Pantheon Report

Generated at 2019-09-18 09:11:54 (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.
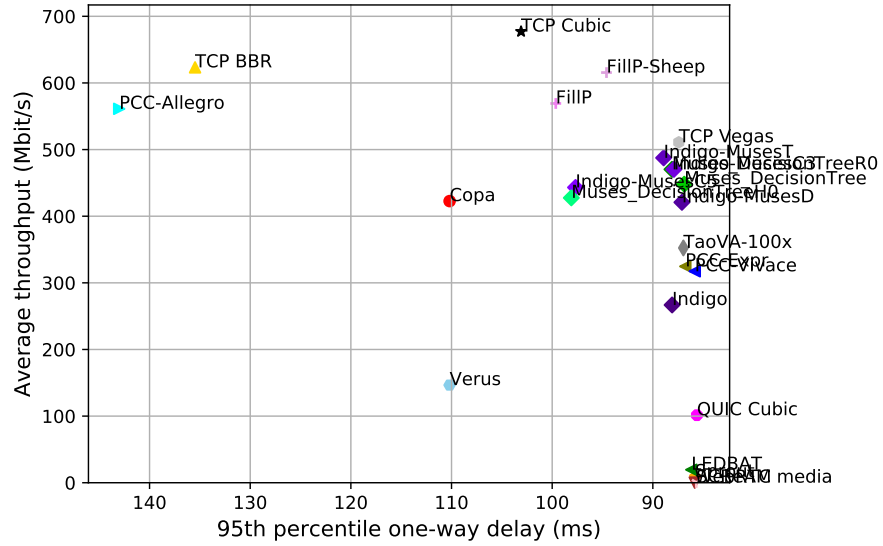
```
System info:
Linux 4.15.0-1040-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912

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
```
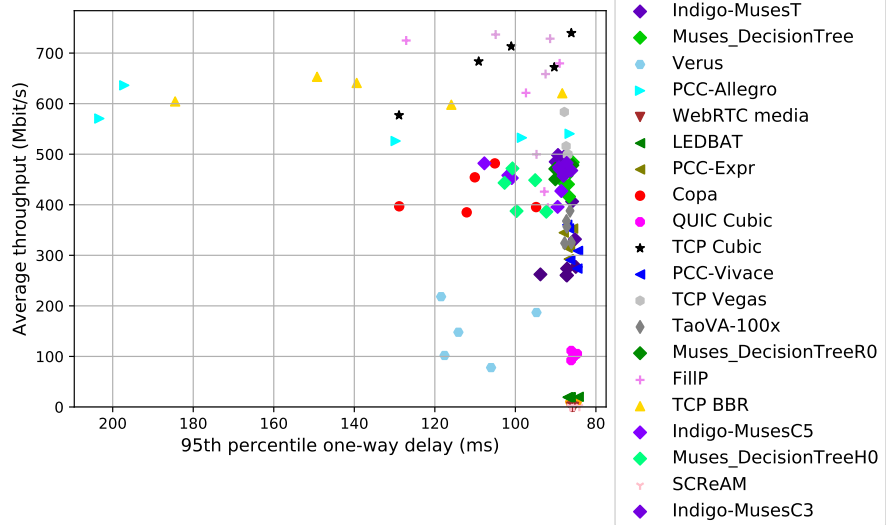
```
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```

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

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	326.81	312.39	271.39	135.10	169.26	91.67	0.75	1.68	1.82
Copa	5	242.43	194.13	156.50	121.66	102.19	87.55	0.51	0.80	2.11
TCP Cubic	5	360.82	344.57	265.77	88.98	96.05	105.33	0.54	0.85	2.14
FillP	5	276.70	322.33	240.75	104.38	89.46	88.78	0.47	0.75	1.89
FillP-Sheep	5	328.47	316.51	236.54	98.76	88.45	87.71	0.43	0.77	1.94
Indigo	5	147.68	126.00	109.30	87.46	91.76	86.50	0.46	0.84	2.02
Indigo-MusesC3	5	298.93	227.82	123.24	88.69	86.30	86.22	0.30	0.82	3.88
Indigo-MusesC5	5	275.24	234.65	86.07	111.16	88.58	85.72	0.32	0.95	3.84
Indigo-MusesD	5	274.75	206.75	65.93	87.61	86.12	85.91	0.35	0.85	3.82
Indigo-MusesT	5	312.22	240.79	100.73	89.94	87.48	86.08	0.39	1.06	3.28
LEDBAT	5	12.64	8.35	4.07	86.25	85.72	85.94	1.15	1.73	3.48
Muses_DecisionTree	5	265.16	213.73	136.85	87.30	86.10	85.85	0.33	0.70	2.49
Muses_DecisionTreeH0	5	246.32	199.13	159.77	103.80	93.40	87.70	0.48	1.22	2.06
Muses_DecisionTreeR0	5	293.80	202.76	138.34	90.55	85.94	85.82	0.40	0.81	2.37
PCC-Allegro	5	309.45	270.73	222.54	155.04	100.48	88.59	1.85	1.06	2.13
PCC-Expr	5	185.39	154.56	113.05	87.02	86.97	85.84	0.56	0.90	2.24
QUIC Cubic	5	50.94	49.28	52.74	85.57	85.31	85.25	0.73	1.20	1.33
SCReAM	5	0.22	0.22	0.22	85.34	85.62	85.28	0.54	0.91	1.54
Sprout	5	4.53	4.11	3.66	85.56	85.72	85.83	0.53	1.16	2.01
TaoVA-100x	5	191.23	169.58	147.83	86.49	87.36	86.92	0.55	0.90	1.82
TCP Vegas	5	249.69	268.45	252.54	86.19	87.34	90.82	0.50	0.75	1.74
Verus	5	64.06	87.27	81.34	113.74	108.23	126.11	0.81	0.68	1.09
PCC-Vivace	5	174.50	149.69	133.67	85.55	85.60	86.97	0.61	1.04	2.46
WebRTC media	5	0.05	0.05	0.05	85.48	85.30	85.74	0.01	0.01	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-09-18 04:03:16
End at: 2019-09-18 04:03:46
Local clock offset: -0.466 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2019-09-18 07:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 653.11 Mbit/s
95th percentile per-packet one-way delay: 149.242 ms
Loss rate: 1.05%
-- Flow 1:
Average throughput: 309.36 Mbit/s
95th percentile per-packet one-way delay: 136.803 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 360.85 Mbit/s
95th percentile per-packet one-way delay: 196.901 ms
Loss rate: 1.30%
-- Flow 3:
Average throughput: 317.81 Mbit/s
95th percentile per-packet one-way delay: 89.927 ms
Loss rate: 1.45%
```
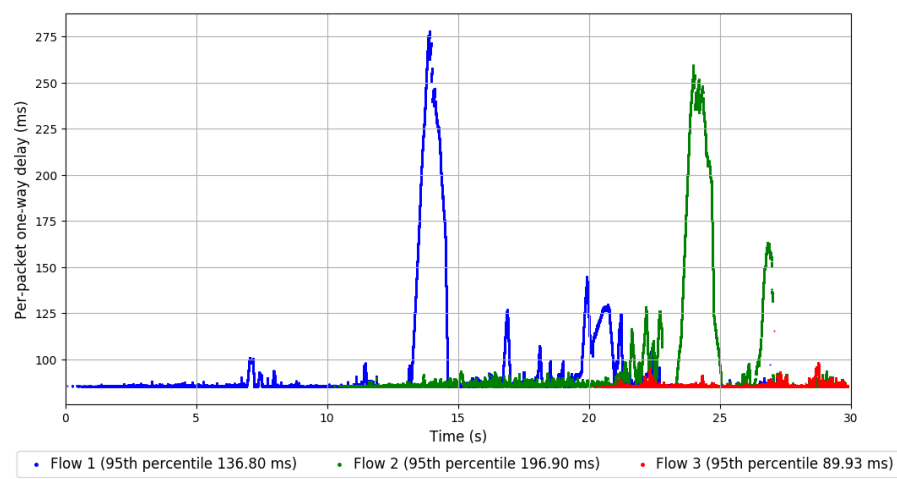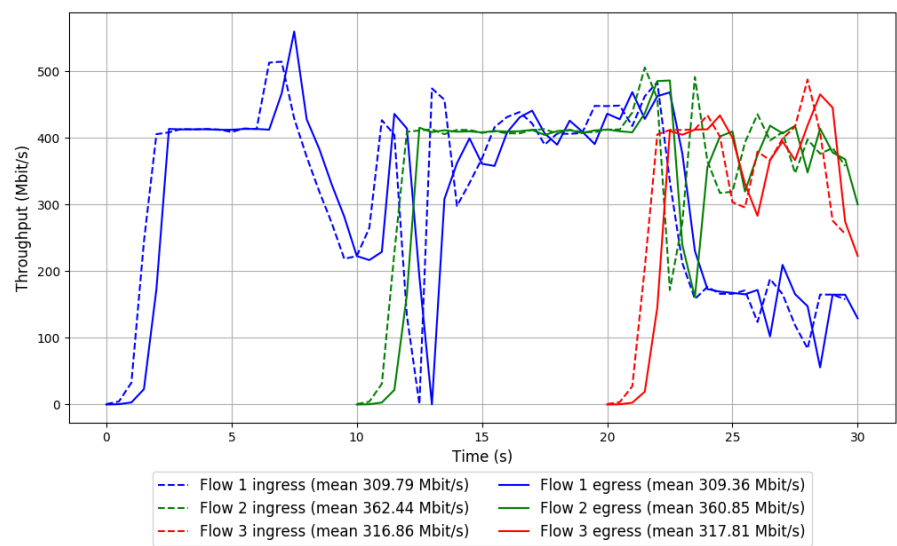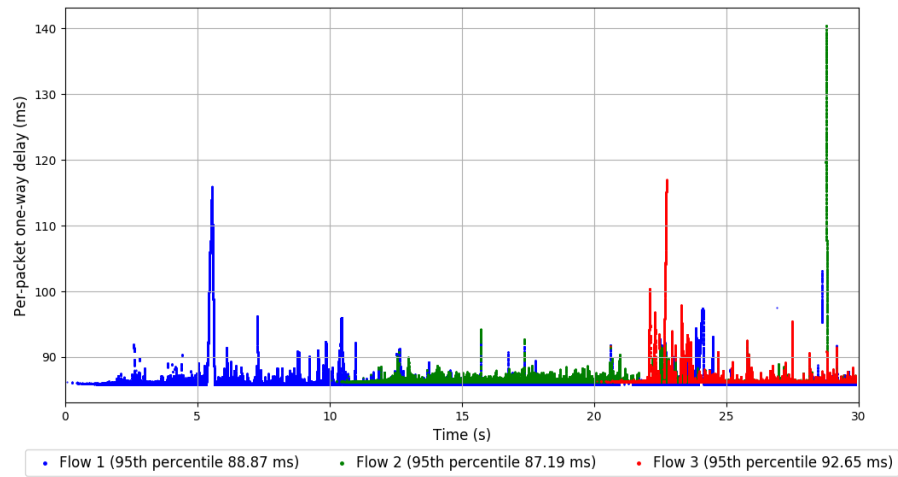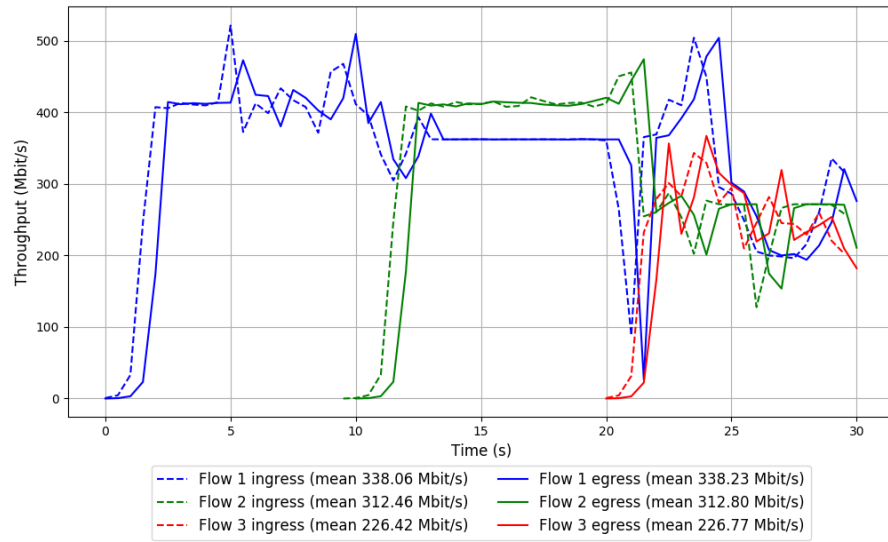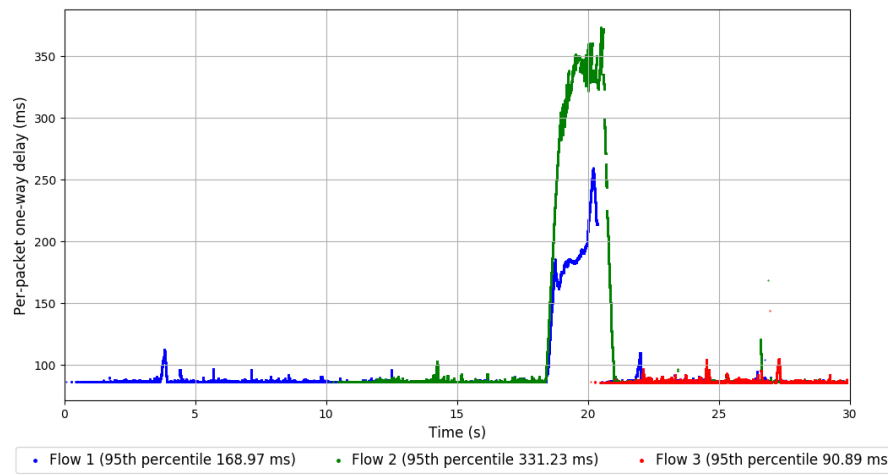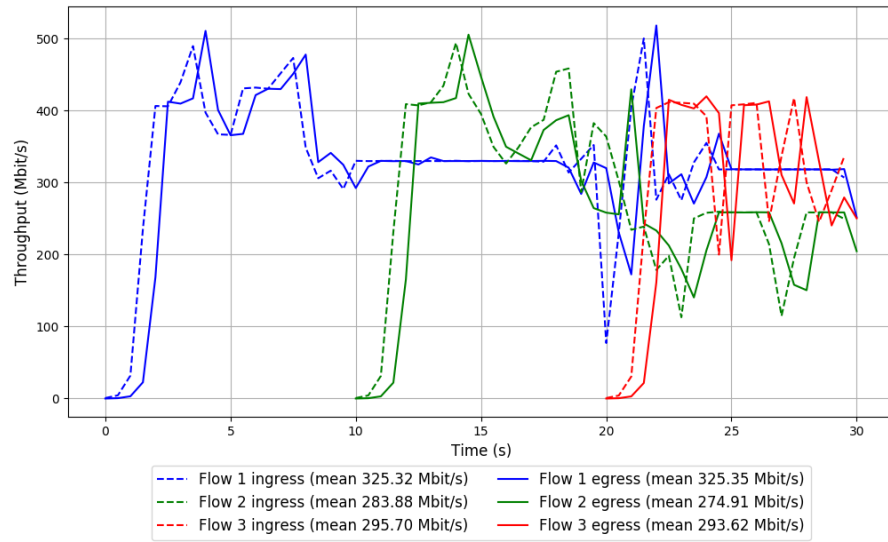
Run 1: Report of TCP BBR — Data Link

Flow 1 ingress (mean 309.79 Mbit/s) --- Flow 1 egress (mean 309.36 Mbit/s)
Flow 2 ingress (mean 362.44 Mbit/s) --- Flow 2 egress (mean 360.85 Mbit/s)
Flow 3 ingress (mean 316.86 Mbit/s) --- Flow 3 egress (mean 317.81 Mbit/s)

Flow 1 (95th percentile 136.80 ms)   Flow 2 (95th percentile 196.90 ms)   Flow 3 (95th percentile 89.93 ms)

```
Run 2: Statistics of TCP BBR

Start at: 2019-09-18 04:42:22
End at: 2019-09-18 04:42:52
Local clock offset: -0.03 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2019-09-18 07:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 620.59 Mbit/s
95th percentile per-packet one-way delay: 88.355 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 338.23 Mbit/s
95th percentile per-packet one-way delay: 88.874 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 312.80 Mbit/s
95th percentile per-packet one-way delay: 87.188 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 226.77 Mbit/s
95th percentile per-packet one-way delay: 92.652 ms
Loss rate: 1.59%
```
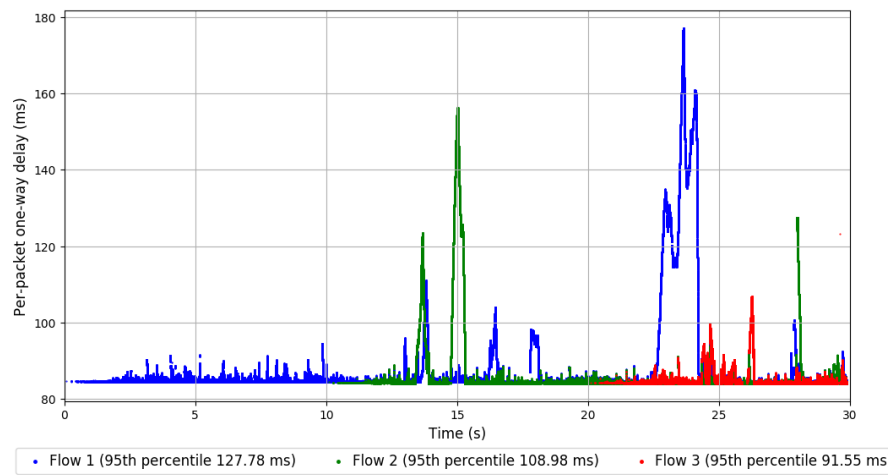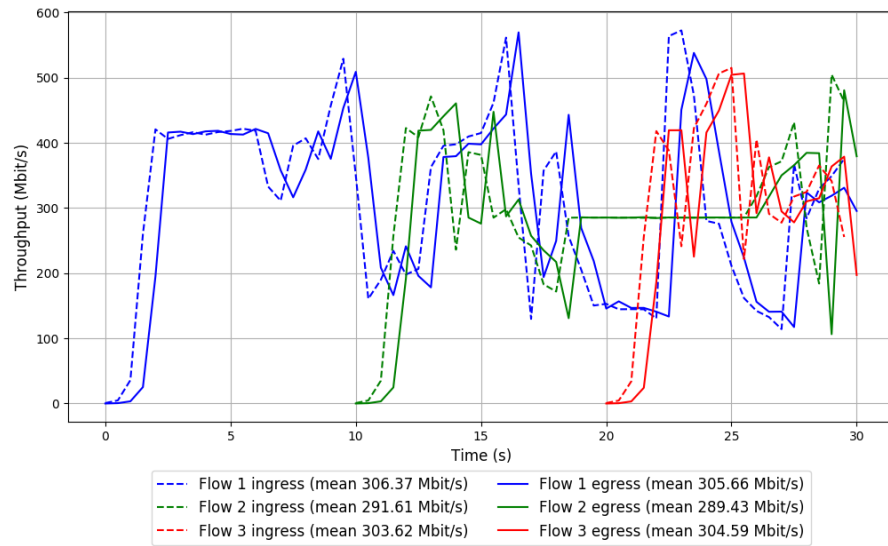
Run 2: Report of TCP BBR — Data Link

Flow 1 ingress (mean 338.06 Mbit/s)   Flow 1 egress (mean 338.23 Mbit/s)
Flow 2 ingress (mean 312.46 Mbit/s)   Flow 2 egress (mean 312.80 Mbit/s)
Flow 3 ingress (mean 226.42 Mbit/s)   Flow 3 egress (mean 226.77 Mbit/s)

Flow 1 (95th percentile 88.87 ms)   Flow 2 (95th percentile 87.19 ms)   Flow 3 (95th percentile 92.65 ms)

```
Run 3: Statistics of TCP BBR

Start at: 2019-09-18 05:21:54
End at: 2019-09-18 05:22:24
Local clock offset: -0.304 ms
Remote clock offset: -0.009 ms


# Below is generated by plot.py at 2019-09-18 07:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 604.37 Mbit/s
95th percentile per-packet one-way delay: 184.493 ms
Loss rate: 1.92%
-- Flow 1:
Average throughput: 325.35 Mbit/s
95th percentile per-packet one-way delay: 168.974 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 274.91 Mbit/s
95th percentile per-packet one-way delay: 331.233 ms
Loss rate: 4.00%
-- Flow 3:
Average throughput: 293.62 Mbit/s
95th percentile per-packet one-way delay: 90.893 ms
Loss rate: 2.42%
```
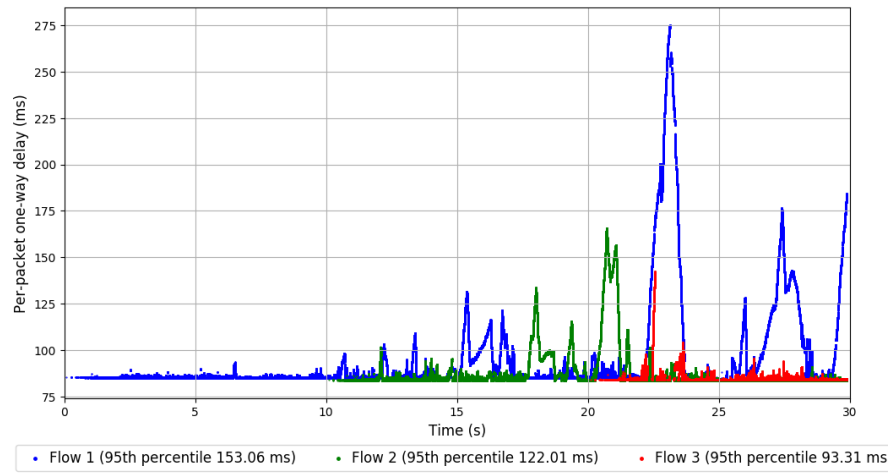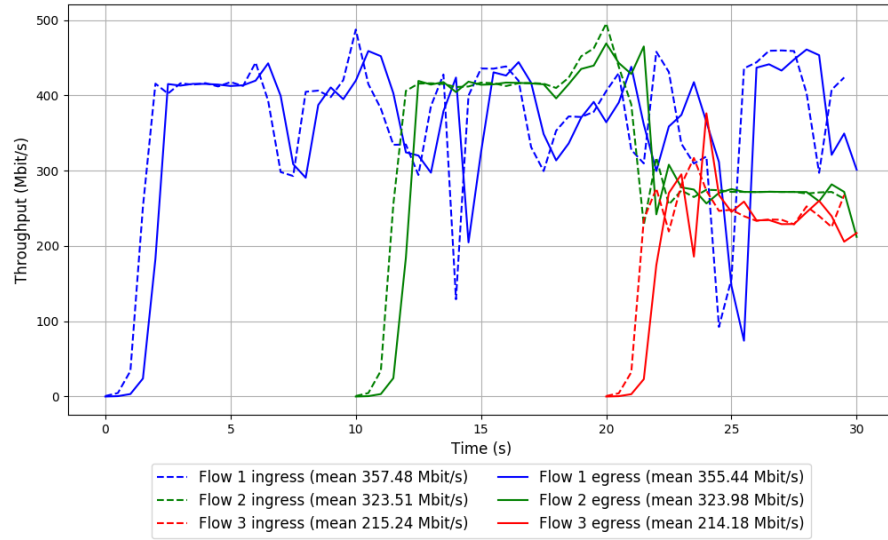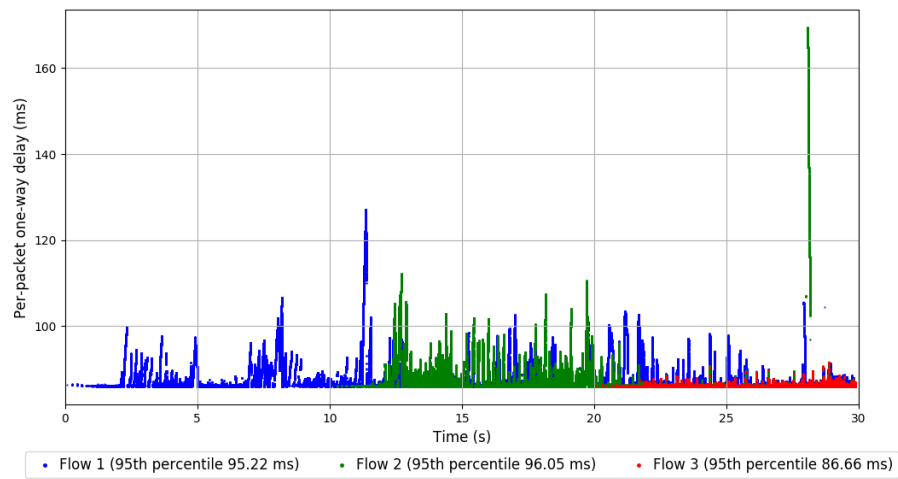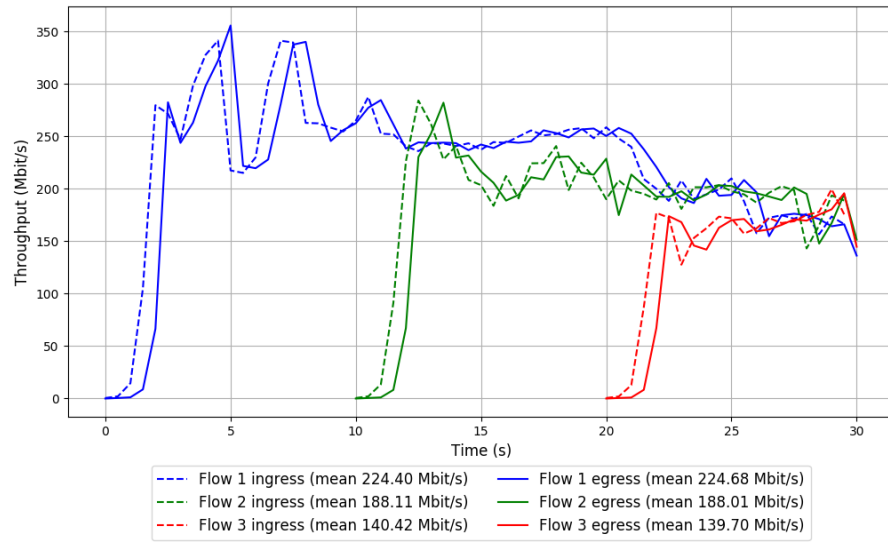
Run 3: Report of TCP BBR — Data Link

- - - Flow 1 ingress (mean 325.32 Mbit/s) —— Flow 1 egress (mean 325.35 Mbit/s)
- - - Flow 2 ingress (mean 283.88 Mbit/s) —— Flow 2 egress (mean 274.91 Mbit/s)
- - - Flow 3 ingress (mean 295.70 Mbit/s) —— Flow 3 egress (mean 293.62 Mbit/s)

• Flow 1 (95th percentile 168.97 ms)   • Flow 2 (95th percentile 331.23 ms)   • Flow 3 (95th percentile 90.89 ms)

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```
Run 4: Statistics of TCP BBR

Start at: 2019-09-18 06:01:17
End at: 2019-09-18 06:01:47
Local clock offset: 0.311 ms
Remote clock offset: -0.052 ms


# Below is generated by plot.py at 2019-09-18 07:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 597.89 Mbit/s
95th percentile per-packet one-way delay: 115.903 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 305.66 Mbit/s
95th percentile per-packet one-way delay: 127.779 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 289.43 Mbit/s
95th percentile per-packet one-way delay: 108.976 ms
Loss rate: 1.60%
-- Flow 3:
Average throughput: 304.59 Mbit/s
95th percentile per-packet one-way delay: 91.552 ms
Loss rate: 1.40%
```
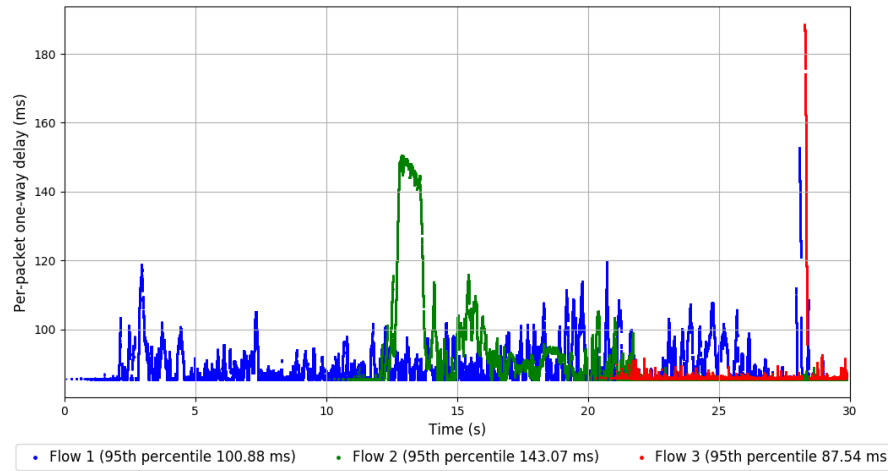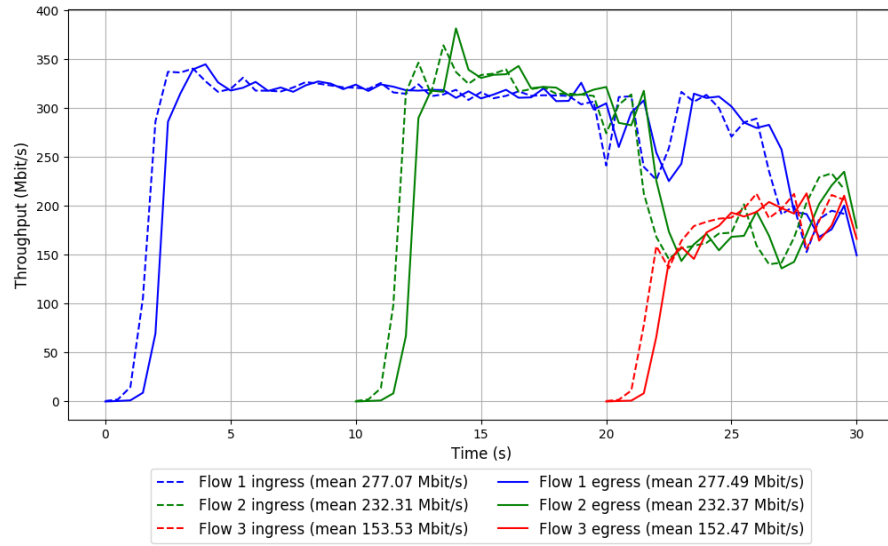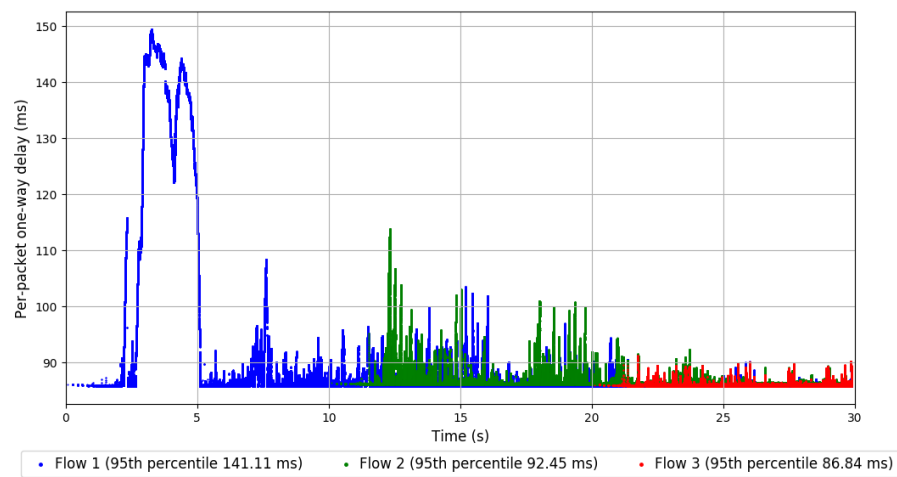
Run 4: Report of TCP BBR — Data Link

```
Run 5: Statistics of TCP BBR

Start at: 2019-09-18 06:40:52
End at: 2019-09-18 06:41:22
Local clock offset: -0.264 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2019-09-18 07:21:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 640.96 Mbit/s
95th percentile per-packet one-way delay: 139.408 ms
Loss rate: 1.14%
-- Flow 1:
Average throughput: 355.44 Mbit/s
95th percentile per-packet one-way delay: 153.056 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 323.98 Mbit/s
95th percentile per-packet one-way delay: 122.007 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 214.18 Mbit/s
95th percentile per-packet one-way delay: 93.310 ms
Loss rate: 2.26%
```

Run 5: Report of TCP BBR — Data Link

Flow 1 ingress (mean 357.48 Mbit/s)   Flow 1 egress (mean 355.44 Mbit/s)
Flow 2 ingress (mean 323.51 Mbit/s)   Flow 2 egress (mean 323.98 Mbit/s)
Flow 3 ingress (mean 215.24 Mbit/s)   Flow 3 egress (mean 214.18 Mbit/s)

Flow 1 (95th percentile 153.06 ms)   Flow 2 (95th percentile 122.01 ms)   Flow 3 (95th percentile 93.31 ms)
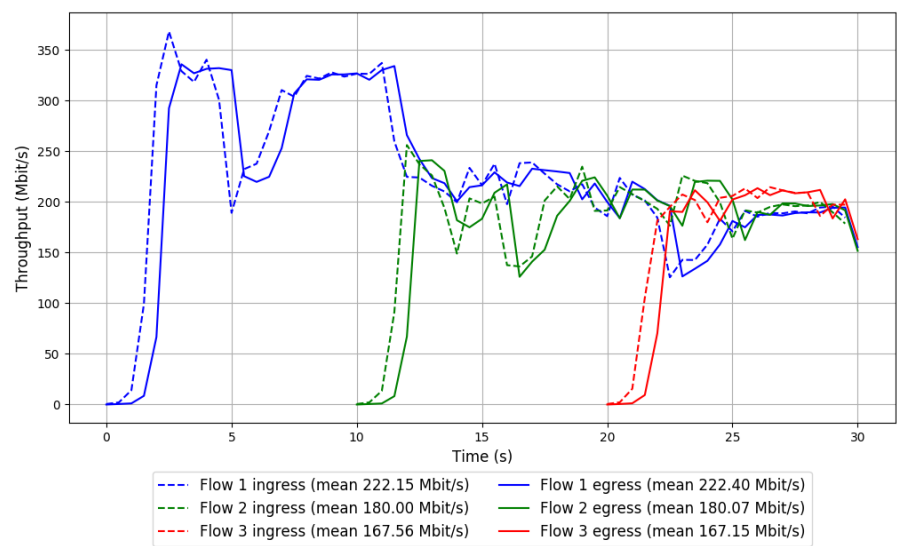
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```
Run 1: Statistics of Copa

Start at: 2019-09-18 04:08:23
End at: 2019-09-18 04:08:53
Local clock offset: 0.141 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2019-09-18 07:22:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.40 Mbit/s
95th percentile per-packet one-way delay: 94.853 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 224.68 Mbit/s
95th percentile per-packet one-way delay: 95.219 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 188.01 Mbit/s
95th percentile per-packet one-way delay: 96.049 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 139.70 Mbit/s
95th percentile per-packet one-way delay: 86.663 ms
Loss rate: 2.24%
```
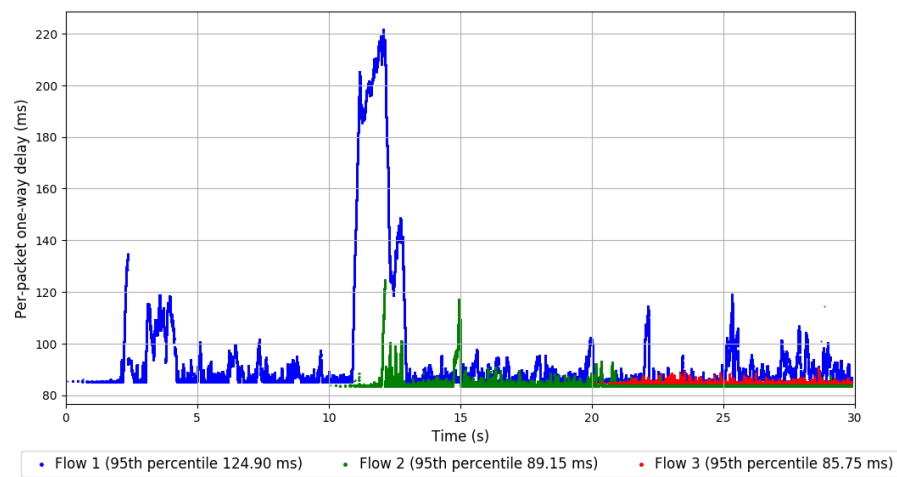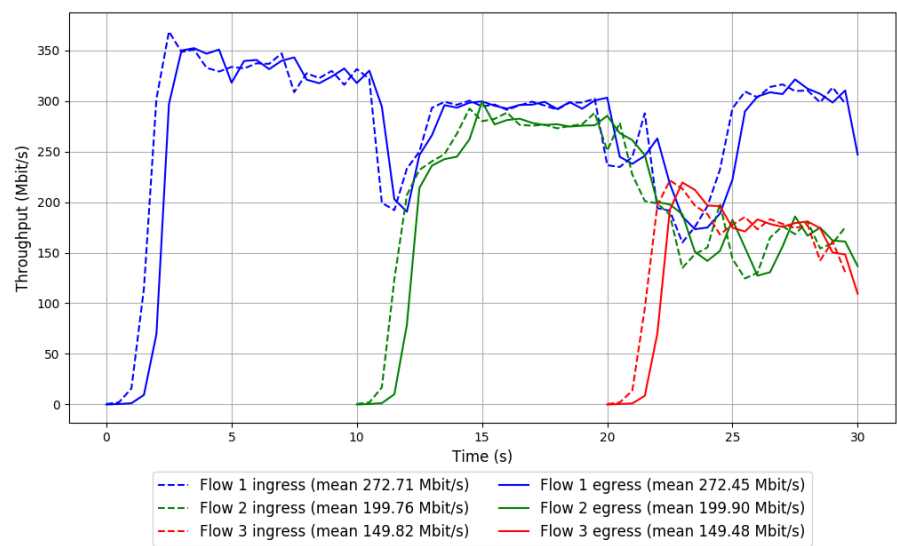
Run 1: Report of Copa — Data Link

```
Run 2: Statistics of Copa

Start at: 2019-09-18 04:47:26
End at: 2019-09-18 04:47:56
Local clock offset: -0.418 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2019-09-18 07:25:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.84 Mbit/s
95th percentile per-packet one-way delay: 105.098 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 277.49 Mbit/s
95th percentile per-packet one-way delay: 100.881 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 232.37 Mbit/s
95th percentile per-packet one-way delay: 143.075 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 152.47 Mbit/s
95th percentile per-packet one-way delay: 87.542 ms
Loss rate: 2.41%
```

Run 2: Report of Copa — Data Link

```
Run 3: Statistics of Copa

Start at: 2019-09-18 05:26:55
End at: 2019-09-18 05:27:25
Local clock offset: -0.084 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-09-18 07:25:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 396.89 Mbit/s
95th percentile per-packet one-way delay: 128.847 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 222.40 Mbit/s
95th percentile per-packet one-way delay: 141.106 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 180.07 Mbit/s
95th percentile per-packet one-way delay: 92.452 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 167.15 Mbit/s
95th percentile per-packet one-way delay: 86.836 ms
Loss rate: 1.98%
```
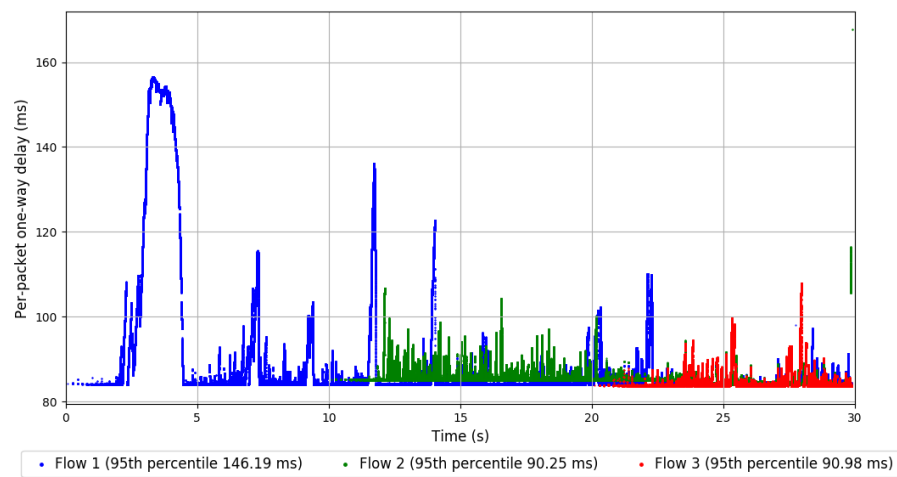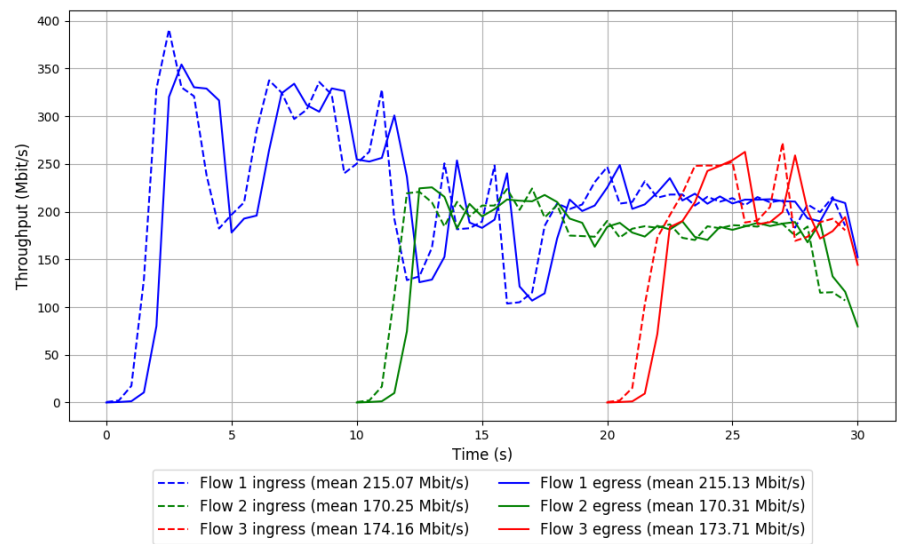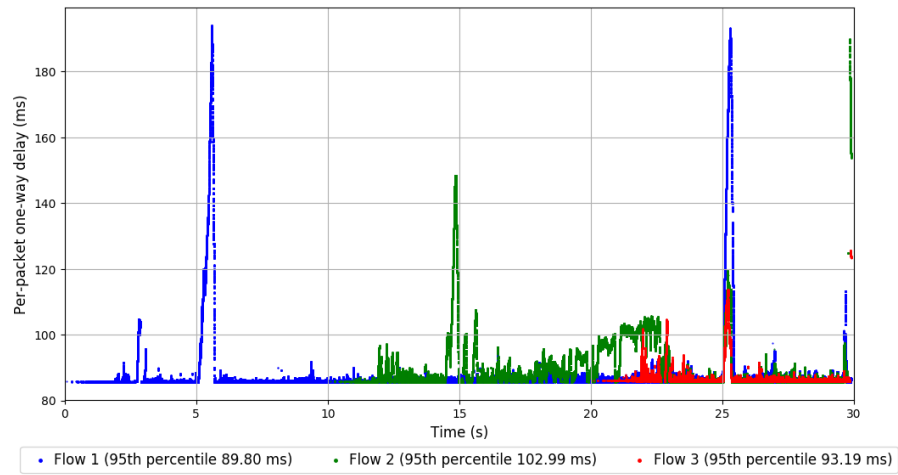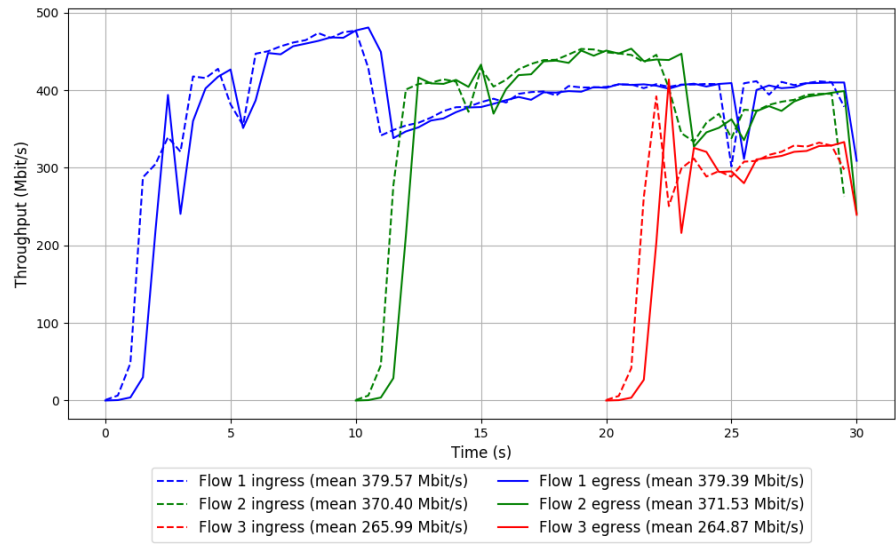
Run 3: Report of Copa — Data Link

```
Run 4: Statistics of Copa

Start at: 2019-09-18 06:06:18
End at: 2019-09-18 06:06:48
Local clock offset: -0.334 ms
Remote clock offset: -0.082 ms


# Below is generated by plot.py at 2019-09-18 07:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.26 Mbit/s
95th percentile per-packet one-way delay: 110.071 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 272.45 Mbit/s
95th percentile per-packet one-way delay: 124.899 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 199.90 Mbit/s
95th percentile per-packet one-way delay: 89.146 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 149.48 Mbit/s
95th percentile per-packet one-way delay: 85.747 ms
Loss rate: 1.94%
```

Run 4: Report of Copa — Data Link

```
Run 5: Statistics of Copa

Start at: 2019-09-18 06:46:02
End at: 2019-09-18 06:46:32
Local clock offset: -0.217 ms
Remote clock offset: 0.024 ms


# Below is generated by plot.py at 2019-09-18 07:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 384.99 Mbit/s
95th percentile per-packet one-way delay: 112.090 ms
Loss rate: 0.78%
-- Flow 1:
Average throughput: 215.13 Mbit/s
95th percentile per-packet one-way delay: 146.191 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 170.31 Mbit/s
95th percentile per-packet one-way delay: 90.251 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 173.71 Mbit/s
95th percentile per-packet one-way delay: 90.984 ms
Loss rate: 1.96%
```
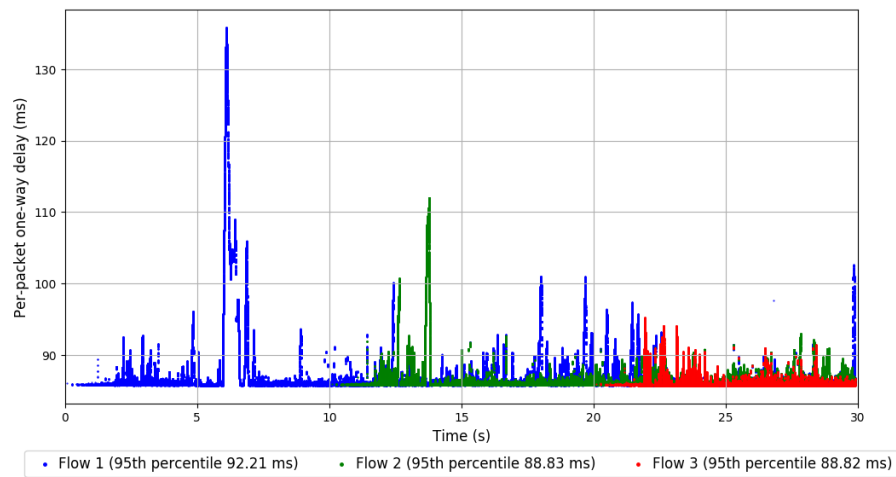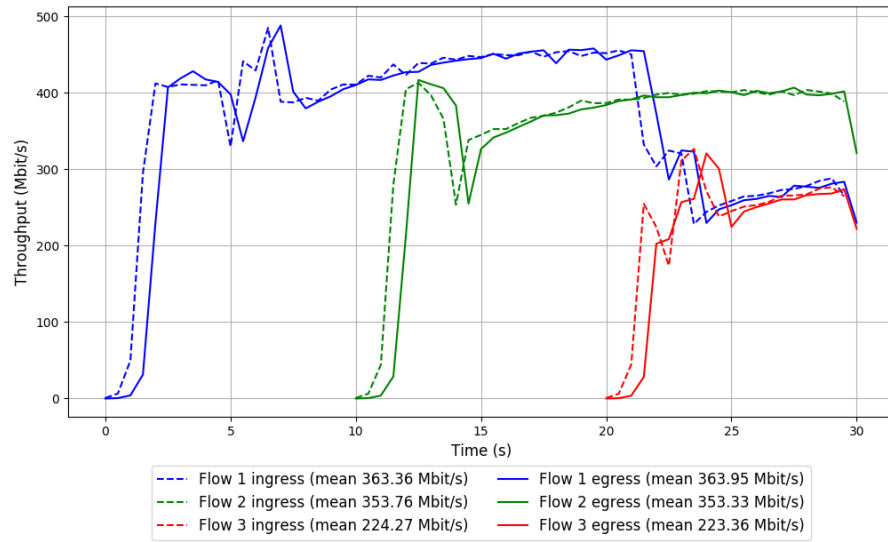
Run 5: Report of Copa — Data Link

