Pantheon Report

Generated at 2018-09-25 18:38:52 (UTC).

Data path: China on eno1 (*remote*) →AWS Korea on ens5 (*local*).

Repeated the test of 19 congestion control schemes 5 times.

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

NTP offsets were measured against ntp.nict.jp and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1021-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
net.ipv4.tcp_mem = 184101 245469 368202

Git summary:
branch: muses @ 90192f6b64ce1a1191dcca0e9ff9ee24950674d7
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/fillp-sheep @ daed0c84f98531712514b2231f43ec6901114ffe
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/indigo-96d2da3 @ 8413272d46f8aa0bcb967ed7048b6a8f994abb95
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 65ac1b19bbefed0c6349ae986009b4fa8643c40a
third_party/pantheon-tunnel @ cbfce6db5ff5740dafe1771f813cd646339e1952
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
```

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```
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from China to AWS Korea, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from China to AWS Korea, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3
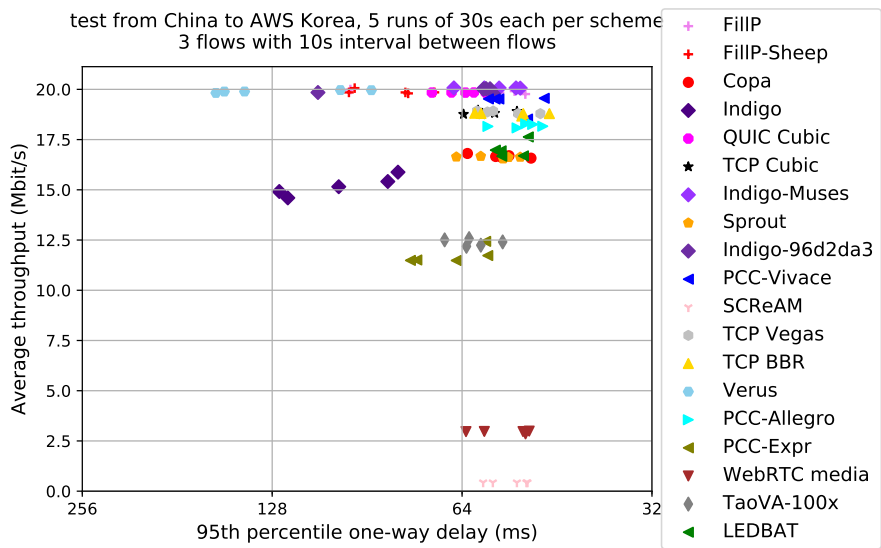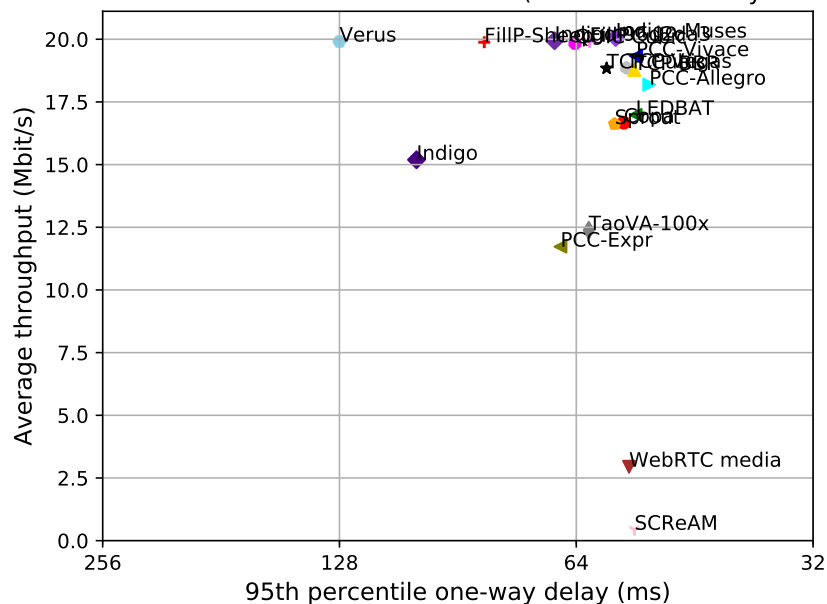
| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	15.74	3.52	2.13	54.68	53.74	53.64	14.18	23.69	25.95
Copa	5	12.10	6.87	0.03	56.21	52.26	53.28	65.37	69.72	82.50
TCP Cubic	5	8.98	9.71	10.34	64.38	56.14	56.81	11.62	9.38	5.89
FillP	5	12.32	8.20	6.46	71.65	51.18	52.46	26.69	27.30	35.21
FillP-Sheep	5	12.61	7.64	6.68	109.68	50.66	50.40	30.56	32.57	36.69
Indigo	5	9.56	5.58	5.90	105.87	89.05	97.96	79.15	83.80	85.64
Indigo-96d2da3	5	12.87	8.90	3.56	68.41	58.34	58.25	66.77	71.35	74.81
LEDBAT	5	10.31	7.06	6.56	53.75	53.80	53.91	1.26	2.26	2.71
Indigo-Muses	5	19.60	0.60	0.35	57.06	57.24	56.04	55.36	67.49	74.37
PCC-Allegro	5	12.78	7.26	1.81	58.59	50.33	50.21	42.65	11.50	15.98
PCC-Expr	5	0.02	12.64	10.12	53.45	76.86	57.43	86.98	60.18	40.96
QUIC Cubic	5	12.59	7.90	6.08	76.96	51.93	51.94	10.19	3.31	2.87
SCReAM	5	0.22	0.22	0.22	54.02	53.73	53.71	0.26	0.48	0.93
Sprout	5	8.73	8.38	7.13	57.27	57.18	56.67	2.24	3.87	7.46
TaoVA-100x	5	0.02	13.71	9.88	54.50	62.03	58.64	92.12	30.80	21.26
TCP Vegas	5	9.99	8.78	9.18	60.23	54.13	53.88	7.37	9.51	5.75
Verus	5	16.43	4.98	3.33	119.59	118.26	108.01	62.67	61.24	68.98
PCC-Vivace	5	12.11	9.64	2.48	58.35	52.53	52.34	8.44	7.85	6.85
WebRTC media	5	1.57	0.99	0.40	54.85	54.74	54.83	0.20	0.37	0.51

```
Run 1: Statistics of TCP BBR

Start at: 2018-09-25 16:54:30
End at: 2018-09-25 16:55:00
Local clock offset: 2.361 ms
Remote clock offset: 23.192 ms


# Below is generated by plot.py at 2018-09-25 18:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.80 Mbit/s
95th percentile per-packet one-way delay: 59.718 ms
Loss rate: 15.40%
-- Flow 1:
Average throughput: 15.73 Mbit/s
95th percentile per-packet one-way delay: 60.058 ms
Loss rate: 13.83%
-- Flow 2:
Average throughput: 3.84 Mbit/s
95th percentile per-packet one-way delay: 59.551 ms
Loss rate: 22.20%
-- Flow 3:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 59.530 ms
Loss rate: 24.47%
```
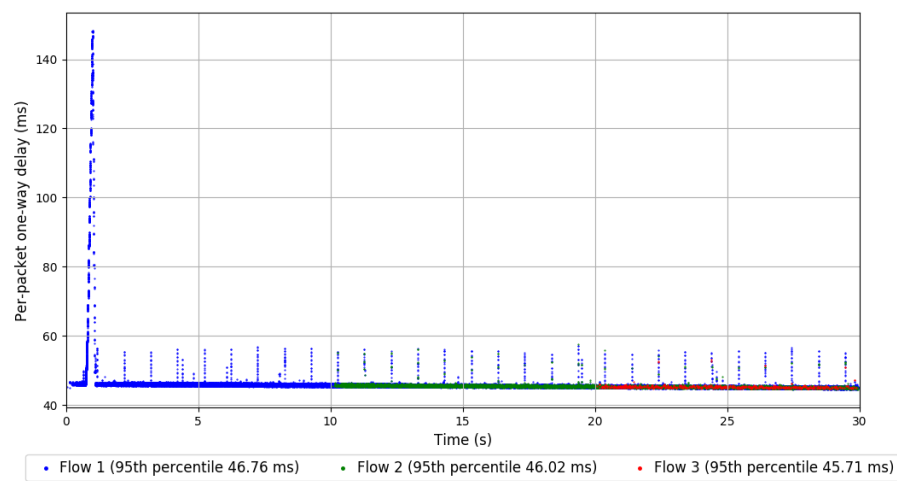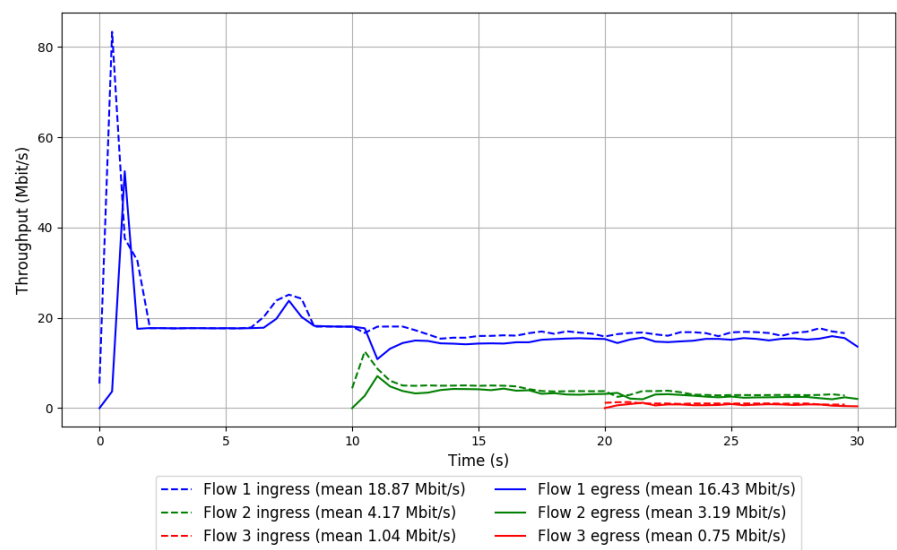
Run 1: Report of TCP BBR — Data Link
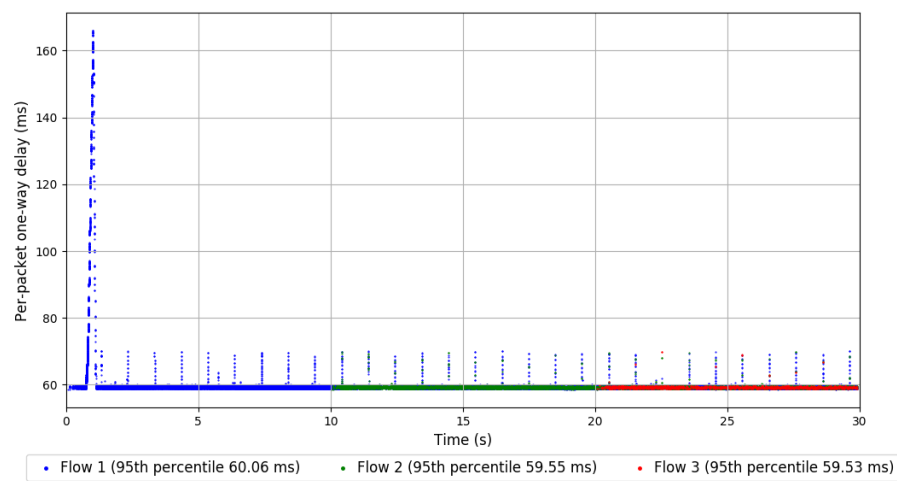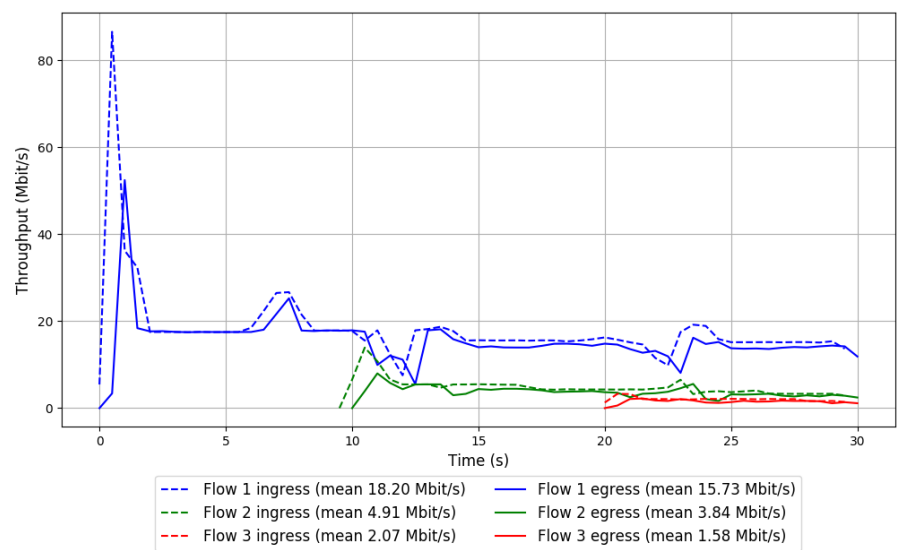
```
Run 2: Statistics of TCP BBR

Start at: 2018-09-25 17:18:07
End at: 2018-09-25 17:18:37
Local clock offset: 3.375 ms
Remote clock offset: 37.14 ms


# Below is generated by plot.py at 2018-09-25 18:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 61.114 ms
Loss rate: 15.55%
-- Flow 1:
Average throughput: 16.13 Mbit/s
95th percentile per-packet one-way delay: 61.340 ms
Loss rate: 14.01%
-- Flow 2:
Average throughput: 3.41 Mbit/s
95th percentile per-packet one-way delay: 60.976 ms
Loss rate: 23.60%
-- Flow 3:
Average throughput: 1.28 Mbit/s
95th percentile per-packet one-way delay: 61.001 ms
Loss rate: 24.60%
```
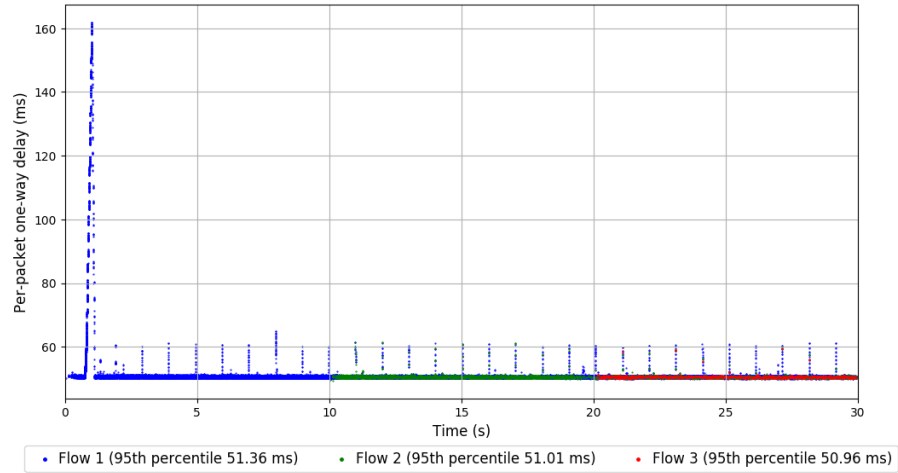
Run 2: Report of TCP BBR — Data Link
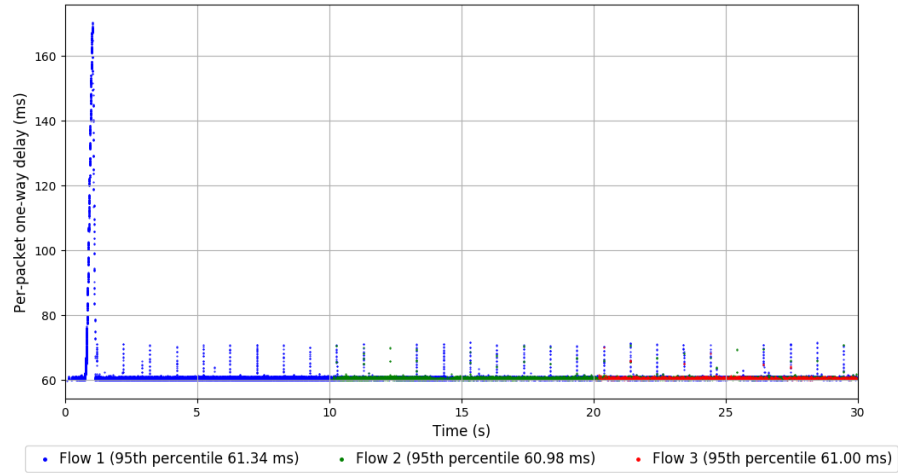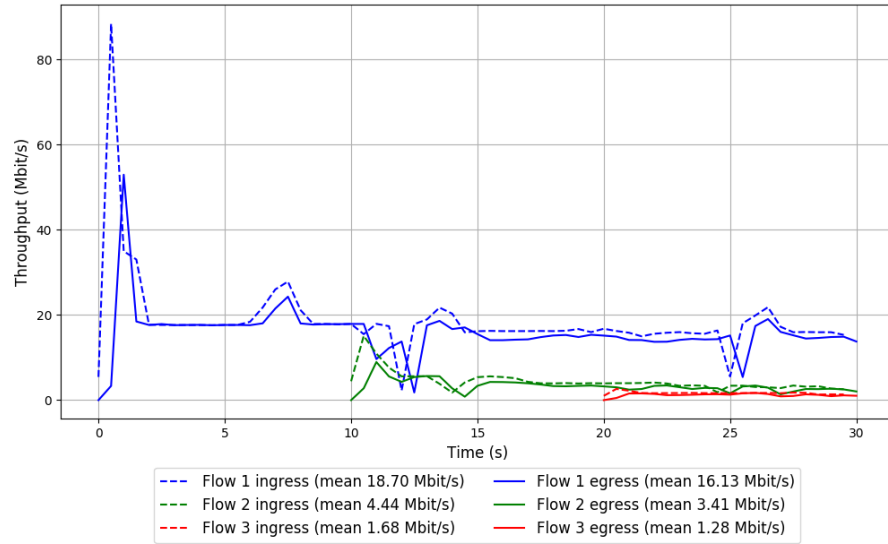
```
Run 3: Statistics of TCP BBR

Start at: 2018-09-25 17:42:38
End at: 2018-09-25 17:43:08
Local clock offset: 13.03 ms
Remote clock offset: 51.039 ms


# Below is generated by plot.py at 2018-09-25 18:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.79 Mbit/s
95th percentile per-packet one-way delay: 46.529 ms
Loss rate: 14.81%
-- Flow 1:
Average throughput: 16.43 Mbit/s
95th percentile per-packet one-way delay: 46.759 ms
Loss rate: 13.21%
-- Flow 2:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 46.023 ms
Loss rate: 24.00%
-- Flow 3:
Average throughput: 0.75 Mbit/s
95th percentile per-packet one-way delay: 45.713 ms
Loss rate: 28.47%
```
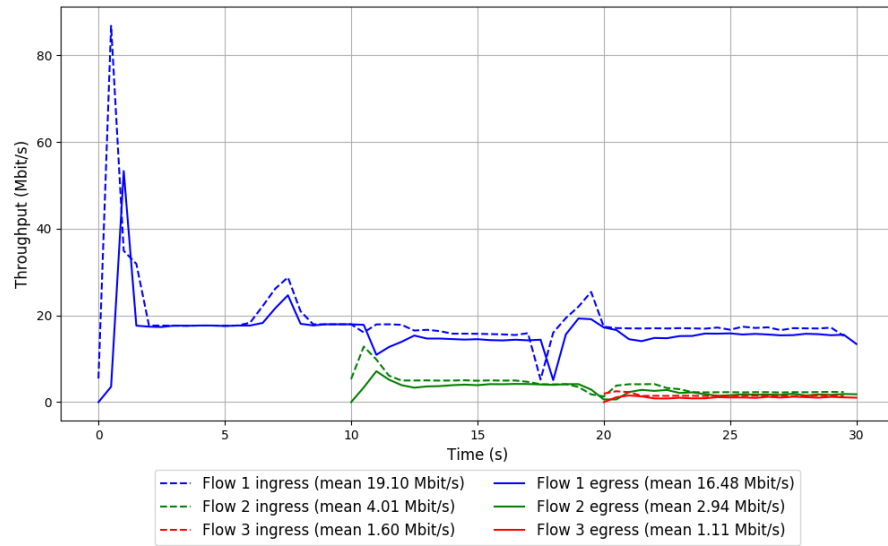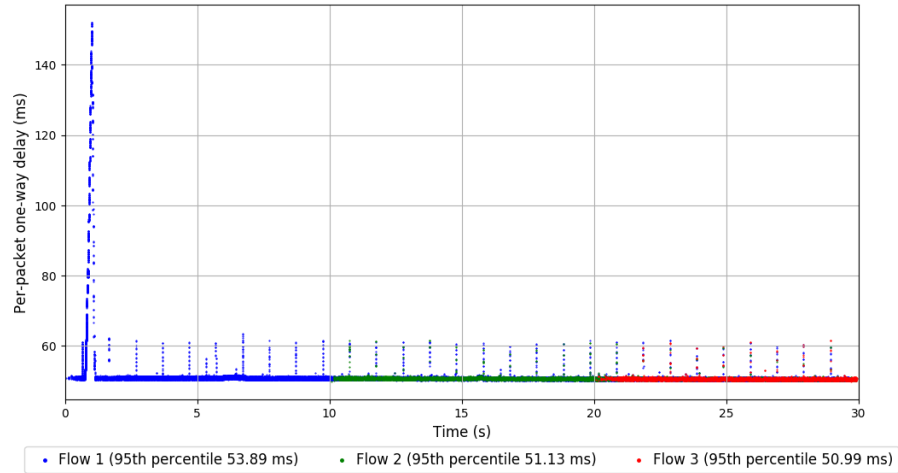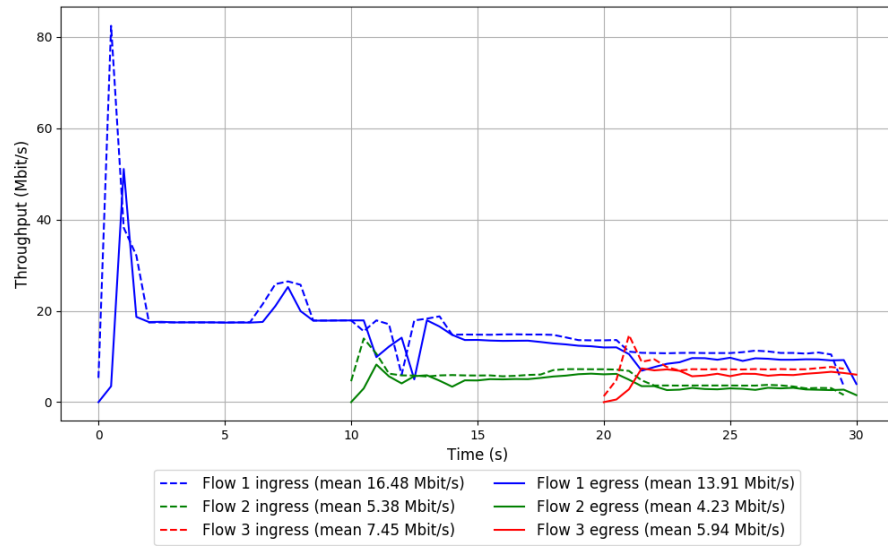
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 18.87 Mbit/s) --- Flow 1 egress (mean 16.43 Mbit/s) ——
Flow 2 ingress (mean 4.17 Mbit/s) --- Flow 2 egress (mean 3.19 Mbit/s) ——
Flow 3 ingress (mean 1.04 Mbit/s) --- Flow 3 egress (mean 0.75 Mbit/s) ——

Flow 1 (95th percentile 46.76 ms) • Flow 2 (95th percentile 46.02 ms) • Flow 3 (95th percentile 45.71 ms) •

```
Run 4: Statistics of TCP BBR

Start at: 2018-09-25 18:06:16
End at: 2018-09-25 18:06:46
Local clock offset: 35.618 ms
Remote clock offset: 46.356 ms


# Below is generated by plot.py at 2018-09-25 18:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.79 Mbit/s
95th percentile per-packet one-way delay: 51.197 ms
Loss rate: 15.98%
-- Flow 1:
Average throughput: 16.48 Mbit/s
95th percentile per-packet one-way delay: 51.363 ms
Loss rate: 14.01%
-- Flow 2:
Average throughput: 2.94 Mbit/s
95th percentile per-packet one-way delay: 51.013 ms
Loss rate: 27.05%
-- Flow 3:
Average throughput: 1.11 Mbit/s
95th percentile per-packet one-way delay: 50.963 ms
Loss rate: 31.24%
```
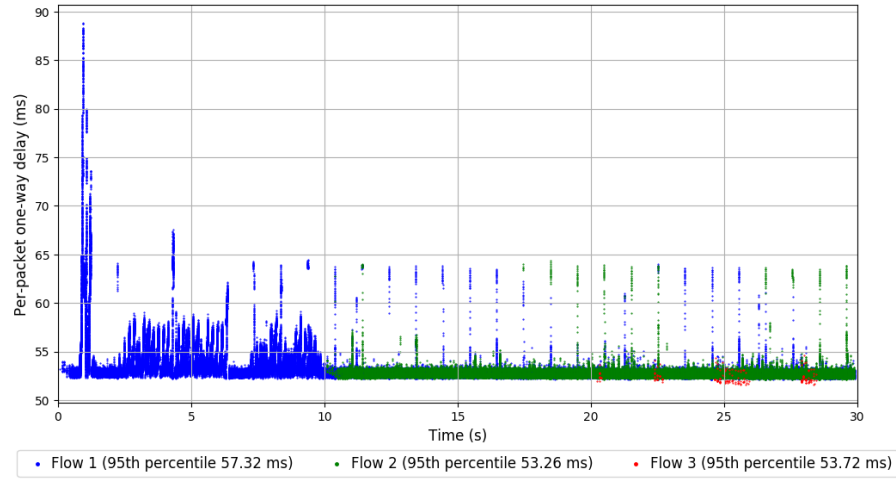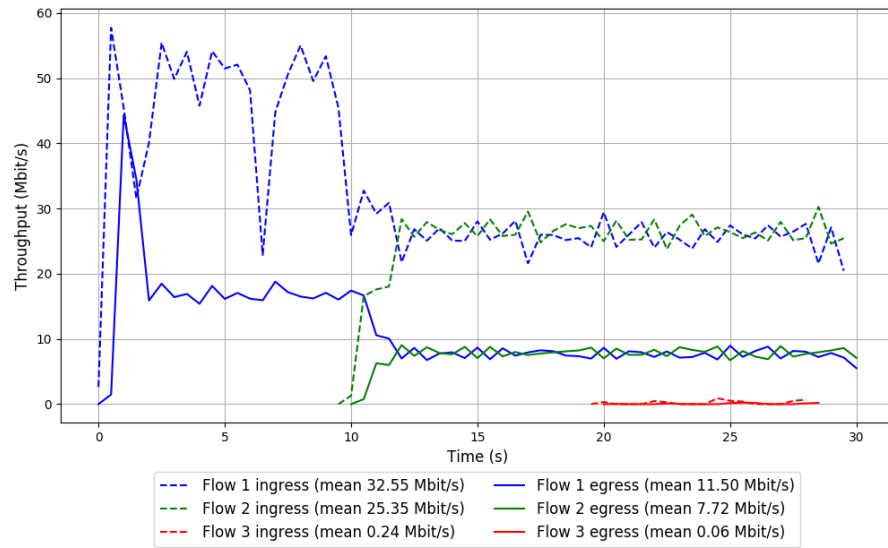
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 19.10 Mbit/s) ---- Flow 1 egress (mean 16.48 Mbit/s) ——
Flow 2 ingress (mean 4.01 Mbit/s) ---- Flow 2 egress (mean 2.94 Mbit/s) ——
Flow 3 ingress (mean 1.60 Mbit/s) ---- Flow 3 egress (mean 1.11 Mbit/s) ——

Flow 1 (95th percentile 51.36 ms)   Flow 2 (95th percentile 51.01 ms)   Flow 3 (95th percentile 50.96 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2018-09-25 18:29:46
End at: 2018-09-25 18:30:16
Local clock offset: 44.509 ms
Remote clock offset: 25.783 ms


# Below is generated by plot.py at 2018-09-25 18:34:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.67 Mbit/s
95th percentile per-packet one-way delay: 51.468 ms
Loss rate: 17.31%
-- Flow 1:
Average throughput: 13.91 Mbit/s
95th percentile per-packet one-way delay: 53.889 ms
Loss rate: 15.83%
-- Flow 2:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 51.127 ms
Loss rate: 21.61%
-- Flow 3:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 50.993 ms
Loss rate: 20.99%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 16.48 Mbit/s) --- Flow 1 egress (mean 13.91 Mbit/s)
Flow 2 ingress (mean 5.38 Mbit/s) --- Flow 2 egress (mean 4.23 Mbit/s)
Flow 3 ingress (mean 7.45 Mbit/s) --- Flow 3 egress (mean 5.94 Mbit/s)

Flow 1 (95th percentile 53.89 ms) • Flow 2 (95th percentile 51.13 ms) • Flow 3 (95th percentile 50.99 ms)

```
Run 1: Statistics of Copa

Start at: 2018-09-25 16:43:00
End at: 2018-09-25 16:43:30
Local clock offset: 4.414 ms
Remote clock offset: 33.601 ms


# Below is generated by plot.py at 2018-09-25 18:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.66 Mbit/s
95th percentile per-packet one-way delay: 56.617 ms
Loss rate: 66.46%
-- Flow 1:
Average throughput: 11.50 Mbit/s
95th percentile per-packet one-way delay: 57.319 ms
Loss rate: 64.78%
-- Flow 2:
Average throughput: 7.72 Mbit/s
95th percentile per-packet one-way delay: 53.257 ms
Loss rate: 69.66%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 53.722 ms
Loss rate: 74.26%
```
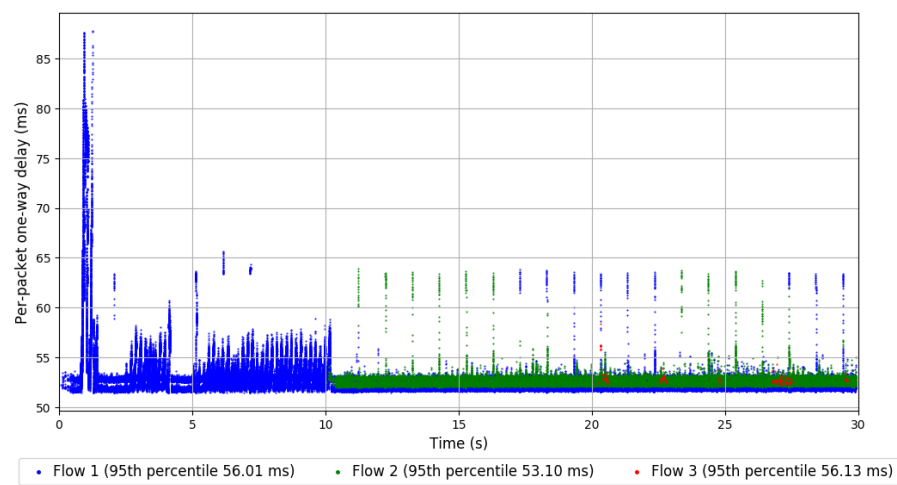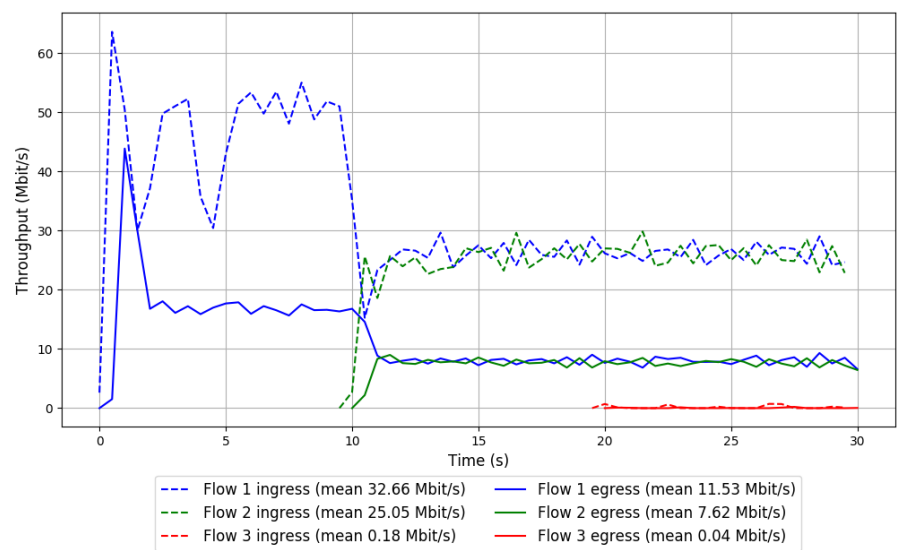
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 32.55 Mbit/s)   Flow 1 egress (mean 11.50 Mbit/s)
Flow 2 ingress (mean 25.35 Mbit/s)   Flow 2 egress (mean 7.72 Mbit/s)
Flow 3 ingress (mean 0.24 Mbit/s)   Flow 3 egress (mean 0.06 Mbit/s)

Flow 1 (95th percentile 57.32 ms)   Flow 2 (95th percentile 53.26 ms)   Flow 3 (95th percentile 53.72 ms)

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```
Run 2: Statistics of Copa

Start at: 2018-09-25 17:06:46
End at: 2018-09-25 17:07:16
Local clock offset: 1.274 ms
Remote clock offset: 31.75 ms


# Below is generated by plot.py at 2018-09-25 18:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.81 Mbit/s
95th percentile per-packet one-way delay: 62.755 ms
Loss rate: 65.91%
-- Flow 1:
Average throughput: 12.98 Mbit/s
95th percentile per-packet one-way delay: 63.145 ms
Loss rate: 64.15%
-- Flow 2:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 59.106 ms
Loss rate: 70.74%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 59.385 ms
Loss rate: 87.56%
```

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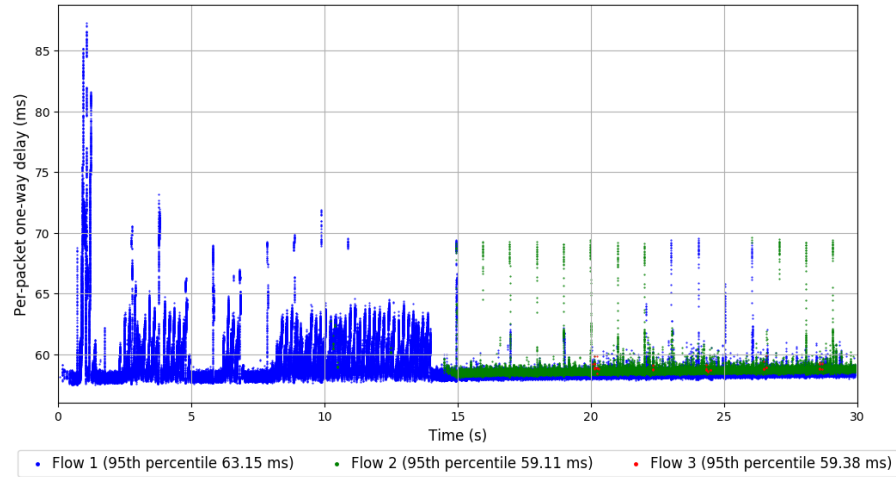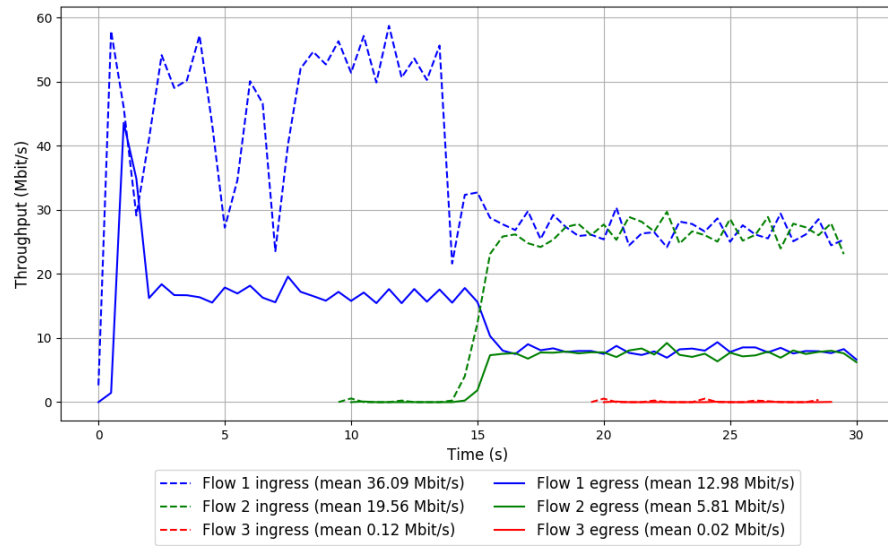
```
Run 3: Statistics of Copa

Start at: 2018-09-25 17:30:41
End at: 2018-09-25 17:31:11
Local clock offset: 4.51 ms
Remote clock offset: 48.514 ms


# Below is generated by plot.py at 2018-09-25 18:35:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 55.364 ms
Loss rate: 66.47%
-- Flow 1:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 56.014 ms
Loss rate: 64.80%
-- Flow 2:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 53.103 ms
Loss rate: 69.70%
-- Flow 3:
Average throughput: 0.04 Mbit/s
95th percentile per-packet one-way delay: 56.130 ms
Loss rate: 80.50%
```

Run 3: Report of Copa — Data Link

- - - Flow 1 ingress (mean 32.66 Mbit/s)   —— Flow 1 egress (mean 11.53 Mbit/s)
- - - Flow 2 ingress (mean 25.05 Mbit/s)   —— Flow 2 egress (mean 7.62 Mbit/s)
- - - Flow 3 ingress (mean 0.18 Mbit/s)   —— Flow 3 egress (mean 0.04 Mbit/s)

• Flow 1 (95th percentile 56.01 ms)   • Flow 2 (95th percentile 53.10 ms)   • Flow 3 (95th percentile 56.13 ms)

```
Run 4: Statistics of Copa

Start at: 2018-09-25 17:54:53
End at: 2018-09-25 17:55:23
Local clock offset: 28.89 ms
Remote clock offset: 49.904 ms


# Below is generated by plot.py at 2018-09-25 18:35:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.58 Mbit/s
95th percentile per-packet one-way delay: 49.767 ms
Loss rate: 67.45%
-- Flow 1:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 50.202 ms
Loss rate: 66.34%
-- Flow 2:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 46.326 ms
Loss rate: 69.78%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 47.395 ms
Loss rate: 87.52%
```

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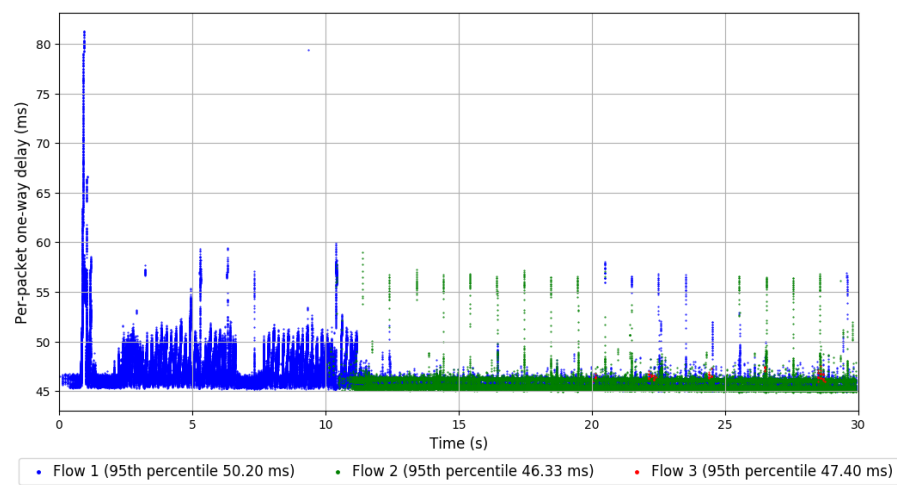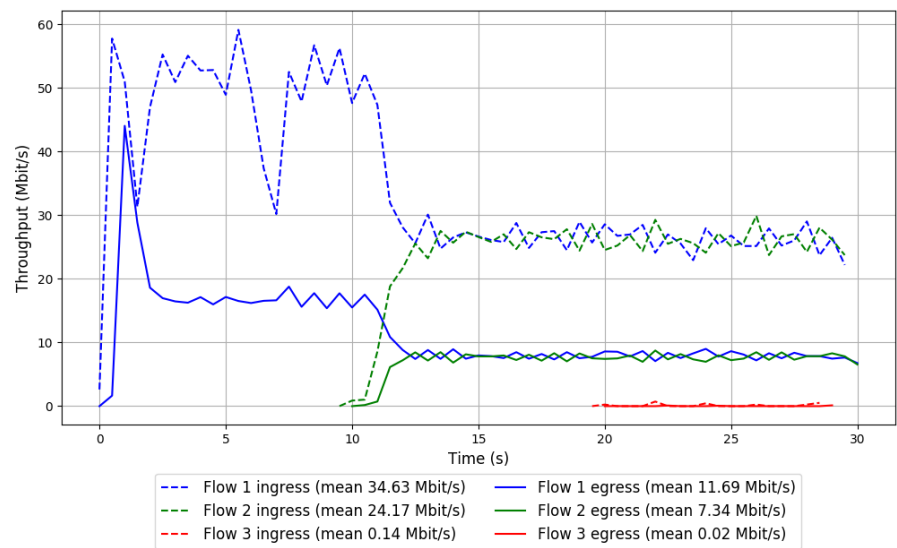
```
Run 5: Statistics of Copa

Start at: 2018-09-25 18:18:35
End at: 2018-09-25 18:19:05
Local clock offset: 40.39 ms
Remote clock offset: 33.416 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.70 Mbit/s
95th percentile per-packet one-way delay: 53.929 ms
Loss rate: 67.28%
-- Flow 1:
Average throughput: 12.78 Mbit/s
95th percentile per-packet one-way delay: 54.390 ms
Loss rate: 66.80%
-- Flow 2:
Average throughput: 5.86 Mbit/s
95th percentile per-packet one-way delay: 49.495 ms
Loss rate: 68.72%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 49.761 ms
Loss rate: 82.65%
```

