Pantheon Report

Generated at 2019-11-24 18:34:59 (UTC).

Data path: Colombia on p4p1 (*remote*) →AWS Brazil 2 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.
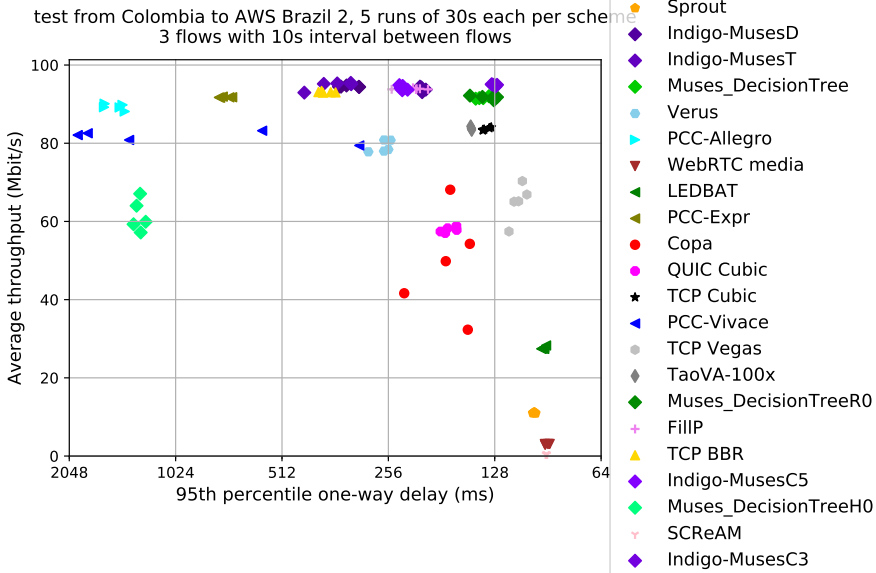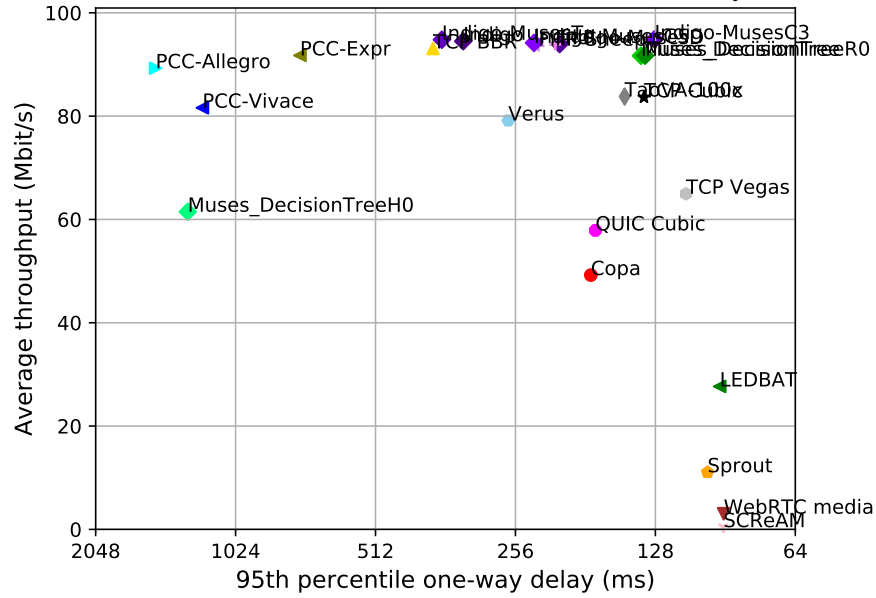
```
System info:
Linux 4.15.0-1051-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 Colombia to AWS Brazil 2, 5 runs of 30s each per scheme
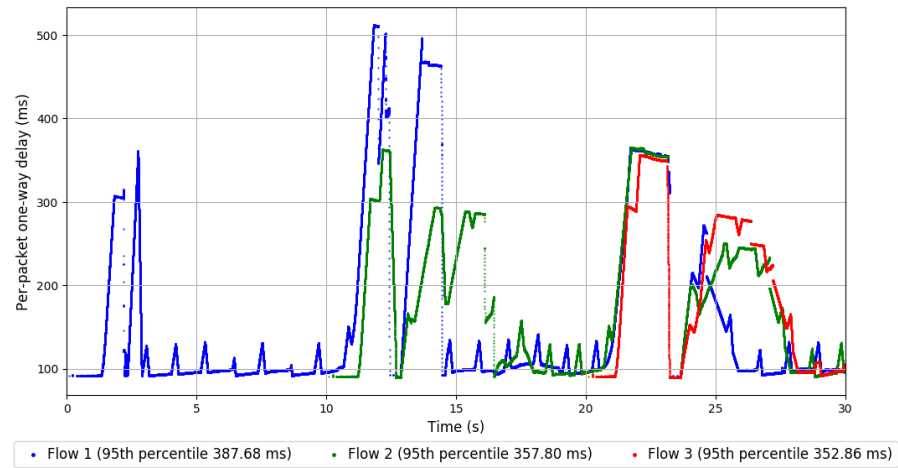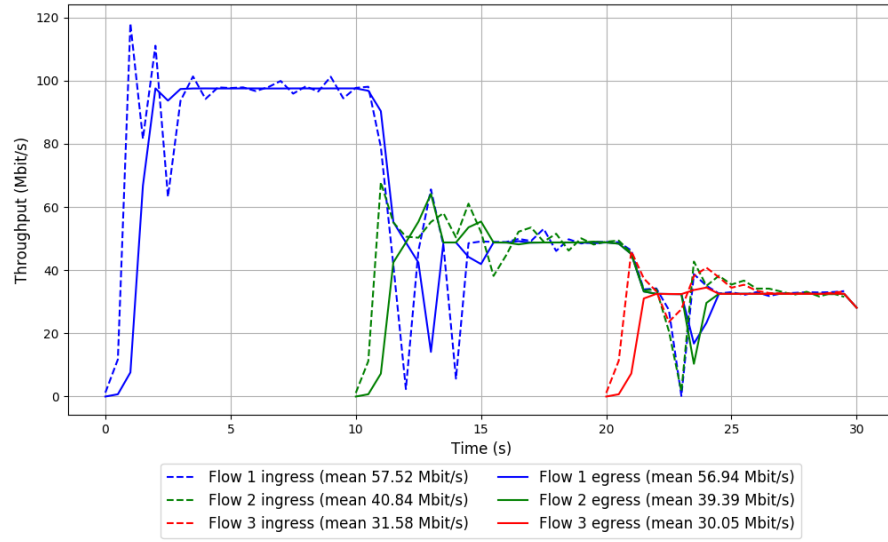### 3 flows with 10s interval between flows (mean of all runs by scheme)

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

3

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	57.05	39.41	29.94	367.50	462.95	359.07	2.08	4.59	4.24
Copa	5	12.47	30.10	53.91	180.30	167.69	147.89	0.40	0.42	2.03
TCP Cubic	5	50.81	33.73	31.62	143.23	130.75	127.88	0.39	0.64	1.60
FillP	5	57.68	39.67	29.98	212.70	205.88	260.34	0.92	2.71	3.51
FillP-Sheep	5	57.43	39.27	30.73	217.18	223.70	259.89	0.66	1.53	2.58
Indigo	5	58.70	39.28	29.88	338.16	135.81	117.02	3.74	0.99	1.80
Indigo-MusesC3	5	60.99	40.27	29.67	125.13	124.68	144.31	1.88	3.75	2.64
Indigo-MusesC5	5	58.28	42.81	30.14	223.00	251.32	255.71	2.06	4.74	7.09
Indigo-MusesD	5	60.88	39.38	28.10	209.46	171.71	170.60	5.58	5.08	6.30
Indigo-MusesT	5	60.40	39.97	28.94	317.79	399.20	480.64	6.10	6.25	7.32
LEDBAT	5	17.91	11.87	5.73	92.72	92.78	92.26	0.94	1.42	2.89
Muses_DecisionTree	5	56.01	39.06	30.70	127.48	145.03	161.45	0.66	0.80	1.96
Muses_DecisionTreeH0	5	34.16	27.86	27.69	1270.73	1371.84	1359.91	15.53	18.47	20.58
Muses_DecisionTreeR0	5	56.16	39.06	30.30	128.37	139.96	174.86	0.40	0.81	2.01
PCC-Allegro	5	56.54	34.70	29.78	1559.59	1127.69	1442.93	26.92	15.13	17.89
PCC-Expr	5	56.95	39.08	27.07	749.89	734.64	298.67	36.42	19.11	4.73
QUIC Cubic	5	34.59	23.32	23.82	134.32	208.80	216.96	0.42	1.13	1.98
SCReAM	5	0.22	0.22	0.22	90.60	91.01	90.19	0.48	0.82	1.38
Sprout	5	5.72	5.53	5.12	98.95	98.58	98.62	0.54	0.79	1.93
TaoVA-100x	5	44.60	32.03	60.85	148.19	156.31	128.54	0.03	0.25	1.73
TCP Vegas	5	36.73	31.68	21.85	110.31	93.23	178.35	0.38	0.83	1.65
Verus	5	48.71	33.21	25.51	253.57	262.21	365.24	0.59	1.16	2.57
PCC-Vivace	5	52.00	32.80	23.98	1106.38	609.05	238.79	4.13	4.76	3.06
WebRTC media	5	1.71	0.96	0.38	91.26	90.09	91.14	0.28	0.57	1.49

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```
Run 1: Statistics of TCP BBR

Start at: 2019-11-24 16:14:10
End at: 2019-11-24 16:14:40
Local clock offset: -1.539 ms
Remote clock offset: -8.039 ms


# Below is generated by plot.py at 2019-11-24 18:21:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.01 Mbit/s
95th percentile per-packet one-way delay: 361.233 ms
Loss rate: 2.78%
-- Flow 1:
Average throughput: 56.94 Mbit/s
95th percentile per-packet one-way delay: 387.682 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 39.39 Mbit/s
95th percentile per-packet one-way delay: 357.799 ms
Loss rate: 4.23%
-- Flow 3:
Average throughput: 30.05 Mbit/s
95th percentile per-packet one-way delay: 352.864 ms
Loss rate: 6.19%
```
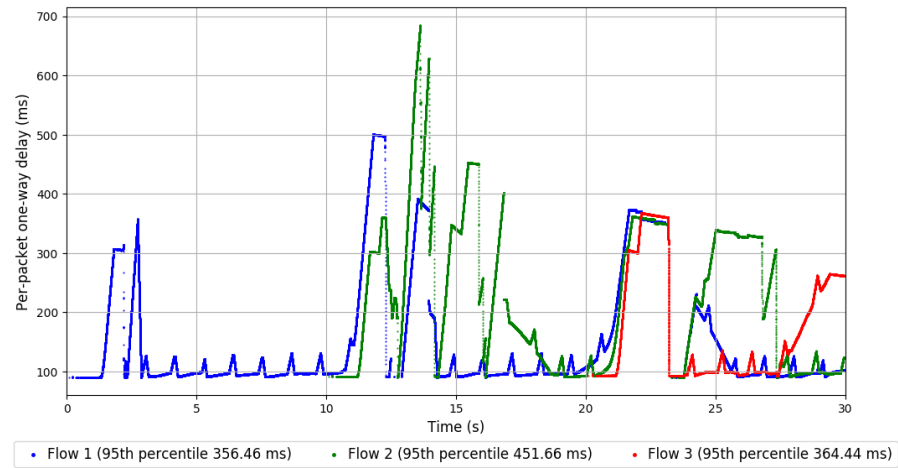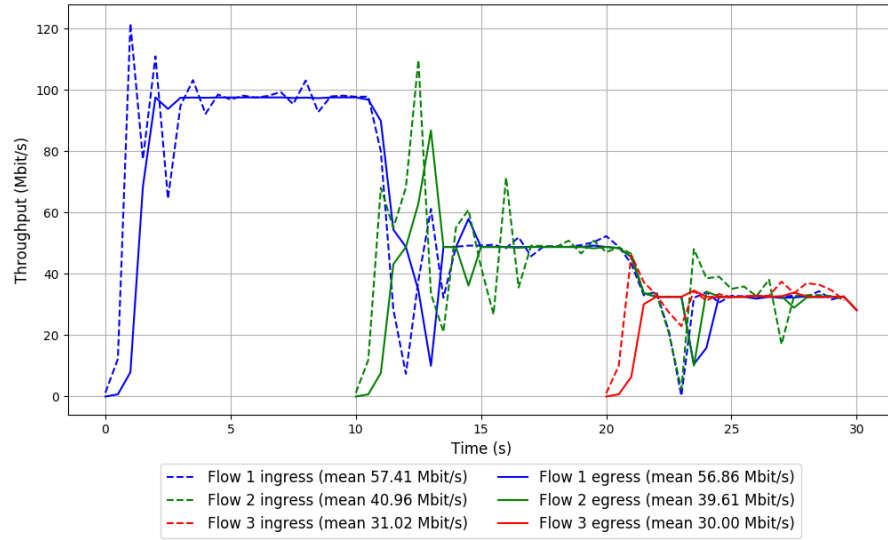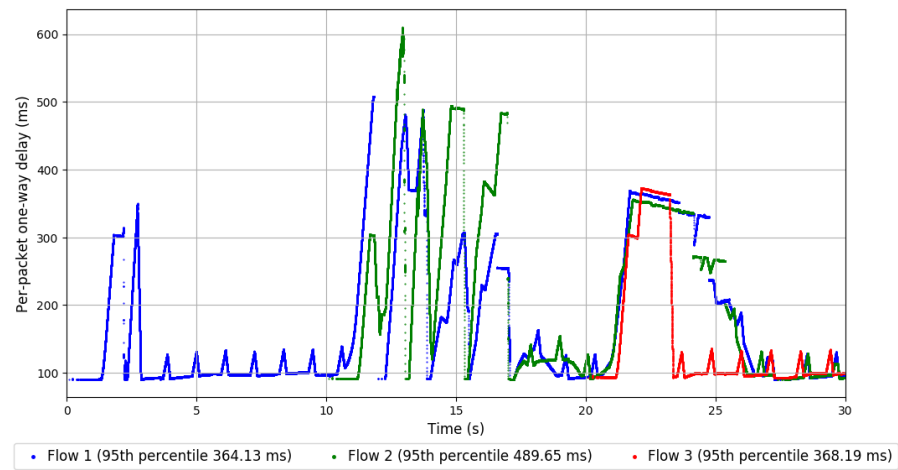
Run 1: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 57.52 Mbit/s) —— Flow 1 egress (mean 56.94 Mbit/s)
- - - Flow 2 ingress (mean 40.84 Mbit/s) —— Flow 2 egress (mean 39.39 Mbit/s)
- - - Flow 3 ingress (mean 31.58 Mbit/s) —— Flow 3 egress (mean 30.05 Mbit/s)

• Flow 1 (95th percentile 387.68 ms)　　• Flow 2 (95th percentile 357.80 ms)　　• Flow 3 (95th percentile 352.86 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-11-24 16:44:26
End at: 2019-11-24 16:44:56
Local clock offset: -0.179 ms
Remote clock offset: -9.468 ms


# Below is generated by plot.py at 2019-11-24 18:21:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 372.712 ms
Loss rate: 2.52%
-- Flow 1:
Average throughput: 56.86 Mbit/s
95th percentile per-packet one-way delay: 356.456 ms
Loss rate: 1.43%
-- Flow 2:
Average throughput: 39.61 Mbit/s
95th percentile per-packet one-way delay: 451.656 ms
Loss rate: 3.99%
-- Flow 3:
Average throughput: 30.00 Mbit/s
95th percentile per-packet one-way delay: 364.441 ms
Loss rate: 4.71%
```
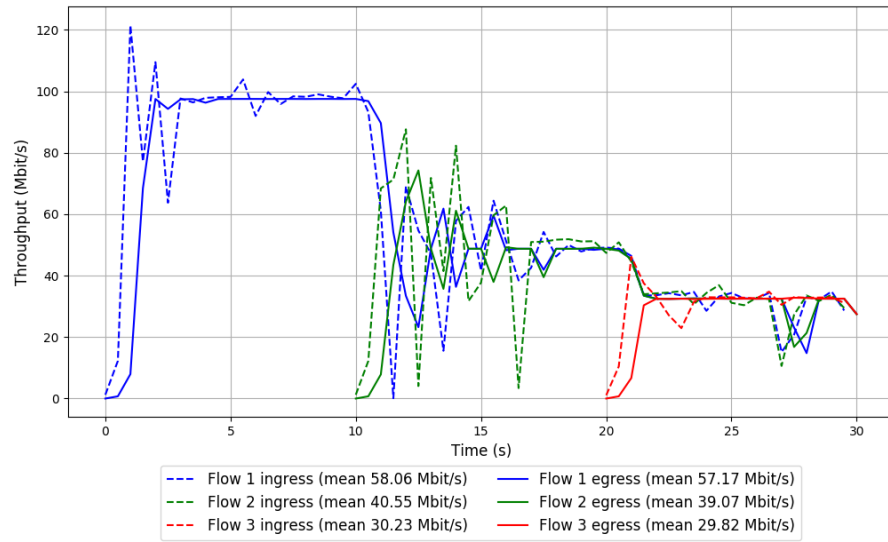
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 57.41 Mbit/s) ---- Flow 1 egress (mean 56.86 Mbit/s)
Flow 2 ingress (mean 40.96 Mbit/s) ---- Flow 2 egress (mean 39.61 Mbit/s)
Flow 3 ingress (mean 31.02 Mbit/s) ---- Flow 3 egress (mean 30.00 Mbit/s)

Flow 1 (95th percentile 356.46 ms) · Flow 2 (95th percentile 451.66 ms) · Flow 3 (95th percentile 364.44 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2019-11-24 17:14:38
End at: 2019-11-24 17:15:08
Local clock offset: 0.749 ms
Remote clock offset: -8.096 ms


# Below is generated by plot.py at 2019-11-24 18:21:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.96 Mbit/s
95th percentile per-packet one-way delay: 392.150 ms
Loss rate: 2.74%
-- Flow 1:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 364.134 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 39.07 Mbit/s
95th percentile per-packet one-way delay: 489.648 ms
Loss rate: 4.31%
-- Flow 3:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 368.191 ms
Loss rate: 2.76%
```
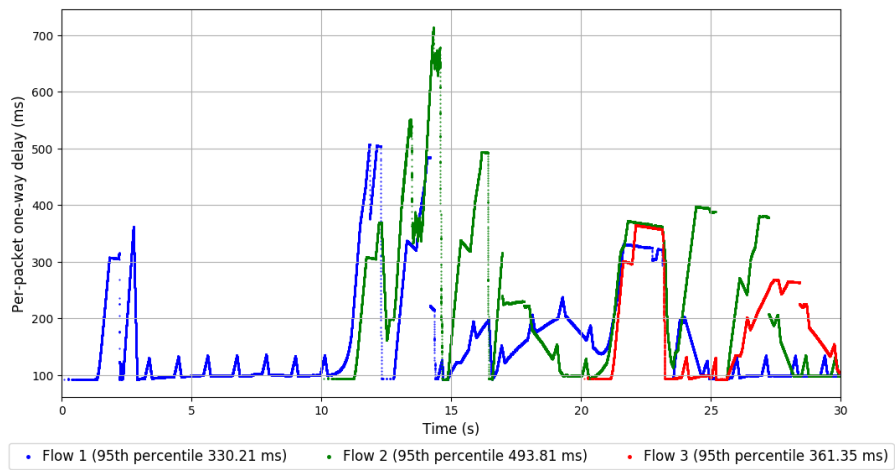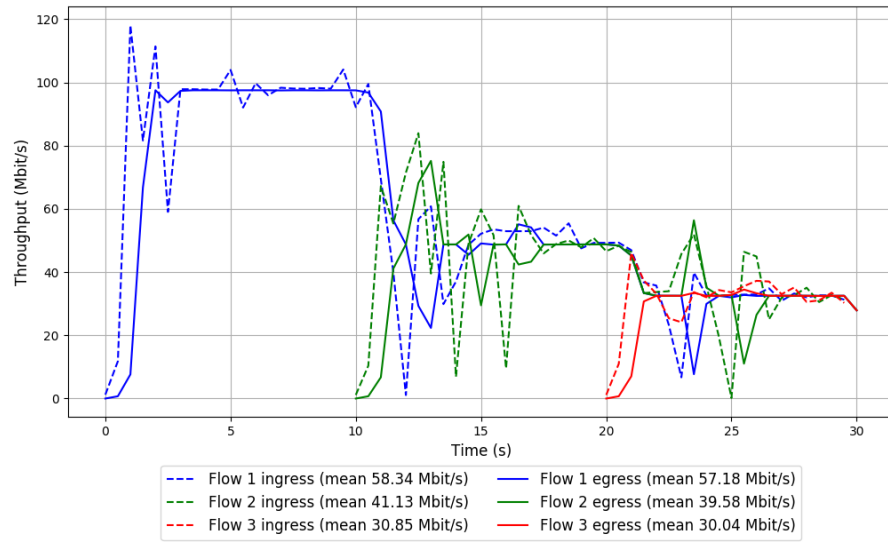
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 58.06 Mbit/s)   Flow 1 egress (mean 57.17 Mbit/s)
Flow 2 ingress (mean 40.55 Mbit/s)   Flow 2 egress (mean 39.07 Mbit/s)
Flow 3 ingress (mean 30.23 Mbit/s)   Flow 3 egress (mean 29.82 Mbit/s)

Flow 1 (95th percentile 364.13 ms)   Flow 2 (95th percentile 489.65 ms)   Flow 3 (95th percentile 368.19 ms)
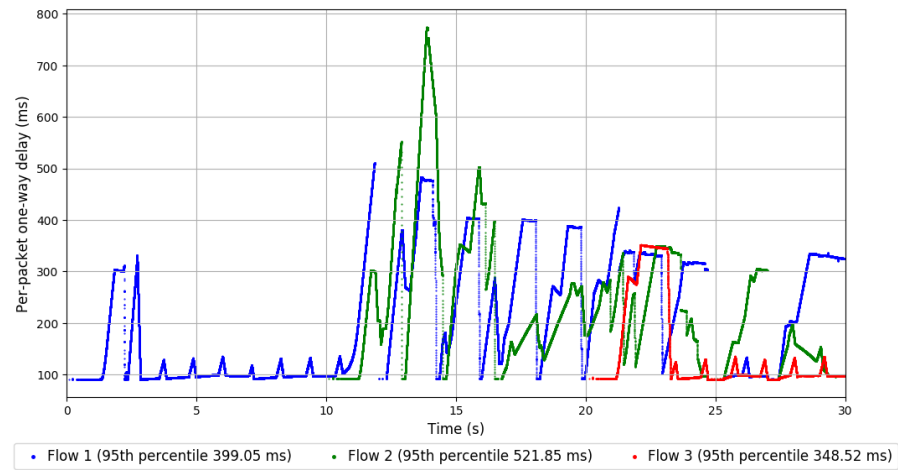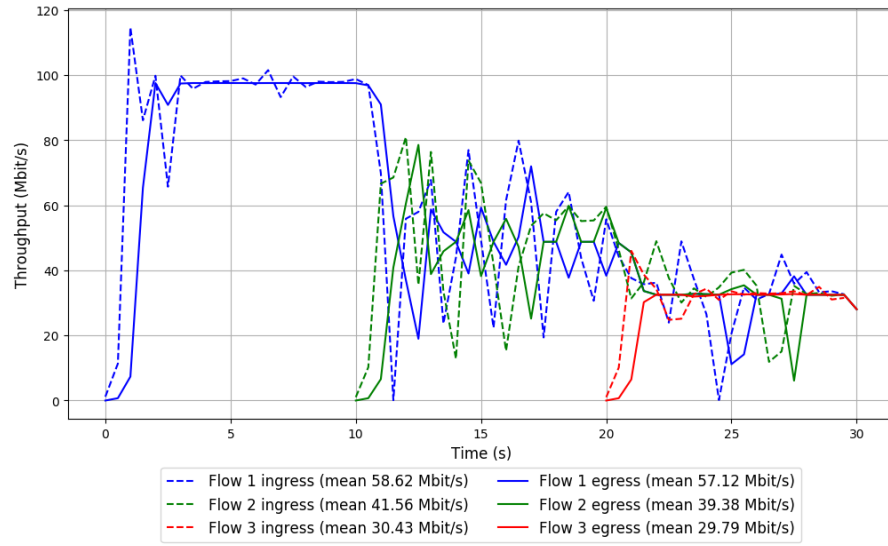
```
Run 4: Statistics of TCP BBR

Start at: 2019-11-24 17:44:54
End at: 2019-11-24 17:45:24
Local clock offset: 0.887 ms
Remote clock offset: -8.289 ms


# Below is generated by plot.py at 2019-11-24 18:21:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.38 Mbit/s
95th percentile per-packet one-way delay: 395.643 ms
Loss rate: 3.20%
-- Flow 1:
Average throughput: 57.18 Mbit/s
95th percentile per-packet one-way delay: 330.207 ms
Loss rate: 2.45%
-- Flow 2:
Average throughput: 39.58 Mbit/s
95th percentile per-packet one-way delay: 493.814 ms
Loss rate: 4.47%
-- Flow 3:
Average throughput: 30.04 Mbit/s
95th percentile per-packet one-way delay: 361.351 ms
Loss rate: 4.04%
```
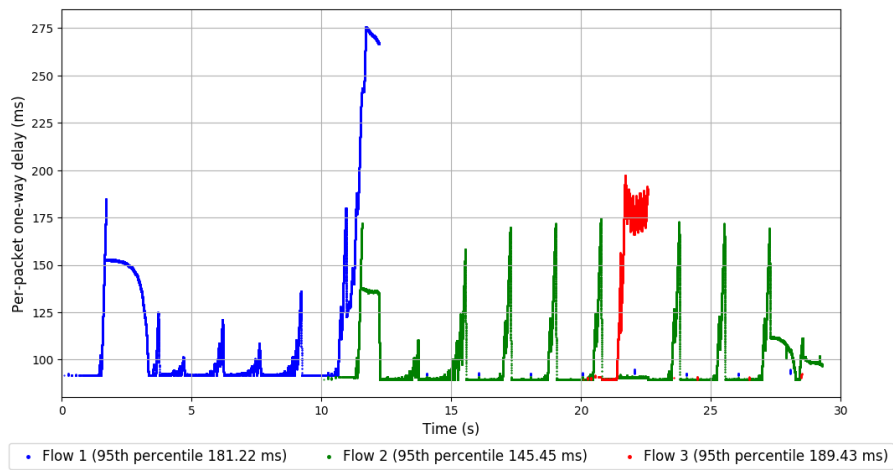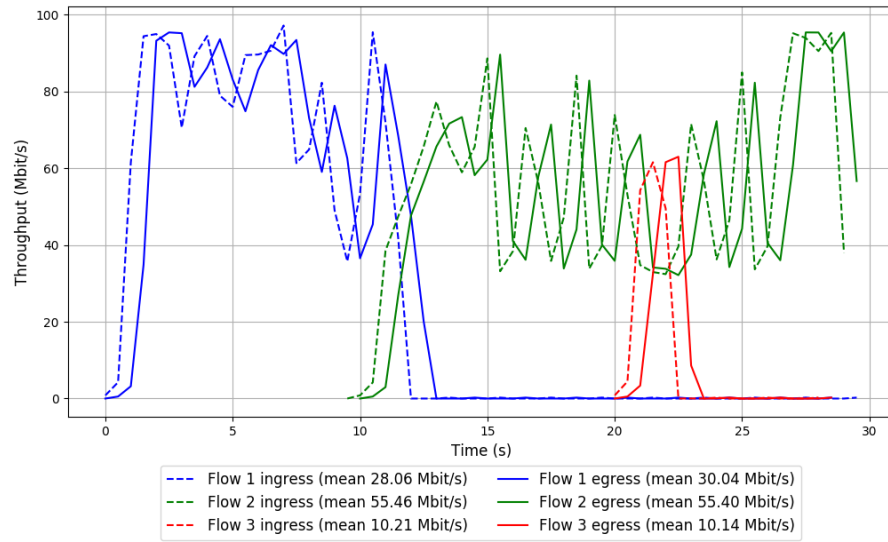
Run 4: Report of TCP BBR — Data Link

Flow 1 ingress (mean 58.34 Mbit/s) --- Flow 1 egress (mean 57.18 Mbit/s)
Flow 2 ingress (mean 41.13 Mbit/s) --- Flow 2 egress (mean 39.58 Mbit/s)
Flow 3 ingress (mean 30.85 Mbit/s) --- Flow 3 egress (mean 30.04 Mbit/s)

Flow 1 (95th percentile 330.21 ms)   Flow 2 (95th percentile 493.81 ms)   Flow 3 (95th percentile 361.35 ms)

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Run 5: Statistics of TCP BBR

Start at: 2019-11-24 18:15:09
End at: 2019-11-24 18:15:39
Local clock offset: -0.239 ms
Remote clock offset: -8.376 ms


# Below is generated by plot.py at 2019-11-24 18:21:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.09 Mbit/s
95th percentile per-packet one-way delay: 403.706 ms
Loss rate: 3.91%
-- Flow 1:
Average throughput: 57.12 Mbit/s
95th percentile per-packet one-way delay: 399.046 ms
Loss rate: 3.03%
-- Flow 2:
Average throughput: 39.38 Mbit/s
95th percentile per-packet one-way delay: 521.848 ms
Loss rate: 5.93%
-- Flow 3:
Average throughput: 29.79 Mbit/s
95th percentile per-packet one-way delay: 348.519 ms
Loss rate: 3.49%
```
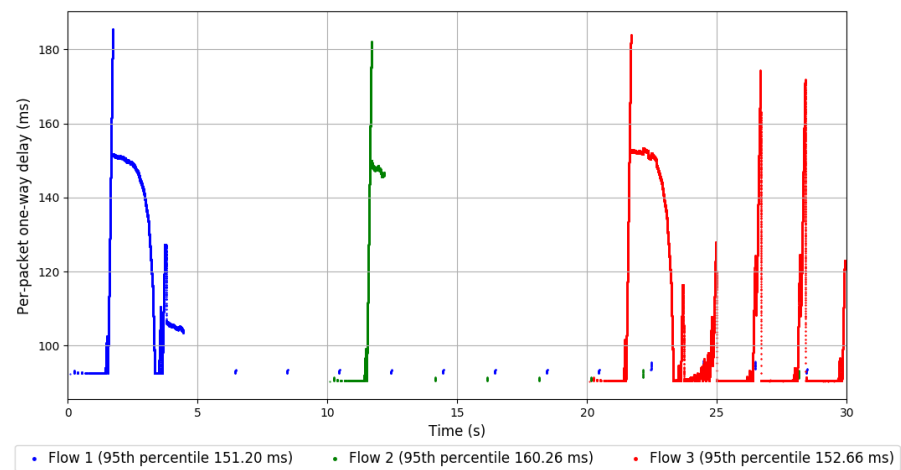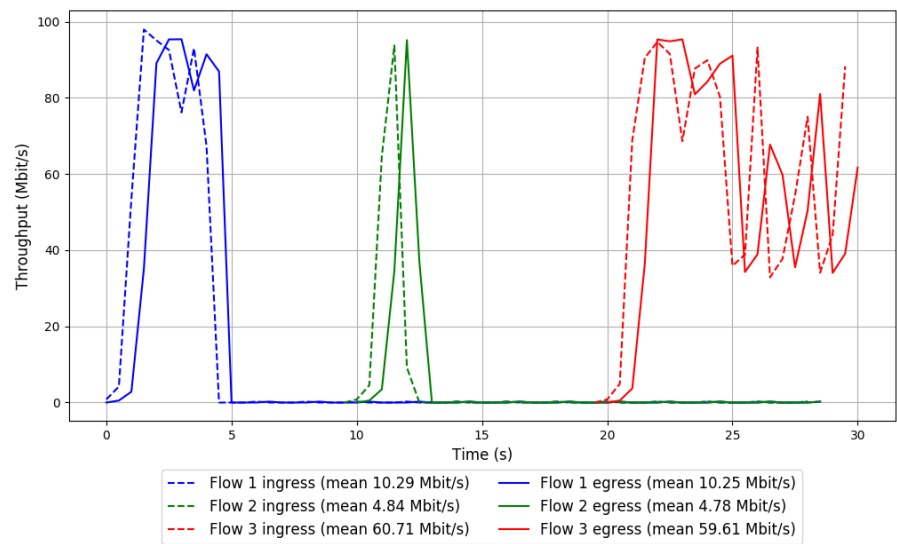
Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 58.62 Mbit/s) — Flow 1 egress (mean 57.12 Mbit/s)
Flow 2 ingress (mean 41.56 Mbit/s) — Flow 2 egress (mean 39.38 Mbit/s)
Flow 3 ingress (mean 30.43 Mbit/s) — Flow 3 egress (mean 29.79 Mbit/s)

Flow 1 (95th percentile 399.05 ms)   Flow 2 (95th percentile 521.85 ms)   Flow 3 (95th percentile 348.52 ms)
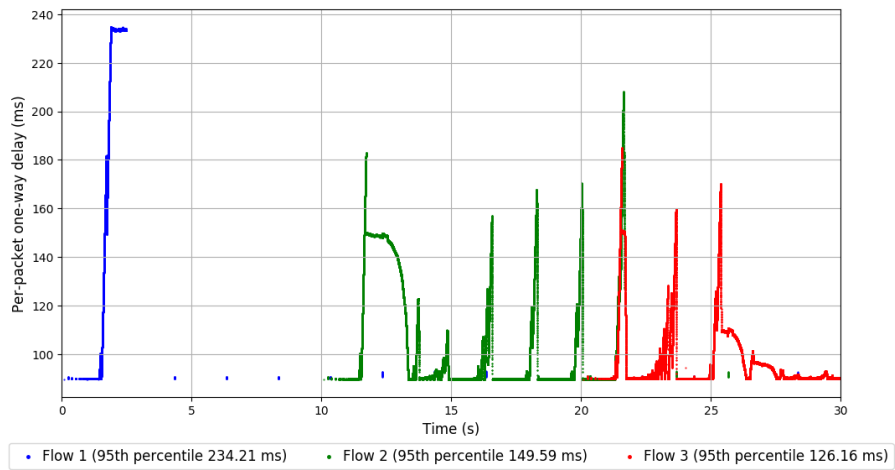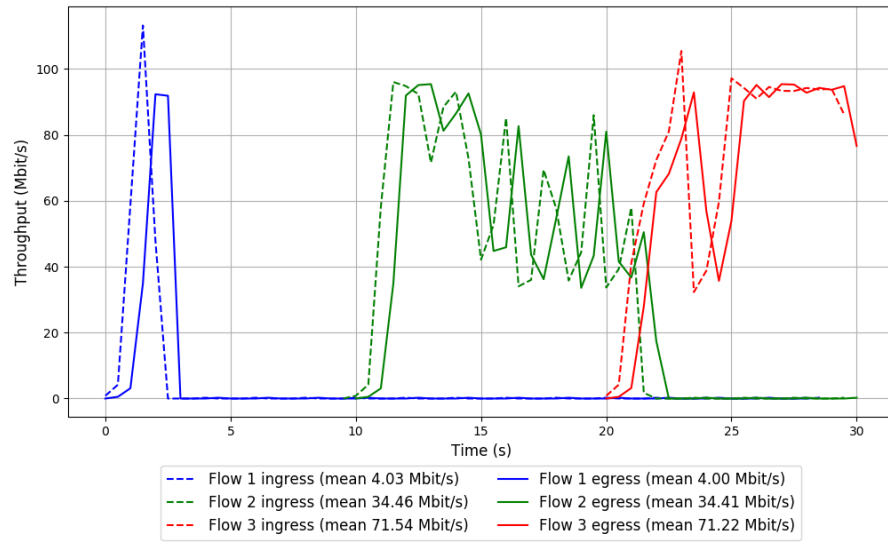
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```
Run 1: Statistics of Copa

Start at: 2019-11-24 16:16:42
End at: 2019-11-24 16:17:12
Local clock offset: -0.781 ms
Remote clock offset: -7.186 ms


# Below is generated by plot.py at 2019-11-24 18:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 68.11 Mbit/s
95th percentile per-packet one-way delay: 171.056 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 30.04 Mbit/s
95th percentile per-packet one-way delay: 181.223 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 55.40 Mbit/s
95th percentile per-packet one-way delay: 145.453 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 10.14 Mbit/s
95th percentile per-packet one-way delay: 189.426 ms
Loss rate: 0.64%
```

Run 1: Report of Copa — Data Link

Flow 1 ingress (mean 28.06 Mbit/s) — Flow 1 egress (mean 30.04 Mbit/s)
Flow 2 ingress (mean 55.46 Mbit/s) — Flow 2 egress (mean 55.40 Mbit/s)
Flow 3 ingress (mean 10.21 Mbit/s) — Flow 3 egress (mean 10.14 Mbit/s)

Flow 1 (95th percentile 181.22 ms)   Flow 2 (95th percentile 145.45 ms)   Flow 3 (95th percentile 189.43 ms)
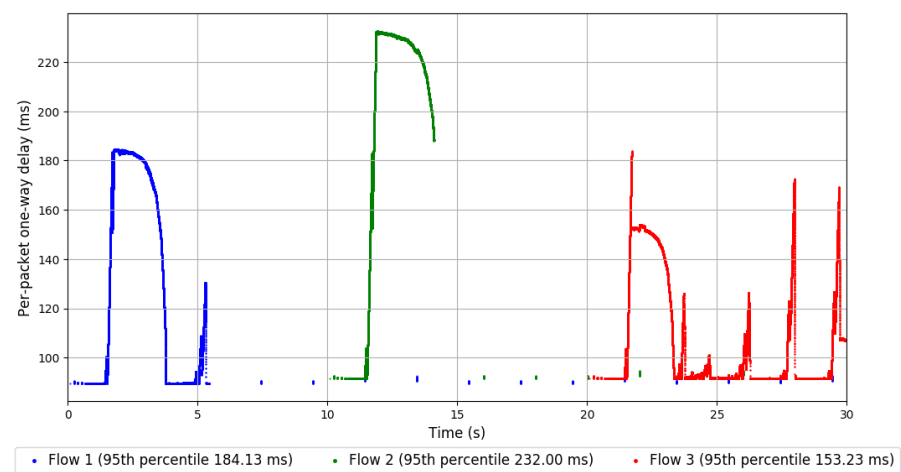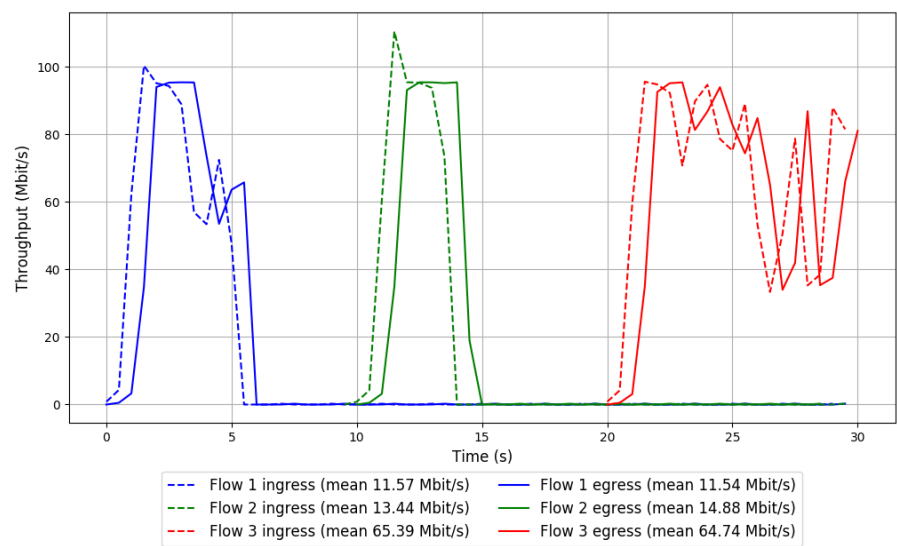
16

```
Run 2: Statistics of Copa

Start at: 2019-11-24 16:46:58
End at: 2019-11-24 16:47:28
Local clock offset: 0.021 ms
Remote clock offset: -9.477 ms


# Below is generated by plot.py at 2019-11-24 18:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 152.556 ms
Loss rate: 2.16%
-- Flow 1:
Average throughput: 10.25 Mbit/s
95th percentile per-packet one-way delay: 151.203 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 4.78 Mbit/s
95th percentile per-packet one-way delay: 160.262 ms
Loss rate: 1.36%
-- Flow 3:
Average throughput: 59.61 Mbit/s
95th percentile per-packet one-way delay: 152.665 ms
Loss rate: 3.17%
```

Run 2: Report of Copa — Data Link

Flow 1 ingress (mean 10.29 Mbit/s)   Flow 1 egress (mean 10.25 Mbit/s)
Flow 2 ingress (mean 4.84 Mbit/s)   Flow 2 egress (mean 4.78 Mbit/s)
Flow 3 ingress (mean 60.71 Mbit/s)   Flow 3 egress (mean 59.61 Mbit/s)

Flow 1 (95th percentile 151.20 ms)   Flow 2 (95th percentile 160.26 ms)   Flow 3 (95th percentile 152.66 ms)
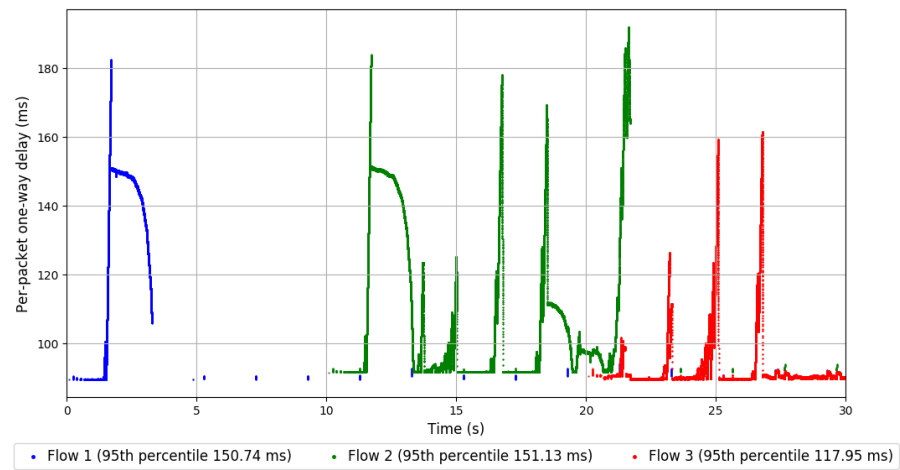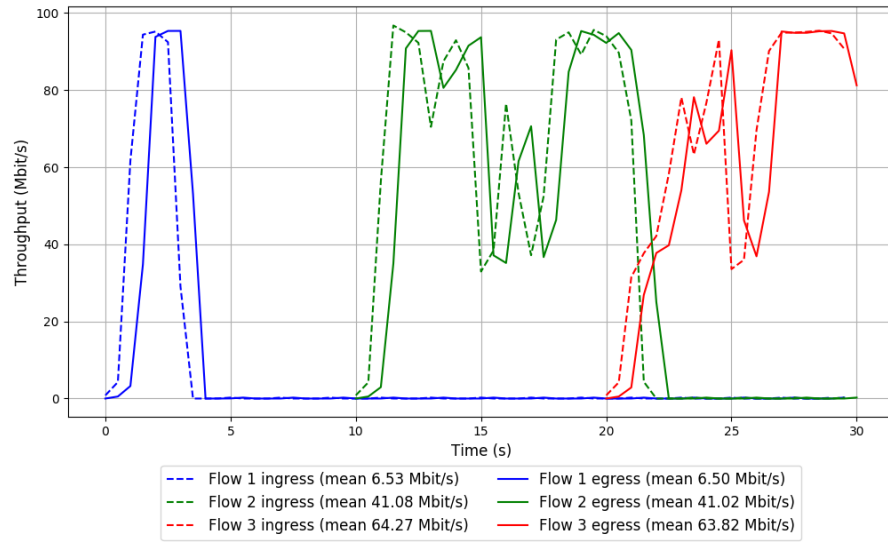
```
Run 3: Statistics of Copa

Start at: 2019-11-24 17:17:10
End at: 2019-11-24 17:17:40
Local clock offset: 0.733 ms
Remote clock offset: -7.483 ms


# Below is generated by plot.py at 2019-11-24 18:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 49.83 Mbit/s
95th percentile per-packet one-way delay: 176.101 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 4.00 Mbit/s
95th percentile per-packet one-way delay: 234.214 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 34.41 Mbit/s
95th percentile per-packet one-way delay: 149.592 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 71.22 Mbit/s
95th percentile per-packet one-way delay: 126.163 ms
Loss rate: 1.84%
```

Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-11-24 17:47:26
End at: 2019-11-24 17:47:56
Local clock offset: 0.834 ms
Remote clock offset: -7.562 ms


# Below is generated by plot.py at 2019-11-24 18:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 41.63 Mbit/s
95th percentile per-packet one-way delay: 230.885 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 11.54 Mbit/s
95th percentile per-packet one-way delay: 184.128 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 14.88 Mbit/s
95th percentile per-packet one-way delay: 231.999 ms
Loss rate: 0.41%
-- Flow 3:
Average throughput: 64.74 Mbit/s
95th percentile per-packet one-way delay: 153.228 ms
Loss rate: 2.38%
```
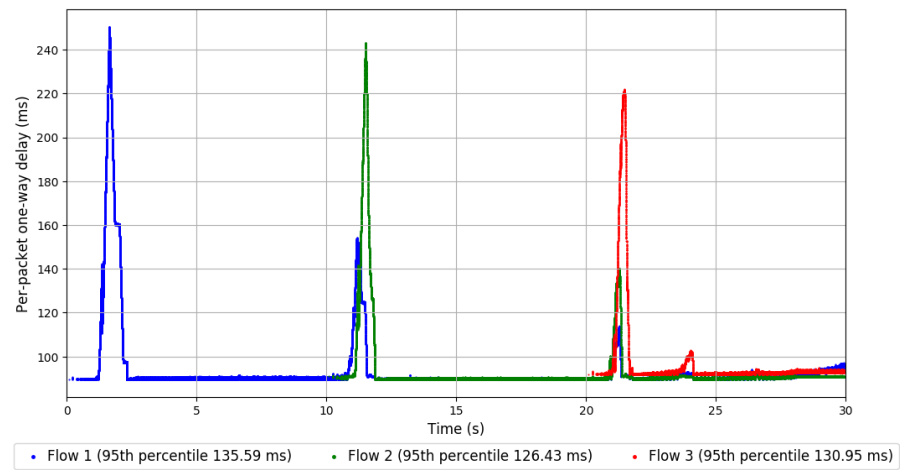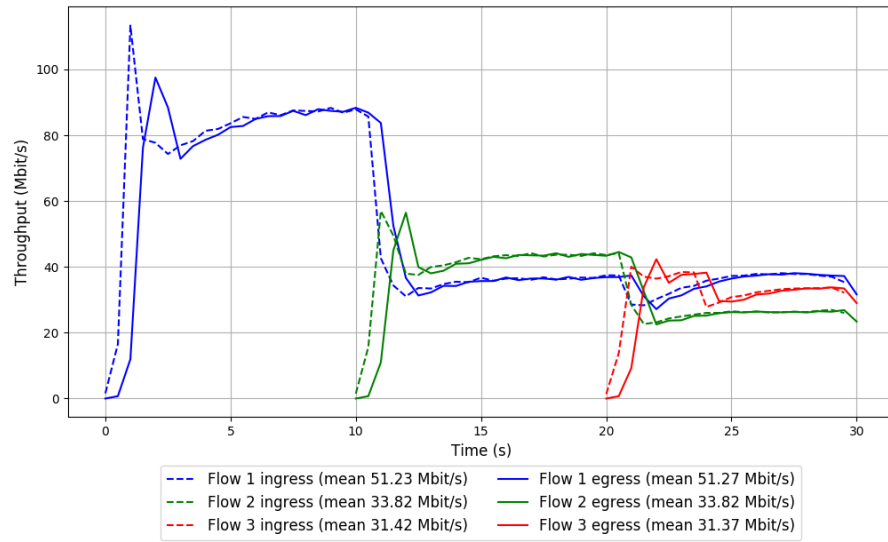
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 11.57 Mbit/s)   Flow 1 egress (mean 11.54 Mbit/s)
Flow 2 ingress (mean 13.44 Mbit/s)   Flow 2 egress (mean 14.88 Mbit/s)
Flow 3 ingress (mean 65.39 Mbit/s)   Flow 3 egress (mean 64.74 Mbit/s)

Flow 1 (95th percentile 184.13 ms)   Flow 2 (95th percentile 232.00 ms)   Flow 3 (95th percentile 153.23 ms)

```
Run 5: Statistics of Copa

Start at: 2019-11-24 18:17:42
End at: 2019-11-24 18:18:12
Local clock offset: -0.438 ms
Remote clock offset: -9.126 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 54.27 Mbit/s
95th percentile per-packet one-way delay: 150.559 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 6.50 Mbit/s
95th percentile per-packet one-way delay: 150.744 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 41.02 Mbit/s
95th percentile per-packet one-way delay: 151.134 ms
Loss rate: 0.13%
-- Flow 3:
Average throughput: 63.82 Mbit/s
95th percentile per-packet one-way delay: 117.947 ms
Loss rate: 2.10%
```
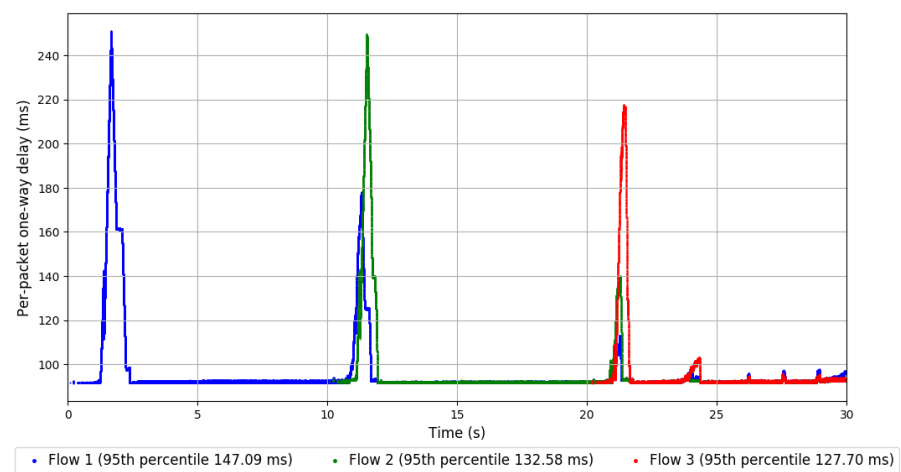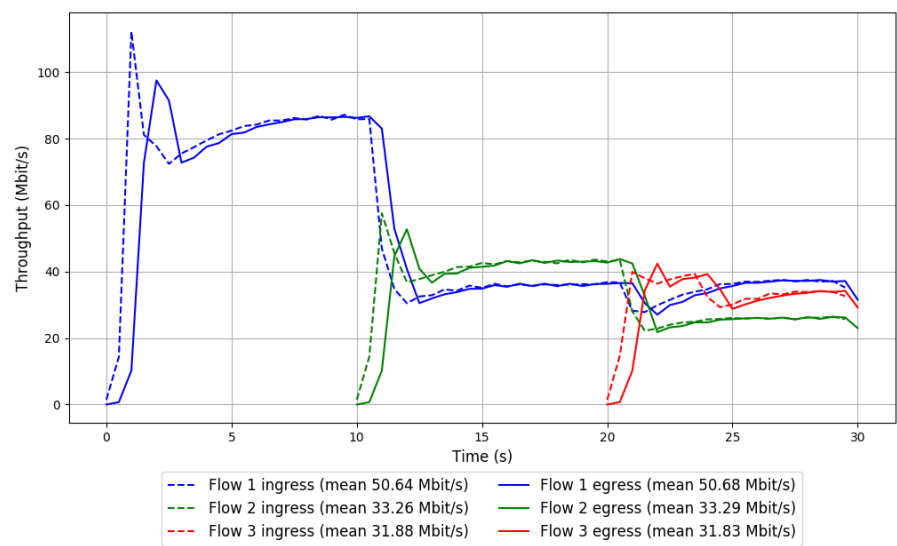
Run 5: Report of Copa — Data Link

```
Run 1: Statistics of TCP Cubic

Start at: 2019-11-24 16:02:51
End at: 2019-11-24 16:03:21
Local clock offset: -0.778 ms
Remote clock offset: -7.691 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.08 Mbit/s
95th percentile per-packet one-way delay: 130.954 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 51.27 Mbit/s
95th percentile per-packet one-way delay: 135.587 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 33.82 Mbit/s
95th percentile per-packet one-way delay: 126.430 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 31.37 Mbit/s
95th percentile per-packet one-way delay: 130.954 ms
Loss rate: 1.57%
```
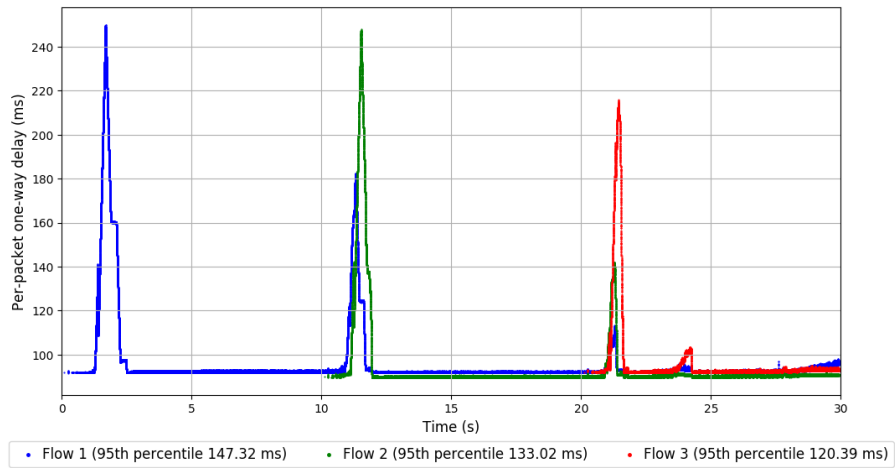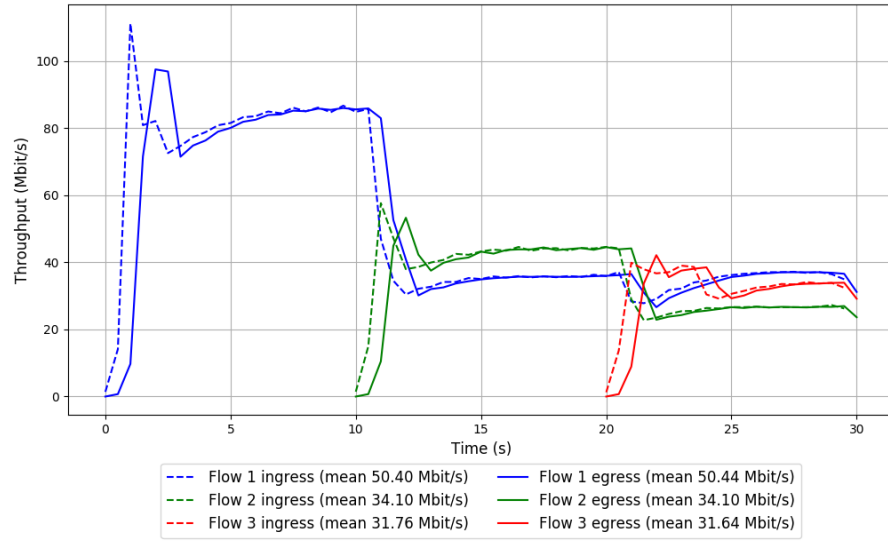
Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-11-24 16:33:08
End at: 2019-11-24 16:33:38
Local clock offset: -0.841 ms
Remote clock offset: -8.415 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.30 Mbit/s
95th percentile per-packet one-way delay: 138.255 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 50.68 Mbit/s
95th percentile per-packet one-way delay: 147.087 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 33.29 Mbit/s
95th percentile per-packet one-way delay: 132.583 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 31.83 Mbit/s
95th percentile per-packet one-way delay: 127.704 ms
Loss rate: 1.56%
```
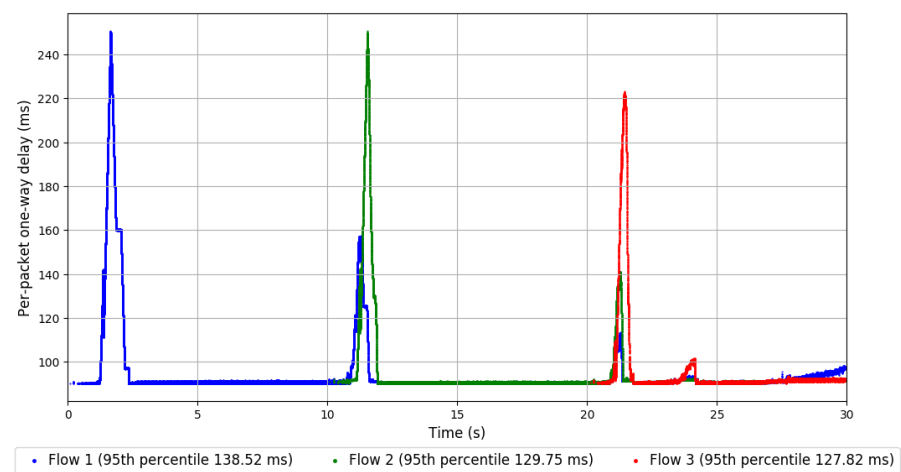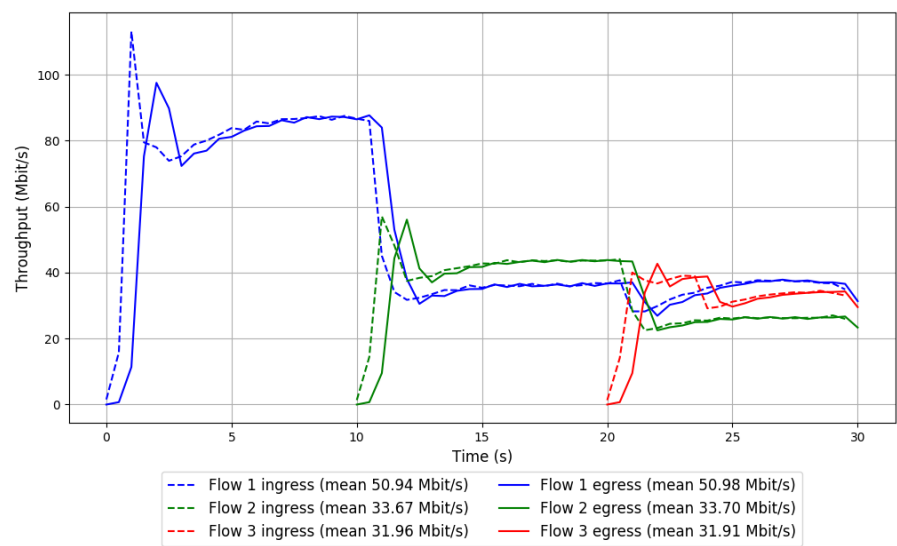
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-11-24 17:03:20
End at: 2019-11-24 17:03:50
Local clock offset: 0.697 ms
Remote clock offset: -7.903 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.51 Mbit/s
95th percentile per-packet one-way delay: 137.163 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 50.44 Mbit/s
95th percentile per-packet one-way delay: 147.316 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 34.10 Mbit/s
95th percentile per-packet one-way delay: 133.018 ms
Loss rate: 0.68%
-- Flow 3:
Average throughput: 31.64 Mbit/s
95th percentile per-packet one-way delay: 120.391 ms
Loss rate: 1.76%
```

Run 3: Report of TCP Cubic — Data Link

- - - - Flow 1 ingress (mean 50.40 Mbit/s) ——— Flow 1 egress (mean 50.44 Mbit/s)
- - - - Flow 2 ingress (mean 34.10 Mbit/s) ——— Flow 2 egress (mean 34.10 Mbit/s)
- - - - Flow 3 ingress (mean 31.76 Mbit/s) ——— Flow 3 egress (mean 31.64 Mbit/s)

• Flow 1 (95th percentile 147.32 ms)   • Flow 2 (95th percentile 133.02 ms)   • Flow 3 (95th percentile 120.39 ms)