Flow 1 ingress (mean 215.07 Mbit/s)   Flow 1 egress (mean 215.13 Mbit/s)
Flow 2 ingress (mean 170.25 Mbit/s)   Flow 2 egress (mean 170.31 Mbit/s)
Flow 3 ingress (mean 174.16 Mbit/s)   Flow 3 egress (mean 173.71 Mbit/s)

Flow 1 (95th percentile 146.19 ms)   Flow 2 (95th percentile 90.25 ms)   Flow 3 (95th percentile 90.98 ms)
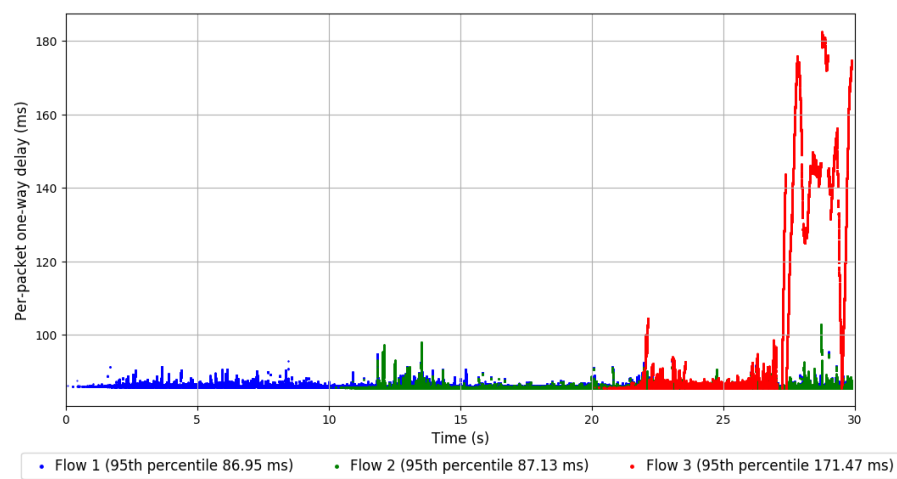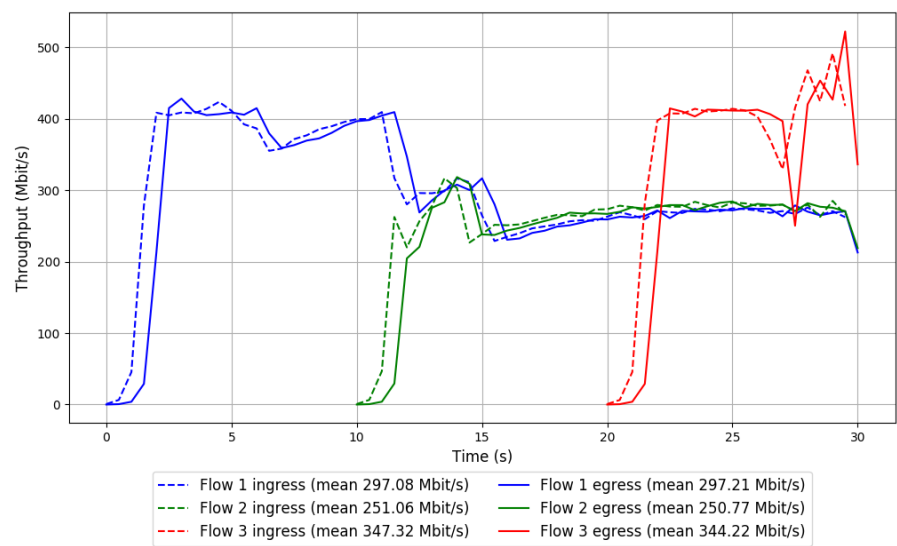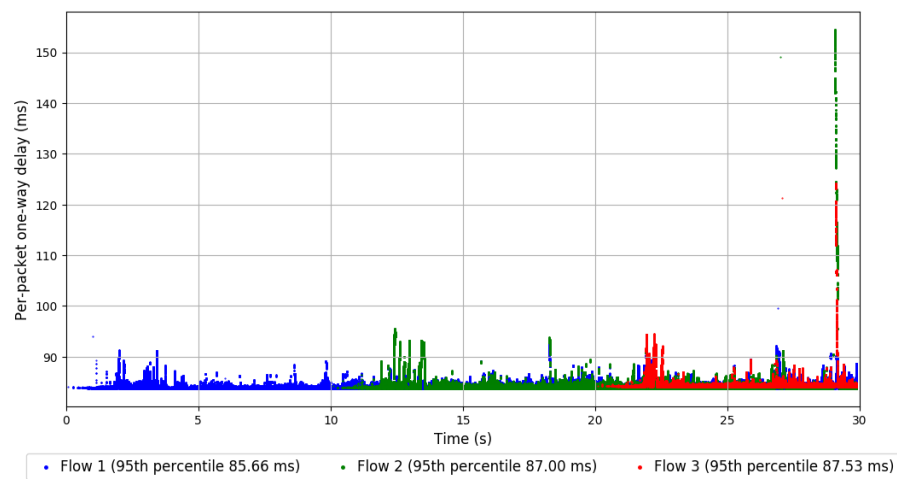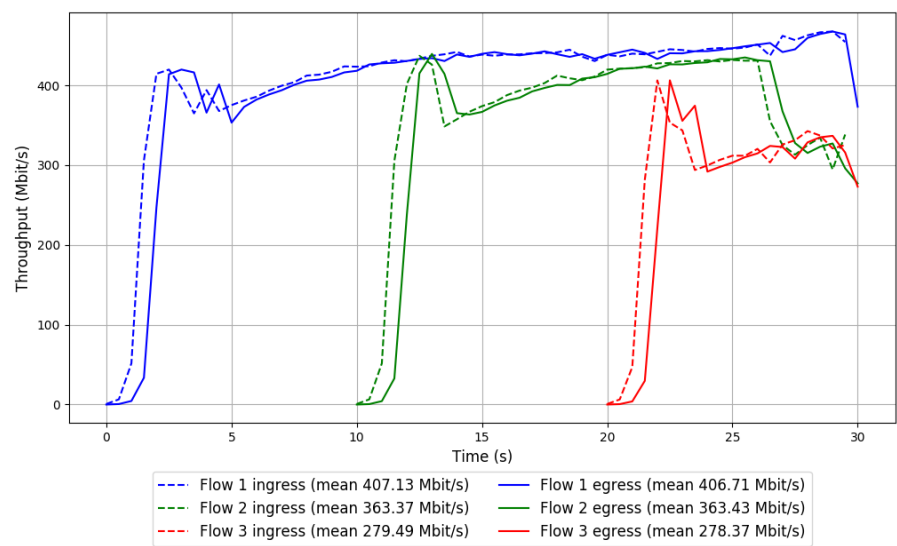
```
Run 1: Statistics of TCP Cubic

Start at: 2019-09-18 04:13:26
End at: 2019-09-18 04:13:56
Local clock offset: -0.269 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-09-18 07:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 713.25 Mbit/s
95th percentile per-packet one-way delay: 101.015 ms
Loss rate: 0.79%
-- Flow 1:
Average throughput: 379.39 Mbit/s
95th percentile per-packet one-way delay: 89.801 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 371.53 Mbit/s
95th percentile per-packet one-way delay: 102.992 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 264.87 Mbit/s
95th percentile per-packet one-way delay: 93.194 ms
Loss rate: 2.16%
```

Run 1: Report of TCP Cubic — Data Link

Flow 1 ingress (mean 379.57 Mbit/s) --- Flow 1 egress (mean 379.39 Mbit/s)
Flow 2 ingress (mean 370.40 Mbit/s) --- Flow 2 egress (mean 371.53 Mbit/s)
Flow 3 ingress (mean 265.99 Mbit/s) --- Flow 3 egress (mean 264.87 Mbit/s)

Flow 1 (95th percentile 89.80 ms)   Flow 2 (95th percentile 102.99 ms)   Flow 3 (95th percentile 93.19 ms)
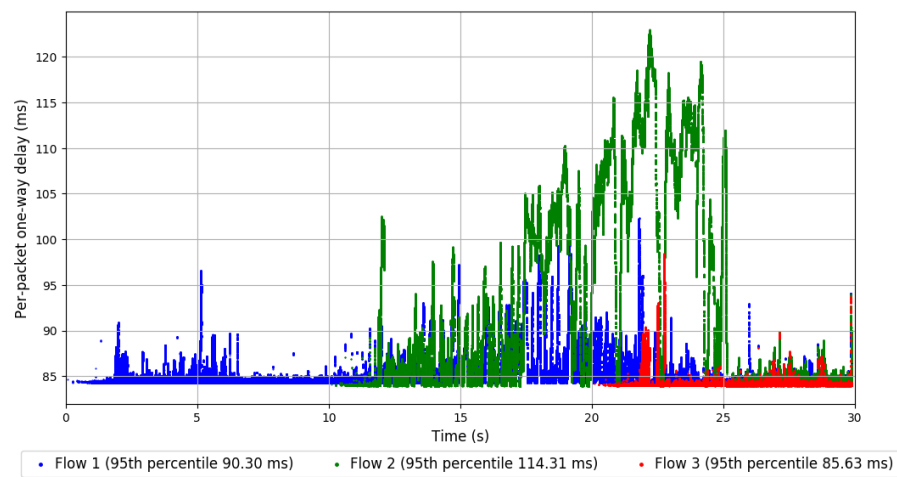
```
Run 2: Statistics of TCP Cubic

Start at: 2019-09-18 04:52:40
End at: 2019-09-18 04:53:10
Local clock offset: -0.123 ms
Remote clock offset: -0.014 ms


# Below is generated by plot.py at 2019-09-18 07:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.05 Mbit/s
95th percentile per-packet one-way delay: 90.323 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 363.95 Mbit/s
95th percentile per-packet one-way delay: 92.213 ms
Loss rate: 0.41%
-- Flow 2:
Average throughput: 353.33 Mbit/s
95th percentile per-packet one-way delay: 88.826 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 223.36 Mbit/s
95th percentile per-packet one-way delay: 88.822 ms
Loss rate: 2.13%
```
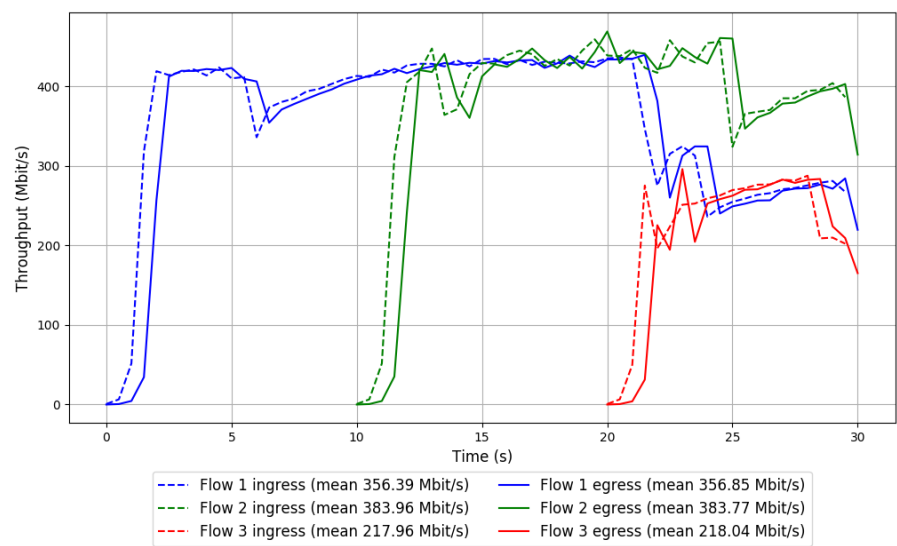
Run 2: Report of TCP Cubic — Data Link

```
Run 3: Statistics of TCP Cubic

Start at: 2019-09-18 05:32:01
End at: 2019-09-18 05:32:31
Local clock offset: -0.33 ms
Remote clock offset: -0.025 ms


# Below is generated by plot.py at 2019-09-18 07:35:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.02 Mbit/s
95th percentile per-packet one-way delay: 128.894 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 297.21 Mbit/s
95th percentile per-packet one-way delay: 86.949 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 250.77 Mbit/s
95th percentile per-packet one-way delay: 87.131 ms
Loss rate: 0.98%
-- Flow 3:
Average throughput: 344.22 Mbit/s
95th percentile per-packet one-way delay: 171.472 ms
Loss rate: 2.61%
```
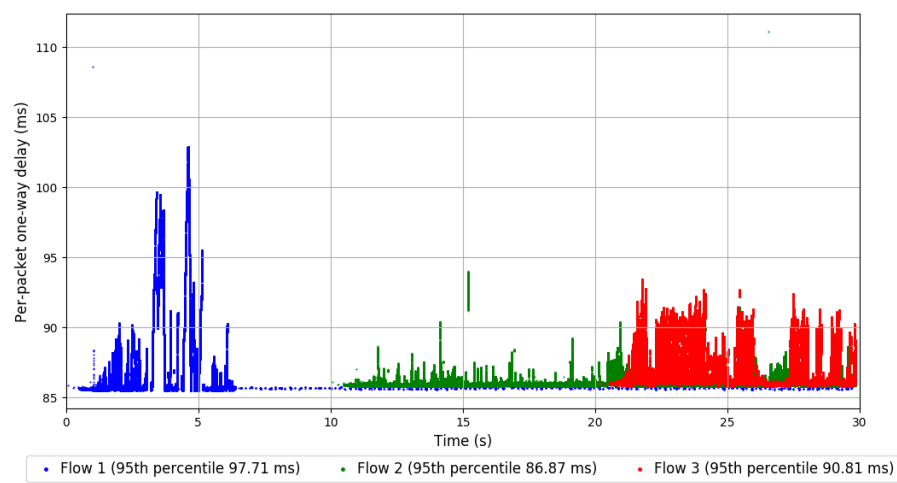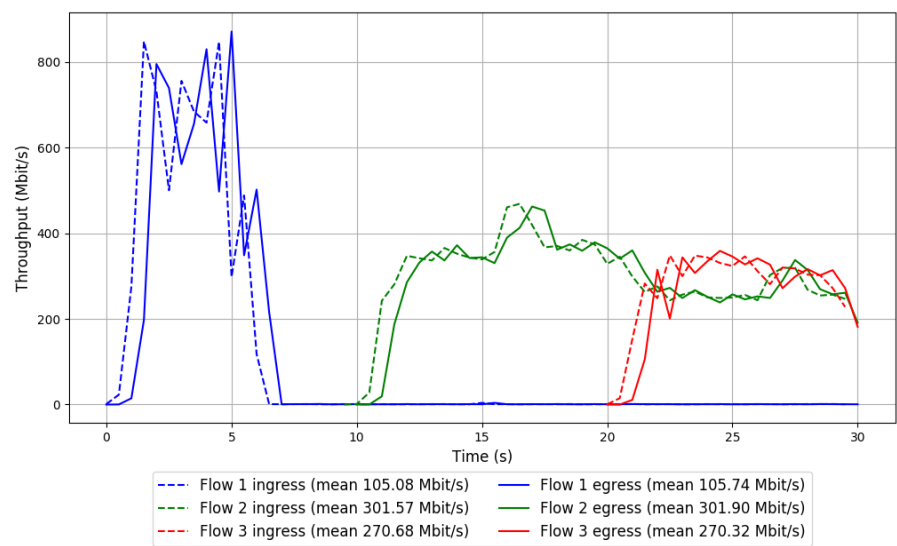
Run 3: Report of TCP Cubic — Data Link

```
Run 4: Statistics of TCP Cubic

Start at: 2019-09-18 06:11:36
End at: 2019-09-18 06:12:06
Local clock offset: -0.111 ms
Remote clock offset: -0.089 ms


# Below is generated by plot.py at 2019-09-18 07:35:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 739.61 Mbit/s
95th percentile per-packet one-way delay: 86.106 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 406.71 Mbit/s
95th percentile per-packet one-way delay: 85.660 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 363.43 Mbit/s
95th percentile per-packet one-way delay: 86.998 ms
Loss rate: 0.84%
-- Flow 3:
Average throughput: 278.37 Mbit/s
95th percentile per-packet one-way delay: 87.533 ms
Loss rate: 2.10%
```

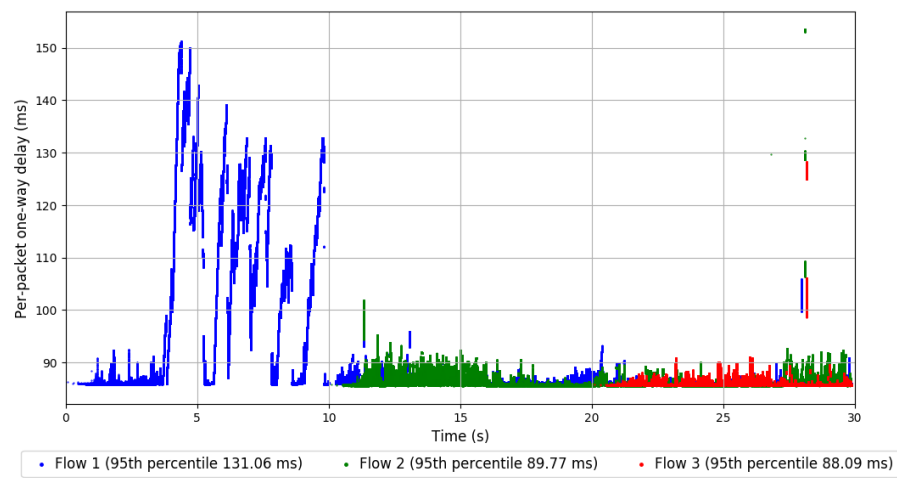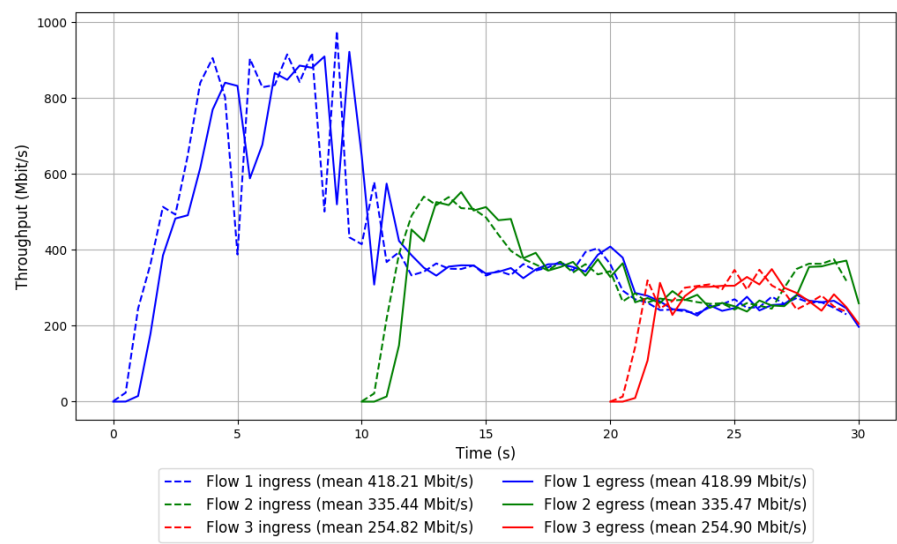# Run 4: Report of TCP Cubic — Data Link

```
Run 5: Statistics of TCP Cubic

Start at: 2019-09-18 06:51:05
End at: 2019-09-18 06:51:35
Local clock offset: 0.115 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-09-18 07:35:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 683.45 Mbit/s
95th percentile per-packet one-way delay: 109.116 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 356.85 Mbit/s
95th percentile per-packet one-way delay: 90.298 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 383.77 Mbit/s
95th percentile per-packet one-way delay: 114.310 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 218.04 Mbit/s
95th percentile per-packet one-way delay: 85.626 ms
Loss rate: 1.68%
```

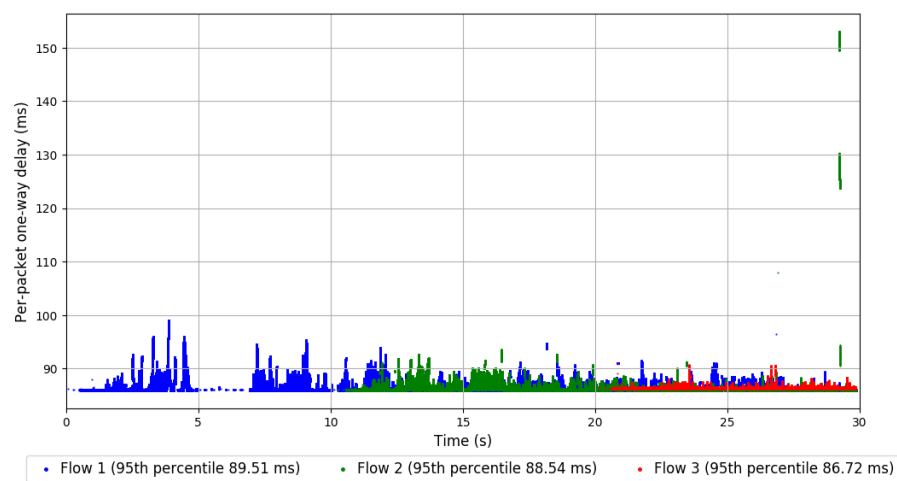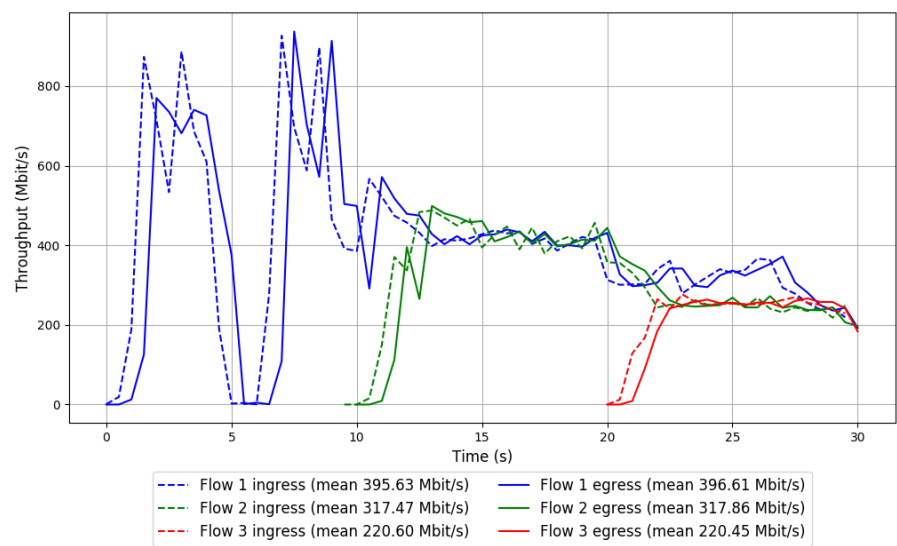# Run 5: Report of TCP Cubic — Data Link

```
Run 1: Statistics of FillP

Start at: 2019-09-18 03:41:06
End at: 2019-09-18 03:41:36
Local clock offset: -0.305 ms
Remote clock offset: -0.103 ms


# Below is generated by plot.py at 2019-09-18 07:35:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.19 Mbit/s
95th percentile per-packet one-way delay: 91.921 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 105.74 Mbit/s
95th percentile per-packet one-way delay: 97.711 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 301.90 Mbit/s
95th percentile per-packet one-way delay: 86.867 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 270.32 Mbit/s
95th percentile per-packet one-way delay: 90.811 ms
Loss rate: 1.88%
```
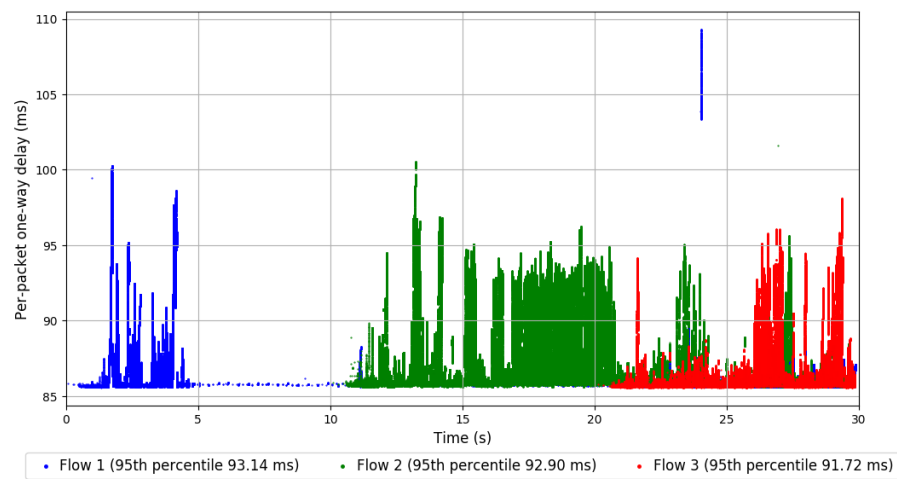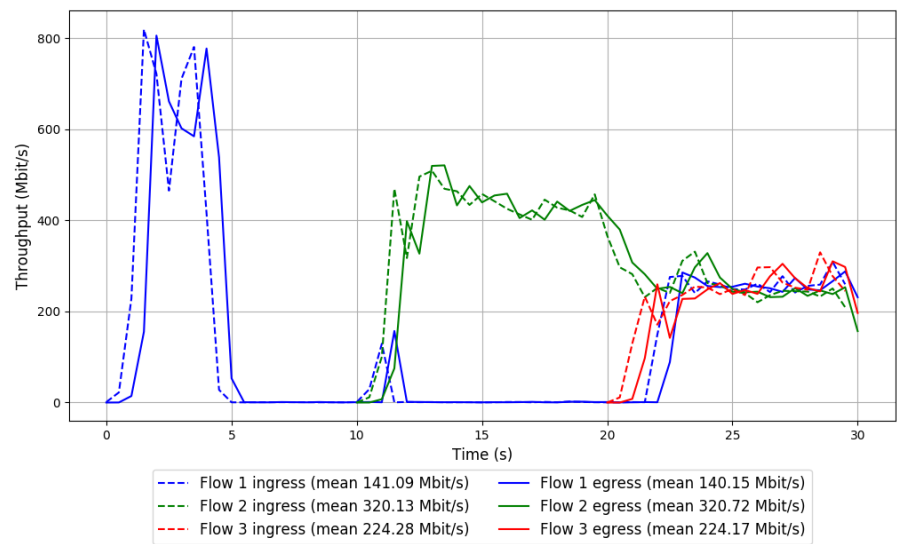
Run 1: Report of FillP — Data Link

```
Run 2: Statistics of FillP

Start at: 2019-09-18 04:20:00
End at: 2019-09-18 04:20:30
Local clock offset: -0.331 ms
Remote clock offset: -0.01 ms


# Below is generated by plot.py at 2019-09-18 07:47:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 724.90 Mbit/s
95th percentile per-packet one-way delay: 127.115 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 418.99 Mbit/s
95th percentile per-packet one-way delay: 131.055 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 335.47 Mbit/s
95th percentile per-packet one-way delay: 89.768 ms
Loss rate: 0.89%
-- Flow 3:
Average throughput: 254.90 Mbit/s
95th percentile per-packet one-way delay: 88.091 ms
Loss rate: 1.71%
```
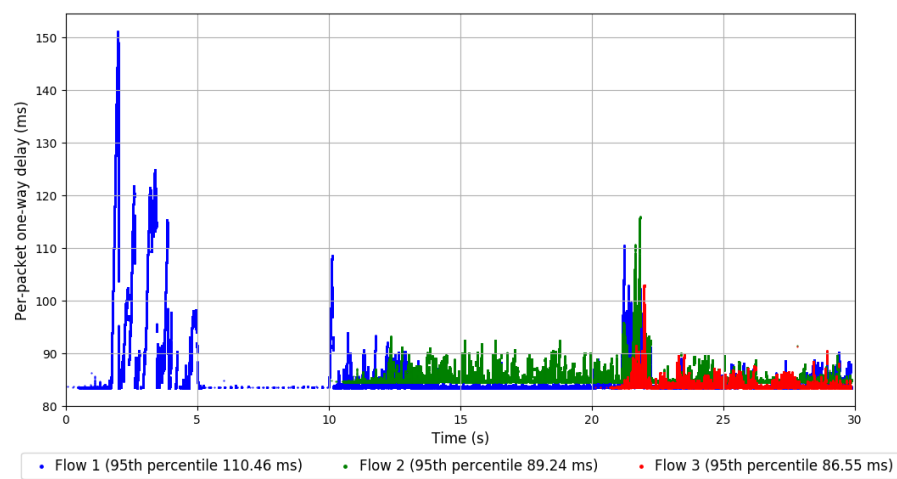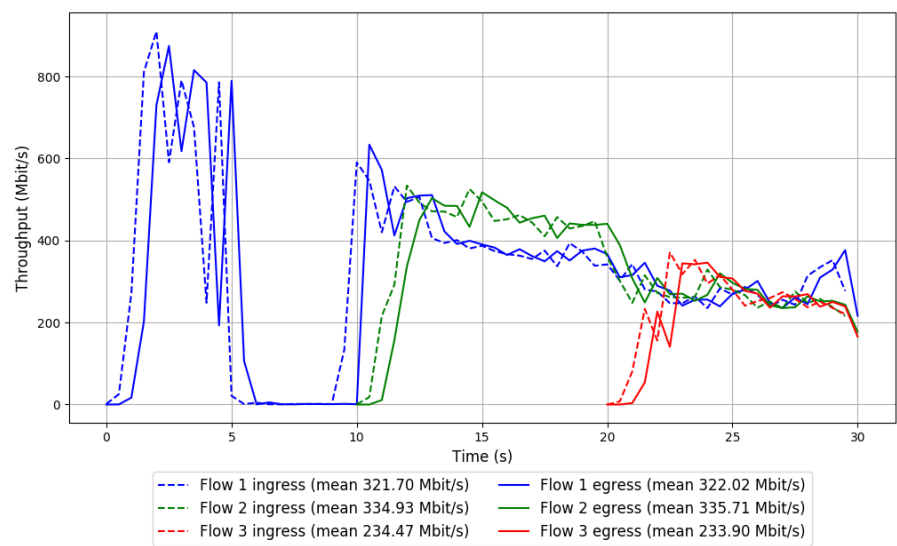
Run 2: Report of FillP — Data Link

```
Run 3: Statistics of FillP

Start at: 2019-09-18 04:59:12
End at: 2019-09-18 04:59:42
Local clock offset: 0.047 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-09-18 07:47:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 679.64 Mbit/s
95th percentile per-packet one-way delay: 89.009 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 396.61 Mbit/s
95th percentile per-packet one-way delay: 89.514 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 317.86 Mbit/s
95th percentile per-packet one-way delay: 88.544 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 220.45 Mbit/s
95th percentile per-packet one-way delay: 86.724 ms
Loss rate: 1.95%
```
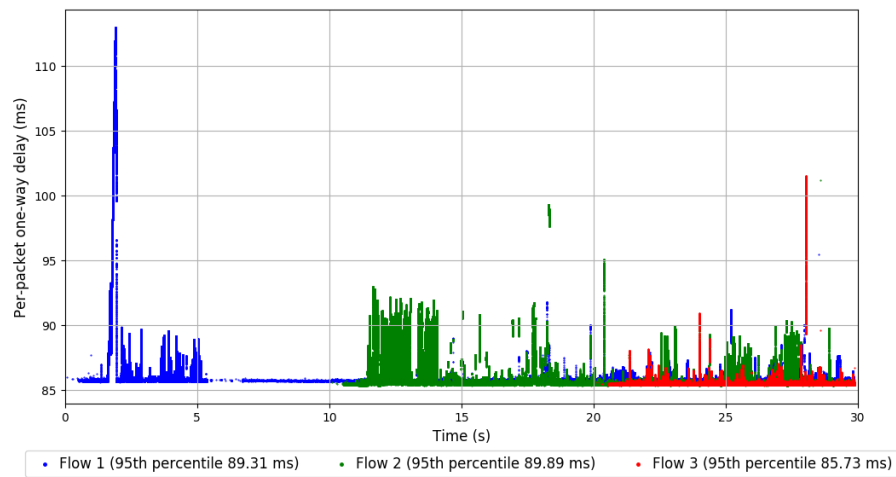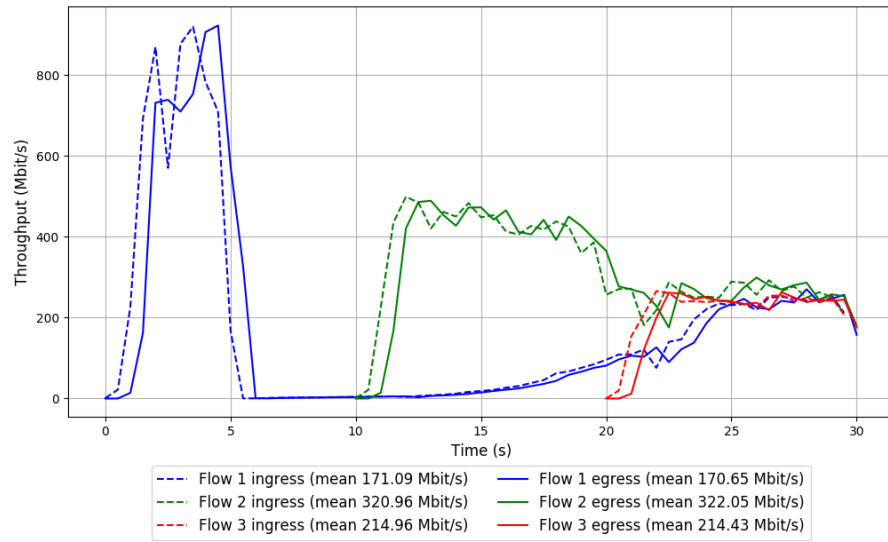
Run 3: Report of FillP — Data Link

```
Run 4: Statistics of FillP

Start at: 2019-09-18 05:38:27
End at: 2019-09-18 05:38:57
Local clock offset: -0.243 ms
Remote clock offset: -0.027 ms


# Below is generated by plot.py at 2019-09-18 07:47:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.94 Mbit/s
95th percentile per-packet one-way delay: 92.803 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 140.15 Mbit/s
95th percentile per-packet one-way delay: 93.144 ms
Loss rate: 1.14%
-- Flow 2:
Average throughput: 320.72 Mbit/s
95th percentile per-packet one-way delay: 92.900 ms
Loss rate: 0.69%
-- Flow 3:
Average throughput: 224.17 Mbit/s
95th percentile per-packet one-way delay: 91.721 ms
Loss rate: 2.02%
```

Run 4: Report of FillP — Data Link

```
Run 5: Statistics of FillP

Start at: 2019-09-18 06:18:13
End at: 2019-09-18 06:18:43
Local clock offset: -0.458 ms
Remote clock offset: -0.045 ms


# Below is generated by plot.py at 2019-09-18 07:47:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 621.29 Mbit/s
95th percentile per-packet one-way delay: 97.370 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 322.02 Mbit/s
95th percentile per-packet one-way delay: 110.462 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 335.71 Mbit/s
95th percentile per-packet one-way delay: 89.239 ms
Loss rate: 0.63%
-- Flow 3:
Average throughput: 233.90 Mbit/s
95th percentile per-packet one-way delay: 86.545 ms
Loss rate: 1.91%
```
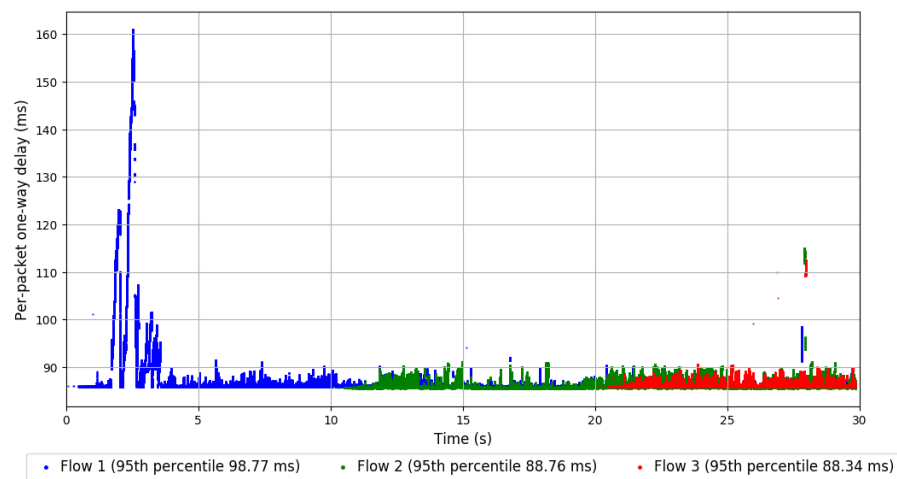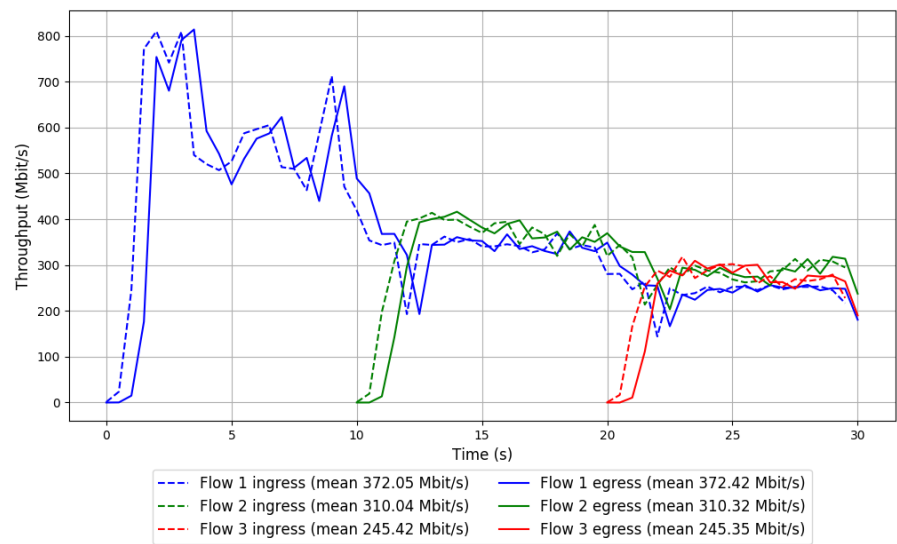
Run 5: Report of FillP — Data Link

```
Run 1: Statistics of FillP-Sheep

Start at: 2019-09-18 03:54:08
End at: 2019-09-18 03:54:38
Local clock offset: -0.48 ms
Remote clock offset: -0.074 ms


# Below is generated by plot.py at 2019-09-18 07:47:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 454.47 Mbit/s
95th percentile per-packet one-way delay: 89.496 ms
Loss rate: 0.90%
-- Flow 1:
Average throughput: 170.65 Mbit/s
95th percentile per-packet one-way delay: 89.309 ms
Loss rate: 0.86%
-- Flow 2:
Average throughput: 322.05 Mbit/s
95th percentile per-packet one-way delay: 89.895 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 214.43 Mbit/s
95th percentile per-packet one-way delay: 85.729 ms
Loss rate: 1.97%
```

Run 1: Report of FillP-Sheep — Data Link

```
Run 2: Statistics of FillP-Sheep

Start at: 2019-09-18 04:33:07
End at: 2019-09-18 04:33:37
Local clock offset: -0.306 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-09-18 07:48:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 658.55 Mbit/s
95th percentile per-packet one-way delay: 92.500 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 372.42 Mbit/s
95th percentile per-packet one-way delay: 98.768 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 310.32 Mbit/s
95th percentile per-packet one-way delay: 88.763 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 245.35 Mbit/s
95th percentile per-packet one-way delay: 88.342 ms
Loss rate: 1.78%
```
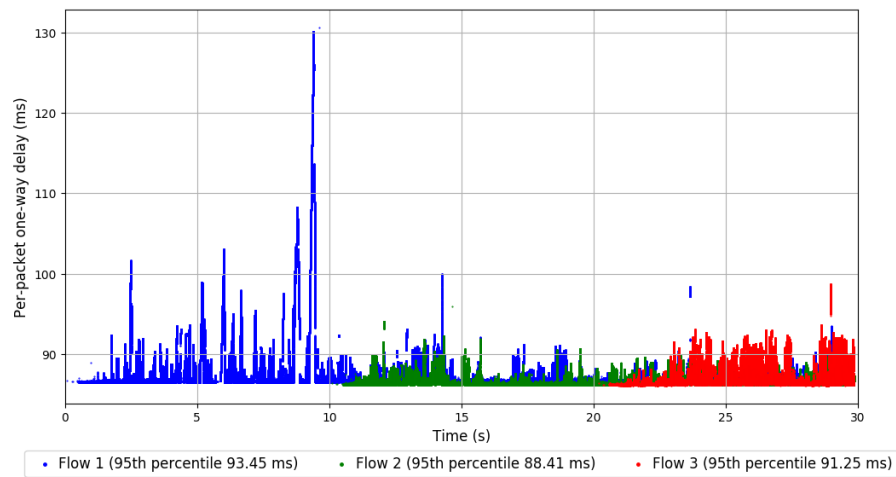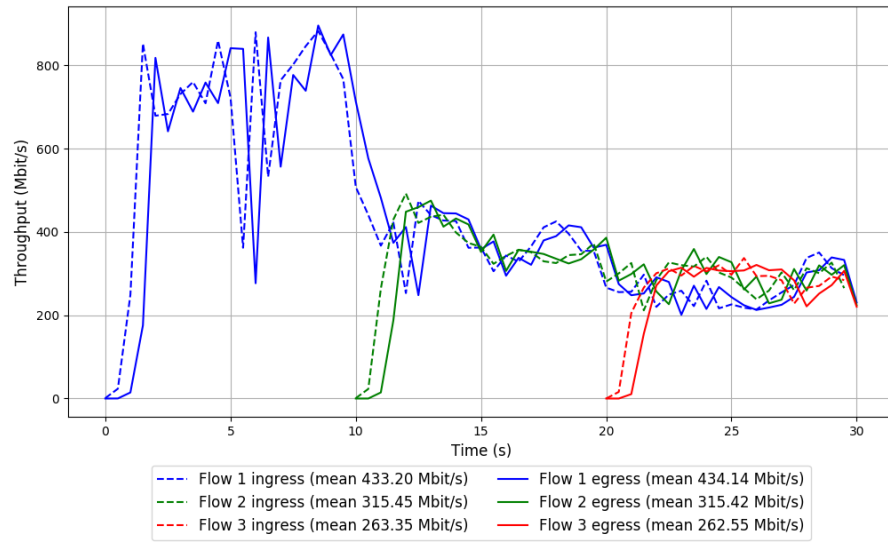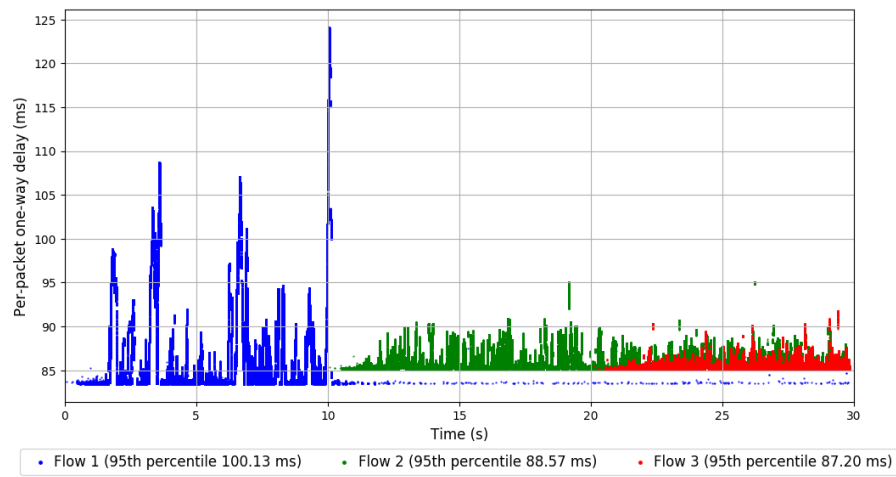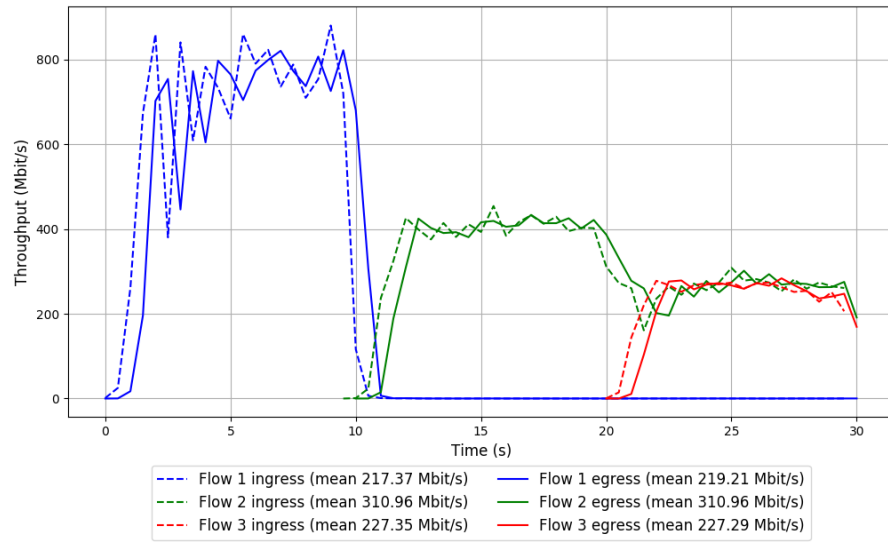
Run 2: Report of FillP-Sheep — Data Link

```
Run 3: Statistics of FillP-Sheep

Start at: 2019-09-18 05:12:36
End at: 2019-09-18 05:13:06
Local clock offset: 0.29 ms
Remote clock offset: -0.02 ms


# Below is generated by plot.py at 2019-09-18 07:50:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 728.53 Mbit/s
95th percentile per-packet one-way delay: 91.375 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 434.14 Mbit/s
95th percentile per-packet one-way delay: 93.450 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 315.42 Mbit/s
95th percentile per-packet one-way delay: 88.411 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 262.55 Mbit/s
95th percentile per-packet one-way delay: 91.246 ms
Loss rate: 2.10%
```

