Pantheon Report

Generated at 2018-10-09 23:07:24 (UTC).

Data path: AWS California 2 on `ens5` (*local*) →Mexico on `em1` (*remote*).

Repeated the test of 18 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 `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1023-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

Git summary:
branch: muses @ 2e19c0464530faa92c63f8217c9971438a26a3be
third_party/fillp @ 5332fc9127c63565e13f4933b336c02d1aabdac6
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 @ f866d3f58d27afd942717625ee3a354cc2e802bd
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
 M src/verus.hpp
 M tools/plot.py
```
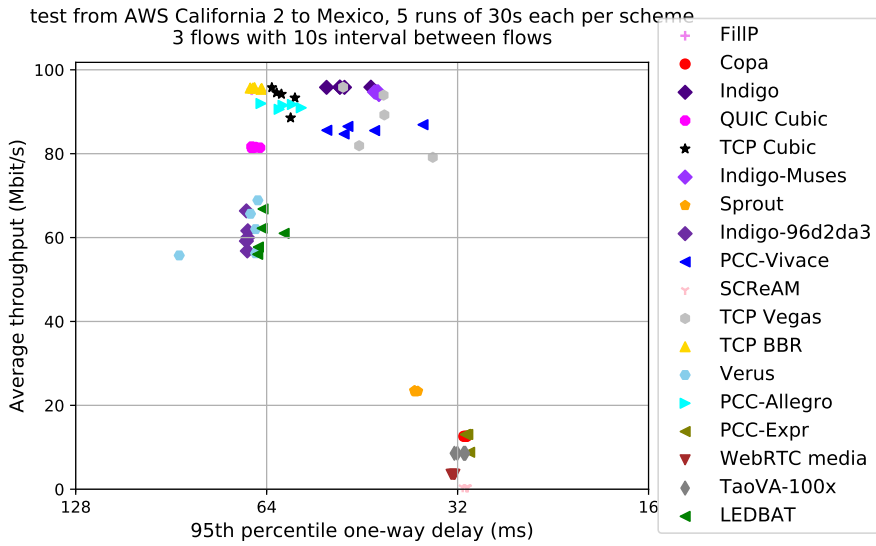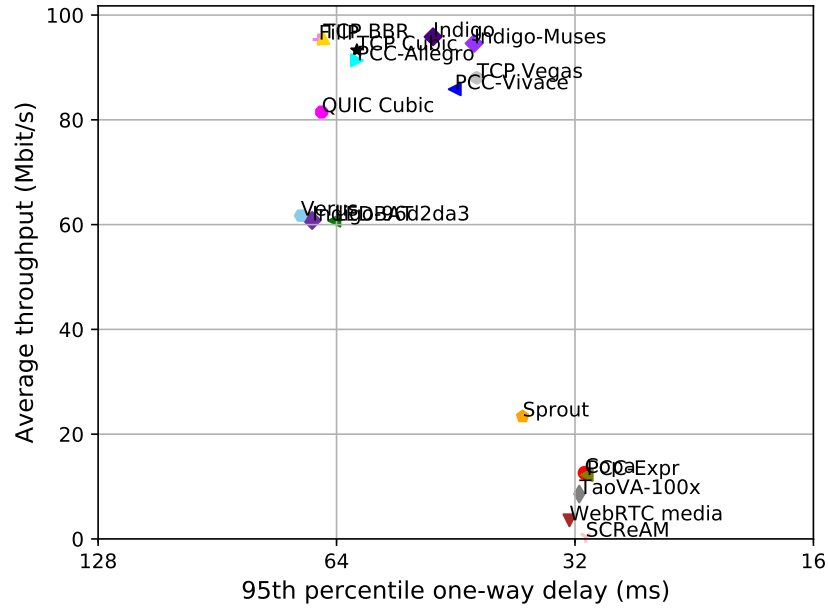
```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

test from AWS California 2 to Mexico, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS California 2 to Mexico, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

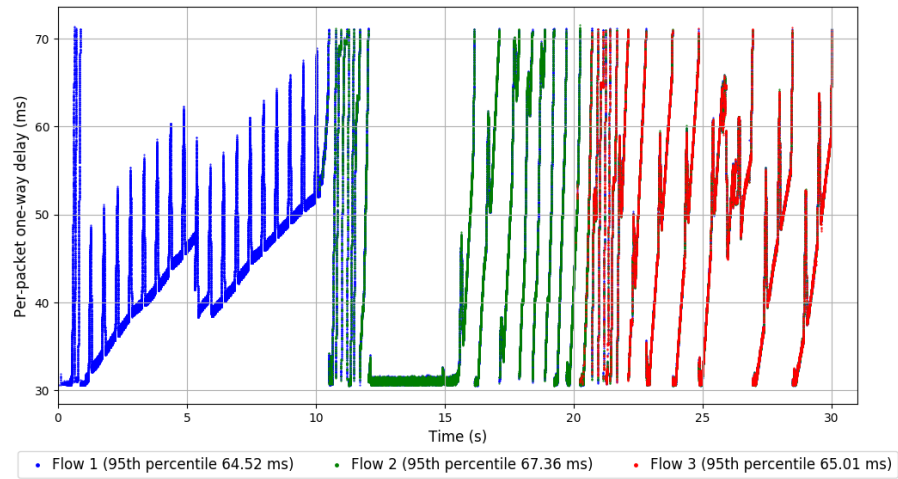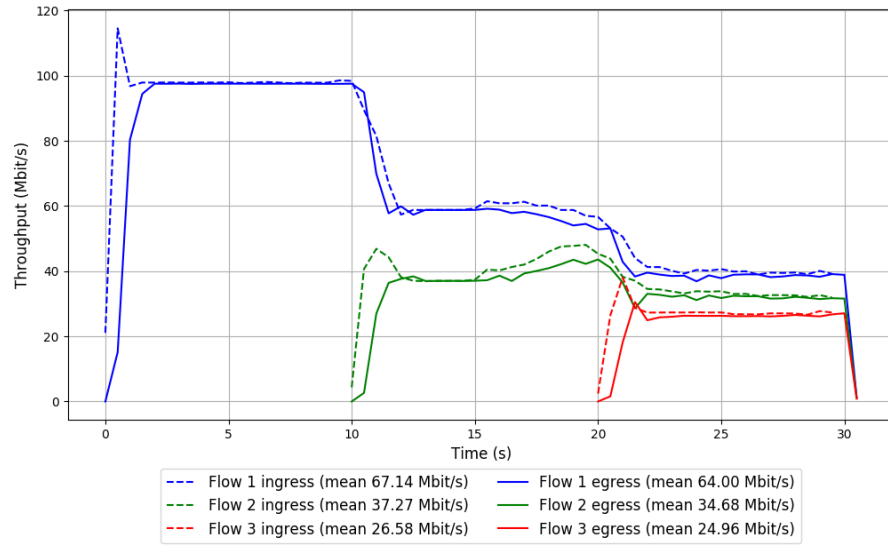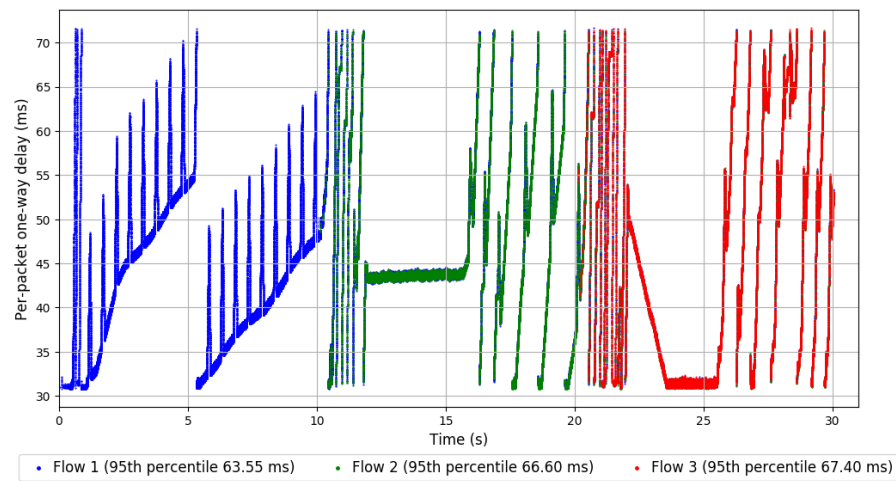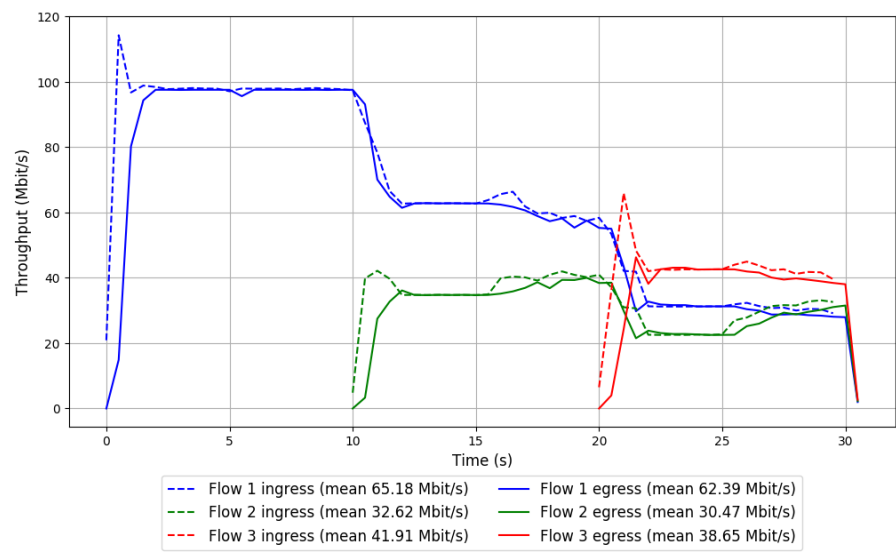| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	61.73	33.53	34.66	65.40	67.85	67.63	5.93	9.77	10.90
Copa	5	9.24	4.76	0.62	31.31	30.91	30.96	70.63	75.69	89.90
TCP Cubic	5	65.58	26.22	30.72	60.08	58.57	55.30	0.85	0.35	0.34
FillP	5	58.24	39.56	32.83	65.98	68.52	68.52	13.89	25.19	31.31
Indigo	5	65.83	29.80	31.42	44.94	50.91	53.46	0.01	0.05	0.06
Indigo-96d2da3	5	47.67	17.85	10.25	68.63	68.22	65.08	57.83	64.69	70.72
LEDBAT	5	39.87	21.20	20.48	64.34	65.18	60.21	0.19	0.27	0.03
Indigo-Muses	5	55.81	35.13	46.87	43.25	44.01	39.72	0.54	0.01	0.00
PCC-Allegro	5	79.38	13.20	9.70	60.12	61.65	59.91	2.00	1.88	1.82
PCC-Expr	5	6.70	6.34	3.92	30.92	30.94	30.96	51.48	36.04	32.51
QUIC Cubic	5	59.13	24.44	18.60	66.54	67.10	67.26	2.88	1.03	1.08
SCReAM	5	0.21	0.21	0.22	30.99	31.01	31.00	0.00	0.00	0.00
Sprout	5	11.78	11.74	11.47	37.12	37.49	37.19	0.07	0.02	0.04
TaoVA-100x	5	0.00	10.02	5.68	30.84	31.70	31.63	95.92	83.53	36.28
TCP Vegas	5	54.09	23.28	55.40	40.88	38.90	45.39	0.83	0.51	0.73
Verus	5	41.81	24.64	12.53	70.84	67.60	66.08	35.70	44.23	36.55
PCC-Vivace	5	64.04	26.19	13.28	43.50	46.59	45.53	0.06	0.03	0.02
WebRTC media	5	1.91	1.23	0.41	32.04	32.86	33.19	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-10-09 21:11:52
End at: 2018-10-09 21:12:22
Local clock offset: 1.594 ms
Remote clock offset: -3.586 ms


# Below is generated by plot.py at 2018-10-09 22:59:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.36 Mbit/s
95th percentile per-packet one-way delay: 65.324 ms
Loss rate: 5.39%
-- Flow 1:
Average throughput: 64.00 Mbit/s
95th percentile per-packet one-way delay: 64.520 ms
Loss rate: 4.67%
-- Flow 2:
Average throughput: 34.68 Mbit/s
95th percentile per-packet one-way delay: 67.358 ms
Loss rate: 7.04%
-- Flow 3:
Average throughput: 24.96 Mbit/s
95th percentile per-packet one-way delay: 65.011 ms
Loss rate: 6.26%
```
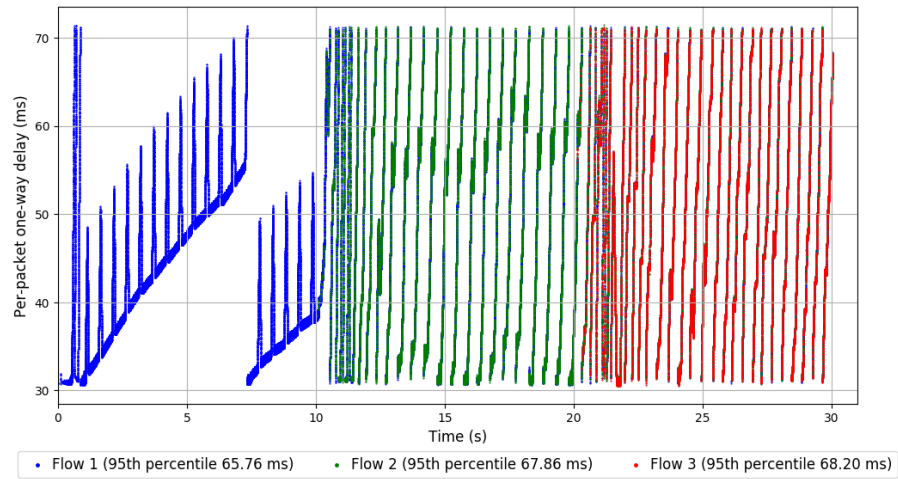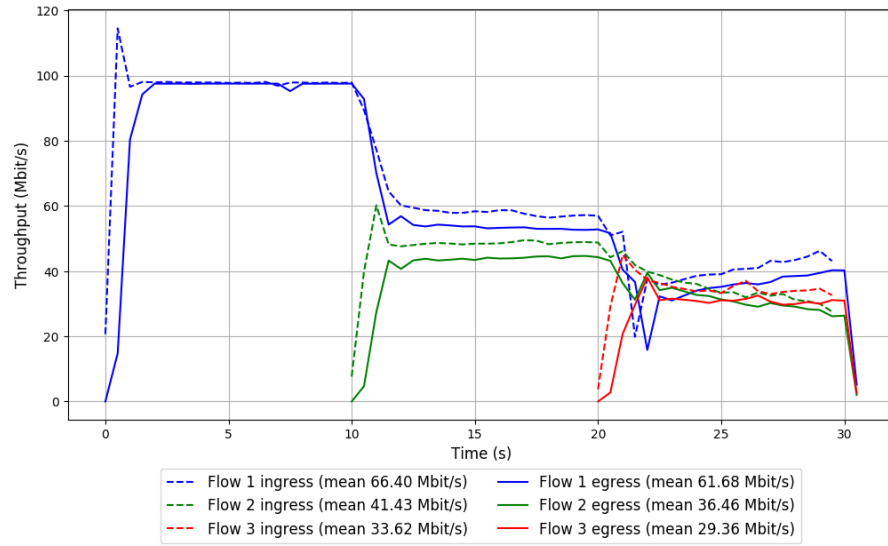
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2018-10-09 21:36:28
End at: 2018-10-09 21:36:58
Local clock offset: 3.761 ms
Remote clock offset: -2.975 ms


# Below is generated by plot.py at 2018-10-09 22:59:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.55 Mbit/s
95th percentile per-packet one-way delay: 65.167 ms
Loss rate: 5.19%
-- Flow 1:
Average throughput: 62.39 Mbit/s
95th percentile per-packet one-way delay: 63.553 ms
Loss rate: 4.21%
-- Flow 2:
Average throughput: 30.47 Mbit/s
95th percentile per-packet one-way delay: 66.601 ms
Loss rate: 6.56%
-- Flow 3:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 67.400 ms
Loss rate: 7.64%
```
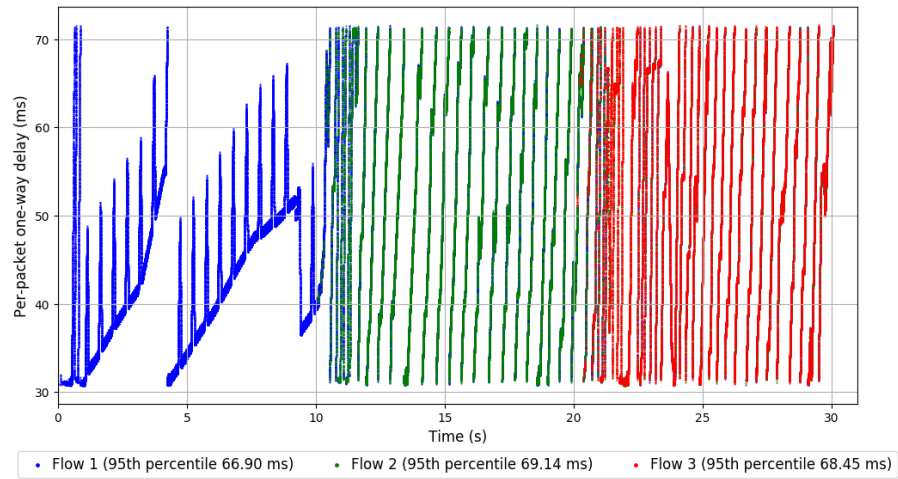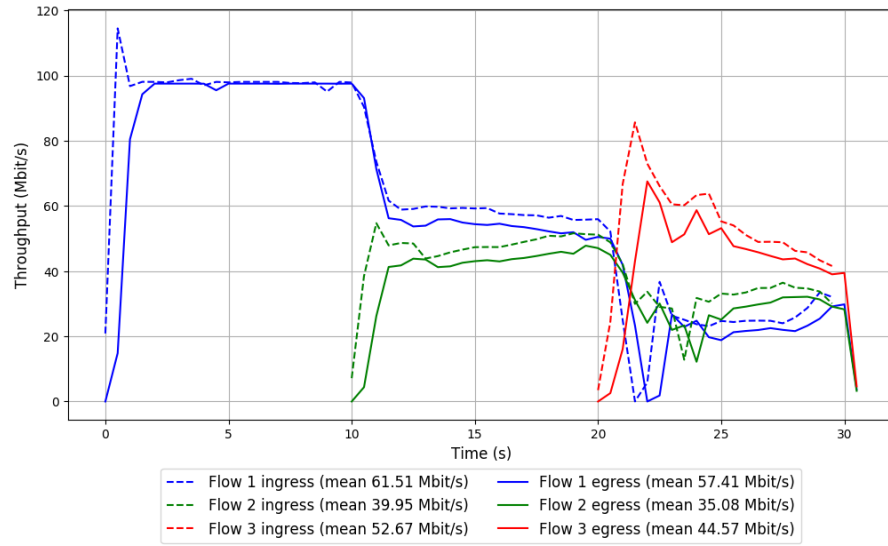
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 65.18 Mbit/s) — — —   Flow 1 egress (mean 62.39 Mbit/s) ———
Flow 2 ingress (mean 32.62 Mbit/s) — — —   Flow 2 egress (mean 30.47 Mbit/s) ———
Flow 3 ingress (mean 41.91 Mbit/s) — — —   Flow 3 egress (mean 38.65 Mbit/s) ———

Flow 1 (95th percentile 63.55 ms)   Flow 2 (95th percentile 66.60 ms)   Flow 3 (95th percentile 67.40 ms)

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```
Run 3: Statistics of TCP BBR

Start at: 2018-10-09 22:01:01
End at: 2018-10-09 22:01:31
Local clock offset: 3.274 ms
Remote clock offset: -2.448 ms


# Below is generated by plot.py at 2018-10-09 22:59:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.75 Mbit/s
95th percentile per-packet one-way delay: 66.887 ms
Loss rate: 8.85%
-- Flow 1:
Average throughput: 61.68 Mbit/s
95th percentile per-packet one-way delay: 65.759 ms
Loss rate: 6.99%
-- Flow 2:
Average throughput: 36.46 Mbit/s
95th percentile per-packet one-way delay: 67.862 ms
Loss rate: 11.86%
-- Flow 3:
Average throughput: 29.36 Mbit/s
95th percentile per-packet one-way delay: 68.202 ms
Loss rate: 12.45%
```

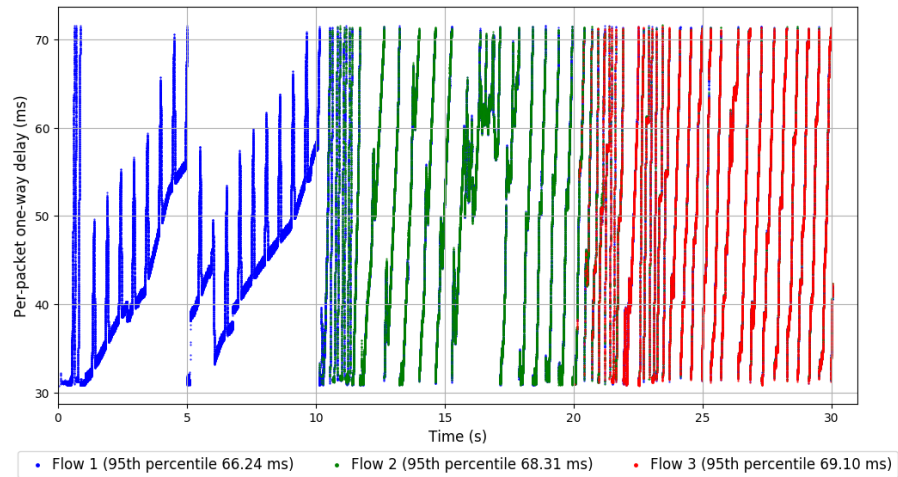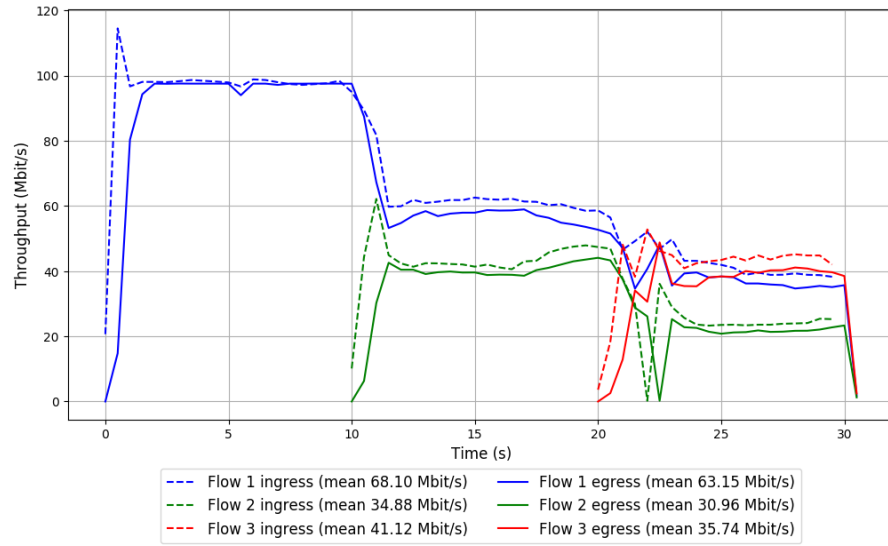Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2018-10-09 22:25:35
End at: 2018-10-09 22:26:05
Local clock offset: 1.082 ms
Remote clock offset: -2.258 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.65 Mbit/s
95th percentile per-packet one-way delay: 67.935 ms
Loss rate: 9.37%
-- Flow 1:
Average throughput: 57.41 Mbit/s
95th percentile per-packet one-way delay: 66.904 ms
Loss rate: 6.55%
-- Flow 2:
Average throughput: 35.08 Mbit/s
95th percentile per-packet one-way delay: 69.139 ms
Loss rate: 12.07%
-- Flow 3:
Average throughput: 44.57 Mbit/s
95th percentile per-packet one-way delay: 68.450 ms
Loss rate: 15.15%
```

Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2018-10-09 22:50:29
End at: 2018-10-09 22:50:59
Local clock offset: 1.16 ms
Remote clock offset: -2.123 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.64 Mbit/s
95th percentile per-packet one-way delay: 67.290 ms
Loss rate: 8.88%
-- Flow 1:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 66.241 ms
Loss rate: 7.23%
-- Flow 2:
Average throughput: 30.96 Mbit/s
95th percentile per-packet one-way delay: 68.306 ms
Loss rate: 11.31%
-- Flow 3:
Average throughput: 35.74 Mbit/s
95th percentile per-packet one-way delay: 69.100 ms
Loss rate: 12.99%
```
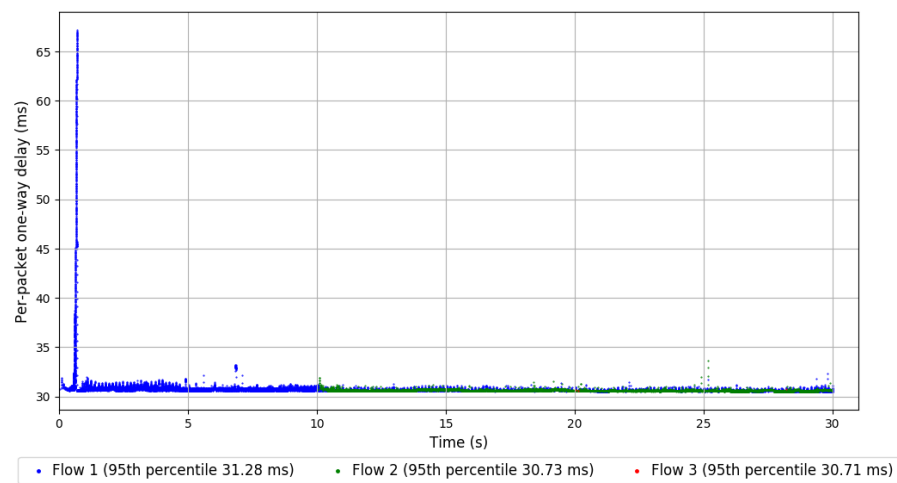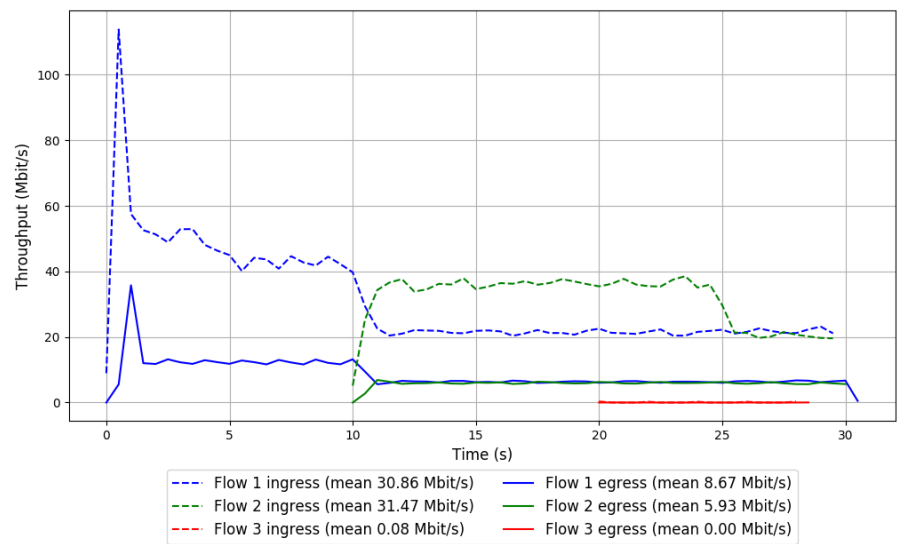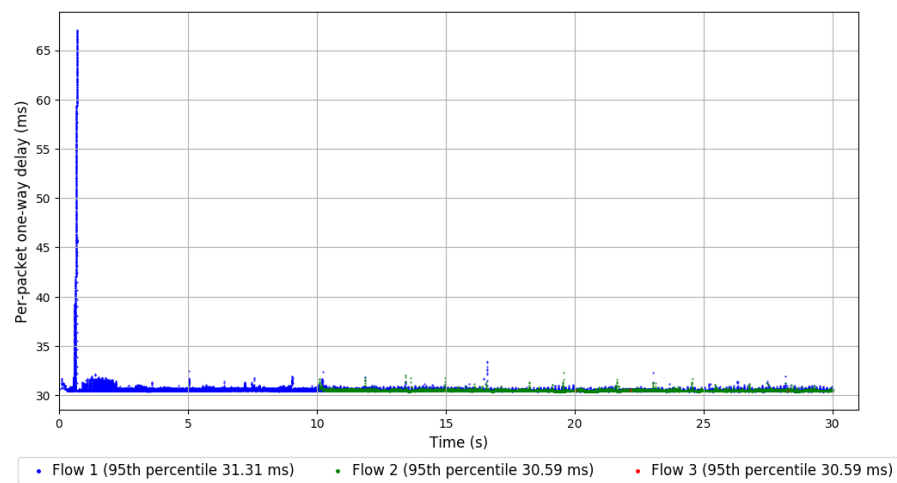
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2018-10-09 20:58:19
End at: 2018-10-09 20:58:49
Local clock offset: 3.457 ms
Remote clock offset: -3.71 ms

# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.088 ms
Loss rate: 75.67%
-- Flow 1:
Average throughput: 8.67 Mbit/s
95th percentile per-packet one-way delay: 31.283 ms
Loss rate: 71.90%
-- Flow 2:
Average throughput: 5.93 Mbit/s
95th percentile per-packet one-way delay: 30.733 ms
Loss rate: 81.21%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.713 ms
Loss rate: 96.21%
```
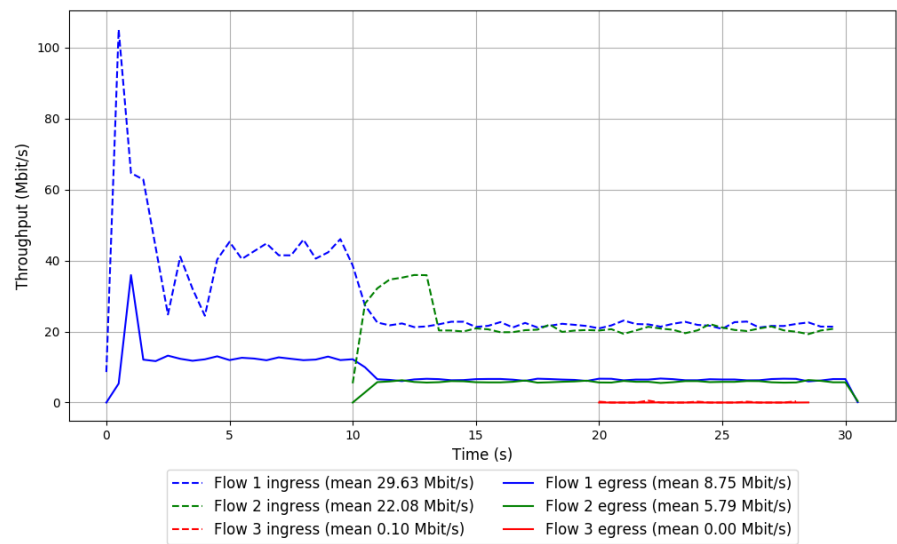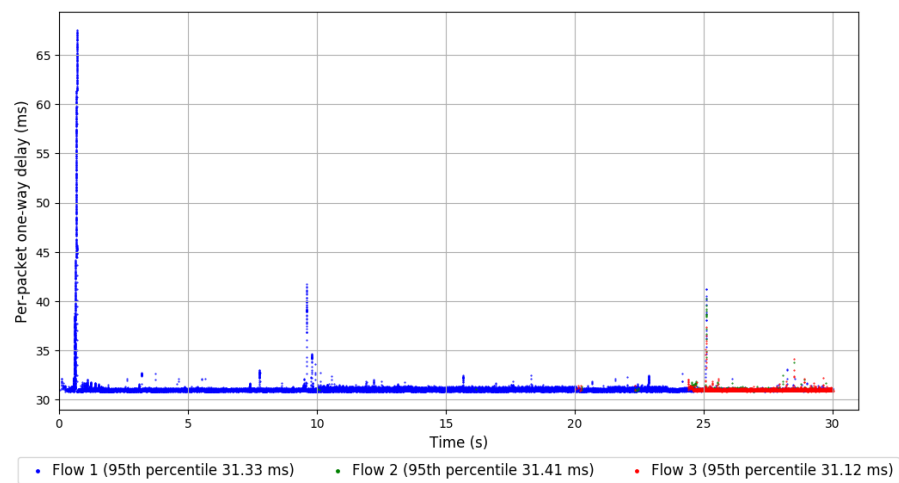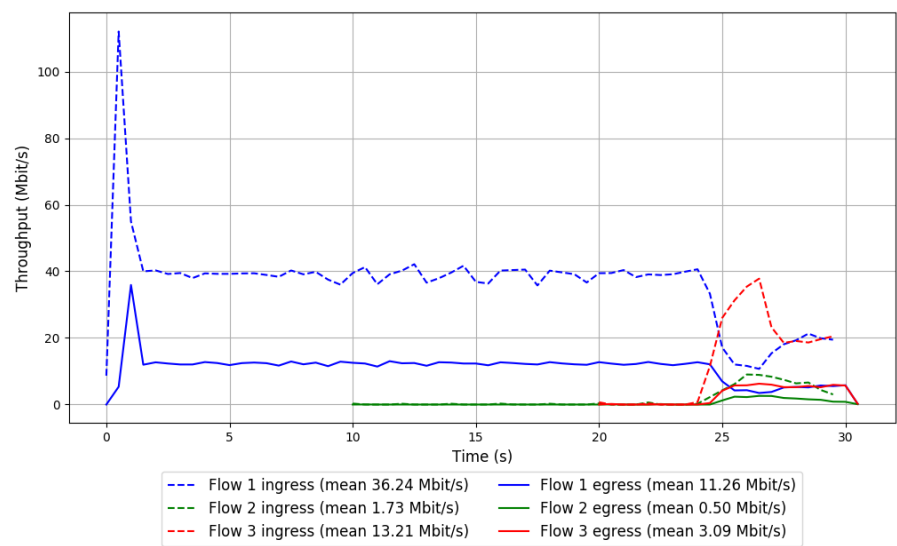
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 30.86 Mbit/s)   Flow 1 egress (mean 8.67 Mbit/s)
Flow 2 ingress (mean 31.47 Mbit/s)   Flow 2 egress (mean 5.93 Mbit/s)
Flow 3 ingress (mean 0.08 Mbit/s)   Flow 3 egress (mean 0.00 Mbit/s)

Flow 1 (95th percentile 31.28 ms)   Flow 2 (95th percentile 30.73 ms)   Flow 3 (95th percentile 30.71 ms)

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```
Run 2: Statistics of Copa

Start at: 2018-10-09 21:22:51
End at: 2018-10-09 21:23:21
Local clock offset: 1.001 ms
Remote clock offset: -3.506 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 30.960 ms
Loss rate: 71.57%
-- Flow 1:
Average throughput: 8.75 Mbit/s
95th percentile per-packet one-way delay: 31.312 ms
Loss rate: 70.46%
-- Flow 2:
Average throughput: 5.79 Mbit/s
95th percentile per-packet one-way delay: 30.591 ms
Loss rate: 73.75%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.587 ms
Loss rate: 95.33%
```
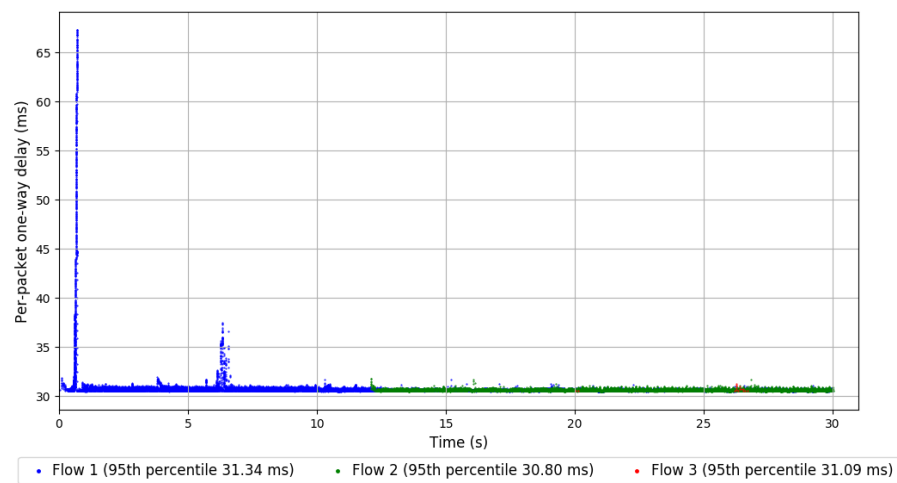
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2018-10-09 21:47:23
End at: 2018-10-09 21:47:53
Local clock offset: 4.741 ms
Remote clock offset: -2.717 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.308 ms
Loss rate: 69.80%
-- Flow 1:
Average throughput: 11.26 Mbit/s
95th percentile per-packet one-way delay: 31.326 ms
Loss rate: 68.93%
-- Flow 2:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 31.409 ms
Loss rate: 71.39%
-- Flow 3:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 31.123 ms
Loss rate: 76.60%
```
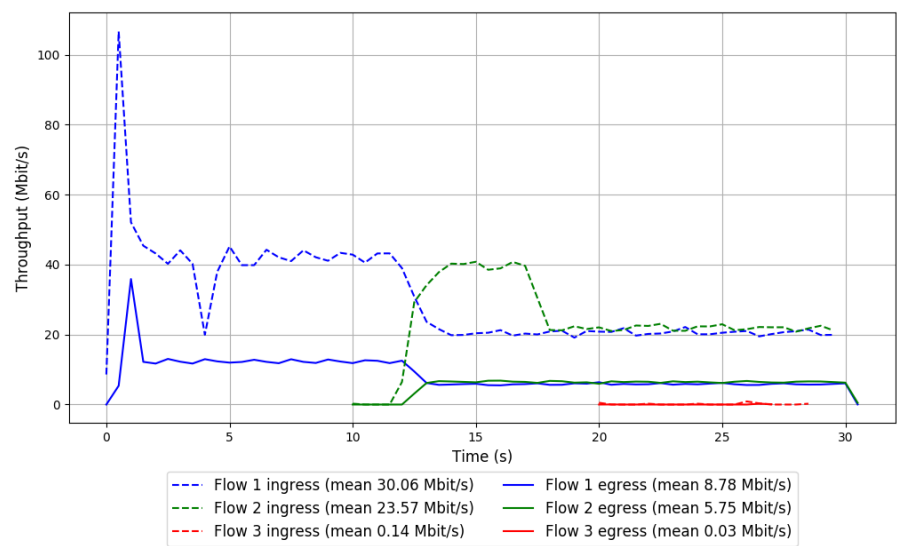
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2018-10-09 22:12:05
End at: 2018-10-09 22:12:35
Local clock offset: 1.723 ms
Remote clock offset: -2.509 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.000 ms
Loss rate: 72.46%
-- Flow 1:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 31.339 ms
Loss rate: 70.80%
-- Flow 2:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 30.799 ms
Loss rate: 75.59%
-- Flow 3:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 31.093 ms
Loss rate: 85.22%
```
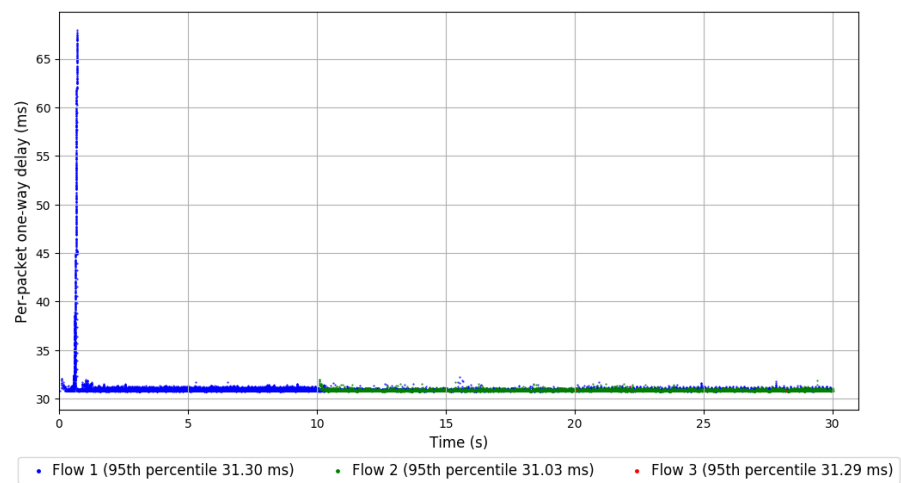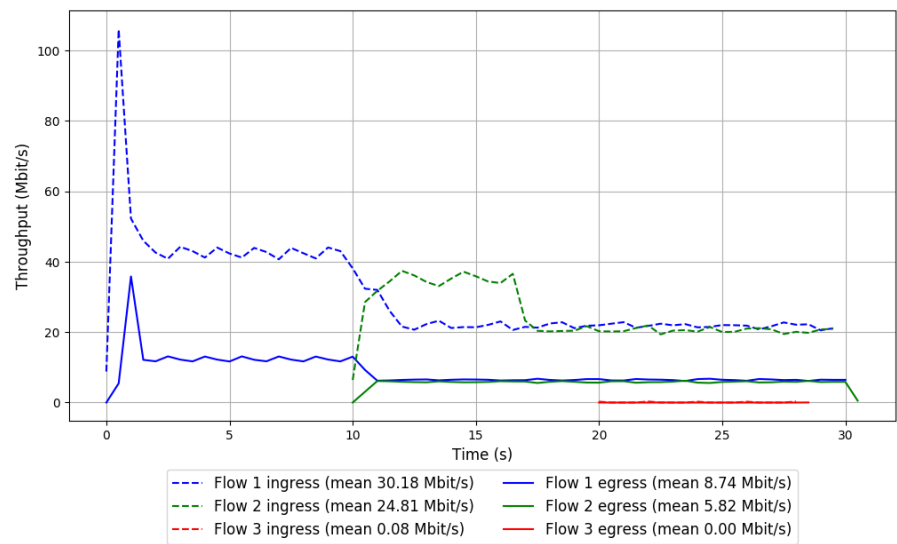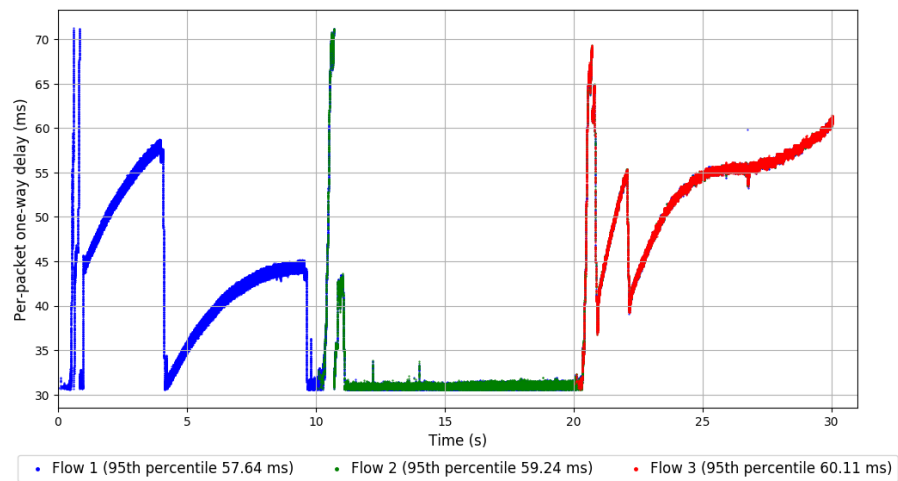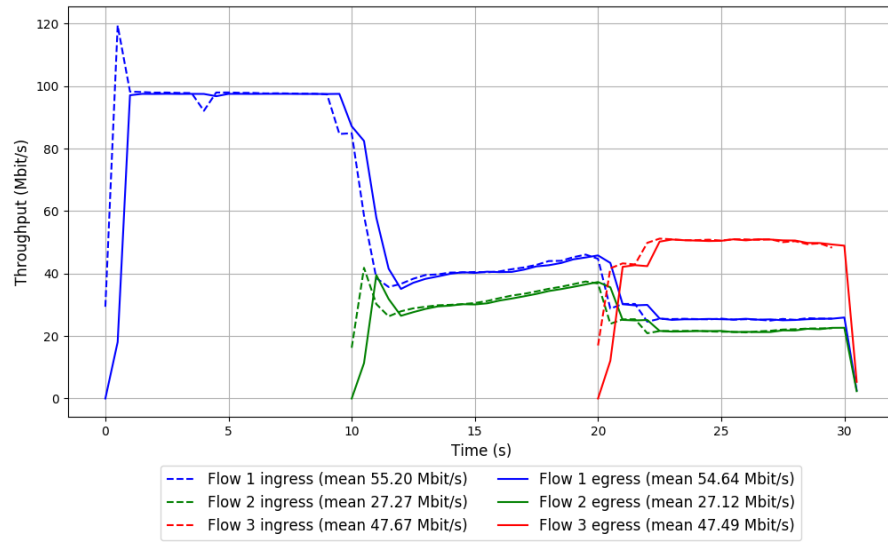
Run 4: Report of Copa — Data Link

- - - Flow 1 ingress (mean 30.06 Mbit/s) ——— Flow 1 egress (mean 8.78 Mbit/s)
- - - Flow 2 ingress (mean 23.57 Mbit/s) ——— Flow 2 egress (mean 5.75 Mbit/s)
- - - Flow 3 ingress (mean 0.14 Mbit/s) ——— Flow 3 egress (mean 0.03 Mbit/s)

• Flow 1 (95th percentile 31.34 ms)   • Flow 2 (95th percentile 30.80 ms)   • Flow 3 (95th percentile 31.09 ms)