```
Run 4: Statistics of TCP Cubic

Start at: 2019-11-24 17:33:35
End at: 2019-11-24 17:34:05
Local clock offset: 0.832 ms
Remote clock offset: -8.127 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.87 Mbit/s
95th percentile per-packet one-way delay: 132.624 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 50.98 Mbit/s
95th percentile per-packet one-way delay: 138.523 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 33.70 Mbit/s
95th percentile per-packet one-way delay: 129.752 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 31.91 Mbit/s
95th percentile per-packet one-way delay: 127.822 ms
Loss rate: 1.55%
```
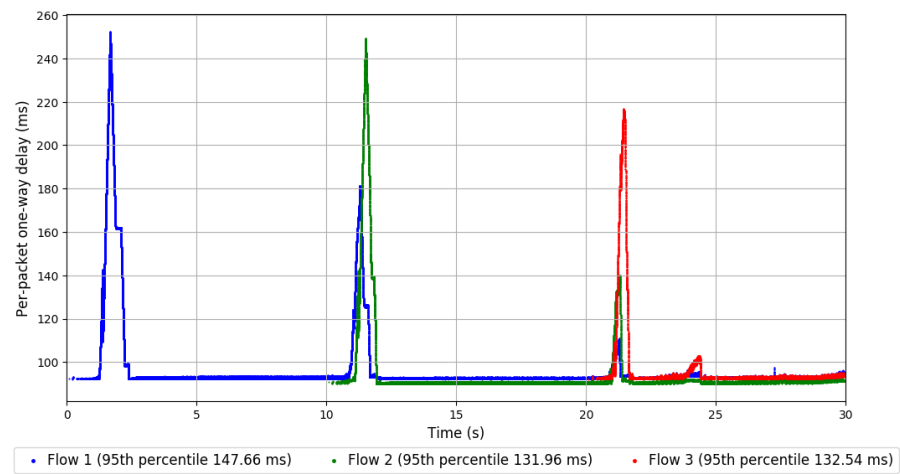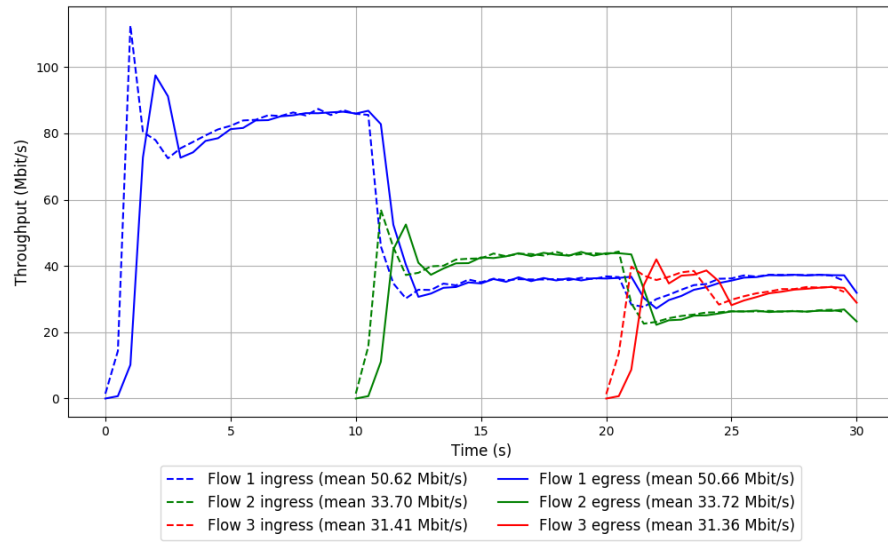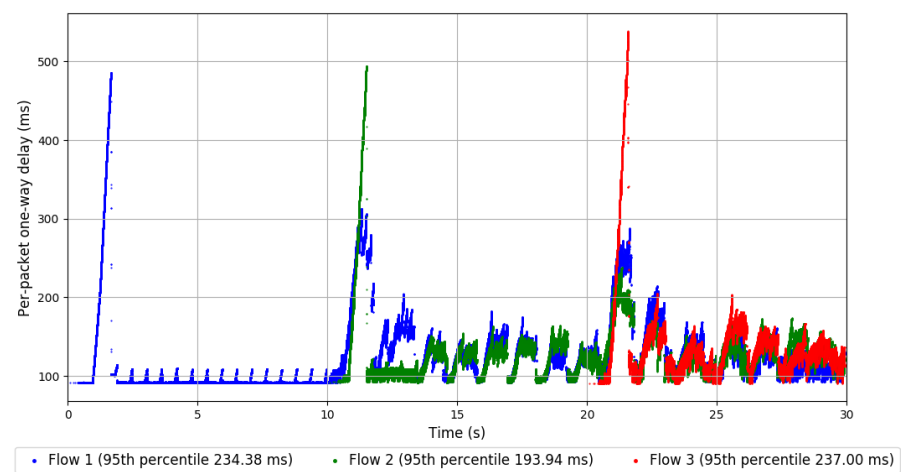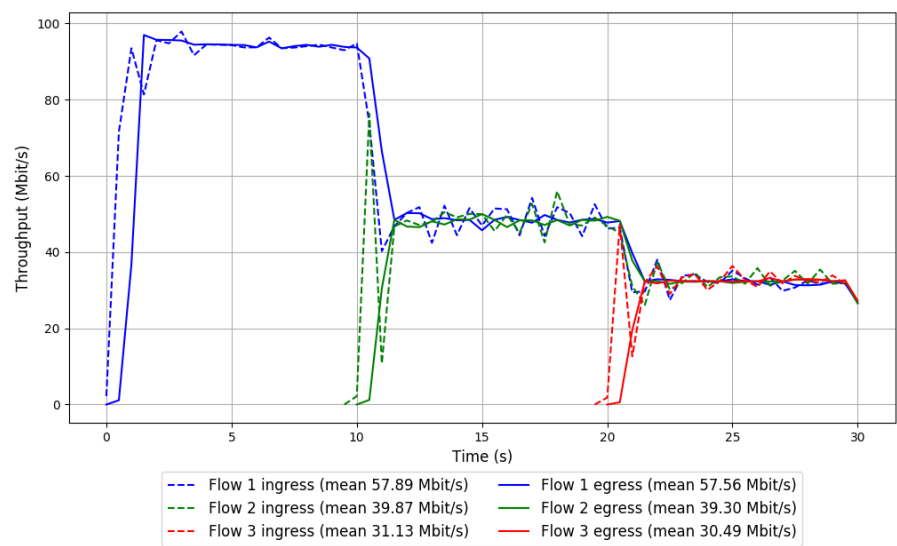
Run 4: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 50.94 Mbit/s) --- Flow 1 egress (mean 50.98 Mbit/s)
Flow 2 ingress (mean 33.67 Mbit/s) --- Flow 2 egress (mean 33.70 Mbit/s)
Flow 3 ingress (mean 31.96 Mbit/s) --- Flow 3 egress (mean 31.91 Mbit/s)

Flow 1 (95th percentile 138.52 ms)　　Flow 2 (95th percentile 129.75 ms)　　Flow 3 (95th percentile 127.82 ms)

```
Run 5: Statistics of TCP Cubic

Start at: 2019-11-24 18:03:50
End at: 2019-11-24 18:04:20
Local clock offset: 0.929 ms
Remote clock offset: -8.417 ms


# Below is generated by plot.py at 2019-11-24 18:22:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.41 Mbit/s
95th percentile per-packet one-way delay: 138.342 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 50.66 Mbit/s
95th percentile per-packet one-way delay: 147.660 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 33.72 Mbit/s
95th percentile per-packet one-way delay: 131.962 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 31.36 Mbit/s
95th percentile per-packet one-way delay: 132.536 ms
Loss rate: 1.58%
```

Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-11-24 16:04:07
End at: 2019-11-24 16:04:37
Local clock offset: -0.779 ms
Remote clock offset: -7.658 ms


# Below is generated by plot.py at 2019-11-24 18:23:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.74 Mbit/s
95th percentile per-packet one-way delay: 213.843 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 57.56 Mbit/s
95th percentile per-packet one-way delay: 234.382 ms
Loss rate: 1.02%
-- Flow 2:
Average throughput: 39.30 Mbit/s
95th percentile per-packet one-way delay: 193.945 ms
Loss rate: 2.11%
-- Flow 3:
Average throughput: 30.49 Mbit/s
95th percentile per-packet one-way delay: 237.005 ms
Loss rate: 3.27%
```
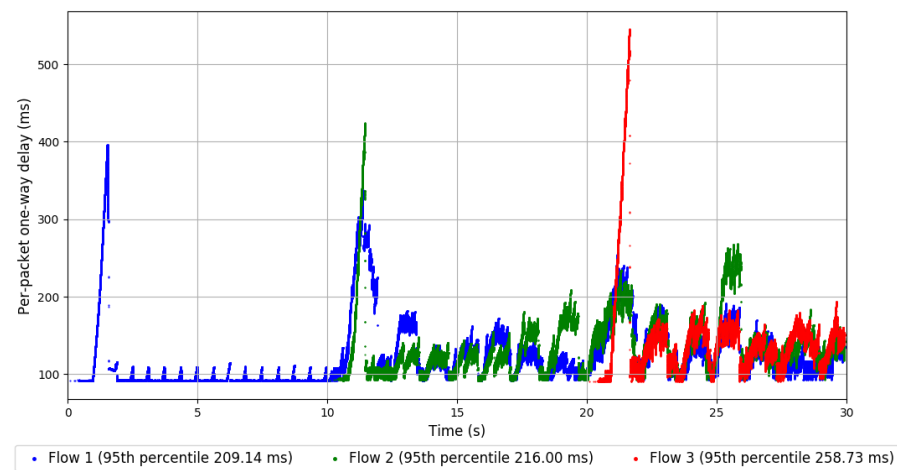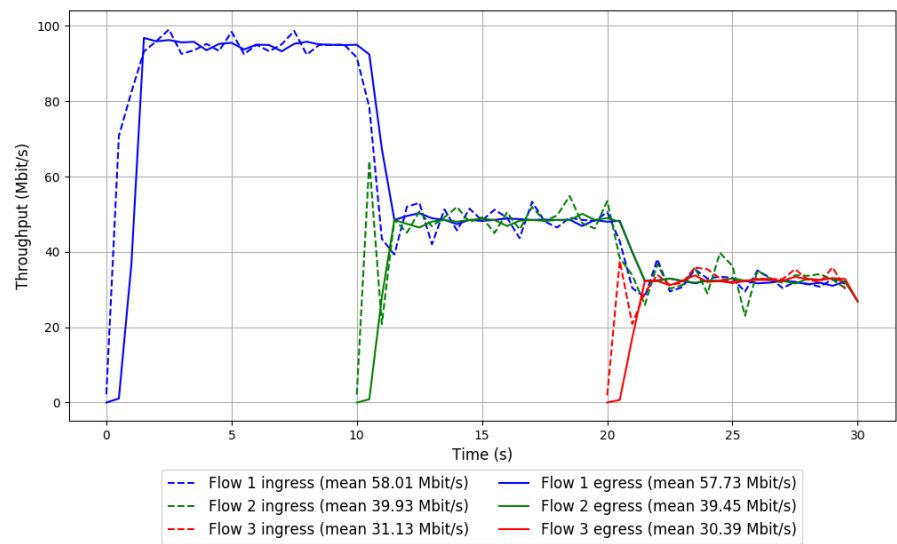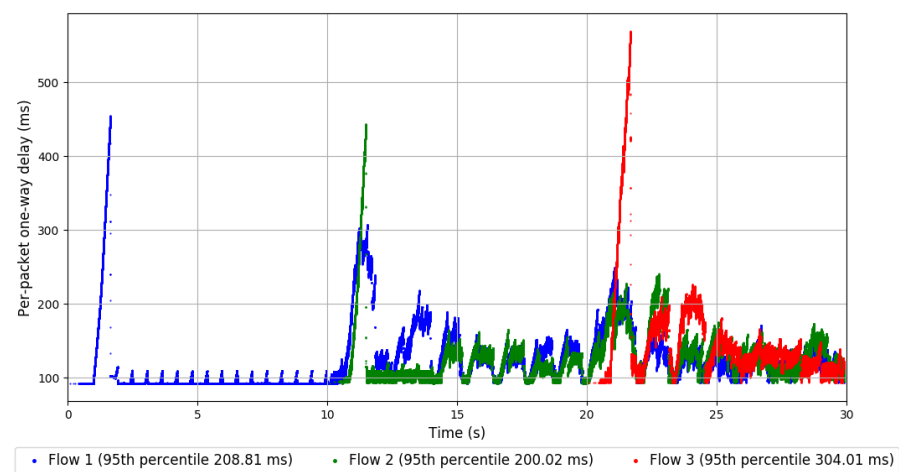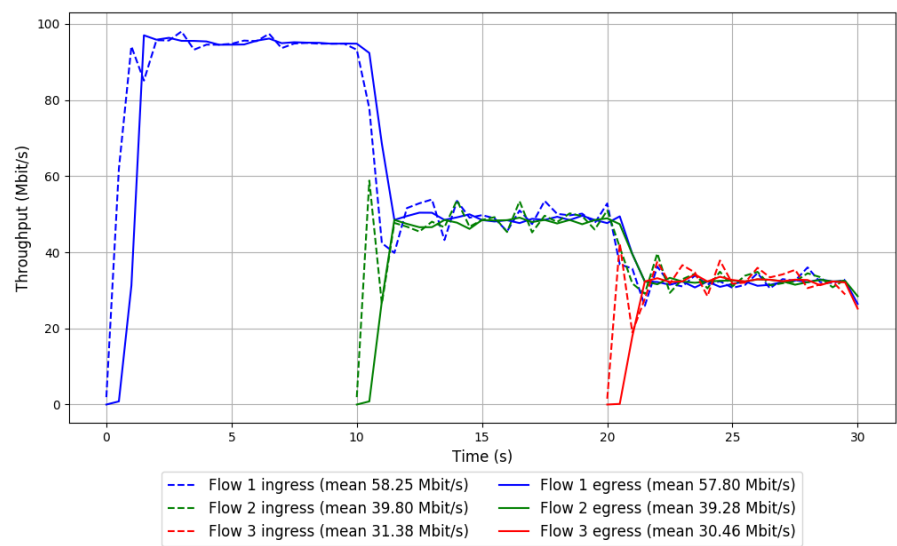
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-11-24 16:34:23
End at: 2019-11-24 16:34:53
Local clock offset: -1.519 ms
Remote clock offset: -9.17 ms


# Below is generated by plot.py at 2019-11-24 18:23:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.95 Mbit/s
95th percentile per-packet one-way delay: 213.076 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 209.136 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 39.45 Mbit/s
95th percentile per-packet one-way delay: 215.995 ms
Loss rate: 1.90%
-- Flow 3:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 258.725 ms
Loss rate: 3.65%
```

Run 2: Report of FillP — Data Link

Flow 1 ingress (mean 58.01 Mbit/s) --- Flow 1 egress (mean 57.73 Mbit/s)
Flow 2 ingress (mean 39.93 Mbit/s) --- Flow 2 egress (mean 39.45 Mbit/s)
Flow 3 ingress (mean 31.13 Mbit/s) --- Flow 3 egress (mean 30.39 Mbit/s)

Flow 1 (95th percentile 209.14 ms)   Flow 2 (95th percentile 216.00 ms)   Flow 3 (95th percentile 258.73 ms)
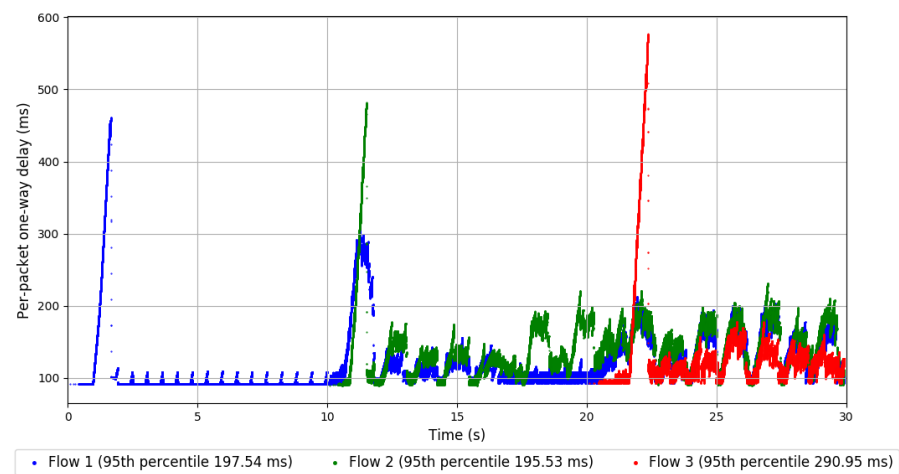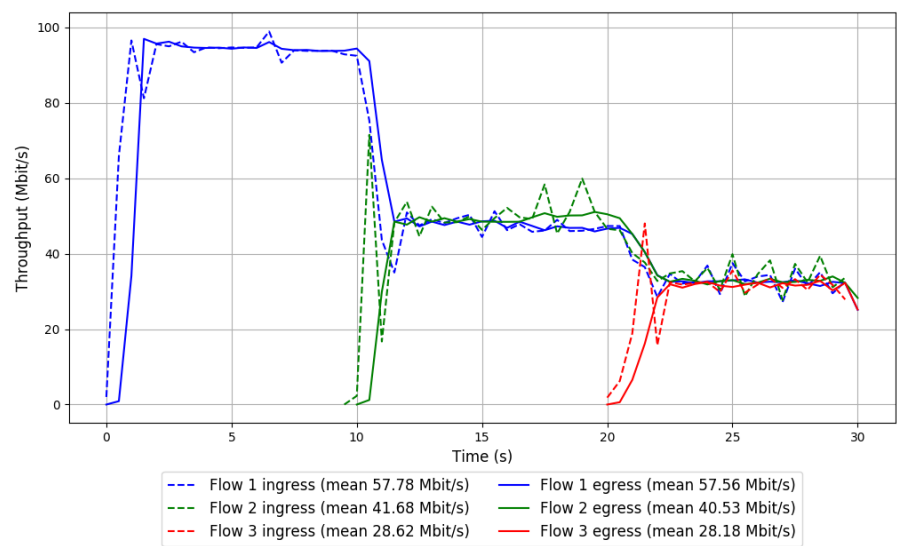
```
Run 3: Statistics of FillP

Start at: 2019-11-24 17:04:36
End at: 2019-11-24 17:05:06
Local clock offset: 0.725 ms
Remote clock offset: -8.437 ms


# Below is generated by plot.py at 2019-11-24 18:23:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.93 Mbit/s
95th percentile per-packet one-way delay: 208.412 ms
Loss rate: 1.76%
-- Flow 1:
Average throughput: 57.80 Mbit/s
95th percentile per-packet one-way delay: 208.812 ms
Loss rate: 1.23%
-- Flow 2:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 200.022 ms
Loss rate: 2.01%
-- Flow 3:
Average throughput: 30.46 Mbit/s
95th percentile per-packet one-way delay: 304.006 ms
Loss rate: 4.14%
```
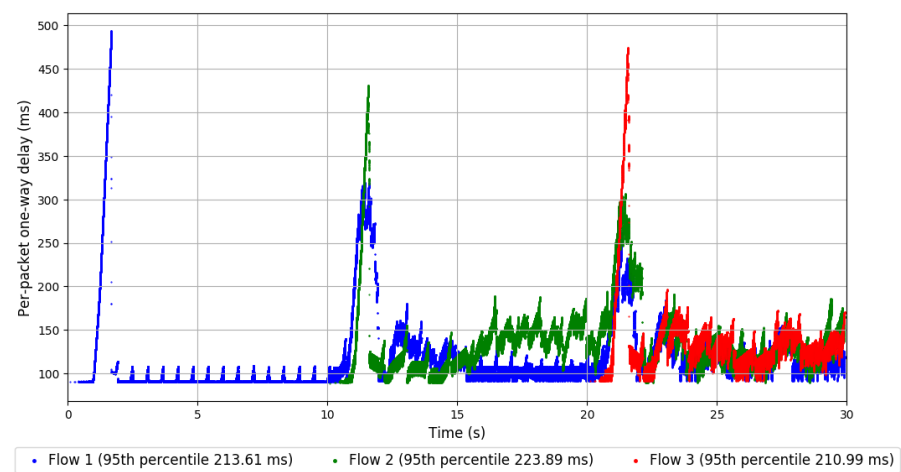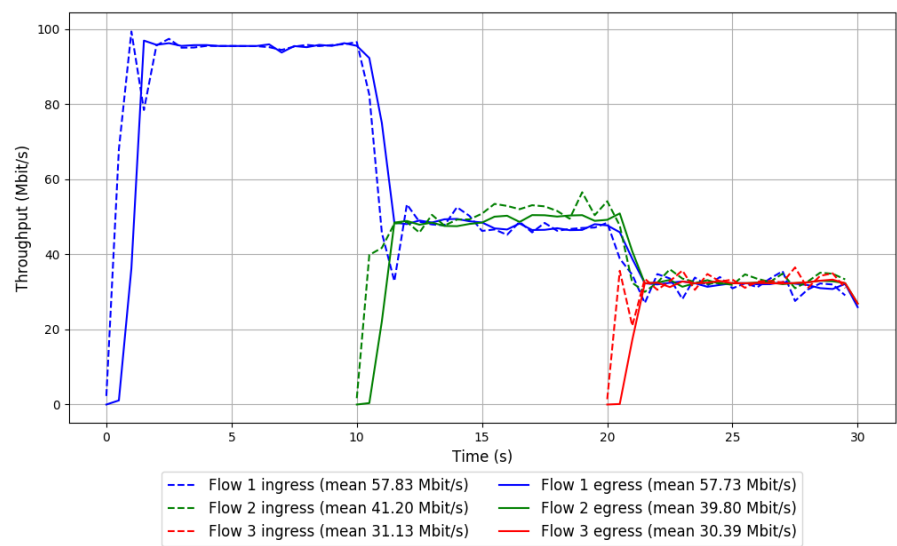
Run 3: Report of FillP — Data Link

Flow 1 ingress (mean 58.25 Mbit/s)   Flow 1 egress (mean 57.80 Mbit/s)
Flow 2 ingress (mean 39.80 Mbit/s)   Flow 2 egress (mean 39.28 Mbit/s)
Flow 3 ingress (mean 31.38 Mbit/s)   Flow 3 egress (mean 30.46 Mbit/s)

Flow 1 (95th percentile 208.81 ms)   Flow 2 (95th percentile 200.02 ms)   Flow 3 (95th percentile 304.01 ms)

40

```
Run 4: Statistics of FillP

Start at: 2019-11-24 17:34:51
End at: 2019-11-24 17:35:21
Local clock offset: 0.771 ms
Remote clock offset: -7.507 ms


# Below is generated by plot.py at 2019-11-24 18:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.78 Mbit/s
95th percentile per-packet one-way delay: 197.709 ms
Loss rate: 1.79%
-- Flow 1:
Average throughput: 57.56 Mbit/s
95th percentile per-packet one-way delay: 197.545 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 40.53 Mbit/s
95th percentile per-packet one-way delay: 195.528 ms
Loss rate: 3.46%
-- Flow 3:
Average throughput: 28.18 Mbit/s
95th percentile per-packet one-way delay: 290.955 ms
Loss rate: 2.74%
```
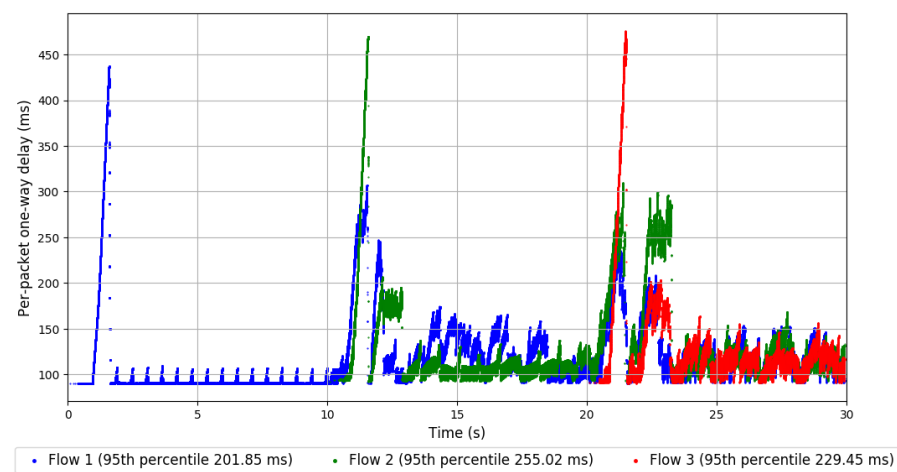
Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-11-24 18:05:06
End at: 2019-11-24 18:05:36
Local clock offset: 0.243 ms
Remote clock offset: -7.869 ms


# Below is generated by plot.py at 2019-11-24 18:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.17 Mbit/s
95th percentile per-packet one-way delay: 218.053 ms
Loss rate: 1.94%
-- Flow 1:
Average throughput: 57.73 Mbit/s
95th percentile per-packet one-way delay: 213.614 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 39.80 Mbit/s
95th percentile per-packet one-way delay: 223.888 ms
Loss rate: 4.06%
-- Flow 3:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 210.993 ms
Loss rate: 3.75%
```
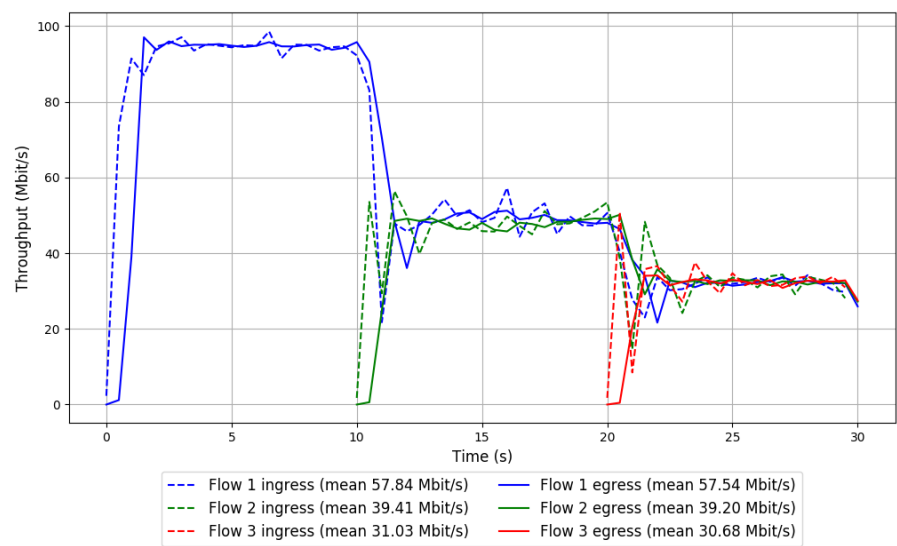
Run 5: Report of FillP — Data Link

Flow 1 ingress (mean 57.83 Mbit/s) --- Flow 1 egress (mean 57.73 Mbit/s)
Flow 2 ingress (mean 41.20 Mbit/s) --- Flow 2 egress (mean 39.80 Mbit/s)
Flow 3 ingress (mean 31.13 Mbit/s) --- Flow 3 egress (mean 30.39 Mbit/s)

Flow 1 (95th percentile 213.61 ms)   Flow 2 (95th percentile 223.89 ms)   Flow 3 (95th percentile 210.99 ms)

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```
Run 1: Statistics of FillP-Sheep

Start at: 2019-11-24 15:55:17
End at: 2019-11-24 15:55:47
Local clock offset: -0.783 ms
Remote clock offset: -8.799 ms


# Below is generated by plot.py at 2019-11-24 18:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.68 Mbit/s
95th percentile per-packet one-way delay: 231.268 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 57.54 Mbit/s
95th percentile per-packet one-way delay: 201.851 ms
Loss rate: 0.87%
-- Flow 2:
Average throughput: 39.20 Mbit/s
95th percentile per-packet one-way delay: 255.016 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 30.68 Mbit/s
95th percentile per-packet one-way delay: 229.447 ms
Loss rate: 2.51%
```
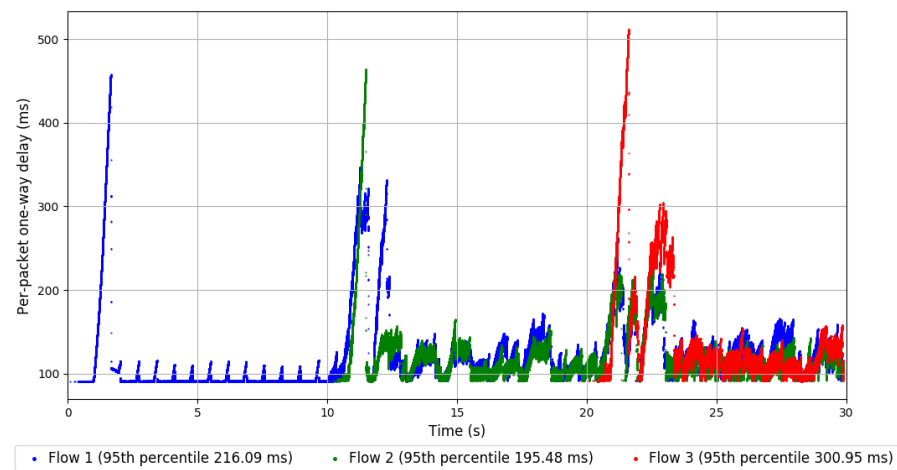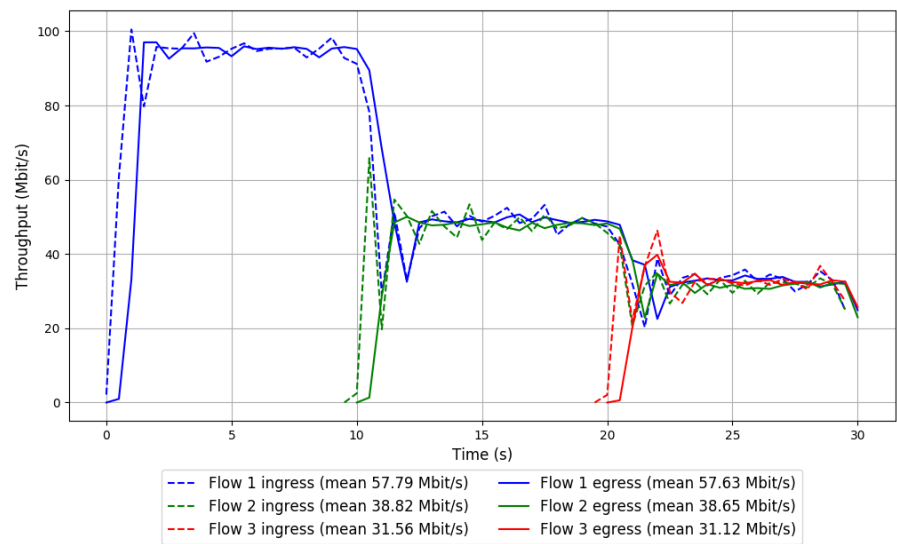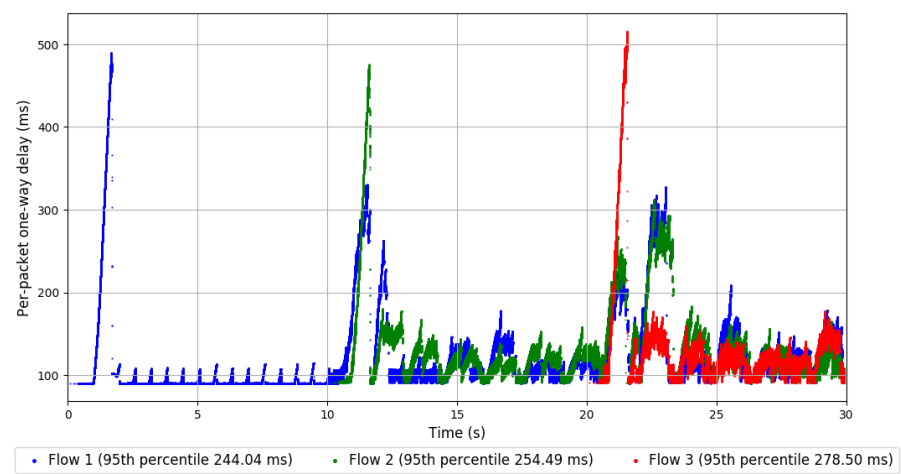
Run 1: Report of FillP-Sheep — Data Link

- - - Flow 1 ingress (mean 57.84 Mbit/s) ——— Flow 1 egress (mean 57.54 Mbit/s)
- - - Flow 2 ingress (mean 39.41 Mbit/s) ——— Flow 2 egress (mean 39.20 Mbit/s)
- - - Flow 3 ingress (mean 31.03 Mbit/s) ——— Flow 3 egress (mean 30.68 Mbit/s)

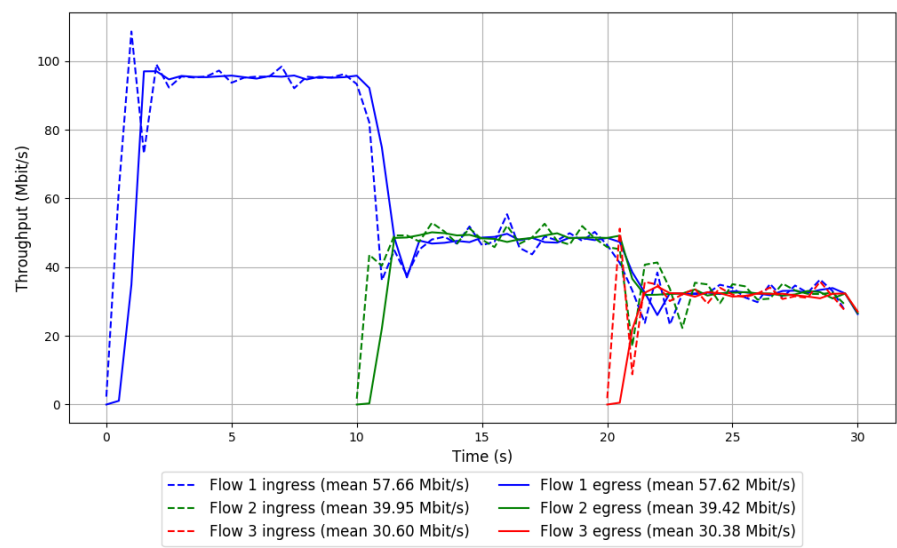• Flow 1 (95th percentile 201.85 ms)   • Flow 2 (95th percentile 255.02 ms)   • Flow 3 (95th percentile 229.45 ms)

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-11-24 16:25:34
End at: 2019-11-24 16:26:04
Local clock offset: -1.58 ms
Remote clock offset: -8.055 ms


# Below is generated by plot.py at 2019-11-24 18:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.60 Mbit/s
95th percentile per-packet one-way delay: 229.428 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 57.63 Mbit/s
95th percentile per-packet one-way delay: 216.090 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 38.65 Mbit/s
95th percentile per-packet one-way delay: 195.476 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 31.12 Mbit/s
95th percentile per-packet one-way delay: 300.955 ms
Loss rate: 2.79%
```
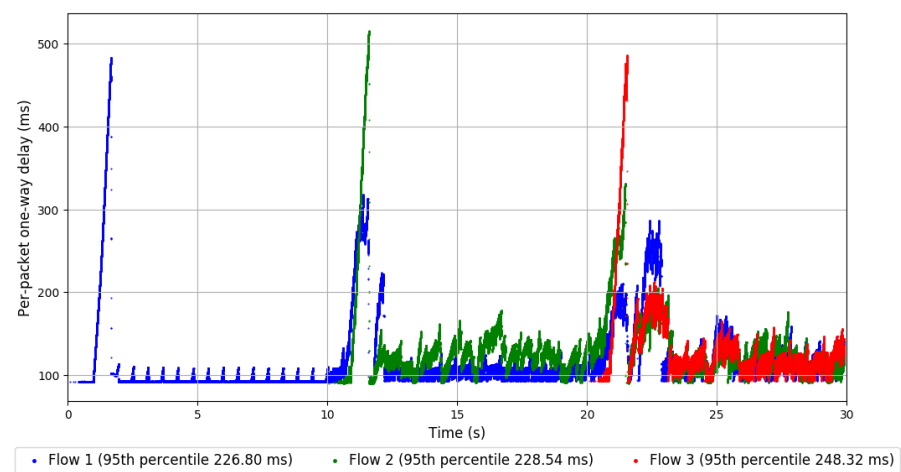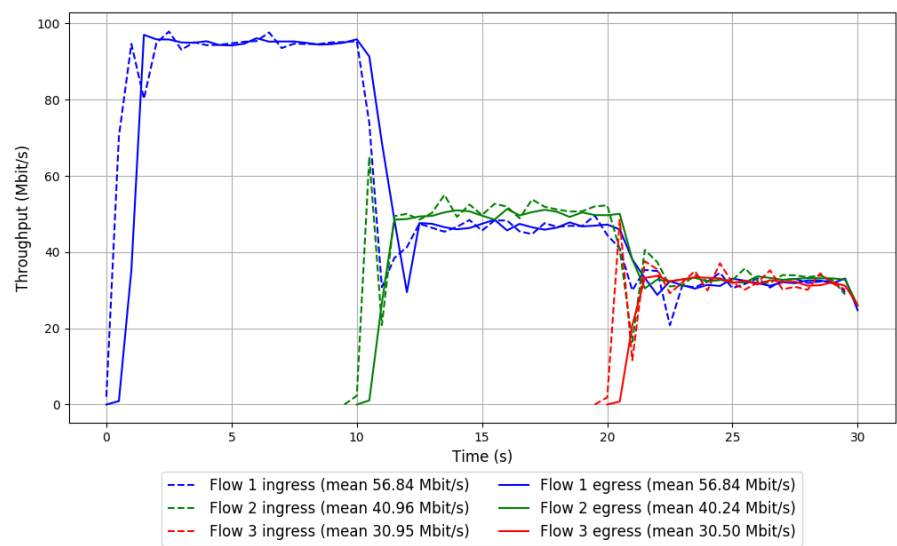
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-11-24 16:55:46
End at: 2019-11-24 16:56:16
Local clock offset: 0.46 ms
Remote clock offset: -9.136 ms


# Below is generated by plot.py at 2019-11-24 18:24:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.79 Mbit/s
95th percentile per-packet one-way delay: 250.486 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 57.62 Mbit/s
95th percentile per-packet one-way delay: 244.039 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 39.42 Mbit/s
95th percentile per-packet one-way delay: 254.488 ms
Loss rate: 1.92%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 278.505 ms
Loss rate: 2.12%
```

Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 57.66 Mbit/s) --- Flow 1 egress (mean 57.62 Mbit/s)
Flow 2 ingress (mean 39.95 Mbit/s) --- Flow 2 egress (mean 39.42 Mbit/s)
Flow 3 ingress (mean 30.60 Mbit/s) --- Flow 3 egress (mean 30.38 Mbit/s)

Flow 1 (95th percentile 244.04 ms)   Flow 2 (95th percentile 254.49 ms)   Flow 3 (95th percentile 278.50 ms)
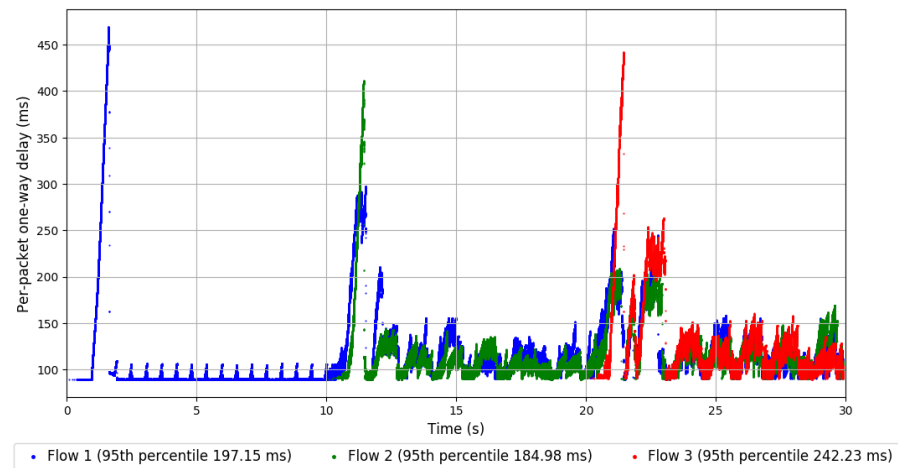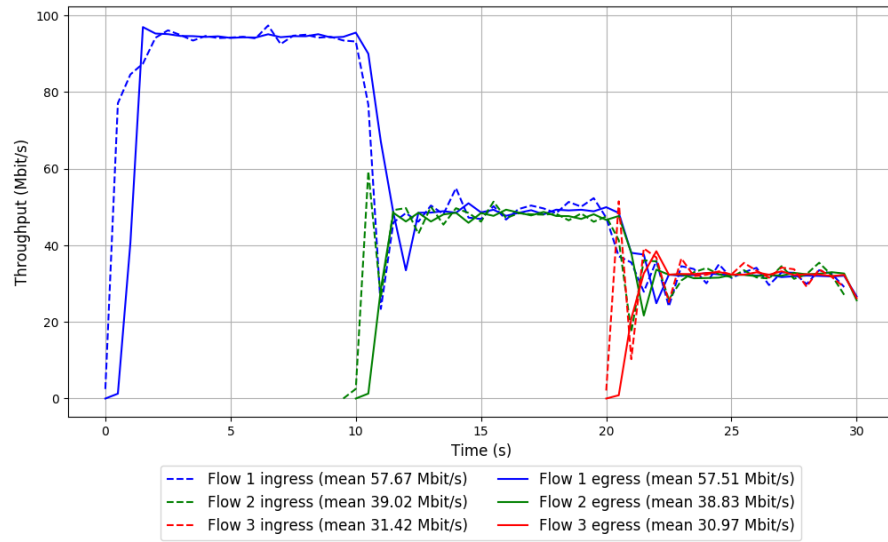
50

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-11-24 17:26:01
End at: 2019-11-24 17:26:31
Local clock offset: 0.695 ms
Remote clock offset: -7.839 ms


# Below is generated by plot.py at 2019-11-24 18:24:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.64 Mbit/s
95th percentile per-packet one-way delay: 228.974 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 56.84 Mbit/s
95th percentile per-packet one-way delay: 226.798 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 40.24 Mbit/s
95th percentile per-packet one-way delay: 228.541 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 30.50 Mbit/s
95th percentile per-packet one-way delay: 248.322 ms
Loss rate: 2.77%
```

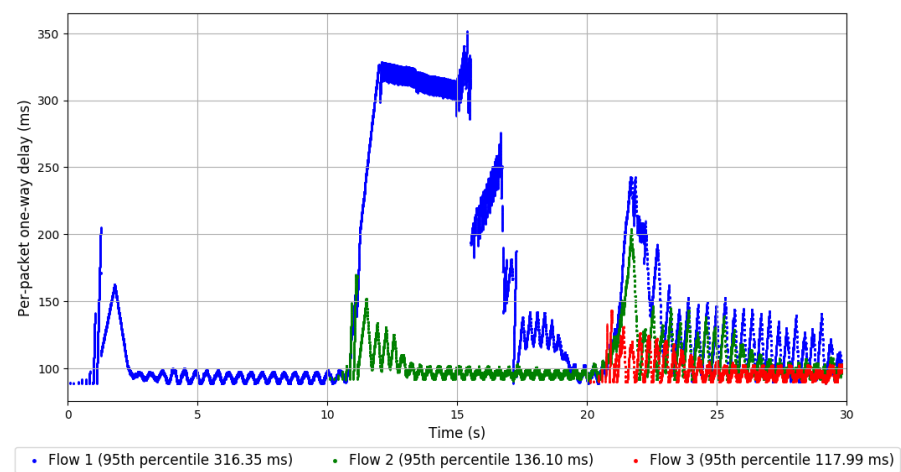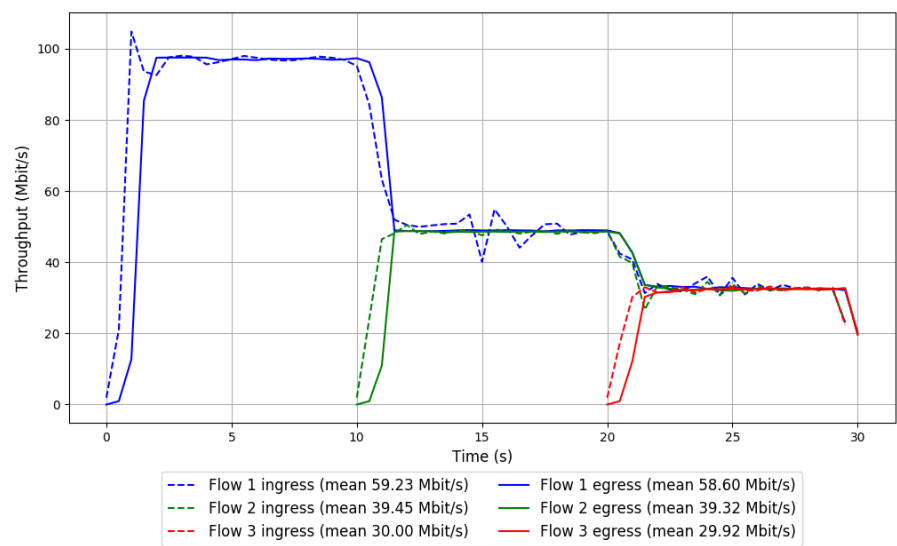## Run 4: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 56.84 Mbit/s)   —— Flow 1 egress (mean 56.84 Mbit/s)
- - - - Flow 2 ingress (mean 40.96 Mbit/s)   —— Flow 2 egress (mean 40.24 Mbit/s)
- - - - Flow 3 ingress (mean 30.95 Mbit/s)   —— Flow 3 egress (mean 30.50 Mbit/s)

- Flow 1 (95th percentile 226.80 ms)   • Flow 2 (95th percentile 228.54 ms)   • Flow 3 (95th percentile 248.32 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-11-24 17:56:15
End at: 2019-11-24 17:56:45
Local clock offset: 0.188 ms
Remote clock offset: -8.302 ms


# Below is generated by plot.py at 2019-11-24 18:24:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.49 Mbit/s
95th percentile per-packet one-way delay: 201.507 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 57.51 Mbit/s
95th percentile per-packet one-way delay: 197.146 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 38.83 Mbit/s
95th percentile per-packet one-way delay: 184.978 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 30.97 Mbit/s
95th percentile per-packet one-way delay: 242.230 ms
Loss rate: 2.71%
```

Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 57.67 Mbit/s) --- Flow 1 egress (mean 57.51 Mbit/s)
Flow 2 ingress (mean 39.02 Mbit/s) --- Flow 2 egress (mean 38.83 Mbit/s)
Flow 3 ingress (mean 31.42 Mbit/s) --- Flow 3 egress (mean 30.97 Mbit/s)

Flow 1 (95th percentile 197.15 ms) Flow 2 (95th percentile 184.98 ms) Flow 3 (95th percentile 242.23 ms)

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```
Run 1: Statistics of Indigo

Start at: 2019-11-24 15:57:49
End at: 2019-11-24 15:58:19
Local clock offset: -1.584 ms
Remote clock offset: -7.942 ms


# Below is generated by plot.py at 2019-11-24 18:24:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.44 Mbit/s
95th percentile per-packet one-way delay: 310.317 ms
Loss rate: 1.41%
-- Flow 1:
Average throughput: 58.60 Mbit/s
95th percentile per-packet one-way delay: 316.350 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 39.32 Mbit/s
95th percentile per-packet one-way delay: 136.102 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 29.92 Mbit/s
95th percentile per-packet one-way delay: 117.992 ms
Loss rate: 1.65%
```
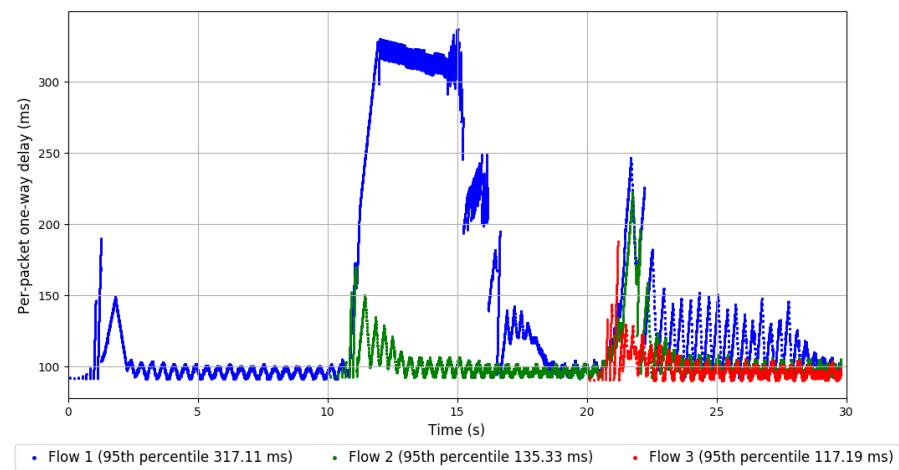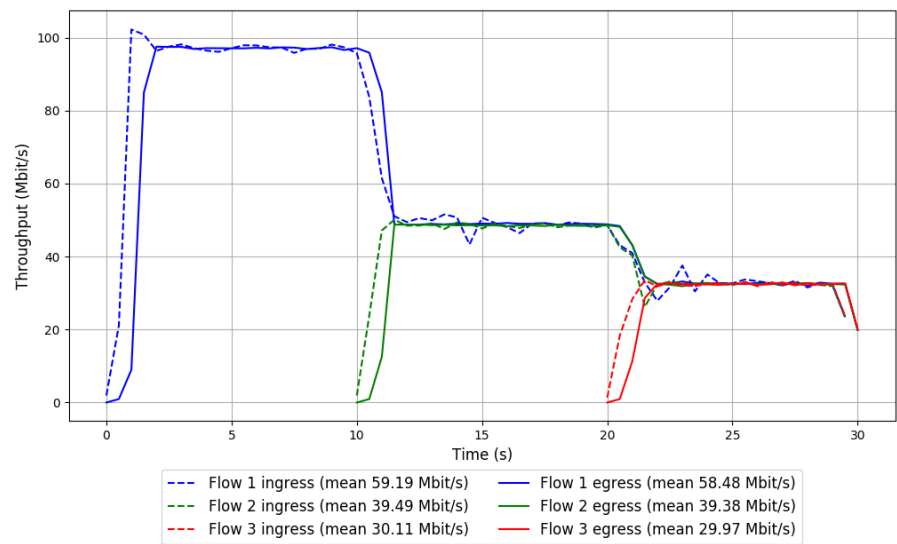
Run 1: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 59.23 Mbit/s)   —— Flow 1 egress (mean 58.60 Mbit/s)
- - - Flow 2 ingress (mean 39.45 Mbit/s)   —— Flow 2 egress (mean 39.32 Mbit/s)
- - - Flow 3 ingress (mean 30.00 Mbit/s)   —— Flow 3 egress (mean 29.92 Mbit/s)

- Flow 1 (95th percentile 316.35 ms)   • Flow 2 (95th percentile 136.10 ms)   • Flow 3 (95th percentile 117.99 ms)

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```
Run 2: Statistics of Indigo

Start at: 2019-11-24 16:28:05
End at: 2019-11-24 16:28:35
Local clock offset: -0.776 ms
Remote clock offset: -8.195 ms


