Pantheon Report

Generated at 2019-08-27 02:53:50 (UTC).

Data path: GCE Iowa on `ens4` (*remote*) →GCE Sydney on `ens4` (*local*).

Repeated the test of 24 congestion control schemes 5 times.

Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.
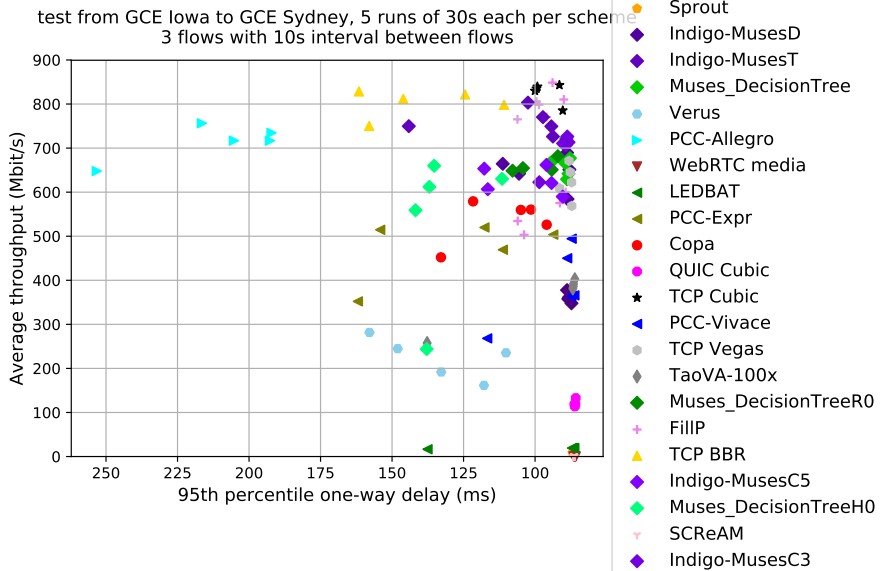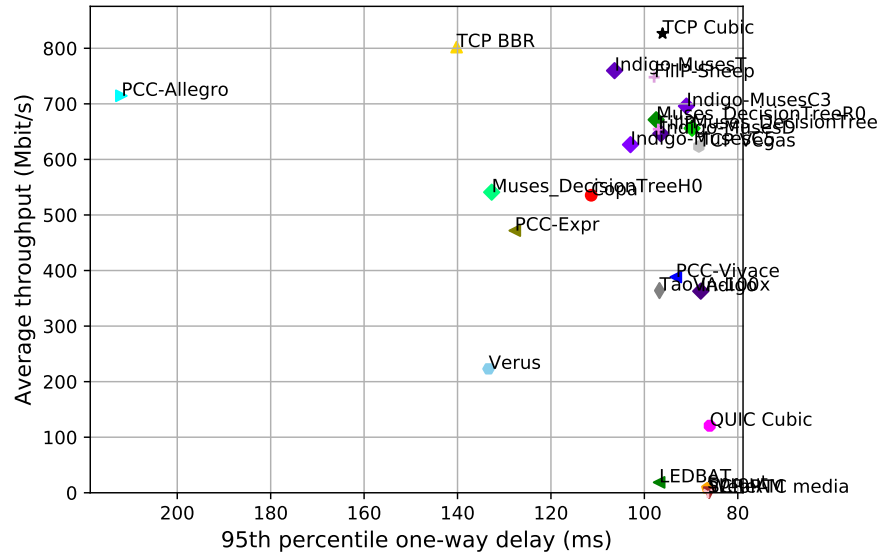
```
System info:
Linux 4.15.0-1036-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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 GCE Iowa to GCE Sydney, 5 runs of 30s each per scheme
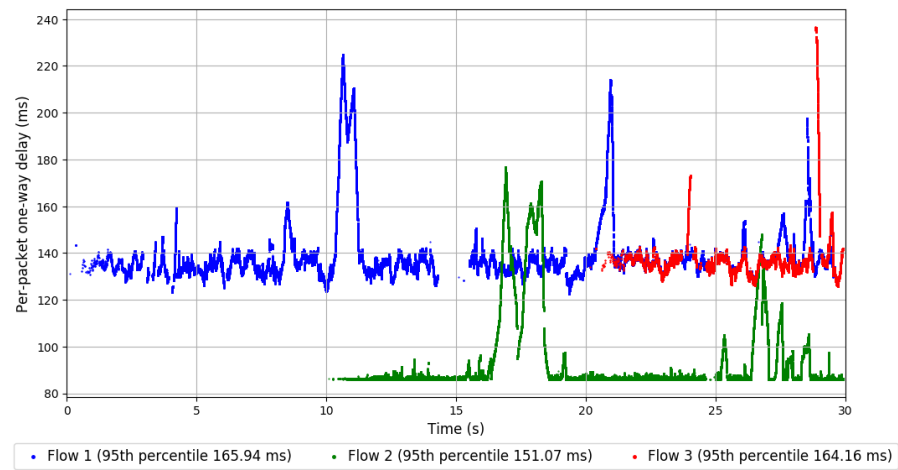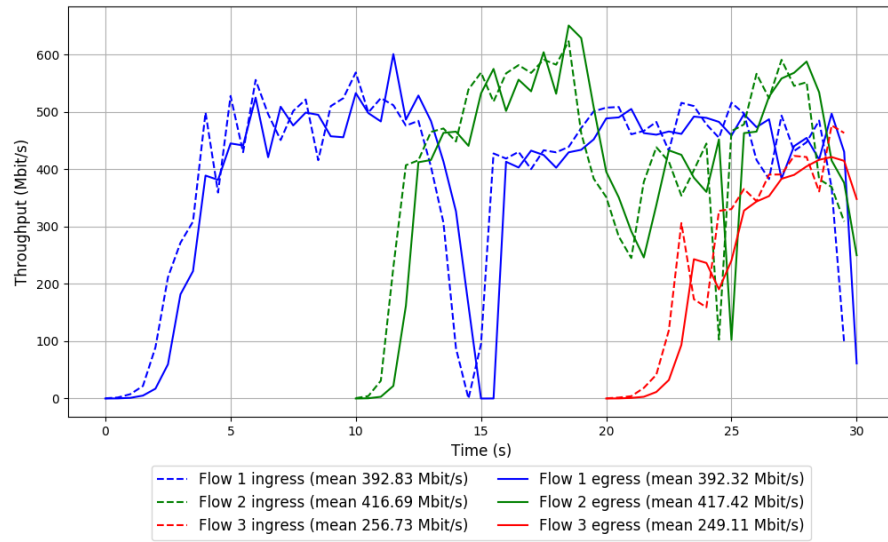3 flows with 10s interval between flows (mean of all runs by scheme)

test from GCE Iowa to GCE Sydney, 5 runs of 30s each per scheme
3 flows with 10s interval between flows

3

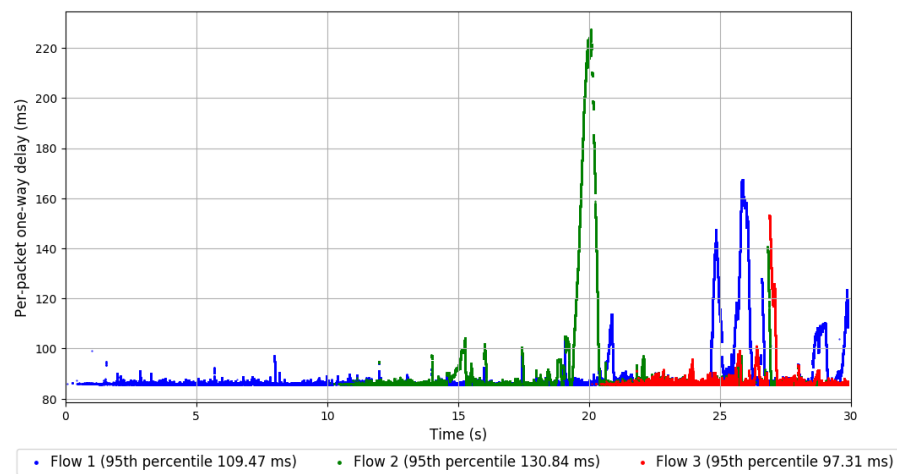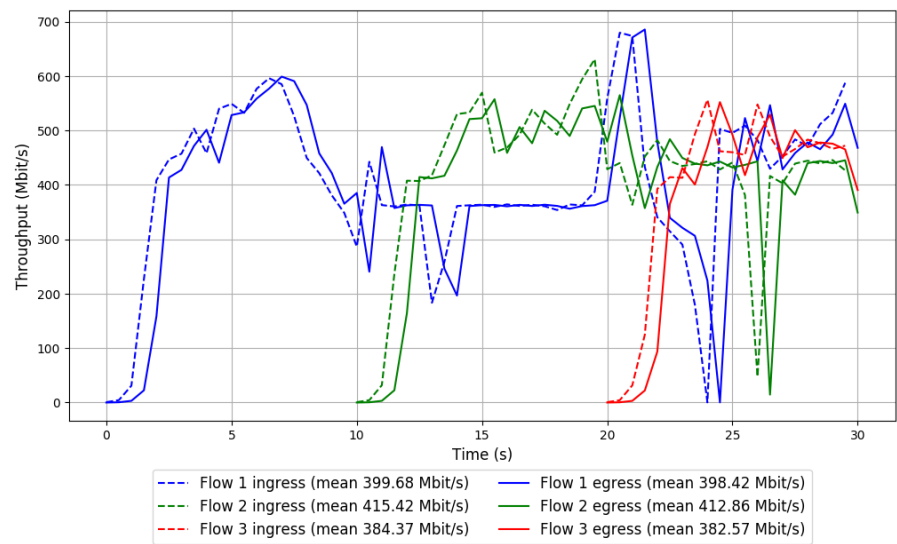| scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	418.26	406.41	347.64	146.39	123.81	123.37	0.89	1.13	2.68
Copa	5	285.73	270.80	212.96	104.70	104.14	121.04	0.61	0.83	2.28
TCP Cubic	5	436.35	407.43	364.03	95.14	93.55	98.34	0.54	0.82	2.11
FillP	5	343.72	345.75	249.32	101.81	88.08	88.76	0.47	0.76	1.86
FillP-Sheep	5	451.24	327.21	243.27	106.80	88.21	91.05	0.50	0.76	1.92
Indigo	5	193.97	178.66	153.16	87.90	88.03	87.80	0.62	0.93	2.17
Indigo-MusesC3	5	412.66	348.35	241.62	91.23	90.94	88.92	0.44	0.87	3.51
Indigo-MusesC5	5	366.92	373.46	99.63	113.52	108.77	86.32	0.38	1.07	3.85
Indigo-MusesD	5	367.53	356.68	207.29	92.95	109.90	88.84	0.55	0.85	3.30
Indigo-MusesT	5	457.48	385.91	231.15	108.62	97.94	91.79	0.51	0.88	3.23
LEDBAT	5	12.50	7.59	3.71	86.76	97.18	96.90	1.15	1.82	3.67
Muses_DecisionTree	5	400.99	303.43	175.31	92.12	88.24	88.61	0.48	0.94	2.59
Muses_DecisionTreeH0	5	306.01	275.05	169.51	144.54	114.16	98.34	1.20	1.10	3.87
Muses_DecisionTreeR0	5	409.86	313.63	173.82	104.07	90.09	88.36	0.47	0.88	2.85
PCC-Allegro	5	407.83	345.41	239.11	213.63	168.57	147.97	2.88	2.97	2.38
PCC-Expr	5	272.44	228.02	148.05	129.69	118.75	90.56	0.78	1.17	2.22
QUIC Cubic	5	66.53	57.41	45.88	86.01	85.99	86.05	0.86	0.66	2.14
SCReAM	5	0.22	0.22	0.22	86.34	86.25	86.35	0.54	0.95	1.85
Sprout	5	4.28	4.00	3.58	86.52	86.51	86.38	0.77	1.22	2.33
TaoVA-100x	5	201.45	164.75	161.84	86.37	97.41	97.53	0.65	0.93	2.12
TCP Vegas	5	318.89	303.83	312.43	86.75	91.19	92.61	0.53	0.69	1.93
Verus	5	125.04	108.92	79.55	125.99	132.76	115.78	0.35	0.90	3.73
PCC-Vivace	5	248.85	156.76	109.06	88.09	97.75	99.78	0.67	1.34	2.52
WebRTC media	5	0.05	0.05	0.05	86.11	86.11	86.06	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-08-26 21:29:37
End at: 2019-08-26 21:30:07
Local clock offset: 0.015 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-08-27 00:54:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.27 Mbit/s
95th percentile per-packet one-way delay: 157.992 ms
Loss rate: 1.44%
-- Flow 1:
Average throughput: 392.32 Mbit/s
95th percentile per-packet one-way delay: 165.940 ms
Loss rate: 1.17%
-- Flow 2:
Average throughput: 417.42 Mbit/s
95th percentile per-packet one-way delay: 151.075 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 249.11 Mbit/s
95th percentile per-packet one-way delay: 164.161 ms
Loss rate: 5.13%
```

Run 1: Report of TCP BBR — Data Link

```
Run 2: Statistics of TCP BBR

Start at: 2019-08-26 22:10:12
End at: 2019-08-26 22:10:42
Local clock offset: -0.064 ms
Remote clock offset: -0.131 ms


# Below is generated by plot.py at 2019-08-27 00:55:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 798.38 Mbit/s
95th percentile per-packet one-way delay: 110.834 ms
Loss rate: 1.30%
-- Flow 1:
Average throughput: 398.42 Mbit/s
95th percentile per-packet one-way delay: 109.470 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 412.86 Mbit/s
95th percentile per-packet one-way delay: 130.840 ms
Loss rate: 1.47%
-- Flow 3:
Average throughput: 382.57 Mbit/s
95th percentile per-packet one-way delay: 97.305 ms
Loss rate: 2.19%
```
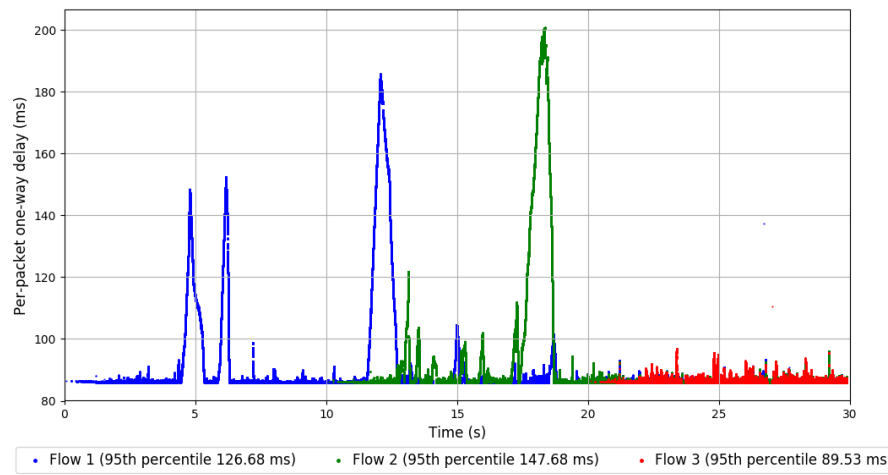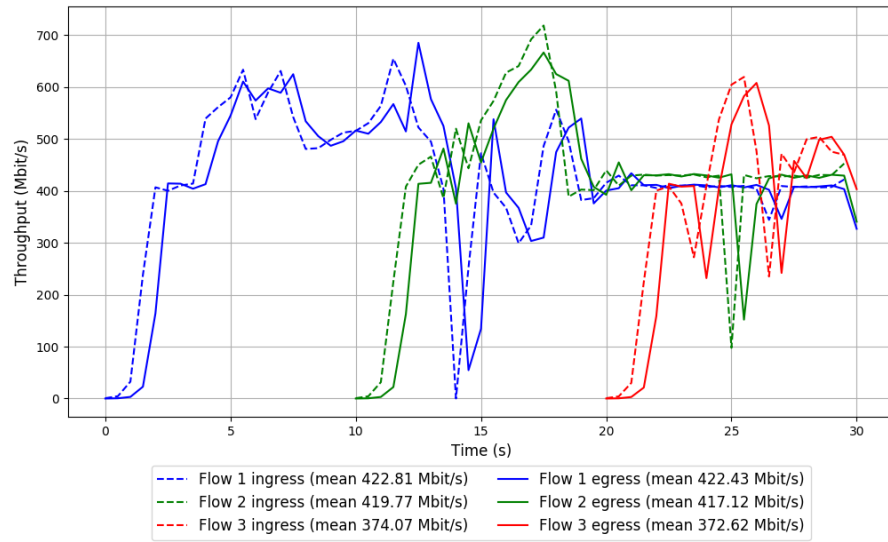
Run 2: Report of TCP BBR — Data Link

```
Run 3: Statistics of TCP BBR

Start at: 2019-08-26 22:50:17
End at: 2019-08-26 22:50:47
Local clock offset: 0.094 ms
Remote clock offset: -0.1 ms


# Below is generated by plot.py at 2019-08-27 00:55:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 821.81 Mbit/s
95th percentile per-packet one-way delay: 124.483 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 422.43 Mbit/s
95th percentile per-packet one-way delay: 126.677 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 417.12 Mbit/s
95th percentile per-packet one-way delay: 147.684 ms
Loss rate: 1.49%
-- Flow 3:
Average throughput: 372.62 Mbit/s
95th percentile per-packet one-way delay: 89.532 ms
Loss rate: 2.13%
```
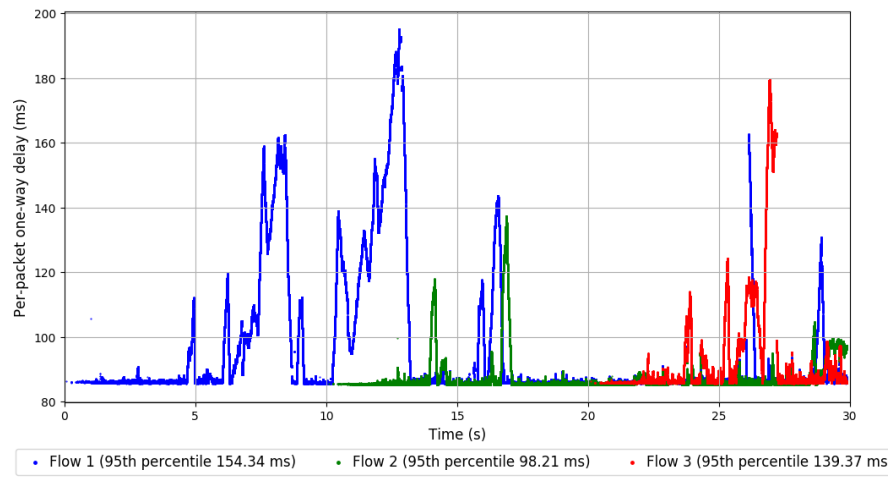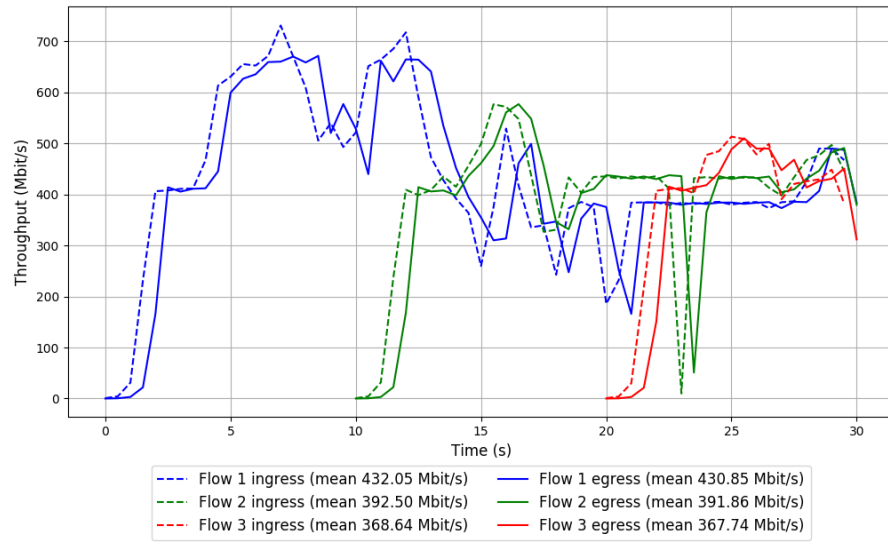
Run 3: Report of TCP BBR — Data Link

Flow 1 ingress (mean 422.81 Mbit/s) --- Flow 1 egress (mean 422.43 Mbit/s)
Flow 2 ingress (mean 419.77 Mbit/s) --- Flow 2 egress (mean 417.12 Mbit/s)
Flow 3 ingress (mean 374.07 Mbit/s) --- Flow 3 egress (mean 372.62 Mbit/s)

Flow 1 (95th percentile 126.68 ms) · Flow 2 (95th percentile 147.68 ms) · Flow 3 (95th percentile 89.53 ms)

```
Run 4: Statistics of TCP BBR

Start at: 2019-08-26 23:31:14
End at: 2019-08-26 23:31:44
Local clock offset: -0.45 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2019-08-27 00:55:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 811.77 Mbit/s
95th percentile per-packet one-way delay: 146.083 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 430.85 Mbit/s
95th percentile per-packet one-way delay: 154.343 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 391.86 Mbit/s
95th percentile per-packet one-way delay: 98.206 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 367.74 Mbit/s
95th percentile per-packet one-way delay: 139.373 ms
Loss rate: 1.98%
```
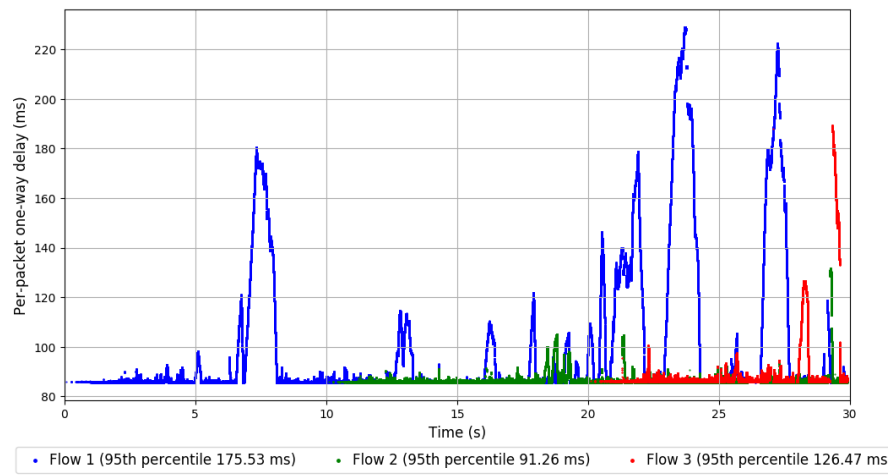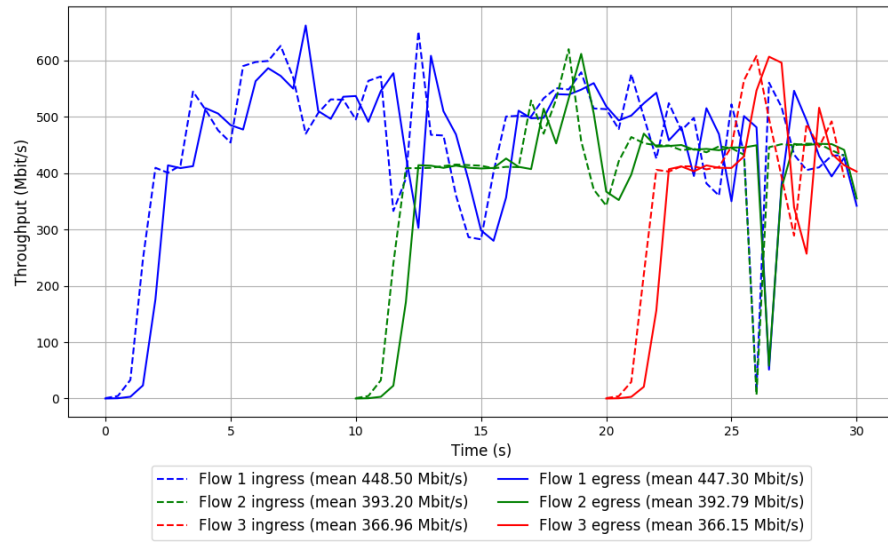
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-08-27 00:11:51
End at: 2019-08-27 00:12:21
Local clock offset: -0.114 ms
Remote clock offset: -0.09 ms


# Below is generated by plot.py at 2019-08-27 00:55:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 828.59 Mbit/s
95th percentile per-packet one-way delay: 161.579 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 447.30 Mbit/s
95th percentile per-packet one-way delay: 175.527 ms
Loss rate: 0.85%
-- Flow 2:
Average throughput: 392.79 Mbit/s
95th percentile per-packet one-way delay: 91.256 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 366.15 Mbit/s
95th percentile per-packet one-way delay: 126.465 ms
Loss rate: 1.96%
```

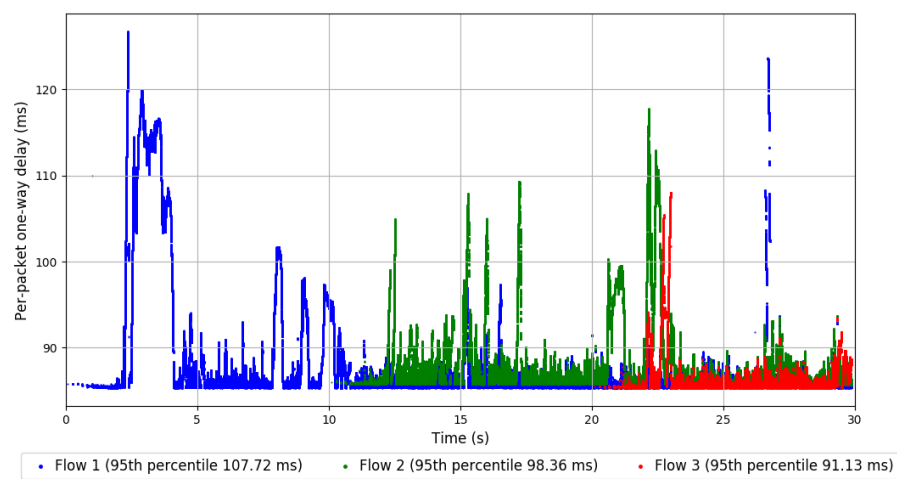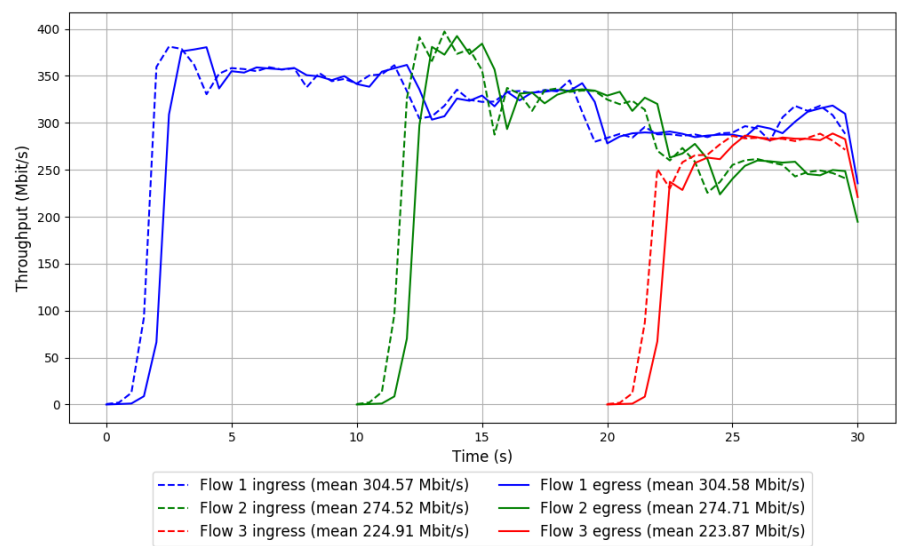Run 5: Report of TCP BBR — Data Link

```
Run 1: Statistics of Copa

Start at: 2019-08-26 21:07:21
End at: 2019-08-26 21:07:51
Local clock offset: -0.43 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-08-27 00:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 560.42 Mbit/s
95th percentile per-packet one-way delay: 101.426 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 304.58 Mbit/s
95th percentile per-packet one-way delay: 107.723 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 274.71 Mbit/s
95th percentile per-packet one-way delay: 98.355 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 223.87 Mbit/s
95th percentile per-packet one-way delay: 91.134 ms
Loss rate: 2.19%
```

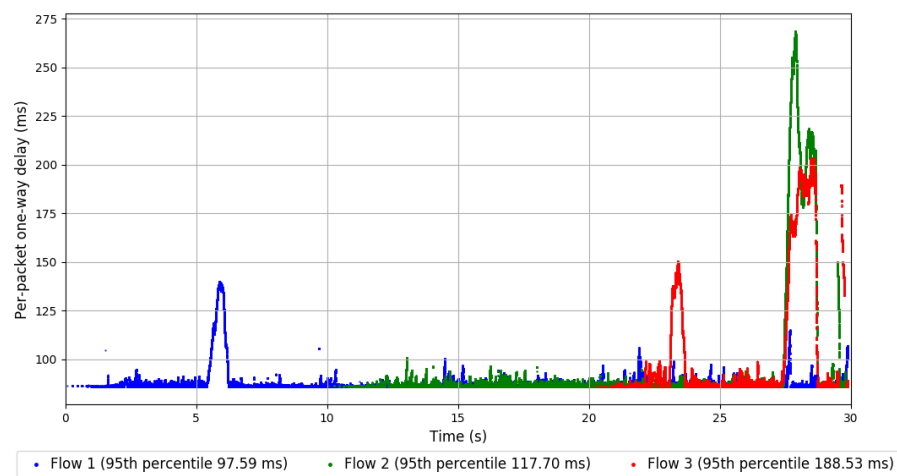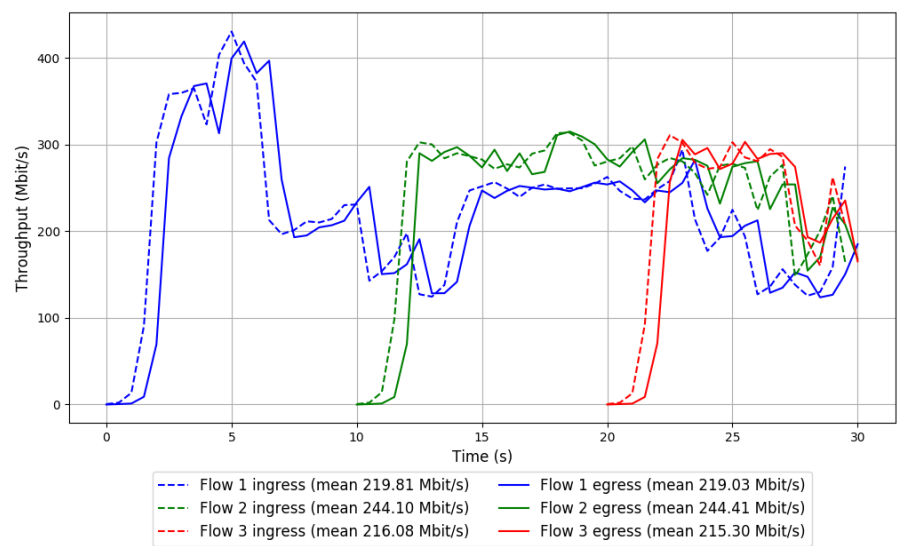Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-08-26 21:48:25
End at: 2019-08-26 21:48:55
Local clock offset: 0.256 ms
Remote clock offset: -0.144 ms


# Below is generated by plot.py at 2019-08-27 00:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.12 Mbit/s
95th percentile per-packet one-way delay: 132.892 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 219.03 Mbit/s
95th percentile per-packet one-way delay: 97.588 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 244.41 Mbit/s
95th percentile per-packet one-way delay: 117.699 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 215.30 Mbit/s
95th percentile per-packet one-way delay: 188.532 ms
Loss rate: 2.09%
```
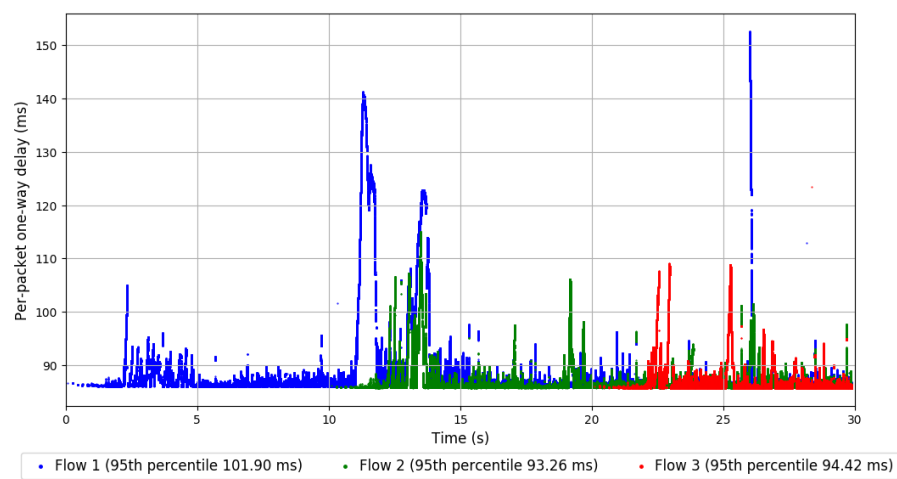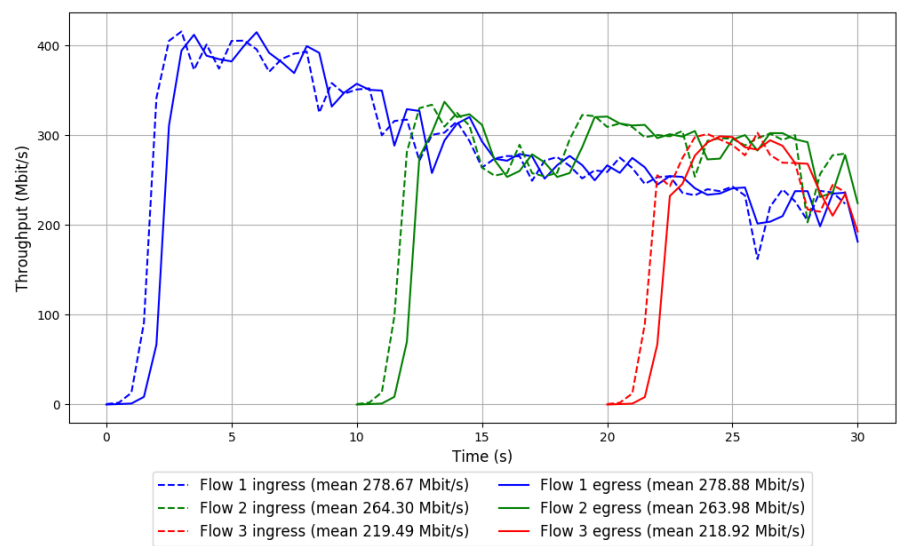
Run 2: Report of Copa — Data Link

- - - Flow 1 ingress (mean 219.81 Mbit/s)   —— Flow 1 egress (mean 219.03 Mbit/s)
- - - Flow 2 ingress (mean 244.10 Mbit/s)   —— Flow 2 egress (mean 244.41 Mbit/s)
- - - Flow 3 ingress (mean 216.08 Mbit/s)   —— Flow 3 egress (mean 215.30 Mbit/s)

• Flow 1 (95th percentile 97.59 ms)   • Flow 2 (95th percentile 117.70 ms)   • Flow 3 (95th percentile 188.53 ms)

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```
Run 3: Statistics of Copa

Start at: 2019-08-26 22:28:27
End at: 2019-08-26 22:28:57
Local clock offset: -0.183 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-08-27 00:58:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 526.10 Mbit/s
95th percentile per-packet one-way delay: 95.942 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 278.88 Mbit/s
95th percentile per-packet one-way delay: 101.897 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 263.98 Mbit/s
95th percentile per-packet one-way delay: 93.264 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 218.92 Mbit/s
95th percentile per-packet one-way delay: 94.417 ms
Loss rate: 1.98%
```
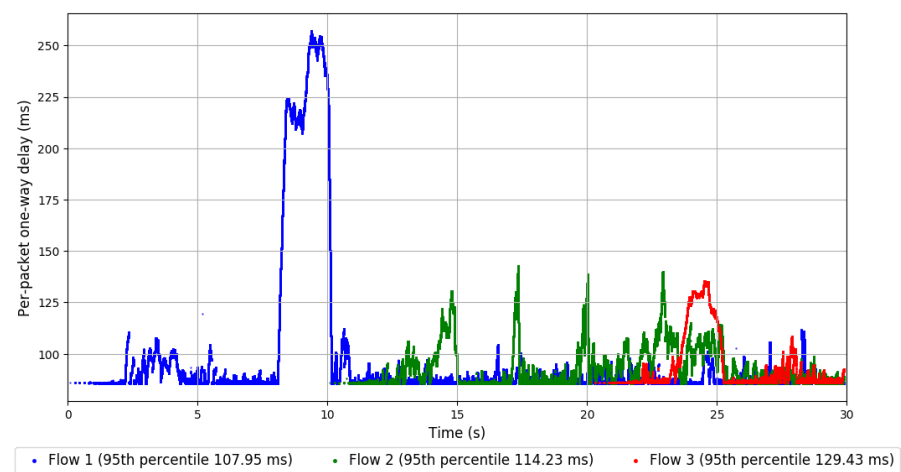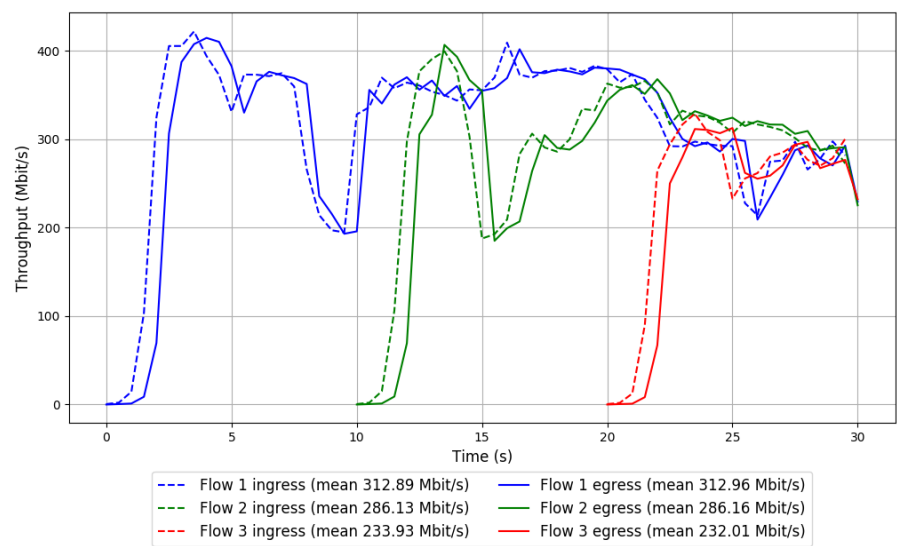
Run 3: Report of Copa — Data Link

Flow 1 ingress (mean 278.67 Mbit/s) — Flow 1 egress (mean 278.88 Mbit/s)
Flow 2 ingress (mean 264.30 Mbit/s) — Flow 2 egress (mean 263.98 Mbit/s)
Flow 3 ingress (mean 219.49 Mbit/s) — Flow 3 egress (mean 218.92 Mbit/s)

Flow 1 (95th percentile 101.90 ms)   Flow 2 (95th percentile 93.26 ms)   Flow 3 (95th percentile 94.42 ms)

```
Run 4: Statistics of Copa

Start at: 2019-08-26 23:09:07
End at: 2019-08-26 23:09:37
Local clock offset: -0.222 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 579.13 Mbit/s
95th percentile per-packet one-way delay: 121.660 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 312.96 Mbit/s
95th percentile per-packet one-way delay: 107.947 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 286.16 Mbit/s
95th percentile per-packet one-way delay: 114.232 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 232.01 Mbit/s
95th percentile per-packet one-way delay: 129.433 ms
Loss rate: 2.54%
```
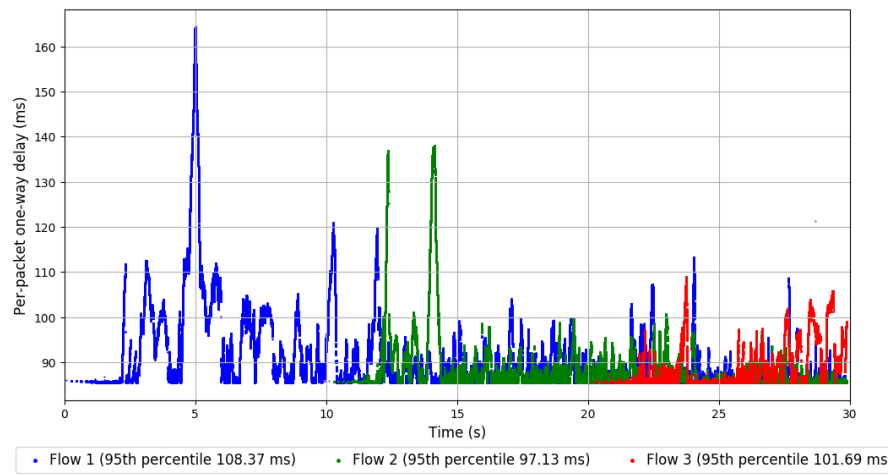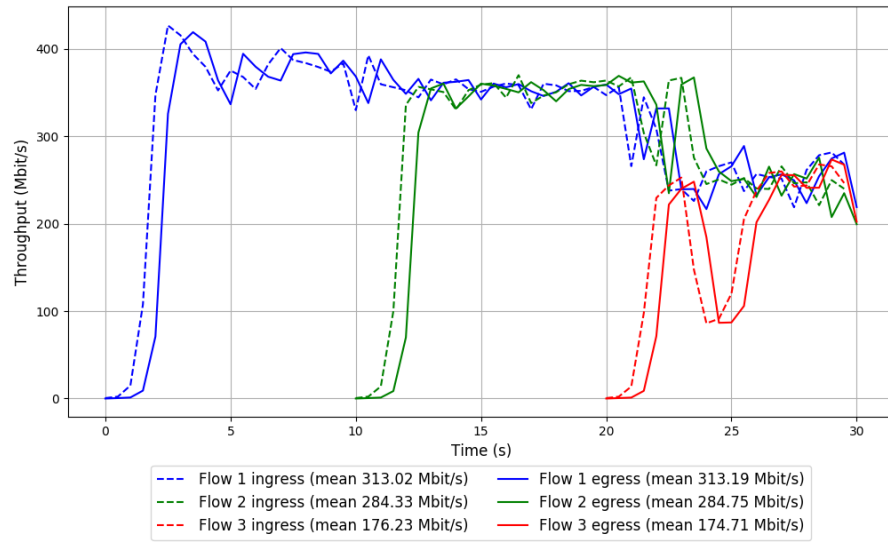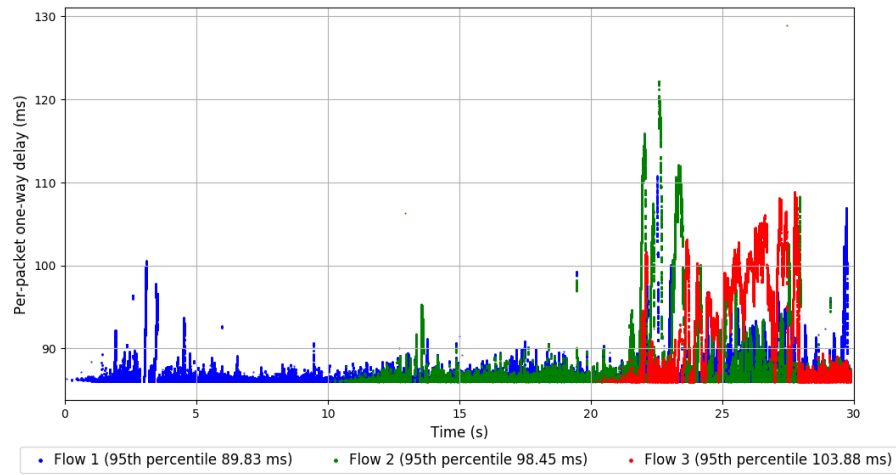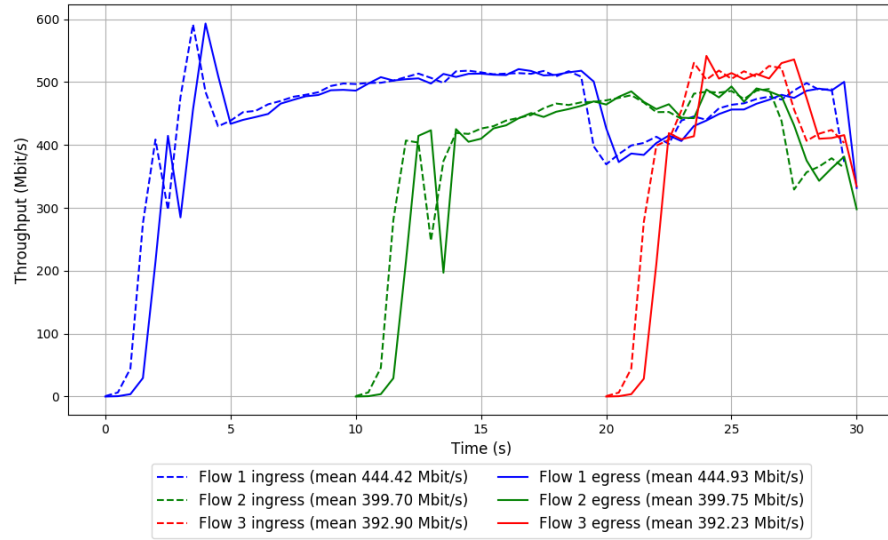
Run 4: Report of Copa — Data Link

Flow 1 ingress (mean 312.89 Mbit/s) — — — Flow 1 egress (mean 312.96 Mbit/s)
Flow 2 ingress (mean 286.13 Mbit/s) — — — Flow 2 egress (mean 286.16 Mbit/s)
Flow 3 ingress (mean 233.93 Mbit/s) — — — Flow 3 egress (mean 232.01 Mbit/s)

Flow 1 (95th percentile 107.95 ms) • Flow 2 (95th percentile 114.23 ms) • Flow 3 (95th percentile 129.43 ms)

```
Run 5: Statistics of Copa

Start at: 2019-08-26 23:49:44
End at: 2019-08-26 23:50:14
Local clock offset: -0.556 ms
Remote clock offset: 0.041 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 559.65 Mbit/s
95th percentile per-packet one-way delay: 104.965 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 313.19 Mbit/s
95th percentile per-packet one-way delay: 108.366 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 284.75 Mbit/s
95th percentile per-packet one-way delay: 97.133 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 174.71 Mbit/s
95th percentile per-packet one-way delay: 101.691 ms
Loss rate: 2.58%
```
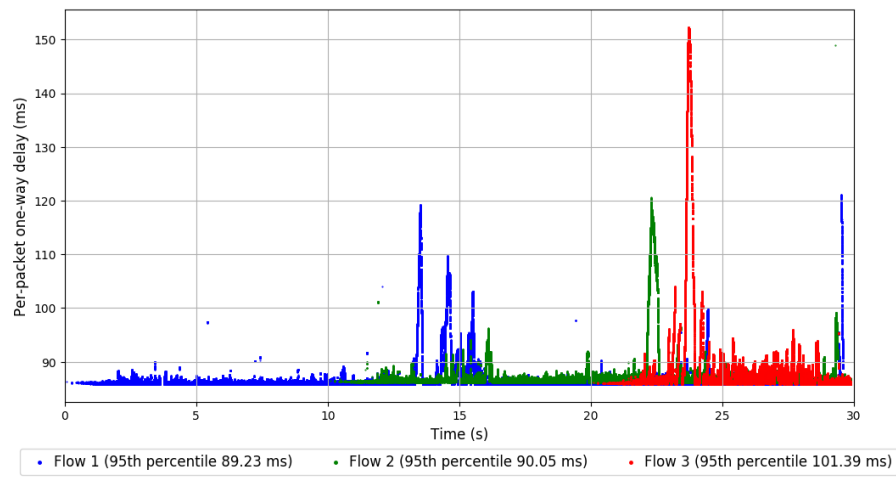
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 313.02 Mbit/s) — Flow 1 egress (mean 313.19 Mbit/s)
Flow 2 ingress (mean 284.33 Mbit/s) — Flow 2 egress (mean 284.75 Mbit/s)
Flow 3 ingress (mean 176.23 Mbit/s) — Flow 3 egress (mean 174.71 Mbit/s)

Flow 1 (95th percentile 108.37 ms)   Flow 2 (95th percentile 97.13 ms)   Flow 3 (95th percentile 101.69 ms)
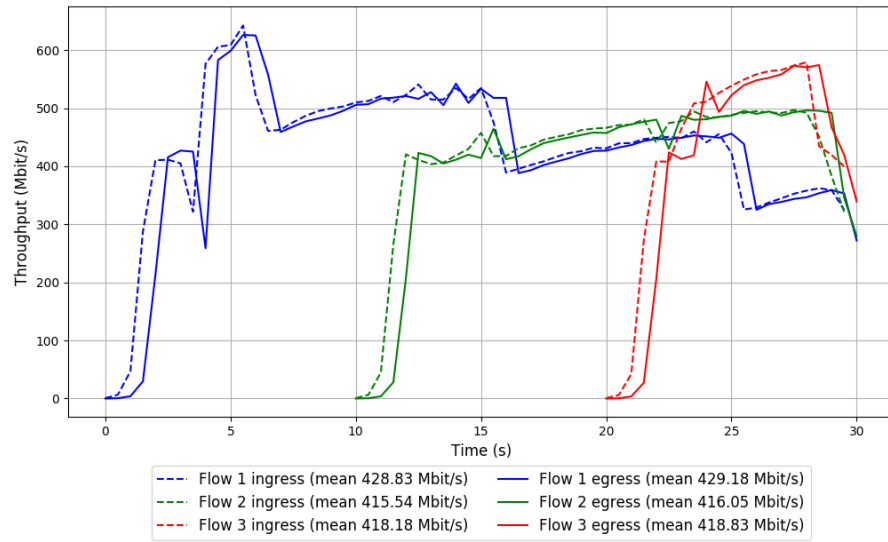
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```
Run 1: Statistics of TCP Cubic

Start at: 2019-08-26 21:42:21
End at: 2019-08-26 21:42:51
Local clock offset: 0.309 ms
Remote clock offset: -0.122 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 839.36 Mbit/s
95th percentile per-packet one-way delay: 99.183 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 444.93 Mbit/s
95th percentile per-packet one-way delay: 89.832 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 399.75 Mbit/s
95th percentile per-packet one-way delay: 98.446 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 392.23 Mbit/s
95th percentile per-packet one-way delay: 103.884 ms
Loss rate: 1.91%
```

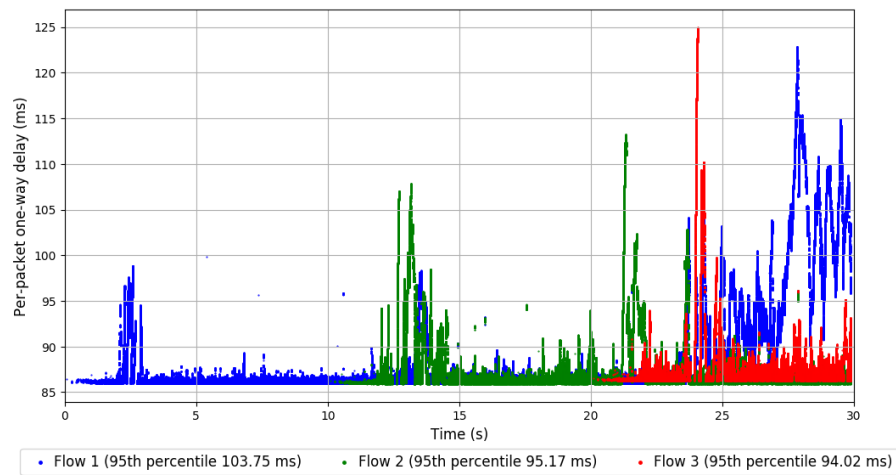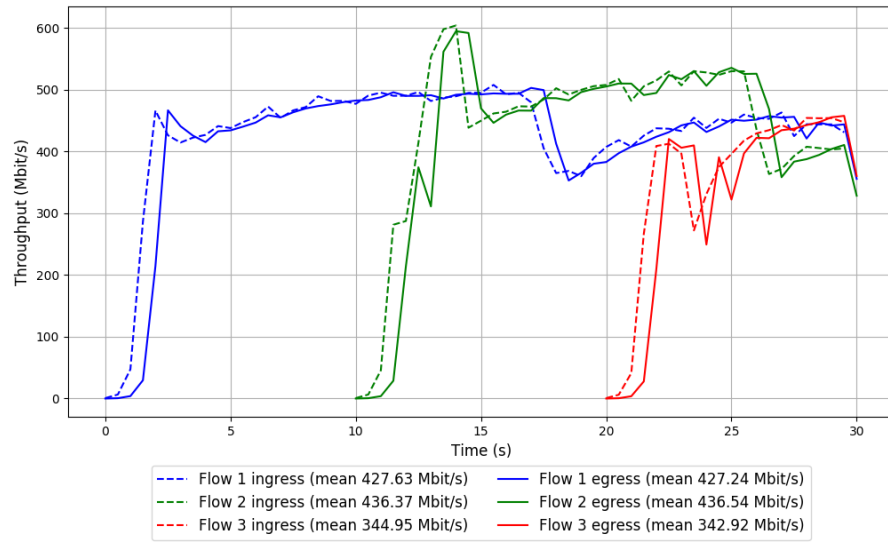Run 1: Report of TCP Cubic — Data Link

```
Run 2: Statistics of TCP Cubic

Start at: 2019-08-26 22:22:22
End at: 2019-08-26 22:22:52
Local clock offset: -0.032 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 843.03 Mbit/s
95th percentile per-packet one-way delay: 91.490 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 429.18 Mbit/s
95th percentile per-packet one-way delay: 89.234 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 416.05 Mbit/s
95th percentile per-packet one-way delay: 90.054 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 418.83 Mbit/s
95th percentile per-packet one-way delay: 101.392 ms
Loss rate: 1.59%
```

Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-08-26 23:02:50
End at: 2019-08-26 23:03:20
Local clock offset: 0.085 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 829.98 Mbit/s
95th percentile per-packet one-way delay: 100.039 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 427.24 Mbit/s
95th percentile per-packet one-way delay: 103.750 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 436.54 Mbit/s
95th percentile per-packet one-way delay: 95.167 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 342.92 Mbit/s
95th percentile per-packet one-way delay: 94.016 ms
Loss rate: 2.32%
```
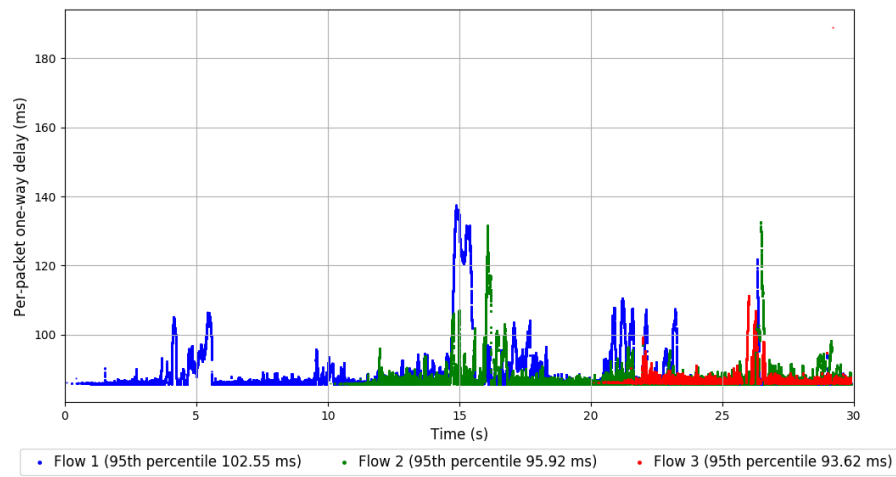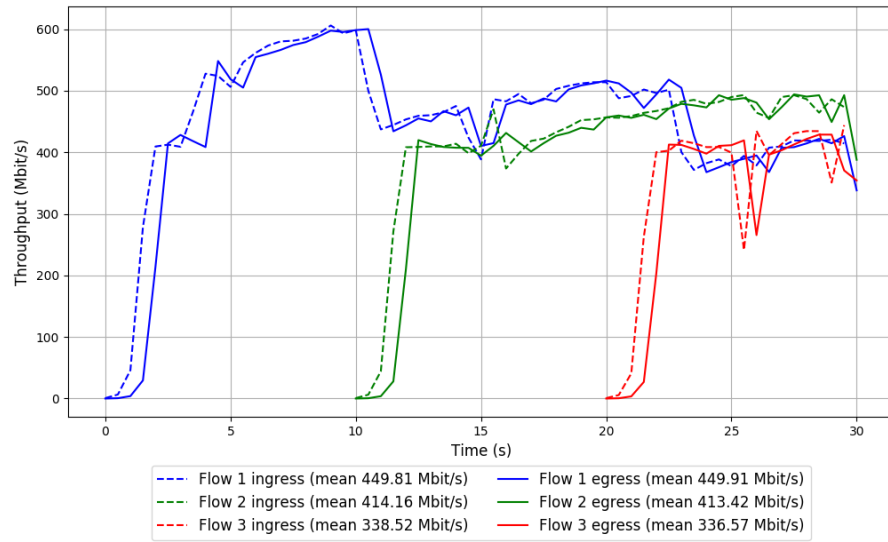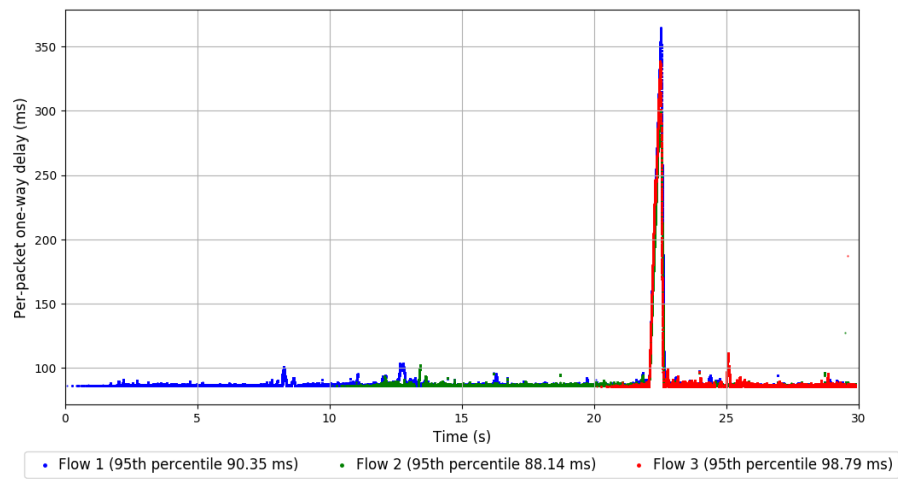
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-08-26 23:43:28
End at: 2019-08-26 23:43:58
Local clock offset: -0.151 ms
Remote clock offset: 0.07 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 834.95 Mbit/s
95th percentile per-packet one-way delay: 99.500 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 449.91 Mbit/s
95th percentile per-packet one-way delay: 102.548 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 413.42 Mbit/s
95th percentile per-packet one-way delay: 95.920 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 336.57 Mbit/s
95th percentile per-packet one-way delay: 93.624 ms
Loss rate: 2.33%
```
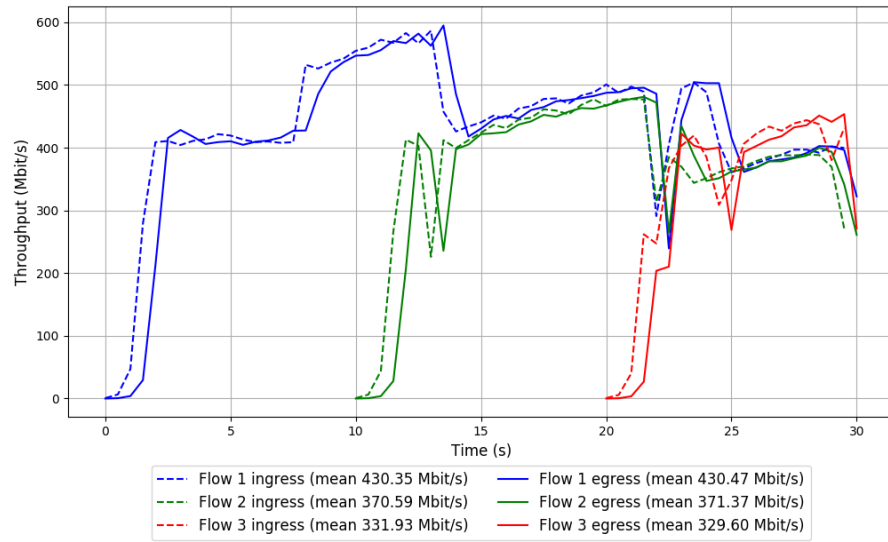
Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-08-27 00:24:08
End at: 2019-08-27 00:24:38
Local clock offset: -0.2 ms
Remote clock offset: -0.116 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 785.30 Mbit/s
95th percentile per-packet one-way delay: 90.330 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 430.47 Mbit/s
95th percentile per-packet one-way delay: 90.352 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 371.37 Mbit/s
95th percentile per-packet one-way delay: 88.143 ms
Loss rate: 0.66%
-- Flow 3:
Average throughput: 329.60 Mbit/s
95th percentile per-packet one-way delay: 98.789 ms
Loss rate: 2.42%
```
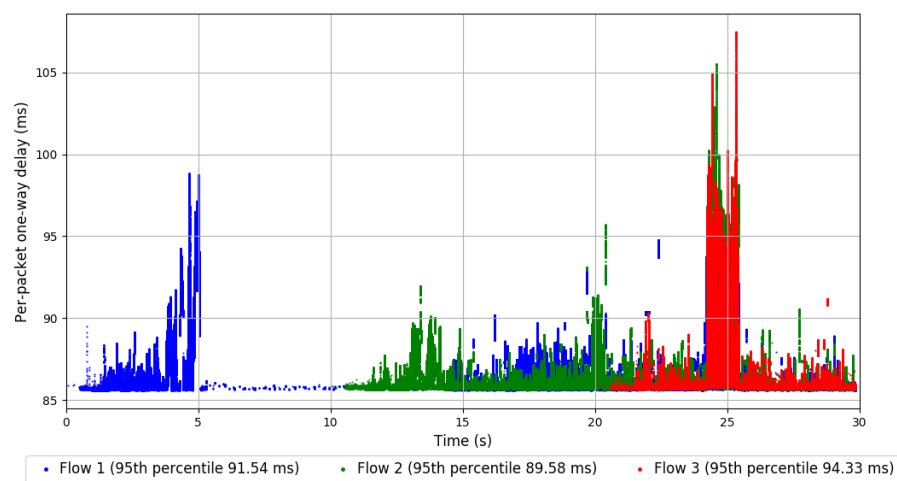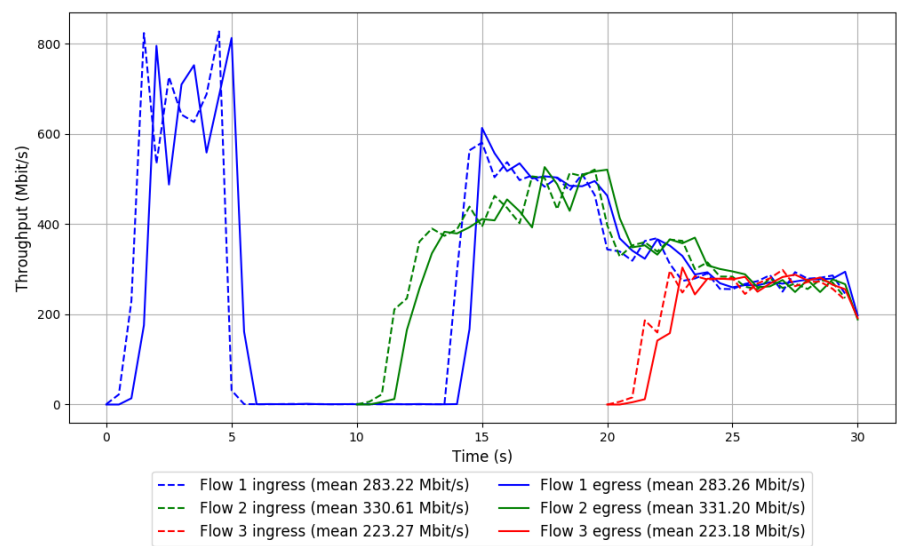
Run 5: Report of TCP Cubic — Data Link

Legend:
- Flow 1 ingress (mean 430.35 Mbit/s) — Flow 1 egress (mean 430.47 Mbit/s)
- Flow 2 ingress (mean 370.59 Mbit/s) — Flow 2 egress (mean 371.37 Mbit/s)
- Flow 3 ingress (mean 331.93 Mbit/s) — Flow 3 egress (mean 329.60 Mbit/s)

Legend:
- Flow 1 (95th percentile 90.35 ms)
- Flow 2 (95th percentile 88.14 ms)
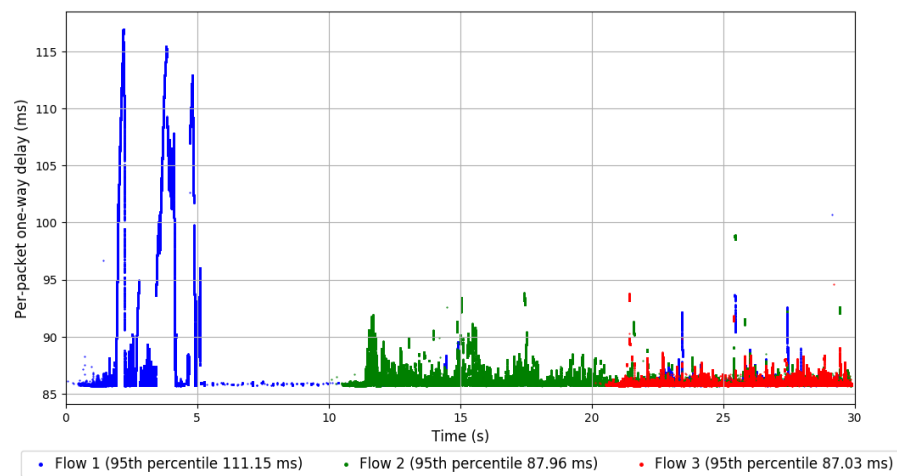- Flow 3 (95th percentile 98.79 ms)

```
Run 1: Statistics of FillP

Start at: 2019-08-26 21:04:21
End at: 2019-08-26 21:04:51
Local clock offset: -0.124 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-08-27 01:10:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 575.50 Mbit/s
95th percentile per-packet one-way delay: 91.323 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 283.26 Mbit/s
95th percentile per-packet one-way delay: 91.537 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 331.20 Mbit/s
95th percentile per-packet one-way delay: 89.578 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 223.18 Mbit/s
95th percentile per-packet one-way delay: 94.327 ms
Loss rate: 1.80%
```
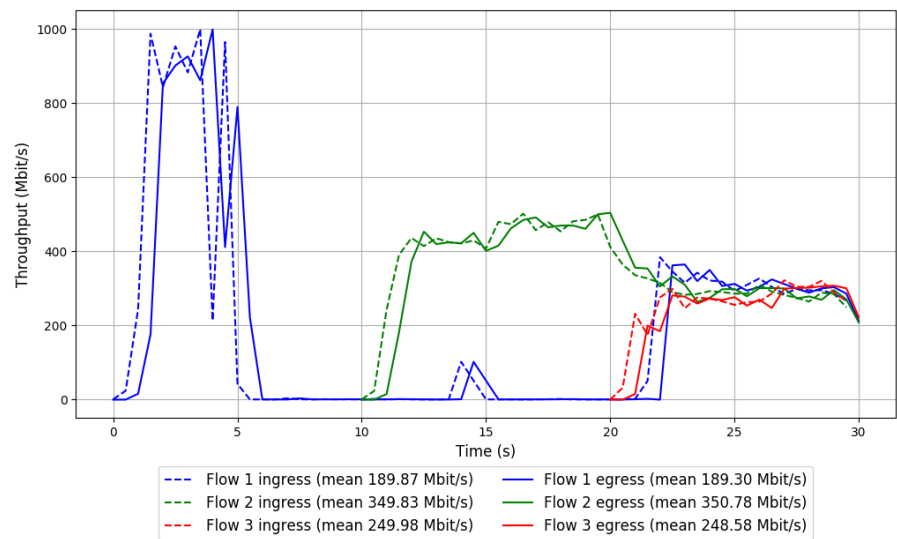
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-08-26 21:45:29
End at: 2019-08-26 21:45:59
Local clock offset: 0.019 ms
Remote clock offset: -0.112 ms


# Below is generated by plot.py at 2019-08-27 01:15:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.32 Mbit/s
95th percentile per-packet one-way delay: 103.843 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 189.30 Mbit/s
95th percentile per-packet one-way delay: 111.147 ms
Loss rate: 0.88%
-- Flow 2:
Average throughput: 350.78 Mbit/s
95th percentile per-packet one-way delay: 87.963 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 248.58 Mbit/s
95th percentile per-packet one-way delay: 87.035 ms
Loss rate: 2.12%
```

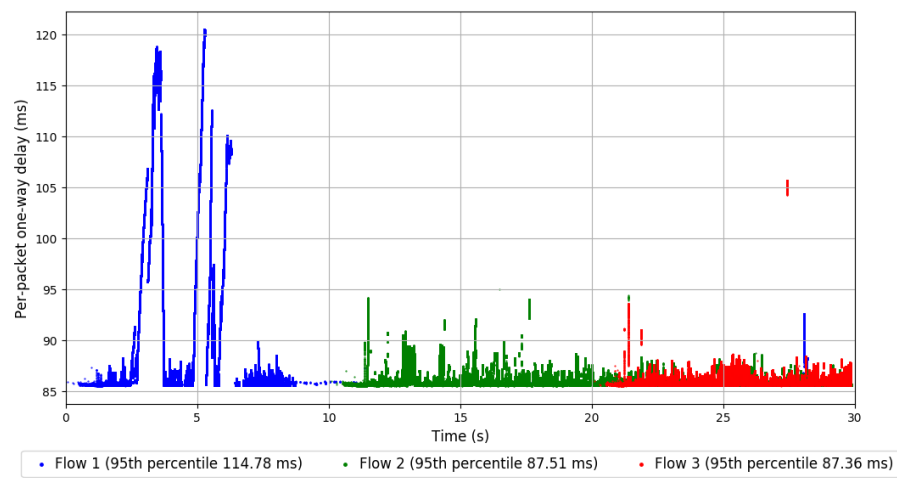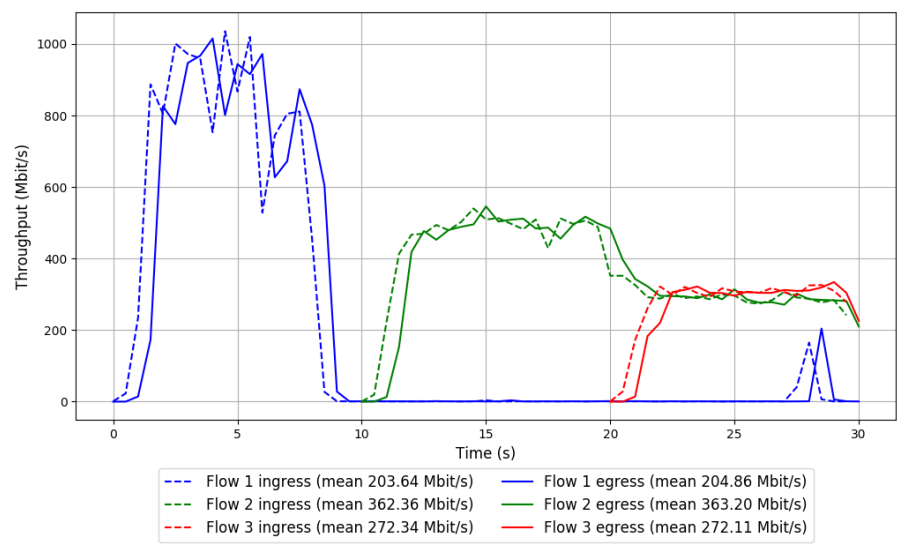Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-08-26 22:25:31
End at: 2019-08-26 22:26:01
Local clock offset: -0.363 ms
Remote clock offset: -0.037 ms


# Below is generated by plot.py at 2019-08-27 01:16:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.57 Mbit/s
95th percentile per-packet one-way delay: 106.058 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 204.86 Mbit/s
95th percentile per-packet one-way delay: 114.775 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 363.20 Mbit/s
95th percentile per-packet one-way delay: 87.514 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 272.11 Mbit/s
95th percentile per-packet one-way delay: 87.361 ms
Loss rate: 1.87%
```

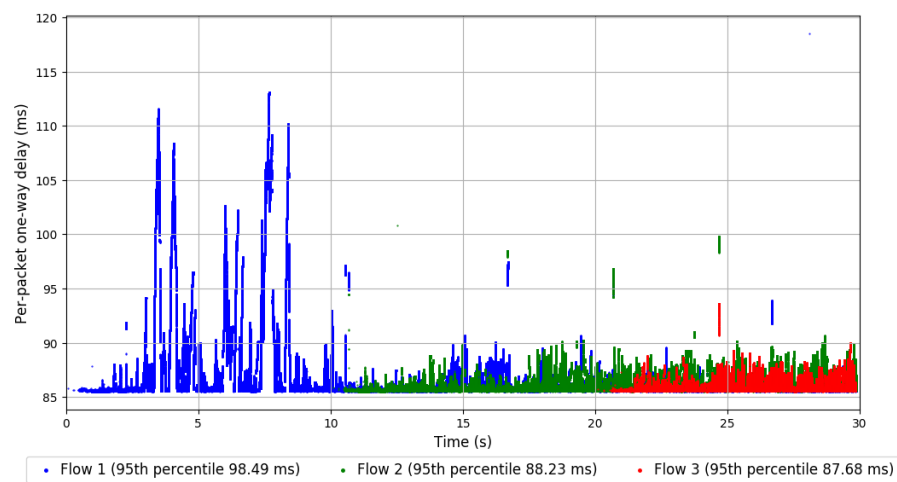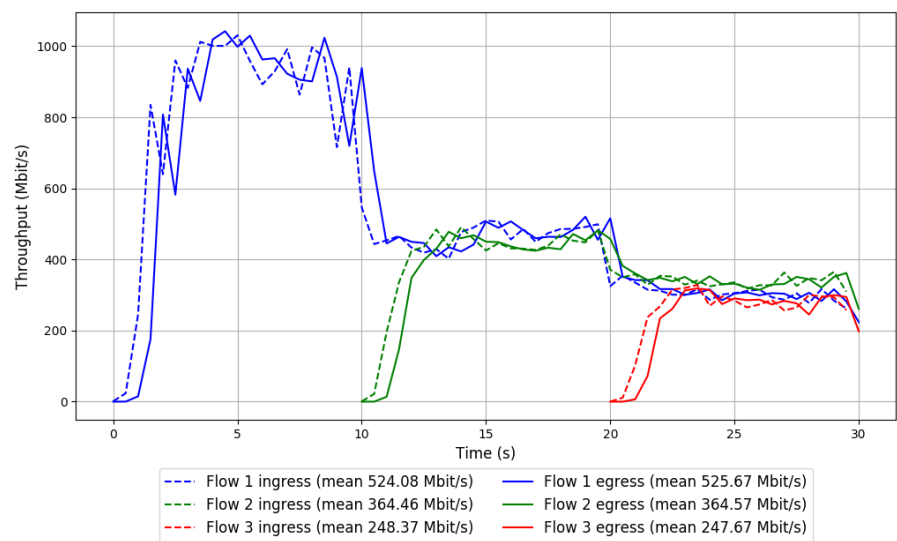# Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-08-26 23:05:58
End at: 2019-08-26 23:06:28
Local clock offset: -0.38 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-08-27 01:22:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 848.56 Mbit/s
95th percentile per-packet one-way delay: 93.885 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 525.67 Mbit/s
95th percentile per-packet one-way delay: 98.492 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 364.57 Mbit/s
95th percentile per-packet one-way delay: 88.232 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 247.67 Mbit/s
95th percentile per-packet one-way delay: 87.683 ms
Loss rate: 2.09%
```

Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-08-26 23:46:37
End at: 2019-08-26 23:47:07
Local clock offset: -0.32 ms
Remote clock offset: 0.049 ms


# Below is generated by plot.py at 2019-08-27 01:22:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 810.29 Mbit/s
95th percentile per-packet one-way delay: 89.953 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 515.52 Mbit/s
95th percentile per-packet one-way delay: 93.084 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 318.99 Mbit/s
95th percentile per-packet one-way delay: 87.129 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 255.07 Mbit/s
95th percentile per-packet one-way delay: 87.417 ms
Loss rate: 1.40%
```
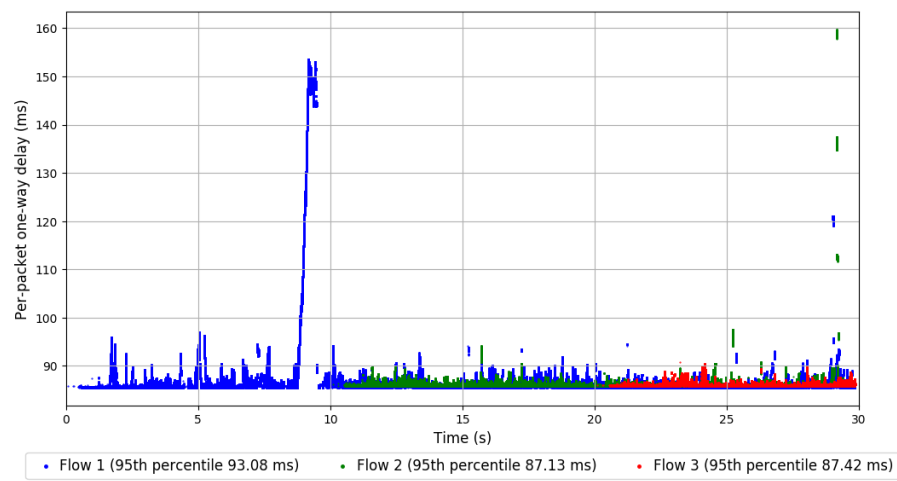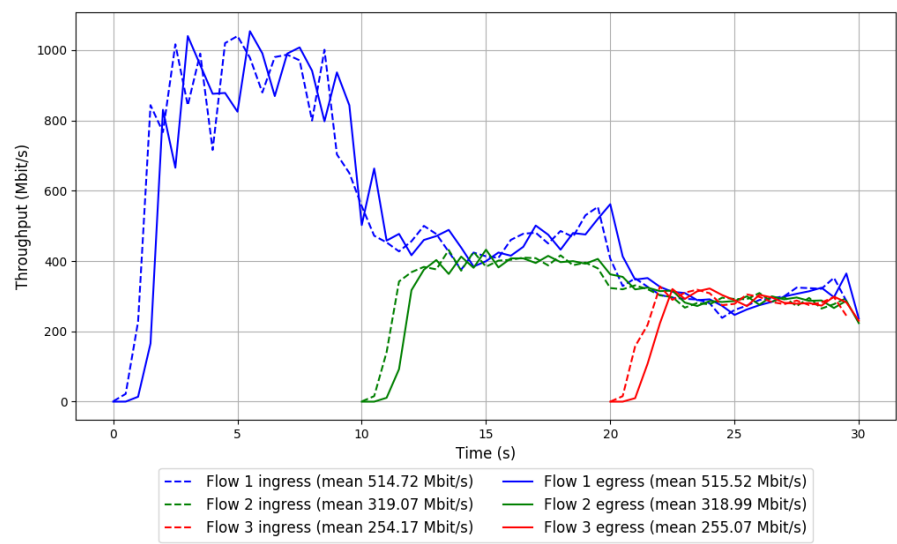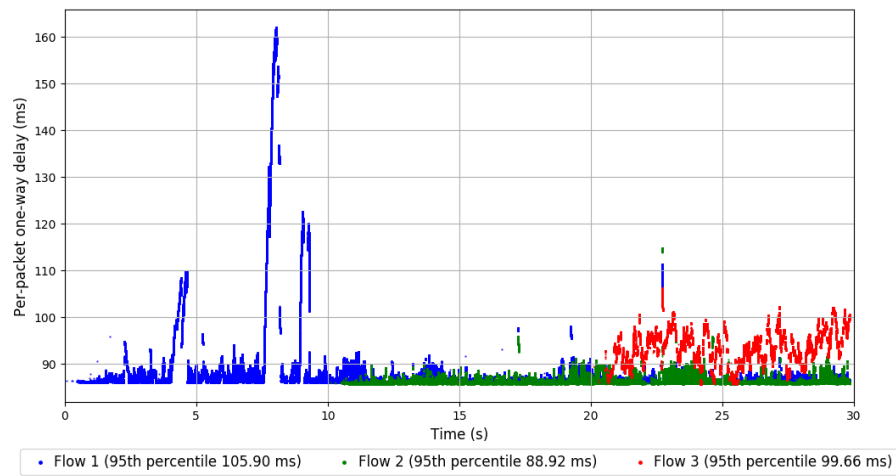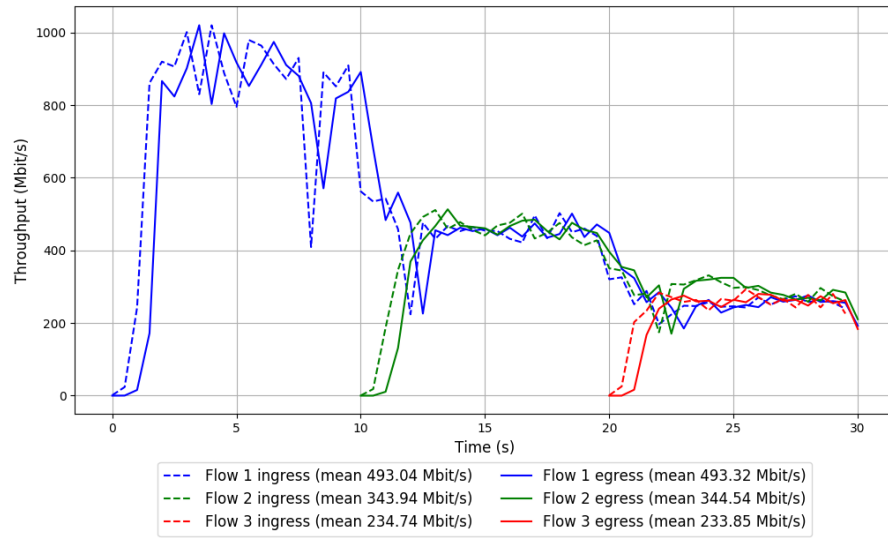
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-08-26 21:27:48
End at: 2019-08-26 21:28:18
Local clock offset: 0.174 ms
Remote clock offset: -0.071 ms


# Below is generated by plot.py at 2019-08-27 01:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 798.46 Mbit/s
95th percentile per-packet one-way delay: 98.638 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 493.32 Mbit/s
95th percentile per-packet one-way delay: 105.900 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 344.54 Mbit/s
95th percentile per-packet one-way delay: 88.923 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 233.85 Mbit/s
95th percentile per-packet one-way delay: 99.659 ms
Loss rate: 2.08%
```

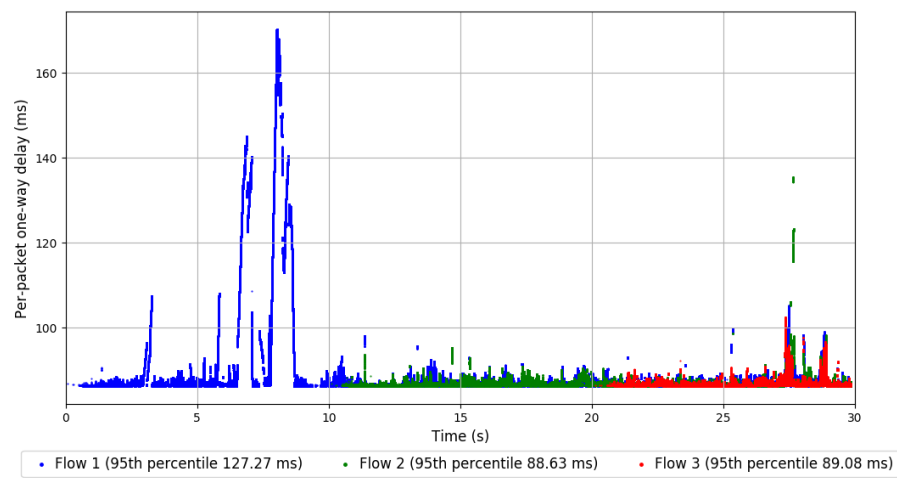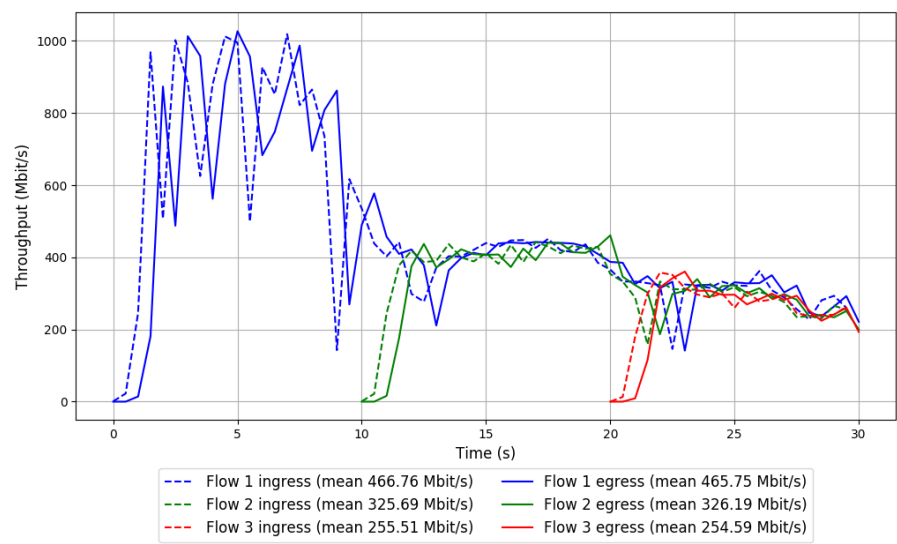Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-08-26 22:08:27
End at: 2019-08-26 22:08:57
Local clock offset: 0.392 ms
Remote clock offset: -0.152 ms


# Below is generated by plot.py at 2019-08-27 01:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 765.26 Mbit/s
95th percentile per-packet one-way delay: 106.152 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 465.75 Mbit/s
95th percentile per-packet one-way delay: 127.270 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 326.19 Mbit/s
95th percentile per-packet one-way delay: 88.627 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 254.59 Mbit/s
95th percentile per-packet one-way delay: 89.076 ms
Loss rate: 1.98%
```

Run 2: Report of FillP-Sheep — Data Link

- - - - Flow 1 ingress (mean 466.76 Mbit/s) —— Flow 1 egress (mean 465.75 Mbit/s)
- - - - Flow 2 ingress (mean 325.69 Mbit/s) —— Flow 2 egress (mean 326.19 Mbit/s)
- - - - Flow 3 ingress (mean 255.51 Mbit/s) —— Flow 3 egress (mean 254.59 Mbit/s)

• Flow 1 (95th percentile 127.27 ms) • Flow 2 (95th percentile 88.63 ms) • Flow 3 (95th percentile 89.08 ms)
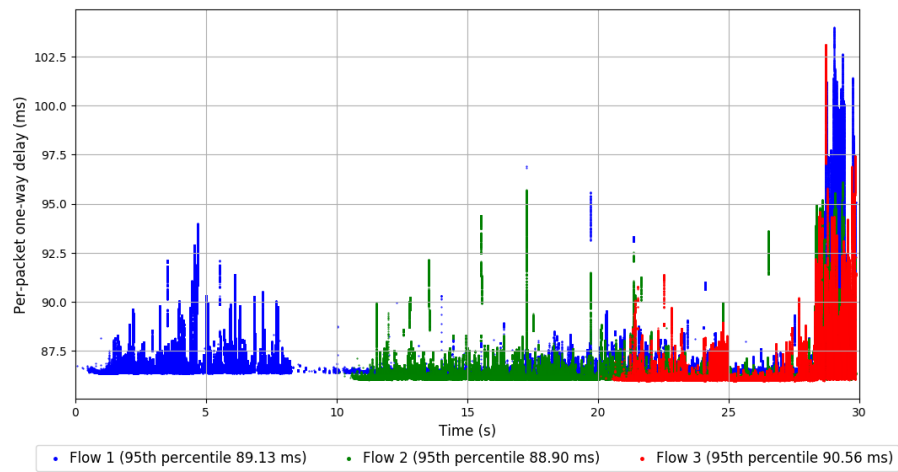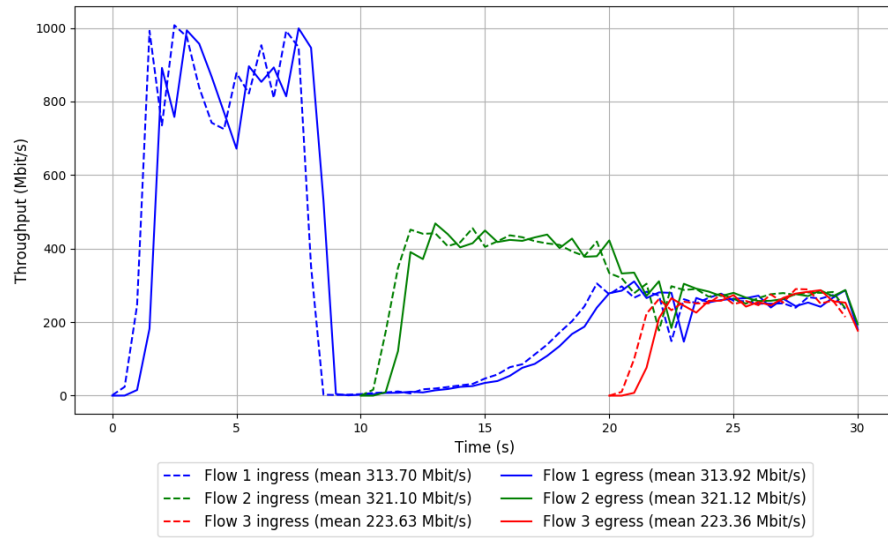
48

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-08-26 22:48:38
End at: 2019-08-26 22:49:08
Local clock offset: 0.111 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-08-27 01:23:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 600.32 Mbit/s
95th percentile per-packet one-way delay: 89.292 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 313.92 Mbit/s
95th percentile per-packet one-way delay: 89.130 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 321.12 Mbit/s
95th percentile per-packet one-way delay: 88.901 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 223.36 Mbit/s
95th percentile per-packet one-way delay: 90.560 ms
Loss rate: 1.85%
```
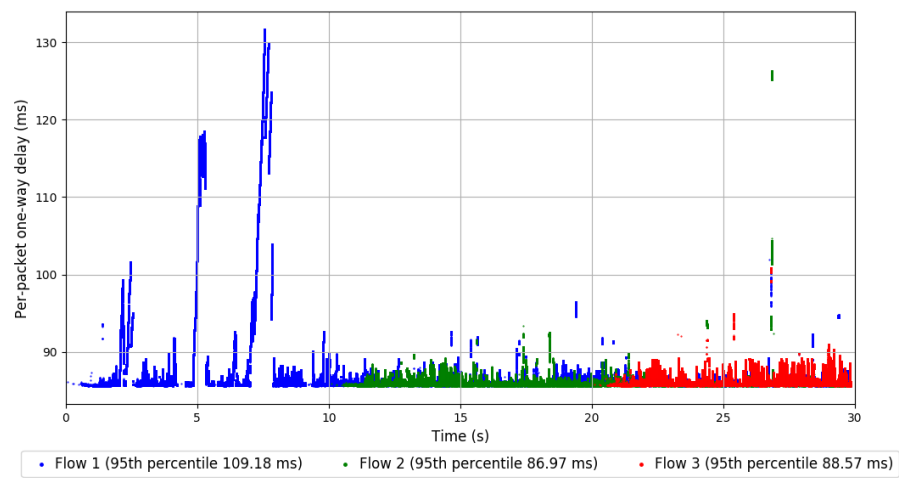
Run 3: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 313.70 Mbit/s) --- Flow 1 egress (mean 313.92 Mbit/s)
Flow 2 ingress (mean 321.10 Mbit/s) --- Flow 2 egress (mean 321.12 Mbit/s)
Flow 3 ingress (mean 223.63 Mbit/s) --- Flow 3 egress (mean 223.36 Mbit/s)

Flow 1 (95th percentile 89.13 ms)   Flow 2 (95th percentile 88.90 ms)   Flow 3 (95th percentile 90.56 ms)

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-08-26 23:29:29
End at: 2019-08-26 23:29:59
Local clock offset: -0.193 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2019-08-27 01:24:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 770.42 Mbit/s
95th percentile per-packet one-way delay: 95.971 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 477.63 Mbit/s
95th percentile per-packet one-way delay: 109.179 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 315.01 Mbit/s
95th percentile per-packet one-way delay: 86.965 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 256.13 Mbit/s
95th percentile per-packet one-way delay: 88.571 ms
Loss rate: 1.72%
```
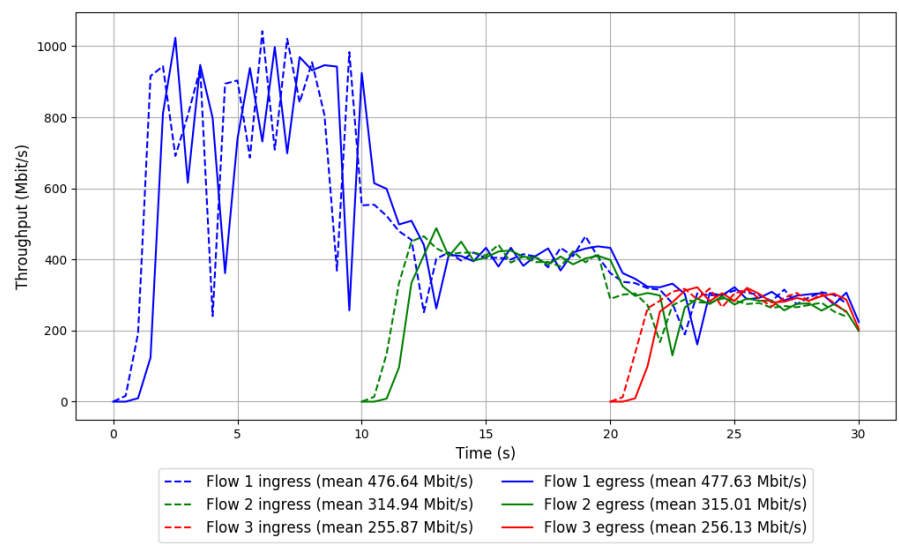
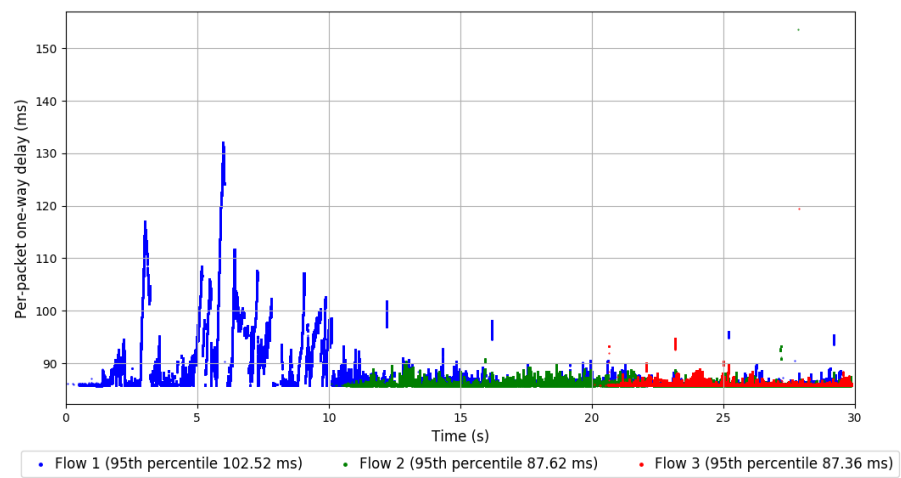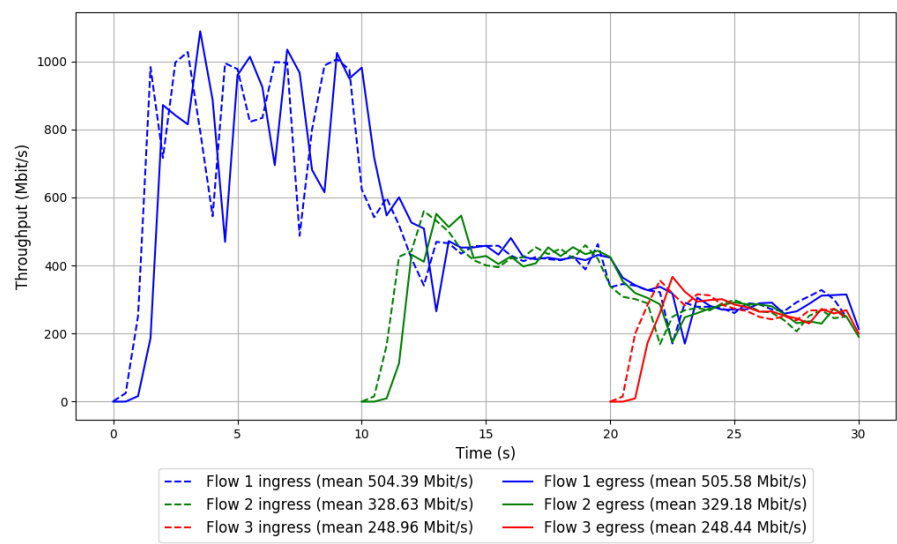Run 4: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 476.64 Mbit/s) --- Flow 1 egress (mean 477.63 Mbit/s)
Flow 2 ingress (mean 314.94 Mbit/s) --- Flow 2 egress (mean 315.01 Mbit/s)
Flow 3 ingress (mean 255.87 Mbit/s) --- Flow 3 egress (mean 256.13 Mbit/s)

• Flow 1 (95th percentile 109.18 ms) • Flow 2 (95th percentile 86.97 ms) • Flow 3 (95th percentile 88.57 ms)

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-08-27 00:10:05
End at: 2019-08-27 00:10:35
Local clock offset: -0.026 ms
Remote clock offset: -0.116 ms


# Below is generated by plot.py at 2019-08-27 01:31:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 805.37 Mbit/s
95th percentile per-packet one-way delay: 99.496 ms
Loss rate: 0.58%
-- Flow 1:
Average throughput: 505.58 Mbit/s
95th percentile per-packet one-way delay: 102.522 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 329.18 Mbit/s
95th percentile per-packet one-way delay: 87.616 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 248.44 Mbit/s
95th percentile per-packet one-way delay: 87.360 ms
Loss rate: 1.98%
```

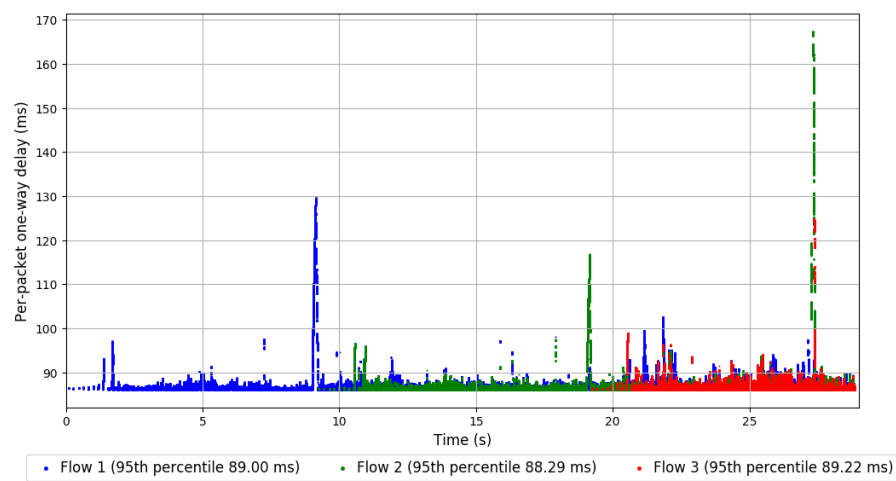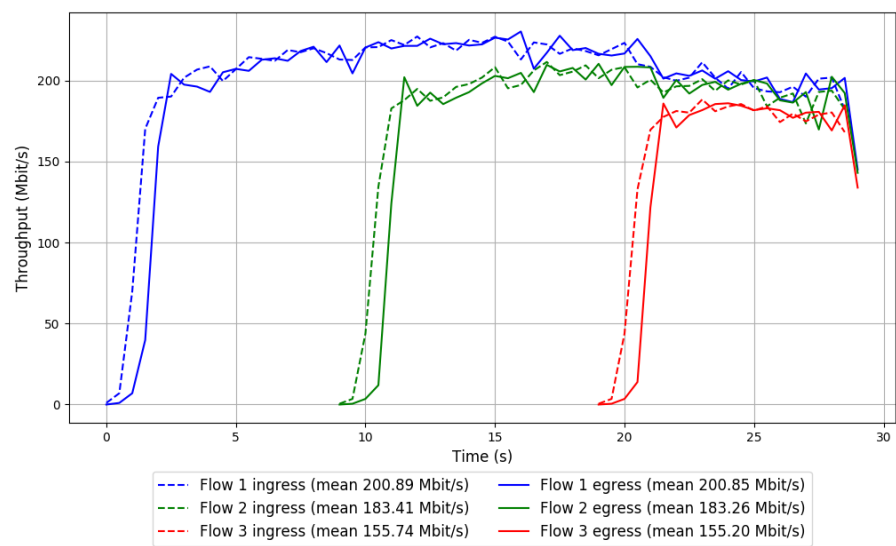Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 504.39 Mbit/s) --- Flow 1 egress (mean 505.58 Mbit/s)
Flow 2 ingress (mean 328.63 Mbit/s) --- Flow 2 egress (mean 329.18 Mbit/s)
Flow 3 ingress (mean 248.96 Mbit/s) --- Flow 3 egress (mean 248.44 Mbit/s)

Flow 1 (95th percentile 102.52 ms) • Flow 2 (95th percentile 87.62 ms) • Flow 3 (95th percentile 87.36 ms)

```
Run 1: Statistics of Indigo

Start at: 2019-08-26 21:35:17
End at: 2019-08-26 21:35:47
Local clock offset: 0.172 ms
Remote clock offset: -0.104 ms

# Below is generated by plot.py at 2019-08-27 01:31:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.64 Mbit/s
95th percentile per-packet one-way delay: 88.821 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 200.85 Mbit/s
95th percentile per-packet one-way delay: 89.002 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 183.26 Mbit/s
95th percentile per-packet one-way delay: 88.294 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 155.20 Mbit/s
95th percentile per-packet one-way delay: 89.224 ms
Loss rate: 2.13%
```
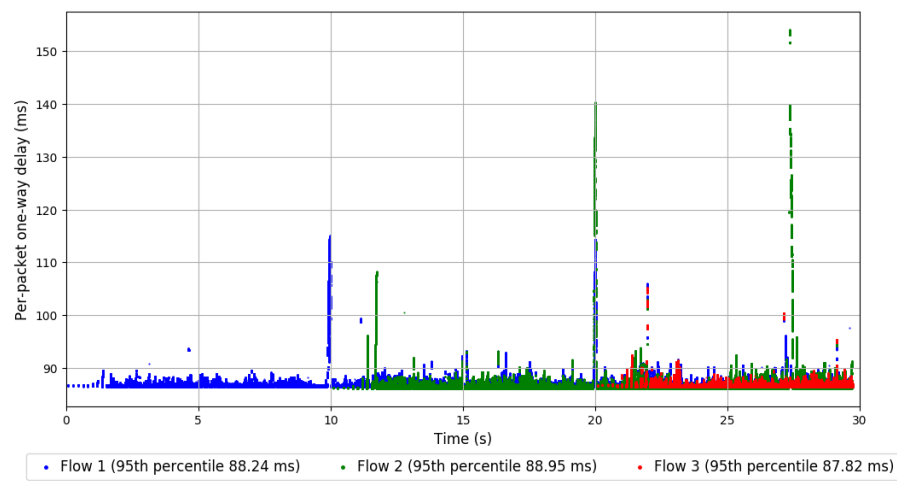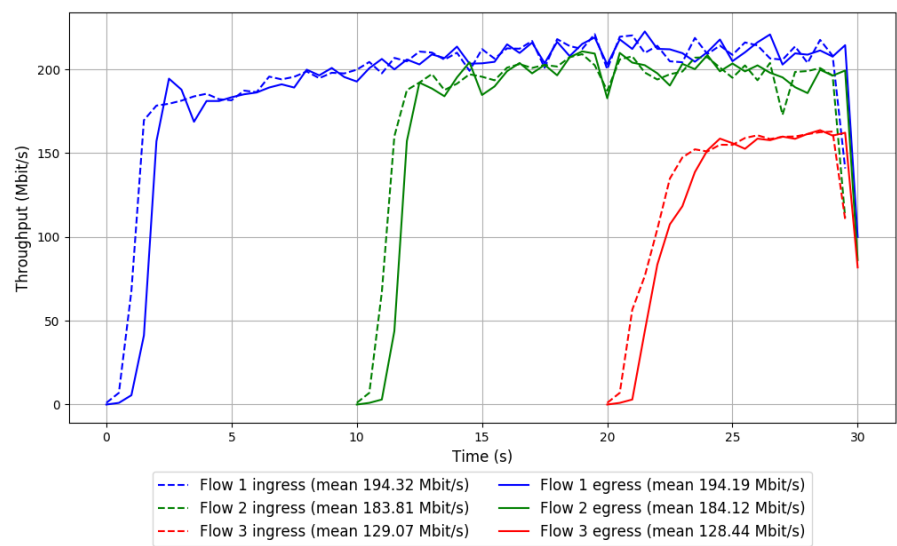
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-08-26 22:15:32
End at: 2019-08-26 22:16:02
Local clock offset: 0.251 ms
Remote clock offset: -0.119 ms

# Below is generated by plot.py at 2019-08-27 01:31:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 357.72 Mbit/s
95th percentile per-packet one-way delay: 88.390 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 194.19 Mbit/s
95th percentile per-packet one-way delay: 88.236 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 184.12 Mbit/s
95th percentile per-packet one-way delay: 88.948 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 128.44 Mbit/s
95th percentile per-packet one-way delay: 87.817 ms
Loss rate: 2.25%
```

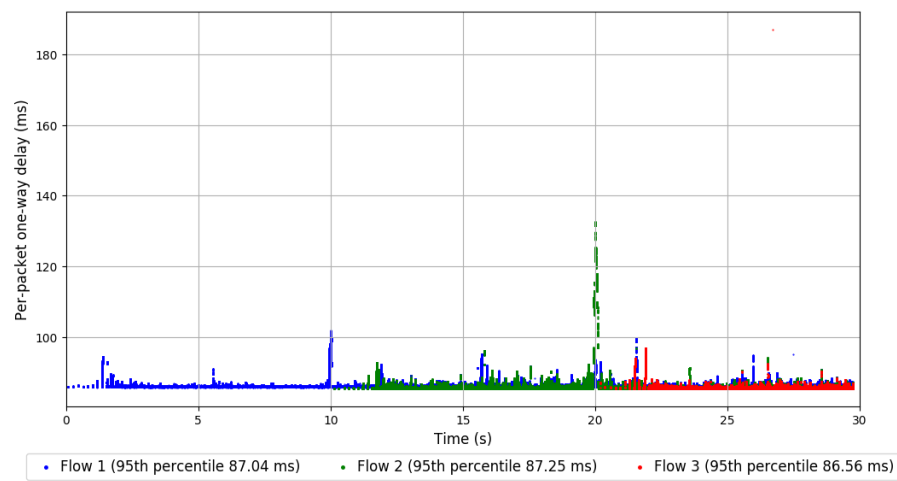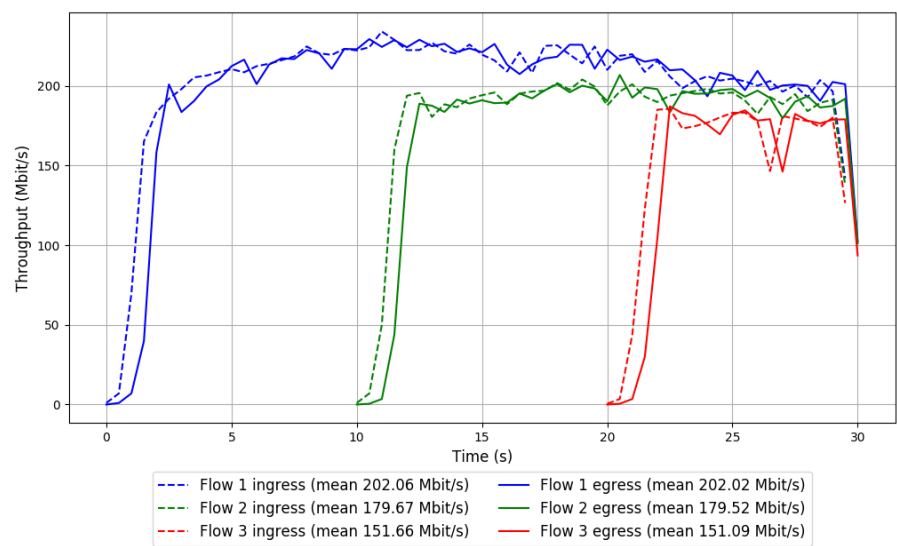# Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-08-26 22:55:47
End at: 2019-08-26 22:56:17
Local clock offset: -0.424 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-08-27 01:32:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.49 Mbit/s
95th percentile per-packet one-way delay: 87.047 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 202.02 Mbit/s
95th percentile per-packet one-way delay: 87.038 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 179.52 Mbit/s
95th percentile per-packet one-way delay: 87.250 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 151.09 Mbit/s
95th percentile per-packet one-way delay: 86.560 ms
Loss rate: 2.14%
```

Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-08-26 23:36:31
End at: 2019-08-26 23:37:01
Local clock offset: 0.395 ms
Remote clock offset: 0.015 ms