```
Run 5: Statistics of Copa

Start at: 2018-10-09 22:36:36
End at: 2018-10-09 22:37:06
Local clock offset: 1.305 ms
Remote clock offset: -2.161 ms


# Below is generated by plot.py at 2018-10-09 22:59:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.61 Mbit/s
95th percentile per-packet one-way delay: 31.202 ms
Loss rate: 72.99%
-- Flow 1:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 31.296 ms
Loss rate: 71.04%
-- Flow 2:
Average throughput: 5.82 Mbit/s
95th percentile per-packet one-way delay: 31.027 ms
Loss rate: 76.53%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.289 ms
Loss rate: 96.14%
```
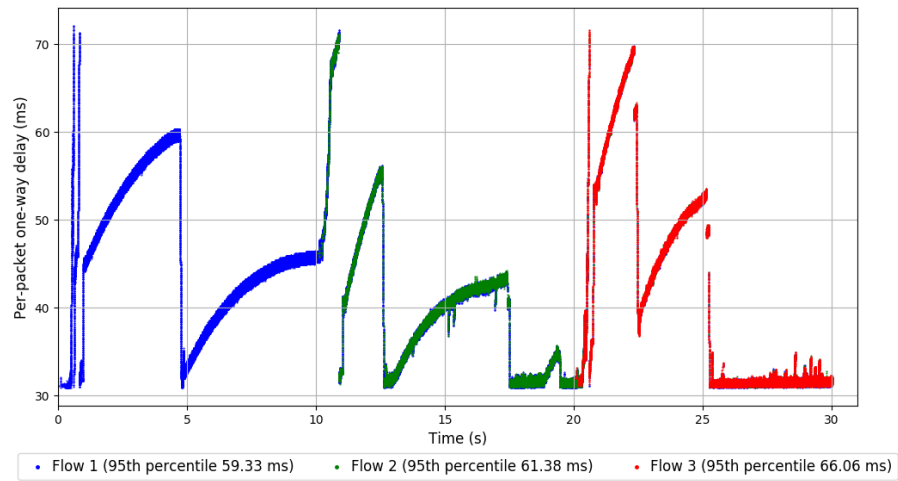
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2018-10-09 21:15:58
End at: 2018-10-09 21:16:28
Local clock offset: 1.335 ms
Remote clock offset: -3.503 ms


# Below is generated by plot.py at 2018-10-09 22:59:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.56 Mbit/s
95th percentile per-packet one-way delay: 58.672 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 54.64 Mbit/s
95th percentile per-packet one-way delay: 57.638 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 27.12 Mbit/s
95th percentile per-packet one-way delay: 59.237 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 47.49 Mbit/s
95th percentile per-packet one-way delay: 60.107 ms
Loss rate: 0.07%
```

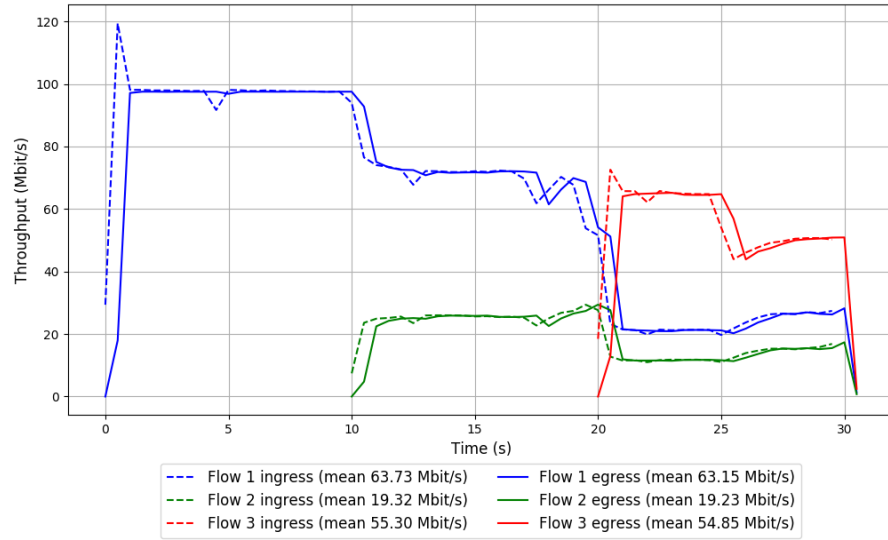Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2018-10-09 21:40:33
End at: 2018-10-09 21:41:03
Local clock offset: 4.247 ms
Remote clock offset: -2.793 ms


# Below is generated by plot.py at 2018-10-09 22:59:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.19 Mbit/s
95th percentile per-packet one-way delay: 60.657 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 63.15 Mbit/s
95th percentile per-packet one-way delay: 59.327 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 19.23 Mbit/s
95th percentile per-packet one-way delay: 61.380 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 54.85 Mbit/s
95th percentile per-packet one-way delay: 66.057 ms
Loss rate: 0.81%
```

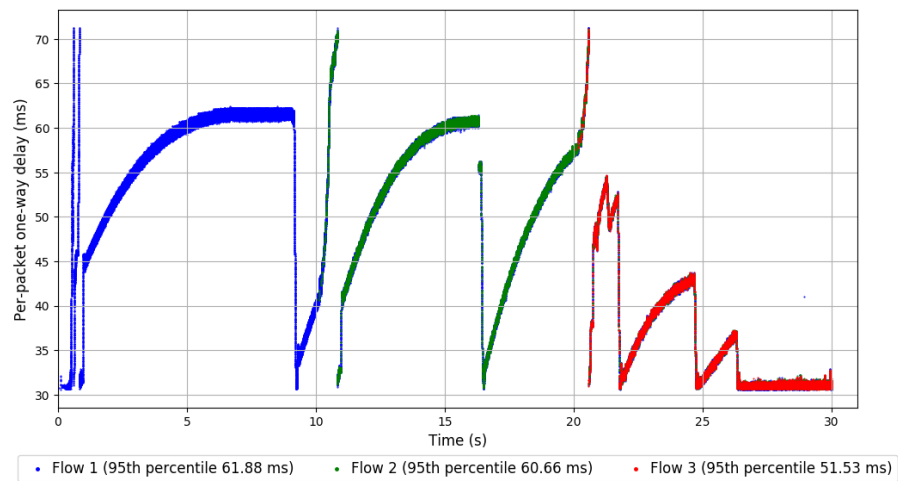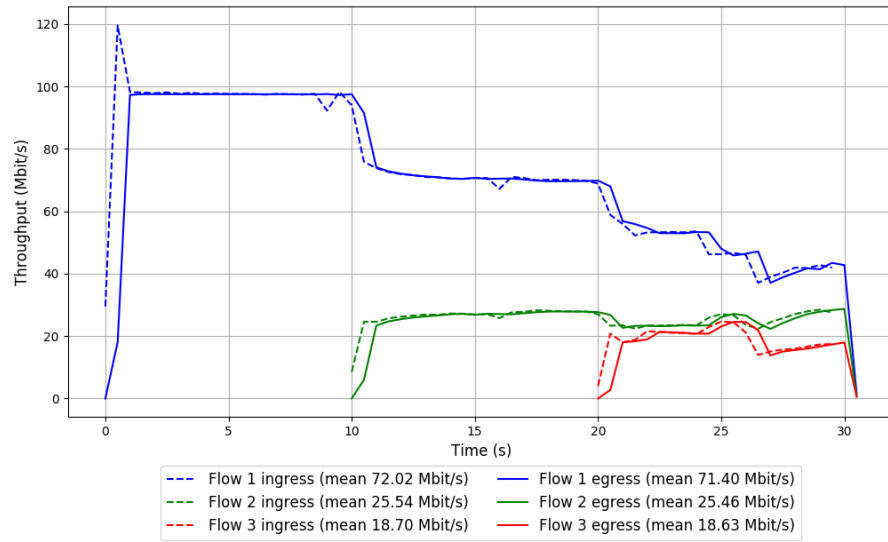Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2018-10-09 22:05:06
End at: 2018-10-09 22:05:36
Local clock offset: 2.493 ms
Remote clock offset: -2.403 ms


# Below is generated by plot.py at 2018-10-09 22:59:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.53 Mbit/s
95th percentile per-packet one-way delay: 61.734 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 71.40 Mbit/s
95th percentile per-packet one-way delay: 61.880 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 60.660 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 18.63 Mbit/s
95th percentile per-packet one-way delay: 51.527 ms
Loss rate: 0.61%
```
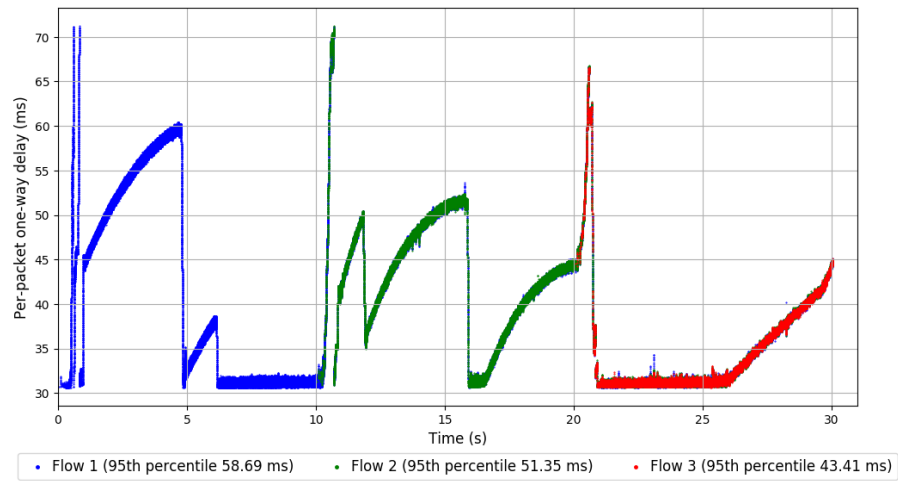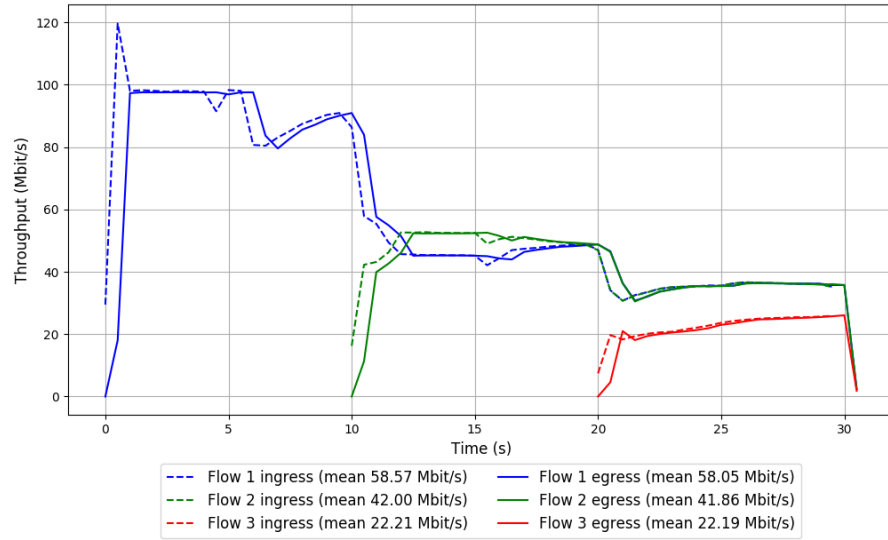
Run 3: Report of TCP Cubic — Data Link

Legend:
- - - Flow 1 ingress (mean 72.02 Mbit/s) ── Flow 1 egress (mean 71.40 Mbit/s)
- - - Flow 2 ingress (mean 25.54 Mbit/s) ── Flow 2 egress (mean 25.46 Mbit/s)
- - - Flow 3 ingress (mean 18.70 Mbit/s) ── Flow 3 egress (mean 18.63 Mbit/s)

Legend:
- Flow 1 (95th percentile 61.88 ms)   • Flow 2 (95th percentile 60.66 ms)   • Flow 3 (95th percentile 51.53 ms)
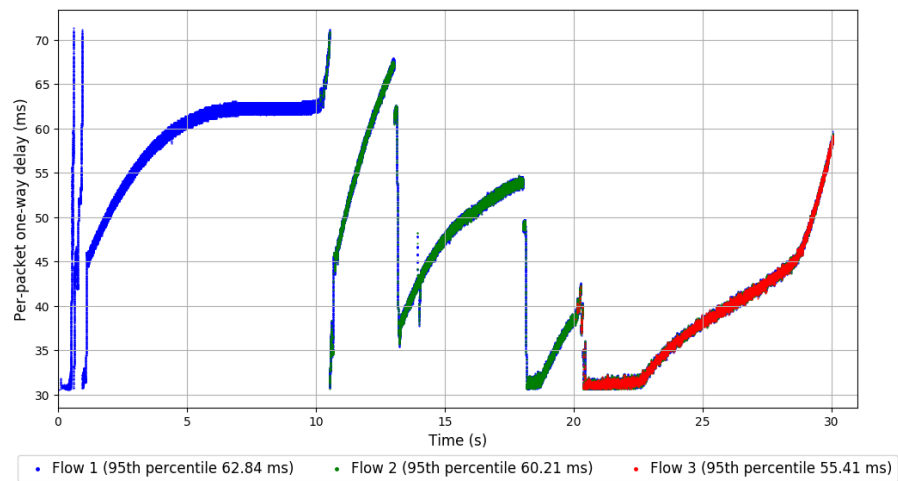
```
Run 4: Statistics of TCP Cubic

Start at: 2018-10-09 22:29:41
End at: 2018-10-09 22:30:11
Local clock offset: 1.241 ms
Remote clock offset: -2.34 ms

# Below is generated by plot.py at 2018-10-09 23:00:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.31 Mbit/s
95th percentile per-packet one-way delay: 57.754 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 58.05 Mbit/s
95th percentile per-packet one-way delay: 58.689 ms
Loss rate: 0.84%
-- Flow 2:
Average throughput: 41.86 Mbit/s
95th percentile per-packet one-way delay: 51.352 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 22.19 Mbit/s
95th percentile per-packet one-way delay: 43.409 ms
Loss rate: 0.12%
```

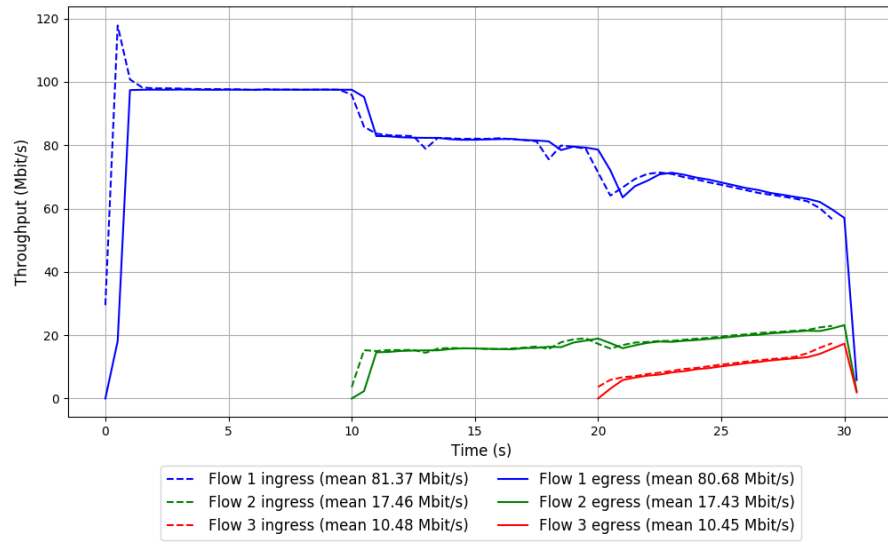Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2018-10-09 22:54:39
End at: 2018-10-09 22:55:09
Local clock offset: 1.086 ms
Remote clock offset: -2.335 ms


# Below is generated by plot.py at 2018-10-09 23:00:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.76 Mbit/s
95th percentile per-packet one-way delay: 62.811 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 80.68 Mbit/s
95th percentile per-packet one-way delay: 62.841 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 17.43 Mbit/s
95th percentile per-packet one-way delay: 60.206 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 55.412 ms
Loss rate: 0.08%
```

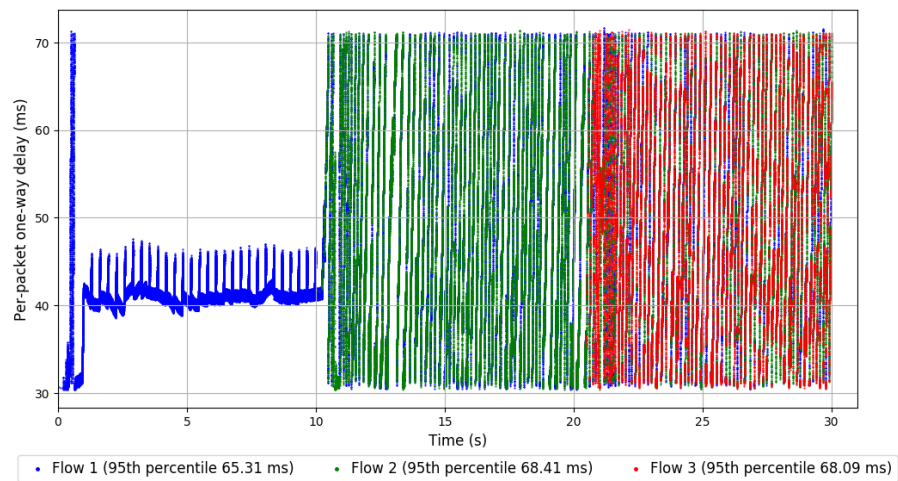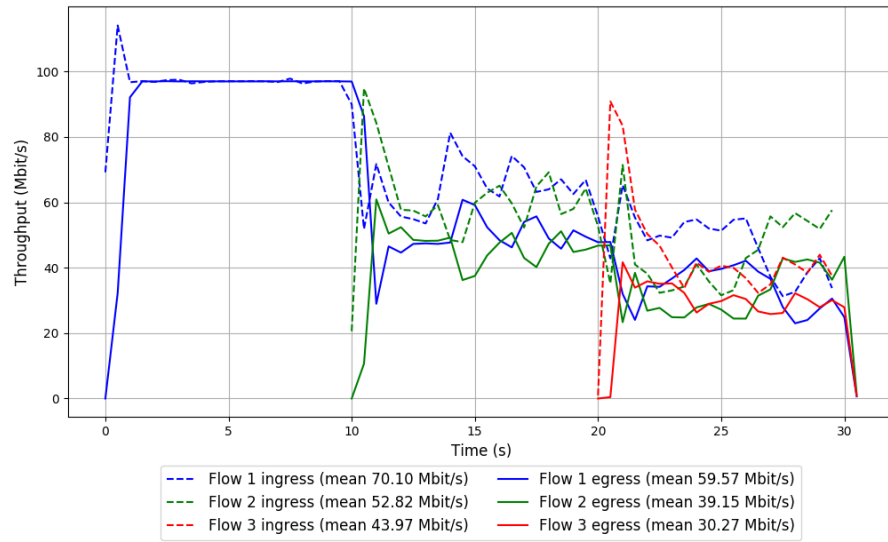Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2018-10-09 21:17:21
End at: 2018-10-09 21:17:51
Local clock offset: 1.255 ms
Remote clock offset: -3.404 ms


# Below is generated by plot.py at 2018-10-09 23:00:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.47 Mbit/s
95th percentile per-packet one-way delay: 66.955 ms
Loss rate: 20.23%
-- Flow 1:
Average throughput: 59.57 Mbit/s
95th percentile per-packet one-way delay: 65.315 ms
Loss rate: 14.91%
-- Flow 2:
Average throughput: 39.15 Mbit/s
95th percentile per-packet one-way delay: 68.414 ms
Loss rate: 25.77%
-- Flow 3:
Average throughput: 30.27 Mbit/s
95th percentile per-packet one-way delay: 68.090 ms
Loss rate: 32.47%
```

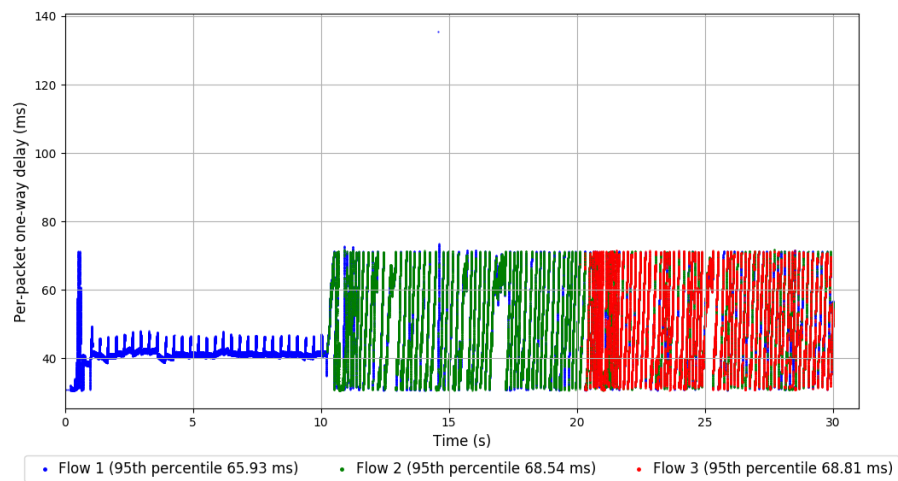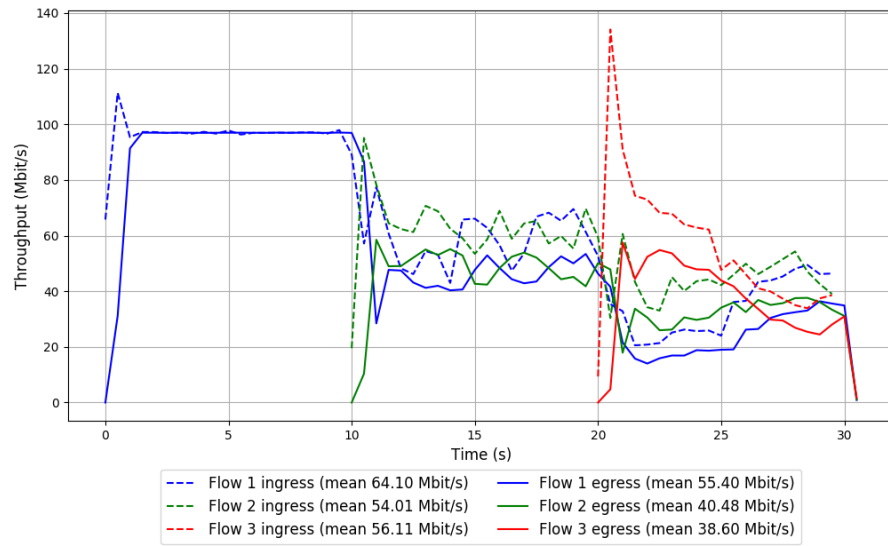Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2018-10-09 21:41:55
End at: 2018-10-09 21:42:25
Local clock offset: 4.372 ms
Remote clock offset: -2.809 ms

# Below is generated by plot.py at 2018-10-09 23:00:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.12 Mbit/s
95th percentile per-packet one-way delay: 67.558 ms
Loss rate: 19.78%
-- Flow 1:
Average throughput: 55.40 Mbit/s
95th percentile per-packet one-way delay: 65.934 ms
Loss rate: 13.50%
-- Flow 2:
Average throughput: 40.48 Mbit/s
95th percentile per-packet one-way delay: 68.543 ms
Loss rate: 24.99%
-- Flow 3:
Average throughput: 38.60 Mbit/s
95th percentile per-packet one-way delay: 68.811 ms
Loss rate: 31.32%
```

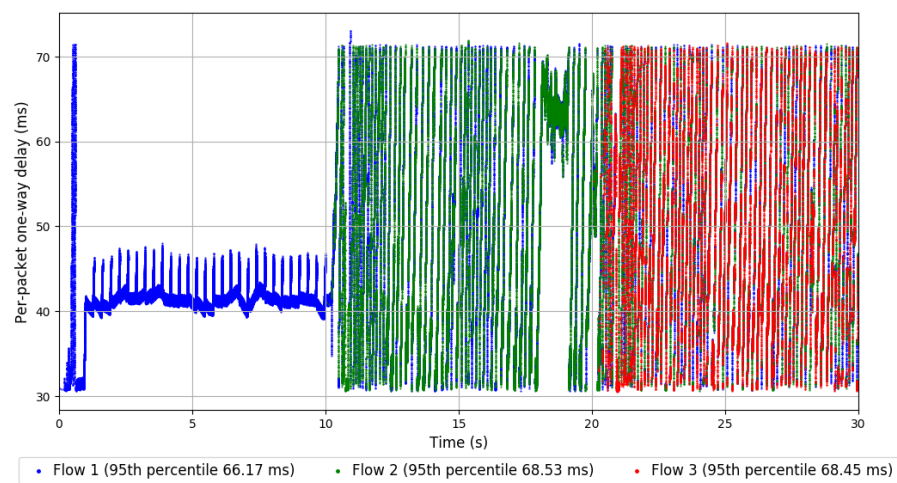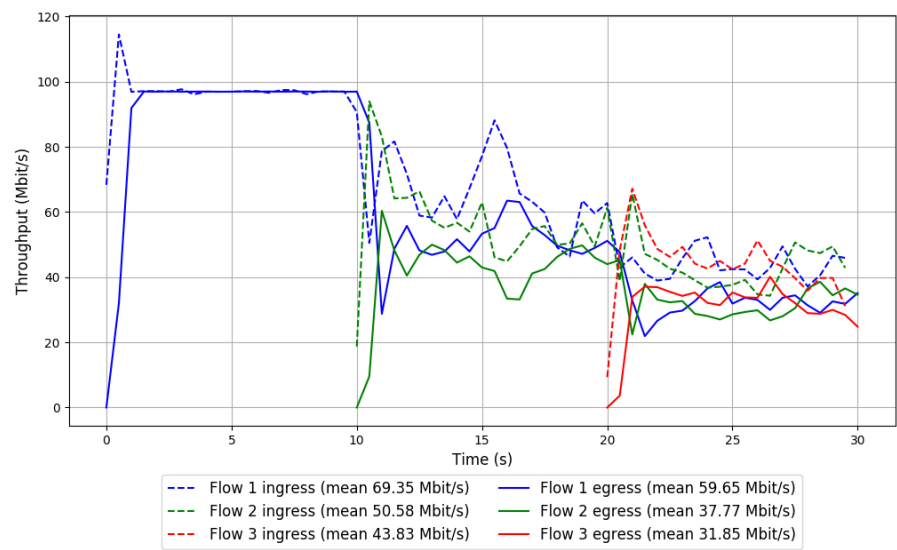Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2018-10-09 22:06:28
End at: 2018-10-09 22:06:58
Local clock offset: 2.276 ms
Remote clock offset: -2.333 ms


# Below is generated by plot.py at 2018-10-09 23:00:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.32 Mbit/s
95th percentile per-packet one-way delay: 67.459 ms
Loss rate: 18.87%
-- Flow 1:
Average throughput: 59.65 Mbit/s
95th percentile per-packet one-way delay: 66.172 ms
Loss rate: 13.95%
-- Flow 2:
Average throughput: 37.77 Mbit/s
95th percentile per-packet one-way delay: 68.527 ms
Loss rate: 25.32%
-- Flow 3:
Average throughput: 31.85 Mbit/s
95th percentile per-packet one-way delay: 68.454 ms
Loss rate: 27.40%
```
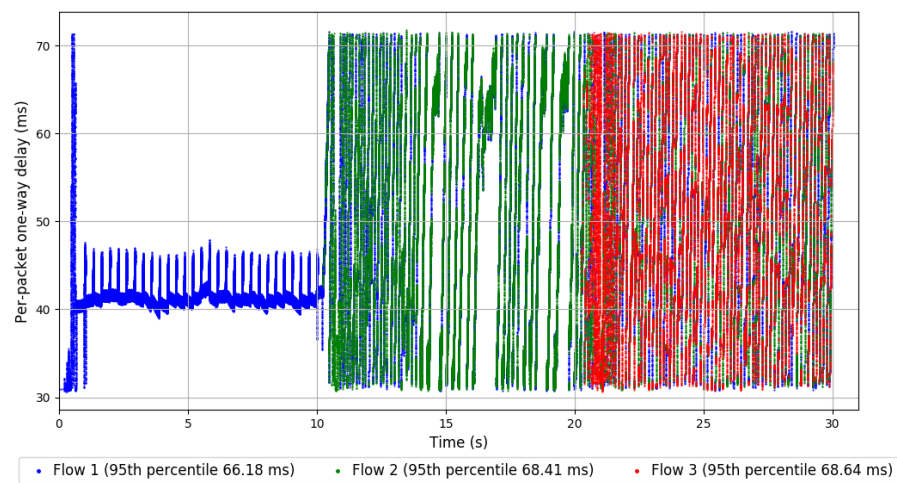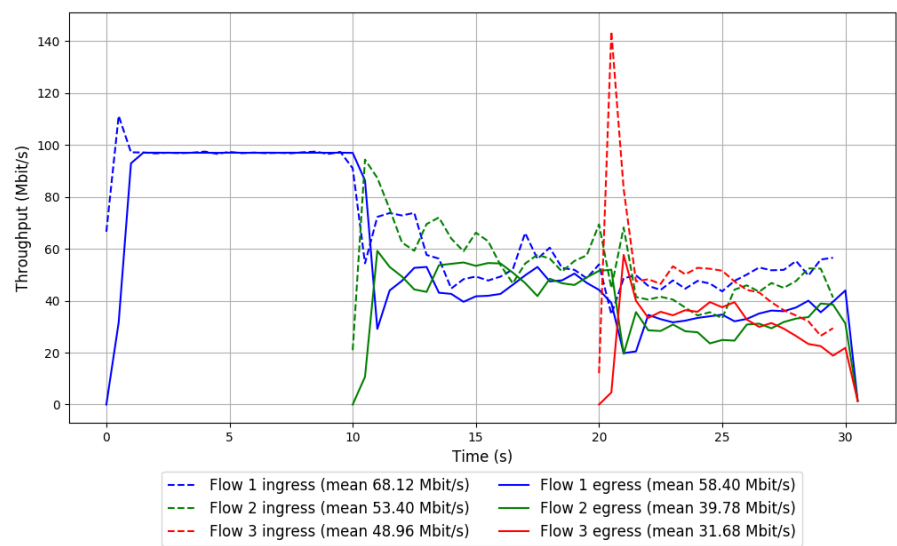
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 69.35 Mbit/s) — Flow 1 egress (mean 59.65 Mbit/s)
Flow 2 ingress (mean 50.58 Mbit/s) — Flow 2 egress (mean 37.77 Mbit/s)
Flow 3 ingress (mean 43.83 Mbit/s) — Flow 3 egress (mean 31.85 Mbit/s)

Flow 1 (95th percentile 66.17 ms) · Flow 2 (95th percentile 68.53 ms) · Flow 3 (95th percentile 68.45 ms)

```
Run 4: Statistics of FillP

Start at: 2018-10-09 22:31:04
End at: 2018-10-09 22:31:34
Local clock offset: 1.263 ms
Remote clock offset: -2.125 ms


# Below is generated by plot.py at 2018-10-09 23:00:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.43 Mbit/s
95th percentile per-packet one-way delay: 67.439 ms
Loss rate: 20.35%
-- Flow 1:
Average throughput: 58.40 Mbit/s
95th percentile per-packet one-way delay: 66.176 ms
Loss rate: 14.17%
-- Flow 2:
Average throughput: 39.78 Mbit/s
95th percentile per-packet one-way delay: 68.410 ms
Loss rate: 25.42%
-- Flow 3:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 68.644 ms
Loss rate: 35.10%
```

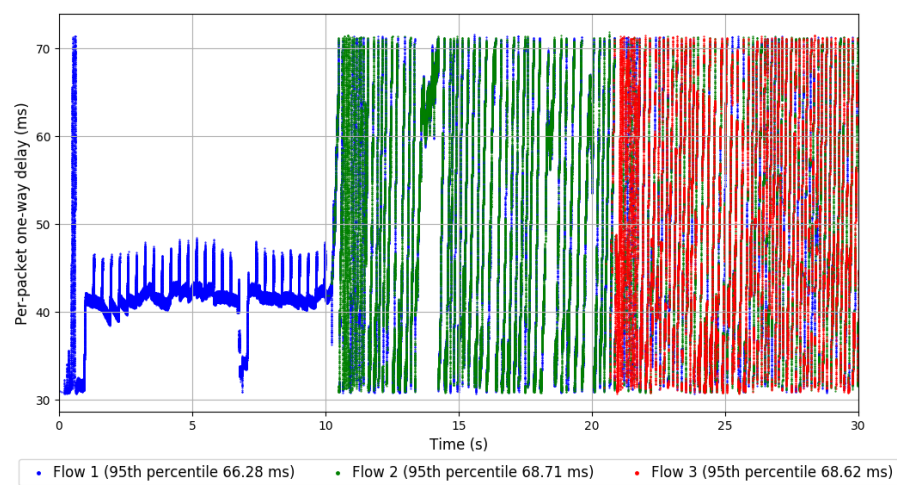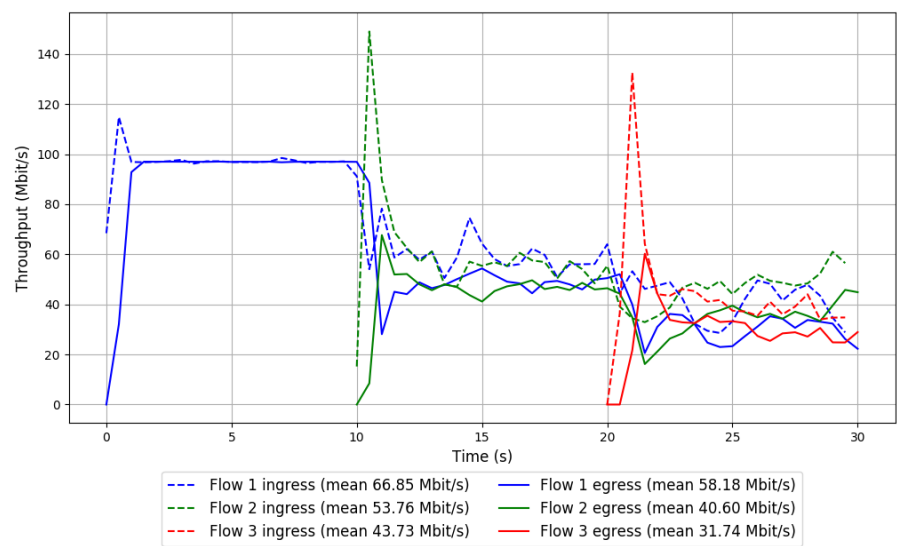Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2018-10-09 22:56:05
End at: 2018-10-09 22:56:35
Local clock offset: 1.197 ms
Remote clock offset: -2.152 ms


# Below is generated by plot.py at 2018-10-09 23:01:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 67.651 ms
Loss rate: 18.60%
-- Flow 1:
Average throughput: 58.18 Mbit/s
95th percentile per-packet one-way delay: 66.279 ms
Loss rate: 12.94%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 68.711 ms
Loss rate: 24.46%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 68.624 ms
Loss rate: 30.25%
```
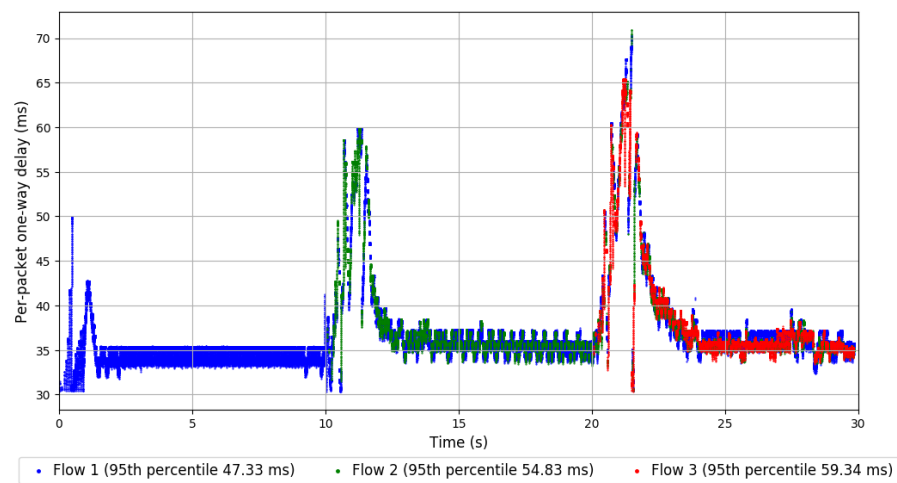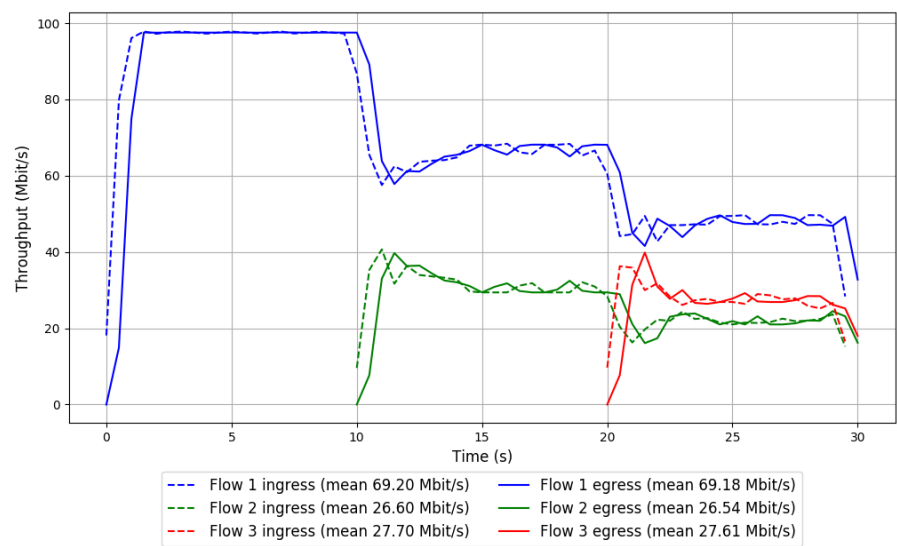
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 66.85 Mbit/s) --- Flow 1 egress (mean 58.18 Mbit/s)
Flow 2 ingress (mean 53.76 Mbit/s) --- Flow 2 egress (mean 40.60 Mbit/s)
Flow 3 ingress (mean 43.73 Mbit/s) --- Flow 3 egress (mean 31.74 Mbit/s)

Flow 1 (95th percentile 66.28 ms) • Flow 2 (95th percentile 68.71 ms) • Flow 3 (95th percentile 68.62 ms)

44

