Pantheon Report

Generated at 2019-10-03 01:08:38 (UTC).

Data path: AWS Brazil 1 on `ens5` (*local*) →Brazil on `p4p1` (*remote*).

Repeated the test of 24 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 `gps.ntp.br` and have been applied to correct the timestamps in logs.
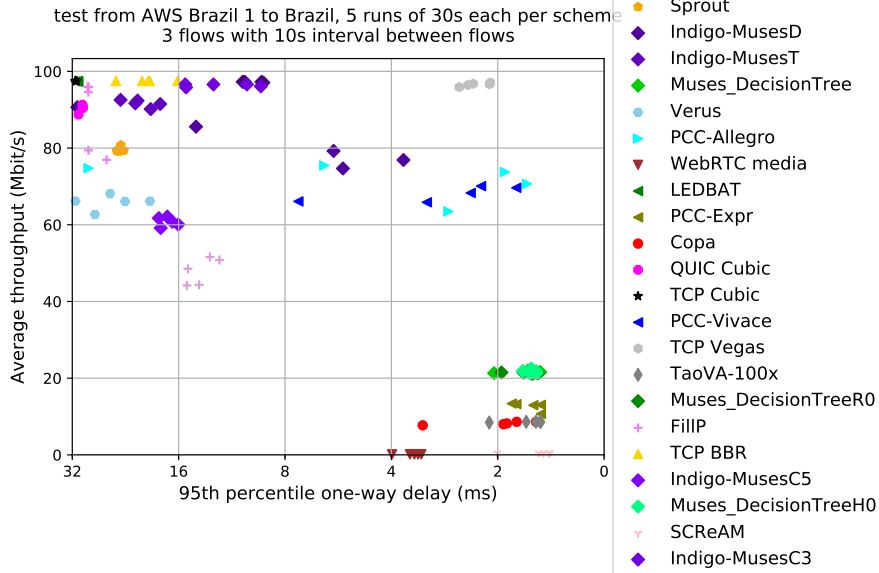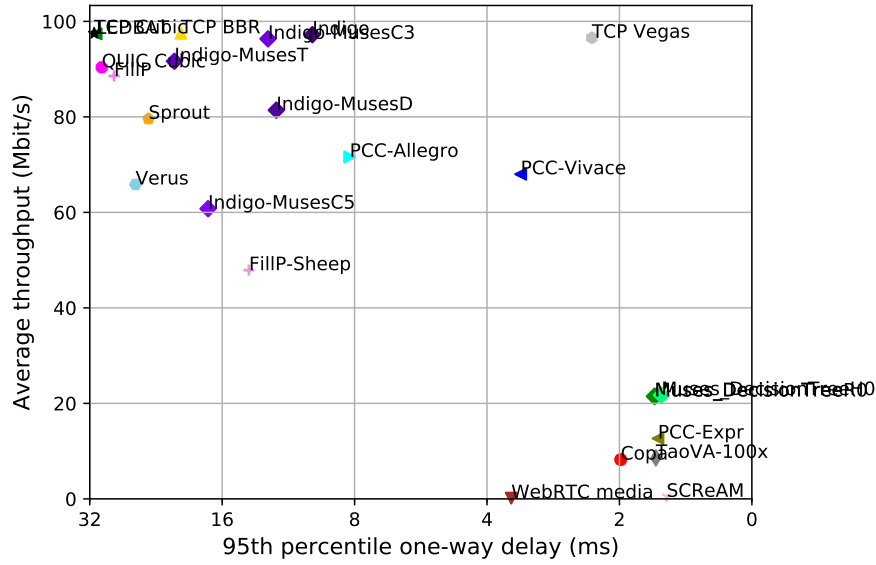
```
System info:
Linux 4.15.0-1050-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
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/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
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 Brazil 1 to Brazil, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

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

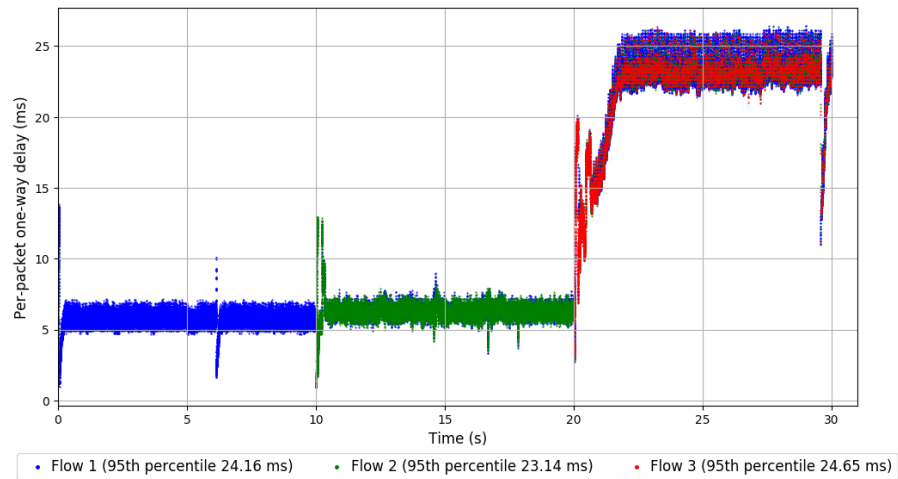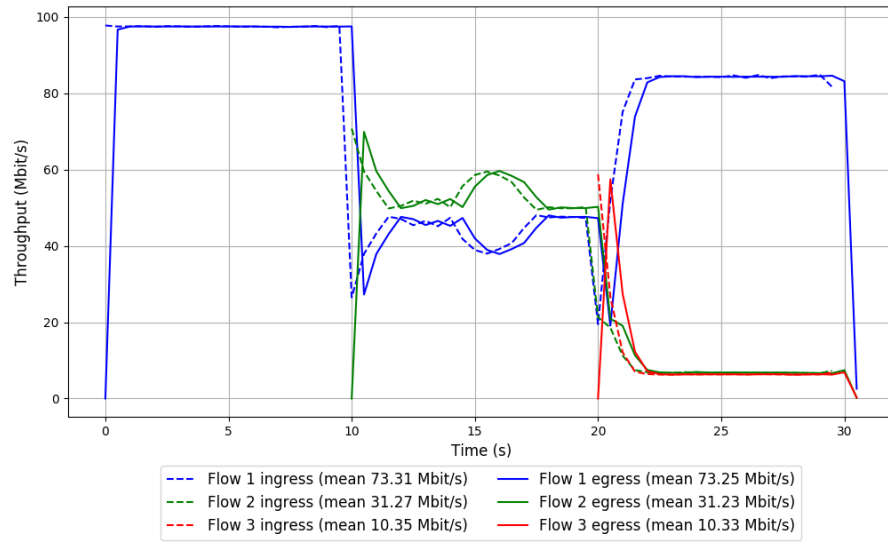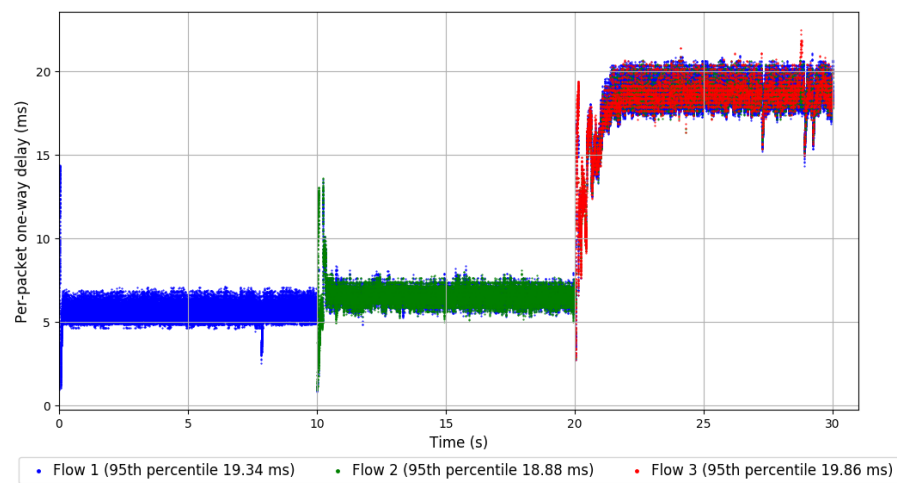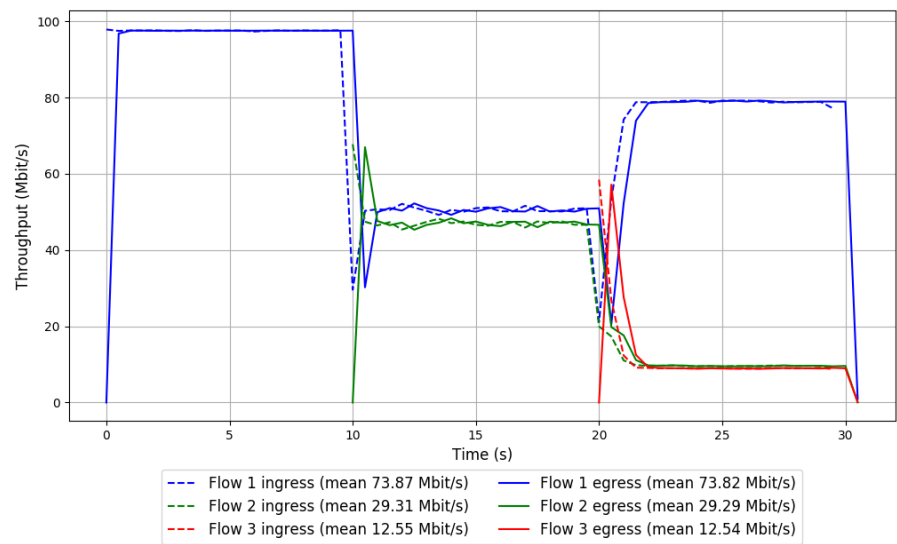| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	72.56	30.32	14.23	19.85	19.41	21.44	0.00	0.00	0.01
Copa	5	0.00	9.36	10.78	1.10	2.48	1.38	98.03	65.04	69.94
TCP Cubic	5	63.36	36.40	29.82	31.17	31.35	31.41	0.03	0.05	0.04
FillP	5	48.72	39.71	40.44	26.25	28.11	28.69	8.59	13.72	29.64
FillP-Sheep	5	36.73	10.15	13.36	11.24	19.11	21.10	1.09	3.13	5.32
Indigo	5	43.81	50.08	62.12	9.39	9.92	10.74	0.00	0.00	0.00
Indigo-MusesC3	5	52.56	43.98	51.93	11.07	13.35	9.33	0.00	0.00	0.00
Indigo-MusesC5	5	30.93	29.86	35.25	16.57	17.59	18.23	0.00	0.00	0.01
Indigo-MusesD	5	44.25	34.81	49.41	8.56	12.66	9.14	0.01	0.42	0.69
Indigo-MusesT	5	56.06	42.02	28.34	18.38	20.98	23.49	0.00	0.01	0.01
LEDBAT	5	61.94	37.60	31.59	30.92	30.99	31.07	0.03	0.07	0.10
Muses_DecisionTree	5	10.72	10.84	11.10	1.43	1.51	1.54	0.00	0.00	0.00
Muses_DecisionTreeH0	5	10.79	10.81	11.62	1.34	1.39	1.39	0.00	0.00	0.00
Muses_DecisionTreeR0	5	10.74	10.78	10.91	1.45	1.46	1.54	0.00	0.00	0.01
PCC-Allegro	5	56.50	18.59	8.38	4.49	9.13	10.05	0.00	0.01	0.02
PCC-Expr	5	6.92	6.19	4.93	1.43	1.56	1.19	83.61	96.87	98.67
QUIC Cubic	5	57.89	34.57	28.87	29.98	30.13	30.41	0.18	0.20	0.21
SCReAM	5	0.22	0.22	0.22	1.29	1.28	1.40	0.00	0.00	0.00
Sprout	5	43.49	39.06	30.68	21.21	23.67	25.77	0.00	0.00	0.00
TaoVA-100x	5	0.00	7.61	10.58	1.15	1.42	1.50	95.92	82.46	82.42
TCP Vegas	5	55.80	40.20	42.07	2.19	2.37	2.52	0.00	0.00	0.00
Verus	5	34.76	32.95	27.61	20.78	26.12	31.40	5.11	6.14	12.21
PCC-Vivace	5	39.16	31.03	24.84	2.34	7.13	7.81	0.02	0.06	0.06
WebRTC media	5	0.06	0.06	0.06	3.49	3.43	3.59	0.02	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-10-02 22:52:53
End at: 2019-10-02 22:53:23
Local clock offset: -5.577 ms
Remote clock offset: -0.174 ms


# Below is generated by plot.py at 2019-10-03 00:56:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 24.073 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.25 Mbit/s
95th percentile per-packet one-way delay: 24.165 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.23 Mbit/s
95th percentile per-packet one-way delay: 23.142 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.33 Mbit/s
95th percentile per-packet one-way delay: 24.651 ms
Loss rate: 0.00%
```
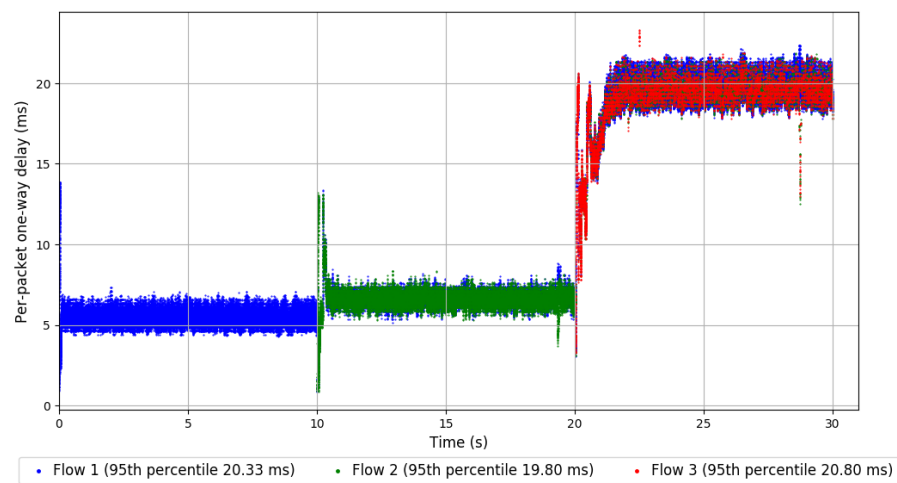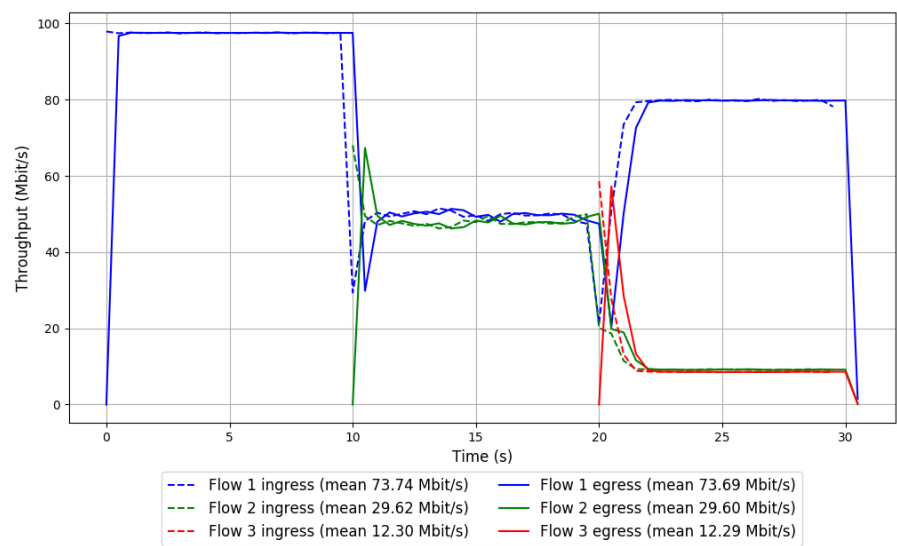
Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-10-02 23:20:06
End at: 2019-10-02 23:20:36
Local clock offset: -5.378 ms
Remote clock offset: -0.285 ms


# Below is generated by plot.py at 2019-10-03 00:56:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 19.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.82 Mbit/s
95th percentile per-packet one-way delay: 19.343 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.29 Mbit/s
95th percentile per-packet one-way delay: 18.881 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 19.856 ms
Loss rate: 0.00%
```
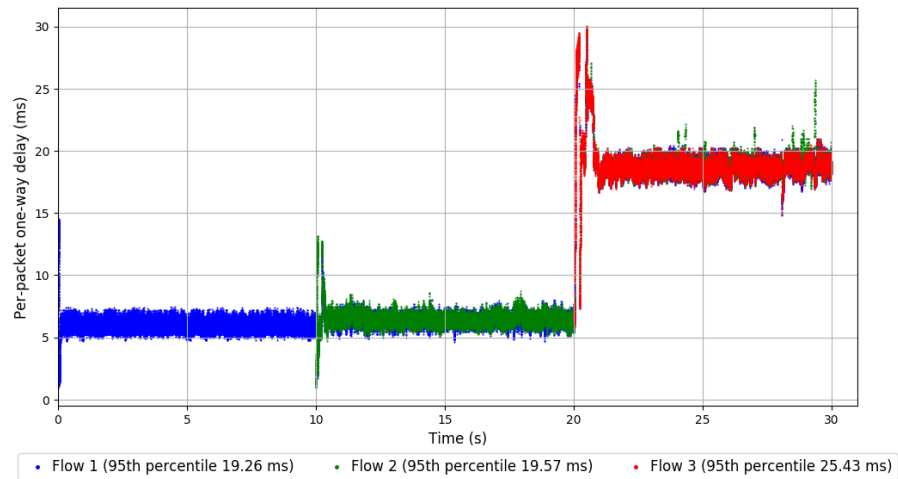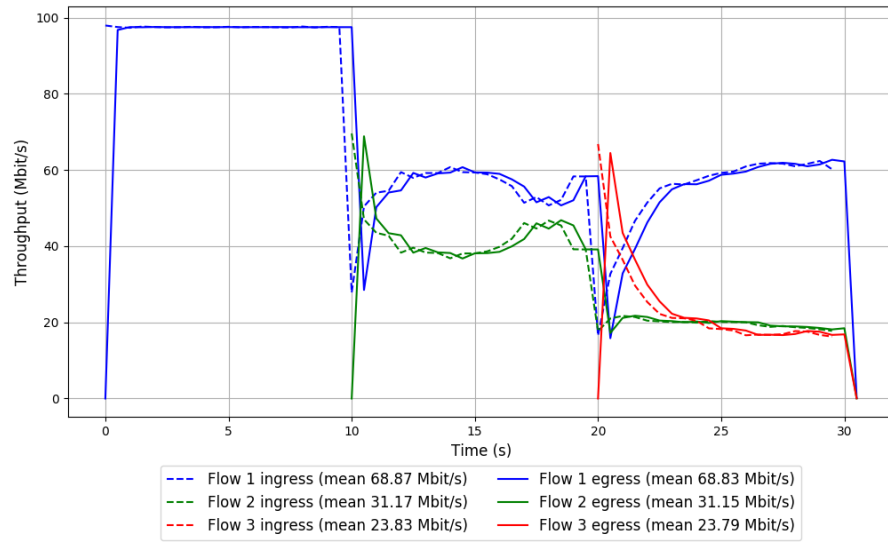
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 73.87 Mbit/s) --- Flow 1 egress (mean 73.82 Mbit/s) ———
Flow 2 ingress (mean 29.31 Mbit/s) --- Flow 2 egress (mean 29.29 Mbit/s) ———
Flow 3 ingress (mean 12.55 Mbit/s) --- Flow 3 egress (mean 12.54 Mbit/s) ———

Flow 1 (95th percentile 19.34 ms)   Flow 2 (95th percentile 18.88 ms)   Flow 3 (95th percentile 19.86 ms)

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```
Run 3: Statistics of TCP BBR

Start at: 2019-10-02 23:47:20
End at: 2019-10-02 23:47:50
Local clock offset: -6.724 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 20.295 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 73.69 Mbit/s
95th percentile per-packet one-way delay: 20.329 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.60 Mbit/s
95th percentile per-packet one-way delay: 19.803 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.29 Mbit/s
95th percentile per-packet one-way delay: 20.801 ms
Loss rate: 0.00%
```
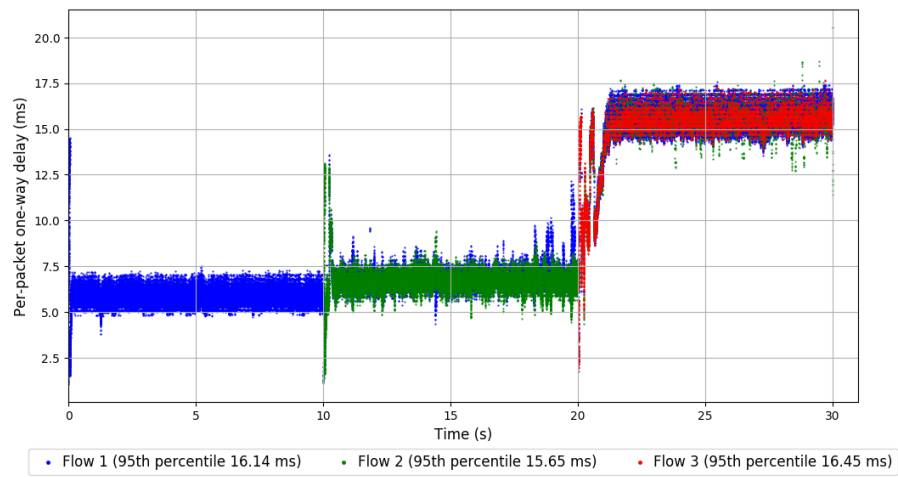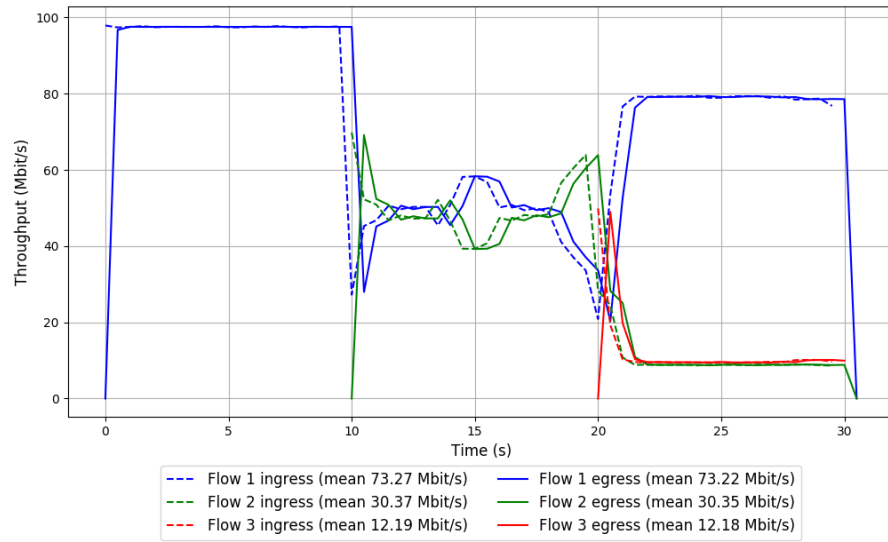
Run 3: Report of TCP BBR — Data Link

```
Run 4: Statistics of TCP BBR

Start at: 2019-10-03 00:14:35
End at: 2019-10-03 00:15:05
Local clock offset: -7.222 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 19.488 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 68.83 Mbit/s
95th percentile per-packet one-way delay: 19.257 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.15 Mbit/s
95th percentile per-packet one-way delay: 19.565 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.79 Mbit/s
95th percentile per-packet one-way delay: 25.425 ms
Loss rate: 0.02%
```
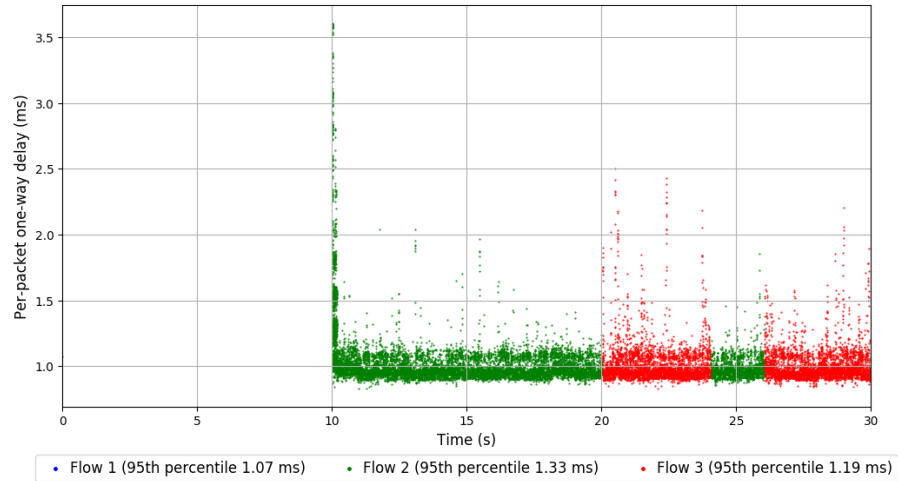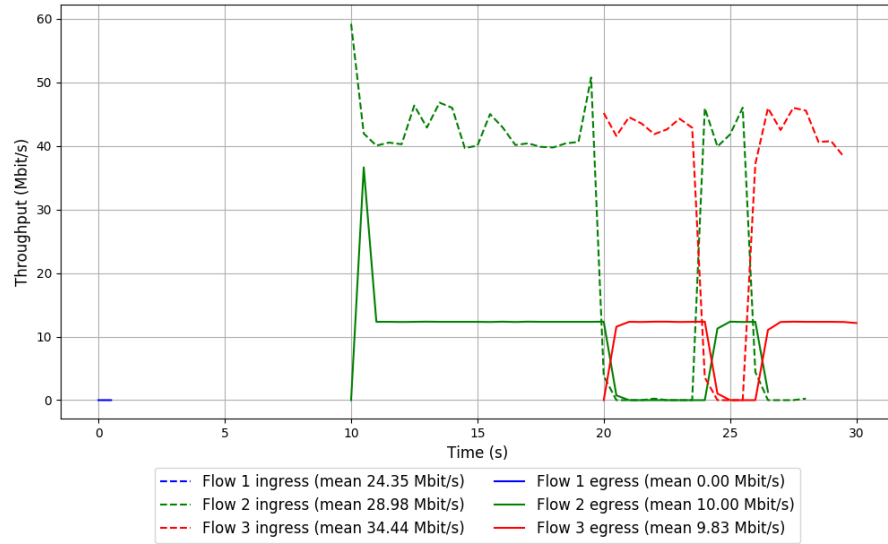
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 68.87 Mbit/s) --- Flow 1 egress (mean 68.83 Mbit/s)
Flow 2 ingress (mean 31.17 Mbit/s) --- Flow 2 egress (mean 31.15 Mbit/s)
Flow 3 ingress (mean 23.83 Mbit/s) --- Flow 3 egress (mean 23.79 Mbit/s)

Flow 1 (95th percentile 19.26 ms)   Flow 2 (95th percentile 19.57 ms)   Flow 3 (95th percentile 25.43 ms)

```
Run 5: Statistics of TCP BBR

Start at: 2019-10-03 00:41:51
End at: 2019-10-03 00:42:21
Local clock offset: 4.256 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 16.120 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 73.22 Mbit/s
95th percentile per-packet one-way delay: 16.145 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 30.35 Mbit/s
95th percentile per-packet one-way delay: 15.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.18 Mbit/s
95th percentile per-packet one-way delay: 16.455 ms
Loss rate: 0.04%
```
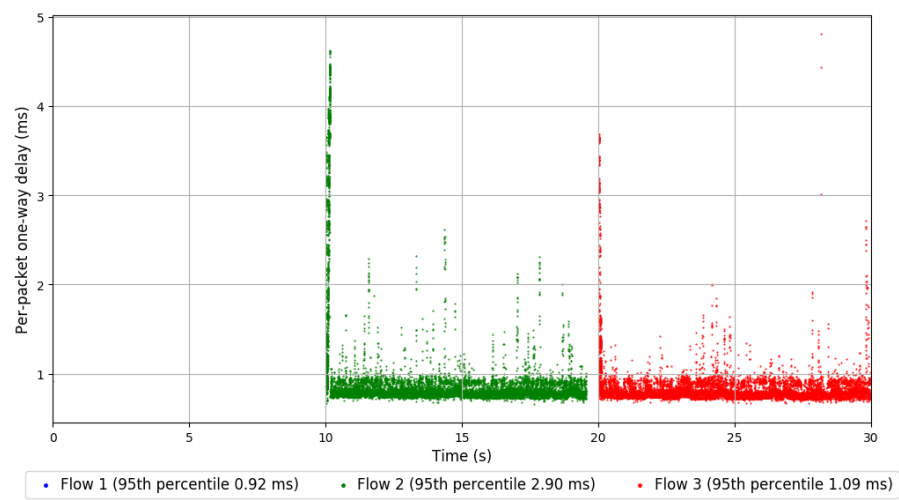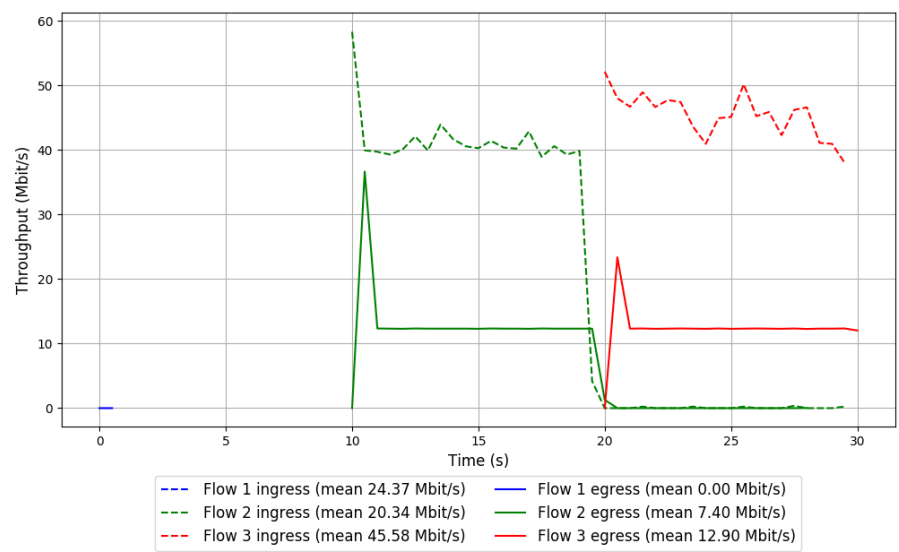
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 73.27 Mbit/s)   Flow 1 egress (mean 73.22 Mbit/s)
Flow 2 ingress (mean 30.37 Mbit/s)   Flow 2 egress (mean 30.35 Mbit/s)
Flow 3 ingress (mean 12.19 Mbit/s)   Flow 3 egress (mean 12.18 Mbit/s)

Flow 1 (95th percentile 16.14 ms)   Flow 2 (95th percentile 15.65 ms)   Flow 3 (95th percentile 16.45 ms)

```
Run 1: Statistics of Copa

Start at: 2019-10-02 23:00:53
End at: 2019-10-02 23:01:23
Local clock offset: -5.5 ms
Remote clock offset: -0.255 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.279 ms
Loss rate: 70.16%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.073 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 1.326 ms
Loss rate: 69.31%
-- Flow 3:
Average throughput: 9.83 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 71.47%
```
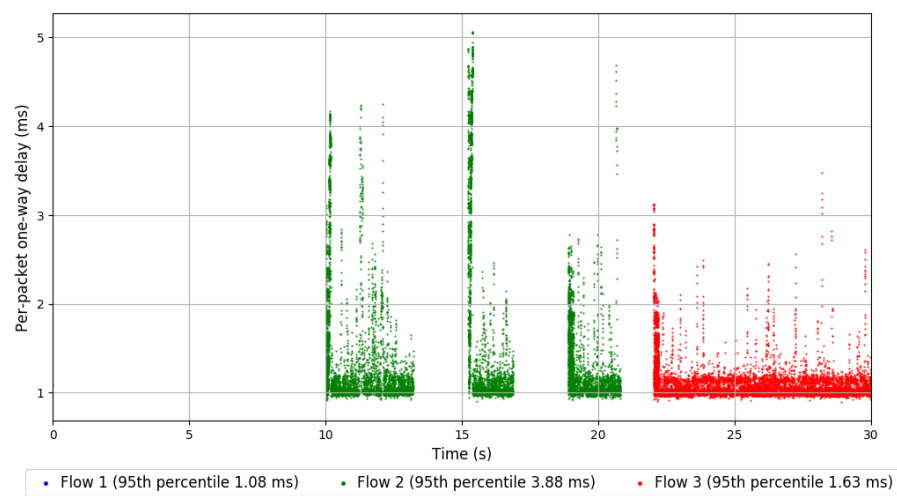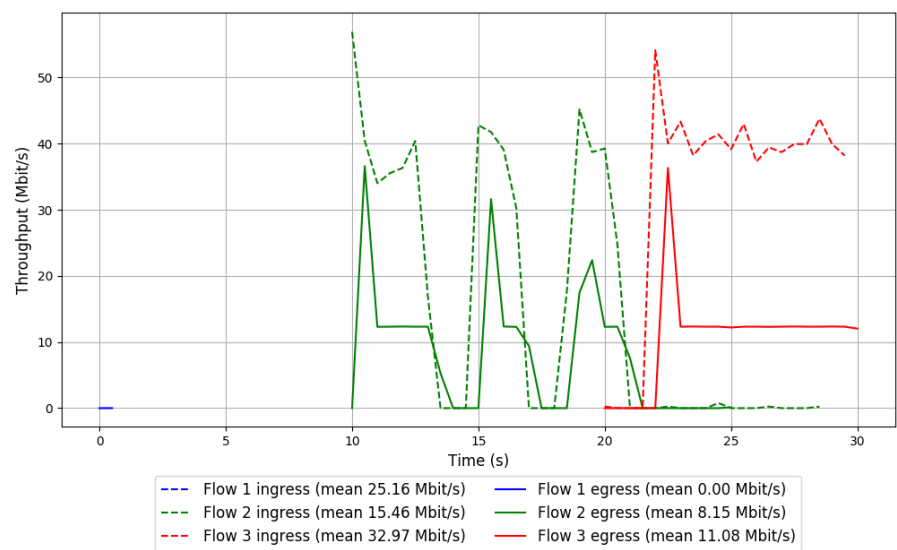
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 24.35 Mbit/s) Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 28.98 Mbit/s) Flow 2 egress (mean 10.00 Mbit/s)
Flow 3 ingress (mean 34.44 Mbit/s) Flow 3 egress (mean 9.83 Mbit/s)

Flow 1 (95th percentile 1.07 ms)   Flow 2 (95th percentile 1.33 ms)   Flow 3 (95th percentile 1.19 ms)

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```
Run 2: Statistics of Copa

Start at: 2019-10-02 23:28:05
End at: 2019-10-02 23:28:35
Local clock offset: -5.753 ms
Remote clock offset: -0.376 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.644 ms
Loss rate: 69.66%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 0.919 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 7.40 Mbit/s
95th percentile per-packet one-way delay: 2.905 ms
Loss rate: 67.33%
-- Flow 3:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 1.093 ms
Loss rate: 71.70%
```
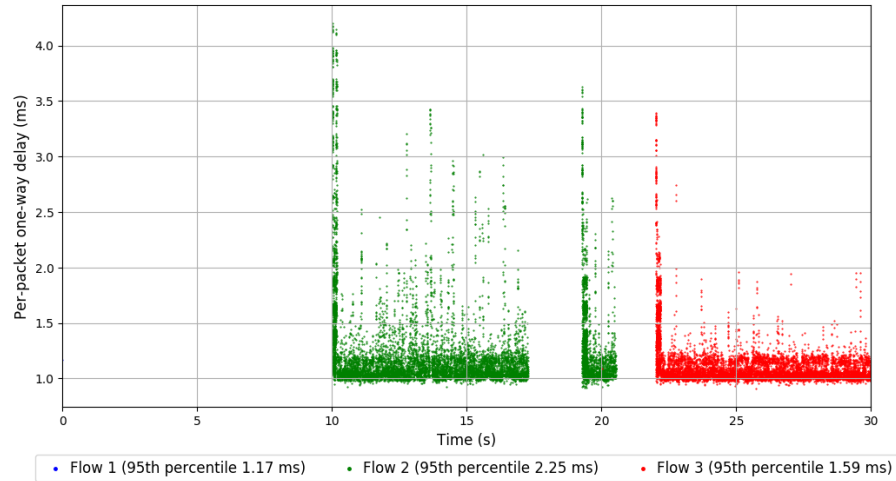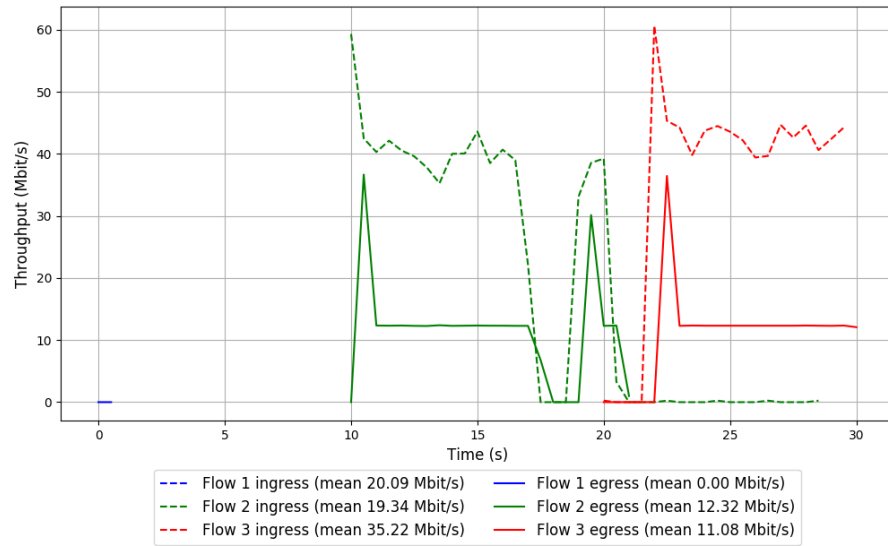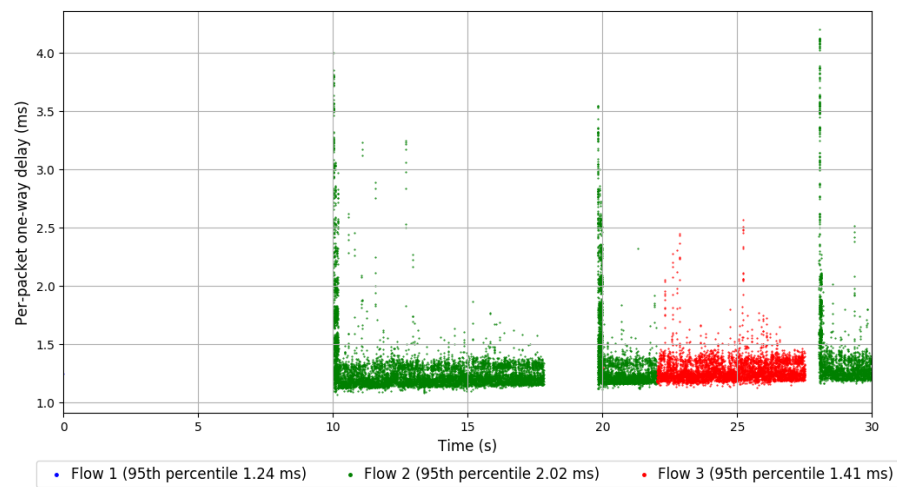
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 24.37 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 20.34 Mbit/s) --- Flow 2 egress (mean 7.40 Mbit/s)
Flow 3 ingress (mean 45.58 Mbit/s) --- Flow 3 egress (mean 12.90 Mbit/s)

Flow 1 (95th percentile 0.92 ms) • Flow 2 (95th percentile 2.90 ms) • Flow 3 (95th percentile 1.09 ms)

```
Run 3: Statistics of Copa

Start at: 2019-10-02 23:55:19
End at: 2019-10-02 23:55:49
Local clock offset: -6.942 ms
Remote clock offset: -0.234 ms

# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.70 Mbit/s
95th percentile per-packet one-way delay: 3.261 ms
Loss rate: 62.70%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 98.33%
-- Flow 2:
Average throughput: 8.15 Mbit/s
95th percentile per-packet one-way delay: 3.875 ms
Loss rate: 58.50%
-- Flow 3:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 1.629 ms
Loss rate: 66.40%
```
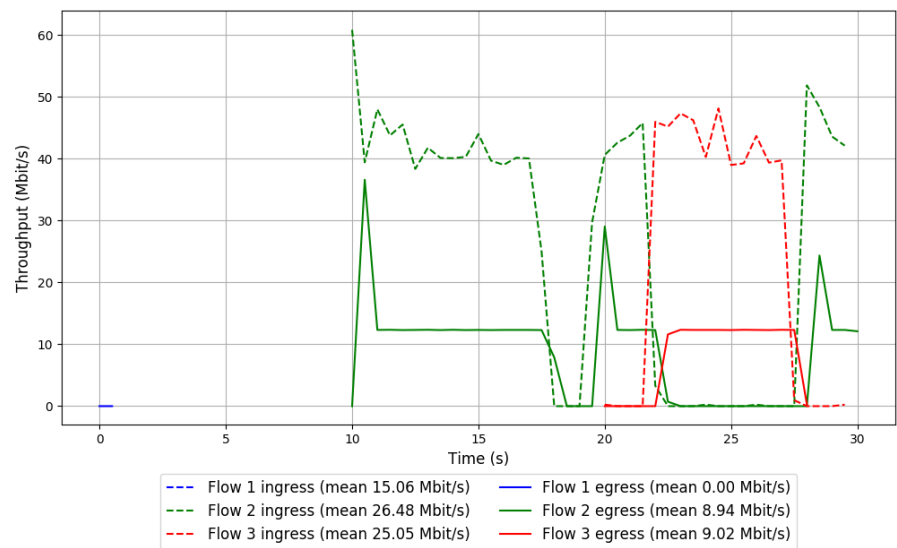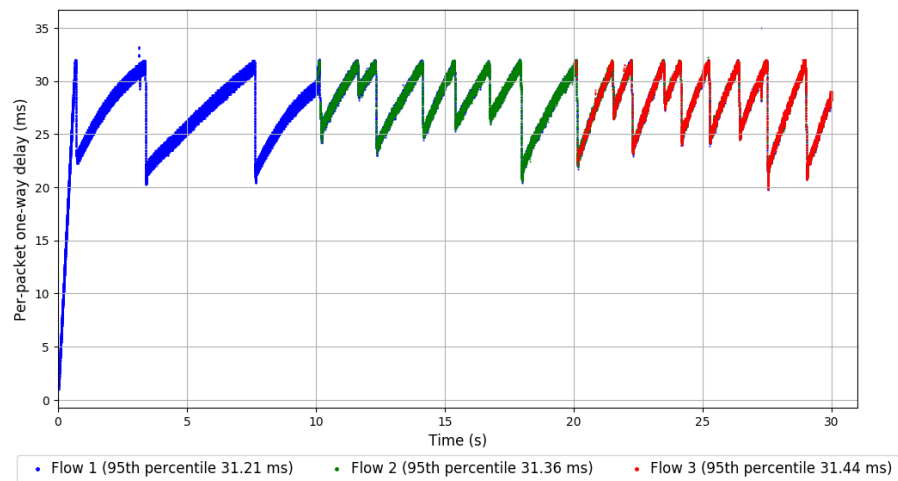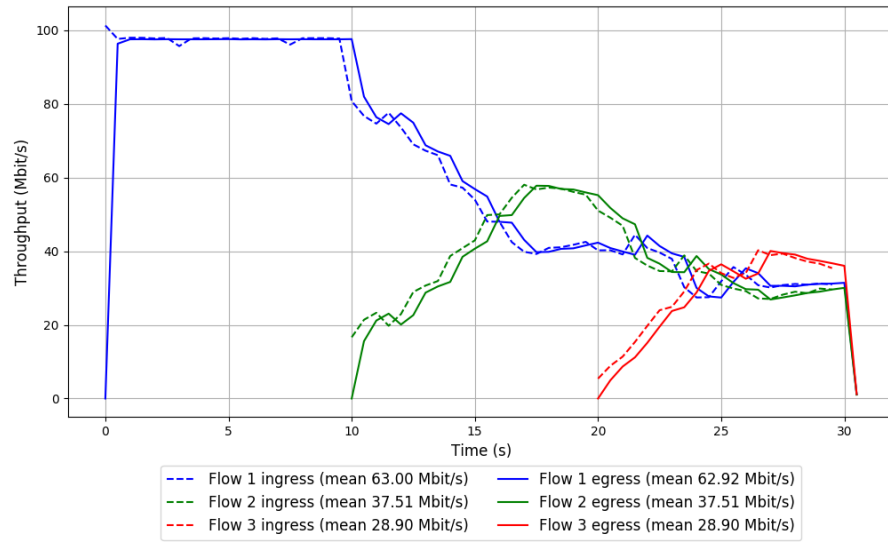
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 25.16 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 15.46 Mbit/s) --- Flow 2 egress (mean 8.15 Mbit/s)
Flow 3 ingress (mean 32.97 Mbit/s) --- Flow 3 egress (mean 11.08 Mbit/s)

Flow 1 (95th percentile 1.08 ms) • Flow 2 (95th percentile 3.88 ms) • Flow 3 (95th percentile 1.63 ms)

```
Run 4: Statistics of Copa

Start at: 2019-10-03 00:22:35
End at: 2019-10-03 00:23:05
Local clock offset: -7.265 ms
Remote clock offset: -0.007 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.01 Mbit/s
95th percentile per-packet one-way delay: 1.894 ms
Loss rate: 66.15%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 97.92%
-- Flow 2:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 2.253 ms
Loss rate: 63.81%
-- Flow 3:
Average throughput: 11.08 Mbit/s
95th percentile per-packet one-way delay: 1.593 ms
Loss rate: 68.54%
```
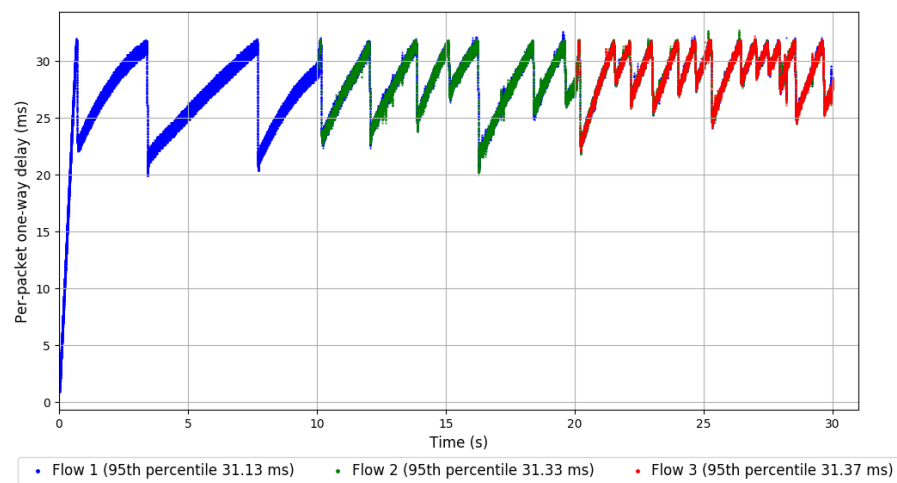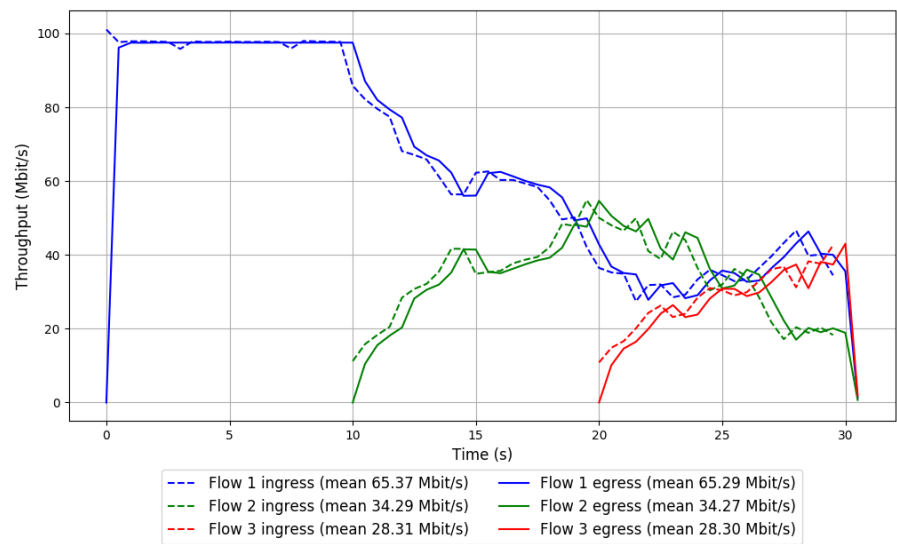
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 20.09 Mbit/s) --- Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 19.34 Mbit/s) --- Flow 2 egress (mean 12.32 Mbit/s)
Flow 3 ingress (mean 35.22 Mbit/s) --- Flow 3 egress (mean 11.08 Mbit/s)

Flow 1 (95th percentile 1.17 ms)   Flow 2 (95th percentile 2.25 ms)   Flow 3 (95th percentile 1.59 ms)

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```
Run 5: Statistics of Copa

Start at: 2019-10-03 00:49:56
End at: 2019-10-03 00:50:26
Local clock offset: 6.416 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-10-03 00:56:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 1.828 ms
Loss rate: 67.91%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.244 ms
Loss rate: 97.24%
-- Flow 2:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 2.024 ms
Loss rate: 66.26%
-- Flow 3:
Average throughput: 9.02 Mbit/s
95th percentile per-packet one-way delay: 1.411 ms
Loss rate: 71.59%
```
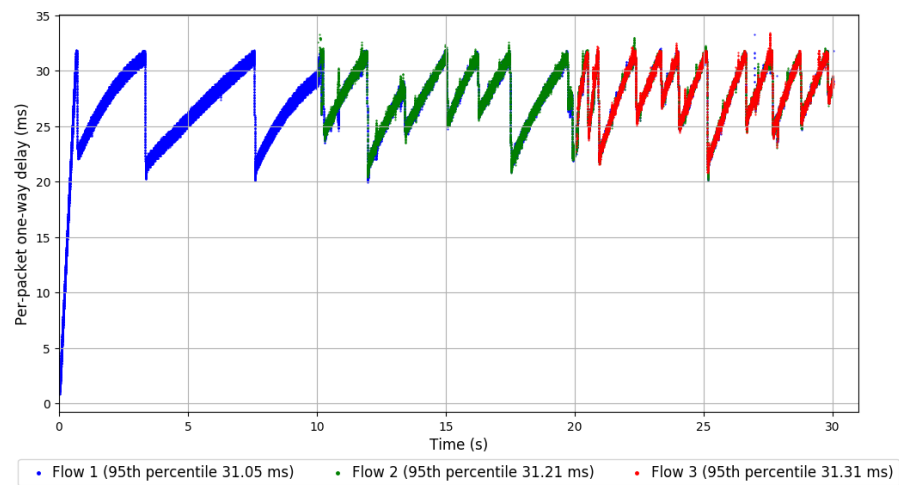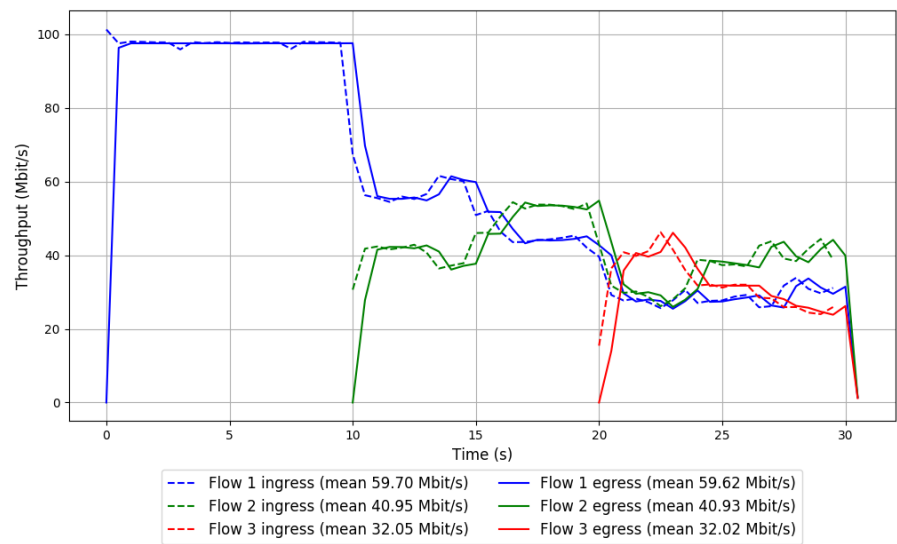
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 15.06 Mbit/s)   Flow 1 egress (mean 0.00 Mbit/s)
Flow 2 ingress (mean 26.48 Mbit/s)   Flow 2 egress (mean 8.94 Mbit/s)
Flow 3 ingress (mean 25.05 Mbit/s)   Flow 3 egress (mean 9.02 Mbit/s)

Flow 1 (95th percentile 1.24 ms)   Flow 2 (95th percentile 2.02 ms)   Flow 3 (95th percentile 1.41 ms)

