Pantheon Report

Generated at 2019-02-11 19:30:04 (UTC).

Data path: AWS India 1 on `ens5` (*local*) →India on `em1` (*remote*).

Repeated the test of 21 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 `nets.org.sg` and have been applied to correct the timestamps in logs.
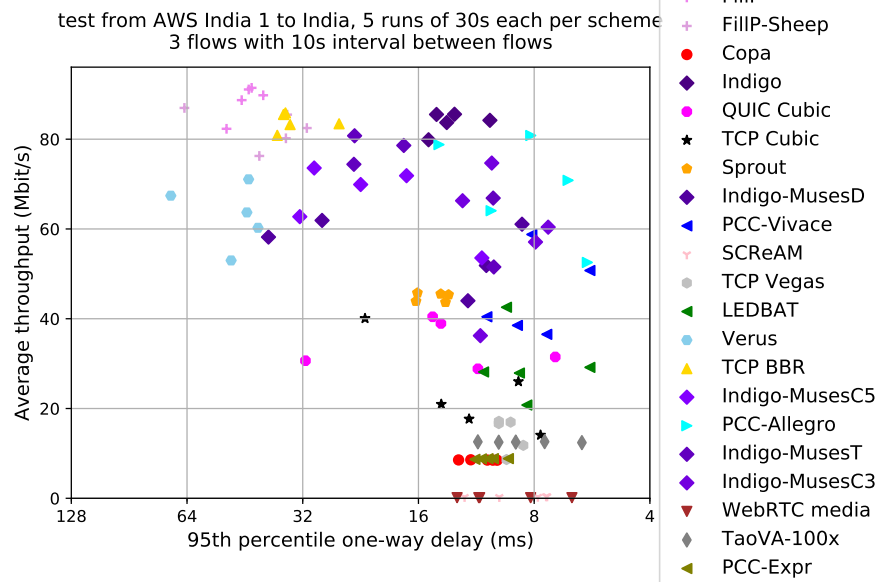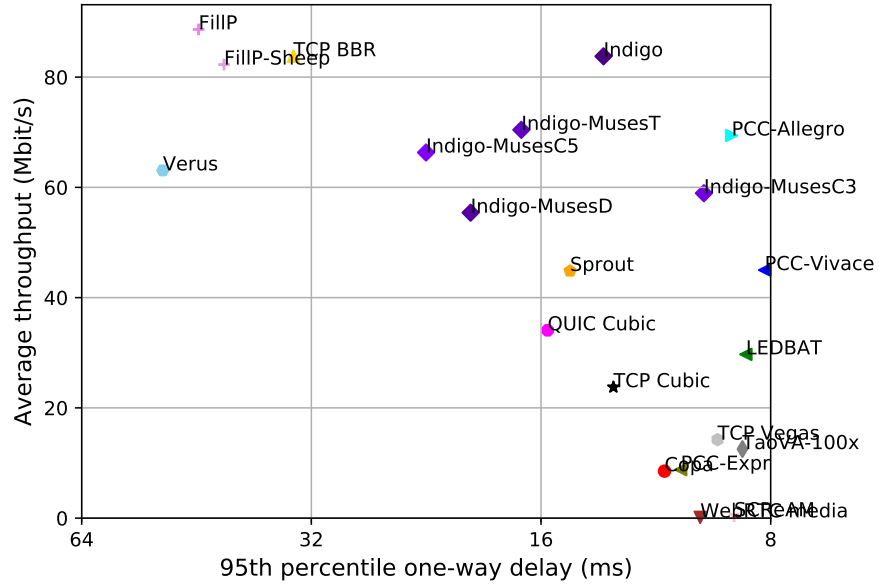
```
System info:
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
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 India 1 to India, 5 runs of 30s each per scheme
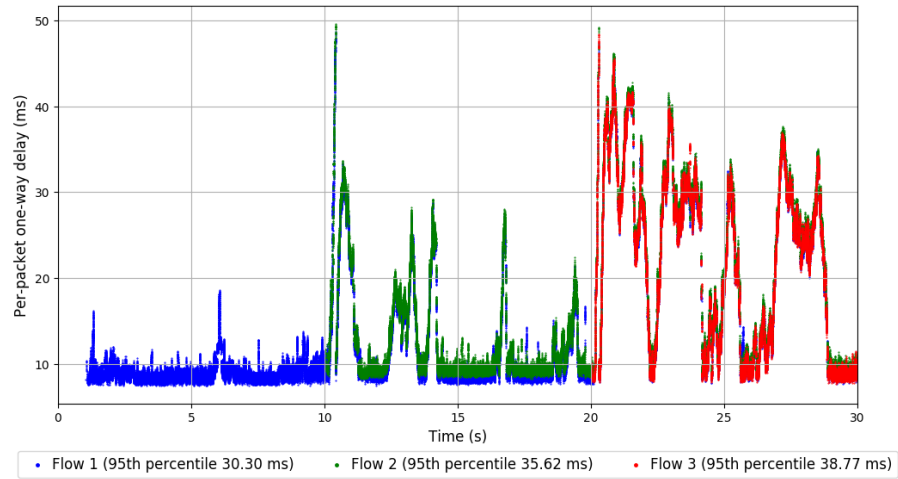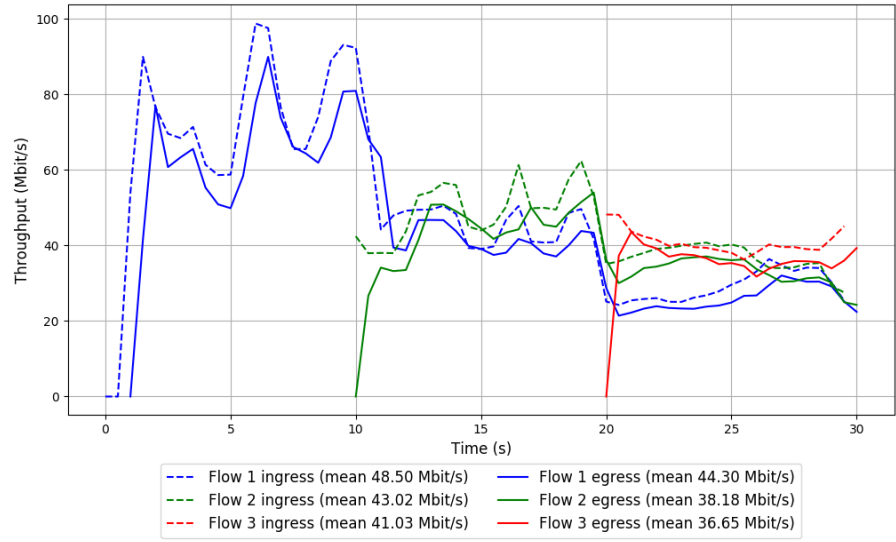3 flows with 10s interval between flows (mean of all runs by scheme)

test from AWS India 1 to India, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

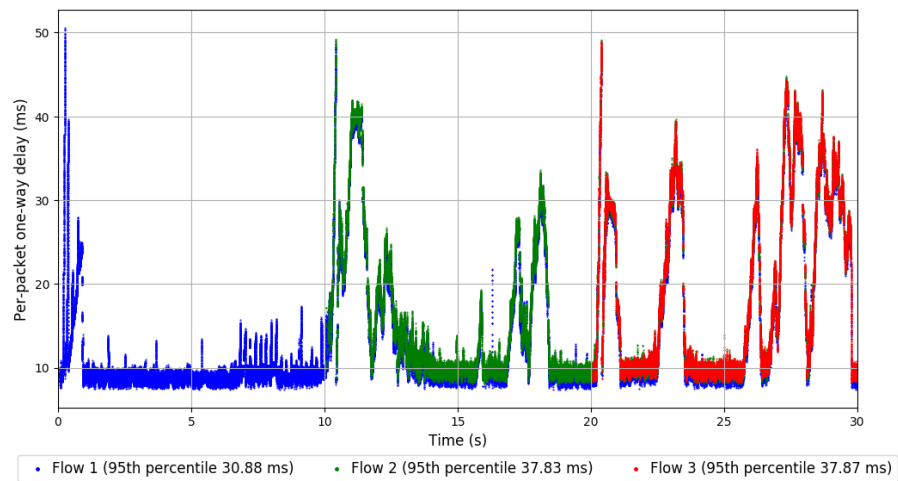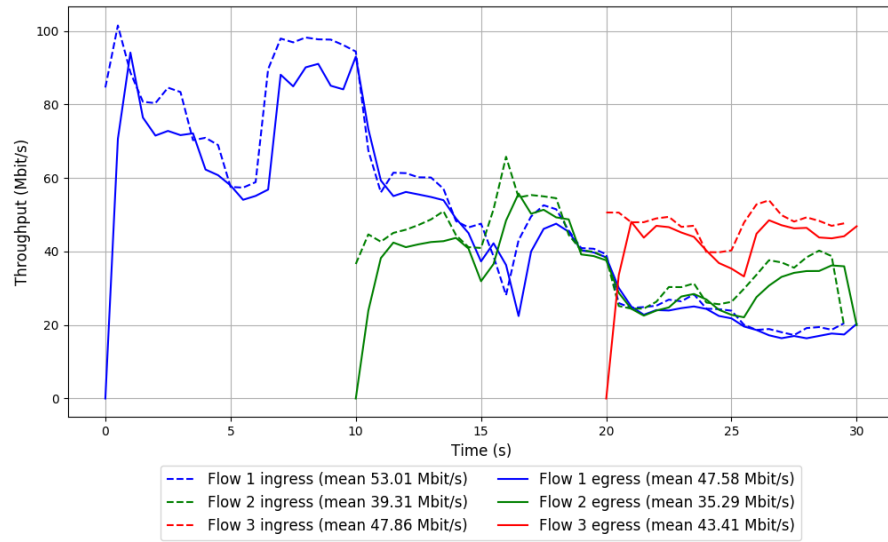| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	50.37	35.70	28.18	30.60	36.70	34.63	11.32	12.00	11.94
Copa	5	0.00	9.88	5.86	10.00	11.07	10.86	98.46	52.44	66.04
TCP Cubic	5	13.12	10.26	11.41	16.13	10.30	10.93	0.58	0.75	0.84
FillP	5	51.89	39.60	31.51	43.46	45.85	47.09	29.70	43.62	54.35
FillP-Sheep	5	49.16	35.55	28.69	38.63	42.65	46.79	12.22	14.06	18.44
Indigo	5	50.44	35.28	31.00	12.67	13.50	14.36	11.05	14.17	14.50
Indigo-MusesC3	5	32.87	26.97	28.51	9.70	9.84	9.61	5.46	5.81	5.77
Indigo-MusesC5	5	36.47	32.41	29.19	21.23	23.94	23.08	8.10	11.35	10.39
Indigo-MusesD	5	31.25	26.76	22.50	16.13	20.50	17.63	6.01	6.84	6.85
Indigo-MusesT	5	40.00	37.33	20.57	15.60	16.97	19.79	6.77	7.03	8.63
LEDBAT	5	16.47	14.57	11.02	8.52	8.65	8.68	0.64	0.84	1.44
PCC-Allegro	5	53.78	19.12	8.86	8.85	9.97	9.76	8.10	8.58	10.12
PCC-Expr	5	0.08	9.63	7.22	8.79	10.33	10.91	85.71	28.94	22.34
QUIC Cubic	5	18.65	15.85	14.81	16.11	14.22	11.53	1.61	1.94	3.34
SCReAM	5	0.15	0.19	0.21	8.93	8.72	9.08	0.39	0.14	0.12
Sprout	5	23.05	22.03	21.66	14.16	15.19	14.78	3.28	5.32	6.25
TaoVA-100x	5	5.60	9.76	1.29	8.79	8.63	8.85	83.80	85.73	65.52
TCP Vegas	5	7.27	7.00	6.93	8.93	11.31	12.06	1.52	1.48	2.70
Verus	5	45.07	23.61	14.94	41.55	62.44	37.91	38.28	54.53	48.42
PCC-Vivace	5	29.62	16.76	12.83	8.12	7.87	8.46	4.84	5.24	7.70
WebRTC media	5	0.05	0.05	0.05	9.17	9.51	9.89	0.17	0.04	0.50

```
Run 1: Statistics of TCP BBR

Start at: 2019-02-11 17:40:57
End at: 2019-02-11 17:41:27
Local clock offset: 2.312 ms
Remote clock offset: -3.211 ms


# Below is generated by plot.py at 2019-02-11 19:23:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.26 Mbit/s
95th percentile per-packet one-way delay: 34.517 ms
Loss rate: 11.45%
-- Flow 1:
Average throughput: 44.30 Mbit/s
95th percentile per-packet one-way delay: 30.299 ms
Loss rate: 11.79%
-- Flow 2:
Average throughput: 38.18 Mbit/s
95th percentile per-packet one-way delay: 35.617 ms
Loss rate: 11.26%
-- Flow 3:
Average throughput: 36.65 Mbit/s
95th percentile per-packet one-way delay: 38.775 ms
Loss rate: 10.66%
```

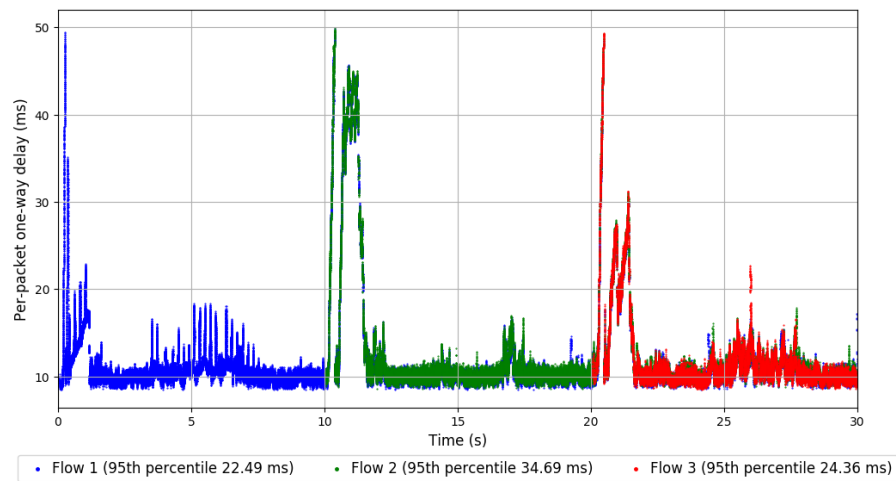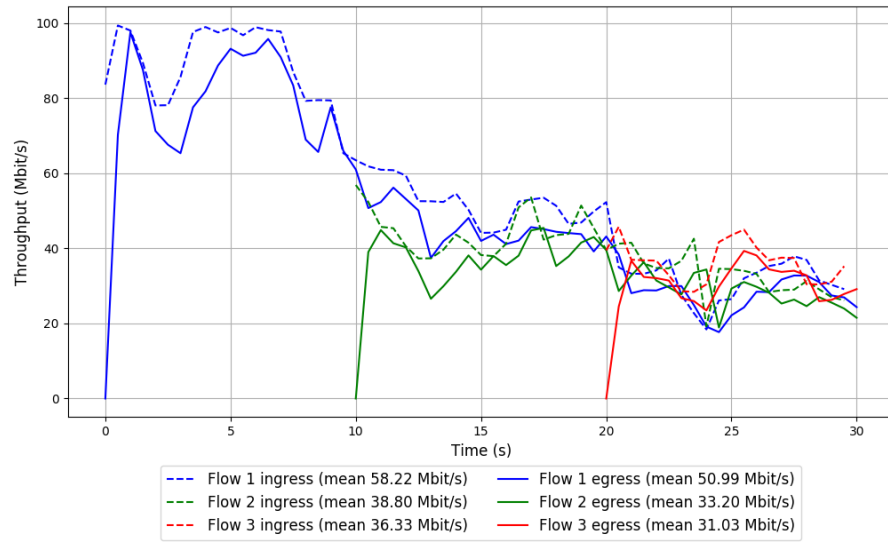Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-02-11 18:05:35
End at: 2019-02-11 18:06:05
Local clock offset: 5.218 ms
Remote clock offset: -4.129 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.51 Mbit/s
95th percentile per-packet one-way delay: 35.898 ms
Loss rate: 10.08%
-- Flow 1:
Average throughput: 47.58 Mbit/s
95th percentile per-packet one-way delay: 30.882 ms
Loss rate: 10.24%
-- Flow 2:
Average throughput: 35.29 Mbit/s
95th percentile per-packet one-way delay: 37.829 ms
Loss rate: 10.22%
-- Flow 3:
Average throughput: 43.41 Mbit/s
95th percentile per-packet one-way delay: 37.870 ms
Loss rate: 9.29%
```

Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-02-11 18:30:29
End at: 2019-02-11 18:30:59
Local clock offset: 3.254 ms
Remote clock offset: -3.584 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.44 Mbit/s
95th percentile per-packet one-way delay: 25.738 ms
Loss rate: 13.23%
-- Flow 1:
Average throughput: 50.99 Mbit/s
95th percentile per-packet one-way delay: 22.487 ms
Loss rate: 12.41%
-- Flow 2:
Average throughput: 33.20 Mbit/s
95th percentile per-packet one-way delay: 34.691 ms
Loss rate: 14.45%
-- Flow 3:
Average throughput: 31.03 Mbit/s
95th percentile per-packet one-way delay: 24.364 ms
Loss rate: 14.61%
```
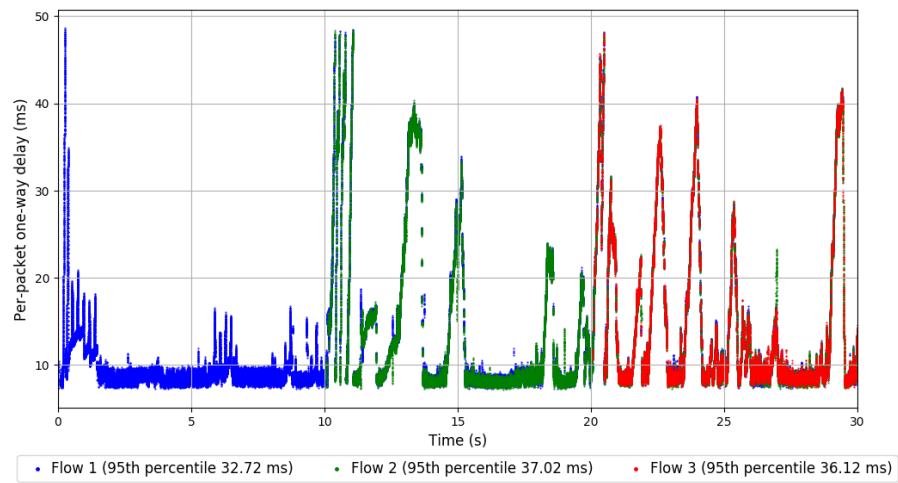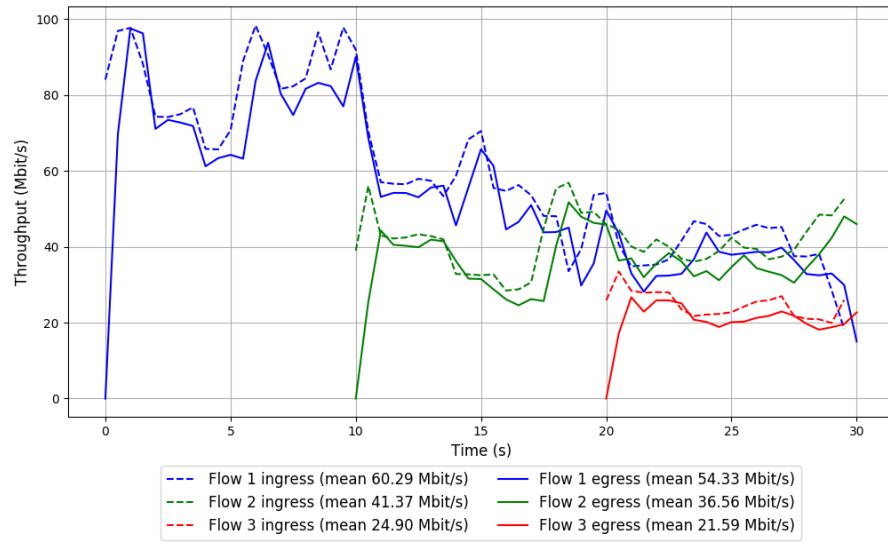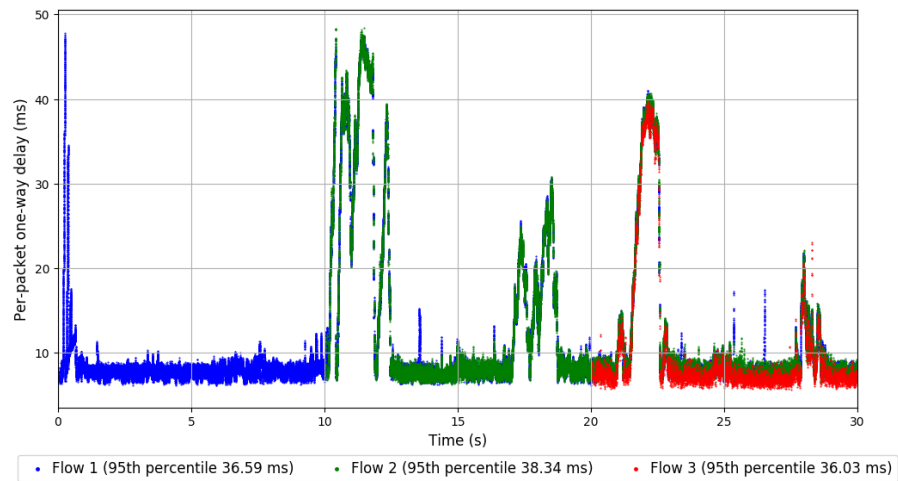
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-02-11 18:55:28
End at: 2019-02-11 18:55:58
Local clock offset: -0.221 ms
Remote clock offset: -4.54 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.86 Mbit/s
95th percentile per-packet one-way delay: 35.489 ms
Loss rate: 10.65%
-- Flow 1:
Average throughput: 54.33 Mbit/s
95th percentile per-packet one-way delay: 32.724 ms
Loss rate: 9.86%
-- Flow 2:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 37.022 ms
Loss rate: 11.60%
-- Flow 3:
Average throughput: 21.59 Mbit/s
95th percentile per-packet one-way delay: 36.118 ms
Loss rate: 13.25%
```

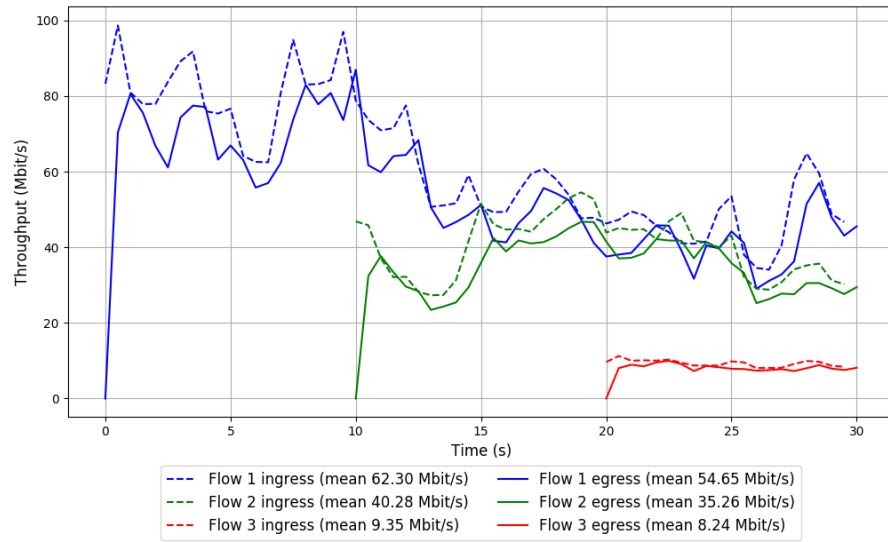Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-02-11 19:20:14
End at: 2019-02-11 19:20:44
Local clock offset: 5.285 ms
Remote clock offset: -3.728 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.87 Mbit/s
95th percentile per-packet one-way delay: 37.269 ms
Loss rate: 12.33%
-- Flow 1:
Average throughput: 54.65 Mbit/s
95th percentile per-packet one-way delay: 36.589 ms
Loss rate: 12.29%
-- Flow 2:
Average throughput: 35.26 Mbit/s
95th percentile per-packet one-way delay: 38.336 ms
Loss rate: 12.47%
-- Flow 3:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 36.027 ms
Loss rate: 11.89%
```

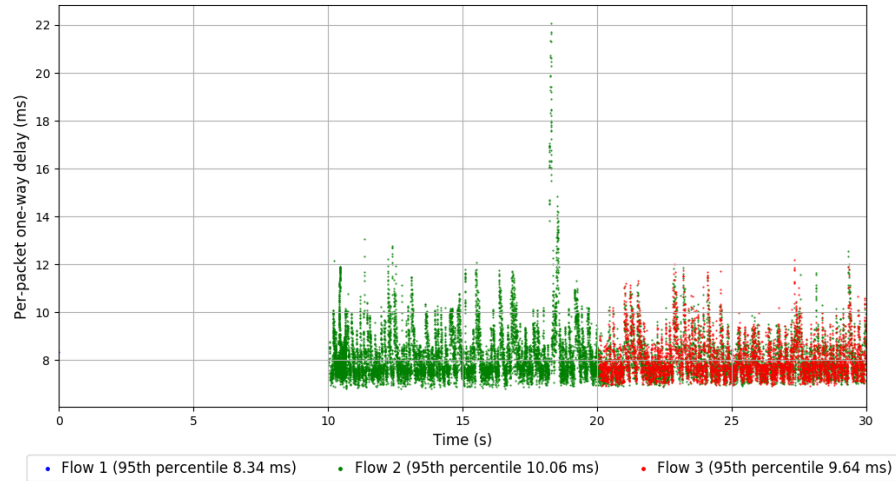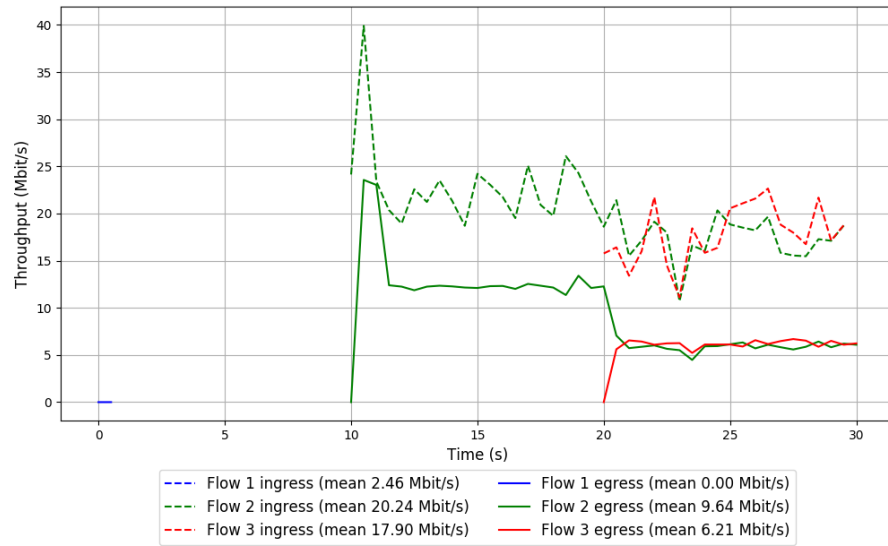Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-02-11 17:37:26
End at: 2019-02-11 17:37:56
Local clock offset: 1.16 ms
Remote clock offset: -4.231 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 9.989 ms
Loss rate: 56.32%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8.343 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 10.056 ms
Loss rate: 52.36%
-- Flow 3:
Average throughput: 6.21 Mbit/s
95th percentile per-packet one-way delay: 9.640 ms
Loss rate: 65.30%
```
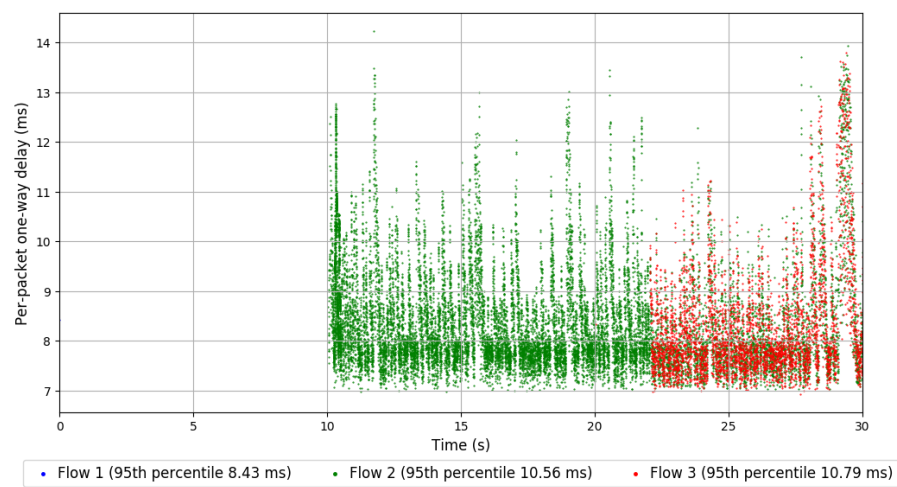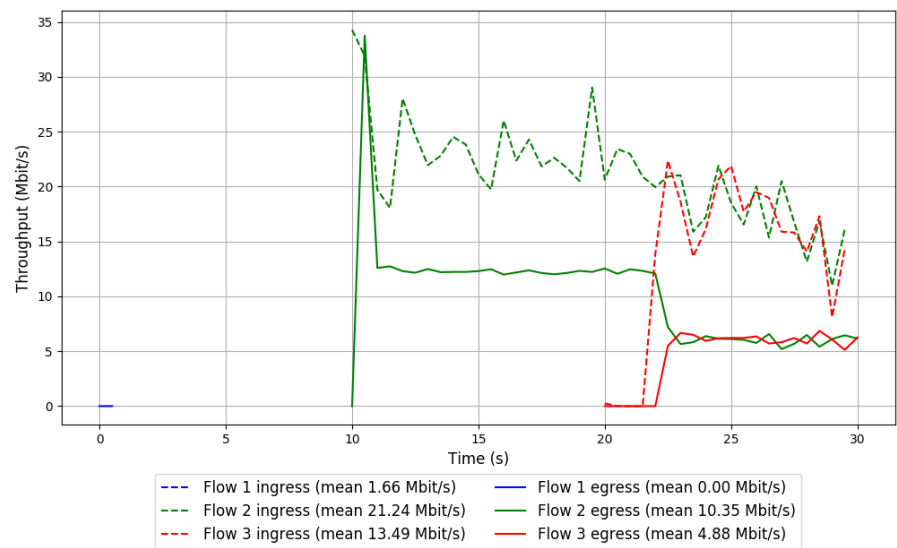
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-02-11 18:02:06
End at: 2019-02-11 18:02:36
Local clock offset: 7.46 ms
Remote clock offset: -3.354 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 10.593 ms
Loss rate: 54.31%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 8.432 ms
Loss rate: 97.92%
-- Flow 2:
Average throughput: 10.35 Mbit/s
95th percentile per-packet one-way delay: 10.560 ms
Loss rate: 51.28%
-- Flow 3:
Average throughput: 4.88 Mbit/s
95th percentile per-packet one-way delay: 10.791 ms
Loss rate: 63.83%
```
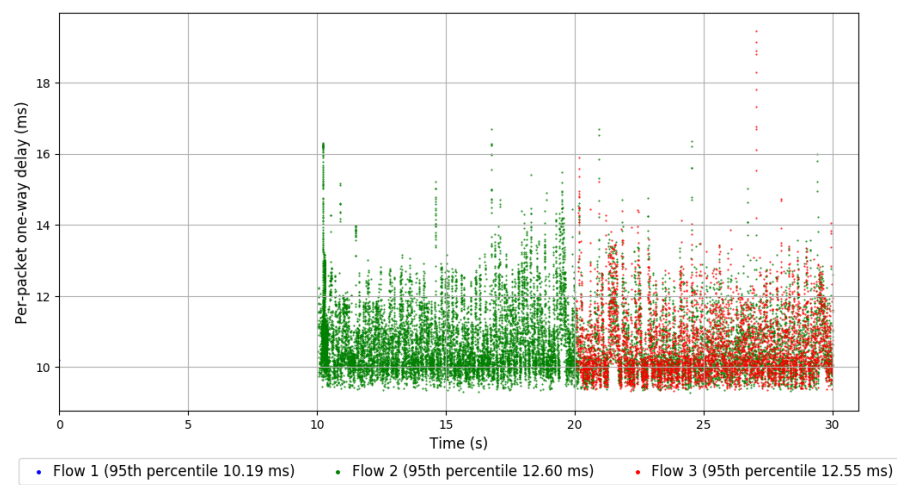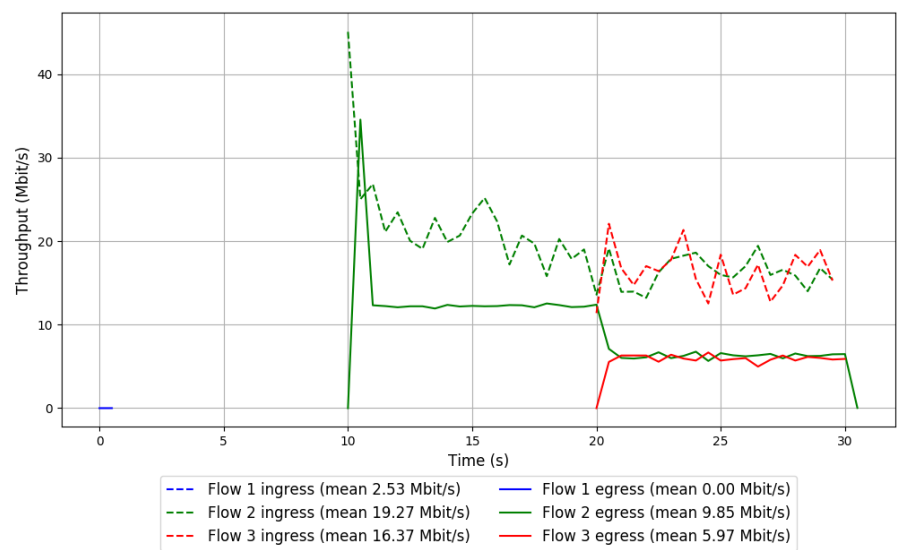
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 1.66 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 21.24 Mbit/s)   Flow 2 egress (mean 10.35 Mbit/s)
Flow 3 ingress (mean 13.49 Mbit/s)   Flow 3 egress (mean 4.88 Mbit/s)

Flow 1 (95th percentile 8.43 ms)   Flow 2 (95th percentile 10.56 ms)   Flow 3 (95th percentile 10.79 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-02-11 18:26:50
End at: 2019-02-11 18:27:20
Local clock offset: 2.111 ms
Remote clock offset: -3.819 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 12.582 ms
Loss rate: 53.26%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 10.194 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 12.596 ms
Loss rate: 48.90%
-- Flow 3:
Average throughput: 5.97 Mbit/s
95th percentile per-packet one-way delay: 12.550 ms
Loss rate: 63.51%
```
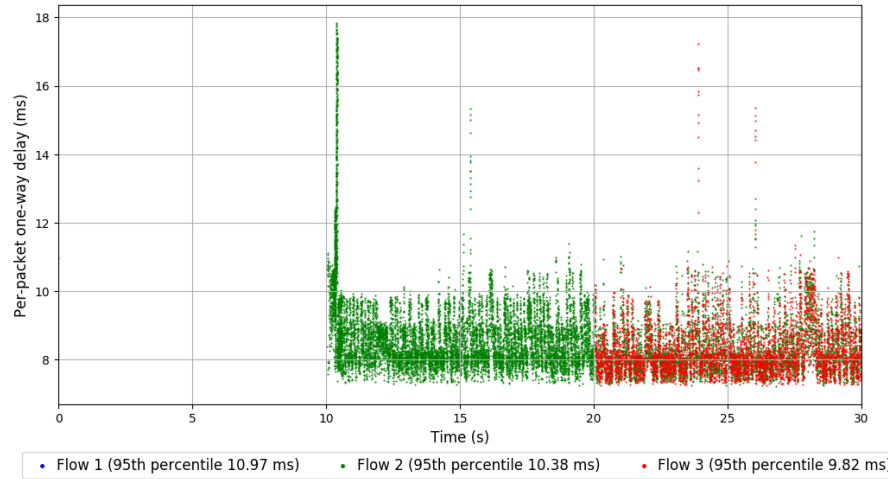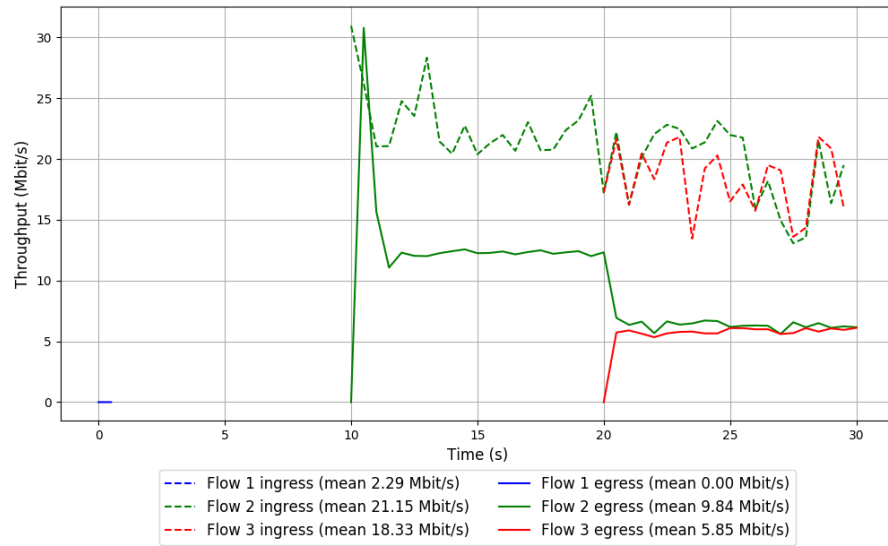
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 2.53 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 19.27 Mbit/s) --- Flow 2 egress (mean 9.85 Mbit/s)
Flow 3 ingress (mean 16.37 Mbit/s) --- Flow 3 egress (mean 5.97 Mbit/s)

- Flow 1 (95th percentile 10.19 ms)   - Flow 2 (95th percentile 12.60 ms)   - Flow 3 (95th percentile 12.55 ms)
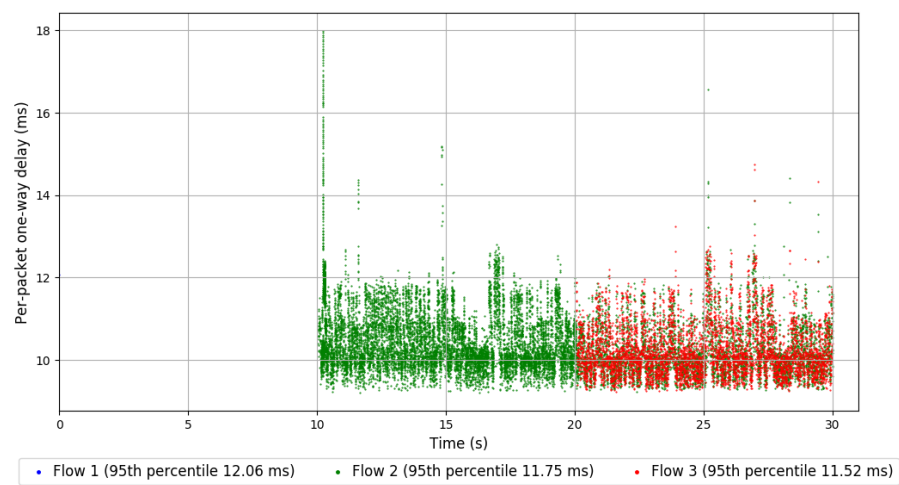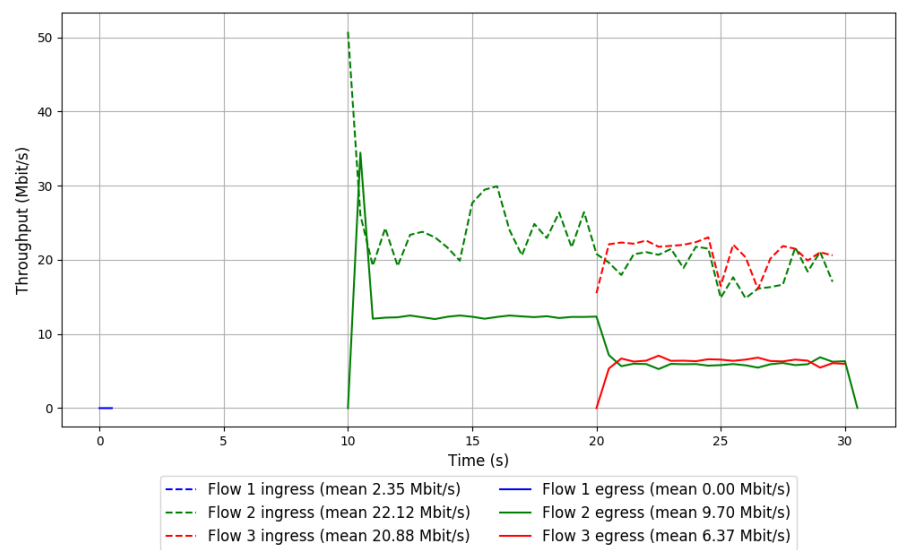
```
Run 4: Statistics of Copa

Start at: 2019-02-11 18:51:51
End at: 2019-02-11 18:52:21
Local clock offset: 0.114 ms
Remote clock offset: -4.418 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 10.249 ms
Loss rate: 57.91%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 10.968 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.84 Mbit/s
95th percentile per-packet one-way delay: 10.376 ms
Loss rate: 53.50%
-- Flow 3:
Average throughput: 5.85 Mbit/s
95th percentile per-packet one-way delay: 9.818 ms
Loss rate: 68.09%
```
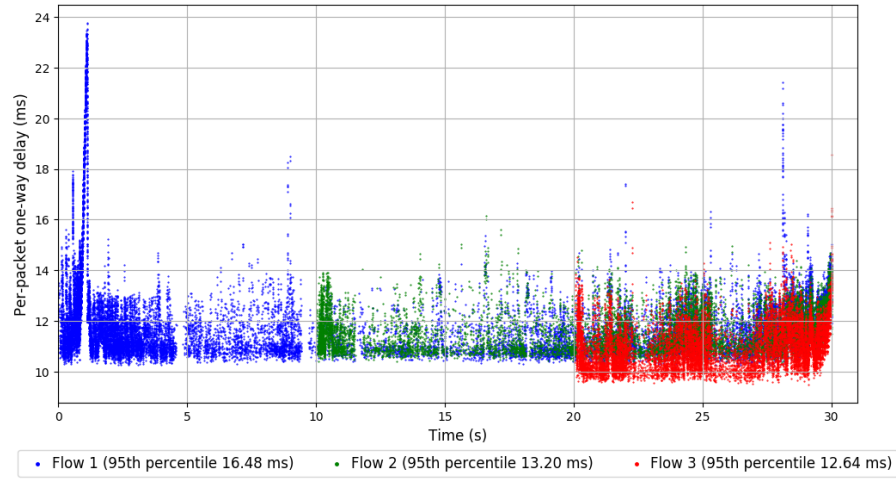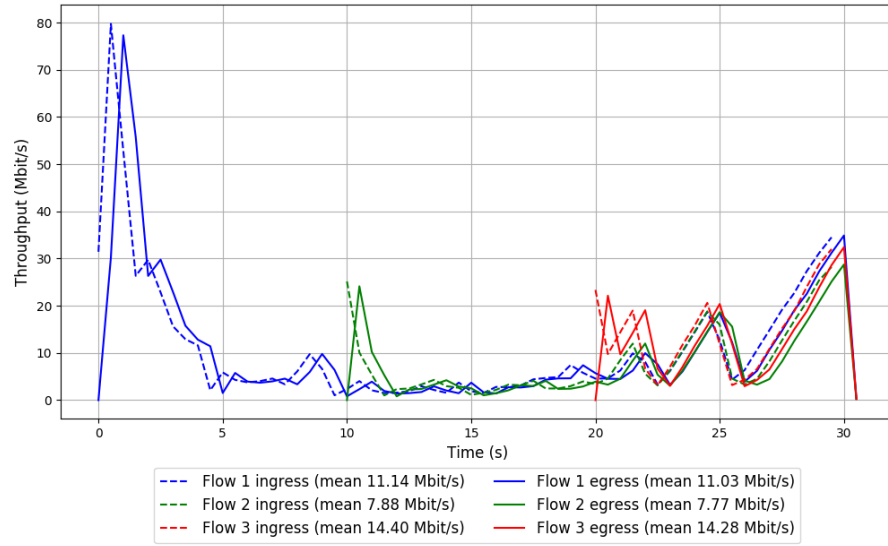
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 2.29 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 21.15 Mbit/s) --- Flow 2 egress (mean 9.84 Mbit/s)
Flow 3 ingress (mean 18.33 Mbit/s) --- Flow 3 egress (mean 5.85 Mbit/s)

• Flow 1 (95th percentile 10.97 ms)   • Flow 2 (95th percentile 10.38 ms)   • Flow 3 (95th percentile 9.82 ms)

```
Run 5: Statistics of Copa

Start at: 2019-02-11 19:16:42
End at: 2019-02-11 19:17:12
Local clock offset: 2.343 ms
Remote clock offset: -3.177 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 11.695 ms
Loss rate: 60.42%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 12.060 ms
Loss rate: 98.60%
-- Flow 2:
Average throughput: 9.70 Mbit/s
95th percentile per-packet one-way delay: 11.750 ms
Loss rate: 56.16%
-- Flow 3:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 11.517 ms
Loss rate: 69.48%
```
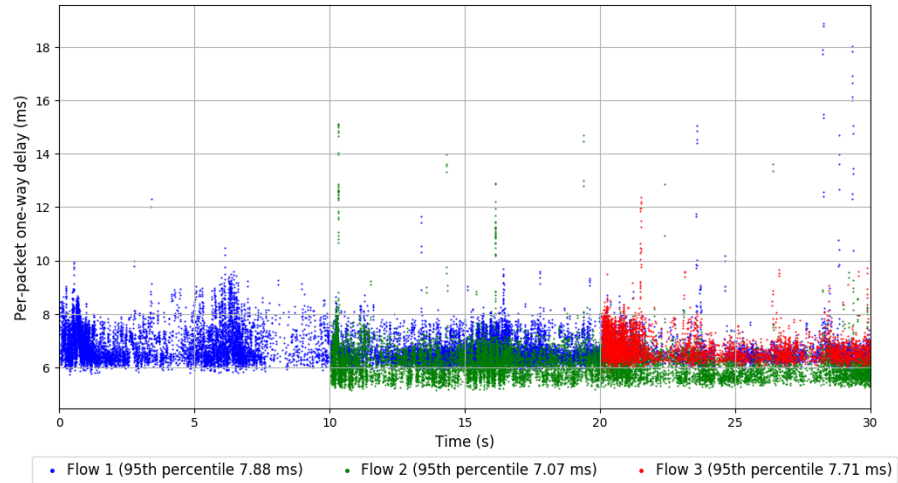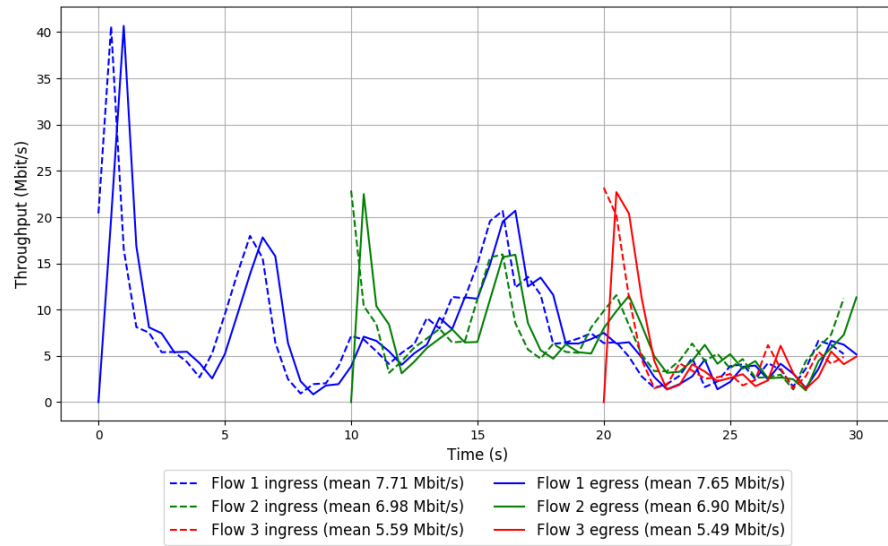
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 2.35 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 22.12 Mbit/s) --- Flow 2 egress (mean 9.70 Mbit/s)
Flow 3 ingress (mean 20.88 Mbit/s) --- Flow 3 egress (mean 6.37 Mbit/s)