```
Run 1: Statistics of Indigo

Start at: 2018-10-09 20:55:36
End at: 2018-10-09 20:56:06
Local clock offset: 4.182 ms
Remote clock offset: -3.912 ms


# Below is generated by plot.py at 2018-10-09 23:01:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 51.492 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 69.18 Mbit/s
95th percentile per-packet one-way delay: 47.327 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 54.826 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 27.61 Mbit/s
95th percentile per-packet one-way delay: 59.343 ms
Loss rate: 0.32%
```
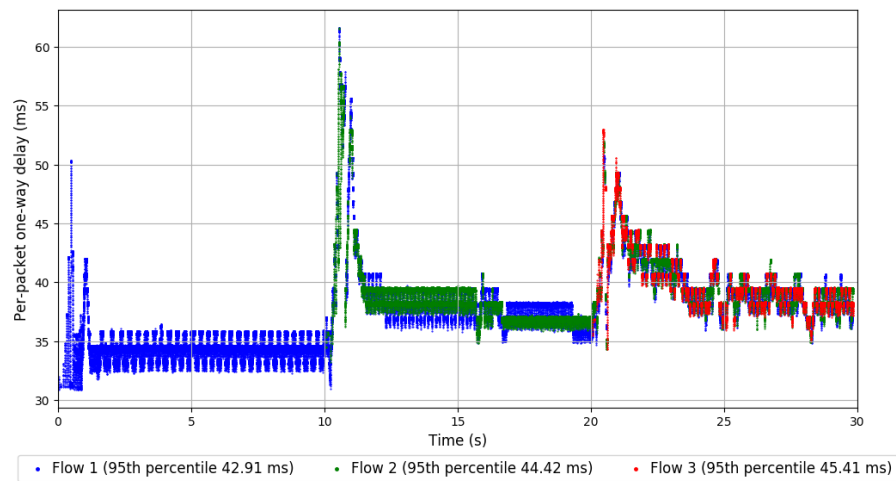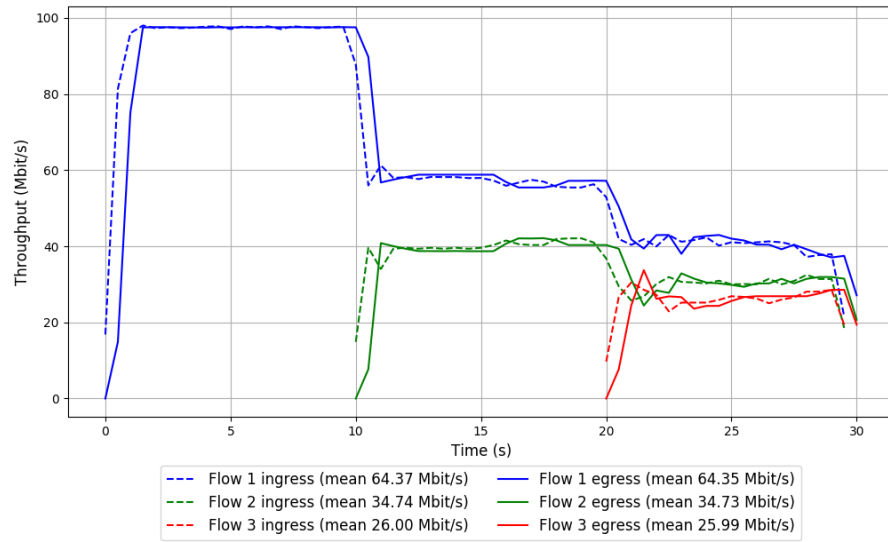
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2018-10-09 21:20:06
End at: 2018-10-09 21:20:36
Local clock offset: 1.114 ms
Remote clock offset: -3.07 ms


# Below is generated by plot.py at 2018-10-09 23:01:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 43.837 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.35 Mbit/s
95th percentile per-packet one-way delay: 42.914 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.73 Mbit/s
95th percentile per-packet one-way delay: 44.416 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.99 Mbit/s
95th percentile per-packet one-way delay: 45.410 ms
Loss rate: 0.00%
```
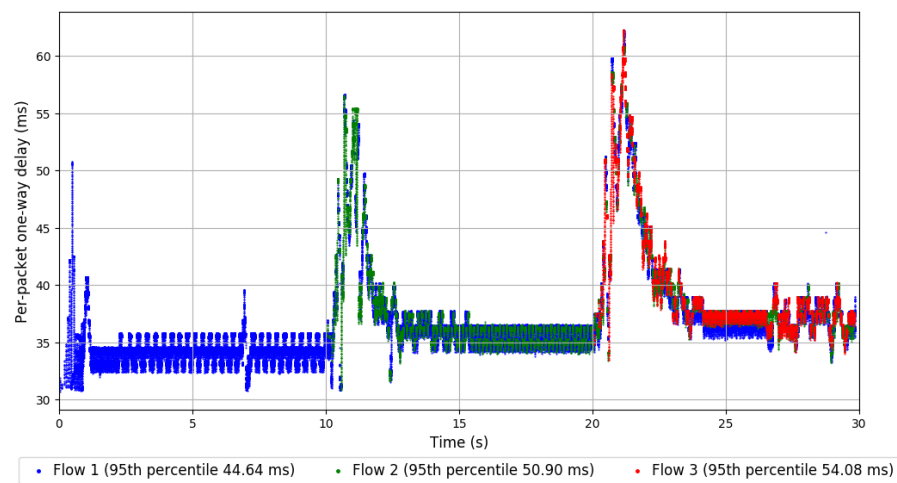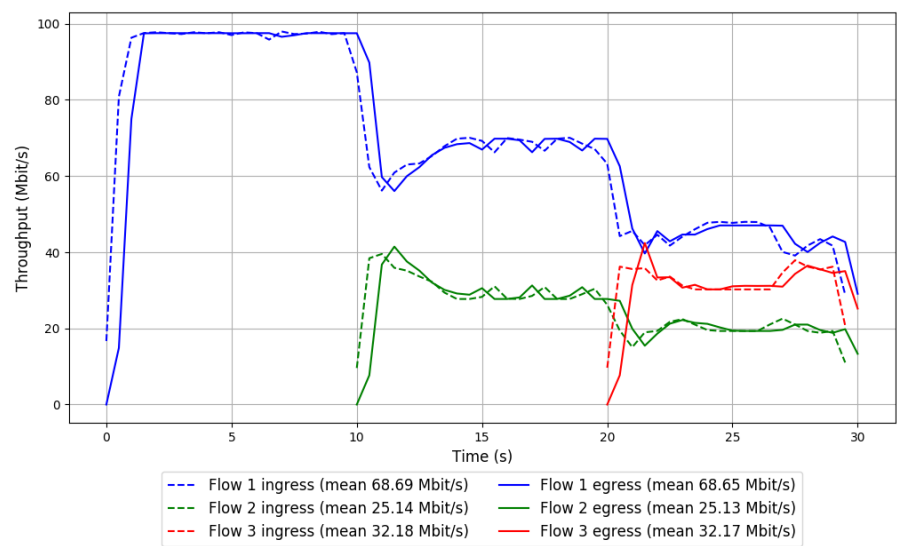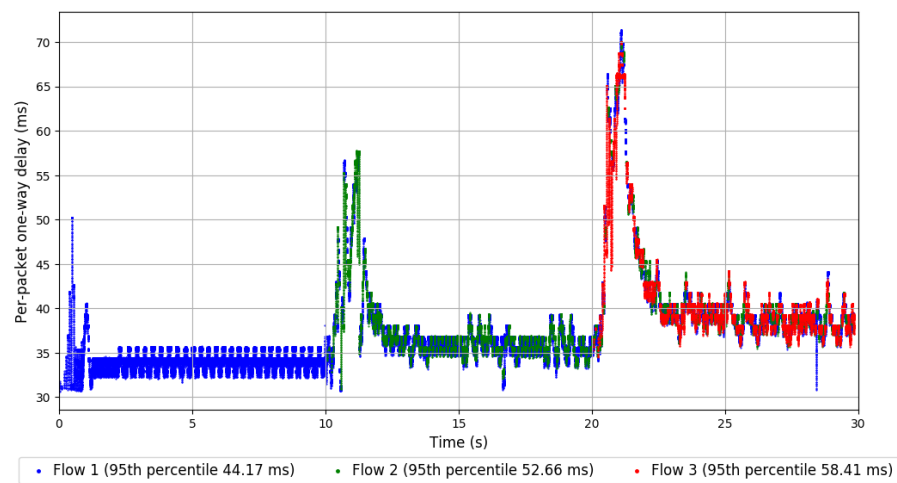
Run 2: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 64.37 Mbit/s) ——— Flow 1 egress (mean 64.35 Mbit/s)
- - - - Flow 2 ingress (mean 34.74 Mbit/s) ——— Flow 2 egress (mean 34.73 Mbit/s)
- - - - Flow 3 ingress (mean 26.00 Mbit/s) ——— Flow 3 egress (mean 25.99 Mbit/s)

• Flow 1 (95th percentile 42.91 ms) • Flow 2 (95th percentile 44.42 ms) • Flow 3 (95th percentile 45.41 ms)

48

```
Run 3: Statistics of Indigo

Start at: 2018-10-09 21:44:40
End at: 2018-10-09 21:45:10
Local clock offset: 4.586 ms
Remote clock offset: -2.75 ms

# Below is generated by plot.py at 2018-10-09 23:01:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 48.250 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 68.65 Mbit/s
95th percentile per-packet one-way delay: 44.637 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 25.13 Mbit/s
95th percentile per-packet one-way delay: 50.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 54.079 ms
Loss rate: 0.00%
```
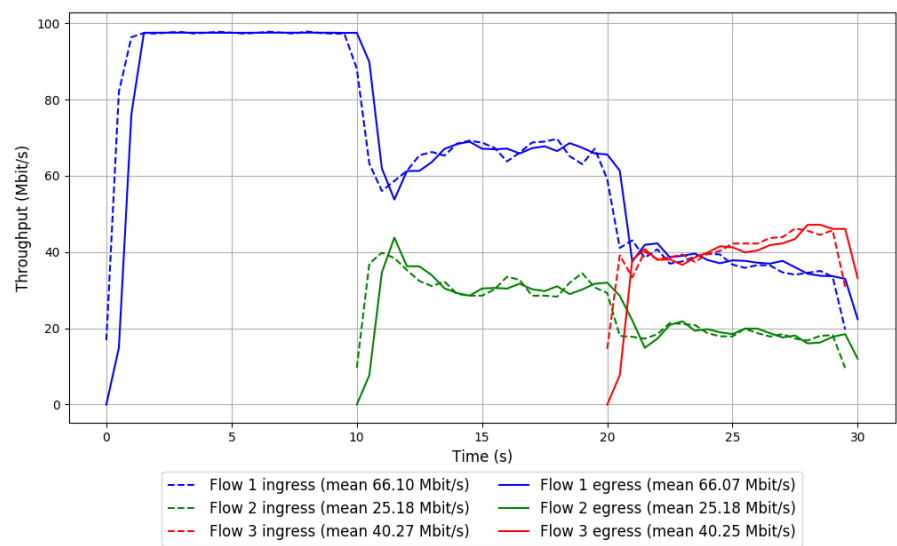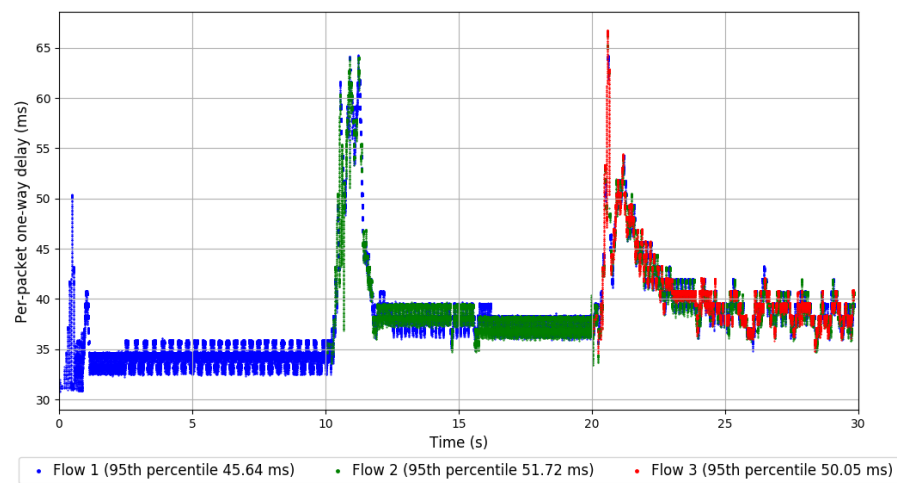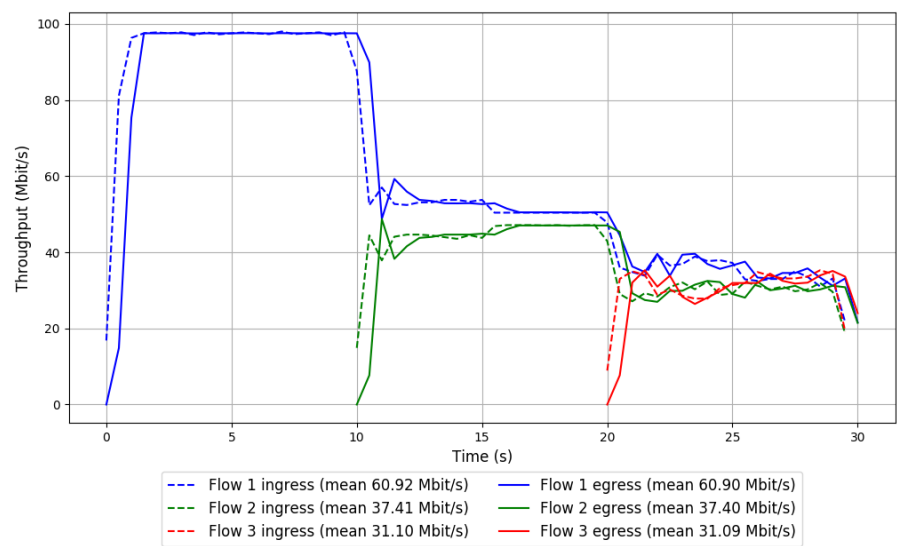
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 68.69 Mbit/s) —— Flow 1 egress (mean 68.65 Mbit/s)
Flow 2 ingress (mean 25.14 Mbit/s) —— Flow 2 egress (mean 25.13 Mbit/s)
Flow 3 ingress (mean 32.18 Mbit/s) —— Flow 3 egress (mean 32.17 Mbit/s)

• Flow 1 (95th percentile 44.64 ms)   • Flow 2 (95th percentile 50.90 ms)   • Flow 3 (95th percentile 54.08 ms)

```
Run 4: Statistics of Indigo

Start at: 2018-10-09 22:09:17
End at: 2018-10-09 22:09:47
Local clock offset: 1.976 ms
Remote clock offset: -2.339 ms


# Below is generated by plot.py at 2018-10-09 23:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.86 Mbit/s
95th percentile per-packet one-way delay: 49.056 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 66.07 Mbit/s
95th percentile per-packet one-way delay: 44.175 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 25.18 Mbit/s
95th percentile per-packet one-way delay: 52.660 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.25 Mbit/s
95th percentile per-packet one-way delay: 58.409 ms
Loss rate: 0.00%
```
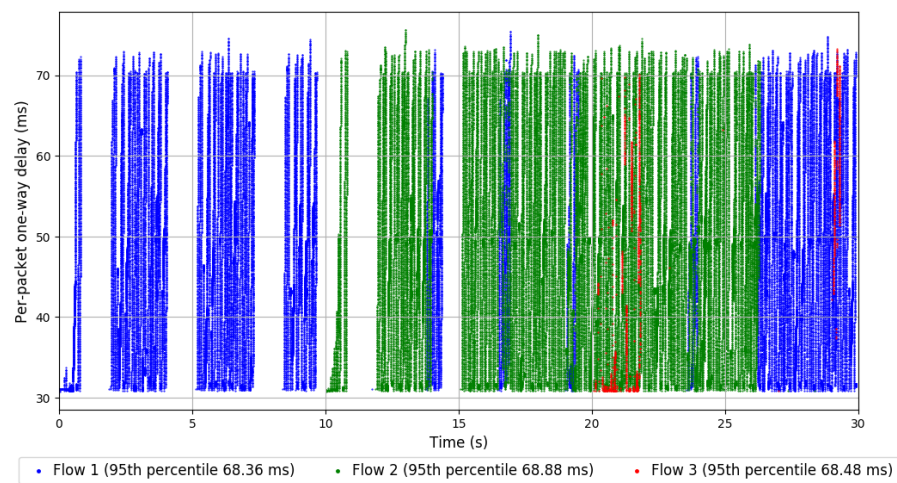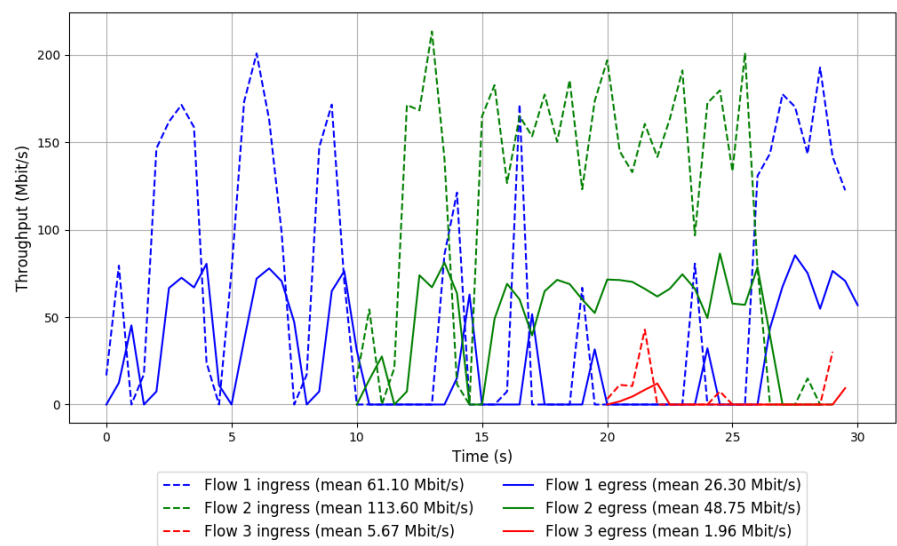
Run 4: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 66.10 Mbit/s) ——— Flow 1 egress (mean 66.07 Mbit/s)
- - - - Flow 2 ingress (mean 25.18 Mbit/s) ——— Flow 2 egress (mean 25.18 Mbit/s)
- - - - Flow 3 ingress (mean 40.27 Mbit/s) ——— Flow 3 egress (mean 40.25 Mbit/s)

• Flow 1 (95th percentile 44.17 ms)   • Flow 2 (95th percentile 52.66 ms)   • Flow 3 (95th percentile 58.41 ms)

```
Run 5: Statistics of Indigo

Start at: 2018-10-09 22:33:50
End at: 2018-10-09 22:34:20
Local clock offset: 1.293 ms
Remote clock offset: -2.062 ms


# Below is generated by plot.py at 2018-10-09 23:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.87 Mbit/s
95th percentile per-packet one-way delay: 49.070 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.90 Mbit/s
95th percentile per-packet one-way delay: 45.641 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.40 Mbit/s
95th percentile per-packet one-way delay: 51.720 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.09 Mbit/s
95th percentile per-packet one-way delay: 50.053 ms
Loss rate: 0.00%
```

Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-96d2da3

Start at: 2018-10-09 20:54:13
End at: 2018-10-09 20:54:43
Local clock offset: 4.266 ms
Remote clock offset: -3.685 ms

# Below is generated by plot.py at 2018-10-09 23:01:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.81 Mbit/s
95th percentile per-packet one-way delay: 68.653 ms
Loss rate: 58.42%
-- Flow 1:
Average throughput: 26.30 Mbit/s
95th percentile per-packet one-way delay: 68.363 ms
Loss rate: 56.96%
-- Flow 2:
Average throughput: 48.75 Mbit/s
95th percentile per-packet one-way delay: 68.881 ms
Loss rate: 59.45%
-- Flow 3:
Average throughput: 1.96 Mbit/s
95th percentile per-packet one-way delay: 68.485 ms
Loss rate: 65.71%
```
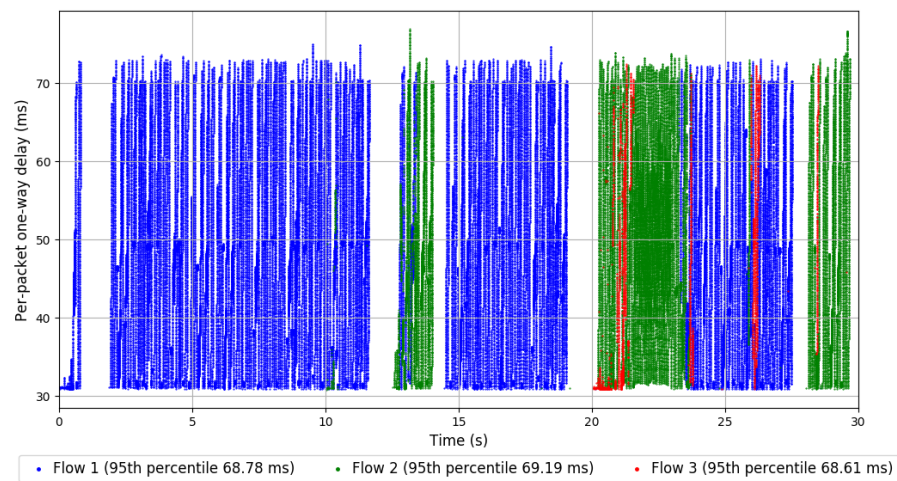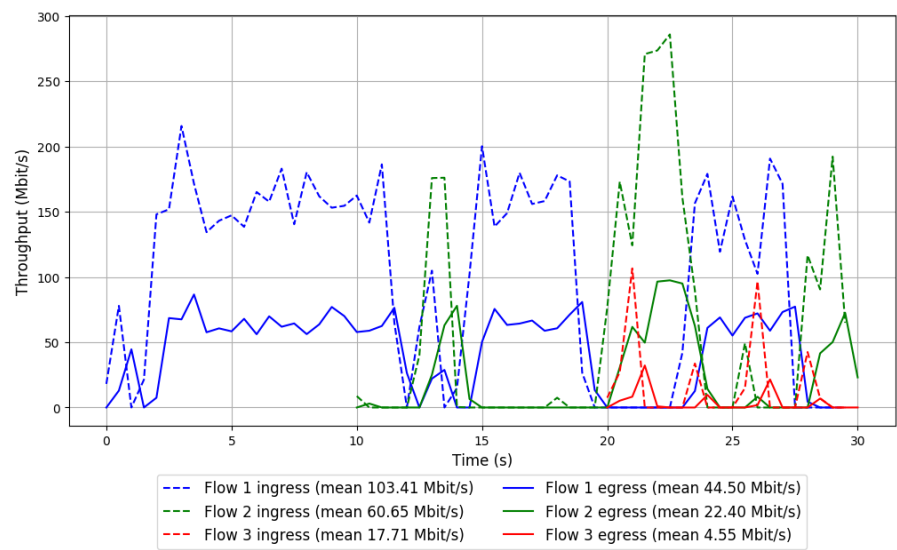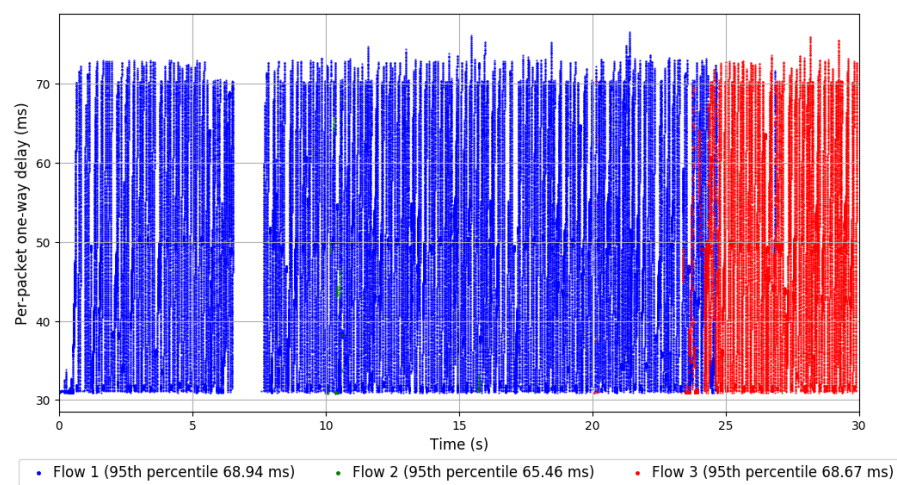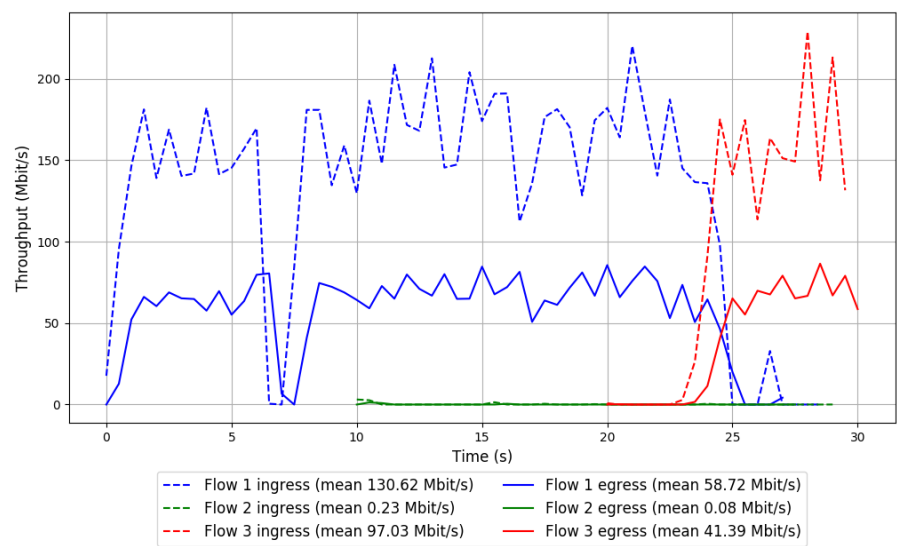
Run 1: Report of Indigo-96d2da3 — Data Link

Flow 1 ingress (mean 61.10 Mbit/s)   Flow 1 egress (mean 26.30 Mbit/s)
Flow 2 ingress (mean 113.60 Mbit/s)   Flow 2 egress (mean 48.75 Mbit/s)
Flow 3 ingress (mean 5.67 Mbit/s)   Flow 3 egress (mean 1.96 Mbit/s)

Flow 1 (95th percentile 68.36 ms)   Flow 2 (95th percentile 68.88 ms)   Flow 3 (95th percentile 68.48 ms)

```
Run 2: Statistics of Indigo-96d2da3

Start at: 2018-10-09 21:18:43
End at: 2018-10-09 21:19:13
Local clock offset: 1.174 ms
Remote clock offset: -3.103 ms


# Below is generated by plot.py at 2018-10-09 23:02:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.17 Mbit/s
95th percentile per-packet one-way delay: 68.883 ms
Loss rate: 60.26%
-- Flow 1:
Average throughput: 44.50 Mbit/s
95th percentile per-packet one-way delay: 68.781 ms
Loss rate: 58.42%
-- Flow 2:
Average throughput: 22.40 Mbit/s
95th percentile per-packet one-way delay: 69.194 ms
Loss rate: 63.02%
-- Flow 3:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 68.615 ms
Loss rate: 74.25%
```

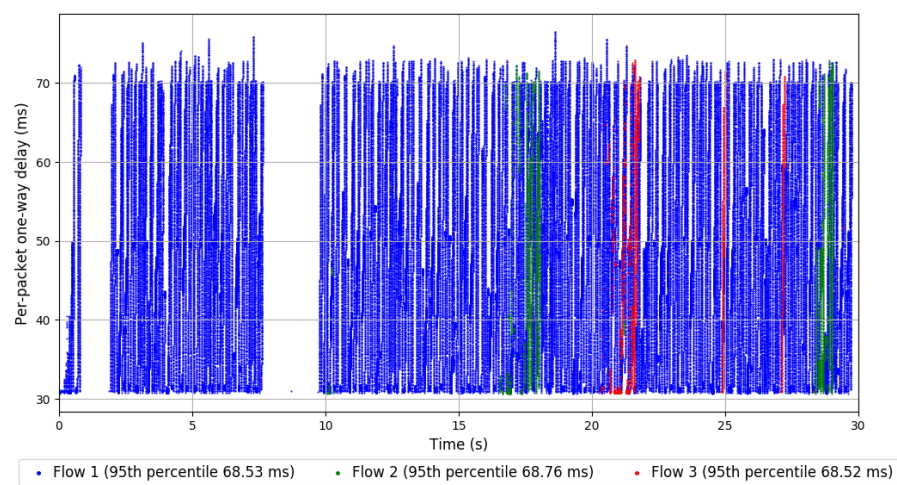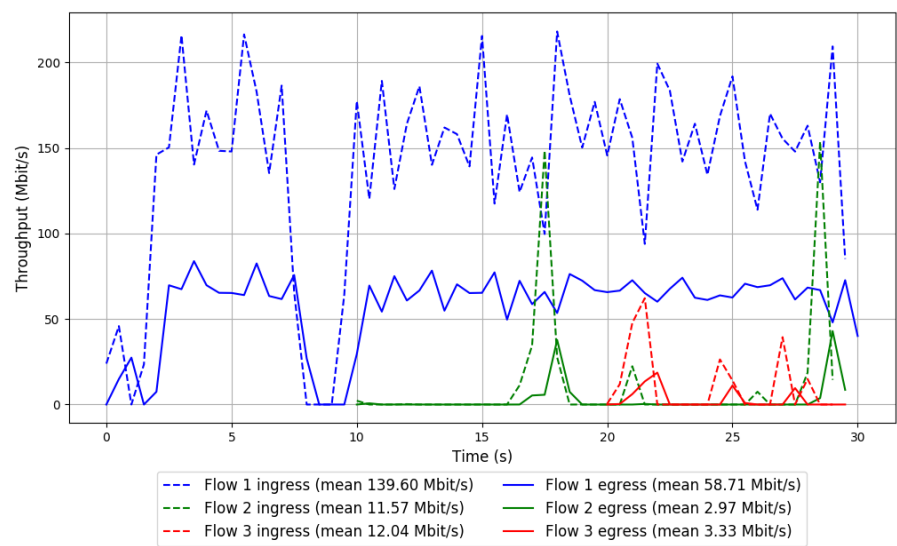Run 2: Report of Indigo-96d2da3 — Data Link

```
Run 3: Statistics of Indigo-96d2da3

Start at: 2018-10-09 21:43:17
End at: 2018-10-09 21:43:47
Local clock offset: 4.461 ms
Remote clock offset: -2.741 ms


# Below is generated by plot.py at 2018-10-09 23:02:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.37 Mbit/s
95th percentile per-packet one-way delay: 68.885 ms
Loss rate: 58.05%
-- Flow 1:
Average throughput: 58.72 Mbit/s
95th percentile per-packet one-way delay: 68.941 ms
Loss rate: 58.26%
-- Flow 2:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 65.461 ms
Loss rate: 67.47%
-- Flow 3:
Average throughput: 41.39 Mbit/s
95th percentile per-packet one-way delay: 68.665 ms
Loss rate: 57.18%
```

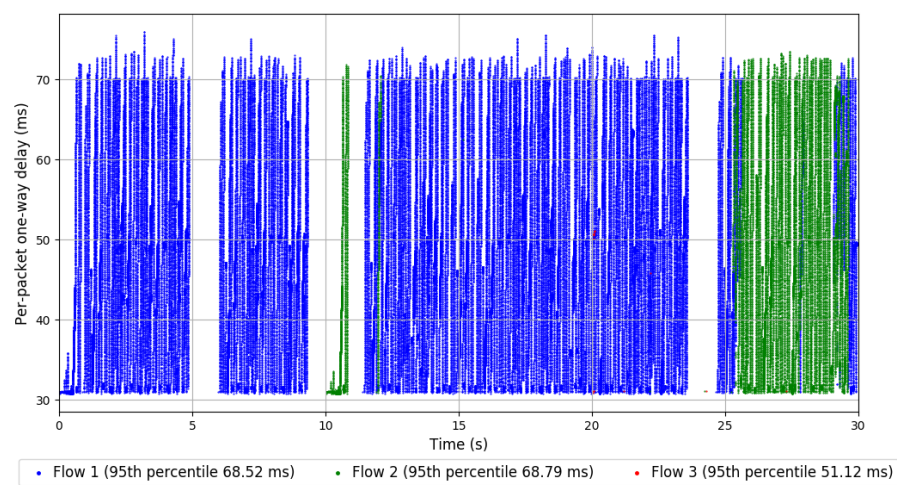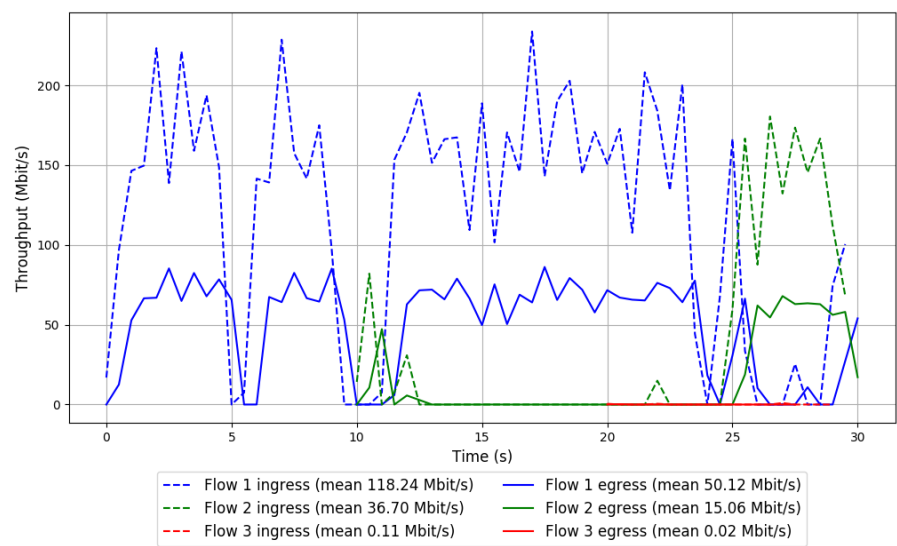Run 3: Report of Indigo-96d2da3 — Data Link

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

Start at: 2018-10-09 22:07:50
End at: 2018-10-09 22:08:20
Local clock offset: 2.117 ms
Remote clock offset: -2.341 ms


# Below is generated by plot.py at 2018-10-09 23:02:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 68.534 ms
Loss rate: 59.10%
-- Flow 1:
Average throughput: 58.71 Mbit/s
95th percentile per-packet one-way delay: 68.526 ms
Loss rate: 57.94%
-- Flow 2:
Average throughput: 2.97 Mbit/s
95th percentile per-packet one-way delay: 68.758 ms
Loss rate: 74.44%
-- Flow 3:
Average throughput: 3.33 Mbit/s
95th percentile per-packet one-way delay: 68.522 ms
Loss rate: 72.23%
```

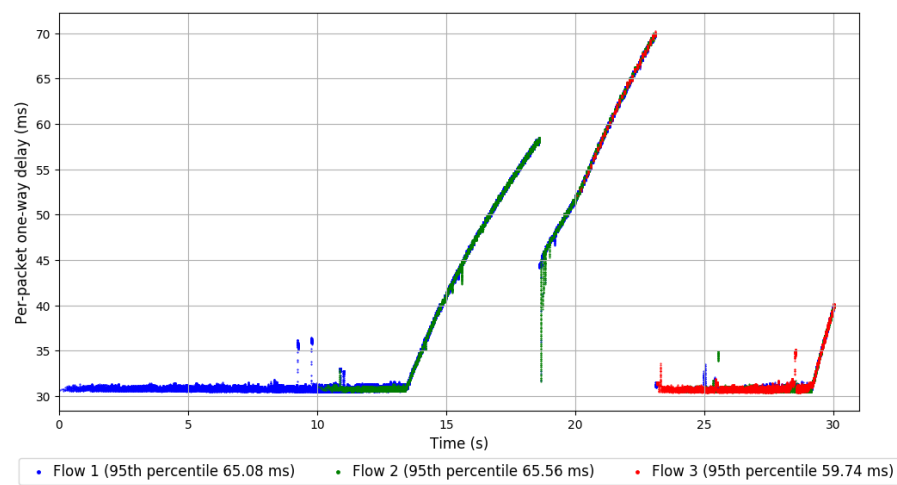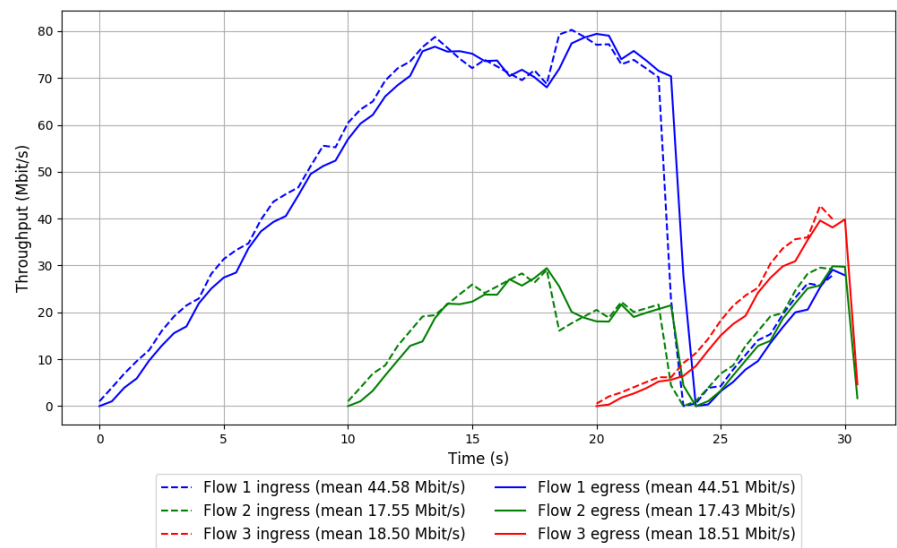Run 4: Report of Indigo-96d2da3 — Data Link

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

Start at: 2018-10-09 22:32:27
End at: 2018-10-09 22:32:57
Local clock offset: 1.274 ms
Remote clock offset: -2.193 ms


# Below is generated by plot.py at 2018-10-09 23:02:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.00 Mbit/s
95th percentile per-packet one-way delay: 68.574 ms
Loss rate: 57.84%
-- Flow 1:
Average throughput: 50.12 Mbit/s
95th percentile per-packet one-way delay: 68.520 ms
Loss rate: 57.58%
-- Flow 2:
Average throughput: 15.06 Mbit/s
95th percentile per-packet one-way delay: 68.789 ms
Loss rate: 59.07%
-- Flow 3:
Average throughput: 0.02 Mbit/s
95th percentile per-packet one-way delay: 51.123 ms
Loss rate: 84.22%
```

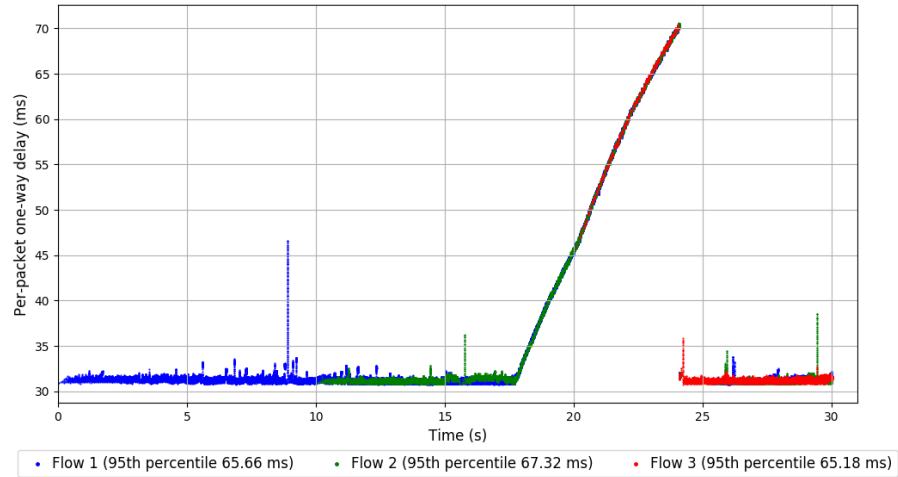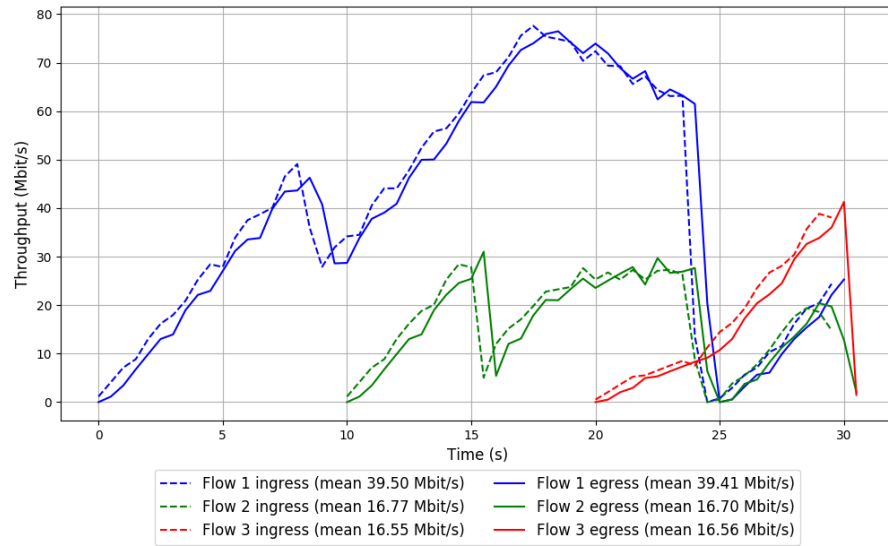Run 5: Report of Indigo-96d2da3 — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2018-10-09 20:59:39
End at: 2018-10-09 21:00:09
Local clock offset: 3.136 ms
Remote clock offset: -3.817 ms


# Below is generated by plot.py at 2018-10-09 23:02:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.21 Mbit/s
95th percentile per-packet one-way delay: 65.057 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 44.51 Mbit/s
95th percentile per-packet one-way delay: 65.077 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 17.43 Mbit/s
95th percentile per-packet one-way delay: 65.559 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 59.743 ms
Loss rate: 0.09%
```
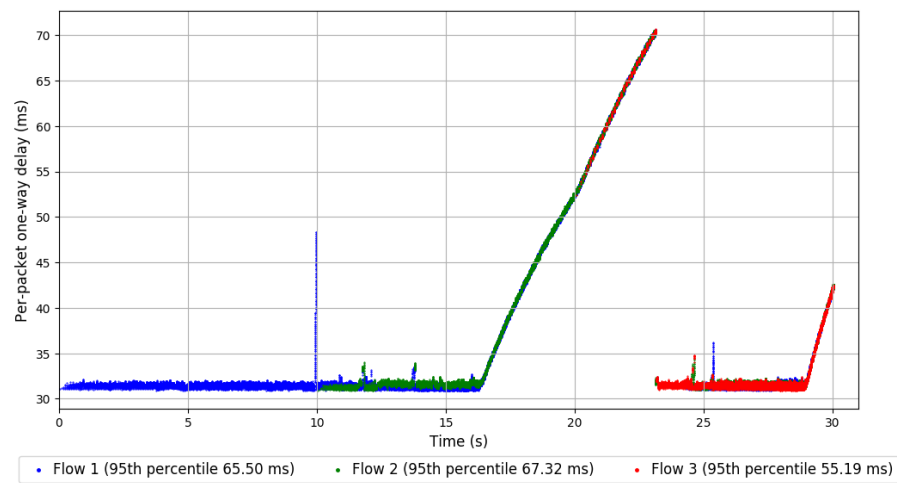
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2018-10-09 21:24:11
End at: 2018-10-09 21:24:41
Local clock offset: 0.962 ms
Remote clock offset: -3.092 ms