24

```
Run 1: Statistics of TCP Cubic

Start at: 2019-10-02 22:51:44
End at: 2019-10-02 22:52:14
Local clock offset: -5.579 ms
Remote clock offset: -0.132 ms


# Below is generated by plot.py at 2019-10-03 00:57:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.240 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 62.92 Mbit/s
95th percentile per-packet one-way delay: 31.210 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.51 Mbit/s
95th percentile per-packet one-way delay: 31.360 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 28.90 Mbit/s
95th percentile per-packet one-way delay: 31.443 ms
Loss rate: 0.03%
```
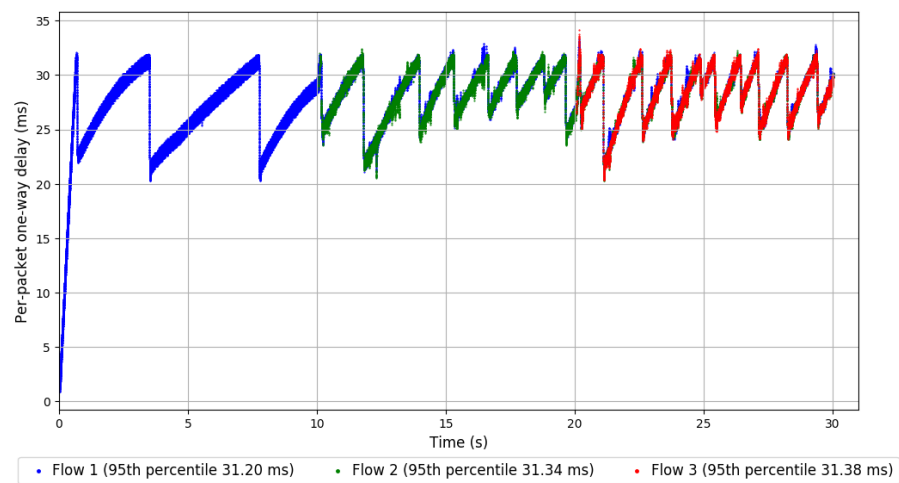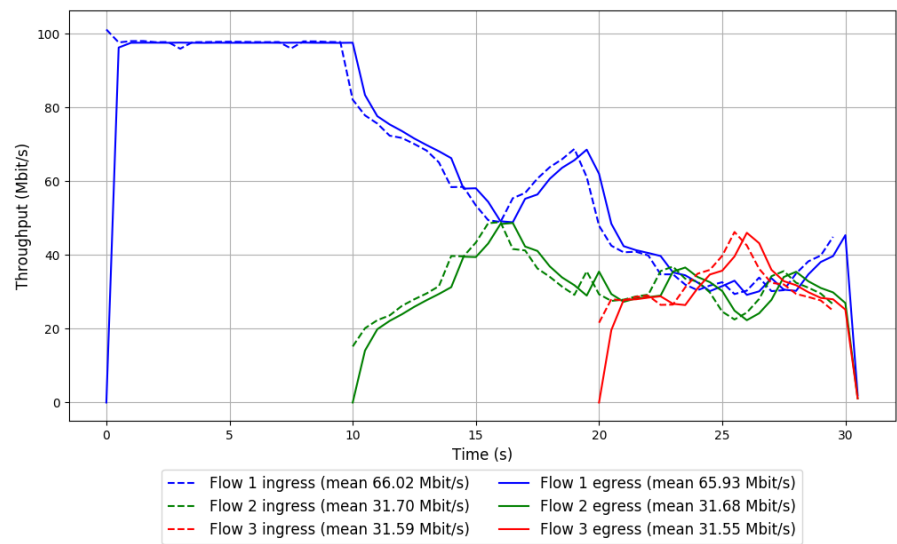
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-10-02 23:18:56
End at: 2019-10-02 23:19:26
Local clock offset: -5.375 ms
Remote clock offset: -0.288 ms


# Below is generated by plot.py at 2019-10-03 00:57:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.284 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 65.29 Mbit/s
95th percentile per-packet one-way delay: 31.133 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 34.27 Mbit/s
95th percentile per-packet one-way delay: 31.330 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 28.30 Mbit/s
95th percentile per-packet one-way delay: 31.366 ms
Loss rate: 0.03%
```
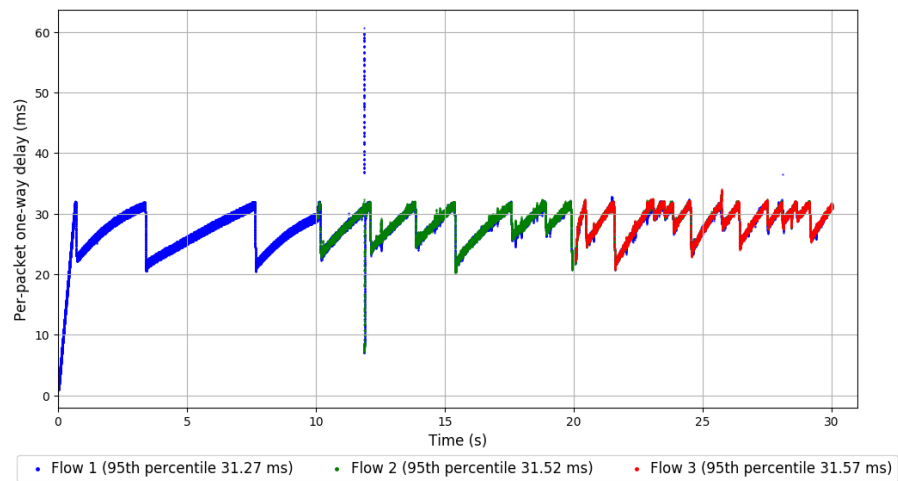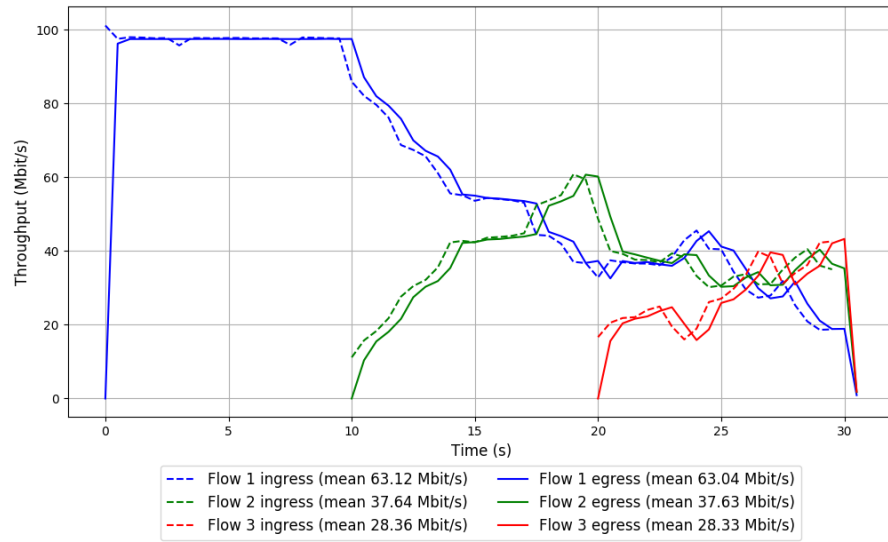
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 65.37 Mbit/s) — — — Flow 1 egress (mean 65.29 Mbit/s)
Flow 2 ingress (mean 34.29 Mbit/s) — — — Flow 2 egress (mean 34.27 Mbit/s)
Flow 3 ingress (mean 28.31 Mbit/s) — — — Flow 3 egress (mean 28.30 Mbit/s)

• Flow 1 (95th percentile 31.13 ms)   • Flow 2 (95th percentile 31.33 ms)   • Flow 3 (95th percentile 31.37 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-10-02 23:46:10
End at: 2019-10-02 23:46:40
Local clock offset: -6.697 ms
Remote clock offset: -0.294 ms


# Below is generated by plot.py at 2019-10-03 00:57:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.49 Mbit/s
95th percentile per-packet one-way delay: 31.096 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 59.62 Mbit/s
95th percentile per-packet one-way delay: 31.050 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 40.93 Mbit/s
95th percentile per-packet one-way delay: 31.210 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 31.309 ms
Loss rate: 0.04%
```
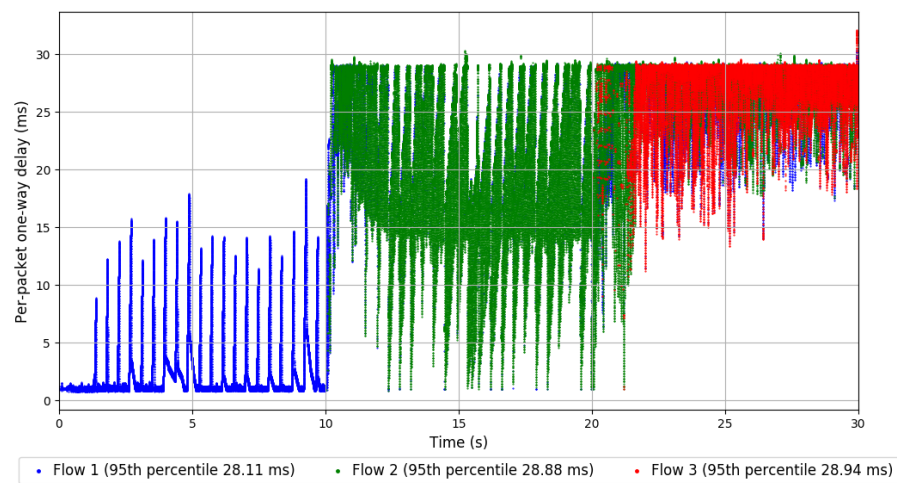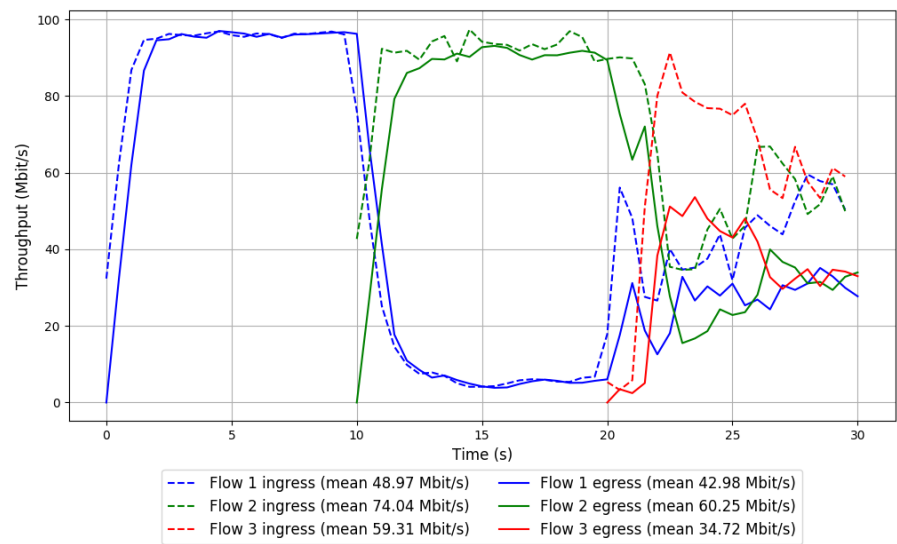
Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 59.70 Mbit/s)   —— Flow 1 egress (mean 59.62 Mbit/s)
- - - - Flow 2 ingress (mean 40.95 Mbit/s)   —— Flow 2 egress (mean 40.93 Mbit/s)
- - - - Flow 3 ingress (mean 32.05 Mbit/s)   —— Flow 3 egress (mean 32.02 Mbit/s)

• Flow 1 (95th percentile 31.05 ms)   • Flow 2 (95th percentile 31.21 ms)   • Flow 3 (95th percentile 31.31 ms)

30

```
Run 4: Statistics of TCP Cubic

Start at: 2019-10-03 00:13:26
End at: 2019-10-03 00:13:56
Local clock offset: -7.148 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-10-03 00:58:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.320 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 65.93 Mbit/s
95th percentile per-packet one-way delay: 31.198 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 31.68 Mbit/s
95th percentile per-packet one-way delay: 31.342 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 31.55 Mbit/s
95th percentile per-packet one-way delay: 31.379 ms
Loss rate: 0.09%
```
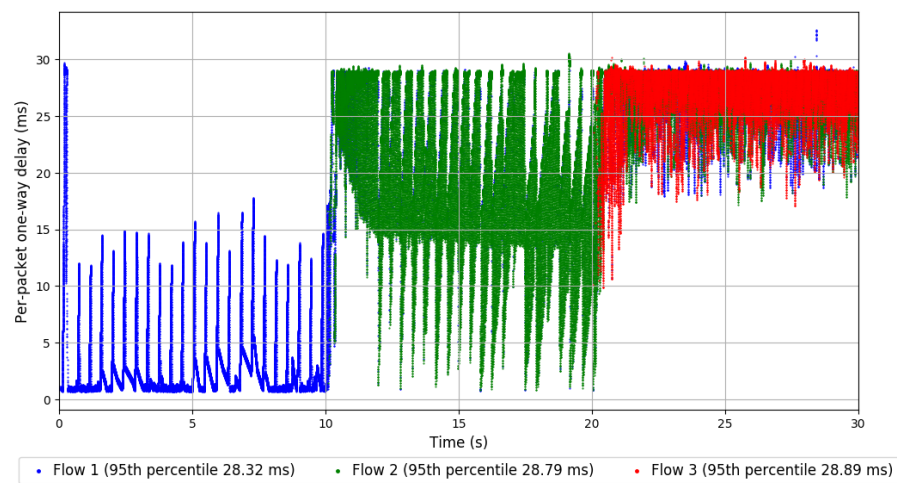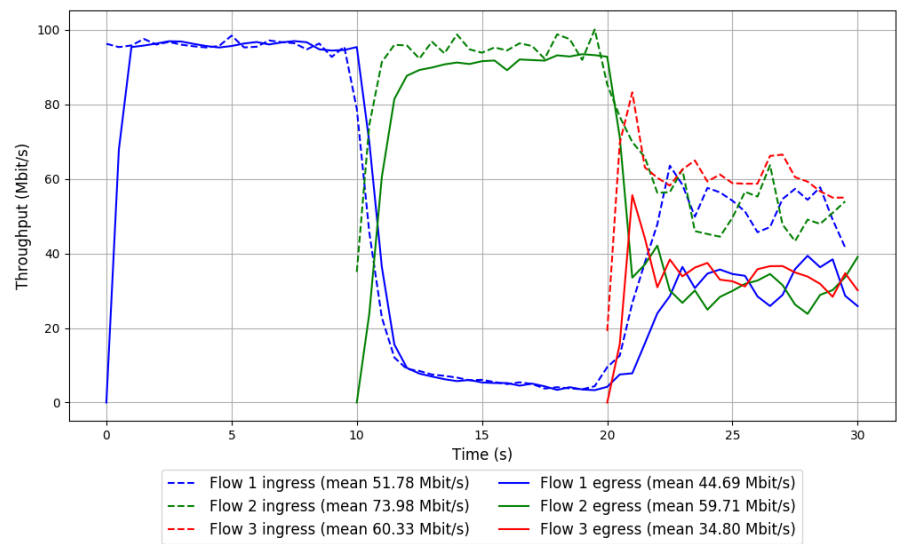
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 66.02 Mbit/s) ----   Flow 1 egress (mean 65.93 Mbit/s) ——
Flow 2 ingress (mean 31.70 Mbit/s) ----   Flow 2 egress (mean 31.68 Mbit/s) ——
Flow 3 ingress (mean 31.59 Mbit/s) ----   Flow 3 egress (mean 31.55 Mbit/s) ——

Flow 1 (95th percentile 31.20 ms)   Flow 2 (95th percentile 31.34 ms)   Flow 3 (95th percentile 31.38 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-10-03 00:40:42
End at: 2019-10-03 00:41:12
Local clock offset: 3.919 ms
Remote clock offset: -0.115 ms


# Below is generated by plot.py at 2019-10-03 00:58:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 31.367 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 31.267 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.63 Mbit/s
95th percentile per-packet one-way delay: 31.516 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 28.33 Mbit/s
95th percentile per-packet one-way delay: 31.568 ms
Loss rate: 0.03%
```

Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 63.12 Mbit/s) Flow 1 egress (mean 63.04 Mbit/s)
Flow 2 ingress (mean 37.64 Mbit/s) Flow 2 egress (mean 37.63 Mbit/s)
Flow 3 ingress (mean 28.36 Mbit/s) Flow 3 egress (mean 28.33 Mbit/s)

Flow 1 (95th percentile 31.27 ms)   Flow 2 (95th percentile 31.52 ms)   Flow 3 (95th percentile 31.57 ms)
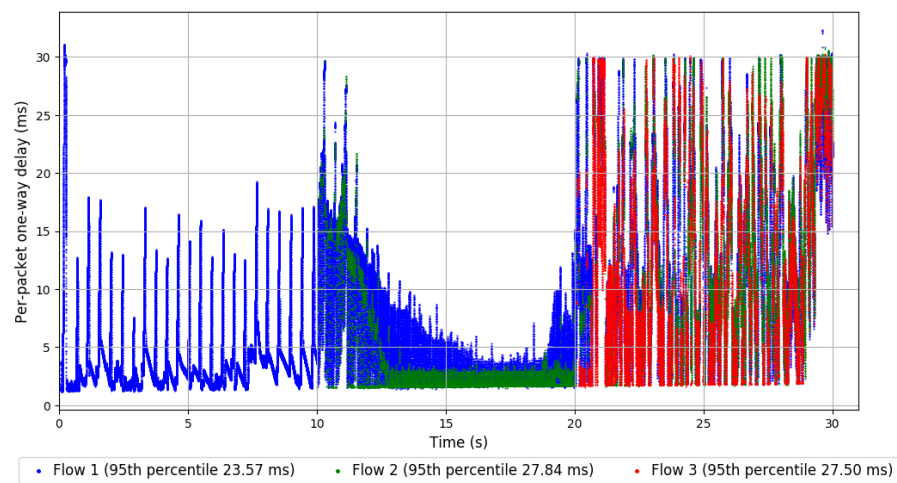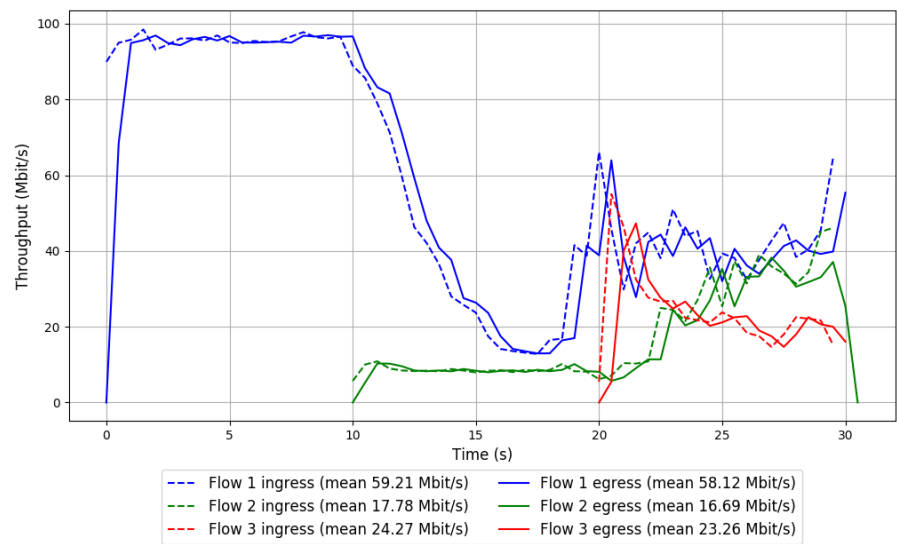
```
Run 1: Statistics of FillP

Start at: 2019-10-02 23:04:14
End at: 2019-10-02 23:04:44
Local clock offset: -5.473 ms
Remote clock offset: -0.238 ms

# Below is generated by plot.py at 2019-10-03 00:58:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.58 Mbit/s
95th percentile per-packet one-way delay: 28.817 ms
Loss rate: 19.71%
-- Flow 1:
Average throughput: 42.98 Mbit/s
95th percentile per-packet one-way delay: 28.108 ms
Loss rate: 12.17%
-- Flow 2:
Average throughput: 60.25 Mbit/s
95th percentile per-packet one-way delay: 28.876 ms
Loss rate: 18.53%
-- Flow 3:
Average throughput: 34.72 Mbit/s
95th percentile per-packet one-way delay: 28.943 ms
Loss rate: 41.42%
```
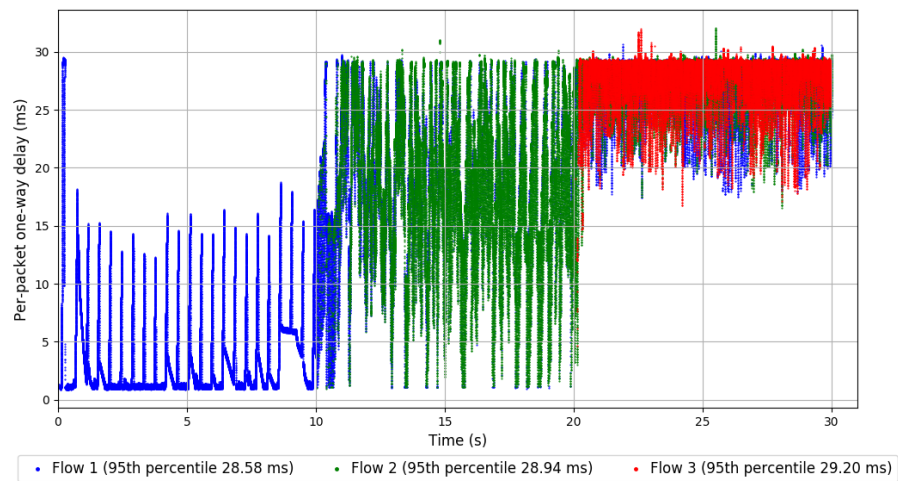
Run 1: Report of FillP — Data Link

- - - Flow 1 ingress (mean 48.97 Mbit/s) —— Flow 1 egress (mean 42.98 Mbit/s)
- - - Flow 2 ingress (mean 74.04 Mbit/s) —— Flow 2 egress (mean 60.25 Mbit/s)
- - - Flow 3 ingress (mean 59.31 Mbit/s) —— Flow 3 egress (mean 34.72 Mbit/s)

• Flow 1 (95th percentile 28.11 ms)   • Flow 2 (95th percentile 28.88 ms)   • Flow 3 (95th percentile 28.94 ms)

```
Run 2: Statistics of FillP

Start at: 2019-10-02 23:31:26
End at: 2019-10-02 23:31:56
Local clock offset: -6.049 ms
Remote clock offset: -0.28 ms

# Below is generated by plot.py at 2019-10-03 00:58:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 28.751 ms
Loss rate: 20.61%
-- Flow 1:
Average throughput: 44.69 Mbit/s
95th percentile per-packet one-way delay: 28.325 ms
Loss rate: 13.62%
-- Flow 2:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 28.786 ms
Loss rate: 19.19%
-- Flow 3:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 28.893 ms
Loss rate: 42.22%
```
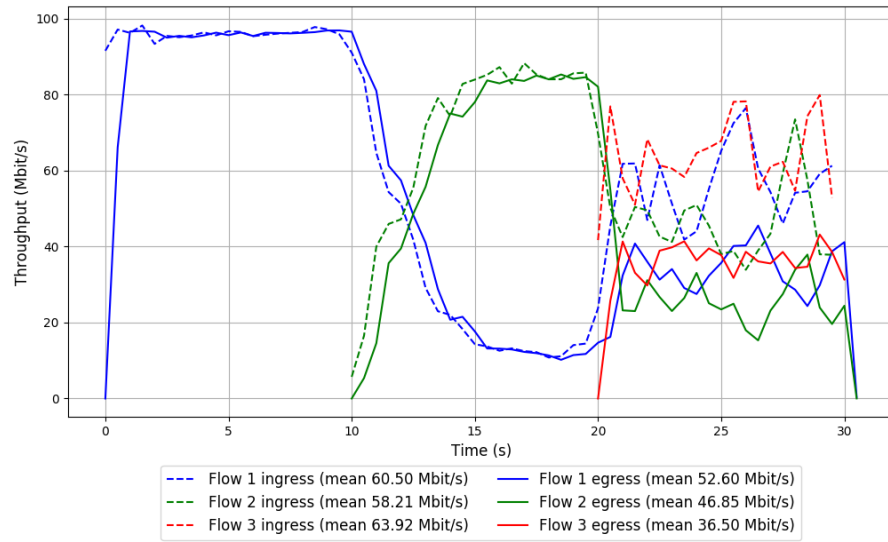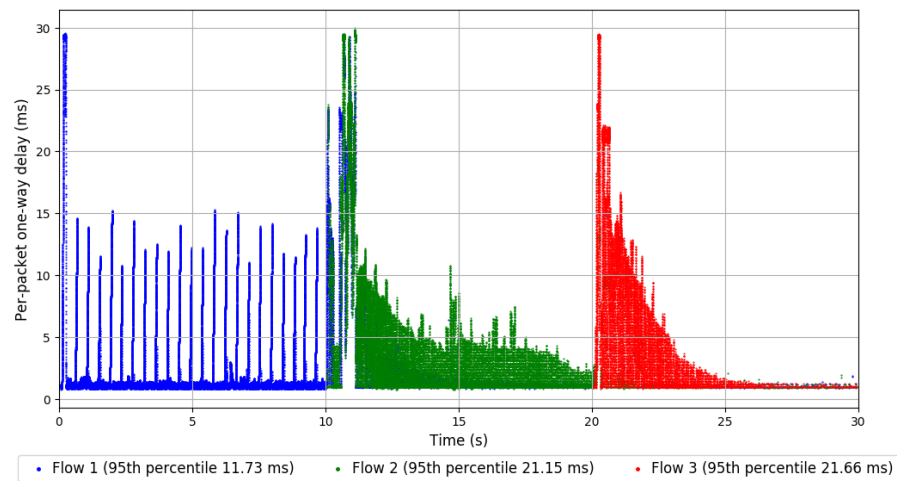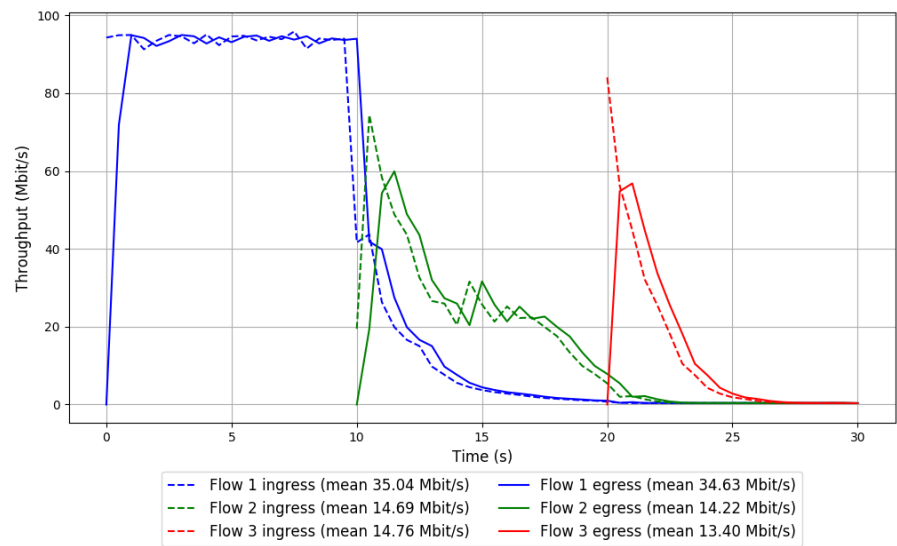
Run 2: Report of FillP — Data Link

- - - Flow 1 ingress (mean 51.78 Mbit/s)   —— Flow 1 egress (mean 44.69 Mbit/s)
- - - Flow 2 ingress (mean 73.98 Mbit/s)   —— Flow 2 egress (mean 59.71 Mbit/s)
- - - Flow 3 ingress (mean 60.33 Mbit/s)   —— Flow 3 egress (mean 34.80 Mbit/s)

• Flow 1 (95th percentile 28.32 ms)   • Flow 2 (95th percentile 28.79 ms)   • Flow 3 (95th percentile 28.89 ms)

```
Run 3: Statistics of FillP

Start at: 2019-10-02 23:58:40
End at: 2019-10-02 23:59:10
Local clock offset: -6.986 ms
Remote clock offset: -0.216 ms


# Below is generated by plot.py at 2019-10-03 00:58:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.40 Mbit/s
95th percentile per-packet one-way delay: 28.781 ms
Loss rate: 8.00%
-- Flow 1:
Average throughput: 45.19 Mbit/s
95th percentile per-packet one-way delay: 22.654 ms
Loss rate: 2.41%
-- Flow 2:
Average throughput: 15.03 Mbit/s
95th percentile per-packet one-way delay: 26.099 ms
Loss rate: 5.47%
-- Flow 3:
Average throughput: 72.90 Mbit/s
95th percentile per-packet one-way delay: 28.929 ms
Loss rate: 17.72%
```
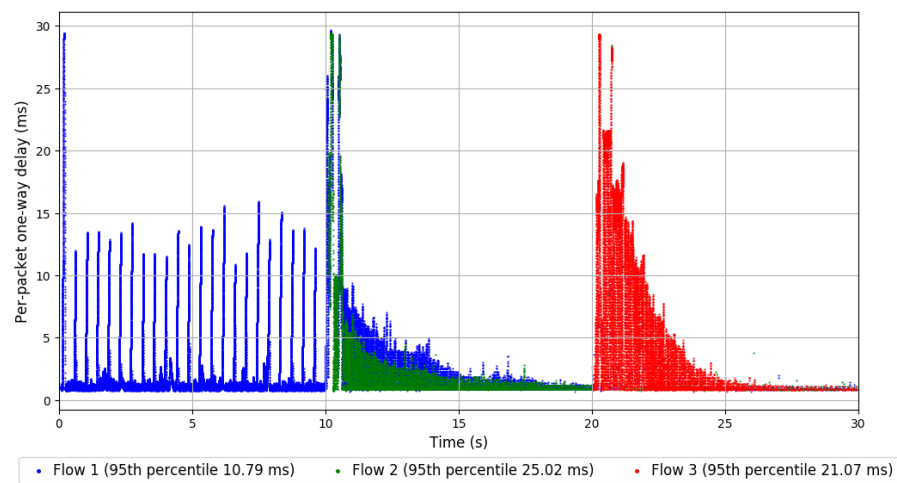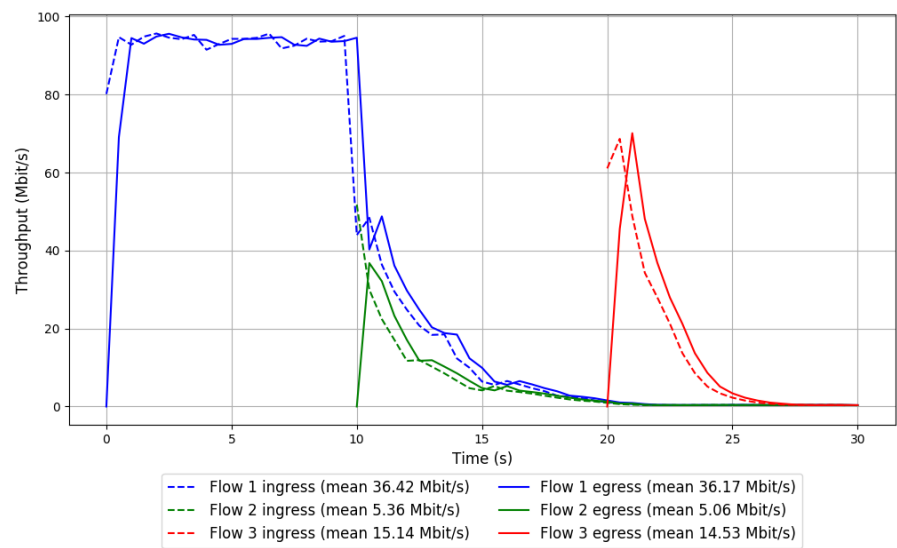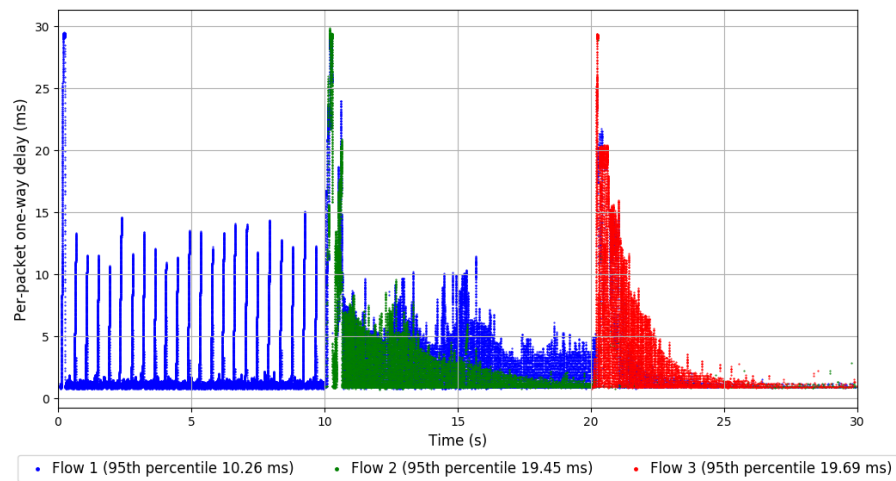
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 46.33 Mbit/s) --- Flow 1 egress (mean 45.19 Mbit/s)
Flow 2 ingress (mean 15.92 Mbit/s) --- Flow 2 egress (mean 15.03 Mbit/s)
Flow 3 ingress (mean 88.85 Mbit/s) --- Flow 3 egress (mean 72.90 Mbit/s)

Flow 1 (95th percentile 22.65 ms)   Flow 2 (95th percentile 26.10 ms)   Flow 3 (95th percentile 28.93 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-10-03 00:25:56
End at: 2019-10-03 00:26:26
Local clock offset: -5.898 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-10-03 00:58:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 25.579 ms
Loss rate: 2.63%
-- Flow 1:
Average throughput: 58.12 Mbit/s
95th percentile per-packet one-way delay: 23.571 ms
Loss rate: 1.77%
-- Flow 2:
Average throughput: 16.69 Mbit/s
95th percentile per-packet one-way delay: 27.840 ms
Loss rate: 6.01%
-- Flow 3:
Average throughput: 23.26 Mbit/s
95th percentile per-packet one-way delay: 27.500 ms
Loss rate: 4.02%
```
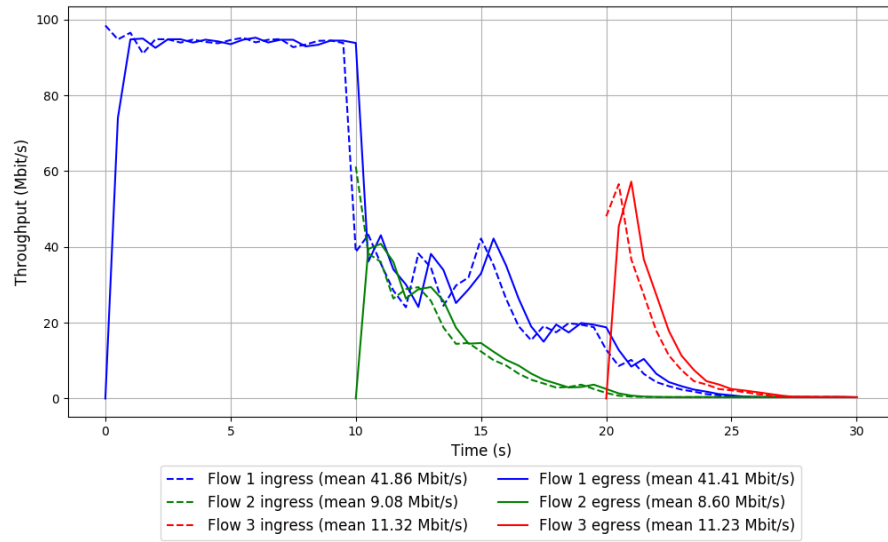
Run 4: Report of FillP — Data Link

Flow 1 ingress (mean 59.21 Mbit/s) --- Flow 1 egress (mean 58.12 Mbit/s)
Flow 2 ingress (mean 17.78 Mbit/s) --- Flow 2 egress (mean 16.69 Mbit/s)
Flow 3 ingress (mean 24.27 Mbit/s) --- Flow 3 egress (mean 23.26 Mbit/s)

Flow 1 (95th percentile 23.57 ms)   Flow 2 (95th percentile 27.84 ms)   Flow 3 (95th percentile 27.50 ms)

```
Run 5: Statistics of FillP

Start at: 2019-10-03 00:53:16
End at: 2019-10-03 00:53:46
Local clock offset: 7.238 ms
Remote clock offset: 0.018 ms


# Below is generated by plot.py at 2019-10-03 00:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.93 Mbit/s
95th percentile per-packet one-way delay: 28.942 ms
Loss rate: 20.30%
-- Flow 1:
Average throughput: 52.60 Mbit/s
95th percentile per-packet one-way delay: 28.581 ms
Loss rate: 12.97%
-- Flow 2:
Average throughput: 46.85 Mbit/s
95th percentile per-packet one-way delay: 28.938 ms
Loss rate: 19.41%
-- Flow 3:
Average throughput: 36.50 Mbit/s
95th percentile per-packet one-way delay: 29.201 ms
Loss rate: 42.83%
```
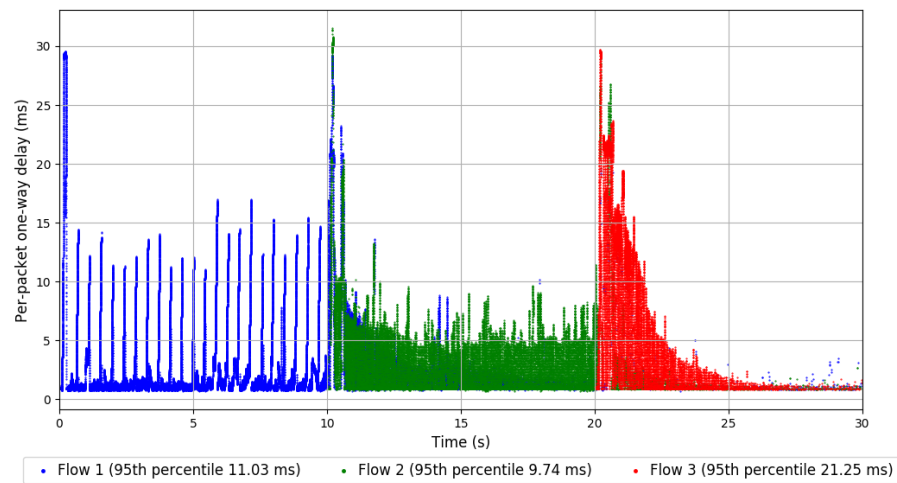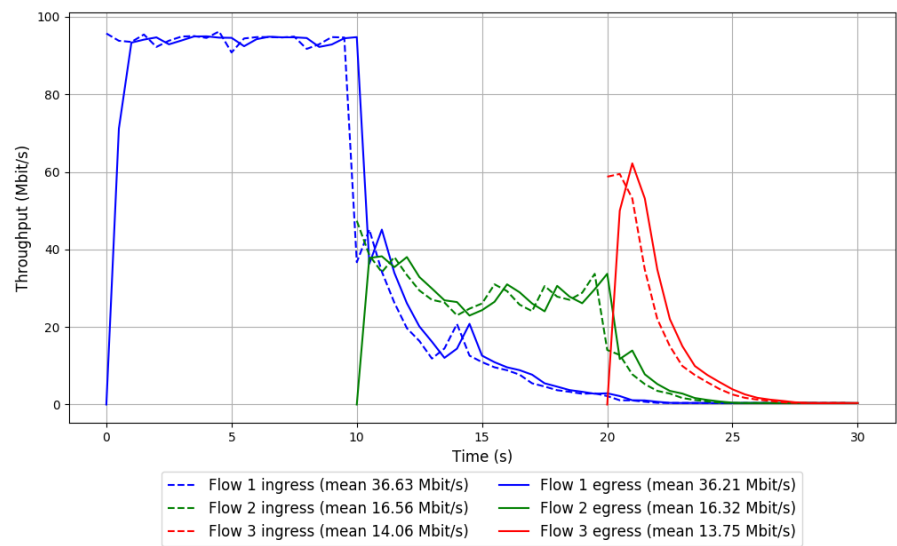
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-10-02 23:01:59
End at: 2019-10-02 23:02:29
Local clock offset: -5.495 ms
Remote clock offset: -0.19 ms


# Below is generated by plot.py at 2019-10-03 00:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.52 Mbit/s
95th percentile per-packet one-way delay: 15.056 ms
Loss rate: 2.37%
-- Flow 1:
Average throughput: 34.63 Mbit/s
95th percentile per-packet one-way delay: 11.730 ms
Loss rate: 1.19%
-- Flow 2:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 21.146 ms
Loss rate: 3.17%
-- Flow 3:
Average throughput: 13.40 Mbit/s
95th percentile per-packet one-way delay: 21.660 ms
Loss rate: 9.20%
```
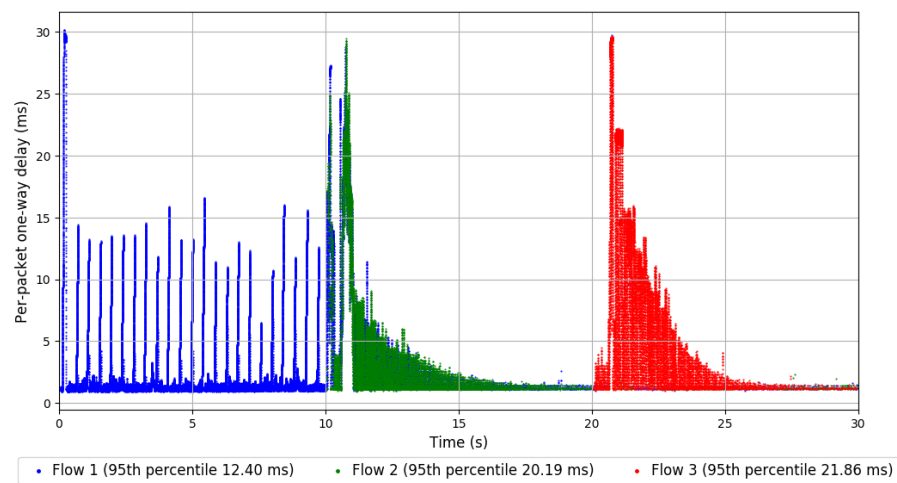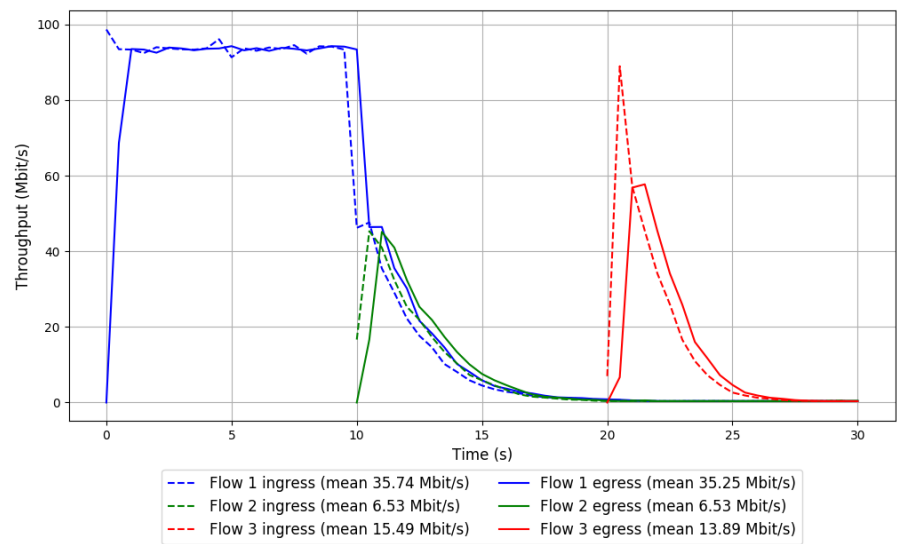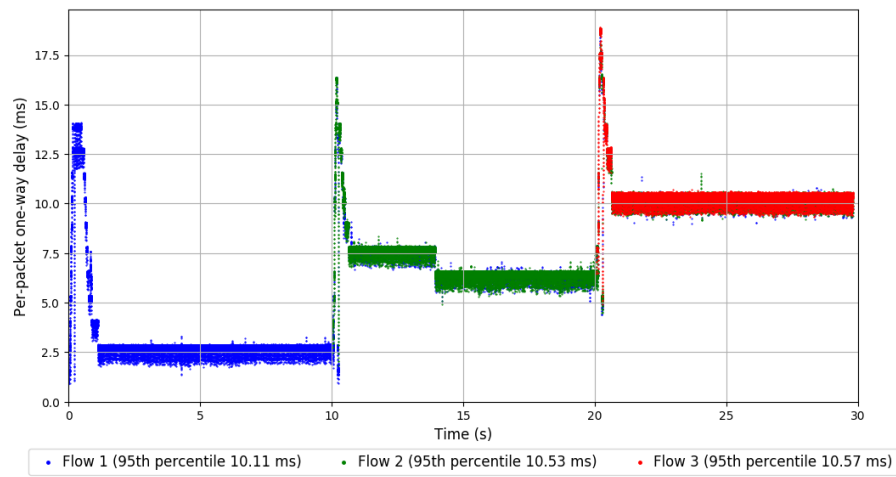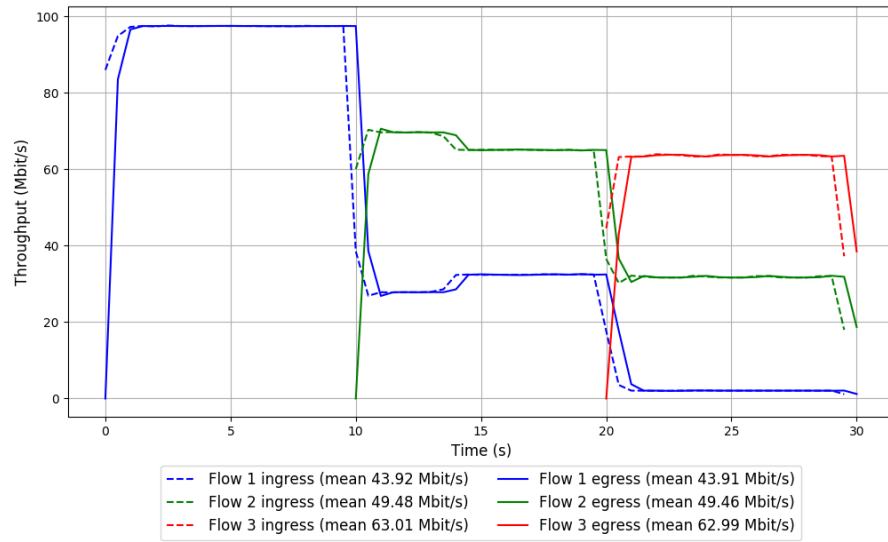
Run 1: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 35.04 Mbit/s) —— Flow 1 egress (mean 34.63 Mbit/s)
- - - Flow 2 ingress (mean 14.69 Mbit/s) —— Flow 2 egress (mean 14.22 Mbit/s)
- - - Flow 3 ingress (mean 14.76 Mbit/s) —— Flow 3 egress (mean 13.40 Mbit/s)

- Flow 1 (95th percentile 11.73 ms)   • Flow 2 (95th percentile 21.15 ms)   • Flow 3 (95th percentile 21.66 ms)
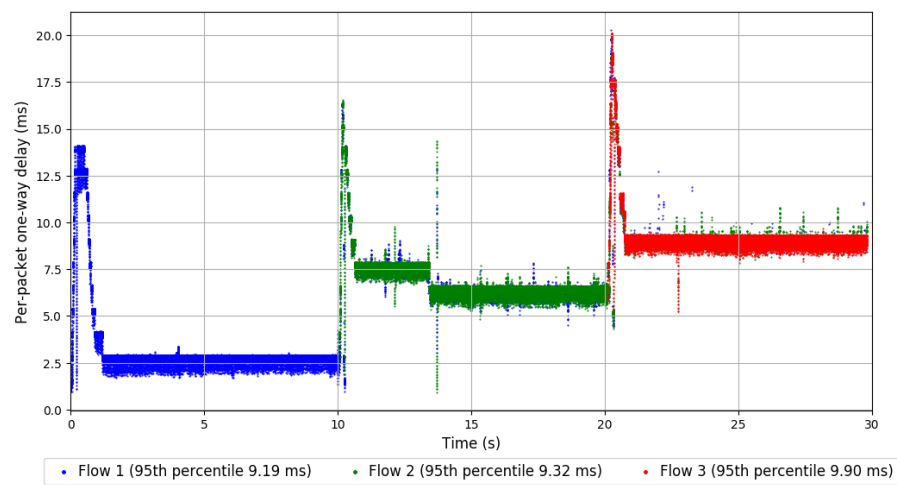
```
Run 2: Statistics of FillP-Sheep

Start at: 2019-10-02 23:29:11
End at: 2019-10-02 23:29:41
Local clock offset: -5.883 ms
Remote clock offset: -0.233 ms

# Below is generated by plot.py at 2019-10-03 00:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.34 Mbit/s
95th percentile per-packet one-way delay: 14.001 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 36.17 Mbit/s
95th percentile per-packet one-way delay: 10.787 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 5.06 Mbit/s
95th percentile per-packet one-way delay: 25.024 ms
Loss rate: 5.61%
-- Flow 3:
Average throughput: 14.53 Mbit/s
95th percentile per-packet one-way delay: 21.072 ms
Loss rate: 4.06%
```

Run 2: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 36.42 Mbit/s) --- Flow 1 egress (mean 36.17 Mbit/s)
Flow 2 ingress (mean 5.36 Mbit/s) --- Flow 2 egress (mean 5.06 Mbit/s)
Flow 3 ingress (mean 15.14 Mbit/s) --- Flow 3 egress (mean 14.53 Mbit/s)

Flow 1 (95th percentile 10.79 ms)   Flow 2 (95th percentile 25.02 ms)   Flow 3 (95th percentile 21.07 ms)
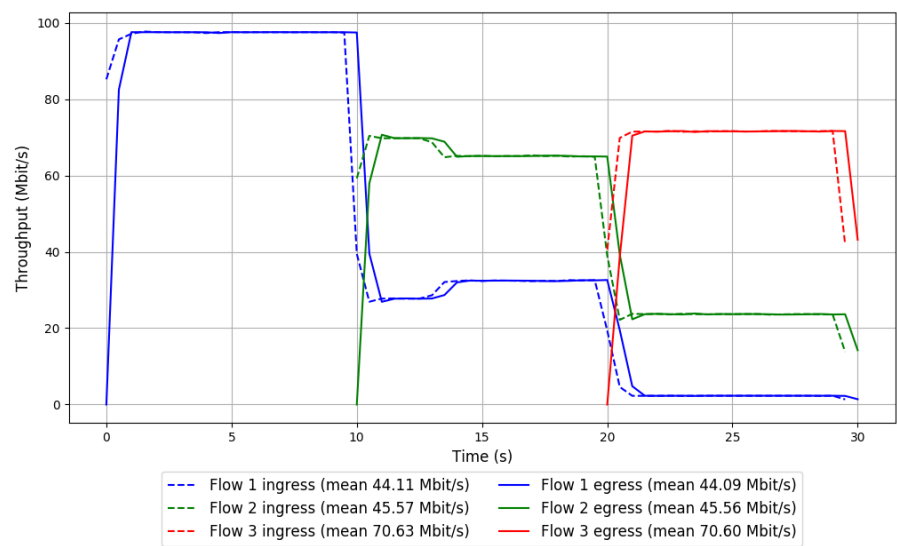
```
Run 3: Statistics of FillP-Sheep

Start at: 2019-10-02 23:56:25
End at: 2019-10-02 23:56:55
Local clock offset: -6.895 ms
Remote clock offset: -0.165 ms


# Below is generated by plot.py at 2019-10-03 00:58:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.83 Mbit/s
95th percentile per-packet one-way delay: 12.260 ms
Loss rate: 1.56%
-- Flow 1:
Average throughput: 41.41 Mbit/s
95th percentile per-packet one-way delay: 10.256 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 8.60 Mbit/s
95th percentile per-packet one-way delay: 19.450 ms
Loss rate: 5.31%
-- Flow 3:
Average throughput: 11.23 Mbit/s
95th percentile per-packet one-way delay: 19.690 ms
Loss rate: 0.87%
```
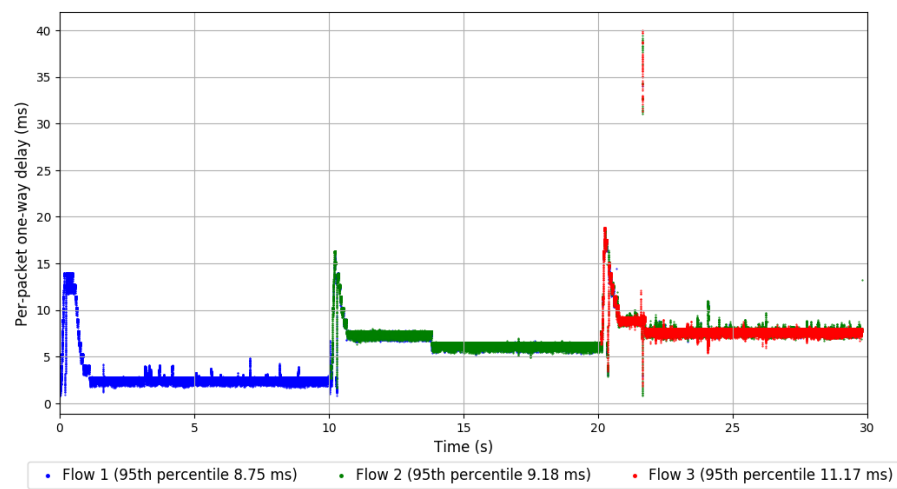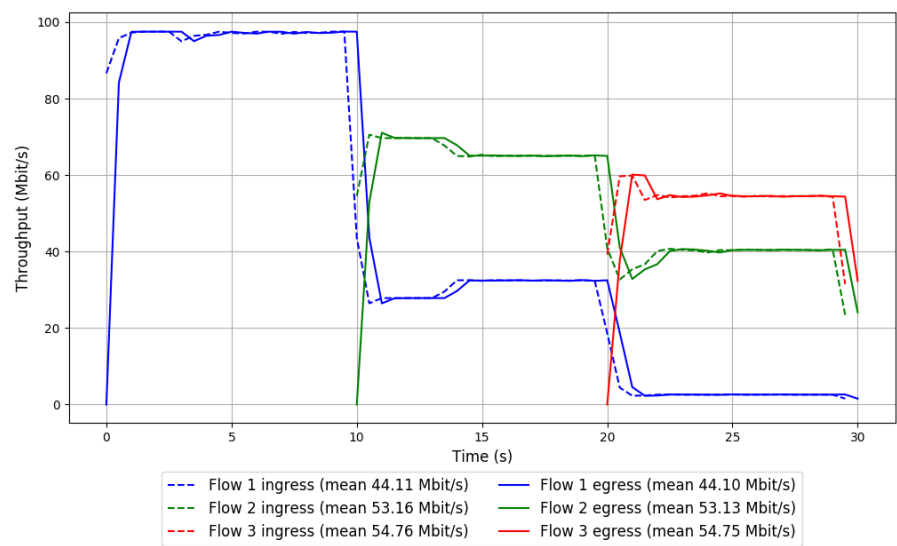
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 41.86 Mbit/s)   Flow 1 egress (mean 41.41 Mbit/s)
Flow 2 ingress (mean 9.08 Mbit/s)   Flow 2 egress (mean 8.60 Mbit/s)
Flow 3 ingress (mean 11.32 Mbit/s)   Flow 3 egress (mean 11.23 Mbit/s)

Flow 1 (95th percentile 10.26 ms)   Flow 2 (95th percentile 19.45 ms)   Flow 3 (95th percentile 19.69 ms)
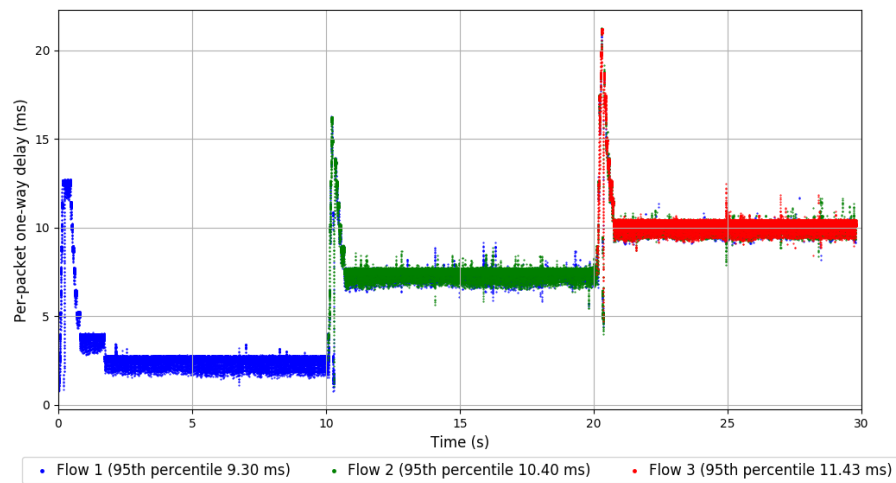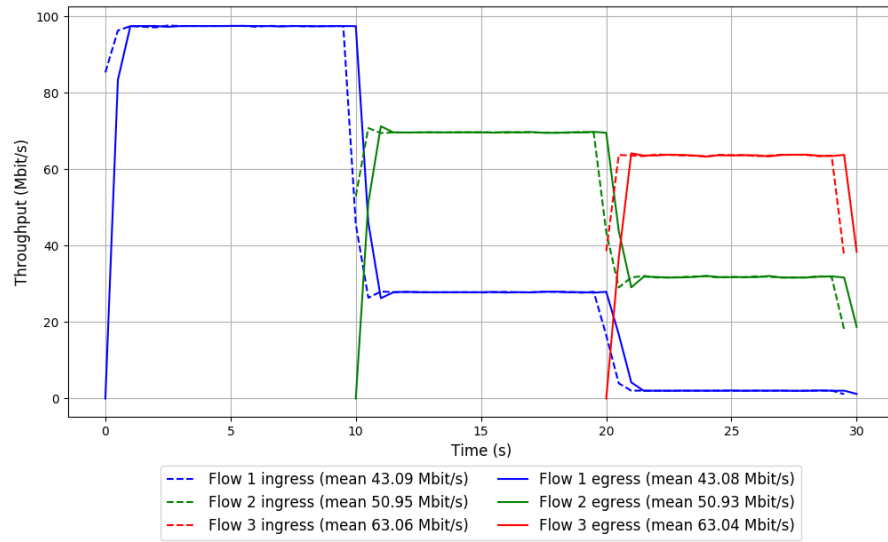
```
Run 4: Statistics of FillP-Sheep