# Below is generated by plot.py at 2019-11-24 18:24:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.46 Mbit/s
95th percentile per-packet one-way delay: 353.125 ms
Loss rate: 6.09%
-- Flow 1:
Average throughput: 58.66 Mbit/s
95th percentile per-packet one-way delay: 362.138 ms
Loss rate: 8.86%
-- Flow 2:
Average throughput: 39.27 Mbit/s
95th percentile per-packet one-way delay: 136.143 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 29.84 Mbit/s
95th percentile per-packet one-way delay: 111.632 ms
Loss rate: 1.76%
```
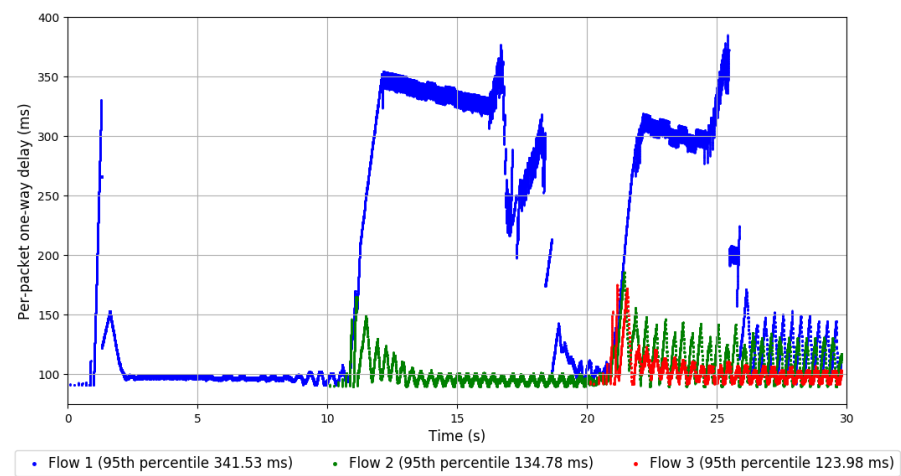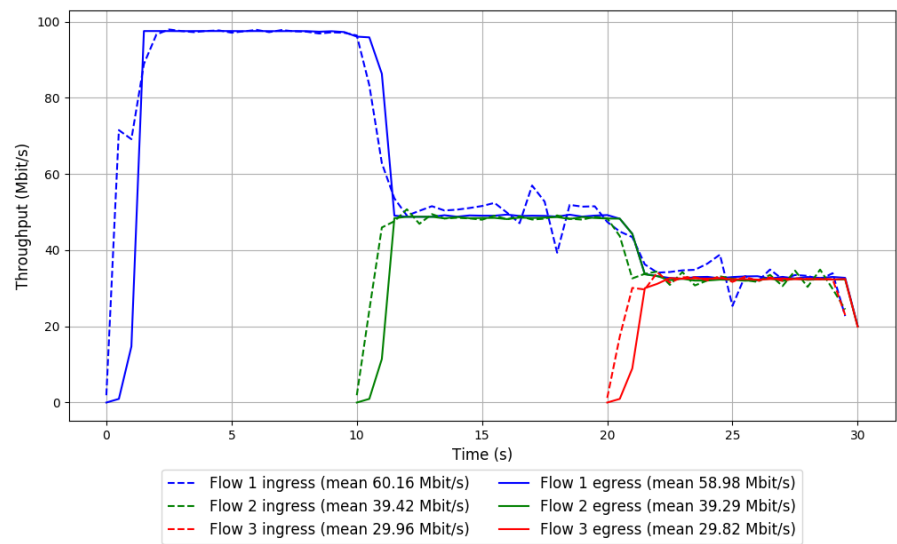
Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-11-24 16:58:18
End at: 2019-11-24 16:58:48
Local clock offset: -0.192 ms
Remote clock offset: -8.734 ms


# Below is generated by plot.py at 2019-11-24 18:24:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.37 Mbit/s
95th percentile per-packet one-way delay: 309.668 ms
Loss rate: 1.49%
-- Flow 1:
Average throughput: 58.48 Mbit/s
95th percentile per-packet one-way delay: 317.106 ms
Loss rate: 1.66%
-- Flow 2:
Average throughput: 39.38 Mbit/s
95th percentile per-packet one-way delay: 135.326 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 29.97 Mbit/s
95th percentile per-packet one-way delay: 117.185 ms
Loss rate: 1.86%
```
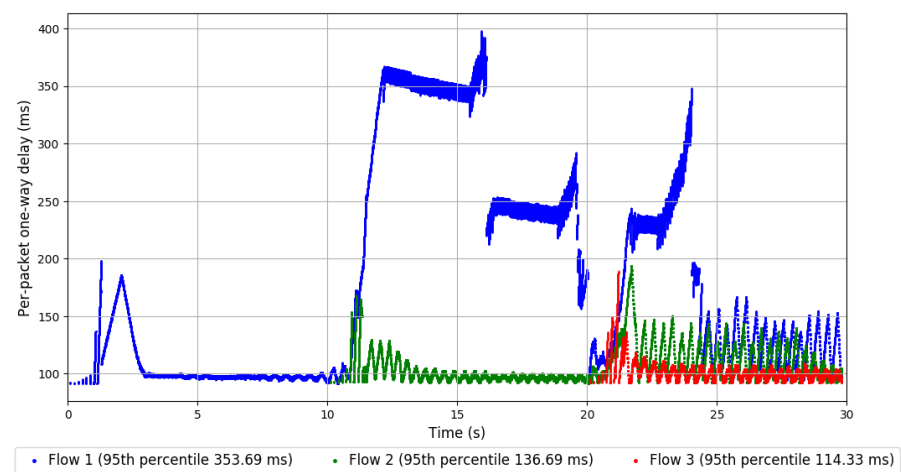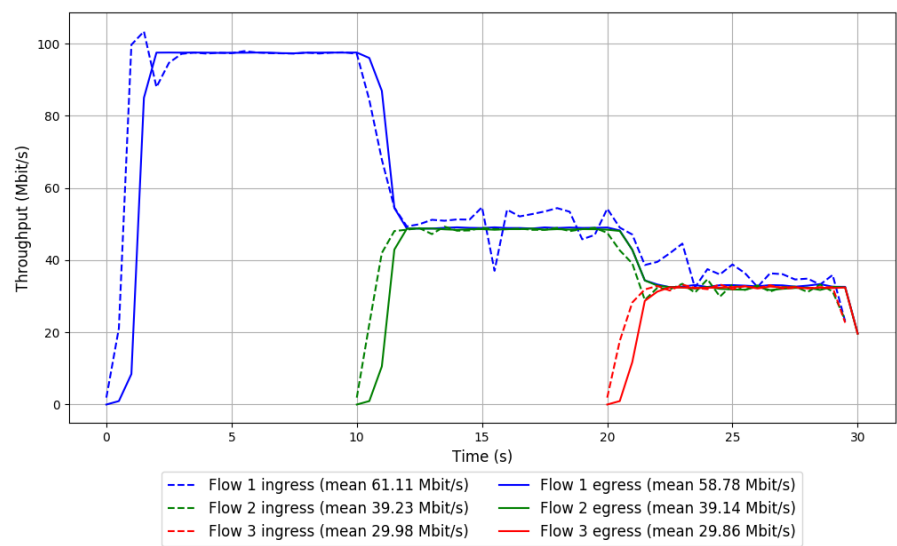
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-11-24 17:28:32
End at: 2019-11-24 17:29:02
Local clock offset: 0.016 ms
Remote clock offset: -7.241 ms


# Below is generated by plot.py at 2019-11-24 18:24:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.76 Mbit/s
95th percentile per-packet one-way delay: 336.310 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 58.98 Mbit/s
95th percentile per-packet one-way delay: 341.526 ms
Loss rate: 2.41%
-- Flow 2:
Average throughput: 39.29 Mbit/s
95th percentile per-packet one-way delay: 134.776 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 123.981 ms
Loss rate: 1.93%
```
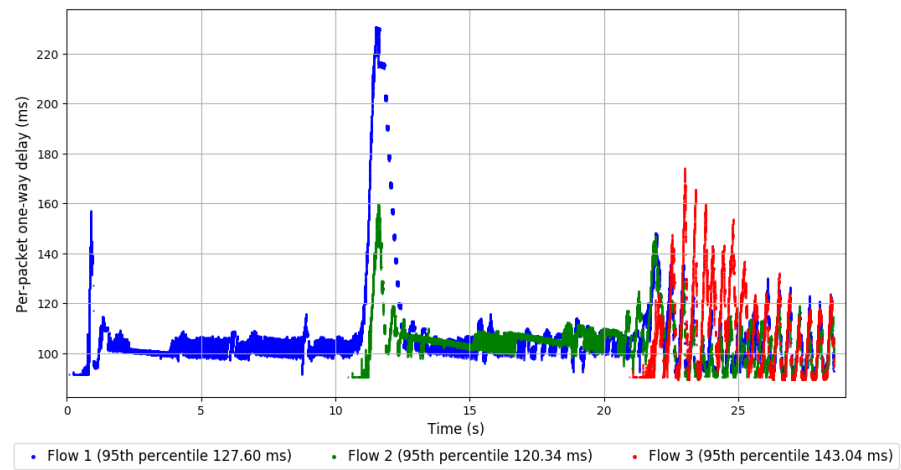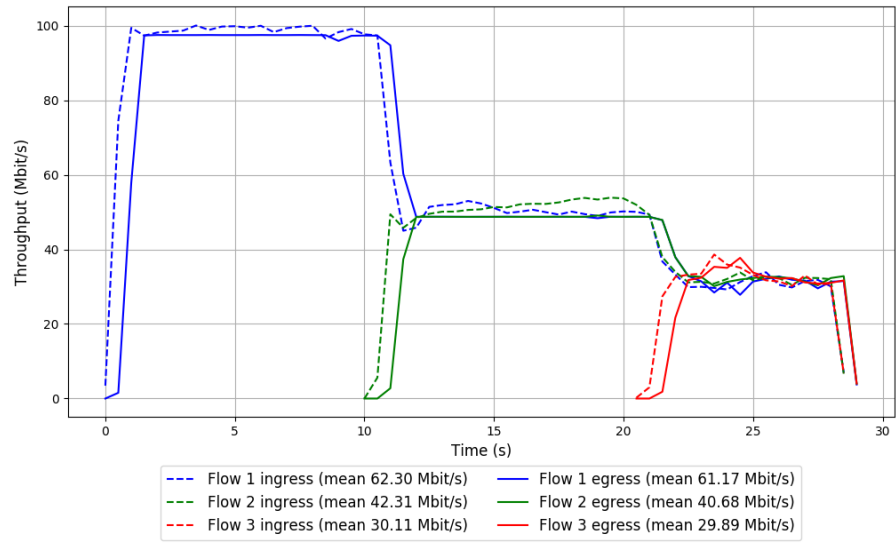
Run 4: Report of Indigo — Data Link

- - - Flow 1 ingress (mean 60.16 Mbit/s) —— Flow 1 egress (mean 58.98 Mbit/s)
- - - Flow 2 ingress (mean 39.42 Mbit/s) —— Flow 2 egress (mean 39.29 Mbit/s)
- - - Flow 3 ingress (mean 29.96 Mbit/s) —— Flow 3 egress (mean 29.82 Mbit/s)

• Flow 1 (95th percentile 341.53 ms) • Flow 2 (95th percentile 134.78 ms) • Flow 3 (95th percentile 123.98 ms)

```
Run 5: Statistics of Indigo

Start at: 2019-11-24 17:58:47
End at: 2019-11-24 17:59:17
Local clock offset: 0.903 ms
Remote clock offset: -7.499 ms


# Below is generated by plot.py at 2019-11-24 18:24:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 348.569 ms
Loss rate: 3.13%
-- Flow 1:
Average throughput: 58.78 Mbit/s
95th percentile per-packet one-way delay: 353.688 ms
Loss rate: 4.27%
-- Flow 2:
Average throughput: 39.14 Mbit/s
95th percentile per-packet one-way delay: 136.692 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 29.86 Mbit/s
95th percentile per-packet one-way delay: 114.331 ms
Loss rate: 1.82%
```
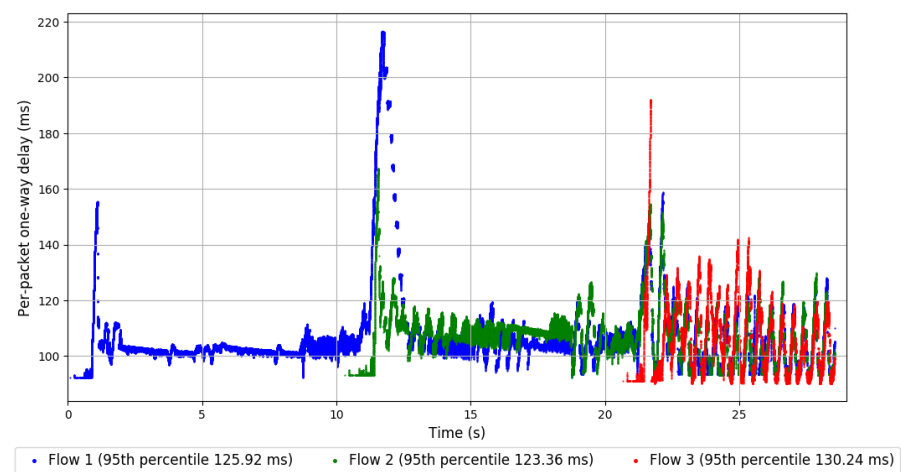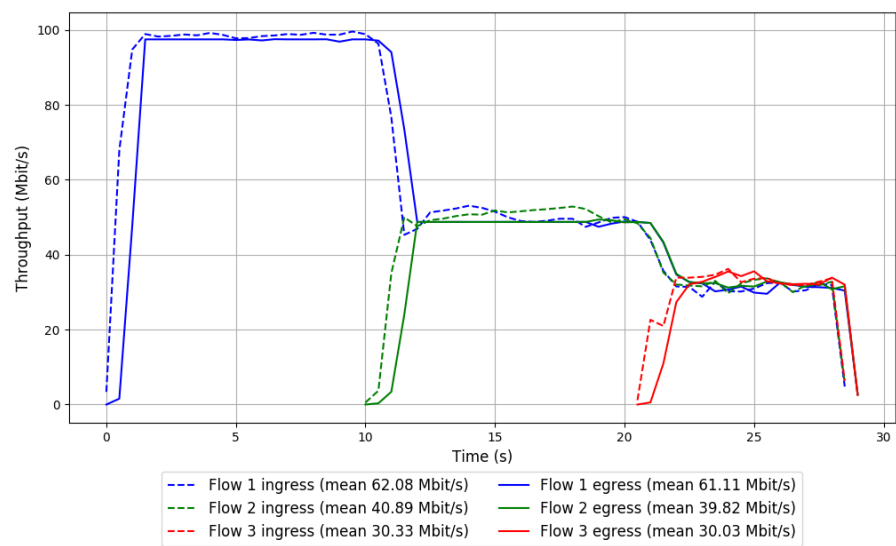
Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 61.11 Mbit/s)   Flow 1 egress (mean 58.78 Mbit/s)
Flow 2 ingress (mean 39.23 Mbit/s)   Flow 2 egress (mean 39.14 Mbit/s)
Flow 3 ingress (mean 29.98 Mbit/s)   Flow 3 egress (mean 29.86 Mbit/s)

Flow 1 (95th percentile 353.69 ms)   Flow 2 (95th percentile 136.69 ms)   Flow 3 (95th percentile 114.33 ms)
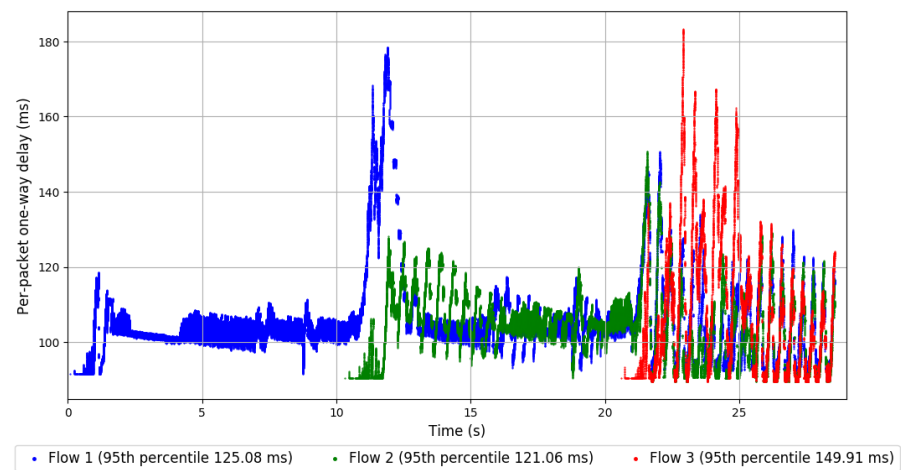
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```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-11-24 15:52:45
End at: 2019-11-24 15:53:15
Local clock offset: -1.533 ms
Remote clock offset: -9.085 ms


# Below is generated by plot.py at 2019-11-24 18:25:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.01 Mbit/s
95th percentile per-packet one-way delay: 130.232 ms
Loss rate: 2.96%
-- Flow 1:
Average throughput: 61.17 Mbit/s
95th percentile per-packet one-way delay: 127.603 ms
Loss rate: 2.30%
-- Flow 2:
Average throughput: 40.68 Mbit/s
95th percentile per-packet one-way delay: 120.336 ms
Loss rate: 4.60%
-- Flow 3:
Average throughput: 29.89 Mbit/s
95th percentile per-packet one-way delay: 143.041 ms
Loss rate: 2.53%
```

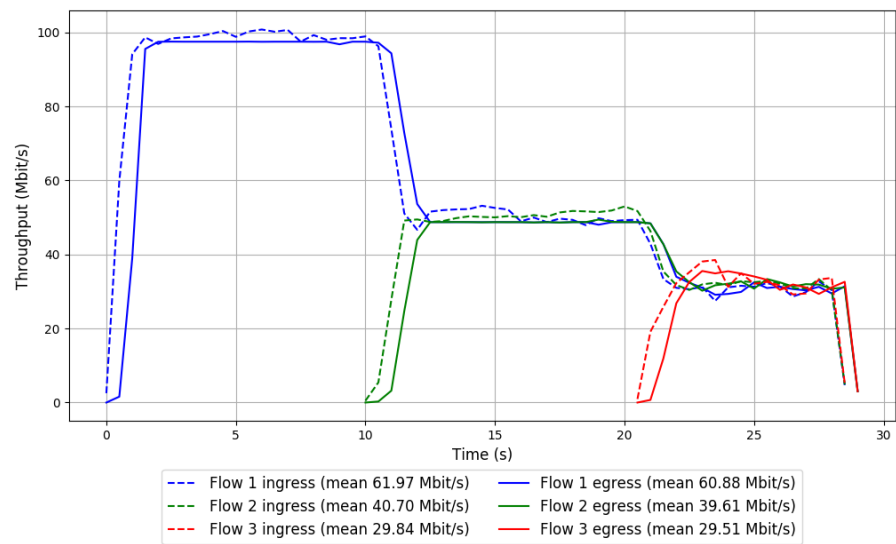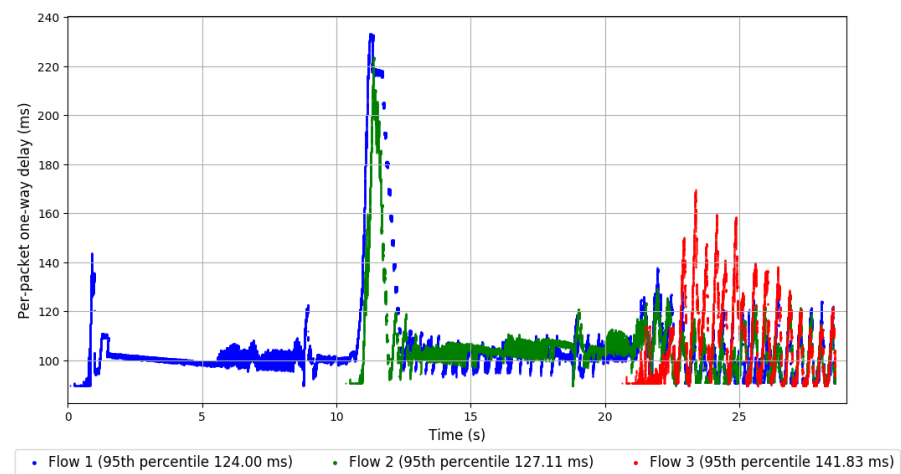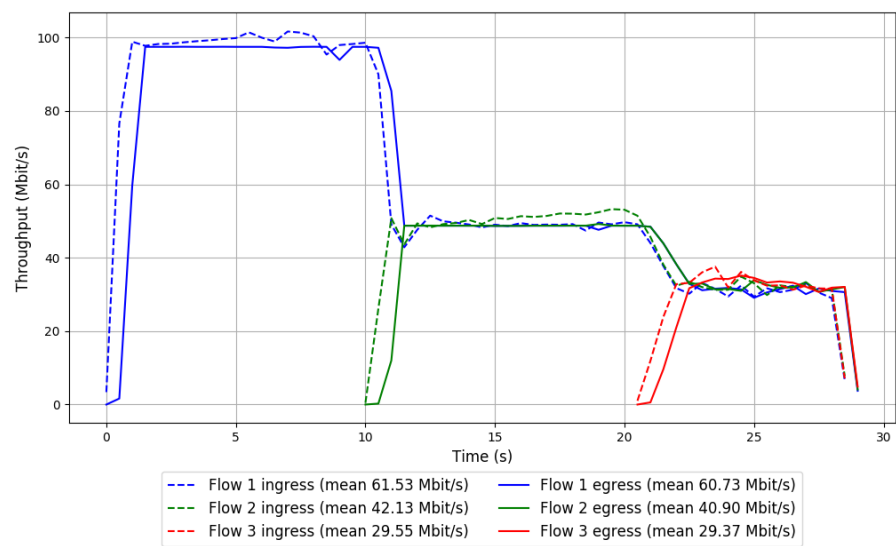Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-11-24 16:23:01
End at: 2019-11-24 16:23:31
Local clock offset: -0.789 ms
Remote clock offset: -8.439 ms


# Below is generated by plot.py at 2019-11-24 18:25:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.93 Mbit/s
95th percentile per-packet one-way delay: 126.075 ms
Loss rate: 2.46%
-- Flow 1:
Average throughput: 61.11 Mbit/s
95th percentile per-packet one-way delay: 125.917 ms
Loss rate: 2.04%
-- Flow 2:
Average throughput: 39.82 Mbit/s
95th percentile per-packet one-way delay: 123.360 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 130.243 ms
Loss rate: 2.71%
```

Run 2: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 62.08 Mbit/s)   —— Flow 1 egress (mean 61.11 Mbit/s)
- - - - Flow 2 ingress (mean 40.89 Mbit/s)   —— Flow 2 egress (mean 39.82 Mbit/s)
- - - - Flow 3 ingress (mean 30.33 Mbit/s)   —— Flow 3 egress (mean 30.03 Mbit/s)

- Flow 1 (95th percentile 125.92 ms)   • Flow 2 (95th percentile 123.36 ms)   • Flow 3 (95th percentile 130.24 ms)
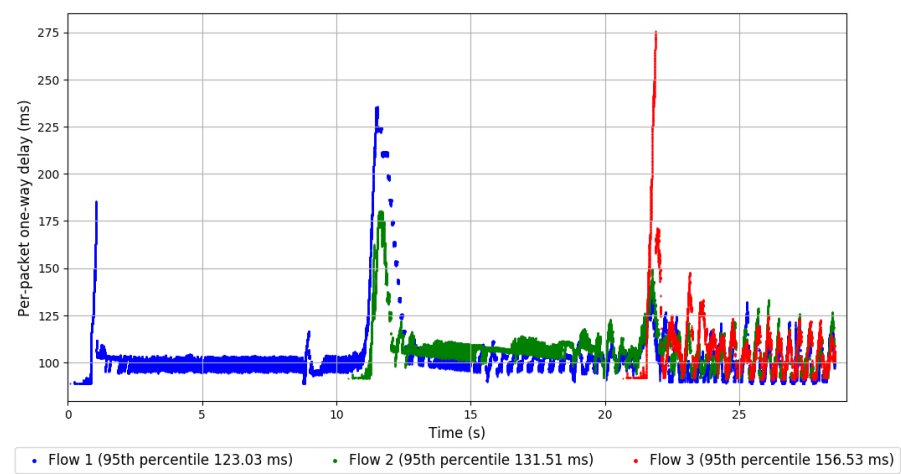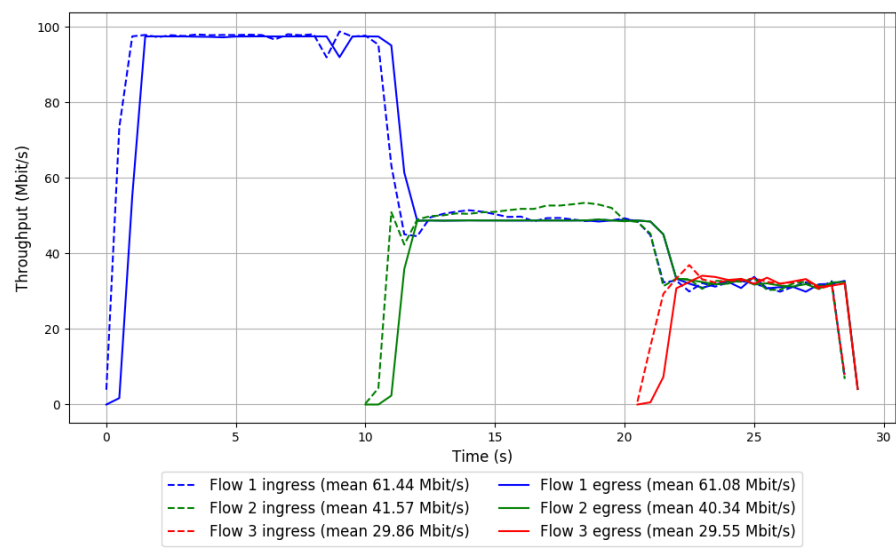
```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-11-24 16:53:14
End at: 2019-11-24 16:53:44
Local clock offset: -0.377 ms
Remote clock offset: -9.324 ms


# Below is generated by plot.py at 2019-11-24 18:25:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.49 Mbit/s
95th percentile per-packet one-way delay: 127.393 ms
Loss rate: 2.61%
-- Flow 1:
Average throughput: 60.88 Mbit/s
95th percentile per-packet one-way delay: 125.079 ms
Loss rate: 2.23%
-- Flow 2:
Average throughput: 39.61 Mbit/s
95th percentile per-packet one-way delay: 121.062 ms
Loss rate: 3.42%
-- Flow 3:
Average throughput: 29.51 Mbit/s
95th percentile per-packet one-way delay: 149.910 ms
Loss rate: 2.83%
```

Run 3: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 61.97 Mbit/s) Flow 1 egress (mean 60.88 Mbit/s)
Flow 2 ingress (mean 40.70 Mbit/s) Flow 2 egress (mean 39.61 Mbit/s)
Flow 3 ingress (mean 29.84 Mbit/s) Flow 3 egress (mean 29.51 Mbit/s)

Flow 1 (95th percentile 125.08 ms) Flow 2 (95th percentile 121.06 ms) Flow 3 (95th percentile 149.91 ms)

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-11-24 17:23:28
End at: 2019-11-24 17:23:58
Local clock offset: 0.677 ms
Remote clock offset: -7.401 ms


# Below is generated by plot.py at 2019-11-24 18:25:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.08 Mbit/s
95th percentile per-packet one-way delay: 130.598 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 60.73 Mbit/s
95th percentile per-packet one-way delay: 124.001 ms
Loss rate: 1.78%
-- Flow 2:
Average throughput: 40.90 Mbit/s
95th percentile per-packet one-way delay: 127.108 ms
Loss rate: 3.65%
-- Flow 3:
Average throughput: 29.37 Mbit/s
95th percentile per-packet one-way delay: 141.828 ms
Loss rate: 2.37%
```

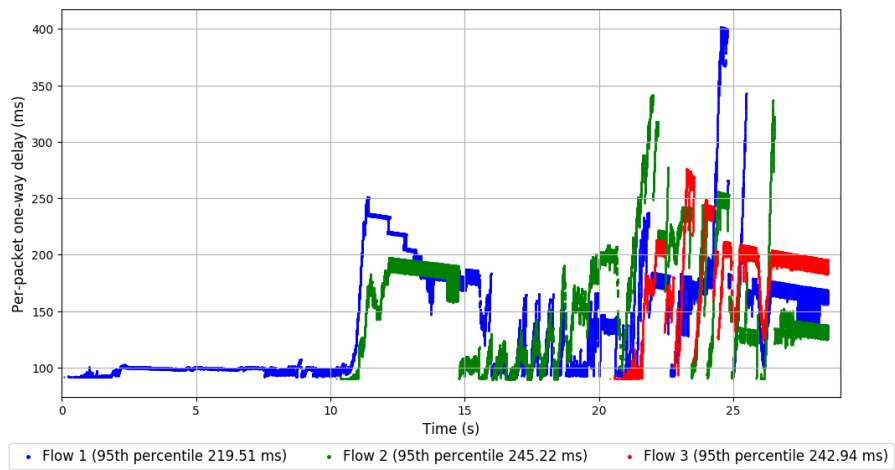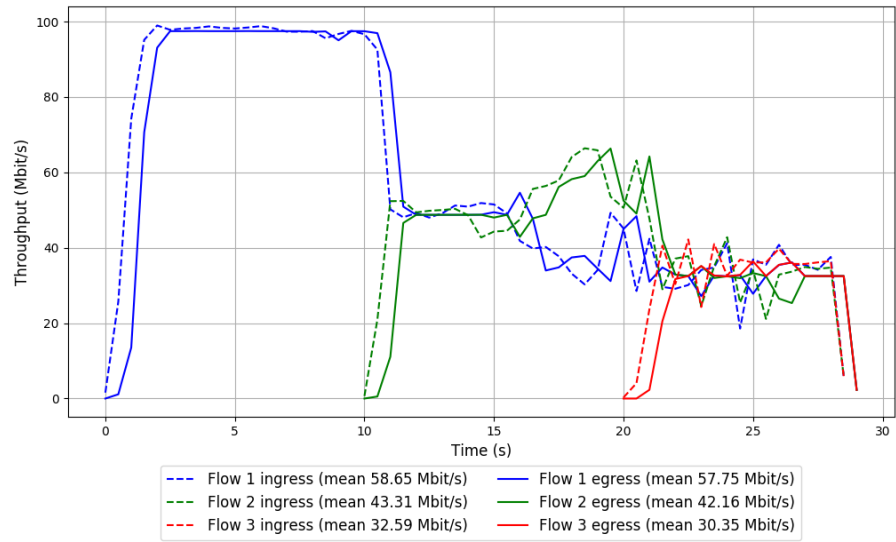Run 4: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 61.53 Mbit/s)   ——— Flow 1 egress (mean 60.73 Mbit/s)
- - - - Flow 2 ingress (mean 42.13 Mbit/s)   ——— Flow 2 egress (mean 40.90 Mbit/s)
- - - - Flow 3 ingress (mean 29.55 Mbit/s)   ——— Flow 3 egress (mean 29.37 Mbit/s)

• Flow 1 (95th percentile 124.00 ms)   • Flow 2 (95th percentile 127.11 ms)   • Flow 3 (95th percentile 141.83 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-11-24 17:53:43
End at: 2019-11-24 17:54:13
Local clock offset: 0.171 ms
Remote clock offset: -7.513 ms


# Below is generated by plot.py at 2019-11-24 18:25:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.96 Mbit/s
95th percentile per-packet one-way delay: 128.508 ms
Loss rate: 1.95%
-- Flow 1:
Average throughput: 61.08 Mbit/s
95th percentile per-packet one-way delay: 123.028 ms
Loss rate: 1.07%
-- Flow 2:
Average throughput: 40.34 Mbit/s
95th percentile per-packet one-way delay: 131.511 ms
Loss rate: 3.71%
-- Flow 3:
Average throughput: 29.55 Mbit/s
95th percentile per-packet one-way delay: 156.526 ms
Loss rate: 2.74%
```
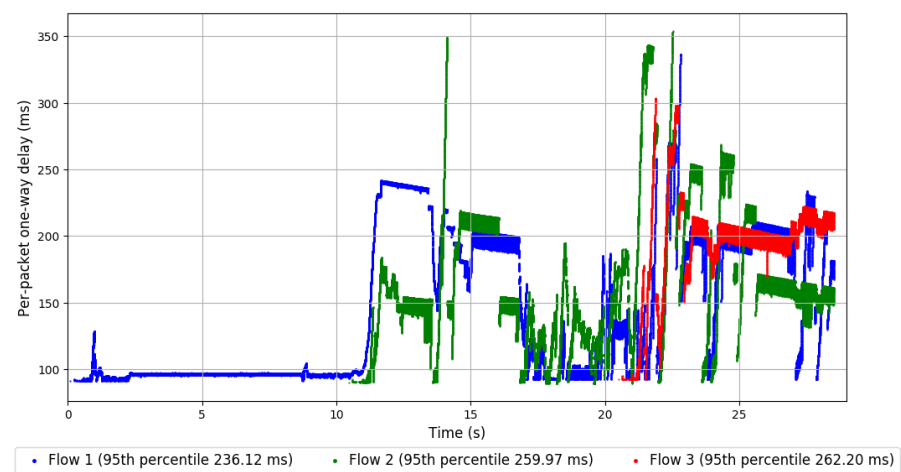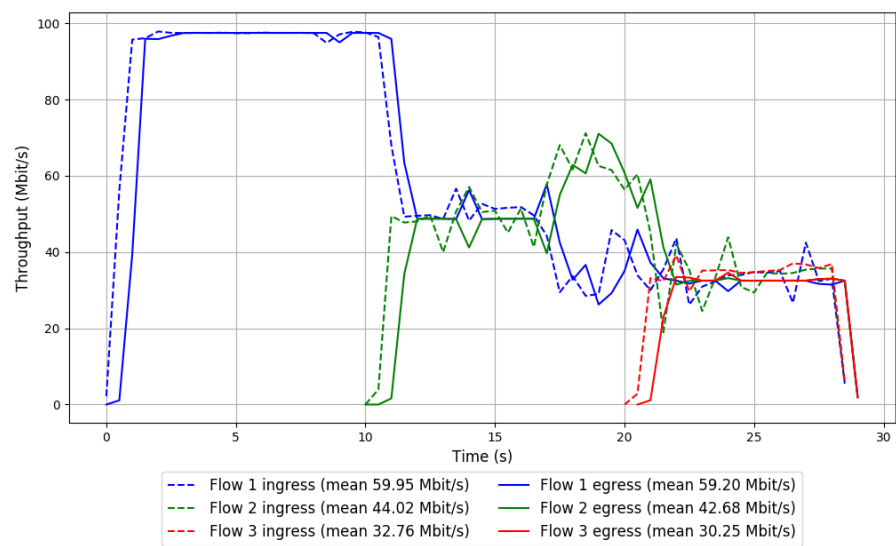
Run 5: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 61.44 Mbit/s) — — — Flow 1 egress (mean 61.08 Mbit/s)
Flow 2 ingress (mean 41.57 Mbit/s) — — — Flow 2 egress (mean 40.34 Mbit/s)
Flow 3 ingress (mean 29.86 Mbit/s) — — — Flow 3 egress (mean 29.55 Mbit/s)

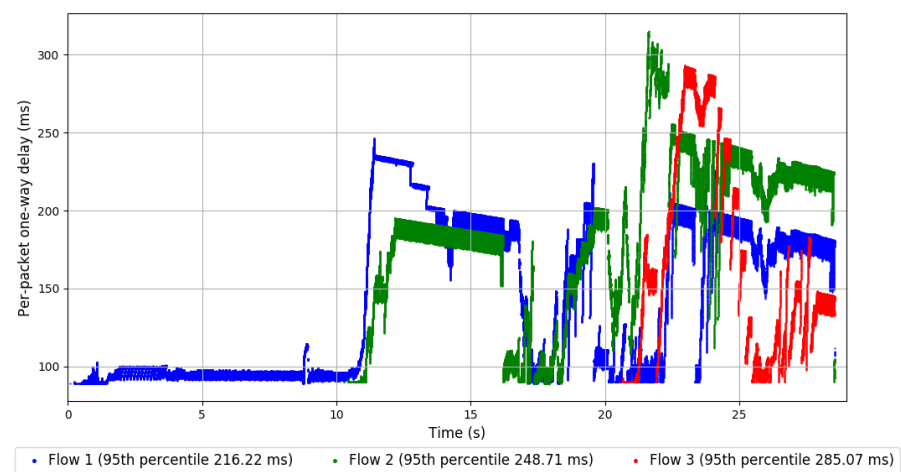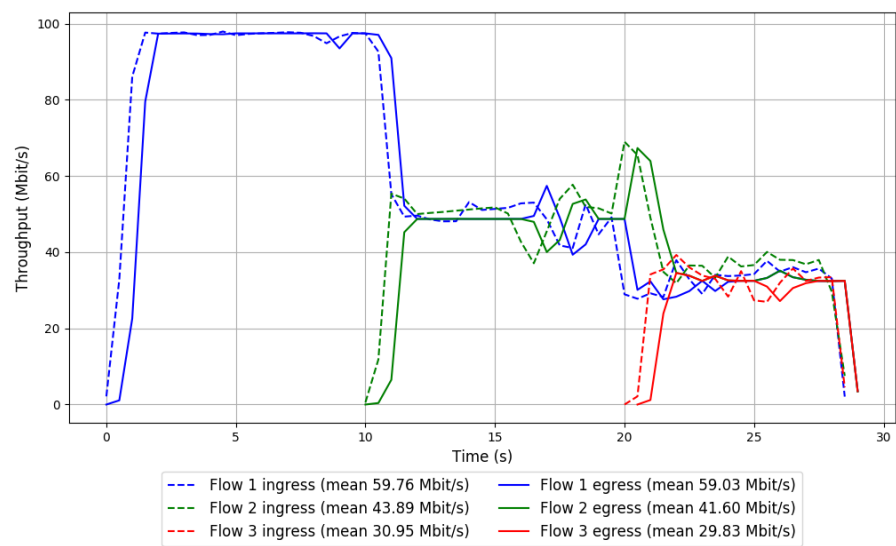Flow 1 (95th percentile 123.03 ms)   Flow 2 (95th percentile 131.51 ms)   Flow 3 (95th percentile 156.53 ms)

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-11-24 16:00:23
End at: 2019-11-24 16:00:53
Local clock offset: -1.513 ms
Remote clock offset: -8.599 ms


# Below is generated by plot.py at 2019-11-24 18:25:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.55 Mbit/s
95th percentile per-packet one-way delay: 233.820 ms
Loss rate: 3.02%
-- Flow 1:
Average throughput: 57.75 Mbit/s
95th percentile per-packet one-way delay: 219.509 ms
Loss rate: 1.99%
-- Flow 2:
Average throughput: 42.16 Mbit/s
95th percentile per-packet one-way delay: 245.216 ms
Loss rate: 3.38%
-- Flow 3:
Average throughput: 30.35 Mbit/s
95th percentile per-packet one-way delay: 242.945 ms
Loss rate: 8.36%
```

Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 58.65 Mbit/s)   Flow 1 egress (mean 57.75 Mbit/s)
Flow 2 ingress (mean 43.31 Mbit/s)   Flow 2 egress (mean 42.16 Mbit/s)
Flow 3 ingress (mean 32.59 Mbit/s)   Flow 3 egress (mean 30.35 Mbit/s)

Flow 1 (95th percentile 219.51 ms)   Flow 2 (95th percentile 245.22 ms)   Flow 3 (95th percentile 242.94 ms)
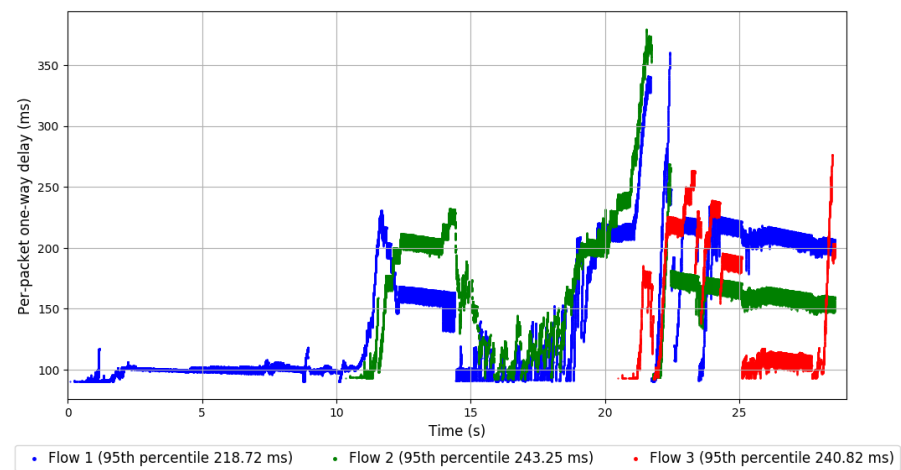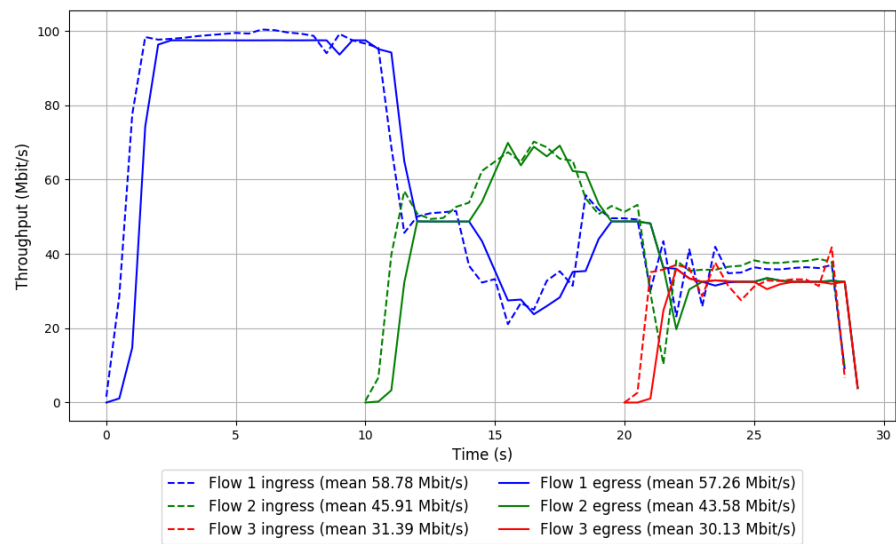
```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-11-24 16:30:39
End at: 2019-11-24 16:31:09
Local clock offset: -1.522 ms
Remote clock offset: -9.05 ms


# Below is generated by plot.py at 2019-11-24 18:25:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.87 Mbit/s
95th percentile per-packet one-way delay: 238.280 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 59.20 Mbit/s
95th percentile per-packet one-way delay: 236.117 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 42.68 Mbit/s
95th percentile per-packet one-way delay: 259.969 ms
Loss rate: 3.79%
-- Flow 3:
Average throughput: 30.25 Mbit/s
95th percentile per-packet one-way delay: 262.200 ms
Loss rate: 9.18%
```

Run 2: Report of Indigo-MusesC5 — Data Link

- - - - Flow 1 ingress (mean 59.95 Mbit/s) ——— Flow 1 egress (mean 59.20 Mbit/s)
- - - - Flow 2 ingress (mean 44.02 Mbit/s) ——— Flow 2 egress (mean 42.68 Mbit/s)
- - - - Flow 3 ingress (mean 32.76 Mbit/s) ——— Flow 3 egress (mean 30.25 Mbit/s)

- Flow 1 (95th percentile 236.12 ms)   - Flow 2 (95th percentile 259.97 ms)   - Flow 3 (95th percentile 262.20 ms)
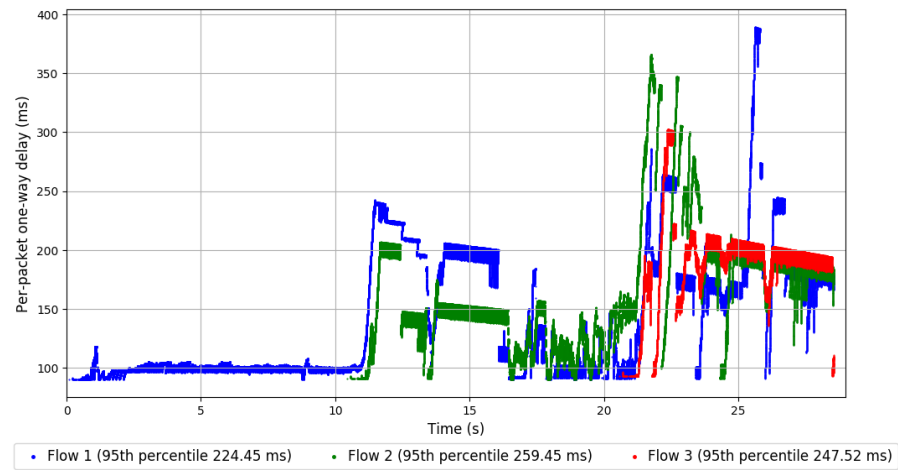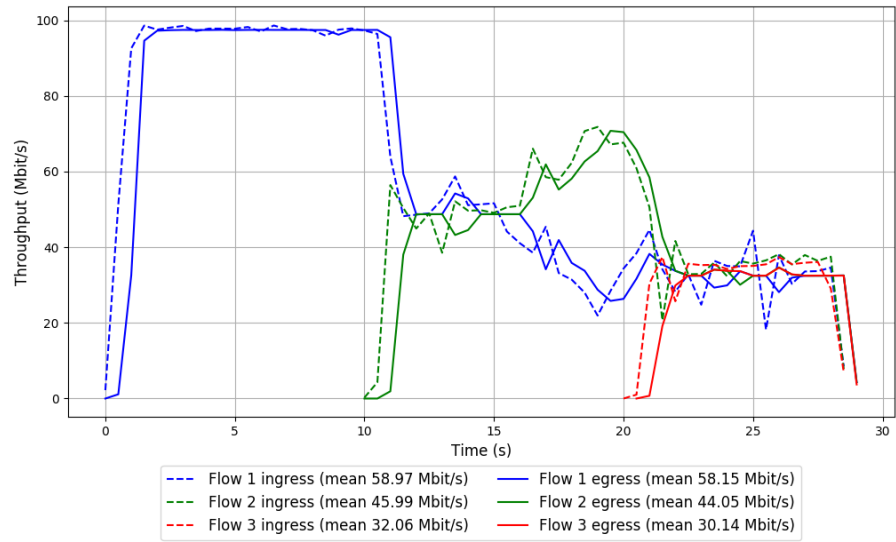
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-11-24 17:00:52
End at: 2019-11-24 17:01:22
Local clock offset: -0.127 ms
Remote clock offset: -8.043 ms


# Below is generated by plot.py at 2019-11-24 18:25:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.13 Mbit/s
95th percentile per-packet one-way delay: 236.470 ms
Loss rate: 3.21%
-- Flow 1:
Average throughput: 59.03 Mbit/s
95th percentile per-packet one-way delay: 216.217 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 41.60 Mbit/s
95th percentile per-packet one-way delay: 248.710 ms
Loss rate: 5.92%
-- Flow 3:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 285.071 ms
Loss rate: 4.83%
```

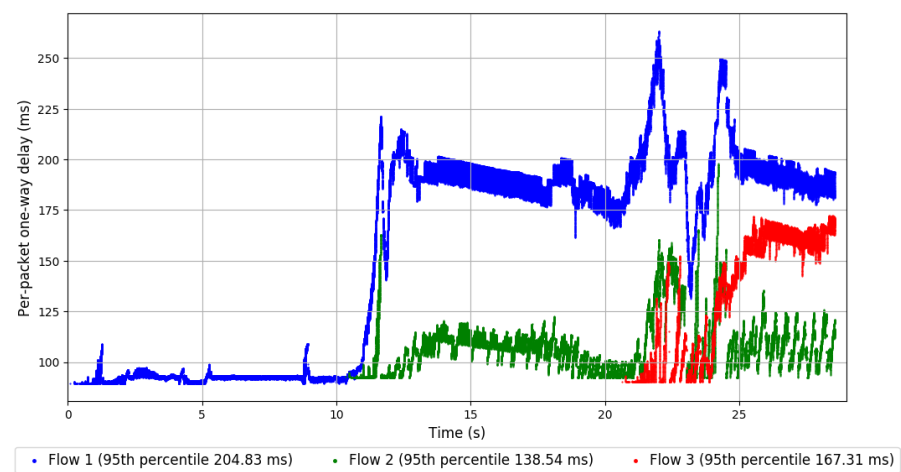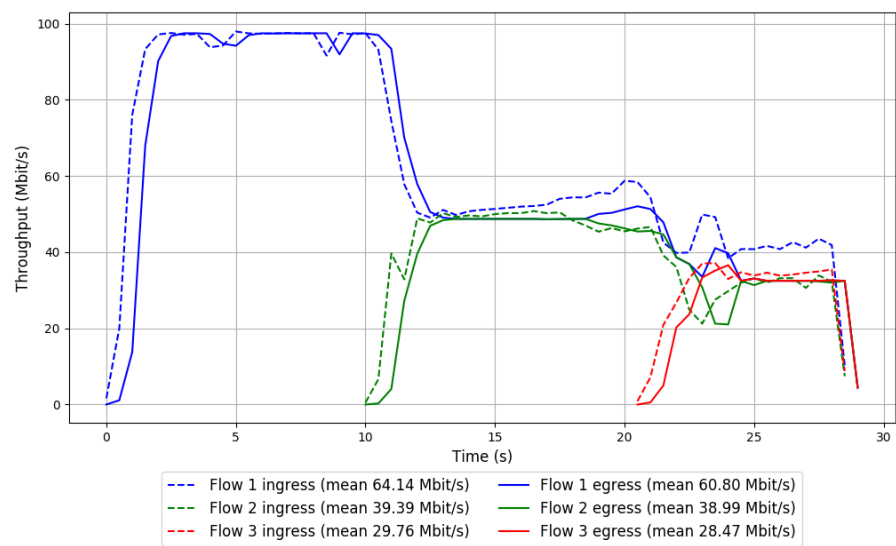Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-11-24 17:31:07
End at: 2019-11-24 17:31:37
Local clock offset: 0.804 ms
Remote clock offset: -8.028 ms


# Below is generated by plot.py at 2019-11-24 18:26:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.69 Mbit/s
95th percentile per-packet one-way delay: 225.857 ms
Loss rate: 4.11%
-- Flow 1:
Average throughput: 57.26 Mbit/s
95th percentile per-packet one-way delay: 218.718 ms
Loss rate: 3.05%
-- Flow 2:
Average throughput: 43.58 Mbit/s
95th percentile per-packet one-way delay: 243.247 ms
Loss rate: 5.80%
-- Flow 3:
Average throughput: 30.13 Mbit/s
95th percentile per-packet one-way delay: 240.824 ms
Loss rate: 5.52%
```

Run 4: Report of Indigo-MusesC5 — Data Link

- - - Flow 1 ingress (mean 58.78 Mbit/s) —— Flow 1 egress (mean 57.26 Mbit/s)
- - - Flow 2 ingress (mean 45.91 Mbit/s) —— Flow 2 egress (mean 43.58 Mbit/s)
- - - Flow 3 ingress (mean 31.39 Mbit/s) —— Flow 3 egress (mean 30.13 Mbit/s)

• Flow 1 (95th percentile 218.72 ms) • Flow 2 (95th percentile 243.25 ms) • Flow 3 (95th percentile 240.82 ms)
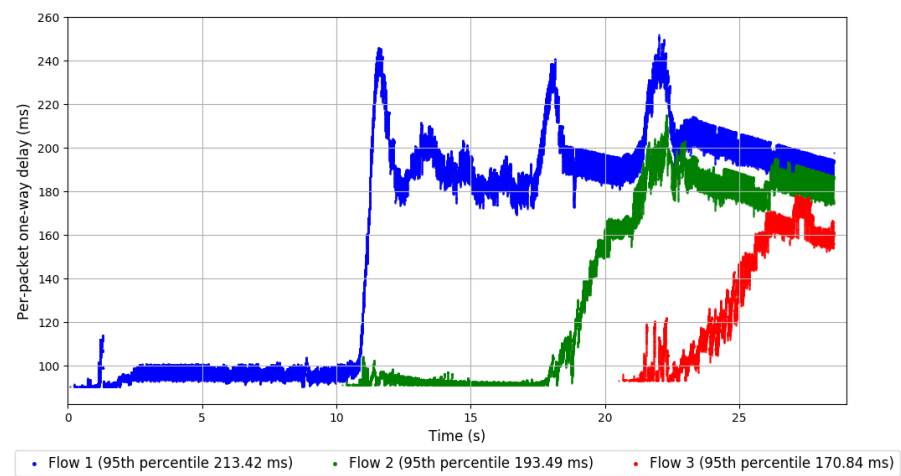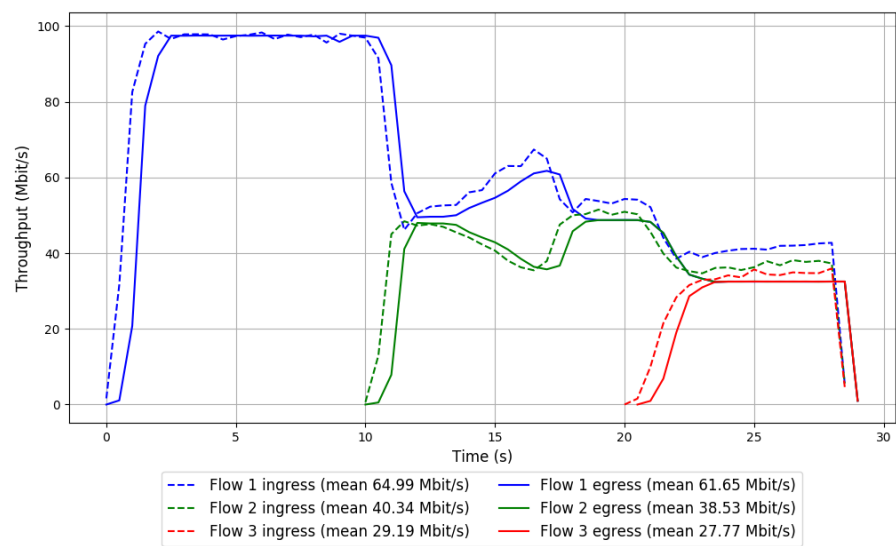
```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-11-24 18:01:22
End at: 2019-11-24 18:01:52
Local clock offset: 0.982 ms
Remote clock offset: -8.155 ms


# Below is generated by plot.py at 2019-11-24 18:26:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.66 Mbit/s
95th percentile per-packet one-way delay: 233.226 ms
Loss rate: 3.28%
-- Flow 1:
Average throughput: 58.15 Mbit/s
95th percentile per-packet one-way delay: 224.452 ms
Loss rate: 1.85%
-- Flow 2:
Average throughput: 44.05 Mbit/s
95th percentile per-packet one-way delay: 259.452 ms
Loss rate: 4.83%
-- Flow 3:
Average throughput: 30.14 Mbit/s
95th percentile per-packet one-way delay: 247.520 ms
Loss rate: 7.54%
```
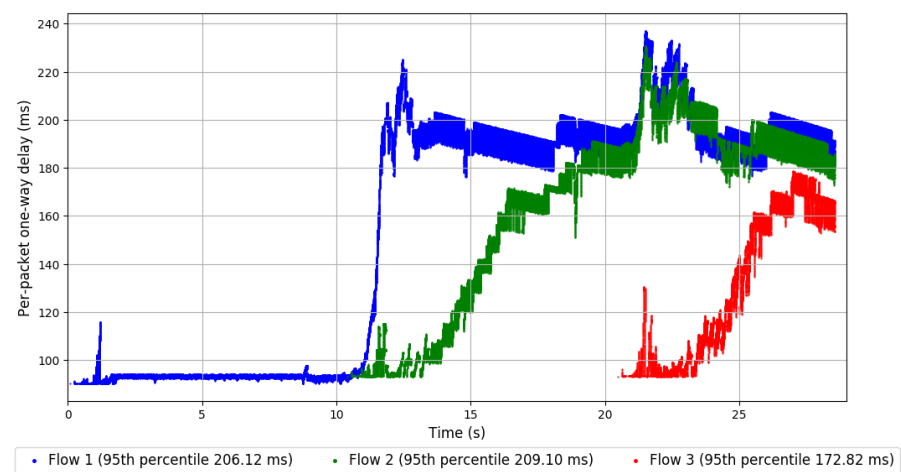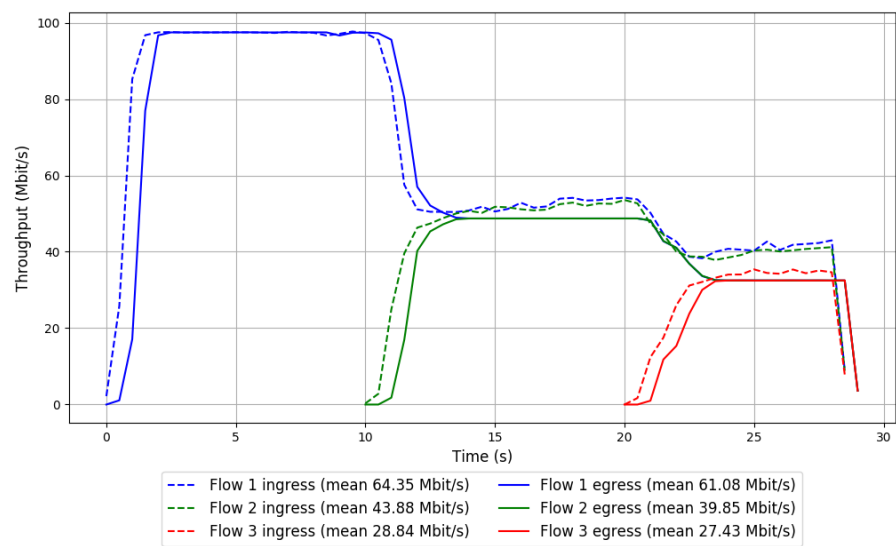
Run 5: Report of Indigo-MusesC5 — Data Link

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```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-11-24 15:54:01
End at: 2019-11-24 15:54:31
Local clock offset: -1.59 ms
Remote clock offset: -8.937 ms


# Below is generated by plot.py at 2019-11-24 18:26:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.71 Mbit/s
95th percentile per-packet one-way delay: 200.636 ms
Loss rate: 4.67%
-- Flow 1:
Average throughput: 60.80 Mbit/s
95th percentile per-packet one-way delay: 204.832 ms
Loss rate: 5.64%
-- Flow 2:
Average throughput: 38.99 Mbit/s
95th percentile per-packet one-way delay: 138.542 ms
Loss rate: 1.78%
-- Flow 3:
Average throughput: 28.47 Mbit/s
95th percentile per-packet one-way delay: 167.310 ms
Loss rate: 5.98%
```
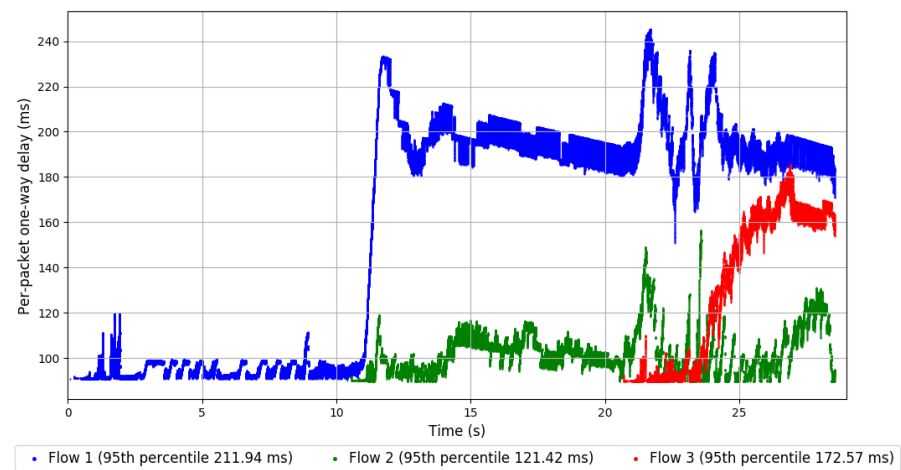
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-11-24 16:24:17
End at: 2019-11-24 16:24:47
Local clock offset: -0.783 ms
Remote clock offset: -8.654 ms


# Below is generated by plot.py at 2019-11-24 18:26:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.25 Mbit/s
95th percentile per-packet one-way delay: 207.639 ms
Loss rate: 5.57%
-- Flow 1:
Average throughput: 61.65 Mbit/s
95th percentile per-packet one-way delay: 213.424 ms
Loss rate: 5.58%
-- Flow 2:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 193.488 ms
Loss rate: 5.23%
-- Flow 3:
Average throughput: 27.77 Mbit/s
95th percentile per-packet one-way delay: 170.845 ms
Loss rate: 6.56%
```

