Pantheon Report

Generated at 2019-07-12 19:56:36 (UTC).

Data path: Stanford on **eno1** (*remote*) →AWS California 1 on **ens5** (*local*).

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 `time.stanford.edu` and have been applied to correct the timestamps in logs.
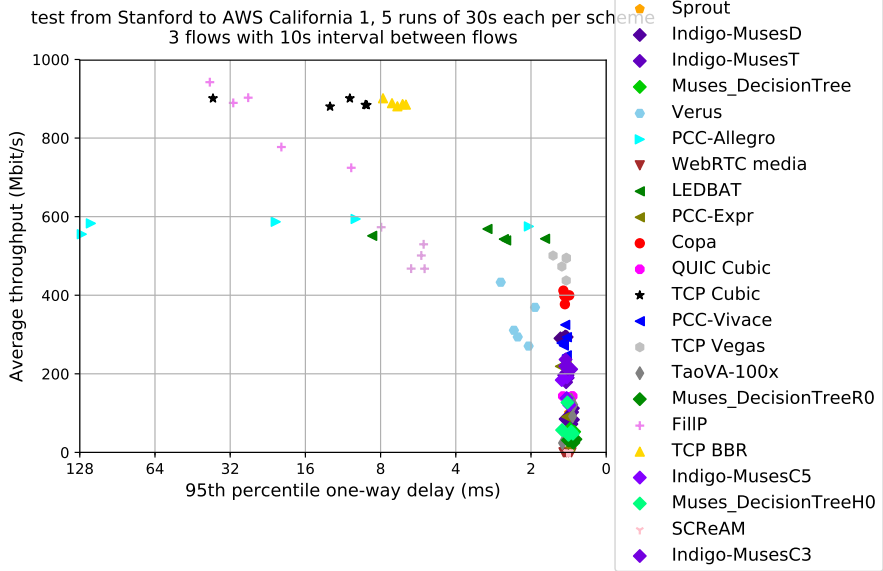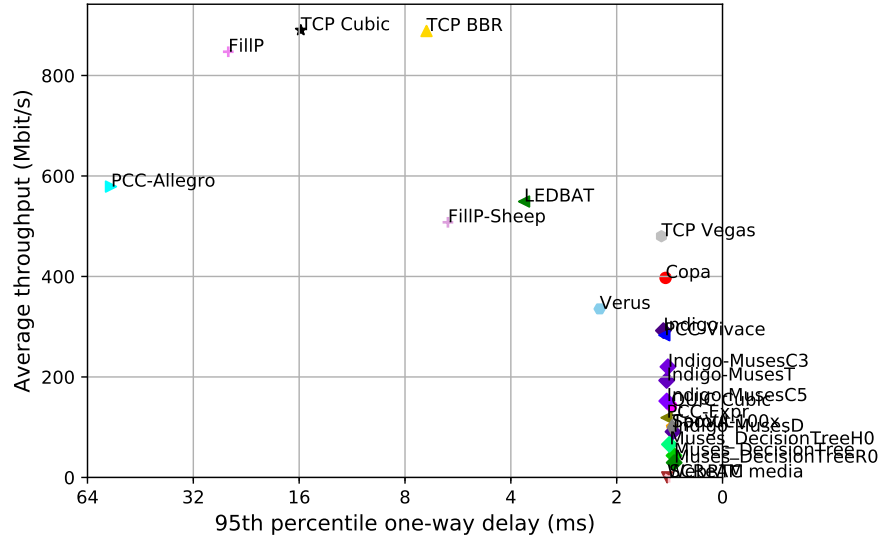
```
System info:
Linux 4.15.0-1041-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ 2076e1149a241f3edb4365d686df32342bf9561f
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 @ 8bb93ffff2b107204a92d8b72449fc0c55e15f00
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 Stanford to AWS California 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)

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

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	509.79	404.65	328.68	6.88	6.42	6.65	0.03	0.03	0.06
Copa	5	243.32	178.83	104.82	1.12	1.01	0.98	0.00	0.01	0.02
TCP Cubic	5	515.01	402.73	321.31	16.58	7.57	7.76	0.03	0.03	0.08
FillP	5	538.57	347.34	234.90	23.77	21.53	26.98	0.04	0.05	0.22
FillP-Sheep	5	381.86	168.84	41.65	6.37	4.97	3.36	0.00	0.00	0.00
Indigo	5	156.49	142.46	125.47	1.07	1.16	1.18	0.01	0.01	0.00
Indigo-MusesC3	5	163.16	75.07	42.27	1.01	1.09	0.99	0.01	0.01	0.04
Indigo-MusesC5	5	91.96	81.44	33.68	1.02	1.11	0.94	0.00	0.02	0.01
Indigo-MusesD	5	58.00	34.90	42.67	0.94	0.92	0.92	0.00	0.01	0.04
Indigo-MusesT	5	143.59	64.56	37.49	1.06	1.06	1.01	0.00	0.01	0.04
LEDBAT	5	323.21	247.46	184.30	4.14	2.15	1.75	0.00	0.00	0.01
Muses_DecisionTree	5	17.03	29.06	23.09	0.91	0.92	0.93	0.01	0.01	0.01
Muses_DecisionTreeH0	5	43.31	25.05	18.95	1.00	1.00	1.01	0.00	0.01	0.01
Muses_DecisionTreeR0	5	13.93	15.31	17.17	0.92	0.90	0.92	0.01	0.00	0.01
PCC-Allegro	5	447.61	162.60	70.60	58.66	1.73	1.16	0.03	0.00	0.02
PCC-Expr	5	60.64	71.43	32.57	1.05	1.05	1.00	0.00	0.01	0.01
QUIC Cubic	5	77.24	68.09	60.42	0.97	0.95	0.99	0.00	0.01	0.02
SCReAM	5	0.22	0.22	0.22	1.02	1.00	0.98	0.00	0.00	0.21
Sprout	5	50.25	50.19	49.84	0.96	0.95	0.97	0.01	0.00	0.05
TaoVA-100x	5	75.06	27.56	19.12	0.96	0.94	0.98	0.00	0.00	0.01
TCP Vegas	5	230.53	255.24	239.43	1.21	1.14	1.27	0.00	0.01	0.02
Verus	5	175.55	197.63	95.27	2.28	2.93	1.77	0.01	0.02	0.00
PCC-Vivace	5	181.35	107.22	92.16	1.02	1.23	1.23	0.00	0.01	0.01
WebRTC media	5	0.05	0.05	0.05	1.04	1.03	1.05	0.01	0.01	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-07-12 16:26:17
End at: 2019-07-12 16:26:47
Local clock offset: 6.234 ms
Remote clock offset: 4.67 ms


# Below is generated by plot.py at 2019-07-12 19:06:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 888.84 Mbit/s
95th percentile per-packet one-way delay: 7.201 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 510.31 Mbit/s
95th percentile per-packet one-way delay: 6.450 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.04 Mbit/s
95th percentile per-packet one-way delay: 7.394 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.82 Mbit/s
95th percentile per-packet one-way delay: 7.798 ms
Loss rate: 0.07%
```
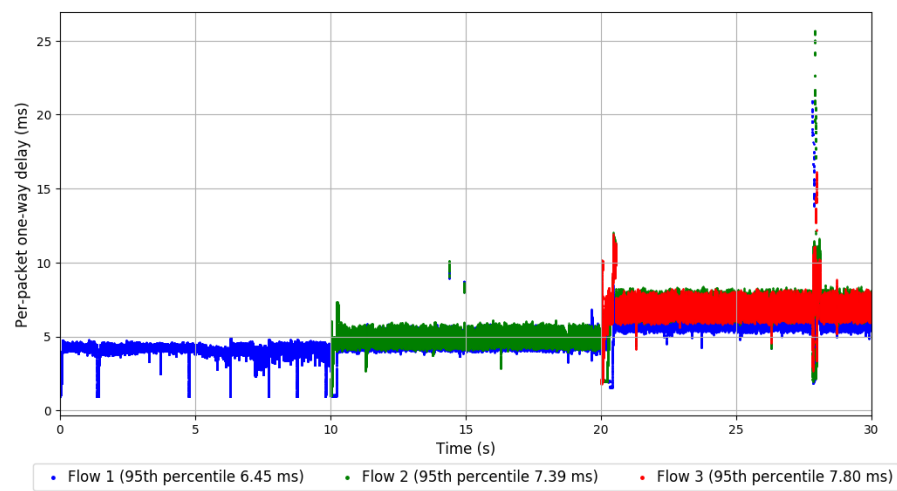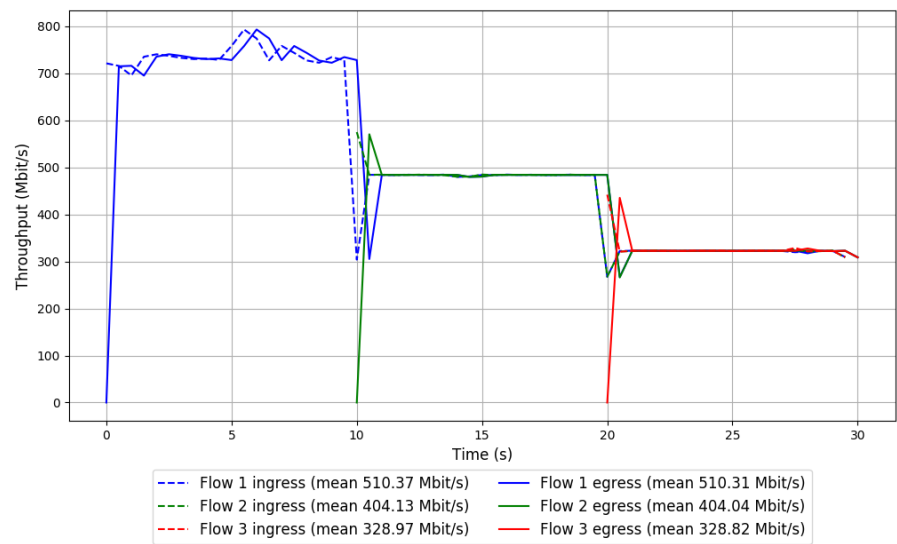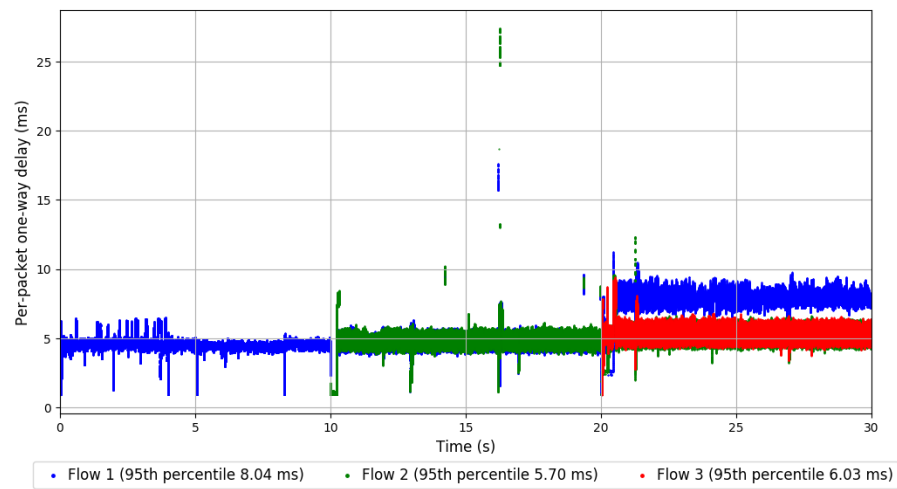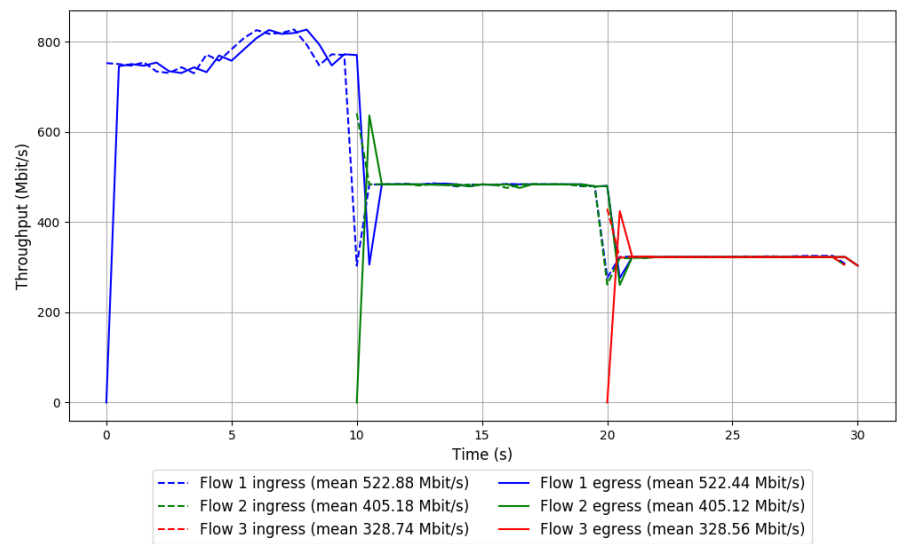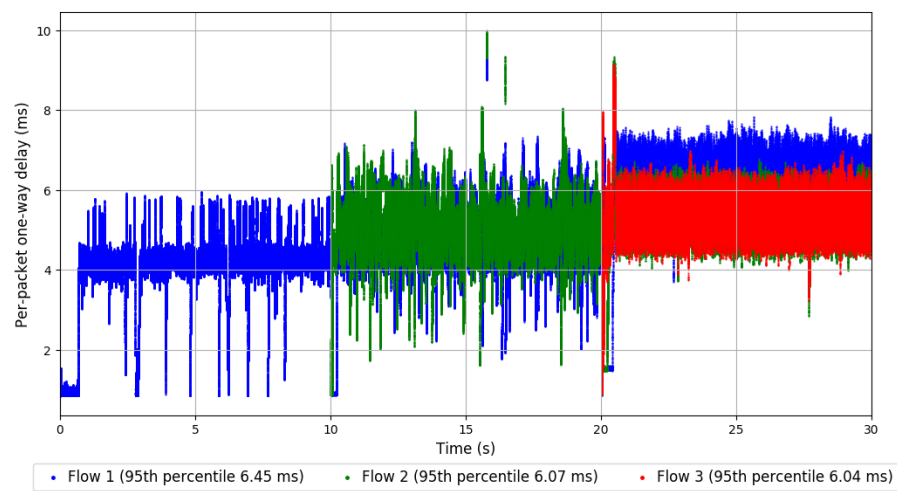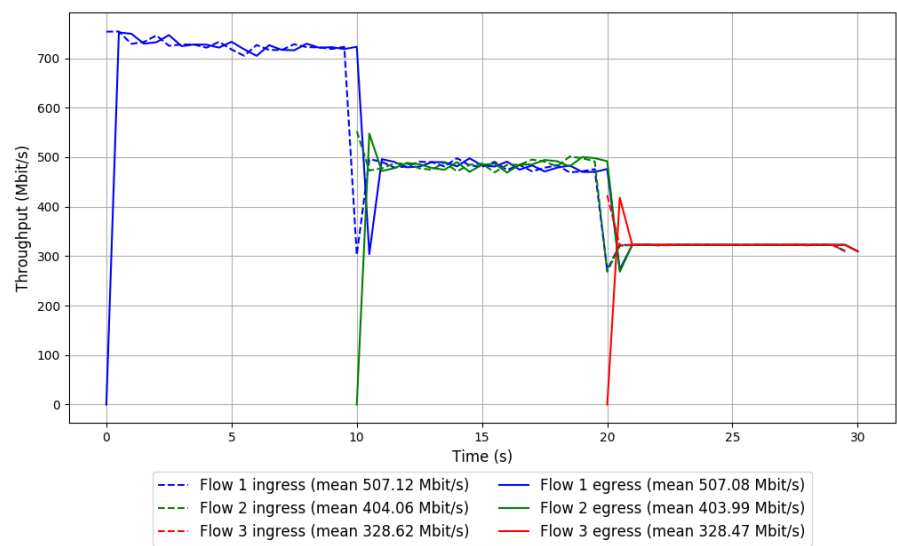
Run 1: Report of TCP BBR — Data Link

- - - - Flow 1 ingress (mean 510.37 Mbit/s) —— Flow 1 egress (mean 510.31 Mbit/s)
- - - - Flow 2 ingress (mean 404.13 Mbit/s) —— Flow 2 egress (mean 404.04 Mbit/s)
- - - - Flow 3 ingress (mean 328.97 Mbit/s) —— Flow 3 egress (mean 328.82 Mbit/s)

- Flow 1 (95th percentile 6.45 ms)　　• Flow 2 (95th percentile 7.39 ms)　　• Flow 3 (95th percentile 7.80 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-07-12 17:00:45
End at: 2019-07-12 17:01:15
Local clock offset: 6.858 ms
Remote clock offset: 3.233 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.37 Mbit/s
95th percentile per-packet one-way delay: 7.823 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 522.44 Mbit/s
95th percentile per-packet one-way delay: 8.037 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 405.12 Mbit/s
95th percentile per-packet one-way delay: 5.703 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 328.56 Mbit/s
95th percentile per-packet one-way delay: 6.030 ms
Loss rate: 0.06%
```
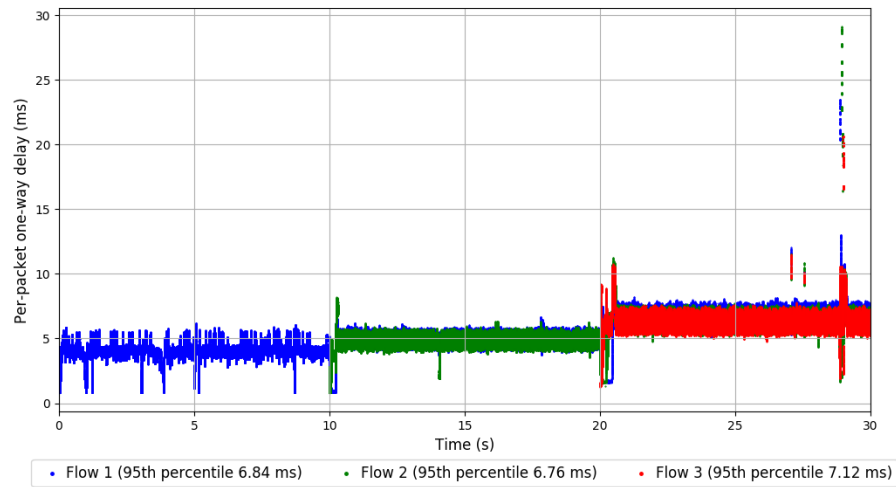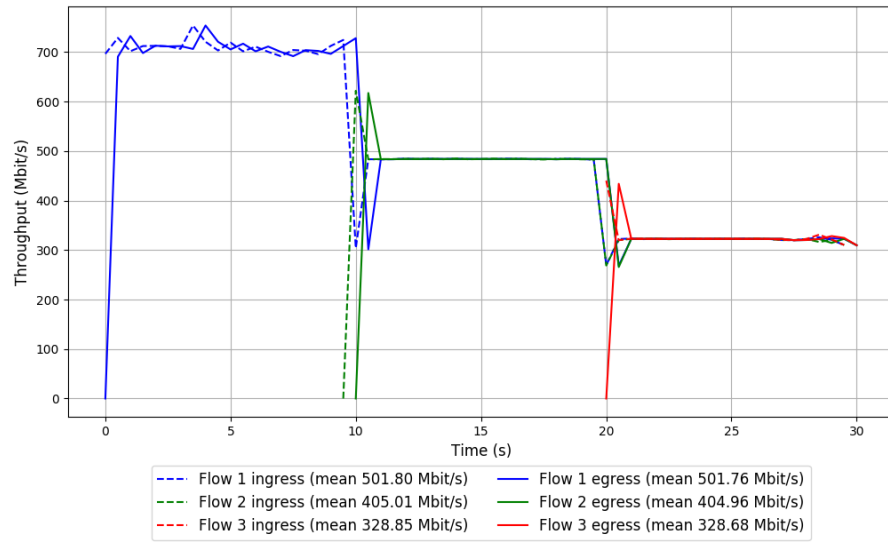
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-07-12 17:35:04
End at: 2019-07-12 17:35:34
Local clock offset: 6.758 ms
Remote clock offset: 3.259 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.23 Mbit/s
95th percentile per-packet one-way delay: 6.338 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 507.08 Mbit/s
95th percentile per-packet one-way delay: 6.447 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 403.99 Mbit/s
95th percentile per-packet one-way delay: 6.070 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.47 Mbit/s
95th percentile per-packet one-way delay: 6.039 ms
Loss rate: 0.06%
```
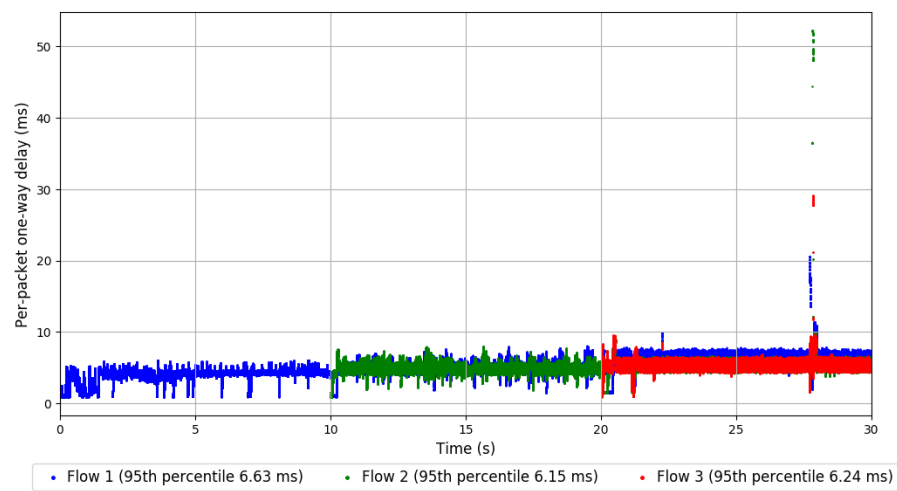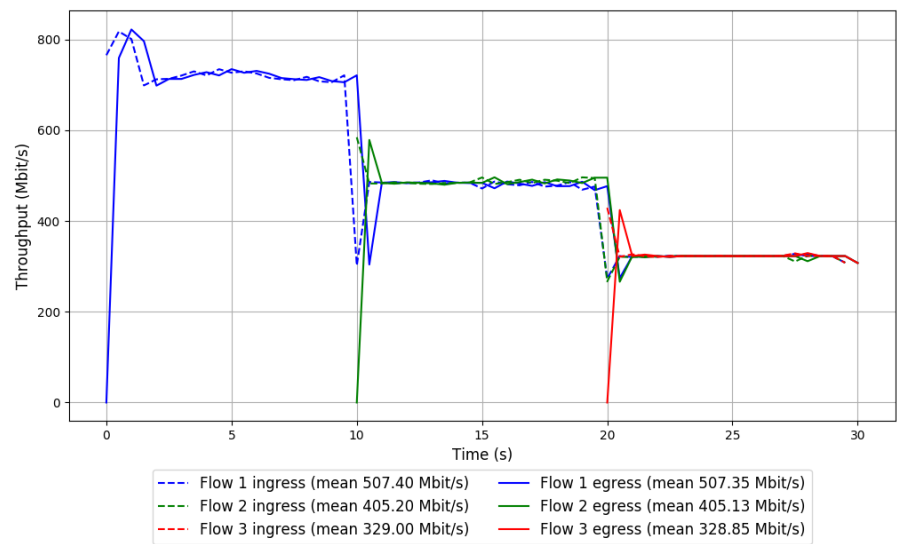
Run 3: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 507.12 Mbit/s) ——— Flow 1 egress (mean 507.08 Mbit/s)
- - - Flow 2 ingress (mean 404.06 Mbit/s) ——— Flow 2 egress (mean 403.99 Mbit/s)
- - - Flow 3 ingress (mean 328.62 Mbit/s) ——— Flow 3 egress (mean 328.47 Mbit/s)

• Flow 1 (95th percentile 6.45 ms)   • Flow 2 (95th percentile 6.07 ms)   • Flow 3 (95th percentile 6.04 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-07-12 18:09:21
End at: 2019-07-12 18:09:51
Local clock offset: 7.165 ms
Remote clock offset: 3.629 ms

# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.92 Mbit/s
95th percentile per-packet one-way delay: 6.852 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 501.76 Mbit/s
95th percentile per-packet one-way delay: 6.836 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.96 Mbit/s
95th percentile per-packet one-way delay: 6.757 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.68 Mbit/s
95th percentile per-packet one-way delay: 7.123 ms
Loss rate: 0.07%
```
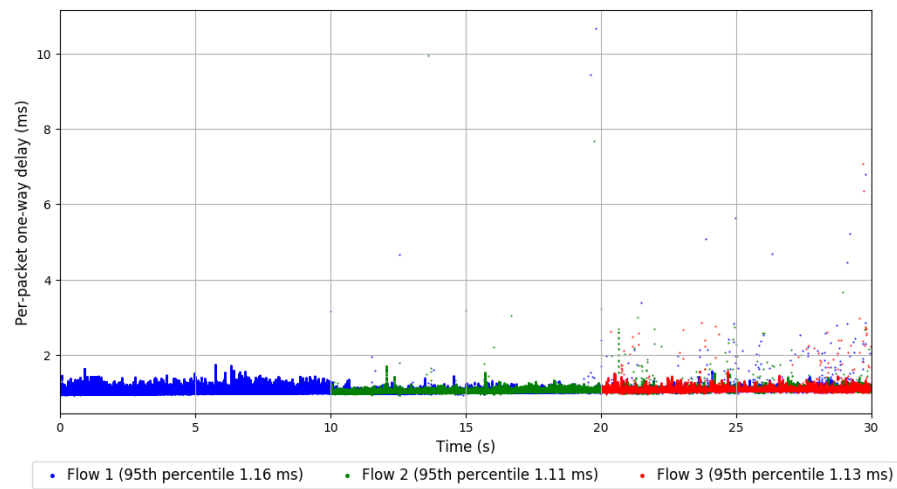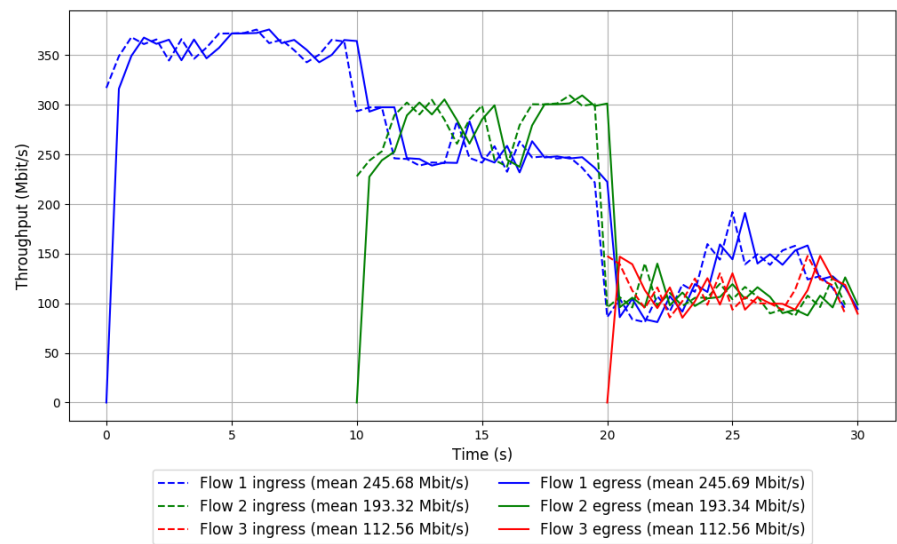
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-07-12 18:43:31
End at: 2019-07-12 18:44:01
Local clock offset: 7.698 ms
Remote clock offset: 3.122 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 886.49 Mbit/s
95th percentile per-packet one-way delay: 6.531 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 507.35 Mbit/s
95th percentile per-packet one-way delay: 6.632 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 405.13 Mbit/s
95th percentile per-packet one-way delay: 6.154 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.85 Mbit/s
95th percentile per-packet one-way delay: 6.238 ms
Loss rate: 0.06%
```
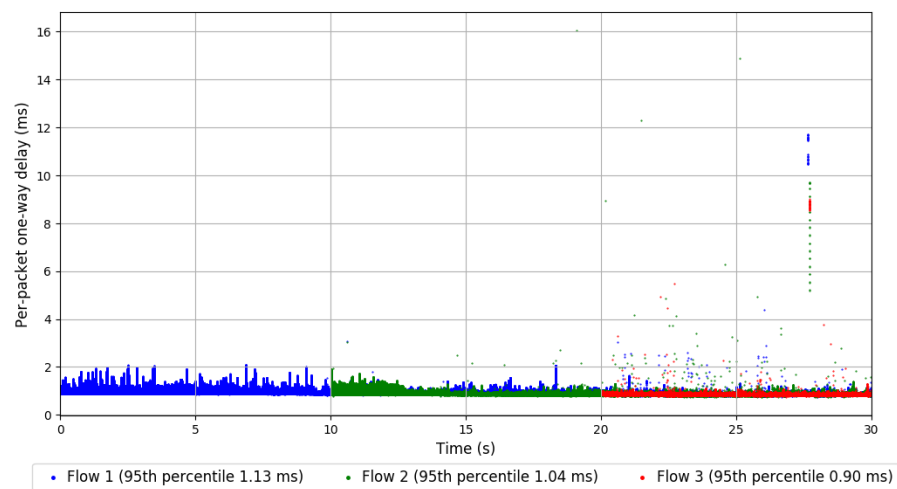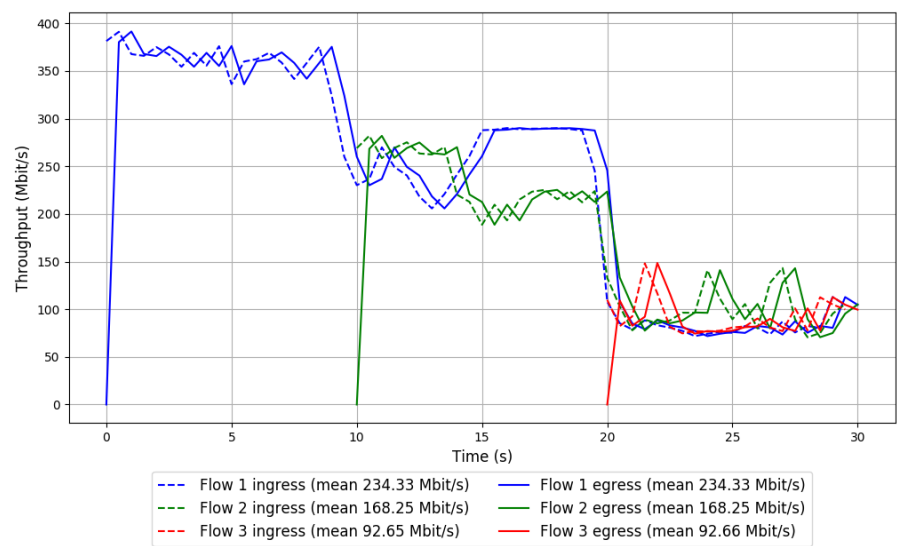
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 507.40 Mbit/s) --- Flow 1 egress (mean 507.35 Mbit/s)
Flow 2 ingress (mean 405.20 Mbit/s) --- Flow 2 egress (mean 405.13 Mbit/s)
Flow 3 ingress (mean 329.00 Mbit/s) --- Flow 3 egress (mean 328.85 Mbit/s)

Flow 1 (95th percentile 6.63 ms)   Flow 2 (95th percentile 6.15 ms)   Flow 3 (95th percentile 6.24 ms)

14

```
Run 1: Statistics of Copa

Start at: 2019-07-12 16:07:37
End at: 2019-07-12 16:08:07
Local clock offset: 6.281 ms
Remote clock offset: 1.881 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 411.76 Mbit/s
95th percentile per-packet one-way delay: 1.138 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 245.69 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 193.34 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 112.56 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.00%
```
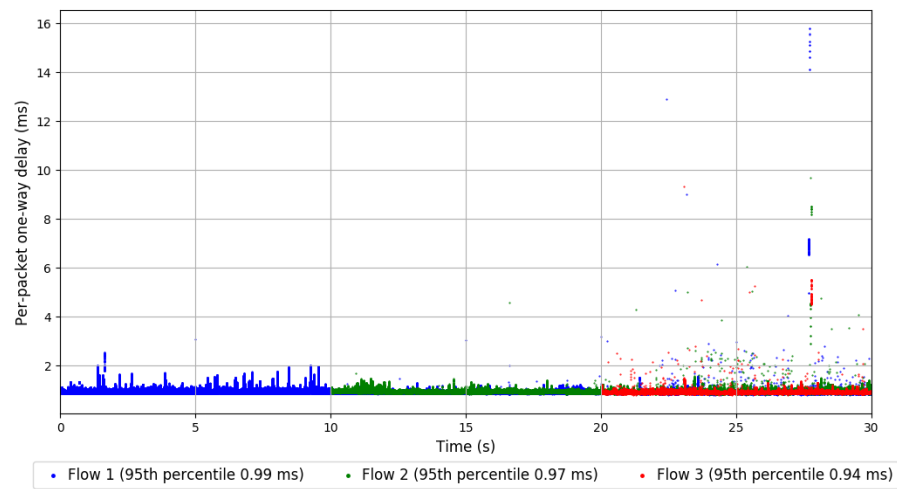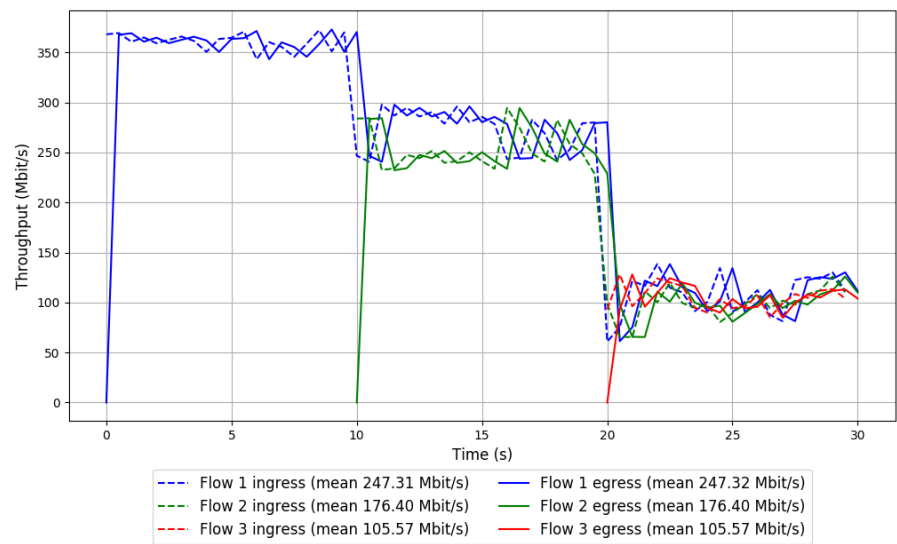
Run 1: Report of Copa — Data Link

16

```
Run 2: Statistics of Copa

Start at: 2019-07-12 16:41:54
End at: 2019-07-12 16:42:24
Local clock offset: 6.654 ms
Remote clock offset: 4.141 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.09 Mbit/s
95th percentile per-packet one-way delay: 1.098 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 234.33 Mbit/s
95th percentile per-packet one-way delay: 1.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.25 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 92.66 Mbit/s
95th percentile per-packet one-way delay: 0.897 ms
Loss rate: 0.03%
```
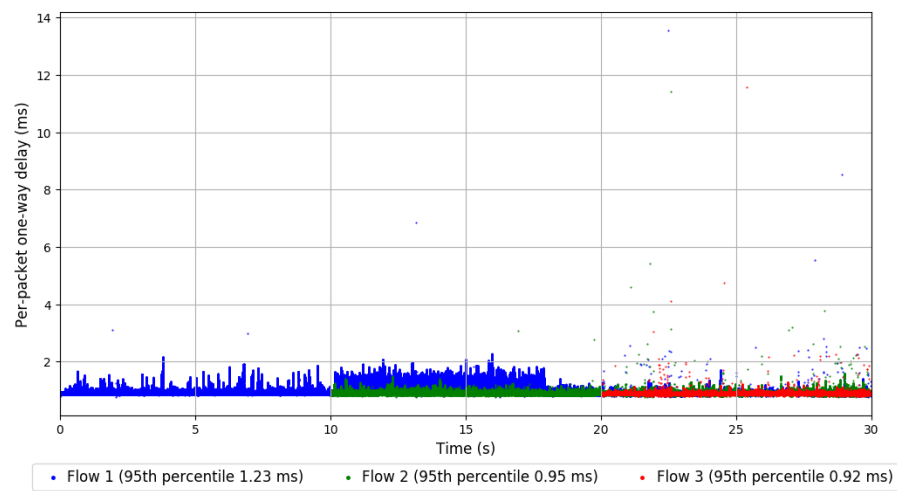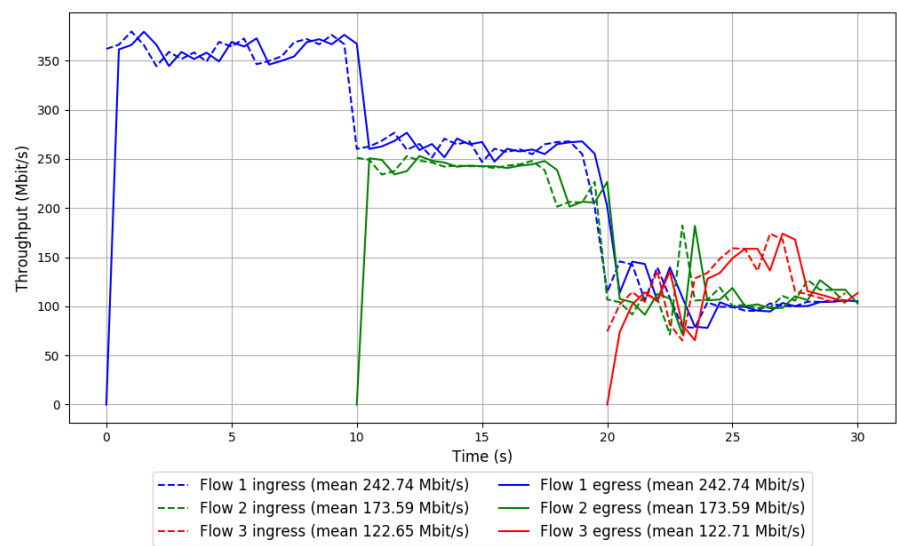
Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-07-12 17:16:15
End at: 2019-07-12 17:16:45
Local clock offset: 6.736 ms
Remote clock offset: 3.208 ms


# Below is generated by plot.py at 2019-07-12 19:06:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 399.81 Mbit/s
95th percentile per-packet one-way delay: 0.982 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 247.32 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 176.40 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 105.57 Mbit/s
95th percentile per-packet one-way delay: 0.940 ms
Loss rate: 0.02%
```
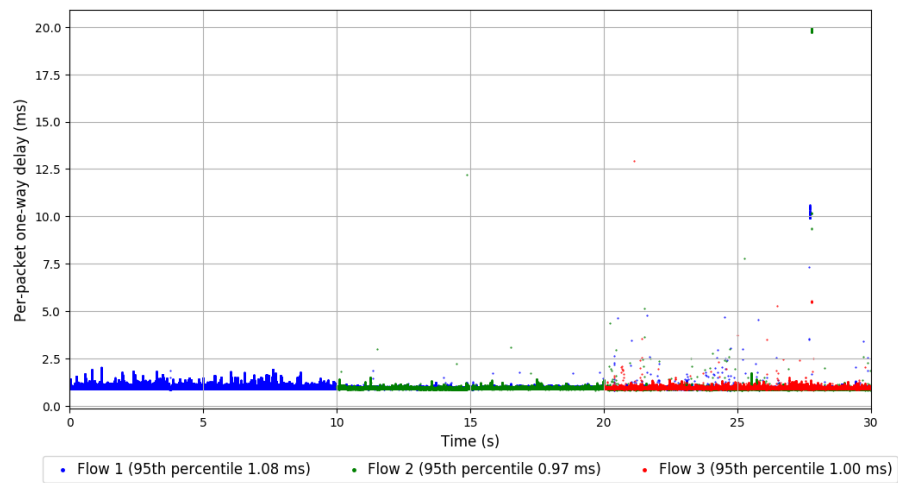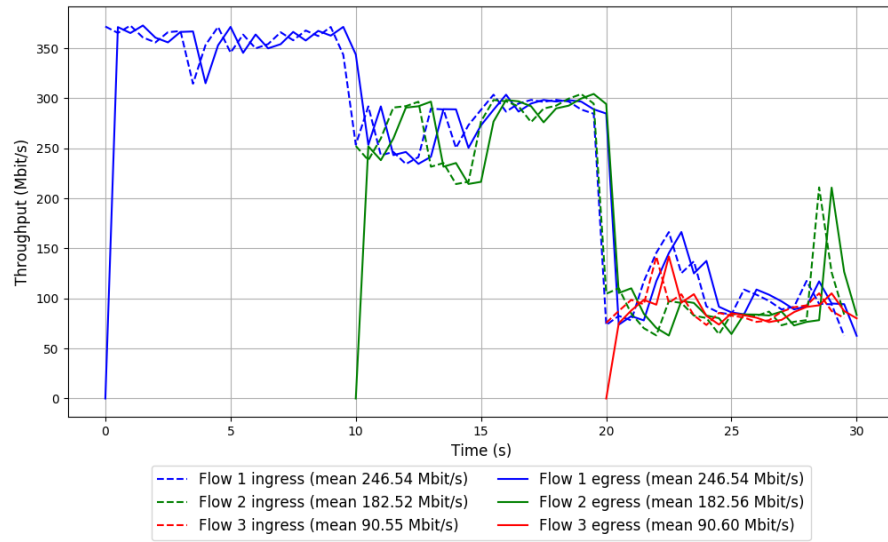
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-07-12 17:50:32
End at: 2019-07-12 17:51:02
Local clock offset: 6.774 ms
Remote clock offset: 3.351 ms


# Below is generated by plot.py at 2019-07-12 19:12:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.96 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 242.74 Mbit/s
95th percentile per-packet one-way delay: 1.226 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 173.59 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 122.71 Mbit/s
95th percentile per-packet one-way delay: 0.924 ms
Loss rate: 0.01%
```
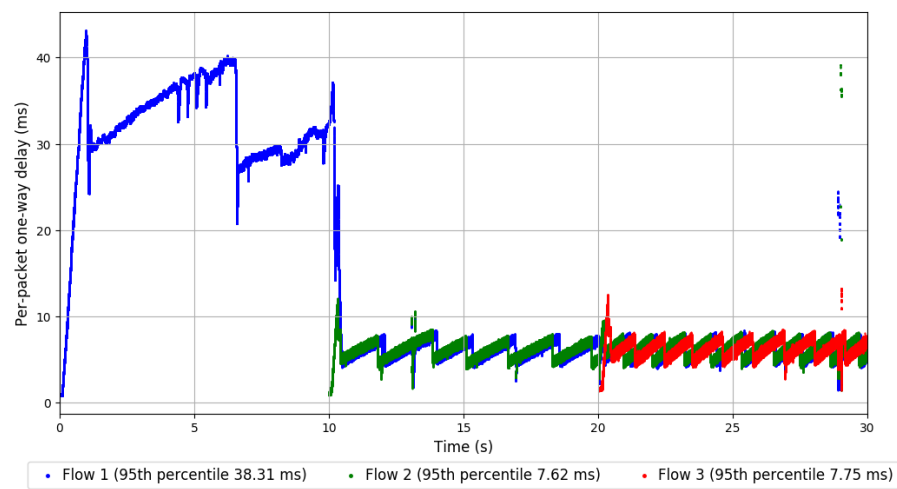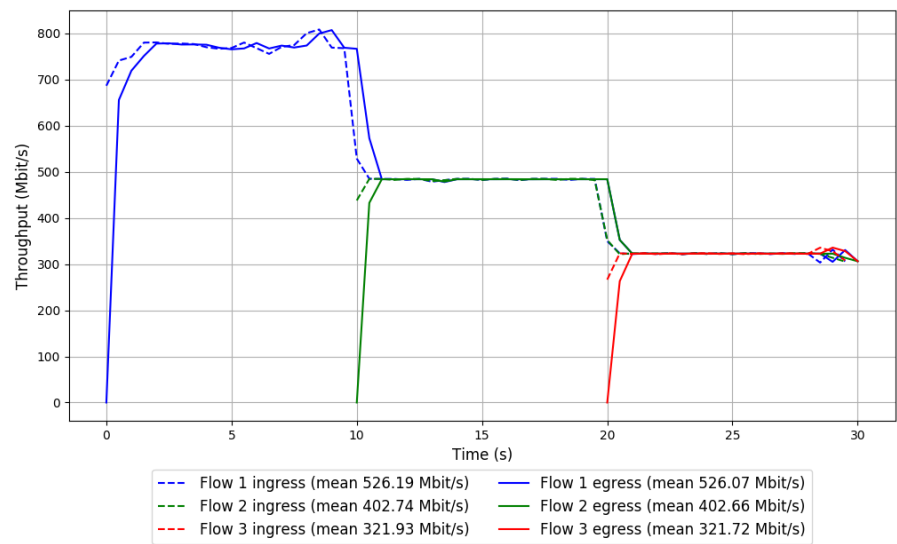
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 242.74 Mbit/s) ---- Flow 1 egress (mean 242.74 Mbit/s)
Flow 2 ingress (mean 173.59 Mbit/s) ---- Flow 2 egress (mean 173.59 Mbit/s)
Flow 3 ingress (mean 122.65 Mbit/s) ---- Flow 3 egress (mean 122.71 Mbit/s)

Flow 1 (95th percentile 1.23 ms)   •   Flow 2 (95th percentile 0.95 ms)   •   Flow 3 (95th percentile 0.92 ms)

```
Run 5: Statistics of Copa

Start at: 2019-07-12 18:24:54
End at: 2019-07-12 18:25:24
Local clock offset: 7.381 ms
Remote clock offset: 3.31 ms


# Below is generated by plot.py at 2019-07-12 19:13:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 398.14 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 246.54 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 182.56 Mbit/s
95th percentile per-packet one-way delay: 0.969 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 90.60 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.02%
```
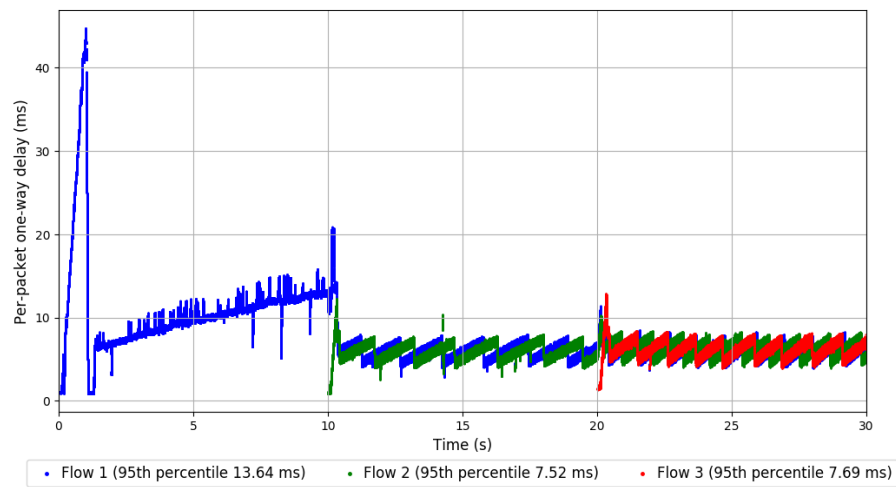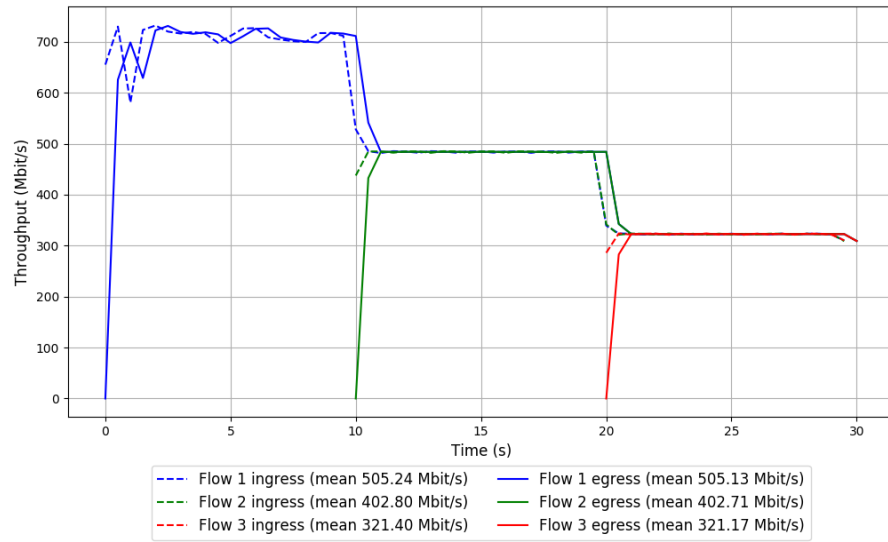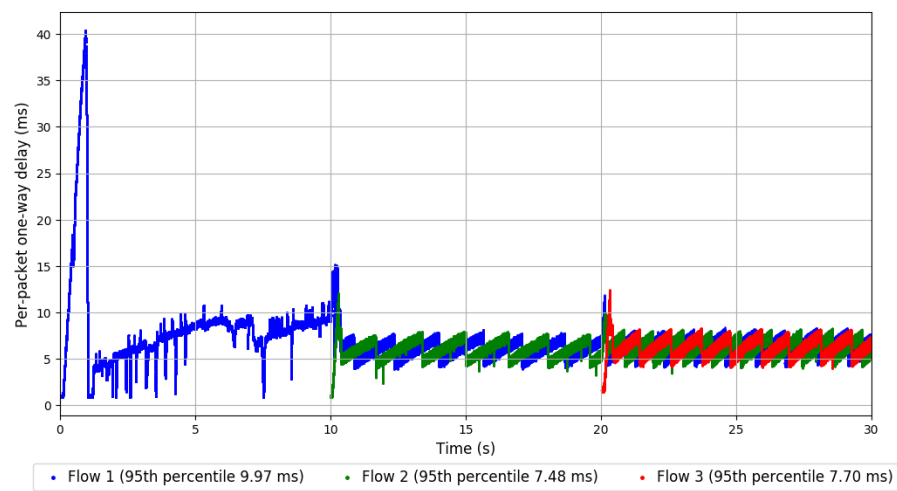
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 246.54 Mbit/s) --- Flow 1 egress (mean 246.54 Mbit/s)
Flow 2 ingress (mean 182.52 Mbit/s) --- Flow 2 egress (mean 182.56 Mbit/s)
Flow 3 ingress (mean 90.55 Mbit/s) --- Flow 3 egress (mean 90.60 Mbit/s)

Flow 1 (95th percentile 1.08 ms) • Flow 2 (95th percentile 0.97 ms) • Flow 3 (95th percentile 1.00 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-07-12 16:09:18
End at: 2019-07-12 16:09:48
Local clock offset: 6.278 ms
Remote clock offset: 2.364 ms


