Pantheon Report

Generated at 2019-10-03 13:33:53 (UTC).

Data path: Brazil on p4p1 (*remote*) →AWS Brazil 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 gps.ntp.br and have been applied to correct the timestamps in logs.
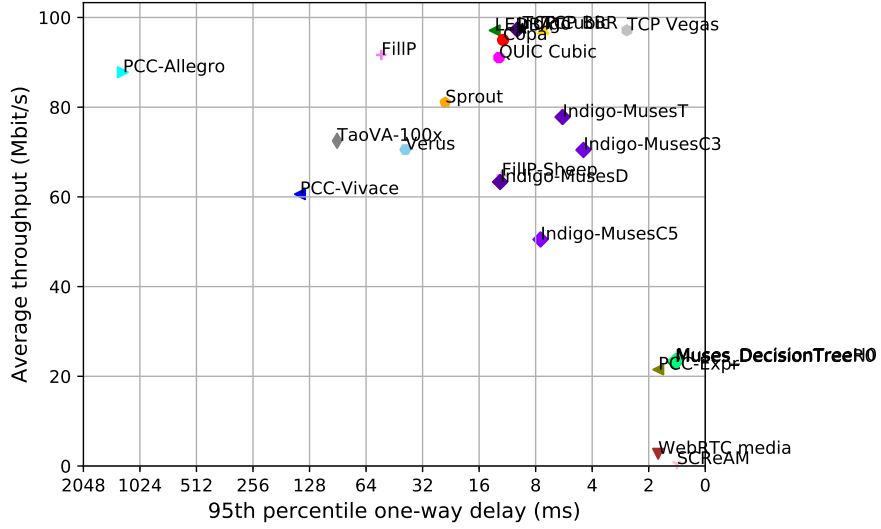
```
System info:
Linux 4.15.0-1050-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

Git summary:
branch: muses @ de42328552b3776a75a932a94dfafd722537b0ec
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/muses_dtree @ 387225f7b5f61ddbe92d708a8869ffbb84eb3200
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
```
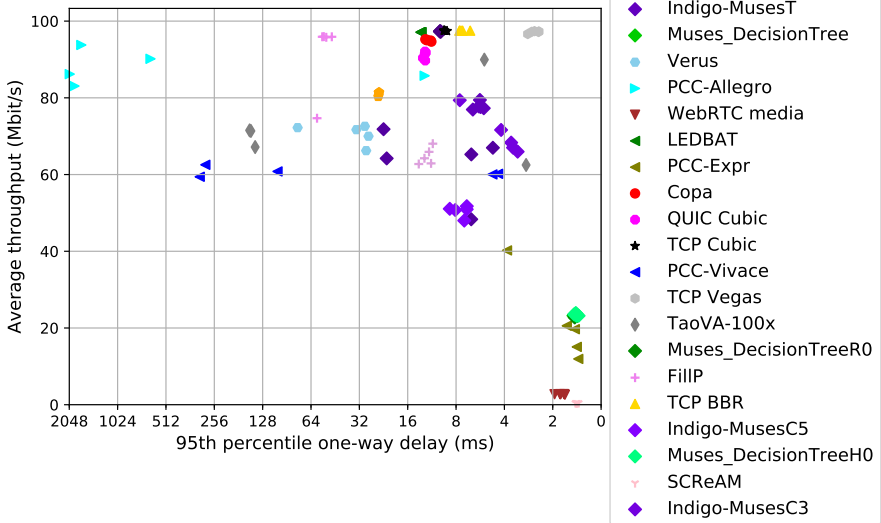
```
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	59.36	40.90	32.84	7.09	7.49	7.46	0.02	0.03	0.08
Copa	5	57.99	39.76	32.29	11.24	12.12	14.24	0.06	0.08	0.17
TCP Cubic	5	59.61	40.64	32.50	9.53	9.27	9.48	0.10	0.17	0.29
FillP	5	50.68	46.19	30.83	21.45	53.01	46.55	0.05	2.25	2.26
FillP-Sheep	5	44.98	22.37	14.87	9.24	13.65	43.01	0.00	0.00	0.12
Indigo	5	59.67	40.65	32.34	10.01	10.07	7.22	0.52	1.18	0.09
Indigo-MusesC3	5	52.15	22.22	17.27	4.56	3.69	3.69	0.00	0.01	0.03
Indigo-MusesC5	5	25.87	25.88	31.75	5.89	7.58	9.79	0.02	0.06	0.03
Indigo-MusesD	5	37.58	24.32	40.51	4.46	5.41	18.82	0.01	0.04	0.53
Indigo-MusesT	5	50.79	34.38	22.69	5.14	6.72	6.12	0.01	0.03	0.09
LEDBAT	5	59.07	40.76	32.79	12.73	13.33	13.64	0.16	0.27	0.41
Muses_DecisionTree	5	11.71	11.71	11.74	1.07	1.07	1.07	0.01	0.01	0.02
Muses_DecisionTreeH0	5	11.82	11.78	12.10	1.03	1.03	1.11	0.01	0.01	0.01
Muses_DecisionTreeR0	5	11.71	11.72	11.80	1.05	1.04	1.07	0.01	0.01	0.02
PCC-Allegro	5	63.46	26.17	21.06	1298.68	208.55	18.34	5.92	1.95	0.16
PCC-Expr	5	13.54	8.92	6.13	1.41	4.90	1.08	0.00	0.00	0.00
QUIC Cubic	5	54.04	40.15	31.17	12.32	12.44	13.18	0.20	0.39	0.54
SCReAM	5	0.22	0.22	0.22	1.00	1.00	1.00	0.00	0.00	0.07
Sprout	5	43.60	40.28	32.20	22.58	24.28	25.87	0.58	0.97	1.64
TaoVA-100x	5	41.91	39.59	15.48	7.34	95.59	117.76	0.01	0.03	0.95
TCP Vegas	5	53.95	41.34	47.11	2.05	2.43	3.17	0.00	0.01	0.02
Verus	5	39.40	31.34	30.96	20.68	32.64	193.30	0.02	0.13	0.09
PCC-Vivace	5	31.45	31.52	24.78	55.87	125.49	156.71	0.16	1.53	1.04
WebRTC media	5	1.52	0.81	0.41	1.61	1.72	1.67	0.00	0.05	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-10-03 11:27:29
End at: 2019-10-03 11:27:59
Local clock offset: -6.655 ms
Remote clock offset: -0.061 ms


# Below is generated by plot.py at 2019-10-03 13:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 7.289 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 7.124 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 40.91 Mbit/s
95th percentile per-packet one-way delay: 7.253 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 32.85 Mbit/s
95th percentile per-packet one-way delay: 7.697 ms
Loss rate: 0.08%
```
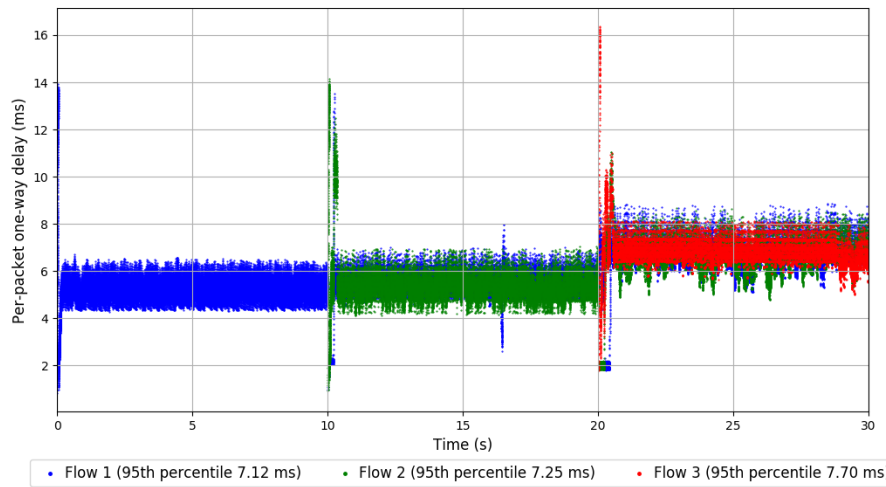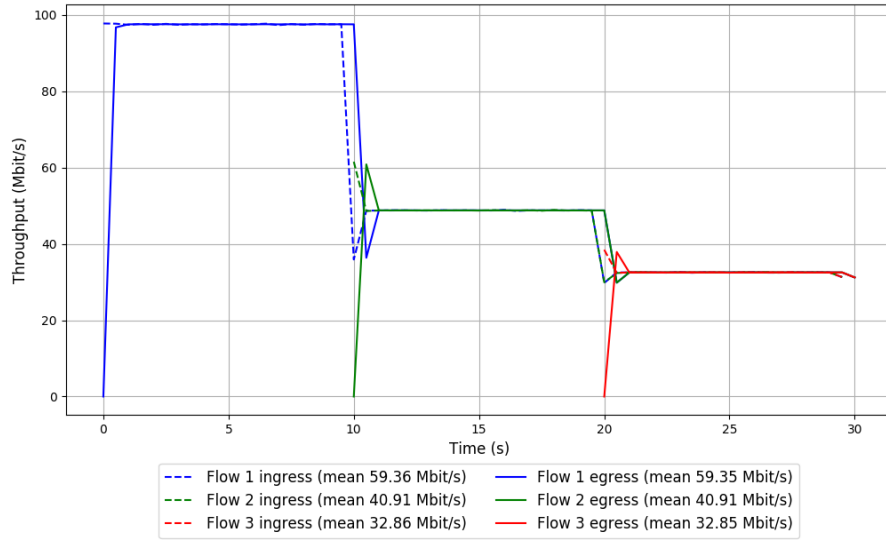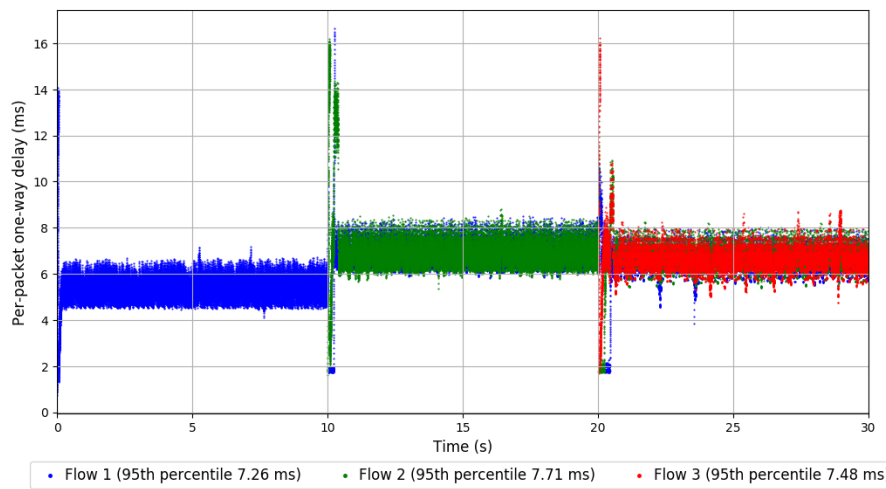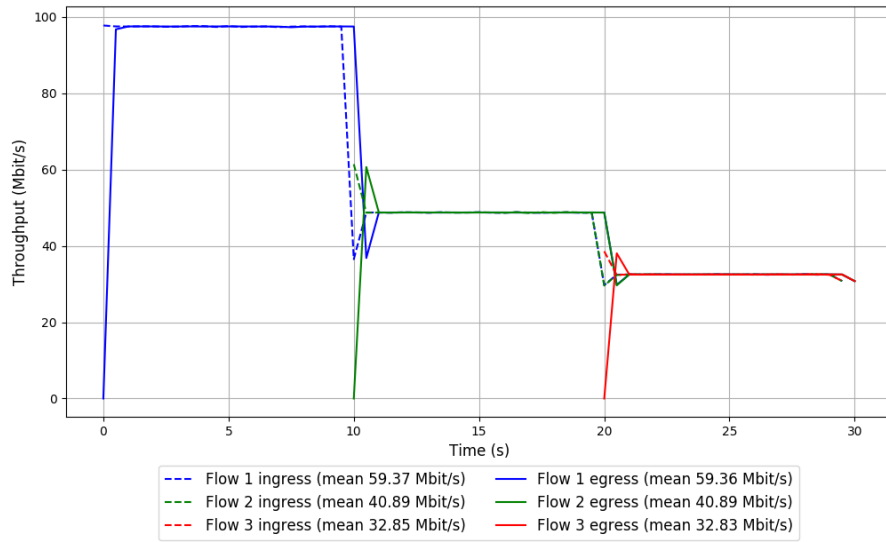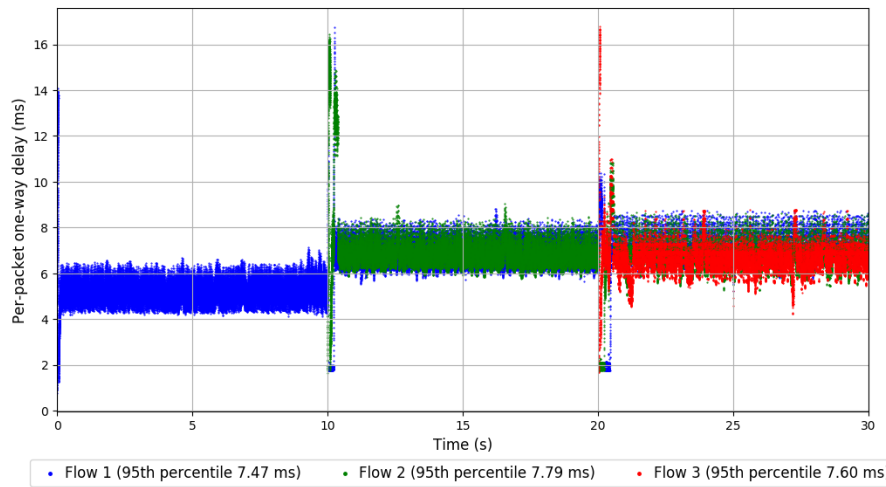
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 59.36 Mbit/s) ---- Flow 1 egress (mean 59.35 Mbit/s) ——
Flow 2 ingress (mean 40.91 Mbit/s) ---- Flow 2 egress (mean 40.91 Mbit/s) ——
Flow 3 ingress (mean 32.86 Mbit/s) ---- Flow 3 egress (mean 32.85 Mbit/s) ——

Flow 1 (95th percentile 7.12 ms)   Flow 2 (95th percentile 7.25 ms)   Flow 3 (95th percentile 7.70 ms)

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```
Run 2: Statistics of TCP BBR

Start at: 2019-10-03 11:54:50
End at: 2019-10-03 11:55:20
Local clock offset: -6.415 ms
Remote clock offset: 0.326 ms


# Below is generated by plot.py at 2019-10-03 13:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 7.448 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 7.260 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.89 Mbit/s
95th percentile per-packet one-way delay: 7.708 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 7.477 ms
Loss rate: 0.08%
```
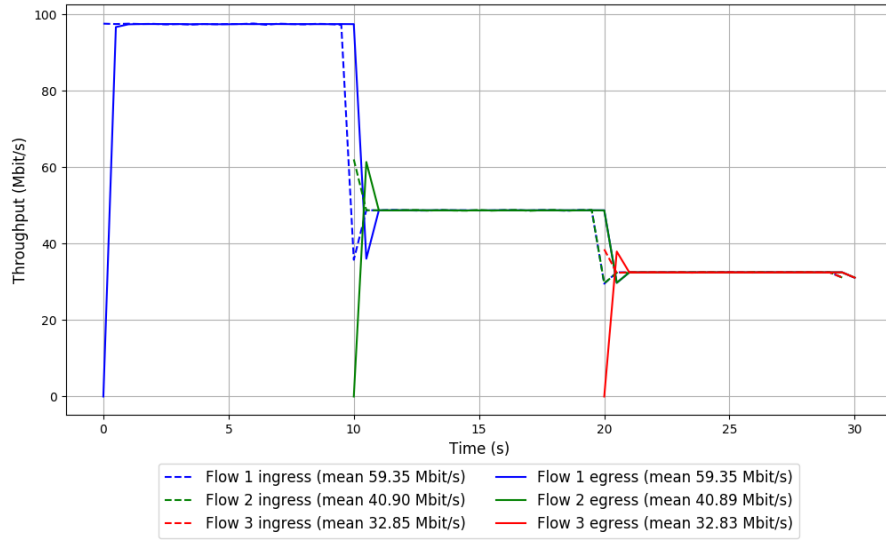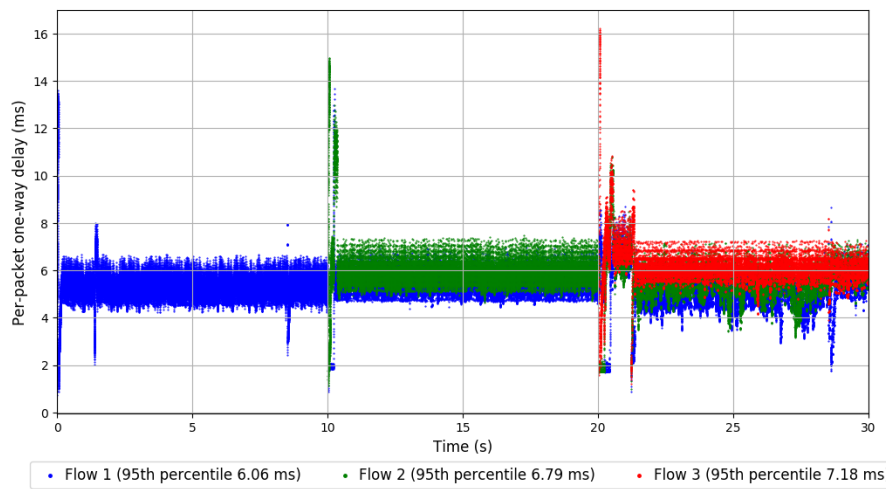
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-10-03 12:22:12
End at: 2019-10-03 12:22:42
Local clock offset: -6.606 ms
Remote clock offset: 0.339 ms


# Below is generated by plot.py at 2019-10-03 13:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 7.587 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 7.474 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 40.89 Mbit/s
95th percentile per-packet one-way delay: 7.790 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 7.602 ms
Loss rate: 0.07%
```
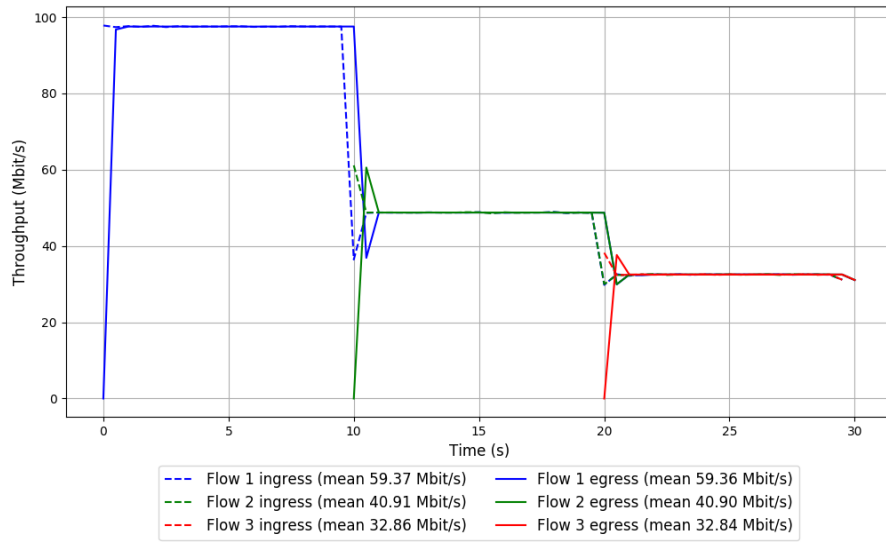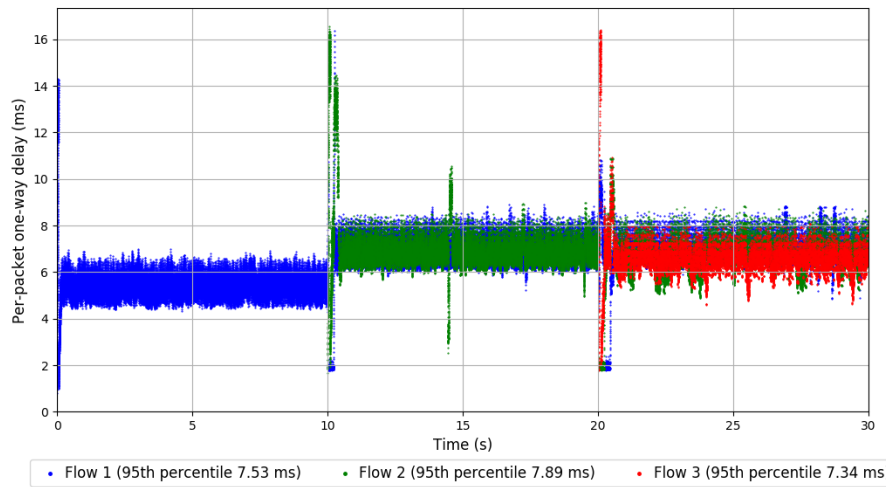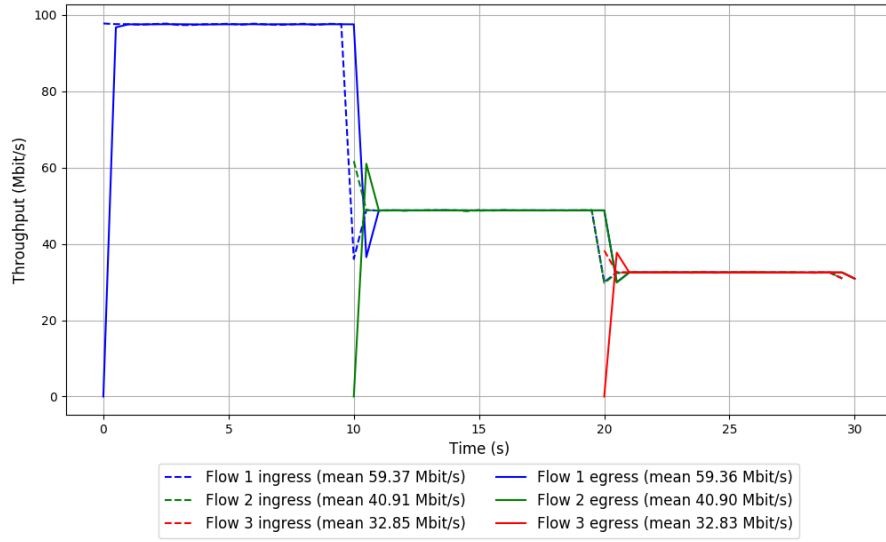
Run 3: Report of TCP BBR — Data Link

Throughput (Mbit/s) vs Time (s)

- - - Flow 1 ingress (mean 59.35 Mbit/s)   —— Flow 1 egress (mean 59.35 Mbit/s)
- - - Flow 2 ingress (mean 40.90 Mbit/s)   —— Flow 2 egress (mean 40.89 Mbit/s)
- - - Flow 3 ingress (mean 32.85 Mbit/s)   —— Flow 3 egress (mean 32.83 Mbit/s)

Per-packet one-way delay (ms) vs Time (s)

· Flow 1 (95th percentile 7.47 ms)   · Flow 2 (95th percentile 7.79 ms)   · Flow 3 (95th percentile 7.60 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2019-10-03 12:49:34
End at: 2019-10-03 12:50:04
Local clock offset: -5.237 ms
Remote clock offset: 0.302 ms


# Below is generated by plot.py at 2019-10-03 13:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 6.532 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 6.058 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.90 Mbit/s
95th percentile per-packet one-way delay: 6.791 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 32.84 Mbit/s
95th percentile per-packet one-way delay: 7.185 ms
Loss rate: 0.07%
```
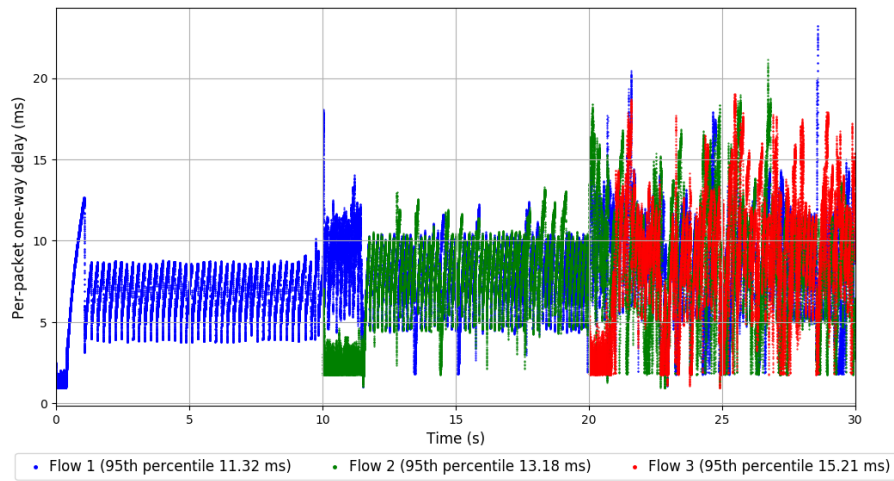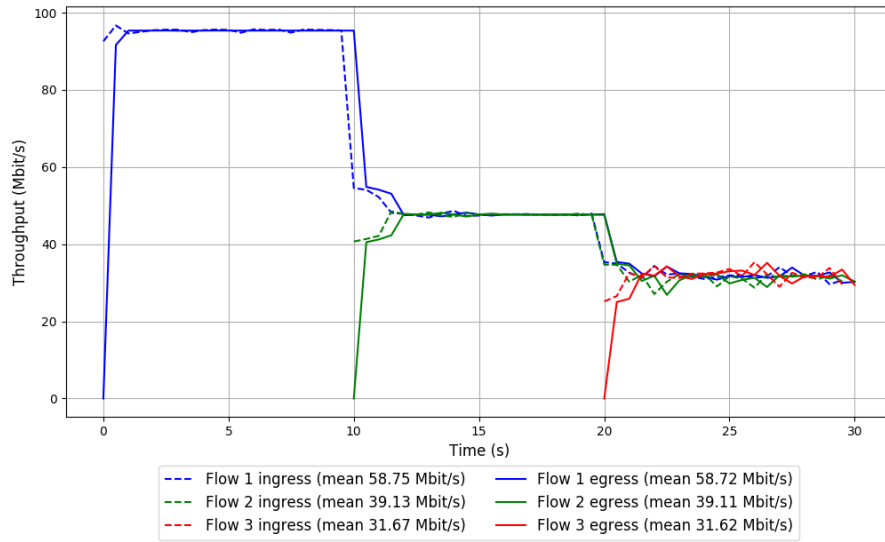
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-10-03 13:16:57
End at: 2019-10-03 13:17:27
Local clock offset: -5.393 ms
Remote clock offset: 0.401 ms


# Below is generated by plot.py at 2019-10-03 13:20:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 7.618 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 59.36 Mbit/s
95th percentile per-packet one-way delay: 7.527 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 40.90 Mbit/s
95th percentile per-packet one-way delay: 7.886 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 7.342 ms
Loss rate: 0.10%
```
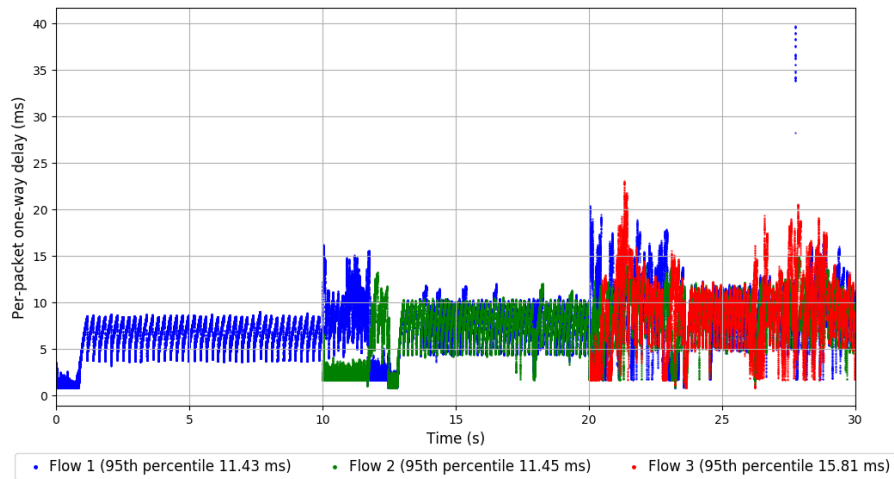
Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-10-03 11:08:08
End at: 2019-10-03 11:08:38
Local clock offset: -6.696 ms
Remote clock offset: -0.561 ms


# Below is generated by plot.py at 2019-10-03 13:21:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.26 Mbit/s
95th percentile per-packet one-way delay: 12.428 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 58.72 Mbit/s
95th percentile per-packet one-way delay: 11.316 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 39.11 Mbit/s
95th percentile per-packet one-way delay: 13.180 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 31.62 Mbit/s
95th percentile per-packet one-way delay: 15.209 ms
Loss rate: 0.18%
```
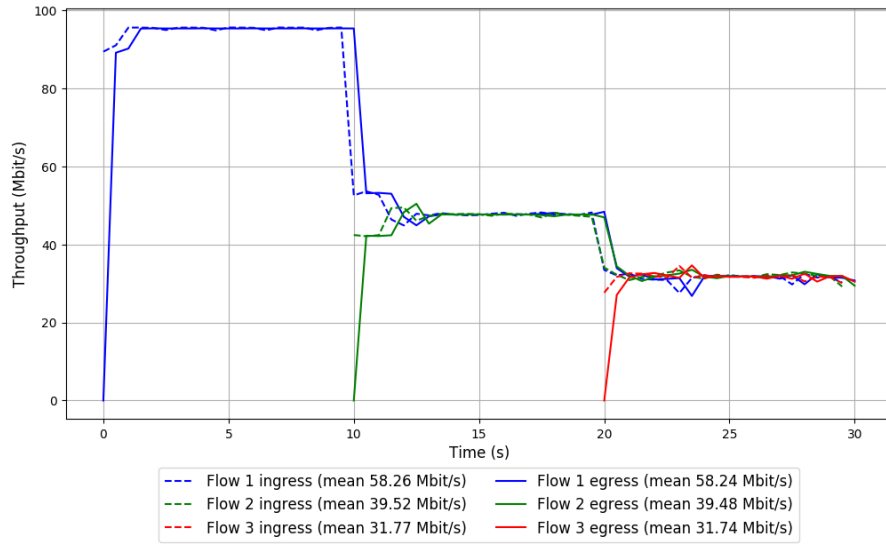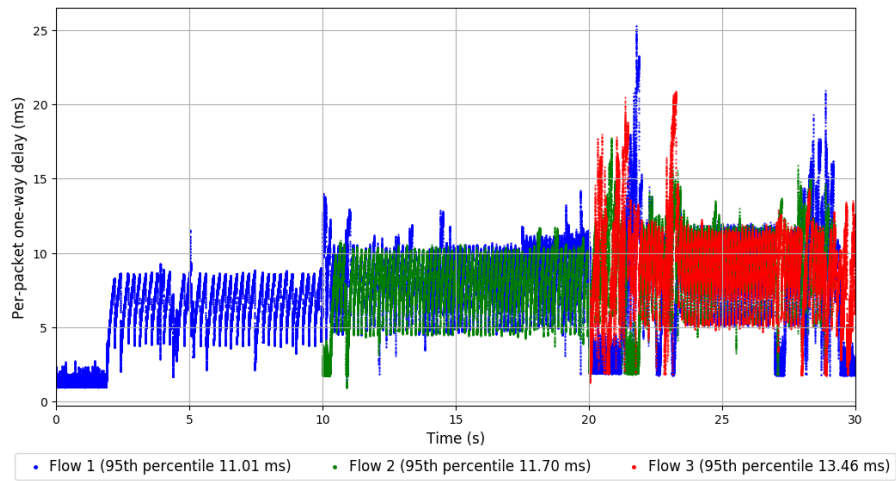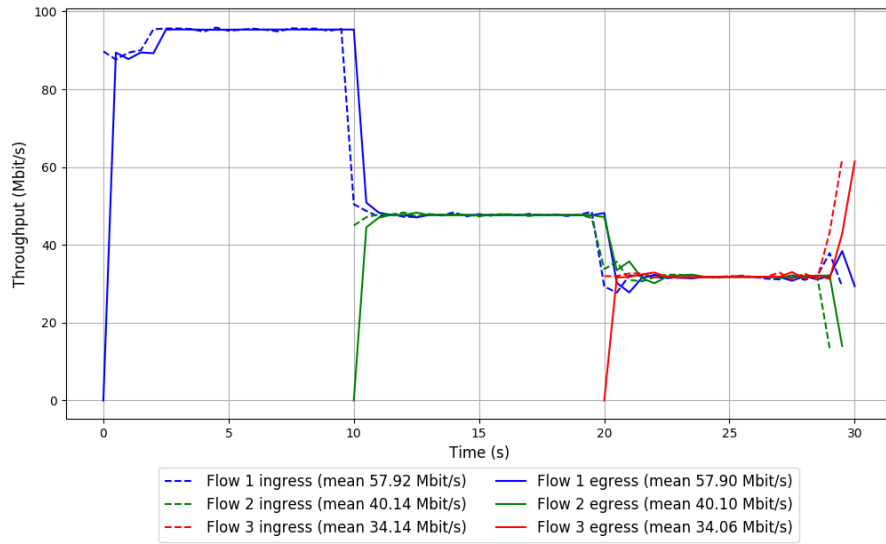
Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 58.75 Mbit/s) --- Flow 1 egress (mean 58.72 Mbit/s)
Flow 2 ingress (mean 39.13 Mbit/s) --- Flow 2 egress (mean 39.11 Mbit/s)
Flow 3 ingress (mean 31.67 Mbit/s) --- Flow 3 egress (mean 31.62 Mbit/s)

Flow 1 (95th percentile 11.32 ms)   Flow 2 (95th percentile 13.18 ms)   Flow 3 (95th percentile 15.21 ms)

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```
Run 2: Statistics of Copa

Start at: 2019-10-03 11:35:27
End at: 2019-10-03 11:35:58
Local clock offset: -6.531 ms
Remote clock offset: 0.111 ms


# Below is generated by plot.py at 2019-10-03 13:21:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 12.116 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 58.24 Mbit/s
95th percentile per-packet one-way delay: 11.431 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 39.48 Mbit/s
95th percentile per-packet one-way delay: 11.447 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 31.74 Mbit/s
95th percentile per-packet one-way delay: 15.811 ms
Loss rate: 0.06%
```
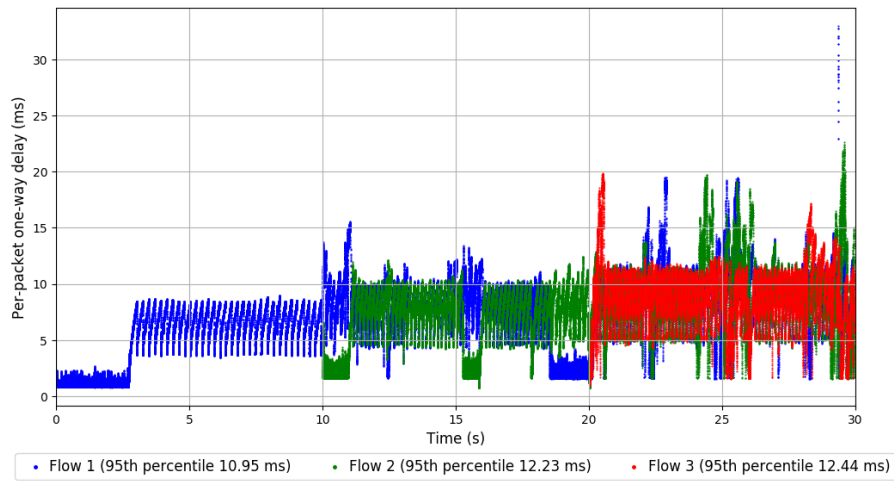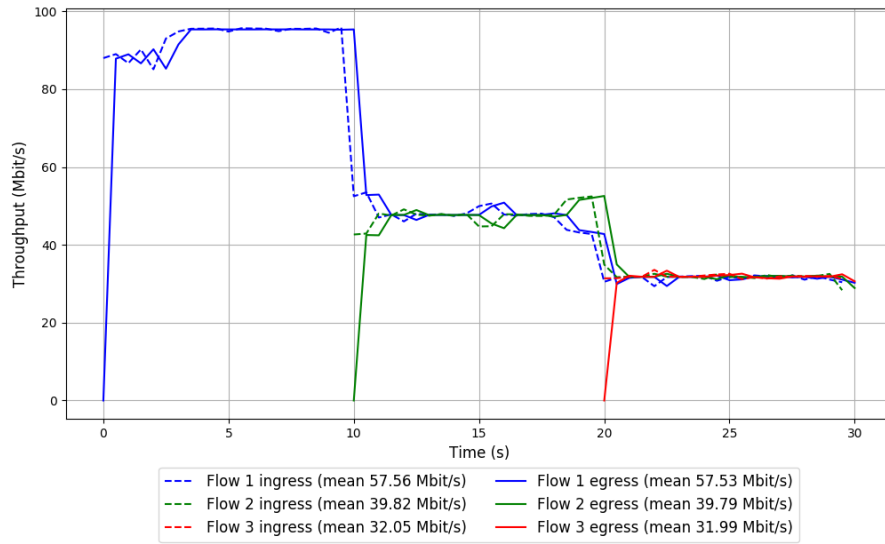
Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 58.26 Mbit/s) --- Flow 1 egress (mean 58.24 Mbit/s)
Flow 2 ingress (mean 39.52 Mbit/s) --- Flow 2 egress (mean 39.48 Mbit/s)
Flow 3 ingress (mean 31.77 Mbit/s) --- Flow 3 egress (mean 31.74 Mbit/s)

Flow 1 (95th percentile 11.43 ms)   Flow 2 (95th percentile 11.45 ms)   Flow 3 (95th percentile 15.81 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-10-03 12:02:48
End at: 2019-10-03 12:03:18
Local clock offset: -6.484 ms
Remote clock offset: 0.291 ms


# Below is generated by plot.py at 2019-10-03 13:21:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.92 Mbit/s
95th percentile per-packet one-way delay: 11.503 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 57.90 Mbit/s
95th percentile per-packet one-way delay: 11.009 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 11.696 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 34.06 Mbit/s
95th percentile per-packet one-way delay: 13.457 ms
Loss rate: 0.26%
```
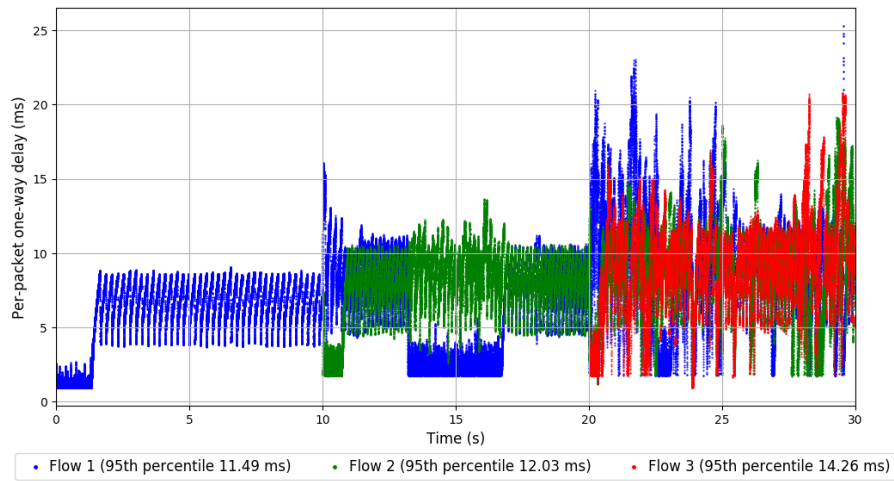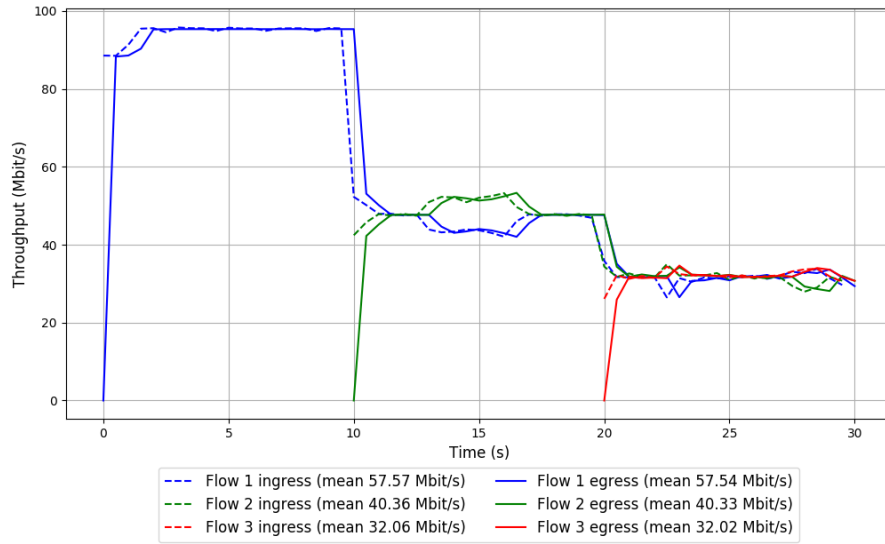
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-10-03 12:30:10
End at: 2019-10-03 12:30:40
Local clock offset: -6.064 ms
Remote clock offset: 0.321 ms


# Below is generated by plot.py at 2019-10-03 13:22:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.65 Mbit/s
95th percentile per-packet one-way delay: 11.397 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 57.53 Mbit/s
95th percentile per-packet one-way delay: 10.950 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 12.226 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 31.99 Mbit/s
95th percentile per-packet one-way delay: 12.440 ms
Loss rate: 0.19%
```
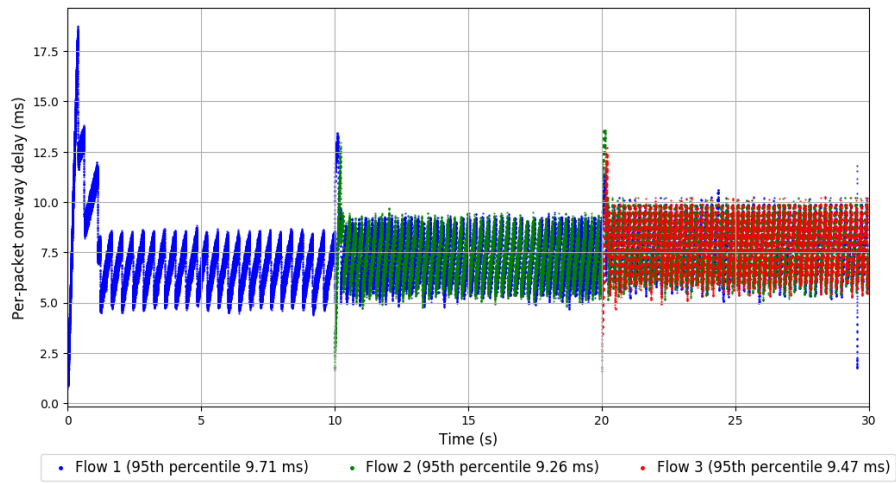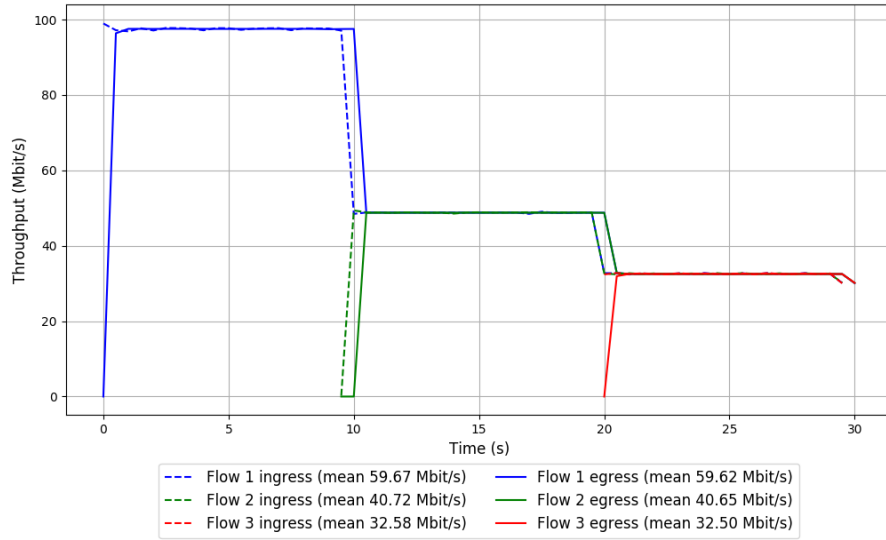
Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-10-03 12:57:35
End at: 2019-10-03 12:58:05
Local clock offset: -5.252 ms
Remote clock offset: 0.14 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.04 Mbit/s
95th percentile per-packet one-way delay: 12.198 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 57.54 Mbit/s
95th percentile per-packet one-way delay: 11.495 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 40.33 Mbit/s
95th percentile per-packet one-way delay: 12.032 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 32.02 Mbit/s
95th percentile per-packet one-way delay: 14.261 ms
Loss rate: 0.15%
```
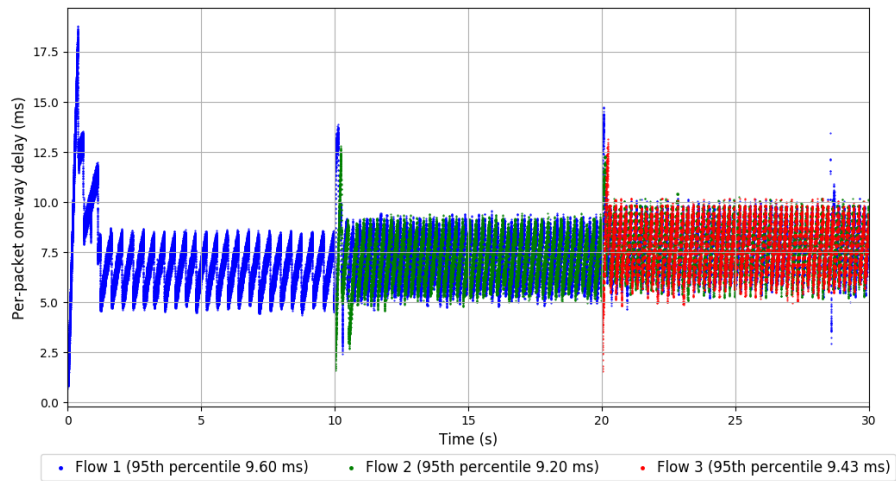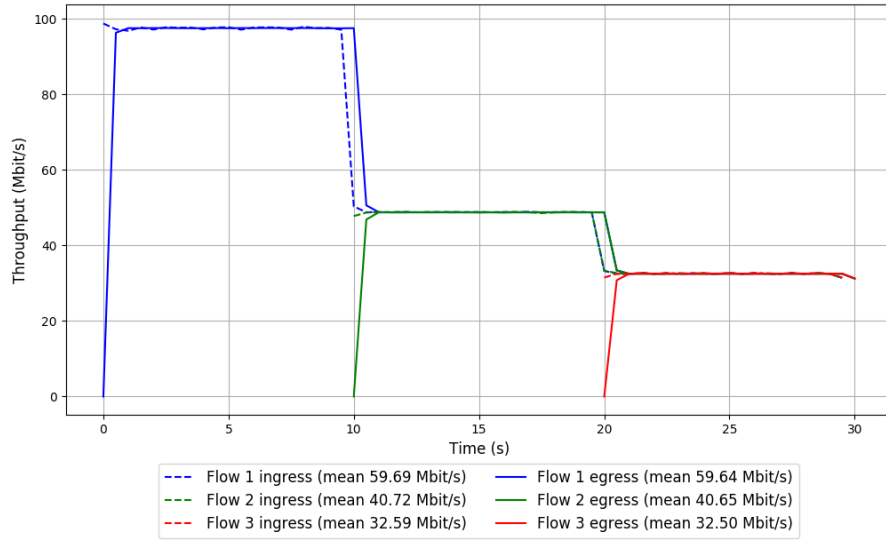
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 57.57 Mbit/s) ---- Flow 1 egress (mean 57.54 Mbit/s) ——
Flow 2 ingress (mean 40.36 Mbit/s) ---- Flow 2 egress (mean 40.33 Mbit/s) ——
Flow 3 ingress (mean 32.06 Mbit/s) ---- Flow 3 egress (mean 32.02 Mbit/s) ——

Flow 1 (95th percentile 11.49 ms)   Flow 2 (95th percentile 12.03 ms)   Flow 3 (95th percentile 14.26 ms)

```
Run 1: Statistics of TCP Cubic

Start at: 2019-10-03 11:19:33
End at: 2019-10-03 11:20:03
Local clock offset: -6.762 ms
Remote clock offset: -0.152 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.51 Mbit/s
95th percentile per-packet one-way delay: 9.460 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 59.62 Mbit/s
95th percentile per-packet one-way delay: 9.708 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.65 Mbit/s
95th percentile per-packet one-way delay: 9.257 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 9.470 ms
Loss rate: 0.26%
```
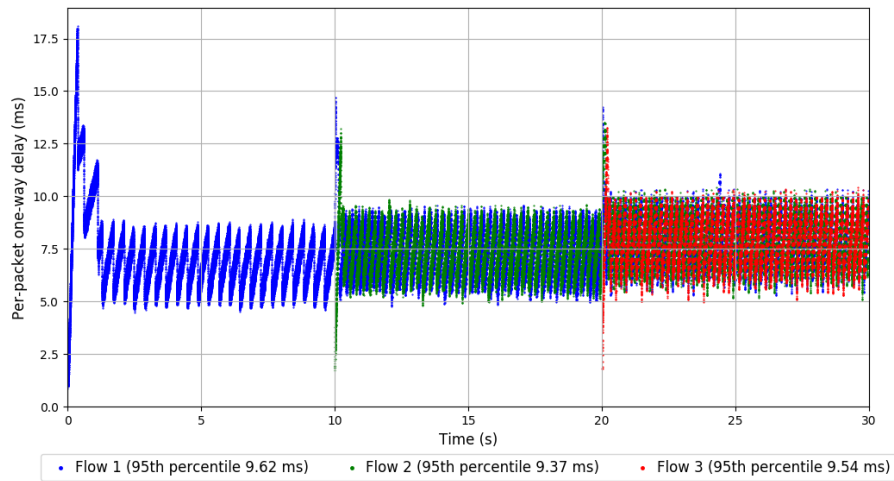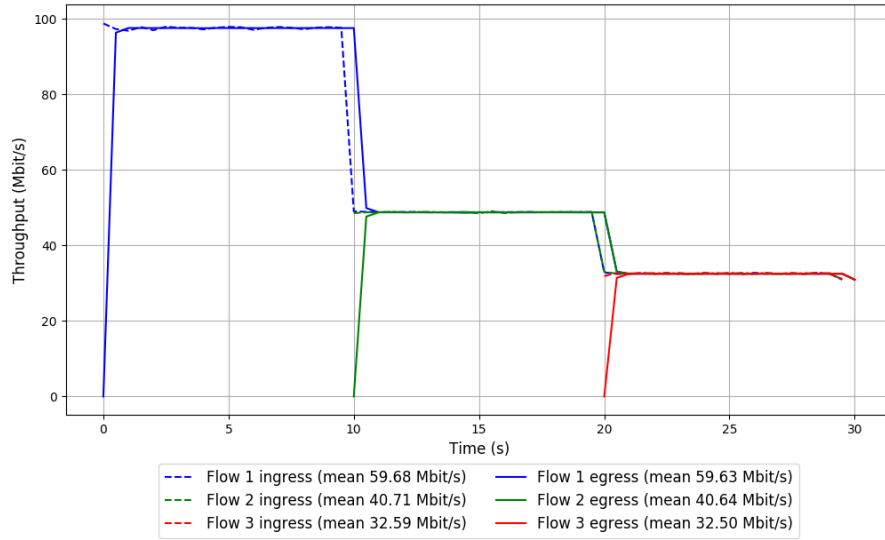
Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 59.67 Mbit/s) --- Flow 1 egress (mean 59.62 Mbit/s)
Flow 2 ingress (mean 40.72 Mbit/s) --- Flow 2 egress (mean 40.65 Mbit/s)
Flow 3 ingress (mean 32.58 Mbit/s) --- Flow 3 egress (mean 32.50 Mbit/s)

Flow 1 (95th percentile 9.71 ms)   Flow 2 (95th percentile 9.26 ms)   Flow 3 (95th percentile 9.47 ms)