Start at: 2019-10-03 00:23:41
End at: 2019-10-03 00:24:11
Local clock offset: -7.285 ms
Remote clock offset: -0.09 ms

# Below is generated by plot.py at 2019-10-03 00:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.60 Mbit/s
95th percentile per-packet one-way delay: 13.046 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 36.21 Mbit/s
95th percentile per-packet one-way delay: 11.025 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 16.32 Mbit/s
95th percentile per-packet one-way delay: 9.738 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 13.75 Mbit/s
95th percentile per-packet one-way delay: 21.246 ms
Loss rate: 2.15%
```

Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 36.63 Mbit/s)   Flow 1 egress (mean 36.21 Mbit/s)
Flow 2 ingress (mean 16.56 Mbit/s)   Flow 2 egress (mean 16.32 Mbit/s)
Flow 3 ingress (mean 14.06 Mbit/s)   Flow 3 egress (mean 13.75 Mbit/s)

Flow 1 (95th percentile 11.03 ms)   Flow 2 (95th percentile 9.74 ms)   Flow 3 (95th percentile 21.25 ms)
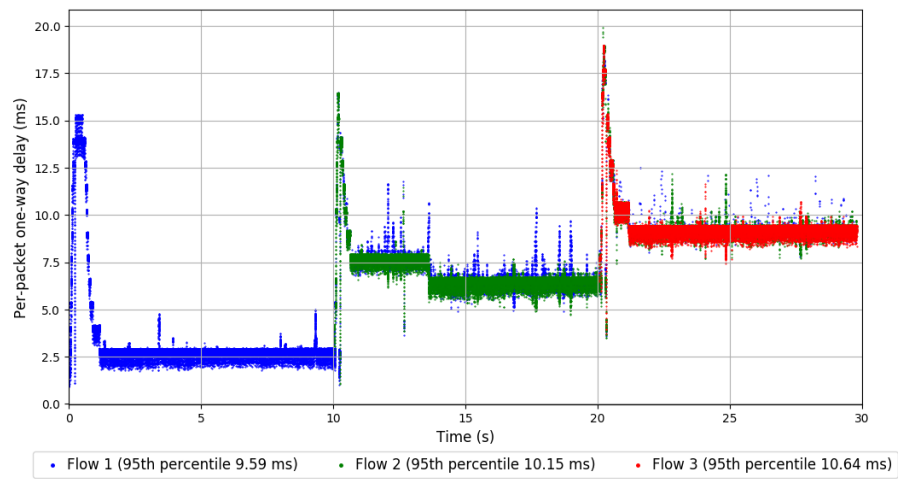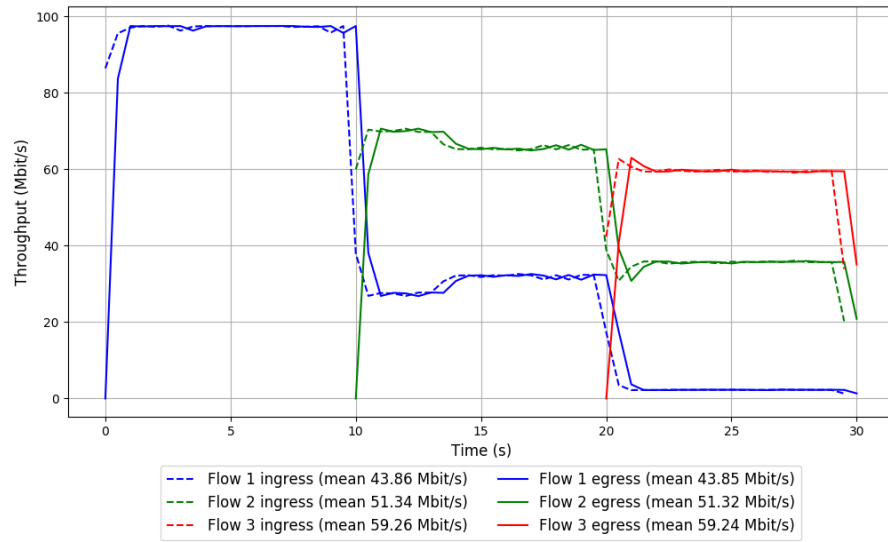
```
Run 5: Statistics of FillP-Sheep

Start at: 2019-10-03 00:51:02
End at: 2019-10-03 00:51:32
Local clock offset: 6.735 ms
Remote clock offset: 0.054 ms


# Below is generated by plot.py at 2019-10-03 00:58:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 15.159 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 35.25 Mbit/s
95th percentile per-packet one-way delay: 12.396 ms
Loss rate: 1.39%
-- Flow 2:
Average throughput: 6.53 Mbit/s
95th percentile per-packet one-way delay: 20.192 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 13.89 Mbit/s
95th percentile per-packet one-way delay: 21.857 ms
Loss rate: 10.33%
```

Run 5: Report of FillP-Sheep — Data Link

Legend:
- Flow 1 ingress (mean 35.74 Mbit/s) — Flow 1 egress (mean 35.25 Mbit/s)
- Flow 2 ingress (mean 6.53 Mbit/s) — Flow 2 egress (mean 6.53 Mbit/s)
- Flow 3 ingress (mean 15.49 Mbit/s) — Flow 3 egress (mean 13.89 Mbit/s)

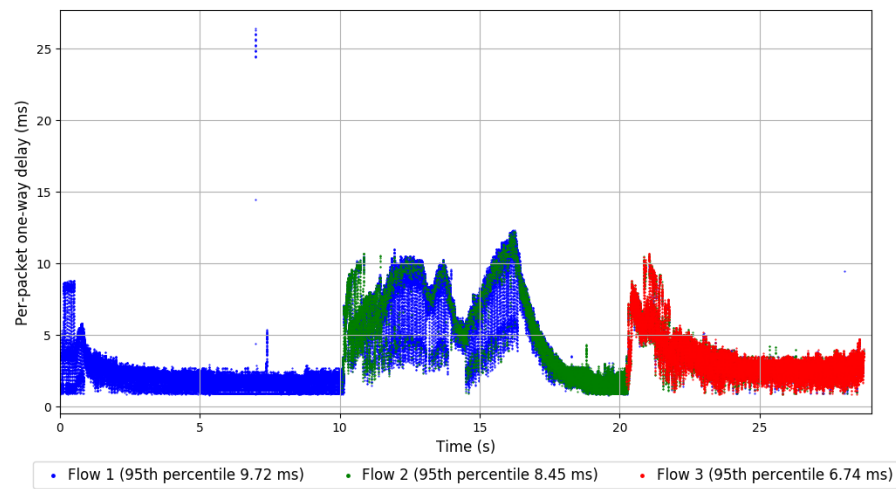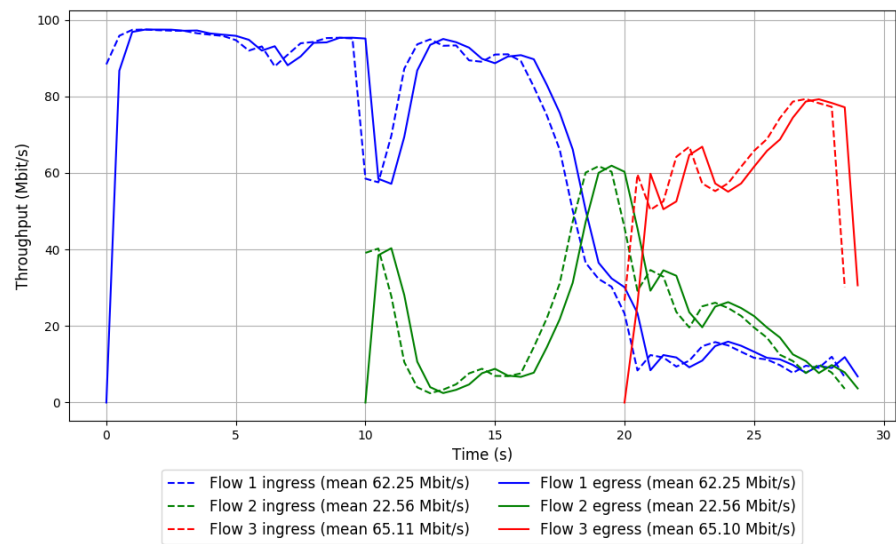- Flow 1 (95th percentile 12.40 ms)   • Flow 2 (95th percentile 20.19 ms)   • Flow 3 (95th percentile 21.86 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-10-02 22:59:42
End at: 2019-10-02 23:00:12
Local clock offset: -5.506 ms
Remote clock offset: -0.202 ms


# Below is generated by plot.py at 2019-10-03 00:59:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 10.539 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.91 Mbit/s
95th percentile per-packet one-way delay: 10.107 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.46 Mbit/s
95th percentile per-packet one-way delay: 10.527 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 10.571 ms
Loss rate: 0.00%
```
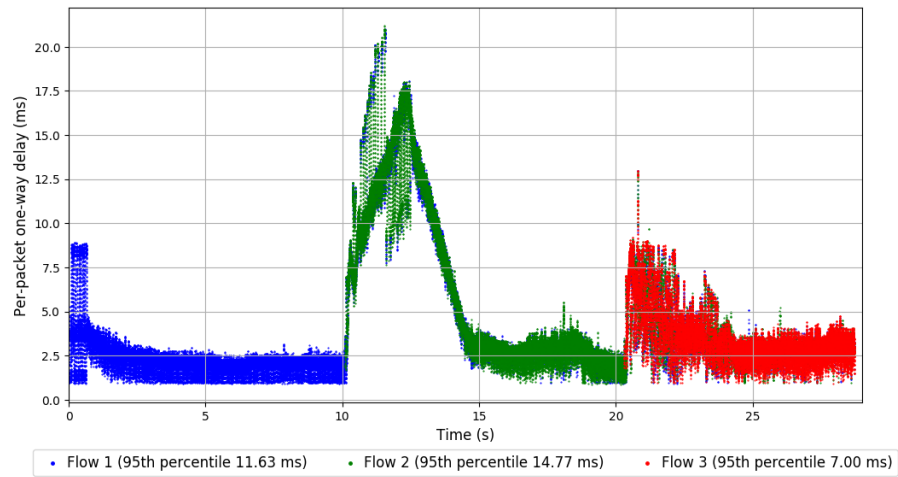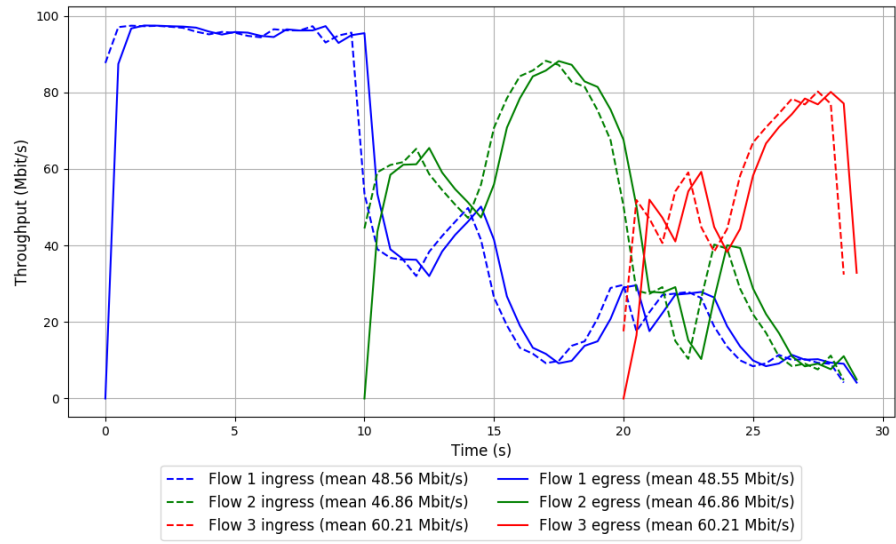
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-10-02 23:26:55
End at: 2019-10-02 23:27:25
Local clock offset: -5.694 ms
Remote clock offset: -0.218 ms


# Below is generated by plot.py at 2019-10-03 00:59:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.26 Mbit/s
95th percentile per-packet one-way delay: 9.322 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.09 Mbit/s
95th percentile per-packet one-way delay: 9.190 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.56 Mbit/s
95th percentile per-packet one-way delay: 9.323 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.60 Mbit/s
95th percentile per-packet one-way delay: 9.901 ms
Loss rate: 0.00%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-10-02 23:54:09
End at: 2019-10-02 23:54:39
Local clock offset: -6.838 ms
Remote clock offset: -0.258 ms


# Below is generated by plot.py at 2019-10-03 00:59:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.07 Mbit/s
95th percentile per-packet one-way delay: 9.211 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.10 Mbit/s
95th percentile per-packet one-way delay: 8.753 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.13 Mbit/s
95th percentile per-packet one-way delay: 9.183 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 54.75 Mbit/s
95th percentile per-packet one-way delay: 11.168 ms
Loss rate: 0.00%
```
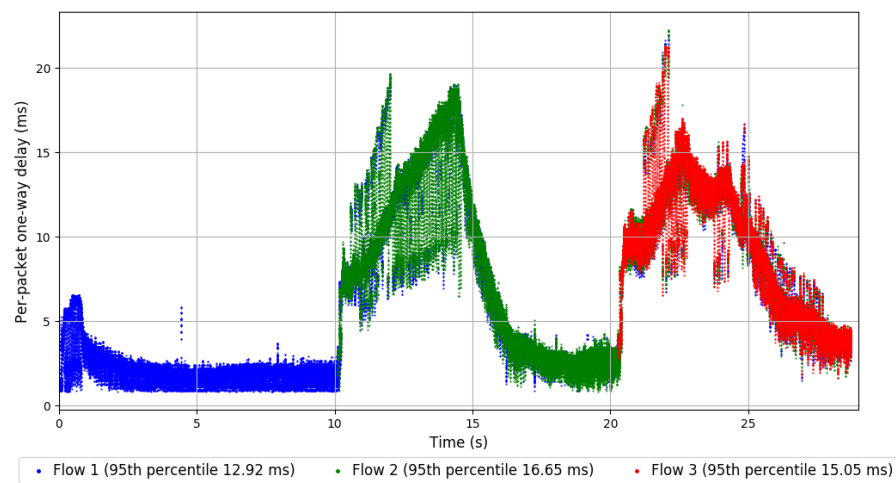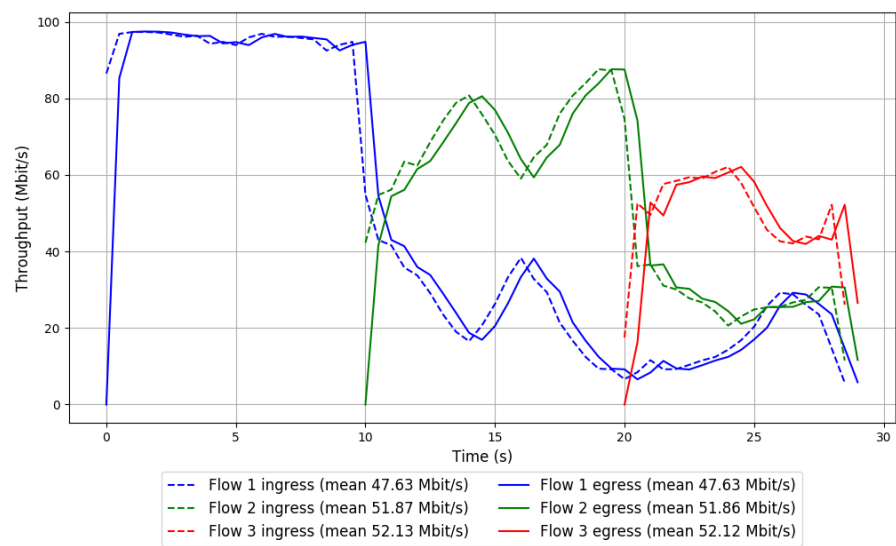
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-10-03 00:21:24
End at: 2019-10-03 00:21:54
Local clock offset: -7.23 ms
Remote clock offset: -0.162 ms


# Below is generated by plot.py at 2019-10-03 00:59:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.28 Mbit/s
95th percentile per-packet one-way delay: 10.409 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 9.296 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.93 Mbit/s
95th percentile per-packet one-way delay: 10.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 63.04 Mbit/s
95th percentile per-packet one-way delay: 11.425 ms
Loss rate: 0.00%
```
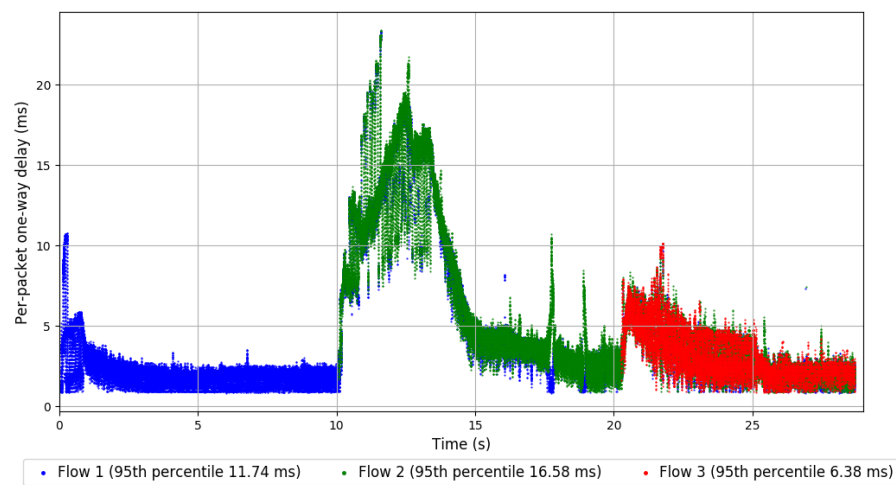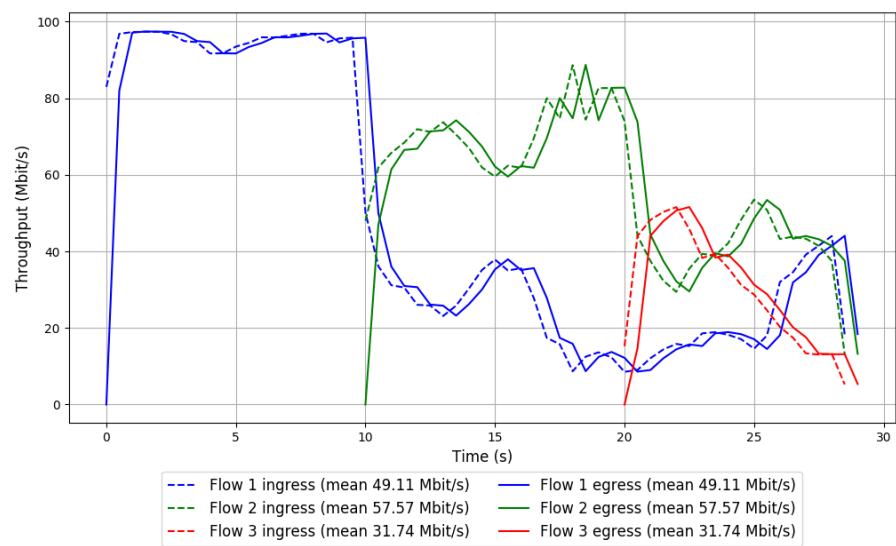
Run 4: Report of Indigo — Data Link

Flow 1 ingress (mean 43.09 Mbit/s) --- Flow 1 egress (mean 43.08 Mbit/s)
Flow 2 ingress (mean 50.95 Mbit/s) --- Flow 2 egress (mean 50.93 Mbit/s)
Flow 3 ingress (mean 63.06 Mbit/s) --- Flow 3 egress (mean 63.04 Mbit/s)

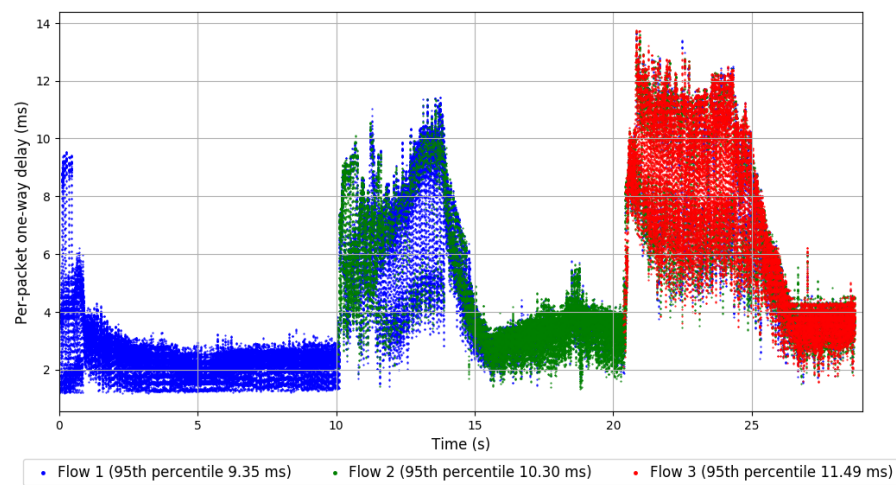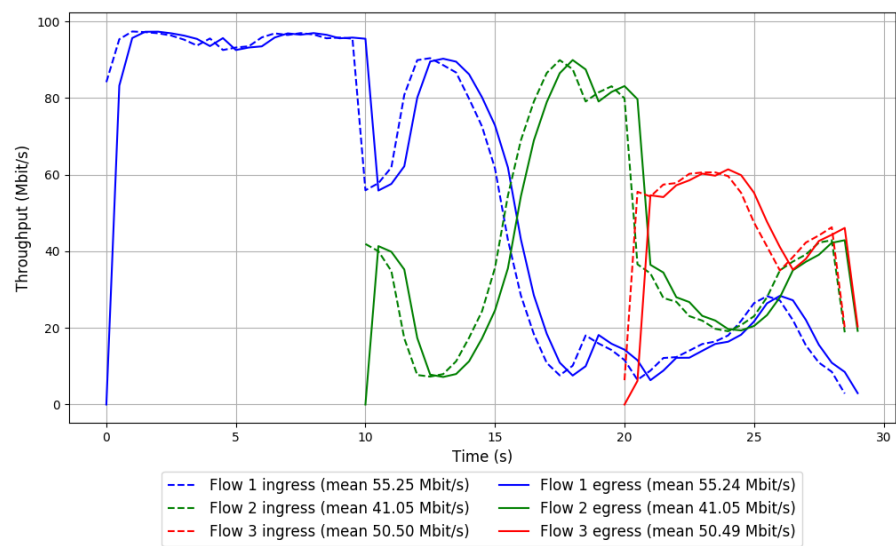Flow 1 (95th percentile 9.30 ms)   Flow 2 (95th percentile 10.40 ms)   Flow 3 (95th percentile 11.43 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-10-03 00:48:45
End at: 2019-10-03 00:49:15
Local clock offset: 6.234 ms
Remote clock offset: -0.063 ms


# Below is generated by plot.py at 2019-10-03 01:00:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 10.417 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.85 Mbit/s
95th percentile per-packet one-way delay: 9.588 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 10.154 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 59.24 Mbit/s
95th percentile per-packet one-way delay: 10.637 ms
Loss rate: 0.01%
```

Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-10-02 22:45:59
End at: 2019-10-02 22:46:29
Local clock offset: -5.578 ms
Remote clock offset: -0.216 ms


# Below is generated by plot.py at 2019-10-03 01:00:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 9.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.25 Mbit/s
95th percentile per-packet one-way delay: 9.721 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.56 Mbit/s
95th percentile per-packet one-way delay: 8.450 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.10 Mbit/s
95th percentile per-packet one-way delay: 6.736 ms
Loss rate: 0.00%
```

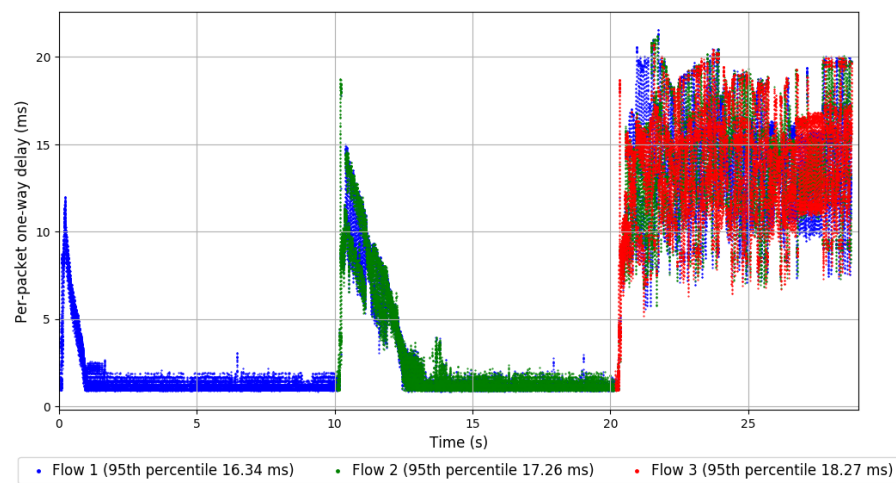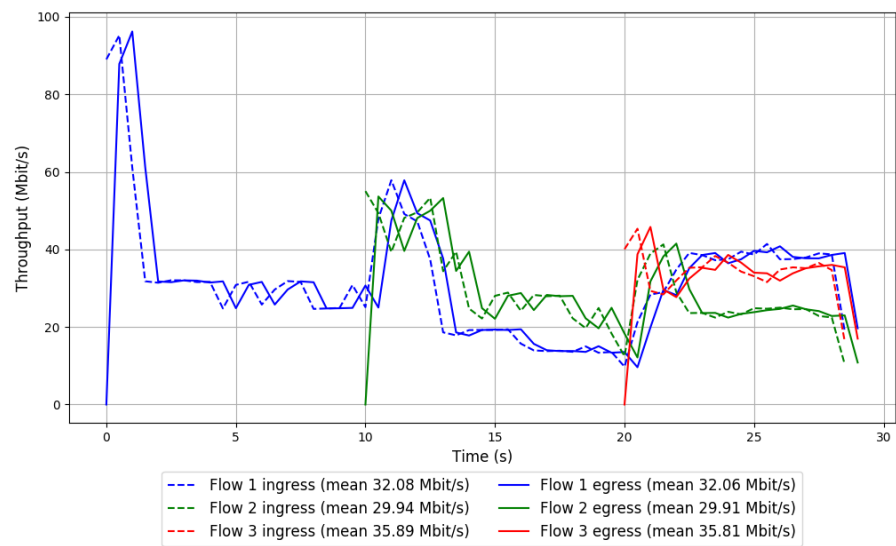Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-10-02 23:13:15
End at: 2019-10-02 23:13:45
Local clock offset: -5.416 ms
Remote clock offset: -0.214 ms


# Below is generated by plot.py at 2019-10-03 01:00:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.59 Mbit/s
95th percentile per-packet one-way delay: 12.753 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.55 Mbit/s
95th percentile per-packet one-way delay: 11.628 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.86 Mbit/s
95th percentile per-packet one-way delay: 14.772 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 60.21 Mbit/s
95th percentile per-packet one-way delay: 6.999 ms
Loss rate: 0.00%
```
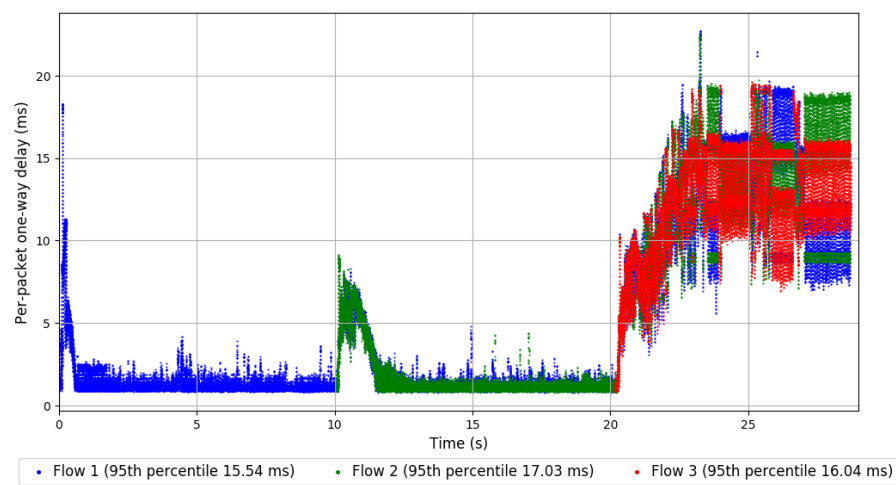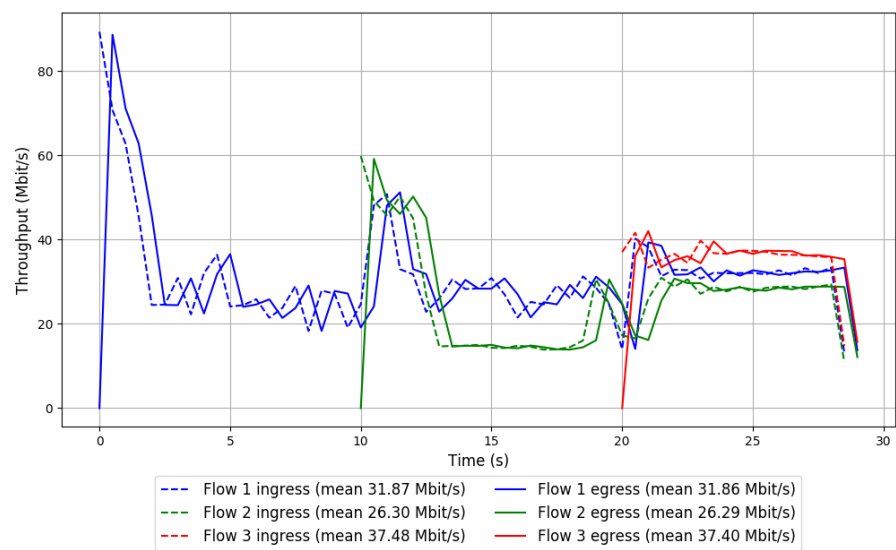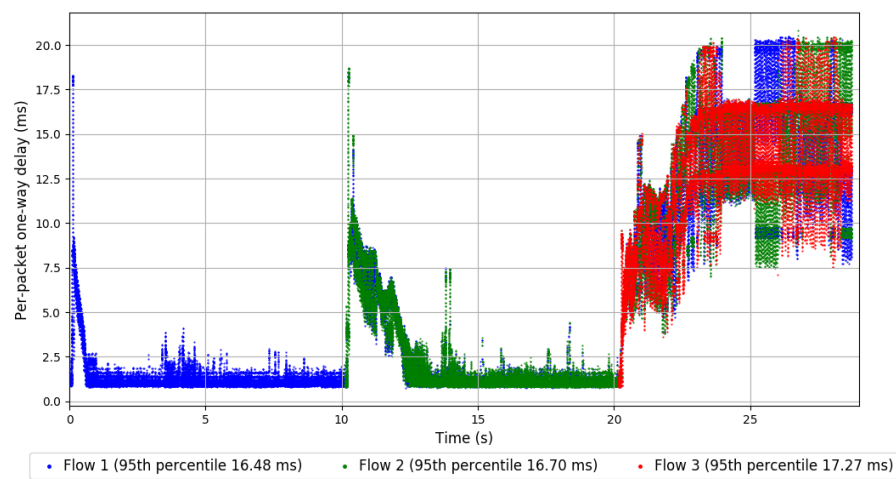
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-10-02 23:40:27
End at: 2019-10-02 23:40:57
Local clock offset: -6.53 ms
Remote clock offset: -0.27 ms


# Below is generated by plot.py at 2019-10-03 01:00:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.60 Mbit/s
95th percentile per-packet one-way delay: 15.324 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.63 Mbit/s
95th percentile per-packet one-way delay: 12.918 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 51.86 Mbit/s
95th percentile per-packet one-way delay: 16.649 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.12 Mbit/s
95th percentile per-packet one-way delay: 15.051 ms
Loss rate: 0.00%
```
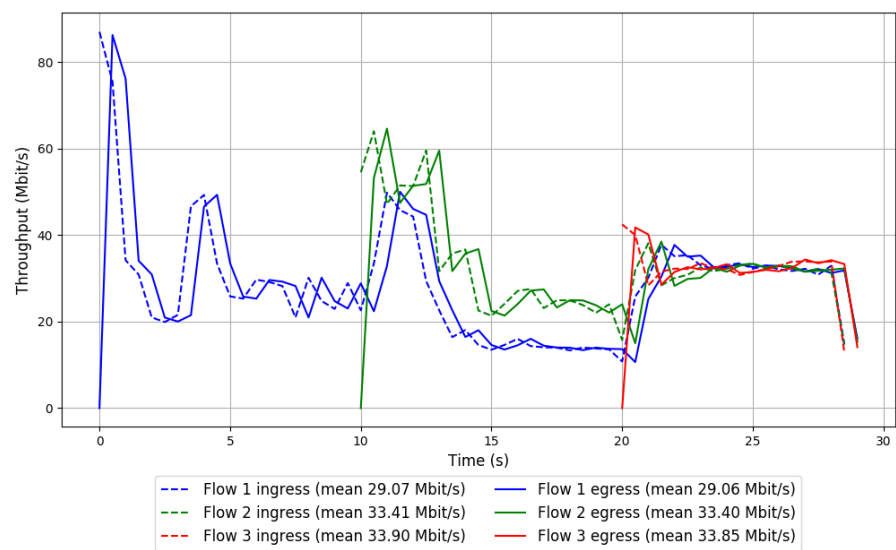
Run 3: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 47.63 Mbit/s) ——— Flow 1 egress (mean 47.63 Mbit/s)
- - - - Flow 2 ingress (mean 51.87 Mbit/s) ——— Flow 2 egress (mean 51.86 Mbit/s)
- - - - Flow 3 ingress (mean 52.13 Mbit/s) ——— Flow 3 egress (mean 52.12 Mbit/s)

- Flow 1 (95th percentile 12.92 ms)   - Flow 2 (95th percentile 16.65 ms)   - Flow 3 (95th percentile 15.05 ms)

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```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-10-03 00:07:40
End at: 2019-10-03 00:08:10
Local clock offset: -7.074 ms
Remote clock offset: -0.136 ms


# Below is generated by plot.py at 2019-10-03 01:00:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 15.241 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.11 Mbit/s
95th percentile per-packet one-way delay: 11.740 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.57 Mbit/s
95th percentile per-packet one-way delay: 16.576 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 6.384 ms
Loss rate: 0.00%
```
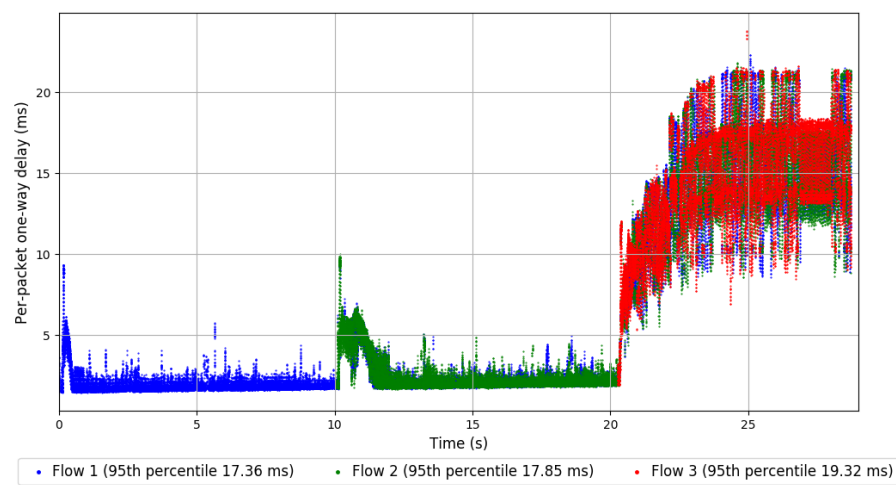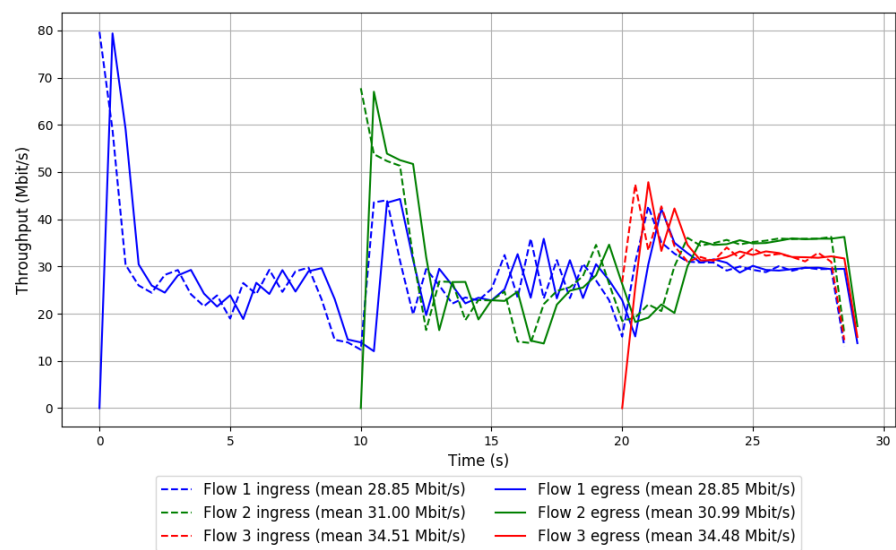
Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-10-03 00:34:56
End at: 2019-10-03 00:35:26
Local clock offset: 1.313 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.59 Mbit/s
95th percentile per-packet one-way delay: 10.253 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.24 Mbit/s
95th percentile per-packet one-way delay: 9.350 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.05 Mbit/s
95th percentile per-packet one-way delay: 10.301 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.49 Mbit/s
95th percentile per-packet one-way delay: 11.488 ms
Loss rate: 0.00%
```
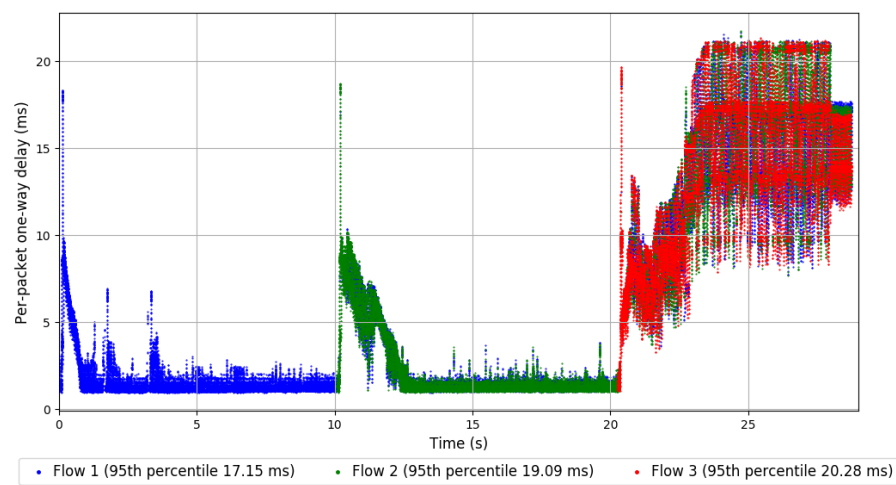
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 55.25 Mbit/s)   Flow 1 egress (mean 55.24 Mbit/s)
Flow 2 ingress (mean 41.05 Mbit/s)   Flow 2 egress (mean 41.05 Mbit/s)
Flow 3 ingress (mean 50.50 Mbit/s)   Flow 3 egress (mean 50.49 Mbit/s)

Flow 1 (95th percentile 9.35 ms)   Flow 2 (95th percentile 10.30 ms)   Flow 3 (95th percentile 11.49 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-10-02 23:03:06
End at: 2019-10-02 23:03:36
Local clock offset: -5.563 ms
Remote clock offset: -0.309 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.13 Mbit/s
95th percentile per-packet one-way delay: 17.222 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 16.335 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.91 Mbit/s
95th percentile per-packet one-way delay: 17.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.81 Mbit/s
95th percentile per-packet one-way delay: 18.265 ms
Loss rate: 0.00%
```
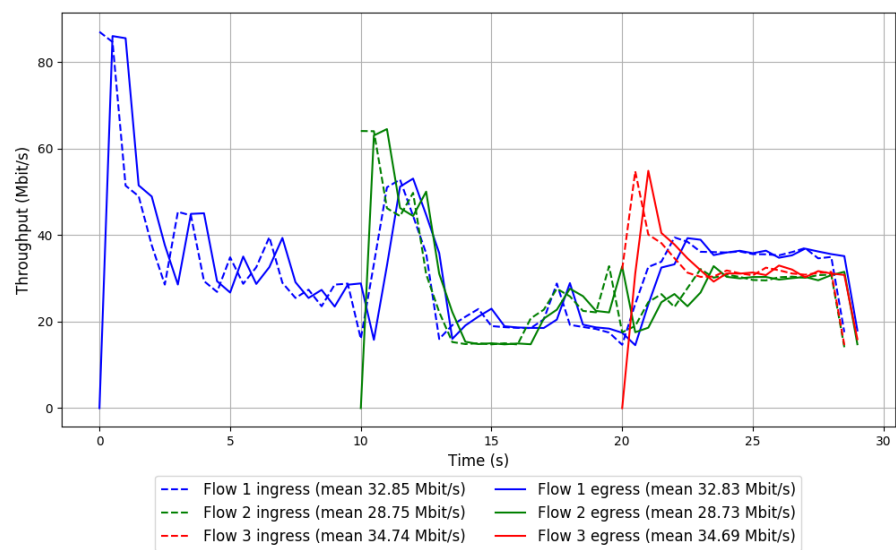
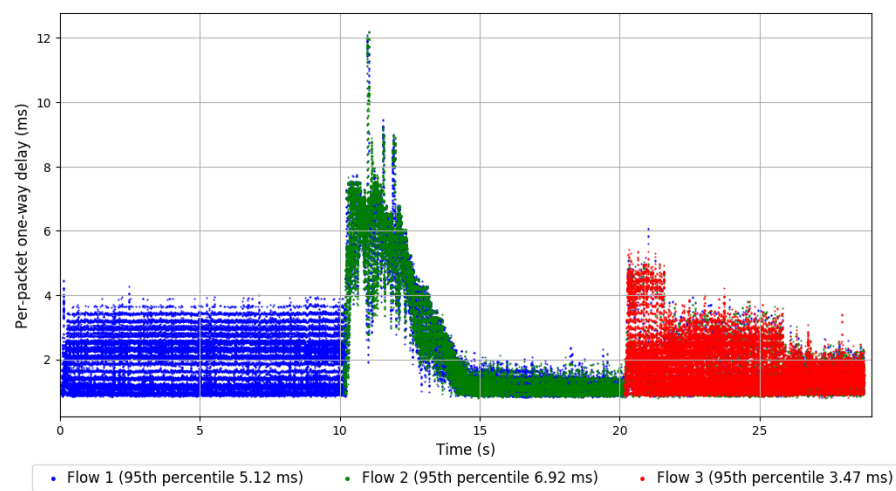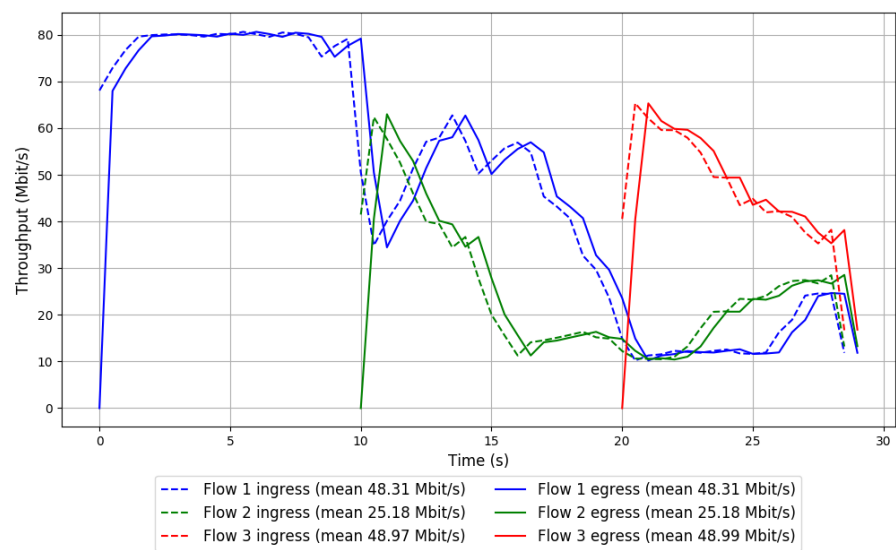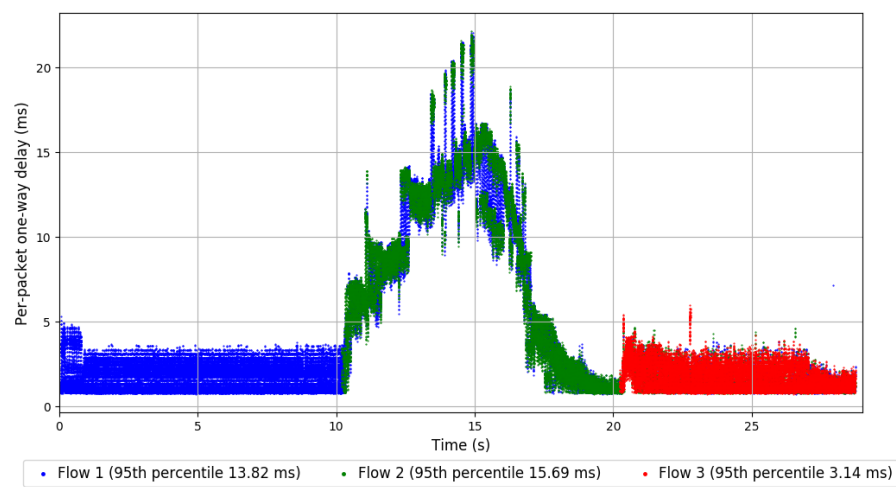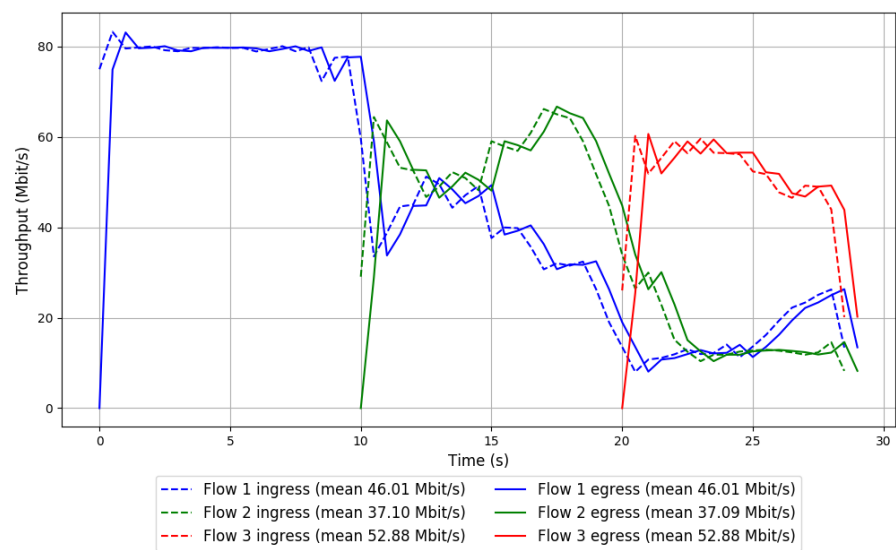Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-10-02 23:30:18
End at: 2019-10-02 23:30:48
Local clock offset: -5.969 ms
Remote clock offset: -0.236 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.07 Mbit/s
95th percentile per-packet one-way delay: 16.033 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 15.535 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.29 Mbit/s
95th percentile per-packet one-way delay: 17.028 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.40 Mbit/s
95th percentile per-packet one-way delay: 16.036 ms
Loss rate: 0.04%
```

Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 31.87 Mbit/s)   Flow 1 egress (mean 31.86 Mbit/s)
Flow 2 ingress (mean 26.30 Mbit/s)   Flow 2 egress (mean 26.29 Mbit/s)
Flow 3 ingress (mean 37.48 Mbit/s)   Flow 3 egress (mean 37.40 Mbit/s)