Run 5: Report of Copa — Data Link
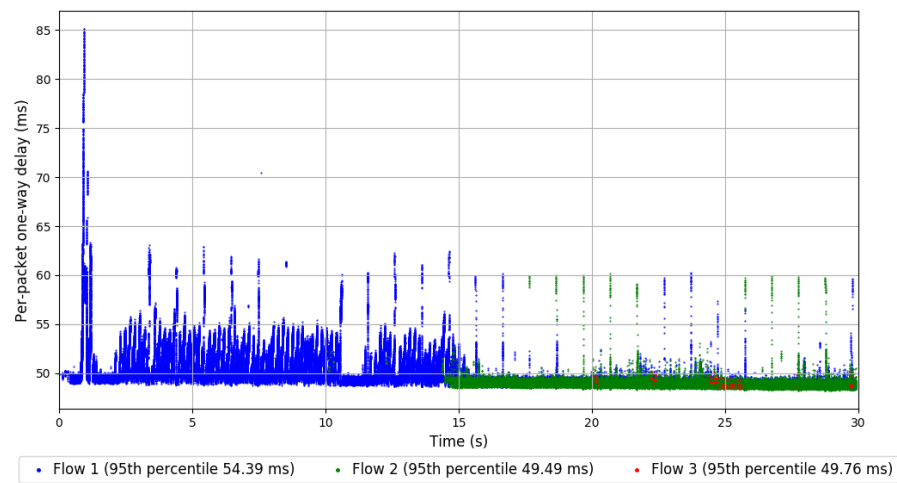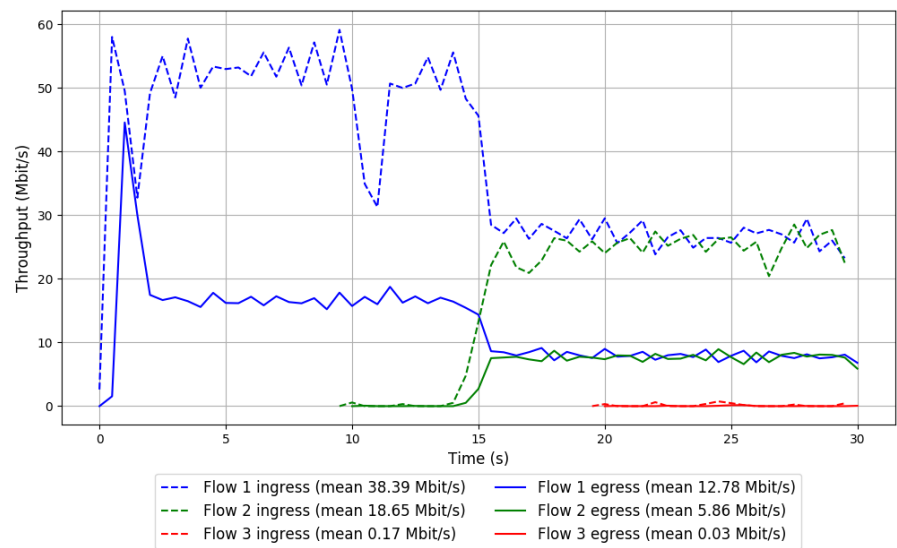
```
Run 1: Statistics of TCP Cubic

Start at: 2018-09-25 16:45:37
End at: 2018-09-25 16:46:07
Local clock offset: 3.871 ms
Remote clock offset: 27.172 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.96 Mbit/s
95th percentile per-packet one-way delay: 60.389 ms
Loss rate: 8.72%
-- Flow 1:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 67.438 ms
Loss rate: 11.26%
-- Flow 2:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 58.896 ms
Loss rate: 7.42%
-- Flow 3:
Average throughput: 9.26 Mbit/s
95th percentile per-packet one-way delay: 58.869 ms
Loss rate: 3.13%
```
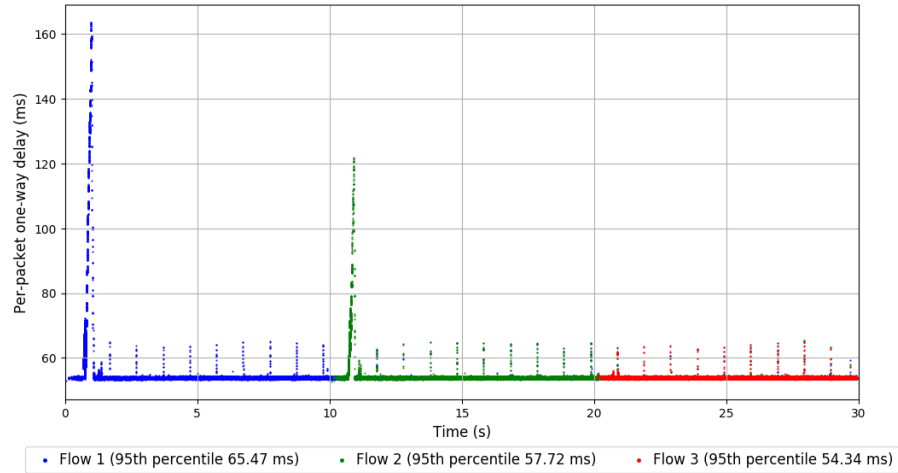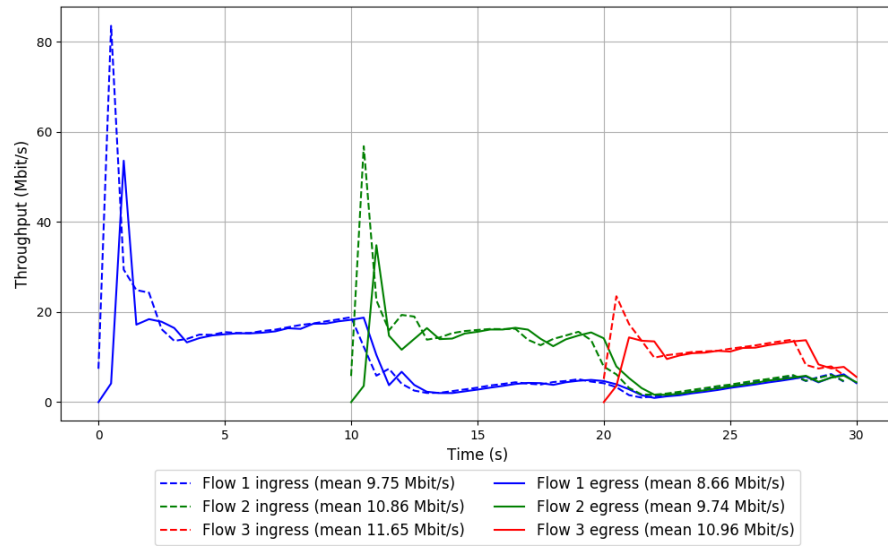
Run 1: Report of TCP Cubic — Data Link
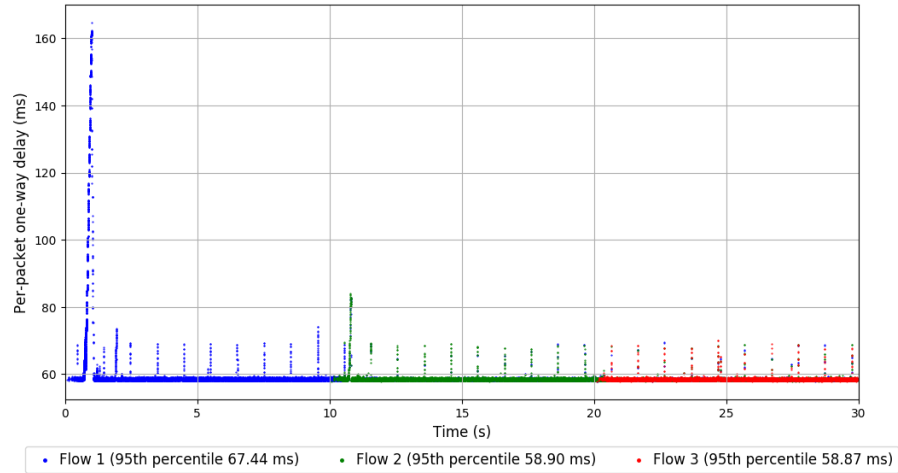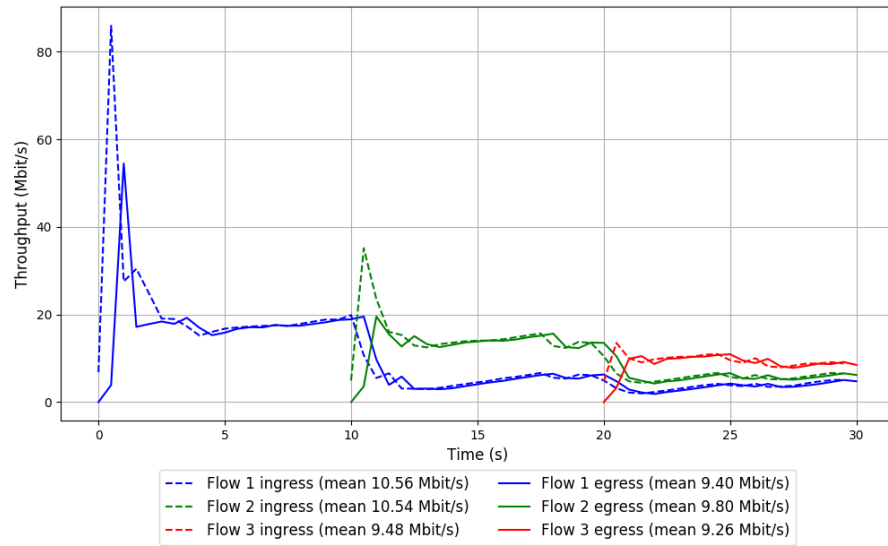
```
Run 2: Statistics of TCP Cubic

Start at: 2018-09-25 17:09:24
End at: 2018-09-25 17:09:54
Local clock offset: 0.877 ms
Remote clock offset: 31.342 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.76 Mbit/s
95th percentile per-packet one-way delay: 63.661 ms
Loss rate: 10.32%
-- Flow 1:
Average throughput: 9.06 Mbit/s
95th percentile per-packet one-way delay: 68.619 ms
Loss rate: 11.79%
-- Flow 2:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 61.567 ms
Loss rate: 10.48%
-- Flow 3:
Average throughput: 6.71 Mbit/s
95th percentile per-packet one-way delay: 61.497 ms
Loss rate: 3.11%
```
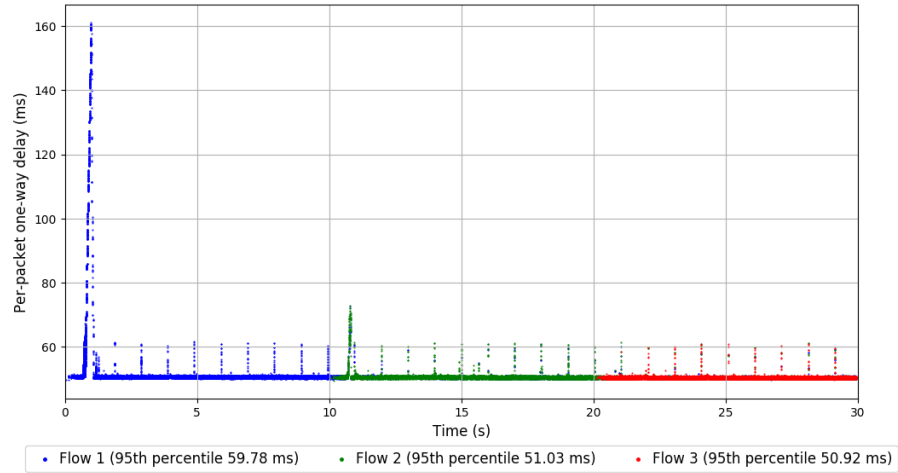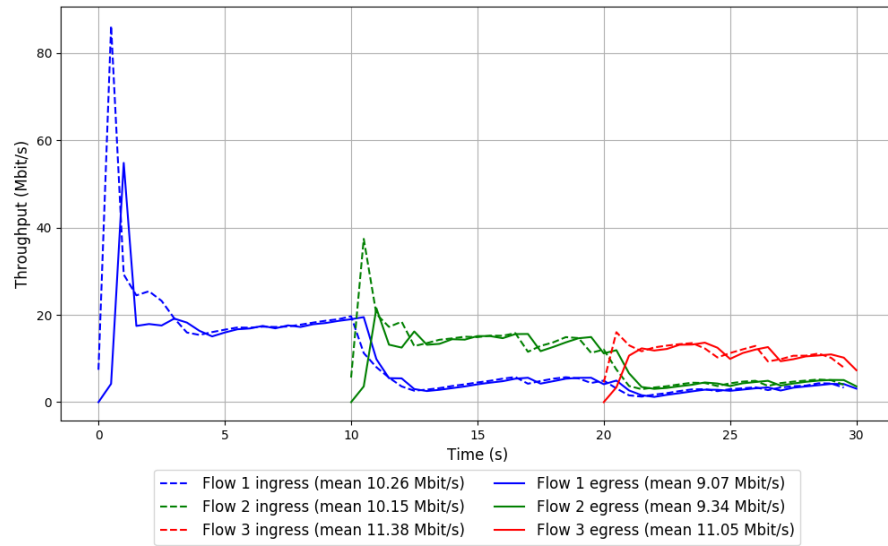
Run 2: Report of TCP Cubic — Data Link
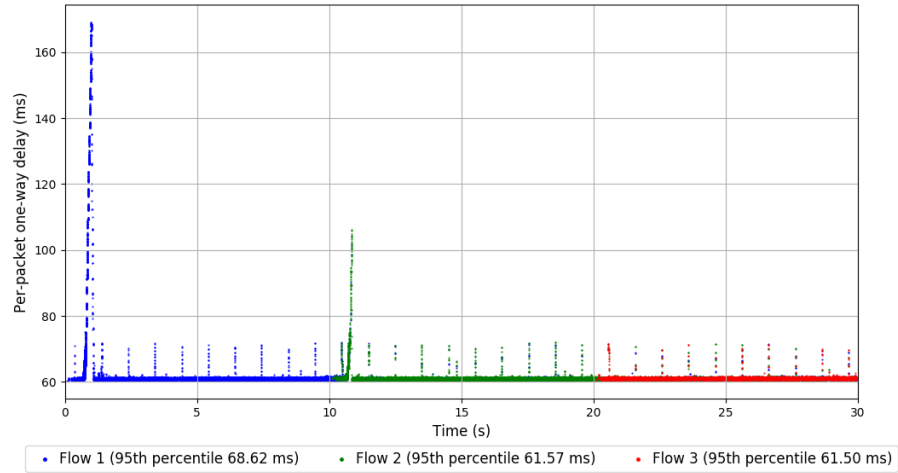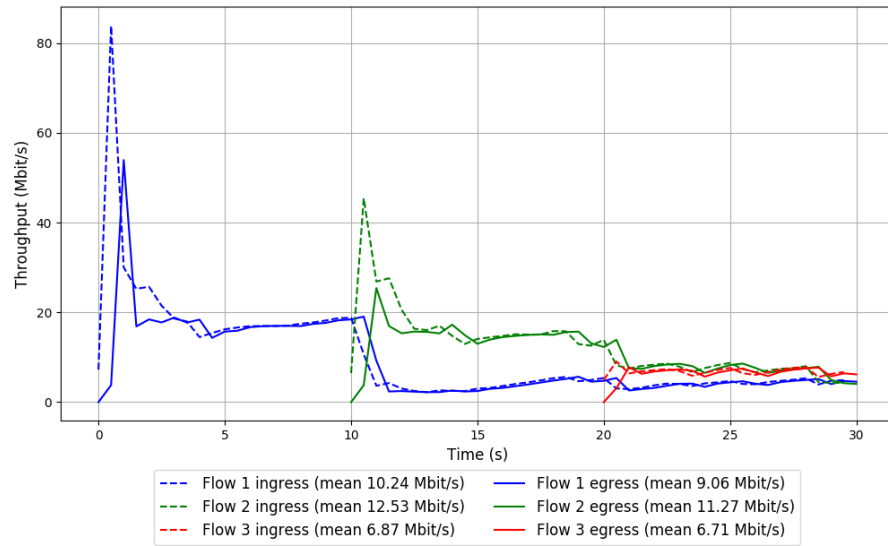
```
Run 3: Statistics of TCP Cubic

Start at: 2018-09-25 17:33:13
End at: 2018-09-25 17:33:43
Local clock offset: 4.539 ms
Remote clock offset: 48.27 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.75 Mbit/s
95th percentile per-packet one-way delay: 59.544 ms
Loss rate: 10.28%
-- Flow 1:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 65.472 ms
Loss rate: 11.37%
-- Flow 2:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 57.717 ms
Loss rate: 10.72%
-- Flow 3:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 54.344 ms
Loss rate: 6.71%
```

Run 3: Report of TCP Cubic — Data Link

- - - Flow 1 ingress (mean 9.75 Mbit/s) — Flow 1 egress (mean 8.66 Mbit/s)
- - - Flow 2 ingress (mean 10.86 Mbit/s) — Flow 2 egress (mean 9.74 Mbit/s)
- - - Flow 3 ingress (mean 11.65 Mbit/s) — Flow 3 egress (mean 10.96 Mbit/s)

• Flow 1 (95th percentile 65.47 ms)   • Flow 2 (95th percentile 57.72 ms)   • Flow 3 (95th percentile 54.34 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2018-09-25 17:57:31
End at: 2018-09-25 17:58:01
Local clock offset: 30.941 ms
Remote clock offset: 45.98 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.91 Mbit/s
95th percentile per-packet one-way delay: 52.381 ms
Loss rate: 9.29%
-- Flow 1:
Average throughput: 9.07 Mbit/s
95th percentile per-packet one-way delay: 59.784 ms
Loss rate: 11.87%
-- Flow 2:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 51.027 ms
Loss rate: 8.45%
-- Flow 3:
Average throughput: 11.05 Mbit/s
95th percentile per-packet one-way delay: 50.920 ms
Loss rate: 3.77%
```

Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 10.26 Mbit/s) — — — Flow 1 egress (mean 9.07 Mbit/s)
Flow 2 ingress (mean 10.15 Mbit/s) — — — Flow 2 egress (mean 9.34 Mbit/s)
Flow 3 ingress (mean 11.38 Mbit/s) — — — Flow 3 egress (mean 11.05 Mbit/s)

Flow 1 (95th percentile 59.78 ms)   Flow 2 (95th percentile 51.03 ms)   Flow 3 (95th percentile 50.92 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2018-09-25 18:21:04
End at: 2018-09-25 18:21:34
Local clock offset: 41.675 ms
Remote clock offset: 30.755 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.81 Mbit/s
95th percentile per-packet one-way delay: 56.815 ms
Loss rate: 11.46%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 60.578 ms
Loss rate: 11.83%
-- Flow 2:
Average throughput: 8.42 Mbit/s
95th percentile per-packet one-way delay: 51.473 ms
Loss rate: 9.83%
-- Flow 3:
Average throughput: 13.72 Mbit/s
95th percentile per-packet one-way delay: 58.440 ms
Loss rate: 12.72%
```

Run 5: Report of TCP Cubic — Data Link
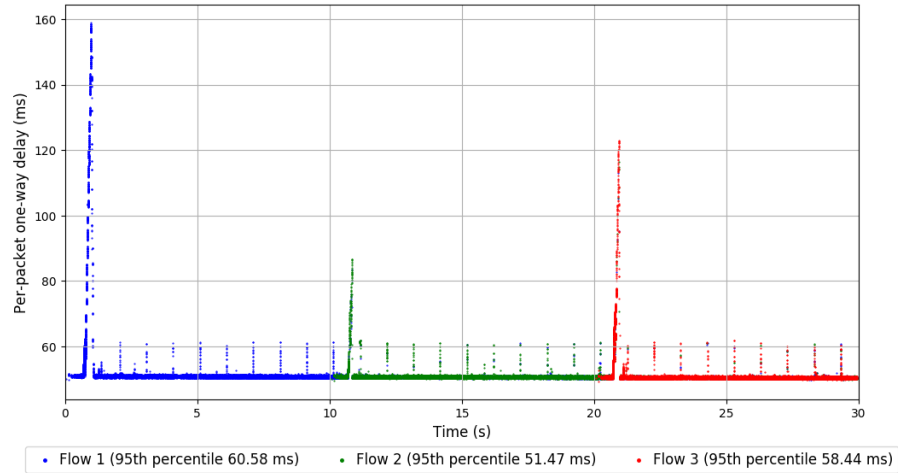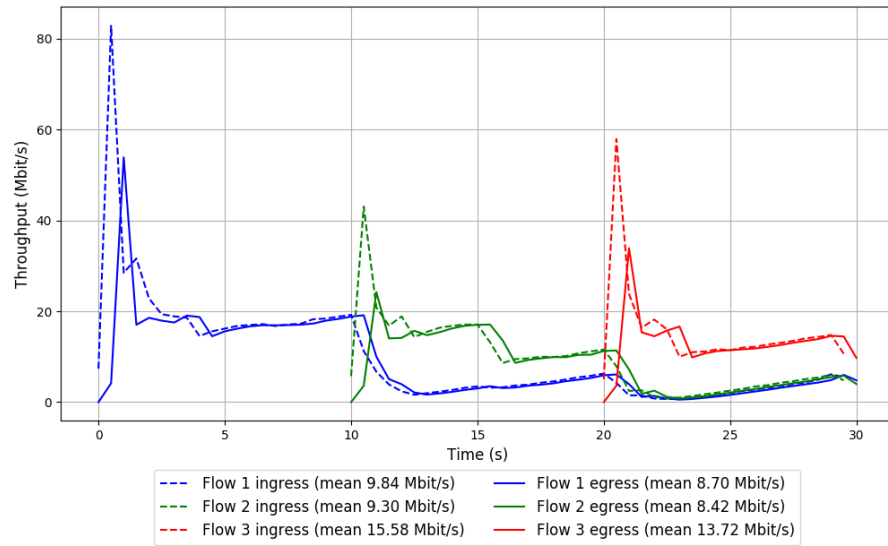
```
Run 1: Statistics of FillP

Start at: 2018-09-25 16:46:50
End at: 2018-09-25 16:47:20
Local clock offset: 3.555 ms
Remote clock offset: 29.846 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.83 Mbit/s
95th percentile per-packet one-way delay: 55.804 ms
Loss rate: 28.97%
-- Flow 1:
Average throughput: 13.17 Mbit/s
95th percentile per-packet one-way delay: 56.250 ms
Loss rate: 26.96%
-- Flow 2:
Average throughput: 7.62 Mbit/s
95th percentile per-packet one-way delay: 55.387 ms
Loss rate: 33.83%
-- Flow 3:
Average throughput: 4.86 Mbit/s
95th percentile per-packet one-way delay: 55.148 ms
Loss rate: 28.53%
```

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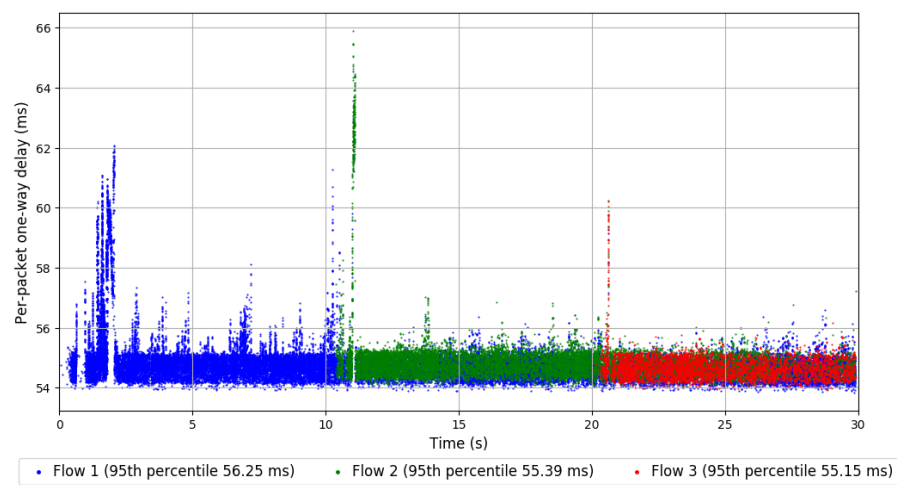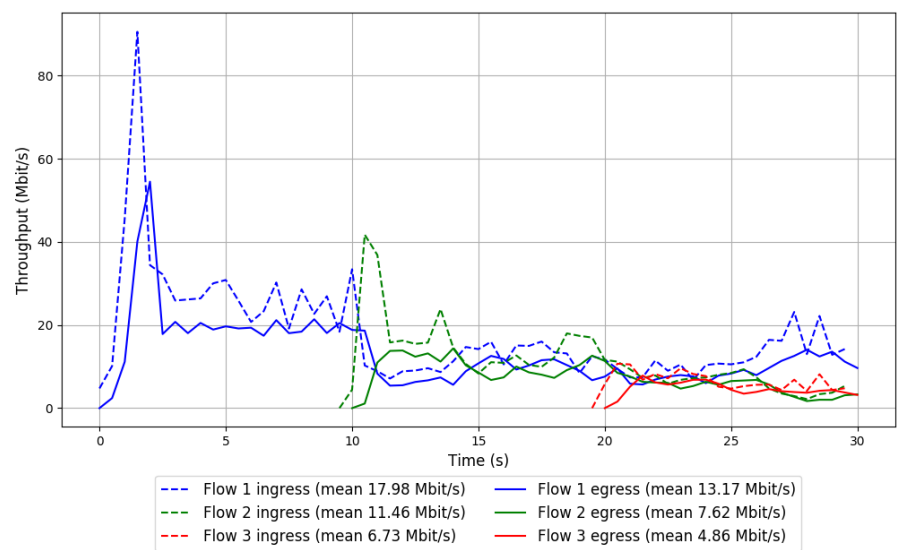
```
Run 2: Statistics of FillP

Start at: 2018-09-25 17:10:37
End at: 2018-09-25 17:11:07
Local clock offset: 1.455 ms
Remote clock offset: 44.504 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.91 Mbit/s
95th percentile per-packet one-way delay: 52.847 ms
Loss rate: 36.06%
-- Flow 1:
Average throughput: 12.77 Mbit/s
95th percentile per-packet one-way delay: 53.222 ms
Loss rate: 32.63%
-- Flow 2:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 48.740 ms
Loss rate: 26.64%
-- Flow 3:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 55.928 ms
Loss rate: 62.60%
```

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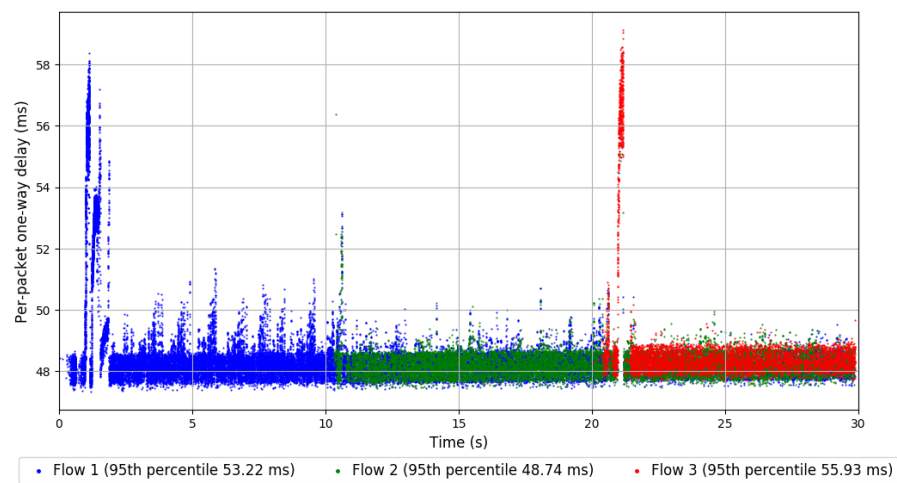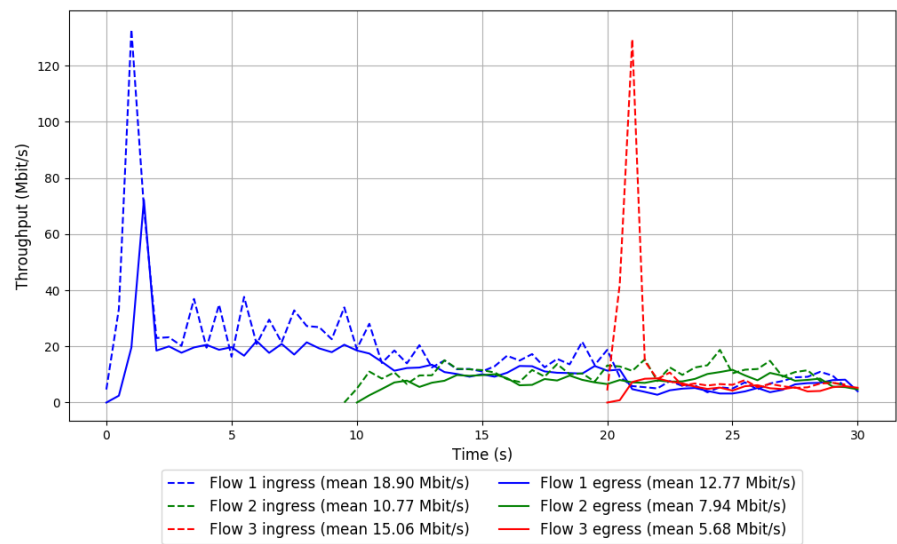
```
Run 3: Statistics of FillP

Start at: 2018-09-25 17:34:32
End at: 2018-09-25 17:35:02
Local clock offset: 4.8 ms
Remote clock offset: 52.191 ms


# Below is generated by plot.py at 2018-09-25 18:35:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.00 Mbit/s
95th percentile per-packet one-way delay: 52.064 ms
Loss rate: 27.23%
-- Flow 1:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 53.992 ms
Loss rate: 28.35%
-- Flow 2:
Average throughput: 7.99 Mbit/s
95th percentile per-packet one-way delay: 49.881 ms
Loss rate: 25.32%
-- Flow 3:
Average throughput: 6.44 Mbit/s
95th percentile per-packet one-way delay: 49.733 ms
Loss rate: 25.03%
```

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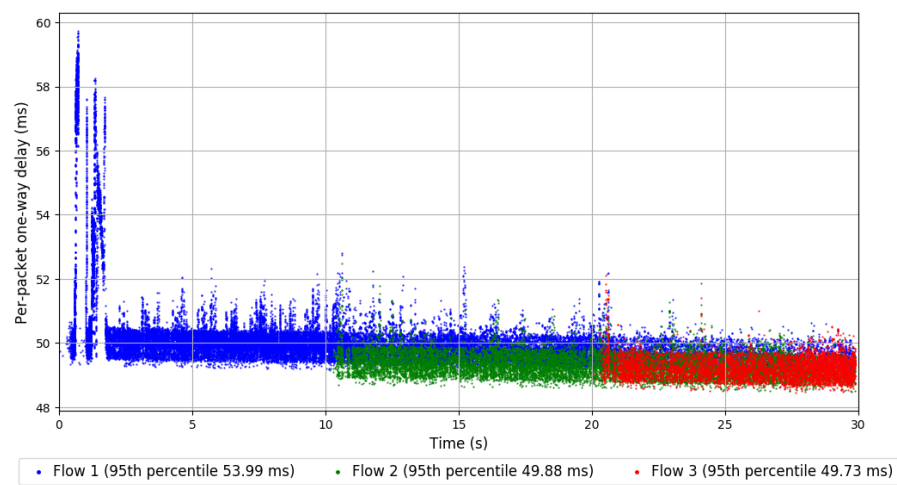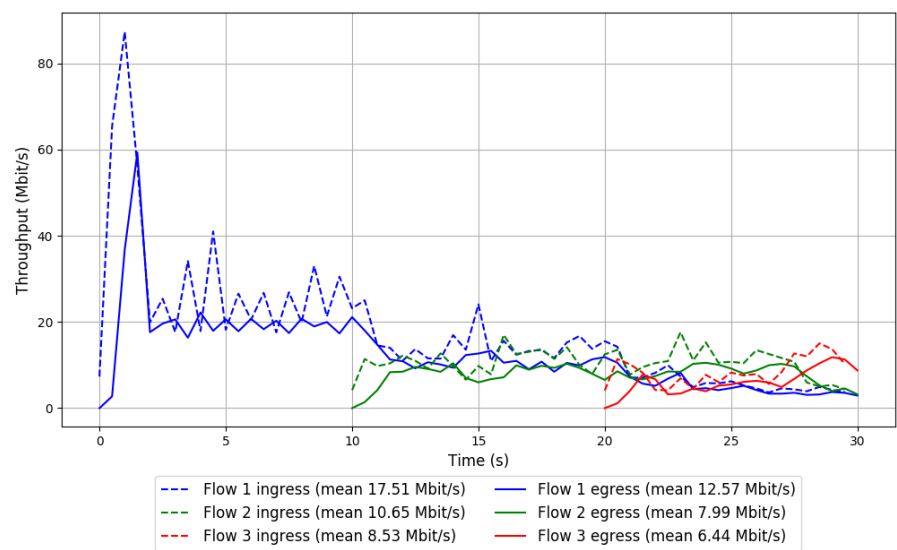
```
Run 4: Statistics of FillP

Start at: 2018-09-25 17:58:44
End at: 2018-09-25 17:59:14
Local clock offset: 31.759 ms
Remote clock offset: 45.978 ms


# Below is generated by plot.py at 2018-09-25 18:35:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.99 Mbit/s
95th percentile per-packet one-way delay: 96.215 ms
Loss rate: 32.19%
-- Flow 1:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 143.995 ms
Loss rate: 34.43%
-- Flow 2:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 50.980 ms
Loss rate: 26.45%
-- Flow 3:
Average throughput: 8.31 Mbit/s
95th percentile per-packet one-way delay: 50.921 ms
Loss rate: 33.34%
```
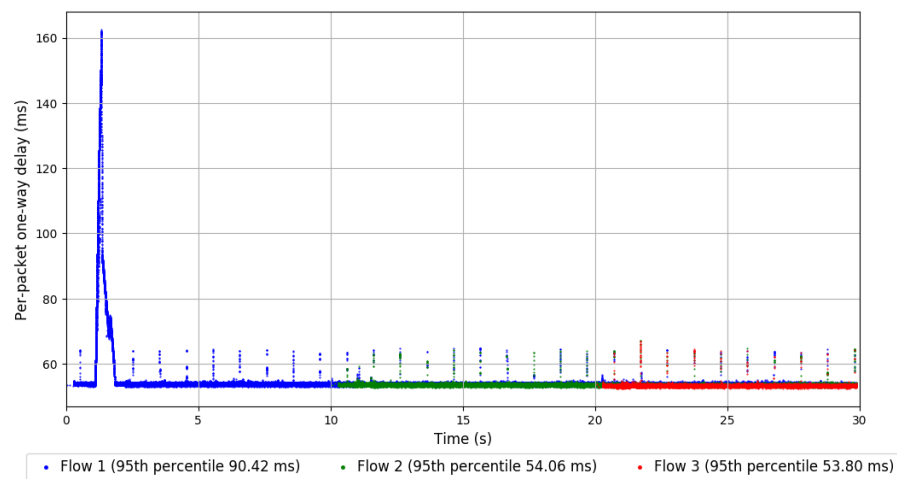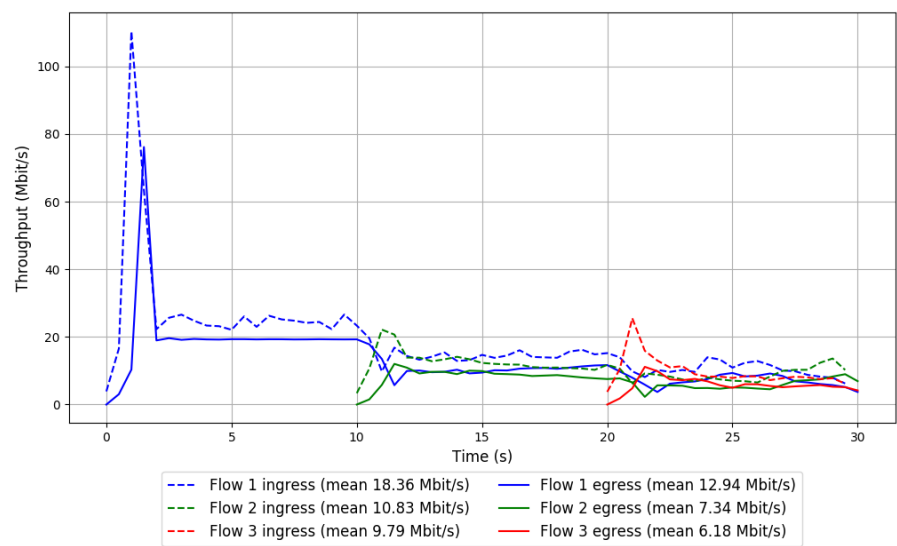
Run 4: Report of FillP — Data Link

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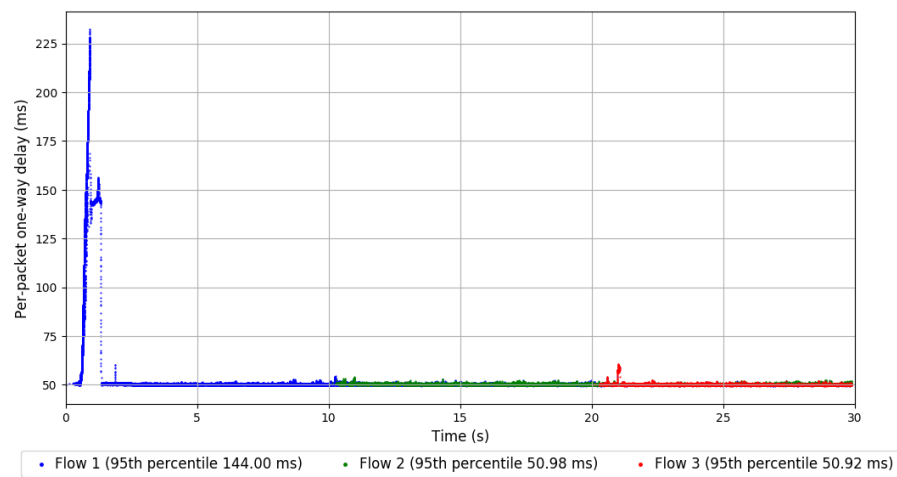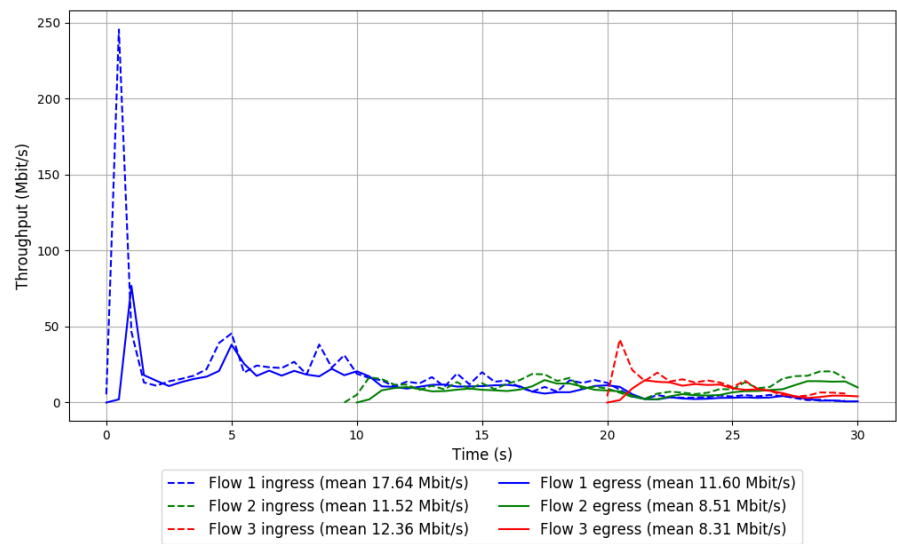
```
Run 5: Statistics of FillP

Start at: 2018-09-25 18:22:17
End at: 2018-09-25 18:22:47
Local clock offset: 41.941 ms
Remote clock offset: 30.061 ms


# Below is generated by plot.py at 2018-09-25 18:35:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.77 Mbit/s
95th percentile per-packet one-way delay: 50.805 ms
Loss rate: 17.44%
-- Flow 1:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 50.799 ms
Loss rate: 11.08%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 50.899 ms
Loss rate: 24.26%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 50.573 ms
Loss rate: 26.57%
```
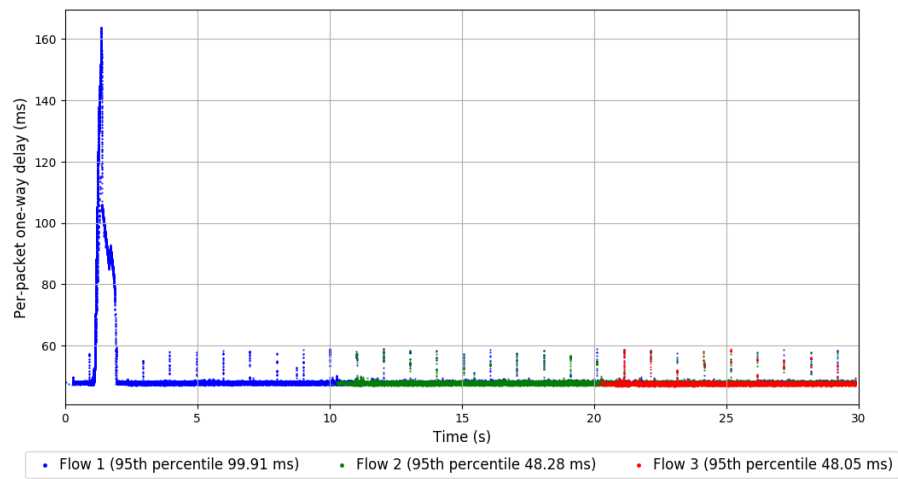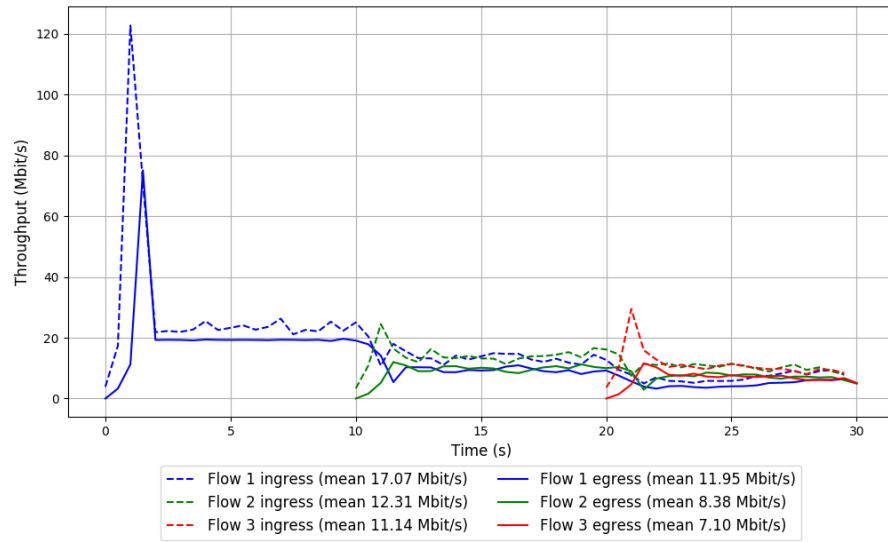
Run 5: Report of FillP — Data Link

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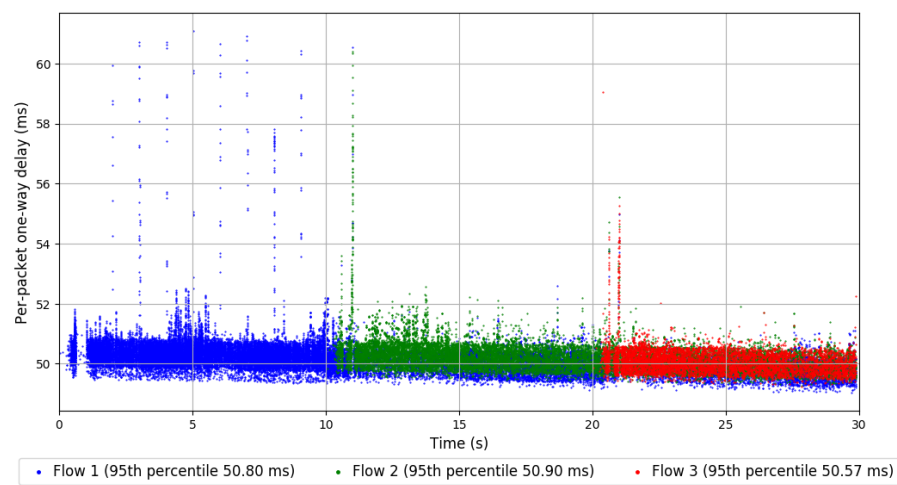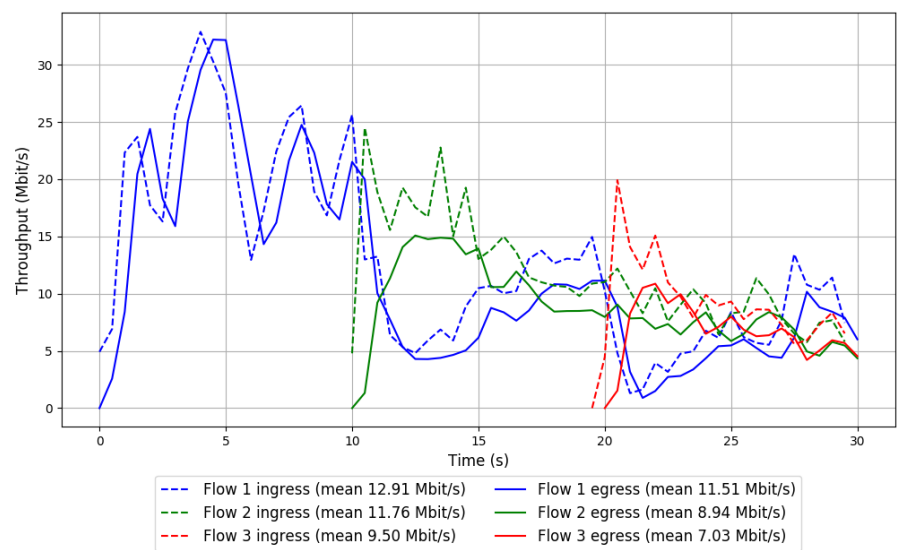
```
Run 1: Statistics of FillP-Sheep

Start at: 2018-09-25 16:56:56
End at: 2018-09-25 16:57:26
Local clock offset: 1.976 ms
Remote clock offset: 27.638 ms


# Below is generated by plot.py at 2018-09-25 18:35:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.85 Mbit/s
95th percentile per-packet one-way delay: 70.796 ms
Loss rate: 31.27%
-- Flow 1:
Average throughput: 12.94 Mbit/s
95th percentile per-packet one-way delay: 90.421 ms
Loss rate: 29.71%
-- Flow 2:
Average throughput: 7.34 Mbit/s
95th percentile per-packet one-way delay: 54.060 ms
Loss rate: 32.51%
-- Flow 3:
Average throughput: 6.18 Mbit/s
95th percentile per-packet one-way delay: 53.799 ms
Loss rate: 37.40%
```

Run 1: Report of FillP-Sheep — Data Link

- Flow 1 ingress (mean 18.36 Mbit/s)   — Flow 1 egress (mean 12.94 Mbit/s)
- Flow 2 ingress (mean 10.83 Mbit/s)   — Flow 2 egress (mean 7.34 Mbit/s)
- Flow 3 ingress (mean 9.79 Mbit/s)   — Flow 3 egress (mean 6.18 Mbit/s)

- Flow 1 (95th percentile 90.42 ms)   • Flow 2 (95th percentile 54.06 ms)   • Flow 3 (95th percentile 53.80 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2018-09-25 17:20:32
End at: 2018-09-25 17:21:02
Local clock offset: 3.588 ms
Remote clock offset: 50.509 ms