Flow 1 (95th percentile 12.06 ms)   Flow 2 (95th percentile 11.75 ms)   Flow 3 (95th percentile 11.52 ms)

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```
Run 1: Statistics of TCP Cubic

Start at: 2019-02-11 17:21:12
End at: 2019-02-11 17:21:42
Local clock offset: -3.151 ms
Remote clock offset: -3.209 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.95 Mbit/s
95th percentile per-packet one-way delay: 13.955 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 11.03 Mbit/s
95th percentile per-packet one-way delay: 16.484 ms
Loss rate: 0.96%
-- Flow 2:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 13.201 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 14.28 Mbit/s
95th percentile per-packet one-way delay: 12.638 ms
Loss rate: 0.75%
```
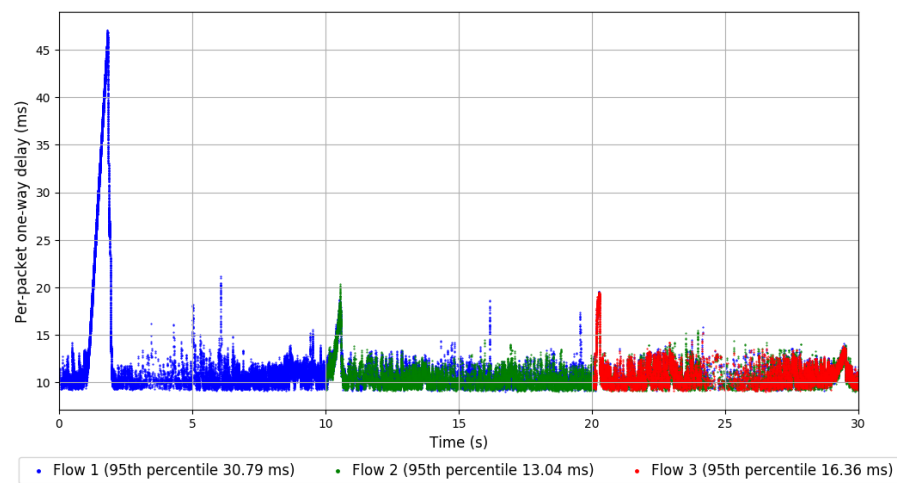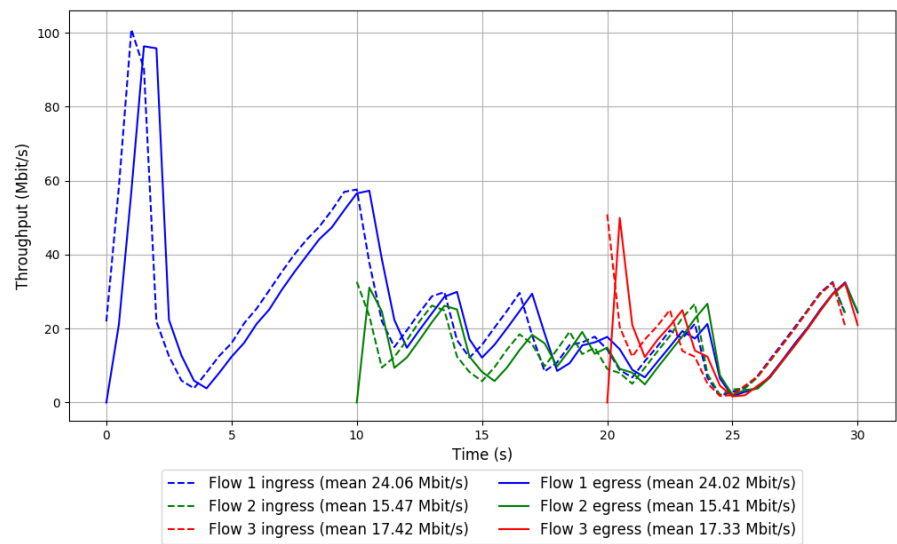
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-02-11 17:45:45
End at: 2019-02-11 17:46:15
Local clock offset: 5.966 ms
Remote clock offset: -3.456 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 14.07 Mbit/s
95th percentile per-packet one-way delay: 7.701 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 7.65 Mbit/s
95th percentile per-packet one-way delay: 7.884 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 6.90 Mbit/s
95th percentile per-packet one-way delay: 7.069 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 7.714 ms
Loss rate: 1.85%
```
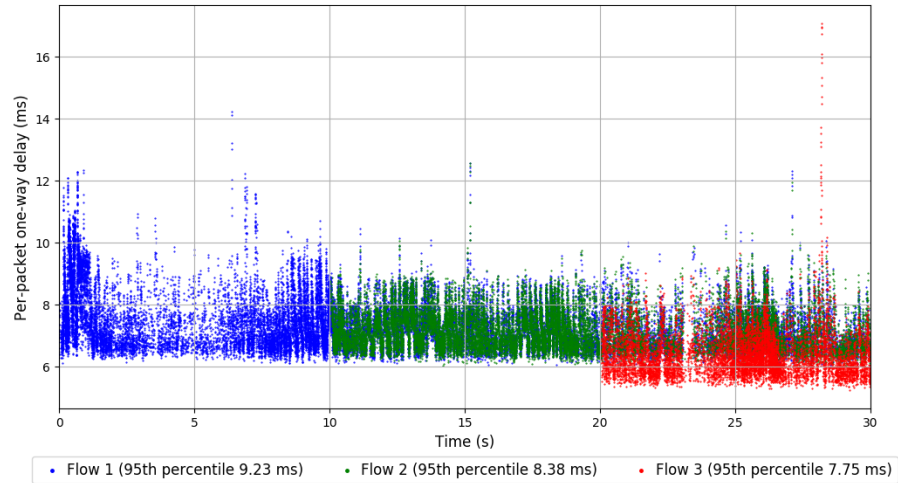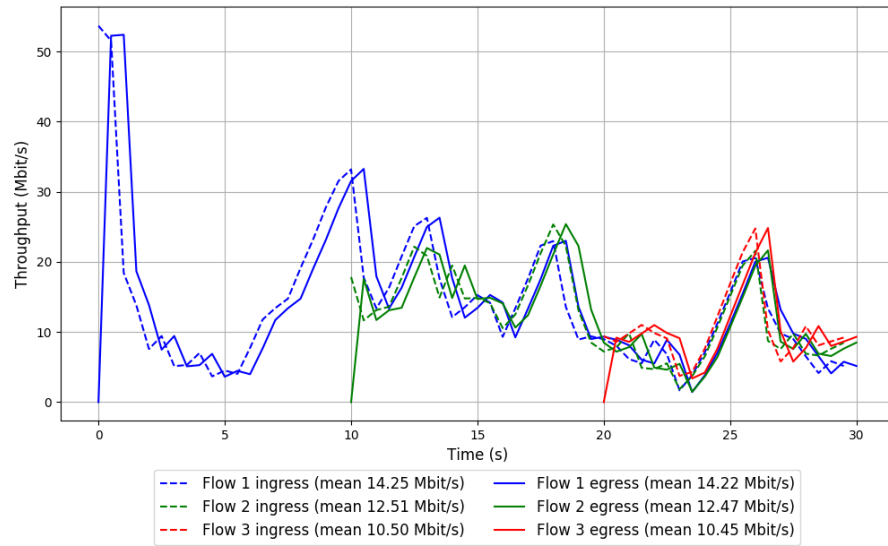
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-02-11 18:10:25
End at: 2019-02-11 18:10:55
Local clock offset: 3.367 ms
Remote clock offset: -3.13 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.06 Mbit/s
95th percentile per-packet one-way delay: 22.037 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 24.02 Mbit/s
95th percentile per-packet one-way delay: 30.794 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 15.41 Mbit/s
95th percentile per-packet one-way delay: 13.043 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 17.33 Mbit/s
95th percentile per-packet one-way delay: 16.356 ms
Loss rate: 0.48%
```
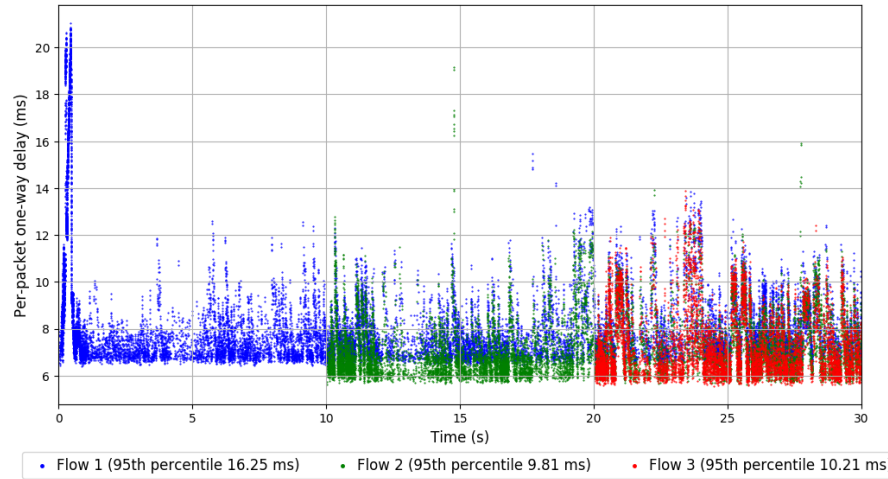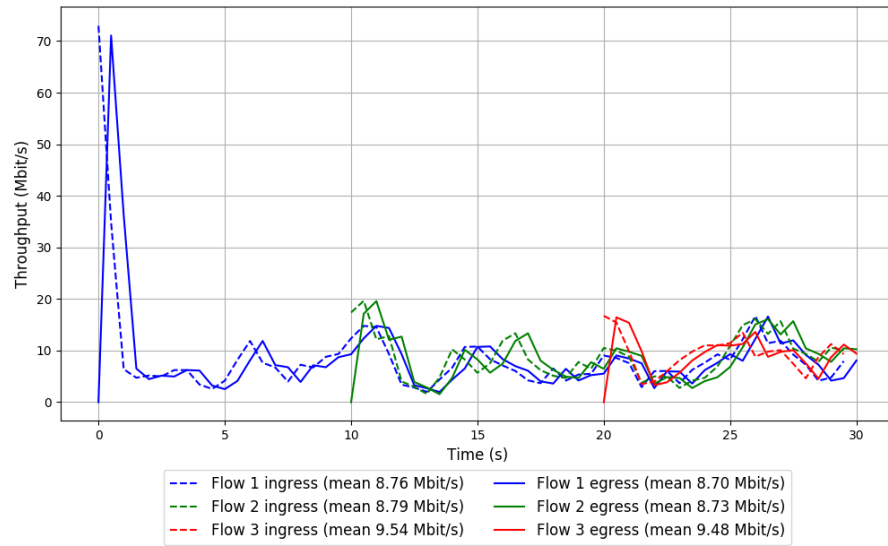
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 24.06 Mbit/s) — Flow 1 egress (mean 24.02 Mbit/s)
Flow 2 ingress (mean 15.47 Mbit/s) — Flow 2 egress (mean 15.41 Mbit/s)
Flow 3 ingress (mean 17.42 Mbit/s) — Flow 3 egress (mean 17.33 Mbit/s)

Flow 1 (95th percentile 30.79 ms) • Flow 2 (95th percentile 13.04 ms) • Flow 3 (95th percentile 16.36 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-02-11 18:35:25
End at: 2019-02-11 18:35:55
Local clock offset: 5.269 ms
Remote clock offset: -3.387 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 26.00 Mbit/s
95th percentile per-packet one-way delay: 8.791 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 9.232 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 12.47 Mbit/s
95th percentile per-packet one-way delay: 8.385 ms
Loss rate: 0.32%
-- Flow 3:
Average throughput: 10.45 Mbit/s
95th percentile per-packet one-way delay: 7.746 ms
Loss rate: 0.50%
```
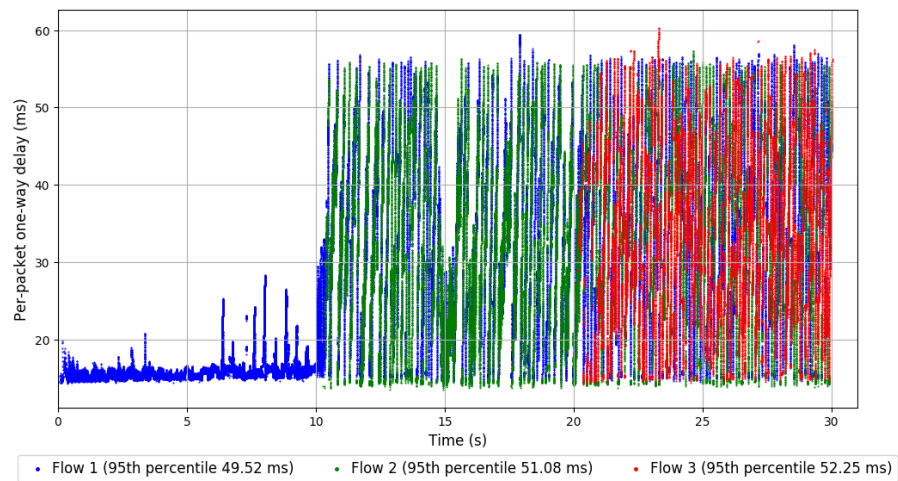
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-02-11 19:00:15
End at: 2019-02-11 19:00:45
Local clock offset: -0.288 ms
Remote clock offset: -5.192 ms


# Below is generated by plot.py at 2019-02-11 19:23:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.67 Mbit/s
95th percentile per-packet one-way delay: 11.814 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 8.70 Mbit/s
95th percentile per-packet one-way delay: 16.253 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 8.73 Mbit/s
95th percentile per-packet one-way delay: 9.807 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 9.48 Mbit/s
95th percentile per-packet one-way delay: 10.207 ms
Loss rate: 0.62%
```
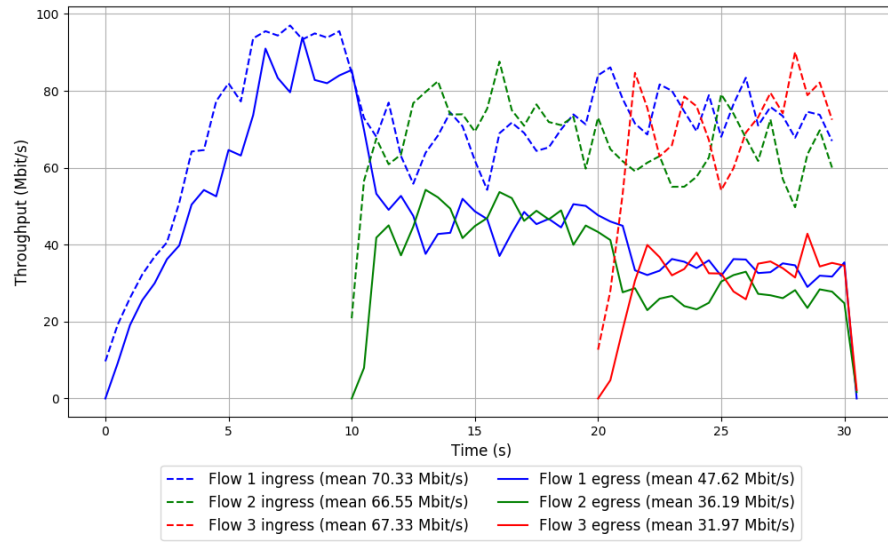
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 8.76 Mbit/s)   Flow 1 egress (mean 8.70 Mbit/s)
Flow 2 ingress (mean 8.79 Mbit/s)   Flow 2 egress (mean 8.73 Mbit/s)
Flow 3 ingress (mean 9.54 Mbit/s)   Flow 3 egress (mean 9.48 Mbit/s)

Flow 1 (95th percentile 16.25 ms)   Flow 2 (95th percentile 9.81 ms)   Flow 3 (95th percentile 10.21 ms)

```
Run 1: Statistics of FillP

Start at: 2019-02-11 17:32:44
End at: 2019-02-11 17:33:14
Local clock offset: -8.267 ms
Remote clock offset: -3.83 ms

# Below is generated by plot.py at 2019-02-11 19:24:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.32 Mbit/s
95th percentile per-packet one-way delay: 50.513 ms
Loss rate: 39.81%
-- Flow 1:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 49.517 ms
Loss rate: 32.21%
-- Flow 2:
Average throughput: 36.19 Mbit/s
95th percentile per-packet one-way delay: 51.079 ms
Loss rate: 45.55%
-- Flow 3:
Average throughput: 31.97 Mbit/s
95th percentile per-packet one-way delay: 52.248 ms
Loss rate: 52.35%
```
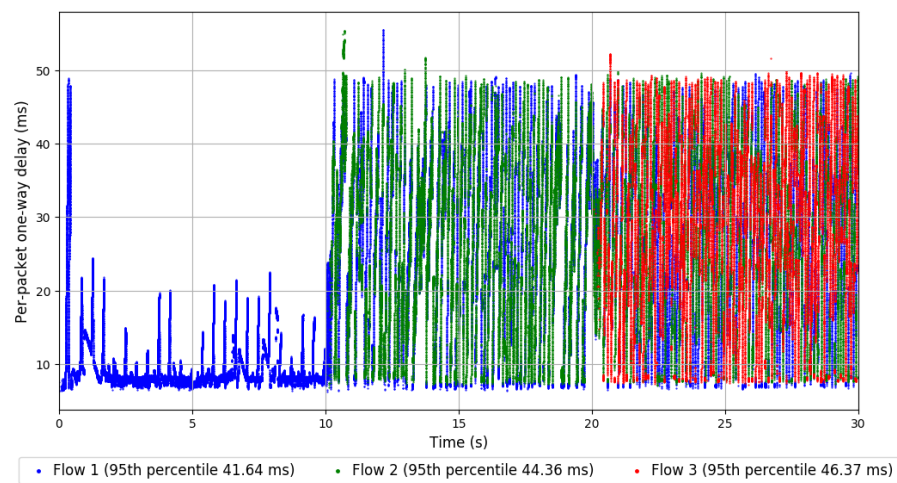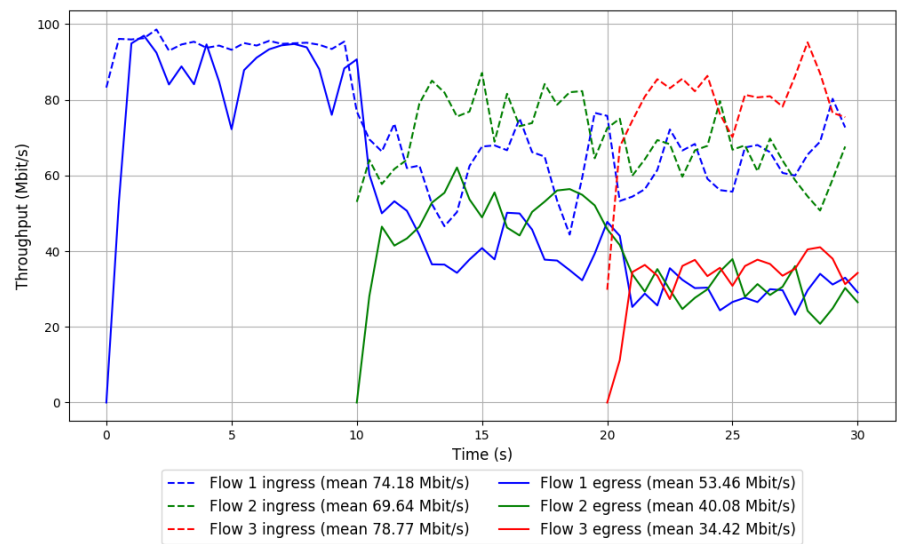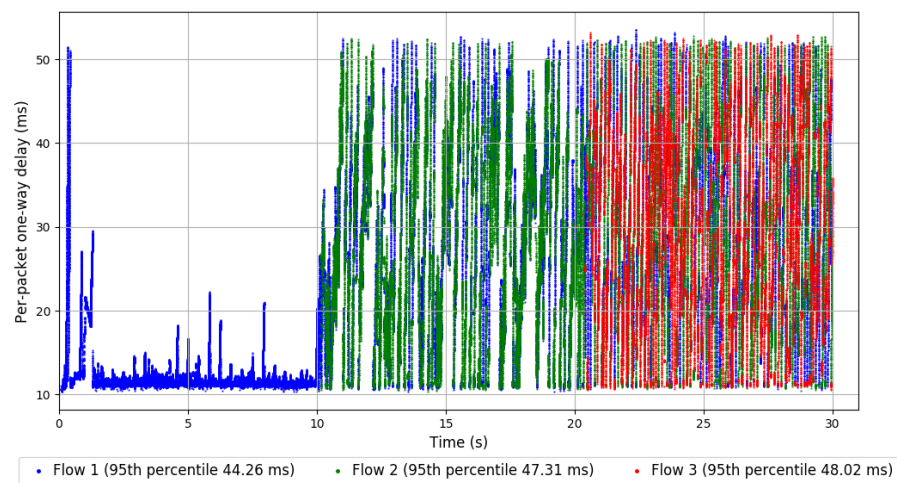
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-02-11 17:57:25
End at: 2019-02-11 17:57:55
Local clock offset: 7.989 ms
Remote clock offset: -4.753 ms


# Below is generated by plot.py at 2019-02-11 19:24:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.78 Mbit/s
95th percentile per-packet one-way delay: 40.545 ms
Loss rate: 36.78%
-- Flow 1:
Average throughput: 53.54 Mbit/s
95th percentile per-packet one-way delay: 38.997 ms
Loss rate: 28.70%
-- Flow 2:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 41.484 ms
Loss rate: 41.52%
-- Flow 3:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 42.710 ms
Loss rate: 54.95%
```

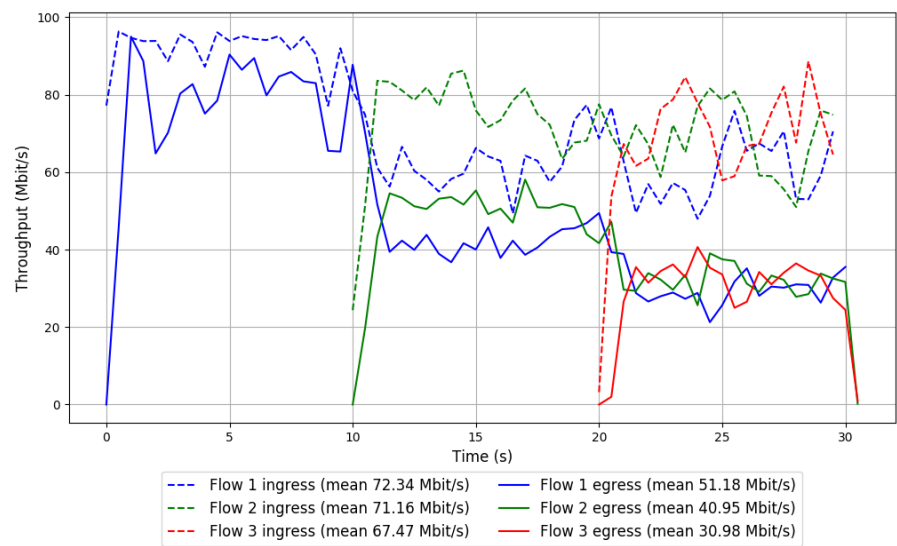Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-02-11 18:22:00
End at: 2019-02-11 18:22:30
Local clock offset: 5.048 ms
Remote clock offset: -3.309 ms

# Below is generated by plot.py at 2019-02-11 19:24:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.44 Mbit/s
95th percentile per-packet one-way delay: 43.460 ms
Loss rate: 37.62%
-- Flow 1:
Average throughput: 53.46 Mbit/s
95th percentile per-packet one-way delay: 41.637 ms
Loss rate: 27.97%
-- Flow 2:
Average throughput: 40.08 Mbit/s
95th percentile per-packet one-way delay: 44.359 ms
Loss rate: 42.45%
-- Flow 3:
Average throughput: 34.42 Mbit/s
95th percentile per-packet one-way delay: 46.367 ms
Loss rate: 56.44%
```
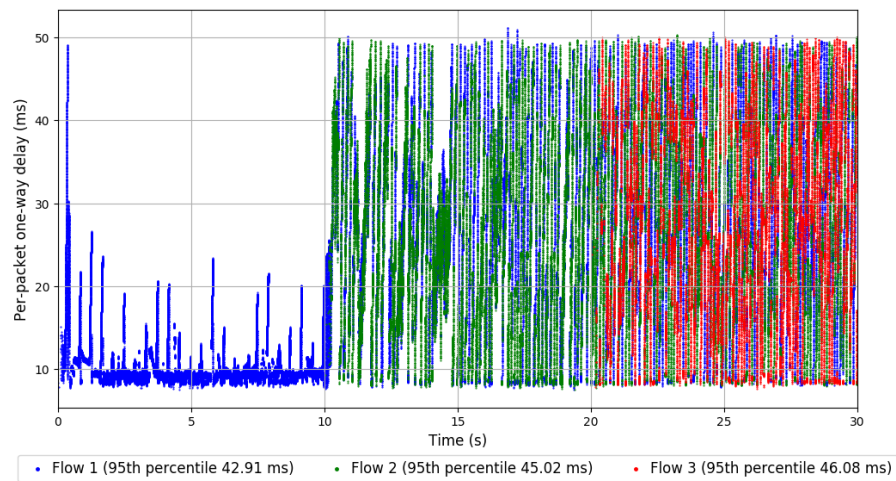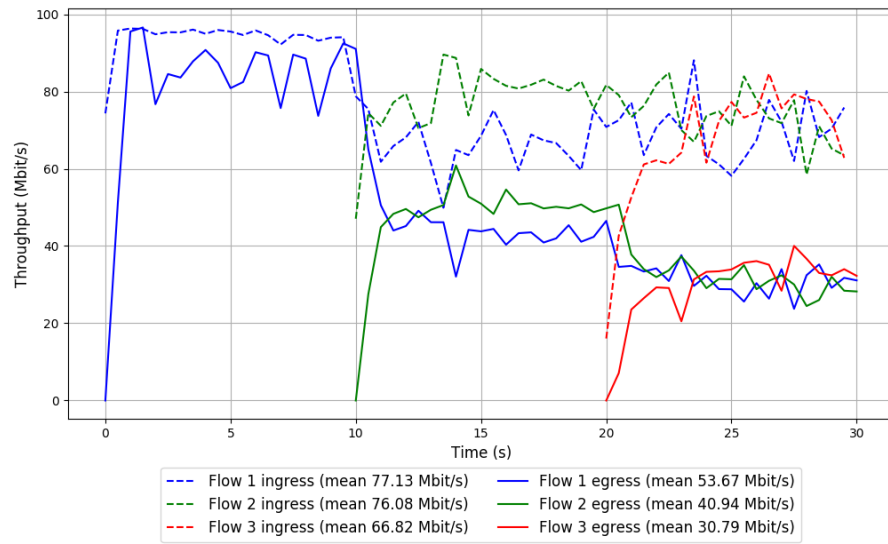
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 74.18 Mbit/s)   Flow 1 egress (mean 53.46 Mbit/s)
Flow 2 ingress (mean 69.64 Mbit/s)   Flow 2 egress (mean 40.08 Mbit/s)
Flow 3 ingress (mean 78.77 Mbit/s)   Flow 3 egress (mean 34.42 Mbit/s)

Flow 1 (95th percentile 41.64 ms)   Flow 2 (95th percentile 44.36 ms)   Flow 3 (95th percentile 46.37 ms)

```
Run 4: Statistics of FillP

Start at: 2019-02-11 18:47:02
End at: 2019-02-11 18:47:32
Local clock offset: -2.59 ms
Remote clock offset: -4.709 ms


# Below is generated by plot.py at 2019-02-11 19:24:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.70 Mbit/s
95th percentile per-packet one-way delay: 46.129 ms
Loss rate: 37.52%
-- Flow 1:
Average throughput: 51.18 Mbit/s
95th percentile per-packet one-way delay: 44.263 ms
Loss rate: 29.20%
-- Flow 2:
Average throughput: 40.95 Mbit/s
95th percentile per-packet one-way delay: 47.309 ms
Loss rate: 42.40%
-- Flow 3:
Average throughput: 30.98 Mbit/s
95th percentile per-packet one-way delay: 48.022 ms
Loss rate: 54.07%
```
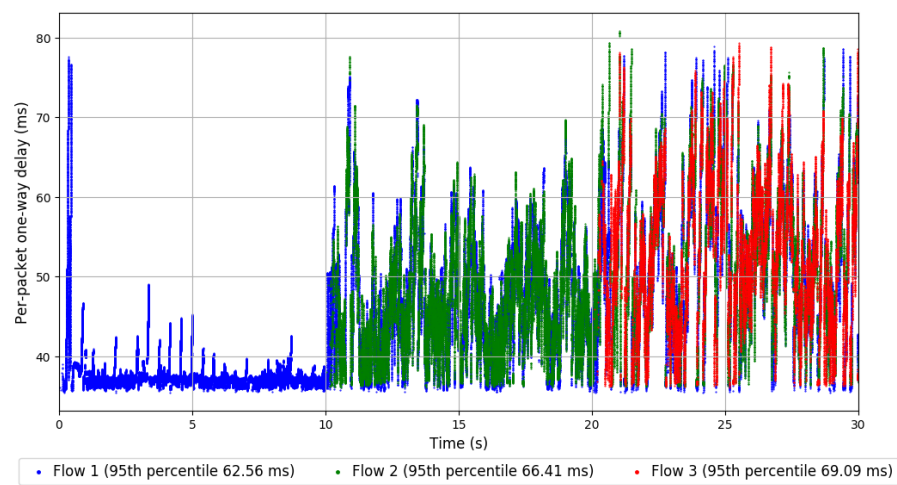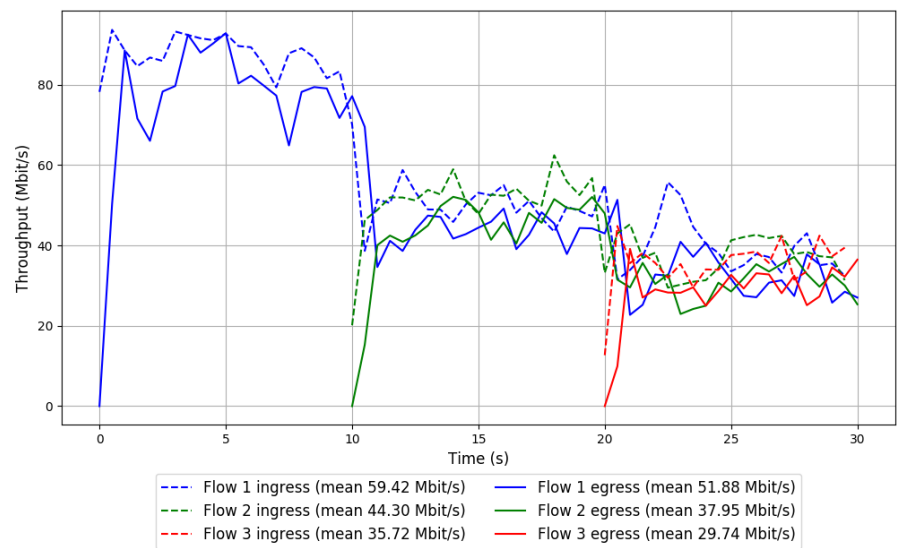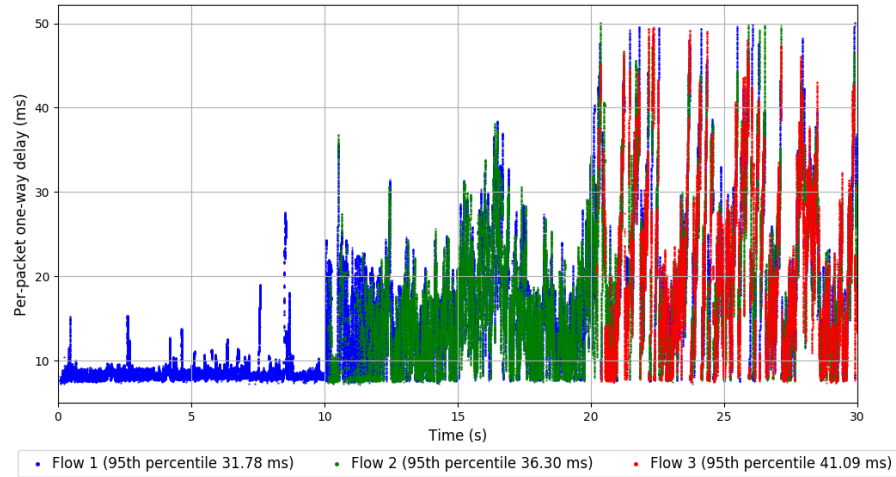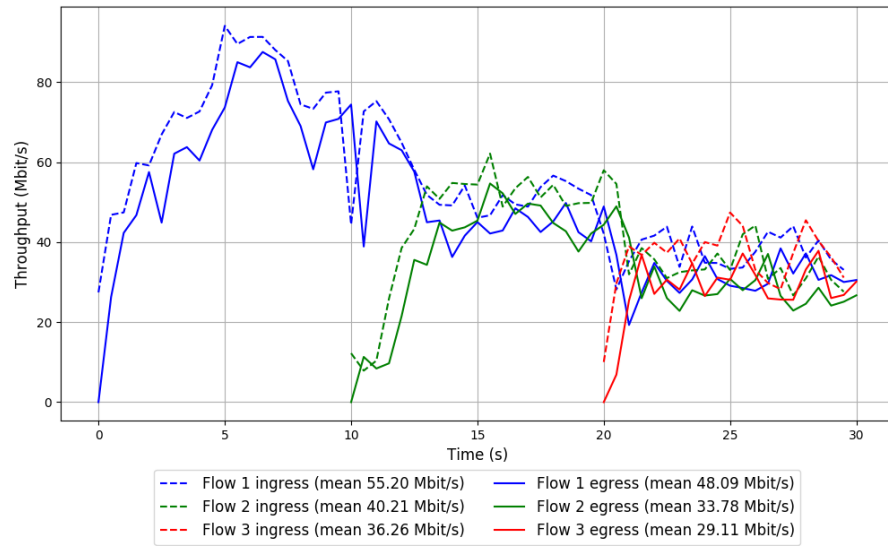
Run 4: Report of FillP — Data Link

- - - Flow 1 ingress (mean 72.34 Mbit/s)   —— Flow 1 egress (mean 51.18 Mbit/s)
- - - Flow 2 ingress (mean 71.16 Mbit/s)   —— Flow 2 egress (mean 40.95 Mbit/s)
- - - Flow 3 ingress (mean 67.47 Mbit/s)   —— Flow 3 egress (mean 30.98 Mbit/s)

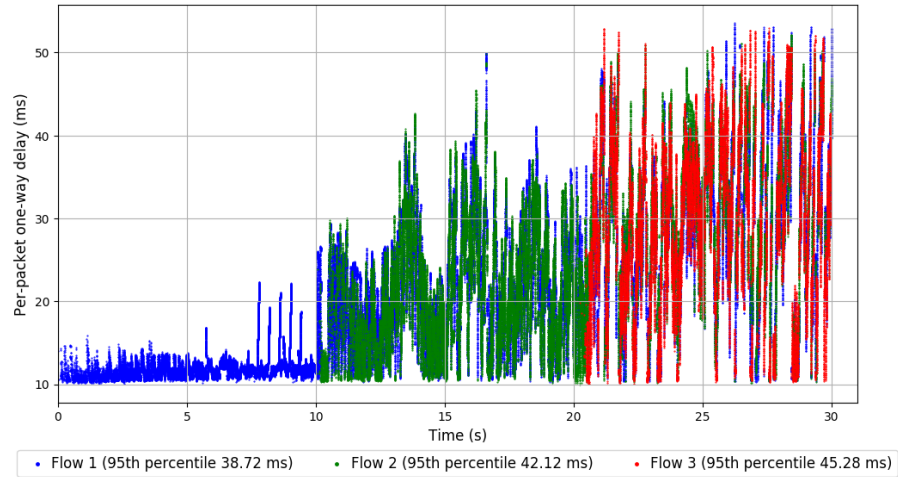- Flow 1 (95th percentile 44.26 ms)   • Flow 2 (95th percentile 47.31 ms)   • Flow 3 (95th percentile 48.02 ms)

```
Run 5: Statistics of FillP

Start at: 2019-02-11 19:11:57
End at: 2019-02-11 19:12:27
Local clock offset: 2.562 ms
Remote clock offset: -3.825 ms


# Below is generated by plot.py at 2019-02-11 19:24:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.07 Mbit/s
95th percentile per-packet one-way delay: 44.230 ms
Loss rate: 39.22%
-- Flow 1:
Average throughput: 53.67 Mbit/s
95th percentile per-packet one-way delay: 42.905 ms
Loss rate: 30.40%
-- Flow 2:
Average throughput: 40.94 Mbit/s
95th percentile per-packet one-way delay: 45.017 ms
Loss rate: 46.19%
-- Flow 3:
Average throughput: 30.79 Mbit/s
95th percentile per-packet one-way delay: 46.083 ms
Loss rate: 53.93%
```

Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 77.13 Mbit/s)   Flow 1 egress (mean 53.67 Mbit/s)
Flow 2 ingress (mean 76.08 Mbit/s)   Flow 2 egress (mean 40.94 Mbit/s)
Flow 3 ingress (mean 66.82 Mbit/s)   Flow 3 egress (mean 30.79 Mbit/s)

Flow 1 (95th percentile 42.91 ms)   Flow 2 (95th percentile 45.02 ms)   Flow 3 (95th percentile 46.08 ms)
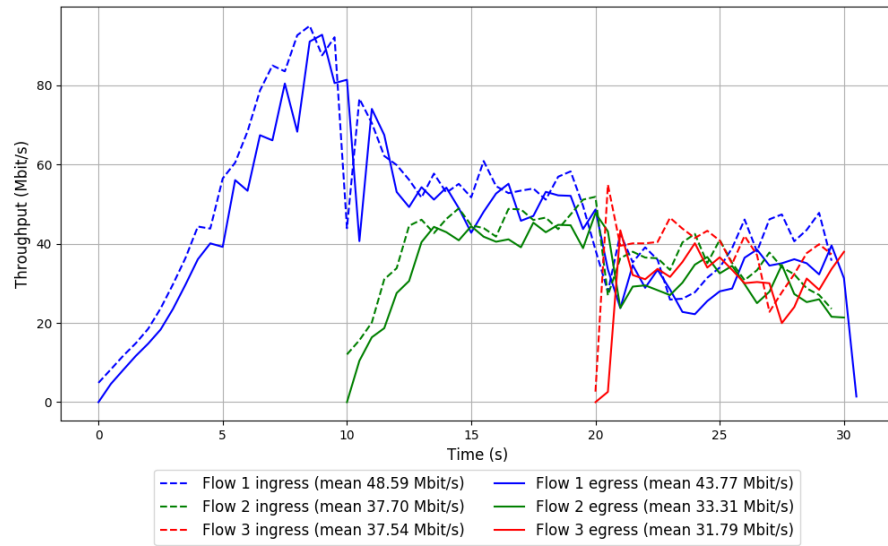
```
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-11 17:17:34
End at: 2019-02-11 17:18:04
Local clock offset: -28.186 ms
Remote clock offset: -2.66 ms


# Below is generated by plot.py at 2019-02-11 19:24:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.96 Mbit/s
95th percentile per-packet one-way delay: 65.006 ms
Loss rate: 13.65%
-- Flow 1:
Average throughput: 51.88 Mbit/s
95th percentile per-packet one-way delay: 62.560 ms
Loss rate: 12.68%
-- Flow 2:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 66.407 ms
Loss rate: 14.35%
-- Flow 3:
Average throughput: 29.74 Mbit/s
95th percentile per-packet one-way delay: 69.088 ms
Loss rate: 16.81%
```

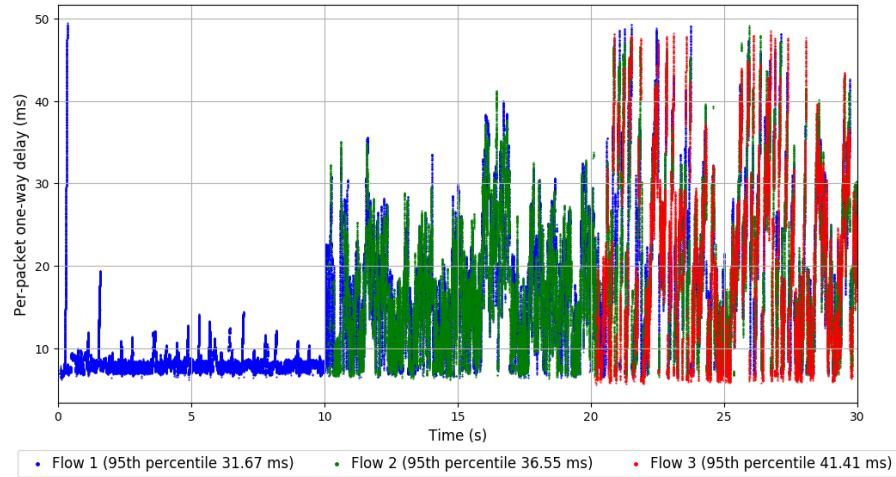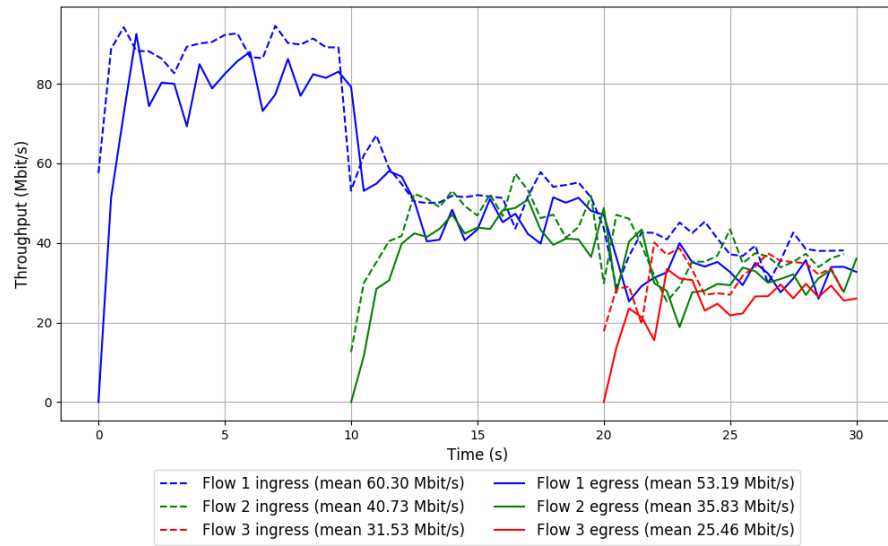Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-11 17:42:10
End at: 2019-02-11 17:42:40
Local clock offset: 4.004 ms
Remote clock offset: -2.925 ms


# Below is generated by plot.py at 2019-02-11 19:24:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.20 Mbit/s
95th percentile per-packet one-way delay: 35.395 ms
Loss rate: 14.61%
-- Flow 1:
Average throughput: 48.09 Mbit/s
95th percentile per-packet one-way delay: 31.783 ms
Loss rate: 12.84%
-- Flow 2:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 36.296 ms
Loss rate: 15.93%
-- Flow 3:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 41.094 ms
Loss rate: 19.77%
```

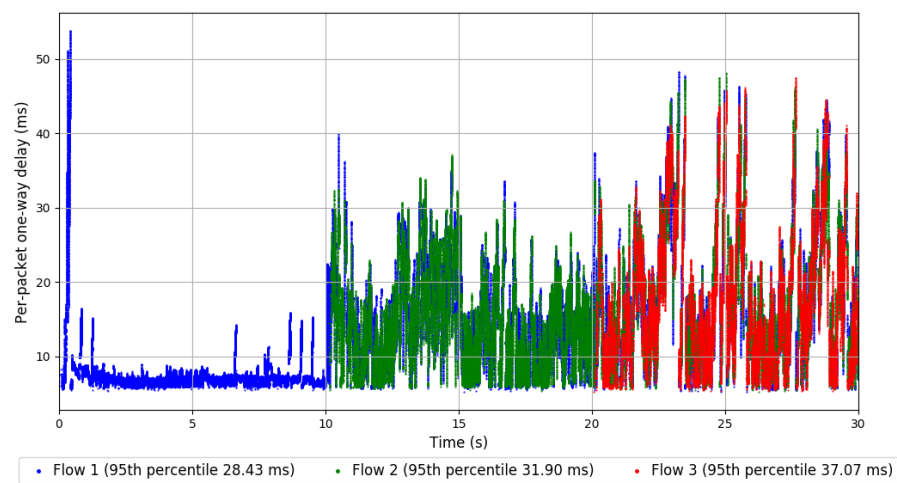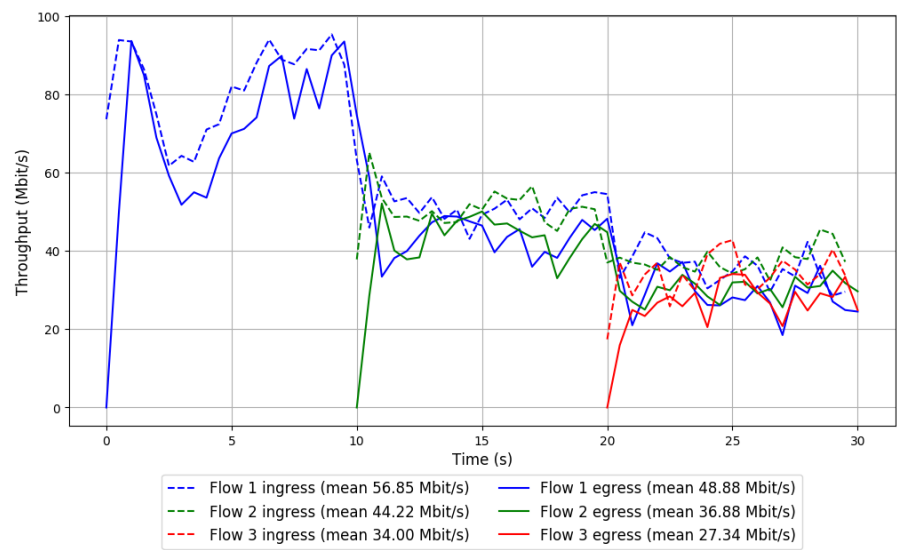Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-11 18:06:51
End at: 2019-02-11 18:07:21
Local clock offset: 4.291 ms
Remote clock offset: -2.523 ms