# Below is generated by plot.py at 2019-08-27 01:33:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 361.40 Mbit/s
95th percentile per-packet one-way delay: 88.106 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 202.88 Mbit/s
95th percentile per-packet one-way delay: 88.226 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 159.24 Mbit/s
95th percentile per-packet one-way delay: 87.969 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 163.95 Mbit/s
95th percentile per-packet one-way delay: 87.933 ms
Loss rate: 2.18%
```
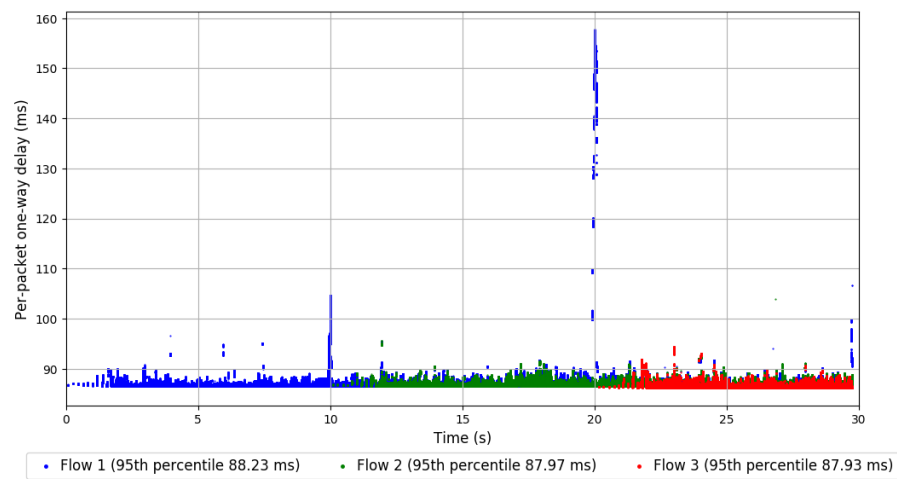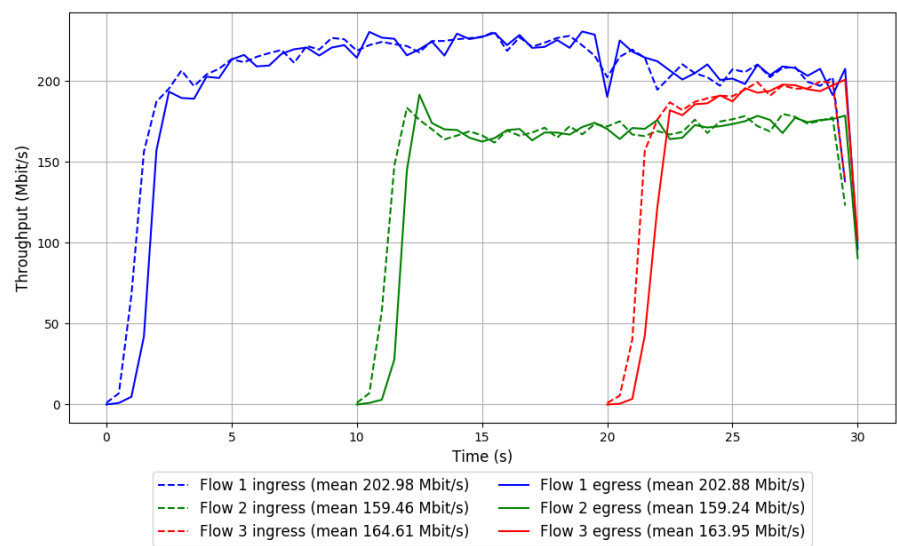
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-08-27 00:17:18
End at: 2019-08-27 00:17:48
Local clock offset: -0.057 ms
Remote clock offset: -0.074 ms


# Below is generated by plot.py at 2019-08-27 01:33:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 347.86 Mbit/s
95th percentile per-packet one-way delay: 87.278 ms
Loss rate: 0.99%
-- Flow 1:
Average throughput: 169.90 Mbit/s
95th percentile per-packet one-way delay: 87.013 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 187.14 Mbit/s
95th percentile per-packet one-way delay: 87.695 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 167.11 Mbit/s
95th percentile per-packet one-way delay: 87.483 ms
Loss rate: 2.13%
```
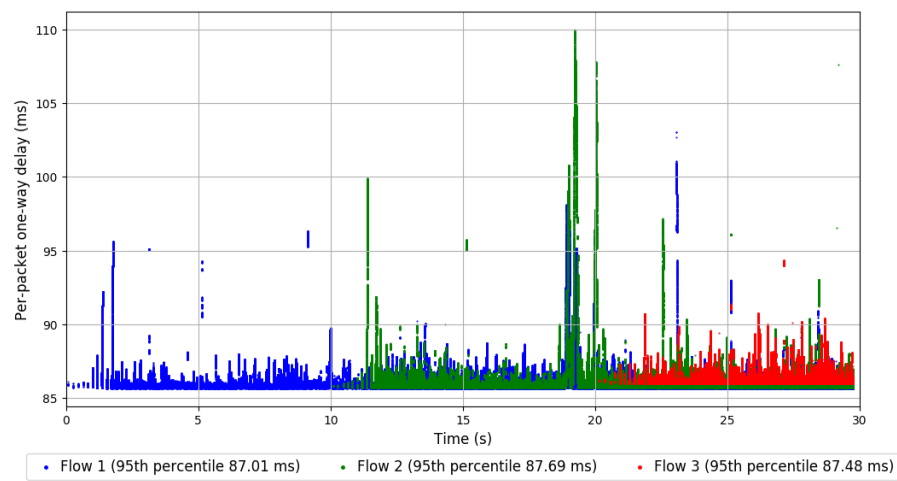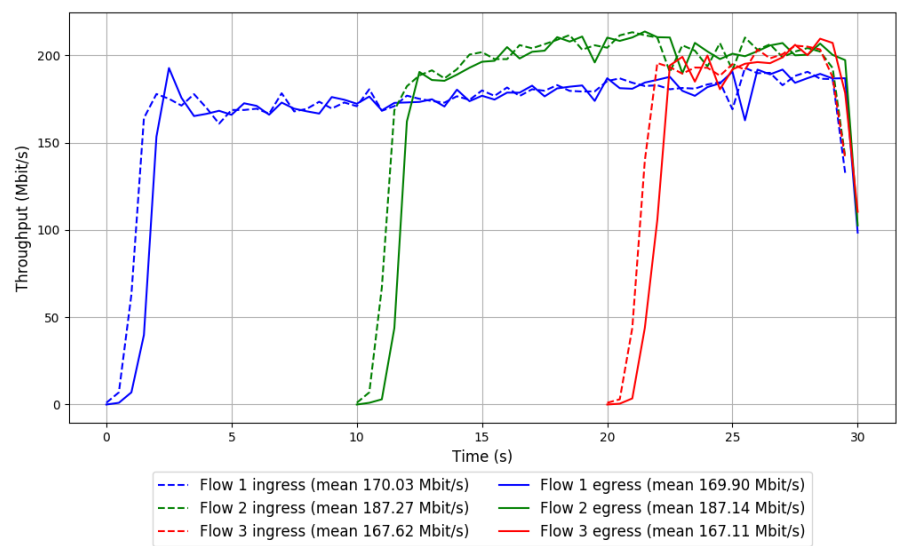
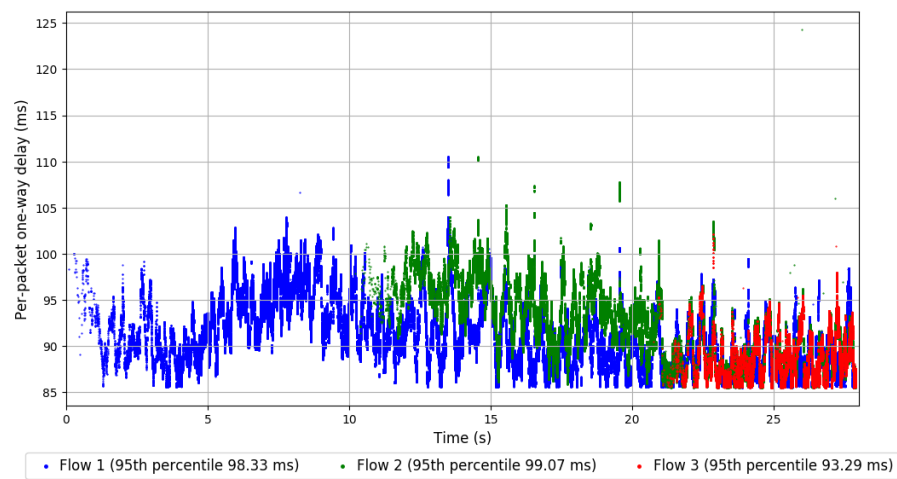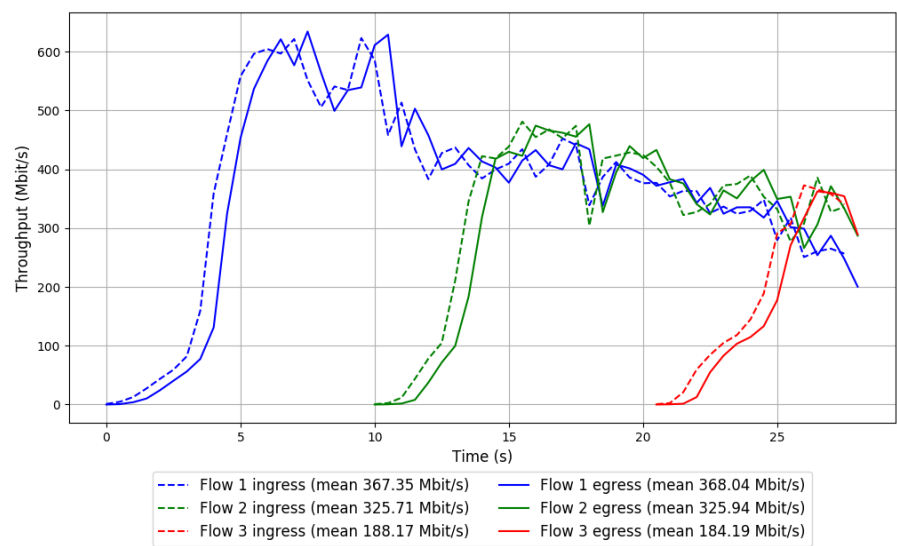Run 5: Report of Indigo — Data Link

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-08-26 21:17:52
End at: 2019-08-26 21:18:22
Local clock offset: -0.128 ms
Remote clock offset: -0.086 ms


# Below is generated by plot.py at 2019-08-27 01:33:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 622.64 Mbit/s
95th percentile per-packet one-way delay: 98.508 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 368.04 Mbit/s
95th percentile per-packet one-way delay: 98.329 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 325.94 Mbit/s
95th percentile per-packet one-way delay: 99.072 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 184.19 Mbit/s
95th percentile per-packet one-way delay: 93.294 ms
Loss rate: 4.49%
```

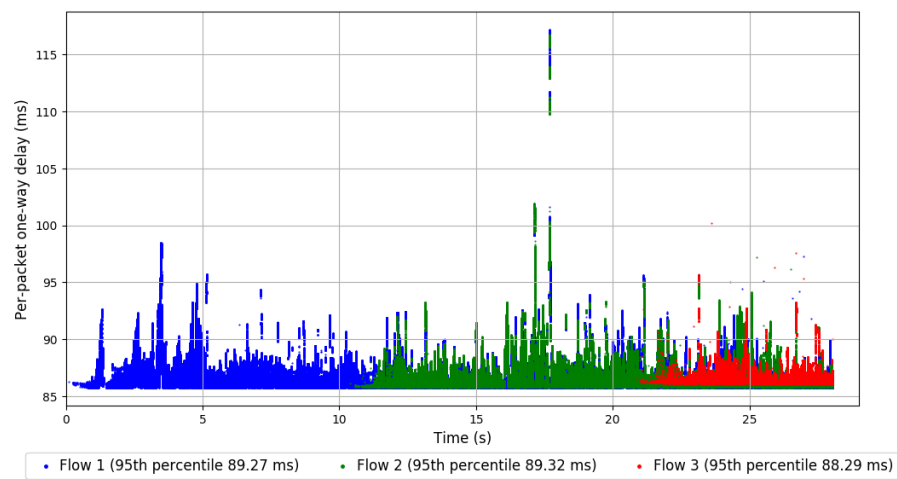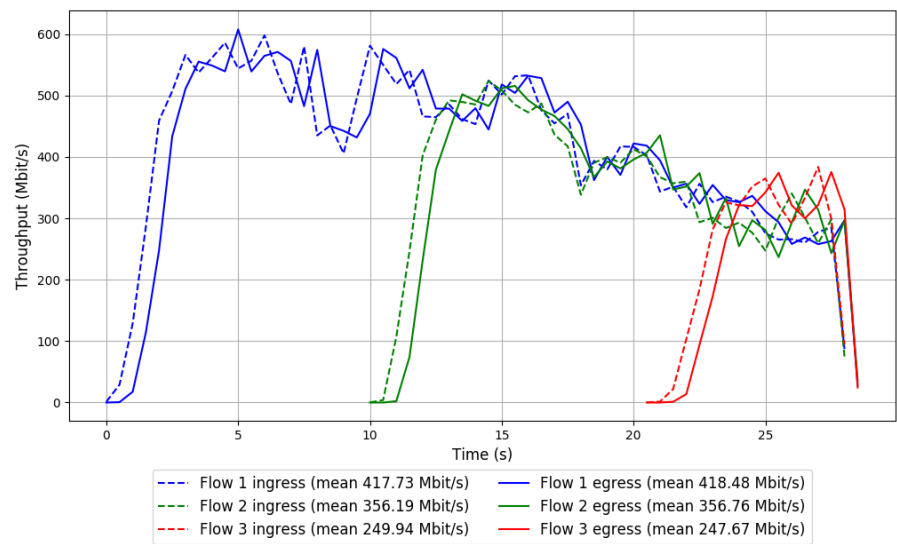Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-08-26 21:58:25
End at: 2019-08-26 21:58:55
Local clock offset: 0.016 ms
Remote clock offset: -0.145 ms


# Below is generated by plot.py at 2019-08-27 01:34:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 707.35 Mbit/s
95th percentile per-packet one-way delay: 89.229 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 418.48 Mbit/s
95th percentile per-packet one-way delay: 89.274 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 356.76 Mbit/s
95th percentile per-packet one-way delay: 89.323 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 247.67 Mbit/s
95th percentile per-packet one-way delay: 88.293 ms
Loss rate: 3.21%
```

Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-08-26 22:38:31
End at: 2019-08-26 22:39:01
Local clock offset: -0.659 ms
Remote clock offset: -0.0 ms


# Below is generated by plot.py at 2019-08-27 01:37:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 710.60 Mbit/s
95th percentile per-packet one-way delay: 90.219 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 422.91 Mbit/s
95th percentile per-packet one-way delay: 91.042 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 346.10 Mbit/s
95th percentile per-packet one-way delay: 89.878 ms
Loss rate: 0.71%
-- Flow 3:
Average throughput: 246.80 Mbit/s
95th percentile per-packet one-way delay: 87.192 ms
Loss rate: 3.67%
```
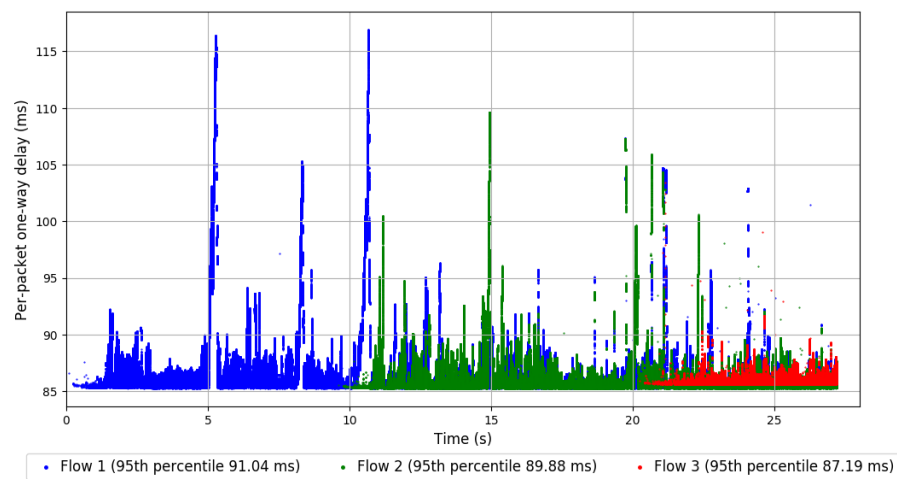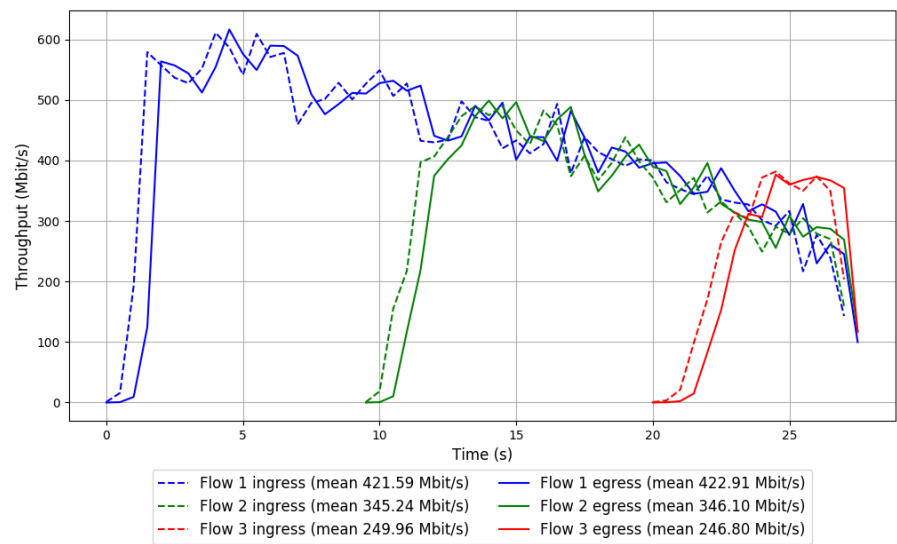
Run 3: Report of Indigo-MusesC3 — Data Link

- - - - Flow 1 ingress (mean 421.59 Mbit/s) ——— Flow 1 egress (mean 422.91 Mbit/s)
- - - - Flow 2 ingress (mean 345.24 Mbit/s) ——— Flow 2 egress (mean 346.10 Mbit/s)
- - - - Flow 3 ingress (mean 249.96 Mbit/s) ——— Flow 3 egress (mean 246.80 Mbit/s)

• Flow 1 (95th percentile 91.04 ms)   • Flow 2 (95th percentile 89.88 ms)   • Flow 3 (95th percentile 87.19 ms)
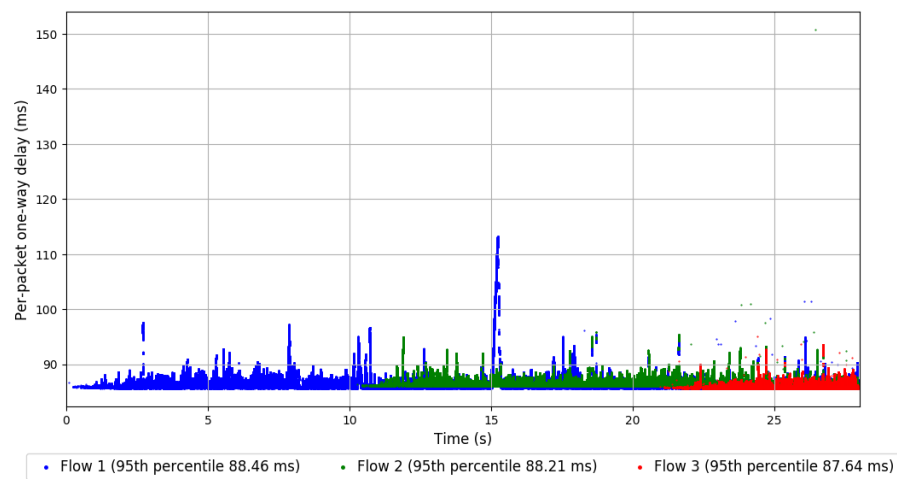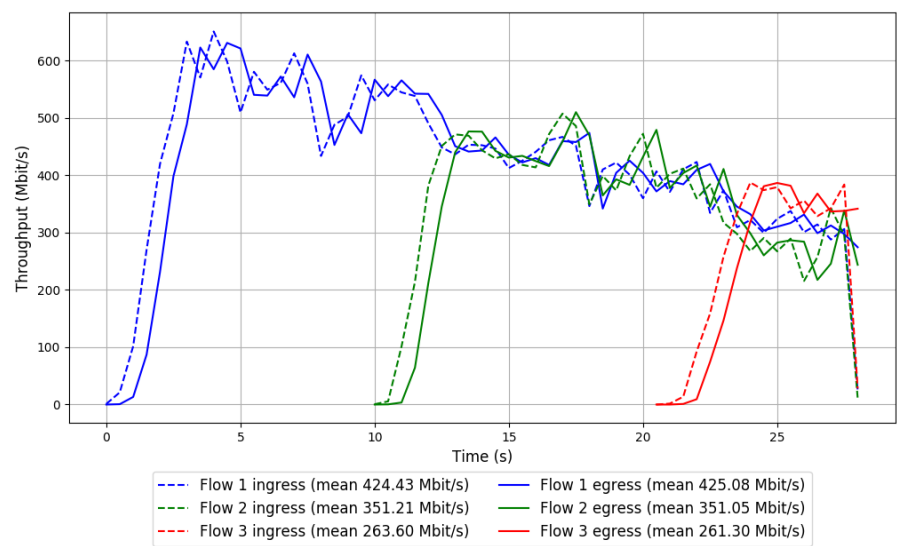
```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-08-26 23:19:16
End at: 2019-08-26 23:19:46
Local clock offset: -0.167 ms
Remote clock offset: -0.042 ms


# Below is generated by plot.py at 2019-08-27 01:41:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 713.30 Mbit/s
95th percentile per-packet one-way delay: 88.302 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 425.08 Mbit/s
95th percentile per-packet one-way delay: 88.457 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 351.05 Mbit/s
95th percentile per-packet one-way delay: 88.214 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 261.30 Mbit/s
95th percentile per-packet one-way delay: 87.644 ms
Loss rate: 3.27%
```

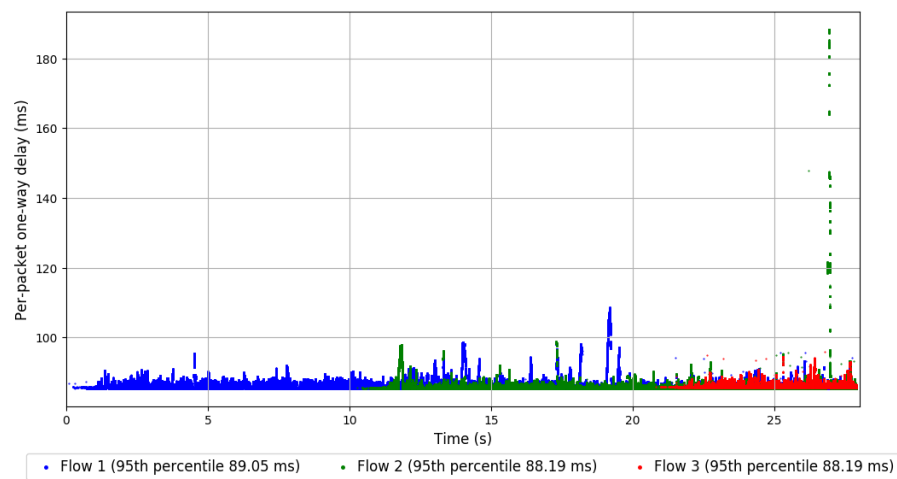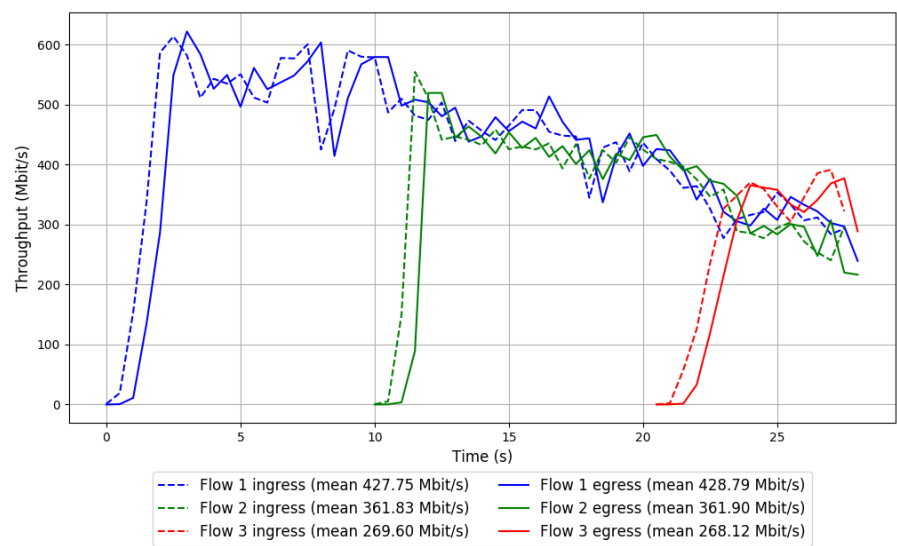Run 4: Report of Indigo-MusesC3 — Data Link

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-08-26 23:59:54
End at: 2019-08-27 00:00:24
Local clock offset: -0.429 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-08-27 01:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 726.22 Mbit/s
95th percentile per-packet one-way delay: 88.732 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 428.79 Mbit/s
95th percentile per-packet one-way delay: 89.048 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 361.90 Mbit/s
95th percentile per-packet one-way delay: 88.190 ms
Loss rate: 0.95%
-- Flow 3:
Average throughput: 268.12 Mbit/s
95th percentile per-packet one-way delay: 88.191 ms
Loss rate: 2.93%
```

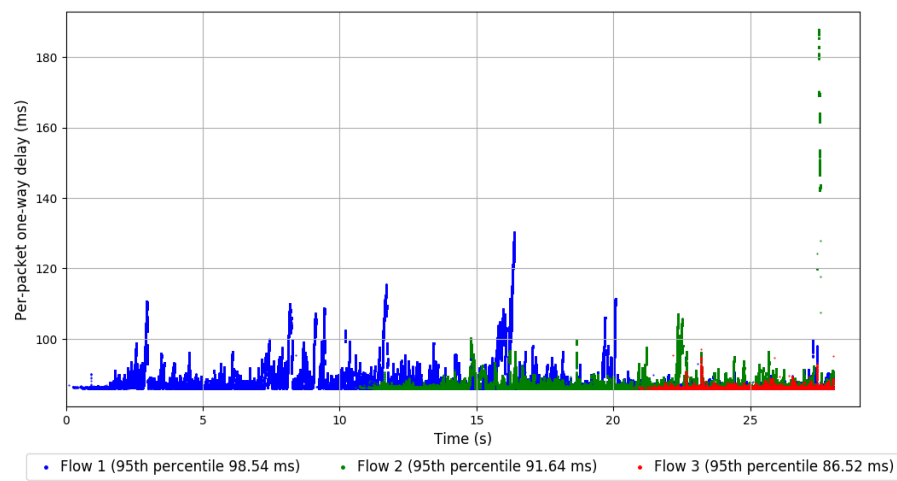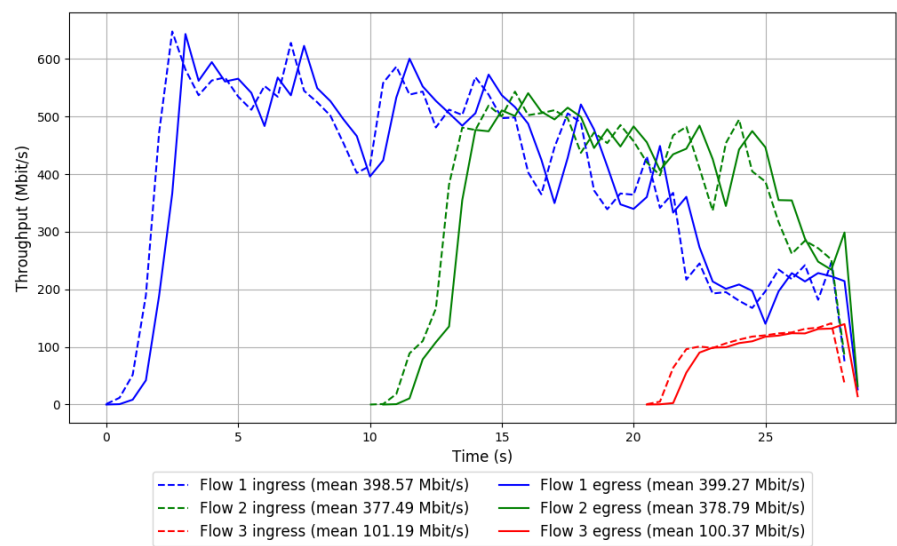Run 5: Report of Indigo-MusesC3 — Data Link

```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-08-26 21:23:04
End at: 2019-08-26 21:23:34
Local clock offset: 0.363 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-08-27 01:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 661.92 Mbit/s
95th percentile per-packet one-way delay: 96.011 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 399.27 Mbit/s
95th percentile per-packet one-way delay: 98.536 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 378.79 Mbit/s
95th percentile per-packet one-way delay: 91.635 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 100.37 Mbit/s
95th percentile per-packet one-way delay: 86.519 ms
Loss rate: 3.15%
```

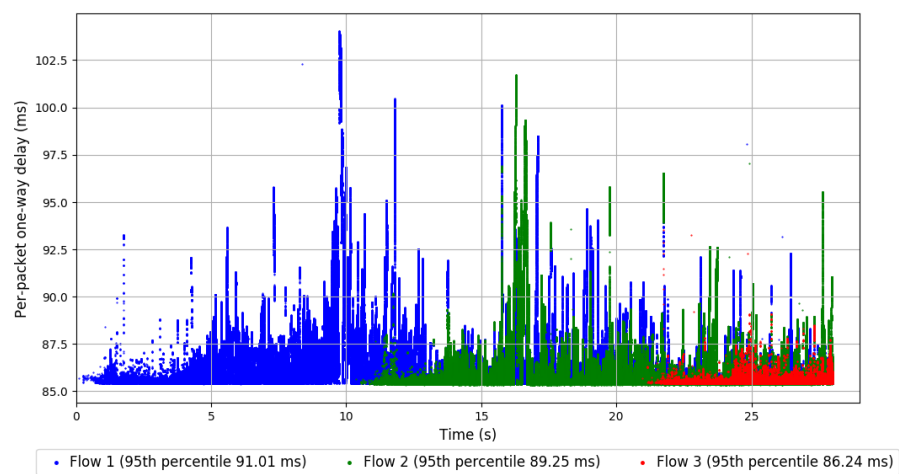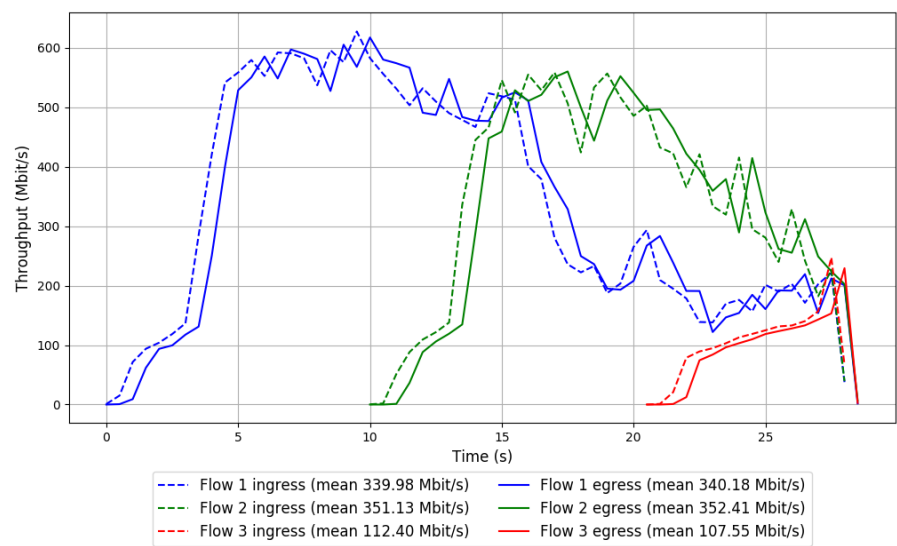Run 1: Report of Indigo-MusesC5 — Data Link

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-08-26 22:03:34
End at: 2019-08-26 22:04:04
Local clock offset: -0.408 ms
Remote clock offset: -0.182 ms


# Below is generated by plot.py at 2019-08-27 01:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 589.92 Mbit/s
95th percentile per-packet one-way delay: 90.322 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 340.18 Mbit/s
95th percentile per-packet one-way delay: 91.009 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 352.41 Mbit/s
95th percentile per-packet one-way delay: 89.245 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 107.55 Mbit/s
95th percentile per-packet one-way delay: 86.242 ms
Loss rate: 6.63%
```

Run 2: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 339.98 Mbit/s) Flow 1 egress (mean 340.18 Mbit/s)
Flow 2 ingress (mean 351.13 Mbit/s) Flow 2 egress (mean 352.41 Mbit/s)
Flow 3 ingress (mean 112.40 Mbit/s) Flow 3 egress (mean 107.55 Mbit/s)

Flow 1 (95th percentile 91.01 ms)   Flow 2 (95th percentile 89.25 ms)   Flow 3 (95th percentile 86.24 ms)
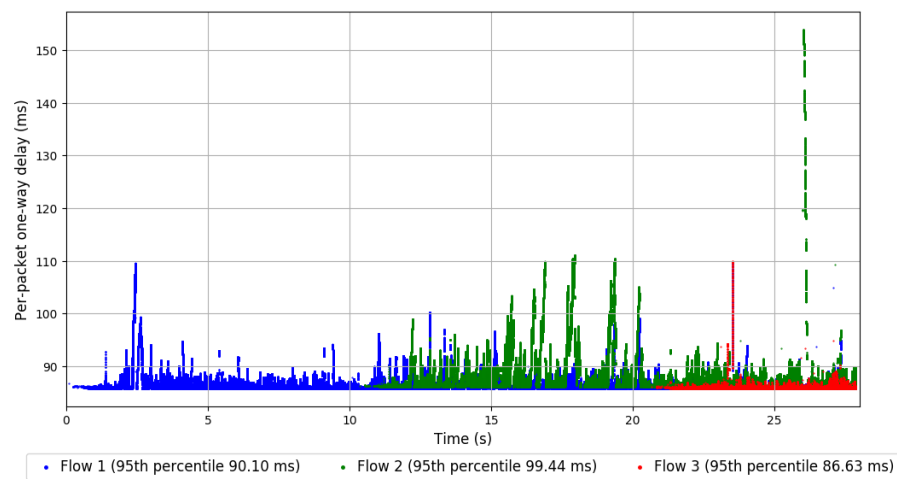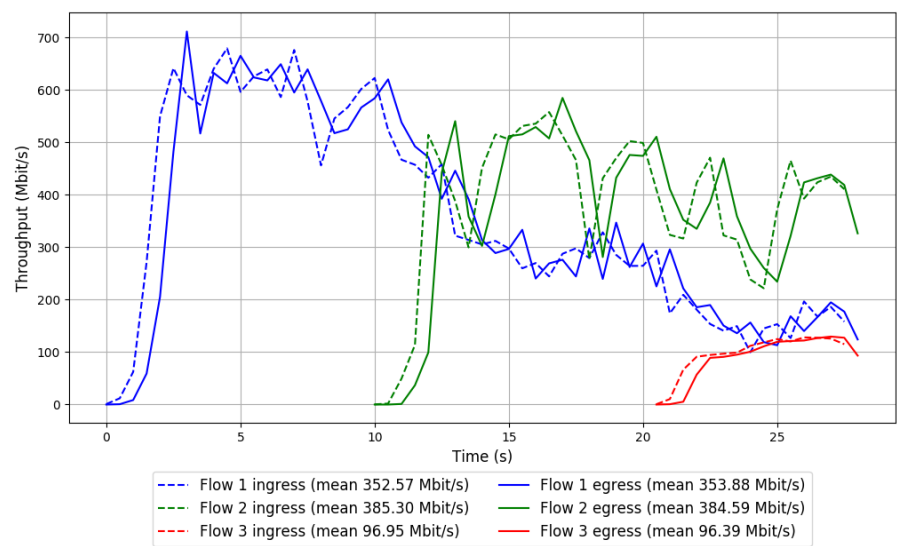
```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-08-26 22:43:45
End at: 2019-08-26 22:44:15
Local clock offset: -0.182 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-08-27 01:42:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.79 Mbit/s
95th percentile per-packet one-way delay: 94.245 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 353.88 Mbit/s
95th percentile per-packet one-way delay: 90.103 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 384.59 Mbit/s
95th percentile per-packet one-way delay: 99.436 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 96.39 Mbit/s
95th percentile per-packet one-way delay: 86.629 ms
Loss rate: 2.88%
```

Run 3: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 352.57 Mbit/s) --- Flow 1 egress (mean 353.88 Mbit/s)
Flow 2 ingress (mean 385.30 Mbit/s) --- Flow 2 egress (mean 384.59 Mbit/s)
Flow 3 ingress (mean 96.95 Mbit/s) --- Flow 3 egress (mean 96.39 Mbit/s)

Flow 1 (95th percentile 90.10 ms)   Flow 2 (95th percentile 99.44 ms)   Flow 3 (95th percentile 86.63 ms)

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-08-26 23:24:34
End at: 2019-08-26 23:25:04
Local clock offset: -0.371 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2019-08-27 01:42:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 606.75 Mbit/s
95th percentile per-packet one-way delay: 116.522 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 333.14 Mbit/s
95th percentile per-packet one-way delay: 184.042 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 400.31 Mbit/s
95th percentile per-packet one-way delay: 100.874 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 89.56 Mbit/s
95th percentile per-packet one-way delay: 86.070 ms
Loss rate: 3.09%
```
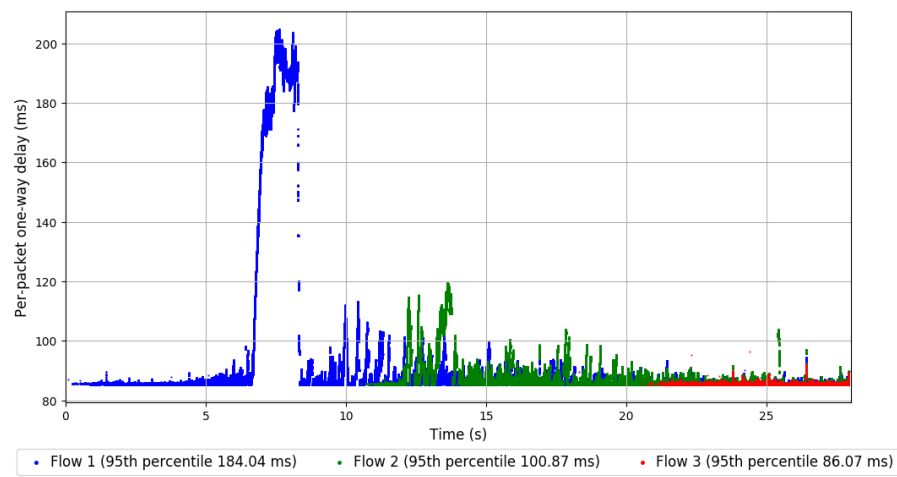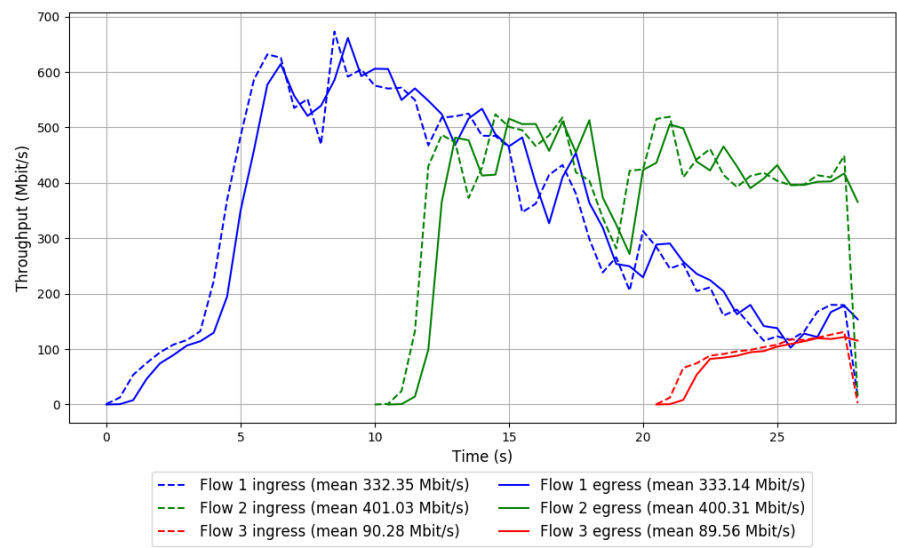
Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 332.35 Mbit/s)   Flow 1 egress (mean 333.14 Mbit/s)
Flow 2 ingress (mean 401.03 Mbit/s)   Flow 2 egress (mean 400.31 Mbit/s)
Flow 3 ingress (mean 90.28 Mbit/s)   Flow 3 egress (mean 89.56 Mbit/s)

Flow 1 (95th percentile 184.04 ms)   Flow 2 (95th percentile 100.87 ms)   Flow 3 (95th percentile 86.07 ms)
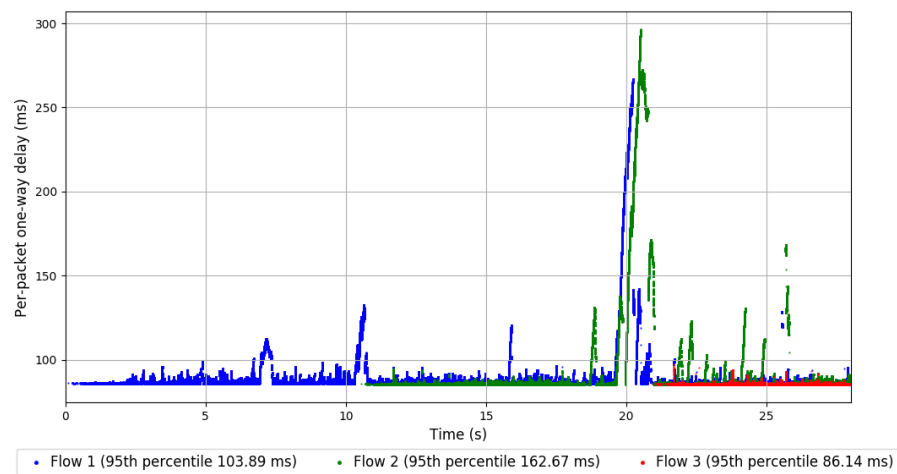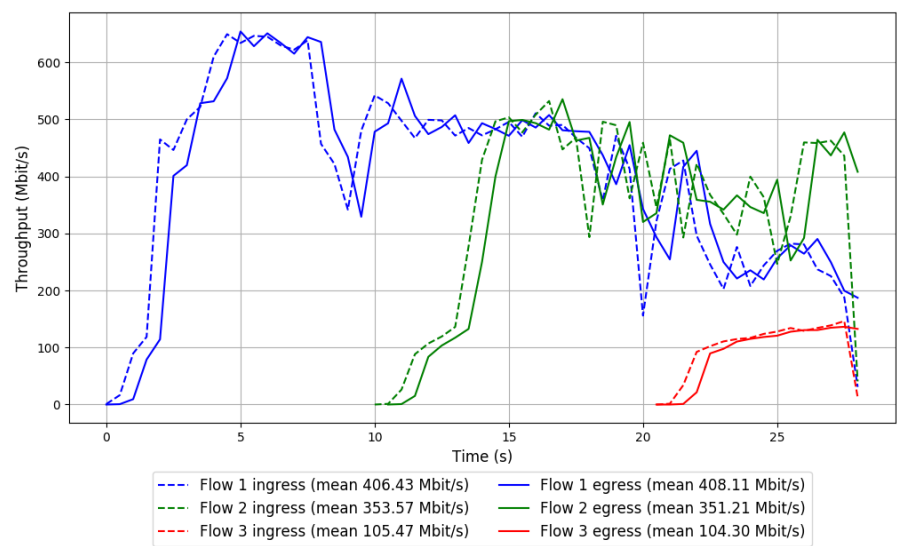
82

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-08-27 00:05:12
End at: 2019-08-27 00:05:42
Local clock offset: -0.494 ms
Remote clock offset: -0.102 ms


# Below is generated by plot.py at 2019-08-27 01:44:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 653.33 Mbit/s
95th percentile per-packet one-way delay: 117.765 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 408.11 Mbit/s
95th percentile per-packet one-way delay: 103.895 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 351.21 Mbit/s
95th percentile per-packet one-way delay: 162.672 ms
Loss rate: 1.64%
-- Flow 3:
Average throughput: 104.30 Mbit/s
95th percentile per-packet one-way delay: 86.135 ms
Loss rate: 3.48%
```

Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 406.43 Mbit/s) --- Flow 1 egress (mean 408.11 Mbit/s)
Flow 2 ingress (mean 353.57 Mbit/s) --- Flow 2 egress (mean 351.21 Mbit/s)
Flow 3 ingress (mean 105.47 Mbit/s) --- Flow 3 egress (mean 104.30 Mbit/s)

Flow 1 (95th percentile 103.89 ms)   Flow 2 (95th percentile 162.67 ms)   Flow 3 (95th percentile 86.14 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-08-26 21:19:36
End at: 2019-08-26 21:20:06
Local clock offset: -0.351 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-08-27 01:46:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 641.84 Mbit/s
95th percentile per-packet one-way delay: 105.613 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 349.08 Mbit/s
95th percentile per-packet one-way delay: 104.285 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 355.30 Mbit/s
95th percentile per-packet one-way delay: 114.584 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 277.30 Mbit/s
95th percentile per-packet one-way delay: 93.304 ms
Loss rate: 3.53%
```
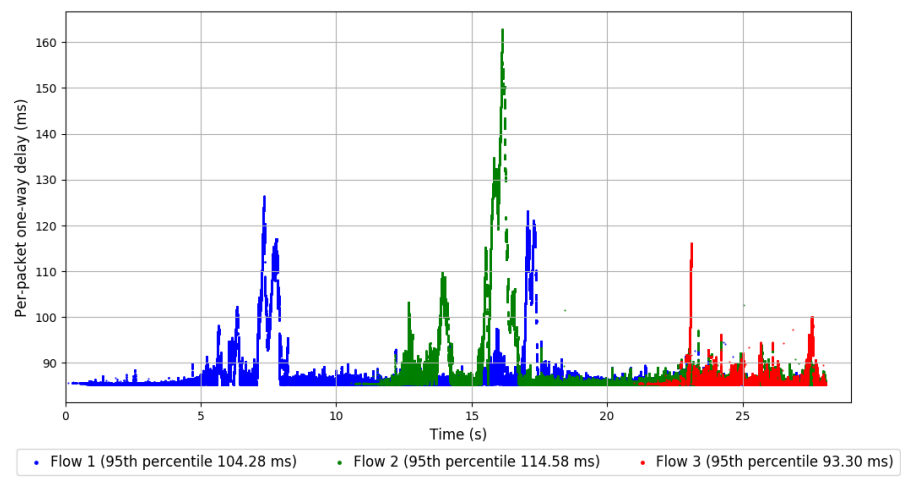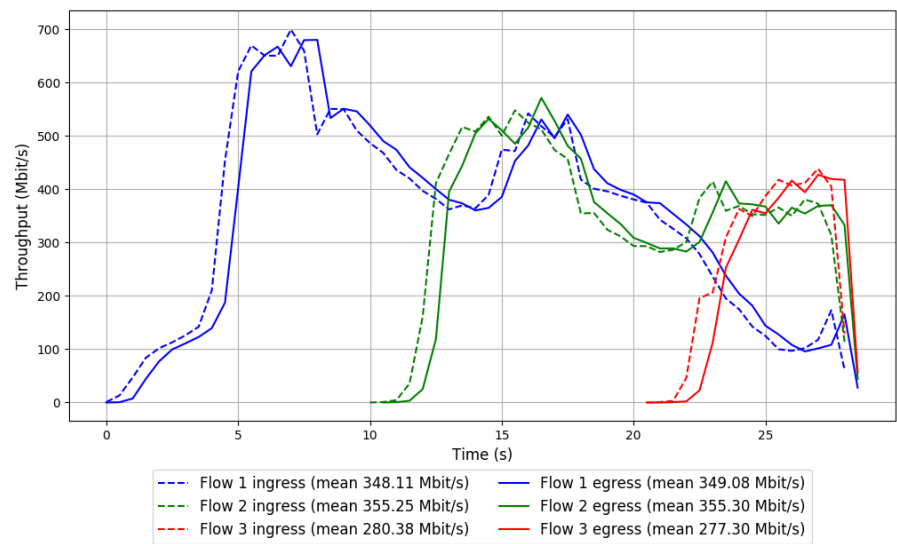
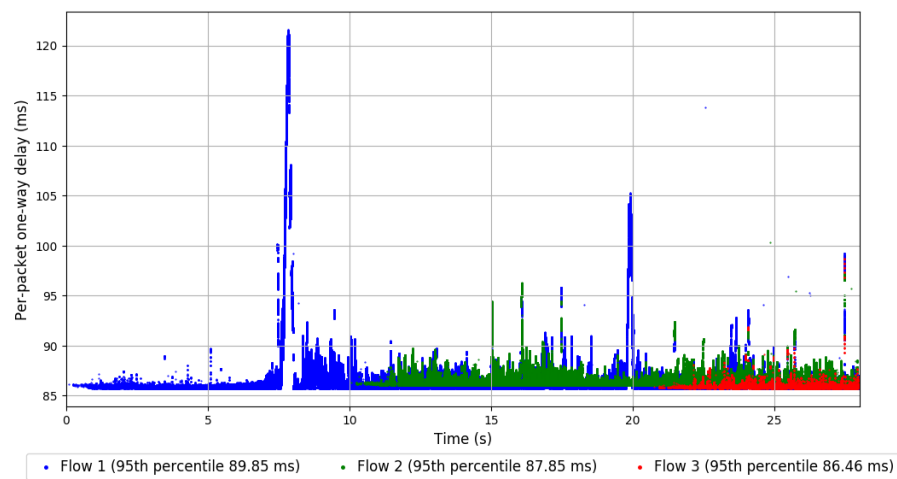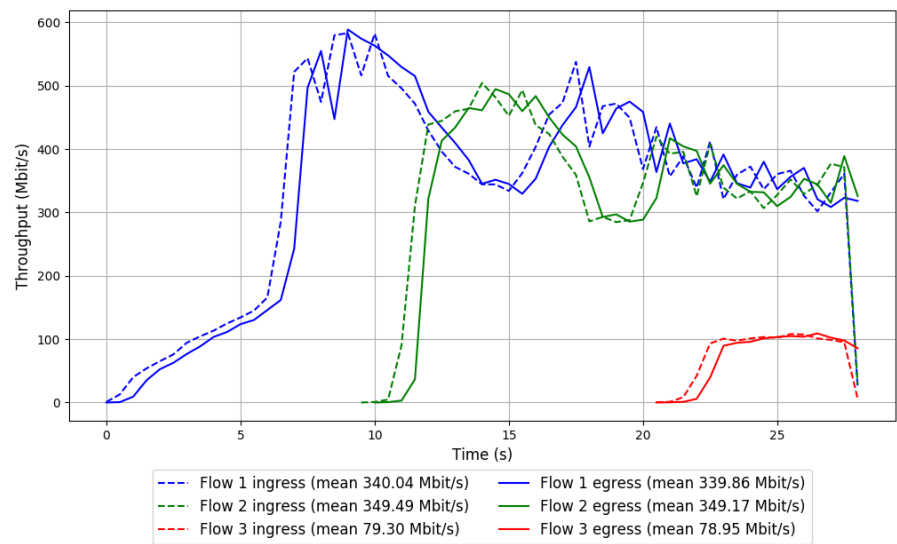Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-08-26 22:00:11
End at: 2019-08-26 22:00:41
Local clock offset: -0.065 ms
Remote clock offset: -0.161 ms


# Below is generated by plot.py at 2019-08-27 01:49:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 584.35 Mbit/s
95th percentile per-packet one-way delay: 88.653 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 339.86 Mbit/s
95th percentile per-packet one-way delay: 89.851 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 349.17 Mbit/s
95th percentile per-packet one-way delay: 87.852 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 78.95 Mbit/s
95th percentile per-packet one-way delay: 86.462 ms
Loss rate: 2.78%
```

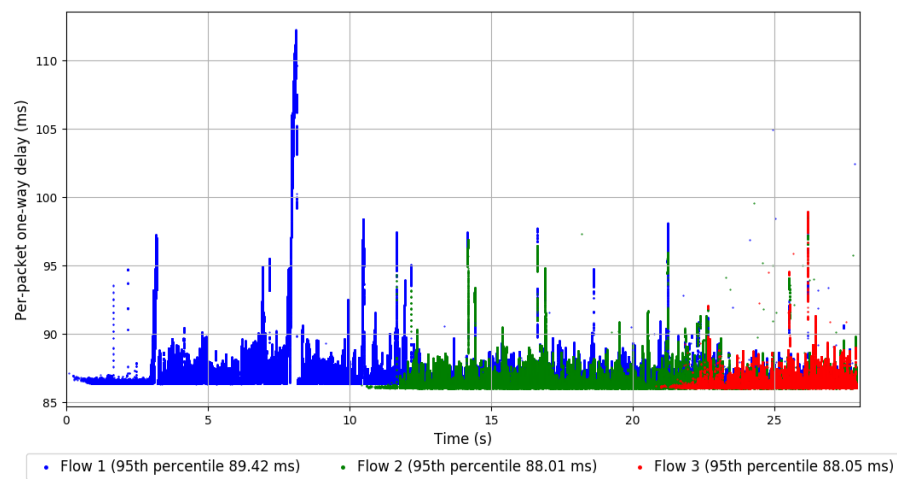Run 2: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 340.04 Mbit/s)   Flow 1 egress (mean 339.86 Mbit/s)
Flow 2 ingress (mean 349.49 Mbit/s)   Flow 2 egress (mean 349.17 Mbit/s)
Flow 3 ingress (mean 79.30 Mbit/s)   Flow 3 egress (mean 78.95 Mbit/s)

Flow 1 (95th percentile 89.85 ms)   Flow 2 (95th percentile 87.85 ms)   Flow 3 (95th percentile 86.46 ms)
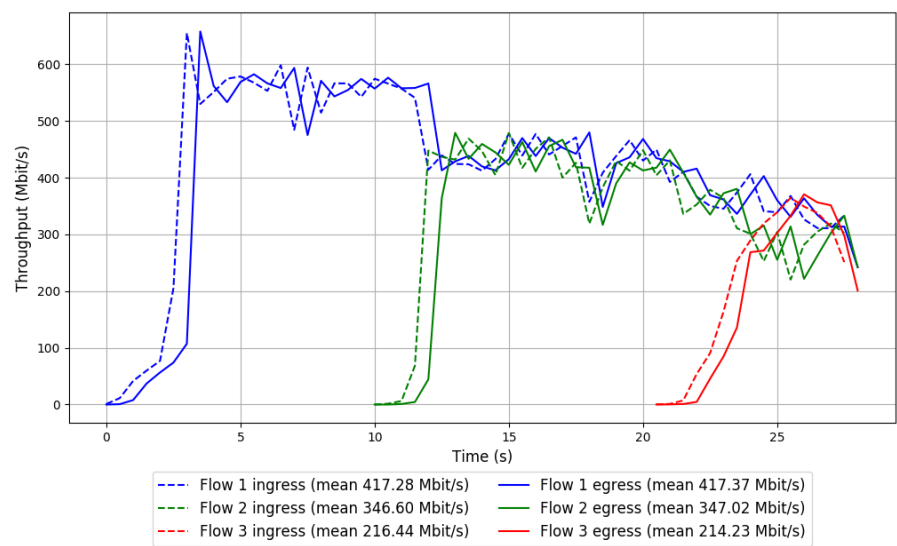
```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-08-26 22:40:17
End at: 2019-08-26 22:40:47
Local clock offset: 0.026 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-08-27 01:50:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.58 Mbit/s
95th percentile per-packet one-way delay: 88.815 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 417.37 Mbit/s
95th percentile per-packet one-way delay: 89.419 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 347.02 Mbit/s
95th percentile per-packet one-way delay: 88.009 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 214.23 Mbit/s
95th percentile per-packet one-way delay: 88.048 ms
Loss rate: 3.49%
```

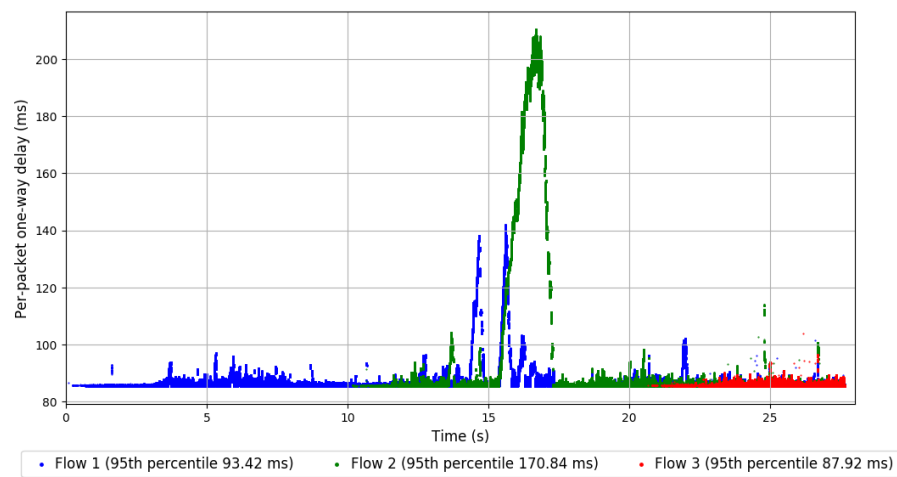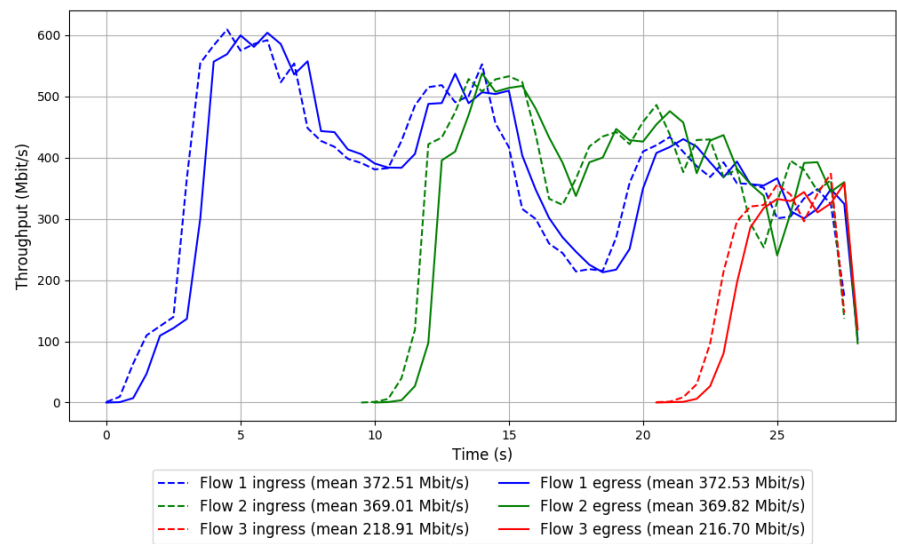Run 3: Report of Indigo-MusesD — Data Link

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-08-26 23:21:03
End at: 2019-08-26 23:21:33
Local clock offset: -0.477 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-08-27 01:50:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 664.33 Mbit/s
95th percentile per-packet one-way delay: 111.293 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 372.53 Mbit/s
95th percentile per-packet one-way delay: 93.423 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 369.82 Mbit/s
95th percentile per-packet one-way delay: 170.841 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 216.70 Mbit/s
95th percentile per-packet one-way delay: 87.918 ms
Loss rate: 3.49%
```