```
Run 2: Statistics of TCP Cubic

Start at: 2019-10-03 11:46:53
End at: 2019-10-03 11:47:23
Local clock offset: -6.509 ms
Remote clock offset: 0.268 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.400 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 59.64 Mbit/s
95th percentile per-packet one-way delay: 9.597 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.65 Mbit/s
95th percentile per-packet one-way delay: 9.202 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 9.427 ms
Loss rate: 0.28%
```
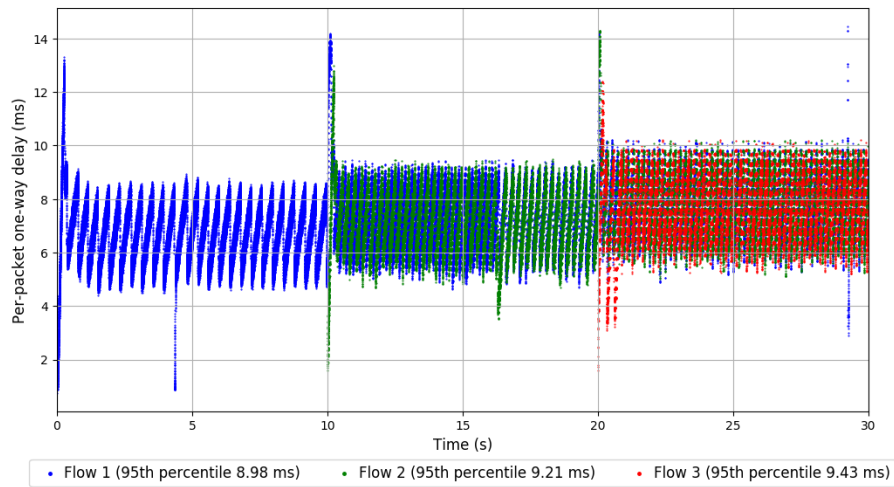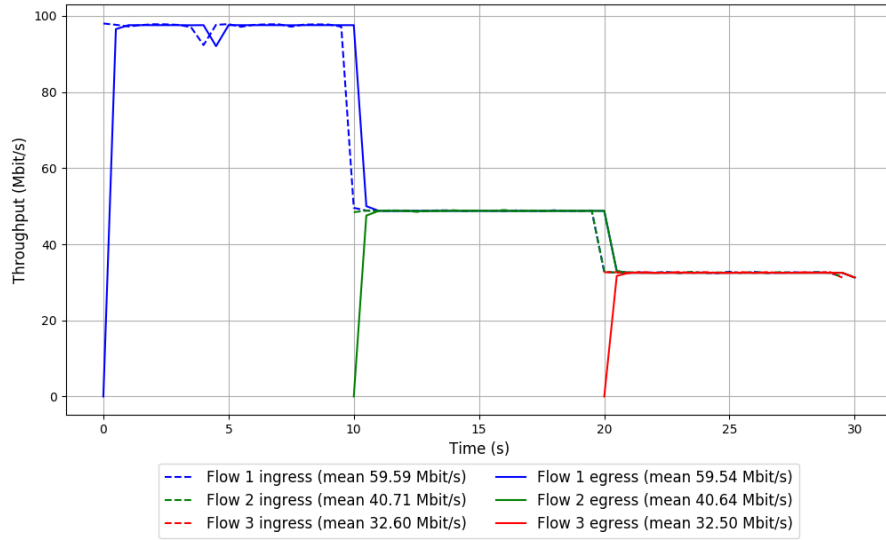
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-10-03 12:14:15
End at: 2019-10-03 12:14:45
Local clock offset: -6.527 ms
Remote clock offset: 0.384 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.526 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 59.63 Mbit/s
95th percentile per-packet one-way delay: 9.623 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 9.369 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 9.543 ms
Loss rate: 0.29%
```
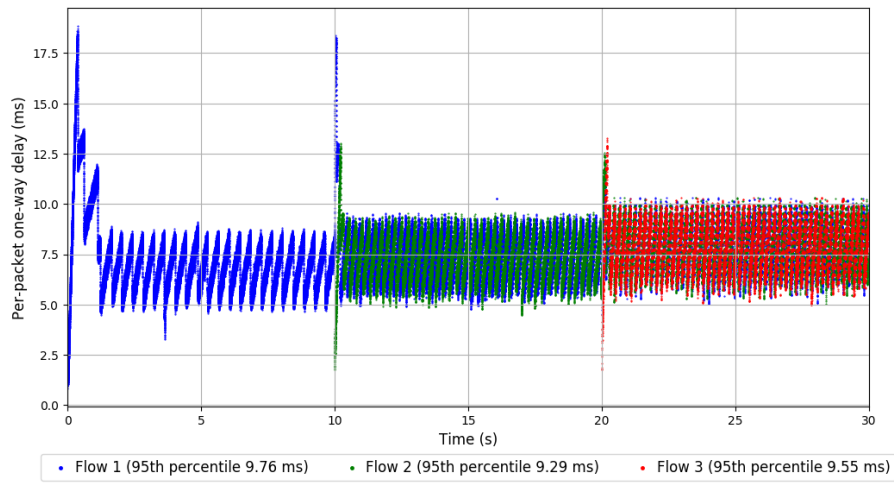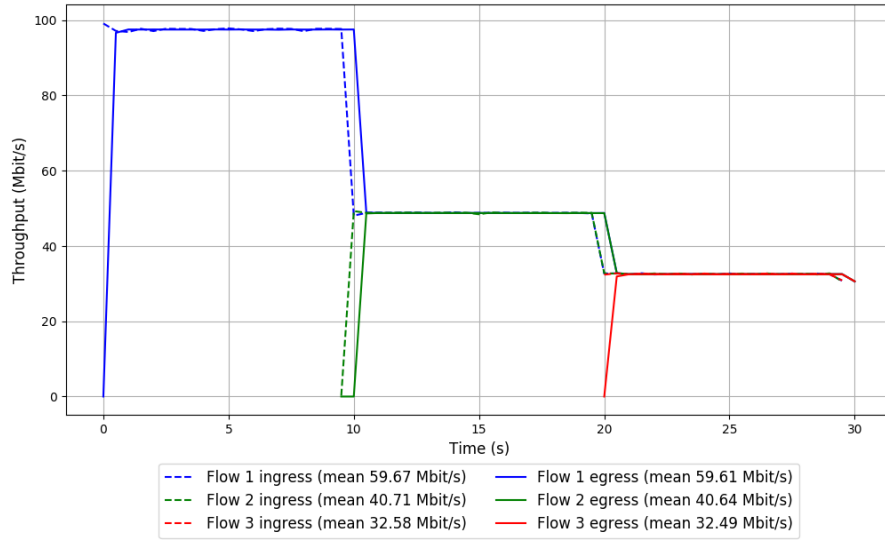
Run 3: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 59.68 Mbit/s) --- Flow 1 egress (mean 59.63 Mbit/s)
Flow 2 ingress (mean 40.71 Mbit/s) --- Flow 2 egress (mean 40.64 Mbit/s)
Flow 3 ingress (mean 32.59 Mbit/s) --- Flow 3 egress (mean 32.50 Mbit/s)

Flow 1 (95th percentile 9.62 ms)   Flow 2 (95th percentile 9.37 ms)   Flow 3 (95th percentile 9.54 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-10-03 12:41:37
End at: 2019-10-03 12:42:07
Local clock offset: -5.499 ms
Remote clock offset: 0.301 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 9.108 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 59.54 Mbit/s
95th percentile per-packet one-way delay: 8.980 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 9.212 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 32.50 Mbit/s
95th percentile per-packet one-way delay: 9.433 ms
Loss rate: 0.33%
```
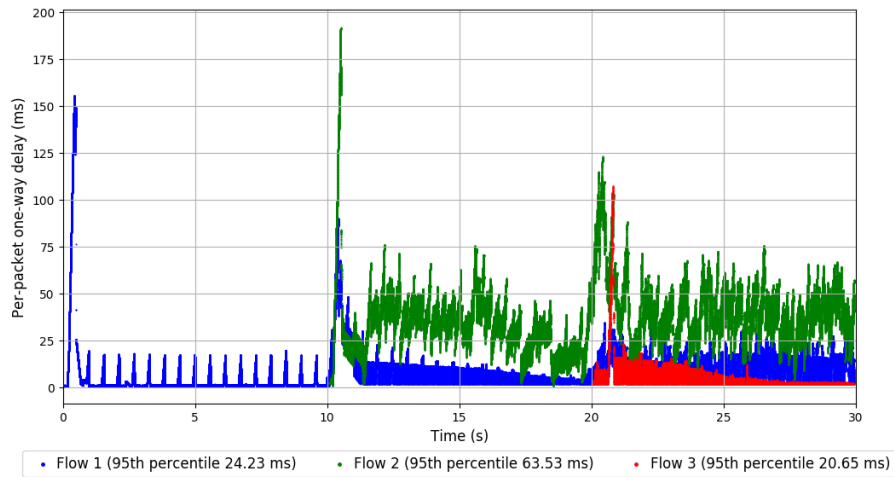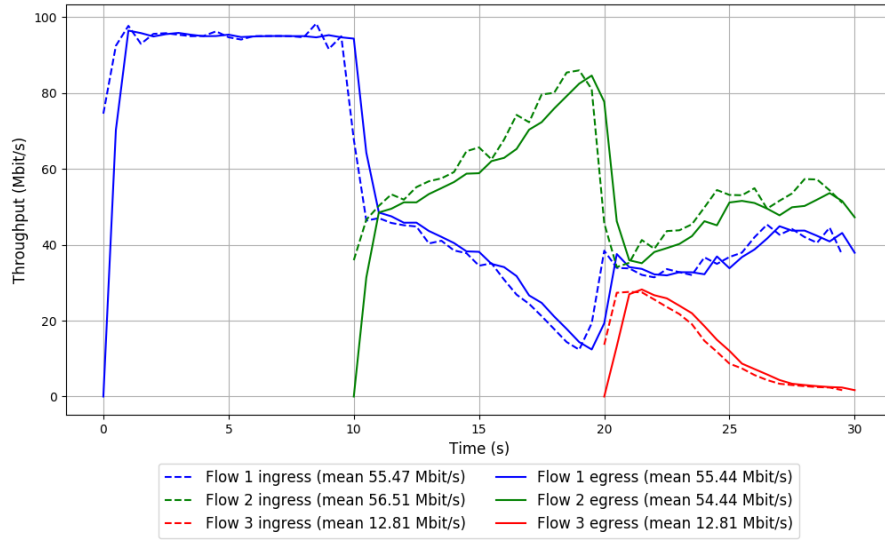
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-10-03 13:09:00
End at: 2019-10-03 13:09:30
Local clock offset: -5.413 ms
Remote clock offset: 0.245 ms


# Below is generated by plot.py at 2019-10-03 13:22:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 9.525 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 59.61 Mbit/s
95th percentile per-packet one-way delay: 9.755 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 9.295 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 32.49 Mbit/s
95th percentile per-packet one-way delay: 9.546 ms
Loss rate: 0.29%
```
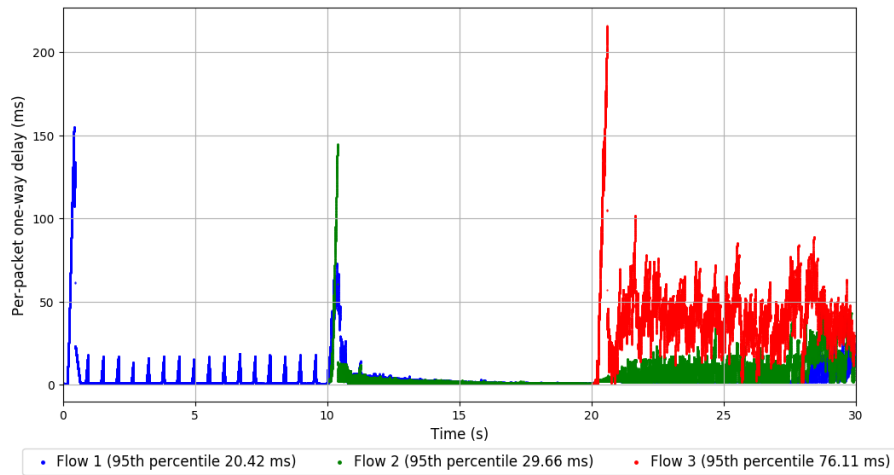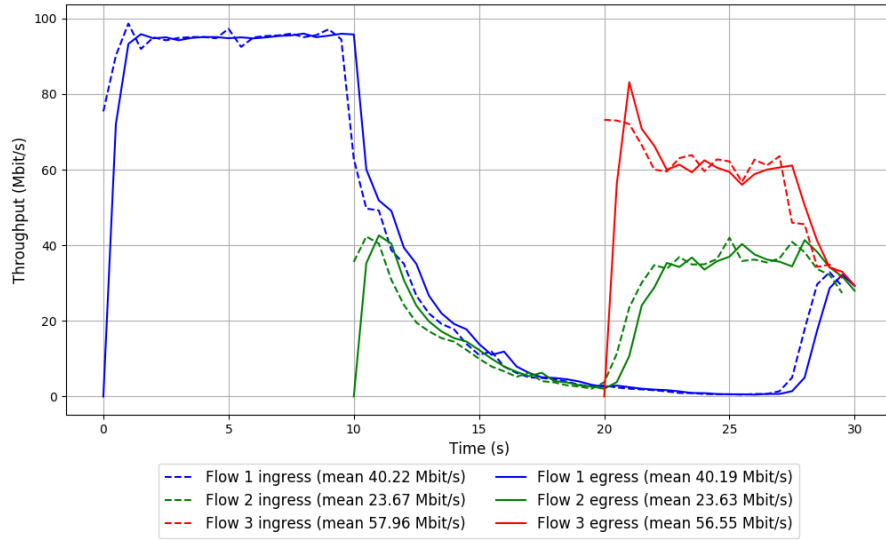
Run 5: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 59.67 Mbit/s) ---- Flow 1 egress (mean 59.61 Mbit/s)
Flow 2 ingress (mean 40.71 Mbit/s) ---- Flow 2 egress (mean 40.64 Mbit/s)
Flow 3 ingress (mean 32.58 Mbit/s) ---- Flow 3 egress (mean 32.49 Mbit/s)

Flow 1 (95th percentile 9.76 ms)   Flow 2 (95th percentile 9.29 ms)   Flow 3 (95th percentile 9.55 ms)

```
Run 1: Statistics of FillP

Start at: 2019-10-03 11:10:28
End at: 2019-10-03 11:10:58
Local clock offset: -6.713 ms
Remote clock offset: -0.51 ms


# Below is generated by plot.py at 2019-10-03 13:23:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 54.469 ms
Loss rate: 1.46%
-- Flow 1:
Average throughput: 55.44 Mbit/s
95th percentile per-packet one-way delay: 24.234 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 54.44 Mbit/s
95th percentile per-packet one-way delay: 63.529 ms
Loss rate: 3.68%
-- Flow 3:
Average throughput: 12.81 Mbit/s
95th percentile per-packet one-way delay: 20.648 ms
Loss rate: 0.02%
```
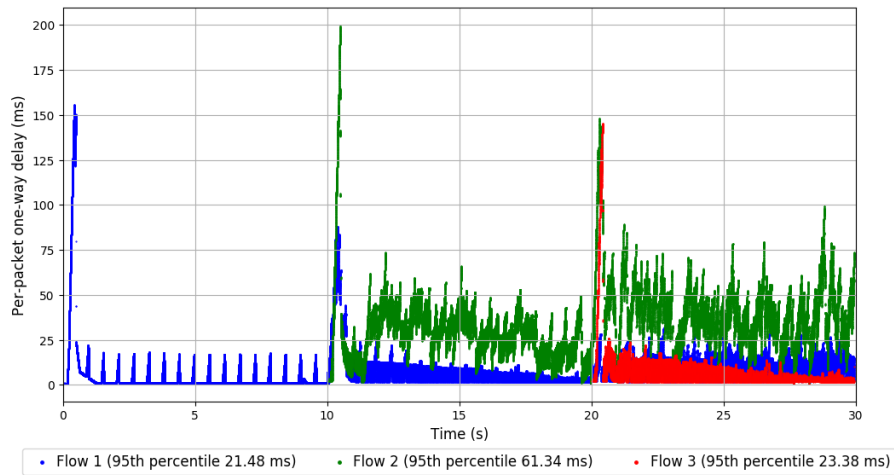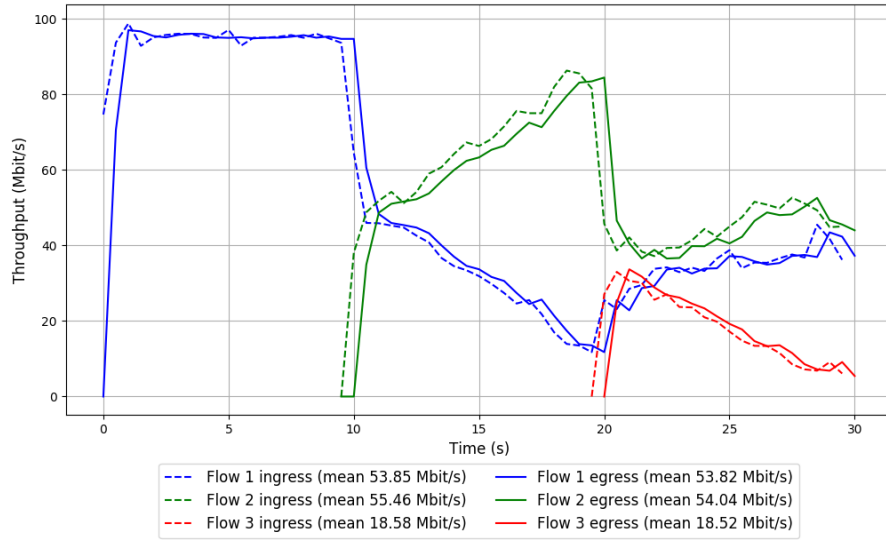
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-10-03 11:37:48
End at: 2019-10-03 11:38:18
Local clock offset: -6.51 ms
Remote clock offset: 0.139 ms


# Below is generated by plot.py at 2019-10-03 13:23:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 74.68 Mbit/s
95th percentile per-packet one-way delay: 58.709 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 40.19 Mbit/s
95th percentile per-packet one-way delay: 20.423 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 23.63 Mbit/s
95th percentile per-packet one-way delay: 29.662 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 56.55 Mbit/s
95th percentile per-packet one-way delay: 76.105 ms
Loss rate: 2.40%
```
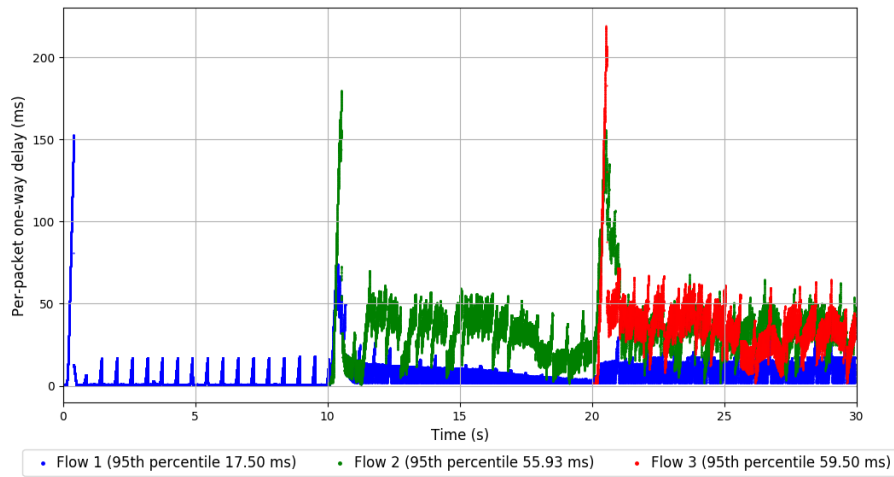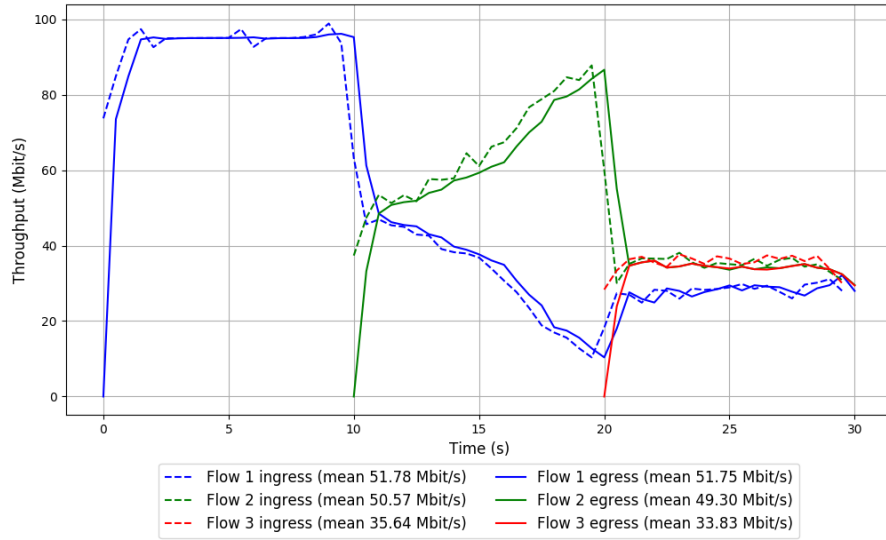
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-10-03 12:05:08
End at: 2019-10-03 12:05:38
Local clock offset: -6.565 ms
Remote clock offset: 0.369 ms


# Below is generated by plot.py at 2019-10-03 13:23:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.95 Mbit/s
95th percentile per-packet one-way delay: 53.288 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 53.82 Mbit/s
95th percentile per-packet one-way delay: 21.483 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 54.04 Mbit/s
95th percentile per-packet one-way delay: 61.341 ms
Loss rate: 2.54%
-- Flow 3:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 23.378 ms
Loss rate: 0.28%
```
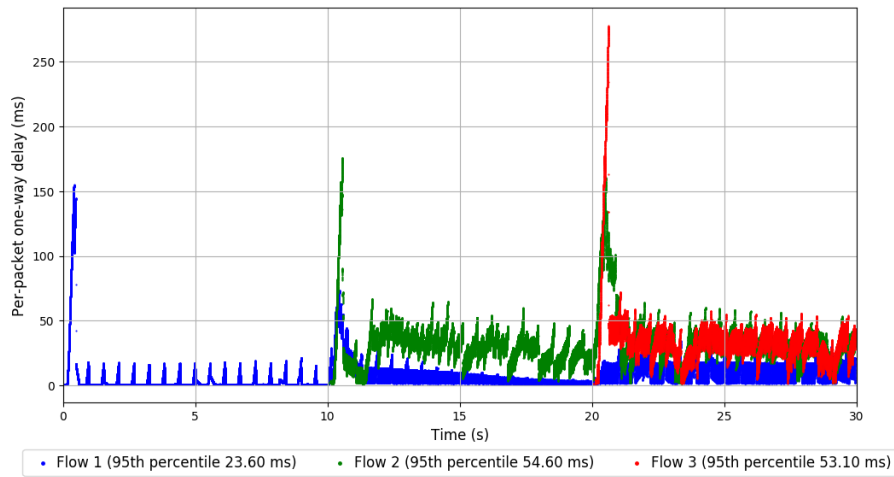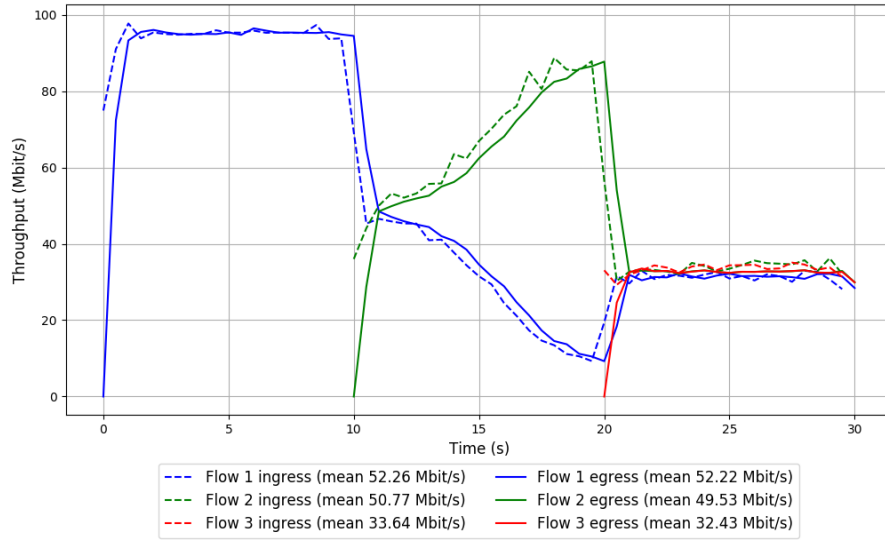
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-10-03 12:32:31
End at: 2019-10-03 12:33:01
Local clock offset: -5.843 ms
Remote clock offset: 0.226 ms


# Below is generated by plot.py at 2019-10-03 13:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.78 Mbit/s
95th percentile per-packet one-way delay: 51.428 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 51.75 Mbit/s
95th percentile per-packet one-way delay: 17.497 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 49.30 Mbit/s
95th percentile per-packet one-way delay: 55.930 ms
Loss rate: 2.51%
-- Flow 3:
Average throughput: 33.83 Mbit/s
95th percentile per-packet one-way delay: 59.498 ms
Loss rate: 4.95%
```
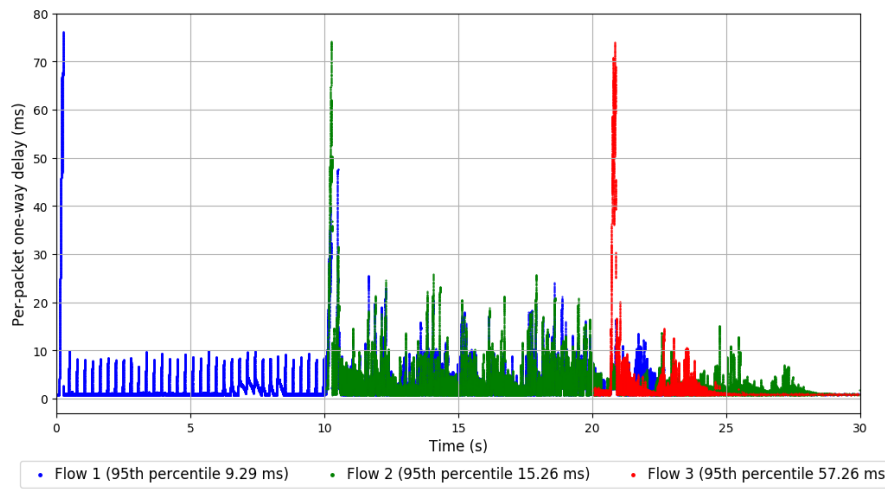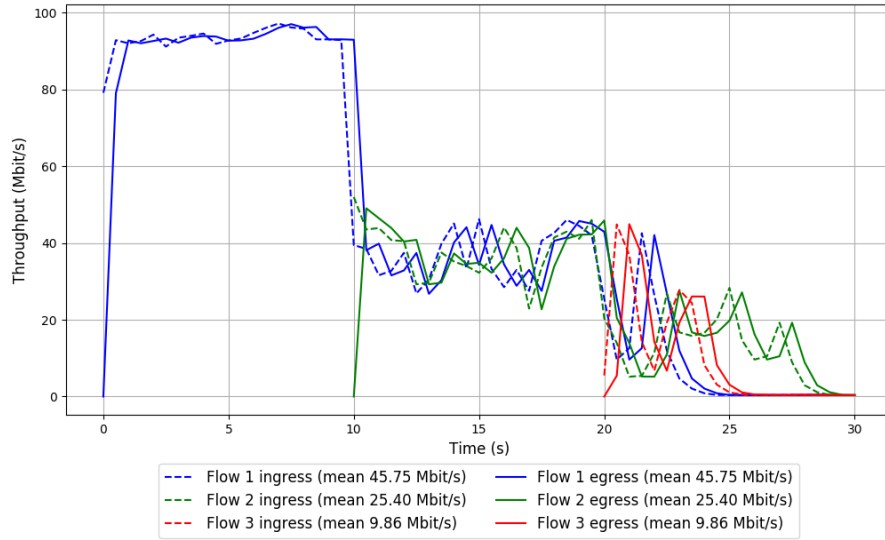
Run 4: Report of FillP — Data Link

- - - Flow 1 ingress (mean 51.78 Mbit/s) ——— Flow 1 egress (mean 51.75 Mbit/s)
- - - Flow 2 ingress (mean 50.57 Mbit/s) ——— Flow 2 egress (mean 49.30 Mbit/s)
- - - Flow 3 ingress (mean 35.64 Mbit/s) ——— Flow 3 egress (mean 33.83 Mbit/s)

• Flow 1 (95th percentile 17.50 ms)　　• Flow 2 (95th percentile 55.93 ms)　　• Flow 3 (95th percentile 59.50 ms)

```
Run 5: Statistics of FillP

Start at: 2019-10-03 12:59:55
End at: 2019-10-03 13:00:25
Local clock offset: -5.319 ms
Remote clock offset: 0.106 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.91 Mbit/s
95th percentile per-packet one-way delay: 47.493 ms
Loss rate: 1.28%
-- Flow 1:
Average throughput: 52.22 Mbit/s
95th percentile per-packet one-way delay: 23.601 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 49.53 Mbit/s
95th percentile per-packet one-way delay: 54.603 ms
Loss rate: 2.42%
-- Flow 3:
Average throughput: 32.43 Mbit/s
95th percentile per-packet one-way delay: 53.098 ms
Loss rate: 3.63%
```
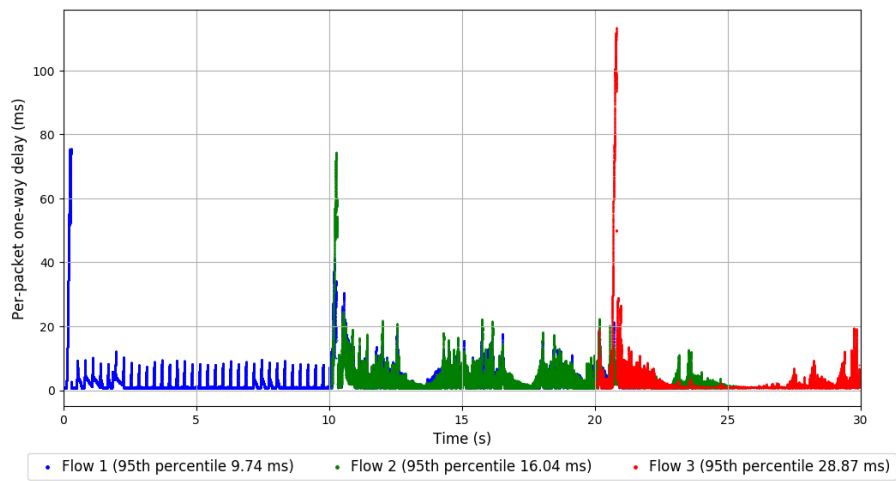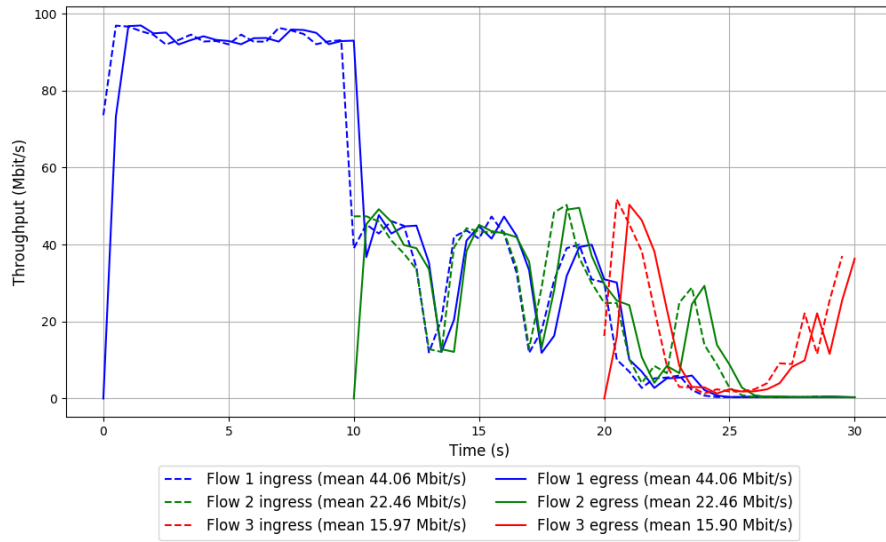
Run 5: Report of FillP — Data Link

Legend (top plot):
- Flow 1 ingress (mean 52.26 Mbit/s)
- Flow 1 egress (mean 52.22 Mbit/s)
- Flow 2 ingress (mean 50.77 Mbit/s)
- Flow 2 egress (mean 49.53 Mbit/s)
- Flow 3 ingress (mean 33.64 Mbit/s)
- Flow 3 egress (mean 32.43 Mbit/s)

Legend (bottom plot):
- Flow 1 (95th percentile 23.60 ms)
- Flow 2 (95th percentile 54.60 ms)
- Flow 3 (95th percentile 53.10 ms)

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```
Run 1: Statistics of FillP-Sheep

Start at: 2019-10-03 11:09:20
End at: 2019-10-03 11:09:50
Local clock offset: -6.76 ms
Remote clock offset: -0.502 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.92 Mbit/s
95th percentile per-packet one-way delay: 11.785 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.75 Mbit/s
95th percentile per-packet one-way delay: 9.288 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.40 Mbit/s
95th percentile per-packet one-way delay: 15.255 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.86 Mbit/s
95th percentile per-packet one-way delay: 57.256 ms
Loss rate: 0.01%
```
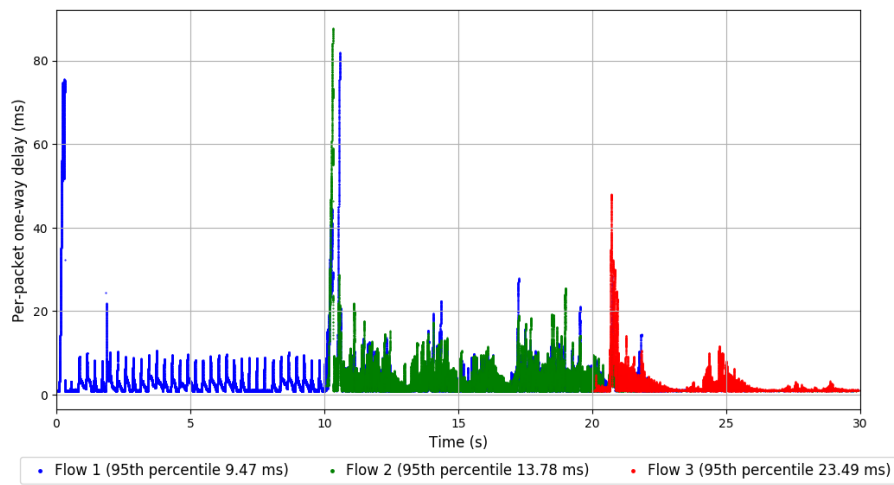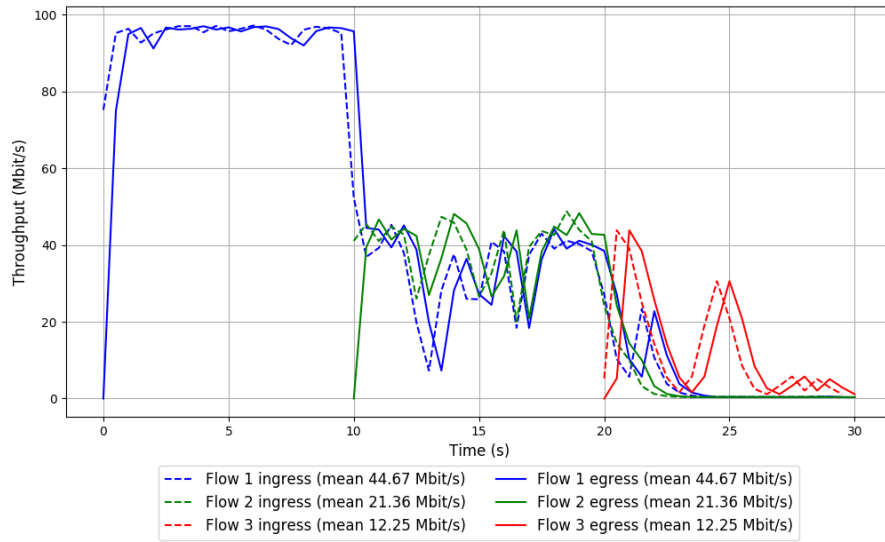
Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-10-03 11:36:40
End at: 2019-10-03 11:37:10
Local clock offset: -6.578 ms
Remote clock offset: 0.099 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.24 Mbit/s
95th percentile per-packet one-way delay: 12.584 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 44.06 Mbit/s
95th percentile per-packet one-way delay: 9.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 22.46 Mbit/s
95th percentile per-packet one-way delay: 16.035 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 15.90 Mbit/s
95th percentile per-packet one-way delay: 28.874 ms
Loss rate: 0.40%
```
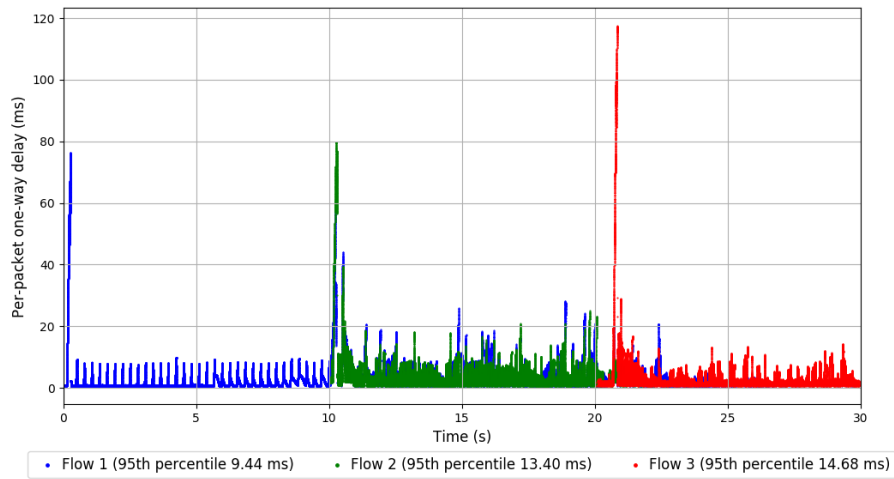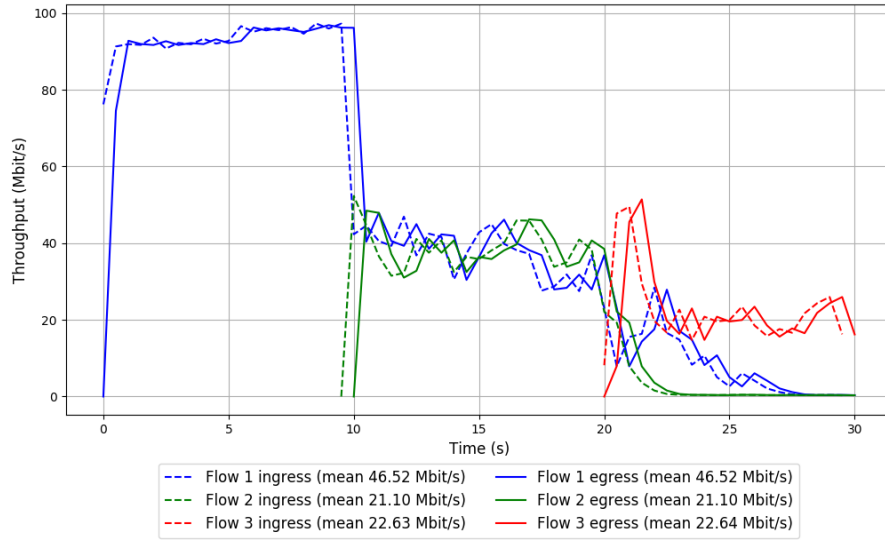
Run 2: Report of FillP-Sheep — Data Link

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```
Run 3: Statistics of FillP-Sheep

Start at: 2019-10-03 12:04:00
End at: 2019-10-03 12:04:30
Local clock offset: -6.516 ms
Remote clock offset: 0.306 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.91 Mbit/s
95th percentile per-packet one-way delay: 11.449 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 44.67 Mbit/s
95th percentile per-packet one-way delay: 9.469 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.36 Mbit/s
95th percentile per-packet one-way delay: 13.784 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 12.25 Mbit/s
95th percentile per-packet one-way delay: 23.494 ms
Loss rate: 0.01%
```
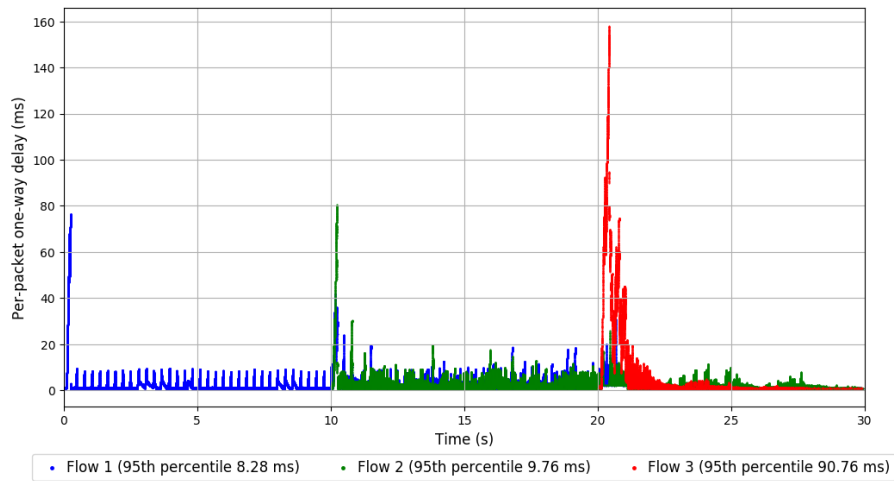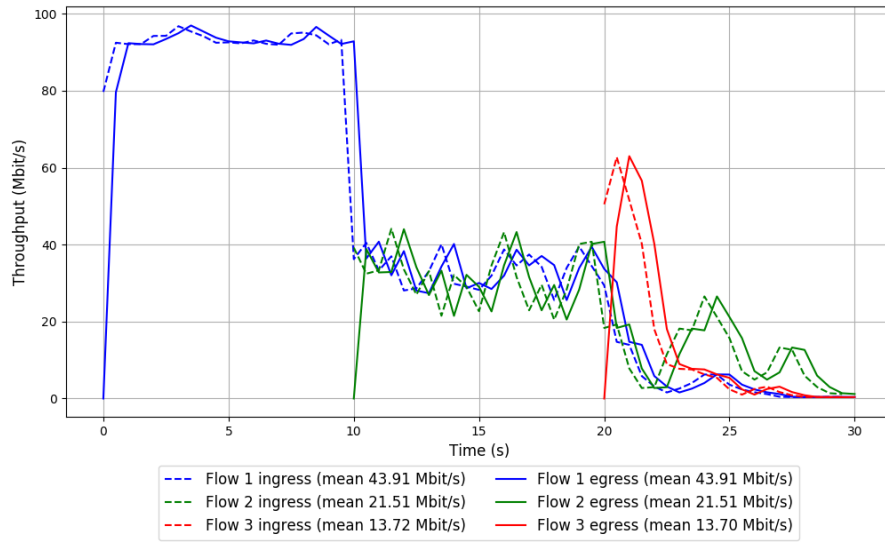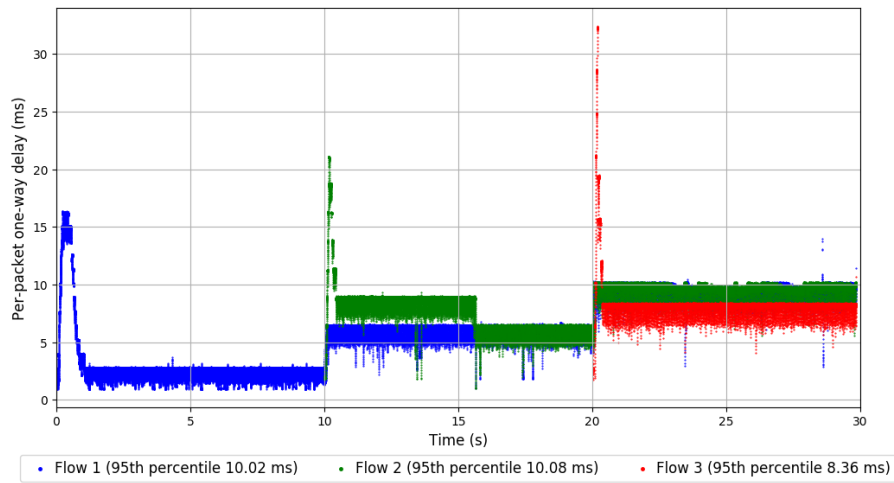
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 44.67 Mbit/s)   Flow 1 egress (mean 44.67 Mbit/s)
Flow 2 ingress (mean 21.36 Mbit/s)   Flow 2 egress (mean 21.36 Mbit/s)
Flow 3 ingress (mean 12.25 Mbit/s)   Flow 3 egress (mean 12.25 Mbit/s)

Flow 1 (95th percentile 9.47 ms)   Flow 2 (95th percentile 13.78 ms)   Flow 3 (95th percentile 23.49 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-10-03 12:31:23
End at: 2019-10-03 12:31:53
Local clock offset: -5.907 ms
Remote clock offset: 0.354 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.05 Mbit/s
95th percentile per-packet one-way delay: 11.166 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.52 Mbit/s
95th percentile per-packet one-way delay: 9.438 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.10 Mbit/s
95th percentile per-packet one-way delay: 13.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.64 Mbit/s
95th percentile per-packet one-way delay: 14.677 ms
Loss rate: 0.01%
```
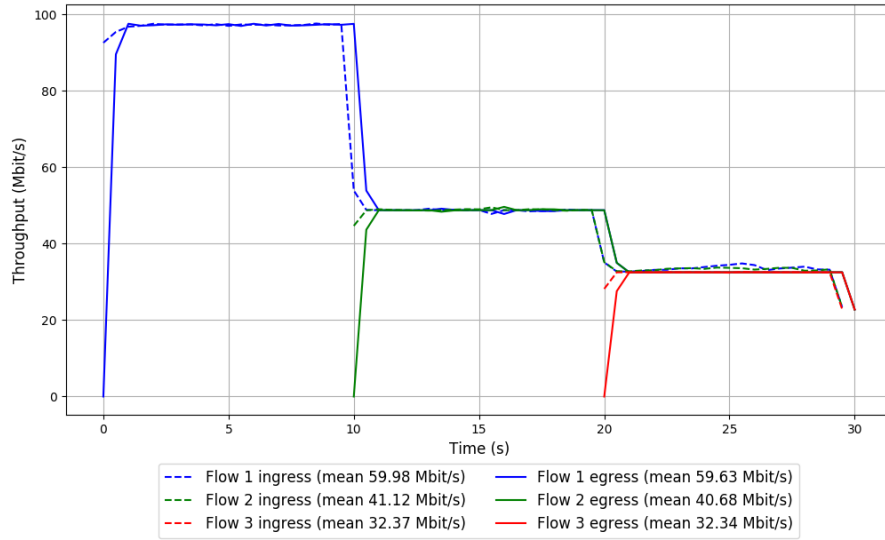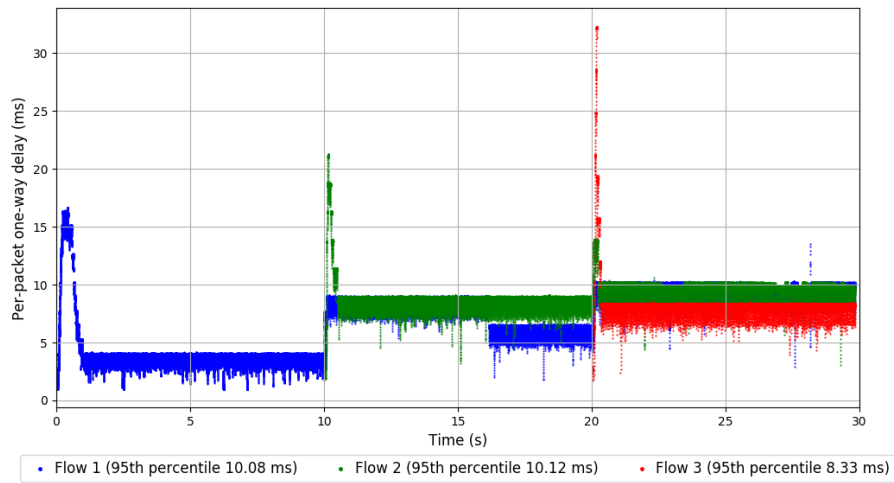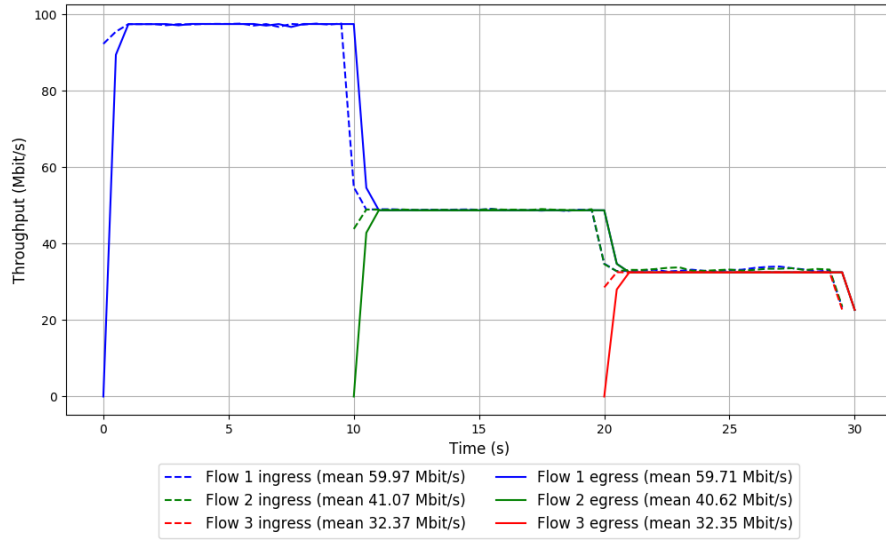
Run 4: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 46.52 Mbit/s) ——— Flow 1 egress (mean 46.52 Mbit/s)
- - - - Flow 2 ingress (mean 21.10 Mbit/s) ——— Flow 2 egress (mean 21.10 Mbit/s)
- - - - Flow 3 ingress (mean 22.63 Mbit/s) ——— Flow 3 egress (mean 22.64 Mbit/s)

- Flow 1 (95th percentile 9.44 ms)   • Flow 2 (95th percentile 13.40 ms)   • Flow 3 (95th percentile 14.68 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-10-03 12:58:48
End at: 2019-10-03 12:59:18
Local clock offset: -5.285 ms
Remote clock offset: 0.112 ms


# Below is generated by plot.py at 2019-10-03 13:24:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.74 Mbit/s
95th percentile per-packet one-way delay: 13.654 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 43.91 Mbit/s
95th percentile per-packet one-way delay: 8.279 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.51 Mbit/s
95th percentile per-packet one-way delay: 9.756 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.70 Mbit/s
95th percentile per-packet one-way delay: 90.762 ms
Loss rate: 0.18%
```
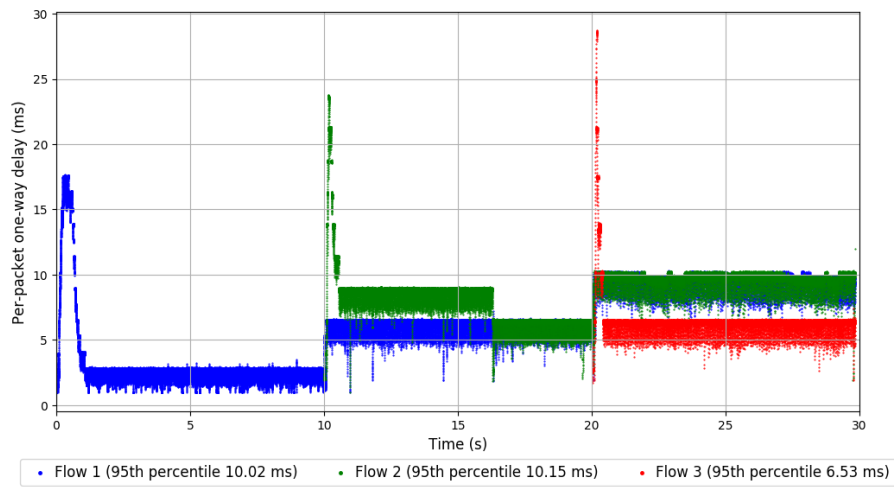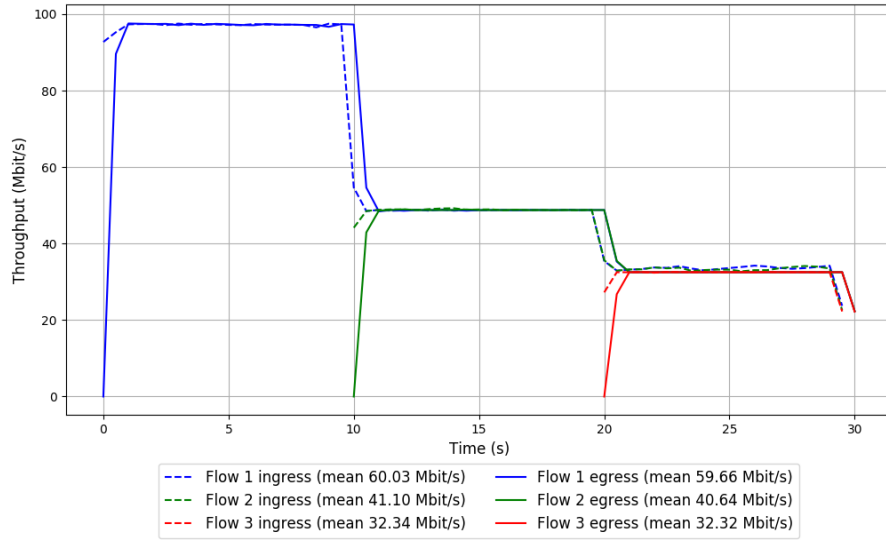
Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 43.91 Mbit/s) --- Flow 1 egress (mean 43.91 Mbit/s)
Flow 2 ingress (mean 21.51 Mbit/s) --- Flow 2 egress (mean 21.51 Mbit/s)
Flow 3 ingress (mean 13.72 Mbit/s) --- Flow 3 egress (mean 13.70 Mbit/s)

Flow 1 (95th percentile 8.28 ms)   Flow 2 (95th percentile 9.76 ms)   Flow 3 (95th percentile 90.76 ms)

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```
Run 1: Statistics of Indigo

Start at: 2019-10-03 11:13:51
End at: 2019-10-03 11:14:21
Local clock offset: -6.717 ms
Remote clock offset: -0.378 ms