# Below is generated by plot.py at 2019-02-11 19:24:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.26 Mbit/s
95th percentile per-packet one-way delay: 41.505 ms
Loss rate: 11.35%
-- Flow 1:
Average throughput: 43.77 Mbit/s
95th percentile per-packet one-way delay: 38.715 ms
Loss rate: 9.83%
-- Flow 2:
Average throughput: 33.31 Mbit/s
95th percentile per-packet one-way delay: 42.125 ms
Loss rate: 11.52%
-- Flow 3:
Average throughput: 31.79 Mbit/s
95th percentile per-packet one-way delay: 45.277 ms
Loss rate: 16.91%
```

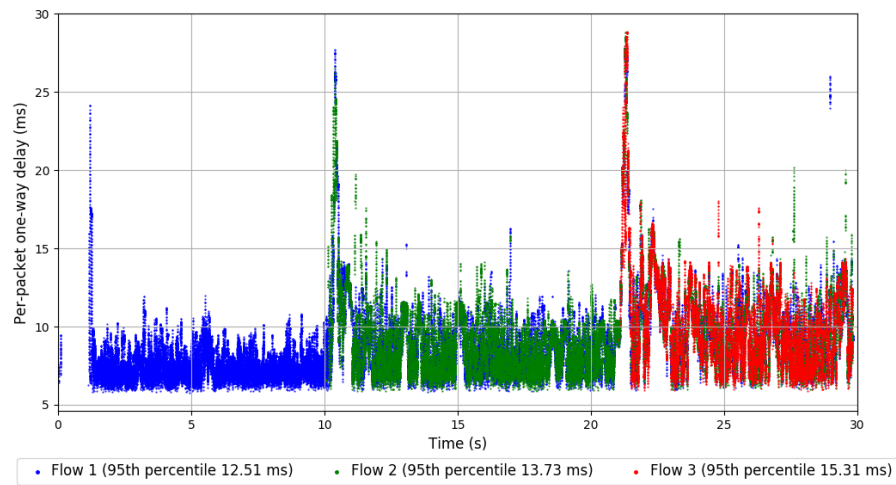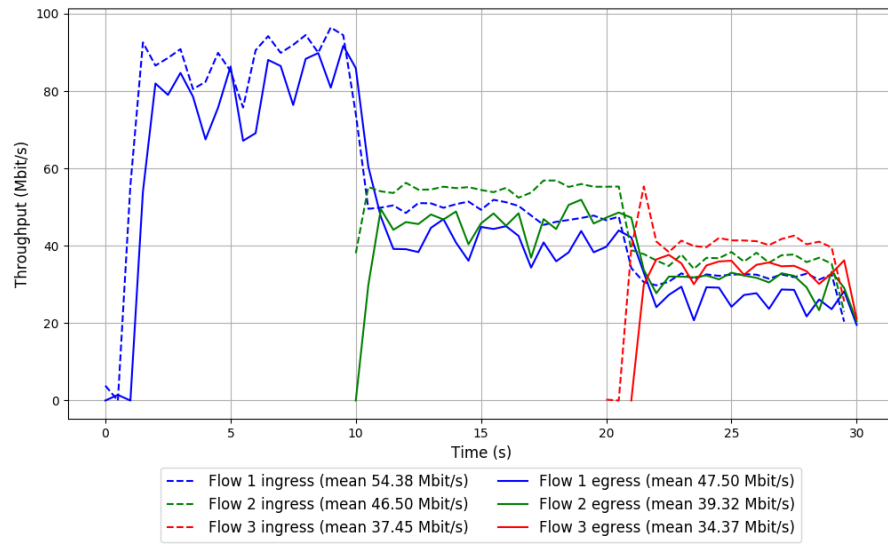Run 3: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 48.59 Mbit/s) —— Flow 1 egress (mean 43.77 Mbit/s)
- - - Flow 2 ingress (mean 37.70 Mbit/s) —— Flow 2 egress (mean 33.31 Mbit/s)
- - - Flow 3 ingress (mean 37.54 Mbit/s) —— Flow 3 egress (mean 31.79 Mbit/s)

• Flow 1 (95th percentile 38.72 ms)   • Flow 2 (95th percentile 42.12 ms)   • Flow 3 (95th percentile 45.28 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-11 18:31:48
End at: 2019-02-11 18:32:18
Local clock offset: 4.967 ms
Remote clock offset: -3.994 ms


# Below is generated by plot.py at 2019-02-11 19:25:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.47 Mbit/s
95th percentile per-packet one-way delay: 35.122 ms
Loss rate: 12.59%
-- Flow 1:
Average throughput: 53.19 Mbit/s
95th percentile per-packet one-way delay: 31.667 ms
Loss rate: 11.74%
-- Flow 2:
Average throughput: 35.83 Mbit/s
95th percentile per-packet one-way delay: 36.546 ms
Loss rate: 11.93%
-- Flow 3:
Average throughput: 25.46 Mbit/s
95th percentile per-packet one-way delay: 41.406 ms
Loss rate: 19.19%
```

Run 4: Report of FillP-Sheep — Data Link
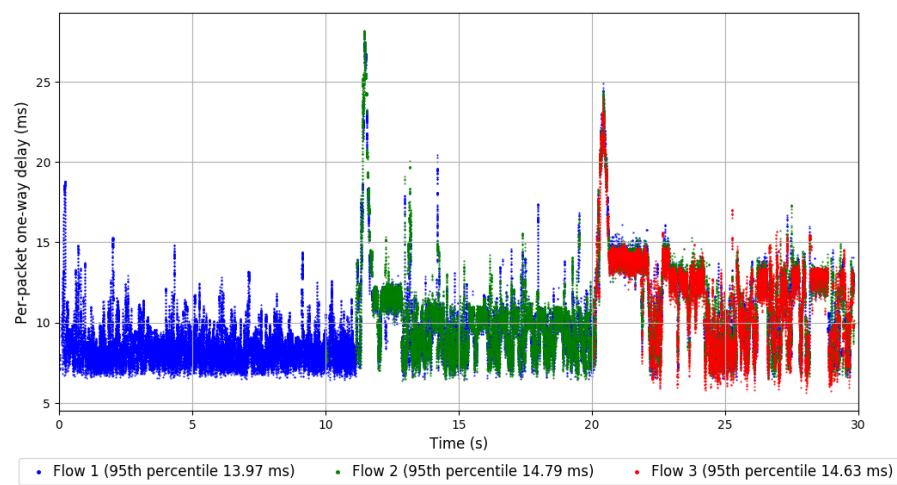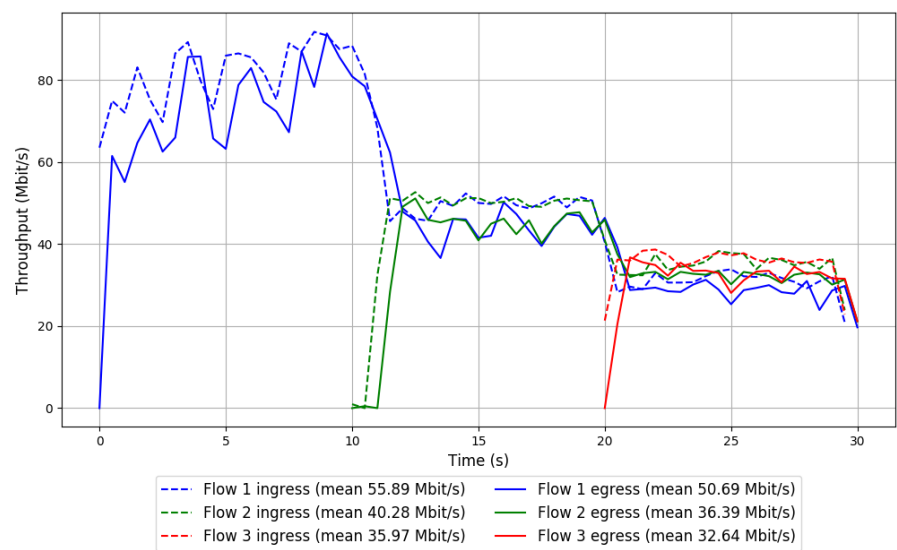

Flow 1 ingress (mean 60.30 Mbit/s)   Flow 1 egress (mean 53.19 Mbit/s)
Flow 2 ingress (mean 40.73 Mbit/s)   Flow 2 egress (mean 35.83 Mbit/s)
Flow 3 ingress (mean 31.53 Mbit/s)   Flow 3 egress (mean 25.46 Mbit/s)

Flow 1 (95th percentile 31.67 ms)   Flow 2 (95th percentile 36.55 ms)   Flow 3 (95th percentile 41.41 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-11 18:56:43
End at: 2019-02-11 18:57:13
Local clock offset: 2.491 ms
Remote clock offset: -3.507 ms


# Below is generated by plot.py at 2019-02-11 19:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.48 Mbit/s
95th percentile per-packet one-way delay: 31.225 ms
Loss rate: 15.42%
-- Flow 1:
Average throughput: 48.88 Mbit/s
95th percentile per-packet one-way delay: 28.428 ms
Loss rate: 14.00%
-- Flow 2:
Average throughput: 36.88 Mbit/s
95th percentile per-packet one-way delay: 31.896 ms
Loss rate: 16.58%
-- Flow 3:
Average throughput: 27.34 Mbit/s
95th percentile per-packet one-way delay: 37.072 ms
Loss rate: 19.52%
```

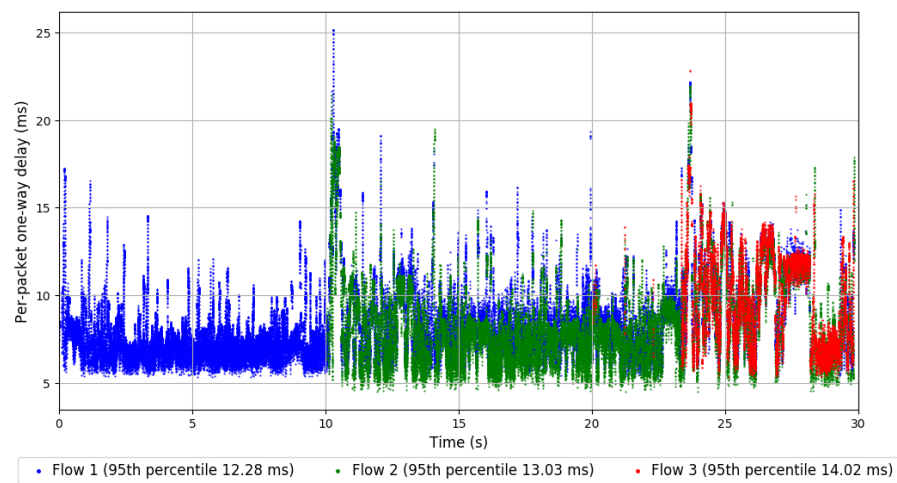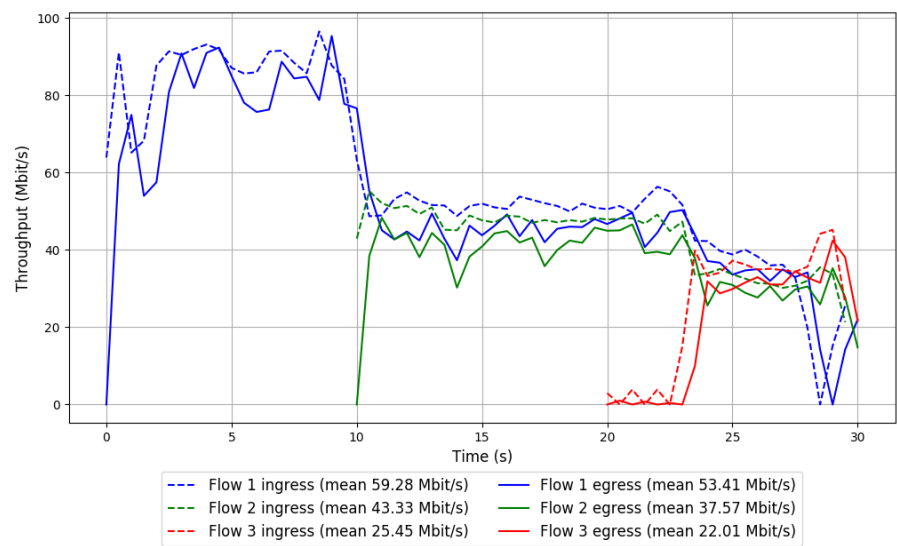Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-02-11 17:39:43
End at: 2019-02-11 17:40:13
Local clock offset: 2.877 ms
Remote clock offset: -4.735 ms


# Below is generated by plot.py at 2019-02-11 19:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.71 Mbit/s
95th percentile per-packet one-way delay: 13.507 ms
Loss rate: 14.15%
-- Flow 1:
Average throughput: 47.50 Mbit/s
95th percentile per-packet one-way delay: 12.511 ms
Loss rate: 12.64%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 13.735 ms
Loss rate: 15.42%
-- Flow 3:
Average throughput: 34.37 Mbit/s
95th percentile per-packet one-way delay: 15.307 ms
Loss rate: 17.63%
```
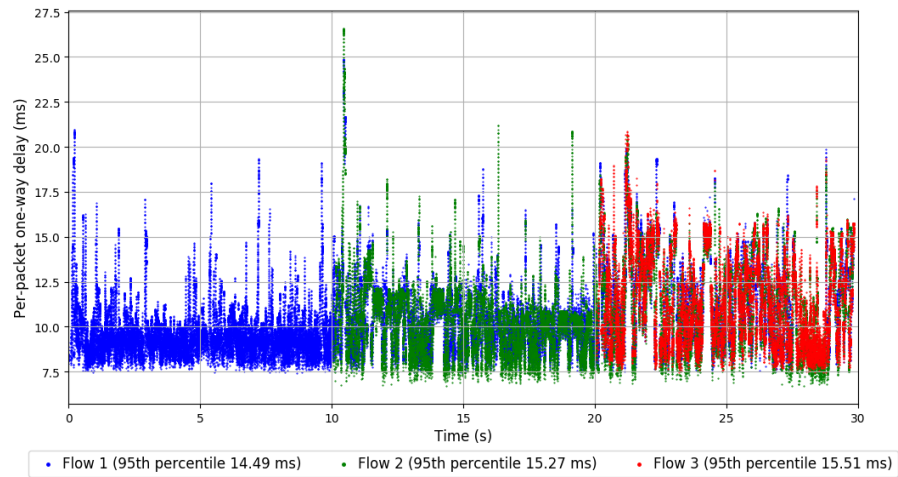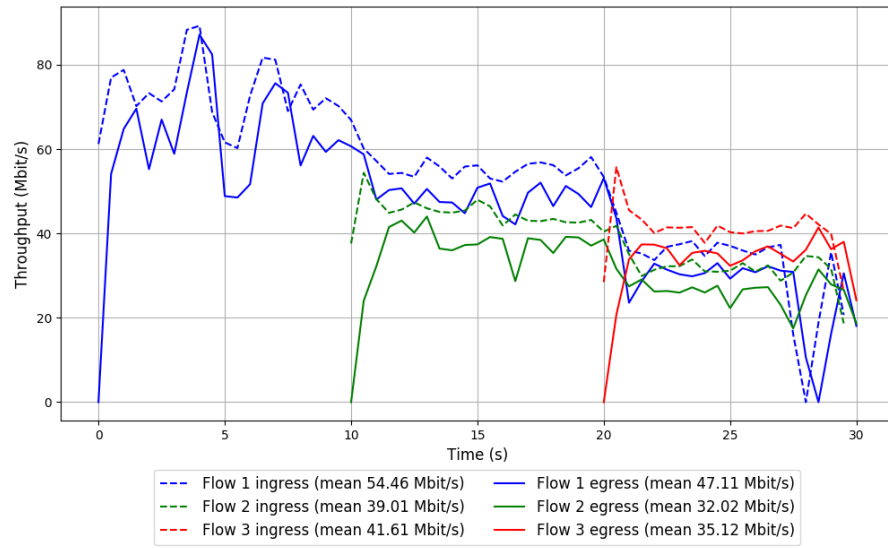
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-02-11 18:04:22
End at: 2019-02-11 18:04:52
Local clock offset: 8.444 ms
Remote clock offset: -2.933 ms


# Below is generated by plot.py at 2019-02-11 19:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.51 Mbit/s
95th percentile per-packet one-way delay: 14.359 ms
Loss rate: 9.40%
-- Flow 1:
Average throughput: 50.69 Mbit/s
95th percentile per-packet one-way delay: 13.975 ms
Loss rate: 9.31%
-- Flow 2:
Average throughput: 36.39 Mbit/s
95th percentile per-packet one-way delay: 14.789 ms
Loss rate: 9.66%
-- Flow 3:
Average throughput: 32.64 Mbit/s
95th percentile per-packet one-way delay: 14.632 ms
Loss rate: 9.24%
```
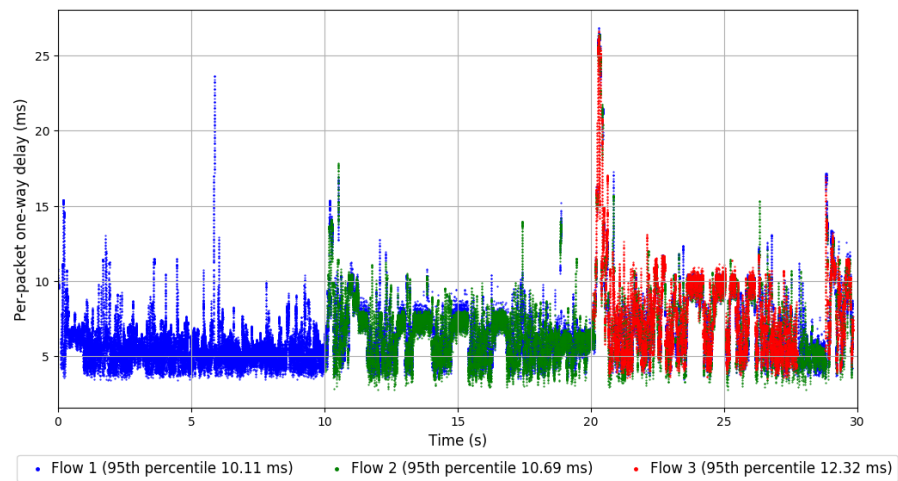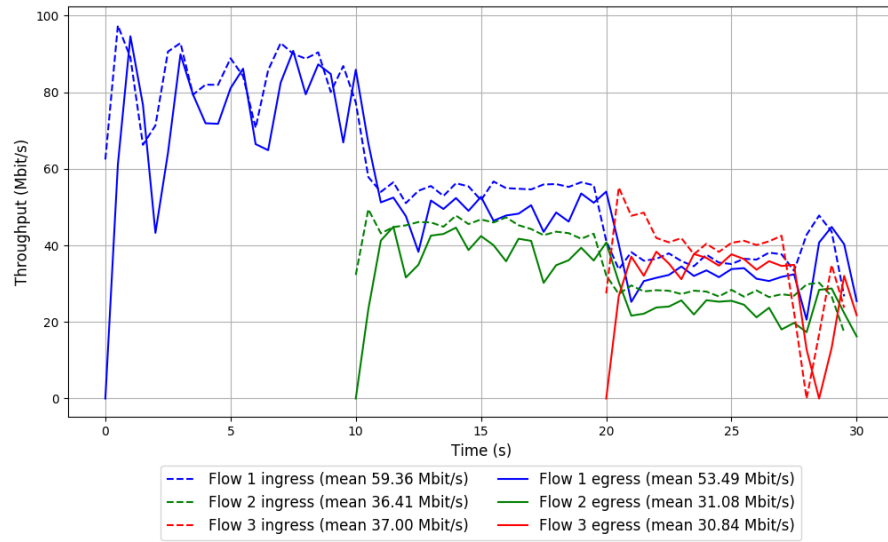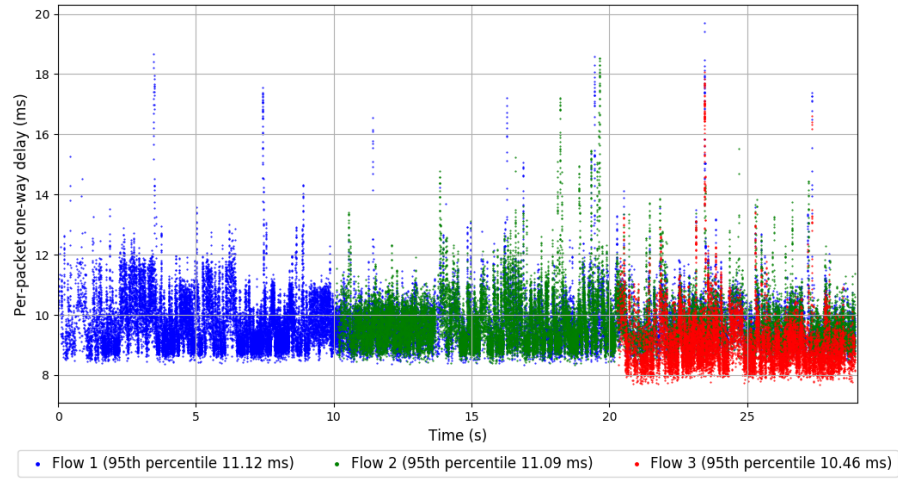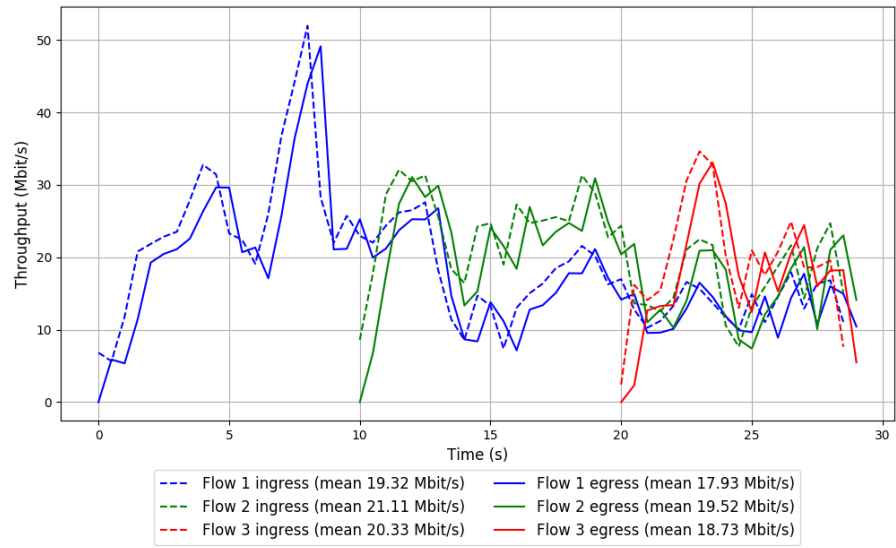
Run 2: Report of Indigo — Data Link

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```
Run 3: Statistics of Indigo

Start at: 2019-02-11 18:29:10
End at: 2019-02-11 18:29:40
Local clock offset: 4.563 ms
Remote clock offset: -5.482 ms


# Below is generated by plot.py at 2019-02-11 19:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.56 Mbit/s
95th percentile per-packet one-way delay: 12.892 ms
Loss rate: 11.19%
-- Flow 1:
Average throughput: 53.41 Mbit/s
95th percentile per-packet one-way delay: 12.282 ms
Loss rate: 9.88%
-- Flow 2:
Average throughput: 37.57 Mbit/s
95th percentile per-packet one-way delay: 13.028 ms
Loss rate: 13.23%
-- Flow 3:
Average throughput: 22.01 Mbit/s
95th percentile per-packet one-way delay: 14.018 ms
Loss rate: 13.44%
```

Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 59.28 Mbit/s) --- Flow 1 egress (mean 53.41 Mbit/s)
Flow 2 ingress (mean 43.33 Mbit/s) --- Flow 2 egress (mean 37.57 Mbit/s)
Flow 3 ingress (mean 25.45 Mbit/s) --- Flow 3 egress (mean 22.01 Mbit/s)

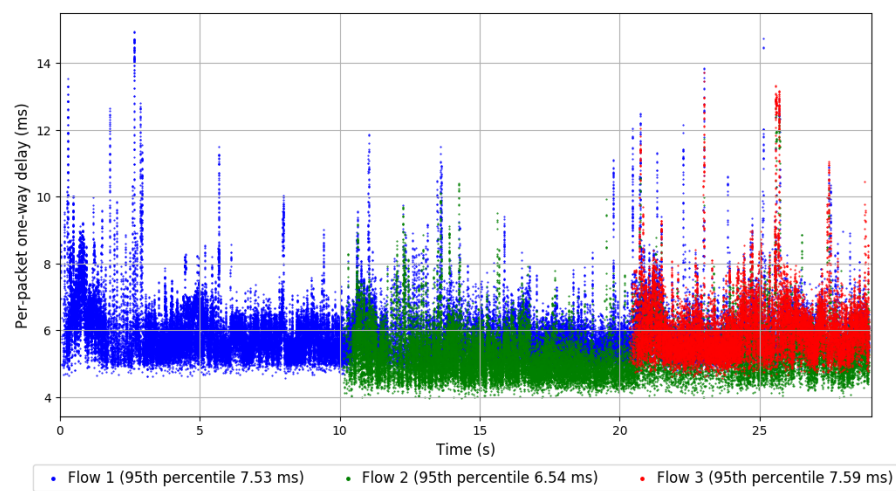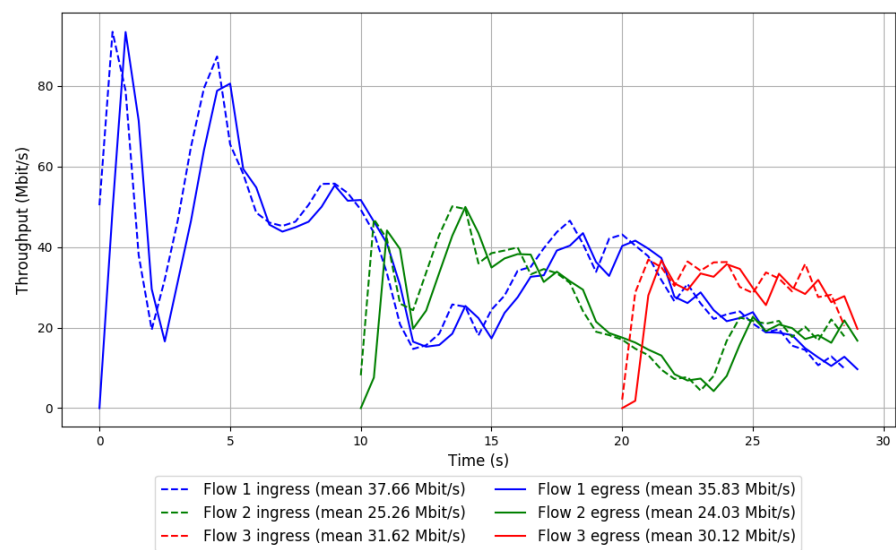Flow 1 (95th percentile 12.28 ms) · Flow 2 (95th percentile 13.03 ms) · Flow 3 (95th percentile 14.02 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-02-11 18:54:08
End at: 2019-02-11 18:54:38
Local clock offset: -0.482 ms
Remote clock offset: -4.677 ms


# Below is generated by plot.py at 2019-02-11 19:25:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.87 Mbit/s
95th percentile per-packet one-way delay: 15.062 ms
Loss rate: 15.00%
-- Flow 1:
Average throughput: 47.11 Mbit/s
95th percentile per-packet one-way delay: 14.491 ms
Loss rate: 13.49%
-- Flow 2:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 15.271 ms
Loss rate: 17.90%
-- Flow 3:
Average throughput: 35.12 Mbit/s
95th percentile per-packet one-way delay: 15.514 ms
Loss rate: 15.55%
```
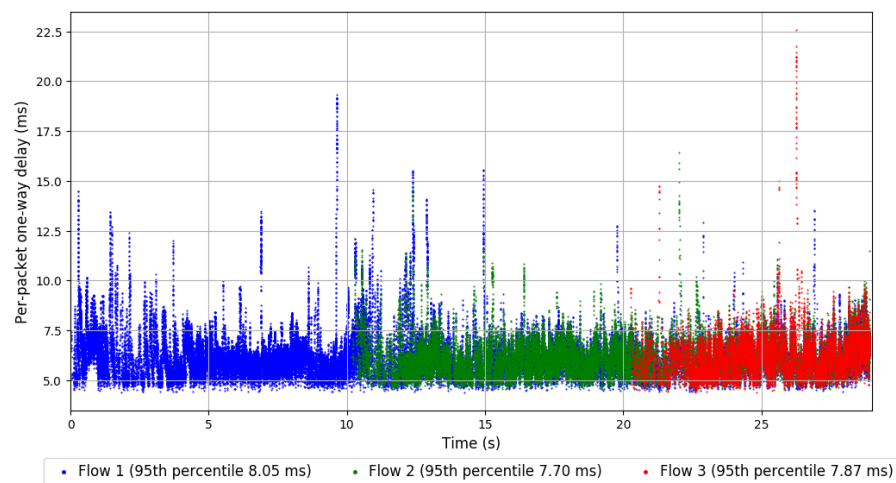
Run 4: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 54.46 Mbit/s) —— Flow 1 egress (mean 47.11 Mbit/s)
- - - Flow 2 ingress (mean 39.01 Mbit/s) —— Flow 2 egress (mean 32.02 Mbit/s)
- - - Flow 3 ingress (mean 41.61 Mbit/s) —— Flow 3 egress (mean 35.12 Mbit/s)

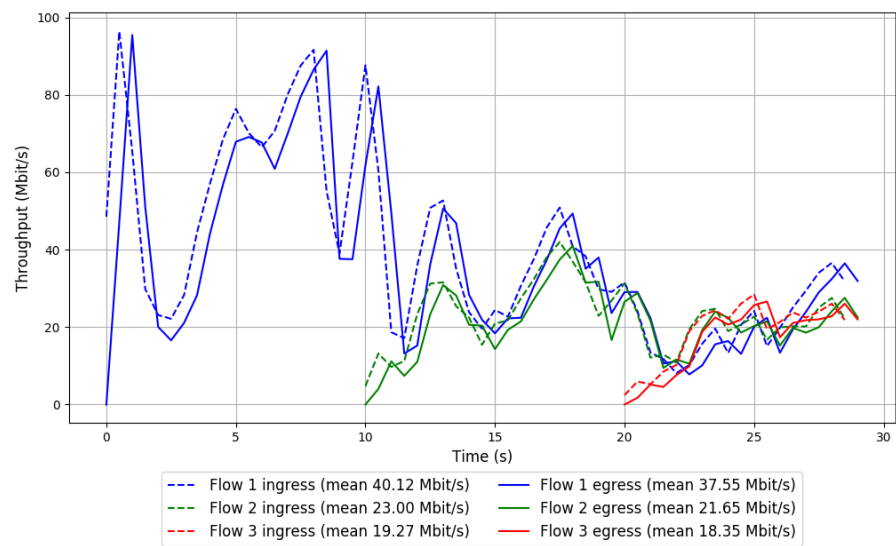- Flow 1 (95th percentile 14.49 ms) - Flow 2 (95th percentile 15.27 ms) - Flow 3 (95th percentile 15.51 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-02-11 19:18:59
End at: 2019-02-11 19:19:29
Local clock offset: 6.346 ms
Remote clock offset: -5.386 ms


# Below is generated by plot.py at 2019-02-11 19:25:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.20 Mbit/s
95th percentile per-packet one-way delay: 10.430 ms
Loss rate: 11.97%
-- Flow 1:
Average throughput: 53.49 Mbit/s
95th percentile per-packet one-way delay: 10.113 ms
Loss rate: 9.93%
-- Flow 2:
Average throughput: 31.08 Mbit/s
95th percentile per-packet one-way delay: 10.691 ms
Loss rate: 14.62%
-- Flow 3:
Average throughput: 30.84 Mbit/s
95th percentile per-packet one-way delay: 12.324 ms
Loss rate: 16.65%
```

Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 59.36 Mbit/s)   Flow 1 egress (mean 53.49 Mbit/s)
Flow 2 ingress (mean 36.41 Mbit/s)   Flow 2 egress (mean 31.08 Mbit/s)
Flow 3 ingress (mean 37.00 Mbit/s)   Flow 3 egress (mean 30.84 Mbit/s)

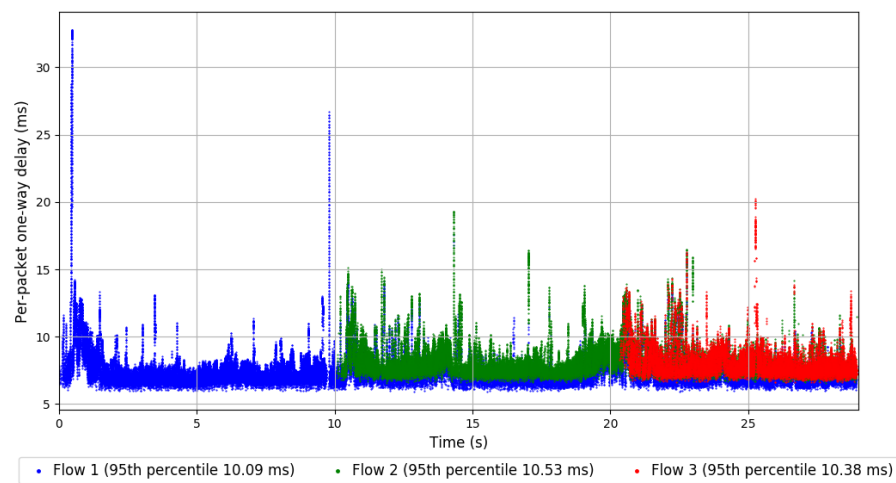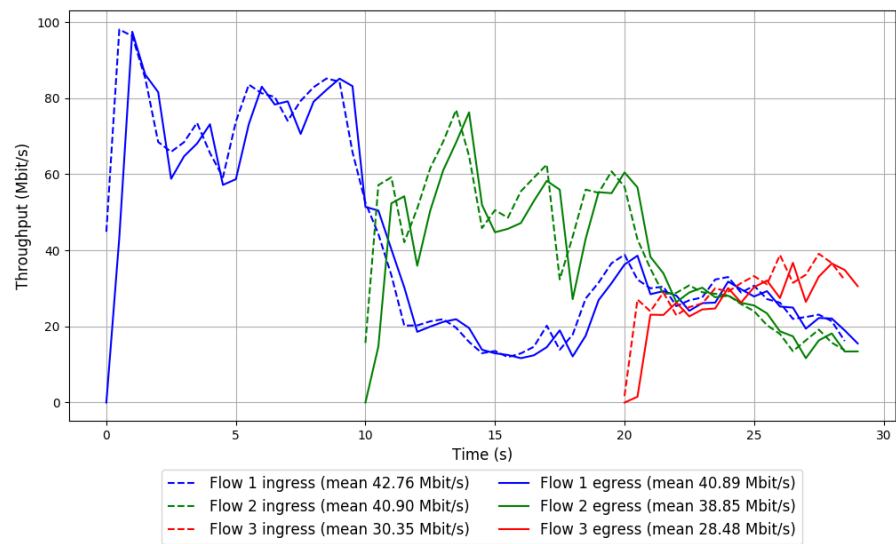Flow 1 (95th percentile 10.11 ms)   Flow 2 (95th percentile 10.69 ms)   Flow 3 (95th percentile 12.32 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:29:15
End at: 2019-02-11 17:29:45
Local clock offset: -1.373 ms
Remote clock offset: -3.119 ms


# Below is generated by plot.py at 2019-02-11 19:25:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 11.042 ms
Loss rate: 7.43%
-- Flow 1:
Average throughput: 17.93 Mbit/s
95th percentile per-packet one-way delay: 11.125 ms
Loss rate: 7.21%
-- Flow 2:
Average throughput: 19.52 Mbit/s
95th percentile per-packet one-way delay: 11.088 ms
Loss rate: 7.54%
-- Flow 3:
Average throughput: 18.73 Mbit/s
95th percentile per-packet one-way delay: 10.459 ms
Loss rate: 7.86%
```

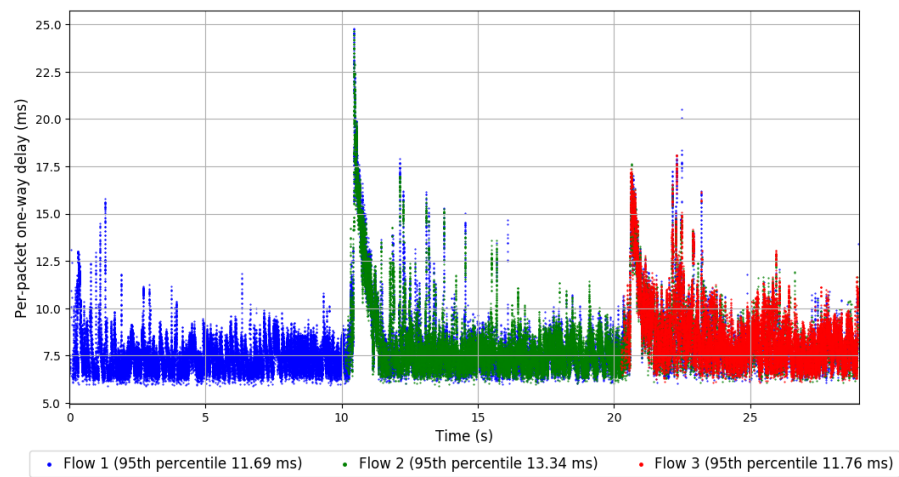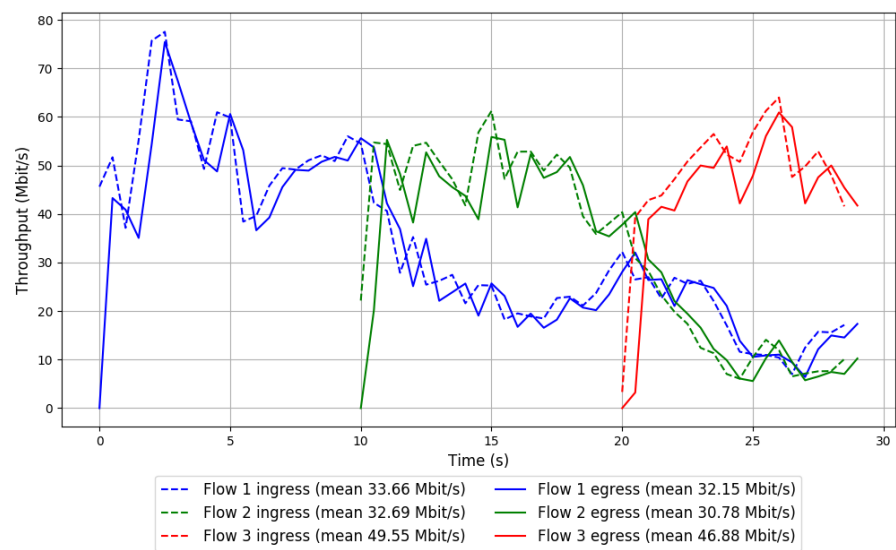Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-11 17:53:50
End at: 2019-02-11 17:54:20
Local clock offset: 8.825 ms
Remote clock offset: -3.386 ms


# Below is generated by plot.py at 2019-02-11 19:25:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.40 Mbit/s
95th percentile per-packet one-way delay: 7.356 ms
Loss rate: 4.84%
-- Flow 1:
Average throughput: 35.83 Mbit/s
95th percentile per-packet one-way delay: 7.529 ms
Loss rate: 4.85%
-- Flow 2:
Average throughput: 24.03 Mbit/s
95th percentile per-packet one-way delay: 6.536 ms
Loss rate: 4.87%
-- Flow 3:
Average throughput: 30.12 Mbit/s
95th percentile per-packet one-way delay: 7.588 ms
Loss rate: 4.72%
```
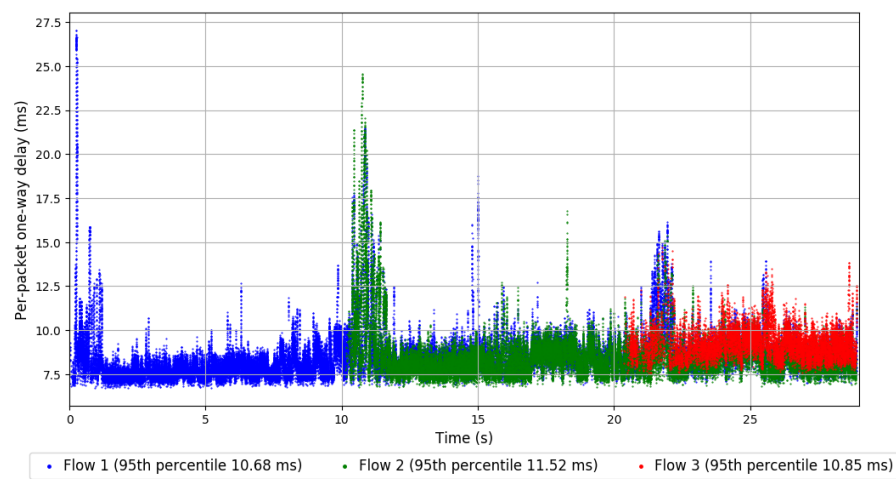
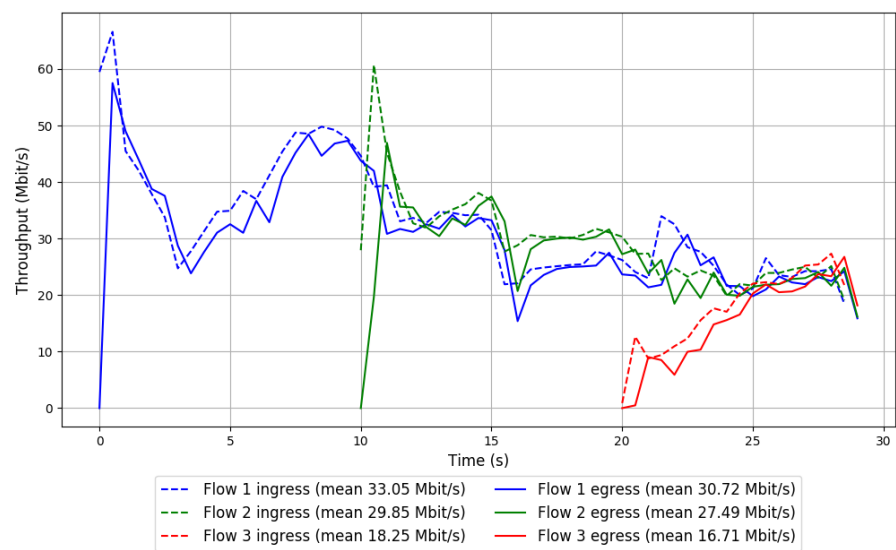Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:18:28
End at: 2019-02-11 18:18:58
Local clock offset: 5.608 ms
Remote clock offset: -5.409 ms


# Below is generated by plot.py at 2019-02-11 19:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.09 Mbit/s
95th percentile per-packet one-way delay: 7.937 ms
Loss rate: 6.10%
-- Flow 1:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 8.054 ms
Loss rate: 6.40%
-- Flow 2:
Average throughput: 21.65 Mbit/s
95th percentile per-packet one-way delay: 7.698 ms
Loss rate: 5.82%
-- Flow 3:
Average throughput: 18.35 Mbit/s
95th percentile per-packet one-way delay: 7.867 ms
Loss rate: 4.75%
```

Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 40.12 Mbit/s) --- Flow 1 egress (mean 37.55 Mbit/s)
Flow 2 ingress (mean 23.00 Mbit/s) --- Flow 2 egress (mean 21.65 Mbit/s)
Flow 3 ingress (mean 19.27 Mbit/s) --- Flow 3 egress (mean 18.35 Mbit/s)

Flow 1 (95th percentile 8.05 ms)   Flow 2 (95th percentile 7.70 ms)   Flow 3 (95th percentile 7.87 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-11 18:43:28
End at: 2019-02-11 18:43:58
Local clock offset: 1.846 ms
Remote clock offset: -4.463 ms


# Below is generated by plot.py at 2019-02-11 19:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 10.315 ms
Loss rate: 4.79%
-- Flow 1:
Average throughput: 40.89 Mbit/s
95th percentile per-packet one-way delay: 10.091 ms
Loss rate: 4.37%
-- Flow 2:
Average throughput: 38.85 Mbit/s
95th percentile per-packet one-way delay: 10.531 ms
Loss rate: 4.99%
-- Flow 3:
Average throughput: 28.48 Mbit/s
95th percentile per-packet one-way delay: 10.382 ms
Loss rate: 6.16%
```
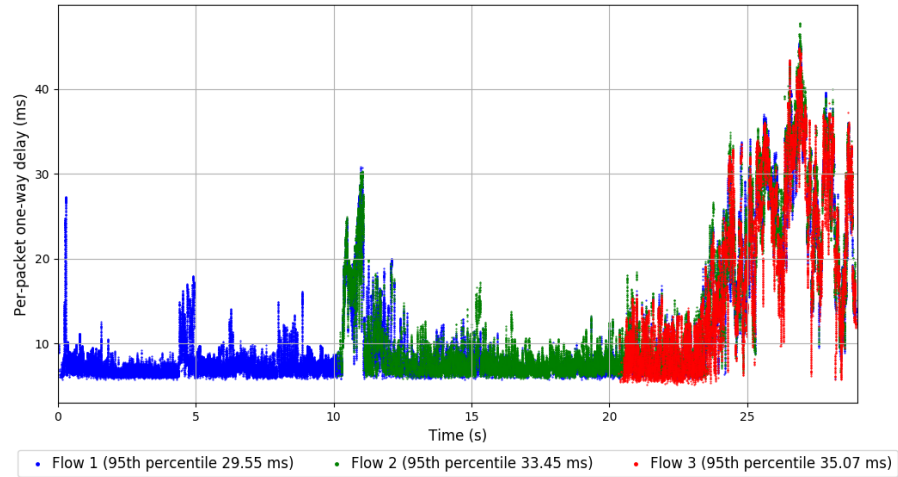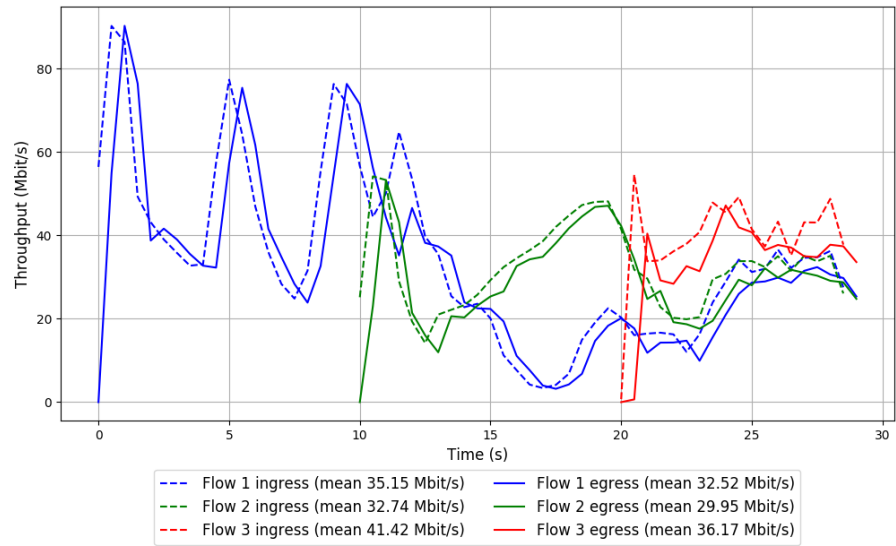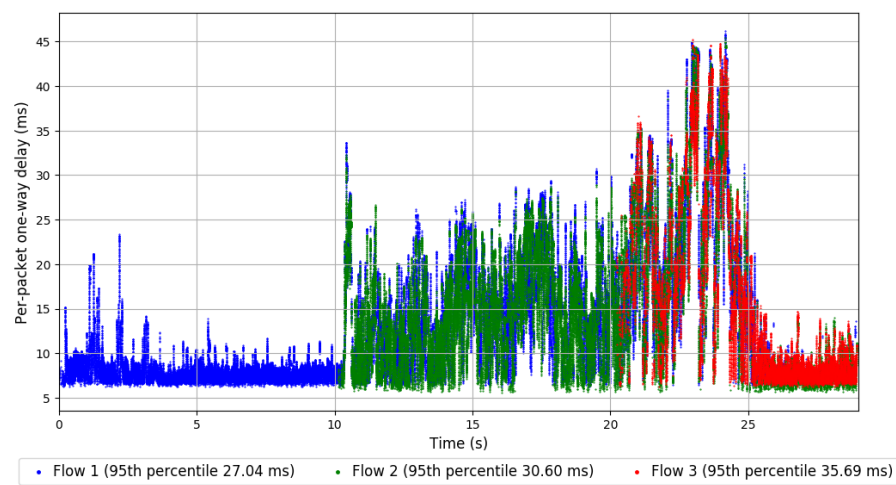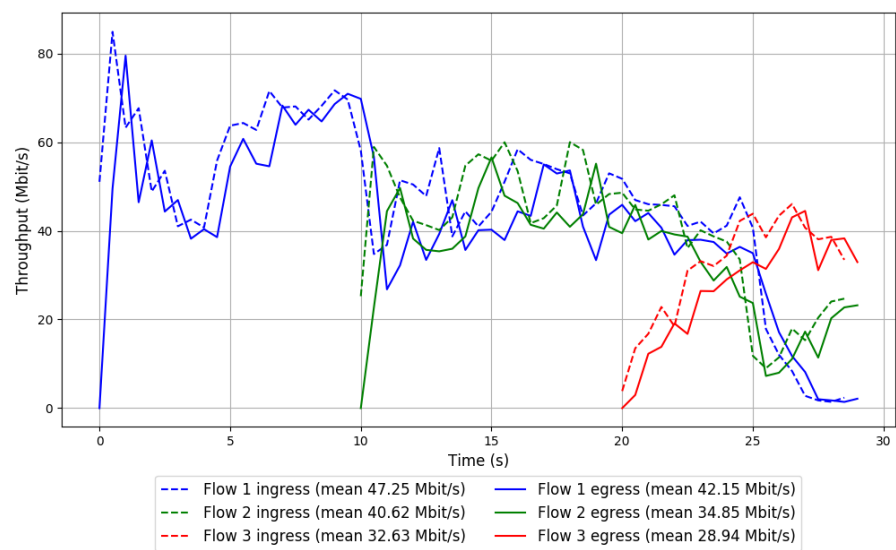
Run 4: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 42.76 Mbit/s) —— Flow 1 egress (mean 40.89 Mbit/s)
- - - Flow 2 ingress (mean 40.90 Mbit/s) —— Flow 2 egress (mean 38.85 Mbit/s)
- - - Flow 3 ingress (mean 30.35 Mbit/s) —— Flow 3 egress (mean 28.48 Mbit/s)

• Flow 1 (95th percentile 10.09 ms)   • Flow 2 (95th percentile 10.53 ms)   • Flow 3 (95th percentile 10.38 ms)

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```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-11 19:08:25
End at: 2019-02-11 19:08:55
Local clock offset: 2.838 ms
Remote clock offset: -4.147 ms