# Below is generated by plot.py at 2019-07-12 19:15:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.00 Mbit/s
95th percentile per-packet one-way delay: 37.495 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 526.07 Mbit/s
95th percentile per-packet one-way delay: 38.315 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 402.66 Mbit/s
95th percentile per-packet one-way delay: 7.616 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.72 Mbit/s
95th percentile per-packet one-way delay: 7.750 ms
Loss rate: 0.09%
```
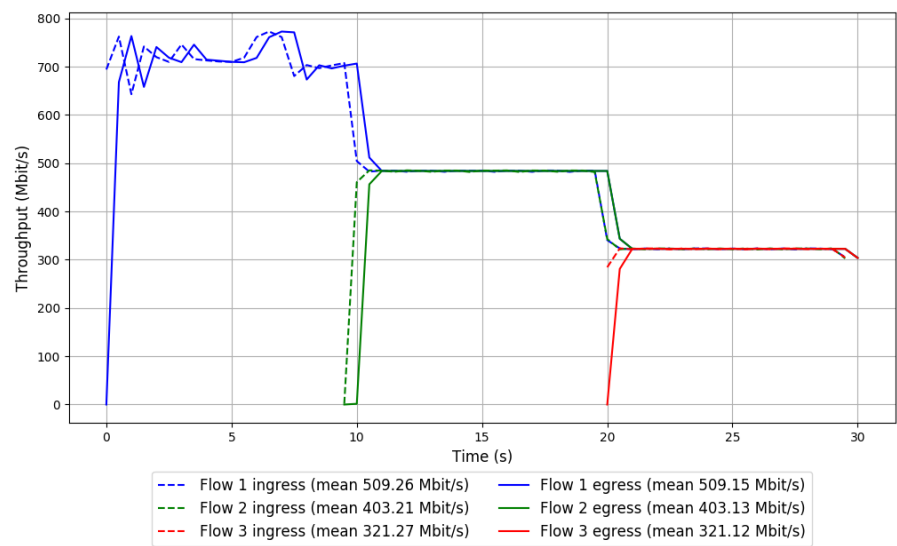
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-07-12 16:43:33
End at: 2019-07-12 16:44:03
Local clock offset: 6.71 ms
Remote clock offset: 3.957 ms


# Below is generated by plot.py at 2019-07-12 19:16:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.16 Mbit/s
95th percentile per-packet one-way delay: 12.743 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 505.13 Mbit/s
95th percentile per-packet one-way delay: 13.638 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 402.71 Mbit/s
95th percentile per-packet one-way delay: 7.522 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.17 Mbit/s
95th percentile per-packet one-way delay: 7.692 ms
Loss rate: 0.08%
```
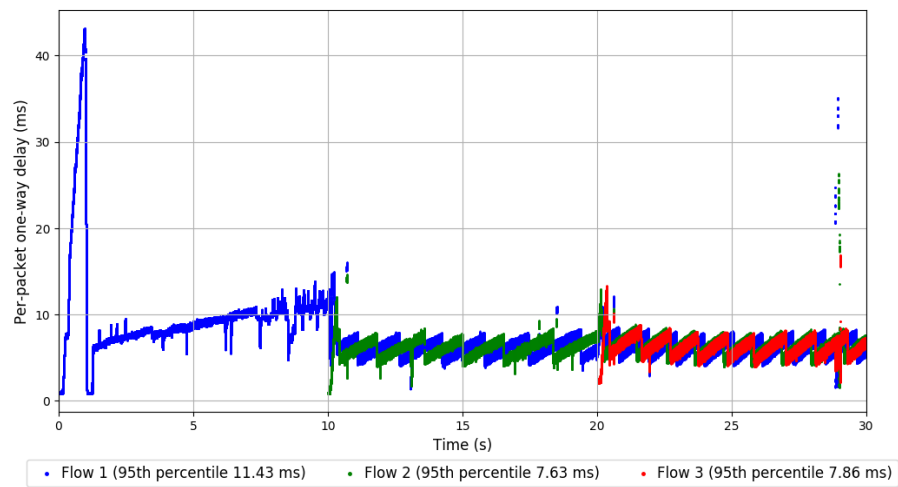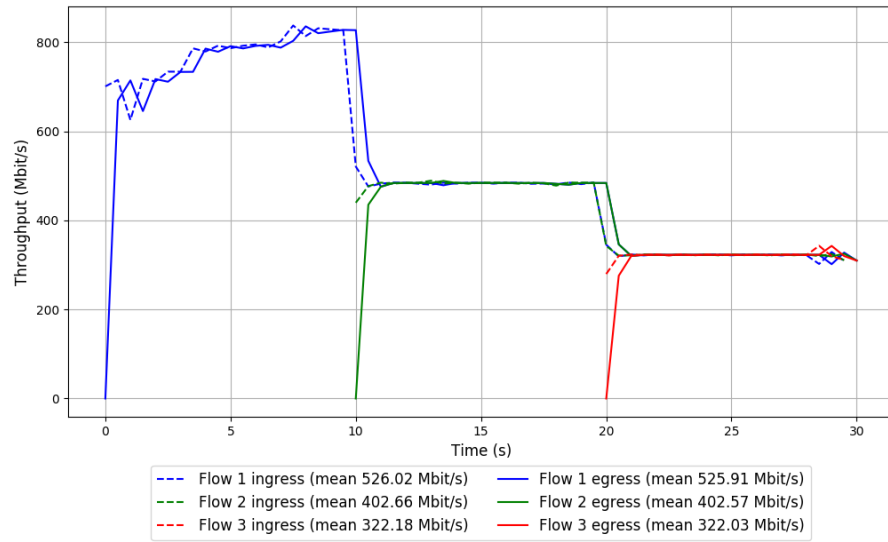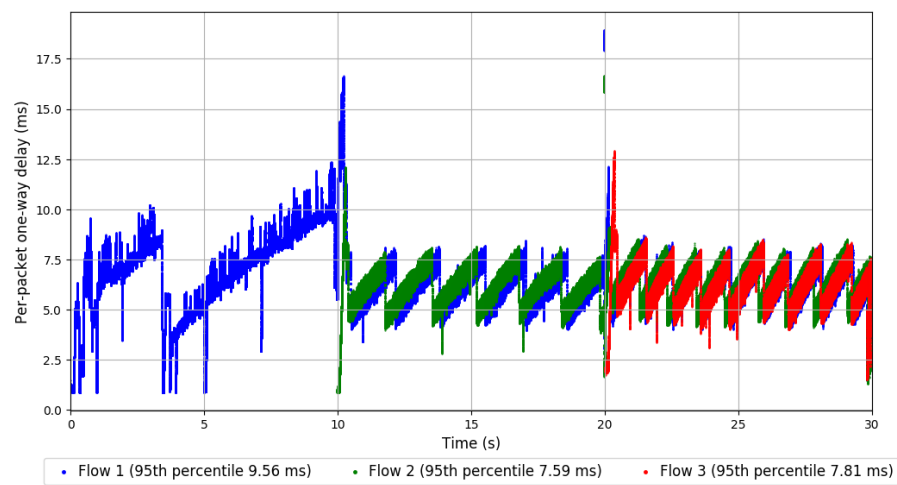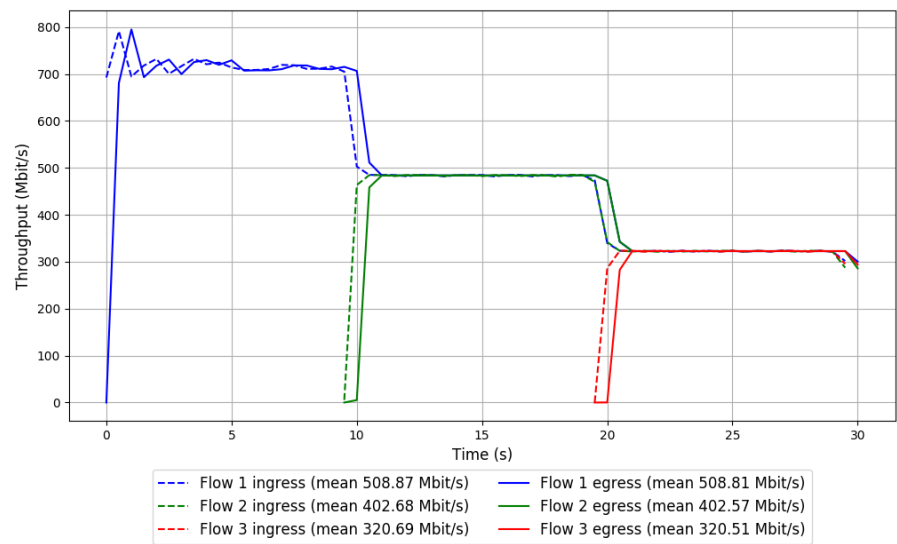
Run 2: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 505.24 Mbit/s) — Flow 1 egress (mean 505.13 Mbit/s)
Flow 2 ingress (mean 402.80 Mbit/s) — Flow 2 egress (mean 402.71 Mbit/s)
Flow 3 ingress (mean 321.40 Mbit/s) — Flow 3 egress (mean 321.17 Mbit/s)

Flow 1 (95th percentile 13.64 ms)   Flow 2 (95th percentile 7.52 ms)   Flow 3 (95th percentile 7.69 ms)

```
Run 3: Statistics of TCP Cubic

Start at: 2019-07-12 17:17:55
End at: 2019-07-12 17:18:25
Local clock offset: 6.733 ms
Remote clock offset: 3.177 ms


# Below is generated by plot.py at 2019-07-12 19:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 884.54 Mbit/s
95th percentile per-packet one-way delay: 9.198 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 509.15 Mbit/s
95th percentile per-packet one-way delay: 9.968 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 403.13 Mbit/s
95th percentile per-packet one-way delay: 7.479 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.12 Mbit/s
95th percentile per-packet one-way delay: 7.697 ms
Loss rate: 0.08%
```
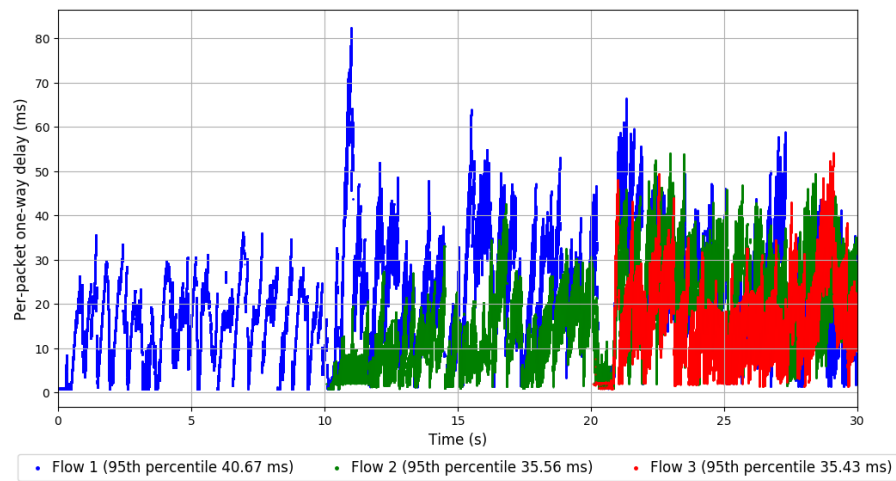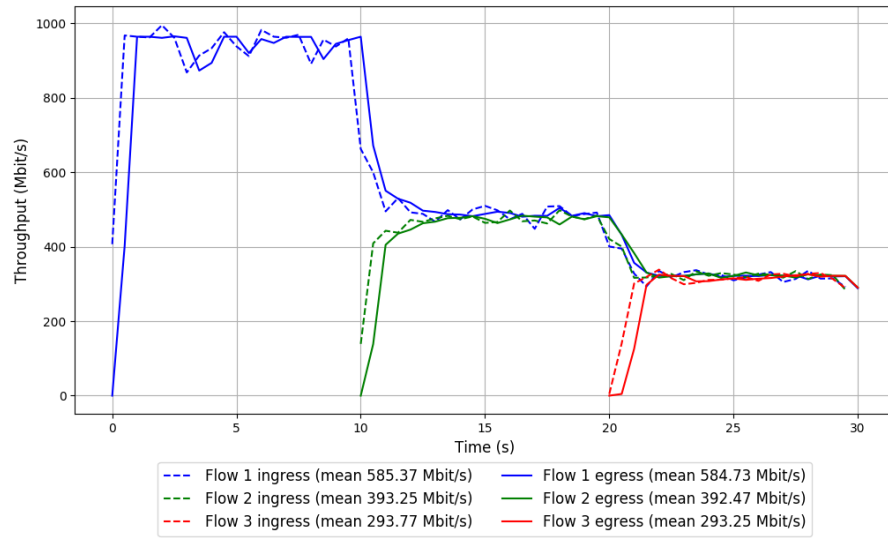
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-07-12 17:52:12
End at: 2019-07-12 17:52:42
Local clock offset: 6.775 ms
Remote clock offset: 3.382 ms


# Below is generated by plot.py at 2019-07-12 19:16:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 900.99 Mbit/s
95th percentile per-packet one-way delay: 10.620 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 525.91 Mbit/s
95th percentile per-packet one-way delay: 11.432 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 402.57 Mbit/s
95th percentile per-packet one-way delay: 7.632 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 322.03 Mbit/s
95th percentile per-packet one-way delay: 7.861 ms
Loss rate: 0.08%
```

Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-07-12 18:26:34
End at: 2019-07-12 18:27:04
Local clock offset: 7.372 ms
Remote clock offset: 3.293 ms


# Below is generated by plot.py at 2019-07-12 19:16:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 883.86 Mbit/s
95th percentile per-packet one-way delay: 9.090 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 508.81 Mbit/s
95th percentile per-packet one-way delay: 9.564 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 402.57 Mbit/s
95th percentile per-packet one-way delay: 7.589 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 320.51 Mbit/s
95th percentile per-packet one-way delay: 7.808 ms
Loss rate: 0.08%
```
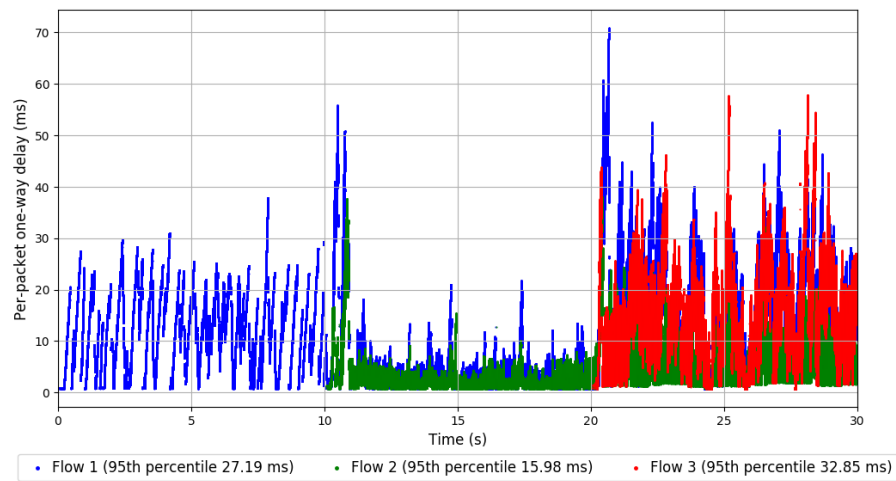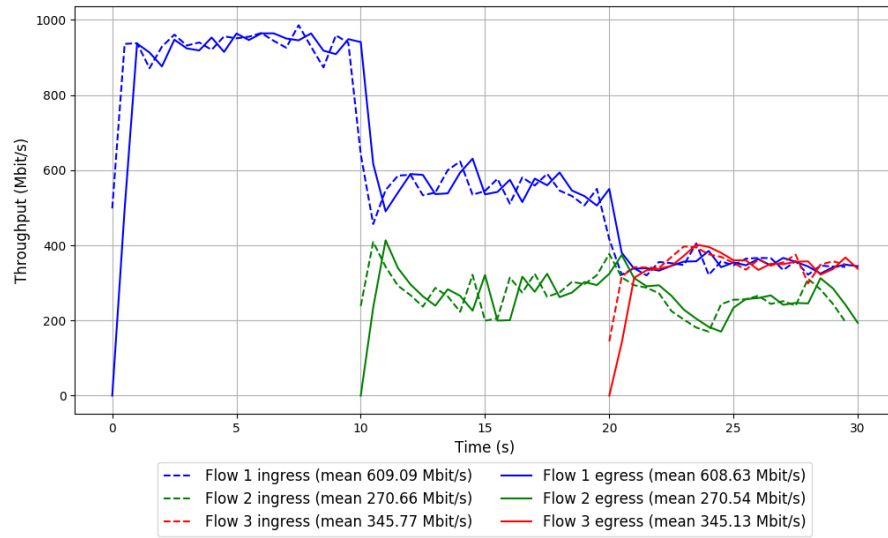
Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-07-12 16:13:39
End at: 2019-07-12 16:14:09
Local clock offset: 6.235 ms
Remote clock offset: 3.154 ms


# Below is generated by plot.py at 2019-07-12 19:19:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 942.25 Mbit/s
95th percentile per-packet one-way delay: 38.607 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 584.73 Mbit/s
95th percentile per-packet one-way delay: 40.672 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 392.47 Mbit/s
95th percentile per-packet one-way delay: 35.563 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 293.25 Mbit/s
95th percentile per-packet one-way delay: 35.434 ms
Loss rate: 0.29%
```
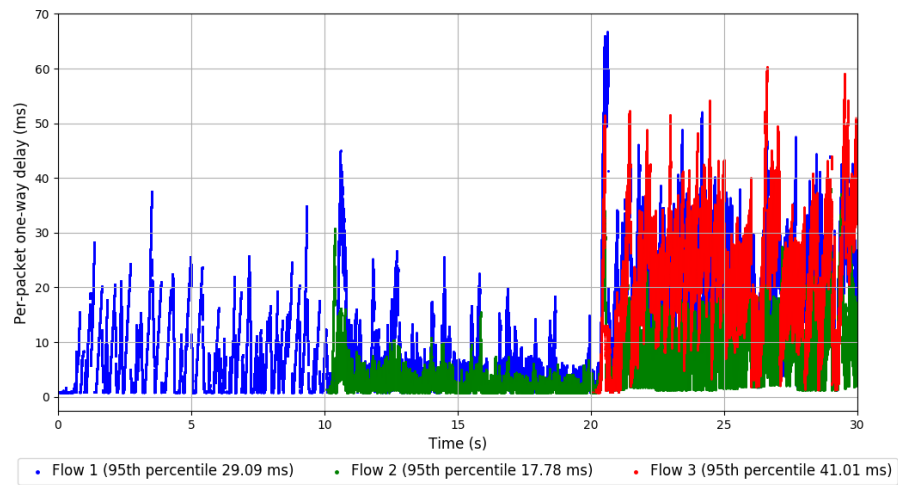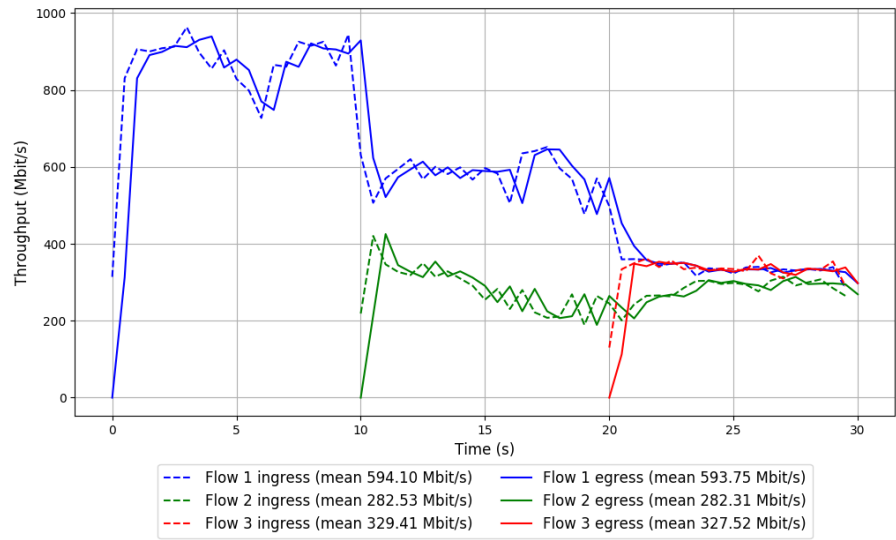
Run 1: Report of FillP — Data Link

Flow 1 ingress (mean 585.37 Mbit/s)   Flow 1 egress (mean 584.73 Mbit/s)
Flow 2 ingress (mean 393.25 Mbit/s)   Flow 2 egress (mean 392.47 Mbit/s)
Flow 3 ingress (mean 293.77 Mbit/s)   Flow 3 egress (mean 293.25 Mbit/s)

Flow 1 (95th percentile 40.67 ms)   Flow 2 (95th percentile 35.56 ms)   Flow 3 (95th percentile 35.43 ms)

```
Run 2: Statistics of FillP

Start at: 2019-07-12 16:47:57
End at: 2019-07-12 16:48:27
Local clock offset: 6.753 ms
Remote clock offset: 3.646 ms

# Below is generated by plot.py at 2019-07-12 19:26:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 902.76 Mbit/s
95th percentile per-packet one-way delay: 27.106 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 608.63 Mbit/s
95th percentile per-packet one-way delay: 27.193 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 270.54 Mbit/s
95th percentile per-packet one-way delay: 15.980 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 345.13 Mbit/s
95th percentile per-packet one-way delay: 32.853 ms
Loss rate: 0.24%
```
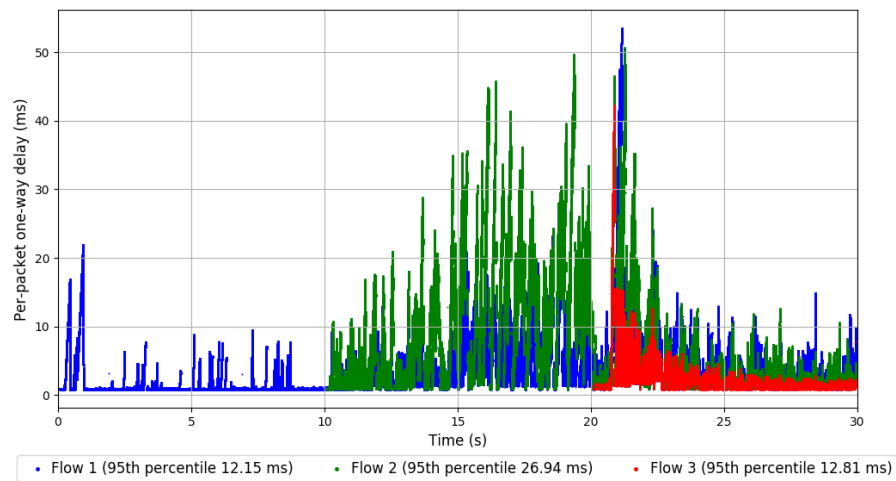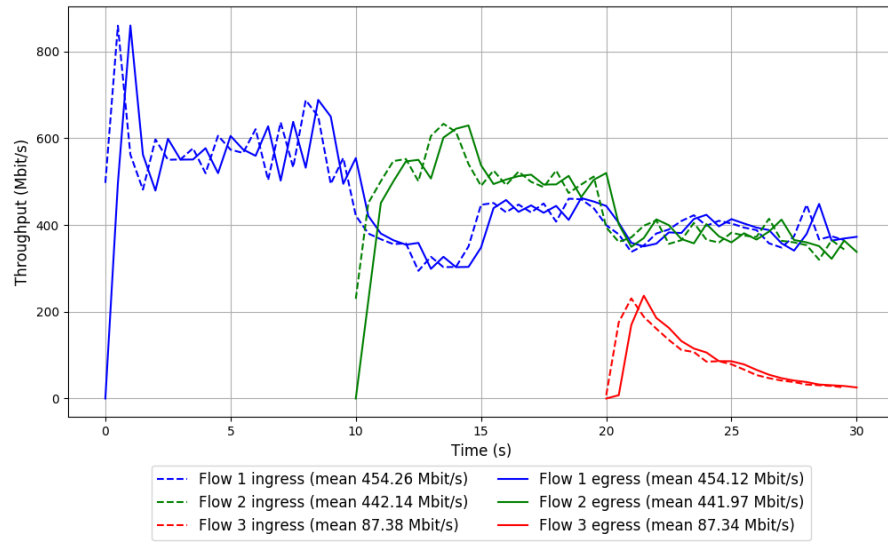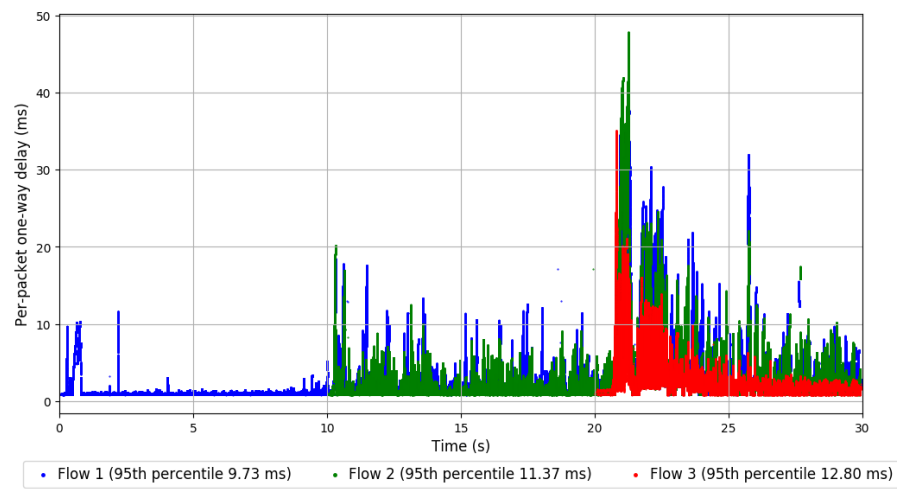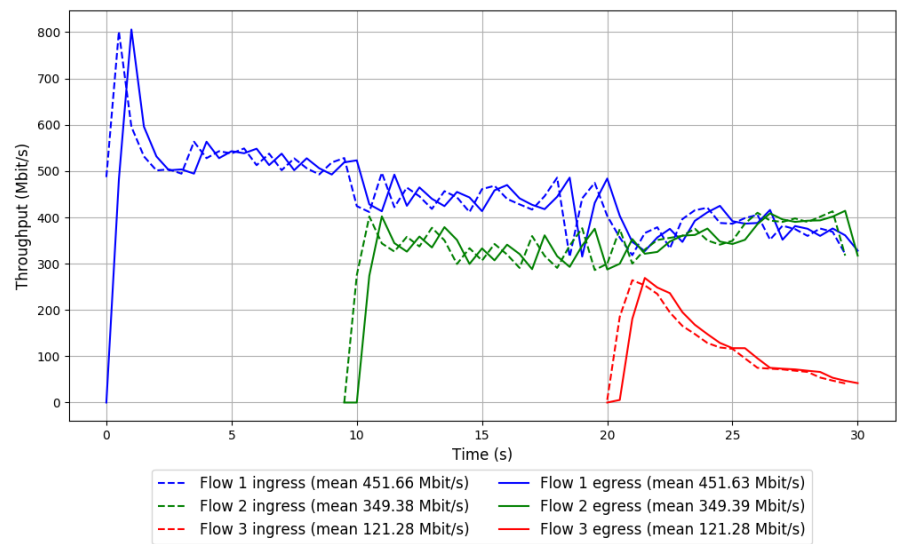
Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 609.09 Mbit/s)   Flow 1 egress (mean 608.63 Mbit/s)
Flow 2 ingress (mean 270.66 Mbit/s)   Flow 2 egress (mean 270.54 Mbit/s)
Flow 3 ingress (mean 345.77 Mbit/s)   Flow 3 egress (mean 345.13 Mbit/s)

Flow 1 (95th percentile 27.19 ms)   Flow 2 (95th percentile 15.98 ms)   Flow 3 (95th percentile 32.85 ms)

```
Run 3: Statistics of FillP

Start at: 2019-07-12 17:22:23
End at: 2019-07-12 17:22:53
Local clock offset: 6.766 ms
Remote clock offset: 3.228 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 889.51 Mbit/s
95th percentile per-packet one-way delay: 31.106 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 593.75 Mbit/s
95th percentile per-packet one-way delay: 29.085 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 282.31 Mbit/s
95th percentile per-packet one-way delay: 17.776 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 327.52 Mbit/s
95th percentile per-packet one-way delay: 41.008 ms
Loss rate: 0.55%
```
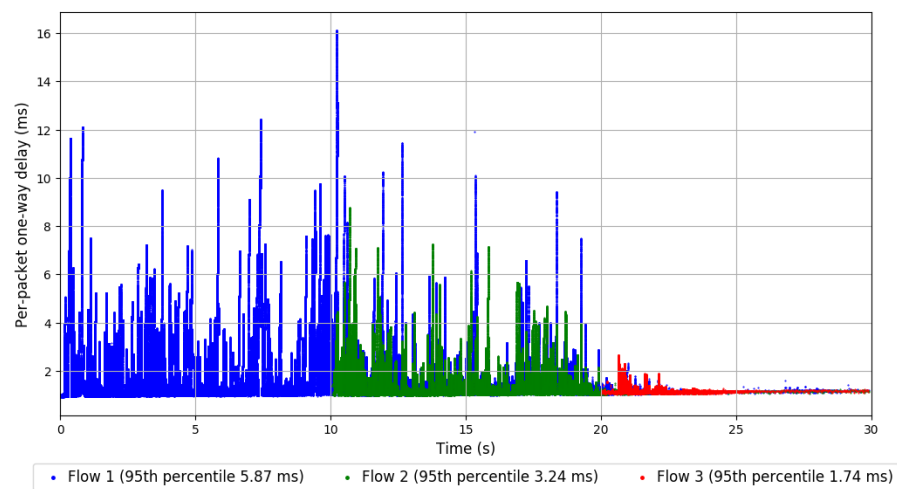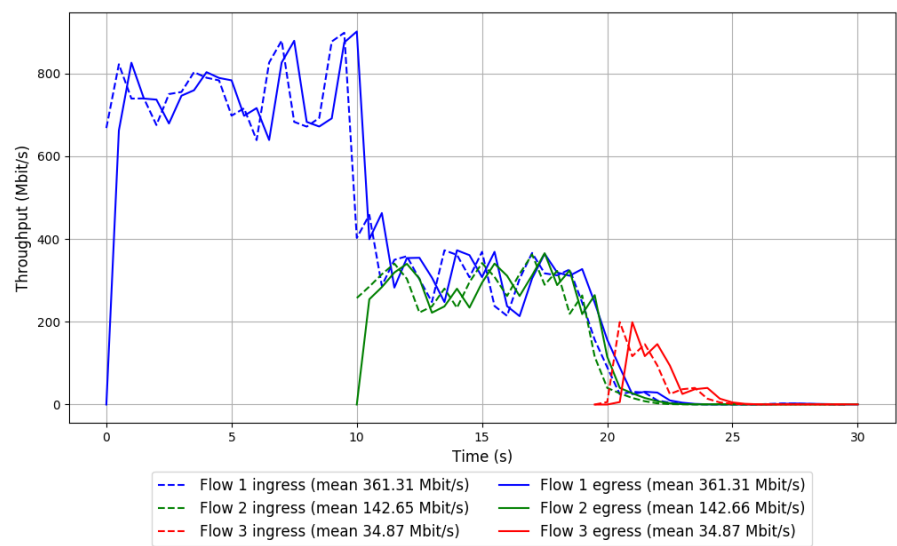
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 594.10 Mbit/s)   Flow 1 egress (mean 593.75 Mbit/s)
Flow 2 ingress (mean 282.53 Mbit/s)   Flow 2 egress (mean 282.31 Mbit/s)
Flow 3 ingress (mean 329.41 Mbit/s)   Flow 3 egress (mean 327.52 Mbit/s)

Flow 1 (95th percentile 29.09 ms)   Flow 2 (95th percentile 17.78 ms)   Flow 3 (95th percentile 41.01 ms)

```
Run 4: Statistics of FillP

Start at: 2019-07-12 17:56:39
End at: 2019-07-12 17:57:09
Local clock offset: 6.763 ms
Remote clock offset: 3.405 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 777.20 Mbit/s
95th percentile per-packet one-way delay: 19.965 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 454.12 Mbit/s
95th percentile per-packet one-way delay: 12.155 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 441.97 Mbit/s
95th percentile per-packet one-way delay: 26.939 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 87.34 Mbit/s
95th percentile per-packet one-way delay: 12.810 ms
Loss rate: 0.01%
```
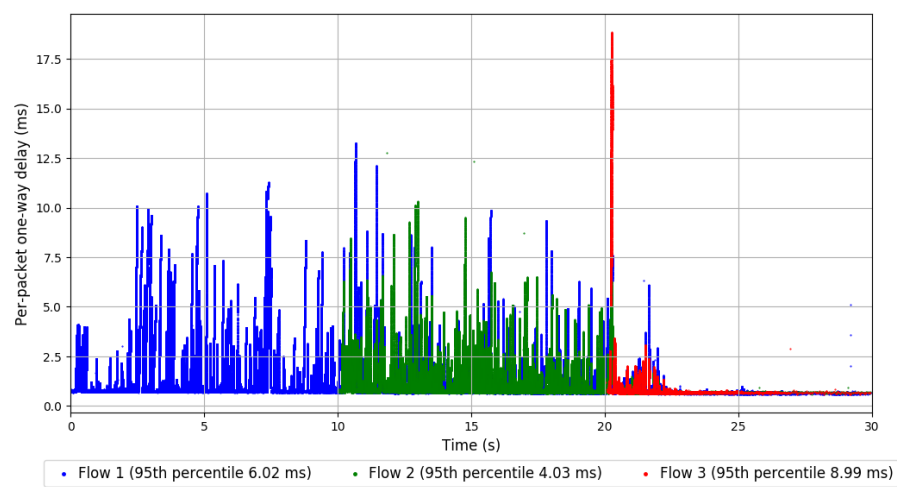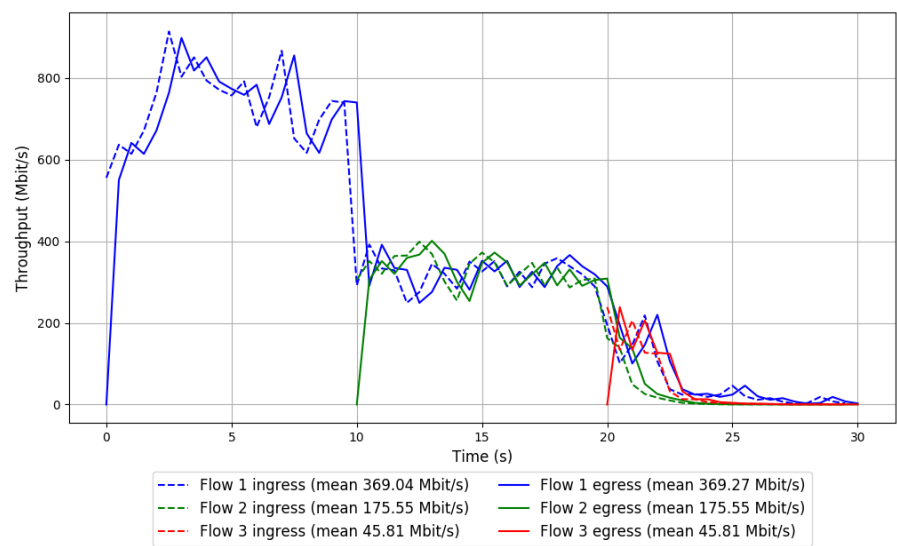
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-07-12 18:30:57
End at: 2019-07-12 18:31:27
Local clock offset: 7.428 ms
Remote clock offset: 3.159 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.37 Mbit/s
95th percentile per-packet one-way delay: 10.485 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 451.63 Mbit/s
95th percentile per-packet one-way delay: 9.729 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 349.39 Mbit/s
95th percentile per-packet one-way delay: 11.368 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 121.28 Mbit/s
95th percentile per-packet one-way delay: 12.803 ms
Loss rate: 0.01%
```
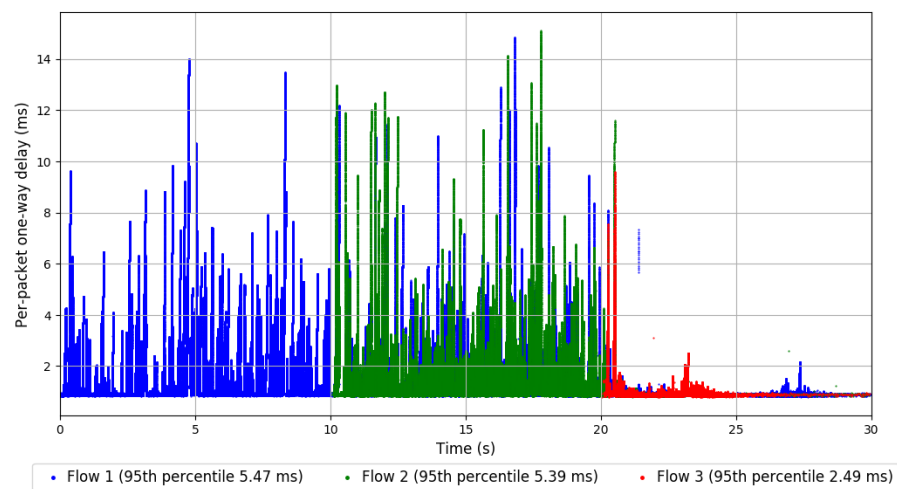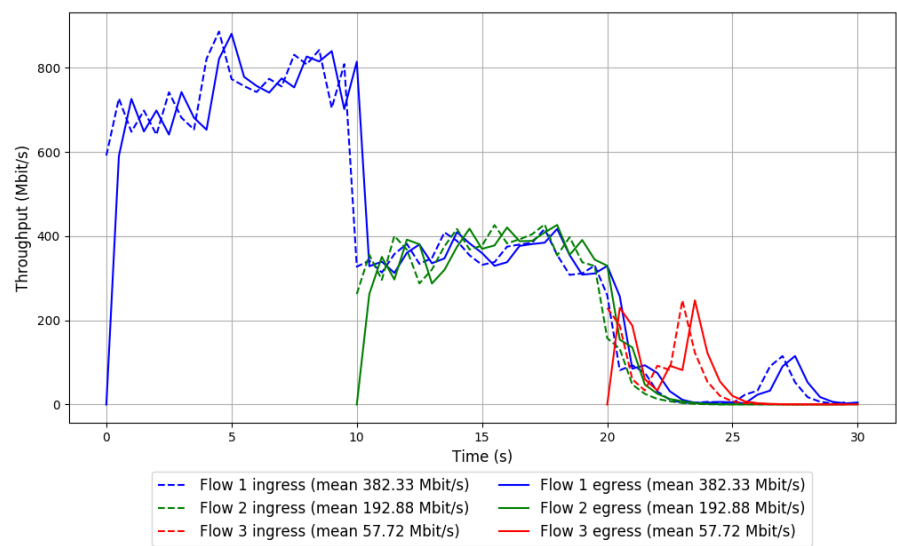
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-07-12 16:03:34
End at: 2019-07-12 16:04:04
Local clock offset: 6.366 ms
Remote clock offset: 0.688 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.50 Mbit/s
95th percentile per-packet one-way delay: 5.332 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 361.31 Mbit/s
95th percentile per-packet one-way delay: 5.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 142.66 Mbit/s
95th percentile per-packet one-way delay: 3.244 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.87 Mbit/s
95th percentile per-packet one-way delay: 1.738 ms
Loss rate: 0.00%
```
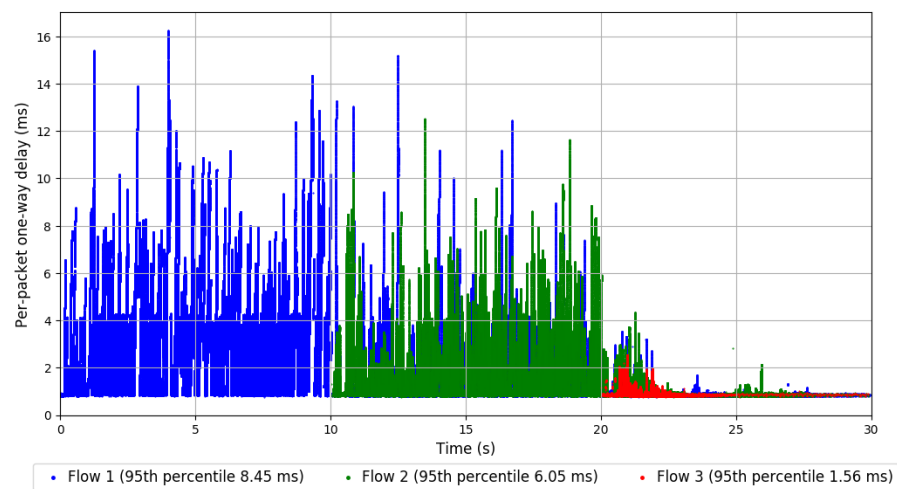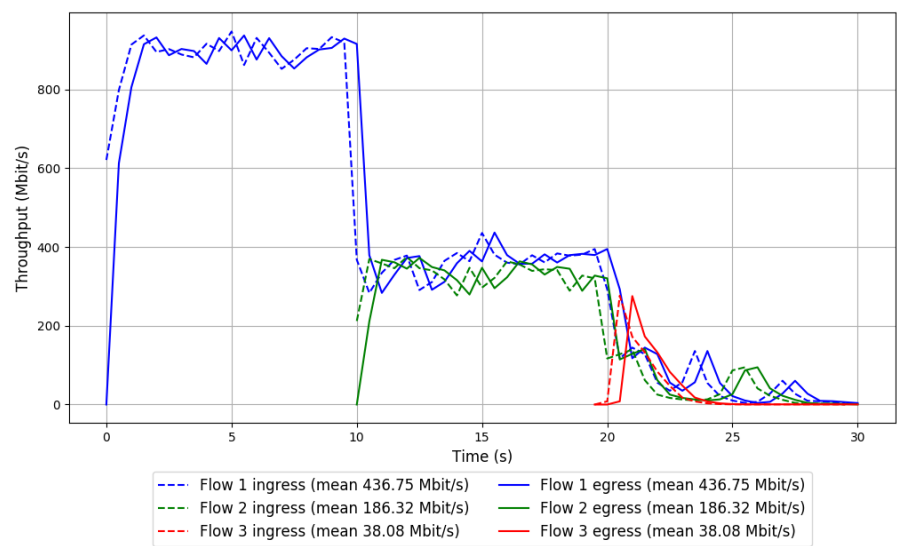
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-07-12 16:37:50
End at: 2019-07-12 16:38:20
Local clock offset: 6.581 ms
Remote clock offset: 4.979 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 501.14 Mbit/s
95th percentile per-packet one-way delay: 5.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 369.27 Mbit/s
95th percentile per-packet one-way delay: 6.020 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 175.55 Mbit/s
95th percentile per-packet one-way delay: 4.027 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.81 Mbit/s
95th percentile per-packet one-way delay: 8.989 ms
Loss rate: 0.00%
```
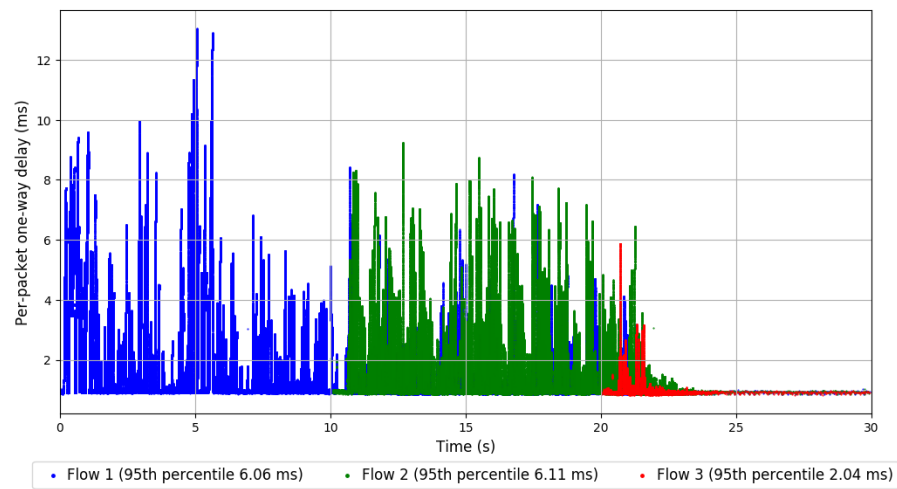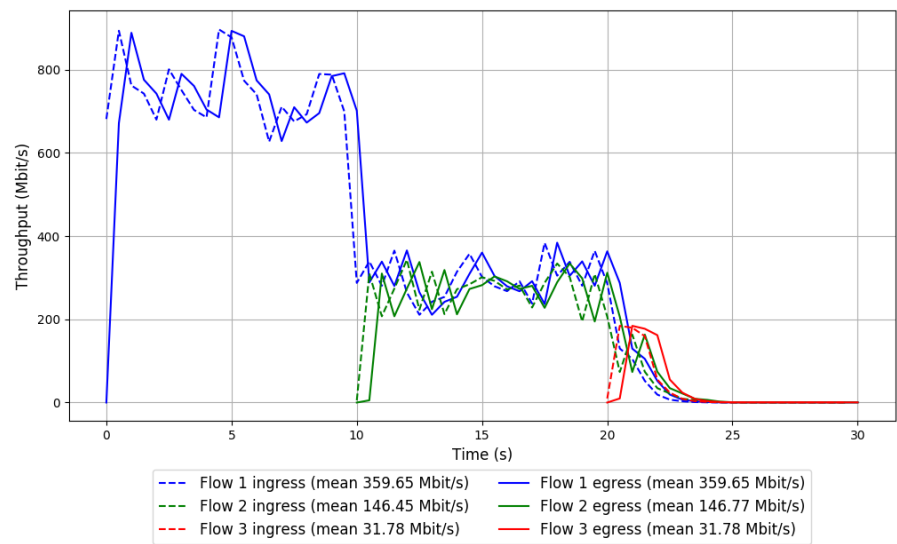
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-07-12 17:12:11
End at: 2019-07-12 17:12:41
Local clock offset: 6.744 ms
Remote clock offset: 3.276 ms


# Below is generated by plot.py at 2019-07-12 19:26:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 529.62 Mbit/s
95th percentile per-packet one-way delay: 5.380 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 382.33 Mbit/s
95th percentile per-packet one-way delay: 5.470 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 192.88 Mbit/s
95th percentile per-packet one-way delay: 5.394 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 57.72 Mbit/s
95th percentile per-packet one-way delay: 2.491 ms
Loss rate: 0.00%
```
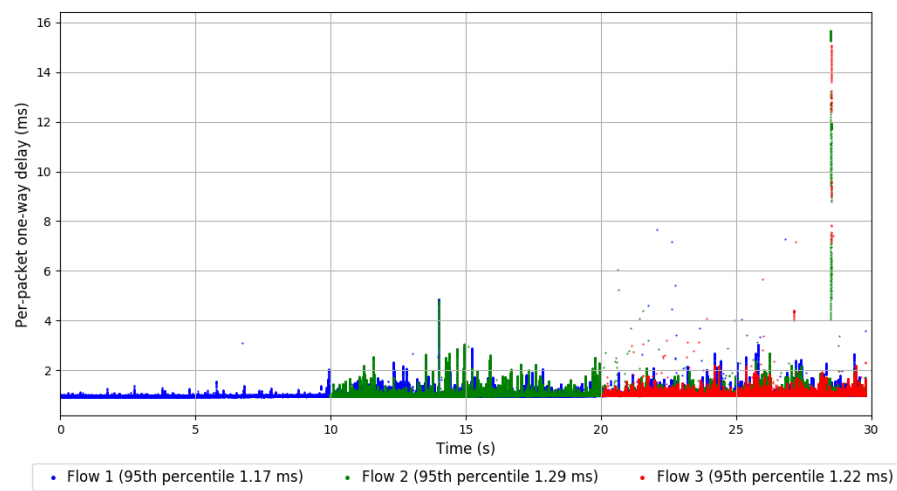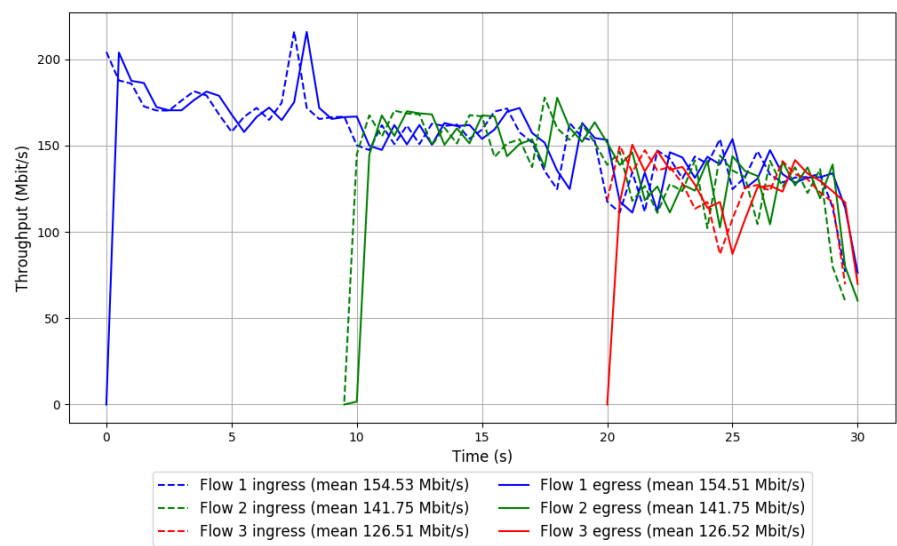
Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-07-12 17:46:26
End at: 2019-07-12 17:46:56
Local clock offset: 6.792 ms
Remote clock offset: 3.385 ms


# Below is generated by plot.py at 2019-07-12 19:29:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.10 Mbit/s
95th percentile per-packet one-way delay: 7.955 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 436.75 Mbit/s
95th percentile per-packet one-way delay: 8.453 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 186.32 Mbit/s
95th percentile per-packet one-way delay: 6.051 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.08 Mbit/s
95th percentile per-packet one-way delay: 1.565 ms
Loss rate: 0.00%
```
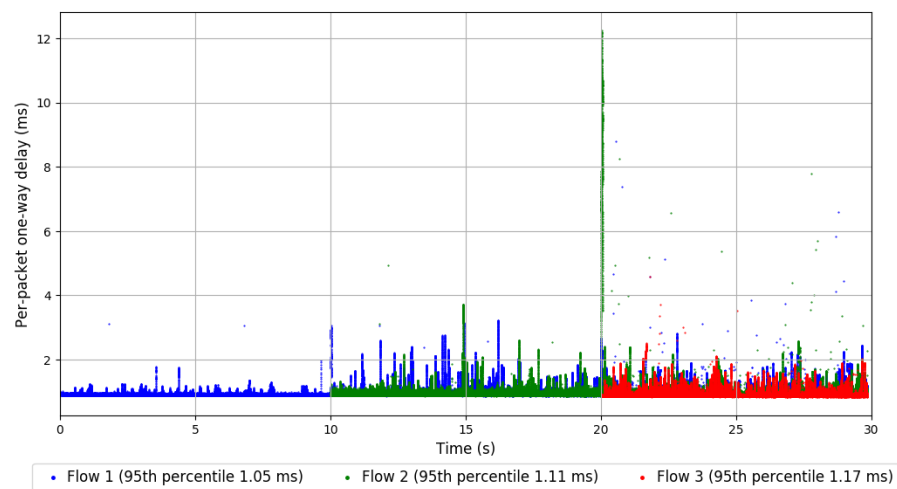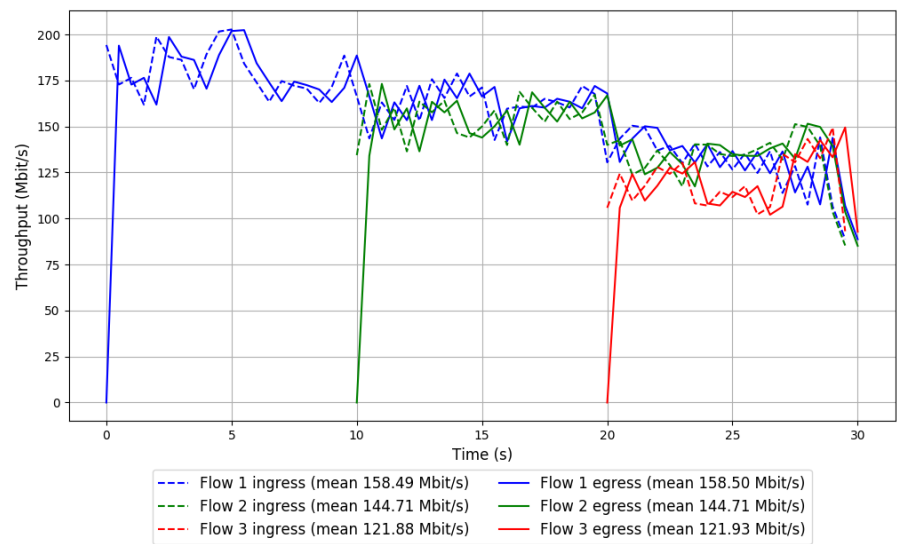
Run 4: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 436.75 Mbit/s)   —— Flow 1 egress (mean 436.75 Mbit/s)
- - - - Flow 2 ingress (mean 186.32 Mbit/s)   —— Flow 2 egress (mean 186.32 Mbit/s)
- - - - Flow 3 ingress (mean 38.08 Mbit/s)   —— Flow 3 egress (mean 38.08 Mbit/s)

- Flow 1 (95th percentile 8.45 ms)   • Flow 2 (95th percentile 6.05 ms)   • Flow 3 (95th percentile 1.56 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-07-12 18:20:51
End at: 2019-07-12 18:21:21
Local clock offset: 7.313 ms
Remote clock offset: 3.447 ms

# Below is generated by plot.py at 2019-07-12 19:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.72 Mbit/s
95th percentile per-packet one-way delay: 6.037 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 359.65 Mbit/s
95th percentile per-packet one-way delay: 6.062 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 146.77 Mbit/s
95th percentile per-packet one-way delay: 6.114 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 2.037 ms
Loss rate: 0.00%
```
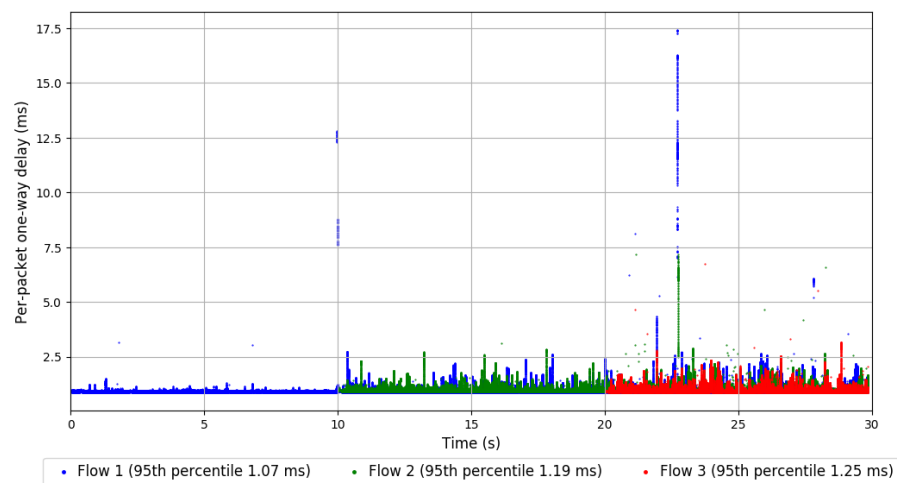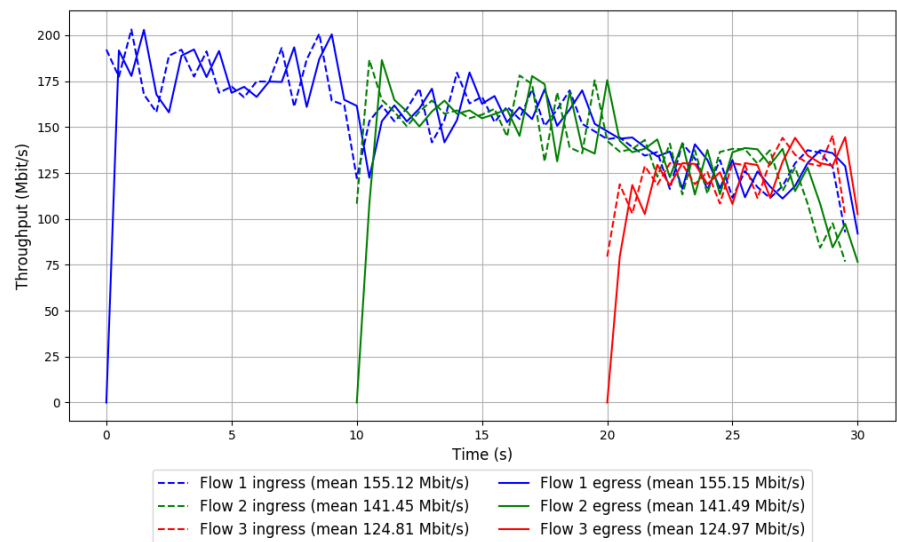
Run 5: Report of FillP-Sheep — Data Link