Flow 1 (95th percentile 15.54 ms)   Flow 2 (95th percentile 17.03 ms)   Flow 3 (95th percentile 16.04 ms)
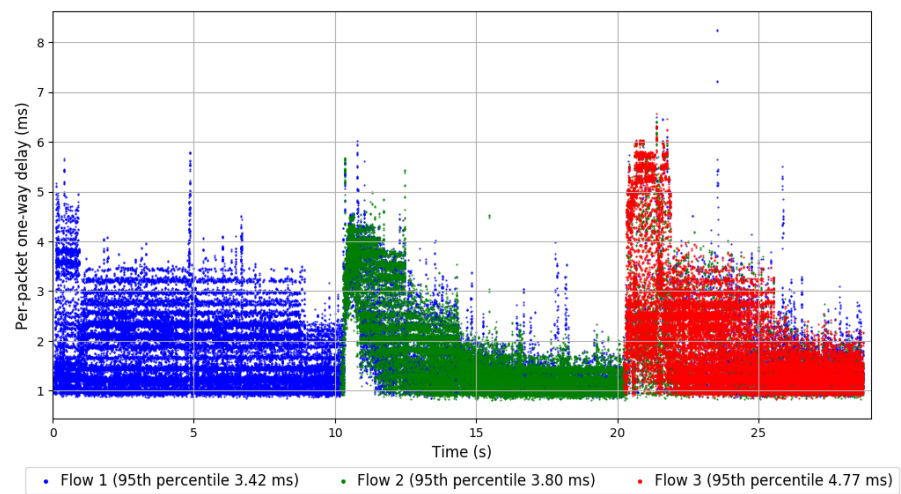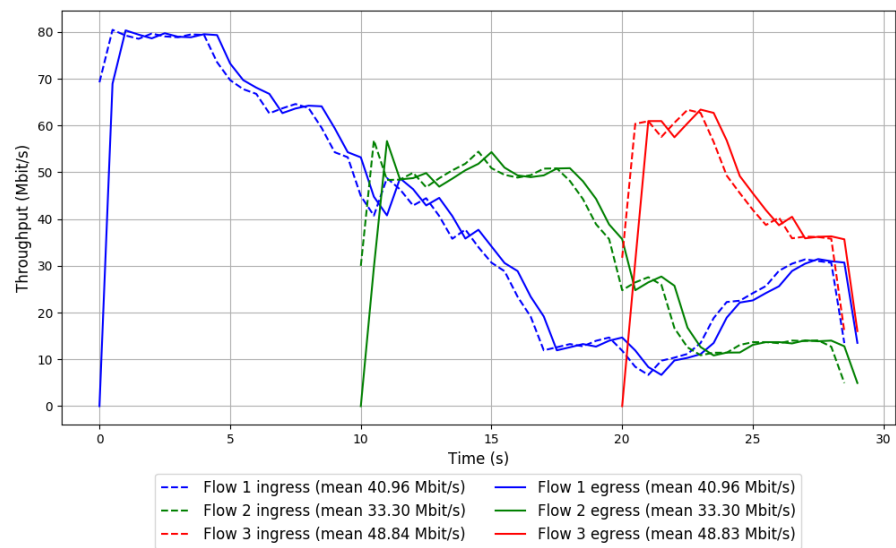
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-10-02 23:57:32
End at: 2019-10-02 23:58:02
Local clock offset: -6.907 ms
Remote clock offset: -0.272 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.80 Mbit/s
95th percentile per-packet one-way delay: 16.679 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.06 Mbit/s
95th percentile per-packet one-way delay: 16.478 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.40 Mbit/s
95th percentile per-packet one-way delay: 16.698 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.85 Mbit/s
95th percentile per-packet one-way delay: 17.272 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-10-03 00:24:48
End at: 2019-10-03 00:25:18
Local clock offset: -7.351 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.16 Mbit/s
95th percentile per-packet one-way delay: 17.984 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 17.359 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 30.99 Mbit/s
95th percentile per-packet one-way delay: 17.846 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.48 Mbit/s
95th percentile per-packet one-way delay: 19.315 ms
Loss rate: 0.00%
```
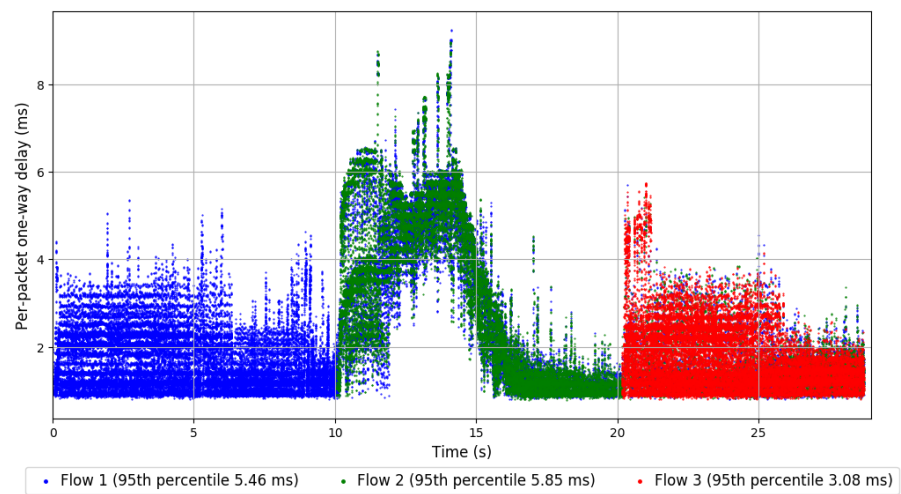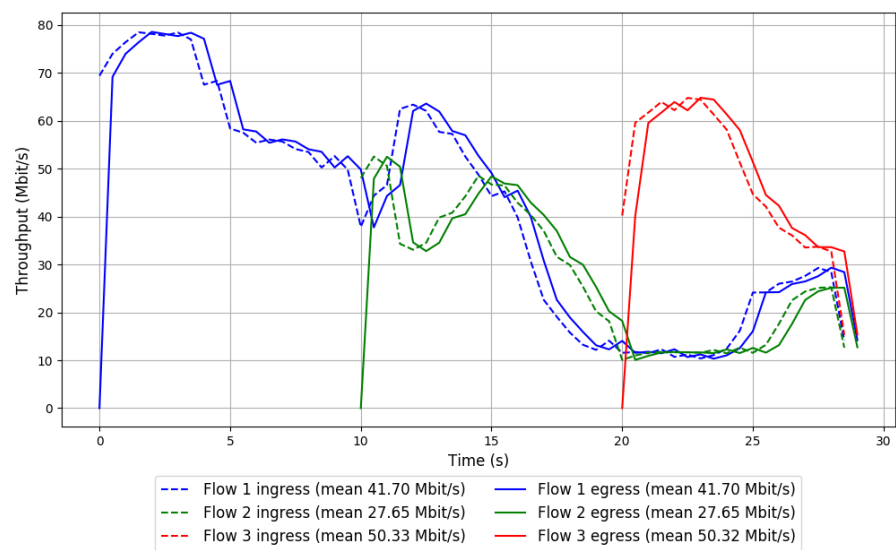
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-10-03 00:52:09
End at: 2019-10-03 00:52:39
Local clock offset: 7.028 ms
Remote clock offset: -0.0 ms


# Below is generated by plot.py at 2019-10-03 01:00:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 61.73 Mbit/s
95th percentile per-packet one-way delay: 18.210 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 17.148 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.73 Mbit/s
95th percentile per-packet one-way delay: 19.090 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 20.282 ms
Loss rate: 0.00%
```
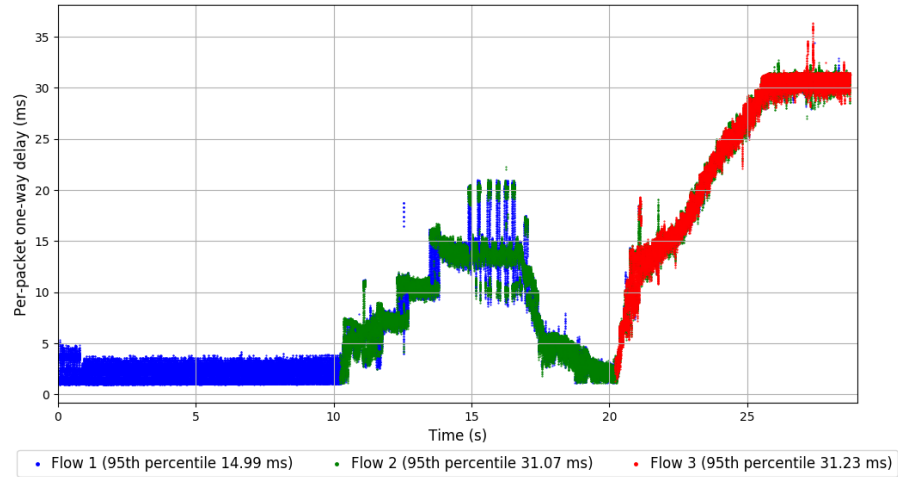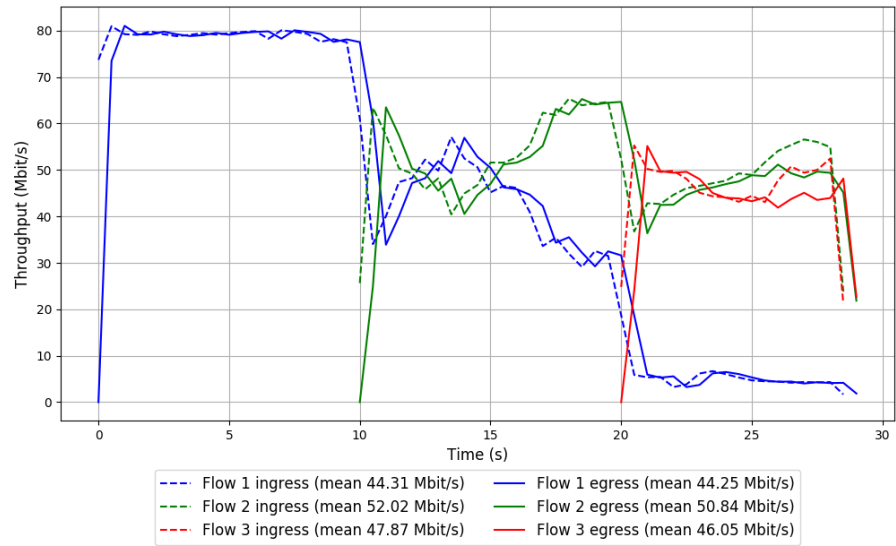
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-10-02 22:48:14
End at: 2019-10-02 22:48:44
Local clock offset: -5.573 ms
Remote clock offset: -0.207 ms

# Below is generated by plot.py at 2019-10-03 01:01:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.25 Mbit/s
95th percentile per-packet one-way delay: 5.829 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.31 Mbit/s
95th percentile per-packet one-way delay: 5.115 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.18 Mbit/s
95th percentile per-packet one-way delay: 6.919 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.99 Mbit/s
95th percentile per-packet one-way delay: 3.472 ms
Loss rate: 0.00%
```

Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-10-02 23:15:31
End at: 2019-10-02 23:16:01
Local clock offset: -5.4 ms
Remote clock offset: -0.351 ms


# Below is generated by plot.py at 2019-10-03 01:01:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.58 Mbit/s
95th percentile per-packet one-way delay: 14.288 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.01 Mbit/s
95th percentile per-packet one-way delay: 13.817 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.09 Mbit/s
95th percentile per-packet one-way delay: 15.685 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 52.88 Mbit/s
95th percentile per-packet one-way delay: 3.144 ms
Loss rate: 0.00%
```
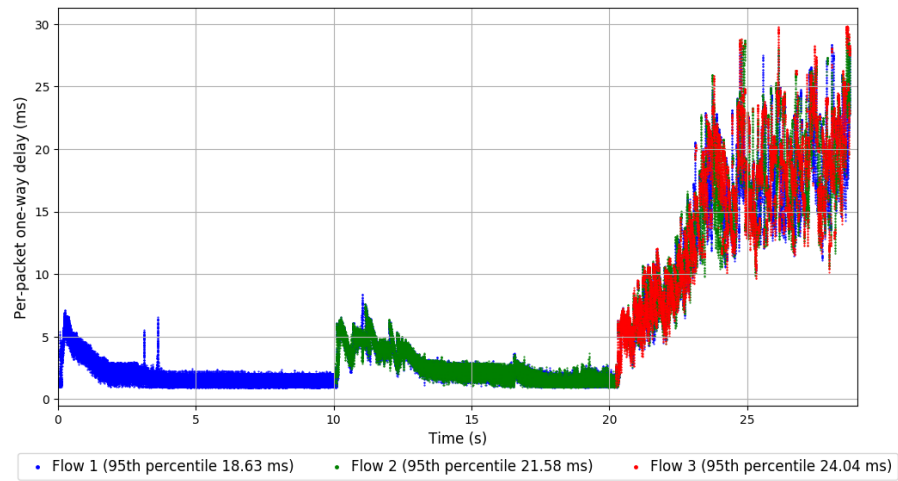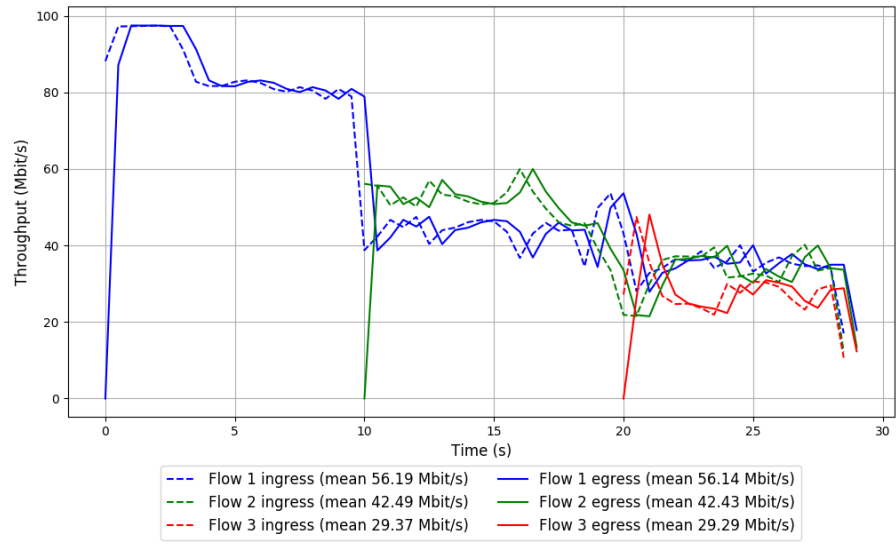
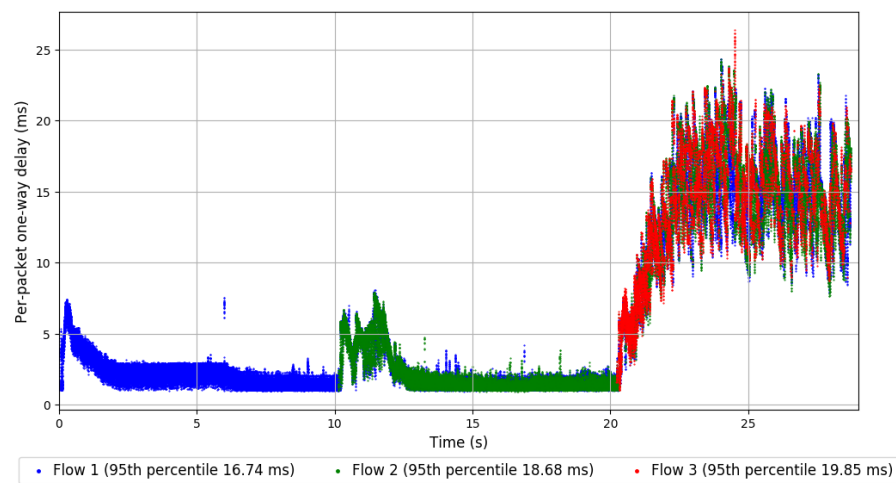Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-10-02 23:42:43
End at: 2019-10-02 23:43:13
Local clock offset: -6.604 ms
Remote clock offset: -0.204 ms


# Below is generated by plot.py at 2019-10-03 01:01:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.89 Mbit/s
95th percentile per-packet one-way delay: 3.696 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.96 Mbit/s
95th percentile per-packet one-way delay: 3.424 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.30 Mbit/s
95th percentile per-packet one-way delay: 3.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.83 Mbit/s
95th percentile per-packet one-way delay: 4.770 ms
Loss rate: 0.00%
```

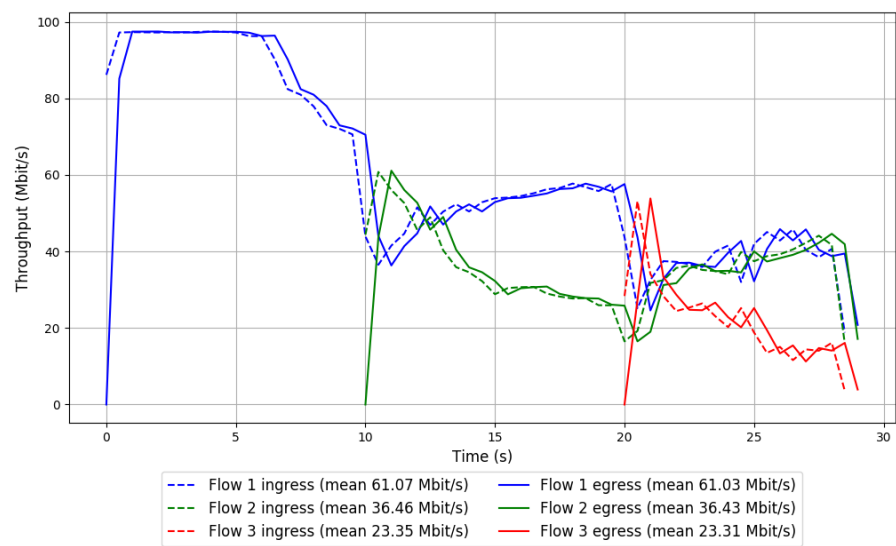Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-10-03 00:09:56
End at: 2019-10-03 00:10:26
Local clock offset: -7.094 ms
Remote clock offset: -0.121 ms


# Below is generated by plot.py at 2019-10-03 01:01:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 5.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.70 Mbit/s
95th percentile per-packet one-way delay: 5.462 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.65 Mbit/s
95th percentile per-packet one-way delay: 5.854 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.32 Mbit/s
95th percentile per-packet one-way delay: 3.075 ms
Loss rate: 0.00%
```
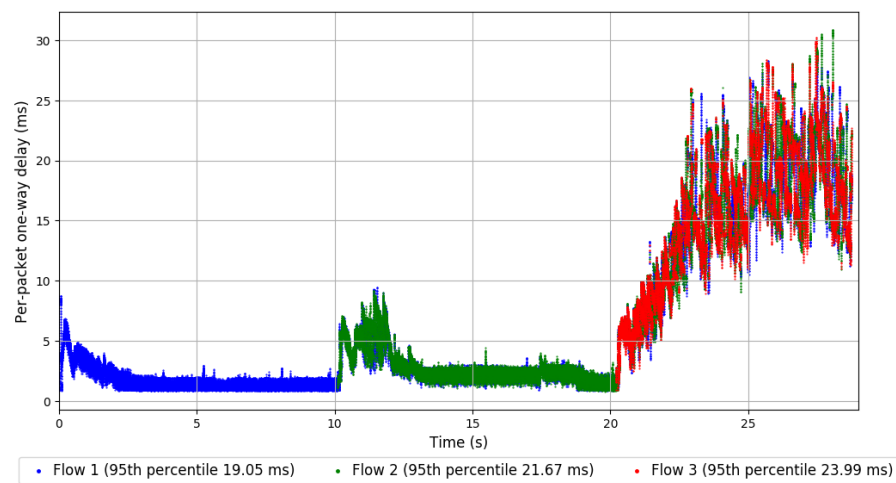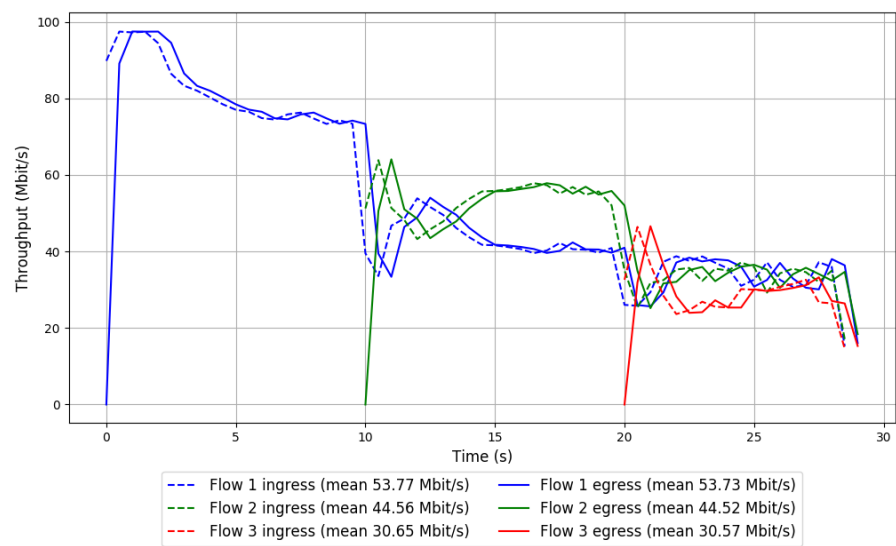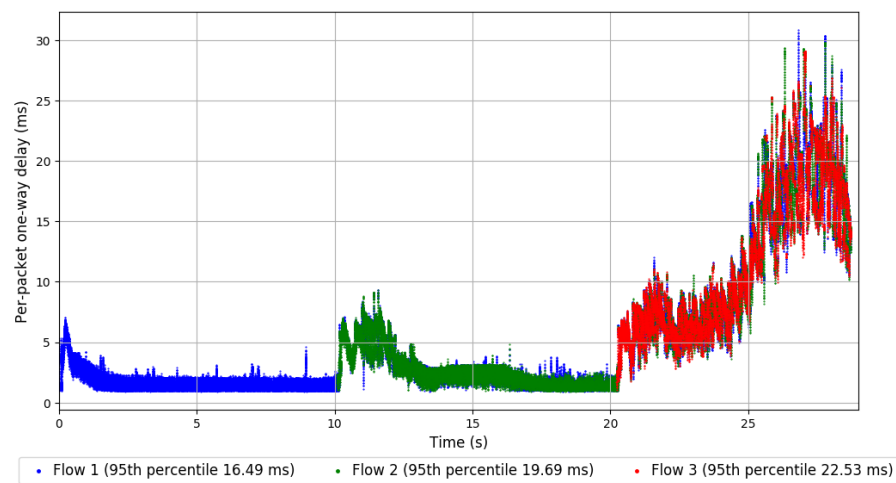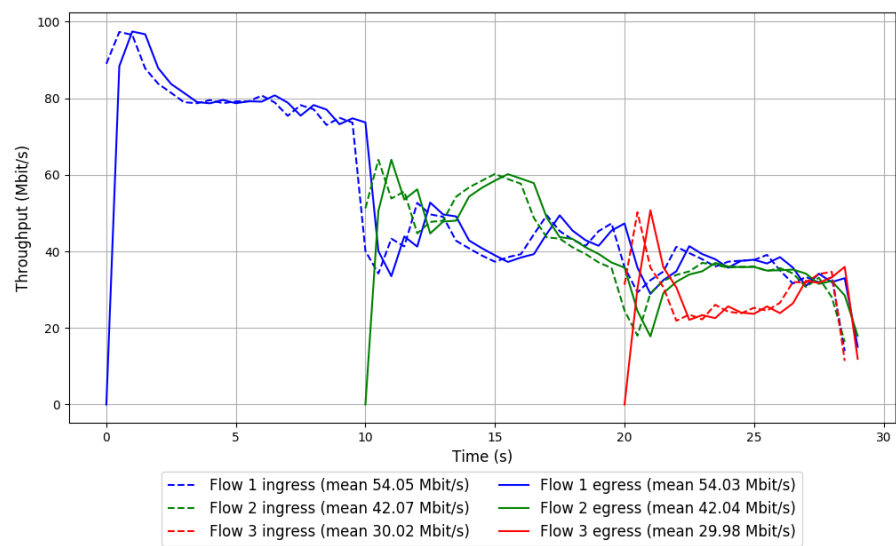
Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-10-03 00:37:11
End at: 2019-10-03 00:37:41
Local clock offset: 2.476 ms
Remote clock offset: -0.157 ms


# Below is generated by plot.py at 2019-10-03 01:01:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.66 Mbit/s
95th percentile per-packet one-way delay: 30.956 ms
Loss rate: 1.32%
-- Flow 1:
Average throughput: 44.25 Mbit/s
95th percentile per-packet one-way delay: 14.994 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 50.84 Mbit/s
95th percentile per-packet one-way delay: 31.065 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 31.234 ms
Loss rate: 3.47%
```

Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 44.31 Mbit/s) --- Flow 1 egress (mean 44.25 Mbit/s)
Flow 2 ingress (mean 52.02 Mbit/s) --- Flow 2 egress (mean 50.84 Mbit/s)
Flow 3 ingress (mean 47.87 Mbit/s) --- Flow 3 egress (mean 46.05 Mbit/s)

Flow 1 (95th percentile 14.99 ms)   Flow 2 (95th percentile 31.07 ms)   Flow 3 (95th percentile 31.23 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-10-02 22:43:43
End at: 2019-10-02 22:44:13
Local clock offset: -5.642 ms
Remote clock offset: -0.219 ms


# Below is generated by plot.py at 2019-10-03 01:01:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.37 Mbit/s
95th percentile per-packet one-way delay: 20.908 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.14 Mbit/s
95th percentile per-packet one-way delay: 18.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.43 Mbit/s
95th percentile per-packet one-way delay: 21.581 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.29 Mbit/s
95th percentile per-packet one-way delay: 24.035 ms
Loss rate: 0.00%
```

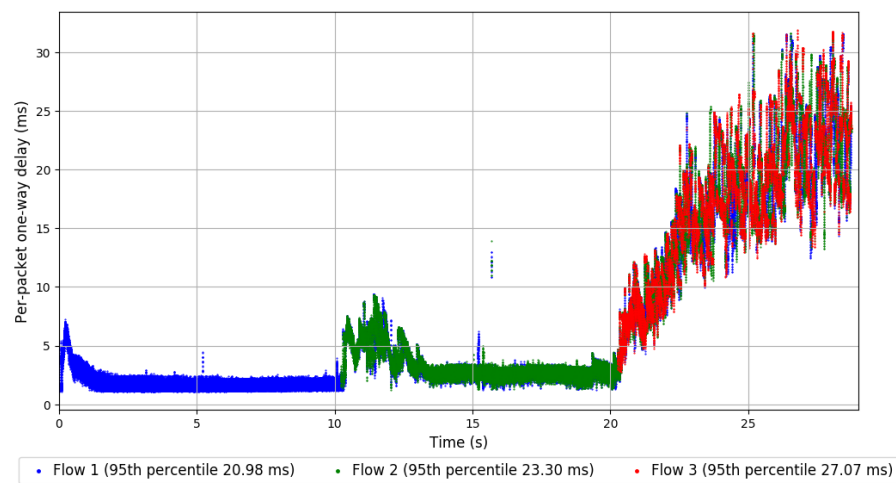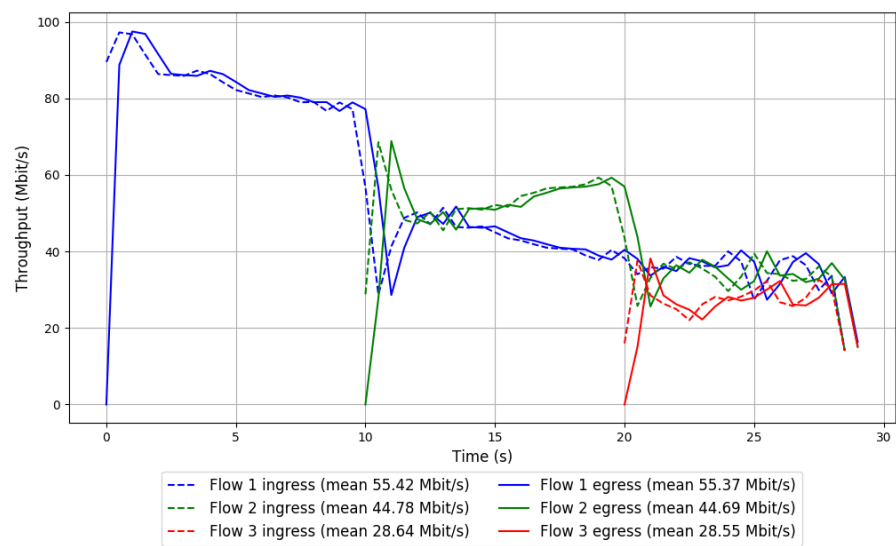Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 56.19 Mbit/s) --- Flow 1 egress (mean 56.14 Mbit/s)
Flow 2 ingress (mean 42.49 Mbit/s) --- Flow 2 egress (mean 42.43 Mbit/s)
Flow 3 ingress (mean 29.37 Mbit/s) --- Flow 3 egress (mean 29.29 Mbit/s)

Flow 1 (95th percentile 18.63 ms) Flow 2 (95th percentile 21.58 ms) Flow 3 (95th percentile 24.04 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-10-02 23:11:00
End at: 2019-10-02 23:11:30
Local clock offset: -5.512 ms
Remote clock offset: -0.221 ms


# Below is generated by plot.py at 2019-10-03 01:02:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.49 Mbit/s
95th percentile per-packet one-way delay: 18.043 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.03 Mbit/s
95th percentile per-packet one-way delay: 16.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.43 Mbit/s
95th percentile per-packet one-way delay: 18.678 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.31 Mbit/s
95th percentile per-packet one-way delay: 19.851 ms
Loss rate: 0.00%
```

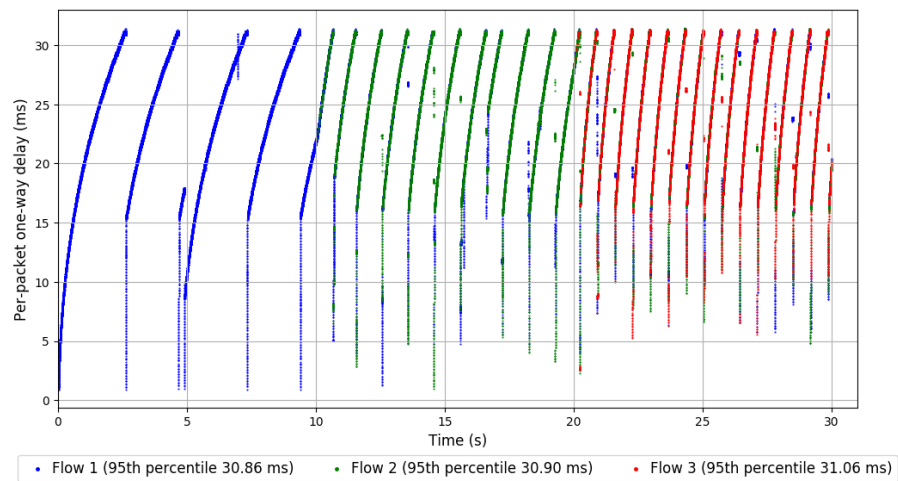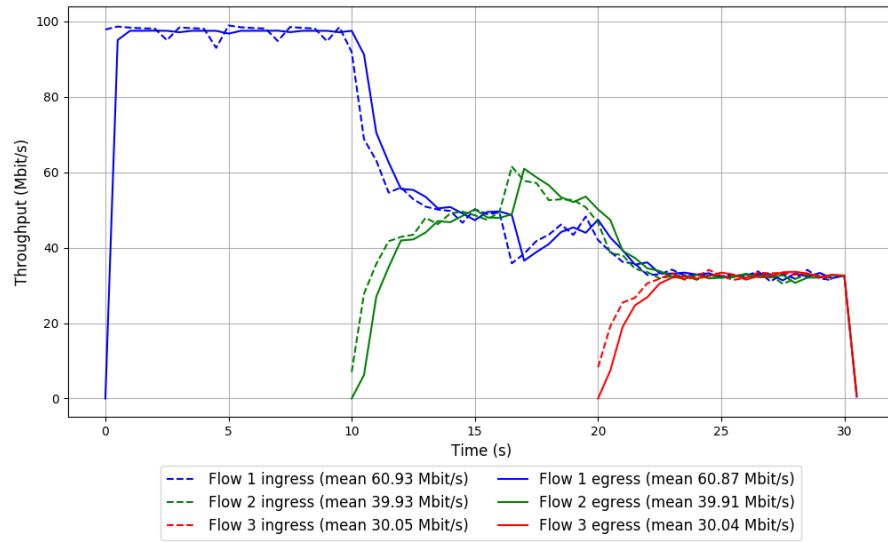Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-10-02 23:38:12
End at: 2019-10-02 23:38:42
Local clock offset: -6.448 ms
Remote clock offset: -0.249 ms


# Below is generated by plot.py at 2019-10-03 01:02:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.68 Mbit/s
95th percentile per-packet one-way delay: 21.220 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.73 Mbit/s
95th percentile per-packet one-way delay: 19.048 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.52 Mbit/s
95th percentile per-packet one-way delay: 21.669 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 23.991 ms
Loss rate: 0.00%
```
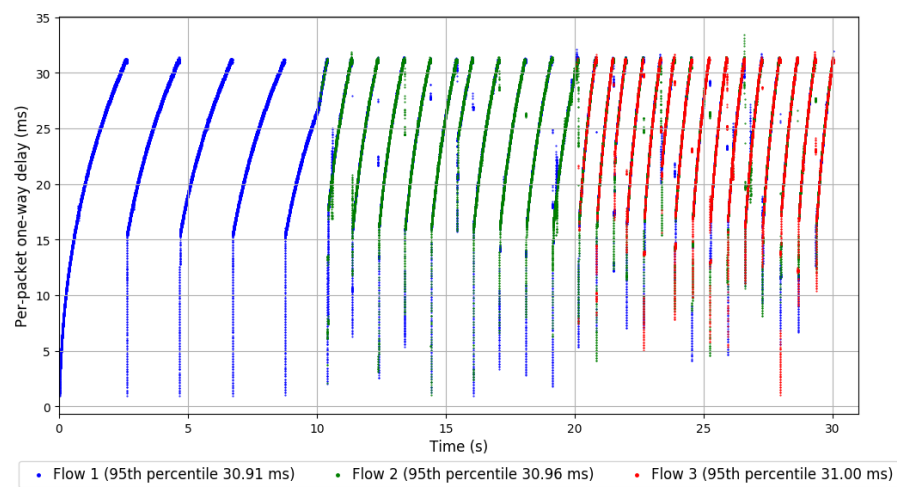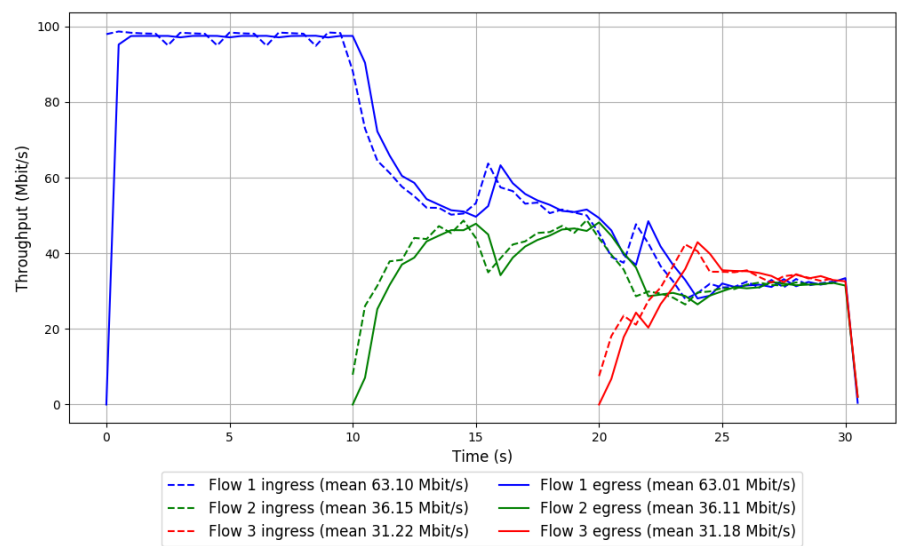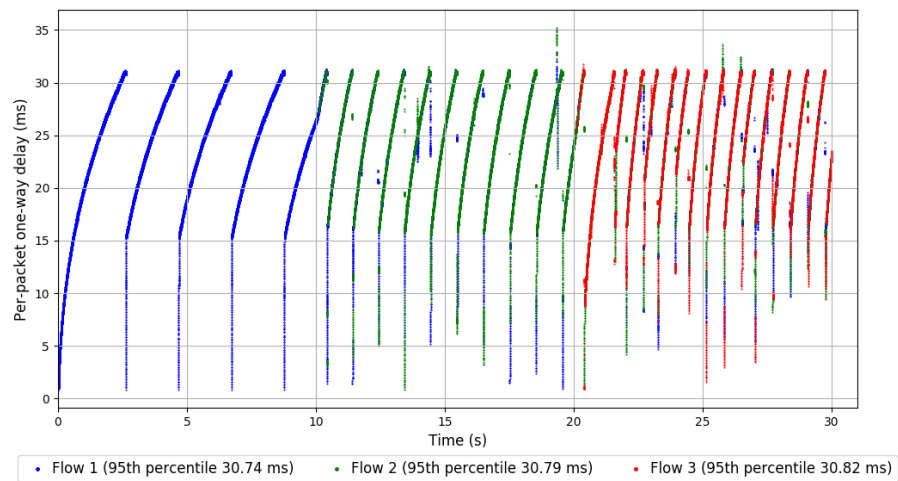
Run 3: Report of Indigo-MusesT — Data Link

- - - Flow 1 ingress (mean 53.77 Mbit/s)   —— Flow 1 egress (mean 53.73 Mbit/s)
- - - Flow 2 ingress (mean 44.56 Mbit/s)   —— Flow 2 egress (mean 44.52 Mbit/s)
- - - Flow 3 ingress (mean 30.65 Mbit/s)   —— Flow 3 egress (mean 30.57 Mbit/s)

- Flow 1 (95th percentile 19.05 ms)   • Flow 2 (95th percentile 21.67 ms)   • Flow 3 (95th percentile 23.99 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-10-03 00:05:25
End at: 2019-10-03 00:05:55
Local clock offset: -7.079 ms
Remote clock offset: -0.126 ms


# Below is generated by plot.py at 2019-10-03 01:02:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 19.192 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.03 Mbit/s
95th percentile per-packet one-way delay: 16.492 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.04 Mbit/s
95th percentile per-packet one-way delay: 19.692 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.98 Mbit/s
95th percentile per-packet one-way delay: 22.526 ms
Loss rate: 0.00%
```

Run 4: Report of Indigo-MusesT — Data Link
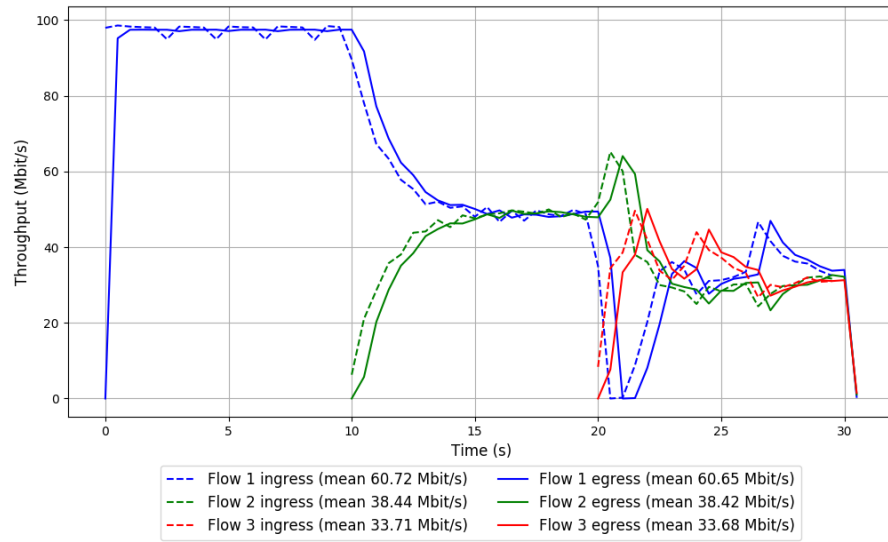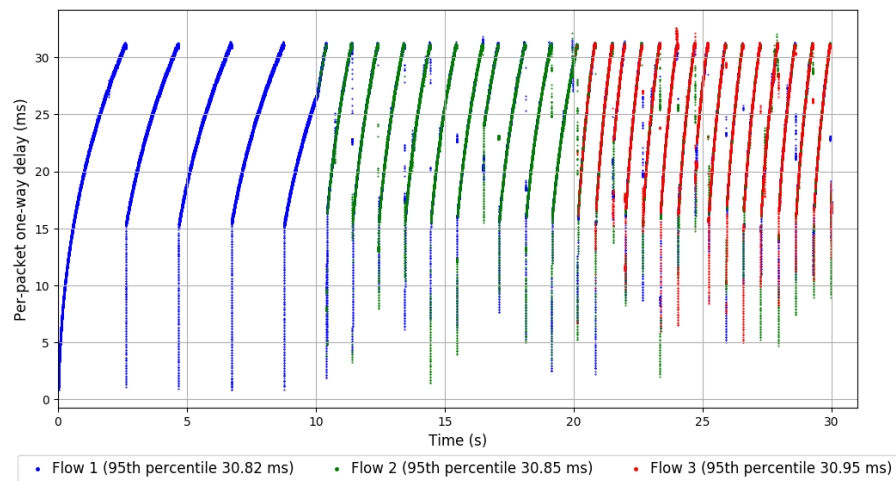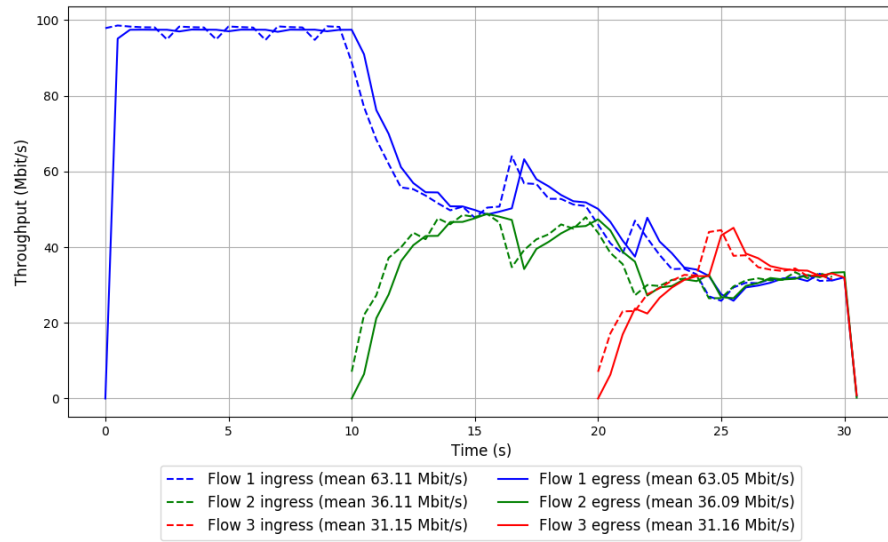

Flow 1 ingress (mean 54.05 Mbit/s) --- Flow 1 egress (mean 54.03 Mbit/s)
Flow 2 ingress (mean 42.07 Mbit/s) --- Flow 2 egress (mean 42.04 Mbit/s)
Flow 3 ingress (mean 30.02 Mbit/s) --- Flow 3 egress (mean 29.98 Mbit/s)

Flow 1 (95th percentile 16.49 ms) Flow 2 (95th percentile 19.69 ms) Flow 3 (95th percentile 22.53 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-10-03 00:32:40
End at: 2019-10-03 00:33:10
Local clock offset: 0.129 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-10-03 01:02:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.56 Mbit/s
95th percentile per-packet one-way delay: 23.357 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 55.37 Mbit/s
95th percentile per-packet one-way delay: 20.976 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 44.69 Mbit/s
95th percentile per-packet one-way delay: 23.299 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 28.55 Mbit/s
95th percentile per-packet one-way delay: 27.069 ms
Loss rate: 0.06%
```

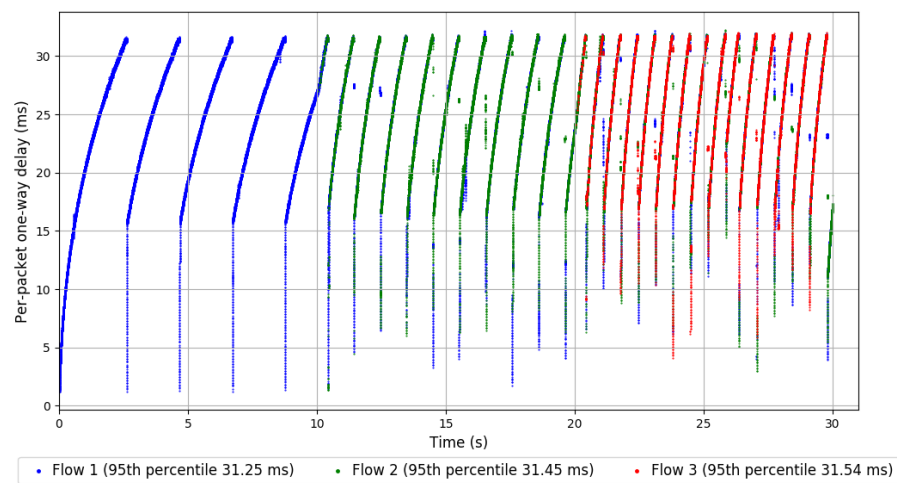# Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-10-02 22:41:27
End at: 2019-10-02 22:41:57
Local clock offset: -5.593 ms
Remote clock offset: -0.229 ms


# Below is generated by plot.py at 2019-10-03 01:02:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 30.886 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 60.87 Mbit/s
95th percentile per-packet one-way delay: 30.863 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 39.91 Mbit/s
95th percentile per-packet one-way delay: 30.901 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 30.04 Mbit/s
95th percentile per-packet one-way delay: 31.061 ms
Loss rate: 0.11%
```
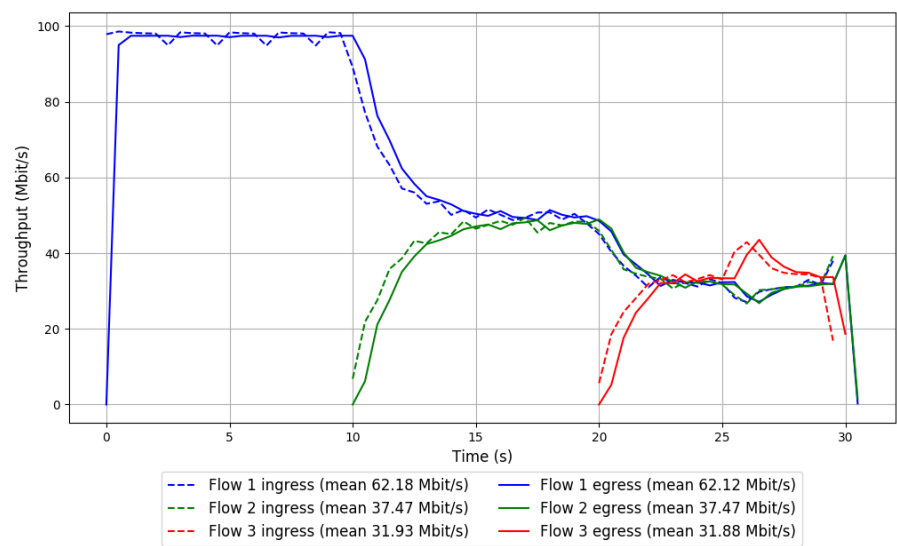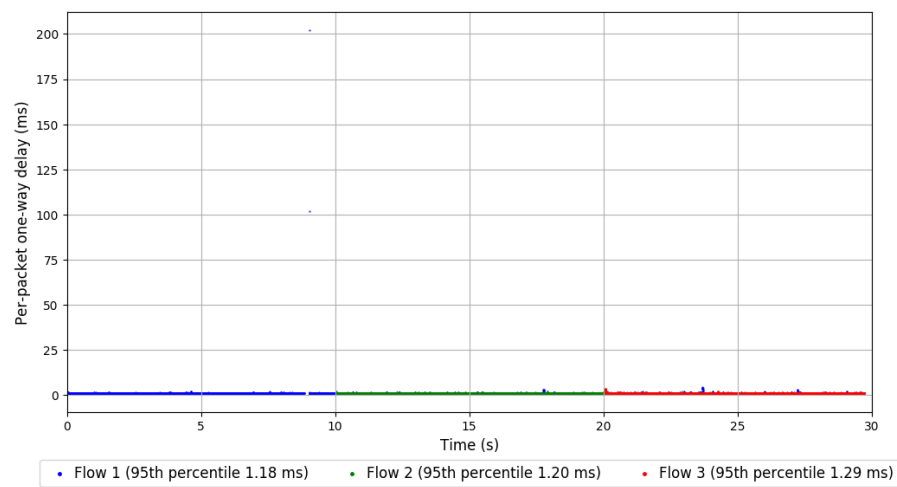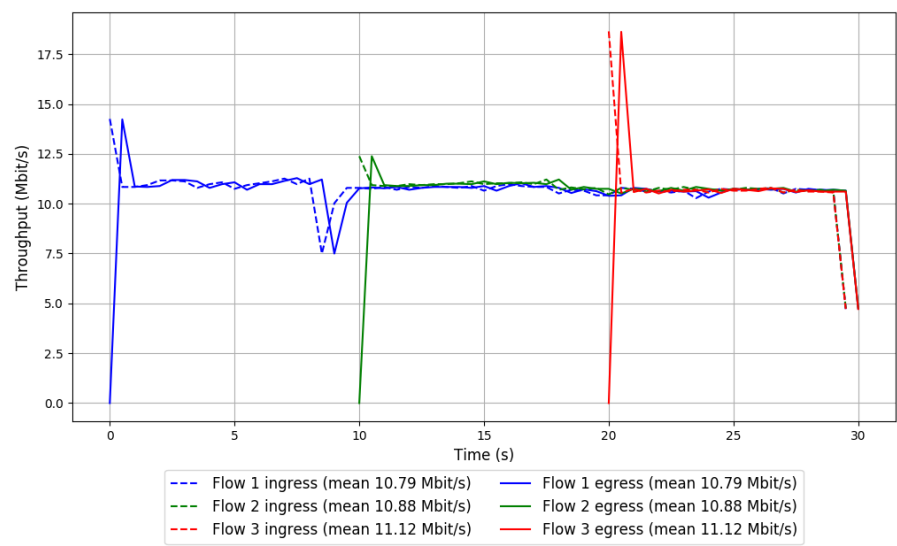
Run 1: Report of LEDBAT — Data Link

Flow 1 ingress (mean 60.93 Mbit/s) ---- Flow 1 egress (mean 60.87 Mbit/s)
Flow 2 ingress (mean 39.93 Mbit/s) ---- Flow 2 egress (mean 39.91 Mbit/s)
Flow 3 ingress (mean 30.05 Mbit/s) ---- Flow 3 egress (mean 30.04 Mbit/s)

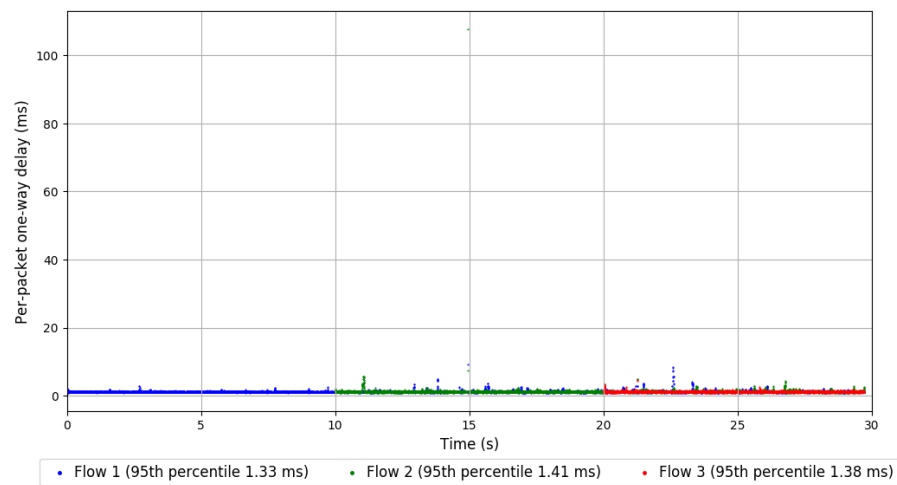Flow 1 (95th percentile 30.86 ms)   Flow 2 (95th percentile 30.90 ms)   Flow 3 (95th percentile 31.06 ms)

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```
Run 2: Statistics of LEDBAT

Start at: 2019-10-02 23:08:44
End at: 2019-10-02 23:09:14
Local clock offset: -5.44 ms
Remote clock offset: -0.19 ms

# Below is generated by plot.py at 2019-10-03 01:03:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 30.935 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.01 Mbit/s
95th percentile per-packet one-way delay: 30.915 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 36.11 Mbit/s
95th percentile per-packet one-way delay: 30.957 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.18 Mbit/s
95th percentile per-packet one-way delay: 30.995 ms
Loss rate: 0.10%
```
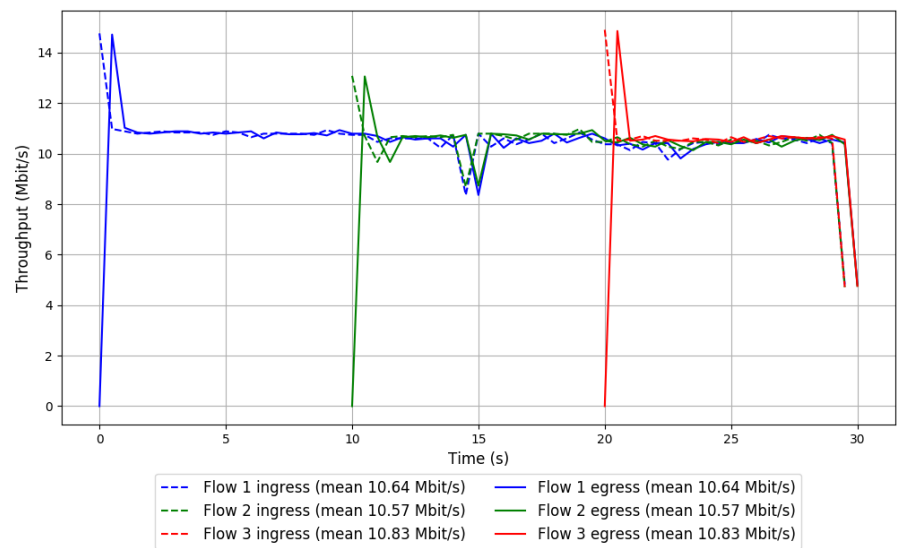
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 63.10 Mbit/s)   Flow 1 egress (mean 63.01 Mbit/s)
Flow 2 ingress (mean 36.15 Mbit/s)   Flow 2 egress (mean 36.11 Mbit/s)
Flow 3 ingress (mean 31.22 Mbit/s)   Flow 3 egress (mean 31.18 Mbit/s)

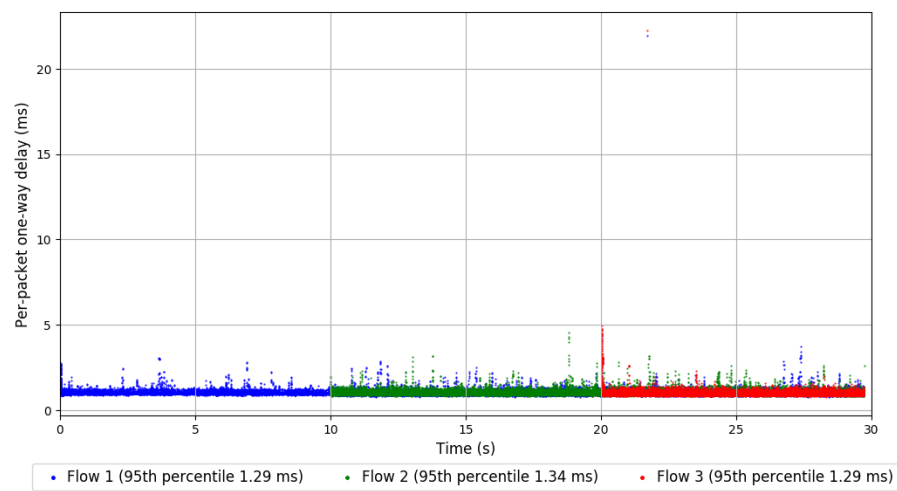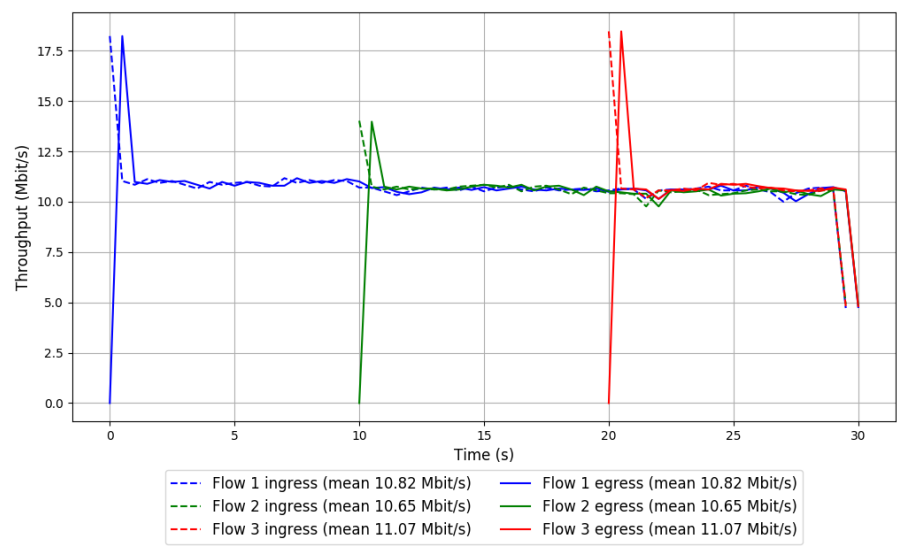Flow 1 (95th percentile 30.91 ms)   Flow 2 (95th percentile 30.96 ms)   Flow 3 (95th percentile 31.00 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-10-02 23:35:56
End at: 2019-10-02 23:36:26
Local clock offset: -6.331 ms
Remote clock offset: -0.314 ms