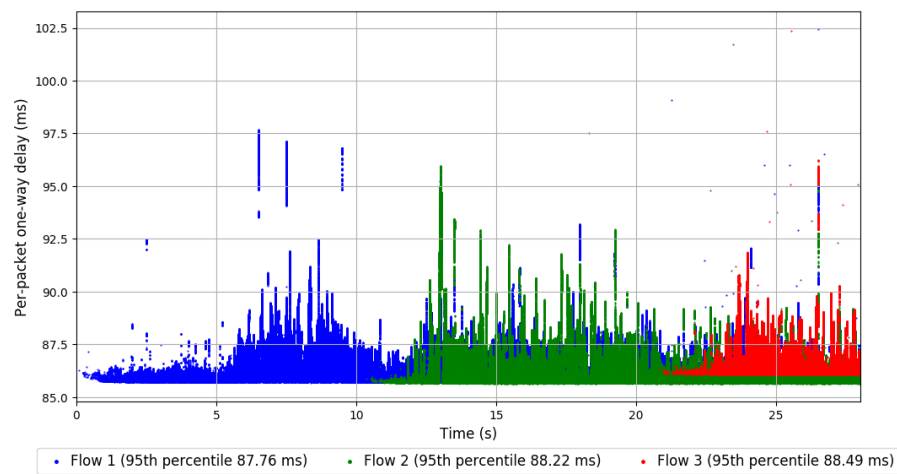Run 4: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 372.51 Mbit/s) --- Flow 1 egress (mean 372.53 Mbit/s)
Flow 2 ingress (mean 369.01 Mbit/s) --- Flow 2 egress (mean 369.82 Mbit/s)
Flow 3 ingress (mean 218.91 Mbit/s) --- Flow 3 egress (mean 216.70 Mbit/s)

Flow 1 (95th percentile 93.42 ms)   Flow 2 (95th percentile 170.84 ms)   Flow 3 (95th percentile 87.92 ms)
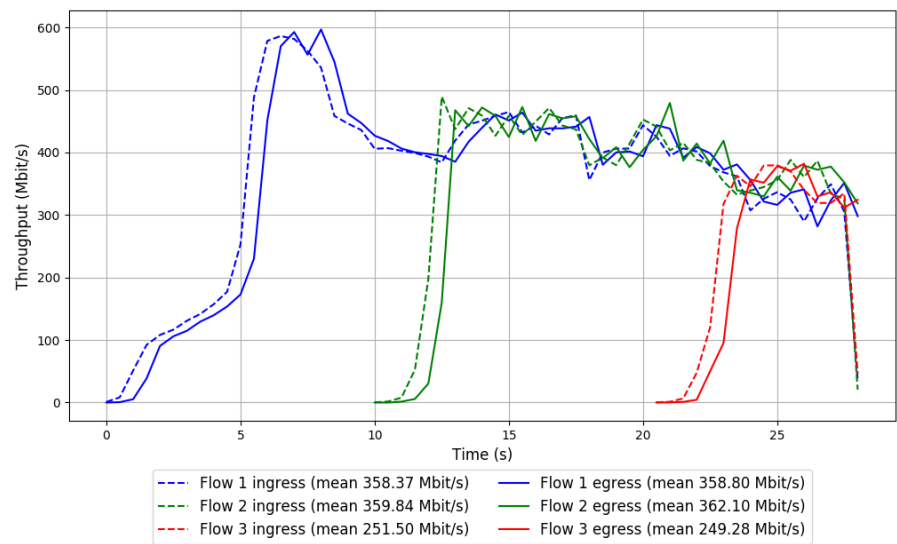
```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-08-27 00:01:41
End at: 2019-08-27 00:02:11
Local clock offset: -0.083 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-08-27 01:50:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 651.31 Mbit/s
95th percentile per-packet one-way delay: 87.995 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 358.80 Mbit/s
95th percentile per-packet one-way delay: 87.760 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 362.10 Mbit/s
95th percentile per-packet one-way delay: 88.224 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 249.28 Mbit/s
95th percentile per-packet one-way delay: 88.493 ms
Loss rate: 3.22%
```

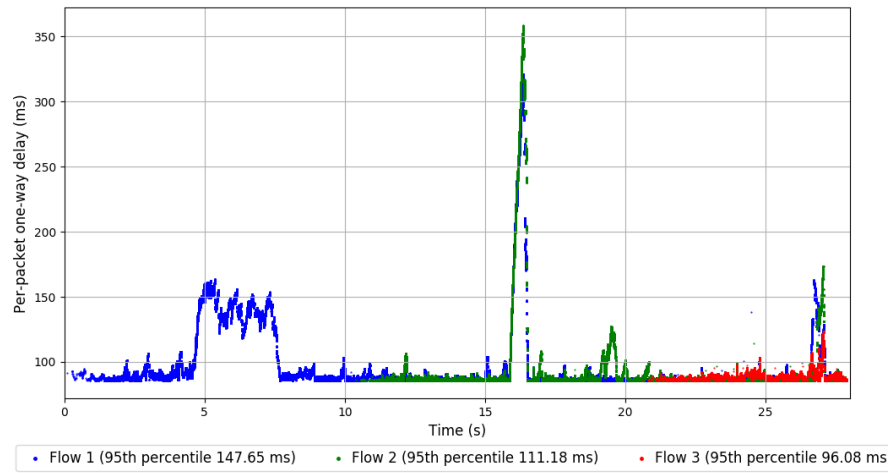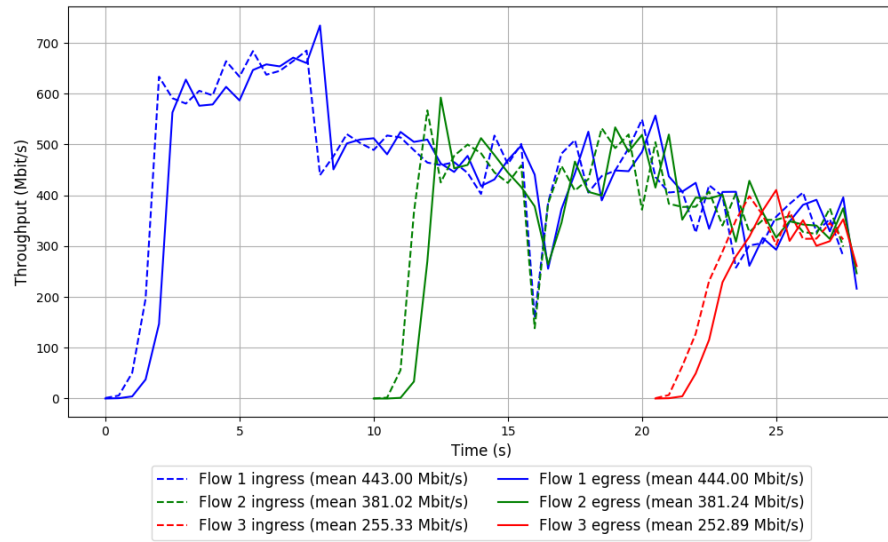# Run 5: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 358.37 Mbit/s) --- Flow 1 egress (mean 358.80 Mbit/s)
Flow 2 ingress (mean 359.84 Mbit/s) --- Flow 2 egress (mean 362.10 Mbit/s)
Flow 3 ingress (mean 251.50 Mbit/s) --- Flow 3 egress (mean 249.28 Mbit/s)

Flow 1 (95th percentile 87.76 ms) • Flow 2 (95th percentile 88.22 ms) • Flow 3 (95th percentile 88.49 ms)

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-08-26 21:37:10
End at: 2019-08-26 21:37:40
Local clock offset: -0.015 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-08-27 01:52:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.74 Mbit/s
95th percentile per-packet one-way delay: 144.143 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 444.00 Mbit/s
95th percentile per-packet one-way delay: 147.645 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 381.24 Mbit/s
95th percentile per-packet one-way delay: 111.184 ms
Loss rate: 0.94%
-- Flow 3:
Average throughput: 252.89 Mbit/s
95th percentile per-packet one-way delay: 96.080 ms
Loss rate: 3.29%
```
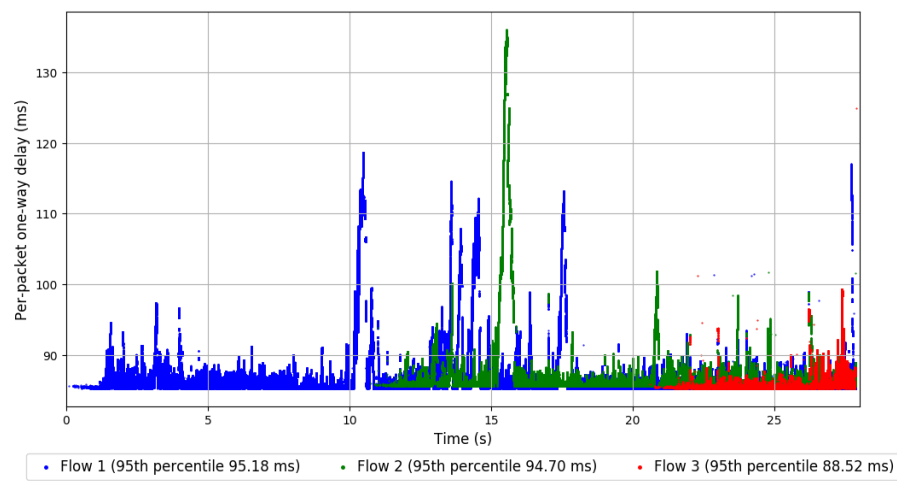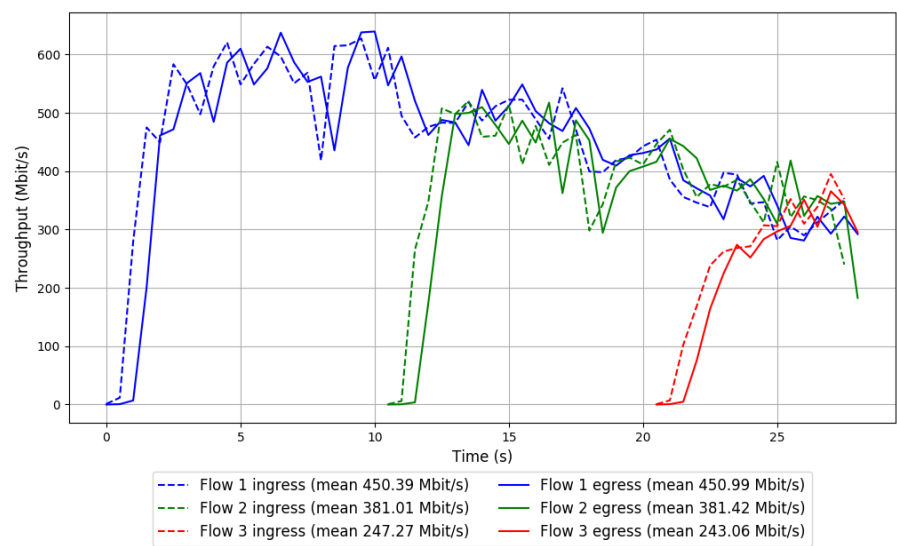
Run 1: Report of Indigo-MusesT — Data Link

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-08-26 22:17:18
End at: 2019-08-26 22:17:48
Local clock offset: -0.584 ms
Remote clock offset: -0.096 ms


# Below is generated by plot.py at 2019-08-27 01:52:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 749.39 Mbit/s
95th percentile per-packet one-way delay: 94.312 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 450.99 Mbit/s
95th percentile per-packet one-way delay: 95.182 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 381.42 Mbit/s
95th percentile per-packet one-way delay: 94.697 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 243.06 Mbit/s
95th percentile per-packet one-way delay: 88.517 ms
Loss rate: 3.76%
```

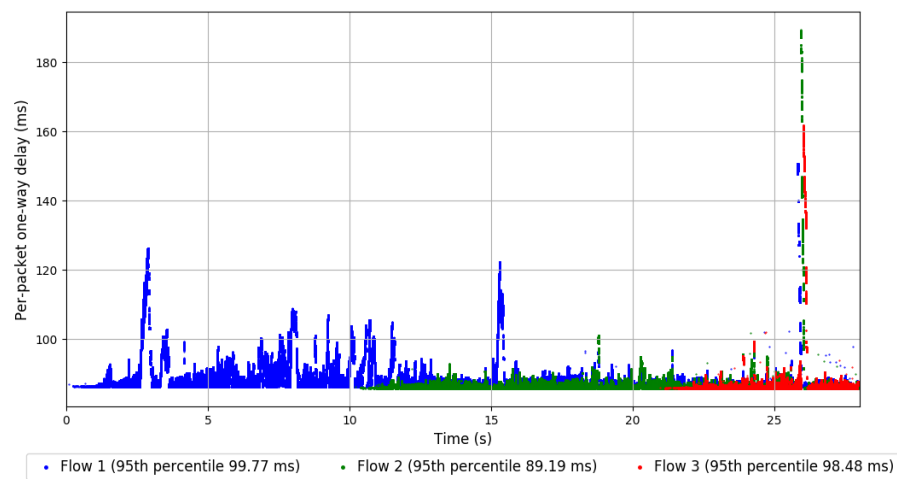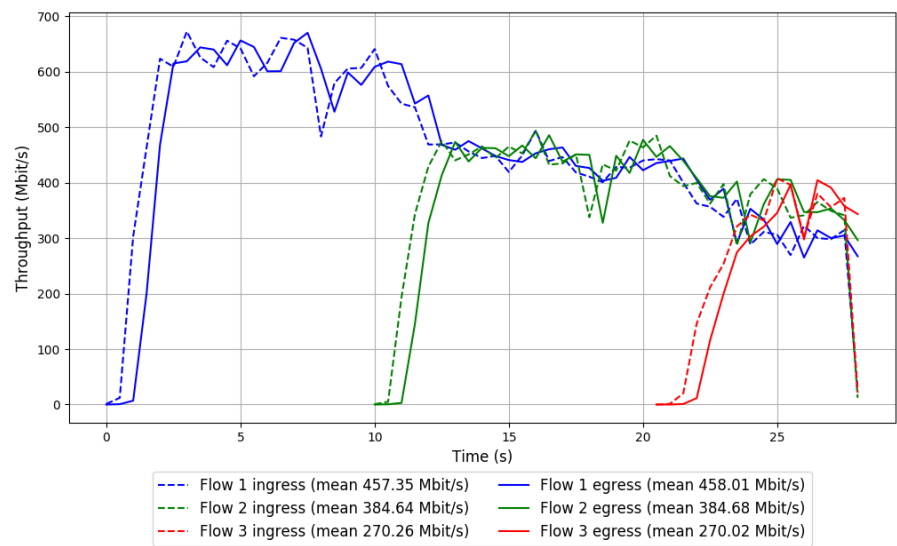Run 2: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 450.39 Mbit/s) --- Flow 1 egress (mean 450.99 Mbit/s) ——
Flow 2 ingress (mean 381.01 Mbit/s) --- Flow 2 egress (mean 381.42 Mbit/s) ——
Flow 3 ingress (mean 247.27 Mbit/s) --- Flow 3 egress (mean 243.06 Mbit/s) ——

Flow 1 (95th percentile 95.18 ms)   Flow 2 (95th percentile 94.70 ms)   Flow 3 (95th percentile 88.52 ms)

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-08-26 22:57:34
End at: 2019-08-26 22:58:04
Local clock offset: -0.129 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-08-27 01:55:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 770.27 Mbit/s
95th percentile per-packet one-way delay: 97.243 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 458.01 Mbit/s
95th percentile per-packet one-way delay: 99.767 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 384.68 Mbit/s
95th percentile per-packet one-way delay: 89.186 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 270.02 Mbit/s
95th percentile per-packet one-way delay: 98.476 ms
Loss rate: 2.57%
```
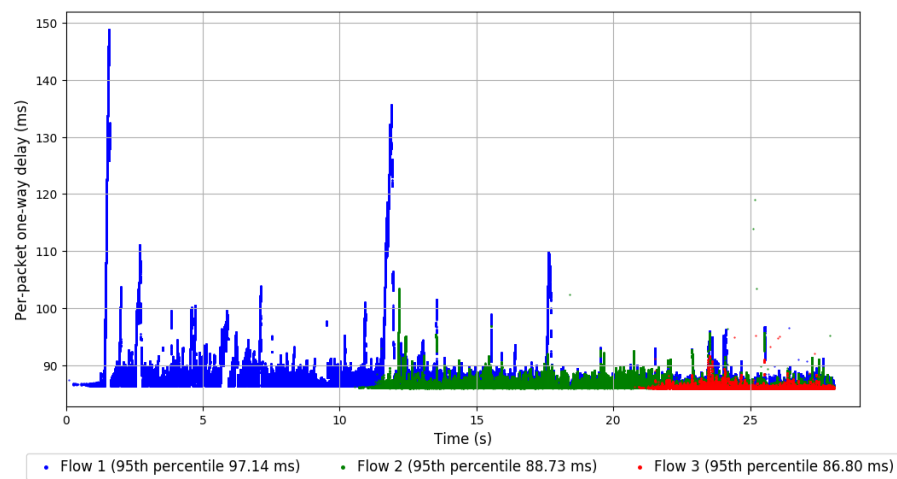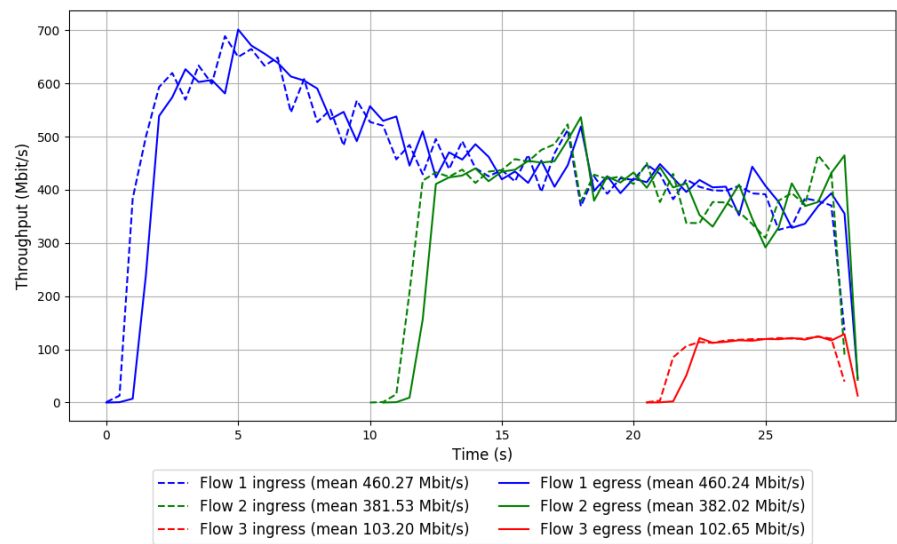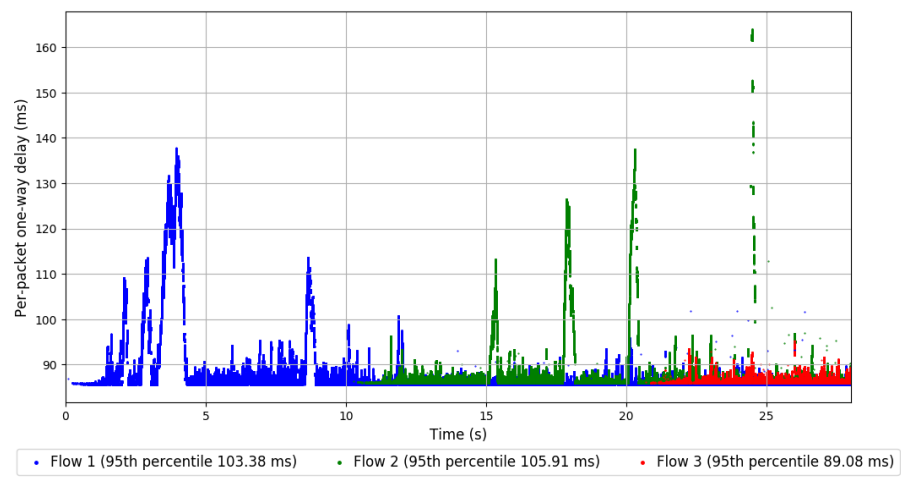
Run 3: Report of Indigo-MusesT — Data Link

Flow 1 ingress (mean 457.35 Mbit/s) Flow 1 egress (mean 458.01 Mbit/s)
Flow 2 ingress (mean 384.64 Mbit/s) Flow 2 egress (mean 384.68 Mbit/s)
Flow 3 ingress (mean 270.26 Mbit/s) Flow 3 egress (mean 270.02 Mbit/s)

Flow 1 (95th percentile 99.77 ms) Flow 2 (95th percentile 89.19 ms) Flow 3 (95th percentile 98.48 ms)

```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-08-26 23:38:17
End at: 2019-08-26 23:38:47
Local clock offset: 0.162 ms
Remote clock offset: 0.007 ms


# Below is generated by plot.py at 2019-08-27 01:58:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 726.20 Mbit/s
95th percentile per-packet one-way delay: 93.751 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 460.24 Mbit/s
95th percentile per-packet one-way delay: 97.140 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 382.02 Mbit/s
95th percentile per-packet one-way delay: 88.732 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 102.65 Mbit/s
95th percentile per-packet one-way delay: 86.802 ms
Loss rate: 2.86%
```

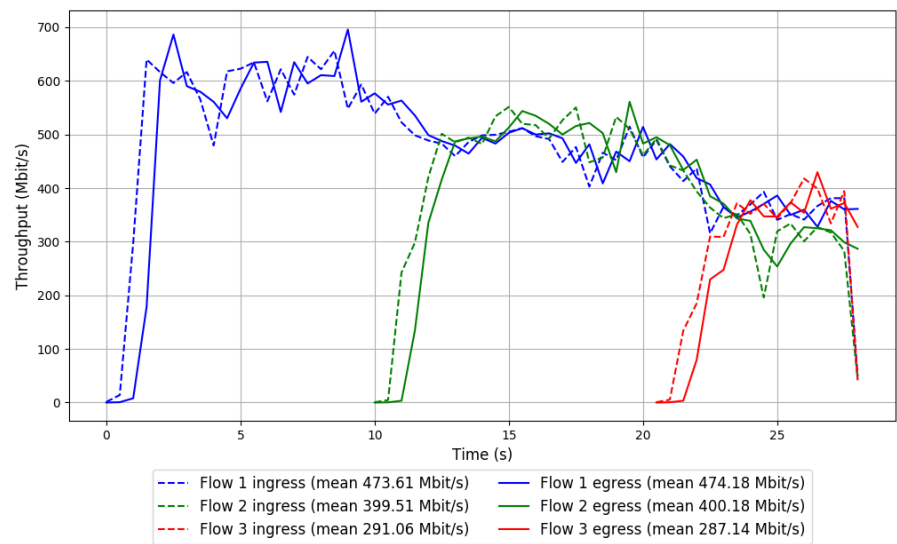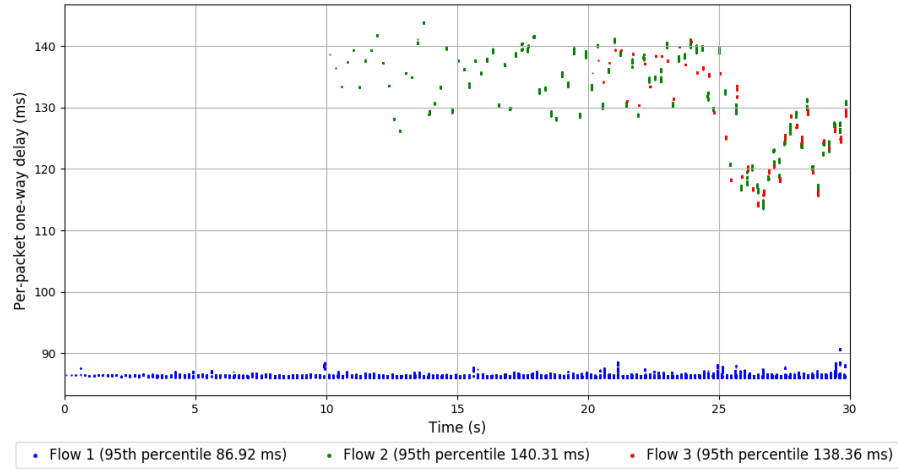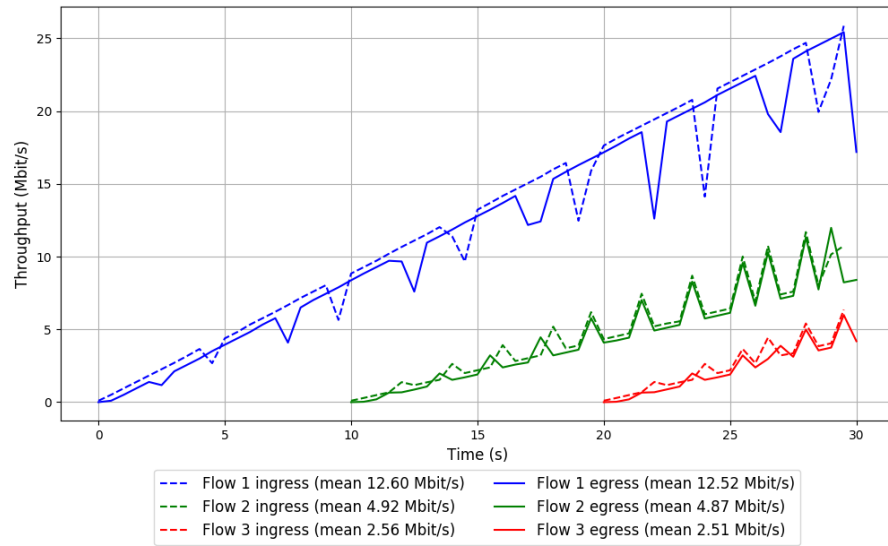Run 4: Report of Indigo-MusesT — Data Link

- - - Flow 1 ingress (mean 460.27 Mbit/s) ——— Flow 1 egress (mean 460.24 Mbit/s)
- - - Flow 2 ingress (mean 381.53 Mbit/s) ——— Flow 2 egress (mean 382.02 Mbit/s)
- - - Flow 3 ingress (mean 103.20 Mbit/s) ——— Flow 3 egress (mean 102.65 Mbit/s)

• Flow 1 (95th percentile 97.14 ms)   • Flow 2 (95th percentile 88.73 ms)   • Flow 3 (95th percentile 86.80 ms)

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-08-27 00:19:03
End at: 2019-08-27 00:19:33
Local clock offset: -0.184 ms
Remote clock offset: -0.113 ms


# Below is generated by plot.py at 2019-08-27 02:00:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 803.17 Mbit/s
95th percentile per-packet one-way delay: 102.483 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 474.18 Mbit/s
95th percentile per-packet one-way delay: 103.382 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 400.18 Mbit/s
95th percentile per-packet one-way delay: 105.908 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 287.14 Mbit/s
95th percentile per-packet one-way delay: 89.083 ms
Loss rate: 3.65%
```
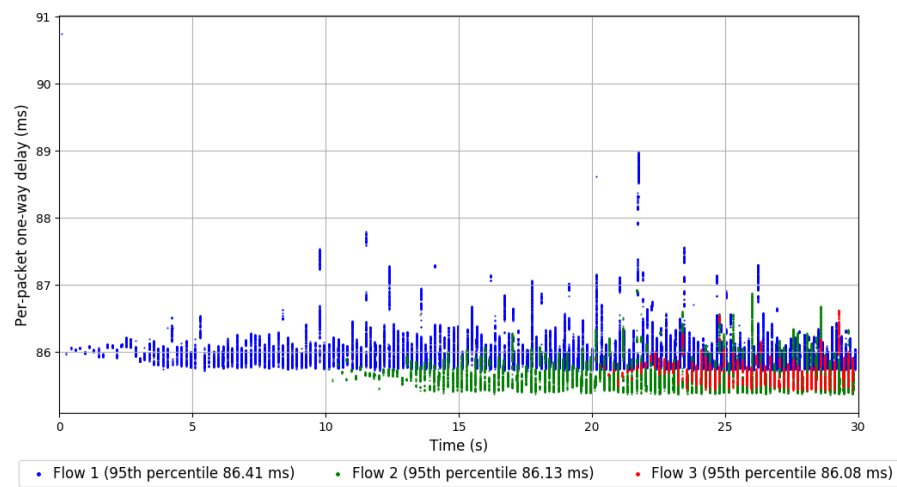
Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-08-26 21:11:15
End at: 2019-08-26 21:11:45
Local clock offset: 0.392 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-08-27 02:00:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 16.54 Mbit/s
95th percentile per-packet one-way delay: 137.611 ms
Loss rate: 1.51%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 86.916 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 4.87 Mbit/s
95th percentile per-packet one-way delay: 140.312 ms
Loss rate: 2.17%
-- Flow 3:
Average throughput: 2.51 Mbit/s
95th percentile per-packet one-way delay: 138.360 ms
Loss rate: 4.26%
```

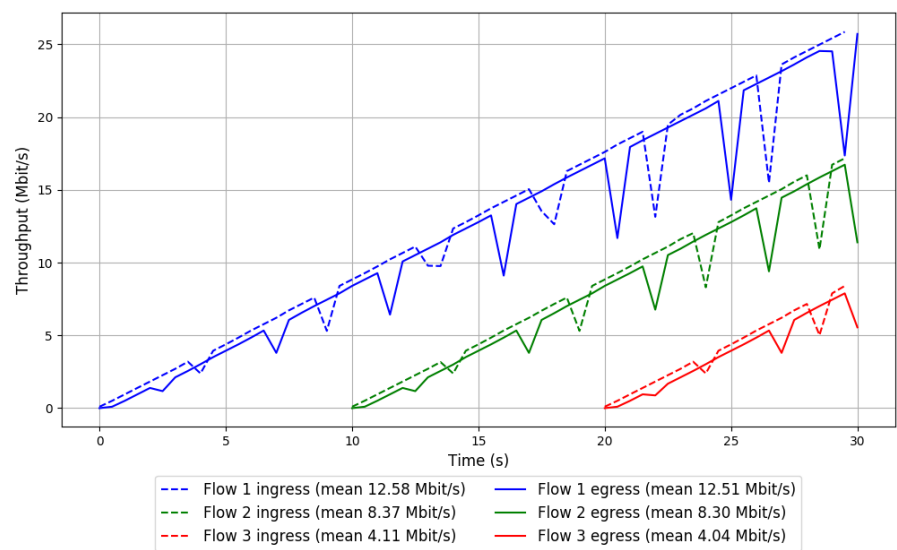Run 1: Report of LEDBAT — Data Link

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```
Run 2: Statistics of LEDBAT

Start at: 2019-08-26 21:52:03
End at: 2019-08-26 21:52:33
Local clock offset: -0.333 ms
Remote clock offset: -0.133 ms


# Below is generated by plot.py at 2019-08-27 02:00:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.31 Mbit/s
95th percentile per-packet one-way delay: 86.322 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 86.413 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 86.126 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 4.04 Mbit/s
95th percentile per-packet one-way delay: 86.084 ms
Loss rate: 3.52%
```
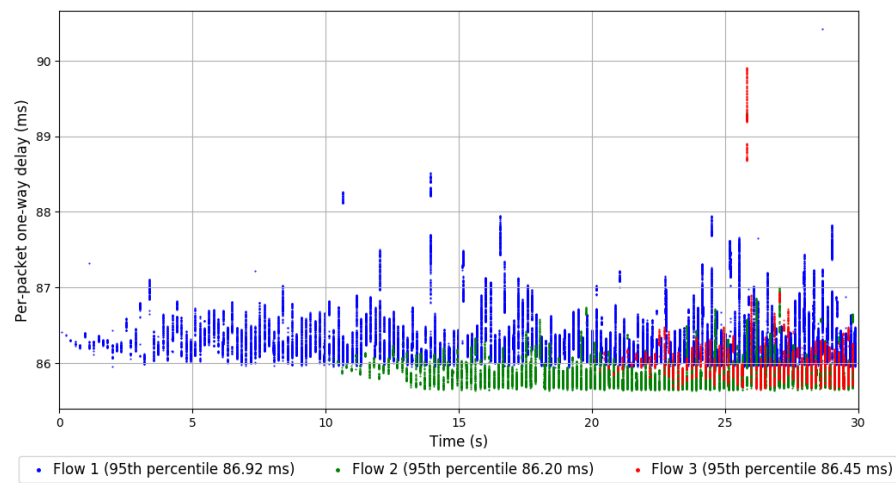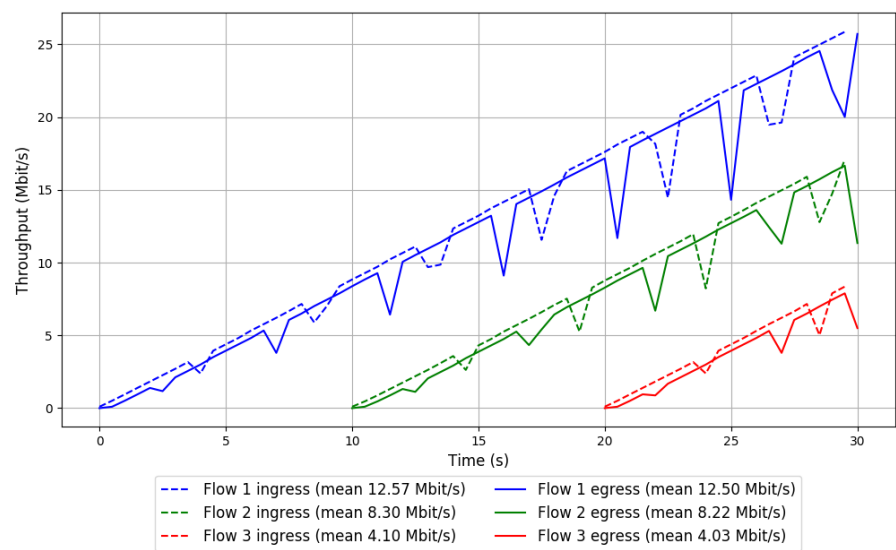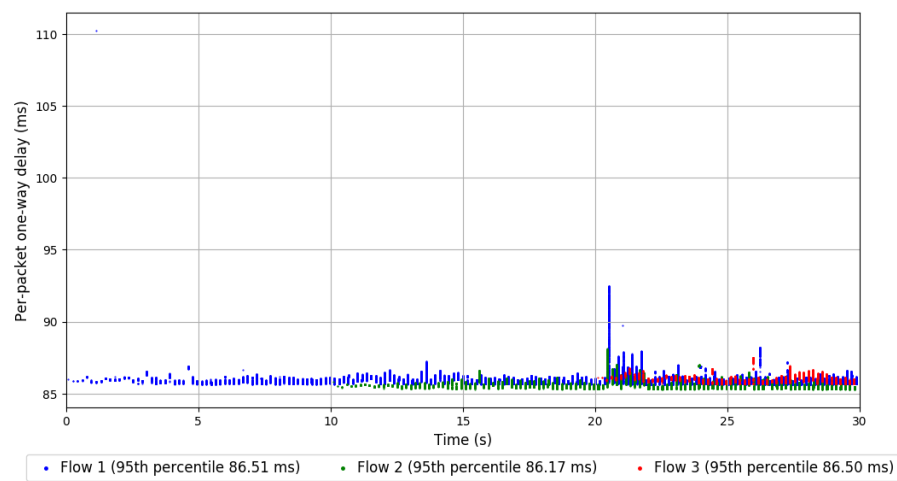
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-08-26 22:32:13
End at: 2019-08-26 22:32:43
Local clock offset: -0.341 ms
Remote clock offset: -0.079 ms

# Below is generated by plot.py at 2019-08-27 02:00:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.24 Mbit/s
95th percentile per-packet one-way delay: 86.802 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 86.922 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.22 Mbit/s
95th percentile per-packet one-way delay: 86.196 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 86.449 ms
Loss rate: 3.53%
```
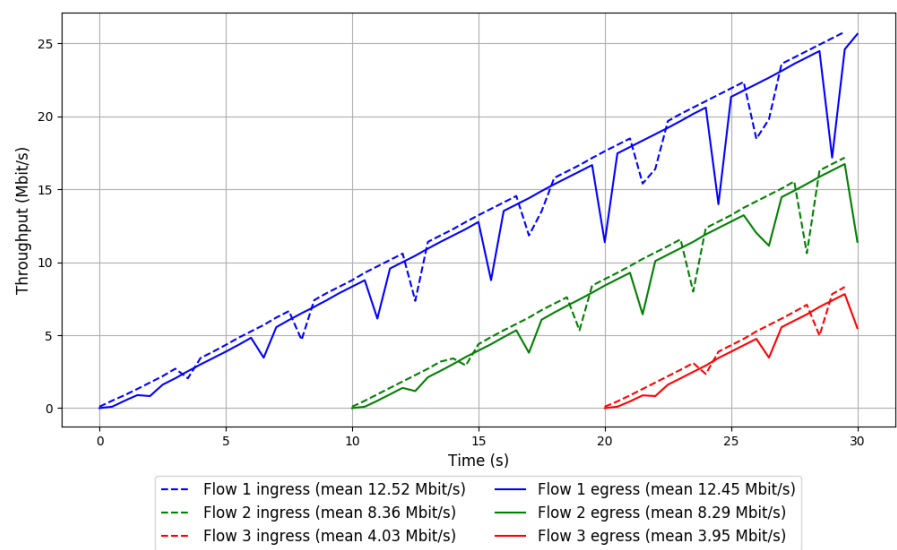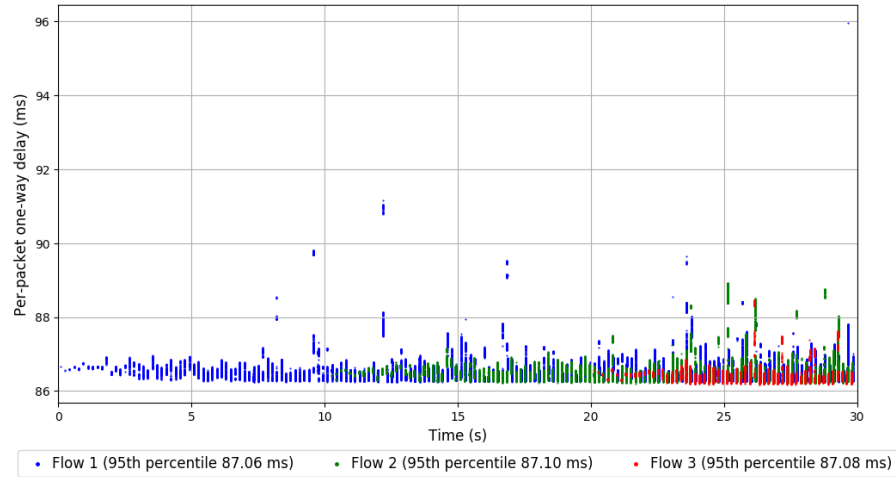
Run 3: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.57 Mbit/s) ---- Flow 1 egress (mean 12.50 Mbit/s)
Flow 2 ingress (mean 8.30 Mbit/s) ---- Flow 2 egress (mean 8.22 Mbit/s)
Flow 3 ingress (mean 4.10 Mbit/s) ---- Flow 3 egress (mean 4.03 Mbit/s)

Flow 1 (95th percentile 86.92 ms)   Flow 2 (95th percentile 86.20 ms)   Flow 3 (95th percentile 86.45 ms)

```
Run 4: Statistics of LEDBAT

Start at: 2019-08-26 23:12:57
End at: 2019-08-26 23:13:27
Local clock offset: -0.581 ms
Remote clock offset: -0.115 ms

# Below is generated by plot.py at 2019-08-27 02:00:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.23 Mbit/s
95th percentile per-packet one-way delay: 86.410 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.45 Mbit/s
95th percentile per-packet one-way delay: 86.506 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 86.165 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 3.95 Mbit/s
95th percentile per-packet one-way delay: 86.504 ms
Loss rate: 3.55%
```
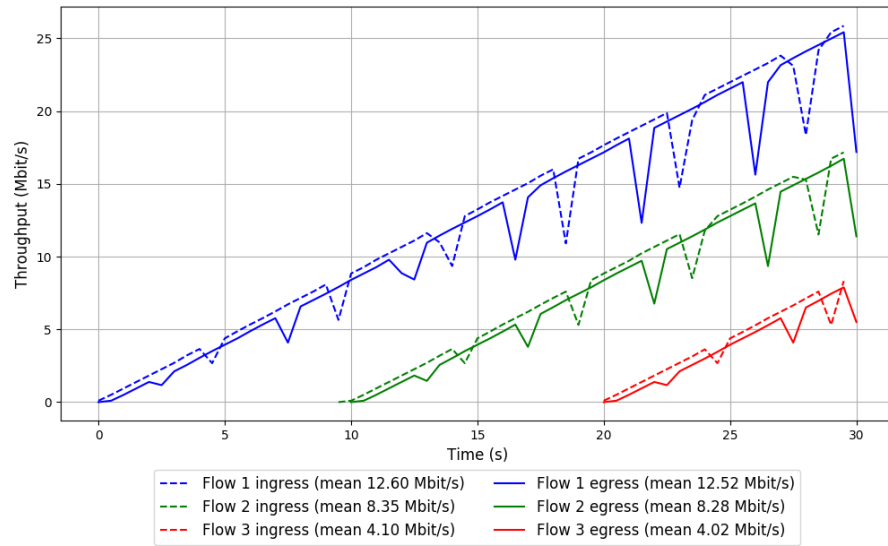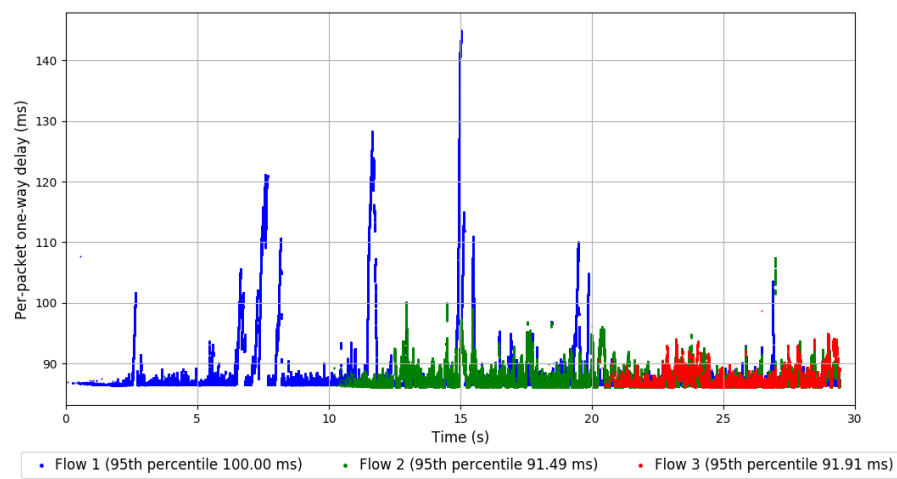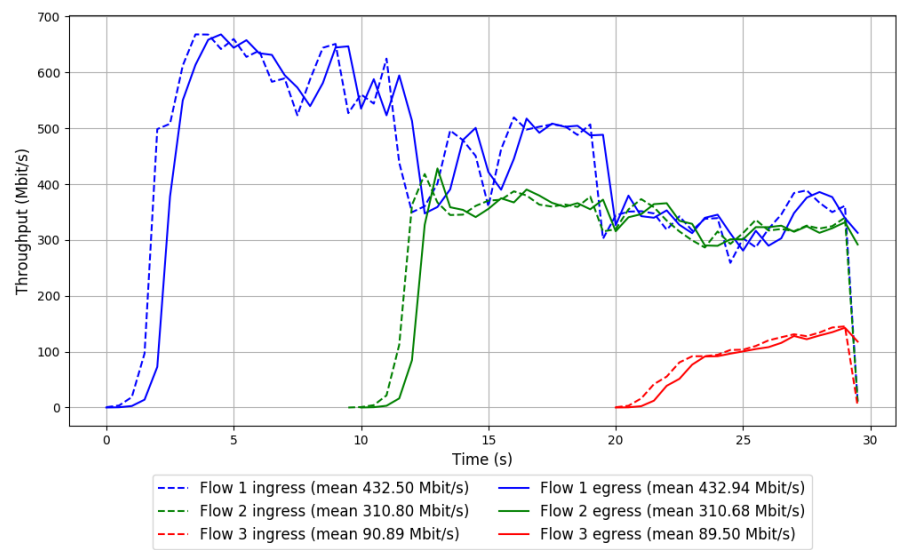
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.52 Mbit/s) --- Flow 1 egress (mean 12.45 Mbit/s)
Flow 2 ingress (mean 8.36 Mbit/s) --- Flow 2 egress (mean 8.29 Mbit/s)
Flow 3 ingress (mean 4.03 Mbit/s) --- Flow 3 egress (mean 3.95 Mbit/s)

Flow 1 (95th percentile 86.51 ms)   Flow 2 (95th percentile 86.17 ms)   Flow 3 (95th percentile 86.50 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-08-26 23:53:33
End at: 2019-08-26 23:54:03
Local clock offset: 0.404 ms
Remote clock offset: -0.024 ms

# Below is generated by plot.py at 2019-08-27 02:00:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.32 Mbit/s
95th percentile per-packet one-way delay: 87.072 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 87.061 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 87.098 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 4.02 Mbit/s
95th percentile per-packet one-way delay: 87.084 ms
Loss rate: 3.50%
```
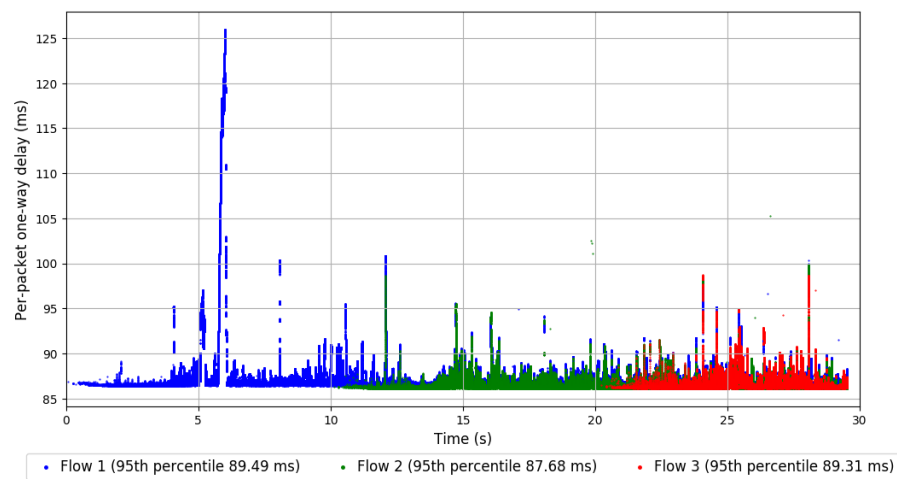
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-08-26 21:09:25
End at: 2019-08-26 21:09:55
Local clock offset: 0.369 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-08-27 02:01:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 666.60 Mbit/s
95th percentile per-packet one-way delay: 94.604 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 432.94 Mbit/s
95th percentile per-packet one-way delay: 100.003 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 310.68 Mbit/s
95th percentile per-packet one-way delay: 91.489 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 89.50 Mbit/s
95th percentile per-packet one-way delay: 91.914 ms
Loss rate: 3.31%
```
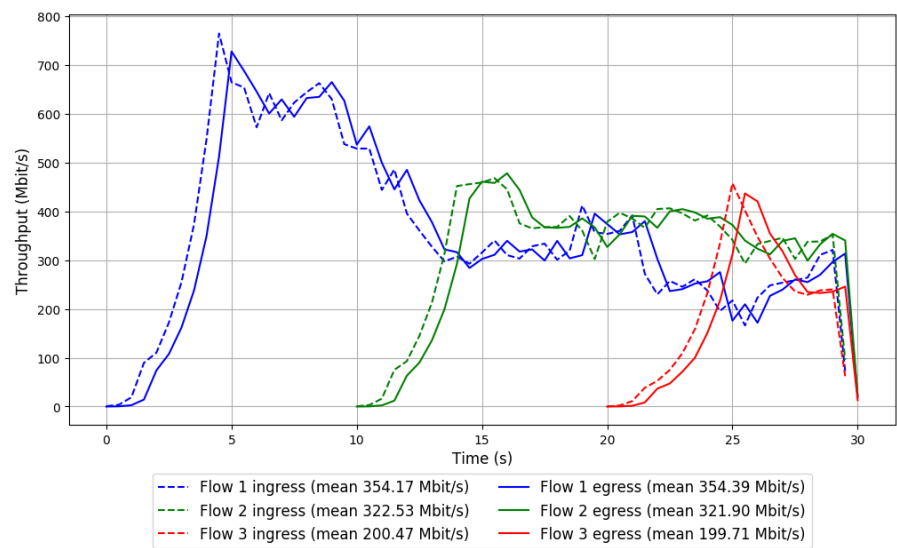
Run 1: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 432.50 Mbit/s) ---- Flow 1 egress (mean 432.94 Mbit/s) ——
Flow 2 ingress (mean 310.80 Mbit/s) ---- Flow 2 egress (mean 310.68 Mbit/s) ——
Flow 3 ingress (mean 90.89 Mbit/s) ---- Flow 3 egress (mean 89.50 Mbit/s) ——

• Flow 1 (95th percentile 100.00 ms)   • Flow 2 (95th percentile 91.49 ms)   • Flow 3 (95th percentile 91.91 ms)
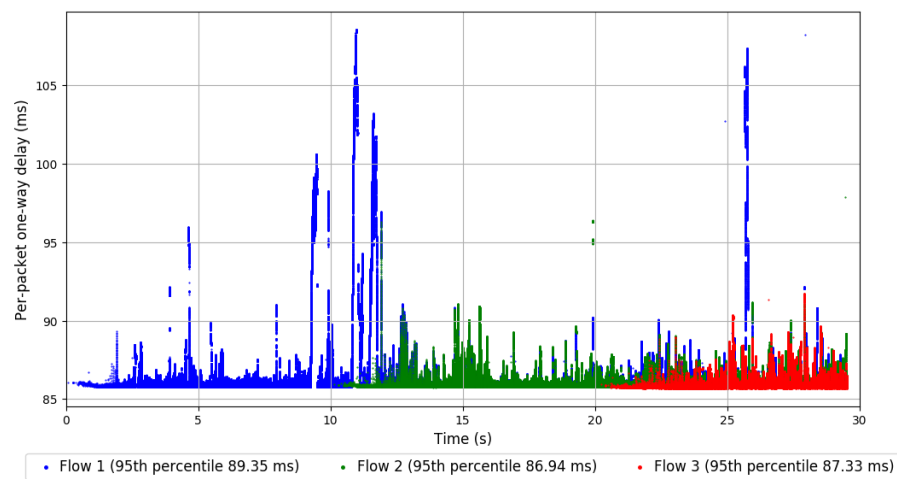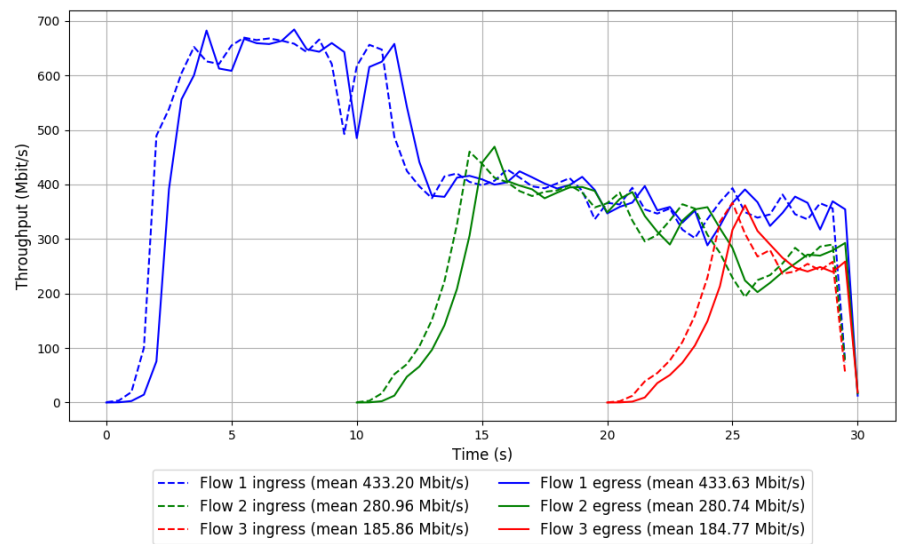
Run 2: Statistics of Muses_DecisionTree

Start at: 2019-08-26 21:50:18
End at: 2019-08-26 21:50:48
Local clock offset: 0.383 ms
Remote clock offset: -0.135 ms

Below is generated by plot.py at 2019-08-27 02:01:27
Datalink statistics
-- Total of 3 flows:
Average throughput: 629.31 Mbit/s
95th percentile per-packet one-way delay: 88.819 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 354.39 Mbit/s
95th percentile per-packet one-way delay: 89.490 ms
Loss rate: 0.52%
-- Flow 2:
Average throughput: 321.90 Mbit/s
95th percentile per-packet one-way delay: 87.677 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 199.71 Mbit/s
95th percentile per-packet one-way delay: 89.311 ms
Loss rate: 2.34%

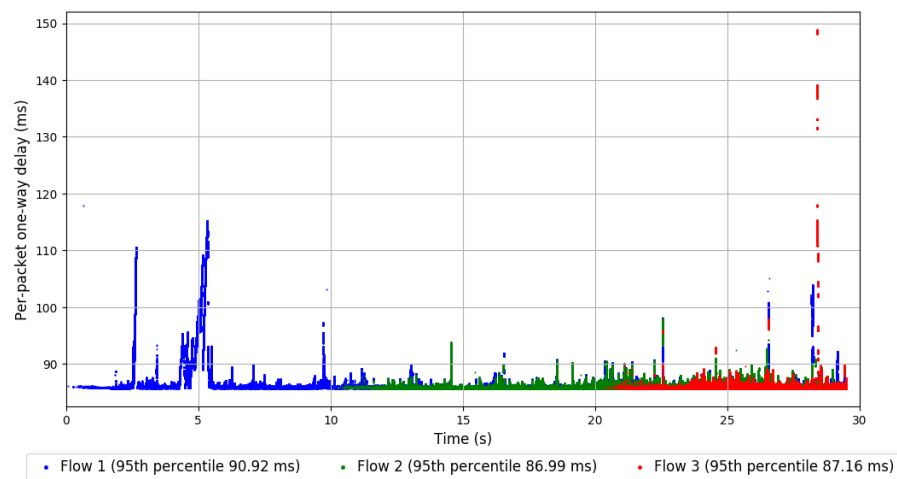Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-08-26 22:30:27
End at: 2019-08-26 22:30:57
Local clock offset: -0.224 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-08-27 02:01:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 677.03 Mbit/s
95th percentile per-packet one-way delay: 87.809 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 433.63 Mbit/s
95th percentile per-packet one-way delay: 89.352 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 280.74 Mbit/s
95th percentile per-packet one-way delay: 86.940 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 184.77 Mbit/s
95th percentile per-packet one-way delay: 87.329 ms
Loss rate: 2.43%
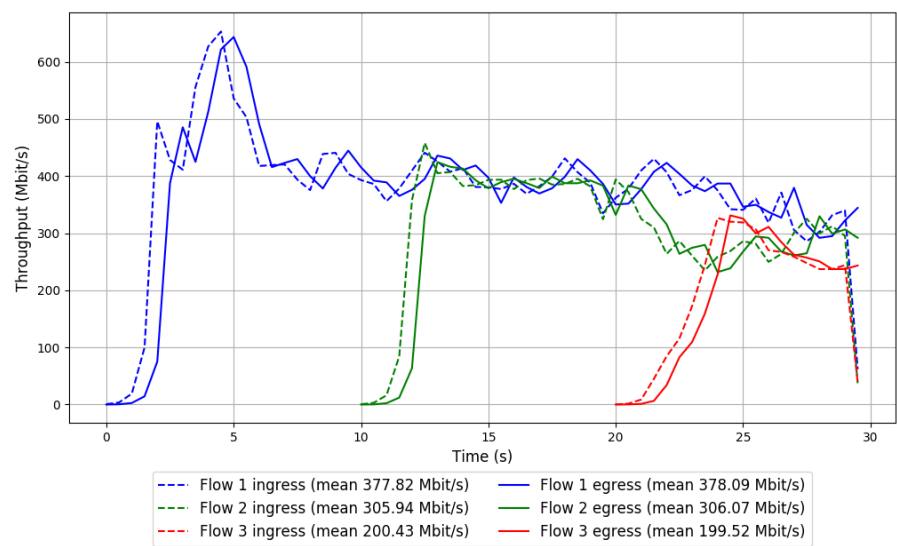```

Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses_DecisionTree

Start at: 2019-08-26 23:11:12
End at: 2019-08-26 23:11:42
Local clock offset: -0.143 ms
Remote clock offset: -0.093 ms

Below is generated by plot.py at 2019-08-27 02:01:54
Datalink statistics
-- Total of 3 flows:
Average throughput: 641.77 Mbit/s
95th percentile per-packet one-way delay: 88.321 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 378.09 Mbit/s
95th percentile per-packet one-way delay: 90.916 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 306.07 Mbit/s
95th percentile per-packet one-way delay: 86.987 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 199.52 Mbit/s
95th percentile per-packet one-way delay: 87.158 ms
Loss rate: 2.28%
```
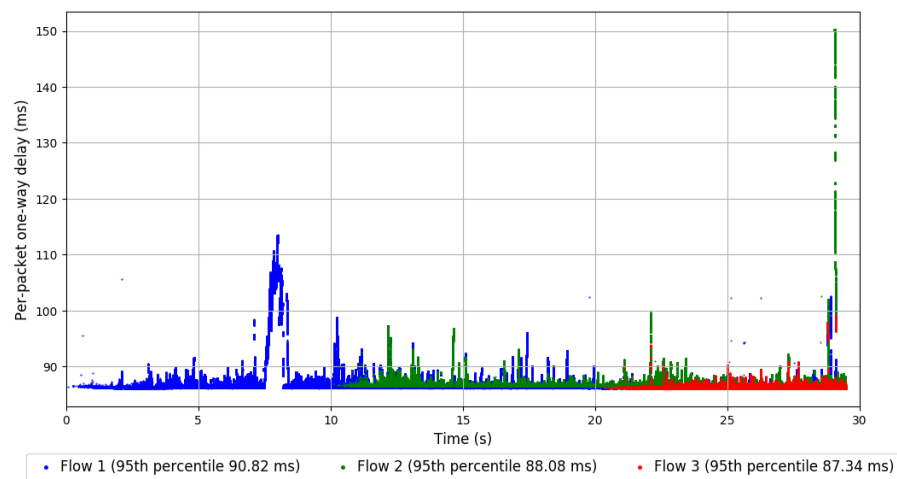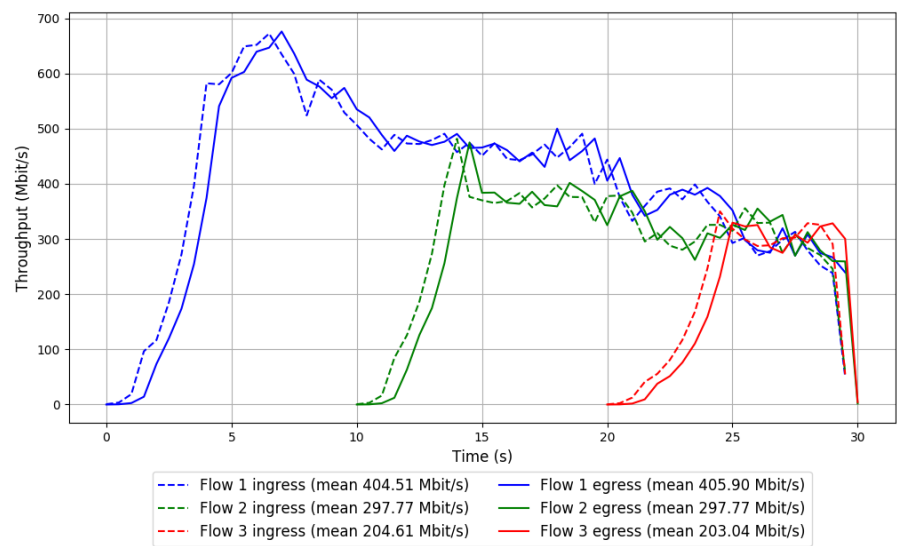
Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses_DecisionTree