# Below is generated by plot.py at 2018-10-09 23:02:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.00 Mbit/s
95th percentile per-packet one-way delay: 66.115 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 39.41 Mbit/s
95th percentile per-packet one-way delay: 65.658 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 16.70 Mbit/s
95th percentile per-packet one-way delay: 67.319 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 16.56 Mbit/s
95th percentile per-packet one-way delay: 65.177 ms
Loss rate: 0.06%
```
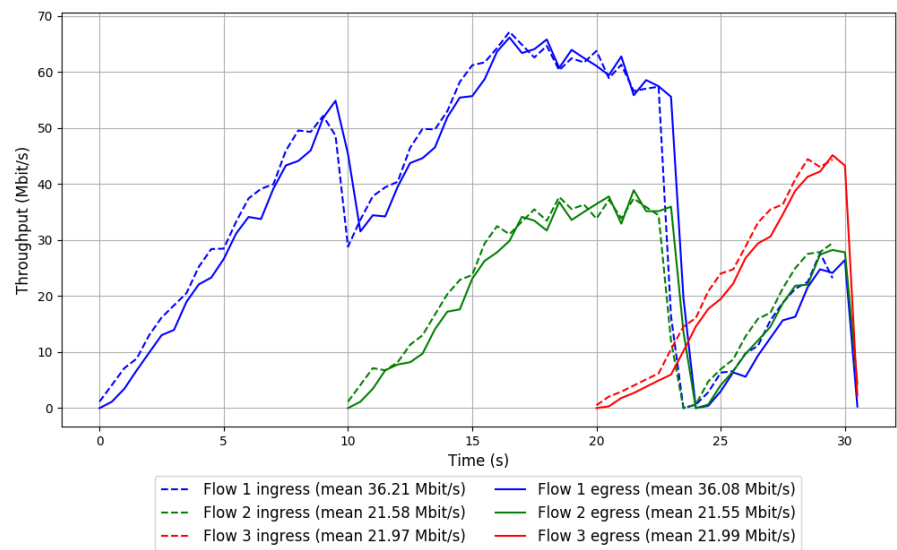
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2018-10-09 21:48:43
End at: 2018-10-09 21:49:13
Local clock offset: 4.812 ms
Remote clock offset: -2.594 ms


# Below is generated by plot.py at 2018-10-09 23:02:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.74 Mbit/s
95th percentile per-packet one-way delay: 65.958 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 36.08 Mbit/s
95th percentile per-packet one-way delay: 65.498 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 21.55 Mbit/s
95th percentile per-packet one-way delay: 67.323 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 21.99 Mbit/s
95th percentile per-packet one-way delay: 55.188 ms
Loss rate: 0.00%
```
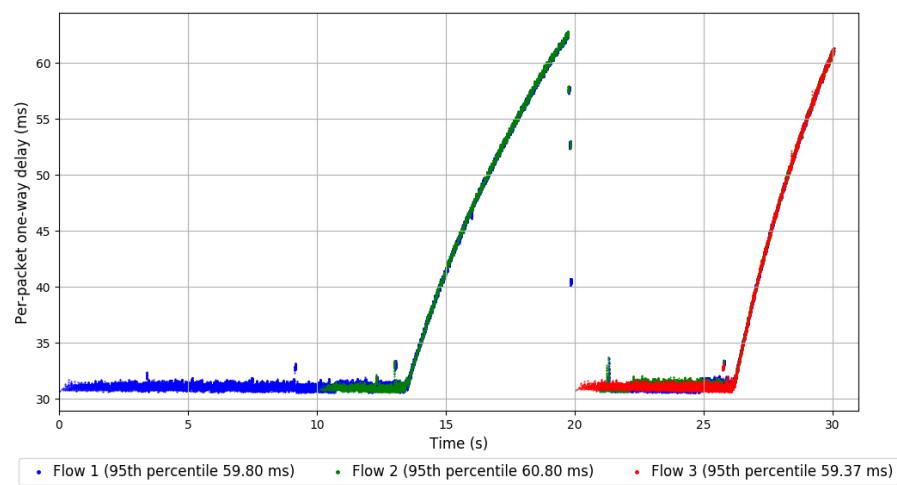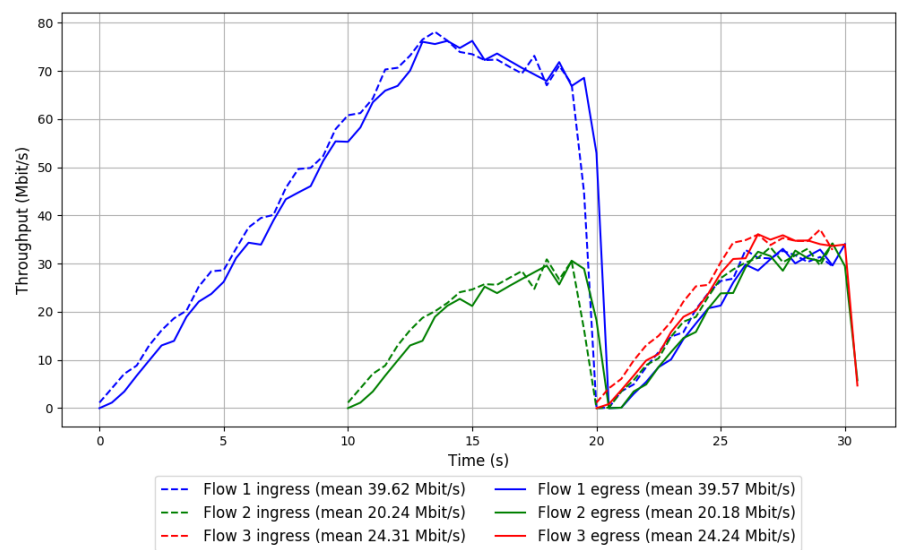
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2018-10-09 22:13:24
End at: 2018-10-09 22:13:54
Local clock offset: 1.614 ms
Remote clock offset: -2.436 ms

# Below is generated by plot.py at 2018-10-09 23:02:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.00 Mbit/s
95th percentile per-packet one-way delay: 60.071 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 39.57 Mbit/s
95th percentile per-packet one-way delay: 59.800 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 20.18 Mbit/s
95th percentile per-packet one-way delay: 60.800 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 59.370 ms
Loss rate: 0.00%
```
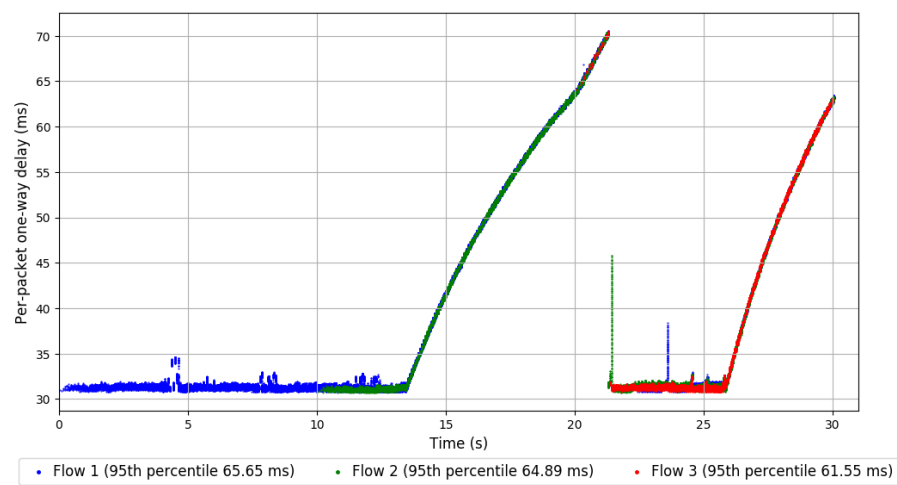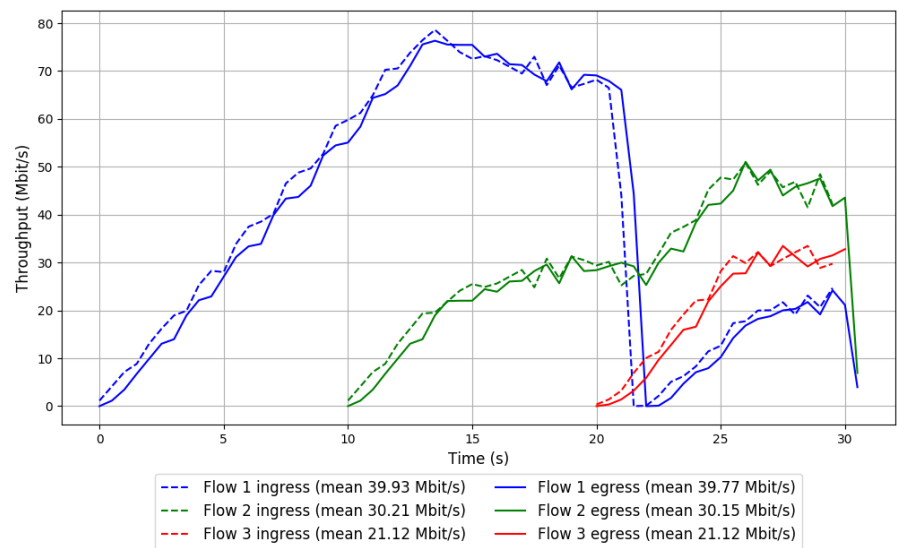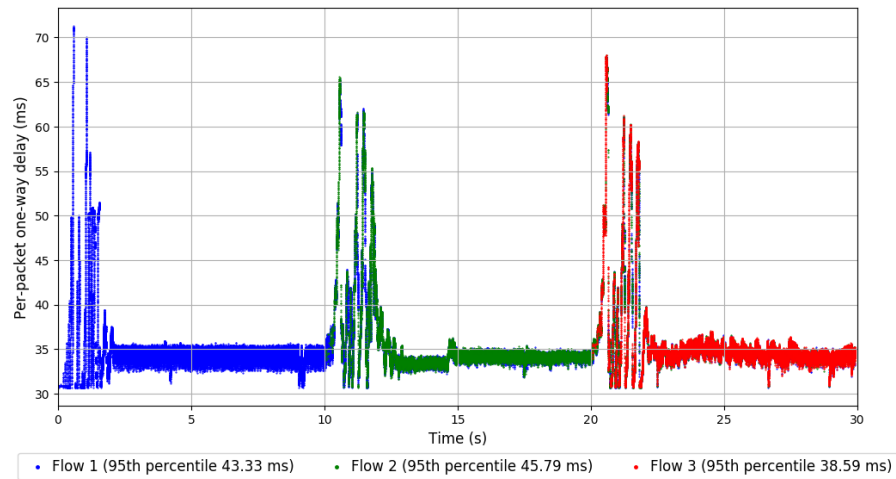
Run 4: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 39.62 Mbit/s) —— Flow 1 egress (mean 39.57 Mbit/s)
- - - Flow 2 ingress (mean 20.24 Mbit/s) —— Flow 2 egress (mean 20.18 Mbit/s)
- - - Flow 3 ingress (mean 24.31 Mbit/s) —— Flow 3 egress (mean 24.24 Mbit/s)

• Flow 1 (95th percentile 59.80 ms)   • Flow 2 (95th percentile 60.80 ms)   • Flow 3 (95th percentile 59.37 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2018-10-09 22:37:56
End at: 2018-10-09 22:38:26
Local clock offset: 1.292 ms
Remote clock offset: -2.163 ms


# Below is generated by plot.py at 2018-10-09 23:02:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.82 Mbit/s
95th percentile per-packet one-way delay: 64.860 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 39.77 Mbit/s
95th percentile per-packet one-way delay: 65.647 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 30.15 Mbit/s
95th percentile per-packet one-way delay: 64.885 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 21.12 Mbit/s
95th percentile per-packet one-way delay: 61.555 ms
Loss rate: 0.00%
```
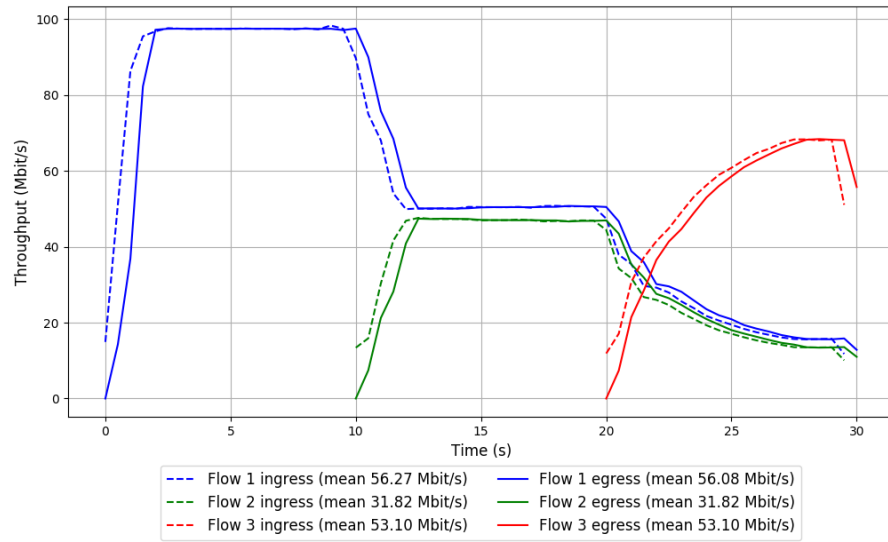
Run 5: Report of LEDBAT — Data Link

- - - Flow 1 ingress (mean 39.93 Mbit/s)   —— Flow 1 egress (mean 39.77 Mbit/s)
- - - Flow 2 ingress (mean 30.21 Mbit/s)   —— Flow 2 egress (mean 30.15 Mbit/s)
- - - Flow 3 ingress (mean 21.12 Mbit/s)   —— Flow 3 egress (mean 21.12 Mbit/s)

- Flow 1 (95th percentile 65.65 ms)   • Flow 2 (95th percentile 64.89 ms)   • Flow 3 (95th percentile 61.55 ms)
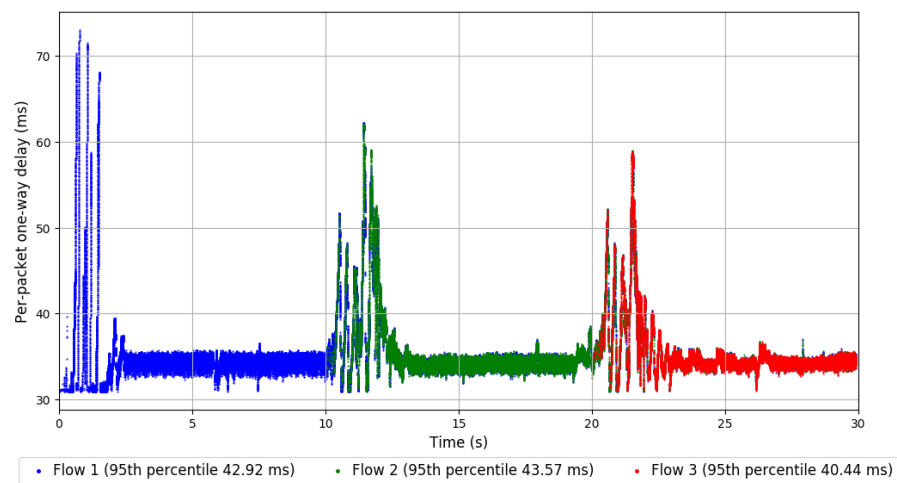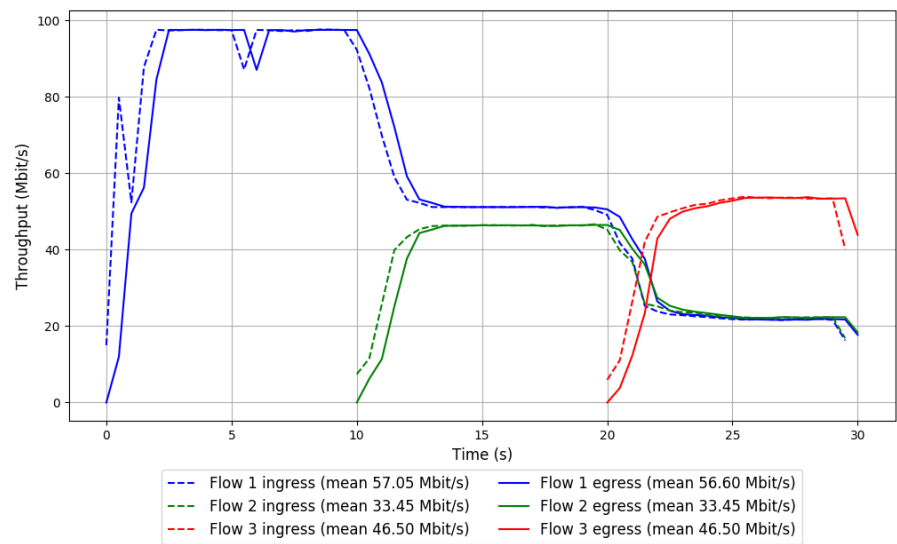
74

```
Run 1: Statistics of Indigo-Muses

Start at: 2018-10-09 21:13:16
End at: 2018-10-09 21:13:46
Local clock offset: 1.481 ms
Remote clock offset: -3.436 ms


# Below is generated by plot.py at 2018-10-09 23:03:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.73 Mbit/s
95th percentile per-packet one-way delay: 43.278 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 56.08 Mbit/s
95th percentile per-packet one-way delay: 43.326 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 45.792 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 53.10 Mbit/s
95th percentile per-packet one-way delay: 38.587 ms
Loss rate: 0.00%
```

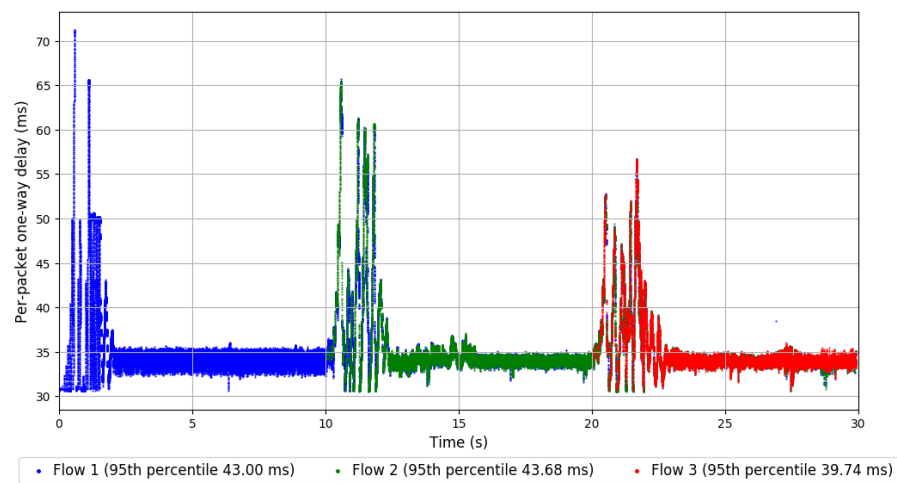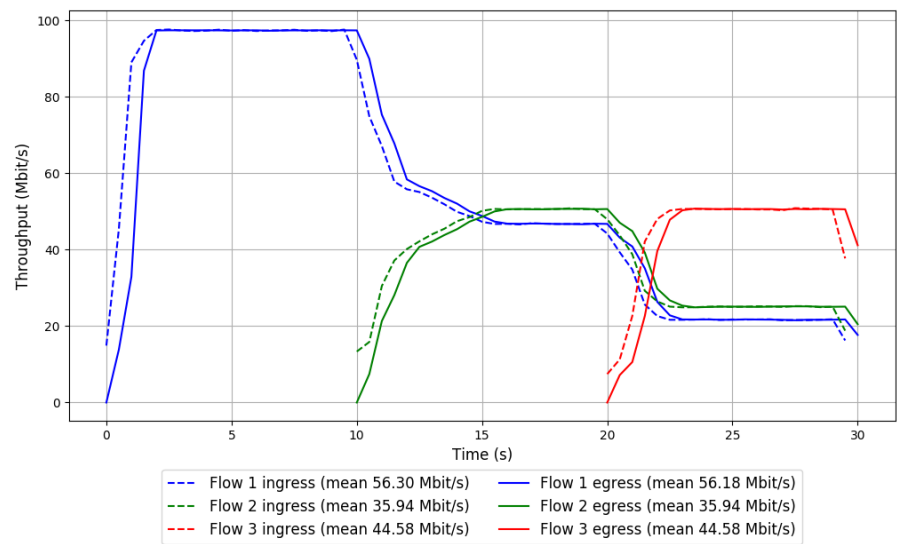Run 1: Report of Indigo-Muses — Data Link

```
Run 2: Statistics of Indigo-Muses

Start at: 2018-10-09 21:37:51
End at: 2018-10-09 21:38:21
Local clock offset: 3.947 ms
Remote clock offset: -2.849 ms


# Below is generated by plot.py at 2018-10-09 23:03:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.10 Mbit/s
95th percentile per-packet one-way delay: 42.578 ms
Loss rate: 0.46%
-- Flow 1:
Average throughput: 56.60 Mbit/s
95th percentile per-packet one-way delay: 42.921 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 33.45 Mbit/s
95th percentile per-packet one-way delay: 43.569 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.50 Mbit/s
95th percentile per-packet one-way delay: 40.439 ms
Loss rate: 0.00%
```

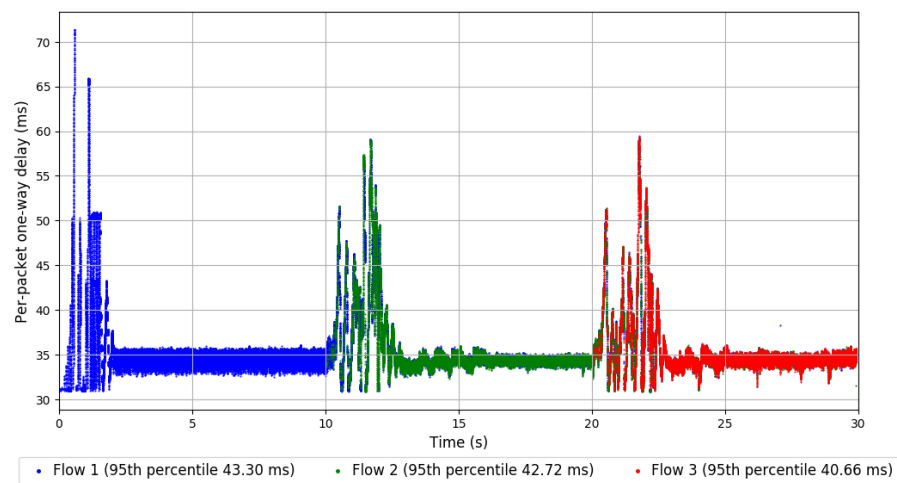Run 2: Report of Indigo-Muses — Data Link

```
Run 3: Statistics of Indigo-Muses

Start at: 2018-10-09 22:02:24
End at: 2018-10-09 22:02:54
Local clock offset: 2.958 ms
Remote clock offset: -2.467 ms


# Below is generated by plot.py at 2018-10-09 23:03:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.77 Mbit/s
95th percentile per-packet one-way delay: 42.712 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 56.18 Mbit/s
95th percentile per-packet one-way delay: 42.997 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 35.94 Mbit/s
95th percentile per-packet one-way delay: 43.678 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 44.58 Mbit/s
95th percentile per-packet one-way delay: 39.742 ms
Loss rate: 0.00%
```
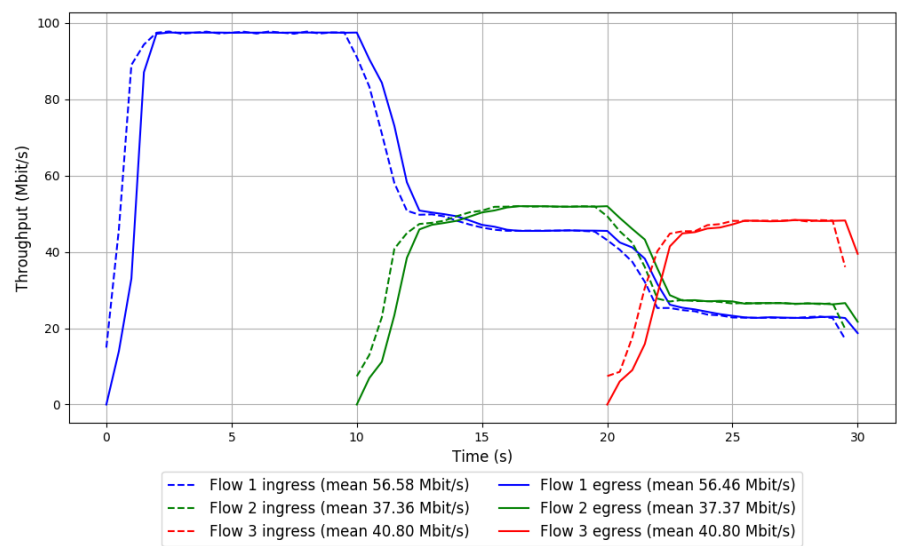
Run 3: Report of Indigo-Muses — Data Link

```
Run 4: Statistics of Indigo-Muses

Start at: 2018-10-09 22:26:58
End at: 2018-10-09 22:27:28
Local clock offset: 1.147 ms
Remote clock offset: -2.118 ms


# Below is generated by plot.py at 2018-10-09 23:03:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.76 Mbit/s
95th percentile per-packet one-way delay: 42.945 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 56.46 Mbit/s
95th percentile per-packet one-way delay: 43.297 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 37.37 Mbit/s
95th percentile per-packet one-way delay: 42.717 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.80 Mbit/s
95th percentile per-packet one-way delay: 40.662 ms
Loss rate: 0.00%
```

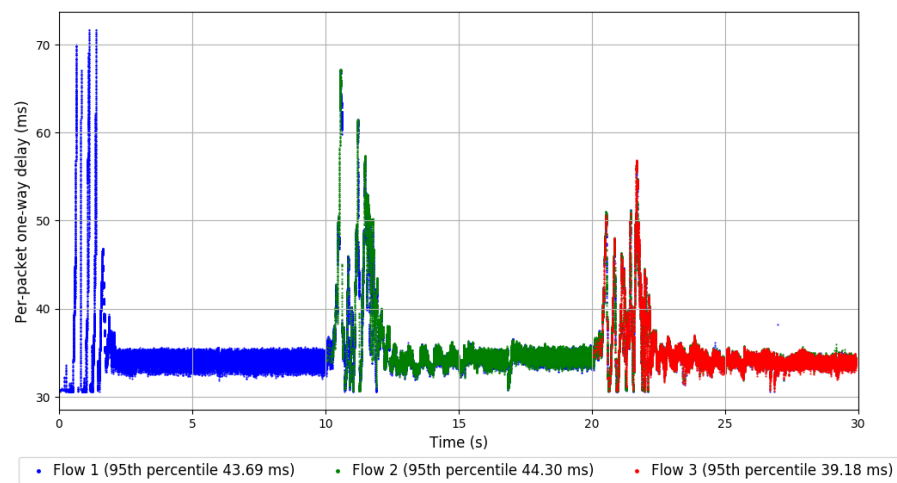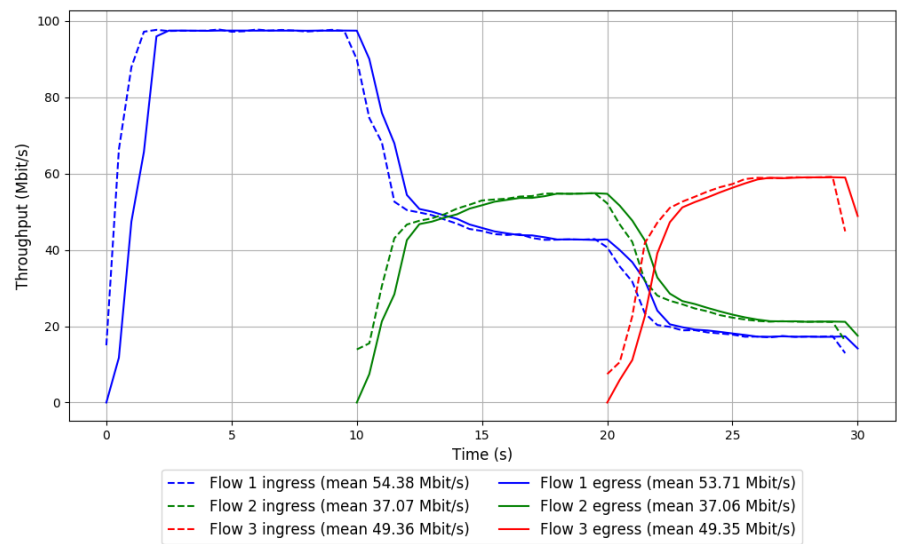Run 4: Report of Indigo-Muses — Data Link

```
Run 5: Statistics of Indigo-Muses

Start at: 2018-10-09 22:51:54
End at: 2018-10-09 22:52:24
Local clock offset: 1.122 ms
Remote clock offset: -2.361 ms


# Below is generated by plot.py at 2018-10-09 23:03:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.61 Mbit/s
95th percentile per-packet one-way delay: 43.035 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 53.71 Mbit/s
95th percentile per-packet one-way delay: 43.689 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 37.06 Mbit/s
95th percentile per-packet one-way delay: 44.305 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 49.35 Mbit/s
95th percentile per-packet one-way delay: 39.179 ms
Loss rate: 0.01%
```

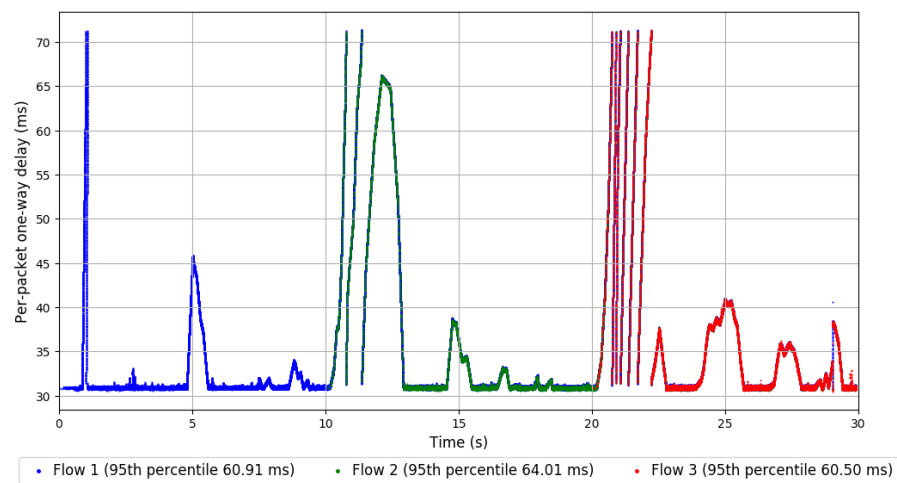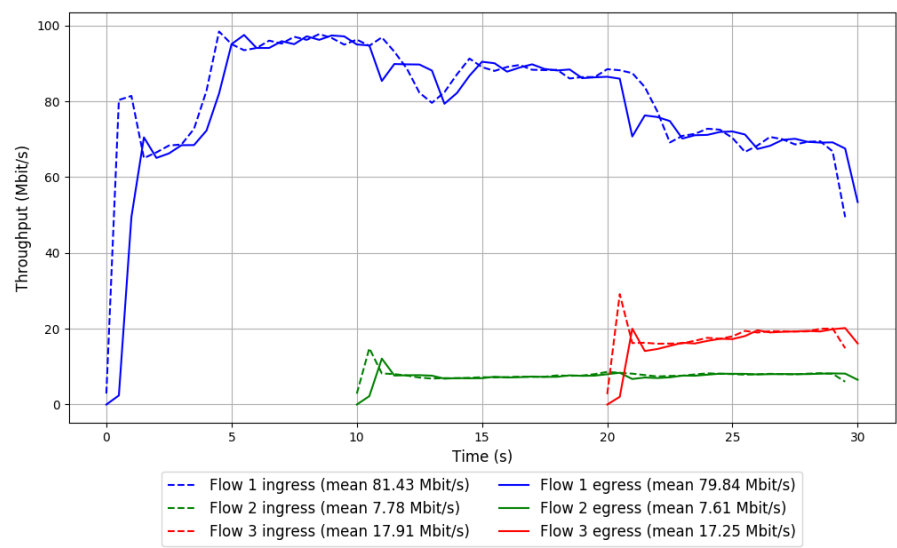Run 5: Report of Indigo-Muses — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2018-10-09 21:05:06
End at: 2018-10-09 21:05:36
Local clock offset: 2.264 ms
Remote clock offset: -3.619 ms


# Below is generated by plot.py at 2018-10-09 23:03:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.58 Mbit/s
95th percentile per-packet one-way delay: 61.158 ms
Loss rate: 2.08%
-- Flow 1:
Average throughput: 79.84 Mbit/s
95th percentile per-packet one-way delay: 60.914 ms
Loss rate: 1.96%
-- Flow 2:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 64.008 ms
Loss rate: 2.30%
-- Flow 3:
Average throughput: 17.25 Mbit/s
95th percentile per-packet one-way delay: 60.496 ms
Loss rate: 3.66%
```
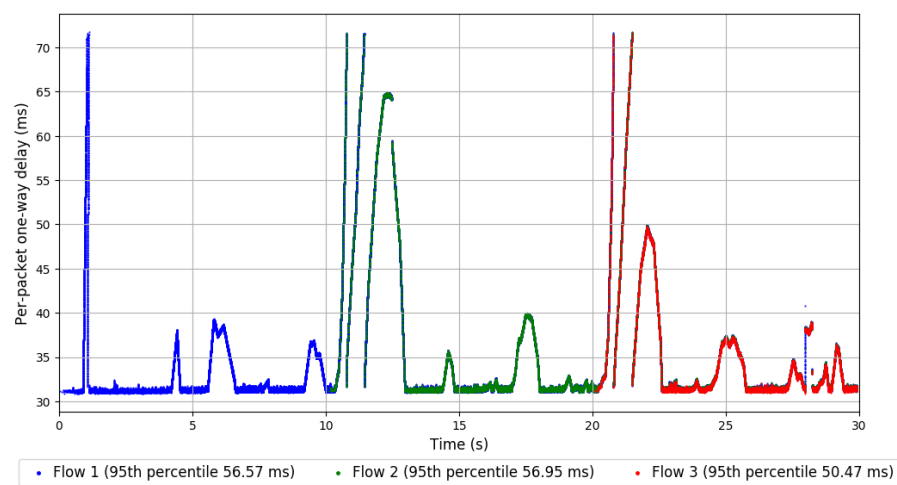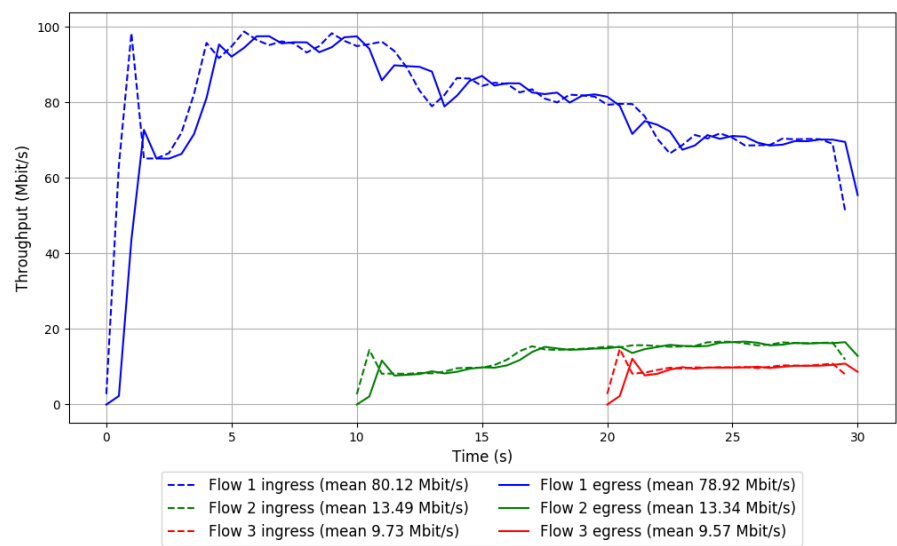
Run 1: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 81.43 Mbit/s) --- Flow 1 egress (mean 79.84 Mbit/s)
Flow 2 ingress (mean 7.78 Mbit/s) --- Flow 2 egress (mean 7.61 Mbit/s)
Flow 3 ingress (mean 17.91 Mbit/s) --- Flow 3 egress (mean 17.25 Mbit/s)

Flow 1 (95th percentile 60.91 ms) • Flow 2 (95th percentile 64.01 ms) • Flow 3 (95th percentile 60.50 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2018-10-09 21:29:41
End at: 2018-10-09 21:30:11
Local clock offset: 2.459 ms
Remote clock offset: -3.048 ms


# Below is generated by plot.py at 2018-10-09 23:03:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.95 Mbit/s
95th percentile per-packet one-way delay: 56.445 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 78.92 Mbit/s
95th percentile per-packet one-way delay: 56.570 ms
Loss rate: 1.50%
-- Flow 2:
Average throughput: 13.34 Mbit/s
95th percentile per-packet one-way delay: 56.947 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 9.57 Mbit/s
95th percentile per-packet one-way delay: 50.469 ms
Loss rate: 1.66%
```
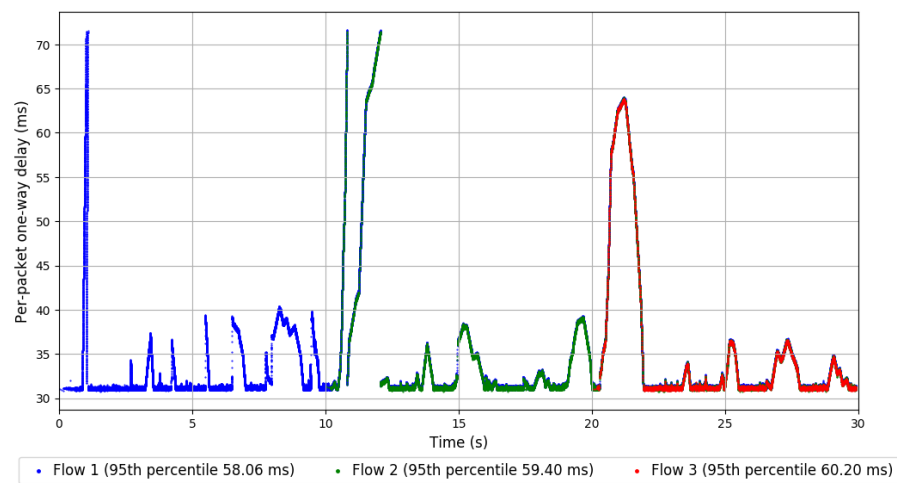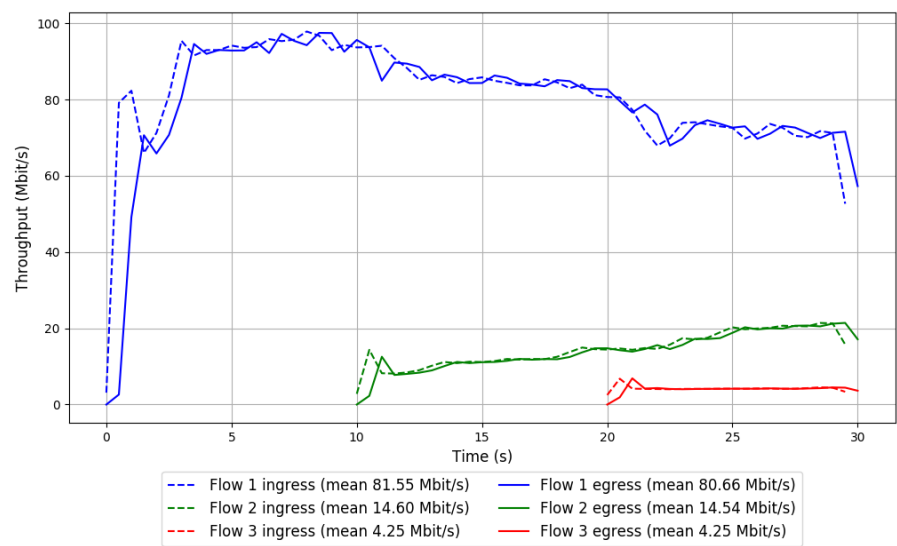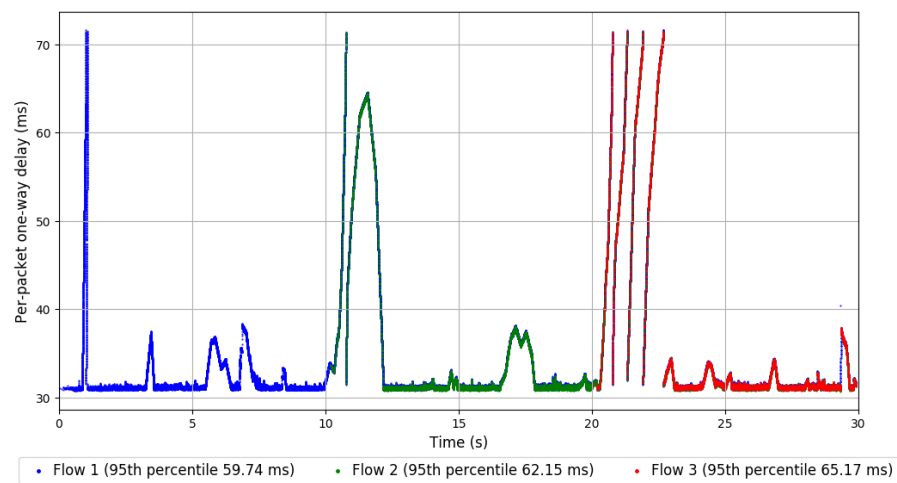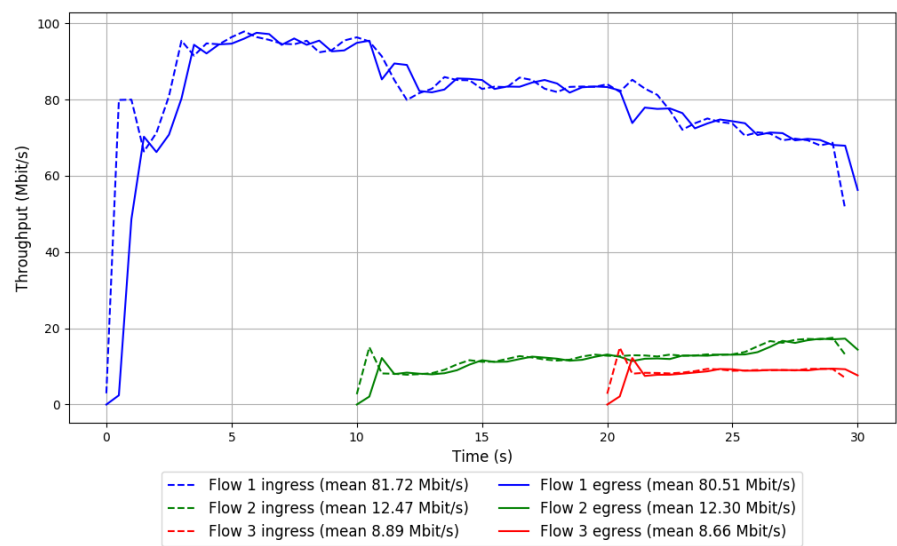
Run 2: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 80.12 Mbit/s) —— Flow 1 egress (mean 78.92 Mbit/s)
- - - Flow 2 ingress (mean 13.49 Mbit/s) —— Flow 2 egress (mean 13.34 Mbit/s)
- - - Flow 3 ingress (mean 9.73 Mbit/s) —— Flow 3 egress (mean 9.57 Mbit/s)