# Below is generated by plot.py at 2018-09-25 18:35:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.85 Mbit/s
95th percentile per-packet one-way delay: 78.719 ms
Loss rate: 31.63%
-- Flow 1:
Average throughput: 11.95 Mbit/s
95th percentile per-packet one-way delay: 99.909 ms
Loss rate: 30.22%
-- Flow 2:
Average throughput: 8.38 Mbit/s
95th percentile per-packet one-way delay: 48.276 ms
Loss rate: 32.26%
-- Flow 3:
Average throughput: 7.10 Mbit/s
95th percentile per-packet one-way delay: 48.052 ms
Loss rate: 36.76%
```

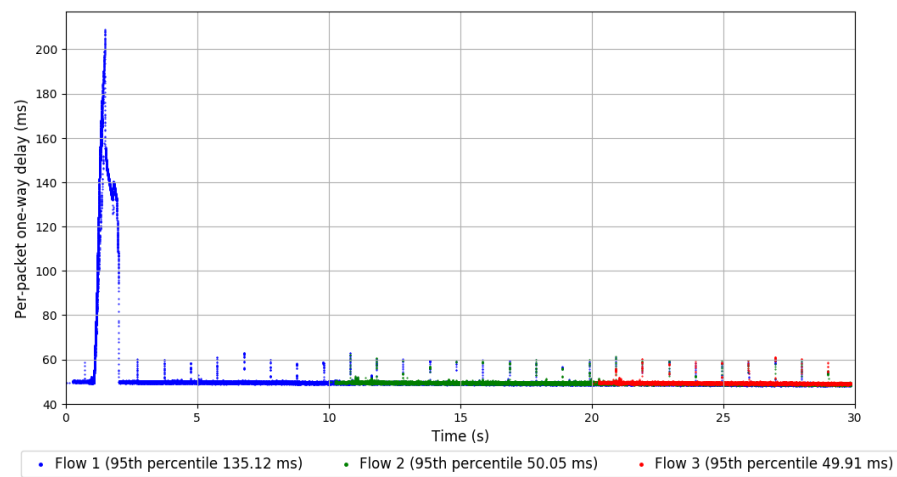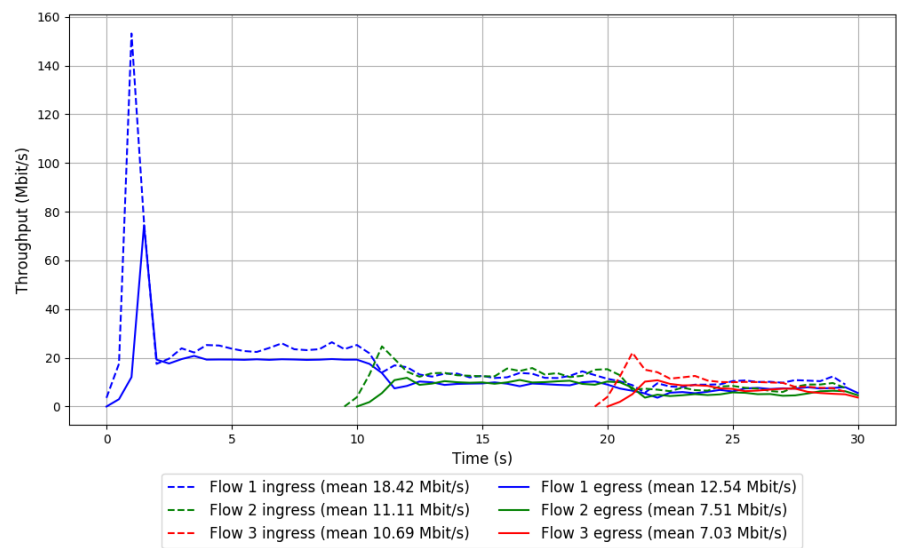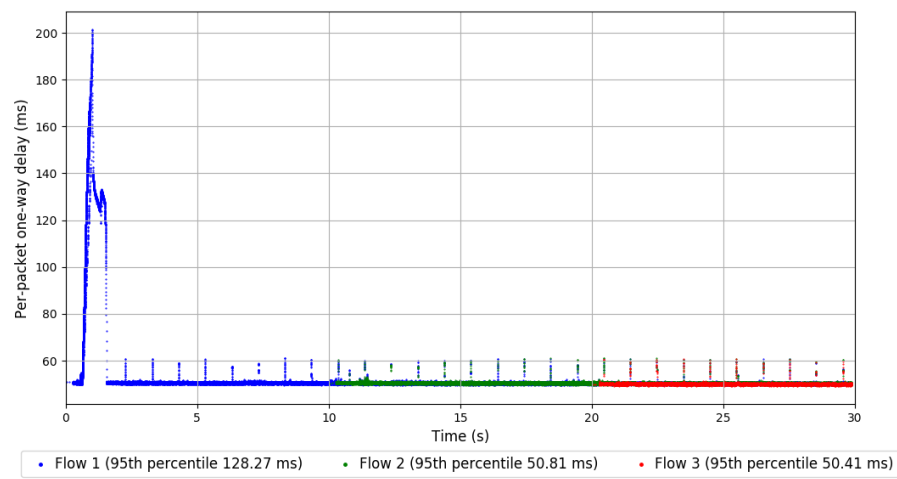Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 17.07 Mbit/s) --- Flow 1 egress (mean 11.95 Mbit/s)
Flow 2 ingress (mean 12.31 Mbit/s) --- Flow 2 egress (mean 8.38 Mbit/s)
Flow 3 ingress (mean 11.14 Mbit/s) --- Flow 3 egress (mean 7.10 Mbit/s)

Flow 1 (95th percentile 99.91 ms)   Flow 2 (95th percentile 48.28 ms)   Flow 3 (95th percentile 48.05 ms)

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```
Run 3: Statistics of FillP-Sheep

Start at: 2018-09-25 17:45:03
End at: 2018-09-25 17:45:33
Local clock offset: 17.614 ms
Remote clock offset: 46.622 ms


# Below is generated by plot.py at 2018-09-25 18:36:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.80 Mbit/s
95th percentile per-packet one-way delay: 77.919 ms
Loss rate: 30.96%
-- Flow 1:
Average throughput: 12.53 Mbit/s
95th percentile per-packet one-way delay: 94.661 ms
Loss rate: 29.09%
-- Flow 2:
Average throughput: 7.66 Mbit/s
95th percentile per-packet one-way delay: 50.126 ms
Loss rate: 33.02%
-- Flow 3:
Average throughput: 6.62 Mbit/s
95th percentile per-packet one-way delay: 49.833 ms
Loss rate: 36.04%
```

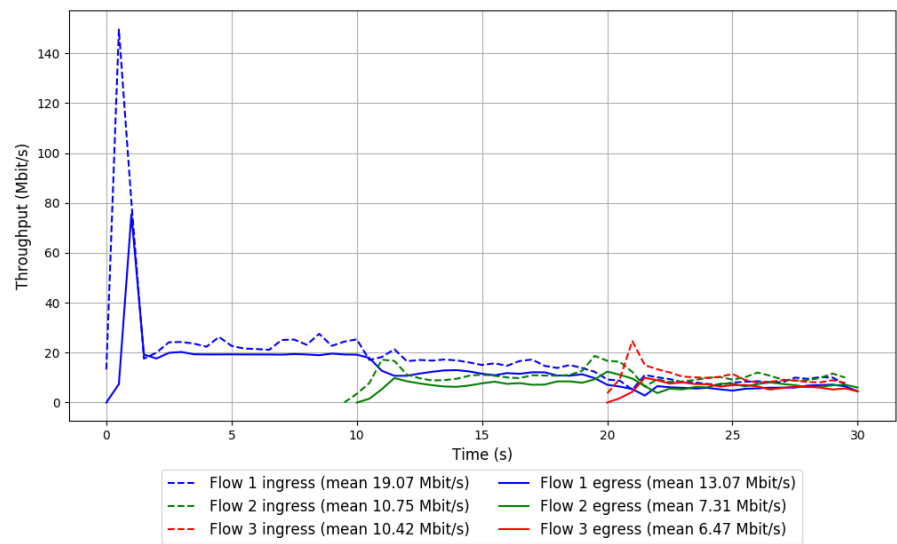Run 3: Report of FillP-Sheep — Data Link
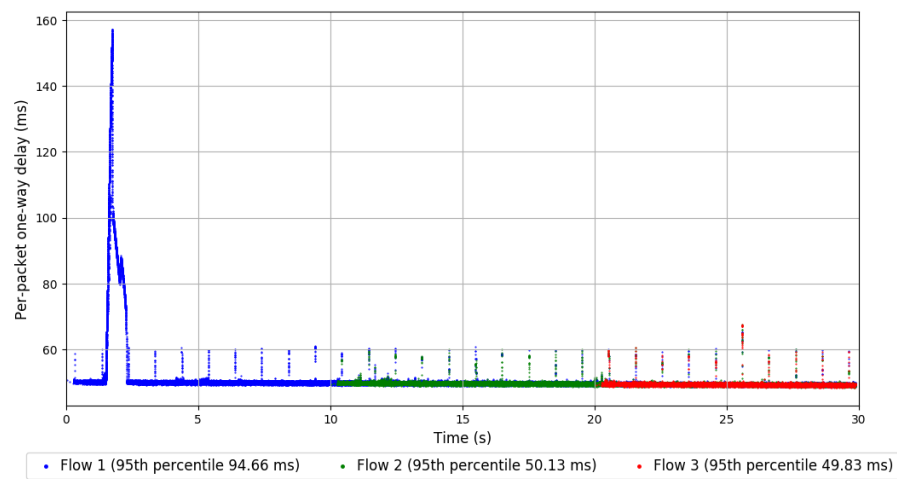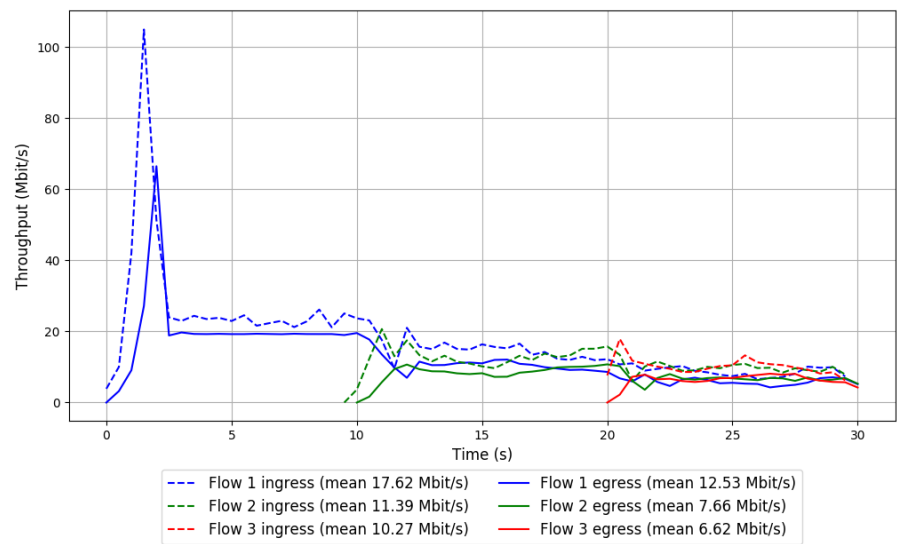
```
Run 4: Statistics of FillP-Sheep

Start at: 2018-09-25 18:08:41
End at: 2018-09-25 18:09:11
Local clock offset: 36.751 ms
Remote clock offset: 46.387 ms


# Below is generated by plot.py at 2018-09-25 18:36:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.85 Mbit/s
95th percentile per-packet one-way delay: 96.727 ms
Loss rate: 32.60%
-- Flow 1:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 135.116 ms
Loss rate: 32.12%
-- Flow 2:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 50.055 ms
Loss rate: 32.73%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 49.912 ms
Loss rate: 34.79%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 18.42 Mbit/s) --- Flow 1 egress (mean 12.54 Mbit/s)
Flow 2 ingress (mean 11.11 Mbit/s) --- Flow 2 egress (mean 7.51 Mbit/s)
Flow 3 ingress (mean 10.69 Mbit/s) --- Flow 3 egress (mean 7.03 Mbit/s)

Flow 1 (95th percentile 135.12 ms)   Flow 2 (95th percentile 50.05 ms)   Flow 3 (95th percentile 49.91 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2018-09-25 18:32:11
End at: 2018-09-25 18:32:41
Local clock offset: 45.412 ms
Remote clock offset: 25.055 ms


# Below is generated by plot.py at 2018-09-25 18:36:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 94.720 ms
Loss rate: 32.59%
-- Flow 1:
Average throughput: 13.07 Mbit/s
95th percentile per-packet one-way delay: 128.272 ms
Loss rate: 31.64%
-- Flow 2:
Average throughput: 7.31 Mbit/s
95th percentile per-packet one-way delay: 50.806 ms
Loss rate: 32.31%
-- Flow 3:
Average throughput: 6.47 Mbit/s
95th percentile per-packet one-way delay: 50.413 ms
Loss rate: 38.45%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 19.07 Mbit/s)   Flow 1 egress (mean 13.07 Mbit/s)
Flow 2 ingress (mean 10.75 Mbit/s)   Flow 2 egress (mean 7.31 Mbit/s)
Flow 3 ingress (mean 10.42 Mbit/s)   Flow 3 egress (mean 6.47 Mbit/s)

Flow 1 (95th percentile 128.27 ms)   Flow 2 (95th percentile 50.81 ms)   Flow 3 (95th percentile 50.41 ms)

```
Run 1: Statistics of Indigo

Start at: 2018-09-25 16:39:18
End at: 2018-09-25 16:39:48
Local clock offset: 6.12 ms
Remote clock offset: 33.969 ms


# Below is generated by plot.py at 2018-09-25 18:36:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.92 Mbit/s
95th percentile per-packet one-way delay: 124.727 ms
Loss rate: 82.62%
-- Flow 1:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 113.227 ms
Loss rate: 79.22%
-- Flow 2:
Average throughput: 5.92 Mbit/s
95th percentile per-packet one-way delay: 115.000 ms
Loss rate: 84.78%
-- Flow 3:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 141.784 ms
Loss rate: 86.78%
```

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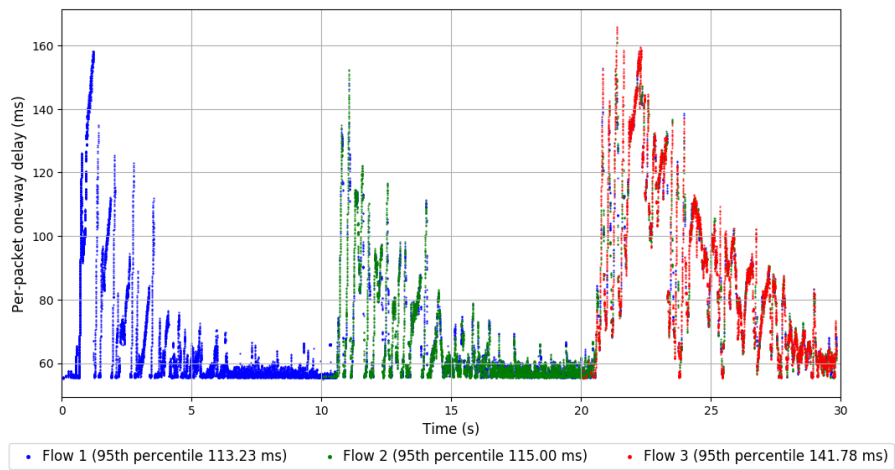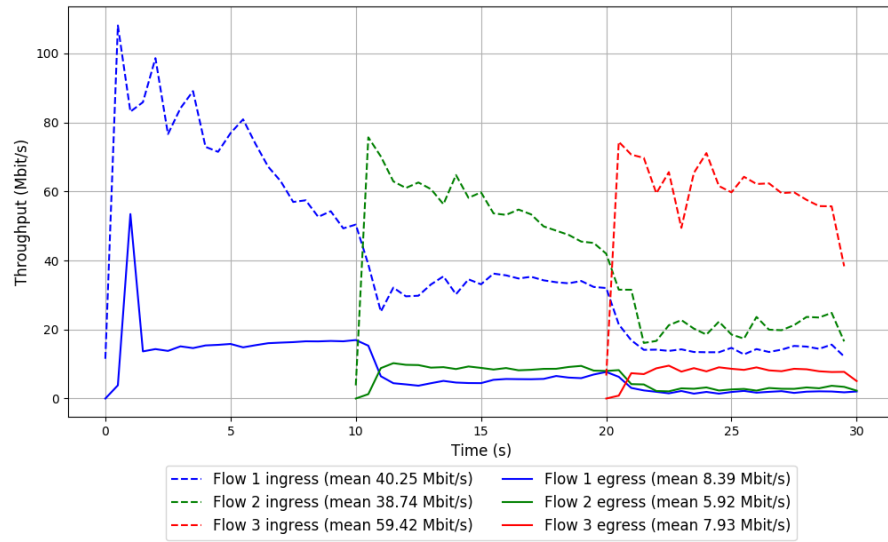
```
Run 2: Statistics of Indigo

Start at: 2018-09-25 17:03:04
End at: 2018-09-25 17:03:34
Local clock offset: 1.459 ms
Remote clock offset: 35.142 ms


# Below is generated by plot.py at 2018-09-25 18:36:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 83.929 ms
Loss rate: 81.16%
-- Flow 1:
Average throughput: 9.35 Mbit/s
95th percentile per-packet one-way delay: 97.914 ms
Loss rate: 79.08%
-- Flow 2:
Average throughput: 6.55 Mbit/s
95th percentile per-packet one-way delay: 73.806 ms
Loss rate: 83.03%
-- Flow 3:
Average throughput: 5.26 Mbit/s
95th percentile per-packet one-way delay: 70.218 ms
Loss rate: 85.05%
```

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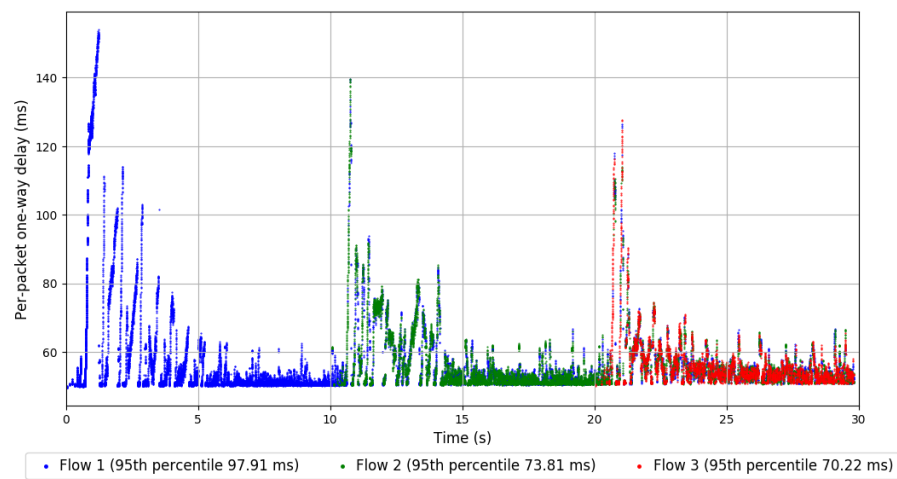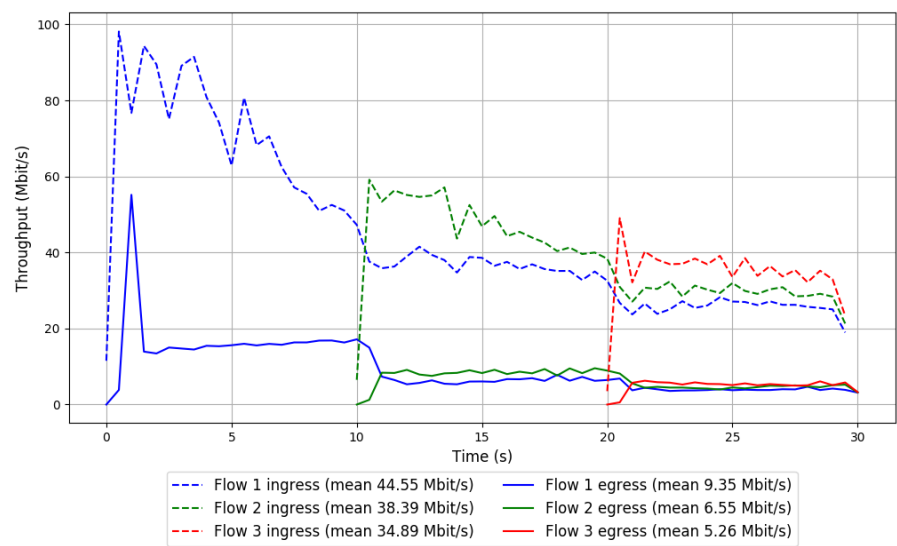
```
Run 3: Statistics of Indigo

Start at: 2018-09-25 17:26:53
End at: 2018-09-25 17:27:23
Local clock offset: 4.248 ms
Remote clock offset: 44.939 ms


# Below is generated by plot.py at 2018-09-25 18:36:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.88 Mbit/s
95th percentile per-packet one-way delay: 80.871 ms
Loss rate: 78.74%
-- Flow 1:
Average throughput: 9.76 Mbit/s
95th percentile per-packet one-way delay: 83.947 ms
Loss rate: 74.45%
-- Flow 2:
Average throughput: 6.13 Mbit/s
95th percentile per-packet one-way delay: 71.827 ms
Loss rate: 82.16%
-- Flow 3:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 84.497 ms
Loss rate: 85.03%
```

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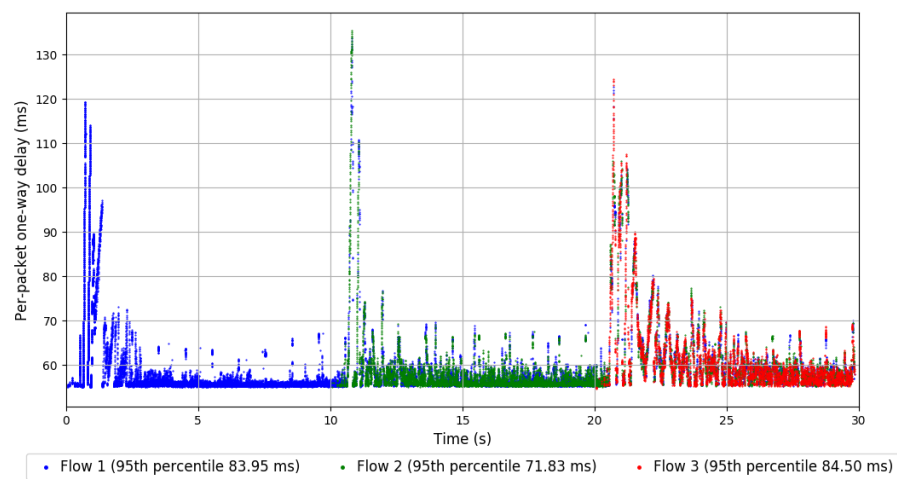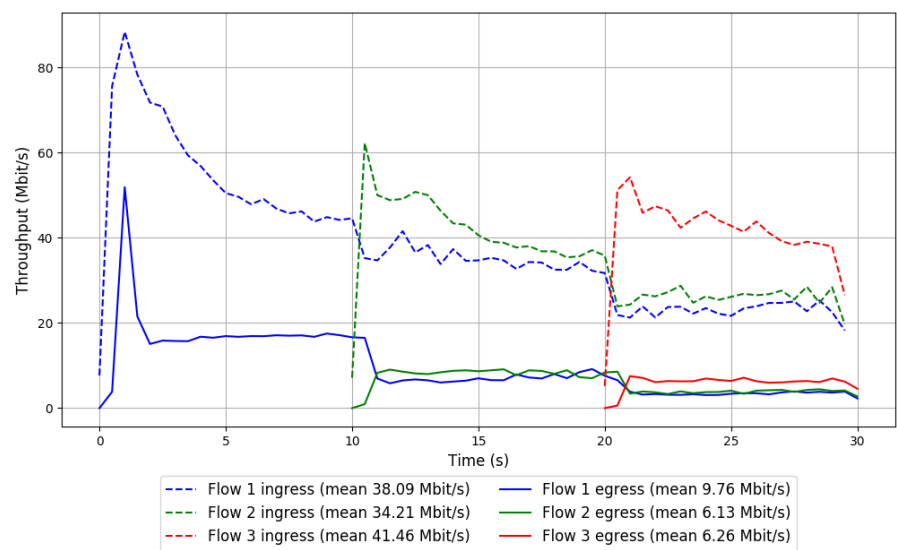
```
Run 4: Statistics of Indigo

Start at: 2018-09-25 17:51:14
End at: 2018-09-25 17:51:44
Local clock offset: 25.826 ms
Remote clock offset: 49.911 ms


# Below is generated by plot.py at 2018-09-25 18:36:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.15 Mbit/s
95th percentile per-packet one-way delay: 100.394 ms
Loss rate: 81.88%
-- Flow 1:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 110.022 ms
Loss rate: 79.54%
-- Flow 2:
Average throughput: 7.12 Mbit/s
95th percentile per-packet one-way delay: 95.060 ms
Loss rate: 84.03%
-- Flow 3:
Average throughput: 5.38 Mbit/s
95th percentile per-packet one-way delay: 89.719 ms
Loss rate: 84.92%
```
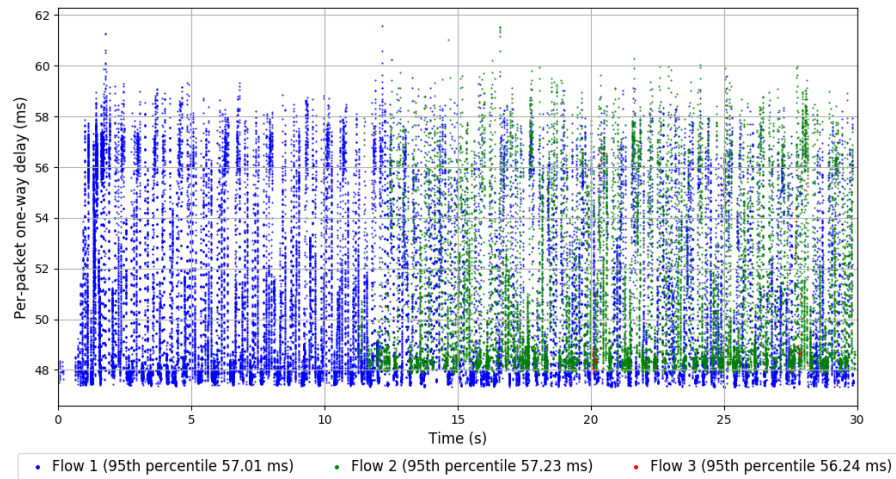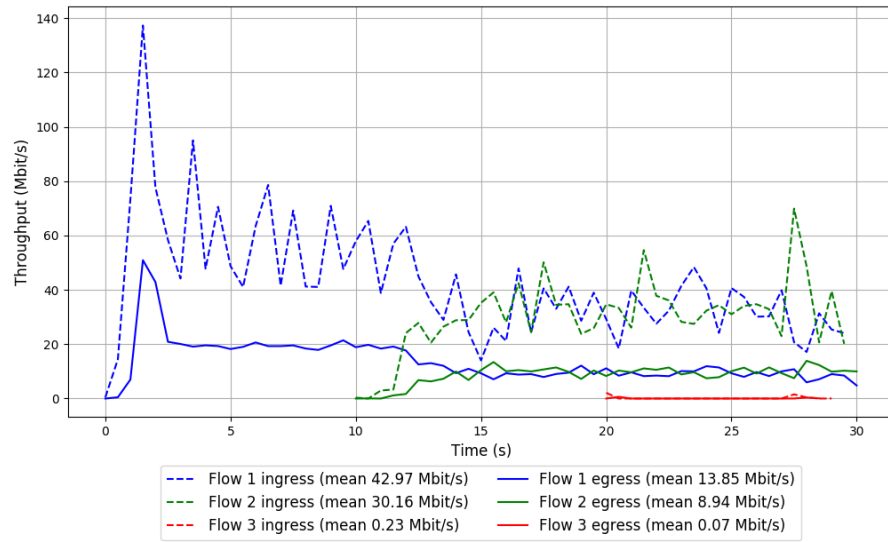
Run 4: Report of Indigo — Data Link
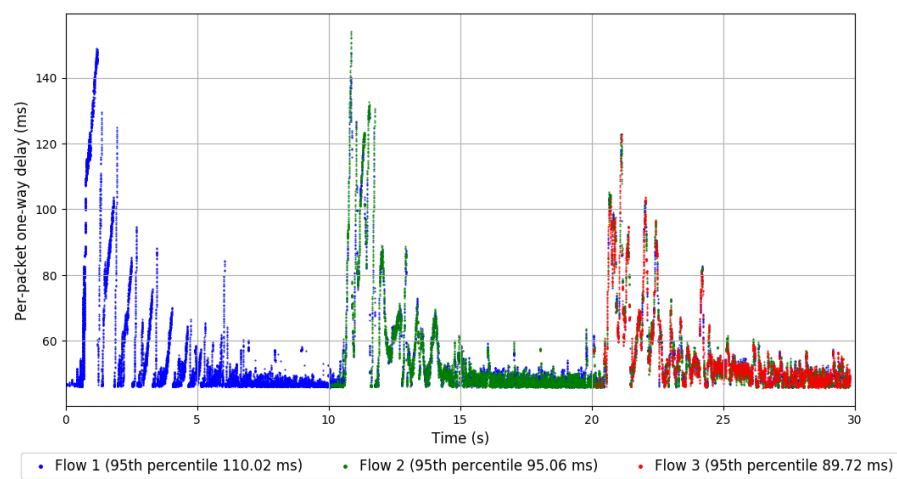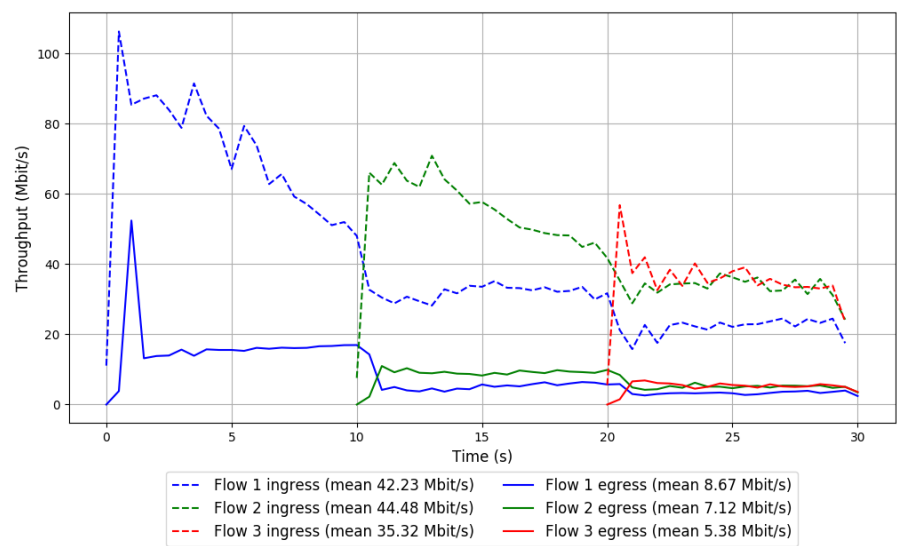
```
Run 5: Statistics of Indigo

Start at: 2018-09-25 18:14:55
End at: 2018-09-25 18:15:25
Local clock offset: 39.182 ms
Remote clock offset: 36.749 ms


# Below is generated by plot.py at 2018-09-25 18:36:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.60 Mbit/s
95th percentile per-packet one-way delay: 120.908 ms
Loss rate: 83.97%
-- Flow 1:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 124.234 ms
Loss rate: 83.44%
-- Flow 2:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 89.555 ms
Loss rate: 84.98%
-- Flow 3:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 103.583 ms
Loss rate: 86.43%
```
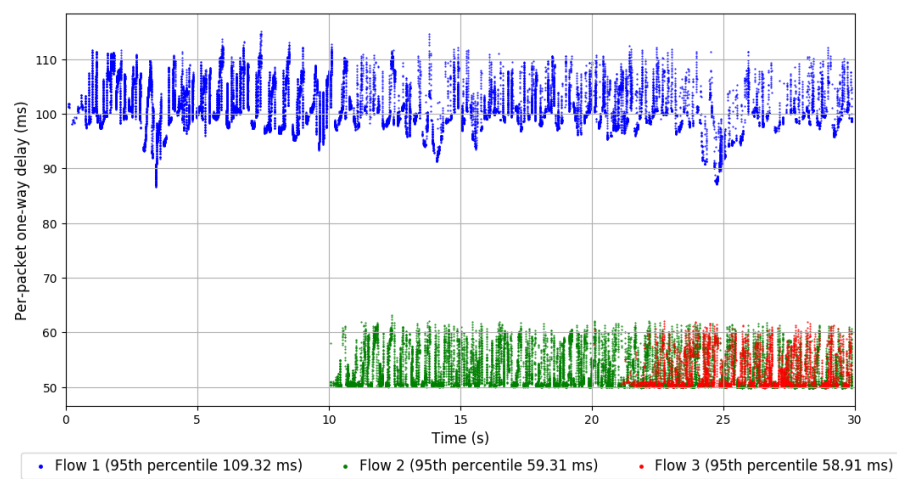
Run 5: Report of Indigo — Data Link
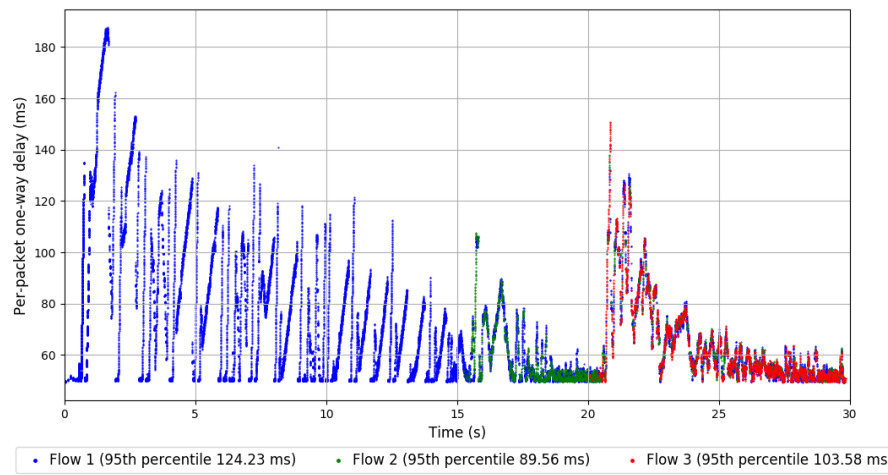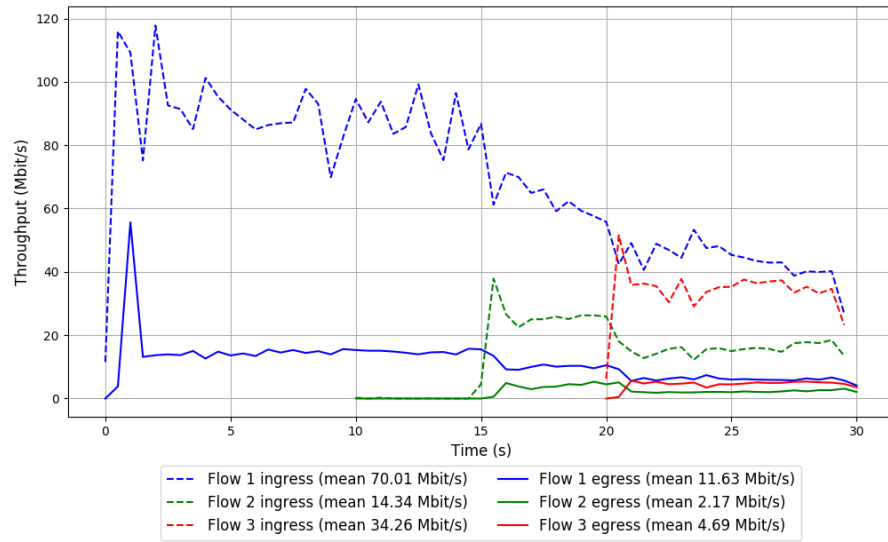
```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-09-25 16:48:05
End at: 2018-09-25 16:48:35
Local clock offset: 3.275 ms
Remote clock offset: 35.71 ms


# Below is generated by plot.py at 2018-09-25 18:36:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.78 Mbit/s
95th percentile per-packet one-way delay: 57.052 ms
Loss rate: 68.75%
-- Flow 1:
Average throughput: 13.85 Mbit/s
95th percentile per-packet one-way delay: 57.005 ms
Loss rate: 67.92%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 57.233 ms
Loss rate: 70.50%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 56.245 ms
Loss rate: 74.29%
```

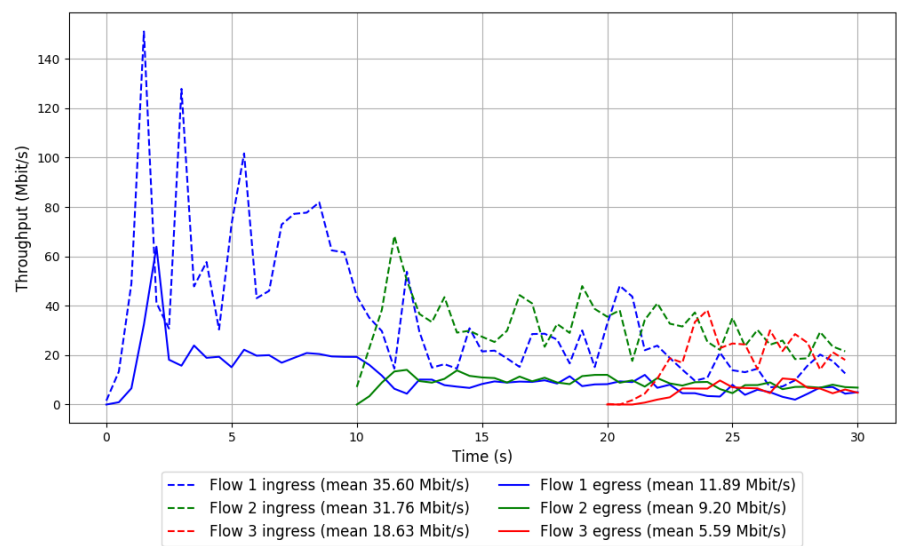Run 1: Report of Indigo-96d2da3 — Data Link

Flow 1 ingress (mean 42.97 Mbit/s) — Flow 1 egress (mean 13.85 Mbit/s)
Flow 2 ingress (mean 30.16 Mbit/s) — Flow 2 egress (mean 8.94 Mbit/s)
Flow 3 ingress (mean 0.23 Mbit/s) — Flow 3 egress (mean 0.07 Mbit/s)

Flow 1 (95th percentile 57.01 ms)   Flow 2 (95th percentile 57.23 ms)   Flow 3 (95th percentile 56.24 ms)
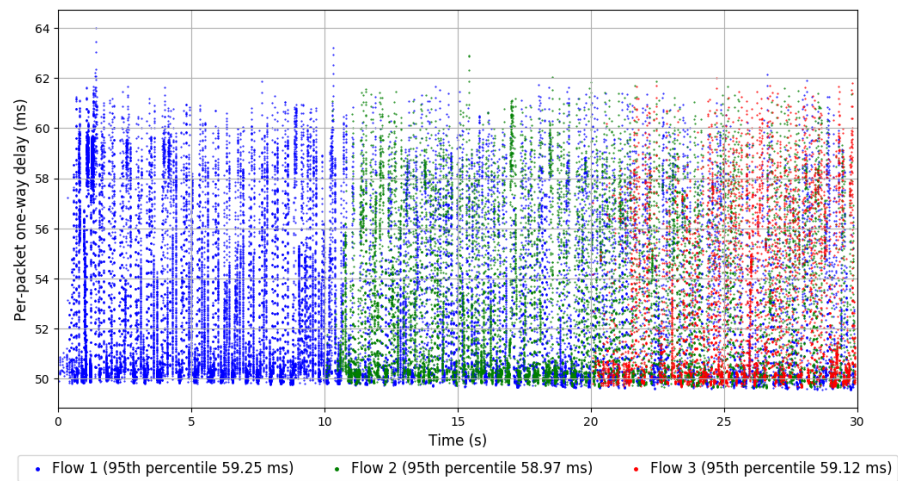
```
Run 2: Statistics of Indigo-96d2da3

Start at: 2018-09-25 17:11:51
End at: 2018-09-25 17:12:21
Local clock offset: 1.889 ms
Remote clock offset: 44.838 ms


# Below is generated by plot.py at 2018-09-25 18:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.03 Mbit/s
95th percentile per-packet one-way delay: 57.787 ms
Loss rate: 67.61%
-- Flow 1:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 57.814 ms
Loss rate: 66.36%
-- Flow 2:
Average throughput: 10.34 Mbit/s
95th percentile per-packet one-way delay: 57.671 ms
Loss rate: 69.74%
-- Flow 3:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 58.297 ms
Loss rate: 80.51%
```

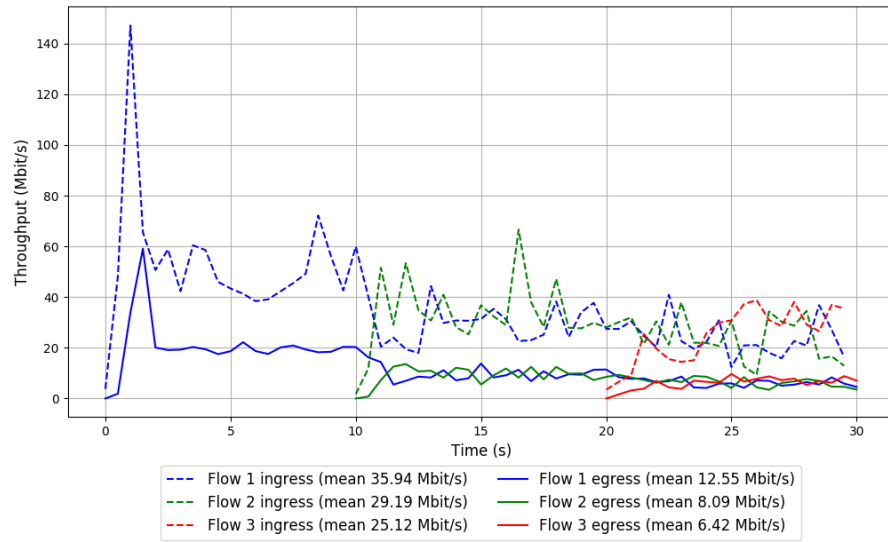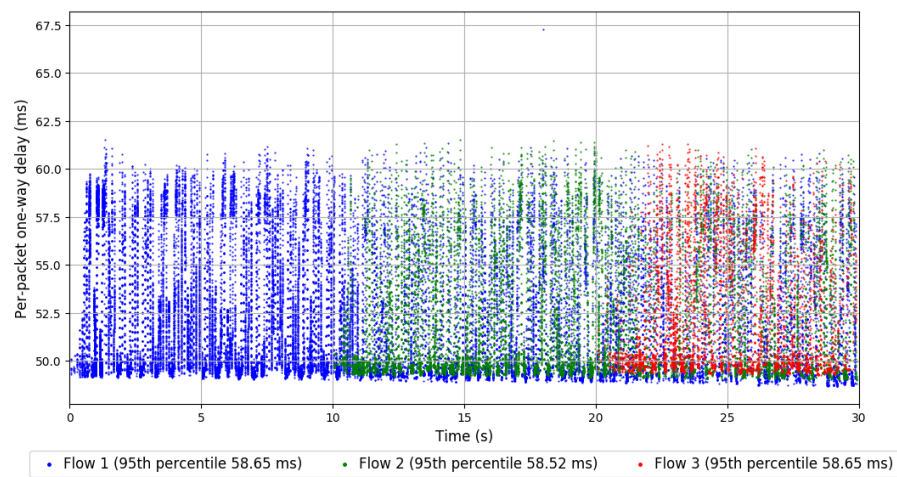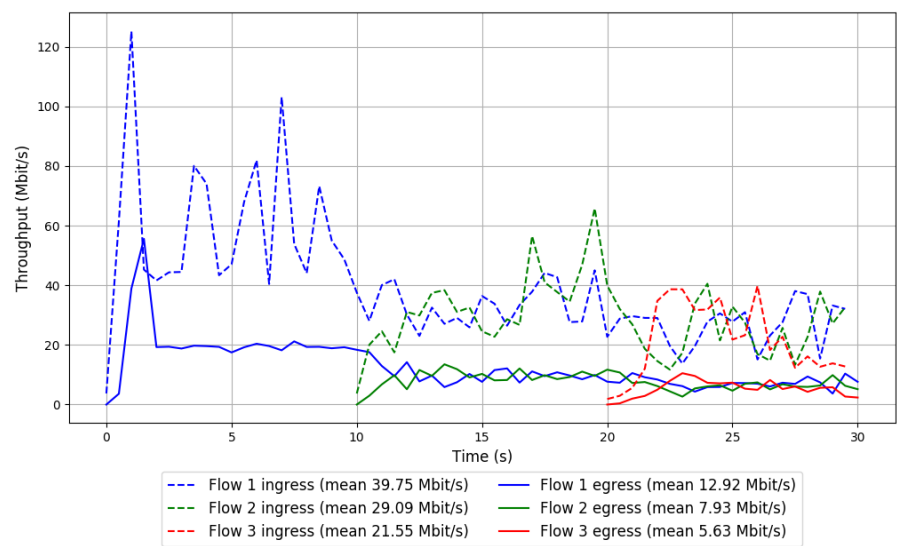Run 2: Report of Indigo-96d2da3 — Data Link
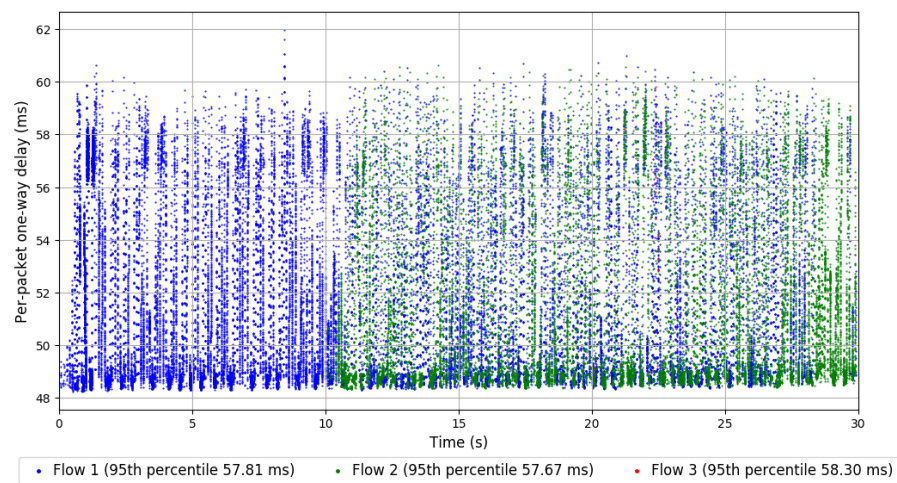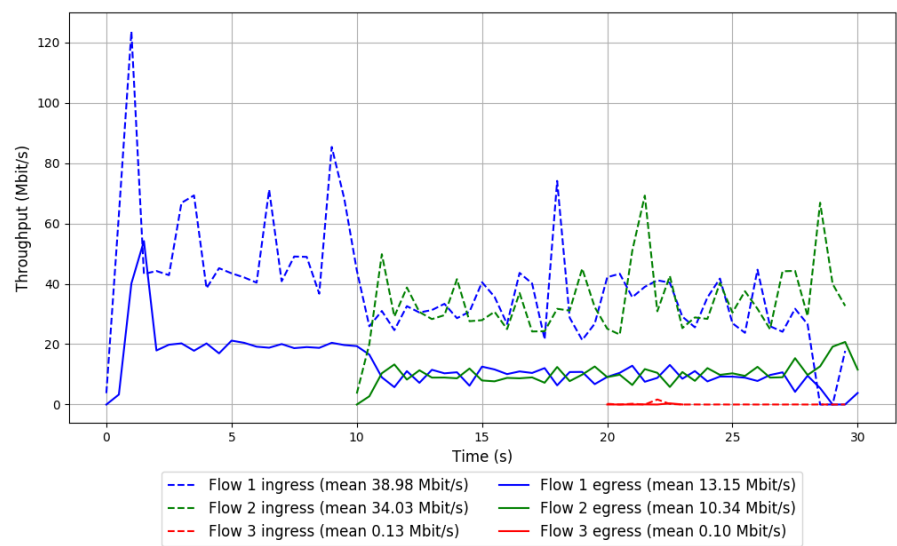
```
Run 3: Statistics of Indigo-96d2da3