# Below is generated by plot.py at 2019-10-03 13:24:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 10.040 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 59.63 Mbit/s
95th percentile per-packet one-way delay: 10.022 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 40.68 Mbit/s
95th percentile per-packet one-way delay: 10.083 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 32.34 Mbit/s
95th percentile per-packet one-way delay: 8.360 ms
Loss rate: 0.10%
```
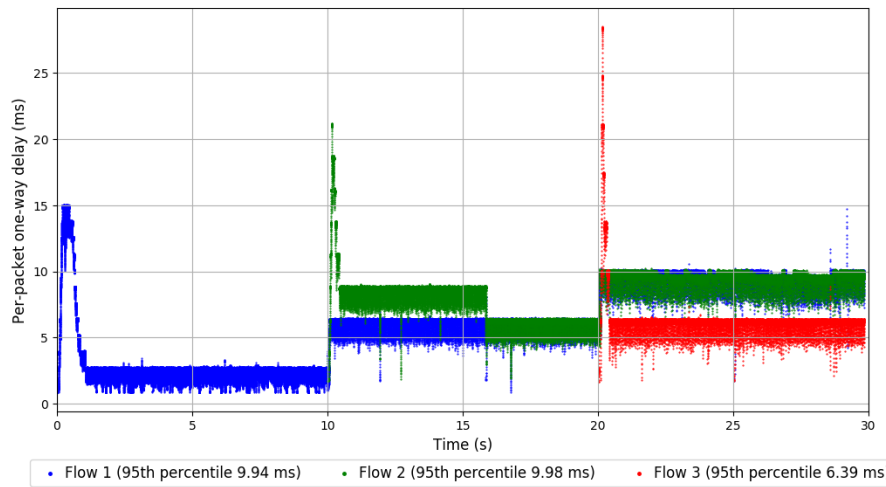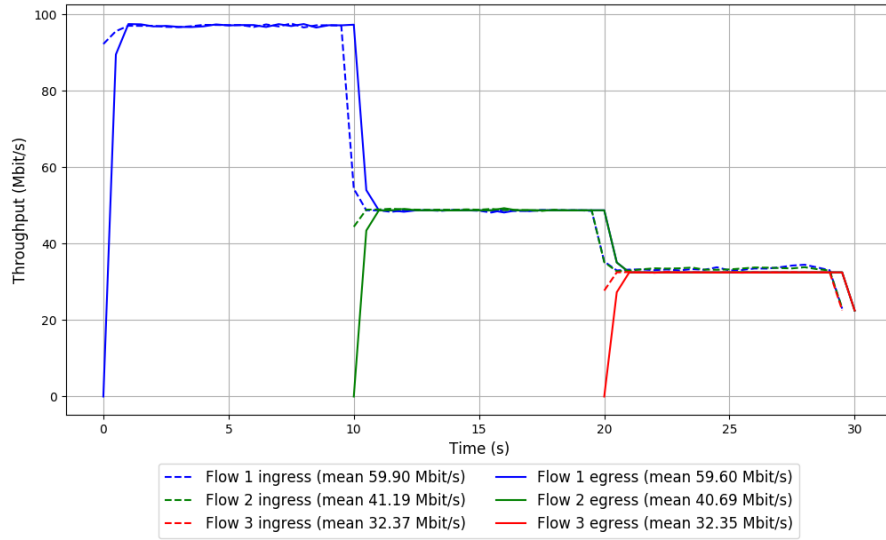
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-10-03 11:41:10
End at: 2019-10-03 11:41:40
Local clock offset: -6.522 ms
Remote clock offset: 0.099 ms


# Below is generated by plot.py at 2019-10-03 13:24:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 10.081 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 59.71 Mbit/s
95th percentile per-packet one-way delay: 10.077 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 40.62 Mbit/s
95th percentile per-packet one-way delay: 10.118 ms
Loss rate: 1.10%
-- Flow 3:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 8.333 ms
Loss rate: 0.09%
```
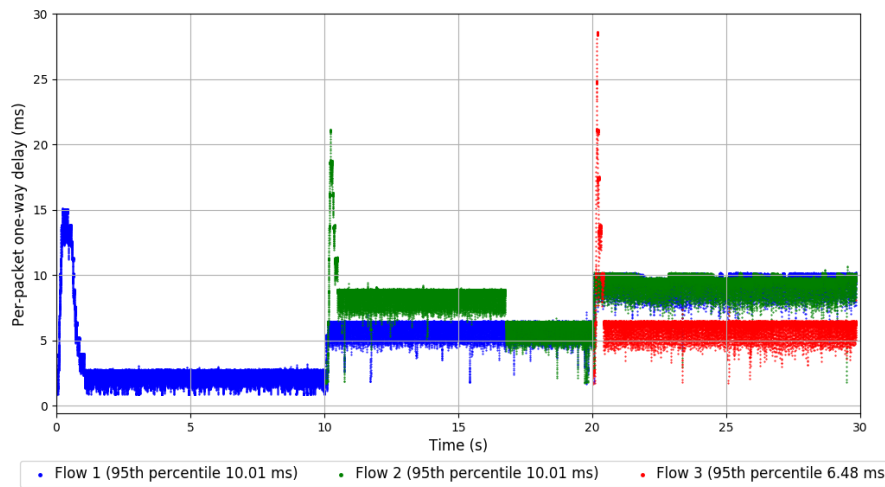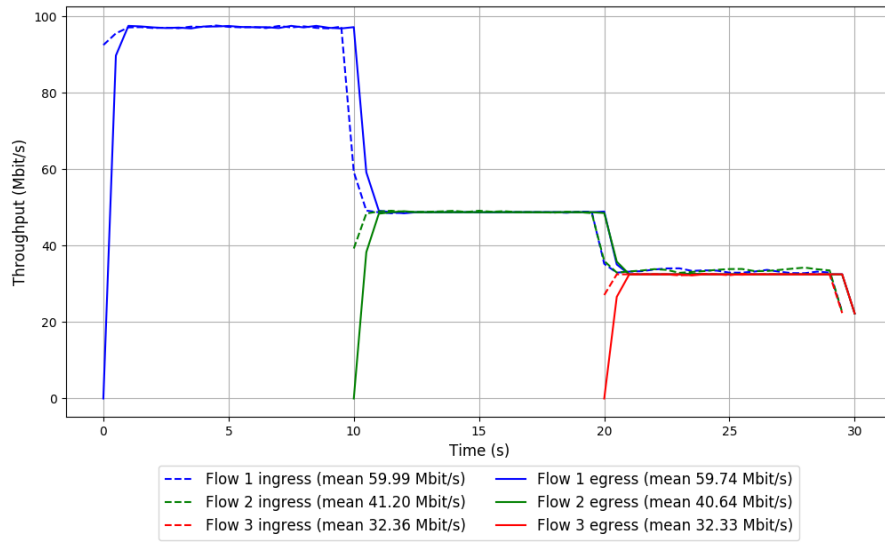
Run 2: Report of Indigo — Data Link

- - - - Flow 1 ingress (mean 59.97 Mbit/s) ——— Flow 1 egress (mean 59.71 Mbit/s)
- - - - Flow 2 ingress (mean 41.07 Mbit/s) ——— Flow 2 egress (mean 40.62 Mbit/s)
- - - - Flow 3 ingress (mean 32.37 Mbit/s) ——— Flow 3 egress (mean 32.35 Mbit/s)

- Flow 1 (95th percentile 10.08 ms)   · Flow 2 (95th percentile 10.12 ms)   · Flow 3 (95th percentile 8.33 ms)

```
Run 3: Statistics of Indigo

Start at: 2019-10-03 12:08:31
End at: 2019-10-03 12:09:01
Local clock offset: -6.525 ms
Remote clock offset: 0.34 ms


# Below is generated by plot.py at 2019-10-03 13:25:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 10.080 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 59.66 Mbit/s
95th percentile per-packet one-way delay: 10.019 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 10.147 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 32.32 Mbit/s
95th percentile per-packet one-way delay: 6.530 ms
Loss rate: 0.08%
```
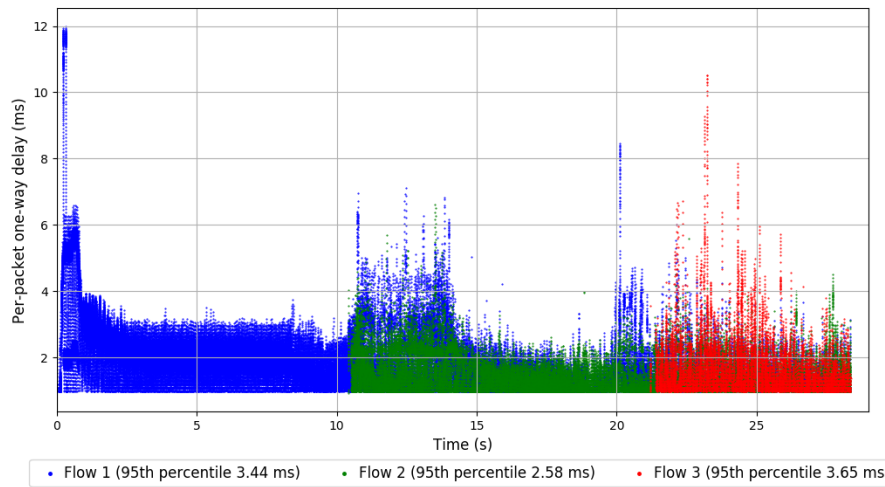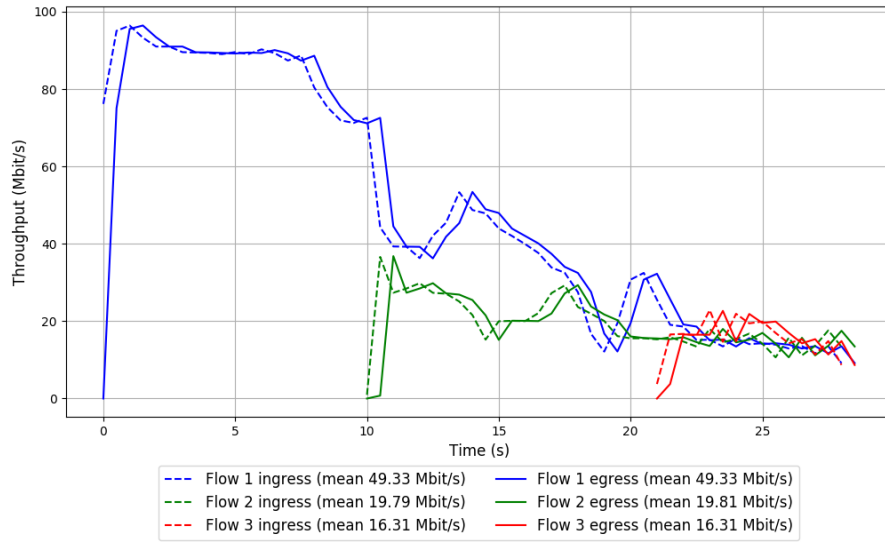
Run 3: Report of Indigo — Data Link

Flow 1 ingress (mean 60.03 Mbit/s) --- Flow 1 egress (mean 59.66 Mbit/s)
Flow 2 ingress (mean 41.10 Mbit/s) --- Flow 2 egress (mean 40.64 Mbit/s)
Flow 3 ingress (mean 32.34 Mbit/s) --- Flow 3 egress (mean 32.32 Mbit/s)

Flow 1 (95th percentile 10.02 ms)   Flow 2 (95th percentile 10.15 ms)   Flow 3 (95th percentile 6.53 ms)

```
Run 4: Statistics of Indigo

Start at: 2019-10-03 12:35:54
End at: 2019-10-03 12:36:24
Local clock offset: -5.664 ms
Remote clock offset: 0.37 ms


# Below is generated by plot.py at 2019-10-03 13:25:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 9.941 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 59.60 Mbit/s
95th percentile per-packet one-way delay: 9.935 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 40.69 Mbit/s
95th percentile per-packet one-way delay: 9.983 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 32.35 Mbit/s
95th percentile per-packet one-way delay: 6.386 ms
Loss rate: 0.09%
```
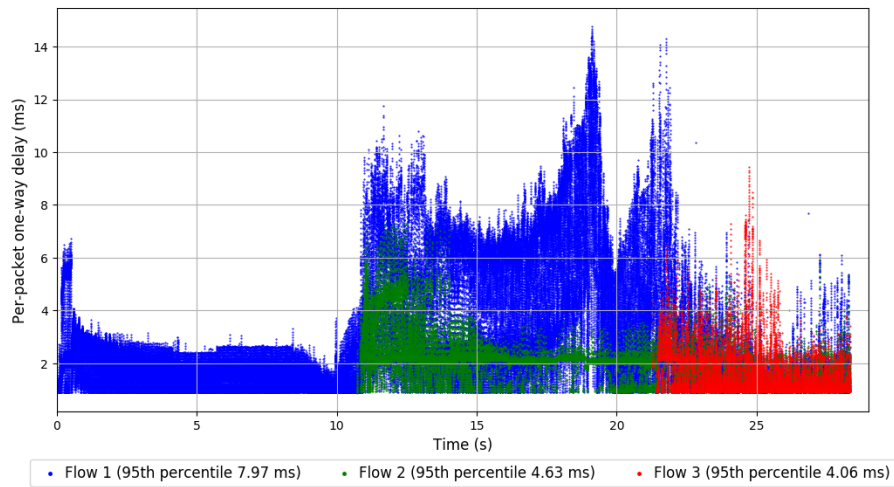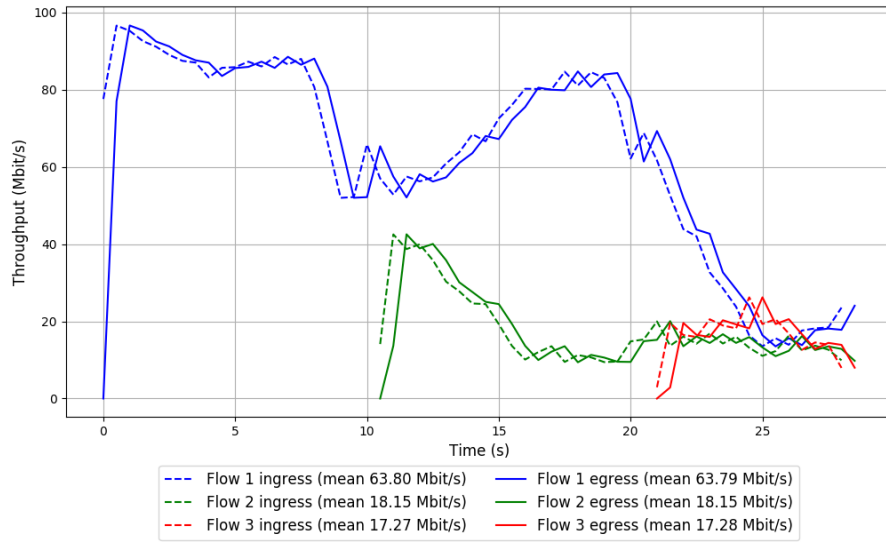
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-10-03 13:03:17
End at: 2019-10-03 13:03:47
Local clock offset: -5.399 ms
Remote clock offset: 0.183 ms


# Below is generated by plot.py at 2019-10-03 13:25:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.29 Mbit/s
95th percentile per-packet one-way delay: 9.995 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 59.74 Mbit/s
95th percentile per-packet one-way delay: 10.010 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 40.64 Mbit/s
95th percentile per-packet one-way delay: 10.010 ms
Loss rate: 1.38%
-- Flow 3:
Average throughput: 32.33 Mbit/s
95th percentile per-packet one-way delay: 6.477 ms
Loss rate: 0.08%
```
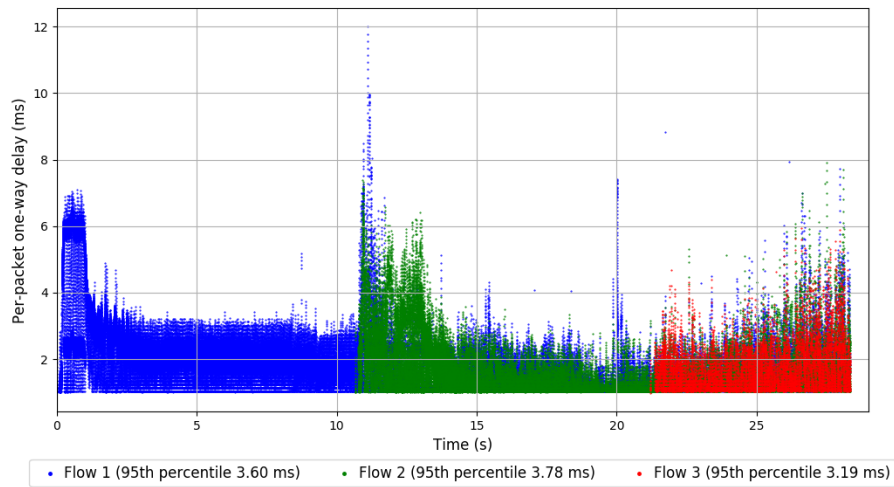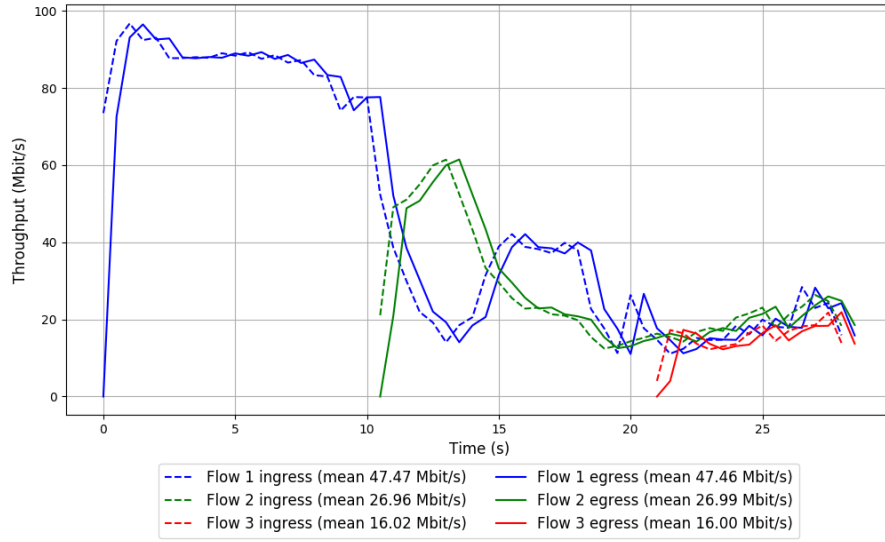
Run 5: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 59.99 Mbit/s) ⎯⎯ Flow 1 egress (mean 59.74 Mbit/s)
- - - Flow 2 ingress (mean 41.20 Mbit/s) ⎯⎯ Flow 2 egress (mean 40.64 Mbit/s)
- - - Flow 3 ingress (mean 32.36 Mbit/s) ⎯⎯ Flow 3 egress (mean 32.33 Mbit/s)

- Flow 1 (95th percentile 10.01 ms)   • Flow 2 (95th percentile 10.01 ms)   • Flow 3 (95th percentile 6.48 ms)

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-10-03 11:01:20
End at: 2019-10-03 11:01:50
Local clock offset: -6.67 ms
Remote clock offset: -0.606 ms


# Below is generated by plot.py at 2019-10-03 13:25:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.97 Mbit/s
95th percentile per-packet one-way delay: 3.309 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.33 Mbit/s
95th percentile per-packet one-way delay: 3.443 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 2.584 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.31 Mbit/s
95th percentile per-packet one-way delay: 3.647 ms
Loss rate: 0.01%
```
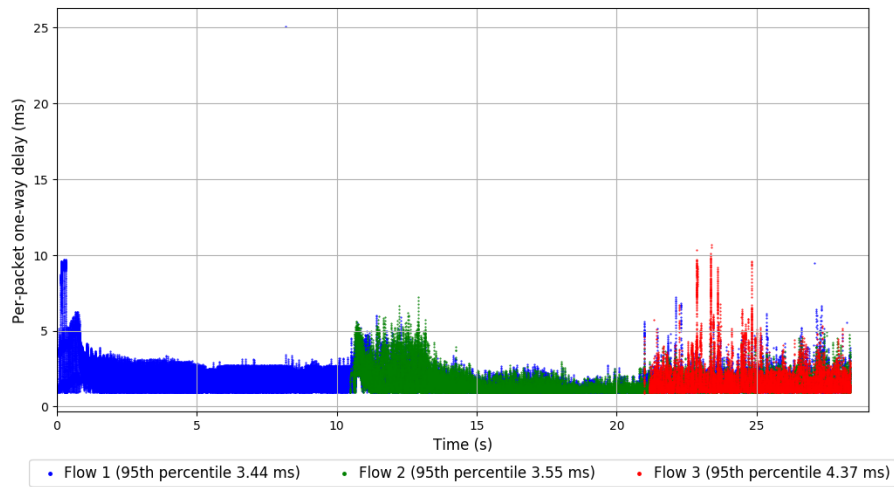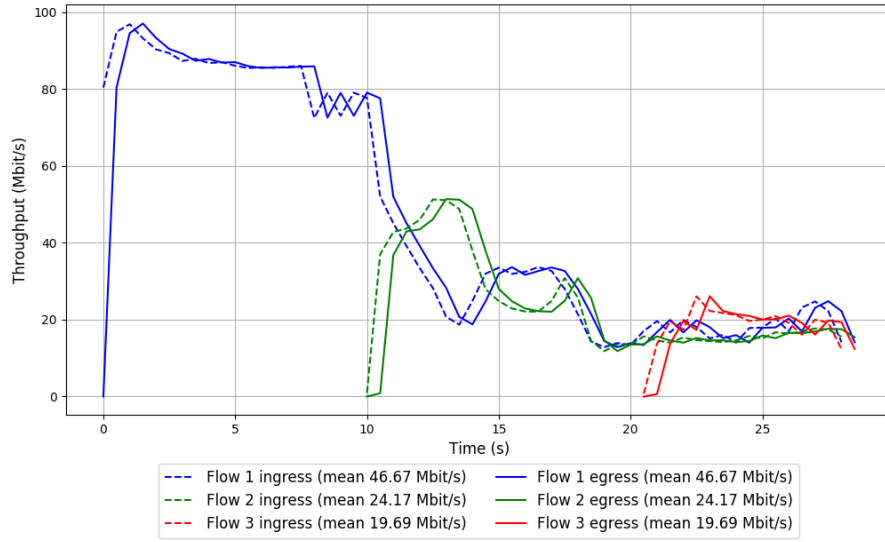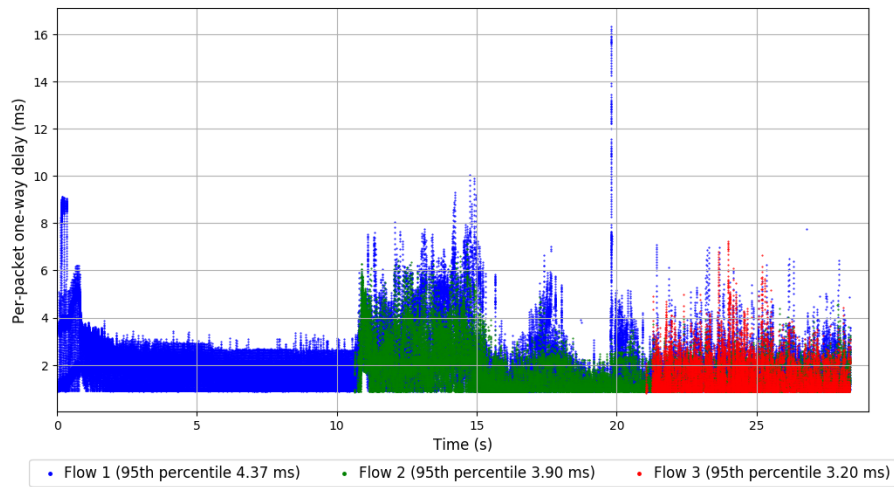
Run 1: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 49.33 Mbit/s) --- Flow 1 egress (mean 49.33 Mbit/s)
Flow 2 ingress (mean 19.79 Mbit/s) --- Flow 2 egress (mean 19.81 Mbit/s)
Flow 3 ingress (mean 16.31 Mbit/s) --- Flow 3 egress (mean 16.31 Mbit/s)

Flow 1 (95th percentile 3.44 ms) • Flow 2 (95th percentile 2.58 ms) • Flow 3 (95th percentile 3.65 ms)

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-10-03 11:28:39
End at: 2019-10-03 11:29:09
Local clock offset: -6.714 ms
Remote clock offset: -0.078 ms

# Below is generated by plot.py at 2019-10-03 13:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.38 Mbit/s
95th percentile per-packet one-way delay: 7.585 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 63.79 Mbit/s
95th percentile per-packet one-way delay: 7.970 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 18.15 Mbit/s
95th percentile per-packet one-way delay: 4.630 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 17.28 Mbit/s
95th percentile per-packet one-way delay: 4.063 ms
Loss rate: 0.04%
```
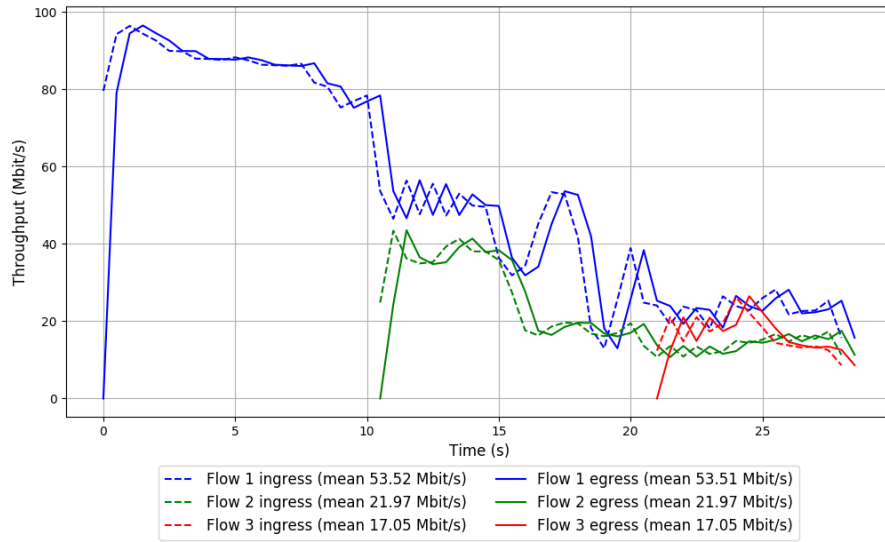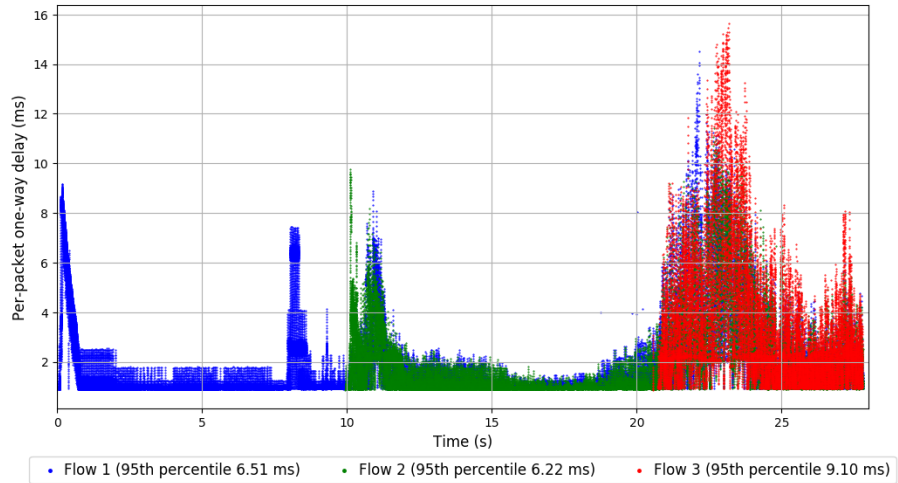
Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-10-03 11:55:59
End at: 2019-10-03 11:56:29
Local clock offset: -6.424 ms
Remote clock offset: 0.22 ms


# Below is generated by plot.py at 2019-10-03 13:25:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.33 Mbit/s
95th percentile per-packet one-way delay: 3.630 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 47.46 Mbit/s
95th percentile per-packet one-way delay: 3.605 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 26.99 Mbit/s
95th percentile per-packet one-way delay: 3.781 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 16.00 Mbit/s
95th percentile per-packet one-way delay: 3.190 ms
Loss rate: 0.12%
```
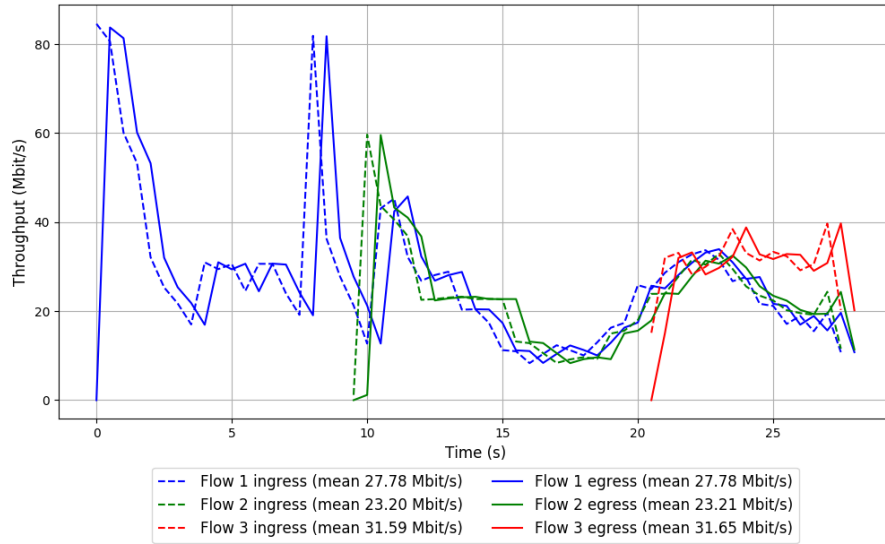
Run 3: Report of Indigo-MusesC3 — Data Link

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```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-10-03 12:23:22
End at: 2019-10-03 12:23:52
Local clock offset: -6.532 ms
Remote clock offset: 0.338 ms


# Below is generated by plot.py at 2019-10-03 13:25:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.01 Mbit/s
95th percentile per-packet one-way delay: 3.536 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.67 Mbit/s
95th percentile per-packet one-way delay: 3.437 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 3.554 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 19.69 Mbit/s
95th percentile per-packet one-way delay: 4.365 ms
Loss rate: 0.00%
```
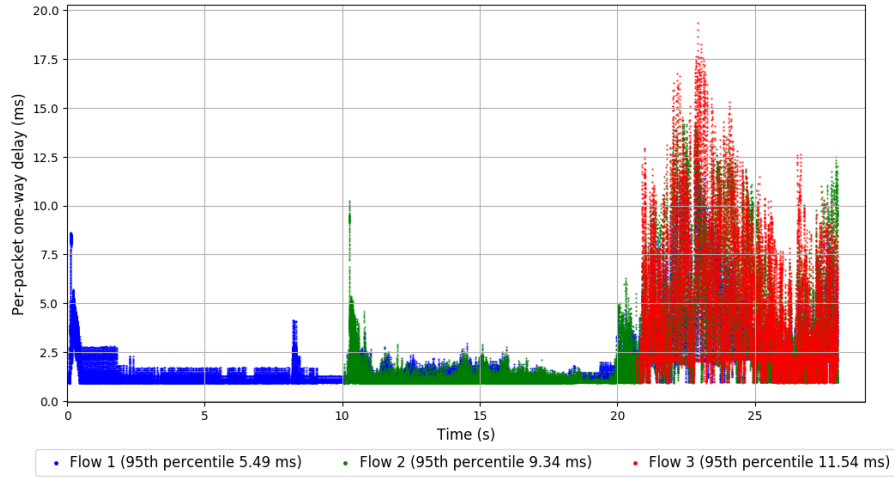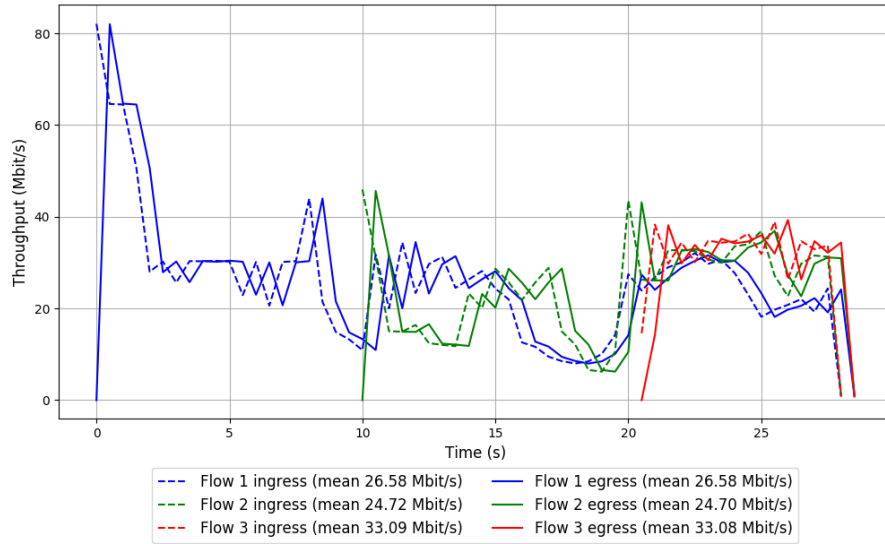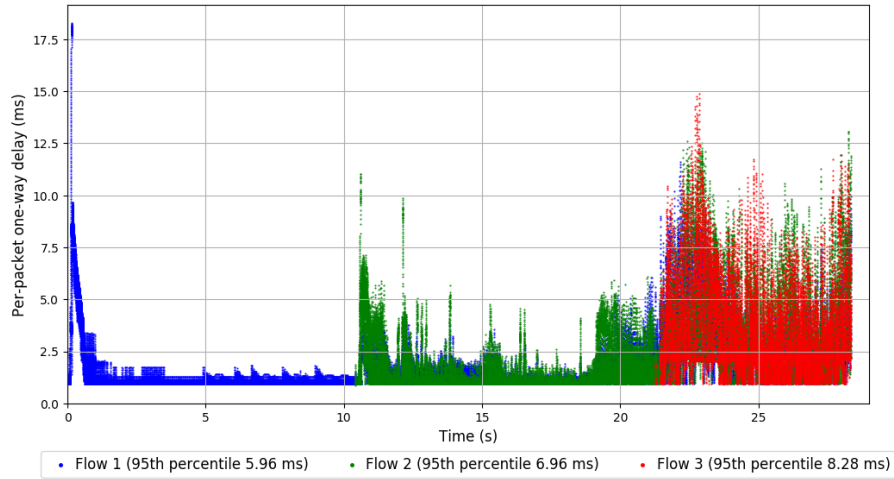
Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 46.67 Mbit/s) —— Flow 1 egress (mean 46.67 Mbit/s)
Flow 2 ingress (mean 24.17 Mbit/s) —— Flow 2 egress (mean 24.17 Mbit/s)
Flow 3 ingress (mean 19.69 Mbit/s) —— Flow 3 egress (mean 19.69 Mbit/s)

• Flow 1 (95th percentile 3.44 ms)   • Flow 2 (95th percentile 3.55 ms)   • Flow 3 (95th percentile 4.37 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-10-03 12:50:43
End at: 2019-10-03 12:51:13
Local clock offset: -5.253 ms
Remote clock offset: 0.218 ms


# Below is generated by plot.py at 2019-10-03 13:25:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.63 Mbit/s
95th percentile per-packet one-way delay: 4.194 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.51 Mbit/s
95th percentile per-packet one-way delay: 4.368 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.97 Mbit/s
95th percentile per-packet one-way delay: 3.905 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.05 Mbit/s
95th percentile per-packet one-way delay: 3.202 ms
Loss rate: 0.00%
```
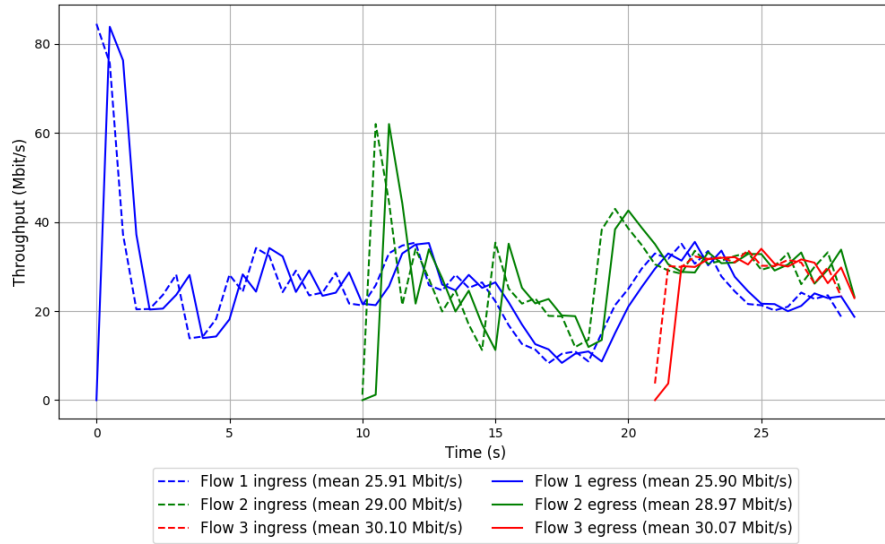
Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-10-03 11:20:42
End at: 2019-10-03 11:21:12
Local clock offset: -6.79 ms
Remote clock offset: -0.19 ms


# Below is generated by plot.py at 2019-10-03 13:25:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.94 Mbit/s
95th percentile per-packet one-way delay: 6.865 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 27.78 Mbit/s
95th percentile per-packet one-way delay: 6.511 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 23.21 Mbit/s
95th percentile per-packet one-way delay: 6.222 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 31.65 Mbit/s
95th percentile per-packet one-way delay: 9.098 ms
Loss rate: 0.02%
```
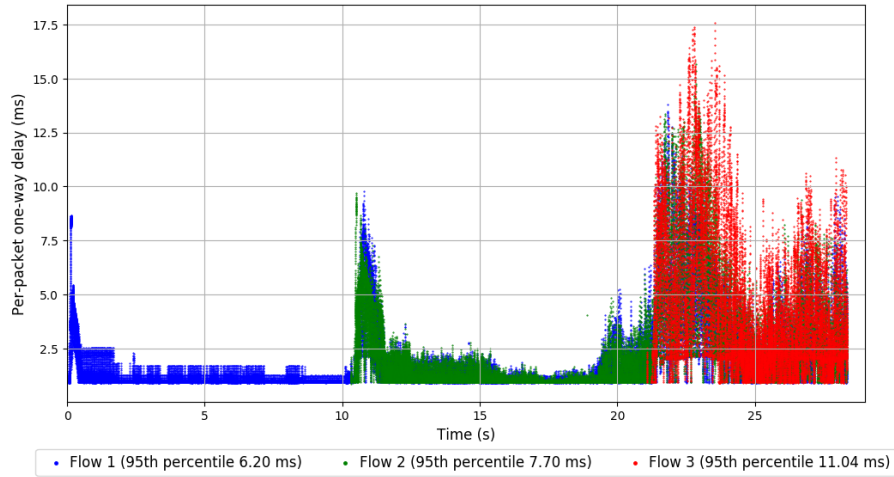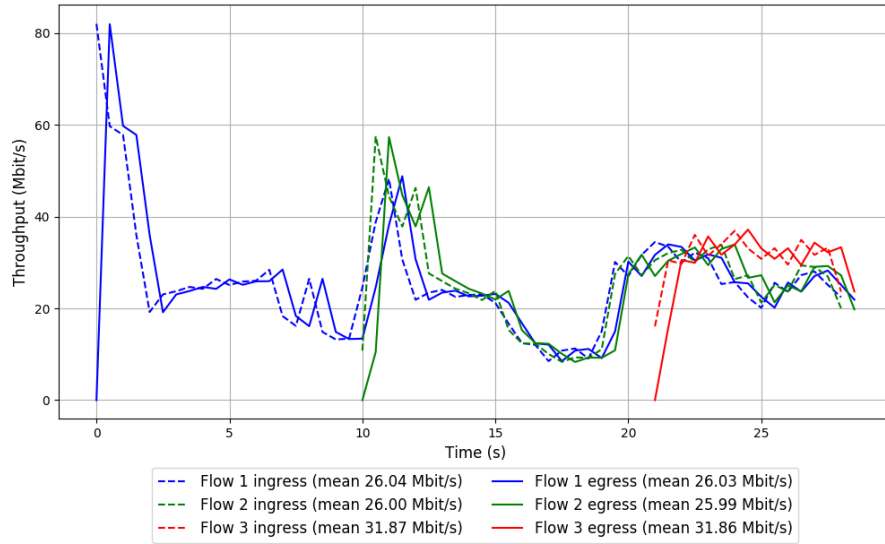
Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-10-03 11:48:02
End at: 2019-10-03 11:48:32
Local clock offset: -6.449 ms
Remote clock offset: 0.233 ms


# Below is generated by plot.py at 2019-10-03 13:25:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.07 Mbit/s
95th percentile per-packet one-way delay: 8.755 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 26.58 Mbit/s
95th percentile per-packet one-way delay: 5.494 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 24.70 Mbit/s
95th percentile per-packet one-way delay: 9.335 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 33.08 Mbit/s
95th percentile per-packet one-way delay: 11.538 ms
Loss rate: 0.00%
```
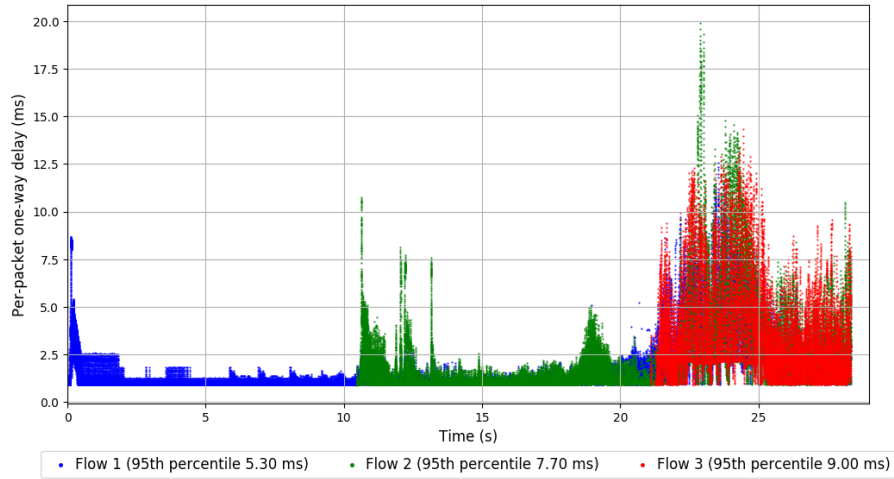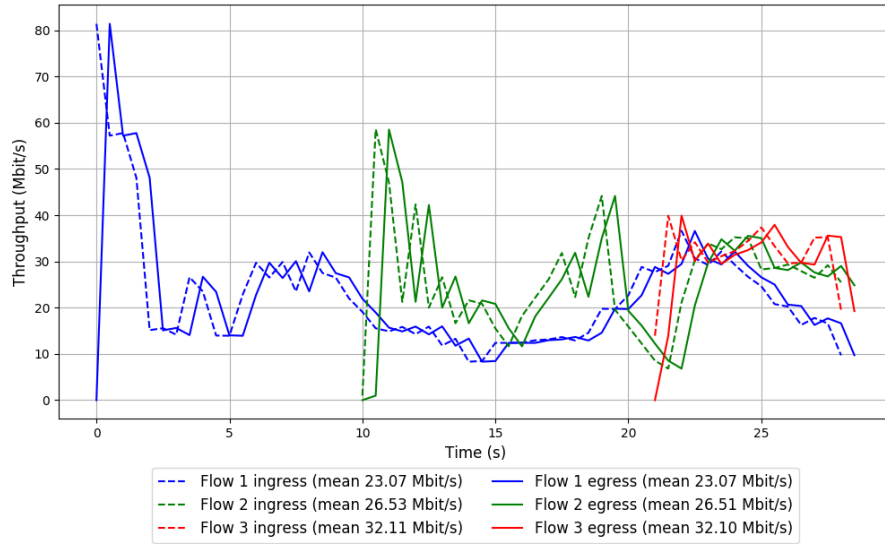
Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-10-03 12:15:25
End at: 2019-10-03 12:15:55
Local clock offset: -6.541 ms
Remote clock offset: 0.389 ms


# Below is generated by plot.py at 2019-10-03 13:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 51.75 Mbit/s
95th percentile per-packet one-way delay: 6.858 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 25.90 Mbit/s
95th percentile per-packet one-way delay: 5.956 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 28.97 Mbit/s
95th percentile per-packet one-way delay: 6.956 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 30.07 Mbit/s
95th percentile per-packet one-way delay: 8.279 ms
Loss rate: 0.10%
```
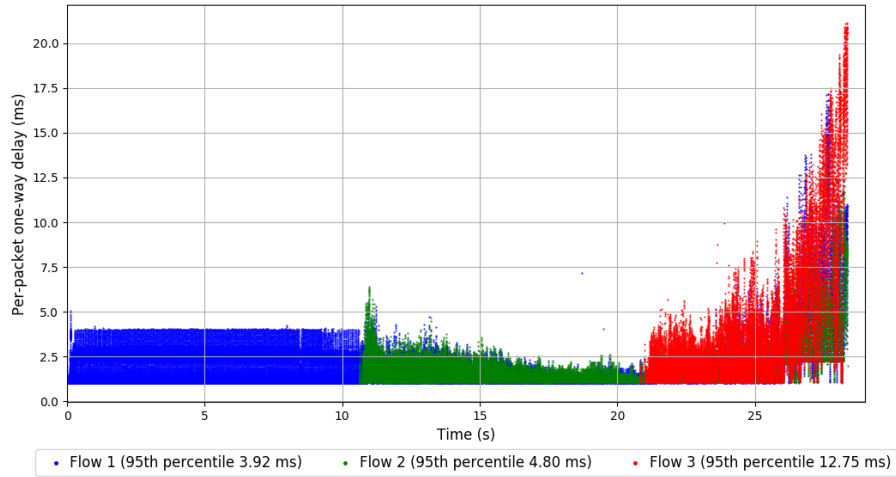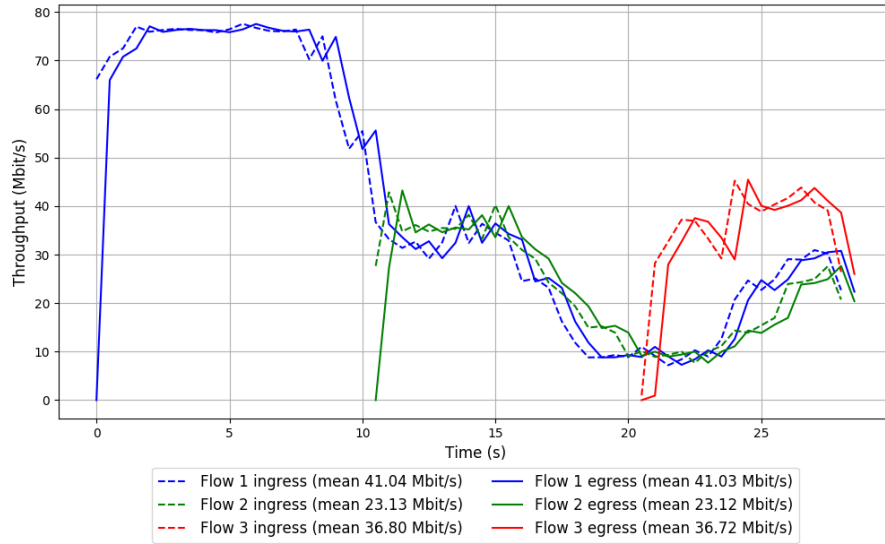
Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 25.91 Mbit/s)   Flow 1 egress (mean 25.90 Mbit/s)
Flow 2 ingress (mean 29.00 Mbit/s)   Flow 2 egress (mean 28.97 Mbit/s)
Flow 3 ingress (mean 30.10 Mbit/s)   Flow 3 egress (mean 30.07 Mbit/s)

Flow 1 (95th percentile 5.96 ms)   Flow 2 (95th percentile 6.96 ms)   Flow 3 (95th percentile 8.28 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-10-03 12:42:46
End at: 2019-10-03 12:43:16
Local clock offset: -5.424 ms
Remote clock offset: 0.267 ms


# Below is generated by plot.py at 2019-10-03 13:25:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 50.76 Mbit/s
95th percentile per-packet one-way delay: 8.089 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 26.03 Mbit/s
95th percentile per-packet one-way delay: 6.202 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 25.99 Mbit/s
95th percentile per-packet one-way delay: 7.697 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 31.86 Mbit/s
95th percentile per-packet one-way delay: 11.035 ms
Loss rate: 0.00%
```
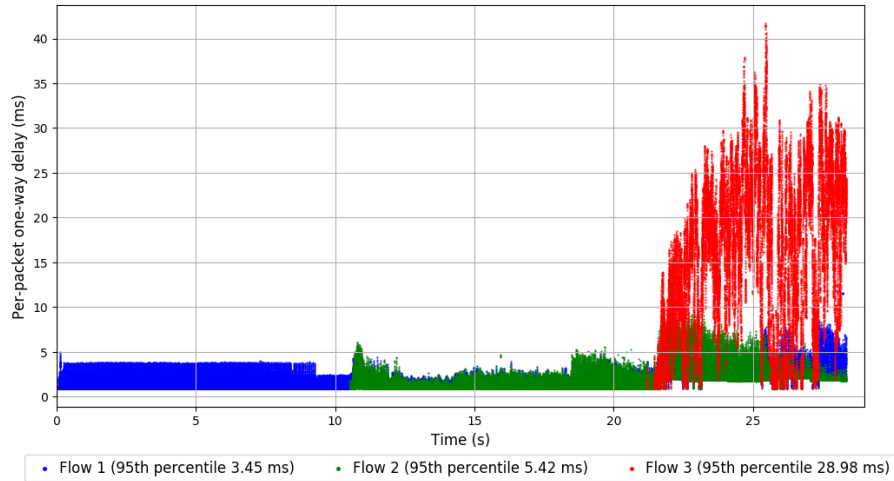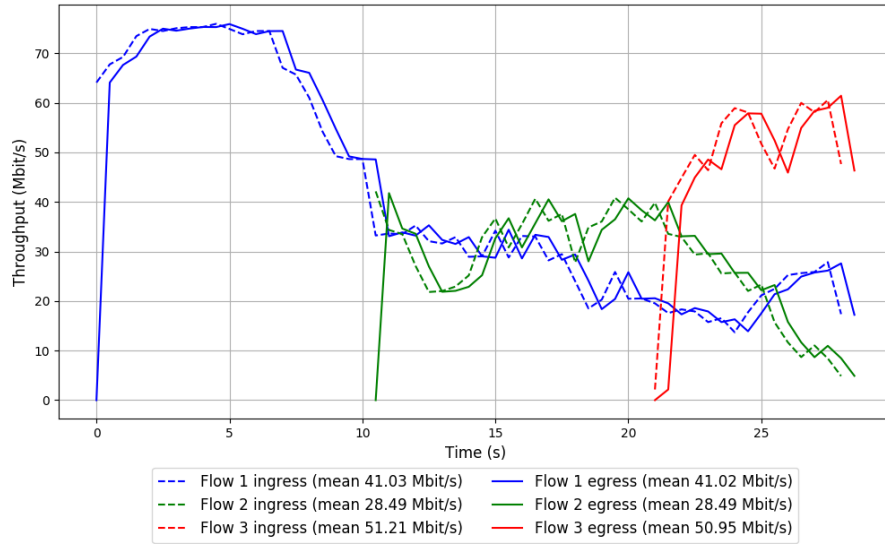
Run 4: Report of Indigo-MusesC5 — Data Link

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-10-03 13:10:10
End at: 2019-10-03 13:10:40
Local clock offset: -5.481 ms
Remote clock offset: 0.231 ms