• Flow 1 (95th percentile 56.57 ms)   • Flow 2 (95th percentile 56.95 ms)   • Flow 3 (95th percentile 50.47 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2018-10-09 21:54:08
End at: 2018-10-09 21:54:38
Local clock offset: 5.134 ms
Remote clock offset: -2.453 ms


# Below is generated by plot.py at 2018-10-09 23:04:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.73 Mbit/s
95th percentile per-packet one-way delay: 58.290 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 80.66 Mbit/s
95th percentile per-packet one-way delay: 58.063 ms
Loss rate: 1.09%
-- Flow 2:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 59.397 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 60.198 ms
Loss rate: 0.00%
```

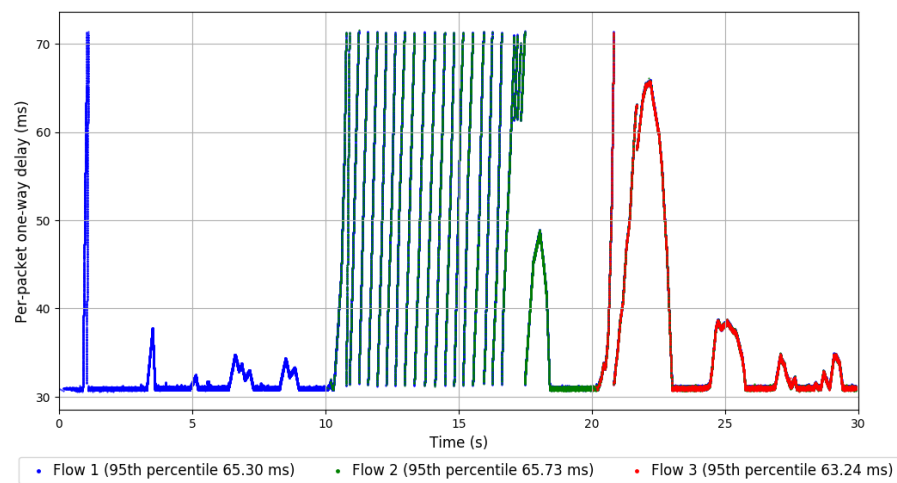Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2018-10-09 22:18:50
End at: 2018-10-09 22:19:20
Local clock offset: 1.31 ms
Remote clock offset: -2.174 ms


# Below is generated by plot.py at 2018-10-09 23:04:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.54 Mbit/s
95th percentile per-packet one-way delay: 60.307 ms
Loss rate: 1.50%
-- Flow 1:
Average throughput: 80.51 Mbit/s
95th percentile per-packet one-way delay: 59.736 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 12.30 Mbit/s
95th percentile per-packet one-way delay: 62.148 ms
Loss rate: 1.37%
-- Flow 3:
Average throughput: 8.66 Mbit/s
95th percentile per-packet one-way delay: 65.167 ms
Loss rate: 2.58%
```
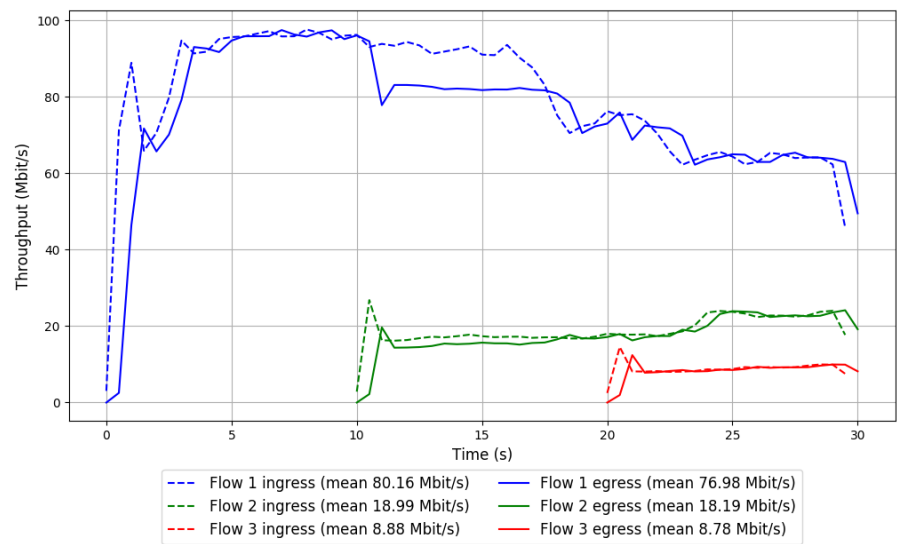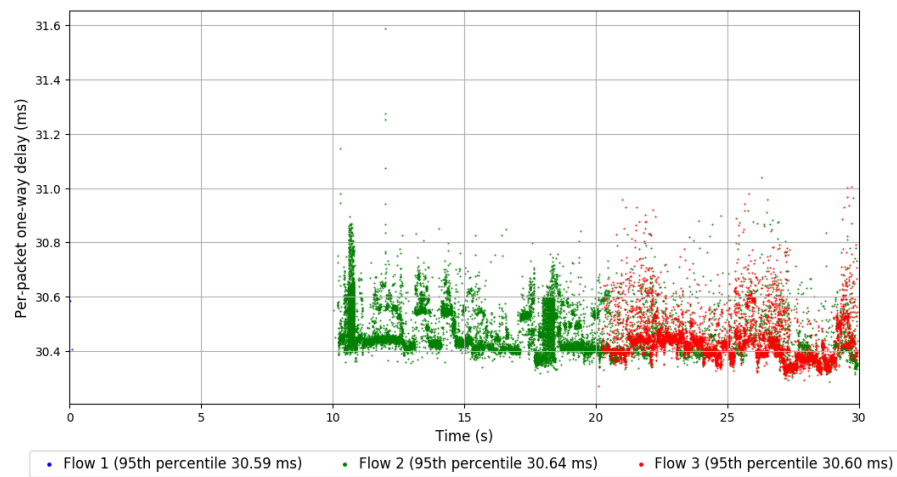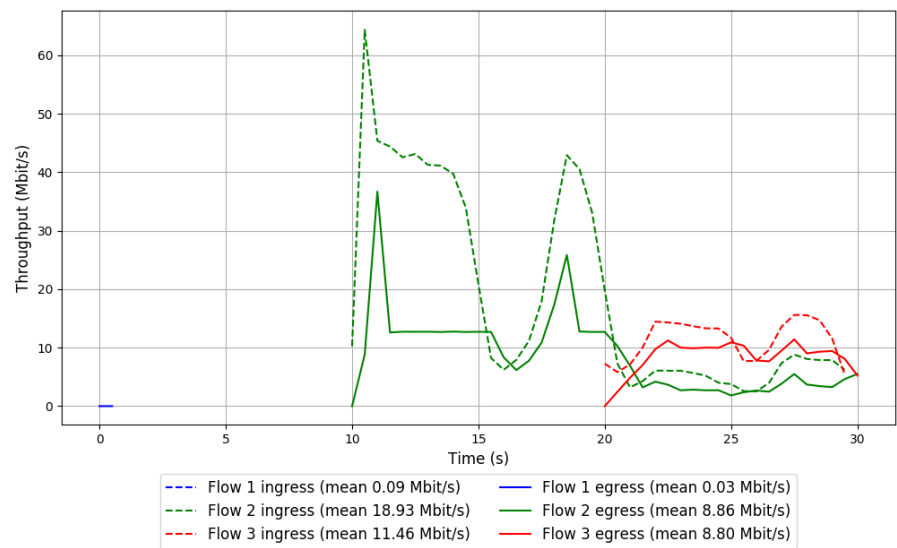
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 81.72 Mbit/s)   Flow 1 egress (mean 80.51 Mbit/s)
Flow 2 ingress (mean 12.47 Mbit/s)   Flow 2 egress (mean 12.30 Mbit/s)
Flow 3 ingress (mean 8.89 Mbit/s)   Flow 3 egress (mean 8.66 Mbit/s)

Flow 1 (95th percentile 59.74 ms)   Flow 2 (95th percentile 62.15 ms)   Flow 3 (95th percentile 65.17 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2018-10-09 22:43:28
End at: 2018-10-09 22:43:58
Local clock offset: 1.241 ms
Remote clock offset: -2.193 ms


# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.96 Mbit/s
95th percentile per-packet one-way delay: 65.323 ms
Loss rate: 3.92%
-- Flow 1:
Average throughput: 76.98 Mbit/s
95th percentile per-packet one-way delay: 65.295 ms
Loss rate: 3.97%
-- Flow 2:
Average throughput: 18.19 Mbit/s
95th percentile per-packet one-way delay: 65.728 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 63.244 ms
Loss rate: 1.22%
```

Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2018-10-09 20:57:00
End at: 2018-10-09 20:57:30
Local clock offset: 3.736 ms
Remote clock offset: -3.937 ms


# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.81 Mbit/s
95th percentile per-packet one-way delay: 30.631 ms
Loss rate: 46.26%
-- Flow 1:
Average throughput: 0.03 Mbit/s
95th percentile per-packet one-way delay: 30.585 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 8.86 Mbit/s
95th percentile per-packet one-way delay: 30.639 ms
Loss rate: 53.18%
-- Flow 3:
Average throughput: 8.80 Mbit/s
95th percentile per-packet one-way delay: 30.602 ms
Loss rate: 23.24%
```
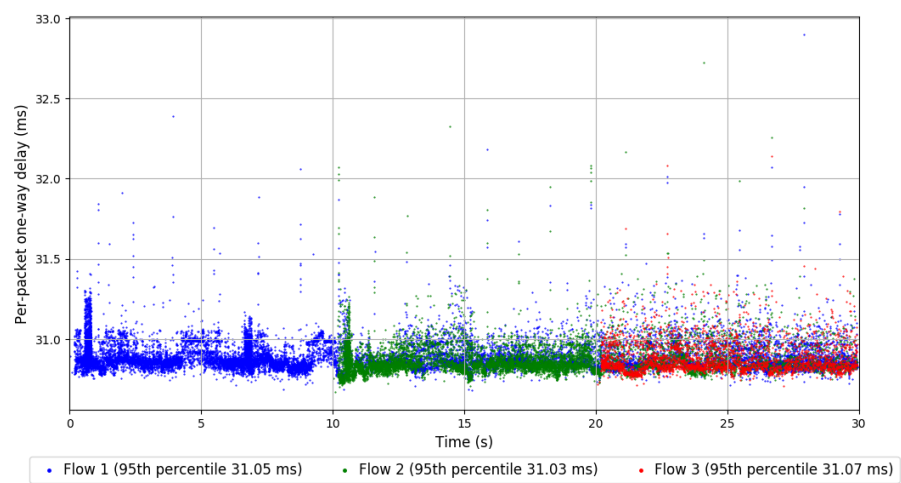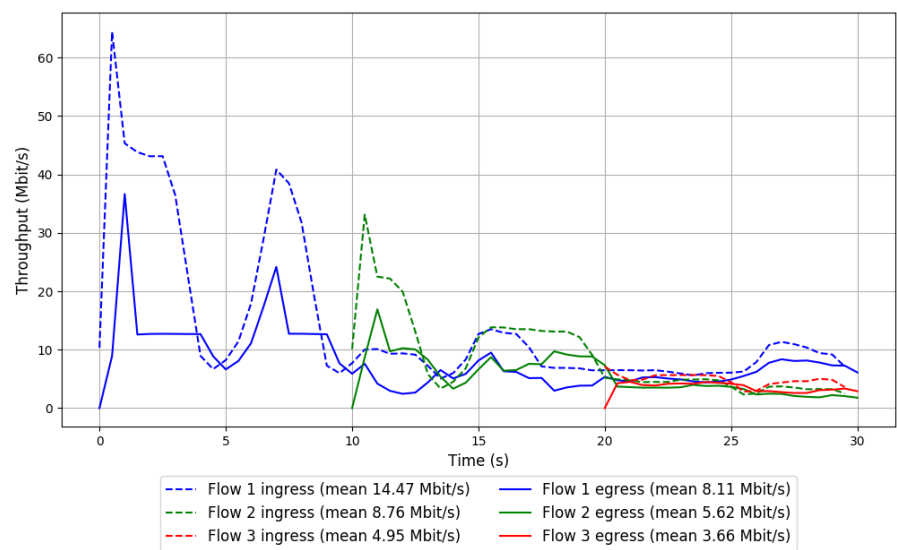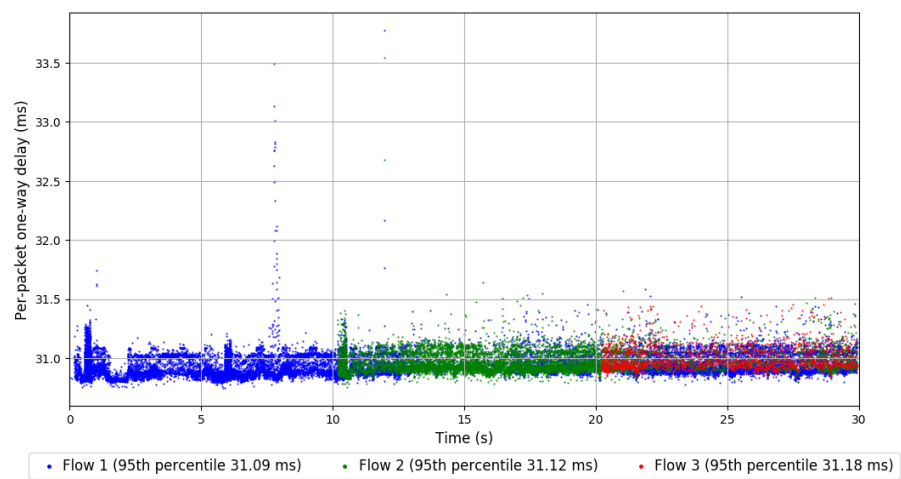
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2018-10-09 21:21:31
End at: 2018-10-09 21:22:01
Local clock offset: 1.053 ms
Remote clock offset: -3.18 ms

# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 31.046 ms
Loss rate: 40.46%
-- Flow 1:
Average throughput: 8.11 Mbit/s
95th percentile per-packet one-way delay: 31.046 ms
Loss rate: 43.93%
-- Flow 2:
Average throughput: 5.62 Mbit/s
95th percentile per-packet one-way delay: 31.034 ms
Loss rate: 35.87%
-- Flow 3:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 31.075 ms
Loss rate: 26.01%
```

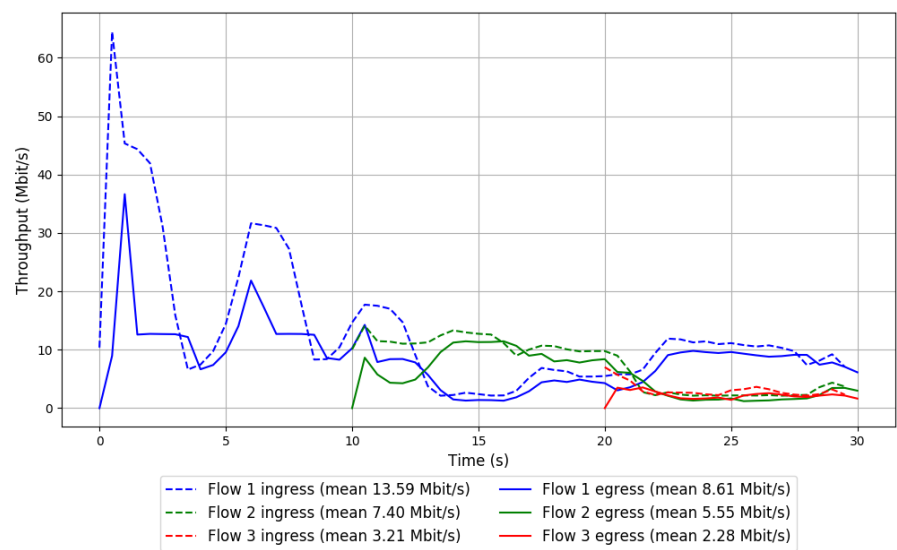Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2018-10-09 21:46:04
End at: 2018-10-09 21:46:34
Local clock offset: 4.666 ms
Remote clock offset: -2.721 ms


# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 31.108 ms
Loss rate: 33.28%
-- Flow 1:
Average throughput: 8.61 Mbit/s
95th percentile per-packet one-way delay: 31.095 ms
Loss rate: 36.63%
-- Flow 2:
Average throughput: 5.55 Mbit/s
95th percentile per-packet one-way delay: 31.119 ms
Loss rate: 24.95%
-- Flow 3:
Average throughput: 2.28 Mbit/s
95th percentile per-packet one-way delay: 31.179 ms
Loss rate: 28.95%
```
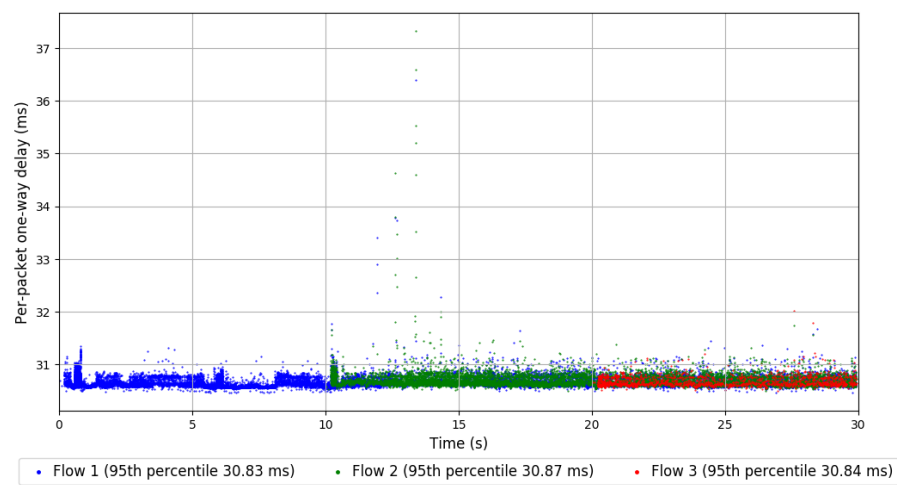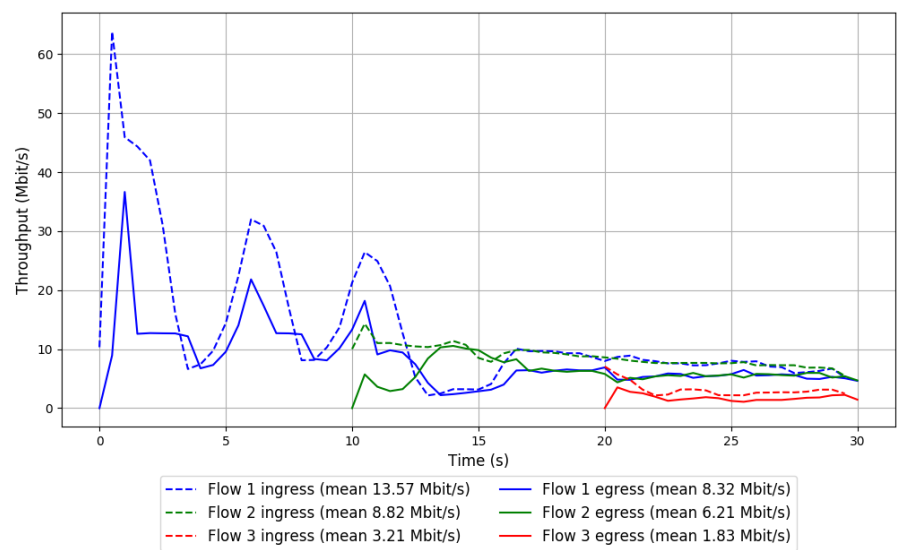
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 13.59 Mbit/s) Flow 1 egress (mean 8.61 Mbit/s)
Flow 2 ingress (mean 7.40 Mbit/s)   Flow 2 egress (mean 5.55 Mbit/s)
Flow 3 ingress (mean 3.21 Mbit/s)   Flow 3 egress (mean 2.28 Mbit/s)

Flow 1 (95th percentile 31.09 ms) Flow 2 (95th percentile 31.12 ms) Flow 3 (95th percentile 31.18 ms)
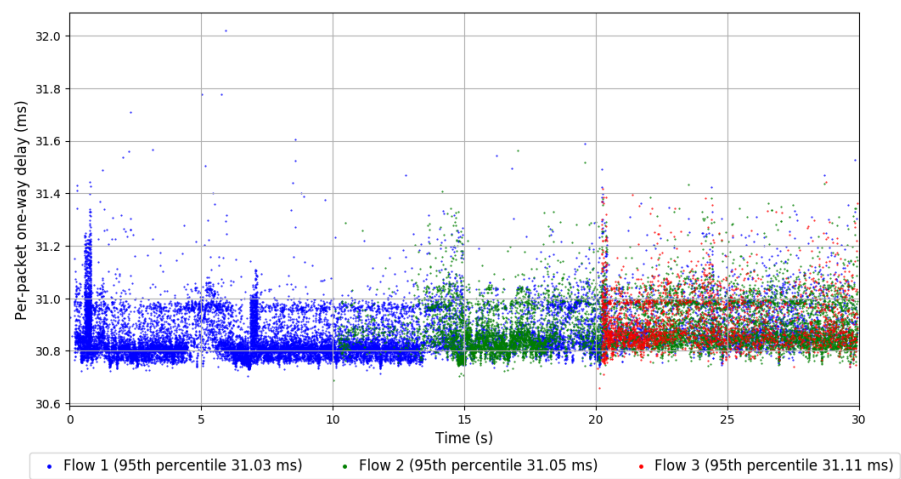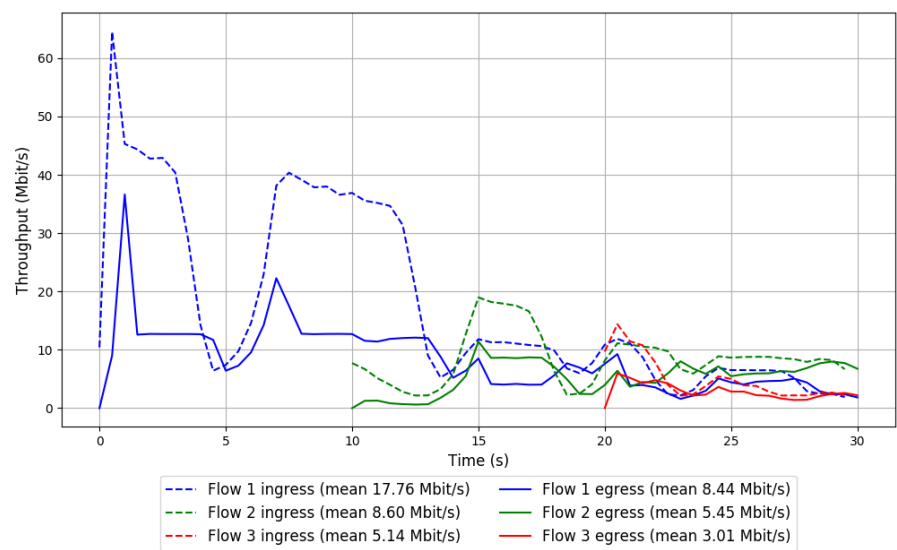
```
Run 4: Statistics of PCC-Expr

Start at: 2018-10-09 22:10:45
End at: 2018-10-09 22:11:15
Local clock offset: 1.825 ms
Remote clock offset: -2.482 ms


# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 30.842 ms
Loss rate: 36.29%
-- Flow 1:
Average throughput: 8.32 Mbit/s
95th percentile per-packet one-way delay: 30.827 ms
Loss rate: 38.67%
-- Flow 2:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 30.872 ms
Loss rate: 29.57%
-- Flow 3:
Average throughput: 1.83 Mbit/s
95th percentile per-packet one-way delay: 30.836 ms
Loss rate: 42.90%
```
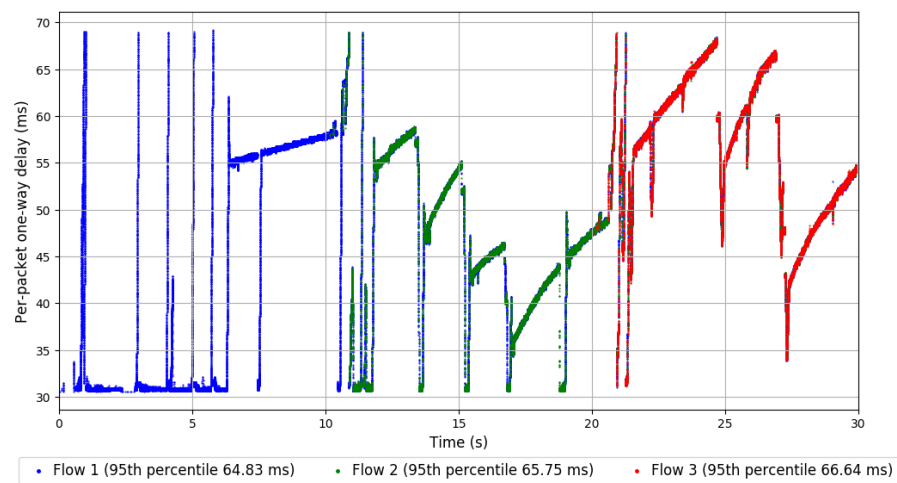
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2018-10-09 22:35:16
End at: 2018-10-09 22:35:46
Local clock offset: 1.279 ms
Remote clock offset: -2.194 ms


# Below is generated by plot.py at 2018-10-09 23:04:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.06 Mbit/s
95th percentile per-packet one-way delay: 31.042 ms
Loss rate: 48.13%
-- Flow 1:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 31.026 ms
Loss rate: 52.47%
-- Flow 2:
Average throughput: 5.45 Mbit/s
95th percentile per-packet one-way delay: 31.052 ms
Loss rate: 36.65%
-- Flow 3:
Average throughput: 3.01 Mbit/s
95th percentile per-packet one-way delay: 31.109 ms
Loss rate: 41.44%
```

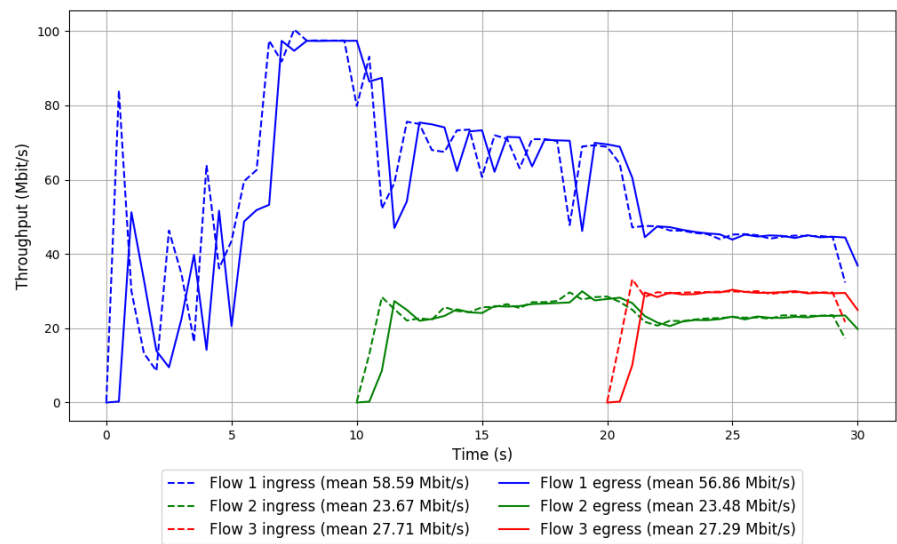# Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2018-10-09 21:06:27
End at: 2018-10-09 21:06:57
Local clock offset: 2.104 ms
Remote clock offset: -3.608 ms


# Below is generated by plot.py at 2018-10-09 23:05:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.43 Mbit/s
95th percentile per-packet one-way delay: 65.547 ms
Loss rate: 2.34%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 64.835 ms
Loss rate: 2.89%
-- Flow 2:
Average throughput: 23.48 Mbit/s
95th percentile per-packet one-way delay: 65.754 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 27.29 Mbit/s
95th percentile per-packet one-way delay: 66.639 ms
Loss rate: 1.45%
```

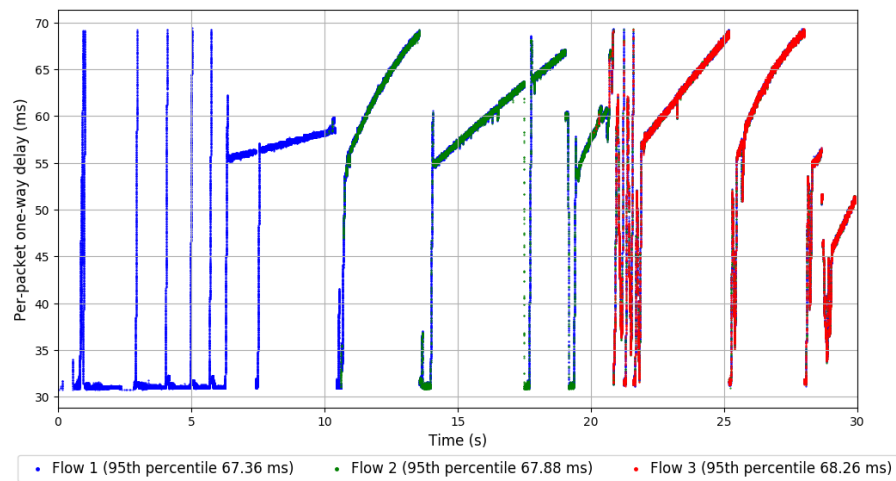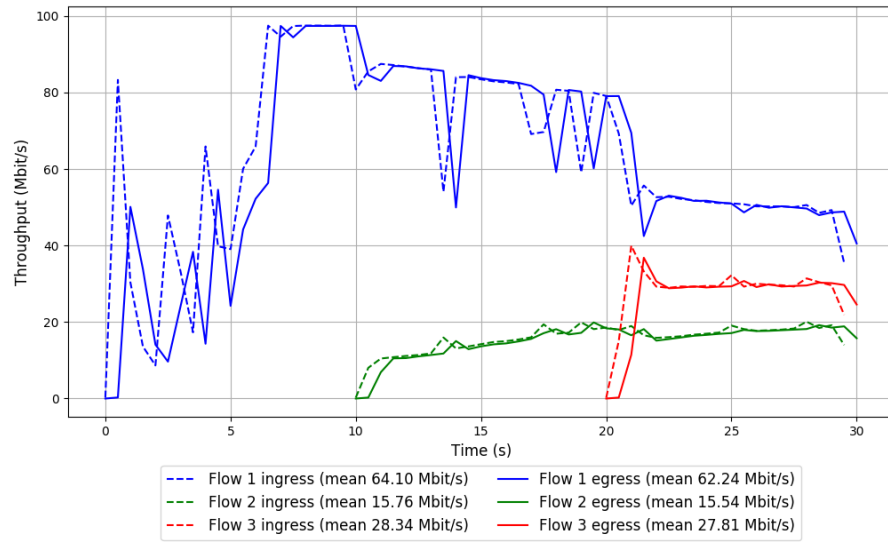Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2018-10-09 21:31:04
End at: 2018-10-09 21:31:34
Local clock offset: 2.799 ms
Remote clock offset: -3.054 ms


# Below is generated by plot.py at 2018-10-09 23:05:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.69 Mbit/s
95th percentile per-packet one-way delay: 67.622 ms
Loss rate: 2.57%
-- Flow 1:
Average throughput: 62.24 Mbit/s
95th percentile per-packet one-way delay: 67.359 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 15.54 Mbit/s
95th percentile per-packet one-way delay: 67.883 ms
Loss rate: 1.43%
-- Flow 3:
Average throughput: 27.81 Mbit/s
95th percentile per-packet one-way delay: 68.256 ms
Loss rate: 1.94%
```

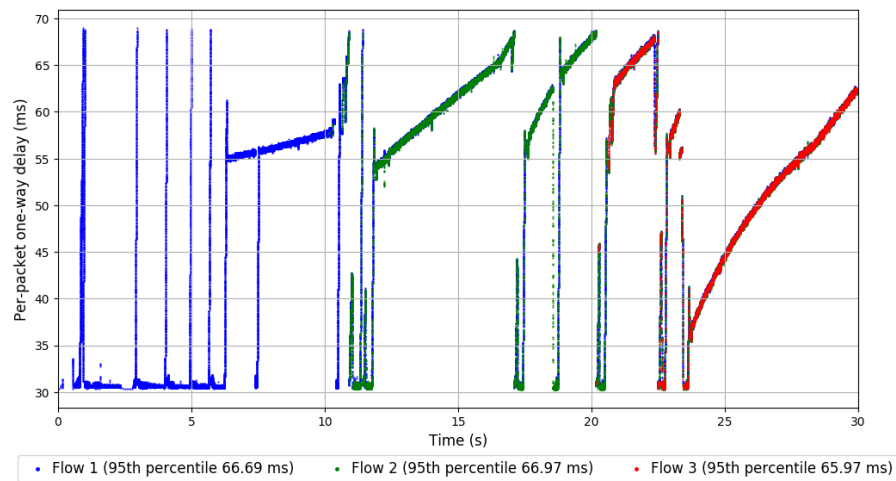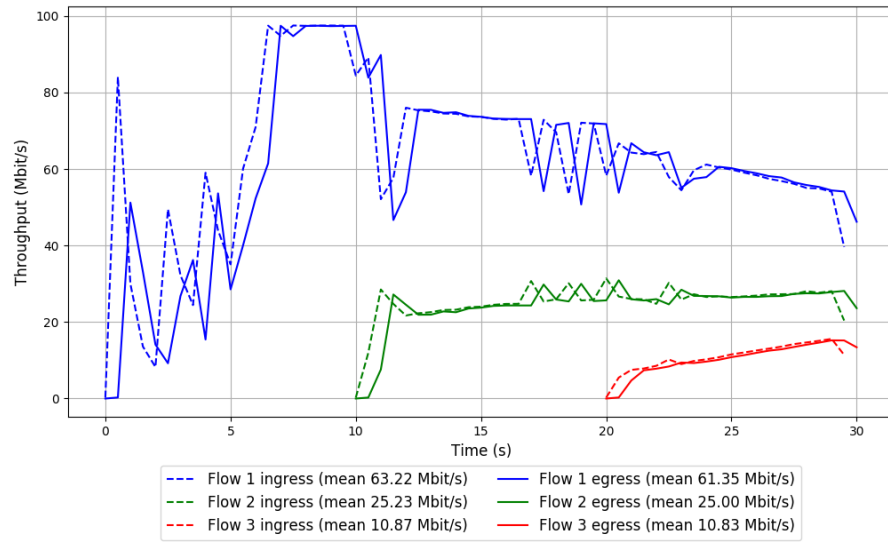Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2018-10-09 21:55:32
End at: 2018-10-09 21:56:02
Local clock offset: 5.008 ms
Remote clock offset: -2.601 ms


# Below is generated by plot.py at 2018-10-09 23:05:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.49 Mbit/s
95th percentile per-packet one-way delay: 66.733 ms
Loss rate: 2.36%
-- Flow 1:
Average throughput: 61.35 Mbit/s
95th percentile per-packet one-way delay: 66.690 ms
Loss rate: 2.85%
-- Flow 2:
Average throughput: 25.00 Mbit/s
95th percentile per-packet one-way delay: 66.965 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 65.967 ms
Loss rate: 0.47%
```
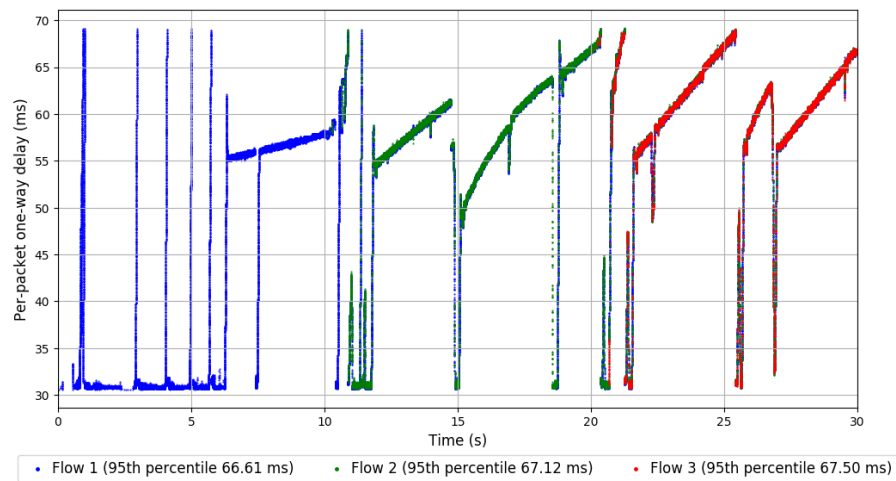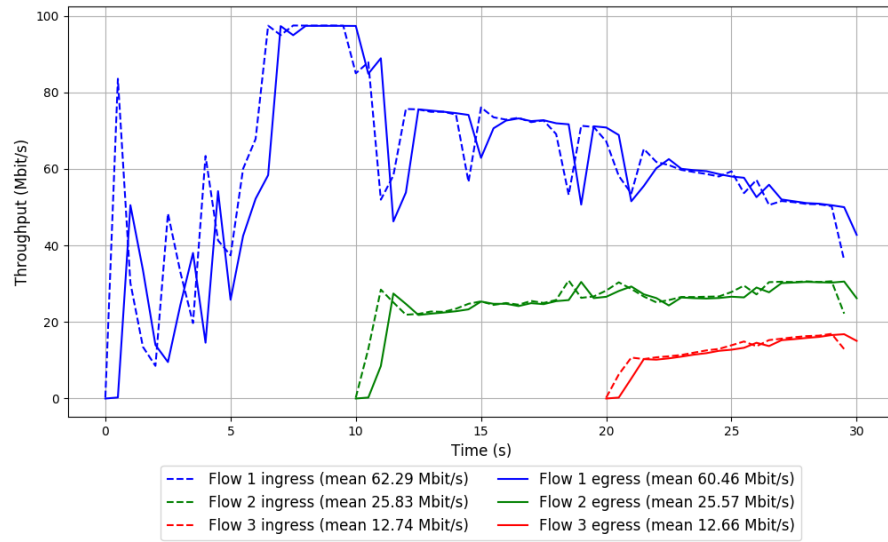
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 63.22 Mbit/s) ---- Flow 1 egress (mean 61.35 Mbit/s)
Flow 2 ingress (mean 25.23 Mbit/s) ---- Flow 2 egress (mean 25.00 Mbit/s)
Flow 3 ingress (mean 10.87 Mbit/s) ---- Flow 3 egress (mean 10.83 Mbit/s)

Flow 1 (95th percentile 66.69 ms) · Flow 2 (95th percentile 66.97 ms) · Flow 3 (95th percentile 65.97 ms)

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```
Run 4: Statistics of QUIC Cubic

Start at: 2018-10-09 22:20:11
End at: 2018-10-09 22:20:41
Local clock offset: 1.261 ms
Remote clock offset: -2.259 ms