Start at: 2019-08-26 23:51:47
End at: 2019-08-26 23:52:17
Local clock offset: 0.293 ms
Remote clock offset: 0.012 ms

Below is generated by plot.py at 2019-08-27 02:02:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 665.56 Mbit/s
95th percentile per-packet one-way delay: 89.362 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 405.90 Mbit/s
95th percentile per-packet one-way delay: 90.817 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 297.77 Mbit/s
95th percentile per-packet one-way delay: 88.085 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 203.04 Mbit/s
95th percentile per-packet one-way delay: 87.343 ms
Loss rate: 2.58%
```
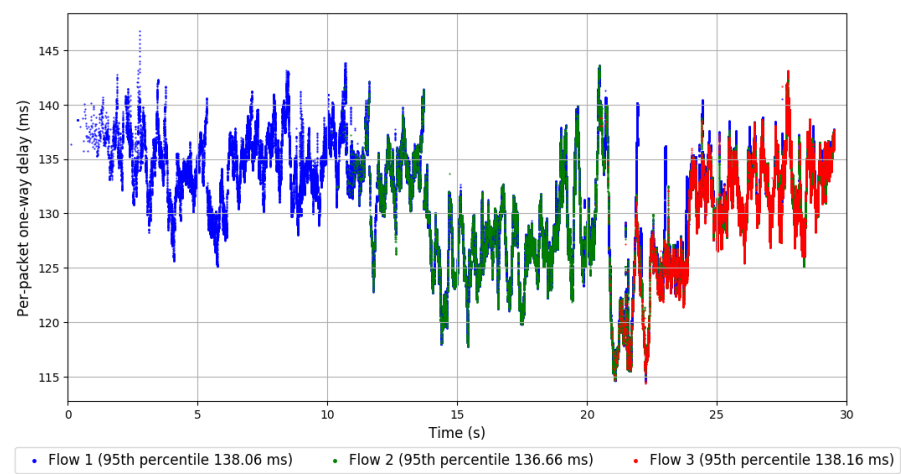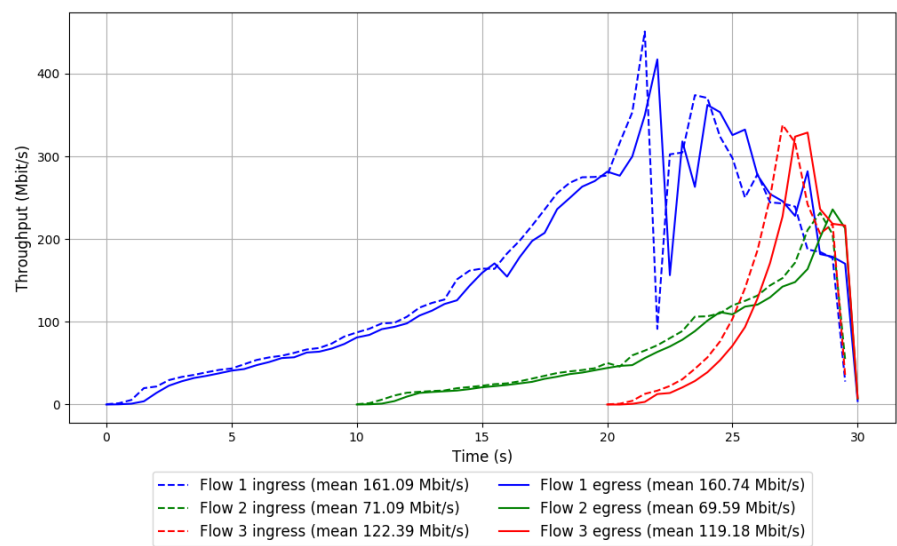
Run 5: Report of Muses_DecisionTree — Data Link

```
Run 1: Statistics of Muses_DecisionTreeH0

Start at: 2019-08-26 21:31:58
End at: 2019-08-26 21:32:28
Local clock offset: 0.215 ms
Remote clock offset: -0.069 ms

Below is generated by plot.py at 2019-08-27 02:02:16
Datalink statistics
-- Total of 3 flows:
Average throughput: 243.98 Mbit/s
95th percentile per-packet one-way delay: 137.893 ms
Loss rate: 1.97%
-- Flow 1:
Average throughput: 160.74 Mbit/s
95th percentile per-packet one-way delay: 138.063 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 69.59 Mbit/s
95th percentile per-packet one-way delay: 136.662 ms
Loss rate: 3.23%
-- Flow 3:
Average throughput: 119.18 Mbit/s
95th percentile per-packet one-way delay: 138.162 ms
Loss rate: 4.64%
```
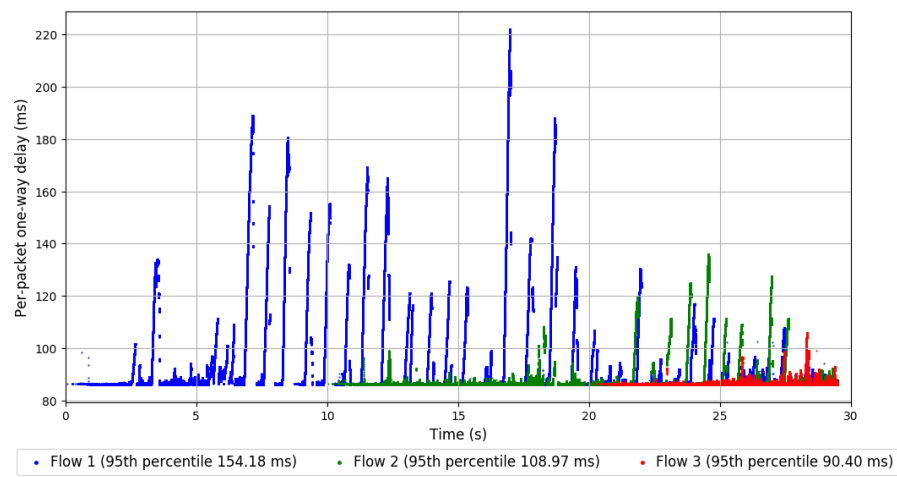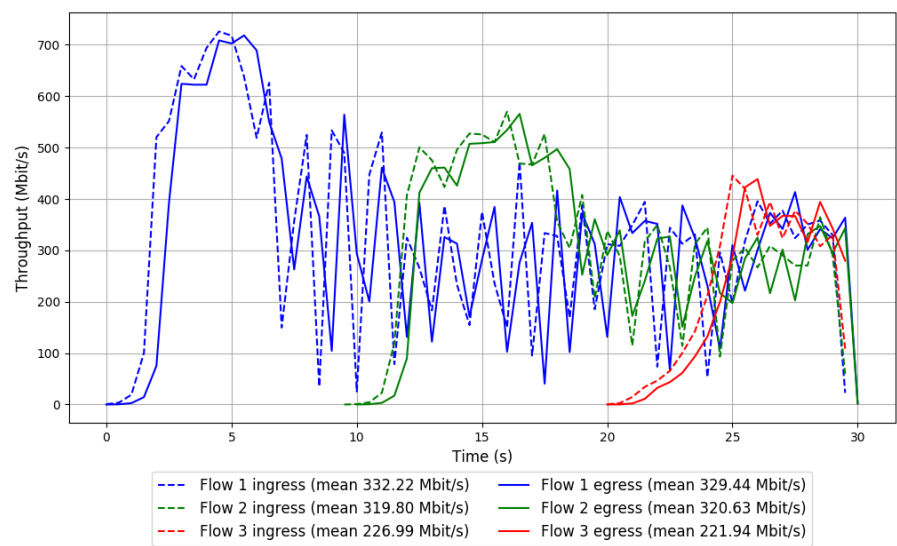
Run 1: Report of Muses_DecisionTreeH0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-08-26 22:12:09
End at: 2019-08-26 22:12:39
Local clock offset: 0.32 ms
Remote clock offset: -0.145 ms


# Below is generated by plot.py at 2019-08-27 02:07:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 612.03 Mbit/s
95th percentile per-packet one-way delay: 136.949 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 329.44 Mbit/s
95th percentile per-packet one-way delay: 154.182 ms
Loss rate: 1.42%
-- Flow 2:
Average throughput: 320.63 Mbit/s
95th percentile per-packet one-way delay: 108.971 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 221.94 Mbit/s
95th percentile per-packet one-way delay: 90.401 ms
Loss rate: 4.09%
```

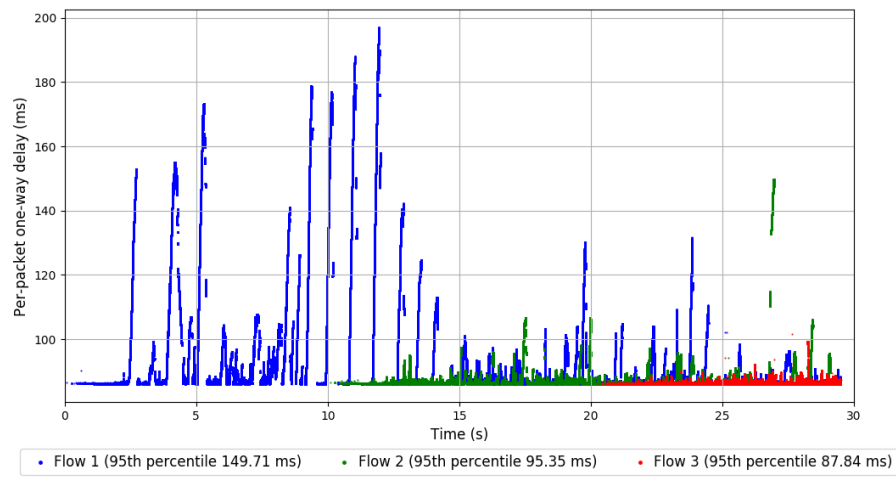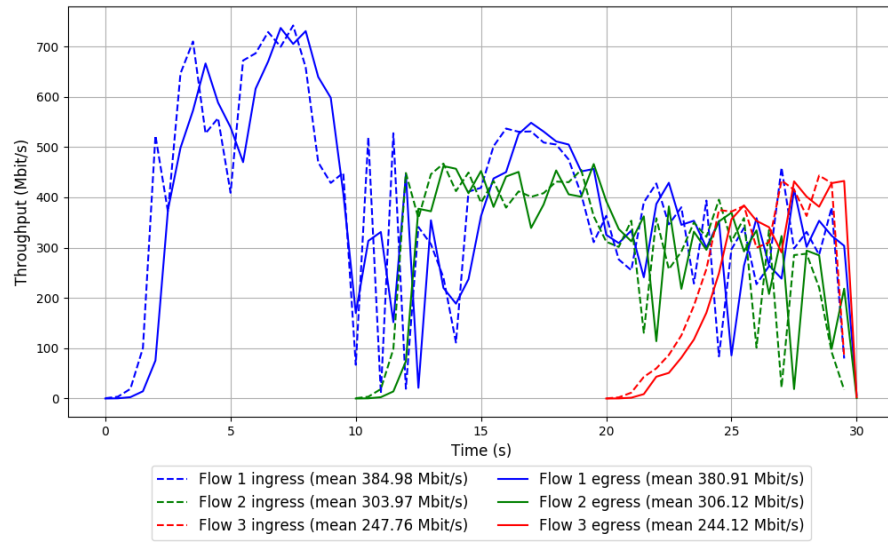Run 2: Report of Muses_DecisionTreeH0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-08-26 22:52:14
End at: 2019-08-26 22:52:44
Local clock offset: 0.206 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-08-27 02:09:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 659.81 Mbit/s
95th percentile per-packet one-way delay: 135.285 ms
Loss rate: 1.39%
-- Flow 1:
Average throughput: 380.91 Mbit/s
95th percentile per-packet one-way delay: 149.705 ms
Loss rate: 1.64%
-- Flow 2:
Average throughput: 306.12 Mbit/s
95th percentile per-packet one-way delay: 95.346 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 244.12 Mbit/s
95th percentile per-packet one-way delay: 87.845 ms
Loss rate: 3.24%
```

Run 3: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 384.98 Mbit/s) — Flow 1 egress (mean 380.91 Mbit/s)
Flow 2 ingress (mean 303.97 Mbit/s) — Flow 2 egress (mean 306.12 Mbit/s)
Flow 3 ingress (mean 247.76 Mbit/s) — Flow 3 egress (mean 244.12 Mbit/s)

Flow 1 (95th percentile 149.71 ms) — Flow 2 (95th percentile 95.35 ms) — Flow 3 (95th percentile 87.84 ms)

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-08-26 23:33:10
End at: 2019-08-26 23:33:40
Local clock offset: 0.37 ms
Remote clock offset: 0.032 ms


# Below is generated by plot.py at 2019-08-27 02:09:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 558.98 Mbit/s
95th percentile per-packet one-way delay: 141.793 ms
Loss rate: 1.38%
-- Flow 1:
Average throughput: 294.72 Mbit/s
95th percentile per-packet one-way delay: 163.302 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 311.17 Mbit/s
95th percentile per-packet one-way delay: 125.773 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 188.69 Mbit/s
95th percentile per-packet one-way delay: 88.878 ms
Loss rate: 2.09%
```
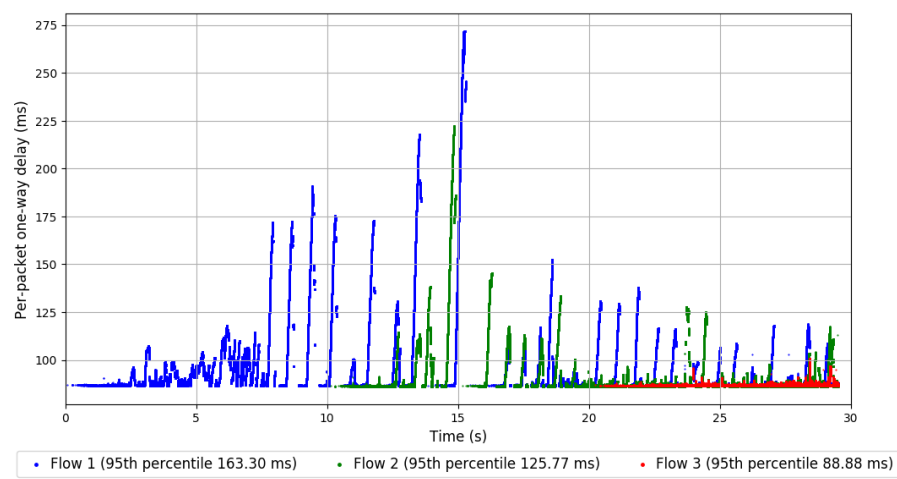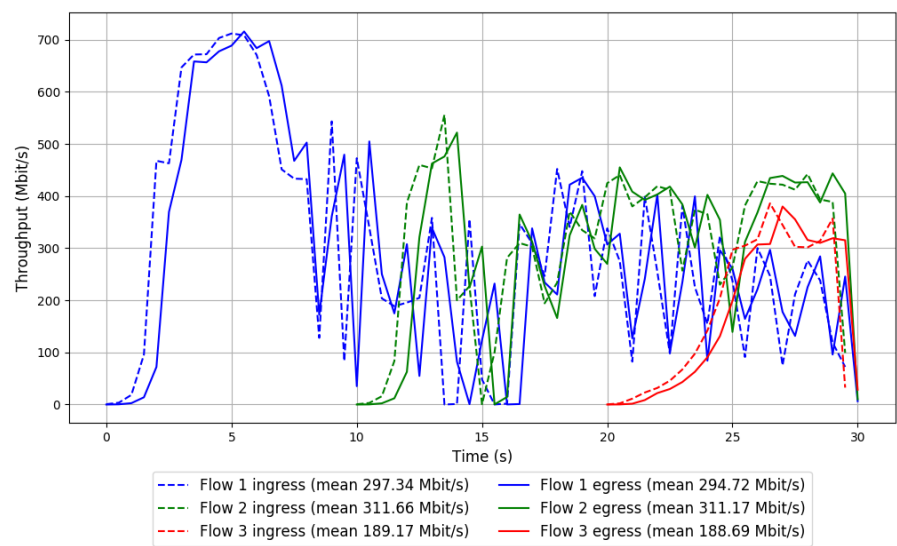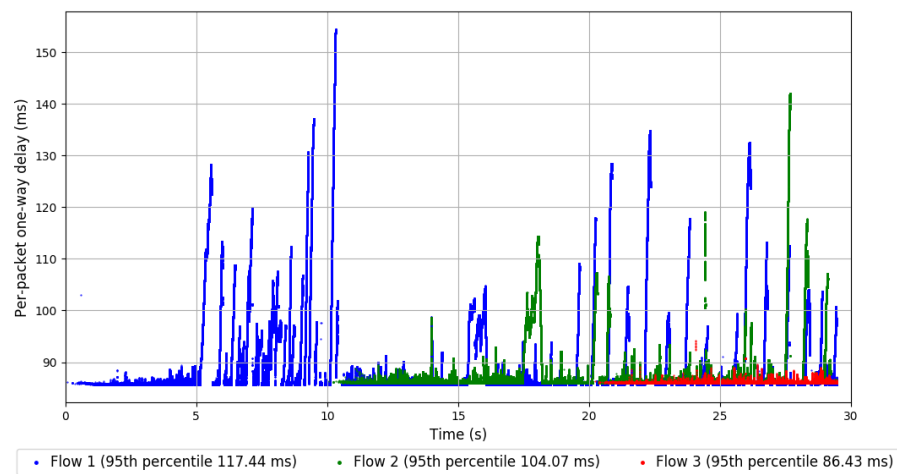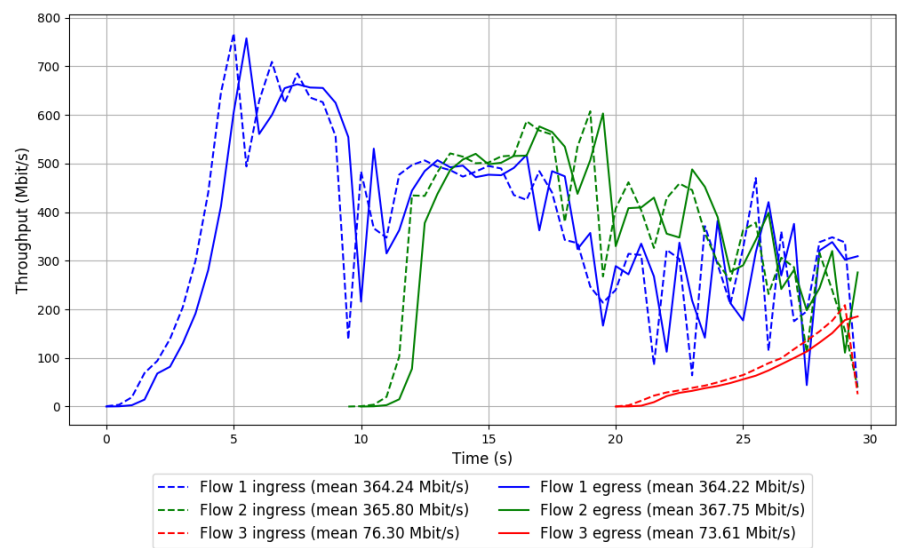
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 297.34 Mbit/s)   Flow 1 egress (mean 294.72 Mbit/s)
Flow 2 ingress (mean 311.66 Mbit/s)   Flow 2 egress (mean 311.17 Mbit/s)
Flow 3 ingress (mean 189.17 Mbit/s)   Flow 3 egress (mean 188.69 Mbit/s)

Flow 1 (95th percentile 163.30 ms)   Flow 2 (95th percentile 125.77 ms)   Flow 3 (95th percentile 88.88 ms)

Run 5: Statistics of Muses_DecisionTreeH0

Start at: 2019-08-27 00:13:49
End at: 2019-08-27 00:14:19
Local clock offset: -0.064 ms
Remote clock offset: -0.058 ms

Below is generated by plot.py at 2019-08-27 02:10:17
Datalink statistics
-- Total of 3 flows:
Average throughput: 630.18 Mbit/s
95th percentile per-packet one-way delay: 111.529 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 364.22 Mbit/s
95th percentile per-packet one-way delay: 117.436 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 367.75 Mbit/s
95th percentile per-packet one-way delay: 104.066 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 73.61 Mbit/s
95th percentile per-packet one-way delay: 86.427 ms
Loss rate: 5.31%

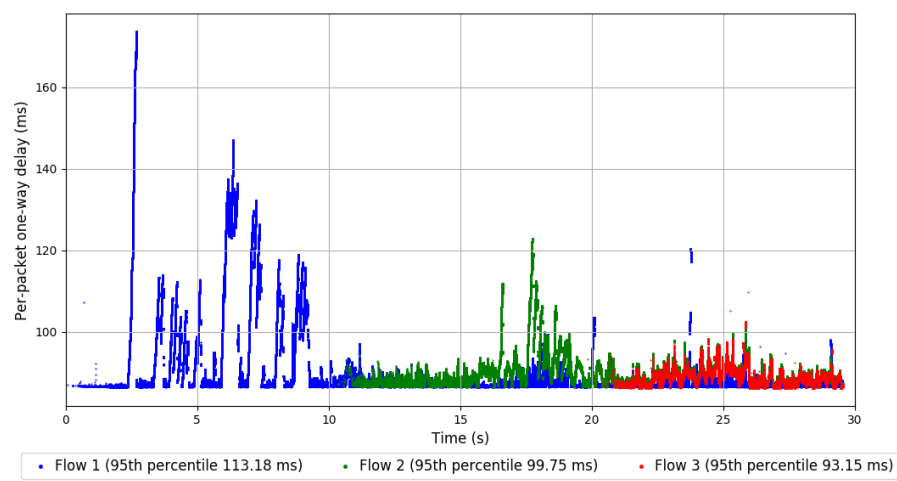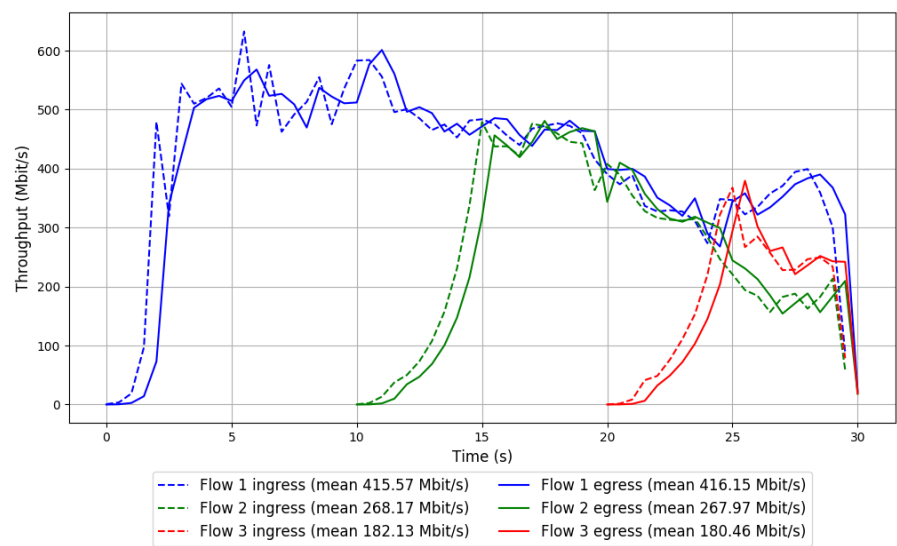Run 5: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 364.24 Mbit/s)   Flow 1 egress (mean 364.22 Mbit/s)
Flow 2 ingress (mean 365.80 Mbit/s)   Flow 2 egress (mean 367.75 Mbit/s)
Flow 3 ingress (mean 76.30 Mbit/s)   Flow 3 egress (mean 73.61 Mbit/s)

Flow 1 (95th percentile 117.44 ms)   Flow 2 (95th percentile 104.07 ms)   Flow 3 (95th percentile 86.43 ms)

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```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-26 21:38:58
End at: 2019-08-26 21:39:28
Local clock offset: 0.496 ms
Remote clock offset: -0.105 ms


# Below is generated by plot.py at 2019-08-27 02:10:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 648.71 Mbit/s
95th percentile per-packet one-way delay: 107.881 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 416.15 Mbit/s
95th percentile per-packet one-way delay: 113.178 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 267.97 Mbit/s
95th percentile per-packet one-way delay: 99.751 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 180.46 Mbit/s
95th percentile per-packet one-way delay: 93.151 ms
Loss rate: 2.78%
```
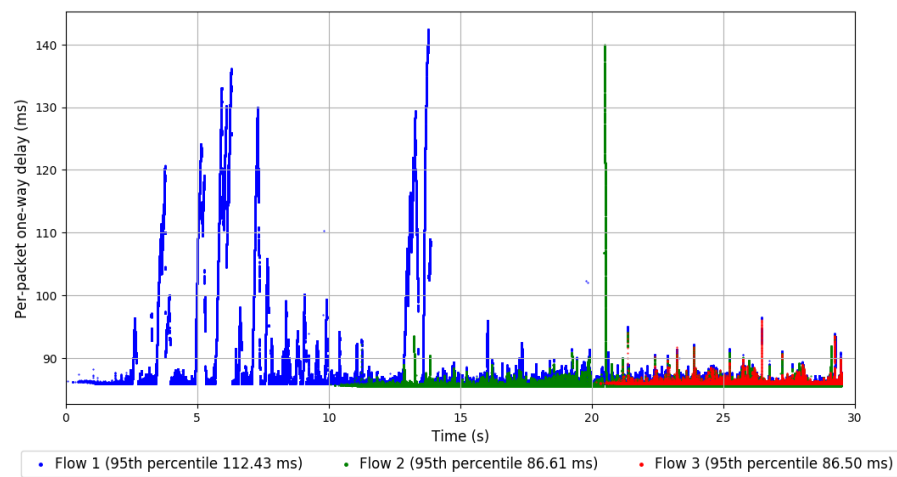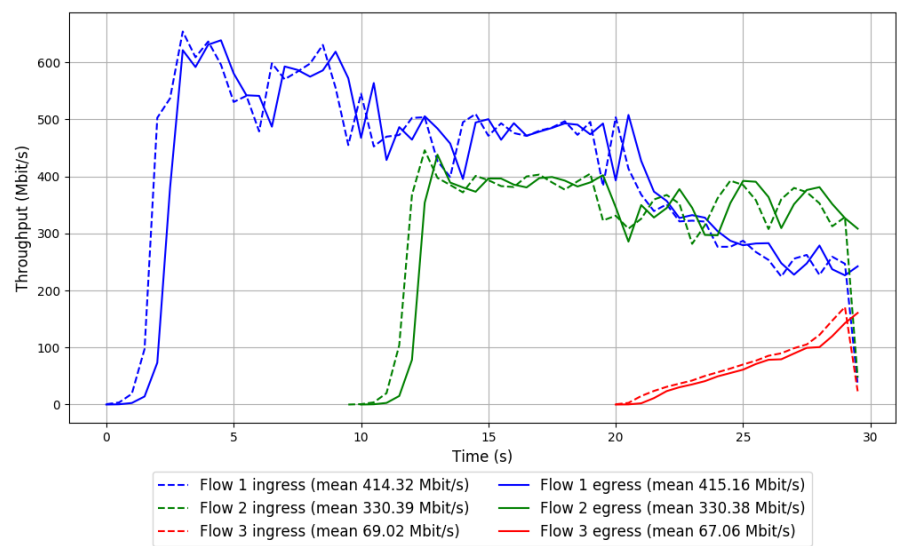
Run 1: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 415.57 Mbit/s) --- Flow 1 egress (mean 416.15 Mbit/s) ---
Flow 2 ingress (mean 268.17 Mbit/s) --- Flow 2 egress (mean 267.97 Mbit/s) ---
Flow 3 ingress (mean 182.13 Mbit/s) --- Flow 3 egress (mean 180.46 Mbit/s) ---

Flow 1 (95th percentile 113.18 ms) • Flow 2 (95th percentile 99.75 ms) • Flow 3 (95th percentile 93.15 ms)
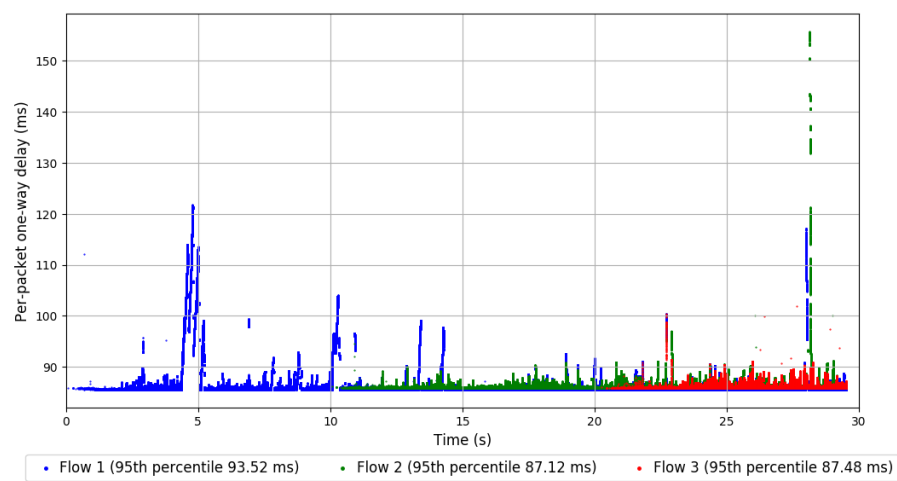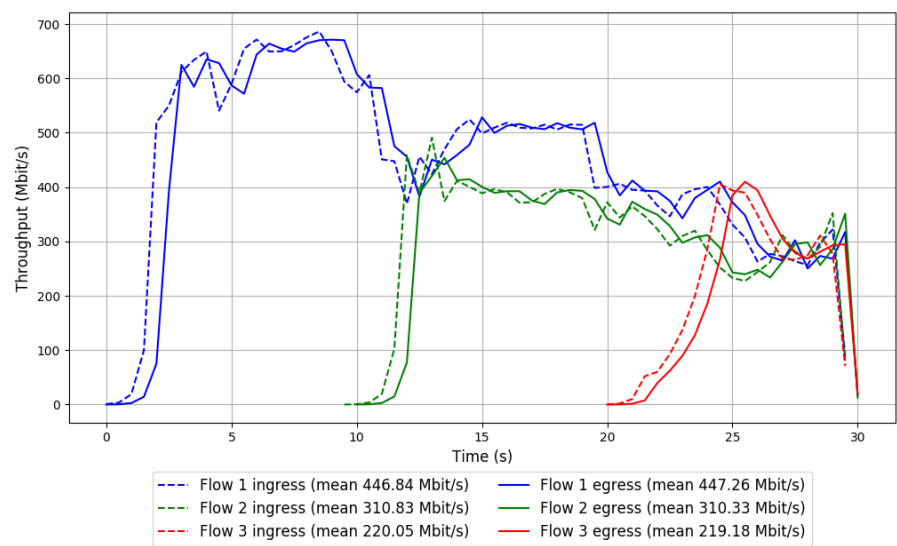
```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-26 22:19:05
End at: 2019-08-26 22:19:35
Local clock offset: -0.306 ms
Remote clock offset: -0.081 ms


# Below is generated by plot.py at 2019-08-27 02:11:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 654.52 Mbit/s
95th percentile per-packet one-way delay: 104.236 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 415.16 Mbit/s
95th percentile per-packet one-way delay: 112.433 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 330.38 Mbit/s
95th percentile per-packet one-way delay: 86.606 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 67.06 Mbit/s
95th percentile per-packet one-way delay: 86.499 ms
Loss rate: 4.61%
```

Run 2: Report of Muses_DecisionTreeR0 — Data Link

```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-26 22:59:23
End at: 2019-08-26 22:59:53
Local clock offset: -0.361 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-08-27 02:12:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 721.19 Mbit/s
95th percentile per-packet one-way delay: 89.069 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 447.26 Mbit/s
95th percentile per-packet one-way delay: 93.519 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 310.33 Mbit/s
95th percentile per-packet one-way delay: 87.123 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 219.18 Mbit/s
95th percentile per-packet one-way delay: 87.483 ms
Loss rate: 2.22%
```
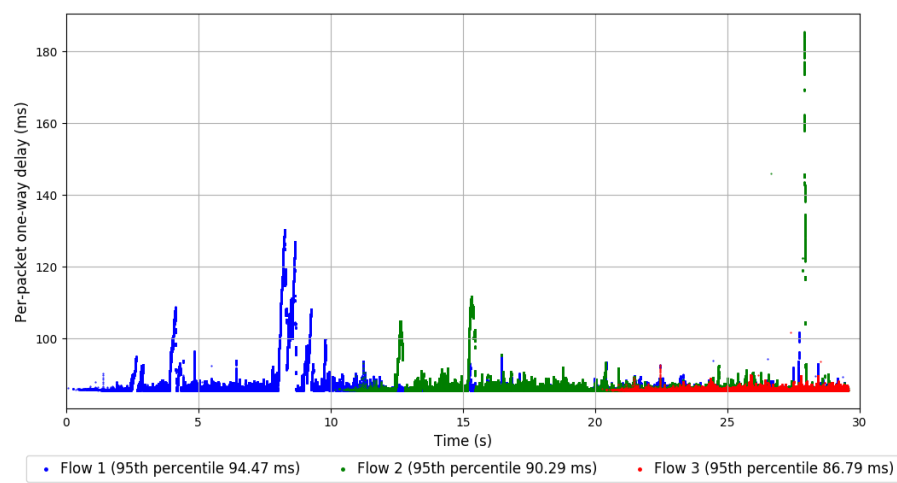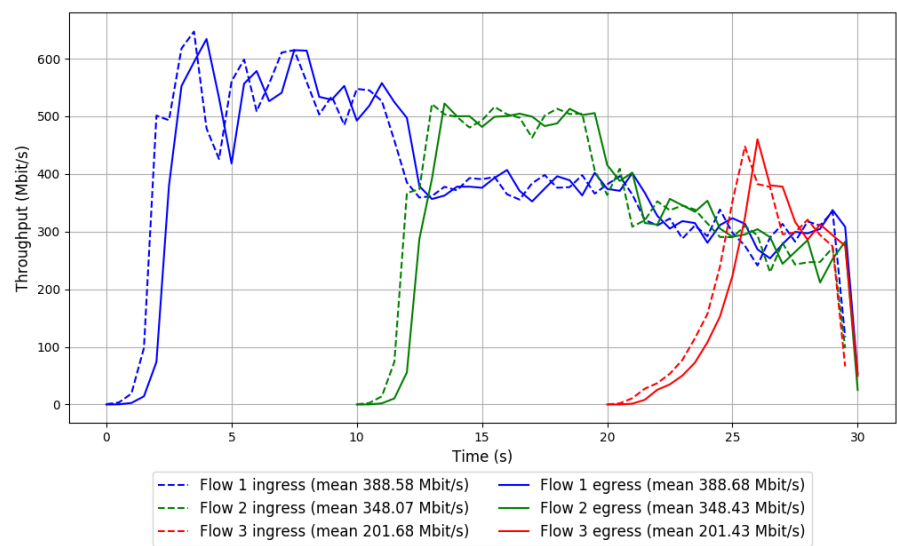
Run 3: Report of Muses_DecisionTreeR0 — Data Link

```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-26 23:40:05
End at: 2019-08-26 23:40:35
Local clock offset: -0.302 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-08-27 02:12:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 681.59 Mbit/s
95th percentile per-packet one-way delay: 92.021 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 388.68 Mbit/s
95th percentile per-packet one-way delay: 94.466 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 348.43 Mbit/s
95th percentile per-packet one-way delay: 90.287 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 201.43 Mbit/s
95th percentile per-packet one-way delay: 86.793 ms
Loss rate: 1.95%
```

Run 4: Report of Muses_DecisionTreeR0 — Data Link
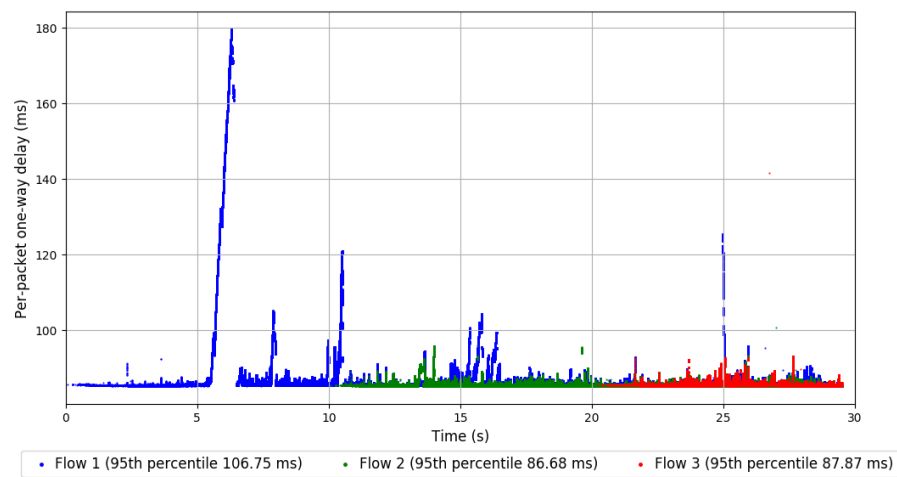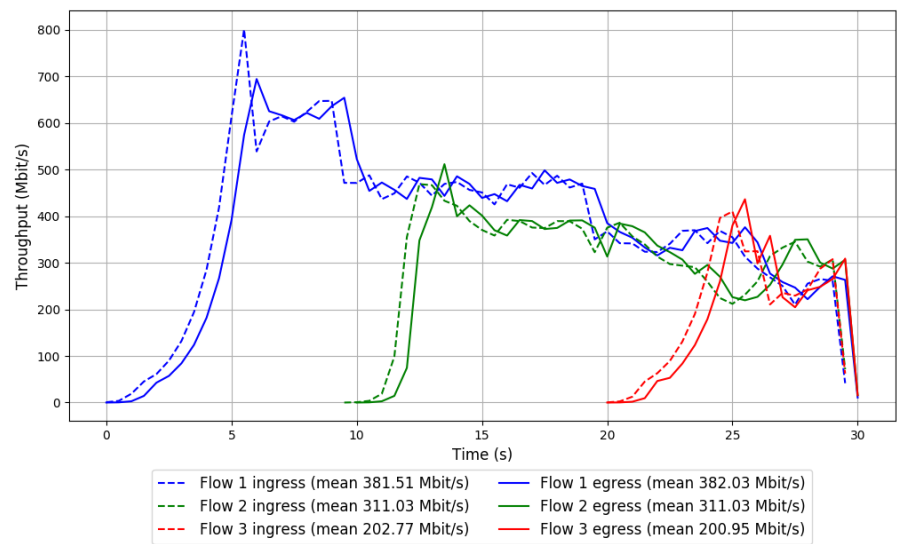
```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-08-27 00:20:53
End at: 2019-08-27 00:21:23
Local clock offset: -0.386 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-08-27 02:16:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 650.95 Mbit/s
95th percentile per-packet one-way delay: 94.177 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 382.03 Mbit/s
95th percentile per-packet one-way delay: 106.745 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 311.03 Mbit/s
95th percentile per-packet one-way delay: 86.677 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 200.95 Mbit/s
95th percentile per-packet one-way delay: 87.871 ms
Loss rate: 2.71%
```
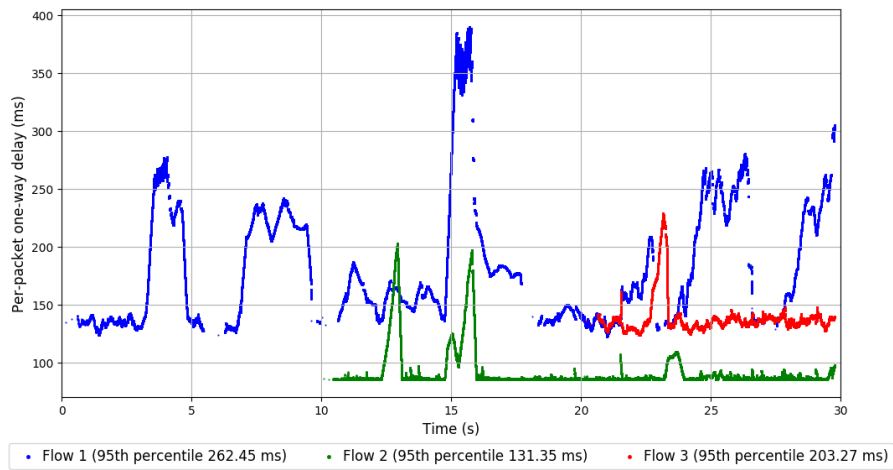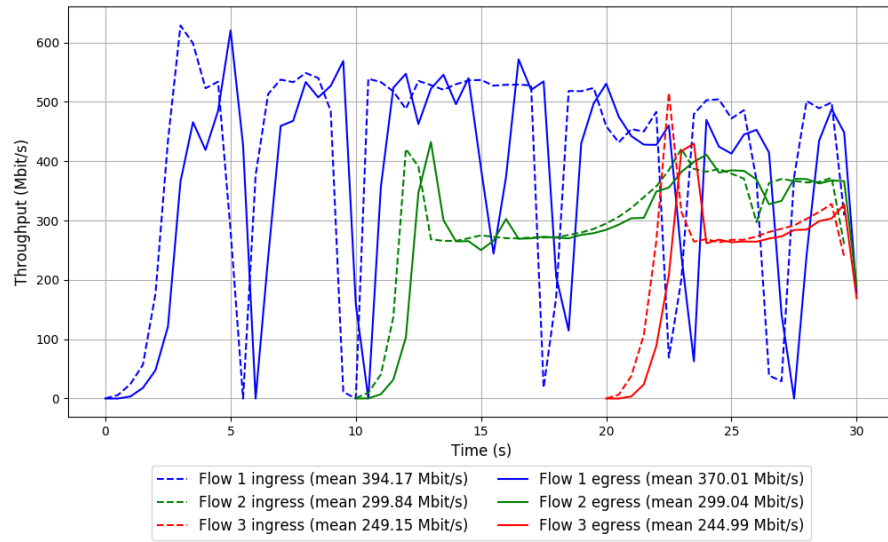
Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-08-26 21:12:33
End at: 2019-08-26 21:13:03
Local clock offset: -0.348 ms
Remote clock offset: -0.046 ms


# Below is generated by plot.py at 2019-08-27 02:26:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 647.90 Mbit/s
95th percentile per-packet one-way delay: 253.220 ms
Loss rate: 4.80%
-- Flow 1:
Average throughput: 370.01 Mbit/s
95th percentile per-packet one-way delay: 262.454 ms
Loss rate: 6.83%
-- Flow 2:
Average throughput: 299.04 Mbit/s
95th percentile per-packet one-way delay: 131.354 ms
Loss rate: 1.14%
-- Flow 3:
Average throughput: 244.99 Mbit/s
95th percentile per-packet one-way delay: 203.268 ms
Loss rate: 3.92%
```

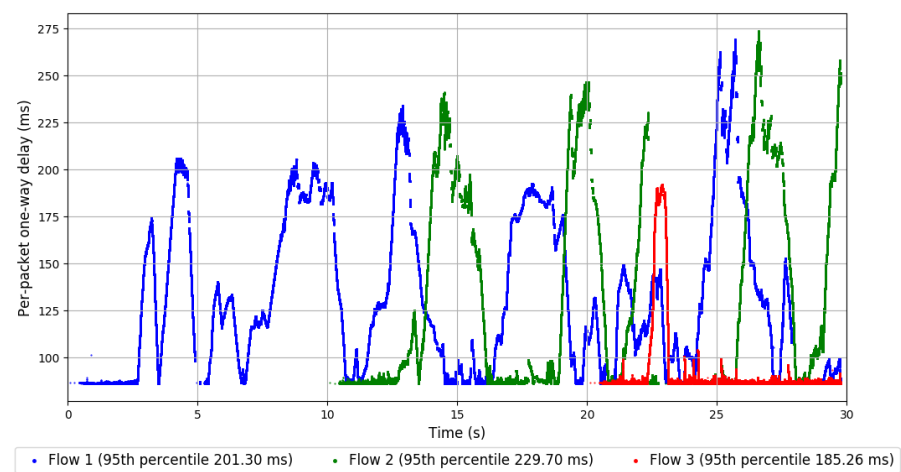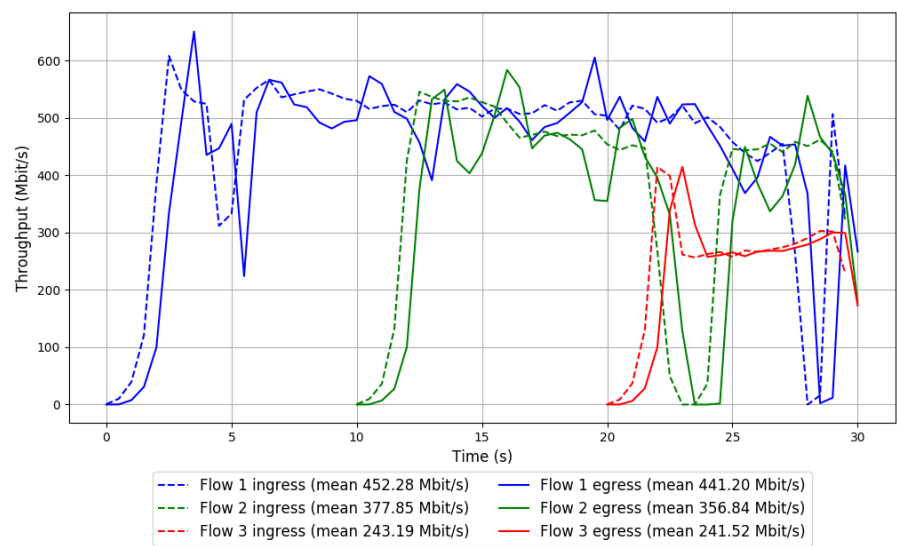# Run 1: Report of PCC-Allegro — Data Link

- Flow 1 ingress (mean 394.17 Mbit/s)
- Flow 1 egress (mean 370.01 Mbit/s)
- Flow 2 ingress (mean 299.84 Mbit/s)
- Flow 2 egress (mean 299.04 Mbit/s)
- Flow 3 ingress (mean 249.15 Mbit/s)
- Flow 3 egress (mean 244.99 Mbit/s)

- Flow 1 (95th percentile 262.45 ms)
- Flow 2 (95th percentile 131.35 ms)
- Flow 3 (95th percentile 203.27 ms)

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-08-26 21:53:19
End at: 2019-08-26 21:53:49
Local clock offset: 0.372 ms
Remote clock offset: -0.165 ms


# Below is generated by plot.py at 2019-08-27 02:30:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 756.21 Mbit/s
95th percentile per-packet one-way delay: 216.473 ms
Loss rate: 4.04%
-- Flow 1:
Average throughput: 441.20 Mbit/s
95th percentile per-packet one-way delay: 201.303 ms
Loss rate: 3.01%
-- Flow 2:
Average throughput: 356.84 Mbit/s
95th percentile per-packet one-way delay: 229.701 ms
Loss rate: 6.38%
-- Flow 3:
Average throughput: 241.52 Mbit/s
95th percentile per-packet one-way delay: 185.265 ms
Loss rate: 2.44%
```

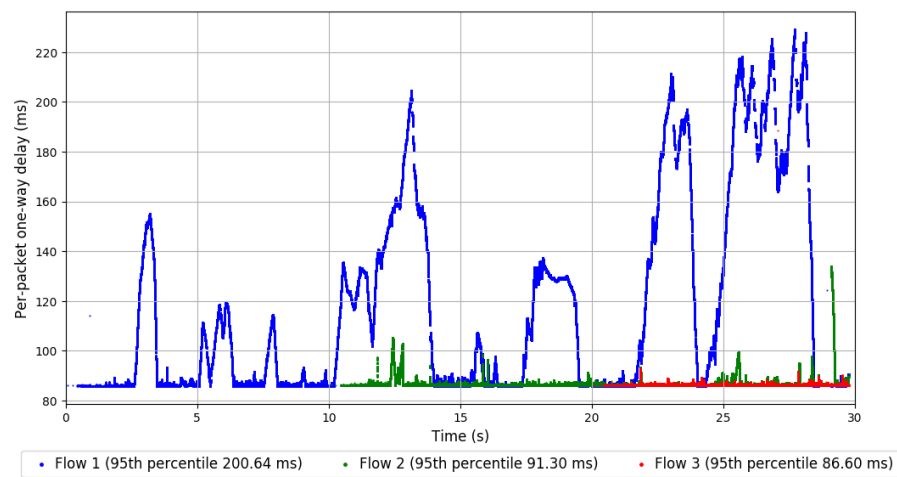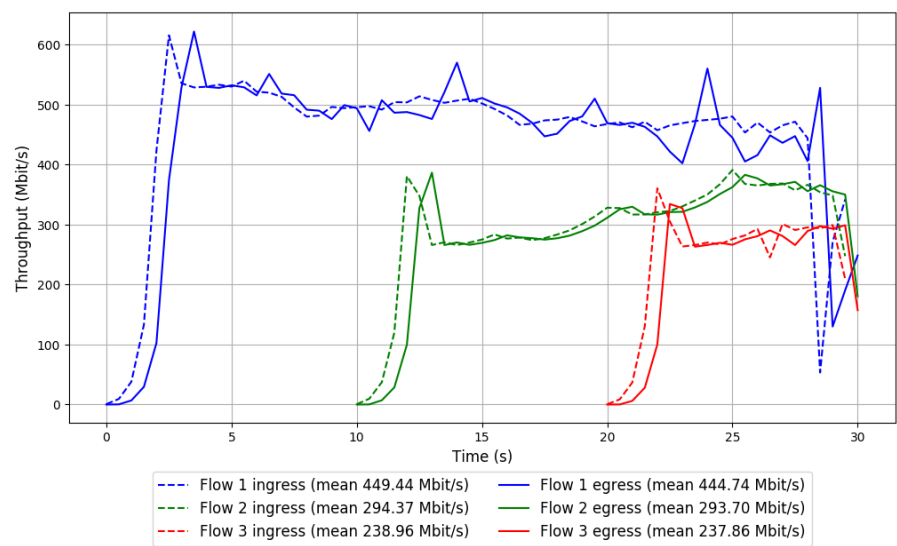Run 2: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 452.28 Mbit/s) — Flow 1 egress (mean 441.20 Mbit/s)
Flow 2 ingress (mean 377.85 Mbit/s) — Flow 2 egress (mean 356.84 Mbit/s)
Flow 3 ingress (mean 243.19 Mbit/s) — Flow 3 egress (mean 241.52 Mbit/s)

Flow 1 (95th percentile 201.30 ms) — Flow 2 (95th percentile 229.70 ms) — Flow 3 (95th percentile 185.26 ms)

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-08-26 22:33:29
End at: 2019-08-26 22:33:59
Local clock offset: -0.156 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-08-27 02:30:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 716.76 Mbit/s
95th percentile per-packet one-way delay: 192.682 ms
Loss rate: 1.54%
-- Flow 1:
Average throughput: 444.74 Mbit/s
95th percentile per-packet one-way delay: 200.642 ms
Loss rate: 1.62%
-- Flow 2:
Average throughput: 293.70 Mbit/s
95th percentile per-packet one-way delay: 91.295 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 237.86 Mbit/s
95th percentile per-packet one-way delay: 86.597 ms
Loss rate: 2.21%
```