```
Run 1: Statistics of Indigo

Start at: 2019-07-12 16:15:20
End at: 2019-07-12 16:15:50
Local clock offset: 6.233 ms
Remote clock offset: 3.388 ms

# Below is generated by plot.py at 2019-07-12 19:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.23 Mbit/s
95th percentile per-packet one-way delay: 1.216 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 154.51 Mbit/s
95th percentile per-packet one-way delay: 1.166 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 141.75 Mbit/s
95th percentile per-packet one-way delay: 1.287 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 126.52 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.00%
```
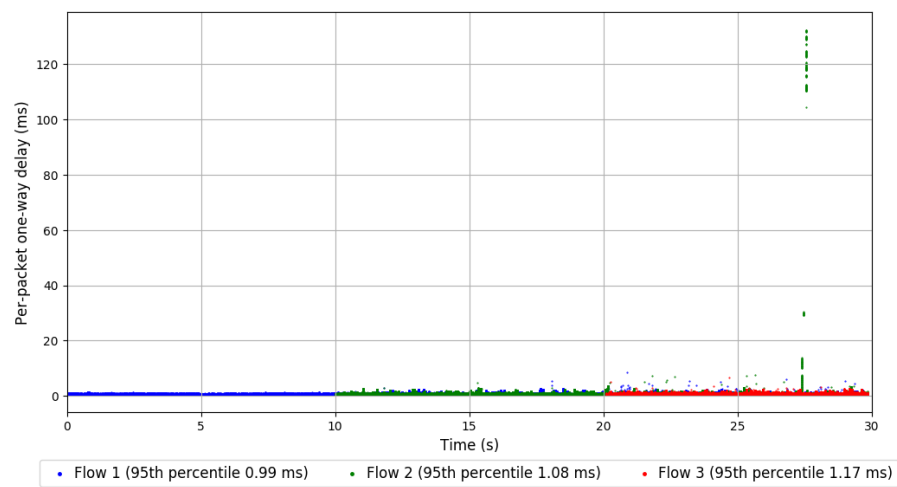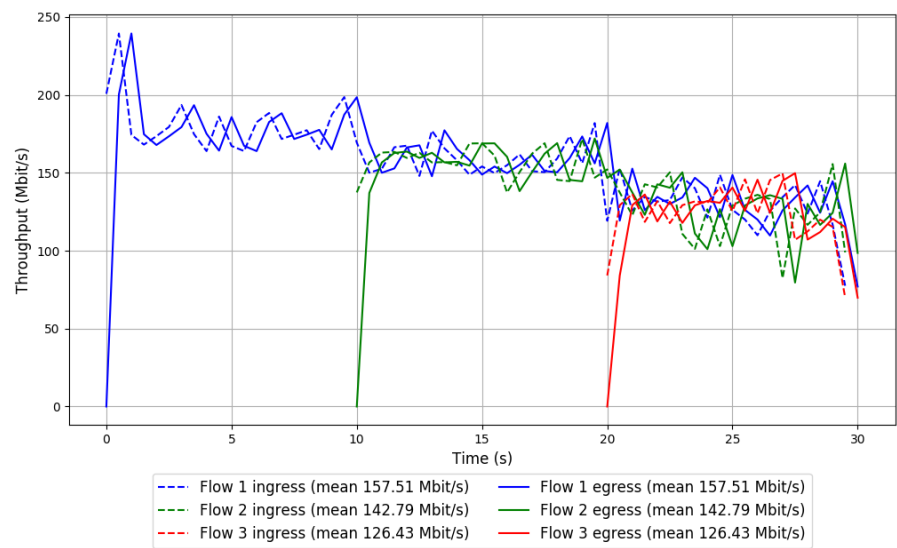
Run 1: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 154.53 Mbit/s) ——— Flow 1 egress (mean 154.51 Mbit/s)
- - - - Flow 2 ingress (mean 141.75 Mbit/s) ——— Flow 2 egress (mean 141.75 Mbit/s)
- - - - Flow 3 ingress (mean 126.51 Mbit/s) ——— Flow 3 egress (mean 126.52 Mbit/s)

• Flow 1 (95th percentile 1.17 ms)   • Flow 2 (95th percentile 1.29 ms)   • Flow 3 (95th percentile 1.22 ms)

```
Run 2: Statistics of Indigo

Start at: 2019-07-12 16:49:37
End at: 2019-07-12 16:50:07
Local clock offset: 6.791 ms
Remote clock offset: 3.531 ms


# Below is generated by plot.py at 2019-07-12 19:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 294.72 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 158.50 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 144.71 Mbit/s
95th percentile per-packet one-way delay: 1.115 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 121.93 Mbit/s
95th percentile per-packet one-way delay: 1.168 ms
Loss rate: 0.01%
```
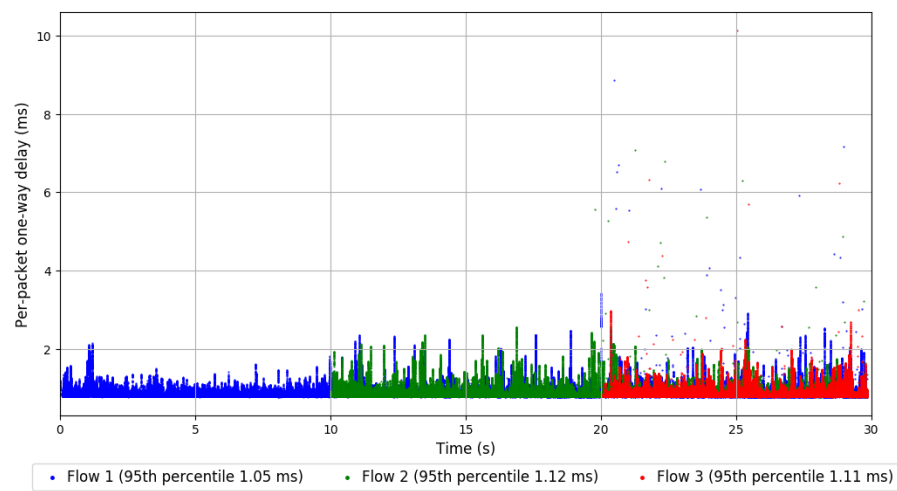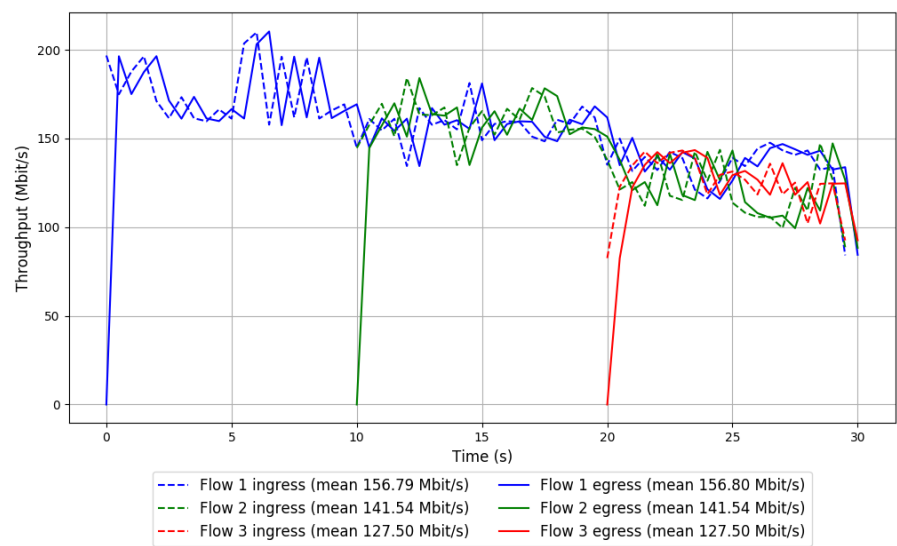
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-07-12 17:24:02
End at: 2019-07-12 17:24:32
Local clock offset: 6.769 ms
Remote clock offset: 3.188 ms

# Below is generated by plot.py at 2019-07-12 19:30:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.04 Mbit/s
95th percentile per-packet one-way delay: 1.153 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.15 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 141.49 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 124.97 Mbit/s
95th percentile per-packet one-way delay: 1.255 ms
Loss rate: 0.00%
```
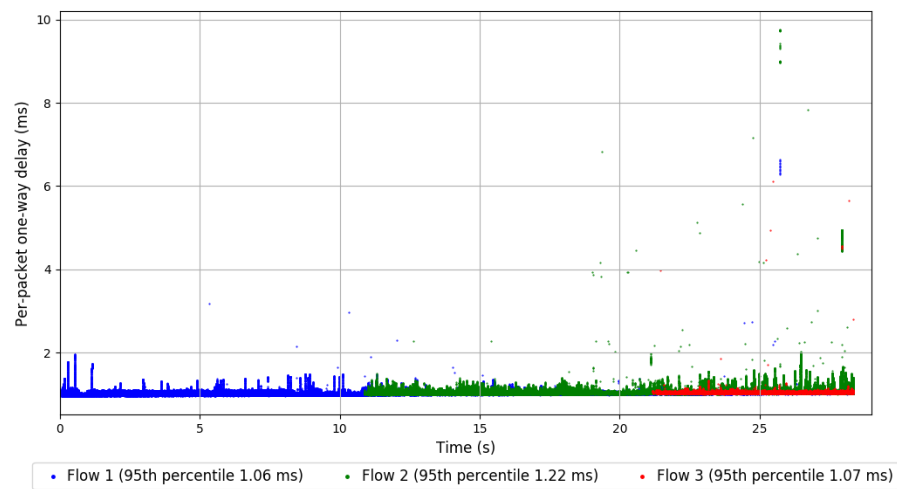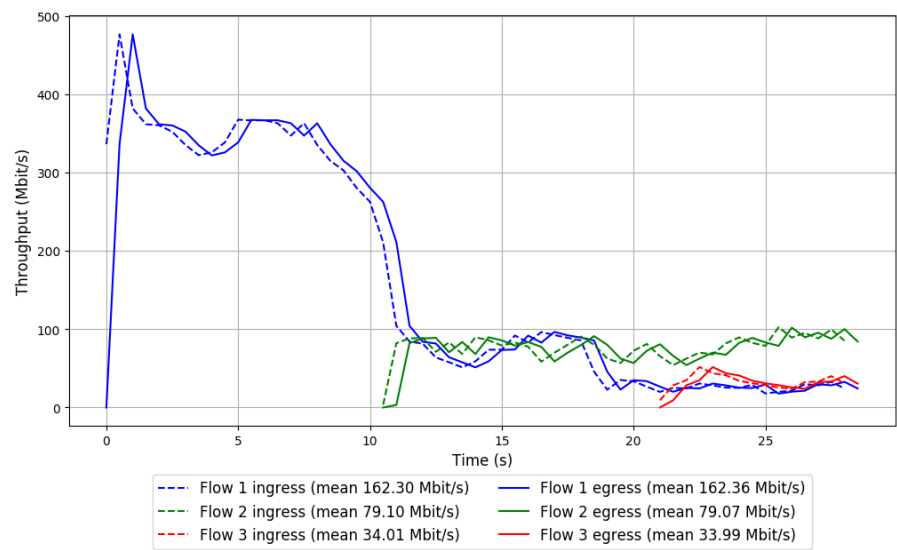
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-07-12 17:58:15
End at: 2019-07-12 17:58:45
Local clock offset: 6.765 ms
Remote clock offset: 3.466 ms


# Below is generated by plot.py at 2019-07-12 19:30:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.66 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.51 Mbit/s
95th percentile per-packet one-way delay: 0.988 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 142.79 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 126.43 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.01%
```
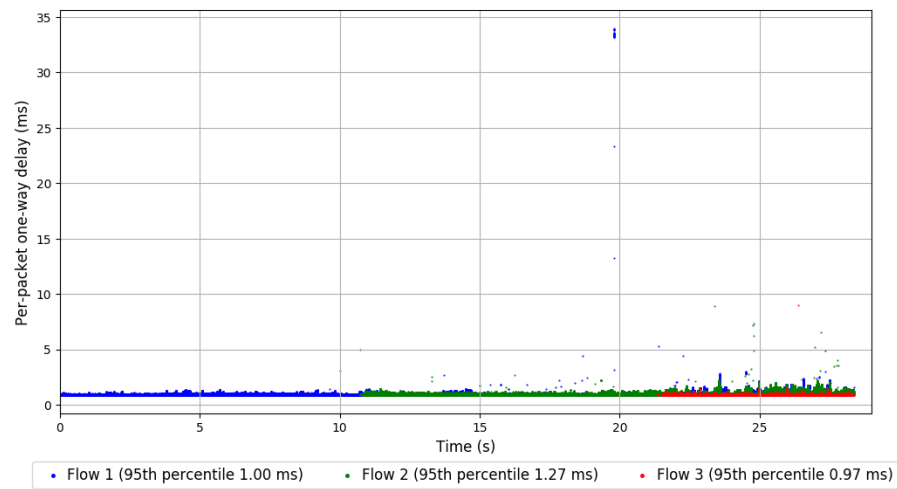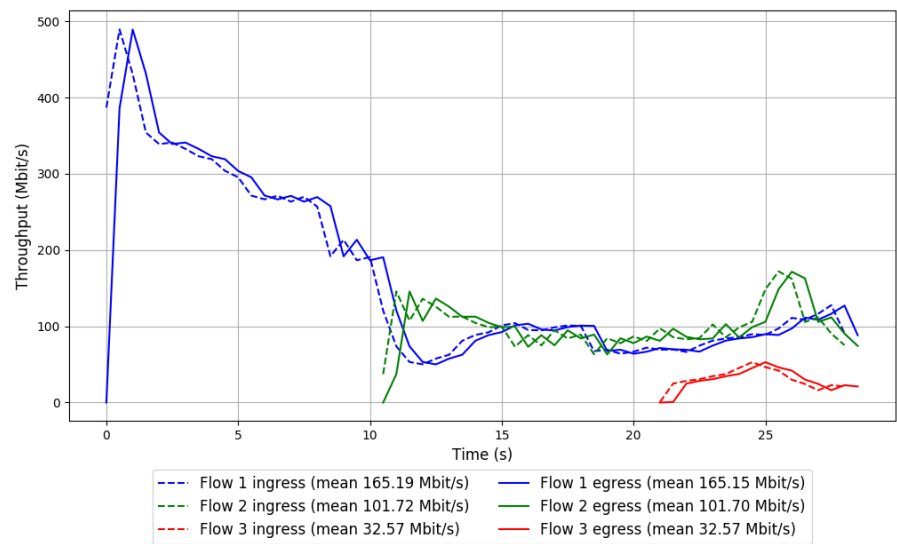
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-07-12 18:32:32
End at: 2019-07-12 18:33:02
Local clock offset: 7.491 ms
Remote clock offset: 3.243 ms


# Below is generated by plot.py at 2019-07-12 19:30:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.57 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 156.80 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.54 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 127.50 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.00%
```
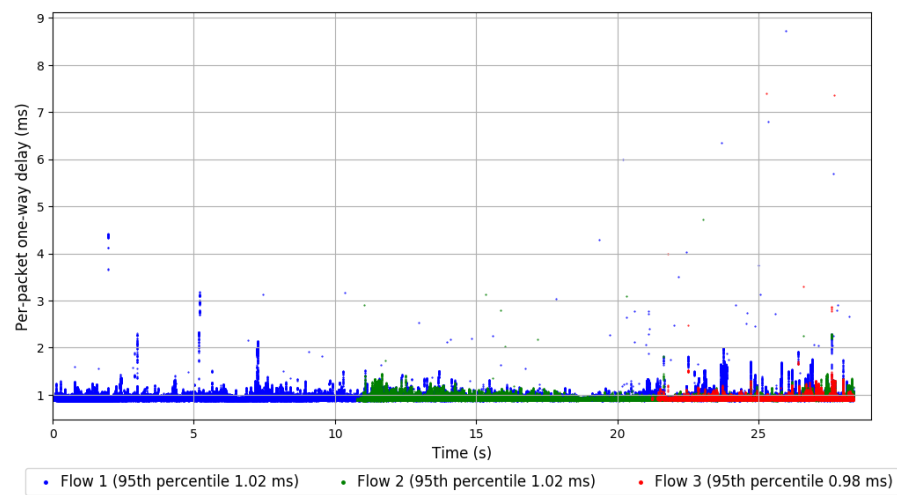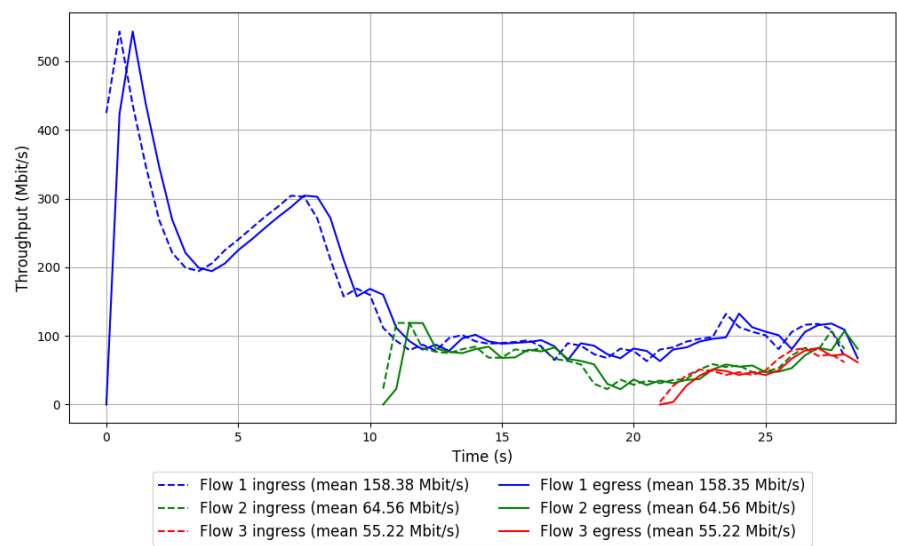
Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-07-12 16:24:55
End at: 2019-07-12 16:25:25
Local clock offset: 6.239 ms
Remote clock offset: 4.535 ms


# Below is generated by plot.py at 2019-07-12 19:30:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 219.65 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 162.36 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 79.07 Mbit/s
95th percentile per-packet one-way delay: 1.215 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 33.99 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 0.05%
```
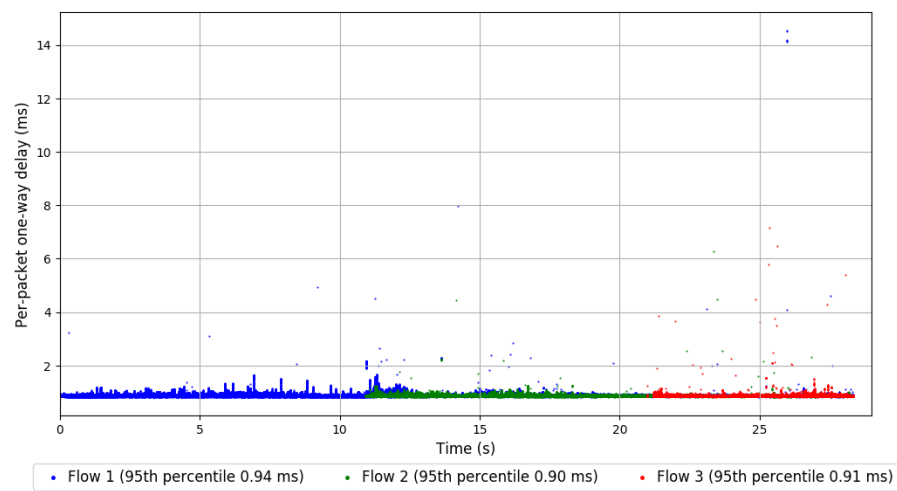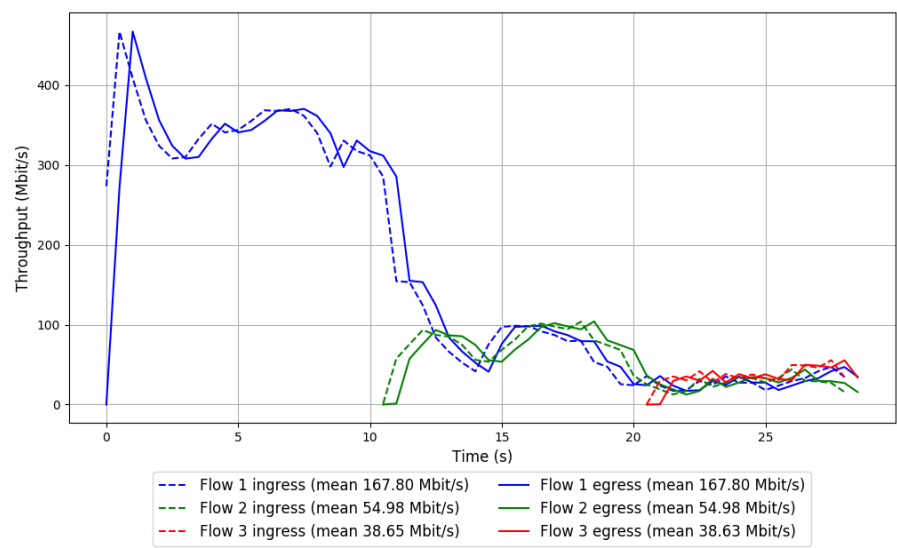
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-07-12 16:59:23
End at: 2019-07-12 16:59:53
Local clock offset: 6.888 ms
Remote clock offset: 3.296 ms


# Below is generated by plot.py at 2019-07-12 19:30:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.41 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 165.15 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 101.70 Mbit/s
95th percentile per-packet one-way delay: 1.272 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 32.57 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.00%
```
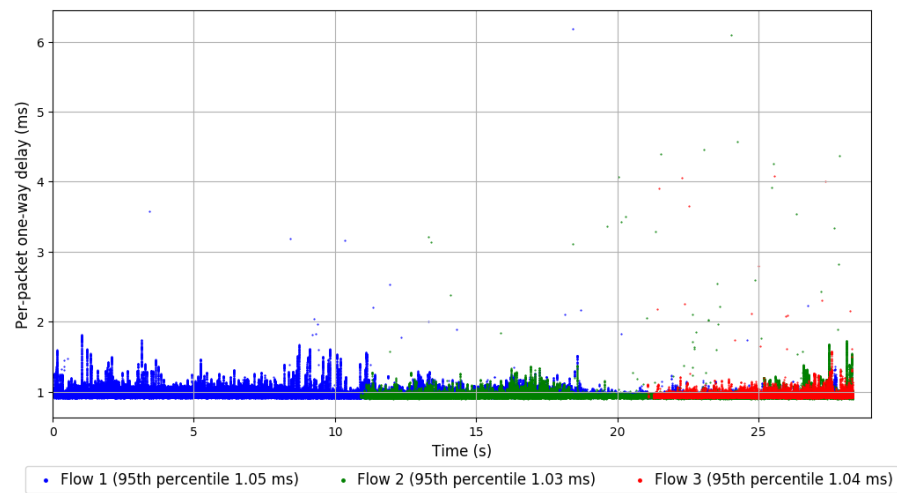
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-07-12 17:33:42
End at: 2019-07-12 17:34:12
Local clock offset: 6.794 ms
Remote clock offset: 3.27 ms


# Below is generated by plot.py at 2019-07-12 19:30:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 212.29 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 158.35 Mbit/s
95th percentile per-packet one-way delay: 1.022 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 64.56 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 55.22 Mbit/s
95th percentile per-packet one-way delay: 0.976 ms
Loss rate: 0.00%
```
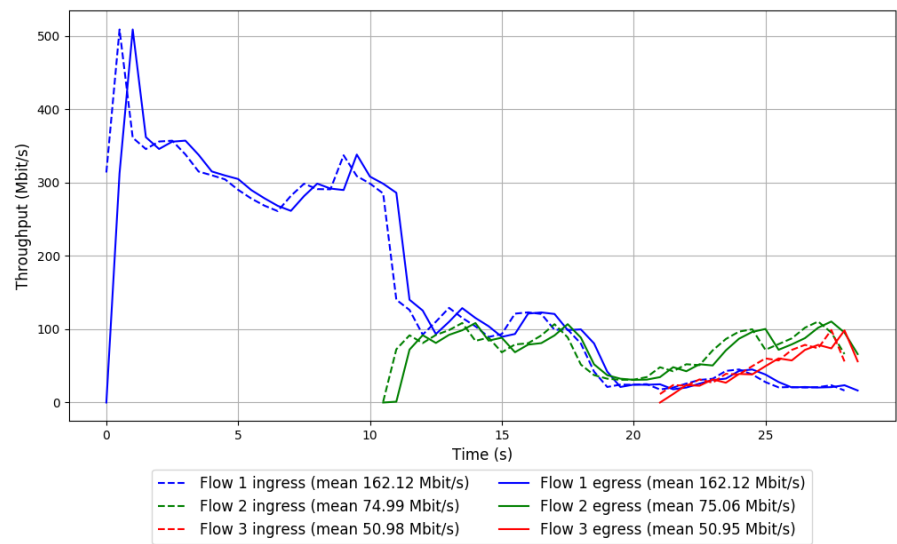
Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-07-12 18:07:55
End at: 2019-07-12 18:08:25
Local clock offset: 7.125 ms
Remote clock offset: 3.577 ms


# Below is generated by plot.py at 2019-07-12 19:31:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.67 Mbit/s
95th percentile per-packet one-way delay: 0.931 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 167.80 Mbit/s
95th percentile per-packet one-way delay: 0.936 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.98 Mbit/s
95th percentile per-packet one-way delay: 0.900 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.63 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.07%
```
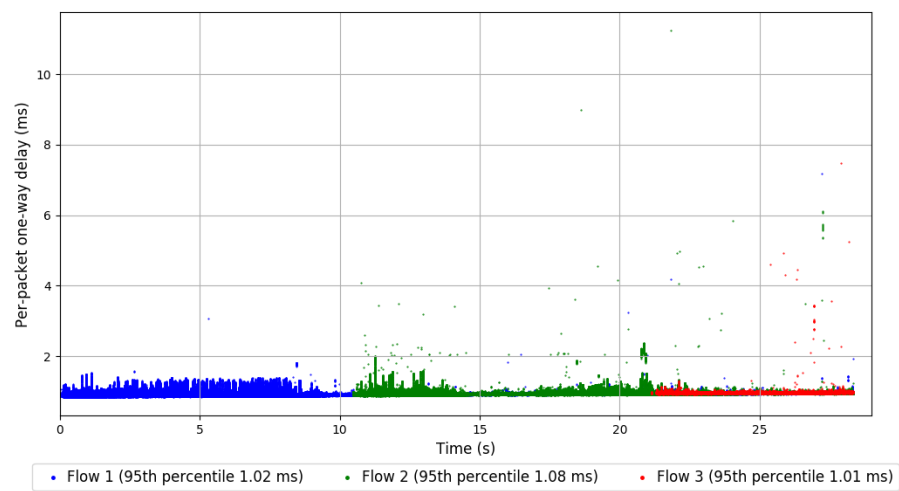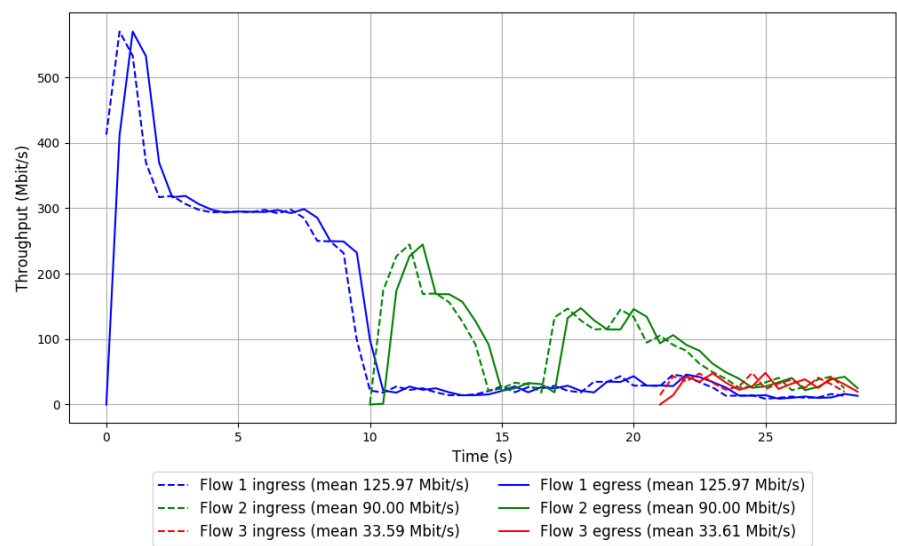
Run 4: Report of Indigo-MusesC3 — Data Link

72

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-07-12 18:42:09
End at: 2019-07-12 18:42:39
Local clock offset: 7.677 ms
Remote clock offset: 3.118 ms


# Below is generated by plot.py at 2019-07-12 19:32:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 221.29 Mbit/s
95th percentile per-packet one-way delay: 1.046 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 162.12 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 75.06 Mbit/s
95th percentile per-packet one-way delay: 1.033 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.95 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.07%
```
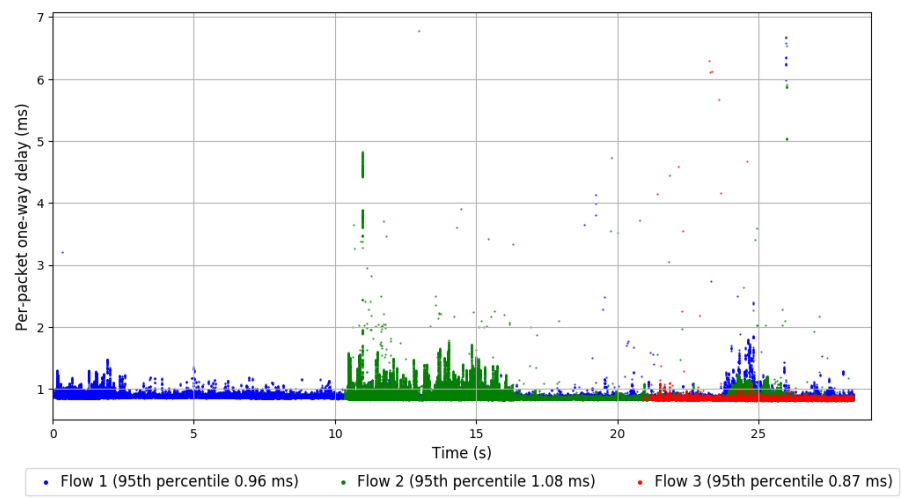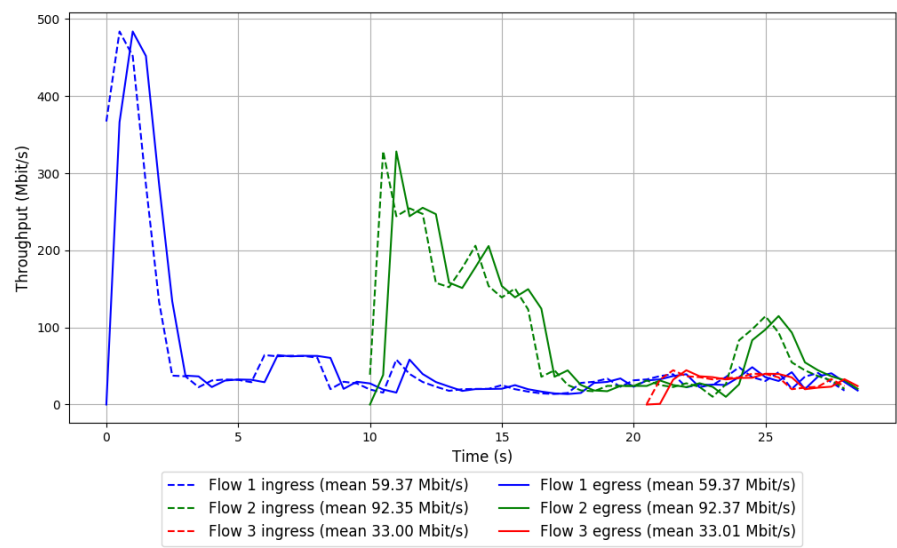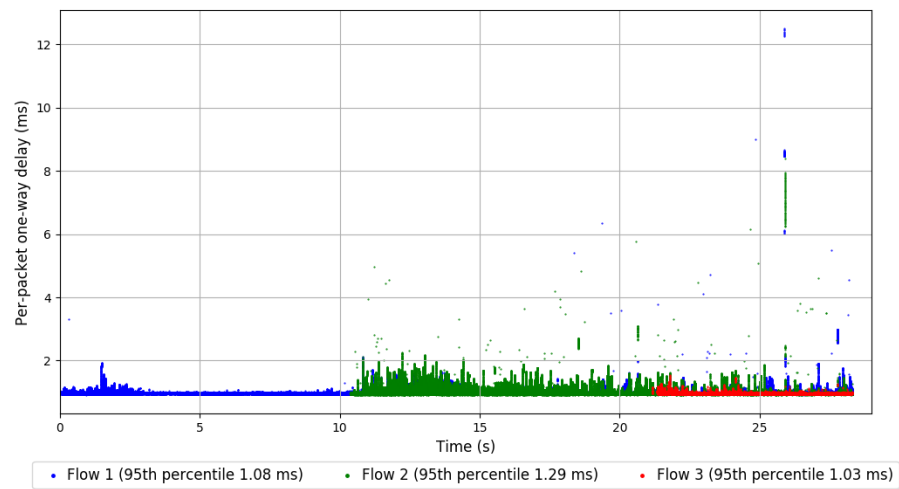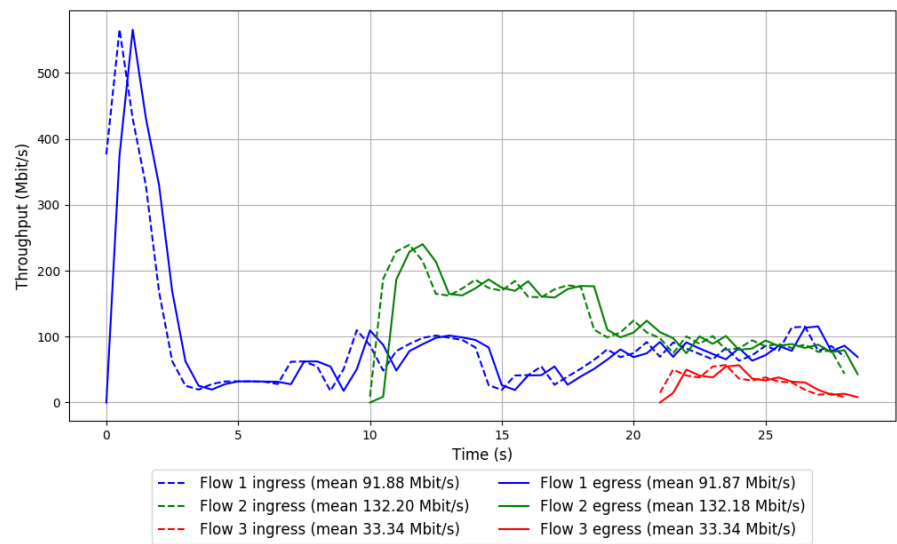
Run 5: Report of Indigo-MusesC3 — Data Link

- - - Flow 1 ingress (mean 162.12 Mbit/s)   —— Flow 1 egress (mean 162.12 Mbit/s)
- - - Flow 2 ingress (mean 74.99 Mbit/s)   —— Flow 2 egress (mean 75.06 Mbit/s)
- - - Flow 3 ingress (mean 50.98 Mbit/s)   —— Flow 3 egress (mean 50.95 Mbit/s)

• Flow 1 (95th percentile 1.05 ms)   • Flow 2 (95th percentile 1.03 ms)   • Flow 3 (95th percentile 1.04 ms)

74

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-07-12 16:12:18
End at: 2019-07-12 16:12:48
Local clock offset: 6.246 ms
Remote clock offset: 2.972 ms

# Below is generated by plot.py at 2019-07-12 19:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.20 Mbit/s
95th percentile per-packet one-way delay: 1.043 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 125.97 Mbit/s
95th percentile per-packet one-way delay: 1.022 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 90.00 Mbit/s
95th percentile per-packet one-way delay: 1.077 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 33.61 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.05%
```
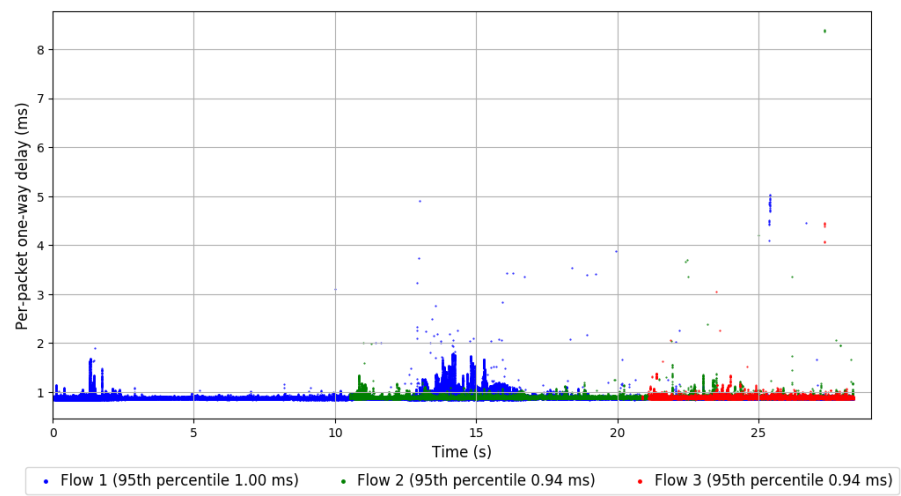
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-07-12 16:46:39
End at: 2019-07-12 16:47:09
Local clock offset: 6.722 ms
Remote clock offset: 3.705 ms


# Below is generated by plot.py at 2019-07-12 19:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.68 Mbit/s
95th percentile per-packet one-way delay: 1.014 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.37 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 92.37 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.01 Mbit/s
95th percentile per-packet one-way delay: 0.871 ms
Loss rate: 0.01%
```
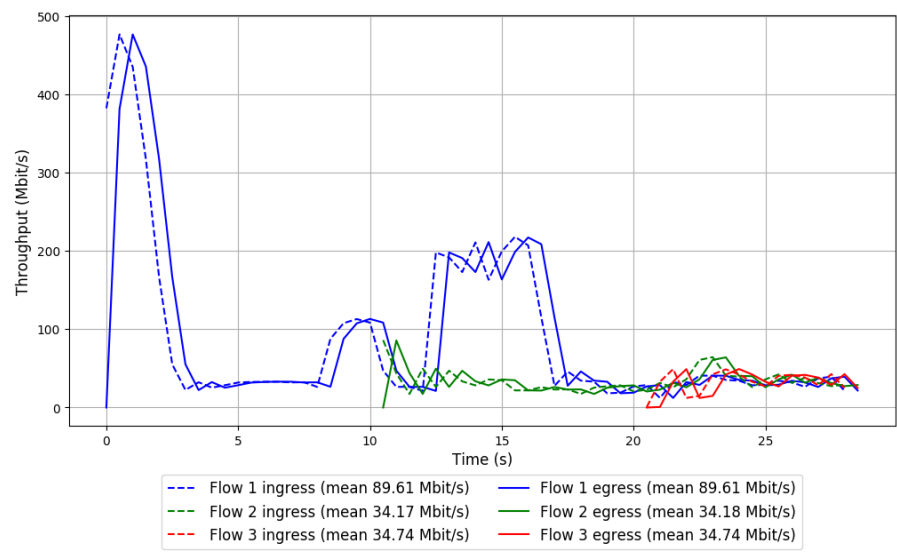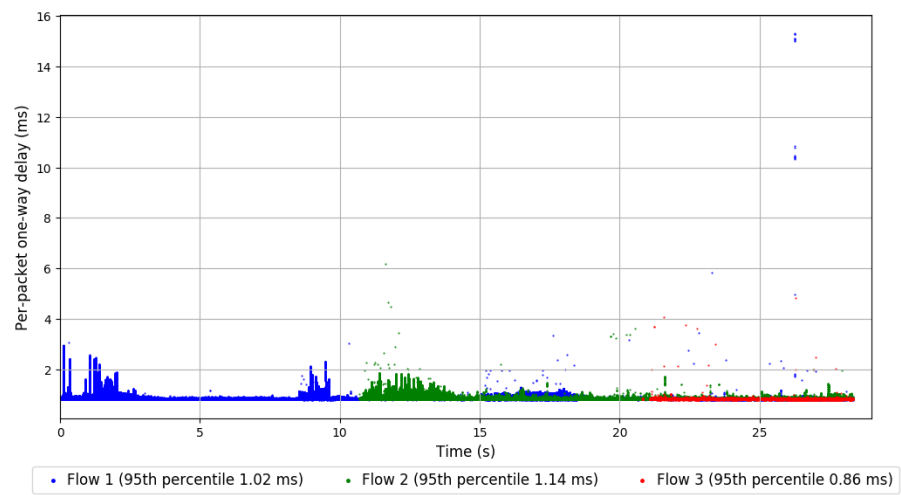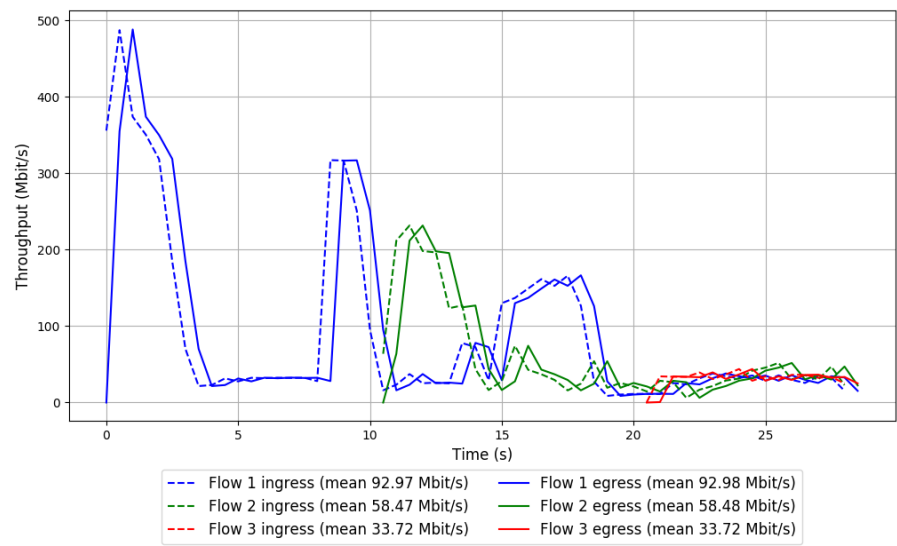
Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-07-12 17:21:02
End at: 2019-07-12 17:21:32
Local clock offset: 6.76 ms
Remote clock offset: 3.158 ms


# Below is generated by plot.py at 2019-07-12 19:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 184.10 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 91.87 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 132.18 Mbit/s
95th percentile per-packet one-way delay: 1.295 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.34 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.00%
```

Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-07-12 17:55:20
End at: 2019-07-12 17:55:50
Local clock offset: 6.793 ms
Remote clock offset: 3.408 ms


# Below is generated by plot.py at 2019-07-12 19:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.26 Mbit/s
95th percentile per-packet one-way delay: 0.980 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 89.61 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 0.945 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 34.74 Mbit/s
95th percentile per-packet one-way delay: 0.937 ms
Loss rate: 0.00%
```
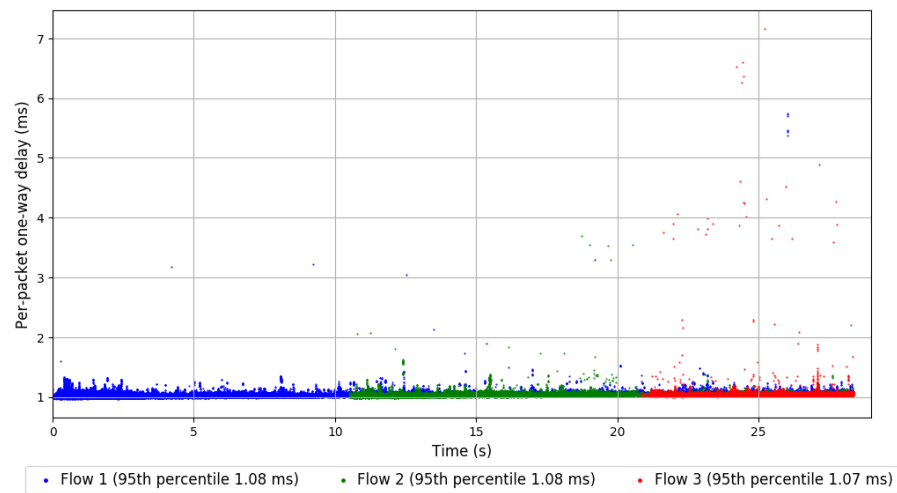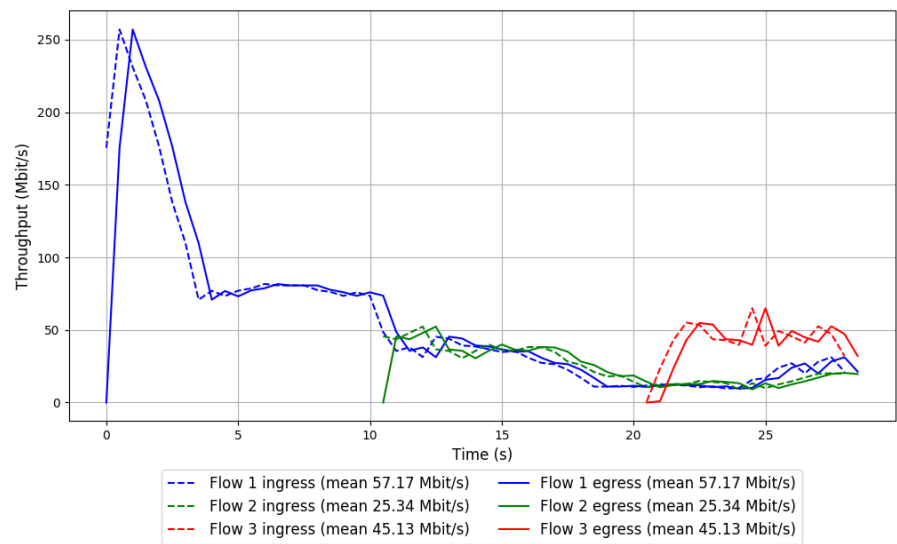
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-07-12 18:29:38
End at: 2019-07-12 18:30:08
Local clock offset: 7.416 ms
Remote clock offset: 3.25 ms


# Below is generated by plot.py at 2019-07-12 19:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.35 Mbit/s
95th percentile per-packet one-way delay: 1.052 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.98 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 58.48 Mbit/s
95th percentile per-packet one-way delay: 1.142 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 33.72 Mbit/s
95th percentile per-packet one-way delay: 0.861 ms
Loss rate: 0.00%
```
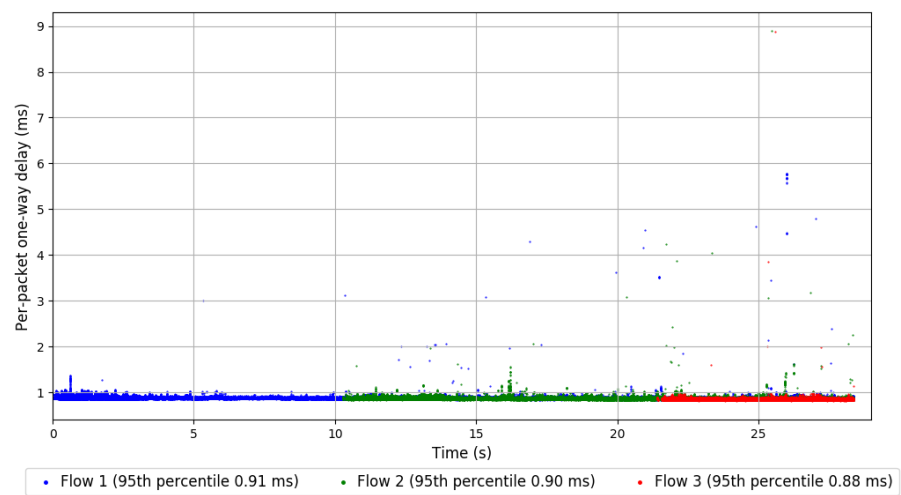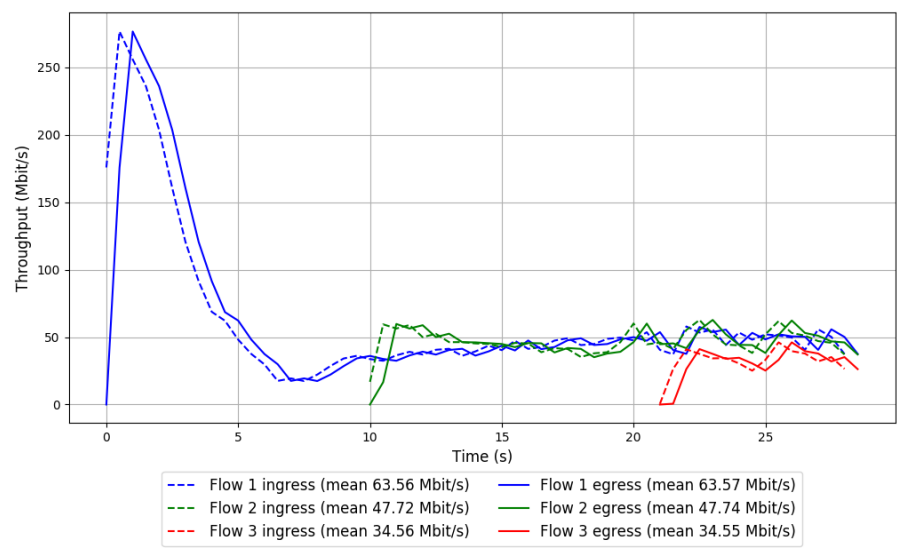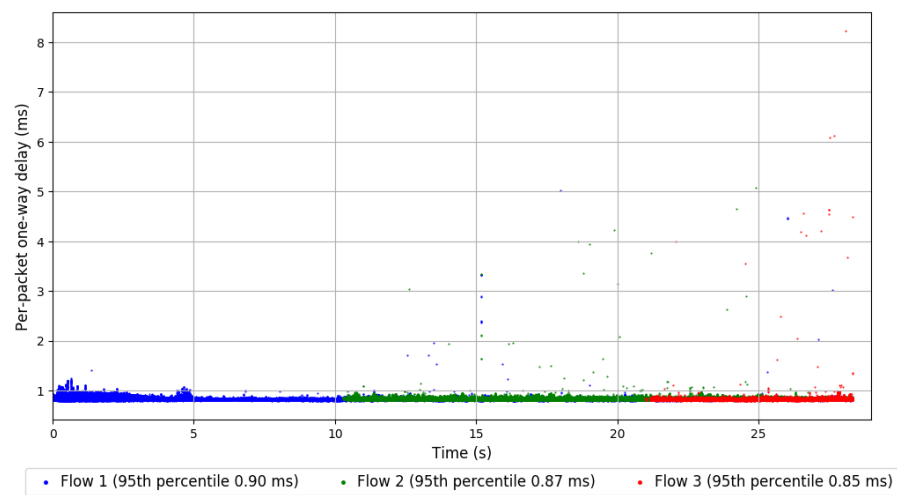
Run 5: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 92.97 Mbit/s) —— Flow 1 egress (mean 92.98 Mbit/s)
- - - Flow 2 ingress (mean 58.47 Mbit/s) —— Flow 2 egress (mean 58.48 Mbit/s)
- - - Flow 3 ingress (mean 33.72 Mbit/s) —— Flow 3 egress (mean 33.72 Mbit/s)

• Flow 1 (95th percentile 1.02 ms)   • Flow 2 (95th percentile 1.14 ms)   • Flow 3 (95th percentile 0.86 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-07-12 16:16:47
End at: 2019-07-12 16:17:17
Local clock offset: 6.245 ms
Remote clock offset: 3.601 ms