# Below is generated by plot.py at 2018-10-09 23:05:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.59 Mbit/s
95th percentile per-packet one-way delay: 66.765 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 60.46 Mbit/s
95th percentile per-packet one-way delay: 66.612 ms
Loss rate: 2.83%
-- Flow 2:
Average throughput: 25.57 Mbit/s
95th percentile per-packet one-way delay: 67.118 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 12.66 Mbit/s
95th percentile per-packet one-way delay: 67.497 ms
Loss rate: 0.65%
```

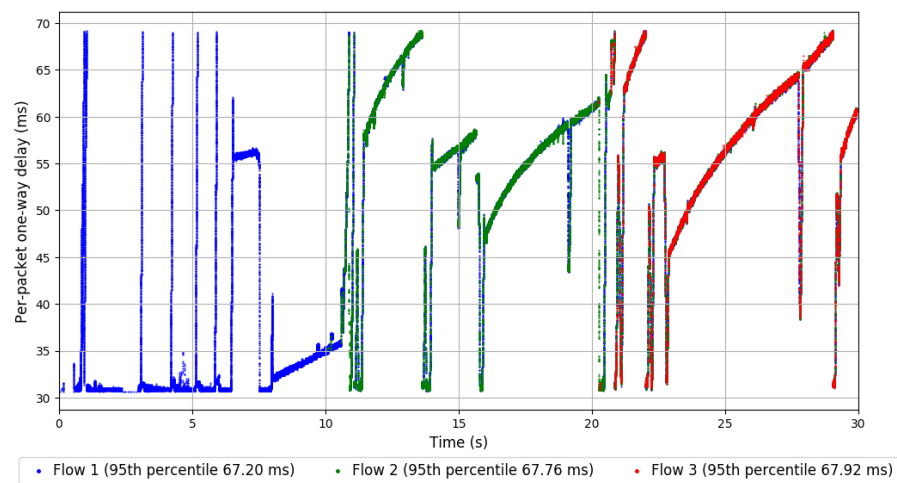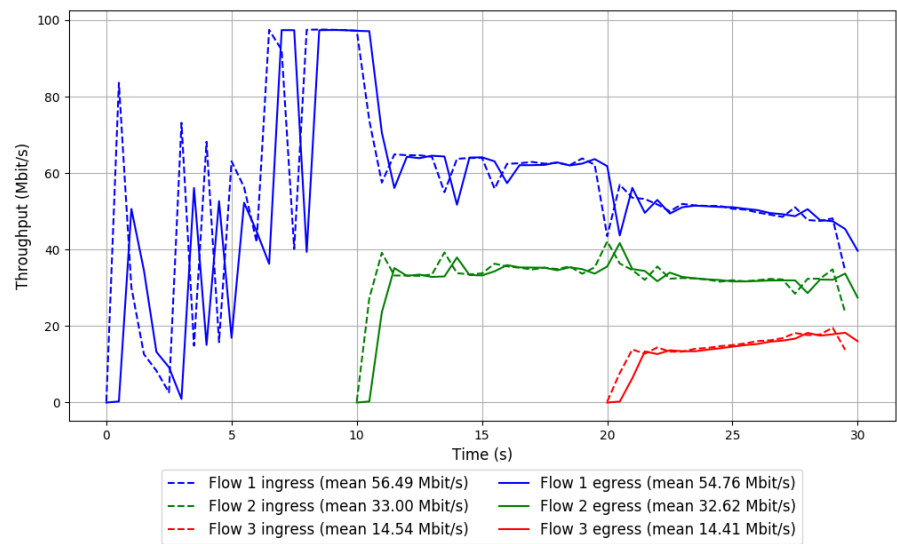Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2018-10-09 22:44:57
End at: 2018-10-09 22:45:27
Local clock offset: 1.227 ms
Remote clock offset: -2.183 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.19 Mbit/s
95th percentile per-packet one-way delay: 67.466 ms
Loss rate: 2.33%
-- Flow 1:
Average throughput: 54.76 Mbit/s
95th percentile per-packet one-way delay: 67.204 ms
Loss rate: 2.97%
-- Flow 2:
Average throughput: 32.62 Mbit/s
95th percentile per-packet one-way delay: 67.756 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 14.41 Mbit/s
95th percentile per-packet one-way delay: 67.925 ms
Loss rate: 0.91%
```
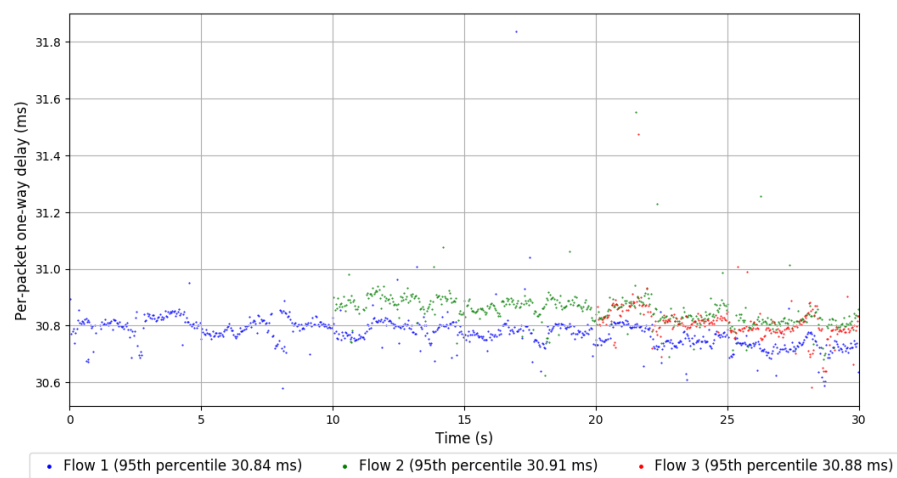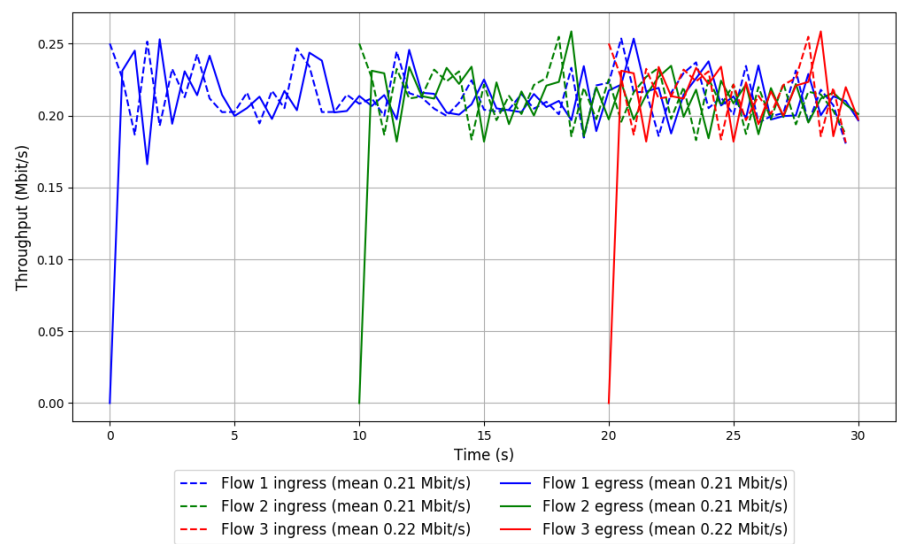
Run 5: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 56.49 Mbit/s)
- Flow 1 egress (mean 54.76 Mbit/s)
- Flow 2 ingress (mean 33.00 Mbit/s)
- Flow 2 egress (mean 32.62 Mbit/s)
- Flow 3 ingress (mean 14.54 Mbit/s)
- Flow 3 egress (mean 14.41 Mbit/s)

- Flow 1 (95th percentile 67.20 ms)
- Flow 2 (95th percentile 67.76 ms)
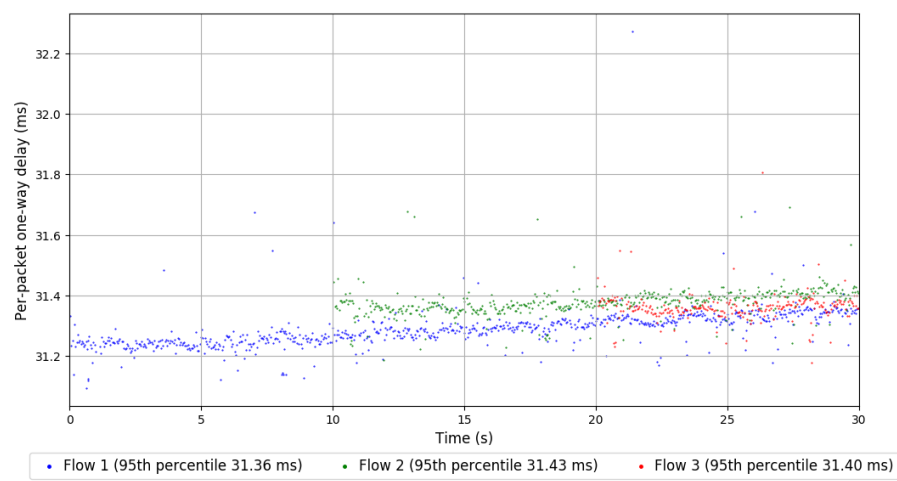- Flow 3 (95th percentile 67.92 ms)

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```
Run 1: Statistics of SCReAM

Start at: 2018-10-09 21:03:47
End at: 2018-10-09 21:04:17
Local clock offset: 2.451 ms
Remote clock offset: -3.609 ms

# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.840 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.913 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.881 ms
Loss rate: 0.00%
```
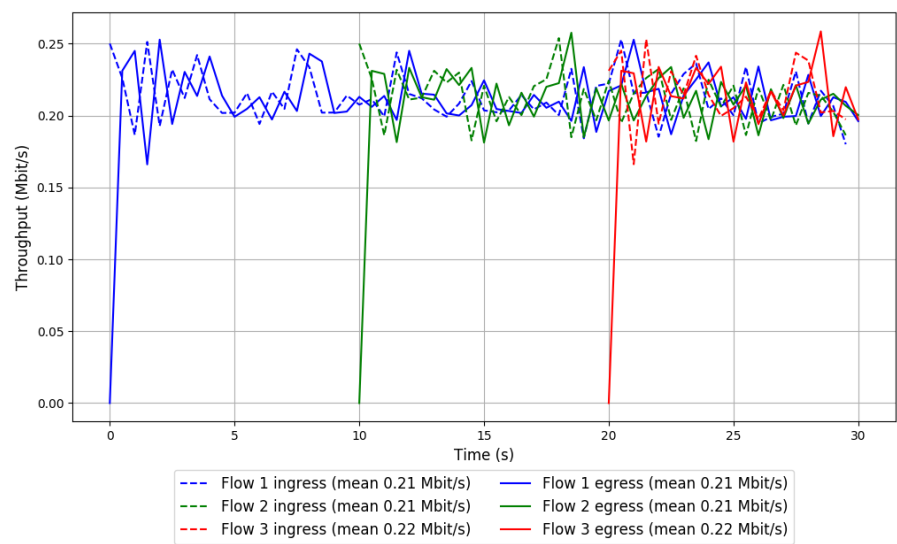
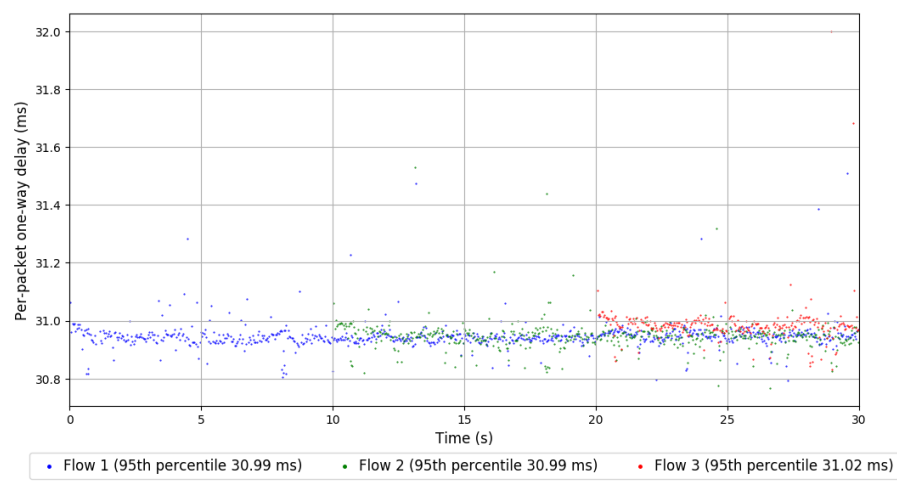# Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2018-10-09 21:28:23
End at: 2018-10-09 21:28:53
Local clock offset: 2.063 ms
Remote clock offset: -2.923 ms

# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.414 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.355 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 31.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.402 ms
Loss rate: 0.00%
```
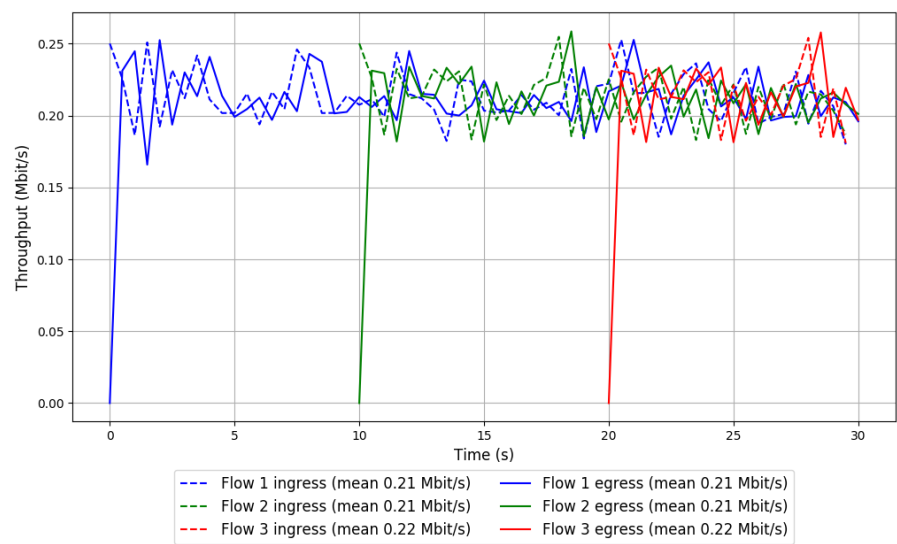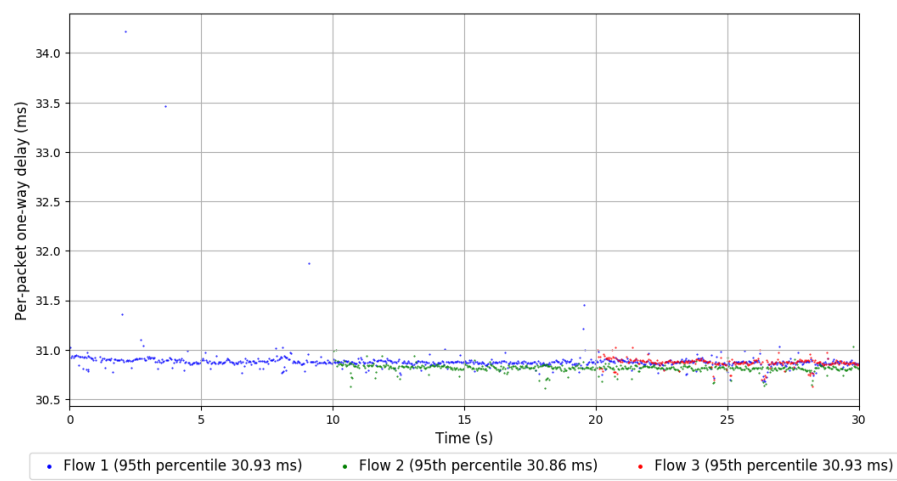
Run 2: Report of SCReAM — Data Link

Flow 1 ingress (mean 0.21 Mbit/s) — — — Flow 1 egress (mean 0.21 Mbit/s)
Flow 2 ingress (mean 0.21 Mbit/s) — — — Flow 2 egress (mean 0.21 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s) — — — Flow 3 egress (mean 0.22 Mbit/s)

Flow 1 (95th percentile 31.36 ms) • Flow 2 (95th percentile 31.43 ms) • Flow 3 (95th percentile 31.40 ms)

```
Run 3: Statistics of SCReAM

Start at: 2018-10-09 21:52:50
End at: 2018-10-09 21:53:20
Local clock offset: 5.043 ms
Remote clock offset: -2.632 ms

# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 31.009 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.986 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.994 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 31.020 ms
Loss rate: 0.00%
```
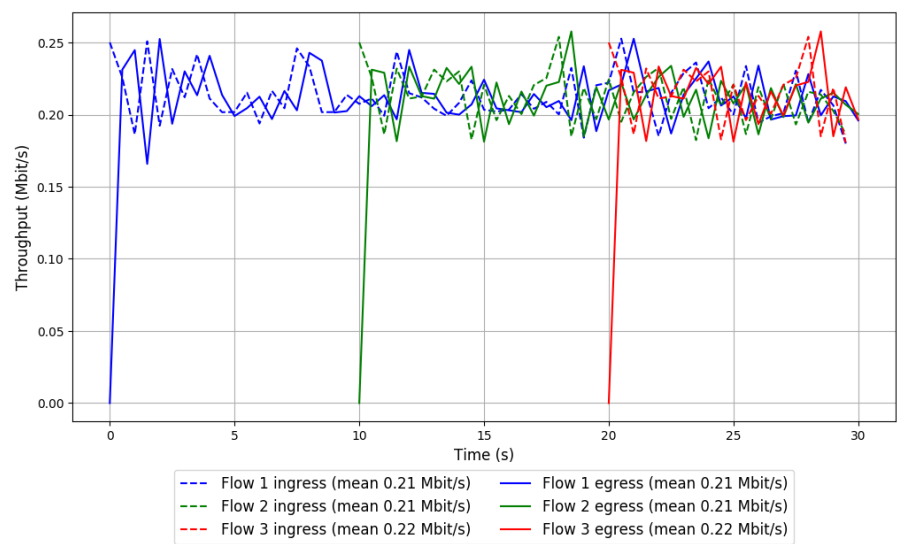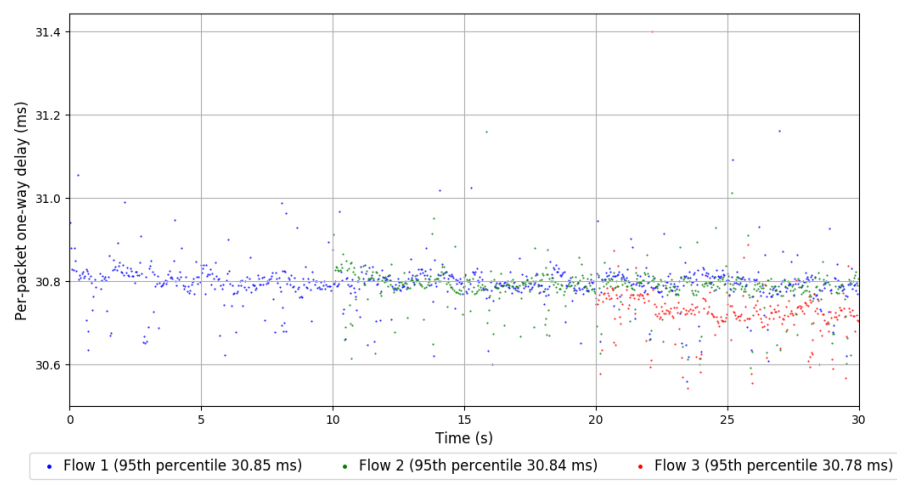
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2018-10-09 22:17:32
End at: 2018-10-09 22:18:02
Local clock offset: 1.381 ms
Remote clock offset: -2.287 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.935 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.856 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.928 ms
Loss rate: 0.00%
```
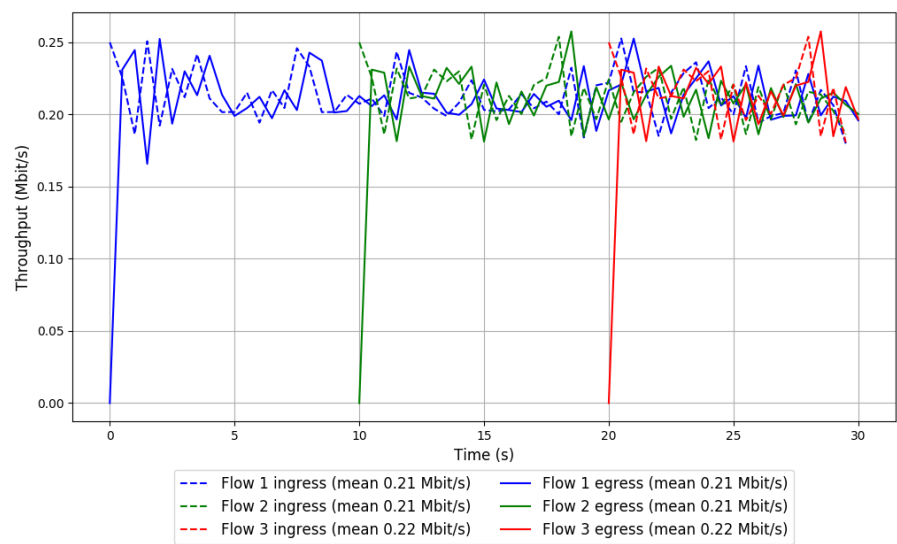
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2018-10-09 22:42:10
End at: 2018-10-09 22:42:40
Local clock offset: 1.26 ms
Remote clock offset: -2.338 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 30.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.849 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 30.836 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 30.780 ms
Loss rate: 0.00%
```
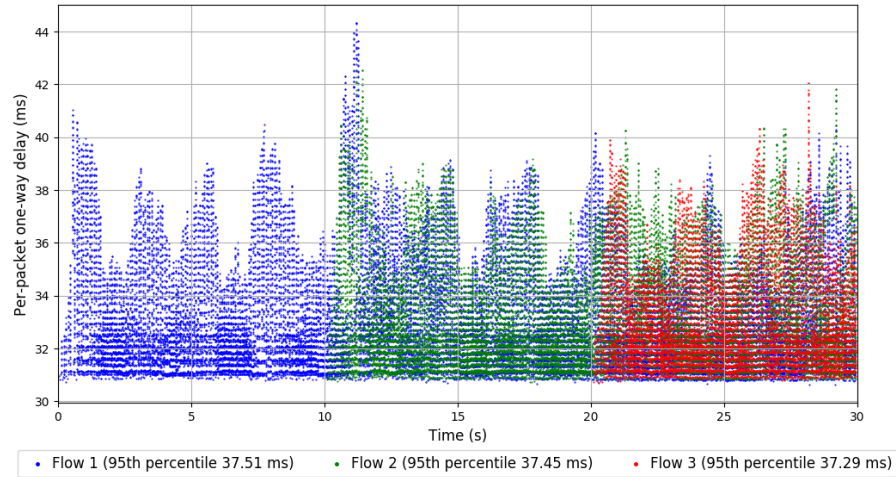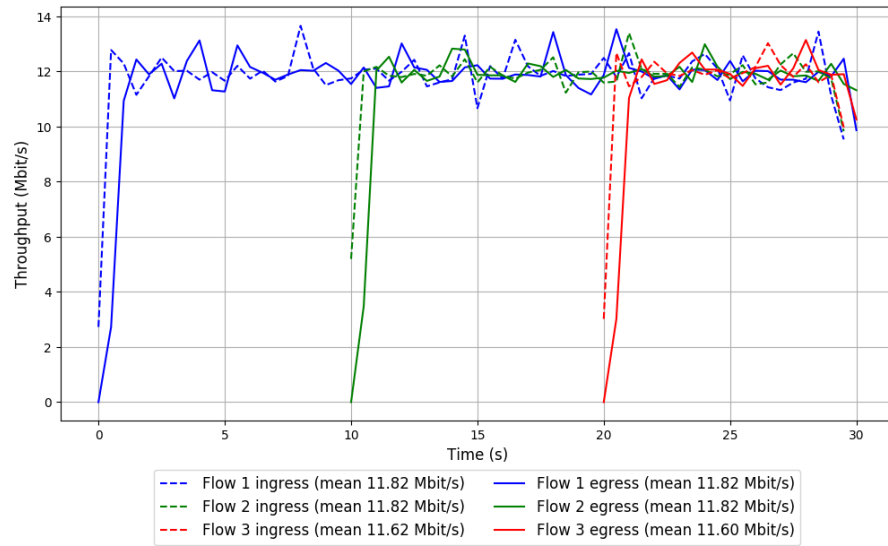
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2018-10-09 21:07:50
End at: 2018-10-09 21:08:20
Local clock offset: 1.94 ms
Remote clock offset: -3.422 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.51 Mbit/s
95th percentile per-packet one-way delay: 37.430 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 37.509 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 37.448 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.60 Mbit/s
95th percentile per-packet one-way delay: 37.290 ms
Loss rate: 0.10%
```
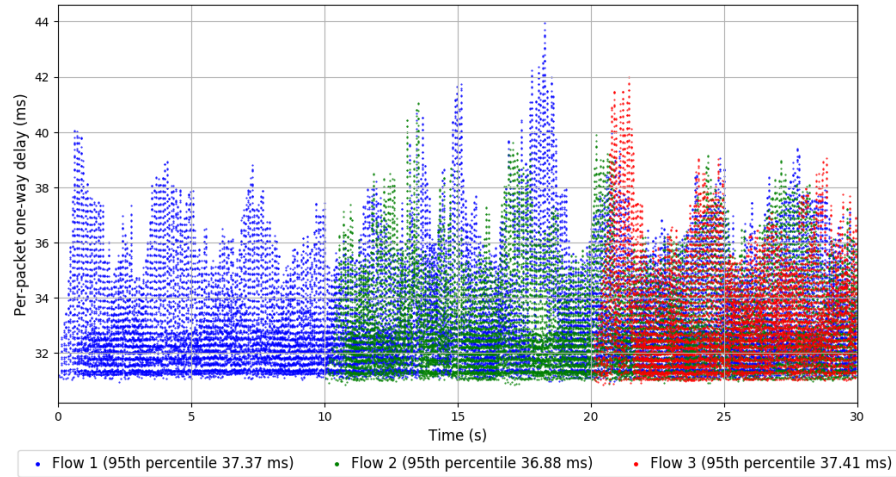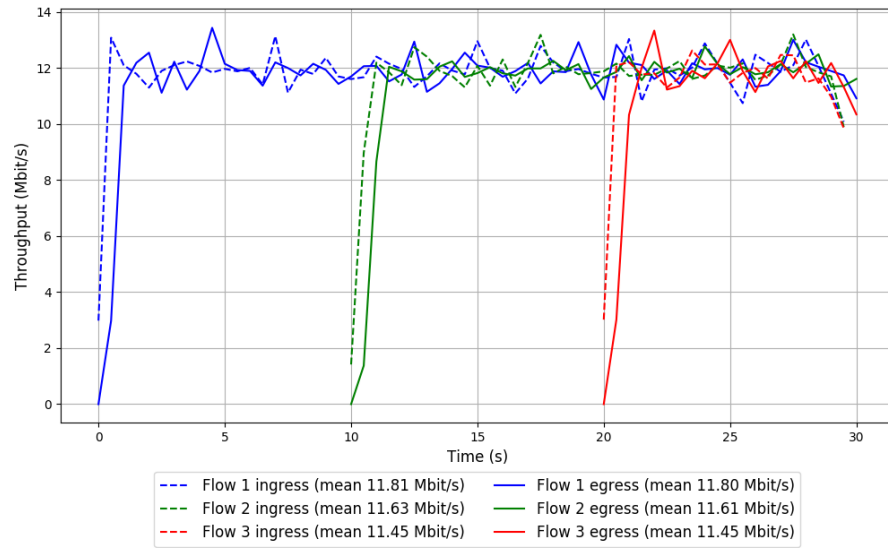
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2018-10-09 21:32:27
End at: 2018-10-09 21:32:57
Local clock offset: 3.112 ms
Remote clock offset: -2.938 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 37.204 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 11.80 Mbit/s
95th percentile per-packet one-way delay: 37.366 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 11.61 Mbit/s
95th percentile per-packet one-way delay: 36.877 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 11.45 Mbit/s
95th percentile per-packet one-way delay: 37.405 ms
Loss rate: 0.01%
```
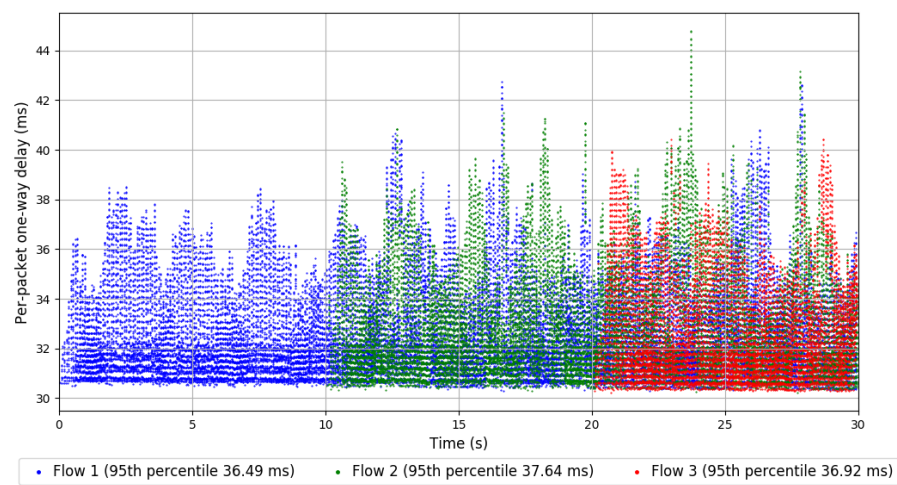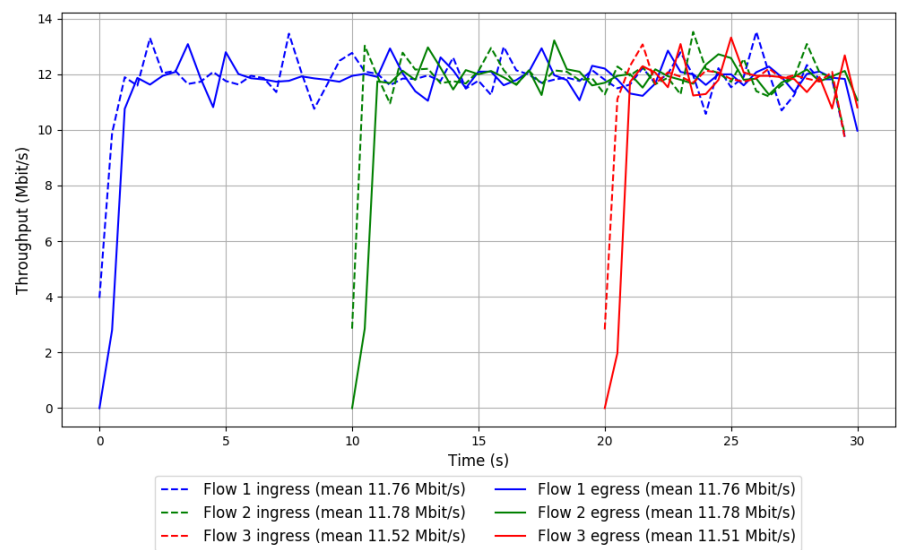
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2018-10-09 21:56:59
End at: 2018-10-09 21:57:29
Local clock offset: 4.493 ms
Remote clock offset: -2.594 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.38 Mbit/s
95th percentile per-packet one-way delay: 36.969 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 36.492 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 37.636 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.51 Mbit/s
95th percentile per-packet one-way delay: 36.922 ms
Loss rate: 0.07%
```
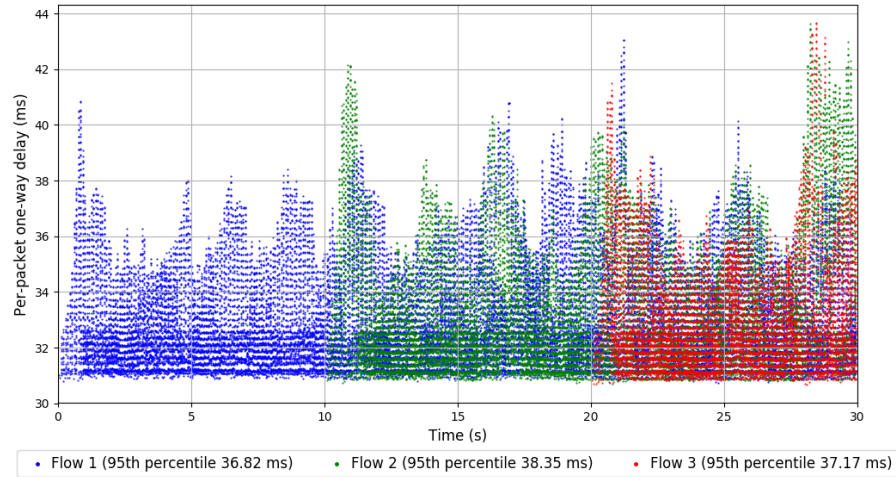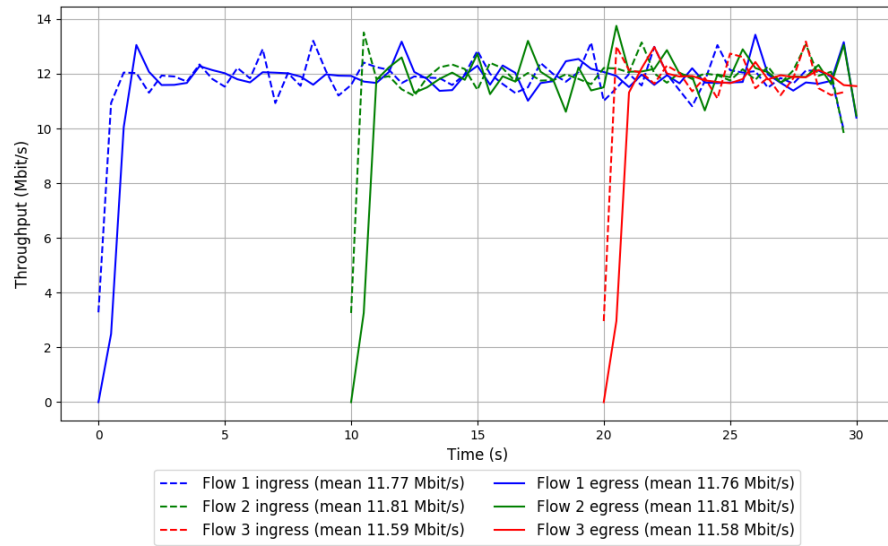
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2018-10-09 22:21:34
End at: 2018-10-09 22:22:04
Local clock offset: 1.204 ms
Remote clock offset: -2.123 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 37.375 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 36.817 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 38.355 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.58 Mbit/s
95th percentile per-packet one-way delay: 37.168 ms
Loss rate: 0.00%
```

Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2018-10-09 22:46:22
End at: 2018-10-09 22:46:52
Local clock offset: 1.218 ms
Remote clock offset: -2.18 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.26 Mbit/s
95th percentile per-packet one-way delay: 37.309 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 37.398 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 11.68 Mbit/s
95th percentile per-packet one-way delay: 37.138 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.23 Mbit/s
95th percentile per-packet one-way delay: 37.165 ms
Loss rate: 0.02%
```
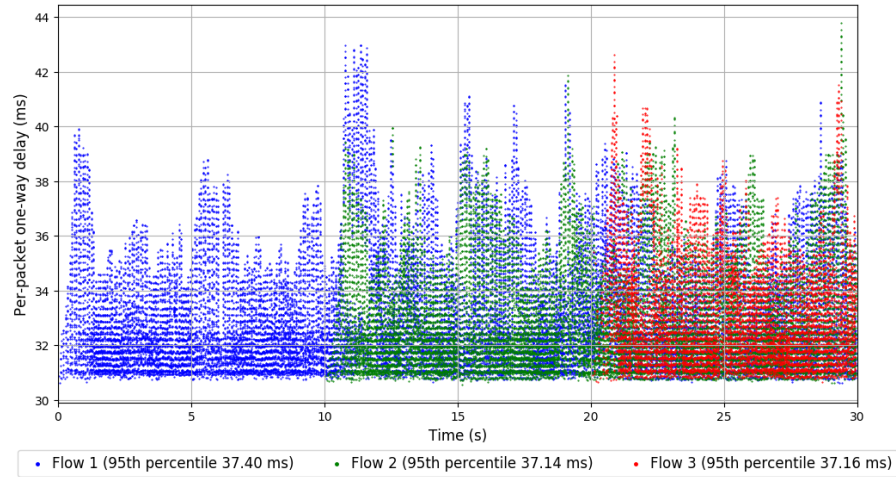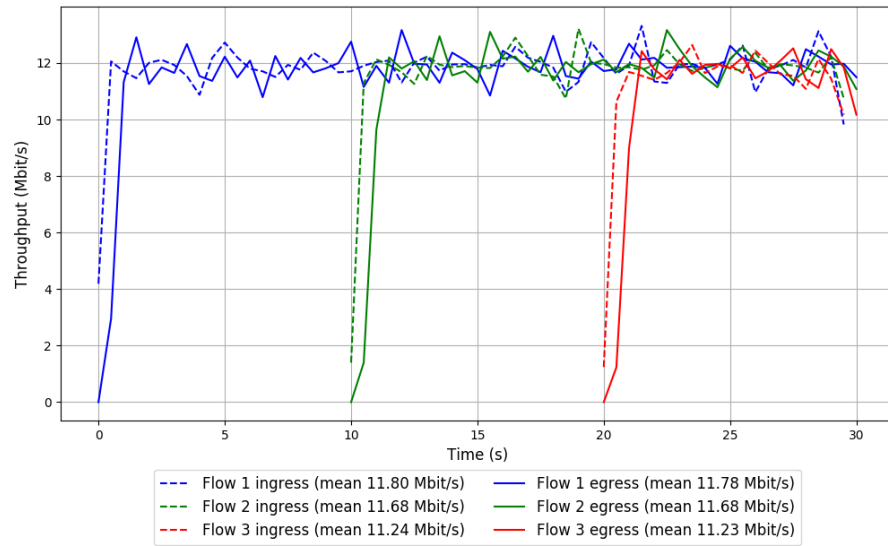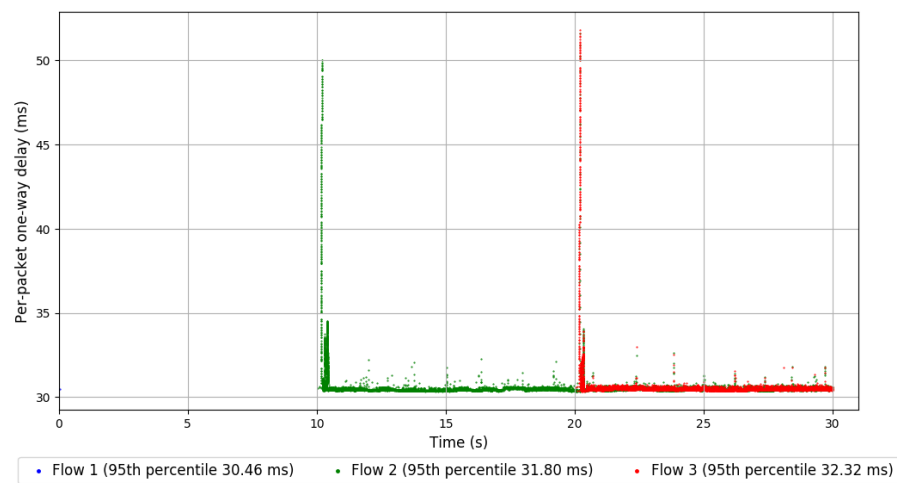
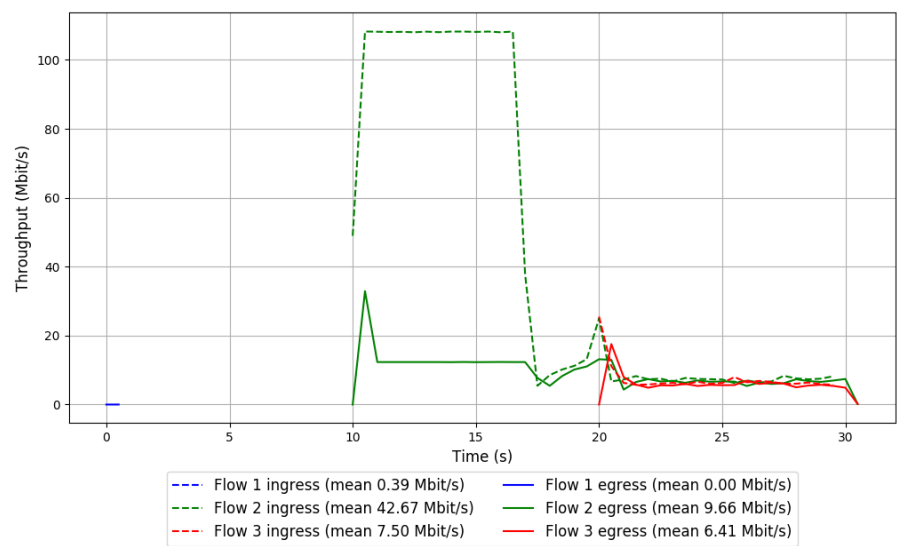## Run 5: Report of Sprout — Data Link

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

Start at: 2018-10-09 21:14:39
End at: 2018-10-09 21:15:09
Local clock offset: 1.408 ms
Remote clock offset: -3.718 ms


# Below is generated by plot.py at 2018-10-09 23:05:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 32.023 ms
Loss rate: 72.29%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.464 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.66 Mbit/s
95th percentile per-packet one-way delay: 31.799 ms
Loss rate: 77.35%
-- Flow 3:
Average throughput: 6.41 Mbit/s
95th percentile per-packet one-way delay: 32.319 ms
Loss rate: 14.63%
```

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

Flow 1 ingress (mean 0.39 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 42.67 Mbit/s)   Flow 2 egress (mean 9.66 Mbit/s)
Flow 3 ingress (mean 7.50 Mbit/s)   Flow 3 egress (mean 6.41 Mbit/s)