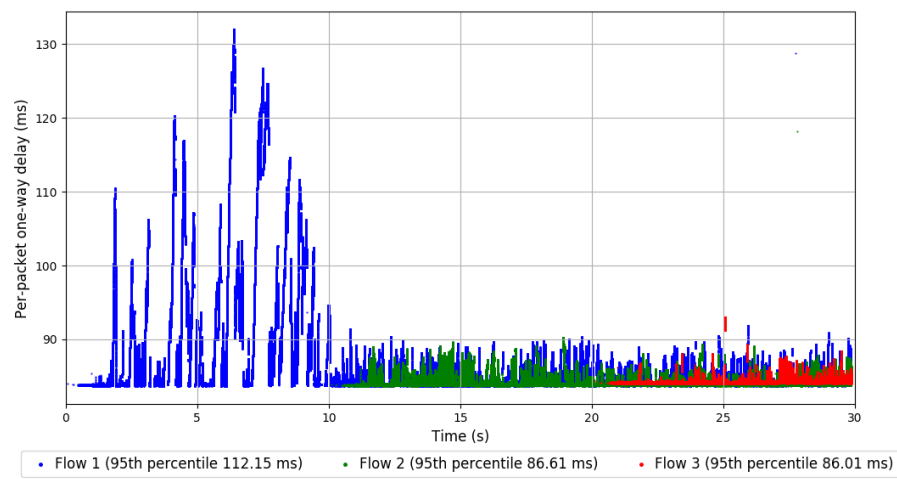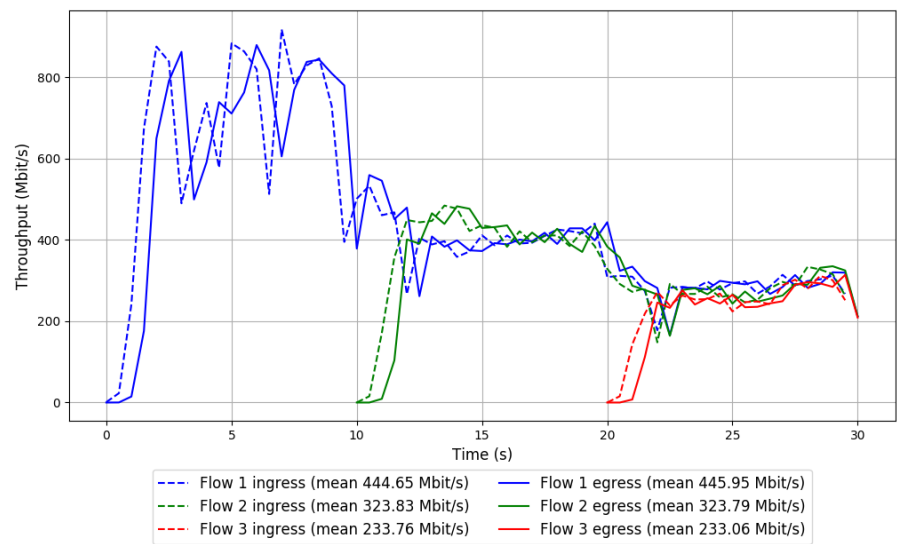Run 3: Report of FillP-Sheep — Data Link

```
Run 4: Statistics of FillP-Sheep

Start at: 2019-09-18 05:52:14
End at: 2019-09-18 05:52:44
Local clock offset: -0.413 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-09-18 07:50:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.70 Mbit/s
95th percentile per-packet one-way delay: 94.751 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 219.21 Mbit/s
95th percentile per-packet one-way delay: 100.134 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 310.96 Mbit/s
95th percentile per-packet one-way delay: 88.571 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 227.29 Mbit/s
95th percentile per-packet one-way delay: 87.204 ms
Loss rate: 1.81%
```

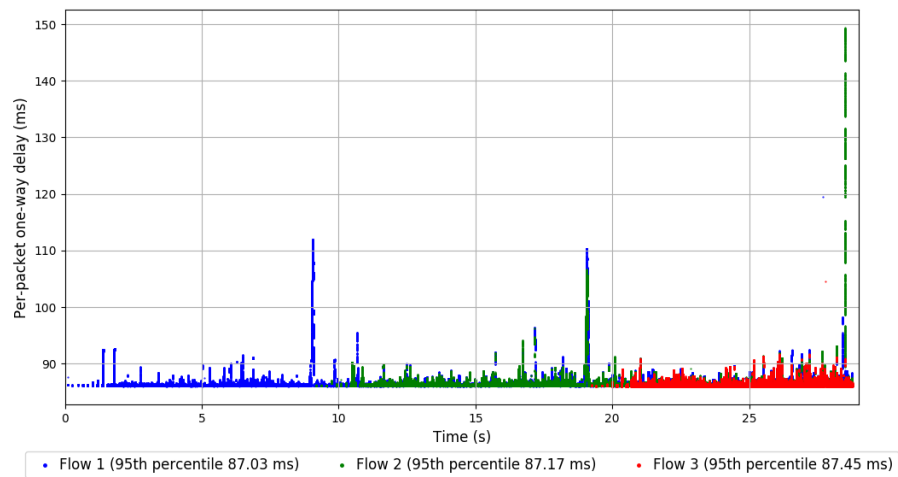Run 4: Report of FillP-Sheep — Data Link

```
Run 5: Statistics of FillP-Sheep

Start at: 2019-09-18 06:31:29
End at: 2019-09-18 06:31:59
Local clock offset: -0.268 ms
Remote clock offset: -0.049 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 736.67 Mbit/s
95th percentile per-packet one-way delay: 104.899 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 445.95 Mbit/s
95th percentile per-packet one-way delay: 112.154 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 323.79 Mbit/s
95th percentile per-packet one-way delay: 86.608 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 233.06 Mbit/s
95th percentile per-packet one-way delay: 86.014 ms
Loss rate: 2.02%
```

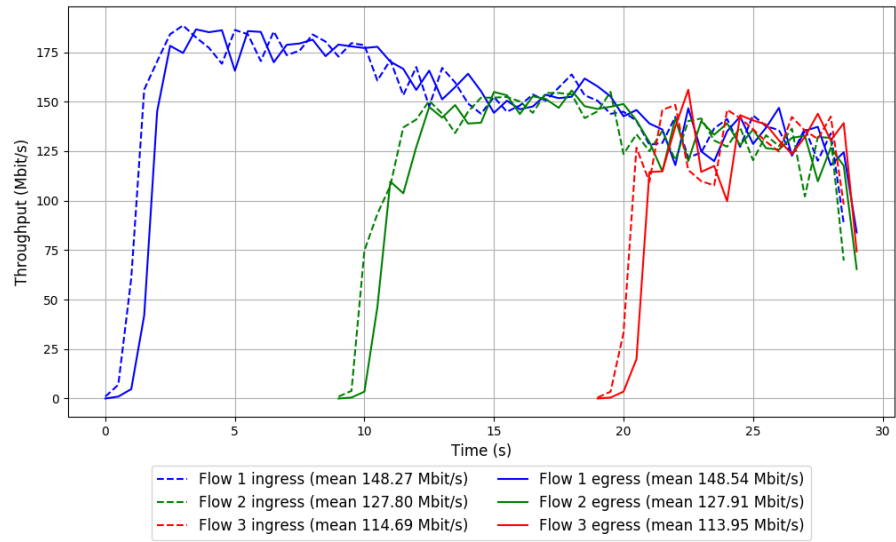# Run 5: Report of FillP-Sheep — Data Link

Flow 1 ingress (mean 444.65 Mbit/s) --- Flow 1 egress (mean 445.95 Mbit/s)
Flow 2 ingress (mean 323.83 Mbit/s) --- Flow 2 egress (mean 323.79 Mbit/s)
Flow 3 ingress (mean 233.76 Mbit/s) --- Flow 3 egress (mean 233.06 Mbit/s)

Flow 1 (95th percentile 112.15 ms) Flow 2 (95th percentile 86.61 ms) Flow 3 (95th percentile 86.01 ms)
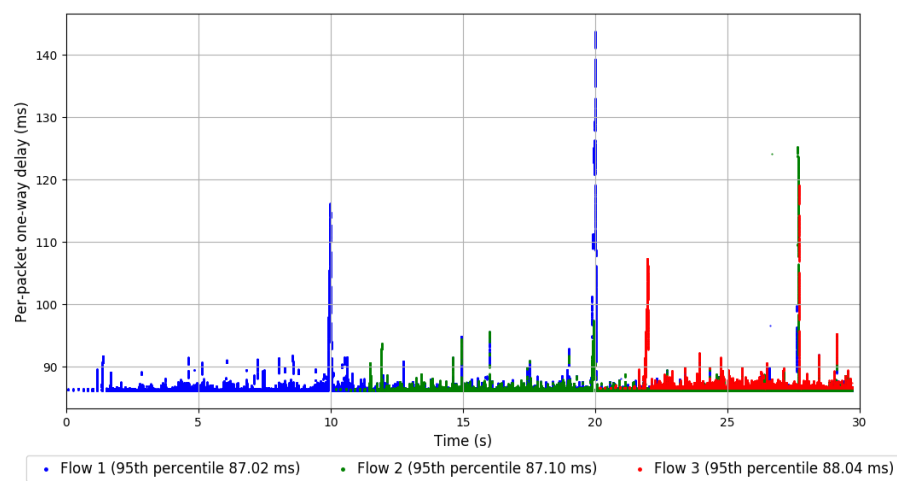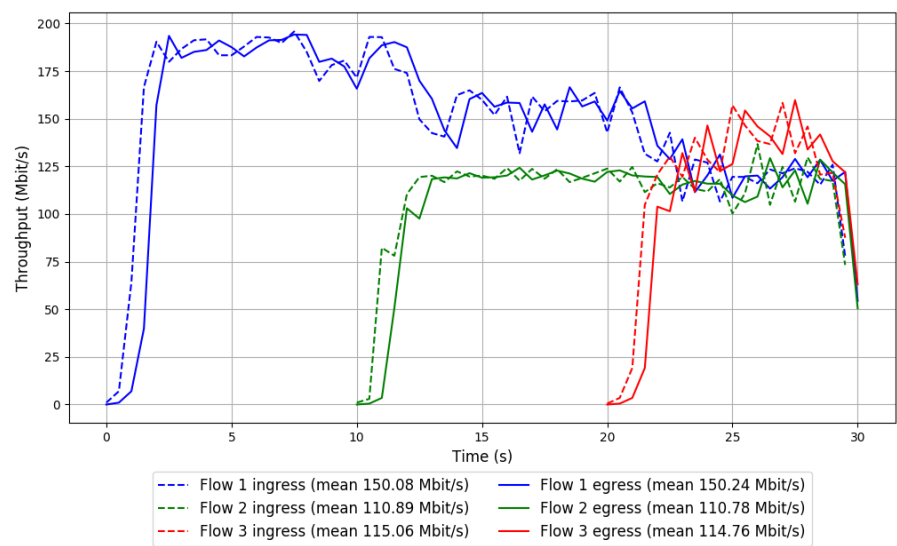
```
Run 1: Statistics of Indigo

Start at: 2019-09-18 04:01:34
End at: 2019-09-18 04:02:04
Local clock offset: 0.069 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 273.82 Mbit/s
95th percentile per-packet one-way delay: 87.158 ms
Loss rate: 0.82%
-- Flow 1:
Average throughput: 148.54 Mbit/s
95th percentile per-packet one-way delay: 87.034 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 127.91 Mbit/s
95th percentile per-packet one-way delay: 87.165 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 113.95 Mbit/s
95th percentile per-packet one-way delay: 87.447 ms
Loss rate: 2.41%
```
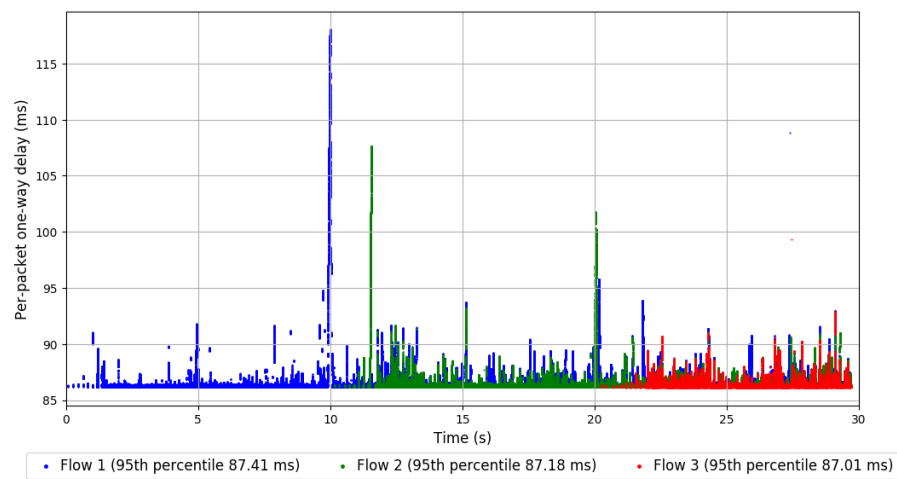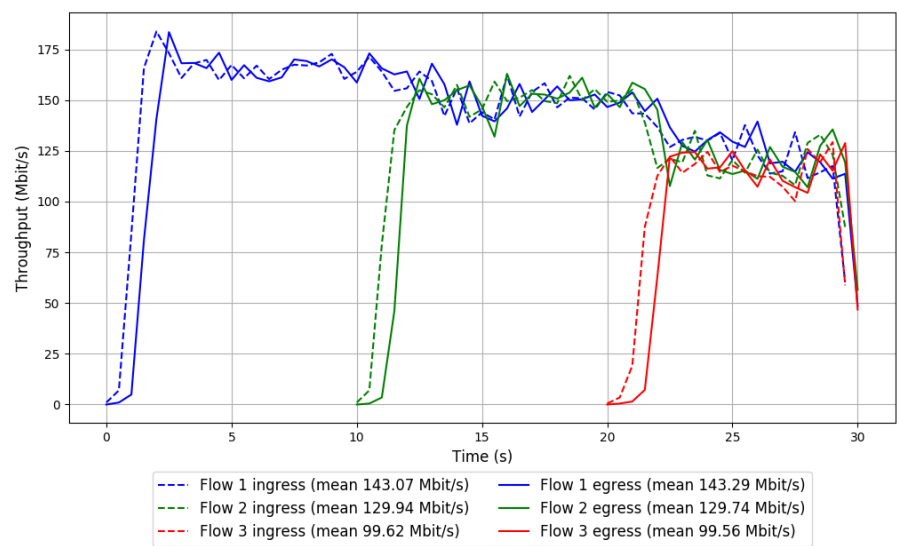
Run 1: Report of Indigo — Data Link

```
Run 2: Statistics of Indigo

Start at: 2019-09-18 04:40:39
End at: 2019-09-18 04:41:09
Local clock offset: 0.341 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.15 Mbit/s
95th percentile per-packet one-way delay: 87.196 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 150.24 Mbit/s
95th percentile per-packet one-way delay: 87.016 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 110.78 Mbit/s
95th percentile per-packet one-way delay: 87.100 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 114.76 Mbit/s
95th percentile per-packet one-way delay: 88.036 ms
Loss rate: 2.03%
```

Run 2: Report of Indigo — Data Link

```
Run 3: Statistics of Indigo

Start at: 2019-09-18 05:20:12
End at: 2019-09-18 05:20:42
Local clock offset: 0.322 ms
Remote clock offset: -0.006 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.64 Mbit/s
95th percentile per-packet one-way delay: 87.292 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 143.29 Mbit/s
95th percentile per-packet one-way delay: 87.414 ms
Loss rate: 0.43%
-- Flow 2:
Average throughput: 129.74 Mbit/s
95th percentile per-packet one-way delay: 87.182 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 99.56 Mbit/s
95th percentile per-packet one-way delay: 87.007 ms
Loss rate: 1.86%
```
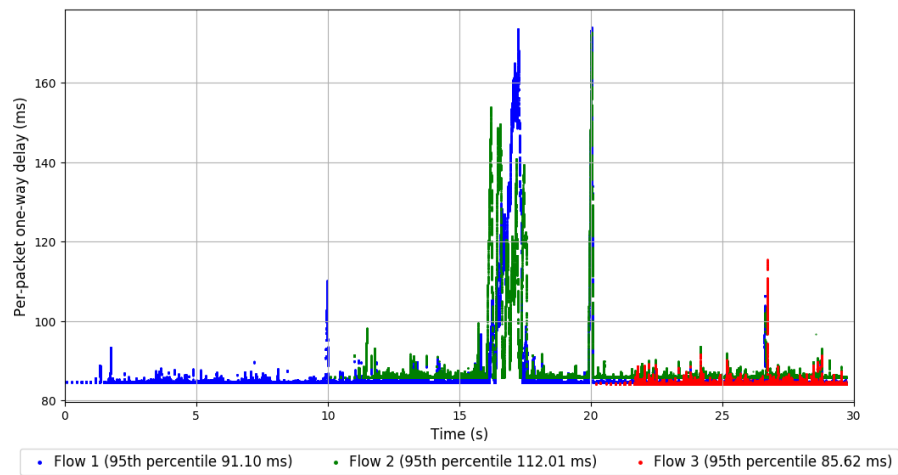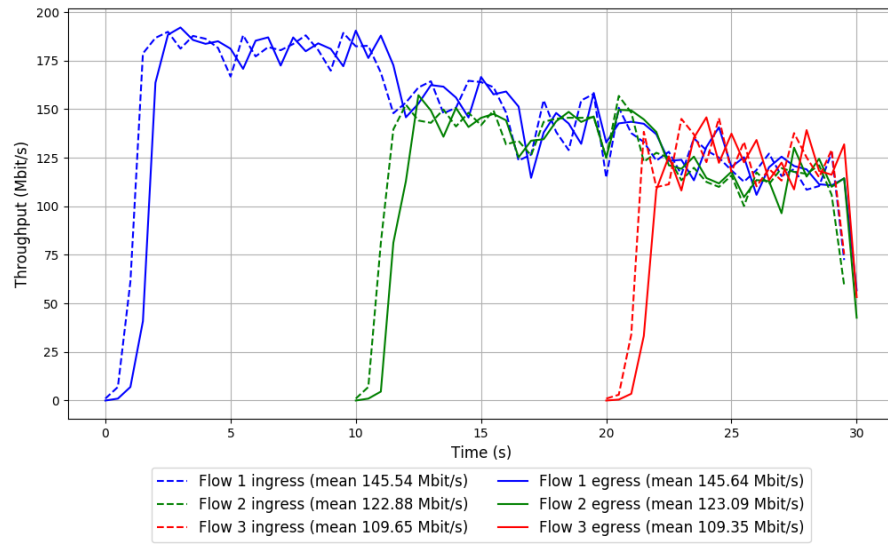
Run 3: Report of Indigo — Data Link

```
Run 4: Statistics of Indigo

Start at: 2019-09-18 05:59:35
End at: 2019-09-18 06:00:05
Local clock offset: 0.353 ms
Remote clock offset: -0.08 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 262.26 Mbit/s
95th percentile per-packet one-way delay: 93.781 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 145.64 Mbit/s
95th percentile per-packet one-way delay: 91.097 ms
Loss rate: 0.50%
-- Flow 2:
Average throughput: 123.09 Mbit/s
95th percentile per-packet one-way delay: 112.009 ms
Loss rate: 0.70%
-- Flow 3:
Average throughput: 109.35 Mbit/s
95th percentile per-packet one-way delay: 85.619 ms
Loss rate: 2.02%
```
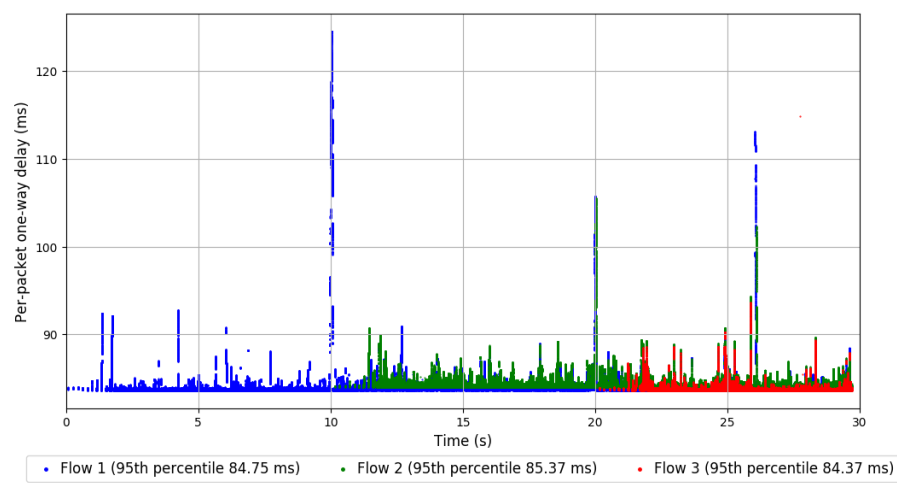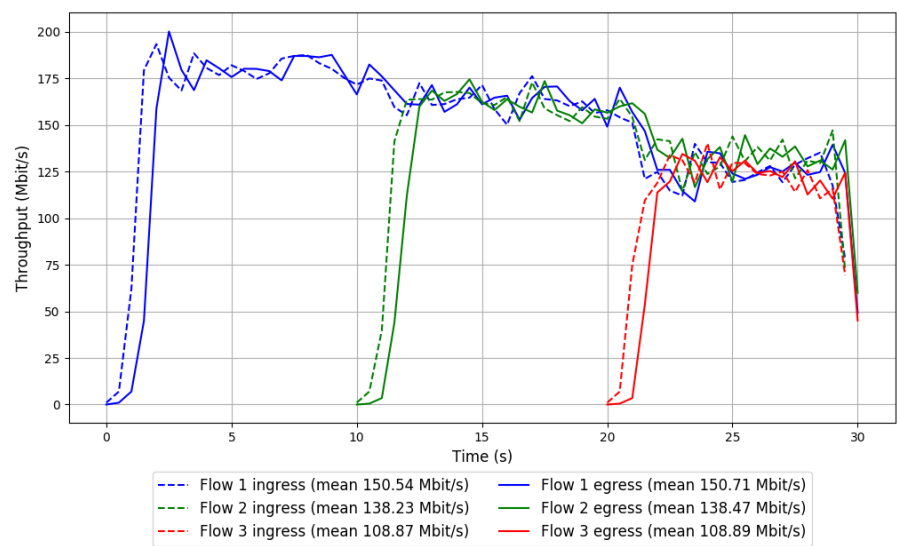
Run 4: Report of Indigo — Data Link

```
Run 5: Statistics of Indigo

Start at: 2019-09-18 06:39:08
End at: 2019-09-18 06:39:38
Local clock offset: -0.201 ms
Remote clock offset: 0.006 ms


# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 277.12 Mbit/s
95th percentile per-packet one-way delay: 85.004 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 150.71 Mbit/s
95th percentile per-packet one-way delay: 84.746 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 138.47 Mbit/s
95th percentile per-packet one-way delay: 85.368 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 108.89 Mbit/s
95th percentile per-packet one-way delay: 84.368 ms
Loss rate: 1.80%
```
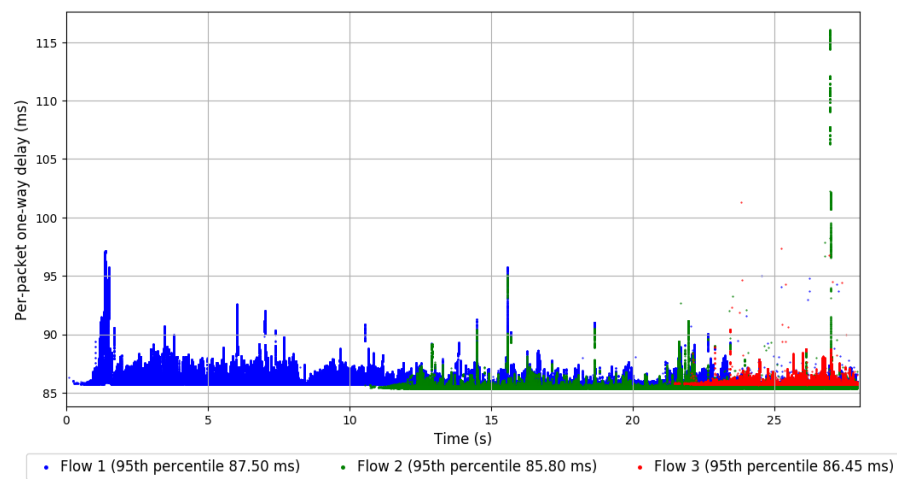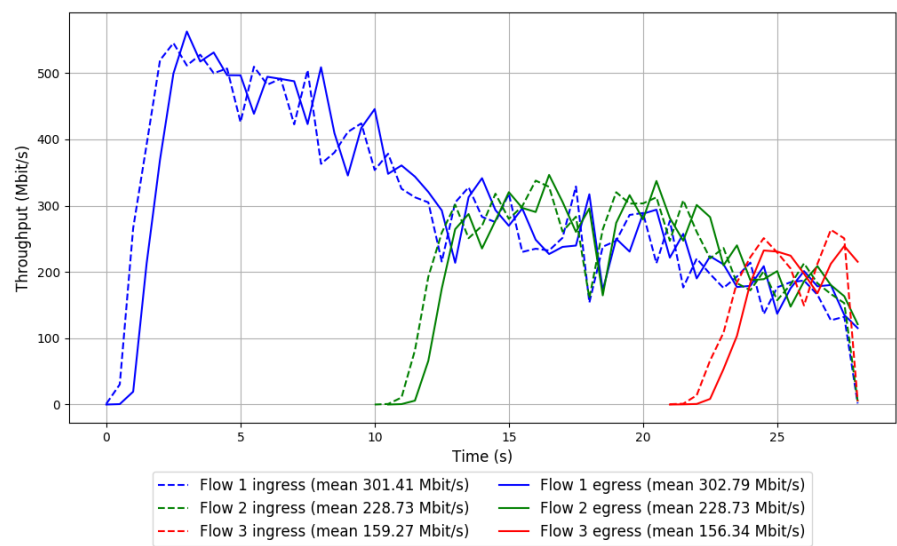
Run 5: Report of Indigo — Data Link

Flow 1 ingress (mean 150.54 Mbit/s) --- Flow 1 egress (mean 150.71 Mbit/s)
Flow 2 ingress (mean 138.23 Mbit/s) --- Flow 2 egress (mean 138.47 Mbit/s)
Flow 3 ingress (mean 108.87 Mbit/s) --- Flow 3 egress (mean 108.89 Mbit/s)

Flow 1 (95th percentile 84.75 ms)   Flow 2 (95th percentile 85.37 ms)   Flow 3 (95th percentile 84.37 ms)
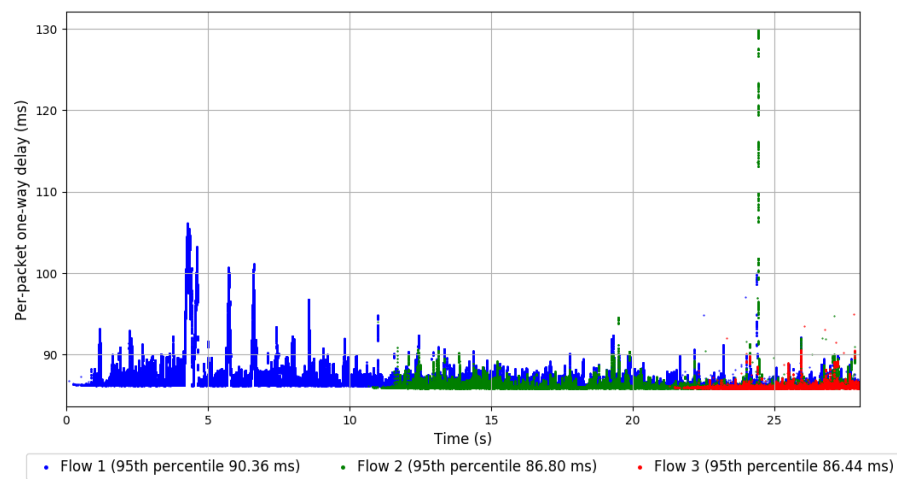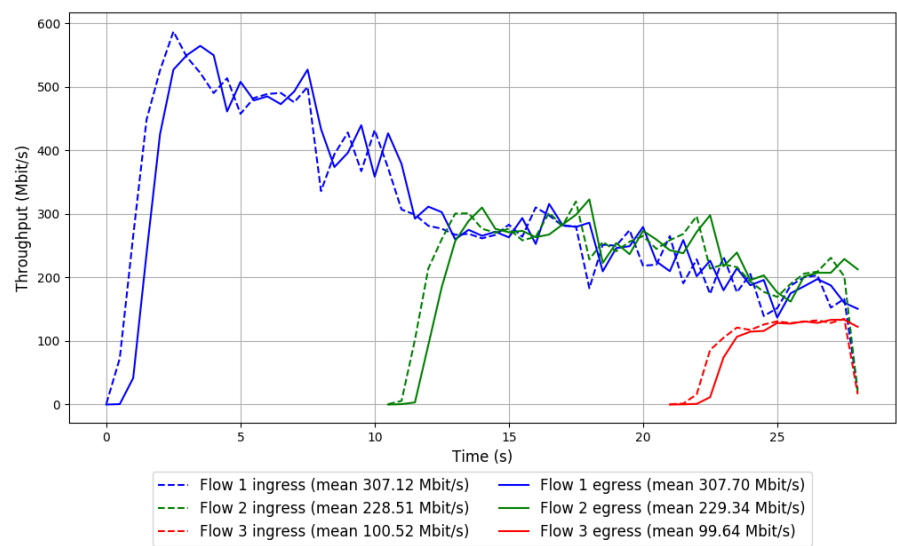
64

```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-09-18 03:44:18
End at: 2019-09-18 03:44:48
Local clock offset: -0.45 ms
Remote clock offset: -0.099 ms

# Below is generated by plot.py at 2019-09-18 07:58:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.68 Mbit/s
95th percentile per-packet one-way delay: 87.255 ms
Loss rate: 0.74%
-- Flow 1:
Average throughput: 302.79 Mbit/s
95th percentile per-packet one-way delay: 87.497 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 228.73 Mbit/s
95th percentile per-packet one-way delay: 85.798 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 156.34 Mbit/s
95th percentile per-packet one-way delay: 86.449 ms
Loss rate: 4.34%
```
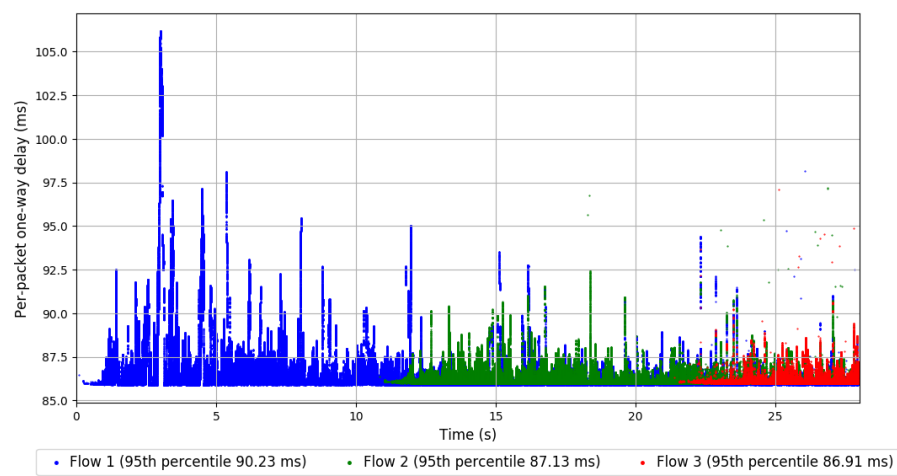
Run 1: Report of Indigo-MusesC3 — Data Link

```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-09-18 04:23:28
End at: 2019-09-18 04:23:58
Local clock offset: -0.04 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-09-18 07:59:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 473.97 Mbit/s
95th percentile per-packet one-way delay: 89.175 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 307.70 Mbit/s
95th percentile per-packet one-way delay: 90.365 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 229.34 Mbit/s
95th percentile per-packet one-way delay: 86.802 ms
Loss rate: 0.65%
-- Flow 3:
Average throughput: 99.64 Mbit/s
95th percentile per-packet one-way delay: 86.436 ms
Loss rate: 3.41%
```

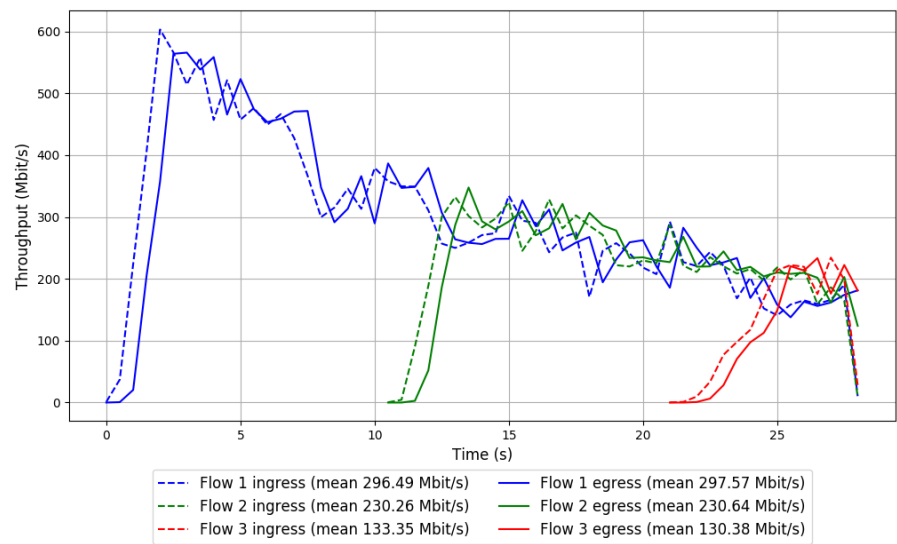Run 2: Report of Indigo-MusesC3 — Data Link

```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-09-18 05:02:39
End at: 2019-09-18 05:03:09
Local clock offset: 0.08 ms
Remote clock offset: -0.012 ms


# Below is generated by plot.py at 2019-09-18 08:01:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 469.88 Mbit/s
95th percentile per-packet one-way delay: 88.936 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 297.57 Mbit/s
95th percentile per-packet one-way delay: 90.232 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 230.64 Mbit/s
95th percentile per-packet one-way delay: 87.129 ms
Loss rate: 0.85%
-- Flow 3:
Average throughput: 130.38 Mbit/s
95th percentile per-packet one-way delay: 86.911 ms
Loss rate: 4.75%
```

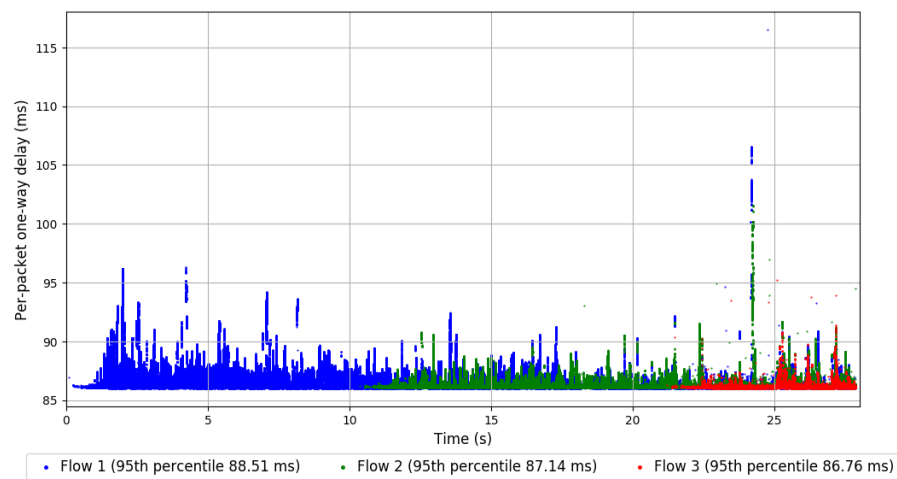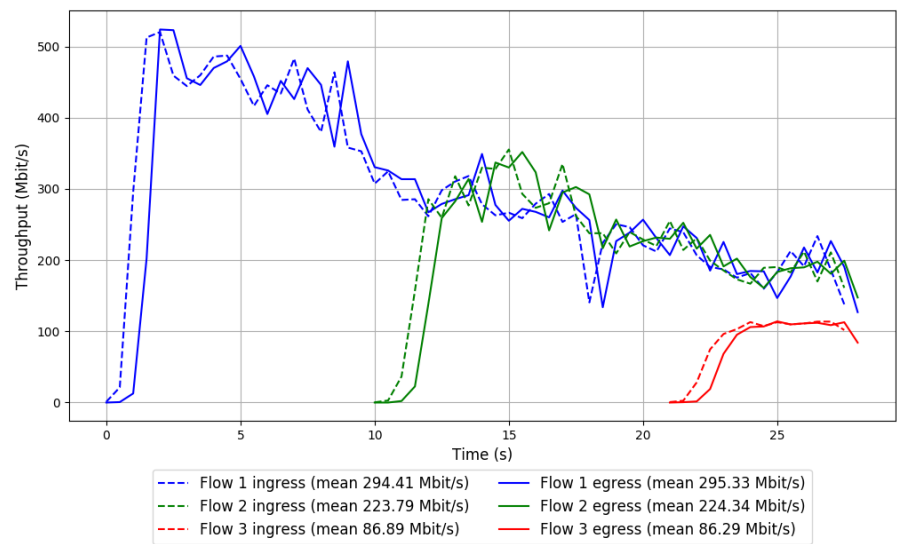## Run 3: Report of Indigo-MusesC3 — Data Link

```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-09-18 05:41:41
End at: 2019-09-18 05:42:11
Local clock offset: 0.167 ms
Remote clock offset: -0.046 ms


# Below is generated by plot.py at 2019-09-18 08:03:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.19 Mbit/s
95th percentile per-packet one-way delay: 88.054 ms
Loss rate: 0.60%
-- Flow 1:
Average throughput: 295.33 Mbit/s
95th percentile per-packet one-way delay: 88.509 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 224.34 Mbit/s
95th percentile per-packet one-way delay: 87.143 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 86.29 Mbit/s
95th percentile per-packet one-way delay: 86.764 ms
Loss rate: 3.26%
```

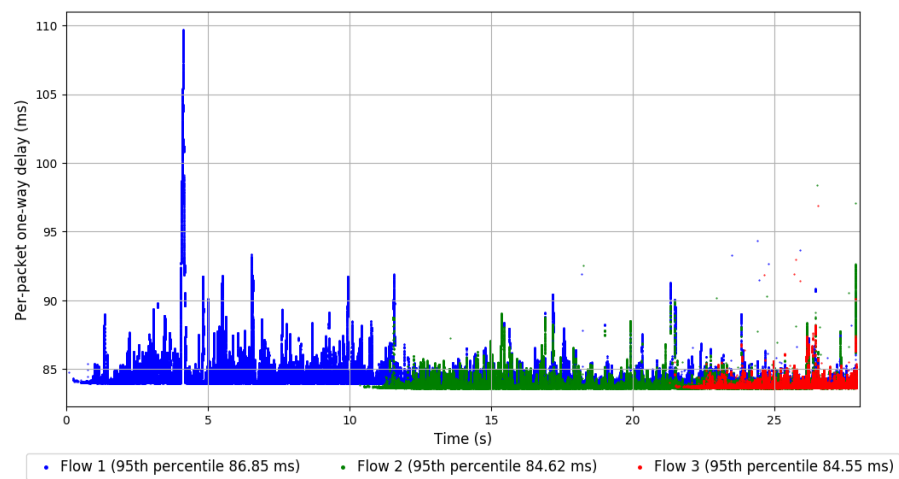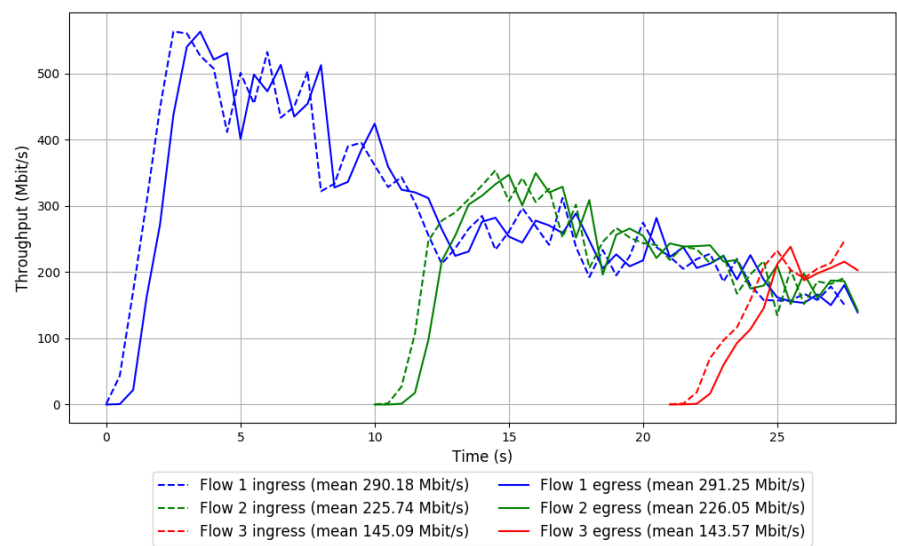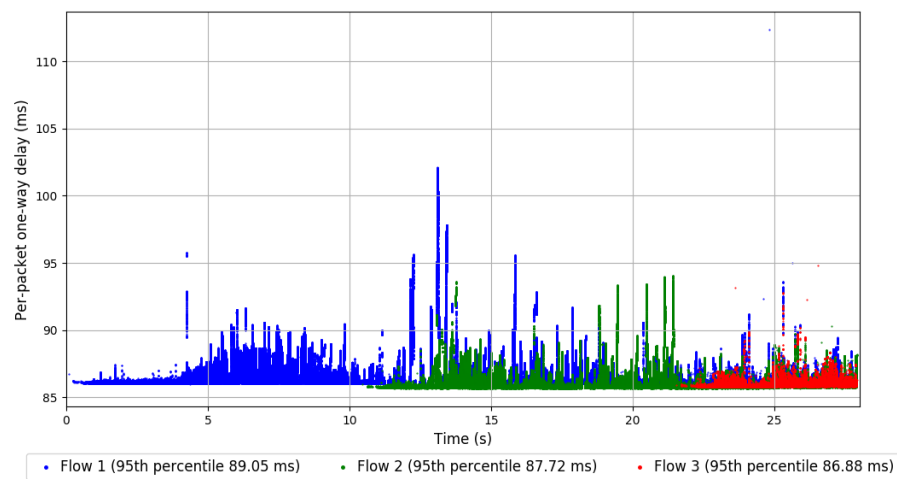Run 4: Report of Indigo-MusesC3 — Data Link

Flow 1 ingress (mean 294.41 Mbit/s) --- Flow 1 egress (mean 295.33 Mbit/s)
Flow 2 ingress (mean 223.79 Mbit/s) --- Flow 2 egress (mean 224.34 Mbit/s)
Flow 3 ingress (mean 86.89 Mbit/s) --- Flow 3 egress (mean 86.29 Mbit/s)

Flow 1 (95th percentile 88.51 ms)   Flow 2 (95th percentile 87.14 ms)   Flow 3 (95th percentile 86.76 ms)

```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-09-18 06:21:37
End at: 2019-09-18 06:22:07
Local clock offset: -0.221 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-09-18 08:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 467.76 Mbit/s
95th percentile per-packet one-way delay: 86.129 ms
Loss rate: 0.71%
-- Flow 1:
Average throughput: 291.25 Mbit/s
95th percentile per-packet one-way delay: 86.853 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 226.05 Mbit/s
95th percentile per-packet one-way delay: 84.624 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 143.57 Mbit/s
95th percentile per-packet one-way delay: 84.546 ms
Loss rate: 3.66%
```

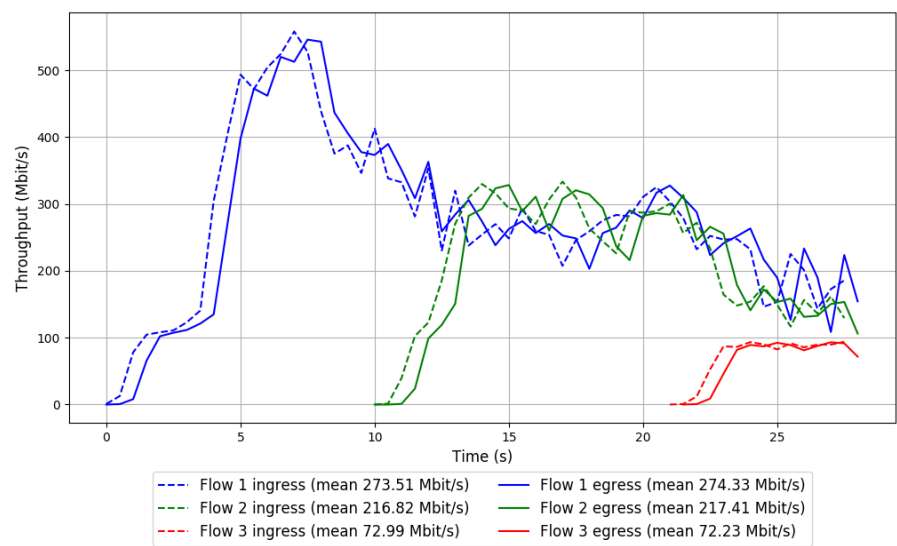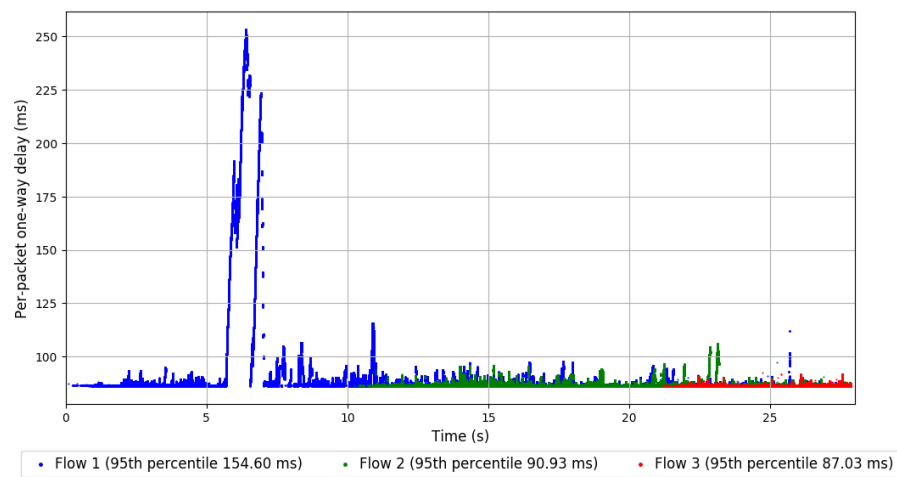Run 5: Report of Indigo-MusesC3 — Data Link

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```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-09-18 03:50:49
End at: 2019-09-18 03:51:19
Local clock offset: -0.145 ms
Remote clock offset: -0.097 ms