# Below is generated by plot.py at 2019-07-12 19:32:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.95 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.34 Mbit/s
95th percentile per-packet one-way delay: 1.077 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 45.13 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.00%
```
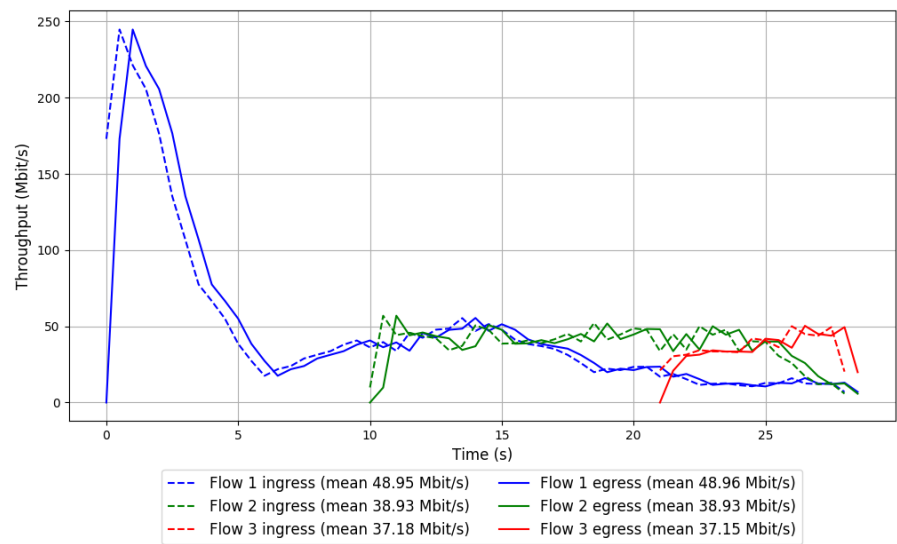
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-07-12 16:51:05
End at: 2019-07-12 16:51:35
Local clock offset: 6.825 ms
Remote clock offset: 3.519 ms


# Below is generated by plot.py at 2019-07-12 19:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 102.48 Mbit/s
95th percentile per-packet one-way delay: 0.907 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.57 Mbit/s
95th percentile per-packet one-way delay: 0.910 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.74 Mbit/s
95th percentile per-packet one-way delay: 0.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.55 Mbit/s
95th percentile per-packet one-way delay: 0.879 ms
Loss rate: 0.04%
```
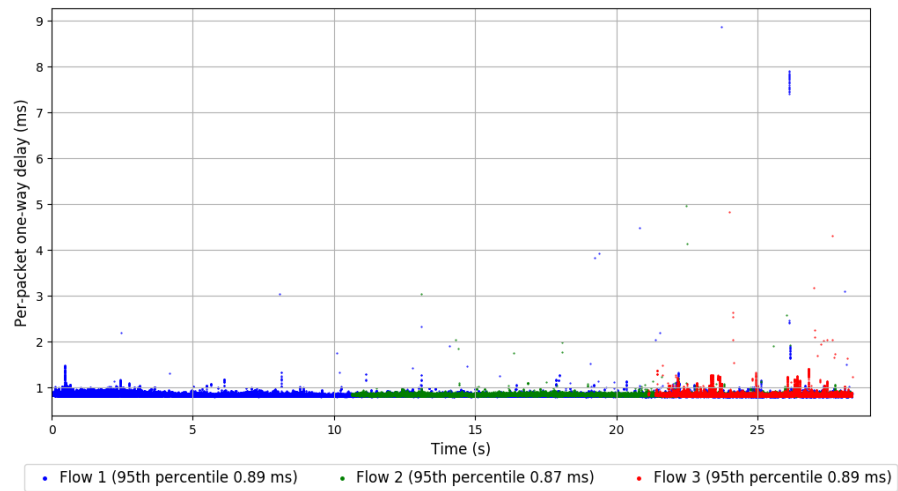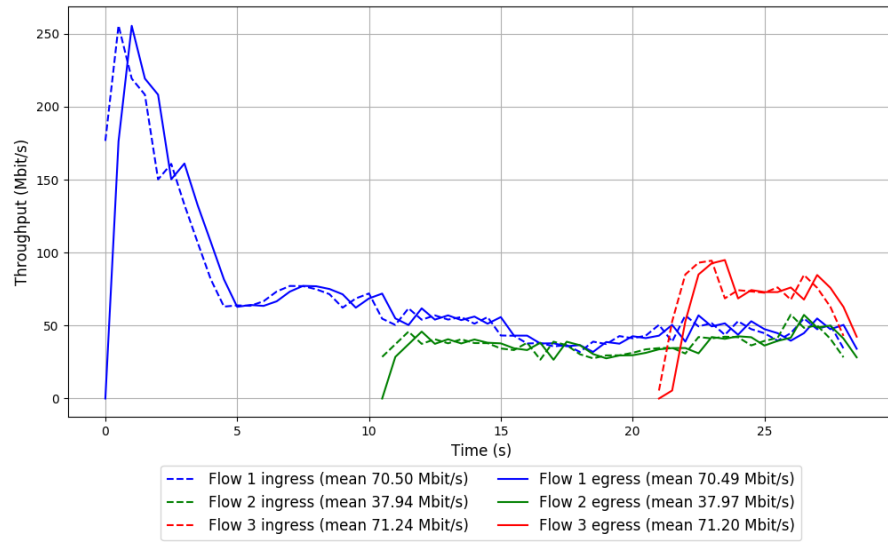
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-07-12 17:25:29
End at: 2019-07-12 17:25:59
Local clock offset: 6.781 ms
Remote clock offset: 3.289 ms


# Below is generated by plot.py at 2019-07-12 19:32:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.34 Mbit/s
95th percentile per-packet one-way delay: 0.884 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 48.96 Mbit/s
95th percentile per-packet one-way delay: 0.899 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.93 Mbit/s
95th percentile per-packet one-way delay: 0.866 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 37.15 Mbit/s
95th percentile per-packet one-way delay: 0.854 ms
Loss rate: 0.07%
```
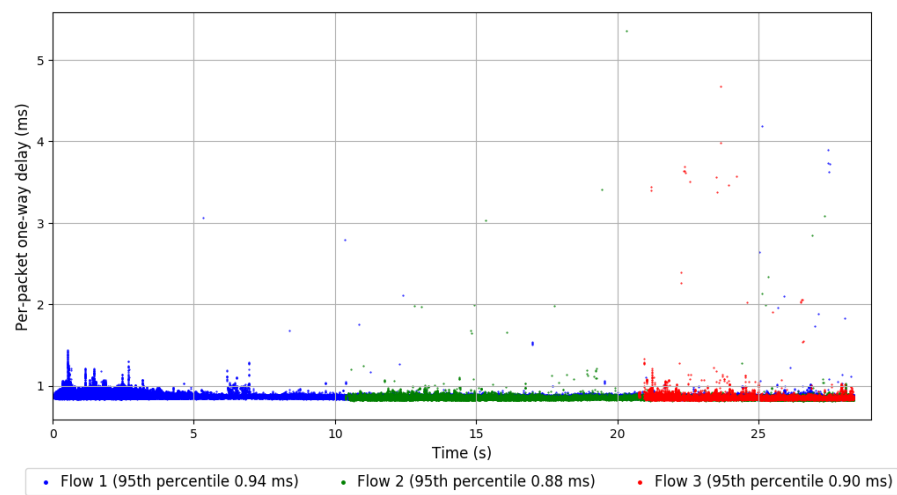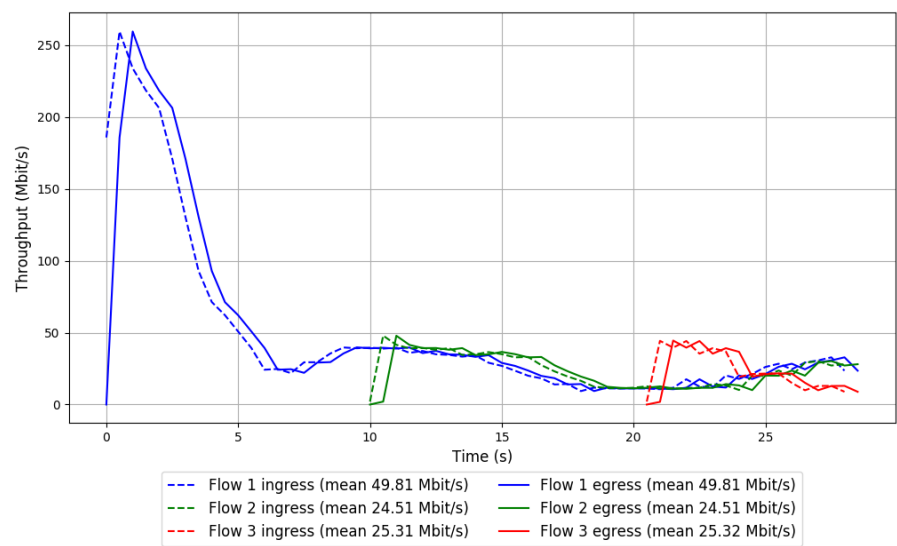
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-07-12 17:59:42
End at: 2019-07-12 18:00:12
Local clock offset: 6.79 ms
Remote clock offset: 3.431 ms


# Below is generated by plot.py at 2019-07-12 19:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 112.35 Mbit/s
95th percentile per-packet one-way delay: 0.885 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 70.49 Mbit/s
95th percentile per-packet one-way delay: 0.889 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 37.97 Mbit/s
95th percentile per-packet one-way delay: 0.870 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.20 Mbit/s
95th percentile per-packet one-way delay: 0.894 ms
Loss rate: 0.07%
```
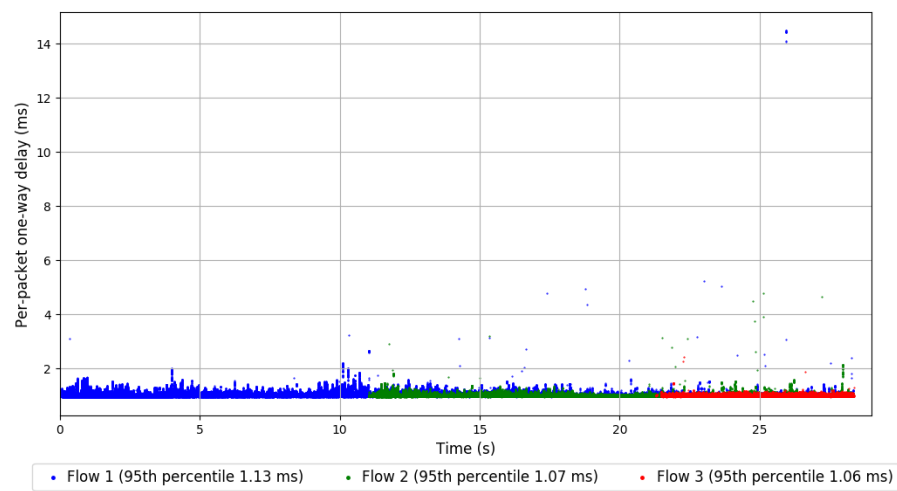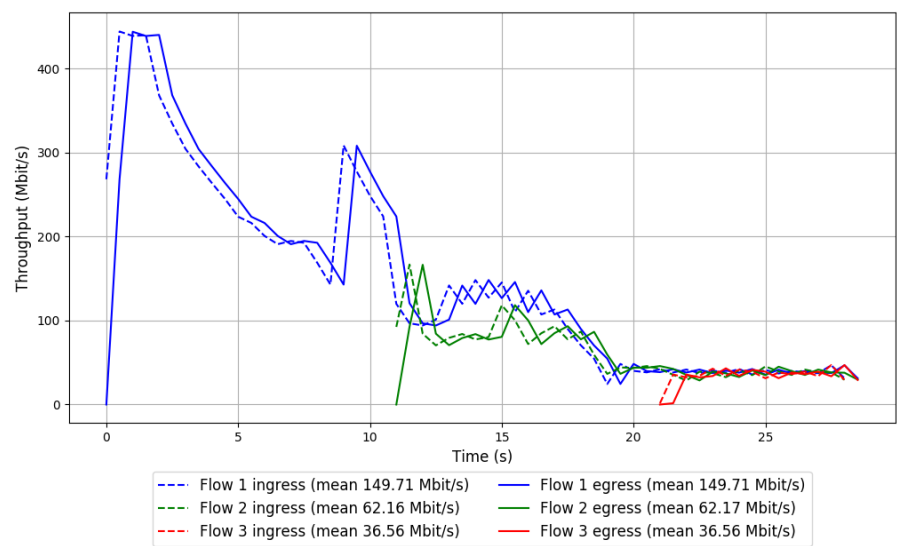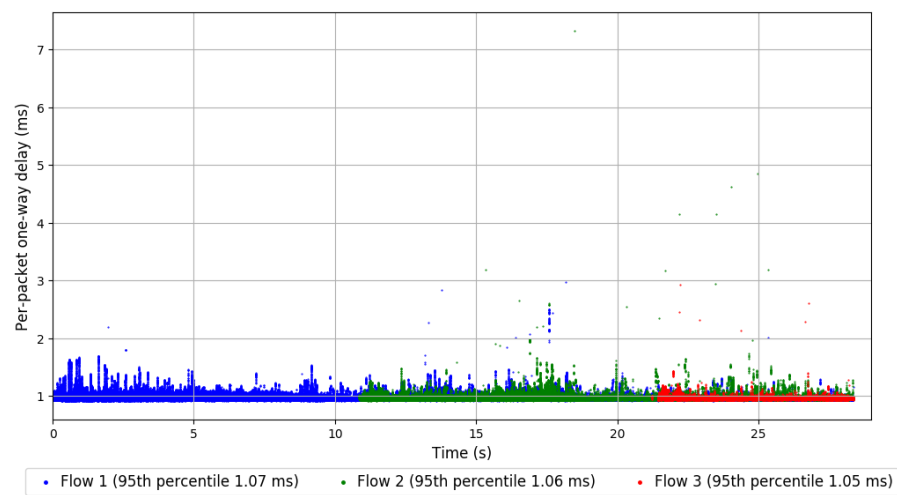
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 70.50 Mbit/s) --- Flow 1 egress (mean 70.49 Mbit/s)
Flow 2 ingress (mean 37.94 Mbit/s) --- Flow 2 egress (mean 37.97 Mbit/s)
Flow 3 ingress (mean 71.24 Mbit/s) --- Flow 3 egress (mean 71.20 Mbit/s)

• Flow 1 (95th percentile 0.89 ms)   • Flow 2 (95th percentile 0.87 ms)   • Flow 3 (95th percentile 0.89 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-07-12 18:34:00
End at: 2019-07-12 18:34:30
Local clock offset: 7.563 ms
Remote clock offset: 3.233 ms

# Below is generated by plot.py at 2019-07-12 19:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.13 Mbit/s
95th percentile per-packet one-way delay: 0.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.81 Mbit/s
95th percentile per-packet one-way delay: 0.935 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.51 Mbit/s
95th percentile per-packet one-way delay: 0.879 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.32 Mbit/s
95th percentile per-packet one-way delay: 0.900 ms
Loss rate: 0.01%
```
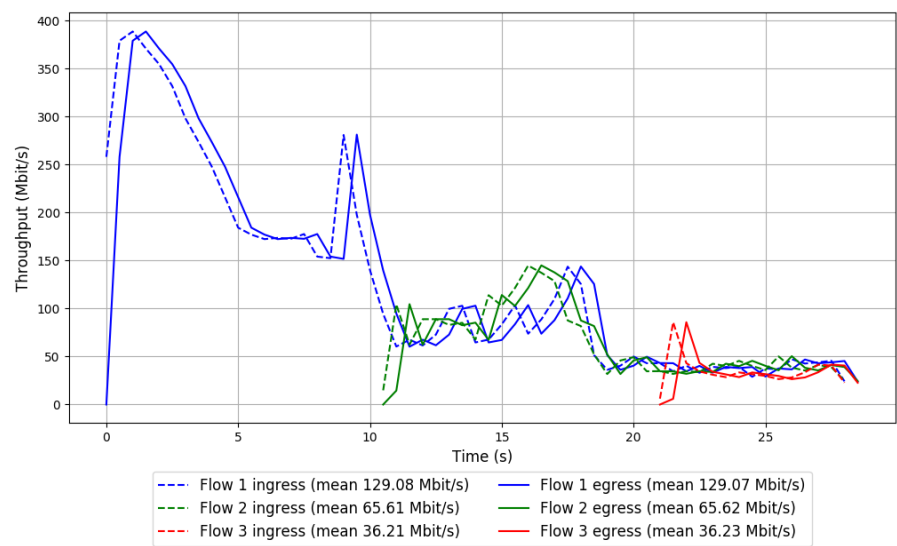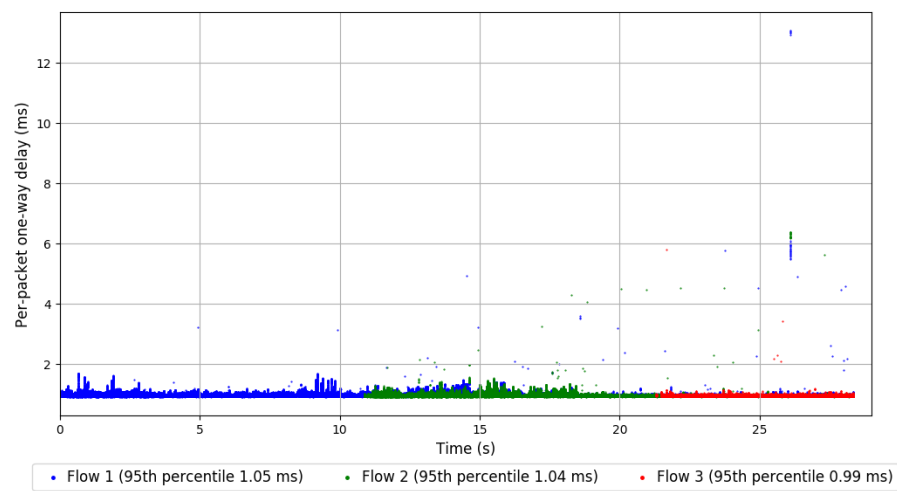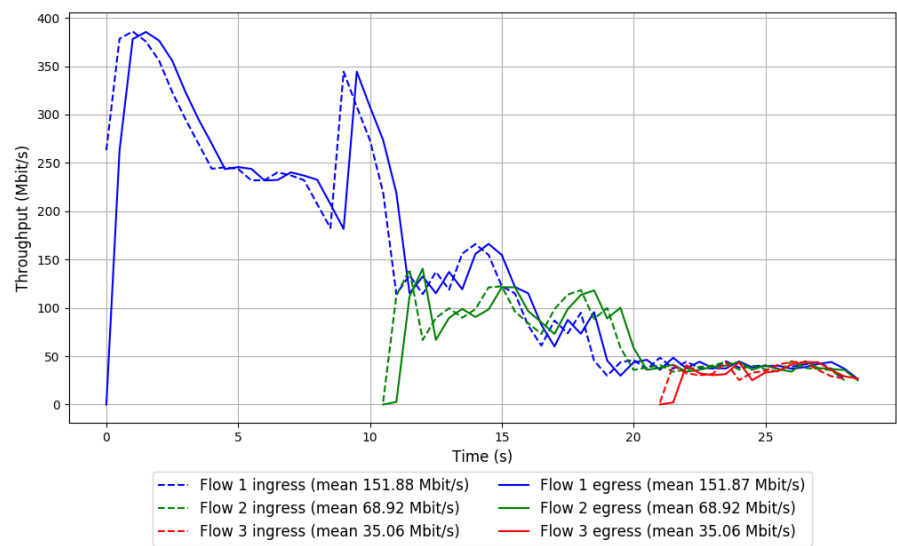
Run 5: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 49.81 Mbit/s)   —— Flow 1 egress (mean 49.81 Mbit/s)
- - - Flow 2 ingress (mean 24.51 Mbit/s)   —— Flow 2 egress (mean 24.51 Mbit/s)
- - - Flow 3 ingress (mean 25.31 Mbit/s)   —— Flow 3 egress (mean 25.32 Mbit/s)

- Flow 1 (95th percentile 0.94 ms)   • Flow 2 (95th percentile 0.88 ms)   • Flow 3 (95th percentile 0.90 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-07-12 16:30:58
End at: 2019-07-12 16:31:28
Local clock offset: 6.356 ms
Remote clock offset: 5.153 ms


# Below is generated by plot.py at 2019-07-12 19:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.76 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 149.71 Mbit/s
95th percentile per-packet one-way delay: 1.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 62.17 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 36.56 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.04%
```
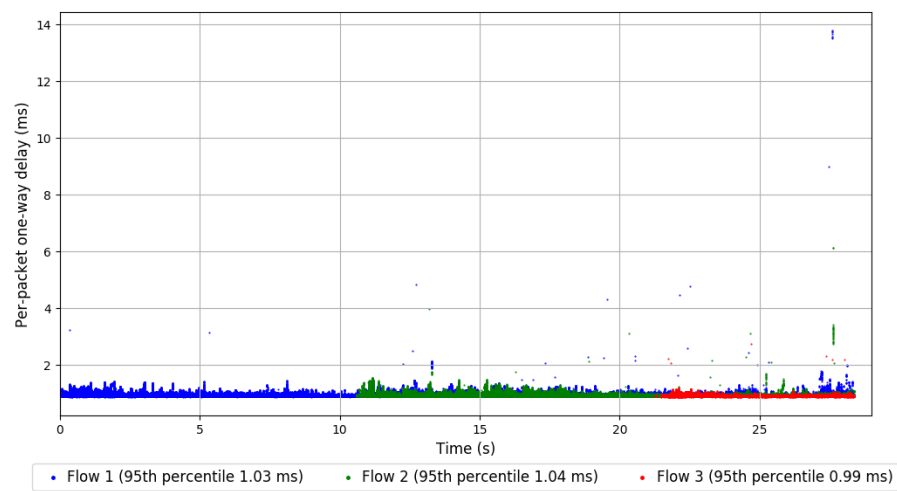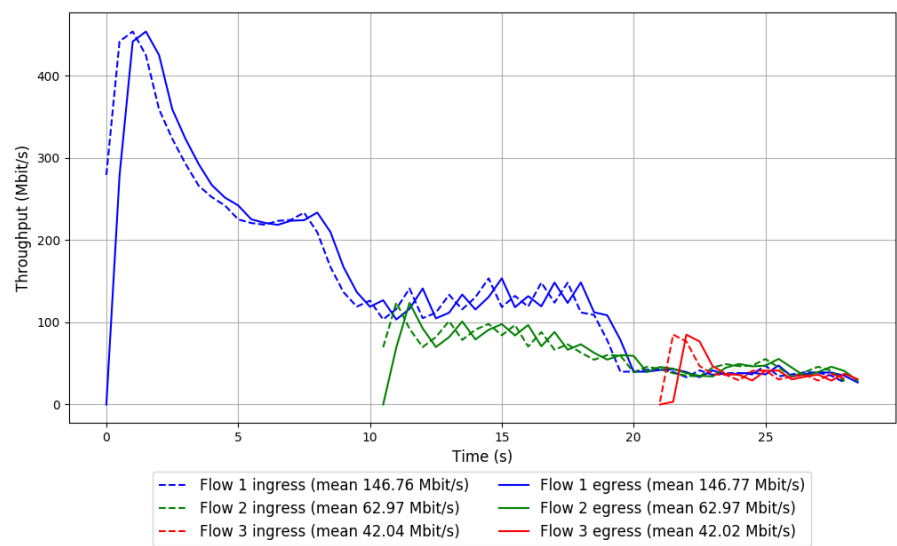
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-07-12 17:05:17
End at: 2019-07-12 17:05:47
Local clock offset: 6.78 ms
Remote clock offset: 3.237 ms


# Below is generated by plot.py at 2019-07-12 19:34:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.69 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 129.07 Mbit/s
95th percentile per-packet one-way delay: 1.067 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 36.23 Mbit/s
95th percentile per-packet one-way delay: 1.052 ms
Loss rate: 0.02%
```
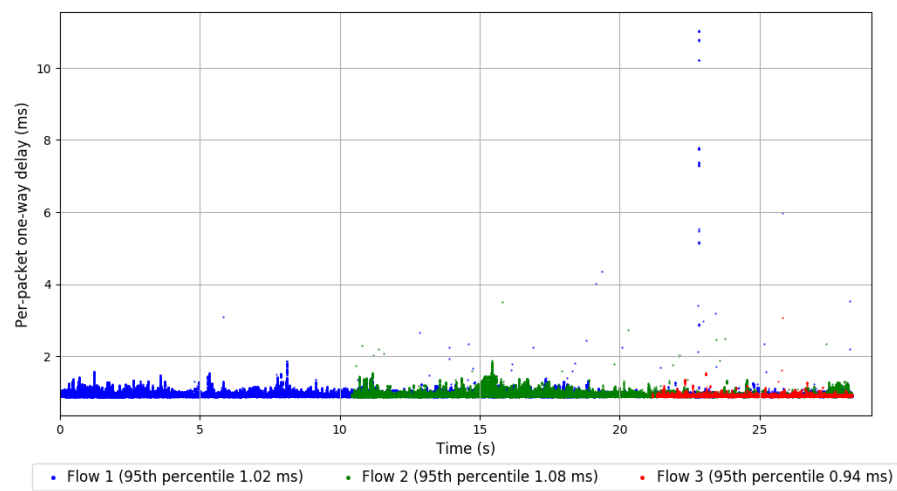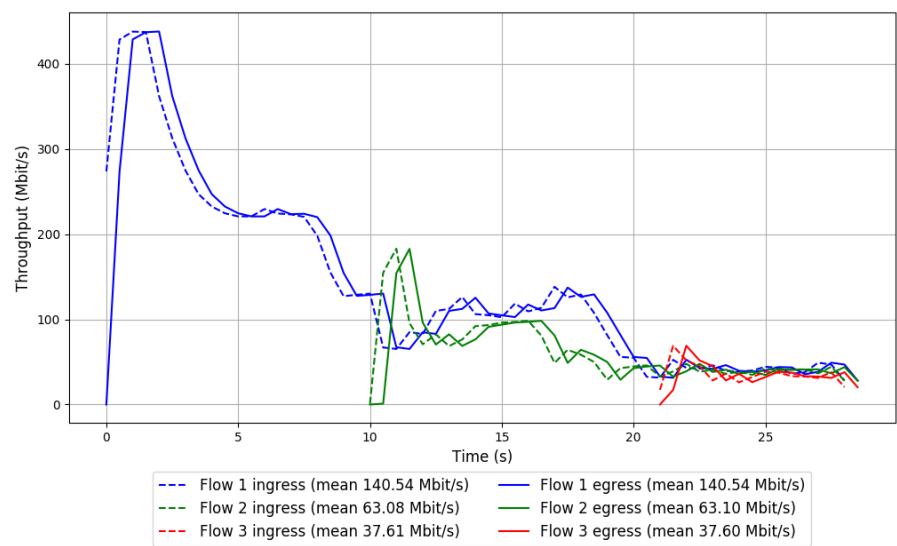
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-07-12 17:39:31
End at: 2019-07-12 17:40:01
Local clock offset: 6.764 ms
Remote clock offset: 3.274 ms


# Below is generated by plot.py at 2019-07-12 19:34:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 203.09 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 151.87 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.92 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 35.06 Mbit/s
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.00%
```
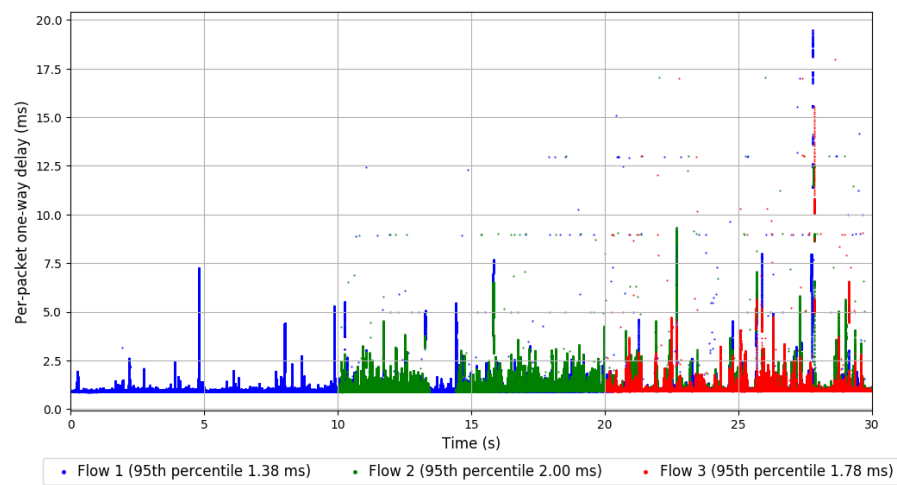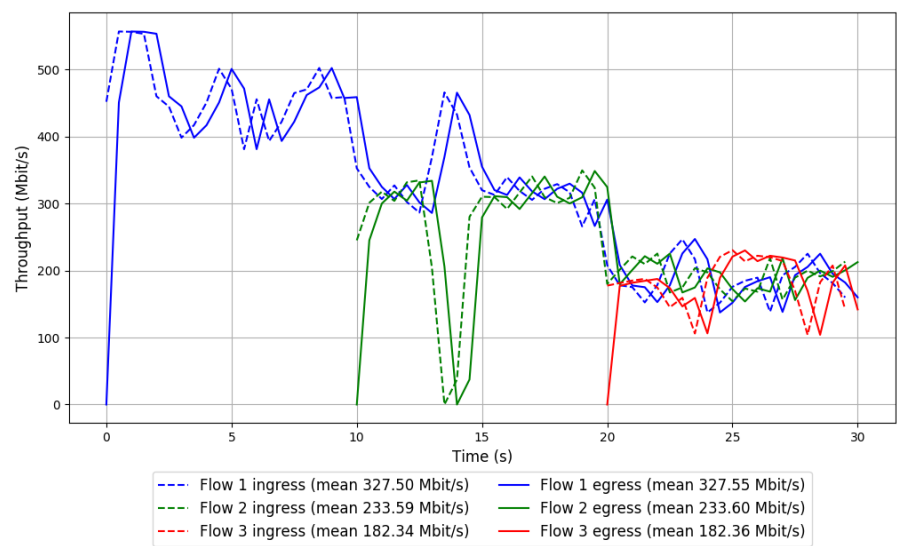
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 151.88 Mbit/s)   Flow 1 egress (mean 151.87 Mbit/s)
Flow 2 ingress (mean 68.92 Mbit/s)   Flow 2 egress (mean 68.92 Mbit/s)
Flow 3 ingress (mean 35.06 Mbit/s)   Flow 3 egress (mean 35.06 Mbit/s)

Flow 1 (95th percentile 1.05 ms)   Flow 2 (95th percentile 1.04 ms)   Flow 3 (95th percentile 0.99 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-07-12 18:13:59
End at: 2019-07-12 18:14:29
Local clock offset: 7.248 ms
Remote clock offset: 3.663 ms


# Below is generated by plot.py at 2019-07-12 19:34:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 196.68 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 146.77 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 62.97 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.02 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.09%
```
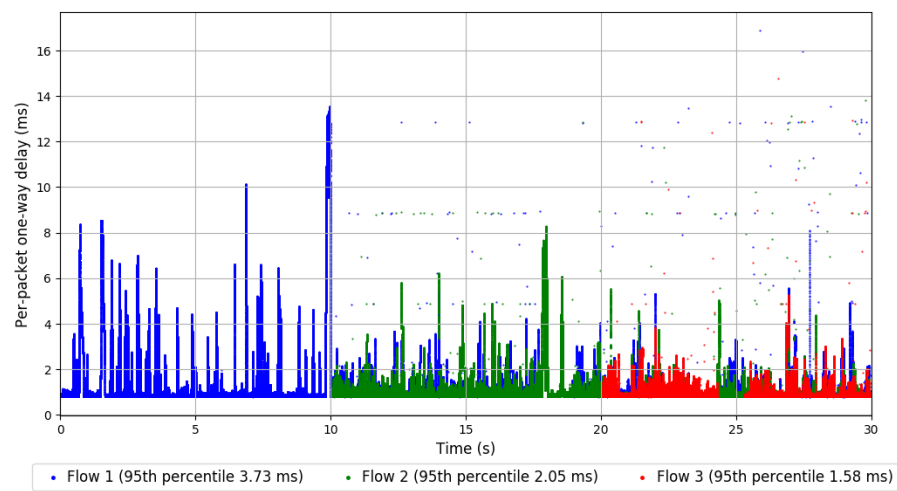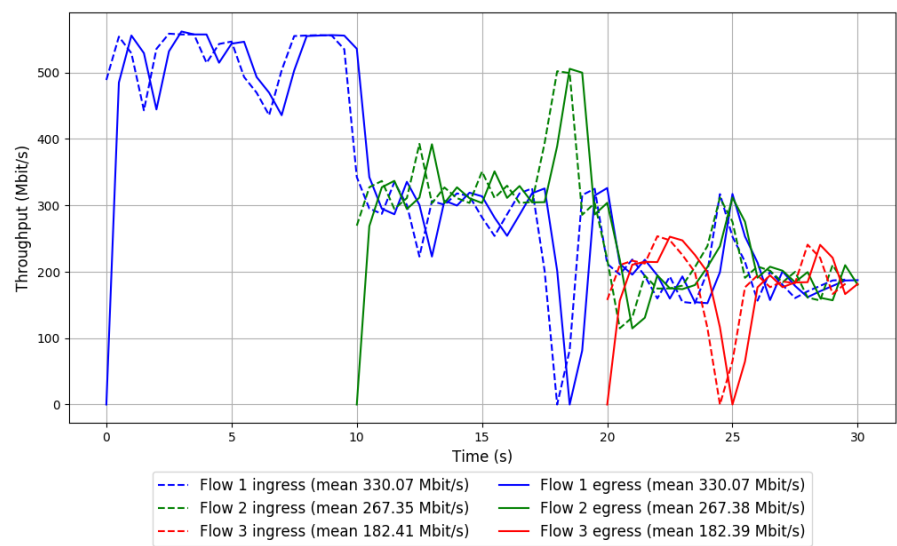
Run 4: Report of Indigo-MusesT — Data Link

- - - Flow 1 ingress (mean 146.76 Mbit/s)   —— Flow 1 egress (mean 146.77 Mbit/s)
- - - Flow 2 ingress (mean 62.97 Mbit/s)   —— Flow 2 egress (mean 62.97 Mbit/s)
- - - Flow 3 ingress (mean 42.04 Mbit/s)   —— Flow 3 egress (mean 42.02 Mbit/s)

• Flow 1 (95th percentile 1.03 ms)   • Flow 2 (95th percentile 1.04 ms)   • Flow 3 (95th percentile 0.99 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-07-12 18:48:02
End at: 2019-07-12 18:48:32
Local clock offset: 7.723 ms
Remote clock offset: 3.176 ms


# Below is generated by plot.py at 2019-07-12 19:34:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 189.87 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 140.54 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 63.10 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 37.60 Mbit/s
95th percentile per-packet one-way delay: 0.939 ms
Loss rate: 0.04%
```
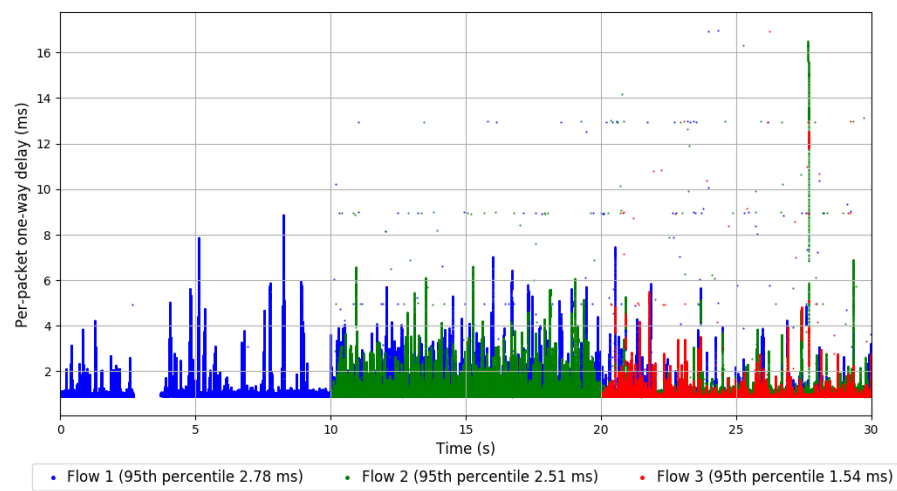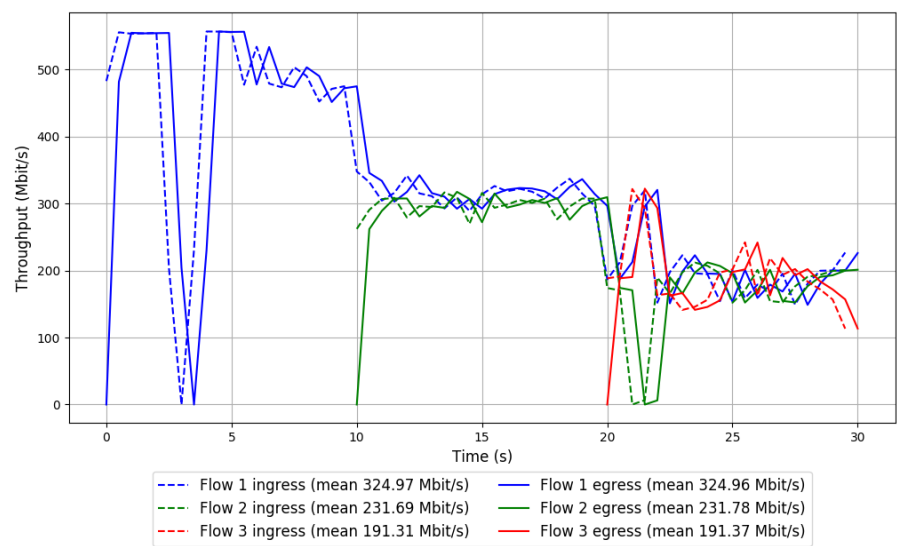
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-07-12 16:19:19
End at: 2019-07-12 16:19:49
Local clock offset: 6.21 ms
Remote clock offset: 3.967 ms


# Below is generated by plot.py at 2019-07-12 19:38:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 543.69 Mbit/s
95th percentile per-packet one-way delay: 1.626 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 327.55 Mbit/s
95th percentile per-packet one-way delay: 1.375 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 233.60 Mbit/s
95th percentile per-packet one-way delay: 1.999 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 182.36 Mbit/s
95th percentile per-packet one-way delay: 1.777 ms
Loss rate: 0.01%
```
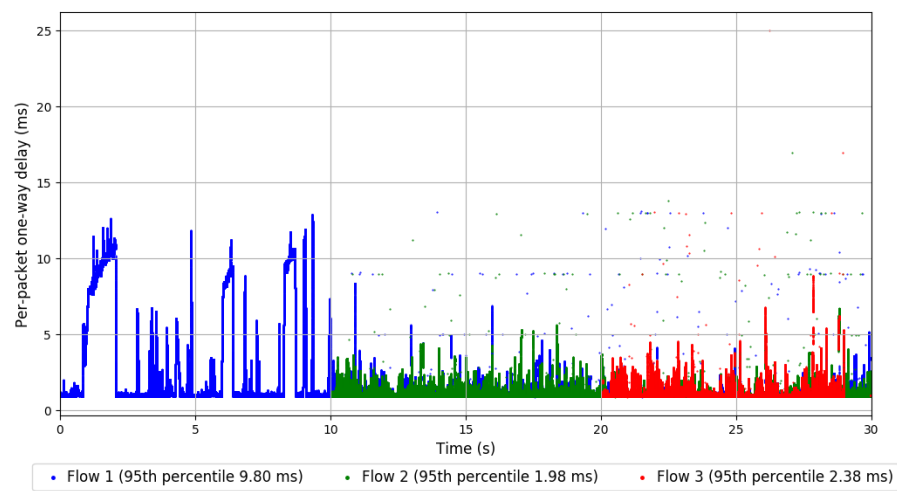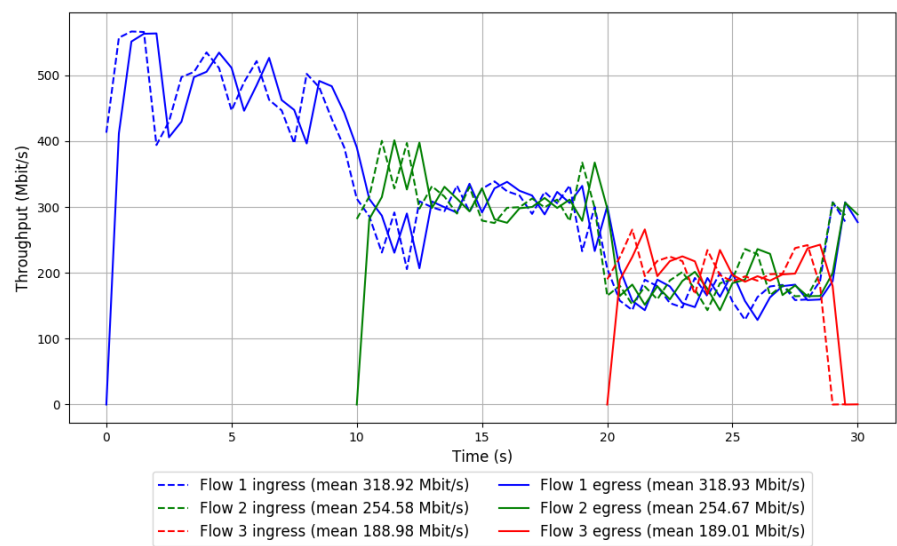
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-07-12 16:53:37
End at: 2019-07-12 16:54:07
Local clock offset: 6.847 ms
Remote clock offset: 3.473 ms


# Below is generated by plot.py at 2019-07-12 19:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.65 Mbit/s
95th percentile per-packet one-way delay: 2.988 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 330.07 Mbit/s
95th percentile per-packet one-way delay: 3.725 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 267.38 Mbit/s
95th percentile per-packet one-way delay: 2.054 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 182.39 Mbit/s
95th percentile per-packet one-way delay: 1.584 ms
Loss rate: 0.02%
```
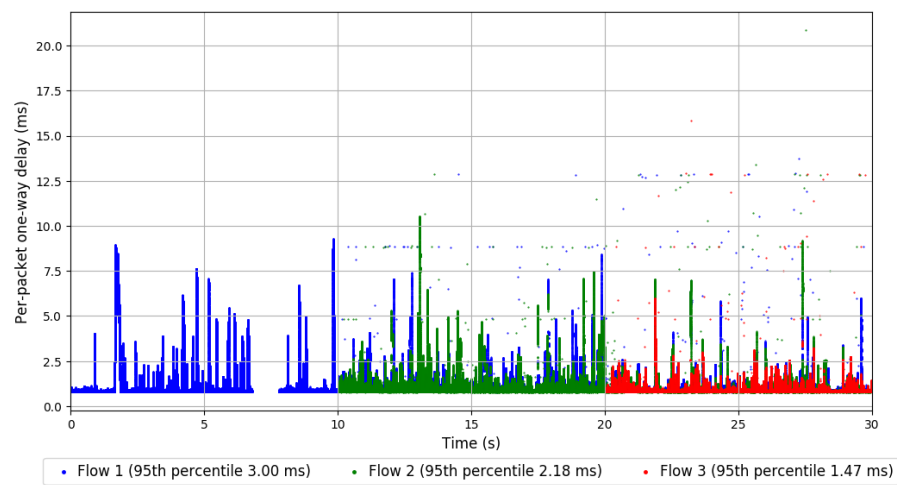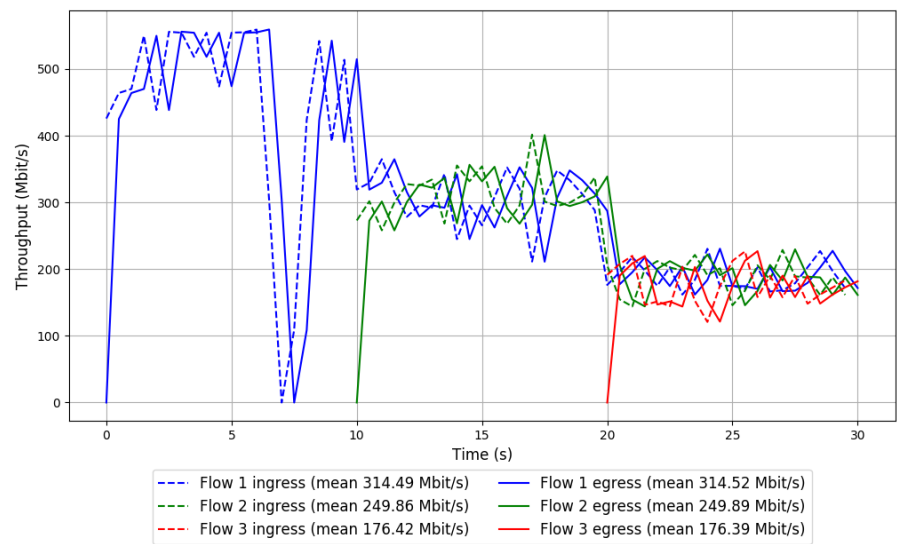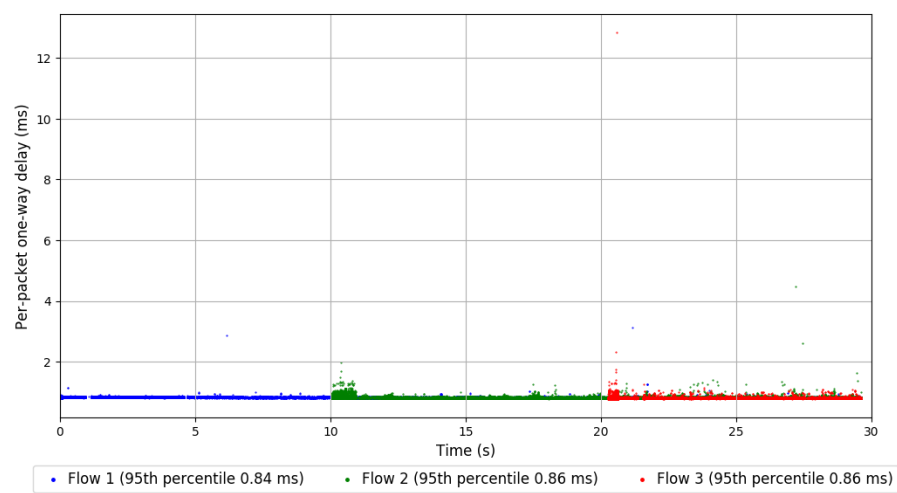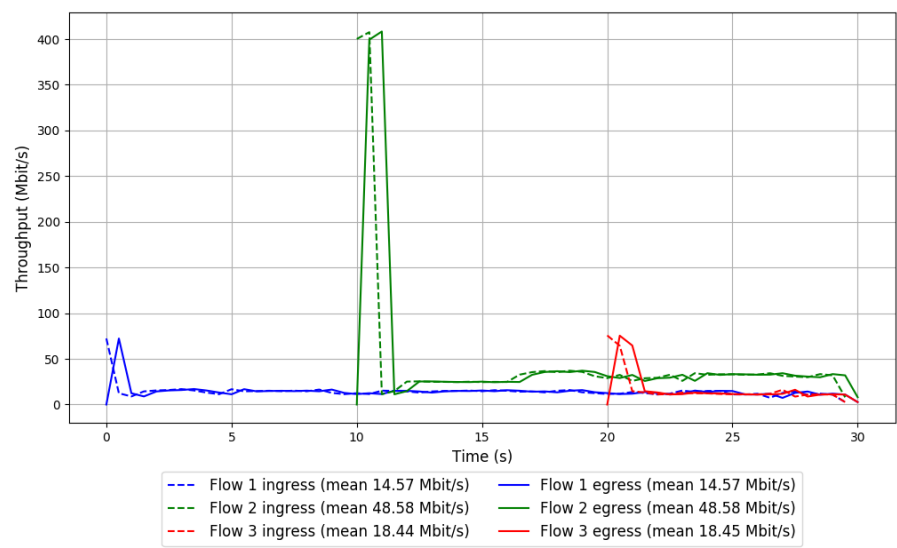
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-07-12 17:28:01
End at: 2019-07-12 17:28:31
Local clock offset: 6.812 ms
Remote clock offset: 3.229 ms