# Below is generated by plot.py at 2019-02-11 19:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.29 Mbit/s
95th percentile per-packet one-way delay: 12.285 ms
Loss rate: 5.09%
-- Flow 1:
Average throughput: 32.15 Mbit/s
95th percentile per-packet one-way delay: 11.690 ms
Loss rate: 4.49%
-- Flow 2:
Average throughput: 30.78 Mbit/s
95th percentile per-packet one-way delay: 13.336 ms
Loss rate: 5.84%
-- Flow 3:
Average throughput: 46.88 Mbit/s
95th percentile per-packet one-way delay: 11.759 ms
Loss rate: 5.37%
```
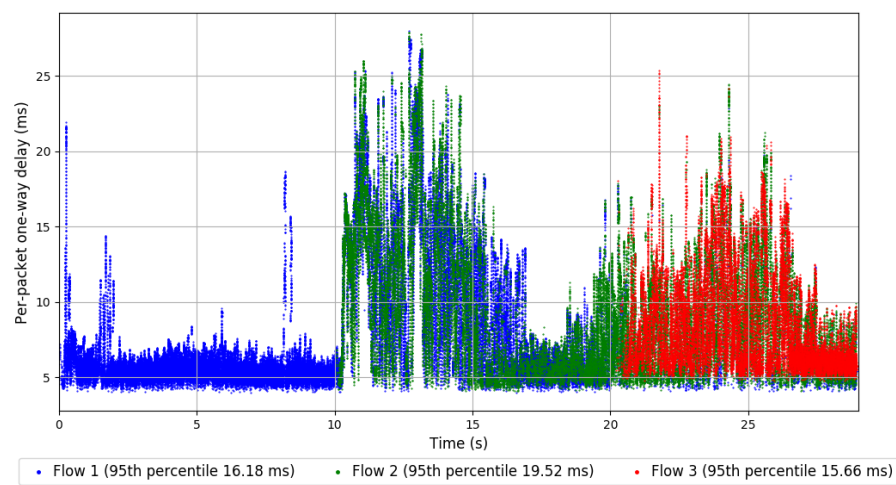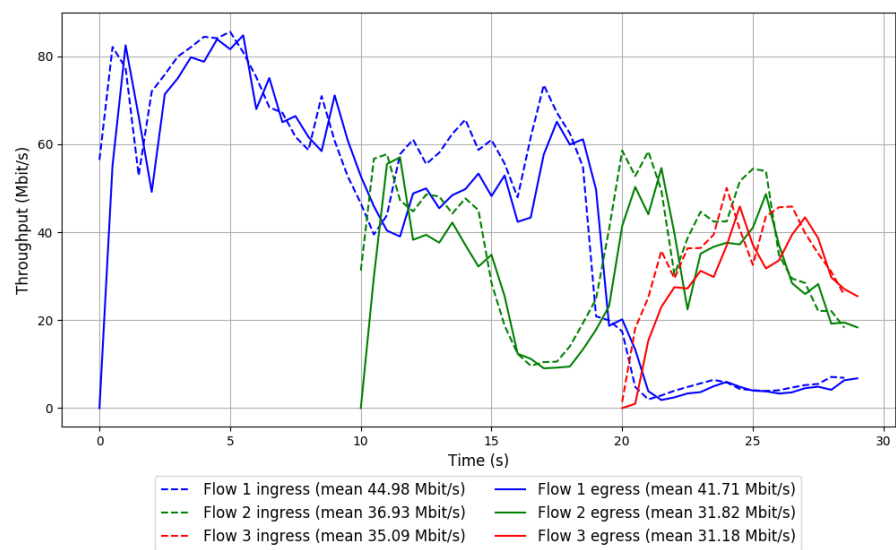
Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:35:07
End at: 2019-02-11 17:35:37
Local clock offset: -0.79 ms
Remote clock offset: -4.262 ms


# Below is generated by plot.py at 2019-02-11 19:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 53.55 Mbit/s
95th percentile per-packet one-way delay: 10.944 ms
Loss rate: 7.46%
-- Flow 1:
Average throughput: 30.72 Mbit/s
95th percentile per-packet one-way delay: 10.677 ms
Loss rate: 7.04%
-- Flow 2:
Average throughput: 27.49 Mbit/s
95th percentile per-packet one-way delay: 11.524 ms
Loss rate: 7.92%
-- Flow 3:
Average throughput: 16.71 Mbit/s
95th percentile per-packet one-way delay: 10.850 ms
Loss rate: 8.45%
```

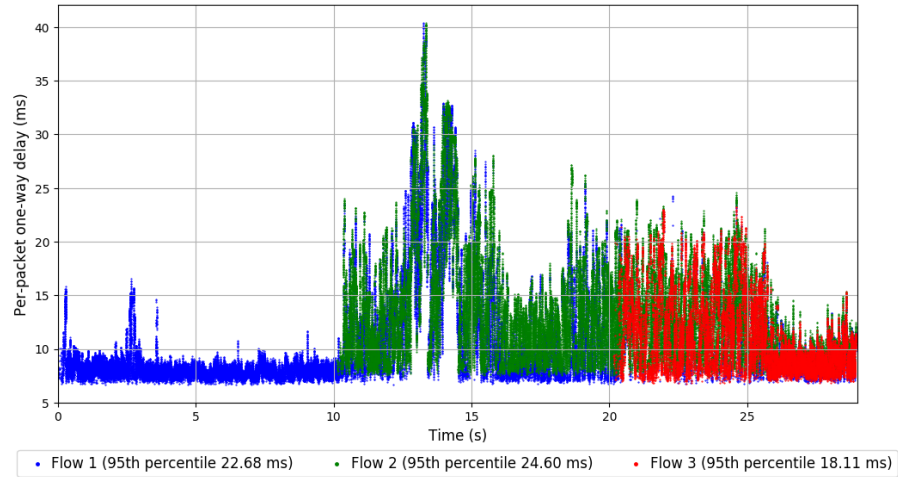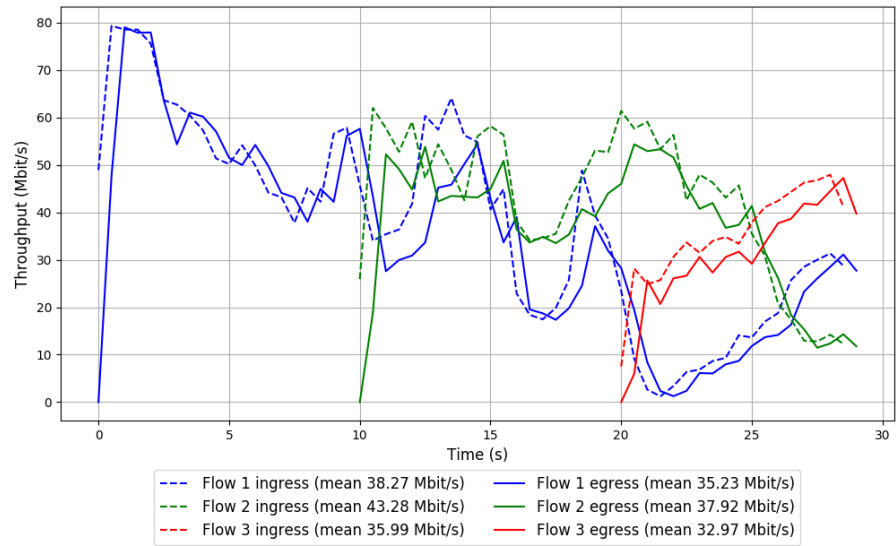Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-11 17:59:49
End at: 2019-02-11 18:00:19
Local clock offset: 7.569 ms
Remote clock offset: -4.26 ms


# Below is generated by plot.py at 2019-02-11 19:26:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 32.570 ms
Loss rate: 8.69%
-- Flow 1:
Average throughput: 32.52 Mbit/s
95th percentile per-packet one-way delay: 29.551 ms
Loss rate: 7.45%
-- Flow 2:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 33.446 ms
Loss rate: 8.48%
-- Flow 3:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 35.073 ms
Loss rate: 12.62%
```

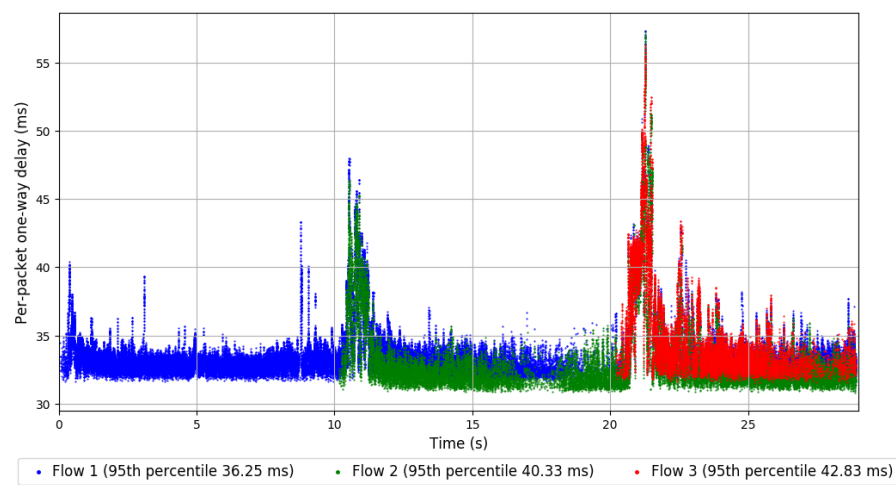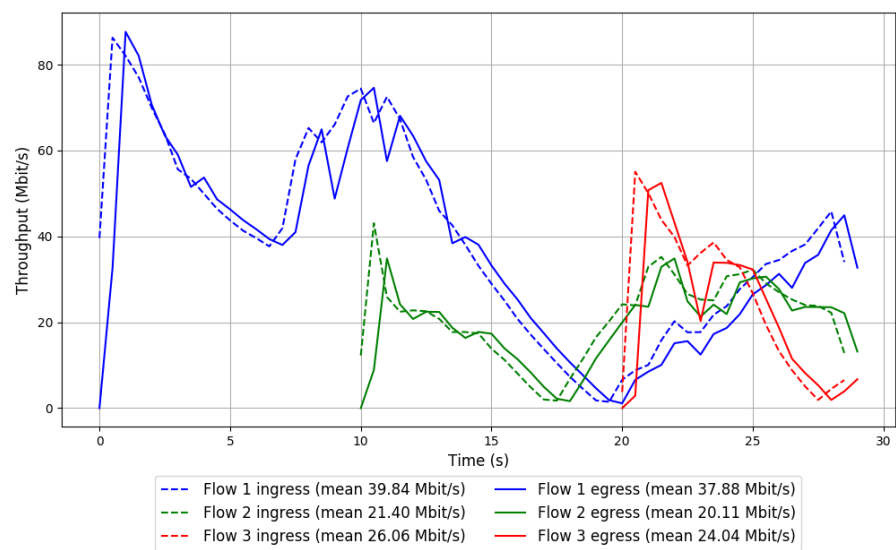Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:24:27
End at: 2019-02-11 18:24:57
Local clock offset: 6.056 ms
Remote clock offset: -2.949 ms


# Below is generated by plot.py at 2019-02-11 19:26:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.58 Mbit/s
95th percentile per-packet one-way delay: 29.879 ms
Loss rate: 11.94%
-- Flow 1:
Average throughput: 42.15 Mbit/s
95th percentile per-packet one-way delay: 27.042 ms
Loss rate: 10.79%
-- Flow 2:
Average throughput: 34.85 Mbit/s
95th percentile per-packet one-way delay: 30.596 ms
Loss rate: 14.18%
-- Flow 3:
Average throughput: 28.94 Mbit/s
95th percentile per-packet one-way delay: 35.694 ms
Loss rate: 11.40%
```

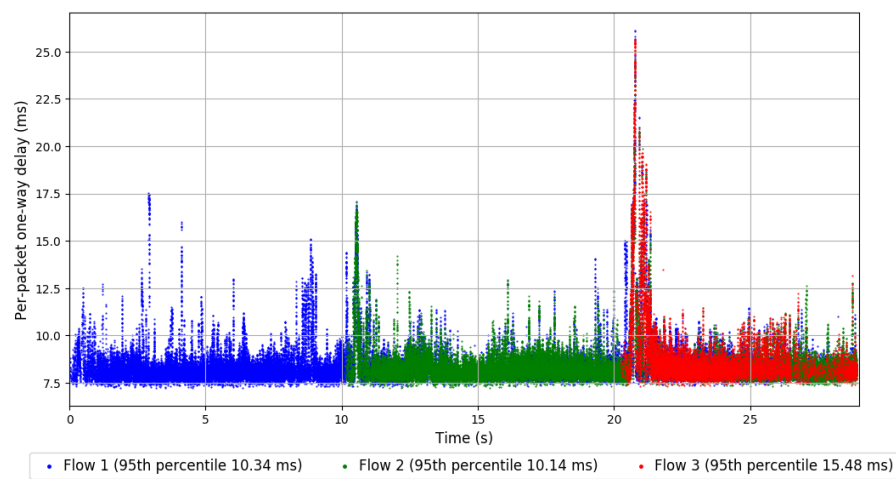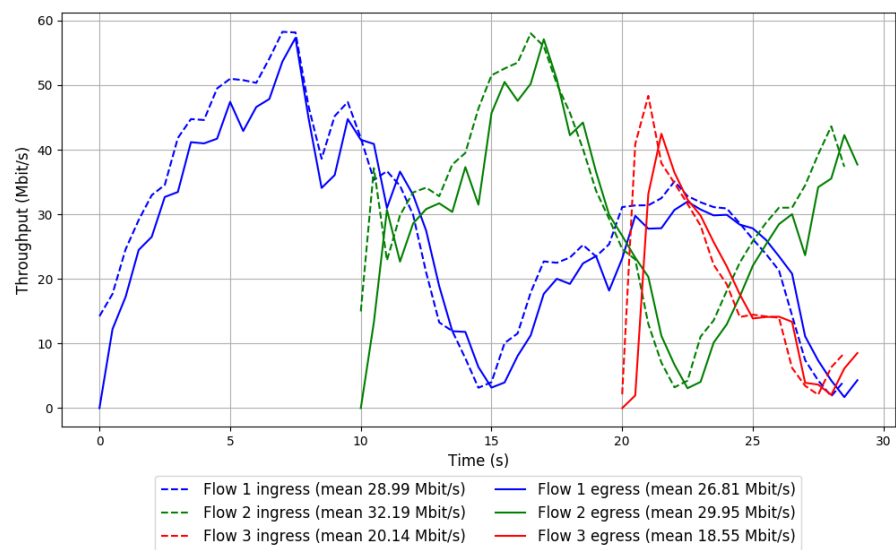Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-11 18:49:31
End at: 2019-02-11 18:50:01
Local clock offset: 1.536 ms
Remote clock offset: -5.846 ms


# Below is generated by plot.py at 2019-02-11 19:26:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.87 Mbit/s
95th percentile per-packet one-way delay: 17.184 ms
Loss rate: 9.76%
-- Flow 1:
Average throughput: 41.71 Mbit/s
95th percentile per-packet one-way delay: 16.183 ms
Loss rate: 7.27%
-- Flow 2:
Average throughput: 31.82 Mbit/s
95th percentile per-packet one-way delay: 19.517 ms
Loss rate: 13.81%
-- Flow 3:
Average throughput: 31.18 Mbit/s
95th percentile per-packet one-way delay: 15.662 ms
Loss rate: 11.13%
```
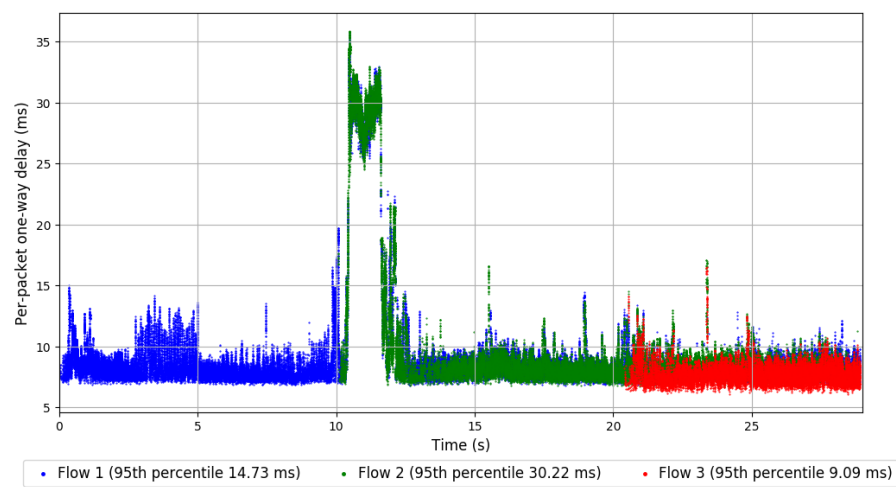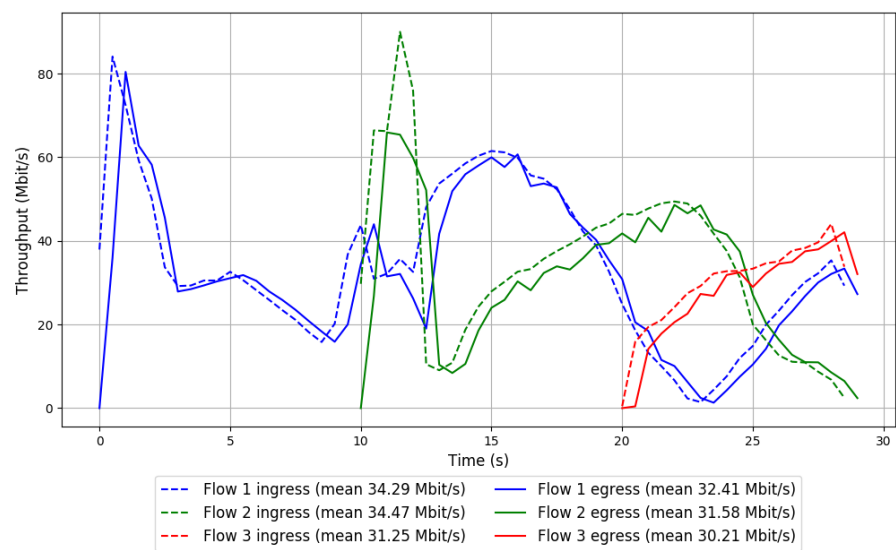
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-11 19:14:23
End at: 2019-02-11 19:14:53
Local clock offset: 3.368 ms
Remote clock offset: -3.715 ms


# Below is generated by plot.py at 2019-02-11 19:26:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.90 Mbit/s
95th percentile per-packet one-way delay: 22.618 ms
Loss rate: 9.61%
-- Flow 1:
Average throughput: 35.23 Mbit/s
95th percentile per-packet one-way delay: 22.678 ms
Loss rate: 7.93%
-- Flow 2:
Average throughput: 37.92 Mbit/s
95th percentile per-packet one-way delay: 24.600 ms
Loss rate: 12.37%
-- Flow 3:
Average throughput: 32.97 Mbit/s
95th percentile per-packet one-way delay: 18.106 ms
Loss rate: 8.36%
```
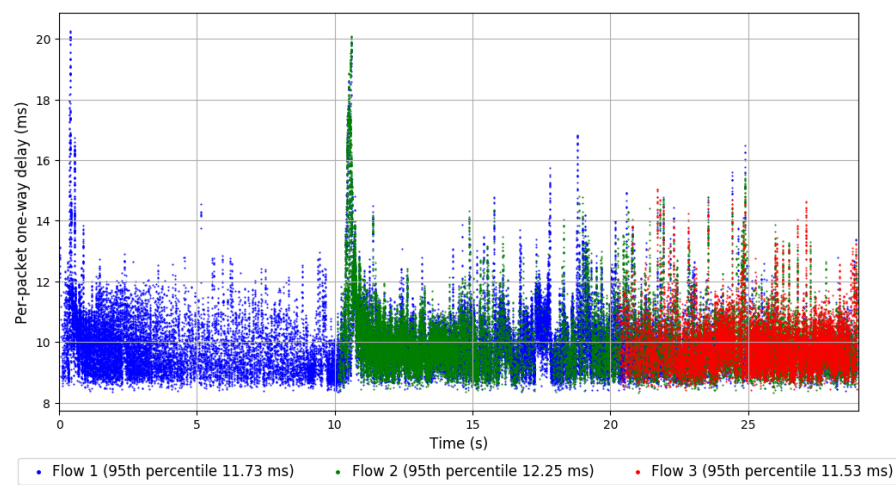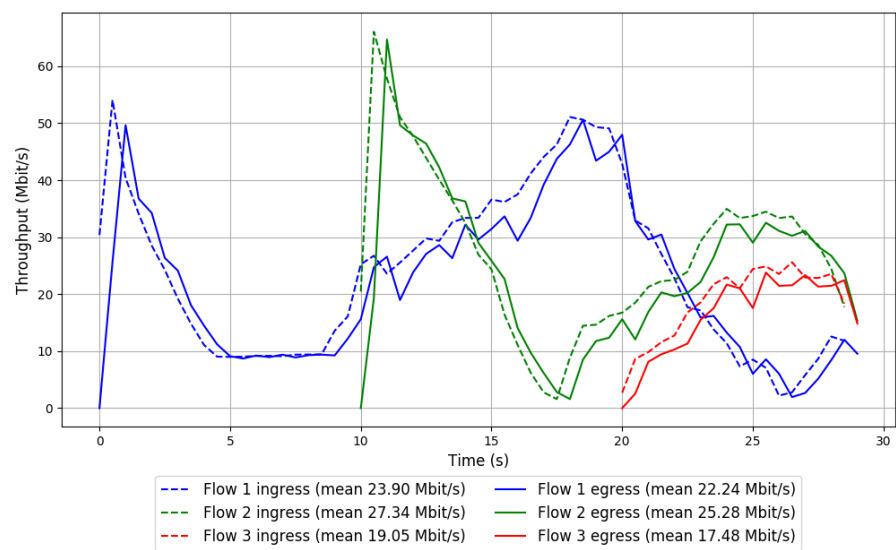
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:18:50
End at: 2019-02-11 17:19:20
Local clock offset: -25.678 ms
Remote clock offset: -4.618 ms

# Below is generated by plot.py at 2019-02-11 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 39.289 ms
Loss rate: 5.52%
-- Flow 1:
Average throughput: 37.88 Mbit/s
95th percentile per-packet one-way delay: 36.253 ms
Loss rate: 4.91%
-- Flow 2:
Average throughput: 20.11 Mbit/s
95th percentile per-packet one-way delay: 40.330 ms
Loss rate: 6.01%
-- Flow 3:
Average throughput: 24.04 Mbit/s
95th percentile per-packet one-way delay: 42.830 ms
Loss rate: 7.79%
```

Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-11 17:43:22
End at: 2019-02-11 17:43:52
Local clock offset: 1.739 ms
Remote clock offset: -4.941 ms


# Below is generated by plot.py at 2019-02-11 19:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.86 Mbit/s
95th percentile per-packet one-way delay: 10.656 ms
Loss rate: 7.35%
-- Flow 1:
Average throughput: 26.81 Mbit/s
95th percentile per-packet one-way delay: 10.335 ms
Loss rate: 7.51%
-- Flow 2:
Average throughput: 29.95 Mbit/s
95th percentile per-packet one-way delay: 10.143 ms
Loss rate: 6.97%
-- Flow 3:
Average throughput: 18.55 Mbit/s
95th percentile per-packet one-way delay: 15.478 ms
Loss rate: 7.89%
```

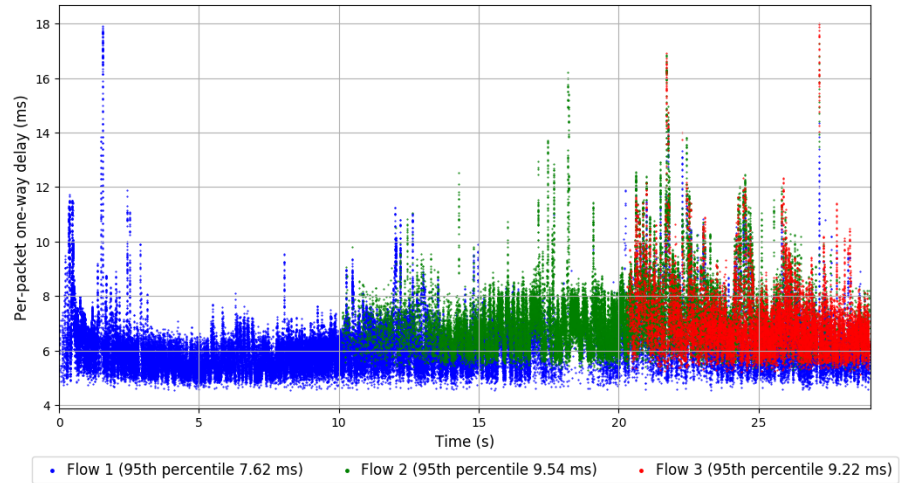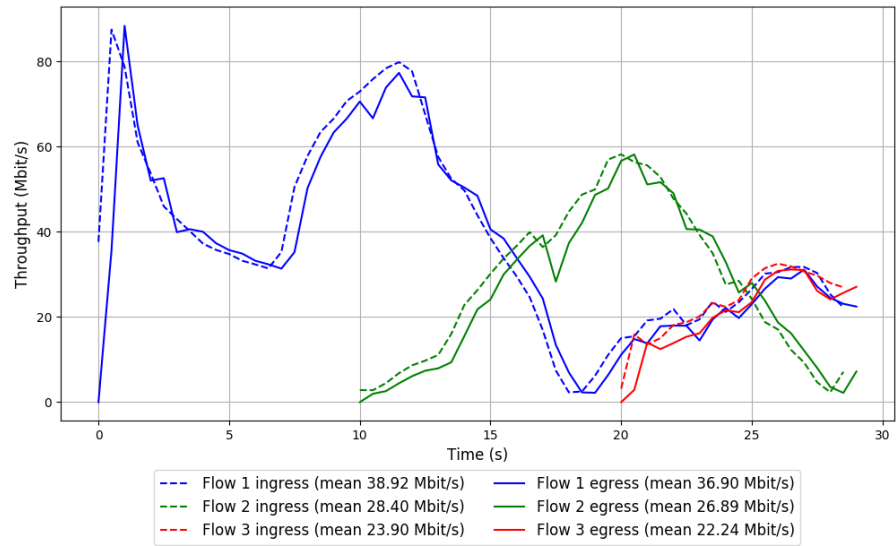Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:08:02
End at: 2019-02-11 18:08:32
Local clock offset: 5.647 ms
Remote clock offset: -4.217 ms


# Below is generated by plot.py at 2019-02-11 19:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 28.501 ms
Loss rate: 6.18%
-- Flow 1:
Average throughput: 32.41 Mbit/s
95th percentile per-packet one-way delay: 14.729 ms
Loss rate: 5.49%
-- Flow 2:
Average throughput: 31.58 Mbit/s
95th percentile per-packet one-way delay: 30.221 ms
Loss rate: 8.39%
-- Flow 3:
Average throughput: 30.21 Mbit/s
95th percentile per-packet one-way delay: 9.094 ms
Loss rate: 3.34%
```

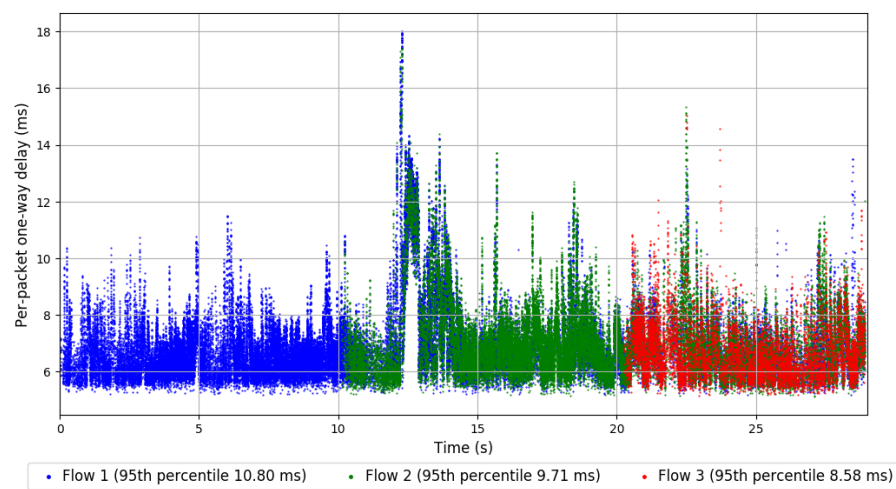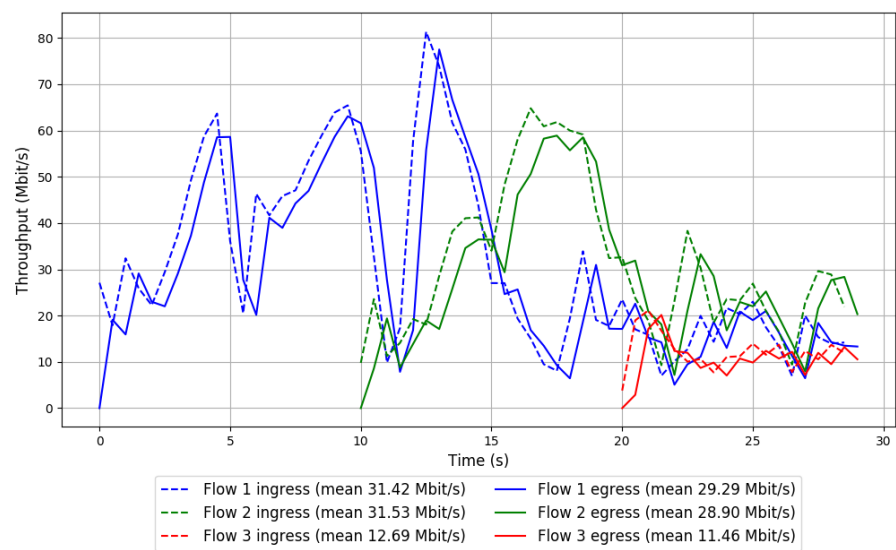Run 3: Report of Indigo-MusesD — Data Link

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```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:33:00
End at: 2019-02-11 18:33:30
Local clock offset: 2.578 ms
Remote clock offset: -3.744 ms


# Below is generated by plot.py at 2019-02-11 19:26:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.01 Mbit/s
95th percentile per-packet one-way delay: 11.897 ms
Loss rate: 7.32%
-- Flow 1:
Average throughput: 22.24 Mbit/s
95th percentile per-packet one-way delay: 11.727 ms
Loss rate: 6.94%
-- Flow 2:
Average throughput: 25.28 Mbit/s
95th percentile per-packet one-way delay: 12.252 ms
Loss rate: 7.52%
-- Flow 3:
Average throughput: 17.48 Mbit/s
95th percentile per-packet one-way delay: 11.532 ms
Loss rate: 8.24%
```

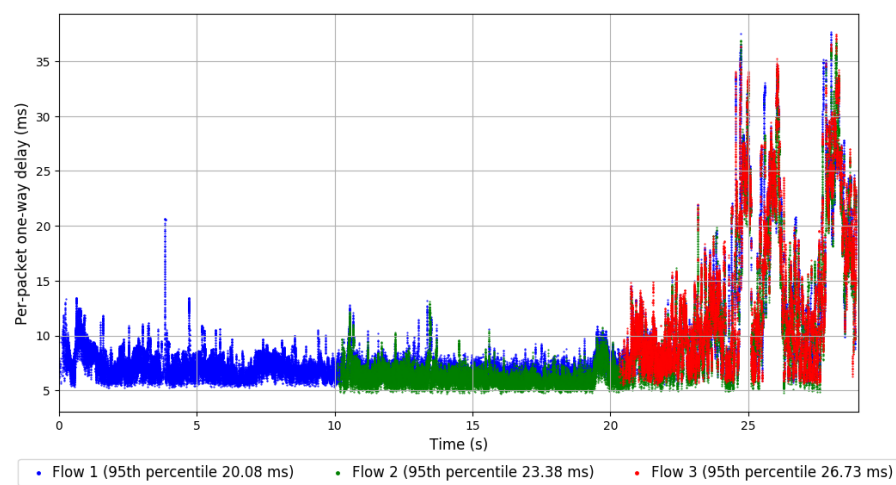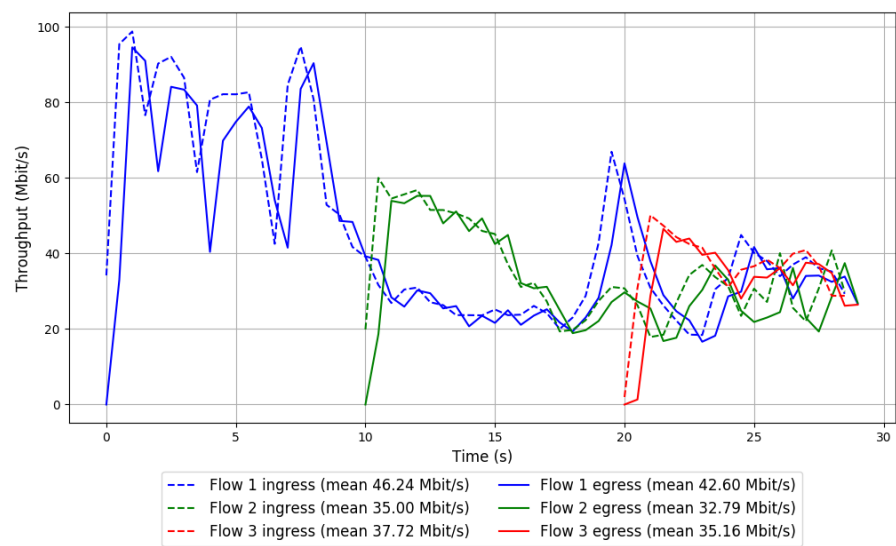Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-11 18:57:54
End at: 2019-02-11 18:58:24
Local clock offset: 2.621 ms
Remote clock offset: -3.451 ms


# Below is generated by plot.py at 2019-02-11 19:26:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.06 Mbit/s
95th percentile per-packet one-way delay: 8.604 ms
Loss rate: 5.43%
-- Flow 1:
Average throughput: 36.90 Mbit/s
95th percentile per-packet one-way delay: 7.616 ms
Loss rate: 5.20%
-- Flow 2:
Average throughput: 26.89 Mbit/s
95th percentile per-packet one-way delay: 9.540 ms
Loss rate: 5.33%
-- Flow 3:
Average throughput: 22.24 Mbit/s
95th percentile per-packet one-way delay: 9.219 ms
Loss rate: 6.99%
```

Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-11 17:24:38
End at: 2019-02-11 17:25:08
Local clock offset: 1.976 ms
Remote clock offset: -3.048 ms


# Below is generated by plot.py at 2019-02-11 19:26:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.53 Mbit/s
95th percentile per-packet one-way delay: 10.189 ms
Loss rate: 7.54%
-- Flow 1:
Average throughput: 29.29 Mbit/s
95th percentile per-packet one-way delay: 10.801 ms
Loss rate: 6.77%
-- Flow 2:
Average throughput: 28.90 Mbit/s
95th percentile per-packet one-way delay: 9.714 ms
Loss rate: 8.31%
-- Flow 3:
Average throughput: 11.46 Mbit/s
95th percentile per-packet one-way delay: 8.578 ms
Loss rate: 9.73%
```
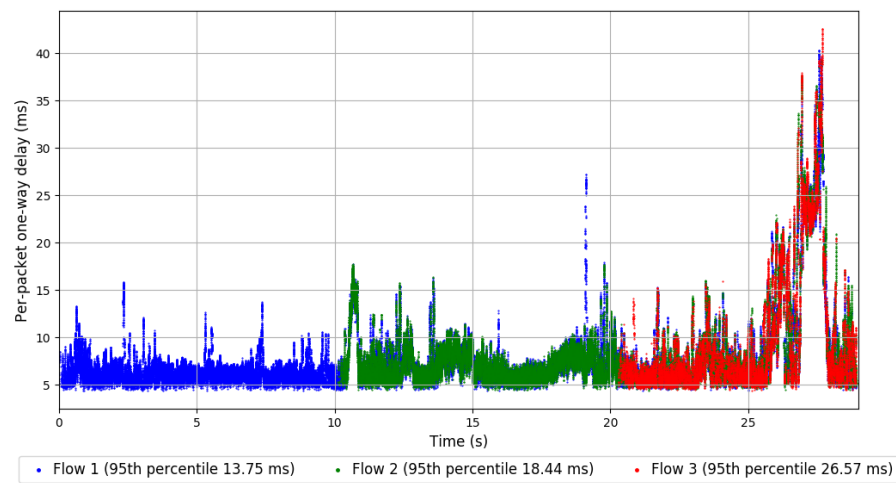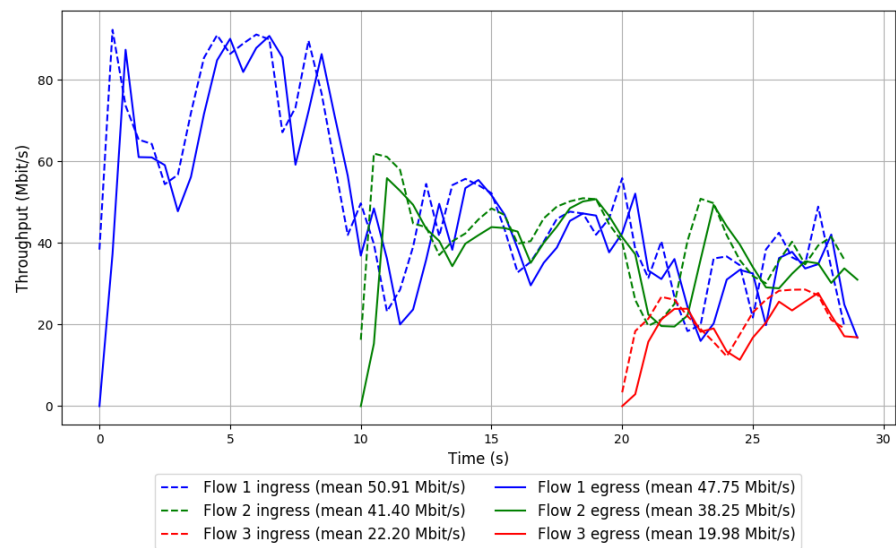
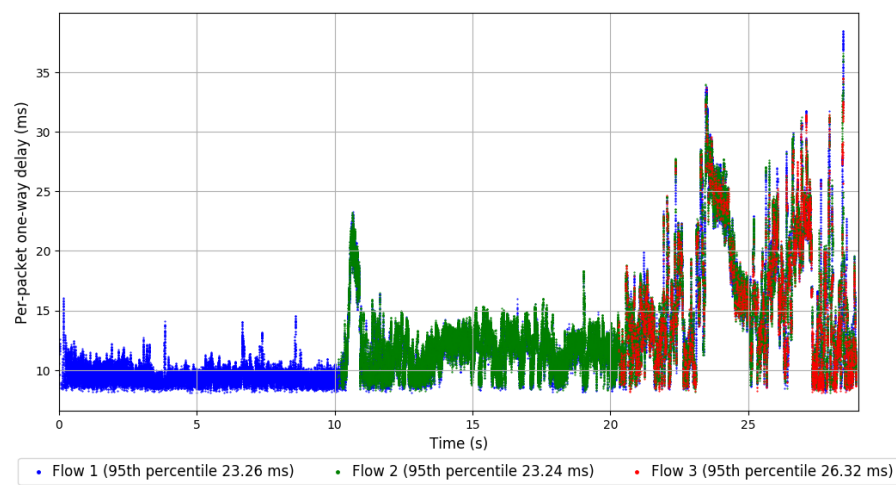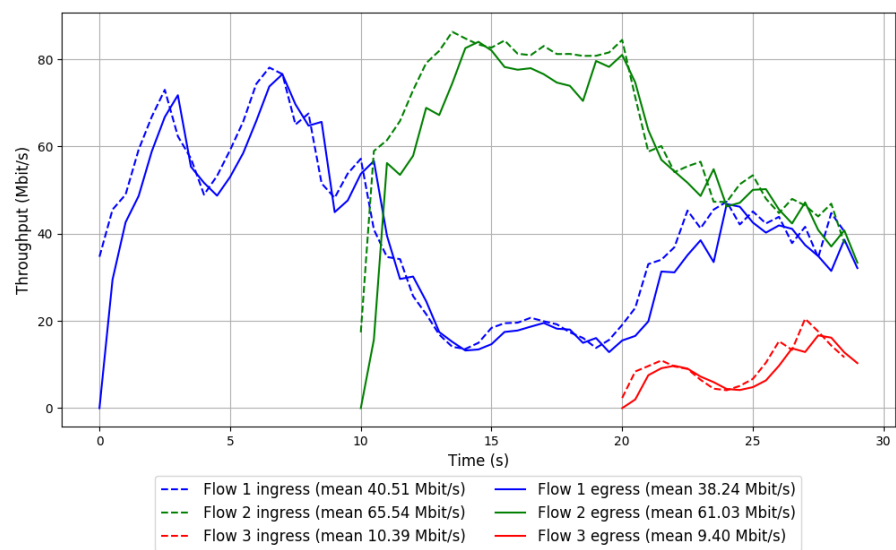Run 1: Report of Indigo-MusesT — Data Link

- Flow 1 ingress (mean 31.42 Mbit/s)
- Flow 1 egress (mean 29.29 Mbit/s)
- Flow 2 ingress (mean 31.53 Mbit/s)
- Flow 2 egress (mean 28.90 Mbit/s)
- Flow 3 ingress (mean 12.69 Mbit/s)
- Flow 3 egress (mean 11.46 Mbit/s)

- Flow 1 (95th percentile 10.80 ms)
- Flow 2 (95th percentile 9.71 ms)
- Flow 3 (95th percentile 8.58 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-11 17:49:10
End at: 2019-02-11 17:49:40
Local clock offset: 5.659 ms
Remote clock offset: -5.067 ms


# Below is generated by plot.py at 2019-02-11 19:27:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.41 Mbit/s
95th percentile per-packet one-way delay: 23.555 ms
Loss rate: 7.22%
-- Flow 1:
Average throughput: 42.60 Mbit/s
95th percentile per-packet one-way delay: 20.082 ms
Loss rate: 7.83%
-- Flow 2:
Average throughput: 32.79 Mbit/s
95th percentile per-packet one-way delay: 23.384 ms
Loss rate: 6.25%
-- Flow 3:
Average throughput: 35.16 Mbit/s
95th percentile per-packet one-way delay: 26.735 ms
Loss rate: 6.69%
```

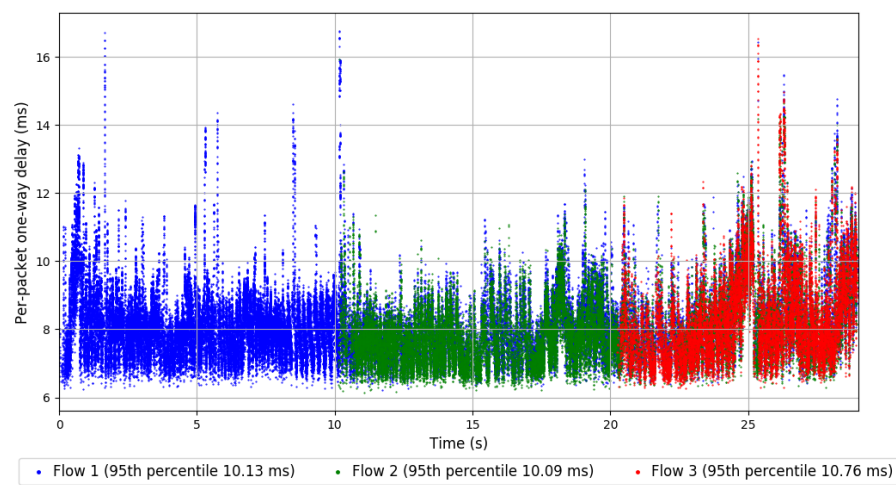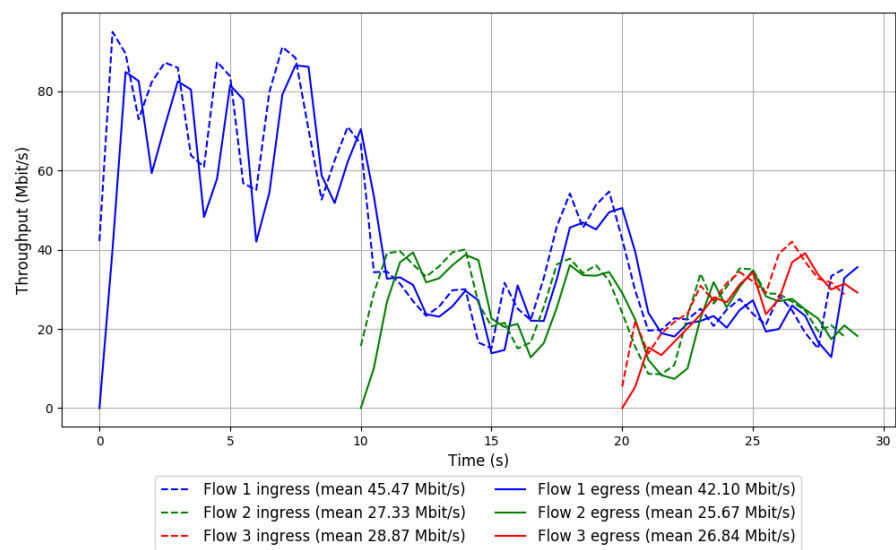Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 46.24 Mbit/s) --- Flow 1 egress (mean 42.60 Mbit/s)
Flow 2 ingress (mean 35.00 Mbit/s) --- Flow 2 egress (mean 32.79 Mbit/s)
Flow 3 ingress (mean 37.72 Mbit/s) --- Flow 3 egress (mean 35.16 Mbit/s)

Flow 1 (95th percentile 20.08 ms)   Flow 2 (95th percentile 23.38 ms)   Flow 3 (95th percentile 26.73 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:13:51
End at: 2019-02-11 18:14:21
Local clock offset: 5.558 ms
Remote clock offset: -5.15 ms


# Below is generated by plot.py at 2019-02-11 19:27:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.60 Mbit/s
95th percentile per-packet one-way delay: 17.471 ms
Loss rate: 6.97%
-- Flow 1:
Average throughput: 47.75 Mbit/s
95th percentile per-packet one-way delay: 13.750 ms
Loss rate: 6.23%
-- Flow 2:
Average throughput: 38.25 Mbit/s
95th percentile per-packet one-way delay: 18.440 ms
Loss rate: 7.62%
-- Flow 3:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 26.571 ms
Loss rate: 10.04%
```

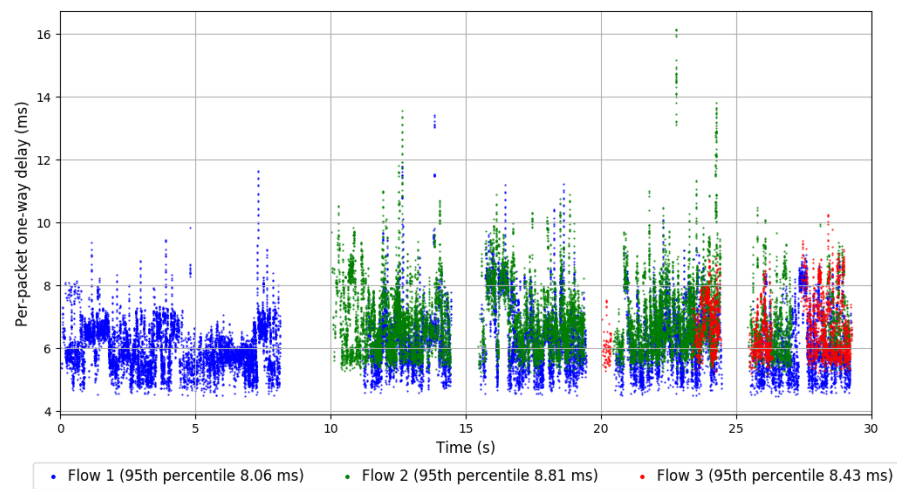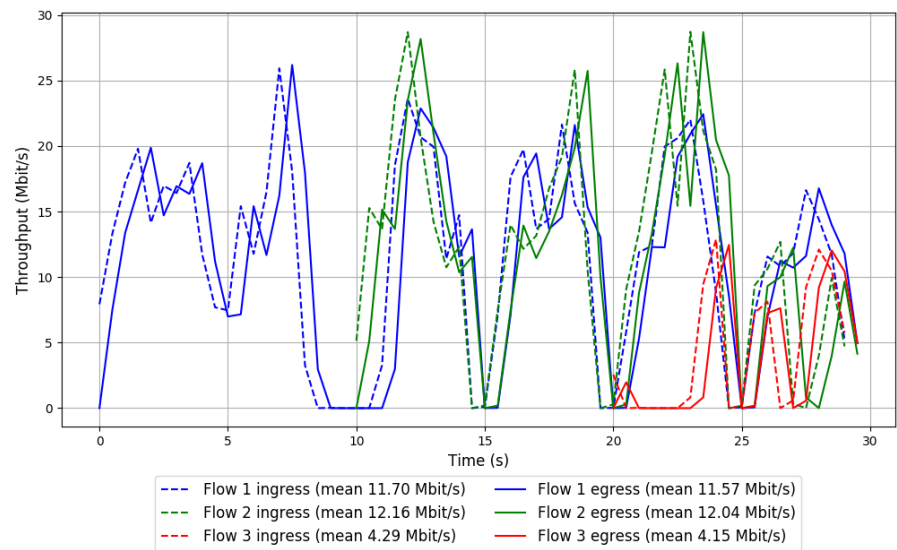Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 50.91 Mbit/s)   Flow 1 egress (mean 47.75 Mbit/s)
Flow 2 ingress (mean 41.40 Mbit/s)   Flow 2 egress (mean 38.25 Mbit/s)
Flow 3 ingress (mean 22.20 Mbit/s)   Flow 3 egress (mean 19.98 Mbit/s)