# Below is generated by plot.py at 2019-10-03 13:25:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.00 Mbit/s
95th percentile per-packet one-way delay: 7.111 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 5.303 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.51 Mbit/s
95th percentile per-packet one-way delay: 7.697 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 32.10 Mbit/s
95th percentile per-packet one-way delay: 8.998 ms
Loss rate: 0.05%
```
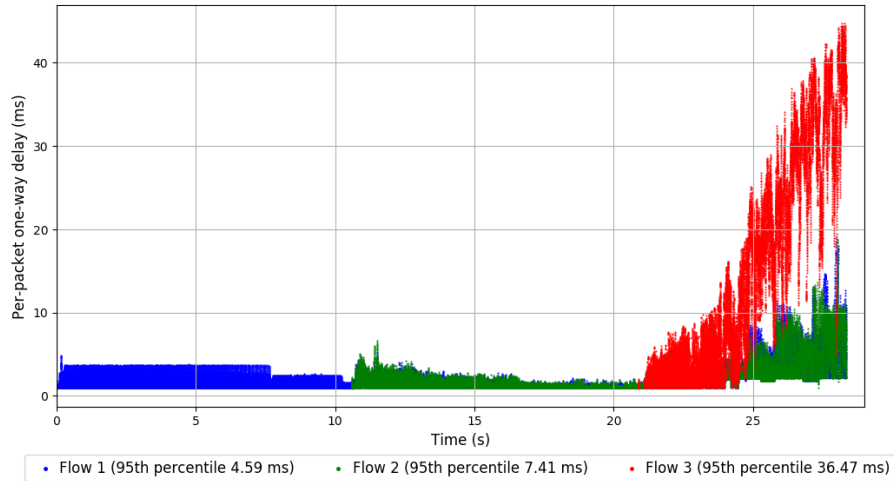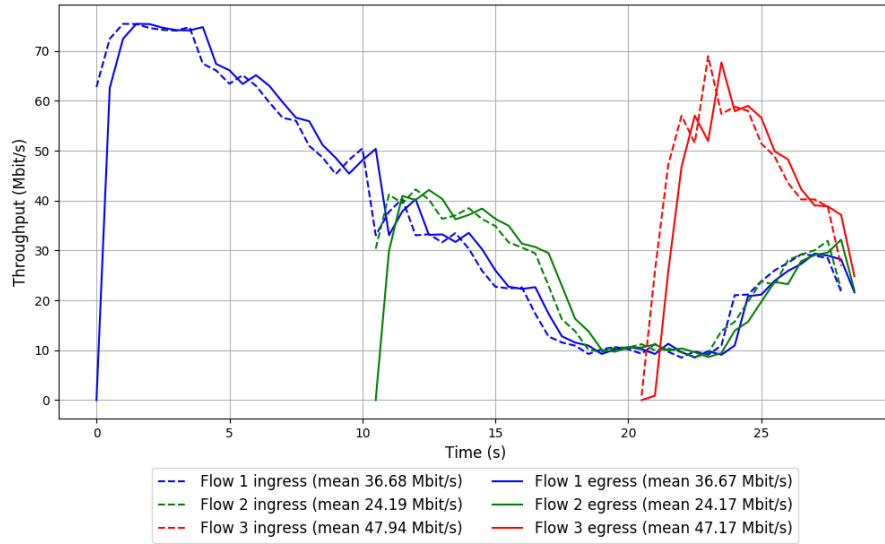
Run 5: Report of Indigo-MusesC5 — Data Link

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-10-03 11:11:36
End at: 2019-10-03 11:12:06
Local clock offset: -6.696 ms
Remote clock offset: -0.493 ms


# Below is generated by plot.py at 2019-10-03 13:26:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.25 Mbit/s
95th percentile per-packet one-way delay: 6.428 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 3.917 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 23.12 Mbit/s
95th percentile per-packet one-way delay: 4.802 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 36.72 Mbit/s
95th percentile per-packet one-way delay: 12.747 ms
Loss rate: 0.24%
```
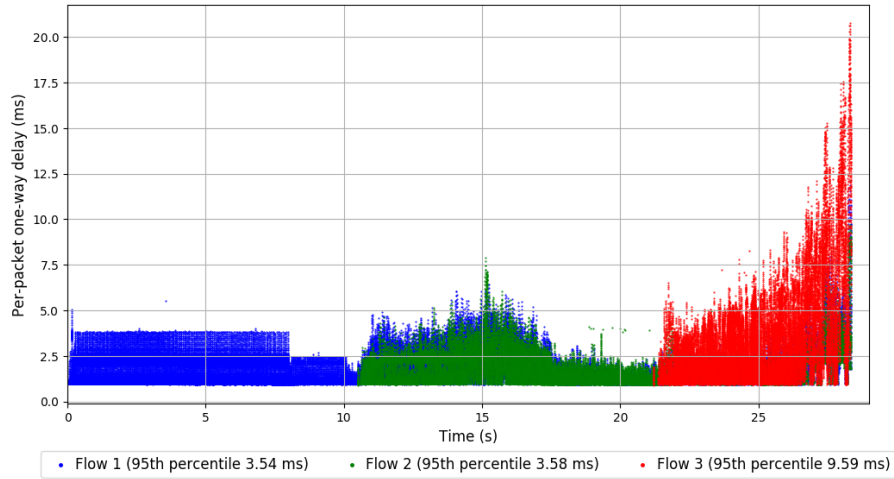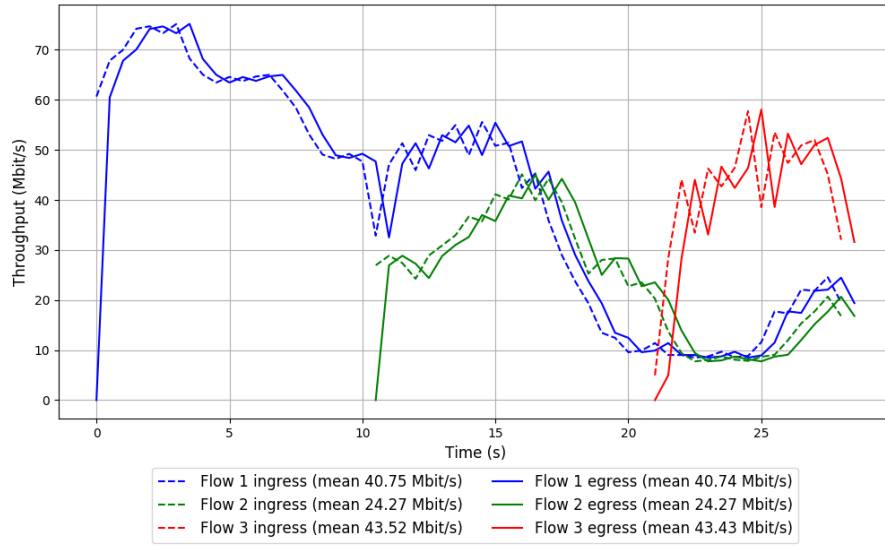
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-10-03 11:38:56
End at: 2019-10-03 11:39:26
Local clock offset: -6.482 ms
Remote clock offset: 0.153 ms


# Below is generated by plot.py at 2019-10-03 13:26:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.82 Mbit/s
95th percentile per-packet one-way delay: 22.621 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 41.02 Mbit/s
95th percentile per-packet one-way delay: 3.446 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 28.49 Mbit/s
95th percentile per-packet one-way delay: 5.423 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 50.95 Mbit/s
95th percentile per-packet one-way delay: 28.982 ms
Loss rate: 0.57%
```
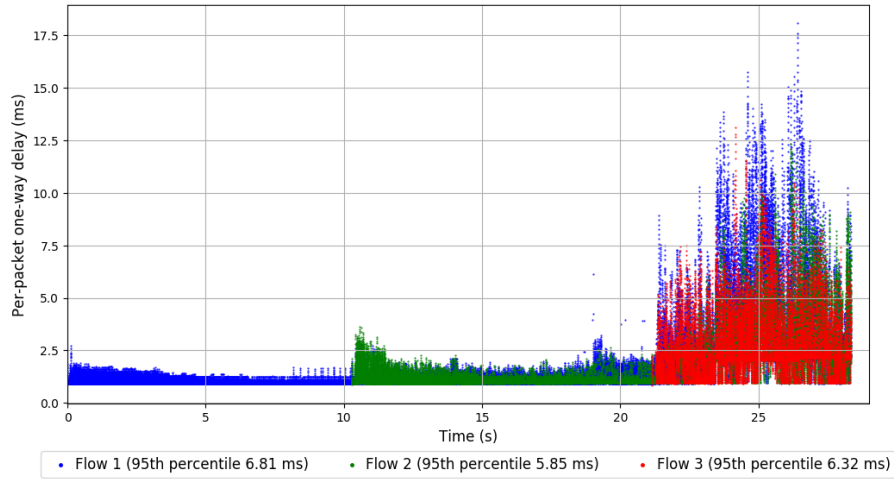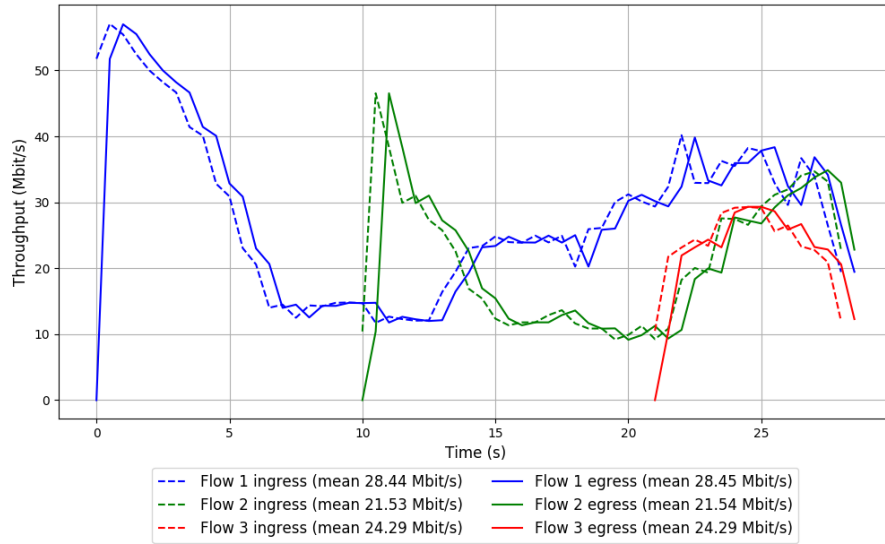
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-10-03 12:06:16
End at: 2019-10-03 12:06:46
Local clock offset: -6.506 ms
Remote clock offset: 0.356 ms


# Below is generated by plot.py at 2019-10-03 13:26:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.21 Mbit/s
95th percentile per-packet one-way delay: 21.629 ms
Loss rate: 0.35%
-- Flow 1:
Average throughput: 36.67 Mbit/s
95th percentile per-packet one-way delay: 4.586 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 24.17 Mbit/s
95th percentile per-packet one-way delay: 7.414 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 47.17 Mbit/s
95th percentile per-packet one-way delay: 36.467 ms
Loss rate: 1.62%
```
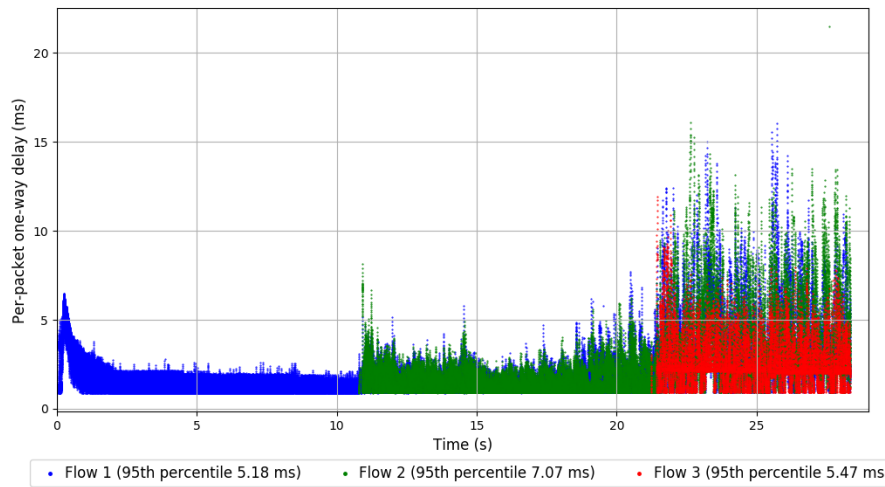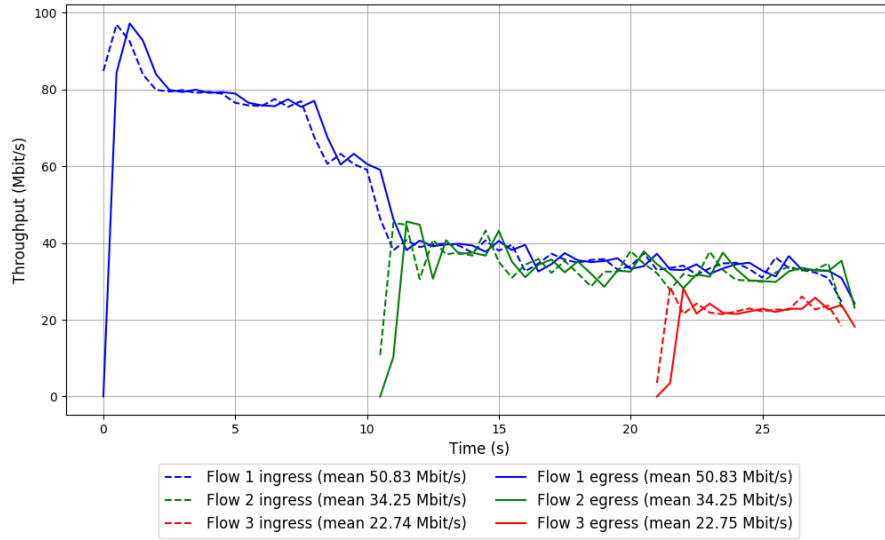
Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-10-03 12:33:40
End at: 2019-10-03 12:34:10
Local clock offset: -5.765 ms
Remote clock offset: 0.263 ms


# Below is generated by plot.py at 2019-10-03 13:26:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.98 Mbit/s
95th percentile per-packet one-way delay: 4.719 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 40.74 Mbit/s
95th percentile per-packet one-way delay: 3.538 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.27 Mbit/s
95th percentile per-packet one-way delay: 3.575 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 43.43 Mbit/s
95th percentile per-packet one-way delay: 9.589 ms
Loss rate: 0.21%
```
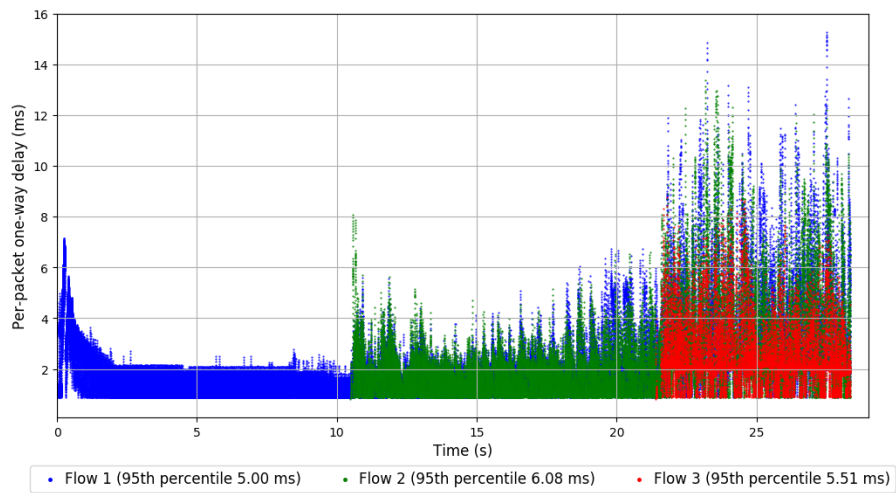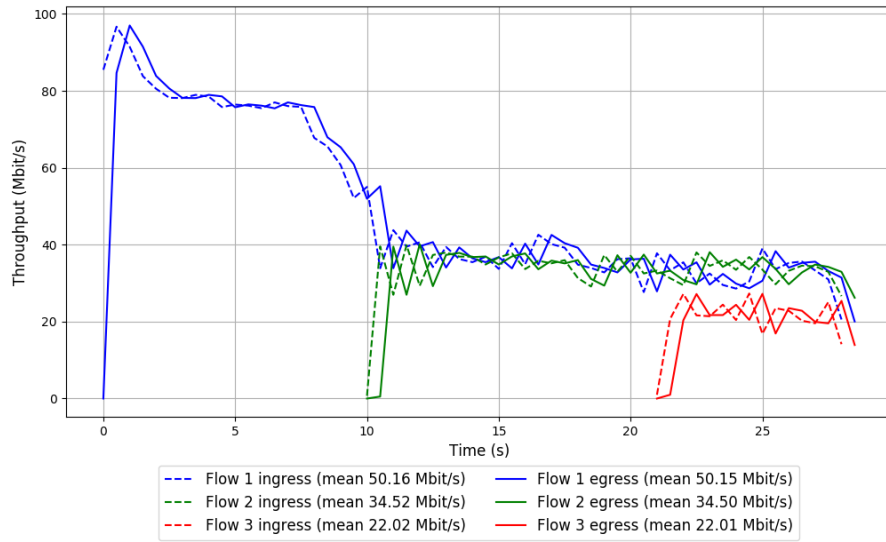
Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 40.75 Mbit/s) --- Flow 1 egress (mean 40.74 Mbit/s)
Flow 2 ingress (mean 24.27 Mbit/s) --- Flow 2 egress (mean 24.27 Mbit/s)
Flow 3 ingress (mean 43.52 Mbit/s) --- Flow 3 egress (mean 43.43 Mbit/s)

Flow 1 (95th percentile 3.54 ms)   Flow 2 (95th percentile 3.58 ms)   Flow 3 (95th percentile 9.59 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-10-03 13:01:04
End at: 2019-10-03 13:01:34
Local clock offset: -5.42 ms
Remote clock offset: 0.076 ms


# Below is generated by plot.py at 2019-10-03 13:26:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 6.438 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 28.45 Mbit/s
95th percentile per-packet one-way delay: 6.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.54 Mbit/s
95th percentile per-packet one-way delay: 5.850 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 24.29 Mbit/s
95th percentile per-packet one-way delay: 6.321 ms
Loss rate: 0.01%
```
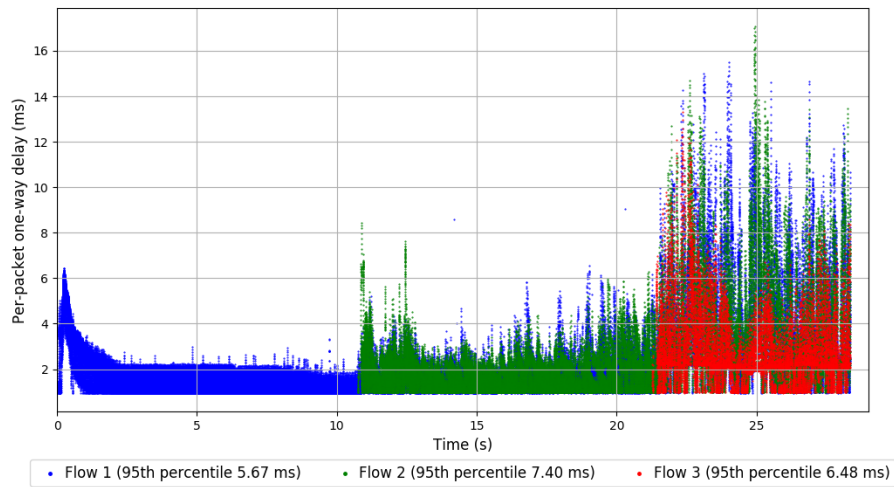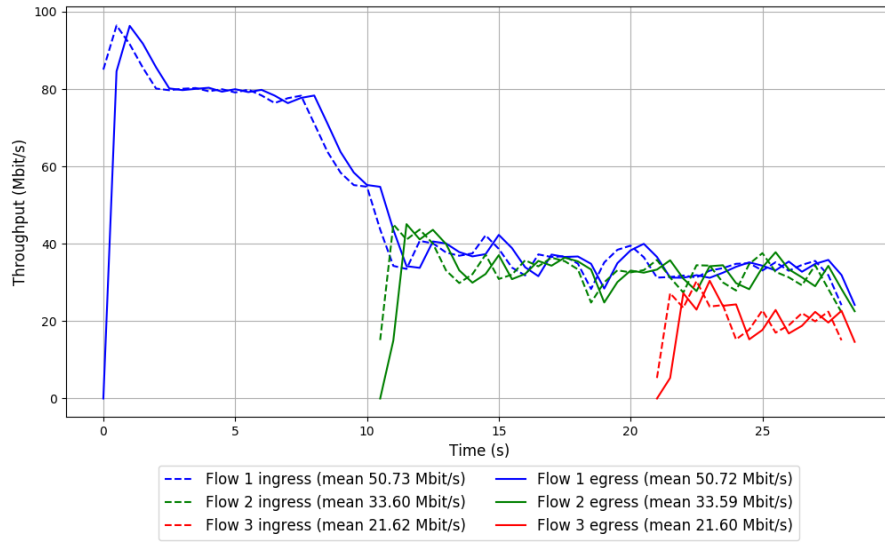
Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-10-03 11:15:01
End at: 2019-10-03 11:15:31
Local clock offset: -6.74 ms
Remote clock offset: -0.313 ms


# Below is generated by plot.py at 2019-10-03 13:26:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.75 Mbit/s
95th percentile per-packet one-way delay: 5.771 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.83 Mbit/s
95th percentile per-packet one-way delay: 5.176 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 7.067 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 22.75 Mbit/s
95th percentile per-packet one-way delay: 5.472 ms
Loss rate: 0.08%
```
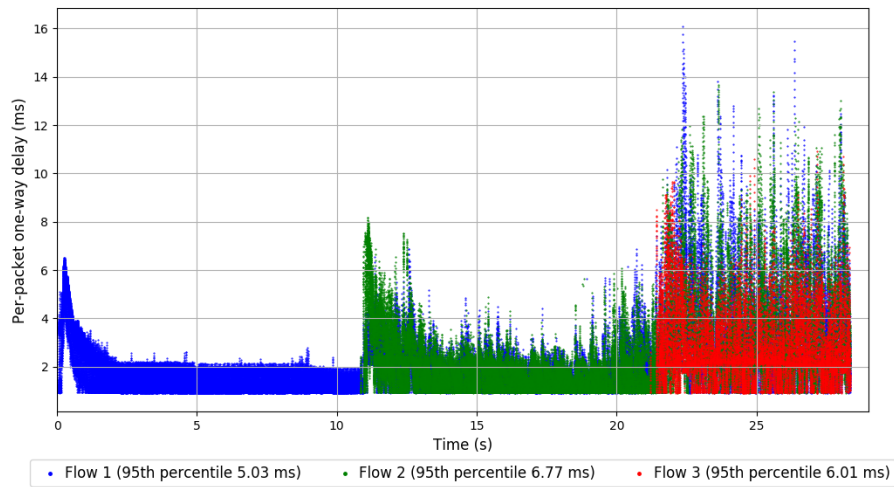
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-10-03 11:42:21
End at: 2019-10-03 11:42:51
Local clock offset: -6.538 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2019-10-03 13:26:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.29 Mbit/s
95th percentile per-packet one-way delay: 5.378 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 50.15 Mbit/s
95th percentile per-packet one-way delay: 5.001 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 34.50 Mbit/s
95th percentile per-packet one-way delay: 6.084 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 22.01 Mbit/s
95th percentile per-packet one-way delay: 5.506 ms
Loss rate: 0.07%
```
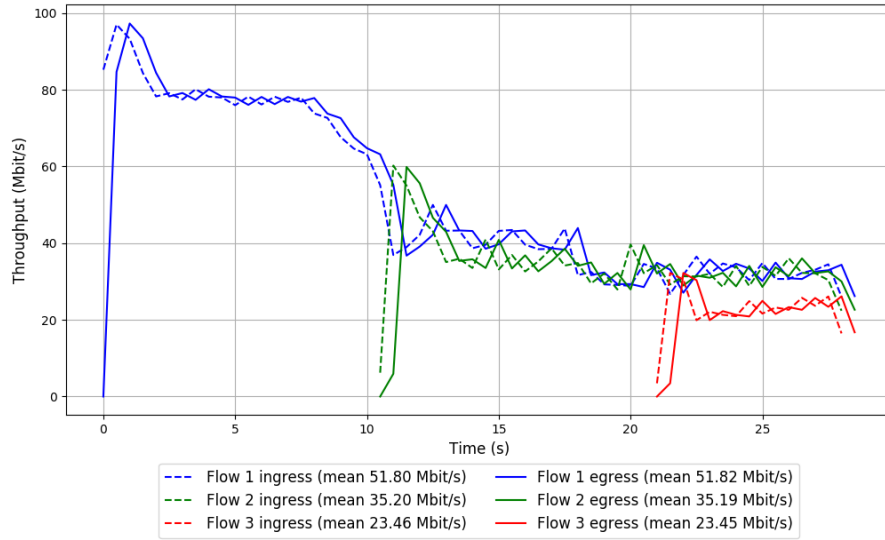
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-10-03 12:09:41
End at: 2019-10-03 12:10:11
Local clock offset: -6.517 ms
Remote clock offset: 0.362 ms

# Below is generated by plot.py at 2019-10-03 13:26:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 6.289 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.72 Mbit/s
95th percentile per-packet one-way delay: 5.672 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 33.59 Mbit/s
95th percentile per-packet one-way delay: 7.402 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 21.60 Mbit/s
95th percentile per-packet one-way delay: 6.482 ms
Loss rate: 0.17%
```
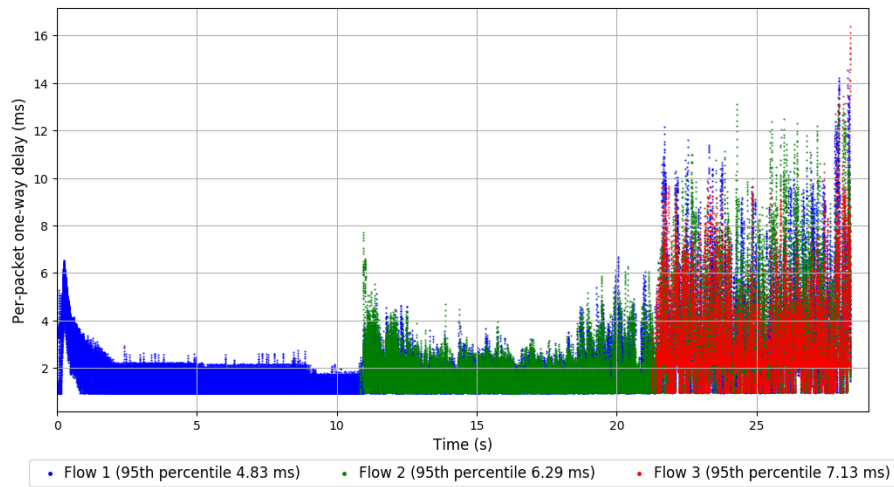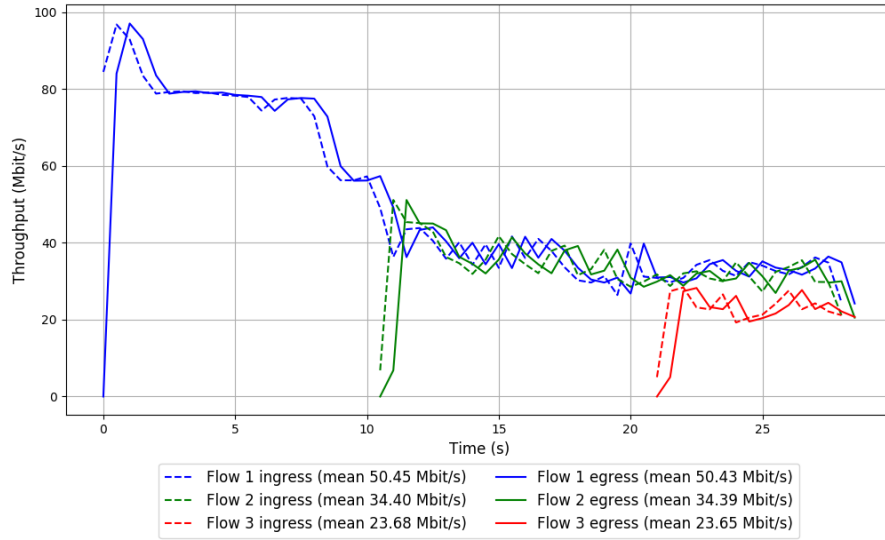
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 50.73 Mbit/s) --- Flow 1 egress (mean 50.72 Mbit/s)
Flow 2 ingress (mean 33.60 Mbit/s) --- Flow 2 egress (mean 33.59 Mbit/s)
Flow 3 ingress (mean 21.62 Mbit/s) --- Flow 3 egress (mean 21.60 Mbit/s)

• Flow 1 (95th percentile 5.67 ms)   • Flow 2 (95th percentile 7.40 ms)   • Flow 3 (95th percentile 6.48 ms)

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```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-10-03 12:37:05
End at: 2019-10-03 12:37:35
Local clock offset: -5.608 ms
Remote clock offset: 0.296 ms


# Below is generated by plot.py at 2019-10-03 13:27:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.45 Mbit/s
95th percentile per-packet one-way delay: 5.683 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.82 Mbit/s
95th percentile per-packet one-way delay: 5.030 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.19 Mbit/s
95th percentile per-packet one-way delay: 6.766 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 23.45 Mbit/s
95th percentile per-packet one-way delay: 6.010 ms
Loss rate: 0.00%
```
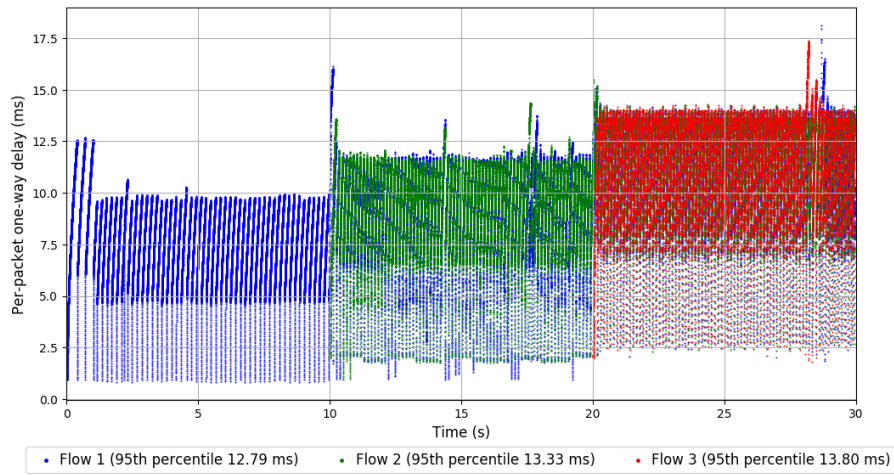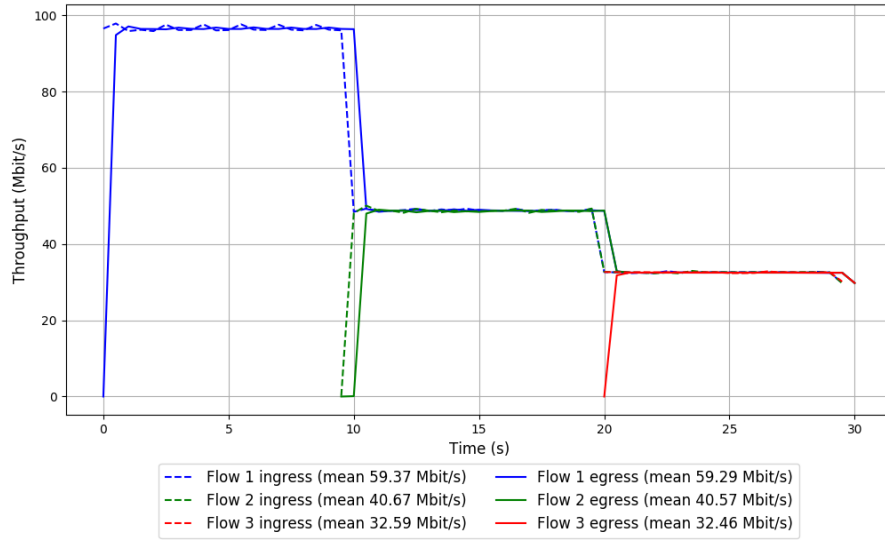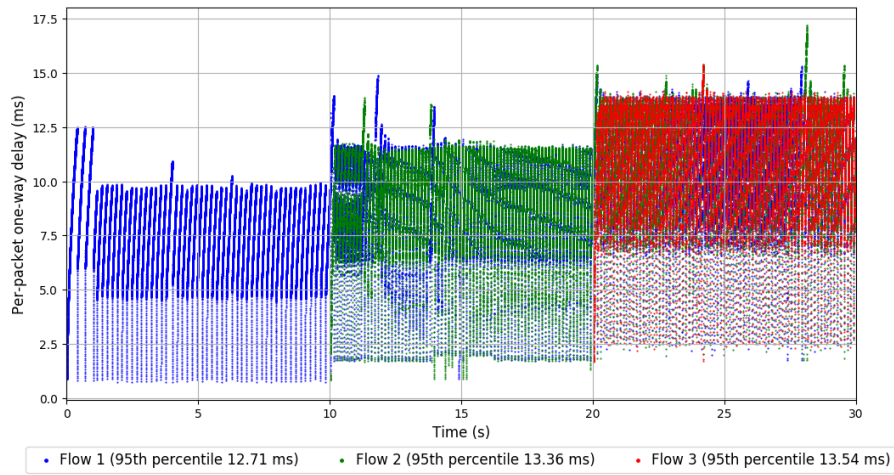
Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-10-03 13:04:28
End at: 2019-10-03 13:04:58
Local clock offset: -5.384 ms
Remote clock offset: 0.168 ms


# Below is generated by plot.py at 2019-10-03 13:27:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.61 Mbit/s
95th percentile per-packet one-way delay: 5.632 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 50.43 Mbit/s
95th percentile per-packet one-way delay: 4.831 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 34.39 Mbit/s
95th percentile per-packet one-way delay: 6.290 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 7.127 ms
Loss rate: 0.13%
```
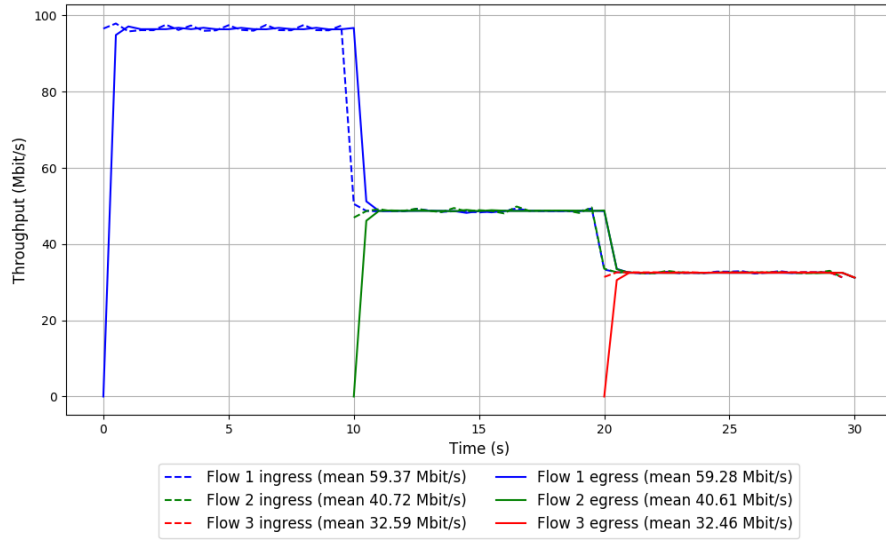
Run 5: Report of Indigo-MusesT — Data Link

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```
Run 1: Statistics of LEDBAT

Start at: 2019-10-03 11:22:59
End at: 2019-10-03 11:23:29
Local clock offset: -6.768 ms
Remote clock offset: -0.142 ms

# Below is generated by plot.py at 2019-10-03 13:27:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 13.278 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 59.29 Mbit/s
95th percentile per-packet one-way delay: 12.795 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 40.57 Mbit/s
95th percentile per-packet one-way delay: 13.326 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 13.796 ms
Loss rate: 0.43%
```
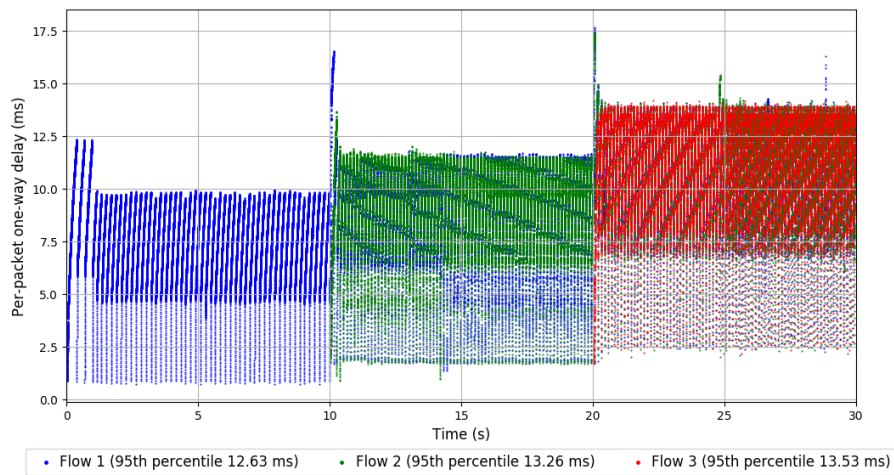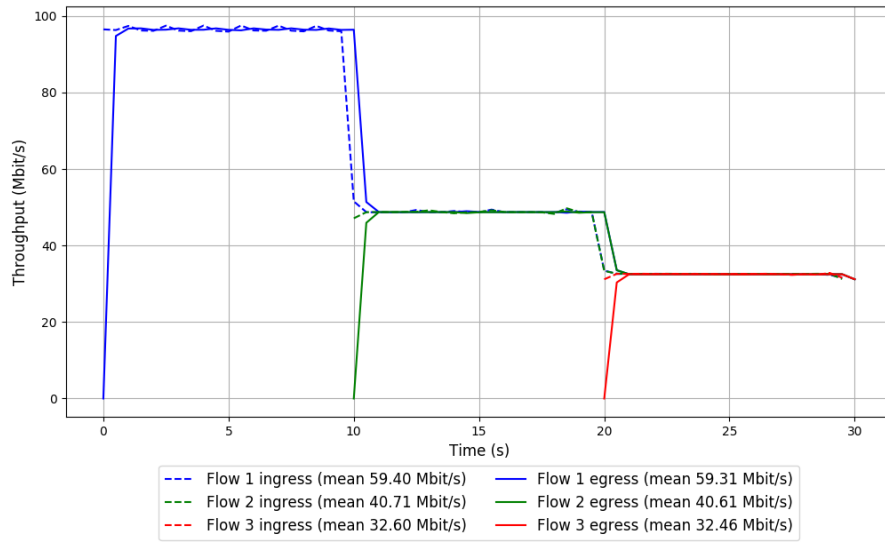
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-10-03 11:50:19
End at: 2019-10-03 11:50:49
Local clock offset: -6.507 ms
Remote clock offset: 0.246 ms


# Below is generated by plot.py at 2019-10-03 13:27:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 13.193 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 12.705 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 40.61 Mbit/s
95th percentile per-packet one-way delay: 13.359 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 13.543 ms
Loss rate: 0.42%
```
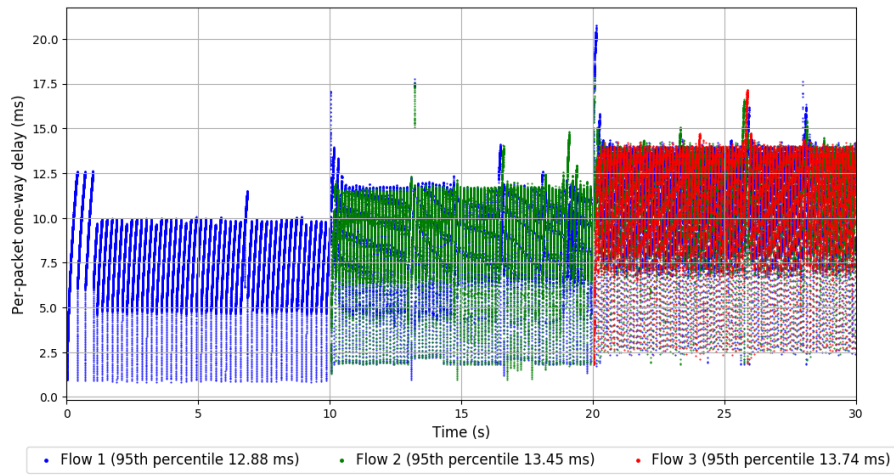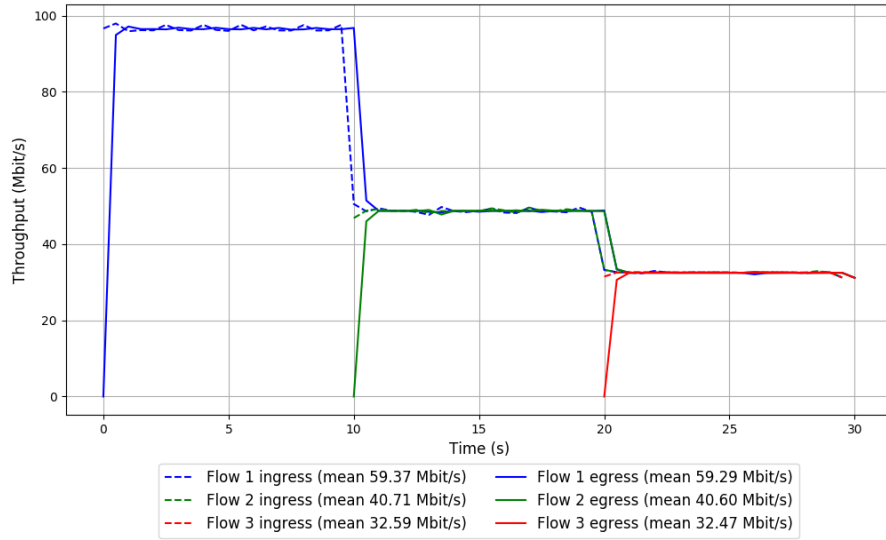
Run 2: Report of LEDBAT — Data Link

Flow 1 ingress (mean 59.37 Mbit/s) --- Flow 1 egress (mean 59.28 Mbit/s)
Flow 2 ingress (mean 40.72 Mbit/s) --- Flow 2 egress (mean 40.61 Mbit/s)
Flow 3 ingress (mean 32.59 Mbit/s) --- Flow 3 egress (mean 32.46 Mbit/s)

Flow 1 (95th percentile 12.71 ms)   Flow 2 (95th percentile 13.36 ms)   Flow 3 (95th percentile 13.54 ms)

```
Run 3: Statistics of LEDBAT

Start at: 2019-10-03 12:17:41
End at: 2019-10-03 12:18:11
Local clock offset: -6.618 ms
Remote clock offset: 0.37 ms


# Below is generated by plot.py at 2019-10-03 13:27:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.13 Mbit/s
95th percentile per-packet one-way delay: 13.149 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 59.31 Mbit/s
95th percentile per-packet one-way delay: 12.632 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 40.61 Mbit/s
95th percentile per-packet one-way delay: 13.258 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 32.46 Mbit/s
95th percentile per-packet one-way delay: 13.526 ms
Loss rate: 0.42%
```
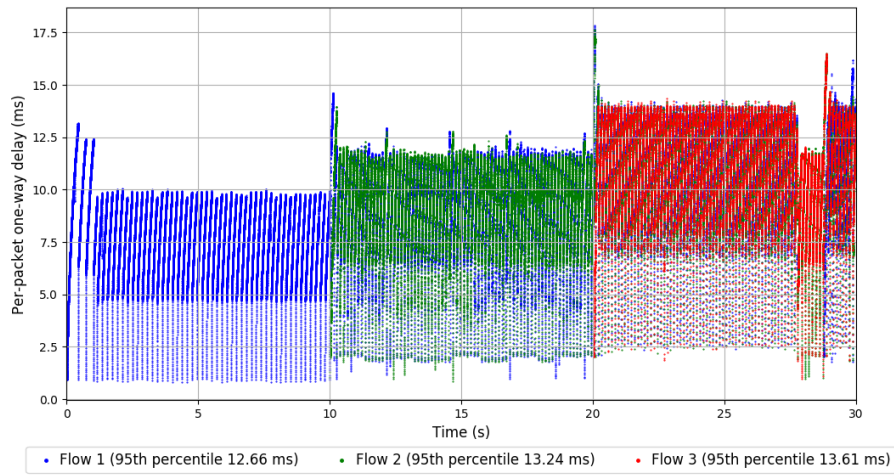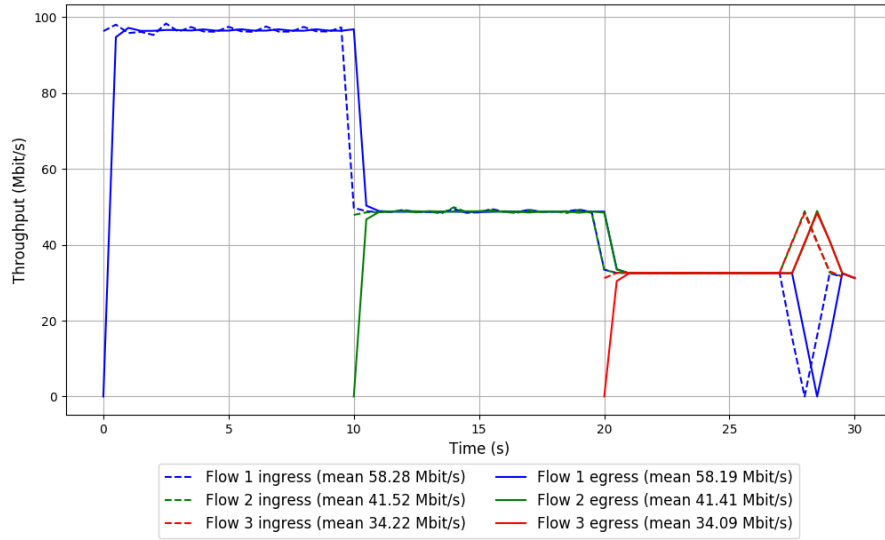
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-10-03 12:45:03
End at: 2019-10-03 12:45:33
Local clock offset: -5.351 ms
Remote clock offset: 0.24 ms


# Below is generated by plot.py at 2019-10-03 13:28:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.11 Mbit/s
95th percentile per-packet one-way delay: 13.342 ms
Loss rate: 0.21%
-- Flow 1:
Average throughput: 59.29 Mbit/s
95th percentile per-packet one-way delay: 12.878 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 40.60 Mbit/s
95th percentile per-packet one-way delay: 13.445 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 32.47 Mbit/s
95th percentile per-packet one-way delay: 13.739 ms
Loss rate: 0.38%
```
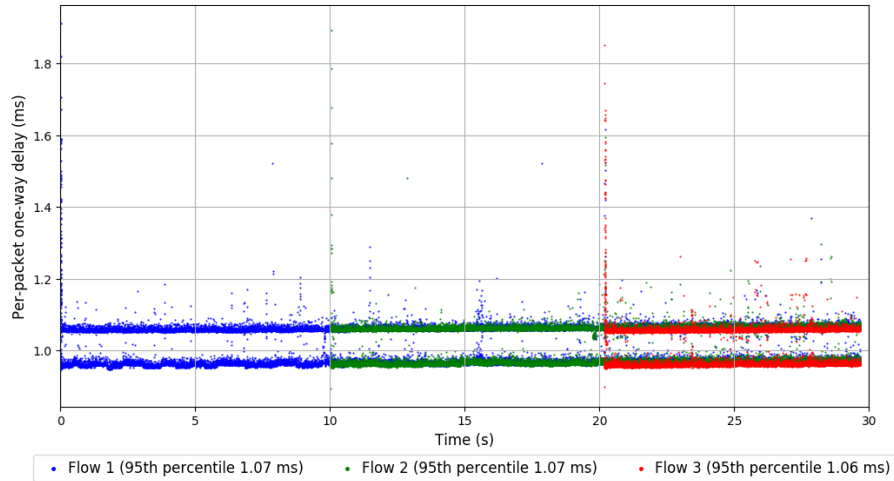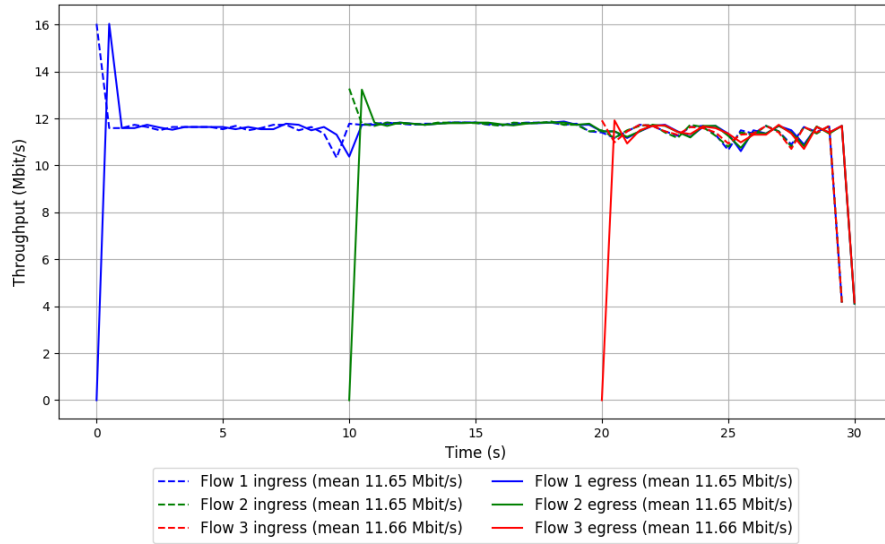
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 59.37 Mbit/s) --- Flow 1 egress (mean 59.29 Mbit/s)
Flow 2 ingress (mean 40.71 Mbit/s) --- Flow 2 egress (mean 40.60 Mbit/s)
Flow 3 ingress (mean 32.59 Mbit/s) --- Flow 3 egress (mean 32.47 Mbit/s)