Start at: 2018-09-25 17:35:51
End at: 2018-09-25 17:36:21
Local clock offset: 4.678 ms
Remote clock offset: 50.452 ms


# Below is generated by plot.py at 2018-09-25 18:36:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 108.309 ms
Loss rate: 68.60%
-- Flow 1:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 109.316 ms
Loss rate: 66.75%
-- Flow 2:
Average throughput: 9.20 Mbit/s
95th percentile per-packet one-way delay: 59.307 ms
Loss rate: 71.18%
-- Flow 3:
Average throughput: 5.59 Mbit/s
95th percentile per-packet one-way delay: 58.913 ms
Loss rate: 70.42%
```

Run 3: Report of Indigo-96d2da3 — Data Link

Flow 1 ingress (mean 35.60 Mbit/s)   Flow 1 egress (mean 11.89 Mbit/s)
Flow 2 ingress (mean 31.76 Mbit/s)   Flow 2 egress (mean 9.20 Mbit/s)
Flow 3 ingress (mean 18.63 Mbit/s)   Flow 3 egress (mean 5.59 Mbit/s)

Flow 1 (95th percentile 109.32 ms)   Flow 2 (95th percentile 59.31 ms)   Flow 3 (95th percentile 58.91 ms)

```
Run 4: Statistics of Indigo-96d2da3

Start at: 2018-09-25 17:59:57
End at: 2018-09-25 18:00:27
Local clock offset: 32.343 ms
Remote clock offset: 45.834 ms


# Below is generated by plot.py at 2018-09-25 18:36:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.01 Mbit/s
95th percentile per-packet one-way delay: 59.191 ms
Loss rate: 68.66%
-- Flow 1:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 59.247 ms
Loss rate: 65.23%
-- Flow 2:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 58.965 ms
Loss rate: 72.44%
-- Flow 3:
Average throughput: 6.42 Mbit/s
95th percentile per-packet one-way delay: 59.122 ms
Loss rate: 74.68%
```

Run 4: Report of Indigo-96d2da3 — Data Link

```
Run 5: Statistics of Indigo-96d2da3

Start at: 2018-09-25 18:23:31
End at: 2018-09-25 18:24:01
Local clock offset: 42.448 ms
Remote clock offset: 29.444 ms


# Below is generated by plot.py at 2018-09-25 18:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.04 Mbit/s
95th percentile per-packet one-way delay: 58.630 ms
Loss rate: 69.85%
-- Flow 1:
Average throughput: 12.92 Mbit/s
95th percentile per-packet one-way delay: 58.645 ms
Loss rate: 67.59%
-- Flow 2:
Average throughput: 7.93 Mbit/s
95th percentile per-packet one-way delay: 58.519 ms
Loss rate: 72.88%
-- Flow 3:
Average throughput: 5.63 Mbit/s
95th percentile per-packet one-way delay: 58.649 ms
Loss rate: 74.16%
```

Run 5: Report of Indigo-96d2da3 — Data Link

- Flow 1 ingress (mean 39.75 Mbit/s)
- Flow 1 egress (mean 12.92 Mbit/s)
- Flow 2 ingress (mean 29.09 Mbit/s)
- Flow 2 egress (mean 7.93 Mbit/s)
- Flow 3 ingress (mean 21.55 Mbit/s)
- Flow 3 egress (mean 5.63 Mbit/s)

- Flow 1 (95th percentile 58.65 ms)
- Flow 2 (95th percentile 58.52 ms)
- Flow 3 (95th percentile 58.65 ms)

```
Run 1: Statistics of LEDBAT

Start at: 2018-09-25 16:38:04
End at: 2018-09-25 16:38:34
Local clock offset: 6.202 ms
Remote clock offset: 35.888 ms

# Below is generated by plot.py at 2018-09-25 18:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.94 Mbit/s
95th percentile per-packet one-way delay: 55.501 ms
Loss rate: 1.55%
-- Flow 1:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 55.554 ms
Loss rate: 1.25%
-- Flow 2:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 55.336 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 55.154 ms
Loss rate: 1.28%
```

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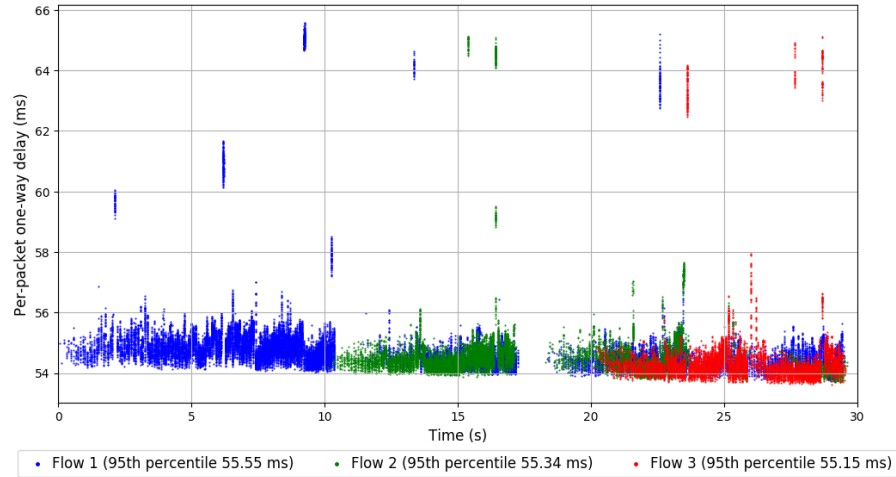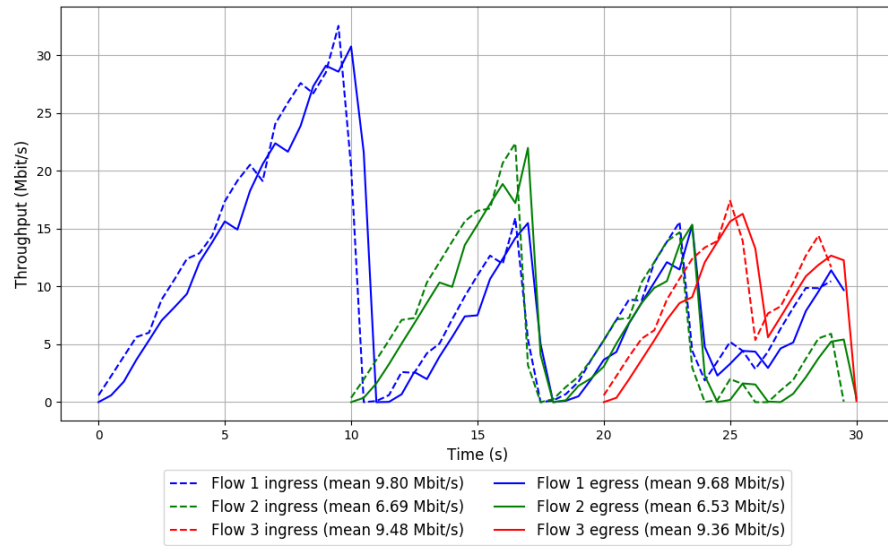
```
Run 2: Statistics of LEDBAT

Start at: 2018-09-25 17:01:51
End at: 2018-09-25 17:02:21
Local clock offset: 1.469 ms
Remote clock offset: 29.729 ms

# Below is generated by plot.py at 2018-09-25 18:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 55.373 ms
Loss rate: 1.63%
-- Flow 1:
Average throughput: 10.62 Mbit/s
95th percentile per-packet one-way delay: 55.181 ms
Loss rate: 1.12%
-- Flow 2:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 55.624 ms
Loss rate: 2.12%
-- Flow 3:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 55.359 ms
Loss rate: 3.37%
```
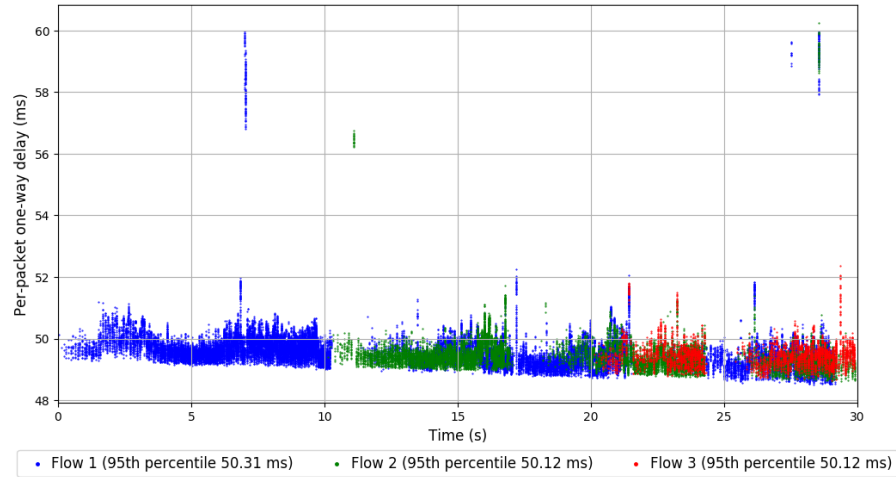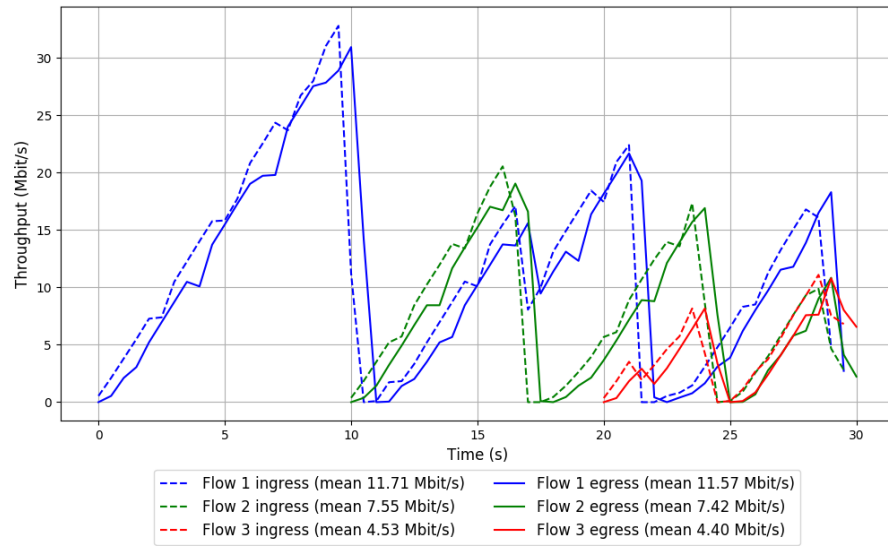
Run 2: Report of LEDBAT — Data Link
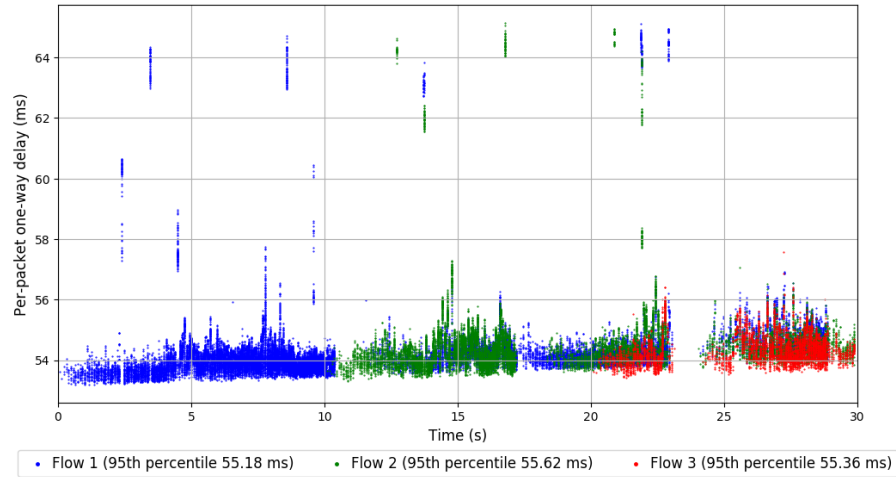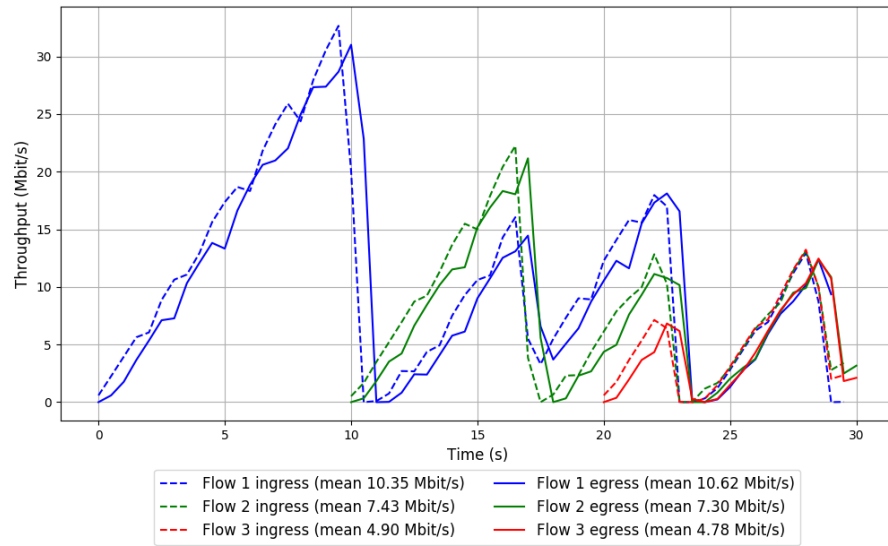
```
Run 3: Statistics of LEDBAT

Start at: 2018-09-25 17:25:39
End at: 2018-09-25 17:26:09
Local clock offset: 4.031 ms
Remote clock offset: 43.983 ms


# Below is generated by plot.py at 2018-09-25 18:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.98 Mbit/s
95th percentile per-packet one-way delay: 56.685 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 9.88 Mbit/s
95th percentile per-packet one-way delay: 56.641 ms
Loss rate: 1.37%
-- Flow 2:
Average throughput: 6.77 Mbit/s
95th percentile per-packet one-way delay: 56.733 ms
Loss rate: 2.34%
-- Flow 3:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 56.782 ms
Loss rate: 2.39%
```

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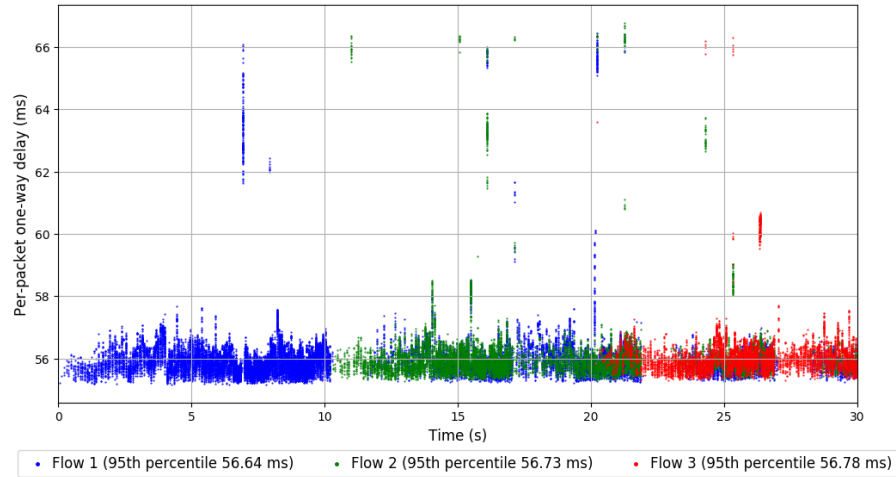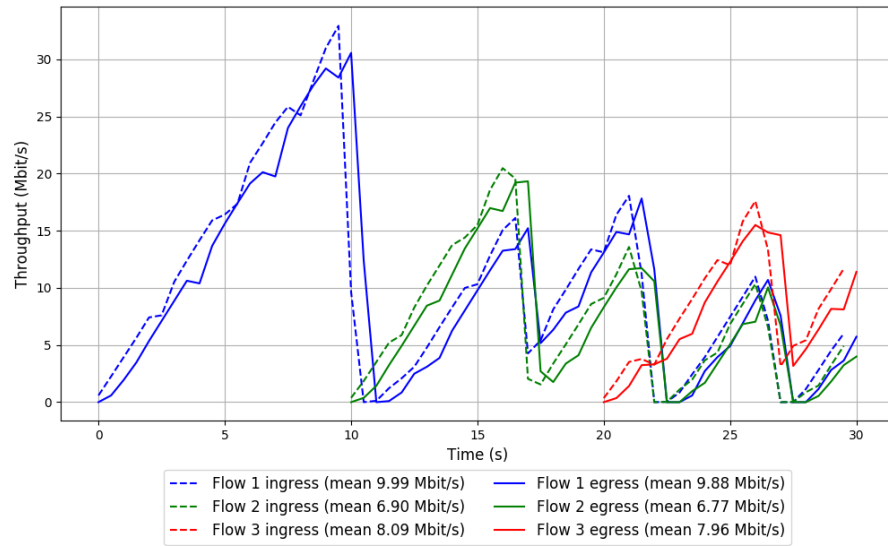
```
Run 4: Statistics of LEDBAT

Start at: 2018-09-25 17:50:01
End at: 2018-09-25 17:50:31
Local clock offset: 24.455 ms
Remote clock offset: 46.246 ms

# Below is generated by plot.py at 2018-09-25 18:36:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.69 Mbit/s
95th percentile per-packet one-way delay: 51.156 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 9.79 Mbit/s
95th percentile per-packet one-way delay: 51.069 ms
Loss rate: 1.33%
-- Flow 2:
Average throughput: 7.30 Mbit/s
95th percentile per-packet one-way delay: 51.187 ms
Loss rate: 2.24%
-- Flow 3:
Average throughput: 6.32 Mbit/s
95th percentile per-packet one-way delay: 52.121 ms
Loss rate: 2.90%
```

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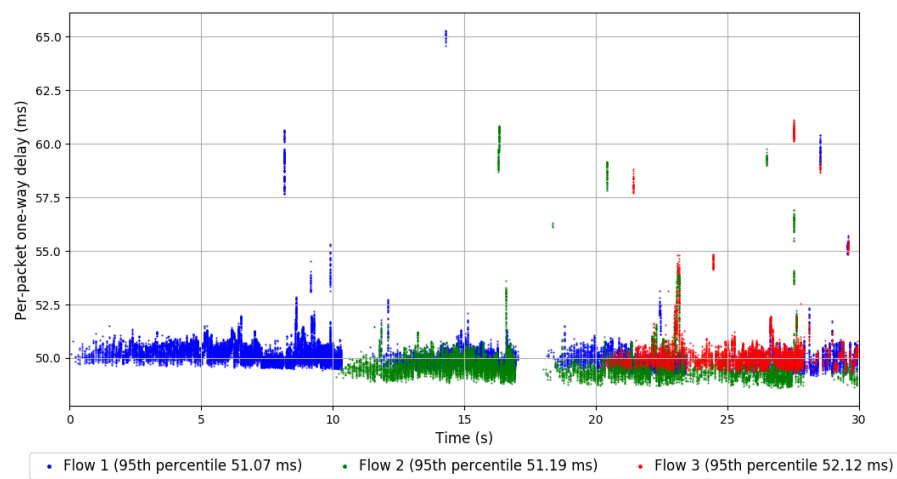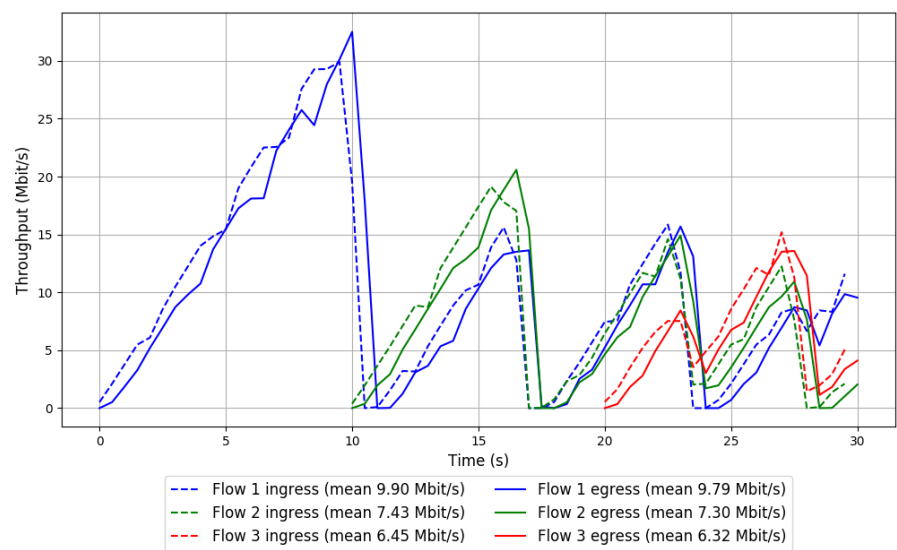
```
Run 5: Statistics of LEDBAT

Start at: 2018-09-25 18:13:42
End at: 2018-09-25 18:14:12
Local clock offset: 38.645 ms
Remote clock offset: 38.433 ms


# Below is generated by plot.py at 2018-09-25 18:36:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.63 Mbit/s
95th percentile per-packet one-way delay: 50.261 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: 50.310 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 7.42 Mbit/s
95th percentile per-packet one-way delay: 50.123 ms
Loss rate: 2.16%
-- Flow 3:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 50.115 ms
Loss rate: 3.60%
```

Run 5: Report of LEDBAT — Data Link

- - - - Flow 1 ingress (mean 11.71 Mbit/s) ——— Flow 1 egress (mean 11.57 Mbit/s)
- - - - Flow 2 ingress (mean 7.55 Mbit/s) ——— Flow 2 egress (mean 7.42 Mbit/s)
- - - - Flow 3 ingress (mean 4.53 Mbit/s) ——— Flow 3 egress (mean 4.40 Mbit/s)

- Flow 1 (95th percentile 50.31 ms) • Flow 2 (95th percentile 50.12 ms) • Flow 3 (95th percentile 50.12 ms)

```
Run 1: Statistics of Indigo-Muses

Start at: 2018-09-25 16:35:37
End at: 2018-09-25 16:36:07
Local clock offset: 5.978 ms
Remote clock offset: 42.992 ms


# Below is generated by plot.py at 2018-09-25 18:36:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.06 Mbit/s
95th percentile per-packet one-way delay: 51.752 ms
Loss rate: 56.69%
-- Flow 1:
Average throughput: 19.66 Mbit/s
95th percentile per-packet one-way delay: 51.482 ms
Loss rate: 56.23%
-- Flow 2:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 53.964 ms
Loss rate: 70.09%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 55.949 ms
Loss rate: 73.87%
```

Run 1: Report of Indigo-Muses — Data Link
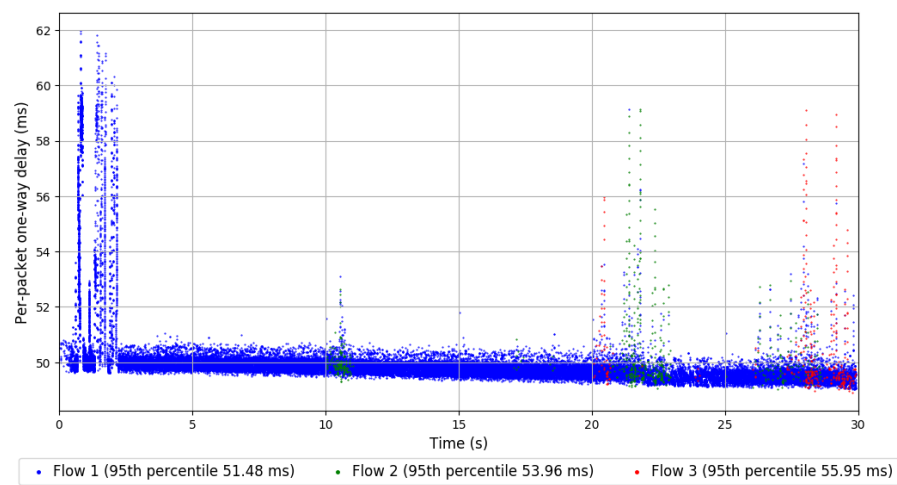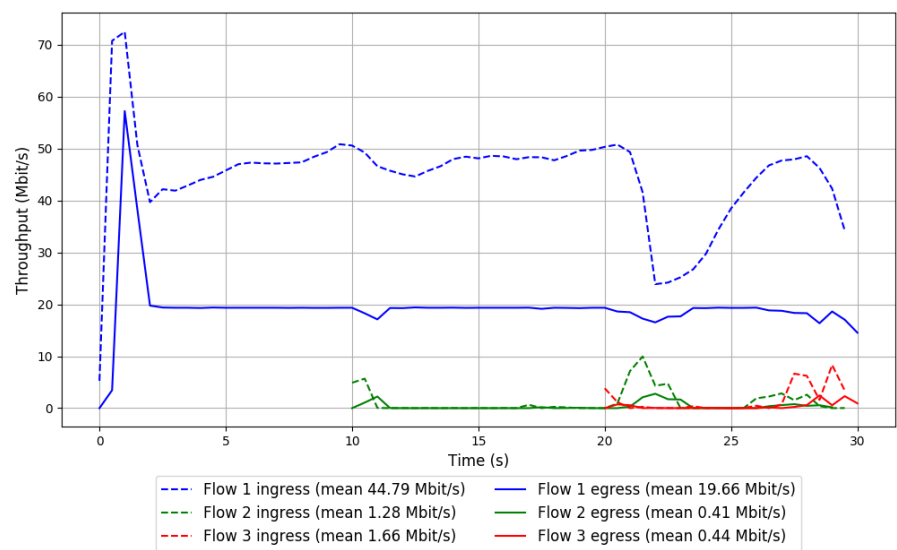
```
Run 2: Statistics of Indigo-Muses

Start at: 2018-09-25 16:59:23
End at: 2018-09-25 16:59:53
Local clock offset: 1.725 ms
Remote clock offset: 20.642 ms


# Below is generated by plot.py at 2018-09-25 18:36:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 65.942 ms
Loss rate: 55.13%
-- Flow 1:
Average throughput: 19.66 Mbit/s
95th percentile per-packet one-way delay: 66.124 ms
Loss rate: 54.84%
-- Flow 2:
Average throughput: 0.63 Mbit/s
95th percentile per-packet one-way delay: 64.464 ms
Loss rate: 65.15%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 63.908 ms
Loss rate: 69.99%
```

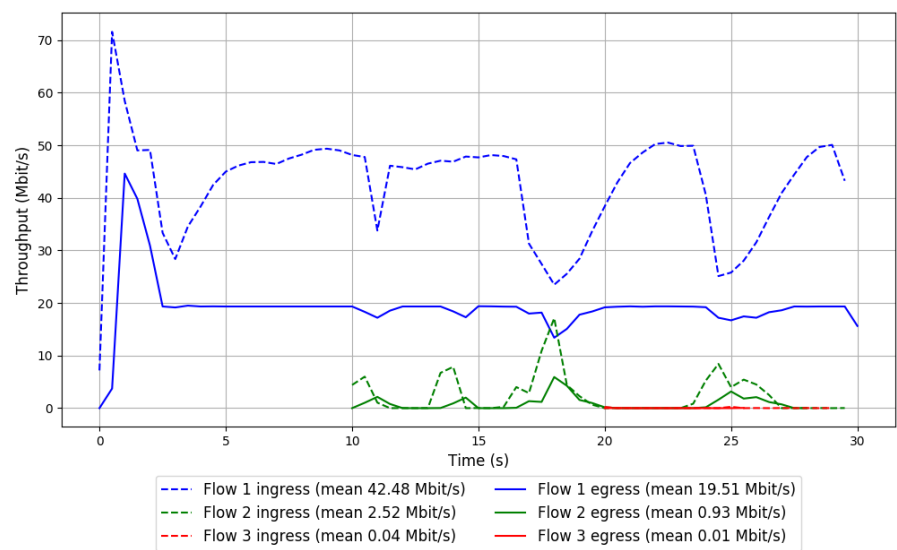Run 2: Report of Indigo-Muses — Data Link
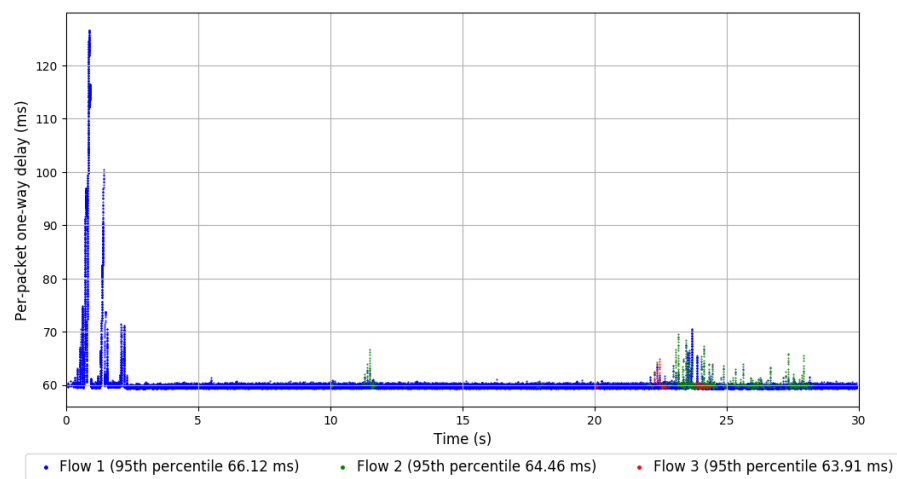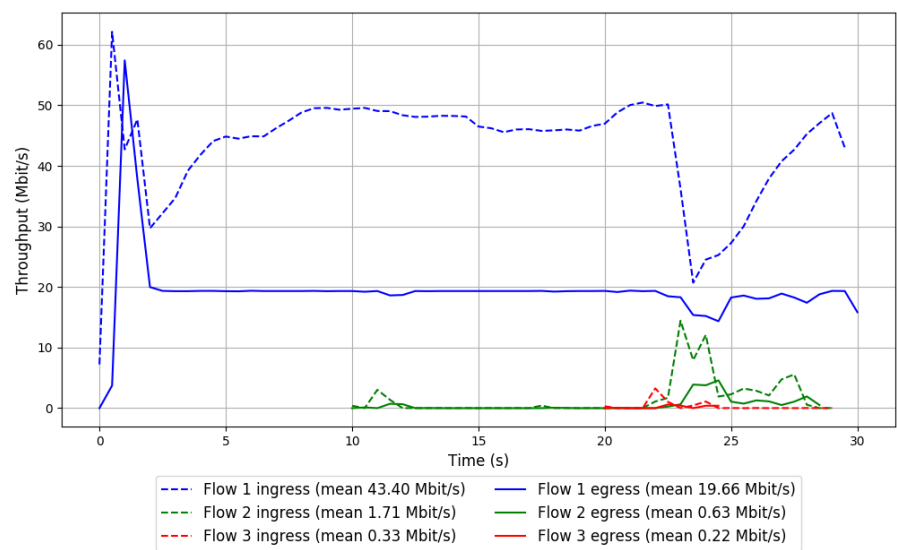
```
Run 3: Statistics of Indigo-Muses

Start at: 2018-09-25 17:23:05
End at: 2018-09-25 17:23:35
Local clock offset: 3.941 ms
Remote clock offset: 49.641 ms


# Below is generated by plot.py at 2018-09-25 18:36:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 52.561 ms
Loss rate: 56.13%
-- Flow 1:
Average throughput: 19.72 Mbit/s
95th percentile per-packet one-way delay: 52.388 ms
Loss rate: 55.69%
-- Flow 2:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 54.795 ms
Loss rate: 71.30%
-- Flow 3:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 52.667 ms
Loss rate: 74.78%
```

Run 3: Report of Indigo-Muses — Data Link
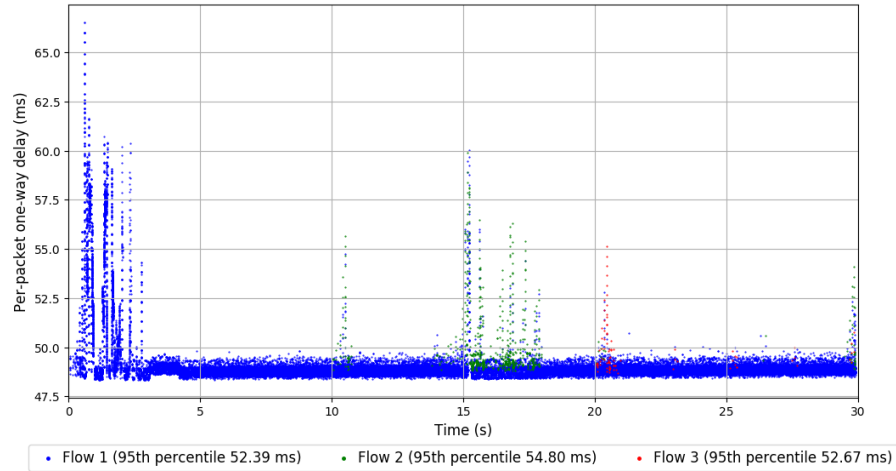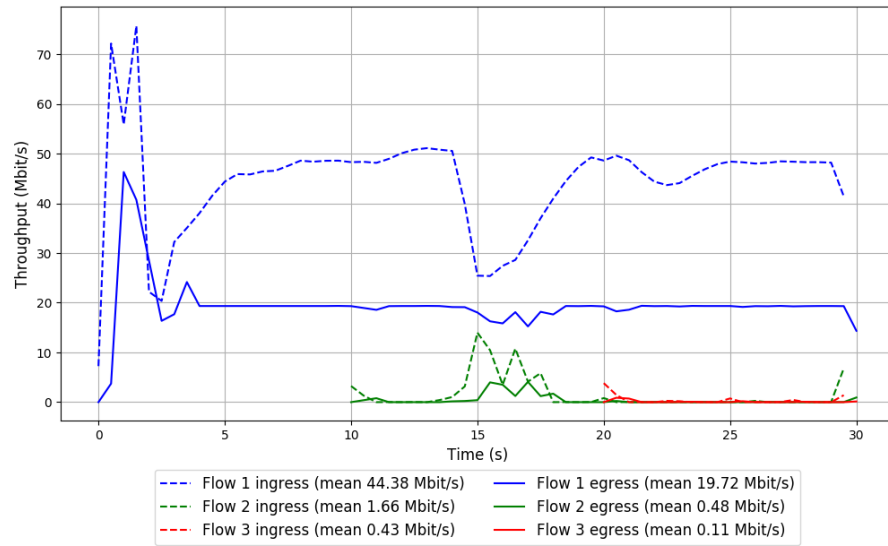
```
Run 4: Statistics of Indigo-Muses

Start at: 2018-09-25 17:47:29
End at: 2018-09-25 17:47:59
Local clock offset: 21.417 ms
Remote clock offset: 41.755 ms


# Below is generated by plot.py at 2018-09-25 18:36:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 58.998 ms
Loss rate: 54.67%
-- Flow 1:
Average throughput: 19.51 Mbit/s
95th percentile per-packet one-way delay: 58.988 ms
Loss rate: 54.19%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 59.245 ms
Loss rate: 66.74%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 54.455 ms
Loss rate: 89.48%
```

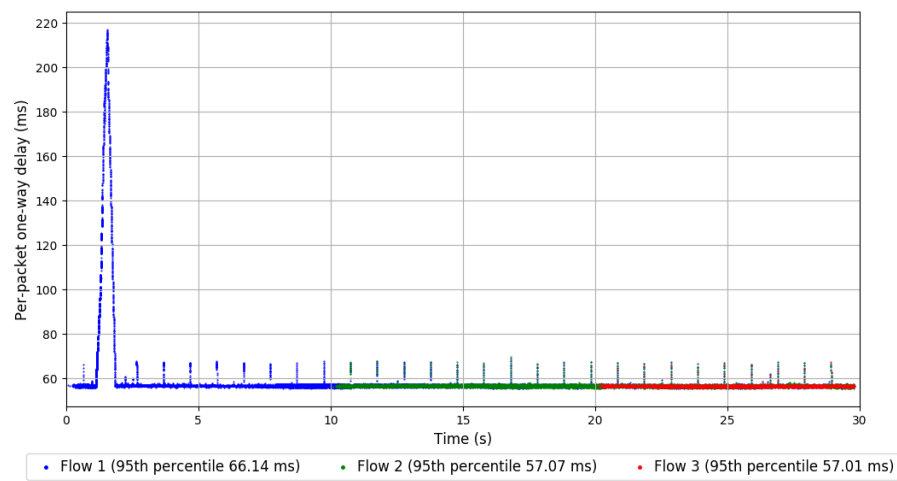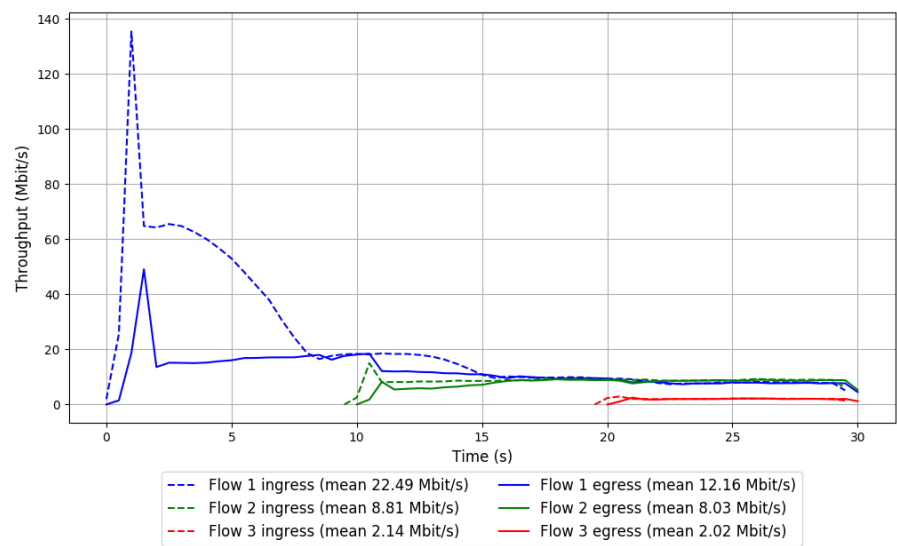Run 4: Report of Indigo-Muses — Data Link
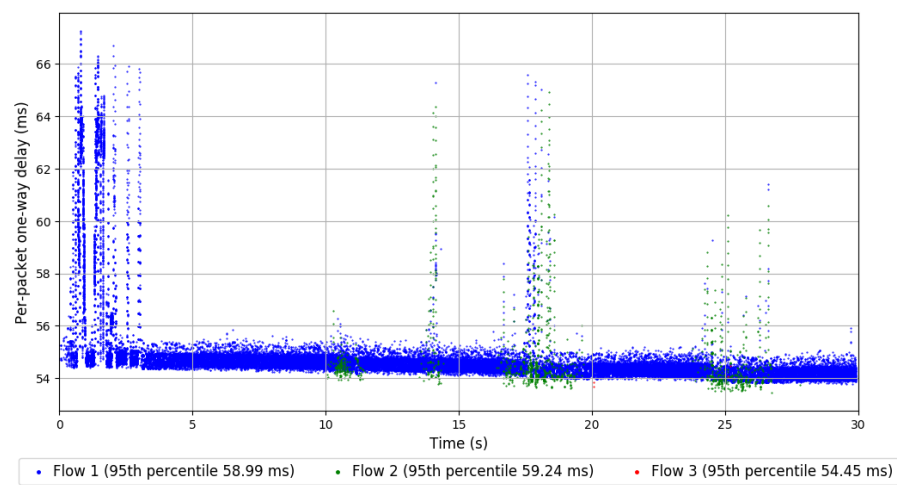
```
Run 5: Statistics of Indigo-Muses

Start at: 2018-09-25 18:11:08
End at: 2018-09-25 18:11:38
Local clock offset: 37.54 ms
Remote clock offset: 42.072 ms


# Below is generated by plot.py at 2018-09-25 18:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.07 Mbit/s
95th percentile per-packet one-way delay: 55.904 ms
Loss rate: 56.16%
-- Flow 1:
Average throughput: 19.46 Mbit/s
95th percentile per-packet one-way delay: 56.299 ms
Loss rate: 55.86%
-- Flow 2:
Average throughput: 0.53 Mbit/s
95th percentile per-packet one-way delay: 53.746 ms
Loss rate: 64.18%
-- Flow 3:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 53.200 ms
Loss rate: 63.73%
```

Run 5: Report of Indigo-Muses — Data Link
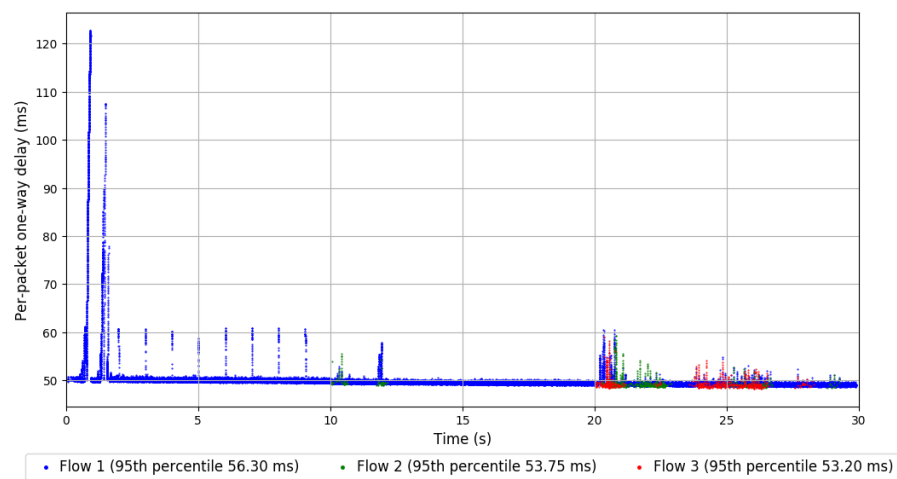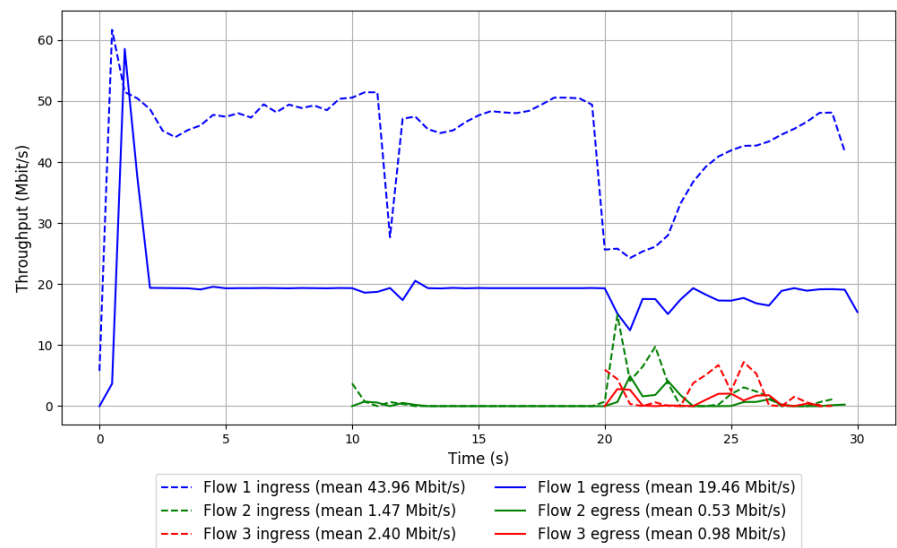
```
Run 1: Statistics of PCC-Allegro