Flow 1 (95th percentile 13.75 ms)   Flow 2 (95th percentile 18.44 ms)   Flow 3 (95th percentile 26.57 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-11 18:38:51
End at: 2019-02-11 18:39:21
Local clock offset: 1.017 ms
Remote clock offset: -4.569 ms


# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.76 Mbit/s
95th percentile per-packet one-way delay: 23.459 ms
Loss rate: 6.38%
-- Flow 1:
Average throughput: 38.24 Mbit/s
95th percentile per-packet one-way delay: 23.259 ms
Loss rate: 5.61%
-- Flow 2:
Average throughput: 61.03 Mbit/s
95th percentile per-packet one-way delay: 23.239 ms
Loss rate: 6.87%
-- Flow 3:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 26.321 ms
Loss rate: 9.62%
```
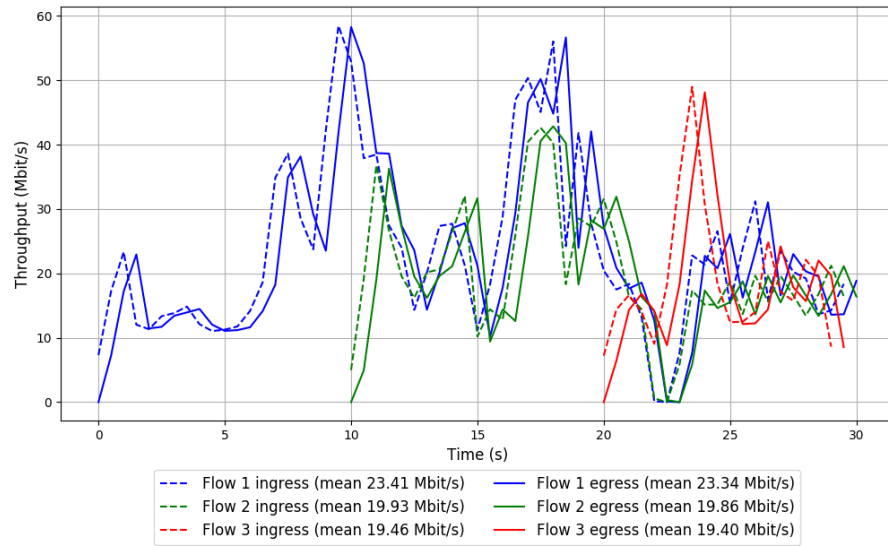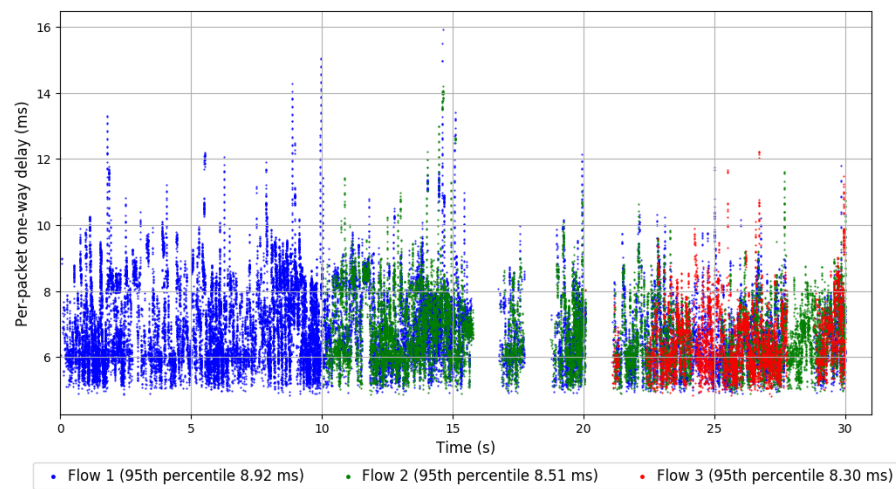
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-11 19:03:45
End at: 2019-02-11 19:04:15
Local clock offset: 0.067 ms
Remote clock offset: -4.708 ms


# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 10.226 ms
Loss rate: 7.03%
-- Flow 1:
Average throughput: 42.10 Mbit/s
95th percentile per-packet one-way delay: 10.129 ms
Loss rate: 7.40%
-- Flow 2:
Average throughput: 25.67 Mbit/s
95th percentile per-packet one-way delay: 10.085 ms
Loss rate: 6.08%
-- Flow 3:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 10.762 ms
Loss rate: 7.07%
```

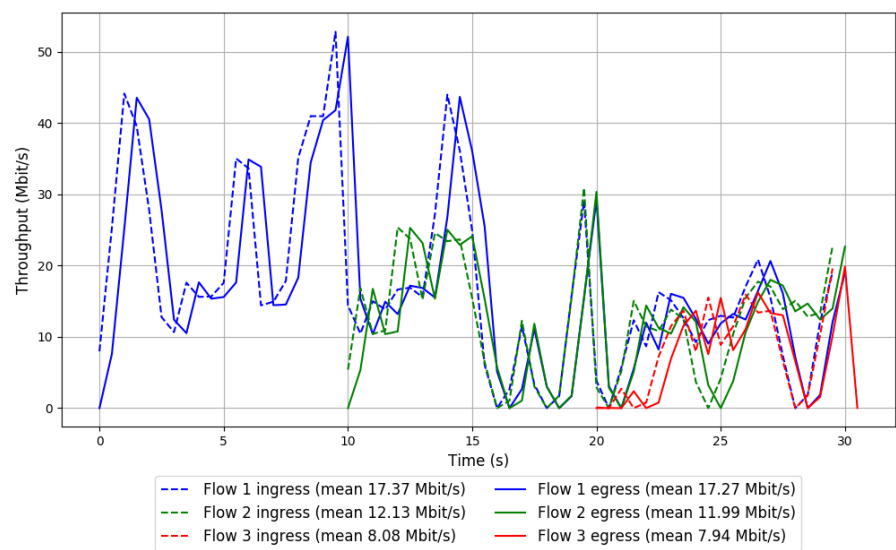Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-02-11 17:28:05
End at: 2019-02-11 17:28:35
Local clock offset: 0.372 ms
Remote clock offset: -4.505 ms


# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.77 Mbit/s
95th percentile per-packet one-way delay: 8.360 ms
Loss rate: 1.26%
-- Flow 1:
Average throughput: 11.57 Mbit/s
95th percentile per-packet one-way delay: 8.065 ms
Loss rate: 1.11%
-- Flow 2:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 8.808 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 4.15 Mbit/s
95th percentile per-packet one-way delay: 8.431 ms
Loss rate: 3.51%
```
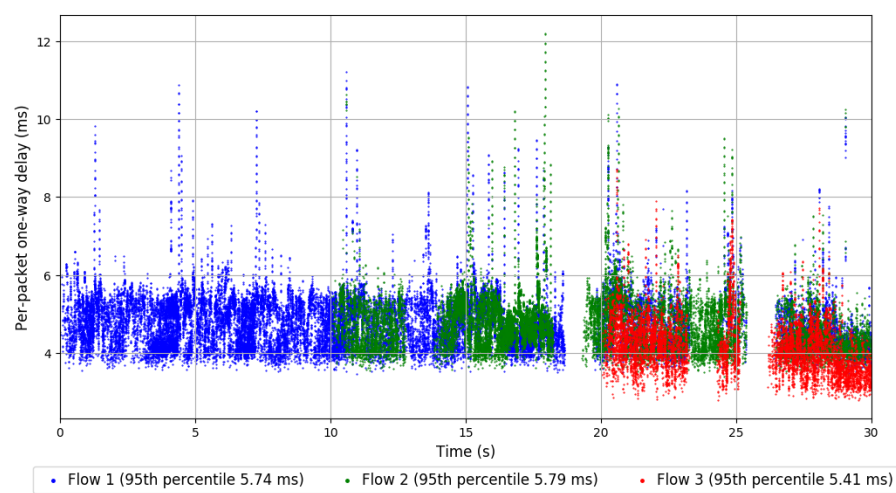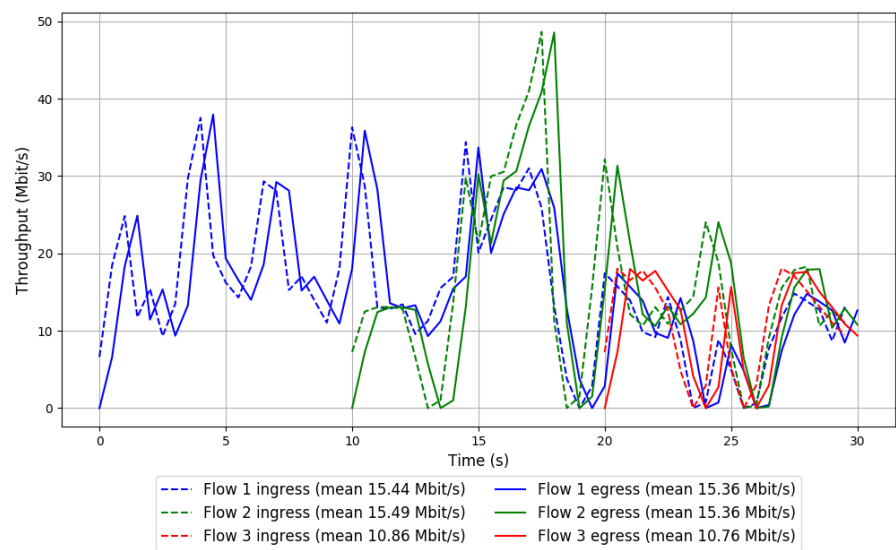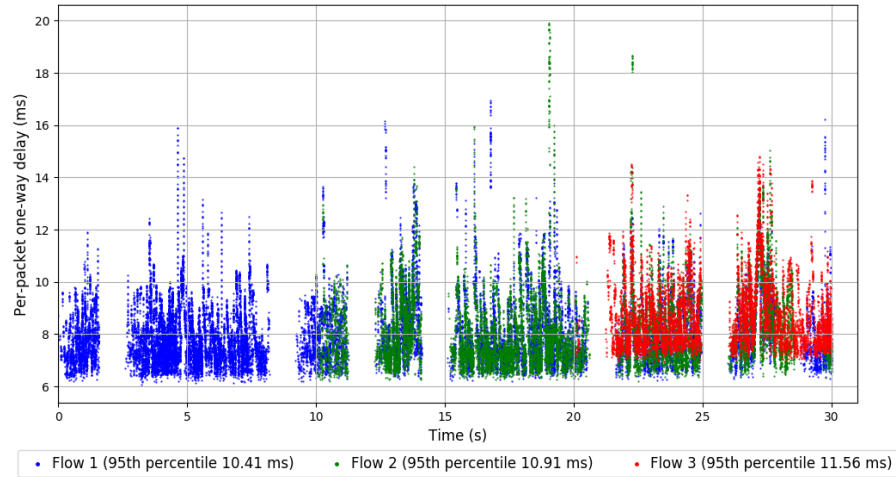
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-02-11 17:52:41
End at: 2019-02-11 17:53:11
Local clock offset: 7.277 ms
Remote clock offset: -5.053 ms

# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 42.56 Mbit/s
95th percentile per-packet one-way delay: 9.445 ms
Loss rate: 0.32%
-- Flow 1:
Average throughput: 23.34 Mbit/s
95th percentile per-packet one-way delay: 9.472 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 19.86 Mbit/s
95th percentile per-packet one-way delay: 9.265 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 19.40 Mbit/s
95th percentile per-packet one-way delay: 9.690 ms
Loss rate: 0.33%
```
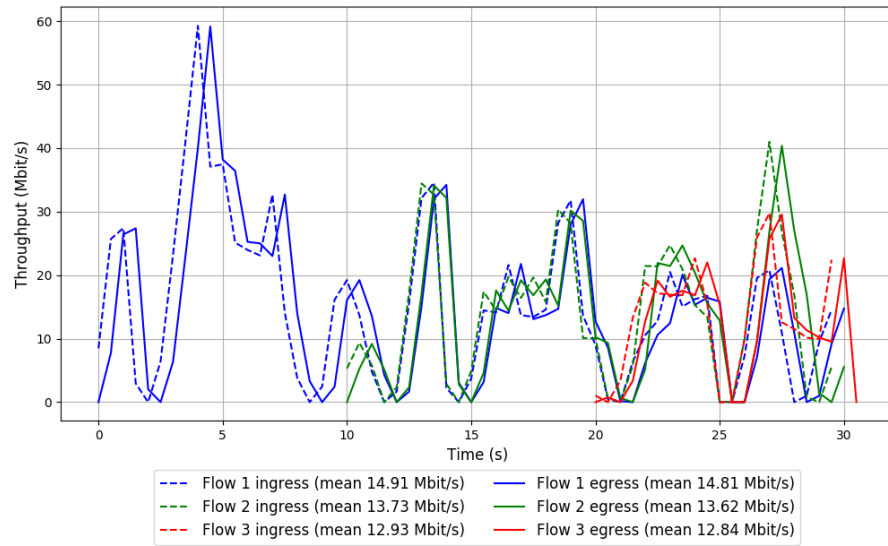
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-02-11 18:17:18
End at: 2019-02-11 18:17:48
Local clock offset: 4.354 ms
Remote clock offset: -5.612 ms

# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.90 Mbit/s
95th percentile per-packet one-way delay: 8.741 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 17.27 Mbit/s
95th percentile per-packet one-way delay: 8.924 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 11.99 Mbit/s
95th percentile per-packet one-way delay: 8.507 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 8.304 ms
Loss rate: 1.69%
```
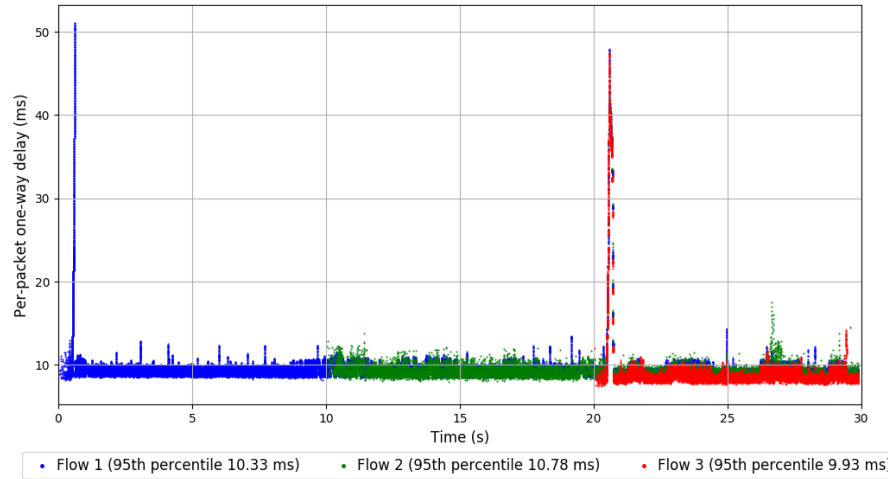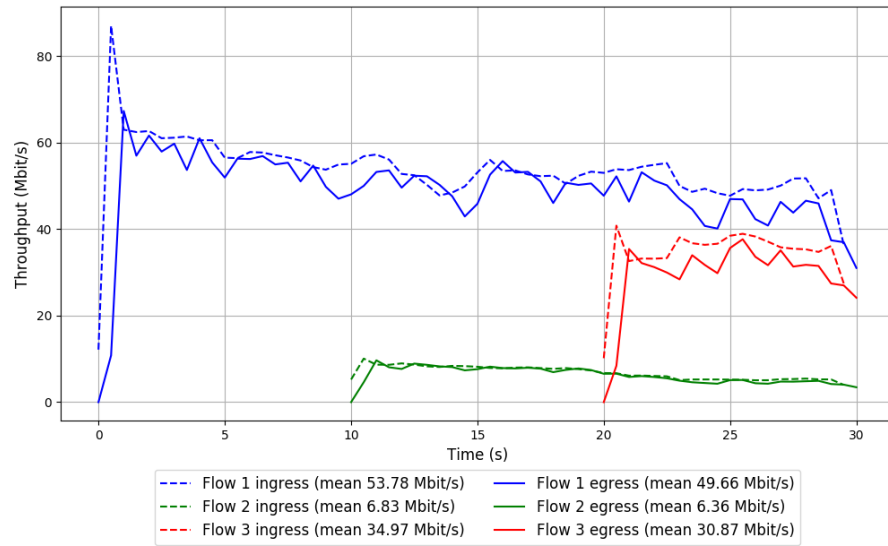
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-02-11 18:42:18
End at: 2019-02-11 18:42:48
Local clock offset: 3.949 ms
Remote clock offset: -5.647 ms


# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 29.16 Mbit/s
95th percentile per-packet one-way delay: 5.731 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 5.735 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 15.36 Mbit/s
95th percentile per-packet one-way delay: 5.788 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 5.412 ms
Loss rate: 0.99%
```
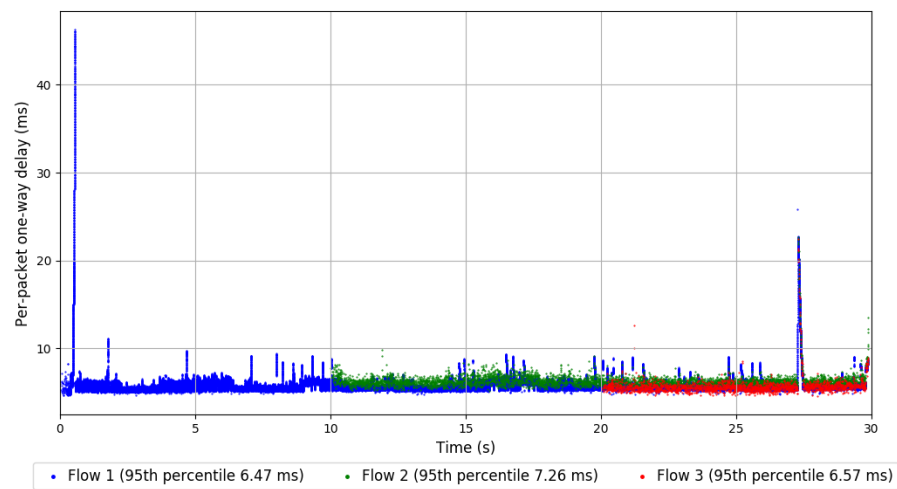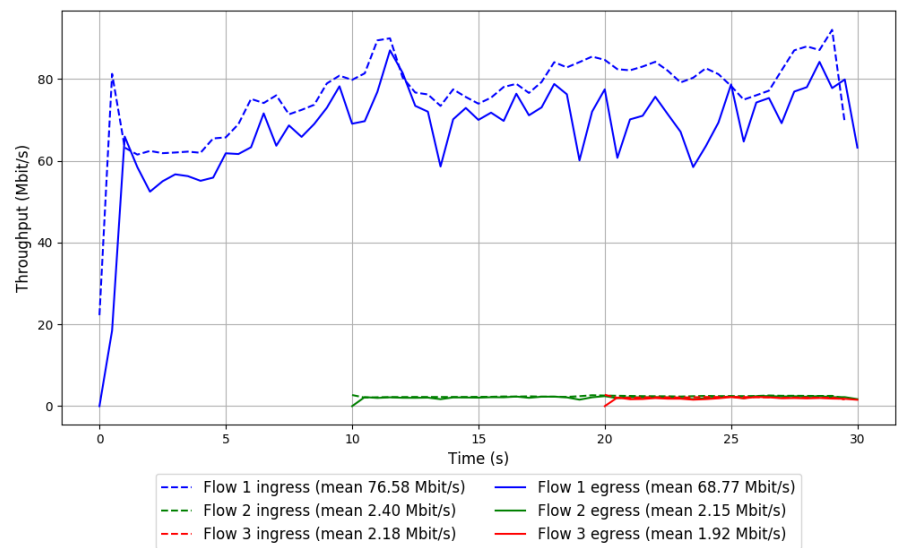
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-02-11 19:07:14
End at: 2019-02-11 19:07:44
Local clock offset: 1.043 ms
Remote clock offset: -4.693 ms


# Below is generated by plot.py at 2019-02-11 19:27:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 10.834 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 14.81 Mbit/s
95th percentile per-packet one-way delay: 10.408 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 13.62 Mbit/s
95th percentile per-packet one-way delay: 10.906 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 12.84 Mbit/s
95th percentile per-packet one-way delay: 11.557 ms
Loss rate: 0.66%
```
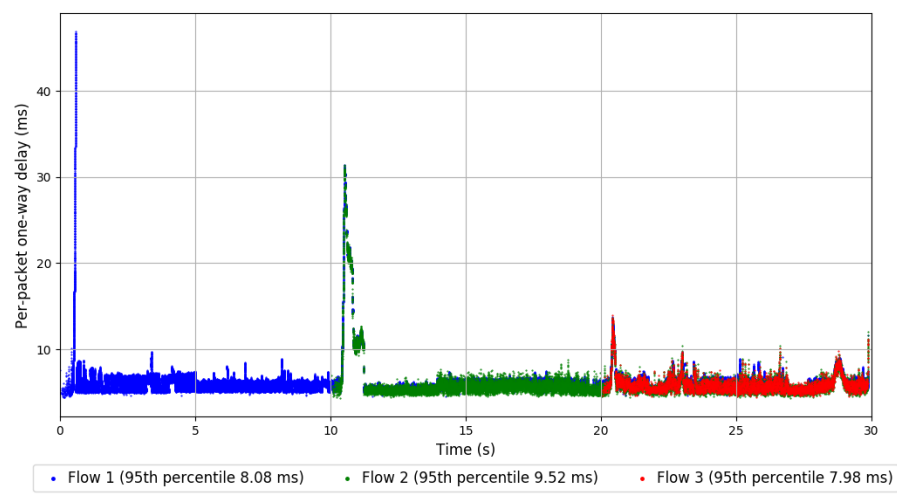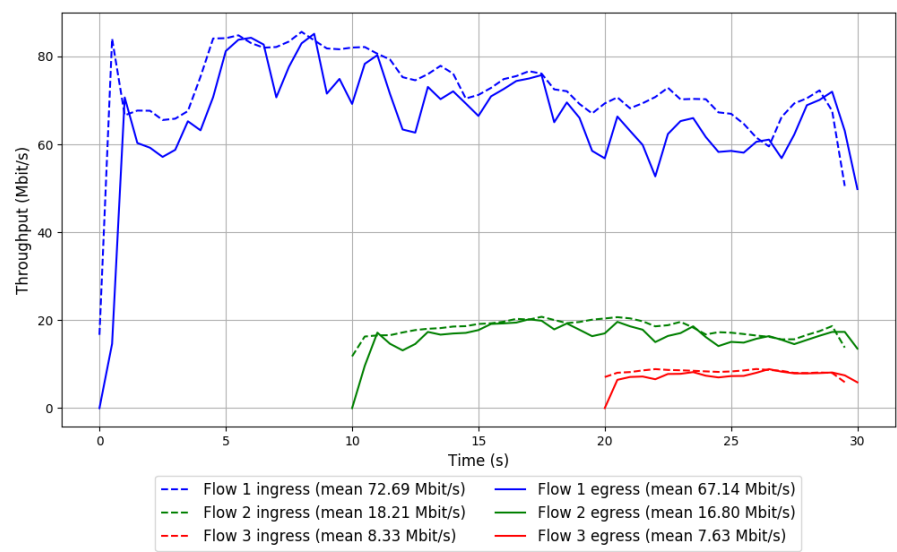
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-11 17:20:02
End at: 2019-02-11 17:20:32
Local clock offset: -0.981 ms
Remote clock offset: -3.336 ms


# Below is generated by plot.py at 2019-02-11 19:27:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.07 Mbit/s
95th percentile per-packet one-way delay: 10.352 ms
Loss rate: 8.29%
-- Flow 1:
Average throughput: 49.66 Mbit/s
95th percentile per-packet one-way delay: 10.333 ms
Loss rate: 7.66%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 10.784 ms
Loss rate: 6.99%
-- Flow 3:
Average throughput: 30.87 Mbit/s
95th percentile per-packet one-way delay: 9.929 ms
Loss rate: 11.75%
```

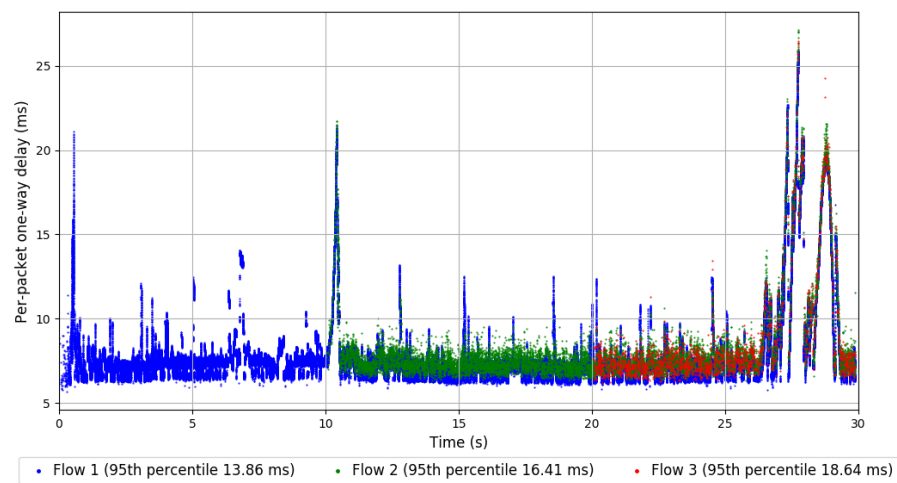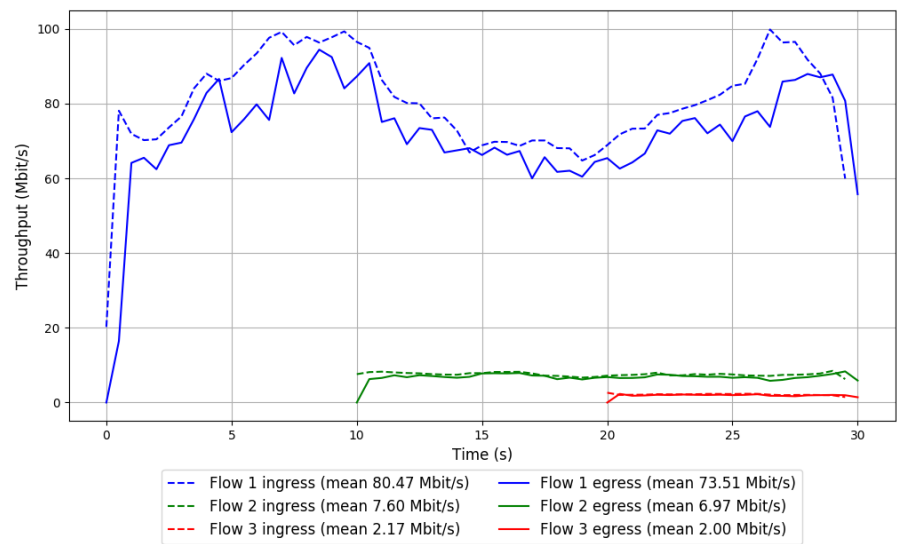Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-11 17:44:34
End at: 2019-02-11 17:45:04
Local clock offset: 4.498 ms
Remote clock offset: -5.139 ms


# Below is generated by plot.py at 2019-02-11 19:28:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.83 Mbit/s
95th percentile per-packet one-way delay: 6.528 ms
Loss rate: 10.20%
-- Flow 1:
Average throughput: 68.77 Mbit/s
95th percentile per-packet one-way delay: 6.470 ms
Loss rate: 10.18%
-- Flow 2:
Average throughput: 2.15 Mbit/s
95th percentile per-packet one-way delay: 7.260 ms
Loss rate: 10.41%
-- Flow 3:
Average throughput: 1.92 Mbit/s
95th percentile per-packet one-way delay: 6.565 ms
Loss rate: 11.68%
```
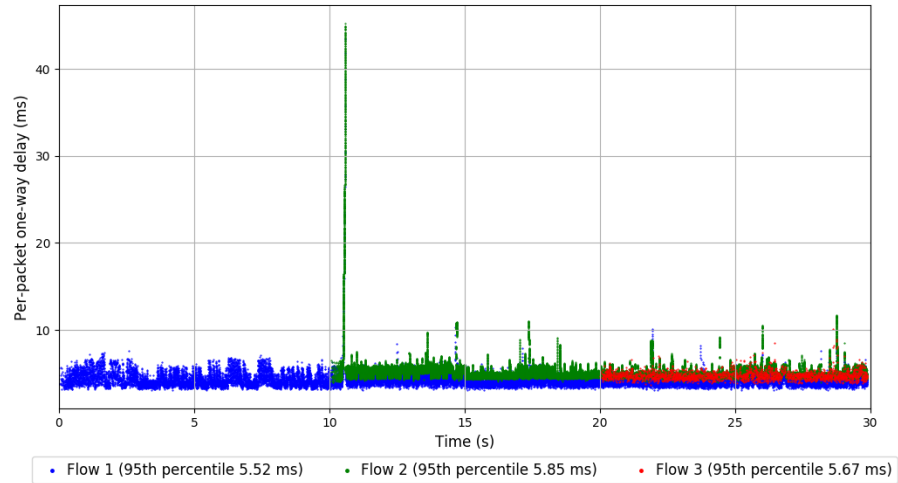
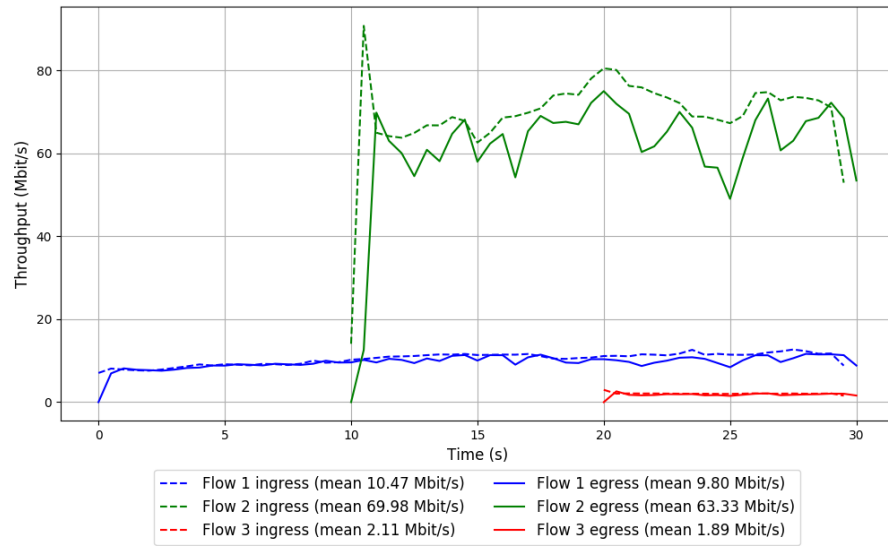Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-11 18:09:14
End at: 2019-02-11 18:09:44
Local clock offset: 8.762 ms
Remote clock offset: -3.279 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.82 Mbit/s
95th percentile per-packet one-way delay: 8.164 ms
Loss rate: 7.67%
-- Flow 1:
Average throughput: 67.14 Mbit/s
95th percentile per-packet one-way delay: 8.084 ms
Loss rate: 7.63%
-- Flow 2:
Average throughput: 16.80 Mbit/s
95th percentile per-packet one-way delay: 9.524 ms
Loss rate: 7.77%
-- Flow 3:
Average throughput: 7.63 Mbit/s
95th percentile per-packet one-way delay: 7.983 ms
Loss rate: 8.34%
```