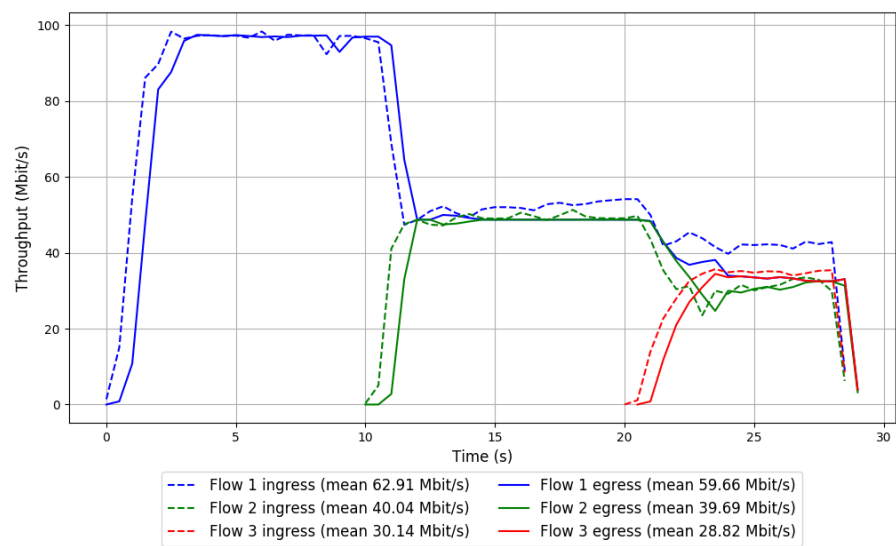Run 2: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 64.99 Mbit/s) ——— Flow 1 egress (mean 61.65 Mbit/s)
- - - Flow 2 ingress (mean 40.34 Mbit/s) ——— Flow 2 egress (mean 38.53 Mbit/s)
- - - Flow 3 ingress (mean 29.19 Mbit/s) ——— Flow 3 egress (mean 27.77 Mbit/s)

- Flow 1 (95th percentile 213.42 ms)   - Flow 2 (95th percentile 193.49 ms)   - Flow 3 (95th percentile 170.84 ms)
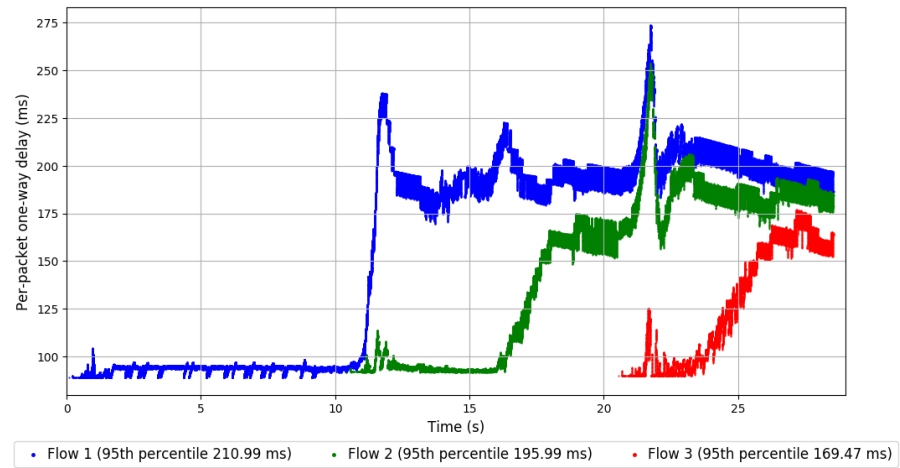
```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-11-24 16:54:30
End at: 2019-11-24 16:55:00
Local clock offset: 0.425 ms
Remote clock offset: -9.174 ms


# Below is generated by plot.py at 2019-11-24 18:26:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.25 Mbit/s
95th percentile per-packet one-way delay: 206.366 ms
Loss rate: 6.81%
-- Flow 1:
Average throughput: 61.08 Mbit/s
95th percentile per-packet one-way delay: 206.125 ms
Loss rate: 5.51%
-- Flow 2:
Average throughput: 39.85 Mbit/s
95th percentile per-packet one-way delay: 209.097 ms
Loss rate: 9.88%
-- Flow 3:
Average throughput: 27.43 Mbit/s
95th percentile per-packet one-way delay: 172.823 ms
Loss rate: 6.51%
```

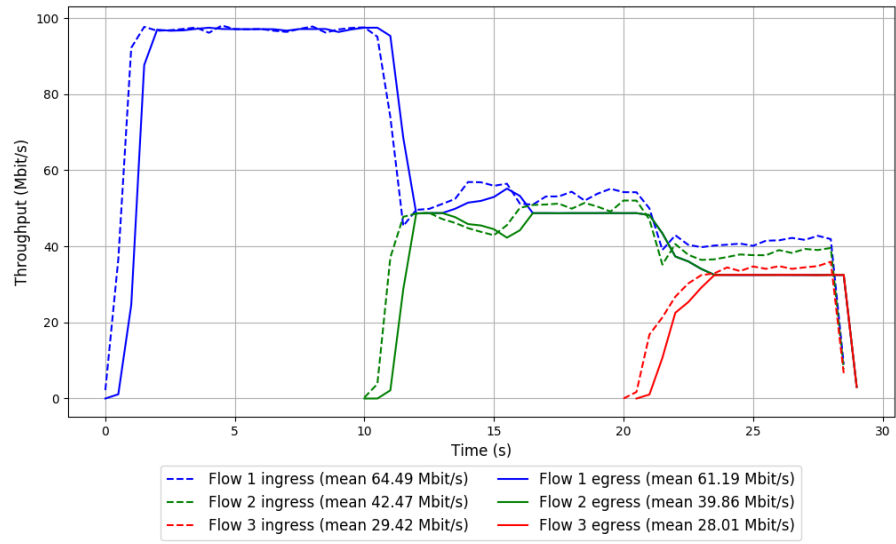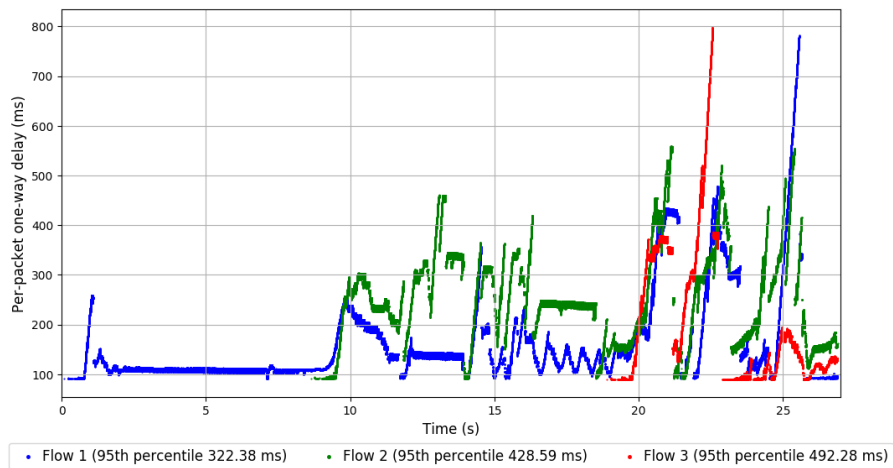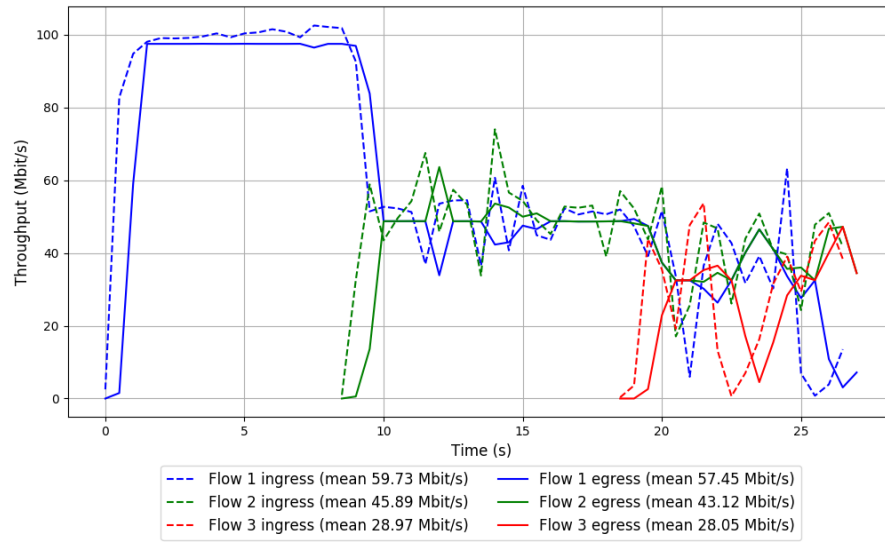Run 3: Report of Indigo-MusesD — Data Link

- - - Flow 1 ingress (mean 64.35 Mbit/s) —— Flow 1 egress (mean 61.08 Mbit/s)
- - - Flow 2 ingress (mean 43.88 Mbit/s) —— Flow 2 egress (mean 39.85 Mbit/s)
- - - Flow 3 ingress (mean 28.84 Mbit/s) —— Flow 3 egress (mean 27.43 Mbit/s)

• Flow 1 (95th percentile 206.12 ms)　　• Flow 2 (95th percentile 209.10 ms)　　• Flow 3 (95th percentile 172.82 ms)
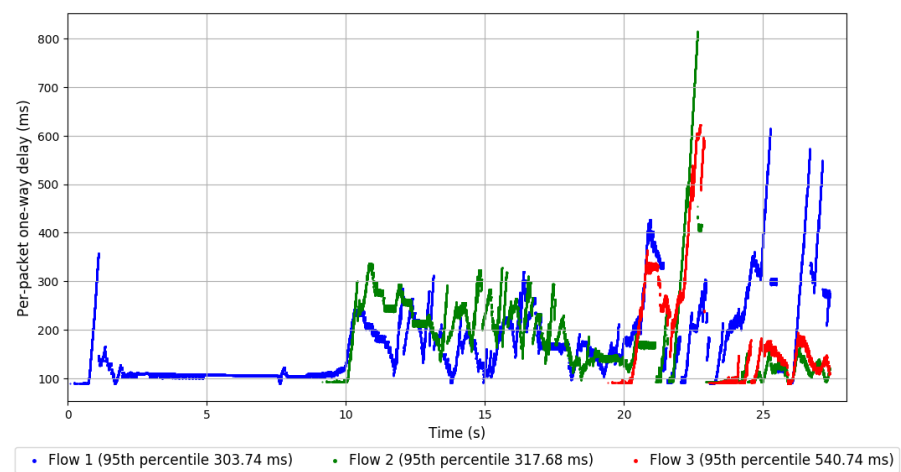
90

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-11-24 17:24:44
End at: 2019-11-24 17:25:14
Local clock offset: -0.003 ms
Remote clock offset: -7.228 ms


# Below is generated by plot.py at 2019-11-24 18:26:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.06 Mbit/s
95th percentile per-packet one-way delay: 205.426 ms
Loss rate: 4.60%
-- Flow 1:
Average throughput: 59.66 Mbit/s
95th percentile per-packet one-way delay: 211.943 ms
Loss rate: 5.61%
-- Flow 2:
Average throughput: 39.69 Mbit/s
95th percentile per-packet one-way delay: 121.418 ms
Loss rate: 1.61%
-- Flow 3:
Average throughput: 28.82 Mbit/s
95th percentile per-packet one-way delay: 172.572 ms
Loss rate: 6.04%
```

Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 62.91 Mbit/s) — Flow 1 egress (mean 59.66 Mbit/s)
Flow 2 ingress (mean 40.04 Mbit/s) — Flow 2 egress (mean 39.69 Mbit/s)
Flow 3 ingress (mean 30.14 Mbit/s) — Flow 3 egress (mean 28.82 Mbit/s)

Flow 1 (95th percentile 211.94 ms)   Flow 2 (95th percentile 121.42 ms)   Flow 3 (95th percentile 172.57 ms)

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-11-24 17:54:59
End at: 2019-11-24 17:55:29
Local clock offset: 0.106 ms
Remote clock offset: -7.739 ms


# Below is generated by plot.py at 2019-11-24 18:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 94.47 Mbit/s
95th percentile per-packet one-way delay: 208.384 ms
Loss rate: 6.00%
-- Flow 1:
Average throughput: 61.19 Mbit/s
95th percentile per-packet one-way delay: 210.990 ms
Loss rate: 5.58%
-- Flow 2:
Average throughput: 39.86 Mbit/s
95th percentile per-packet one-way delay: 195.985 ms
Loss rate: 6.88%
-- Flow 3:
Average throughput: 28.01 Mbit/s
95th percentile per-packet one-way delay: 169.465 ms
Loss rate: 6.39%
```
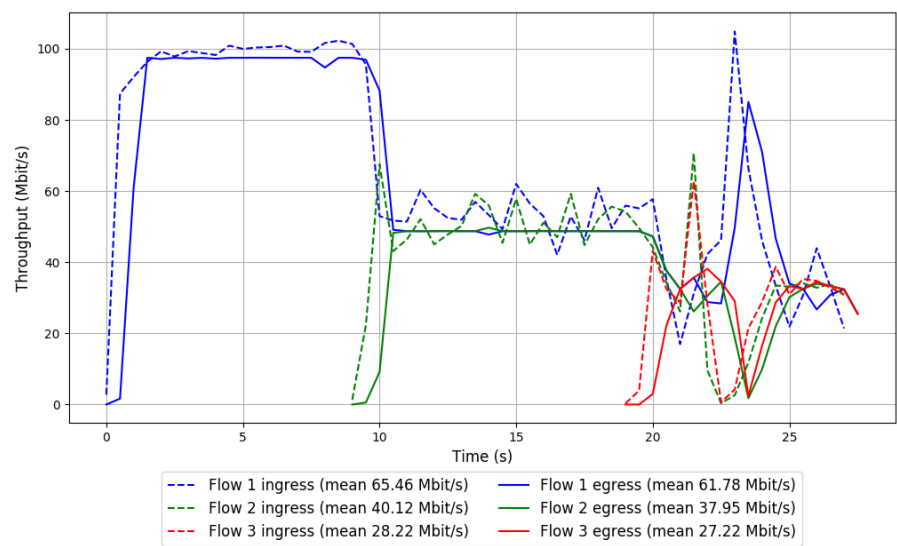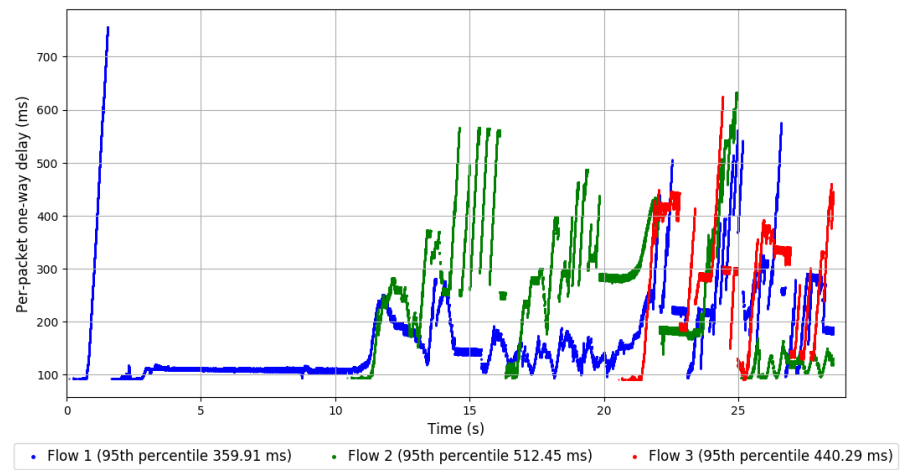
Run 5: Report of Indigo-MusesD — Data Link

- - - - Flow 1 ingress (mean 64.49 Mbit/s)   —— Flow 1 egress (mean 61.19 Mbit/s)
- - - - Flow 2 ingress (mean 42.47 Mbit/s)   —— Flow 2 egress (mean 39.86 Mbit/s)
- - - - Flow 3 ingress (mean 29.42 Mbit/s)   —— Flow 3 egress (mean 28.01 Mbit/s)

• Flow 1 (95th percentile 210.99 ms)   • Flow 2 (95th percentile 195.99 ms)   • Flow 3 (95th percentile 169.47 ms)
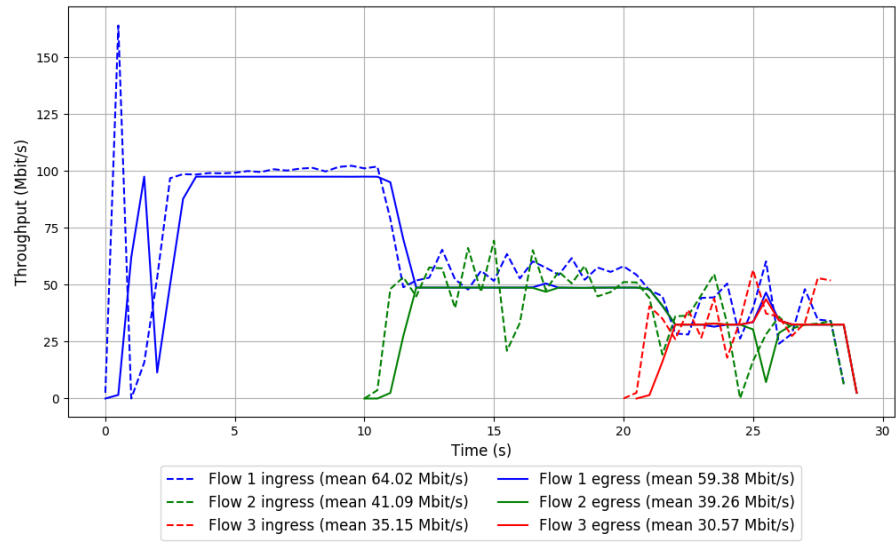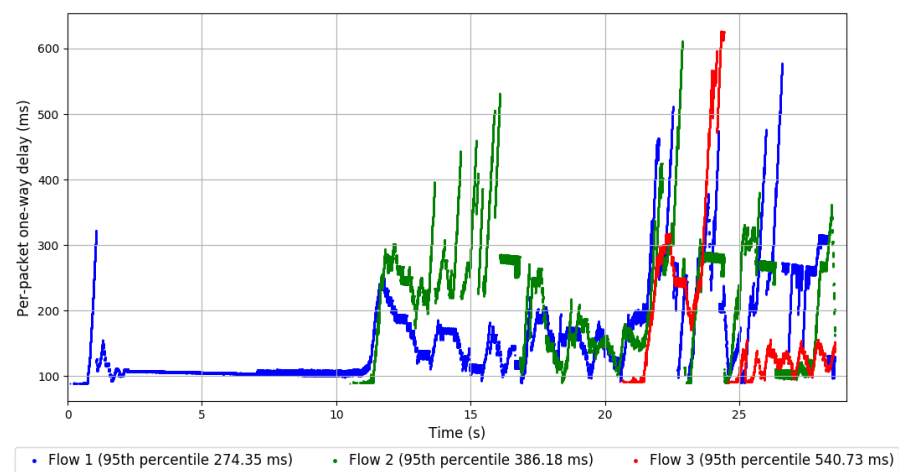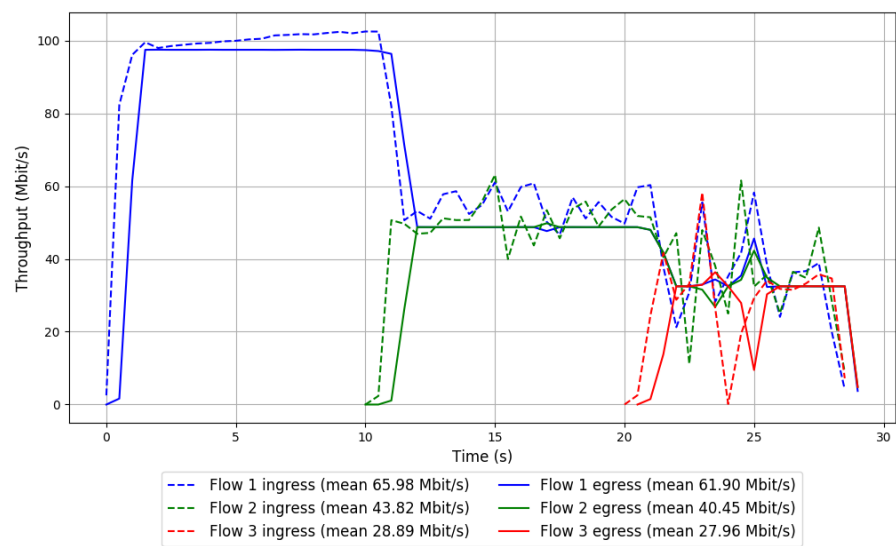
```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-11-24 16:10:18
End at: 2019-11-24 16:10:48
Local clock offset: -1.528 ms
Remote clock offset: -7.371 ms


# Below is generated by plot.py at 2019-11-24 18:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.18 Mbit/s
95th percentile per-packet one-way delay: 389.920 ms
Loss rate: 5.14%
-- Flow 1:
Average throughput: 57.45 Mbit/s
95th percentile per-packet one-way delay: 322.377 ms
Loss rate: 4.34%
-- Flow 2:
Average throughput: 43.12 Mbit/s
95th percentile per-packet one-way delay: 428.590 ms
Loss rate: 6.74%
-- Flow 3:
Average throughput: 28.05 Mbit/s
95th percentile per-packet one-way delay: 492.278 ms
Loss rate: 4.86%
```

Run 1: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 59.73 Mbit/s) — Flow 1 egress (mean 57.45 Mbit/s)
Flow 2 ingress (mean 45.89 Mbit/s) — Flow 2 egress (mean 43.12 Mbit/s)
Flow 3 ingress (mean 28.97 Mbit/s) — Flow 3 egress (mean 28.05 Mbit/s)

Flow 1 (95th percentile 322.38 ms)   Flow 2 (95th percentile 428.59 ms)   Flow 3 (95th percentile 492.28 ms)

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-11-24 16:40:34
End at: 2019-11-24 16:41:04
Local clock offset: -1.362 ms
Remote clock offset: -9.357 ms


# Below is generated by plot.py at 2019-11-24 18:27:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.09 Mbit/s
95th percentile per-packet one-way delay: 326.242 ms
Loss rate: 5.71%
-- Flow 1:
Average throughput: 61.78 Mbit/s
95th percentile per-packet one-way delay: 303.744 ms
Loss rate: 5.62%
-- Flow 2:
Average throughput: 37.95 Mbit/s
95th percentile per-packet one-way delay: 317.678 ms
Loss rate: 6.10%
-- Flow 3:
Average throughput: 27.22 Mbit/s
95th percentile per-packet one-way delay: 540.743 ms
Loss rate: 5.21%
```
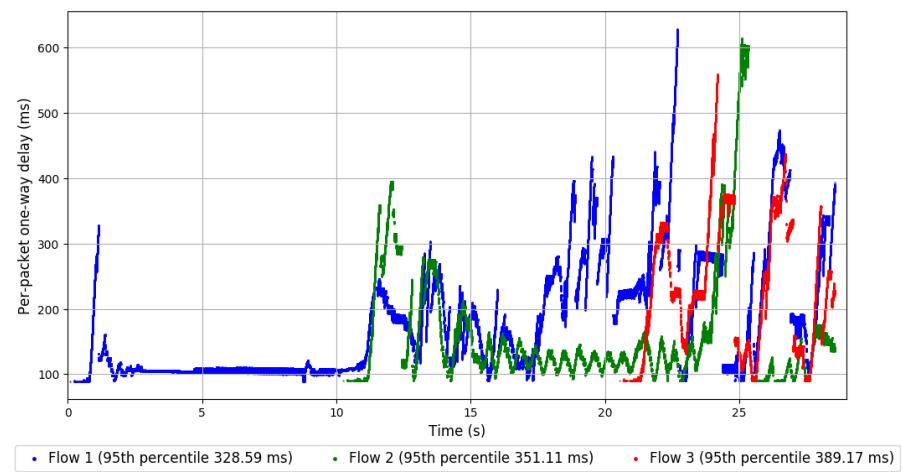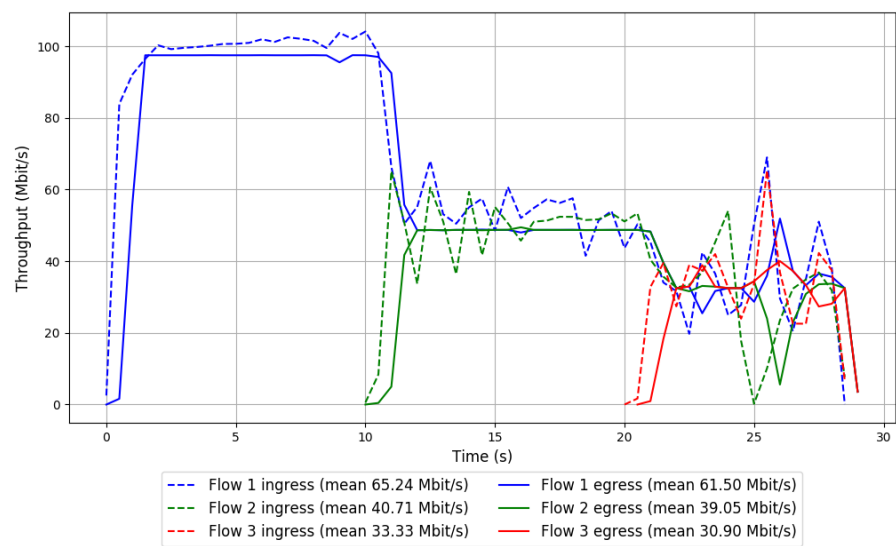
Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 65.46 Mbit/s)   Flow 1 egress (mean 61.78 Mbit/s)
Flow 2 ingress (mean 40.12 Mbit/s)   Flow 2 egress (mean 37.95 Mbit/s)
Flow 3 ingress (mean 28.22 Mbit/s)   Flow 3 egress (mean 27.22 Mbit/s)

Flow 1 (95th percentile 303.74 ms)   Flow 2 (95th percentile 317.68 ms)   Flow 3 (95th percentile 540.74 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-11-24 17:10:47
End at: 2019-11-24 17:11:17
Local clock offset: 0.794 ms
Remote clock offset: -8.124 ms


# Below is generated by plot.py at 2019-11-24 18:27:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.95 Mbit/s
95th percentile per-packet one-way delay: 442.653 ms
Loss rate: 7.55%
-- Flow 1:
Average throughput: 59.38 Mbit/s
95th percentile per-packet one-way delay: 359.910 ms
Loss rate: 7.70%
-- Flow 2:
Average throughput: 39.26 Mbit/s
95th percentile per-packet one-way delay: 512.446 ms
Loss rate: 5.22%
-- Flow 3:
Average throughput: 30.57 Mbit/s
95th percentile per-packet one-way delay: 440.294 ms
Loss rate: 12.78%
```

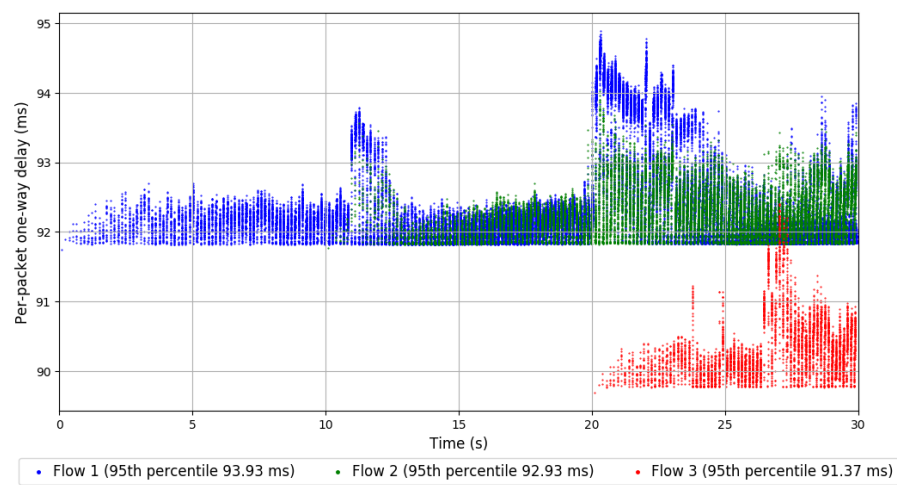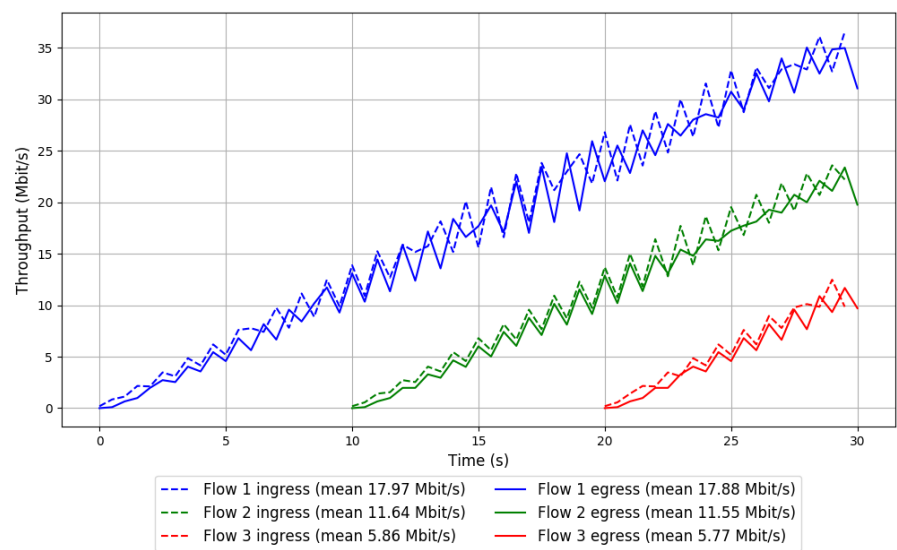# Run 3: Report of Indigo-MusesT — Data Link

- Flow 1 ingress (mean 64.02 Mbit/s) — Flow 1 egress (mean 59.38 Mbit/s)
- Flow 2 ingress (mean 41.09 Mbit/s) — Flow 2 egress (mean 39.26 Mbit/s)
- Flow 3 ingress (mean 35.15 Mbit/s) — Flow 3 egress (mean 30.57 Mbit/s)

- Flow 1 (95th percentile 359.91 ms)   • Flow 2 (95th percentile 512.45 ms)   • Flow 3 (95th percentile 440.29 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-11-24 17:41:01
End at: 2019-11-24 17:41:31
Local clock offset: 0.083 ms
Remote clock offset: -7.613 ms


# Below is generated by plot.py at 2019-11-24 18:27:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.44 Mbit/s
95th percentile per-packet one-way delay: 327.006 ms
Loss rate: 6.99%
-- Flow 1:
Average throughput: 61.90 Mbit/s
95th percentile per-packet one-way delay: 274.346 ms
Loss rate: 6.67%
-- Flow 2:
Average throughput: 40.45 Mbit/s
95th percentile per-packet one-way delay: 386.176 ms
Loss rate: 8.38%
-- Flow 3:
Average throughput: 27.96 Mbit/s
95th percentile per-packet one-way delay: 540.732 ms
Loss rate: 4.89%
```

Run 4: Report of Indigo-MusesT — Data Link
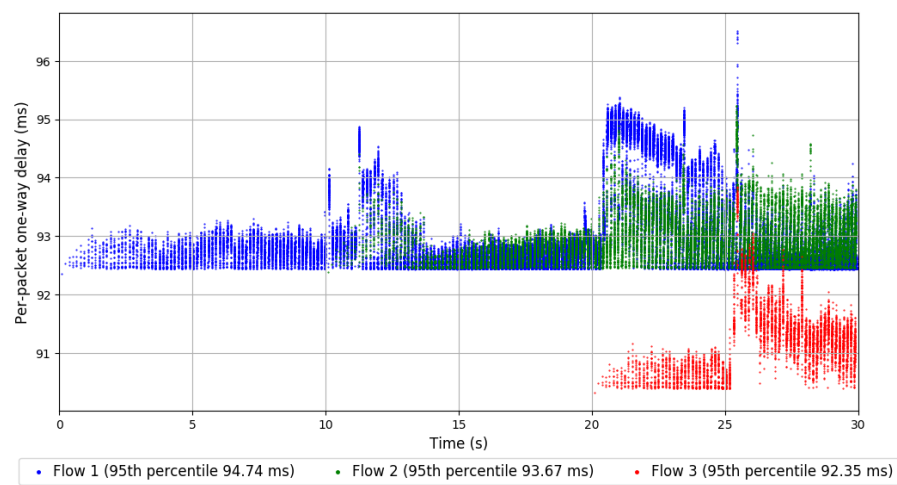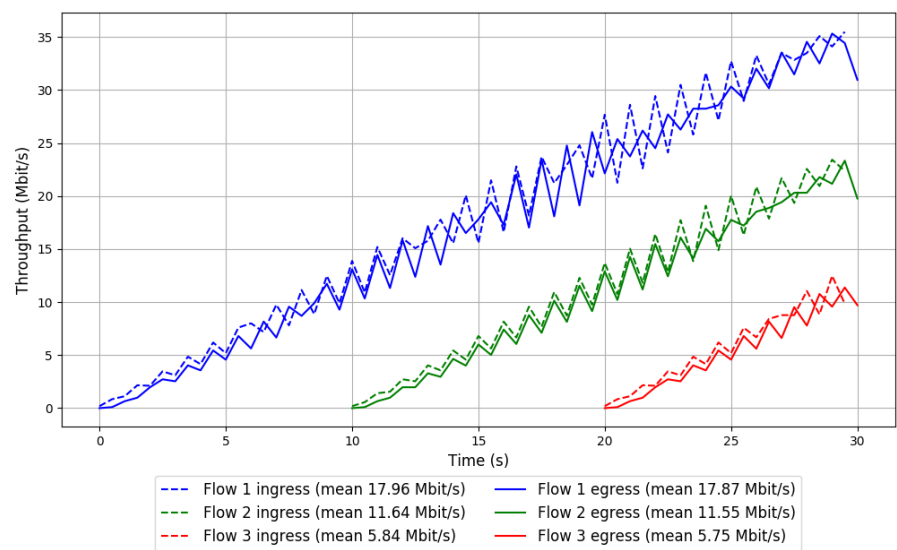

Flow 1 ingress (mean 65.98 Mbit/s) --- Flow 1 egress (mean 61.90 Mbit/s)
Flow 2 ingress (mean 43.82 Mbit/s) --- Flow 2 egress (mean 40.45 Mbit/s)
Flow 3 ingress (mean 28.89 Mbit/s) --- Flow 3 egress (mean 27.96 Mbit/s)

Flow 1 (95th percentile 274.35 ms)   Flow 2 (95th percentile 386.18 ms)   Flow 3 (95th percentile 540.73 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-11-24 18:11:16
End at: 2019-11-24 18:11:46
Local clock offset: 0.075 ms
Remote clock offset: -8.22 ms


# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 357.201 ms
Loss rate: 6.08%
-- Flow 1:
Average throughput: 61.50 Mbit/s
95th percentile per-packet one-way delay: 328.587 ms
Loss rate: 6.18%
-- Flow 2:
Average throughput: 39.05 Mbit/s
95th percentile per-packet one-way delay: 351.114 ms
Loss rate: 4.80%
-- Flow 3:
Average throughput: 30.90 Mbit/s
95th percentile per-packet one-way delay: 389.169 ms
Loss rate: 8.88%
```
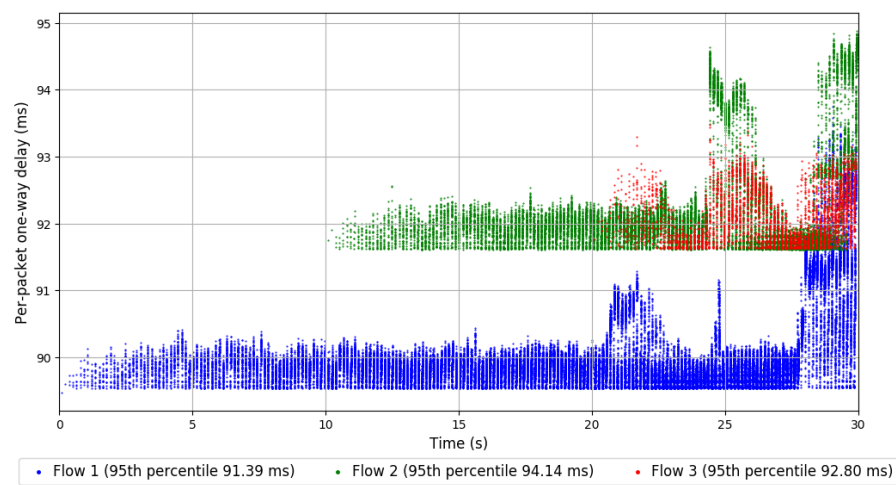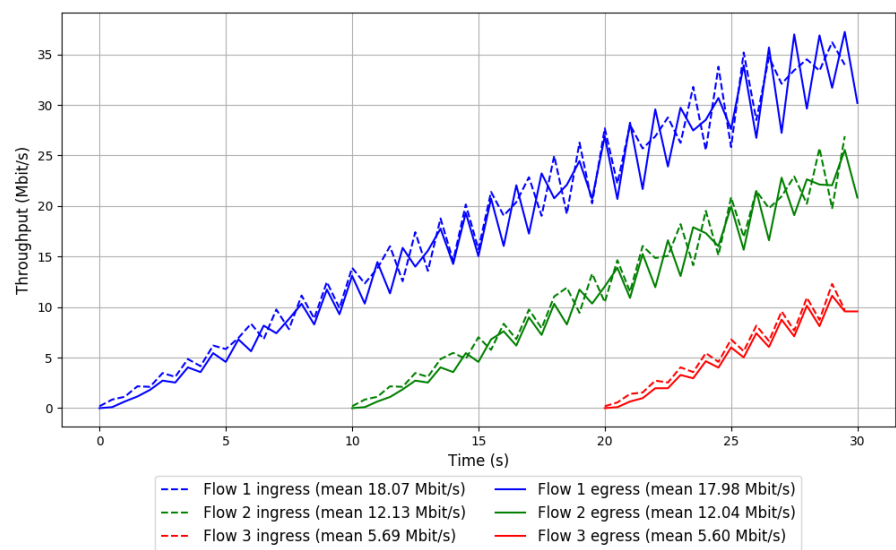
Run 5: Report of Indigo-MusesT — Data Link

- - - Flow 1 ingress (mean 65.24 Mbit/s)   —— Flow 1 egress (mean 61.50 Mbit/s)
- - - Flow 2 ingress (mean 40.71 Mbit/s)   —— Flow 2 egress (mean 39.05 Mbit/s)
- - - Flow 3 ingress (mean 33.33 Mbit/s)   —— Flow 3 egress (mean 30.90 Mbit/s)

- Flow 1 (95th percentile 328.59 ms)   • Flow 2 (95th percentile 351.11 ms)   • Flow 3 (95th percentile 389.17 ms)
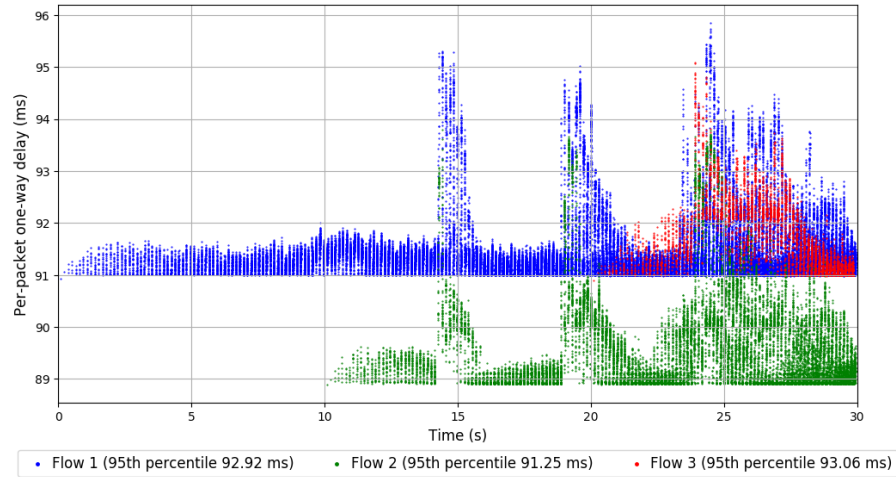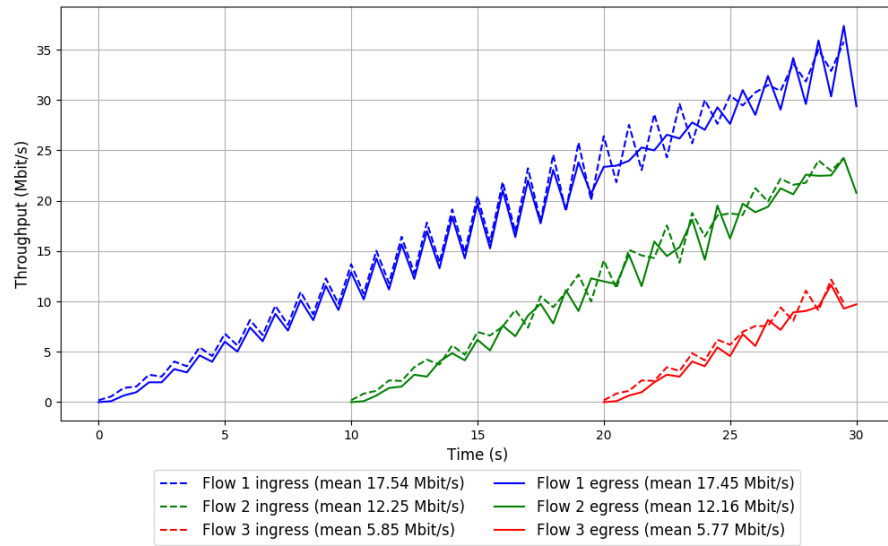
```
Run 1: Statistics of LEDBAT

Start at: 2019-11-24 16:07:53
End at: 2019-11-24 16:08:23
Local clock offset: -0.789 ms
Remote clock offset: -7.588 ms


# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.44 Mbit/s
95th percentile per-packet one-way delay: 93.714 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 17.88 Mbit/s
95th percentile per-packet one-way delay: 93.934 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 92.930 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 91.373 ms
Loss rate: 2.87%
```
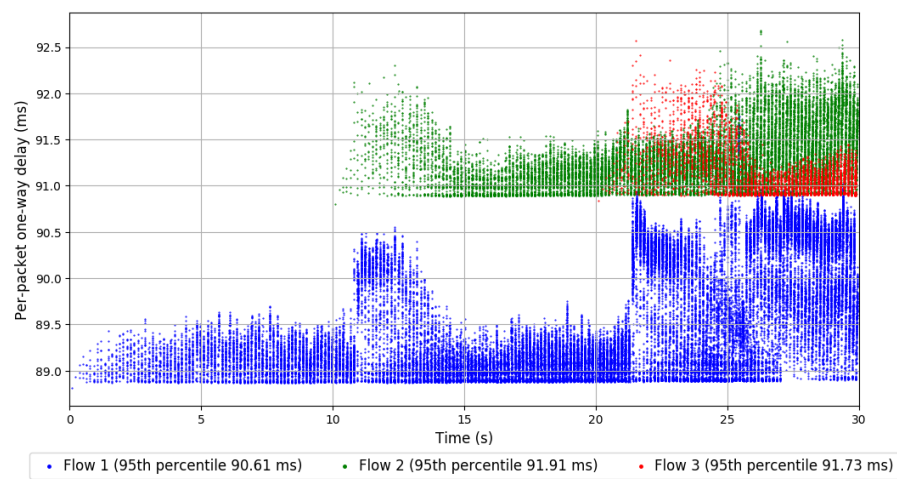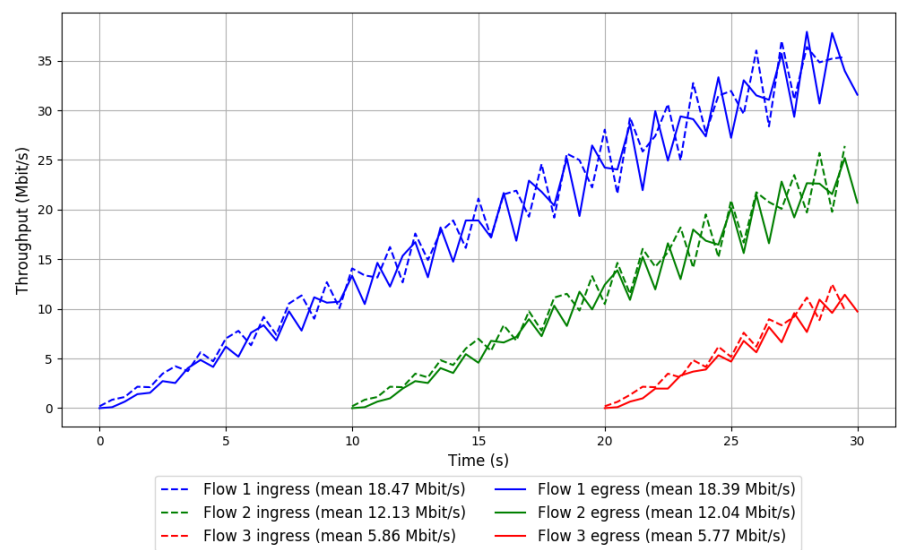
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-11-24 16:38:09
End at: 2019-11-24 16:38:39
Local clock offset: -0.769 ms
Remote clock offset: -9.362 ms

# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.43 Mbit/s
95th percentile per-packet one-way delay: 94.554 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 17.87 Mbit/s
95th percentile per-packet one-way delay: 94.742 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 11.55 Mbit/s
95th percentile per-packet one-way delay: 93.671 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 92.350 ms
Loss rate: 2.88%
```
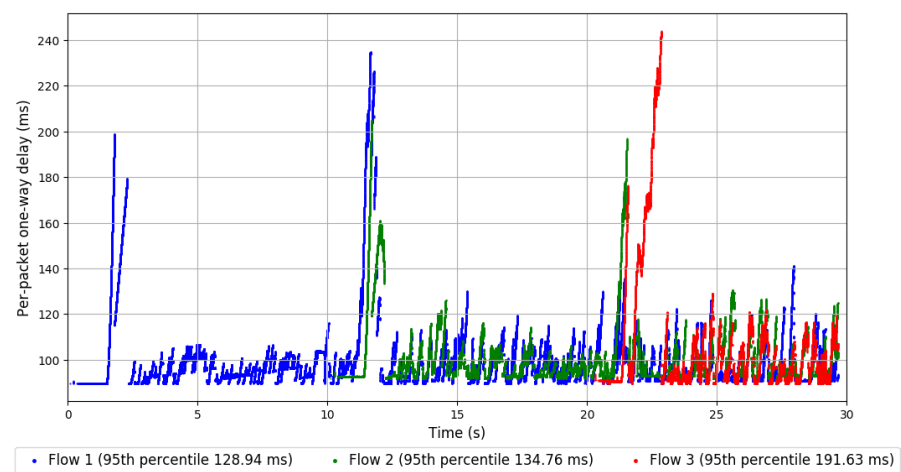
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-11-24 17:08:22
End at: 2019-11-24 17:08:52
Local clock offset: 0.736 ms
Remote clock offset: -7.6 ms


# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.81 Mbit/s
95th percentile per-packet one-way delay: 92.806 ms
Loss rate: 1.20%
-- Flow 1:
Average throughput: 17.98 Mbit/s
95th percentile per-packet one-way delay: 91.385 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 94.145 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 5.60 Mbit/s
95th percentile per-packet one-way delay: 92.801 ms
Loss rate: 2.91%
```
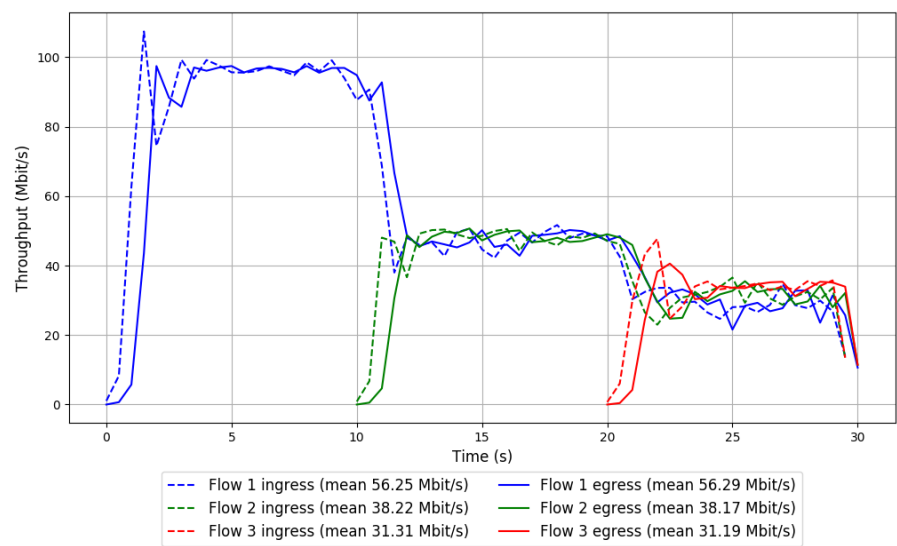
Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-11-24 17:38:37
End at: 2019-11-24 17:39:07
Local clock offset: 0.136 ms
Remote clock offset: -7.573 ms


# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.42 Mbit/s
95th percentile per-packet one-way delay: 92.727 ms
Loss rate: 1.22%
-- Flow 1:
Average throughput: 17.45 Mbit/s
95th percentile per-packet one-way delay: 92.924 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 12.16 Mbit/s
95th percentile per-packet one-way delay: 91.253 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 93.062 ms
Loss rate: 2.88%
```

Run 4: Report of LEDBAT — Data Link

```
Run 5: Statistics of LEDBAT

Start at: 2019-11-24 18:08:52
End at: 2019-11-24 18:09:22
Local clock offset: 0.288 ms
Remote clock offset: -8.011 ms


# Below is generated by plot.py at 2019-11-24 18:27:58
# Datalink statistics
-- Total of 3 flows:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 91.618 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 18.39 Mbit/s
95th percentile per-packet one-way delay: 90.605 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 12.04 Mbit/s
95th percentile per-packet one-way delay: 91.908 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 5.77 Mbit/s
95th percentile per-packet one-way delay: 91.733 ms
Loss rate: 2.89%
```
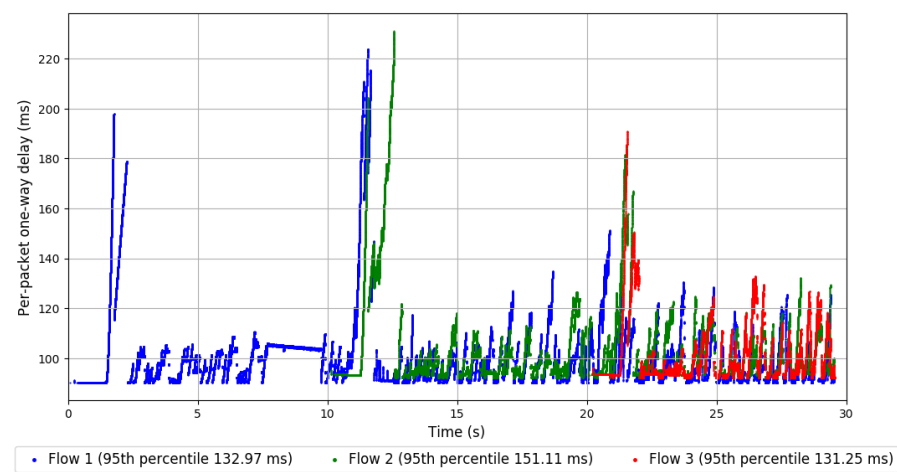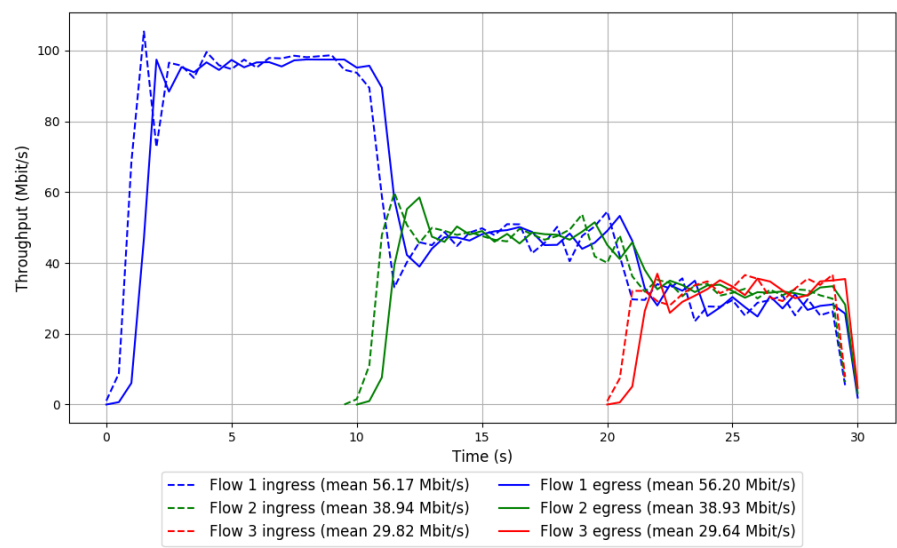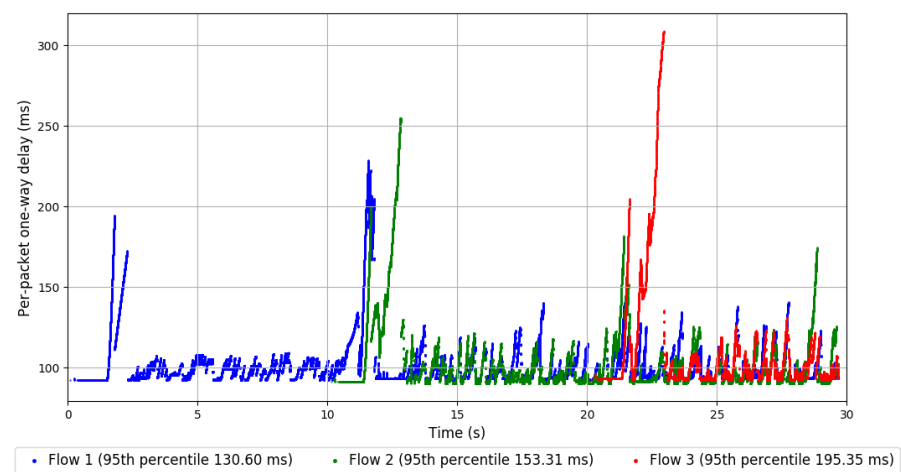
Run 5: Report of LEDBAT — Data Link

Flow 1 ingress (mean 18.47 Mbit/s)   Flow 1 egress (mean 18.39 Mbit/s)
Flow 2 ingress (mean 12.13 Mbit/s)   Flow 2 egress (mean 12.04 Mbit/s)
Flow 3 ingress (mean 5.86 Mbit/s)   Flow 3 egress (mean 5.77 Mbit/s)

Flow 1 (95th percentile 90.61 ms)   Flow 2 (95th percentile 91.91 ms)   Flow 3 (95th percentile 91.73 ms)
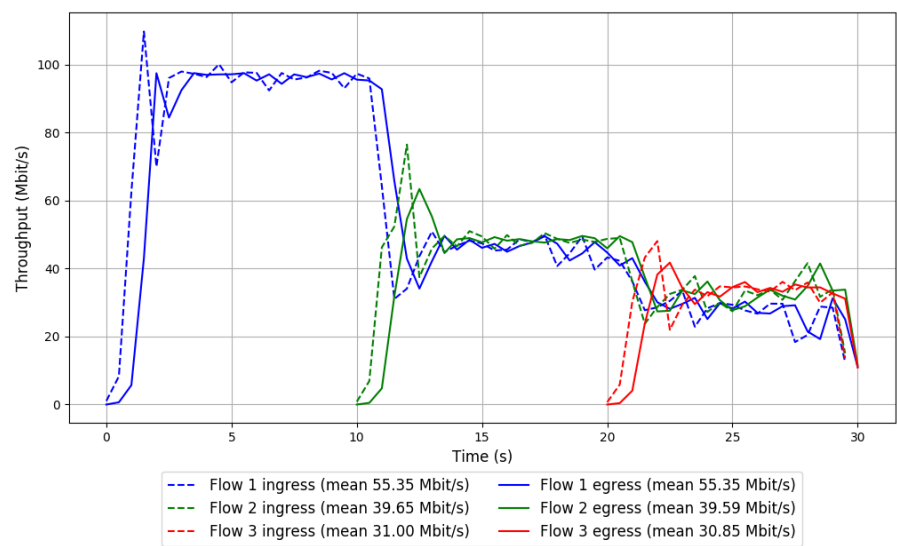
```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 15:50:14
End at: 2019-11-24 15:50:44
Local clock offset: -0.777 ms
Remote clock offset: -8.645 ms