Flow 1 (95th percentile 30.46 ms)   Flow 2 (95th percentile 31.80 ms)   Flow 3 (95th percentile 32.32 ms)
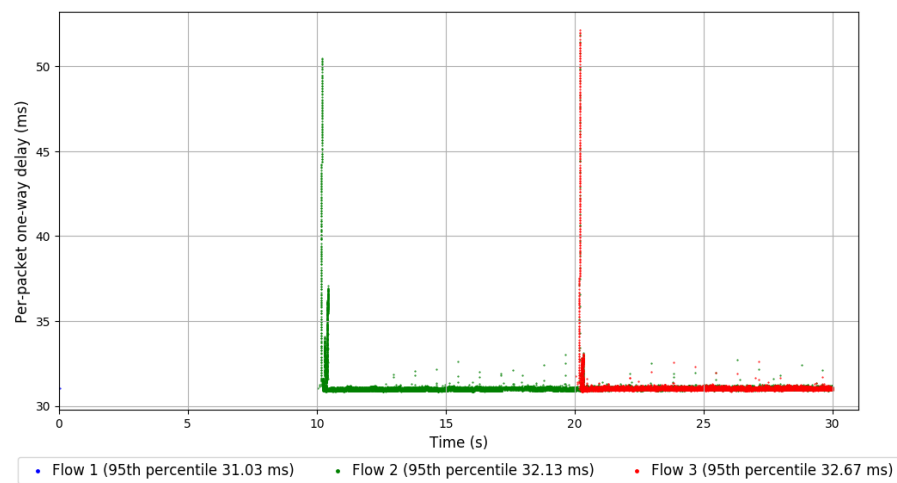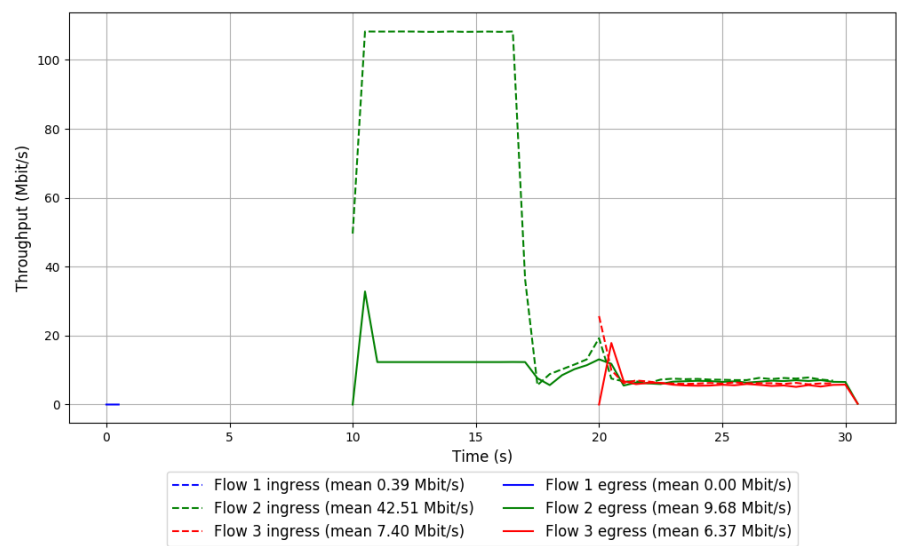
```
Run 2: Statistics of TaoVA-100x

Start at: 2018-10-09 21:39:14
End at: 2018-10-09 21:39:44
Local clock offset: 4.101 ms
Remote clock offset: -2.849 ms

# Below is generated by plot.py at 2018-10-09 23:05:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 32.374 ms
Loss rate: 72.17%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 31.034 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.68 Mbit/s
95th percentile per-packet one-way delay: 32.134 ms
Loss rate: 77.23%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 32.670 ms
Loss rate: 13.93%
```
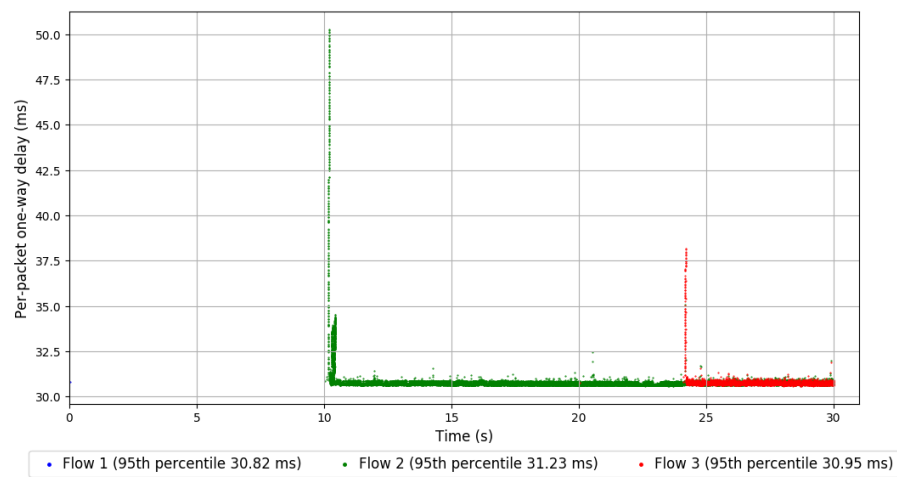
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 42.51 Mbit/s)   Flow 2 egress (mean 9.68 Mbit/s)
Flow 3 ingress (mean 7.40 Mbit/s)   Flow 3 egress (mean 6.37 Mbit/s)

Flow 1 (95th percentile 31.03 ms)   Flow 2 (95th percentile 32.13 ms)   Flow 3 (95th percentile 32.67 ms)
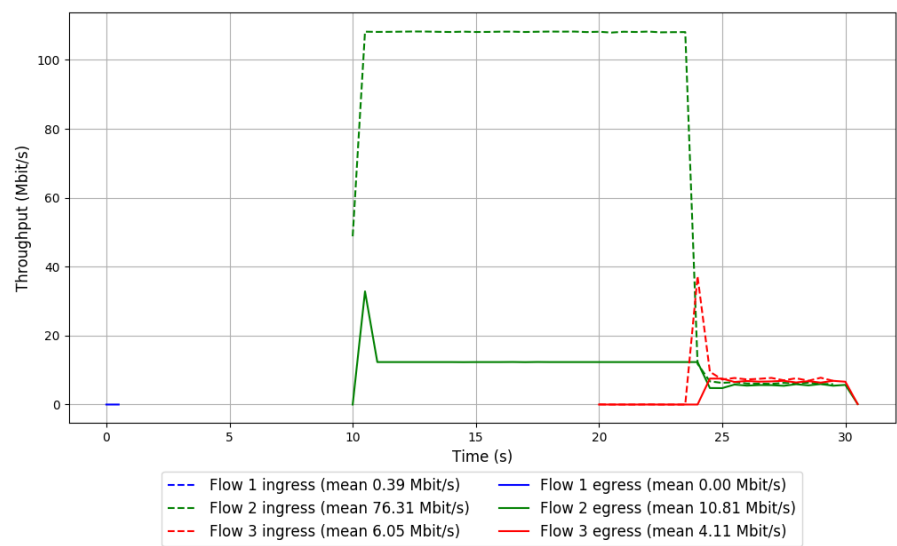
```
Run 3: Statistics of TaoVA-100x

Start at: 2018-10-09 22:03:46
End at: 2018-10-09 22:04:16
Local clock offset: 2.695 ms
Remote clock offset: -2.425 ms


# Below is generated by plot.py at 2018-10-09 23:05:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.104 ms
Loss rate: 83.79%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.819 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 31.227 ms
Loss rate: 85.84%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 30.951 ms
Loss rate: 32.06%
```
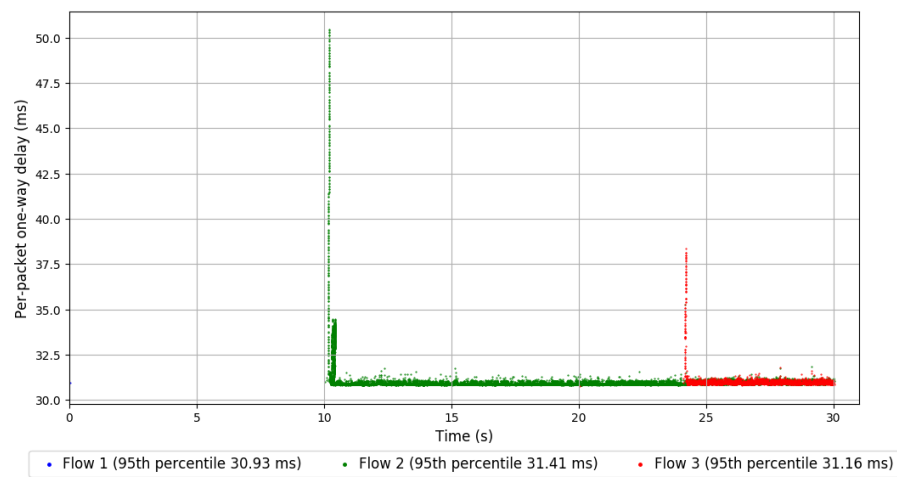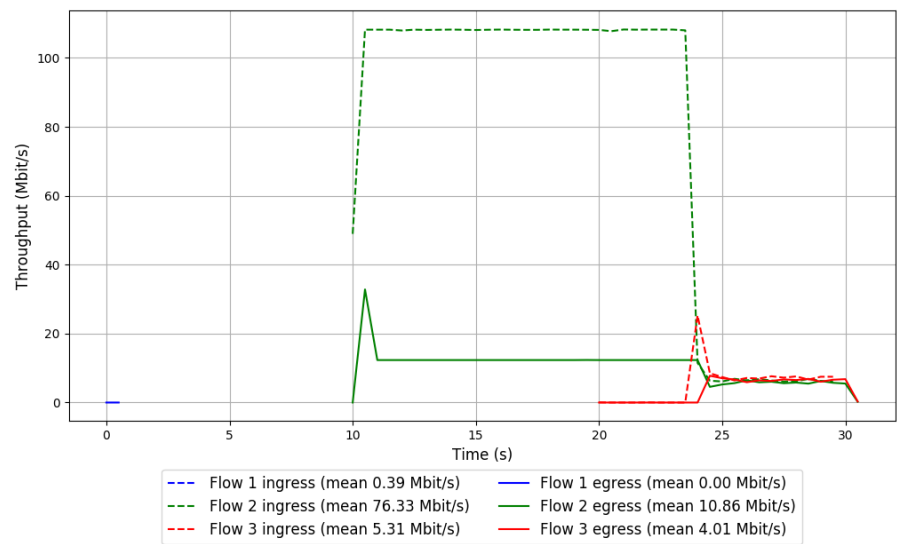
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 76.31 Mbit/s) --- Flow 2 egress (mean 10.81 Mbit/s)
Flow 3 ingress (mean 6.05 Mbit/s) --- Flow 3 egress (mean 4.11 Mbit/s)

Flow 1 (95th percentile 30.82 ms)   Flow 2 (95th percentile 31.23 ms)   Flow 3 (95th percentile 30.95 ms)

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

Start at: 2018-10-09 22:28:21
End at: 2018-10-09 22:28:51
Local clock offset: 1.227 ms
Remote clock offset: -2.164 ms


# Below is generated by plot.py at 2018-10-09 23:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.304 ms
Loss rate: 83.72%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.934 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 10.86 Mbit/s
95th percentile per-packet one-way delay: 31.412 ms
Loss rate: 85.77%
-- Flow 3:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 31.165 ms
Loss rate: 24.41%
```
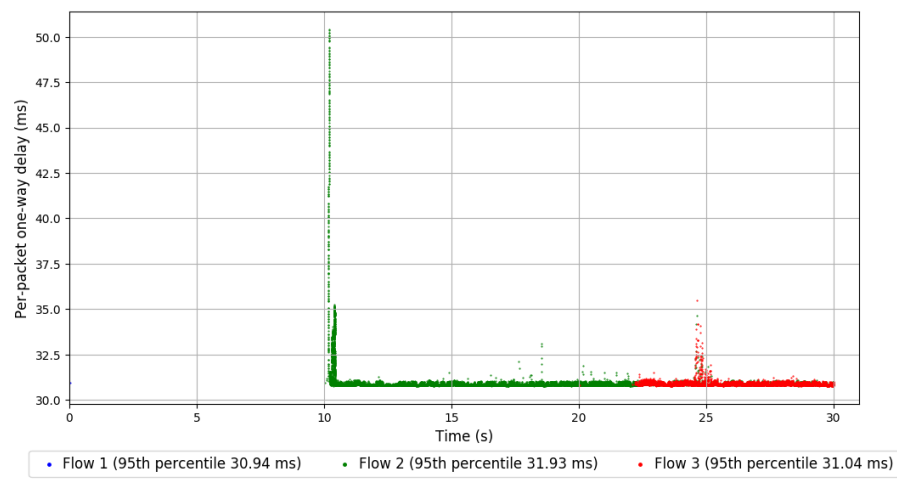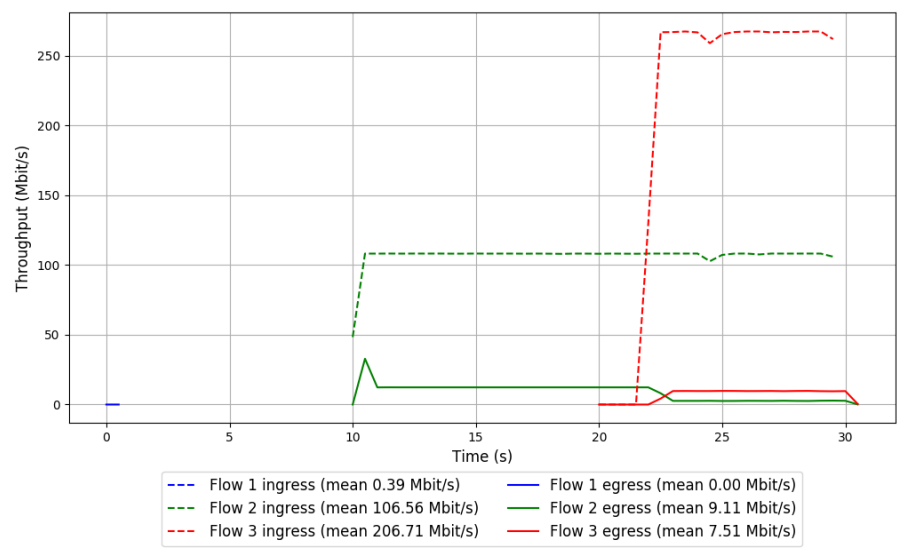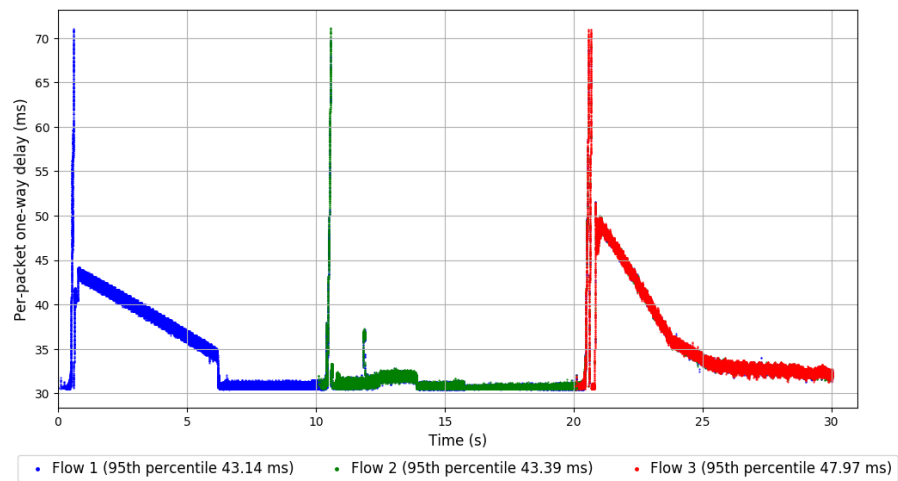
Run 4: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 0.39 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 76.33 Mbit/s) --- Flow 2 egress (mean 10.86 Mbit/s)
Flow 3 ingress (mean 5.31 Mbit/s) --- Flow 3 egress (mean 4.01 Mbit/s)

Flow 1 (95th percentile 30.93 ms) · Flow 2 (95th percentile 31.41 ms) · Flow 3 (95th percentile 31.16 ms)

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

Start at: 2018-10-09 22:53:18
End at: 2018-10-09 22:53:48
Local clock offset: 1.12 ms
Remote clock offset: -2.128 ms


# Below is generated by plot.py at 2018-10-09 23:05:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 31.206 ms
Loss rate: 93.87%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 30.944 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.11 Mbit/s
95th percentile per-packet one-way delay: 31.934 ms
Loss rate: 91.45%
-- Flow 3:
Average throughput: 7.51 Mbit/s
95th percentile per-packet one-way delay: 31.039 ms
Loss rate: 96.37%
```

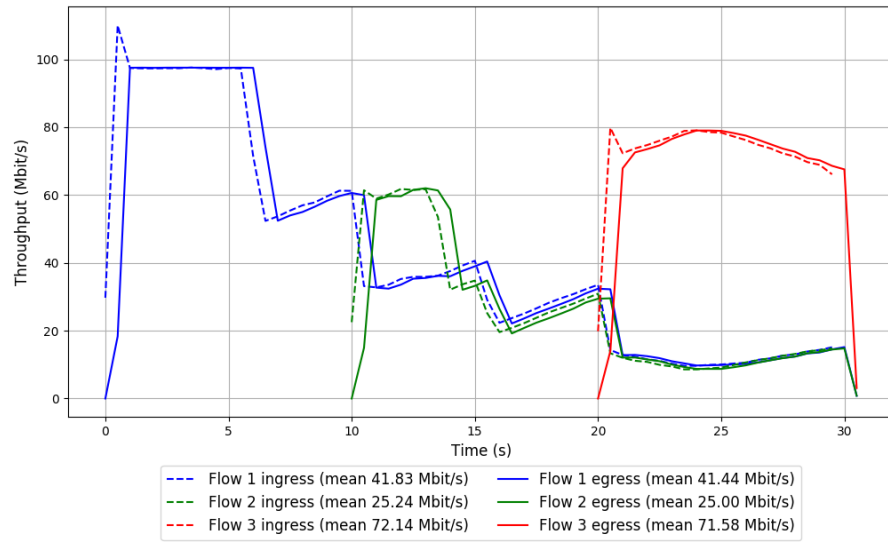Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2018-10-09 21:02:24
End at: 2018-10-09 21:02:54
Local clock offset: 2.642 ms
Remote clock offset: -3.849 ms


# Below is generated by plot.py at 2018-10-09 23:06:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.90 Mbit/s
95th percentile per-packet one-way delay: 45.750 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 41.44 Mbit/s
95th percentile per-packet one-way delay: 43.136 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 25.00 Mbit/s
95th percentile per-packet one-way delay: 43.388 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 71.58 Mbit/s
95th percentile per-packet one-way delay: 47.972 ms
Loss rate: 0.77%
```

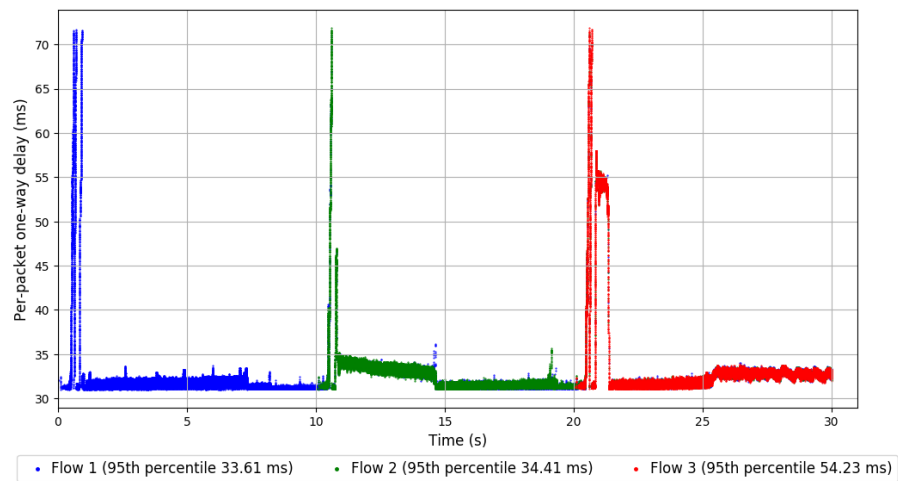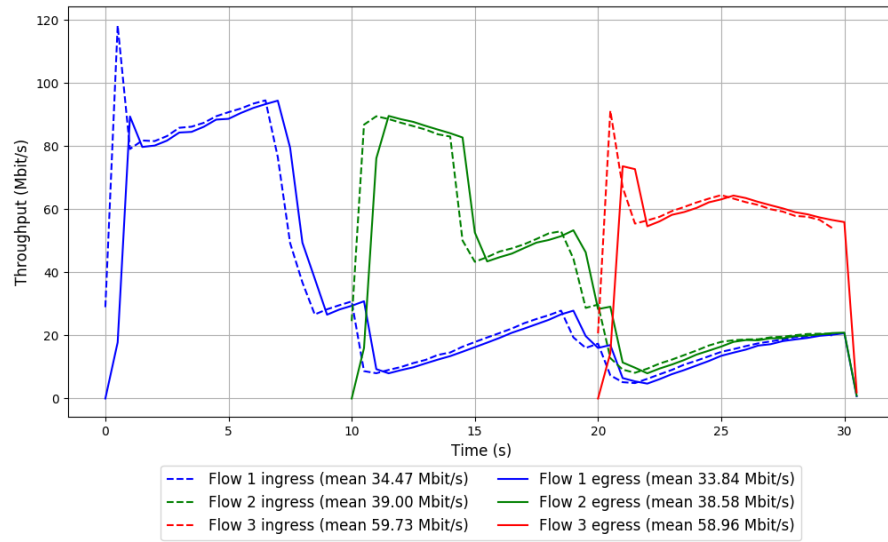Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2018-10-09 21:26:58
End at: 2018-10-09 21:27:28
Local clock offset: 1.575 ms
Remote clock offset: -3.071 ms


# Below is generated by plot.py at 2018-10-09 23:06:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.14 Mbit/s
95th percentile per-packet one-way delay: 35.017 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 33.84 Mbit/s
95th percentile per-packet one-way delay: 33.610 ms
Loss rate: 1.83%
-- Flow 2:
Average throughput: 38.58 Mbit/s
95th percentile per-packet one-way delay: 34.406 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 58.96 Mbit/s
95th percentile per-packet one-way delay: 54.226 ms
Loss rate: 1.28%
```

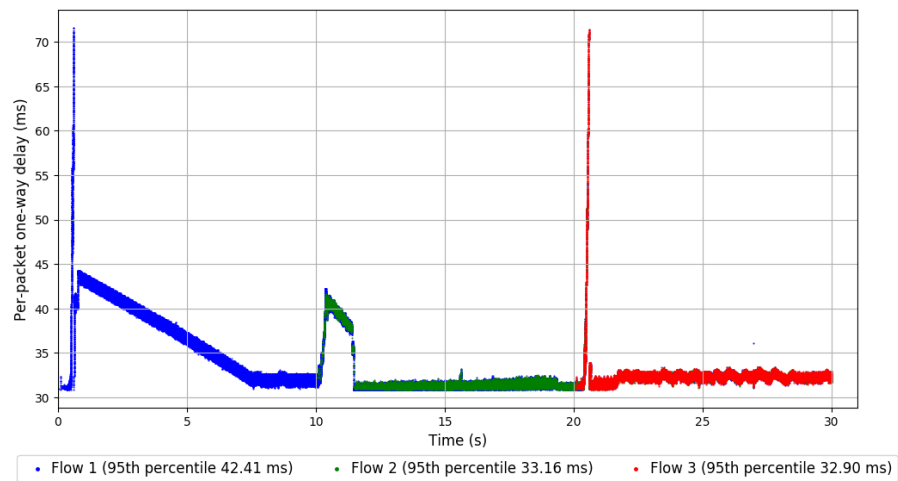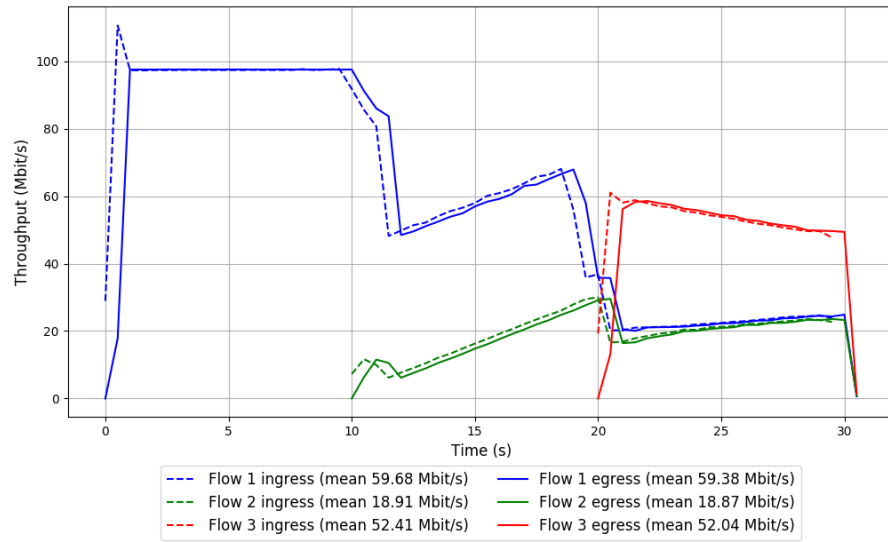Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2018-10-09 21:51:27
End at: 2018-10-09 21:51:57
Local clock offset: 4.975 ms
Remote clock offset: -2.584 ms


# Below is generated by plot.py at 2018-10-09 23:06:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.24 Mbit/s
95th percentile per-packet one-way delay: 41.745 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 59.38 Mbit/s
95th percentile per-packet one-way delay: 42.414 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 18.87 Mbit/s
95th percentile per-packet one-way delay: 33.157 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 52.04 Mbit/s
95th percentile per-packet one-way delay: 32.903 ms
Loss rate: 0.69%
```
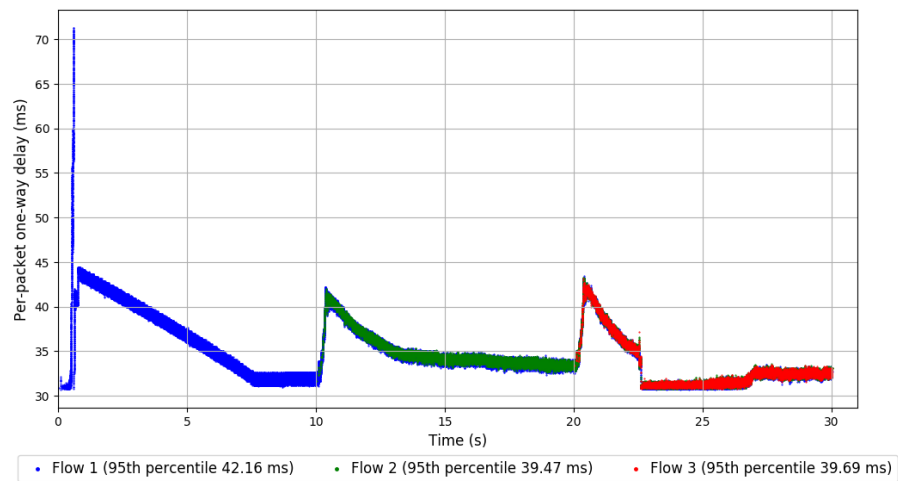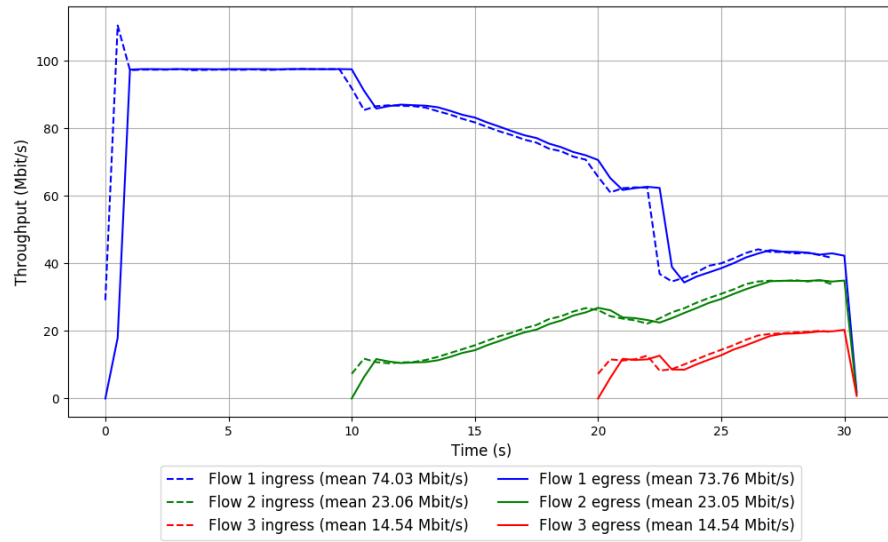
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 59.68 Mbit/s)   Flow 1 egress (mean 59.38 Mbit/s)
Flow 2 ingress (mean 18.91 Mbit/s)   Flow 2 egress (mean 18.87 Mbit/s)
Flow 3 ingress (mean 52.41 Mbit/s)   Flow 3 egress (mean 52.04 Mbit/s)

Flow 1 (95th percentile 42.41 ms)   Flow 2 (95th percentile 33.16 ms)   Flow 3 (95th percentile 32.90 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2018-10-09 22:16:09
End at: 2018-10-09 22:16:39
Local clock offset: 1.454 ms
Remote clock offset: -2.232 ms


# Below is generated by plot.py at 2018-10-09 23:06:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.95 Mbit/s
95th percentile per-packet one-way delay: 41.867 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 73.76 Mbit/s
95th percentile per-packet one-way delay: 42.159 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 23.05 Mbit/s
95th percentile per-packet one-way delay: 39.468 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.54 Mbit/s
95th percentile per-packet one-way delay: 39.693 ms
Loss rate: 0.01%
```

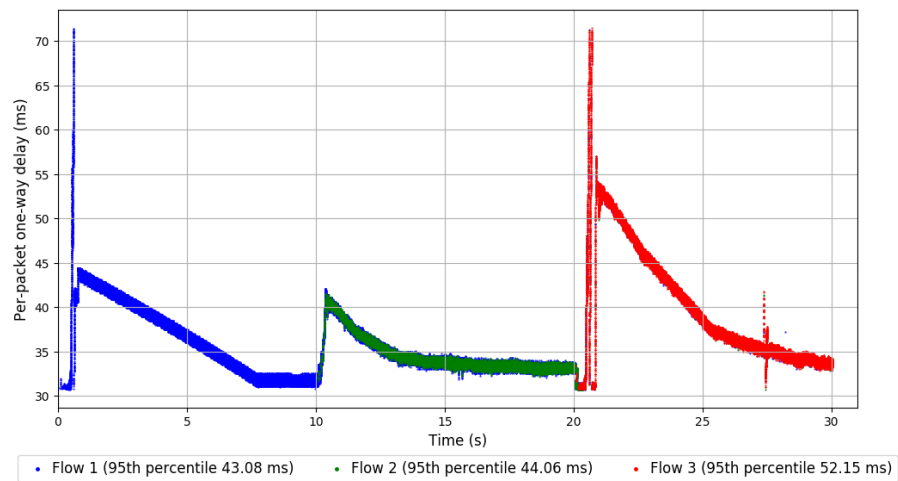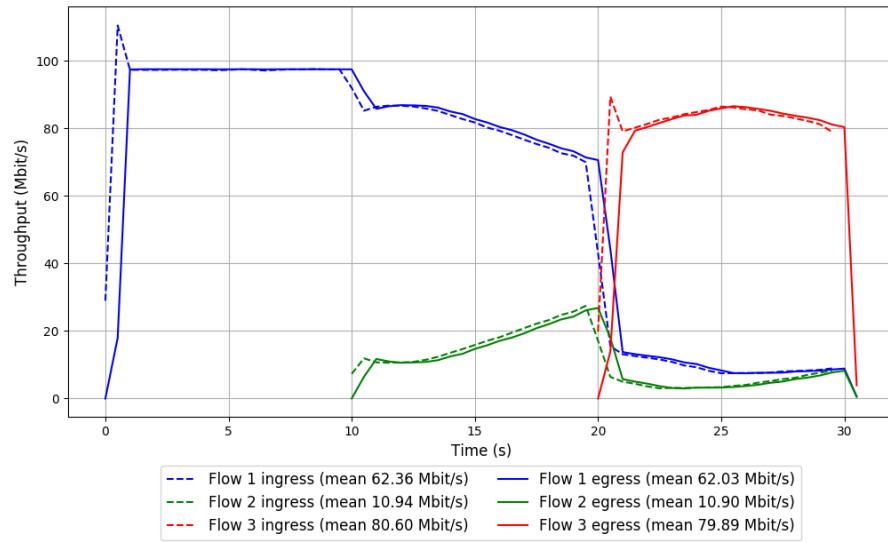Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2018-10-09 22:40:42
End at: 2018-10-09 22:41:12
Local clock offset: 1.276 ms
Remote clock offset: -2.206 ms


# Below is generated by plot.py at 2018-10-09 23:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 48.493 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 43.076 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 10.90 Mbit/s
95th percentile per-packet one-way delay: 44.057 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 79.89 Mbit/s
95th percentile per-packet one-way delay: 52.145 ms
Loss rate: 0.88%
```

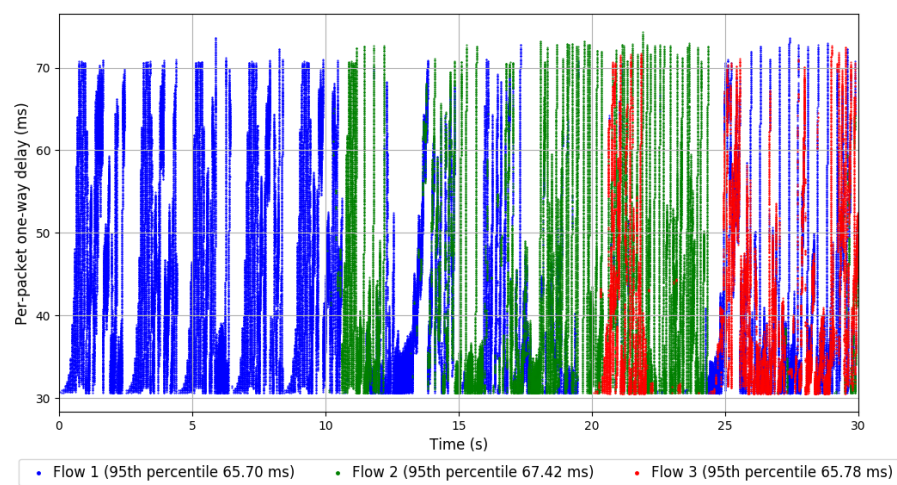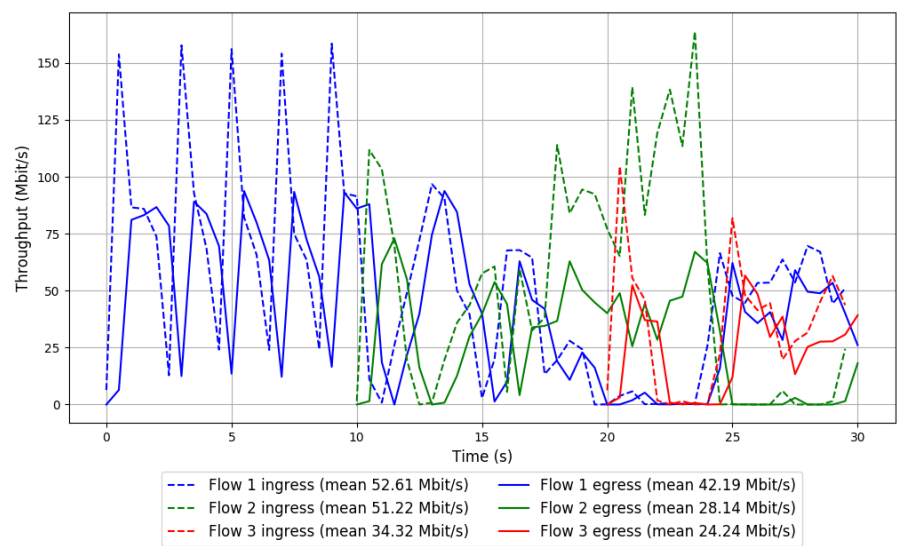Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2018-10-09 21:01:01
End at: 2018-10-09 21:01:31
Local clock offset: 2.871 ms
Remote clock offset: -3.699 ms


# Below is generated by plot.py at 2018-10-09 23:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.88 Mbit/s
95th percentile per-packet one-way delay: 66.073 ms
Loss rate: 29.65%
-- Flow 1:
Average throughput: 42.19 Mbit/s
95th percentile per-packet one-way delay: 65.704 ms
Loss rate: 19.76%
-- Flow 2:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 67.419 ms
Loss rate: 45.05%
-- Flow 3:
Average throughput: 24.24 Mbit/s
95th percentile per-packet one-way delay: 65.781 ms
Loss rate: 29.23%
```

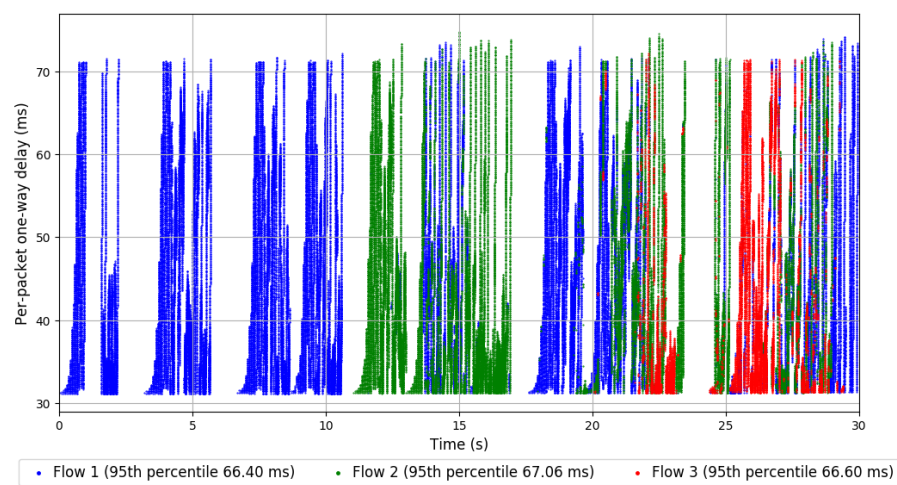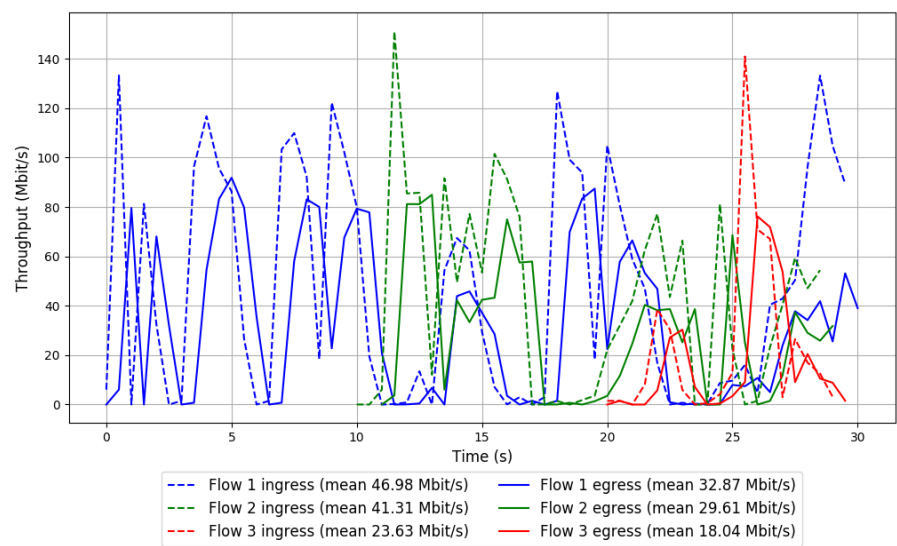Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2018-10-09 21:25:34
End at: 2018-10-09 21:26:04
Local clock offset: 1.073 ms
Remote clock offset: -3.028 ms