Start at: 2018-09-25 16:58:10
End at: 2018-09-25 16:58:40
Local clock offset: 1.769 ms
Remote clock offset: 24.472 ms


# Below is generated by plot.py at 2018-09-25 18:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.16 Mbit/s
95th percentile per-packet one-way delay: 58.233 ms
Loss rate: 37.70%
-- Flow 1:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 66.139 ms
Loss rate: 46.09%
-- Flow 2:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 57.067 ms
Loss rate: 9.28%
-- Flow 3:
Average throughput: 2.02 Mbit/s
95th percentile per-packet one-way delay: 57.008 ms
Loss rate: 6.78%
```
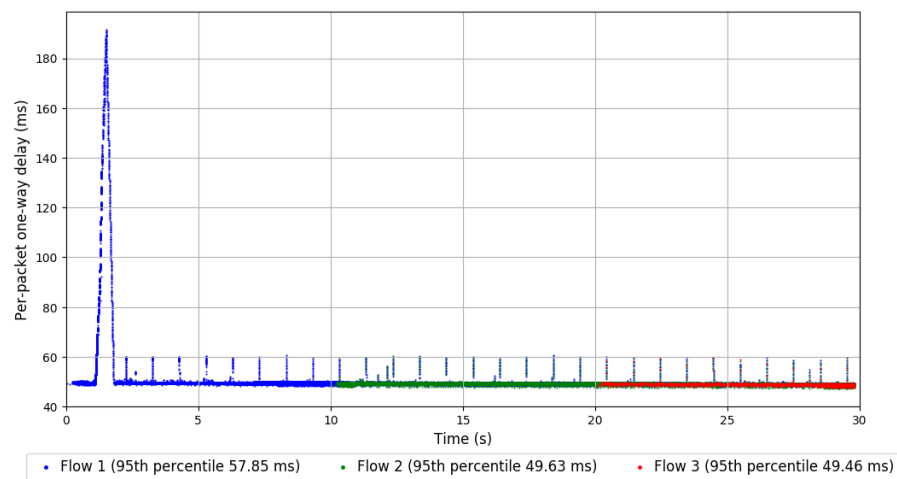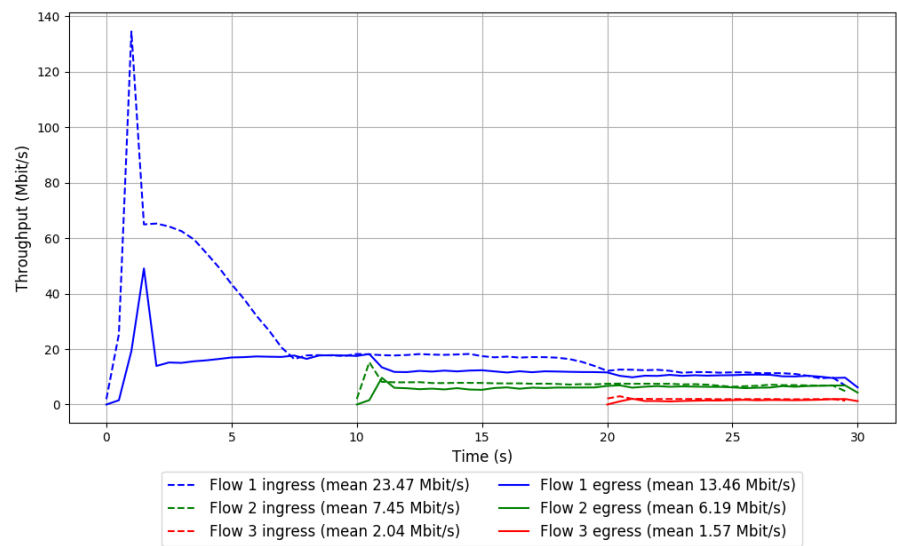
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 22.49 Mbit/s) ——— Flow 1 egress (mean 12.16 Mbit/s)
Flow 2 ingress (mean 8.81 Mbit/s) ——— Flow 2 egress (mean 8.03 Mbit/s)
Flow 3 ingress (mean 2.14 Mbit/s) ——— Flow 3 egress (mean 2.02 Mbit/s)

Flow 1 (95th percentile 66.14 ms) • Flow 2 (95th percentile 57.07 ms) • Flow 3 (95th percentile 57.01 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-09-25 17:21:45
End at: 2018-09-25 17:22:15
Local clock offset: 3.629 ms
Remote clock offset: 50.537 ms


# Below is generated by plot.py at 2018-09-25 18:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.25 Mbit/s
95th percentile per-packet one-way delay: 49.456 ms
Loss rate: 33.53%
-- Flow 1:
Average throughput: 12.36 Mbit/s
95th percentile per-packet one-way delay: 57.144 ms
Loss rate: 40.78%
-- Flow 2:
Average throughput: 7.96 Mbit/s
95th percentile per-packet one-way delay: 48.698 ms
Loss rate: 9.92%
-- Flow 3:
Average throughput: 1.85 Mbit/s
95th percentile per-packet one-way delay: 48.691 ms
Loss rate: 15.80%
```

Run 2: Report of PCC-Allegro — Data Link
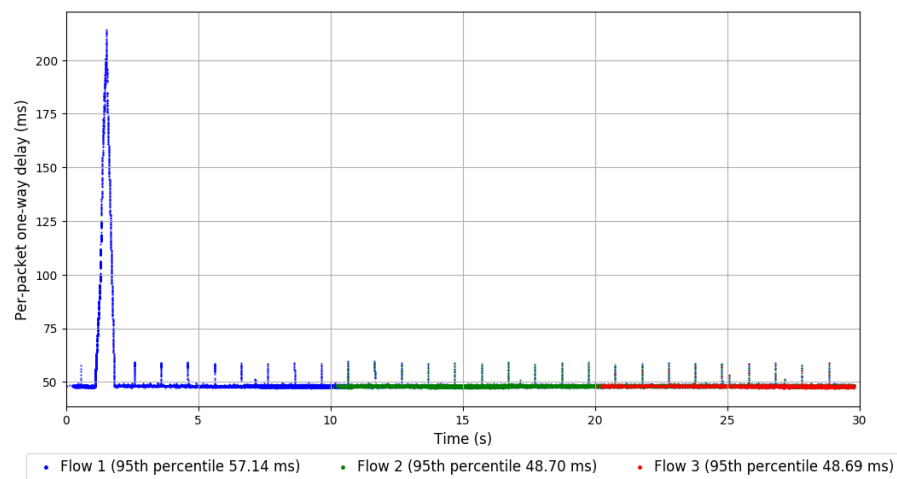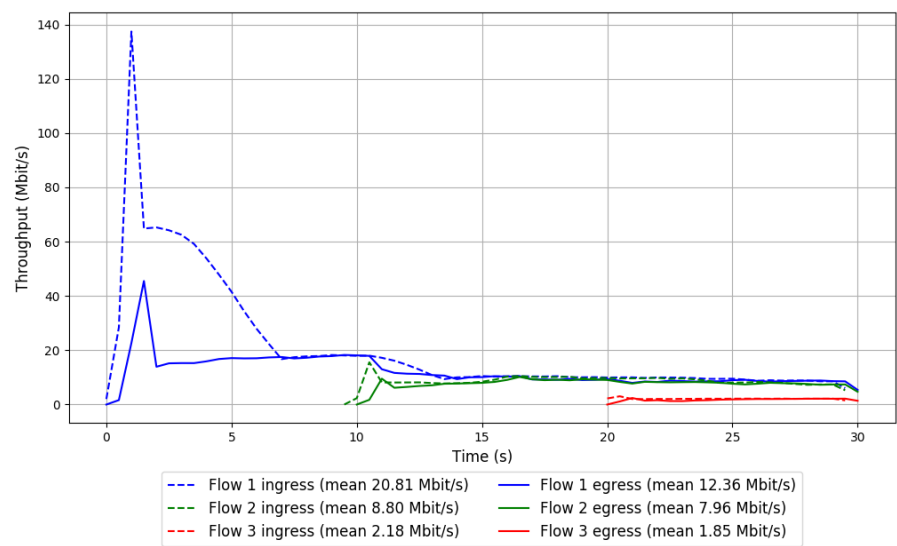
```
Run 3: Statistics of PCC-Allegro

Start at: 2018-09-25 17:46:16
End at: 2018-09-25 17:46:46
Local clock offset: 19.818 ms
Remote clock offset: 47.215 ms


# Below is generated by plot.py at 2018-09-25 18:37:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.08 Mbit/s
95th percentile per-packet one-way delay: 52.359 ms
Loss rate: 38.02%
-- Flow 1:
Average throughput: 13.46 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 42.83%
-- Flow 2:
Average throughput: 6.19 Mbit/s
95th percentile per-packet one-way delay: 49.633 ms
Loss rate: 17.20%
-- Flow 3:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 49.457 ms
Loss rate: 23.55%
```

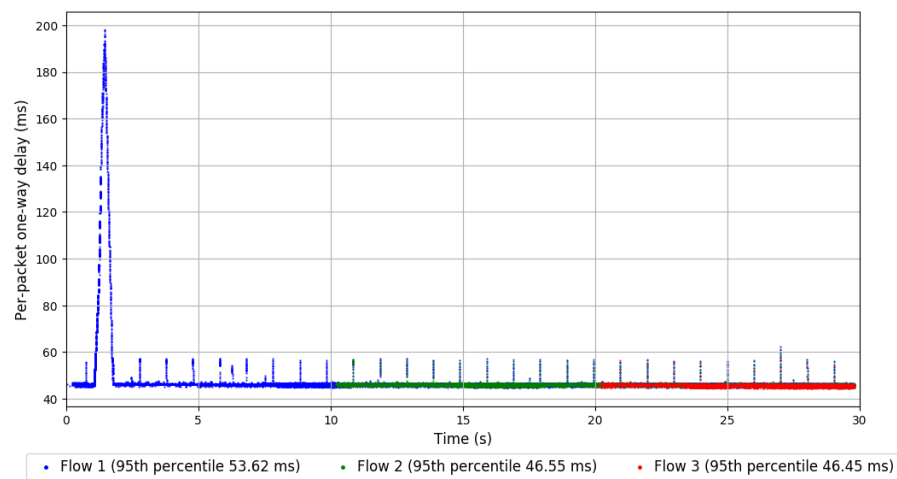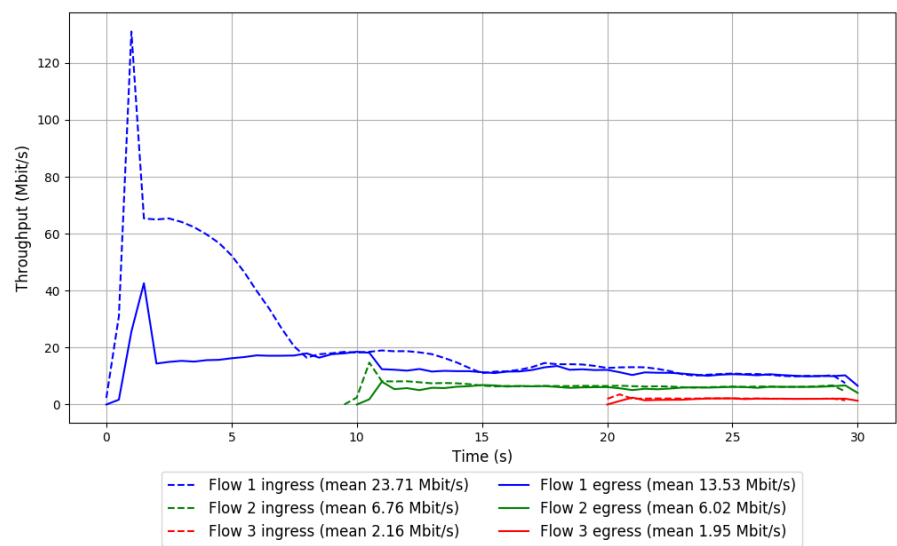## Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 23.47 Mbit/s) — Flow 1 egress (mean 13.46 Mbit/s)
Flow 2 ingress (mean 7.45 Mbit/s) — Flow 2 egress (mean 6.19 Mbit/s)
Flow 3 ingress (mean 2.04 Mbit/s) — Flow 3 egress (mean 1.57 Mbit/s)

Flow 1 (95th percentile 57.85 ms) • Flow 2 (95th percentile 49.63 ms) • Flow 3 (95th percentile 49.46 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-09-25 18:09:55
End at: 2018-09-25 18:10:25
Local clock offset: 37.184 ms
Remote clock offset: 44.67 ms


# Below is generated by plot.py at 2018-09-25 18:37:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.29 Mbit/s
95th percentile per-packet one-way delay: 50.735 ms
Loss rate: 33.28%
-- Flow 1:
Average throughput: 12.37 Mbit/s
95th percentile per-packet one-way delay: 58.188 ms
Loss rate: 40.41%
-- Flow 2:
Average throughput: 8.10 Mbit/s
95th percentile per-packet one-way delay: 49.722 ms
Loss rate: 9.65%
-- Flow 3:
Average throughput: 1.65 Mbit/s
95th percentile per-packet one-way delay: 49.440 ms
Loss rate: 23.10%
```
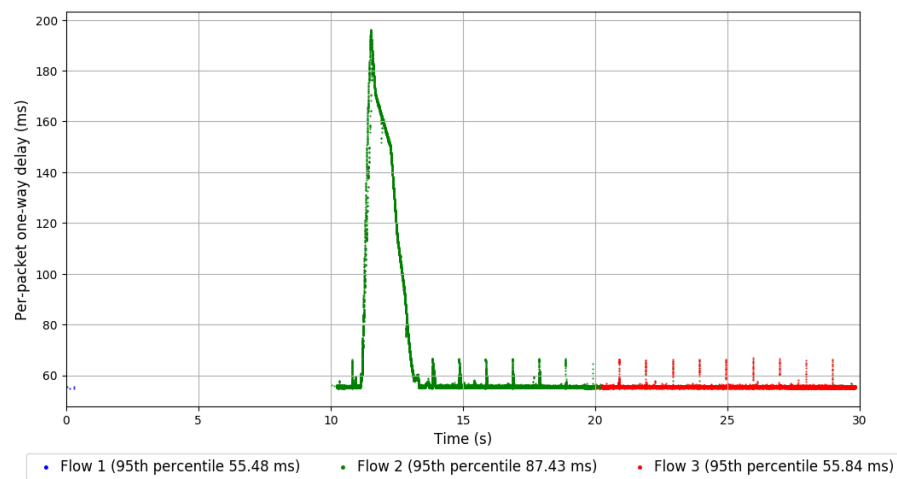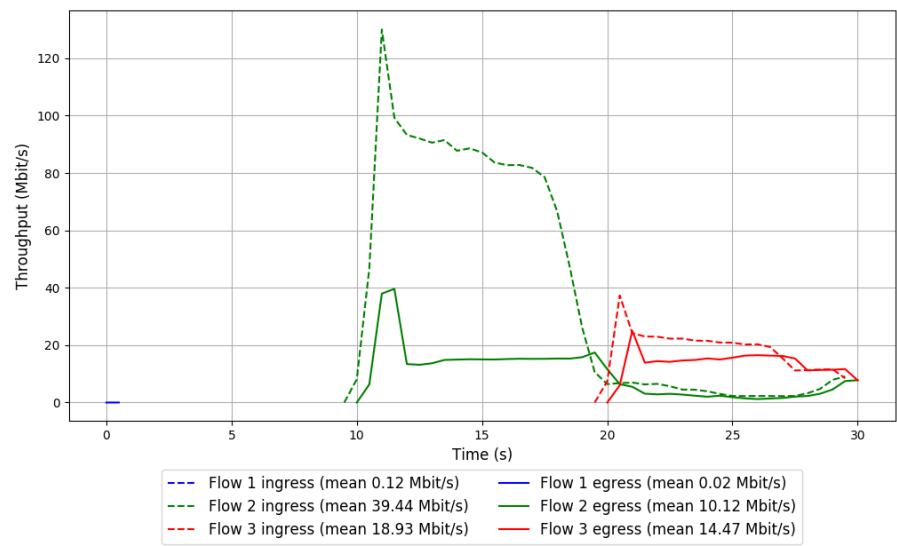
Run 4: Report of PCC-Allegro — Data Link
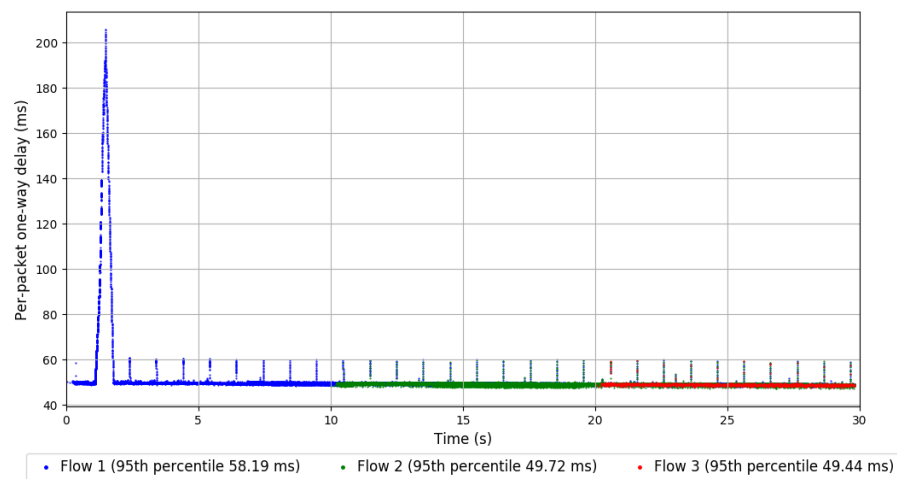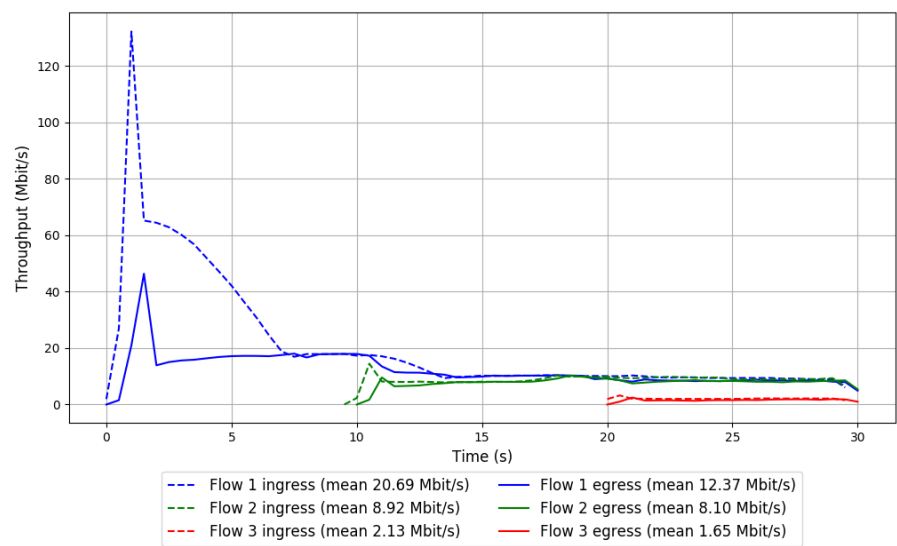
```
Run 5: Statistics of PCC-Allegro

Start at: 2018-09-25 18:33:25
End at: 2018-09-25 18:33:55
Local clock offset: 45.655 ms
Remote clock offset: 28.643 ms


# Below is generated by plot.py at 2018-09-25 18:37:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.16 Mbit/s
95th percentile per-packet one-way delay: 47.668 ms
Loss rate: 37.39%
-- Flow 1:
Average throughput: 13.53 Mbit/s
95th percentile per-packet one-way delay: 53.616 ms
Loss rate: 43.12%
-- Flow 2:
Average throughput: 6.02 Mbit/s
95th percentile per-packet one-way delay: 46.552 ms
Loss rate: 11.43%
-- Flow 3:
Average throughput: 1.95 Mbit/s
95th percentile per-packet one-way delay: 46.453 ms
Loss rate: 10.69%
```

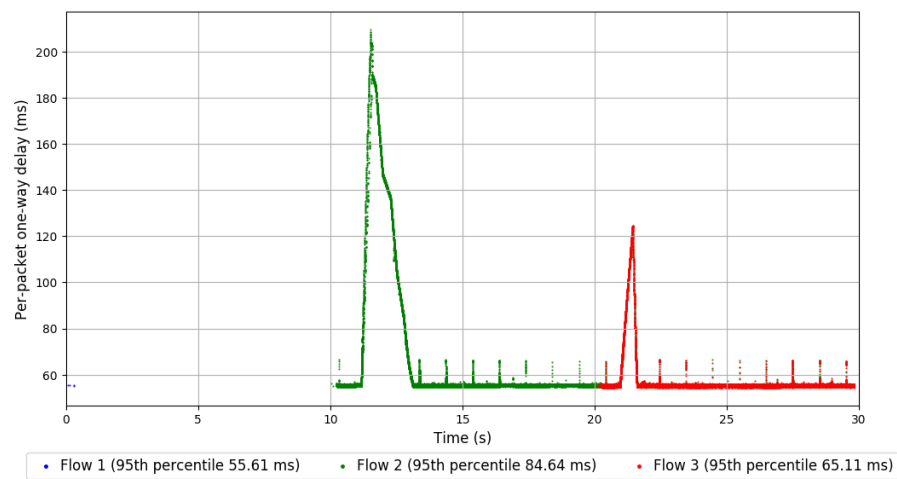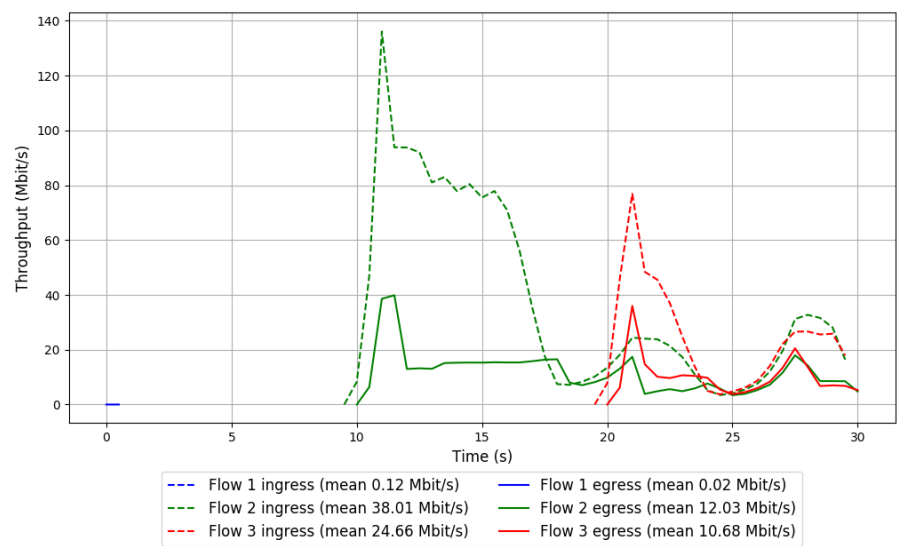## Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 23.71 Mbit/s) --- Flow 1 egress (mean 13.53 Mbit/s)
Flow 2 ingress (mean 6.76 Mbit/s) --- Flow 2 egress (mean 6.02 Mbit/s)
Flow 3 ingress (mean 2.16 Mbit/s) --- Flow 3 egress (mean 1.95 Mbit/s)

Flow 1 (95th percentile 53.62 ms) • Flow 2 (95th percentile 46.55 ms) • Flow 3 (95th percentile 46.45 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2018-09-25 16:49:25
End at: 2018-09-25 16:49:55
Local clock offset: 3.024 ms
Remote clock offset: 27.981 ms


# Below is generated by plot.py at 2018-09-25 18:37:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.48 Mbit/s
95th percentile per-packet one-way delay: 65.386 ms
Loss rate: 64.79%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 55.476 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 10.12 Mbit/s
95th percentile per-packet one-way delay: 87.432 ms
Loss rate: 74.45%
-- Flow 3:
Average throughput: 14.47 Mbit/s
95th percentile per-packet one-way delay: 55.839 ms
Loss rate: 24.22%
```
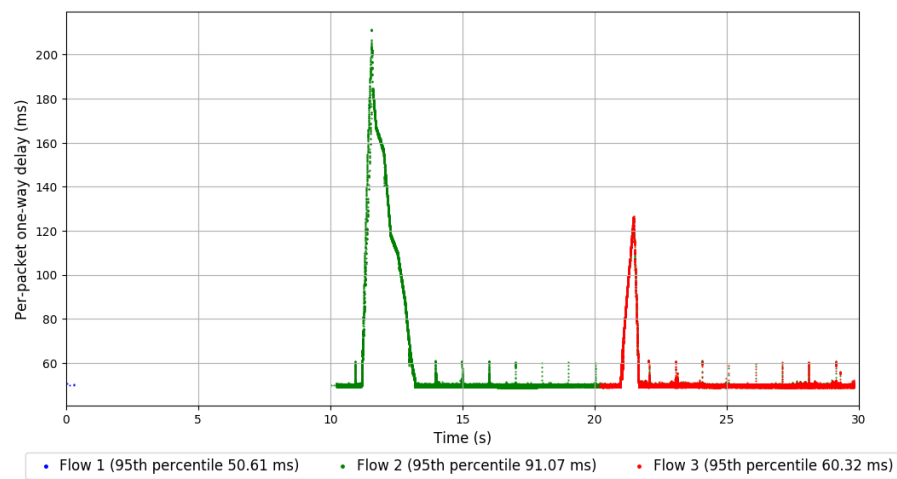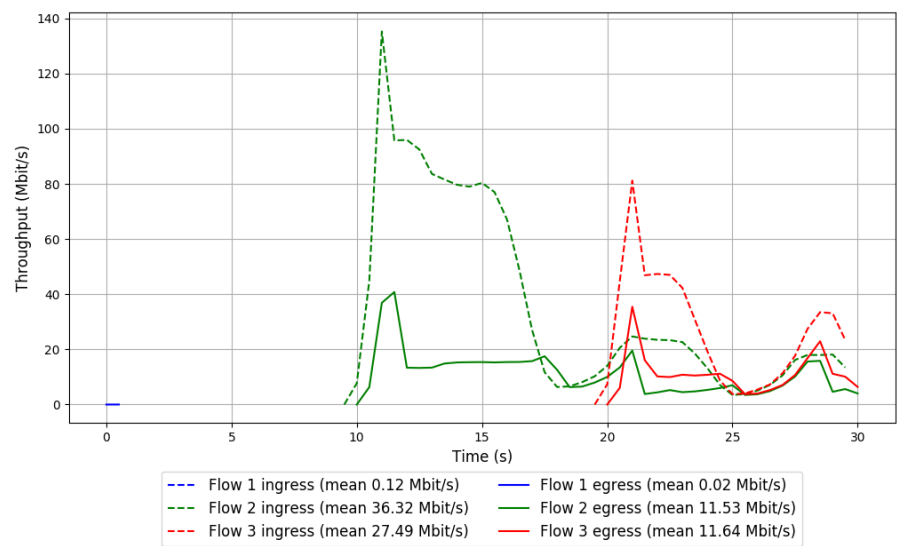
Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.12 Mbit/s) --- Flow 1 egress (mean 0.02 Mbit/s)
Flow 2 ingress (mean 39.44 Mbit/s) --- Flow 2 egress (mean 10.12 Mbit/s)
Flow 3 ingress (mean 18.93 Mbit/s) --- Flow 3 egress (mean 14.47 Mbit/s)

Flow 1 (95th percentile 55.48 ms) • Flow 2 (95th percentile 87.43 ms) • Flow 3 (95th percentile 55.84 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2018-09-25 17:13:06
End at: 2018-09-25 17:13:36
Local clock offset: 2.144 ms
Remote clock offset: 39.137 ms


# Below is generated by plot.py at 2018-09-25 18:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 75.493 ms
Loss rate: 65.71%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 55.610 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 84.642 ms
Loss rate: 68.49%
-- Flow 3:
Average throughput: 10.68 Mbit/s
95th percentile per-packet one-way delay: 65.114 ms
Loss rate: 57.07%
```
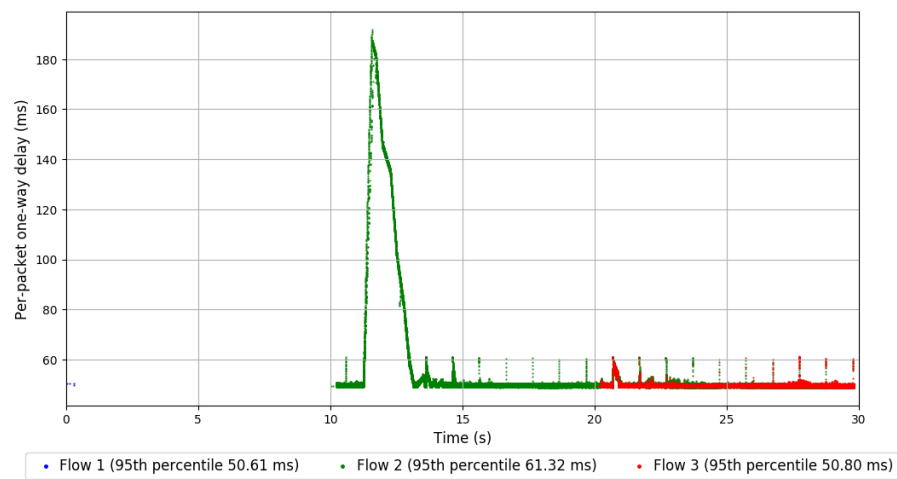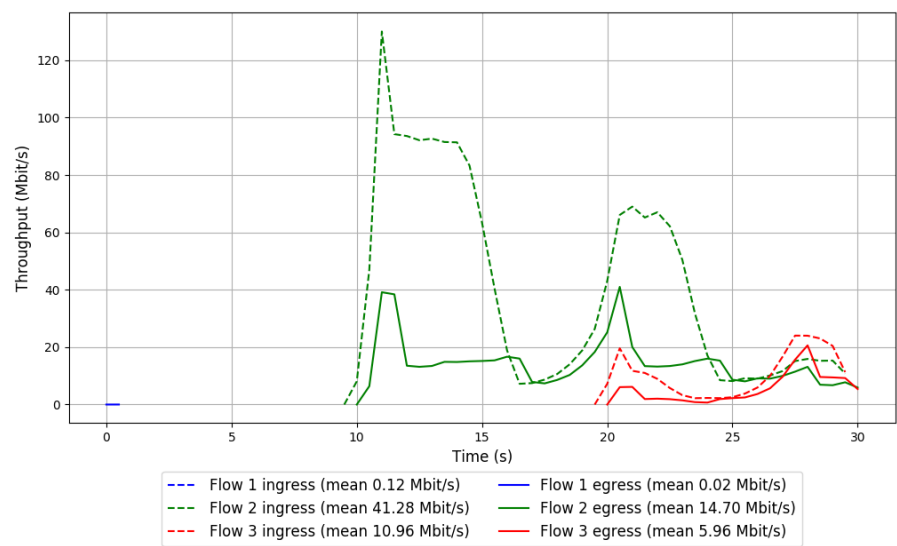
Run 2: Report of PCC-Expr — Data Link

- Flow 1 ingress (mean 0.12 Mbit/s)
- Flow 2 ingress (mean 38.01 Mbit/s)
- Flow 3 ingress (mean 24.66 Mbit/s)
- Flow 1 egress (mean 0.02 Mbit/s)
- Flow 2 egress (mean 12.03 Mbit/s)
- Flow 3 egress (mean 10.68 Mbit/s)

- Flow 1 (95th percentile 55.61 ms)
- Flow 2 (95th percentile 84.64 ms)
- Flow 3 (95th percentile 65.11 ms)

```
Run 3: Statistics of PCC-Expr

Start at: 2018-09-25 17:37:19
End at: 2018-09-25 17:37:49
Local clock offset: 4.673 ms
Remote clock offset: 45.078 ms


# Below is generated by plot.py at 2018-09-25 18:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 58.718 ms
Loss rate: 23.95%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 54.967 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 14.83 Mbit/s
95th percentile per-packet one-way delay: 59.833 ms
Loss rate: 25.03%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 55.089 ms
Loss rate: 19.47%
```

Run 3: Report of PCC-Expr — Data Link
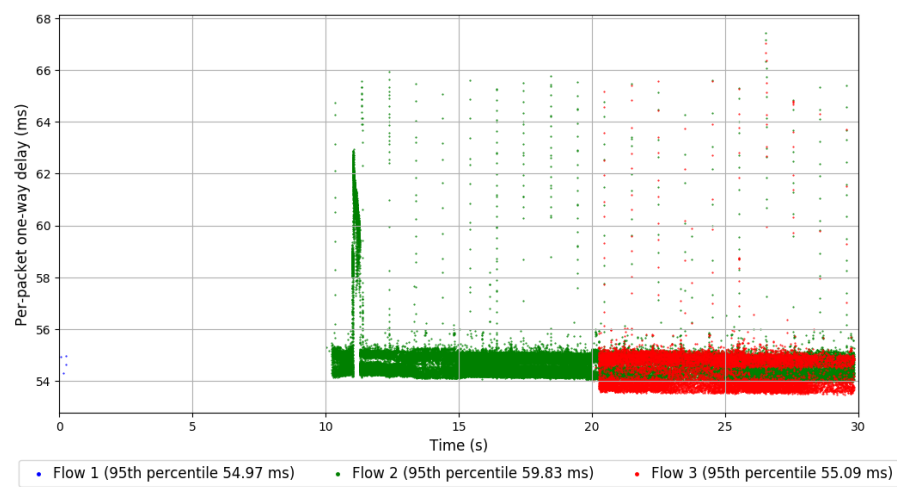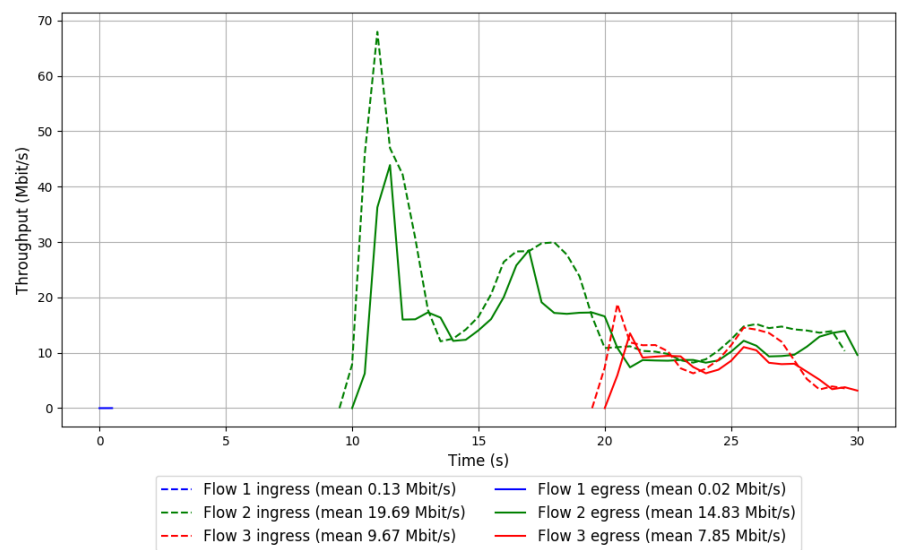
```
Run 4: Statistics of PCC-Expr

Start at: 2018-09-25 18:01:18
End at: 2018-09-25 18:01:48
Local clock offset: 32.906 ms
Remote clock offset: 46.089 ms


# Below is generated by plot.py at 2018-09-25 18:37:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 77.284 ms
Loss rate: 65.56%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 50.614 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 91.068 ms
Loss rate: 68.39%
-- Flow 3:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 60.322 ms
Loss rate: 58.01%
```

Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.12 Mbit/s) --- Flow 1 egress (mean 0.02 Mbit/s)
Flow 2 ingress (mean 36.32 Mbit/s) --- Flow 2 egress (mean 11.53 Mbit/s)
Flow 3 ingress (mean 27.49 Mbit/s) --- Flow 3 egress (mean 11.64 Mbit/s)

Flow 1 (95th percentile 50.61 ms) • Flow 2 (95th percentile 91.07 ms) • Flow 3 (95th percentile 60.32 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2018-09-25 18:24:46
End at: 2018-09-25 18:25:16
Local clock offset: 42.628 ms
Remote clock offset: 28.286 ms


# Below is generated by plot.py at 2018-09-25 18:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 58.274 ms
Loss rate: 62.39%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 50.607 ms
Loss rate: 86.98%
-- Flow 2:
Average throughput: 14.70 Mbit/s
95th percentile per-packet one-way delay: 61.324 ms
Loss rate: 64.55%
-- Flow 3:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 50.801 ms
Loss rate: 46.04%
```

Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.12 Mbit/s) --- Flow 1 egress (mean 0.02 Mbit/s)
Flow 2 ingress (mean 41.28 Mbit/s) --- Flow 2 egress (mean 14.70 Mbit/s)
Flow 3 ingress (mean 10.96 Mbit/s) --- Flow 3 egress (mean 5.96 Mbit/s)

Flow 1 (95th percentile 50.61 ms)   Flow 2 (95th percentile 61.32 ms)   Flow 3 (95th percentile 50.80 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-09-25 16:41:46
End at: 2018-09-25 16:42:16
Local clock offset: 4.989 ms
Remote clock offset: 31.543 ms


# Below is generated by plot.py at 2018-09-25 18:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 63.200 ms
Loss rate: 8.28%
-- Flow 1:
Average throughput: 12.22 Mbit/s
95th percentile per-packet one-way delay: 69.373 ms
Loss rate: 10.56%
-- Flow 2:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 56.282 ms
Loss rate: 4.94%
-- Flow 3:
Average throughput: 6.01 Mbit/s
95th percentile per-packet one-way delay: 56.368 ms
Loss rate: 2.78%
```

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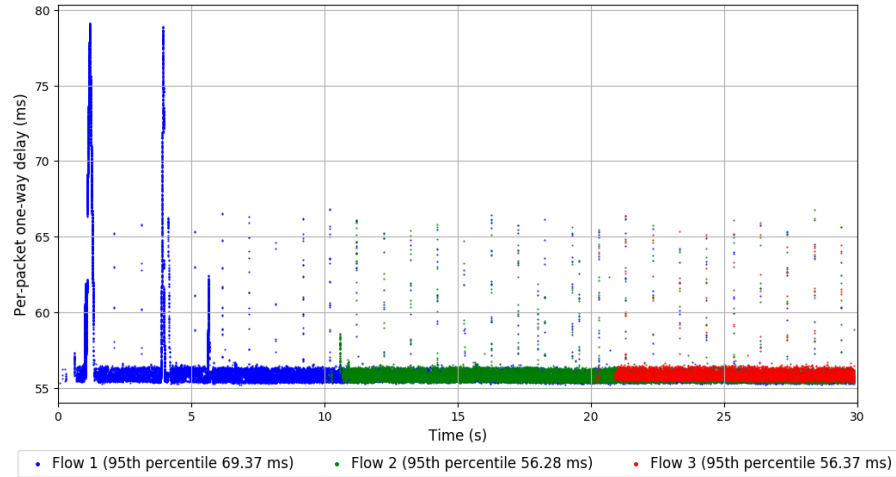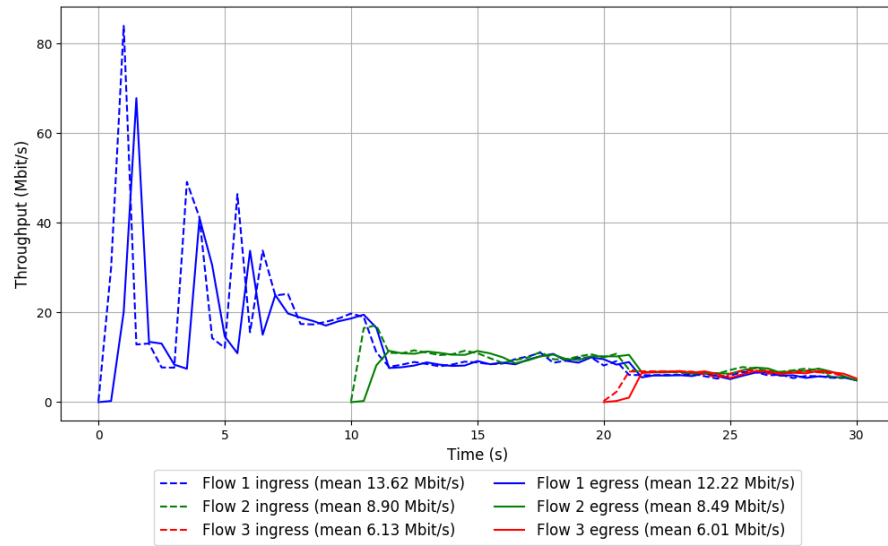
```
Run 2: Statistics of QUIC Cubic

Start at: 2018-09-25 17:05:32
End at: 2018-09-25 17:06:02
Local clock offset: 1.159 ms
Remote clock offset: 34.015 ms


# Below is generated by plot.py at 2018-09-25 18:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 71.463 ms
Loss rate: 9.41%
-- Flow 1:
Average throughput: 11.27 Mbit/s
95th percentile per-packet one-way delay: 92.587 ms
Loss rate: 12.19%
-- Flow 2:
Average throughput: 9.99 Mbit/s
95th percentile per-packet one-way delay: 55.171 ms
Loss rate: 6.24%
-- Flow 3:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 55.042 ms
Loss rate: 2.79%
```

Run 2: Report of QUIC Cubic — Data Link
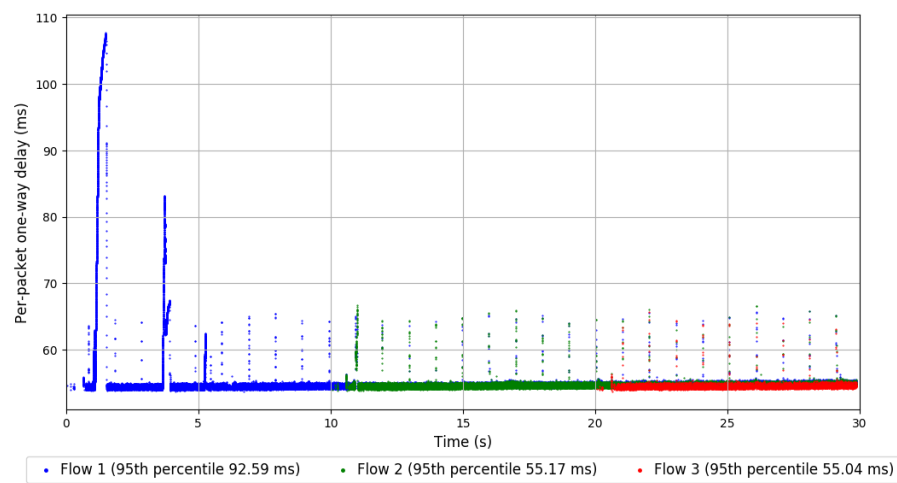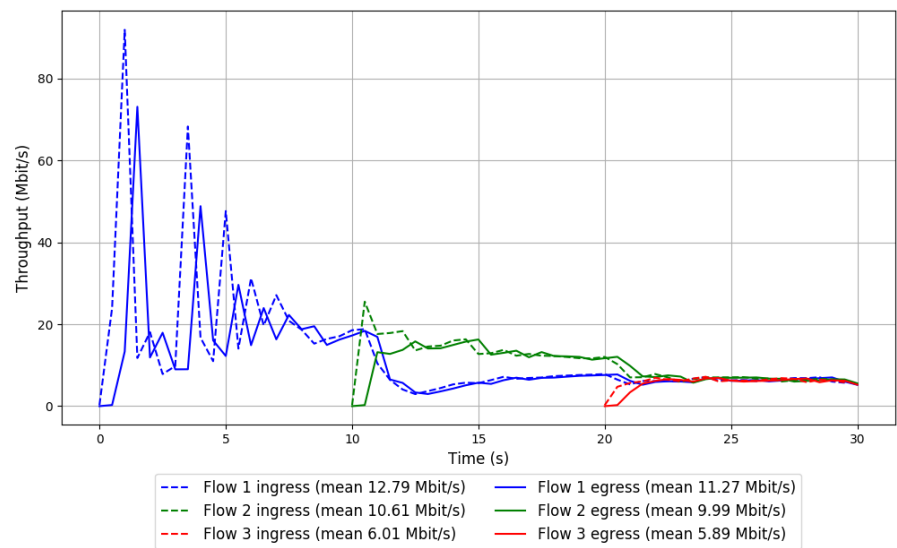
```
Run 3: Statistics of QUIC Cubic

Start at: 2018-09-25 17:29:28
End at: 2018-09-25 17:29:58
Local clock offset: 4.3 ms
Remote clock offset: 49.747 ms