Flow 1 (95th percentile 12.88 ms) • Flow 2 (95th percentile 13.45 ms) • Flow 3 (95th percentile 13.74 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-10-03 13:12:26
End at: 2019-10-03 13:12:56
Local clock offset: -5.408 ms
Remote clock offset: 0.319 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.10 Mbit/s
95th percentile per-packet one-way delay: 13.175 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 58.19 Mbit/s
95th percentile per-packet one-way delay: 12.665 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 41.41 Mbit/s
95th percentile per-packet one-way delay: 13.239 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 34.09 Mbit/s
95th percentile per-packet one-way delay: 13.610 ms
Loss rate: 0.39%
```
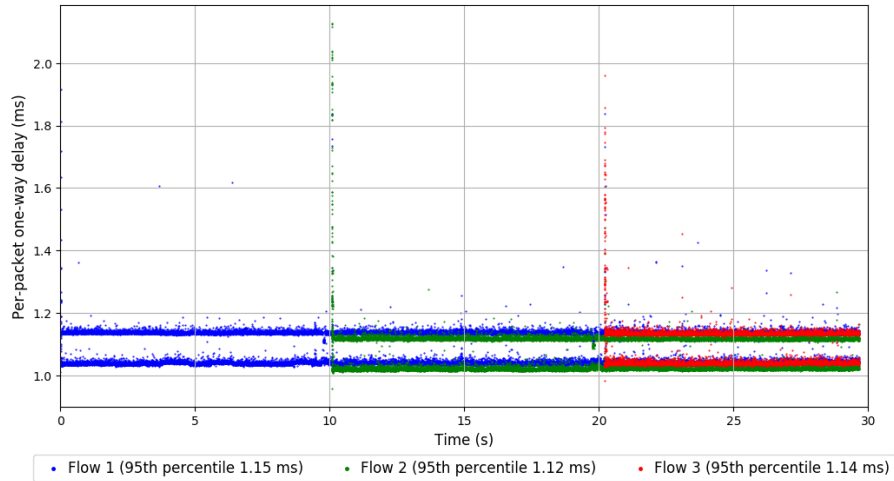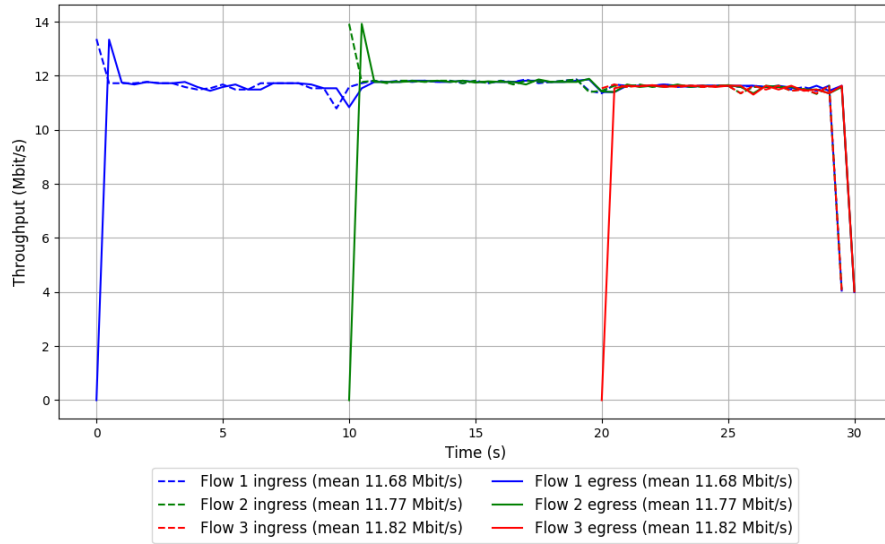
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 11:04:46
End at: 2019-10-03 11:05:16
Local clock offset: -6.683 ms
Remote clock offset: -0.612 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.09 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.65 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.65 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.66 Mbit/s
95th percentile per-packet one-way delay: 1.065 ms
Loss rate: 0.02%
```
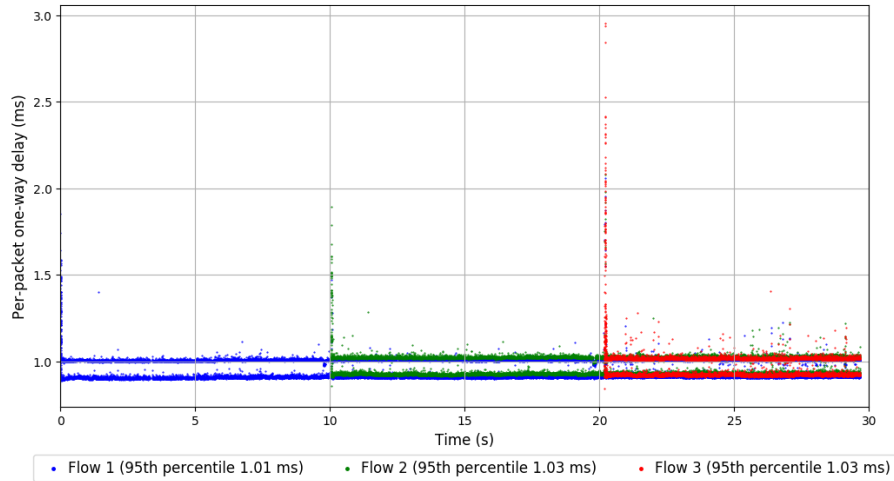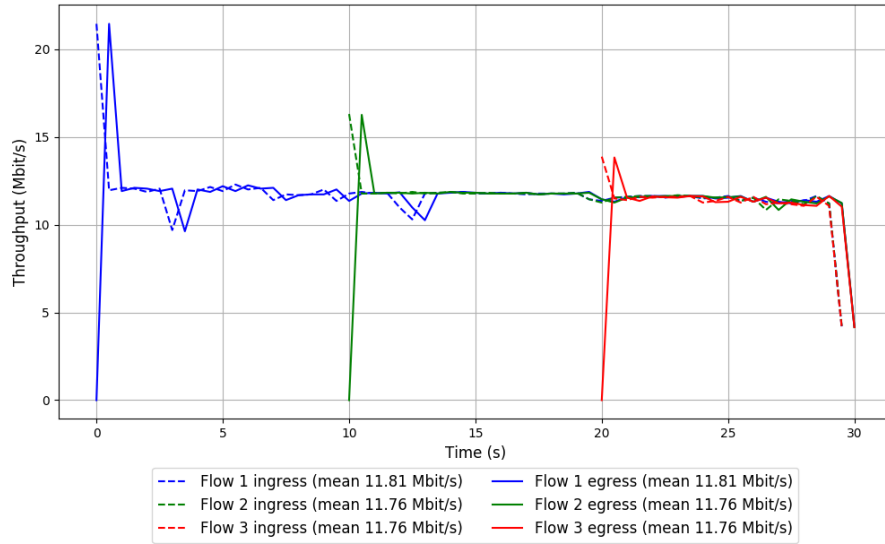
Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 11:32:06
End at: 2019-10-03 11:32:36
Local clock offset: -6.577 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 1.143 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.68 Mbit/s
95th percentile per-packet one-way delay: 1.145 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.77 Mbit/s
95th percentile per-packet one-way delay: 1.125 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.82 Mbit/s
95th percentile per-packet one-way delay: 1.143 ms
Loss rate: 0.02%
```
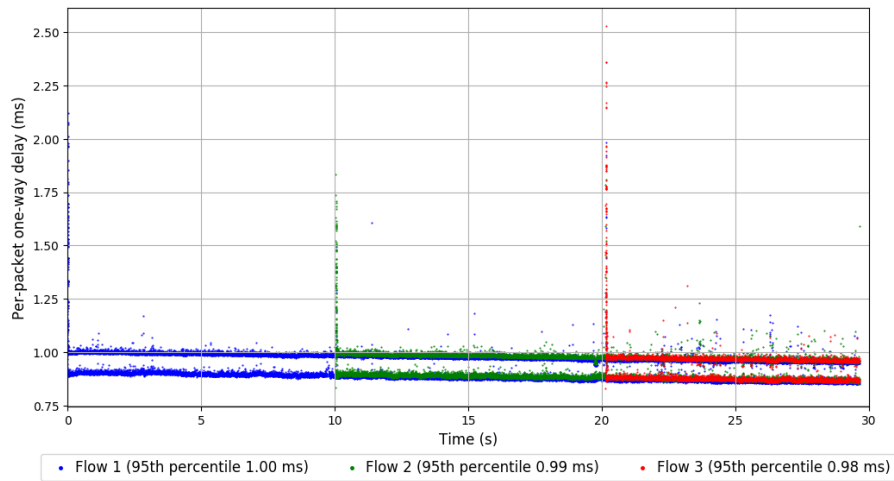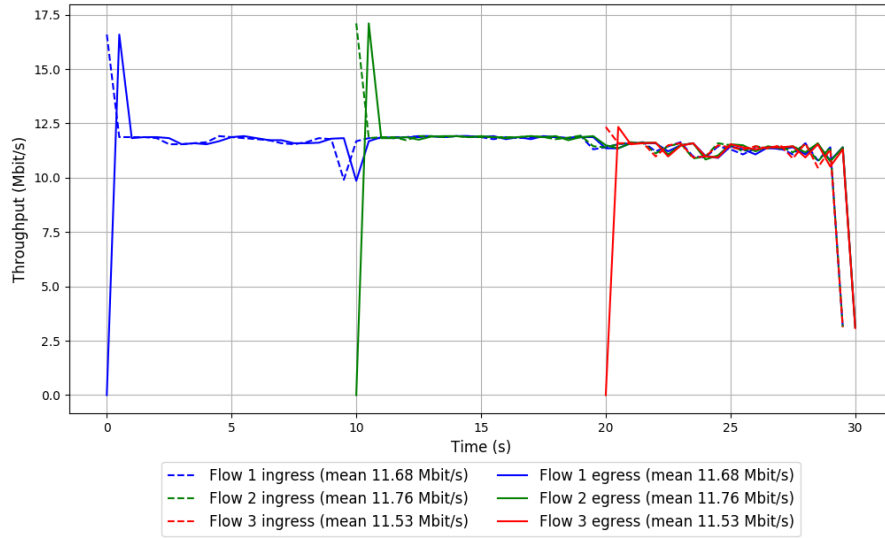
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 11:59:26
End at: 2019-10-03 11:59:56
Local clock offset: -6.465 ms
Remote clock offset: 0.329 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.35 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 1.014 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 1.033 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.02%
```
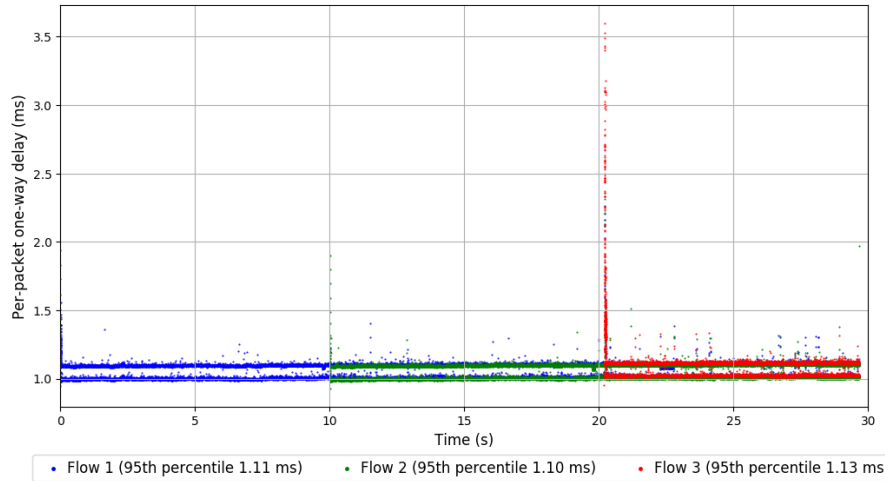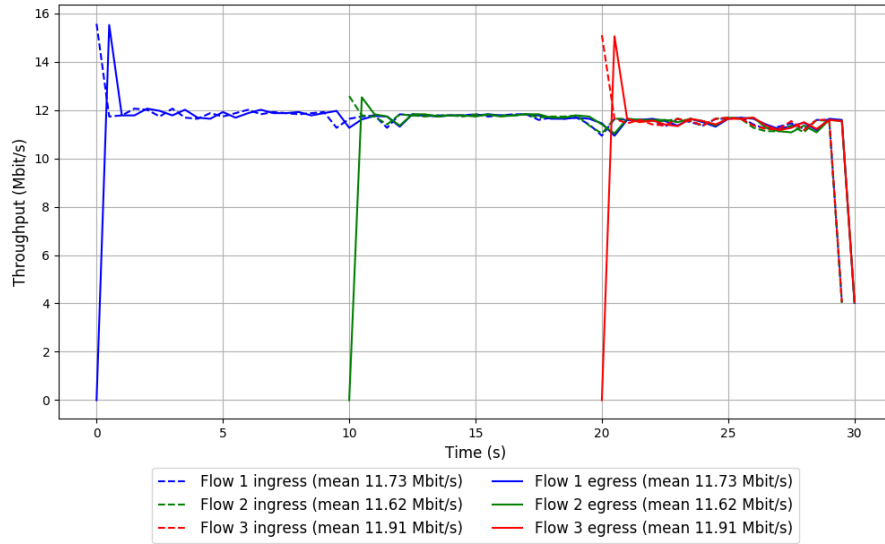
Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 12:26:49
End at: 2019-10-03 12:27:19
Local clock offset: -6.296 ms
Remote clock offset: 0.317 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.15 Mbit/s
95th percentile per-packet one-way delay: 0.997 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.68 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 11.53 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.02%
```
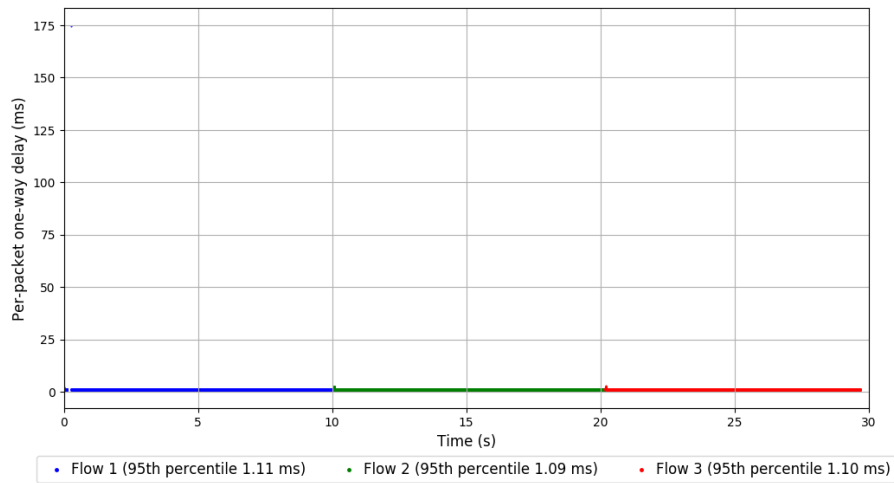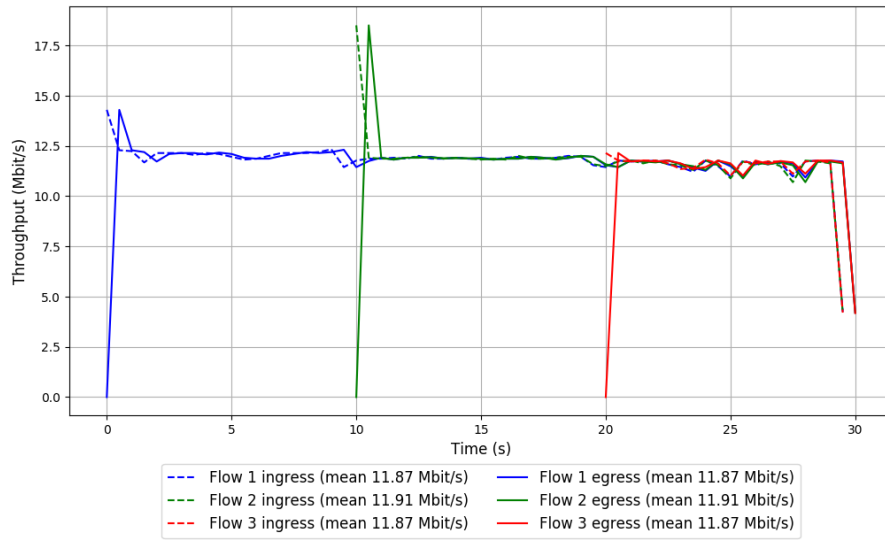
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-10-03 12:54:13
End at: 2019-10-03 12:54:43
Local clock offset: -5.131 ms
Remote clock offset: 0.124 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.23 Mbit/s
95th percentile per-packet one-way delay: 1.116 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 1.111 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.62 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.91 Mbit/s
95th percentile per-packet one-way delay: 1.131 ms
Loss rate: 0.02%
```
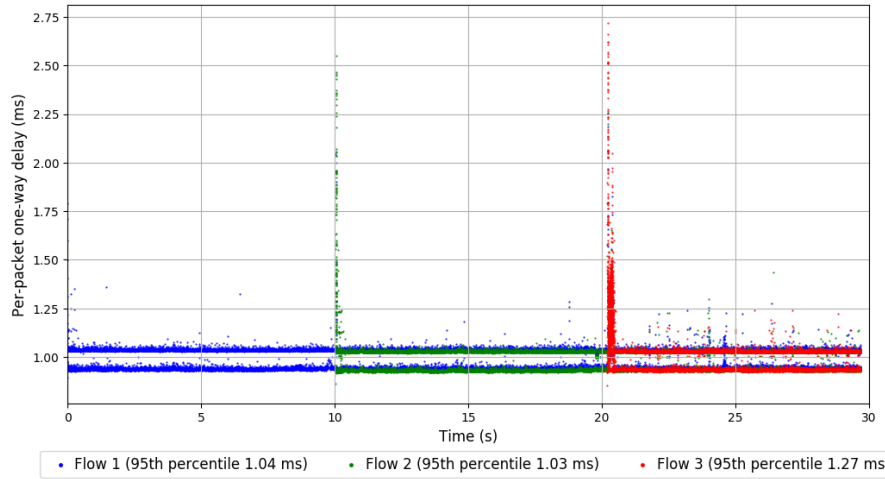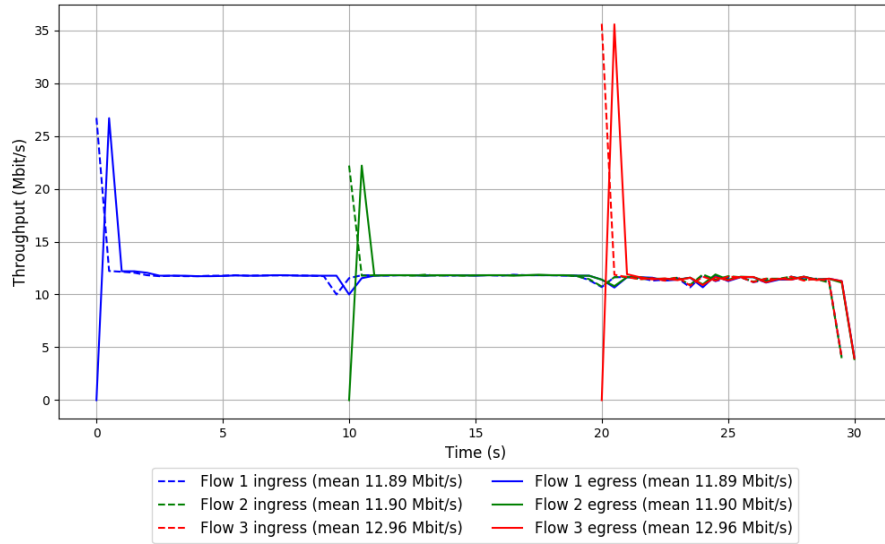
Run 5: Report of Muses_DecisionTree — Data Link

Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-10-03 11:12:44
End at: 2019-10-03 11:13:14
Local clock offset: -6.7 ms
Remote clock offset: -0.449 ms

Below is generated by plot.py at 2019-10-03 13:28:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 23.55 Mbit/s
95th percentile per-packet one-way delay: 1.111 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.91 Mbit/s
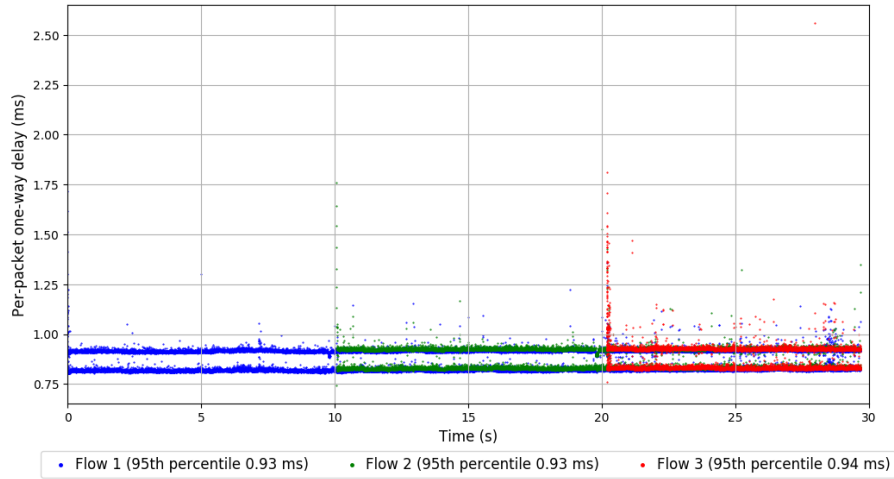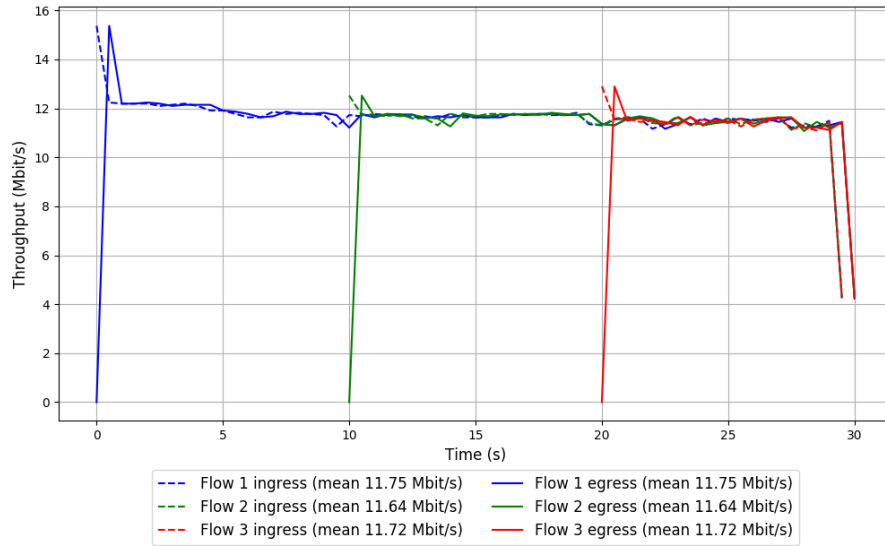95th percentile per-packet one-way delay: 1.089 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 0.01%

Run 1: Report of Muses_DecisionTreeH0 — Data Link

Run 2: Statistics of Muses_DecisionTreeH0

Start at: 2019-10-03 11:40:04
End at: 2019-10-03 11:40:34
Local clock offset: -6.492 ms
Remote clock offset: 0.133 ms

Below is generated by plot.py at 2019-10-03 13:28:13
Datalink statistics
-- Total of 3 flows:
Average throughput: 23.90 Mbit/s
95th percentile per-packet one-way delay: 1.046 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.89 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.90 Mbit/s
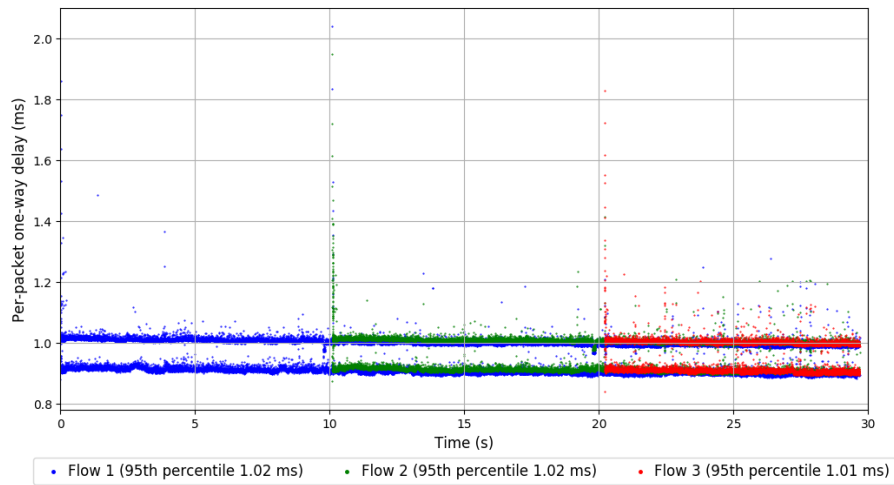95th percentile per-packet one-way delay: 1.035 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.96 Mbit/s
95th percentile per-packet one-way delay: 1.269 ms
Loss rate: 0.02%

Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 12:07:24
End at: 2019-10-03 12:07:54
Local clock offset: -6.58 ms
Remote clock offset: 0.433 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 0.931 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.75 Mbit/s
95th percentile per-packet one-way delay: 0.925 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 0.933 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 0.937 ms
Loss rate: 0.01%
```
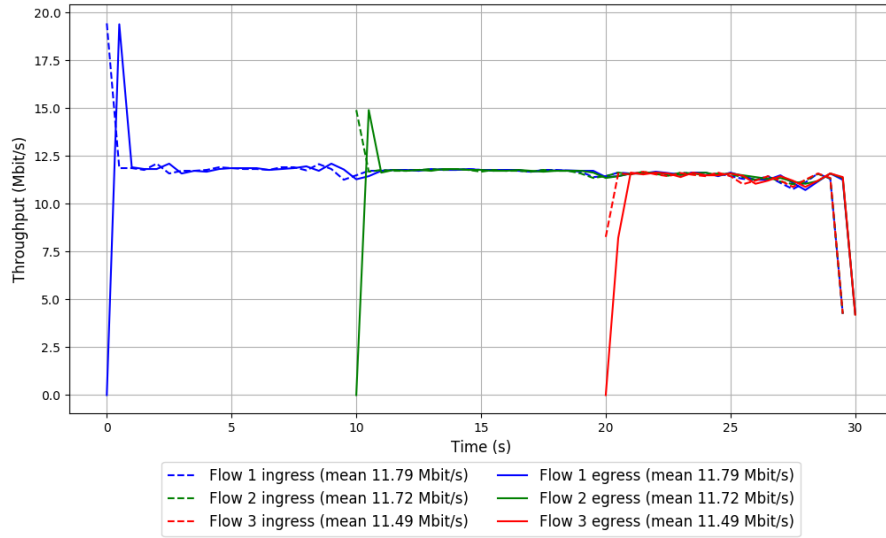
Run 3: Report of Muses_DecisionTreeH0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 12:34:48
End at: 2019-10-03 12:35:18
Local clock offset: -5.77 ms
Remote clock offset: 0.256 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.19 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.02%
```
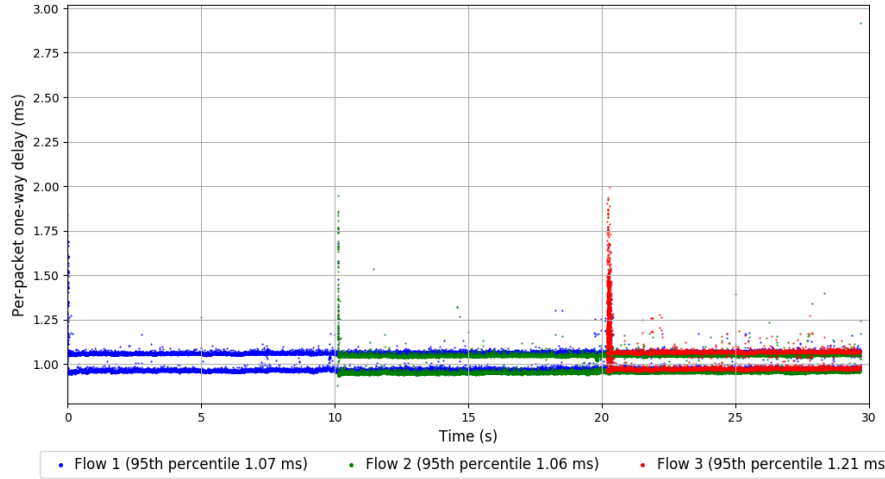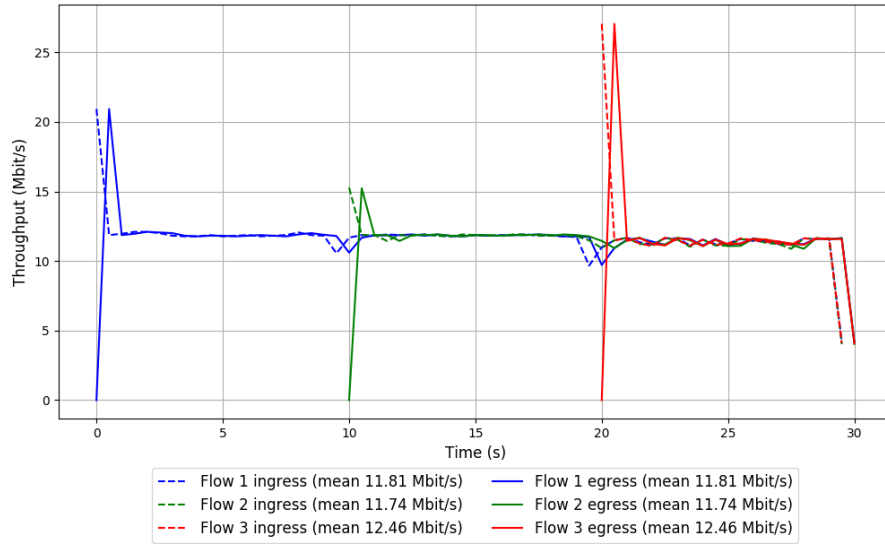
Run 4: Report of Muses_DecisionTreeH0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-10-03 13:02:11
End at: 2019-10-03 13:02:41
Local clock offset: -5.36 ms
Remote clock offset: 0.14 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.53 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.81 Mbit/s
95th percentile per-packet one-way delay: 1.070 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.74 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.46 Mbit/s
95th percentile per-packet one-way delay: 1.208 ms
Loss rate: 0.01%
```
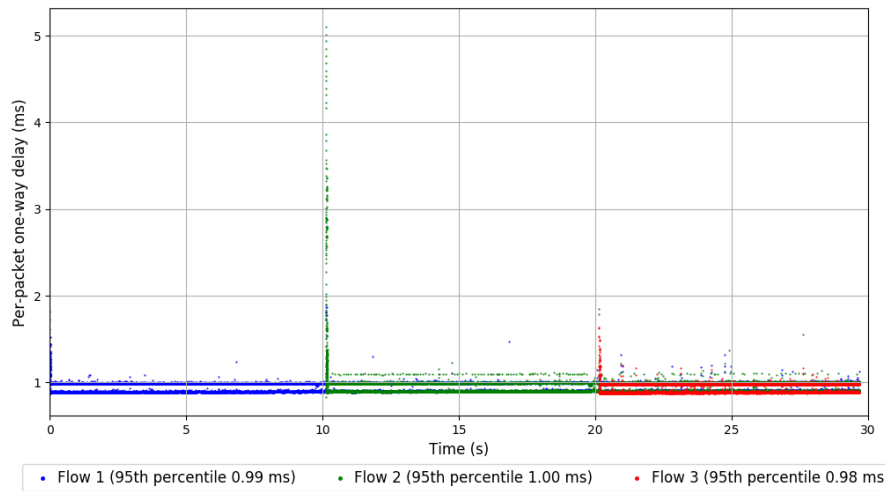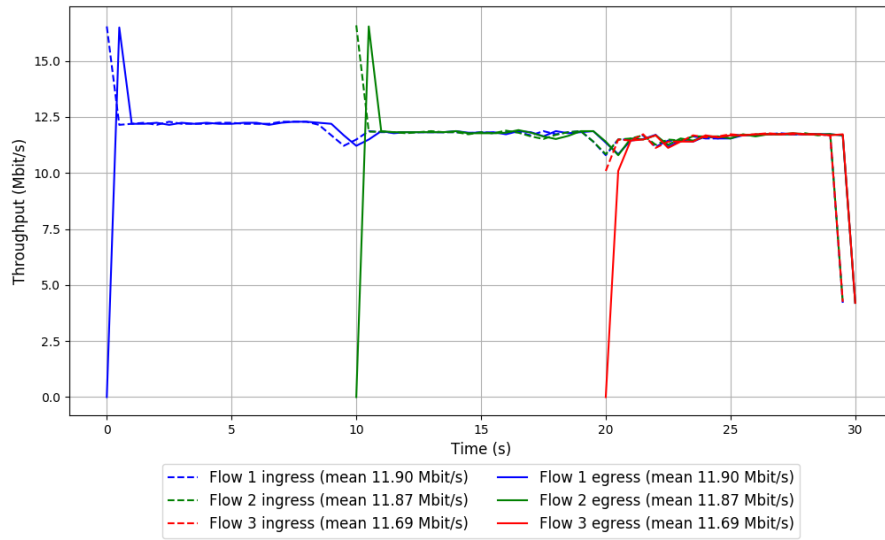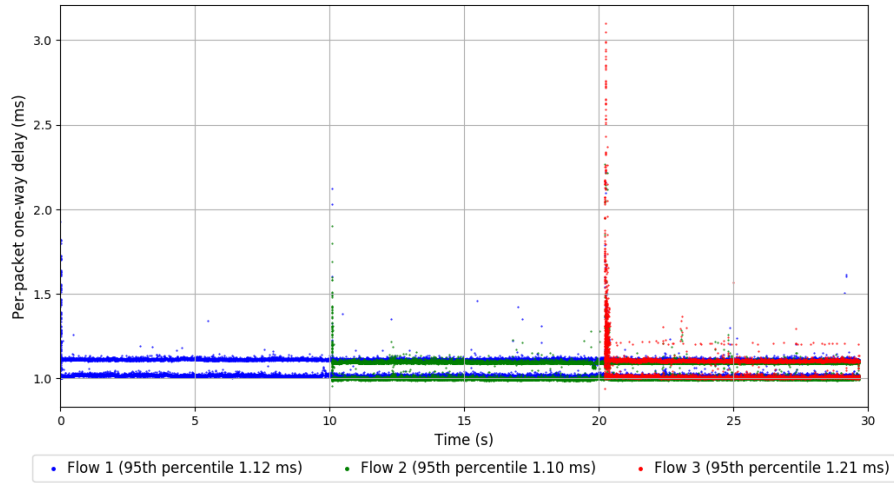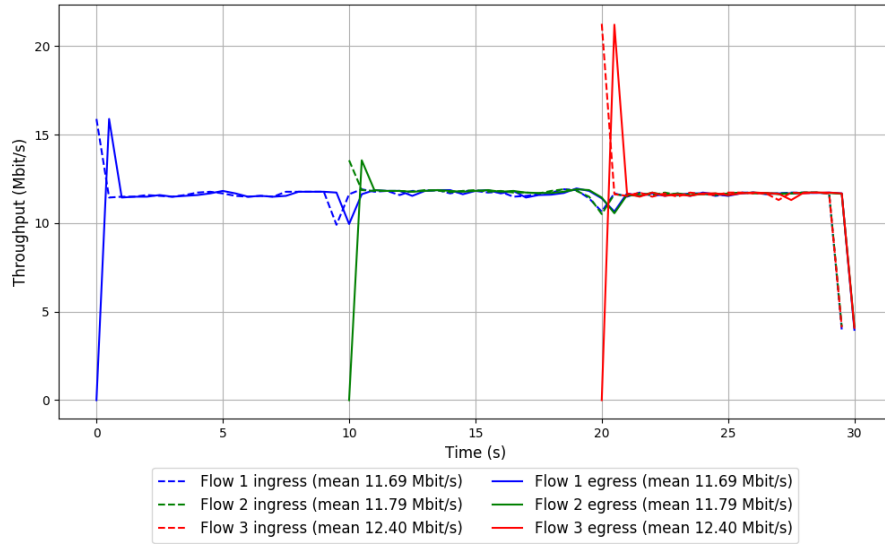
Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 11:05:52
End at: 2019-10-03 11:06:22
Local clock offset: -6.707 ms
Remote clock offset: -0.533 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.49 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.90 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.87 Mbit/s
95th percentile per-packet one-way delay: 0.998 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.02%
```

Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 11:33:12
End at: 2019-10-03 11:33:42
Local clock offset: -6.553 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2019-10-03 13:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.43 Mbit/s
95th percentile per-packet one-way delay: 1.116 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.69 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.79 Mbit/s
95th percentile per-packet one-way delay: 1.103 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 12.40 Mbit/s
95th percentile per-packet one-way delay: 1.206 ms
Loss rate: 0.01%
```
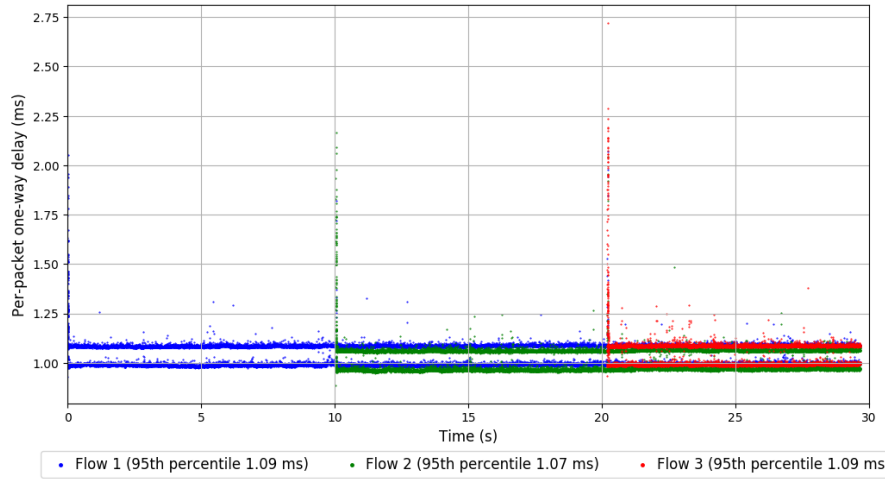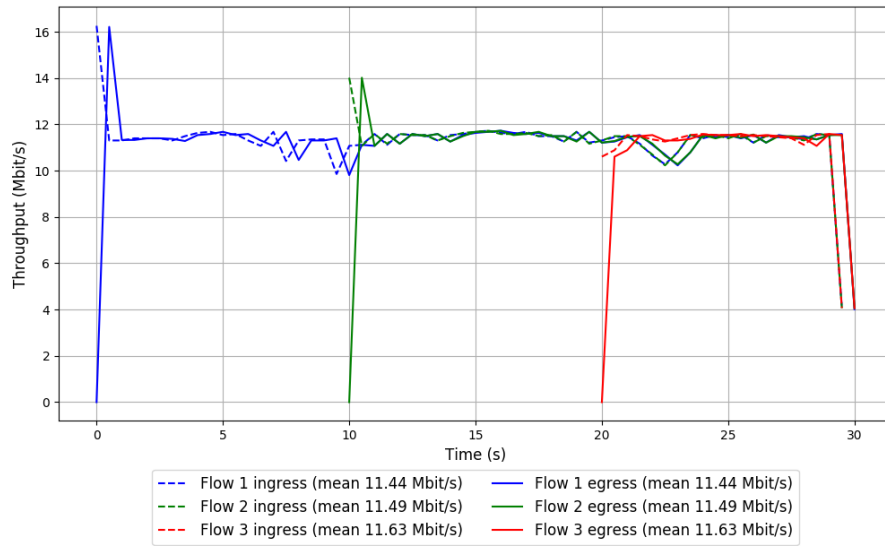
Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 12:00:32
End at: 2019-10-03 12:01:02
Local clock offset: -6.476 ms
Remote clock offset: 0.272 ms


# Below is generated by plot.py at 2019-10-03 13:28:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 22.75 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.44 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.49 Mbit/s
95th percentile per-packet one-way delay: 1.071 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 1.095 ms
Loss rate: 0.02%
```
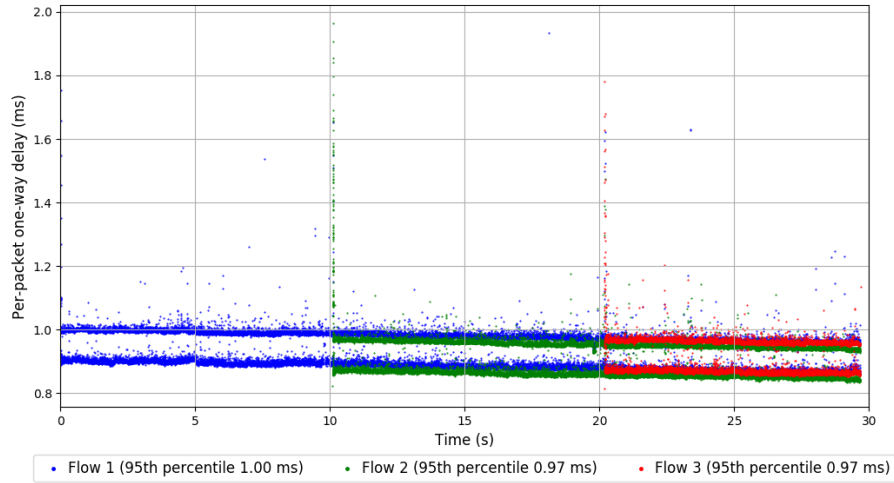
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 12:27:55
End at: 2019-10-03 12:28:25
Local clock offset: -6.191 ms
Remote clock offset: 0.316 ms


# Below is generated by plot.py at 2019-10-03 13:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.22 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.76 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 11.72 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.64 Mbit/s
95th percentile per-packet one-way delay: 0.972 ms
Loss rate: 0.01%
```
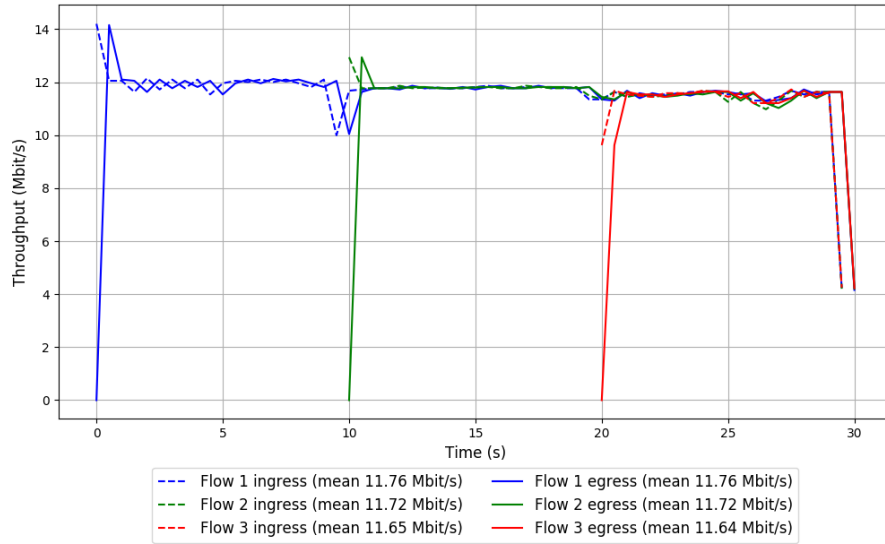
Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-10-03 12:55:19
End at: 2019-10-03 12:55:49
Local clock offset: -5.148 ms
Remote clock offset: 0.188 ms


# Below is generated by plot.py at 2019-10-03 13:28:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 23.27 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 11.78 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 11.73 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 11.63 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.02%
```
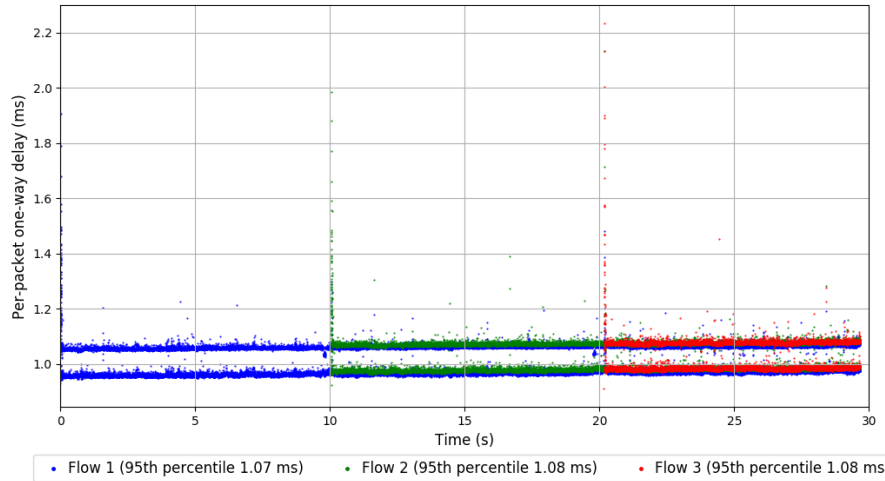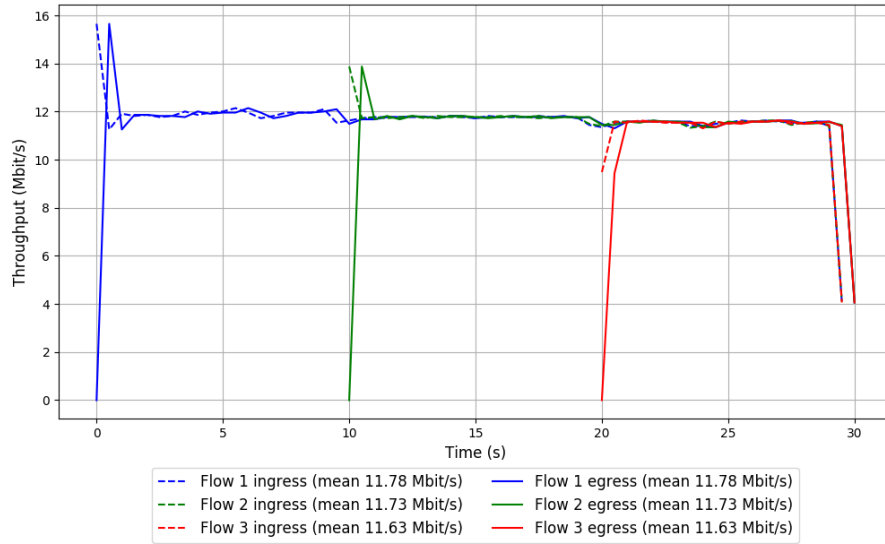
Run 5: Report of Muses_DecisionTreeR0 — Data Link

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```
Run 1: Statistics of PCC-Allegro

Start at: 2019-10-03 11:02:27
End at: 2019-10-03 11:02:57
Local clock offset: -6.683 ms
Remote clock offset: -0.628 ms


# Below is generated by plot.py at 2019-10-03 13:29:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.76 Mbit/s
95th percentile per-packet one-way delay: 12.547 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 75.77 Mbit/s
95th percentile per-packet one-way delay: 14.780 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 12.82 Mbit/s
95th percentile per-packet one-way delay: 2.290 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 2.297 ms
Loss rate: 0.03%
```
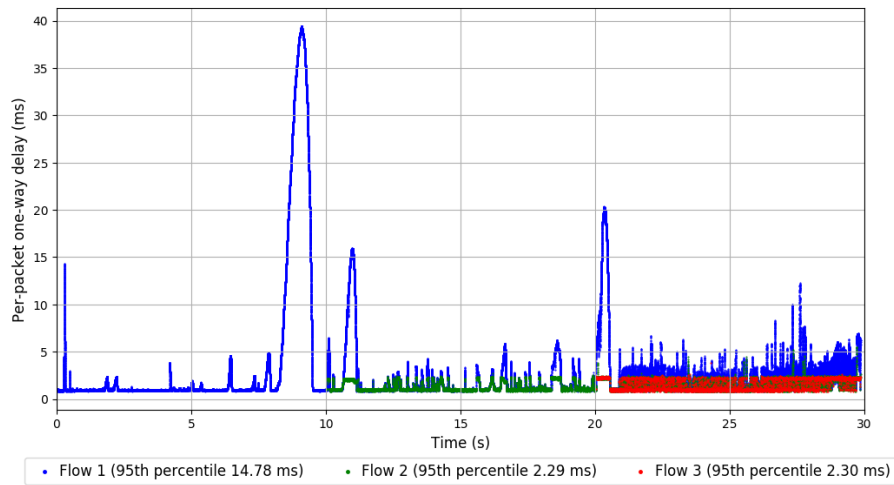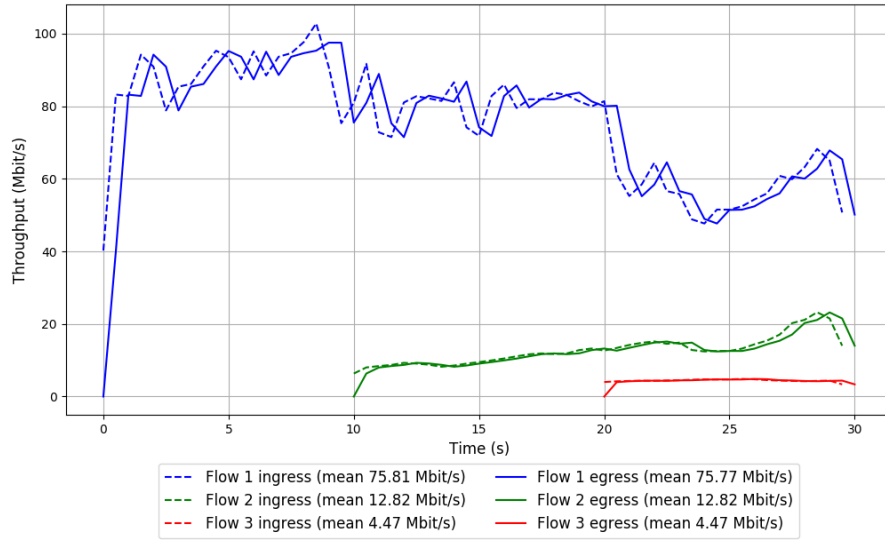
Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-10-03 11:29:47
End at: 2019-10-03 11:30:17
Local clock offset: -6.68 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-10-03 13:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 2033.330 ms
Loss rate: 4.31%
-- Flow 1:
Average throughput: 65.74 Mbit/s
95th percentile per-packet one-way delay: 2118.090 ms
Loss rate: 5.54%
-- Flow 2:
Average throughput: 16.61 Mbit/s
95th percentile per-packet one-way delay: 23.677 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 28.47 Mbit/s
95th percentile per-packet one-way delay: 14.578 ms
Loss rate: 0.11%
```
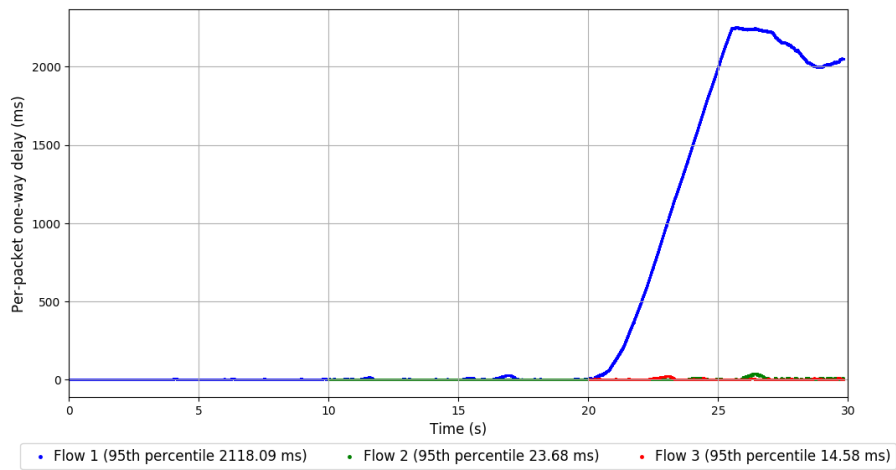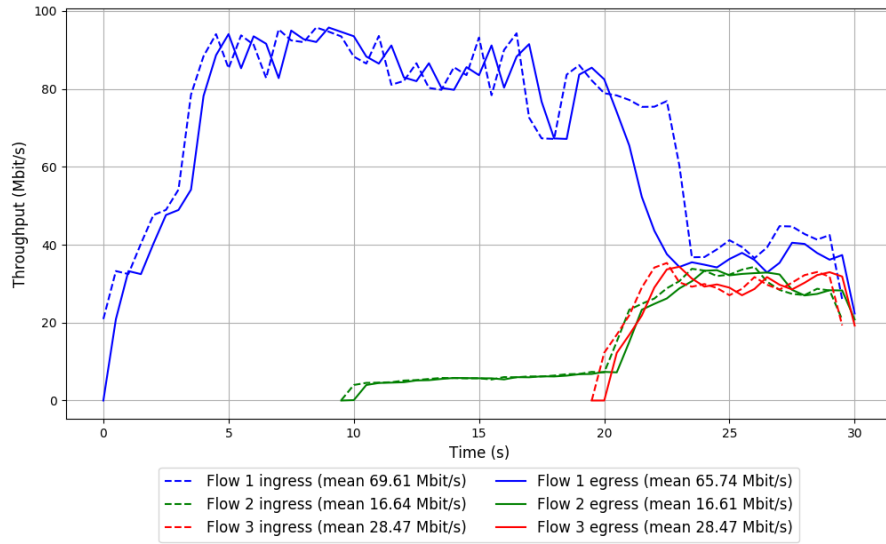
Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-10-03 11:57:07
End at: 2019-10-03 11:57:37
Local clock offset: -6.442 ms
Remote clock offset: 0.29 ms


# Below is generated by plot.py at 2019-10-03 13:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.07 Mbit/s
95th percentile per-packet one-way delay: 1898.972 ms
Loss rate: 7.67%
-- Flow 1:
Average throughput: 51.90 Mbit/s
95th percentile per-packet one-way delay: 1929.975 ms
Loss rate: 11.64%
-- Flow 2:
Average throughput: 33.23 Mbit/s
95th percentile per-packet one-way delay: 47.121 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 27.58 Mbit/s
95th percentile per-packet one-way delay: 18.886 ms
Loss rate: 0.16%
```
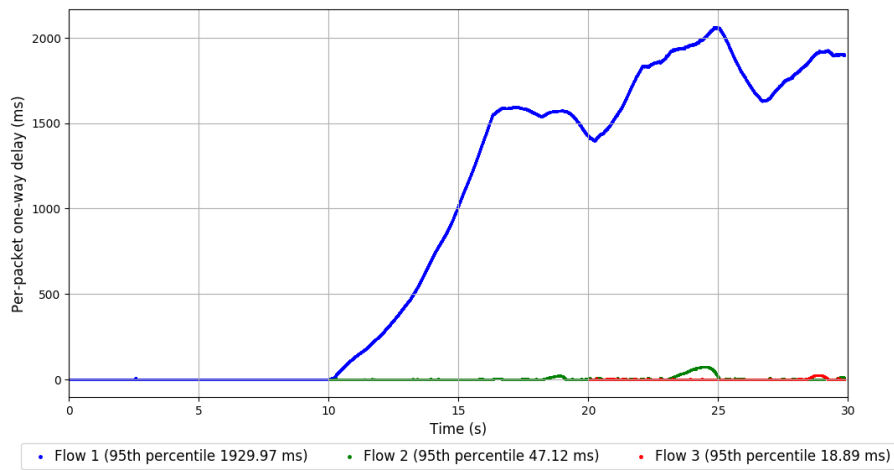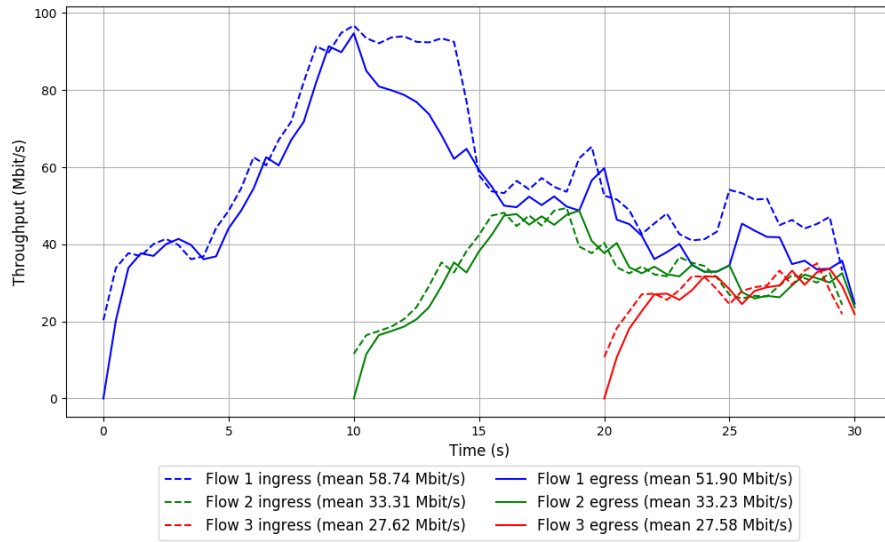
Run 3: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 58.74 Mbit/s) —— Flow 1 egress (mean 51.90 Mbit/s)
- - - Flow 2 ingress (mean 33.31 Mbit/s) —— Flow 2 egress (mean 33.23 Mbit/s)
- - - Flow 3 ingress (mean 27.62 Mbit/s) —— Flow 3 egress (mean 27.58 Mbit/s)

• Flow 1 (95th percentile 1929.97 ms)   • Flow 2 (95th percentile 47.12 ms)   • Flow 3 (95th percentile 18.89 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-10-03 12:24:30
End at: 2019-10-03 12:25:00
Local clock offset: -6.614 ms
Remote clock offset: 0.296 ms


# Below is generated by plot.py at 2019-10-03 13:29:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.17 Mbit/s
95th percentile per-packet one-way delay: 638.881 ms
Loss rate: 3.19%
-- Flow 1:
Average throughput: 59.86 Mbit/s
95th percentile per-packet one-way delay: 648.500 ms
Loss rate: 2.74%
-- Flow 2:
Average throughput: 33.94 Mbit/s
95th percentile per-packet one-way delay: 572.503 ms
Loss rate: 5.29%
-- Flow 3:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 48.438 ms
Loss rate: 0.30%
```
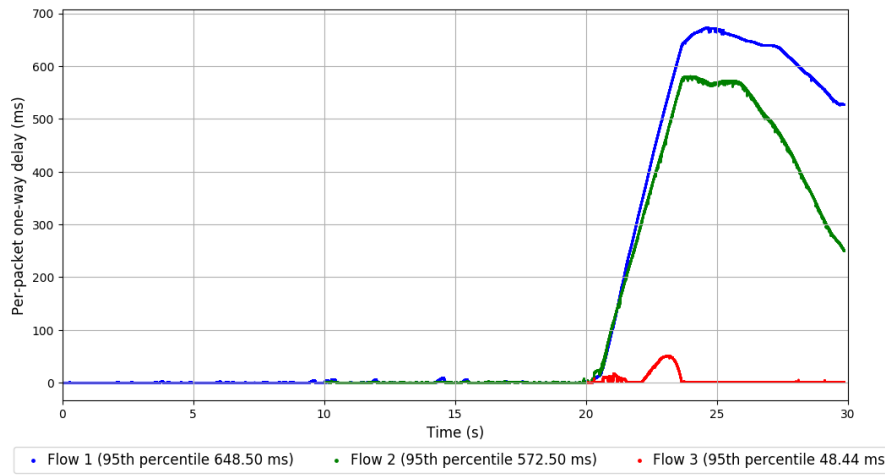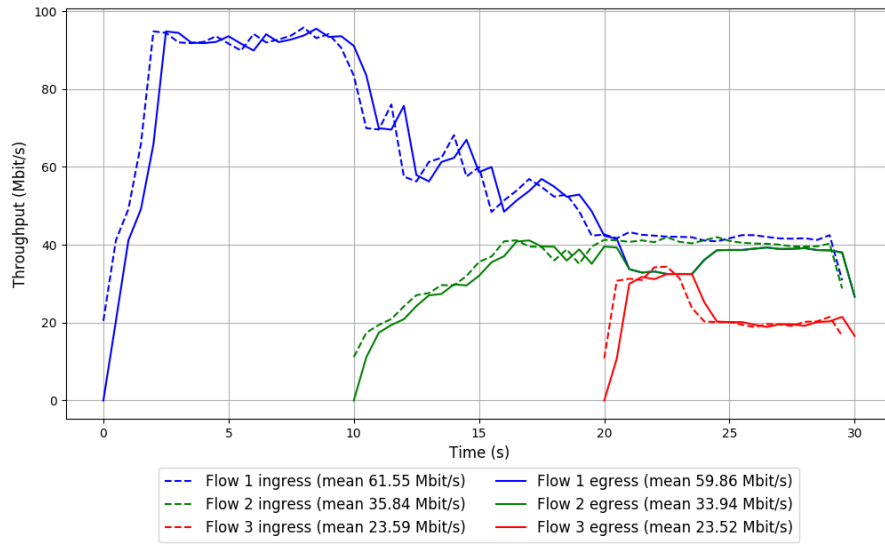
Run 4: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 61.55 Mbit/s) --- Flow 1 egress (mean 59.86 Mbit/s)
Flow 2 ingress (mean 35.84 Mbit/s) --- Flow 2 egress (mean 33.94 Mbit/s)
Flow 3 ingress (mean 23.59 Mbit/s) --- Flow 3 egress (mean 23.52 Mbit/s)