# Below is generated by plot.py at 2019-11-24 18:28:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.54 Mbit/s
95th percentile per-packet one-way delay: 141.562 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 56.29 Mbit/s
95th percentile per-packet one-way delay: 128.942 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 38.17 Mbit/s
95th percentile per-packet one-way delay: 134.761 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 31.19 Mbit/s
95th percentile per-packet one-way delay: 191.628 ms
Loss rate: 1.87%
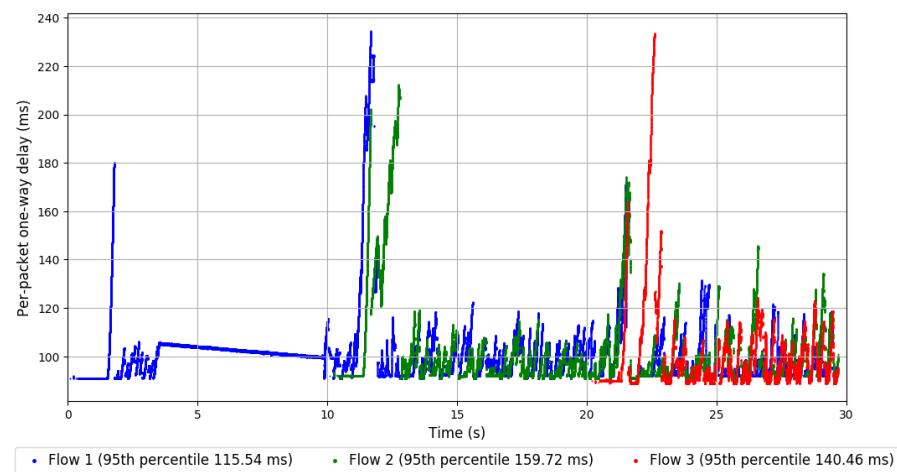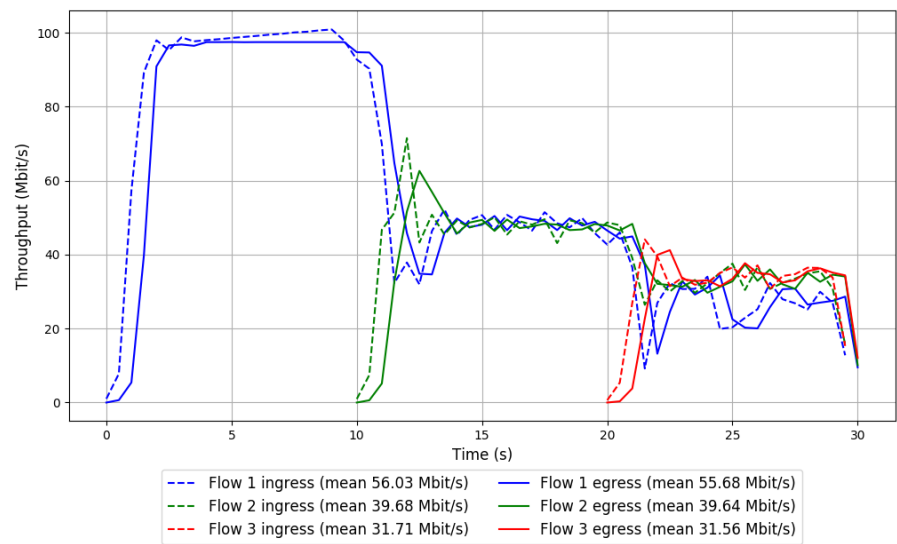```

Run 1: Report of Muses_DecisionTree — Data Link



- - - Flow 1 ingress (mean 56.25 Mbit/s) —— Flow 1 egress (mean 56.29 Mbit/s)
- - - Flow 2 ingress (mean 38.22 Mbit/s) —— Flow 2 egress (mean 38.17 Mbit/s)
- - - Flow 3 ingress (mean 31.31 Mbit/s) —— Flow 3 egress (mean 31.19 Mbit/s)



- Flow 1 (95th percentile 128.94 ms)   • Flow 2 (95th percentile 134.76 ms)   • Flow 3 (95th percentile 191.63 ms)

```
Run 2: Statistics of Muses_DecisionTree

Start at: 2019-11-24 16:20:30
End at: 2019-11-24 16:21:00
Local clock offset: -0.766 ms
Remote clock offset: -8.164 ms

Below is generated by plot.py at 2019-11-24 18:28:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.52 Mbit/s
95th percentile per-packet one-way delay: 137.978 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 56.20 Mbit/s
95th percentile per-packet one-way delay: 132.968 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 38.93 Mbit/s
95th percentile per-packet one-way delay: 151.107 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 29.64 Mbit/s
95th percentile per-packet one-way delay: 131.254 ms
Loss rate: 2.08%
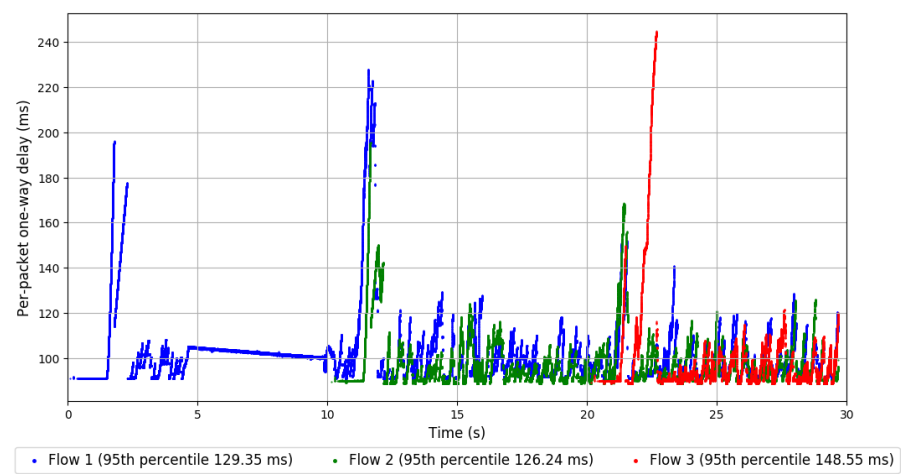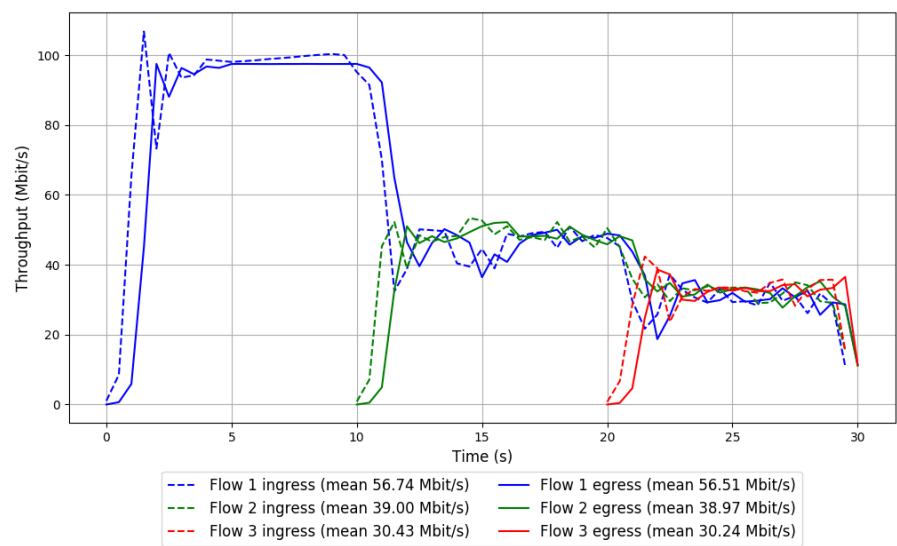```
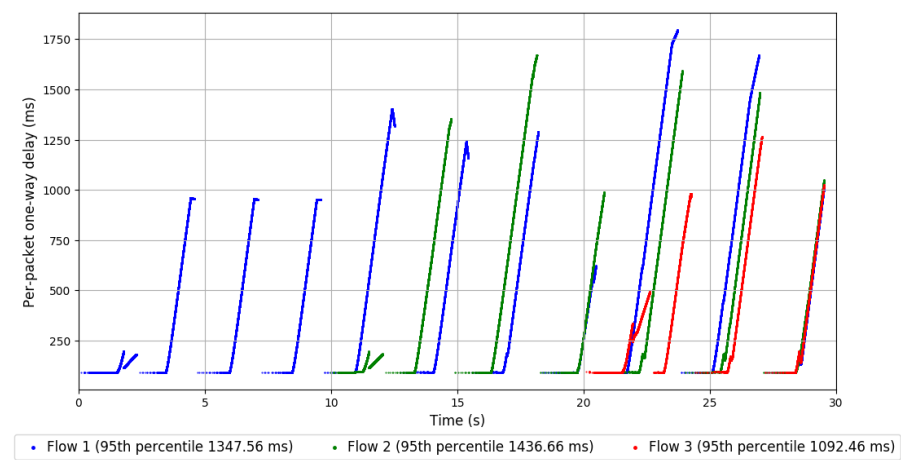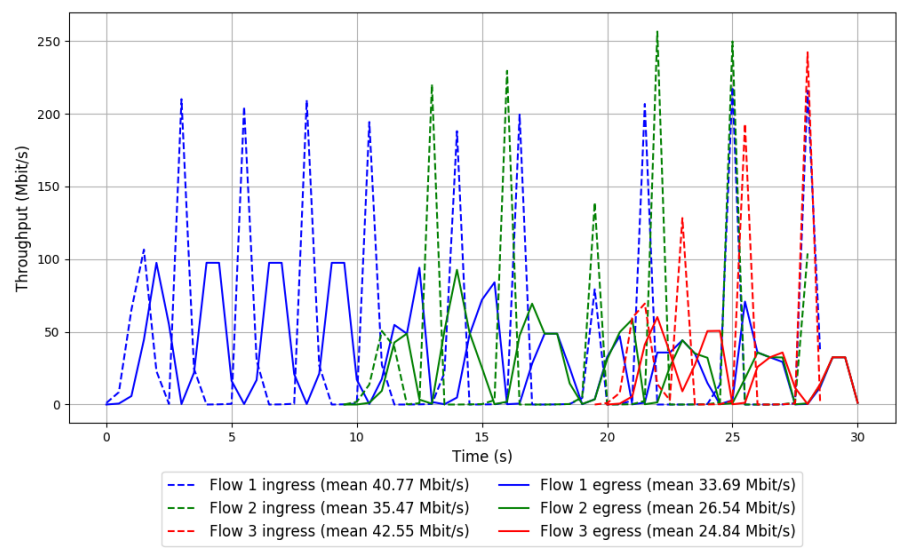
Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 16:50:43
End at: 2019-11-24 16:51:13
Local clock offset: 0.252 ms
Remote clock offset: -9.456 ms


# Below is generated by plot.py at 2019-11-24 18:28:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.39 Mbit/s
95th percentile per-packet one-way delay: 144.934 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 55.35 Mbit/s
95th percentile per-packet one-way delay: 130.604 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 39.59 Mbit/s
95th percentile per-packet one-way delay: 153.308 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 30.85 Mbit/s
95th percentile per-packet one-way delay: 195.346 ms
Loss rate: 1.93%
```

Run 3: Report of Muses_DecisionTree — Data Link

- - - Flow 1 ingress (mean 55.35 Mbit/s) —— Flow 1 egress (mean 55.35 Mbit/s)
- - - Flow 2 ingress (mean 39.65 Mbit/s) —— Flow 2 egress (mean 39.59 Mbit/s)
- - - Flow 3 ingress (mean 31.00 Mbit/s) —— Flow 3 egress (mean 30.85 Mbit/s)

- Flow 1 (95th percentile 130.60 ms)   • Flow 2 (95th percentile 153.31 ms)   • Flow 3 (95th percentile 195.35 ms)

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 17:20:57
End at: 2019-11-24 17:21:27
Local clock offset: -0.09 ms
Remote clock offset: -7.343 ms


# Below is generated by plot.py at 2019-11-24 18:28:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.02 Mbit/s
95th percentile per-packet one-way delay: 132.975 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 55.68 Mbit/s
95th percentile per-packet one-way delay: 115.542 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 39.64 Mbit/s
95th percentile per-packet one-way delay: 159.718 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 31.56 Mbit/s
95th percentile per-packet one-way delay: 140.462 ms
Loss rate: 1.90%
```
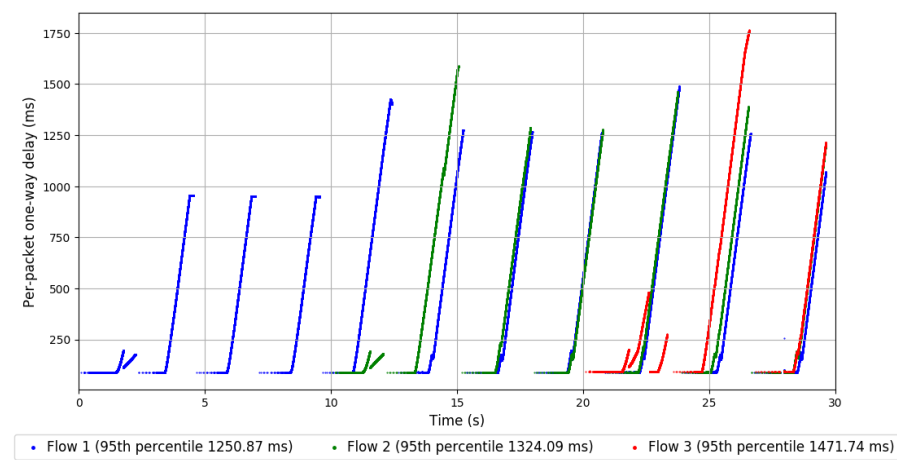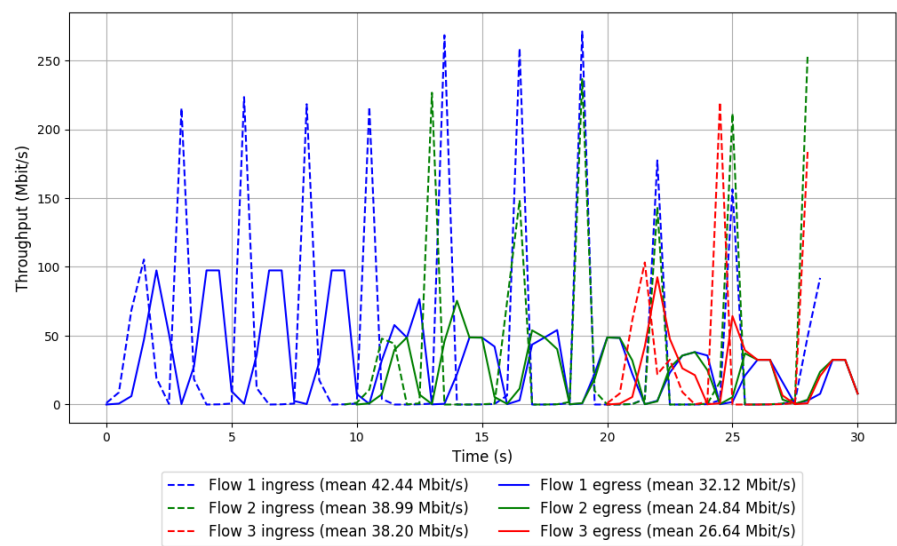
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses\_DecisionTree

Start at: 2019-11-24 17:51:12
End at: 2019-11-24 17:51:42
Local clock offset: 0.091 ms
Remote clock offset: -7.589 ms


# Below is generated by plot.py at 2019-11-24 18:28:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.97 Mbit/s
95th percentile per-packet one-way delay: 130.042 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 56.51 Mbit/s
95th percentile per-packet one-way delay: 129.350 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 126.242 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 30.24 Mbit/s
95th percentile per-packet one-way delay: 148.548 ms
Loss rate: 2.02%
```
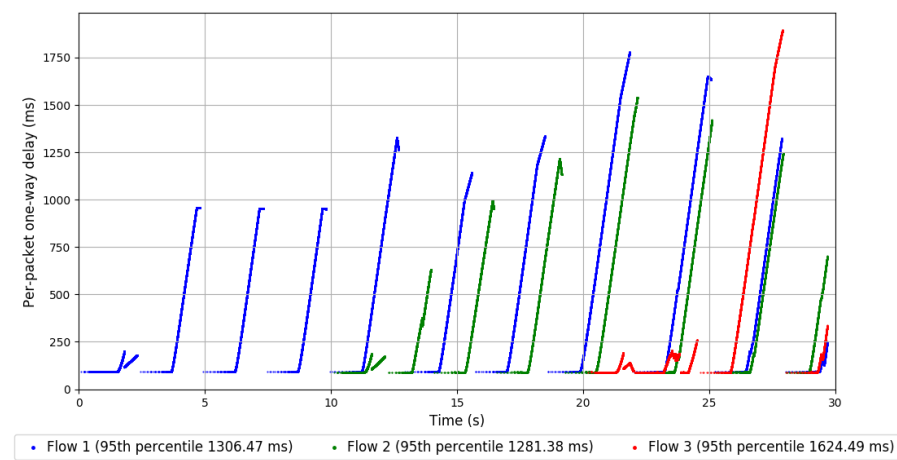
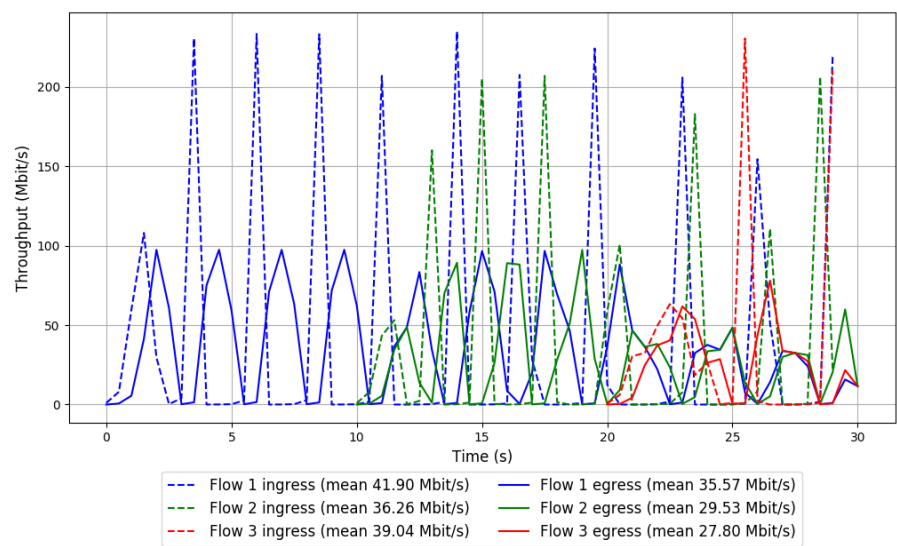Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 16:15:27
End at: 2019-11-24 16:15:57
Local clock offset: -0.776 ms
Remote clock offset: -7.854 ms


# Below is generated by plot.py at 2019-11-24 18:28:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.28 Mbit/s
95th percentile per-packet one-way delay: 1347.113 ms
Loss rate: 20.15%
-- Flow 1:
Average throughput: 33.69 Mbit/s
95th percentile per-packet one-way delay: 1347.562 ms
Loss rate: 14.74%
-- Flow 2:
Average throughput: 26.54 Mbit/s
95th percentile per-packet one-way delay: 1436.664 ms
Loss rate: 21.39%
-- Flow 3:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 1092.457 ms
Loss rate: 35.29%
```

Run 1: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 40.77 Mbit/s)　　Flow 1 egress (mean 33.69 Mbit/s)
Flow 2 ingress (mean 35.47 Mbit/s)　　Flow 2 egress (mean 26.54 Mbit/s)
Flow 3 ingress (mean 42.55 Mbit/s)　　Flow 3 egress (mean 24.84 Mbit/s)

Flow 1 (95th percentile 1347.56 ms)　　Flow 2 (95th percentile 1436.66 ms)　　Flow 3 (95th percentile 1092.46 ms)
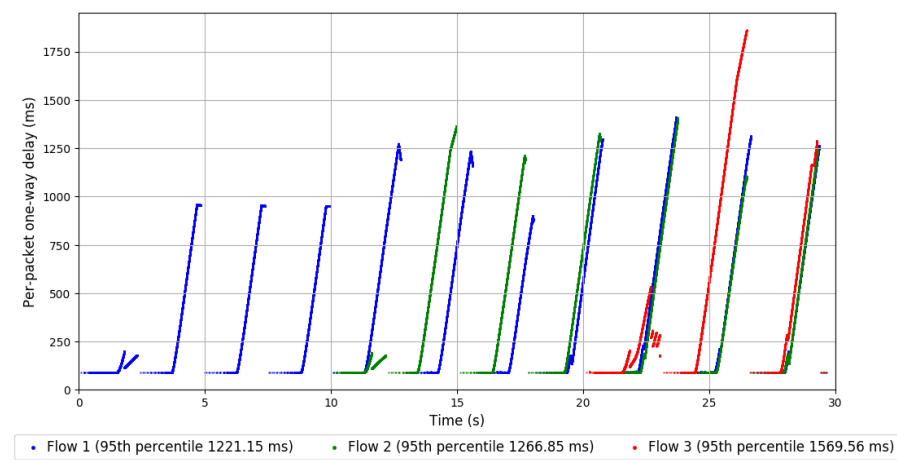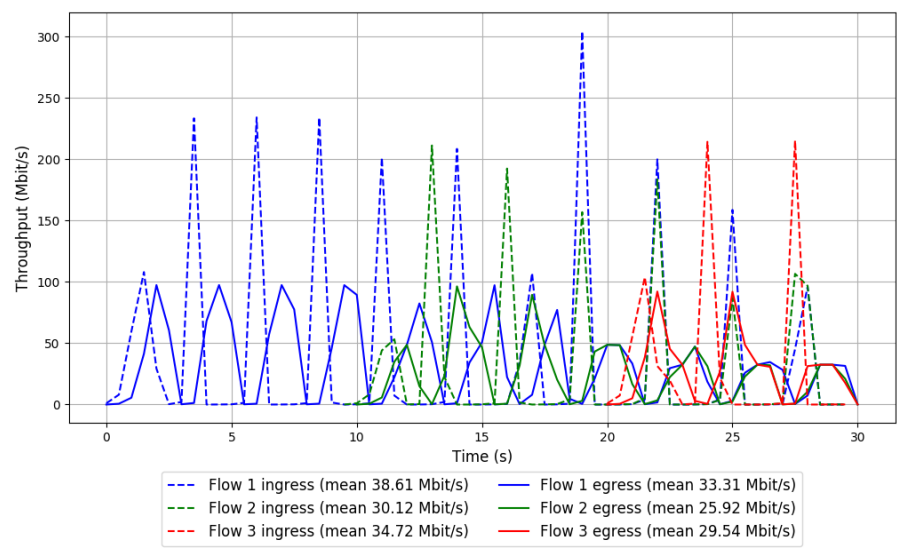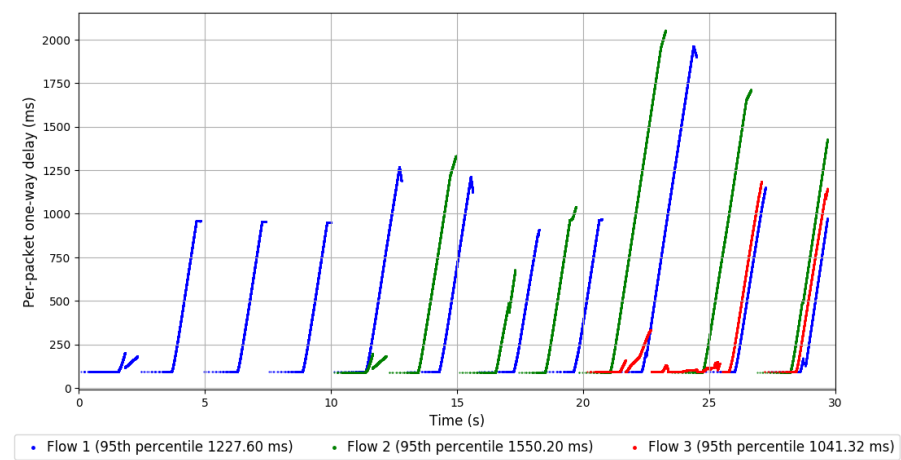
```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 16:45:43
End at: 2019-11-24 16:46:13
Local clock offset: -0.802 ms
Remote clock offset: -9.384 ms


# Below is generated by plot.py at 2019-11-24 18:28:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.17 Mbit/s
95th percentile per-packet one-way delay: 1285.700 ms
Loss rate: 25.09%
-- Flow 1:
Average throughput: 32.12 Mbit/s
95th percentile per-packet one-way delay: 1250.874 ms
Loss rate: 21.77%
-- Flow 2:
Average throughput: 24.84 Mbit/s
95th percentile per-packet one-way delay: 1324.089 ms
Loss rate: 32.42%
-- Flow 3:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 1471.744 ms
Loss rate: 21.22%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 42.44 Mbit/s)
Flow 1 egress (mean 32.12 Mbit/s)
Flow 2 ingress (mean 38.99 Mbit/s)
Flow 2 egress (mean 24.84 Mbit/s)
Flow 3 ingress (mean 38.20 Mbit/s)
Flow 3 egress (mean 26.64 Mbit/s)

Flow 1 (95th percentile 1250.87 ms)
Flow 2 (95th percentile 1324.09 ms)
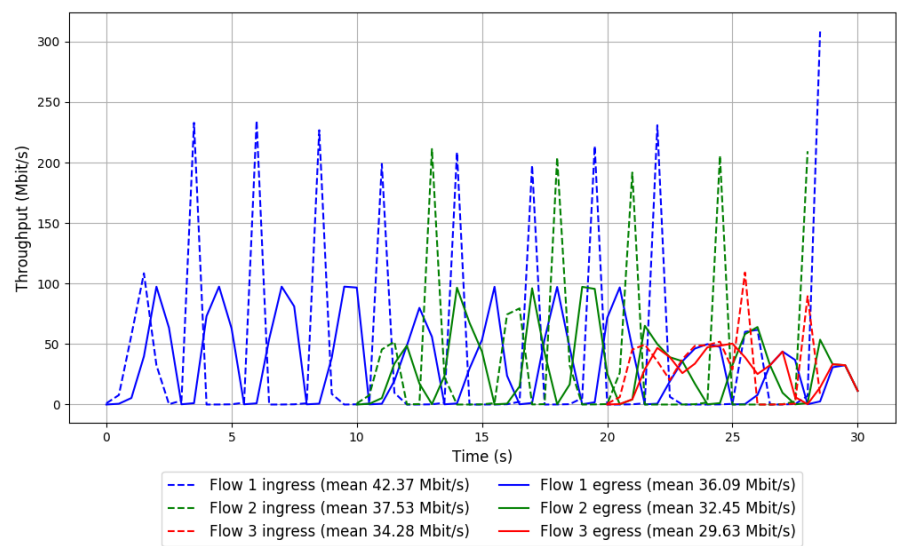Flow 3 (95th percentile 1471.74 ms)

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 17:15:55
End at: 2019-11-24 17:16:25
Local clock offset: -0.009 ms
Remote clock offset: -7.493 ms


# Below is generated by plot.py at 2019-11-24 18:28:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.01 Mbit/s
95th percentile per-packet one-way delay: 1320.801 ms
Loss rate: 17.32%
-- Flow 1:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 1306.466 ms
Loss rate: 14.75%
-- Flow 2:
Average throughput: 29.53 Mbit/s
95th percentile per-packet one-way delay: 1281.381 ms
Loss rate: 16.62%
-- Flow 3:
Average throughput: 27.80 Mbit/s
95th percentile per-packet one-way delay: 1624.487 ms
Loss rate: 27.34%
```
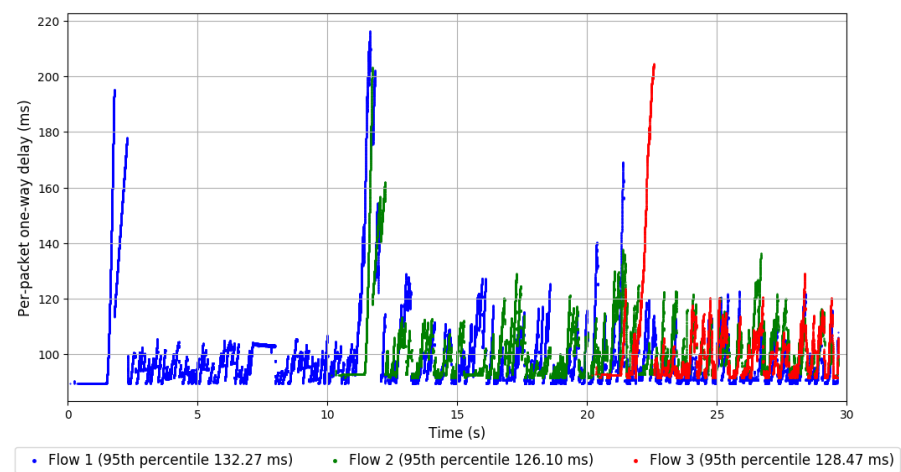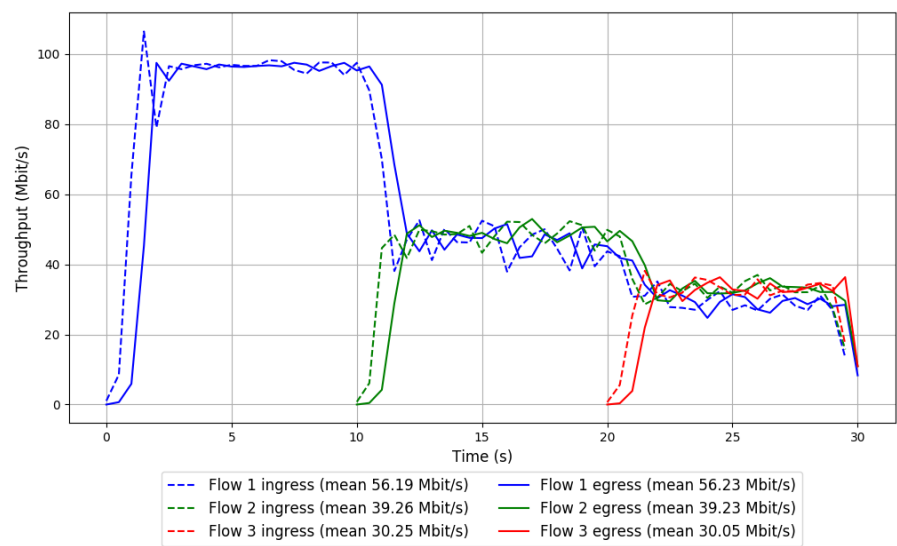
Run 3: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 41.90 Mbit/s) — Flow 1 egress (mean 35.57 Mbit/s)
Flow 2 ingress (mean 36.26 Mbit/s) — Flow 2 egress (mean 29.53 Mbit/s)
Flow 3 ingress (mean 39.04 Mbit/s) — Flow 3 egress (mean 27.80 Mbit/s)

Flow 1 (95th percentile 1306.47 ms) • Flow 2 (95th percentile 1281.38 ms) • Flow 3 (95th percentile 1624.49 ms)
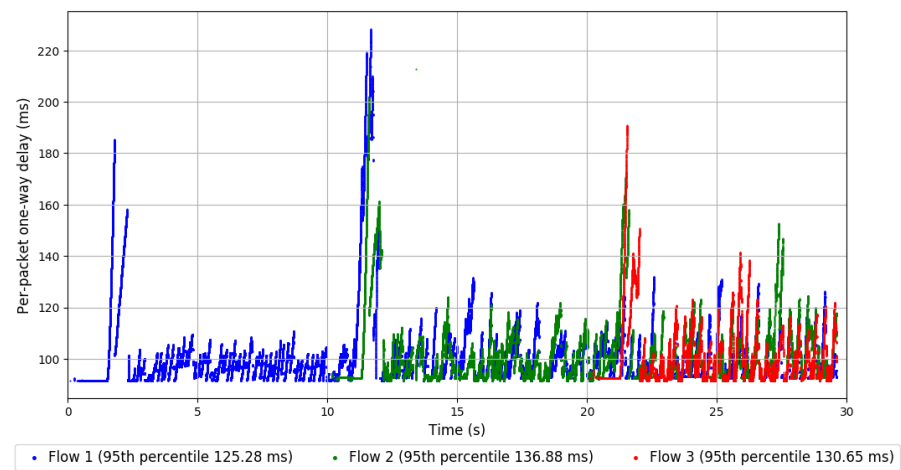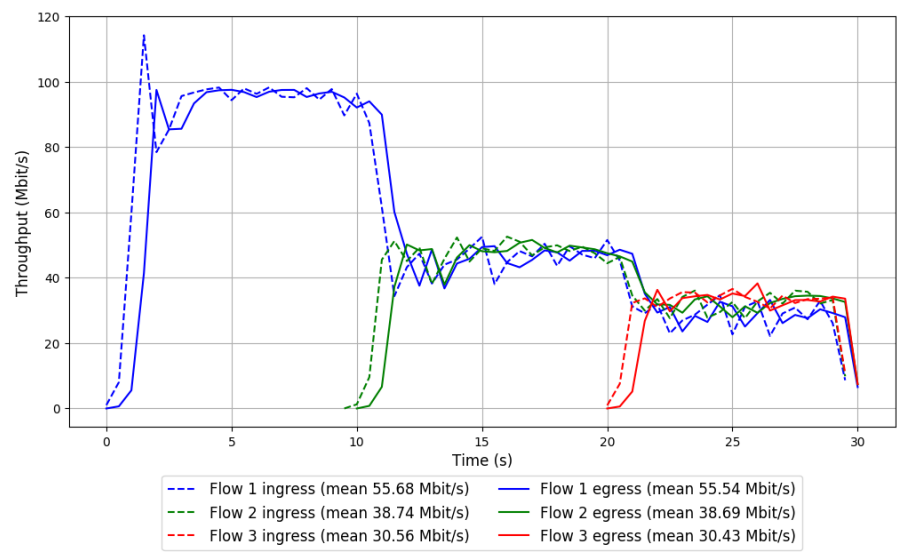
```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 17:46:11
End at: 2019-11-24 17:46:41
Local clock offset: 0.153 ms
Remote clock offset: -7.659 ms


# Below is generated by plot.py at 2019-11-24 18:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 59.92 Mbit/s
95th percentile per-packet one-way delay: 1244.517 ms
Loss rate: 14.59%
-- Flow 1:
Average throughput: 33.31 Mbit/s
95th percentile per-packet one-way delay: 1221.152 ms
Loss rate: 14.14%
-- Flow 2:
Average throughput: 25.92 Mbit/s
95th percentile per-packet one-way delay: 1266.846 ms
Loss rate: 14.56%
-- Flow 3:
Average throughput: 29.54 Mbit/s
95th percentile per-packet one-way delay: 1569.559 ms
Loss rate: 16.16%
```

Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 38.61 Mbit/s)   Flow 1 egress (mean 33.31 Mbit/s)
Flow 2 ingress (mean 30.12 Mbit/s)   Flow 2 egress (mean 25.92 Mbit/s)
Flow 3 ingress (mean 34.72 Mbit/s)   Flow 3 egress (mean 29.54 Mbit/s)

Flow 1 (95th percentile 1221.15 ms)   Flow 2 (95th percentile 1266.85 ms)   Flow 3 (95th percentile 1569.56 ms)
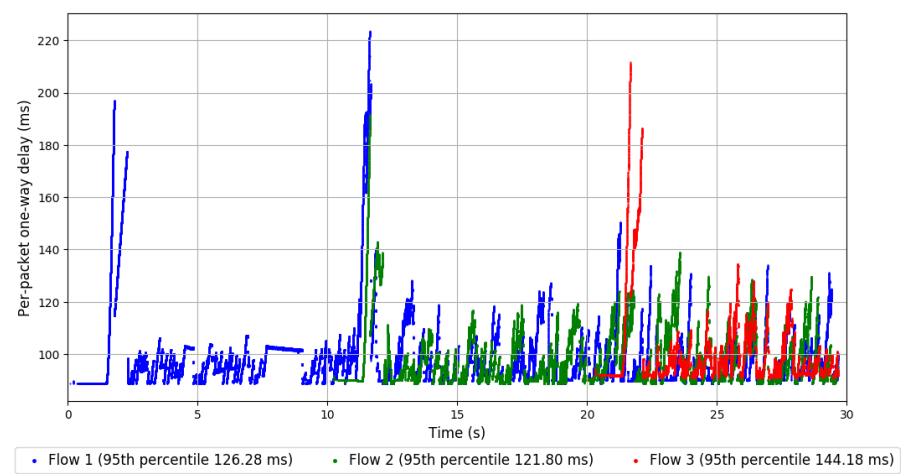
```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-11-24 18:16:26
End at: 2019-11-24 18:16:56
Local clock offset: 0.432 ms
Remote clock offset: -8.408 ms


# Below is generated by plot.py at 2019-11-24 18:29:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 67.08 Mbit/s
95th percentile per-packet one-way delay: 1290.584 ms
Loss rate: 9.49%
-- Flow 1:
Average throughput: 36.09 Mbit/s
95th percentile per-packet one-way delay: 1227.602 ms
Loss rate: 12.25%
-- Flow 2:
Average throughput: 32.45 Mbit/s
95th percentile per-packet one-way delay: 1550.203 ms
Loss rate: 7.37%
-- Flow 3:
Average throughput: 29.63 Mbit/s
95th percentile per-packet one-way delay: 1041.317 ms
Loss rate: 2.90%
```

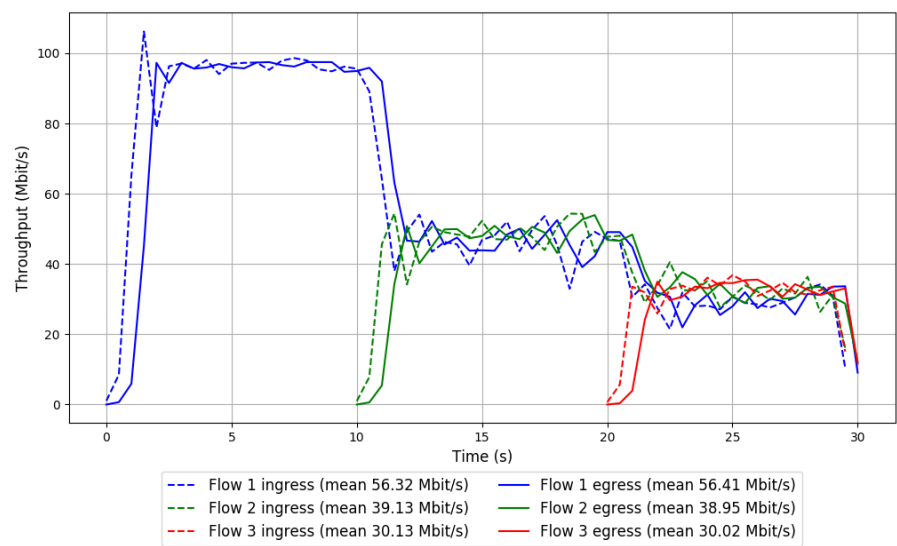Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 15:56:33
End at: 2019-11-24 15:57:03
Local clock offset: -1.52 ms
Remote clock offset: -8.698 ms


# Below is generated by plot.py at 2019-11-24 18:29:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.75 Mbit/s
95th percentile per-packet one-way delay: 129.334 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 56.23 Mbit/s
95th percentile per-packet one-way delay: 132.268 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 39.23 Mbit/s
95th percentile per-packet one-way delay: 126.096 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 30.05 Mbit/s
95th percentile per-packet one-way delay: 128.474 ms
Loss rate: 2.14%
```
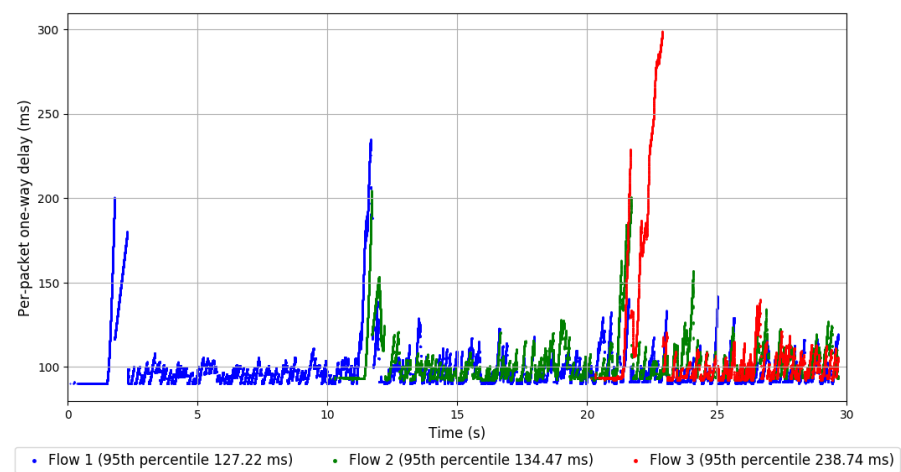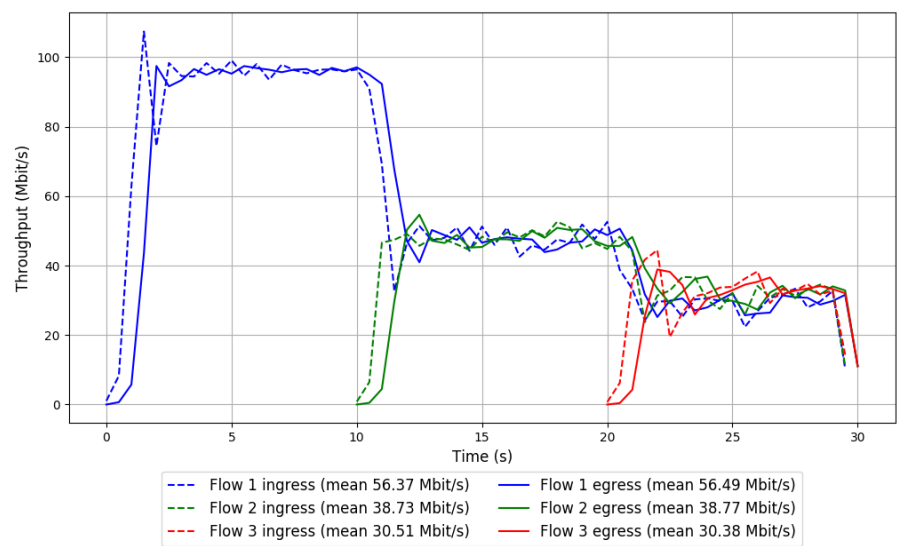
Run 1: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 56.19 Mbit/s)   Flow 1 egress (mean 56.23 Mbit/s)
Flow 2 ingress (mean 39.26 Mbit/s)   Flow 2 egress (mean 39.23 Mbit/s)
Flow 3 ingress (mean 30.25 Mbit/s)   Flow 3 egress (mean 30.05 Mbit/s)

Flow 1 (95th percentile 132.27 ms)   Flow 2 (95th percentile 126.10 ms)   Flow 3 (95th percentile 128.47 ms)

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```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 16:26:49
End at: 2019-11-24 16:27:19
Local clock offset: -1.524 ms
Remote clock offset: -8.824 ms


# Below is generated by plot.py at 2019-11-24 18:29:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.98 Mbit/s
95th percentile per-packet one-way delay: 128.756 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 55.54 Mbit/s
95th percentile per-packet one-way delay: 125.276 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 38.69 Mbit/s
95th percentile per-packet one-way delay: 136.884 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 30.43 Mbit/s
95th percentile per-packet one-way delay: 130.654 ms
Loss rate: 1.91%
```
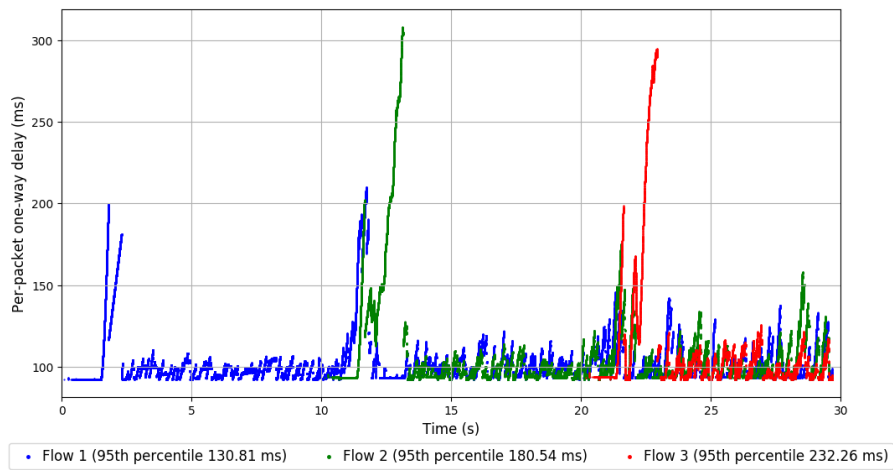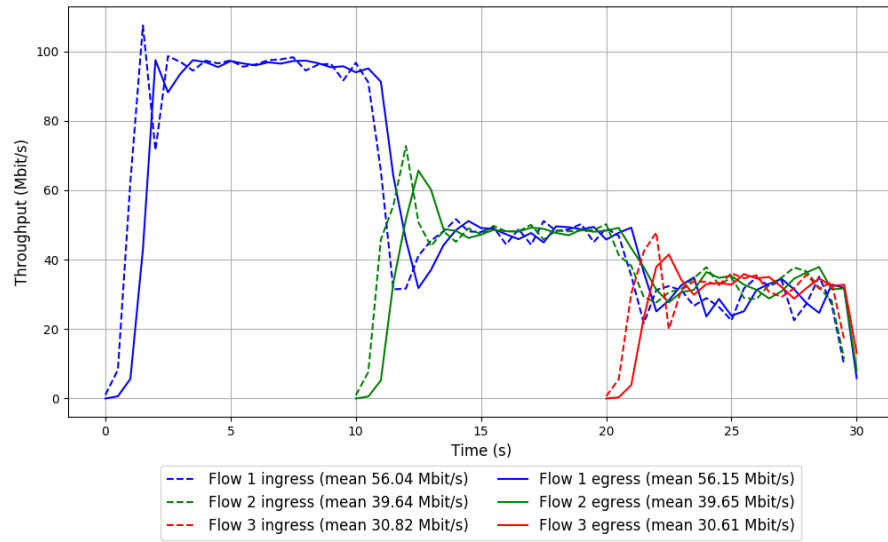
Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 16:57:02
End at: 2019-11-24 16:57:32
Local clock offset: -0.251 ms
Remote clock offset: -8.192 ms


# Below is generated by plot.py at 2019-11-24 18:29:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.79 Mbit/s
95th percentile per-packet one-way delay: 126.086 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 56.41 Mbit/s
95th percentile per-packet one-way delay: 126.276 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 38.95 Mbit/s
95th percentile per-packet one-way delay: 121.798 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 30.02 Mbit/s
95th percentile per-packet one-way delay: 144.176 ms
Loss rate: 1.91%
```
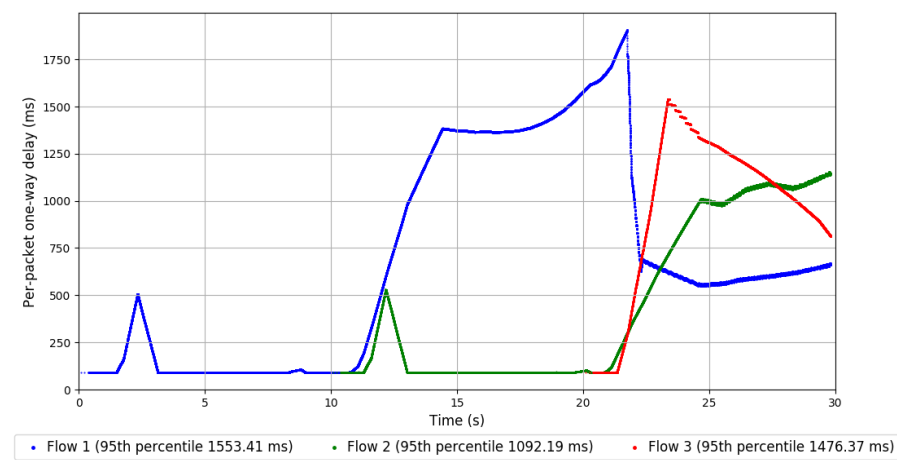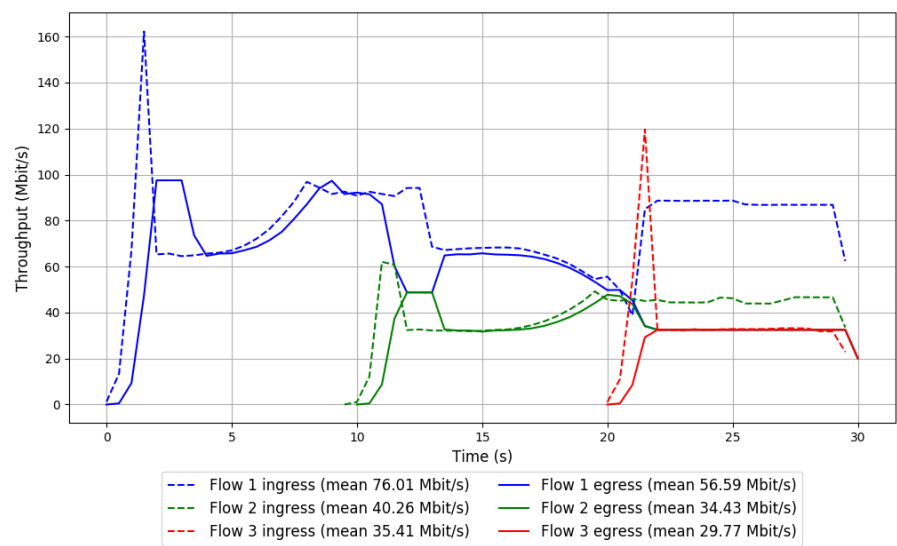
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 17:27:16
End at: 2019-11-24 17:27:46
Local clock offset: 0.765 ms
Remote clock offset: -7.909 ms


# Below is generated by plot.py at 2019-11-24 18:29:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.86 Mbit/s
95th percentile per-packet one-way delay: 138.700 ms
Loss rate: 0.55%
-- Flow 1:
Average throughput: 56.49 Mbit/s
95th percentile per-packet one-way delay: 127.223 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 38.77 Mbit/s
95th percentile per-packet one-way delay: 134.467 ms
Loss rate: 0.61%
-- Flow 3:
Average throughput: 30.38 Mbit/s
95th percentile per-packet one-way delay: 238.742 ms
Loss rate: 1.93%
```

Run 4: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 56.37 Mbit/s) --- Flow 1 egress (mean 56.49 Mbit/s)
Flow 2 ingress (mean 38.73 Mbit/s) --- Flow 2 egress (mean 38.77 Mbit/s)
Flow 3 ingress (mean 30.51 Mbit/s) --- Flow 3 egress (mean 30.38 Mbit/s)

Flow 1 (95th percentile 127.22 ms) • Flow 2 (95th percentile 134.47 ms) • Flow 3 (95th percentile 238.74 ms)

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```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-11-24 17:57:31
End at: 2019-11-24 17:58:01
Local clock offset: 0.945 ms
Remote clock offset: -8.321 ms


# Below is generated by plot.py at 2019-11-24 18:29:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.18 Mbit/s
95th percentile per-packet one-way delay: 150.455 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 56.15 Mbit/s
95th percentile per-packet one-way delay: 130.814 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 39.65 Mbit/s
95th percentile per-packet one-way delay: 180.544 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 30.61 Mbit/s
95th percentile per-packet one-way delay: 232.263 ms
Loss rate: 2.14%
```

Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-11-24 16:05:23
End at: 2019-11-24 16:05:53
Local clock offset: -0.78 ms
Remote clock offset: -8.257 ms