# Below is generated by plot.py at 2018-09-25 18:37:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.83 Mbit/s
95th percentile per-packet one-way delay: 58.702 ms
Loss rate: 7.04%
-- Flow 1:
Average throughput: 13.16 Mbit/s
95th percentile per-packet one-way delay: 61.386 ms
Loss rate: 9.28%
-- Flow 2:
Average throughput: 6.85 Mbit/s
95th percentile per-packet one-way delay: 51.782 ms
Loss rate: 1.98%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 51.747 ms
Loss rate: 2.90%
```

Run 3: Report of QUIC Cubic — Data Link
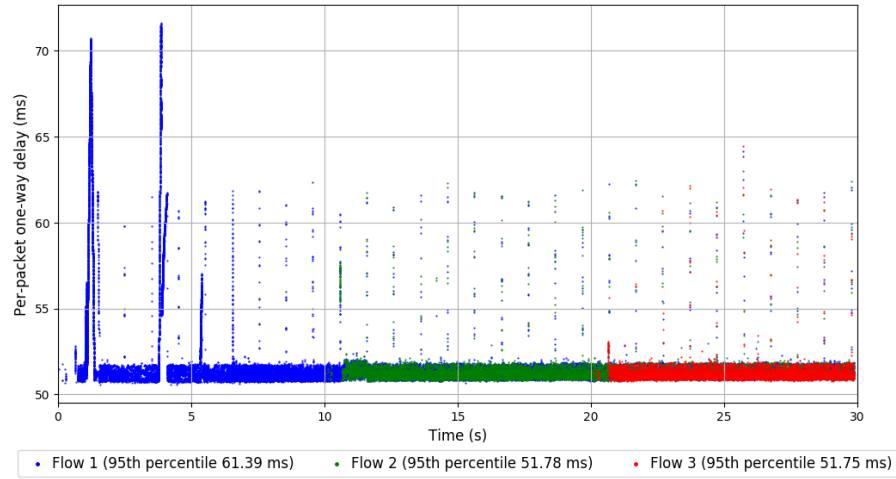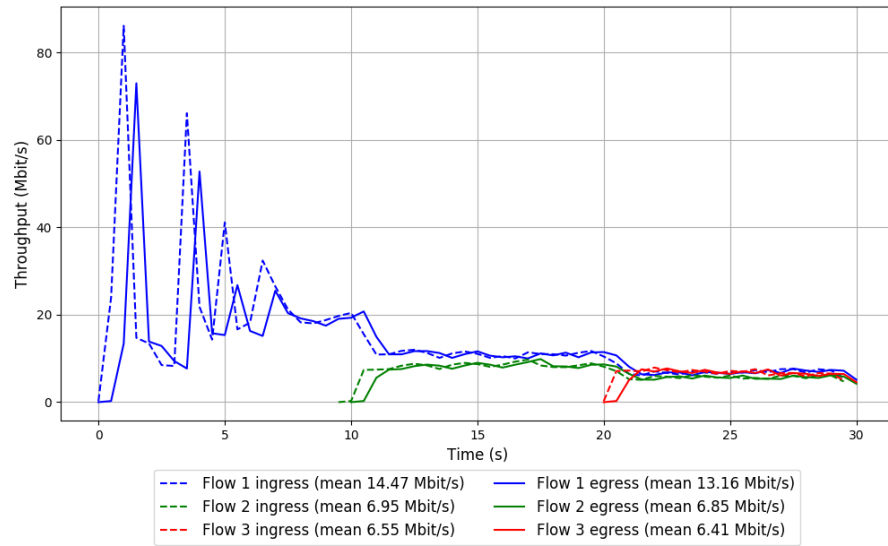
```
Run 4: Statistics of QUIC Cubic

Start at: 2018-09-25 17:53:40
End at: 2018-09-25 17:54:10
Local clock offset: 27.995 ms
Remote clock offset: 50.036 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 61.320 ms
Loss rate: 7.33%
-- Flow 1:
Average throughput: 12.98 Mbit/s
95th percentile per-packet one-way delay: 77.928 ms
Loss rate: 9.86%
-- Flow 2:
Average throughput: 7.13 Mbit/s
95th percentile per-packet one-way delay: 46.502 ms
Loss rate: 1.82%
-- Flow 3:
Average throughput: 6.49 Mbit/s
95th percentile per-packet one-way delay: 46.127 ms
Loss rate: 2.81%
```

Run 4: Report of QUIC Cubic — Data Link
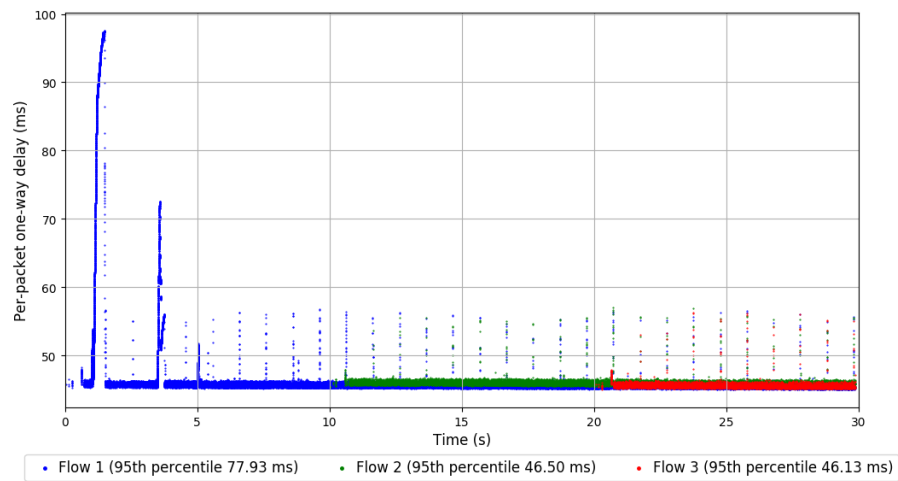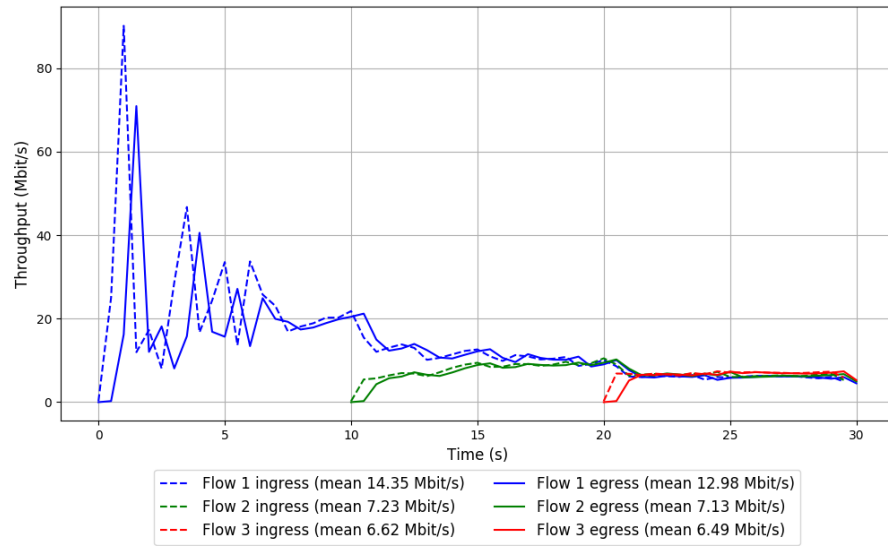
```
Run 5: Statistics of QUIC Cubic

Start at: 2018-09-25 18:17:22
End at: 2018-09-25 18:17:52
Local clock offset: 40.08 ms
Remote clock offset: 33.912 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.84 Mbit/s
95th percentile per-packet one-way delay: 66.512 ms
Loss rate: 6.86%
-- Flow 1:
Average throughput: 13.33 Mbit/s
95th percentile per-packet one-way delay: 83.546 ms
Loss rate: 9.07%
-- Flow 2:
Average throughput: 7.05 Mbit/s
95th percentile per-packet one-way delay: 49.925 ms
Loss rate: 1.56%
-- Flow 3:
Average throughput: 5.58 Mbit/s
95th percentile per-packet one-way delay: 50.399 ms
Loss rate: 3.05%
```

Run 5: Report of QUIC Cubic — Data Link
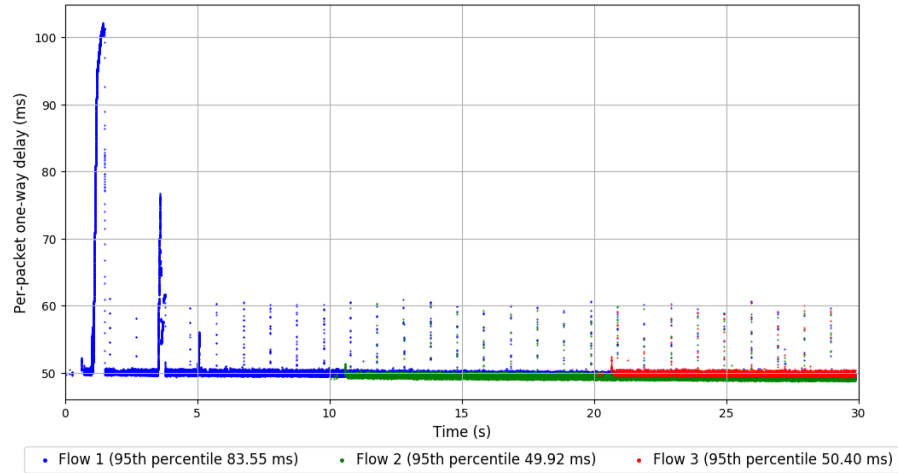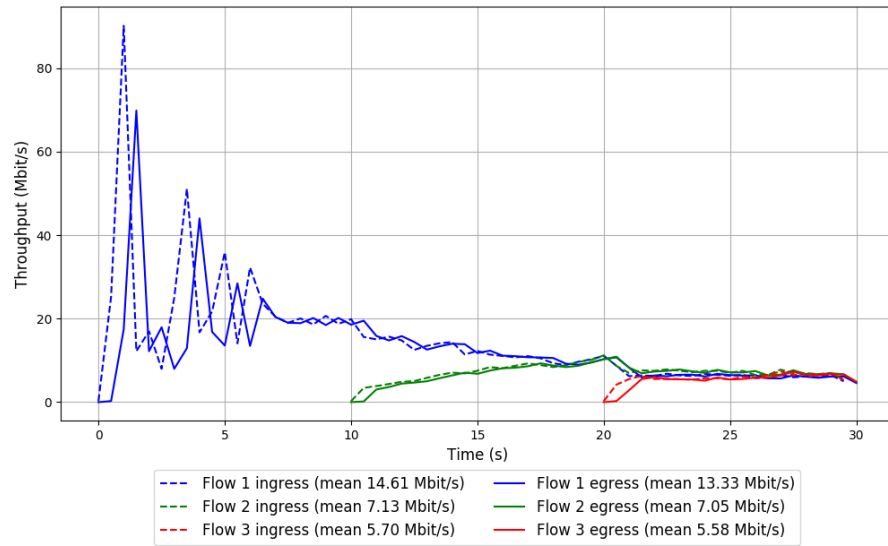
```
Run 1: Statistics of SCReAM

Start at: 2018-09-25 16:40:35
End at: 2018-09-25 16:41:05
Local clock offset: 5.736 ms
Remote clock offset: 30.151 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 59.265 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.325 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 59.077 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 58.978 ms
Loss rate: 1.08%
```

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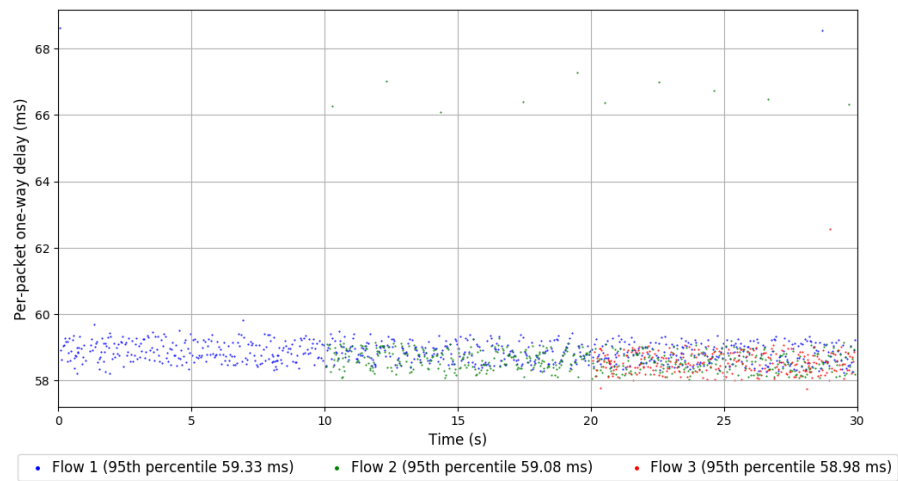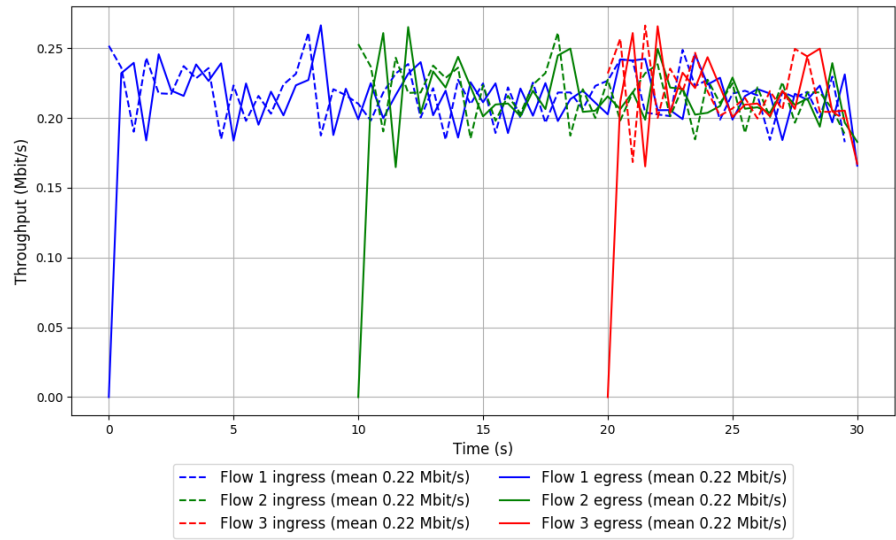
```
Run 2: Statistics of SCReAM

Start at: 2018-09-25 17:04:21
End at: 2018-09-25 17:04:51
Local clock offset: 1.281 ms
Remote clock offset: 30.903 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 57.202 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.298 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 56.913 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 57.057 ms
Loss rate: 1.08%
```

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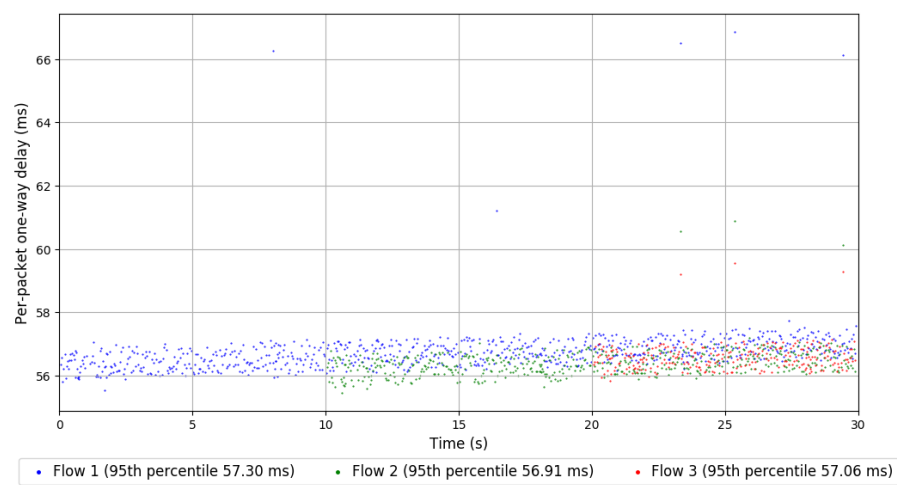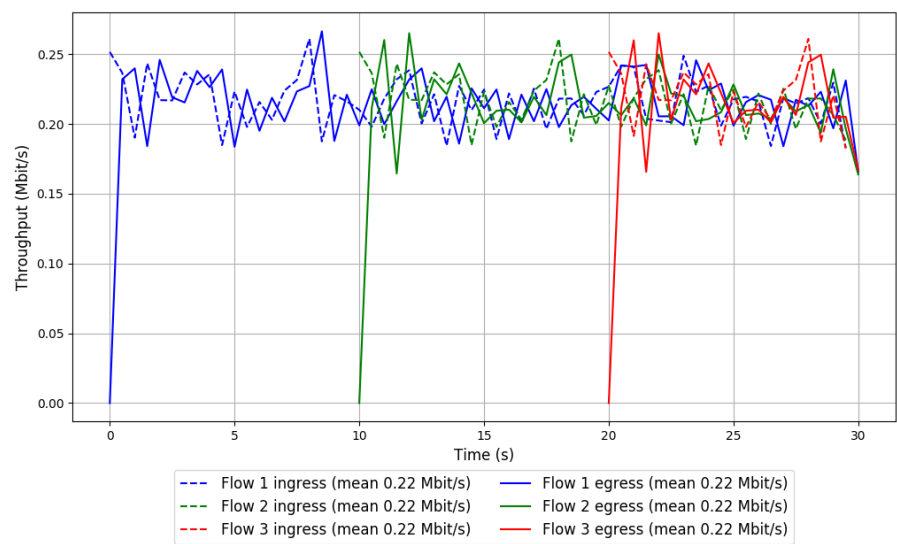
```
Run 3: Statistics of SCReAM

Start at: 2018-09-25 17:28:16
End at: 2018-09-25 17:28:46
Local clock offset: 4.244 ms
Remote clock offset: 49.05 ms

# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 52.391 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 52.438 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.650 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 51.908 ms
Loss rate: 0.73%
```

Run 3: Report of SCReAM — Data Link

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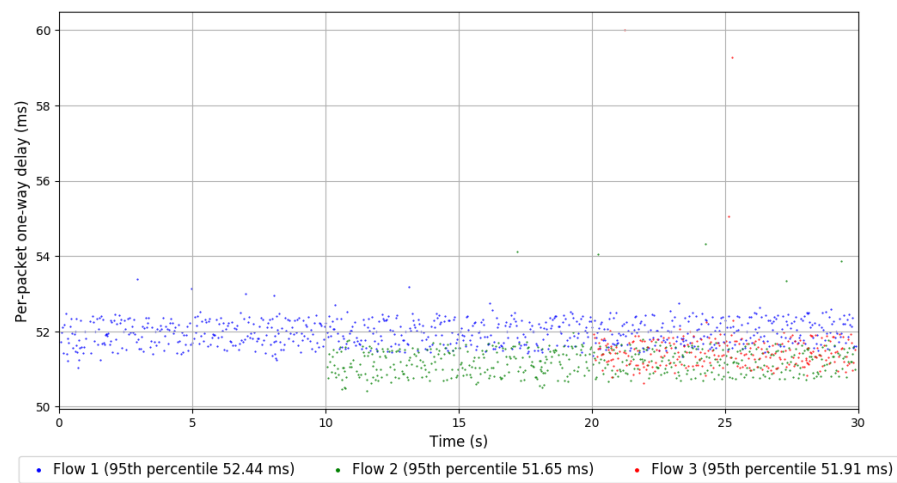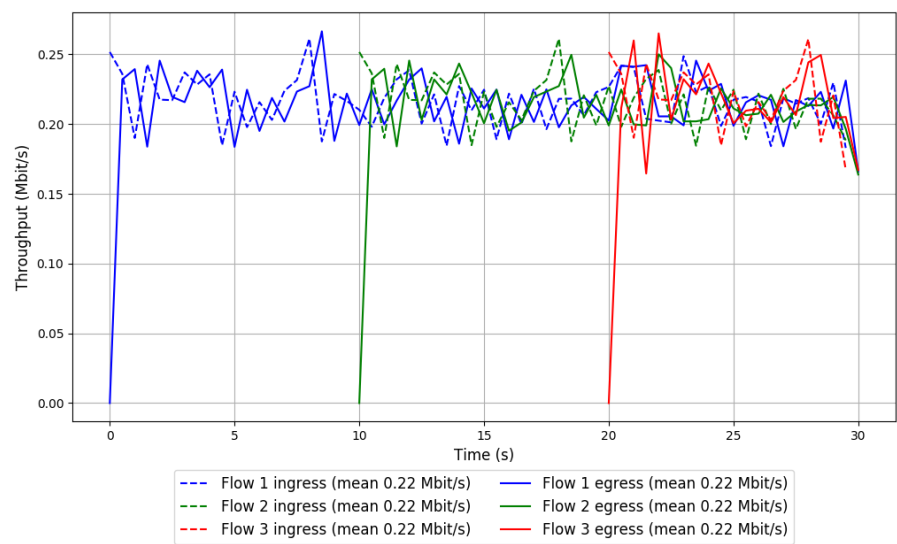
```
Run 4: Statistics of SCReAM

Start at: 2018-09-25 17:52:29
End at: 2018-09-25 17:52:59
Local clock offset: 26.856 ms
Remote clock offset: 46.07 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.600 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.660 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.522 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.510 ms
Loss rate: 0.70%
```

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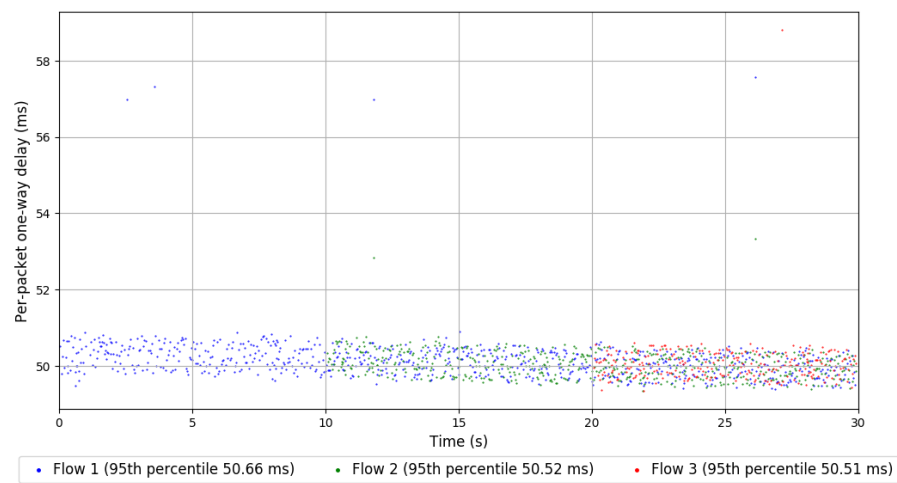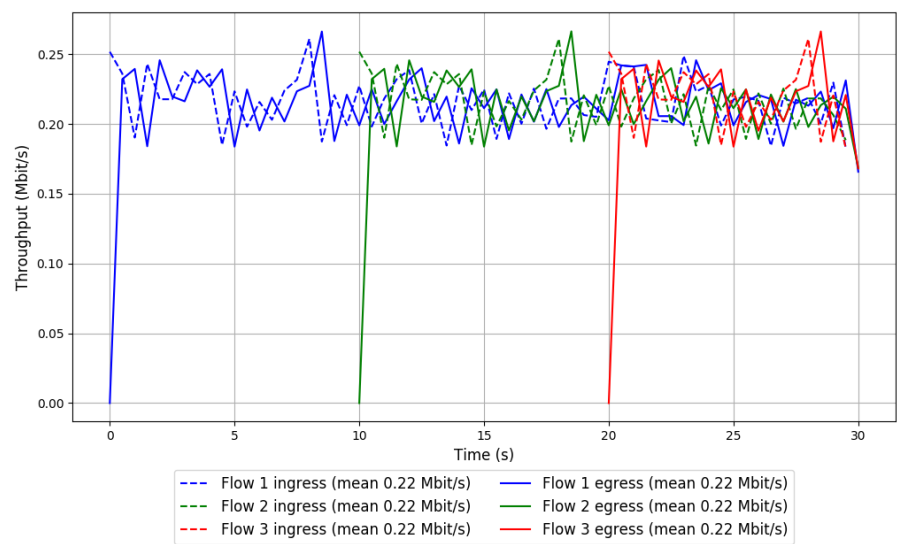
```
Run 5: Statistics of SCReAM

Start at: 2018-09-25 18:16:11
End at: 2018-09-25 18:16:41
Local clock offset: 39.542 ms
Remote clock offset: 35.103 ms


# Below is generated by plot.py at 2018-09-25 18:37:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 50.410 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.378 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.501 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 50.073 ms
Loss rate: 1.08%
```

Run 5: Report of SCReAM — Data Link
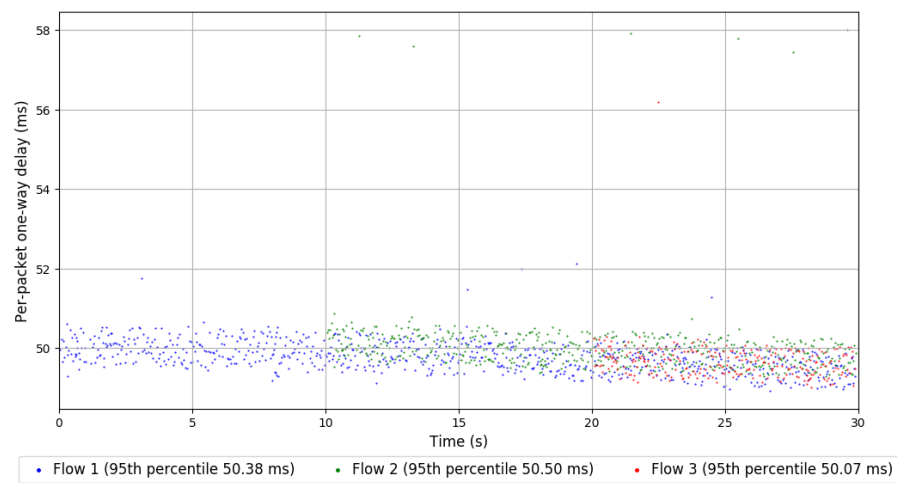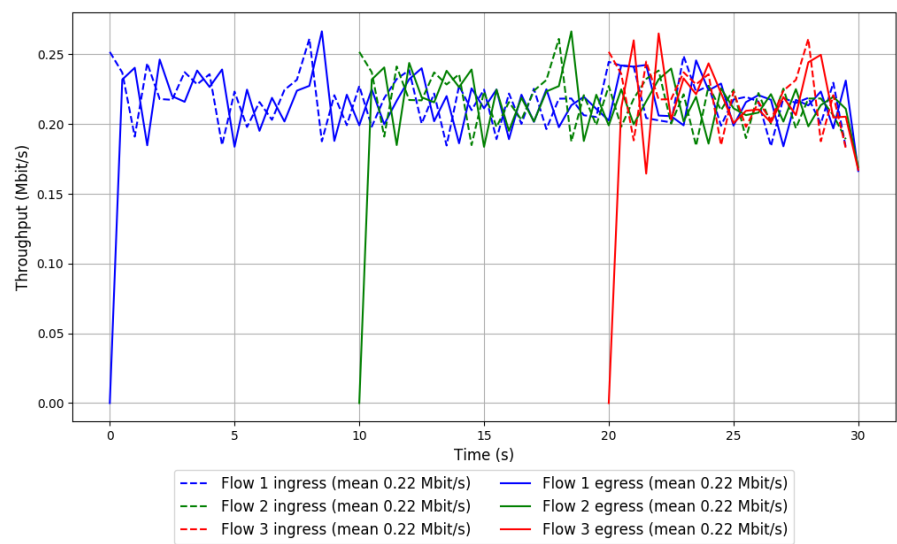
```
Run 1: Statistics of Sprout

Start at: 2018-09-25 16:50:41
End at: 2018-09-25 16:51:11
Local clock offset: 2.783 ms
Remote clock offset: 27.675 ms


# Below is generated by plot.py at 2018-09-25 18:37:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 59.785 ms
Loss rate: 3.61%
-- Flow 1:
Average throughput: 8.64 Mbit/s
95th percentile per-packet one-way delay: 59.843 ms
Loss rate: 2.22%
-- Flow 2:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 60.049 ms
Loss rate: 3.98%
-- Flow 3:
Average throughput: 6.96 Mbit/s
95th percentile per-packet one-way delay: 58.603 ms
Loss rate: 7.66%
```

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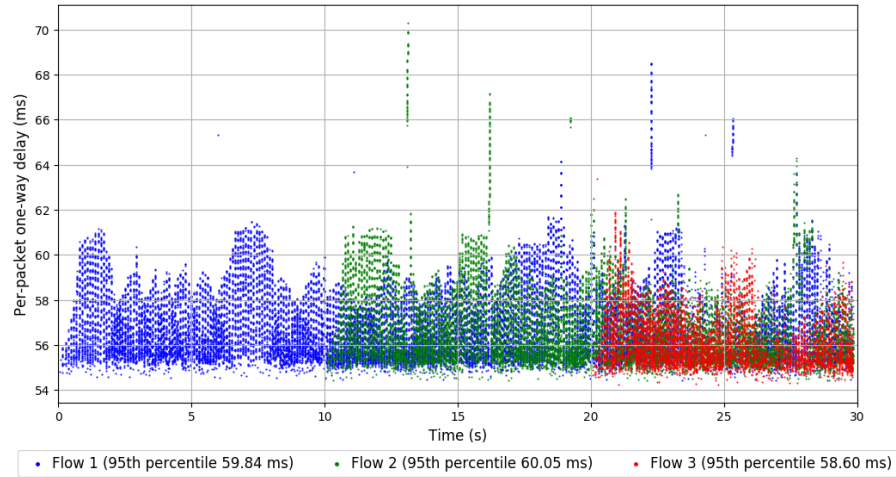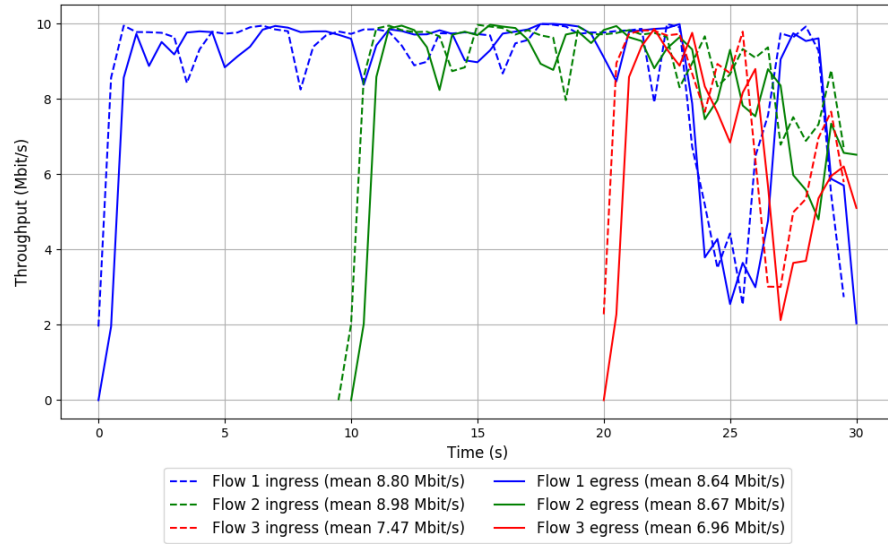
```
Run 2: Statistics of Sprout

Start at: 2018-09-25 17:14:24
End at: 2018-09-25 17:14:54
Local clock offset: 2.499 ms
Remote clock offset: 34.886 ms


# Below is generated by plot.py at 2018-09-25 18:37:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.64 Mbit/s
95th percentile per-packet one-way delay: 65.348 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 65.407 ms
Loss rate: 2.53%
-- Flow 2:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 65.461 ms
Loss rate: 2.75%
-- Flow 3:
Average throughput: 6.95 Mbit/s
95th percentile per-packet one-way delay: 64.717 ms
Loss rate: 6.71%
```

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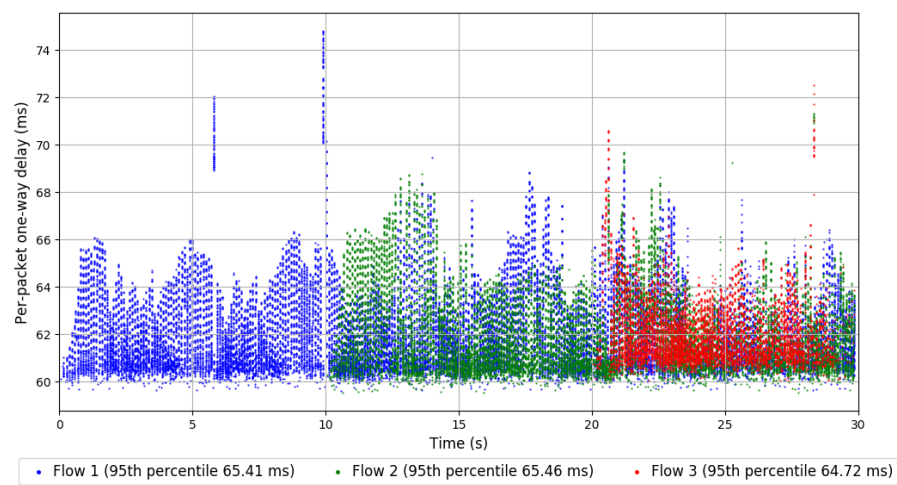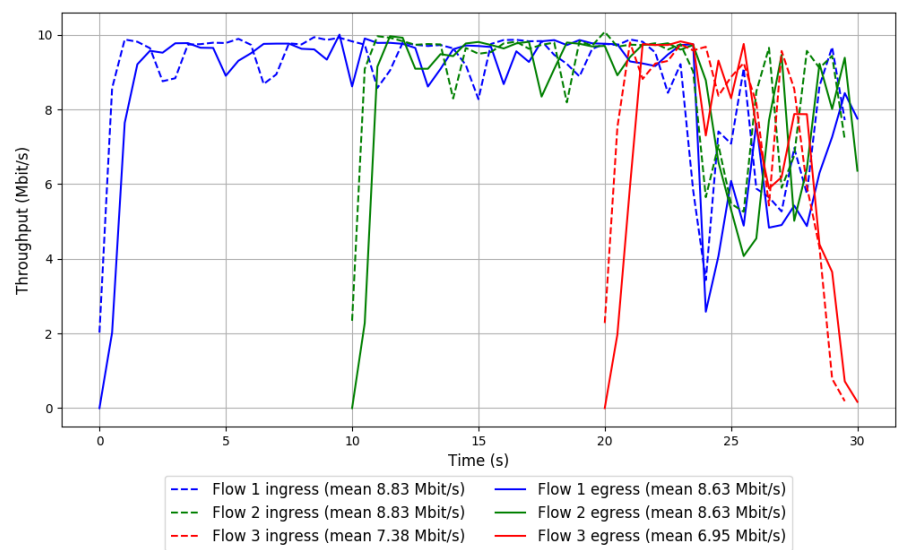
```
Run 3: Statistics of Sprout

Start at: 2018-09-25 17:38:48
End at: 2018-09-25 17:39:18
Local clock offset: 4.653 ms
Remote clock offset: 49.398 ms


# Below is generated by plot.py at 2018-09-25 18:37:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.62 Mbit/s
95th percentile per-packet one-way delay: 54.047 ms
Loss rate: 3.53%
-- Flow 1:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 54.281 ms
Loss rate: 2.26%
-- Flow 2:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 53.496 ms
Loss rate: 3.84%
-- Flow 3:
Average throughput: 8.00 Mbit/s
95th percentile per-packet one-way delay: 53.811 ms
Loss rate: 6.86%
```

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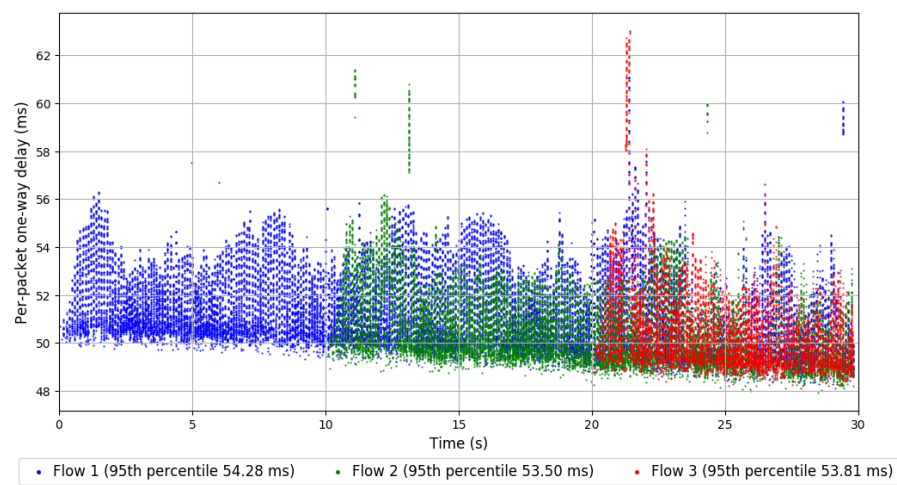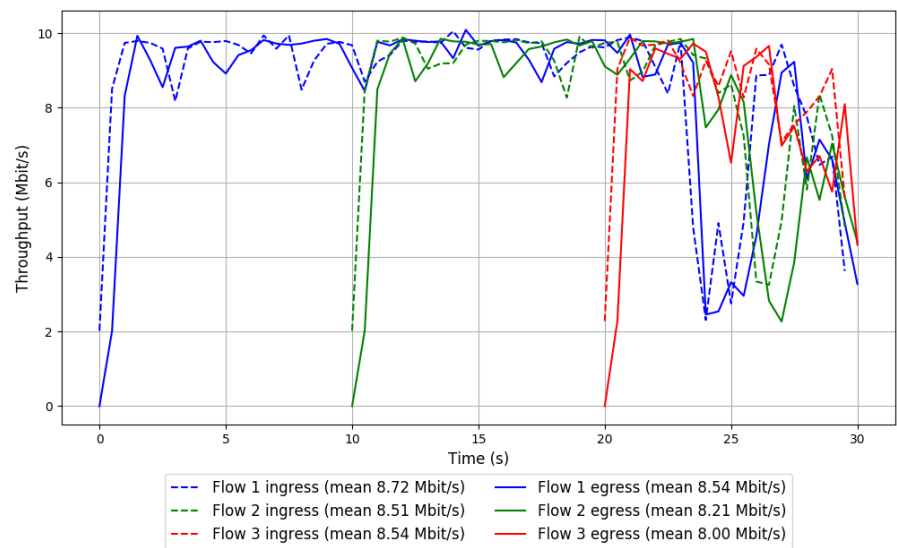
```
Run 4: Statistics of Sprout

Start at: 2018-09-25 18:02:33
End at: 2018-09-25 18:03:03
Local clock offset: 33.981 ms
Remote clock offset: 50.053 ms


# Below is generated by plot.py at 2018-09-25 18:37:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.63 Mbit/s
95th percentile per-packet one-way delay: 51.755 ms
Loss rate: 3.78%
-- Flow 1:
Average throughput: 9.05 Mbit/s
95th percentile per-packet one-way delay: 51.883 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 51.716 ms
Loss rate: 4.71%
-- Flow 3:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 50.741 ms
Loss rate: 8.31%
```
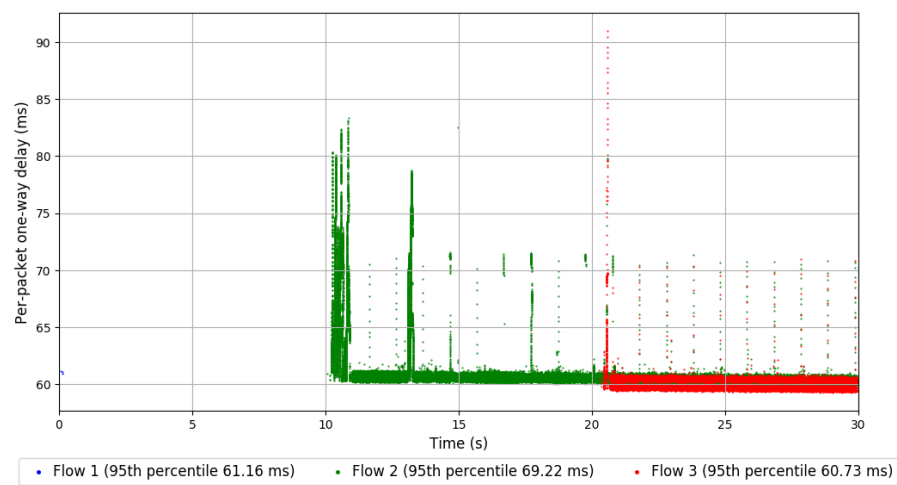
Run 4: Report of Sprout — Data Link
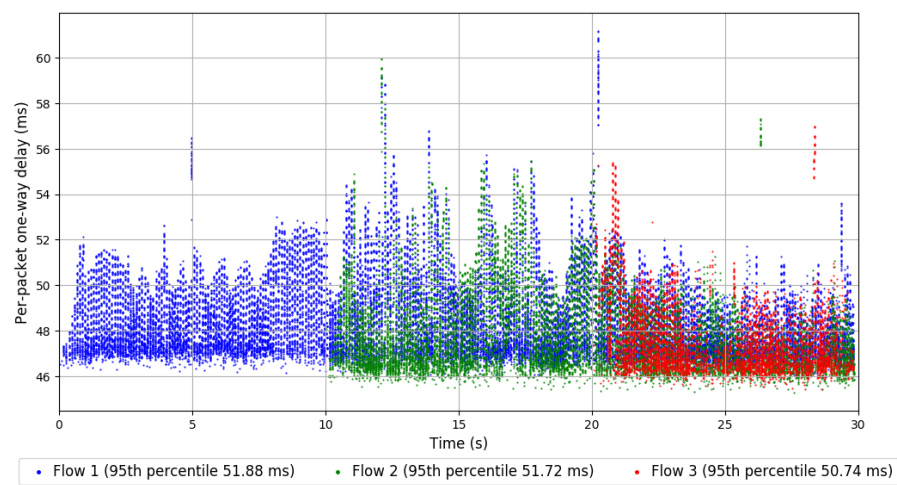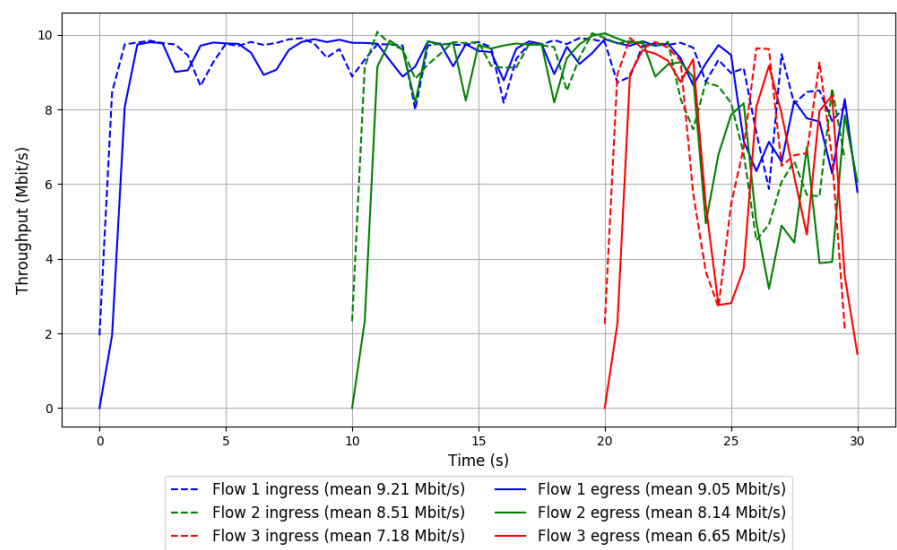
```
Run 5: Statistics of Sprout

Start at: 2018-09-25 18:26:05
End at: 2018-09-25 18:26:35
Local clock offset: 43.244 ms
Remote clock offset: 27.585 ms