# Below is generated by plot.py at 2019-07-12 19:39:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 542.76 Mbit/s
95th percentile per-packet one-way delay: 2.569 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 324.96 Mbit/s
95th percentile per-packet one-way delay: 2.778 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 231.78 Mbit/s
95th percentile per-packet one-way delay: 2.512 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 191.37 Mbit/s
95th percentile per-packet one-way delay: 1.540 ms
Loss rate: 0.00%
```

Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-07-12 18:02:15
End at: 2019-07-12 18:02:45
Local clock offset: 6.965 ms
Remote clock offset: 3.44 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 551.15 Mbit/s
95th percentile per-packet one-way delay: 8.644 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 318.93 Mbit/s
95th percentile per-packet one-way delay: 9.803 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 254.67 Mbit/s
95th percentile per-packet one-way delay: 1.979 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 189.01 Mbit/s
95th percentile per-packet one-way delay: 2.382 ms
Loss rate: 0.00%
```
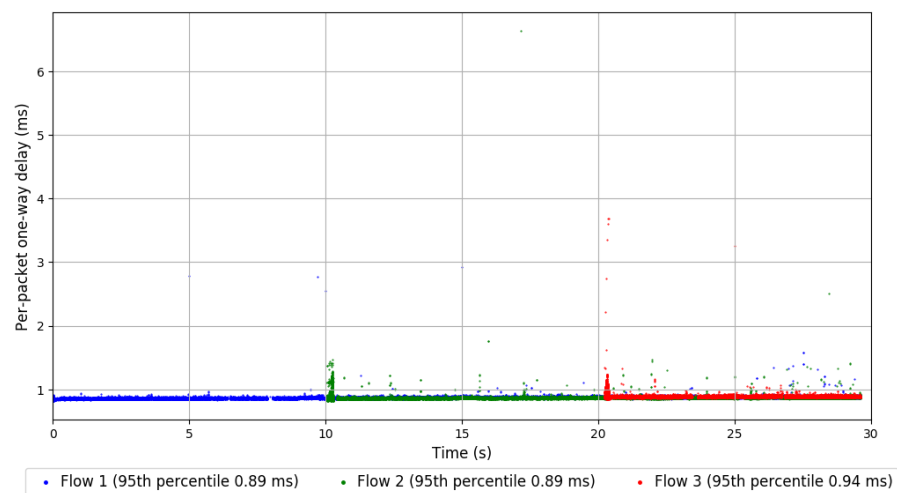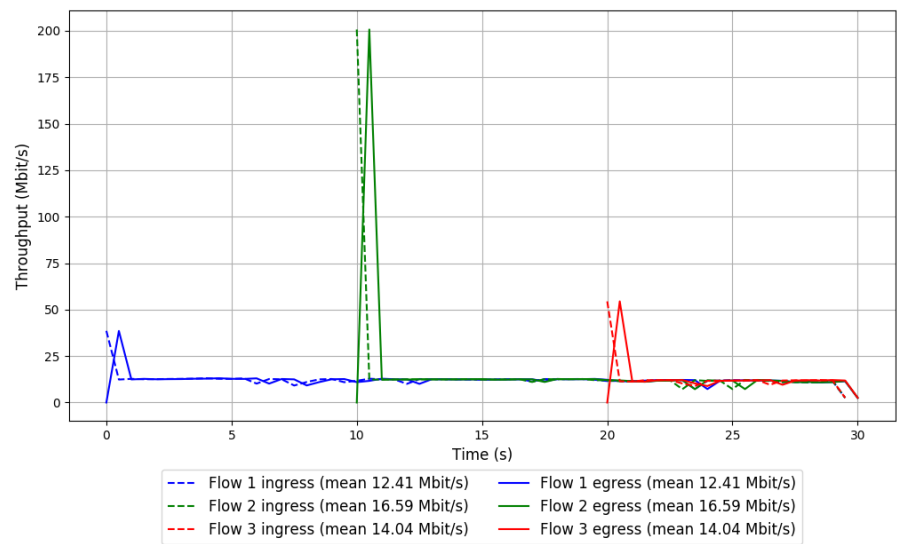
Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-07-12 18:36:31
End at: 2019-07-12 18:37:01
Local clock offset: 7.602 ms
Remote clock offset: 3.247 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 539.46 Mbit/s
95th percentile per-packet one-way delay: 2.515 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 314.52 Mbit/s
95th percentile per-packet one-way delay: 2.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 249.89 Mbit/s
95th percentile per-packet one-way delay: 2.184 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 176.39 Mbit/s
95th percentile per-packet one-way delay: 1.467 ms
Loss rate: 0.03%
```
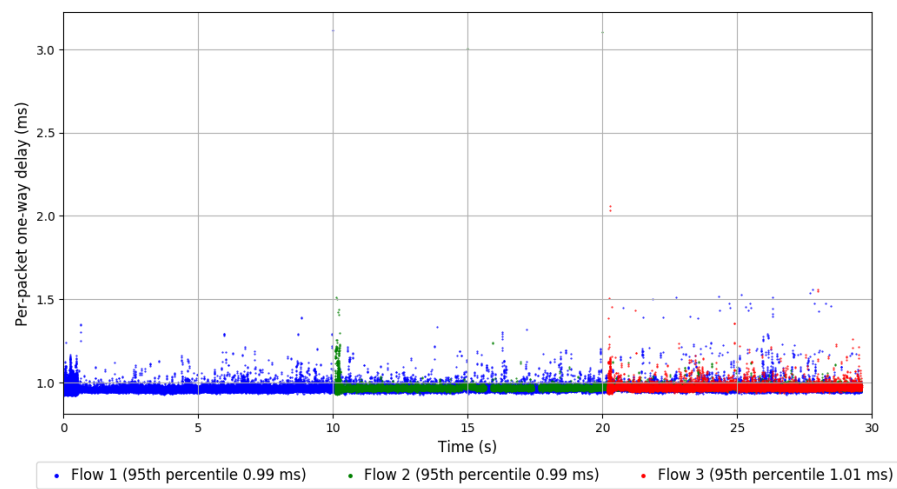
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 15:58:01
End at: 2019-07-12 15:58:31
Local clock offset: 6.499 ms
Remote clock offset: -1.119 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.52 Mbit/s
95th percentile per-packet one-way delay: 0.851 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.57 Mbit/s
95th percentile per-packet one-way delay: 0.845 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 48.58 Mbit/s
95th percentile per-packet one-way delay: 0.856 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.45 Mbit/s
95th percentile per-packet one-way delay: 0.861 ms
Loss rate: 0.01%
```
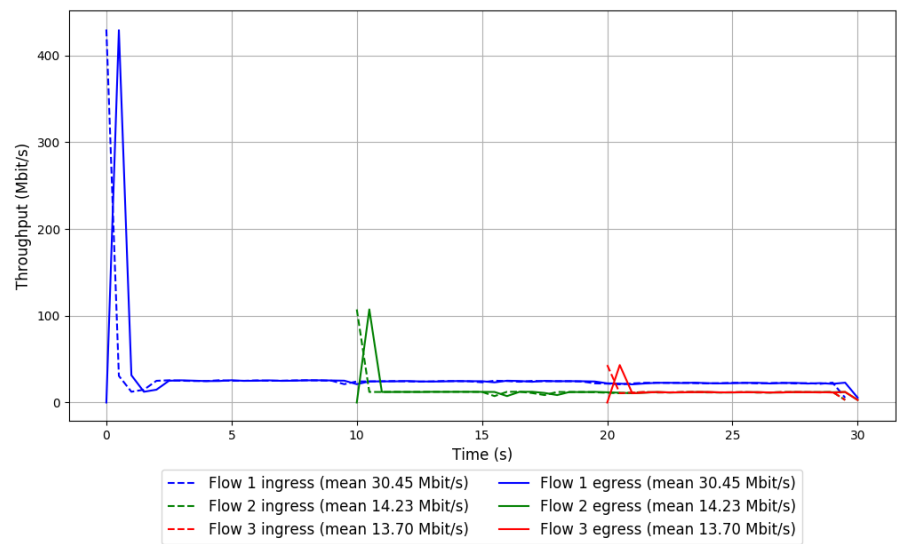
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 16:32:19
End at: 2019-07-12 16:32:49
Local clock offset: 6.397 ms
Remote clock offset: 5.375 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.83 Mbit/s
95th percentile per-packet one-way delay: 0.899 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 0.891 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 16.59 Mbit/s
95th percentile per-packet one-way delay: 0.888 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 14.04 Mbit/s
95th percentile per-packet one-way delay: 0.938 ms
Loss rate: 0.02%
```
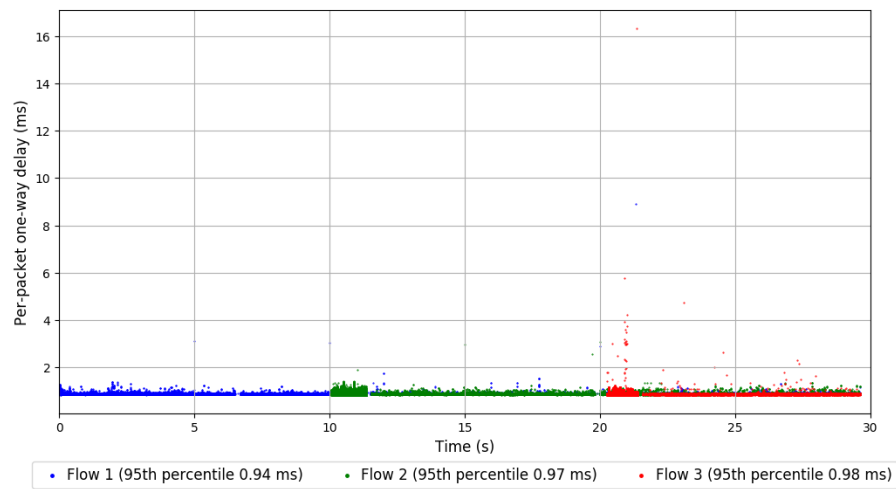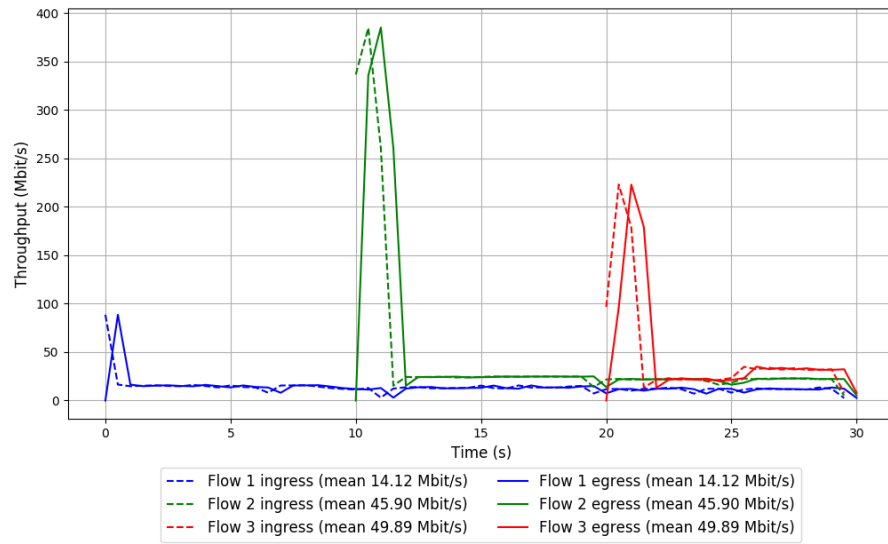
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 17:06:38
End at: 2019-07-12 17:07:08
Local clock offset: 6.785 ms
Remote clock offset: 3.263 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.19 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 30.45 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 14.23 Mbit/s
95th percentile per-packet one-way delay: 0.989 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 13.70 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.02%
```
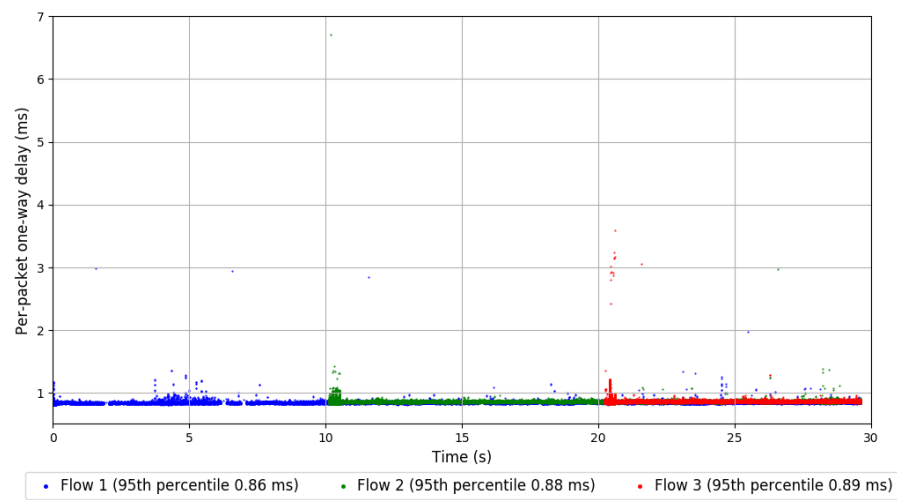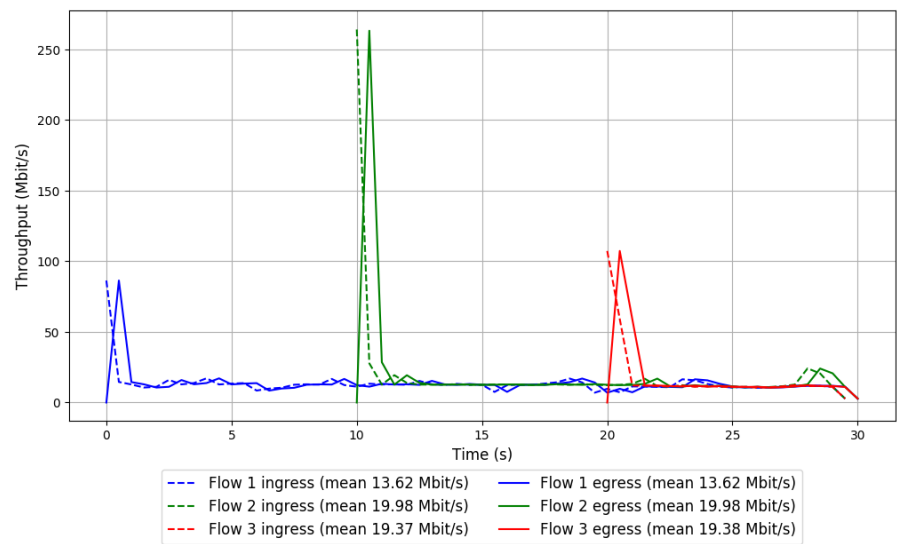
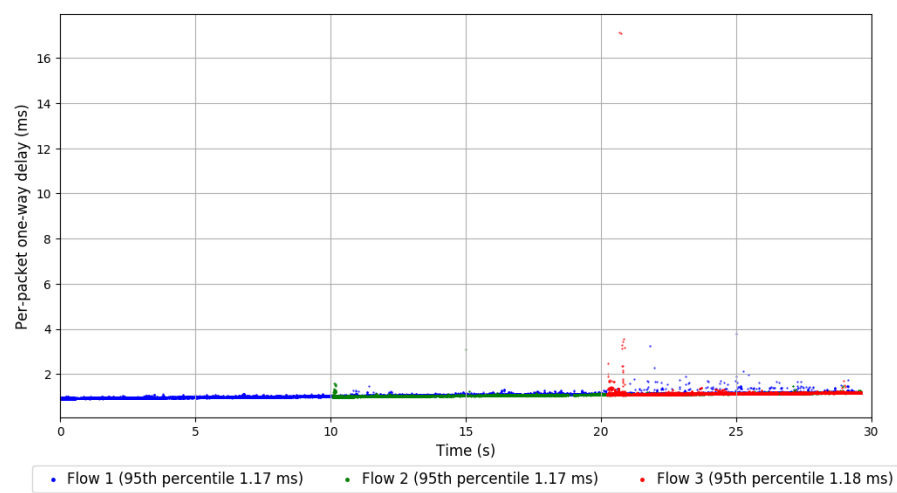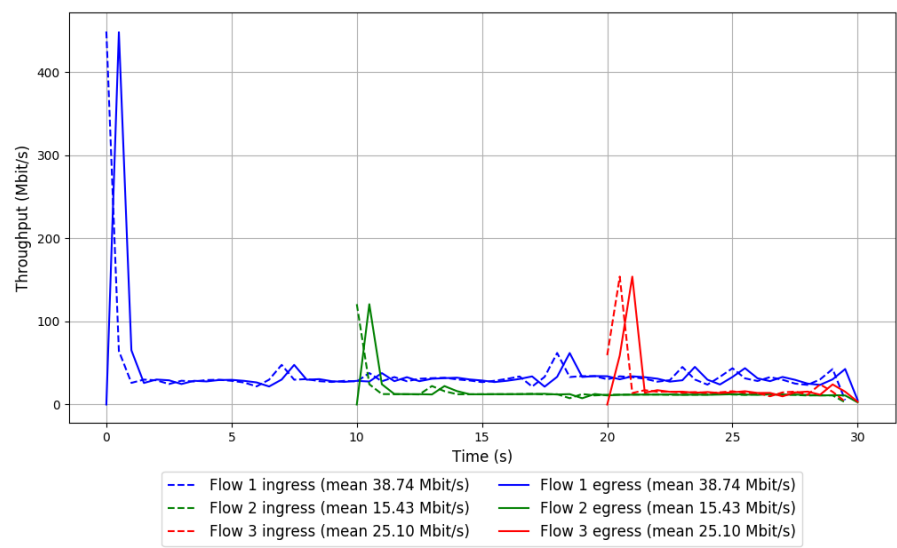Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 17:40:52
End at: 2019-07-12 17:41:22
Local clock offset: 6.776 ms
Remote clock offset: 3.379 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.23 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 14.12 Mbit/s
95th percentile per-packet one-way delay: 0.942 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.90 Mbit/s
95th percentile per-packet one-way delay: 0.969 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 49.89 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.01%
```

Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-07-12 18:15:20
End at: 2019-07-12 18:15:50
Local clock offset: 7.234 ms
Remote clock offset: 3.739 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.62 Mbit/s
95th percentile per-packet one-way delay: 0.864 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 19.98 Mbit/s
95th percentile per-packet one-way delay: 0.880 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.38 Mbit/s
95th percentile per-packet one-way delay: 0.888 ms
Loss rate: 0.01%
```
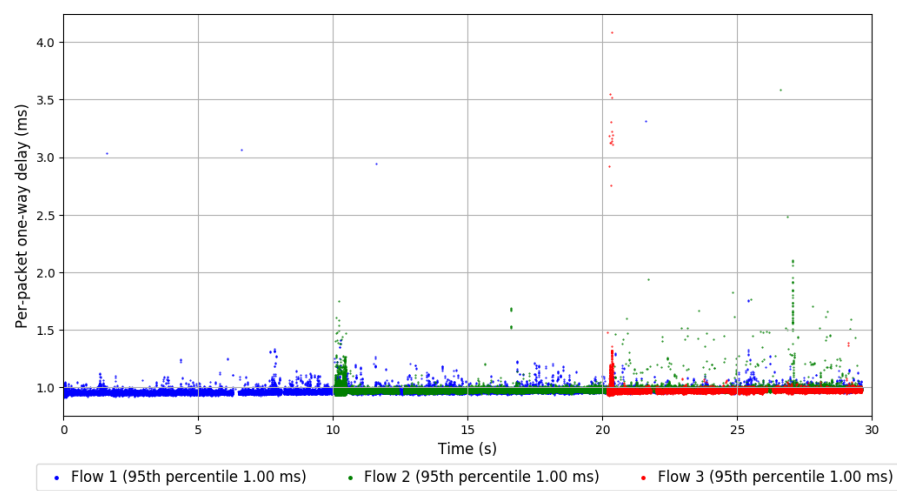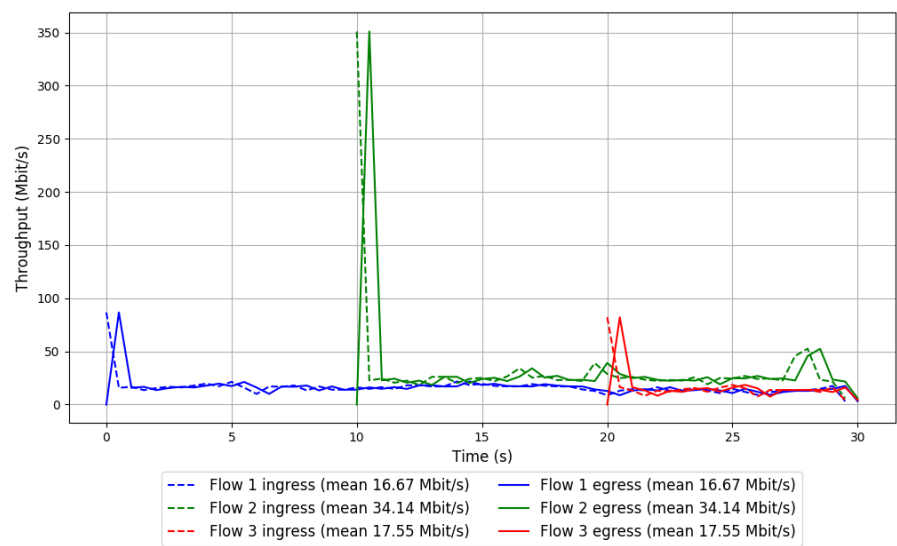
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 15:59:18
End at: 2019-07-12 15:59:48
Local clock offset: 6.473 ms
Remote clock offset: -1.083 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 56.88 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 38.74 Mbit/s
95th percentile per-packet one-way delay: 1.173 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.43 Mbit/s
95th percentile per-packet one-way delay: 1.165 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 25.10 Mbit/s
95th percentile per-packet one-way delay: 1.178 ms
Loss rate: 0.02%
```
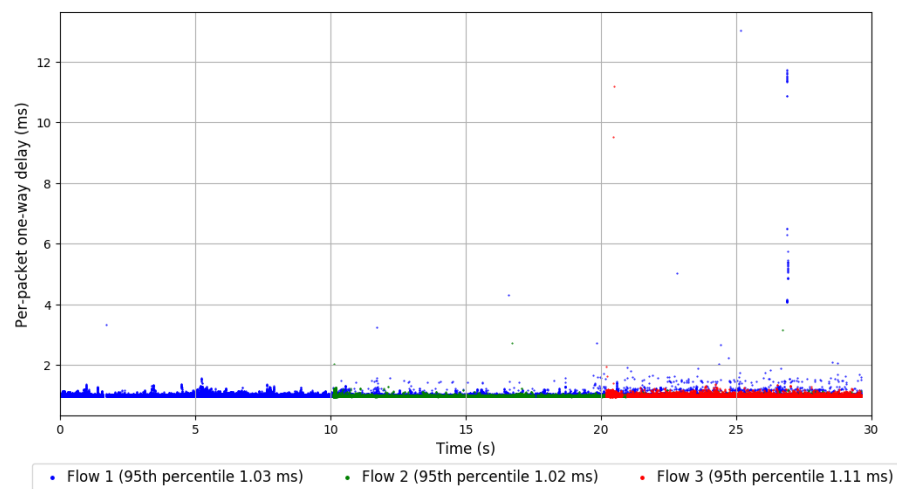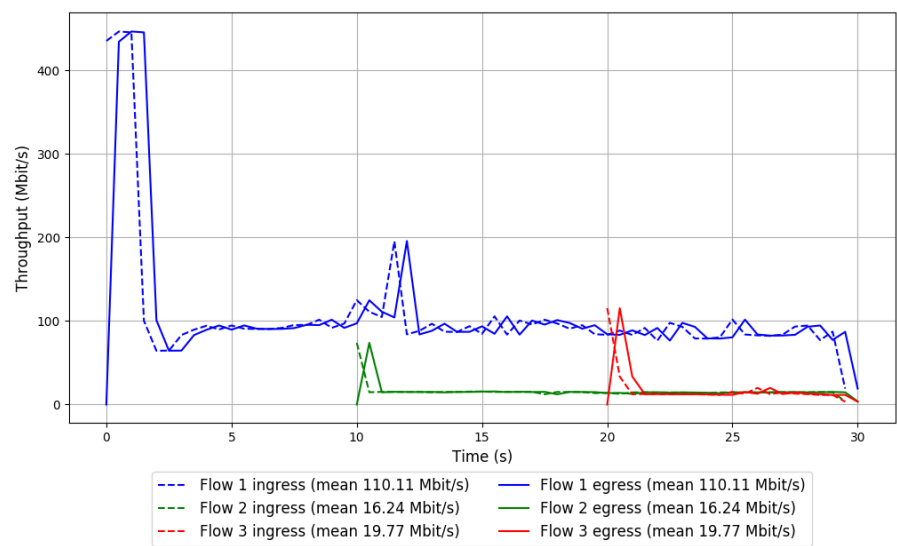
Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 16:33:35
End at: 2019-07-12 16:34:05
Local clock offset: 6.436 ms
Remote clock offset: 5.393 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 44.81 Mbit/s
95th percentile per-packet one-way delay: 1.004 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 16.67 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.14 Mbit/s
95th percentile per-packet one-way delay: 1.005 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 17.55 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.01%
```
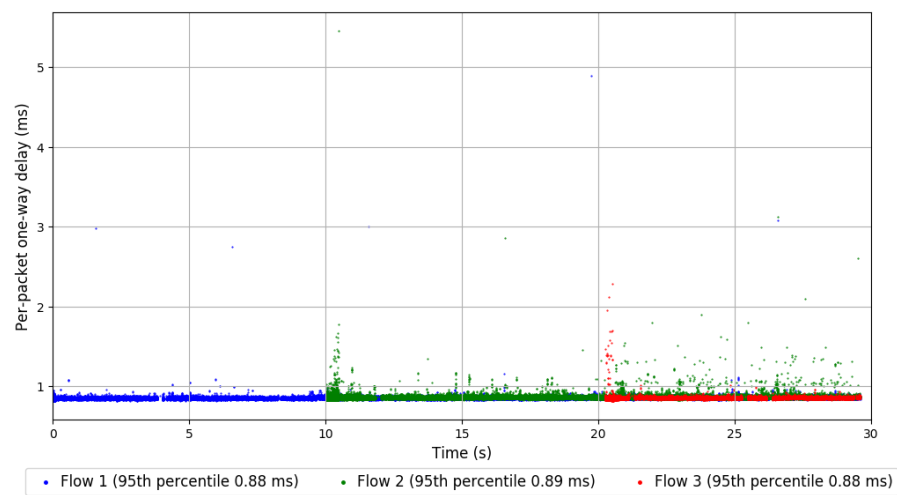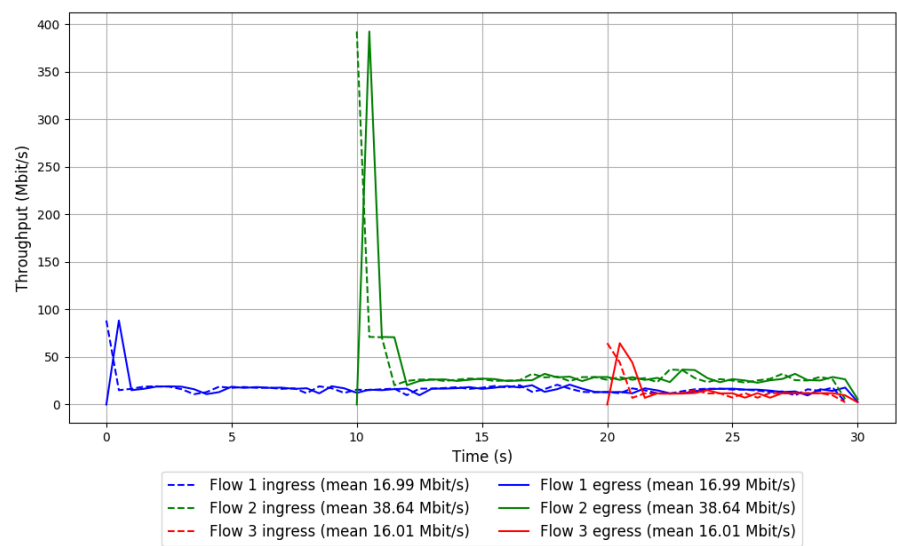
Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 17:07:54
End at: 2019-07-12 17:08:24
Local clock offset: 6.786 ms
Remote clock offset: 3.26 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.12 Mbit/s
95th percentile per-packet one-way delay: 1.031 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 110.11 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 16.24 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 19.77 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.01%
```
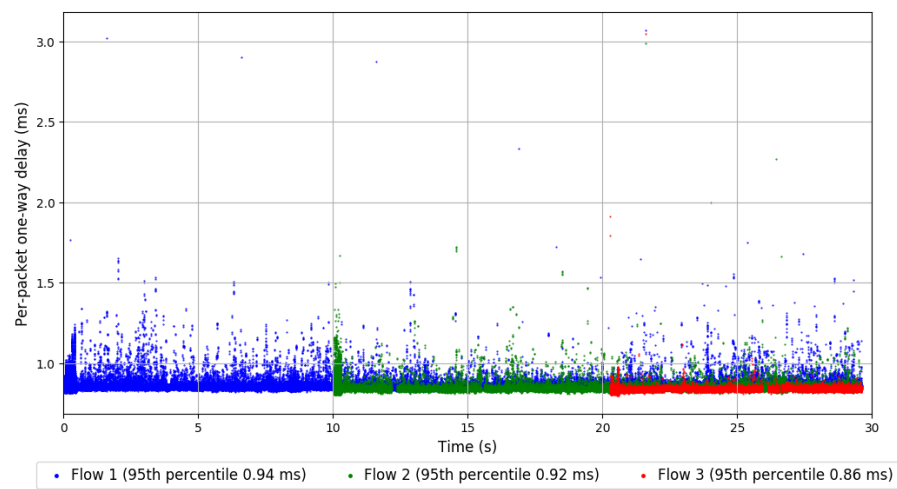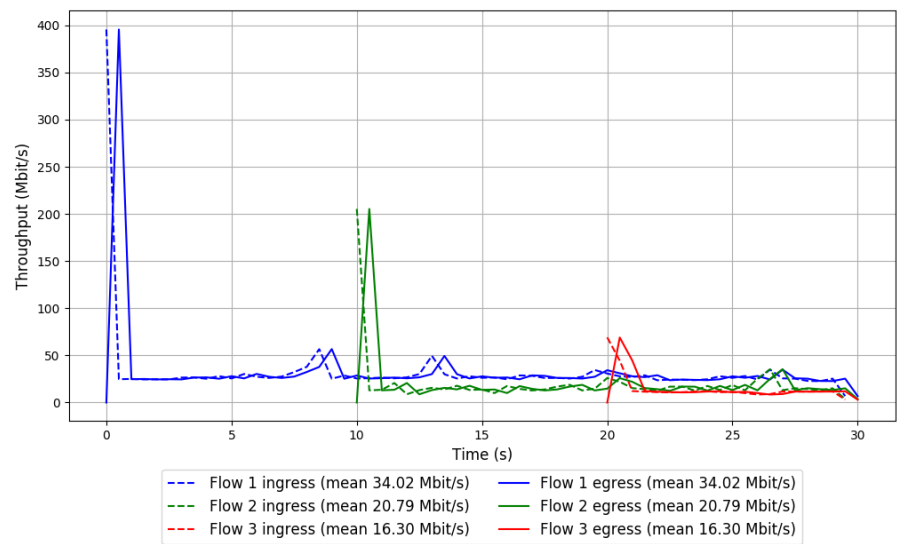
Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 17:42:09
End at: 2019-07-12 17:42:39
Local clock offset: 6.763 ms
Remote clock offset: 3.417 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 47.62 Mbit/s
95th percentile per-packet one-way delay: 0.885 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 16.99 Mbit/s
95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 38.64 Mbit/s
95th percentile per-packet one-way delay: 0.892 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 16.01 Mbit/s
95th percentile per-packet one-way delay: 0.875 ms
Loss rate: 0.00%
```
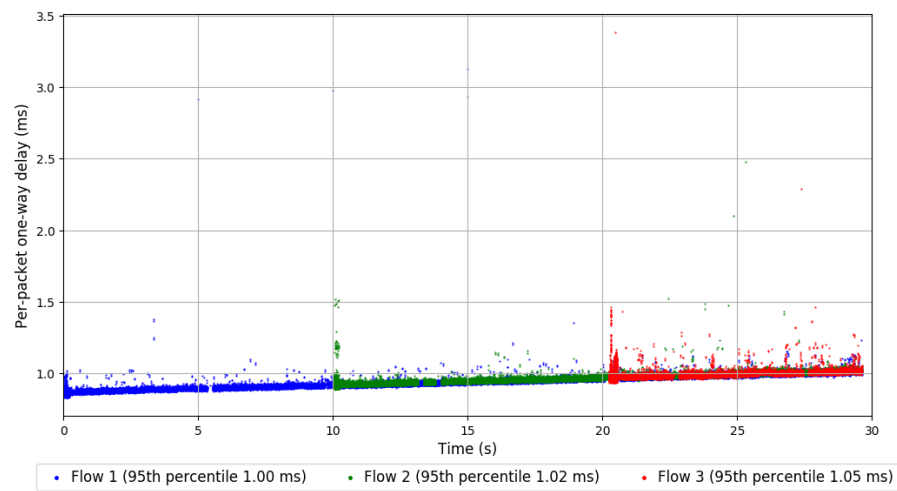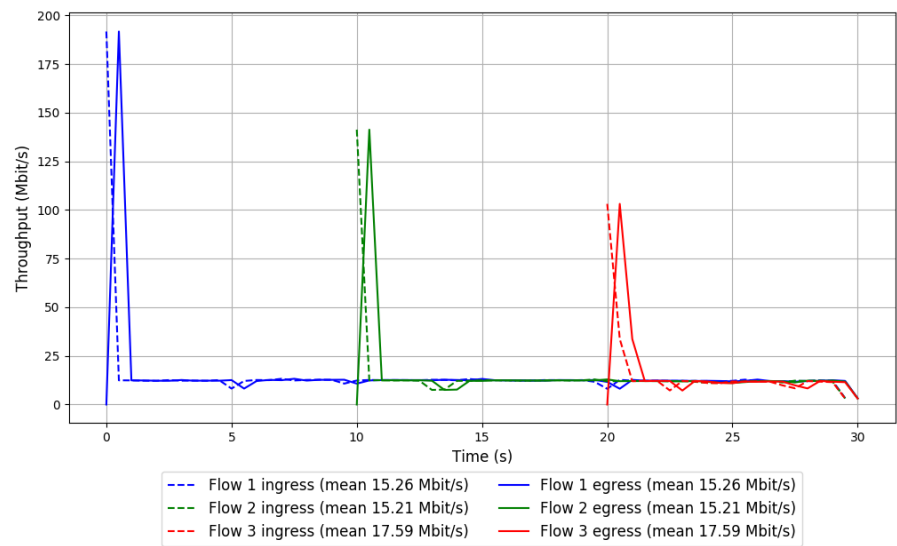
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 16.99 Mbit/s)   Flow 1 egress (mean 16.99 Mbit/s)
Flow 2 ingress (mean 38.64 Mbit/s)   Flow 2 egress (mean 38.64 Mbit/s)
Flow 3 ingress (mean 16.01 Mbit/s)   Flow 3 egress (mean 16.01 Mbit/s)

Flow 1 (95th percentile 0.88 ms)   Flow 2 (95th percentile 0.89 ms)   Flow 3 (95th percentile 0.88 ms)

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-07-12 18:16:36
End at: 2019-07-12 18:17:06
Local clock offset: 7.273 ms
Remote clock offset: 3.805 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 52.90 Mbit/s
95th percentile per-packet one-way delay: 0.929 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 34.02 Mbit/s
95th percentile per-packet one-way delay: 0.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.79 Mbit/s
95th percentile per-packet one-way delay: 0.924 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 16.30 Mbit/s
95th percentile per-packet one-way delay: 0.863 ms
Loss rate: 0.02%
```
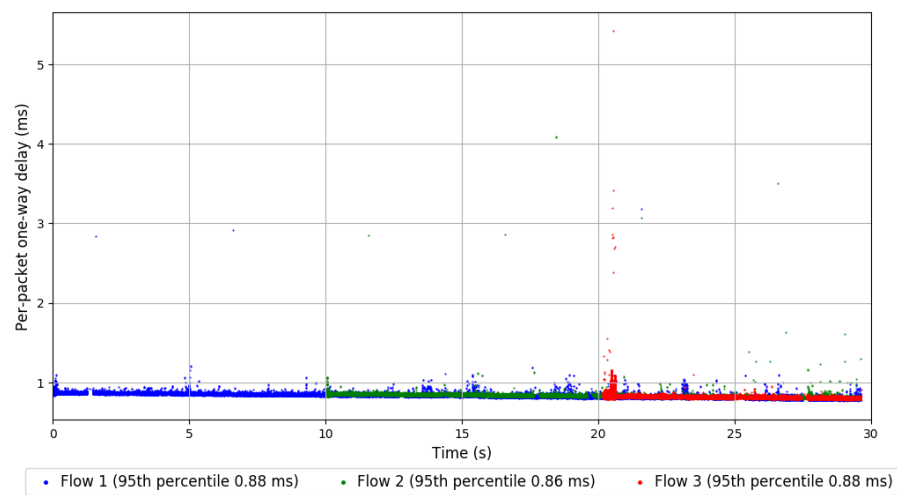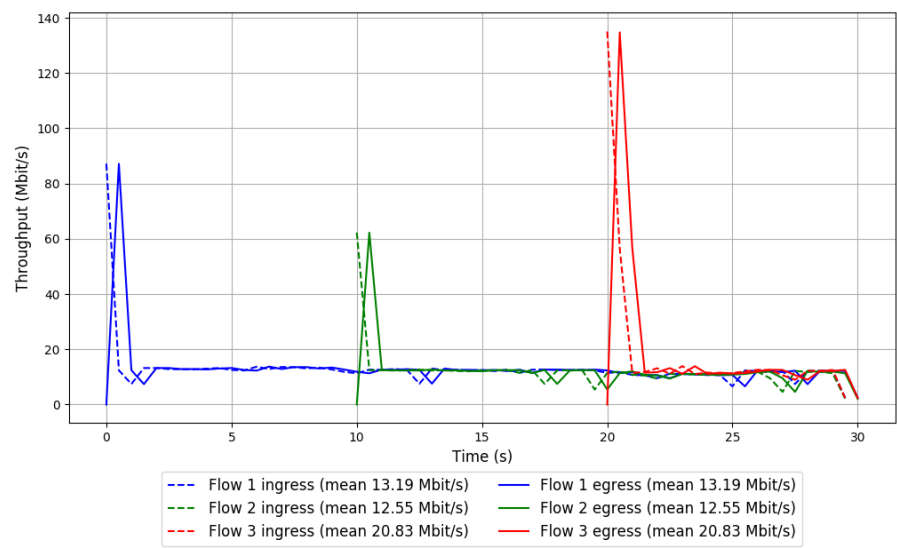
Run 5: Report of Muses_DecisionTreeH0 — Data Link

134

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 16:06:21
End at: 2019-07-12 16:06:52
Local clock offset: 6.311 ms
Remote clock offset: 1.662 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.89 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 15.26 Mbit/s
95th percentile per-packet one-way delay: 1.005 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 15.21 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.59 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.01%
```
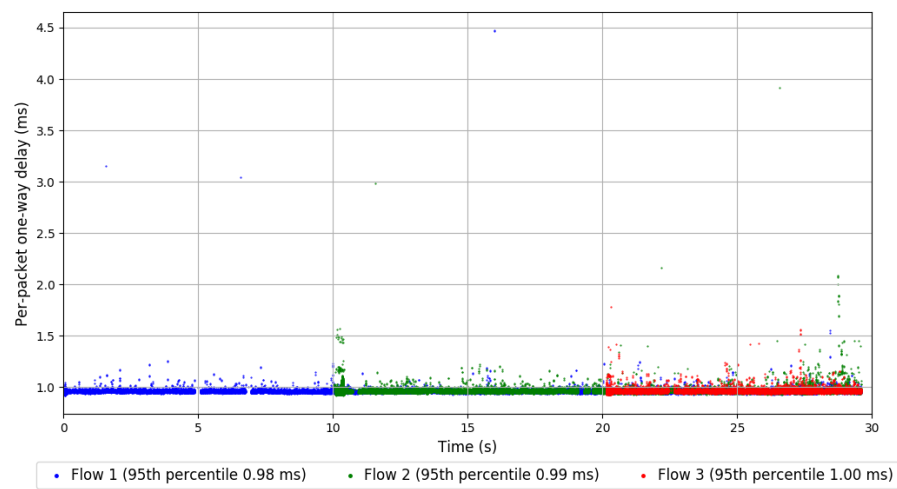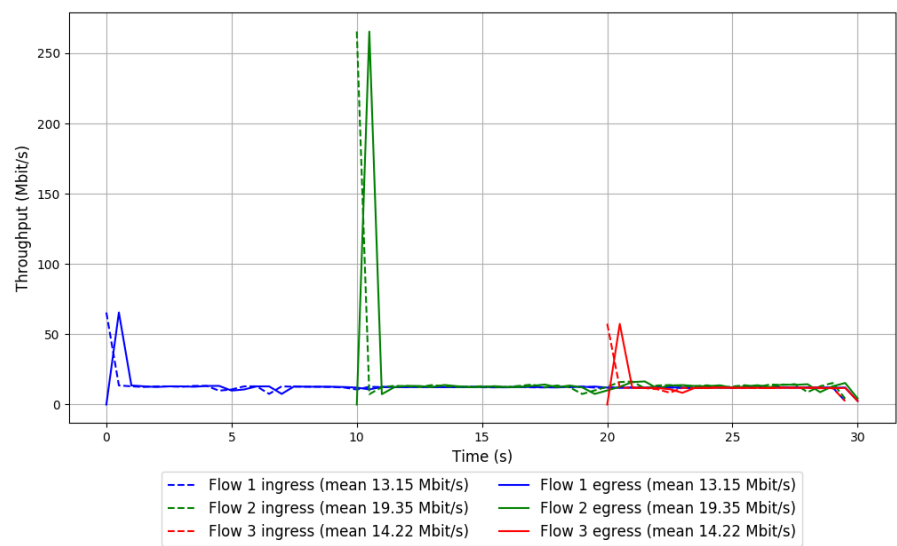
Run 1: Report of Muses_DecisionTreeR0 — Data Link

Run 2: Statistics of Muses_DecisionTreeR0

Start at: 2019-07-12 16:40:38
End at: 2019-07-12 16:41:08
Local clock offset: 6.658 ms
Remote clock offset: 4.382 ms

Below is generated by plot.py at 2019-07-12 19:40:23
Datalink statistics
-- Total of 3 flows:
Average throughput: 28.13 Mbit/s
95th percentile per-packet one-way delay: 0.876 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.19 Mbit/s
95th percentile per-packet one-way delay: 0.882 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 12.55 Mbit/s
95th percentile per-packet one-way delay: 0.862 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 20.83 Mbit/s
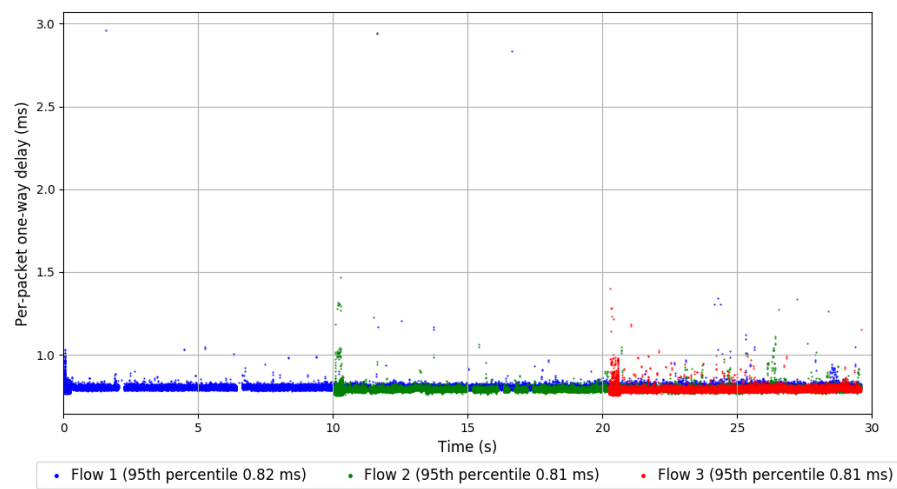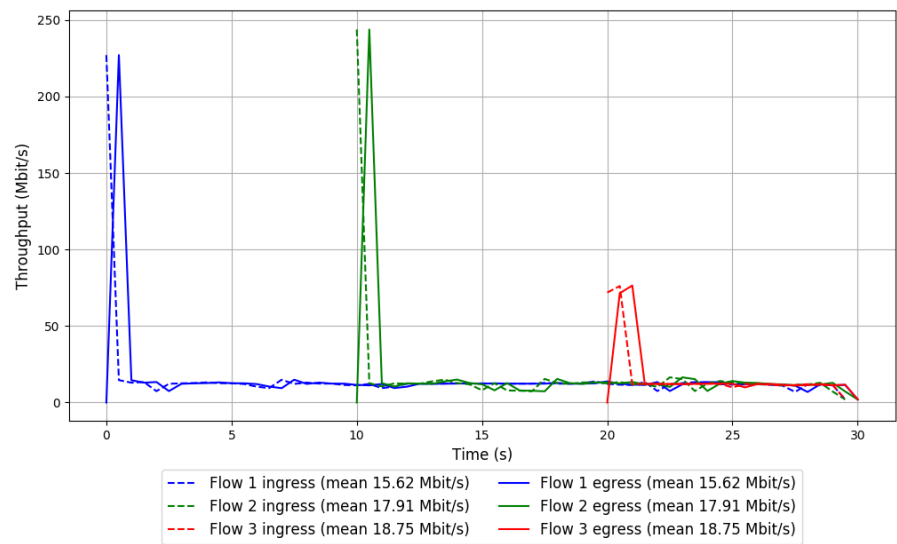95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.00%

Run 2: Report of Muses_DecisionTreeR0 — Data Link

138

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 17:15:00
End at: 2019-07-12 17:15:30
Local clock offset: 6.766 ms
Remote clock offset: 3.197 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 0.987 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 0.980 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 19.35 Mbit/s
95th percentile per-packet one-way delay: 0.993 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 14.22 Mbit/s
95th percentile per-packet one-way delay: 0.997 ms
Loss rate: 0.02%
```
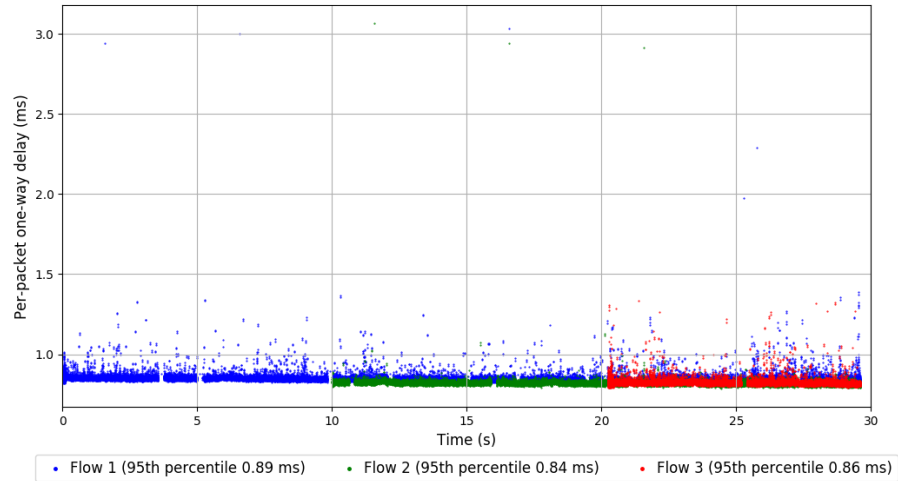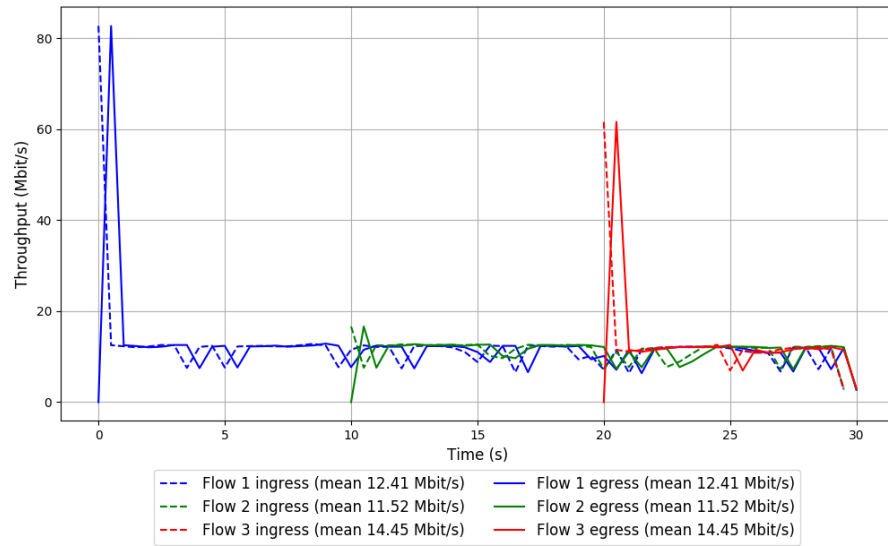
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 17:49:16
End at: 2019-07-12 17:49:46
Local clock offset: 6.748 ms
Remote clock offset: 3.401 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 33.37 Mbit/s
95th percentile per-packet one-way delay: 0.818 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 15.62 Mbit/s
95th percentile per-packet one-way delay: 0.821 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 17.91 Mbit/s
95th percentile per-packet one-way delay: 0.808 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.75 Mbit/s
95th percentile per-packet one-way delay: 0.810 ms
Loss rate: 0.01%
```

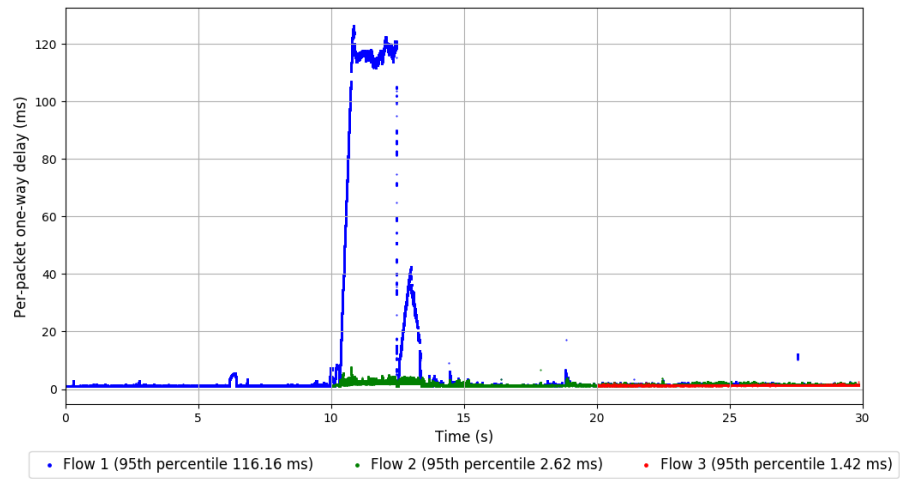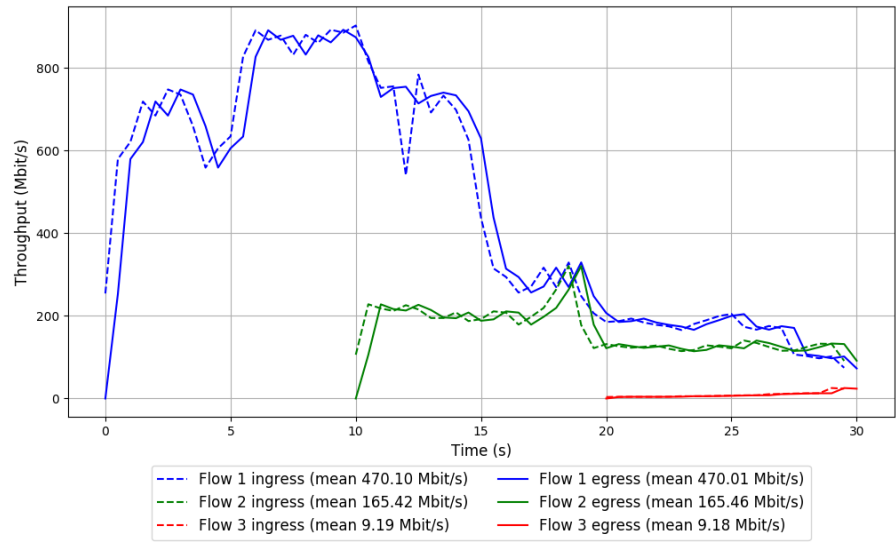Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-07-12 18:23:38
End at: 2019-07-12 18:24:08
Local clock offset: 7.354 ms
Remote clock offset: 3.441 ms


# Below is generated by plot.py at 2019-07-12 19:40:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 24.61 Mbit/s
95th percentile per-packet one-way delay: 0.874 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.41 Mbit/s
95th percentile per-packet one-way delay: 0.890 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.52 Mbit/s
95th percentile per-packet one-way delay: 0.840 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 14.45 Mbit/s
95th percentile per-packet one-way delay: 0.863 ms
Loss rate: 0.02%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-07-12 16:00:34
End at: 2019-07-12 16:01:04
Local clock offset: 6.462 ms
Remote clock offset: -0.608 ms


# Below is generated by plot.py at 2019-07-12 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 582.84 Mbit/s
95th percentile per-packet one-way delay: 115.569 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 470.01 Mbit/s
95th percentile per-packet one-way delay: 116.155 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 165.46 Mbit/s
95th percentile per-packet one-way delay: 2.616 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.18 Mbit/s
95th percentile per-packet one-way delay: 1.417 ms
Loss rate: 0.05%
```
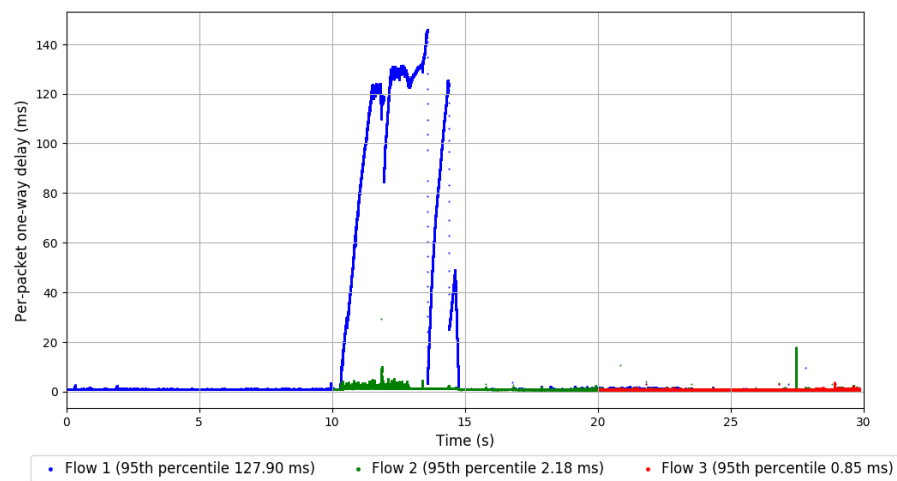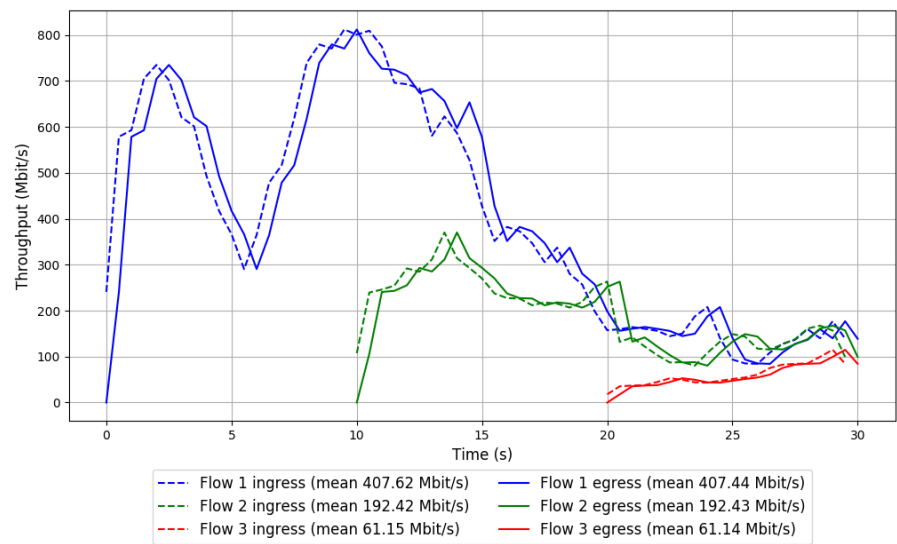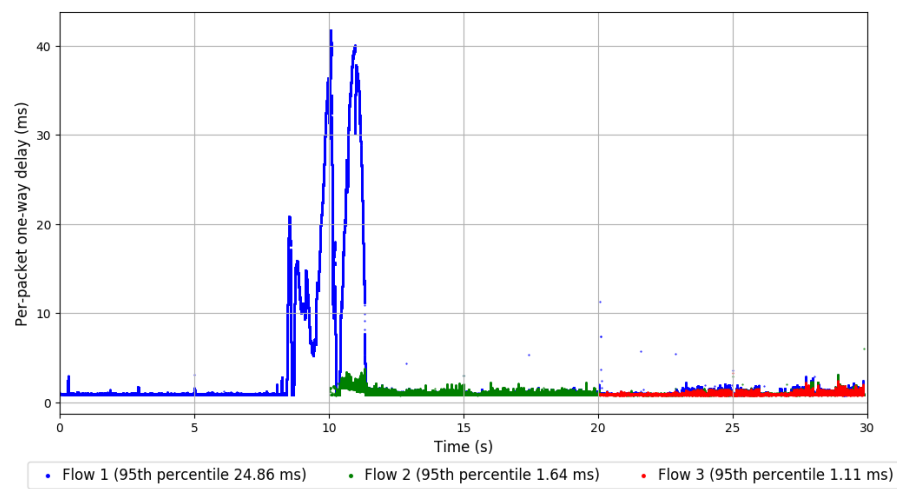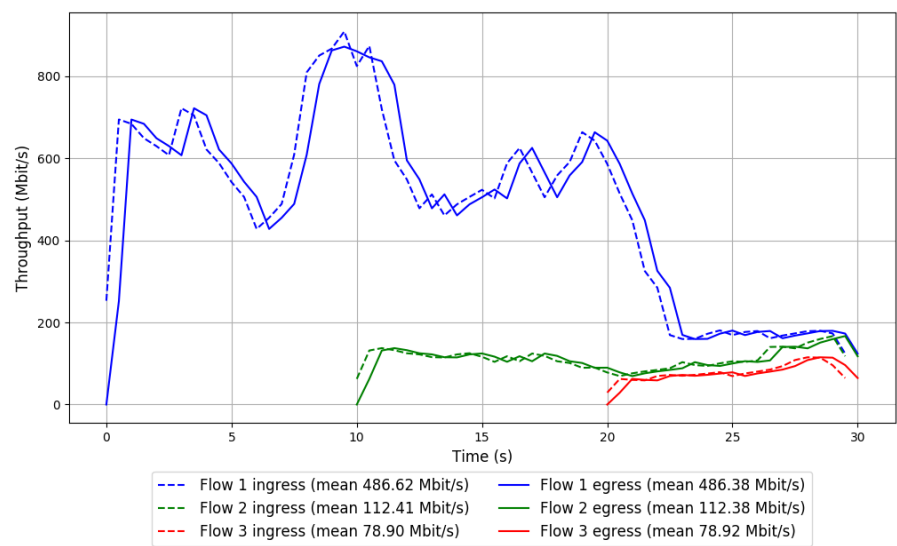
Run 1: Report of PCC-Allegro — Data Link

- --- Flow 1 ingress (mean 470.10 Mbit/s)   — Flow 1 egress (mean 470.01 Mbit/s)
- --- Flow 2 ingress (mean 165.42 Mbit/s)   — Flow 2 egress (mean 165.46 Mbit/s)
- --- Flow 3 ingress (mean 9.19 Mbit/s)   — Flow 3 egress (mean 9.18 Mbit/s)

- Flow 1 (95th percentile 116.16 ms)   • Flow 2 (95th percentile 2.62 ms)   • Flow 3 (95th percentile 1.42 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-07-12 16:34:51
End at: 2019-07-12 16:35:21
Local clock offset: 6.492 ms
Remote clock offset: 5.639 ms


# Below is generated by plot.py at 2019-07-12 19:43:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 555.34 Mbit/s
95th percentile per-packet one-way delay: 125.626 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 407.44 Mbit/s
95th percentile per-packet one-way delay: 127.898 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 192.43 Mbit/s
95th percentile per-packet one-way delay: 2.181 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 61.14 Mbit/s
95th percentile per-packet one-way delay: 0.853 ms
Loss rate: 0.02%
```
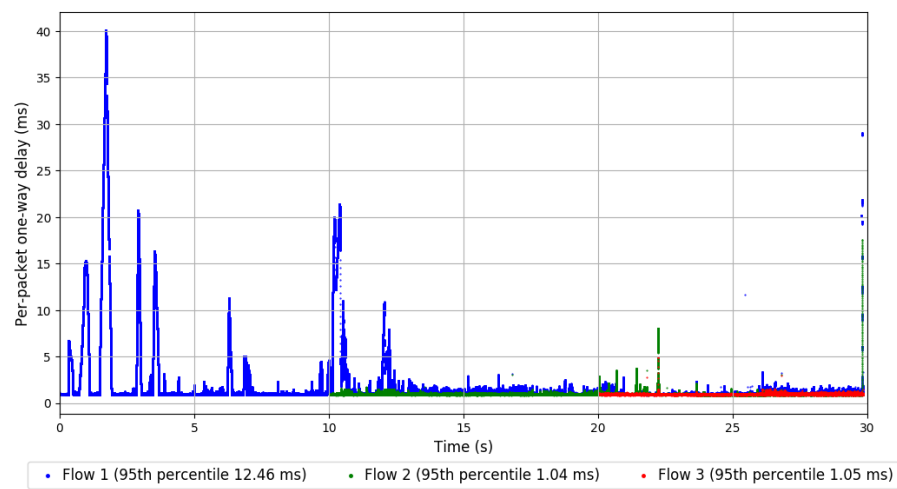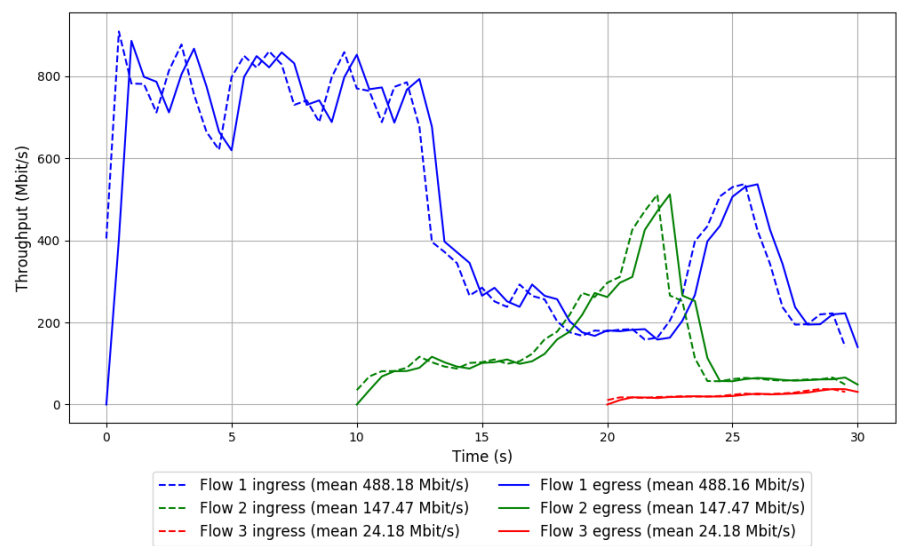
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-07-12 17:09:13
End at: 2019-07-12 17:09:43
Local clock offset: 6.767 ms
Remote clock offset: 3.351 ms