# Below is generated by plot.py at 2019-11-24 18:29:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.16 Mbit/s
95th percentile per-packet one-way delay: 1474.401 ms
Loss rate: 22.47%
-- Flow 1:
Average throughput: 56.59 Mbit/s
95th percentile per-packet one-way delay: 1553.412 ms
Loss rate: 25.90%
-- Flow 2:
Average throughput: 34.43 Mbit/s
95th percentile per-packet one-way delay: 1092.194 ms
Loss rate: 15.09%
-- Flow 3:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 1476.365 ms
Loss rate: 17.11%
```
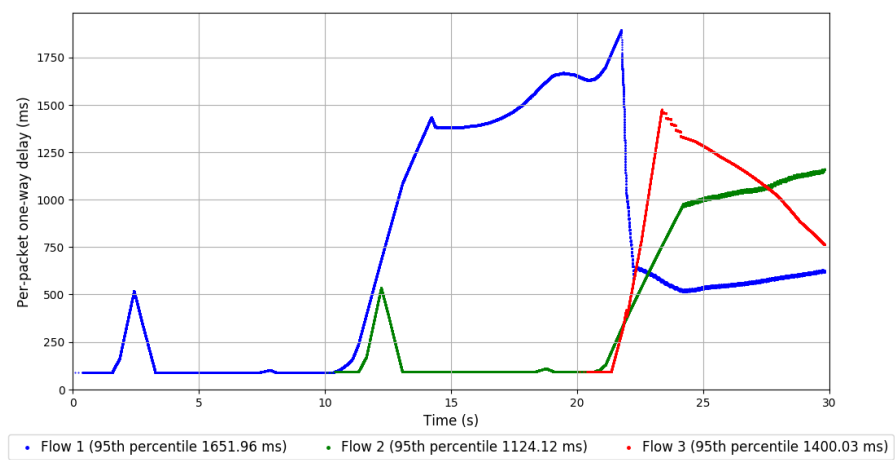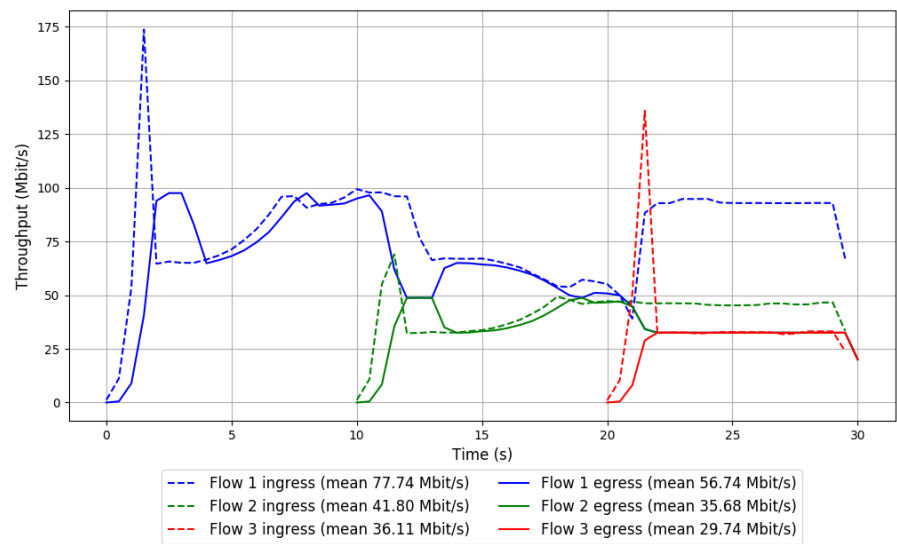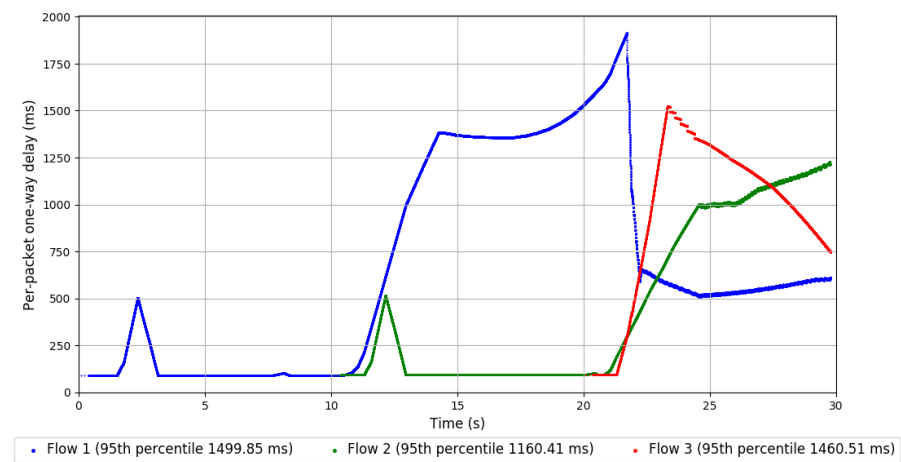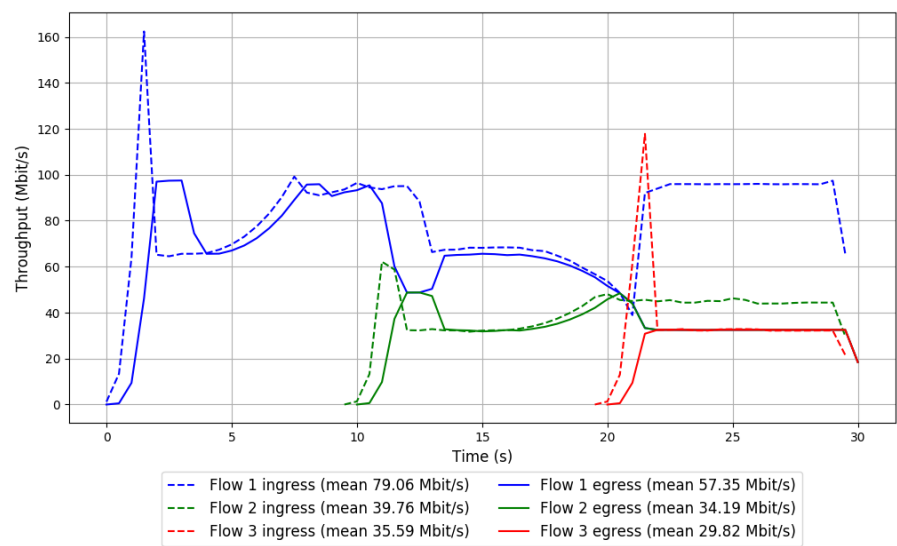
Run 1: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 76.01 Mbit/s) —— Flow 1 egress (mean 56.59 Mbit/s)
- - - Flow 2 ingress (mean 40.26 Mbit/s) —— Flow 2 egress (mean 34.43 Mbit/s)
- - - Flow 3 ingress (mean 35.41 Mbit/s) —— Flow 3 egress (mean 29.77 Mbit/s)

• Flow 1 (95th percentile 1553.41 ms)   • Flow 2 (95th percentile 1092.19 ms)   • Flow 3 (95th percentile 1476.37 ms)

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```
Run 2: Statistics of PCC-Allegro

Start at: 2019-11-24 16:35:39
End at: 2019-11-24 16:36:09
Local clock offset: -1.522 ms
Remote clock offset: -8.565 ms


# Below is generated by plot.py at 2019-11-24 18:30:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.13 Mbit/s
95th percentile per-packet one-way delay: 1426.719 ms
Loss rate: 22.21%
-- Flow 1:
Average throughput: 56.02 Mbit/s
95th percentile per-packet one-way delay: 1432.190 ms
Loss rate: 25.97%
-- Flow 2:
Average throughput: 33.73 Mbit/s
95th percentile per-packet one-way delay: 1158.757 ms
Loss rate: 12.92%
-- Flow 3:
Average throughput: 29.80 Mbit/s
95th percentile per-packet one-way delay: 1530.059 ms
Loss rate: 18.32%
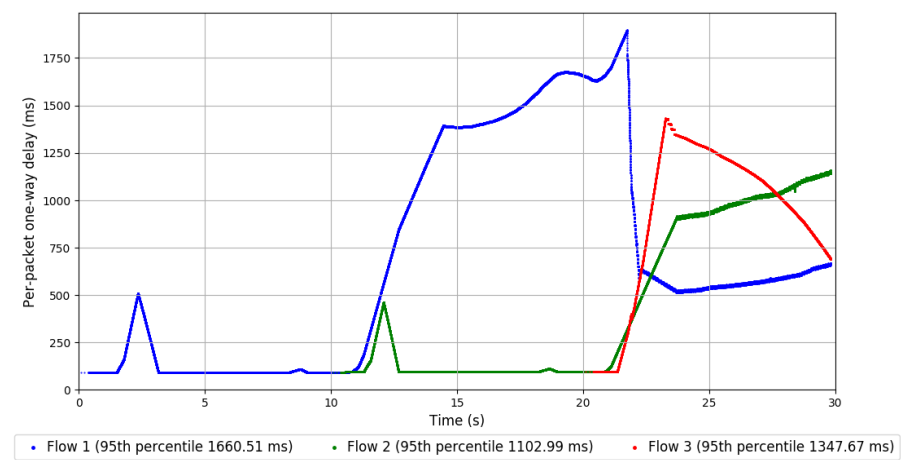```
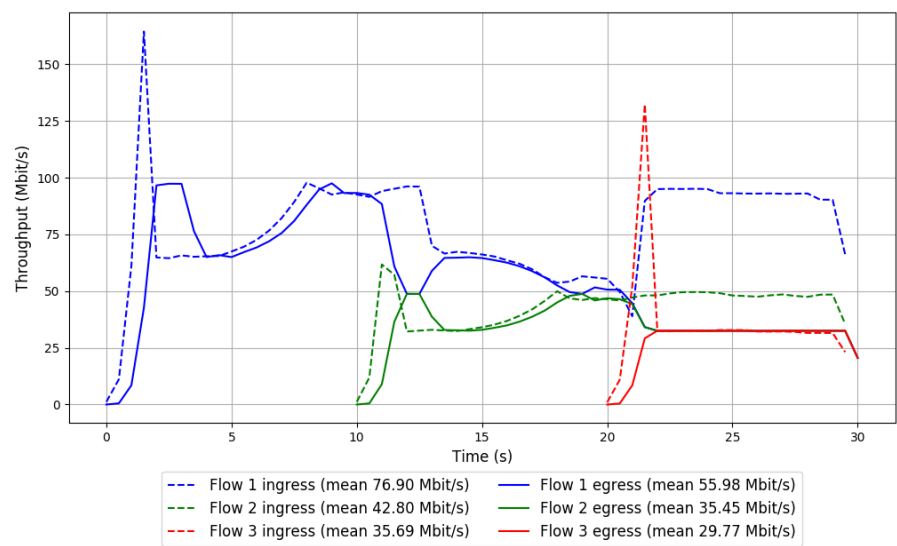
Run 2: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 75.32 Mbit/s) --- Flow 1 egress (mean 56.02 Mbit/s)
Flow 2 ingress (mean 38.46 Mbit/s) --- Flow 2 egress (mean 33.73 Mbit/s)
Flow 3 ingress (mean 35.96 Mbit/s) --- Flow 3 egress (mean 29.80 Mbit/s)



Flow 1 (95th percentile 1432.19 ms)    Flow 2 (95th percentile 1158.76 ms)    Flow 3 (95th percentile 1530.06 ms)

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```
Run 3: Statistics of PCC-Allegro

Start at: 2019-11-24 17:05:52
End at: 2019-11-24 17:06:22
Local clock offset: -0.082 ms
Remote clock offset: -7.69 ms

Below is generated by plot.py at 2019-11-24 18:30:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 1626.236 ms
Loss rate: 23.63%
-- Flow 1:
Average throughput: 56.74 Mbit/s
95th percentile per-packet one-way delay: 1651.959 ms
Loss rate: 27.36%
-- Flow 2:
Average throughput: 35.68 Mbit/s
95th percentile per-packet one-way delay: 1124.118 ms
Loss rate: 15.26%
-- Flow 3:
Average throughput: 29.74 Mbit/s
95th percentile per-packet one-way delay: 1400.033 ms
Loss rate: 18.81%
```
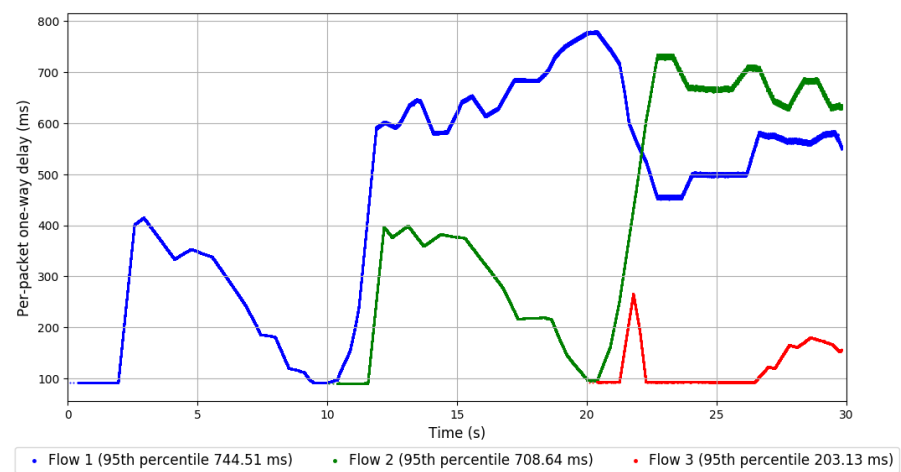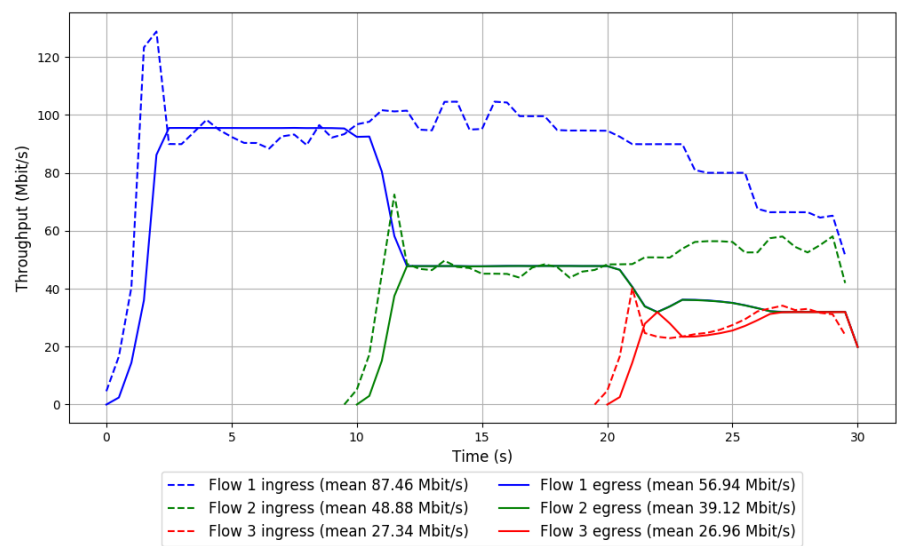
# Run 3: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 77.74 Mbit/s) --- Flow 1 egress (mean 56.74 Mbit/s)
Flow 2 ingress (mean 41.80 Mbit/s) --- Flow 2 egress (mean 35.68 Mbit/s)
Flow 3 ingress (mean 36.11 Mbit/s) --- Flow 3 egress (mean 29.74 Mbit/s)



Flow 1 (95th percentile 1651.96 ms)    Flow 2 (95th percentile 1124.12 ms)    Flow 3 (95th percentile 1400.03 ms)
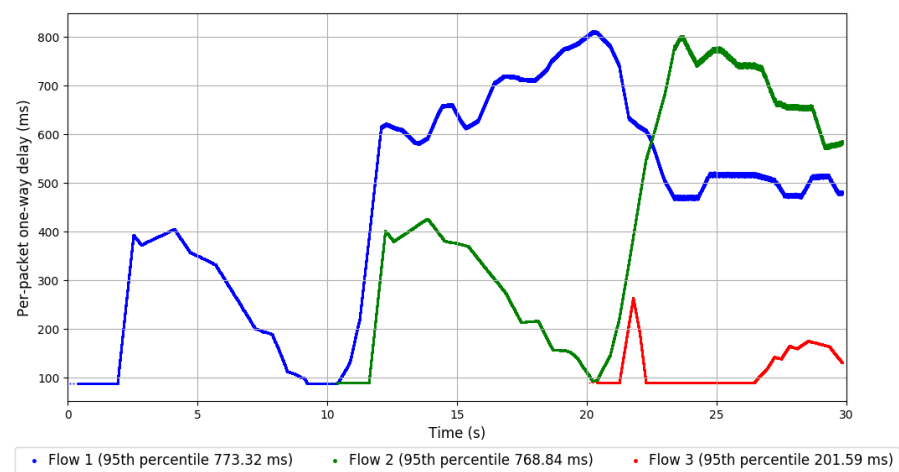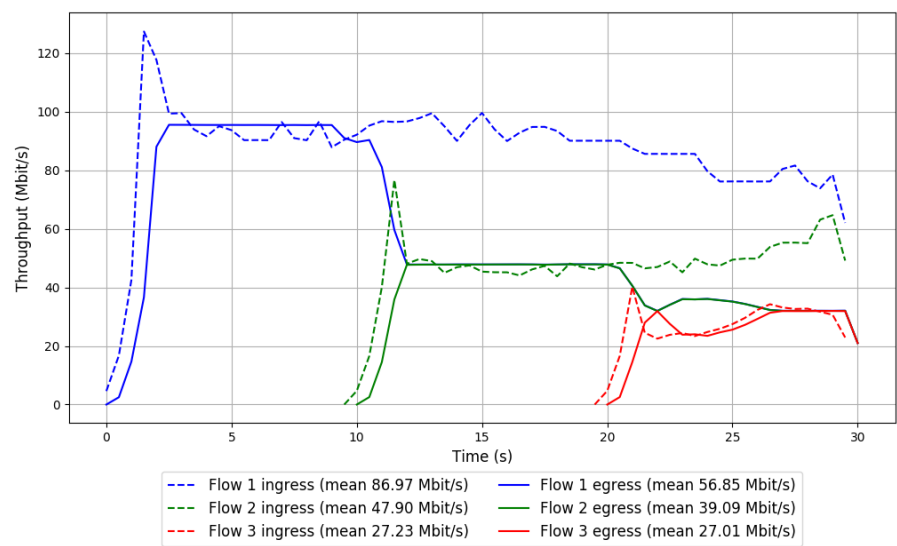
```
Run 4: Statistics of PCC-Allegro

Start at: 2019-11-24 17:36:06
End at: 2019-11-24 17:36:36
Local clock offset: 0.856 ms
Remote clock offset: -7.613 ms

Below is generated by plot.py at 2019-11-24 18:30:31
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.81 Mbit/s
95th percentile per-packet one-way delay: 1447.244 ms
Loss rate: 23.79%
-- Flow 1:
Average throughput: 57.35 Mbit/s
95th percentile per-packet one-way delay: 1499.852 ms
Loss rate: 27.80%
-- Flow 2:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 1160.409 ms
Loss rate: 14.63%
-- Flow 3:
Average throughput: 29.82 Mbit/s
95th percentile per-packet one-way delay: 1460.505 ms
Loss rate: 17.43%
```

# Run 4: Report of PCC-Allegro — Data Link



Flow 1 ingress (mean 79.06 Mbit/s) --- Flow 1 egress (mean 57.35 Mbit/s)
Flow 2 ingress (mean 39.76 Mbit/s) --- Flow 2 egress (mean 34.19 Mbit/s)
Flow 3 ingress (mean 35.59 Mbit/s) --- Flow 3 egress (mean 29.82 Mbit/s)



Flow 1 (95th percentile 1499.85 ms) · Flow 2 (95th percentile 1160.41 ms) · Flow 3 (95th percentile 1460.51 ms)

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-11-24 18:06:21
End at: 2019-11-24 18:06:51
Local clock offset: 0.951 ms
Remote clock offset: -8.625 ms

Below is generated by plot.py at 2019-11-24 18:30:42
Datalink statistics
-- Total of 3 flows:
Average throughput: 89.22 Mbit/s
95th percentile per-packet one-way delay: 1633.116 ms
Loss rate: 24.19%
-- Flow 1:
Average throughput: 55.98 Mbit/s
95th percentile per-packet one-way delay: 1660.514 ms
Loss rate: 27.55%
-- Flow 2:
Average throughput: 35.45 Mbit/s
95th percentile per-packet one-way delay: 1102.990 ms
Loss rate: 17.77%
-- Flow 3:
Average throughput: 29.77 Mbit/s
95th percentile per-packet one-way delay: 1347.669 ms
Loss rate: 17.76%
```
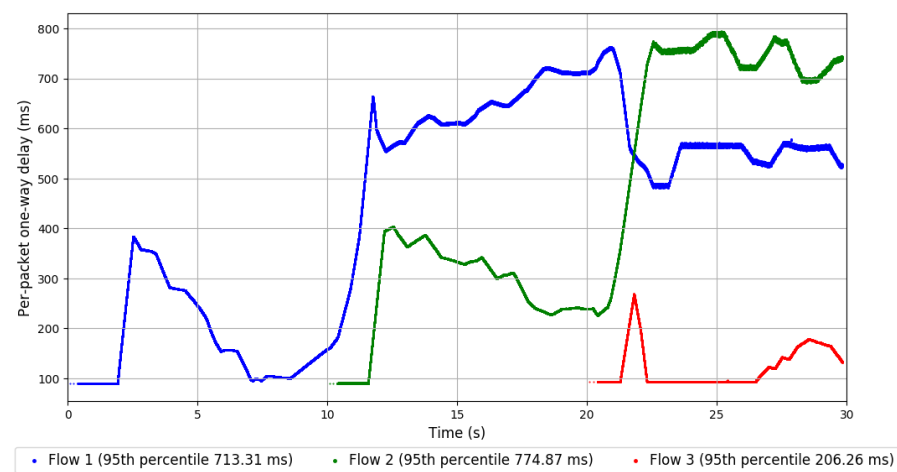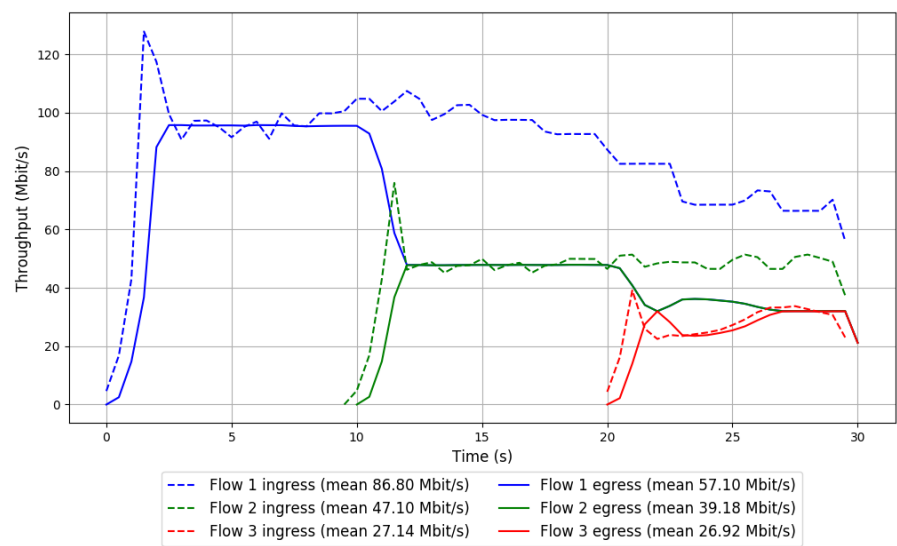
Run 5: Report of PCC-Allegro — Data Link

```
Run 1: Statistics of PCC-Expr

Start at: 2019-11-24 16:11:34
End at: 2019-11-24 16:12:04
Local clock offset: -0.782 ms
Remote clock offset: -7.41 ms

Below is generated by plot.py at 2019-11-24 18:31:47
Datalink statistics
-- Total of 3 flows:
Average throughput: 91.74 Mbit/s
95th percentile per-packet one-way delay: 721.710 ms
Loss rate: 29.24%
-- Flow 1:
Average throughput: 56.94 Mbit/s
95th percentile per-packet one-way delay: 744.508 ms
Loss rate: 35.21%
-- Flow 2:
Average throughput: 39.12 Mbit/s
95th percentile per-packet one-way delay: 708.640 ms
Loss rate: 20.54%
-- Flow 3:
Average throughput: 26.96 Mbit/s
95th percentile per-packet one-way delay: 203.134 ms
Loss rate: 2.82%
```
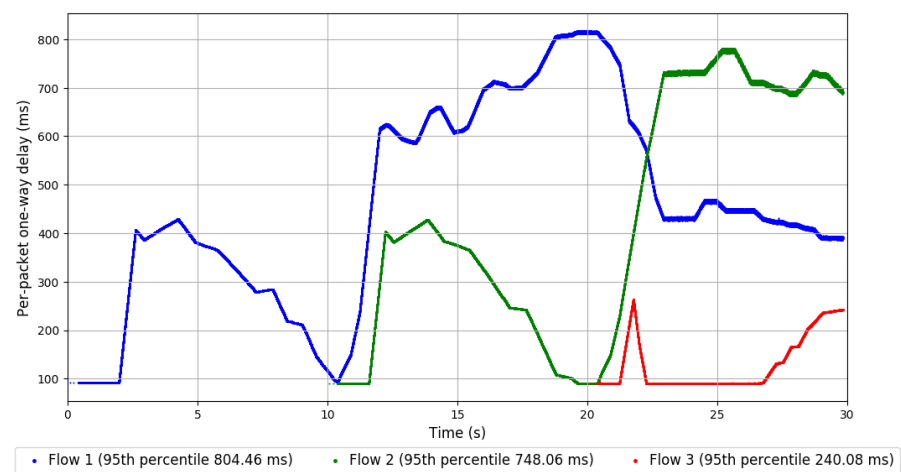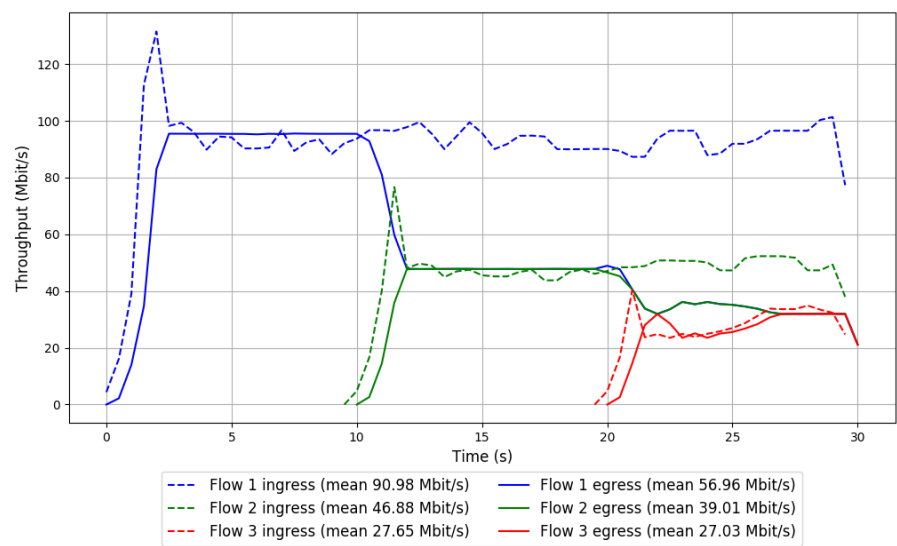
## Run 1: Report of PCC-Expr — Data Link



- - - Flow 1 ingress (mean 87.46 Mbit/s)    —— Flow 1 egress (mean 56.94 Mbit/s)
- - - Flow 2 ingress (mean 48.88 Mbit/s)    —— Flow 2 egress (mean 39.12 Mbit/s)
- - - Flow 3 ingress (mean 27.34 Mbit/s)    —— Flow 3 egress (mean 26.96 Mbit/s)



- Flow 1 (95th percentile 744.51 ms)    • Flow 2 (95th percentile 708.64 ms)    • Flow 3 (95th percentile 203.13 ms)

```
Run 2: Statistics of PCC-Expr

Start at: 2019-11-24 16:41:50
End at: 2019-11-24 16:42:20
Local clock offset: -1.209 ms
Remote clock offset: -8.635 ms


# Below is generated by plot.py at 2019-11-24 18:31:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.64 Mbit/s
95th percentile per-packet one-way delay: 766.093 ms
Loss rate: 28.65%
-- Flow 1:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 773.324 ms
Loss rate: 34.94%
-- Flow 2:
Average throughput: 39.09 Mbit/s
95th percentile per-packet one-way delay: 768.837 ms
Loss rate: 18.96%
-- Flow 3:
Average throughput: 27.01 Mbit/s
95th percentile per-packet one-way delay: 201.589 ms
Loss rate: 2.21%
```

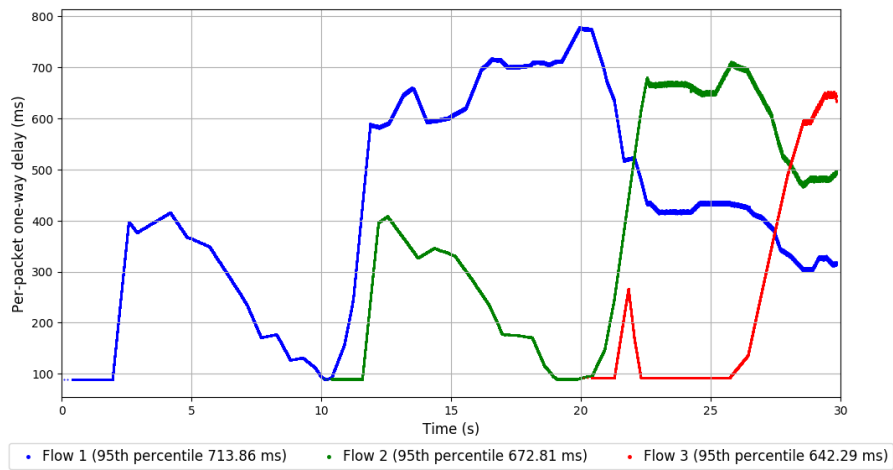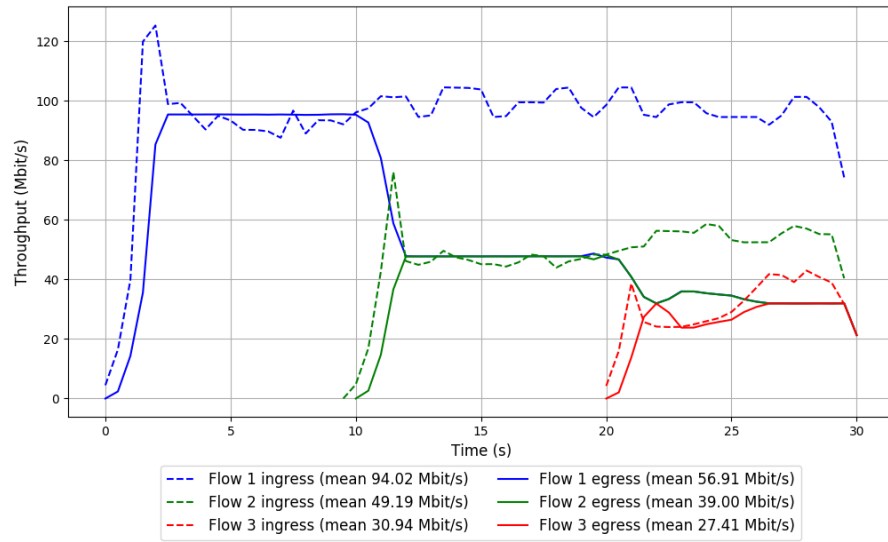Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-11-24 17:12:03
End at: 2019-11-24 17:12:33
Local clock offset: 0.773 ms
Remote clock offset: -7.559 ms


# Below is generated by plot.py at 2019-11-24 18:31:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.92 Mbit/s
95th percentile per-packet one-way delay: 753.455 ms
Loss rate: 28.02%
-- Flow 1:
Average throughput: 57.10 Mbit/s
95th percentile per-packet one-way delay: 713.311 ms
Loss rate: 34.52%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 774.873 ms
Loss rate: 17.40%
-- Flow 3:
Average throughput: 26.92 Mbit/s
95th percentile per-packet one-way delay: 206.261 ms
Loss rate: 2.25%
```
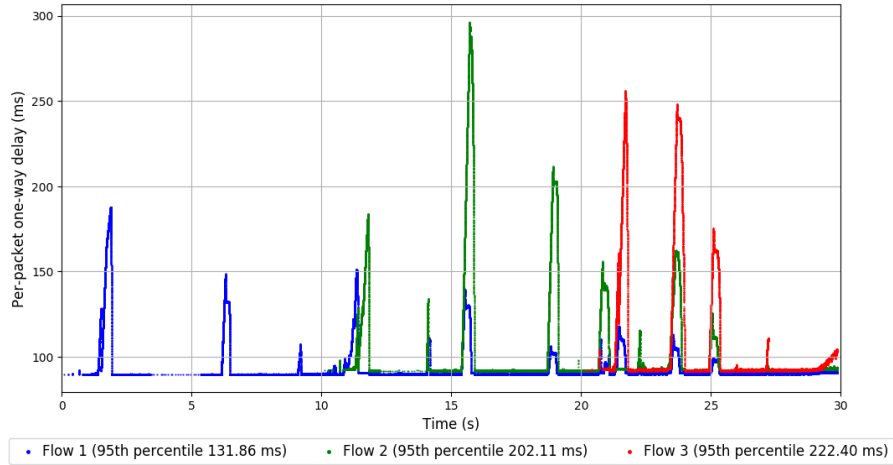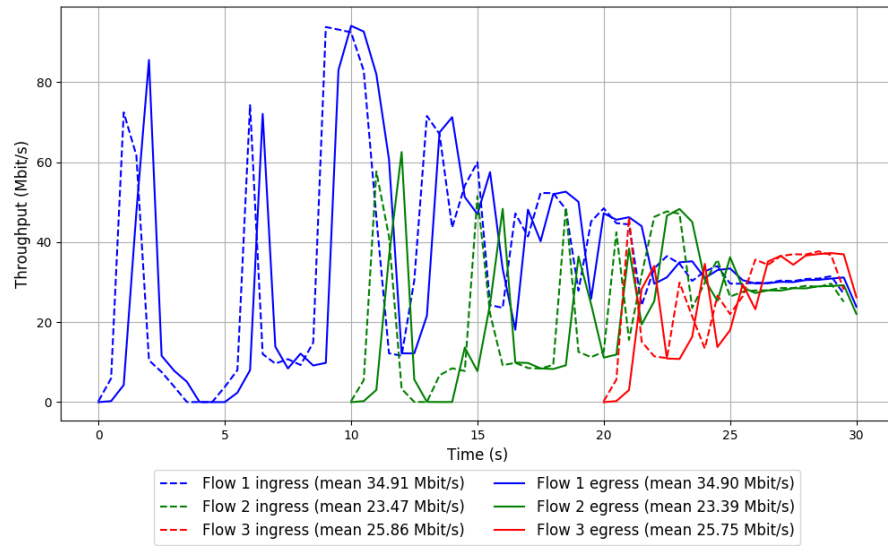
Run 3: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 86.80 Mbit/s) --- Flow 1 egress (mean 57.10 Mbit/s)
Flow 2 ingress (mean 47.10 Mbit/s) --- Flow 2 egress (mean 39.18 Mbit/s)
Flow 3 ingress (mean 27.14 Mbit/s) --- Flow 3 egress (mean 26.92 Mbit/s)

Flow 1 (95th percentile 713.31 ms)   Flow 2 (95th percentile 774.87 ms)   Flow 3 (95th percentile 206.26 ms)

```
Run 4: Statistics of PCC-Expr

Start at: 2019-11-24 17:42:17
End at: 2019-11-24 17:42:47
Local clock offset: 0.893 ms
Remote clock offset: -7.577 ms


# Below is generated by plot.py at 2019-11-24 18:32:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.71 Mbit/s
95th percentile per-packet one-way delay: 772.441 ms
Loss rate: 30.49%
-- Flow 1:
Average throughput: 56.96 Mbit/s
95th percentile per-packet one-way delay: 804.461 ms
Loss rate: 37.69%
-- Flow 2:
Average throughput: 39.01 Mbit/s
95th percentile per-packet one-way delay: 748.058 ms
Loss rate: 17.37%
-- Flow 3:
Average throughput: 27.03 Mbit/s
95th percentile per-packet one-way delay: 240.078 ms
Loss rate: 3.65%
```

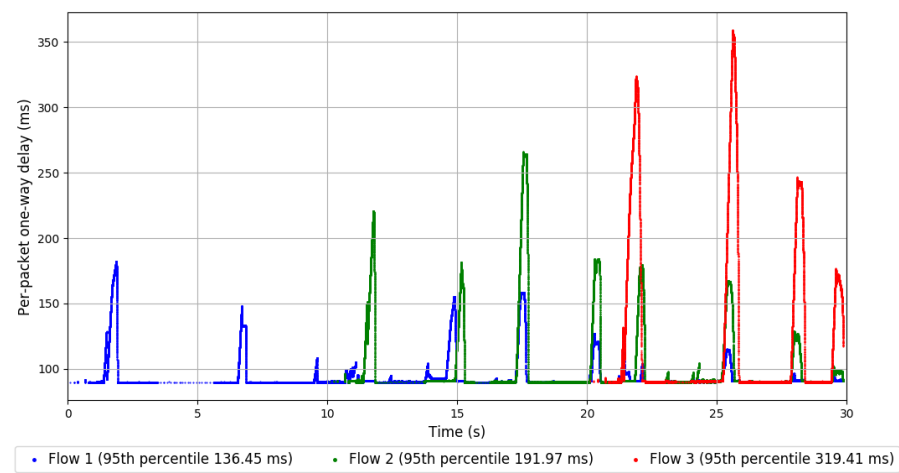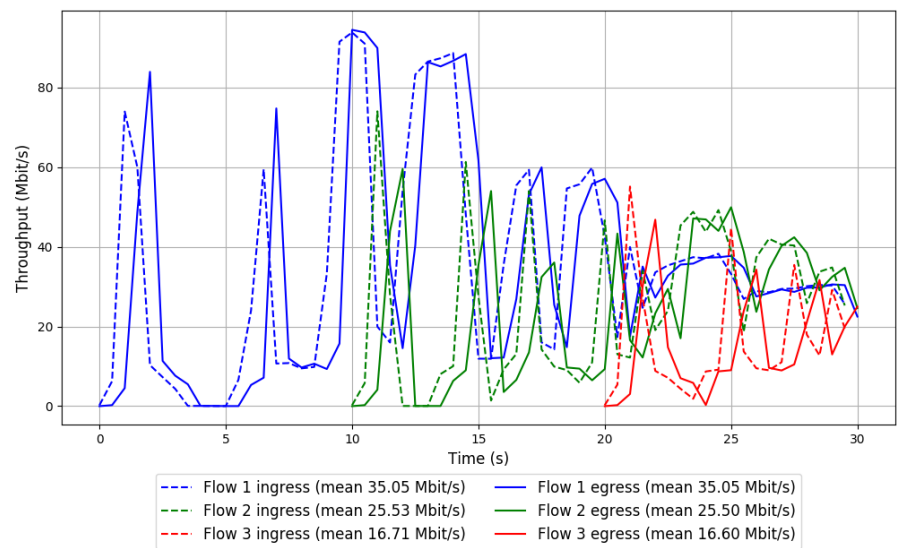Run 4: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 90.98 Mbit/s)   Flow 1 egress (mean 56.96 Mbit/s)
Flow 2 ingress (mean 46.88 Mbit/s)   Flow 2 egress (mean 39.01 Mbit/s)
Flow 3 ingress (mean 27.65 Mbit/s)   Flow 3 egress (mean 27.03 Mbit/s)

Flow 1 (95th percentile 804.46 ms)   Flow 2 (95th percentile 748.06 ms)   Flow 3 (95th percentile 240.08 ms)

```
Run 5: Statistics of PCC-Expr

Start at: 2019-11-24 18:12:33
End at: 2019-11-24 18:13:03
Local clock offset: -0.034 ms
Remote clock offset: -8.289 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.77 Mbit/s
95th percentile per-packet one-way delay: 708.561 ms
Loss rate: 33.32%
-- Flow 1:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 713.860 ms
Loss rate: 39.75%
-- Flow 2:
Average throughput: 39.00 Mbit/s
95th percentile per-packet one-way delay: 672.807 ms
Loss rate: 21.27%
-- Flow 3:
Average throughput: 27.41 Mbit/s
95th percentile per-packet one-way delay: 642.294 ms
Loss rate: 12.70%
```

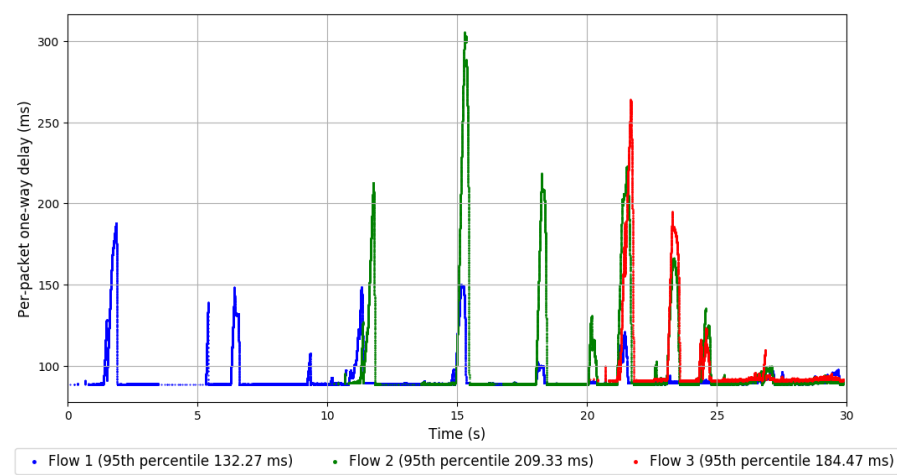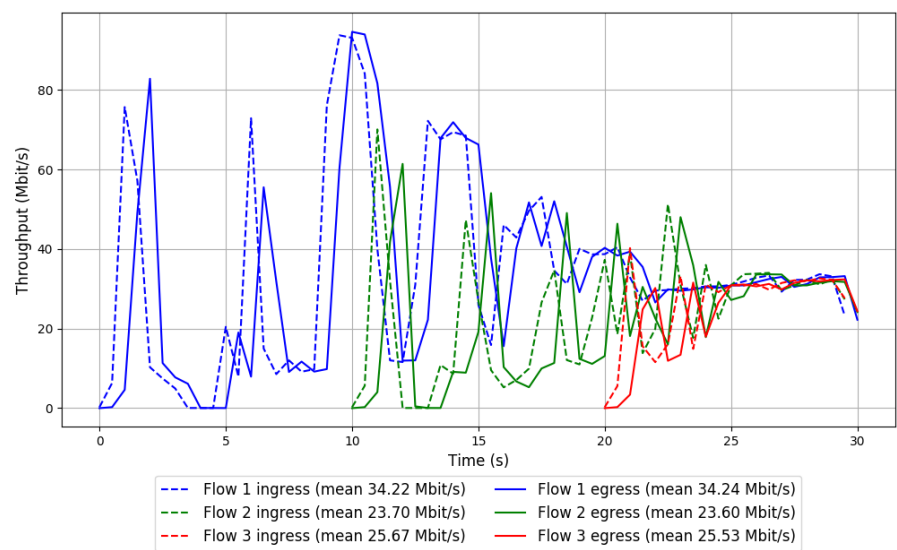Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-11-24 16:06:38
End at: 2019-11-24 16:07:08
Local clock offset: -0.787 ms
Remote clock offset: -7.629 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.87 Mbit/s
95th percentile per-packet one-way delay: 164.299 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 34.90 Mbit/s
95th percentile per-packet one-way delay: 131.863 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 23.39 Mbit/s
95th percentile per-packet one-way delay: 202.112 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 25.75 Mbit/s
95th percentile per-packet one-way delay: 222.404 ms
Loss rate: 1.86%
```

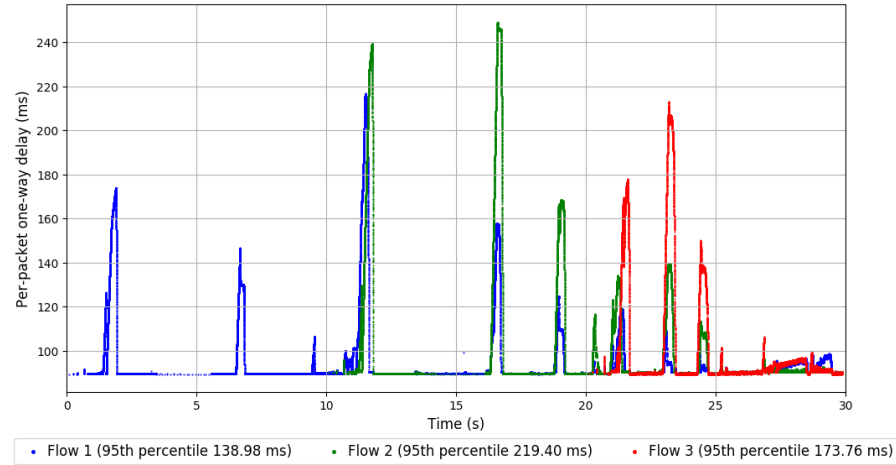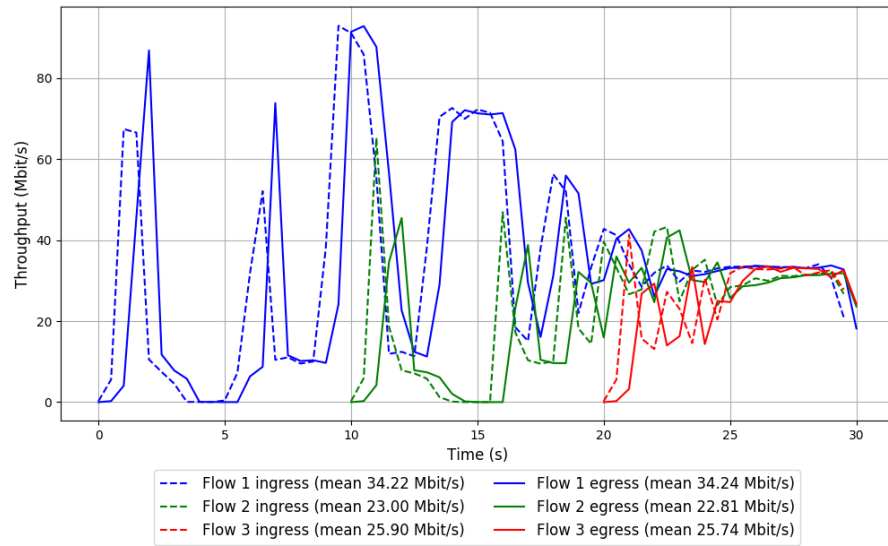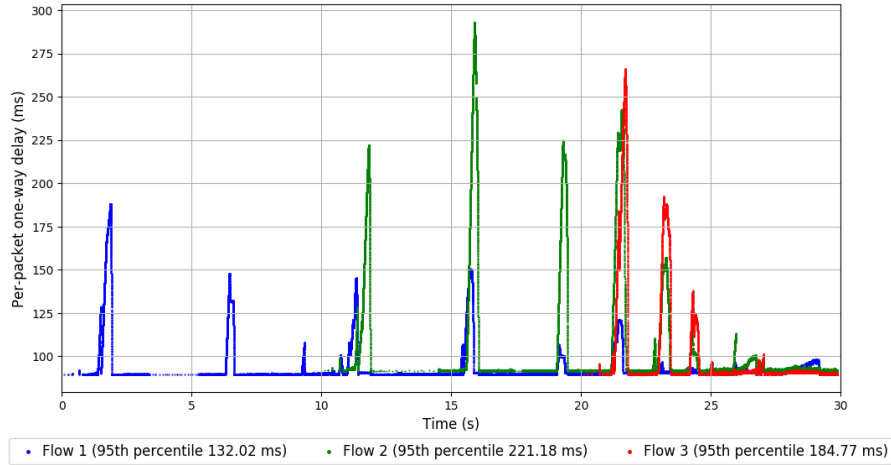Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-11-24 16:36:54
End at: 2019-11-24 16:37:24
Local clock offset: -0.778 ms
Remote clock offset: -8.588 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.42 Mbit/s
95th percentile per-packet one-way delay: 182.313 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 136.452 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 25.50 Mbit/s
95th percentile per-packet one-way delay: 191.970 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 16.60 Mbit/s
95th percentile per-packet one-way delay: 319.413 ms
Loss rate: 2.08%
```

Run 2: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 35.05 Mbit/s)   Flow 1 egress (mean 35.05 Mbit/s)
Flow 2 ingress (mean 25.53 Mbit/s)   Flow 2 egress (mean 25.50 Mbit/s)
Flow 3 ingress (mean 16.71 Mbit/s)   Flow 3 egress (mean 16.60 Mbit/s)

Flow 1 (95th percentile 136.45 ms)   Flow 2 (95th percentile 191.97 ms)   Flow 3 (95th percentile 319.41 ms)
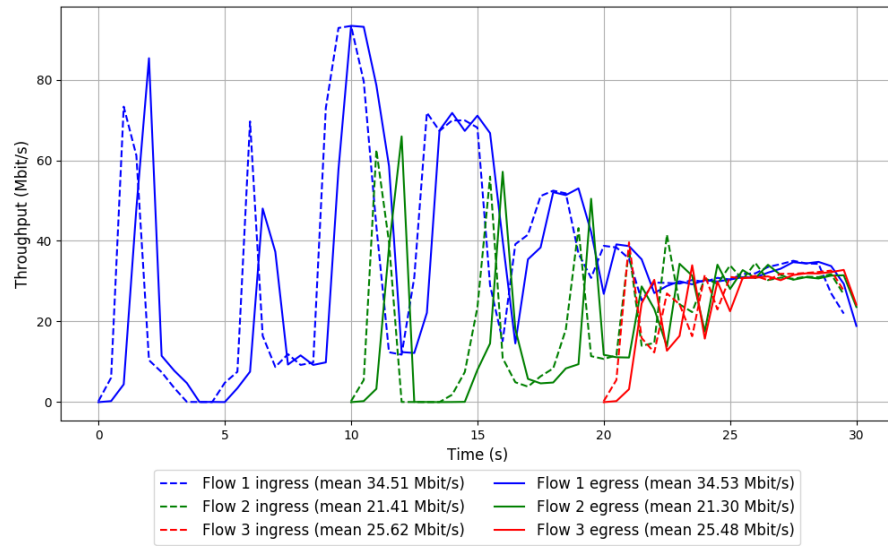
```
Run 3: Statistics of QUIC Cubic

Start at: 2019-11-24 17:07:07
End at: 2019-11-24 17:07:37
Local clock offset: 0.013 ms
Remote clock offset: -7.664 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 58.27 Mbit/s
95th percentile per-packet one-way delay: 174.043 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 132.270 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 23.60 Mbit/s
95th percentile per-packet one-way delay: 209.328 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 25.53 Mbit/s
95th percentile per-packet one-way delay: 184.474 ms
Loss rate: 1.99%
```

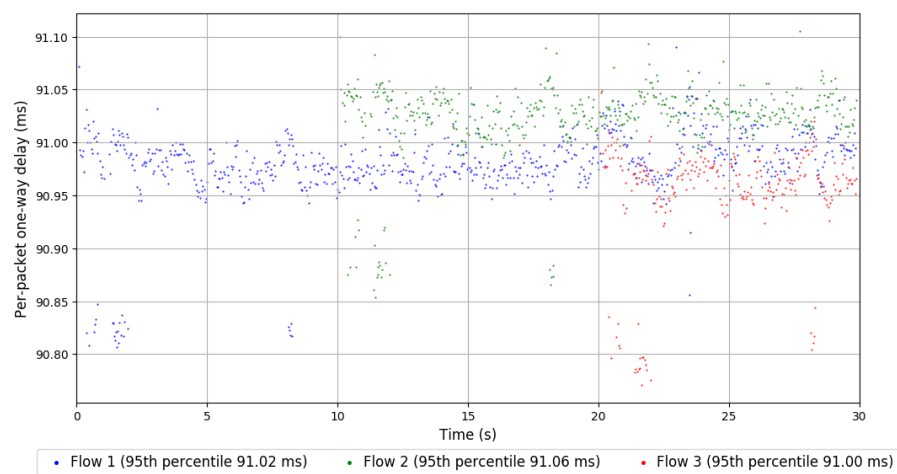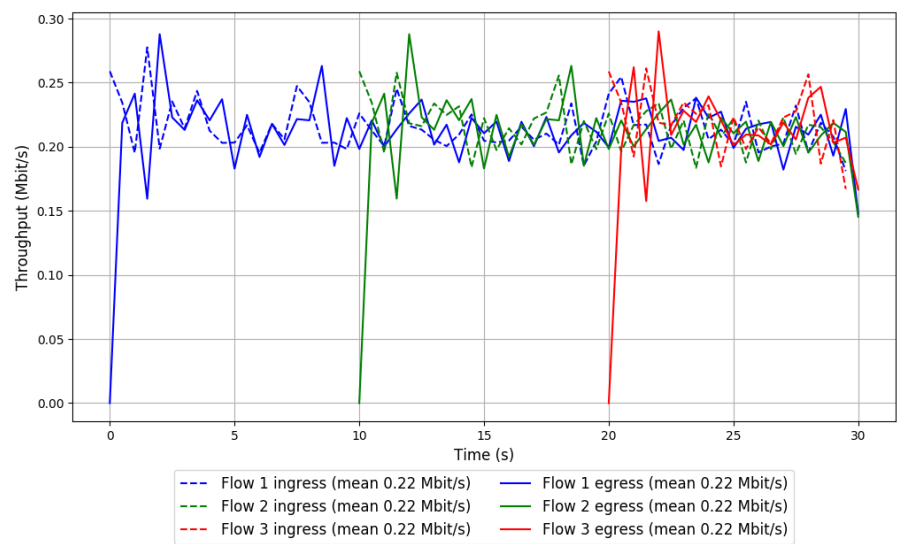Run 3: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 34.22 Mbit/s) —— Flow 1 egress (mean 34.24 Mbit/s)
- - - Flow 2 ingress (mean 23.70 Mbit/s) —— Flow 2 egress (mean 23.60 Mbit/s)
- - - Flow 3 ingress (mean 25.67 Mbit/s) —— Flow 3 egress (mean 25.53 Mbit/s)

• Flow 1 (95th percentile 132.27 ms)   • Flow 2 (95th percentile 209.33 ms)   • Flow 3 (95th percentile 184.47 ms)

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```
Run 4: Statistics of QUIC Cubic

Start at: 2019-11-24 17:37:22
End at: 2019-11-24 17:37:52
Local clock offset: 0.125 ms
Remote clock offset: -8.176 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.82 Mbit/s
95th percentile per-packet one-way delay: 164.014 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 34.24 Mbit/s
95th percentile per-packet one-way delay: 138.982 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 22.81 Mbit/s
95th percentile per-packet one-way delay: 219.399 ms
Loss rate: 1.50%
-- Flow 3:
Average throughput: 25.74 Mbit/s
95th percentile per-packet one-way delay: 173.763 ms
Loss rate: 1.97%
```

Run 4: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 34.22 Mbit/s) --- Flow 1 egress (mean 34.24 Mbit/s)
Flow 2 ingress (mean 23.00 Mbit/s) --- Flow 2 egress (mean 22.81 Mbit/s)
Flow 3 ingress (mean 25.90 Mbit/s) --- Flow 3 egress (mean 25.74 Mbit/s)

Flow 1 (95th percentile 138.98 ms) Flow 2 (95th percentile 219.40 ms) Flow 3 (95th percentile 173.76 ms)
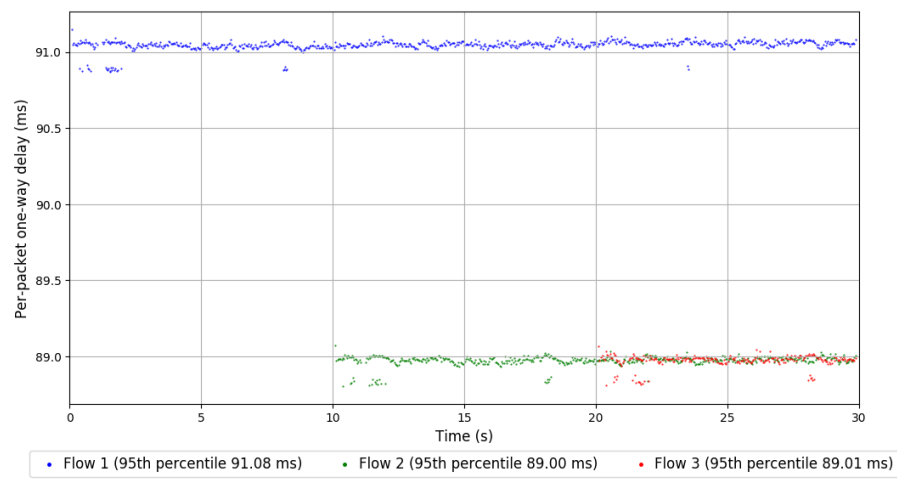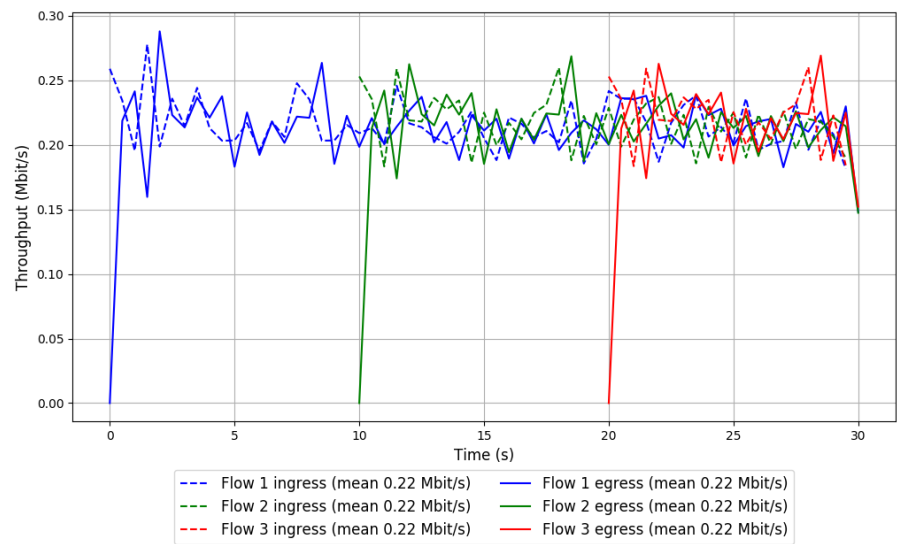
172

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-11-24 18:07:37
End at: 2019-11-24 18:08:07
Local clock offset: 0.263 ms
Remote clock offset: -8.766 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.02 Mbit/s
95th percentile per-packet one-way delay: 176.749 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 34.53 Mbit/s
95th percentile per-packet one-way delay: 132.022 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 21.30 Mbit/s
95th percentile per-packet one-way delay: 221.180 ms
Loss rate: 1.21%
-- Flow 3:
Average throughput: 25.48 Mbit/s
95th percentile per-packet one-way delay: 184.766 ms
Loss rate: 1.98%
```

Run 5: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 34.51 Mbit/s) — — — Flow 1 egress (mean 34.53 Mbit/s)
Flow 2 ingress (mean 21.41 Mbit/s) — — — Flow 2 egress (mean 21.30 Mbit/s)
Flow 3 ingress (mean 25.62 Mbit/s) — — — Flow 3 egress (mean 25.48 Mbit/s)