# Below is generated by plot.py at 2019-09-18 08:03:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 427.11 Mbit/s
95th percentile per-packet one-way delay: 88.584 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 274.33 Mbit/s
95th percentile per-packet one-way delay: 89.048 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 217.41 Mbit/s
95th percentile per-packet one-way delay: 87.715 ms
Loss rate: 0.72%
-- Flow 3:
Average throughput: 72.23 Mbit/s
95th percentile per-packet one-way delay: 86.876 ms
Loss rate: 3.65%
```

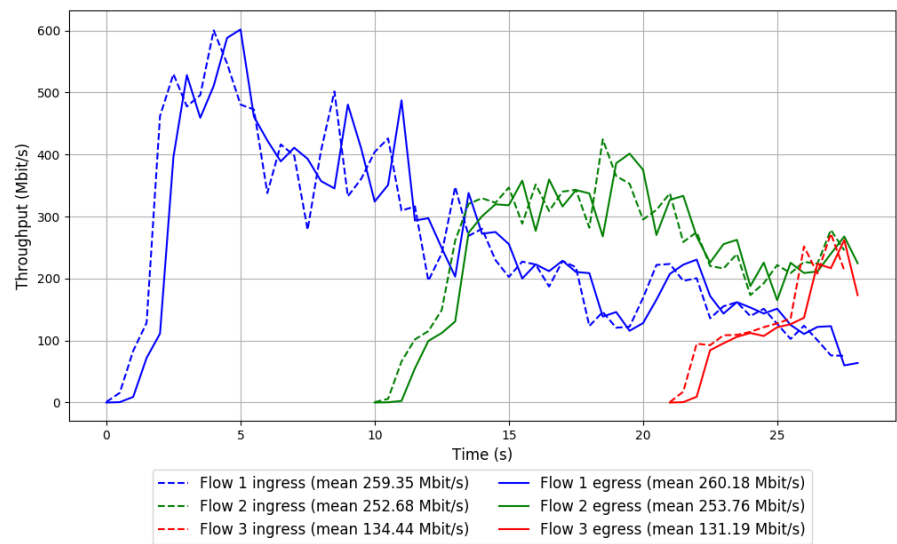Run 1: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 273.51 Mbit/s)
Flow 1 egress (mean 274.33 Mbit/s)
Flow 2 ingress (mean 216.82 Mbit/s)
Flow 2 egress (mean 217.41 Mbit/s)
Flow 3 ingress (mean 72.99 Mbit/s)
Flow 3 egress (mean 72.23 Mbit/s)

Flow 1 (95th percentile 89.05 ms)
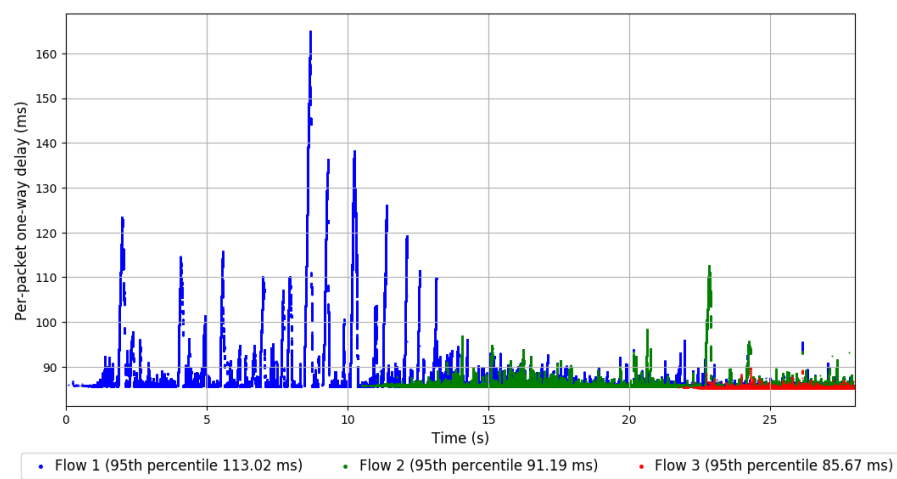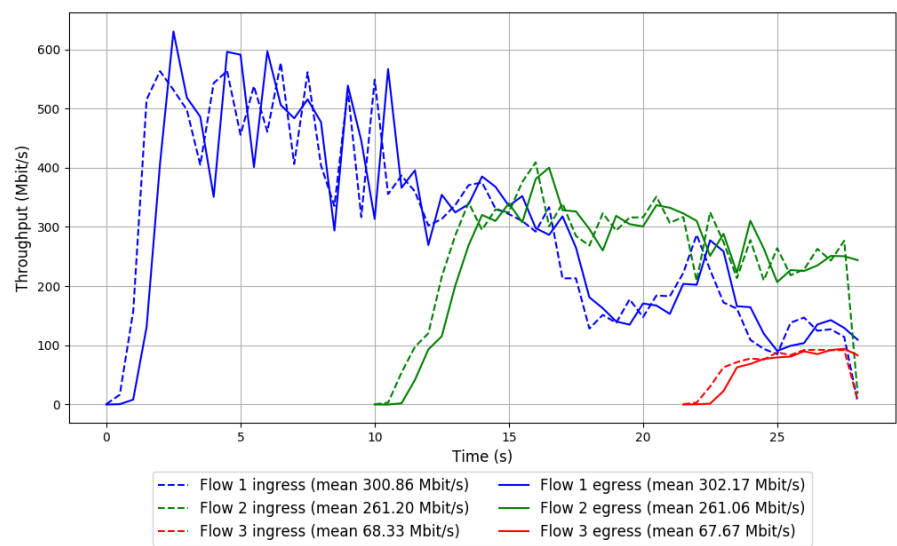Flow 2 (95th percentile 87.72 ms)
Flow 3 (95th percentile 86.88 ms)

```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-09-18 04:29:47
End at: 2019-09-18 04:30:17
Local clock offset: 0.343 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-09-18 08:04:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 452.84 Mbit/s
95th percentile per-packet one-way delay: 100.889 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 260.18 Mbit/s
95th percentile per-packet one-way delay: 154.601 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 253.76 Mbit/s
95th percentile per-packet one-way delay: 90.934 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 131.19 Mbit/s
95th percentile per-packet one-way delay: 87.028 ms
Loss rate: 4.93%
```

Run 2: Report of Indigo-MusesC5 — Data Link

```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-09-18 05:09:18
End at: 2019-09-18 05:09:48
Local clock offset: -0.495 ms
Remote clock offset: -0.008 ms

# Below is generated by plot.py at 2019-09-18 08:05:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.98 Mbit/s
95th percentile per-packet one-way delay: 107.695 ms
Loss rate: 0.62%
-- Flow 1:
Average throughput: 302.17 Mbit/s
95th percentile per-packet one-way delay: 113.019 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 261.06 Mbit/s
95th percentile per-packet one-way delay: 91.192 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 67.67 Mbit/s
95th percentile per-packet one-way delay: 85.673 ms
Loss rate: 3.64%
```
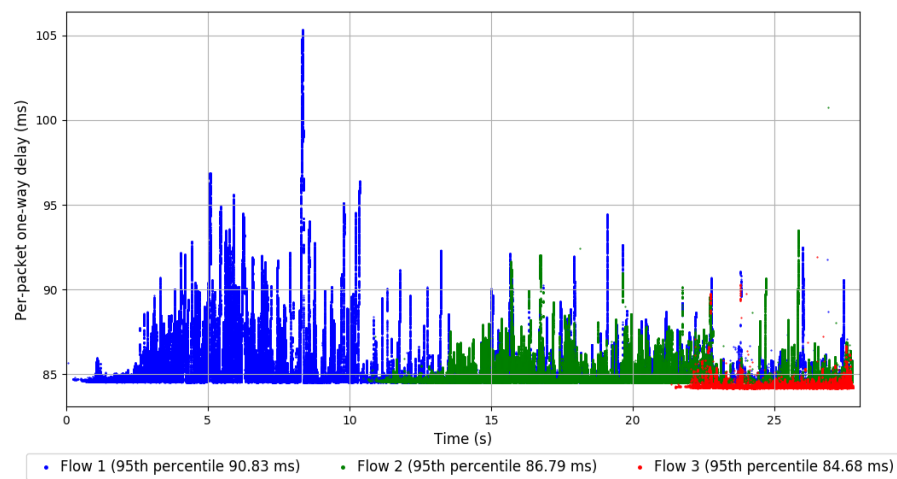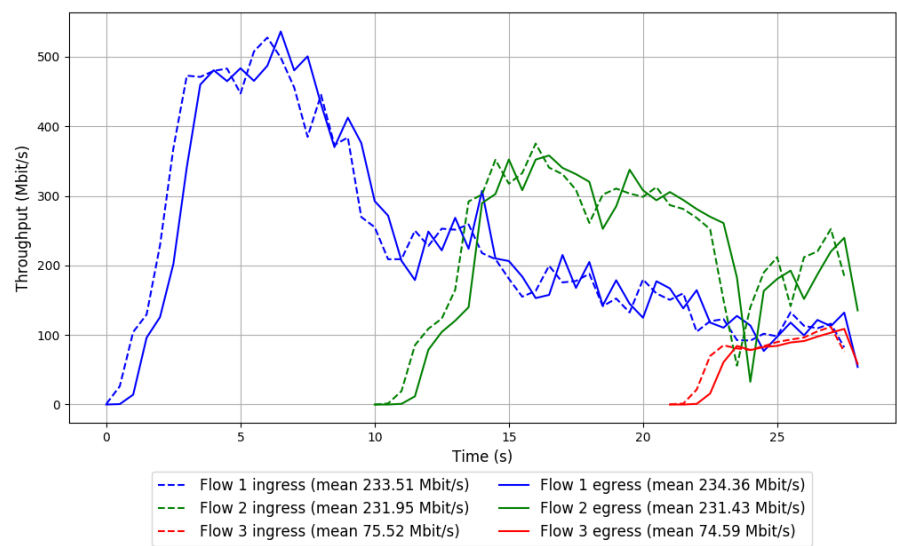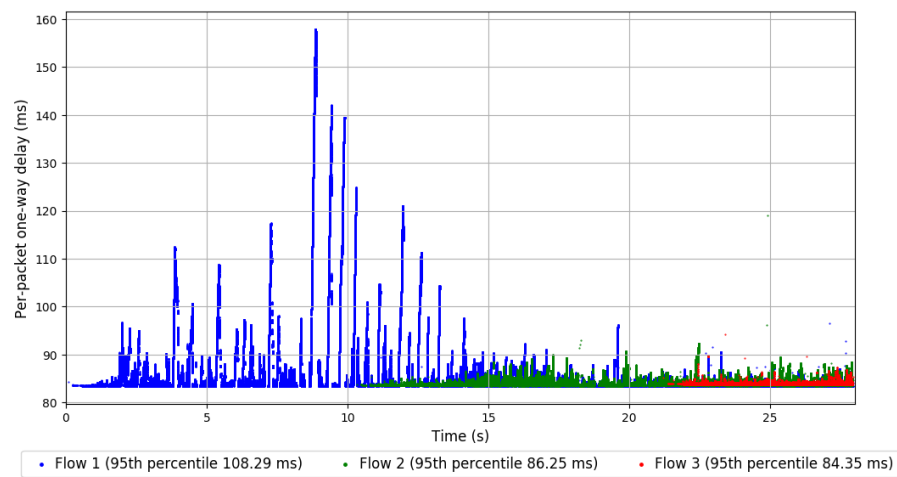
Run 3: Report of Indigo-MusesC5 — Data Link

```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-09-18 05:49:00
End at: 2019-09-18 05:49:30
Local clock offset: 0.318 ms
Remote clock offset: -0.06 ms


# Below is generated by plot.py at 2019-09-18 08:05:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 395.81 Mbit/s
95th percentile per-packet one-way delay: 89.506 ms
Loss rate: 0.81%
-- Flow 1:
Average throughput: 234.36 Mbit/s
95th percentile per-packet one-way delay: 90.826 ms
Loss rate: 0.27%
-- Flow 2:
Average throughput: 231.43 Mbit/s
95th percentile per-packet one-way delay: 86.789 ms
Loss rate: 1.31%
-- Flow 3:
Average throughput: 74.59 Mbit/s
95th percentile per-packet one-way delay: 84.681 ms
Loss rate: 3.81%
```

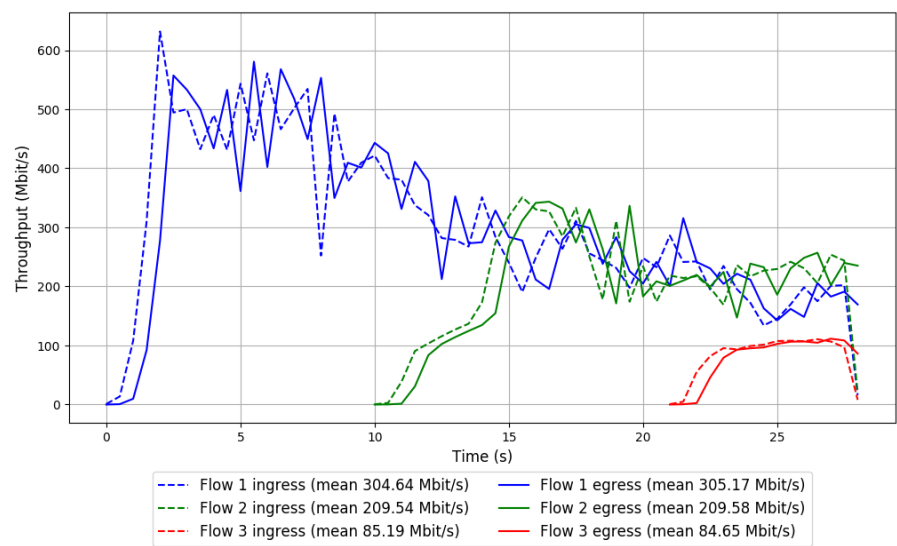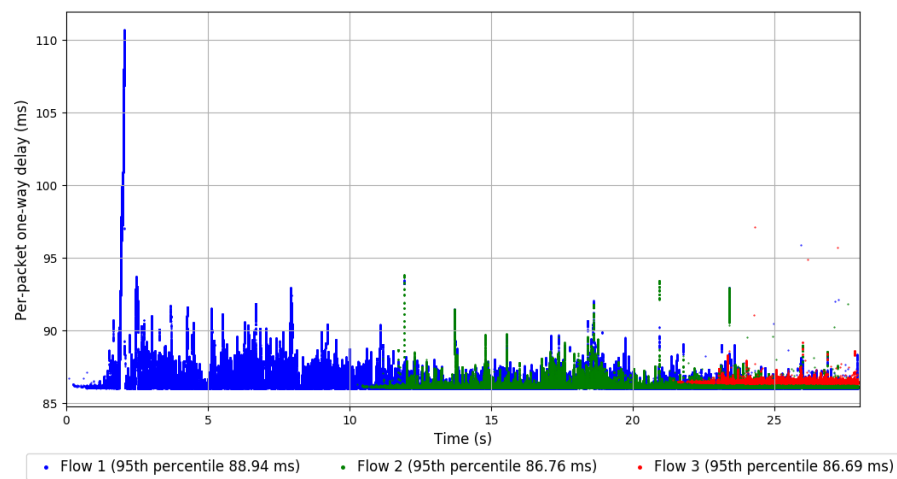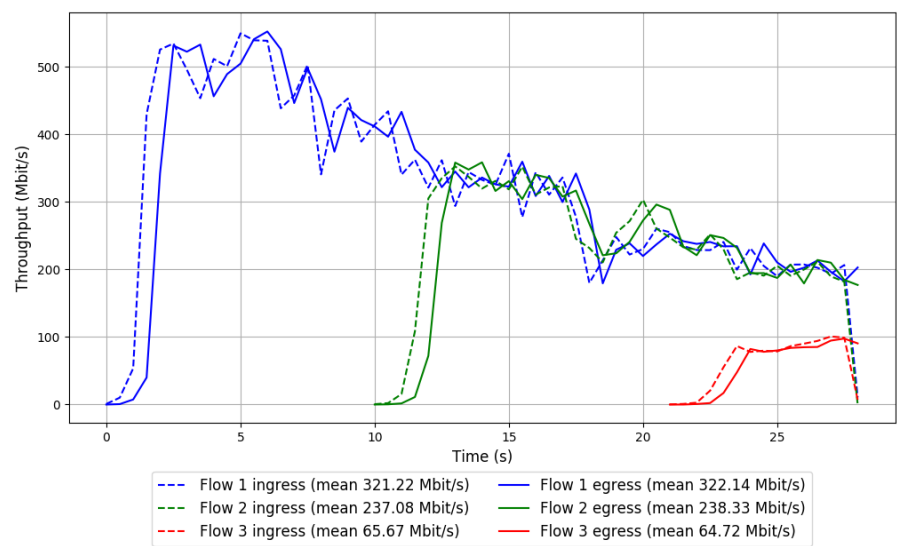Run 4: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 233.51 Mbit/s) --- Flow 1 egress (mean 234.36 Mbit/s) ---
Flow 2 ingress (mean 231.95 Mbit/s) --- Flow 2 egress (mean 231.43 Mbit/s) ---
Flow 3 ingress (mean 75.52 Mbit/s) --- Flow 3 egress (mean 74.59 Mbit/s) ---

Flow 1 (95th percentile 90.83 ms) • Flow 2 (95th percentile 86.79 ms) • Flow 3 (95th percentile 84.68 ms)

```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-09-18 06:28:13
End at: 2019-09-18 06:28:43
Local clock offset: -0.466 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-09-18 08:07:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 458.10 Mbit/s
95th percentile per-packet one-way delay: 101.744 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 305.17 Mbit/s
95th percentile per-packet one-way delay: 108.288 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 209.58 Mbit/s
95th percentile per-packet one-way delay: 86.248 ms
Loss rate: 0.96%
-- Flow 3:
Average throughput: 84.65 Mbit/s
95th percentile per-packet one-way delay: 84.347 ms
Loss rate: 3.19%
```
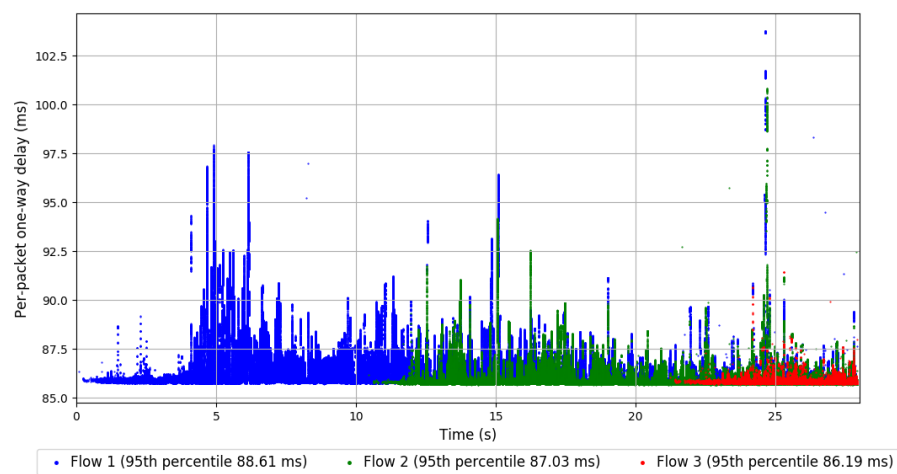
Run 5: Report of Indigo-MusesC5 — Data Link

Flow 1 ingress (mean 304.64 Mbit/s) ---- Flow 1 egress (mean 305.17 Mbit/s) ——
Flow 2 ingress (mean 209.54 Mbit/s) ---- Flow 2 egress (mean 209.58 Mbit/s) ——
Flow 3 ingress (mean 85.19 Mbit/s) ---- Flow 3 egress (mean 84.65 Mbit/s) ——

• Flow 1 (95th percentile 108.29 ms) • Flow 2 (95th percentile 86.25 ms) • Flow 3 (95th percentile 84.35 ms)

```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-09-18 03:55:43
End at: 2019-09-18 03:56:13
Local clock offset: 0.192 ms
Remote clock offset: -0.098 ms


# Below is generated by plot.py at 2019-09-18 08:10:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 488.34 Mbit/s
95th percentile per-packet one-way delay: 88.176 ms
Loss rate: 0.49%
-- Flow 1:
Average throughput: 322.14 Mbit/s
95th percentile per-packet one-way delay: 88.938 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 238.33 Mbit/s
95th percentile per-packet one-way delay: 86.761 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 64.72 Mbit/s
95th percentile per-packet one-way delay: 86.691 ms
Loss rate: 4.02%
```
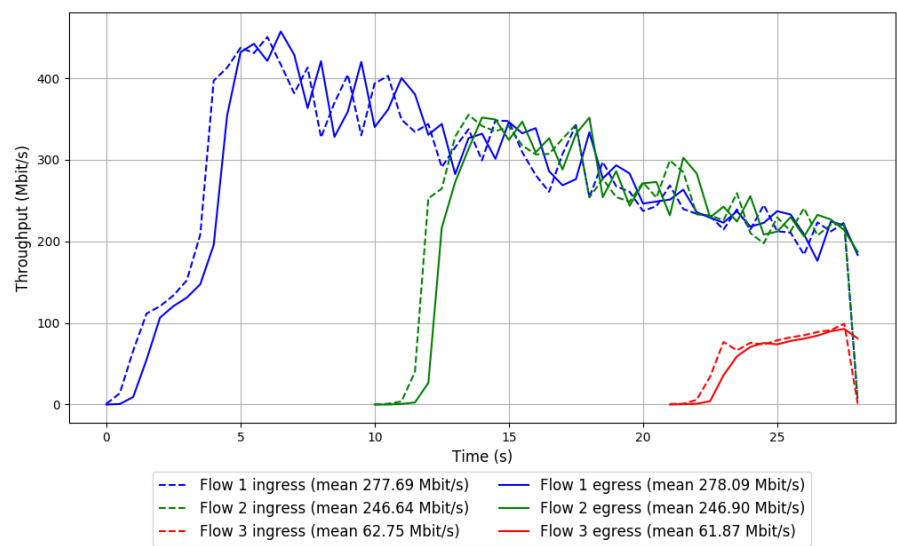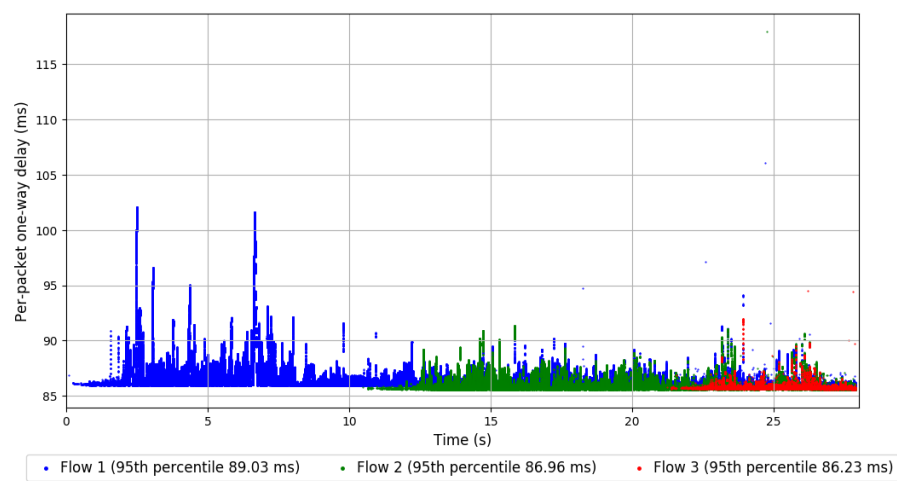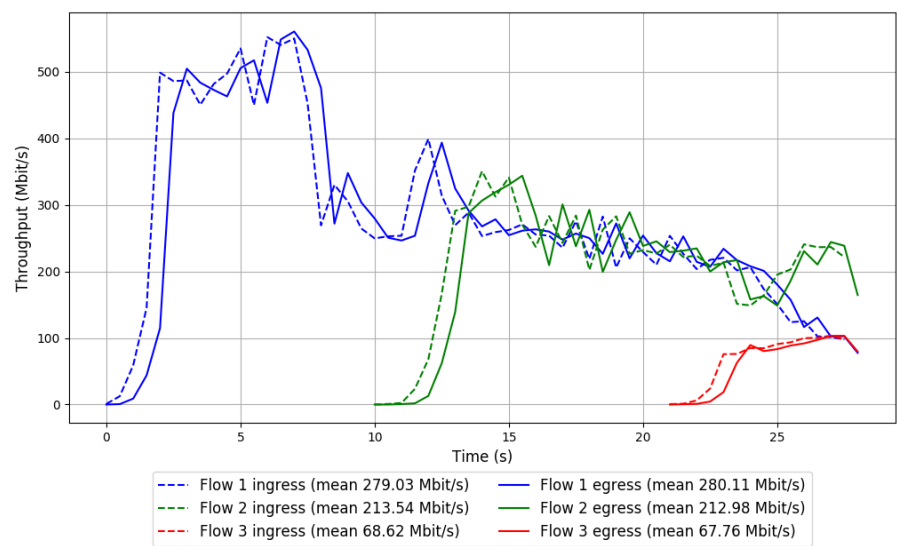
Run 1: Report of Indigo-MusesD — Data Link

```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-09-18 04:34:52
End at: 2019-09-18 04:35:22
Local clock offset: -0.159 ms
Remote clock offset: 0.005 ms


# Below is generated by plot.py at 2019-09-18 08:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 447.84 Mbit/s
95th percentile per-packet one-way delay: 88.032 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 278.09 Mbit/s
95th percentile per-packet one-way delay: 88.608 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 246.90 Mbit/s
95th percentile per-packet one-way delay: 87.026 ms
Loss rate: 0.87%
-- Flow 3:
Average throughput: 61.87 Mbit/s
95th percentile per-packet one-way delay: 86.193 ms
Loss rate: 3.87%
```
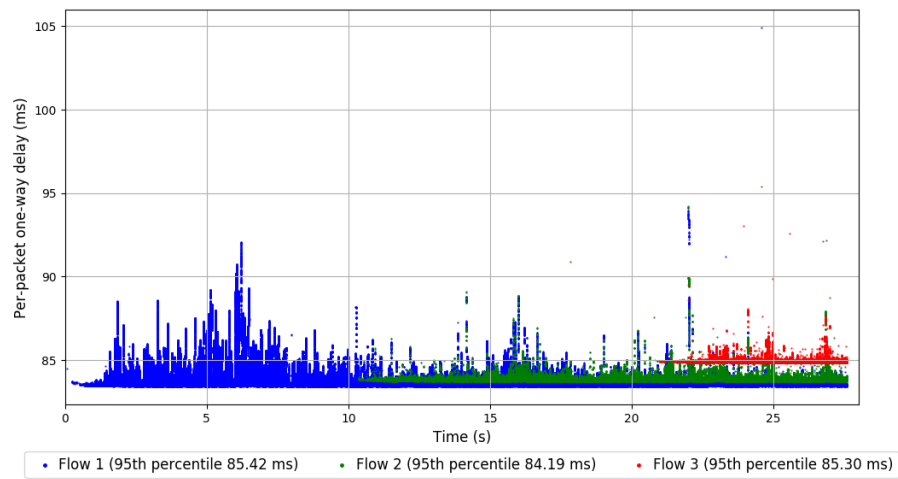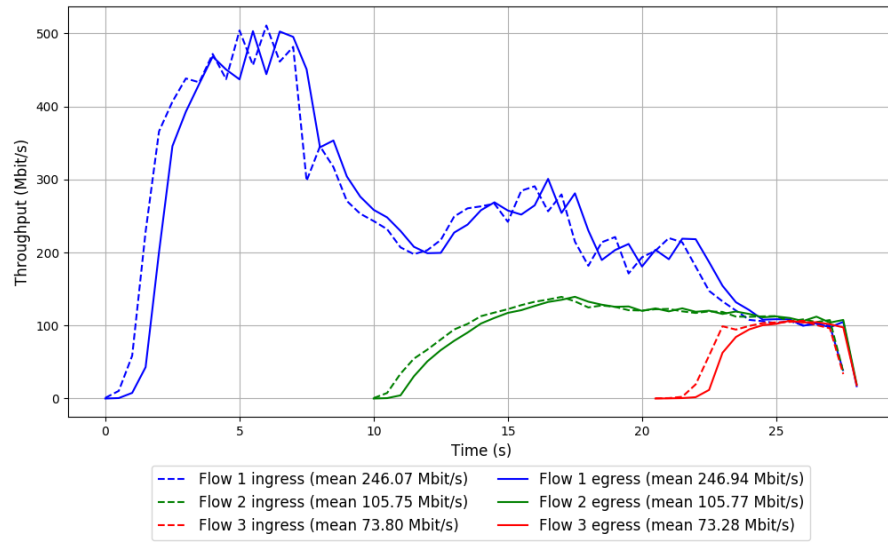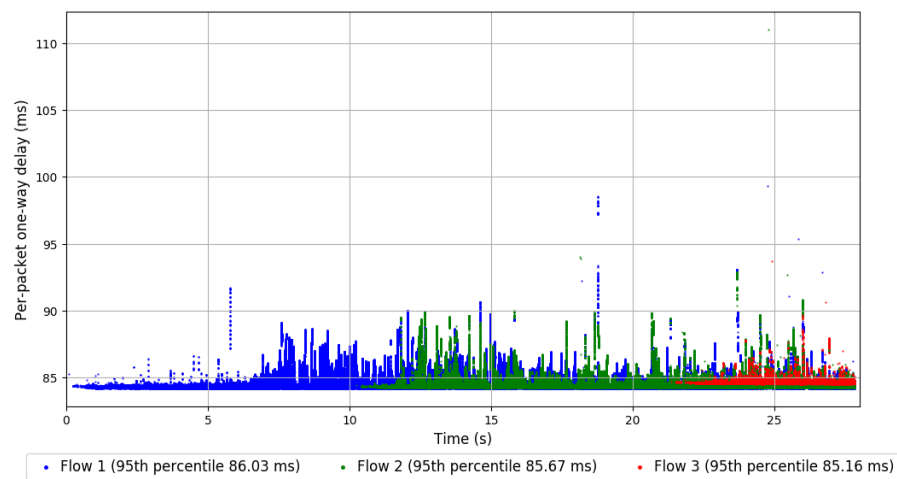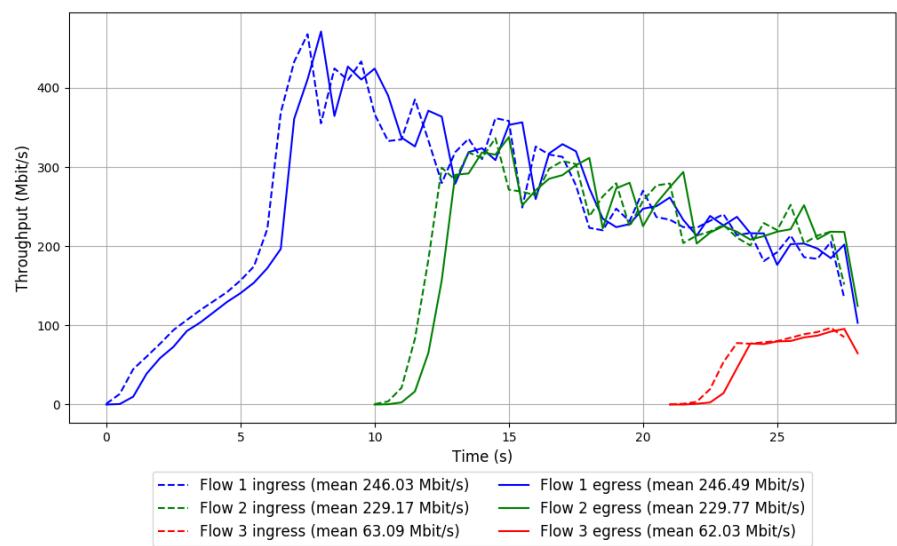
Run 2: Report of Indigo-MusesD — Data Link

```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-09-18 05:14:23
End at: 2019-09-18 05:14:53
Local clock offset: -0.271 ms
Remote clock offset: -0.004 ms


# Below is generated by plot.py at 2019-09-18 08:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 429.72 Mbit/s
95th percentile per-packet one-way delay: 88.244 ms
Loss rate: 0.68%
-- Flow 1:
Average throughput: 280.11 Mbit/s
95th percentile per-packet one-way delay: 89.035 ms
Loss rate: 0.24%
-- Flow 2:
Average throughput: 212.98 Mbit/s
95th percentile per-packet one-way delay: 86.958 ms
Loss rate: 1.23%
-- Flow 3:
Average throughput: 67.76 Mbit/s
95th percentile per-packet one-way delay: 86.226 ms
Loss rate: 3.72%
```

Run 3: Report of Indigo-MusesD — Data Link

Flow 1 ingress (mean 279.03 Mbit/s) ---- Flow 1 egress (mean 280.11 Mbit/s) ——
Flow 2 ingress (mean 213.54 Mbit/s) ---- Flow 2 egress (mean 212.98 Mbit/s) ——
Flow 3 ingress (mean 68.62 Mbit/s) ---- Flow 3 egress (mean 67.76 Mbit/s) ——

Flow 1 (95th percentile 89.03 ms)   Flow 2 (95th percentile 86.96 ms)   Flow 3 (95th percentile 86.23 ms)

```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-09-18 05:53:52
End at: 2019-09-18 05:54:22
Local clock offset: -0.487 ms
Remote clock offset: -0.073 ms


# Below is generated by plot.py at 2019-09-18 08:11:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.87 Mbit/s
95th percentile per-packet one-way delay: 85.207 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 246.94 Mbit/s
95th percentile per-packet one-way delay: 85.419 ms
Loss rate: 0.26%
-- Flow 2:
Average throughput: 105.77 Mbit/s
95th percentile per-packet one-way delay: 84.193 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 73.28 Mbit/s
95th percentile per-packet one-way delay: 85.303 ms
Loss rate: 3.13%
```

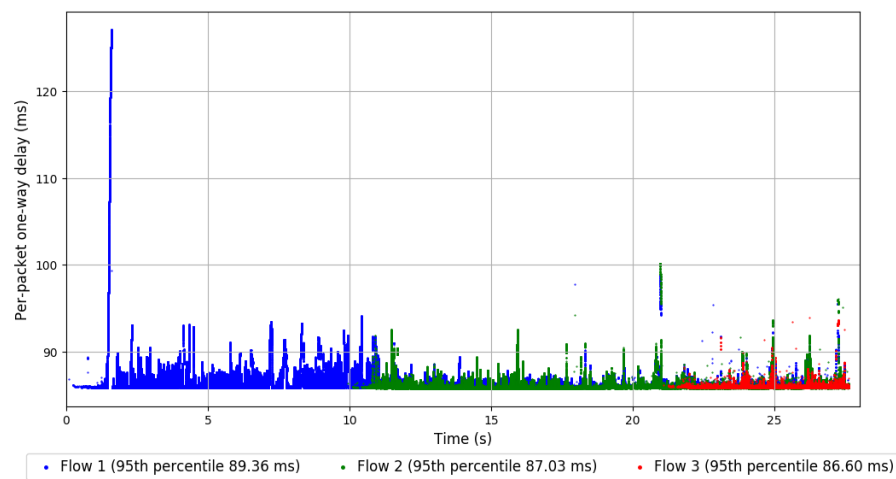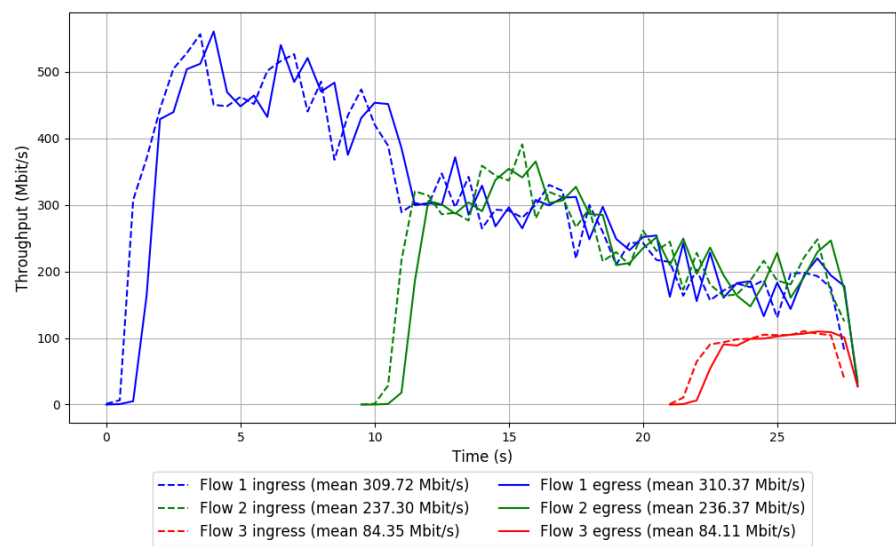Run 4: Report of Indigo-MusesD — Data Link

```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-09-18 06:33:17
End at: 2019-09-18 06:33:47
Local clock offset: 0.325 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2019-09-18 08:11:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 406.43 Mbit/s
95th percentile per-packet one-way delay: 85.902 ms
Loss rate: 0.70%
-- Flow 1:
Average throughput: 246.49 Mbit/s
95th percentile per-packet one-way delay: 86.026 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 229.77 Mbit/s
95th percentile per-packet one-way delay: 85.672 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 62.03 Mbit/s
95th percentile per-packet one-way delay: 85.161 ms
Loss rate: 4.35%
```

Run 5: Report of Indigo-MusesD — Data Link

```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-09-18 03:42:39
End at: 2019-09-18 03:43:09
Local clock offset: -0.001 ms
Remote clock offset: -0.101 ms


# Below is generated by plot.py at 2019-09-18 08:14:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 481.87 Mbit/s
95th percentile per-packet one-way delay: 88.622 ms
Loss rate: 0.84%
-- Flow 1:
Average throughput: 310.37 Mbit/s
95th percentile per-packet one-way delay: 89.362 ms
Loss rate: 0.42%
-- Flow 2:
Average throughput: 236.37 Mbit/s
95th percentile per-packet one-way delay: 87.028 ms
Loss rate: 1.40%
-- Flow 3:
Average throughput: 84.11 Mbit/s
95th percentile per-packet one-way delay: 86.601 ms
Loss rate: 2.85%
```
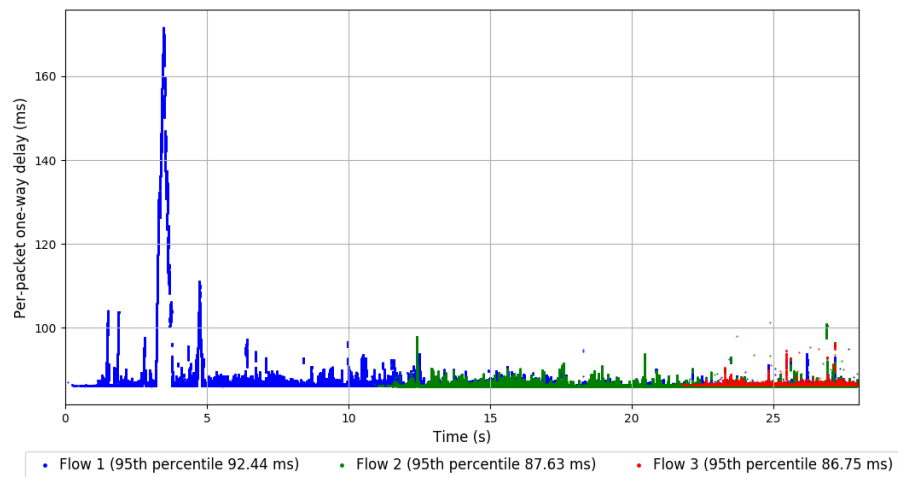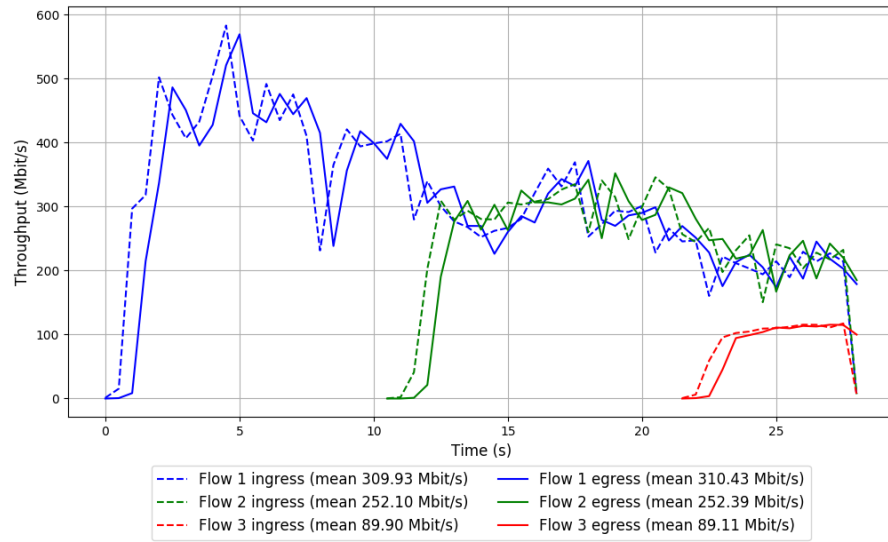
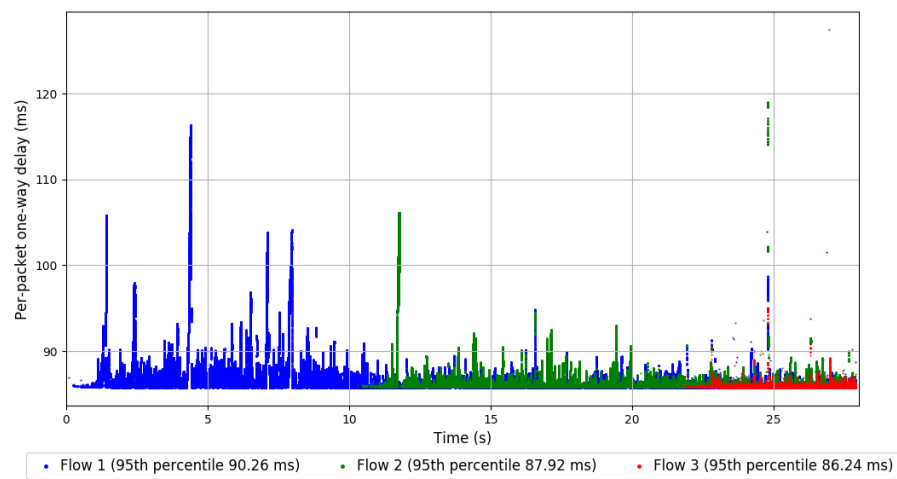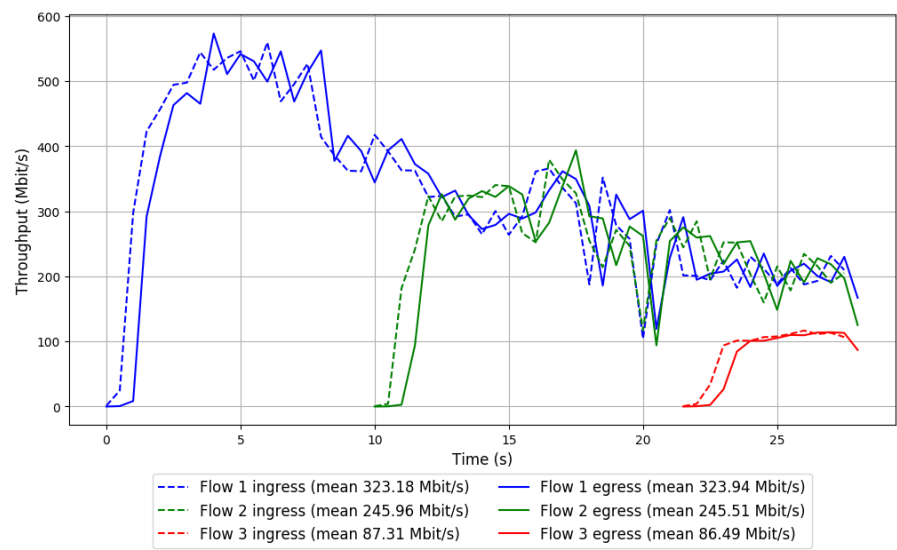Run 1: Report of Indigo-MusesT — Data Link

96

```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-09-18 04:21:48
End at: 2019-09-18 04:22:18
Local clock offset: 0.159 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-09-18 08:14:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 485.04 Mbit/s
95th percentile per-packet one-way delay: 89.983 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 310.43 Mbit/s
95th percentile per-packet one-way delay: 92.445 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 252.39 Mbit/s
95th percentile per-packet one-way delay: 87.632 ms
Loss rate: 0.88%
-- Flow 3:
Average throughput: 89.11 Mbit/s
95th percentile per-packet one-way delay: 86.749 ms
Loss rate: 3.49%
```
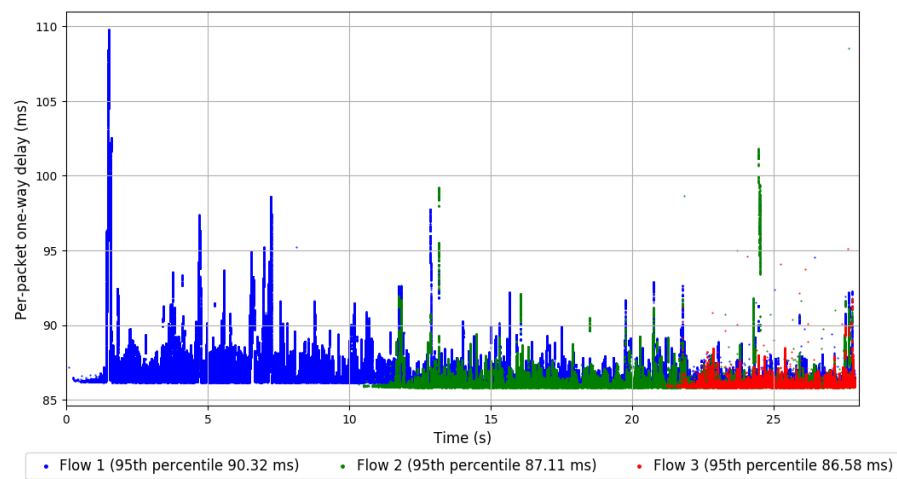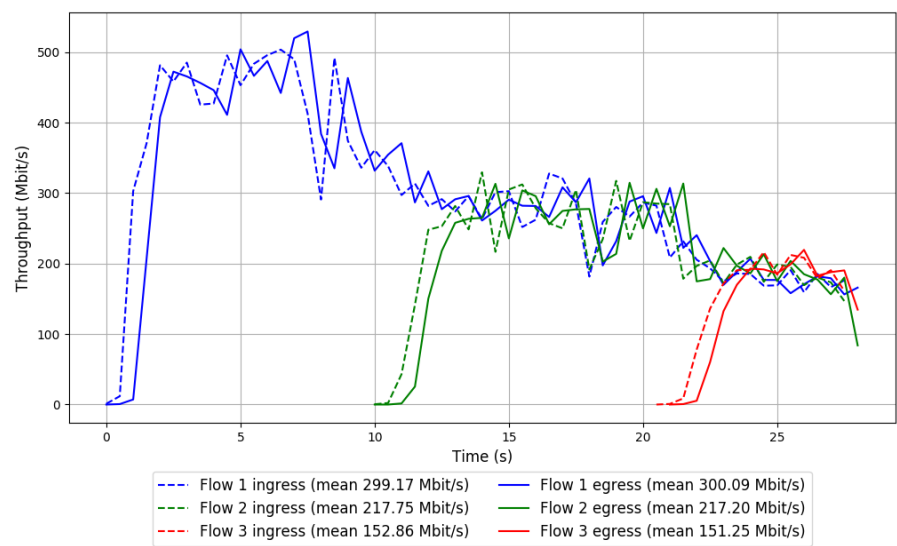
Run 2: Report of Indigo-MusesT — Data Link

```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-09-18 05:00:58
End at: 2019-09-18 05:01:28
Local clock offset: -0.119 ms
Remote clock offset: -0.051 ms


# Below is generated by plot.py at 2019-09-18 08:16:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.43 Mbit/s
95th percentile per-packet one-way delay: 89.416 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 323.94 Mbit/s
95th percentile per-packet one-way delay: 90.256 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 245.51 Mbit/s
95th percentile per-packet one-way delay: 87.924 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 86.243 ms
Loss rate: 3.63%
```
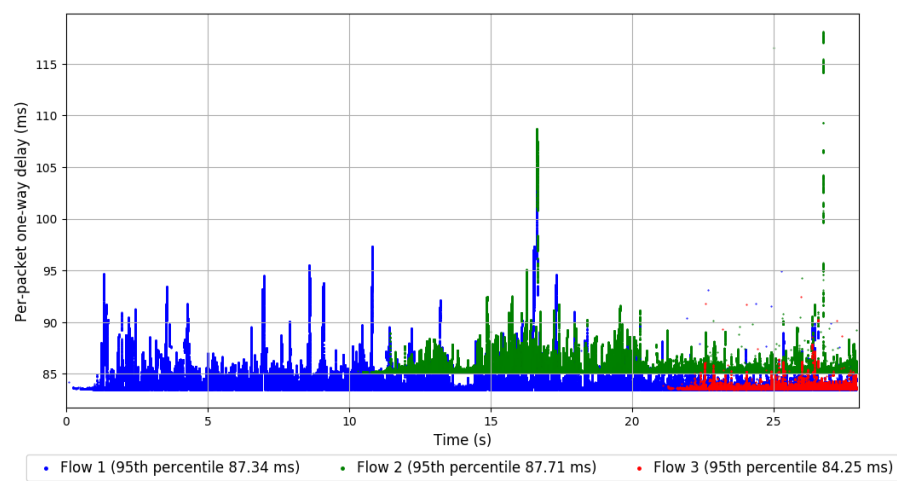
Run 3: Report of Indigo-MusesT — Data Link

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```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-09-18 05:40:02
End at: 2019-09-18 05:40:32
Local clock offset: -0.009 ms
Remote clock offset: -0.009 ms


# Below is generated by plot.py at 2019-09-18 08:17:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 473.95 Mbit/s
95th percentile per-packet one-way delay: 89.145 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 300.09 Mbit/s
95th percentile per-packet one-way delay: 90.321 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 217.20 Mbit/s
95th percentile per-packet one-way delay: 87.110 ms
Loss rate: 1.32%
-- Flow 3:
Average throughput: 151.25 Mbit/s
95th percentile per-packet one-way delay: 86.580 ms
Loss rate: 3.55%
```