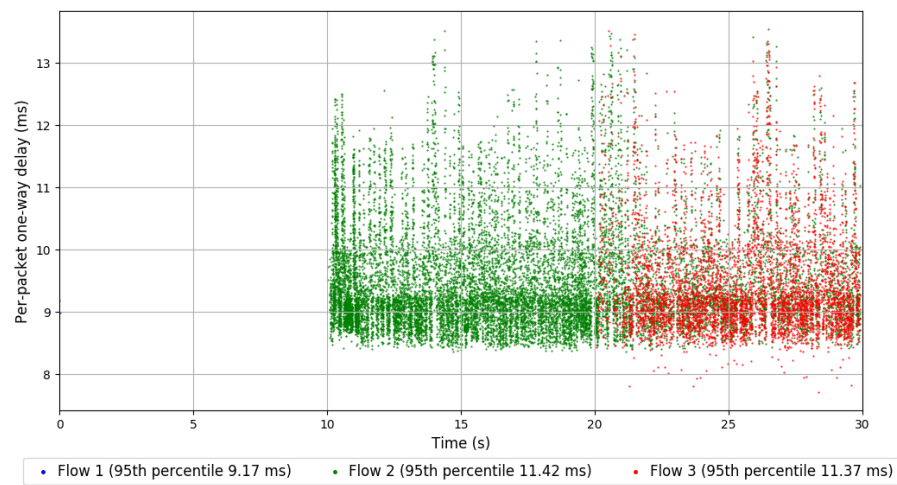Run 3: Report of PCC-Allegro — Data Link

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-11 18:34:12
End at: 2019-02-11 18:34:42
Local clock offset: 3.422 ms
Remote clock offset: -5.376 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.79 Mbit/s
95th percentile per-packet one-way delay: 14.146 ms
Loss rate: 8.64%
-- Flow 1:
Average throughput: 73.51 Mbit/s
95th percentile per-packet one-way delay: 13.863 ms
Loss rate: 8.66%
-- Flow 2:
Average throughput: 6.97 Mbit/s
95th percentile per-packet one-way delay: 16.412 ms
Loss rate: 8.25%
-- Flow 3:
Average throughput: 2.00 Mbit/s
95th percentile per-packet one-way delay: 18.641 ms
Loss rate: 8.12%
```
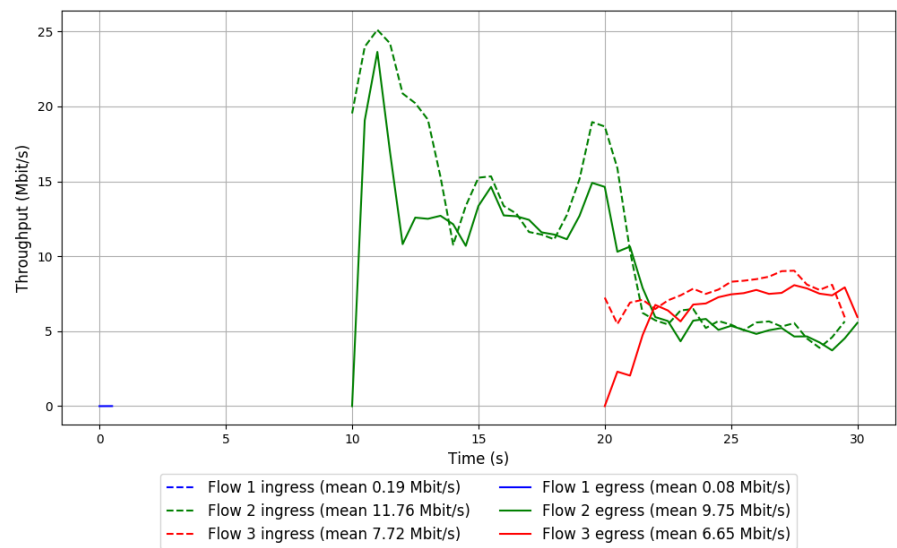
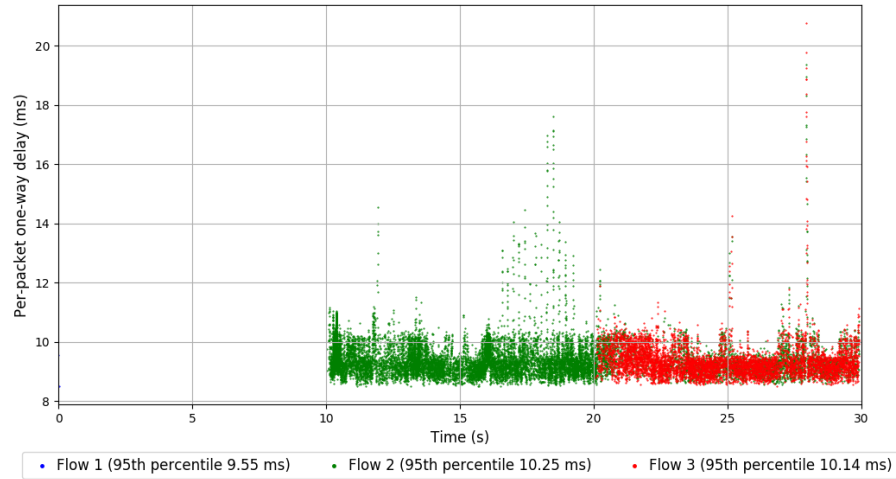Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-11 18:59:05
End at: 2019-02-11 18:59:35
Local clock offset: 1.118 ms
Remote clock offset: -6.176 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.54 Mbit/s
95th percentile per-packet one-way delay: 5.817 ms
Loss rate: 8.94%
-- Flow 1:
Average throughput: 9.80 Mbit/s
95th percentile per-packet one-way delay: 5.516 ms
Loss rate: 6.37%
-- Flow 2:
Average throughput: 63.33 Mbit/s
95th percentile per-packet one-way delay: 5.852 ms
Loss rate: 9.49%
-- Flow 3:
Average throughput: 1.89 Mbit/s
95th percentile per-packet one-way delay: 5.672 ms
Loss rate: 10.72%
```
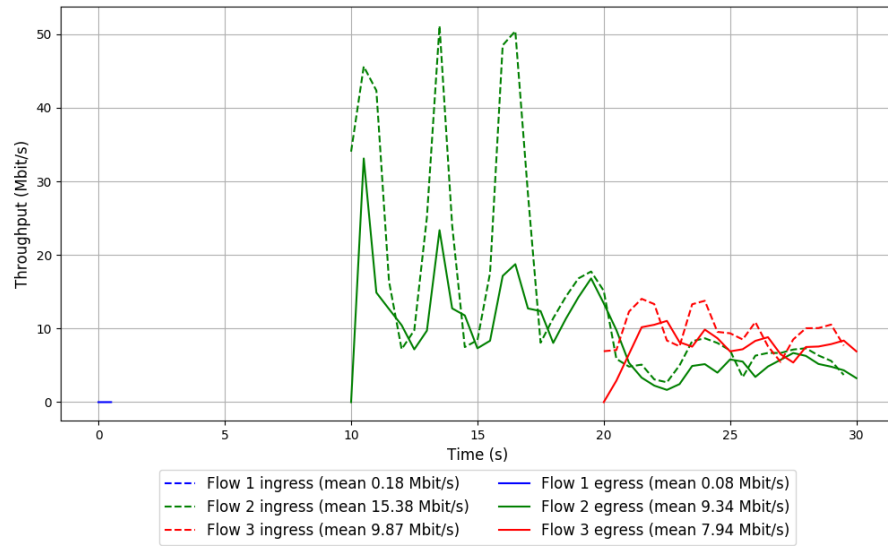
Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-11 17:23:30
End at: 2019-02-11 17:24:00
Local clock offset: -1.251 ms
Remote clock offset: -3.099 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 11.408 ms
Loss rate: 16.32%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 9.173 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 11.424 ms
Loss rate: 17.10%
-- Flow 3:
Average throughput: 6.65 Mbit/s
95th percentile per-packet one-way delay: 11.371 ms
Loss rate: 13.90%
```
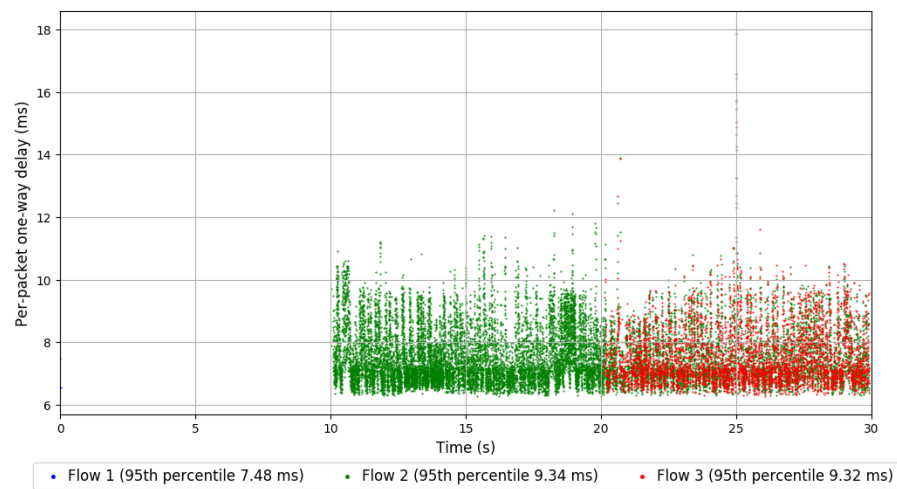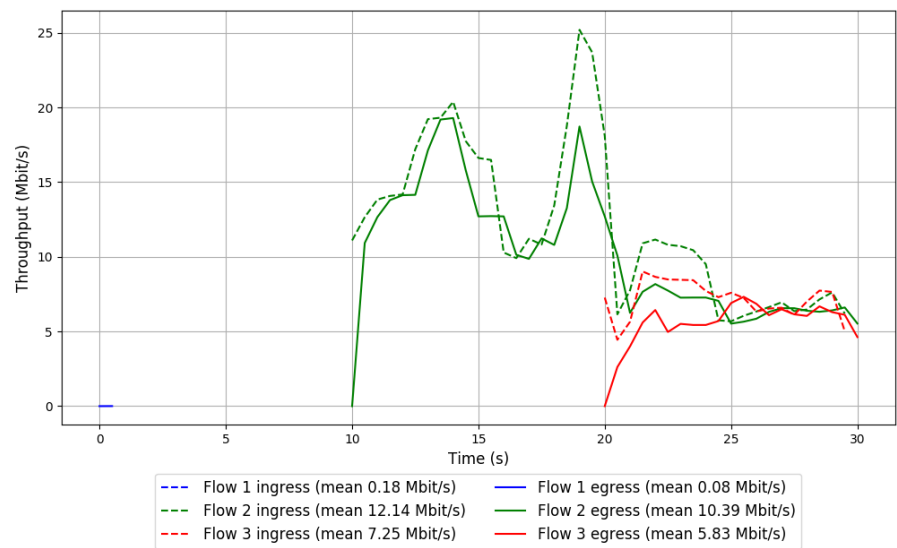
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-11 17:48:02
End at: 2019-02-11 17:48:32
Local clock offset: 4.271 ms
Remote clock offset: -2.973 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.83 Mbit/s
95th percentile per-packet one-way delay: 10.215 ms
Loss rate: 34.54%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 9.554 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 10.248 ms
Loss rate: 39.30%
-- Flow 3:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 10.144 ms
Loss rate: 19.57%
```
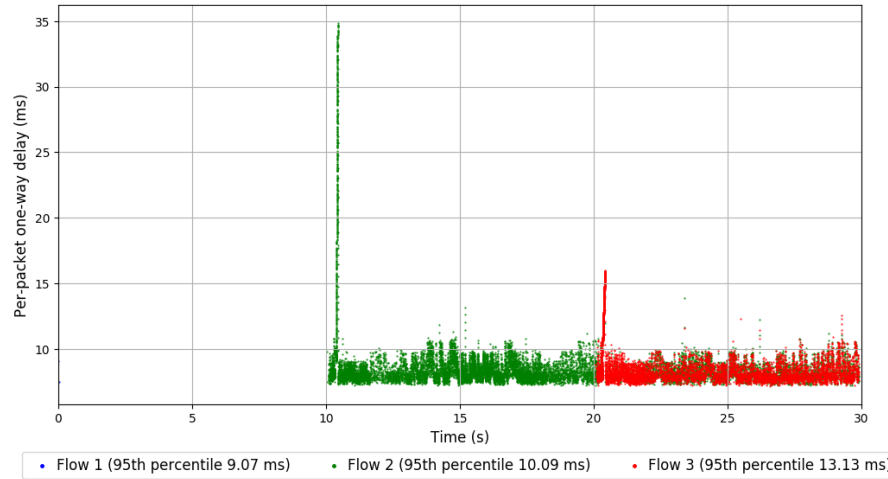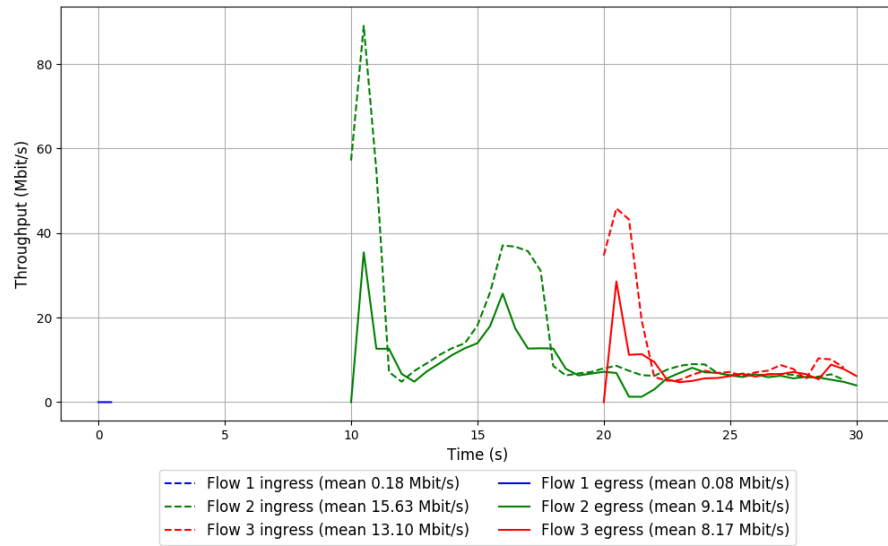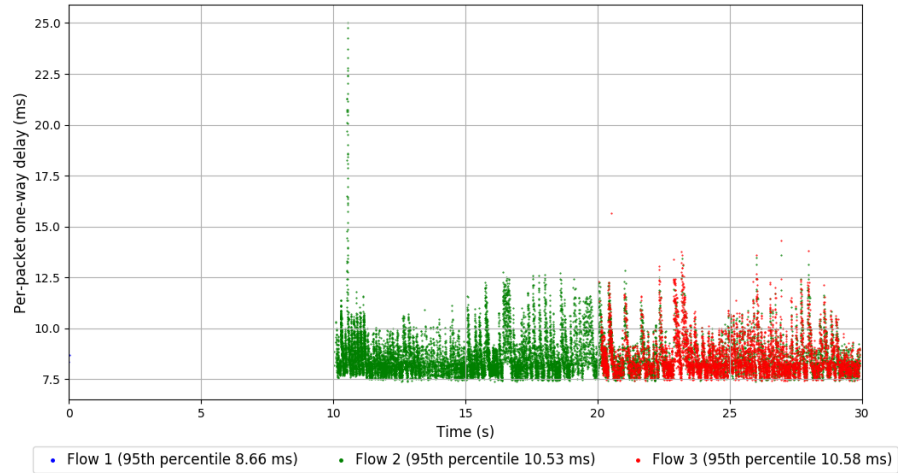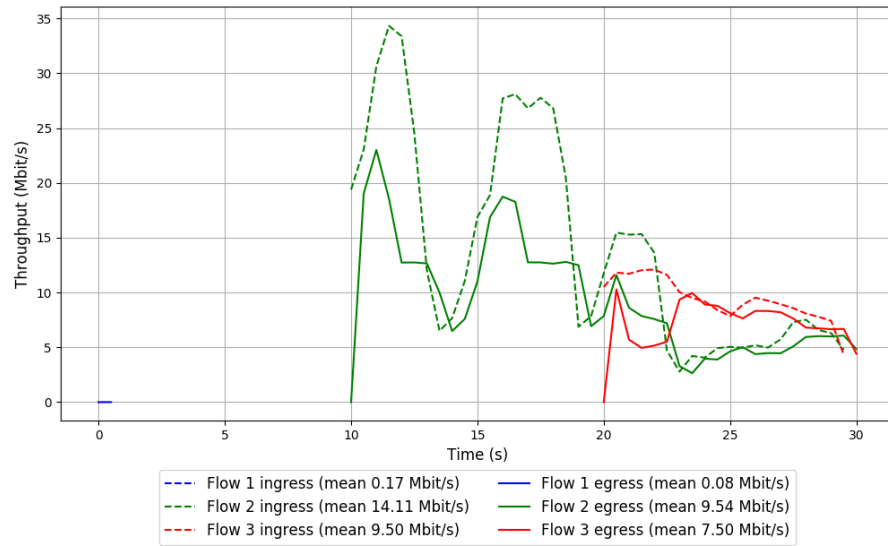
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-02-11 18:12:43
End at: 2019-02-11 18:13:13
Local clock offset: 4.701 ms
Remote clock offset: -4.864 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.84 Mbit/s
95th percentile per-packet one-way delay: 9.337 ms
Loss rate: 15.56%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 7.477 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 10.39 Mbit/s
95th percentile per-packet one-way delay: 9.338 ms
Loss rate: 14.37%
-- Flow 3:
Average throughput: 5.83 Mbit/s
95th percentile per-packet one-way delay: 9.319 ms
Loss rate: 19.53%
```

Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 0.18 Mbit/s) --- Flow 1 egress (mean 0.08 Mbit/s)
Flow 2 ingress (mean 12.14 Mbit/s) --- Flow 2 egress (mean 10.39 Mbit/s)
Flow 3 ingress (mean 7.25 Mbit/s) --- Flow 3 egress (mean 5.83 Mbit/s)

Flow 1 (95th percentile 7.48 ms) Flow 2 (95th percentile 9.34 ms) Flow 3 (95th percentile 9.32 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-02-11 18:37:44
End at: 2019-02-11 18:38:14
Local clock offset: 3.146 ms
Remote clock offset: -3.567 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.78 Mbit/s
95th percentile per-packet one-way delay: 10.975 ms
Loss rate: 40.41%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 9.066 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.14 Mbit/s
95th percentile per-packet one-way delay: 10.087 ms
Loss rate: 41.54%
-- Flow 3:
Average throughput: 8.17 Mbit/s
95th percentile per-packet one-way delay: 13.132 ms
Loss rate: 37.69%
```
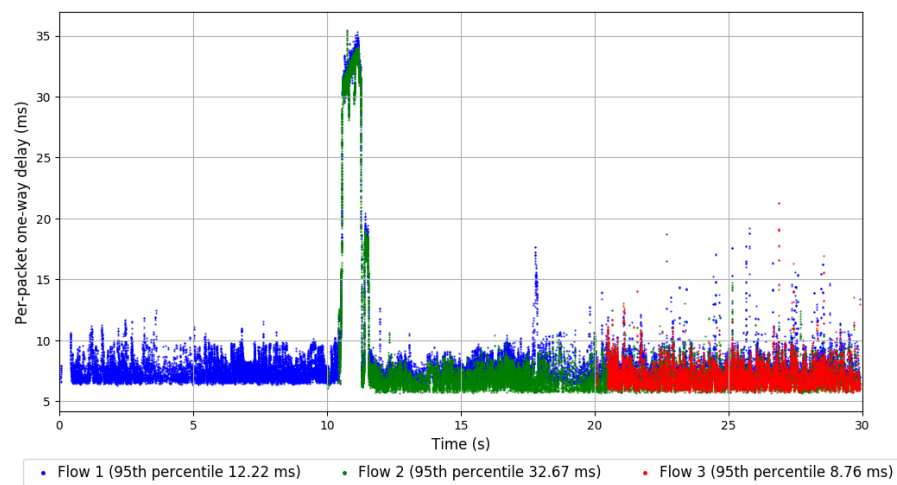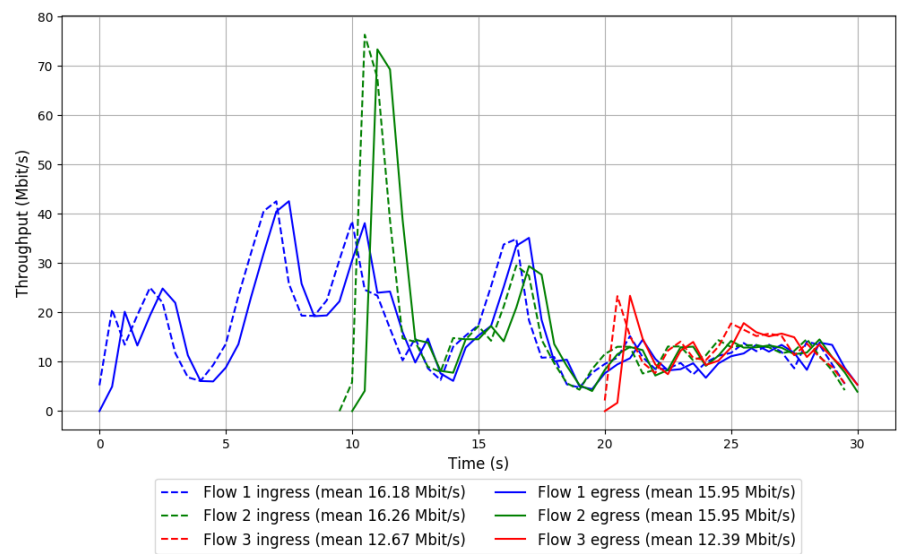
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-02-11 19:02:38
End at: 2019-02-11 19:03:08
Local clock offset: 0.29 ms
Remote clock offset: -3.275 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.82 Mbit/s
95th percentile per-packet one-way delay: 10.549 ms
Loss rate: 29.54%
-- Flow 1:
Average throughput: 0.08 Mbit/s
95th percentile per-packet one-way delay: 8.660 ms
Loss rate: 85.71%
-- Flow 2:
Average throughput: 9.54 Mbit/s
95th percentile per-packet one-way delay: 10.529 ms
Loss rate: 32.39%
-- Flow 3:
Average throughput: 7.50 Mbit/s
95th percentile per-packet one-way delay: 10.583 ms
Loss rate: 21.01%
```
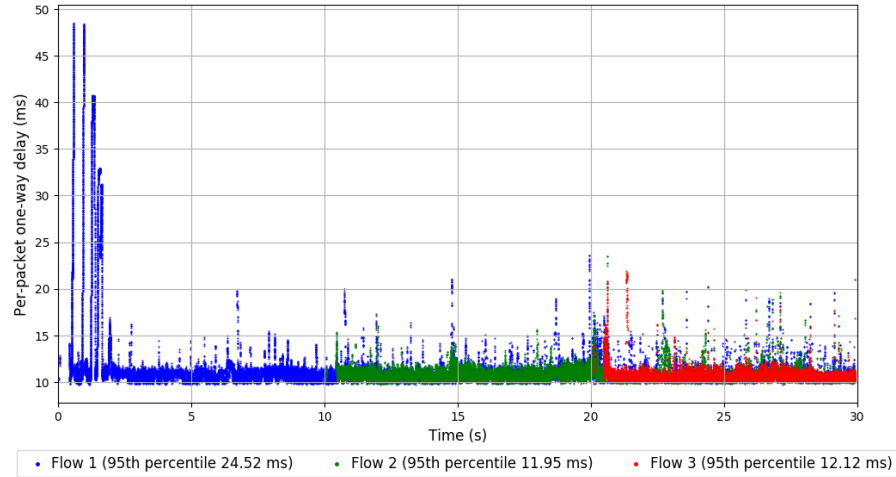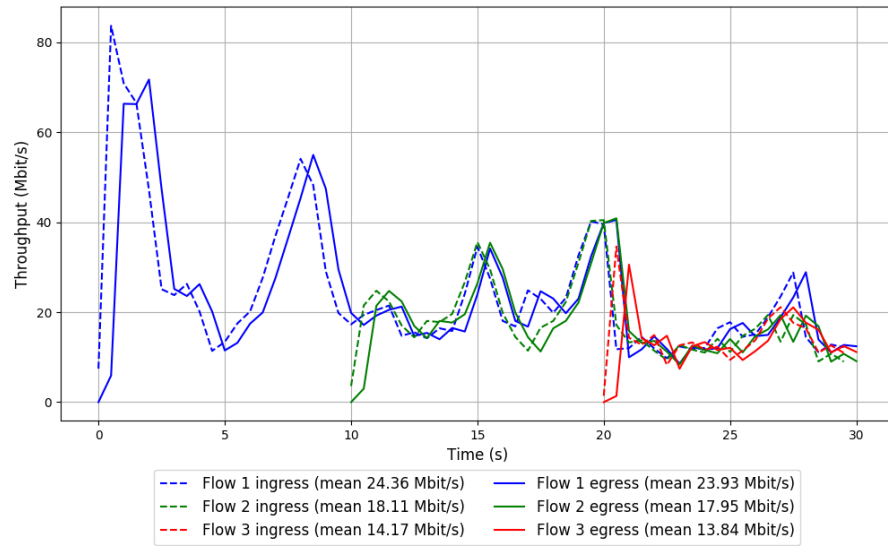
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-11 17:22:20
End at: 2019-02-11 17:22:50
Local clock offset: 0.607 ms
Remote clock offset: -3.273 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.65 Mbit/s
95th percentile per-packet one-way delay: 31.486 ms
Loss rate: 1.68%
-- Flow 1:
Average throughput: 15.95 Mbit/s
95th percentile per-packet one-way delay: 12.225 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 15.95 Mbit/s
95th percentile per-packet one-way delay: 32.668 ms
Loss rate: 1.87%
-- Flow 3:
Average throughput: 12.39 Mbit/s
95th percentile per-packet one-way delay: 8.761 ms
Loss rate: 2.18%
```
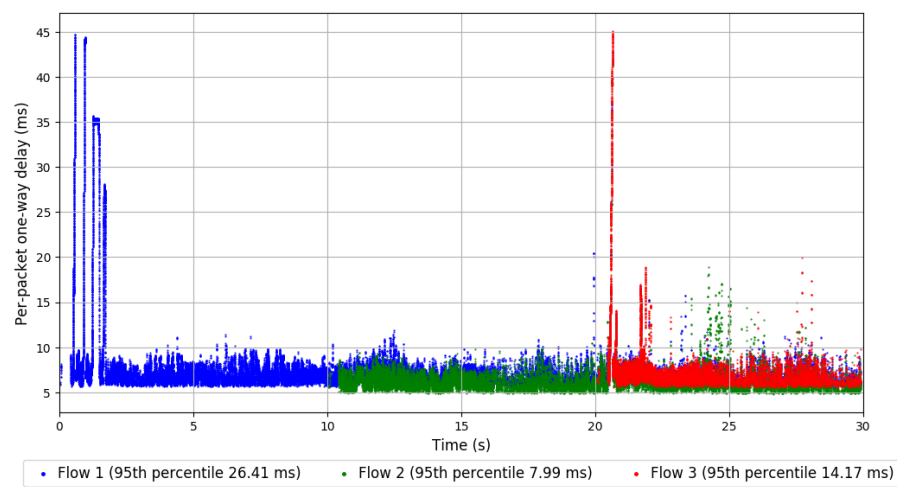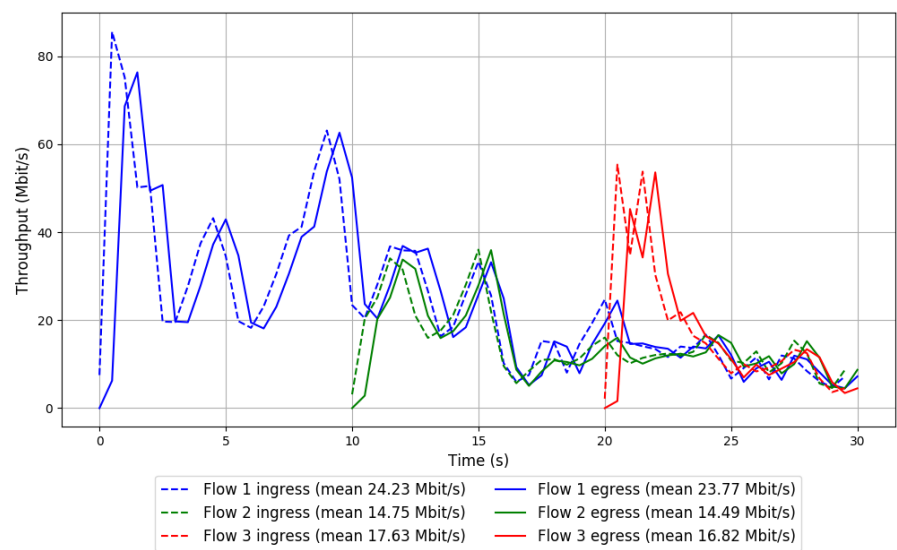
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-11 17:46:53
End at: 2019-02-11 17:47:23
Local clock offset: 1.679 ms
Remote clock offset: -3.317 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 14.697 ms
Loss rate: 1.53%
-- Flow 1:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 24.515 ms
Loss rate: 1.70%
-- Flow 2:
Average throughput: 17.95 Mbit/s
95th percentile per-packet one-way delay: 11.954 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 13.84 Mbit/s
95th percentile per-packet one-way delay: 12.122 ms
Loss rate: 2.31%
```
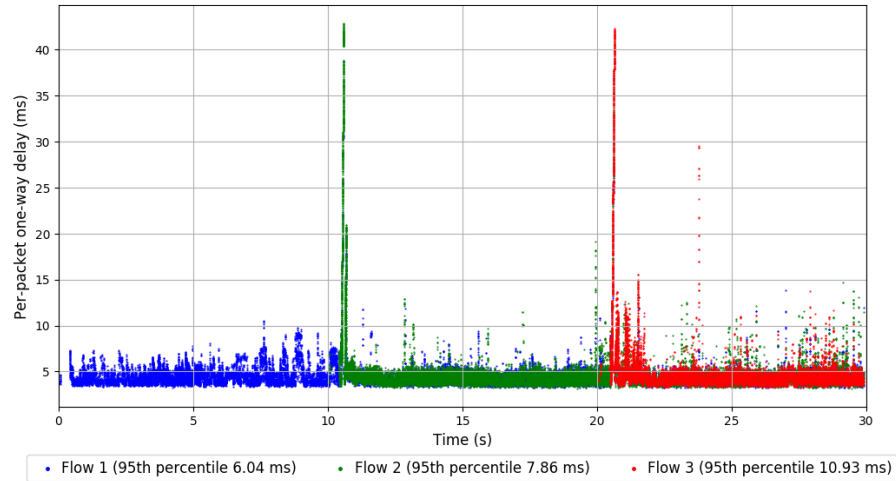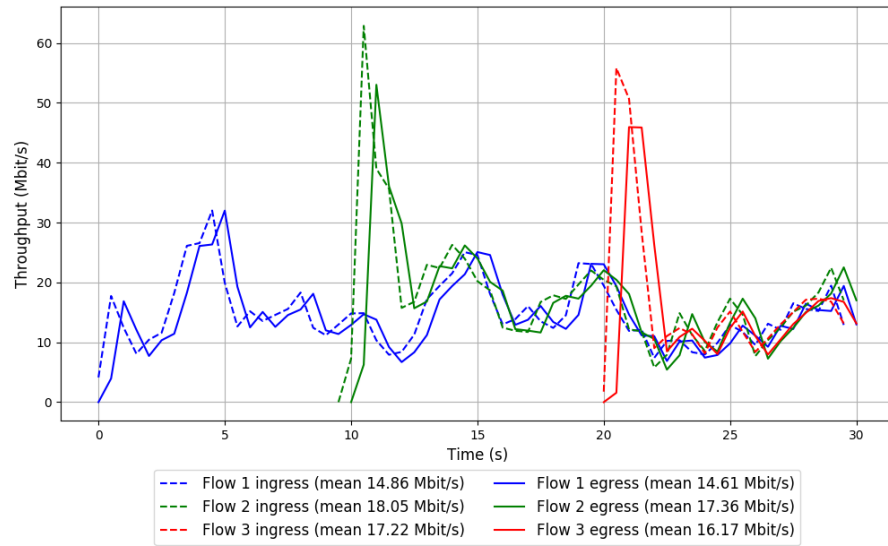
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-11 18:11:34
End at: 2019-02-11 18:12:04
Local clock offset: 6.42 ms
Remote clock offset: -4.024 ms


# Below is generated by plot.py at 2019-02-11 19:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.95 Mbit/s
95th percentile per-packet one-way delay: 13.987 ms
Loss rate: 2.26%
-- Flow 1:
Average throughput: 23.77 Mbit/s
95th percentile per-packet one-way delay: 26.410 ms
Loss rate: 1.91%
-- Flow 2:
Average throughput: 14.49 Mbit/s
95th percentile per-packet one-way delay: 7.990 ms
Loss rate: 1.77%
-- Flow 3:
Average throughput: 16.82 Mbit/s
95th percentile per-packet one-way delay: 14.171 ms
Loss rate: 4.53%
```
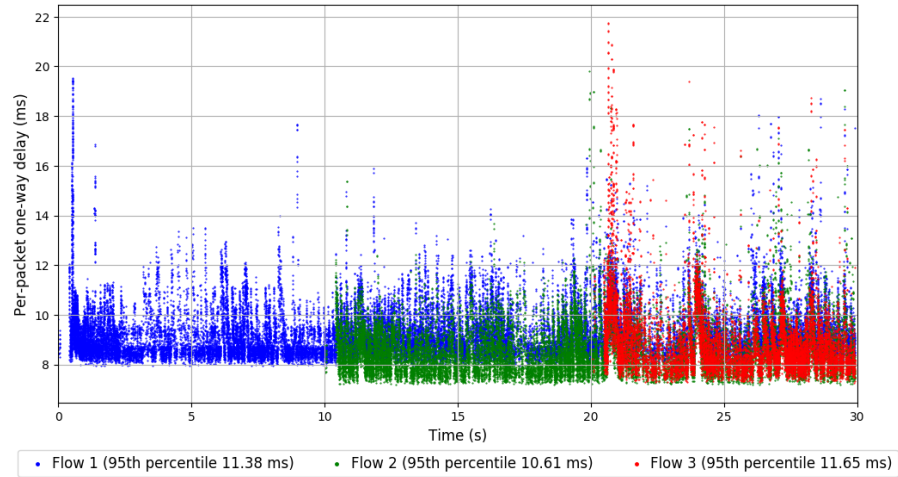
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-11 18:36:35
End at: 2019-02-11 18:37:05
Local clock offset: 5.4 ms
Remote clock offset: -5.621 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.49 Mbit/s
95th percentile per-packet one-way delay: 7.051 ms
Loss rate: 3.24%
-- Flow 1:
Average throughput: 14.61 Mbit/s
95th percentile per-packet one-way delay: 6.037 ms
Loss rate: 1.71%
-- Flow 2:
Average throughput: 17.36 Mbit/s
95th percentile per-packet one-way delay: 7.861 ms
Loss rate: 3.78%
-- Flow 3:
Average throughput: 16.17 Mbit/s
95th percentile per-packet one-way delay: 10.931 ms
Loss rate: 6.09%
```

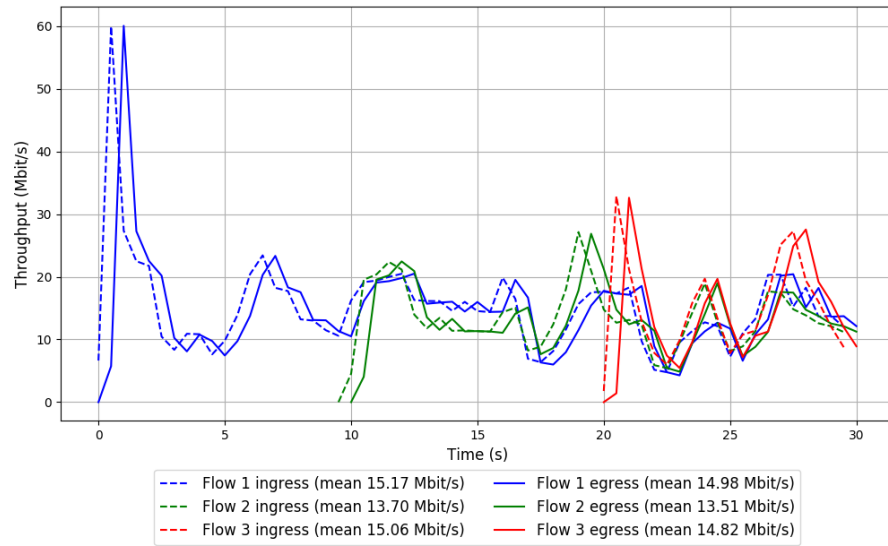Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-11 19:01:23
End at: 2019-02-11 19:01:53
Local clock offset: -1.338 ms
Remote clock offset: -4.458 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 11.207 ms
Loss rate: 1.36%
-- Flow 1:
Average throughput: 14.98 Mbit/s
95th percentile per-packet one-way delay: 11.381 ms
Loss rate: 1.28%
-- Flow 2:
Average throughput: 13.51 Mbit/s
95th percentile per-packet one-way delay: 10.613 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 14.82 Mbit/s
95th percentile per-packet one-way delay: 11.648 ms
Loss rate: 1.58%
```
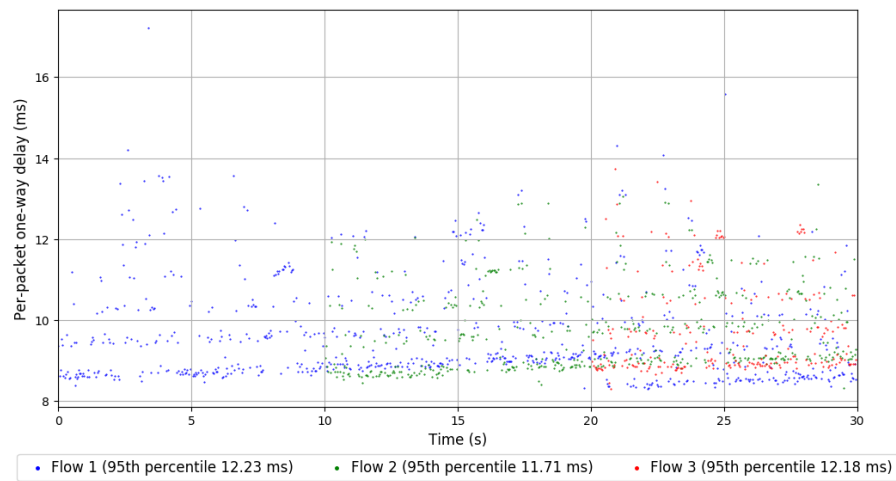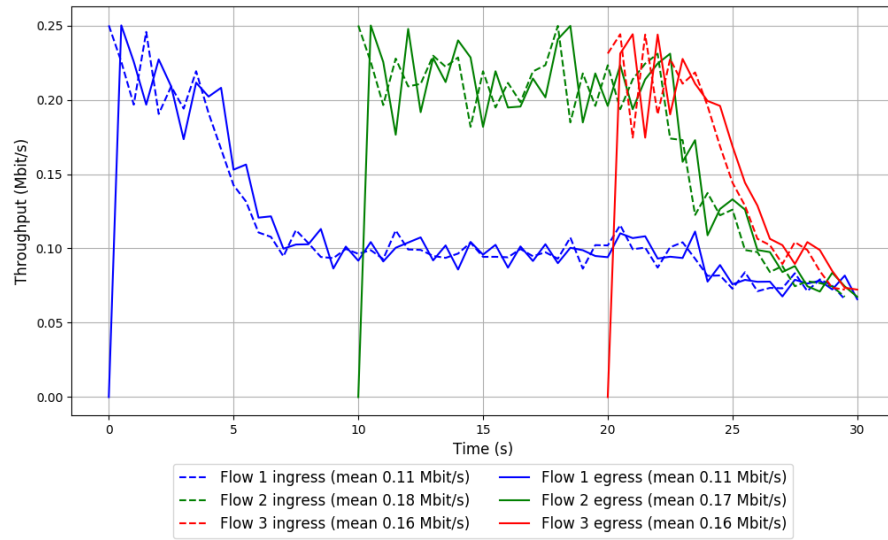
Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 15.17 Mbit/s)   Flow 1 egress (mean 14.98 Mbit/s)
Flow 2 ingress (mean 13.70 Mbit/s)   Flow 2 egress (mean 13.51 Mbit/s)
Flow 3 ingress (mean 15.06 Mbit/s)   Flow 3 egress (mean 14.82 Mbit/s)

Flow 1 (95th percentile 11.38 ms)   Flow 2 (95th percentile 10.61 ms)   Flow 3 (95th percentile 11.65 ms)
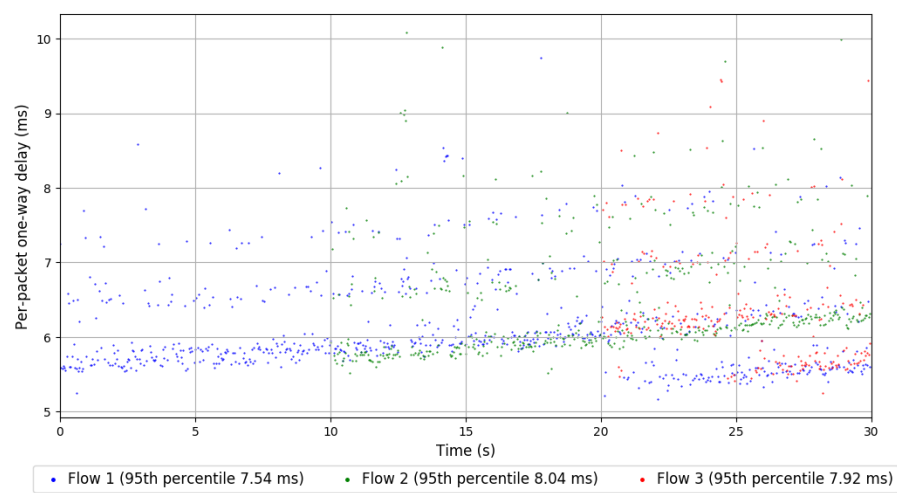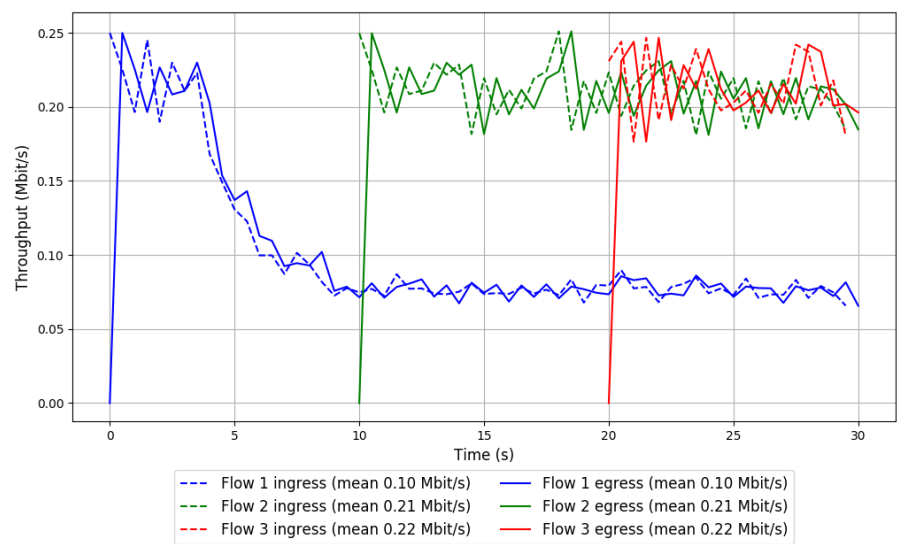
```
Run 1: Statistics of SCReAM

Start at: 2019-02-11 17:31:37
End at: 2019-02-11 17:32:07
Local clock offset: -3.134 ms
Remote clock offset: -4.74 ms

# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.28 Mbit/s
95th percentile per-packet one-way delay: 12.137 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 0.11 Mbit/s
95th percentile per-packet one-way delay: 12.230 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 11.710 ms
Loss rate: 0.42%
-- Flow 3:
Average throughput: 0.16 Mbit/s
95th percentile per-packet one-way delay: 12.181 ms
Loss rate: 0.62%
```
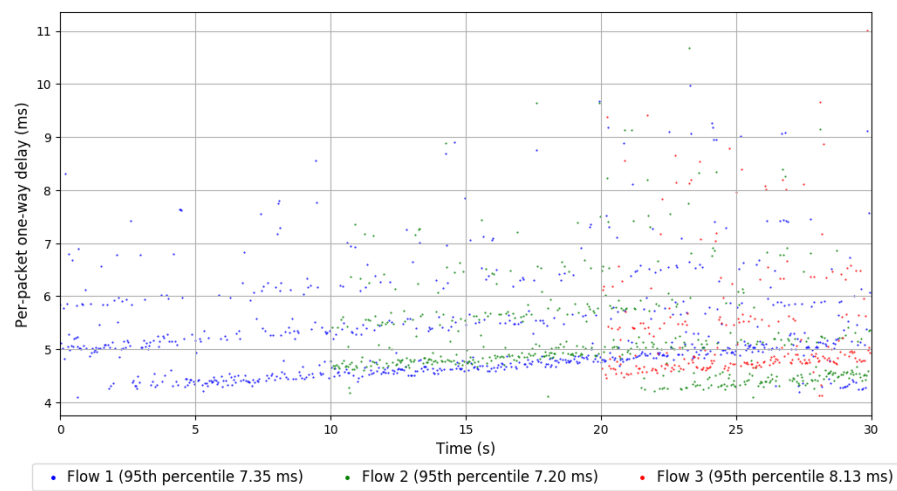
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-02-11 17:56:19
End at: 2019-02-11 17:56:49
Local clock offset: 7.215 ms
Remote clock offset: -4.637 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.31 Mbit/s
95th percentile per-packet one-way delay: 7.825 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 7.540 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 8.035 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 7.921 ms
Loss rate: 0.00%
```
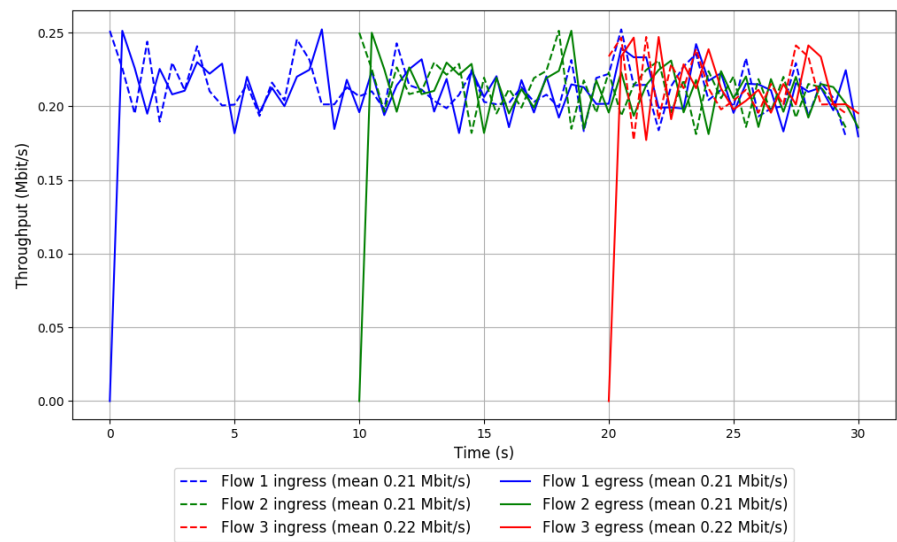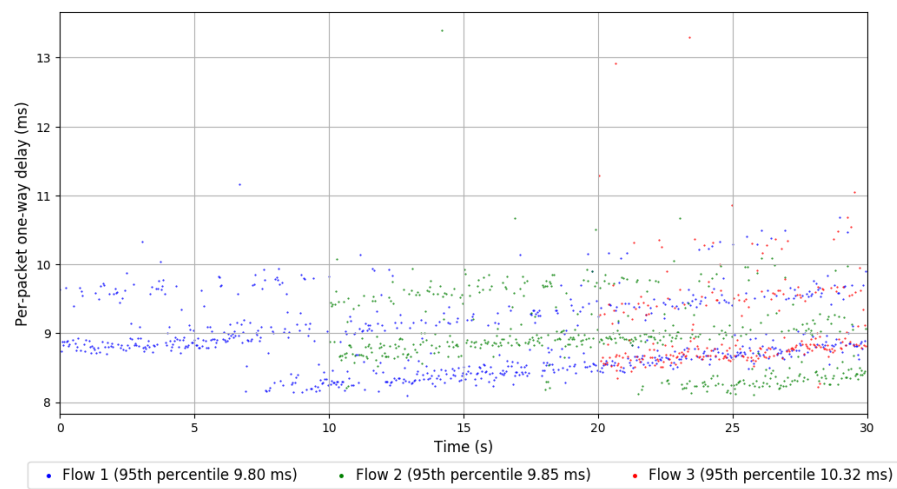
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-02-11 18:20:53
End at: 2019-02-11 18:21:23
Local clock offset: 6.176 ms
Remote clock offset: -5.125 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 7.404 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.349 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.201 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 8.128 ms
Loss rate: 0.00%
```
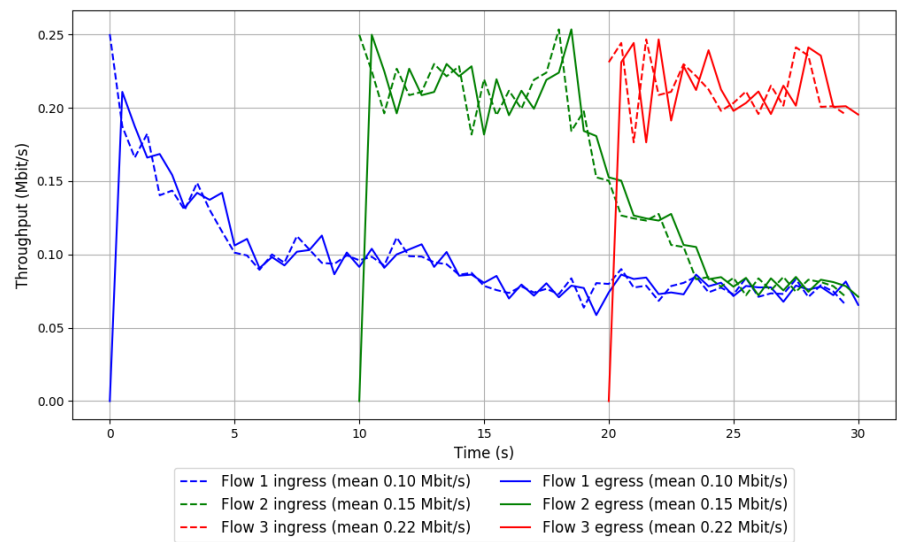
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-02-11 18:45:55
End at: 2019-02-11 18:46:25
Local clock offset: -0.327 ms
Remote clock offset: -4.81 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.27 Mbit/s
95th percentile per-packet one-way delay: 9.859 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 0.10 Mbit/s
95th percentile per-packet one-way delay: 9.800 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 9.847 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 10.319 ms
Loss rate: 0.00%
```
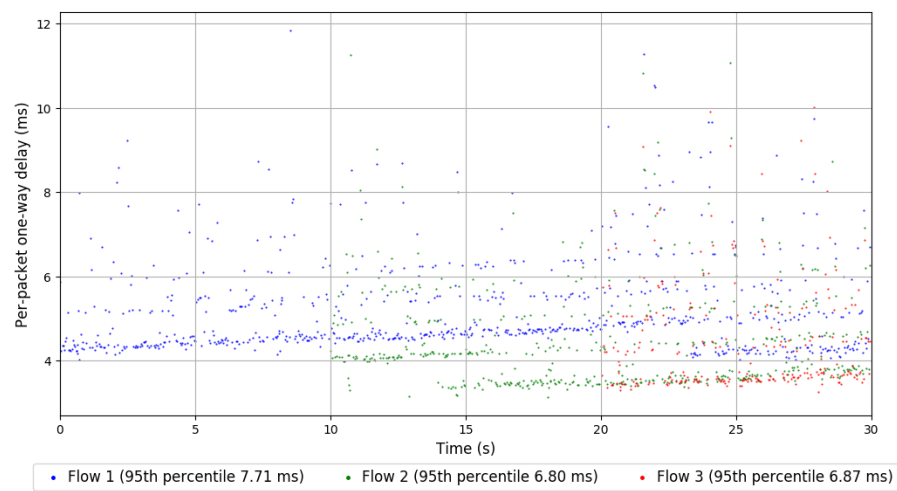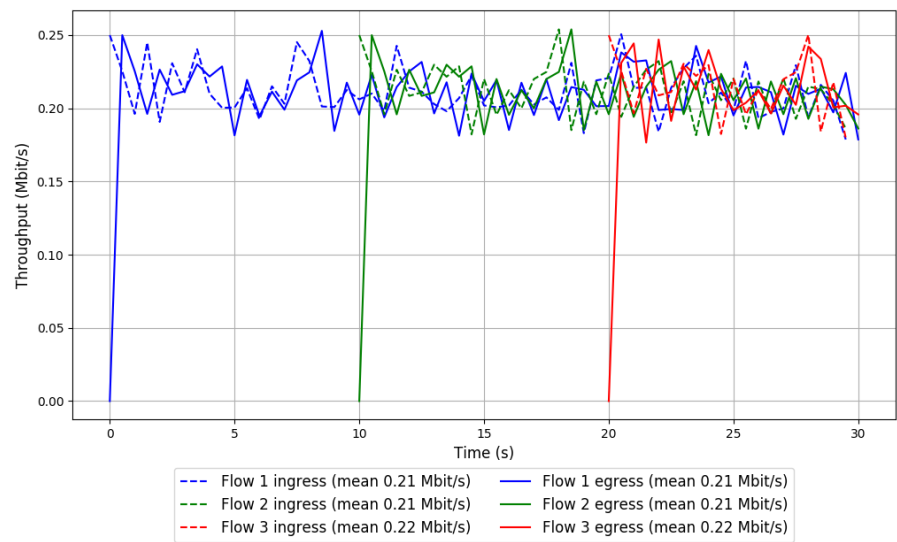
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-02-11 19:10:51
End at: 2019-02-11 19:11:21
Local clock offset: 4.211 ms
Remote clock offset: -5.549 ms


# Below is generated by plot.py at 2019-02-11 19:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 7.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 7.710 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.21 Mbit/s
95th percentile per-packet one-way delay: 6.803 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 6.873 ms
Loss rate: 0.00%
```

Run 5: Report of SCReAM — Data Link
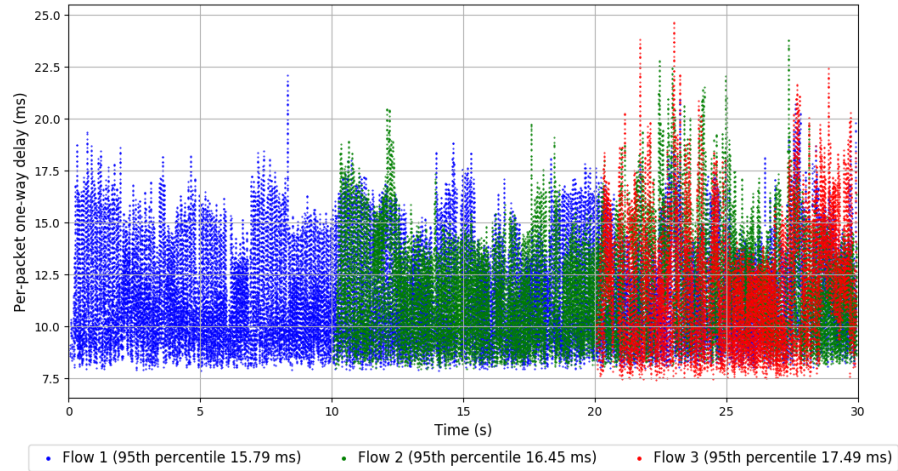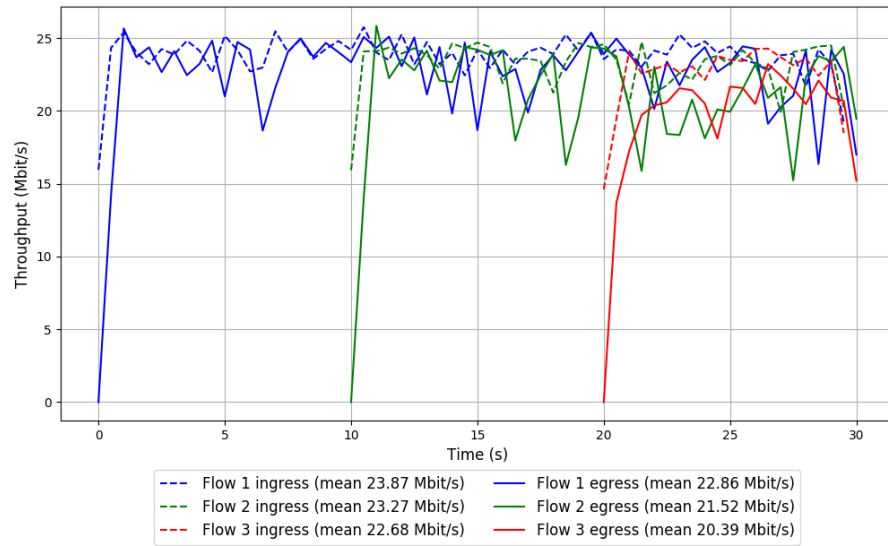

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```
Run 1: Statistics of Sprout

Start at: 2019-02-11 17:38:35
End at: 2019-02-11 17:39:05
Local clock offset: 2.237 ms
Remote clock offset: -2.686 ms


# Below is generated by plot.py at 2019-02-11 19:28:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.91 Mbit/s
95th percentile per-packet one-way delay: 16.238 ms
Loss rate: 6.23%
-- Flow 1:
Average throughput: 22.86 Mbit/s
95th percentile per-packet one-way delay: 15.785 ms
Loss rate: 4.21%
-- Flow 2:
Average throughput: 21.52 Mbit/s
95th percentile per-packet one-way delay: 16.449 ms
Loss rate: 7.51%
-- Flow 3:
Average throughput: 20.39 Mbit/s
95th percentile per-packet one-way delay: 17.492 ms
Loss rate: 10.05%
```

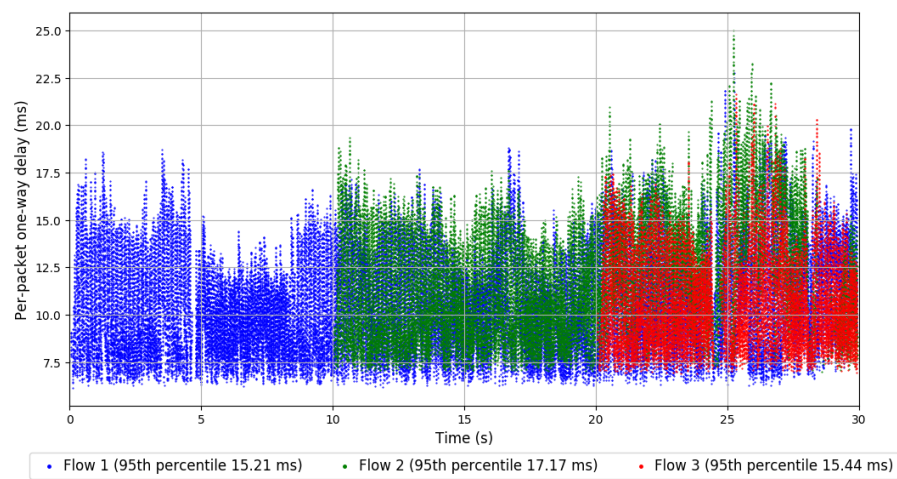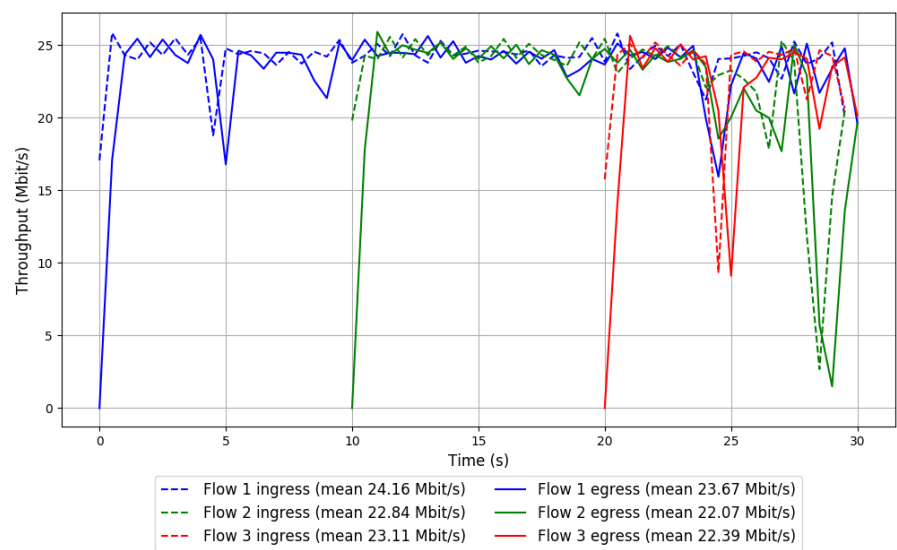Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-02-11 18:03:13
End at: 2019-02-11 18:03:43
Local clock offset: 5.77 ms
Remote clock offset: -5.217 ms


# Below is generated by plot.py at 2019-02-11 19:28:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.75 Mbit/s
95th percentile per-packet one-way delay: 16.101 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 23.67 Mbit/s
95th percentile per-packet one-way delay: 15.205 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 22.07 Mbit/s
95th percentile per-packet one-way delay: 17.167 ms
Loss rate: 3.38%
-- Flow 3:
Average throughput: 22.39 Mbit/s
95th percentile per-packet one-way delay: 15.435 ms
Loss rate: 3.07%
```
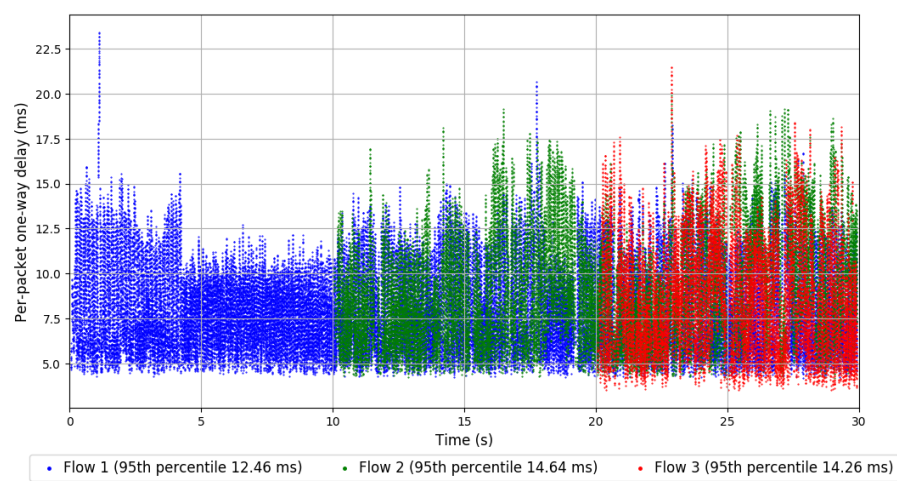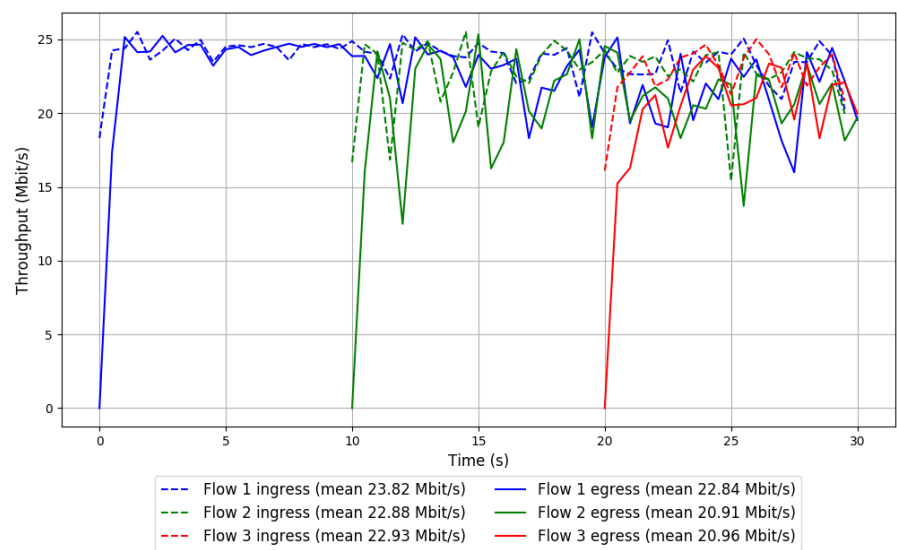
Run 2: Report of Sprout — Data Link