# Below is generated by plot.py at 2018-09-25 18:37:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.54 Mbit/s
95th percentile per-packet one-way delay: 55.077 ms
Loss rate: 3.61%
-- Flow 1:
Average throughput: 8.77 Mbit/s
95th percentile per-packet one-way delay: 54.937 ms
Loss rate: 2.14%
-- Flow 2:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 55.167 ms
Loss rate: 4.08%
-- Flow 3:
Average throughput: 7.09 Mbit/s
95th percentile per-packet one-way delay: 55.466 ms
Loss rate: 7.77%
```
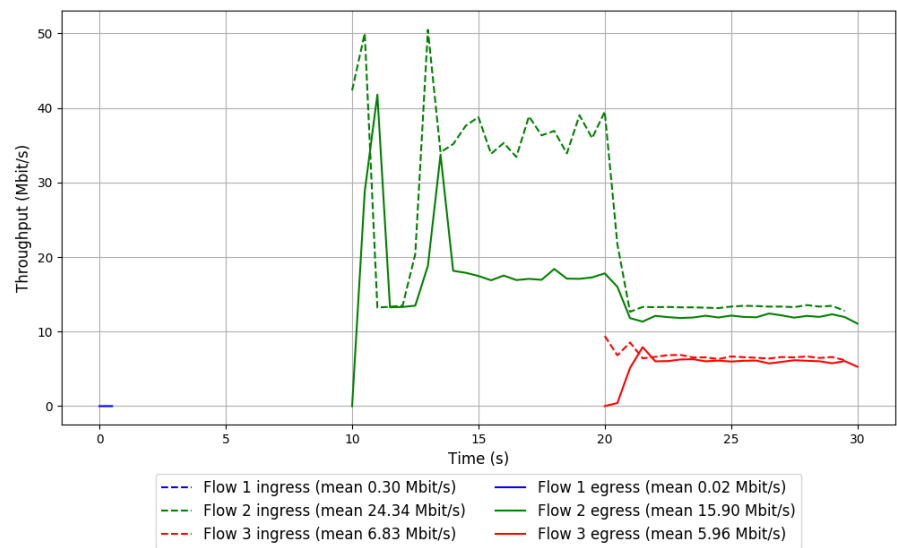
Run 5: Report of Sprout — Data Link
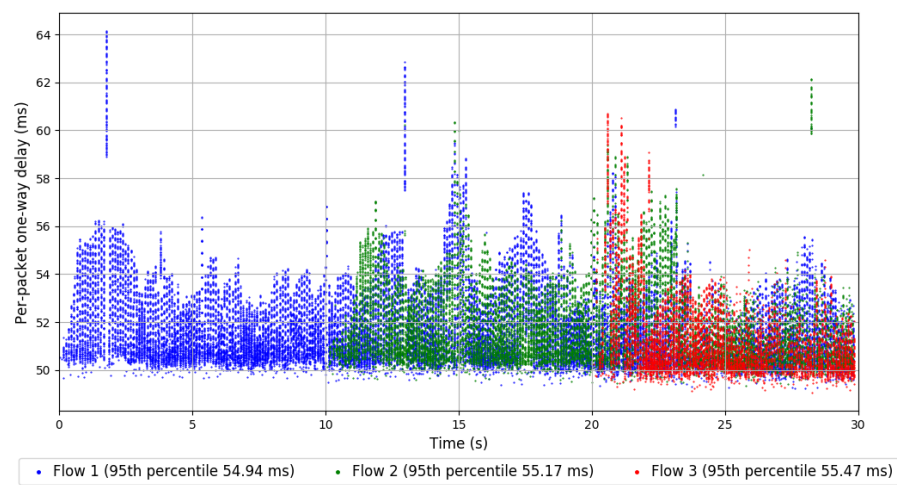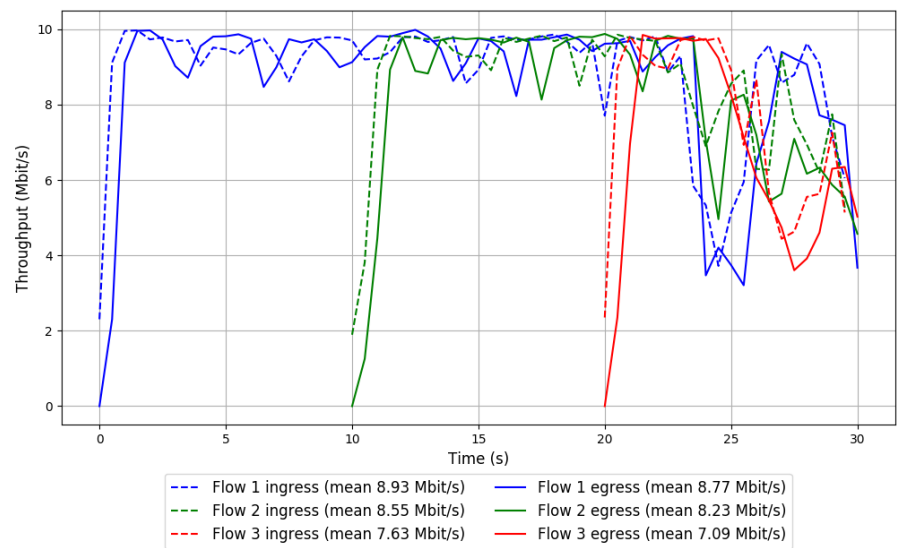
```
Run 1: Statistics of TaoVA-100x

Start at: 2018-09-25 16:36:50
End at: 2018-09-25 16:37:20
Local clock offset: 6.097 ms
Remote clock offset: 31.031 ms


# Below is generated by plot.py at 2018-09-25 18:38:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 68.207 ms
Loss rate: 32.53%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 61.156 ms
Loss rate: 92.12%
-- Flow 2:
Average throughput: 15.90 Mbit/s
95th percentile per-packet one-way delay: 69.222 ms
Loss rate: 34.95%
-- Flow 3:
Average throughput: 5.96 Mbit/s
95th percentile per-packet one-way delay: 60.729 ms
Loss rate: 15.19%
```

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

- - - - Flow 1 ingress (mean 0.30 Mbit/s) ——— Flow 1 egress (mean 0.02 Mbit/s)
- - - - Flow 2 ingress (mean 24.34 Mbit/s) ——— Flow 2 egress (mean 15.90 Mbit/s)
- - - - Flow 3 ingress (mean 6.83 Mbit/s) ——— Flow 3 egress (mean 5.96 Mbit/s)

- Flow 1 (95th percentile 61.16 ms)　　　・ Flow 2 (95th percentile 69.22 ms)　　　・ Flow 3 (95th percentile 60.73 ms)
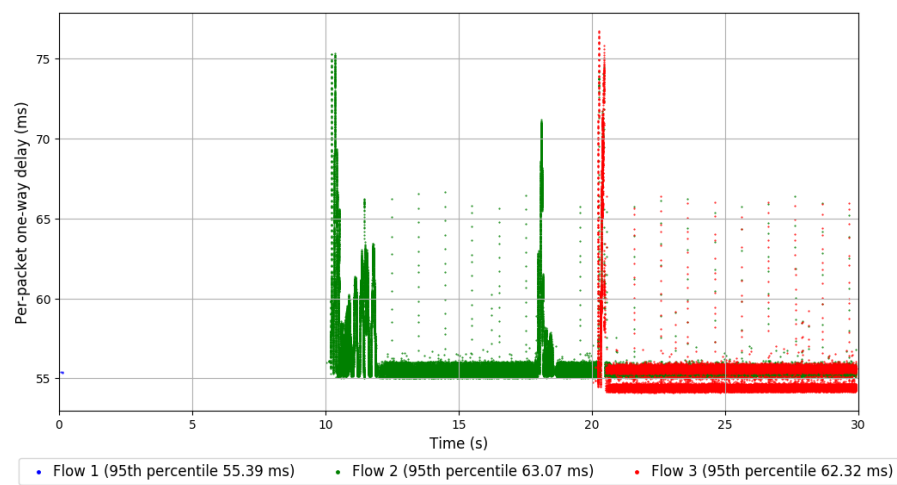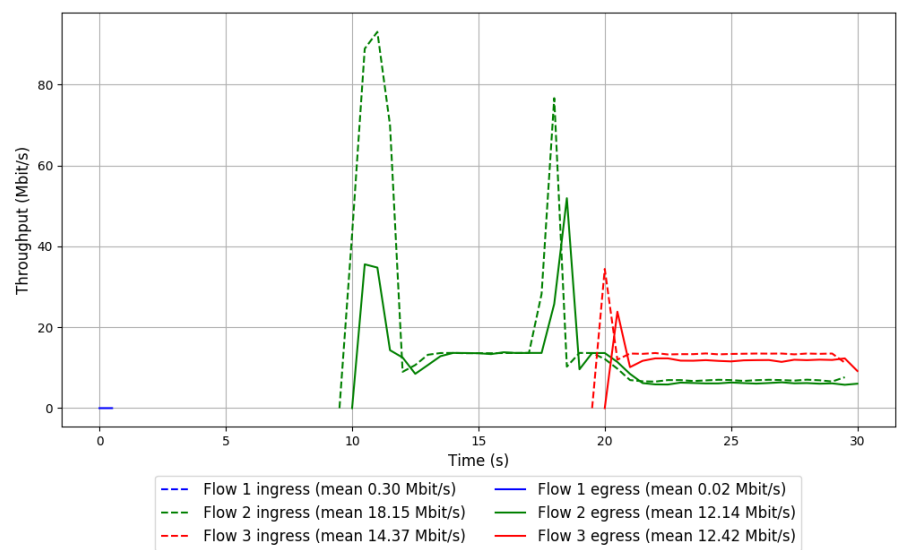
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```
Run 2: Statistics of TaoVA-100x

Start at: 2018-09-25 17:00:36
End at: 2018-09-25 17:01:06
Local clock offset: 1.648 ms
Remote clock offset: 26.383 ms


# Below is generated by plot.py at 2018-09-25 18:38:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.57 Mbit/s
95th percentile per-packet one-way delay: 62.379 ms
Loss rate: 21.37%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 54.939 ms
Loss rate: 92.12%
-- Flow 2:
Average throughput: 14.73 Mbit/s
95th percentile per-packet one-way delay: 61.377 ms
Loss rate: 17.41%
-- Flow 3:
Average throughput: 8.39 Mbit/s
95th percentile per-packet one-way delay: 65.253 ms
Loss rate: 32.74%
```

Run 2: Report of TaoVA-100x — Data Link
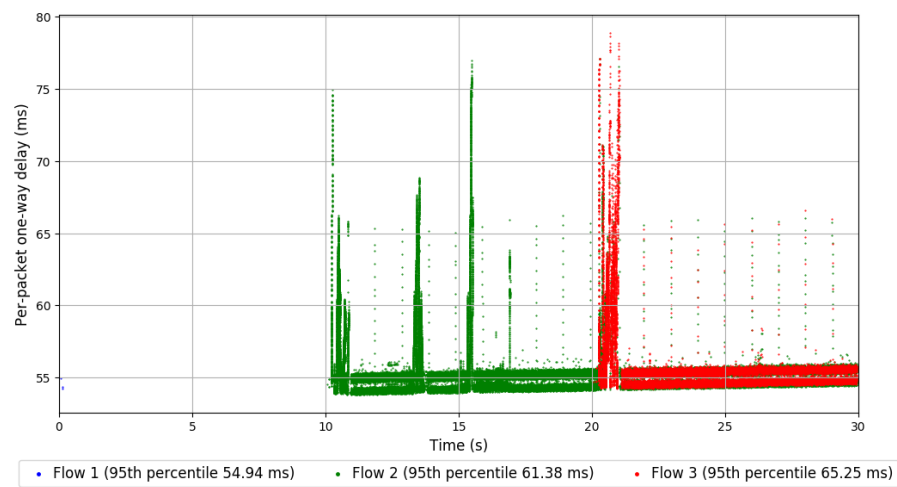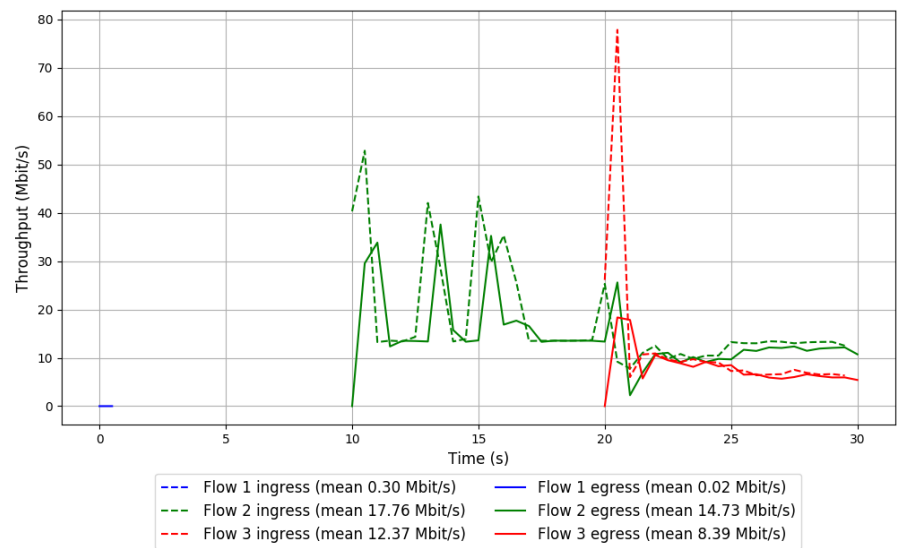
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-09-25 17:24:25
End at: 2018-09-25 17:24:55
Local clock offset: 4.147 ms
Remote clock offset: 44.136 ms


# Below is generated by plot.py at 2018-09-25 18:38:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.19 Mbit/s
95th percentile per-packet one-way delay: 62.989 ms
Loss rate: 28.03%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 55.394 ms
Loss rate: 92.12%
-- Flow 2:
Average throughput: 12.14 Mbit/s
95th percentile per-packet one-way delay: 63.069 ms
Loss rate: 33.43%
-- Flow 3:
Average throughput: 12.42 Mbit/s
95th percentile per-packet one-way delay: 62.316 ms
Loss rate: 14.31%
```

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

- - - Flow 1 ingress (mean 0.30 Mbit/s)   —— Flow 1 egress (mean 0.02 Mbit/s)
- - - Flow 2 ingress (mean 18.15 Mbit/s)   —— Flow 2 egress (mean 12.14 Mbit/s)
- - - Flow 3 ingress (mean 14.37 Mbit/s)   —— Flow 3 egress (mean 12.42 Mbit/s)

- Flow 1 (95th percentile 55.39 ms)   • Flow 2 (95th percentile 63.07 ms)   • Flow 3 (95th percentile 62.32 ms)

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

Start at: 2018-09-25 17:48:46
End at: 2018-09-25 17:49:16
Local clock offset: 23.004 ms
Remote clock offset: 46.055 ms


# Below is generated by plot.py at 2018-09-25 18:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 55.190 ms
Loss rate: 28.72%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 50.219 ms
Loss rate: 92.12%
-- Flow 2:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 56.351 ms
Loss rate: 33.67%
-- Flow 3:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 50.055 ms
Loss rate: 14.70%
```

Run 4: Report of TaoVA-100x — Data Link
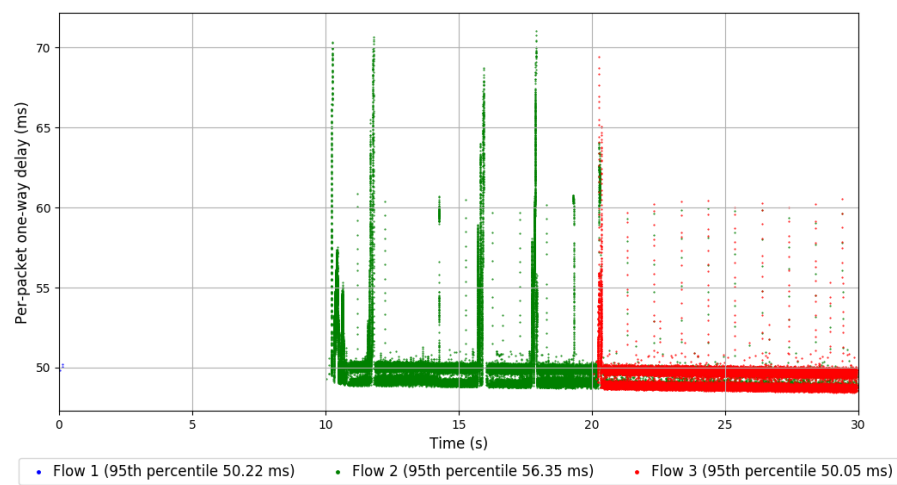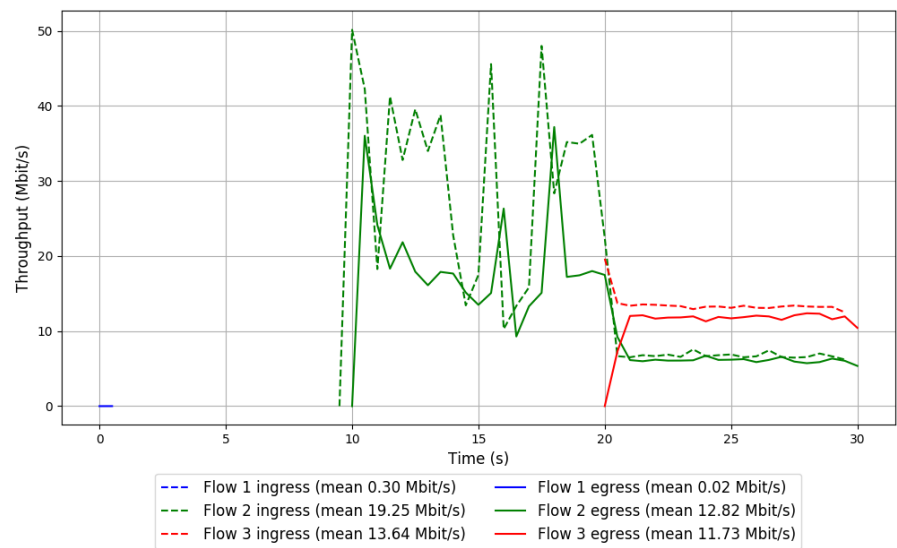
```
Run 5: Statistics of TaoVA-100x

Start at: 2018-09-25 18:12:27
End at: 2018-09-25 18:12:57
Local clock offset: 38.329 ms
Remote clock offset: 39.875 ms


# Below is generated by plot.py at 2018-09-25 18:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.24 Mbit/s
95th percentile per-packet one-way delay: 59.770 ms
Loss rate: 33.11%
-- Flow 1:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 50.790 ms
Loss rate: 92.12%
-- Flow 2:
Average throughput: 12.98 Mbit/s
95th percentile per-packet one-way delay: 60.122 ms
Loss rate: 34.55%
-- Flow 3:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 54.824 ms
Loss rate: 29.36%
```

Run 5: Report of TaoVA-100x — Data Link
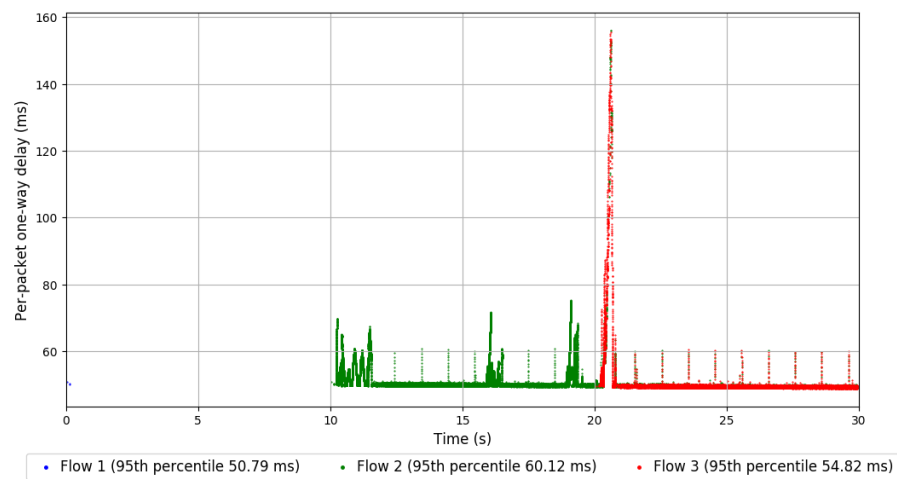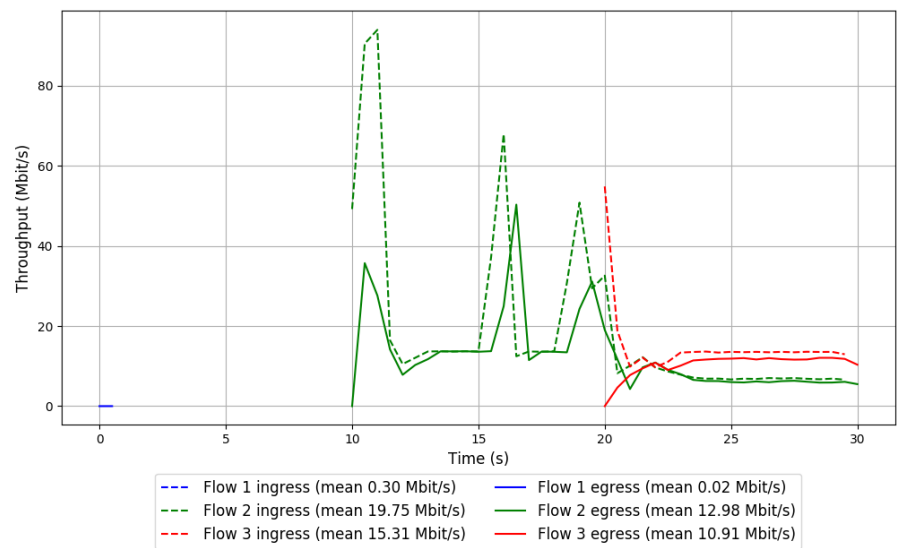
```
Run 1: Statistics of TCP Vegas

Start at: 2018-09-25 16:44:24
End at: 2018-09-25 16:44:54
Local clock offset: 4.076 ms
Remote clock offset: 28.779 ms


# Below is generated by plot.py at 2018-09-25 18:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.88 Mbit/s
95th percentile per-packet one-way delay: 58.335 ms
Loss rate: 6.53%
-- Flow 1:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 63.058 ms
Loss rate: 7.31%
-- Flow 2:
Average throughput: 8.35 Mbit/s
95th percentile per-packet one-way delay: 57.812 ms
Loss rate: 6.37%
-- Flow 3:
Average throughput: 8.12 Mbit/s
95th percentile per-packet one-way delay: 57.775 ms
Loss rate: 3.66%
```

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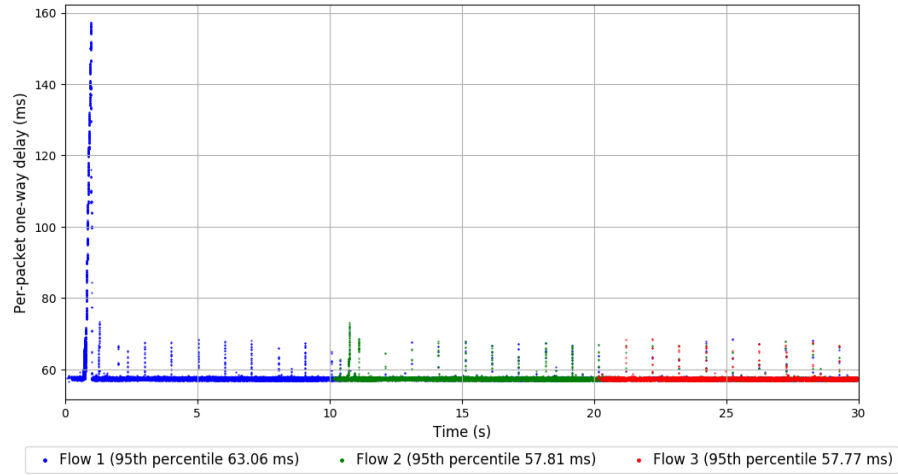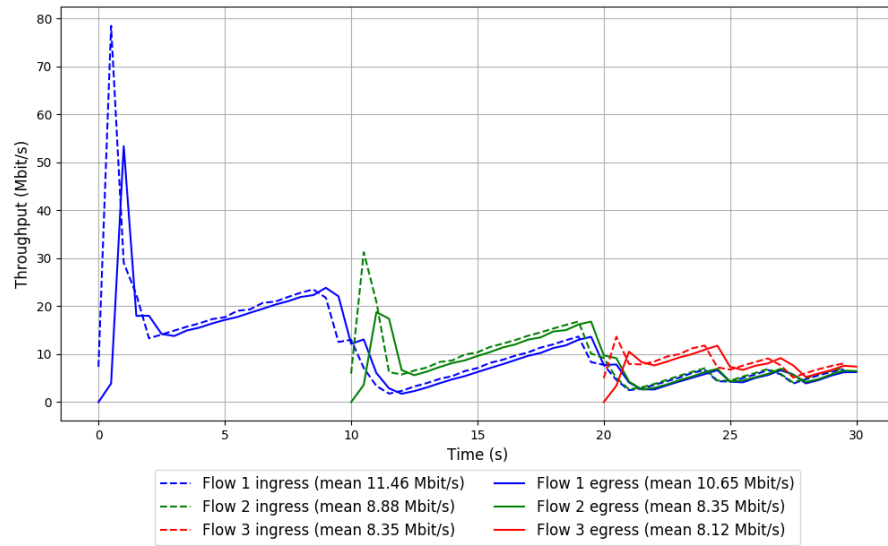
```
Run 2: Statistics of TCP Vegas

Start at: 2018-09-25 17:08:11
End at: 2018-09-25 17:08:41
Local clock offset: 1.261 ms
Remote clock offset: 33.695 ms


# Below is generated by plot.py at 2018-09-25 18:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.93 Mbit/s
95th percentile per-packet one-way delay: 60.592 ms
Loss rate: 8.53%
-- Flow 1:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 64.965 ms
Loss rate: 6.70%
-- Flow 2:
Average throughput: 8.85 Mbit/s
95th percentile per-packet one-way delay: 59.235 ms
Loss rate: 12.53%
-- Flow 3:
Average throughput: 10.19 Mbit/s
95th percentile per-packet one-way delay: 58.857 ms
Loss rate: 6.28%
```

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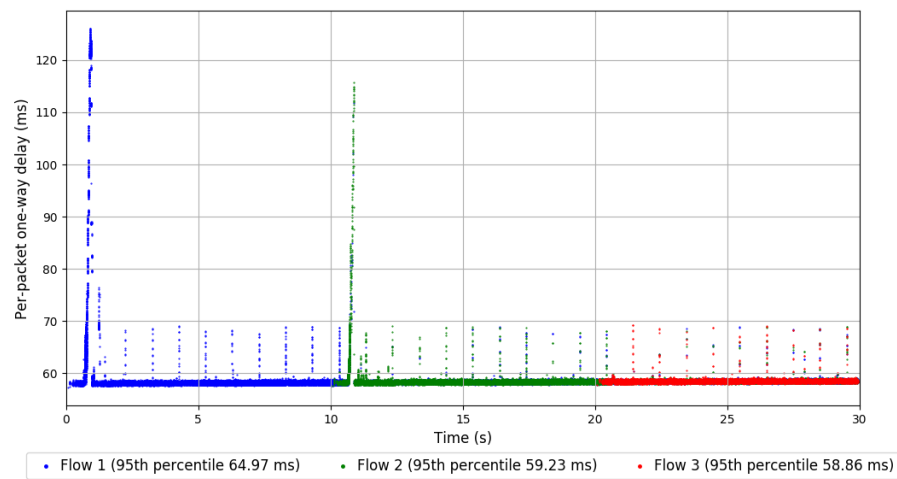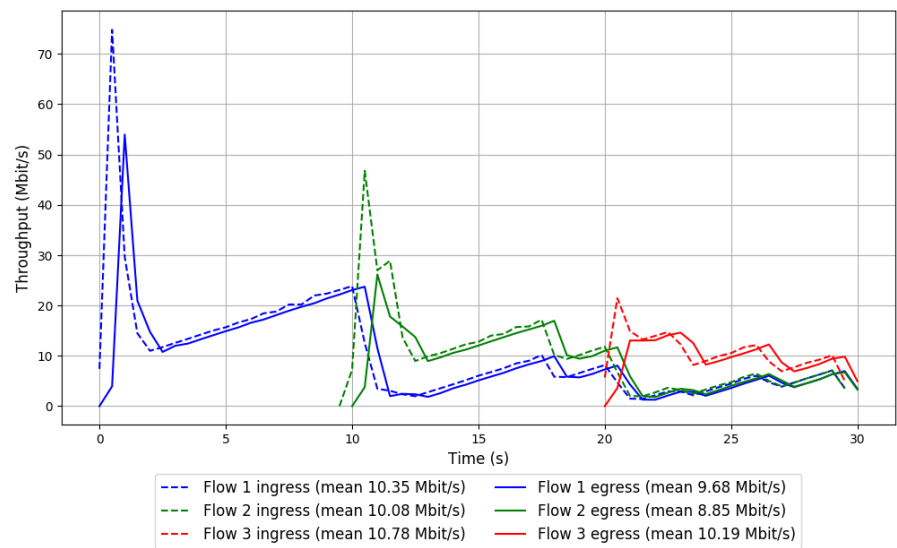
```
Run 3: Statistics of TCP Vegas

Start at: 2018-09-25 17:31:56
End at: 2018-09-25 17:32:26
Local clock offset: 4.584 ms
Remote clock offset: 46.32 ms


# Below is generated by plot.py at 2018-09-25 18:38:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.92 Mbit/s
95th percentile per-packet one-way delay: 57.132 ms
Loss rate: 7.91%
-- Flow 1:
Average throughput: 10.08 Mbit/s
95th percentile per-packet one-way delay: 64.557 ms
Loss rate: 7.88%
-- Flow 2:
Average throughput: 8.99 Mbit/s
95th percentile per-packet one-way delay: 56.103 ms
Loss rate: 9.55%
-- Flow 3:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 56.078 ms
Loss rate: 4.39%
```

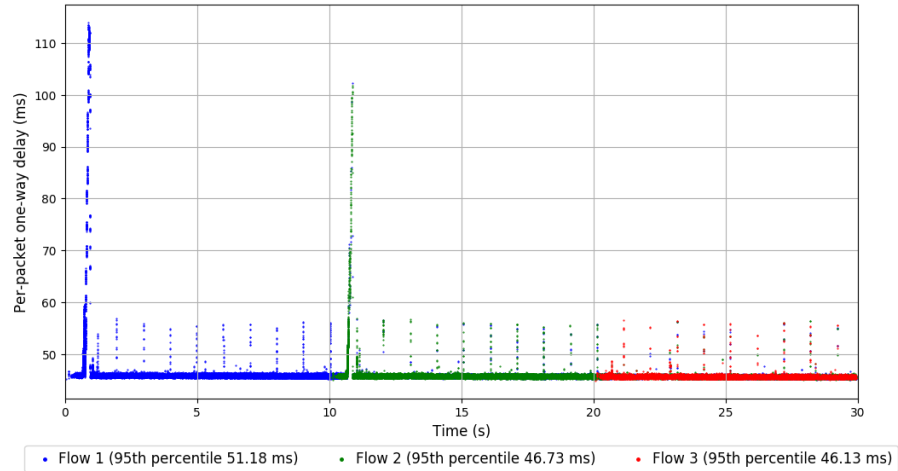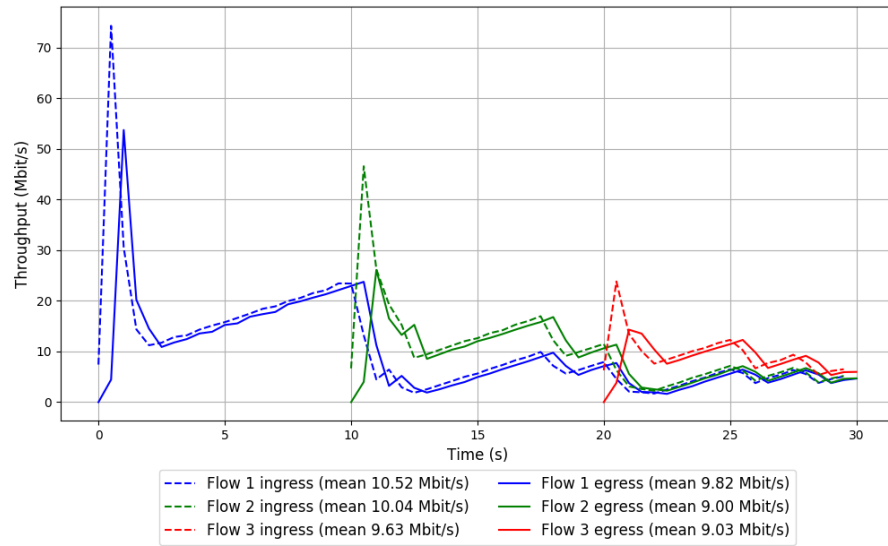Run 3: Report of TCP Vegas — Data Link
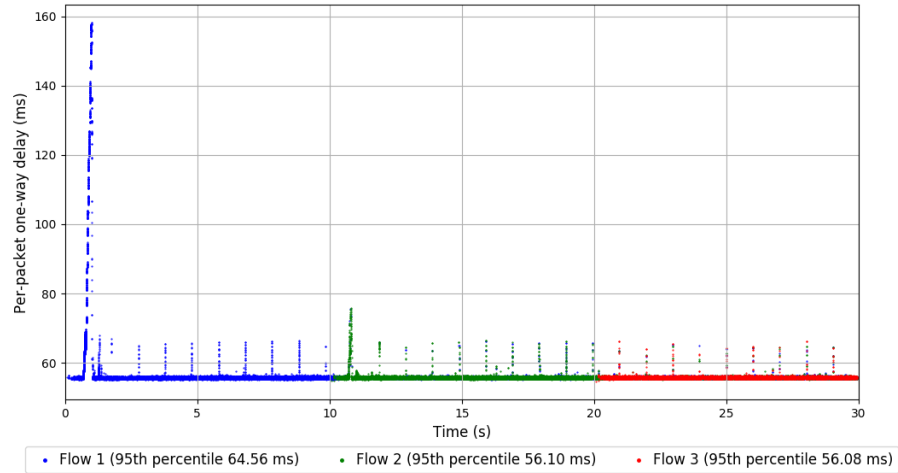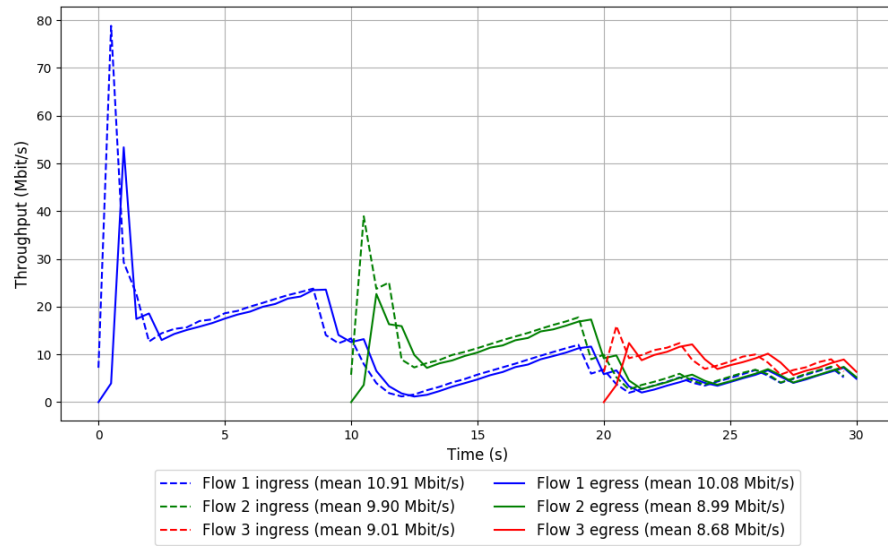
```
Run 4: Statistics of TCP Vegas

Start at: 2018-09-25 17:56:18
End at: 2018-09-25 17:56:48
Local clock offset: 29.881 ms
Remote clock offset: 50.503 ms


# Below is generated by plot.py at 2018-09-25 18:38:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.79 Mbit/s
95th percentile per-packet one-way delay: 48.092 ms
Loss rate: 8.18%
-- Flow 1:
Average throughput: 9.82 Mbit/s
95th percentile per-packet one-way delay: 51.181 ms
Loss rate: 6.90%
-- Flow 2:
Average throughput: 9.00 Mbit/s
95th percentile per-packet one-way delay: 46.729 ms
Loss rate: 10.75%
-- Flow 3:
Average throughput: 9.03 Mbit/s
95th percentile per-packet one-way delay: 46.130 ms
Loss rate: 7.02%
```
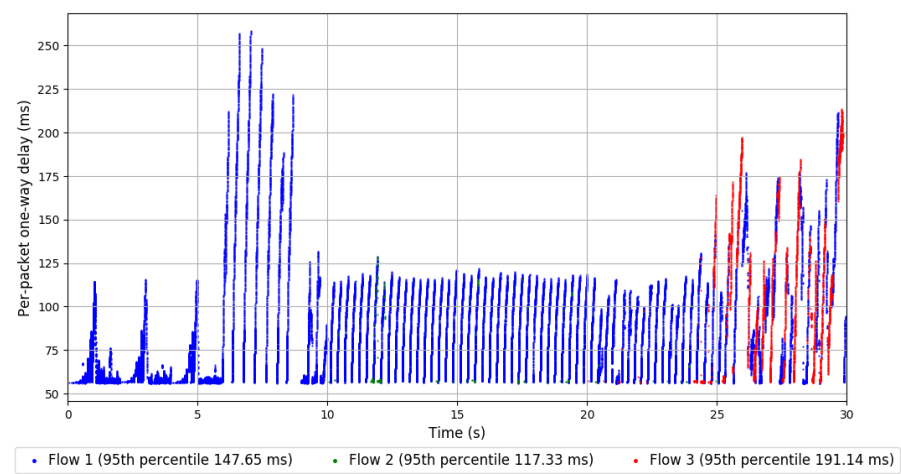
Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 10.52 Mbit/s) — Flow 1 egress (mean 9.82 Mbit/s)
Flow 2 ingress (mean 10.04 Mbit/s) — Flow 2 egress (mean 9.00 Mbit/s)
Flow 3 ingress (mean 9.63 Mbit/s) — Flow 3 egress (mean 9.03 Mbit/s)

Flow 1 (95th percentile 51.18 ms)   Flow 2 (95th percentile 46.73 ms)   Flow 3 (95th percentile 46.13 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2018-09-25 18:19:51
End at: 2018-09-25 18:20:21
Local clock offset: 41.006 ms
Remote clock offset: 31.884 ms


# Below is generated by plot.py at 2018-09-25 18:38:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.79 Mbit/s
95th percentile per-packet one-way delay: 52.160 ms
Loss rate: 8.03%
-- Flow 1:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 57.383 ms
Loss rate: 8.06%
-- Flow 2:
Average throughput: 8.72 Mbit/s
95th percentile per-packet one-way delay: 50.785 ms
Loss rate: 8.34%
-- Flow 3:
Average throughput: 9.87 Mbit/s
95th percentile per-packet one-way delay: 50.555 ms
Loss rate: 7.41%
```

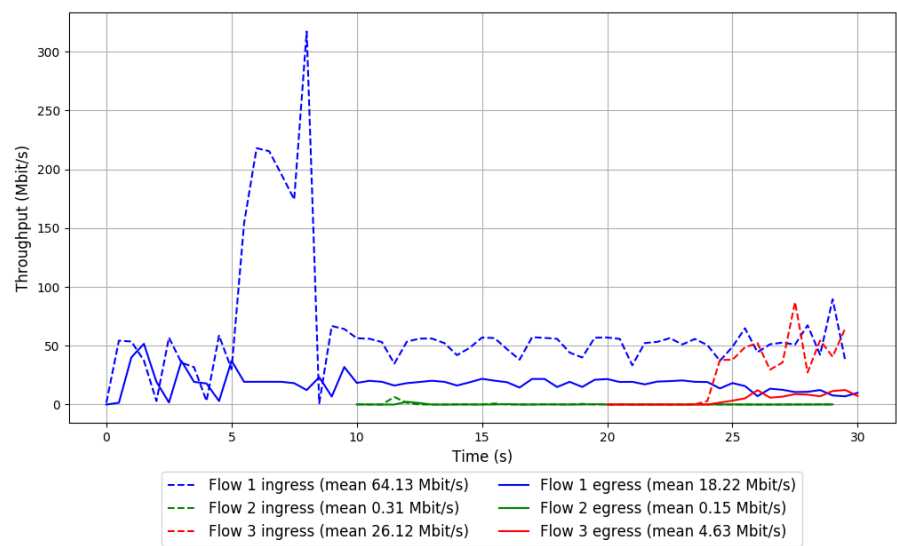Run 5: Report of TCP Vegas — Data Link
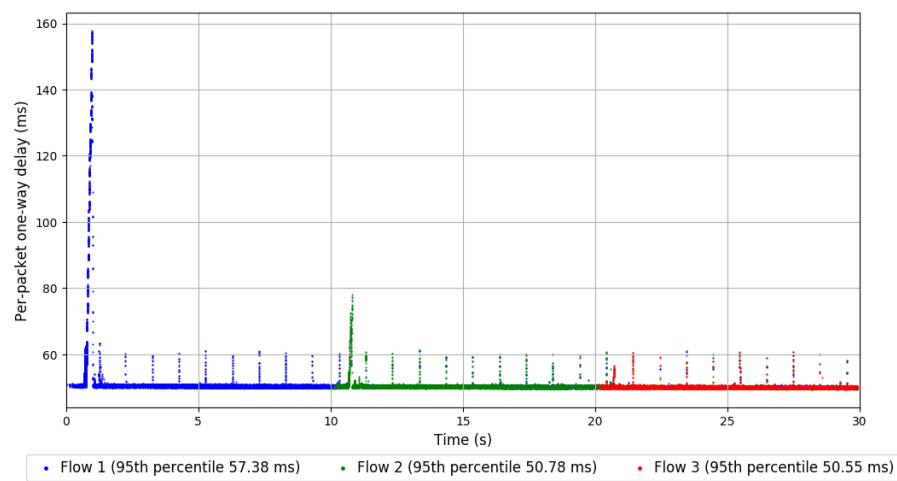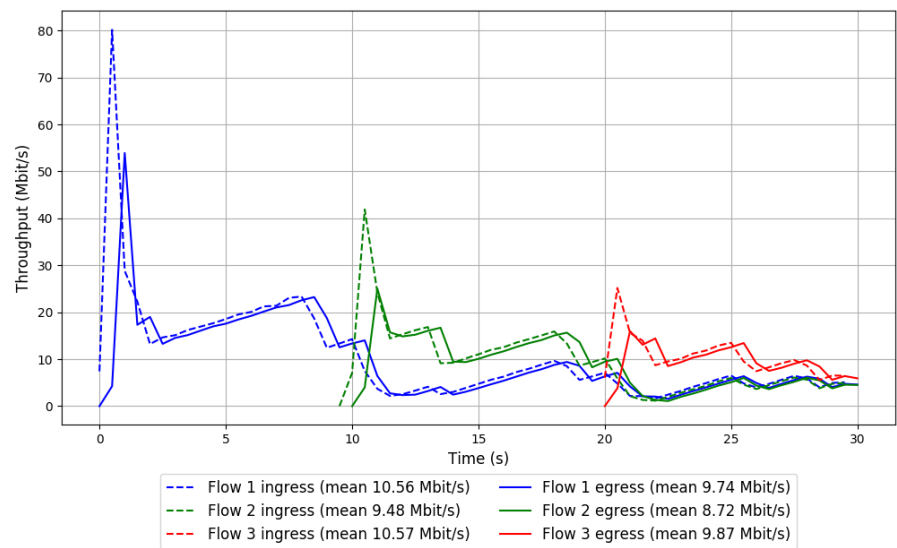
```
Run 1: Statistics of Verus

Start at: 2018-09-25 16:53:06
End at: 2018-09-25 16:53:36
Local clock offset: 2.375 ms
Remote clock offset: 25.501 ms


# Below is generated by plot.py at 2018-09-25 18:38:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.82 Mbit/s
95th percentile per-packet one-way delay: 157.186 ms
Loss rate: 72.92%
-- Flow 1:
Average throughput: 18.22 Mbit/s
95th percentile per-packet one-way delay: 147.649 ms
Loss rate: 71.67%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 117.326 ms
Loss rate: 54.55%
-- Flow 3:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 191.139 ms
Loss rate: 82.58%
```

Run 1: Report of Verus — Data Link

- - - Flow 1 ingress (mean 64.13 Mbit/s) ——— Flow 1 egress (mean 18.22 Mbit/s)
- - - Flow 2 ingress (mean 0.31 Mbit/s) ——— Flow 2 egress (mean 0.15 Mbit/s)
- - - Flow 3 ingress (mean 26.12 Mbit/s) ——— Flow 3 egress (mean 4.63 Mbit/s)

• Flow 1 (95th percentile 147.65 ms)   • Flow 2 (95th percentile 117.33 ms)   • Flow 3 (95th percentile 191.14 ms)
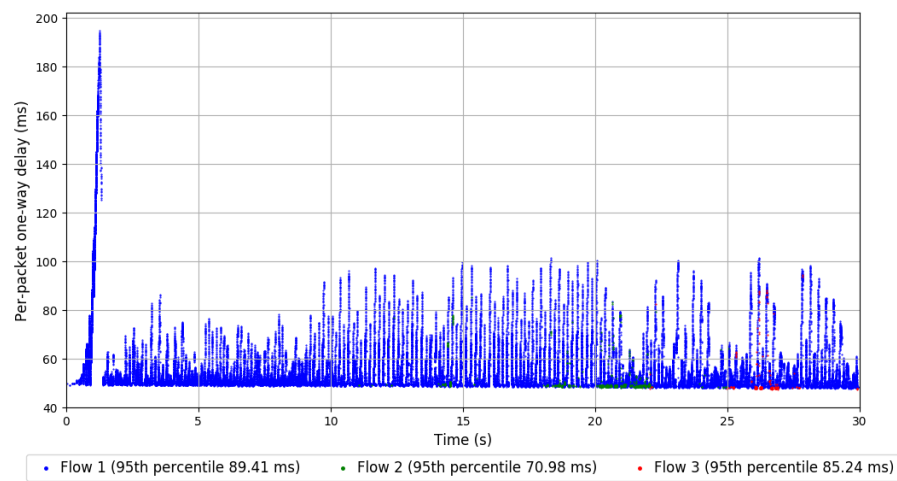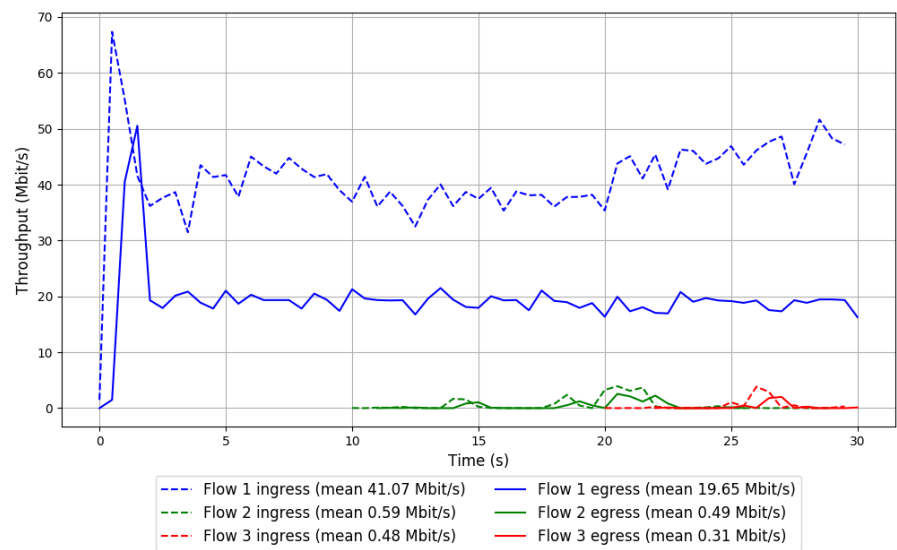
```
Run 2: Statistics of Verus