# Below is generated by plot.py at 2019-07-12 19:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 586.92 Mbit/s
95th percentile per-packet one-way delay: 21.022 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 486.38 Mbit/s
95th percentile per-packet one-way delay: 24.859 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 112.38 Mbit/s
95th percentile per-packet one-way delay: 1.641 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 78.92 Mbit/s
95th percentile per-packet one-way delay: 1.107 ms
Loss rate: 0.00%
```
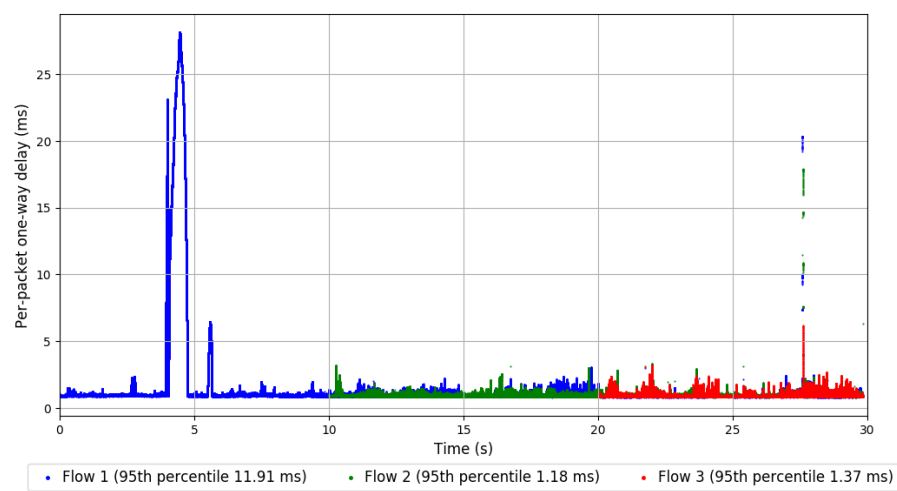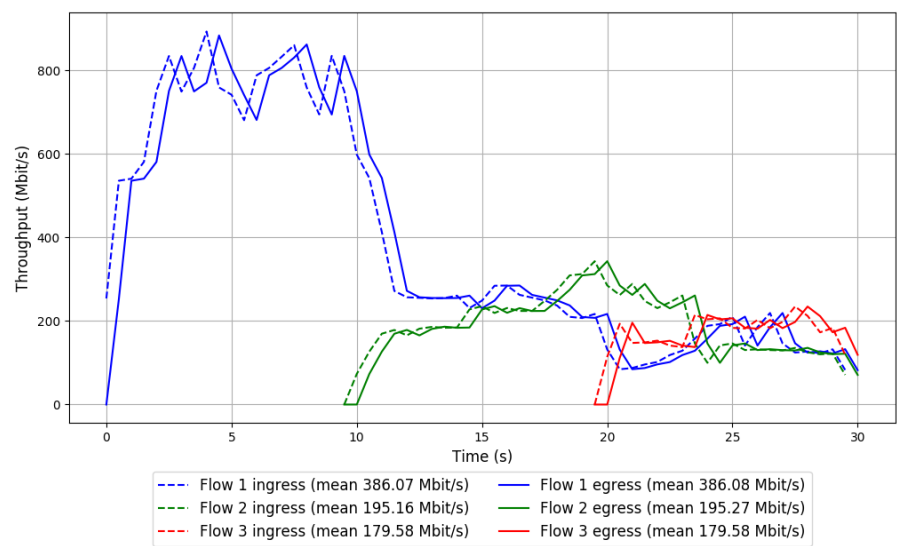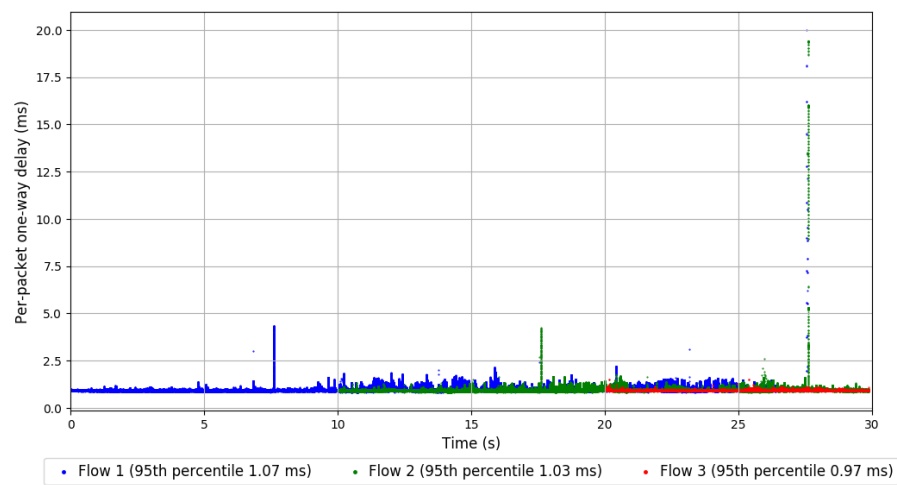
Run 3: Report of PCC-Allegro — Data Link

- - - - Flow 1 ingress (mean 486.62 Mbit/s) —— Flow 1 egress (mean 486.38 Mbit/s)
- - - - Flow 2 ingress (mean 112.41 Mbit/s) —— Flow 2 egress (mean 112.38 Mbit/s)
- - - - Flow 3 ingress (mean 78.90 Mbit/s) —— Flow 3 egress (mean 78.92 Mbit/s)

- Flow 1 (95th percentile 24.86 ms)   - Flow 2 (95th percentile 1.64 ms)   - Flow 3 (95th percentile 1.11 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-07-12 17:43:25
End at: 2019-07-12 17:43:55
Local clock offset: 6.782 ms
Remote clock offset: 3.355 ms


# Below is generated by plot.py at 2019-07-12 19:46:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 594.09 Mbit/s
95th percentile per-packet one-way delay: 10.065 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 488.16 Mbit/s
95th percentile per-packet one-way delay: 12.461 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 147.47 Mbit/s
95th percentile per-packet one-way delay: 1.043 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.18 Mbit/s
95th percentile per-packet one-way delay: 1.049 ms
Loss rate: 0.03%
```
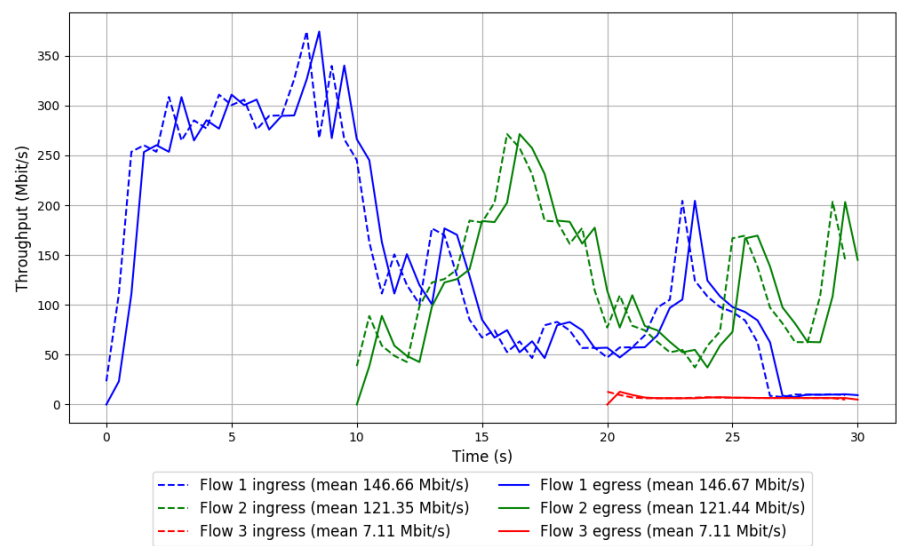
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-07-12 18:17:52
End at: 2019-07-12 18:18:22
Local clock offset: 7.285 ms
Remote clock offset: 3.673 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.11 Mbit/s
95th percentile per-packet one-way delay: 2.039 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 386.08 Mbit/s
95th percentile per-packet one-way delay: 11.908 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 195.27 Mbit/s
95th percentile per-packet one-way delay: 1.184 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 179.58 Mbit/s
95th percentile per-packet one-way delay: 1.371 ms
Loss rate: 0.02%
```
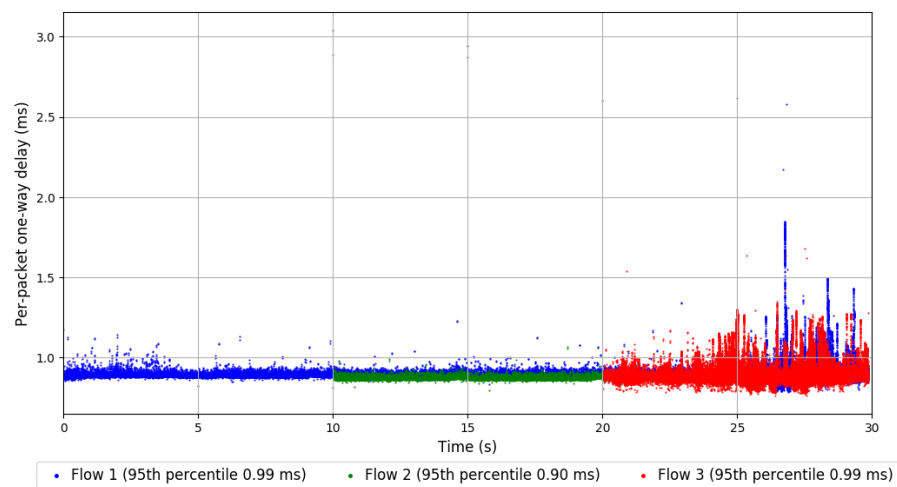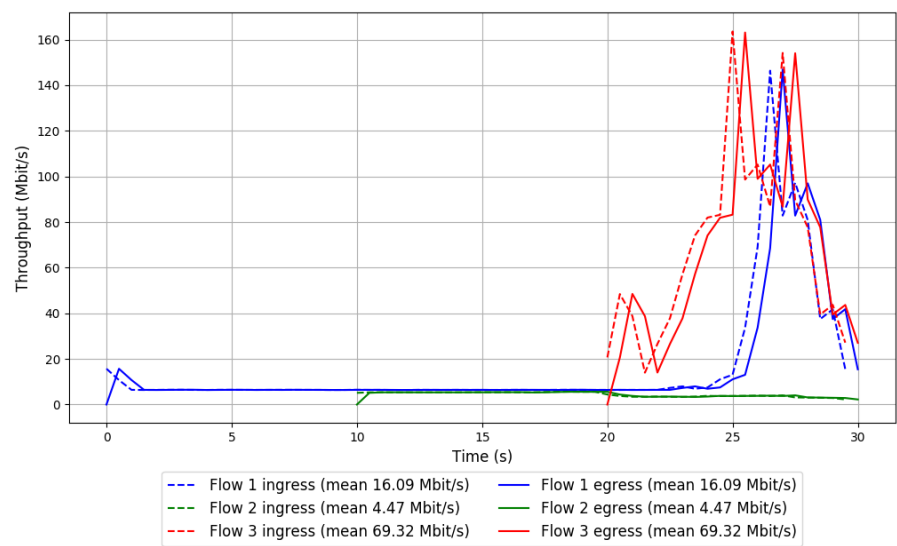
Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-07-12 16:29:29
End at: 2019-07-12 16:29:59
Local clock offset: 6.285 ms
Remote clock offset: 5.054 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 229.76 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 146.67 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 121.44 Mbit/s
95th percentile per-packet one-way delay: 1.035 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 7.11 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.00%
```
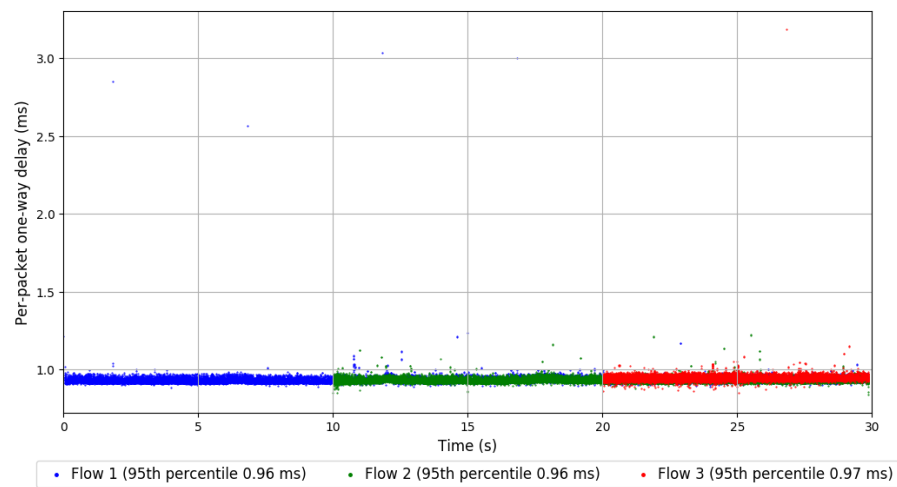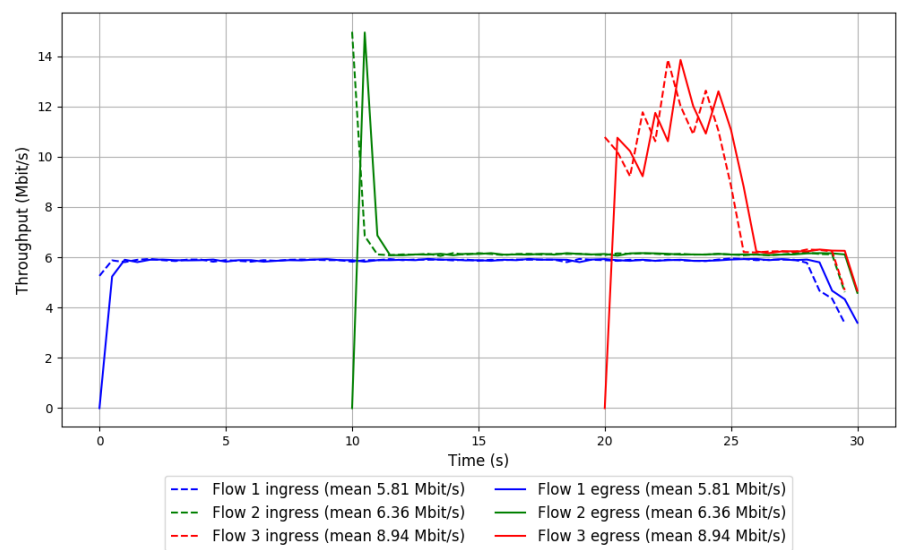
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-07-12 17:04:00
End at: 2019-07-12 17:04:30
Local clock offset: 6.797 ms
Remote clock offset: 3.31 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.96 Mbit/s
95th percentile per-packet one-way delay: 0.986 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 16.09 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 0.903 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.32 Mbit/s
95th percentile per-packet one-way delay: 0.993 ms
Loss rate: 0.01%
```
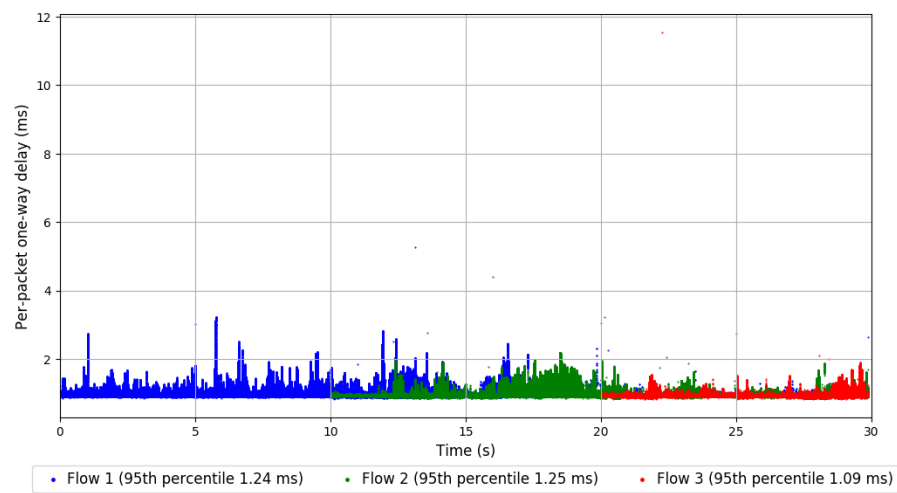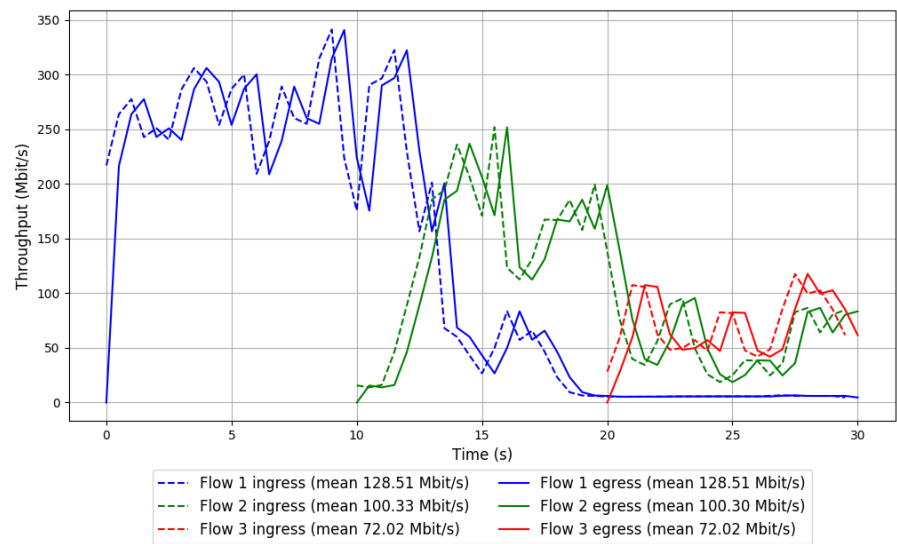
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-07-12 17:38:16
End at: 2019-07-12 17:38:46
Local clock offset: 6.773 ms
Remote clock offset: 3.276 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 13.00 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.36 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.94 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.01%
```
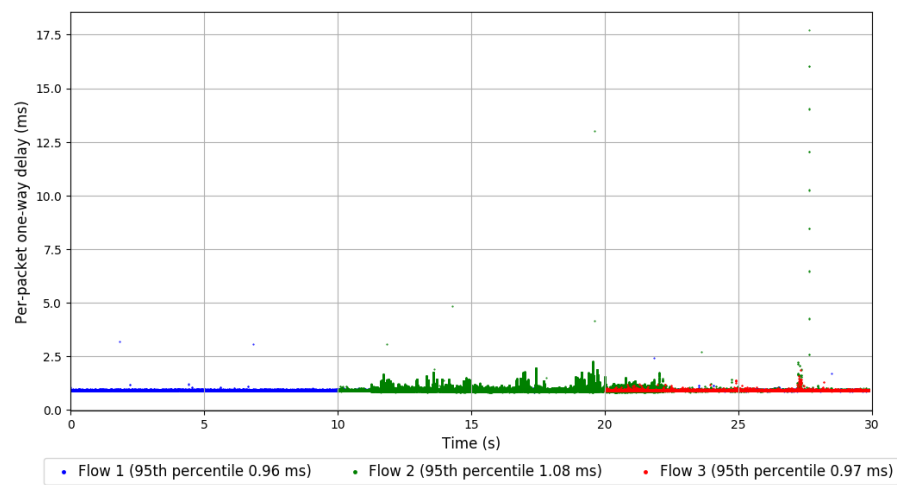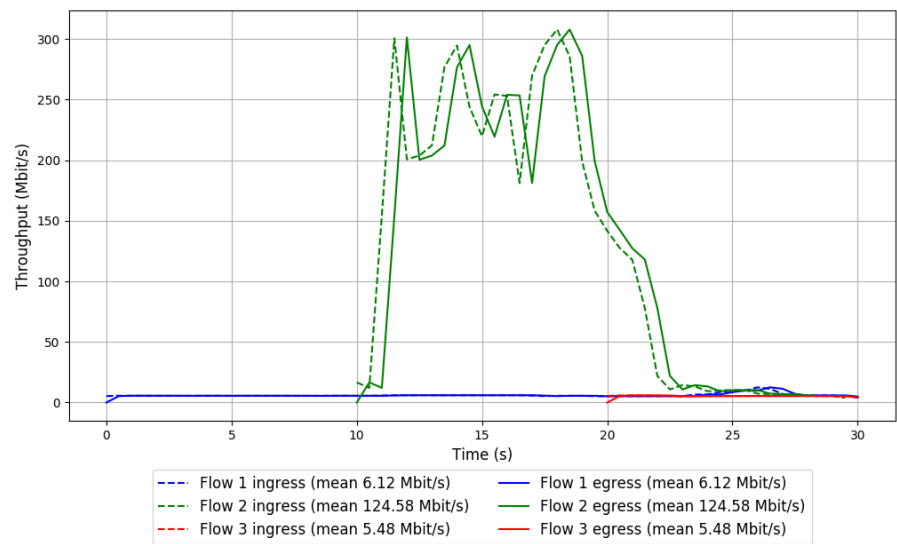
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 5.81 Mbit/s) --- Flow 1 egress (mean 5.81 Mbit/s)
Flow 2 ingress (mean 6.36 Mbit/s) --- Flow 2 egress (mean 6.36 Mbit/s)
Flow 3 ingress (mean 8.94 Mbit/s) --- Flow 3 egress (mean 8.94 Mbit/s)

Flow 1 (95th percentile 0.96 ms)   Flow 2 (95th percentile 0.96 ms)   Flow 3 (95th percentile 0.97 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-07-12 18:12:31
End at: 2019-07-12 18:13:01
Local clock offset: 7.21 ms
Remote clock offset: 3.602 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 218.97 Mbit/s
95th percentile per-packet one-way delay: 1.230 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 128.51 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 100.30 Mbit/s
95th percentile per-packet one-way delay: 1.253 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 72.02 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.01%
```
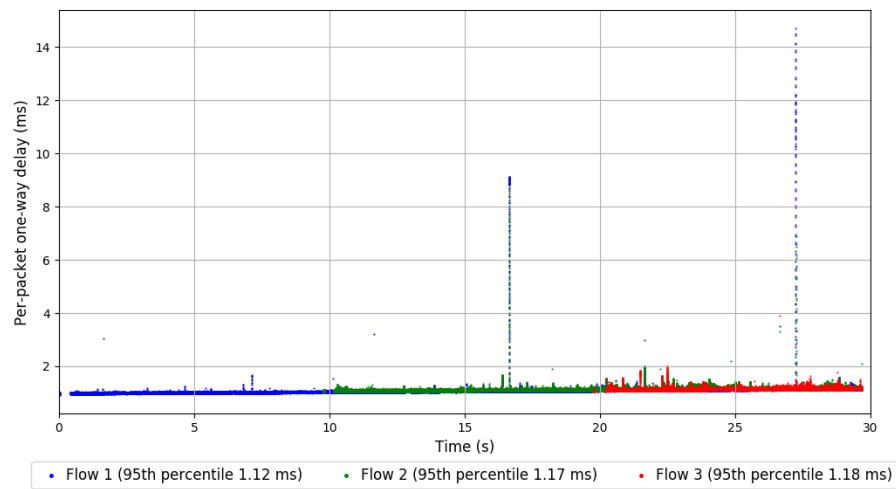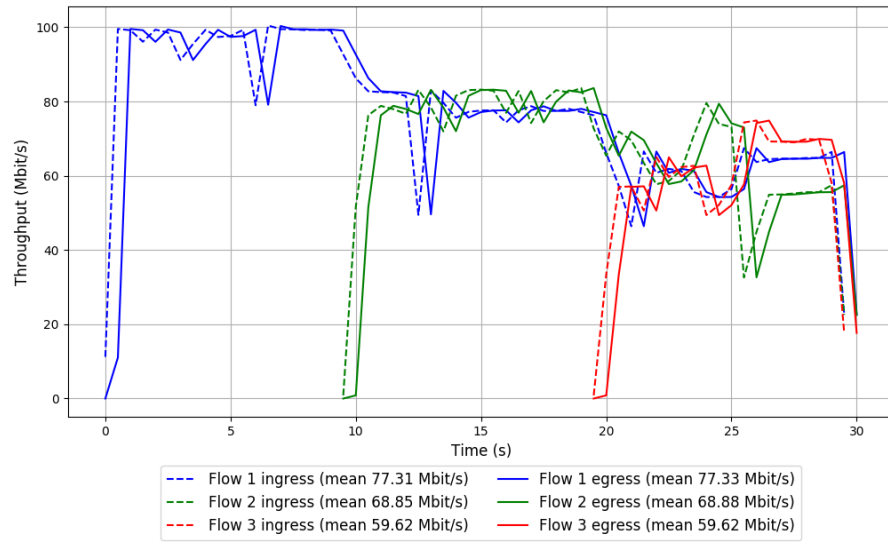
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-07-12 18:46:42
End at: 2019-07-12 18:47:12
Local clock offset: 7.723 ms
Remote clock offset: 3.165 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.80 Mbit/s
95th percentile per-packet one-way delay: 1.062 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.12 Mbit/s
95th percentile per-packet one-way delay: 0.958 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 124.58 Mbit/s
95th percentile per-packet one-way delay: 1.076 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.02%
```
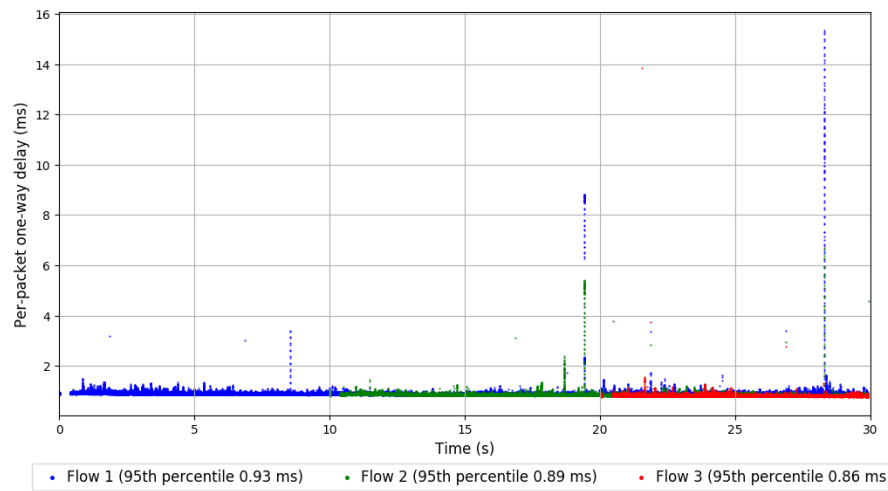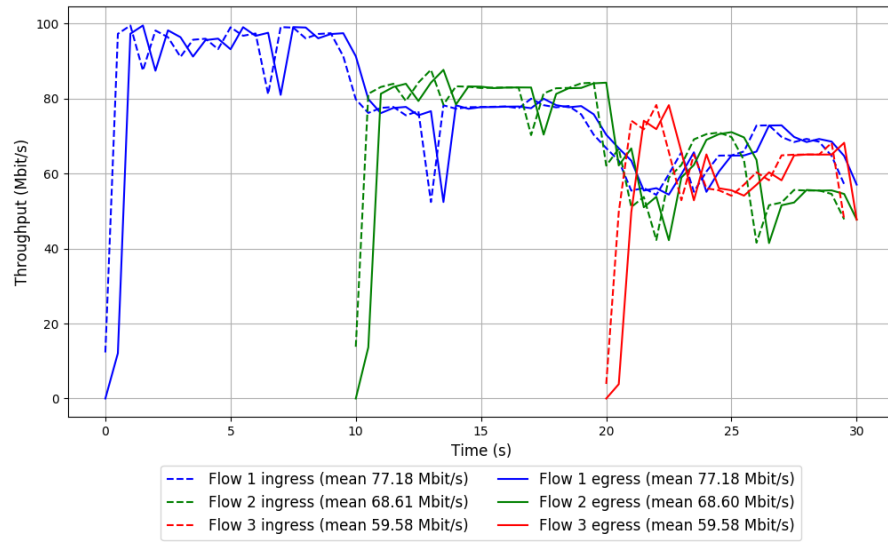
Run 5: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 6.12 Mbit/s) --- Flow 1 egress (mean 6.12 Mbit/s)
Flow 2 ingress (mean 124.58 Mbit/s) --- Flow 2 egress (mean 124.58 Mbit/s)
Flow 3 ingress (mean 5.48 Mbit/s) --- Flow 3 egress (mean 5.48 Mbit/s)

Flow 1 (95th percentile 0.96 ms)   Flow 2 (95th percentile 1.08 ms)   Flow 3 (95th percentile 0.97 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-07-12 16:05:02
End at: 2019-07-12 16:05:32
Local clock offset: 6.334 ms
Remote clock offset: 1.165 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.38 Mbit/s
95th percentile per-packet one-way delay: 1.154 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.33 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.88 Mbit/s
95th percentile per-packet one-way delay: 1.171 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 59.62 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.02%
```
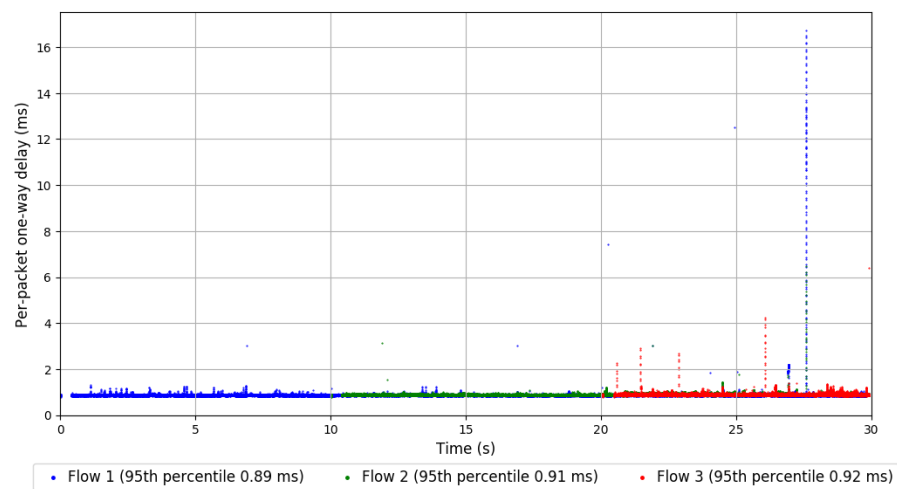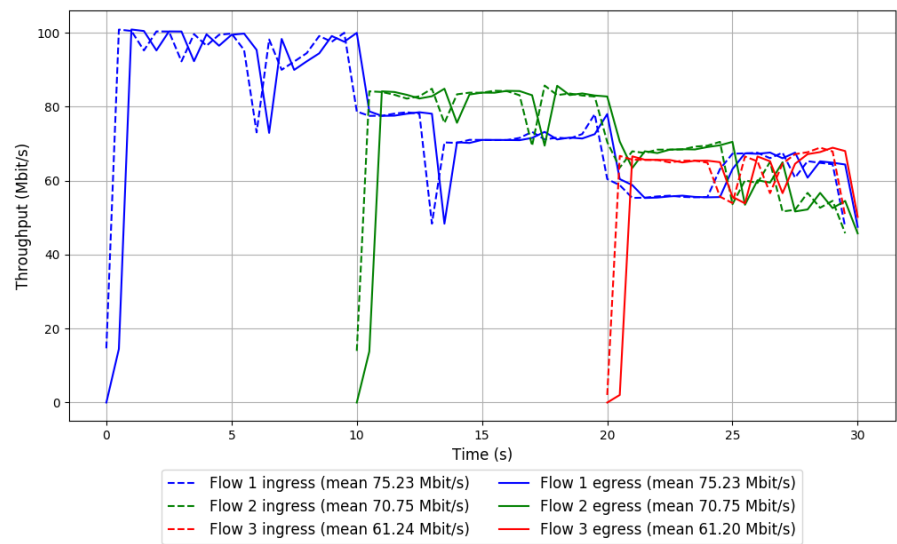
Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-07-12 16:39:18
End at: 2019-07-12 16:39:48
Local clock offset: 6.612 ms
Remote clock offset: 4.563 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.50 Mbit/s
95th percentile per-packet one-way delay: 0.919 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.18 Mbit/s
95th percentile per-packet one-way delay: 0.931 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.60 Mbit/s
95th percentile per-packet one-way delay: 0.890 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 59.58 Mbit/s
95th percentile per-packet one-way delay: 0.856 ms
Loss rate: 0.02%
```
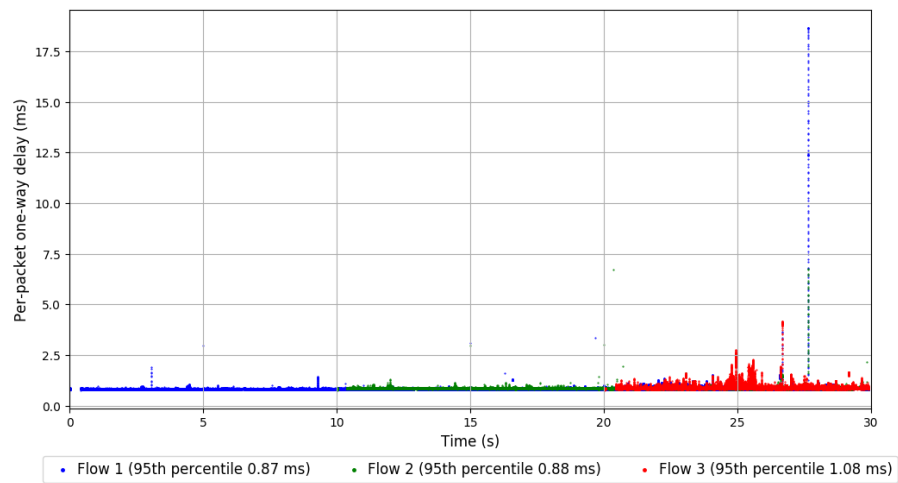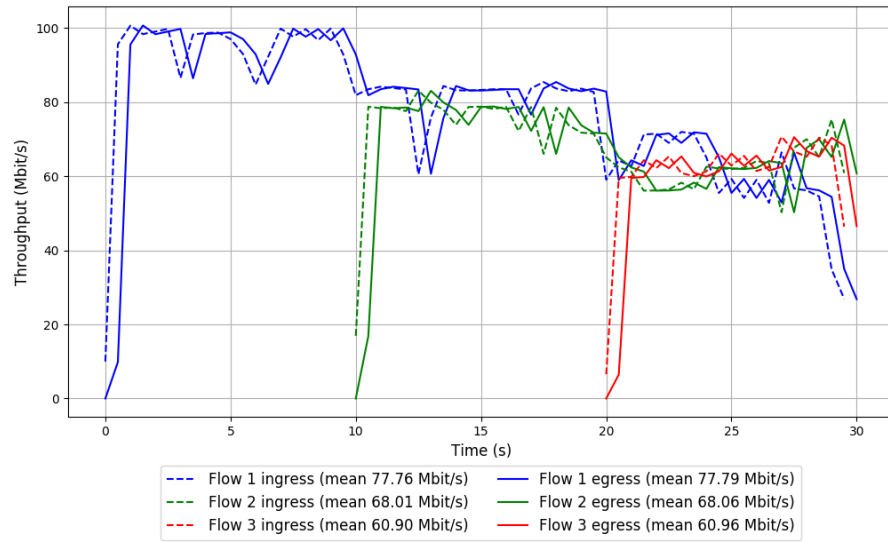
Run 2: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 77.18 Mbit/s) —— Flow 1 egress (mean 77.18 Mbit/s)
- - - Flow 2 ingress (mean 68.61 Mbit/s) —— Flow 2 egress (mean 68.60 Mbit/s)
- - - Flow 3 ingress (mean 59.58 Mbit/s) —— Flow 3 egress (mean 59.58 Mbit/s)

- Flow 1 (95th percentile 0.93 ms)   - Flow 2 (95th percentile 0.89 ms)   - Flow 3 (95th percentile 0.86 ms)

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-07-12 17:13:40
End at: 2019-07-12 17:14:10
Local clock offset: 6.727 ms
Remote clock offset: 3.255 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.52 Mbit/s
95th percentile per-packet one-way delay: 0.901 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 75.23 Mbit/s
95th percentile per-packet one-way delay: 0.888 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 70.75 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 61.20 Mbit/s
95th percentile per-packet one-way delay: 0.916 ms
Loss rate: 0.02%
```
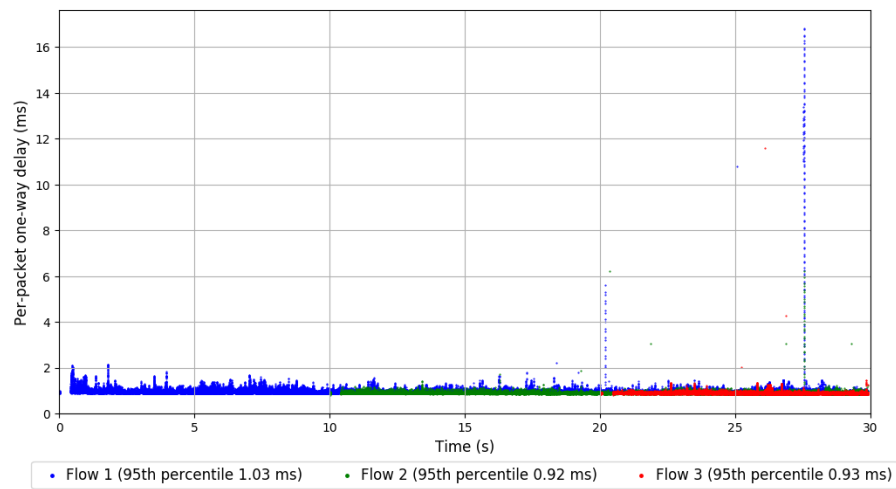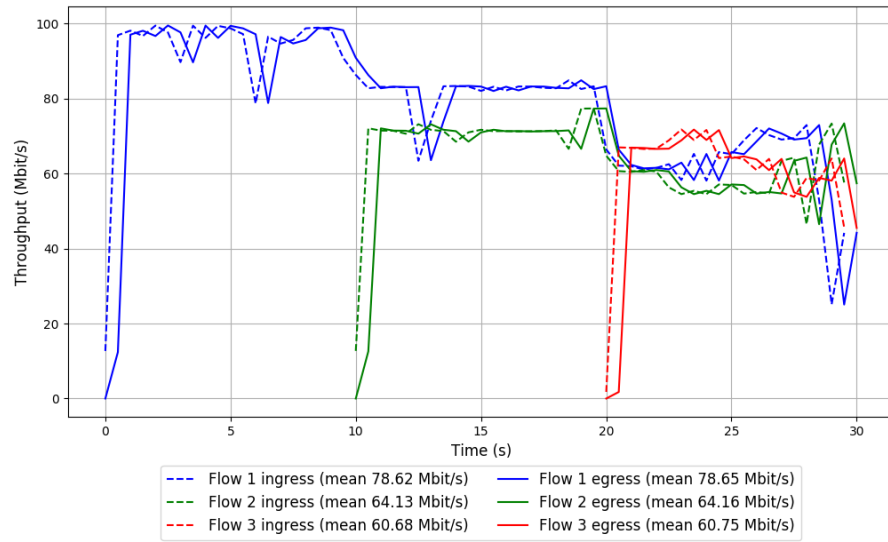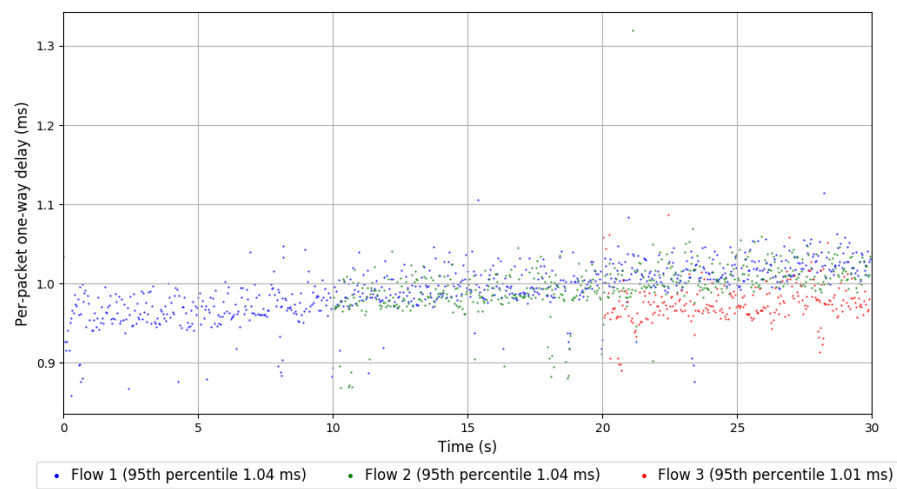
Run 3: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 75.23 Mbit/s)   Flow 1 egress (mean 75.23 Mbit/s)
Flow 2 ingress (mean 70.75 Mbit/s)   Flow 2 egress (mean 70.75 Mbit/s)
Flow 3 ingress (mean 61.24 Mbit/s)   Flow 3 egress (mean 61.20 Mbit/s)

Flow 1 (95th percentile 0.89 ms)   Flow 2 (95th percentile 0.91 ms)   Flow 3 (95th percentile 0.92 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-07-12 17:47:56
End at: 2019-07-12 17:48:26
Local clock offset: 6.784 ms
Remote clock offset: 3.379 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 143.22 Mbit/s
95th percentile per-packet one-way delay: 0.893 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 77.79 Mbit/s
95th percentile per-packet one-way delay: 0.867 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.06 Mbit/s
95th percentile per-packet one-way delay: 0.883 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 60.96 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.00%
```
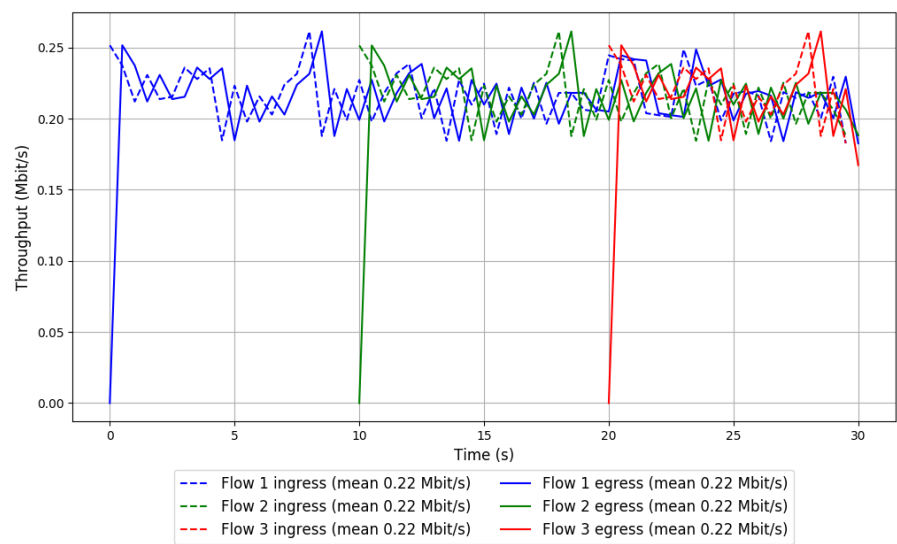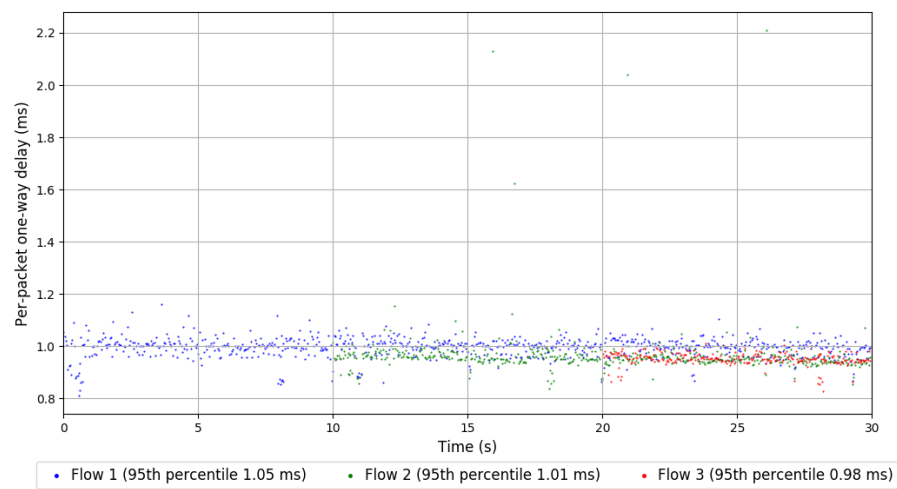
Run 4: Report of QUIC Cubic — Data Link

- Flow 1 ingress (mean 77.76 Mbit/s)
- Flow 1 egress (mean 77.79 Mbit/s)
- Flow 2 ingress (mean 68.01 Mbit/s)
- Flow 2 egress (mean 68.06 Mbit/s)
- Flow 3 ingress (mean 60.90 Mbit/s)
- Flow 3 egress (mean 60.96 Mbit/s)

- Flow 1 (95th percentile 0.87 ms)
- Flow 2 (95th percentile 0.88 ms)
- Flow 3 (95th percentile 1.08 ms)