Flow 1 (95th percentile 132.02 ms)   Flow 2 (95th percentile 221.18 ms)   Flow 3 (95th percentile 184.77 ms)
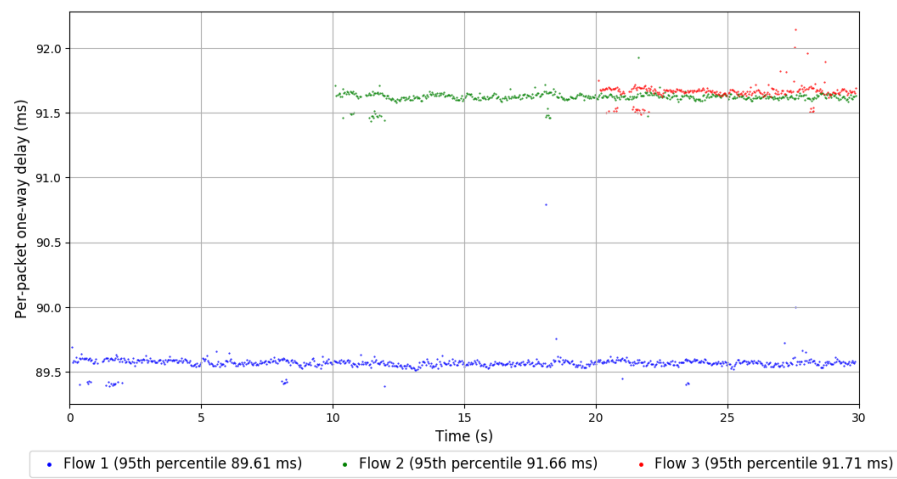
```
Run 1: Statistics of SCReAM

Start at: 2019-11-24 16:09:06
End at: 2019-11-24 16:09:36
Local clock offset: -1.534 ms
Remote clock offset: -7.453 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 91.047 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.017 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.057 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 90.999 ms
Loss rate: 1.10%
```
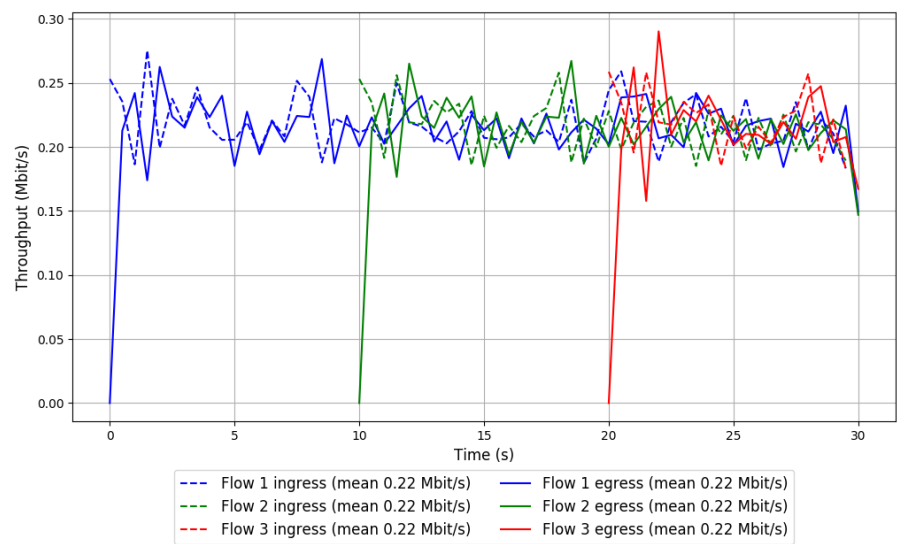
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-11-24 16:39:23
End at: 2019-11-24 16:39:53
Local clock offset: -0.843 ms
Remote clock offset: -8.592 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 91.486 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.483 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.503 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.437 ms
Loss rate: 1.46%
```
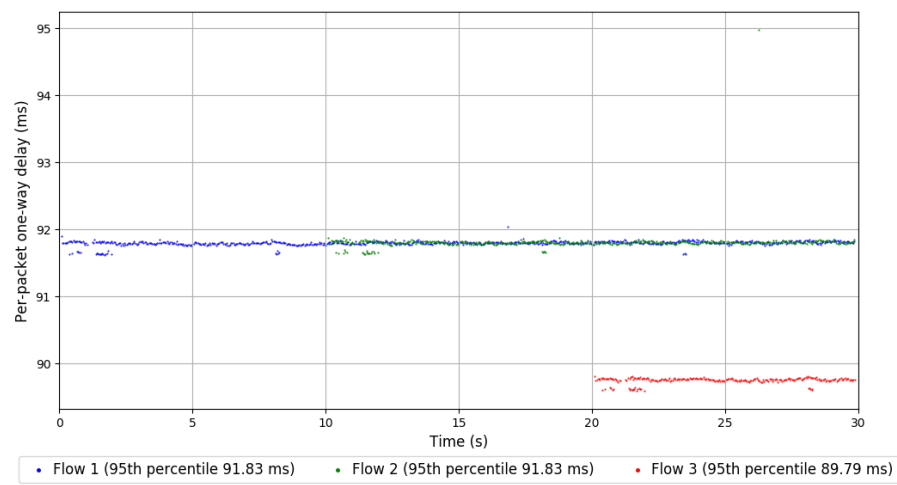
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-11-24 17:09:35
End at: 2019-11-24 17:10:05
Local clock offset: 0.072 ms
Remote clock offset: -7.659 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 91.073 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.080 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.004 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.009 ms
Loss rate: 1.46%
```
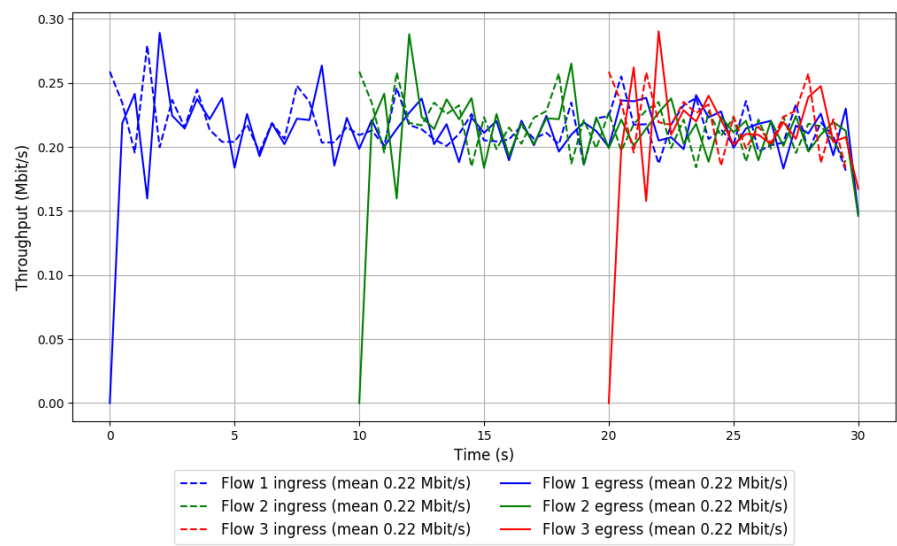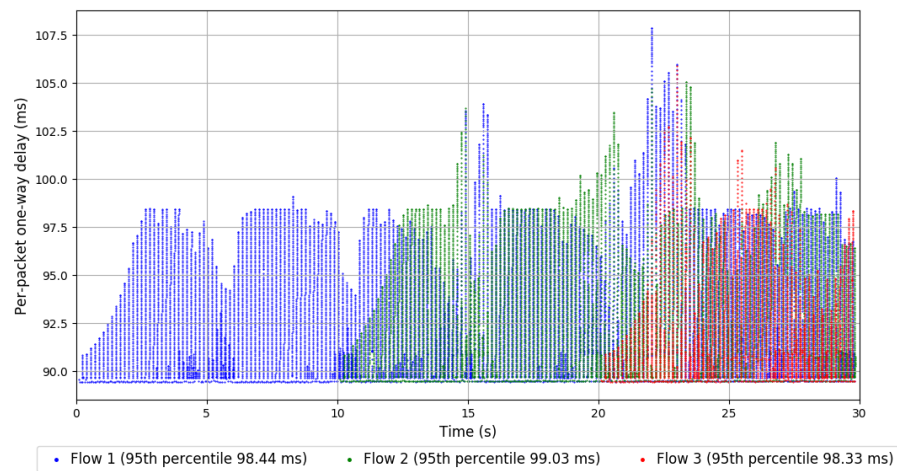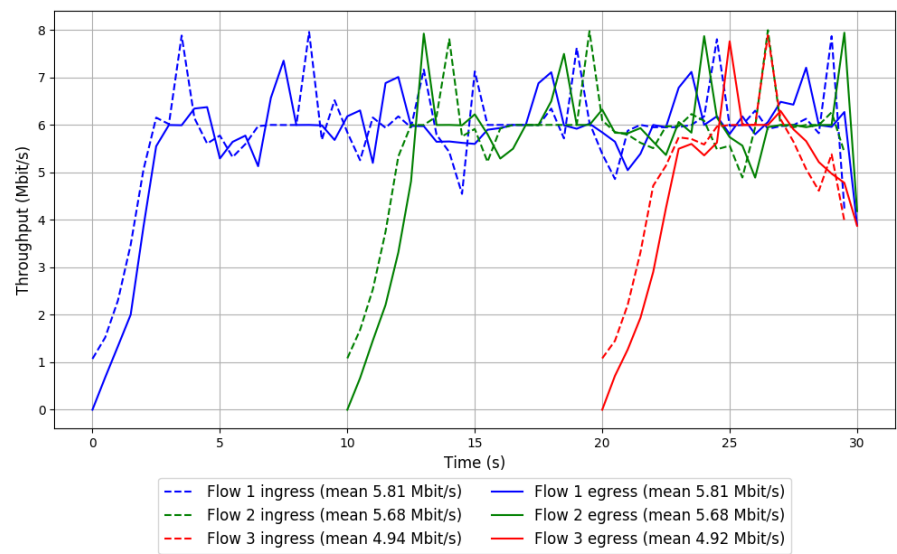
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-11-24 17:39:50
End at: 2019-11-24 17:40:20
Local clock offset: 0.885 ms
Remote clock offset: -7.496 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 91.682 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.605 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.659 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.710 ms
Loss rate: 1.45%
```
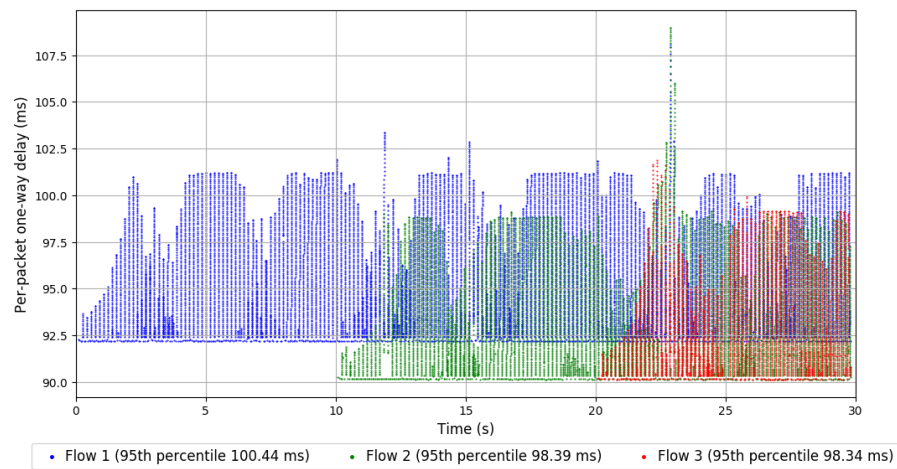
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-11-24 18:10:05
End at: 2019-11-24 18:10:35
Local clock offset: 0.982 ms
Remote clock offset: -8.14 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 91.828 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.828 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 91.833 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.787 ms
Loss rate: 1.45%
```
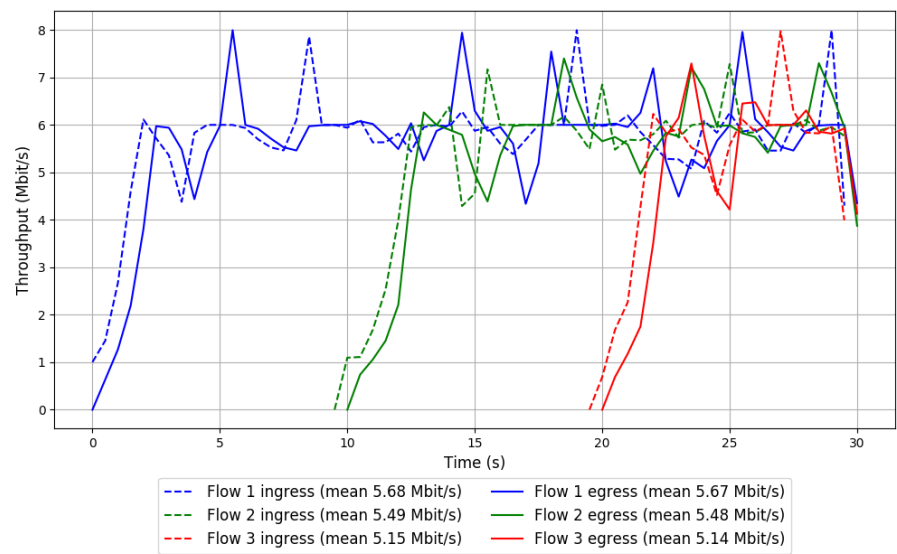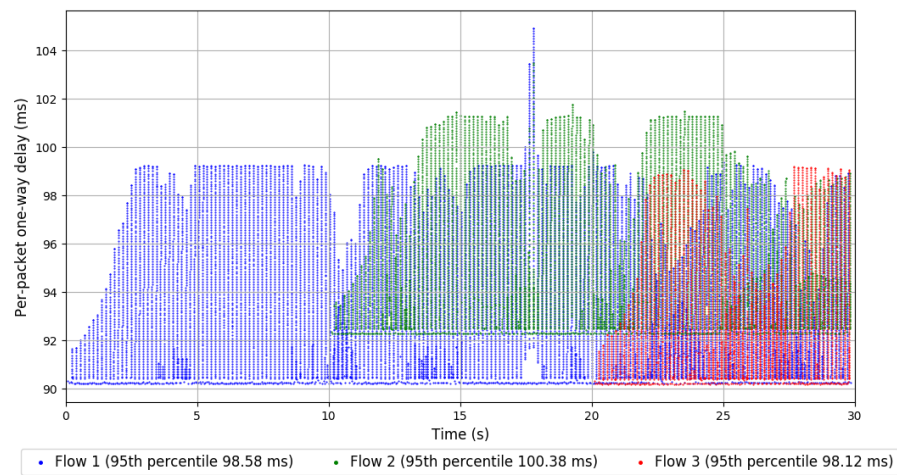
Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-11-24 16:01:39
End at: 2019-11-24 16:02:09
Local clock offset: -0.785 ms
Remote clock offset: -7.752 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.19 Mbit/s
95th percentile per-packet one-way delay: 98.662 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 98.443 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 5.68 Mbit/s
95th percentile per-packet one-way delay: 99.035 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 4.92 Mbit/s
95th percentile per-packet one-way delay: 98.331 ms
Loss rate: 2.05%
```
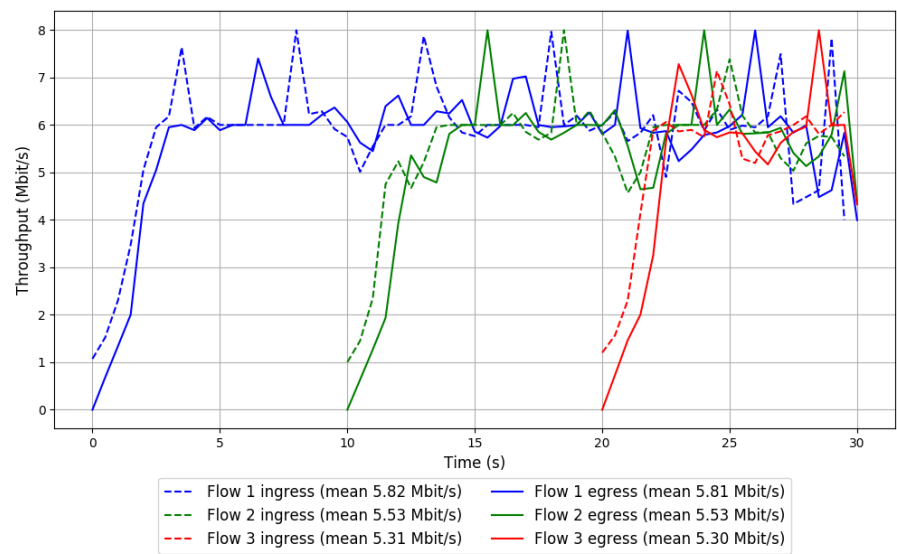
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-11-24 16:31:56
End at: 2019-11-24 16:32:26
Local clock offset: -0.776 ms
Remote clock offset: -9.095 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.99 Mbit/s
95th percentile per-packet one-way delay: 99.894 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 5.67 Mbit/s
95th percentile per-packet one-way delay: 100.442 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 98.390 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 5.14 Mbit/s
95th percentile per-packet one-way delay: 98.338 ms
Loss rate: 1.83%
```
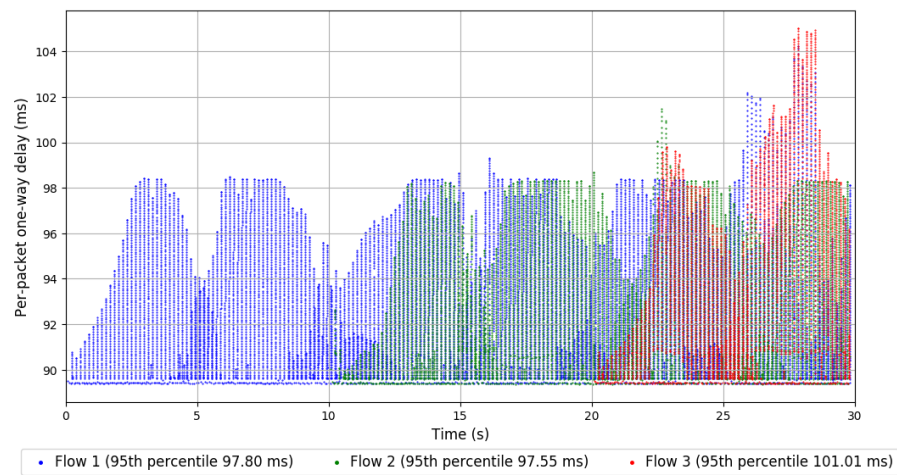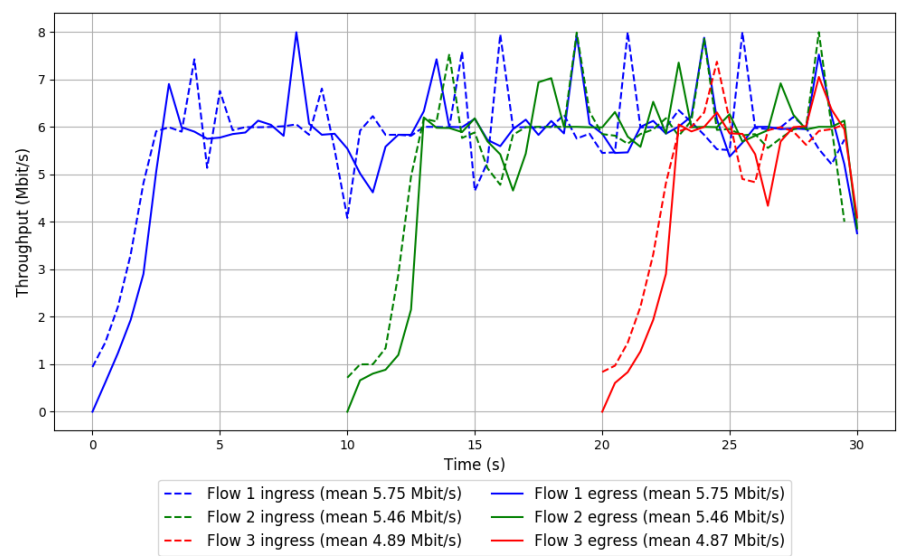
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-11-24 17:02:08
End at: 2019-11-24 17:02:38
Local clock offset: 0.664 ms
Remote clock offset: -8.592 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 11.20 Mbit/s
95th percentile per-packet one-way delay: 99.116 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 5.81 Mbit/s
95th percentile per-packet one-way delay: 98.577 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 5.53 Mbit/s
95th percentile per-packet one-way delay: 100.382 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 5.30 Mbit/s
95th percentile per-packet one-way delay: 98.124 ms
Loss rate: 1.86%
```
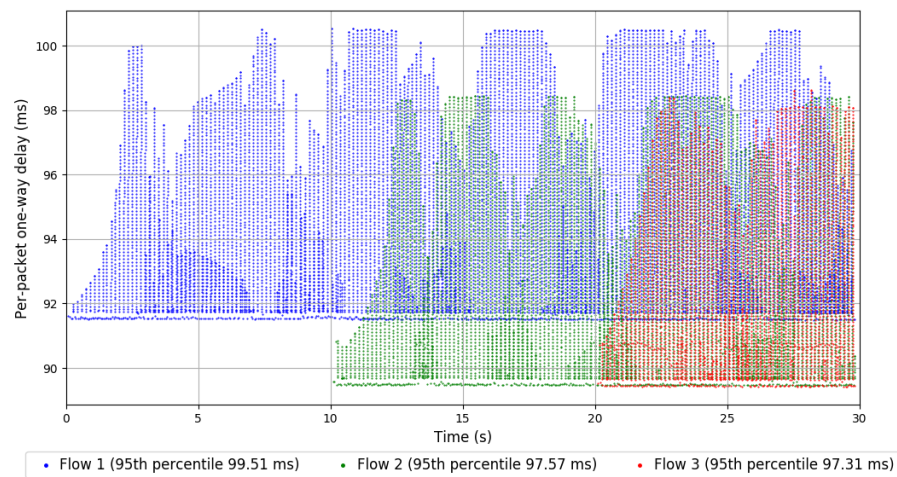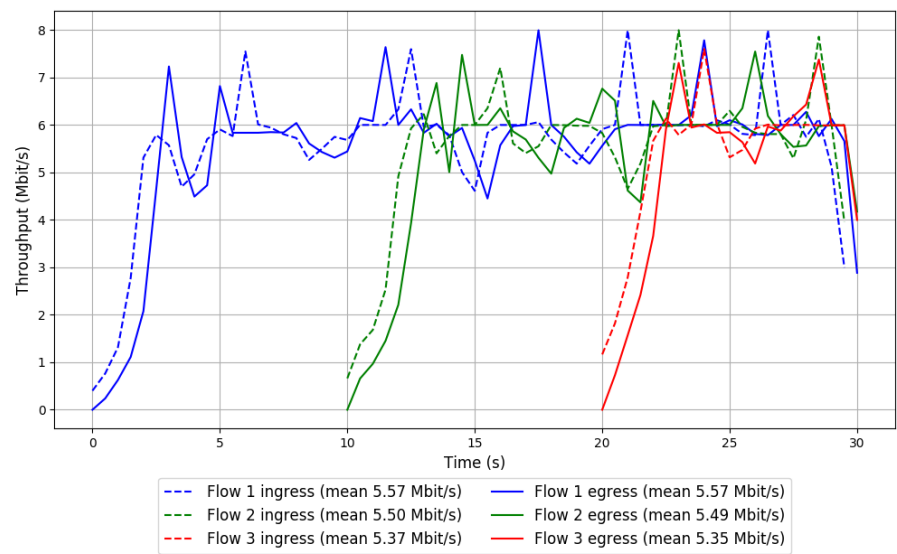
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-11-24 17:32:23
End at: 2019-11-24 17:32:53
Local clock offset: 0.742 ms
Remote clock offset: -7.408 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 98.059 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 5.75 Mbit/s
95th percentile per-packet one-way delay: 97.798 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 5.46 Mbit/s
95th percentile per-packet one-way delay: 97.548 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 101.013 ms
Loss rate: 2.04%
```
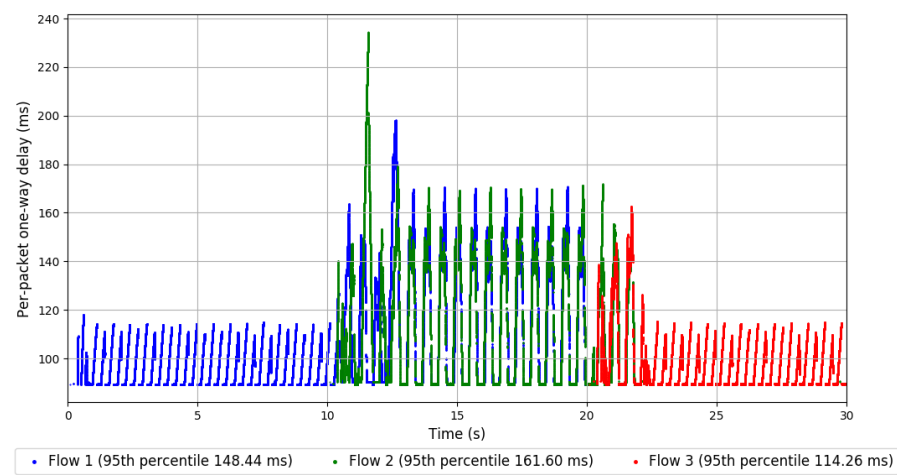
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-11-24 18:02:38
End at: 2019-11-24 18:03:08
Local clock offset: 0.23 ms
Remote clock offset: -8.435 ms


# Below is generated by plot.py at 2019-11-24 18:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.96 Mbit/s
95th percentile per-packet one-way delay: 98.749 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 5.57 Mbit/s
95th percentile per-packet one-way delay: 99.508 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 5.49 Mbit/s
95th percentile per-packet one-way delay: 97.569 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 5.35 Mbit/s
95th percentile per-packet one-way delay: 97.310 ms
Loss rate: 1.89%
```
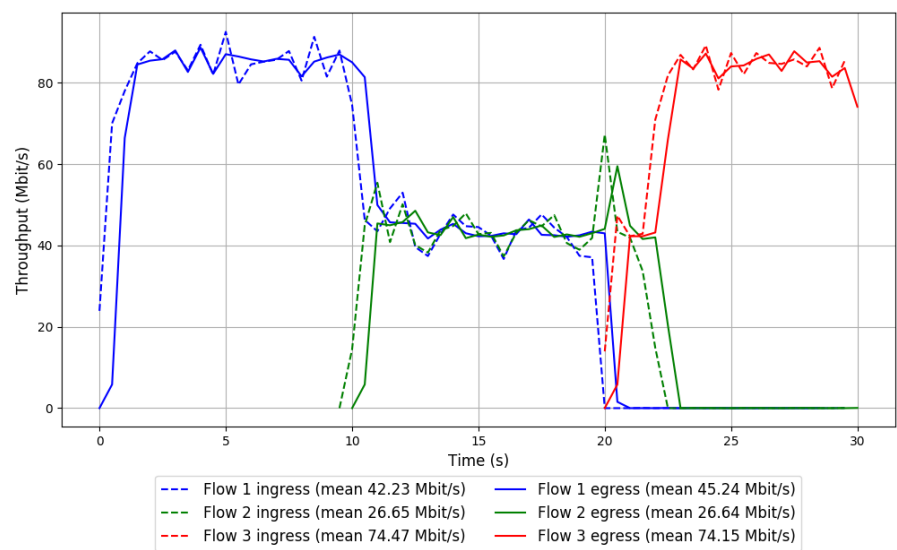
Run 5: Report of Sprout — Data Link

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

Start at: 2019-11-24 15:48:55
End at: 2019-11-24 15:49:25
Local clock offset: -1.532 ms
Remote clock offset: -9.368 ms


# Below is generated by plot.py at 2019-11-24 18:33:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.31 Mbit/s
95th percentile per-packet one-way delay: 149.732 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 45.24 Mbit/s
95th percentile per-packet one-way delay: 148.439 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 26.64 Mbit/s
95th percentile per-packet one-way delay: 161.600 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 74.15 Mbit/s
95th percentile per-packet one-way delay: 114.260 ms
Loss rate: 1.83%
```

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

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

Start at: 2019-11-24 16:19:11
End at: 2019-11-24 16:19:41
Local clock offset: -0.759 ms
Remote clock offset: -8.0 ms

# Below is generated by plot.py at 2019-11-24 18:33:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.77 Mbit/s
95th percentile per-packet one-way delay: 149.224 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 42.24 Mbit/s
95th percentile per-packet one-way delay: 147.504 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 25.86 Mbit/s
95th percentile per-packet one-way delay: 161.846 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 115.837 ms
Loss rate: 1.88%
```
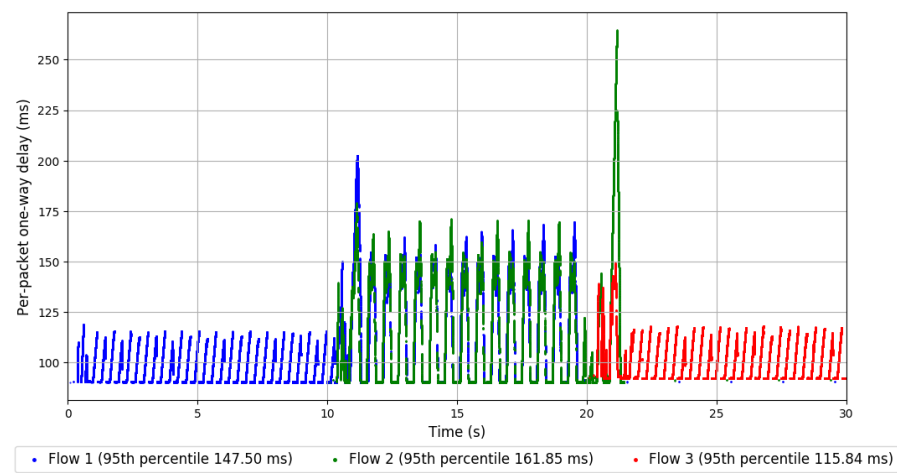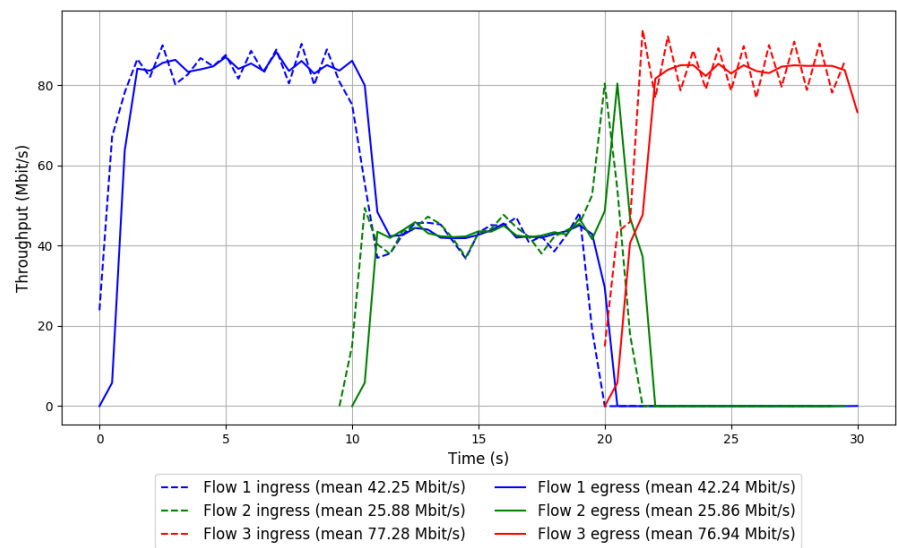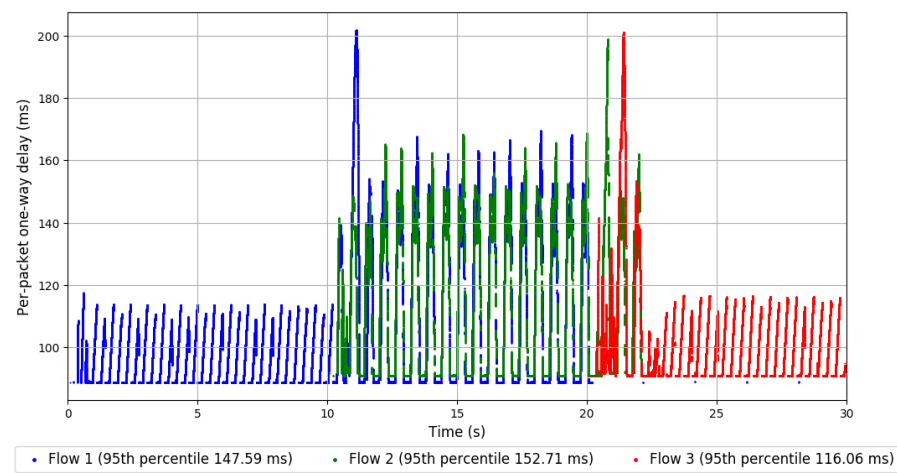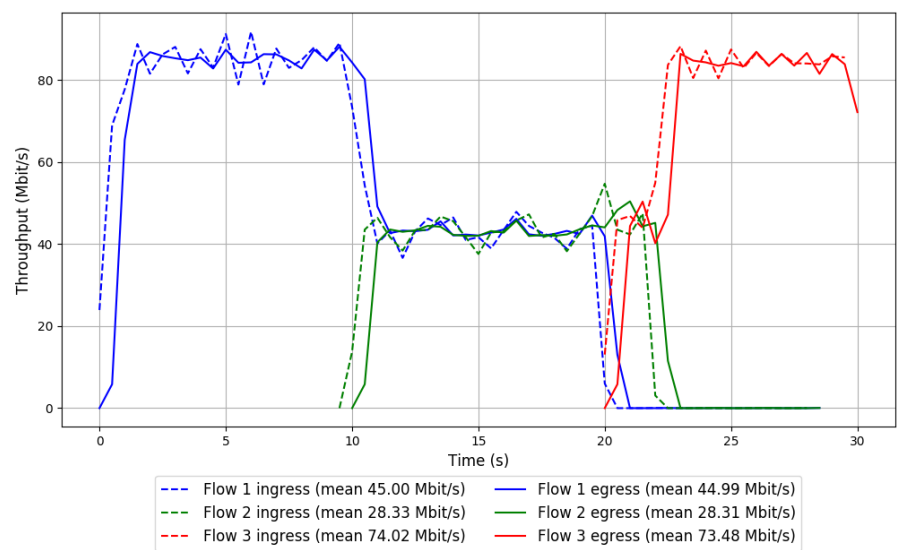
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 42.25 Mbit/s)   Flow 1 egress (mean 42.24 Mbit/s)
Flow 2 ingress (mean 25.88 Mbit/s)   Flow 2 egress (mean 25.86 Mbit/s)
Flow 3 ingress (mean 77.28 Mbit/s)   Flow 3 egress (mean 76.94 Mbit/s)

Flow 1 (95th percentile 147.50 ms)   Flow 2 (95th percentile 161.85 ms)   Flow 3 (95th percentile 115.84 ms)

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

Start at: 2019-11-24 16:49:24
End at: 2019-11-24 16:49:54
Local clock offset: -0.559 ms
Remote clock offset: -8.759 ms

# Below is generated by plot.py at 2019-11-24 18:33:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.69 Mbit/s
95th percentile per-packet one-way delay: 148.752 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 44.99 Mbit/s
95th percentile per-packet one-way delay: 147.595 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 28.31 Mbit/s
95th percentile per-packet one-way delay: 152.709 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 73.48 Mbit/s
95th percentile per-packet one-way delay: 116.065 ms
Loss rate: 2.01%
```

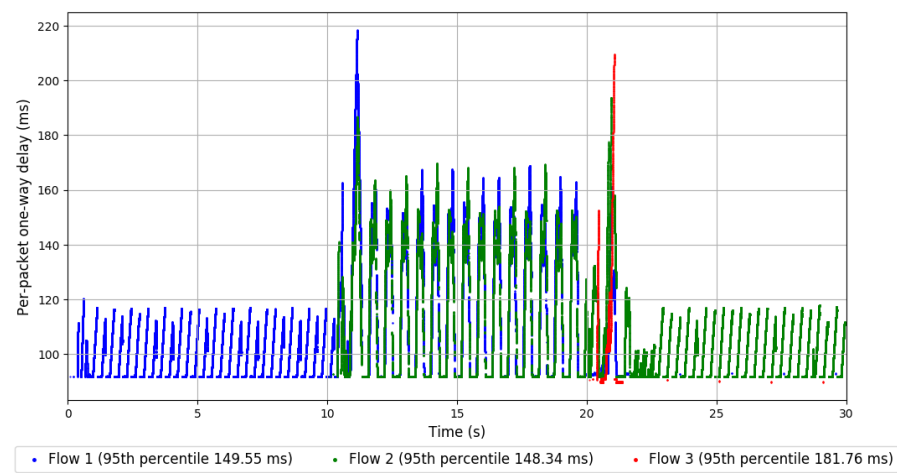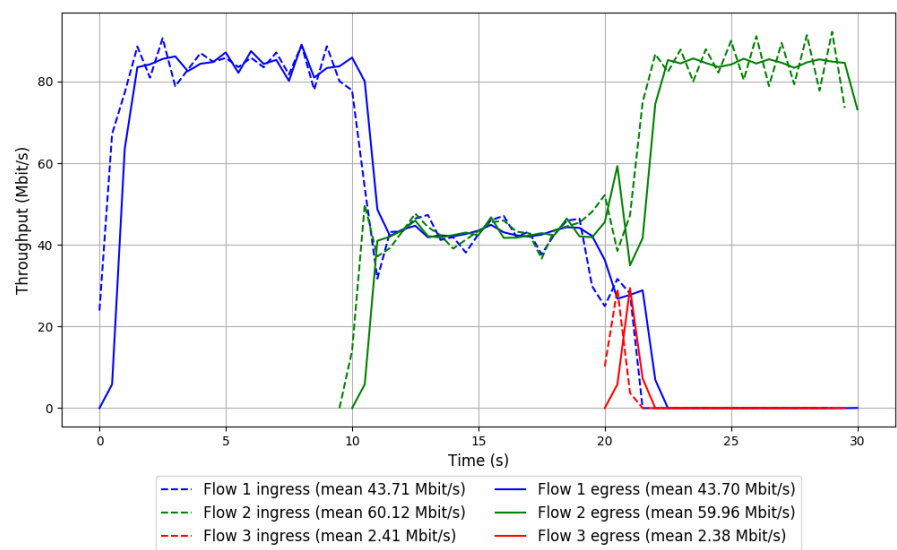Run 3: Report of TaoVA-100x — Data Link

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

Start at: 2019-11-24 17:19:38
End at: 2019-11-24 17:20:08
Local clock offset: 0.67 ms
Remote clock offset: -7.414 ms


# Below is generated by plot.py at 2019-11-24 18:33:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.78 Mbit/s
95th percentile per-packet one-way delay: 148.974 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 43.70 Mbit/s
95th percentile per-packet one-way delay: 149.550 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 59.96 Mbit/s
95th percentile per-packet one-way delay: 148.343 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 181.763 ms
Loss rate: 1.39%
```
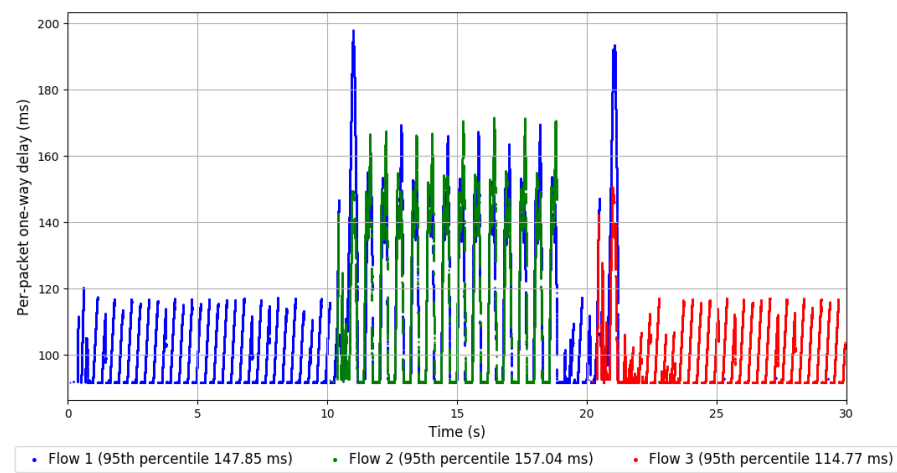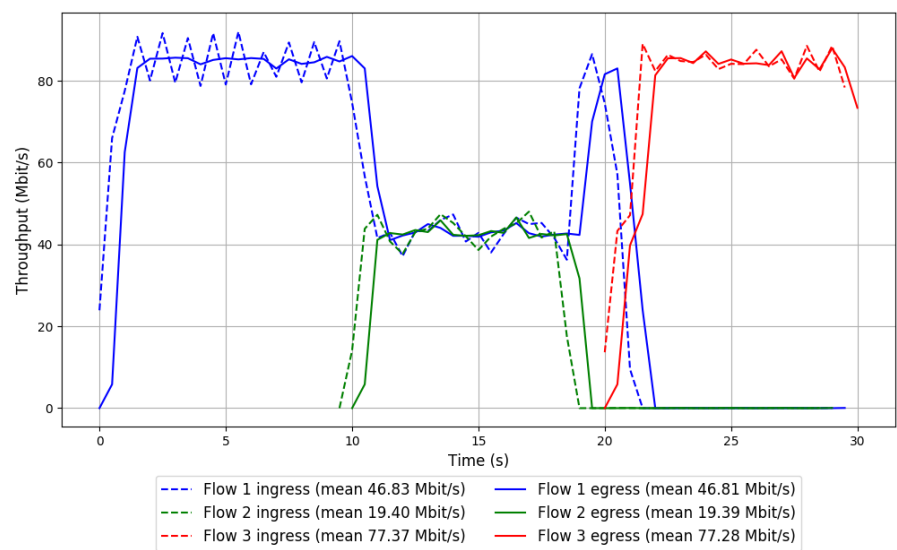
Run 4: Report of TaoVA-100x — Data Link

- - - - Flow 1 ingress (mean 43.71 Mbit/s)   —— Flow 1 egress (mean 43.70 Mbit/s)
- - - - Flow 2 ingress (mean 60.12 Mbit/s)   —— Flow 2 egress (mean 59.96 Mbit/s)
- - - - Flow 3 ingress (mean 2.41 Mbit/s)   —— Flow 3 egress (mean 2.38 Mbit/s)

• Flow 1 (95th percentile 149.55 ms)   • Flow 2 (95th percentile 148.34 ms)   • Flow 3 (95th percentile 181.76 ms)

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

Start at: 2019-11-24 17:49:53
End at: 2019-11-24 17:50:23
Local clock offset: 0.144 ms
Remote clock offset: -8.323 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.42 Mbit/s
95th percentile per-packet one-way delay: 148.720 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 46.81 Mbit/s
95th percentile per-packet one-way delay: 147.852 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 19.39 Mbit/s
95th percentile per-packet one-way delay: 157.037 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 77.28 Mbit/s
95th percentile per-packet one-way delay: 114.766 ms
Loss rate: 1.55%
```

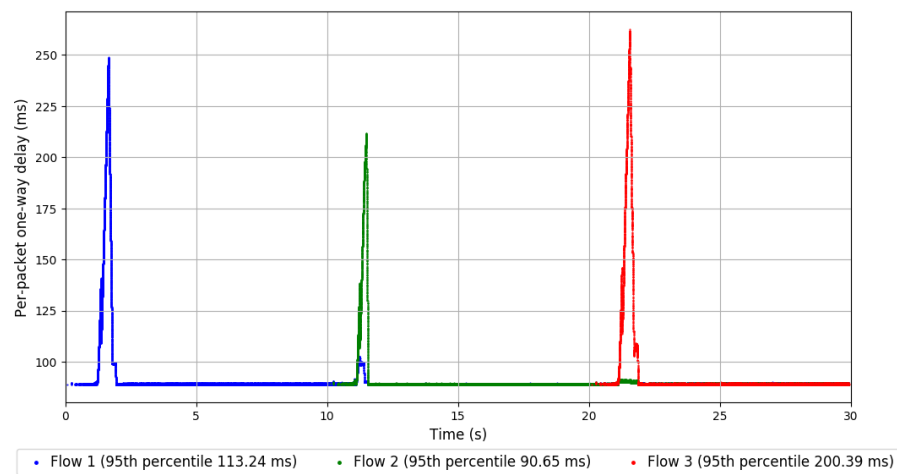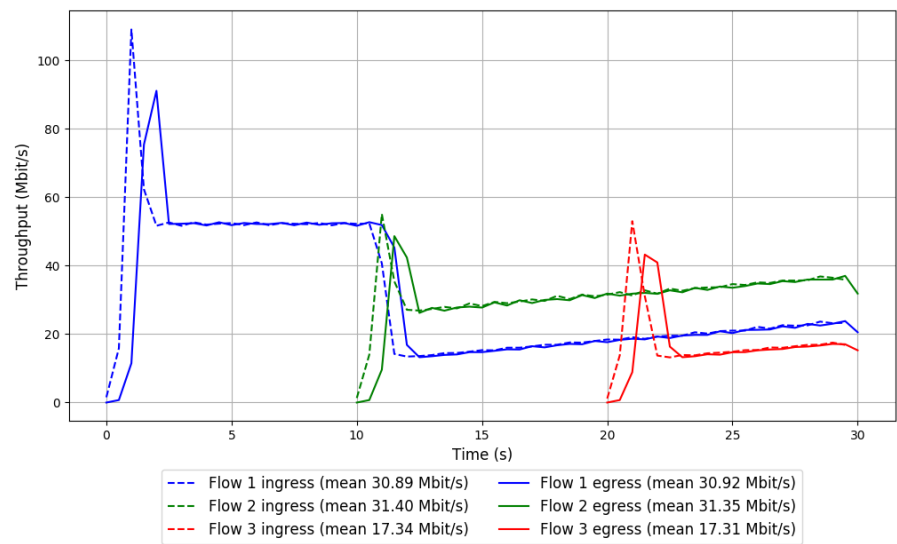# Run 5: Report of TaoVA-100x — Data Link

```
Run 1: Statistics of TCP Vegas

Start at: 2019-11-24 15:51:30
End at: 2019-11-24 15:52:00
Local clock offset: -1.523 ms
Remote clock offset: -8.555 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 57.44 Mbit/s
95th percentile per-packet one-way delay: 116.675 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 30.92 Mbit/s
95th percentile per-packet one-way delay: 113.242 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 31.35 Mbit/s
95th percentile per-packet one-way delay: 90.648 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 17.31 Mbit/s
95th percentile per-packet one-way delay: 200.386 ms
Loss rate: 1.54%
```

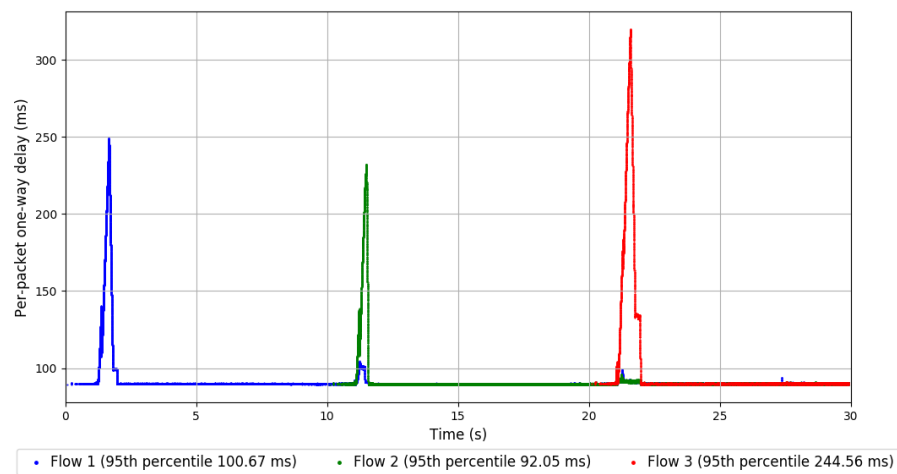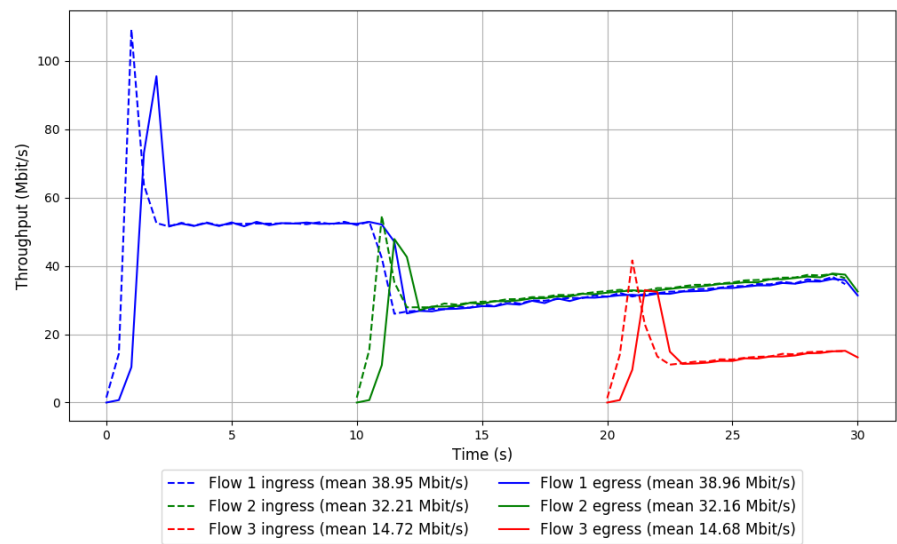Run 1: Report of TCP Vegas — Data Link

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```
Run 2: Statistics of TCP Vegas

Start at: 2019-11-24 16:21:46
End at: 2019-11-24 16:22:16
Local clock offset: -0.845 ms
Remote clock offset: -7.749 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.16 Mbit/s
95th percentile per-packet one-way delay: 109.595 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 38.96 Mbit/s
95th percentile per-packet one-way delay: 100.670 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 32.16 Mbit/s
95th percentile per-packet one-way delay: 92.047 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 14.68 Mbit/s
95th percentile per-packet one-way delay: 244.560 ms
Loss rate: 1.67%
```

Run 2: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 38.95 Mbit/s) — Flow 1 egress (mean 38.96 Mbit/s)
Flow 2 ingress (mean 32.21 Mbit/s) — Flow 2 egress (mean 32.16 Mbit/s)
Flow 3 ingress (mean 14.72 Mbit/s) — Flow 3 egress (mean 14.68 Mbit/s)

Flow 1 (95th percentile 100.67 ms) • Flow 2 (95th percentile 92.05 ms) • Flow 3 (95th percentile 244.56 ms)
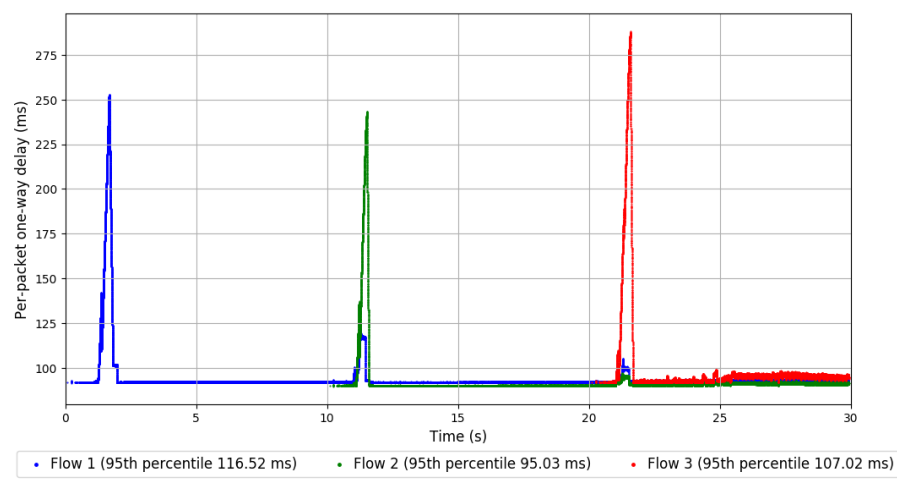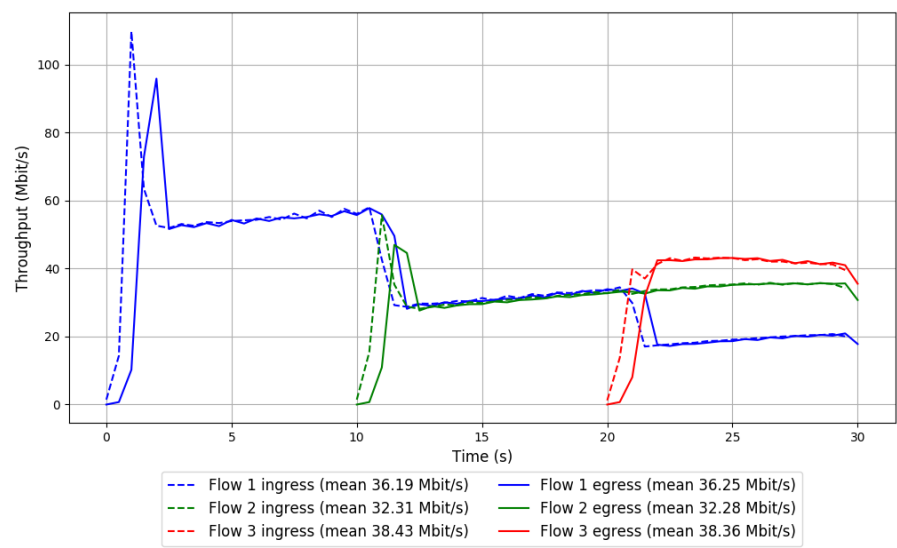
```
Run 3: Statistics of TCP Vegas

Start at: 2019-11-24 16:51:59
End at: 2019-11-24 16:52:29
Local clock offset: 0.322 ms
Remote clock offset: -8.853 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 70.33 Mbit/s
95th percentile per-packet one-way delay: 106.917 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 36.25 Mbit/s
95th percentile per-packet one-way delay: 116.518 ms
Loss rate: 0.30%
-- Flow 2:
Average throughput: 32.28 Mbit/s
95th percentile per-packet one-way delay: 95.032 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 38.36 Mbit/s
95th percentile per-packet one-way delay: 107.016 ms
Loss rate: 1.61%
```

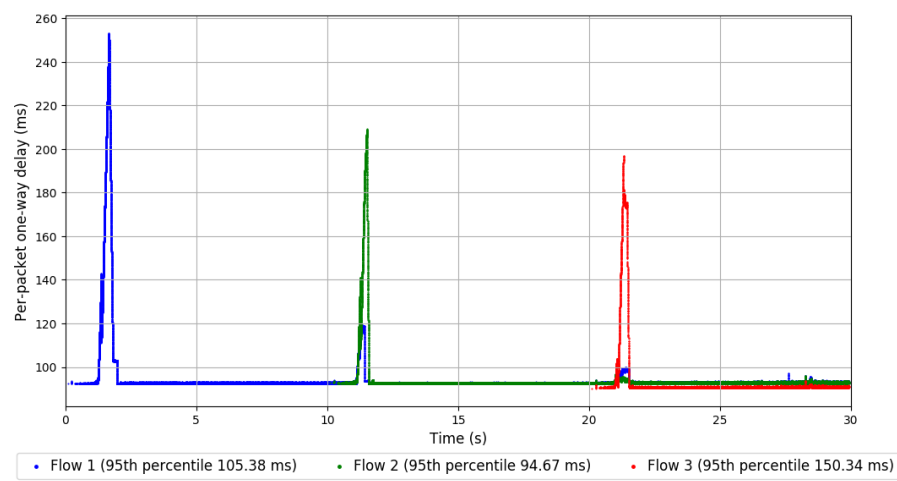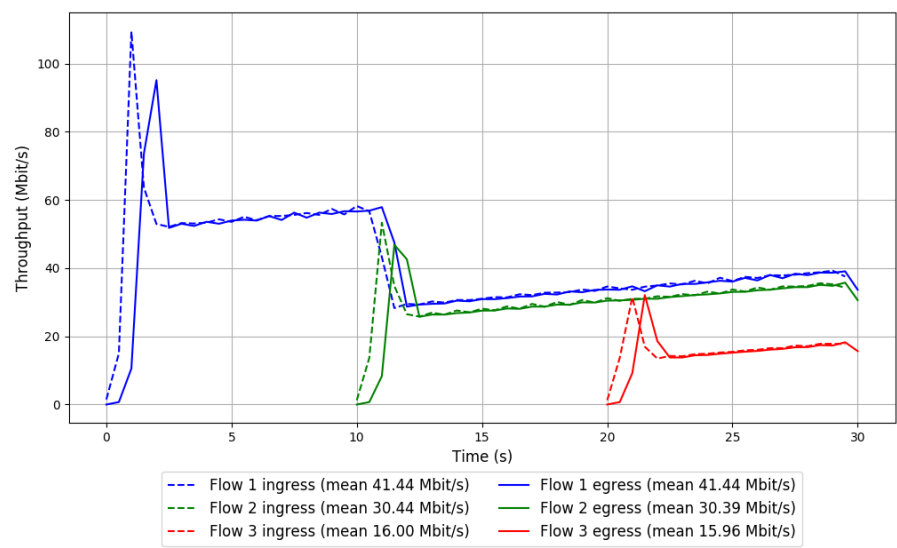Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-11-24 17:22:13
End at: 2019-11-24 17:22:43
Local clock offset: 0.726 ms
Remote clock offset: -8.035 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 66.88 Mbit/s
95th percentile per-packet one-way delay: 103.818 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 41.44 Mbit/s
95th percentile per-packet one-way delay: 105.382 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 30.39 Mbit/s
95th percentile per-packet one-way delay: 94.674 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 15.96 Mbit/s
95th percentile per-packet one-way delay: 150.345 ms
Loss rate: 1.67%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 41.44 Mbit/s) — — — —   Flow 1 egress (mean 41.44 Mbit/s) ———
Flow 2 ingress (mean 30.44 Mbit/s) — — — —   Flow 2 egress (mean 30.39 Mbit/s) ———
Flow 3 ingress (mean 16.00 Mbit/s) — — — —   Flow 3 egress (mean 15.96 Mbit/s) ———

Flow 1 (95th percentile 105.38 ms)   Flow 2 (95th percentile 94.67 ms)   Flow 3 (95th percentile 150.34 ms)
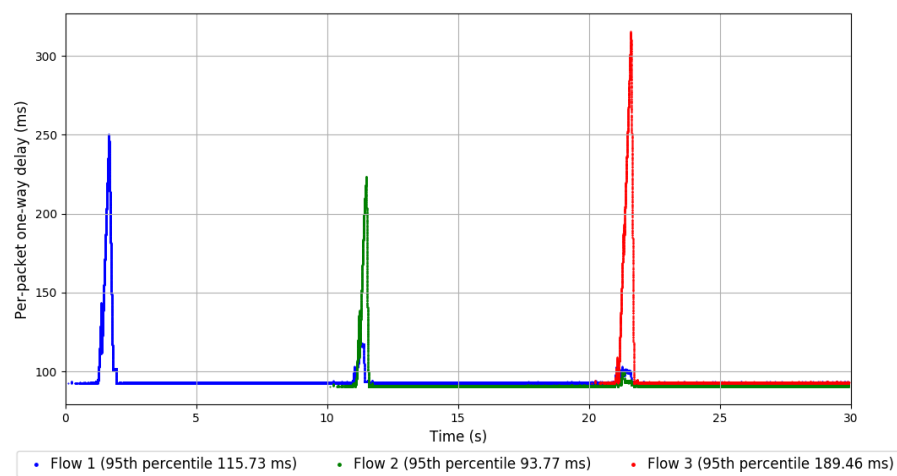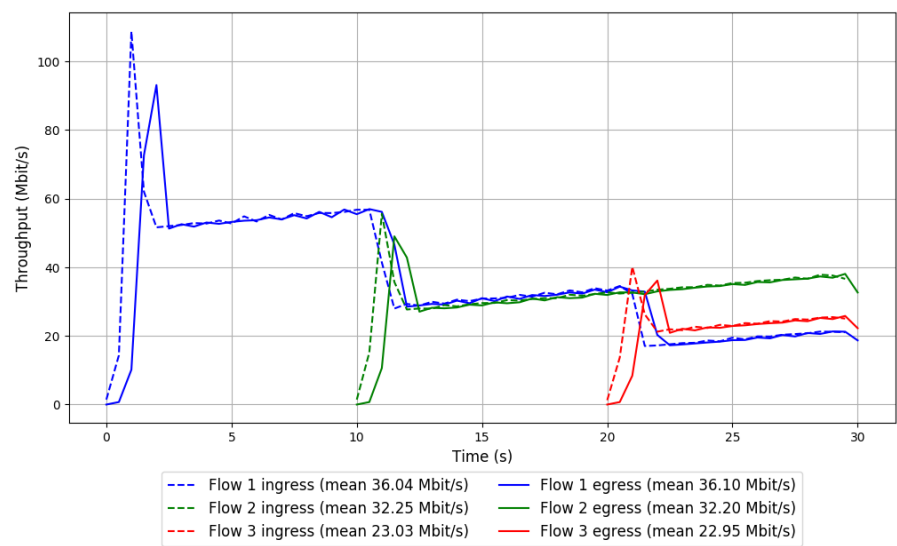
```
Run 5: Statistics of TCP Vegas