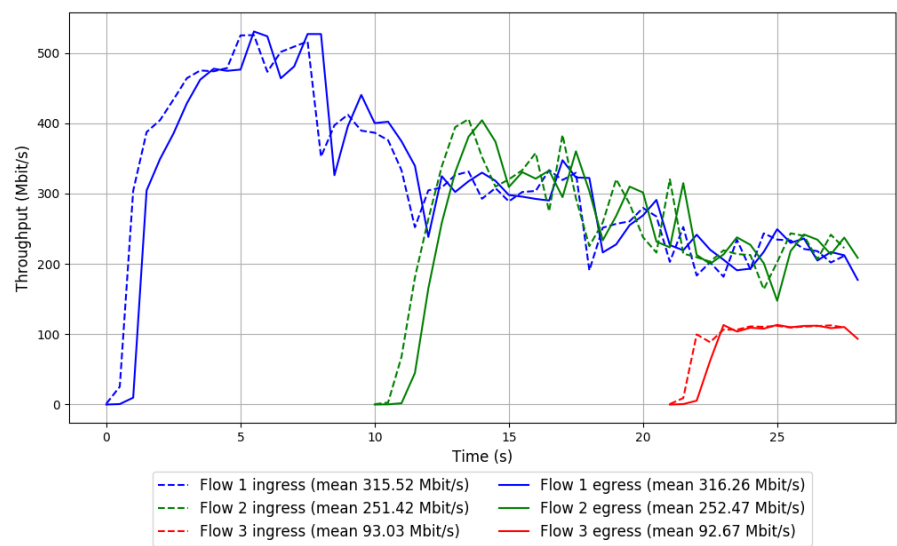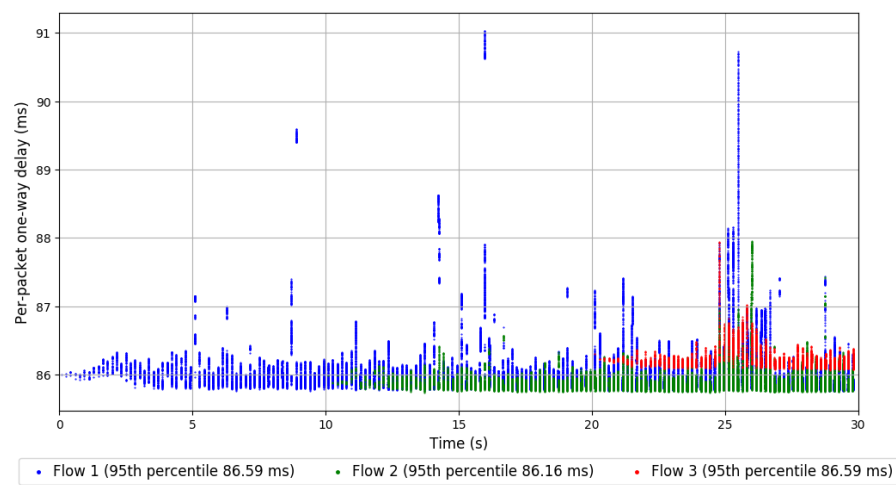Run 4: Report of Indigo-MusesT — Data Link

```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-09-18 06:19:56
End at: 2019-09-18 06:20:26
Local clock offset: -0.478 ms
Remote clock offset: -0.062 ms


# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.63 Mbit/s
95th percentile per-packet one-way delay: 87.470 ms
Loss rate: 0.54%
-- Flow 1:
Average throughput: 316.26 Mbit/s
95th percentile per-packet one-way delay: 87.340 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 252.47 Mbit/s
95th percentile per-packet one-way delay: 87.712 ms
Loss rate: 0.53%
-- Flow 3:
Average throughput: 92.67 Mbit/s
95th percentile per-packet one-way delay: 84.250 ms
Loss rate: 2.87%
```

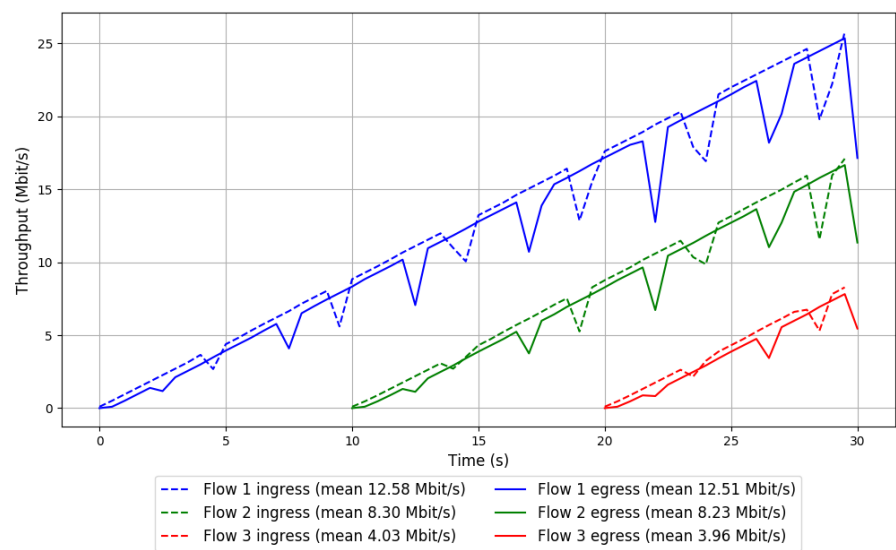Run 5: Report of Indigo-MusesT — Data Link

```
Run 1: Statistics of LEDBAT

Start at: 2019-09-18 03:57:24
End at: 2019-09-18 03:57:54
Local clock offset: -0.062 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.25 Mbit/s
95th percentile per-packet one-way delay: 86.465 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.51 Mbit/s
95th percentile per-packet one-way delay: 86.588 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.23 Mbit/s
95th percentile per-packet one-way delay: 86.159 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 3.96 Mbit/s
95th percentile per-packet one-way delay: 86.587 ms
Loss rate: 3.55%
```
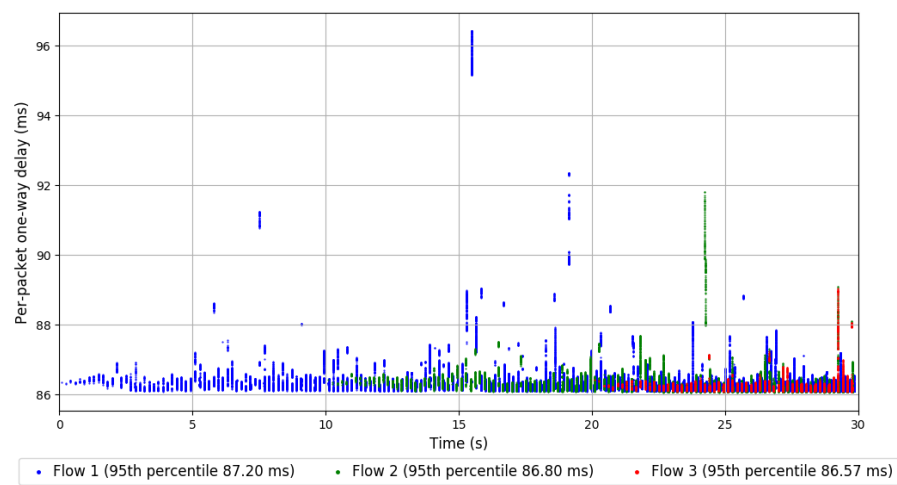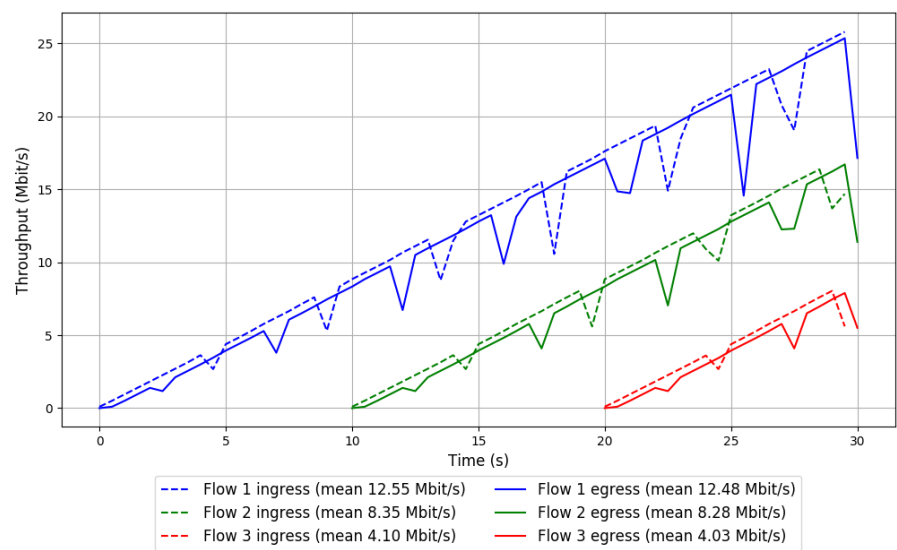
Run 1: Report of LEDBAT — Data Link

```
Run 2: Statistics of LEDBAT

Start at: 2019-09-18 04:36:30
End at: 2019-09-18 04:37:00
Local clock offset: 0.246 ms
Remote clock offset: -0.001 ms


# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.26 Mbit/s
95th percentile per-packet one-way delay: 87.039 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.48 Mbit/s
95th percentile per-packet one-way delay: 87.201 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.28 Mbit/s
95th percentile per-packet one-way delay: 86.796 ms
Loss rate: 1.74%
-- Flow 3:
Average throughput: 4.03 Mbit/s
95th percentile per-packet one-way delay: 86.573 ms
Loss rate: 3.50%
```
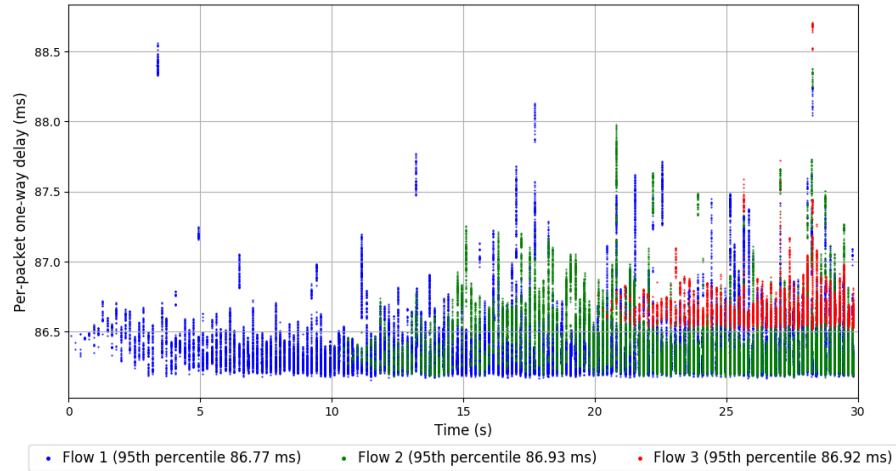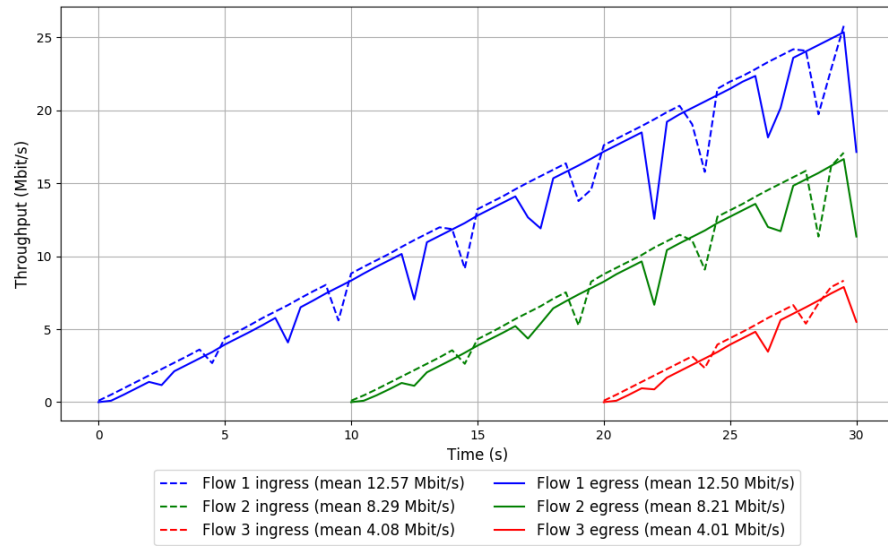
Run 2: Report of LEDBAT — Data Link

```
Run 3: Statistics of LEDBAT

Start at: 2019-09-18 05:16:01
End at: 2019-09-18 05:16:31
Local clock offset: 0.337 ms
Remote clock offset: -0.018 ms


# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.25 Mbit/s
95th percentile per-packet one-way delay: 86.855 ms
Loss rate: 1.48%
-- Flow 1:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 86.773 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.21 Mbit/s
95th percentile per-packet one-way delay: 86.934 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 4.01 Mbit/s
95th percentile per-packet one-way delay: 86.923 ms
Loss rate: 3.50%
```

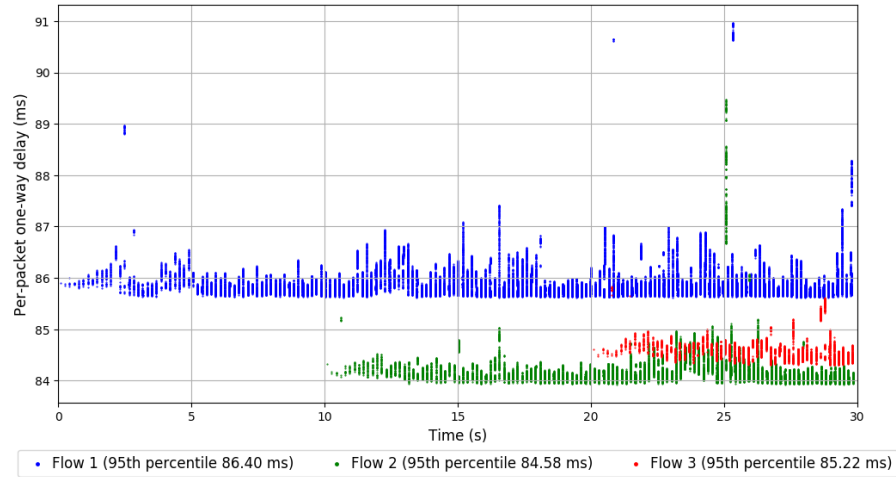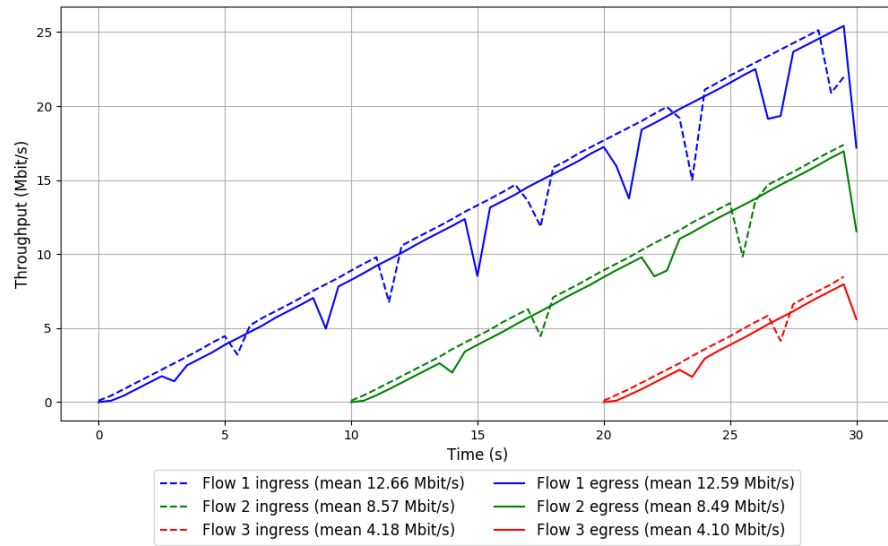## Run 3: Report of LEDBAT — Data Link

```
Run 4: Statistics of LEDBAT

Start at: 2019-09-18 05:55:25
End at: 2019-09-18 05:55:55
Local clock offset: 0.12 ms
Remote clock offset: -0.047 ms


# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.53 Mbit/s
95th percentile per-packet one-way delay: 86.271 ms
Loss rate: 1.47%
-- Flow 1:
Average throughput: 12.59 Mbit/s
95th percentile per-packet one-way delay: 86.396 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 8.49 Mbit/s
95th percentile per-packet one-way delay: 84.582 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 4.10 Mbit/s
95th percentile per-packet one-way delay: 85.216 ms
Loss rate: 3.48%
```
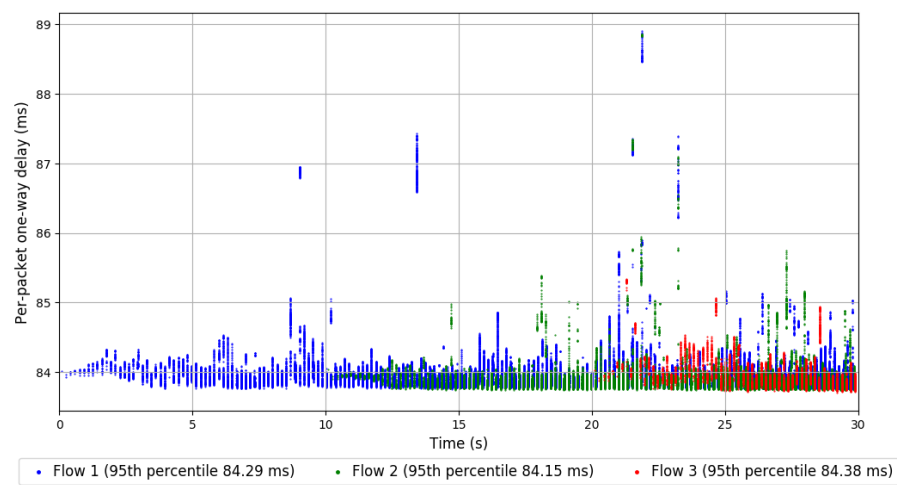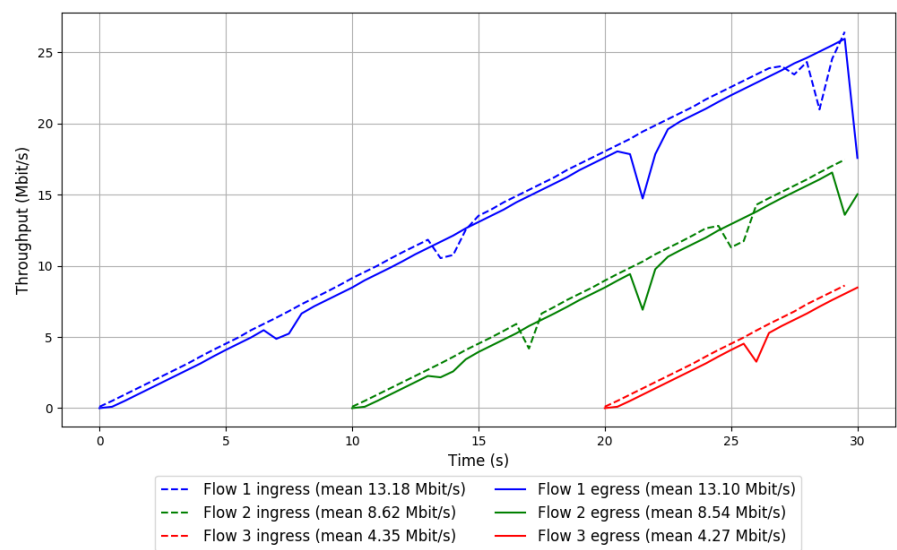
Run 4: Report of LEDBAT — Data Link

Flow 1 ingress (mean 12.66 Mbit/s) — — —   Flow 1 egress (mean 12.59 Mbit/s) ———
Flow 2 ingress (mean 8.57 Mbit/s) — — —   Flow 2 egress (mean 8.49 Mbit/s) ———
Flow 3 ingress (mean 4.18 Mbit/s) — — —   Flow 3 egress (mean 4.10 Mbit/s) ———

Flow 1 (95th percentile 86.40 ms)   Flow 2 (95th percentile 84.58 ms)   Flow 3 (95th percentile 85.22 ms)

```
Run 5: Statistics of LEDBAT

Start at: 2019-09-18 06:34:54
End at: 2019-09-18 06:35:24
Local clock offset: -0.089 ms
Remote clock offset: -0.002 ms

# Below is generated by plot.py at 2019-09-18 08:19:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.12 Mbit/s
95th percentile per-packet one-way delay: 84.276 ms
Loss rate: 1.45%
-- Flow 1:
Average throughput: 13.10 Mbit/s
95th percentile per-packet one-way delay: 84.290 ms
Loss rate: 1.13%
-- Flow 2:
Average throughput: 8.54 Mbit/s
95th percentile per-packet one-way delay: 84.154 ms
Loss rate: 1.71%
-- Flow 3:
Average throughput: 4.27 Mbit/s
95th percentile per-packet one-way delay: 84.377 ms
Loss rate: 3.38%
```
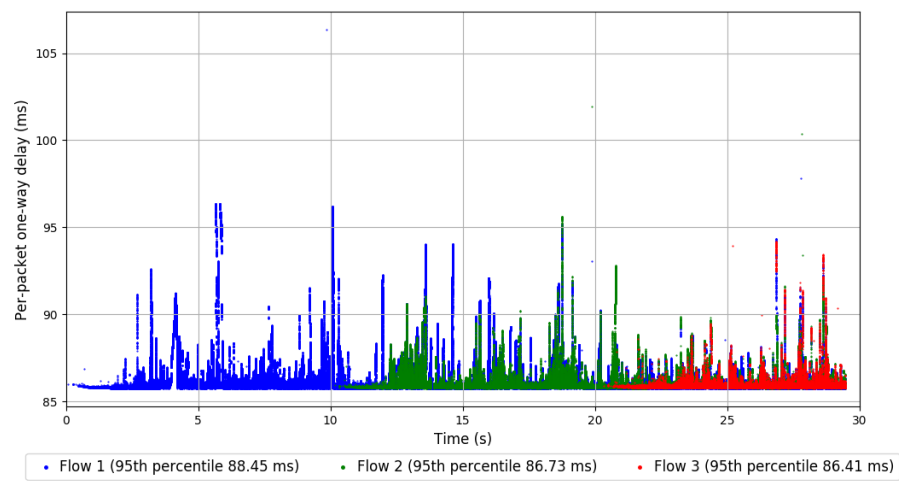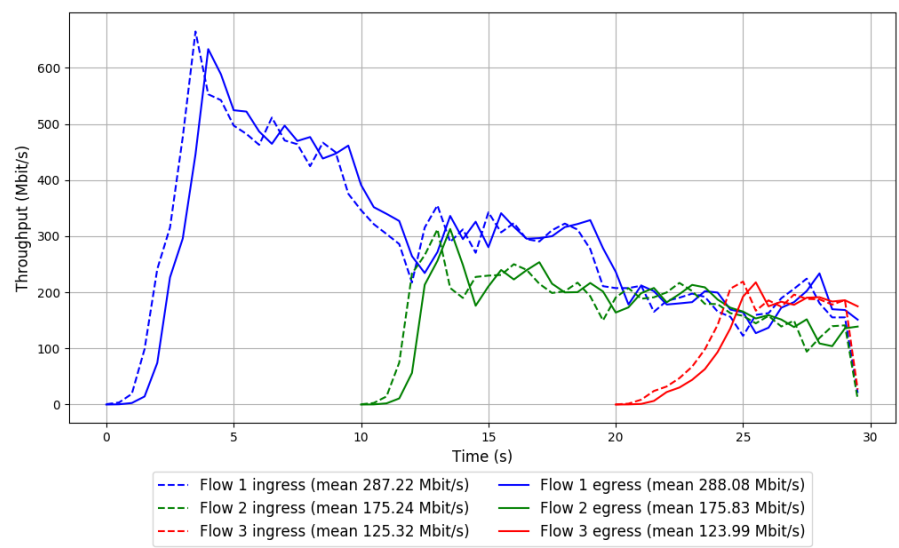
Run 5: Report of LEDBAT — Data Link

```
Run 1: Statistics of Muses\_DecisionTree

Start at: 2019-09-18 03:59:55
End at: 2019-09-18 04:00:25
Local clock offset: -0.074 ms
Remote clock offset: -0.074 ms


# Below is generated by plot.py at 2019-09-18 08:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 442.17 Mbit/s
95th percentile per-packet one-way delay: 87.754 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 288.08 Mbit/s
95th percentile per-packet one-way delay: 88.451 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 175.83 Mbit/s
95th percentile per-packet one-way delay: 86.729 ms
Loss rate: 0.57%
-- Flow 3:
Average throughput: 123.99 Mbit/s
95th percentile per-packet one-way delay: 86.411 ms
Loss rate: 2.90%
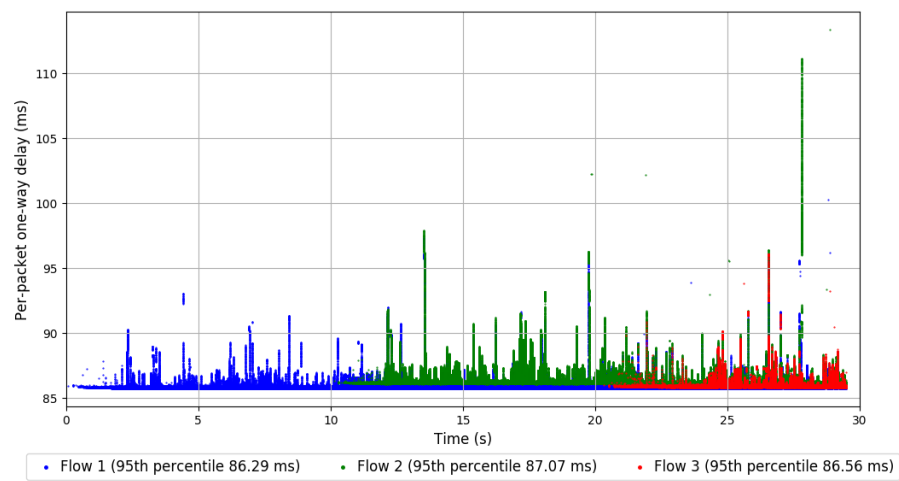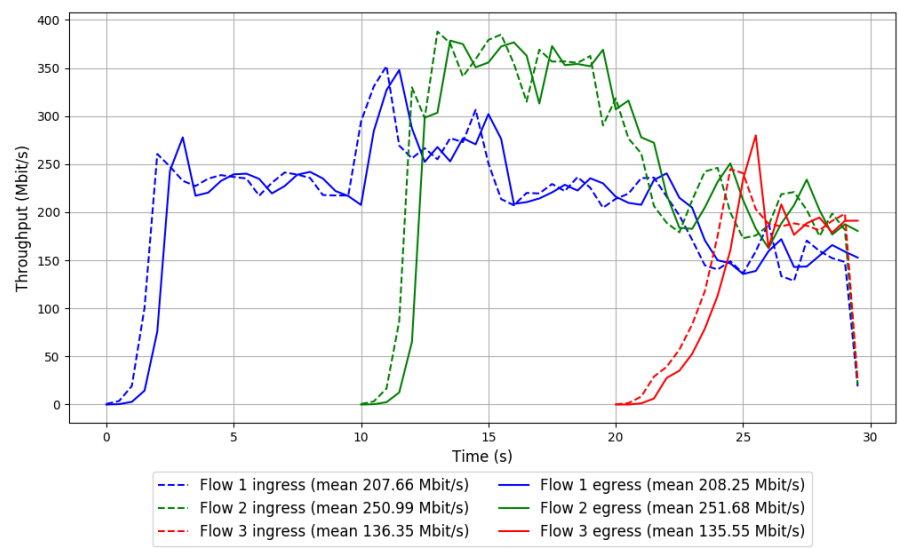```

Run 1: Report of Muses_DecisionTree — Data Link

```
Run 2: Statistics of Muses\_DecisionTree

Start at: 2019-09-18 04:39:02
End at: 2019-09-18 04:39:32
Local clock offset: -0.092 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2019-09-18 08:20:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 416.16 Mbit/s
95th percentile per-packet one-way delay: 86.674 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 208.25 Mbit/s
95th percentile per-packet one-way delay: 86.291 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 251.68 Mbit/s
95th percentile per-packet one-way delay: 87.066 ms
Loss rate: 0.62%
-- Flow 3:
Average throughput: 135.55 Mbit/s
95th percentile per-packet one-way delay: 86.562 ms
Loss rate: 2.43%
```

Run 2: Report of Muses_DecisionTree — Data Link

```
Run 3: Statistics of Muses\_DecisionTree

Start at: 2019-09-18 05:18:32
End at: 2019-09-18 05:19:02
Local clock offset: -0.103 ms
Remote clock offset: 0.0 ms

# Below is generated by plot.py at 2019-09-18 08:21:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 457.42 Mbit/s
95th percentile per-packet one-way delay: 87.294 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 273.65 Mbit/s
95th percentile per-packet one-way delay: 87.807 ms
Loss rate: 0.32%
-- Flow 2:
Average throughput: 209.26 Mbit/s
95th percentile per-packet one-way delay: 86.625 ms
Loss rate: 0.77%
-- Flow 3:
Average throughput: 146.44 Mbit/s
95th percentile per-packet one-way delay: 86.372 ms
Loss rate: 2.21%
```
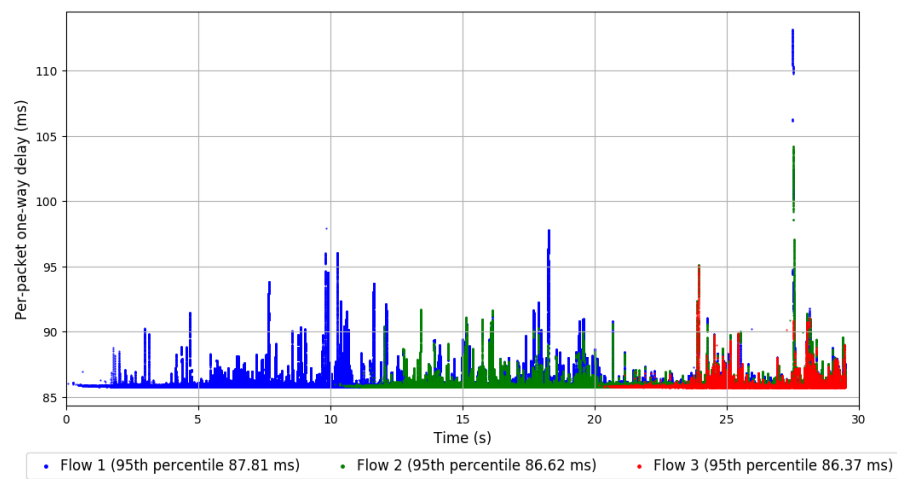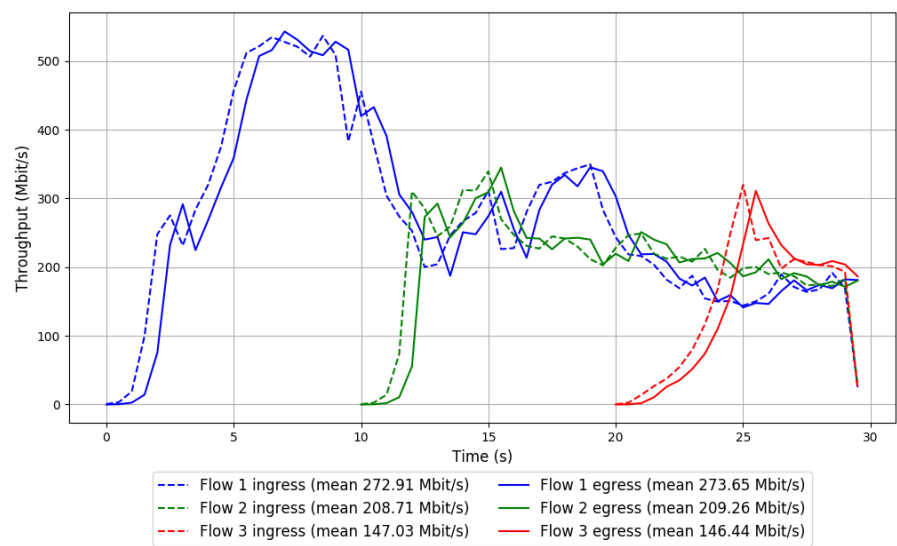
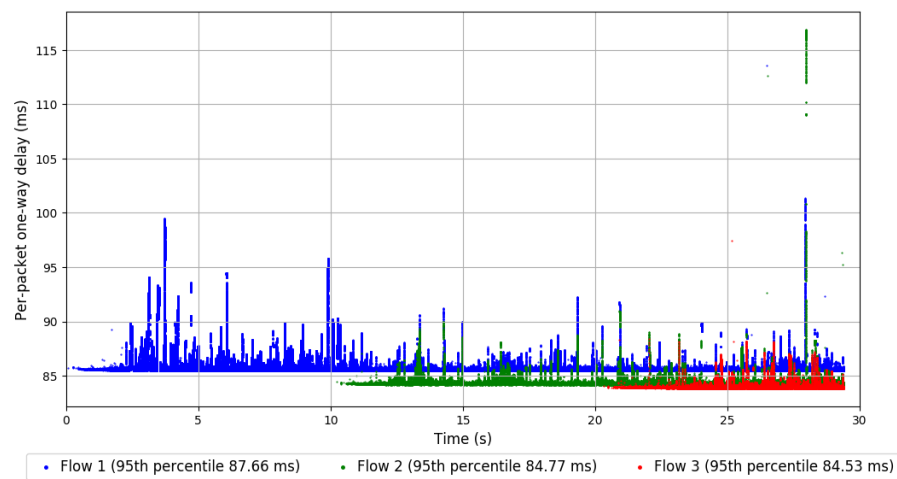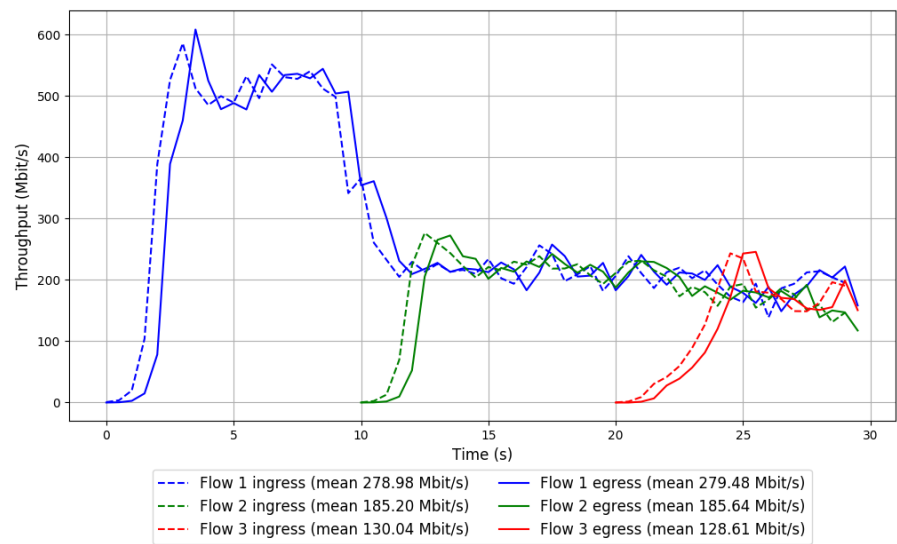Run 3: Report of Muses_DecisionTree — Data Link

```
Run 4: Statistics of Muses\_DecisionTree

Start at: 2019-09-18 05:57:56
End at: 2019-09-18 05:58:26
Local clock offset: -0.017 ms
Remote clock offset: -0.085 ms


# Below is generated by plot.py at 2019-09-18 08:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.54 Mbit/s
95th percentile per-packet one-way delay: 86.928 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 279.48 Mbit/s
95th percentile per-packet one-way delay: 87.664 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 185.64 Mbit/s
95th percentile per-packet one-way delay: 84.766 ms
Loss rate: 0.74%
-- Flow 3:
Average throughput: 128.61 Mbit/s
95th percentile per-packet one-way delay: 84.526 ms
Loss rate: 2.92%
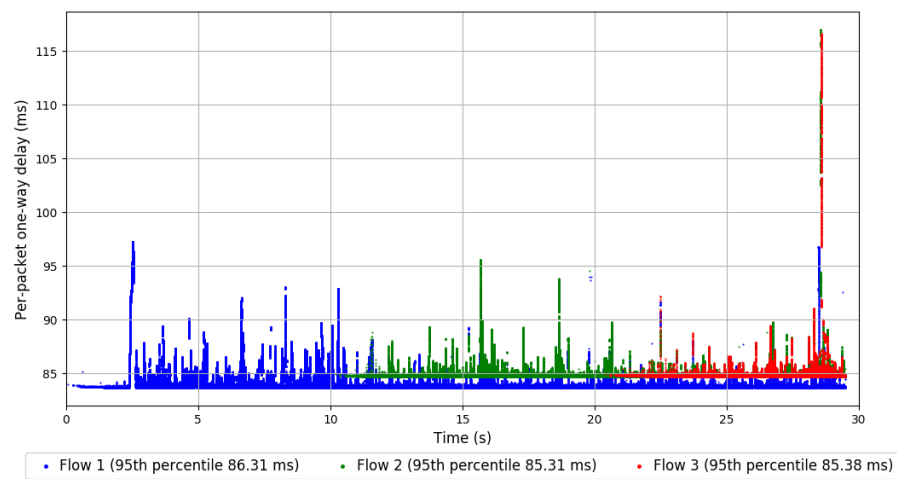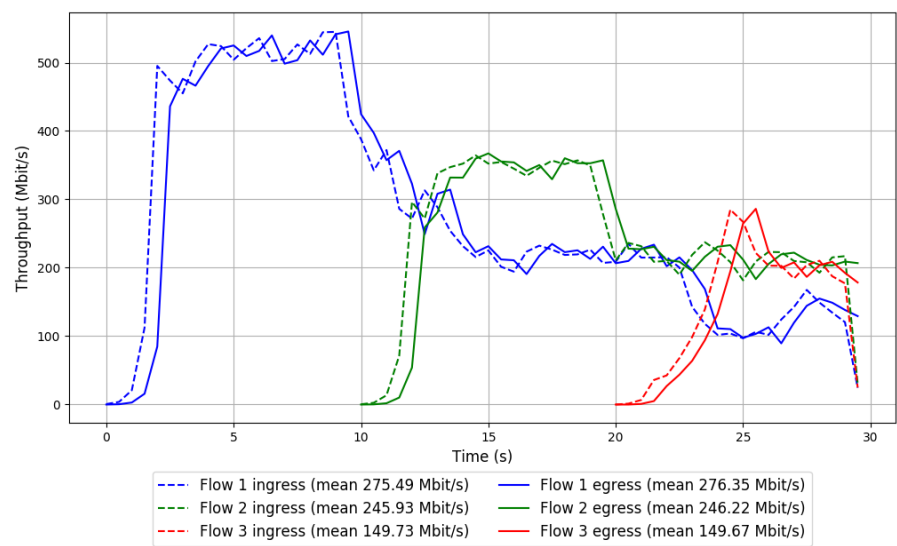```

Run 4: Report of Muses_DecisionTree — Data Link

```
Run 5: Statistics of Muses_DecisionTree

Start at: 2019-09-18 06:37:26
End at: 2019-09-18 06:37:56
Local clock offset: -0.311 ms
Remote clock offset: -0.036 ms

Below is generated by plot.py at 2019-09-18 08:23:21
Datalink statistics
-- Total of 3 flows:
Average throughput: 483.97 Mbit/s
95th percentile per-packet one-way delay: 85.752 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 276.35 Mbit/s
95th percentile per-packet one-way delay: 86.306 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 246.22 Mbit/s
95th percentile per-packet one-way delay: 85.313 ms
Loss rate: 0.78%
-- Flow 3:
Average throughput: 149.67 Mbit/s
95th percentile per-packet one-way delay: 85.377 ms
Loss rate: 1.97%
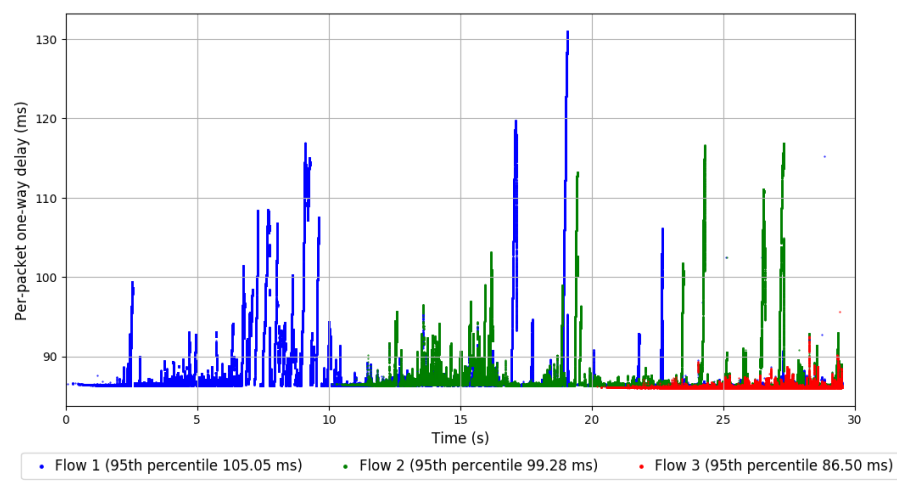```

Run 5: Report of Muses_DecisionTree — Data Link

Flow 1 ingress (mean 275.49 Mbit/s)   Flow 1 egress (mean 276.35 Mbit/s)
Flow 2 ingress (mean 245.93 Mbit/s)   Flow 2 egress (mean 246.22 Mbit/s)
Flow 3 ingress (mean 149.73 Mbit/s)   Flow 3 egress (mean 149.67 Mbit/s)

Flow 1 (95th percentile 86.31 ms)   Flow 2 (95th percentile 85.31 ms)   Flow 3 (95th percentile 85.38 ms)
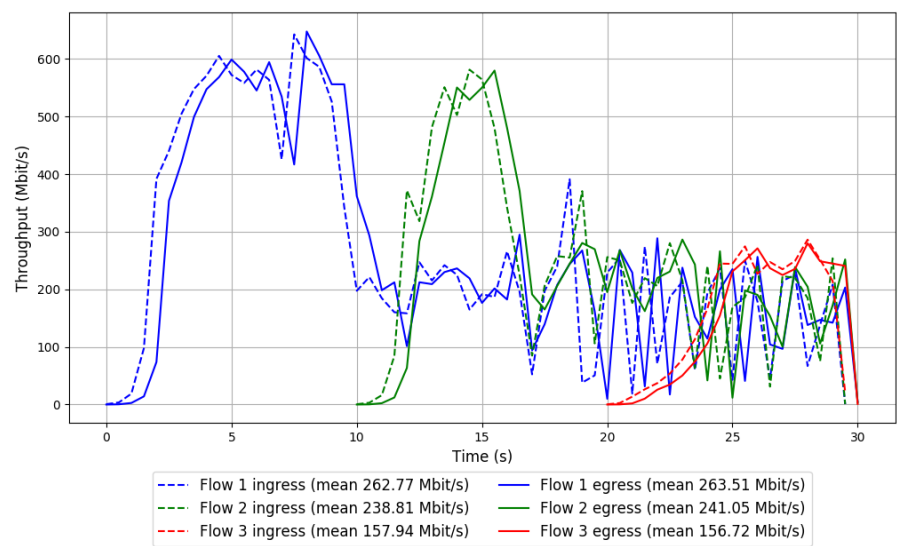
```
Run 1: Statistics of Muses\_DecisionTreeH0

Start at: 2019-09-18 03:45:58
End at: 2019-09-18 03:46:28
Local clock offset: 0.171 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-09-18 08:24:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.87 Mbit/s
95th percentile per-packet one-way delay: 100.722 ms
Loss rate: 0.25%
-- Flow 1:
Average throughput: 263.51 Mbit/s
95th percentile per-packet one-way delay: 105.053 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 241.05 Mbit/s
95th percentile per-packet one-way delay: 99.279 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 156.72 Mbit/s
95th percentile per-packet one-way delay: 86.502 ms
Loss rate: 2.18%
```
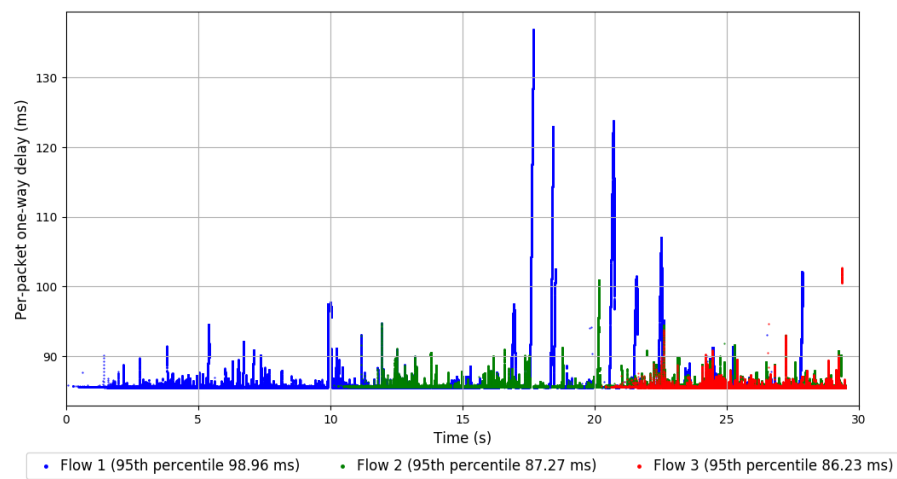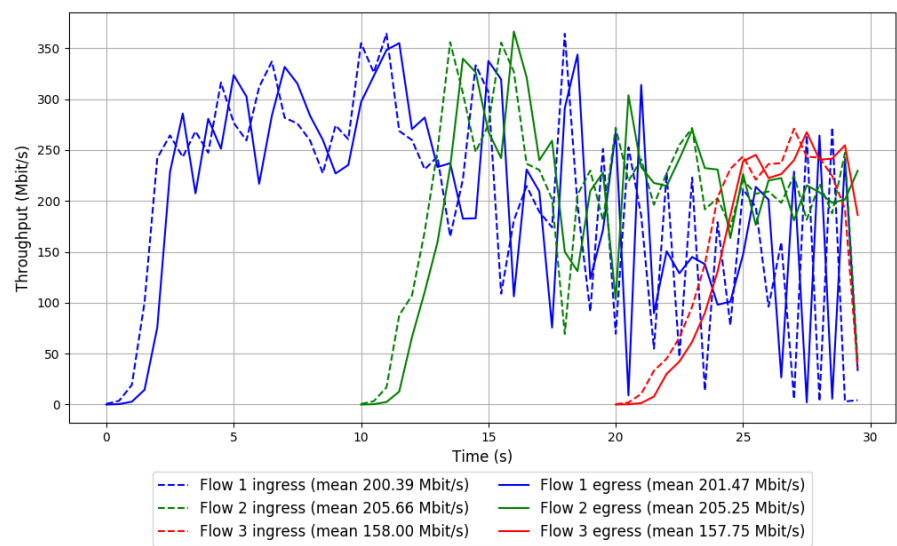
Run 1: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 262.77 Mbit/s) Flow 1 egress (mean 263.51 Mbit/s)
Flow 2 ingress (mean 238.81 Mbit/s) Flow 2 egress (mean 241.05 Mbit/s)
Flow 3 ingress (mean 157.94 Mbit/s) Flow 3 egress (mean 156.72 Mbit/s)

Flow 1 (95th percentile 105.05 ms) Flow 2 (95th percentile 99.28 ms) Flow 3 (95th percentile 86.50 ms)

```
Run 2: Statistics of Muses\_DecisionTreeH0

Start at: 2019-09-18 04:25:07
End at: 2019-09-18 04:25:37
Local clock offset: -0.316 ms
Remote clock offset: 0.013 ms