Flow 1 (95th percentile 648.50 ms)   Flow 2 (95th percentile 572.50 ms)   Flow 3 (95th percentile 48.44 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-10-03 12:51:52
End at: 2019-10-03 12:52:22
Local clock offset: -5.18 ms
Remote clock offset: 0.182 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.78 Mbit/s
95th percentile per-packet one-way delay: 1722.071 ms
Loss rate: 7.66%
-- Flow 1:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 1782.065 ms
Loss rate: 9.62%
-- Flow 2:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 397.164 ms
Loss rate: 4.02%
-- Flow 3:
Average throughput: 21.26 Mbit/s
95th percentile per-packet one-way delay: 7.484 ms
Loss rate: 0.20%
```
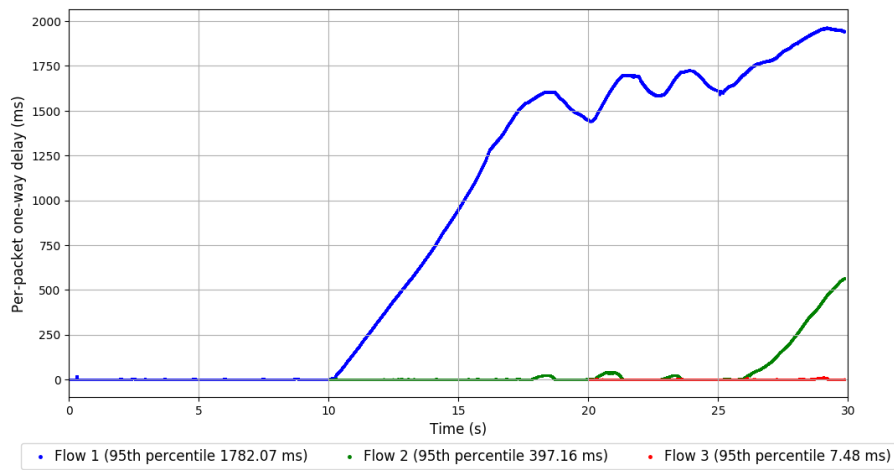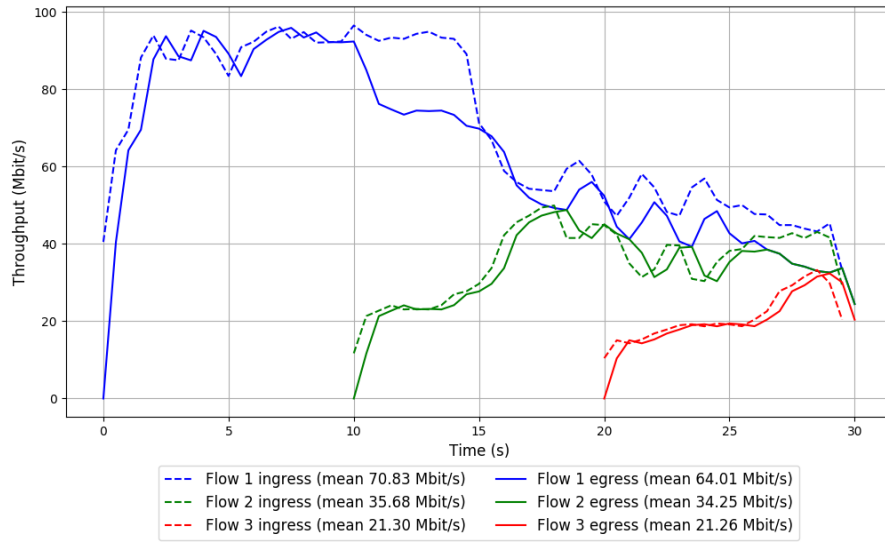
Run 5: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 70.83 Mbit/s)
- Flow 1 egress (mean 64.01 Mbit/s)
- Flow 2 ingress (mean 35.68 Mbit/s)
- Flow 2 egress (mean 34.25 Mbit/s)
- Flow 3 ingress (mean 21.30 Mbit/s)
- Flow 3 egress (mean 21.26 Mbit/s)

- Flow 1 (95th percentile 1782.07 ms)
- Flow 2 (95th percentile 397.16 ms)
- Flow 3 (95th percentile 7.48 ms)

```
Run 1: Statistics of PCC-Expr

Start at: 2019-10-03 11:17:19
End at: 2019-10-03 11:17:49
Local clock offset: -6.743 ms
Remote clock offset: -0.218 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.94 Mbit/s
95th percentile per-packet one-way delay: 0.945 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 6.37 Mbit/s
95th percentile per-packet one-way delay: 0.918 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.64 Mbit/s
95th percentile per-packet one-way delay: 0.984 ms
Loss rate: 0.00%
```
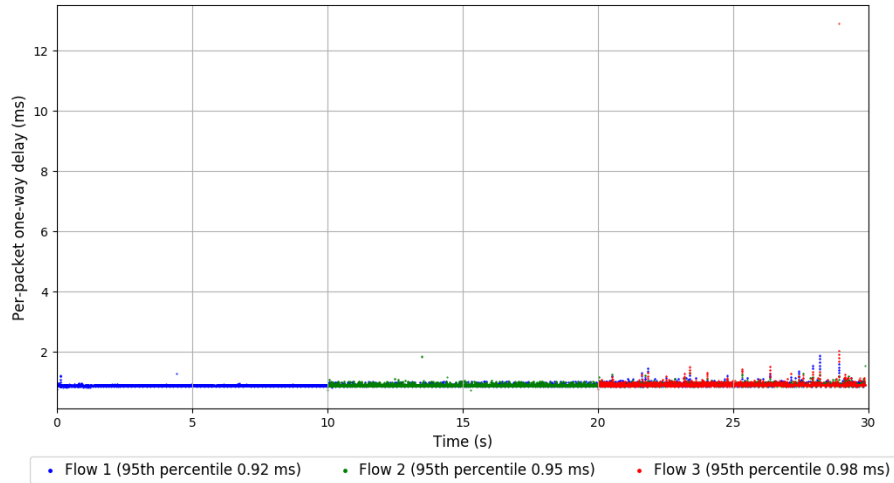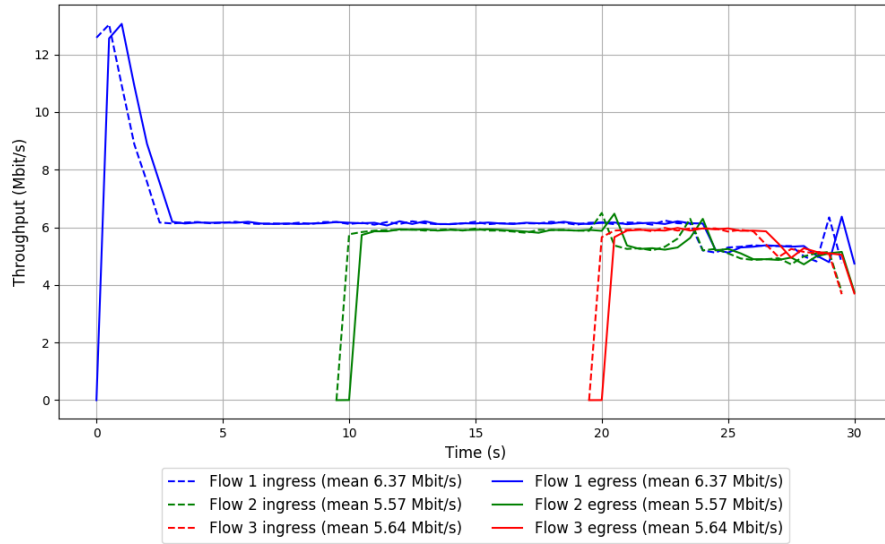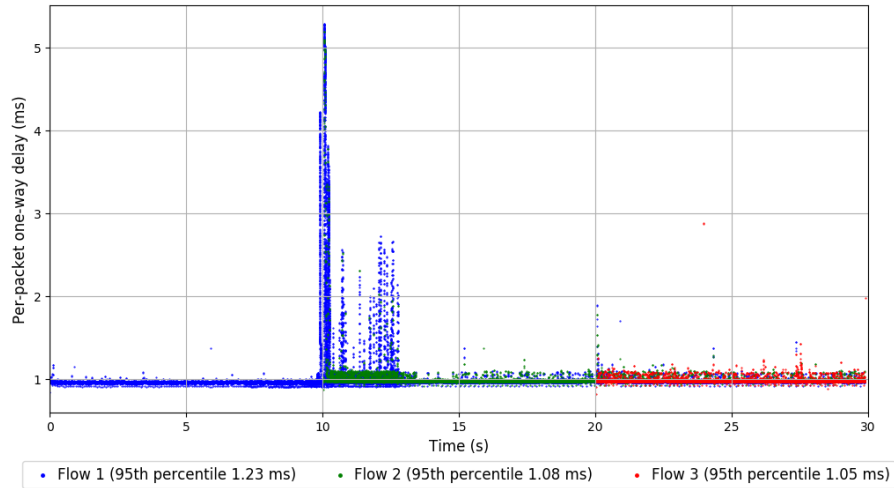
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-10-03 11:44:39
End at: 2019-10-03 11:45:09
Local clock offset: -6.457 ms
Remote clock offset: 0.154 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.68 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 14.66 Mbit/s
95th percentile per-packet one-way delay: 1.233 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.55 Mbit/s
95th percentile per-packet one-way delay: 1.078 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 6.07 Mbit/s
95th percentile per-packet one-way delay: 1.046 ms
Loss rate: 0.00%
```
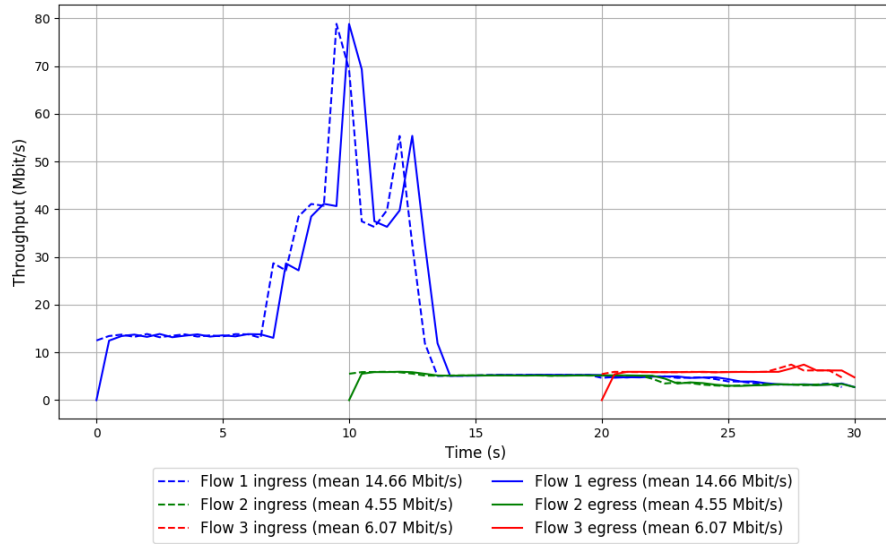
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-10-03 12:11:59
End at: 2019-10-03 12:12:29
Local clock offset: -6.523 ms
Remote clock offset: 0.469 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 40.23 Mbit/s
95th percentile per-packet one-way delay: 3.854 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 29.91 Mbit/s
95th percentile per-packet one-way delay: 2.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 12.58 Mbit/s
95th percentile per-packet one-way delay: 19.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.88 Mbit/s
95th percentile per-packet one-way delay: 0.951 ms
Loss rate: 0.02%
```
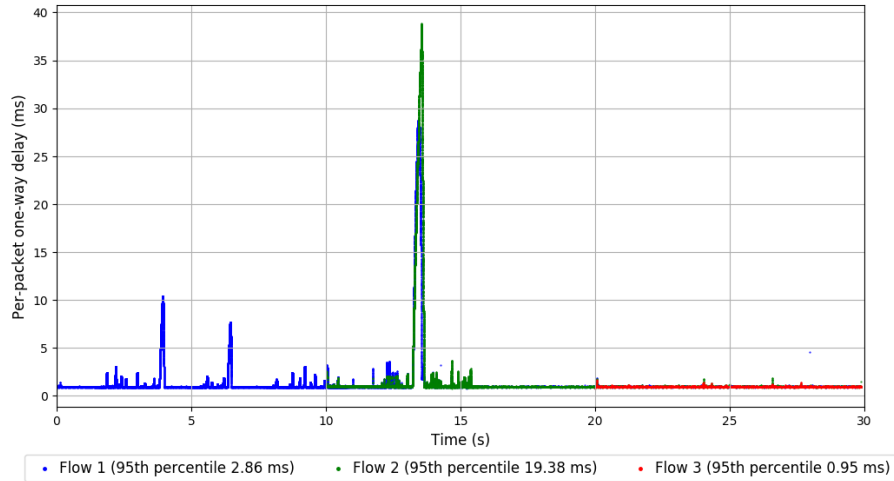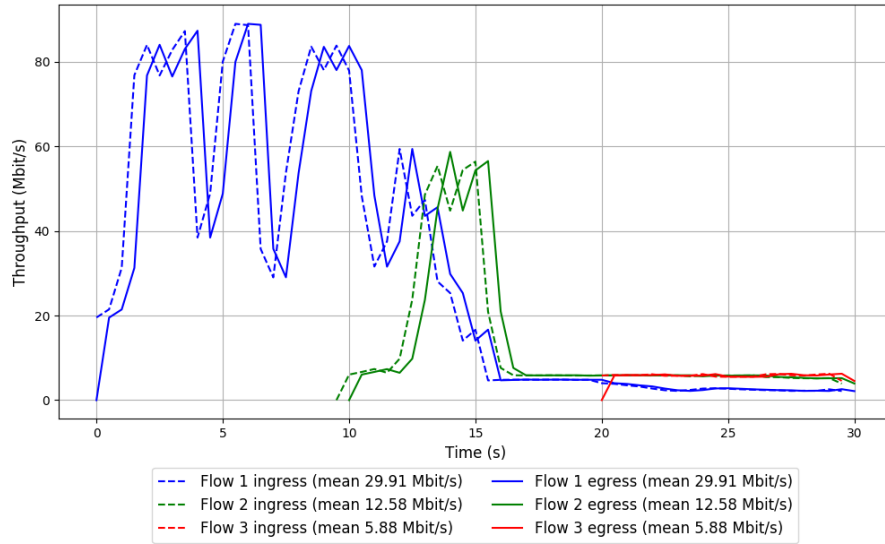
Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-10-03 12:39:22
End at: 2019-10-03 12:39:52
Local clock offset: -5.517 ms
Remote clock offset: 0.284 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.58 Mbit/s
95th percentile per-packet one-way delay: 1.421 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.74 Mbit/s
95th percentile per-packet one-way delay: 1.032 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 15.20 Mbit/s
95th percentile per-packet one-way delay: 2.059 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 1.269 ms
Loss rate: 0.00%
```
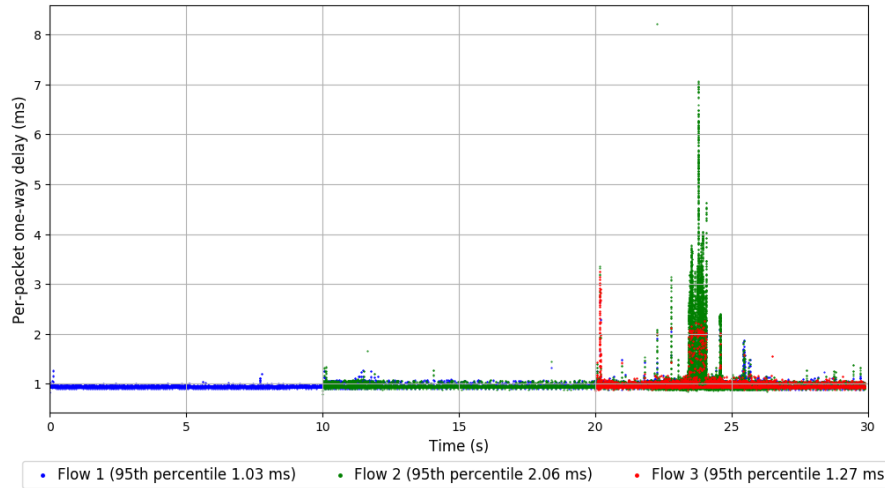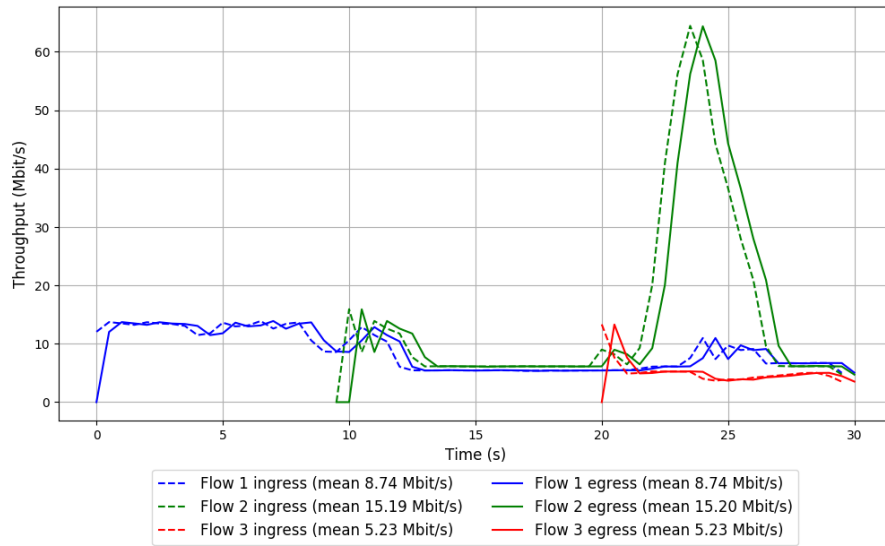
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-10-03 13:06:46
End at: 2019-10-03 13:07:16
Local clock offset: -5.418 ms
Remote clock offset: 0.252 ms


# Below is generated by plot.py at 2019-10-03 13:29:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 15.08 Mbit/s
95th percentile per-packet one-way delay: 1.007 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 0.984 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 6.70 Mbit/s
95th percentile per-packet one-way delay: 1.012 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.85 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.00%
```
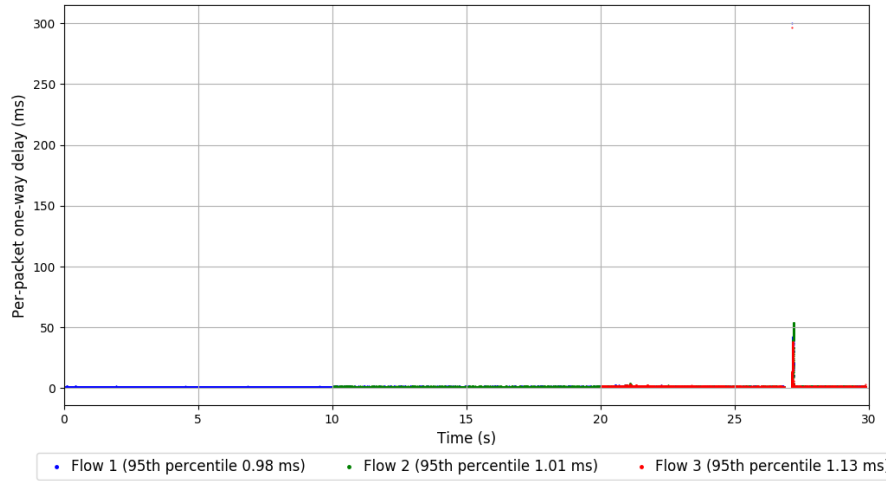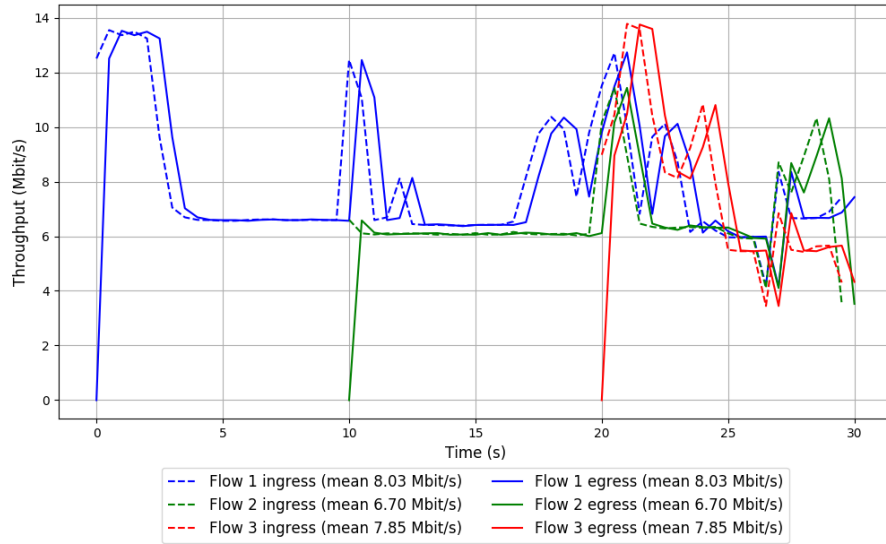
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-10-03 11:16:10
End at: 2019-10-03 11:16:40
Local clock offset: -6.806 ms
Remote clock offset: -0.371 ms


# Below is generated by plot.py at 2019-10-03 13:30:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.33 Mbit/s
95th percentile per-packet one-way delay: 12.544 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 54.19 Mbit/s
95th percentile per-packet one-way delay: 12.636 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 40.37 Mbit/s
95th percentile per-packet one-way delay: 12.328 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 31.05 Mbit/s
95th percentile per-packet one-way delay: 12.877 ms
Loss rate: 0.57%
```
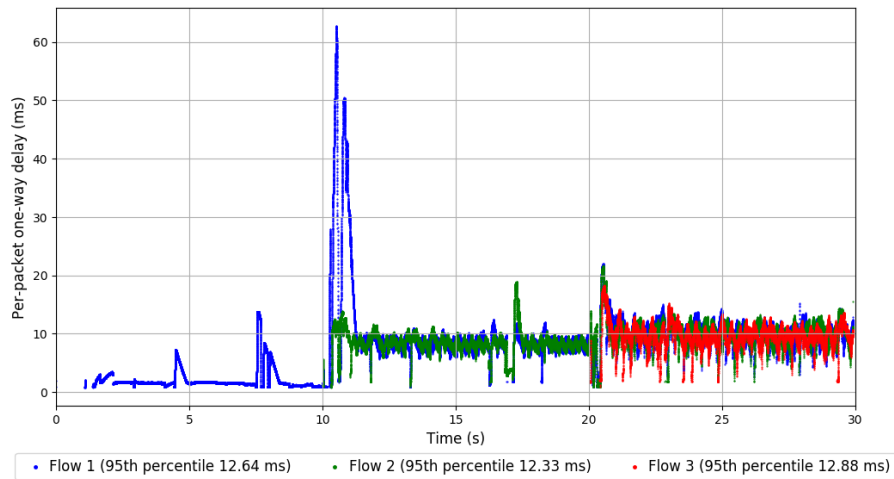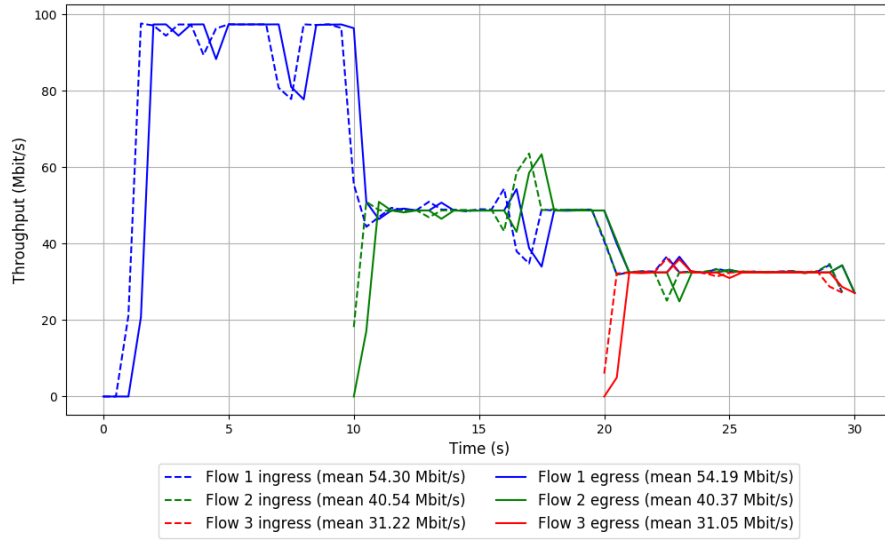
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 54.30 Mbit/s) --- Flow 1 egress (mean 54.19 Mbit/s)
Flow 2 ingress (mean 40.54 Mbit/s) --- Flow 2 egress (mean 40.37 Mbit/s)
Flow 3 ingress (mean 31.22 Mbit/s) --- Flow 3 egress (mean 31.05 Mbit/s)

Flow 1 (95th percentile 12.64 ms)   Flow 2 (95th percentile 12.33 ms)   Flow 3 (95th percentile 12.88 ms)

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-10-03 11:43:29
End at: 2019-10-03 11:43:59
Local clock offset: -6.455 ms
Remote clock offset: 0.164 ms


# Below is generated by plot.py at 2019-10-03 13:30:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.80 Mbit/s
95th percentile per-packet one-way delay: 12.337 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 54.85 Mbit/s
95th percentile per-packet one-way delay: 12.077 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.03 Mbit/s
95th percentile per-packet one-way delay: 12.164 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 31.17 Mbit/s
95th percentile per-packet one-way delay: 13.277 ms
Loss rate: 0.57%
```
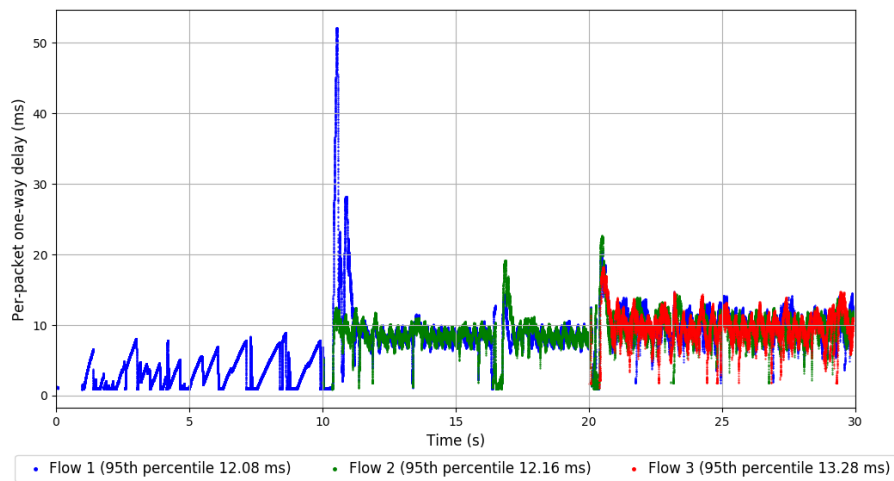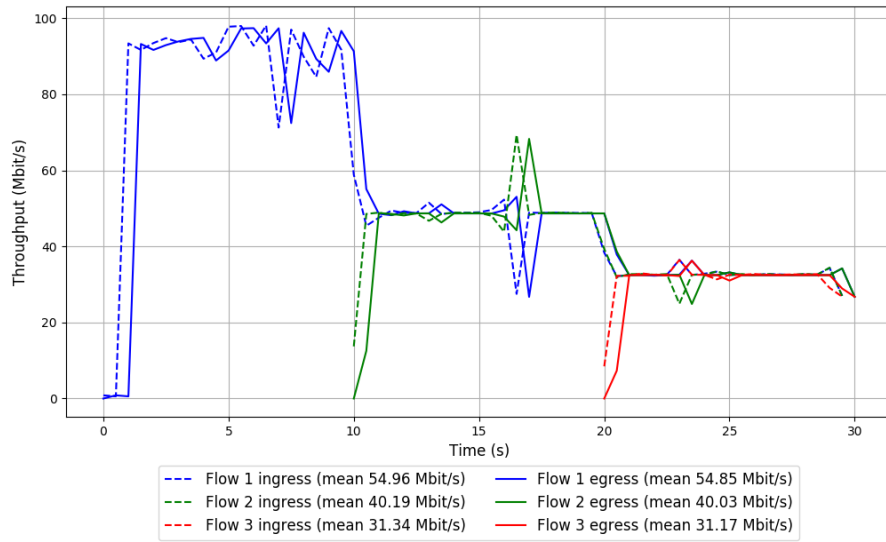
Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-10-03 12:10:50
End at: 2019-10-03 12:11:20
Local clock offset: -6.528 ms
Remote clock offset: 0.393 ms


# Below is generated by plot.py at 2019-10-03 13:30:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.08 Mbit/s
95th percentile per-packet one-way delay: 12.494 ms
Loss rate: 0.28%
-- Flow 1:
Average throughput: 55.05 Mbit/s
95th percentile per-packet one-way delay: 11.903 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.13 Mbit/s
95th percentile per-packet one-way delay: 12.826 ms
Loss rate: 0.37%
-- Flow 3:
Average throughput: 31.23 Mbit/s
95th percentile per-packet one-way delay: 13.144 ms
Loss rate: 0.53%
```
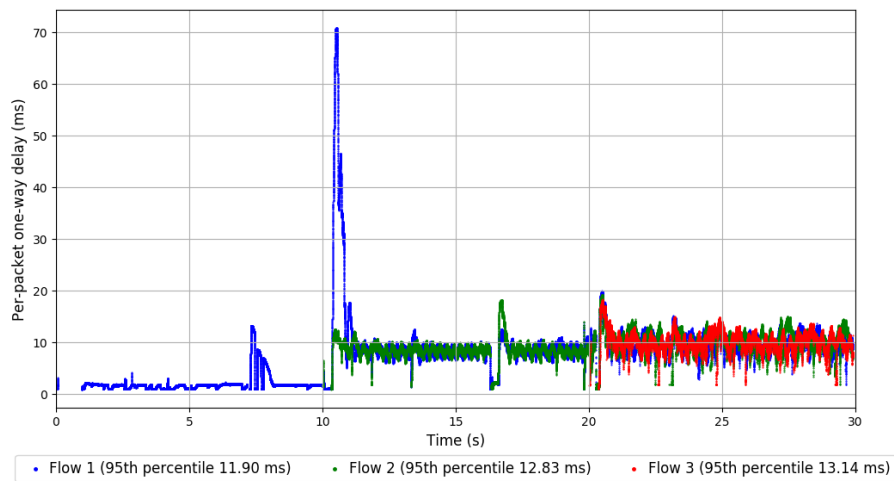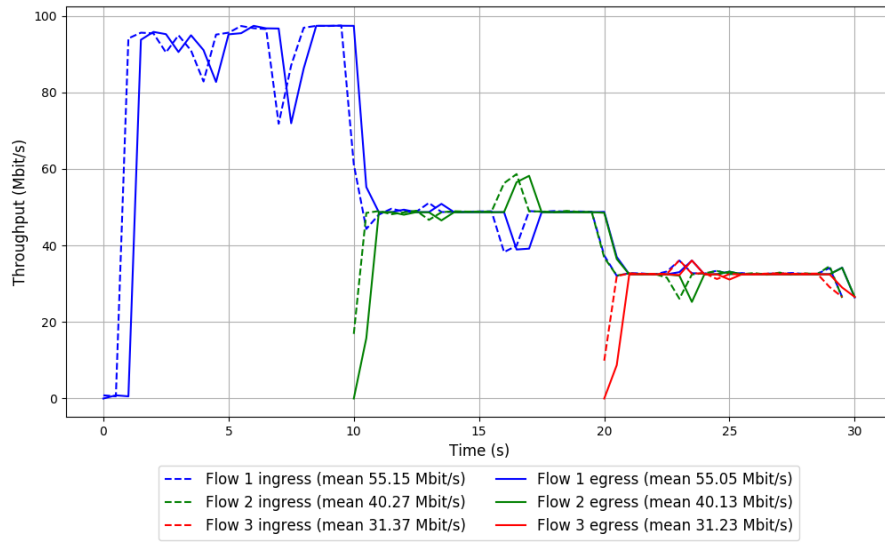
Run 3: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 55.15 Mbit/s) —— Flow 1 egress (mean 55.05 Mbit/s)
- - - Flow 2 ingress (mean 40.27 Mbit/s) —— Flow 2 egress (mean 40.13 Mbit/s)
- - - Flow 3 ingress (mean 31.37 Mbit/s) —— Flow 3 egress (mean 31.23 Mbit/s)

- Flow 1 (95th percentile 11.90 ms)   - Flow 2 (95th percentile 12.83 ms)   - Flow 3 (95th percentile 13.14 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-10-03 12:38:13
End at: 2019-10-03 12:38:43
Local clock offset: -5.625 ms
Remote clock offset: 0.347 ms


# Below is generated by plot.py at 2019-10-03 13:30:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.71 Mbit/s
95th percentile per-packet one-way delay: 12.449 ms
Loss rate: 0.29%
-- Flow 1:
Average throughput: 52.72 Mbit/s
95th percentile per-packet one-way delay: 12.537 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 12.059 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 31.21 Mbit/s
95th percentile per-packet one-way delay: 12.912 ms
Loss rate: 0.52%
```
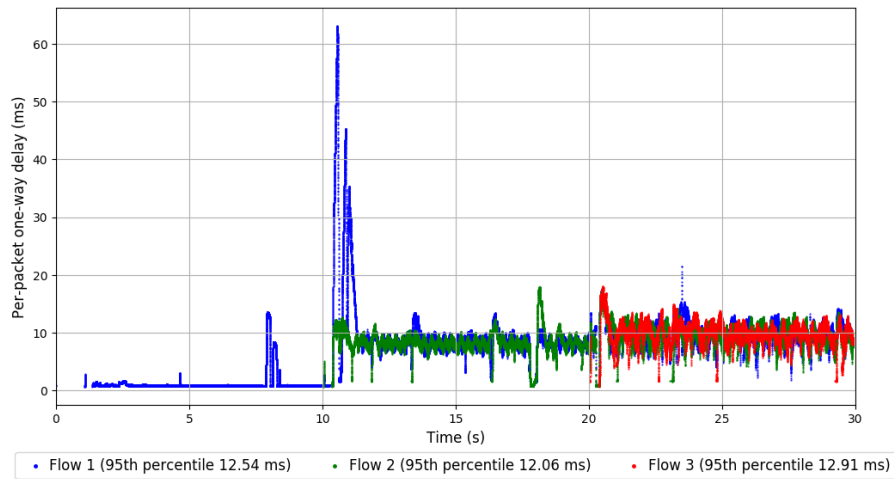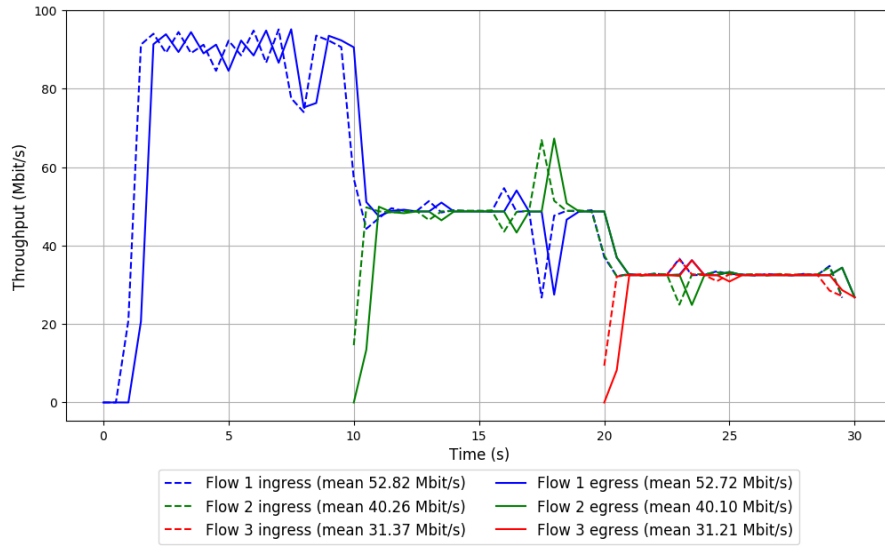
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-10-03 13:05:37
End at: 2019-10-03 13:06:07
Local clock offset: -5.39 ms
Remote clock offset: 0.163 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.39 Mbit/s
95th percentile per-packet one-way delay: 12.868 ms
Loss rate: 0.30%
-- Flow 1:
Average throughput: 53.40 Mbit/s
95th percentile per-packet one-way delay: 12.451 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 40.10 Mbit/s
95th percentile per-packet one-way delay: 12.810 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 13.703 ms
Loss rate: 0.52%
```
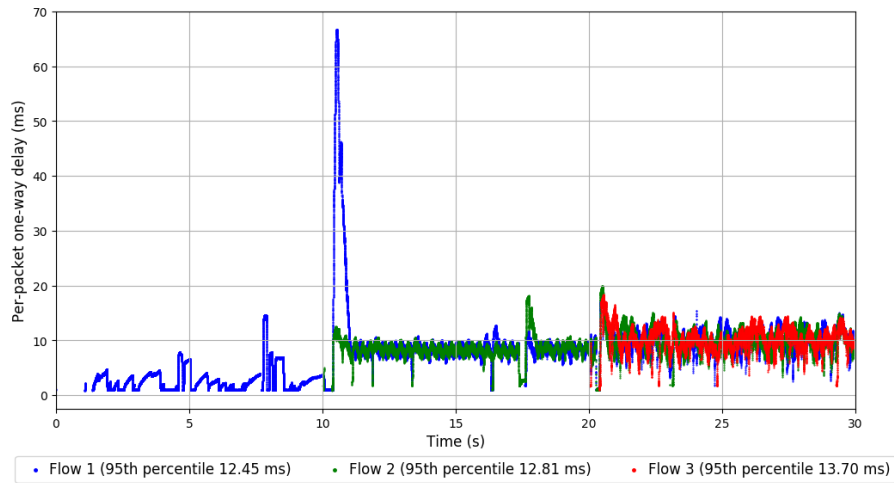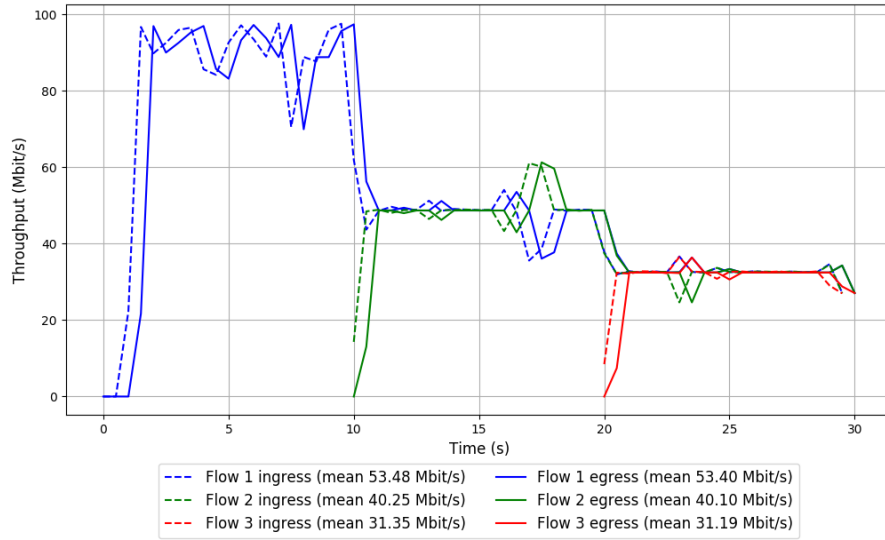
Run 5: Report of QUIC Cubic — Data Link

• Flow 1 (95th percentile 12.45 ms)   • Flow 2 (95th percentile 12.81 ms)   • Flow 3 (95th percentile 13.70 ms)

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```
Run 1: Statistics of SCReAM

Start at: 2019-10-03 11:24:09
End at: 2019-10-03 11:24:39
Local clock offset: -6.762 ms
Remote clock offset: -0.186 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.067 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.35%
```
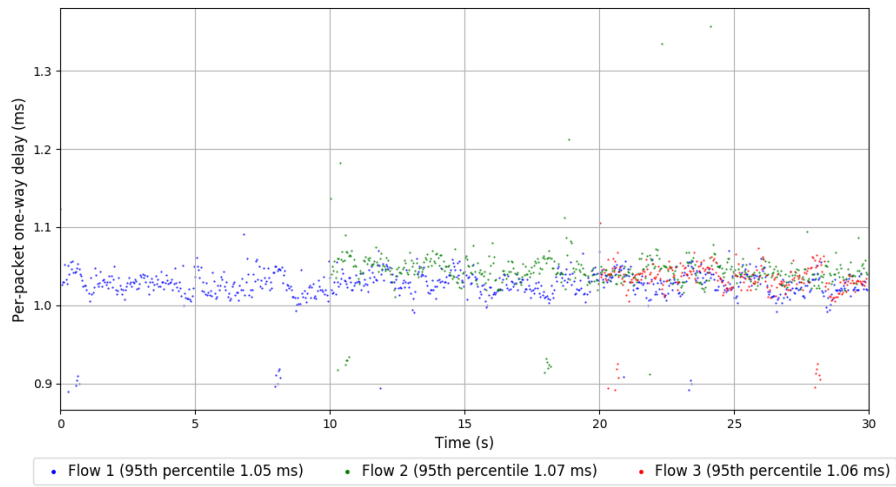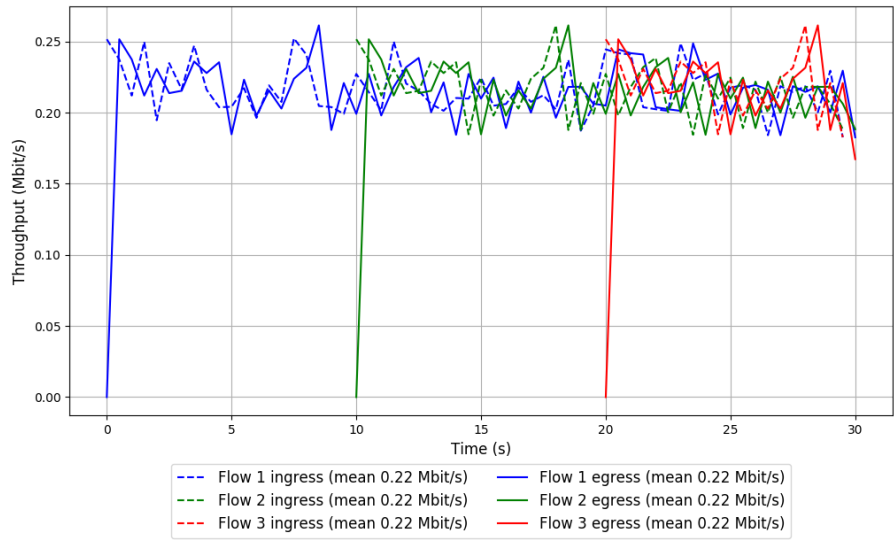
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-10-03 11:51:30
End at: 2019-10-03 11:52:00
Local clock offset: -6.423 ms
Remote clock offset: 0.206 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.022 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.031 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.009 ms
Loss rate: 0.00%
```
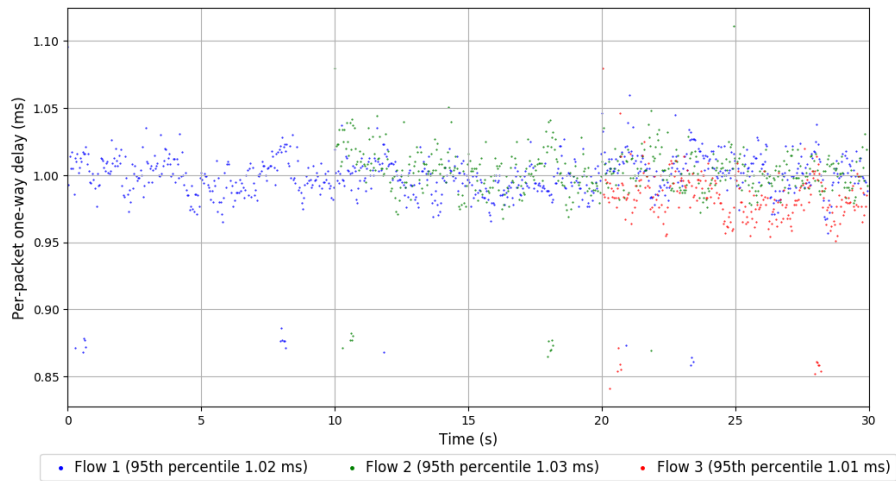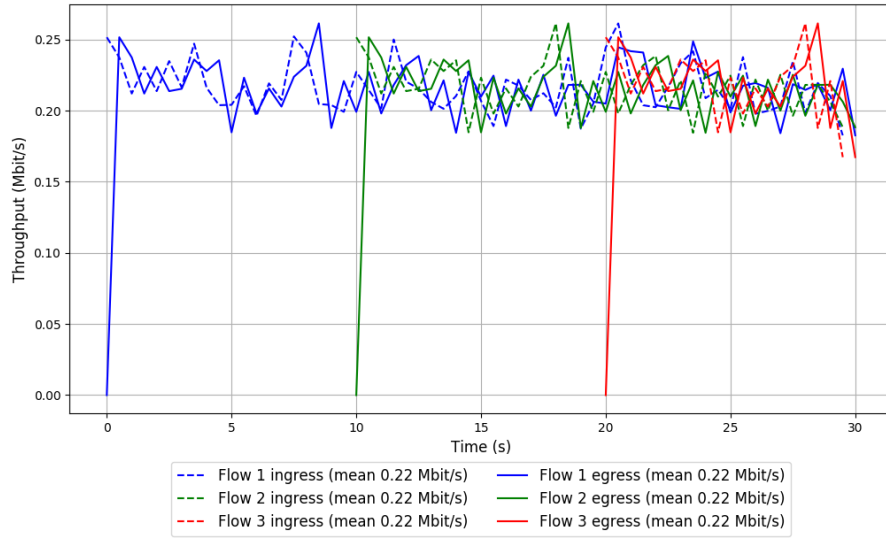
Run 2: Report of SCReAM — Data Link

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

Flow 1 (95th percentile 1.02 ms)   Flow 2 (95th percentile 1.03 ms)   Flow 3 (95th percentile 1.01 ms)

```
Run 3: Statistics of SCReAM

Start at: 2019-10-03 12:18:52
End at: 2019-10-03 12:19:22
Local clock offset: -6.542 ms
Remote clock offset: 0.338 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.000 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.021 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.00%
```
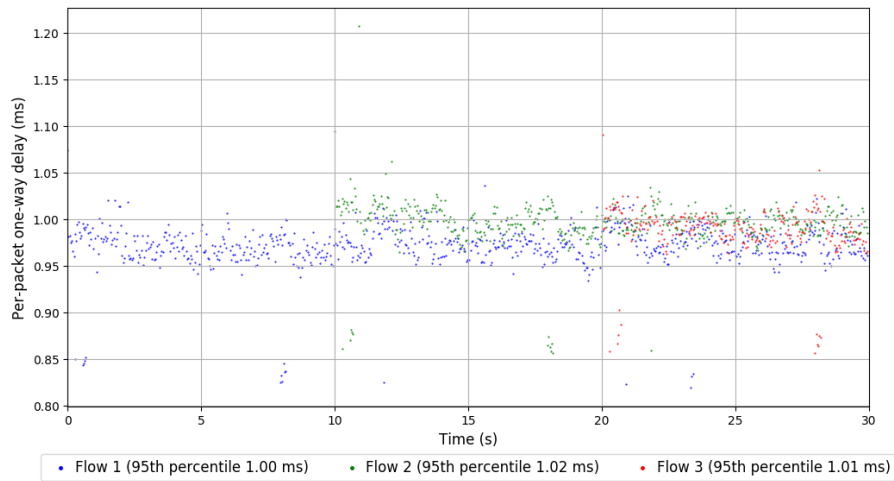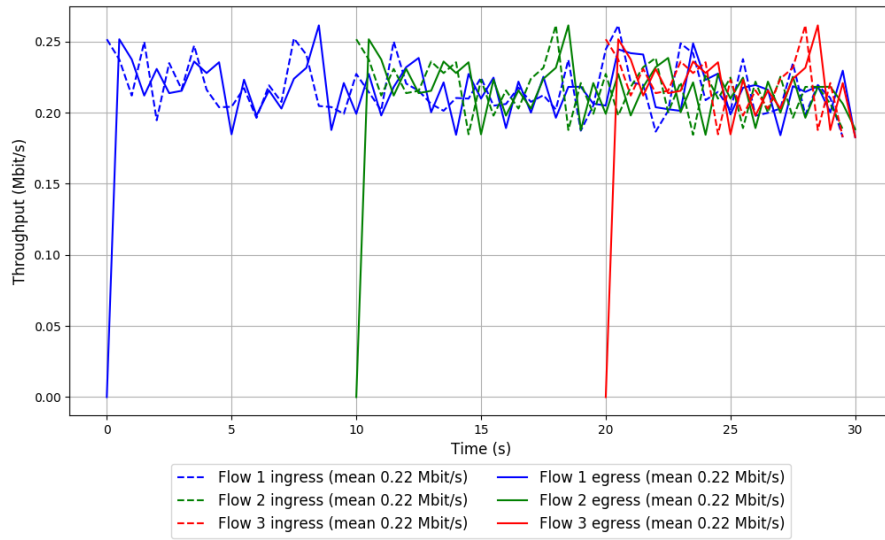
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-10-03 12:46:14
End at: 2019-10-03 12:46:44
Local clock offset: -5.321 ms
Remote clock offset: 0.314 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 0.928 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.932 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.909 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.921 ms
Loss rate: 0.00%
```
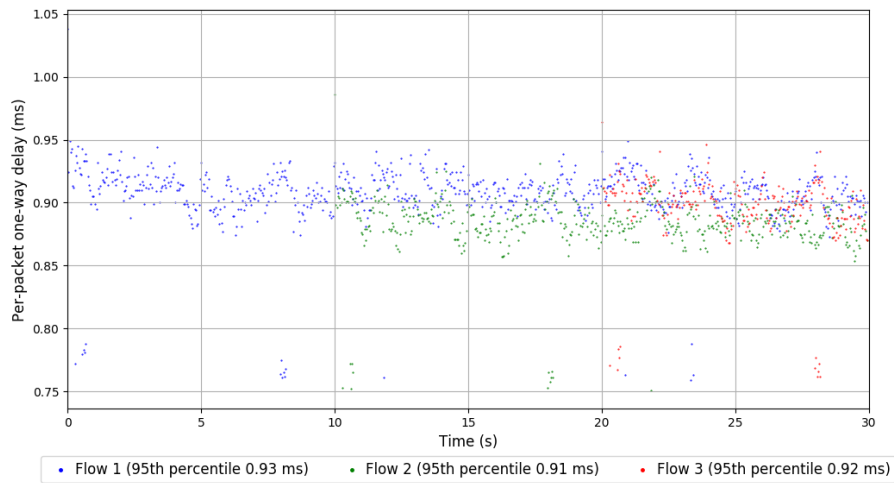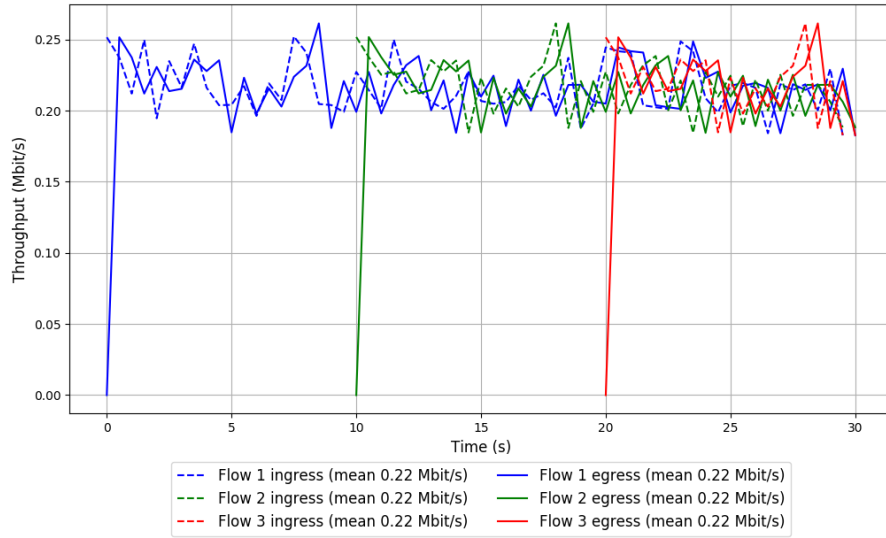
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-10-03 13:13:37
End at: 2019-10-03 13:14:07
Local clock offset: -5.48 ms
Remote clock offset: 0.255 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 0.988 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.981 ms
Loss rate: 0.00%
```
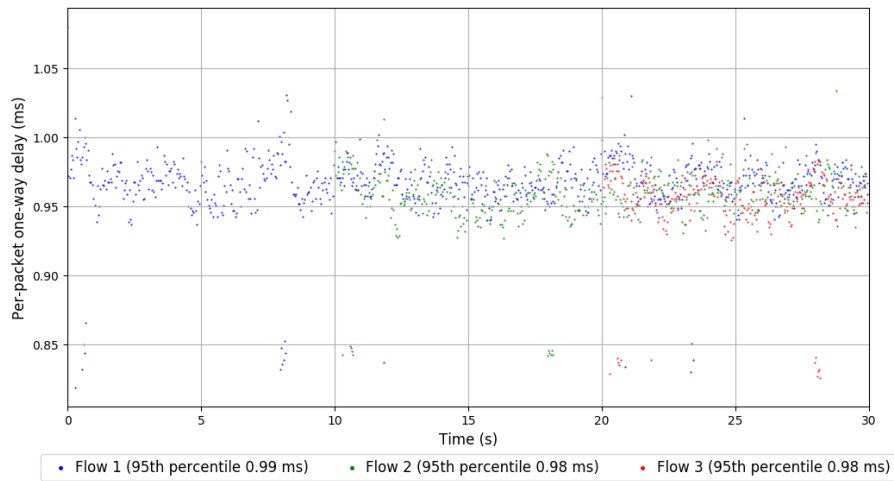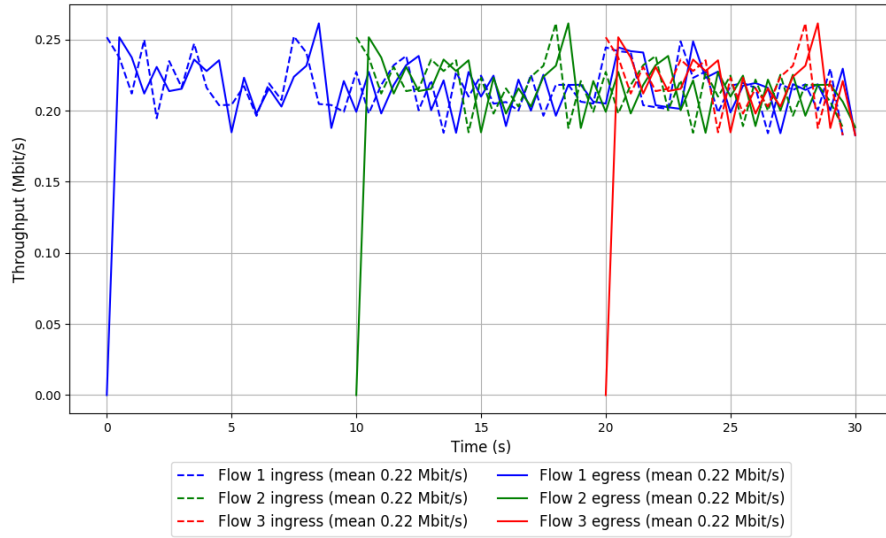
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-10-03 11:18:25
End at: 2019-10-03 11:18:55
Local clock offset: -6.731 ms
Remote clock offset: -0.242 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.41 Mbit/s
95th percentile per-packet one-way delay: 24.264 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 43.81 Mbit/s
95th percentile per-packet one-way delay: 22.731 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 40.52 Mbit/s
95th percentile per-packet one-way delay: 24.257 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 25.842 ms
Loss rate: 2.41%
```
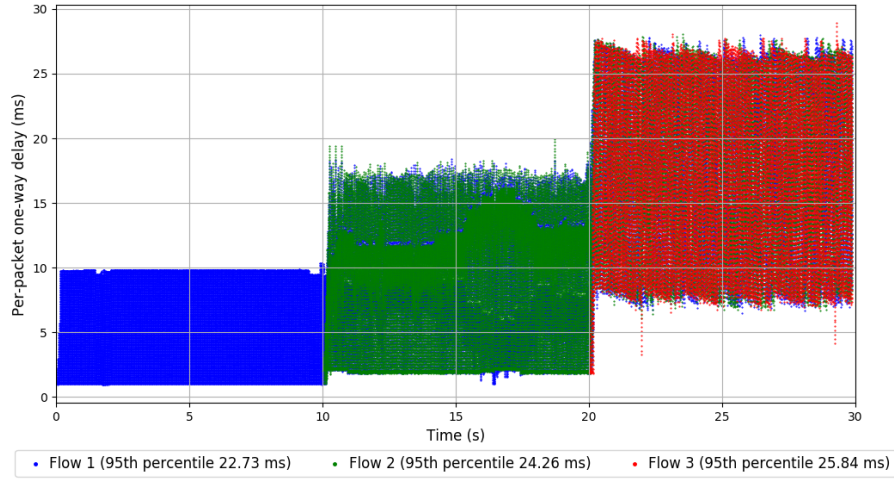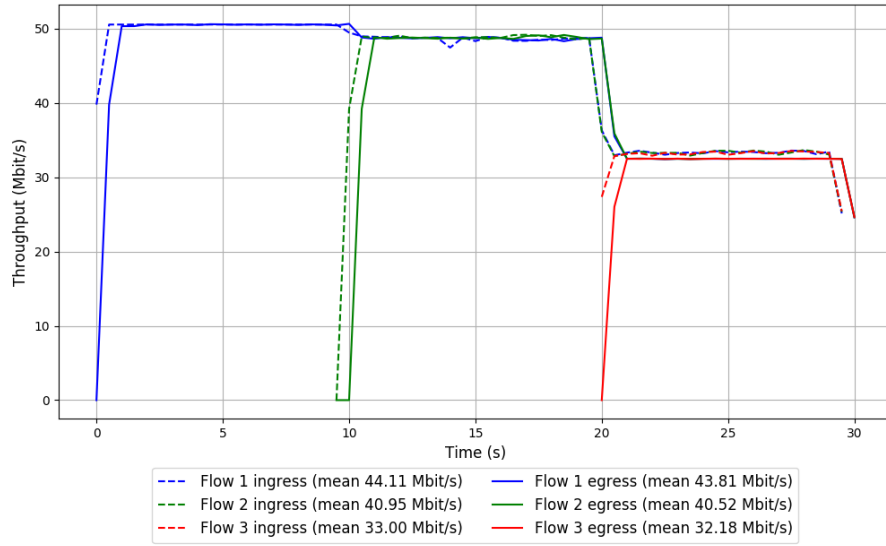
Run 1: Report of Sprout — Data Link

Flow 1 ingress (mean 44.11 Mbit/s) --- Flow 1 egress (mean 43.81 Mbit/s)
Flow 2 ingress (mean 40.95 Mbit/s) --- Flow 2 egress (mean 40.52 Mbit/s)
Flow 3 ingress (mean 33.00 Mbit/s) --- Flow 3 egress (mean 32.18 Mbit/s)

Flow 1 (95th percentile 22.73 ms)   Flow 2 (95th percentile 24.26 ms)   Flow 3 (95th percentile 25.84 ms)