Flow 1 ingress (mean 24.16 Mbit/s) --- Flow 1 egress (mean 23.67 Mbit/s)
Flow 2 ingress (mean 22.84 Mbit/s) --- Flow 2 egress (mean 22.07 Mbit/s)
Flow 3 ingress (mean 23.11 Mbit/s) --- Flow 3 egress (mean 22.39 Mbit/s)

Flow 1 (95th percentile 15.21 ms)　　Flow 2 (95th percentile 17.17 ms)　　Flow 3 (95th percentile 15.44 ms)

```
Run 3: Statistics of Sprout

Start at: 2019-02-11 18:27:58
End at: 2019-02-11 18:28:28
Local clock offset: 5.472 ms
Remote clock offset: -5.634 ms


# Below is generated by plot.py at 2019-02-11 19:28:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 43.67 Mbit/s
95th percentile per-packet one-way delay: 13.608 ms
Loss rate: 6.34%
-- Flow 1:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 12.462 ms
Loss rate: 4.14%
-- Flow 2:
Average throughput: 20.91 Mbit/s
95th percentile per-packet one-way delay: 14.645 ms
Loss rate: 8.65%
-- Flow 3:
Average throughput: 20.96 Mbit/s
95th percentile per-packet one-way delay: 14.262 ms
Loss rate: 8.60%
```

Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-02-11 18:52:58
End at: 2019-02-11 18:53:28
Local clock offset: 3.304 ms
Remote clock offset: -3.979 ms


# Below is generated by plot.py at 2019-02-11 19:28:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.35 Mbit/s
95th percentile per-packet one-way delay: 13.360 ms
Loss rate: 3.86%
-- Flow 1:
Average throughput: 22.85 Mbit/s
95th percentile per-packet one-way delay: 13.580 ms
Loss rate: 3.59%
-- Flow 2:
Average throughput: 22.80 Mbit/s
95th percentile per-packet one-way delay: 13.382 ms
Loss rate: 3.92%
-- Flow 3:
Average throughput: 22.47 Mbit/s
95th percentile per-packet one-way delay: 12.630 ms
Loss rate: 4.58%
```
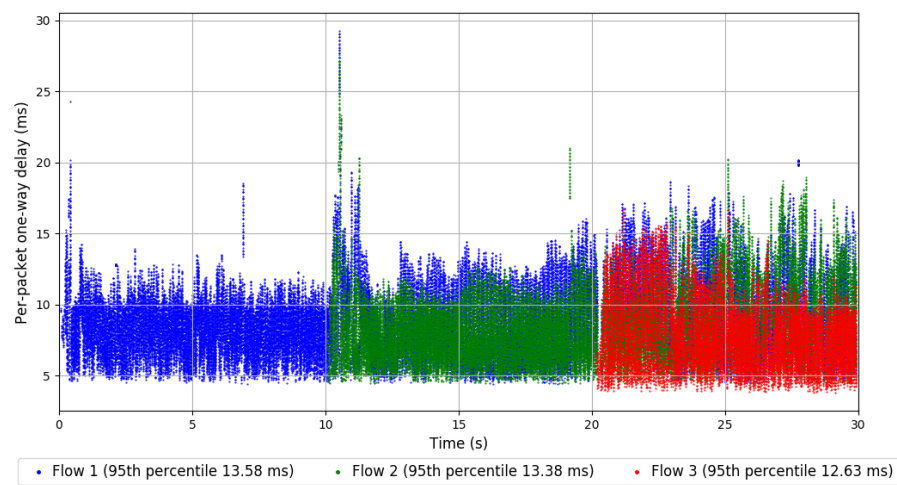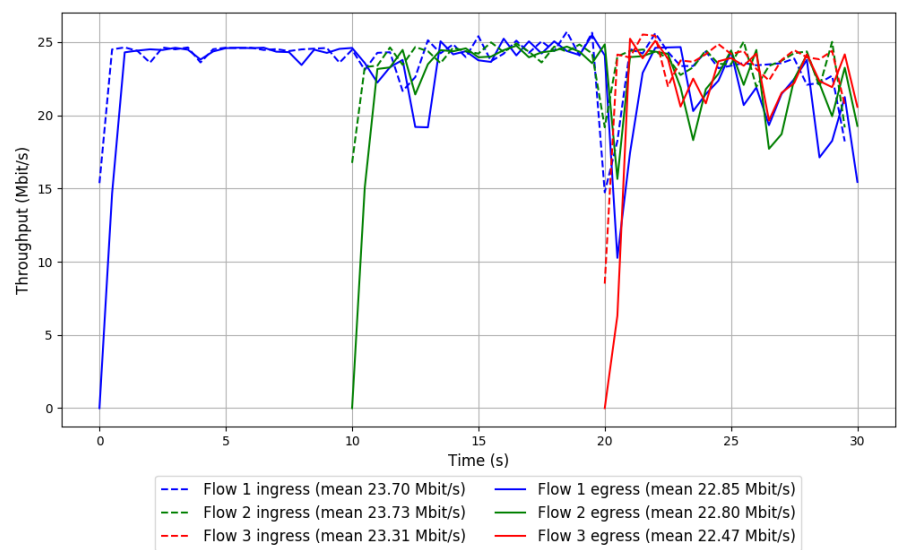
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-02-11 19:17:50
End at: 2019-02-11 19:18:20
Local clock offset: 4.87 ms
Remote clock offset: -5.04 ms


# Below is generated by plot.py at 2019-02-11 19:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 45.52 Mbit/s
95th percentile per-packet one-way delay: 13.996 ms
Loss rate: 3.09%
-- Flow 1:
Average throughput: 23.02 Mbit/s
95th percentile per-packet one-way delay: 13.755 ms
Loss rate: 2.44%
-- Flow 2:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 14.286 ms
Loss rate: 3.13%
-- Flow 3:
Average throughput: 22.11 Mbit/s
95th percentile per-packet one-way delay: 14.064 ms
Loss rate: 4.97%
```
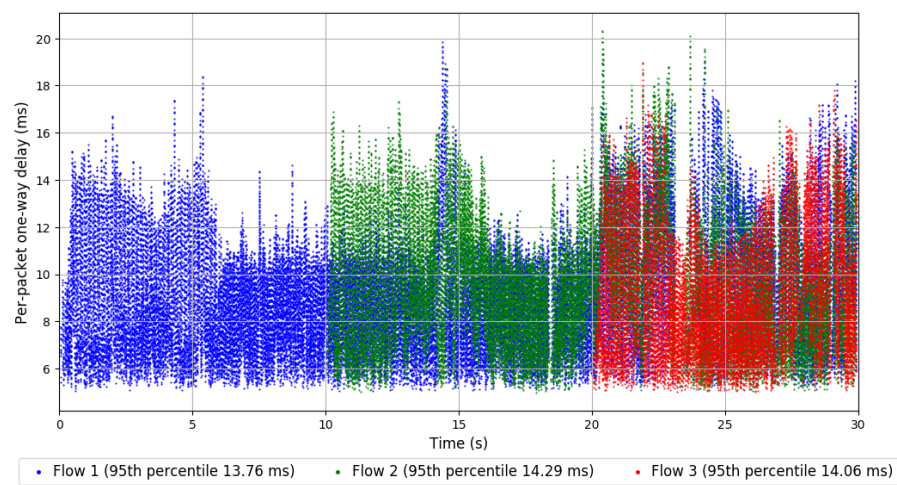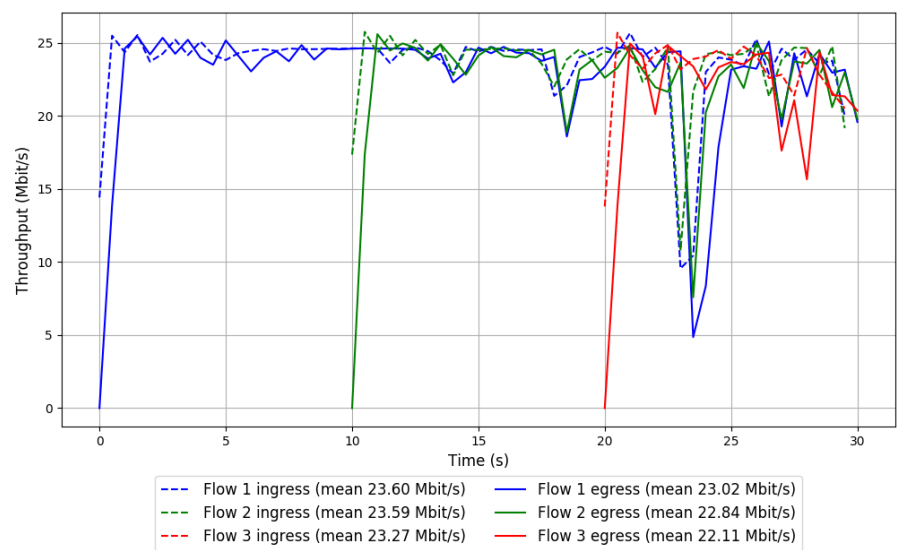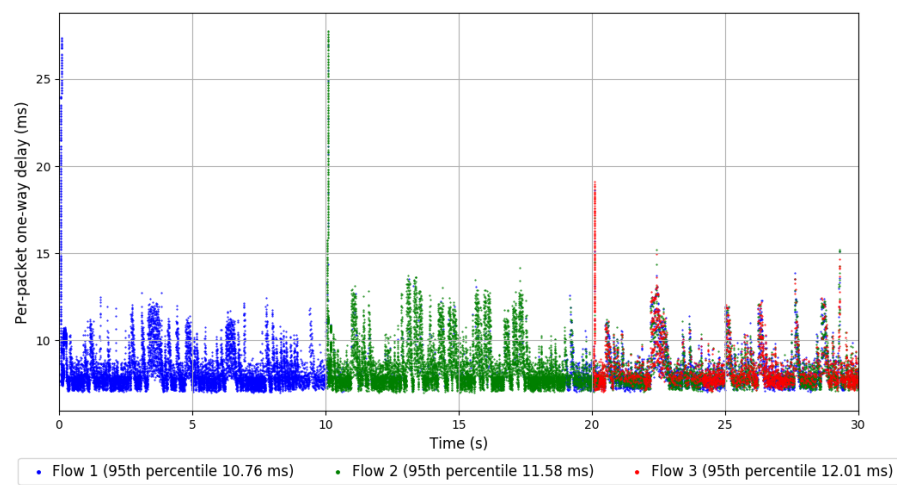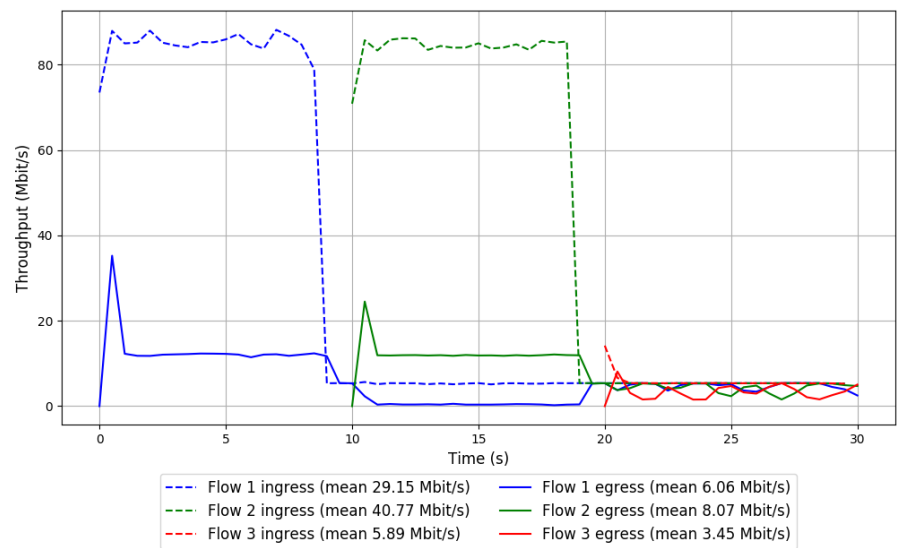
Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 23.60 Mbit/s)   Flow 1 egress (mean 23.02 Mbit/s)
Flow 2 ingress (mean 23.59 Mbit/s)   Flow 2 egress (mean 22.84 Mbit/s)
Flow 3 ingress (mean 23.27 Mbit/s)   Flow 3 egress (mean 22.11 Mbit/s)

Flow 1 (95th percentile 13.76 ms)   Flow 2 (95th percentile 14.29 ms)   Flow 3 (95th percentile 14.06 ms)

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

Start at: 2019-02-11 17:25:49
End at: 2019-02-11 17:26:19
Local clock offset: -1.528 ms
Remote clock offset: -4.567 ms


# Below is generated by plot.py at 2019-02-11 19:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 11.210 ms
Loss rate: 78.41%
-- Flow 1:
Average throughput: 6.06 Mbit/s
95th percentile per-packet one-way delay: 10.760 ms
Loss rate: 79.23%
-- Flow 2:
Average throughput: 8.07 Mbit/s
95th percentile per-packet one-way delay: 11.577 ms
Loss rate: 80.21%
-- Flow 3:
Average throughput: 3.45 Mbit/s
95th percentile per-packet one-way delay: 12.007 ms
Loss rate: 41.35%
```
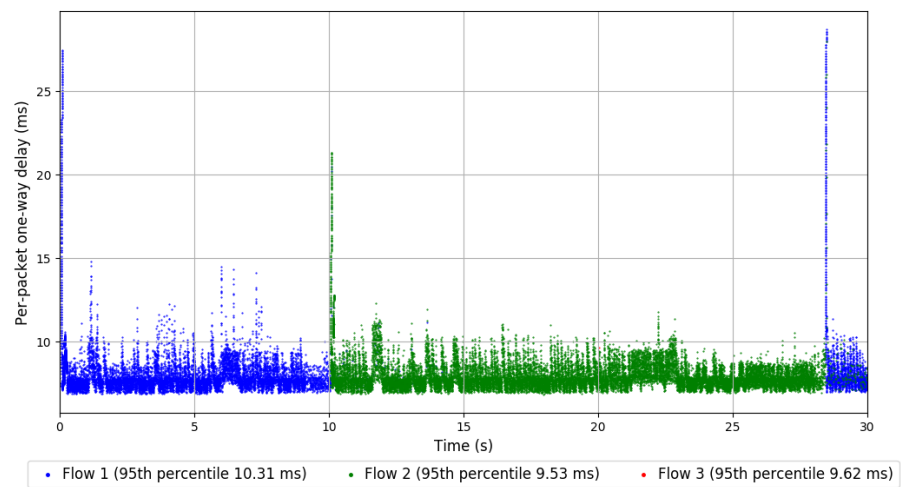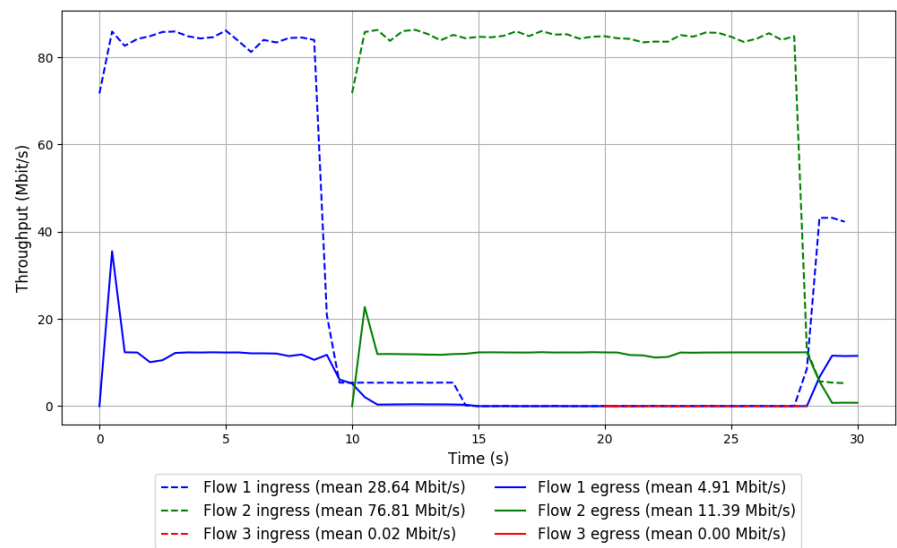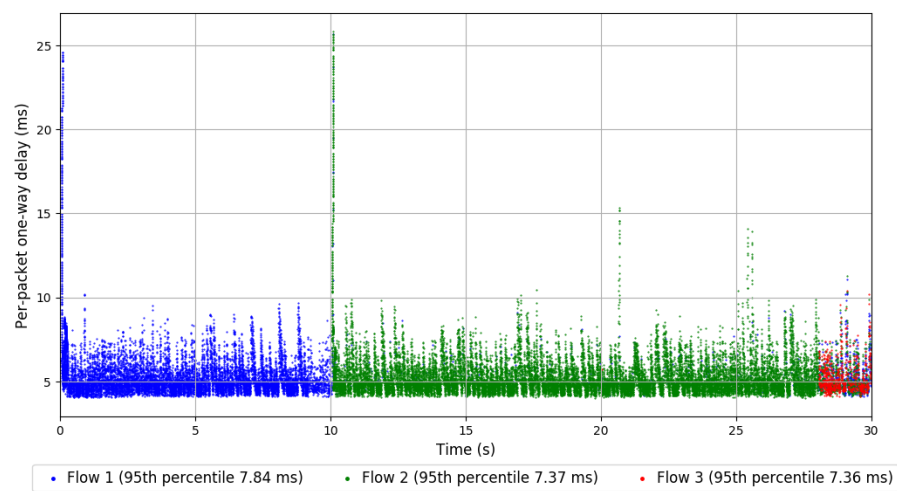
Run 1: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 29.15 Mbit/s)   Flow 1 egress (mean 6.06 Mbit/s)
Flow 2 ingress (mean 40.77 Mbit/s)   Flow 2 egress (mean 8.07 Mbit/s)
Flow 3 ingress (mean 5.89 Mbit/s)   Flow 3 egress (mean 3.45 Mbit/s)

Flow 1 (95th percentile 10.76 ms)   Flow 2 (95th percentile 11.58 ms)   Flow 3 (95th percentile 12.01 ms)

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

Start at: 2019-02-11 17:50:21
End at: 2019-02-11 17:50:51
Local clock offset: 5.473 ms
Remote clock offset: -3.903 ms


# Below is generated by plot.py at 2019-02-11 19:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 9.893 ms
Loss rate: 84.35%
-- Flow 1:
Average throughput: 4.91 Mbit/s
95th percentile per-packet one-way delay: 10.314 ms
Loss rate: 82.87%
-- Flow 2:
Average throughput: 11.39 Mbit/s
95th percentile per-packet one-way delay: 9.526 ms
Loss rate: 85.18%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 9.620 ms
Loss rate: 99.16%
```
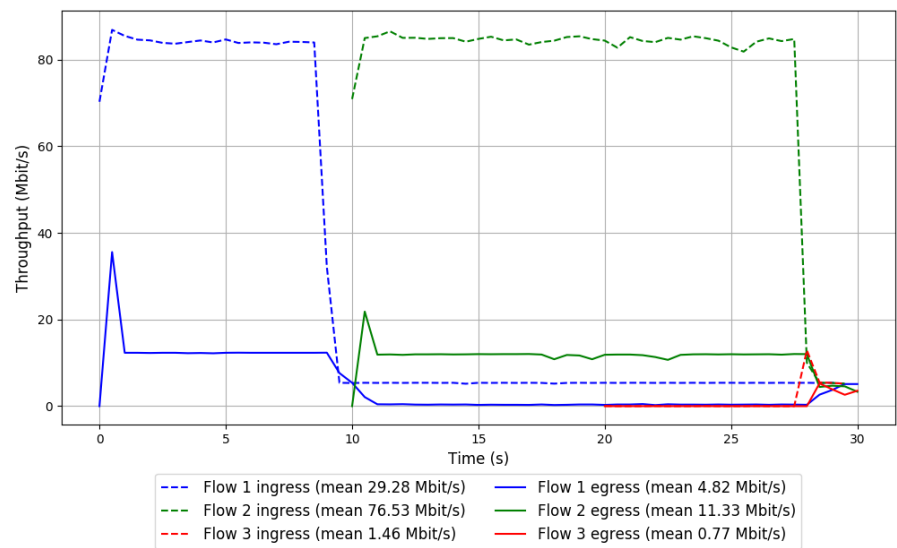
Run 2: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 28.64 Mbit/s) ——— Flow 1 egress (mean 4.91 Mbit/s)
- - - Flow 2 ingress (mean 76.81 Mbit/s) ——— Flow 2 egress (mean 11.39 Mbit/s)
- - - Flow 3 ingress (mean 0.02 Mbit/s) ——— Flow 3 egress (mean 0.00 Mbit/s)

• Flow 1 (95th percentile 10.31 ms)   • Flow 2 (95th percentile 9.53 ms)   • Flow 3 (95th percentile 9.62 ms)
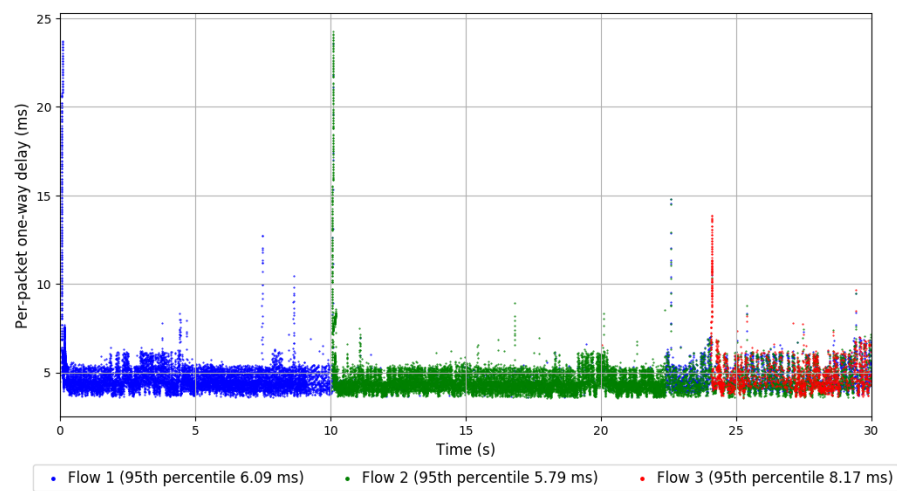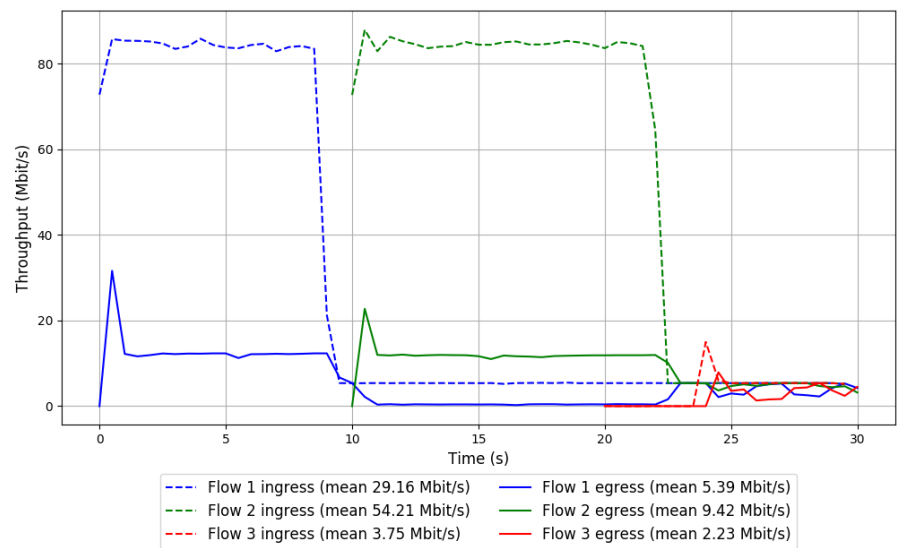
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-11 18:15:03
End at: 2019-02-11 18:15:33
Local clock offset: 6.863 ms
Remote clock offset: -4.752 ms


# Below is generated by plot.py at 2019-02-11 19:28:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.62 Mbit/s
95th percentile per-packet one-way delay: 7.514 ms
Loss rate: 84.37%
-- Flow 1:
Average throughput: 4.82 Mbit/s
95th percentile per-packet one-way delay: 7.838 ms
Loss rate: 83.54%
-- Flow 2:
Average throughput: 11.33 Mbit/s
95th percentile per-packet one-way delay: 7.374 ms
Loss rate: 85.20%
-- Flow 3:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 7.363 ms
Loss rate: 47.40%
```

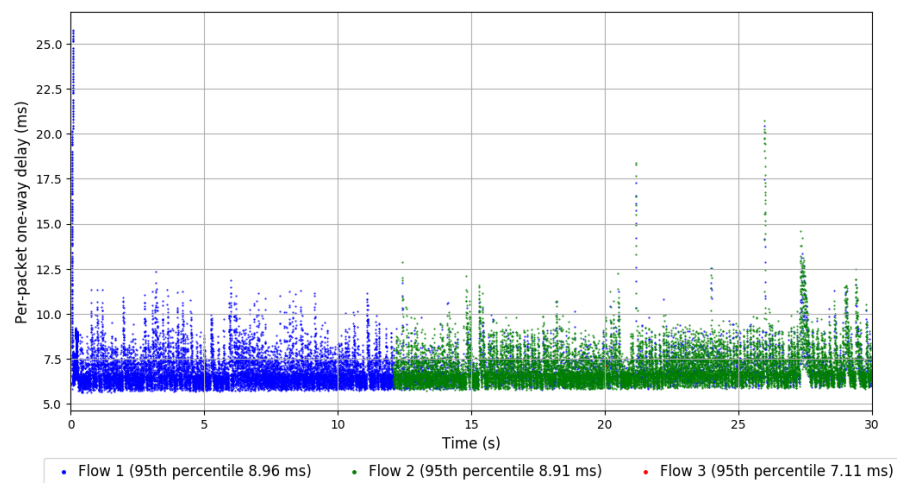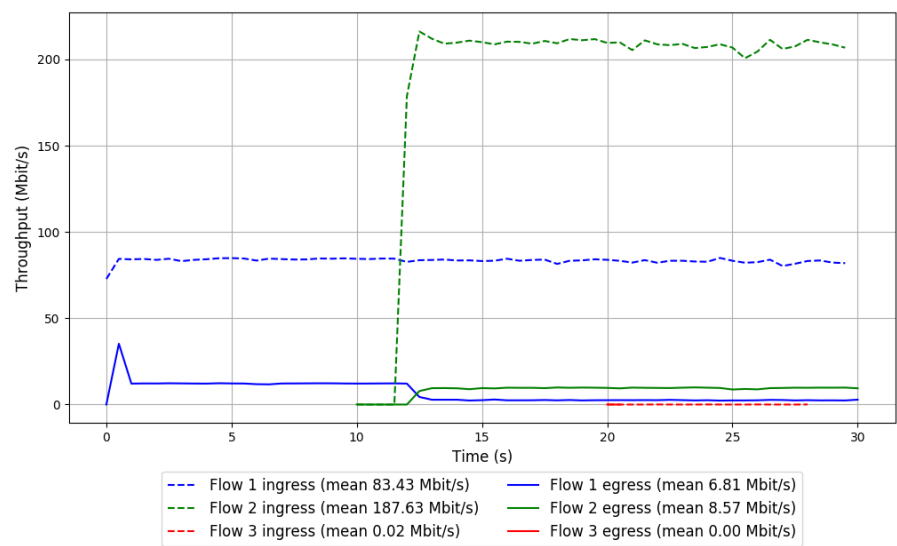# Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2019-02-11 18:40:02
End at: 2019-02-11 18:40:32
Local clock offset: 5.145 ms
Remote clock offset: -4.749 ms


# Below is generated by plot.py at 2019-02-11 19:29:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 6.011 ms
Loss rate: 81.35%
-- Flow 1:
Average throughput: 5.39 Mbit/s
95th percentile per-packet one-way delay: 6.086 ms
Loss rate: 81.52%
-- Flow 2:
Average throughput: 9.42 Mbit/s
95th percentile per-packet one-way delay: 5.790 ms
Loss rate: 82.62%
-- Flow 3:
Average throughput: 2.23 Mbit/s
95th percentile per-packet one-way delay: 8.173 ms
Loss rate: 40.52%
```
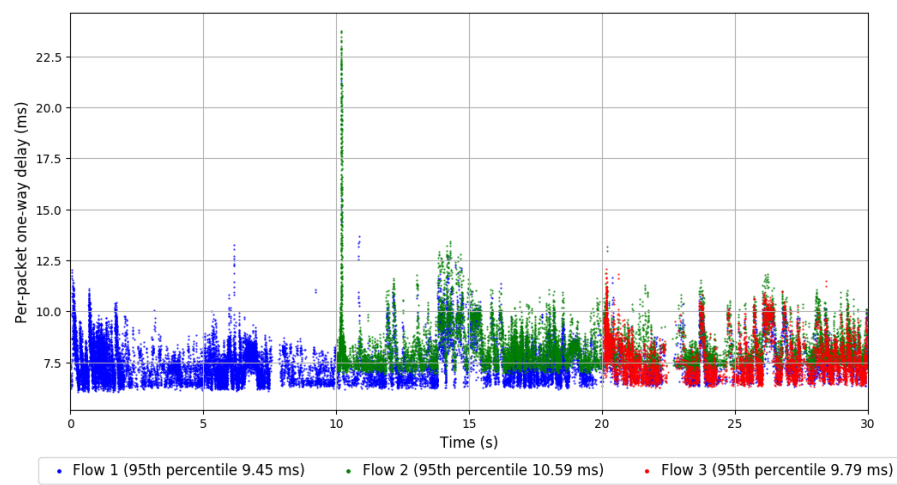
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-02-11 19:04:58
End at: 2019-02-11 19:05:28
Local clock offset: 1.829 ms
Remote clock offset: -4.051 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 8.934 ms
Loss rate: 93.99%
-- Flow 1:
Average throughput: 6.81 Mbit/s
95th percentile per-packet one-way delay: 8.965 ms
Loss rate: 91.84%
-- Flow 2:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 8.906 ms
Loss rate: 95.43%
-- Flow 3:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 7.110 ms
Loss rate: 99.16%
```

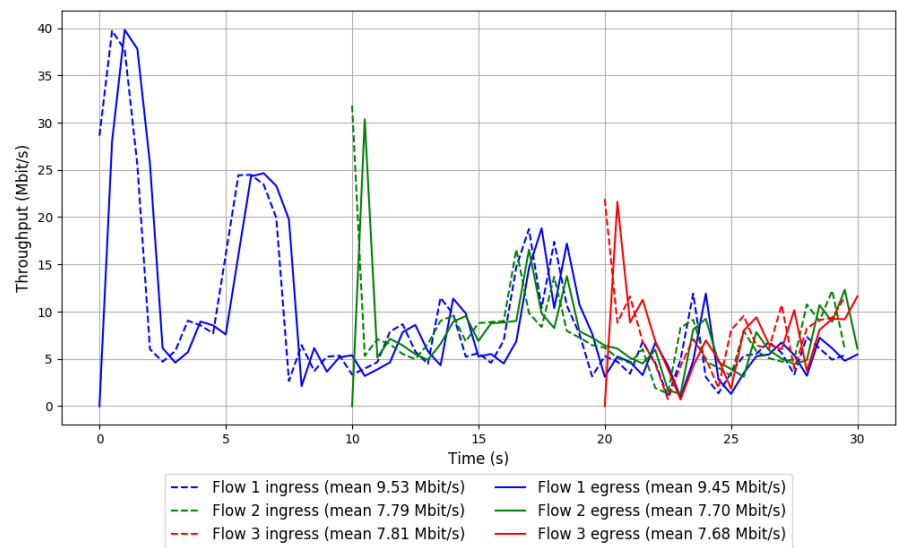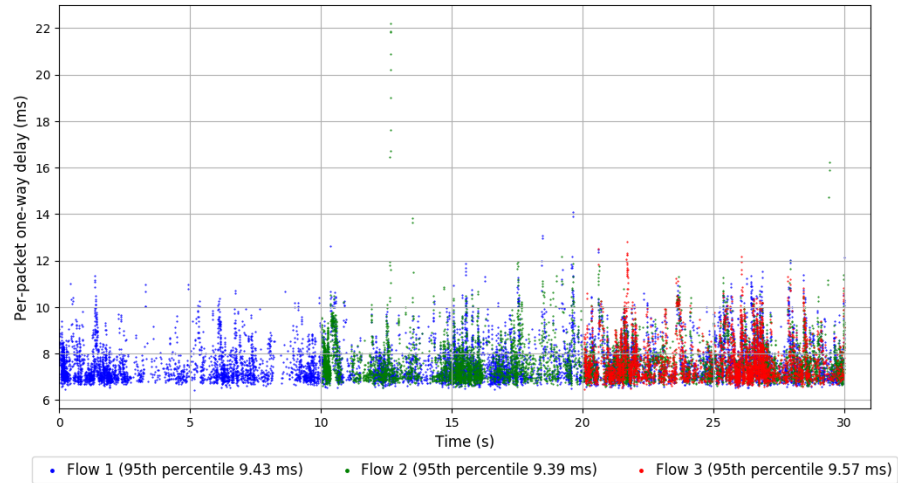Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-02-11 17:36:18
End at: 2019-02-11 17:36:48
Local clock offset: 0.037 ms
Remote clock offset: -4.776 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 17.14 Mbit/s
95th percentile per-packet one-way delay: 9.884 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 9.45 Mbit/s
95th percentile per-packet one-way delay: 9.451 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 10.589 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 7.68 Mbit/s
95th percentile per-packet one-way delay: 9.791 ms
Loss rate: 1.65%
```

Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-02-11 18:00:58
End at: 2019-02-11 18:01:29
Local clock offset: 6.592 ms
Remote clock offset: -4.682 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.63 Mbit/s
95th percentile per-packet one-way delay: 9.440 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 4.36 Mbit/s
95th percentile per-packet one-way delay: 9.425 ms
Loss rate: 3.09%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 9.395 ms
Loss rate: 2.51%
-- Flow 3:
Average throughput: 4.66 Mbit/s
95th percentile per-packet one-way delay: 9.575 ms
Loss rate: 2.35%
```
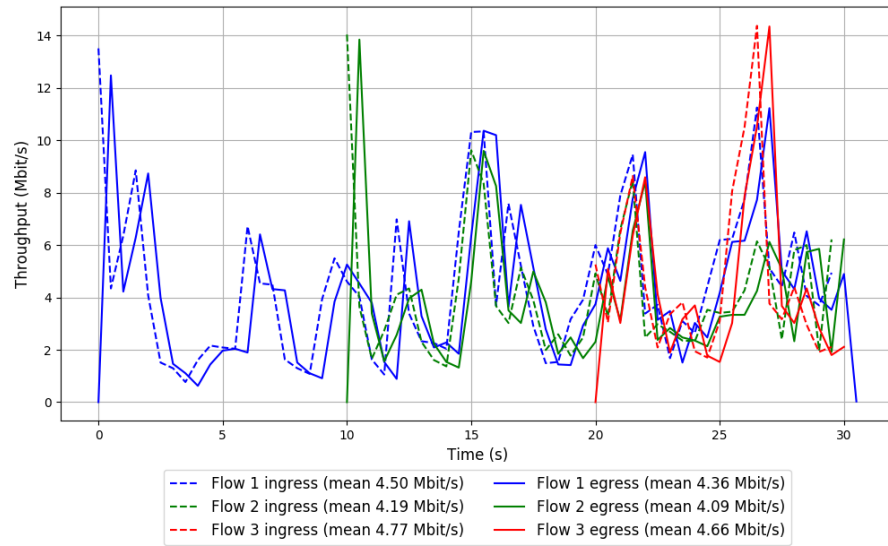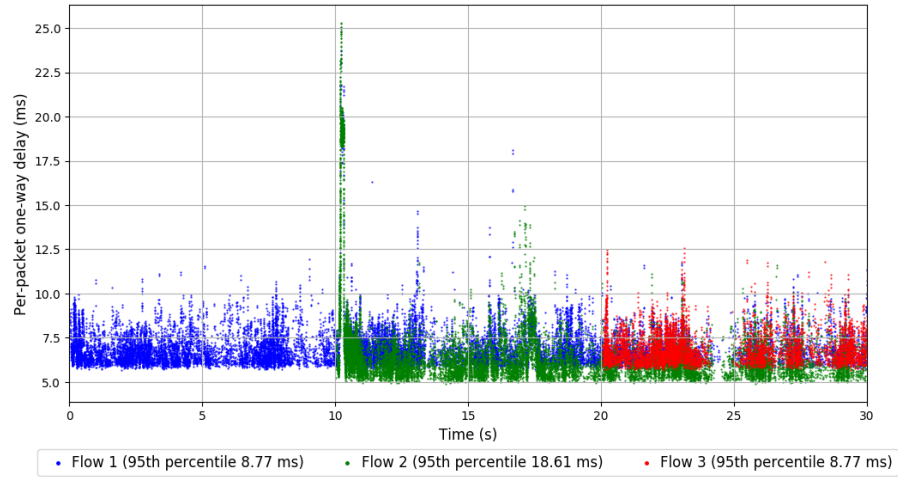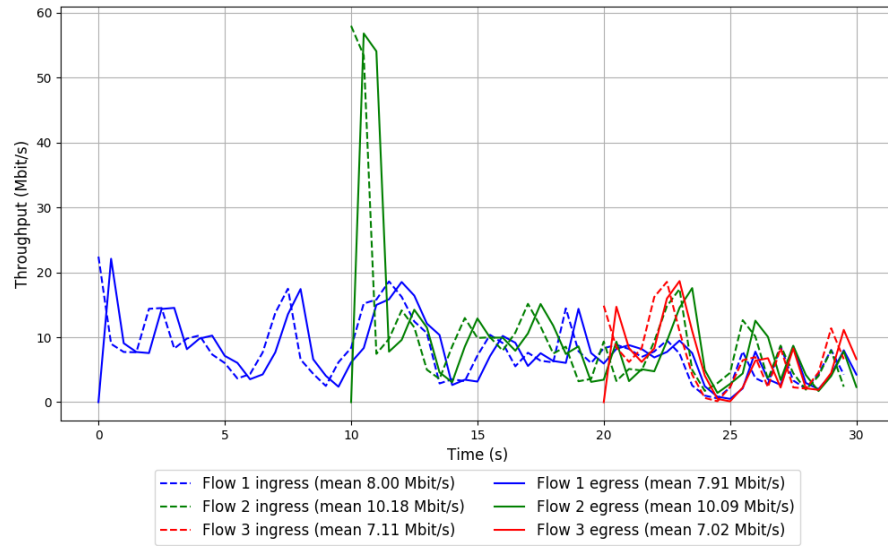
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-02-11 18:25:42
End at: 2019-02-11 18:26:12
Local clock offset: 5.775 ms
Remote clock offset: -3.966 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.97 Mbit/s
95th percentile per-packet one-way delay: 9.212 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 7.91 Mbit/s
95th percentile per-packet one-way delay: 8.765 ms
Loss rate: 1.06%
-- Flow 2:
Average throughput: 10.09 Mbit/s
95th percentile per-packet one-way delay: 18.610 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 7.02 Mbit/s
95th percentile per-packet one-way delay: 8.765 ms
Loss rate: 1.20%
```

Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-02-11 18:50:43
End at: 2019-02-11 18:51:13
Local clock offset: 0.631 ms
Remote clock offset: -5.817 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 8.538 ms
Loss rate: 1.71%
-- Flow 1:
Average throughput: 5.94 Mbit/s
95th percentile per-packet one-way delay: 8.568 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 5.89 Mbit/s
95th percentile per-packet one-way delay: 8.630 ms
Loss rate: 1.54%
-- Flow 3:
Average throughput: 5.80 Mbit/s
95th percentile per-packet one-way delay: 8.177 ms
Loss rate: 2.23%
```
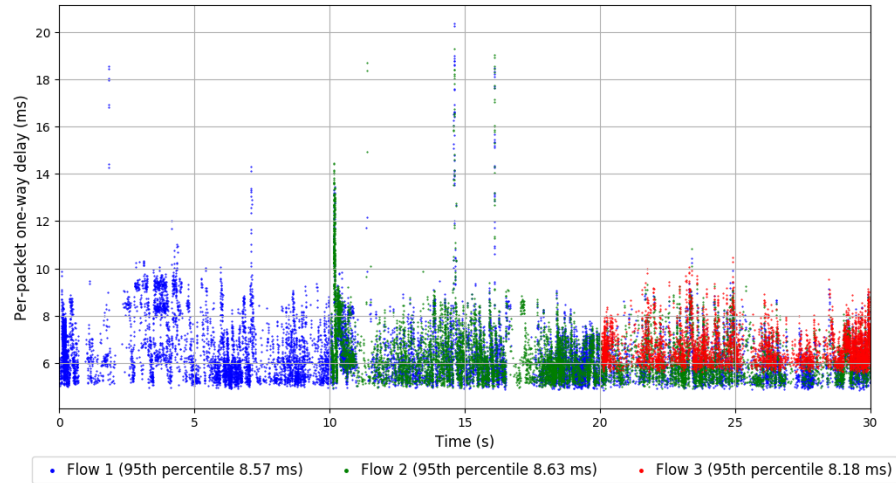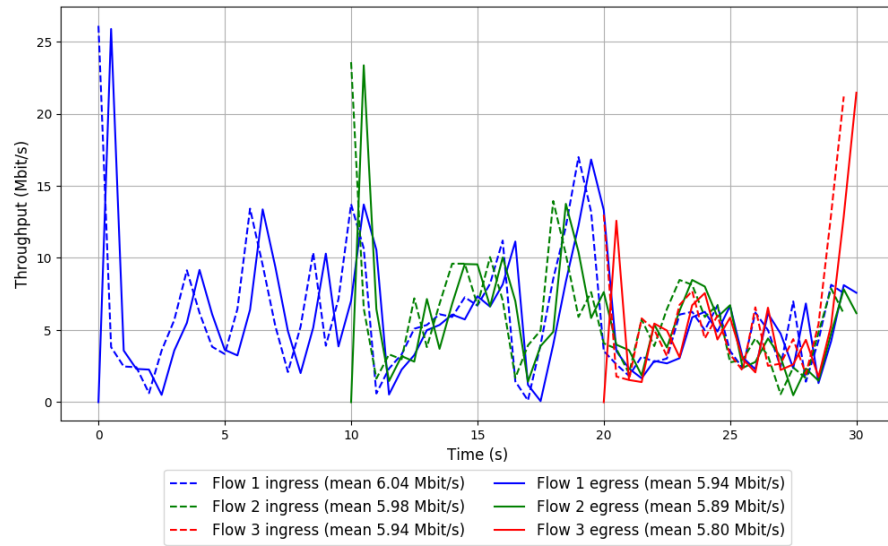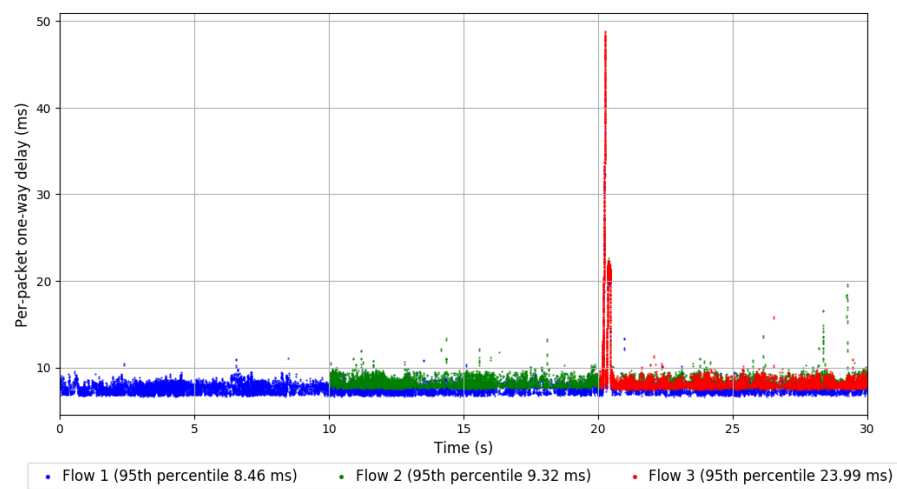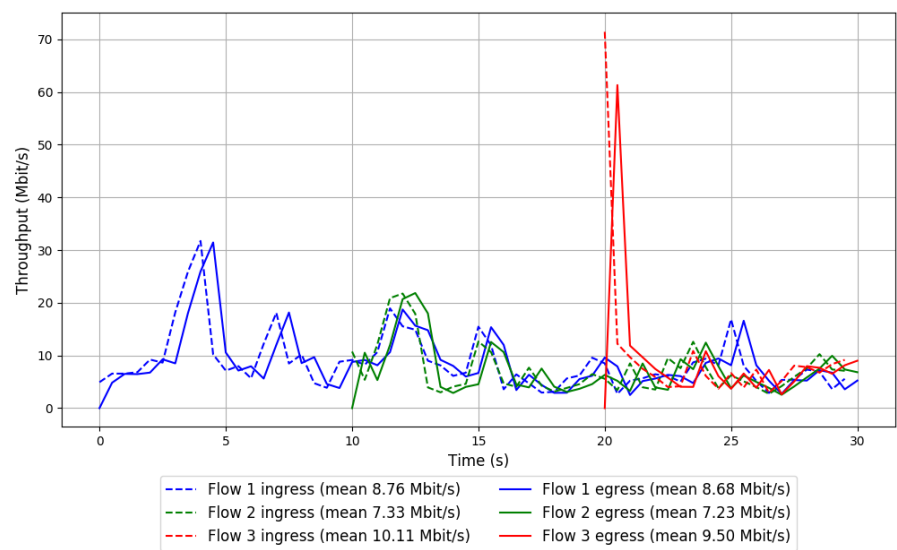
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-02-11 19:15:34
End at: 2019-02-11 19:16:04
Local clock offset: 3.369 ms
Remote clock offset: -3.915 ms


# Below is generated by plot.py at 2019-02-11 19:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.65 Mbit/s
95th percentile per-packet one-way delay: 9.890 ms
Loss rate: 2.11%
-- Flow 1:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 8.463 ms
Loss rate: 1.00%
-- Flow 2:
Average throughput: 7.23 Mbit/s
95th percentile per-packet one-way delay: 9.320 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 9.50 Mbit/s
95th percentile per-packet one-way delay: 23.992 ms
Loss rate: 6.06%
```

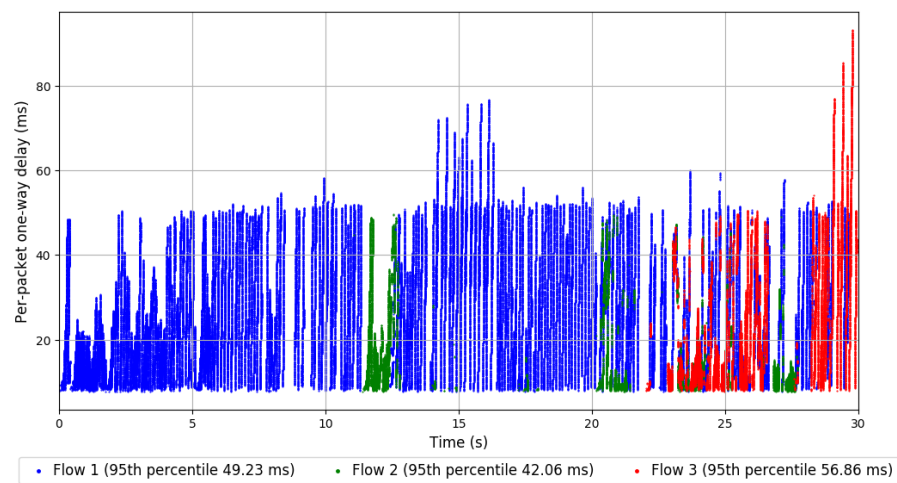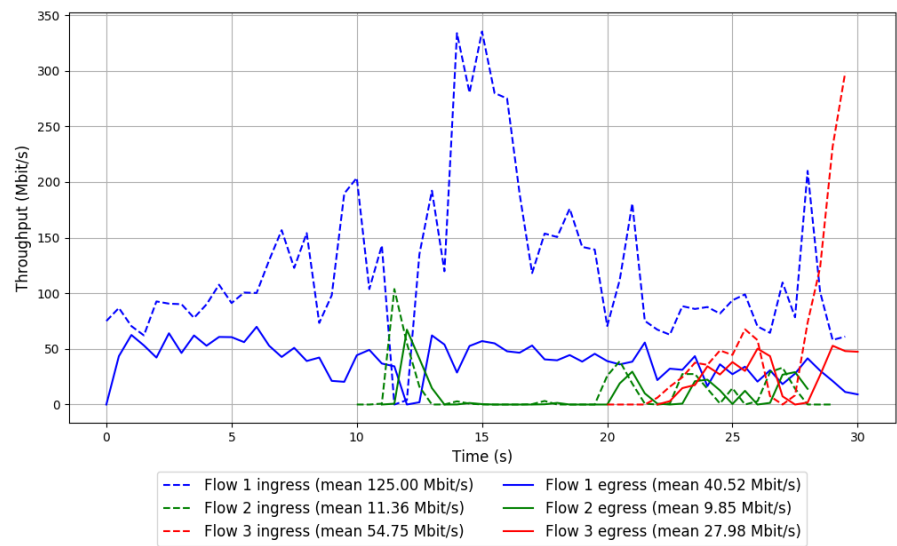Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-02-11 17:30:25
End at: 2019-02-11 17:30:55
Local clock offset: -2.47 ms
Remote clock offset: -4.674 ms