# Below is generated by plot.py at 2019-10-03 01:03:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 30.766 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 60.65 Mbit/s
95th percentile per-packet one-way delay: 30.739 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 38.42 Mbit/s
95th percentile per-packet one-way delay: 30.787 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 33.68 Mbit/s
95th percentile per-packet one-way delay: 30.822 ms
Loss rate: 0.10%
```

Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 60.72 Mbit/s)   Flow 1 egress (mean 60.65 Mbit/s)
Flow 2 ingress (mean 38.44 Mbit/s)   Flow 2 egress (mean 38.42 Mbit/s)
Flow 3 ingress (mean 33.71 Mbit/s)   Flow 3 egress (mean 33.68 Mbit/s)

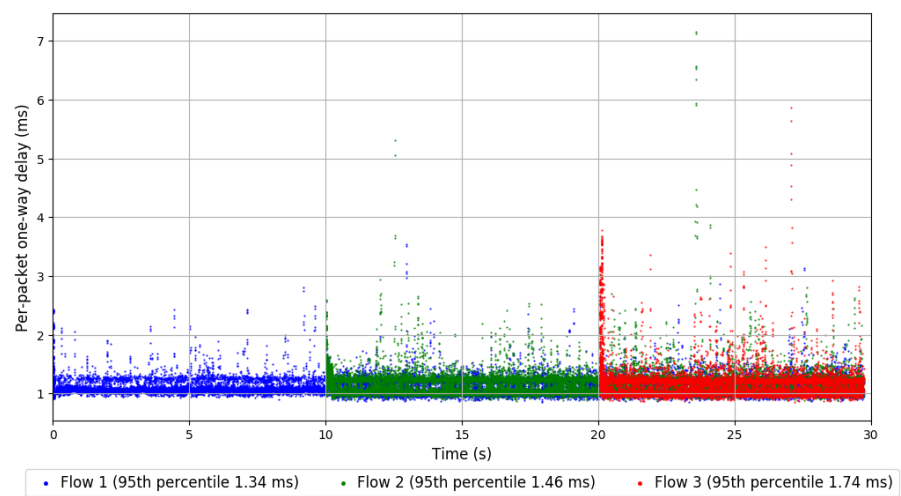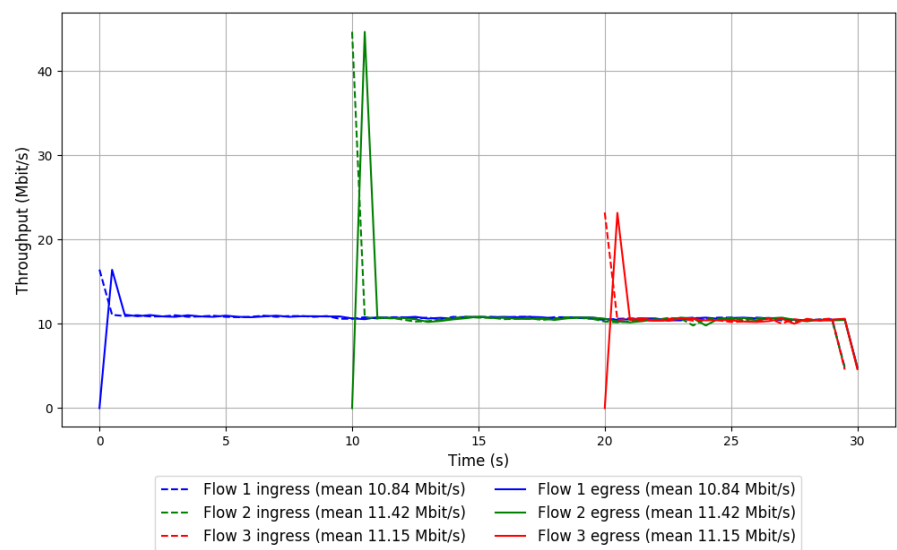Flow 1 (95th percentile 30.74 ms)   Flow 2 (95th percentile 30.79 ms)   Flow 3 (95th percentile 30.82 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-10-03 00:03:09
End at: 2019-10-03 00:03:39
Local clock offset: -7.0 ms
Remote clock offset: -0.226 ms


# Below is generated by plot.py at 2019-10-03 01:03:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 30.837 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 63.05 Mbit/s
95th percentile per-packet one-way delay: 30.818 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 30.854 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.16 Mbit/s
95th percentile per-packet one-way delay: 30.947 ms
Loss rate: 0.10%
```

Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 63.11 Mbit/s) --- Flow 1 egress (mean 63.05 Mbit/s)
Flow 2 ingress (mean 36.11 Mbit/s) --- Flow 2 egress (mean 36.09 Mbit/s)
Flow 3 ingress (mean 31.15 Mbit/s) --- Flow 3 egress (mean 31.16 Mbit/s)

Flow 1 (95th percentile 30.82 ms)   Flow 2 (95th percentile 30.85 ms)   Flow 3 (95th percentile 30.95 ms)

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```
Run 5: Statistics of LEDBAT

Start at: 2019-10-03 00:30:24
End at: 2019-10-03 00:30:54
Local clock offset: -1.531 ms
Remote clock offset: -0.059 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.40 Mbit/s
95th percentile per-packet one-way delay: 31.349 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.12 Mbit/s
95th percentile per-packet one-way delay: 31.250 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.47 Mbit/s
95th percentile per-packet one-way delay: 31.453 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 31.88 Mbit/s
95th percentile per-packet one-way delay: 31.539 ms
Loss rate: 0.09%
```

Run 5: Report of LEDBAT — Data Link

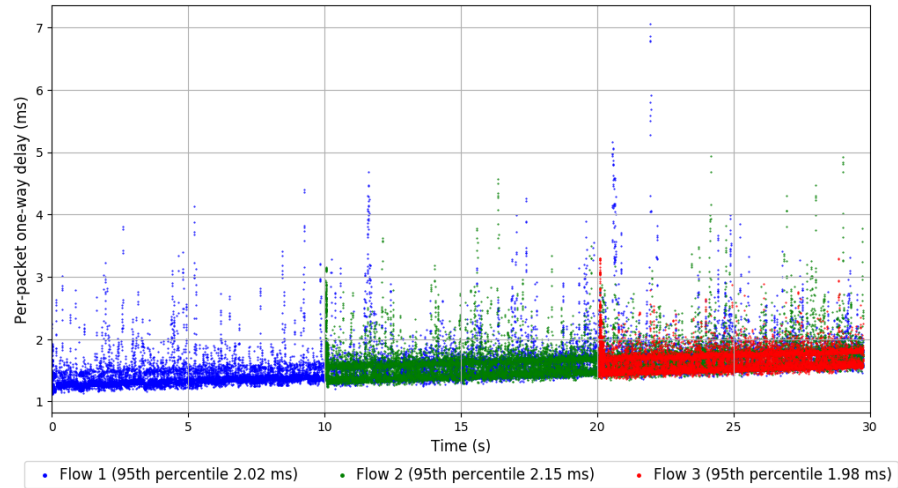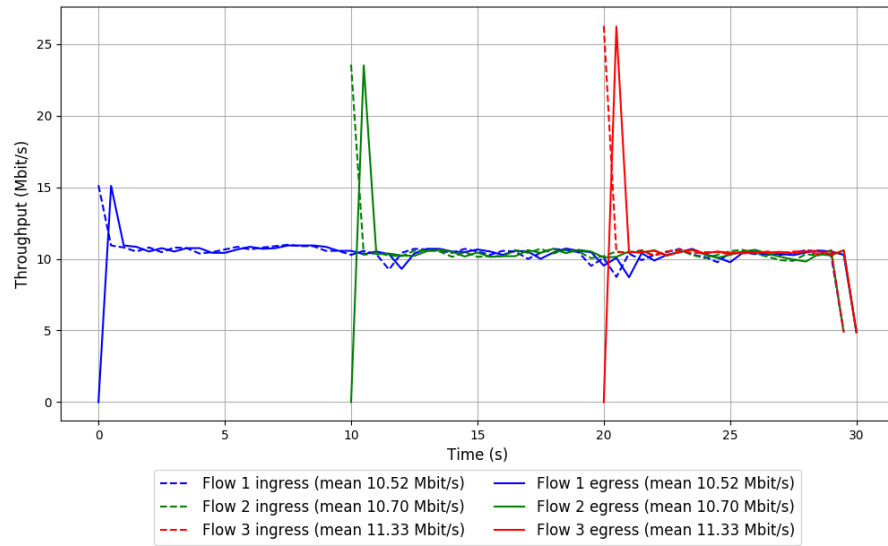Flow 1 ingress (mean 62.18 Mbit/s) --- Flow 1 egress (mean 62.12 Mbit/s)
Flow 2 ingress (mean 37.47 Mbit/s) --- Flow 2 egress (mean 37.47 Mbit/s)
Flow 3 ingress (mean 31.93 Mbit/s) --- Flow 3 egress (mean 31.88 Mbit/s)

Flow 1 (95th percentile 31.25 ms)　　Flow 2 (95th percentile 31.45 ms)　　Flow 3 (95th percentile 31.54 ms)

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 22:40:21
End at: 2019-10-02 22:40:51
Local clock offset: -5.581 ms
Remote clock offset: -0.305 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.61 Mbit/s
95th percentile per-packet one-way delay: 1.203 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.79 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 1.200 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.12 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
```

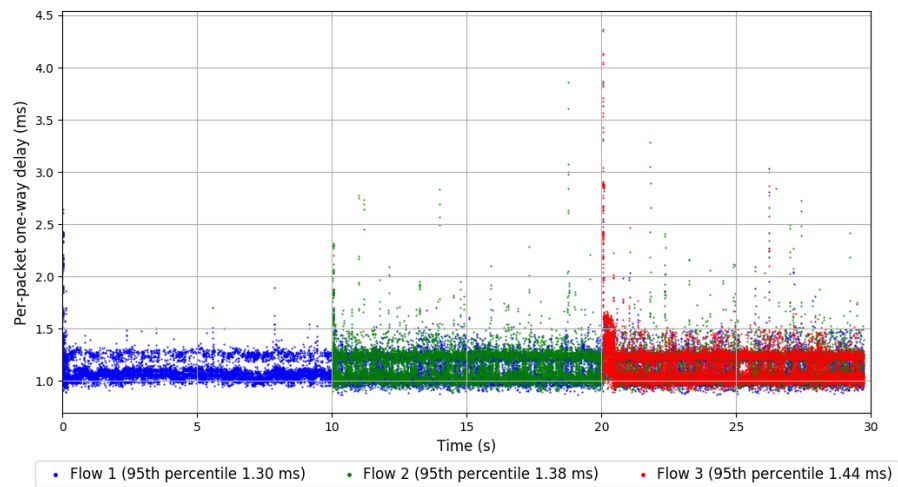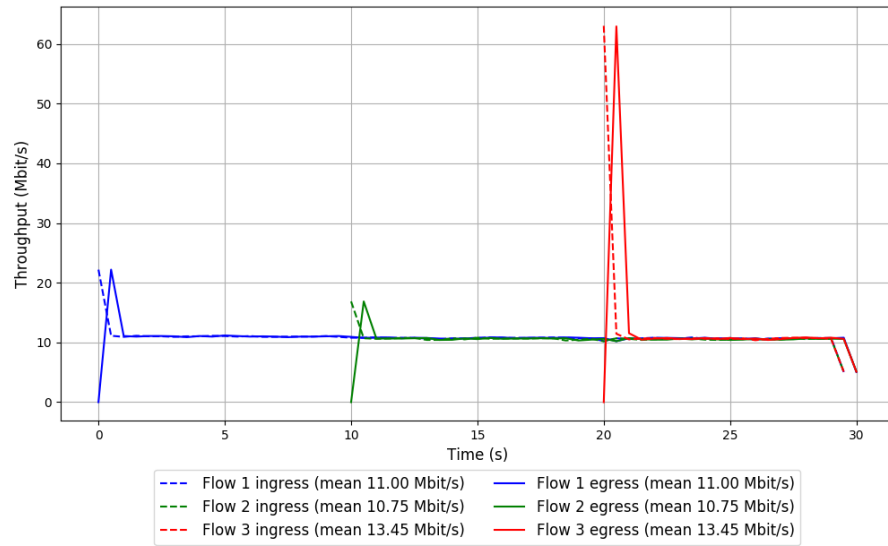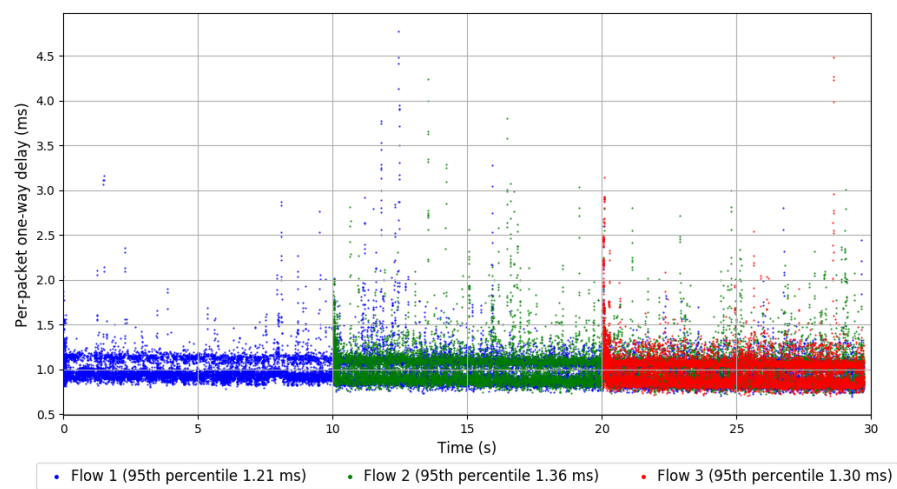Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 23:07:37
End at: 2019-10-02 23:08:07
Local clock offset: -5.45 ms
Remote clock offset: -0.199 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.19 Mbit/s
95th percentile per-packet one-way delay: 1.364 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.64 Mbit/s
95th percentile per-packet one-way delay: 1.328 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 1.406 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.83 Mbit/s
95th percentile per-packet one-way delay: 1.382 ms
Loss rate: 0.00%
```
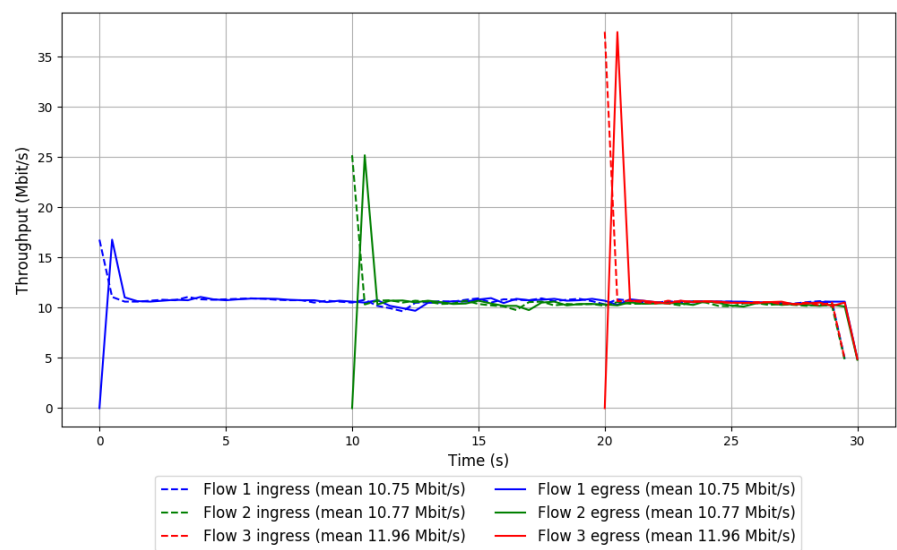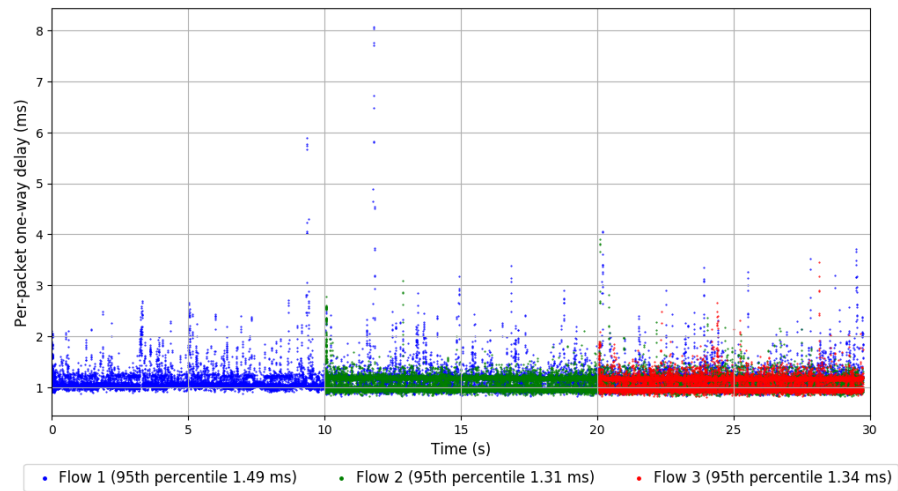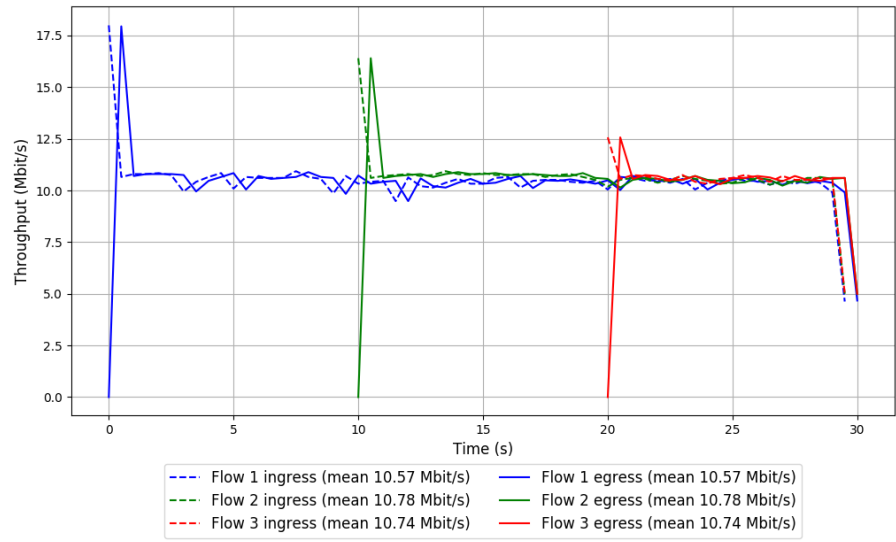
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-10-02 23:34:50
End at: 2019-10-02 23:35:20
Local clock offset: -6.292 ms
Remote clock offset: -0.253 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.49 Mbit/s
95th percentile per-packet one-way delay: 1.307 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.82 Mbit/s
95th percentile per-packet one-way delay: 1.289 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.07 Mbit/s
95th percentile per-packet one-way delay: 1.293 ms
Loss rate: 0.00%
```

Run 3: Report of Muses_DecisionTree — Data Link

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```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 00:02:03
End at: 2019-10-03 00:02:33
Local clock offset: -6.994 ms
Remote clock offset: -0.157 ms

# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.04 Mbit/s
95th percentile per-packet one-way delay: 1.430 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 1.342 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 1.458 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.15 Mbit/s
95th percentile per-packet one-way delay: 1.737 ms
Loss rate: 0.00%
```
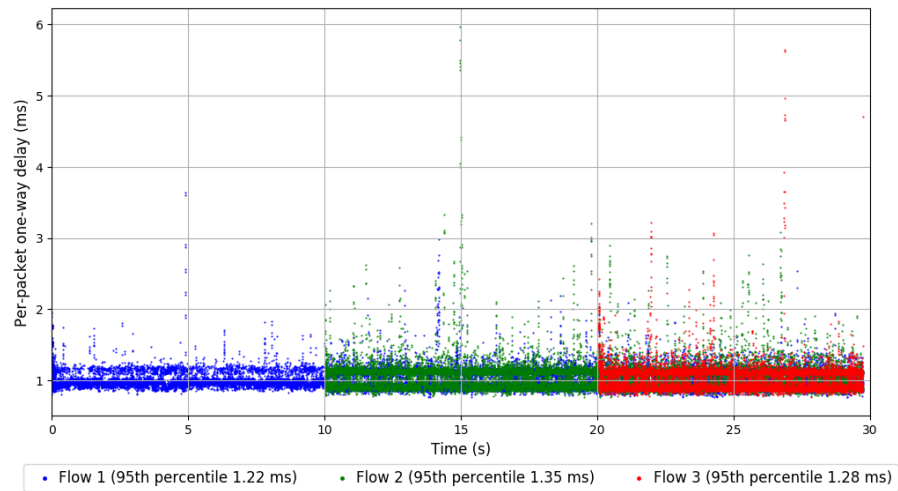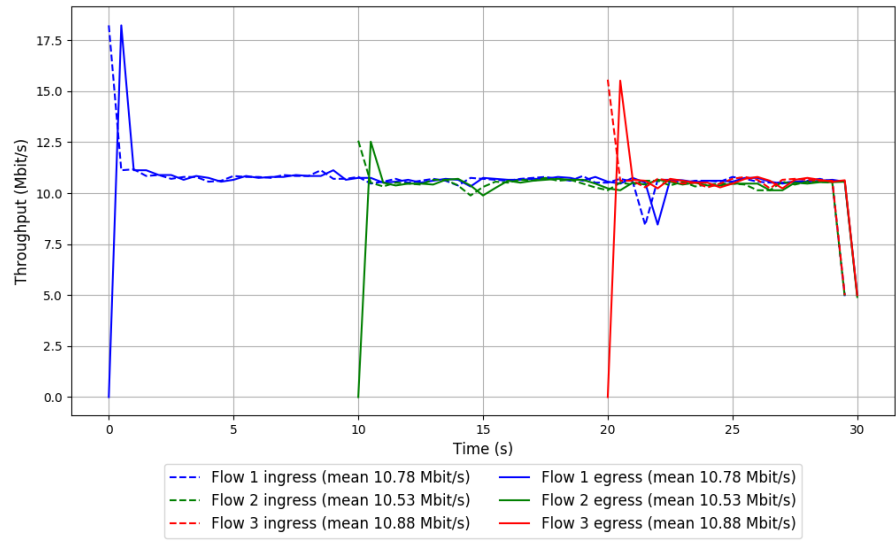
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 00:29:18
End at: 2019-10-03 00:29:48
Local clock offset: -2.37 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 2.048 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.52 Mbit/s
95th percentile per-packet one-way delay: 2.016 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.70 Mbit/s
95th percentile per-packet one-way delay: 2.154 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.33 Mbit/s
95th percentile per-packet one-way delay: 1.978 ms
Loss rate: 0.00%
```
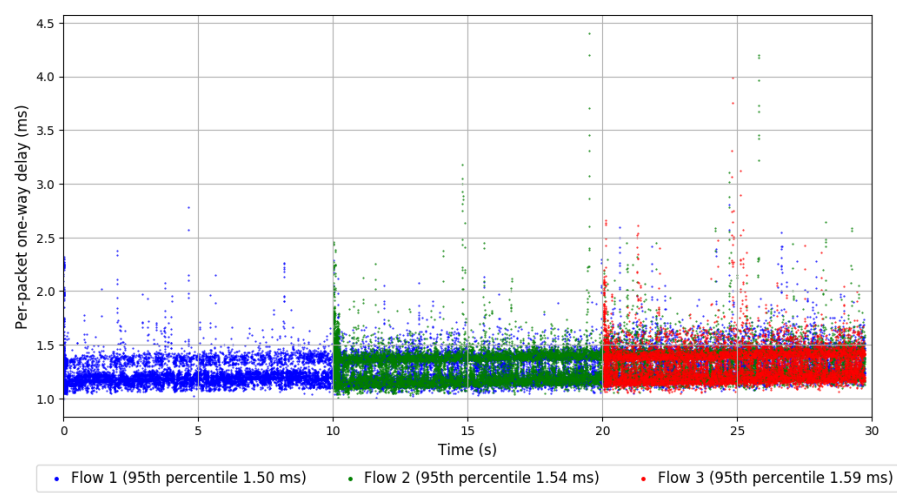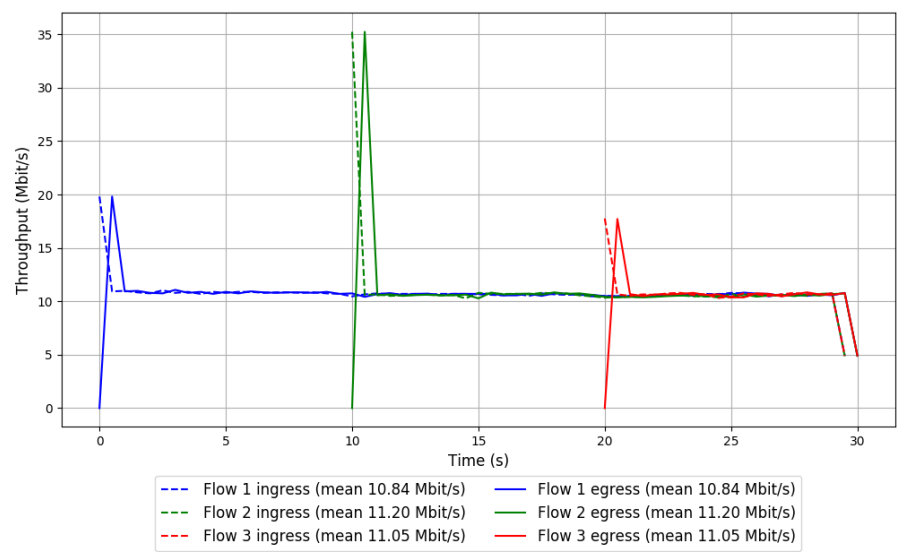
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 22:58:36
End at: 2019-10-02 22:59:06
Local clock offset: -5.537 ms
Remote clock offset: -0.18 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.50 Mbit/s
95th percentile per-packet one-way delay: 1.368 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 11.00 Mbit/s
95th percentile per-packet one-way delay: 1.297 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 1.383 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 1.440 ms
Loss rate: 0.00%
```

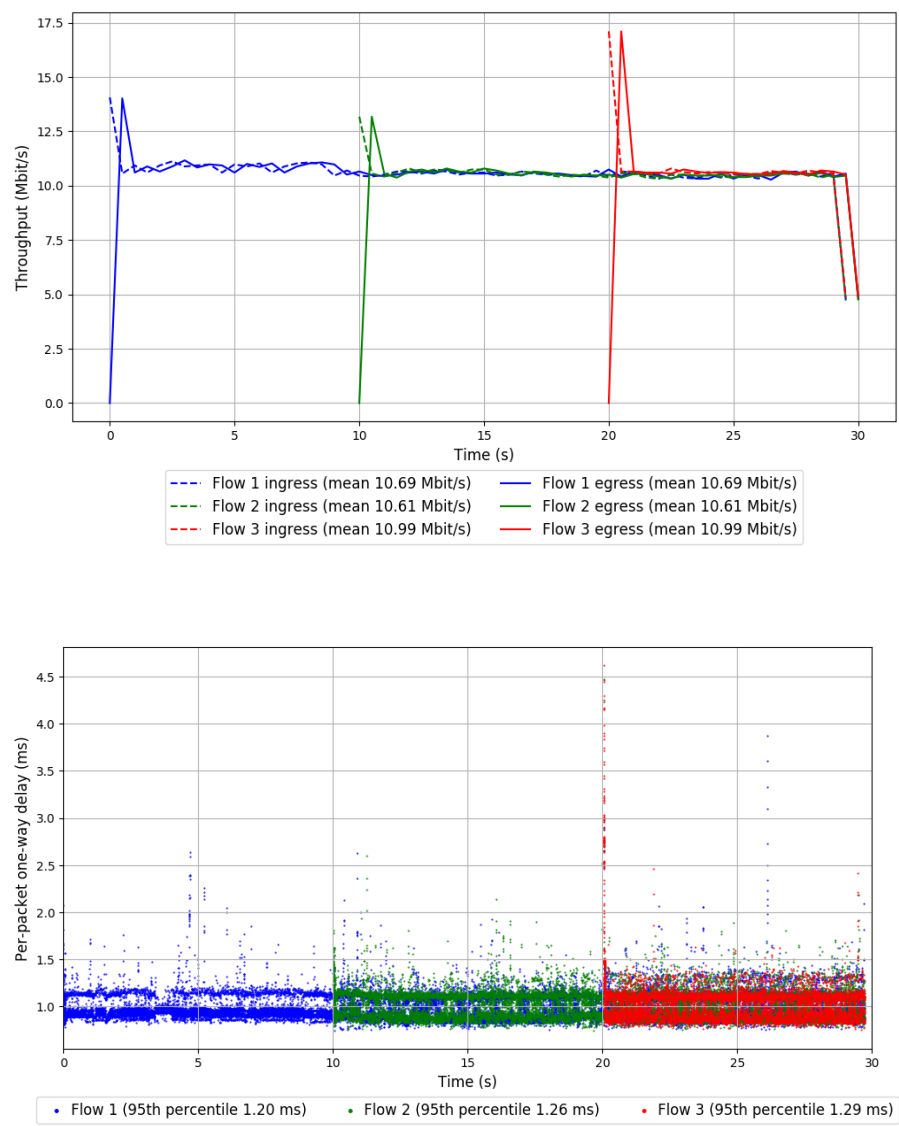Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 23:25:49
End at: 2019-10-02 23:26:19
Local clock offset: -5.55 ms
Remote clock offset: -0.336 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.79 Mbit/s
95th percentile per-packet one-way delay: 1.276 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.75 Mbit/s
95th percentile per-packet one-way delay: 1.205 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.77 Mbit/s
95th percentile per-packet one-way delay: 1.363 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.96 Mbit/s
95th percentile per-packet one-way delay: 1.298 ms
Loss rate: 0.00%
```
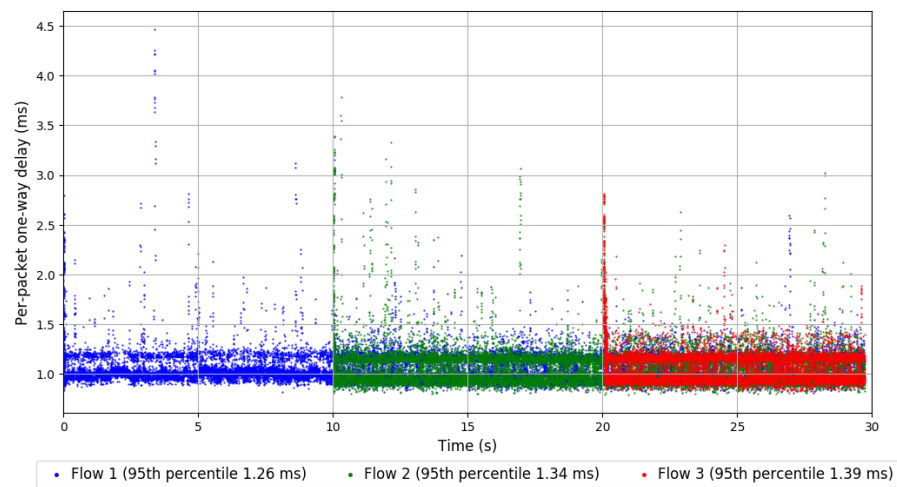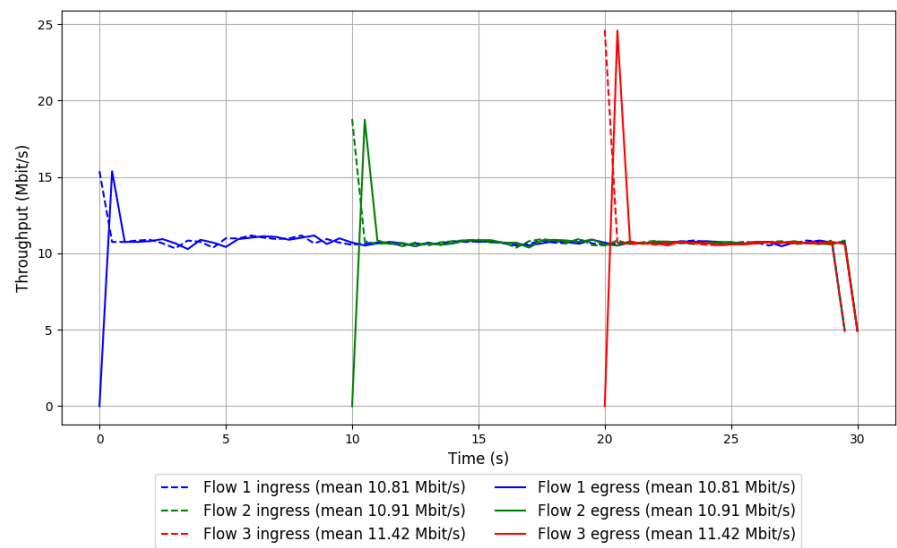
Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-02 23:53:02
End at: 2019-10-02 23:53:32
Local clock offset: -6.891 ms
Remote clock offset: -0.274 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.20 Mbit/s
95th percentile per-packet one-way delay: 1.394 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.57 Mbit/s
95th percentile per-packet one-way delay: 1.494 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 1.313 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 1.337 ms
Loss rate: 0.00%
```

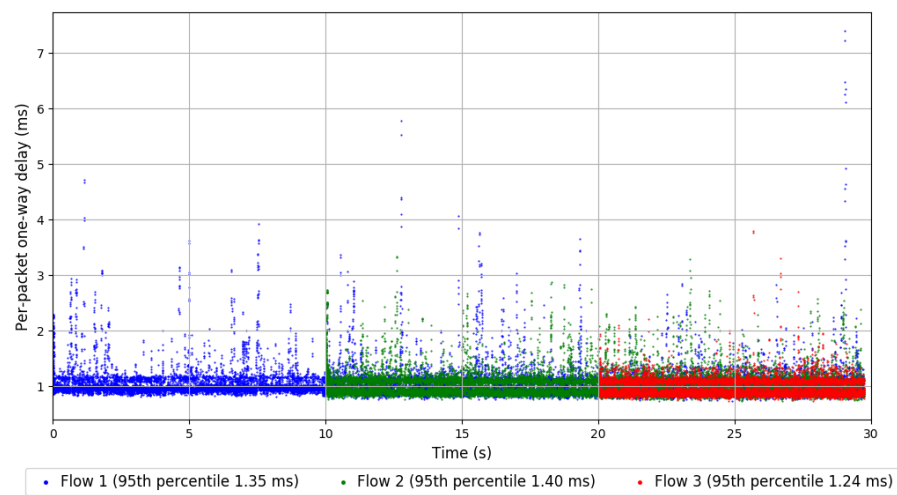Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 00:20:18
End at: 2019-10-03 00:20:48
Local clock offset: -7.226 ms
Remote clock offset: -0.117 ms


# Below is generated by plot.py at 2019-10-03 01:03:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 1.269 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.78 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.53 Mbit/s
95th percentile per-packet one-way delay: 1.349 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 1.280 ms
Loss rate: 0.01%
```

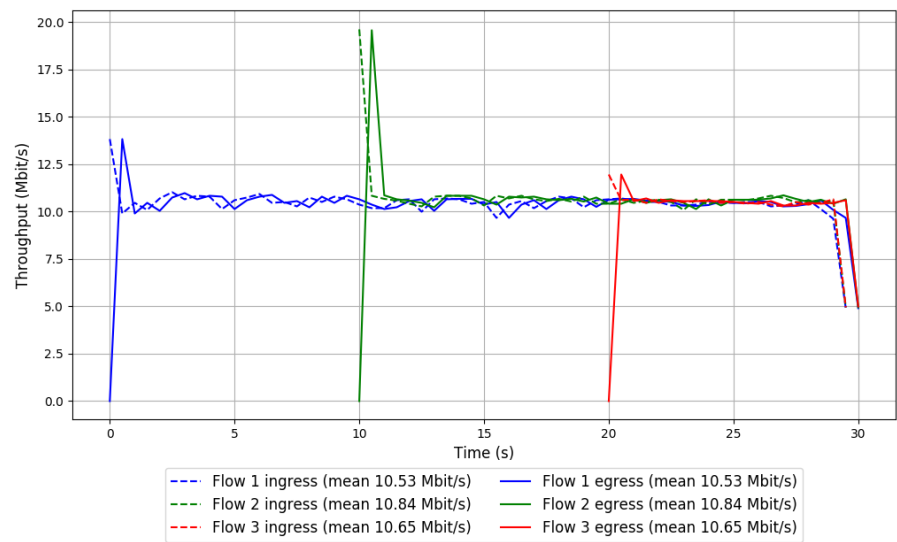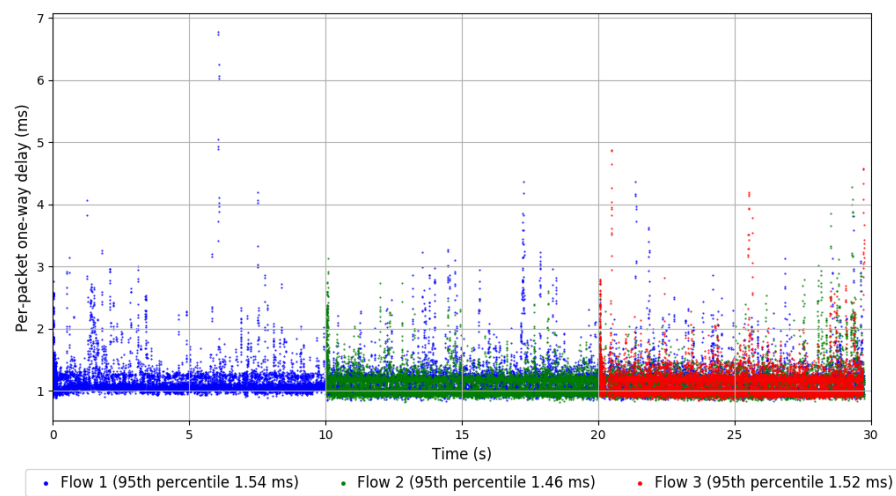Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 10.78 Mbit/s)   Flow 1 egress (mean 10.78 Mbit/s)
Flow 2 ingress (mean 10.53 Mbit/s)   Flow 2 egress (mean 10.53 Mbit/s)
Flow 3 ingress (mean 10.88 Mbit/s)   Flow 3 egress (mean 10.88 Mbit/s)

Flow 1 (95th percentile 1.22 ms)   Flow 2 (95th percentile 1.35 ms)   Flow 3 (95th percentile 1.28 ms)

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-10-03 00:47:39
End at: 2019-10-03 00:48:09
Local clock offset: 5.916 ms
Remote clock offset: -0.023 ms

Below is generated by plot.py at 2019-10-03 01:03:24
Datalink statistics
-- Total of 3 flows:
Average throughput: 21.87 Mbit/s
95th percentile per-packet one-way delay: 1.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 1.497 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 1.542 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.05 Mbit/s
95th percentile per-packet one-way delay: 1.586 ms
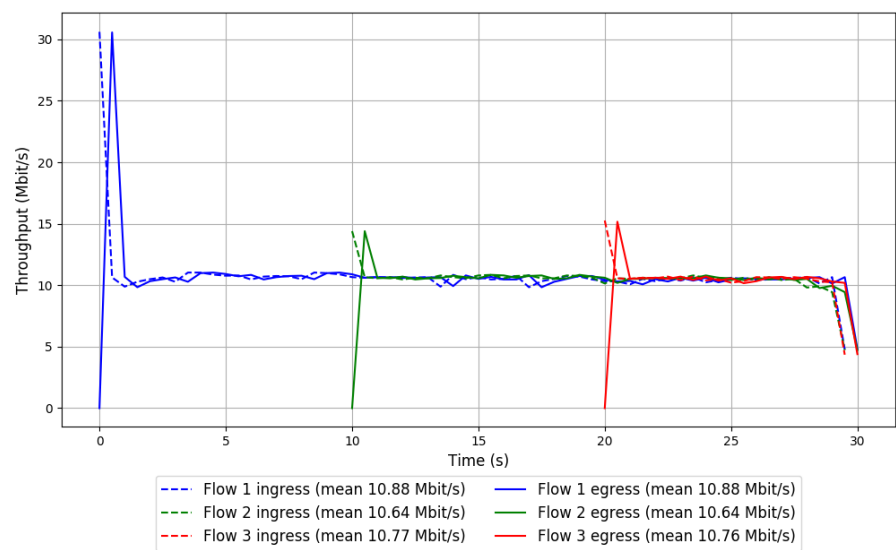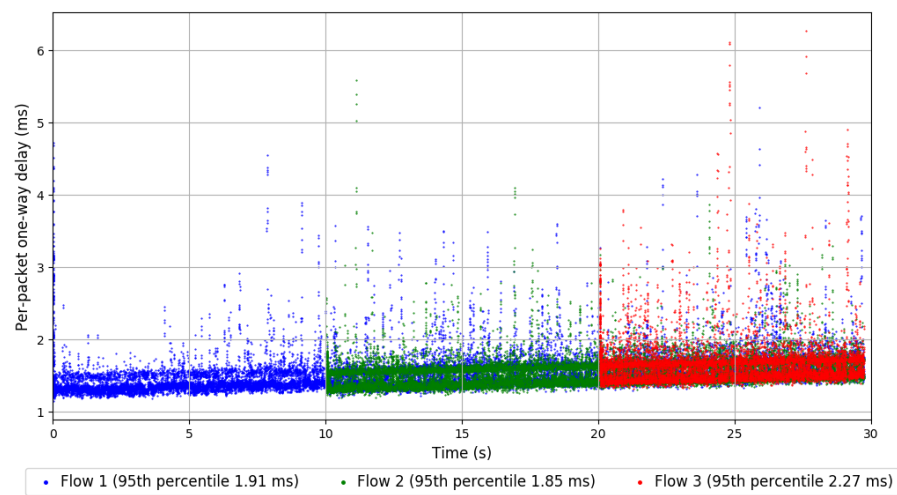Loss rate: 0.00%

Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 22:44:52
End at: 2019-10-02 22:45:22
Local clock offset: -5.589 ms
Remote clock offset: -0.306 ms


# Below is generated by plot.py at 2019-10-03 01:03:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 1.240 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.69 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.61 Mbit/s
95th percentile per-packet one-way delay: 1.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 1.292 ms
Loss rate: 0.00%
```

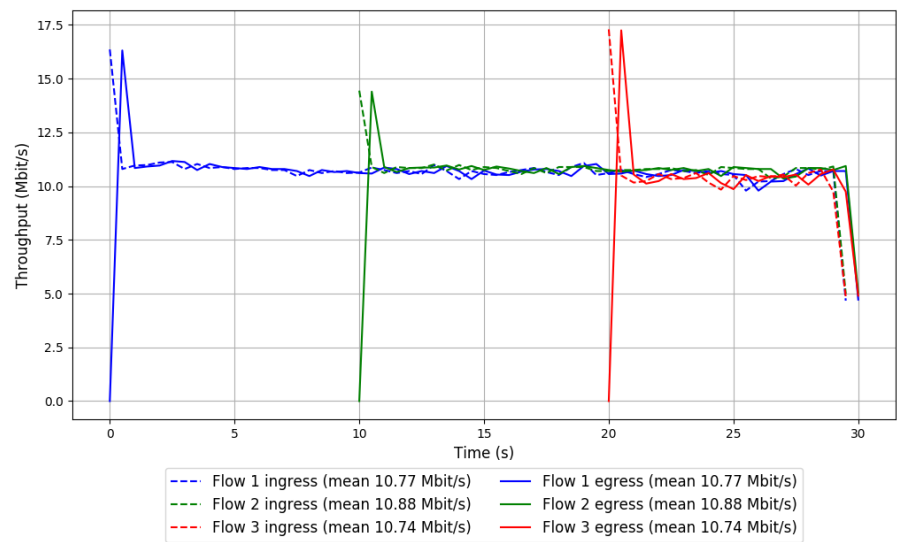Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 23:12:09
End at: 2019-10-02 23:12:39
Local clock offset: -5.412 ms
Remote clock offset: -0.268 ms


# Below is generated by plot.py at 2019-10-03 01:03:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.77 Mbit/s
95th percentile per-packet one-way delay: 1.311 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.81 Mbit/s
95th percentile per-packet one-way delay: 1.260 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.91 Mbit/s
95th percentile per-packet one-way delay: 1.340 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.42 Mbit/s
95th percentile per-packet one-way delay: 1.391 ms
Loss rate: 0.00%
```

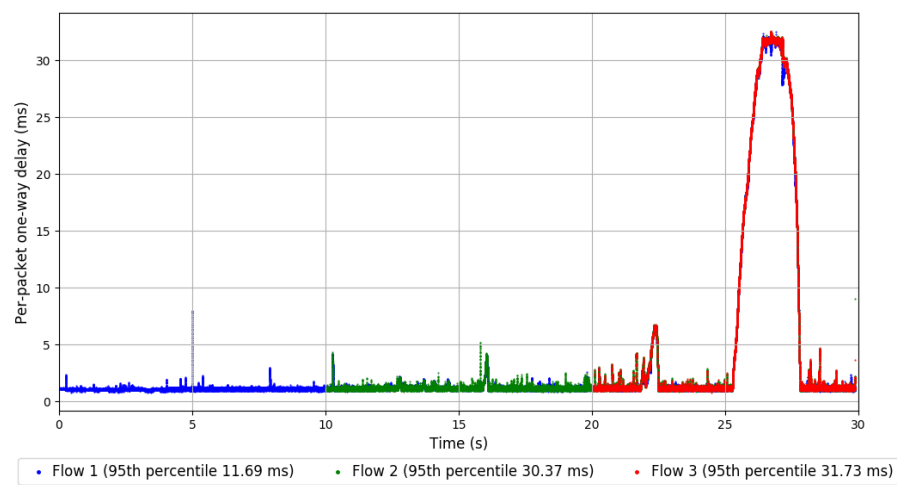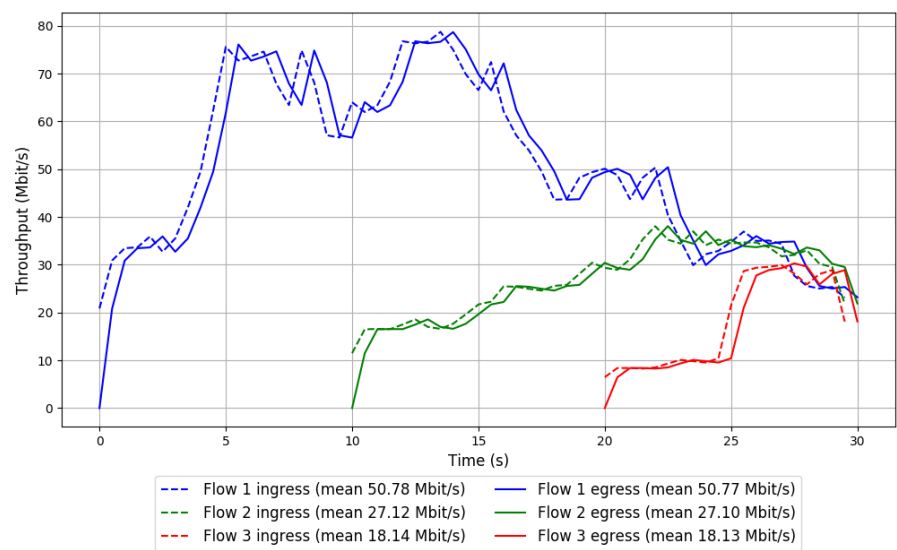Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-02 23:39:21
End at: 2019-10-02 23:39:51
Local clock offset: -6.468 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2019-10-03 01:03:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.18 Mbit/s
95th percentile per-packet one-way delay: 1.344 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.53 Mbit/s
95th percentile per-packet one-way delay: 1.354 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.84 Mbit/s
95th percentile per-packet one-way delay: 1.396 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.65 Mbit/s
95th percentile per-packet one-way delay: 1.240 ms
Loss rate: 0.00%
```
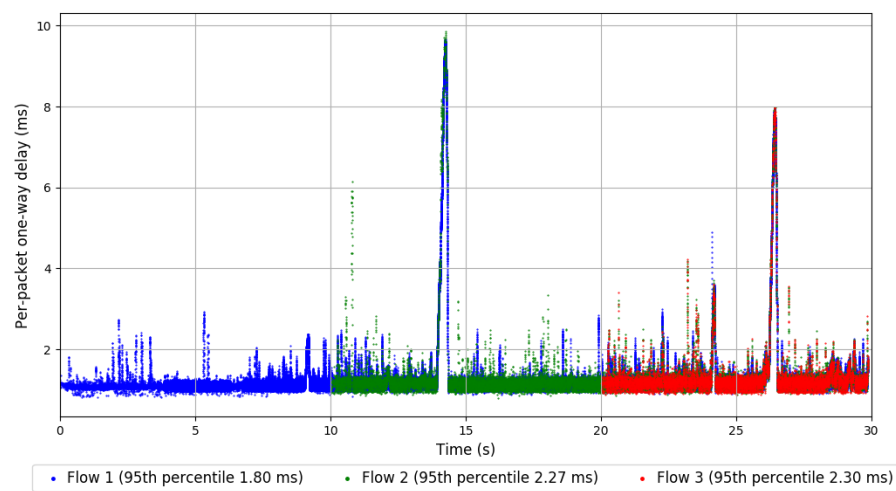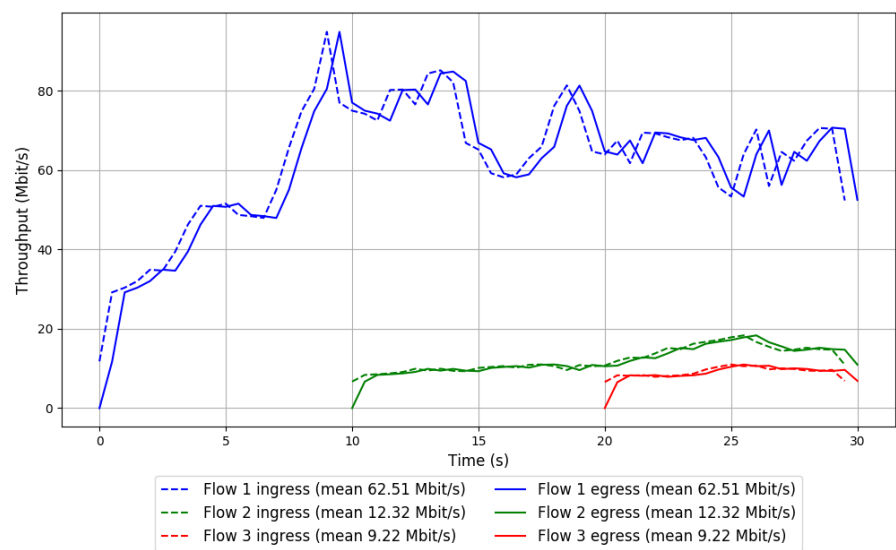
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 00:06:34
End at: 2019-10-03 00:07:04
Local clock offset: -7.114 ms
Remote clock offset: -0.201 ms


# Below is generated by plot.py at 2019-10-03 01:03:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.44 Mbit/s
95th percentile per-packet one-way delay: 1.515 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 1.544 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.64 Mbit/s
95th percentile per-packet one-way delay: 1.461 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.76 Mbit/s
95th percentile per-packet one-way delay: 1.522 ms
Loss rate: 0.03%
```

Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 00:33:49
End at: 2019-10-03 00:34:19
Local clock offset: 0.682 ms
Remote clock offset: -0.085 ms