Start at: 2019-11-24 17:52:28
End at: 2019-11-24 17:52:58
Local clock offset: 0.919 ms
Remote clock offset: -8.263 ms


# Below is generated by plot.py at 2019-11-24 18:33:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 65.06 Mbit/s
95th percentile per-packet one-way delay: 112.844 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 36.10 Mbit/s
95th percentile per-packet one-way delay: 115.730 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 32.20 Mbit/s
95th percentile per-packet one-way delay: 93.774 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 22.95 Mbit/s
95th percentile per-packet one-way delay: 189.458 ms
Loss rate: 1.75%
```
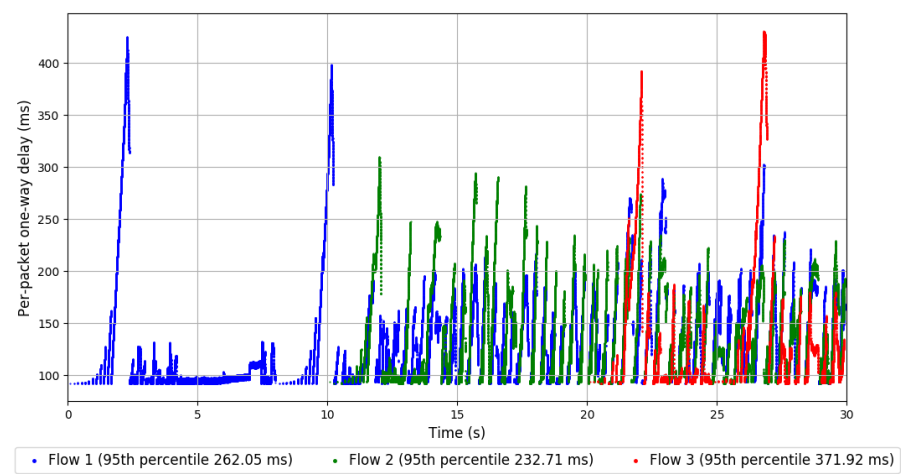
Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 36.04 Mbit/s) — Flow 1 egress (mean 36.10 Mbit/s)
Flow 2 ingress (mean 32.25 Mbit/s) — Flow 2 egress (mean 32.20 Mbit/s)
Flow 3 ingress (mean 23.03 Mbit/s) — Flow 3 egress (mean 22.95 Mbit/s)

Flow 1 (95th percentile 115.73 ms) · Flow 2 (95th percentile 93.77 ms) · Flow 3 (95th percentile 189.46 ms)
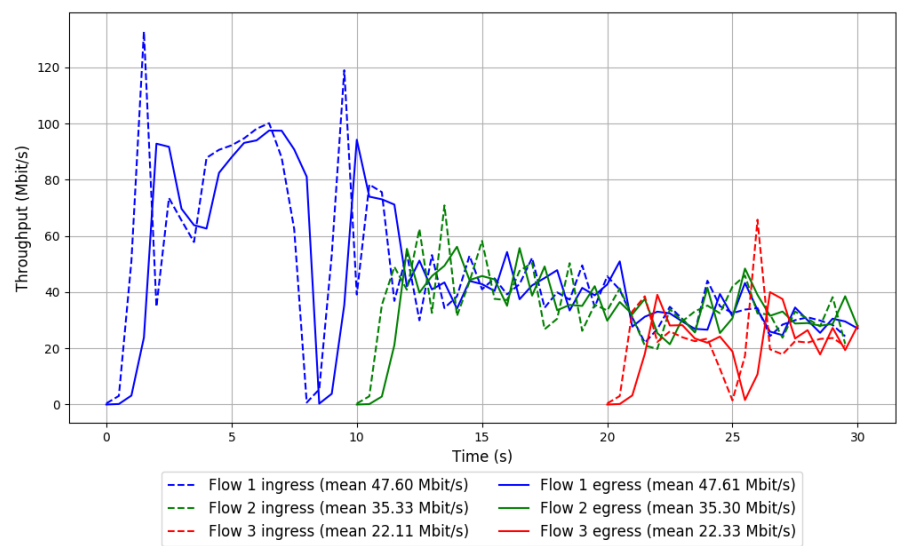
214

```
Run 1: Statistics of Verus

Start at: 2019-11-24 15:59:06
End at: 2019-11-24 15:59:36
Local clock offset: -0.765 ms
Remote clock offset: -7.957 ms


# Below is generated by plot.py at 2019-11-24 18:34:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.40 Mbit/s
95th percentile per-packet one-way delay: 255.965 ms
Loss rate: 0.51%
-- Flow 1:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 262.053 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 35.30 Mbit/s
95th percentile per-packet one-way delay: 232.709 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 22.33 Mbit/s
95th percentile per-packet one-way delay: 371.918 ms
Loss rate: 0.62%
```
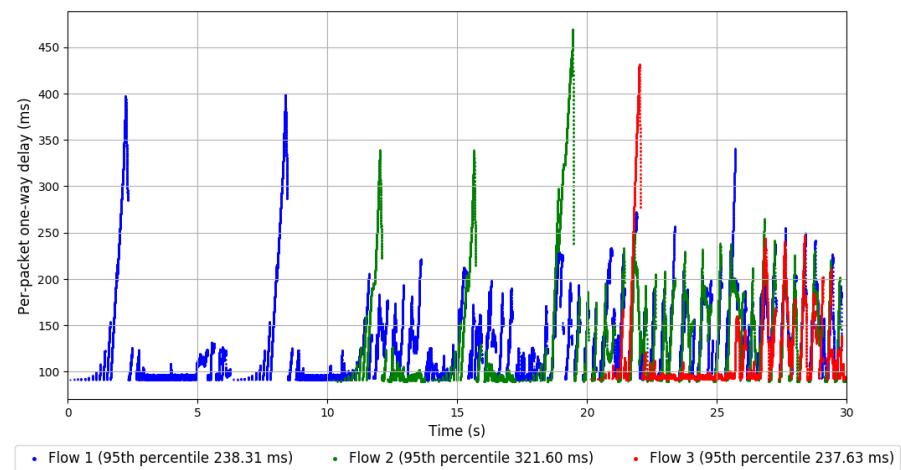
Run 1: Report of Verus — Data Link

Flow 1 ingress (mean 47.60 Mbit/s) — Flow 1 egress (mean 47.61 Mbit/s)
Flow 2 ingress (mean 35.33 Mbit/s) — Flow 2 egress (mean 35.30 Mbit/s)
Flow 3 ingress (mean 22.11 Mbit/s) — Flow 3 egress (mean 22.33 Mbit/s)

Flow 1 (95th percentile 262.05 ms)   Flow 2 (95th percentile 232.71 ms)   Flow 3 (95th percentile 371.92 ms)

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```
Run 2: Statistics of Verus

Start at: 2019-11-24 16:29:23
End at: 2019-11-24 16:29:53
Local clock offset: -0.838 ms
Remote clock offset: -8.28 ms


# Below is generated by plot.py at 2019-11-24 18:34:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.99 Mbit/s
95th percentile per-packet one-way delay: 263.528 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 49.98 Mbit/s
95th percentile per-packet one-way delay: 238.310 ms
Loss rate: 0.72%
-- Flow 2:
Average throughput: 29.11 Mbit/s
95th percentile per-packet one-way delay: 321.604 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 26.36 Mbit/s
95th percentile per-packet one-way delay: 237.628 ms
Loss rate: 2.45%
```
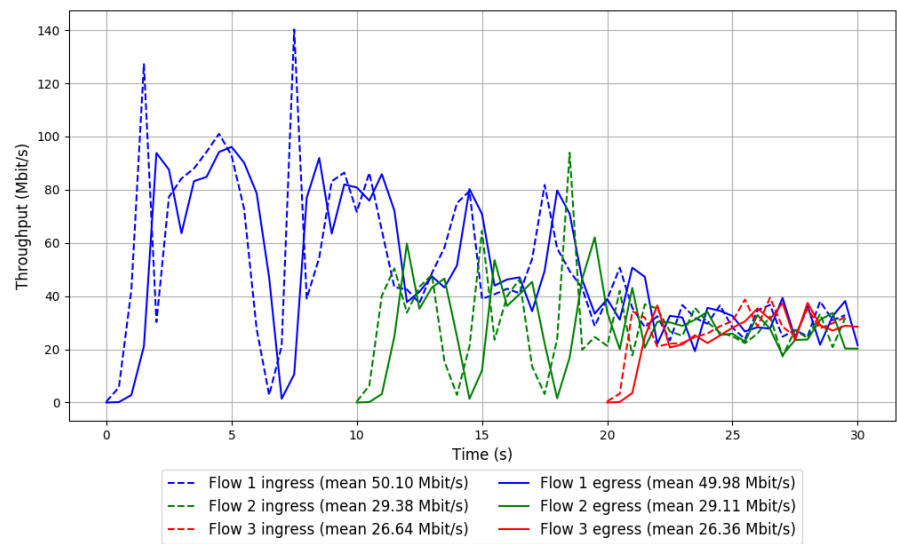
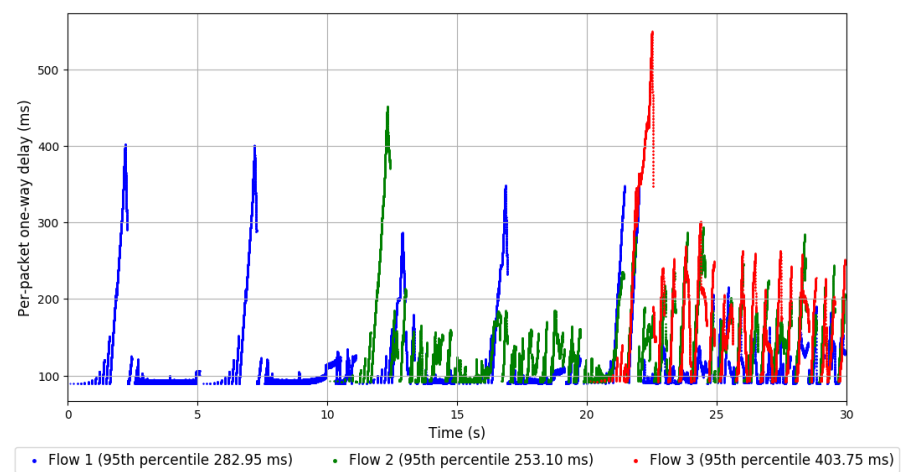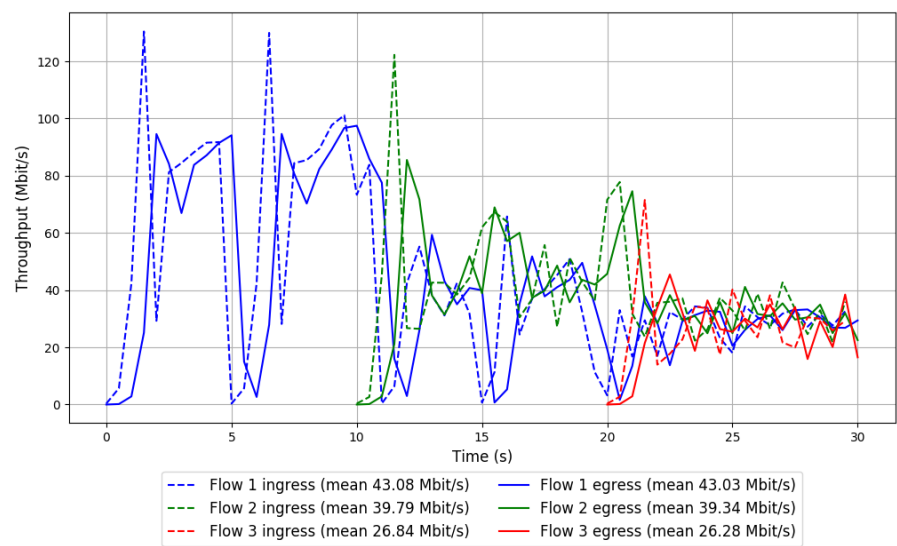Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-11-24 16:59:36
End at: 2019-11-24 17:00:06
Local clock offset: -0.156 ms
Remote clock offset: -8.699 ms


# Below is generated by plot.py at 2019-11-24 18:34:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.81 Mbit/s
95th percentile per-packet one-way delay: 291.554 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 43.03 Mbit/s
95th percentile per-packet one-way delay: 282.953 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 39.34 Mbit/s
95th percentile per-packet one-way delay: 253.101 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 403.753 ms
Loss rate: 3.42%
```
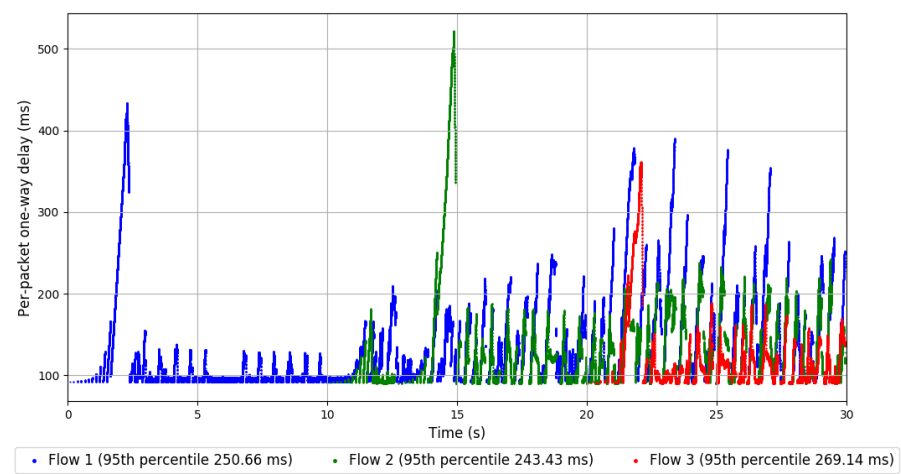
Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 43.08 Mbit/s) --- Flow 1 egress (mean 43.03 Mbit/s)
Flow 2 ingress (mean 39.79 Mbit/s) --- Flow 2 egress (mean 39.34 Mbit/s)
Flow 3 ingress (mean 26.84 Mbit/s) --- Flow 3 egress (mean 26.28 Mbit/s)

Flow 1 (95th percentile 282.95 ms)   Flow 2 (95th percentile 253.10 ms)   Flow 3 (95th percentile 403.75 ms)
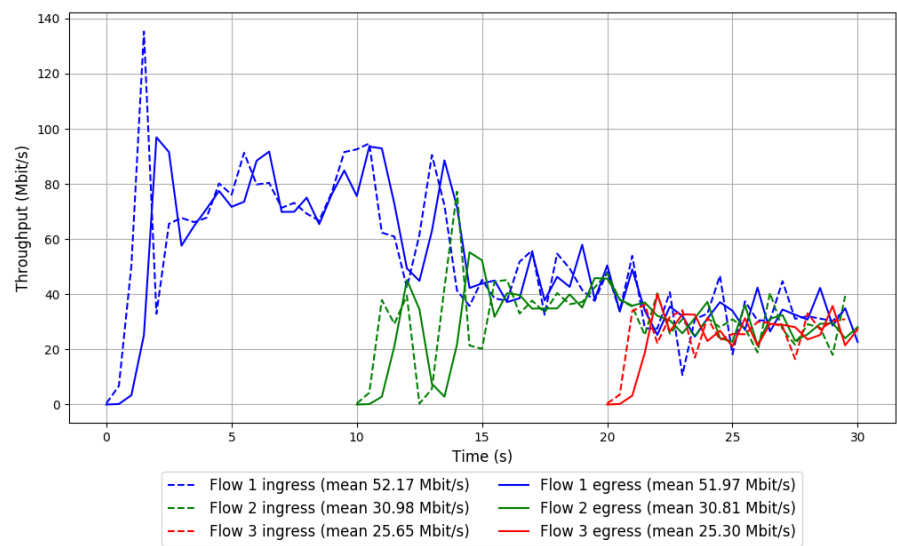
```
Run 4: Statistics of Verus

Start at: 2019-11-24 17:29:50
End at: 2019-11-24 17:30:20
Local clock offset: 0.778 ms
Remote clock offset: -7.366 ms


# Below is generated by plot.py at 2019-11-24 18:34:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.78 Mbit/s
95th percentile per-packet one-way delay: 252.226 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 51.97 Mbit/s
95th percentile per-packet one-way delay: 250.662 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 30.81 Mbit/s
95th percentile per-packet one-way delay: 243.433 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 25.30 Mbit/s
95th percentile per-packet one-way delay: 269.136 ms
Loss rate: 2.76%
```

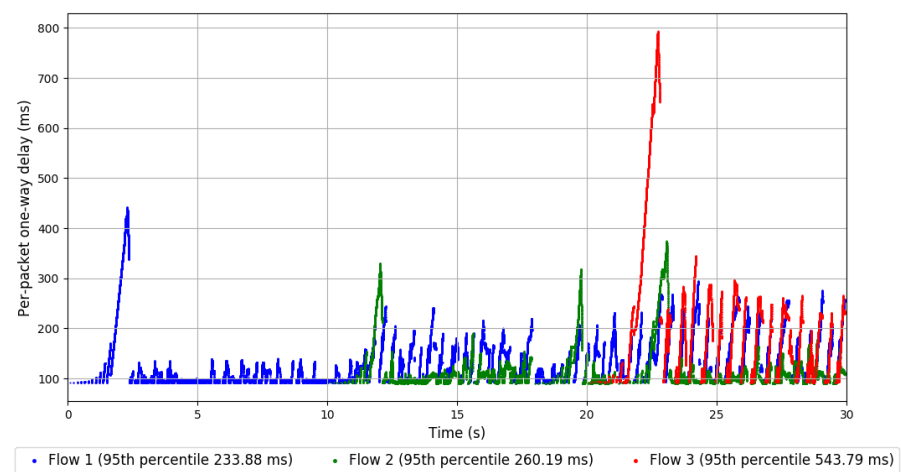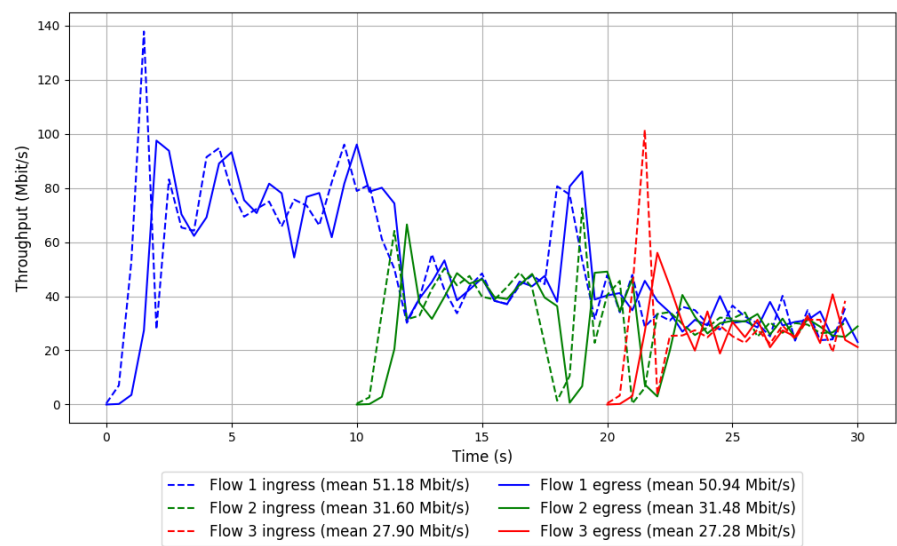Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-11-24 18:00:05
End at: 2019-11-24 18:00:35
Local clock offset: 0.967 ms
Remote clock offset: -7.546 ms


# Below is generated by plot.py at 2019-11-24 18:34:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.82 Mbit/s
95th percentile per-packet one-way delay: 263.233 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 50.94 Mbit/s
95th percentile per-packet one-way delay: 233.885 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 31.48 Mbit/s
95th percentile per-packet one-way delay: 260.193 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 27.28 Mbit/s
95th percentile per-packet one-way delay: 543.788 ms
Loss rate: 3.62%
```

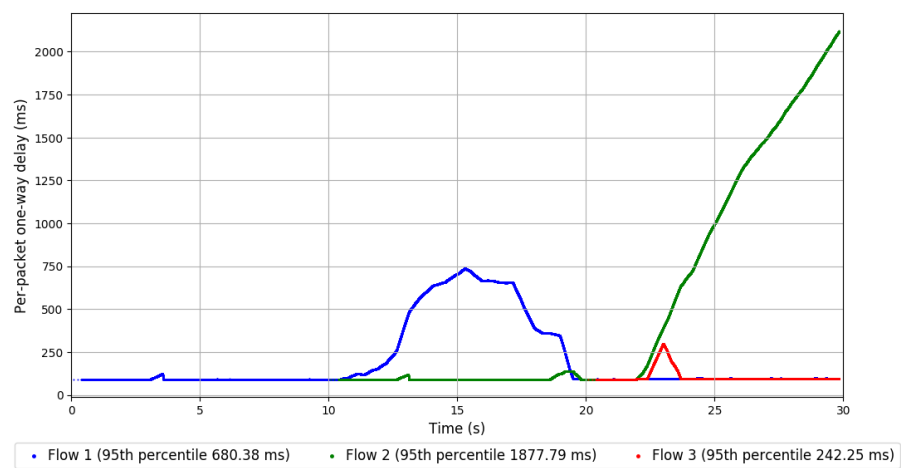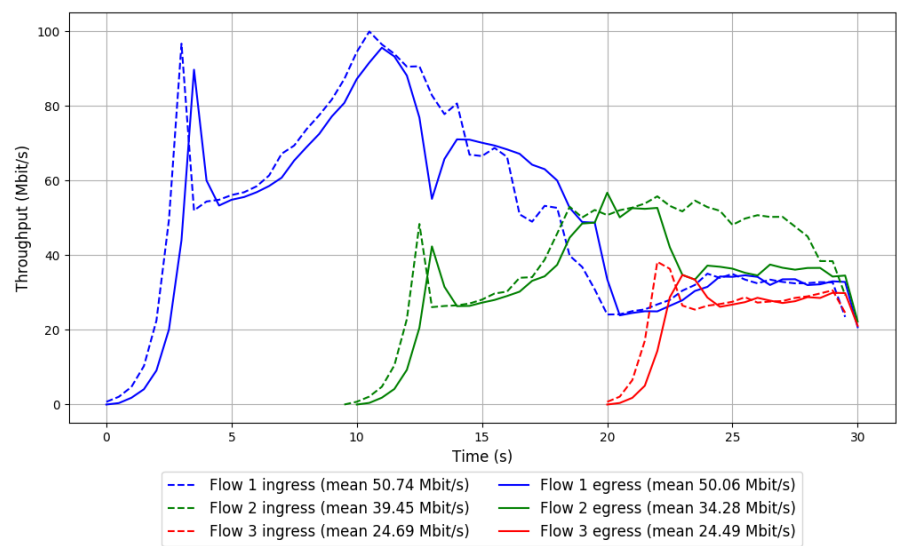Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-11-24 16:12:53
End at: 2019-11-24 16:13:23
Local clock offset: -1.515 ms
Remote clock offset: -8.054 ms


# Below is generated by plot.py at 2019-11-24 18:34:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.83 Mbit/s
95th percentile per-packet one-way delay: 1386.713 ms
Loss rate: 5.51%
-- Flow 1:
Average throughput: 50.06 Mbit/s
95th percentile per-packet one-way delay: 680.381 ms
Loss rate: 1.82%
-- Flow 2:
Average throughput: 34.28 Mbit/s
95th percentile per-packet one-way delay: 1877.789 ms
Loss rate: 13.69%
-- Flow 3:
Average throughput: 24.49 Mbit/s
95th percentile per-packet one-way delay: 242.253 ms
Loss rate: 2.19%
```

Run 1: Report of PCC-Vivace — Data Link

- - - Flow 1 ingress (mean 50.74 Mbit/s) —— Flow 1 egress (mean 50.06 Mbit/s)
- - - Flow 2 ingress (mean 39.45 Mbit/s) —— Flow 2 egress (mean 34.28 Mbit/s)
- - - Flow 3 ingress (mean 24.69 Mbit/s) —— Flow 3 egress (mean 24.49 Mbit/s)

• Flow 1 (95th percentile 680.38 ms)   • Flow 2 (95th percentile 1877.79 ms)   • Flow 3 (95th percentile 242.25 ms)
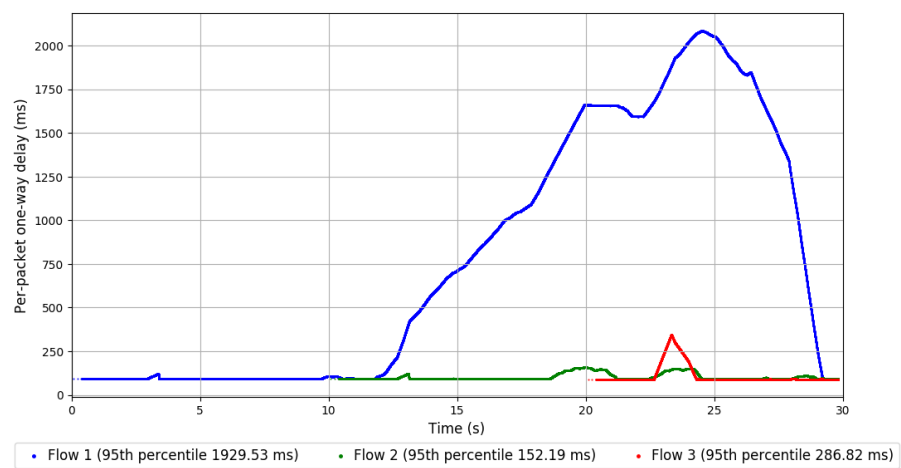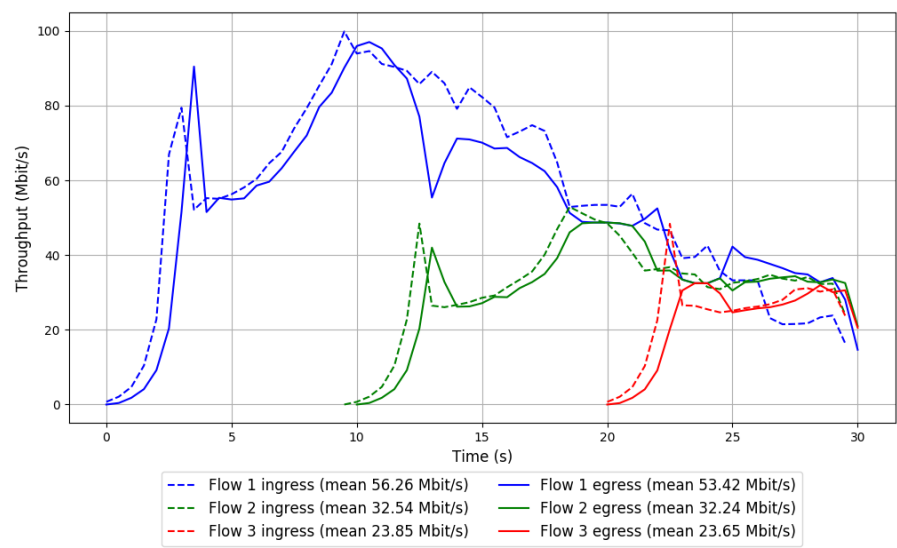
```
Run 2: Statistics of PCC-Vivace

Start at: 2019-11-24 16:43:09
End at: 2019-11-24 16:43:39
Local clock offset: -0.294 ms
Remote clock offset: -8.691 ms


# Below is generated by plot.py at 2019-11-24 18:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.55 Mbit/s
95th percentile per-packet one-way delay: 1816.941 ms
Loss rate: 4.22%
-- Flow 1:
Average throughput: 53.42 Mbit/s
95th percentile per-packet one-way delay: 1929.534 ms
Loss rate: 5.50%
-- Flow 2:
Average throughput: 32.24 Mbit/s
95th percentile per-packet one-way delay: 152.185 ms
Loss rate: 1.62%
-- Flow 3:
Average throughput: 23.65 Mbit/s
95th percentile per-packet one-way delay: 286.817 ms
Loss rate: 2.26%
```

Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 56.26 Mbit/s)   Flow 1 egress (mean 53.42 Mbit/s)
Flow 2 ingress (mean 32.54 Mbit/s)   Flow 2 egress (mean 32.24 Mbit/s)
Flow 3 ingress (mean 23.85 Mbit/s)   Flow 3 egress (mean 23.65 Mbit/s)

Flow 1 (95th percentile 1929.53 ms)   Flow 2 (95th percentile 152.19 ms)   Flow 3 (95th percentile 286.82 ms)

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```
Run 3: Statistics of PCC-Vivace

Start at: 2019-11-24 17:13:21
End at: 2019-11-24 17:13:51
Local clock offset: 0.752 ms
Remote clock offset: -7.57 ms


# Below is generated by plot.py at 2019-11-24 18:34:49
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.43 Mbit/s
95th percentile per-packet one-way delay: 309.497 ms
Loss rate: 1.27%
-- Flow 1:
Average throughput: 50.30 Mbit/s
95th percentile per-packet one-way delay: 342.531 ms
Loss rate: 0.99%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 260.251 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 23.82 Mbit/s
95th percentile per-packet one-way delay: 236.521 ms
Loss rate: 2.09%
```
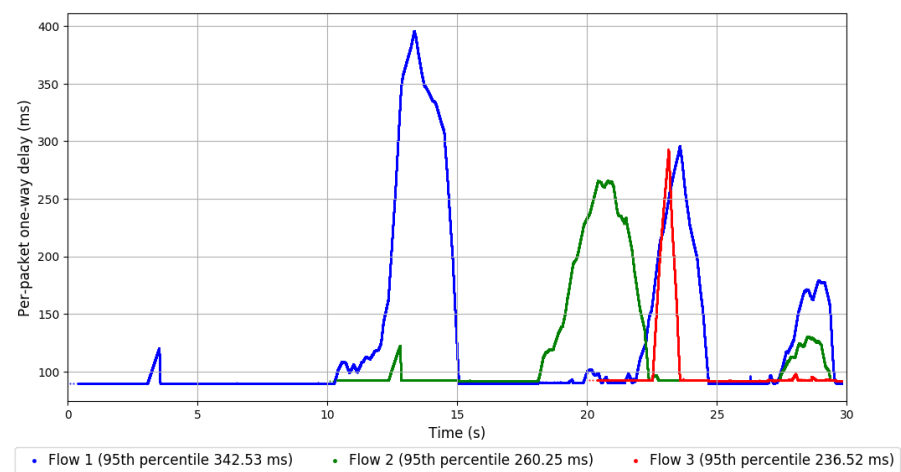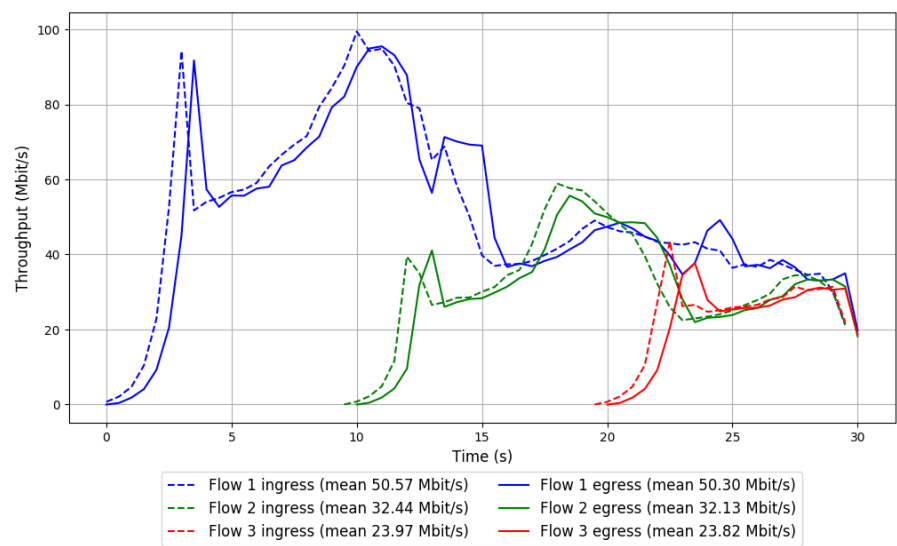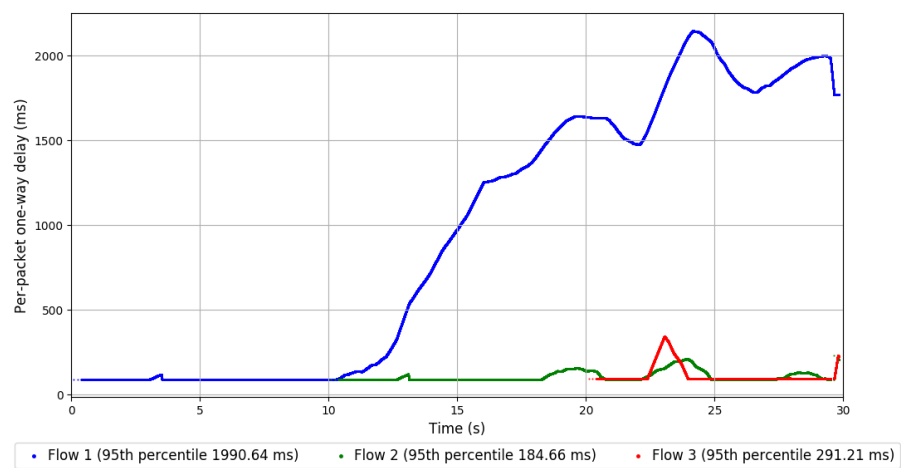
Run 3: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 50.57 Mbit/s)
- Flow 1 egress (mean 50.30 Mbit/s)
- Flow 2 ingress (mean 32.44 Mbit/s)
- Flow 2 egress (mean 32.13 Mbit/s)
- Flow 3 ingress (mean 23.97 Mbit/s)
- Flow 3 egress (mean 23.82 Mbit/s)

- Flow 1 (95th percentile 342.53 ms)
- Flow 2 (95th percentile 260.25 ms)
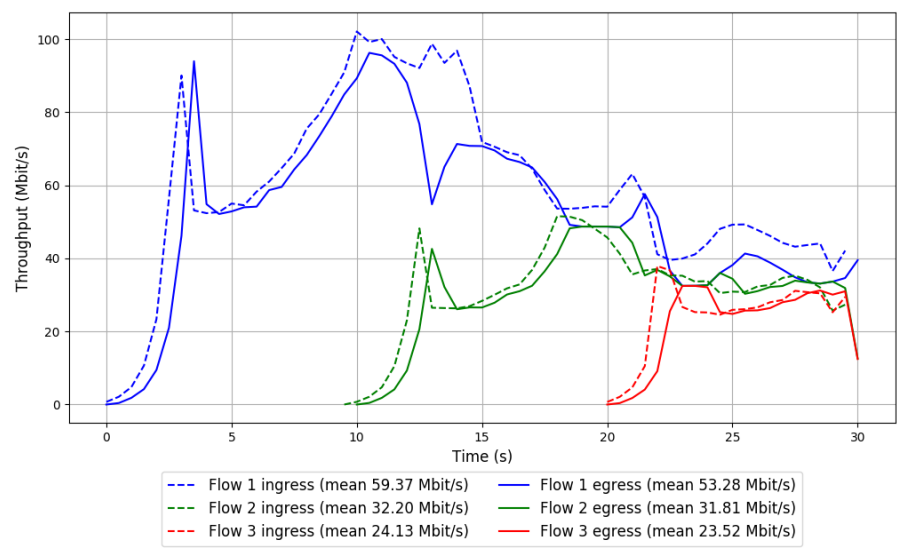- Flow 3 (95th percentile 236.52 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-11-24 17:43:36
End at: 2019-11-24 17:44:06
Local clock offset: 0.894 ms
Remote clock offset: -8.361 ms


# Below is generated by plot.py at 2019-11-24 18:34:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 82.08 Mbit/s
95th percentile per-packet one-way delay: 1938.796 ms
Loss rate: 7.96%
-- Flow 1:
Average throughput: 53.28 Mbit/s
95th percentile per-packet one-way delay: 1990.638 ms
Loss rate: 10.69%
-- Flow 2:
Average throughput: 31.81 Mbit/s
95th percentile per-packet one-way delay: 184.657 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 23.52 Mbit/s
95th percentile per-packet one-way delay: 291.207 ms
Loss rate: 3.96%
```

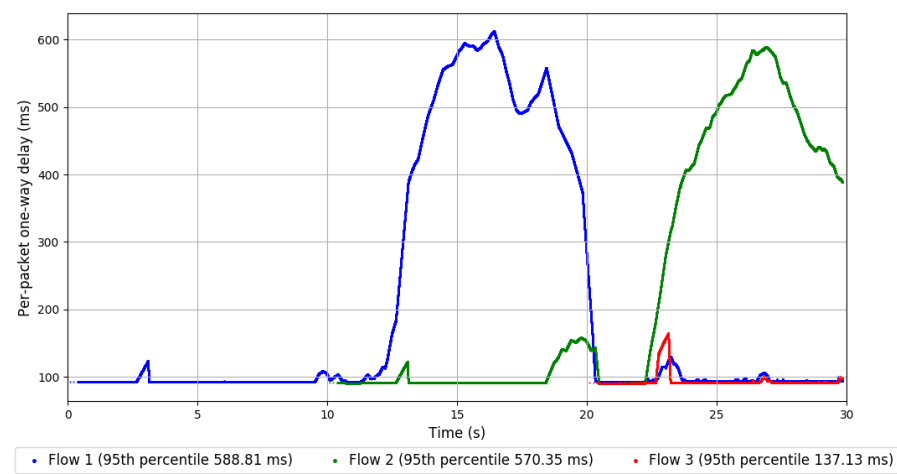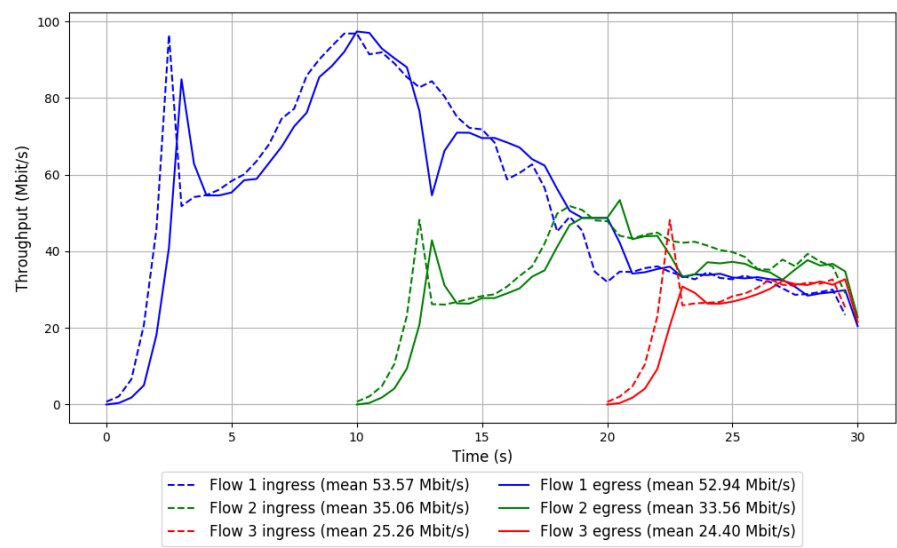Run 4: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 59.37 Mbit/s)   Flow 1 egress (mean 53.28 Mbit/s)
Flow 2 ingress (mean 32.20 Mbit/s)   Flow 2 egress (mean 31.81 Mbit/s)
Flow 3 ingress (mean 24.13 Mbit/s)   Flow 3 egress (mean 23.52 Mbit/s)

Flow 1 (95th percentile 1990.64 ms)   Flow 2 (95th percentile 184.66 ms)   Flow 3 (95th percentile 291.21 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-11-24 18:13:52
End at: 2019-11-24 18:14:22
Local clock offset: 0.602 ms
Remote clock offset: -8.971 ms


# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 83.20 Mbit/s
95th percentile per-packet one-way delay: 582.814 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 52.94 Mbit/s
95th percentile per-packet one-way delay: 588.813 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 33.56 Mbit/s
95th percentile per-packet one-way delay: 570.351 ms
Loss rate: 4.96%
-- Flow 3:
Average throughput: 24.40 Mbit/s
95th percentile per-packet one-way delay: 137.134 ms
Loss rate: 4.79%
```

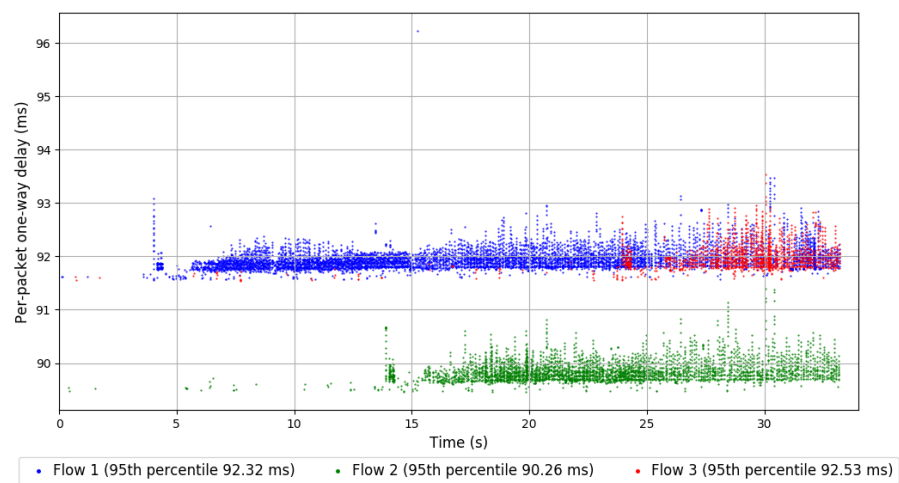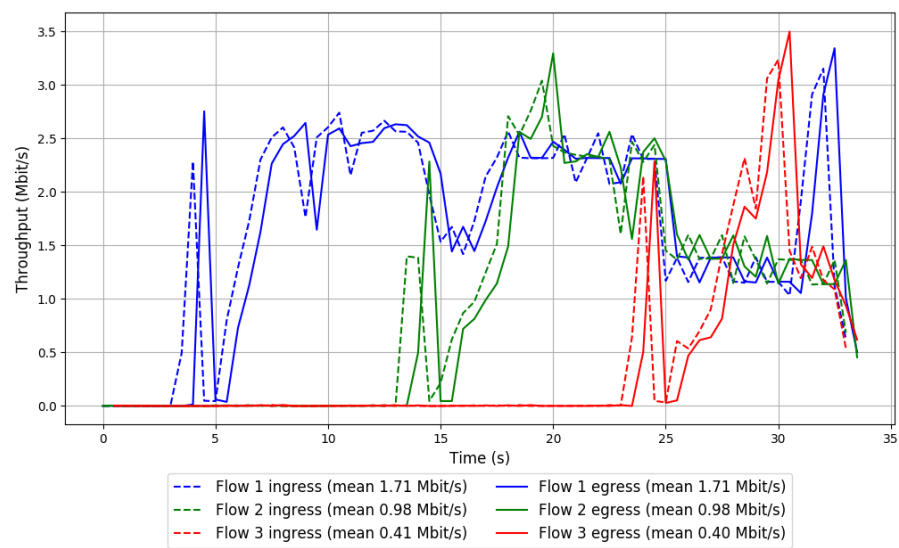Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 53.57 Mbit/s) --- Flow 1 egress (mean 52.94 Mbit/s)
Flow 2 ingress (mean 35.06 Mbit/s) --- Flow 2 egress (mean 33.56 Mbit/s)
Flow 3 ingress (mean 25.26 Mbit/s) --- Flow 3 egress (mean 24.40 Mbit/s)

Flow 1 (95th percentile 588.81 ms)   Flow 2 (95th percentile 570.35 ms)   Flow 3 (95th percentile 137.13 ms)

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```
Run 1: Statistics of WebRTC media

Start at: 2019-11-24 15:47:44
End at: 2019-11-24 15:48:14
Local clock offset: -0.767 ms
Remote clock offset: -8.818 ms


# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 92.299 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 92.324 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.98 Mbit/s
95th percentile per-packet one-way delay: 90.263 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 0.40 Mbit/s
95th percentile per-packet one-way delay: 92.535 ms
Loss rate: 1.17%
```

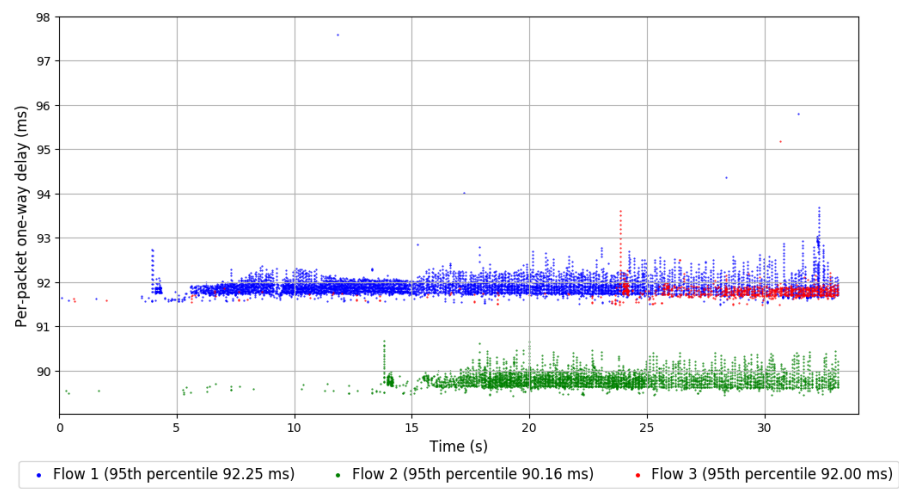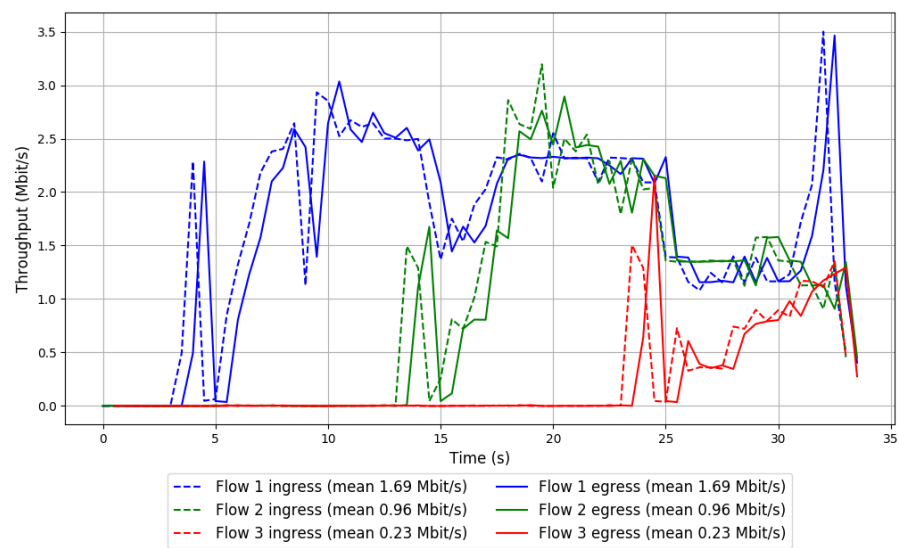Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-11-24 16:17:59
End at: 2019-11-24 16:18:29
Local clock offset: -1.52 ms
Remote clock offset: -7.917 ms


# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 2.88 Mbit/s
95th percentile per-packet one-way delay: 92.180 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 92.254 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 90.161 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.23 Mbit/s
95th percentile per-packet one-way delay: 91.999 ms
Loss rate: 2.00%
```

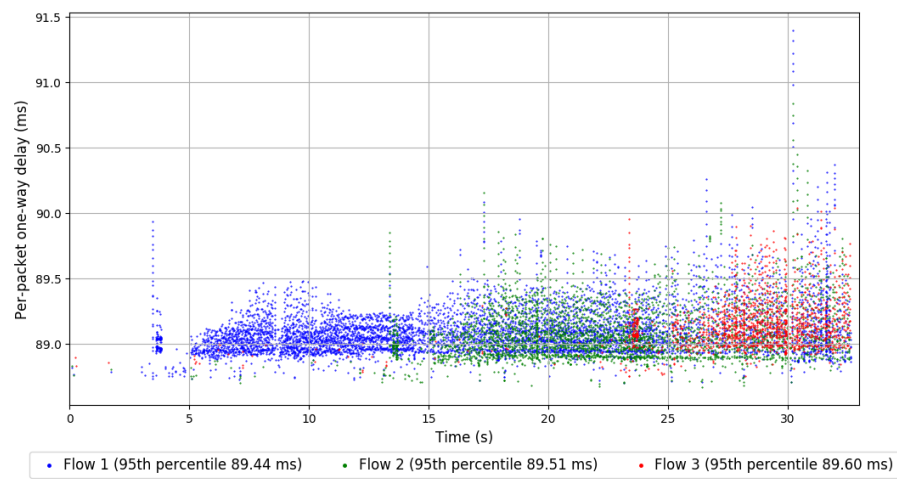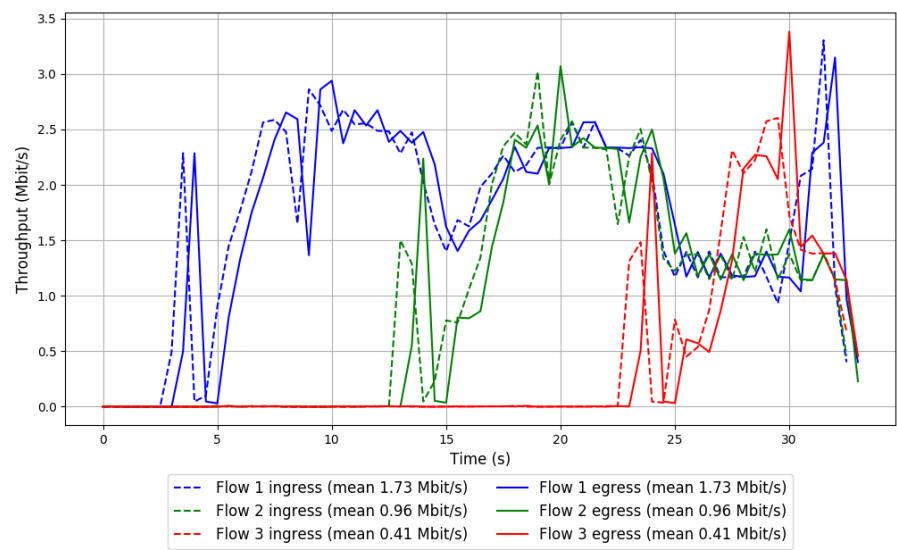Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-11-24 16:48:12
End at: 2019-11-24 16:48:42
Local clock offset: -0.719 ms
Remote clock offset: -8.909 ms


# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.09 Mbit/s
95th percentile per-packet one-way delay: 89.492 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 1.73 Mbit/s
95th percentile per-packet one-way delay: 89.444 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 89.510 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 89.603 ms
Loss rate: 1.70%
```

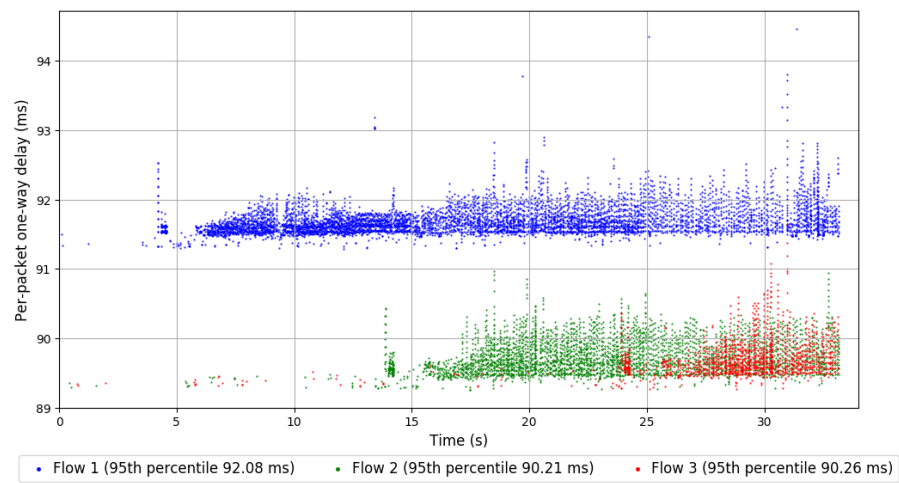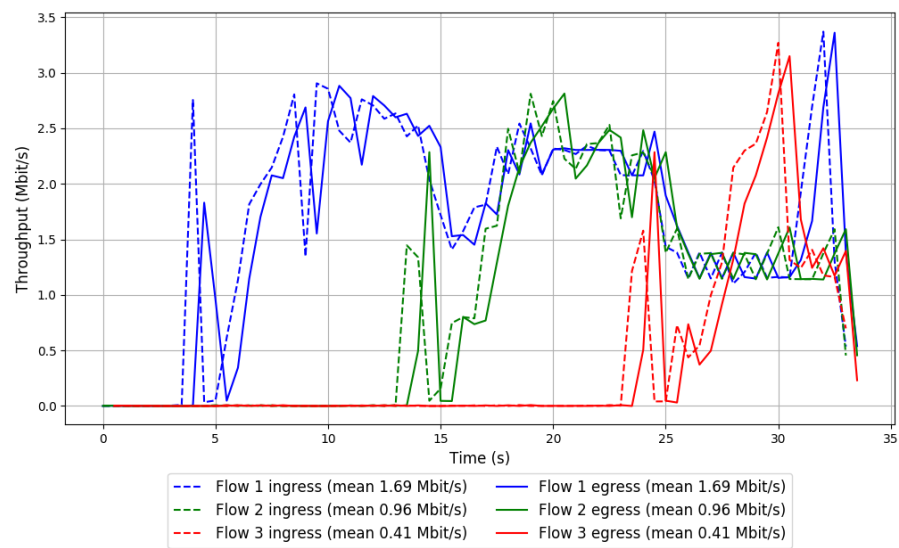Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-11-24 17:18:27
End at: 2019-11-24 17:18:57
Local clock offset: -0.088 ms
Remote clock offset: -8.018 ms

# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.04 Mbit/s
95th percentile per-packet one-way delay: 91.980 ms
Loss rate: 0.48%
-- Flow 1:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 92.081 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 90.206 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 0.41 Mbit/s
95th percentile per-packet one-way delay: 90.261 ms
Loss rate: 1.75%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-11-24 17:48:41
End at: 2019-11-24 17:49:11
Local clock offset: 0.897 ms
Remote clock offset: -7.674 ms


# Below is generated by plot.py at 2019-11-24 18:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 90.457 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 1.71 Mbit/s
95th percentile per-packet one-way delay: 90.200 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 0.96 Mbit/s
95th percentile per-packet one-way delay: 90.304 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 91.281 ms
Loss rate: 0.83%
```

Run 5: Report of WebRTC media — Data Link

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