# Below is generated by plot.py at 2019-09-18 08:24:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 386.22 Mbit/s
95th percentile per-packet one-way delay: 92.316 ms
Loss rate: 0.66%
-- Flow 1:
Average throughput: 201.47 Mbit/s
95th percentile per-packet one-way delay: 98.960 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 205.25 Mbit/s
95th percentile per-packet one-way delay: 87.271 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 157.75 Mbit/s
95th percentile per-packet one-way delay: 86.228 ms
Loss rate: 1.99%
```

Run 2: Report of Muses_DecisionTreeH0 — Data Link
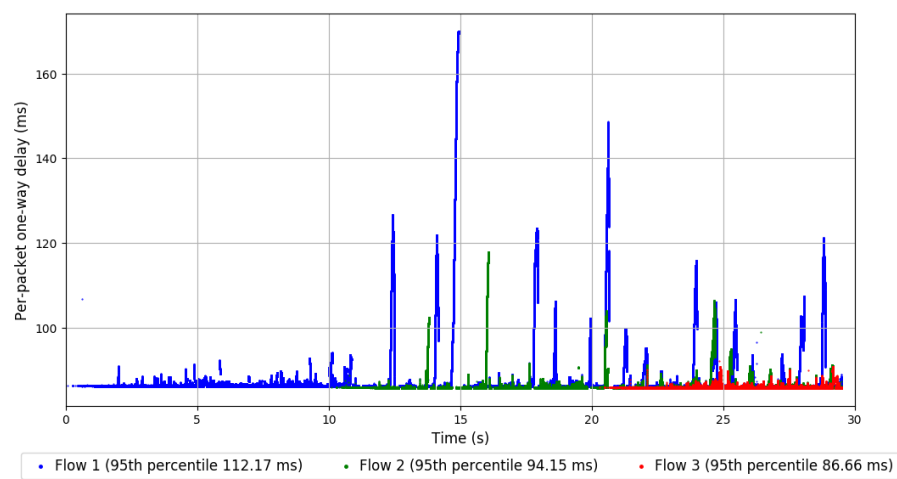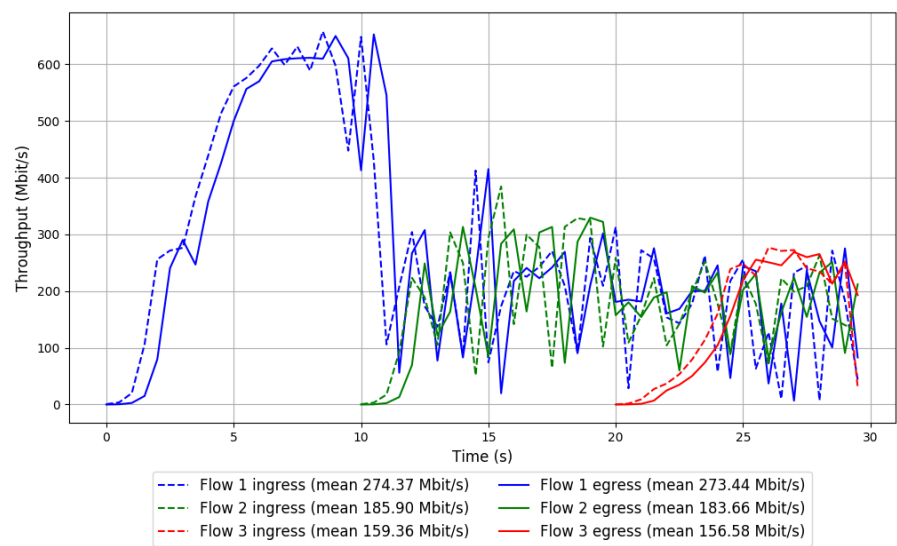
```
Run 3: Statistics of Muses\_DecisionTreeH0

Start at: 2019-09-18 05:04:18
End at: 2019-09-18 05:04:48
Local clock offset: -0.083 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-09-18 08:27:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 443.35 Mbit/s
95th percentile per-packet one-way delay: 102.680 ms
Loss rate: 1.52%
-- Flow 1:
Average throughput: 273.44 Mbit/s
95th percentile per-packet one-way delay: 112.166 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 183.66 Mbit/s
95th percentile per-packet one-way delay: 94.154 ms
Loss rate: 2.08%
-- Flow 3:
Average throughput: 156.58 Mbit/s
95th percentile per-packet one-way delay: 86.661 ms
Loss rate: 3.57%
```
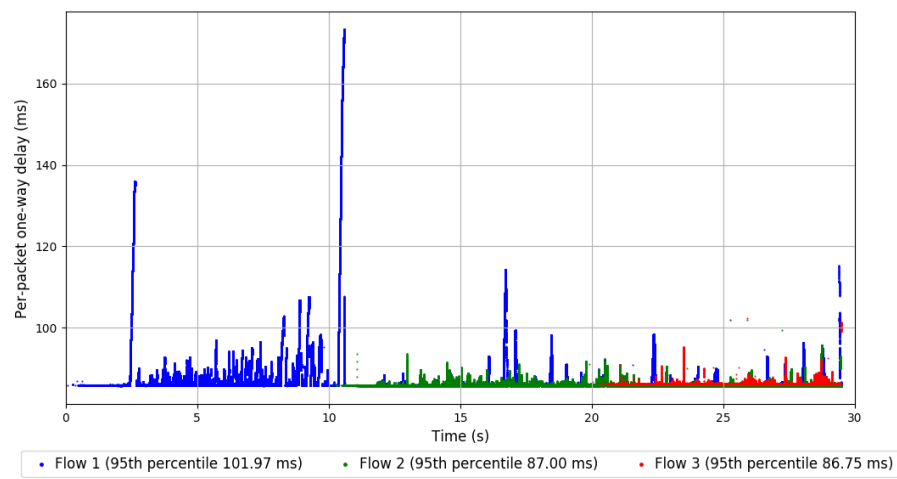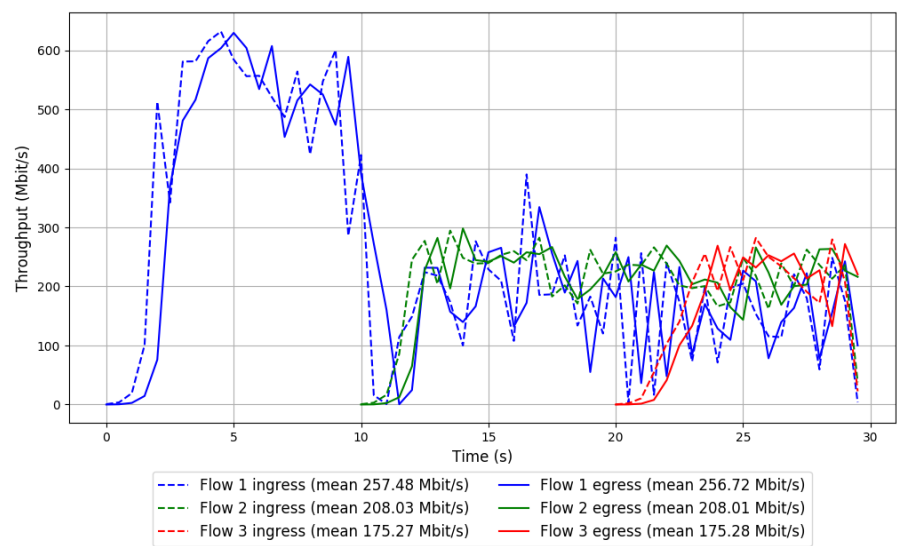
Run 3: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 274.37 Mbit/s)   Flow 1 egress (mean 273.44 Mbit/s)
Flow 2 ingress (mean 185.90 Mbit/s)   Flow 2 egress (mean 183.66 Mbit/s)
Flow 3 ingress (mean 159.36 Mbit/s)   Flow 3 egress (mean 156.58 Mbit/s)

Flow 1 (95th percentile 112.17 ms)   Flow 2 (95th percentile 94.15 ms)   Flow 3 (95th percentile 86.66 ms)

```
Run 4: Statistics of Muses\_DecisionTreeH0

Start at: 2019-09-18 05:43:21
End at: 2019-09-18 05:43:51
Local clock offset: -0.058 ms
Remote clock offset: -0.054 ms


# Below is generated by plot.py at 2019-09-18 08:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 448.66 Mbit/s
95th percentile per-packet one-way delay: 95.074 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 256.72 Mbit/s
95th percentile per-packet one-way delay: 101.975 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 208.01 Mbit/s
95th percentile per-packet one-way delay: 87.002 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 175.28 Mbit/s
95th percentile per-packet one-way delay: 86.750 ms
Loss rate: 1.85%
```
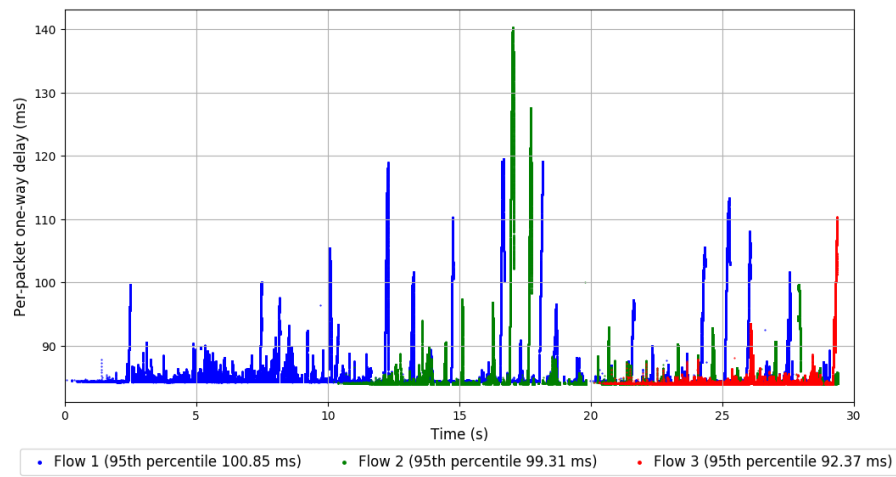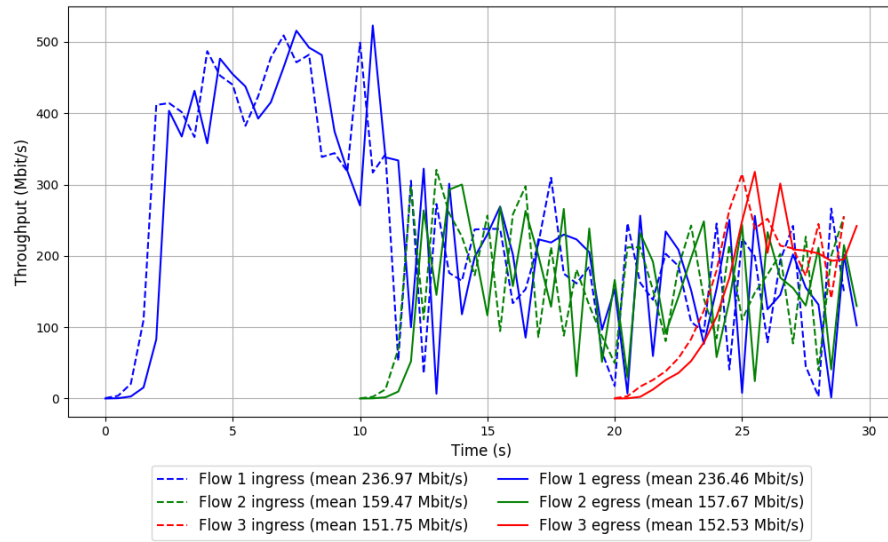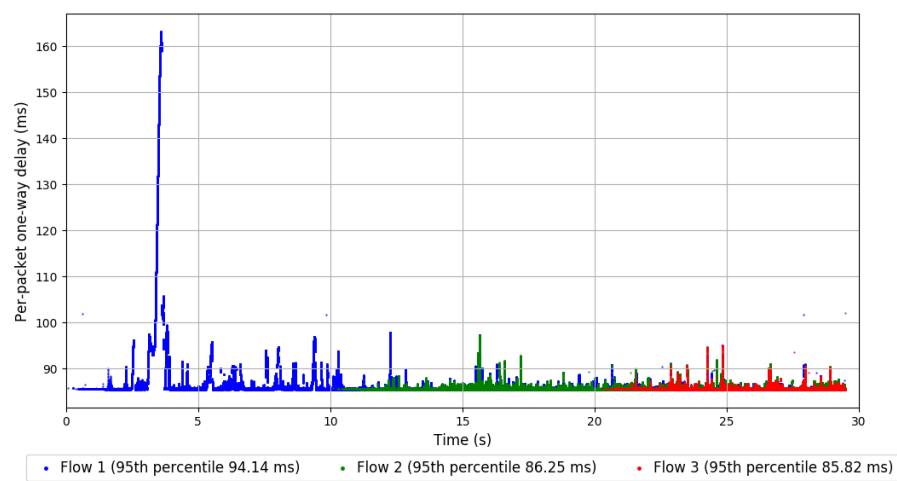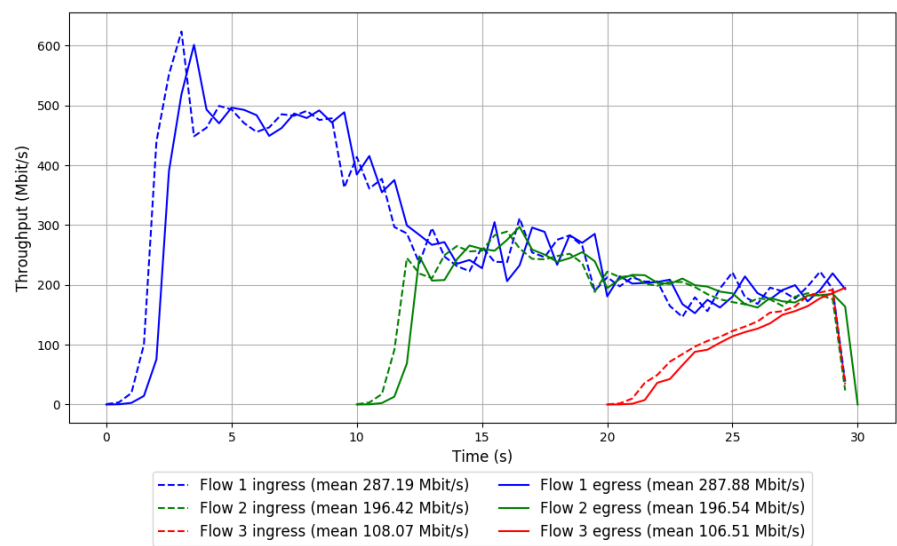
Run 4: Report of Muses_DecisionTreeH0 — Data Link

Flow 1 ingress (mean 257.48 Mbit/s) --- Flow 1 egress (mean 256.72 Mbit/s)
Flow 2 ingress (mean 208.03 Mbit/s) --- Flow 2 egress (mean 208.01 Mbit/s)
Flow 3 ingress (mean 175.27 Mbit/s) --- Flow 3 egress (mean 175.28 Mbit/s)

Flow 1 (95th percentile 101.97 ms) • Flow 2 (95th percentile 87.00 ms) • Flow 3 (95th percentile 86.75 ms)

```
Run 5: Statistics of Muses\_DecisionTreeH0

Start at: 2019-09-18 06:23:17
End at: 2019-09-18 06:23:47
Local clock offset: 0.097 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-09-18 08:28:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 387.57 Mbit/s
95th percentile per-packet one-way delay: 99.701 ms
Loss rate: 1.13%
-- Flow 1:
Average throughput: 236.46 Mbit/s
95th percentile per-packet one-way delay: 100.853 ms
Loss rate: 0.81%
-- Flow 2:
Average throughput: 157.67 Mbit/s
95th percentile per-packet one-way delay: 99.310 ms
Loss rate: 2.03%
-- Flow 3:
Average throughput: 152.53 Mbit/s
95th percentile per-packet one-way delay: 92.374 ms
Loss rate: 0.72%
```

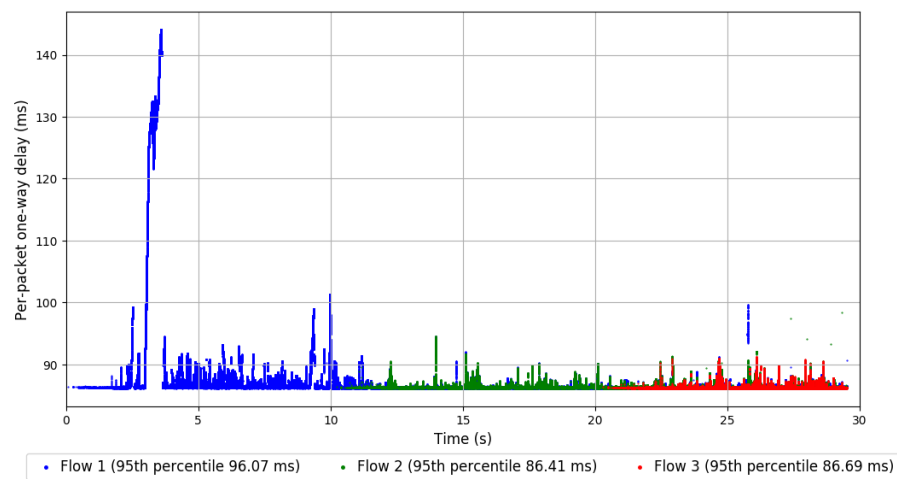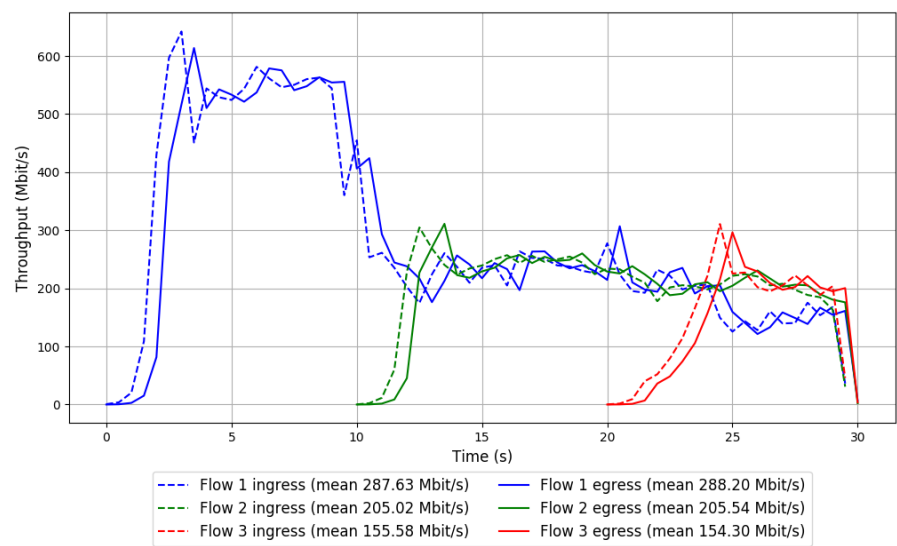Run 5: Report of Muses_DecisionTreeH0 — Data Link

```
Run 1: Statistics of Muses\_DecisionTreeR0

Start at: 2019-09-18 04:15:20
End at: 2019-09-18 04:15:50
Local clock offset: -0.325 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-09-18 08:29:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 450.41 Mbit/s
95th percentile per-packet one-way delay: 90.074 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 287.88 Mbit/s
95th percentile per-packet one-way delay: 94.139 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 196.54 Mbit/s
95th percentile per-packet one-way delay: 86.245 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 106.51 Mbit/s
95th percentile per-packet one-way delay: 85.823 ms
Loss rate: 3.27%
```

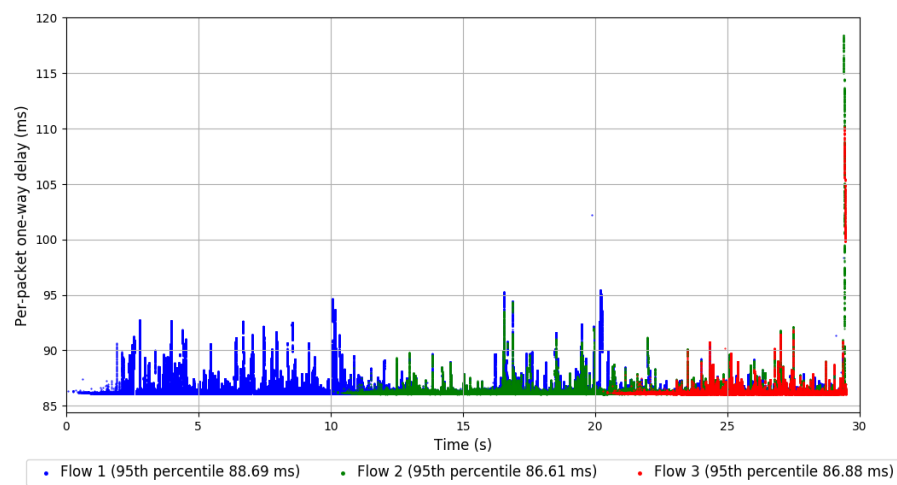Run 1: Report of Muses_DecisionTreeR0 — Data Link

```
Run 2: Statistics of Muses\_DecisionTreeR0

Start at: 2019-09-18 04:54:32
End at: 2019-09-18 04:55:02
Local clock offset: 0.304 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-09-18 08:30:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 471.03 Mbit/s
95th percentile per-packet one-way delay: 90.083 ms
Loss rate: 0.69%
-- Flow 1:
Average throughput: 288.20 Mbit/s
95th percentile per-packet one-way delay: 96.073 ms
Loss rate: 0.38%
-- Flow 2:
Average throughput: 205.54 Mbit/s
95th percentile per-packet one-way delay: 86.408 ms
Loss rate: 0.64%
-- Flow 3:
Average throughput: 154.30 Mbit/s
95th percentile per-packet one-way delay: 86.695 ms
Loss rate: 2.65%
```
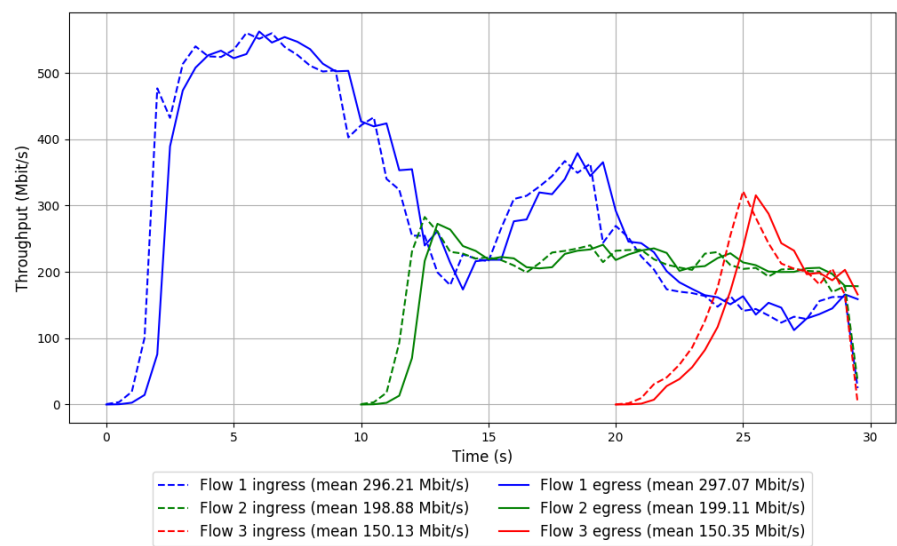
Run 2: Report of Muses_DecisionTreeR0 — Data Link

Flow 1 ingress (mean 287.63 Mbit/s) Flow 1 egress (mean 288.20 Mbit/s)
Flow 2 ingress (mean 205.02 Mbit/s) Flow 2 egress (mean 205.54 Mbit/s)
Flow 3 ingress (mean 155.58 Mbit/s) Flow 3 egress (mean 154.30 Mbit/s)

Flow 1 (95th percentile 96.07 ms) Flow 2 (95th percentile 86.41 ms) Flow 3 (95th percentile 86.69 ms)
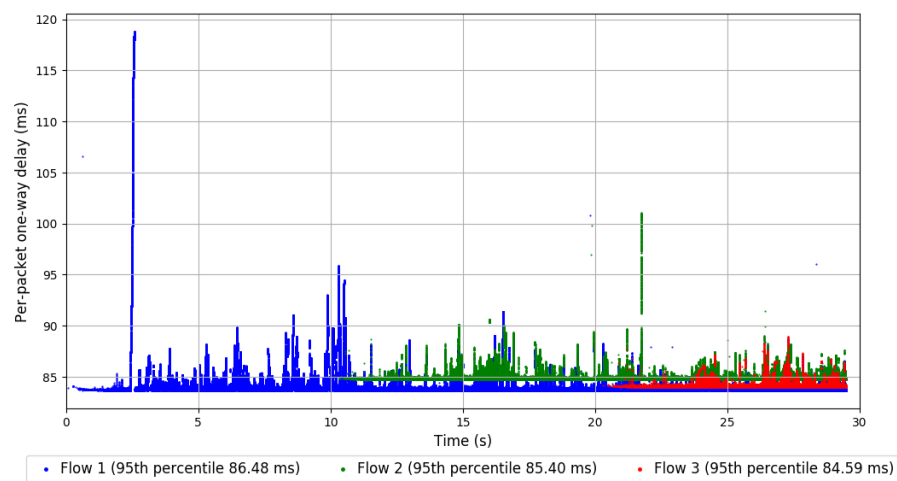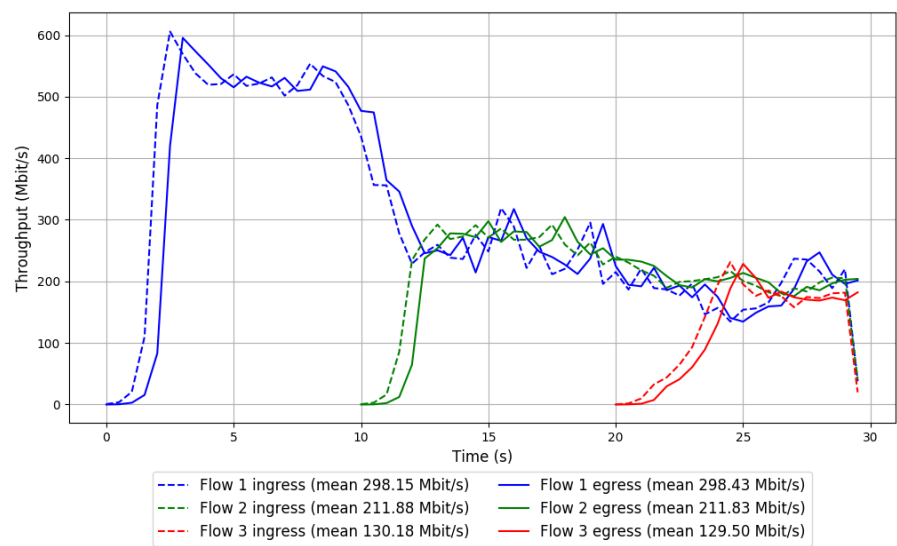
```
Run 3: Statistics of Muses\_DecisionTreeR0

Start at: 2019-09-18 05:33:49
End at: 2019-09-18 05:34:19
Local clock offset: 0.209 ms
Remote clock offset: -0.008 ms


# Below is generated by plot.py at 2019-09-18 08:32:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 475.37 Mbit/s
95th percentile per-packet one-way delay: 88.066 ms
Loss rate: 0.53%
-- Flow 1:
Average throughput: 297.07 Mbit/s
95th percentile per-packet one-way delay: 88.694 ms
Loss rate: 0.31%
-- Flow 2:
Average throughput: 199.11 Mbit/s
95th percentile per-packet one-way delay: 86.613 ms
Loss rate: 0.76%
-- Flow 3:
Average throughput: 150.35 Mbit/s
95th percentile per-packet one-way delay: 86.881 ms
Loss rate: 1.26%
```

Run 3: Report of Muses_DecisionTreeR0 — Data Link
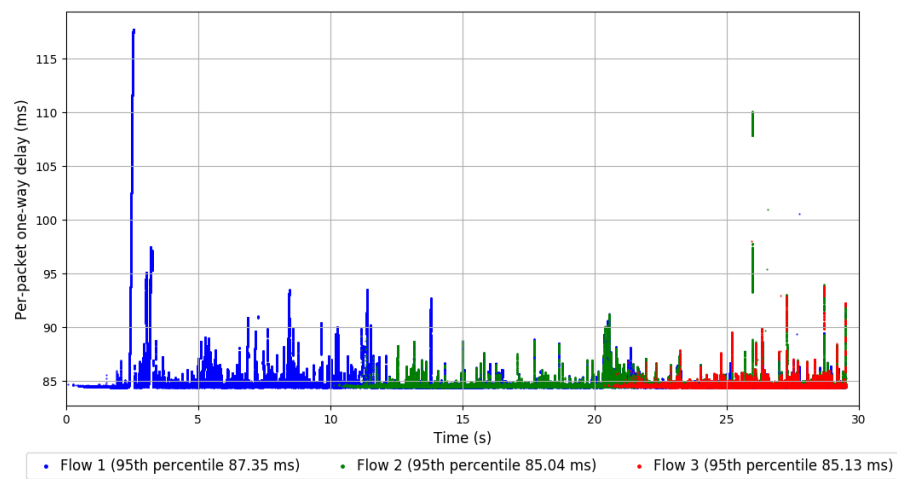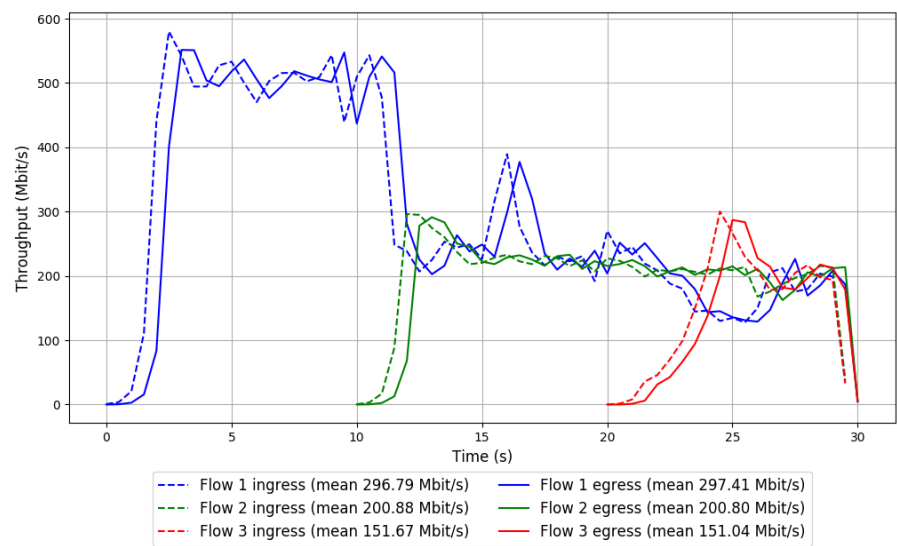
```
Run 4: Statistics of Muses\_DecisionTreeR0

Start at: 2019-09-18 06:13:32
End at: 2019-09-18 06:14:02
Local clock offset: -0.228 ms
Remote clock offset: -0.072 ms


# Below is generated by plot.py at 2019-09-18 08:33:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 478.18 Mbit/s
95th percentile per-packet one-way delay: 85.856 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 298.43 Mbit/s
95th percentile per-packet one-way delay: 86.484 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 211.83 Mbit/s
95th percentile per-packet one-way delay: 85.404 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 129.50 Mbit/s
95th percentile per-packet one-way delay: 84.594 ms
Loss rate: 2.33%
```
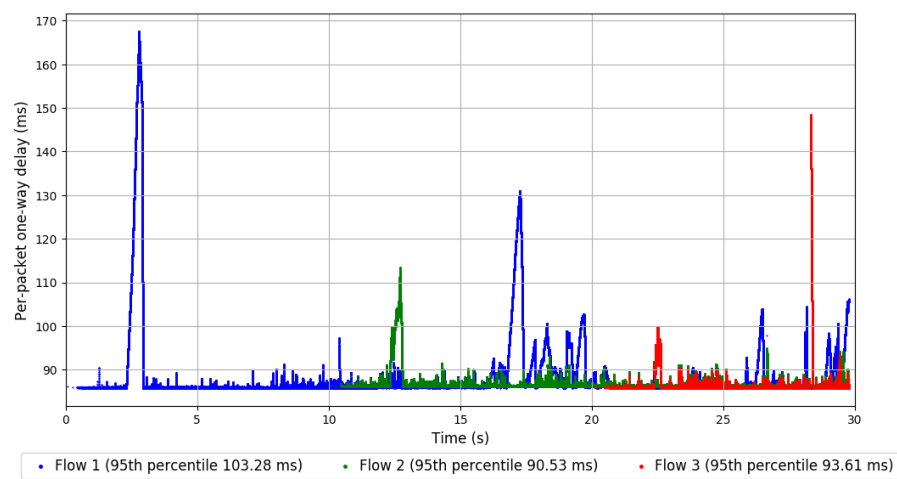
Run 4: Report of Muses_DecisionTreeR0 — Data Link

```
Run 5: Statistics of Muses\_DecisionTreeR0

Start at: 2019-09-18 06:52:58
End at: 2019-09-18 06:53:28
Local clock offset: 0.219 ms
Remote clock offset: -0.075 ms


# Below is generated by plot.py at 2019-09-18 08:33:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 476.51 Mbit/s
95th percentile per-packet one-way delay: 86.422 ms
Loss rate: 0.73%
-- Flow 1:
Average throughput: 297.41 Mbit/s
95th percentile per-packet one-way delay: 87.350 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 200.80 Mbit/s
95th percentile per-packet one-way delay: 85.044 ms
Loss rate: 0.93%
-- Flow 3:
Average throughput: 151.04 Mbit/s
95th percentile per-packet one-way delay: 85.130 ms
Loss rate: 2.32%
```
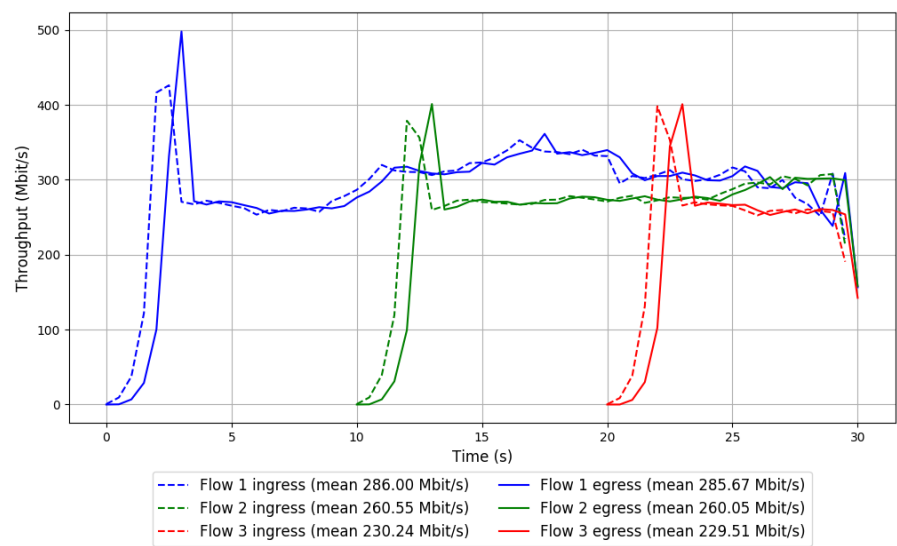
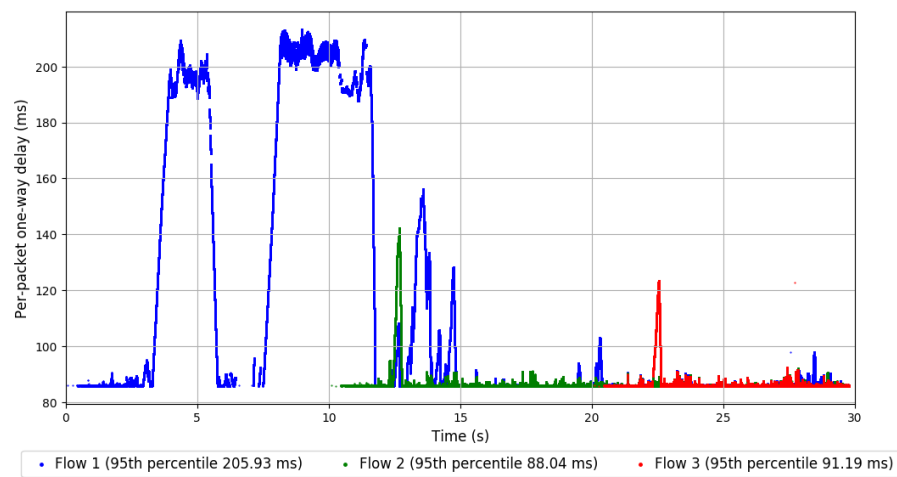Run 5: Report of Muses_DecisionTreeR0 — Data Link

```
Run 1: Statistics of PCC-Allegro

Start at: 2019-09-18 04:11:34
End at: 2019-09-18 04:12:04
Local clock offset: -0.076 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-09-18 08:45:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 532.50 Mbit/s
95th percentile per-packet one-way delay: 98.379 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 285.67 Mbit/s
95th percentile per-packet one-way delay: 103.279 ms
Loss rate: 0.69%
-- Flow 2:
Average throughput: 260.05 Mbit/s
95th percentile per-packet one-way delay: 90.535 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 229.51 Mbit/s
95th percentile per-packet one-way delay: 93.610 ms
Loss rate: 2.07%
```

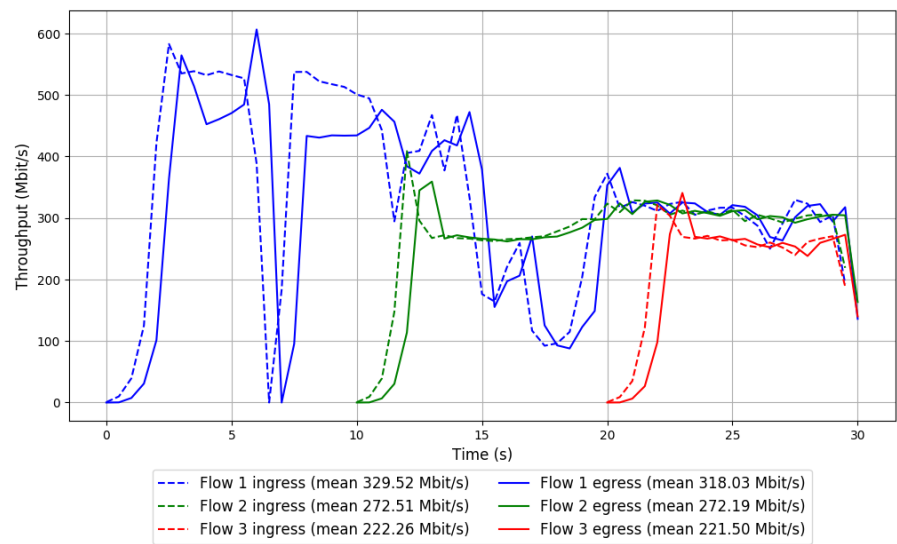Run 1: Report of PCC-Allegro — Data Link

```
Run 2: Statistics of PCC-Allegro

Start at: 2019-09-18 04:50:44
End at: 2019-09-18 04:51:14
Local clock offset: -0.069 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-09-18 08:47:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 570.54 Mbit/s
95th percentile per-packet one-way delay: 203.316 ms
Loss rate: 2.86%
-- Flow 1:
Average throughput: 318.03 Mbit/s
95th percentile per-packet one-way delay: 205.928 ms
Loss rate: 4.05%
-- Flow 2:
Average throughput: 272.19 Mbit/s
95th percentile per-packet one-way delay: 88.036 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 221.50 Mbit/s
95th percentile per-packet one-way delay: 91.195 ms
Loss rate: 2.11%
```

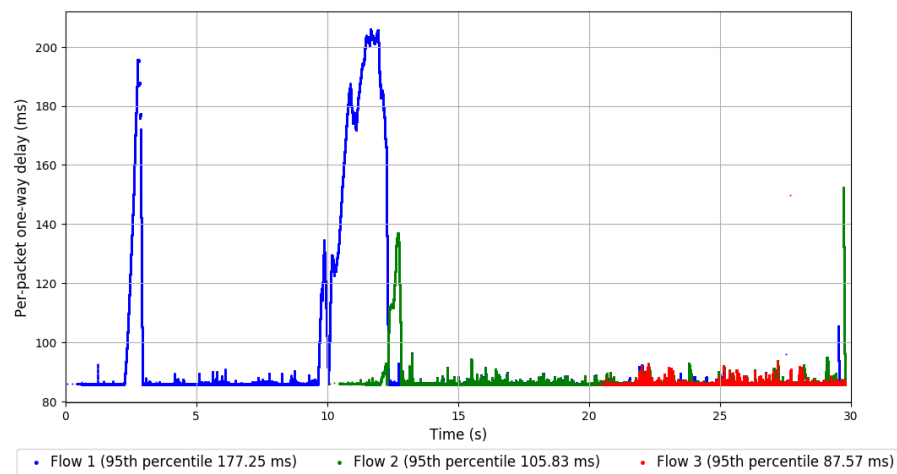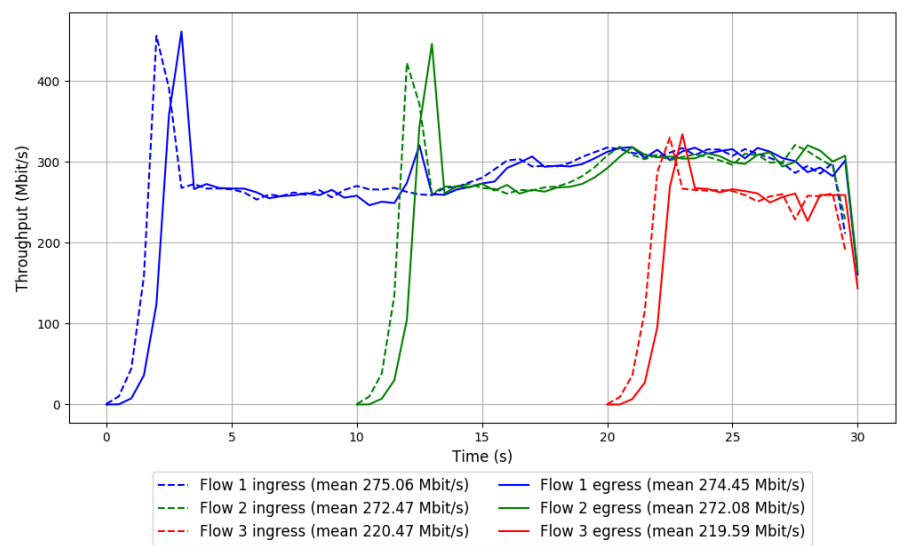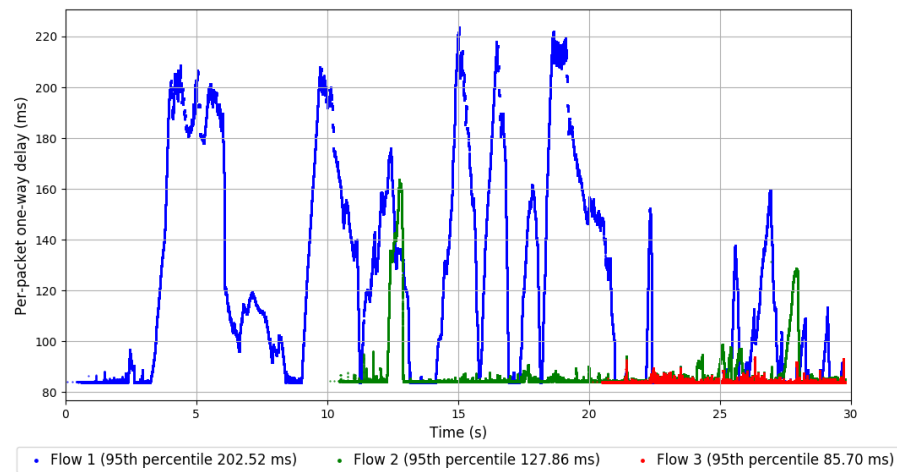Run 2: Report of PCC-Allegro — Data Link

```
Run 3: Statistics of PCC-Allegro

Start at: 2019-09-18 05:30:06
End at: 2019-09-18 05:30:36
Local clock offset: -0.122 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-09-18 08:47:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 526.08 Mbit/s
95th percentile per-packet one-way delay: 129.729 ms
Loss rate: 1.06%
-- Flow 1:
Average throughput: 274.45 Mbit/s
95th percentile per-packet one-way delay: 177.255 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 272.08 Mbit/s
95th percentile per-packet one-way delay: 105.829 ms
Loss rate: 1.01%
-- Flow 3:
Average throughput: 219.59 Mbit/s
95th percentile per-packet one-way delay: 87.574 ms
Loss rate: 2.15%
```

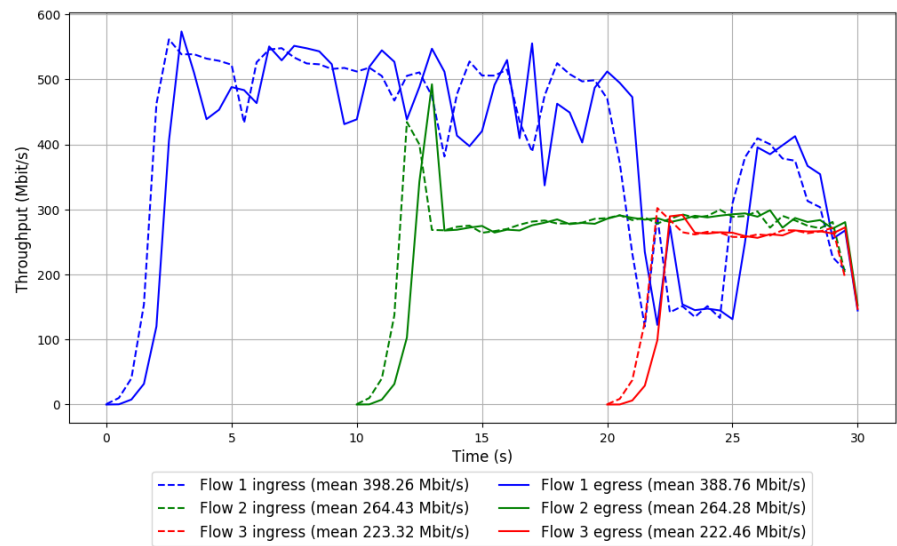# Run 3: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 275.06 Mbit/s) — Flow 1 egress (mean 274.45 Mbit/s)
Flow 2 ingress (mean 272.47 Mbit/s) — Flow 2 egress (mean 272.08 Mbit/s)
Flow 3 ingress (mean 220.47 Mbit/s) — Flow 3 egress (mean 219.59 Mbit/s)

Flow 1 (95th percentile 177.25 ms)   Flow 2 (95th percentile 105.83 ms)   Flow 3 (95th percentile 87.57 ms)

```
Run 4: Statistics of PCC-Allegro

Start at: 2019-09-18 06:09:35
End at: 2019-09-18 06:10:05
Local clock offset: -0.055 ms
Remote clock offset: -0.088 ms