```
Run 2: Statistics of Sprout

Start at: 2019-10-03 11:45:45
End at: 2019-10-03 11:46:15
Local clock offset: -6.435 ms
Remote clock offset: 0.13 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.65 Mbit/s
95th percentile per-packet one-way delay: 24.205 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 43.24 Mbit/s
95th percentile per-packet one-way delay: 22.649 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 24.402 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 32.23 Mbit/s
95th percentile per-packet one-way delay: 25.557 ms
Loss rate: 1.31%
```
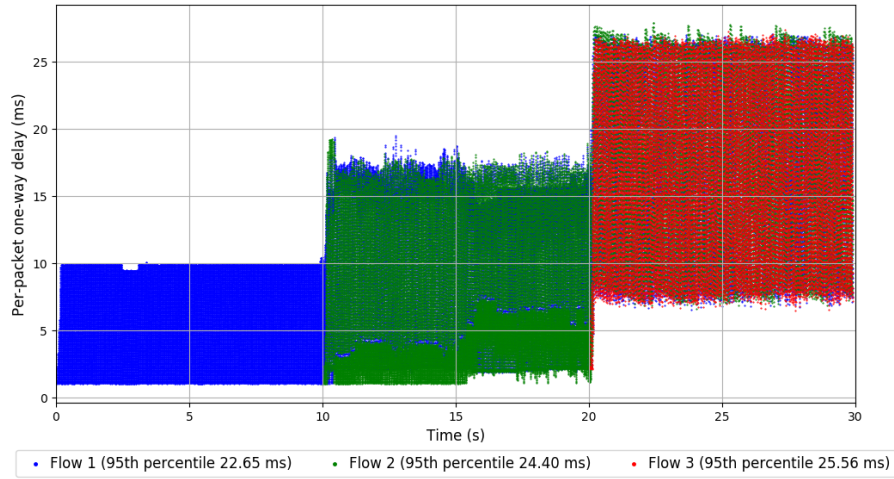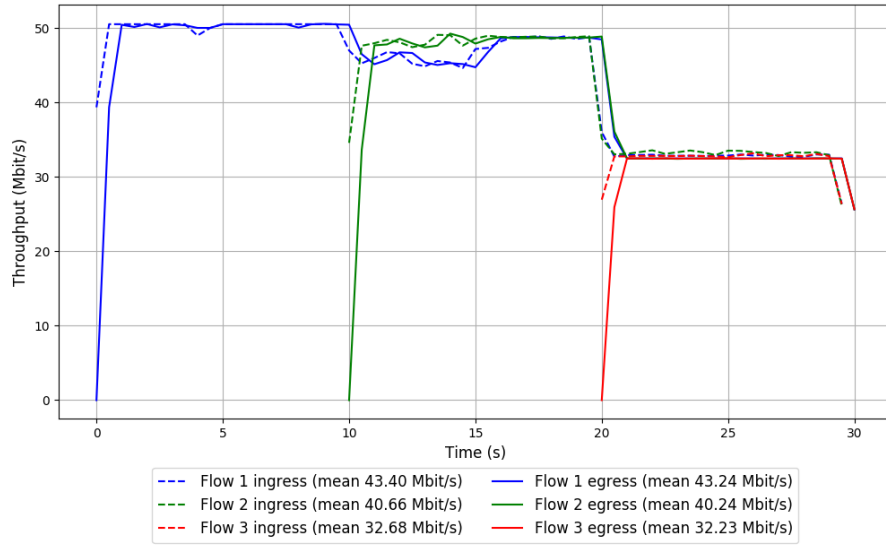
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-10-03 12:13:07
End at: 2019-10-03 12:13:37
Local clock offset: -6.543 ms
Remote clock offset: 0.391 ms


# Below is generated by plot.py at 2019-10-03 13:30:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.36 Mbit/s
95th percentile per-packet one-way delay: 24.251 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 43.80 Mbit/s
95th percentile per-packet one-way delay: 22.554 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 40.50 Mbit/s
95th percentile per-packet one-way delay: 24.367 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 32.18 Mbit/s
95th percentile per-packet one-way delay: 25.837 ms
Loss rate: 2.24%
```
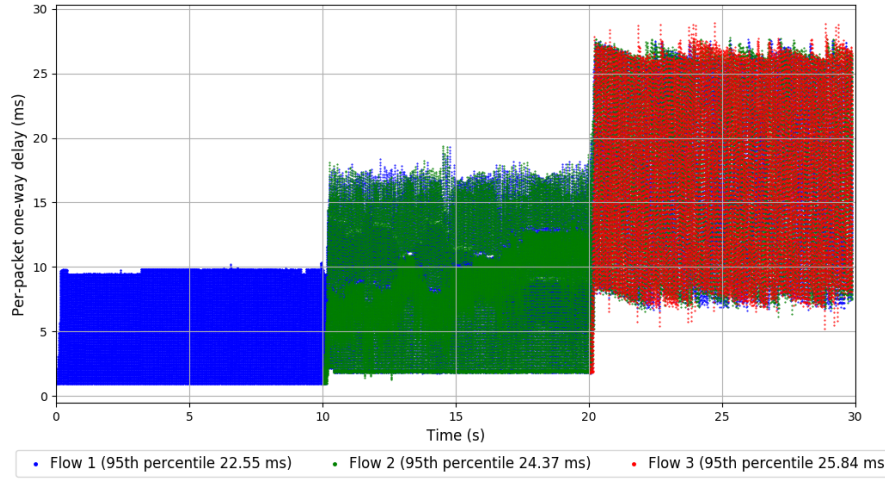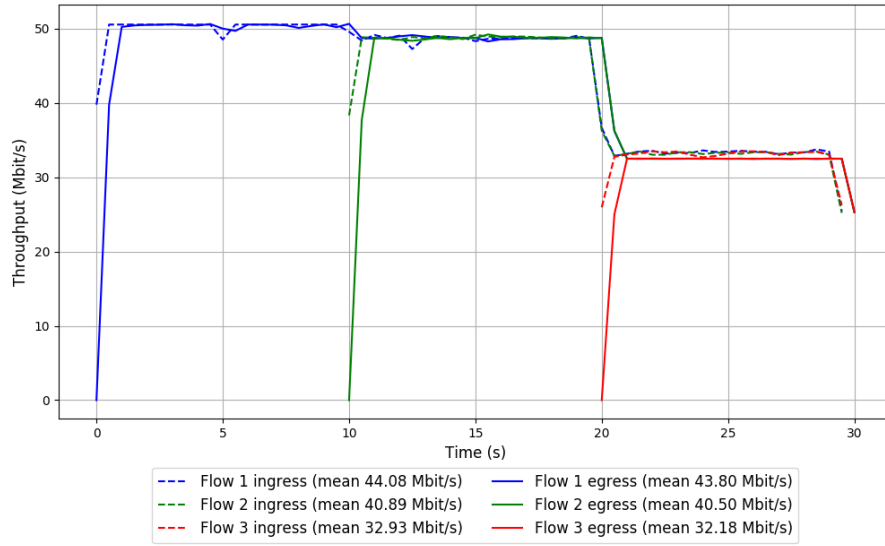
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-10-03 12:40:29
End at: 2019-10-03 12:40:59
Local clock offset: -5.531 ms
Remote clock offset: 0.326 ms


# Below is generated by plot.py at 2019-10-03 13:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.44 Mbit/s
95th percentile per-packet one-way delay: 24.025 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 43.91 Mbit/s
95th percentile per-packet one-way delay: 22.435 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 24.199 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 32.19 Mbit/s
95th percentile per-packet one-way delay: 25.483 ms
Loss rate: 1.68%
```
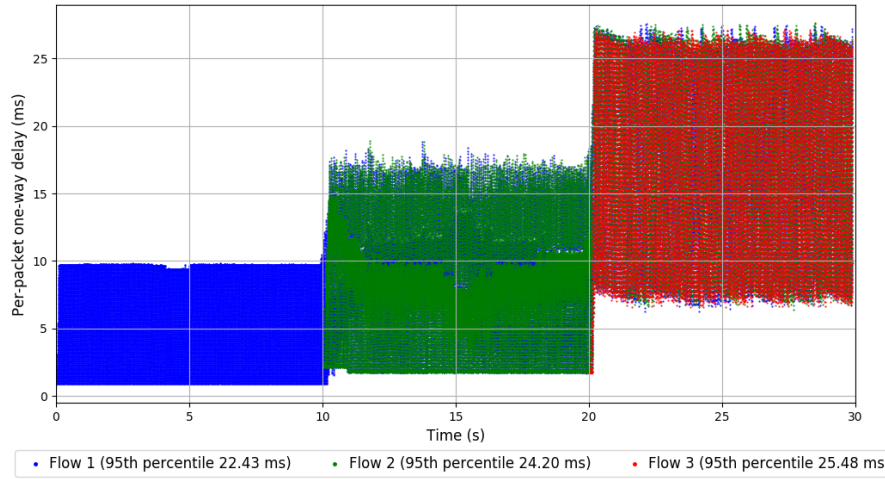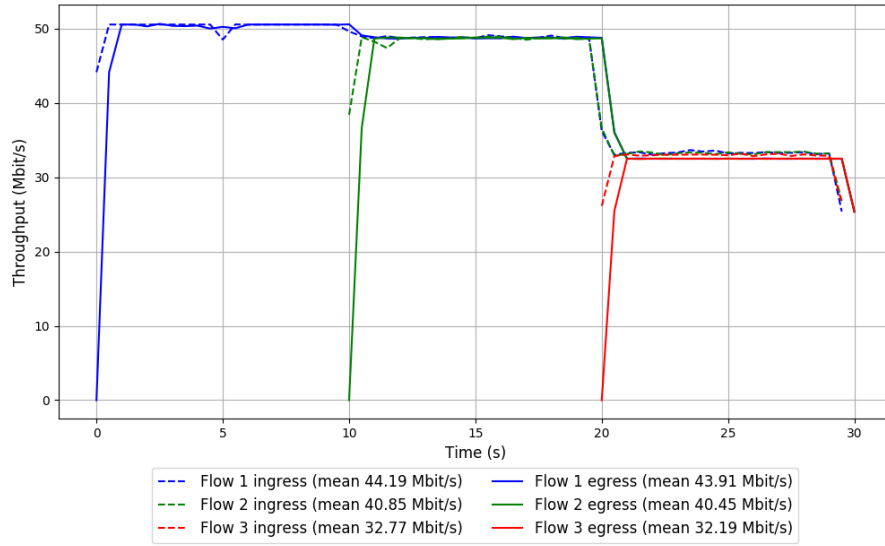
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-10-03 13:07:52
End at: 2019-10-03 13:08:23
Local clock offset: -5.431 ms
Remote clock offset: 0.199 ms


# Below is generated by plot.py at 2019-10-03 13:31:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.29 Mbit/s
95th percentile per-packet one-way delay: 24.425 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 43.25 Mbit/s
95th percentile per-packet one-way delay: 22.542 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 39.71 Mbit/s
95th percentile per-packet one-way delay: 24.188 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 26.638 ms
Loss rate: 0.54%
```
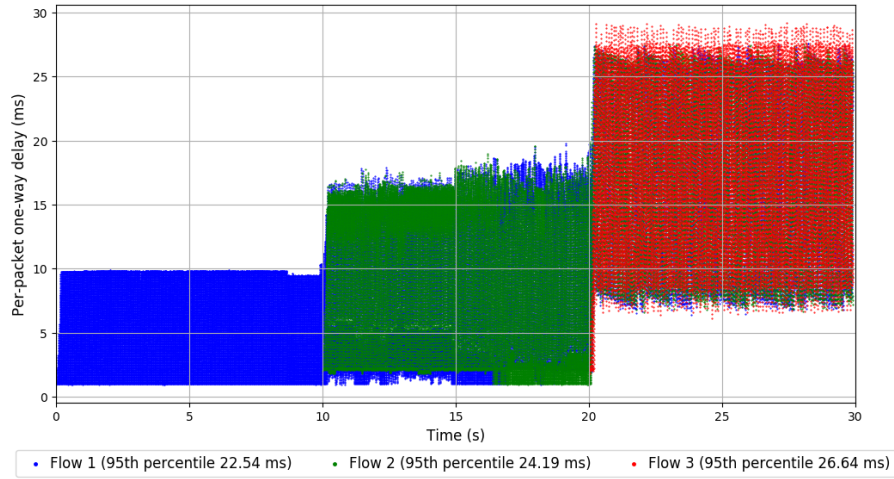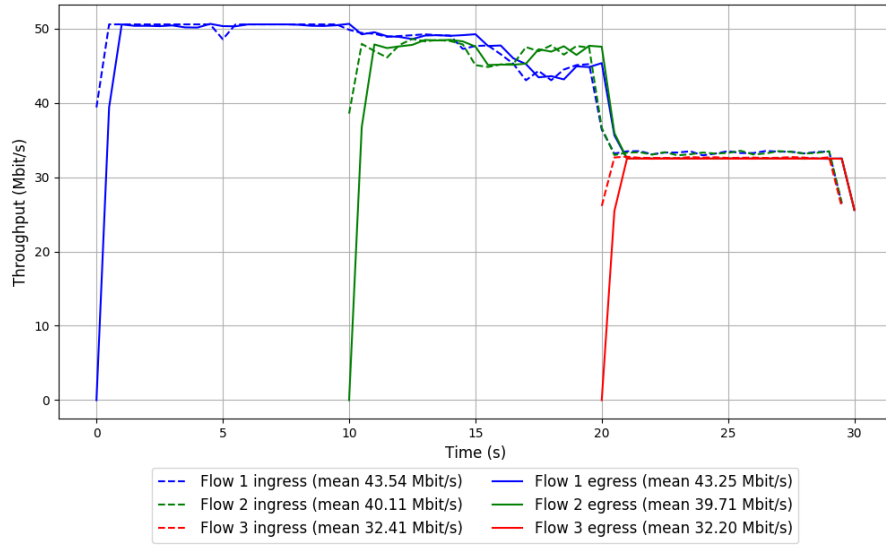
Run 5: Report of Sprout — Data Link

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

Start at: 2019-10-03 11:03:35
End at: 2019-10-03 11:04:05
Local clock offset: -6.764 ms
Remote clock offset: -0.644 ms


# Below is generated by plot.py at 2019-10-03 13:31:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.50 Mbit/s
95th percentile per-packet one-way delay: 2.931 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 7.94 Mbit/s
95th percentile per-packet one-way delay: 1.949 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 2.122 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 48.46 Mbit/s
95th percentile per-packet one-way delay: 4.181 ms
Loss rate: 0.02%
```
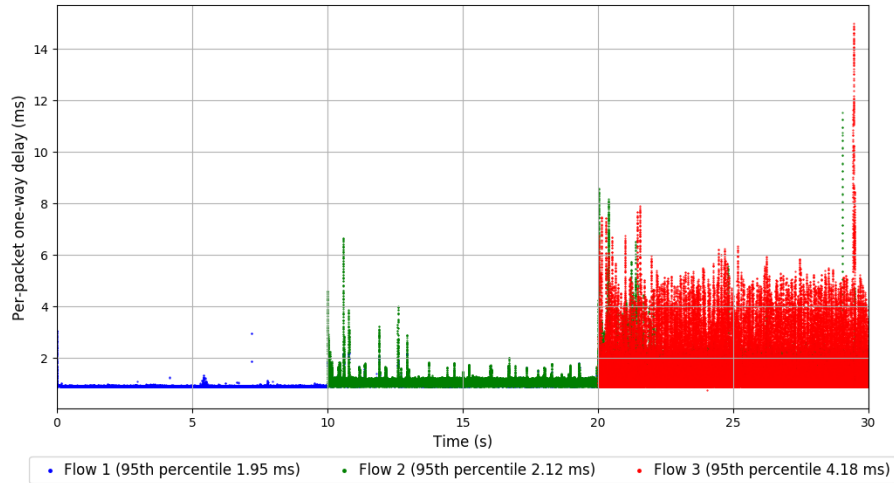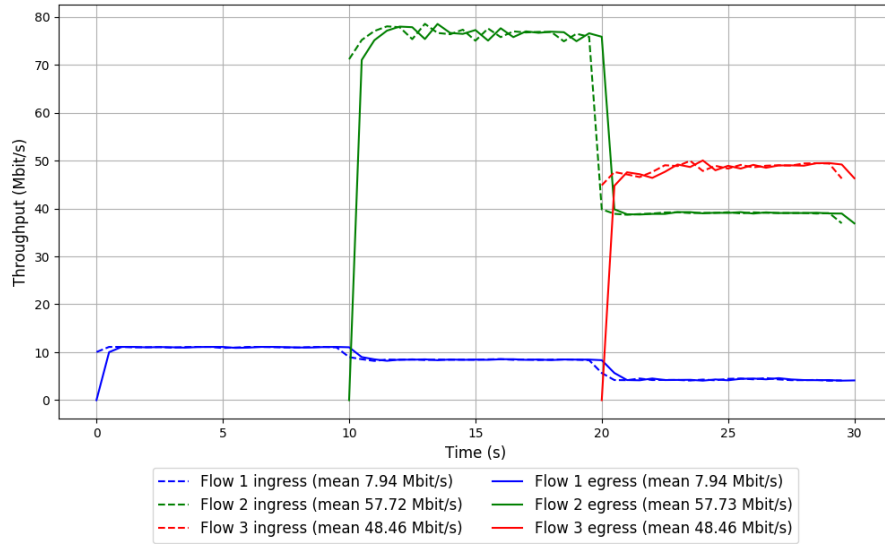
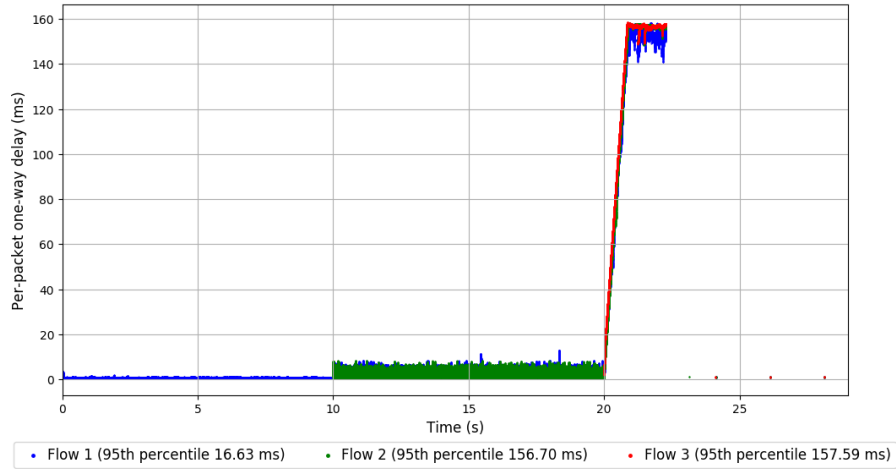Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-10-03 11:30:56
End at: 2019-10-03 11:31:26
Local clock offset: -6.648 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-10-03 13:32:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.52 Mbit/s
95th percentile per-packet one-way delay: 154.327 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 49.66 Mbit/s
95th percentile per-packet one-way delay: 16.628 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 29.90 Mbit/s
95th percentile per-packet one-way delay: 156.700 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 8.93 Mbit/s
95th percentile per-packet one-way delay: 157.593 ms
Loss rate: 0.49%
```

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

- - - - Flow 1 ingress (mean 49.67 Mbit/s) ——— Flow 1 egress (mean 49.66 Mbit/s)
- - - - Flow 2 ingress (mean 29.91 Mbit/s) ——— Flow 2 egress (mean 29.90 Mbit/s)
- - - - Flow 3 ingress (mean 8.97 Mbit/s) ——— Flow 3 egress (mean 8.93 Mbit/s)

- Flow 1 (95th percentile 16.63 ms) • Flow 2 (95th percentile 156.70 ms) • Flow 3 (95th percentile 157.59 ms)
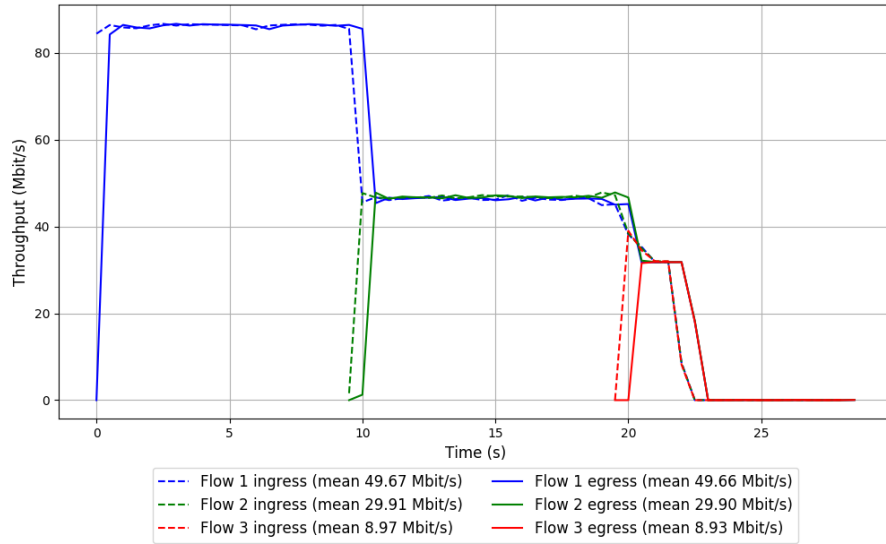
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-10-03 11:58:16
End at: 2019-10-03 11:58:46
Local clock offset: -6.523 ms
Remote clock offset: 0.221 ms


# Below is generated by plot.py at 2019-10-03 13:32:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.17 Mbit/s
95th percentile per-packet one-way delay: 142.550 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 45.27 Mbit/s
95th percentile per-packet one-way delay: 6.043 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 31.69 Mbit/s
95th percentile per-packet one-way delay: 156.861 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 9.40 Mbit/s
95th percentile per-packet one-way delay: 157.777 ms
Loss rate: 0.44%
```
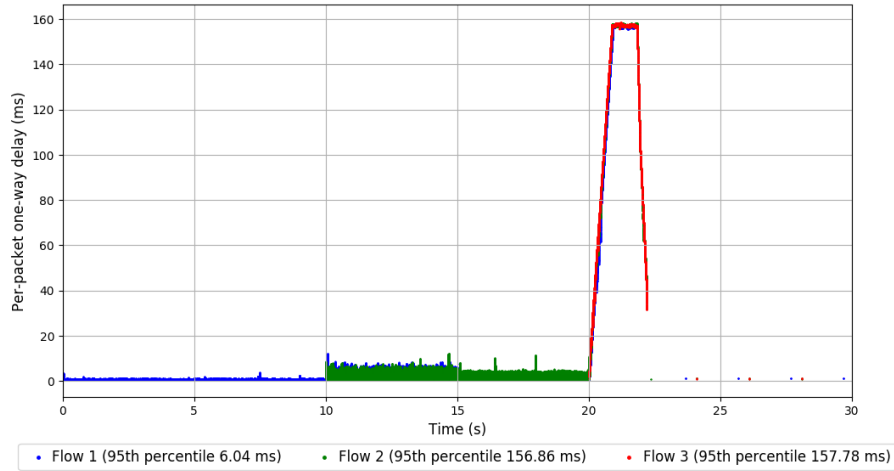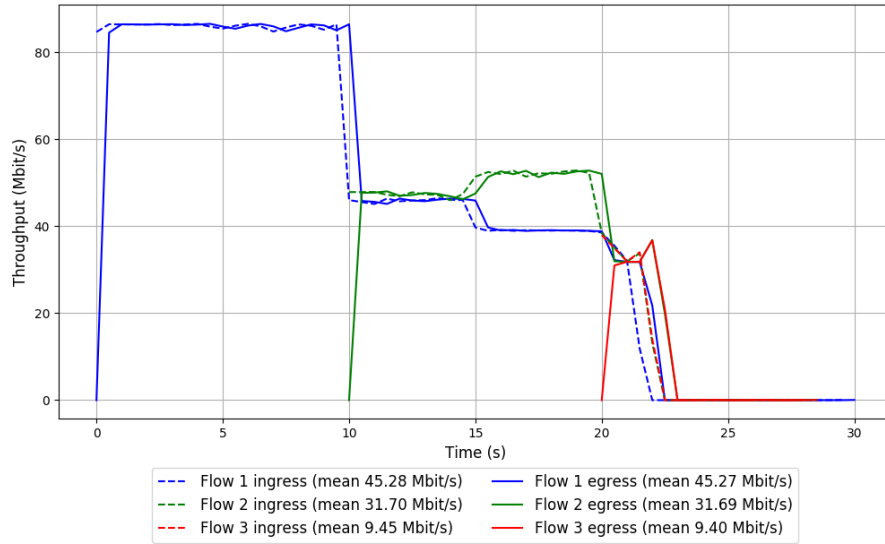
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 45.28 Mbit/s) --- Flow 1 egress (mean 45.27 Mbit/s)
Flow 2 ingress (mean 31.70 Mbit/s) --- Flow 2 egress (mean 31.69 Mbit/s)
Flow 3 ingress (mean 9.45 Mbit/s) --- Flow 3 egress (mean 9.40 Mbit/s)

Flow 1 (95th percentile 6.04 ms) Flow 2 (95th percentile 156.86 ms) Flow 3 (95th percentile 157.78 ms)

200

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

Start at: 2019-10-03 12:25:38
End at: 2019-10-03 12:26:08
Local clock offset: -6.395 ms
Remote clock offset: 0.369 ms


# Below is generated by plot.py at 2019-10-03 13:32:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.37 Mbit/s
95th percentile per-packet one-way delay: 151.495 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 7.378 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 29.91 Mbit/s
95th percentile per-packet one-way delay: 156.550 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 155.970 ms
Loss rate: 0.34%
```
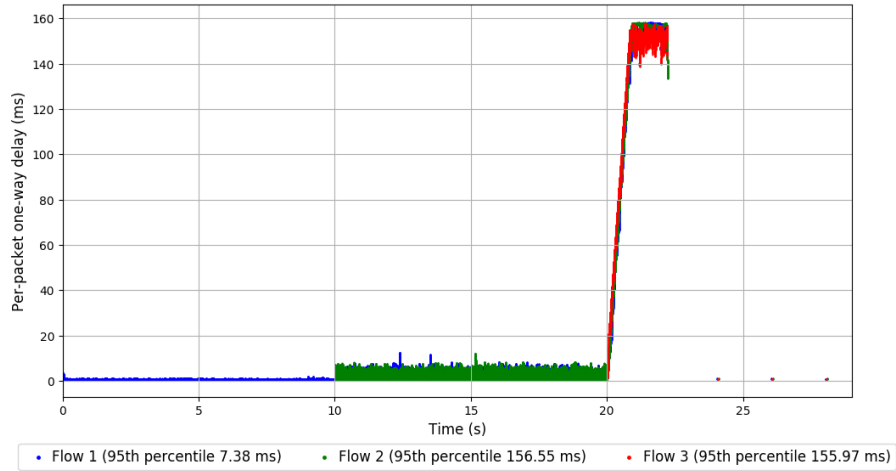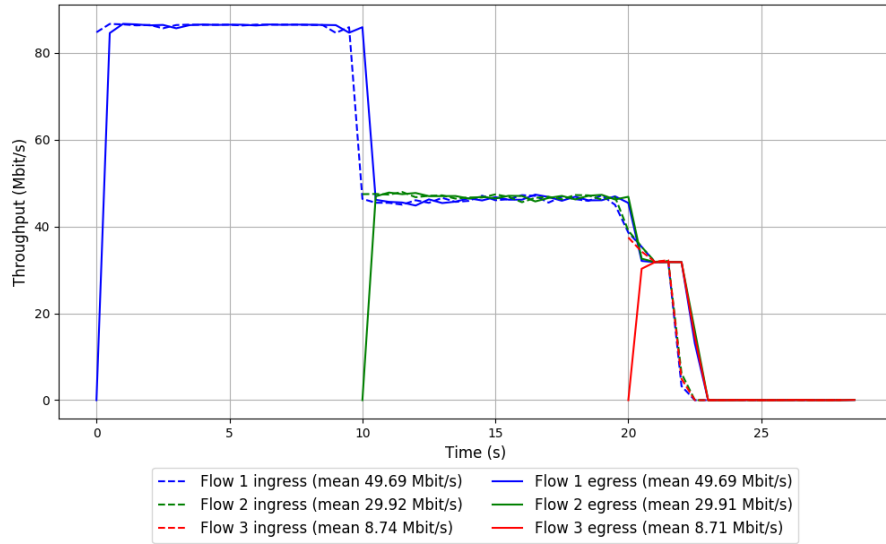
Run 4: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 49.69 Mbit/s) ——— Flow 1 egress (mean 49.69 Mbit/s)
- - - - Flow 2 ingress (mean 29.92 Mbit/s) ——— Flow 2 egress (mean 29.91 Mbit/s)
- - - - Flow 3 ingress (mean 8.74 Mbit/s) ——— Flow 3 egress (mean 8.71 Mbit/s)

- Flow 1 (95th percentile 7.38 ms)   • Flow 2 (95th percentile 156.55 ms)   • Flow 3 (95th percentile 155.97 ms)

202

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

Start at: 2019-10-03 12:53:01
End at: 2019-10-03 12:53:31
Local clock offset: -5.148 ms
Remote clock offset: 0.171 ms


# Below is generated by plot.py at 2019-10-03 13:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.96 Mbit/s
95th percentile per-packet one-way delay: 5.332 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 56.97 Mbit/s
95th percentile per-packet one-way delay: 4.708 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 48.73 Mbit/s
95th percentile per-packet one-way delay: 5.692 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 1.88 Mbit/s
95th percentile per-packet one-way delay: 113.285 ms
Loss rate: 3.47%
```
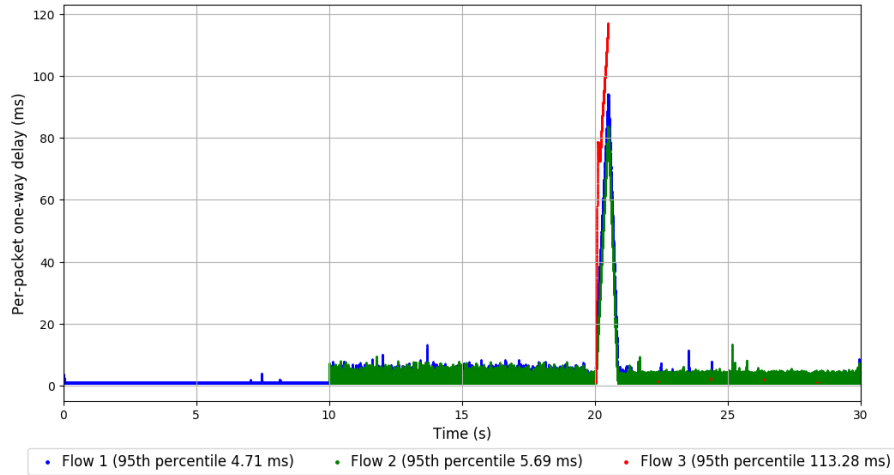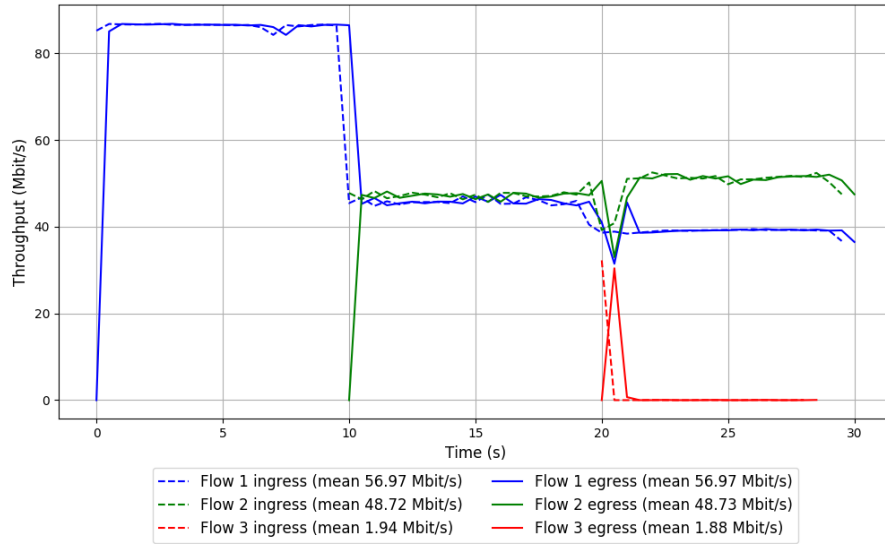
Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-10-03 11:21:49
End at: 2019-10-03 11:22:19
Local clock offset: -6.75 ms
Remote clock offset: -0.212 ms


# Below is generated by plot.py at 2019-10-03 13:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 2.442 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.61 Mbit/s
95th percentile per-packet one-way delay: 2.154 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.19 Mbit/s
95th percentile per-packet one-way delay: 2.308 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 47.97 Mbit/s
95th percentile per-packet one-way delay: 3.008 ms
Loss rate: 0.02%
```
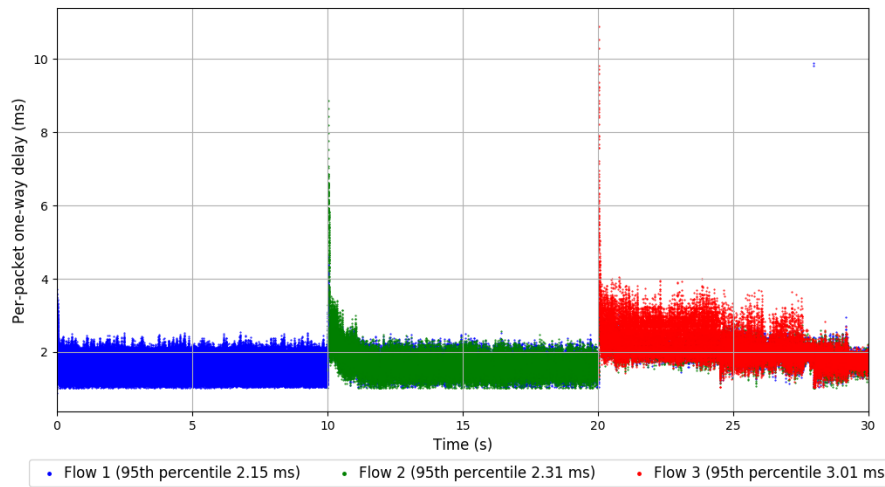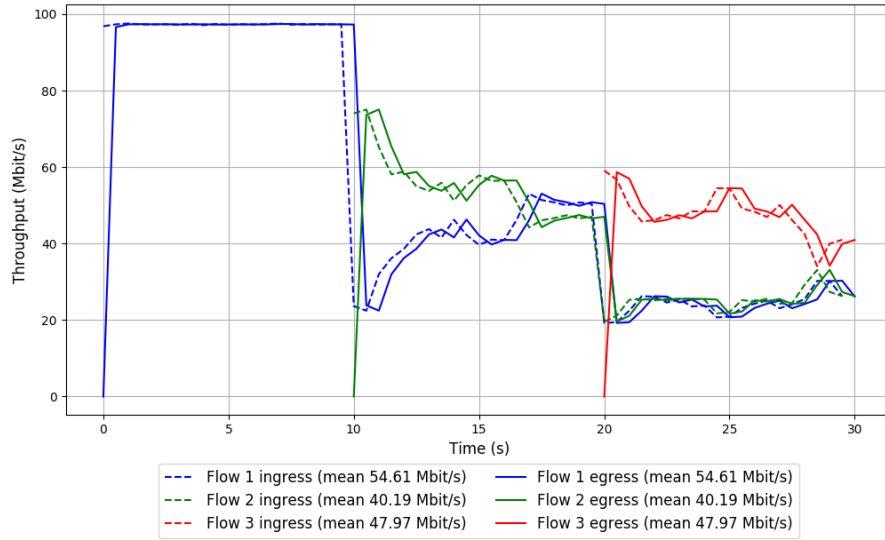
Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-10-03 11:49:10
End at: 2019-10-03 11:49:40
Local clock offset: -6.437 ms
Remote clock offset: 0.276 ms


# Below is generated by plot.py at 2019-10-03 13:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 2.705 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.66 Mbit/s
95th percentile per-packet one-way delay: 2.065 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.15 Mbit/s
95th percentile per-packet one-way delay: 2.224 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 48.57 Mbit/s
95th percentile per-packet one-way delay: 3.369 ms
Loss rate: 0.02%
```
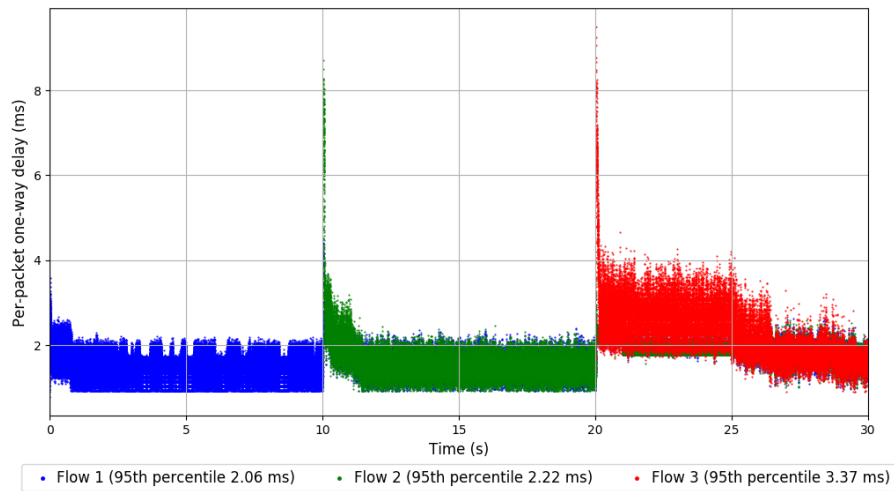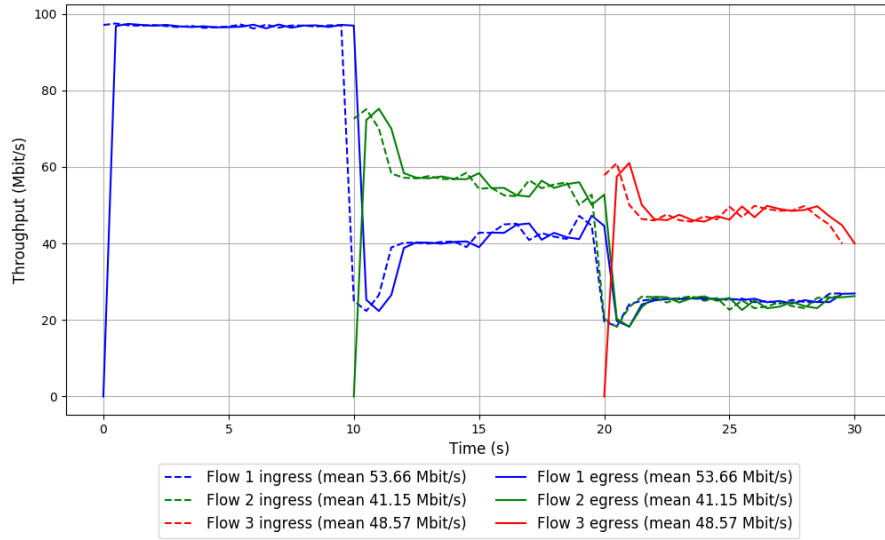
Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 53.66 Mbit/s) --- Flow 1 egress (mean 53.66 Mbit/s)
Flow 2 ingress (mean 41.15 Mbit/s) --- Flow 2 egress (mean 41.15 Mbit/s)
Flow 3 ingress (mean 48.57 Mbit/s) --- Flow 3 egress (mean 48.57 Mbit/s)

Flow 1 (95th percentile 2.06 ms) • Flow 2 (95th percentile 2.22 ms) • Flow 3 (95th percentile 3.37 ms)

```
Run 3: Statistics of TCP Vegas

Start at: 2019-10-03 12:16:32
End at: 2019-10-03 12:17:02
Local clock offset: -6.547 ms
Remote clock offset: 0.351 ms


# Below is generated by plot.py at 2019-10-03 13:32:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 2.598 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.28 Mbit/s
95th percentile per-packet one-way delay: 2.128 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.48 Mbit/s
95th percentile per-packet one-way delay: 2.847 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 44.55 Mbit/s
95th percentile per-packet one-way delay: 2.969 ms
Loss rate: 0.03%
```
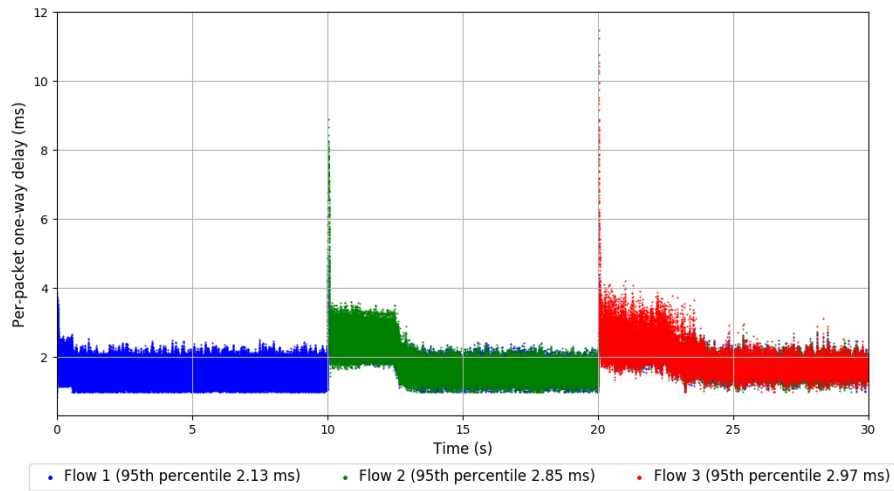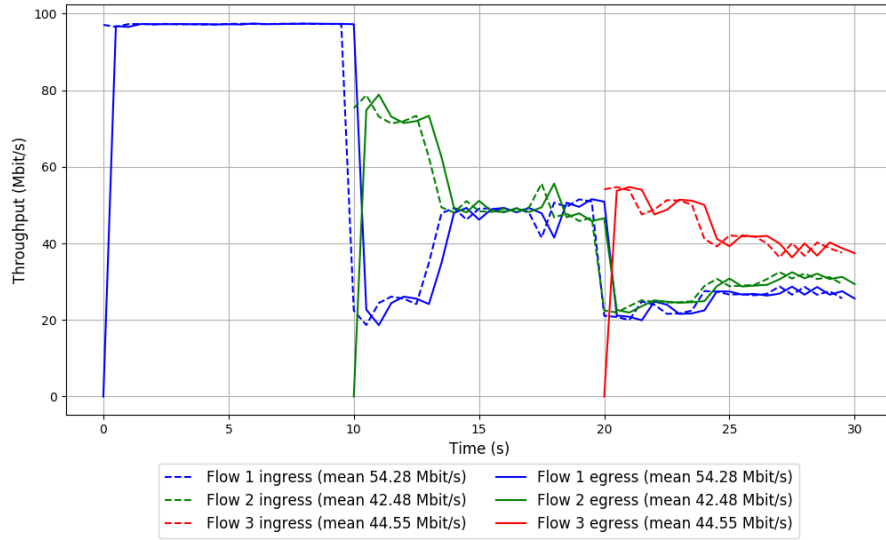
Run 3: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 54.28 Mbit/s) --- Flow 1 egress (mean 54.28 Mbit/s)
Flow 2 ingress (mean 42.48 Mbit/s) --- Flow 2 egress (mean 42.48 Mbit/s)
Flow 3 ingress (mean 44.55 Mbit/s) --- Flow 3 egress (mean 44.55 Mbit/s)

Flow 1 (95th percentile 2.13 ms)   Flow 2 (95th percentile 2.85 ms)   Flow 3 (95th percentile 2.97 ms)

```
Run 4: Statistics of TCP Vegas

Start at: 2019-10-03 12:43:54
End at: 2019-10-03 12:44:24
Local clock offset: -5.448 ms
Remote clock offset: 0.354 ms


# Below is generated by plot.py at 2019-10-03 13:33:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.63 Mbit/s
95th percentile per-packet one-way delay: 2.862 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 52.50 Mbit/s
95th percentile per-packet one-way delay: 1.915 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.94 Mbit/s
95th percentile per-packet one-way delay: 2.468 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.74 Mbit/s
95th percentile per-packet one-way delay: 3.360 ms
Loss rate: 0.02%
```
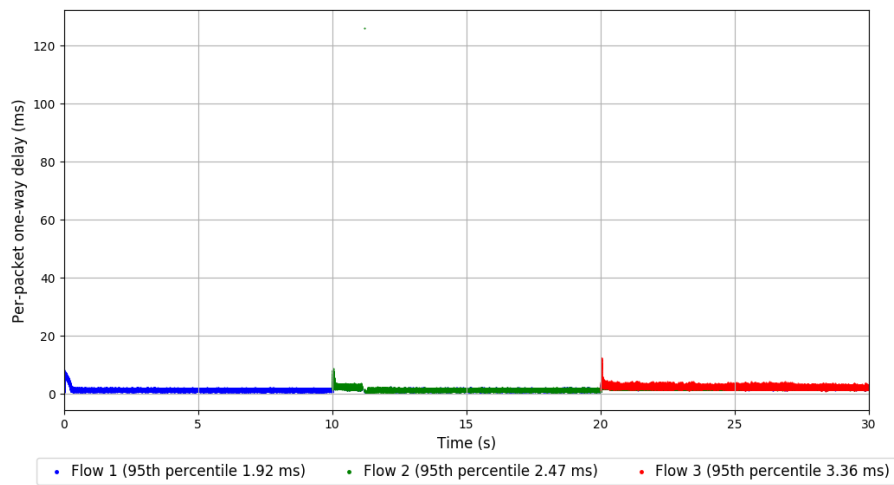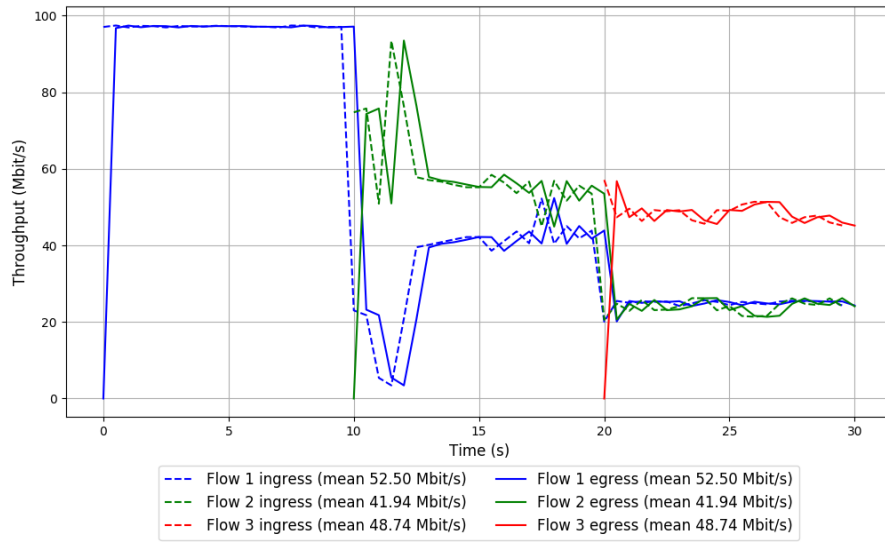
Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 52.50 Mbit/s) Flow 1 egress (mean 52.50 Mbit/s)
Flow 2 ingress (mean 41.94 Mbit/s) Flow 2 egress (mean 41.94 Mbit/s)
Flow 3 ingress (mean 48.74 Mbit/s) Flow 3 egress (mean 48.74 Mbit/s)

Flow 1 (95th percentile 1.92 ms)   Flow 2 (95th percentile 2.47 ms)   Flow 3 (95th percentile 3.36 ms)

```
Run 5: Statistics of TCP Vegas

Start at: 2019-10-03 13:11:17
End at: 2019-10-03 13:11:47
Local clock offset: -5.488 ms
Remote clock offset: 0.296 ms