# Below is generated by plot.py at 2019-10-03 01:03:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 21.48 Mbit/s
95th percentile per-packet one-way delay: 1.930 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 10.77 Mbit/s
95th percentile per-packet one-way delay: 1.906 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.88 Mbit/s
95th percentile per-packet one-way delay: 1.852 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.74 Mbit/s
95th percentile per-packet one-way delay: 2.271 ms
Loss rate: 0.00%
```

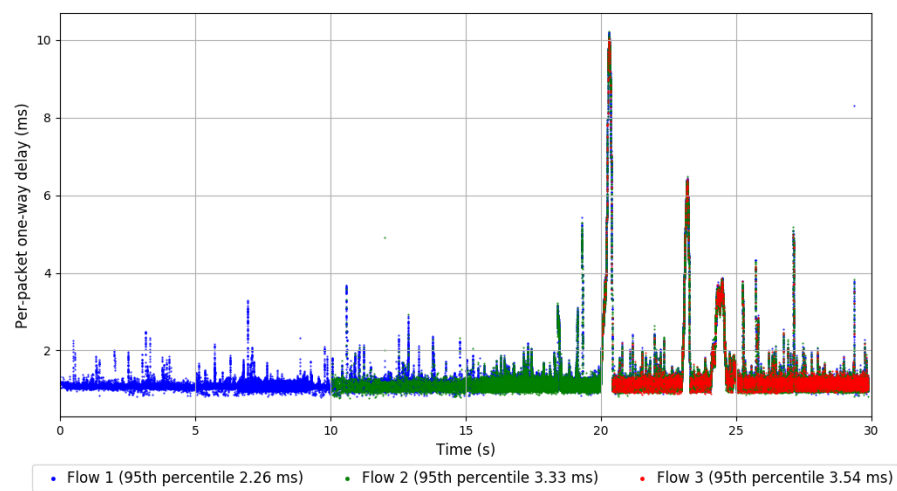Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-10-02 22:55:10
End at: 2019-10-02 22:55:40
Local clock offset: -5.642 ms
Remote clock offset: -0.216 ms


# Below is generated by plot.py at 2019-10-03 01:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.76 Mbit/s
95th percentile per-packet one-way delay: 28.773 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.77 Mbit/s
95th percentile per-packet one-way delay: 11.690 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 30.368 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 18.13 Mbit/s
95th percentile per-packet one-way delay: 31.734 ms
Loss rate: 0.08%
```
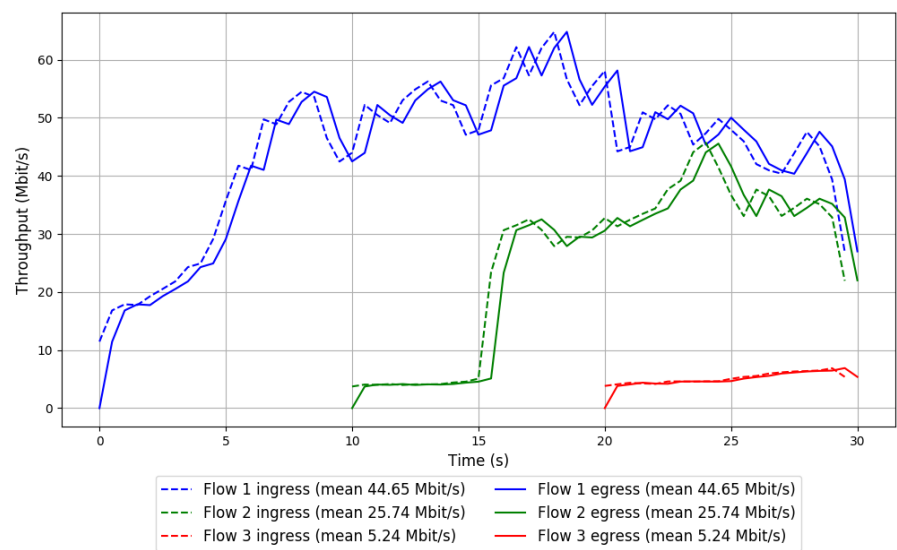
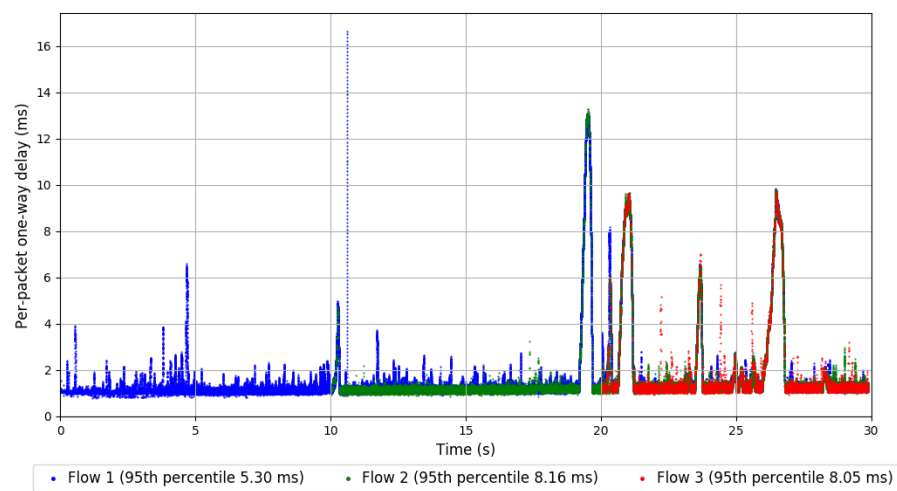Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-10-02 23:22:23
End at: 2019-10-02 23:22:53
Local clock offset: -5.446 ms
Remote clock offset: -0.222 ms


# Below is generated by plot.py at 2019-10-03 01:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 73.75 Mbit/s
95th percentile per-packet one-way delay: 1.867 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 62.51 Mbit/s
95th percentile per-packet one-way delay: 1.797 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 12.32 Mbit/s
95th percentile per-packet one-way delay: 2.268 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.22 Mbit/s
95th percentile per-packet one-way delay: 2.302 ms
Loss rate: 0.00%
```
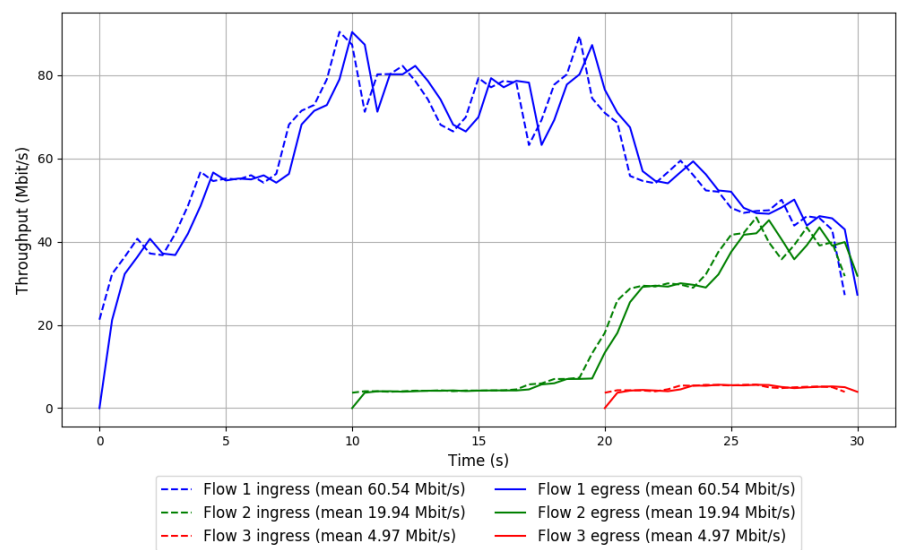
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-10-02 23:49:36
End at: 2019-10-02 23:50:06
Local clock offset: -6.776 ms
Remote clock offset: -0.345 ms


# Below is generated by plot.py at 2019-10-03 01:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.67 Mbit/s
95th percentile per-packet one-way delay: 1.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 1.420 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 7.86 Mbit/s
95th percentile per-packet one-way delay: 1.503 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 4.624 ms
Loss rate: 0.00%
```
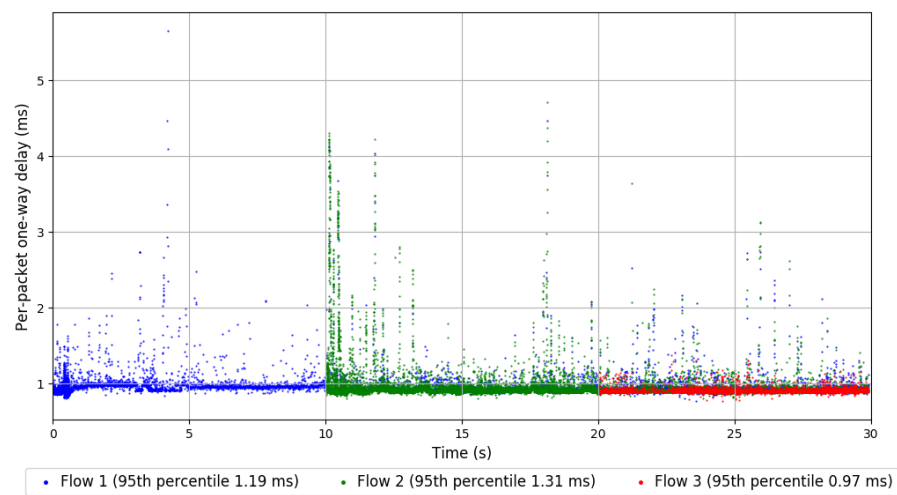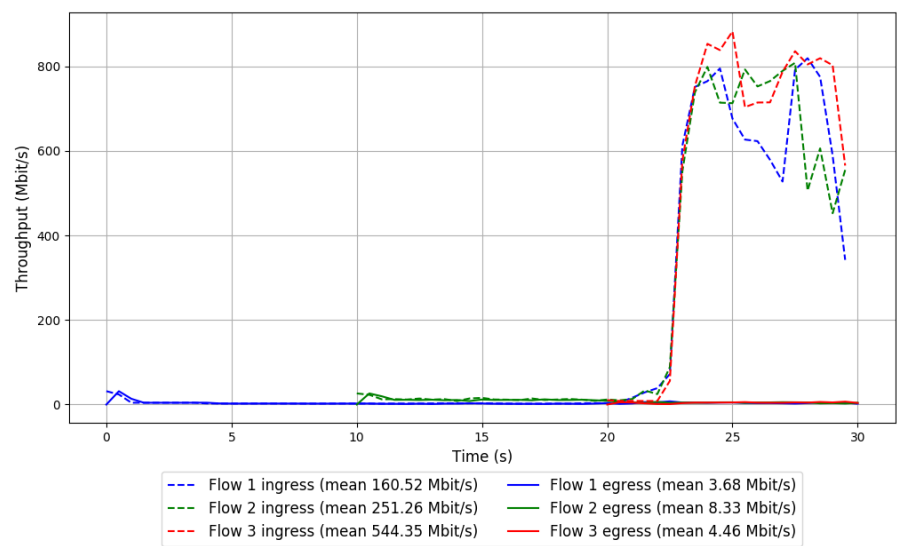
Run 3: Report of PCC-Allegro — Data Link

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```
Run 4: Statistics of PCC-Allegro

Start at: 2019-10-03 00:16:52
End at: 2019-10-03 00:17:22
Local clock offset: -7.254 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-10-03 01:04:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.49 Mbit/s
95th percentile per-packet one-way delay: 2.759 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.65 Mbit/s
95th percentile per-packet one-way delay: 2.262 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.74 Mbit/s
95th percentile per-packet one-way delay: 3.325 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.24 Mbit/s
95th percentile per-packet one-way delay: 3.539 ms
Loss rate: 0.00%
```
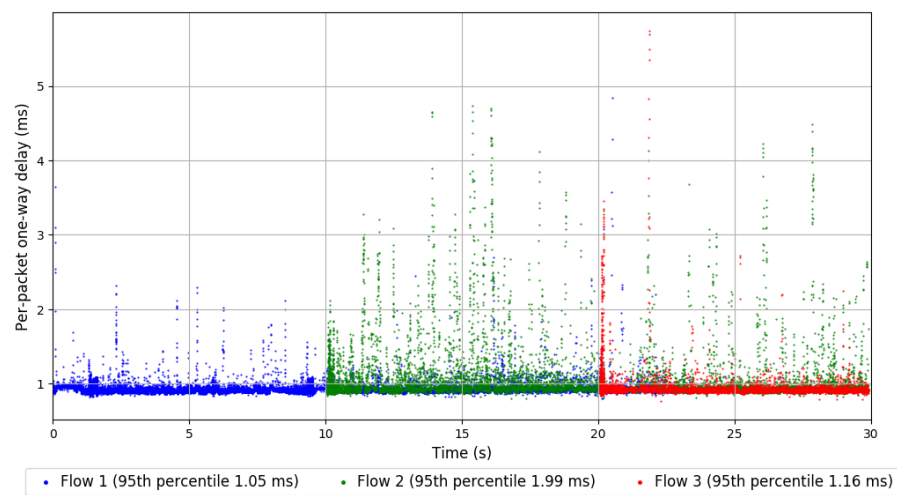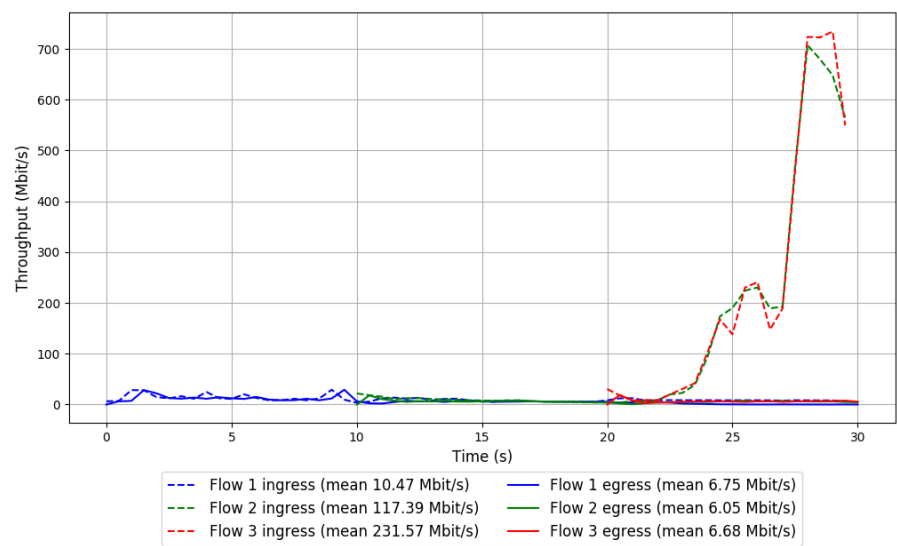
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-10-03 00:44:13
End at: 2019-10-03 00:44:43
Local clock offset: 5.032 ms
Remote clock offset: -0.066 ms


# Below is generated by plot.py at 2019-10-03 01:04:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 75.44 Mbit/s
95th percentile per-packet one-way delay: 6.192 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.54 Mbit/s
95th percentile per-packet one-way delay: 5.301 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.94 Mbit/s
95th percentile per-packet one-way delay: 8.165 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 8.052 ms
Loss rate: 0.00%
```

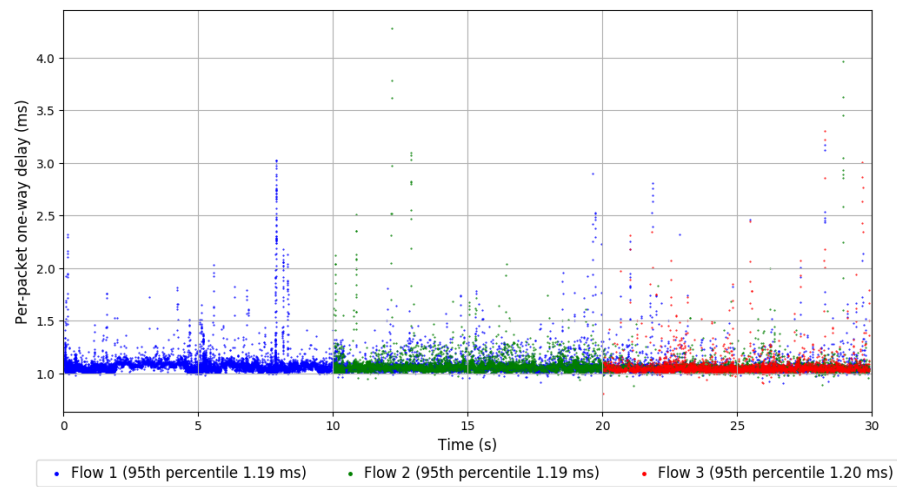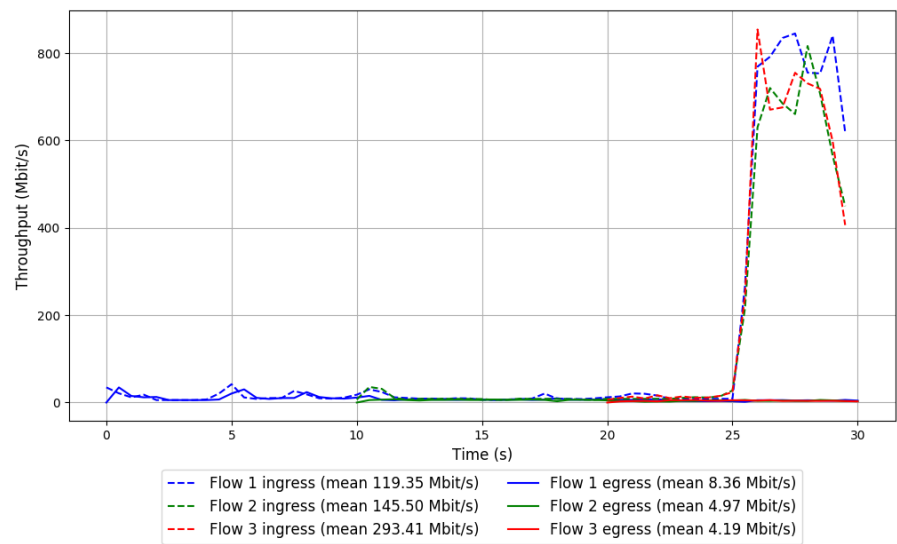## Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-10-02 22:50:32
End at: 2019-10-02 22:51:02
Local clock offset: -5.577 ms
Remote clock offset: -0.231 ms


# Below is generated by plot.py at 2019-10-03 01:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.69 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 97.89%
-- Flow 1:
Average throughput: 3.68 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 97.71%
-- Flow 2:
Average throughput: 8.33 Mbit/s
95th percentile per-packet one-way delay: 1.311 ms
Loss rate: 96.69%
-- Flow 3:
Average throughput: 4.46 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 99.18%
```
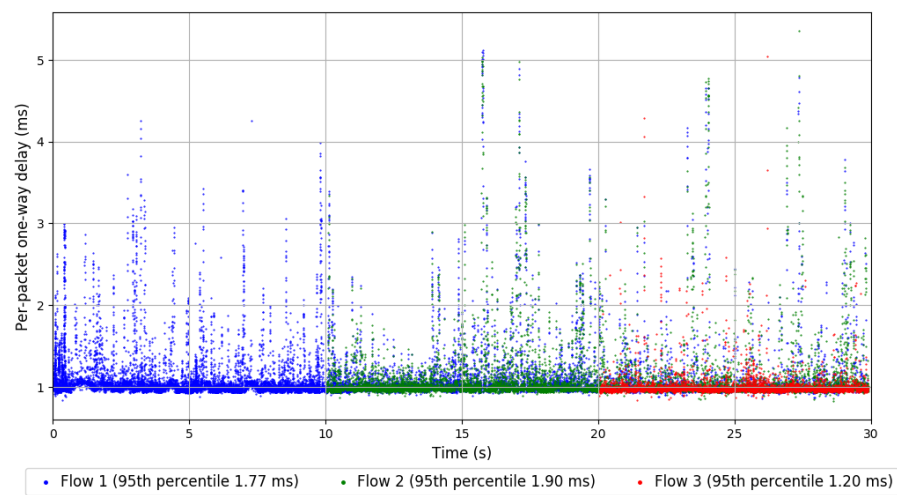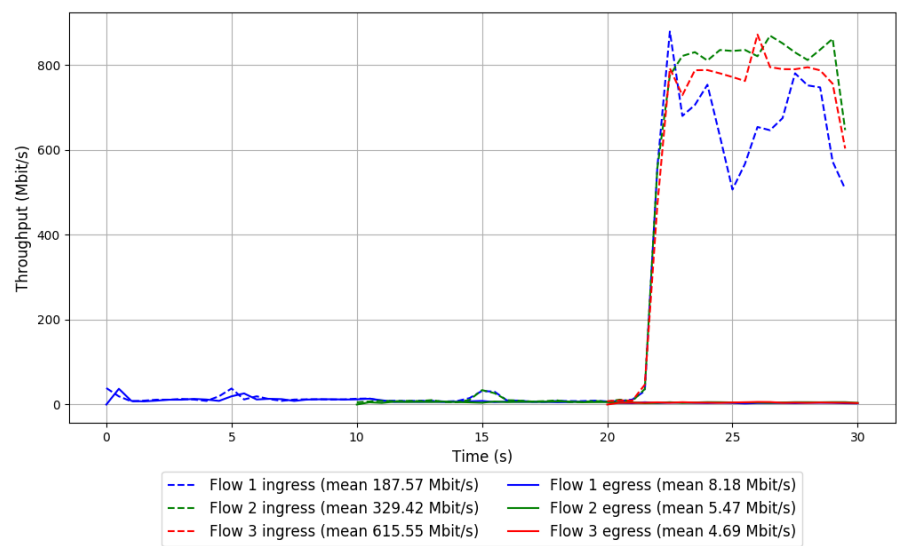
Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 160.52 Mbit/s) — — — Flow 1 egress (mean 3.68 Mbit/s)
Flow 2 ingress (mean 251.26 Mbit/s) — — — Flow 2 egress (mean 8.33 Mbit/s)
Flow 3 ingress (mean 544.35 Mbit/s) — — — Flow 3 egress (mean 4.46 Mbit/s)

Flow 1 (95th percentile 1.19 ms)   Flow 2 (95th percentile 1.31 ms)   Flow 3 (95th percentile 0.97 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-10-02 23:17:49
End at: 2019-10-02 23:18:19
Local clock offset: -5.443 ms
Remote clock offset: -0.342 ms


# Below is generated by plot.py at 2019-10-03 01:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 12.95 Mbit/s
95th percentile per-packet one-way delay: 1.331 ms
Loss rate: 92.15%
-- Flow 1:
Average throughput: 6.75 Mbit/s
95th percentile per-packet one-way delay: 1.055 ms
Loss rate: 35.76%
-- Flow 2:
Average throughput: 6.05 Mbit/s
95th percentile per-packet one-way delay: 1.985 ms
Loss rate: 94.85%
-- Flow 3:
Average throughput: 6.68 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 97.12%
```
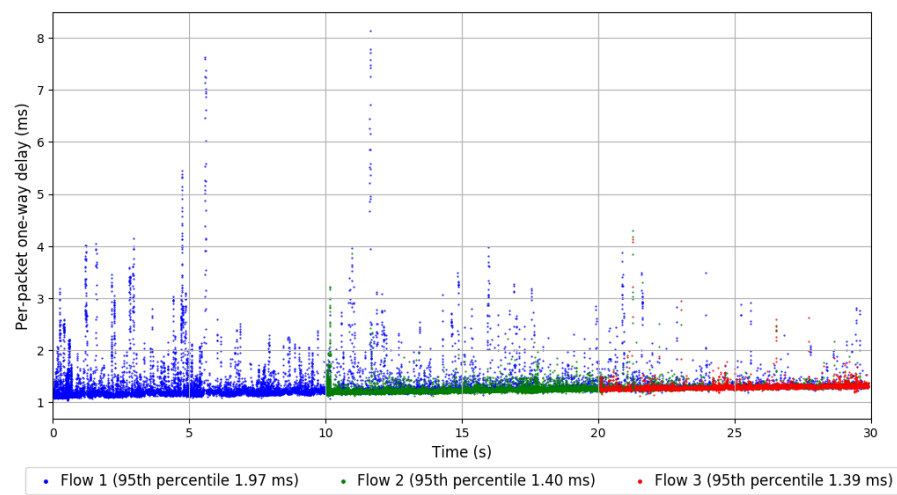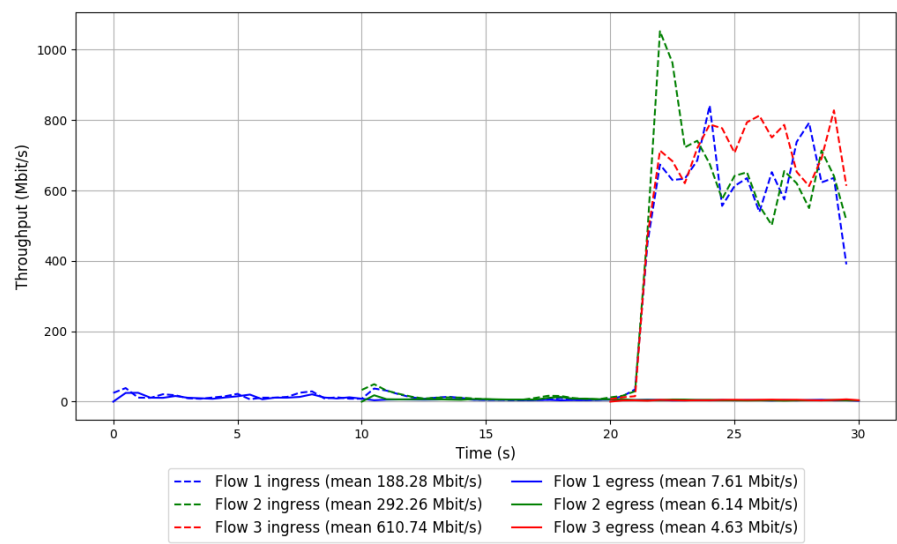
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-10-02 23:45:01
End at: 2019-10-02 23:45:31
Local clock offset: -6.717 ms
Remote clock offset: -0.17 ms


# Below is generated by plot.py at 2019-10-03 01:05:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.05 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 95.83%
-- Flow 1:
Average throughput: 8.36 Mbit/s
95th percentile per-packet one-way delay: 1.187 ms
Loss rate: 92.99%
-- Flow 2:
Average throughput: 4.97 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 96.59%
-- Flow 3:
Average throughput: 4.19 Mbit/s
95th percentile per-packet one-way delay: 1.203 ms
Loss rate: 98.57%
```
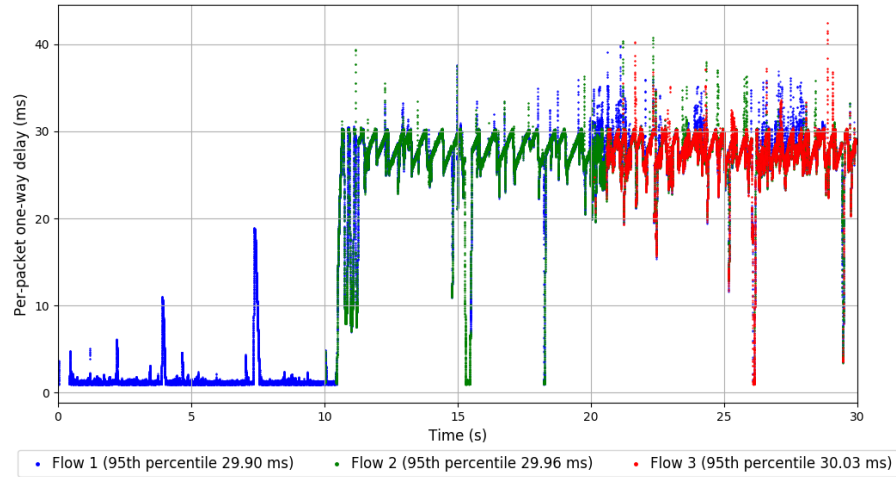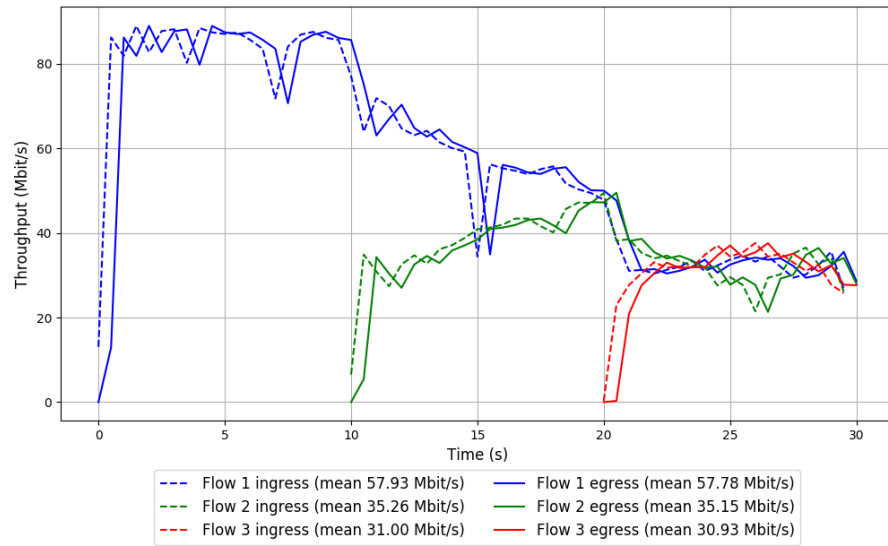
Run 3: Report of PCC-Expr — Data Link

- - - Flow 1 ingress (mean 119.35 Mbit/s) —— Flow 1 egress (mean 8.36 Mbit/s)
- - - Flow 2 ingress (mean 145.50 Mbit/s) —— Flow 2 egress (mean 4.97 Mbit/s)
- - - Flow 3 ingress (mean 293.41 Mbit/s) —— Flow 3 egress (mean 4.19 Mbit/s)

• Flow 1 (95th percentile 1.19 ms)   • Flow 2 (95th percentile 1.19 ms)   • Flow 3 (95th percentile 1.20 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-10-03 00:12:13
End at: 2019-10-03 00:12:43
Local clock offset: -7.169 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.37 Mbit/s
95th percentile per-packet one-way delay: 1.737 ms
Loss rate: 97.81%
-- Flow 1:
Average throughput: 8.18 Mbit/s
95th percentile per-packet one-way delay: 1.766 ms
Loss rate: 95.64%
-- Flow 2:
Average throughput: 5.47 Mbit/s
95th percentile per-packet one-way delay: 1.898 ms
Loss rate: 98.34%
-- Flow 3:
Average throughput: 4.69 Mbit/s
95th percentile per-packet one-way delay: 1.201 ms
Loss rate: 99.24%
```
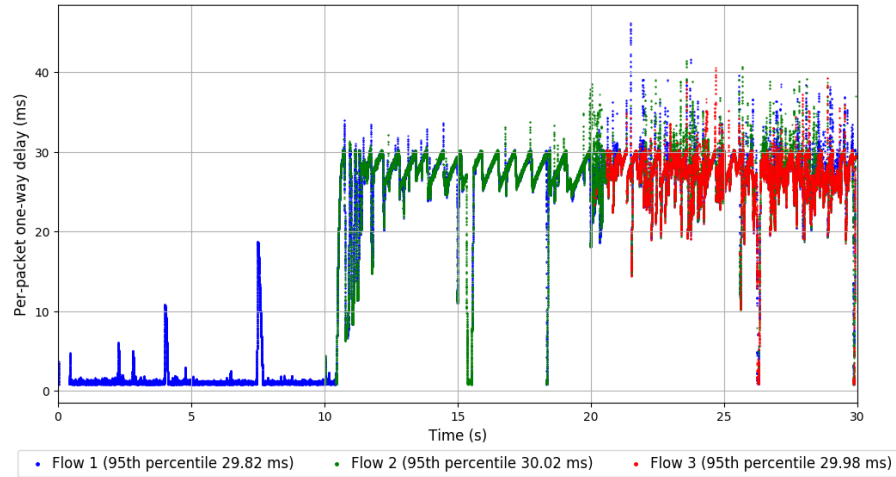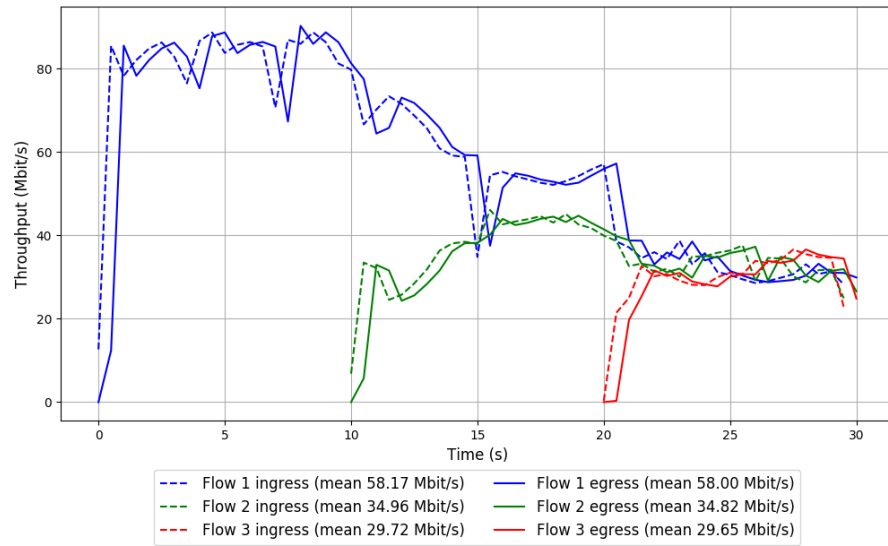
Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 187.57 Mbit/s) ---
Flow 1 egress (mean 8.18 Mbit/s) ——
Flow 2 ingress (mean 329.42 Mbit/s) ---
Flow 2 egress (mean 5.47 Mbit/s) ——
Flow 3 ingress (mean 615.55 Mbit/s) ---
Flow 3 egress (mean 4.69 Mbit/s) ——

Flow 1 (95th percentile 1.77 ms)
Flow 2 (95th percentile 1.90 ms)
Flow 3 (95th percentile 1.20 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-10-03 00:39:29
End at: 2019-10-03 00:39:59
Local clock offset: 3.417 ms
Remote clock offset: -0.034 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.22 Mbit/s
95th percentile per-packet one-way delay: 1.649 ms
Loss rate: 97.74%
-- Flow 1:
Average throughput: 7.61 Mbit/s
95th percentile per-packet one-way delay: 1.968 ms
Loss rate: 95.96%
-- Flow 2:
Average throughput: 6.14 Mbit/s
95th percentile per-packet one-way delay: 1.400 ms
Loss rate: 97.90%
-- Flow 3:
Average throughput: 4.63 Mbit/s
95th percentile per-packet one-way delay: 1.393 ms
Loss rate: 99.24%
```
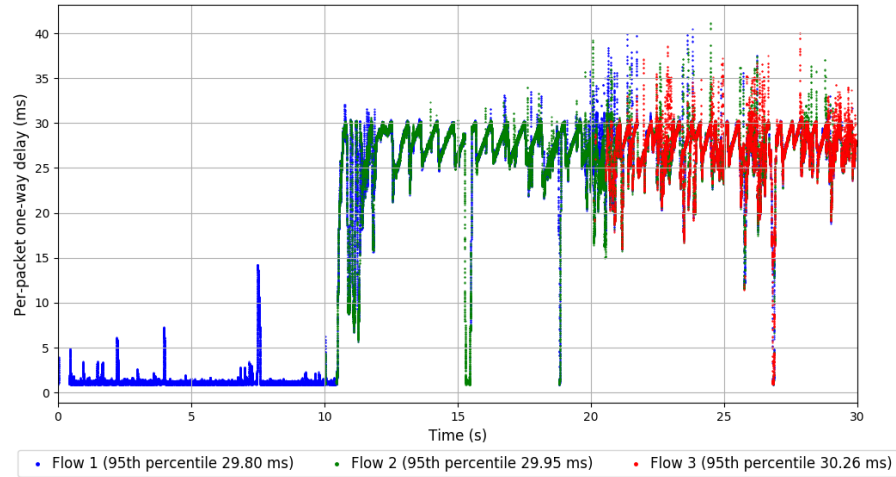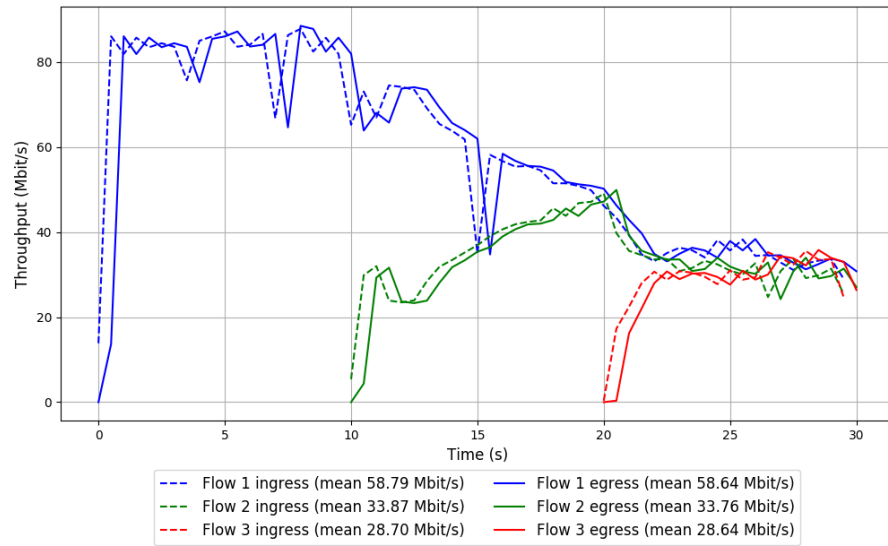
Run 5: Report of PCC-Expr — Data Link

- Flow 1 ingress (mean 188.28 Mbit/s)
- Flow 1 egress (mean 7.61 Mbit/s)
- Flow 2 ingress (mean 292.26 Mbit/s)
- Flow 2 egress (mean 6.14 Mbit/s)
- Flow 3 ingress (mean 610.74 Mbit/s)
- Flow 3 egress (mean 4.63 Mbit/s)

- Flow 1 (95th percentile 1.97 ms)
- Flow 2 (95th percentile 1.40 ms)
- Flow 3 (95th percentile 1.39 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-10-02 22:39:12
End at: 2019-10-02 22:39:42
Local clock offset: -5.564 ms
Remote clock offset: -0.174 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.33 Mbit/s
95th percentile per-packet one-way delay: 29.935 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 57.78 Mbit/s
95th percentile per-packet one-way delay: 29.900 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 35.15 Mbit/s
95th percentile per-packet one-way delay: 29.964 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 30.93 Mbit/s
95th percentile per-packet one-way delay: 30.034 ms
Loss rate: 0.18%
```

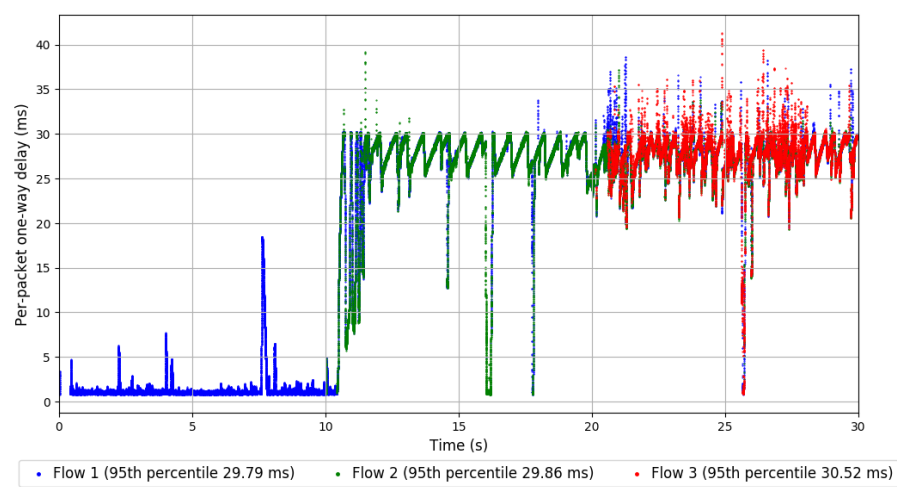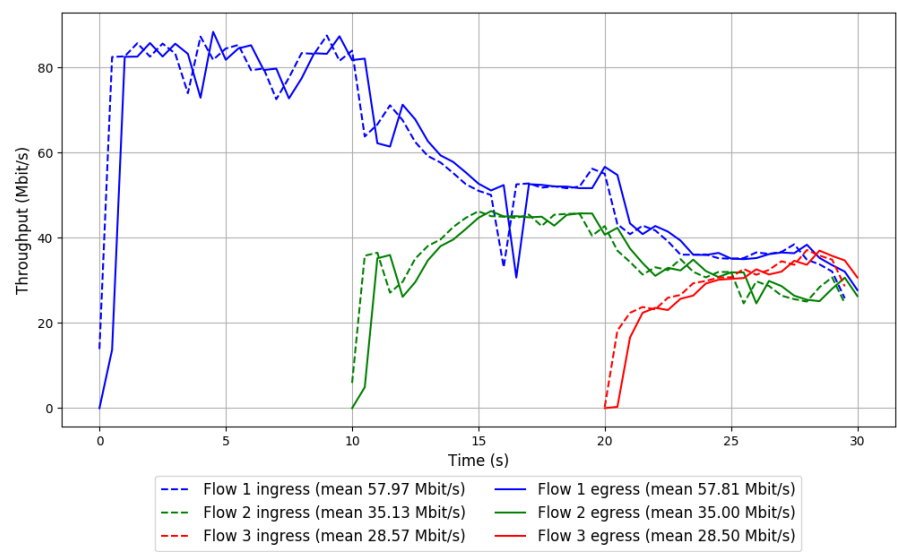Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-10-02 23:06:28
End at: 2019-10-02 23:06:58
Local clock offset: -5.461 ms
Remote clock offset: -0.255 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.88 Mbit/s
95th percentile per-packet one-way delay: 29.895 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 58.00 Mbit/s
95th percentile per-packet one-way delay: 29.823 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 34.82 Mbit/s
95th percentile per-packet one-way delay: 30.025 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 29.65 Mbit/s
95th percentile per-packet one-way delay: 29.975 ms
Loss rate: 0.18%
```
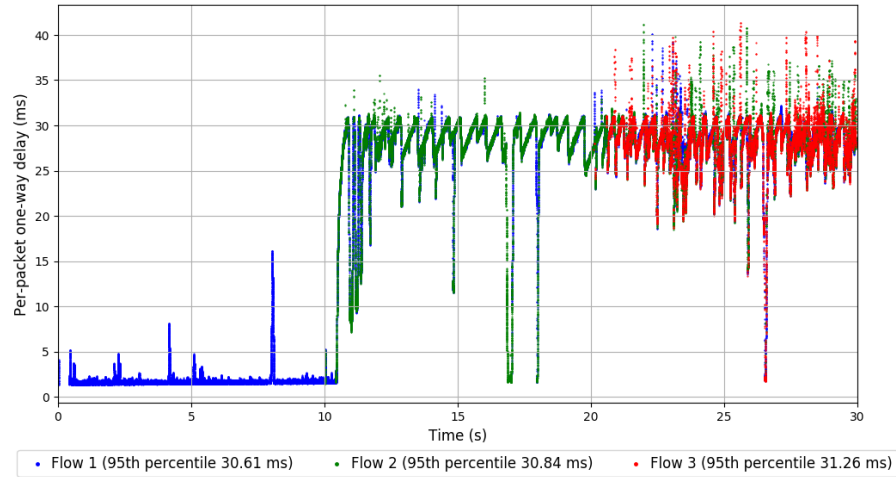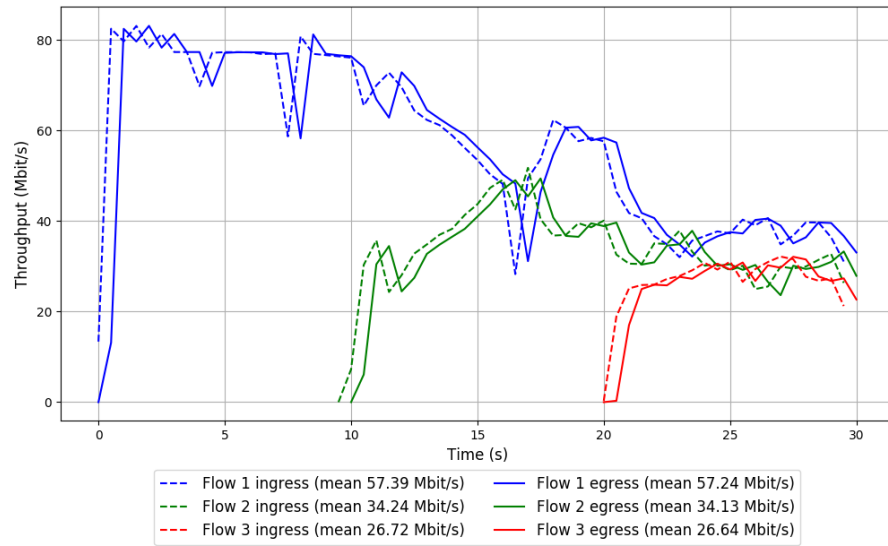
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-10-02 23:33:41
End at: 2019-10-02 23:34:11
Local clock offset: -6.215 ms
Remote clock offset: -0.215 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.50 Mbit/s
95th percentile per-packet one-way delay: 29.892 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 58.64 Mbit/s
95th percentile per-packet one-way delay: 29.799 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 29.947 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 28.64 Mbit/s
95th percentile per-packet one-way delay: 30.262 ms
Loss rate: 0.16%
```
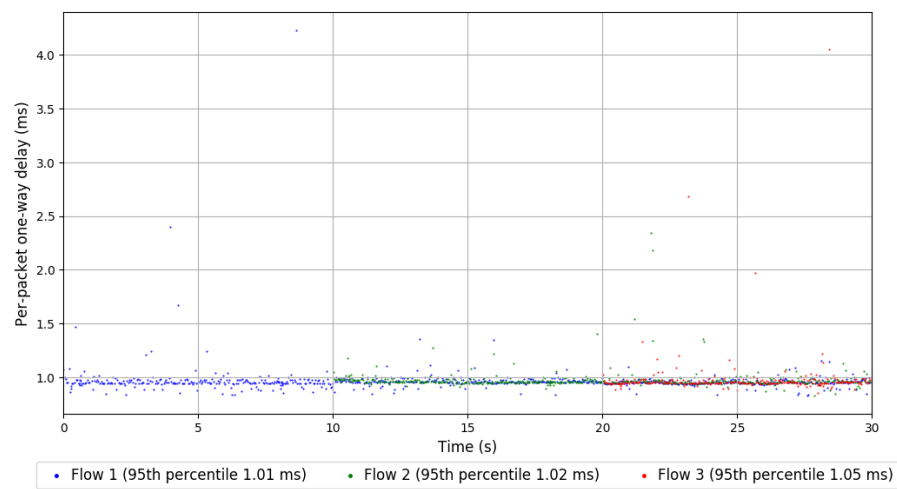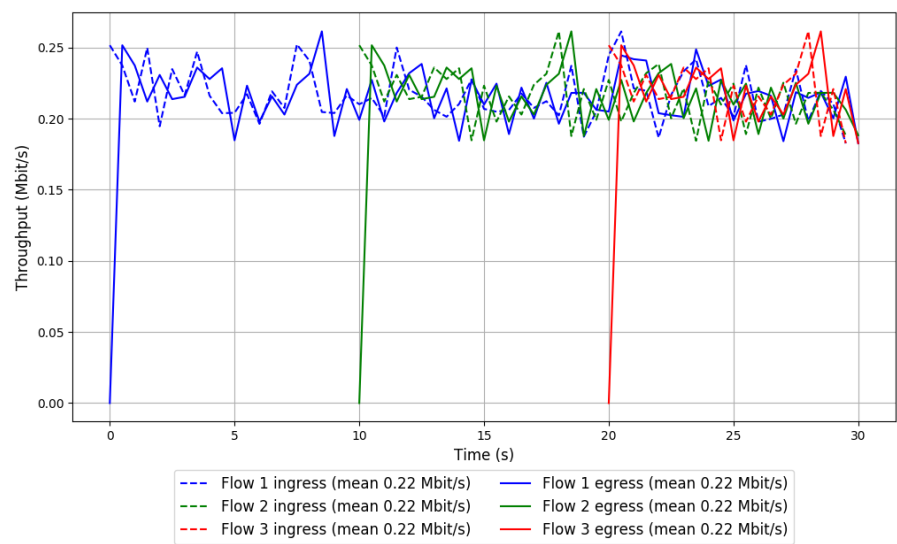
Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-10-03 00:00:53
End at: 2019-10-03 00:01:23
Local clock offset: -6.969 ms
Remote clock offset: -0.233 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.46 Mbit/s
95th percentile per-packet one-way delay: 29.850 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 57.81 Mbit/s
95th percentile per-packet one-way delay: 29.788 ms
Loss rate: 0.18%
-- Flow 2:
Average throughput: 35.00 Mbit/s
95th percentile per-packet one-way delay: 29.858 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 28.50 Mbit/s
95th percentile per-packet one-way delay: 30.524 ms
Loss rate: 0.22%
```

Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 57.97 Mbit/s) --- Flow 1 egress (mean 57.81 Mbit/s)
Flow 2 ingress (mean 35.13 Mbit/s) --- Flow 2 egress (mean 35.00 Mbit/s)
Flow 3 ingress (mean 28.57 Mbit/s) --- Flow 3 egress (mean 28.50 Mbit/s)

Flow 1 (95th percentile 29.79 ms)   Flow 2 (95th percentile 29.86 ms)   Flow 3 (95th percentile 30.52 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-10-03 00:28:09
End at: 2019-10-03 00:28:39
Local clock offset: -3.673 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.72 Mbit/s
95th percentile per-packet one-way delay: 30.722 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 57.24 Mbit/s
95th percentile per-packet one-way delay: 30.606 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.13 Mbit/s
95th percentile per-packet one-way delay: 30.838 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 31.256 ms
Loss rate: 0.31%
```

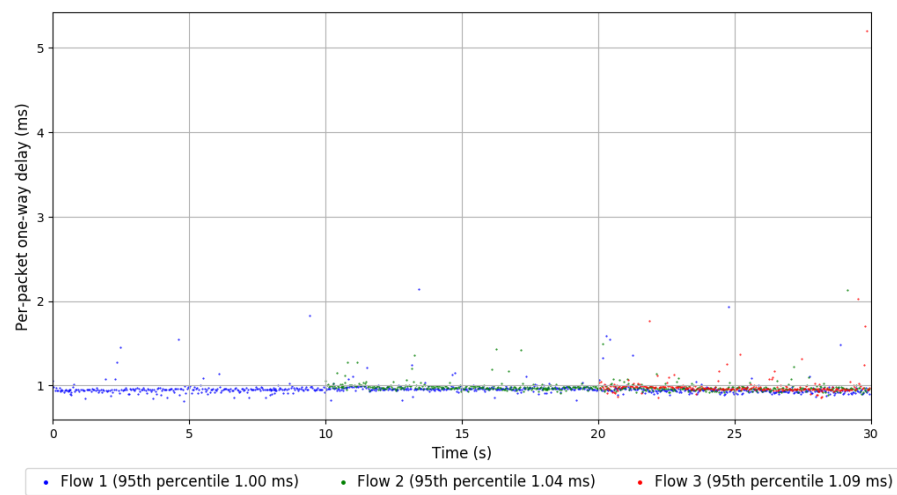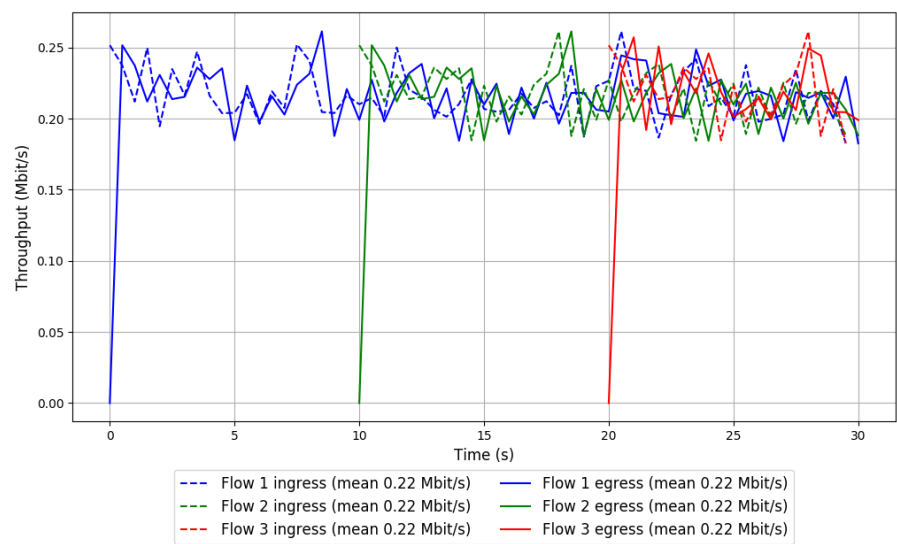Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-10-02 22:38:06
End at: 2019-10-02 22:38:36
Local clock offset: -5.615 ms
Remote clock offset: -0.341 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.007 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.025 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.00%
```
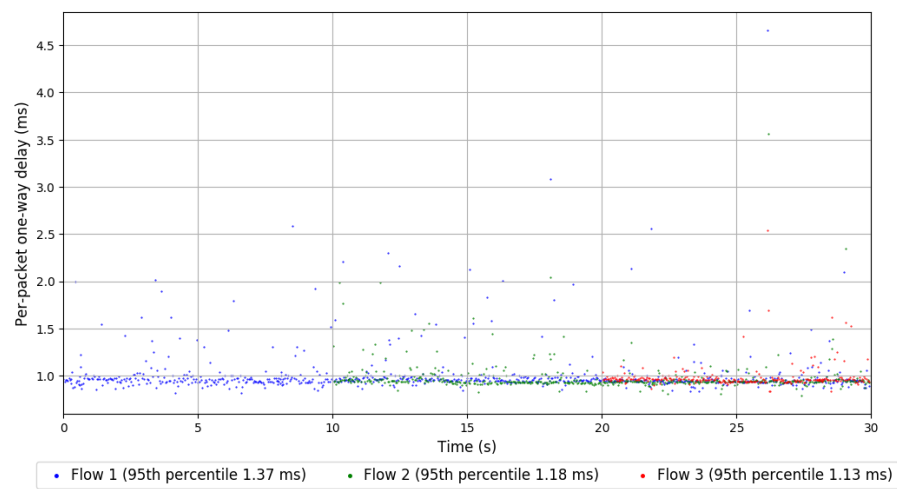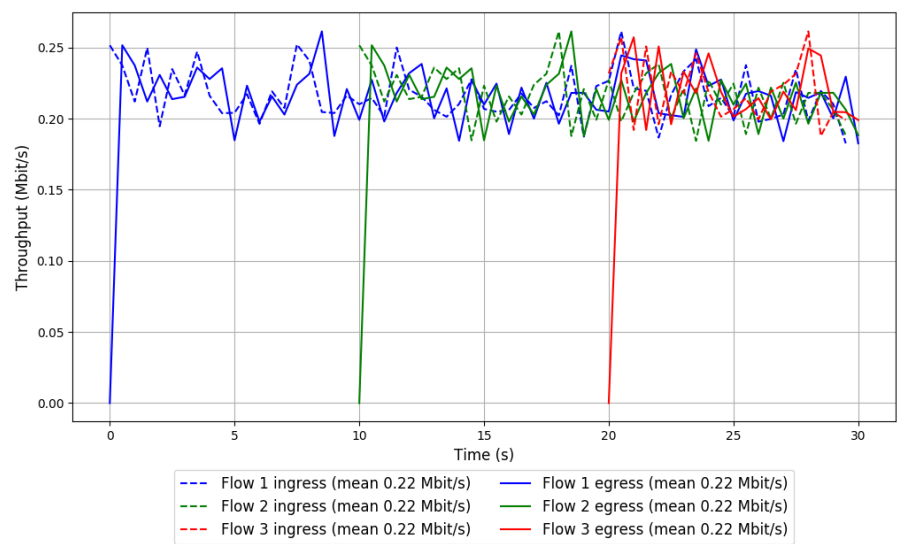
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-10-02 23:05:23
End at: 2019-10-02 23:05:53
Local clock offset: -5.473 ms
Remote clock offset: -0.202 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.130 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.00%
```
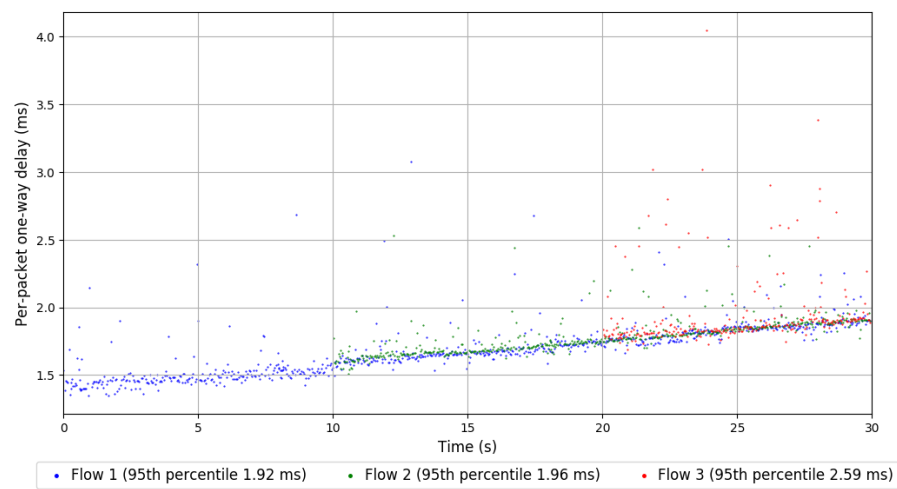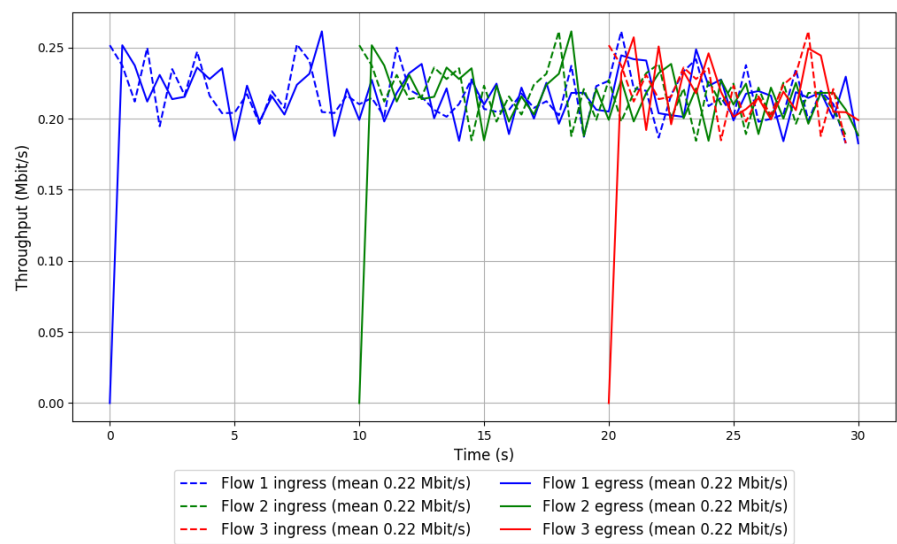
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-10-02 23:32:35
End at: 2019-10-02 23:33:05
Local clock offset: -6.147 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.001 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.095 ms
Loss rate: 0.00%
```

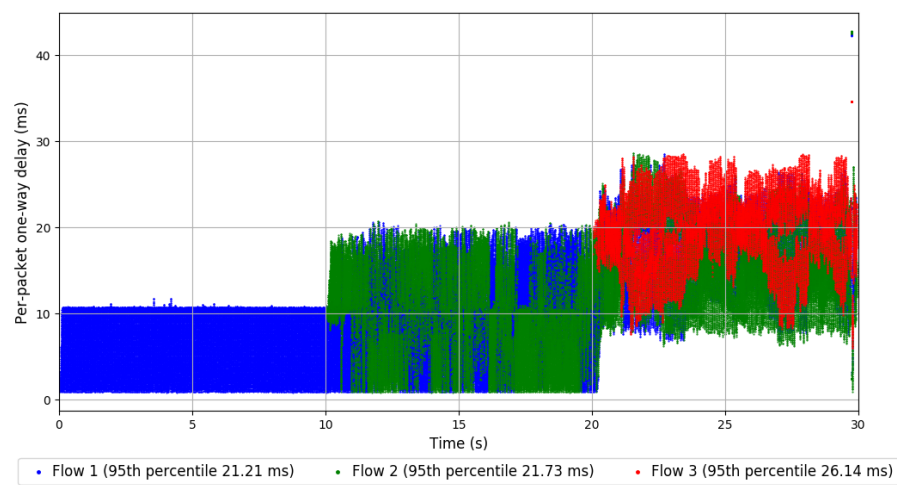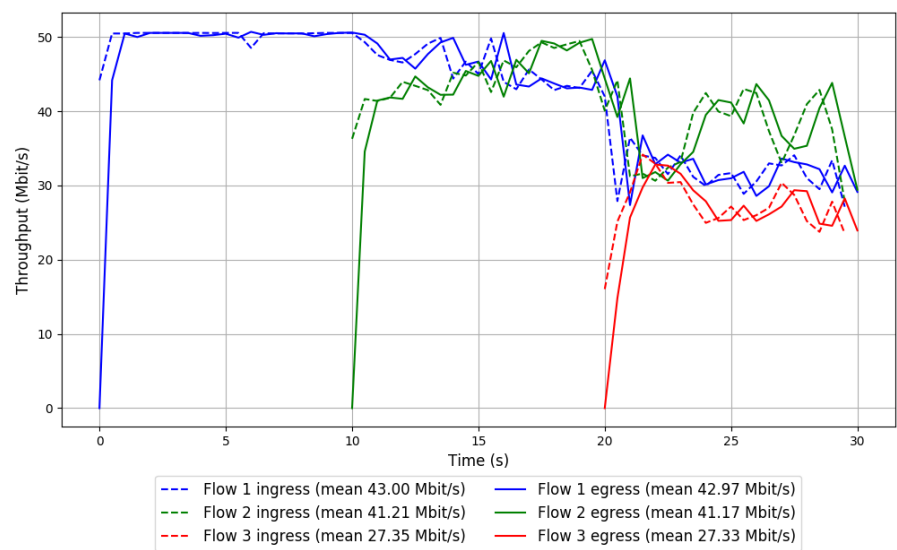# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-10-02 23:59:48
End at: 2019-10-03 00:00:18
Local clock offset: -6.959 ms
Remote clock offset: -0.276 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.232 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.374 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.132 ms
Loss rate: 0.00%
```

Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-10-03 00:27:04
End at: 2019-10-03 00:27:34
Local clock offset: -4.682 ms
Remote clock offset: -0.143 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.006 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.915 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.963 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.588 ms
Loss rate: 0.00%
```
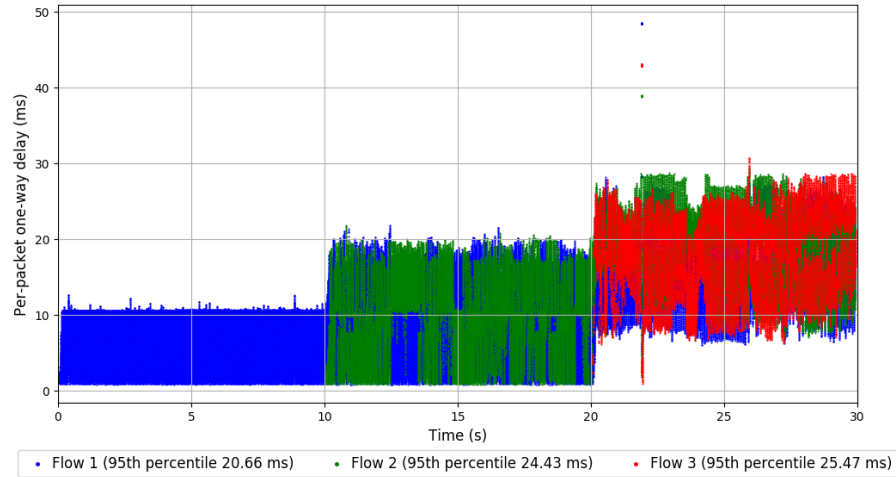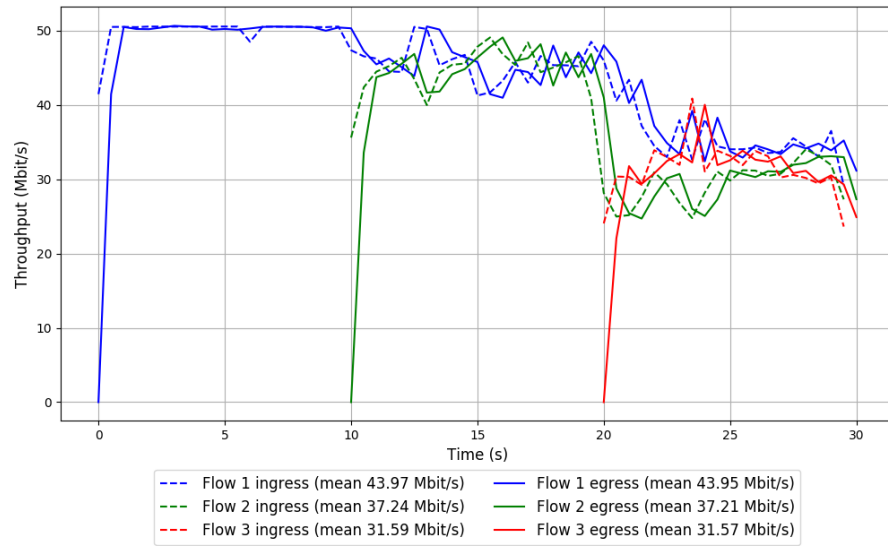
Run 5: Report of SCReAM — Data Link

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```
Run 1: Statistics of Sprout

Start at: 2019-10-02 22:54:02
End at: 2019-10-02 22:54:32
Local clock offset: -5.588 ms
Remote clock offset: -0.203 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.39 Mbit/s
95th percentile per-packet one-way delay: 22.852 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 42.97 Mbit/s
95th percentile per-packet one-way delay: 21.213 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.17 Mbit/s
95th percentile per-packet one-way delay: 21.733 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 27.33 Mbit/s
95th percentile per-packet one-way delay: 26.145 ms
Loss rate: 0.00%
```
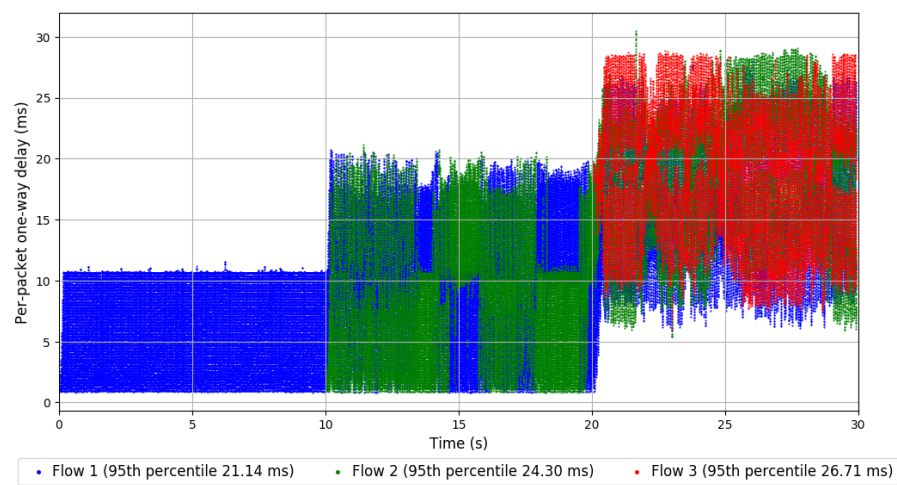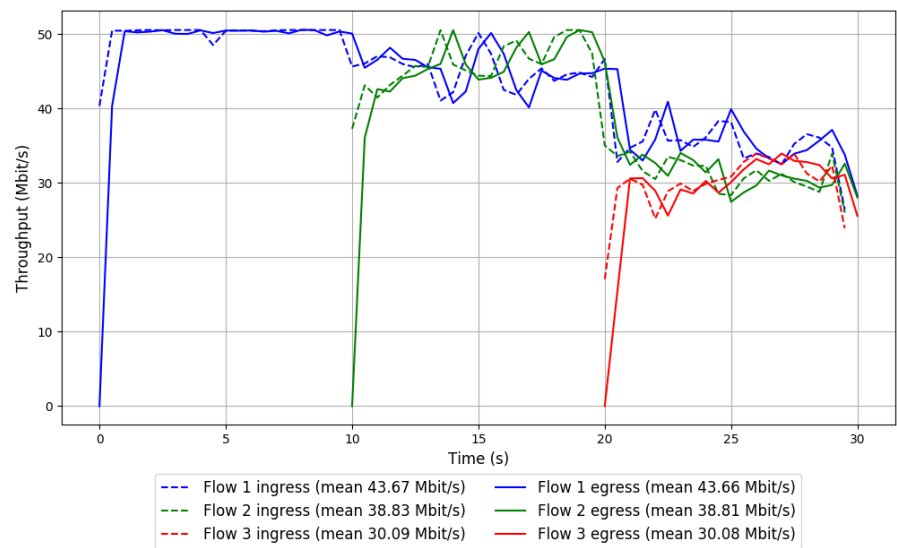
Run 1: Report of Sprout — Data Link

Run 2: Statistics of Sprout

Start at: 2019-10-02 23:21:15
End at: 2019-10-02 23:21:45
Local clock offset: -5.379 ms
Remote clock offset: -0.303 ms

Below is generated by plot.py at 2019-10-03 01:06:36
Datalink statistics
-- Total of 3 flows:
Average throughput: 79.12 Mbit/s
95th percentile per-packet one-way delay: 23.613 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.95 Mbit/s
95th percentile per-packet one-way delay: 20.662 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.21 Mbit/s
95th percentile per-packet one-way delay: 24.430 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.57 Mbit/s
95th percentile per-packet one-way delay: 25.472 ms
Loss rate: 0.00%
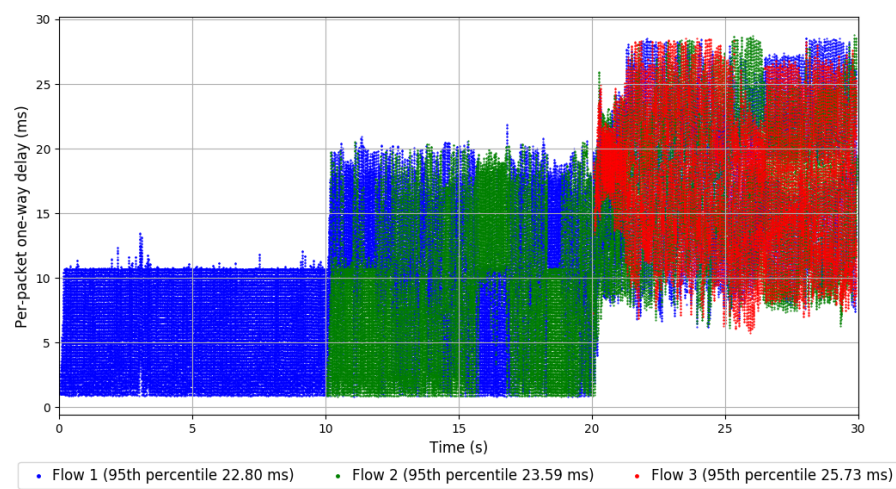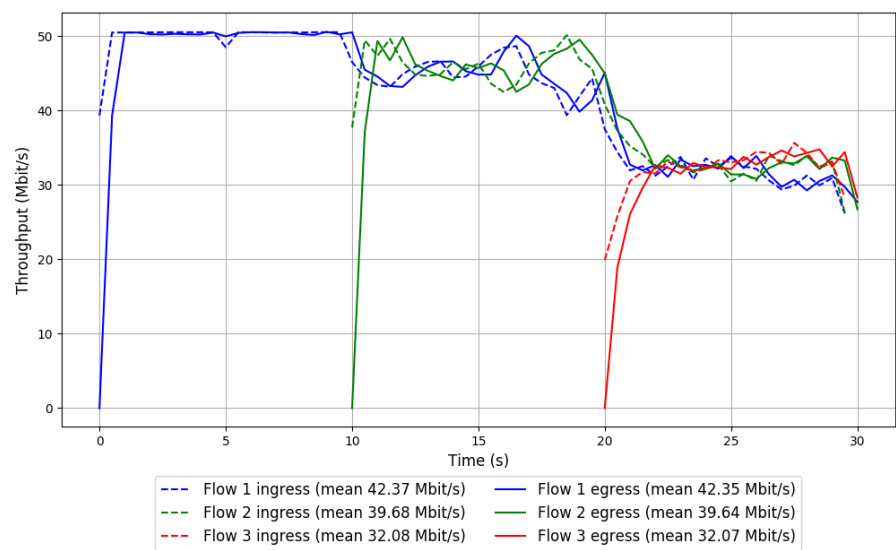
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-10-02 23:48:29
End at: 2019-10-02 23:48:59
Local clock offset: -6.735 ms
Remote clock offset: -0.248 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.39 Mbit/s
95th percentile per-packet one-way delay: 23.945 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.66 Mbit/s
95th percentile per-packet one-way delay: 21.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.81 Mbit/s
95th percentile per-packet one-way delay: 24.303 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.08 Mbit/s
95th percentile per-packet one-way delay: 26.706 ms
Loss rate: 0.00%
```
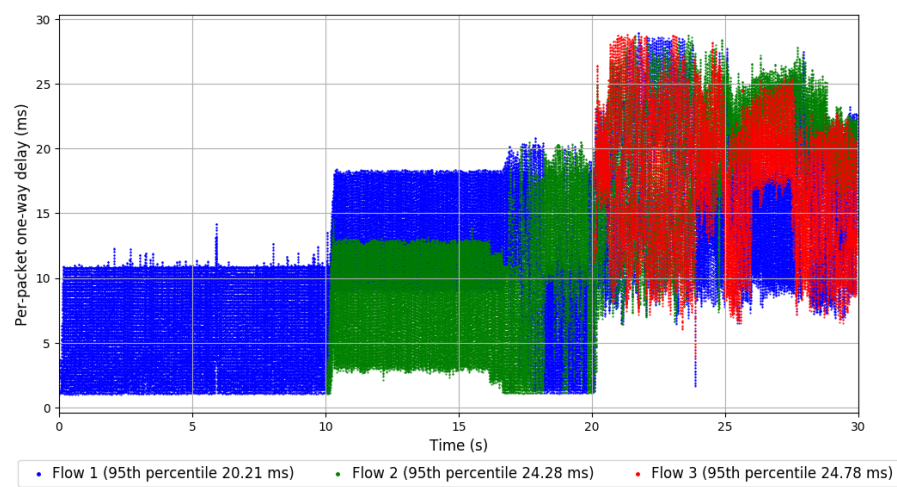
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-10-03 00:15:45
End at: 2019-10-03 00:16:15
Local clock offset: -7.175 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-10-03 01:06:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.31 Mbit/s
95th percentile per-packet one-way delay: 23.901 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.35 Mbit/s
95th percentile per-packet one-way delay: 22.798 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.64 Mbit/s
95th percentile per-packet one-way delay: 23.593 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.07 Mbit/s
95th percentile per-packet one-way delay: 25.726 ms
Loss rate: 0.00%
```

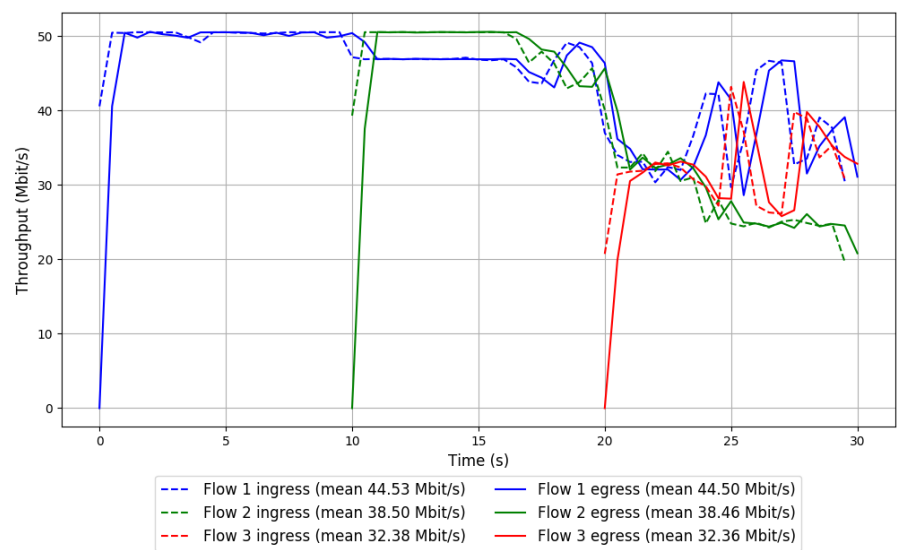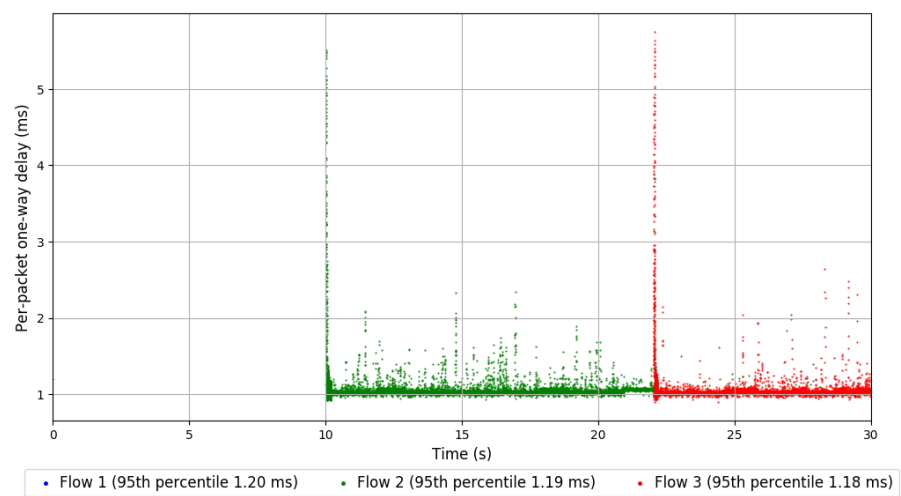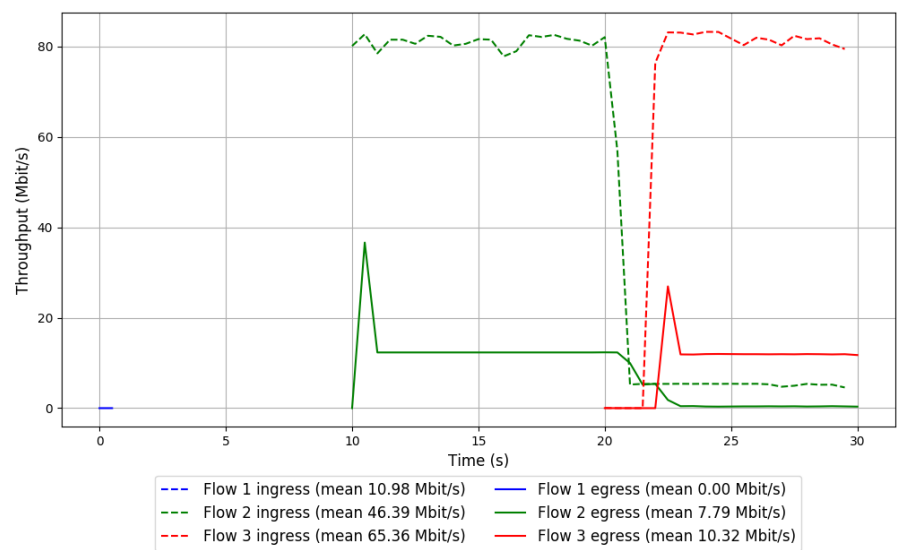Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-10-03 00:43:01
End at: 2019-10-03 00:43:31
Local clock offset: 4.662 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-10-03 01:06:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.78 Mbit/s
95th percentile per-packet one-way delay: 23.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.50 Mbit/s
95th percentile per-packet one-way delay: 20.207 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.46 Mbit/s
95th percentile per-packet one-way delay: 24.276 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.36 Mbit/s
95th percentile per-packet one-way delay: 24.776 ms
Loss rate: 0.00%
```

Run 5: Report of Sprout — Data Link

Flow 1 ingress (mean 44.53 Mbit/s)   Flow 1 egress (mean 44.50 Mbit/s)
Flow 2 ingress (mean 38.50 Mbit/s)   Flow 2 egress (mean 38.46 Mbit/s)
Flow 3 ingress (mean 32.38 Mbit/s)   Flow 3 egress (mean 32.36 Mbit/s)

Flow 1 (95th percentile 20.21 ms)   Flow 2 (95th percentile 24.28 ms)   Flow 3 (95th percentile 24.78 ms)
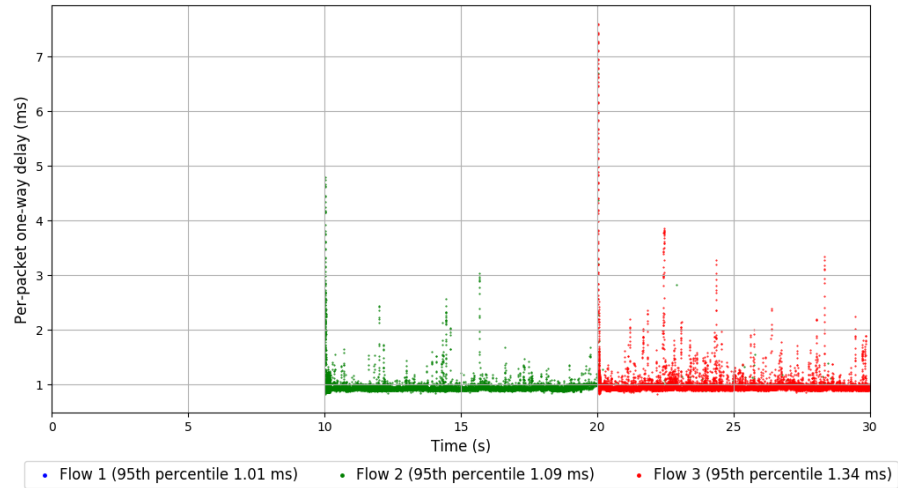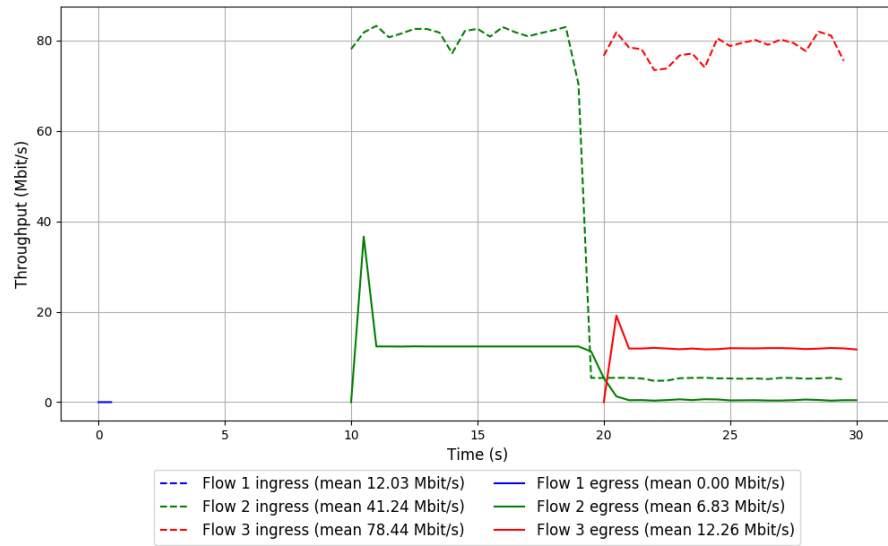
```
Run 1: Statistics of TaoVA-100x

Start at: 2019-10-02 22:47:08
End at: 2019-10-02 22:47:38
Local clock offset: -5.605 ms
Remote clock offset: -0.173 ms

# Below is generated by plot.py at 2019-10-03 01:06:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 83.63%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.197 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 7.79 Mbit/s
95th percentile per-packet one-way delay: 1.192 ms
Loss rate: 83.21%
-- Flow 3:
Average throughput: 10.32 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 84.22%
```

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

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

Start at: 2019-10-02 23:14:24
End at: 2019-10-02 23:14:54
Local clock offset: -5.405 ms
Remote clock offset: -0.274 ms


# Below is generated by plot.py at 2019-10-03 01:06:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.202 ms
Loss rate: 83.90%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 6.83 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 83.45%
-- Flow 3:
Average throughput: 12.26 Mbit/s
95th percentile per-packet one-way delay: 1.342 ms
Loss rate: 84.38%
```
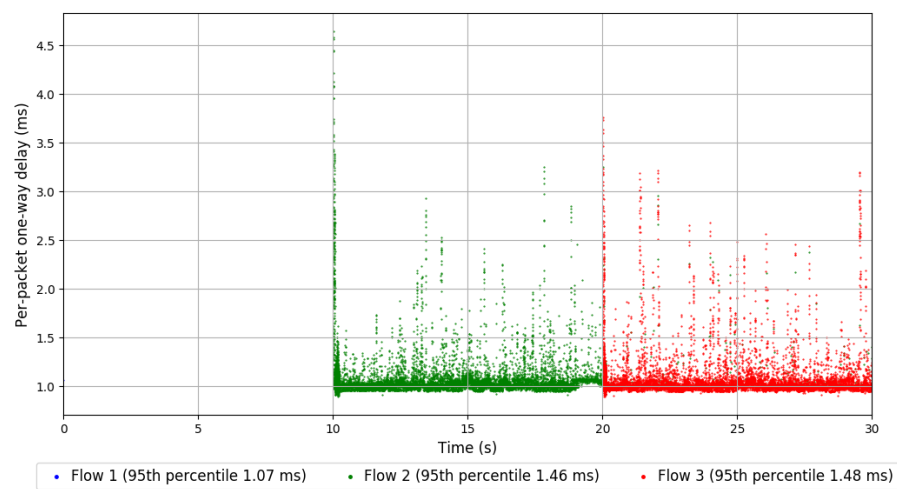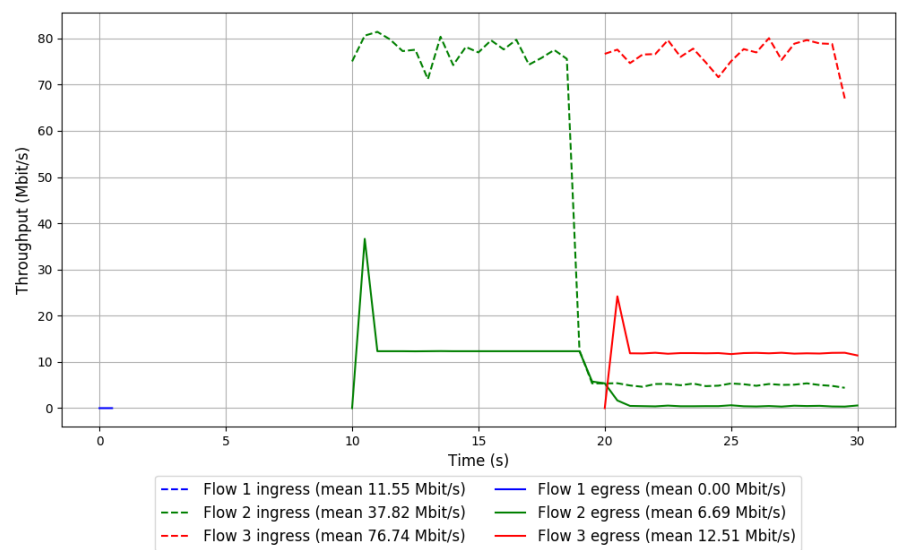
Run 2: Report of TaoVA-100x — Data Link

--- Flow 1 ingress (mean 12.03 Mbit/s)   — Flow 1 egress (mean 0.00 Mbit/s)
--- Flow 2 ingress (mean 41.24 Mbit/s)   — Flow 2 egress (mean 6.83 Mbit/s)
--- Flow 3 ingress (mean 78.44 Mbit/s)   — Flow 3 egress (mean 12.26 Mbit/s)

• Flow 1 (95th percentile 1.01 ms)   • Flow 2 (95th percentile 1.09 ms)   • Flow 3 (95th percentile 1.34 ms)

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

Start at: 2019-10-02 23:41:37
End at: 2019-10-02 23:42:07
Local clock offset: -6.571 ms
Remote clock offset: -0.188 ms


# Below is generated by plot.py at 2019-10-03 01:06:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.465 ms
Loss rate: 83.01%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 6.69 Mbit/s
95th percentile per-packet one-way delay: 1.459 ms
Loss rate: 82.31%
-- Flow 3:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 1.477 ms
Loss rate: 83.69%
```
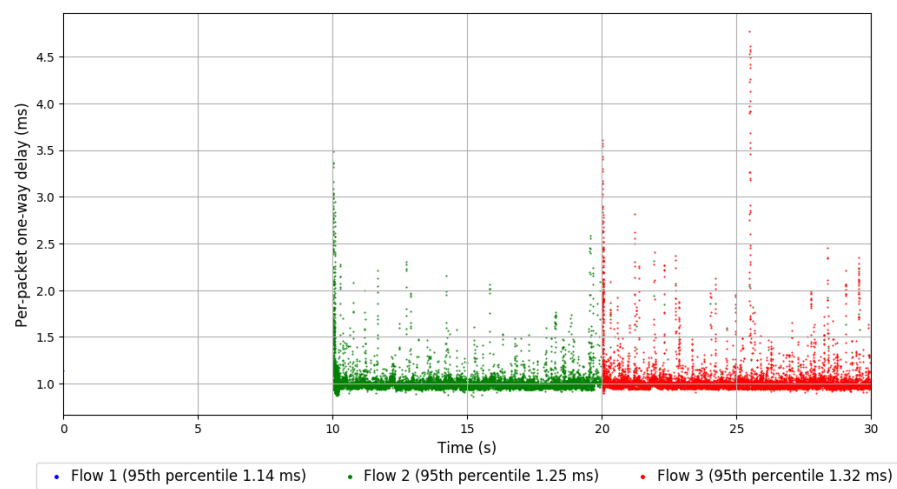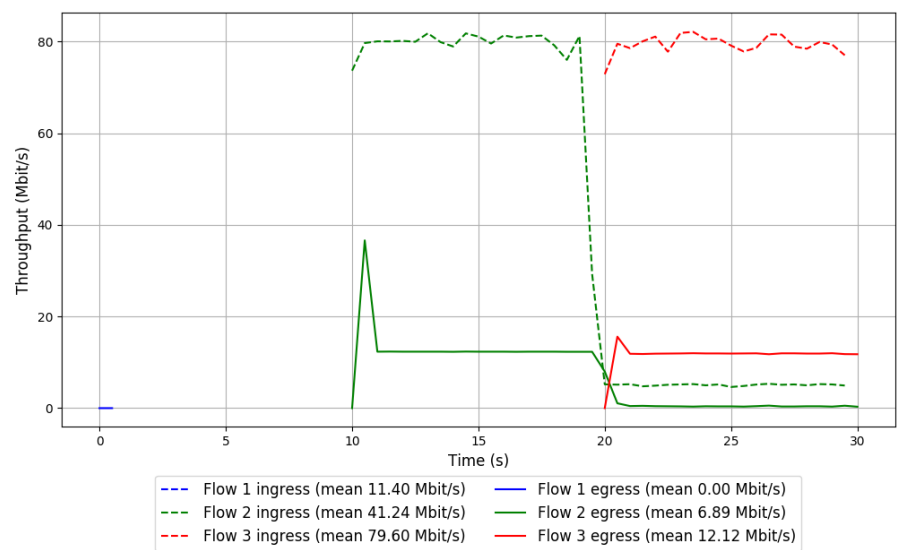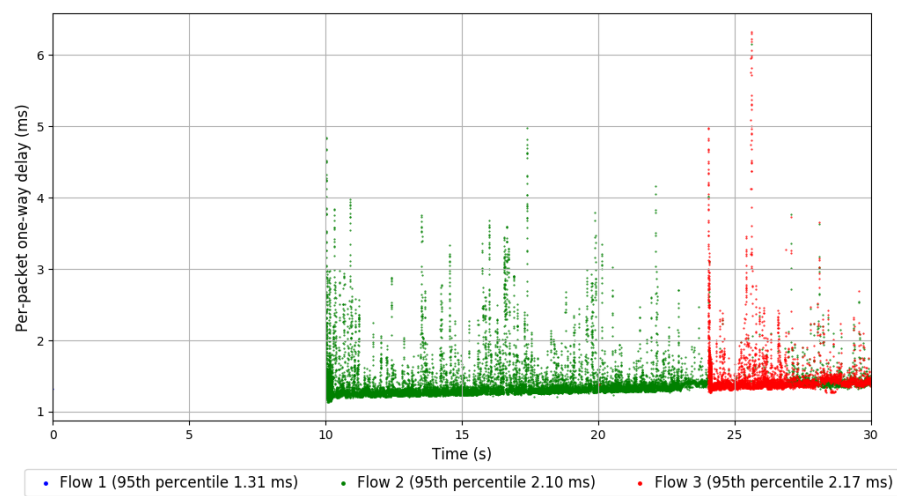
Run 3: Report of TaoVA-100x — Data Link

- - - Flow 1 ingress (mean 11.55 Mbit/s)   ——— Flow 1 egress (mean 0.00 Mbit/s)
- - - Flow 2 ingress (mean 37.82 Mbit/s)   ——— Flow 2 egress (mean 6.69 Mbit/s)
- - - Flow 3 ingress (mean 76.74 Mbit/s)   ——— Flow 3 egress (mean 12.51 Mbit/s)

- Flow 1 (95th percentile 1.07 ms)   • Flow 2 (95th percentile 1.46 ms)   • Flow 3 (95th percentile 1.48 ms)
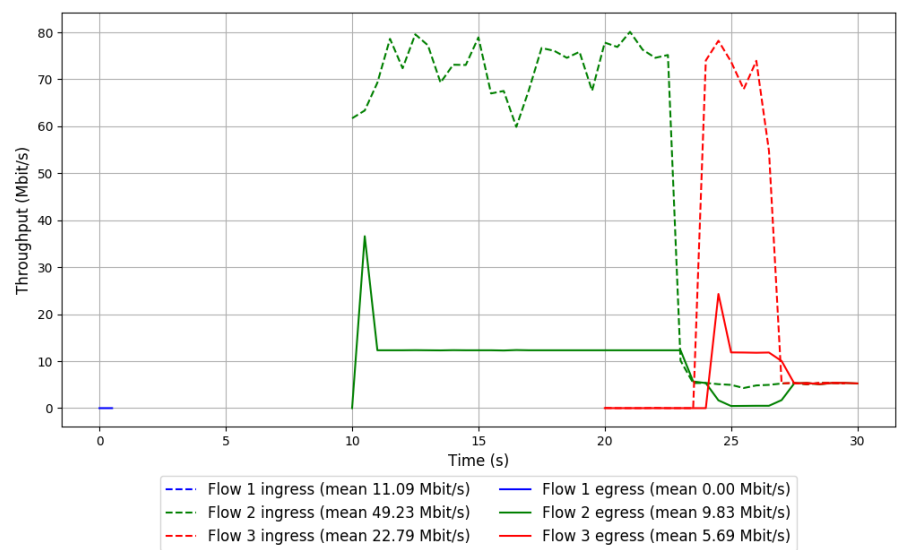
200

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

Start at: 2019-10-03 00:08:49
End at: 2019-10-03 00:09:19
Local clock offset: -7.154 ms
Remote clock offset: -0.15 ms

# Below is generated by plot.py at 2019-10-03 01:06:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 1.282 ms
Loss rate: 84.02%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 6.89 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 83.31%
-- Flow 3:
Average throughput: 12.12 Mbit/s
95th percentile per-packet one-way delay: 1.318 ms
Loss rate: 84.77%
```
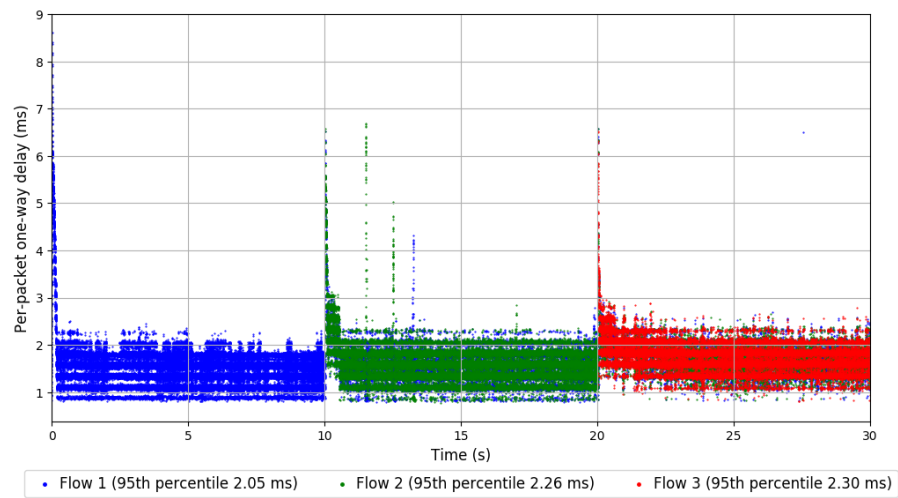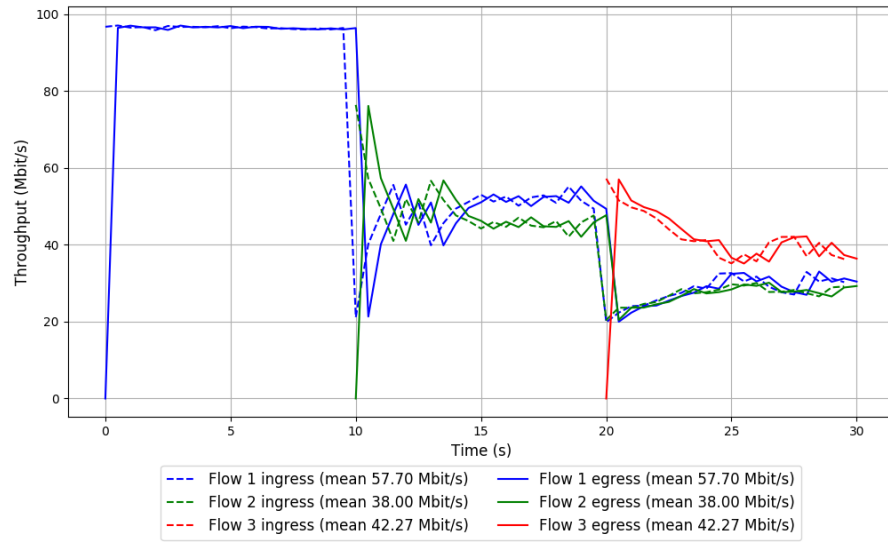
Run 4: Report of TaoVA-100x — Data Link

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

Start at: 2019-10-03 00:36:05
End at: 2019-10-03 00:36:35
Local clock offset: 1.937 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-10-03 01:06:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.44 Mbit/s
95th percentile per-packet one-way delay: 2.114 ms
Loss rate: 79.10%
-- Flow 1:
Average throughput: 0.00 Mbit/s
95th percentile per-packet one-way delay: 1.310 ms
Loss rate: 95.92%
-- Flow 2:
Average throughput: 9.83 Mbit/s
95th percentile per-packet one-way delay: 2.103 ms
Loss rate: 80.04%
-- Flow 3:
Average throughput: 5.69 Mbit/s
95th percentile per-packet one-way delay: 2.168 ms
Loss rate: 75.04%
```
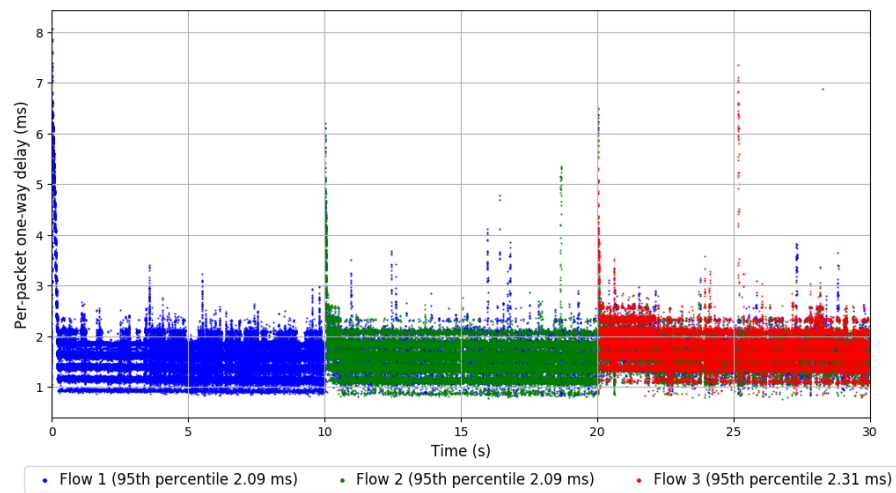
Run 5: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 11.09 Mbit/s) ——— Flow 1 egress (mean 0.00 Mbit/s)
- - - - Flow 2 ingress (mean 49.23 Mbit/s) ——— Flow 2 egress (mean 9.83 Mbit/s)
- - - - Flow 3 ingress (mean 22.79 Mbit/s) ——— Flow 3 egress (mean 5.69 Mbit/s)

- Flow 1 (95th percentile 1.31 ms)   - Flow 2 (95th percentile 2.10 ms)   - Flow 3 (95th percentile 2.17 ms)
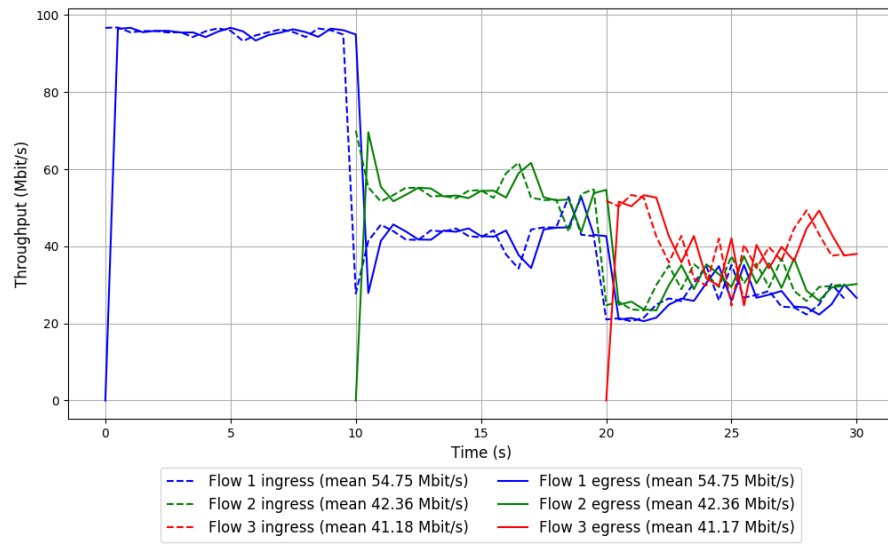
204

```
Run 1: Statistics of TCP Vegas

Start at: 2019-10-02 22:57:27
End at: 2019-10-02 22:57:57
Local clock offset: -5.531 ms
Remote clock offset: -0.276 ms


# Below is generated by plot.py at 2019-10-03 01:07:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.07 Mbit/s
95th percentile per-packet one-way delay: 2.099 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.70 Mbit/s
95th percentile per-packet one-way delay: 2.052 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.00 Mbit/s
95th percentile per-packet one-way delay: 2.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.27 Mbit/s
95th percentile per-packet one-way delay: 2.297 ms
Loss rate: 0.00%
```
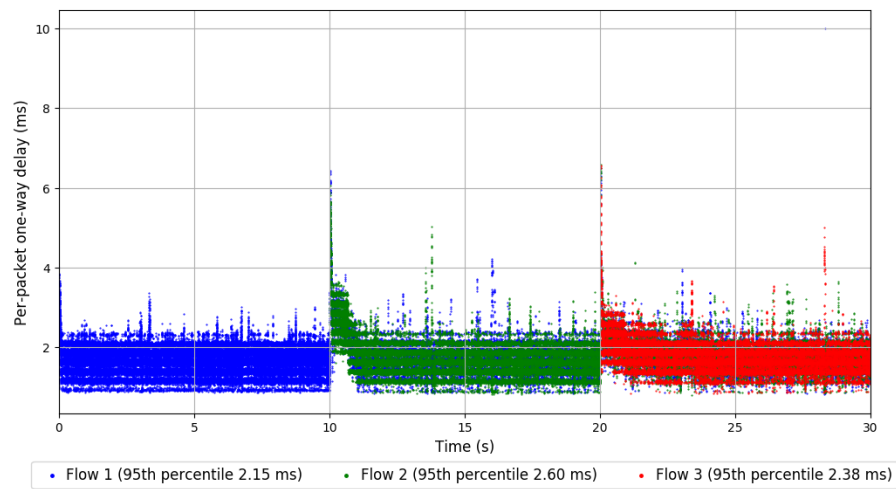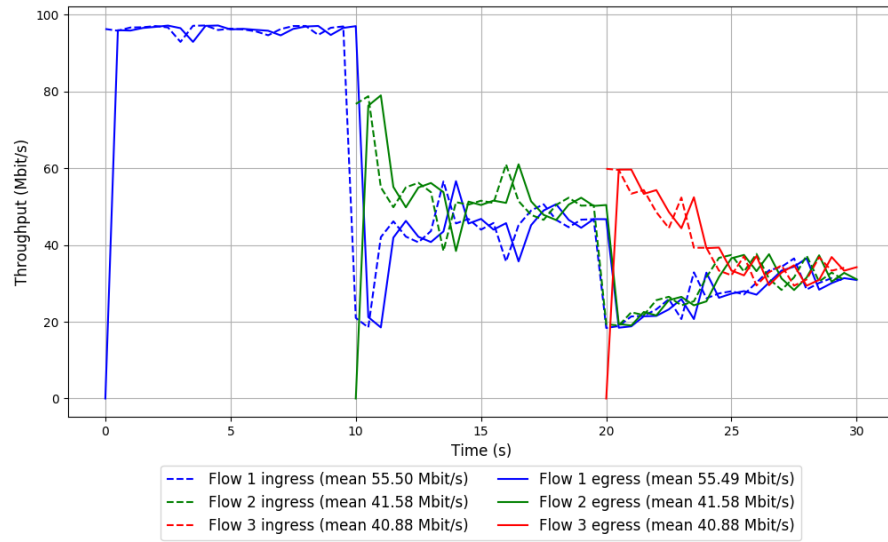
Run 1: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 57.70 Mbit/s) — Flow 1 egress (mean 57.70 Mbit/s)
Flow 2 ingress (mean 38.00 Mbit/s) — Flow 2 egress (mean 38.00 Mbit/s)
Flow 3 ingress (mean 42.27 Mbit/s) — Flow 3 egress (mean 42.27 Mbit/s)

Flow 1 (95th percentile 2.05 ms)   Flow 2 (95th percentile 2.26 ms)   Flow 3 (95th percentile 2.30 ms)

```
Run 2: Statistics of TCP Vegas

Start at: 2019-10-02 23:24:39
End at: 2019-10-02 23:25:09
Local clock offset: -5.379 ms
Remote clock offset: -0.264 ms


# Below is generated by plot.py at 2019-10-03 01:07:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.65 Mbit/s
95th percentile per-packet one-way delay: 2.110 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.75 Mbit/s
95th percentile per-packet one-way delay: 2.093 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.36 Mbit/s
95th percentile per-packet one-way delay: 2.093 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.17 Mbit/s
95th percentile per-packet one-way delay: 2.308 ms
Loss rate: 0.00%
```
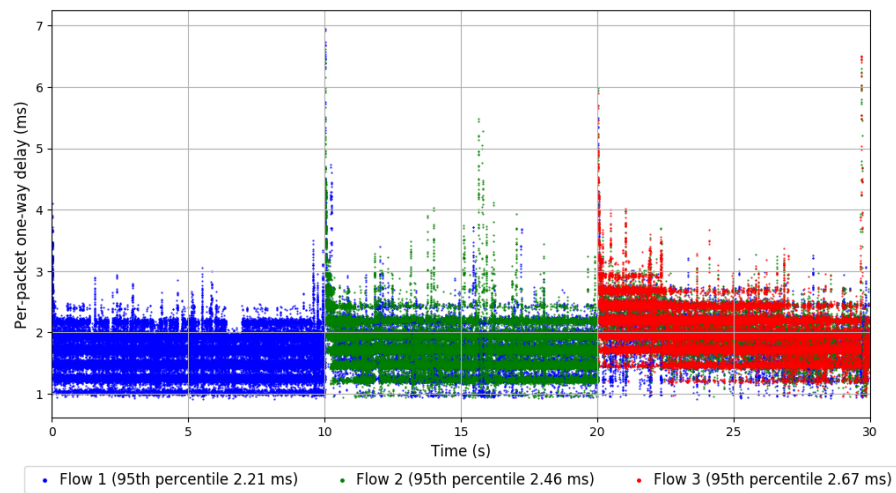
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-10-02 23:51:53
End at: 2019-10-02 23:52:23
Local clock offset: -6.814 ms
Remote clock offset: -0.249 ms


# Below is generated by plot.py at 2019-10-03 01:07:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.79 Mbit/s
95th percentile per-packet one-way delay: 2.345 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.49 Mbit/s
95th percentile per-packet one-way delay: 2.151 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.58 Mbit/s
95th percentile per-packet one-way delay: 2.605 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 40.88 Mbit/s
95th percentile per-packet one-way delay: 2.379 ms
Loss rate: 0.00%
```
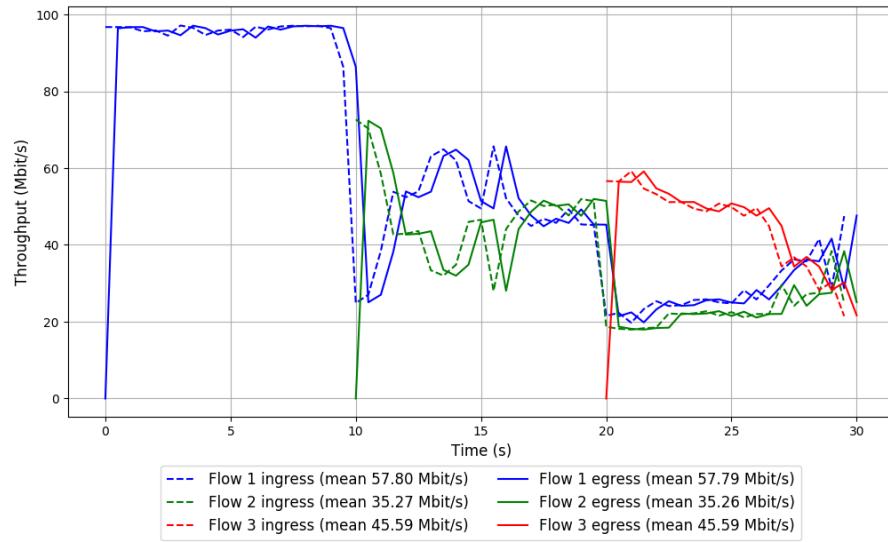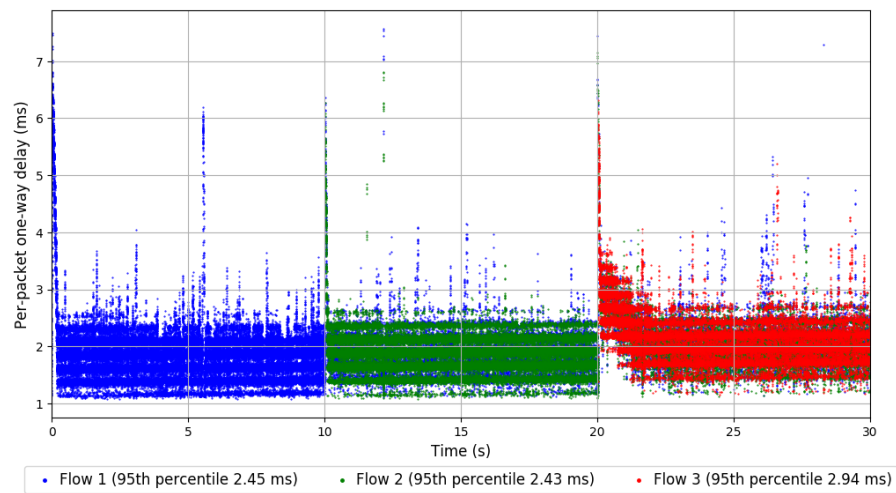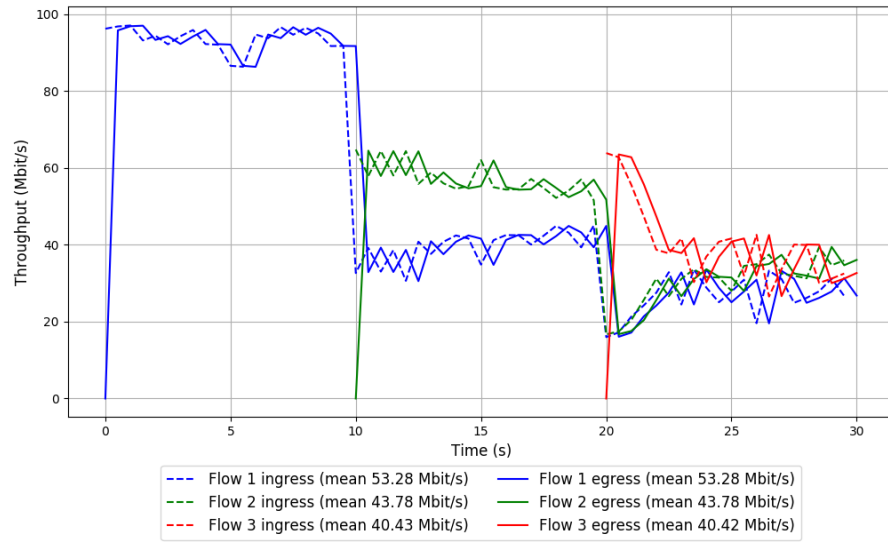
Run 3: Report of TCP Vegas — Data Link