# Below is generated by plot.py at 2019-09-18 08:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 636.23 Mbit/s
95th percentile per-packet one-way delay: 197.116 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 388.76 Mbit/s
95th percentile per-packet one-way delay: 202.518 ms
Loss rate: 2.94%
-- Flow 2:
Average throughput: 264.28 Mbit/s
95th percentile per-packet one-way delay: 127.863 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 222.46 Mbit/s
95th percentile per-packet one-way delay: 85.696 ms
Loss rate: 2.11%
```
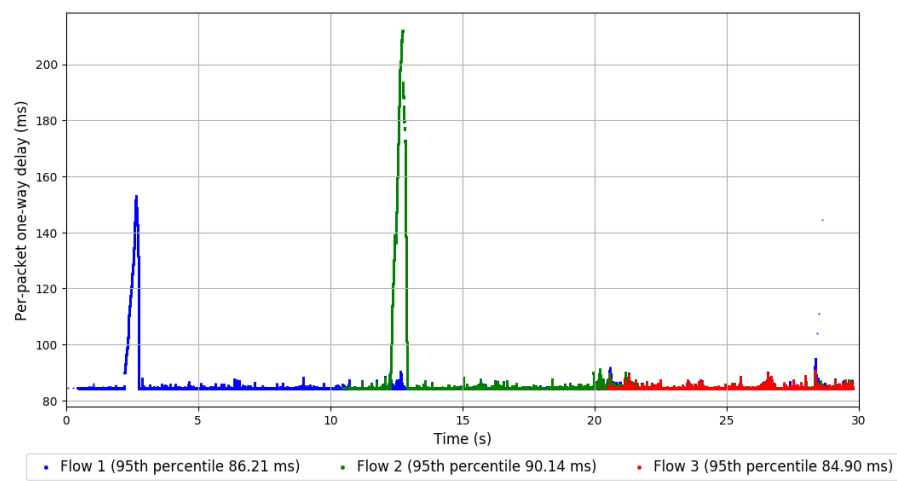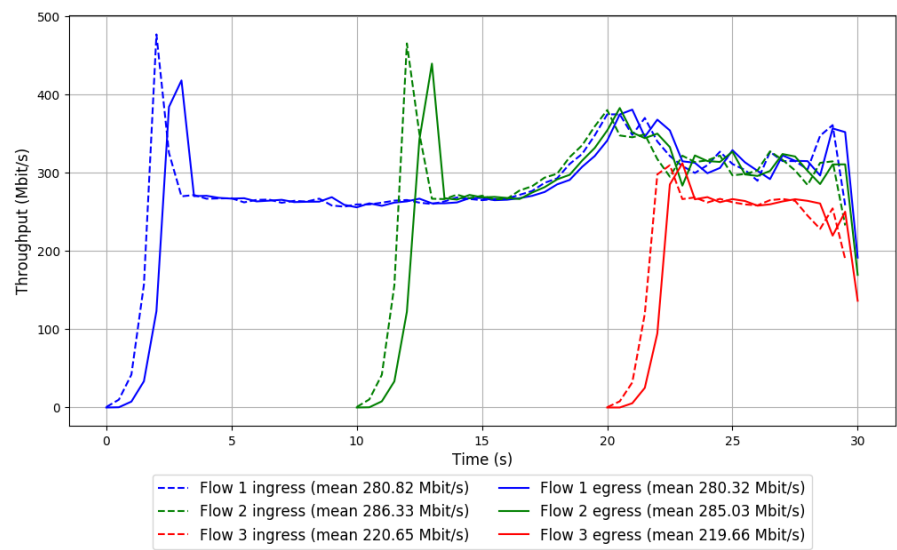
Run 4: Report of PCC-Allegro — Data Link

```
Run 5: Statistics of PCC-Allegro

Start at: 2019-09-18 06:49:12
End at: 2019-09-18 06:49:42
Local clock offset: 0.381 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2019-09-18 08:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 540.45 Mbit/s
95th percentile per-packet one-way delay: 86.527 ms
Loss rate: 1.16%
-- Flow 1:
Average throughput: 280.32 Mbit/s
95th percentile per-packet one-way delay: 86.208 ms
Loss rate: 0.77%
-- Flow 2:
Average throughput: 285.03 Mbit/s
95th percentile per-packet one-way delay: 90.139 ms
Loss rate: 1.34%
-- Flow 3:
Average throughput: 219.66 Mbit/s
95th percentile per-packet one-way delay: 84.897 ms
Loss rate: 2.23%
```

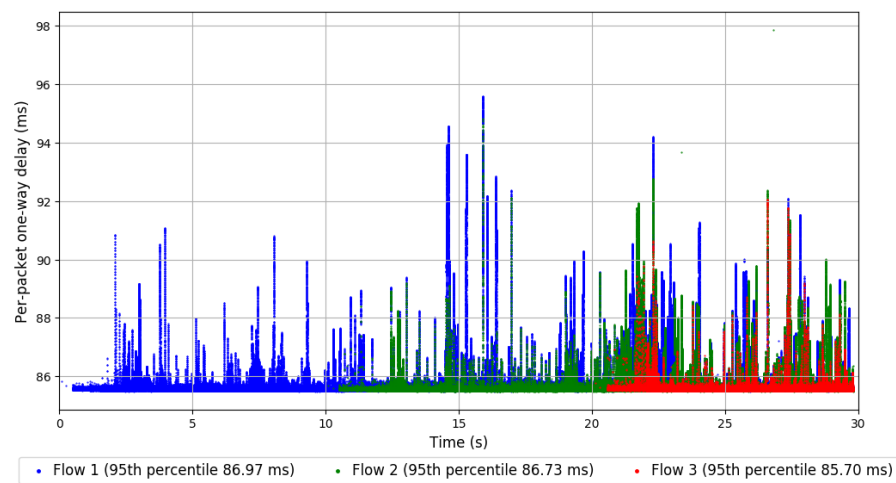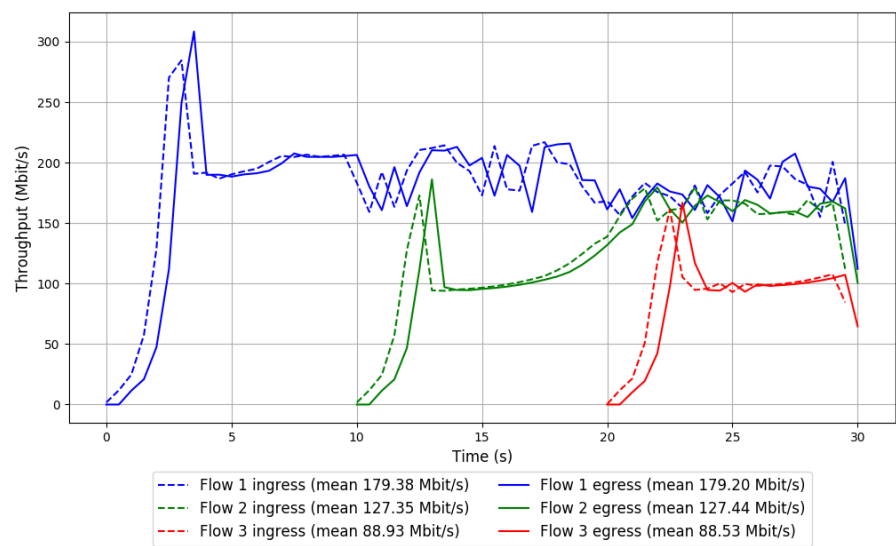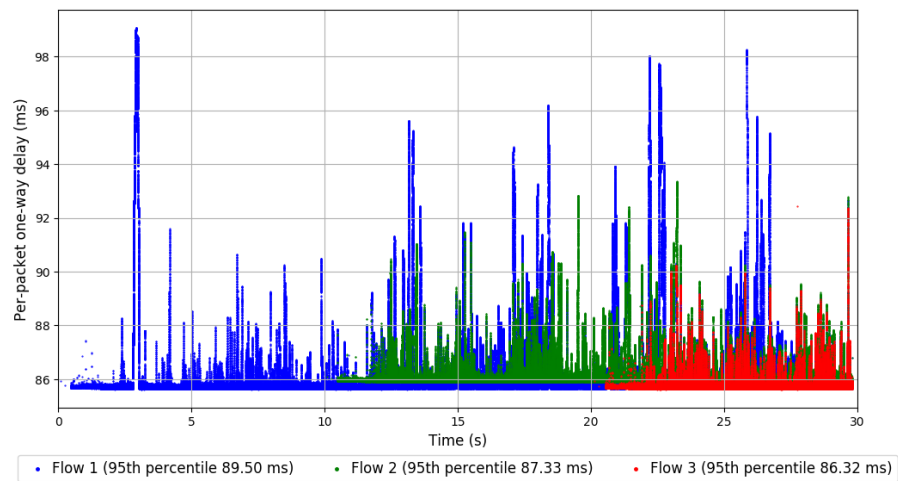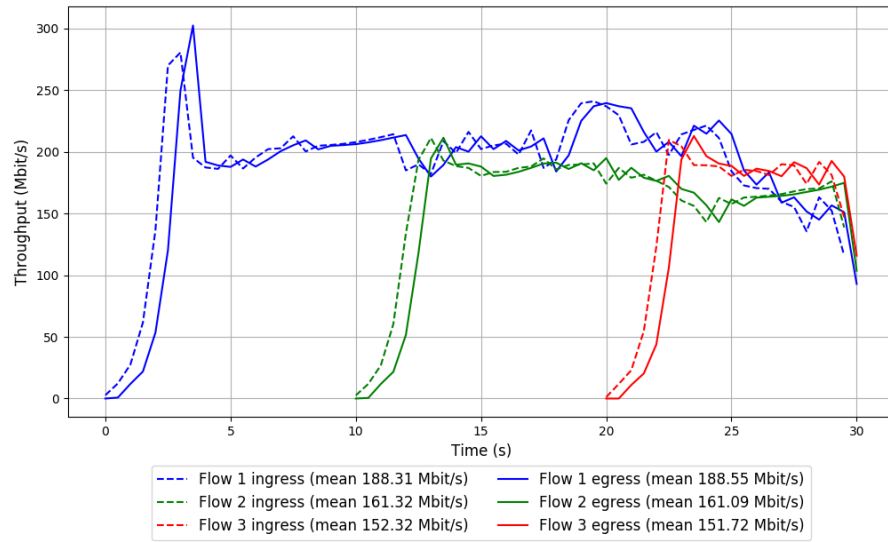Run 5: Report of PCC-Allegro — Data Link

Flow 1 ingress (mean 280.82 Mbit/s) --- Flow 1 egress (mean 280.32 Mbit/s)
Flow 2 ingress (mean 286.33 Mbit/s) --- Flow 2 egress (mean 285.03 Mbit/s)
Flow 3 ingress (mean 220.65 Mbit/s) --- Flow 3 egress (mean 219.66 Mbit/s)

Flow 1 (95th percentile 86.21 ms)   Flow 2 (95th percentile 90.14 ms)   Flow 3 (95th percentile 84.90 ms)
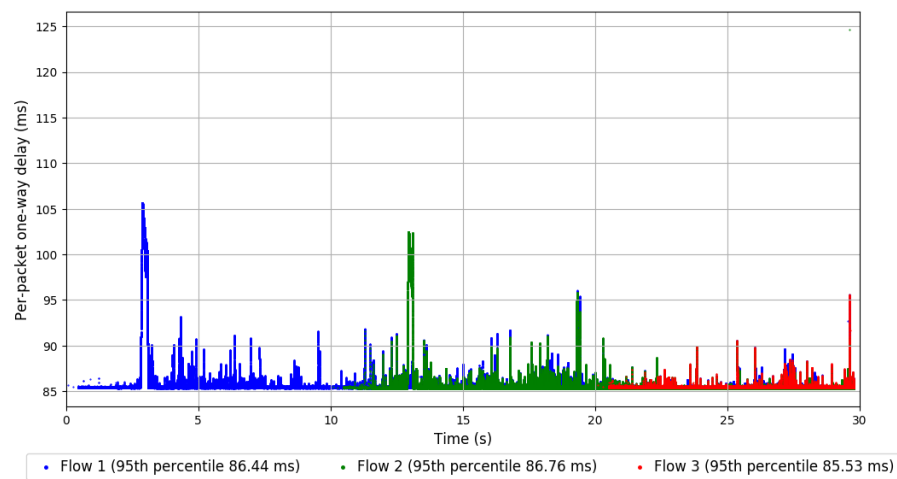
154

```
Run 1: Statistics of PCC-Expr

Start at: 2019-09-18 03:39:23
End at: 2019-09-18 03:39:53
Local clock offset: -0.279 ms
Remote clock offset: -0.095 ms


# Below is generated by plot.py at 2019-09-18 08:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 292.45 Mbit/s
95th percentile per-packet one-way delay: 86.757 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 179.20 Mbit/s
95th percentile per-packet one-way delay: 86.975 ms
Loss rate: 0.68%
-- Flow 2:
Average throughput: 127.44 Mbit/s
95th percentile per-packet one-way delay: 86.728 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 88.53 Mbit/s
95th percentile per-packet one-way delay: 85.703 ms
Loss rate: 2.21%
```

Run 1: Report of PCC-Expr — Data Link

Flow 1 ingress (mean 179.38 Mbit/s) Flow 1 egress (mean 179.20 Mbit/s)
Flow 2 ingress (mean 127.35 Mbit/s) Flow 2 egress (mean 127.44 Mbit/s)
Flow 3 ingress (mean 88.93 Mbit/s)   Flow 3 egress (mean 88.53 Mbit/s)

Flow 1 (95th percentile 86.97 ms) Flow 2 (95th percentile 86.73 ms) Flow 3 (95th percentile 85.70 ms)
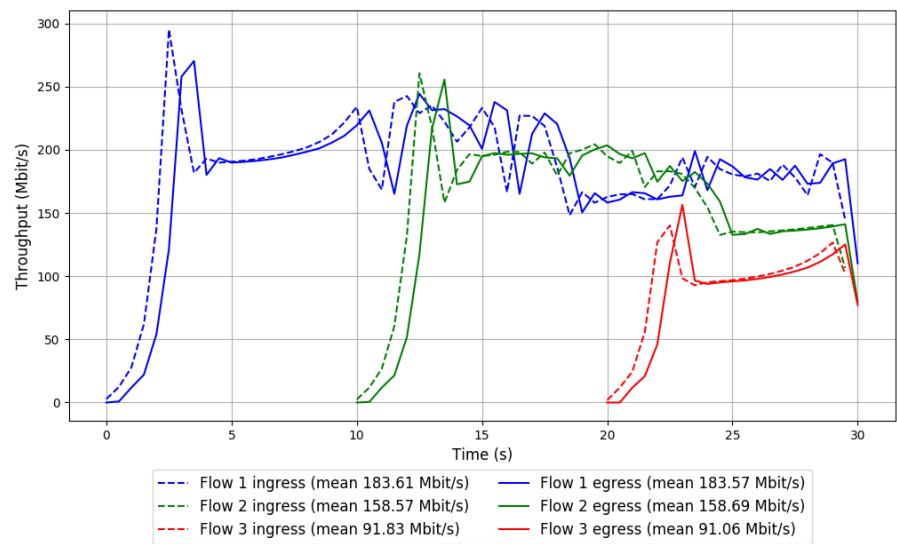
```
Run 2: Statistics of PCC-Expr

Start at: 2019-09-18 04:18:14
End at: 2019-09-18 04:18:44
Local clock offset: -0.258 ms
Remote clock offset: -0.011 ms


# Below is generated by plot.py at 2019-09-18 08:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 344.78 Mbit/s
95th percentile per-packet one-way delay: 87.995 ms
Loss rate: 0.87%
-- Flow 1:
Average throughput: 188.55 Mbit/s
95th percentile per-packet one-way delay: 89.502 ms
Loss rate: 0.45%
-- Flow 2:
Average throughput: 161.09 Mbit/s
95th percentile per-packet one-way delay: 87.327 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 151.72 Mbit/s
95th percentile per-packet one-way delay: 86.321 ms
Loss rate: 2.14%
```

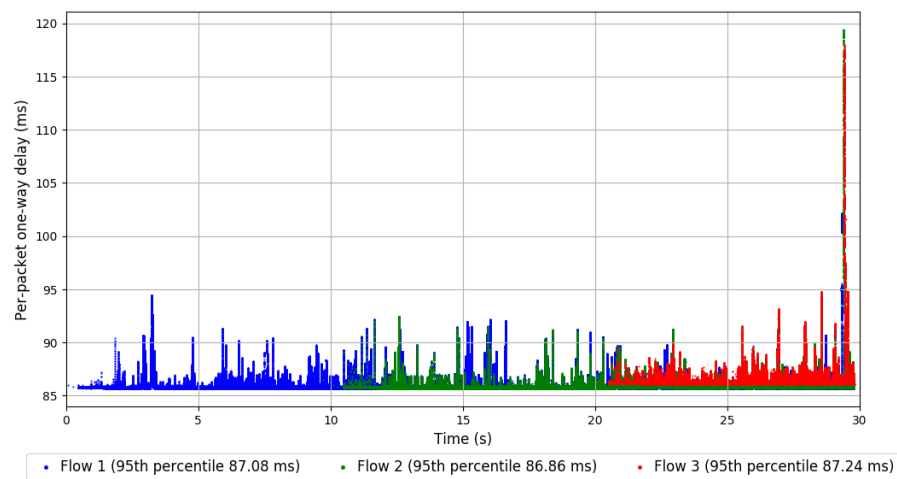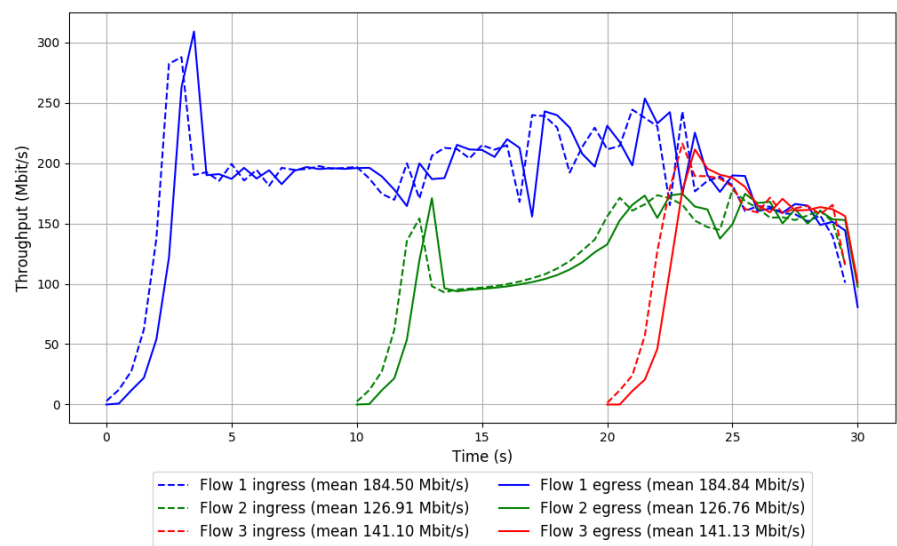# Run 2: Report of PCC-Expr — Data Link

```
Run 3: Statistics of PCC-Expr

Start at: 2019-09-18 04:57:27
End at: 2019-09-18 04:57:57
Local clock offset: -0.483 ms
Remote clock offset: -0.017 ms


# Below is generated by plot.py at 2019-09-18 08:51:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 318.46 Mbit/s
95th percentile per-packet one-way delay: 86.430 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 183.57 Mbit/s
95th percentile per-packet one-way delay: 86.438 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 158.69 Mbit/s
95th percentile per-packet one-way delay: 86.756 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 91.06 Mbit/s
95th percentile per-packet one-way delay: 85.532 ms
Loss rate: 2.59%
```

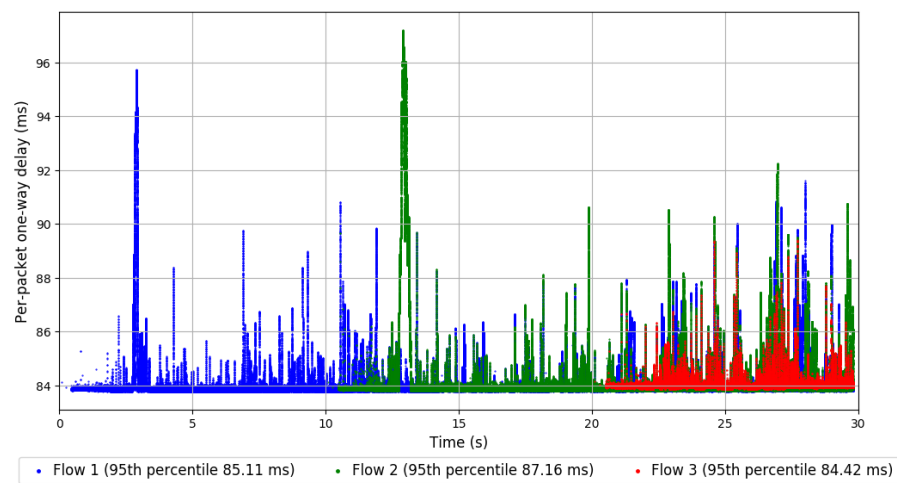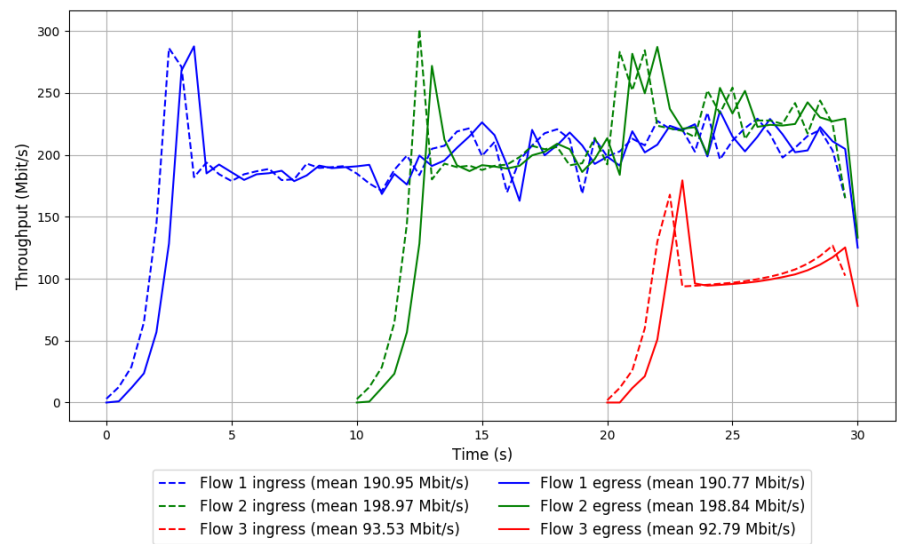# Run 3: Report of PCC-Expr — Data Link

```
Run 4: Statistics of PCC-Expr

Start at: 2019-09-18 05:36:44
End at: 2019-09-18 05:37:14
Local clock offset: -0.097 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2019-09-18 08:52:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 314.81 Mbit/s
95th percentile per-packet one-way delay: 87.045 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 184.84 Mbit/s
95th percentile per-packet one-way delay: 87.076 ms
Loss rate: 0.40%
-- Flow 2:
Average throughput: 126.76 Mbit/s
95th percentile per-packet one-way delay: 86.862 ms
Loss rate: 0.99%
-- Flow 3:
Average throughput: 141.13 Mbit/s
95th percentile per-packet one-way delay: 87.238 ms
Loss rate: 1.74%
```
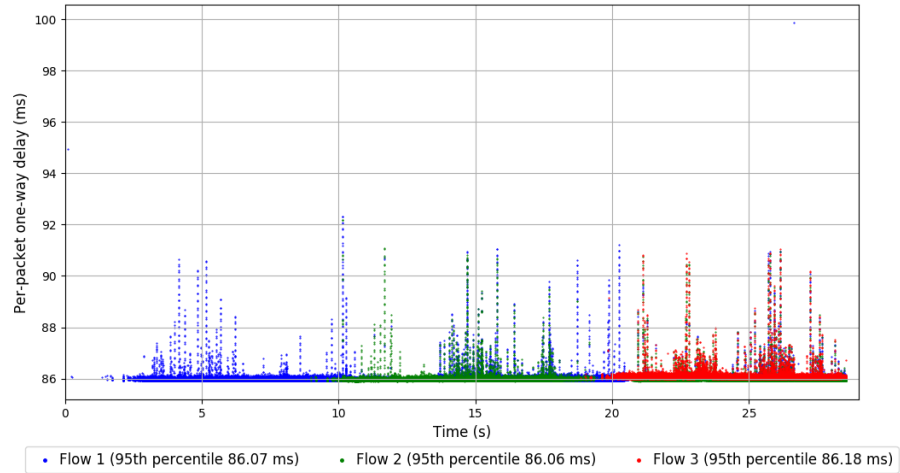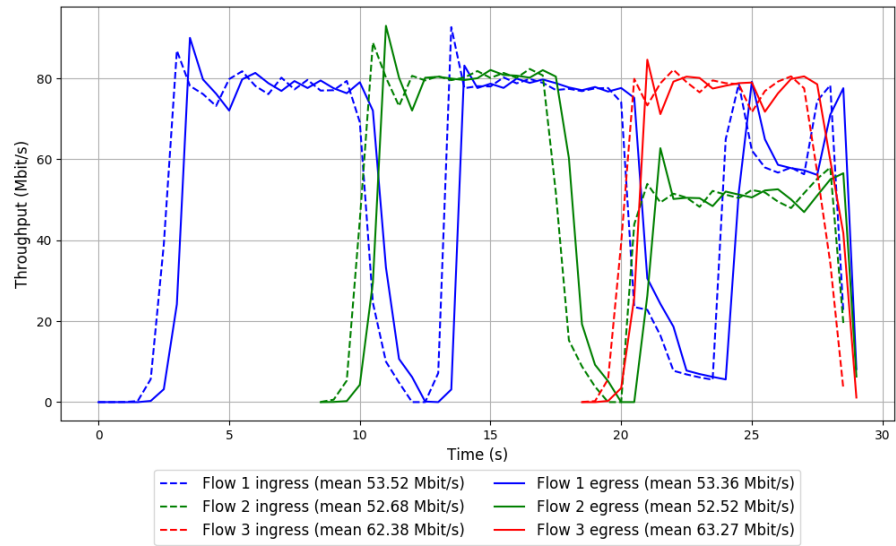
Run 4: Report of PCC-Expr — Data Link

```
Run 5: Statistics of PCC-Expr

Start at: 2019-09-18 06:16:28
End at: 2019-09-18 06:16:58
Local clock offset: -0.059 ms
Remote clock offset: -0.057 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 352.89 Mbit/s
95th percentile per-packet one-way delay: 85.663 ms
Loss rate: 0.92%
-- Flow 1:
Average throughput: 190.77 Mbit/s
95th percentile per-packet one-way delay: 85.114 ms
Loss rate: 0.66%
-- Flow 2:
Average throughput: 198.84 Mbit/s
95th percentile per-packet one-way delay: 87.159 ms
Loss rate: 0.92%
-- Flow 3:
Average throughput: 92.79 Mbit/s
95th percentile per-packet one-way delay: 84.420 ms
Loss rate: 2.51%
```
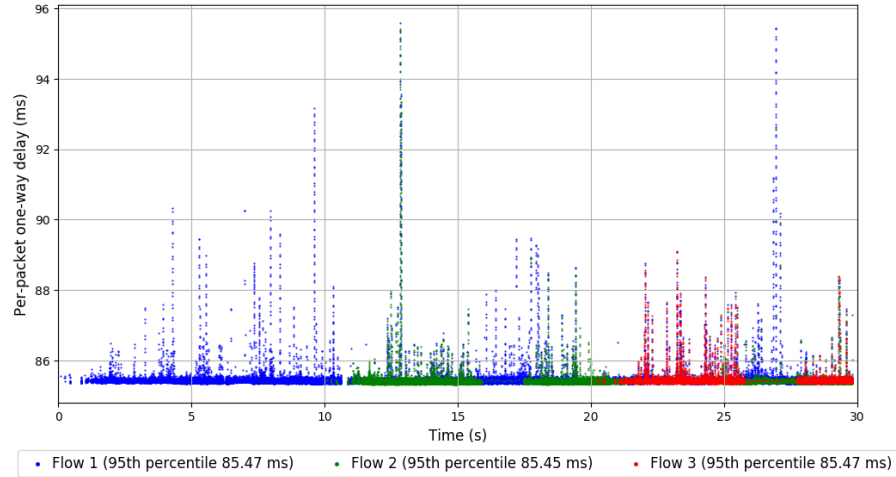
Run 5: Report of PCC-Expr — Data Link

```
Run 1: Statistics of QUIC Cubic

Start at: 2019-09-18 04:07:02
End at: 2019-09-18 04:07:32
Local clock offset: 0.093 ms
Remote clock offset: -0.027 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 111.37 Mbit/s
95th percentile per-packet one-way delay: 86.119 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 53.36 Mbit/s
95th percentile per-packet one-way delay: 86.074 ms
Loss rate: 0.92%
-- Flow 2:
Average throughput: 52.52 Mbit/s
95th percentile per-packet one-way delay: 86.064 ms
Loss rate: 1.15%
-- Flow 3:
Average throughput: 63.27 Mbit/s
95th percentile per-packet one-way delay: 86.184 ms
Loss rate: 0.33%
```

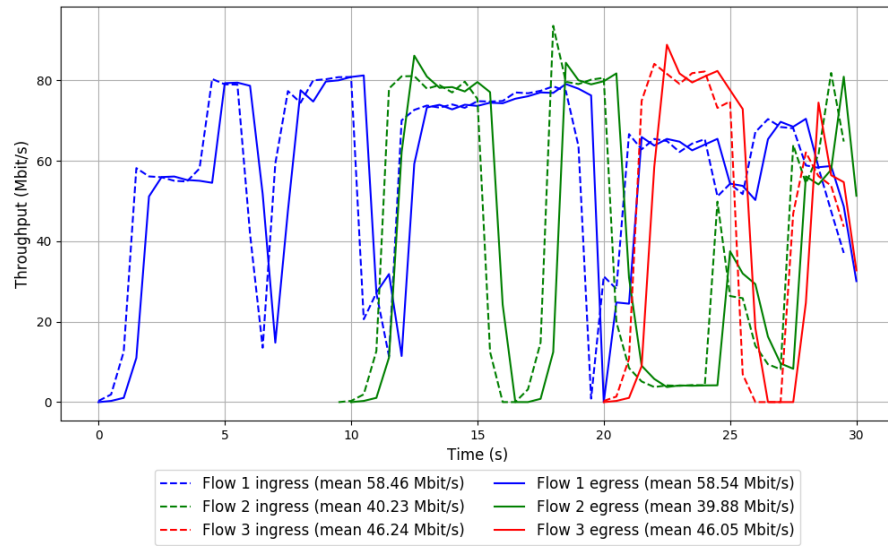Run 1: Report of QUIC Cubic — Data Link

```
Run 2: Statistics of QUIC Cubic

Start at: 2019-09-18 04:46:05
End at: 2019-09-18 04:46:35
Local clock offset: -0.503 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.05 Mbit/s
95th percentile per-packet one-way delay: 85.468 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 58.54 Mbit/s
95th percentile per-packet one-way delay: 85.473 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 39.88 Mbit/s
95th percentile per-packet one-way delay: 85.455 ms
Loss rate: 1.73%
-- Flow 3:
Average throughput: 46.05 Mbit/s
95th percentile per-packet one-way delay: 85.468 ms
Loss rate: 2.14%
```

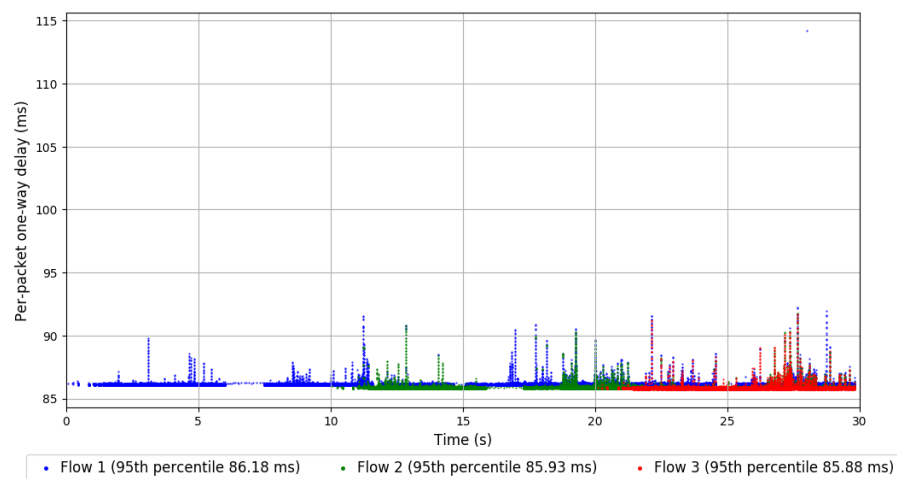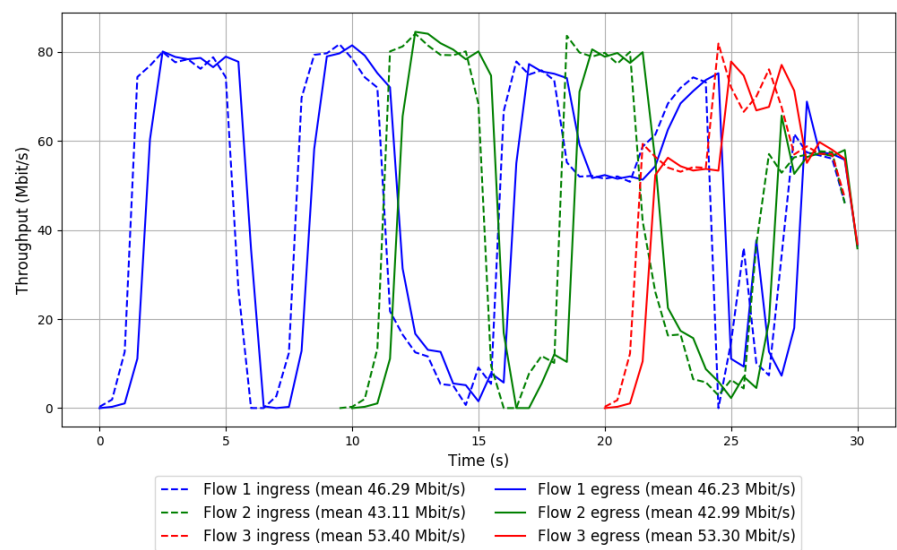# Run 2: Report of QUIC Cubic — Data Link

```
Run 3: Statistics of QUIC Cubic

Start at: 2019-09-18 05:25:34
End at: 2019-09-18 05:26:04
Local clock offset: -0.107 ms
Remote clock offset: -0.016 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.19 Mbit/s
95th percentile per-packet one-way delay: 86.152 ms
Loss rate: 1.09%
-- Flow 1:
Average throughput: 46.23 Mbit/s
95th percentile per-packet one-way delay: 86.176 ms
Loss rate: 0.71%
-- Flow 2:
Average throughput: 42.99 Mbit/s
95th percentile per-packet one-way delay: 85.931 ms
Loss rate: 1.16%
-- Flow 3:
Average throughput: 53.30 Mbit/s
95th percentile per-packet one-way delay: 85.882 ms
Loss rate: 1.93%
```

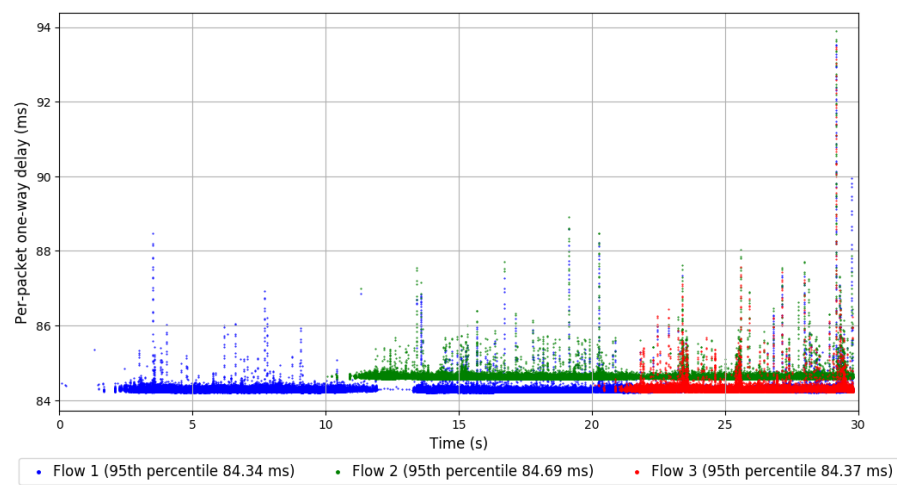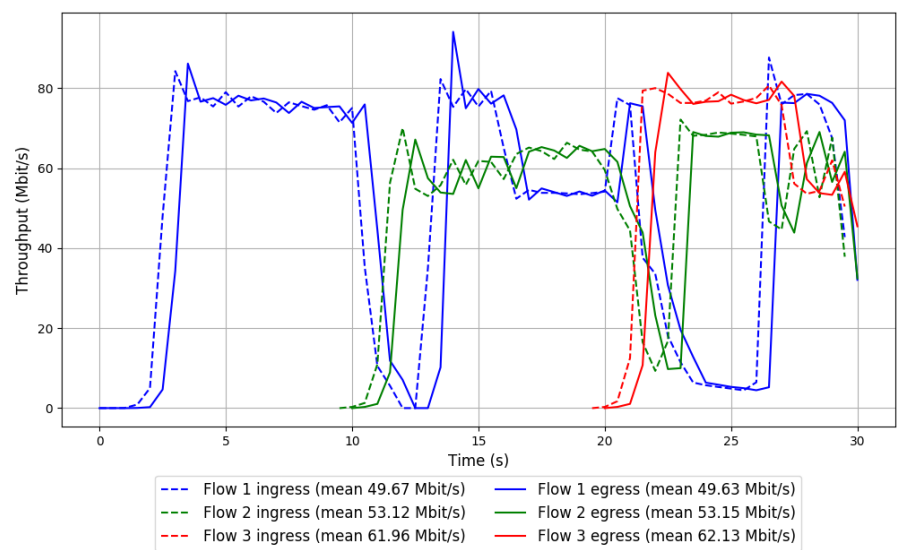Run 3: Report of QUIC Cubic — Data Link

```
Run 4: Statistics of QUIC Cubic

Start at: 2019-09-18 06:04:57
End at: 2019-09-18 06:05:27
Local clock offset: 0.35 ms
Remote clock offset: -0.092 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 105.25 Mbit/s
95th percentile per-packet one-way delay: 84.656 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 49.63 Mbit/s
95th percentile per-packet one-way delay: 84.345 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 53.15 Mbit/s
95th percentile per-packet one-way delay: 84.695 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 62.13 Mbit/s
95th percentile per-packet one-way delay: 84.371 ms
Loss rate: 1.46%
```
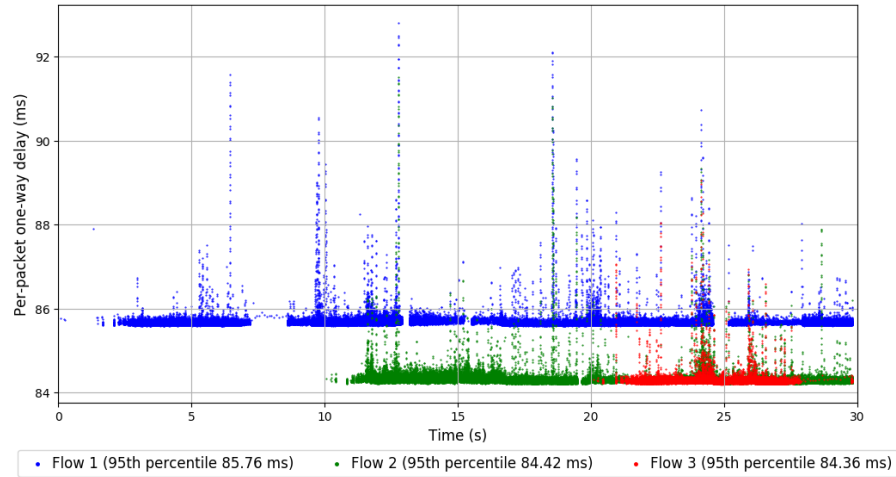
Run 4: Report of QUIC Cubic — Data Link

```
Run 5: Statistics of QUIC Cubic

Start at: 2019-09-18 06:44:41
End at: 2019-09-18 06:45:11
Local clock offset: 0.34 ms
Remote clock offset: 0.012 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 98.10 Mbit/s
95th percentile per-packet one-way delay: 85.717 ms
Loss rate: 1.01%
-- Flow 1:
Average throughput: 46.92 Mbit/s
95th percentile per-packet one-way delay: 85.760 ms
Loss rate: 0.94%
-- Flow 2:
Average throughput: 57.87 Mbit/s
95th percentile per-packet one-way delay: 84.418 ms
Loss rate: 1.18%
-- Flow 3:
Average throughput: 38.97 Mbit/s
95th percentile per-packet one-way delay: 84.357 ms
Loss rate: 0.78%
```
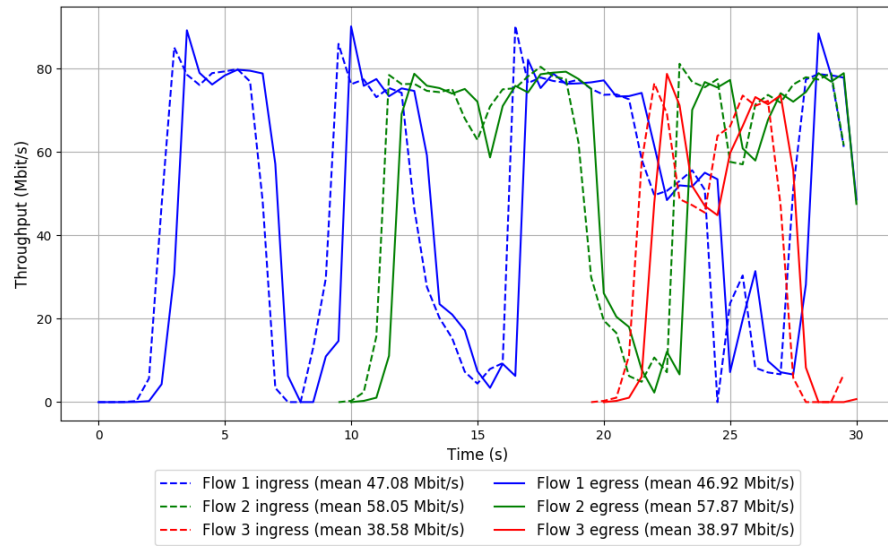
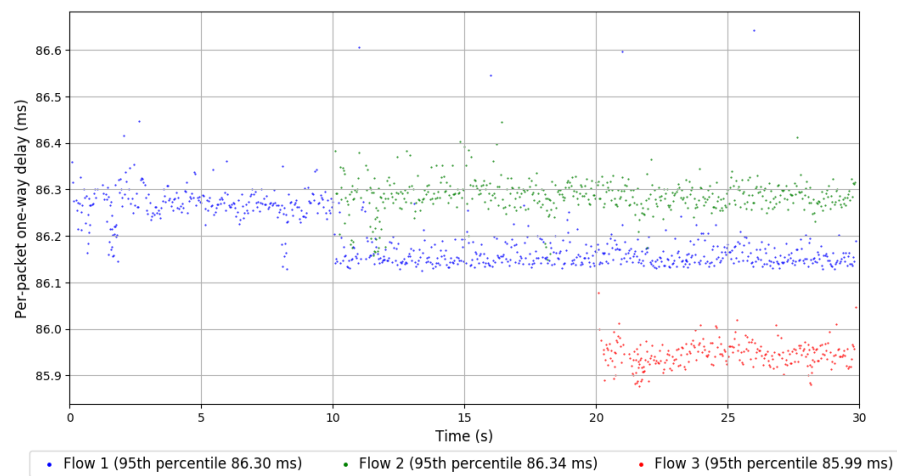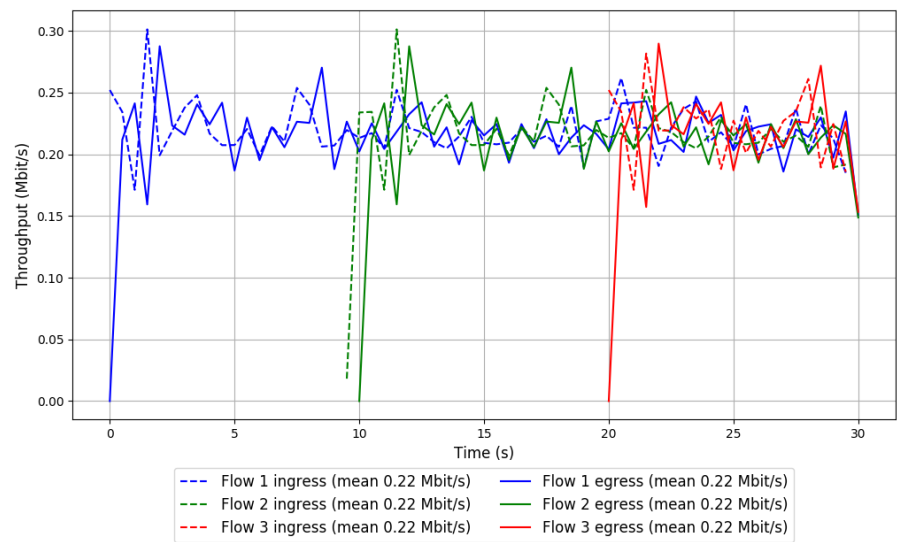Run 5: Report of QUIC Cubic — Data Link

```
Run 1: Statistics of SCReAM

Start at: 2019-09-18 03:58:41
End at: 2019-09-18 03:59:11
Local clock offset: -0.07 ms
Remote clock offset: -0.06 ms

# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.320 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.300 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.336 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.993 ms
Loss rate: 1.46%
```
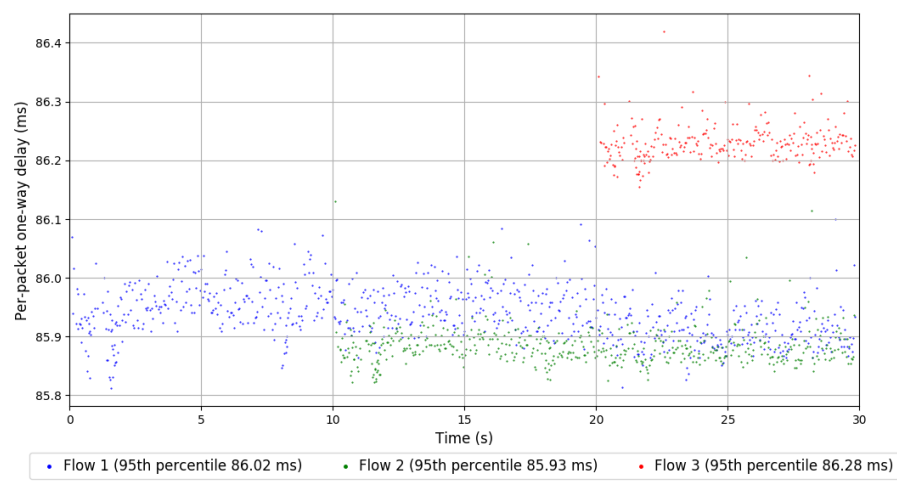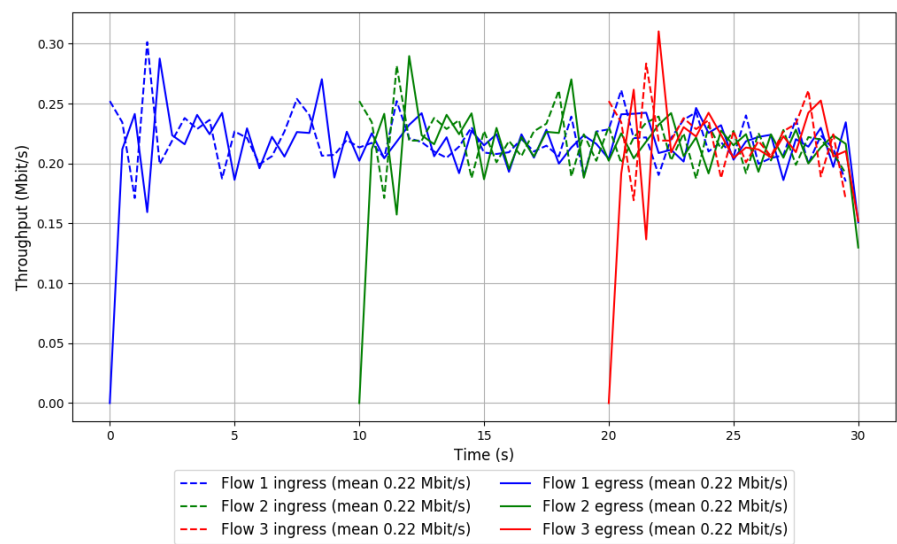
Run 1: Report of SCReAM — Data Link