# Below is generated by plot.py at 2018-10-09 23:06:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.26 Mbit/s
95th percentile per-packet one-way delay: 66.623 ms
Loss rate: 30.15%
-- Flow 1:
Average throughput: 32.87 Mbit/s
95th percentile per-packet one-way delay: 66.400 ms
Loss rate: 30.03%
-- Flow 2:
Average throughput: 29.61 Mbit/s
95th percentile per-packet one-way delay: 67.065 ms
Loss rate: 32.04%
-- Flow 3:
Average throughput: 18.04 Mbit/s
95th percentile per-packet one-way delay: 66.604 ms
Loss rate: 24.20%
```

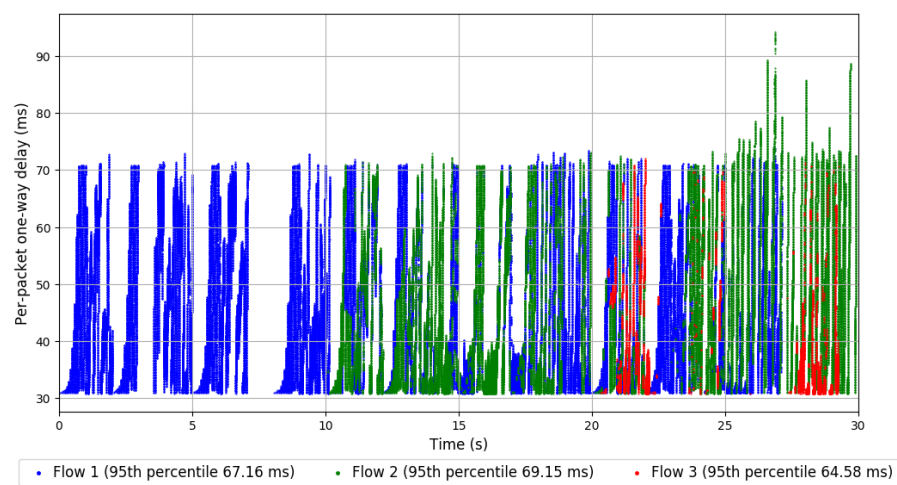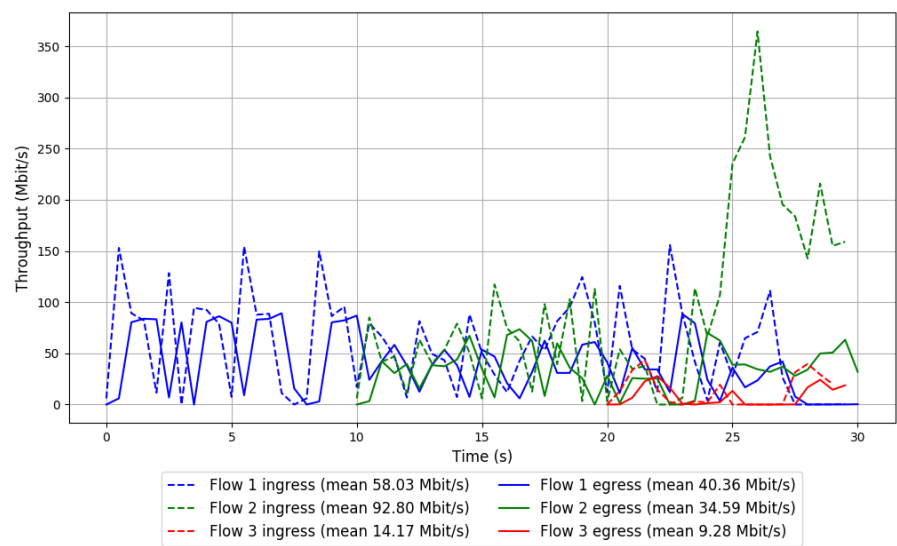Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2018-10-09 21:50:04
End at: 2018-10-09 21:50:34
Local clock offset: 4.9 ms
Remote clock offset: -2.594 ms


# Below is generated by plot.py at 2018-10-09 23:06:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.67 Mbit/s
95th percentile per-packet one-way delay: 67.868 ms
Loss rate: 46.76%
-- Flow 1:
Average throughput: 40.36 Mbit/s
95th percentile per-packet one-way delay: 67.163 ms
Loss rate: 30.60%
-- Flow 2:
Average throughput: 34.59 Mbit/s
95th percentile per-packet one-way delay: 69.152 ms
Loss rate: 62.68%
-- Flow 3:
Average throughput: 9.28 Mbit/s
95th percentile per-packet one-way delay: 64.583 ms
Loss rate: 34.44%
```
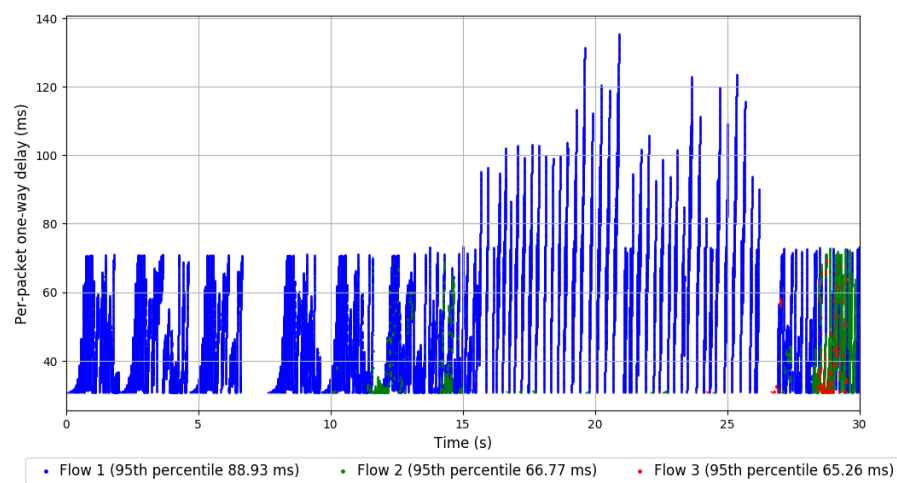
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 58.03 Mbit/s) --- Flow 1 egress (mean 40.36 Mbit/s)
Flow 2 ingress (mean 92.80 Mbit/s) --- Flow 2 egress (mean 34.59 Mbit/s)
Flow 3 ingress (mean 14.17 Mbit/s) --- Flow 3 egress (mean 9.28 Mbit/s)

Flow 1 (95th percentile 67.16 ms) • Flow 2 (95th percentile 69.15 ms) • Flow 3 (95th percentile 64.58 ms)

```
Run 4: Statistics of Verus

Start at: 2018-10-09 22:14:46
End at: 2018-10-09 22:15:16
Local clock offset: 1.515 ms
Remote clock offset: -2.3 ms


# Below is generated by plot.py at 2018-10-09 23:07:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 55.74 Mbit/s
95th percentile per-packet one-way delay: 87.901 ms
Loss rate: 69.57%
-- Flow 1:
Average throughput: 52.43 Mbit/s
95th percentile per-packet one-way delay: 88.934 ms
Loss rate: 70.49%
-- Flow 2:
Average throughput: 4.72 Mbit/s
95th percentile per-packet one-way delay: 66.769 ms
Loss rate: 39.57%
-- Flow 3:
Average throughput: 0.60 Mbit/s
95th percentile per-packet one-way delay: 65.263 ms
Loss rate: 39.80%
```
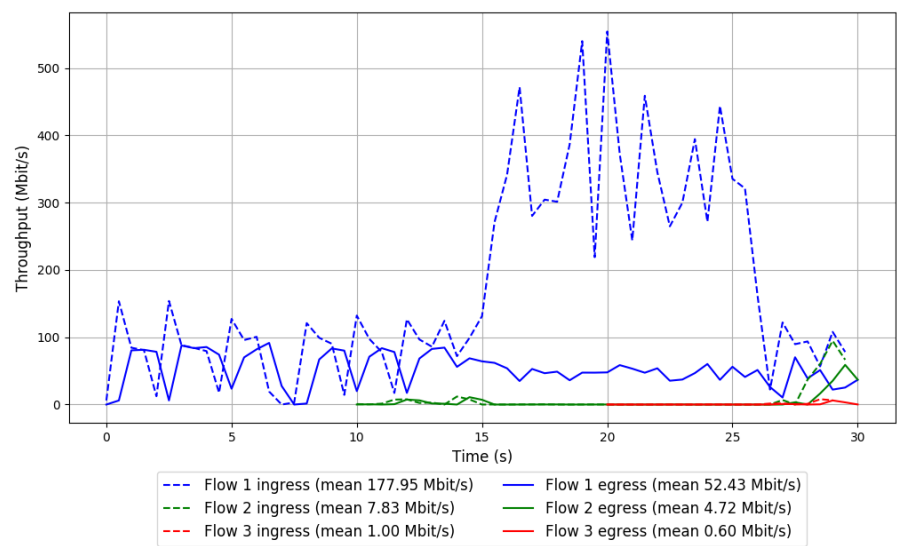
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2018-10-09 22:39:19
End at: 2018-10-09 22:39:49
Local clock offset: 1.284 ms
Remote clock offset: -2.14 ms


# Below is generated by plot.py at 2018-10-09 23:07:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.01 Mbit/s
95th percentile per-packet one-way delay: 66.603 ms
Loss rate: 34.35%
-- Flow 1:
Average throughput: 41.19 Mbit/s
95th percentile per-packet one-way delay: 66.006 ms
Loss rate: 27.63%
-- Flow 2:
Average throughput: 26.12 Mbit/s
95th percentile per-packet one-way delay: 67.618 ms
Loss rate: 41.80%
-- Flow 3:
Average throughput: 10.50 Mbit/s
95th percentile per-packet one-way delay: 68.171 ms
Loss rate: 55.08%
```
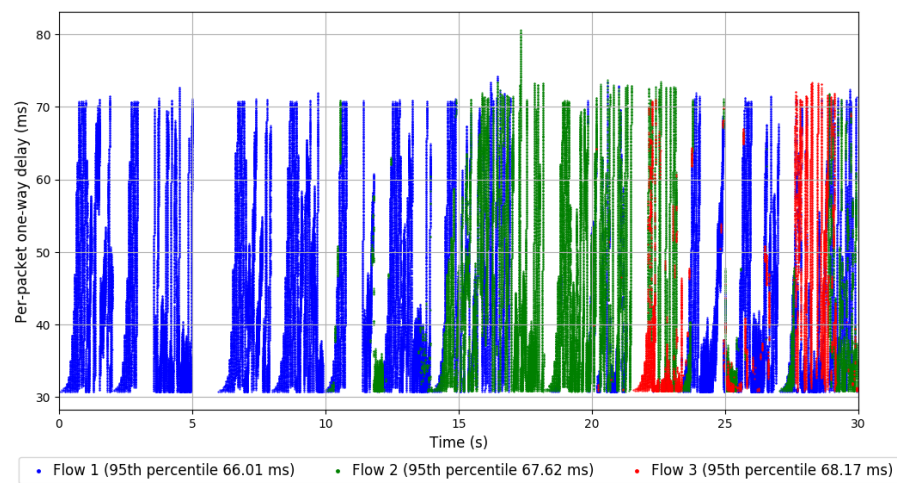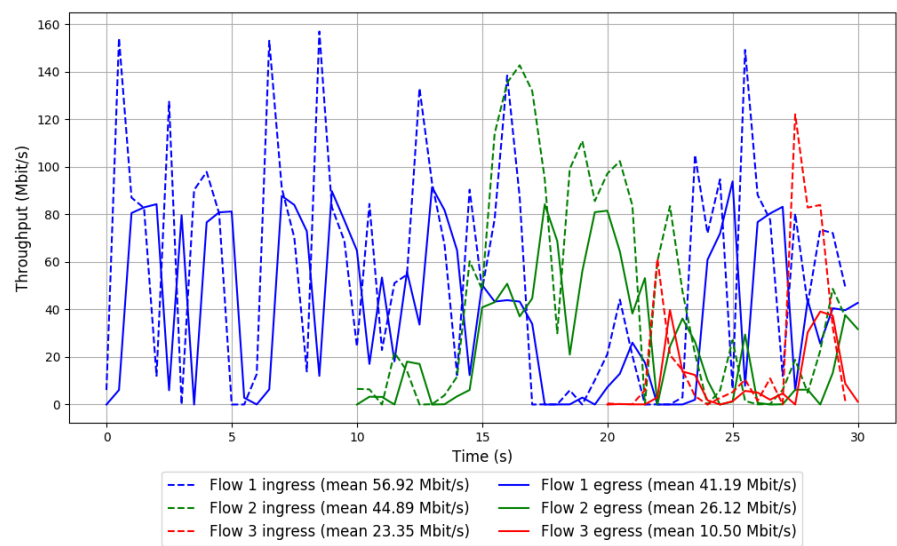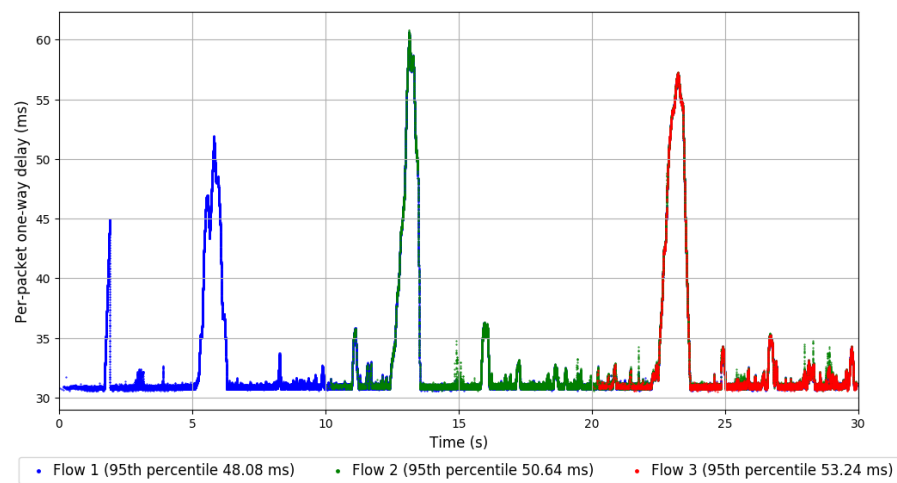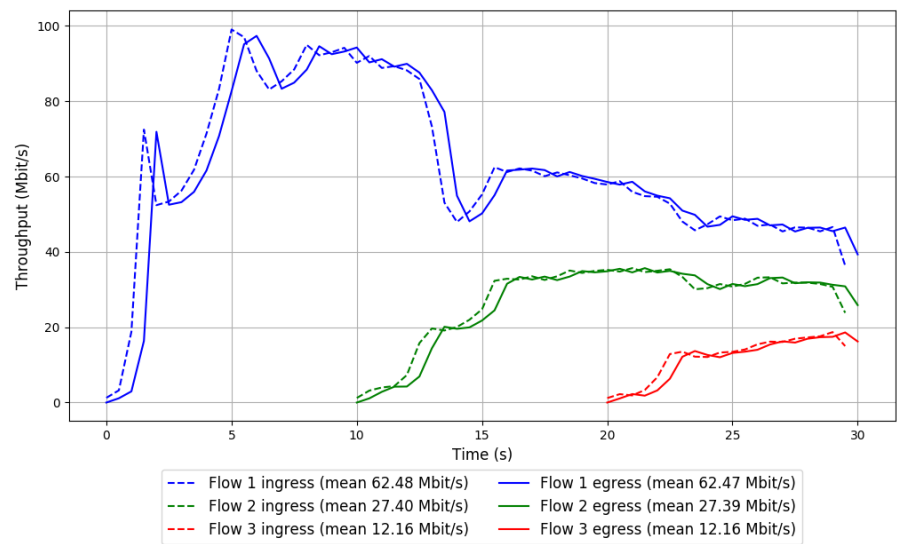
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-10-09 21:09:10
End at: 2018-10-09 21:09:40
Local clock offset: 1.819 ms
Remote clock offset: -3.514 ms


# Below is generated by plot.py at 2018-10-09 23:07:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.71 Mbit/s
95th percentile per-packet one-way delay: 48.318 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 62.47 Mbit/s
95th percentile per-packet one-way delay: 48.075 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 27.39 Mbit/s
95th percentile per-packet one-way delay: 50.644 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 53.241 ms
Loss rate: 0.01%
```

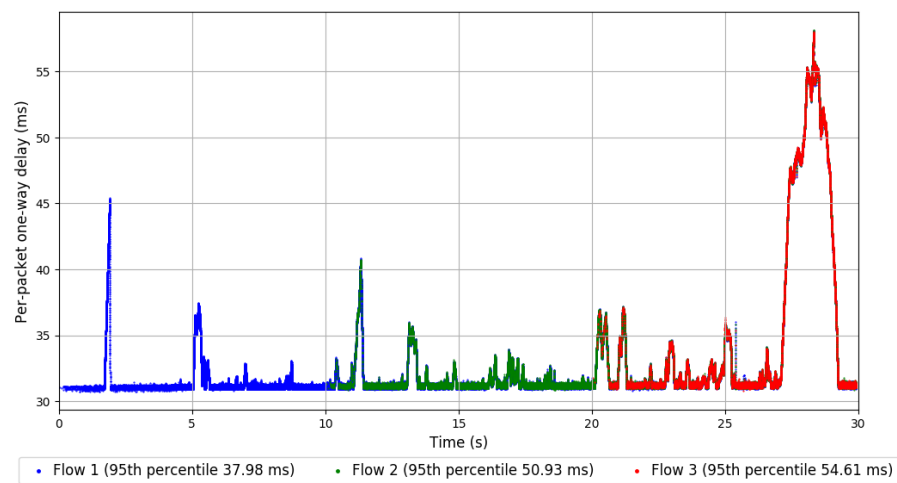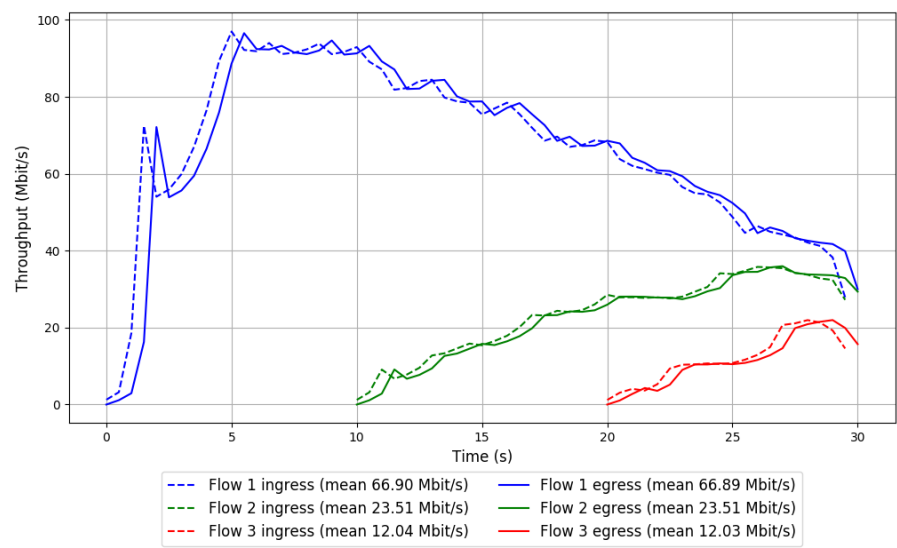# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2018-10-09 21:33:46
End at: 2018-10-09 21:34:16
Local clock offset: 3.348 ms
Remote clock offset: -2.955 ms


# Below is generated by plot.py at 2018-10-09 23:07:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.50 Mbit/s
95th percentile per-packet one-way delay: 47.657 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 66.89 Mbit/s
95th percentile per-packet one-way delay: 37.985 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 23.51 Mbit/s
95th percentile per-packet one-way delay: 50.932 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 12.03 Mbit/s
95th percentile per-packet one-way delay: 54.614 ms
Loss rate: 0.09%
```

Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 66.90 Mbit/s) --- Flow 1 egress (mean 66.89 Mbit/s)
Flow 2 ingress (mean 23.51 Mbit/s) --- Flow 2 egress (mean 23.51 Mbit/s)
Flow 3 ingress (mean 12.04 Mbit/s) --- Flow 3 egress (mean 12.03 Mbit/s)

Flow 1 (95th percentile 37.98 ms) Flow 2 (95th percentile 50.93 ms) Flow 3 (95th percentile 54.61 ms)
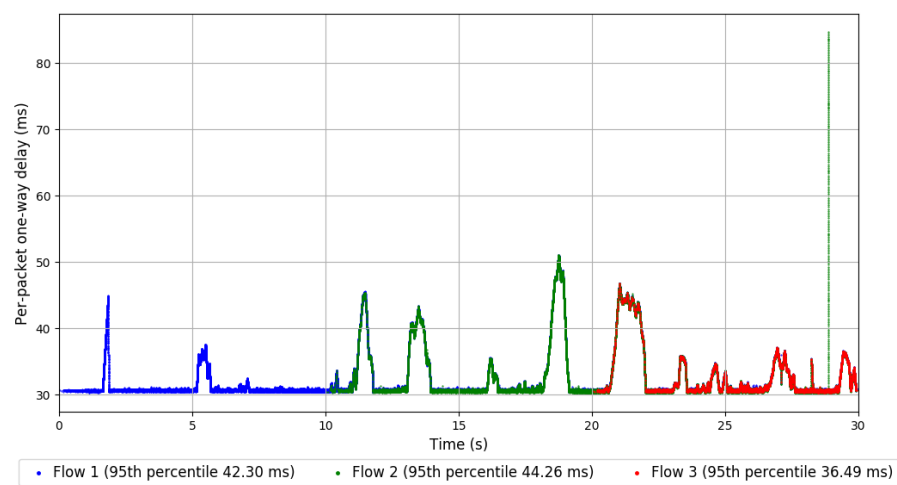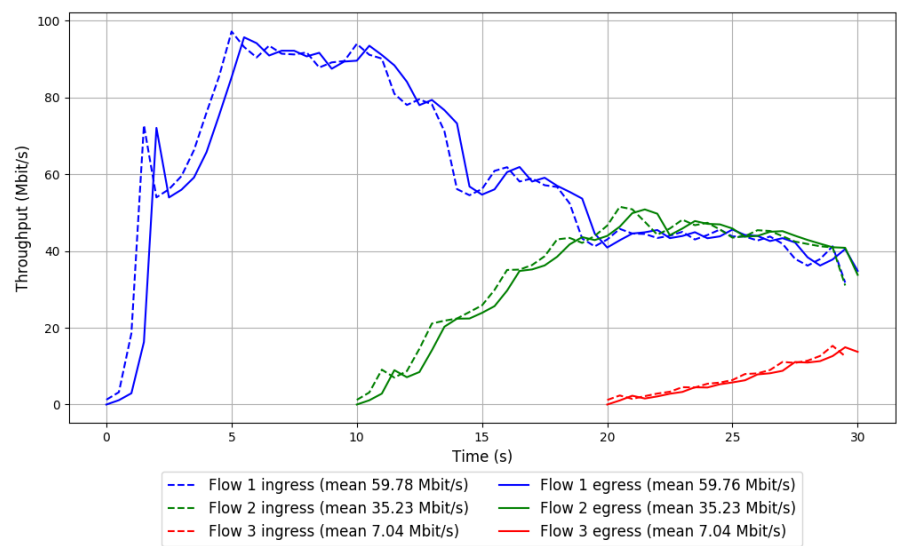
```
Run 3: Statistics of PCC-Vivace

Start at: 2018-10-09 21:58:19
End at: 2018-10-09 21:58:49
Local clock offset: 3.945 ms
Remote clock offset: -2.692 ms


# Below is generated by plot.py at 2018-10-09 23:07:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.51 Mbit/s
95th percentile per-packet one-way delay: 43.249 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.76 Mbit/s
95th percentile per-packet one-way delay: 42.301 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 44.258 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.04 Mbit/s
95th percentile per-packet one-way delay: 36.495 ms
Loss rate: 0.00%
```

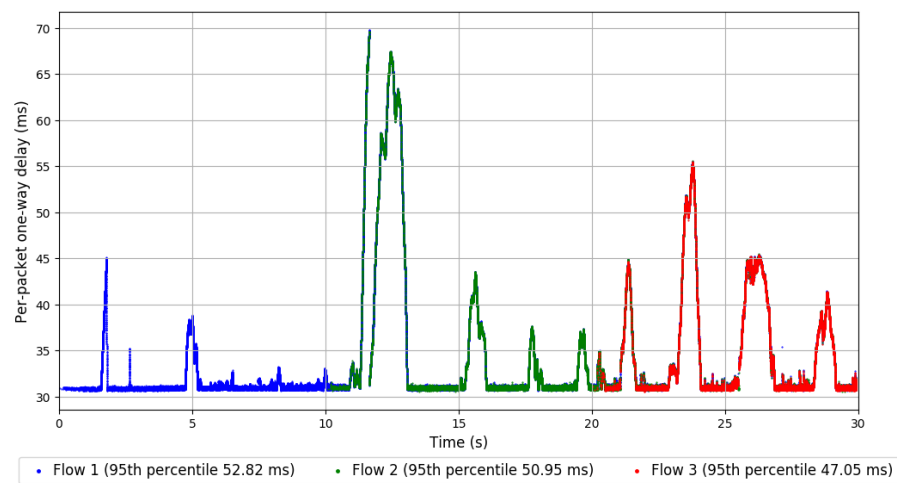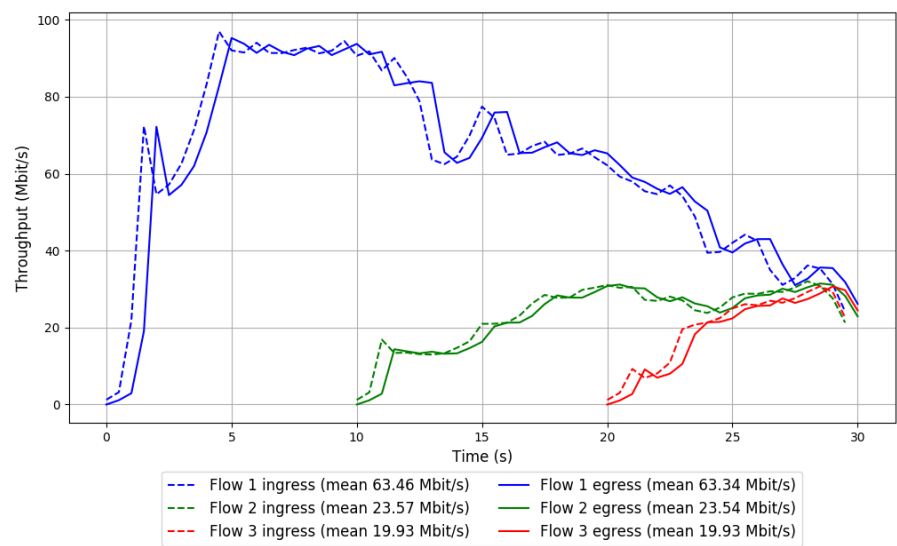Run 3: Report of PCC-Vivace — Data Link

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```
Run 4: Statistics of PCC-Vivace

Start at: 2018-10-09 22:22:53
End at: 2018-10-09 22:23:23
Local clock offset: 1.152 ms
Remote clock offset: -2.243 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.58 Mbit/s
95th percentile per-packet one-way delay: 51.447 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 63.34 Mbit/s
95th percentile per-packet one-way delay: 52.822 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 23.54 Mbit/s
95th percentile per-packet one-way delay: 50.948 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 47.048 ms
Loss rate: 0.00%
```

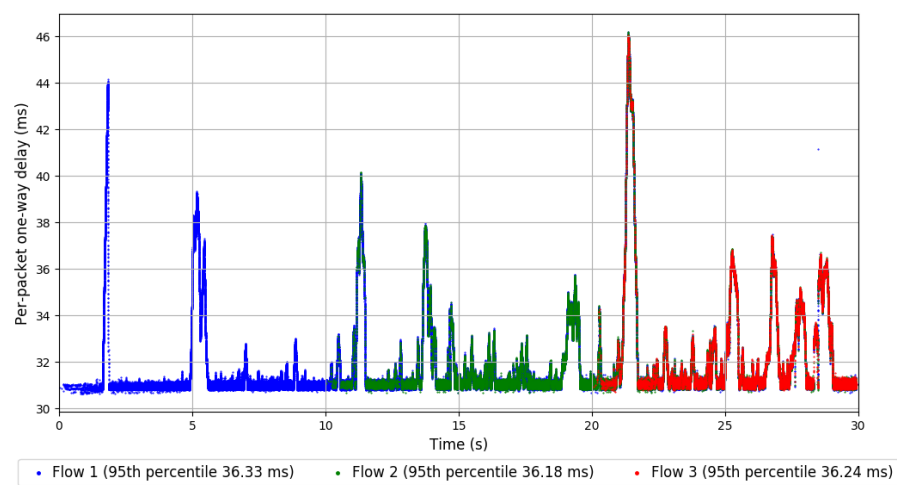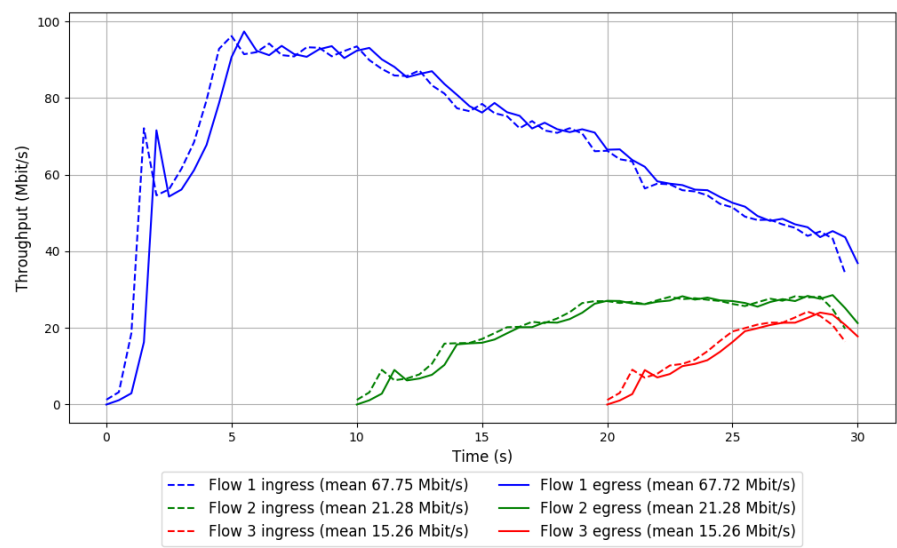Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2018-10-09 22:47:42
End at: 2018-10-09 22:48:12
Local clock offset: 1.2 ms
Remote clock offset: -2.118 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.91 Mbit/s
95th percentile per-packet one-way delay: 36.286 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 67.72 Mbit/s
95th percentile per-packet one-way delay: 36.333 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 21.28 Mbit/s
95th percentile per-packet one-way delay: 36.178 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 36.238 ms
Loss rate: 0.00%
```
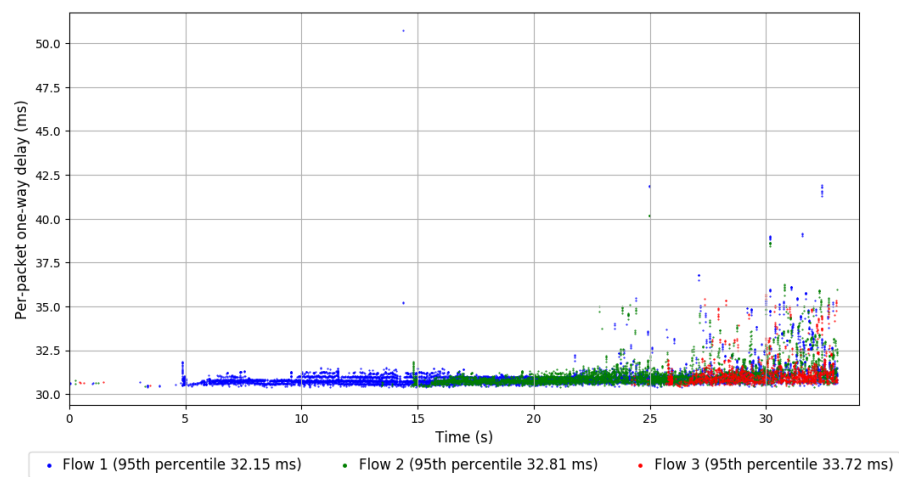
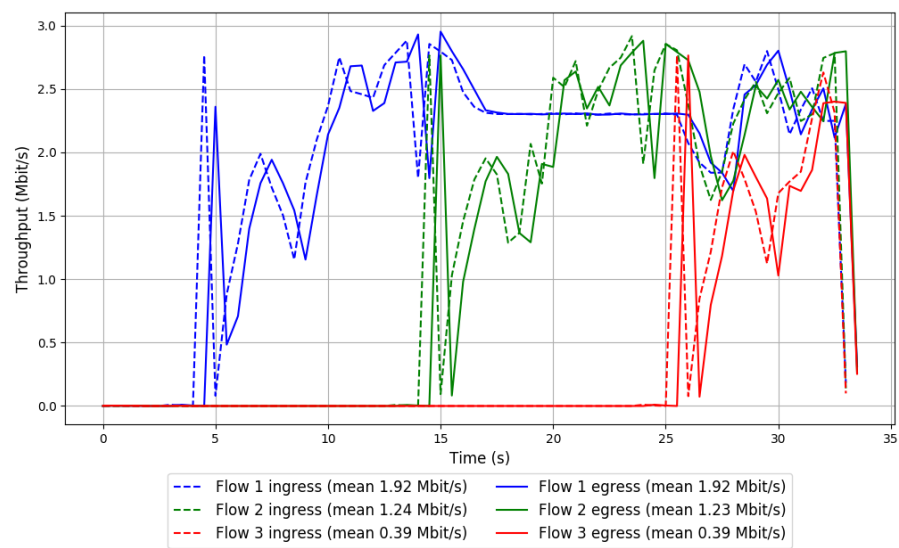## Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2018-10-09 21:10:34
End at: 2018-10-09 21:11:04
Local clock offset: 1.677 ms
Remote clock offset: -3.635 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.53 Mbit/s
95th percentile per-packet one-way delay: 32.649 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 32.151 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 32.809 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.39 Mbit/s
95th percentile per-packet one-way delay: 33.722 ms
Loss rate: 0.00%
```

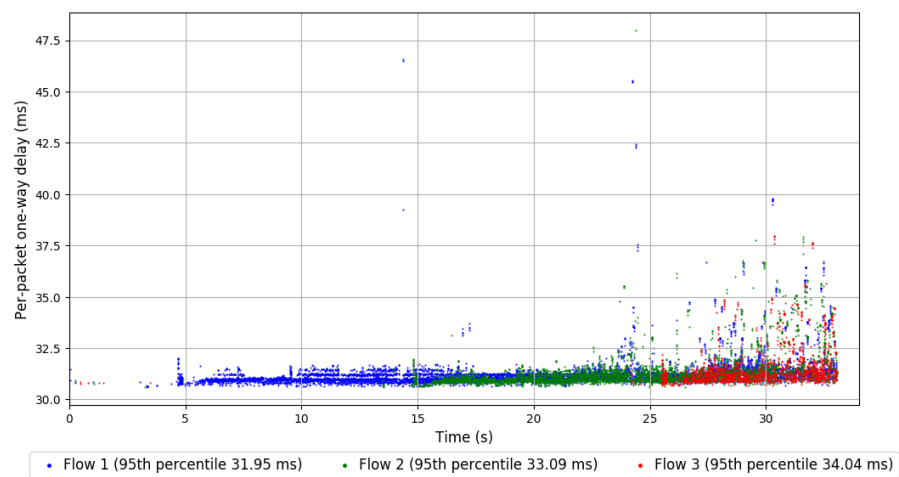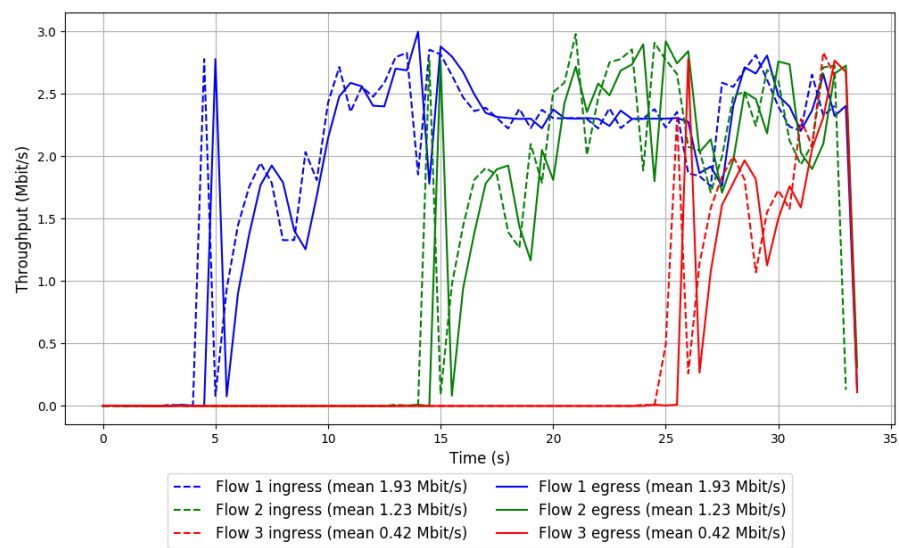Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2018-10-09 21:35:10
End at: 2018-10-09 21:35:40
Local clock offset: 3.537 ms
Remote clock offset: -3.153 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.57 Mbit/s
95th percentile per-packet one-way delay: 32.762 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.93 Mbit/s
95th percentile per-packet one-way delay: 31.949 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 33.092 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 34.037 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.93 Mbit/s) Flow 1 egress (mean 1.93 Mbit/s)
Flow 2 ingress (mean 1.23 Mbit/s) Flow 2 egress (mean 1.23 Mbit/s)
Flow 3 ingress (mean 0.42 Mbit/s) Flow 3 egress (mean 0.42 Mbit/s)

Flow 1 (95th percentile 31.95 ms)   Flow 2 (95th percentile 33.09 ms)   Flow 3 (95th percentile 34.04 ms)
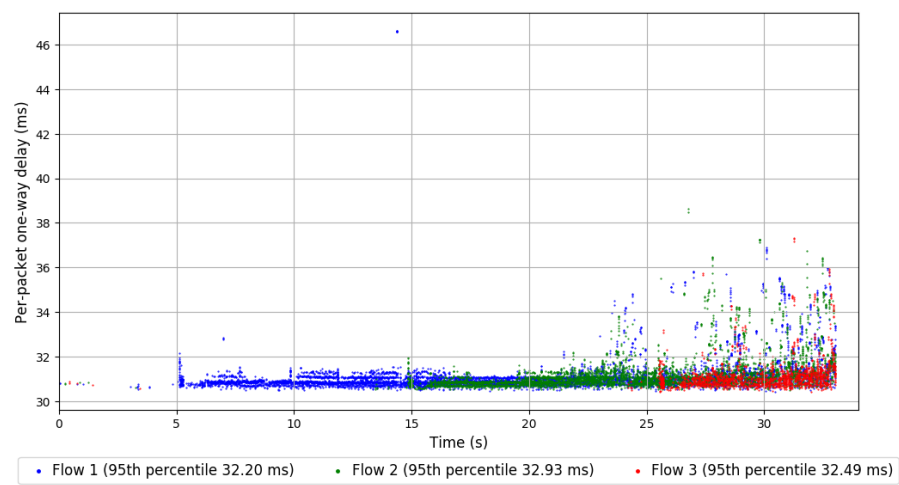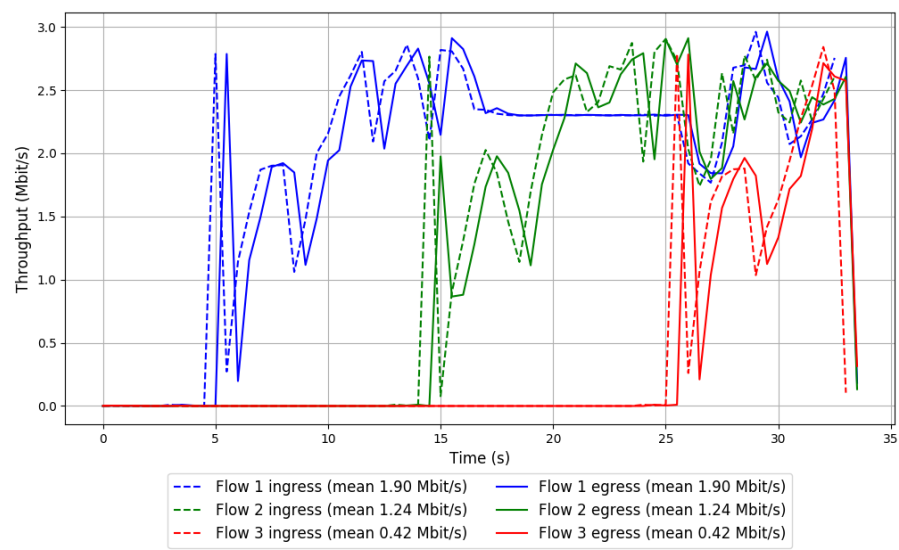
```
Run 3: Statistics of WebRTC media

Start at: 2018-10-09 21:59:43
End at: 2018-10-09 22:00:13
Local clock offset: 3.594 ms
Remote clock offset: -2.434 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 32.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 32.203 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.24 Mbit/s
95th percentile per-packet one-way delay: 32.929 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 32.486 ms
Loss rate: 0.00%
```

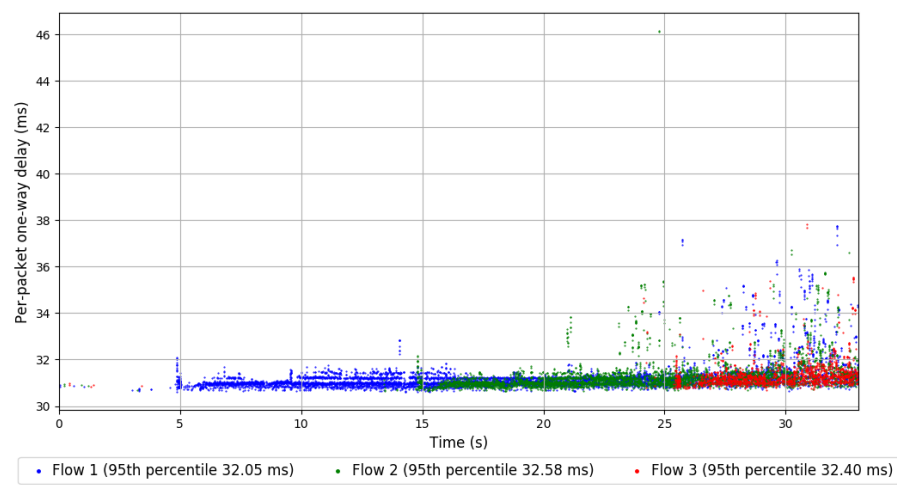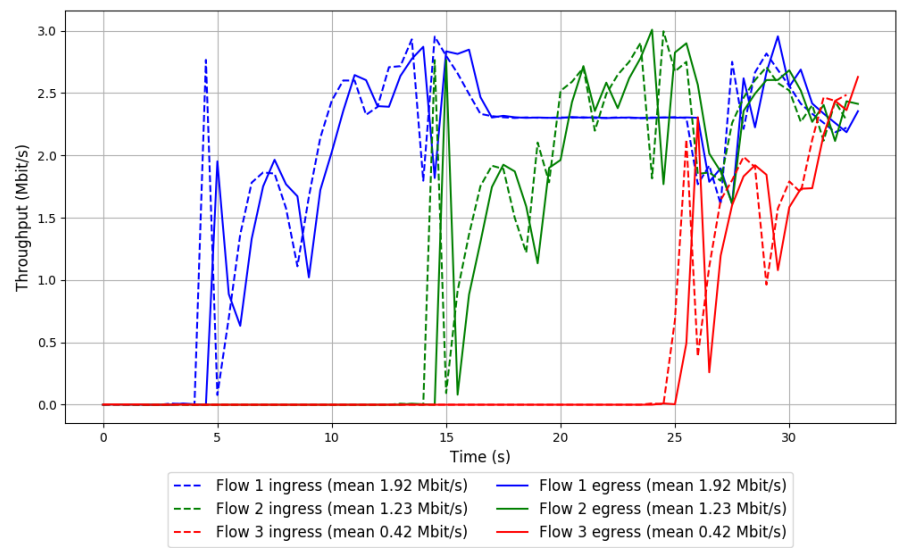Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2018-10-09 22:24:16
End at: 2018-10-09 22:24:46
Local clock offset: 1.1 ms
Remote clock offset: -2.199 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.55 Mbit/s
95th percentile per-packet one-way delay: 32.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 32.055 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 32.581 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 32.398 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2018-10-09 22:49:11
End at: 2018-10-09 22:49:41
Local clock offset: 1.168 ms
Remote clock offset: -2.097 ms


# Below is generated by plot.py at 2018-10-09 23:07:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.54 Mbit/s
95th percentile per-packet one-way delay: 32.392 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 31.863 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 32.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 33.297 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link