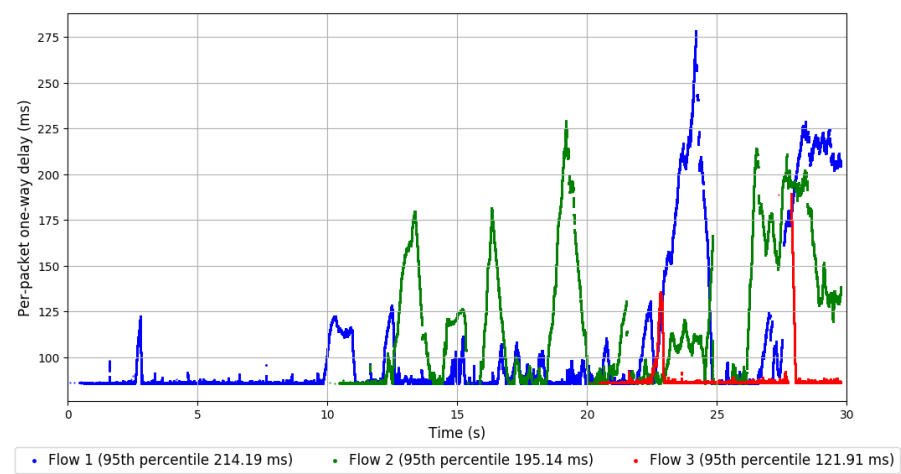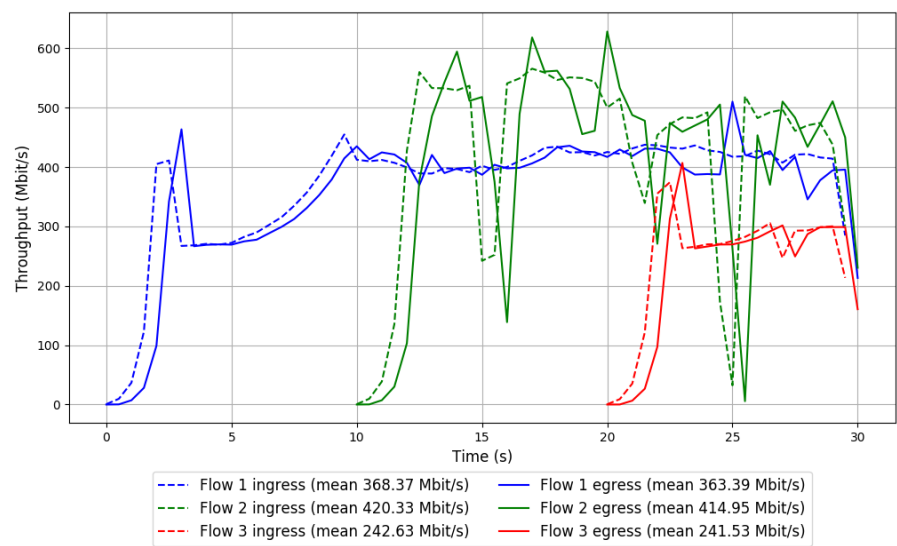# Run 3: Report of PCC-Allegro — Data Link

Legend:
- Flow 1 ingress (mean 449.44 Mbit/s)
- Flow 1 egress (mean 444.74 Mbit/s)
- Flow 2 ingress (mean 294.37 Mbit/s)
- Flow 2 egress (mean 293.70 Mbit/s)
- Flow 3 ingress (mean 238.96 Mbit/s)
- Flow 3 egress (mean 237.86 Mbit/s)

Legend:
- Flow 1 (95th percentile 200.64 ms)
- Flow 2 (95th percentile 91.30 ms)
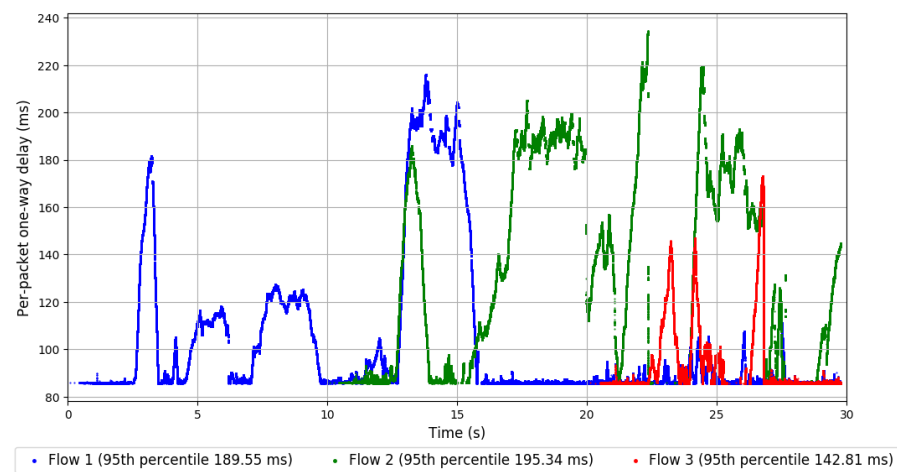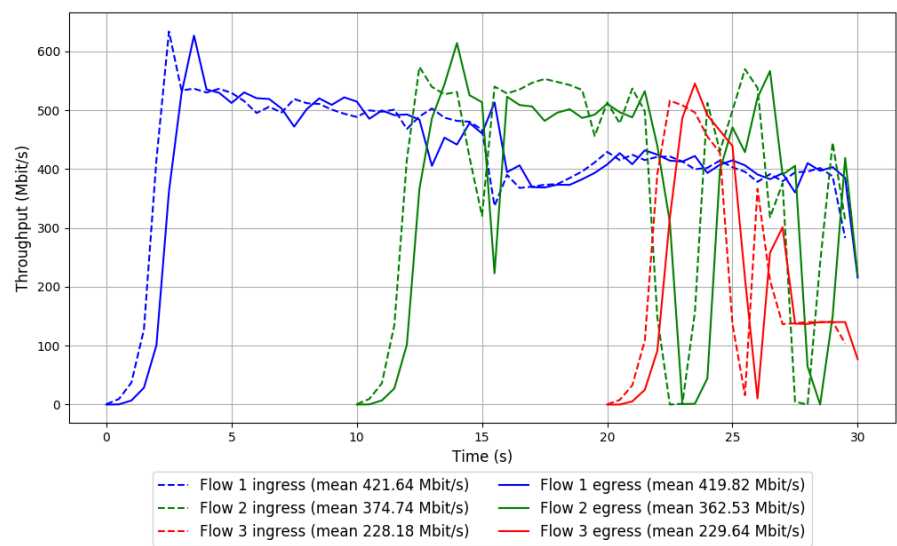- Flow 3 (95th percentile 86.60 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-08-26 23:14:13
End at: 2019-08-26 23:14:43
Local clock offset: -0.067 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-08-27 02:30:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 716.95 Mbit/s
95th percentile per-packet one-way delay: 205.277 ms
Loss rate: 2.04%
-- Flow 1:
Average throughput: 363.39 Mbit/s
95th percentile per-packet one-way delay: 214.195 ms
Loss rate: 1.92%
-- Flow 2:
Average throughput: 414.95 Mbit/s
95th percentile per-packet one-way delay: 195.140 ms
Loss rate: 2.15%
-- Flow 3:
Average throughput: 241.53 Mbit/s
95th percentile per-packet one-way delay: 121.906 ms
Loss rate: 2.21%
```

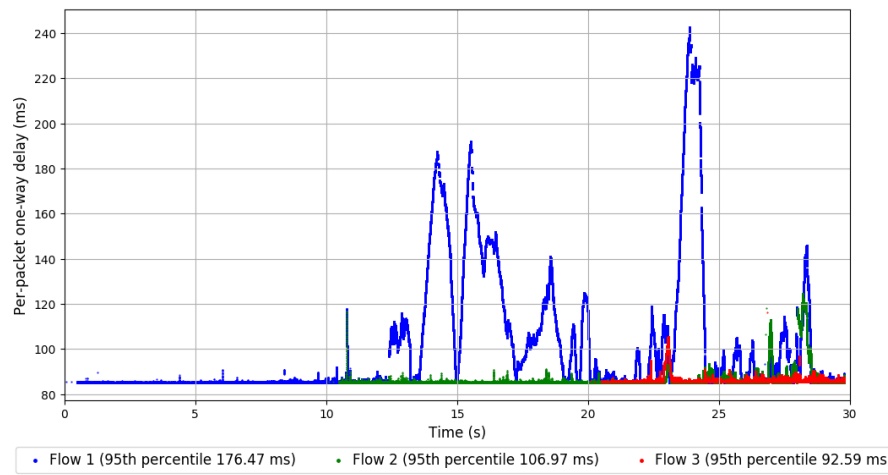# Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-08-26 23:54:50
End at: 2019-08-26 23:55:20
Local clock offset: -0.106 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-08-27 02:31:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 734.61 Mbit/s
95th percentile per-packet one-way delay: 192.137 ms
Loss rate: 2.06%
-- Flow 1:
Average throughput: 419.82 Mbit/s
95th percentile per-packet one-way delay: 189.547 ms
Loss rate: 1.01%
-- Flow 2:
Average throughput: 362.53 Mbit/s
95th percentile per-packet one-way delay: 195.344 ms
Loss rate: 4.10%
-- Flow 3:
Average throughput: 229.64 Mbit/s
95th percentile per-packet one-way delay: 142.805 ms
Loss rate: 1.14%
```

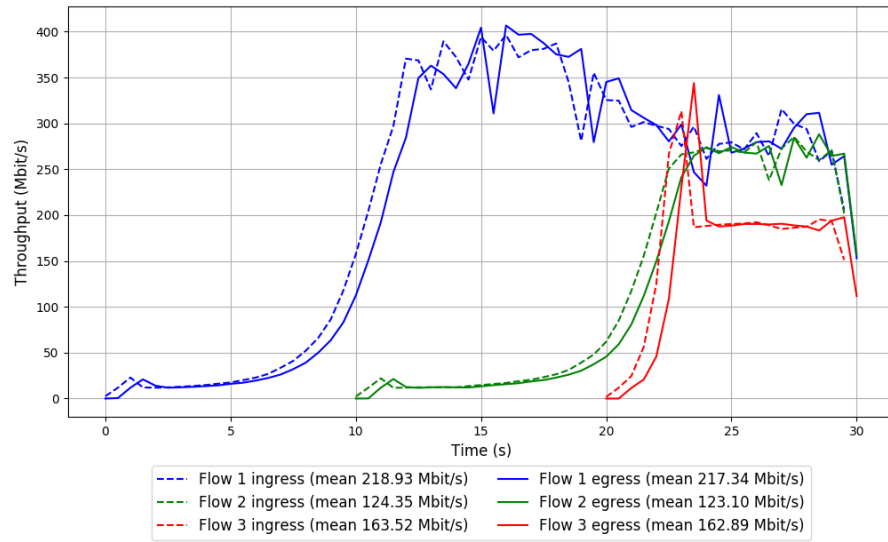Run 5: Report of PCC-Allegro — Data Link

- - - Flow 1 ingress (mean 421.64 Mbit/s) —— Flow 1 egress (mean 419.82 Mbit/s)
- - - Flow 2 ingress (mean 374.74 Mbit/s) —— Flow 2 egress (mean 362.53 Mbit/s)
- - - Flow 3 ingress (mean 228.18 Mbit/s) —— Flow 3 egress (mean 229.64 Mbit/s)

· Flow 1 (95th percentile 189.55 ms)   · Flow 2 (95th percentile 195.34 ms)   · Flow 3 (95th percentile 142.81 ms)
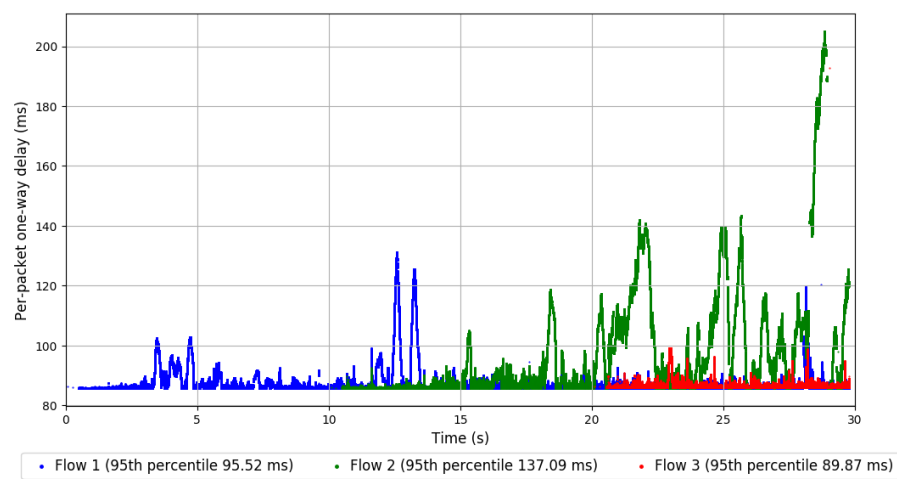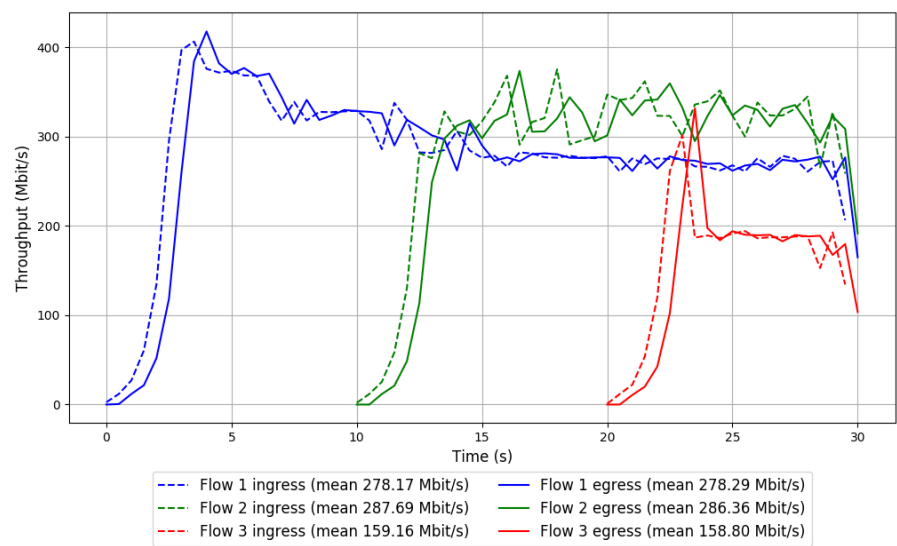
154

```
Run 1: Statistics of PCC-Expr

Start at: 2019-08-26 21:24:48
End at: 2019-08-26 21:25:18
Local clock offset: -0.301 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-08-27 02:31:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.09 Mbit/s
95th percentile per-packet one-way delay: 161.955 ms
Loss rate: 1.57%
-- Flow 1:
Average throughput: 217.34 Mbit/s
95th percentile per-packet one-way delay: 176.471 ms
Loss rate: 1.31%
-- Flow 2:
Average throughput: 123.10 Mbit/s
95th percentile per-packet one-way delay: 106.974 ms
Loss rate: 1.89%
-- Flow 3:
Average throughput: 162.89 Mbit/s
95th percentile per-packet one-way delay: 92.587 ms
Loss rate: 2.15%
```
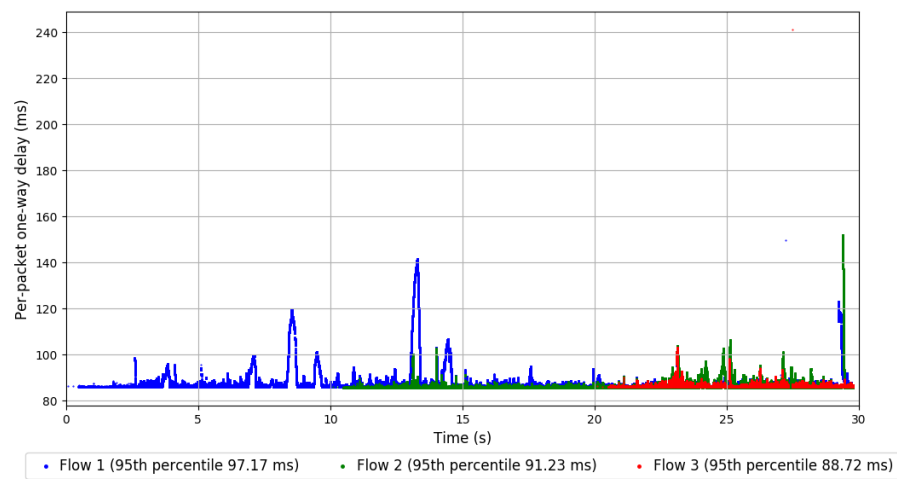
Run 1: Report of PCC-Expr — Data Link

```
Run 2: Statistics of PCC-Expr

Start at: 2019-08-26 22:05:15
End at: 2019-08-26 22:05:45
Local clock offset: -0.068 ms
Remote clock offset: -0.183 ms


# Below is generated by plot.py at 2019-08-27 02:31:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 519.87 Mbit/s
95th percentile per-packet one-way delay: 117.708 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 278.29 Mbit/s
95th percentile per-packet one-way delay: 95.516 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 286.36 Mbit/s
95th percentile per-packet one-way delay: 137.088 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 158.80 Mbit/s
95th percentile per-packet one-way delay: 89.872 ms
Loss rate: 1.95%
```
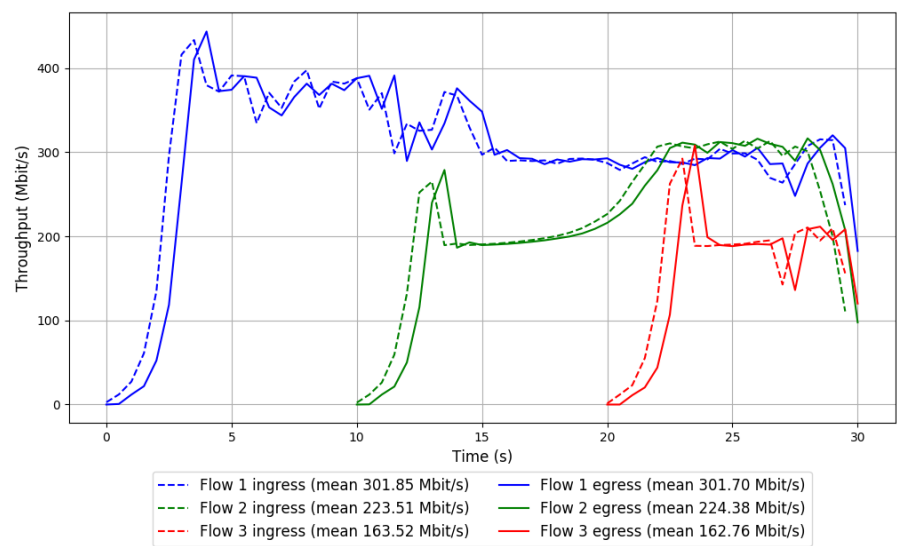
Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-08-26 22:45:28
End at: 2019-08-26 22:45:58
Local clock offset: -0.41 ms
Remote clock offset: -0.076 ms


# Below is generated by plot.py at 2019-08-27 02:31:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 503.57 Mbit/s
95th percentile per-packet one-way delay: 93.647 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 301.70 Mbit/s
95th percentile per-packet one-way delay: 97.170 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 224.38 Mbit/s
95th percentile per-packet one-way delay: 91.227 ms
Loss rate: 0.48%
-- Flow 3:
Average throughput: 162.76 Mbit/s
95th percentile per-packet one-way delay: 88.719 ms
Loss rate: 2.21%
```

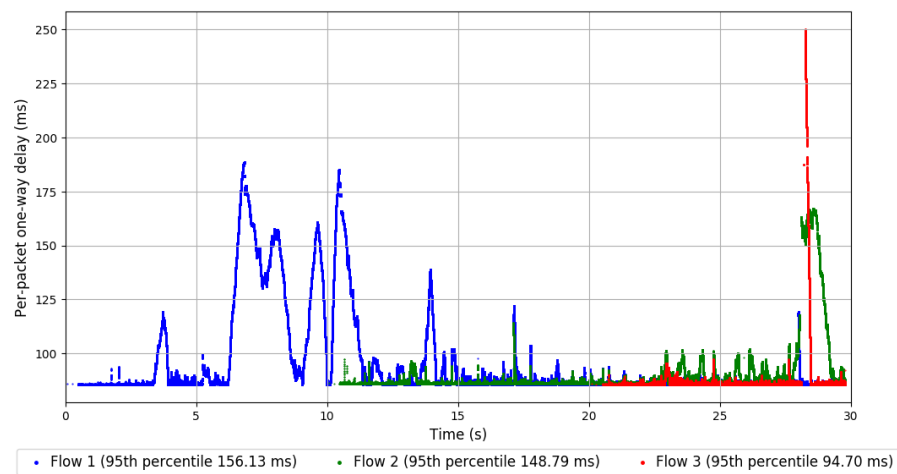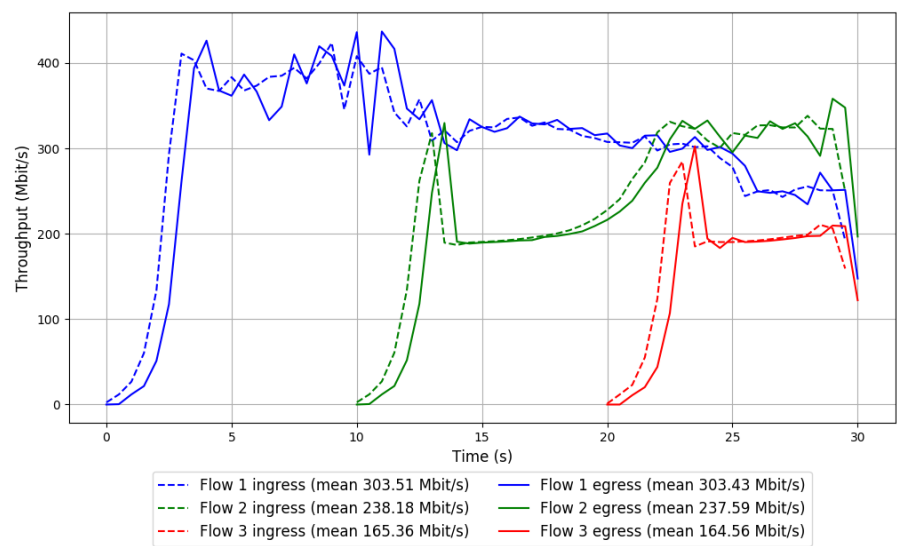# Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-08-26 23:26:17
End at: 2019-08-26 23:26:47
Local clock offset: -0.231 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-08-27 02:36:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 514.58 Mbit/s
95th percentile per-packet one-way delay: 154.153 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 303.43 Mbit/s
95th percentile per-packet one-way delay: 156.135 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 237.59 Mbit/s
95th percentile per-packet one-way delay: 148.794 ms
Loss rate: 1.11%
-- Flow 3:
Average throughput: 164.56 Mbit/s
95th percentile per-packet one-way delay: 94.697 ms
Loss rate: 2.17%
```

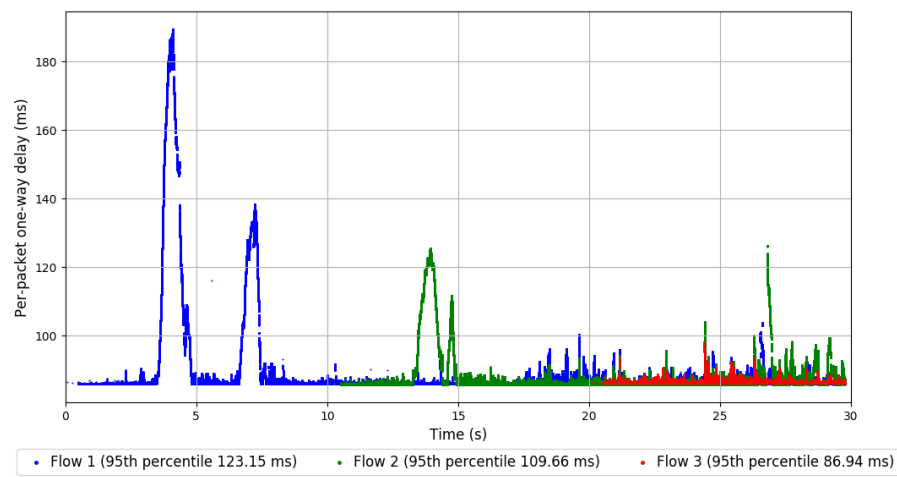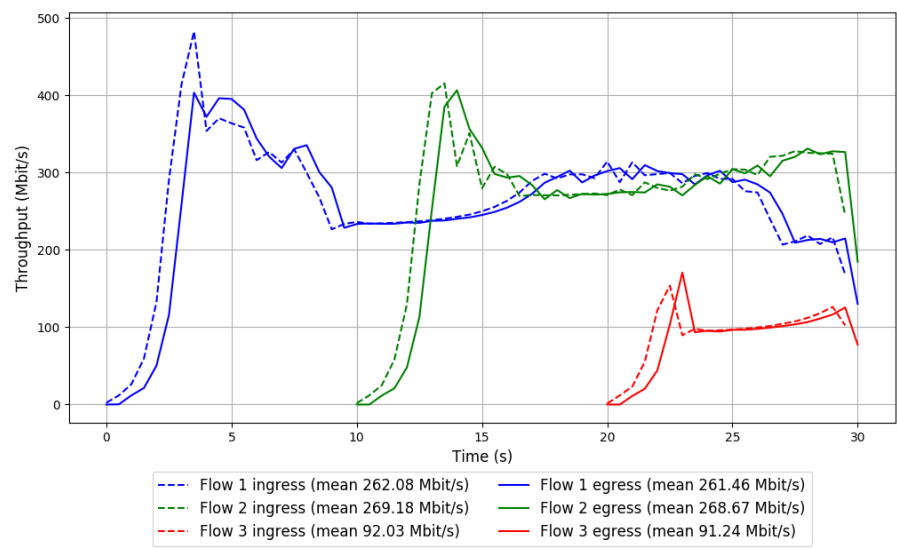Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-08-27 00:06:56
End at: 2019-08-27 00:07:26
Local clock offset: -0.062 ms
Remote clock offset: -0.112 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.35 Mbit/s
95th percentile per-packet one-way delay: 111.264 ms
Loss rate: 1.03%
-- Flow 1:
Average throughput: 261.46 Mbit/s
95th percentile per-packet one-way delay: 123.150 ms
Loss rate: 0.82%
-- Flow 2:
Average throughput: 268.67 Mbit/s
95th percentile per-packet one-way delay: 109.661 ms
Loss rate: 1.06%
-- Flow 3:
Average throughput: 91.24 Mbit/s
95th percentile per-packet one-way delay: 86.942 ms
Loss rate: 2.61%
```
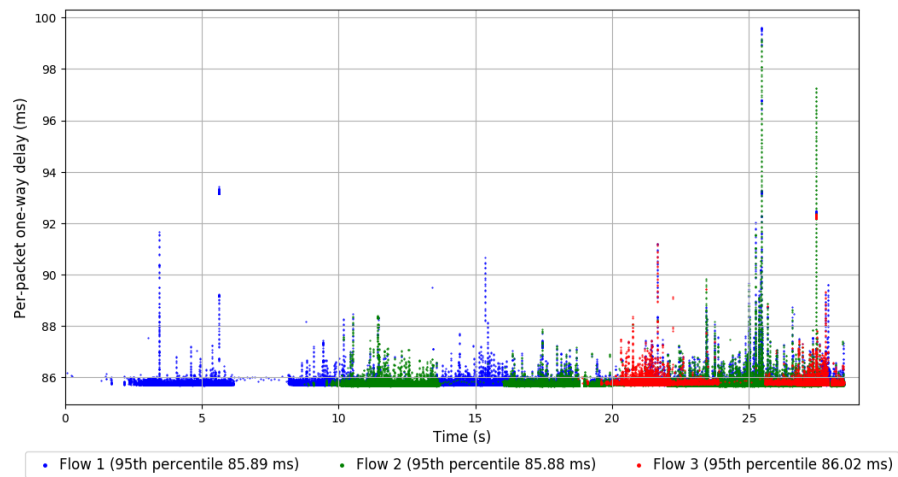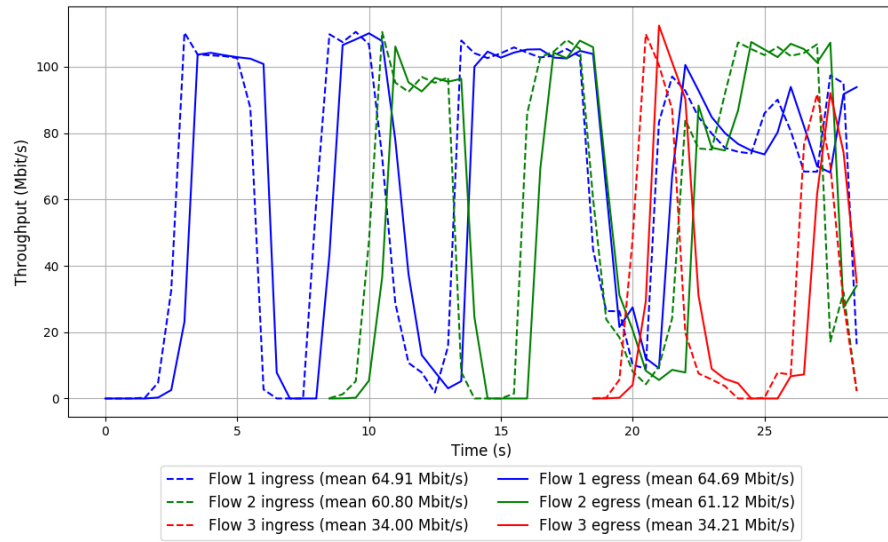
Run 5: Report of PCC-Expr — Data Link

Throughput (Mbit/s) vs Time (s)

Flow 1 ingress (mean 262.08 Mbit/s)   Flow 1 egress (mean 261.46 Mbit/s)
Flow 2 ingress (mean 269.18 Mbit/s)   Flow 2 egress (mean 268.67 Mbit/s)
Flow 3 ingress (mean 92.03 Mbit/s)   Flow 3 egress (mean 91.24 Mbit/s)

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

Flow 1 (95th percentile 123.15 ms)   Flow 2 (95th percentile 109.66 ms)   Flow 3 (95th percentile 86.94 ms)

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-08-26 21:06:00
End at: 2019-08-26 21:06:30
Local clock offset: -0.047 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.92 Mbit/s
95th percentile per-packet one-way delay: 85.900 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 64.69 Mbit/s
95th percentile per-packet one-way delay: 85.891 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 61.12 Mbit/s
95th percentile per-packet one-way delay: 85.880 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 34.21 Mbit/s
95th percentile per-packet one-way delay: 86.019 ms
Loss rate: 1.15%
```
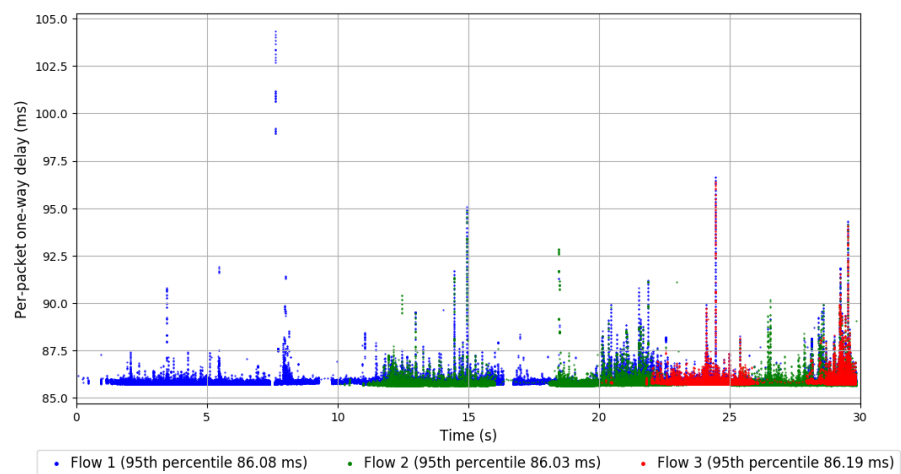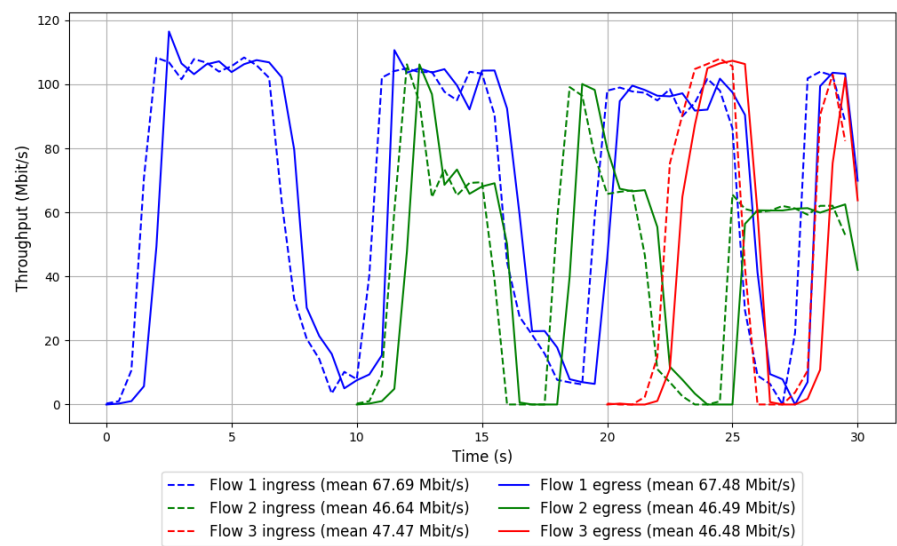
Run 1: Report of QUIC Cubic — Data Link

Flow 1 ingress (mean 64.91 Mbit/s) — Flow 1 egress (mean 64.69 Mbit/s)
Flow 2 ingress (mean 60.80 Mbit/s) — Flow 2 egress (mean 61.12 Mbit/s)
Flow 3 ingress (mean 34.00 Mbit/s) — Flow 3 egress (mean 34.21 Mbit/s)

Flow 1 (95th percentile 85.89 ms) · Flow 2 (95th percentile 85.88 ms) · Flow 3 (95th percentile 86.02 ms)
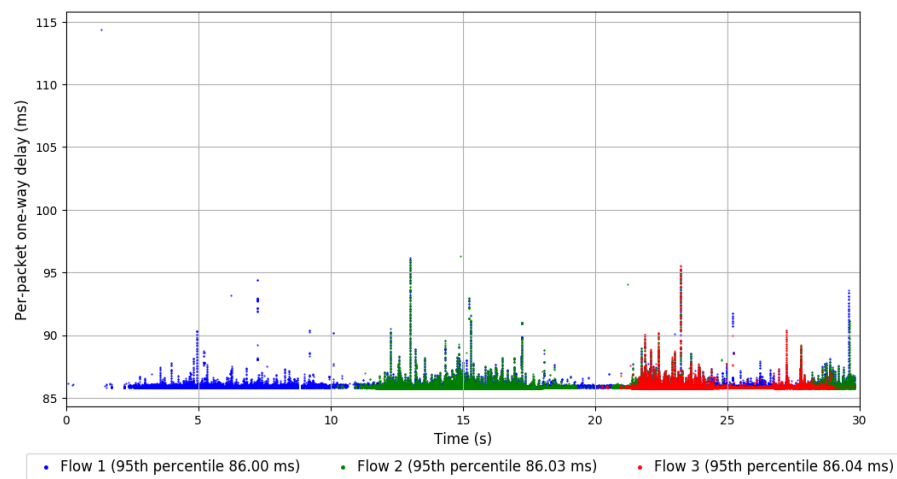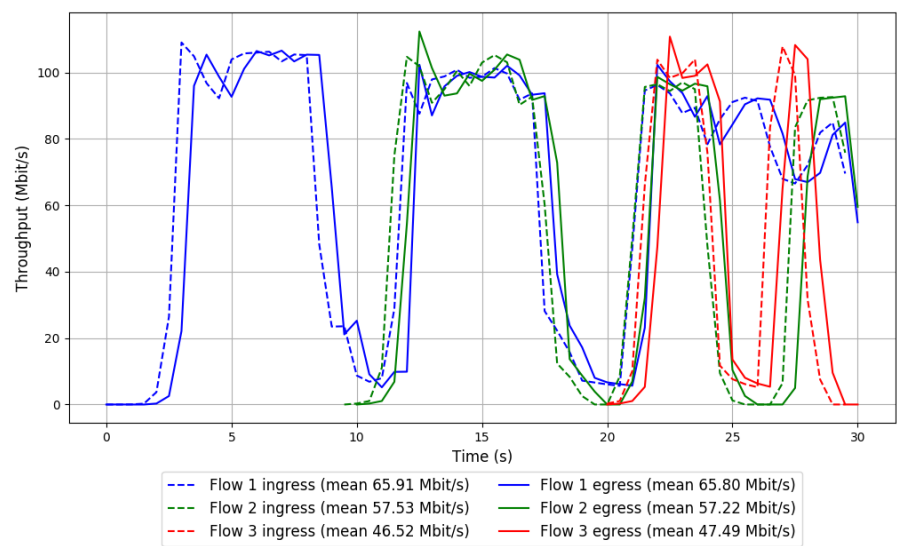
```
Run 2: Statistics of QUIC Cubic

Start at: 2019-08-26 21:47:04
End at: 2019-08-26 21:47:34
Local clock offset: -0.025 ms
Remote clock offset: -0.146 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 113.53 Mbit/s
95th percentile per-packet one-way delay: 86.083 ms
Loss rate: 1.37%
-- Flow 1:
Average throughput: 67.48 Mbit/s
95th percentile per-packet one-way delay: 86.078 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 46.49 Mbit/s
95th percentile per-packet one-way delay: 86.035 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 46.48 Mbit/s
95th percentile per-packet one-way delay: 86.185 ms
Loss rate: 3.86%
```

Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-08-26 22:27:07
End at: 2019-08-26 22:27:37
Local clock offset: -0.114 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 119.27 Mbit/s
95th percentile per-packet one-way delay: 86.013 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 65.80 Mbit/s
95th percentile per-packet one-way delay: 86.002 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 57.22 Mbit/s
95th percentile per-packet one-way delay: 86.032 ms
Loss rate: 1.39%
-- Flow 3:
Average throughput: 47.49 Mbit/s
95th percentile per-packet one-way delay: 86.038 ms
Loss rate: 0.00%
```
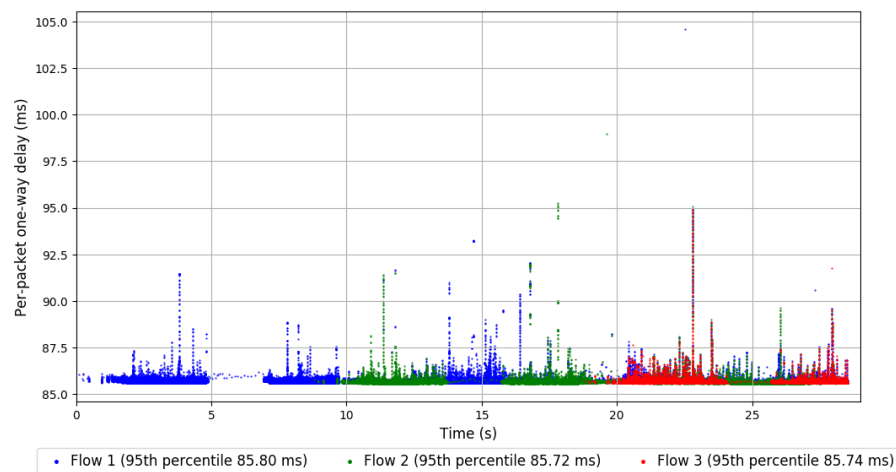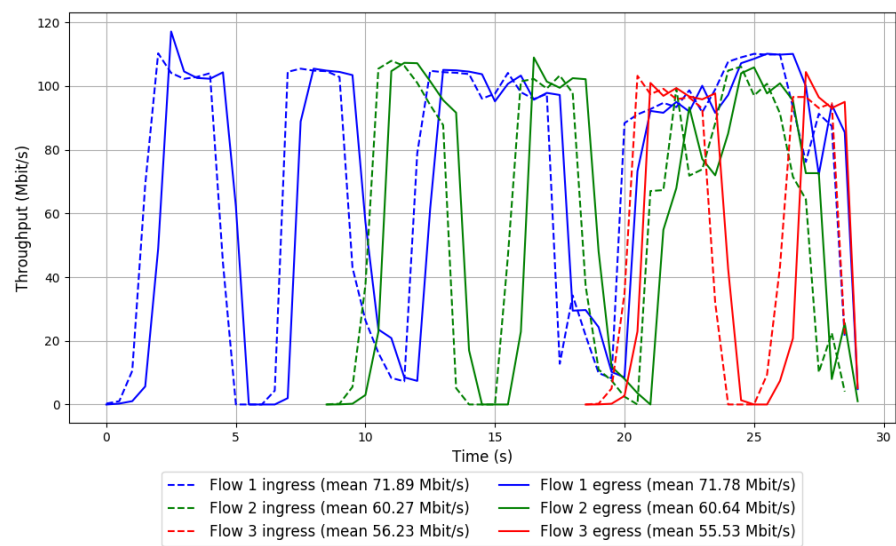
Run 3: Report of QUIC Cubic — Data Link

- - - Flow 1 ingress (mean 65.91 Mbit/s) —— Flow 1 egress (mean 65.80 Mbit/s)
- - - Flow 2 ingress (mean 57.53 Mbit/s) —— Flow 2 egress (mean 57.22 Mbit/s)
- - - Flow 3 ingress (mean 46.52 Mbit/s) —— Flow 3 egress (mean 47.49 Mbit/s)

• Flow 1 (95th percentile 86.00 ms) • Flow 2 (95th percentile 86.03 ms) • Flow 3 (95th percentile 86.04 ms)

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-08-26 23:07:46
End at: 2019-08-26 23:08:16
Local clock offset: -0.3 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 132.85 Mbit/s
95th percentile per-packet one-way delay: 85.780 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 85.804 ms
Loss rate: 0.76%
-- Flow 2:
Average throughput: 60.64 Mbit/s
95th percentile per-packet one-way delay: 85.720 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 55.53 Mbit/s
95th percentile per-packet one-way delay: 85.744 ms
Loss rate: 2.97%
```
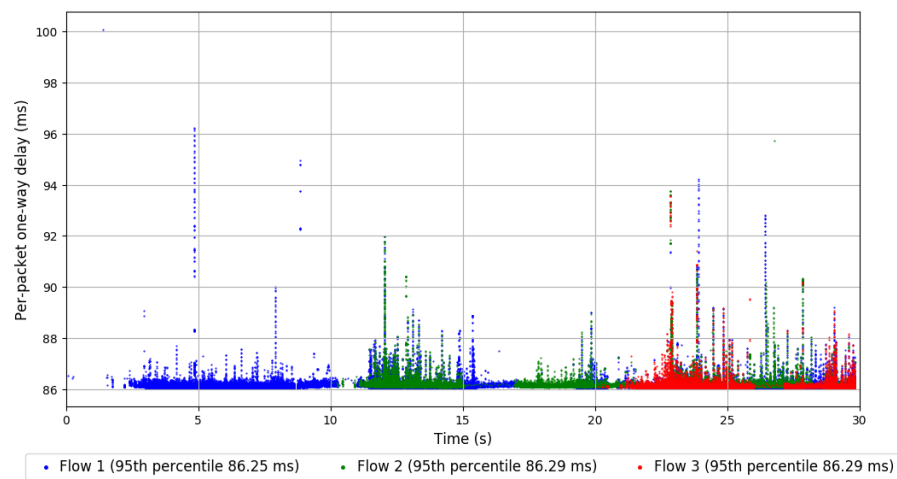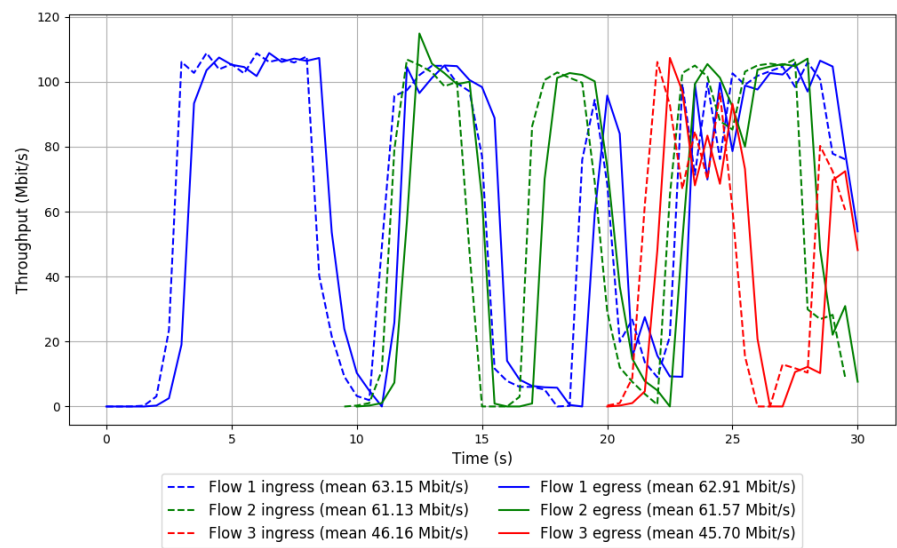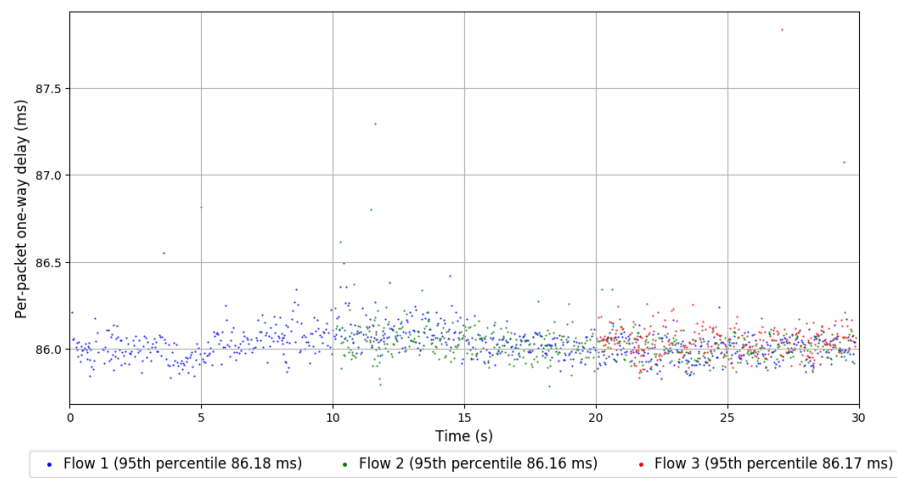
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-08-26 23:48:23
End at: 2019-08-26 23:48:53
Local clock offset: 0.23 ms
Remote clock offset: 0.023 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.72 Mbit/s
95th percentile per-packet one-way delay: 86.269 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 62.91 Mbit/s
95th percentile per-packet one-way delay: 86.251 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 61.57 Mbit/s
95th percentile per-packet one-way delay: 86.293 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 45.70 Mbit/s
95th percentile per-packet one-way delay: 86.287 ms
Loss rate: 2.73%
```
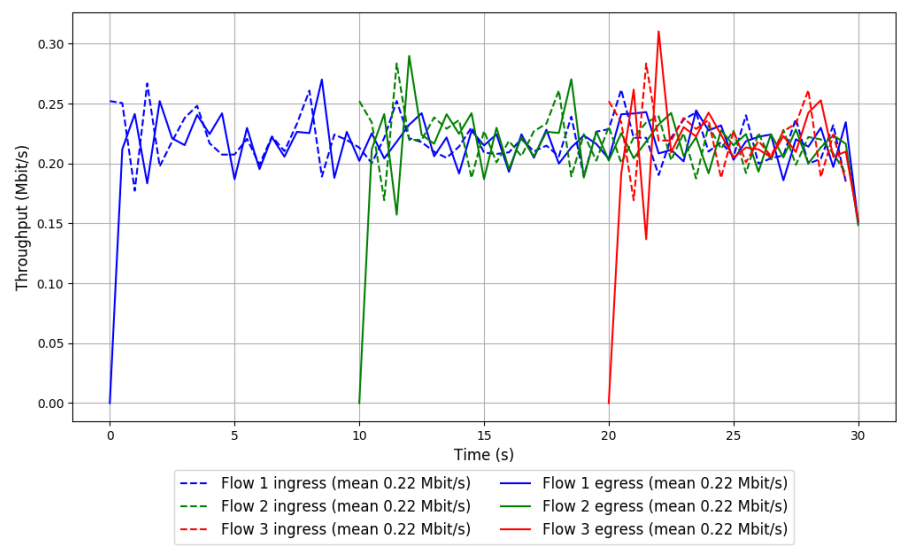
Run 5: Report of QUIC Cubic — Data Link

Legend:
- Flow 1 ingress (mean 63.15 Mbit/s)
- Flow 1 egress (mean 62.91 Mbit/s)
- Flow 2 ingress (mean 61.13 Mbit/s)
- Flow 2 egress (mean 61.57 Mbit/s)
- Flow 3 ingress (mean 46.16 Mbit/s)
- Flow 3 egress (mean 45.70 Mbit/s)

Legend:
- Flow 1 (95th percentile 86.25 ms)
- Flow 2 (95th percentile 86.29 ms)
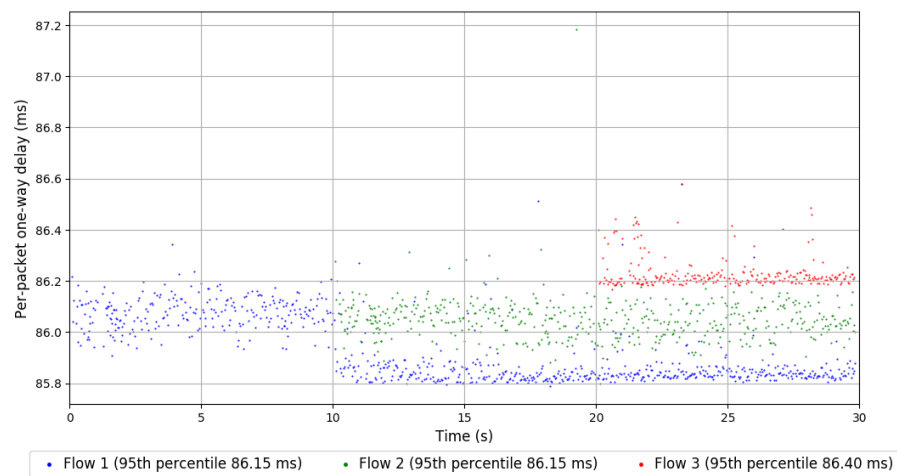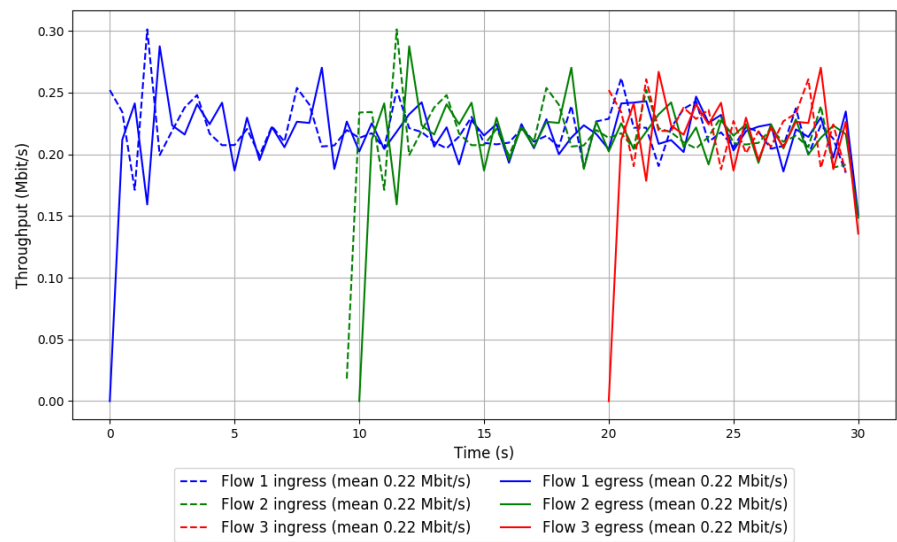- Flow 3 (95th percentile 86.29 ms)

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```
Run 1: Statistics of SCReAM

Start at: 2019-08-26 21:26:34
End at: 2019-08-26 21:27:04
Local clock offset: 0.165 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.172 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.177 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.159 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.165 ms
Loss rate: 1.85%
```

Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-08-26 22:07:14
End at: 2019-08-26 22:07:44
Local clock offset: -0.038 ms
Remote clock offset: -0.217 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.231 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.148 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.147 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.396 ms
Loss rate: 1.85%
```
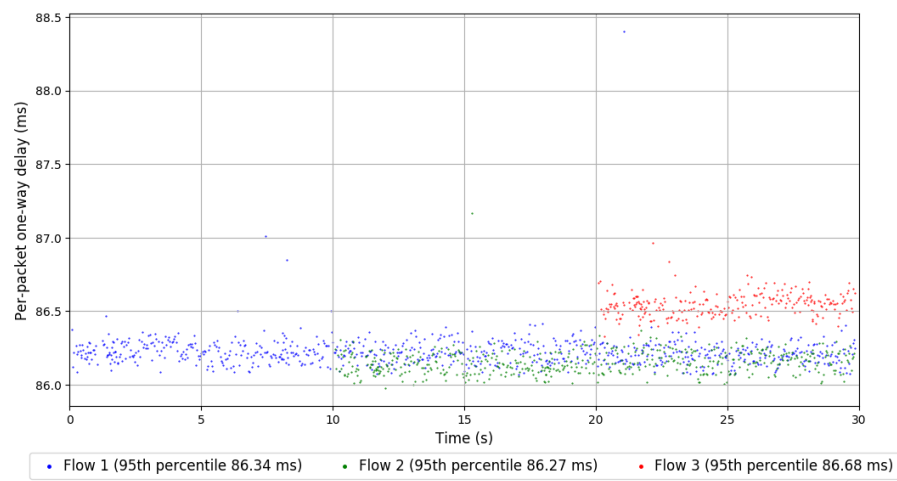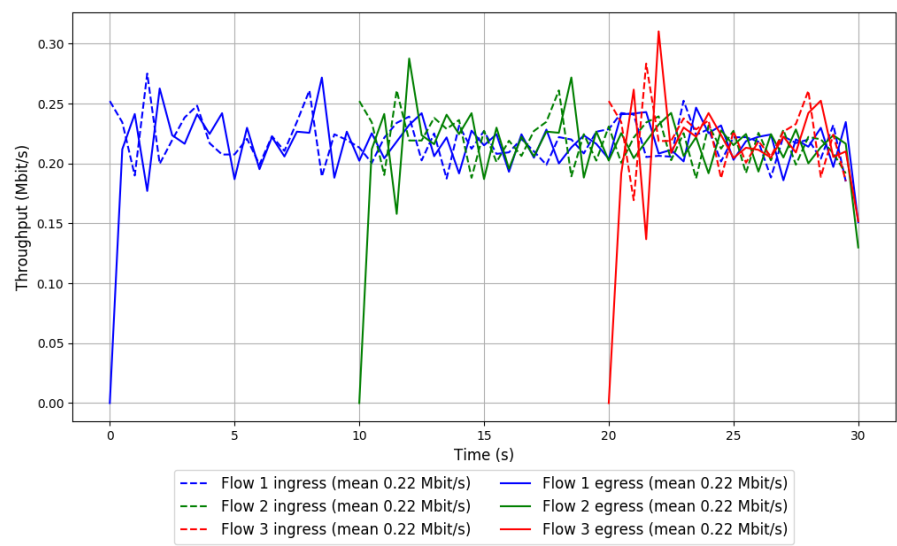
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-08-26 22:47:24
End at: 2019-08-26 22:47:54
Local clock offset: 0.009 ms
Remote clock offset: -0.08 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.584 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.340 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.271 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.680 ms
Loss rate: 1.85%
```
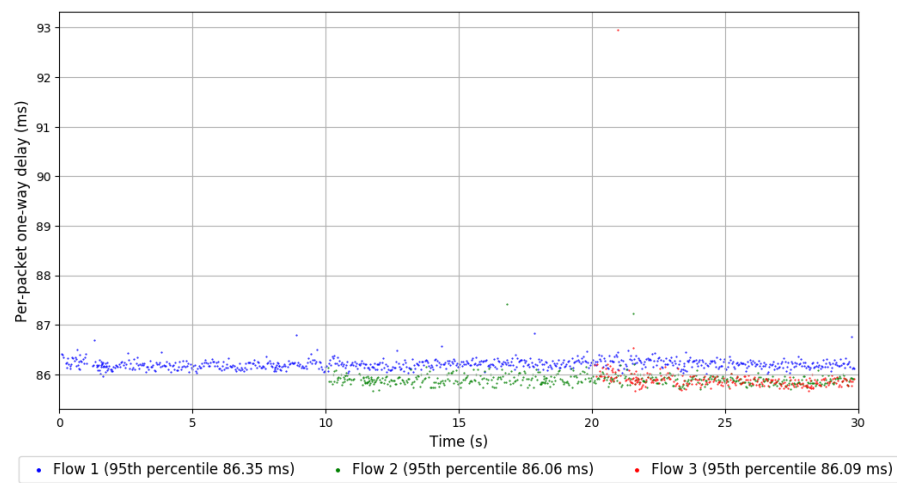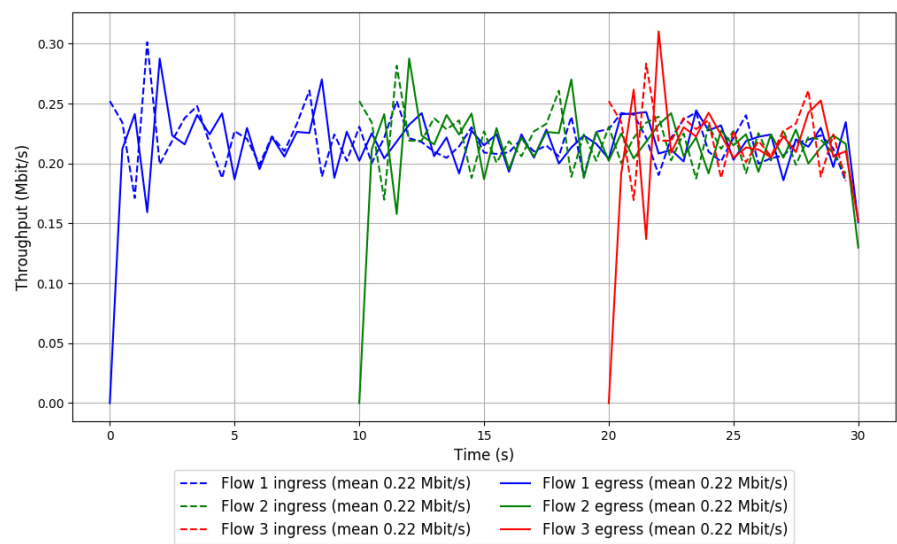
Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-08-26 23:28:16
End at: 2019-08-26 23:28:46
Local clock offset: -0.296 ms
Remote clock offset: -0.009 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.312 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.351 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.060 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.086 ms
Loss rate: 1.85%
```
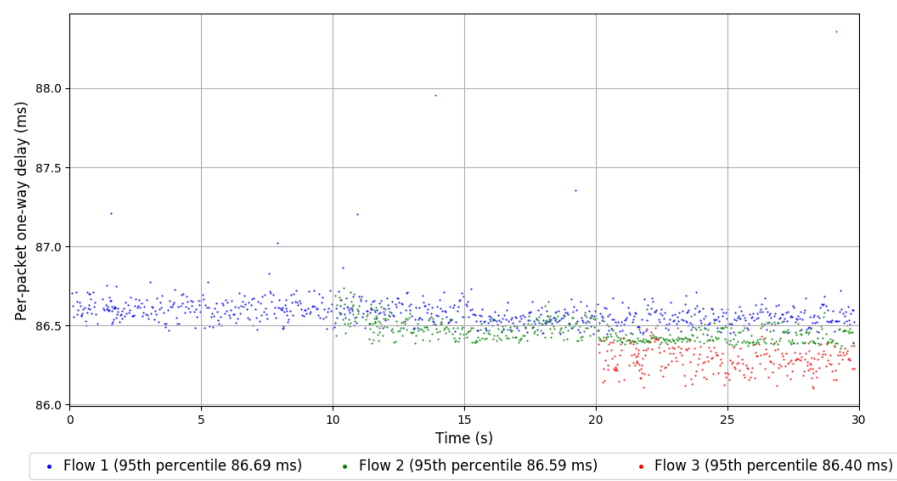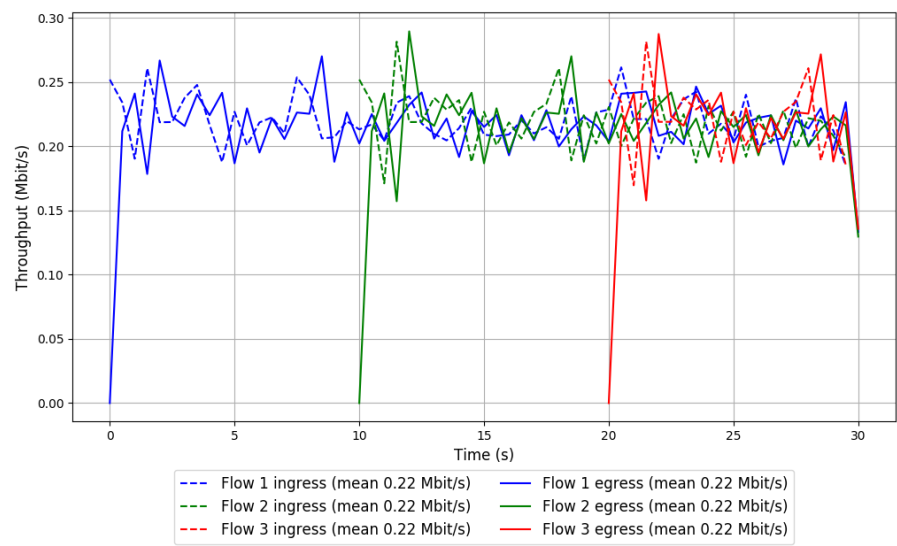
Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-08-27 00:08:51
End at: 2019-08-27 00:09:21
Local clock offset: 0.2 ms
Remote clock offset: -0.099 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.666 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.691 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.591 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.402 ms
Loss rate: 1.85%
```

Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-08-26 21:16:37
End at: 2019-08-26 21:17:07
Local clock offset: -0.148 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 86.454 ms
Loss rate: 1.19%
-- Flow 1:
Average throughput: 4.21 Mbit/s
95th percentile per-packet one-way delay: 86.375 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 3.94 Mbit/s
95th percentile per-packet one-way delay: 86.609 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 4.11 Mbit/s
95th percentile per-packet one-way delay: 86.312 ms
Loss rate: 2.32%
```
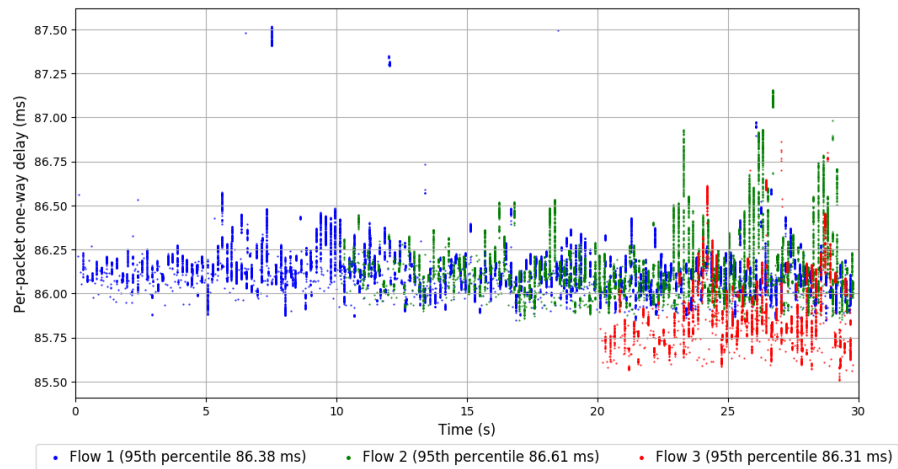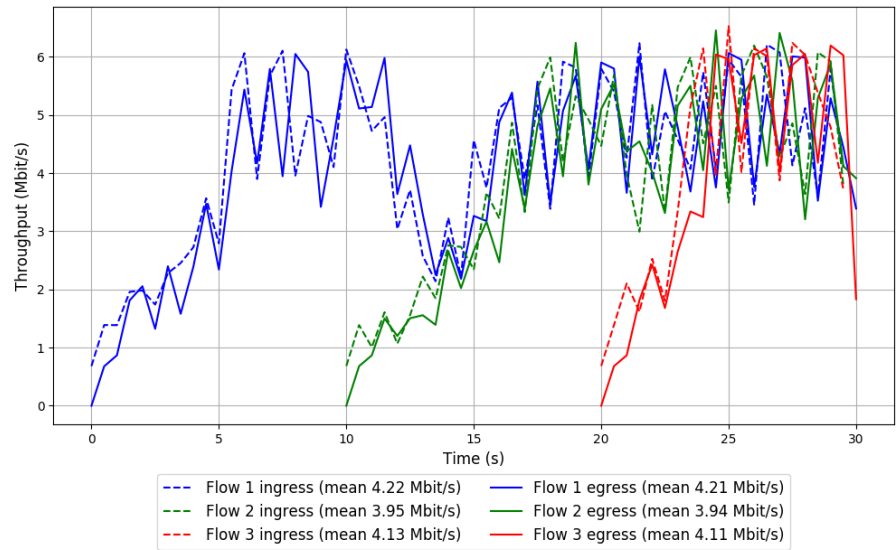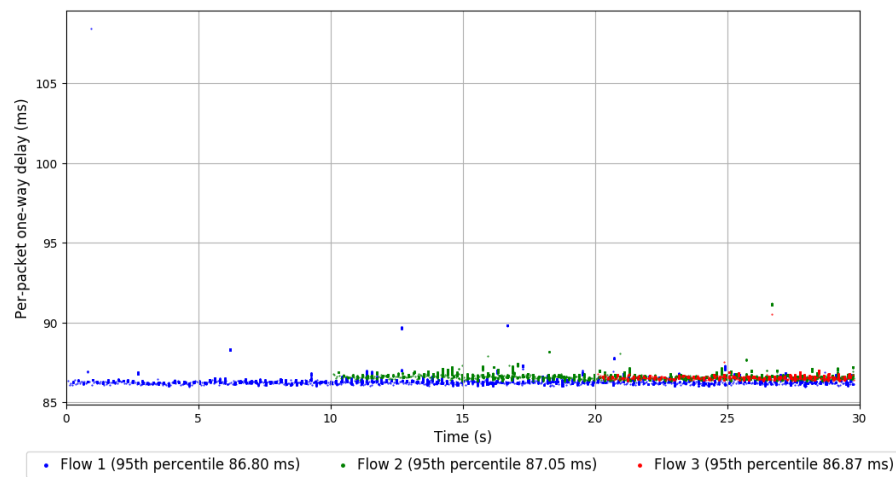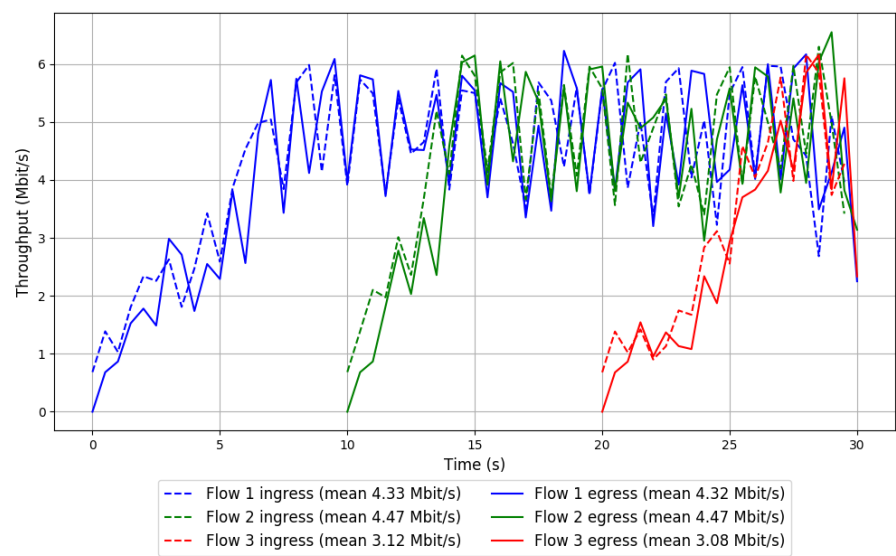
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-08-26 21:57:10
End at: 2019-08-26 21:57:40
Local clock offset: 0.208 ms
Remote clock offset: -0.177 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.29 Mbit/s
95th percentile per-packet one-way delay: 86.940 ms
Loss rate: 1.10%
-- Flow 1:
Average throughput: 4.32 Mbit/s
95th percentile per-packet one-way delay: 86.798 ms
Loss rate: 0.74%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 87.052 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 3.08 Mbit/s
95th percentile per-packet one-way delay: 86.873 ms
Loss rate: 3.16%
```
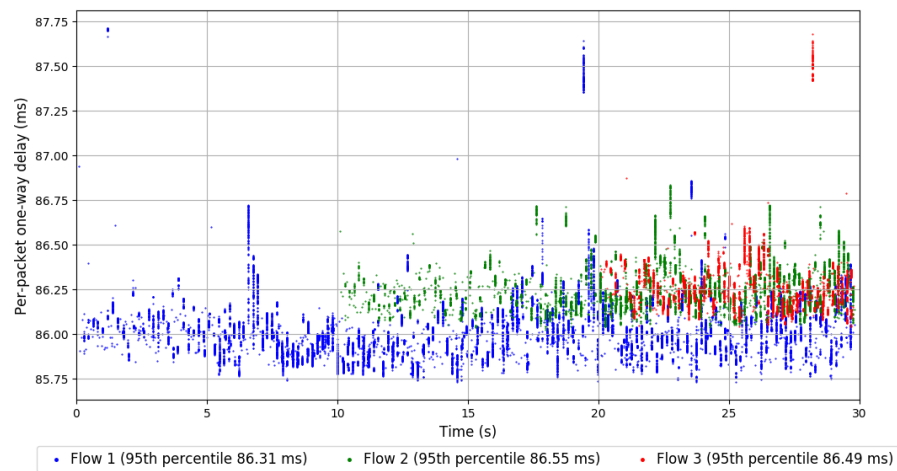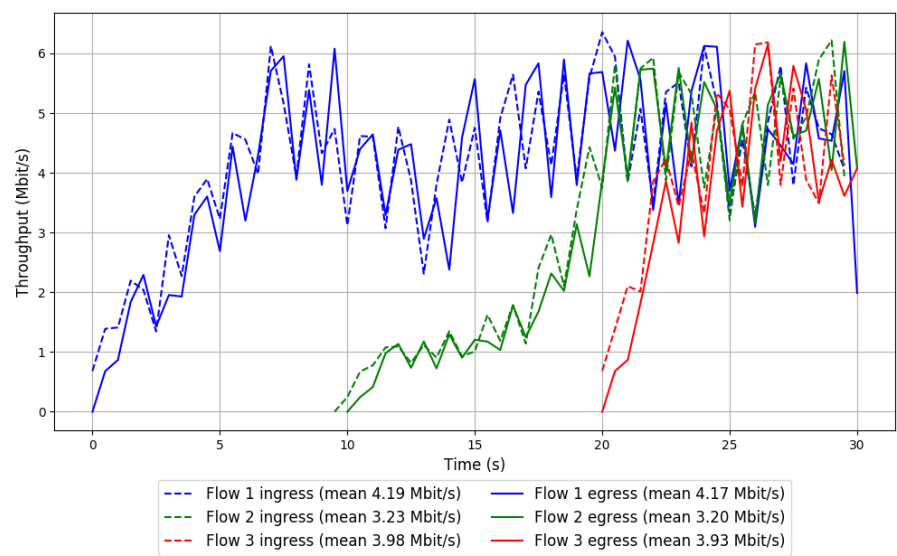
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-08-26 22:37:16
End at: 2019-08-26 22:37:46
Local clock offset: -0.272 ms
Remote clock offset: -0.058 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.58 Mbit/s
95th percentile per-packet one-way delay: 86.455 ms
Loss rate: 1.33%
-- Flow 1:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 86.310 ms
Loss rate: 0.83%
-- Flow 2:
Average throughput: 3.20 Mbit/s
95th percentile per-packet one-way delay: 86.550 ms
Loss rate: 1.51%
-- Flow 3:
Average throughput: 3.93 Mbit/s
95th percentile per-packet one-way delay: 86.492 ms
Loss rate: 2.65%
```
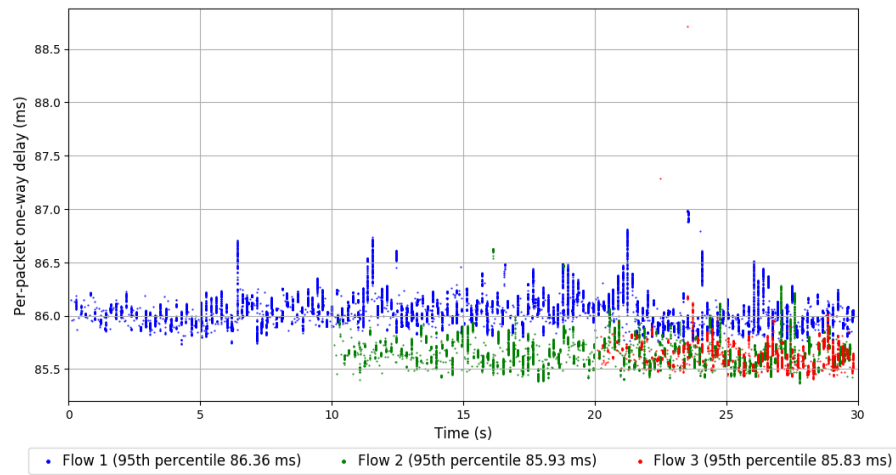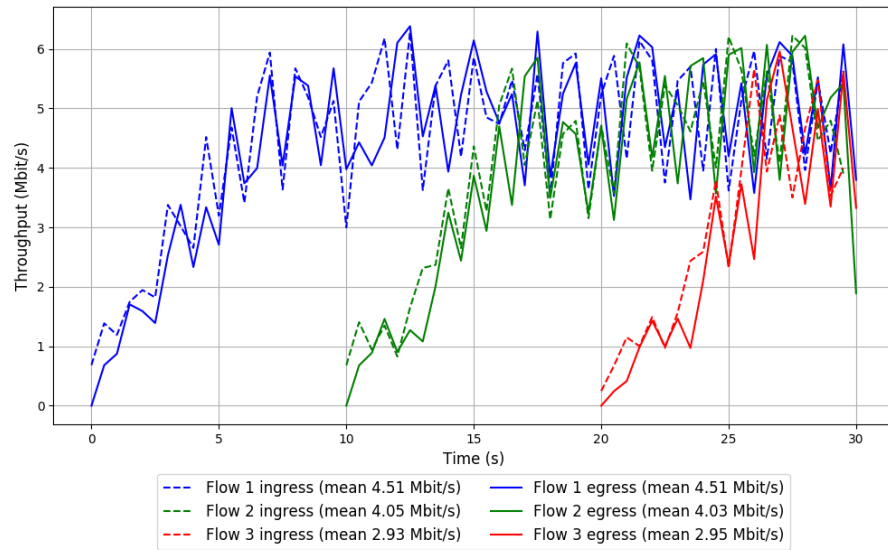
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-08-26 23:18:01
End at: 2019-08-26 23:18:31
Local clock offset: -0.492 ms
Remote clock offset: -0.069 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.14 Mbit/s
95th percentile per-packet one-way delay: 86.266 ms
Loss rate: 0.94%
-- Flow 1:
Average throughput: 4.51 Mbit/s
95th percentile per-packet one-way delay: 86.363 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 85.928 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 2.95 Mbit/s
95th percentile per-packet one-way delay: 85.826 ms
Loss rate: 1.25%
```
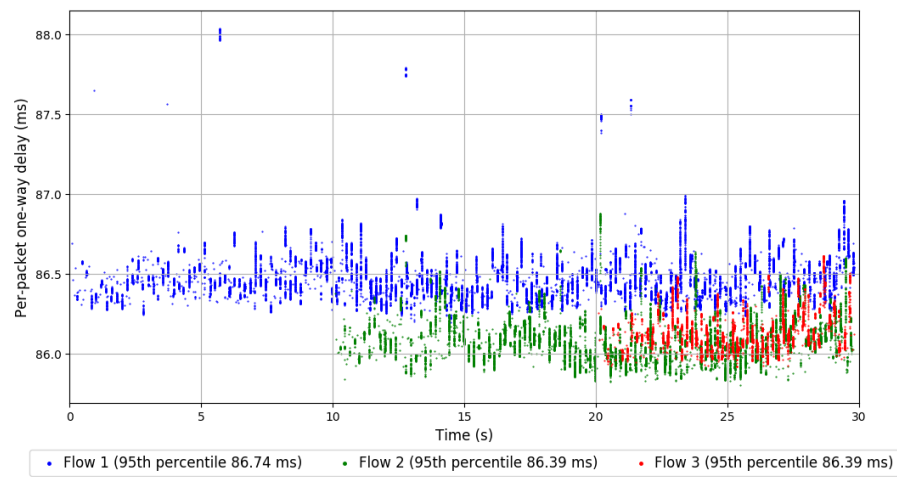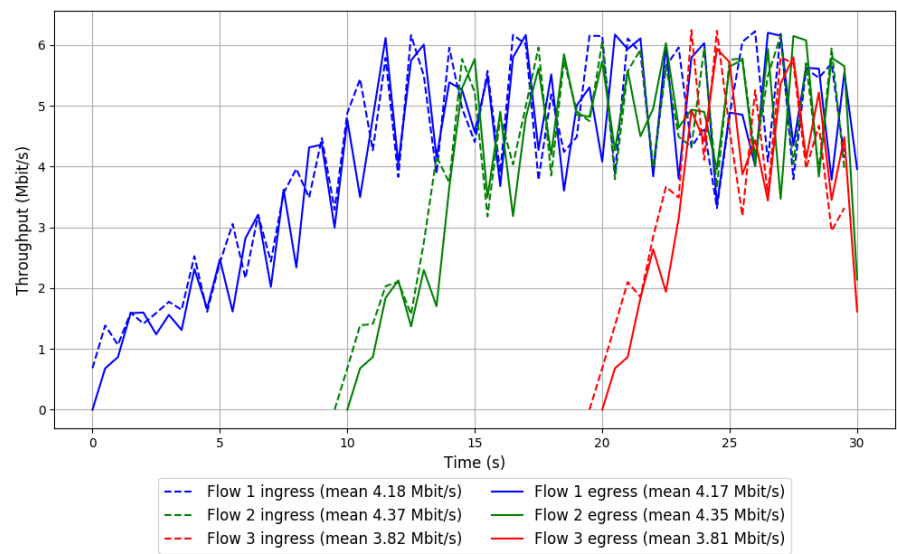
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-08-26 23:58:40
End at: 2019-08-26 23:59:10
Local clock offset: 0.05 ms
Remote clock offset: -0.064 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.30 Mbit/s
95th percentile per-packet one-way delay: 86.657 ms
Loss rate: 1.17%
-- Flow 1:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 86.741 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 86.390 ms
Loss rate: 1.22%
-- Flow 3:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 86.394 ms
Loss rate: 2.26%
```
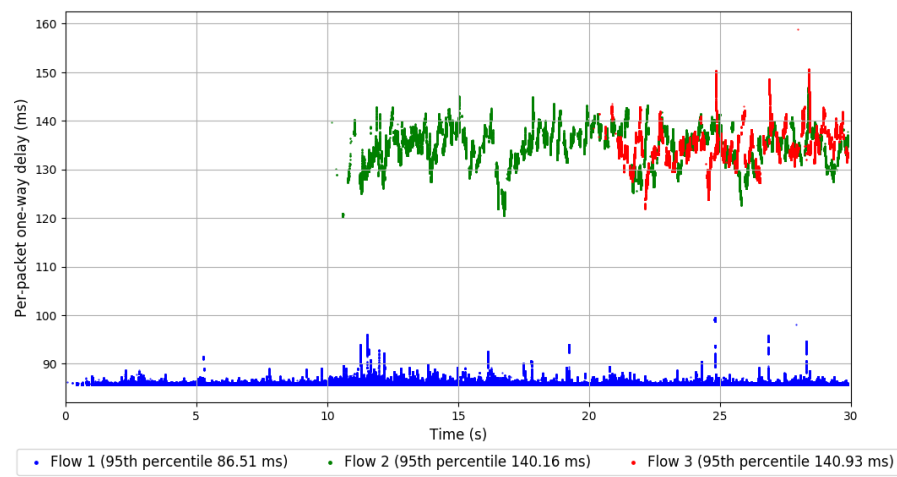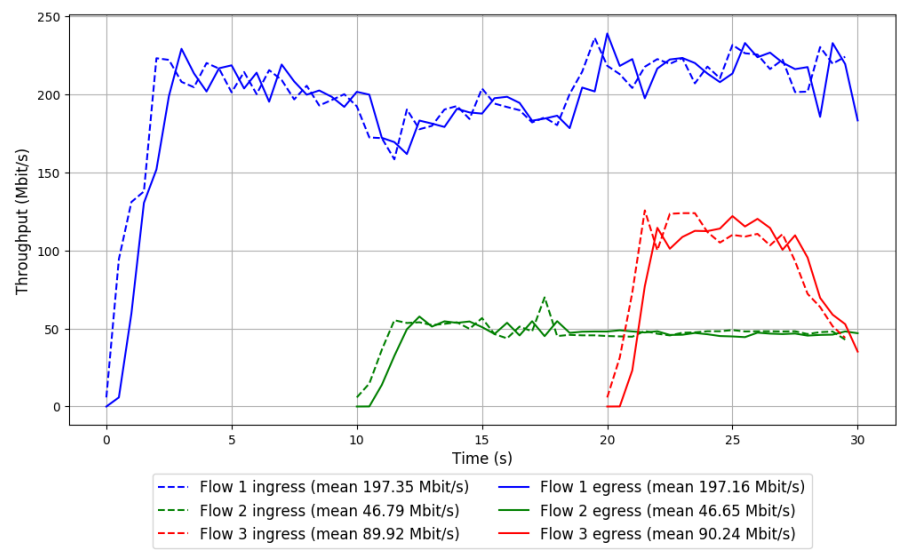
Run 5: Report of Sprout — Data Link

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

Start at: 2019-08-26 21:14:50
End at: 2019-08-26 21:15:20
Local clock offset: 0.085 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-08-27 02:39:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 257.52 Mbit/s
95th percentile per-packet one-way delay: 137.733 ms
Loss rate: 0.91%
-- Flow 1:
Average throughput: 197.16 Mbit/s
95th percentile per-packet one-way delay: 86.510 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 46.65 Mbit/s
95th percentile per-packet one-way delay: 140.157 ms
Loss rate: 1.42%
-- Flow 3:
Average throughput: 90.24 Mbit/s
95th percentile per-packet one-way delay: 140.933 ms
Loss rate: 1.91%
```

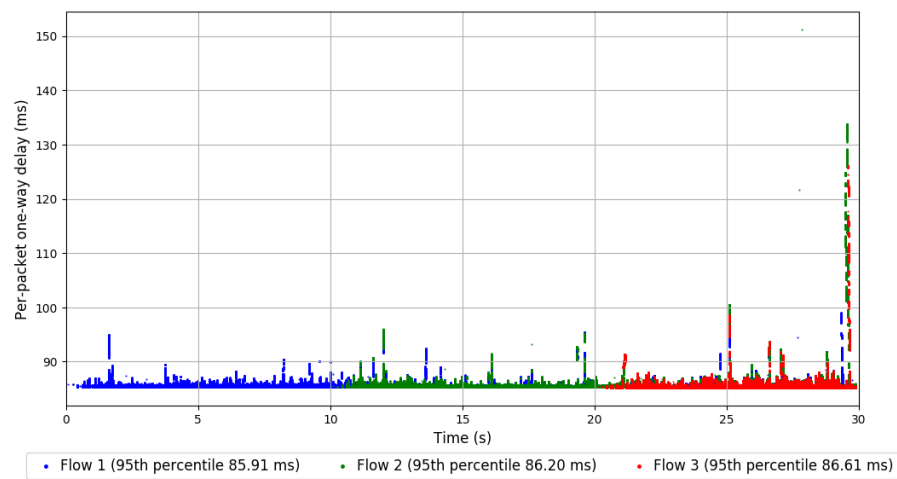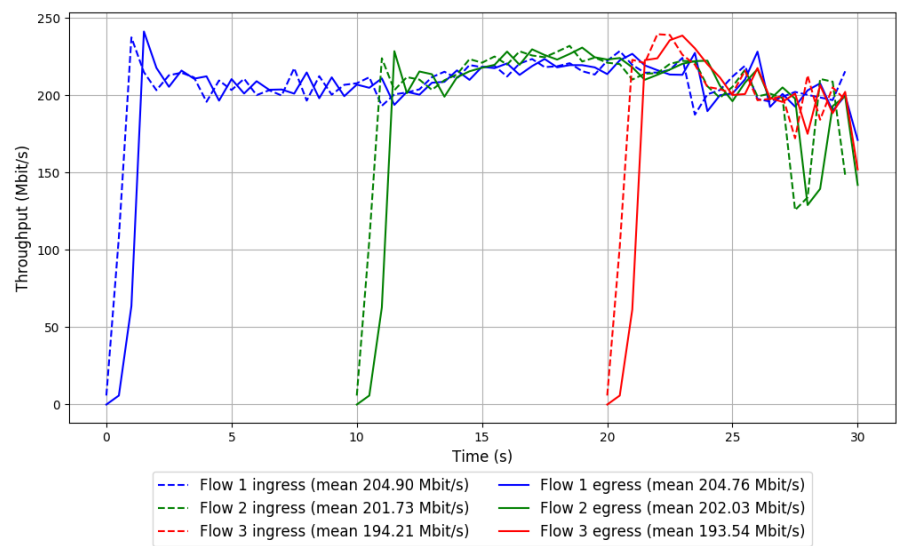Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-08-26 21:55:20
End at: 2019-08-26 21:55:50
Local clock offset: -0.51 ms
Remote clock offset: -0.196 ms


# Below is generated by plot.py at 2019-08-27 02:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 402.43 Mbit/s
95th percentile per-packet one-way delay: 86.105 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 204.76 Mbit/s
95th percentile per-packet one-way delay: 85.913 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 202.03 Mbit/s
95th percentile per-packet one-way delay: 86.203 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 193.54 Mbit/s
95th percentile per-packet one-way delay: 86.613 ms
Loss rate: 2.07%
```

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

Flow 1 ingress (mean 204.90 Mbit/s) — Flow 1 egress (mean 204.76 Mbit/s)
Flow 2 ingress (mean 201.73 Mbit/s) — Flow 2 egress (mean 202.03 Mbit/s)
Flow 3 ingress (mean 194.21 Mbit/s) — Flow 3 egress (mean 193.54 Mbit/s)

Flow 1 (95th percentile 85.91 ms) • Flow 2 (95th percentile 86.20 ms) • Flow 3 (95th percentile 86.61 ms)
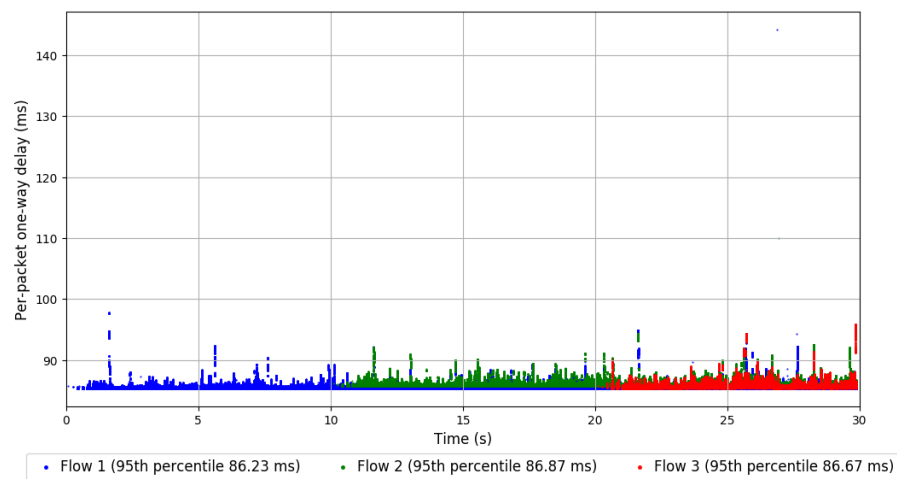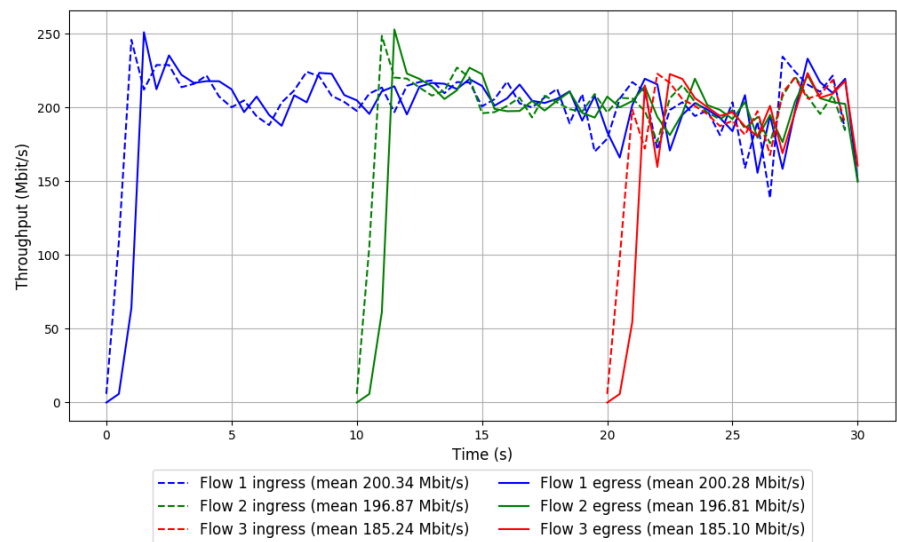
```
Run 3: Statistics of TaoVA-100x

Start at: 2019-08-26 22:35:27
End at: 2019-08-26 22:35:57
Local clock offset: -0.532 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-08-27 02:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 391.80 Mbit/s
95th percentile per-packet one-way delay: 86.577 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 200.28 Mbit/s
95th percentile per-packet one-way delay: 86.233 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 196.81 Mbit/s
95th percentile per-packet one-way delay: 86.870 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 185.10 Mbit/s
95th percentile per-packet one-way delay: 86.665 ms
Loss rate: 1.80%
```

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

Flow 1 ingress (mean 200.34 Mbit/s) --- Flow 1 egress (mean 200.28 Mbit/s)
Flow 2 ingress (mean 196.87 Mbit/s) --- Flow 2 egress (mean 196.81 Mbit/s)
Flow 3 ingress (mean 185.24 Mbit/s) --- Flow 3 egress (mean 185.10 Mbit/s)

Flow 1 (95th percentile 86.23 ms) · Flow 2 (95th percentile 86.87 ms) · Flow 3 (95th percentile 86.67 ms)
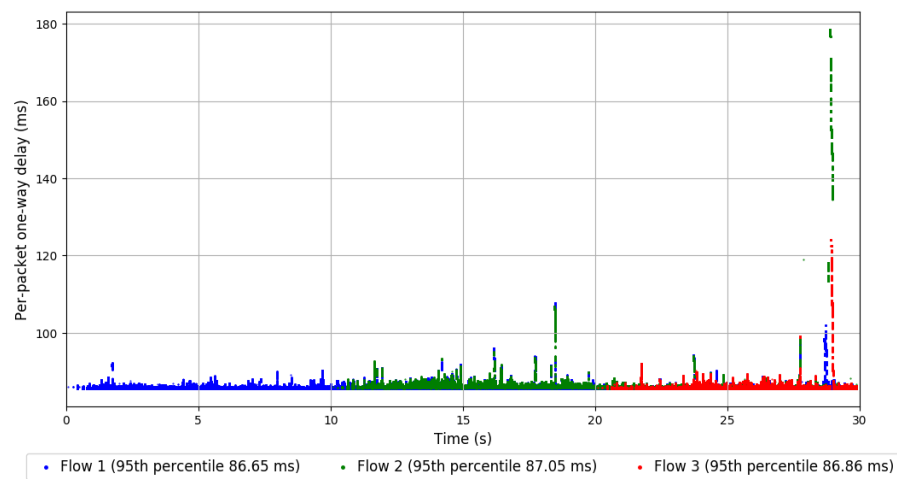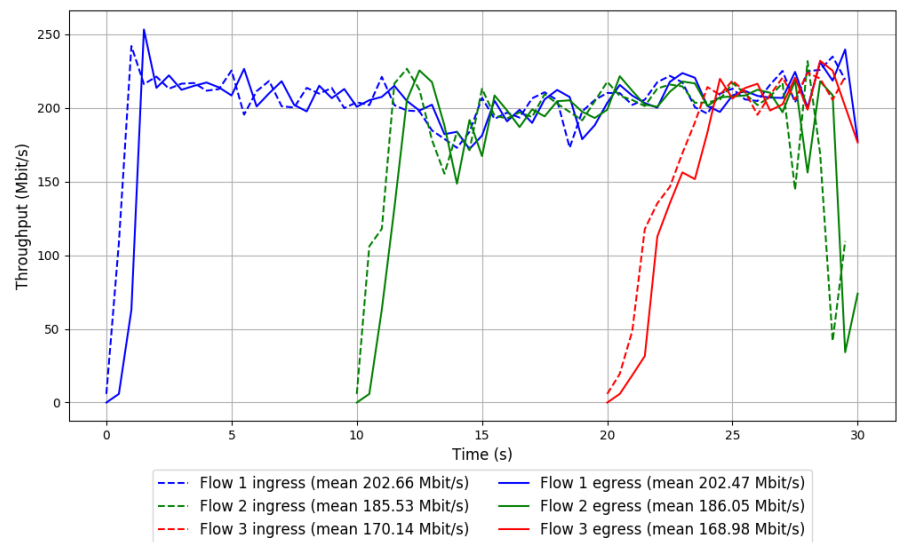
```
Run 4: Statistics of TaoVA-100x

Start at: 2019-08-26 23:16:12
End at: 2019-08-26 23:16:42
Local clock offset: -0.206 ms
Remote clock offset: -0.083 ms


# Below is generated by plot.py at 2019-08-27 02:43:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.51 Mbit/s
95th percentile per-packet one-way delay: 86.797 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 202.47 Mbit/s
95th percentile per-packet one-way delay: 86.651 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 186.05 Mbit/s
95th percentile per-packet one-way delay: 87.053 ms
Loss rate: 0.59%
-- Flow 3:
Average throughput: 168.98 Mbit/s
95th percentile per-packet one-way delay: 86.865 ms
Loss rate: 2.36%
```

Run 4: Report of TaoVA-100x — Data Link

- Flow 1 ingress (mean 202.66 Mbit/s)
- Flow 1 egress (mean 202.47 Mbit/s)
- Flow 2 ingress (mean 185.53 Mbit/s)
- Flow 2 egress (mean 186.05 Mbit/s)
- Flow 3 ingress (mean 170.14 Mbit/s)
- Flow 3 egress (mean 168.98 Mbit/s)

- Flow 1 (95th percentile 86.65 ms)
- Flow 2 (95th percentile 87.05 ms)
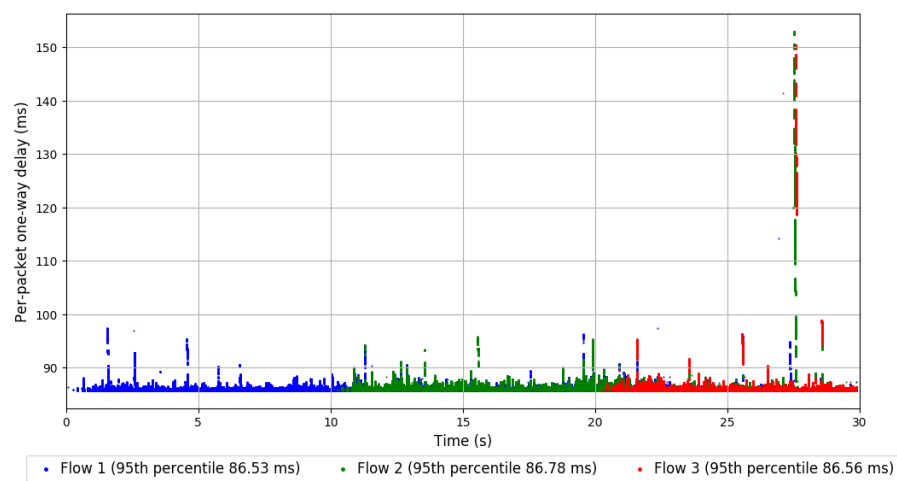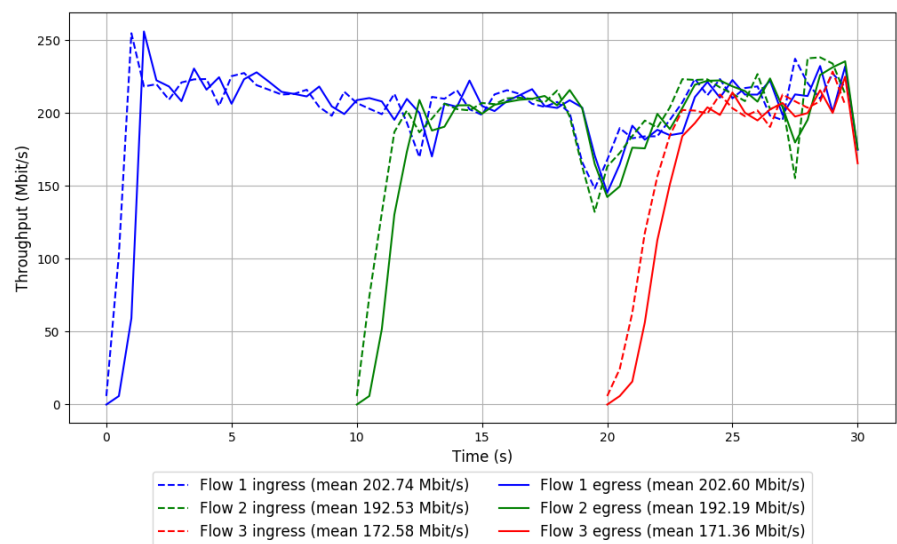- Flow 3 (95th percentile 86.86 ms)

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

Start at: 2019-08-26 23:56:50
End at: 2019-08-26 23:57:20
Local clock offset: -0.011 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2019-08-27 02:43:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.37 Mbit/s
95th percentile per-packet one-way delay: 86.624 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 202.60 Mbit/s
95th percentile per-packet one-way delay: 86.535 ms
Loss rate: 0.65%
-- Flow 2:
Average throughput: 192.19 Mbit/s
95th percentile per-packet one-way delay: 86.775 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 171.36 Mbit/s
95th percentile per-packet one-way delay: 86.557 ms
Loss rate: 2.46%
```

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

Flow 1 ingress (mean 202.74 Mbit/s) --- Flow 1 egress (mean 202.60 Mbit/s)
Flow 2 ingress (mean 192.53 Mbit/s) --- Flow 2 egress (mean 192.19 Mbit/s)
Flow 3 ingress (mean 172.58 Mbit/s) --- Flow 3 egress (mean 171.36 Mbit/s)

Flow 1 (95th percentile 86.53 ms)   Flow 2 (95th percentile 86.78 ms)   Flow 3 (95th percentile 86.56 ms)
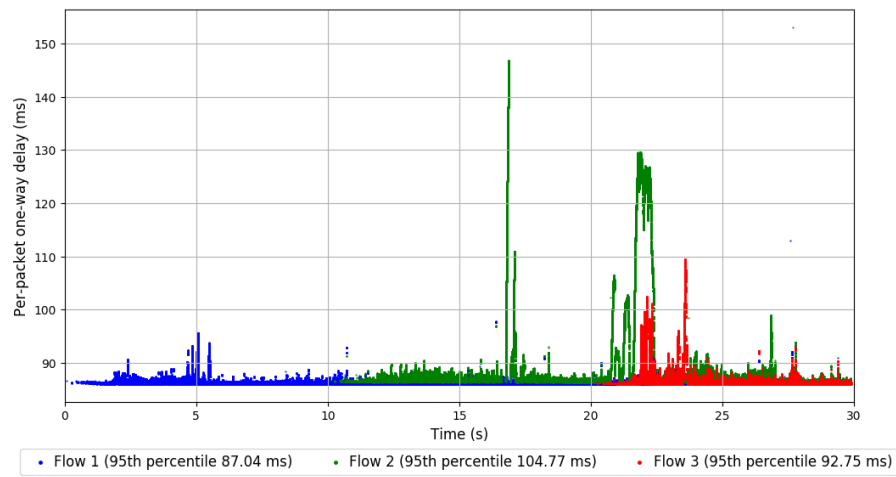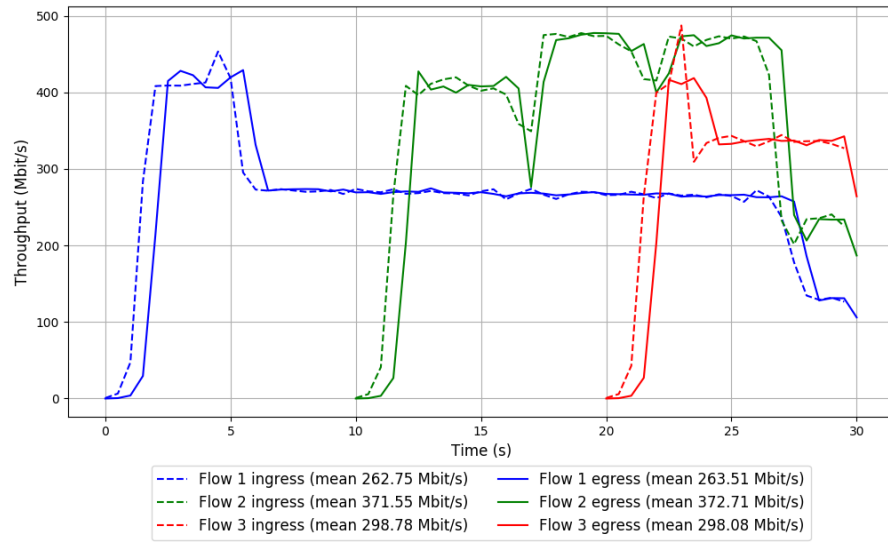
```
Run 1: Statistics of TCP Vegas

Start at: 2019-08-26 21:21:19
End at: 2019-08-26 21:21:49
Local clock offset: 0.48 ms
Remote clock offset: -0.067 ms


# Below is generated by plot.py at 2019-08-27 02:43:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 608.80 Mbit/s
95th percentile per-packet one-way delay: 91.421 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 263.51 Mbit/s
95th percentile per-packet one-way delay: 87.043 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 372.71 Mbit/s
95th percentile per-packet one-way delay: 104.768 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 298.08 Mbit/s
95th percentile per-packet one-way delay: 92.750 ms
Loss rate: 1.96%
```

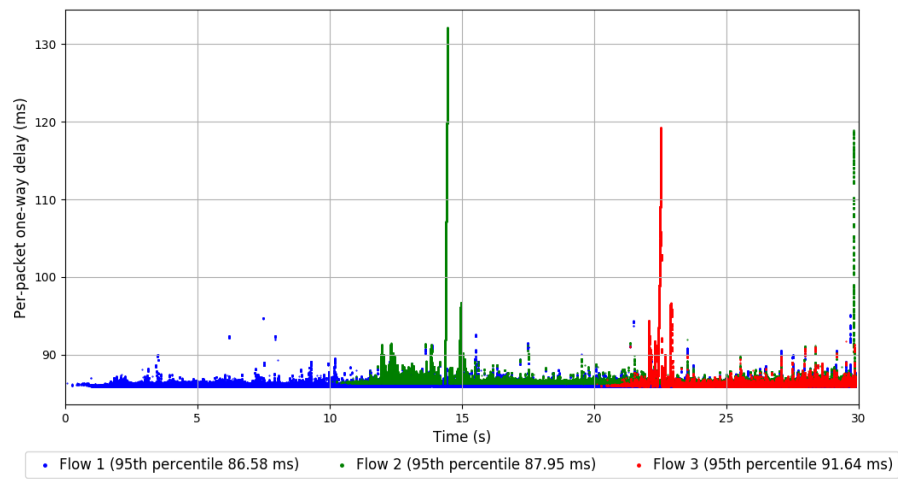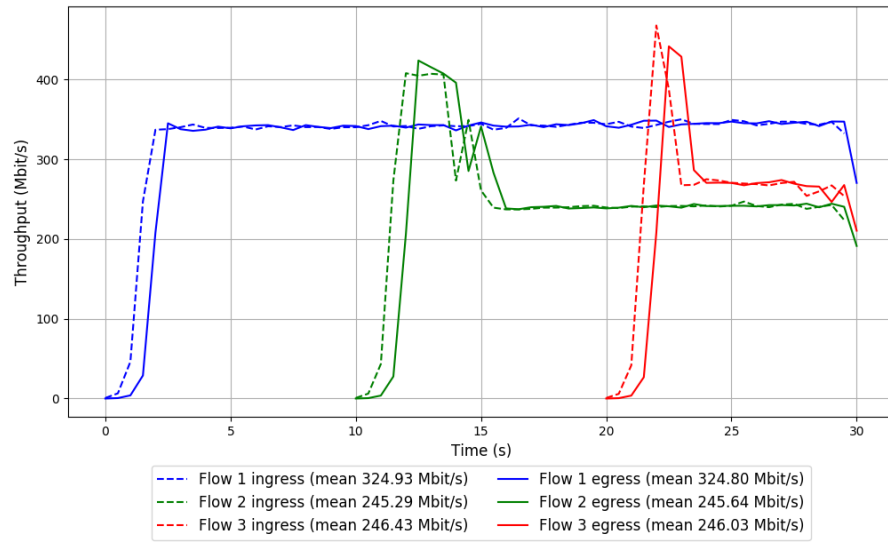Run 1: Report of TCP Vegas — Data Link

```
Run 2: Statistics of TCP Vegas

Start at: 2019-08-26 22:01:52
End at: 2019-08-26 22:02:22
Local clock offset: 0.101 ms
Remote clock offset: -0.207 ms


# Below is generated by plot.py at 2019-08-27 02:45:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 568.72 Mbit/s
95th percentile per-packet one-way delay: 87.184 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 324.80 Mbit/s
95th percentile per-packet one-way delay: 86.576 ms
Loss rate: 0.61%
-- Flow 2:
Average throughput: 245.64 Mbit/s
95th percentile per-packet one-way delay: 87.949 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 246.03 Mbit/s
95th percentile per-packet one-way delay: 91.636 ms
Loss rate: 1.89%
```
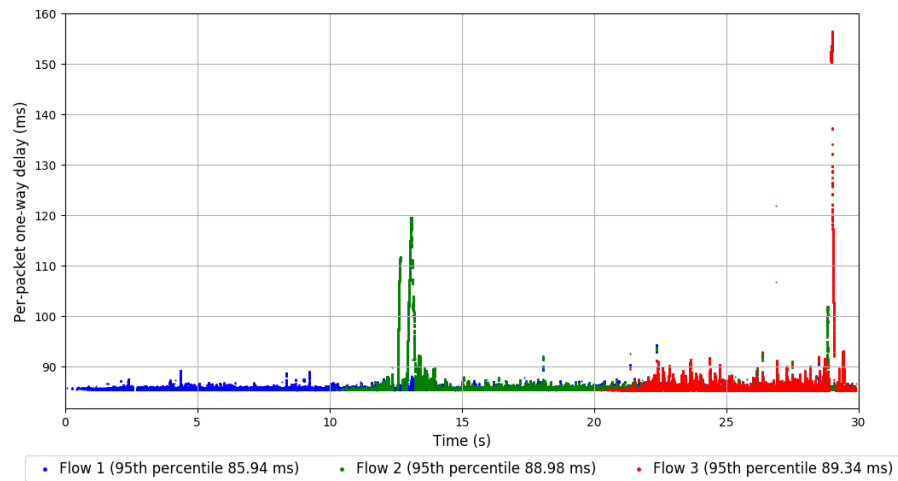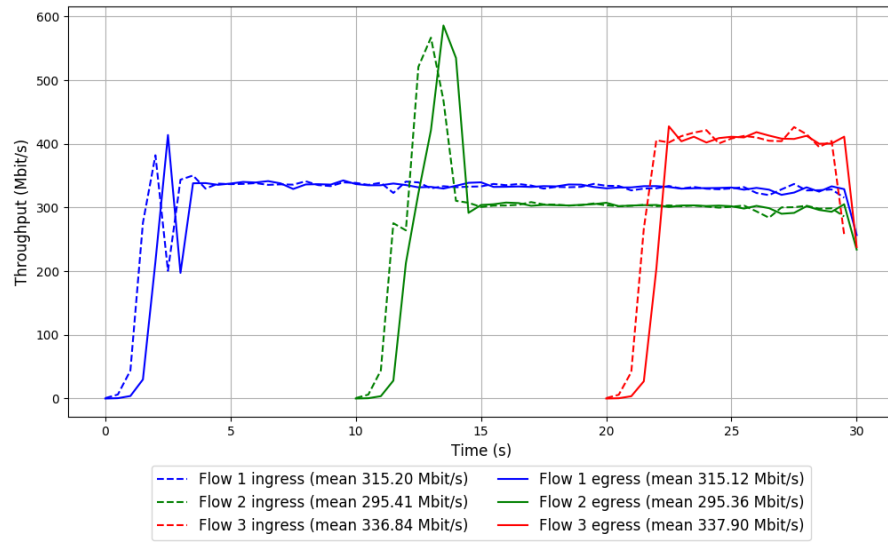
Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-08-26 22:42:01
End at: 2019-08-26 22:42:31
Local clock offset: -0.5 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-08-27 02:48:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 622.27 Mbit/s
95th percentile per-packet one-way delay: 87.228 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 315.12 Mbit/s
95th percentile per-packet one-way delay: 85.939 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 295.36 Mbit/s
95th percentile per-packet one-way delay: 88.980 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 337.90 Mbit/s
95th percentile per-packet one-way delay: 89.337 ms
Loss rate: 1.40%
```

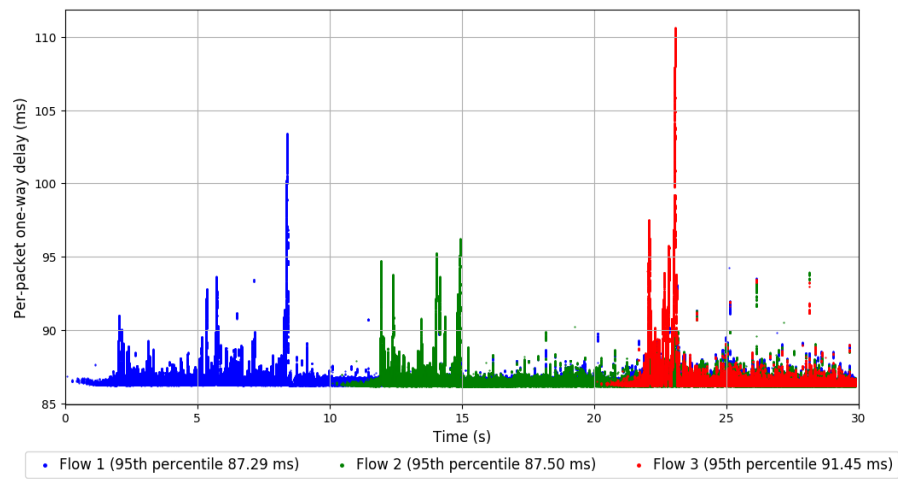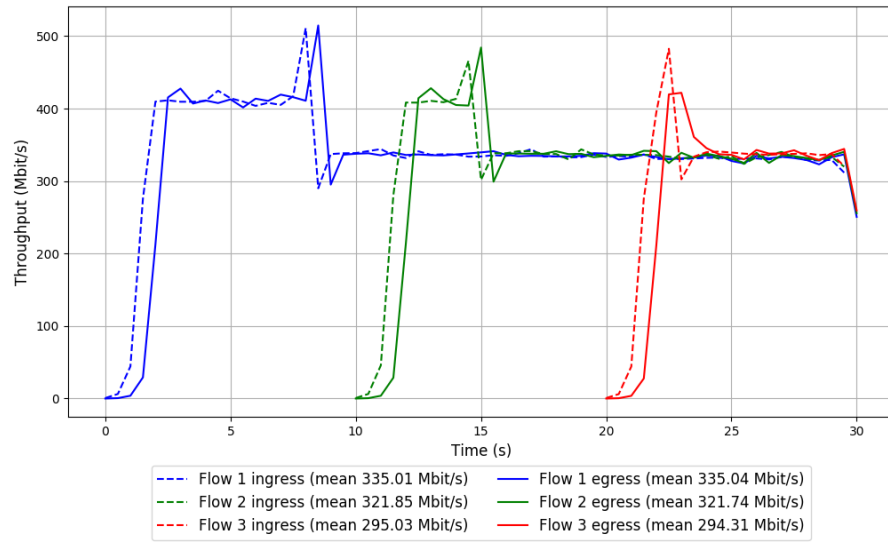# Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-08-26 23:22:48
End at: 2019-08-26 23:23:18
Local clock offset: 0.363 ms
Remote clock offset: -0.043 ms


# Below is generated by plot.py at 2019-08-27 02:49:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 645.41 Mbit/s
95th percentile per-packet one-way delay: 87.697 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 335.04 Mbit/s
95th percentile per-packet one-way delay: 87.292 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 321.74 Mbit/s
95th percentile per-packet one-way delay: 87.505 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 294.31 Mbit/s
95th percentile per-packet one-way delay: 91.449 ms
Loss rate: 1.98%
```