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-07-12 18:22:19
End at: 2019-07-12 18:22:49
Local clock offset: 7.329 ms
Remote clock offset: 3.407 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.42 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 78.65 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.16 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 60.75 Mbit/s
95th percentile per-packet one-way delay: 0.934 ms
Loss rate: 0.02%
```
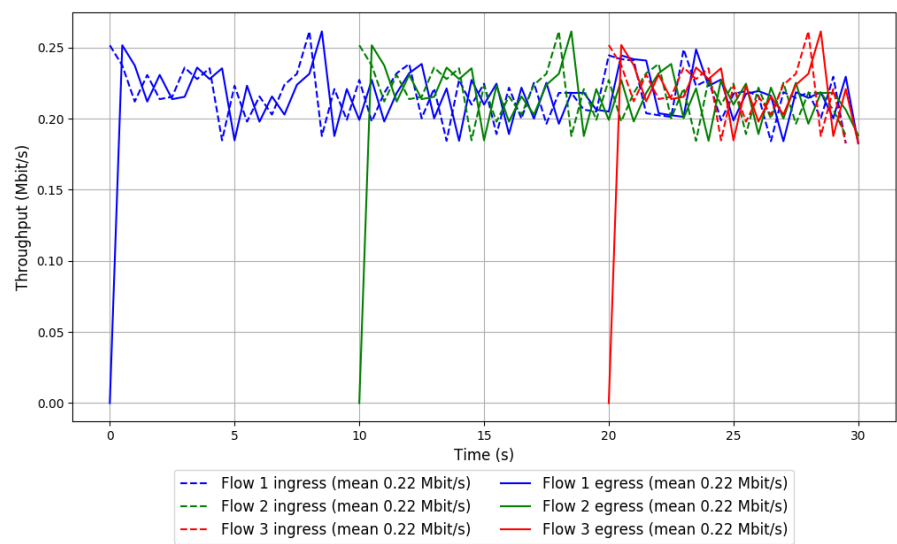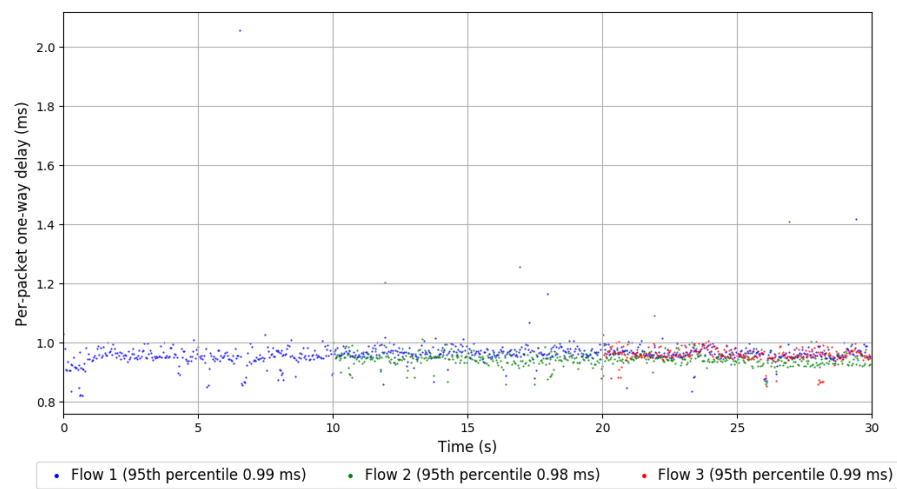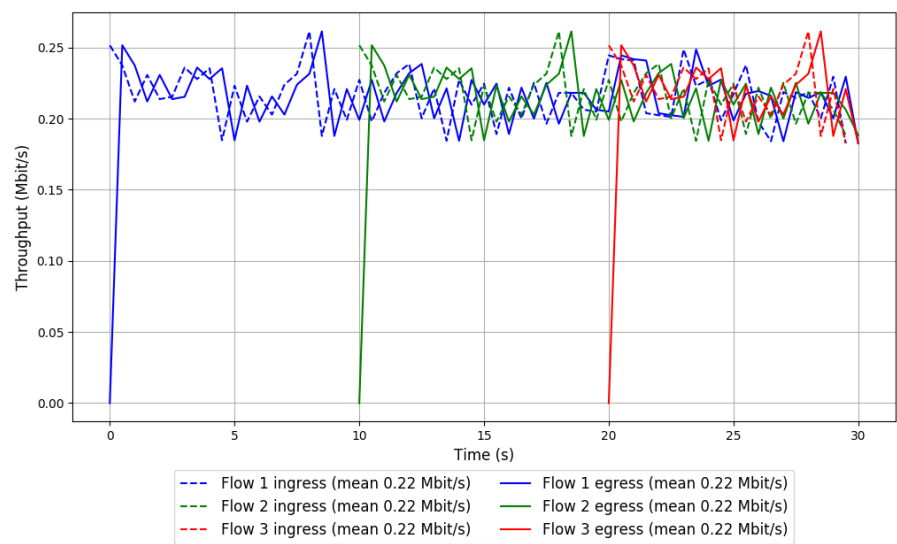
Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-07-12 16:18:04
End at: 2019-07-12 16:18:34
Local clock offset: 6.23 ms
Remote clock offset: 3.906 ms

# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.039 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.35%
```
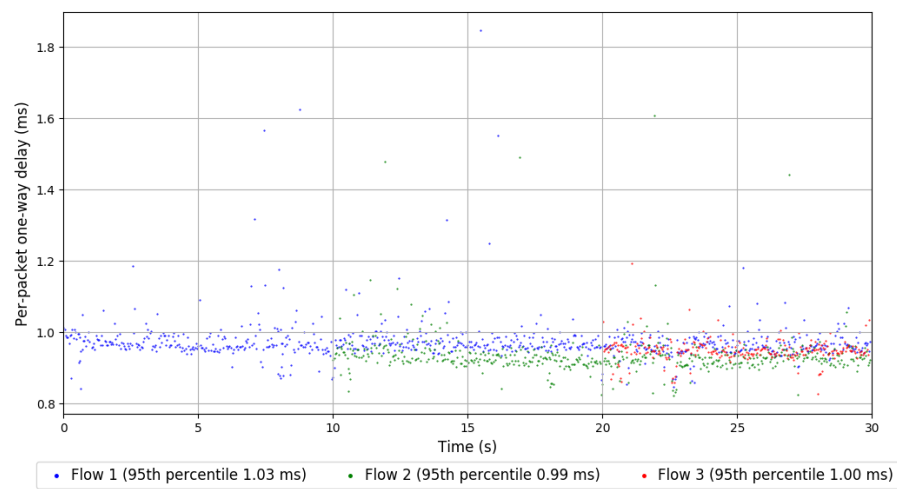
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-07-12 16:52:23
End at: 2019-07-12 16:52:53
Local clock offset: 6.814 ms
Remote clock offset: 3.47 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.011 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.984 ms
Loss rate: 0.00%
```
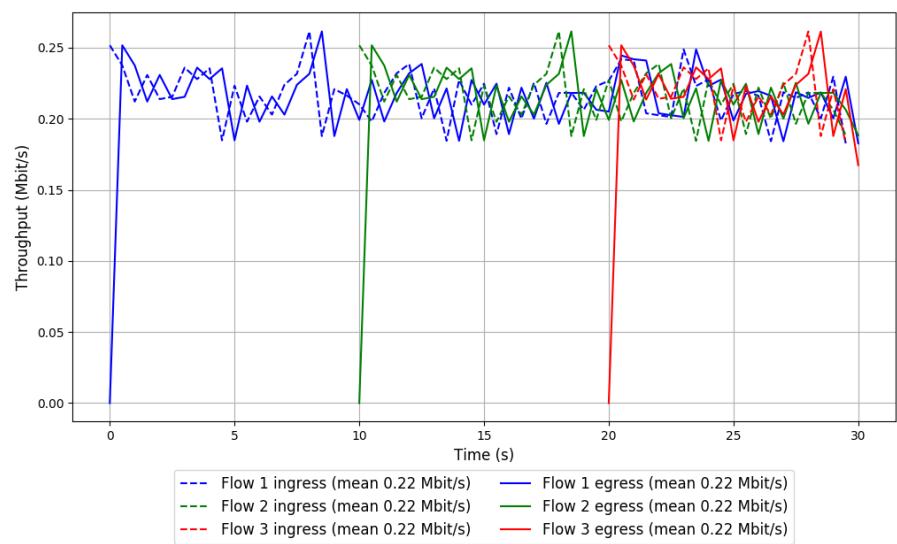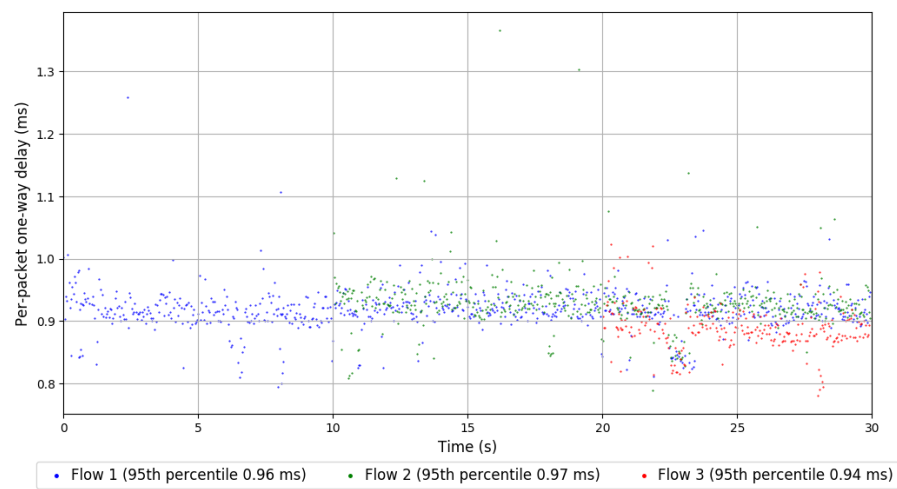
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-07-12 17:26:46
End at: 2019-07-12 17:27:16
Local clock offset: 6.797 ms
Remote clock offset: 3.272 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.00%
```
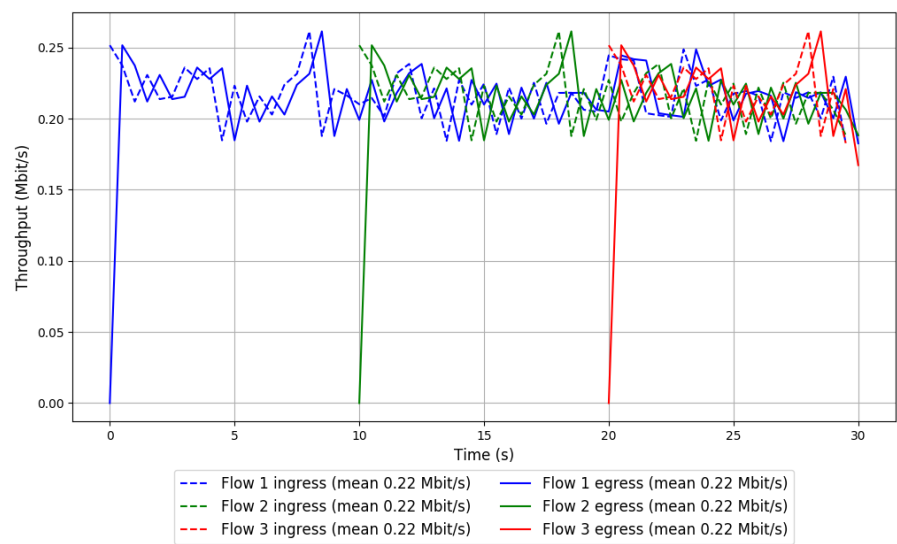
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-07-12 18:01:00
End at: 2019-07-12 18:01:30
Local clock offset: 6.856 ms
Remote clock offset: 3.456 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.992 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.35%
```
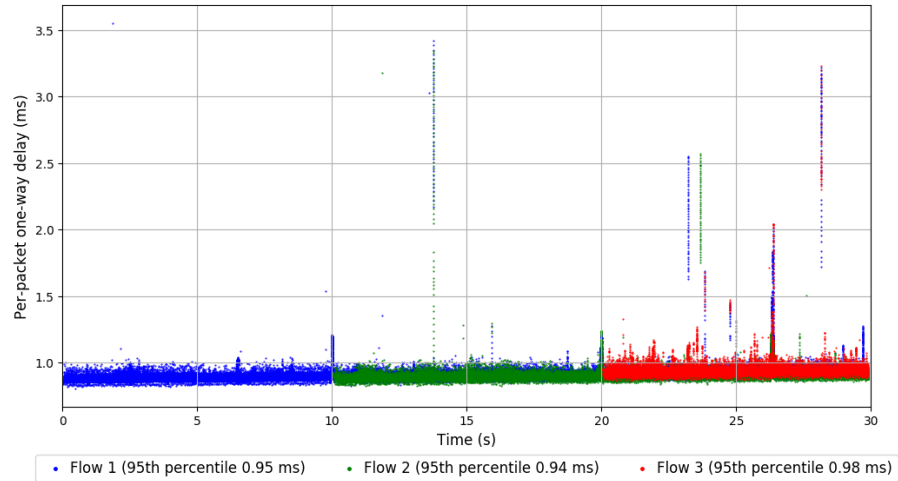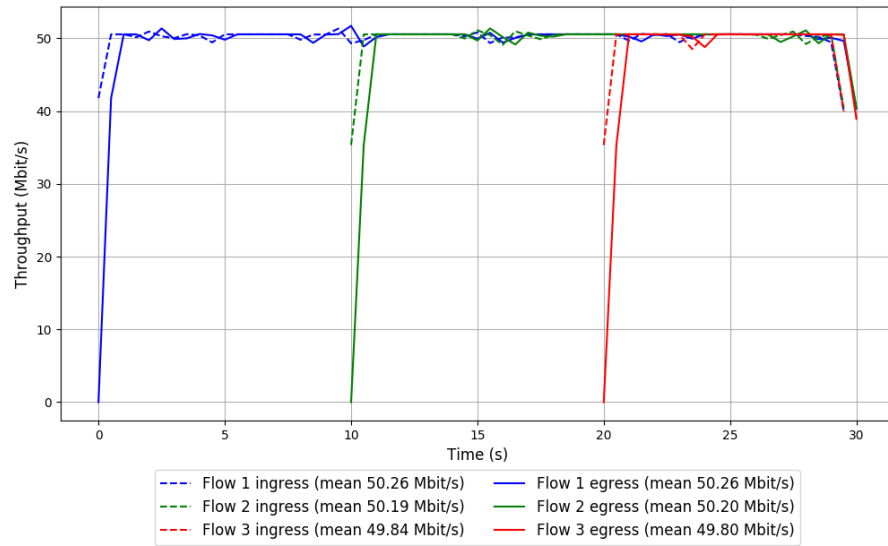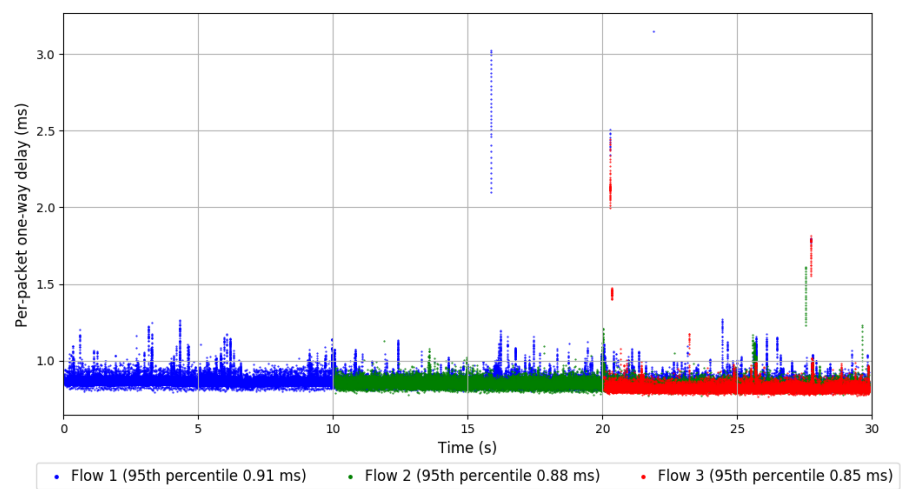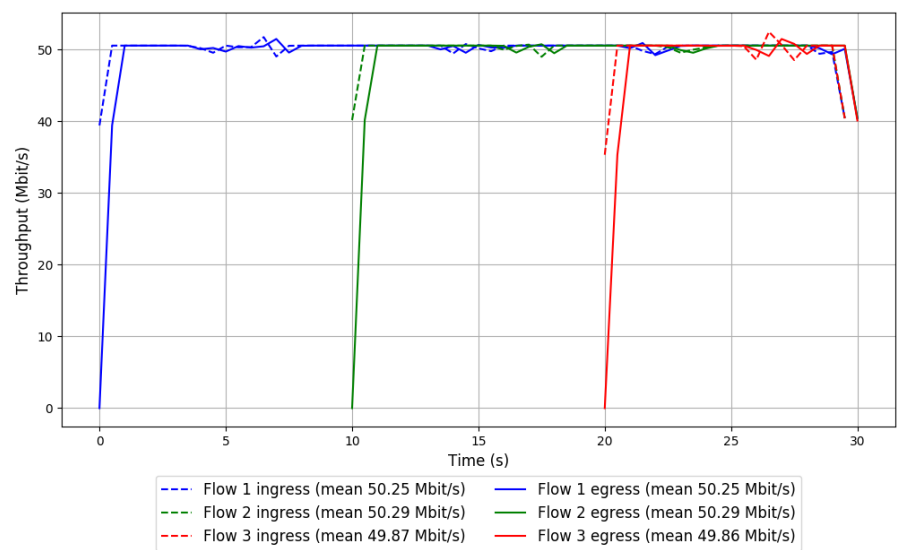
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-07-12 18:35:16
End at: 2019-07-12 18:35:47
Local clock offset: 7.567 ms
Remote clock offset: 3.252 ms


# Below is generated by plot.py at 2019-07-12 19:46:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.940 ms
Loss rate: 0.35%
```
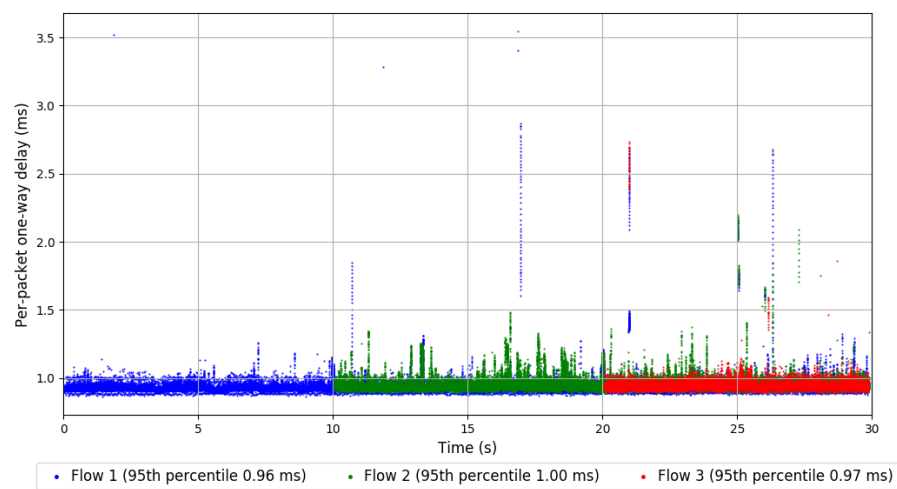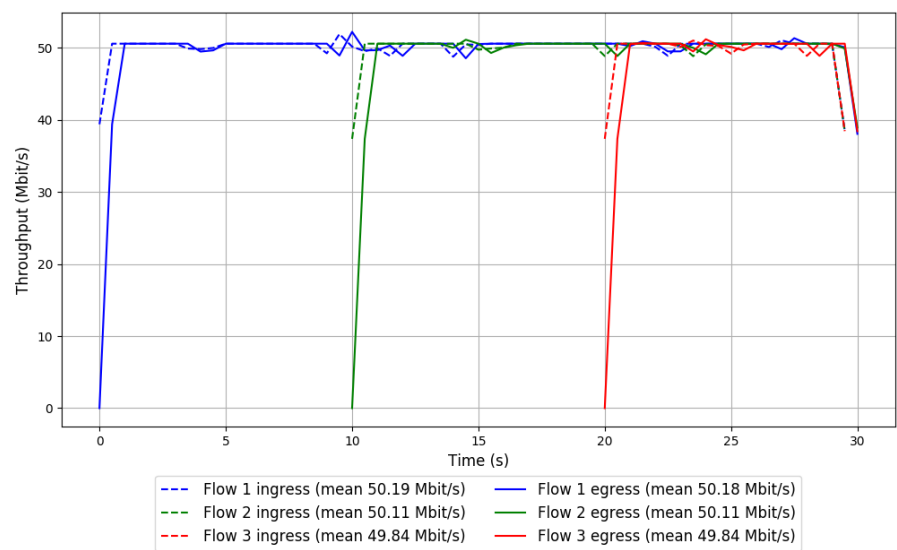
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-07-12 16:20:57
End at: 2019-07-12 16:21:27
Local clock offset: 6.21 ms
Remote clock offset: 4.235 ms


# Below is generated by plot.py at 2019-07-12 19:46:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.99 Mbit/s
95th percentile per-packet one-way delay: 0.956 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 0.948 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.20 Mbit/s
95th percentile per-packet one-way delay: 0.936 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.80 Mbit/s
95th percentile per-packet one-way delay: 0.985 ms
Loss rate: 0.10%
```

Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-07-12 16:55:17
End at: 2019-07-12 16:55:47
Local clock offset: 6.853 ms
Remote clock offset: 3.426 ms


# Below is generated by plot.py at 2019-07-12 19:47:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.09 Mbit/s
95th percentile per-packet one-way delay: 0.891 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.29 Mbit/s
95th percentile per-packet one-way delay: 0.879 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.86 Mbit/s
95th percentile per-packet one-way delay: 0.852 ms
Loss rate: 0.03%
```
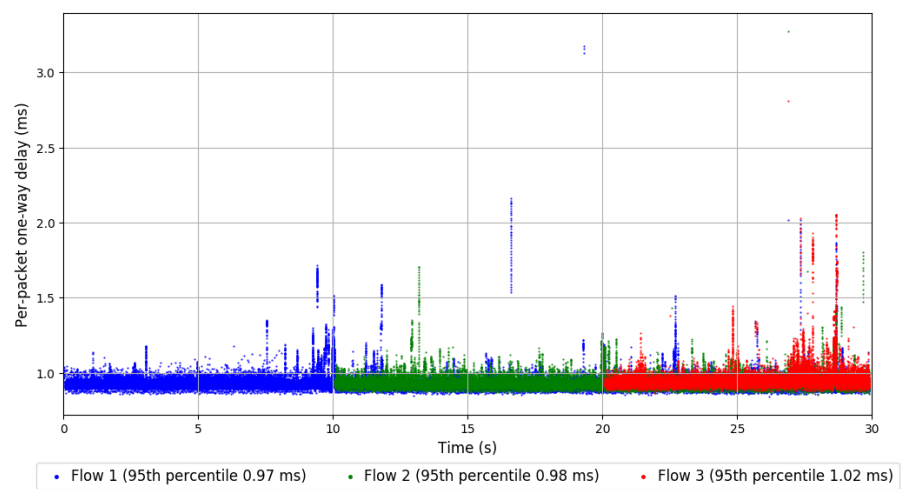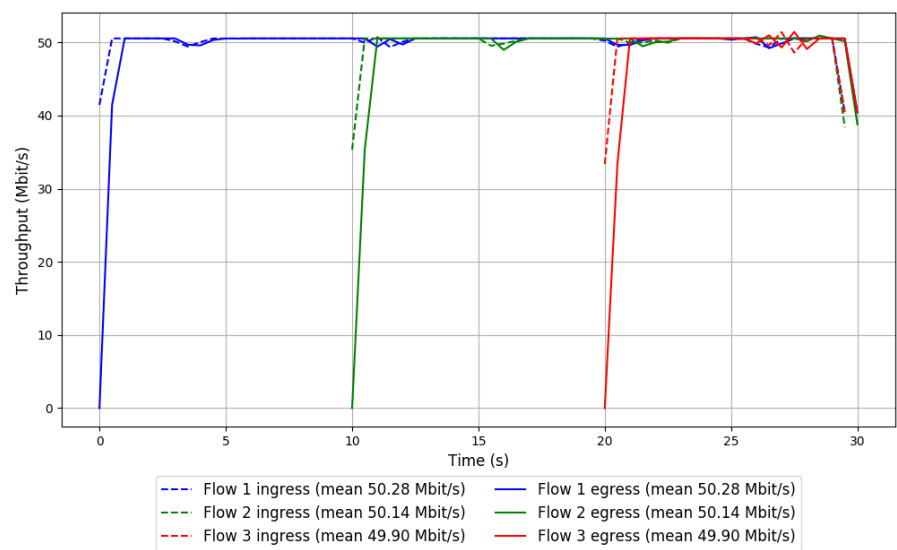
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-07-12 17:29:40
End at: 2019-07-12 17:30:10
Local clock offset: 6.773 ms
Remote clock offset: 3.208 ms


# Below is generated by plot.py at 2019-07-12 19:47:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.92 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 50.11 Mbit/s
95th percentile per-packet one-way delay: 1.003 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 49.84 Mbit/s
95th percentile per-packet one-way delay: 0.975 ms
Loss rate: 0.00%
```
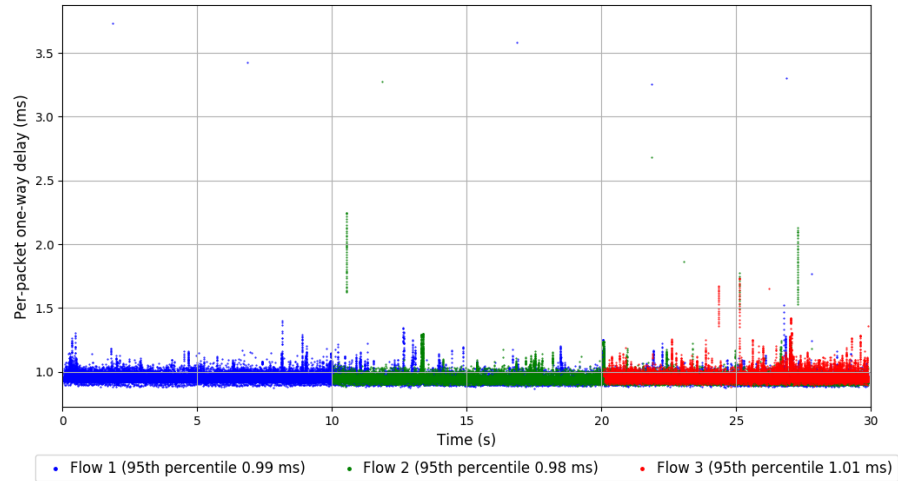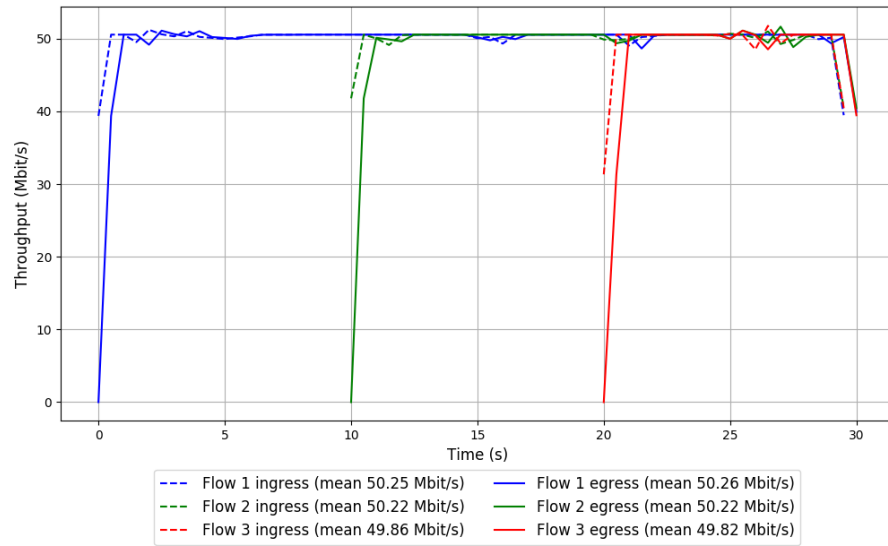
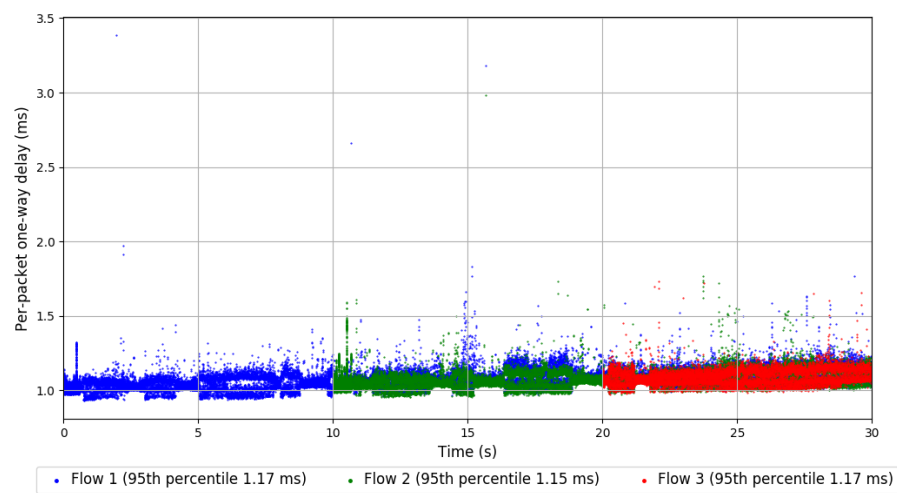# Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-07-12 18:03:54
End at: 2019-07-12 18:04:24
Local clock offset: 6.991 ms
Remote clock offset: 3.458 ms


# Below is generated by plot.py at 2019-07-12 19:47:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.00 Mbit/s
95th percentile per-packet one-way delay: 0.982 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.28 Mbit/s
95th percentile per-packet one-way delay: 0.972 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.14 Mbit/s
95th percentile per-packet one-way delay: 0.980 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.90 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.00%
```
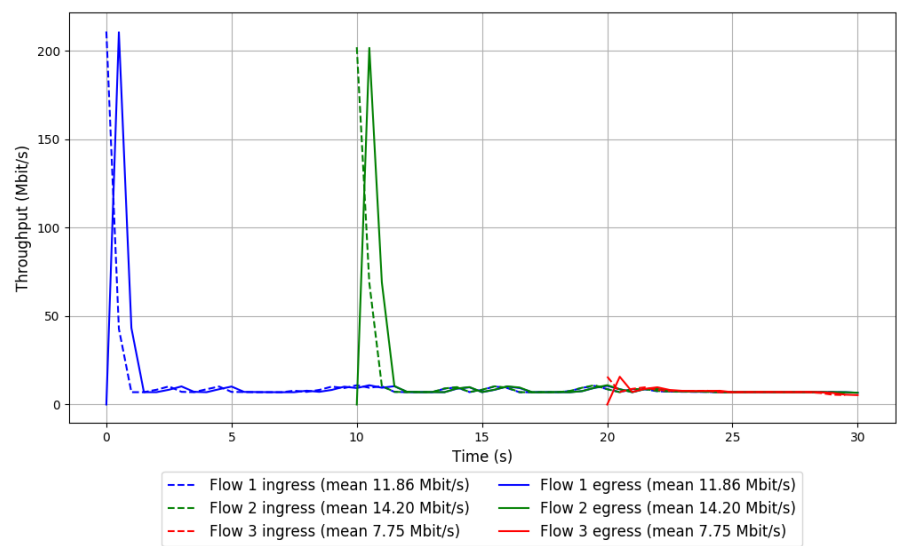
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-07-12 18:38:10
End at: 2019-07-12 18:38:40
Local clock offset: 7.621 ms
Remote clock offset: 3.142 ms


# Below is generated by plot.py at 2019-07-12 19:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.00 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.26 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.22 Mbit/s
95th percentile per-packet one-way delay: 0.977 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.82 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.10%
```
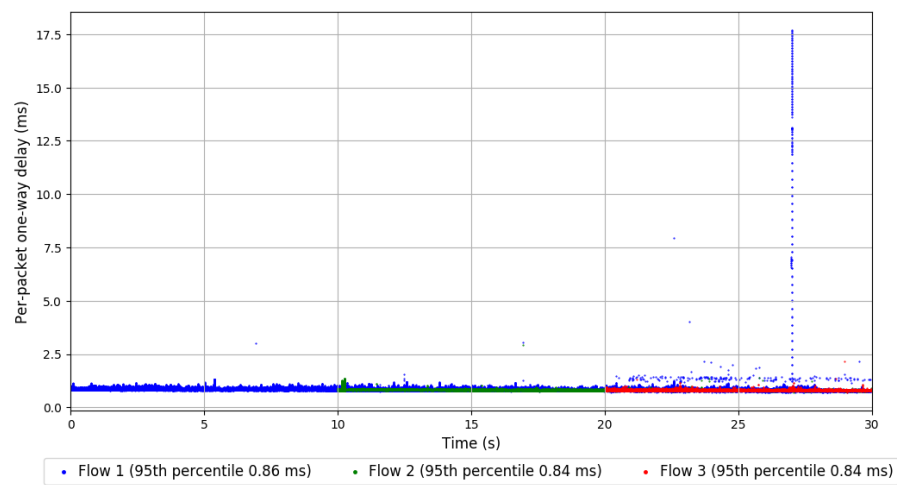
Run 5: Report of Sprout — Data Link

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

Start at: 2019-07-12 16:11:02
End at: 2019-07-12 16:11:32
Local clock offset: 6.261 ms
Remote clock offset: 2.624 ms

# Below is generated by plot.py at 2019-07-12 19:47:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.89 Mbit/s
95th percentile per-packet one-way delay: 1.162 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.86 Mbit/s
95th percentile per-packet one-way delay: 1.169 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 14.20 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 7.75 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.02%
```
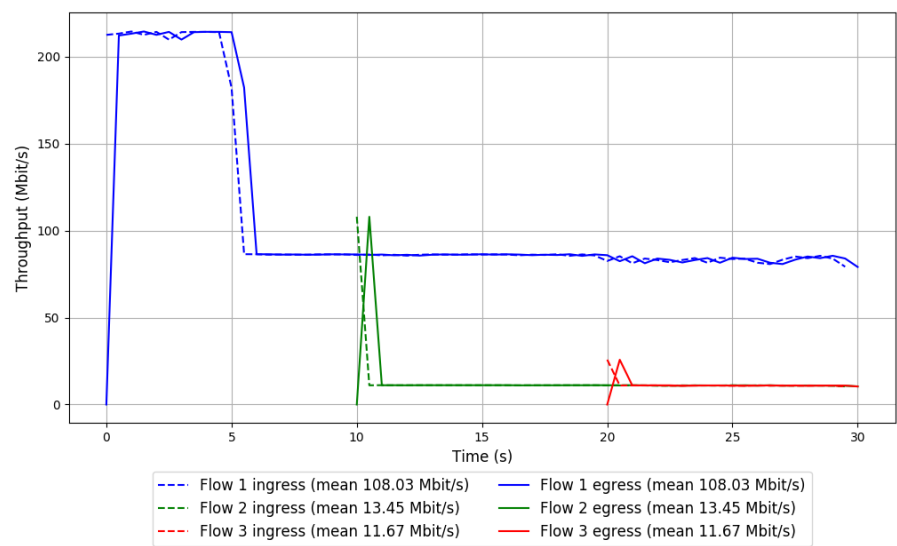
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-12 16:45:16
End at: 2019-07-12 16:45:46
Local clock offset: 6.719 ms
Remote clock offset: 3.866 ms


# Below is generated by plot.py at 2019-07-12 19:48:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.87 Mbit/s
95th percentile per-packet one-way delay: 0.863 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 108.03 Mbit/s
95th percentile per-packet one-way delay: 0.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 13.45 Mbit/s
95th percentile per-packet one-way delay: 0.845 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.67 Mbit/s
95th percentile per-packet one-way delay: 0.844 ms
Loss rate: 0.01%
```
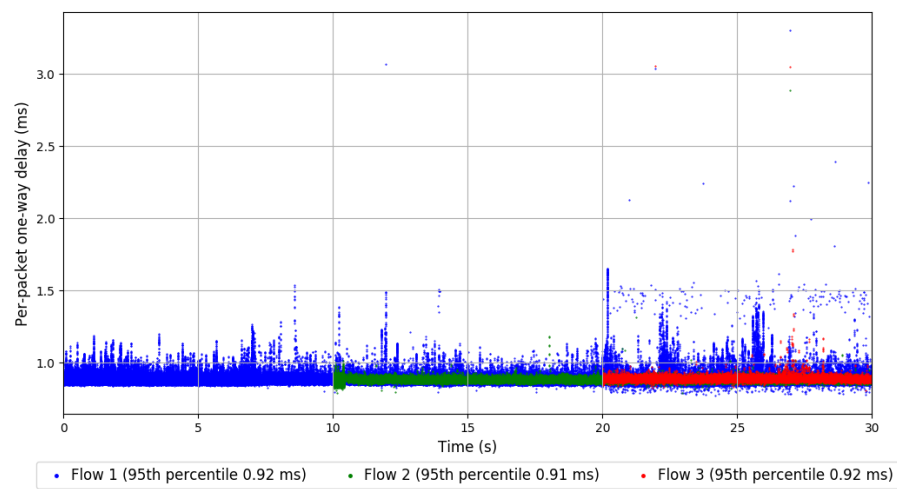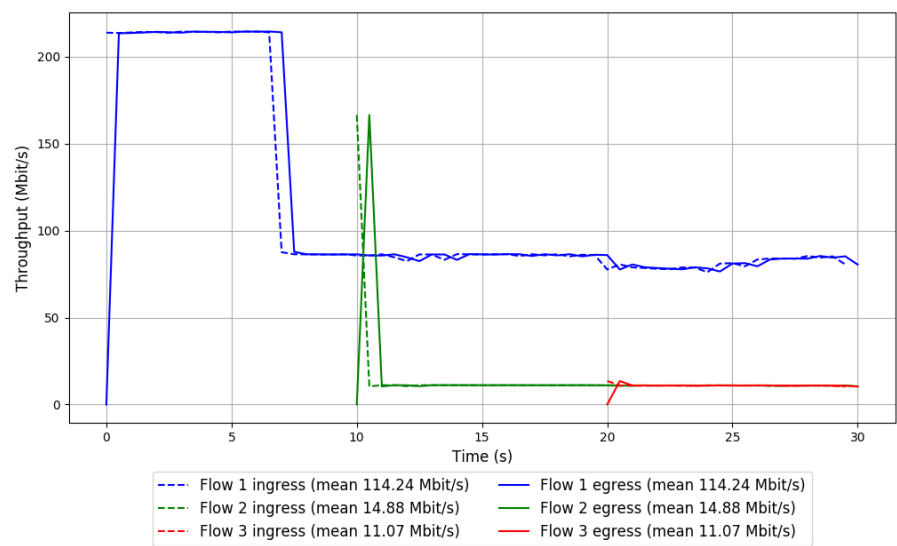
Run 2: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-12 17:19:39
End at: 2019-07-12 17:20:09
Local clock offset: 6.733 ms
Remote clock offset: 3.205 ms

# Below is generated by plot.py at 2019-07-12 19:49:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.83 Mbit/s
95th percentile per-packet one-way delay: 0.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 114.24 Mbit/s
95th percentile per-packet one-way delay: 0.918 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.88 Mbit/s
95th percentile per-packet one-way delay: 0.905 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.07 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.01%
```
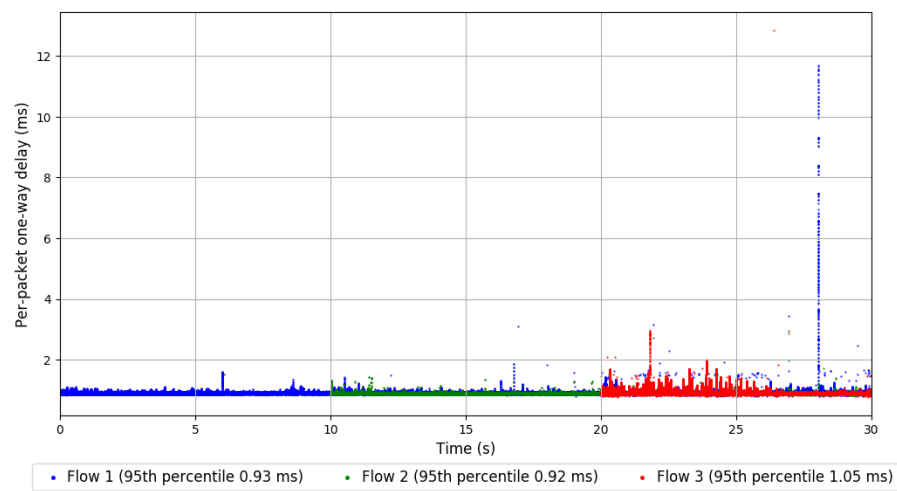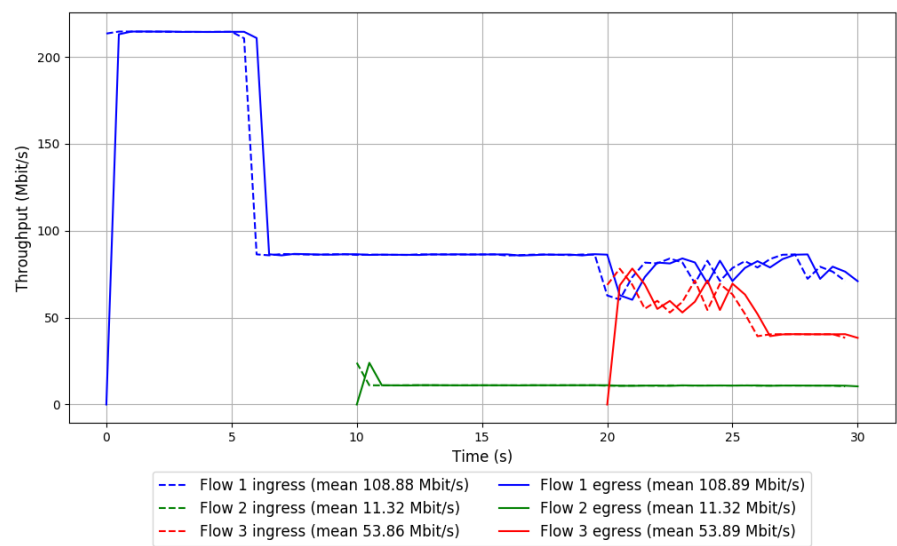
Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2019-07-12 17:53:57
End at: 2019-07-12 17:54:27
Local clock offset: 6.753 ms
Remote clock offset: 3.347 ms


# Below is generated by plot.py at 2019-07-12 19:49:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.34 Mbit/s
95th percentile per-packet one-way delay: 0.930 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 108.89 Mbit/s
95th percentile per-packet one-way delay: 0.927 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.32 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 53.89 Mbit/s
95th percentile per-packet one-way delay: 1.048 ms
Loss rate: 0.01%
```
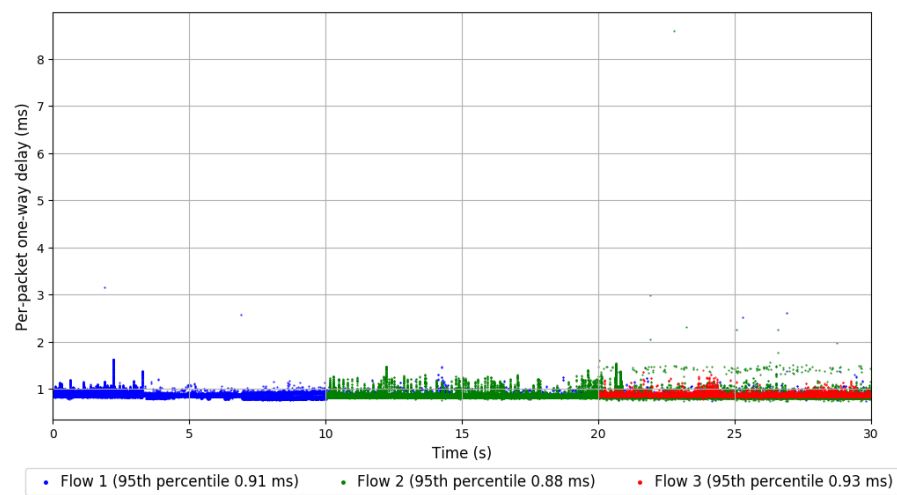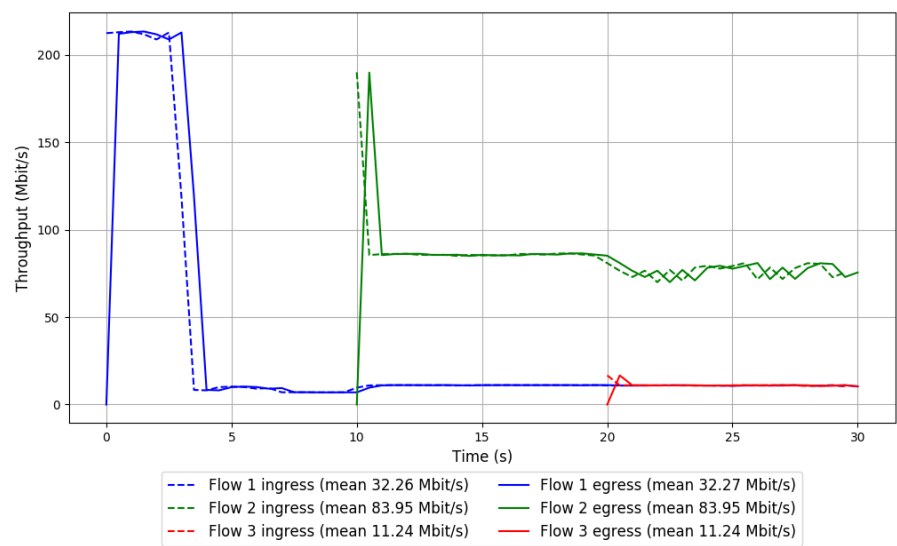
Run 4: Report of TaoVA-100x — Data Link

202

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

Start at: 2019-07-12 18:28:18
End at: 2019-07-12 18:28:48
Local clock offset: 7.361 ms
Remote clock offset: 3.258 ms


# Below is generated by plot.py at 2019-07-12 19:49:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.83 Mbit/s
95th percentile per-packet one-way delay: 0.893 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 32.27 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 83.95 Mbit/s
95th percentile per-packet one-way delay: 0.881 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.24 Mbit/s
95th percentile per-packet one-way delay: 0.926 ms
Loss rate: 0.01%
```
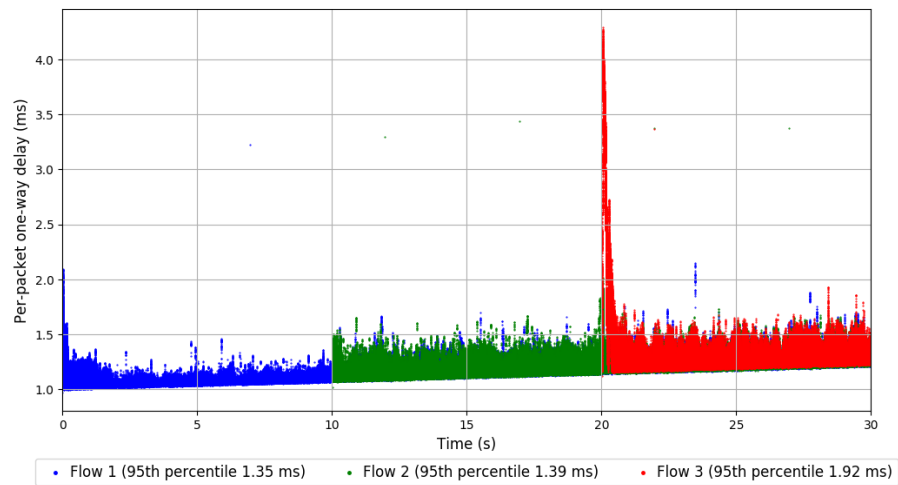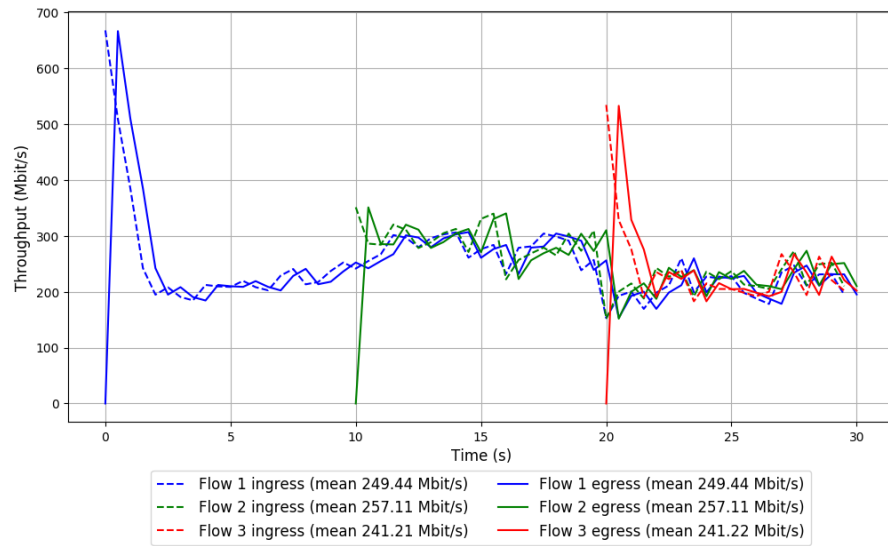
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-07-12 16:02:03
End at: 2019-07-12 16:02:33
Local clock offset: 6.391 ms
Remote clock offset: 0.062 ms

# Below is generated by plot.py at 2019-07-12 19:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 500.84 Mbit/s
95th percentile per-packet one-way delay: 1.413 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 249.44 Mbit/s
95th percentile per-packet one-way delay: 1.355 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 257.11 Mbit/s
95th percentile per-packet one-way delay: 1.394 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 241.22 Mbit/s
95th percentile per-packet one-way delay: 1.923 ms
Loss rate: 0.01%
```
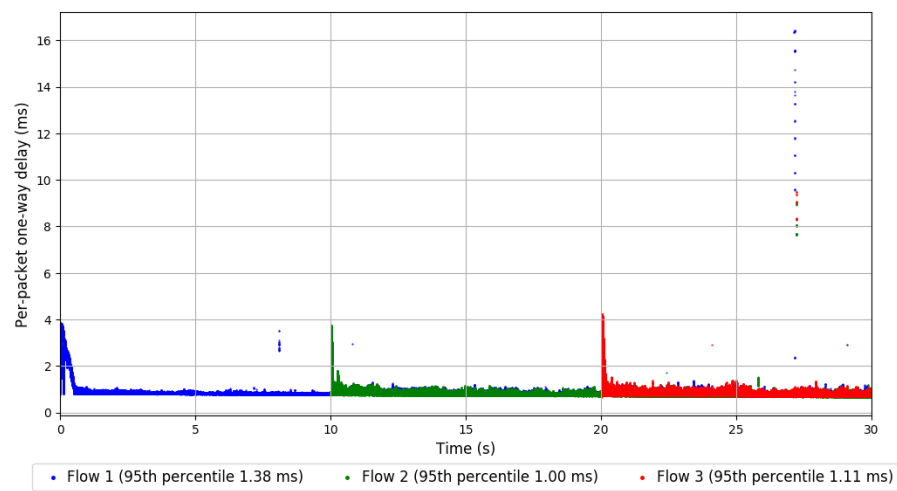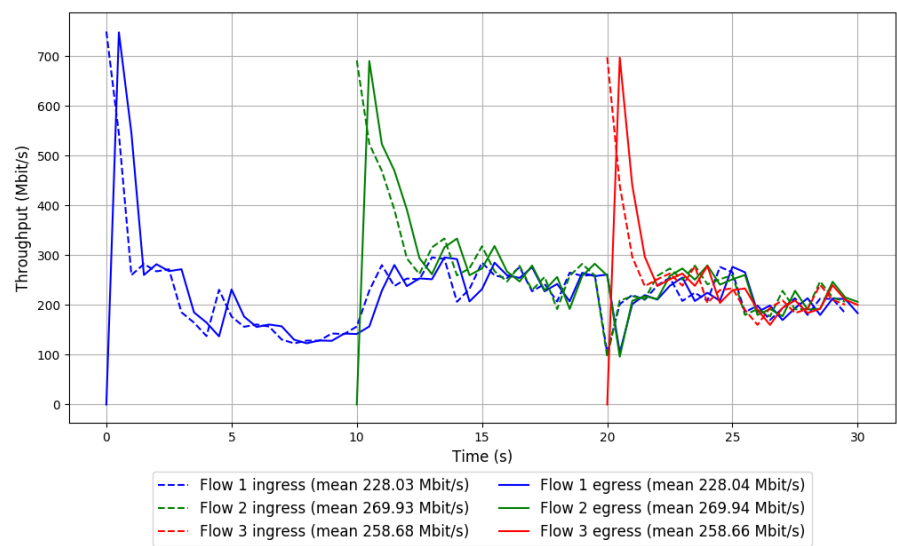
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-07-12 16:36:19
End at: 2019-07-12 16:36:49
Local clock offset: 6.534 ms
Remote clock offset: 5.27 ms


# Below is generated by plot.py at 2019-07-12 19:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 493.77 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 228.04 Mbit/s
95th percentile per-packet one-way delay: 1.384 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 269.94 Mbit/s
95th percentile per-packet one-way delay: 0.997 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 258.66 Mbit/s
95th percentile per-packet one-way delay: 1.113 ms
Loss rate: 0.01%
```
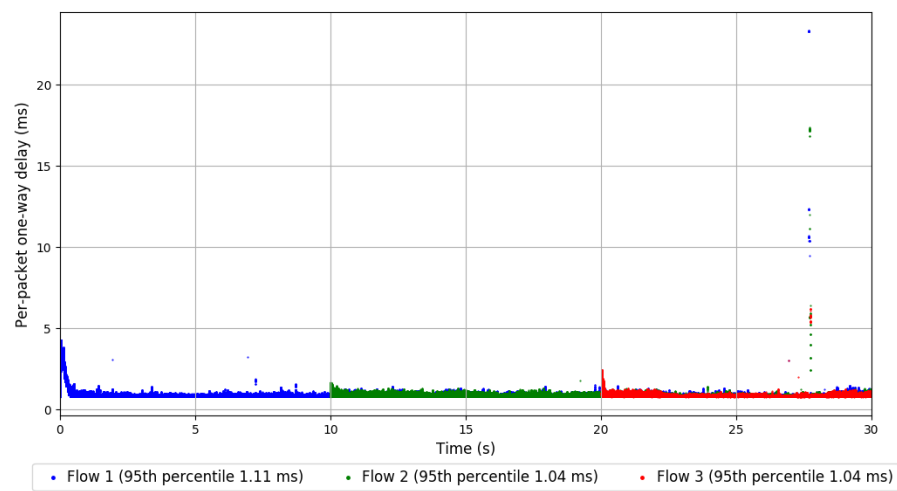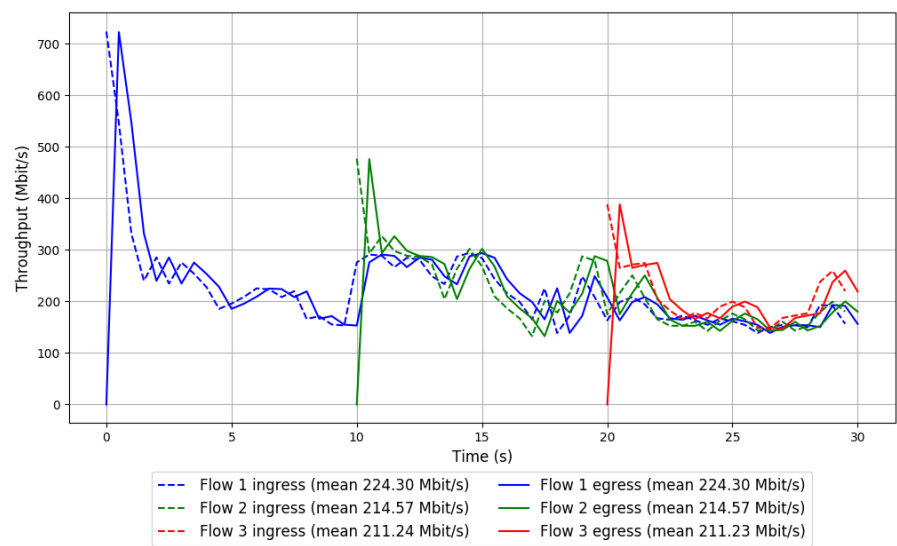
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-07-12 17:10:42
End at: 2019-07-12 17:11:12
Local clock offset: 6.733 ms
Remote clock offset: 3.359 ms