Start at: 2018-09-25 17:16:52
End at: 2018-09-25 17:17:22
Local clock offset: 3.198 ms
Remote clock offset: 37.603 ms


# Below is generated by plot.py at 2018-09-25 18:38:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.89 Mbit/s
95th percentile per-packet one-way delay: 152.408 ms
Loss rate: 72.86%
-- Flow 1:
Average throughput: 13.14 Mbit/s
95th percentile per-packet one-way delay: 116.158 ms
Loss rate: 53.12%
-- Flow 2:
Average throughput: 13.04 Mbit/s
95th percentile per-packet one-way delay: 181.461 ms
Loss rate: 87.76%
-- Flow 3:
Average throughput: 6.94 Mbit/s
95th percentile per-packet one-way delay: 122.693 ms
Loss rate: 70.27%
```

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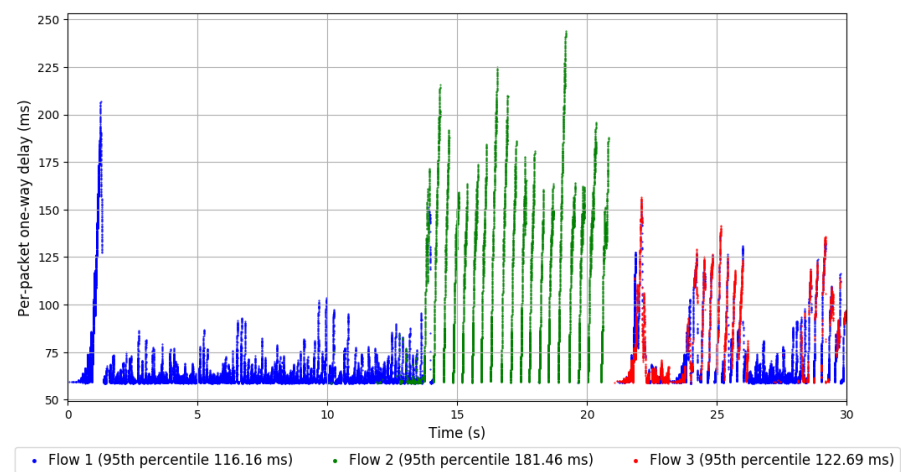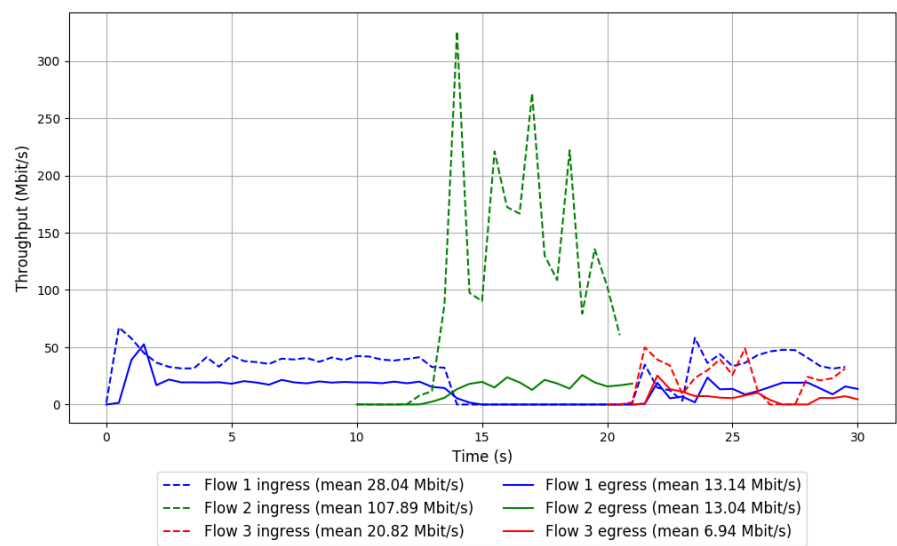
```
Run 3: Statistics of Verus

Start at: 2018-09-25 17:41:16
End at: 2018-09-25 17:41:46
Local clock offset: 10.15 ms
Remote clock offset: 47.888 ms


# Below is generated by plot.py at 2018-09-25 18:38:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 89.117 ms
Loss rate: 52.17%
-- Flow 1:
Average throughput: 19.65 Mbit/s
95th percentile per-packet one-way delay: 89.412 ms
Loss rate: 52.30%
-- Flow 2:
Average throughput: 0.49 Mbit/s
95th percentile per-packet one-way delay: 70.978 ms
Loss rate: 39.75%
-- Flow 3:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 85.240 ms
Loss rate: 48.63%
```

Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2018-09-25 18:05:00
End at: 2018-09-25 18:05:30
Local clock offset: 35.057 ms
Remote clock offset: 46.47 ms


# Below is generated by plot.py at 2018-09-25 18:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.89 Mbit/s
95th percentile per-packet one-way delay: 141.571 ms
Loss rate: 76.49%
-- Flow 1:
Average throughput: 17.23 Mbit/s
95th percentile per-packet one-way delay: 143.211 ms
Loss rate: 78.17%
-- Flow 2:
Average throughput: 2.14 Mbit/s
95th percentile per-packet one-way delay: 123.839 ms
Loss rate: 49.67%
-- Flow 3:
Average throughput: 4.74 Mbit/s
95th percentile per-packet one-way delay: 94.030 ms
Loss rate: 56.75%
```

Run 4: Report of Verus — Data Link

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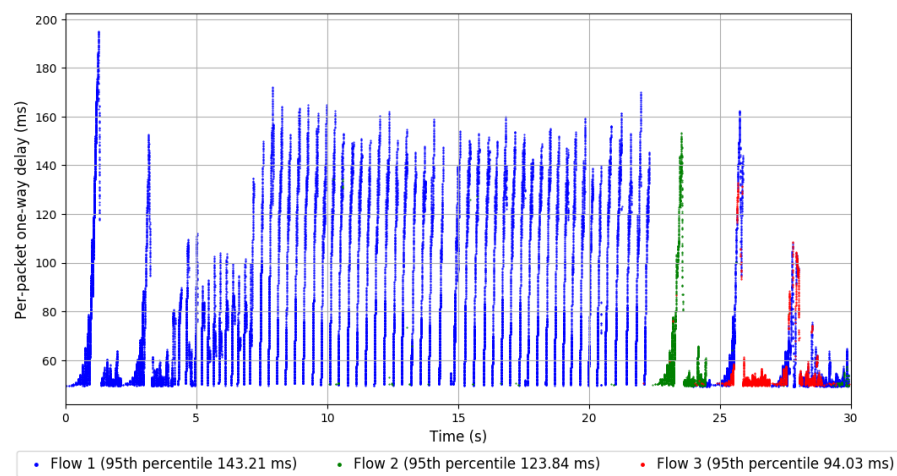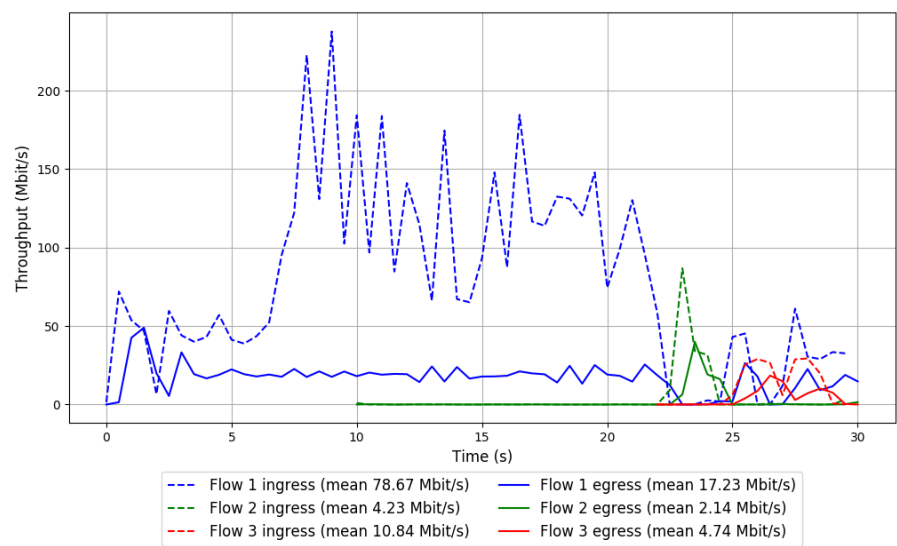
```
Run 5: Statistics of Verus

Start at: 2018-09-25 18:28:32
End at: 2018-09-25 18:29:02
Local clock offset: 44.036 ms
Remote clock offset: 30.315 ms


# Below is generated by plot.py at 2018-09-25 18:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.96 Mbit/s
95th percentile per-packet one-way delay: 99.778 ms
Loss rate: 64.91%
-- Flow 1:
Average throughput: 13.92 Mbit/s
95th percentile per-packet one-way delay: 101.538 ms
Loss rate: 58.10%
-- Flow 2:
Average throughput: 9.08 Mbit/s
95th percentile per-packet one-way delay: 97.688 ms
Loss rate: 74.48%
-- Flow 3:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 46.969 ms
Loss rate: 86.67%
```

Run 5: Report of Verus — Data Link
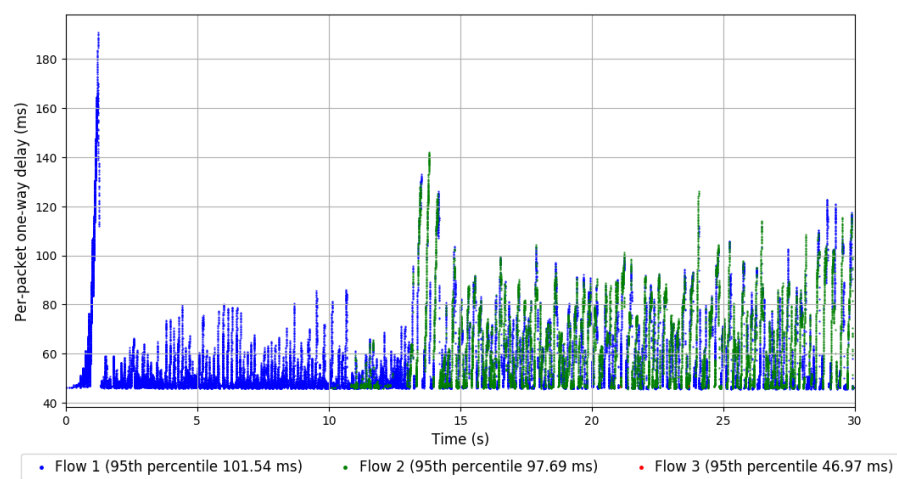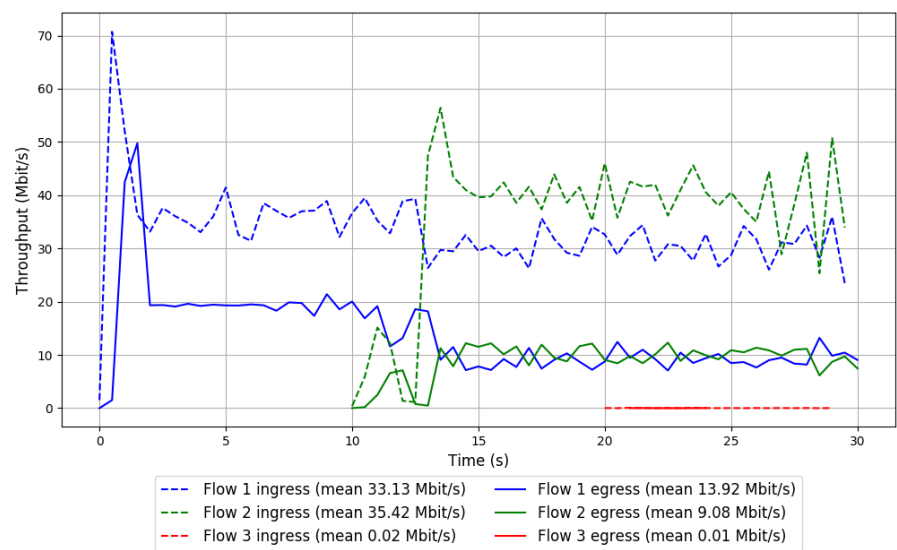
```
Run 1: Statistics of PCC-Vivace

Start at: 2018-09-25 16:51:53
End at: 2018-09-25 16:52:23
Local clock offset: 2.754 ms
Remote clock offset: 28.048 ms


# Below is generated by plot.py at 2018-09-25 18:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 56.738 ms
Loss rate: 6.82%
-- Flow 1:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 65.831 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 54.773 ms
Loss rate: 7.94%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 55.045 ms
Loss rate: 6.97%
```

Run 1: Report of PCC-Vivace — Data Link
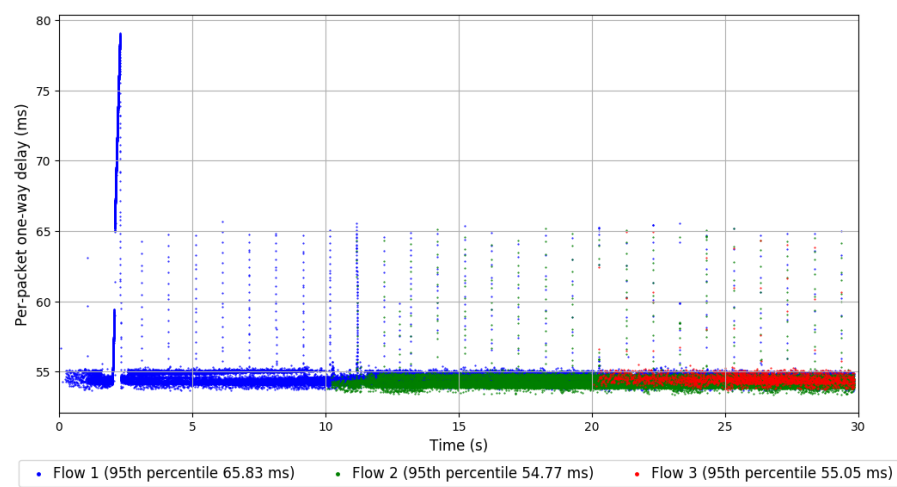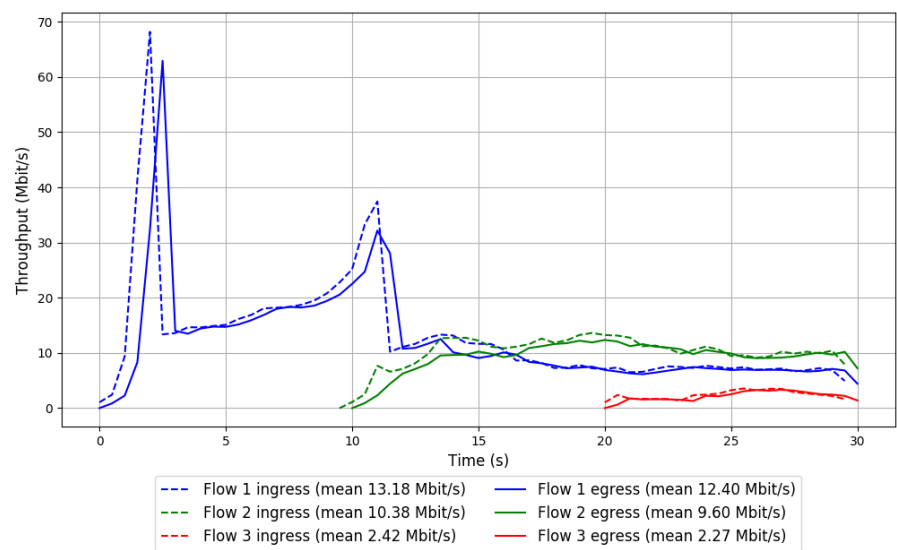
```
Run 2: Statistics of PCC-Vivace

Start at: 2018-09-25 17:15:37
End at: 2018-09-25 17:16:07
Local clock offset: 3.126 ms
Remote clock offset: 39.346 ms


# Below is generated by plot.py at 2018-09-25 18:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 58.136 ms
Loss rate: 7.41%
-- Flow 1:
Average throughput: 13.67 Mbit/s
95th percentile per-packet one-way delay: 61.487 ms
Loss rate: 7.35%
-- Flow 2:
Average throughput: 7.74 Mbit/s
95th percentile per-packet one-way delay: 57.983 ms
Loss rate: 7.54%
-- Flow 3:
Average throughput: 2.17 Mbit/s
95th percentile per-packet one-way delay: 57.562 ms
Loss rate: 7.50%
```

Run 2: Report of PCC-Vivace — Data Link
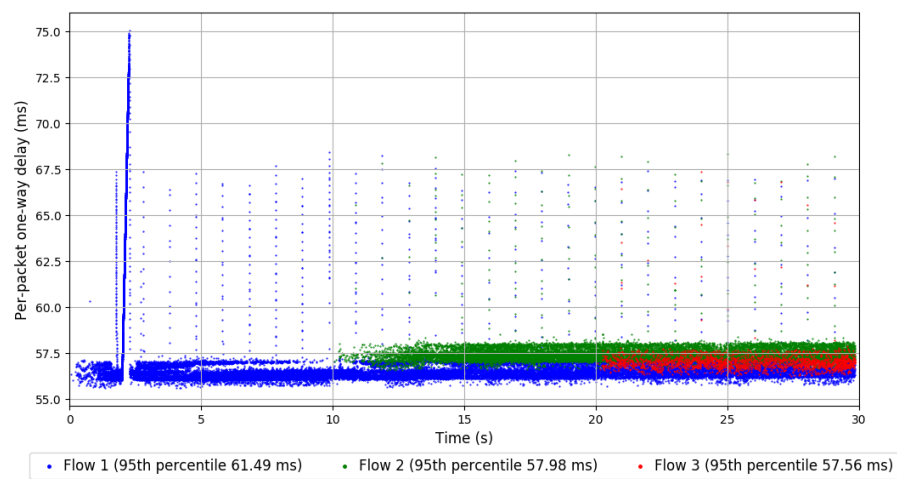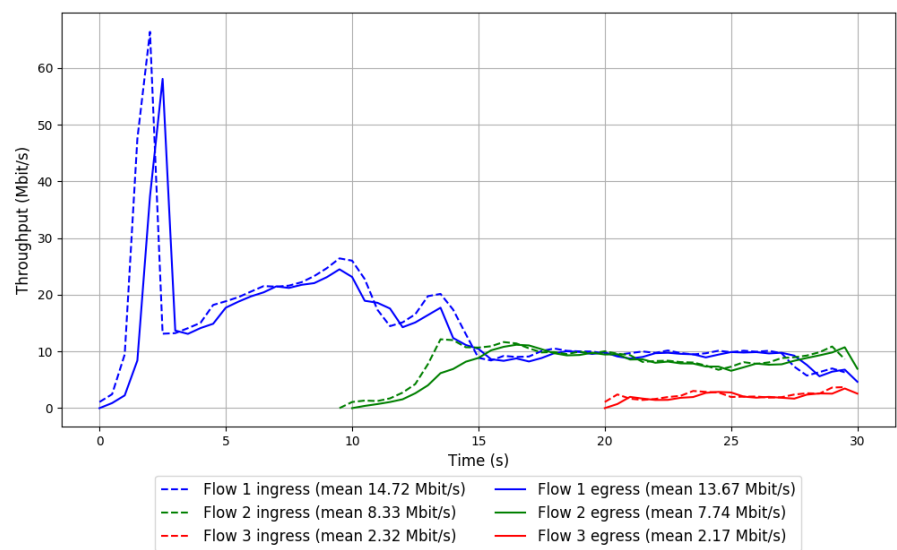
```
Run 3: Statistics of PCC-Vivace

Start at: 2018-09-25 17:40:01
End at: 2018-09-25 17:40:31
Local clock offset: 6.584 ms
Remote clock offset: 52.257 ms

# Below is generated by plot.py at 2018-09-25 18:38:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.56 Mbit/s
95th percentile per-packet one-way delay: 47.421 ms
Loss rate: 13.61%
-- Flow 1:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 54.270 ms
Loss rate: 15.36%
-- Flow 2:
Average throughput: 13.41 Mbit/s
95th percentile per-packet one-way delay: 44.522 ms
Loss rate: 12.34%
-- Flow 3:
Average throughput: 3.03 Mbit/s
95th percentile per-packet one-way delay: 44.309 ms
Loss rate: 6.95%
```

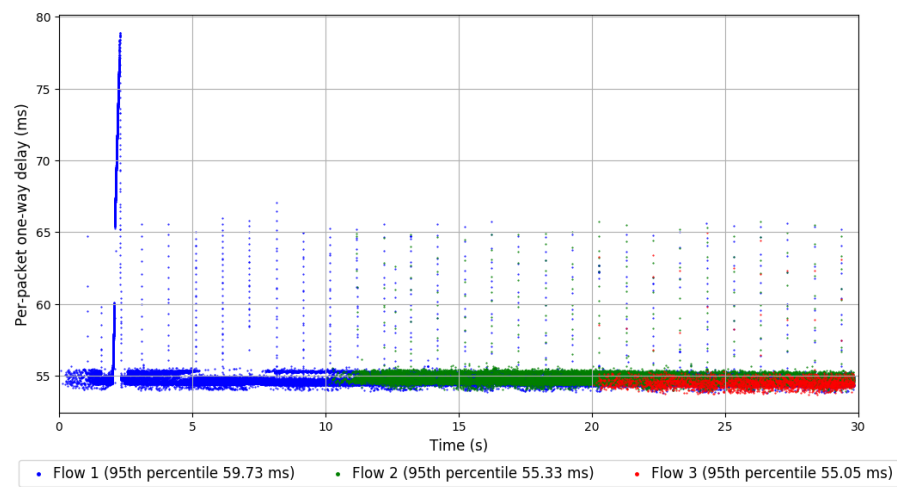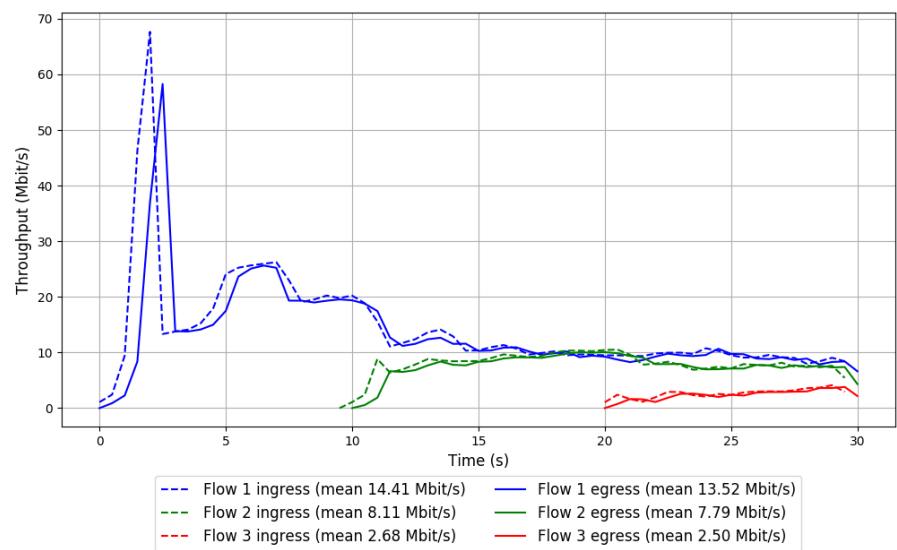Run 3: Report of PCC-Vivace — Data Link
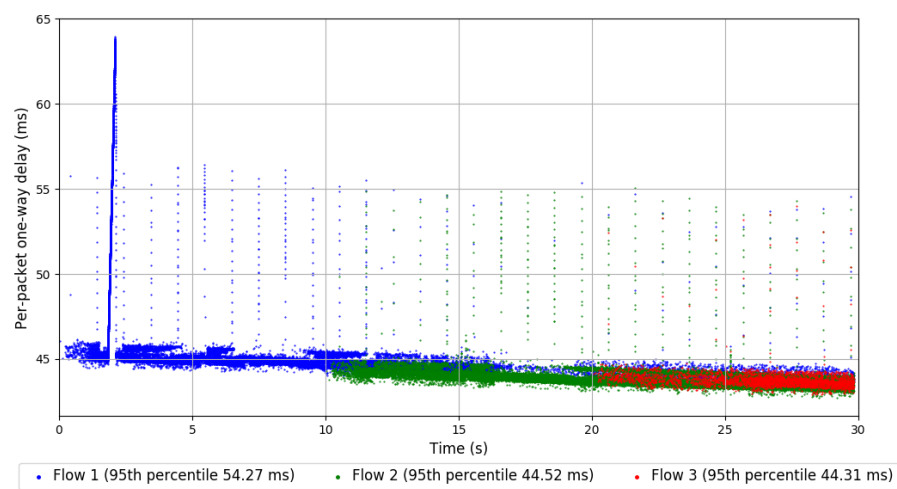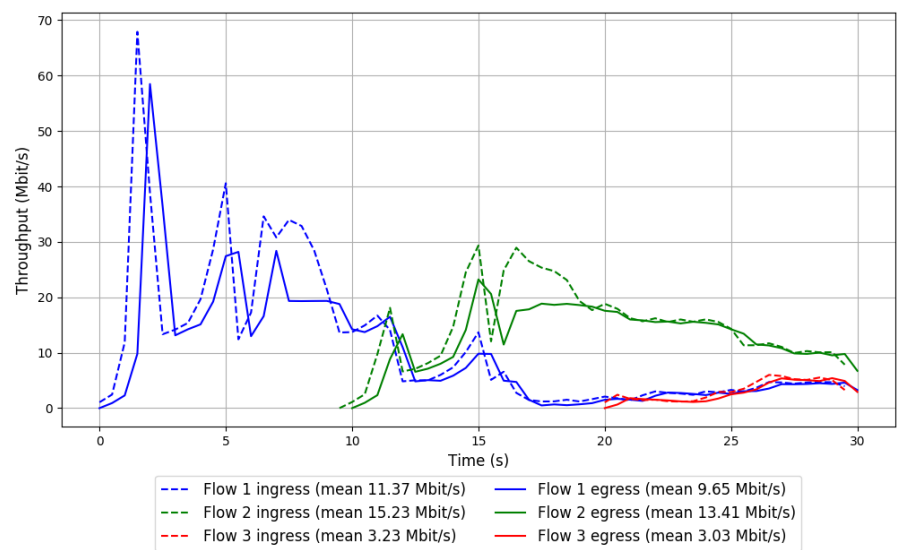
```
Run 4: Statistics of PCC-Vivace

Start at: 2018-09-25 18:03:46
End at: 2018-09-25 18:04:16
Local clock offset: 34.365 ms
Remote clock offset: 41.592 ms


# Below is generated by plot.py at 2018-09-25 18:38:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 55.959 ms
Loss rate: 5.88%
-- Flow 1:
Average throughput: 13.52 Mbit/s
95th percentile per-packet one-way delay: 59.725 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 55.332 ms
Loss rate: 4.25%
-- Flow 3:
Average throughput: 2.50 Mbit/s
95th percentile per-packet one-way delay: 55.047 ms
Loss rate: 7.23%
```

Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 14.41 Mbit/s) — Flow 1 egress (mean 13.52 Mbit/s)
Flow 2 ingress (mean 8.11 Mbit/s) — Flow 2 egress (mean 7.79 Mbit/s)
Flow 3 ingress (mean 2.68 Mbit/s) — Flow 3 egress (mean 2.50 Mbit/s)

Flow 1 (95th percentile 59.73 ms)   Flow 2 (95th percentile 55.33 ms)   Flow 3 (95th percentile 55.05 ms)
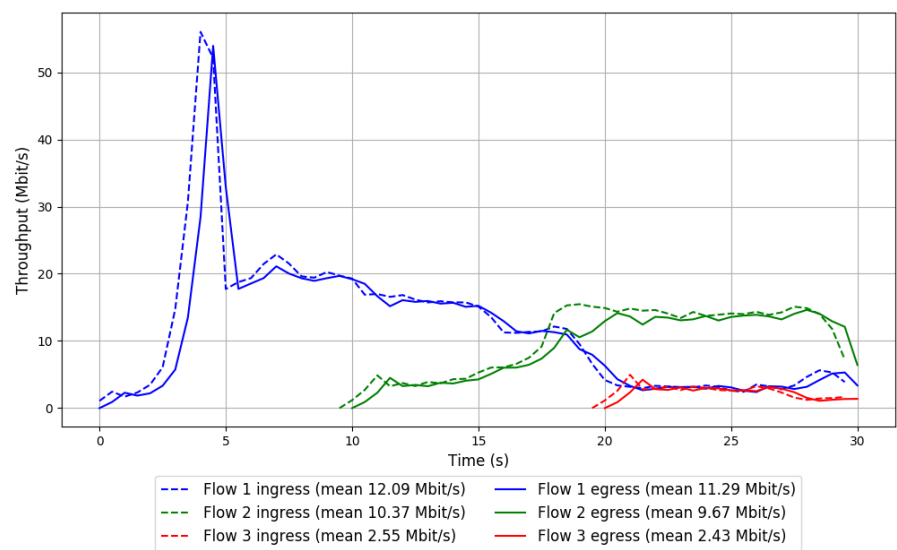
```
Run 5: Statistics of PCC-Vivace

Start at: 2018-09-25 18:27:18
End at: 2018-09-25 18:27:48
Local clock offset: 43.643 ms
Remote clock offset: 27.548 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 50.400 ms
Loss rate: 6.92%
-- Flow 1:
Average throughput: 11.29 Mbit/s
95th percentile per-packet one-way delay: 50.448 ms
Loss rate: 6.87%
-- Flow 2:
Average throughput: 9.67 Mbit/s
95th percentile per-packet one-way delay: 50.048 ms
Loss rate: 7.16%
-- Flow 3:
Average throughput: 2.43 Mbit/s
95th percentile per-packet one-way delay: 49.720 ms
Loss rate: 5.59%
```

Run 5: Report of PCC-Vivace — Data Link
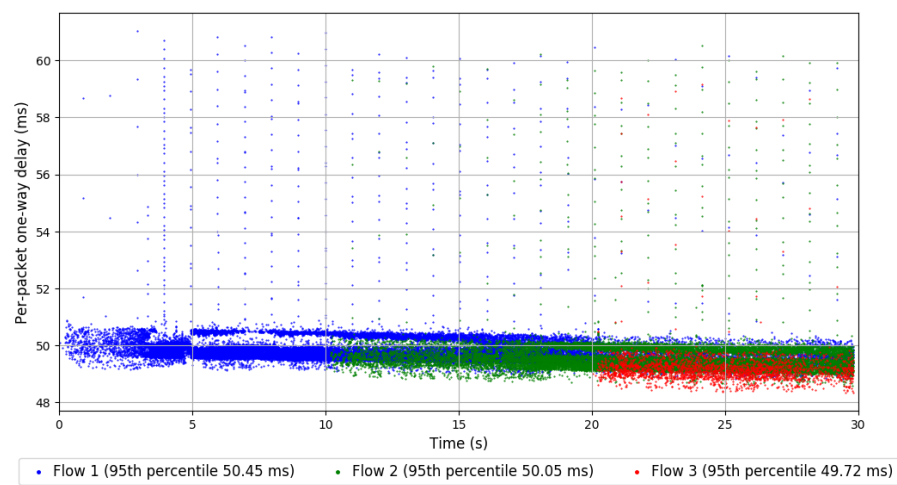
```
Run 1: Statistics of WebRTC media

Start at: 2018-09-25 16:55:44
End at: 2018-09-25 16:56:14
Local clock offset: 1.989 ms
Remote clock offset: 19.027 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 63.092 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 1.57 Mbit/s
95th percentile per-packet one-way delay: 63.061 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 1.02 Mbit/s
95th percentile per-packet one-way delay: 63.195 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.38 Mbit/s
95th percentile per-packet one-way delay: 63.039 ms
Loss rate: 1.10%
```

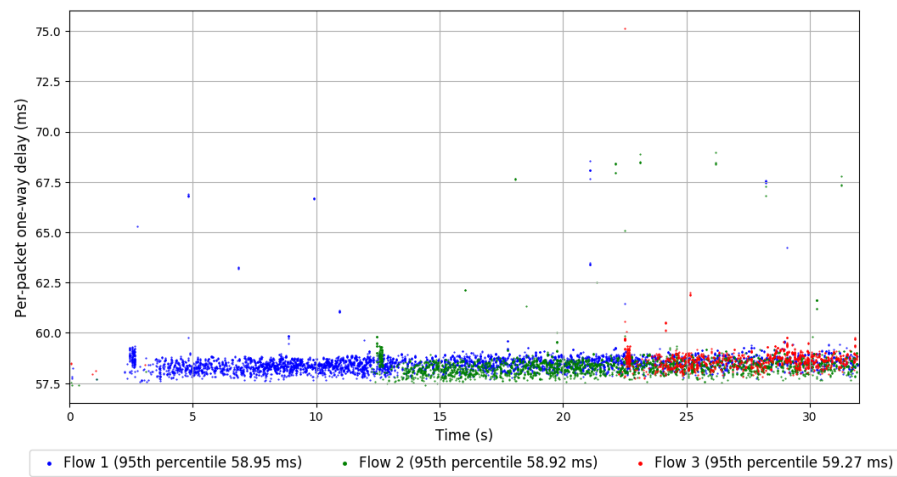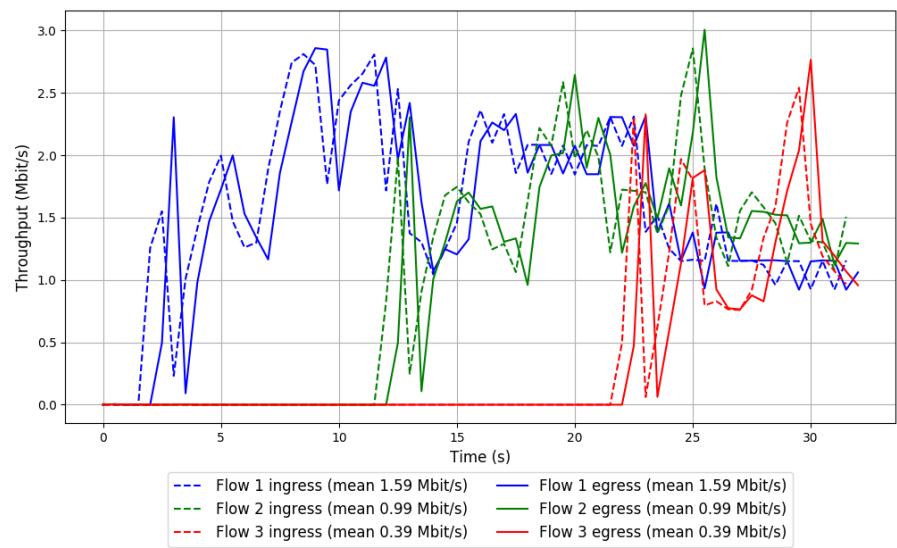Run 1: Report of WebRTC media — Data Link
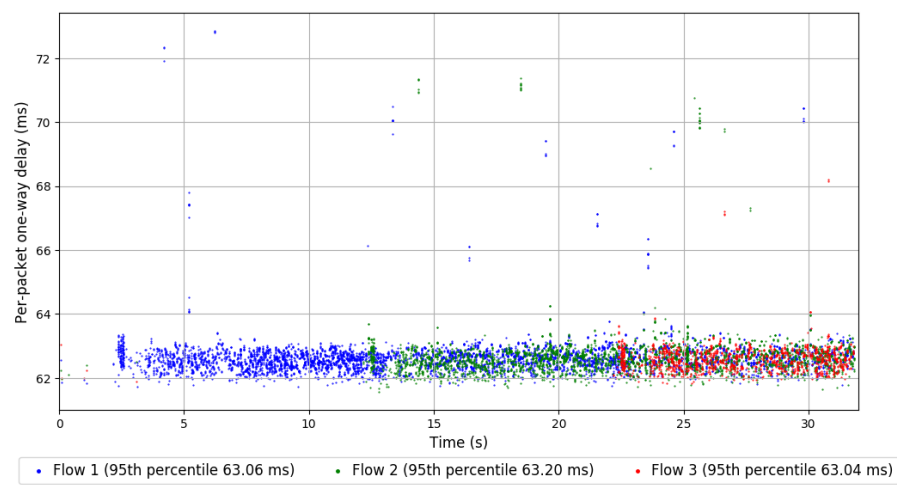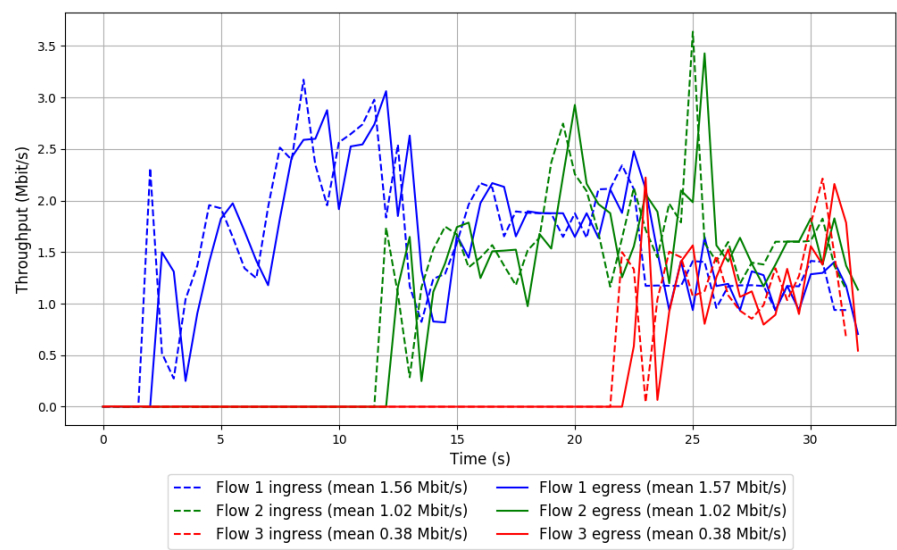
```
Run 2: Statistics of WebRTC media

Start at: 2018-09-25 17:19:20
End at: 2018-09-25 17:19:50
Local clock offset: 3.589 ms
Remote clock offset: 39.371 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 59.006 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 1.59 Mbit/s
95th percentile per-packet one-way delay: 58.947 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 58.923 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 59.265 ms
Loss rate: 0.57%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2018-09-25 17:43:51
End at: 2018-09-25 17:44:21
Local clock offset: 15.931 ms
Remote clock offset: 47.119 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.99 Mbit/s
95th percentile per-packet one-way delay: 50.093 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 1.58 Mbit/s
95th percentile per-packet one-way delay: 50.174 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 0.99 Mbit/s
95th percentile per-packet one-way delay: 49.951 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 49.827 ms
Loss rate: 0.25%
```

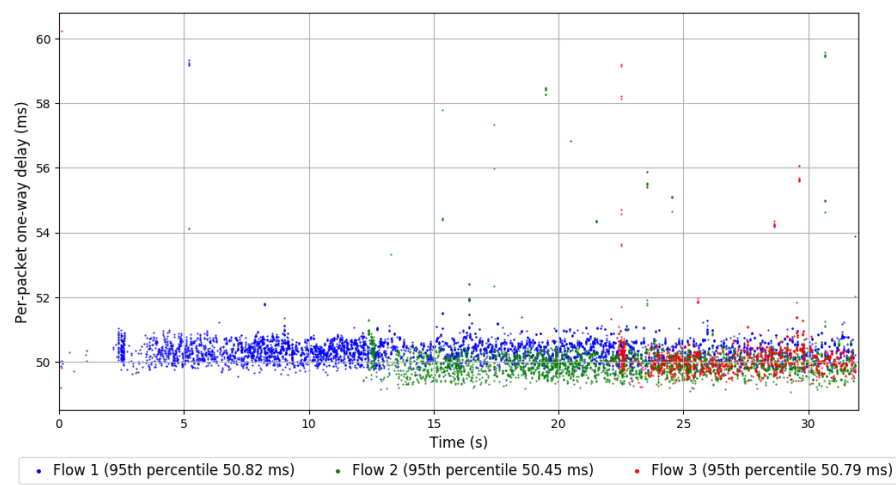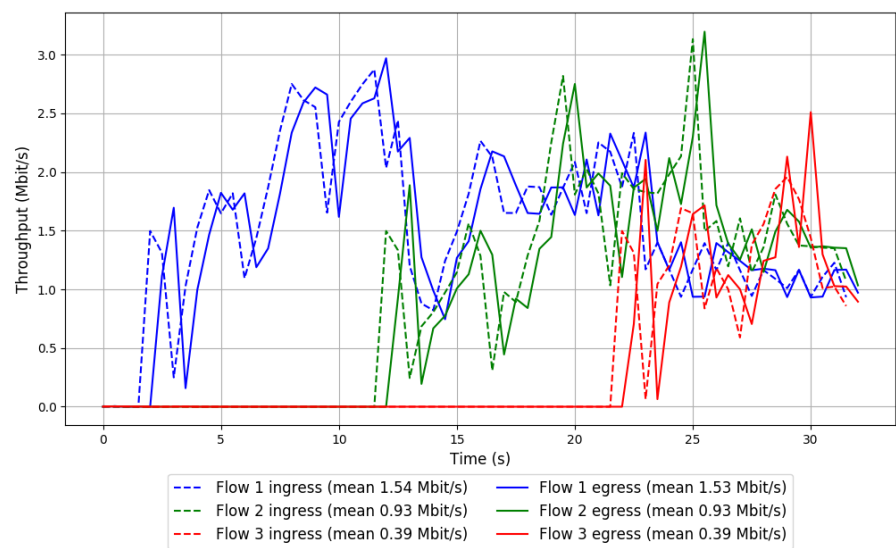Run 3: Report of WebRTC media — Data Link
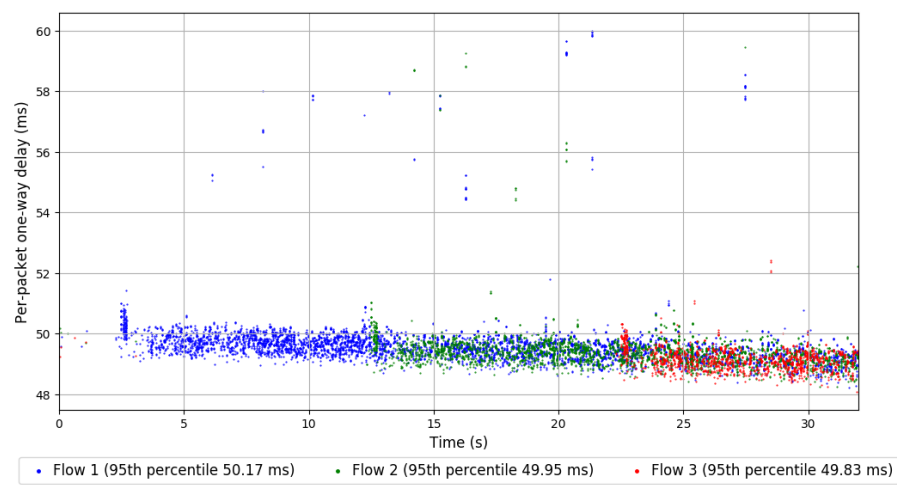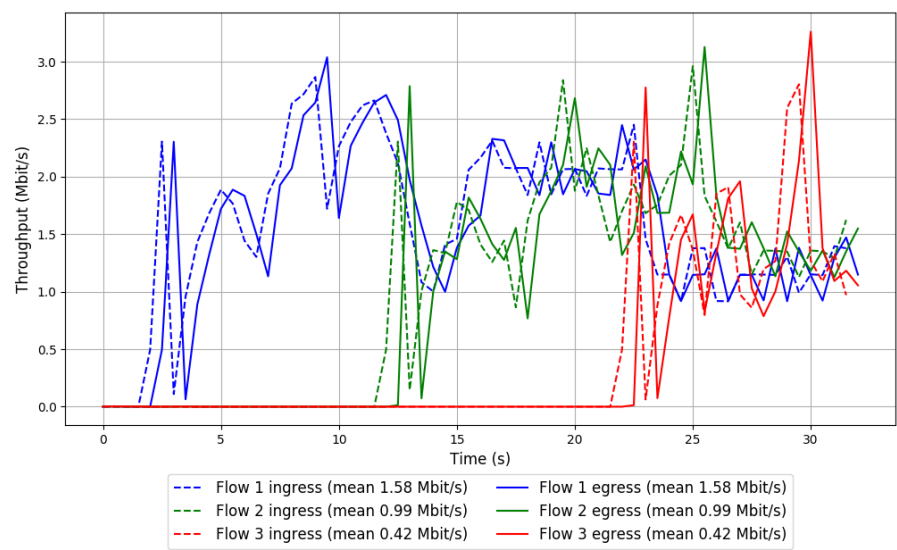
```
Run 4: Statistics of WebRTC media

Start at: 2018-09-25 18:07:30
End at: 2018-09-25 18:08:00
Local clock offset: 36.148 ms
Remote clock offset: 46.673 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.85 Mbit/s
95th percentile per-packet one-way delay: 50.769 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 1.53 Mbit/s
95th percentile per-packet one-way delay: 50.823 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 0.93 Mbit/s
95th percentile per-packet one-way delay: 50.453 ms
Loss rate: 0.44%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 50.793 ms
Loss rate: 0.36%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-09-25 18:30:59
End at: 2018-09-25 18:31:29
Local clock offset: 45.02 ms
Remote clock offset: 25.278 ms


# Below is generated by plot.py at 2018-09-25 18:38:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 51.236 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 51.259 ms
Loss rate: 0.23%
-- Flow 2:
Average throughput: 1.00 Mbit/s
95th percentile per-packet one-way delay: 51.176 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 51.231 ms
Loss rate: 0.26%
```

Run 5: Report of WebRTC media — Data Link