Run 4: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 335.01 Mbit/s) --- Flow 1 egress (mean 335.04 Mbit/s)
Flow 2 ingress (mean 321.85 Mbit/s) --- Flow 2 egress (mean 321.74 Mbit/s)
Flow 3 ingress (mean 295.03 Mbit/s) --- Flow 3 egress (mean 294.31 Mbit/s)

Flow 1 (95th percentile 87.29 ms)   Flow 2 (95th percentile 87.50 ms)   Flow 3 (95th percentile 91.45 ms)
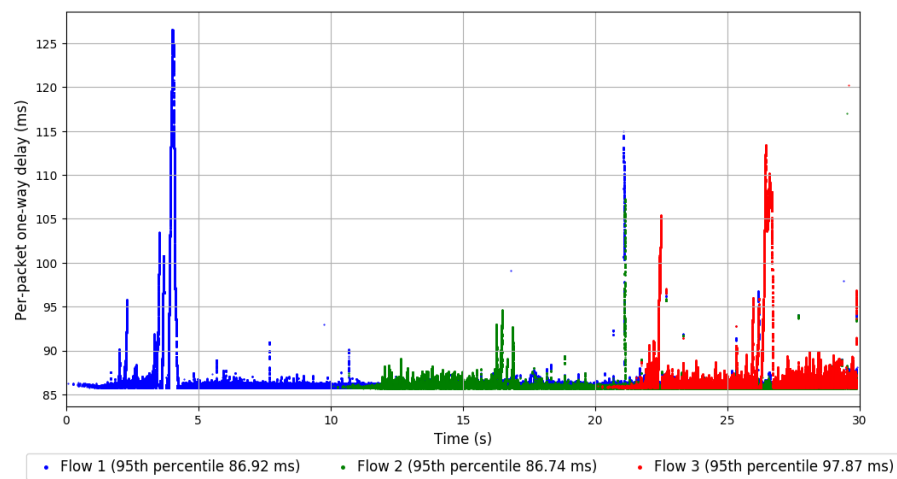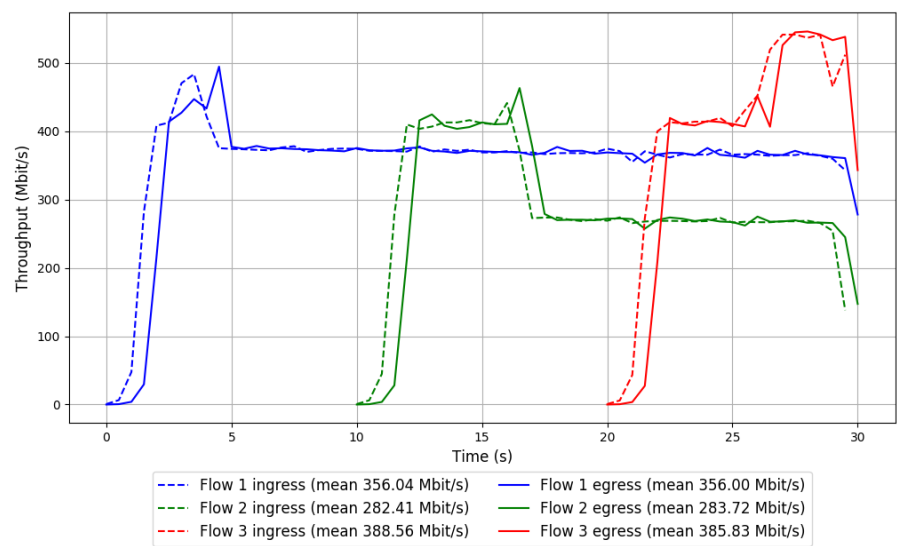
212

```
Run 5: Statistics of TCP Vegas

Start at: 2019-08-27 00:03:25
End at: 2019-08-27 00:03:55
Local clock offset: -0.034 ms
Remote clock offset: -0.087 ms


# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 671.12 Mbit/s
95th percentile per-packet one-way delay: 88.147 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 356.00 Mbit/s
95th percentile per-packet one-way delay: 86.920 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 283.72 Mbit/s
95th percentile per-packet one-way delay: 86.739 ms
Loss rate: 0.40%
-- Flow 3:
Average throughput: 385.83 Mbit/s
95th percentile per-packet one-way delay: 97.866 ms
Loss rate: 2.42%
```

Run 5: Report of TCP Vegas — Data Link

Flow 1 ingress (mean 356.04 Mbit/s) — — — Flow 1 egress (mean 356.00 Mbit/s)
Flow 2 ingress (mean 282.41 Mbit/s) — — — Flow 2 egress (mean 283.72 Mbit/s)
Flow 3 ingress (mean 388.56 Mbit/s) — — — Flow 3 egress (mean 385.83 Mbit/s)

Flow 1 (95th percentile 86.92 ms)   Flow 2 (95th percentile 86.74 ms)   Flow 3 (95th percentile 97.87 ms)
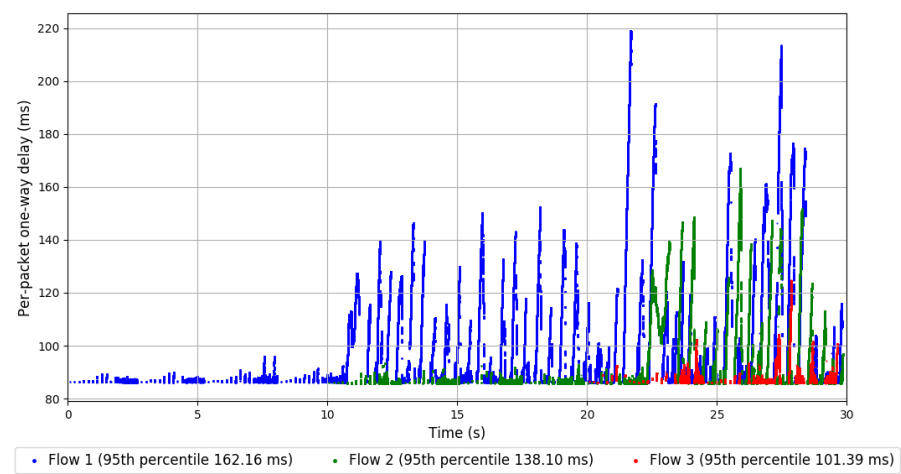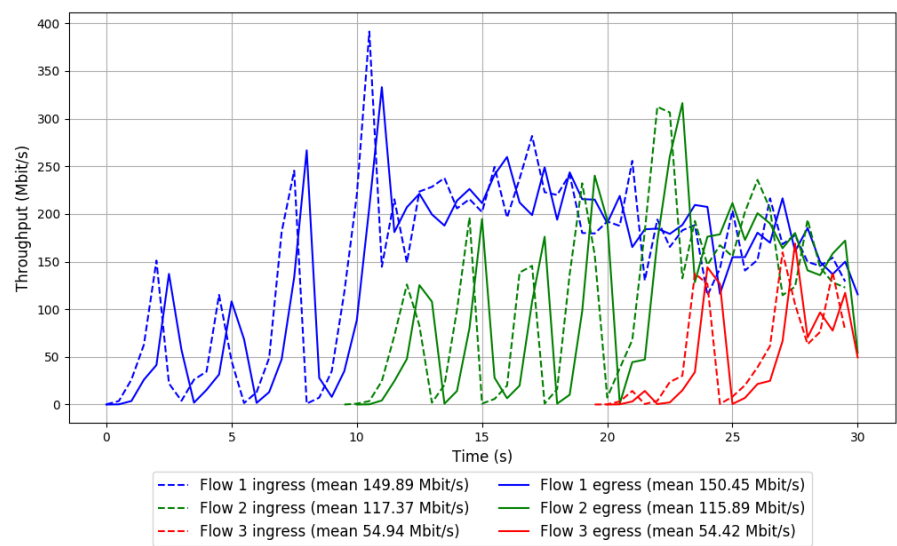
```
Run 1: Statistics of Verus

Start at: 2019-08-26 21:40:44
End at: 2019-08-26 21:41:14
Local clock offset: 0.066 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 244.85 Mbit/s
95th percentile per-packet one-way delay: 148.022 ms
Loss rate: 1.02%
-- Flow 1:
Average throughput: 150.45 Mbit/s
95th percentile per-packet one-way delay: 162.164 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 115.89 Mbit/s
95th percentile per-packet one-way delay: 138.100 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 54.42 Mbit/s
95th percentile per-packet one-way delay: 101.390 ms
Loss rate: 4.56%
```

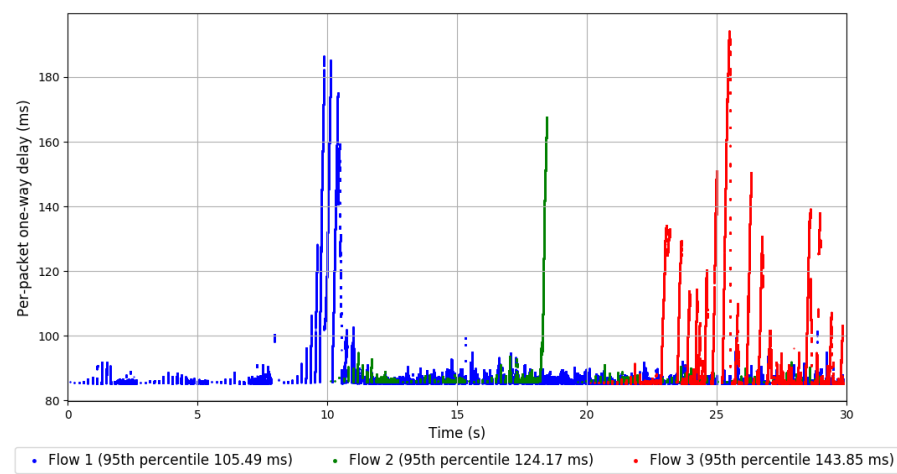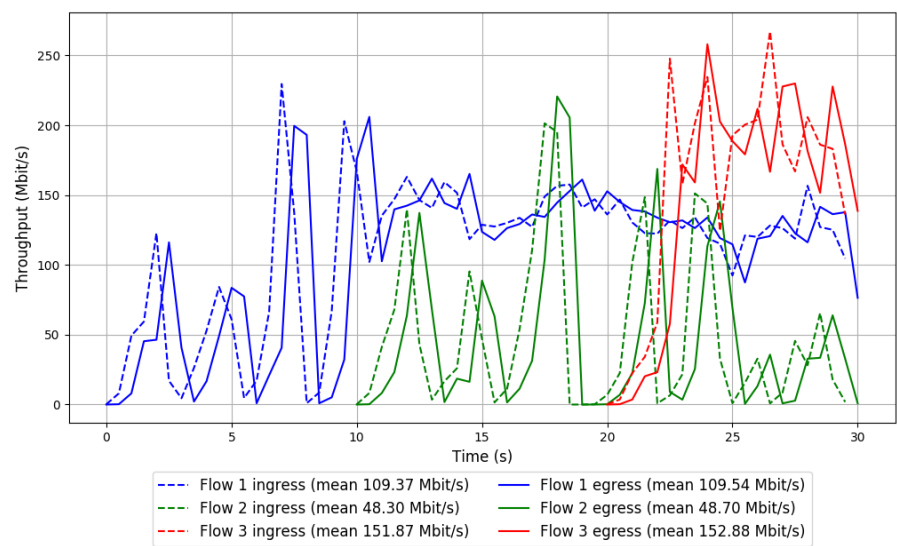Run 1: Report of Verus — Data Link

```
Run 2: Statistics of Verus

Start at: 2019-08-26 22:20:50
End at: 2019-08-26 22:21:20
Local clock offset: -0.653 ms
Remote clock offset: -0.116 ms


# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 191.82 Mbit/s
95th percentile per-packet one-way delay: 132.803 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 109.54 Mbit/s
95th percentile per-packet one-way delay: 105.494 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 48.70 Mbit/s
95th percentile per-packet one-way delay: 124.170 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 152.88 Mbit/s
95th percentile per-packet one-way delay: 143.848 ms
Loss rate: 0.92%
```

Run 2: Report of Verus — Data Link

Flow 1 ingress (mean 109.37 Mbit/s) --- Flow 1 egress (mean 109.54 Mbit/s)
Flow 2 ingress (mean 48.30 Mbit/s) --- Flow 2 egress (mean 48.70 Mbit/s)
Flow 3 ingress (mean 151.87 Mbit/s) --- Flow 3 egress (mean 152.88 Mbit/s)

Flow 1 (95th percentile 105.49 ms)   Flow 2 (95th percentile 124.17 ms)   Flow 3 (95th percentile 143.85 ms)
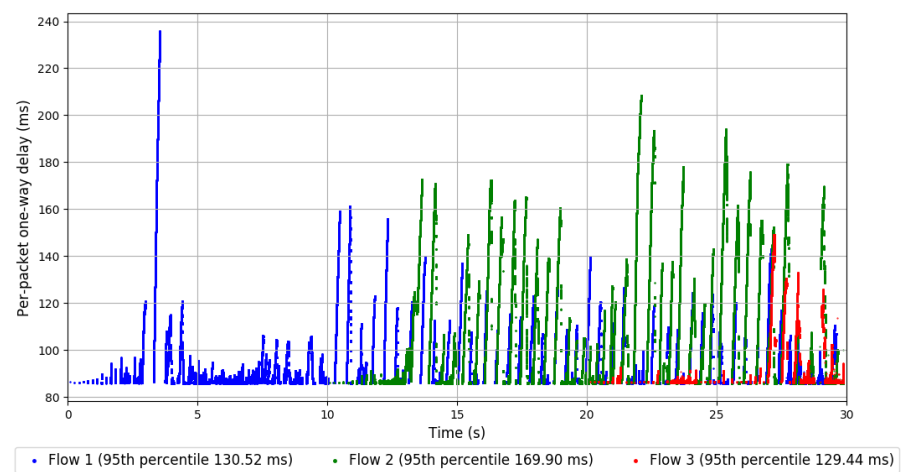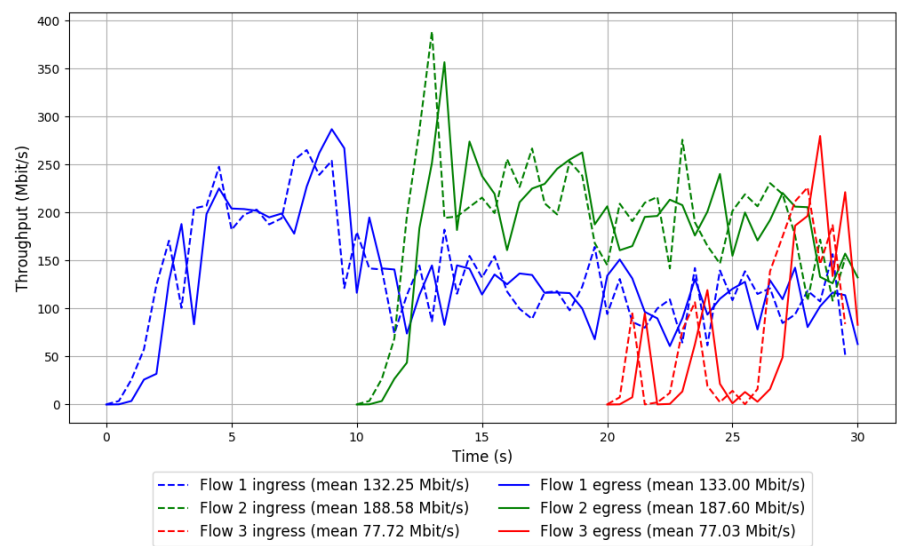
```
Run 3: Statistics of Verus

Start at: 2019-08-26 23:01:11
End at: 2019-08-26 23:01:41
Local clock offset: 0.018 ms
Remote clock offset: -0.101 ms


# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 281.56 Mbit/s
95th percentile per-packet one-way delay: 157.905 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 133.00 Mbit/s
95th percentile per-packet one-way delay: 130.524 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 187.60 Mbit/s
95th percentile per-packet one-way delay: 169.903 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 77.03 Mbit/s
95th percentile per-packet one-way delay: 129.442 ms
Loss rate: 1.24%
```

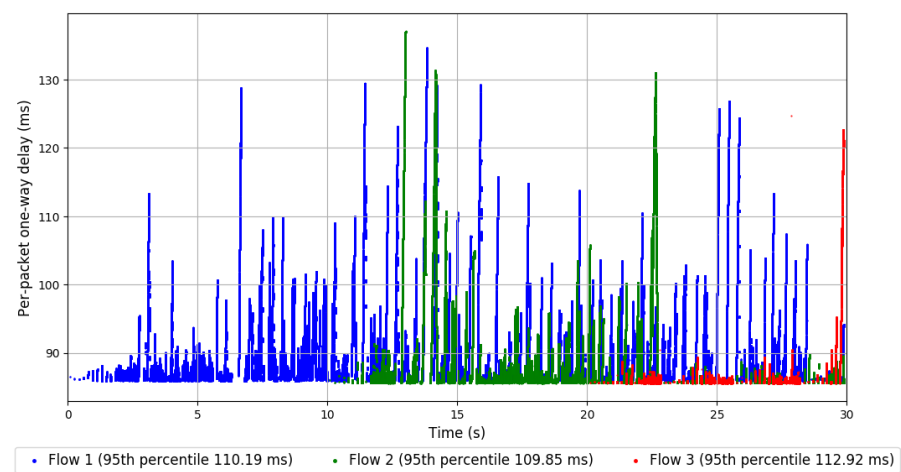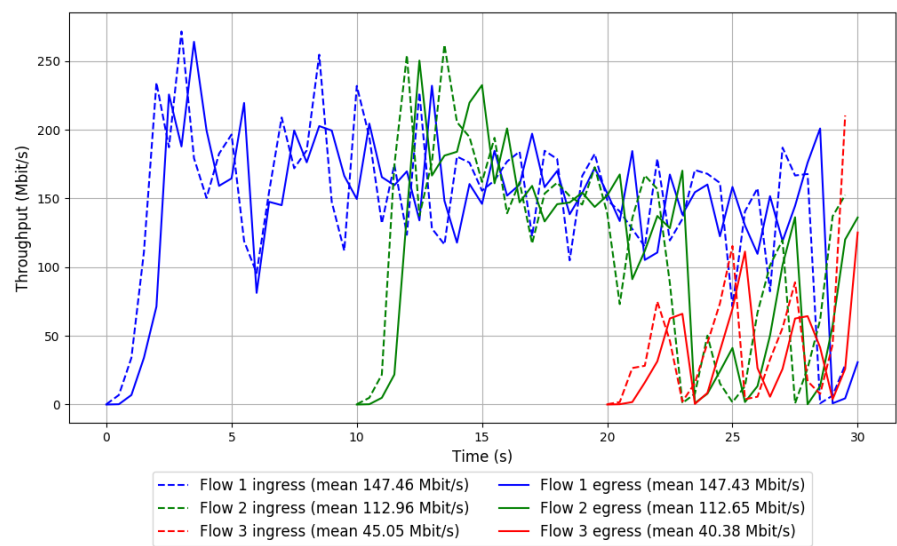# Run 3: Report of Verus — Data Link

```
Run 4: Statistics of Verus

Start at: 2019-08-26 23:41:52
End at: 2019-08-26 23:42:22
Local clock offset: -0.252 ms
Remote clock offset: 0.023 ms


# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 235.43 Mbit/s
95th percentile per-packet one-way delay: 110.163 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 147.43 Mbit/s
95th percentile per-packet one-way delay: 110.187 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 112.65 Mbit/s
95th percentile per-packet one-way delay: 109.849 ms
Loss rate: 1.13%
-- Flow 3:
Average throughput: 40.38 Mbit/s
95th percentile per-packet one-way delay: 112.924 ms
Loss rate: 11.94%
```

Run 4: Report of Verus — Data Link

Flow 1 ingress (mean 147.46 Mbit/s)　　Flow 1 egress (mean 147.43 Mbit/s)
Flow 2 ingress (mean 112.96 Mbit/s)　　Flow 2 egress (mean 112.65 Mbit/s)
Flow 3 ingress (mean 45.05 Mbit/s)　　Flow 3 egress (mean 40.38 Mbit/s)

Flow 1 (95th percentile 110.19 ms)　　Flow 2 (95th percentile 109.85 ms)　　Flow 3 (95th percentile 112.92 ms)
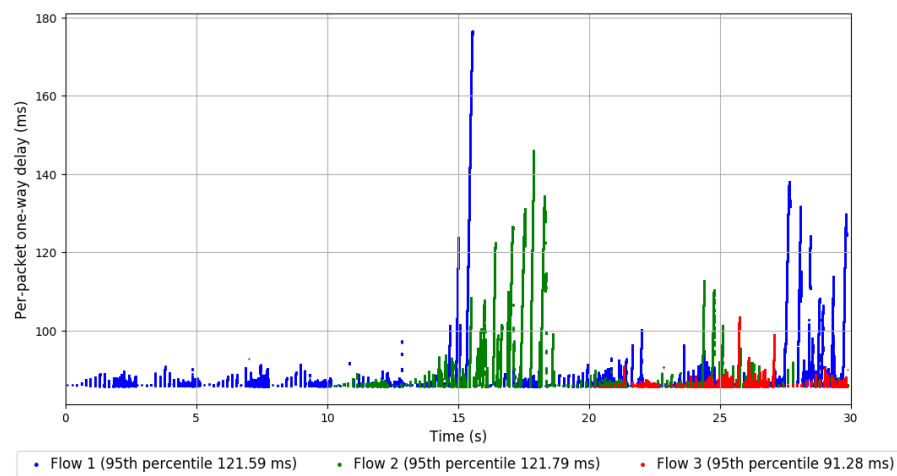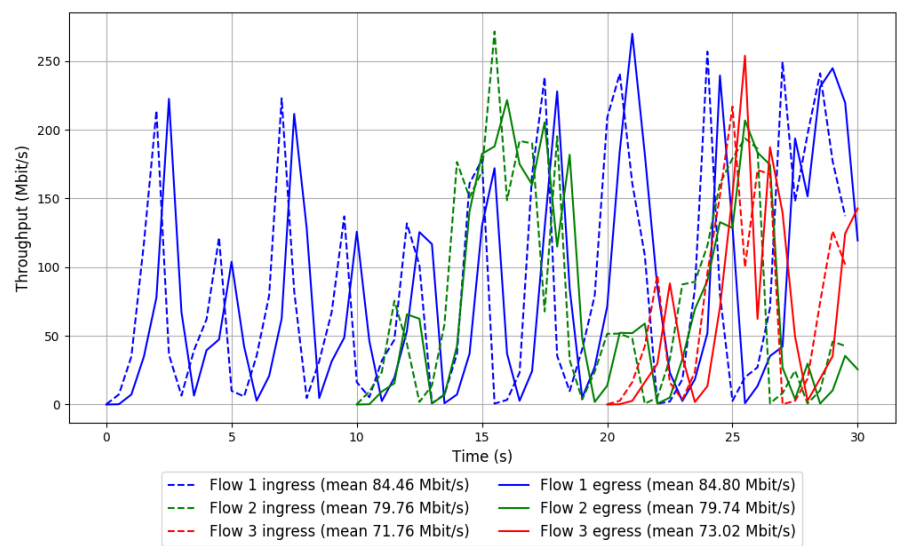
```
Run 5: Statistics of Verus

Start at: 2019-08-27 00:22:38
End at: 2019-08-27 00:23:08
Local clock offset: -0.012 ms
Remote clock offset: -0.123 ms


# Below is generated by plot.py at 2019-08-27 02:51:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 161.53 Mbit/s
95th percentile per-packet one-way delay: 117.867 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 84.80 Mbit/s
95th percentile per-packet one-way delay: 121.586 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 79.74 Mbit/s
95th percentile per-packet one-way delay: 121.788 ms
Loss rate: 0.86%
-- Flow 3:
Average throughput: 73.02 Mbit/s
95th percentile per-packet one-way delay: 91.276 ms
Loss rate: 0.00%
```

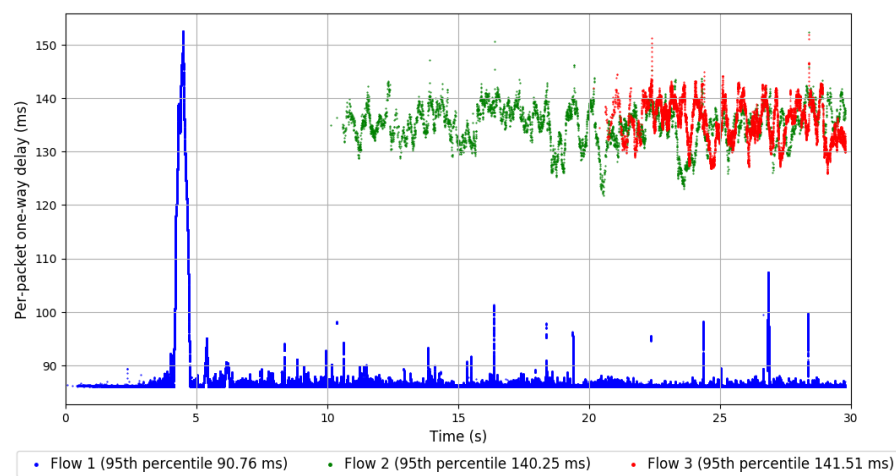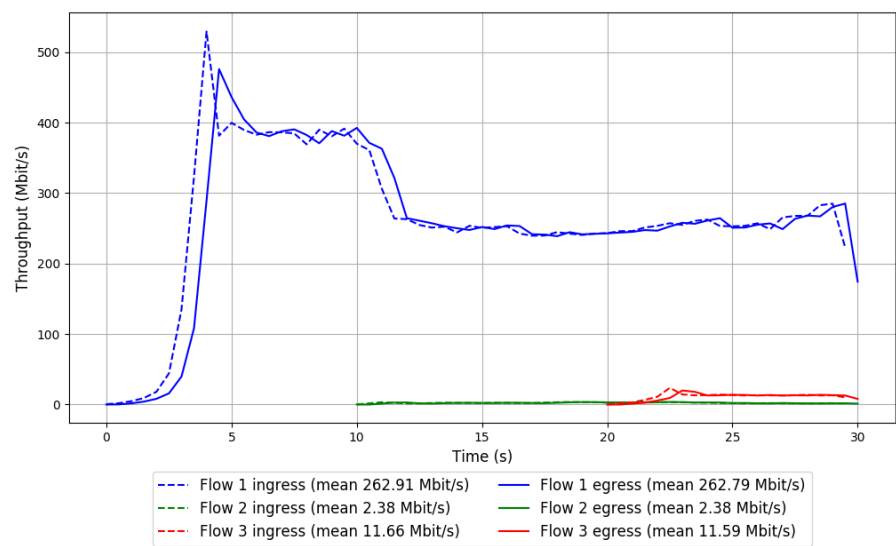## Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-08-26 21:33:30
End at: 2019-08-26 21:34:00
Local clock offset: 0.486 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-08-27 02:52:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 268.12 Mbit/s
95th percentile per-packet one-way delay: 116.743 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 262.79 Mbit/s
95th percentile per-packet one-way delay: 90.763 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 2.38 Mbit/s
95th percentile per-packet one-way delay: 140.248 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 11.59 Mbit/s
95th percentile per-packet one-way delay: 141.506 ms
Loss rate: 2.93%
```

Run 1: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 262.91 Mbit/s)   Flow 1 egress (mean 262.79 Mbit/s)
Flow 2 ingress (mean 2.38 Mbit/s)   Flow 2 egress (mean 2.38 Mbit/s)
Flow 3 ingress (mean 11.66 Mbit/s)   Flow 3 egress (mean 11.59 Mbit/s)

Flow 1 (95th percentile 90.76 ms)   Flow 2 (95th percentile 140.25 ms)   Flow 3 (95th percentile 141.51 ms)
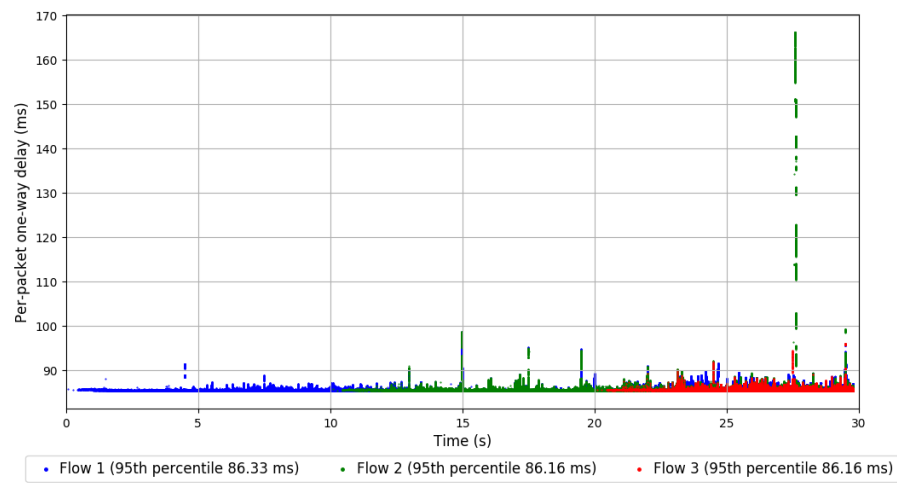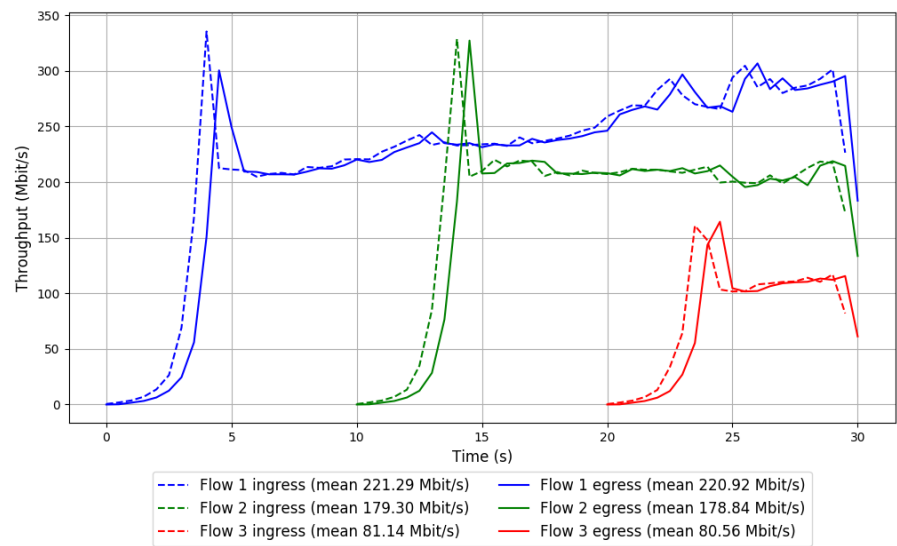
```
Run 2: Statistics of PCC-Vivace

Start at: 2019-08-26 22:13:53
End at: 2019-08-26 22:14:23
Local clock offset: -0.422 ms
Remote clock offset: -0.094 ms


# Below is generated by plot.py at 2019-08-27 02:52:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 365.77 Mbit/s
95th percentile per-packet one-way delay: 86.261 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 220.92 Mbit/s
95th percentile per-packet one-way delay: 86.335 ms
Loss rate: 0.75%
-- Flow 2:
Average throughput: 178.84 Mbit/s
95th percentile per-packet one-way delay: 86.164 ms
Loss rate: 1.12%
-- Flow 3:
Average throughput: 80.56 Mbit/s
95th percentile per-packet one-way delay: 86.157 ms
Loss rate: 2.52%
```

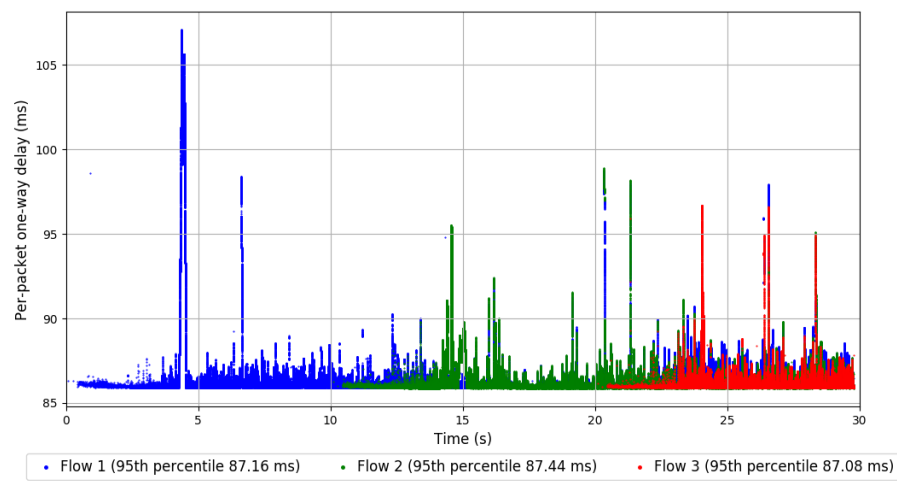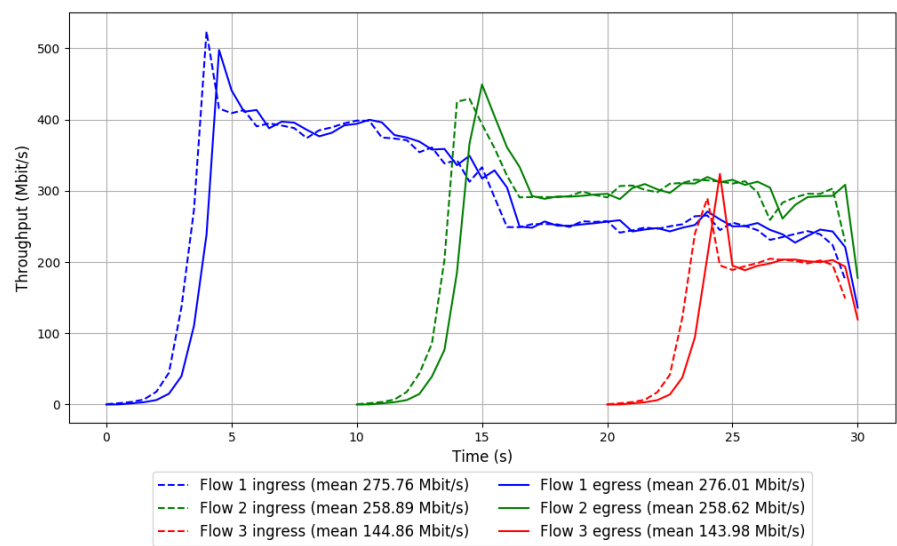# Run 2: Report of PCC-Vivace — Data Link

```
Run 3: Statistics of PCC-Vivace

Start at: 2019-08-26 22:54:00
End at: 2019-08-26 22:54:30
Local clock offset: -0.009 ms
Remote clock offset: -0.078 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 494.36 Mbit/s
95th percentile per-packet one-way delay: 87.227 ms
Loss rate: 0.83%
-- Flow 1:
Average throughput: 276.01 Mbit/s
95th percentile per-packet one-way delay: 87.162 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 258.62 Mbit/s
95th percentile per-packet one-way delay: 87.440 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 143.98 Mbit/s
95th percentile per-packet one-way delay: 87.083 ms
Loss rate: 2.30%
```

Run 3: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 275.76 Mbit/s) --- Flow 1 egress (mean 276.01 Mbit/s)
Flow 2 ingress (mean 258.89 Mbit/s) --- Flow 2 egress (mean 258.62 Mbit/s)
Flow 3 ingress (mean 144.86 Mbit/s) --- Flow 3 egress (mean 143.98 Mbit/s)

Flow 1 (95th percentile 87.16 ms)   Flow 2 (95th percentile 87.44 ms)   Flow 3 (95th percentile 87.08 ms)

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-08-26 23:34:52
End at: 2019-08-26 23:35:22
Local clock offset: 0.095 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.41 Mbit/s
95th percentile per-packet one-way delay: 87.375 ms
Loss rate: 1.25%
-- Flow 1:
Average throughput: 179.48 Mbit/s
95th percentile per-packet one-way delay: 86.955 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 202.82 Mbit/s
95th percentile per-packet one-way delay: 86.863 ms
Loss rate: 1.35%
-- Flow 3:
Average throughput: 151.60 Mbit/s
95th percentile per-packet one-way delay: 95.850 ms
Loss rate: 2.26%
```
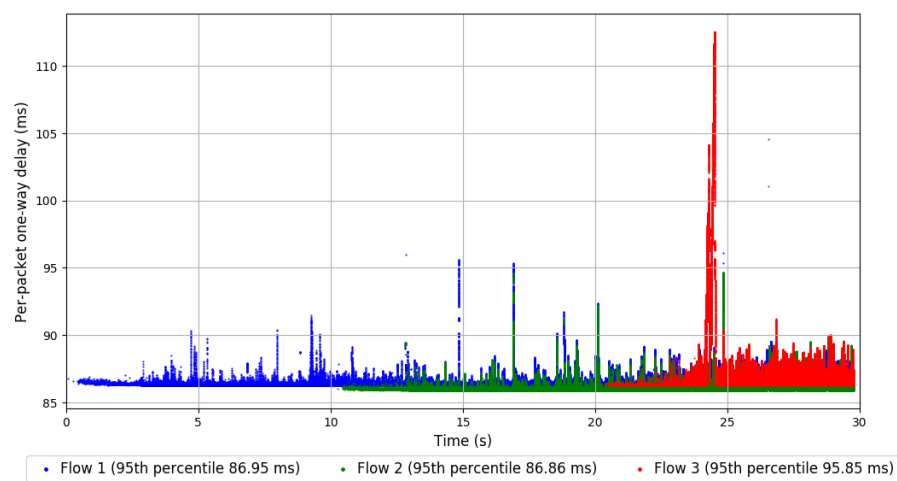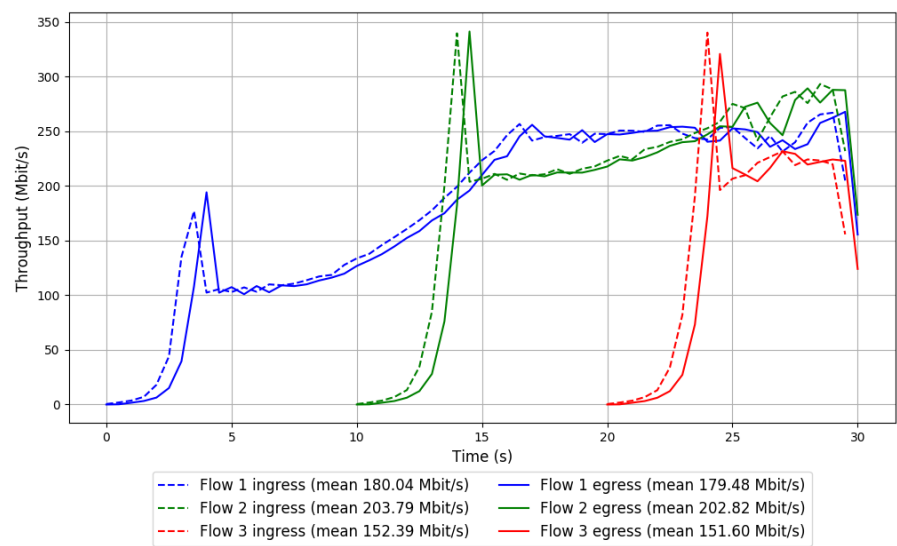
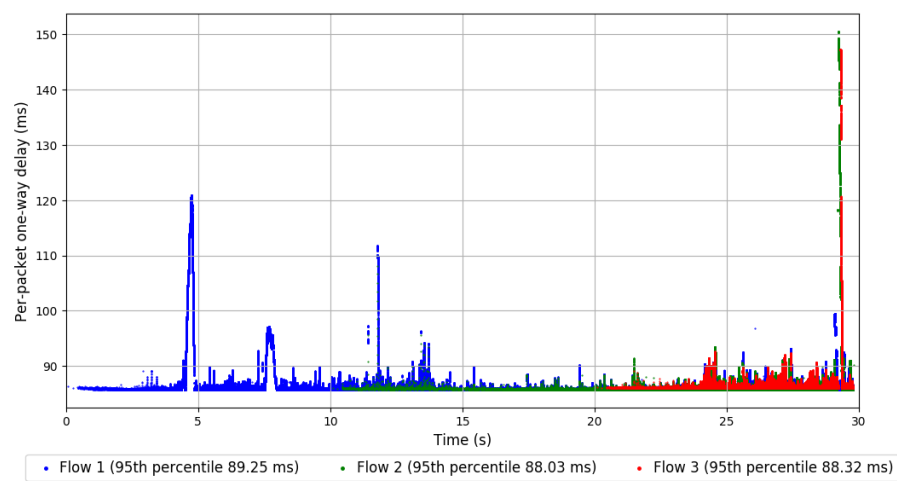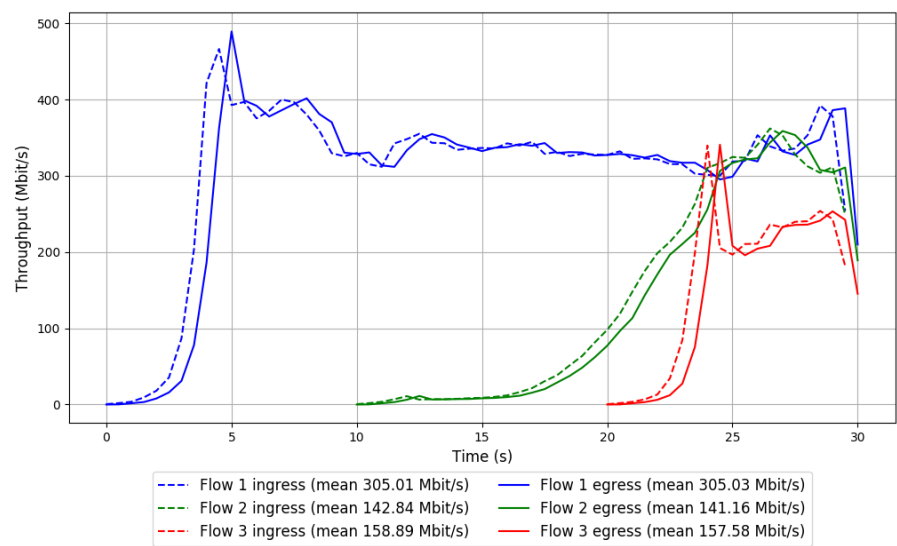Run 4: Report of PCC-Vivace — Data Link

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-08-27 00:15:33
End at: 2019-08-27 00:16:03
Local clock offset: -0.047 ms
Remote clock offset: -0.111 ms

# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 449.97 Mbit/s
95th percentile per-packet one-way delay: 88.778 ms
Loss rate: 1.11%
-- Flow 1:
Average throughput: 305.03 Mbit/s
95th percentile per-packet one-way delay: 89.253 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 141.16 Mbit/s
95th percentile per-packet one-way delay: 88.032 ms
Loss rate: 2.01%
-- Flow 3:
Average throughput: 157.58 Mbit/s
95th percentile per-packet one-way delay: 88.319 ms
Loss rate: 2.57%
```
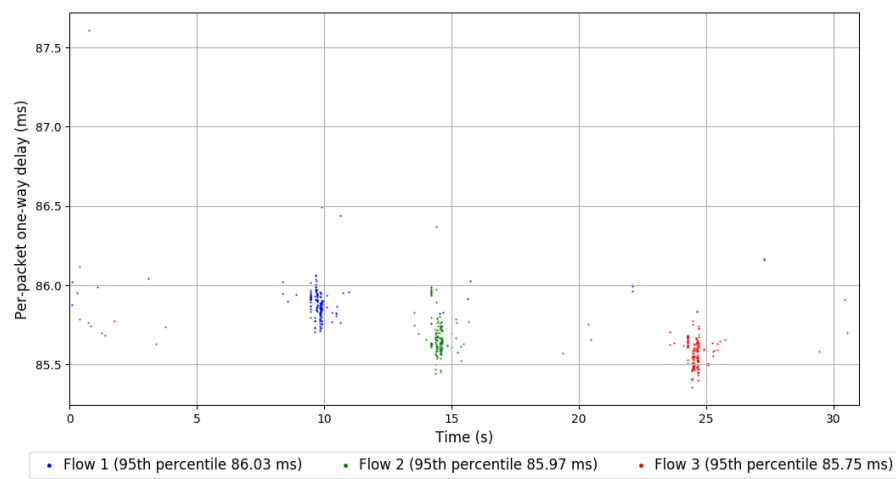
Run 5: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 305.01 Mbit/s) --- Flow 1 egress (mean 305.03 Mbit/s)
Flow 2 ingress (mean 142.84 Mbit/s) --- Flow 2 egress (mean 141.16 Mbit/s)
Flow 3 ingress (mean 158.89 Mbit/s) --- Flow 3 egress (mean 157.58 Mbit/s)

Flow 1 (95th percentile 89.25 ms)   Flow 2 (95th percentile 88.03 ms)   Flow 3 (95th percentile 88.32 ms)
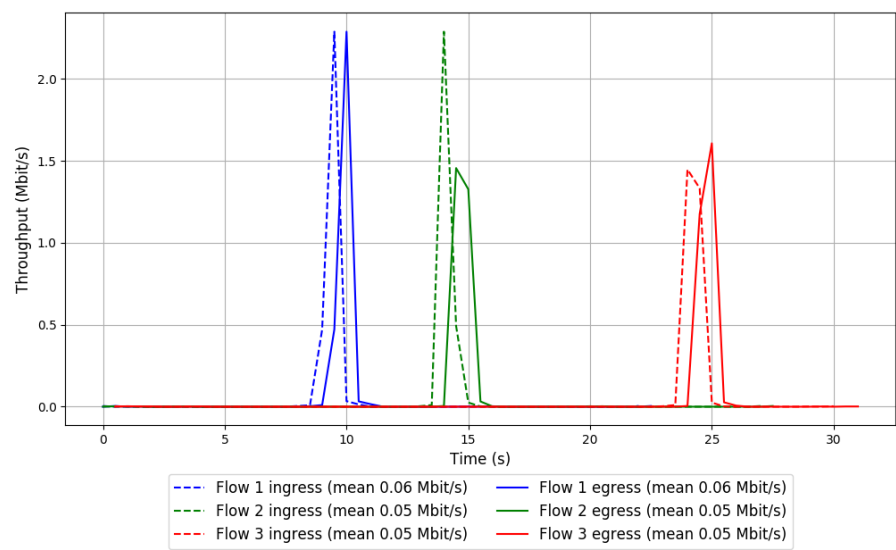
```
Run 1: Statistics of WebRTC media

Start at: 2019-08-26 21:44:16
End at: 2019-08-26 21:44:46
Local clock offset: -0.343 ms
Remote clock offset: -0.122 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 85.990 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.06 Mbit/s
95th percentile per-packet one-way delay: 86.025 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.971 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.751 ms
Loss rate: 0.00%
```

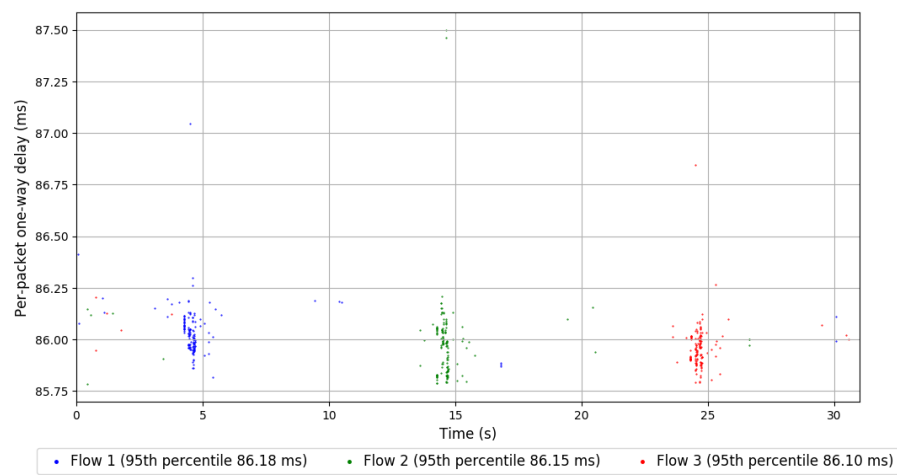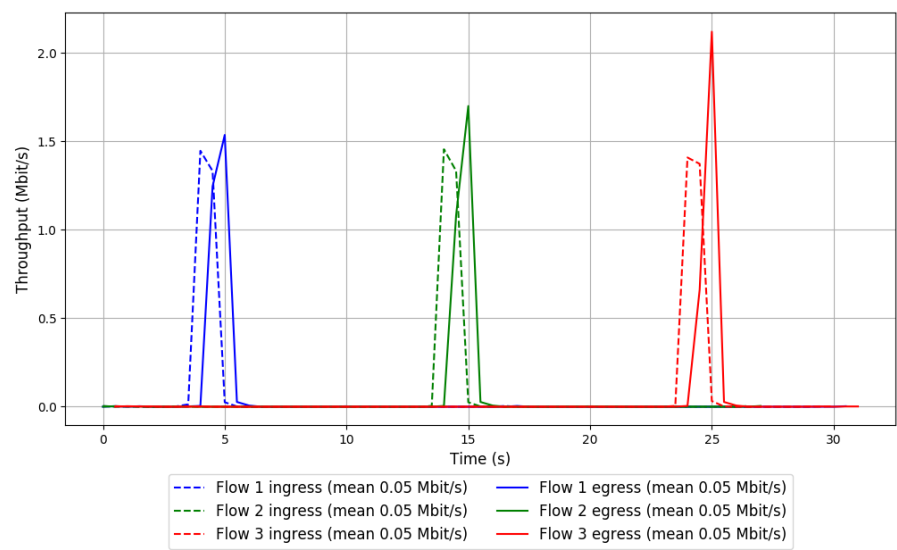Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-08-26 22:24:17
End at: 2019-08-26 22:24:47
Local clock offset: -0.135 ms
Remote clock offset: -0.056 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 86.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.184 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.150 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.096 ms
Loss rate: 0.00%
```

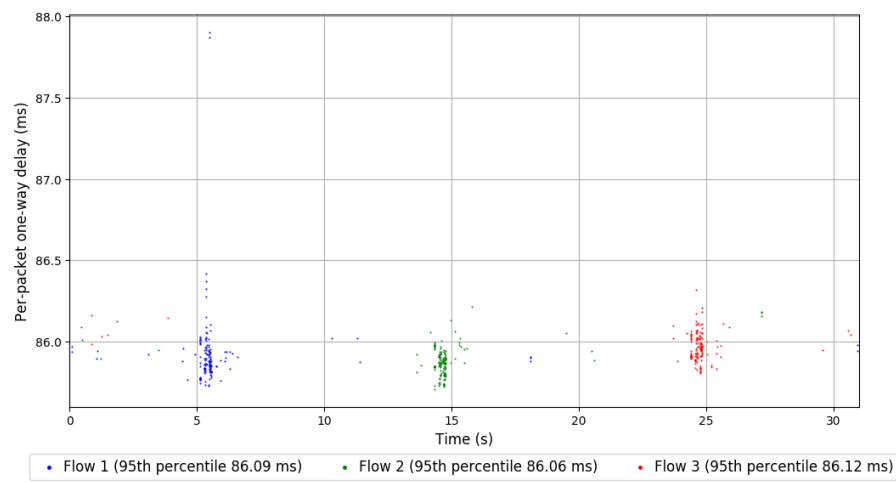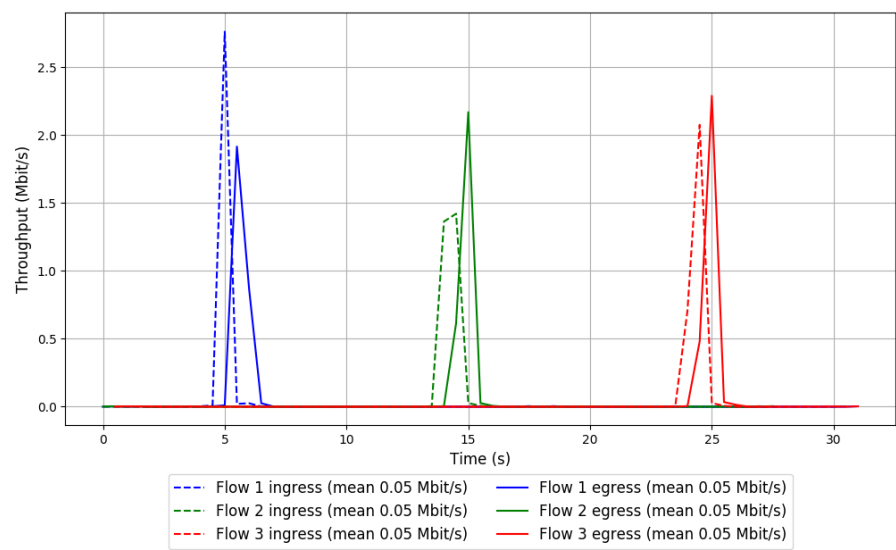Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-08-26 23:04:45
End at: 2019-08-26 23:05:15
Local clock offset: -0.128 ms
Remote clock offset: -0.093 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 86.109 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.092 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.058 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.125 ms
Loss rate: 0.00%
```

Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-08-26 23:45:23
End at: 2019-08-26 23:45:53
Local clock offset: -0.48 ms
Remote clock offset: 0.026 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 85.780 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.792 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.793 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.738 ms
Loss rate: 0.00%
```
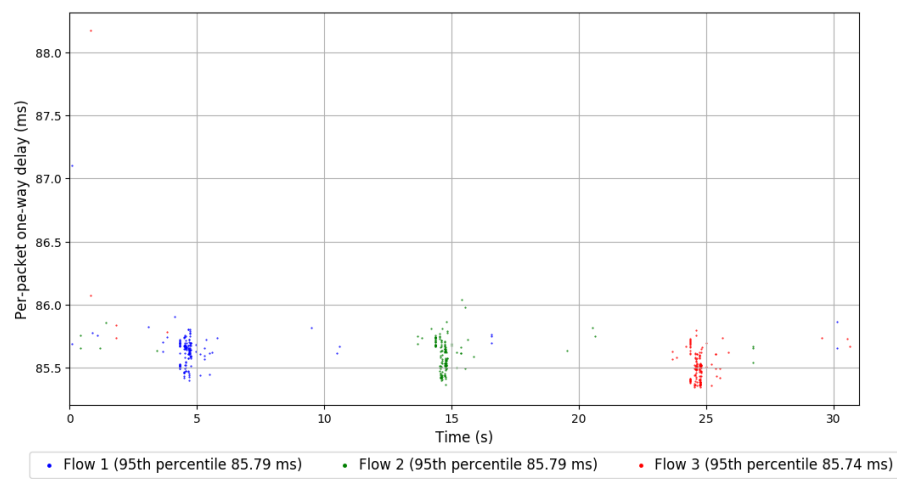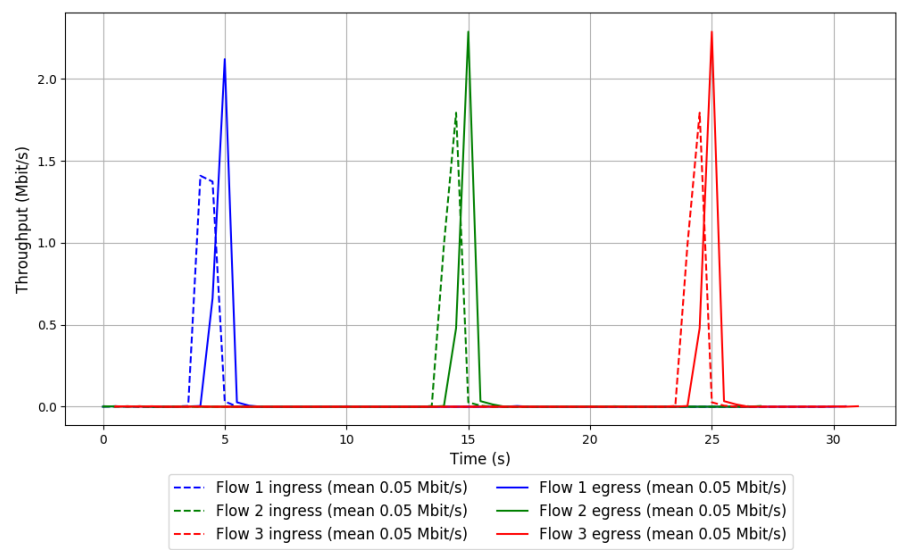
Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-08-27 00:26:00
End at: 2019-08-27 00:26:30
Local clock offset: 0.372 ms
Remote clock offset: -0.091 ms


# Below is generated by plot.py at 2019-08-27 02:53:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 86.559 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.459 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.580 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.590 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link