# Below is generated by plot.py at 2019-07-12 19:52:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 437.46 Mbit/s
95th percentile per-packet one-way delay: 1.063 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 224.30 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 214.57 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 211.23 Mbit/s
95th percentile per-packet one-way delay: 1.042 ms
Loss rate: 0.03%
```
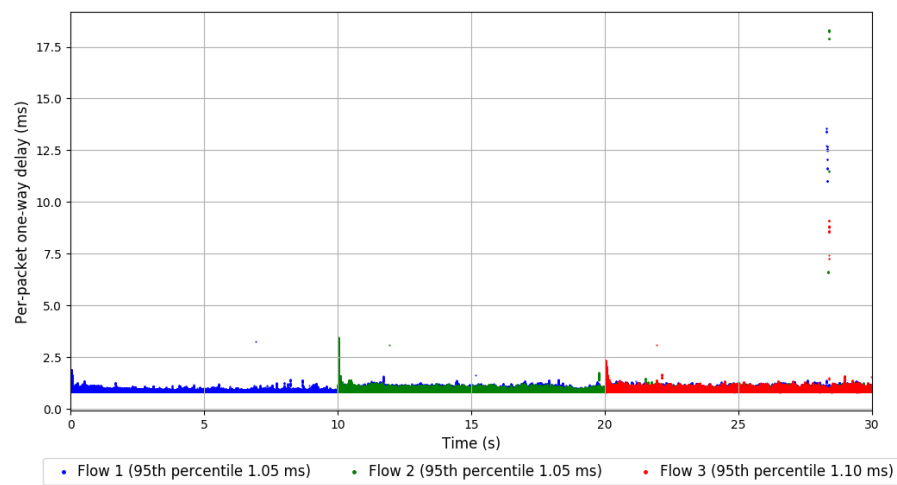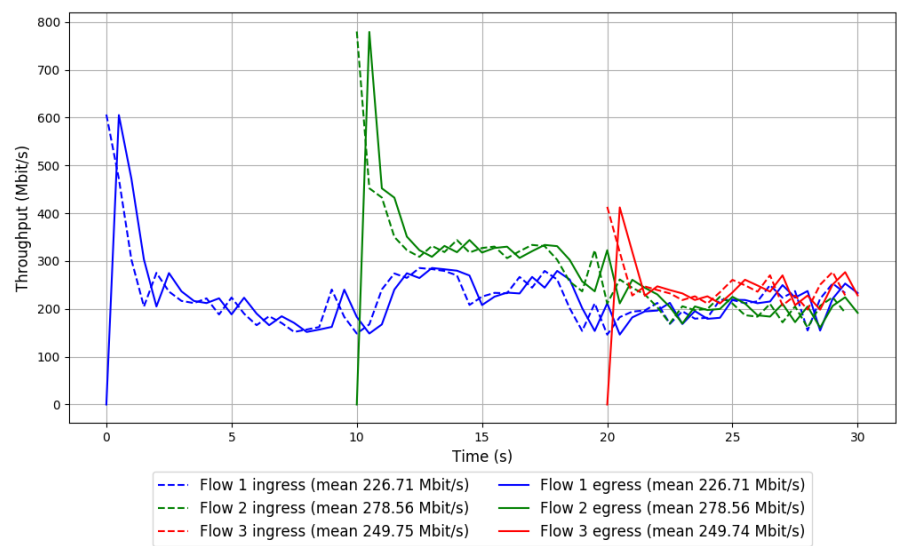
Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-07-12 17:44:55
End at: 2019-07-12 17:45:25
Local clock offset: 6.79 ms
Remote clock offset: 3.418 ms


# Below is generated by plot.py at 2019-07-12 19:53:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 495.28 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 226.71 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 278.56 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 249.74 Mbit/s
95th percentile per-packet one-way delay: 1.097 ms
Loss rate: 0.02%
```
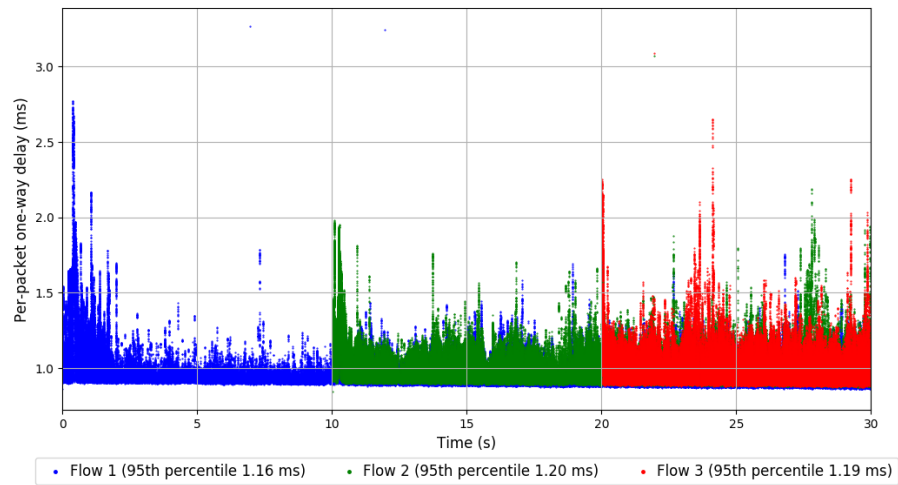
Run 4: Report of TCP Vegas — Data Link

```
Run 5: Statistics of TCP Vegas

Start at: 2019-07-12 18:19:21
End at: 2019-07-12 18:19:51
Local clock offset: 7.292 ms
Remote clock offset: 3.562 ms


# Below is generated by plot.py at 2019-07-12 19:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 473.05 Mbit/s
95th percentile per-packet one-way delay: 1.179 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 224.16 Mbit/s
95th percentile per-packet one-way delay: 1.157 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 256.00 Mbit/s
95th percentile per-packet one-way delay: 1.197 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 236.28 Mbit/s
95th percentile per-packet one-way delay: 1.191 ms
Loss rate: 0.02%
```
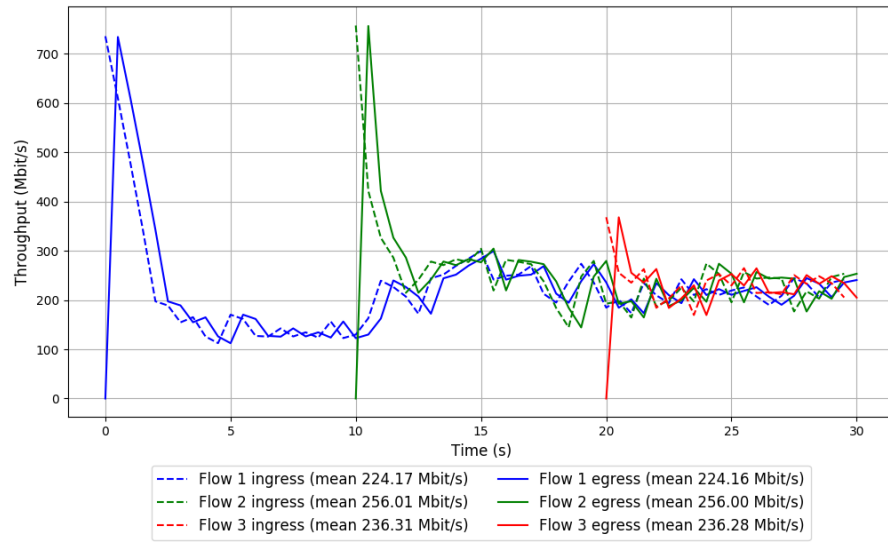
Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-07-12 16:23:28
End at: 2019-07-12 16:23:58
Local clock offset: 6.237 ms
Remote clock offset: 4.504 ms


# Below is generated by plot.py at 2019-07-12 19:54:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.61 Mbit/s
95th percentile per-packet one-way delay: 2.044 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.60 Mbit/s
95th percentile per-packet one-way delay: 2.180 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 118.04 Mbit/s
95th percentile per-packet one-way delay: 1.815 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 104.01 Mbit/s
95th percentile per-packet one-way delay: 1.552 ms
Loss rate: 0.00%
```
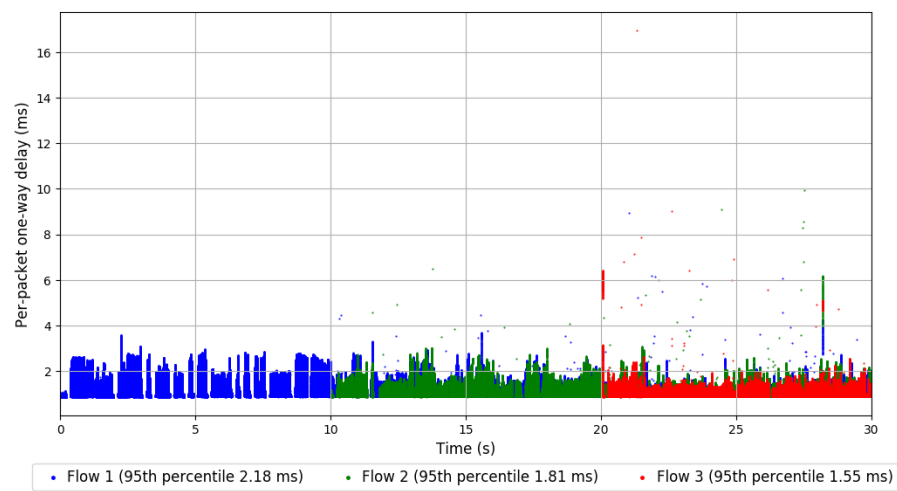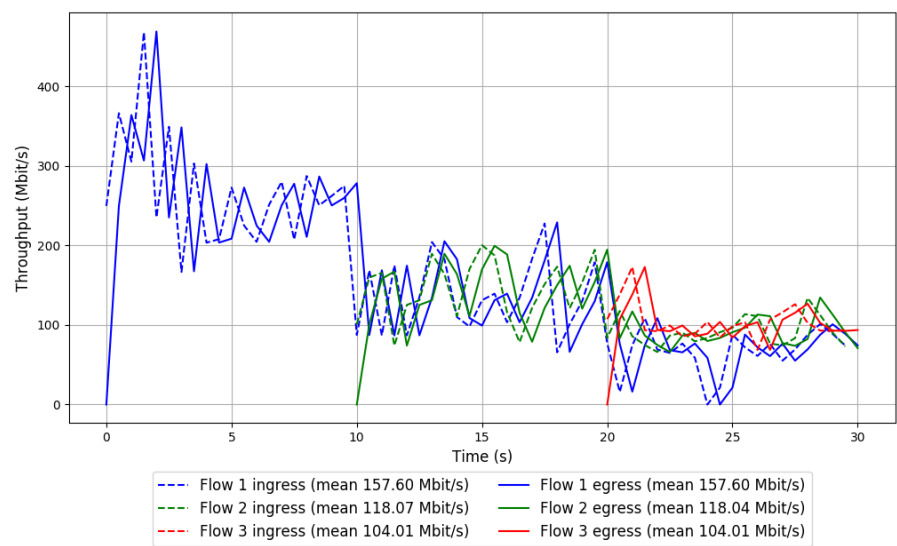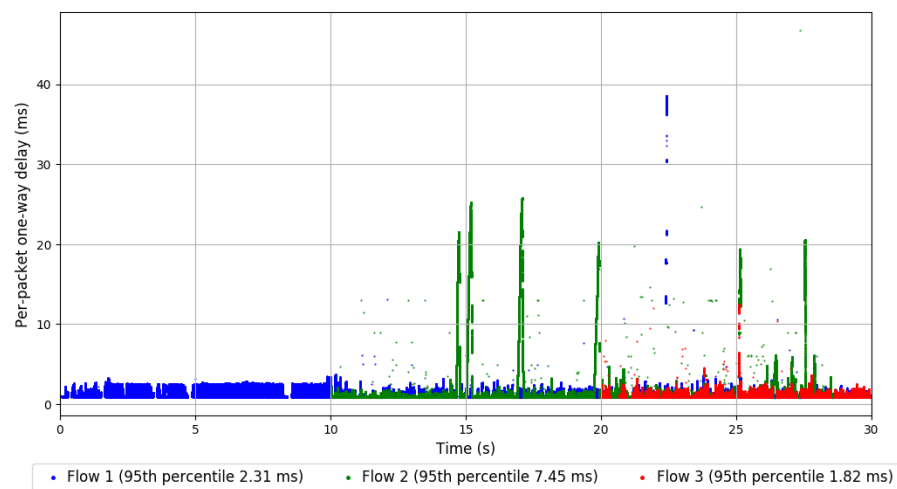
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 157.60 Mbit/s) --- Flow 1 egress (mean 157.60 Mbit/s)
Flow 2 ingress (mean 118.07 Mbit/s) --- Flow 2 egress (mean 118.04 Mbit/s)
Flow 3 ingress (mean 104.01 Mbit/s) --- Flow 3 egress (mean 104.01 Mbit/s)

Flow 1 (95th percentile 2.18 ms) • Flow 2 (95th percentile 1.81 ms) • Flow 3 (95th percentile 1.55 ms)

```
Run 2: Statistics of Verus

Start at: 2019-07-12 16:57:49
End at: 2019-07-12 16:58:19
Local clock offset: 6.873 ms
Remote clock offset: 3.272 ms


# Below is generated by plot.py at 2019-07-12 19:54:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 433.04 Mbit/s
95th percentile per-packet one-way delay: 2.643 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 179.96 Mbit/s
95th percentile per-packet one-way delay: 2.314 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 356.27 Mbit/s
95th percentile per-packet one-way delay: 7.452 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.94 Mbit/s
95th percentile per-packet one-way delay: 1.819 ms
Loss rate: 0.00%
```
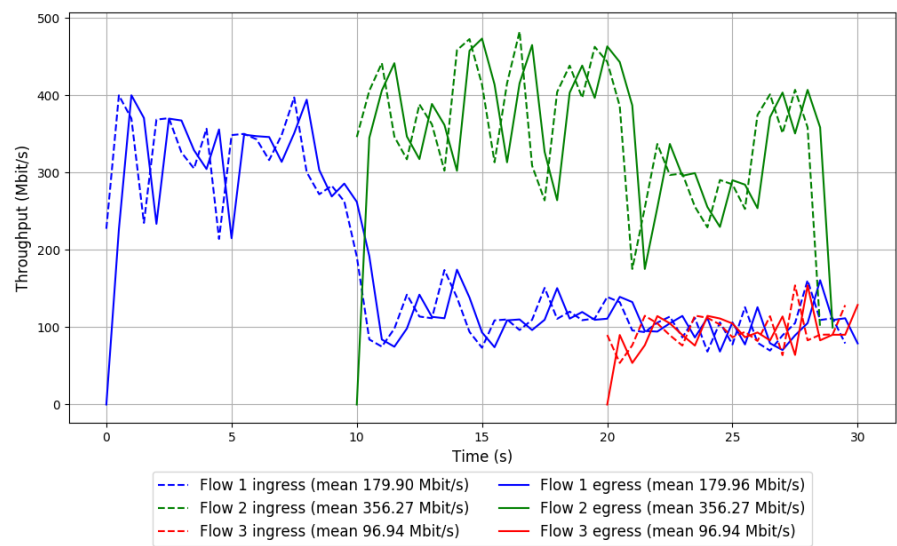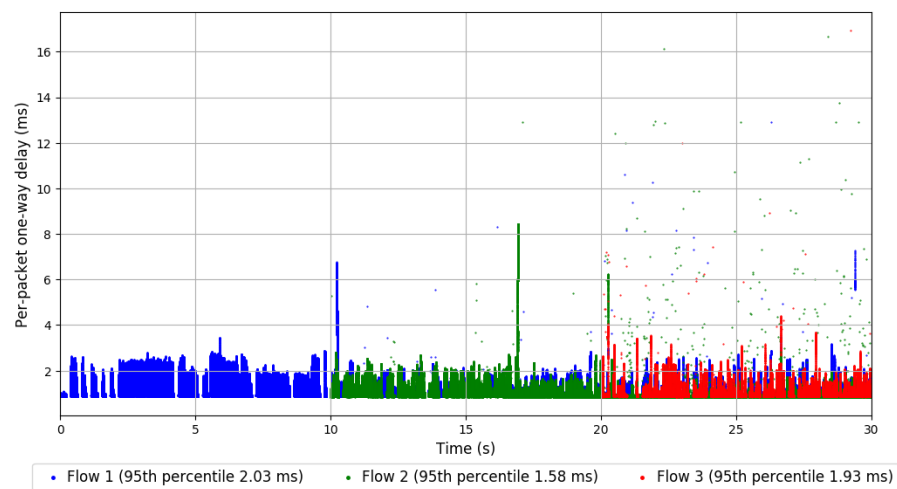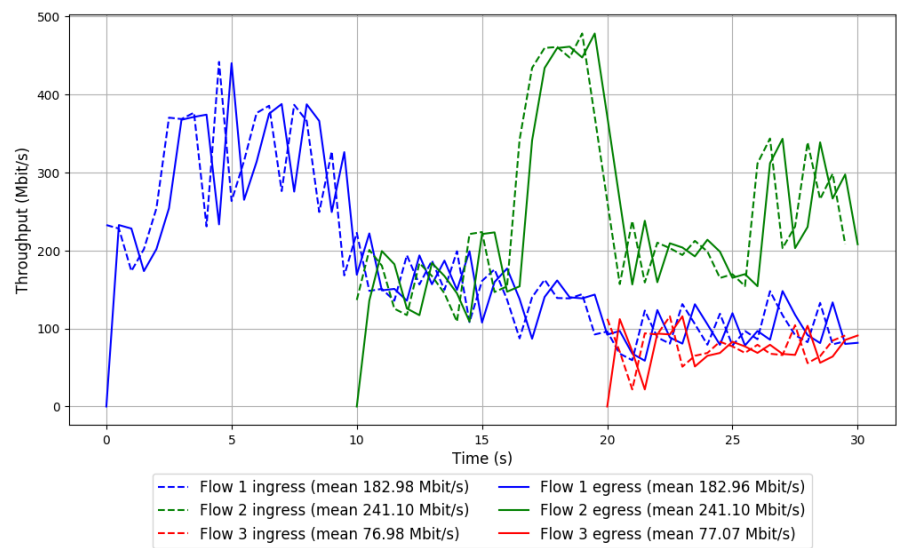
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-07-12 17:32:11
End at: 2019-07-12 17:32:41
Local clock offset: 6.798 ms
Remote clock offset: 3.279 ms


# Below is generated by plot.py at 2019-07-12 19:54:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.16 Mbit/s
95th percentile per-packet one-way delay: 1.893 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 182.96 Mbit/s
95th percentile per-packet one-way delay: 2.030 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 241.10 Mbit/s
95th percentile per-packet one-way delay: 1.577 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 77.07 Mbit/s
95th percentile per-packet one-way delay: 1.933 ms
Loss rate: 0.00%
```

Run 3: Report of Verus — Data Link

220

```
Run 4: Statistics of Verus

Start at: 2019-07-12 18:06:26
End at: 2019-07-12 18:06:56
Local clock offset: 7.092 ms
Remote clock offset: 3.548 ms


# Below is generated by plot.py at 2019-07-12 19:55:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 310.79 Mbit/s
95th percentile per-packet one-way delay: 2.341 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 184.58 Mbit/s
95th percentile per-packet one-way delay: 2.487 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 140.17 Mbit/s
95th percentile per-packet one-way delay: 1.982 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 98.96 Mbit/s
95th percentile per-packet one-way delay: 1.971 ms
Loss rate: 0.00%
```
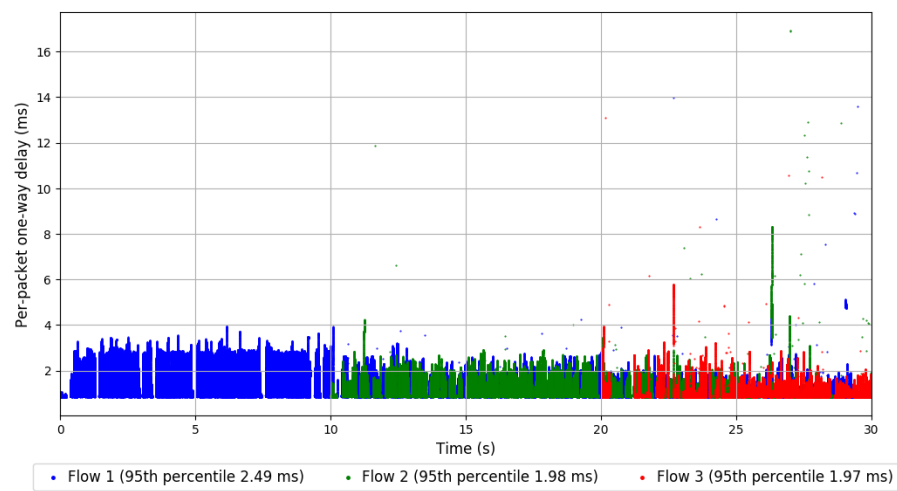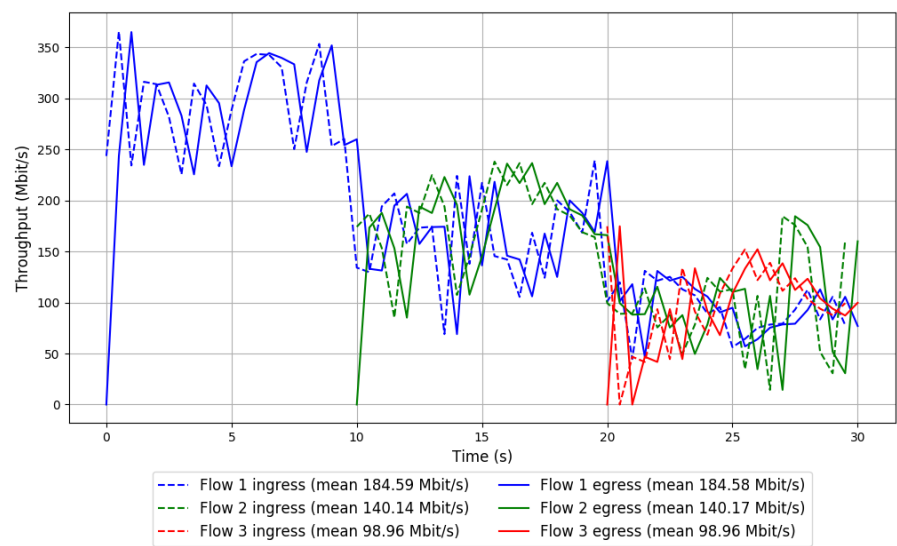
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-07-12 18:40:41
End at: 2019-07-12 18:41:11
Local clock offset: 7.692 ms
Remote clock offset: 3.196 ms


# Below is generated by plot.py at 2019-07-12 19:55:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.87 Mbit/s
95th percentile per-packet one-way delay: 2.260 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 172.65 Mbit/s
95th percentile per-packet one-way delay: 2.387 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 132.57 Mbit/s
95th percentile per-packet one-way delay: 1.828 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 99.36 Mbit/s
95th percentile per-packet one-way delay: 1.557 ms
Loss rate: 0.00%
```
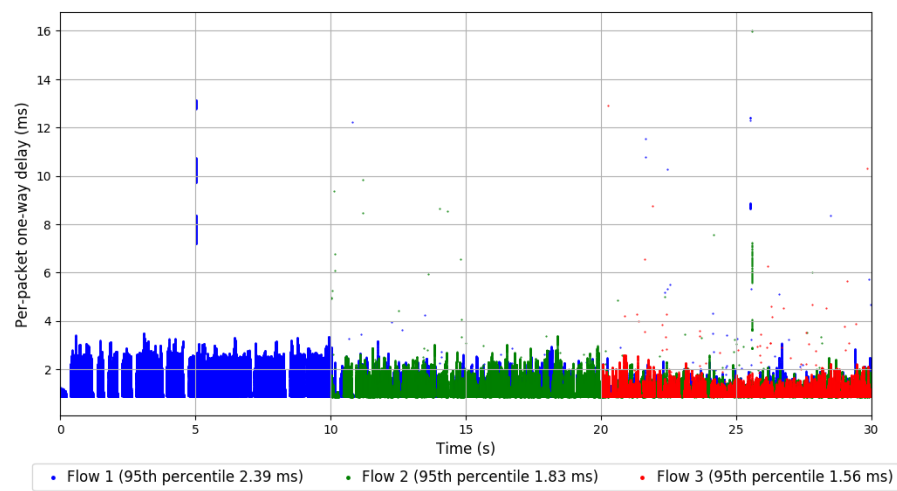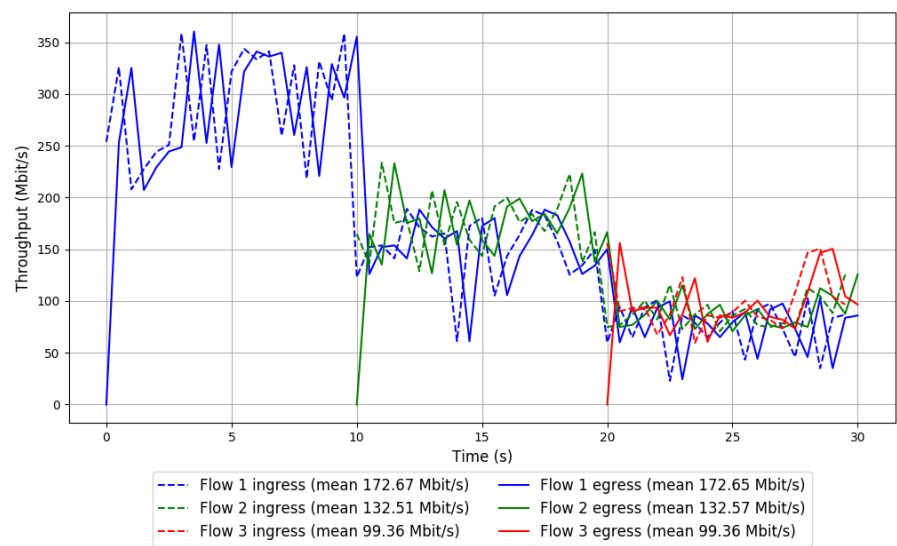
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-07-12 16:28:01
End at: 2019-07-12 16:28:31
Local clock offset: 6.254 ms
Remote clock offset: 4.949 ms


# Below is generated by plot.py at 2019-07-12 19:56:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.19 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 197.62 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 87.94 Mbit/s
95th percentile per-packet one-way delay: 1.040 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 112.45 Mbit/s
95th percentile per-packet one-way delay: 1.157 ms
Loss rate: 0.01%
```
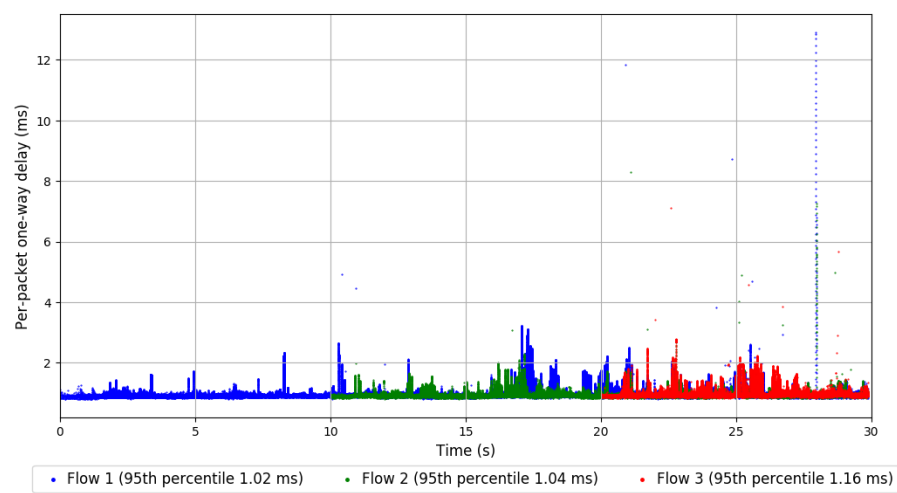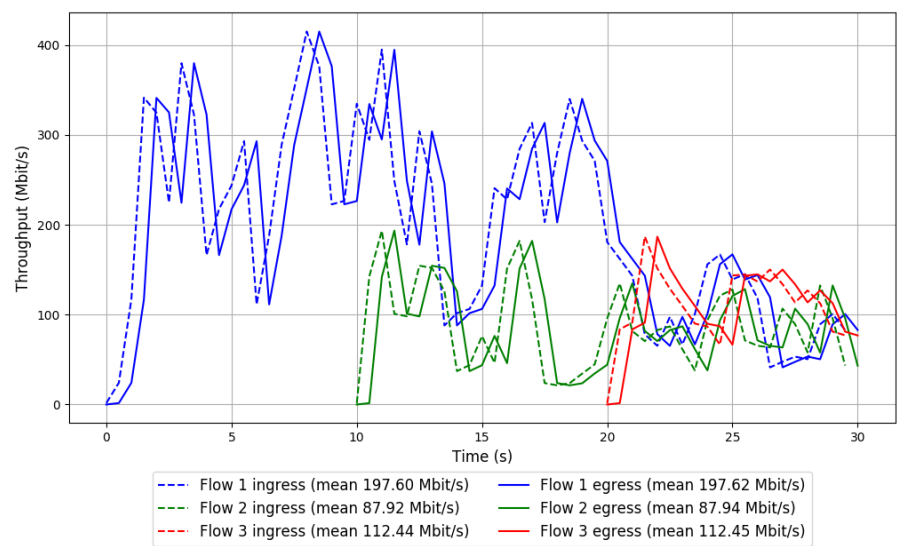
Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-07-12 17:02:30
End at: 2019-07-12 17:03:00
Local clock offset: 6.845 ms
Remote clock offset: 3.29 ms


# Below is generated by plot.py at 2019-07-12 19:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 324.60 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 239.65 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 98.41 Mbit/s
95th percentile per-packet one-way delay: 1.325 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 59.38 Mbit/s
95th percentile per-packet one-way delay: 1.039 ms
Loss rate: 0.00%
```
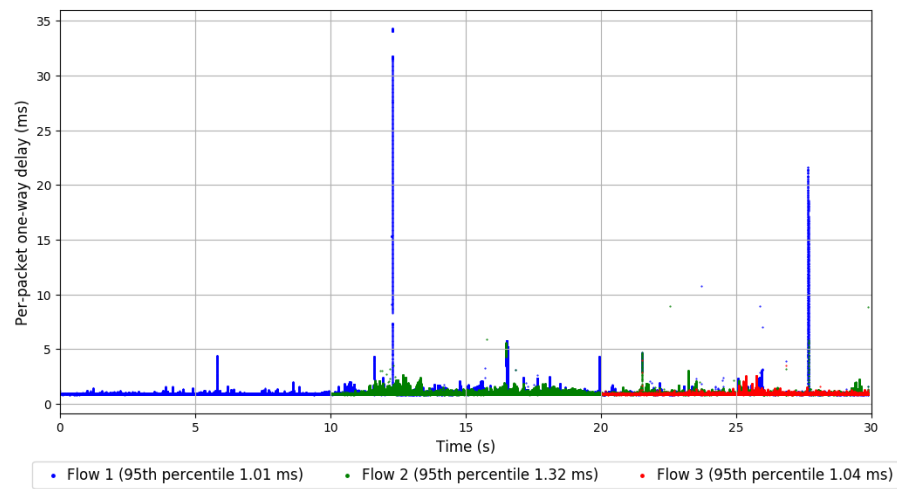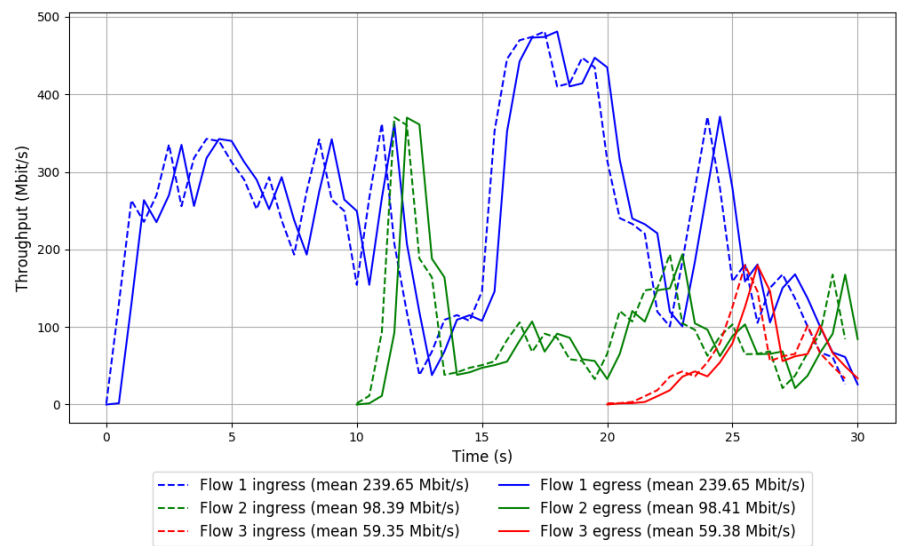
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-07-12 17:36:48
End at: 2019-07-12 17:37:18
Local clock offset: 6.747 ms
Remote clock offset: 3.275 ms


# Below is generated by plot.py at 2019-07-12 19:56:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 278.46 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 147.14 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 154.64 Mbit/s
95th percentile per-packet one-way delay: 1.322 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.31 Mbit/s
95th percentile per-packet one-way delay: 1.565 ms
Loss rate: 0.01%
```
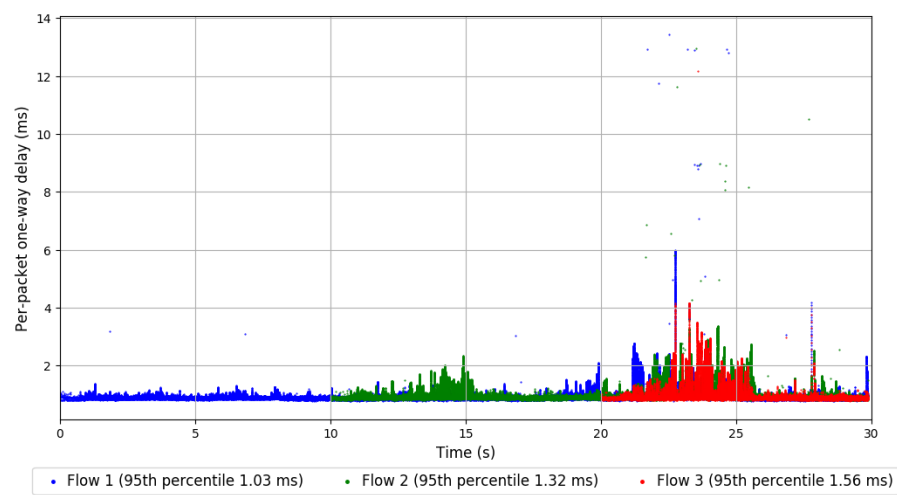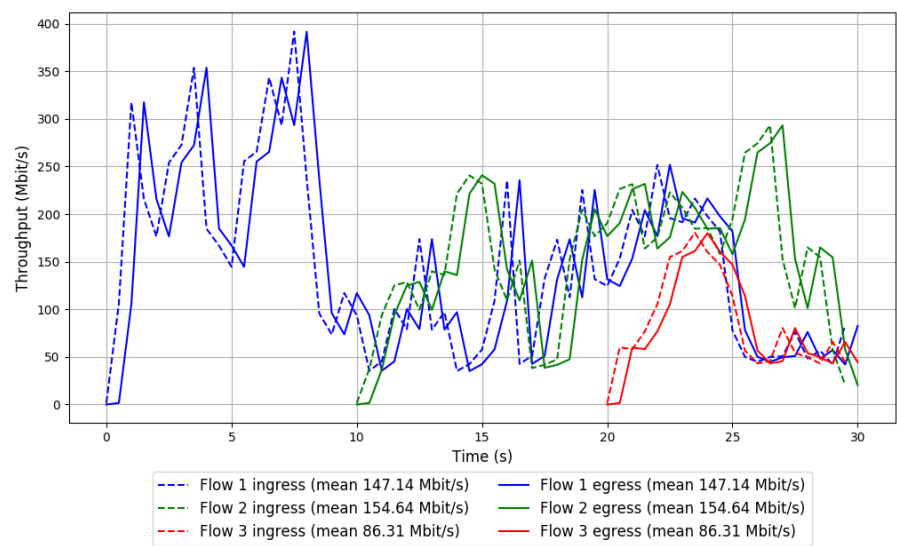
Run 3: Report of PCC-Vivace — Data Link

- - - - Flow 1 ingress (mean 147.14 Mbit/s)   —— Flow 1 egress (mean 147.14 Mbit/s)
- - - - Flow 2 ingress (mean 154.64 Mbit/s)   —— Flow 2 egress (mean 154.64 Mbit/s)
- - - - Flow 3 ingress (mean 86.31 Mbit/s)   —— Flow 3 egress (mean 86.31 Mbit/s)

- Flow 1 (95th percentile 1.03 ms)   • Flow 2 (95th percentile 1.32 ms)   • Flow 3 (95th percentile 1.56 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-07-12 18:11:04
End at: 2019-07-12 18:11:34
Local clock offset: 7.191 ms
Remote clock offset: 3.598 ms


# Below is generated by plot.py at 2019-07-12 19:56:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 247.08 Mbit/s
95th percentile per-packet one-way delay: 1.049 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 149.95 Mbit/s
95th percentile per-packet one-way delay: 1.001 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 99.29 Mbit/s
95th percentile per-packet one-way delay: 1.170 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 94.28 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.01%
```
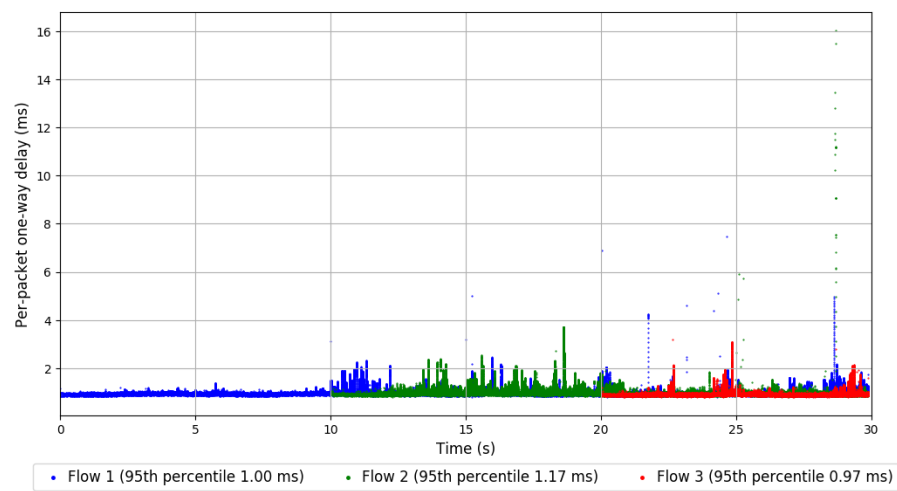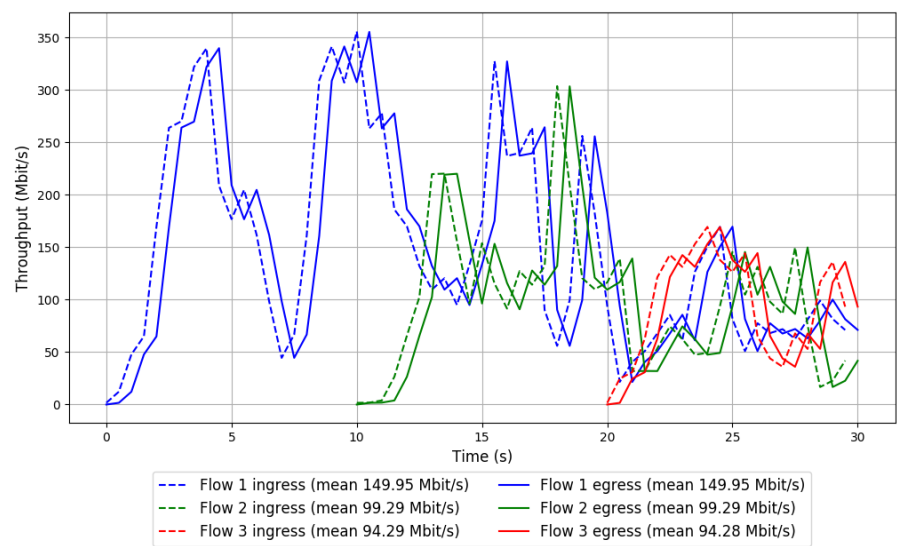
Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-07-12 18:45:15
End at: 2019-07-12 18:45:45
Local clock offset: 7.696 ms
Remote clock offset: 3.138 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 271.87 Mbit/s
95th percentile per-packet one-way delay: 1.126 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 172.37 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 95.81 Mbit/s
95th percentile per-packet one-way delay: 1.275 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.40 Mbit/s
95th percentile per-packet one-way delay: 1.440 ms
Loss rate: 0.02%
```
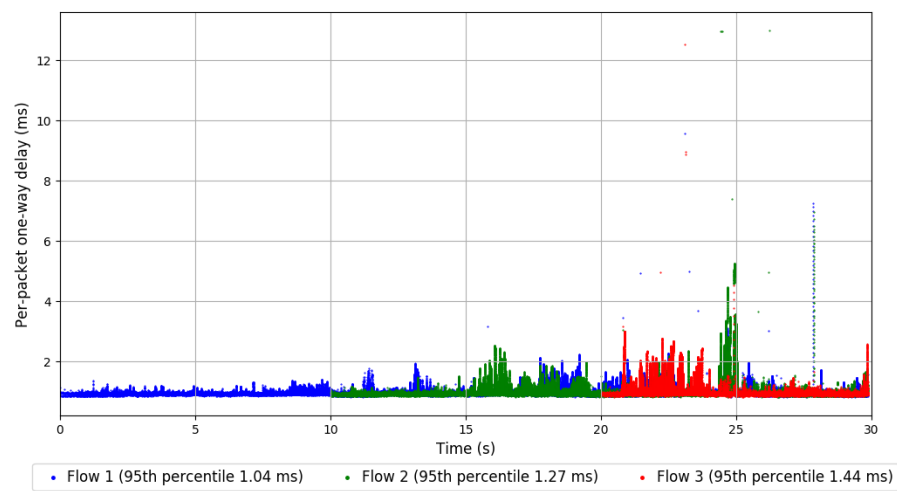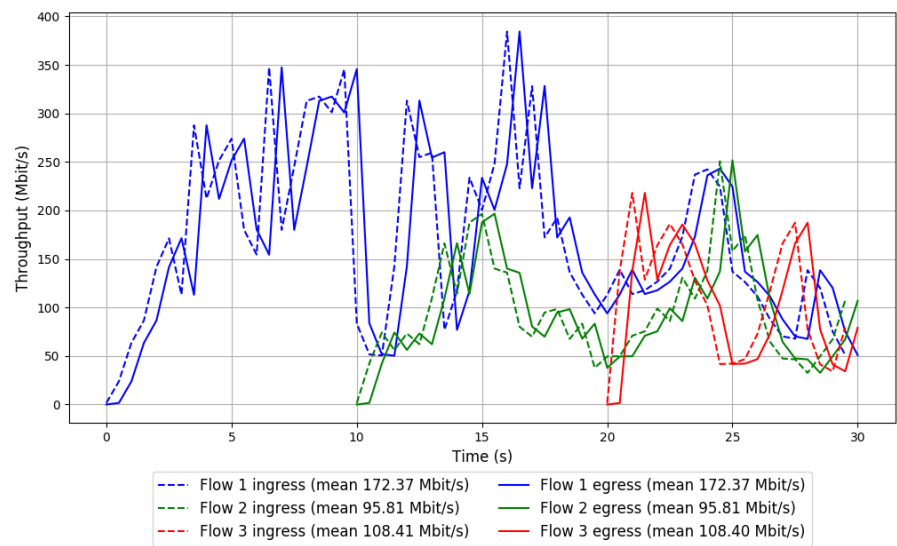
Run 5: Report of PCC-Vivace — Data Link

234

```
Run 1: Statistics of WebRTC media

Start at: 2019-07-12 16:22:14
End at: 2019-07-12 16:22:44
Local clock offset: 6.223 ms
Remote clock offset: 4.292 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.103 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.00%
```
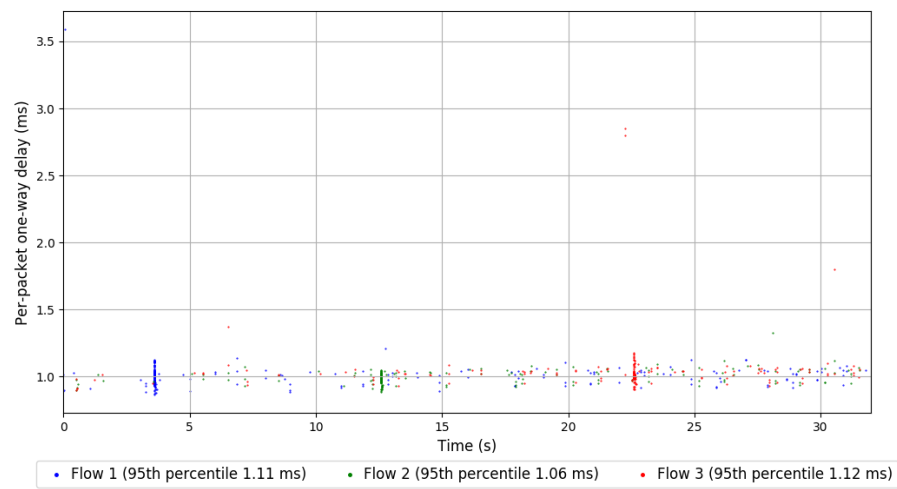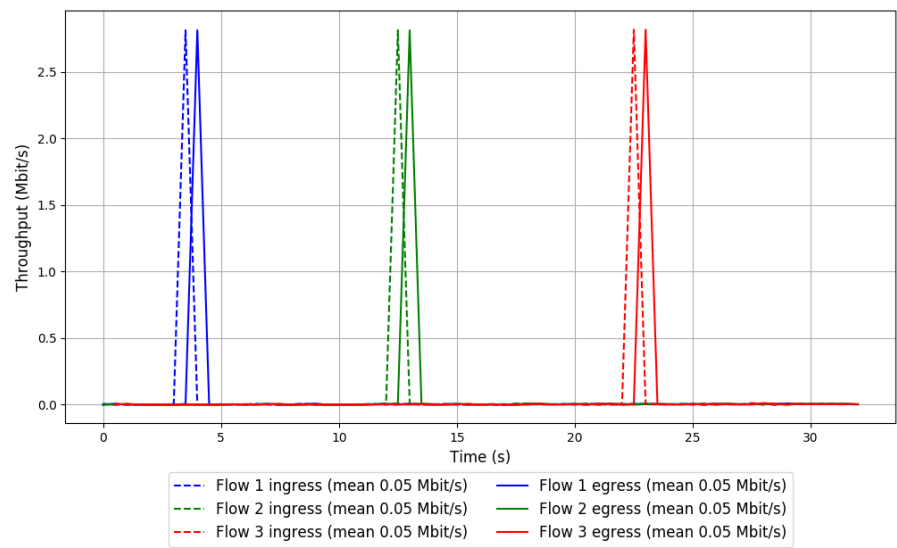
Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-07-12 16:56:34
End at: 2019-07-12 16:57:04
Local clock offset: 6.854 ms
Remote clock offset: 3.387 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 0.924 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.969 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.906 ms
Loss rate: 0.00%
```
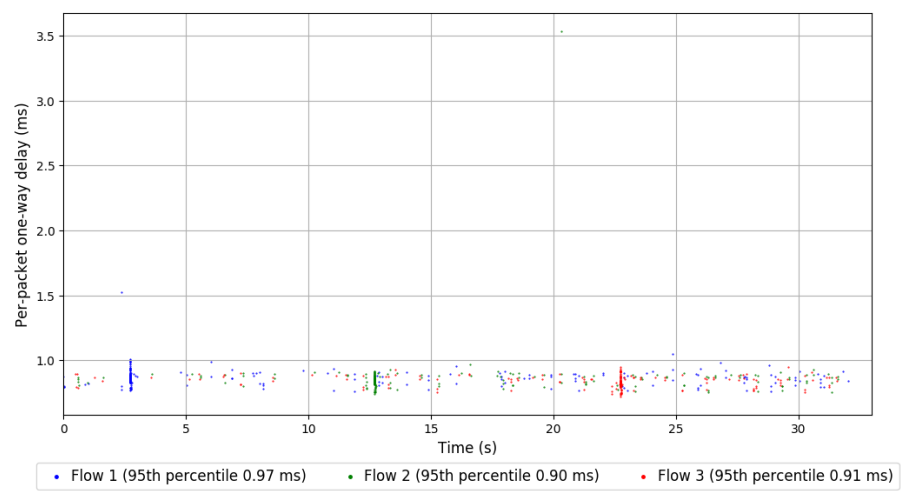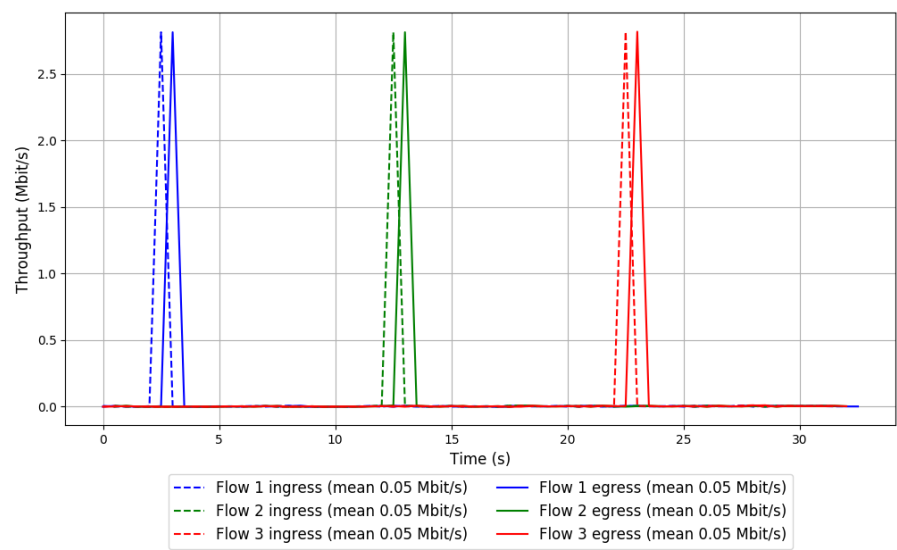
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-07-12 17:30:57
End at: 2019-07-12 17:31:27
Local clock offset: 6.811 ms
Remote clock offset: 3.222 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.135 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.066 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.182 ms
Loss rate: 0.00%
```
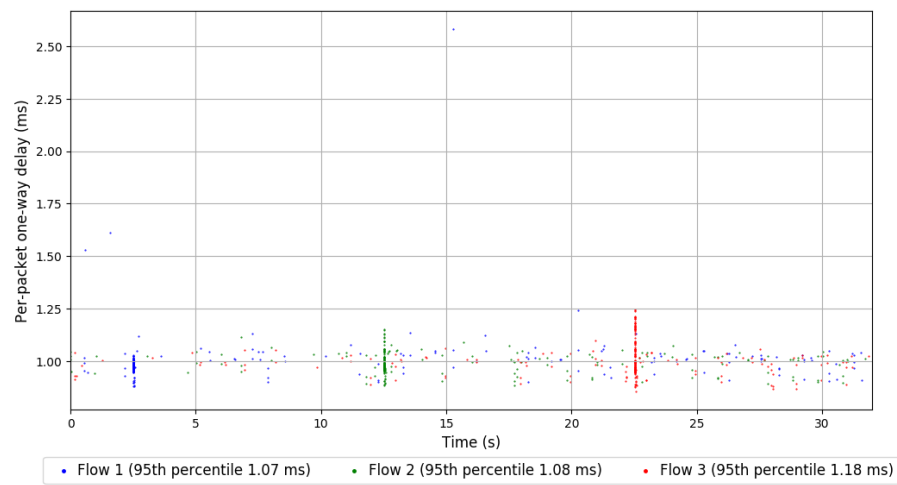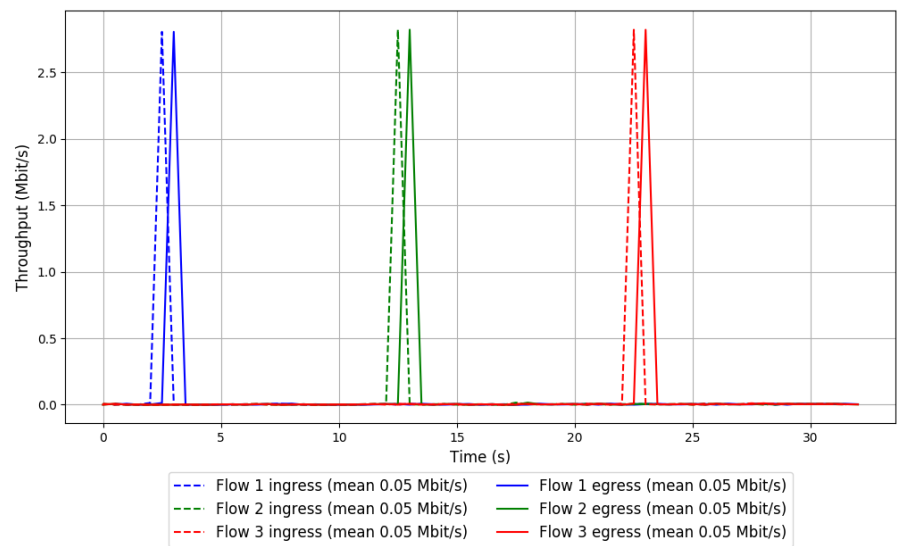
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-07-12 18:05:11
End at: 2019-07-12 18:05:41
Local clock offset: 7.046 ms
Remote clock offset: 3.455 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.063 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.032 ms
Loss rate: 0.00%
```
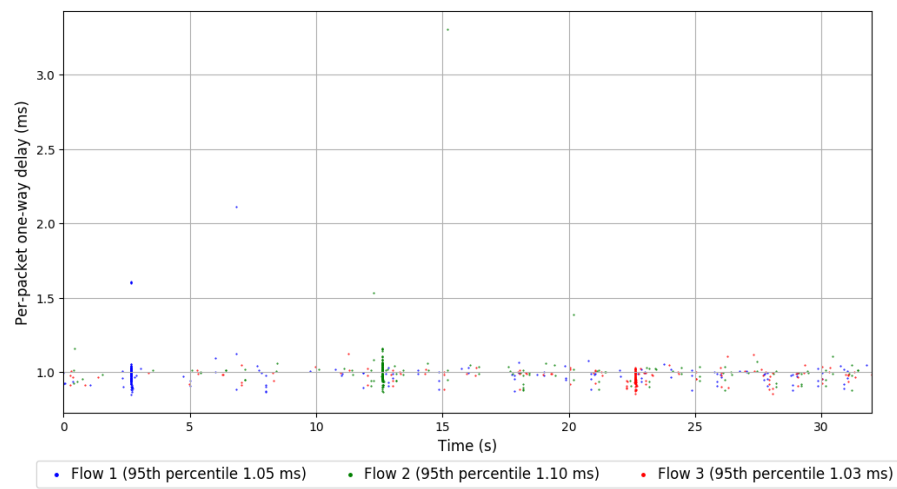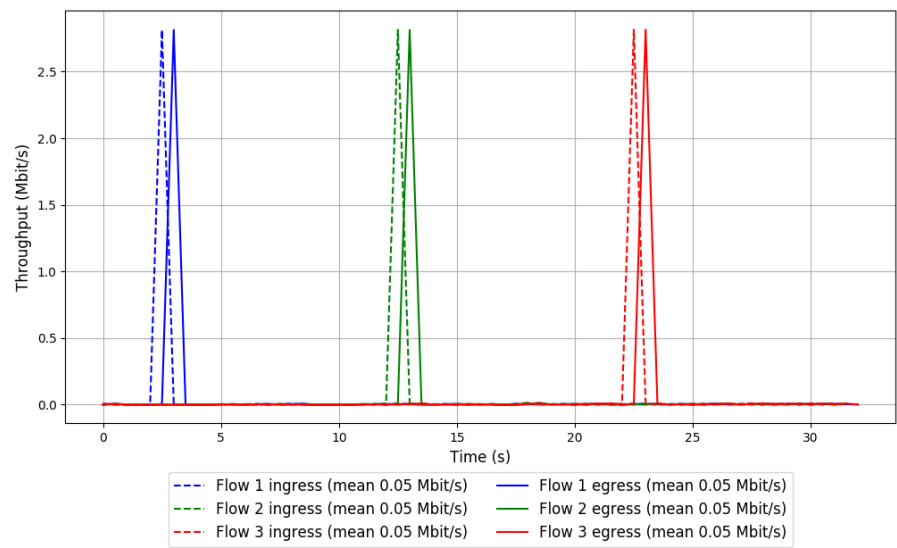
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-07-12 18:39:27
End at: 2019-07-12 18:39:57
Local clock offset: 7.65 ms
Remote clock offset: 3.167 ms


# Below is generated by plot.py at 2019-07-12 19:56:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 1.004 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link