# Below is generated by plot.py at 2019-02-11 19:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.99 Mbit/s
95th percentile per-packet one-way delay: 49.144 ms
Loss rate: 64.40%
-- Flow 1:
Average throughput: 40.52 Mbit/s
95th percentile per-packet one-way delay: 49.228 ms
Loss rate: 67.54%
-- Flow 2:
Average throughput: 9.85 Mbit/s
95th percentile per-packet one-way delay: 42.065 ms
Loss rate: 24.14%
-- Flow 3:
Average throughput: 27.98 Mbit/s
95th percentile per-packet one-way delay: 56.864 ms
Loss rate: 59.05%
```

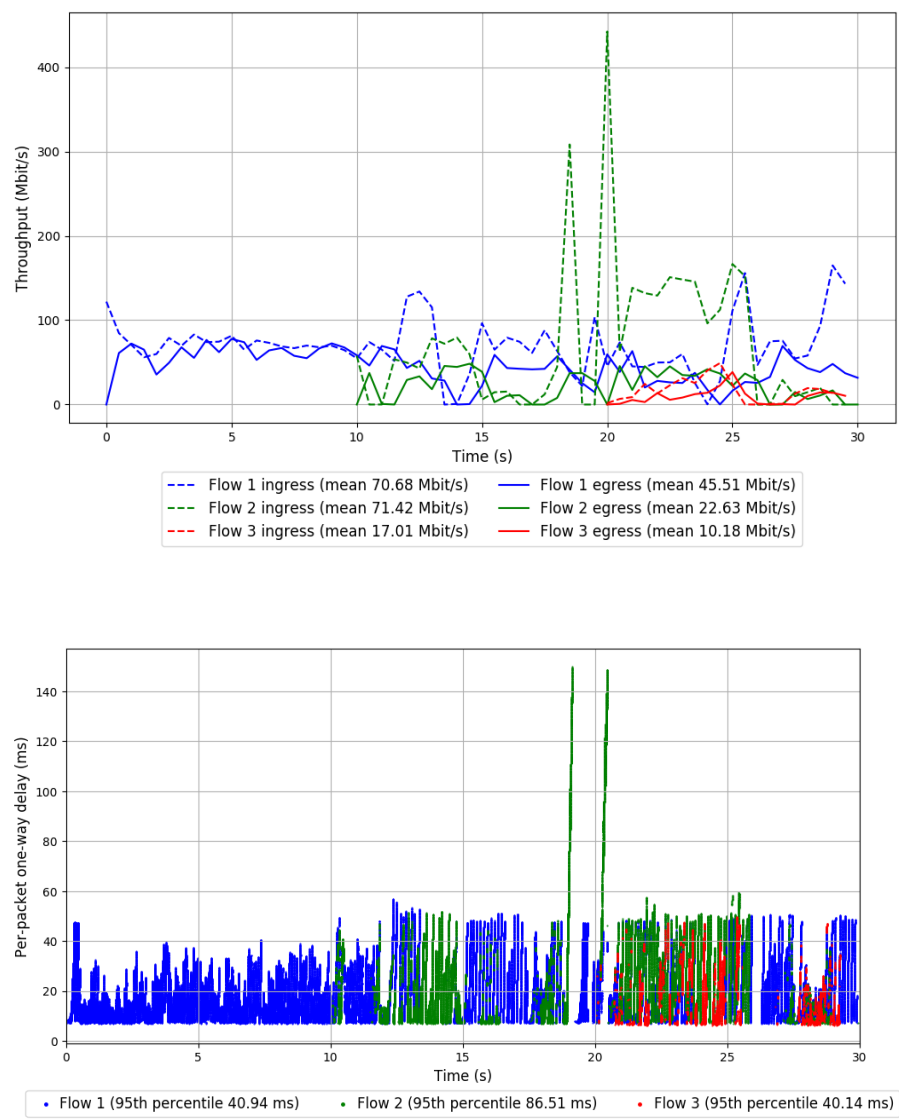Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-02-11 17:55:05
End at: 2019-02-11 17:55:35
Local clock offset: 6.94 ms
Remote clock offset: -3.272 ms


# Below is generated by plot.py at 2019-02-11 19:29:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.69 Mbit/s
95th percentile per-packet one-way delay: 44.717 ms
Loss rate: 48.40%
-- Flow 1:
Average throughput: 45.51 Mbit/s
95th percentile per-packet one-way delay: 40.939 ms
Loss rate: 35.61%
-- Flow 2:
Average throughput: 22.63 Mbit/s
95th percentile per-packet one-way delay: 86.511 ms
Loss rate: 68.31%
-- Flow 3:
Average throughput: 10.18 Mbit/s
95th percentile per-packet one-way delay: 40.139 ms
Loss rate: 40.22%
```
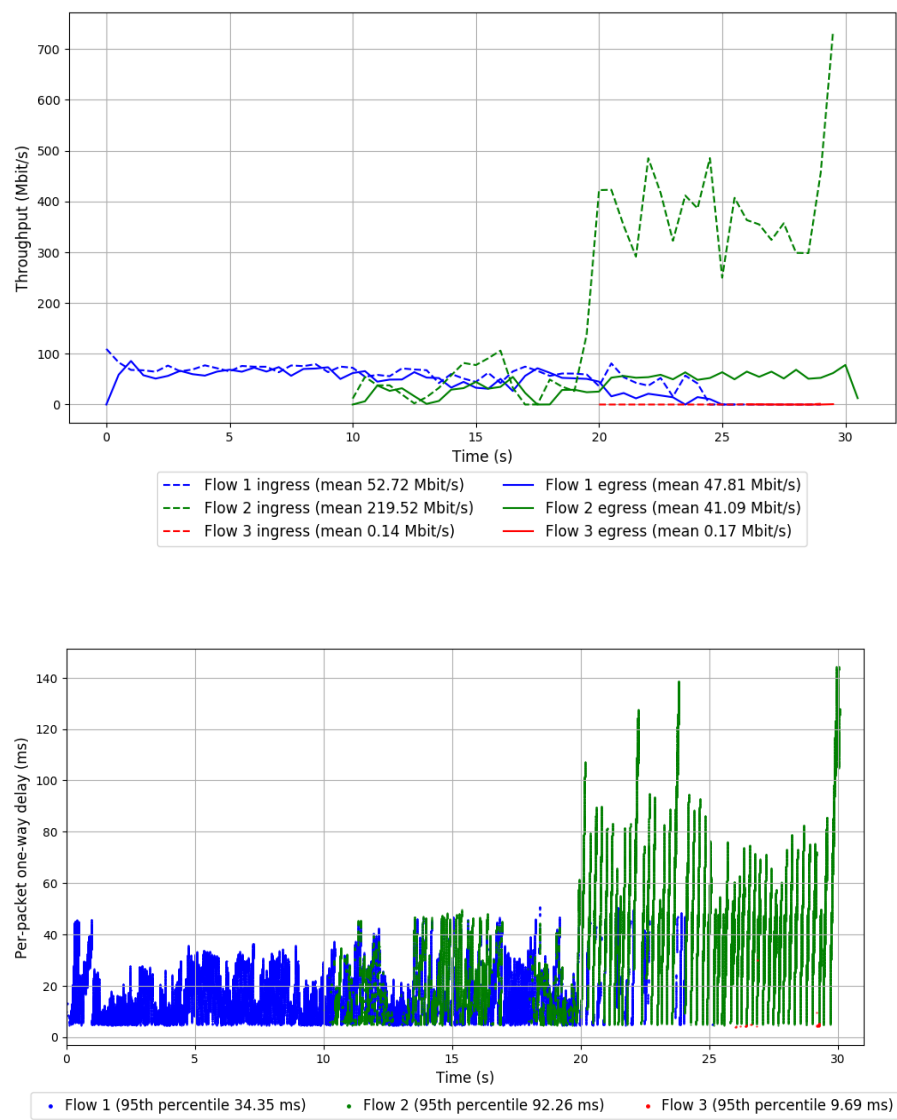
Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 70.68 Mbit/s) --- Flow 1 egress (mean 45.51 Mbit/s)
Flow 2 ingress (mean 71.42 Mbit/s) --- Flow 2 egress (mean 22.63 Mbit/s)
Flow 3 ingress (mean 17.01 Mbit/s) --- Flow 3 egress (mean 10.18 Mbit/s)

Flow 1 (95th percentile 40.94 ms) • Flow 2 (95th percentile 86.51 ms) • Flow 3 (95th percentile 40.14 ms)

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```
Run 3: Statistics of Verus

Start at: 2019-02-11 18:19:40
End at: 2019-02-11 18:20:10
Local clock offset: 6.631 ms
Remote clock offset: -4.222 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.41 Mbit/s
95th percentile per-packet one-way delay: 70.529 ms
Loss rate: 65.79%
-- Flow 1:
Average throughput: 47.81 Mbit/s
95th percentile per-packet one-way delay: 34.355 ms
Loss rate: 22.24%
-- Flow 2:
Average throughput: 41.09 Mbit/s
95th percentile per-packet one-way delay: 92.260 ms
Loss rate: 81.18%
-- Flow 3:
Average throughput: 0.17 Mbit/s
95th percentile per-packet one-way delay: 9.688 ms
Loss rate: 58.18%
```
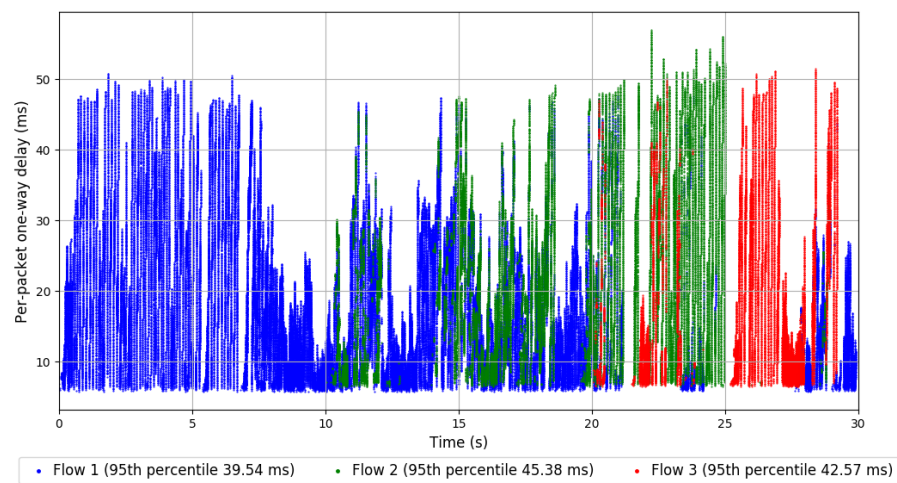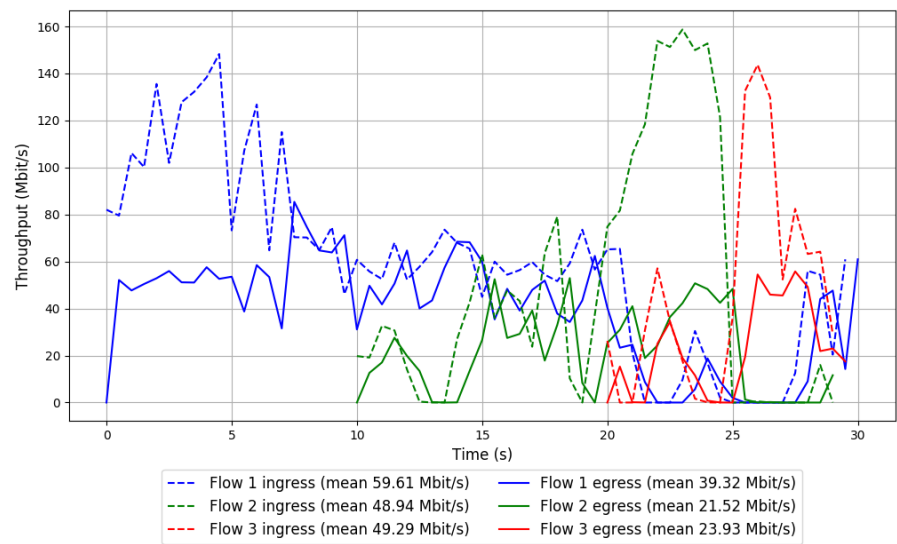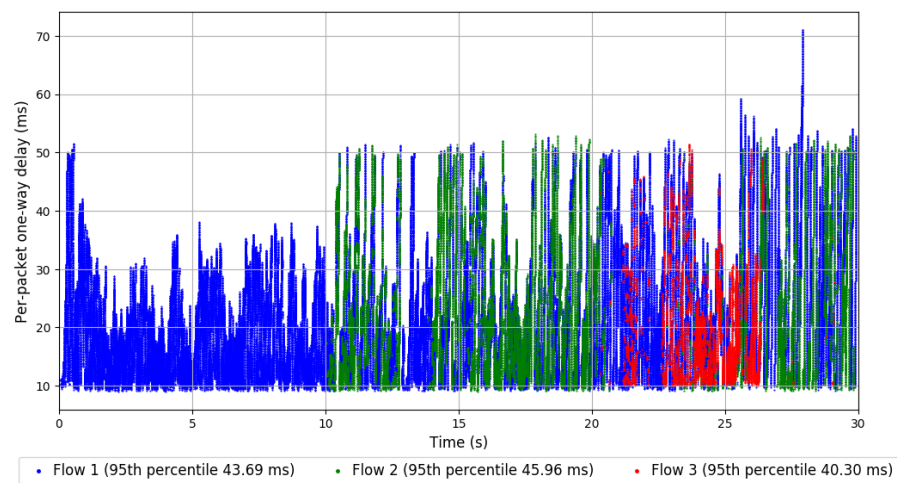
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 52.72 Mbit/s) — Flow 1 egress (mean 47.81 Mbit/s)
Flow 2 ingress (mean 219.52 Mbit/s) — Flow 2 egress (mean 41.09 Mbit/s)
Flow 3 ingress (mean 0.14 Mbit/s) — Flow 3 egress (mean 0.17 Mbit/s)

Flow 1 (95th percentile 34.35 ms) • Flow 2 (95th percentile 92.26 ms) • Flow 3 (95th percentile 9.69 ms)

```
Run 4: Statistics of Verus

Start at: 2019-02-11 18:44:41
End at: 2019-02-11 18:45:11
Local clock offset: 1.972 ms
Remote clock offset: -4.299 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.26 Mbit/s
95th percentile per-packet one-way delay: 41.835 ms
Loss rate: 43.22%
-- Flow 1:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 39.539 ms
Loss rate: 34.12%
-- Flow 2:
Average throughput: 21.52 Mbit/s
95th percentile per-packet one-way delay: 45.381 ms
Loss rate: 56.64%
-- Flow 3:
Average throughput: 23.93 Mbit/s
95th percentile per-packet one-way delay: 42.572 ms
Loss rate: 51.32%
```

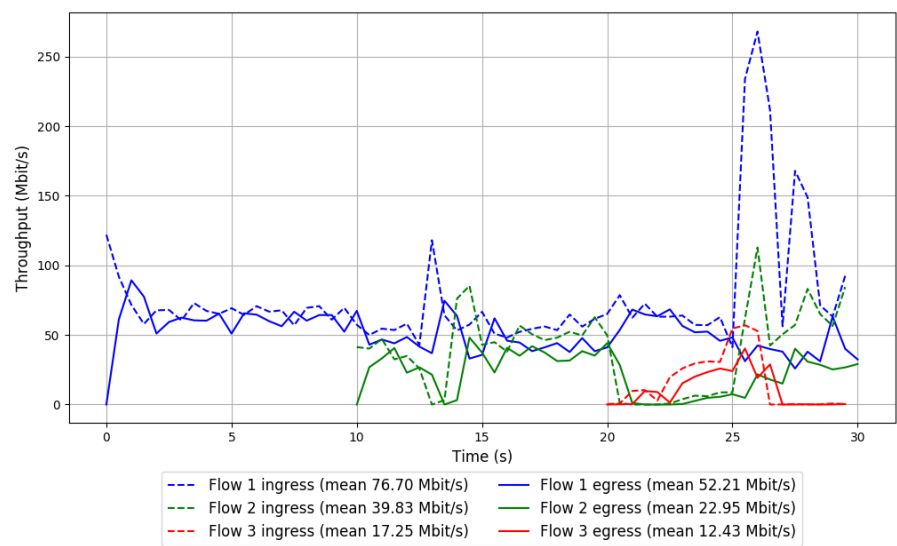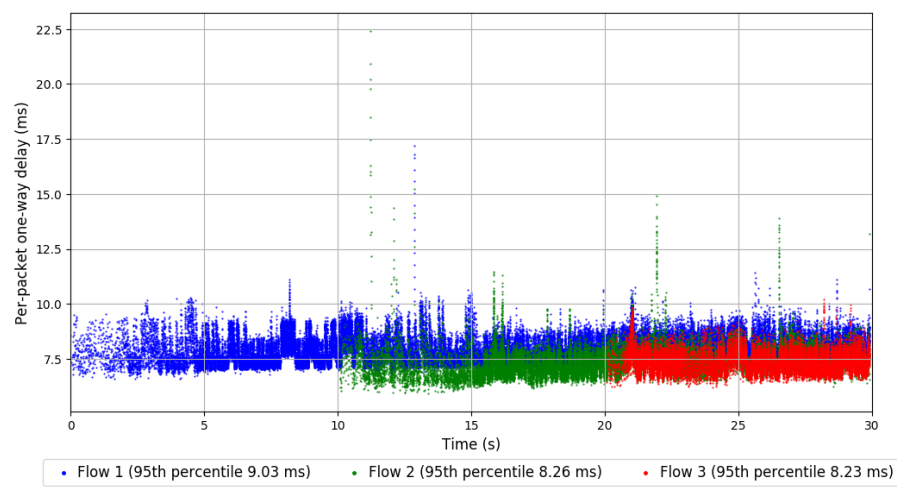Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-02-11 19:09:37
End at: 2019-02-11 19:10:07
Local clock offset: 0.483 ms
Remote clock offset: -3.205 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.06 Mbit/s
95th percentile per-packet one-way delay: 44.257 ms
Loss rate: 34.50%
-- Flow 1:
Average throughput: 52.21 Mbit/s
95th percentile per-packet one-way delay: 43.692 ms
Loss rate: 31.88%
-- Flow 2:
Average throughput: 22.95 Mbit/s
95th percentile per-packet one-way delay: 45.964 ms
Loss rate: 42.36%
-- Flow 3:
Average throughput: 12.43 Mbit/s
95th percentile per-packet one-way delay: 40.304 ms
Loss rate: 33.31%
```
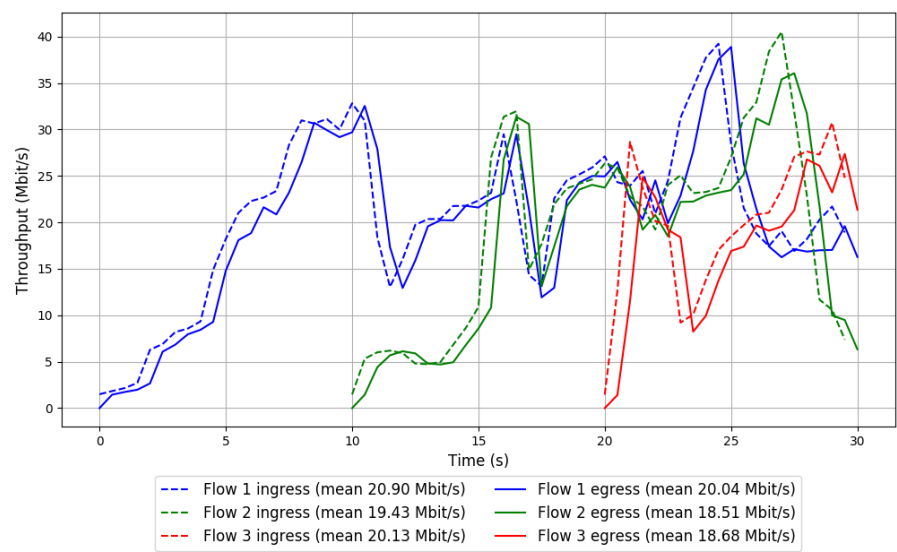
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-11 17:33:56
End at: 2019-02-11 17:34:26
Local clock offset: 0.311 ms
Remote clock offset: -2.993 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 38.51 Mbit/s
95th percentile per-packet one-way delay: 8.847 ms
Loss rate: 4.82%
-- Flow 1:
Average throughput: 20.04 Mbit/s
95th percentile per-packet one-way delay: 9.026 ms
Loss rate: 4.12%
-- Flow 2:
Average throughput: 18.51 Mbit/s
95th percentile per-packet one-way delay: 8.258 ms
Loss rate: 4.70%
-- Flow 3:
Average throughput: 18.68 Mbit/s
95th percentile per-packet one-way delay: 8.232 ms
Loss rate: 7.24%
```

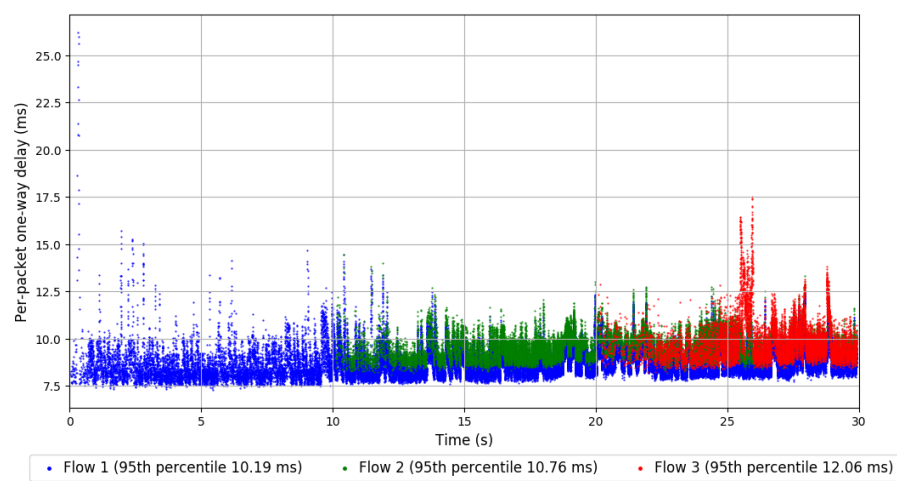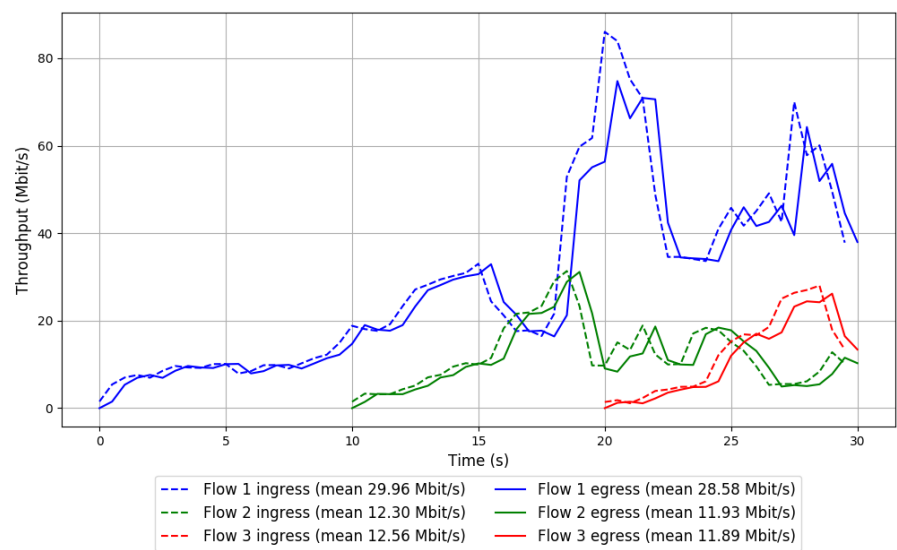# Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-11 17:58:38
End at: 2019-02-11 17:59:08
Local clock offset: 4.765 ms
Remote clock offset: -4.456 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.44 Mbit/s
95th percentile per-packet one-way delay: 10.622 ms
Loss rate: 4.37%
-- Flow 1:
Average throughput: 28.58 Mbit/s
95th percentile per-packet one-way delay: 10.185 ms
Loss rate: 4.60%
-- Flow 2:
Average throughput: 11.93 Mbit/s
95th percentile per-packet one-way delay: 10.756 ms
Loss rate: 3.03%
-- Flow 3:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 12.063 ms
Loss rate: 5.38%
```

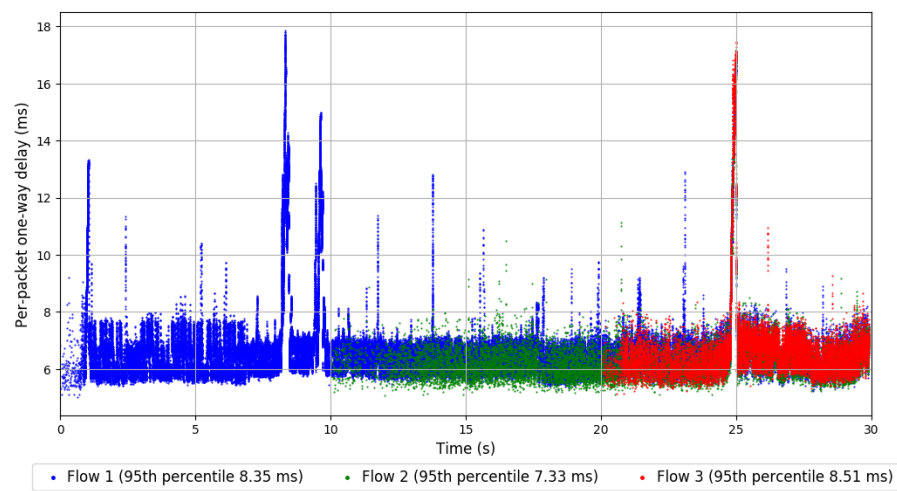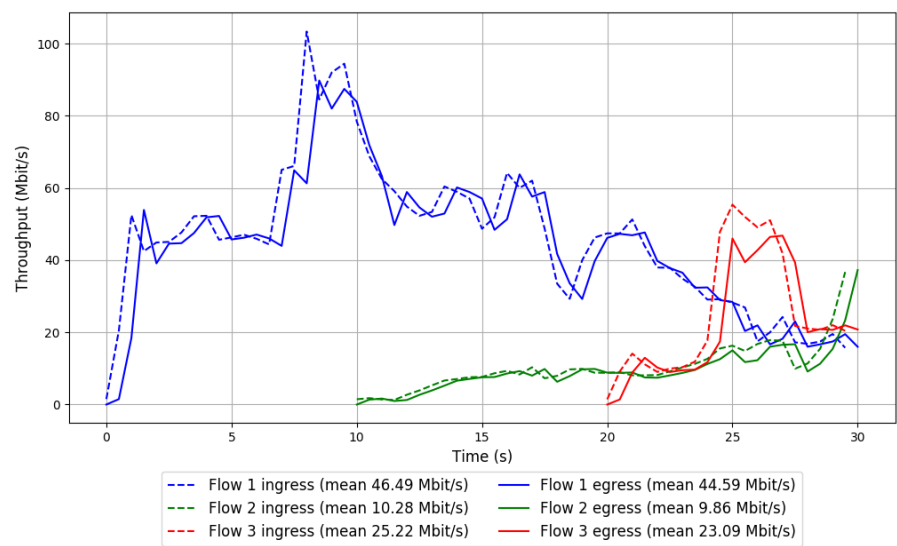# Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-11 18:23:14
End at: 2019-02-11 18:23:44
Local clock offset: 4.171 ms
Remote clock offset: -5.202 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.77 Mbit/s
95th percentile per-packet one-way delay: 8.116 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 44.59 Mbit/s
95th percentile per-packet one-way delay: 8.352 ms
Loss rate: 4.08%
-- Flow 2:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 7.325 ms
Loss rate: 4.12%
-- Flow 3:
Average throughput: 23.09 Mbit/s
95th percentile per-packet one-way delay: 8.511 ms
Loss rate: 8.44%
```

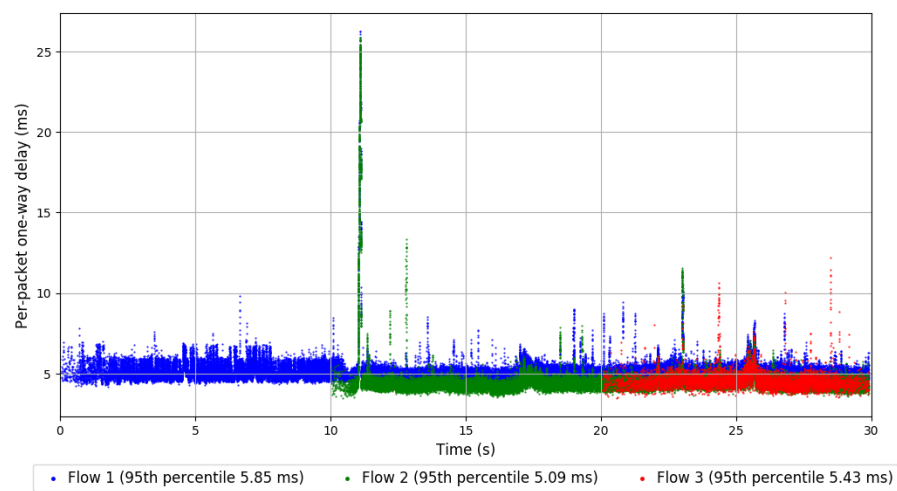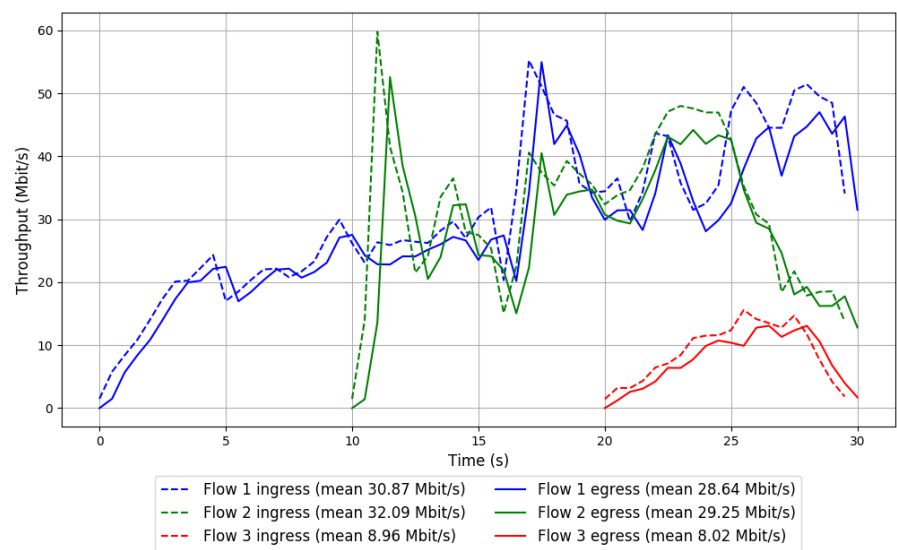# Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-11 18:48:18
End at: 2019-02-11 18:48:48
Local clock offset: 2.408 ms
Remote clock offset: -5.558 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.74 Mbit/s
95th percentile per-packet one-way delay: 5.731 ms
Loss rate: 8.04%
-- Flow 1:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 5.851 ms
Loss rate: 7.21%
-- Flow 2:
Average throughput: 29.25 Mbit/s
95th percentile per-packet one-way delay: 5.089 ms
Loss rate: 8.88%
-- Flow 3:
Average throughput: 8.02 Mbit/s
95th percentile per-packet one-way delay: 5.435 ms
Loss rate: 10.56%
```

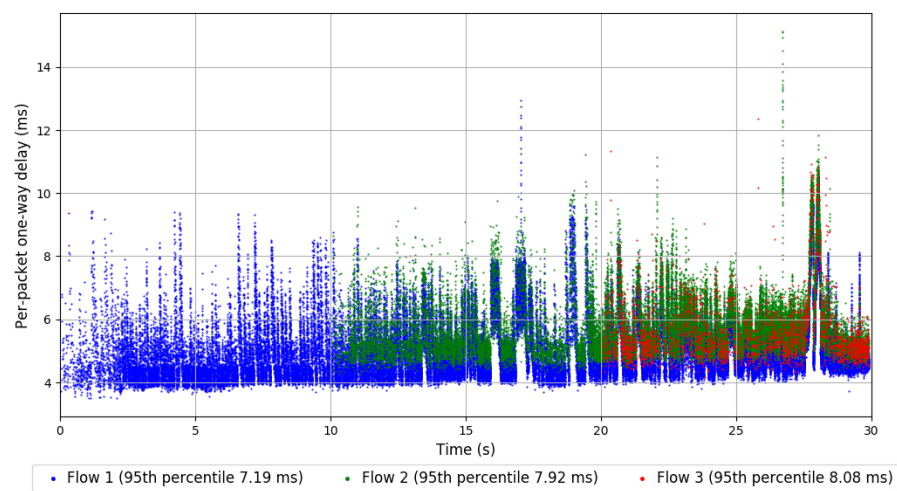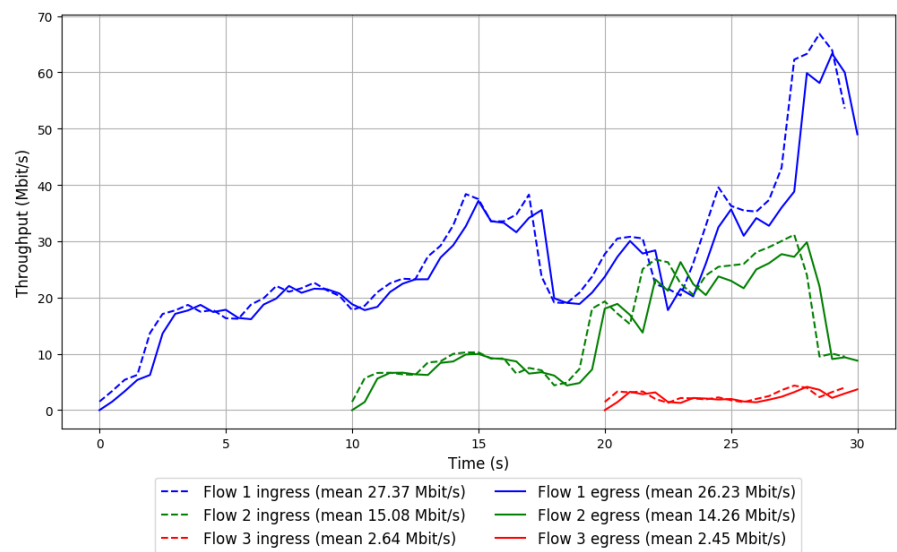Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-11 19:13:13
End at: 2019-02-11 19:13:43
Local clock offset: 5.393 ms
Remote clock offset: -4.446 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 7.419 ms
Loss rate: 4.58%
-- Flow 1:
Average throughput: 26.23 Mbit/s
95th percentile per-packet one-way delay: 7.188 ms
Loss rate: 4.19%
-- Flow 2:
Average throughput: 14.26 Mbit/s
95th percentile per-packet one-way delay: 7.925 ms
Loss rate: 5.45%
-- Flow 3:
Average throughput: 2.45 Mbit/s
95th percentile per-packet one-way delay: 8.079 ms
Loss rate: 6.88%
```

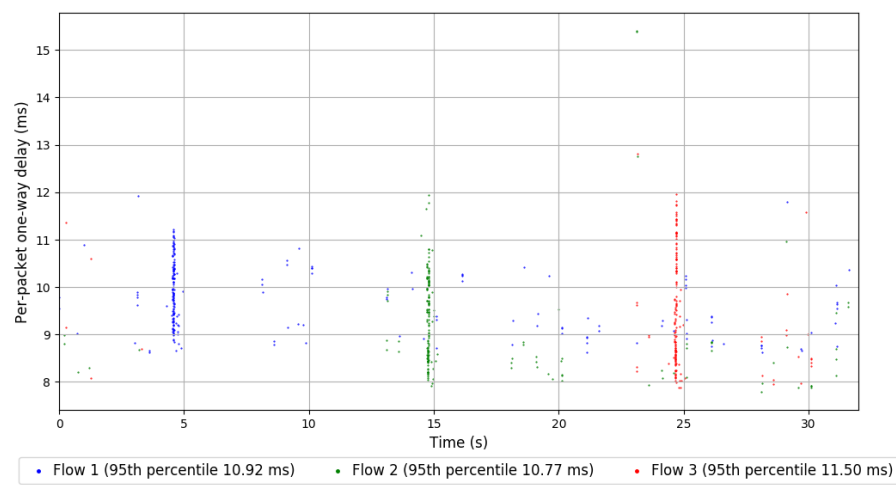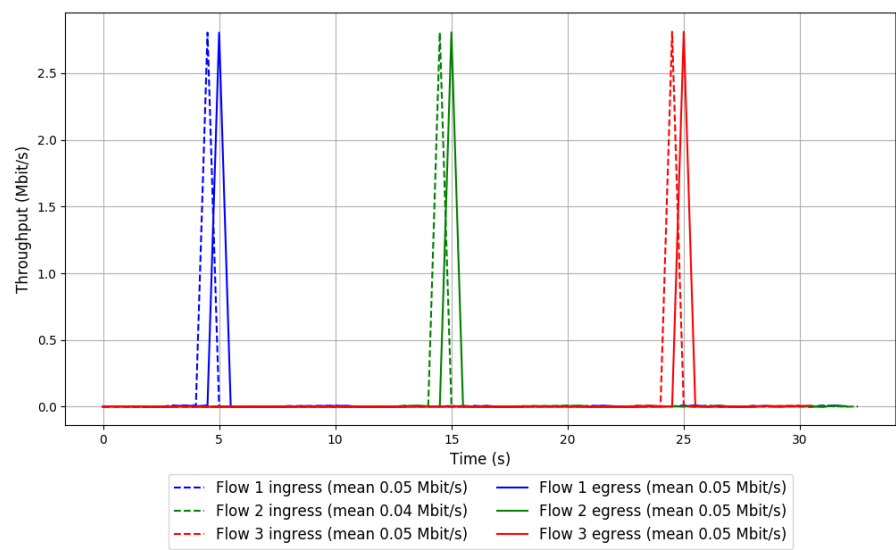Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-02-11 17:26:58
End at: 2019-02-11 17:27:28
Local clock offset: -0.854 ms
Remote clock offset: -2.349 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 11.147 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.916 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.771 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.501 ms
Loss rate: 0.00%
```

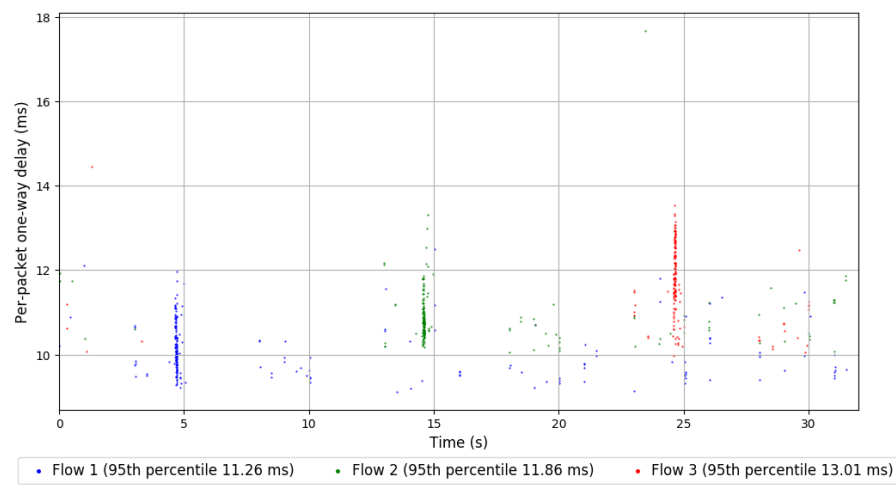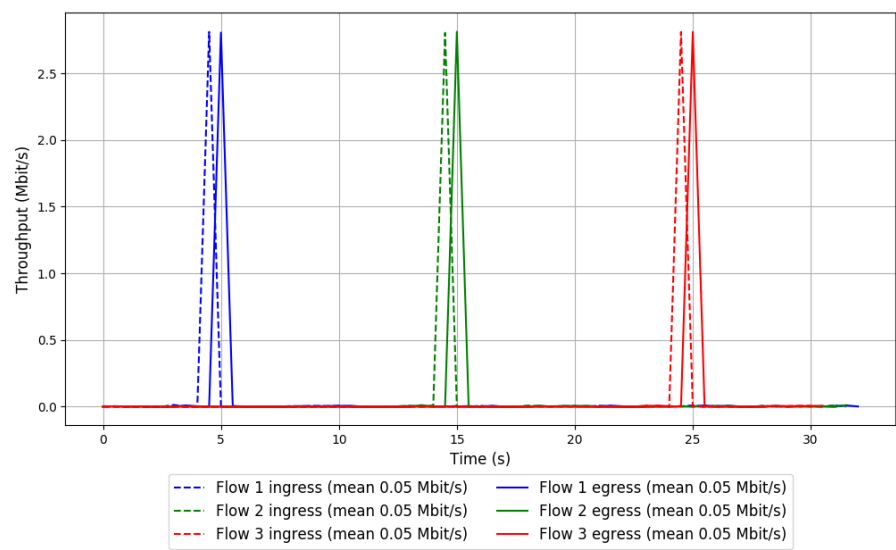Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-02-11 17:51:34
End at: 2019-02-11 17:52:04
Local clock offset: 3.334 ms
Remote clock offset: -3.129 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 12.694 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.259 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.864 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 13.005 ms
Loss rate: 0.00%
```

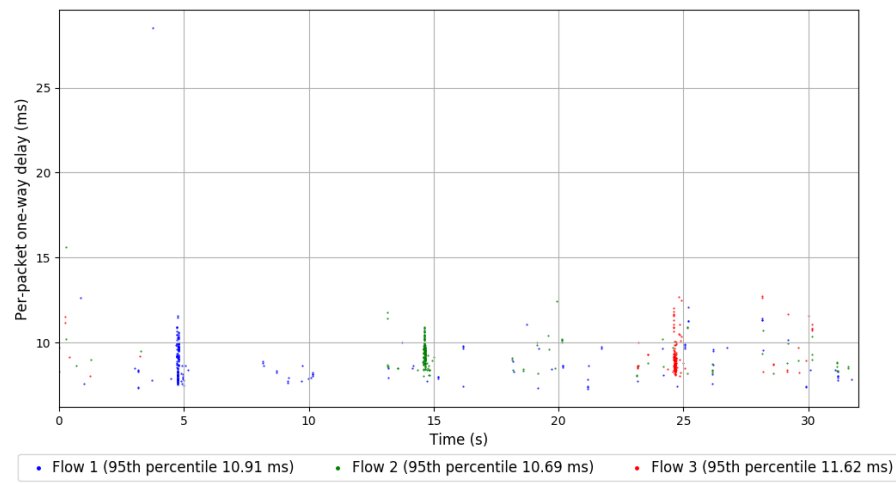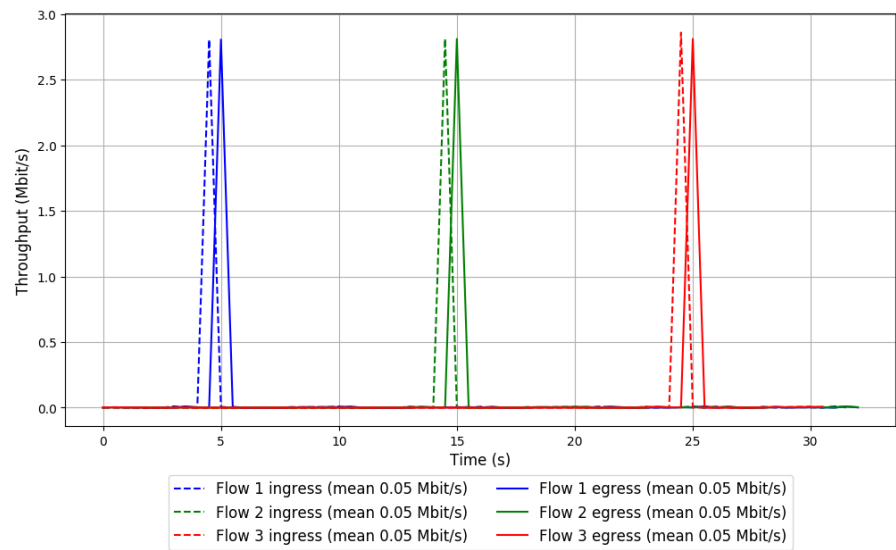Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-02-11 18:16:12
End at: 2019-02-11 18:16:42
Local clock offset: 4.01 ms
Remote clock offset: -3.645 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 11.090 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.906 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 10.690 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 11.620 ms
Loss rate: 1.65%
```

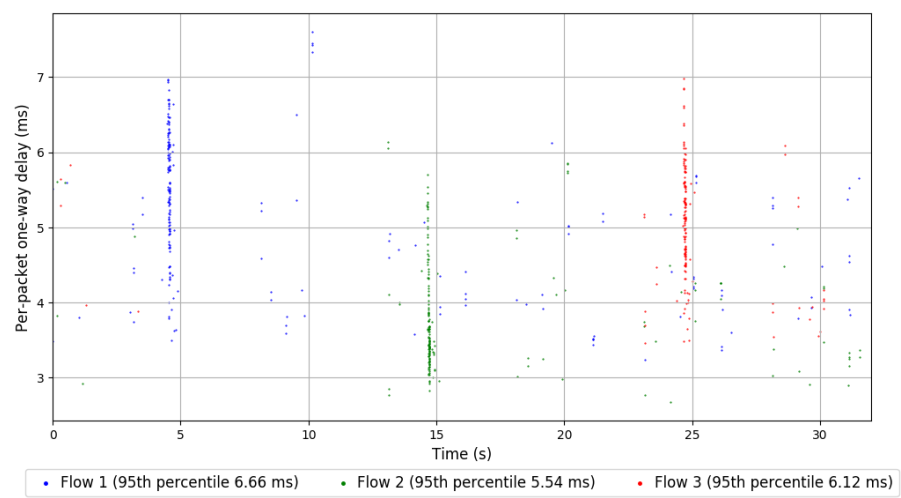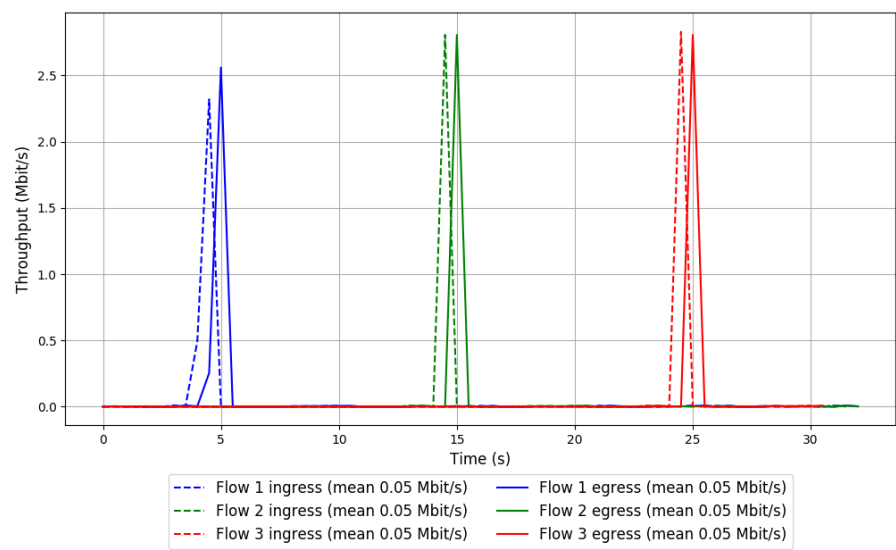Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-02-11 18:41:12
End at: 2019-02-11 18:41:42
Local clock offset: 4.365 ms
Remote clock offset: -5.552 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 6.381 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.656 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.543 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.115 ms
Loss rate: 0.83%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-02-11 19:06:07
End at: 2019-02-11 19:06:37
Local clock offset: 2.522 ms
Remote clock offset: -5.665 ms


# Below is generated by plot.py at 2019-02-11 19:30:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 8.171 ms
Loss rate: 0.27%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.118 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 8.671 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 7.220 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link