# Below is generated by plot.py at 2019-10-03 13:33:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.17 Mbit/s
95th percentile per-packet one-way delay: 2.454 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 2.007 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.92 Mbit/s
95th percentile per-packet one-way delay: 2.320 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 45.73 Mbit/s
95th percentile per-packet one-way delay: 3.135 ms
Loss rate: 0.02%
```
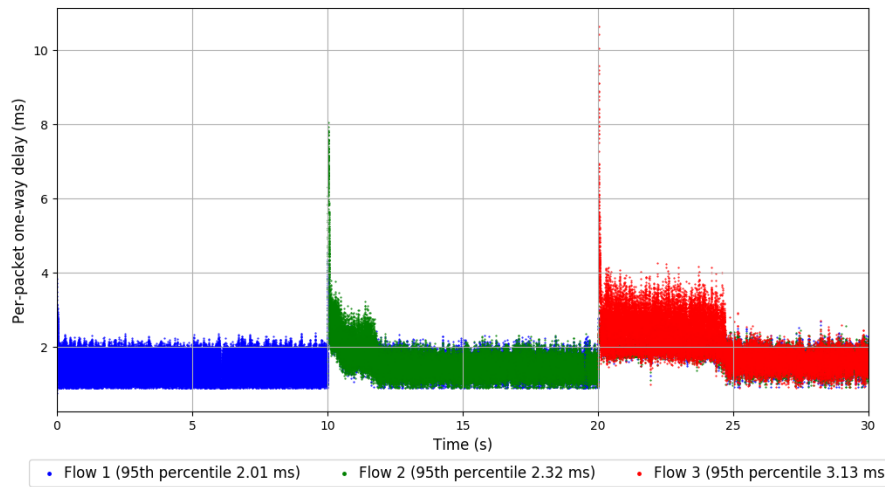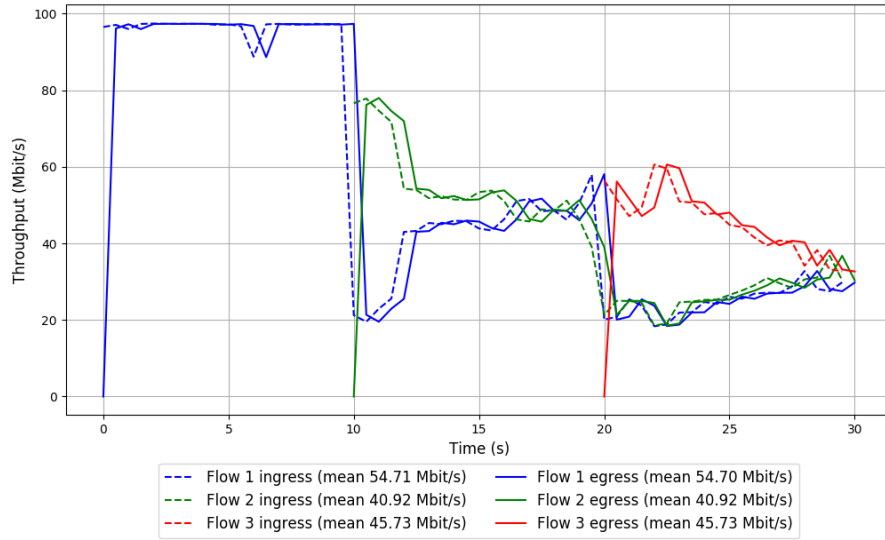
Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-10-03 11:25:15
End at: 2019-10-03 11:25:45
Local clock offset: -6.751 ms
Remote clock offset: -0.044 ms


# Below is generated by plot.py at 2019-10-03 13:33:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.99 Mbit/s
95th percentile per-packet one-way delay: 28.063 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 39.93 Mbit/s
95th percentile per-packet one-way delay: 19.911 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 33.12 Mbit/s
95th percentile per-packet one-way delay: 17.337 ms
Loss rate: 0.52%
-- Flow 3:
Average throughput: 24.11 Mbit/s
95th percentile per-packet one-way delay: 180.656 ms
Loss rate: 0.16%
```
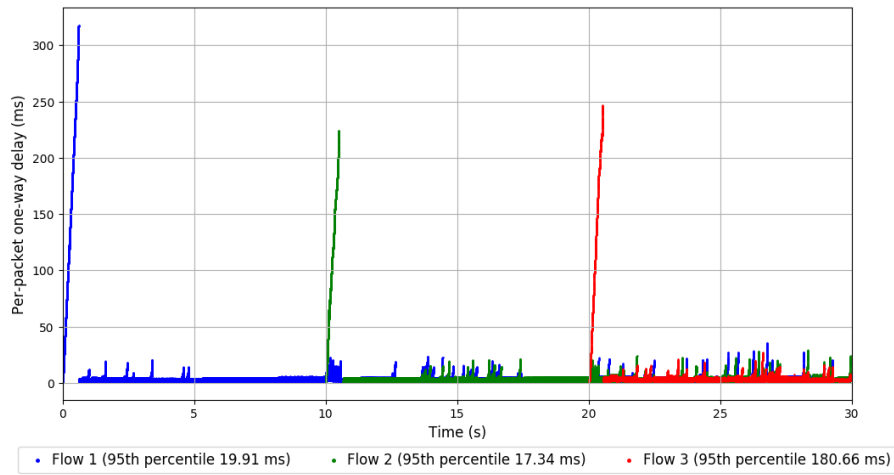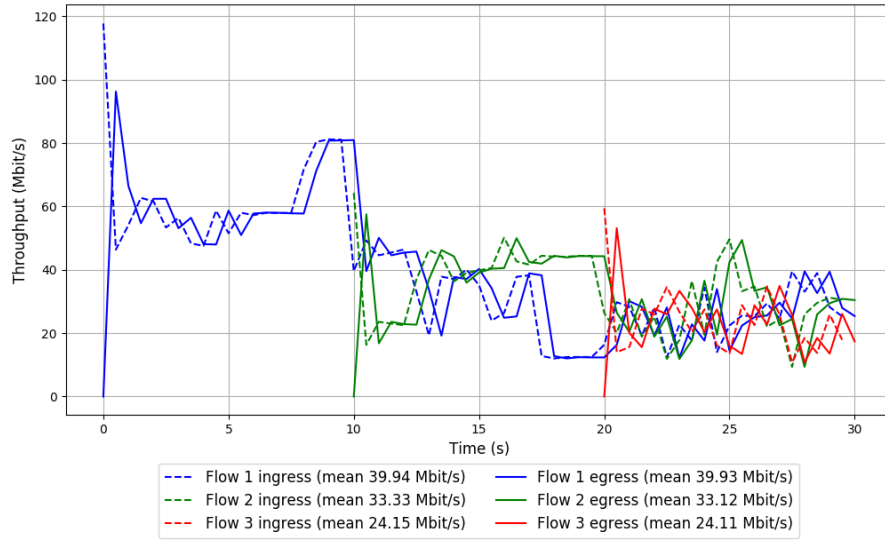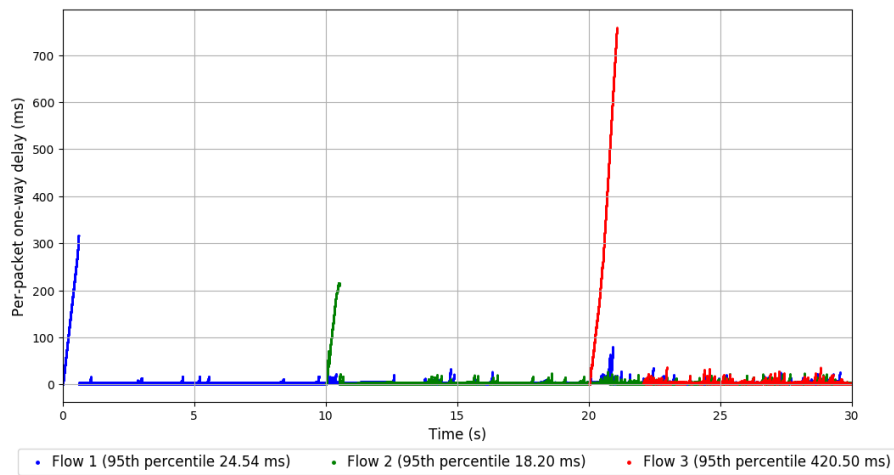
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 39.94 Mbit/s)   Flow 1 egress (mean 39.93 Mbit/s)
Flow 2 ingress (mean 33.33 Mbit/s)   Flow 2 egress (mean 33.12 Mbit/s)
Flow 3 ingress (mean 24.15 Mbit/s)   Flow 3 egress (mean 24.11 Mbit/s)

Flow 1 (95th percentile 19.91 ms)   Flow 2 (95th percentile 17.34 ms)   Flow 3 (95th percentile 180.66 ms)

```
Run 2: Statistics of Verus

Start at: 2019-10-03 11:52:35
End at: 2019-10-03 11:53:05
Local clock offset: -6.485 ms
Remote clock offset: 0.255 ms


# Below is generated by plot.py at 2019-10-03 13:33:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 77.536 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 39.76 Mbit/s
95th percentile per-packet one-way delay: 24.541 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 34.11 Mbit/s
95th percentile per-packet one-way delay: 18.203 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 29.43 Mbit/s
95th percentile per-packet one-way delay: 420.498 ms
Loss rate: 0.13%
```
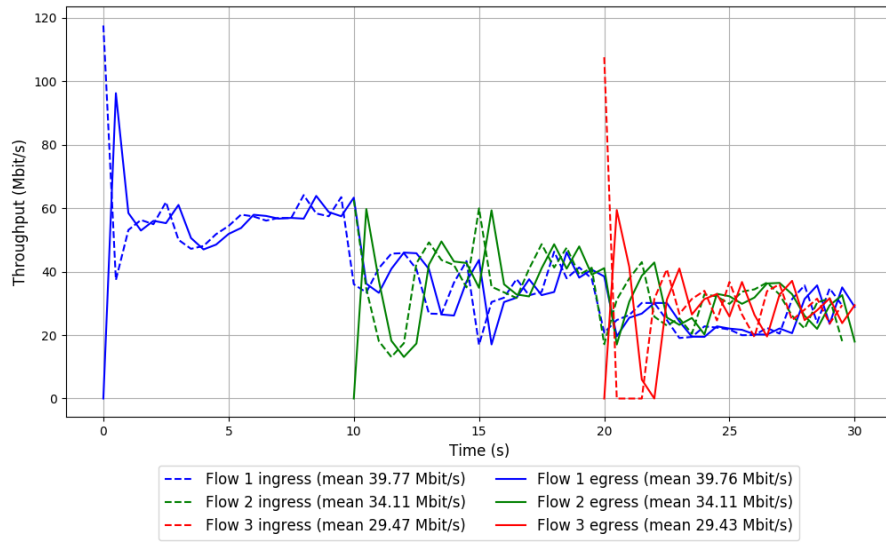
Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-10-03 12:19:57
End at: 2019-10-03 12:20:27
Local clock offset: -6.541 ms
Remote clock offset: 0.398 ms


# Below is generated by plot.py at 2019-10-03 13:33:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 72.58 Mbit/s
95th percentile per-packet one-way delay: 29.572 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 39.26 Mbit/s
95th percentile per-packet one-way delay: 20.940 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 32.99 Mbit/s
95th percentile per-packet one-way delay: 30.904 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 34.18 Mbit/s
95th percentile per-packet one-way delay: 95.668 ms
Loss rate: 0.04%
```
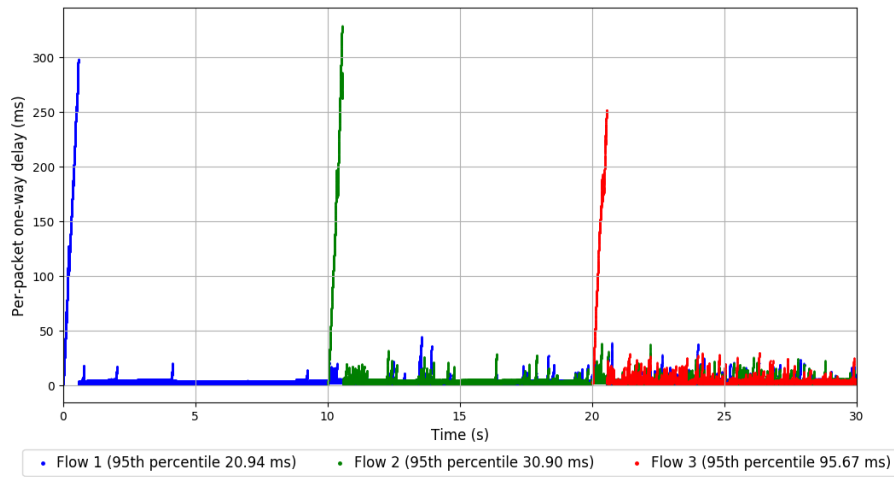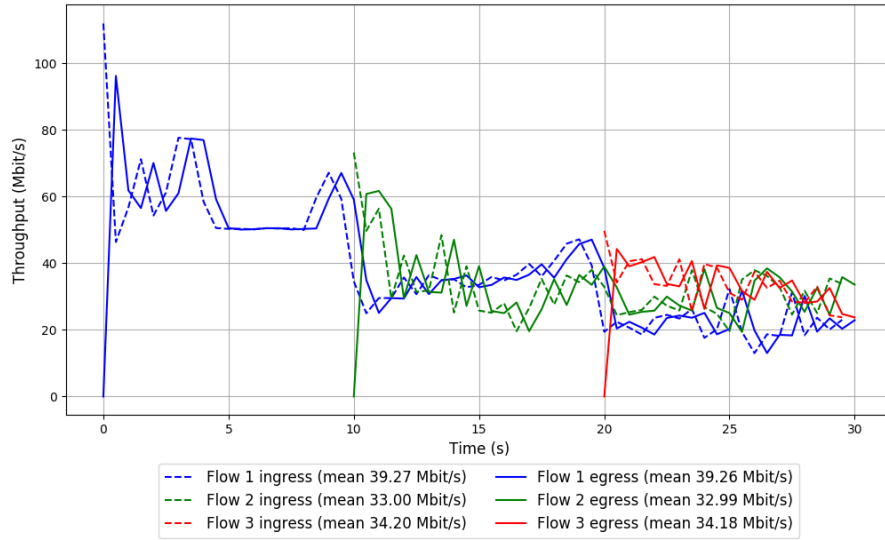
Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-10-03 12:47:19
End at: 2019-10-03 12:47:49
Local clock offset: -5.289 ms
Remote clock offset: 0.29 ms


# Below is generated by plot.py at 2019-10-03 13:33:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 71.70 Mbit/s
95th percentile per-packet one-way delay: 33.384 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 39.74 Mbit/s
95th percentile per-packet one-way delay: 19.590 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 32.17 Mbit/s
95th percentile per-packet one-way delay: 20.957 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 31.78 Mbit/s
95th percentile per-packet one-way delay: 136.265 ms
Loss rate: 0.05%
```
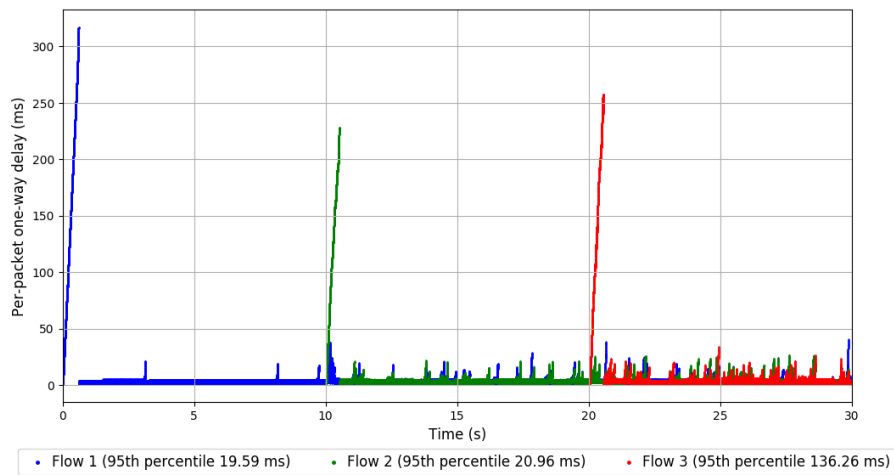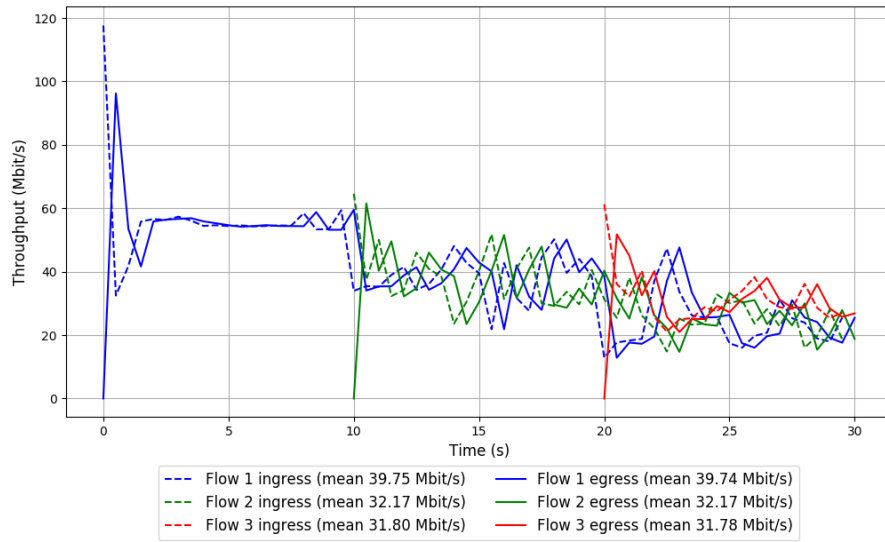
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-10-03 13:14:43
End at: 2019-10-03 13:15:13
Local clock offset: -5.479 ms
Remote clock offset: 0.348 ms


# Below is generated by plot.py at 2019-10-03 13:33:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.23 Mbit/s
95th percentile per-packet one-way delay: 29.022 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 38.33 Mbit/s
95th percentile per-packet one-way delay: 18.421 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 24.30 Mbit/s
95th percentile per-packet one-way delay: 75.782 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 35.30 Mbit/s
95th percentile per-packet one-way delay: 133.415 ms
Loss rate: 0.08%
```
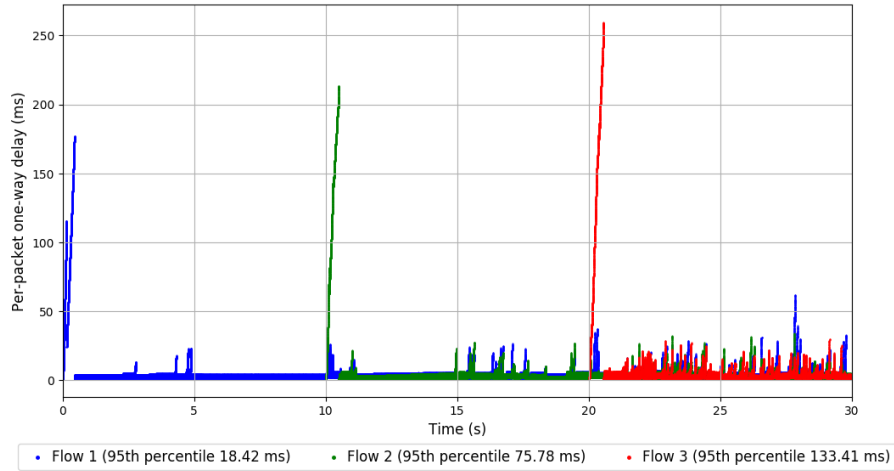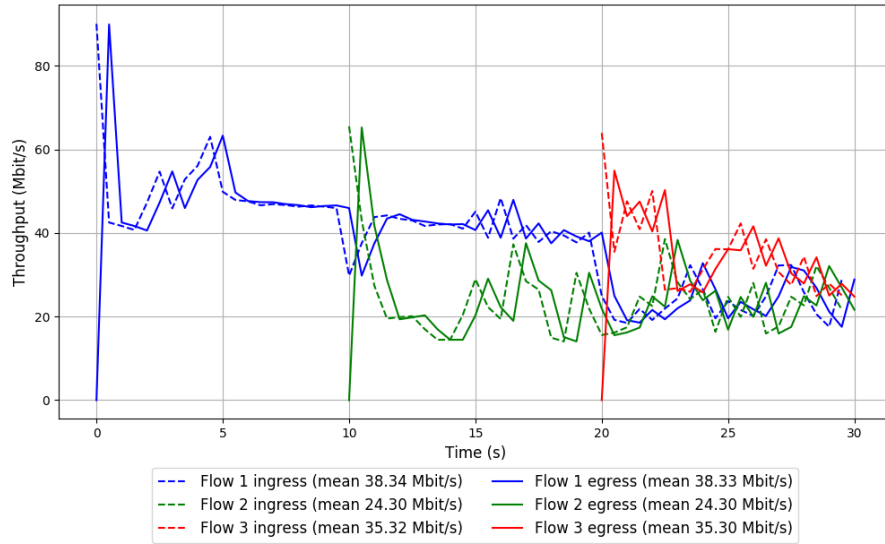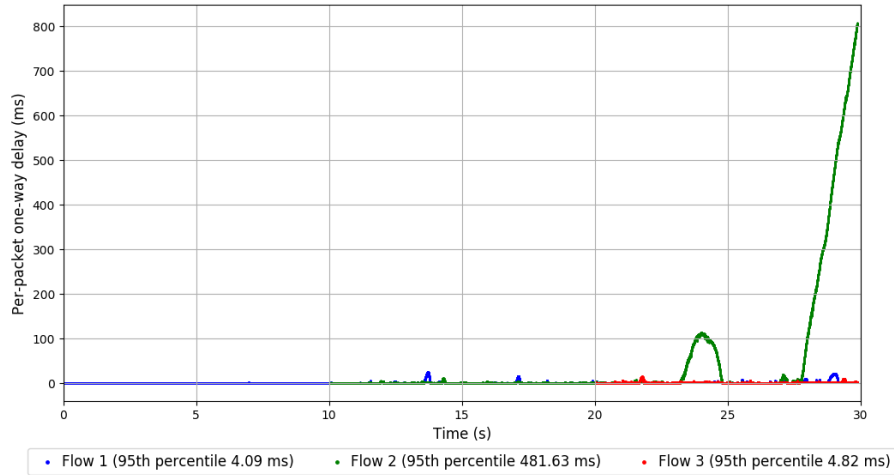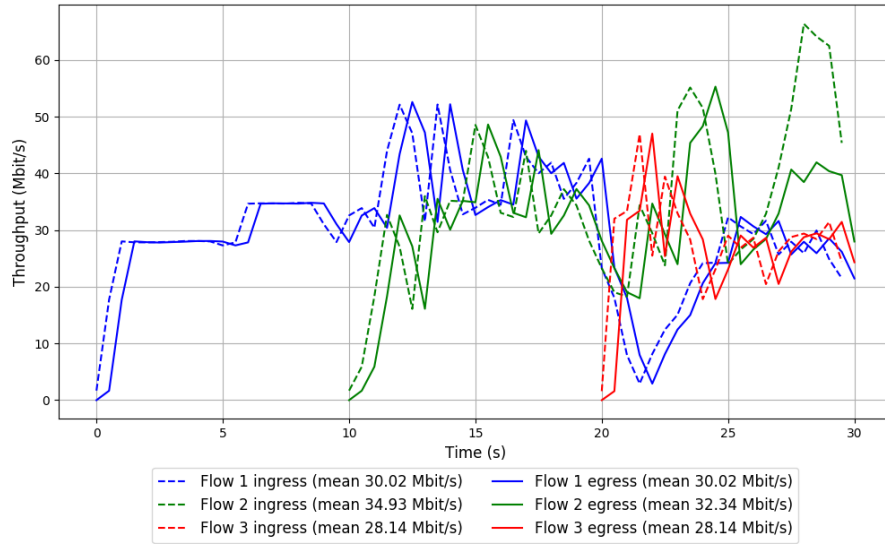
Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-10-03 11:06:58
End at: 2019-10-03 11:07:28
Local clock offset: -6.69 ms
Remote clock offset: -0.557 ms


# Below is generated by plot.py at 2019-10-03 13:33:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.81 Mbit/s
95th percentile per-packet one-way delay: 103.483 ms
Loss rate: 2.77%
-- Flow 1:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 4.086 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 32.34 Mbit/s
95th percentile per-packet one-way delay: 481.629 ms
Loss rate: 7.43%
-- Flow 3:
Average throughput: 28.14 Mbit/s
95th percentile per-packet one-way delay: 4.816 ms
Loss rate: 0.03%
```

Run 1: Report of PCC-Vivace — Data Link

Legend:
- Flow 1 ingress (mean 30.02 Mbit/s)
- Flow 1 egress (mean 30.02 Mbit/s)
- Flow 2 ingress (mean 34.93 Mbit/s)
- Flow 2 egress (mean 32.34 Mbit/s)
- Flow 3 ingress (mean 28.14 Mbit/s)
- Flow 3 egress (mean 28.14 Mbit/s)

Legend:
- Flow 1 (95th percentile 4.09 ms)
- Flow 2 (95th percentile 481.63 ms)
- Flow 3 (95th percentile 4.82 ms)

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-10-03 11:34:19
End at: 2019-10-03 11:34:49
Local clock offset: -6.552 ms
Remote clock offset: 0.028 ms


# Below is generated by plot.py at 2019-10-03 13:33:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.03 Mbit/s
95th percentile per-packet one-way delay: 4.752 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 31.57 Mbit/s
95th percentile per-packet one-way delay: 2.512 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 34.32 Mbit/s
95th percentile per-packet one-way delay: 30.670 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 16.99 Mbit/s
95th percentile per-packet one-way delay: 3.944 ms
Loss rate: 0.03%
```
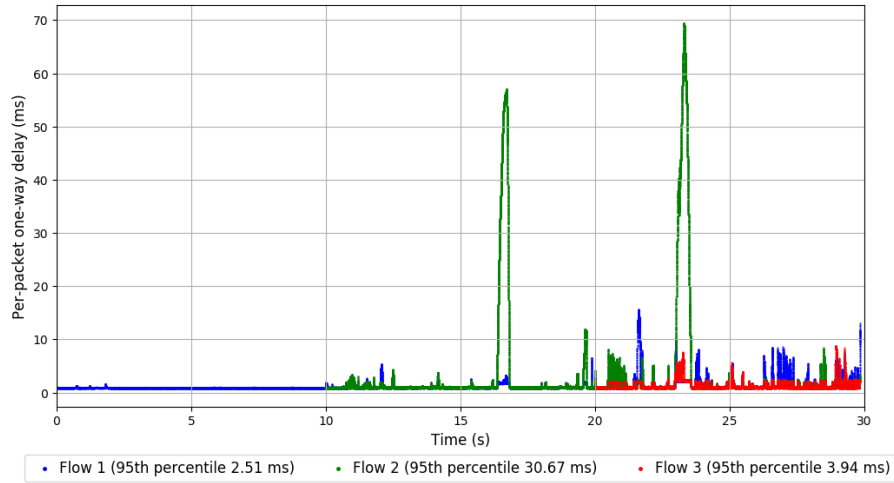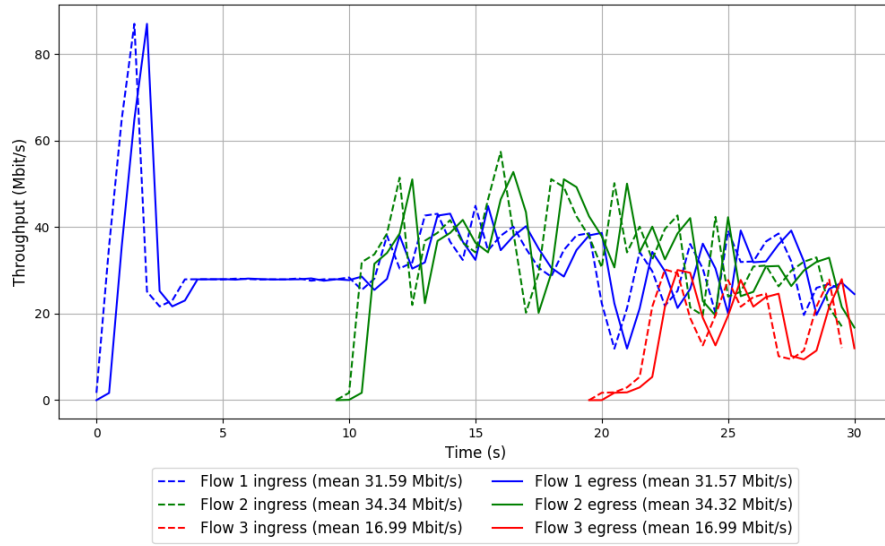
Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-10-03 12:01:39
End at: 2019-10-03 12:02:09
Local clock offset: -6.479 ms
Remote clock offset: 0.254 ms


# Below is generated by plot.py at 2019-10-03 13:33:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.42 Mbit/s
95th percentile per-packet one-way delay: 315.748 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 28.85 Mbit/s
95th percentile per-packet one-way delay: 2.252 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 29.48 Mbit/s
95th percentile per-packet one-way delay: 5.087 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.17 Mbit/s
95th percentile per-packet one-way delay: 394.919 ms
Loss rate: 3.85%
```
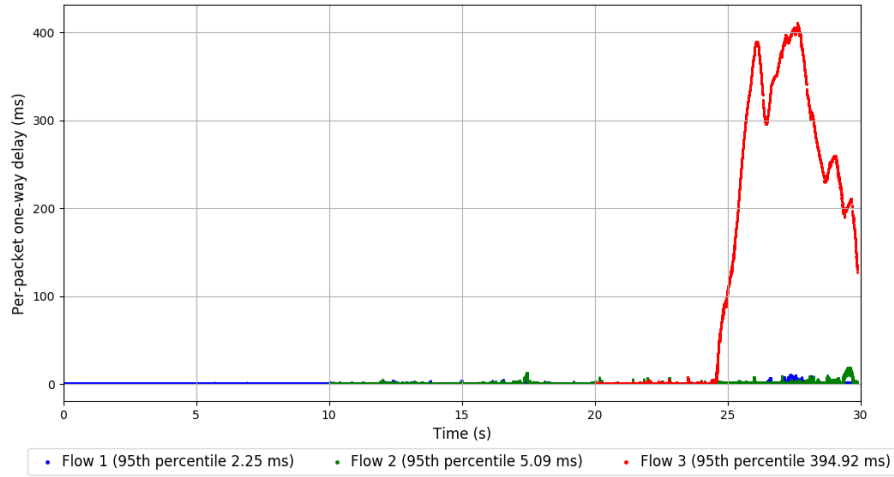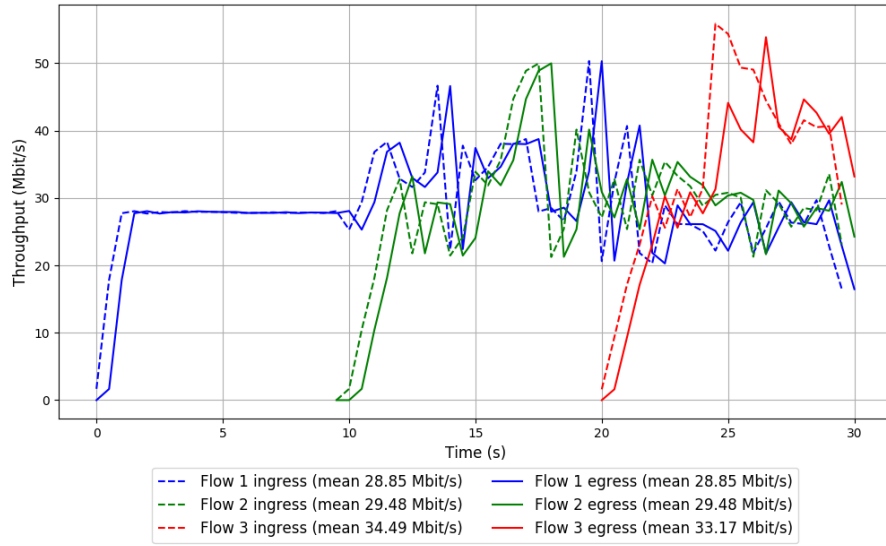
Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-10-03 12:29:01
End at: 2019-10-03 12:29:31
Local clock offset: -6.156 ms
Remote clock offset: 0.302 ms


# Below is generated by plot.py at 2019-10-03 13:33:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 62.55 Mbit/s
95th percentile per-packet one-way delay: 291.232 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 33.88 Mbit/s
95th percentile per-packet one-way delay: 266.202 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 29.34 Mbit/s
95th percentile per-packet one-way delay: 104.949 ms
Loss rate: 0.15%
-- Flow 3:
Average throughput: 27.73 Mbit/s
95th percentile per-packet one-way delay: 376.446 ms
Loss rate: 1.29%
```
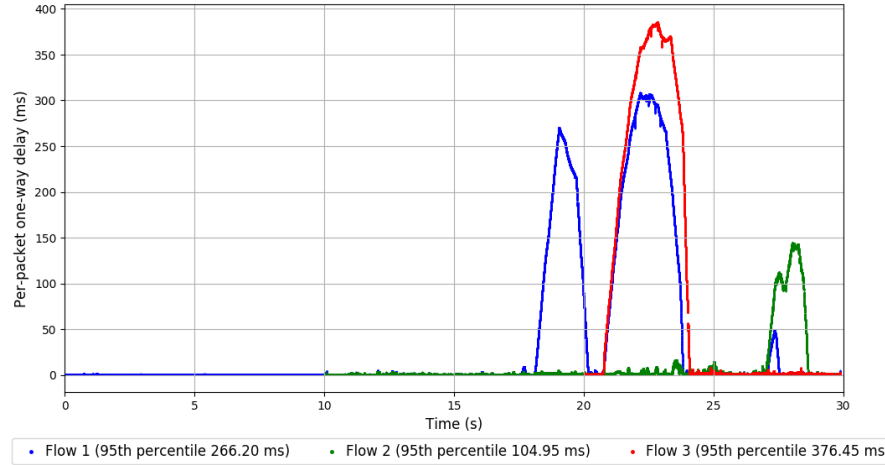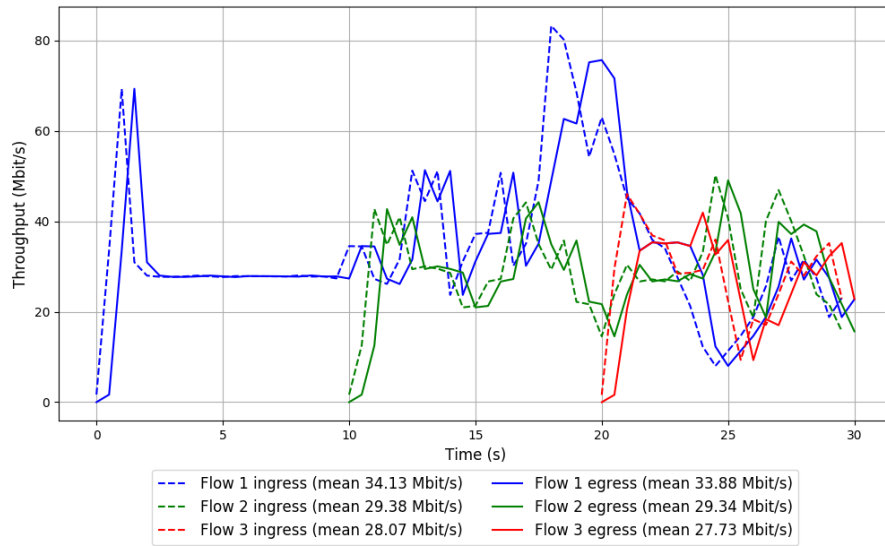
Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 34.13 Mbit/s) — Flow 1 egress (mean 33.88 Mbit/s)
Flow 2 ingress (mean 29.38 Mbit/s) — Flow 2 egress (mean 29.34 Mbit/s)
Flow 3 ingress (mean 28.07 Mbit/s) — Flow 3 egress (mean 27.73 Mbit/s)

Flow 1 (95th percentile 266.20 ms) — Flow 2 (95th percentile 104.95 ms) — Flow 3 (95th percentile 376.45 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-10-03 12:56:26
End at: 2019-10-03 12:56:56
Local clock offset: -5.188 ms
Remote clock offset: 0.119 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 60.19 Mbit/s
95th percentile per-packet one-way delay: 4.378 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 32.93 Mbit/s
95th percentile per-packet one-way delay: 4.279 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 32.14 Mbit/s
95th percentile per-packet one-way delay: 5.109 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 17.85 Mbit/s
95th percentile per-packet one-way delay: 3.446 ms
Loss rate: 0.02%
```
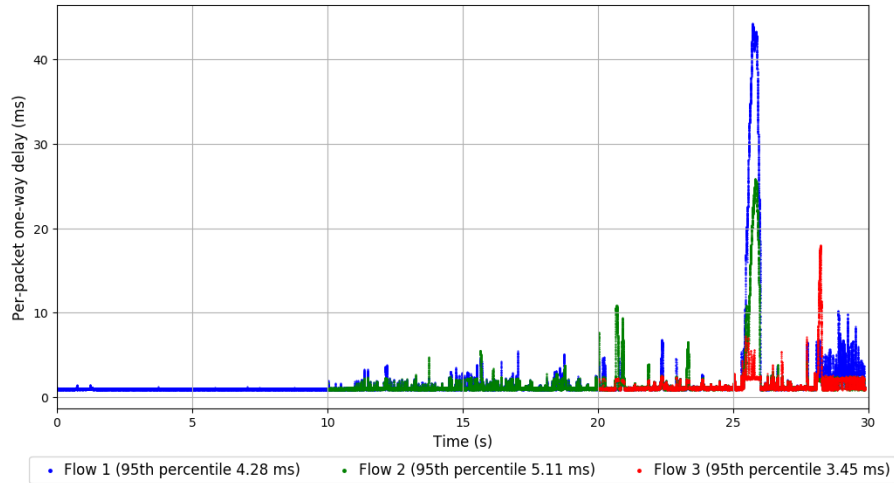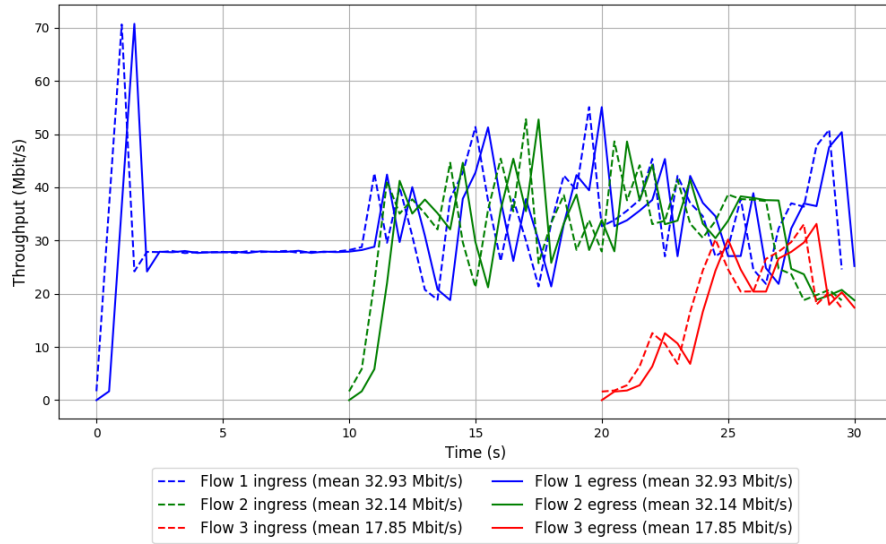
Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-10-03 11:26:24
End at: 2019-10-03 11:26:54
Local clock offset: -6.763 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.77 Mbit/s
95th percentile per-packet one-way delay: 1.534 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.49 Mbit/s
95th percentile per-packet one-way delay: 1.546 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.87 Mbit/s
95th percentile per-packet one-way delay: 1.551 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.42 Mbit/s
95th percentile per-packet one-way delay: 1.407 ms
Loss rate: 0.00%
```
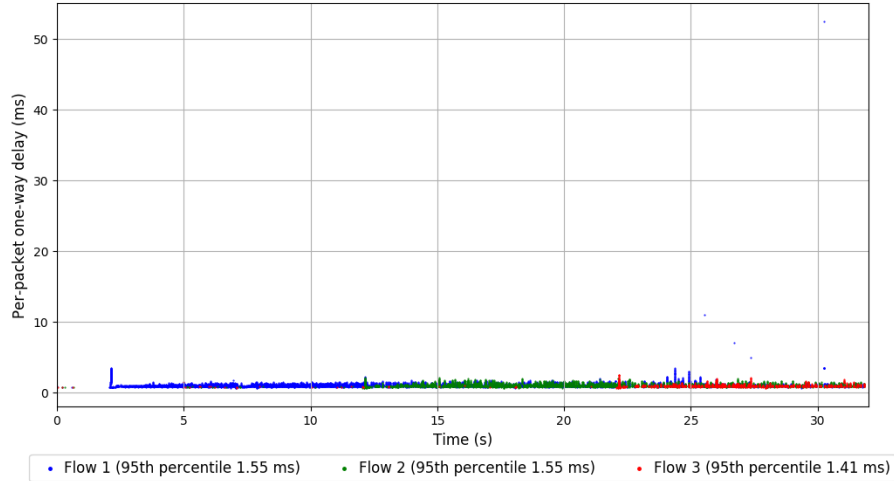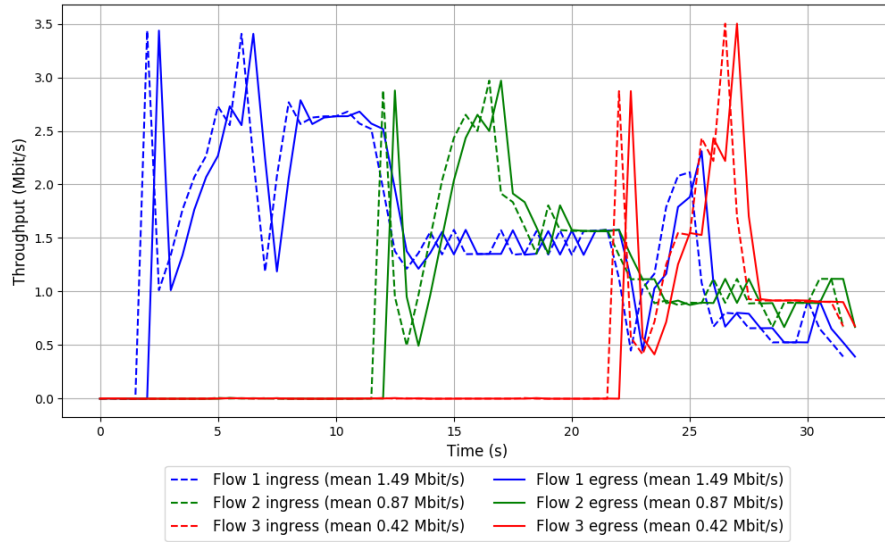
Run 1: Report of WebRTC media — Data Link

Flow 1 ingress (mean 1.49 Mbit/s) — Flow 1 egress (mean 1.49 Mbit/s)
Flow 2 ingress (mean 0.87 Mbit/s) — Flow 2 egress (mean 0.87 Mbit/s)
Flow 3 ingress (mean 0.42 Mbit/s) — Flow 3 egress (mean 0.42 Mbit/s)

Flow 1 (95th percentile 1.55 ms)   Flow 2 (95th percentile 1.55 ms)   Flow 3 (95th percentile 1.41 ms)

```
Run 2: Statistics of WebRTC media

Start at: 2019-10-03 11:53:44
End at: 2019-10-03 11:54:14
Local clock offset: -6.419 ms
Remote clock offset: 0.282 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.61 Mbit/s
95th percentile per-packet one-way delay: 1.498 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.56 Mbit/s
95th percentile per-packet one-way delay: 1.543 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.71 Mbit/s
95th percentile per-packet one-way delay: 1.384 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.35 Mbit/s
95th percentile per-packet one-way delay: 1.426 ms
Loss rate: 0.00%
```
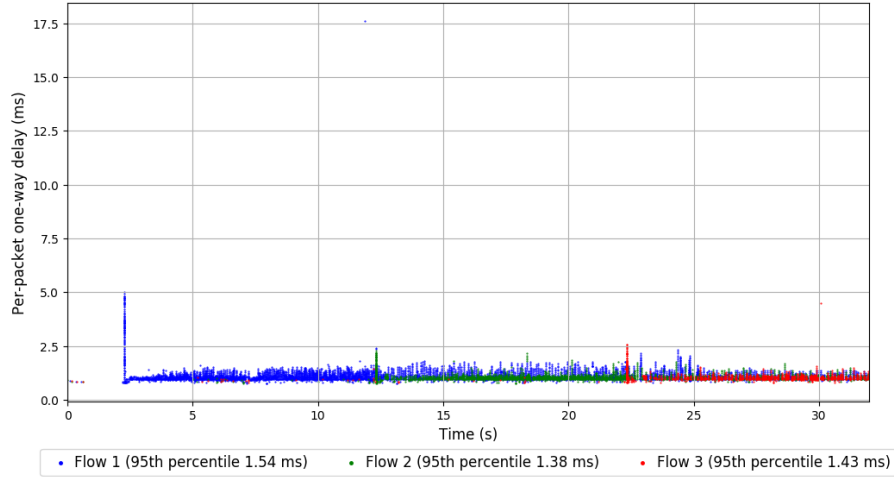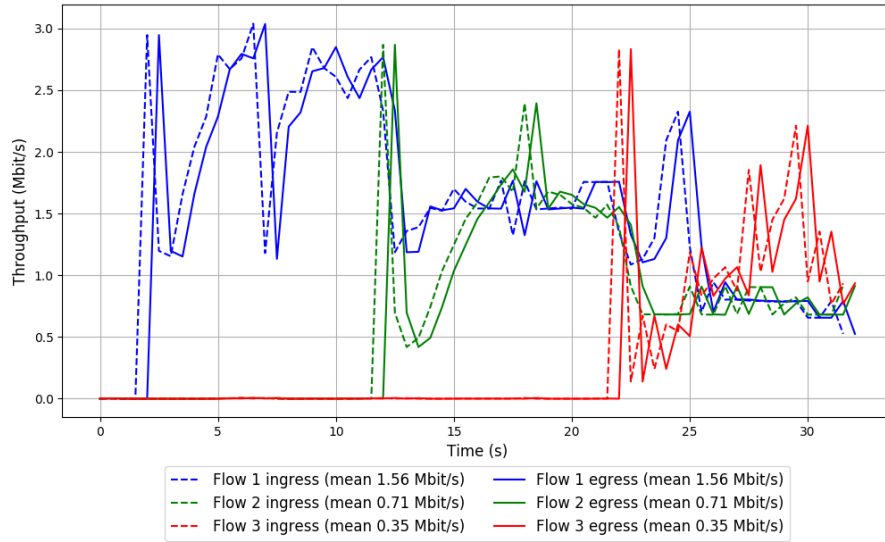
Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-10-03 12:21:07
End at: 2019-10-03 12:21:37
Local clock offset: -6.599 ms
Remote clock offset: 0.342 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.73 Mbit/s
95th percentile per-packet one-way delay: 1.675 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 1.590 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.77 Mbit/s
95th percentile per-packet one-way delay: 1.715 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.785 ms
Loss rate: 0.00%
```
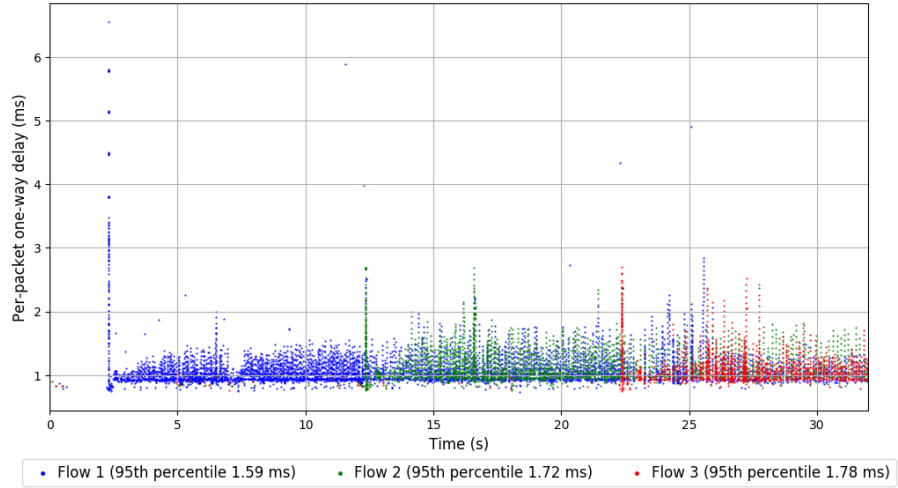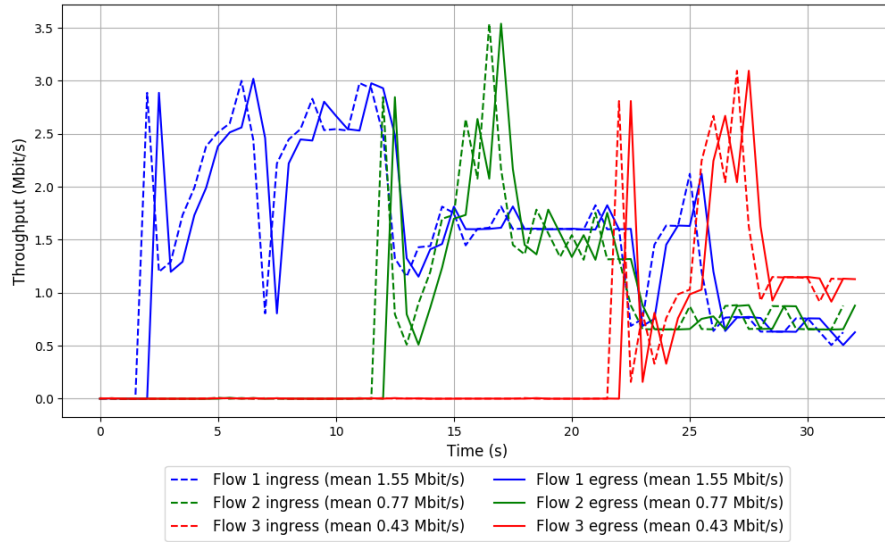
Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-10-03 12:48:29
End at: 2019-10-03 12:48:59
Local clock offset: -5.263 ms
Remote clock offset: 0.175 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.74 Mbit/s
95th percentile per-packet one-way delay: 1.926 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 1.47 Mbit/s
95th percentile per-packet one-way delay: 1.688 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.86 Mbit/s
95th percentile per-packet one-way delay: 2.139 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 2.104 ms
Loss rate: 0.00%
```
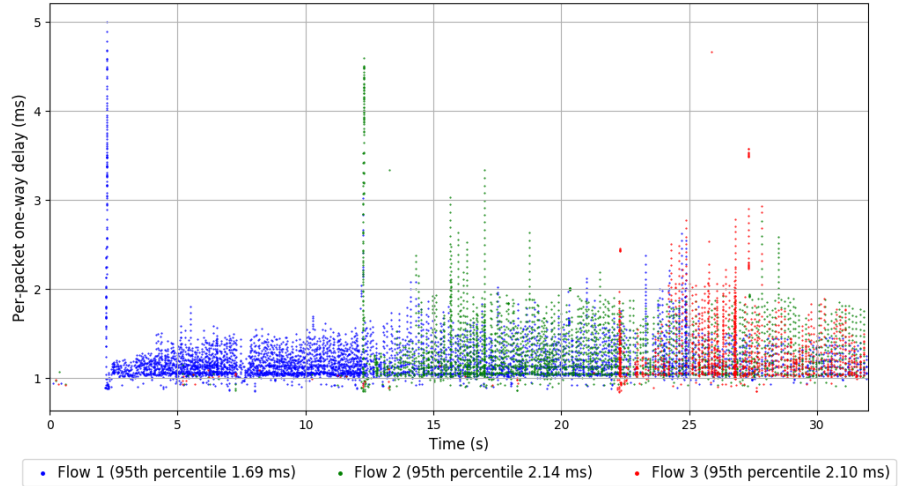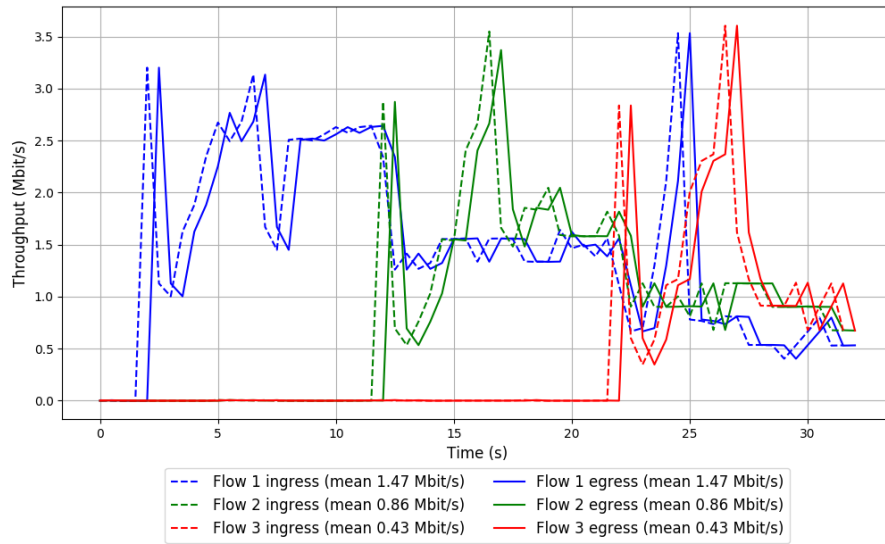
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-10-03 13:15:52
End at: 2019-10-03 13:16:22
Local clock offset: -5.403 ms
Remote clock offset: 0.321 ms


# Below is generated by plot.py at 2019-10-03 13:33:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.76 Mbit/s
95th percentile per-packet one-way delay: 1.702 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 1.51 Mbit/s
95th percentile per-packet one-way delay: 1.663 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.82 Mbit/s
95th percentile per-packet one-way delay: 1.796 ms
Loss rate: 0.25%
-- Flow 3:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.626 ms
Loss rate: 0.01%
```

Run 5: Report of WebRTC media — Data Link