11 12:05:02
Local clock offset: 0.521 ms
Remote clock offset: -0.346 ms


# Below is generated by plot.py at 2017-08-11 13:28:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.05 Mbit/s
95th percentile per-packet one-way delay: 51.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.26 Mbit/s
95th percentile per-packet one-way delay: 51.917 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 52.063 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 52.437 ms
Loss rate: 0.01%
```

Run 9: Report of WebRTC media — Data Link

```
Run 10: Statistics of WebRTC media

Start at: 2017-08-11 12:25:41
End at: 2017-08-11 12:26:11
Local clock offset: 0.512 ms
Remote clock offset: -2.387 ms


# Below is generated by plot.py at 2017-08-11 13:28:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.91 Mbit/s
95th percentile per-packet one-way delay: 49.385 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.11 Mbit/s
95th percentile per-packet one-way delay: 49.390 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.35 Mbit/s
95th percentile per-packet one-way delay: 49.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.45 Mbit/s
95th percentile per-packet one-way delay: 49.651 ms
Loss rate: 0.00%
```

Run 10: Report of WebRTC media — Data Link