- - - Flow 1 ingress (mean 55.50 Mbit/s) ——— Flow 1 egress (mean 55.49 Mbit/s)
- - - Flow 2 ingress (mean 41.58 Mbit/s) ——— Flow 2 egress (mean 41.58 Mbit/s)
- - - Flow 3 ingress (mean 40.88 Mbit/s) ——— Flow 3 egress (mean 40.88 Mbit/s)

• Flow 1 (95th percentile 2.15 ms)   • Flow 2 (95th percentile 2.60 ms)   • Flow 3 (95th percentile 2.38 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-10-03 00:19:09
End at: 2019-10-03 00:19:39
Local clock offset: -7.21 ms
Remote clock offset: 0.003 ms


# Below is generated by plot.py at 2019-10-03 01:07:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.44 Mbit/s
95th percentile per-packet one-way delay: 2.428 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.79 Mbit/s
95th percentile per-packet one-way delay: 2.210 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.26 Mbit/s
95th percentile per-packet one-way delay: 2.460 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.59 Mbit/s
95th percentile per-packet one-way delay: 2.667 ms
Loss rate: 0.00%
```
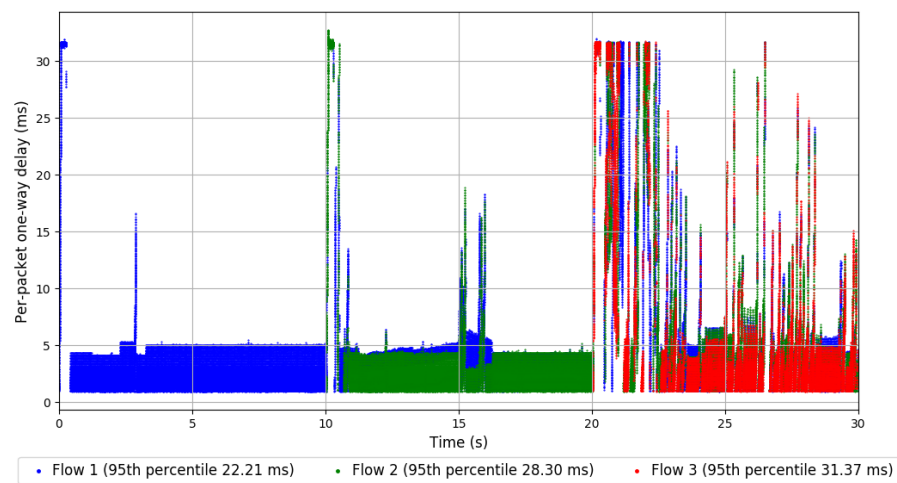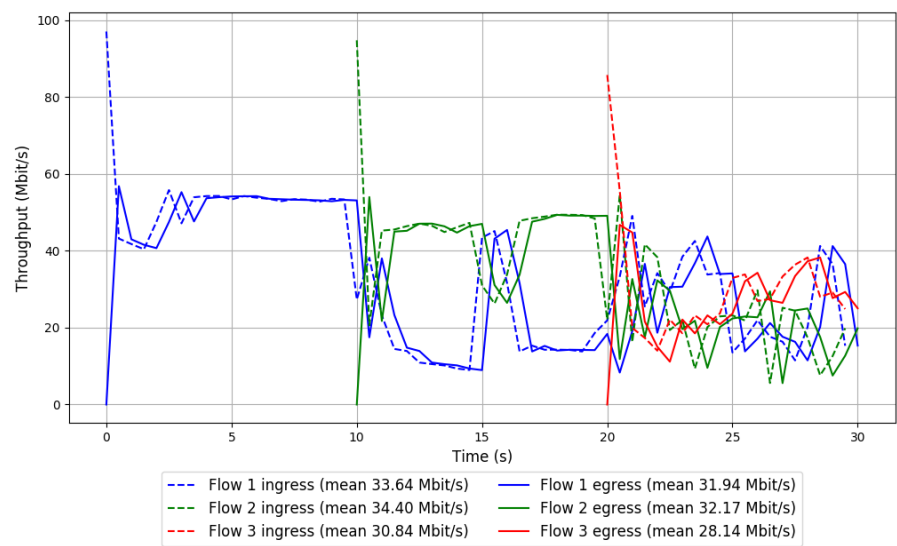
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-10-03 00:46:30
End at: 2019-10-03 00:47:00
Local clock offset: 5.641 ms
Remote clock offset: 0.045 ms


# Below is generated by plot.py at 2019-10-03 01:07:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 2.570 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.28 Mbit/s
95th percentile per-packet one-way delay: 2.449 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.78 Mbit/s
95th percentile per-packet one-way delay: 2.426 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 40.42 Mbit/s
95th percentile per-packet one-way delay: 2.939 ms
Loss rate: 0.00%
```
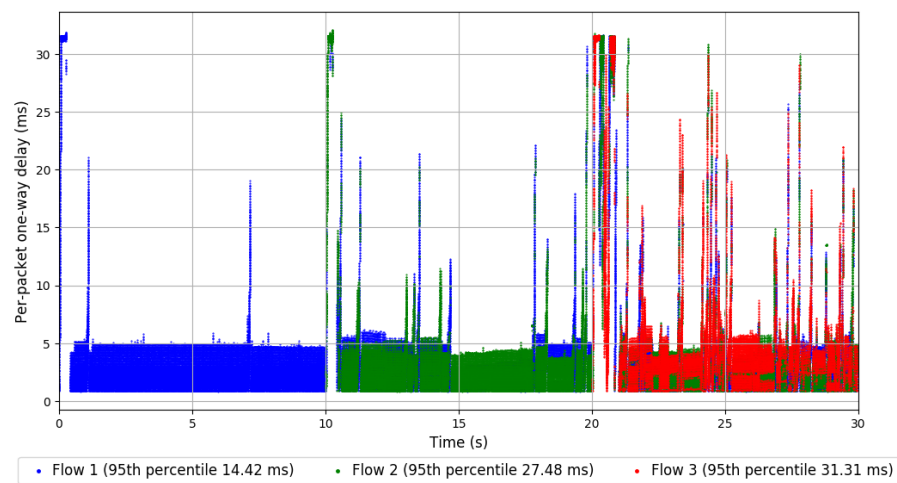
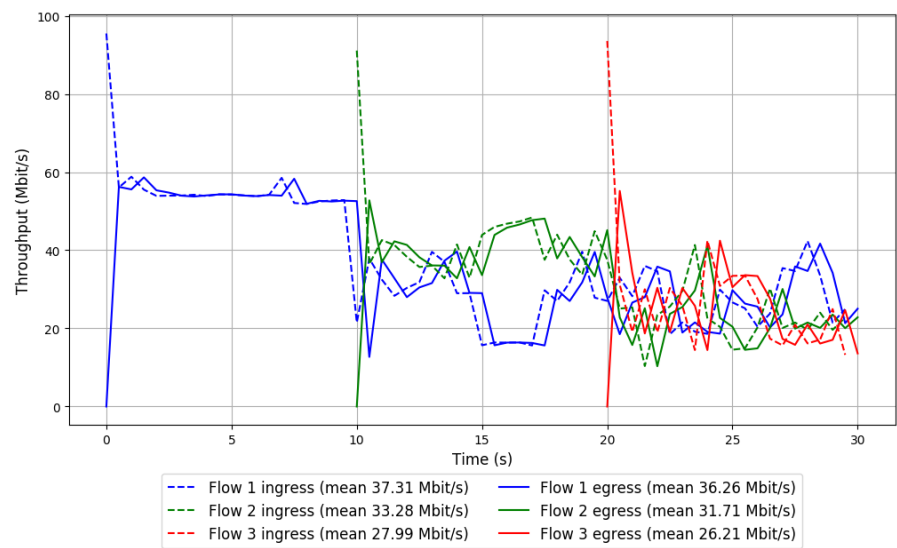Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-10-02 22:56:18
End at: 2019-10-02 22:56:48
Local clock offset: -5.562 ms
Remote clock offset: -0.153 ms

# Below is generated by plot.py at 2019-10-03 01:07:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.68 Mbit/s
95th percentile per-packet one-way delay: 27.610 ms
Loss rate: 6.09%
-- Flow 1:
Average throughput: 31.94 Mbit/s
95th percentile per-packet one-way delay: 22.207 ms
Loss rate: 5.02%
-- Flow 2:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 28.297 ms
Loss rate: 6.46%
-- Flow 3:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 31.369 ms
Loss rate: 8.76%
```
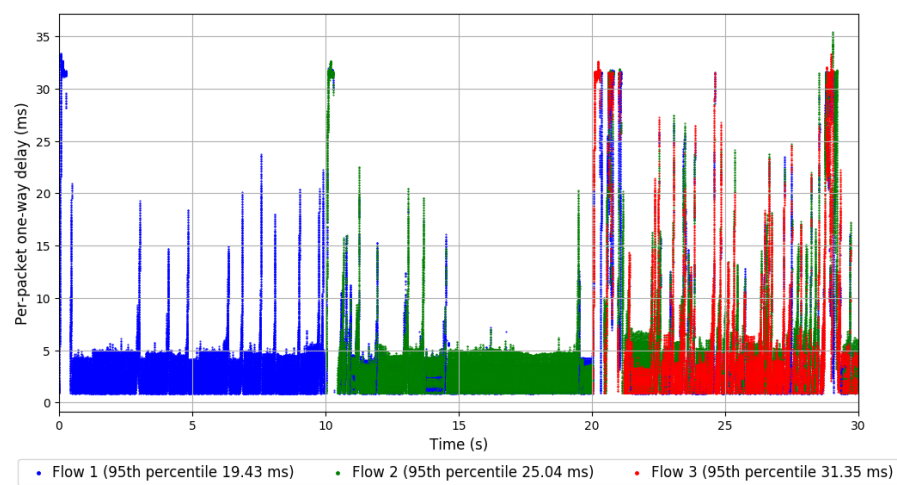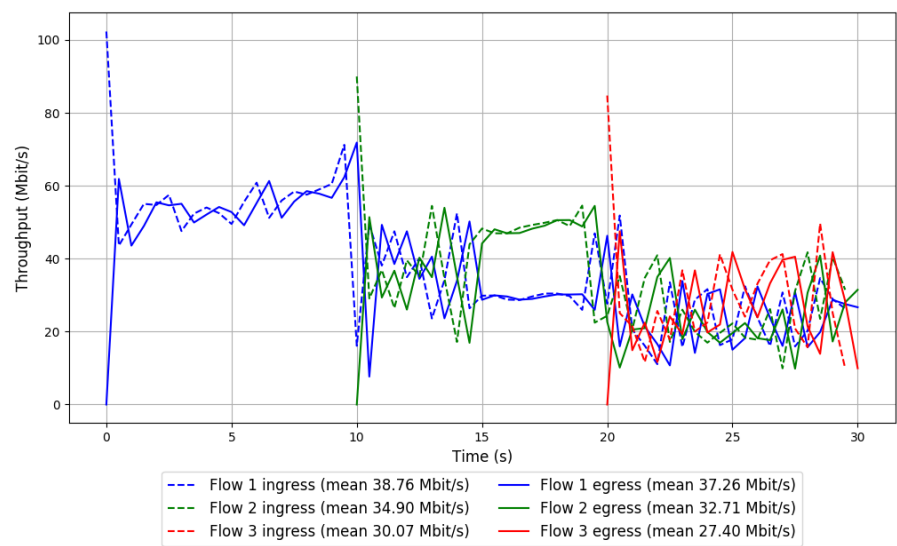
Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-10-02 23:23:30
End at: 2019-10-02 23:24:00
Local clock offset: -5.374 ms
Remote clock offset: -0.281 ms


# Below is generated by plot.py at 2019-10-03 01:07:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.08 Mbit/s
95th percentile per-packet one-way delay: 22.683 ms
Loss rate: 3.90%
-- Flow 1:
Average throughput: 36.26 Mbit/s
95th percentile per-packet one-way delay: 14.419 ms
Loss rate: 2.82%
-- Flow 2:
Average throughput: 31.71 Mbit/s
95th percentile per-packet one-way delay: 27.478 ms
Loss rate: 4.67%
-- Flow 3:
Average throughput: 26.21 Mbit/s
95th percentile per-packet one-way delay: 31.309 ms
Loss rate: 6.34%
```
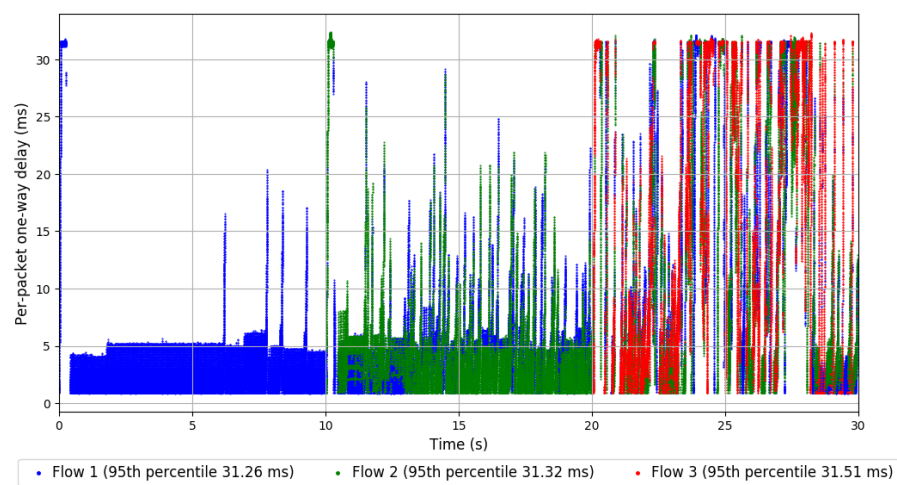
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-10-02 23:50:44
End at: 2019-10-02 23:51:14
Local clock offset: -6.874 ms
Remote clock offset: -0.271 ms


# Below is generated by plot.py at 2019-10-03 01:07:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.12 Mbit/s
95th percentile per-packet one-way delay: 25.003 ms
Loss rate: 5.33%
-- Flow 1:
Average throughput: 37.26 Mbit/s
95th percentile per-packet one-way delay: 19.435 ms
Loss rate: 3.87%
-- Flow 2:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 25.039 ms
Loss rate: 6.25%
-- Flow 3:
Average throughput: 27.40 Mbit/s
95th percentile per-packet one-way delay: 31.350 ms
Loss rate: 8.86%
```
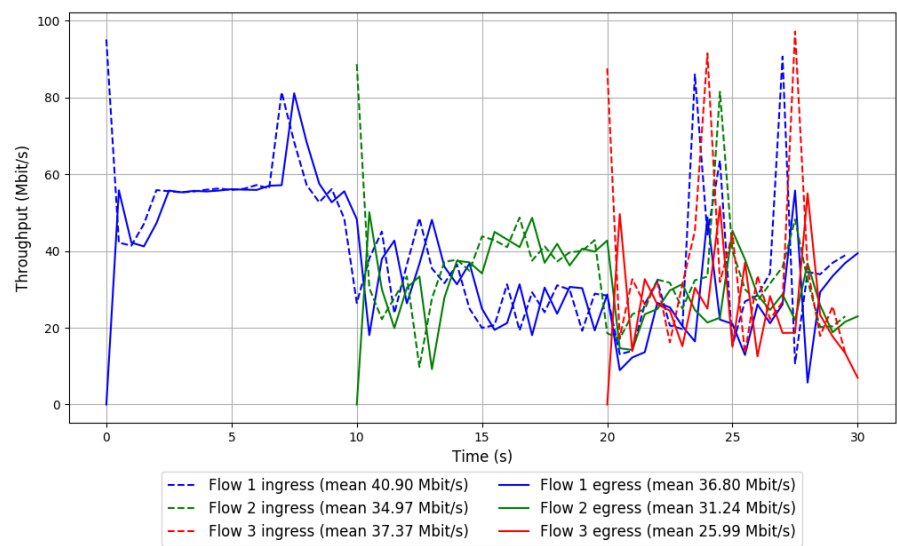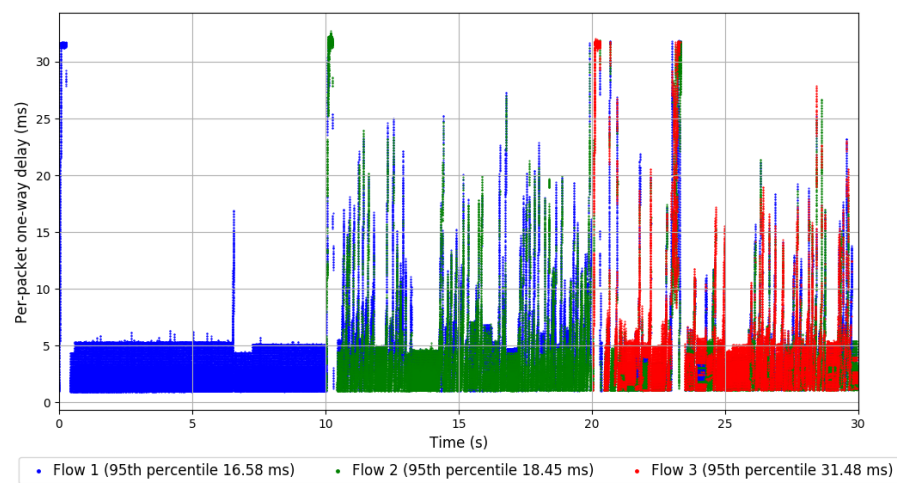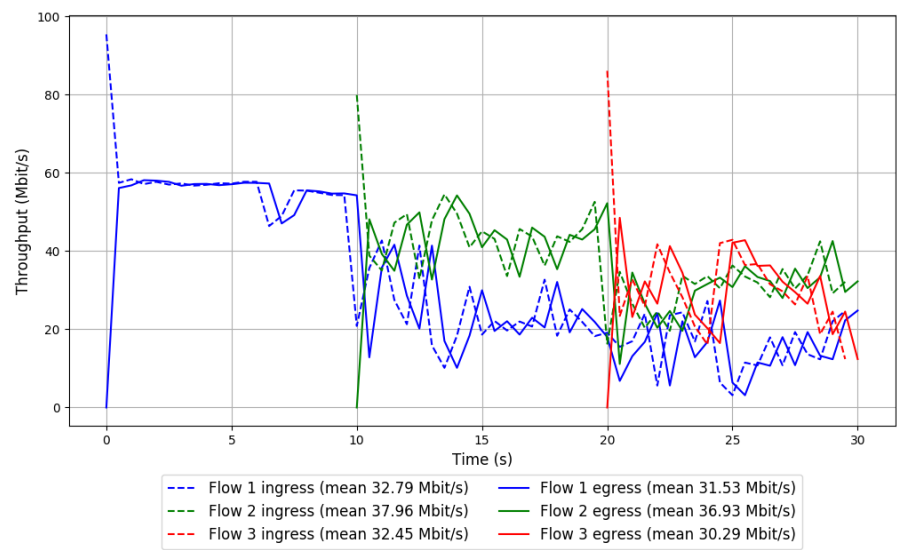
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 38.76 Mbit/s) --- Flow 1 egress (mean 37.26 Mbit/s)
Flow 2 ingress (mean 34.90 Mbit/s) --- Flow 2 egress (mean 32.71 Mbit/s)
Flow 3 ingress (mean 30.07 Mbit/s) --- Flow 3 egress (mean 27.40 Mbit/s)

Flow 1 (95th percentile 19.43 ms)   Flow 2 (95th percentile 25.04 ms)   Flow 3 (95th percentile 31.35 ms)

```
Run 4: Statistics of Verus

Start at: 2019-10-03 00:18:00
End at: 2019-10-03 00:18:30
Local clock offset: -7.189 ms
Remote clock offset: -0.036 ms


# Below is generated by plot.py at 2019-10-03 01:08:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.19 Mbit/s
95th percentile per-packet one-way delay: 31.339 ms
Loss rate: 13.51%
-- Flow 1:
Average throughput: 36.80 Mbit/s
95th percentile per-packet one-way delay: 31.263 ms
Loss rate: 10.01%
-- Flow 2:
Average throughput: 31.24 Mbit/s
95th percentile per-packet one-way delay: 31.322 ms
Loss rate: 10.62%
-- Flow 3:
Average throughput: 25.99 Mbit/s
95th percentile per-packet one-way delay: 31.510 ms
Loss rate: 30.48%
```

Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-10-03 00:45:21
End at: 2019-10-03 00:45:51
Local clock offset: 5.338 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2019-10-03 01:08:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.16 Mbit/s
95th percentile per-packet one-way delay: 19.285 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 16.578 ms
Loss rate: 3.83%
-- Flow 2:
Average throughput: 36.93 Mbit/s
95th percentile per-packet one-way delay: 18.449 ms
Loss rate: 2.69%
-- Flow 3:
Average throughput: 30.29 Mbit/s
95th percentile per-packet one-way delay: 31.483 ms
Loss rate: 6.63%
```
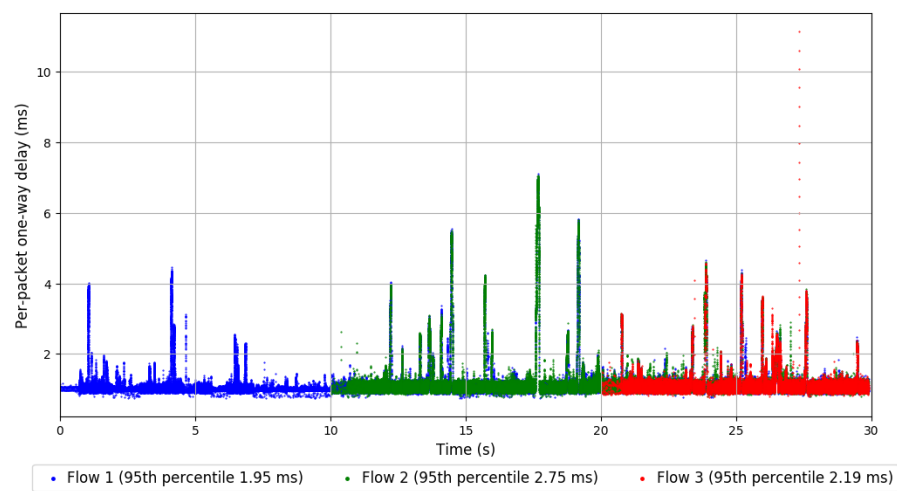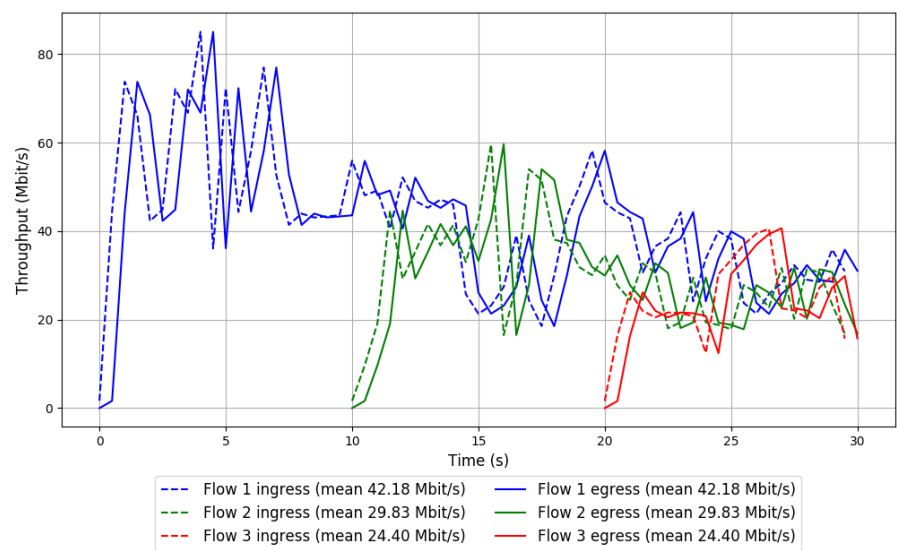
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-10-02 22:49:23
End at: 2019-10-02 22:49:53
Local clock offset: -5.586 ms
Remote clock offset: -0.15 ms


# Below is generated by plot.py at 2019-10-03 01:08:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.07 Mbit/s
95th percentile per-packet one-way delay: 2.230 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.18 Mbit/s
95th percentile per-packet one-way delay: 1.945 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 2.748 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.40 Mbit/s
95th percentile per-packet one-way delay: 2.193 ms
Loss rate: 0.00%
```

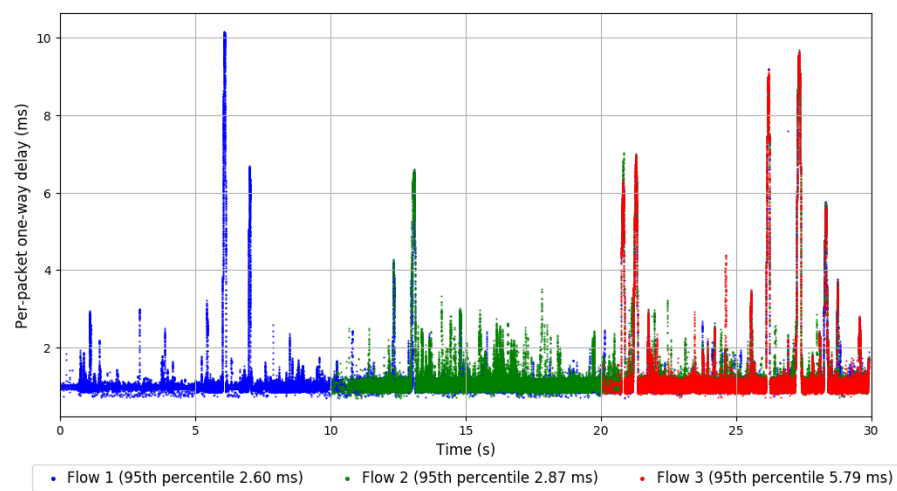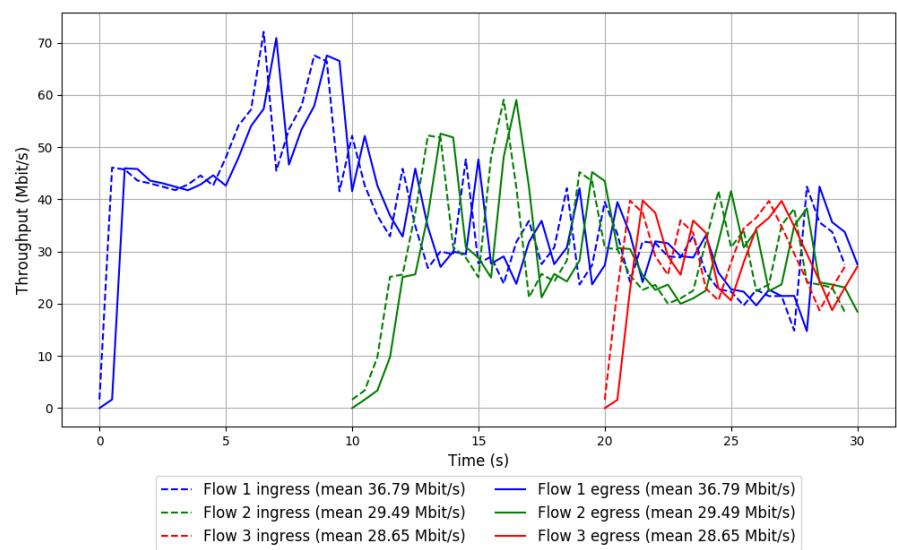Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-10-02 23:16:39
End at: 2019-10-02 23:17:09
Local clock offset: -5.444 ms
Remote clock offset: -0.293 ms


# Below is generated by plot.py at 2019-10-03 01:08:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.86 Mbit/s
95th percentile per-packet one-way delay: 3.174 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 36.79 Mbit/s
95th percentile per-packet one-way delay: 2.595 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.49 Mbit/s
95th percentile per-packet one-way delay: 2.873 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 28.65 Mbit/s
95th percentile per-packet one-way delay: 5.793 ms
Loss rate: 0.00%
```

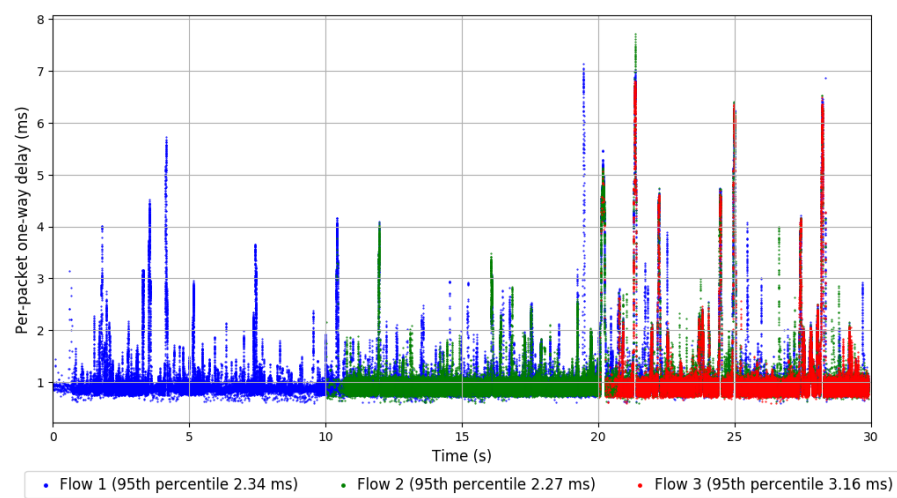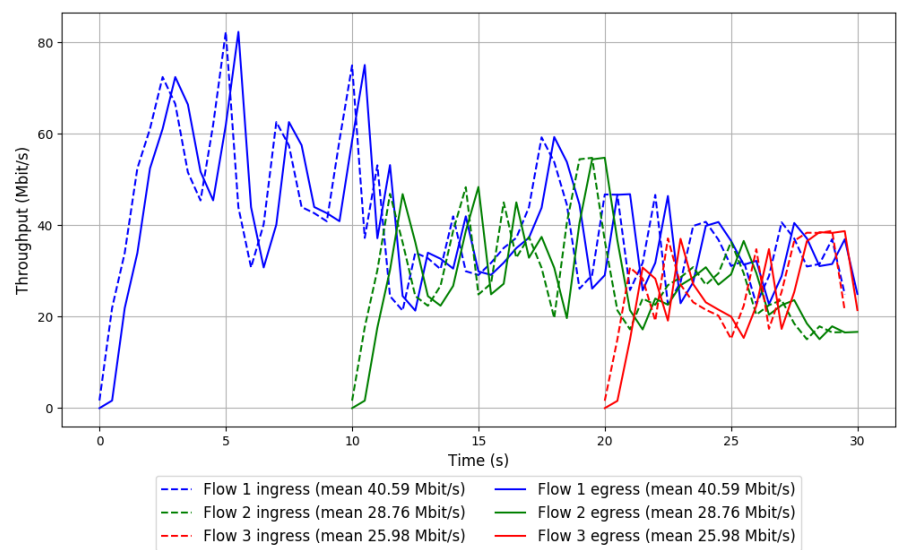Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-10-02 23:43:51
End at: 2019-10-02 23:44:21
Local clock offset: -6.623 ms
Remote clock offset: -0.306 ms


# Below is generated by plot.py at 2019-10-03 01:08:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.29 Mbit/s
95th percentile per-packet one-way delay: 2.386 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.59 Mbit/s
95th percentile per-packet one-way delay: 2.343 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.76 Mbit/s
95th percentile per-packet one-way delay: 2.269 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.98 Mbit/s
95th percentile per-packet one-way delay: 3.157 ms
Loss rate: 0.00%
```
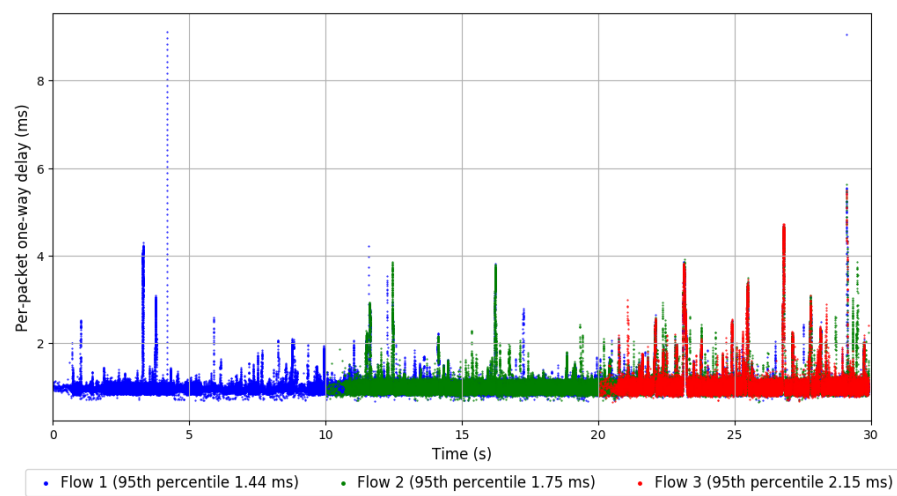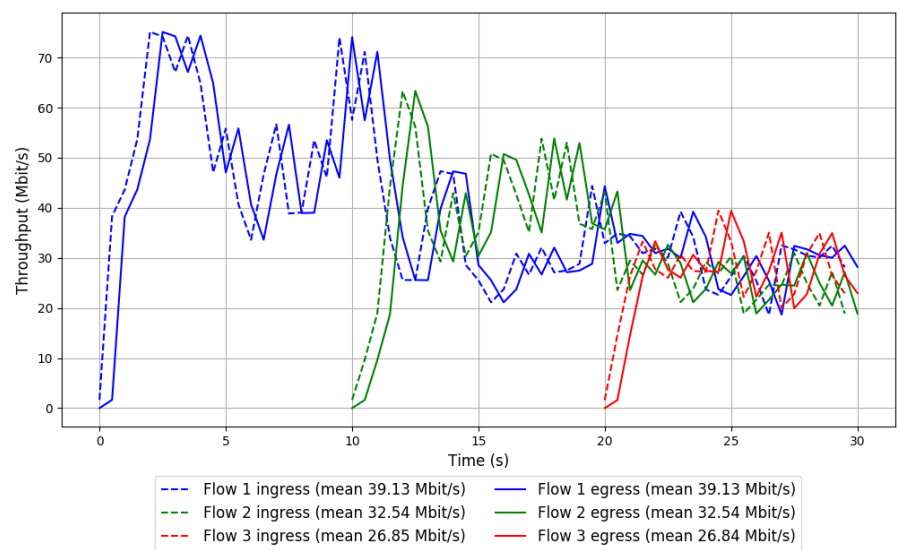
Run 3: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 40.59 Mbit/s) ——— Flow 1 egress (mean 40.59 Mbit/s)
- - - - Flow 2 ingress (mean 28.76 Mbit/s) ——— Flow 2 egress (mean 28.76 Mbit/s)
- - - - Flow 3 ingress (mean 25.98 Mbit/s) ——— Flow 3 egress (mean 25.98 Mbit/s)

- Flow 1 (95th percentile 2.34 ms)   • Flow 2 (95th percentile 2.27 ms)   • Flow 3 (95th percentile 3.16 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-10-03 00:11:04
End at: 2019-10-03 00:11:34
Local clock offset: -7.114 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.64 Mbit/s
95th percentile per-packet one-way delay: 1.652 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 39.13 Mbit/s
95th percentile per-packet one-way delay: 1.444 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.54 Mbit/s
95th percentile per-packet one-way delay: 1.745 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.84 Mbit/s
95th percentile per-packet one-way delay: 2.153 ms
Loss rate: 0.00%
```

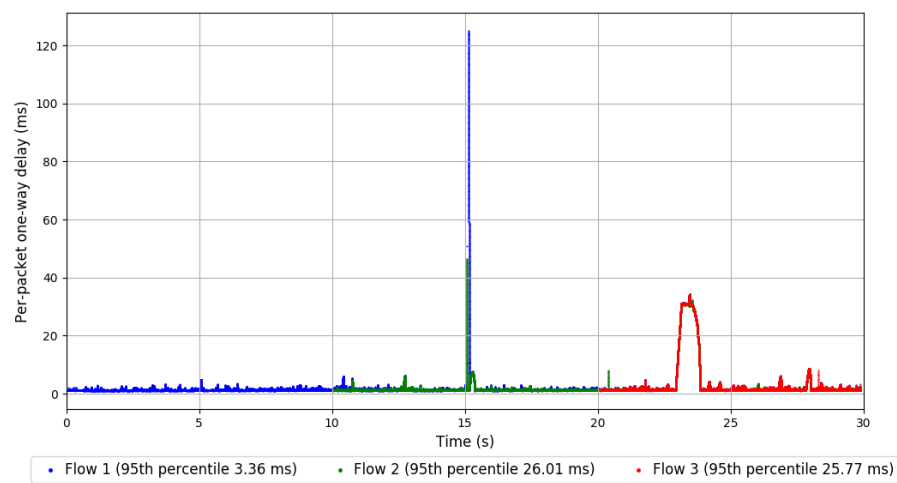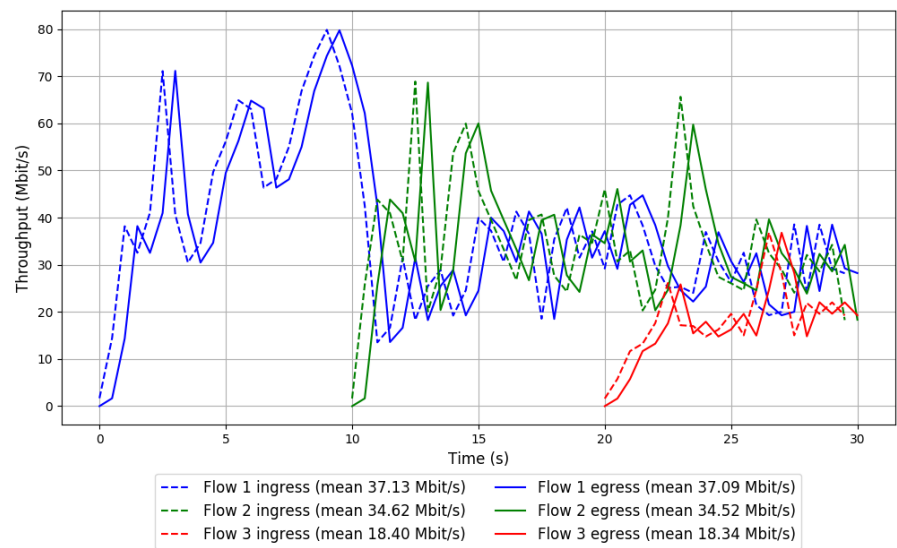Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-10-03 00:38:20
End at: 2019-10-03 00:38:50
Local clock offset: 2.977 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.10 Mbit/s
95th percentile per-packet one-way delay: 7.332 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 37.09 Mbit/s
95th percentile per-packet one-way delay: 3.356 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 34.52 Mbit/s
95th percentile per-packet one-way delay: 26.010 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 18.34 Mbit/s
95th percentile per-packet one-way delay: 25.769 ms
Loss rate: 0.32%
```

Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-10-02 22:42:38
End at: 2019-10-02 22:43:08
Local clock offset: -5.582 ms
Remote clock offset: -0.29 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 3.360 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.584 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.144 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.341 ms
Loss rate: 0.00%
```
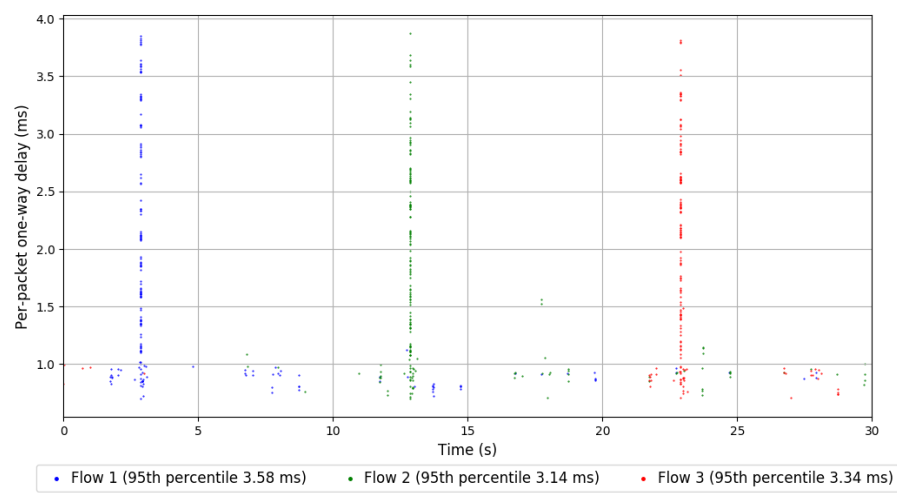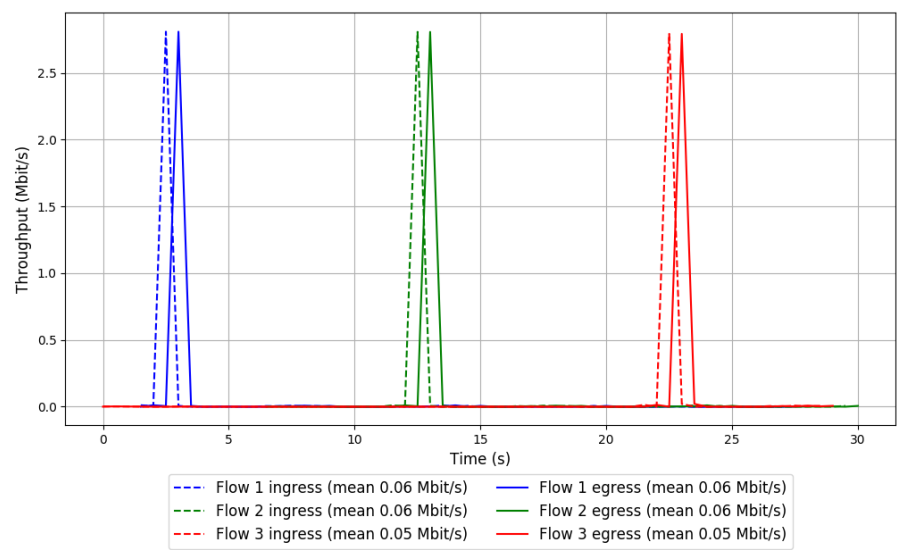
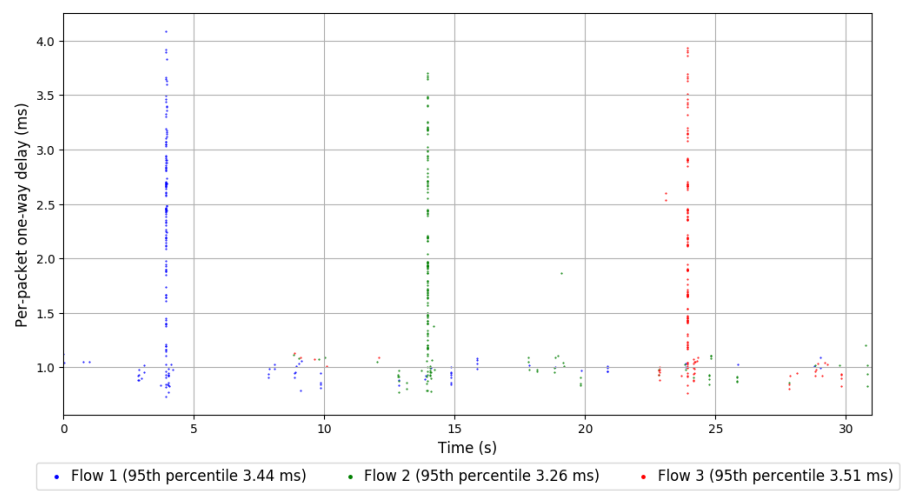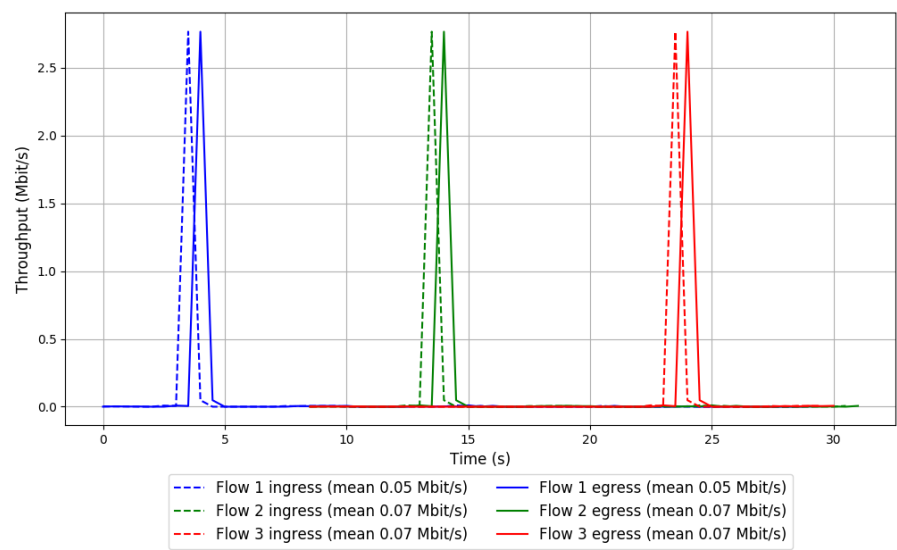Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-10-02 23:09:54
End at: 2019-10-02 23:10:24
Local clock offset: -5.504 ms
Remote clock offset: -0.315 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 3.442 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.442 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 3.257 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 3.510 ms
Loss rate: 0.00%
```

Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-10-02 23:37:07
End at: 2019-10-02 23:37:37
Local clock offset: -6.389 ms
Remote clock offset: -0.25 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 3.545 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.520 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.592 ms
Loss rate: 0.00%
```
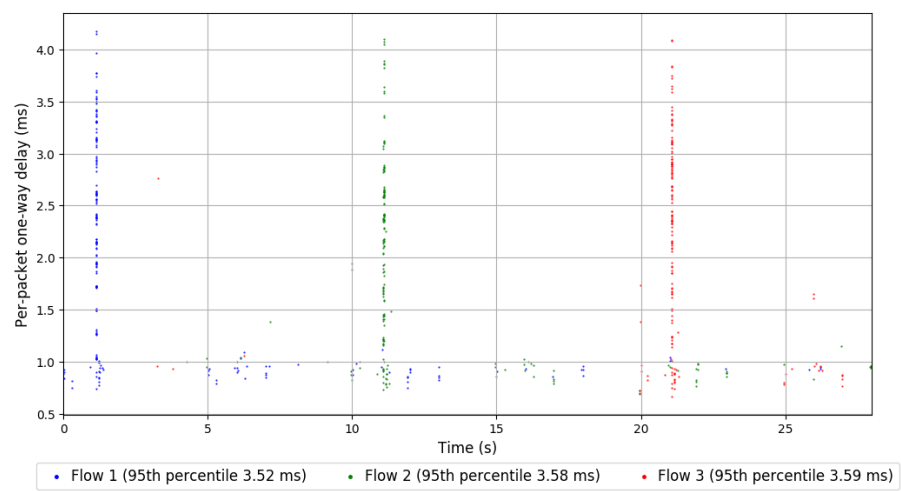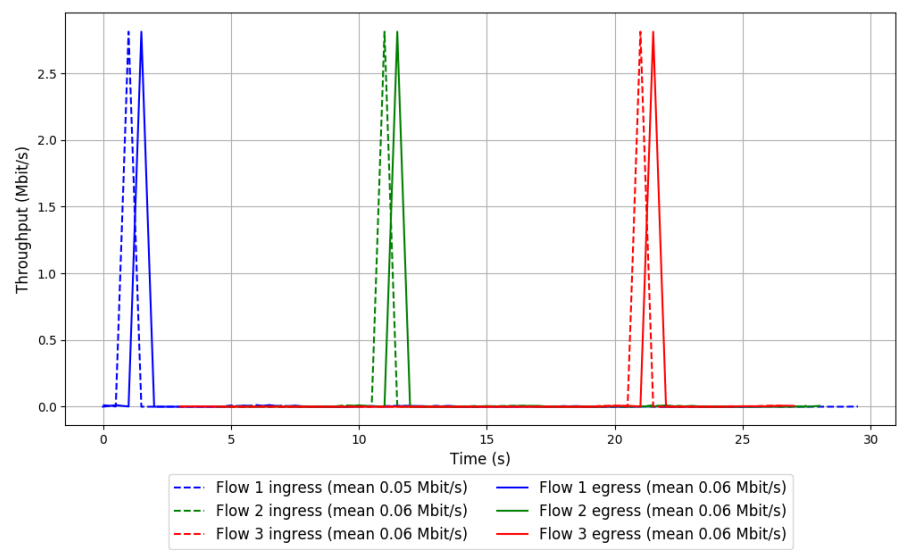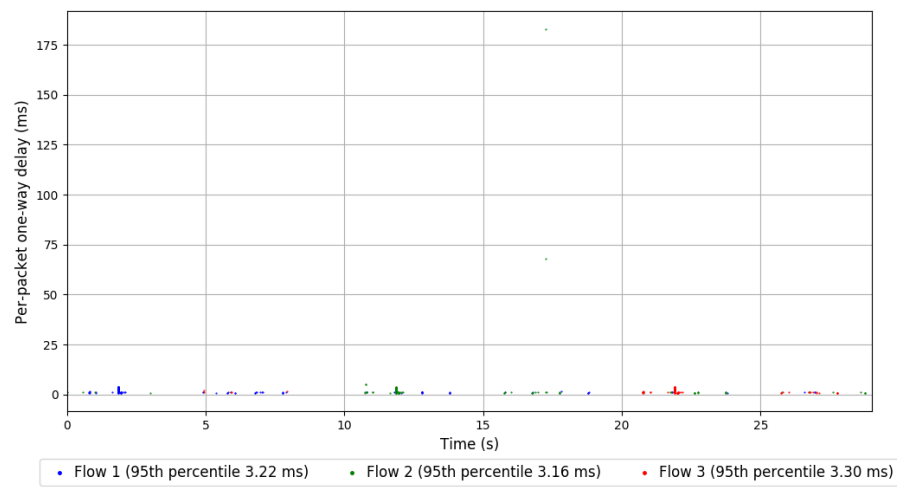
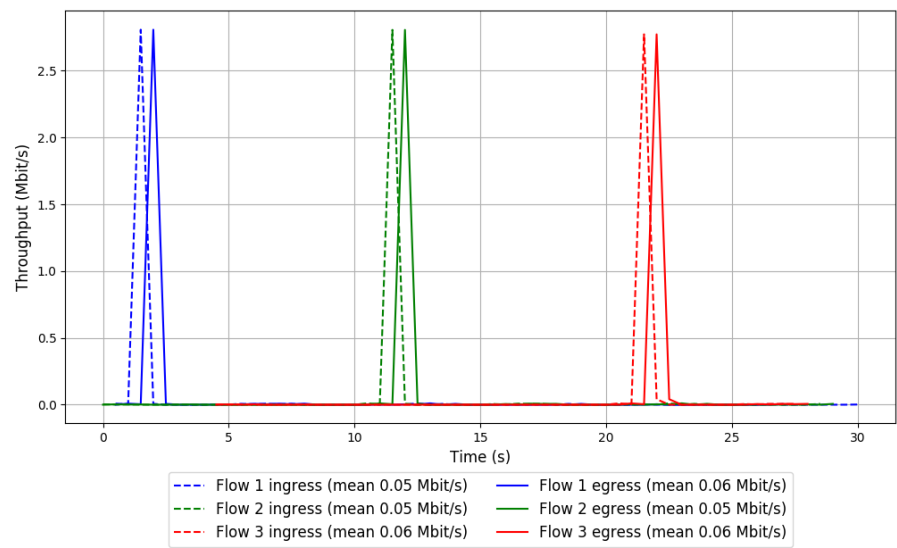Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-10-03 00:04:20
End at: 2019-10-03 00:04:50
Local clock offset: -7.007 ms
Remote clock offset: -0.179 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 3.290 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.216 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.160 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.304 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-10-03 00:31:35
End at: 2019-10-03 00:32:05
Local clock offset: -0.707 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-10-03 01:08:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.15 Mbit/s
95th percentile per-packet one-way delay: 3.981 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.712 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 3.987 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.209 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link