```
Run 2: Statistics of SCReAM

Start at: 2019-09-18 04:37:47
End at: 2019-09-18 04:38:17
Local clock offset: -0.065 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.237 ms
Loss rate: 0.85%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.019 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.934 ms
Loss rate: 1.04%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.282 ms
Loss rate: 1.50%
```
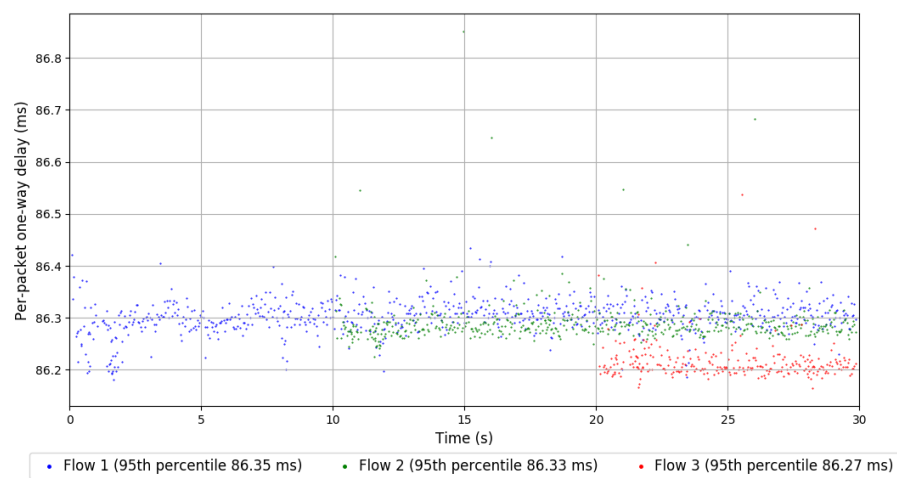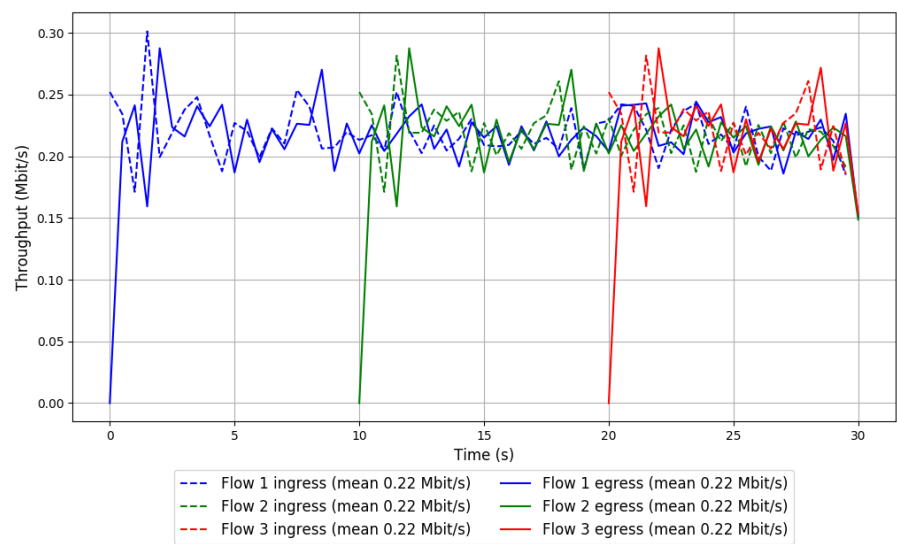
Run 2: Report of SCReAM — Data Link

```
Run 3: Statistics of SCReAM

Start at: 2019-09-18 05:17:18
End at: 2019-09-18 05:17:48
Local clock offset: 0.274 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.347 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.354 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.332 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.266 ms
Loss rate: 1.46%
```
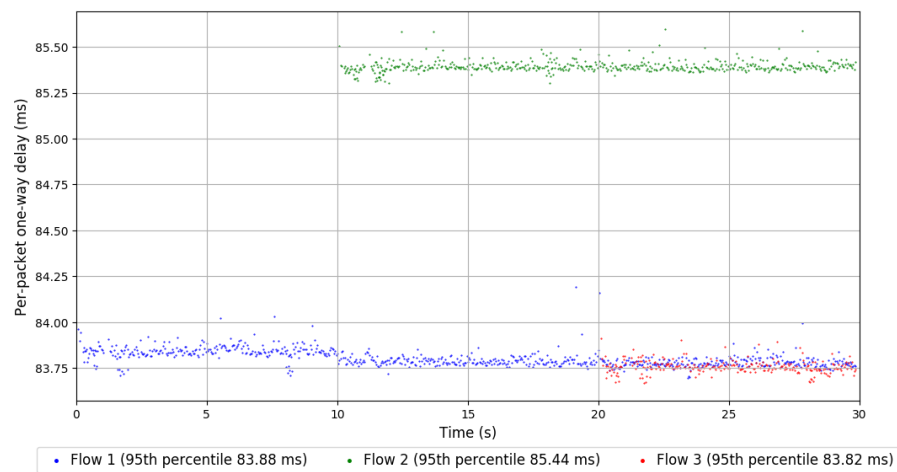
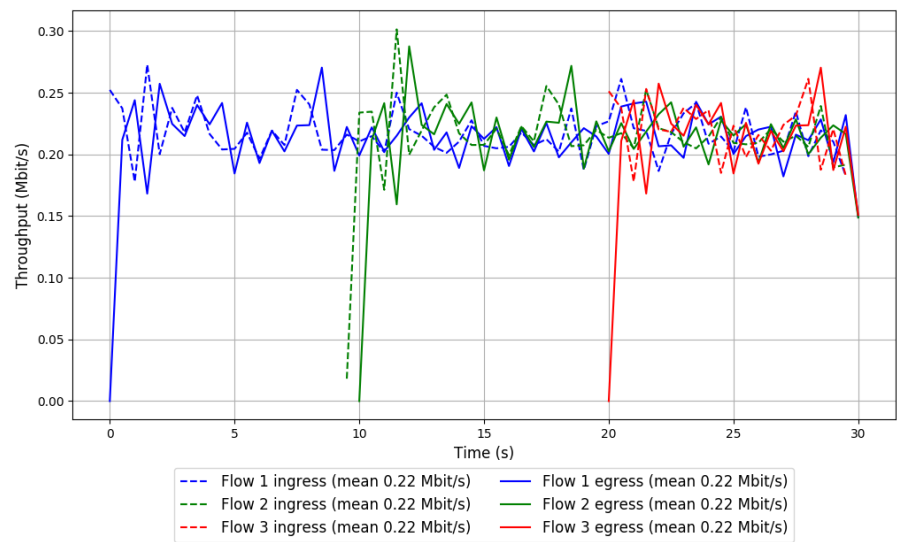# Run 3: Report of SCReAM — Data Link

```
Run 4: Statistics of SCReAM

Start at: 2019-09-18 05:56:42
End at: 2019-09-18 05:57:12
Local clock offset: -0.248 ms
Remote clock offset: -0.091 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 85.418 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.877 ms
Loss rate: 0.51%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 85.441 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 83.817 ms
Loss rate: 1.45%
```
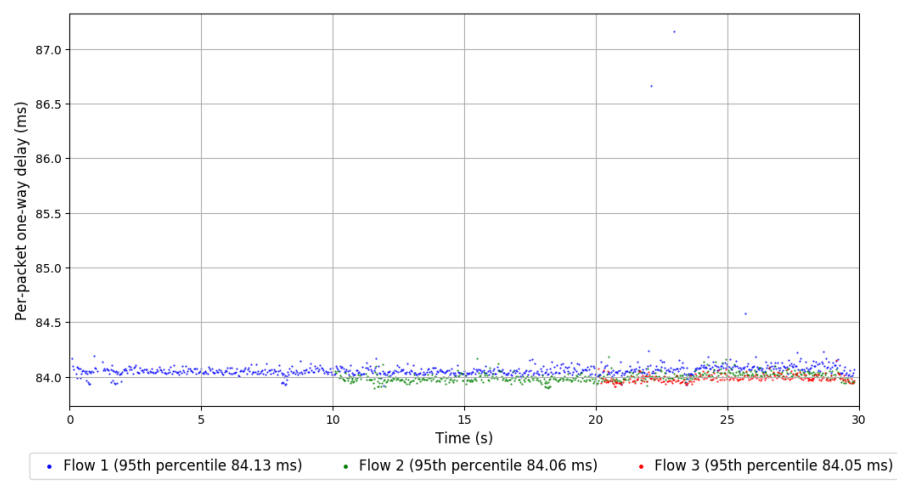
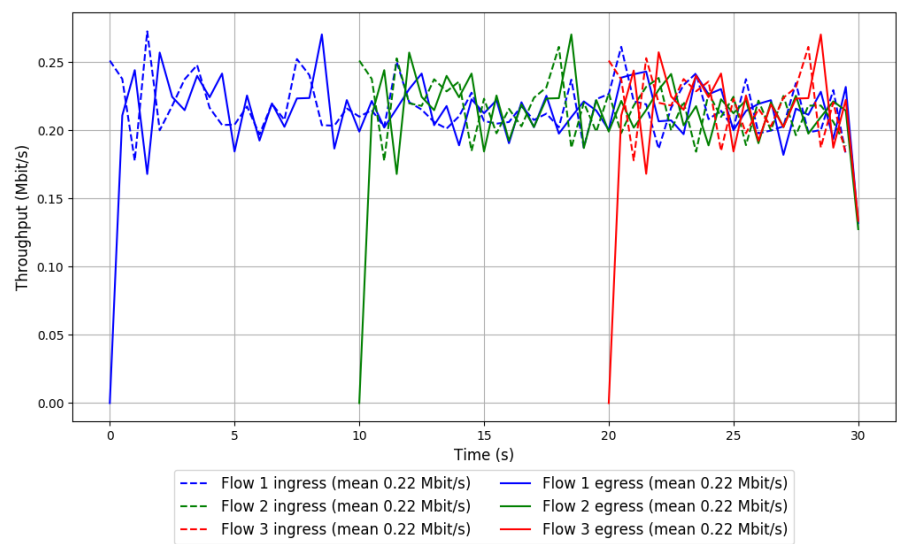# Run 4: Report of SCReAM — Data Link

```
Run 5: Statistics of SCReAM

Start at: 2019-09-18 06:36:11
End at: 2019-09-18 06:36:41
Local clock offset: -0.066 ms
Remote clock offset: -0.008 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 84.110 ms
Loss rate: 0.97%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.133 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.060 ms
Loss rate: 1.03%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.045 ms
Loss rate: 1.84%
```

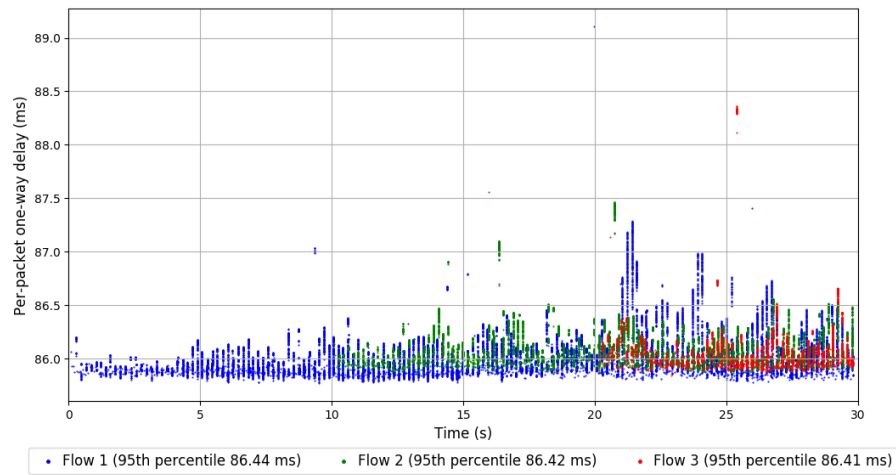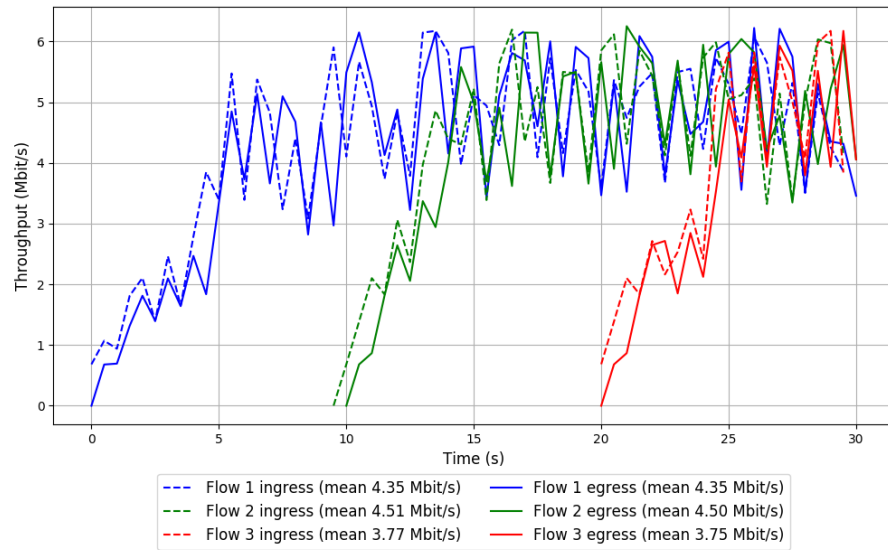# Run 5: Report of SCReAM — Data Link

```
Run 1: Statistics of Sprout

Start at: 2019-09-18 04:10:18
End at: 2019-09-18 04:10:48
Local clock offset: -0.068 ms
Remote clock offset: -0.035 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.56 Mbit/s
95th percentile per-packet one-way delay: 86.426 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 86.435 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 4.50 Mbit/s
95th percentile per-packet one-way delay: 86.425 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 86.414 ms
Loss rate: 2.46%
```
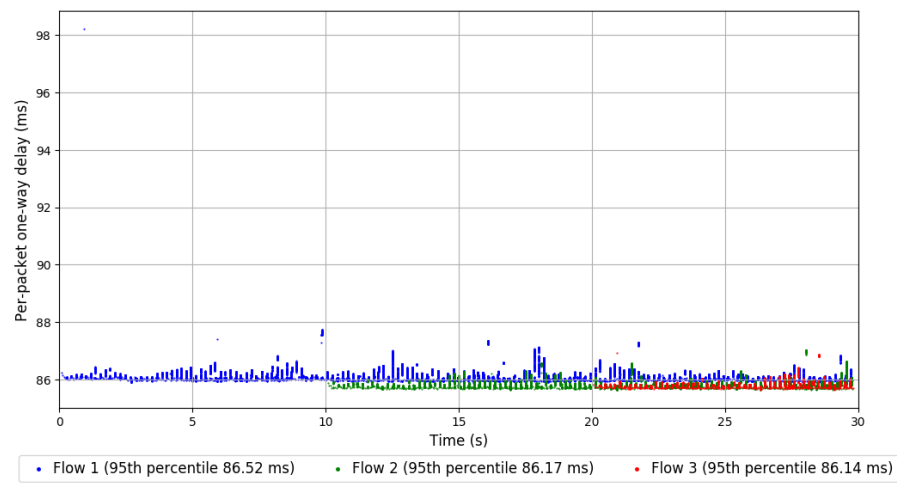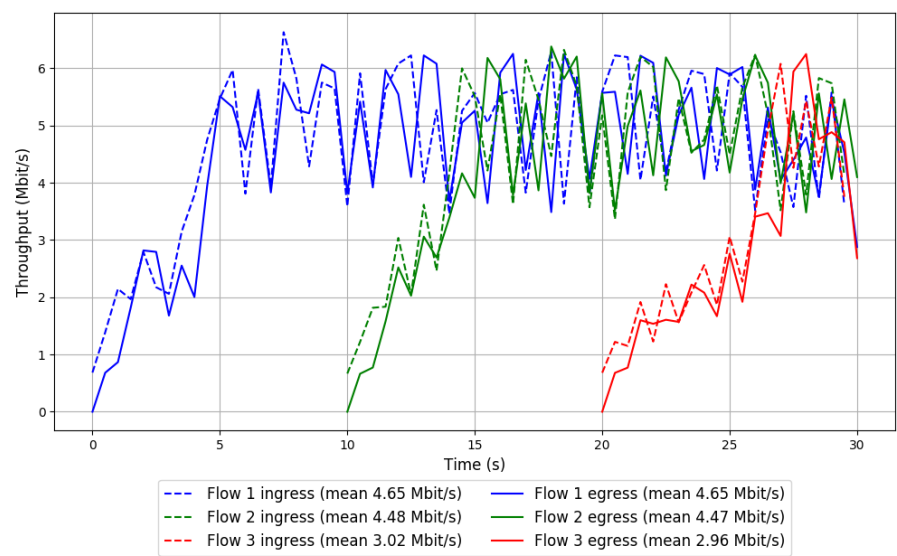
Run 1: Report of Sprout — Data Link

```
Run 2: Statistics of Sprout

Start at: 2019-09-18 04:49:29
End at: 2019-09-18 04:49:59
Local clock offset: -0.299 ms
Remote clock offset: -0.038 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 86.411 ms
Loss rate: 1.12%
-- Flow 1:
Average throughput: 4.65 Mbit/s
95th percentile per-packet one-way delay: 86.523 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 4.47 Mbit/s
95th percentile per-packet one-way delay: 86.169 ms
Loss rate: 1.17%
-- Flow 3:
Average throughput: 2.96 Mbit/s
95th percentile per-packet one-way delay: 86.141 ms
Loss rate: 3.23%
```
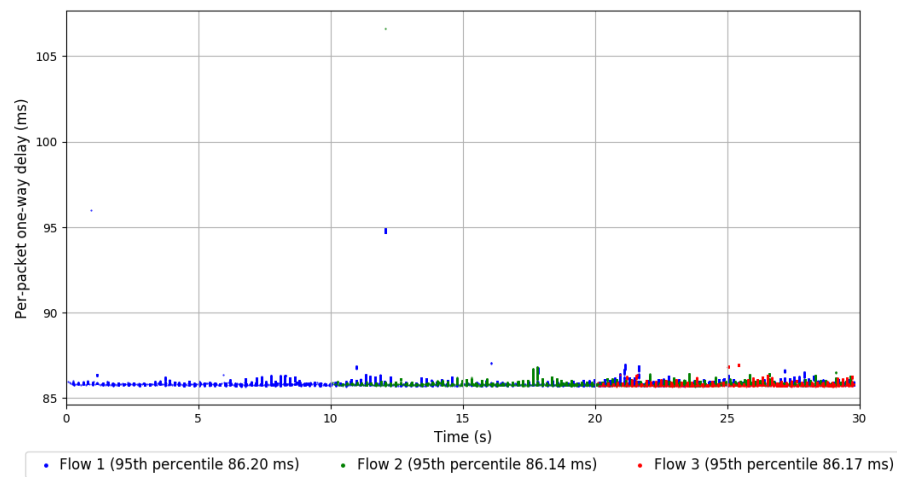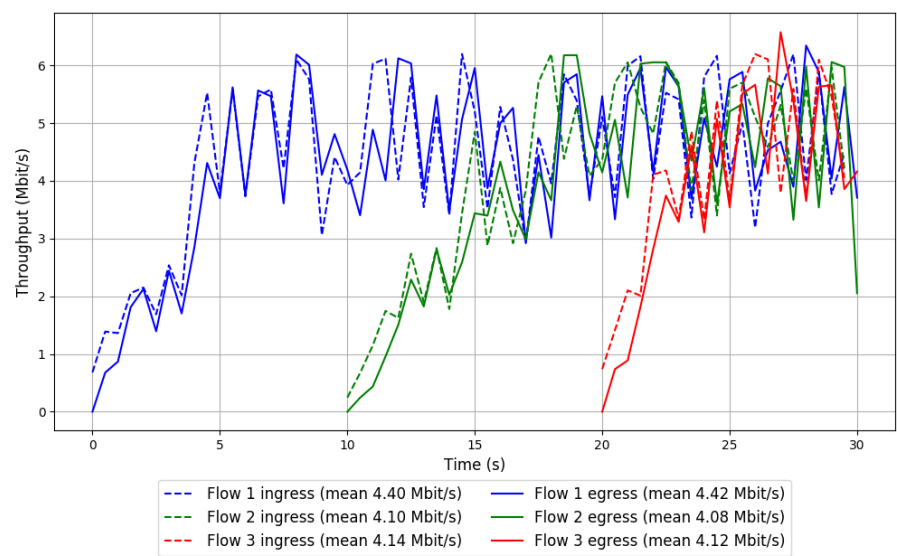
Run 2: Report of Sprout — Data Link

```
Run 3: Statistics of Sprout

Start at: 2019-09-18 05:28:50
End at: 2019-09-18 05:29:20
Local clock offset: -0.232 ms
Remote clock offset: -0.026 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.46 Mbit/s
95th percentile per-packet one-way delay: 86.180 ms
Loss rate: 0.96%
-- Flow 1:
Average throughput: 4.42 Mbit/s
95th percentile per-packet one-way delay: 86.205 ms
Loss rate: 0.29%
-- Flow 2:
Average throughput: 4.08 Mbit/s
95th percentile per-packet one-way delay: 86.143 ms
Loss rate: 1.33%
-- Flow 3:
Average throughput: 4.12 Mbit/s
95th percentile per-packet one-way delay: 86.165 ms
Loss rate: 2.37%
```
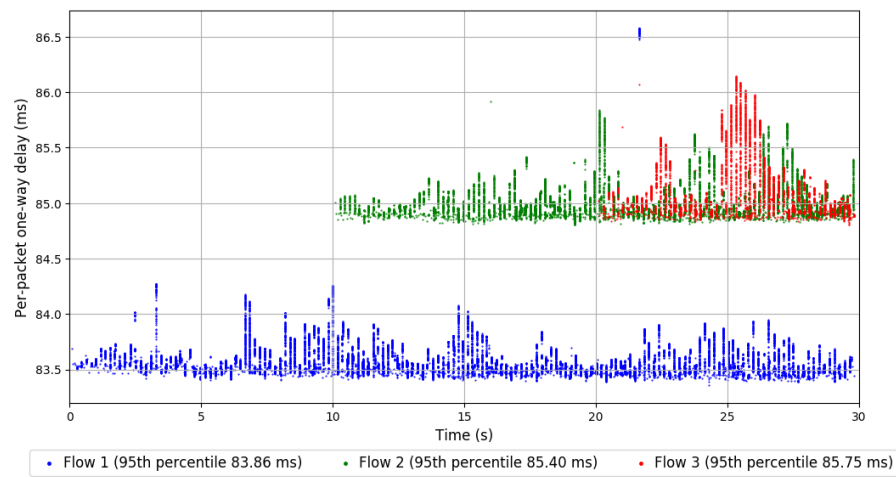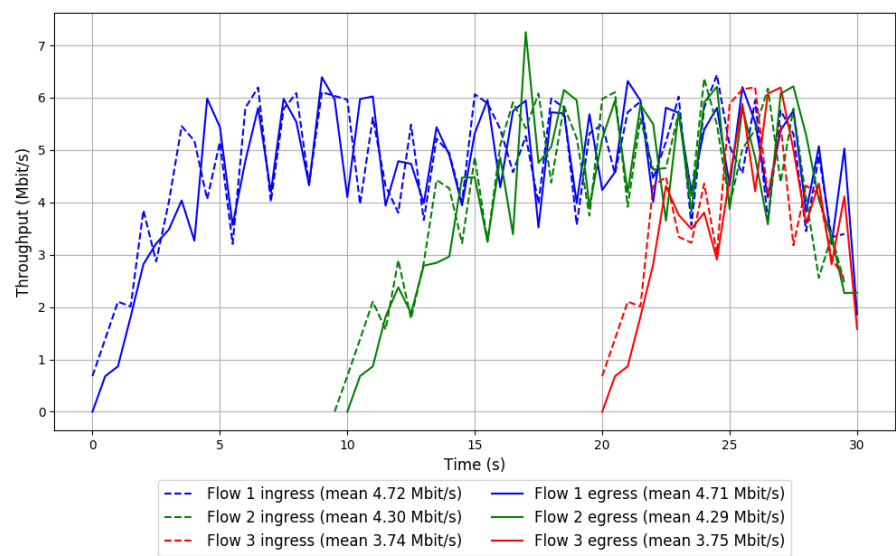
Run 3: Report of Sprout — Data Link

```
Run 4: Statistics of Sprout

Start at: 2019-09-18 06:08:19
End at: 2019-09-18 06:08:49
Local clock offset: -0.511 ms
Remote clock offset: -0.084 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.79 Mbit/s
95th percentile per-packet one-way delay: 85.341 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 4.71 Mbit/s
95th percentile per-packet one-way delay: 83.859 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 4.29 Mbit/s
95th percentile per-packet one-way delay: 85.401 ms
Loss rate: 0.75%
-- Flow 3:
Average throughput: 3.75 Mbit/s
95th percentile per-packet one-way delay: 85.747 ms
Loss rate: 1.53%
```
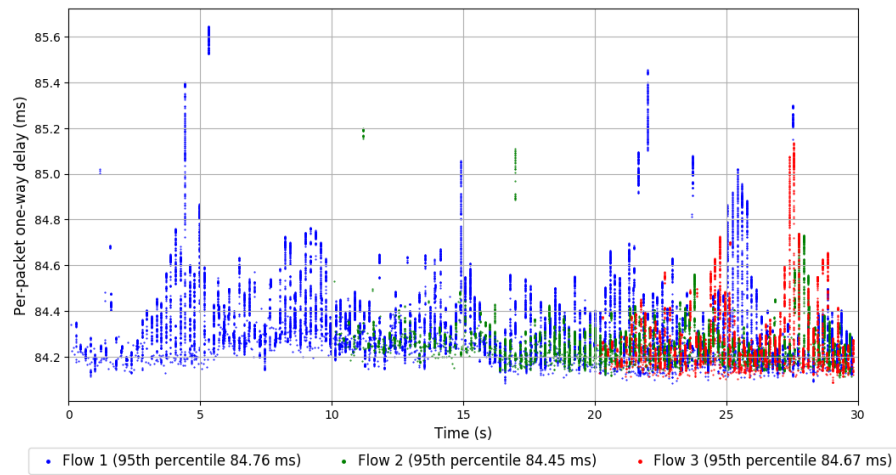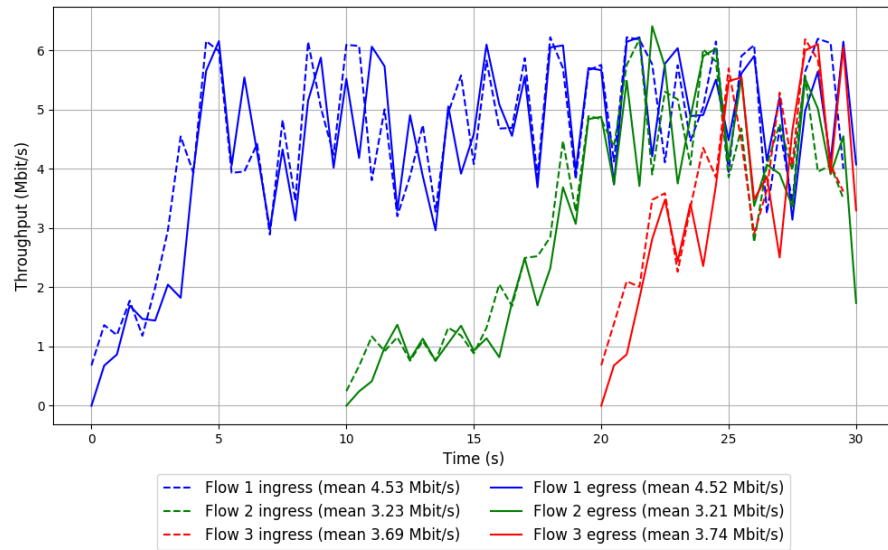
Run 4: Report of Sprout — Data Link

```
Run 5: Statistics of Sprout

Start at: 2019-09-18 06:47:56
End at: 2019-09-18 06:48:26
Local clock offset: 0.222 ms
Remote clock offset: -0.023 ms


# Below is generated by plot.py at 2019-09-18 08:55:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.87 Mbit/s
95th percentile per-packet one-way delay: 84.682 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 4.52 Mbit/s
95th percentile per-packet one-way delay: 84.759 ms
Loss rate: 0.73%
-- Flow 2:
Average throughput: 3.21 Mbit/s
95th percentile per-packet one-way delay: 84.453 ms
Loss rate: 1.45%
-- Flow 3:
Average throughput: 3.74 Mbit/s
95th percentile per-packet one-way delay: 84.672 ms
Loss rate: 0.44%
```
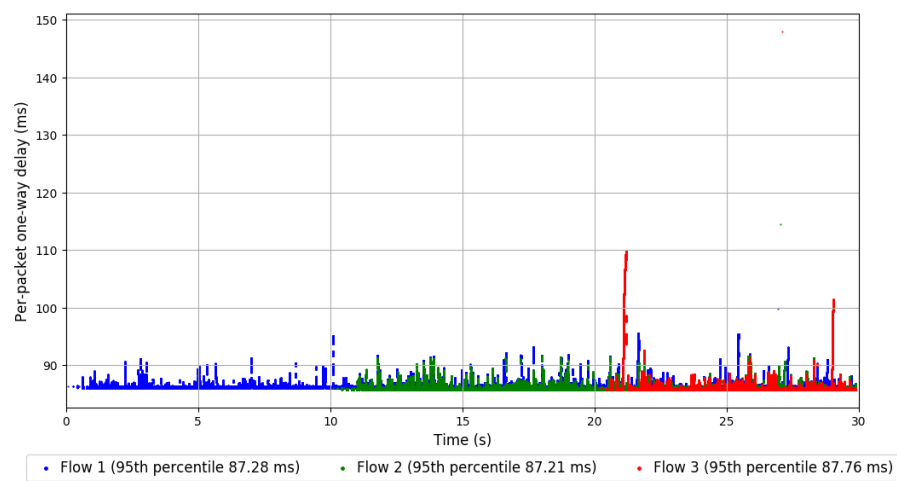
Run 5: Report of Sprout — Data Link

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

Start at: 2019-09-18 04:05:10
End at: 2019-09-18 04:05:40
Local clock offset: -0.073 ms
Remote clock offset: -0.039 ms

# Below is generated by plot.py at 2019-09-18 09:01:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 367.76 Mbit/s
95th percentile per-packet one-way delay: 87.313 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 193.84 Mbit/s
95th percentile per-packet one-way delay: 87.276 ms
Loss rate: 0.47%
-- Flow 2:
Average throughput: 186.48 Mbit/s
95th percentile per-packet one-way delay: 87.214 ms
Loss rate: 1.20%
-- Flow 3:
Average throughput: 152.39 Mbit/s
95th percentile per-packet one-way delay: 87.756 ms
Loss rate: 2.14%
```
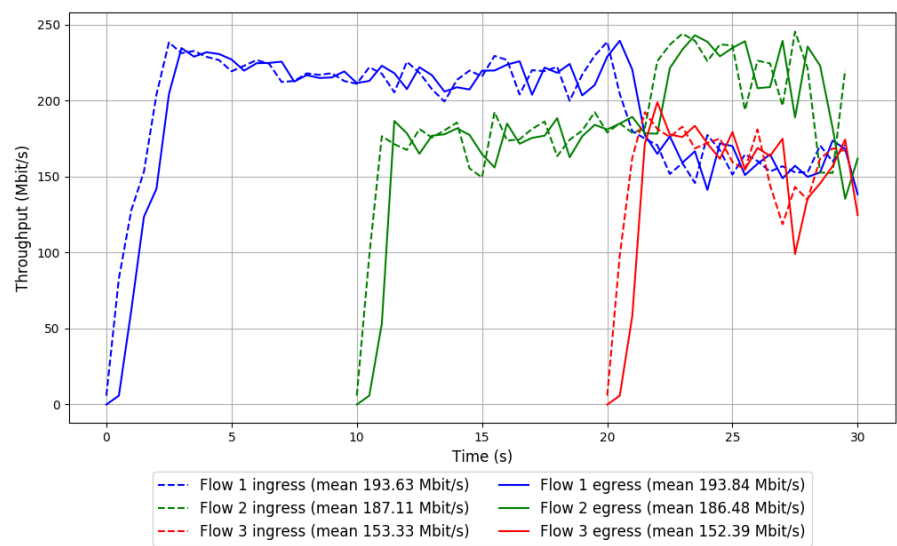
Run 1: Report of TaoVA-100x — Data Link

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

Start at: 2019-09-18 04:44:14
End at: 2019-09-18 04:44:44
Local clock offset: -0.032 ms
Remote clock offset: -0.022 ms


# Below is generated by plot.py at 2019-09-18 09:01:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 356.79 Mbit/s
95th percentile per-packet one-way delay: 87.222 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 195.33 Mbit/s
95th percentile per-packet one-way delay: 86.850 ms
Loss rate: 0.49%
-- Flow 2:
Average throughput: 167.70 Mbit/s
95th percentile per-packet one-way delay: 87.476 ms
Loss rate: 1.05%
-- Flow 3:
Average throughput: 152.36 Mbit/s
95th percentile per-packet one-way delay: 88.200 ms
Loss rate: 1.90%
```
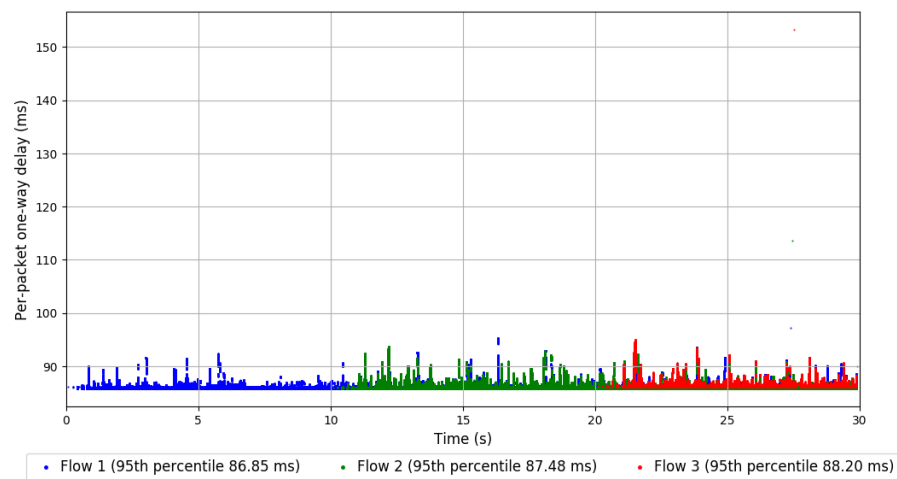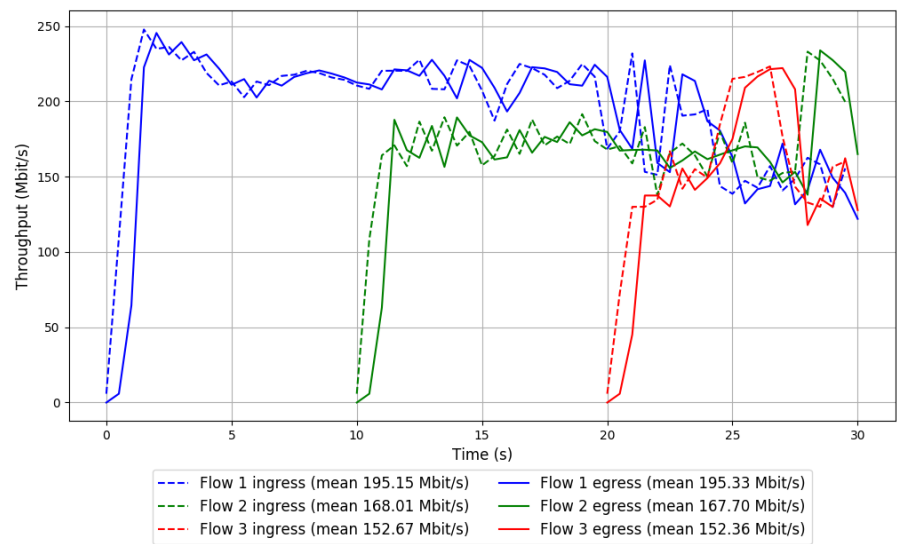
Run 2: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 195.15 Mbit/s)   Flow 1 egress (mean 195.33 Mbit/s)
Flow 2 ingress (mean 168.01 Mbit/s)   Flow 2 egress (mean 167.70 Mbit/s)
Flow 3 ingress (mean 152.67 Mbit/s)   Flow 3 egress (mean 152.36 Mbit/s)

Flow 1 (95th percentile 86.85 ms)   Flow 2 (95th percentile 87.48 ms)   Flow 3 (95th percentile 88.20 ms)

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

Start at: 2019-09-18 05:23:46
End at: 2019-09-18 05:24:16
Local clock offset: -0.119 ms
Remote clock offset: -0.03 ms


# Below is generated by plot.py at 2019-09-18 09:01:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.91 Mbit/s
95th percentile per-packet one-way delay: 87.769 ms
Loss rate: 0.76%
-- Flow 1:
Average throughput: 175.19 Mbit/s
95th percentile per-packet one-way delay: 87.809 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 153.78 Mbit/s
95th percentile per-packet one-way delay: 87.627 ms
Loss rate: 0.80%
-- Flow 3:
Average throughput: 142.01 Mbit/s
95th percentile per-packet one-way delay: 87.880 ms
Loss rate: 1.42%
```
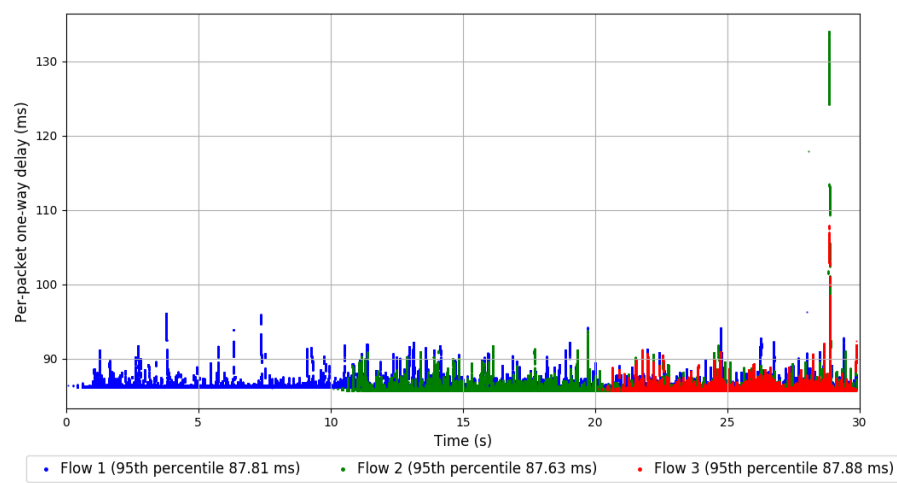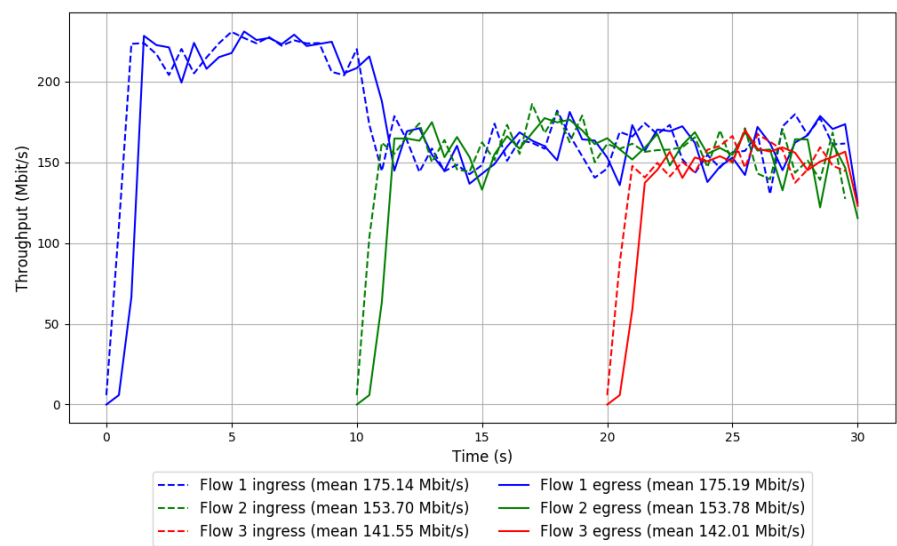
Run 3: Report of TaoVA-100x — Data Link

Flow 1 ingress (mean 175.14 Mbit/s) --- Flow 1 egress (mean 175.19 Mbit/s)
Flow 2 ingress (mean 153.70 Mbit/s) --- Flow 2 egress (mean 153.78 Mbit/s)
Flow 3 ingress (mean 141.55 Mbit/s) --- Flow 3 egress (mean 142.01 Mbit/s)

Flow 1 (95th percentile 87.81 ms) • Flow 2 (95th percentile 87.63 ms) • Flow 3 (95th percentile 87.88 ms)
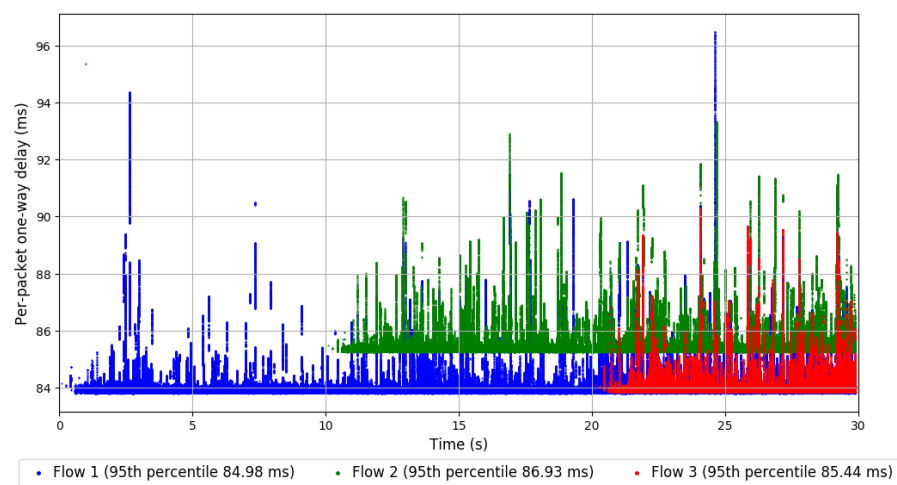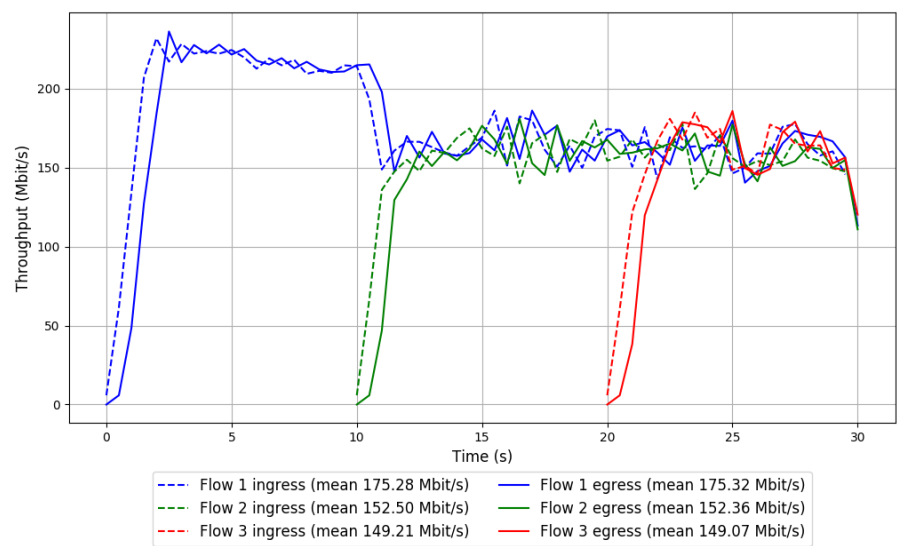
```
Run 4: Statistics of TaoVA-100x

Start at: 2019-09-18 06:03:09
End at: 2019-09-18 06:03:39
Local clock offset: -0.041 ms
Remote clock offset: -0.079 ms


# Below is generated by plot.py at 2019-09-18 09:01:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.34 Mbit/s
95th percentile per-packet one-way delay: 86.093 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 175.32 Mbit/s
95th percentile per-packet one-way delay: 84.983 ms
Loss rate: 0.55%
-- Flow 2:
Average throughput: 152.36 Mbit/s
95th percentile per-packet one-way delay: 86.931 ms
Loss rate: 1.00%
-- Flow 3:
Average throughput: 149.07 Mbit/s
95th percentile per-packet one-way delay: 85.437 ms
Loss rate: 1.81%
```

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

Flow 1 ingress (mean 175.28 Mbit/s) --- Flow 1 egress (mean 175.32 Mbit/s)
Flow 2 ingress (mean 152.50 Mbit/s) --- Flow 2 egress (mean 152.36 Mbit/s)
Flow 3 ingress (mean 149.21 Mbit/s) --- Flow 3 egress (mean 149.07 Mbit/s)

Flow 1 (95th percentile 84.98 ms) • Flow 2 (95th percentile 86.93 ms) • Flow 3 (95th percentile 85.44 ms)
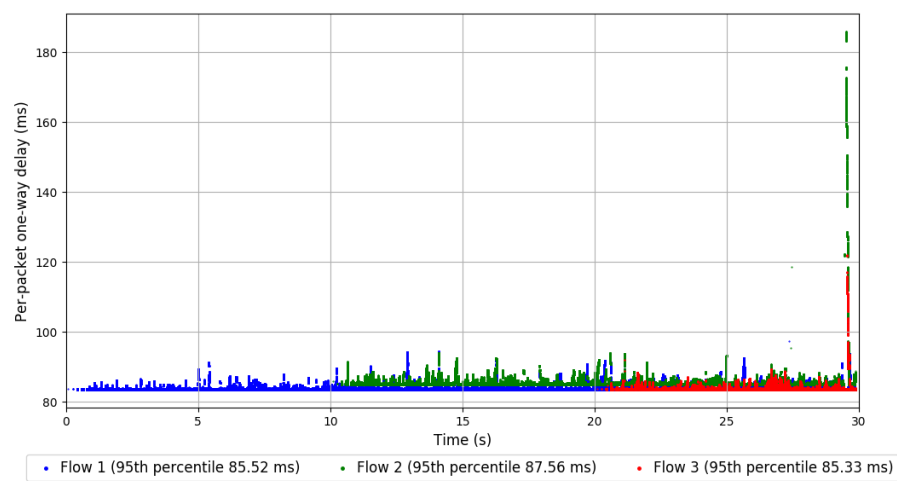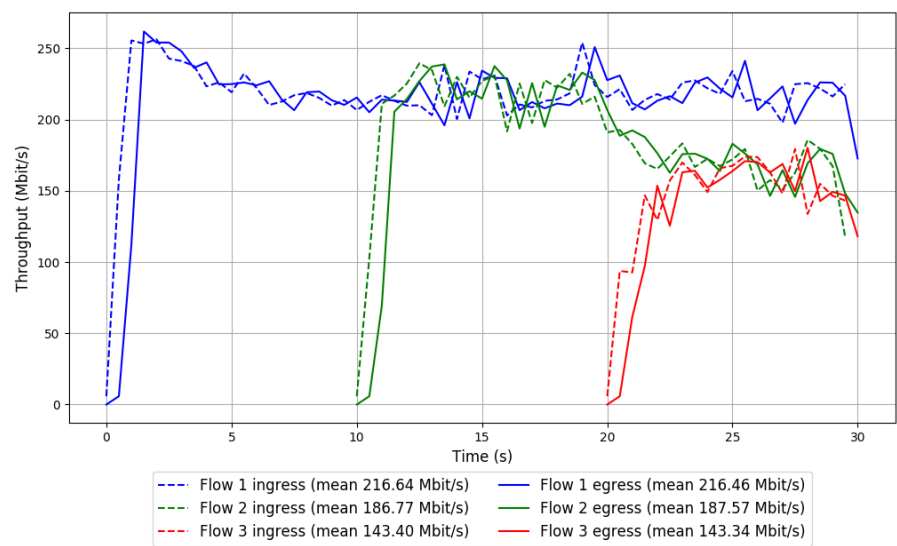
202

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

Start at: 2019-09-18 06:42:46
End at: 2019-09-18 06:43:16
Local clock offset: -0.333 ms
Remote clock offset: -0.031 ms


# Below is generated by plot.py at 2019-09-18 09:03:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.10 Mbit/s
95th percentile per-packet one-way delay: 86.427 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 216.46 Mbit/s
95th percentile per-packet one-way delay: 85.523 ms
Loss rate: 0.67%
-- Flow 2:
Average throughput: 187.57 Mbit/s
95th percentile per-packet one-way delay: 87.556 ms
Loss rate: 0.47%
-- Flow 3:
Average throughput: 143.34 Mbit/s
95th percentile per-packet one-way delay: 85.327 ms
Loss rate: 1.82%
```

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

- - - - Flow 1 ingress (mean 216.64 Mbit/s) —— Flow 1 egress (mean 216.46 Mbit/s)
- - - - Flow 2 ingress (mean 186.77 Mbit/s) —— Flow 2 egress (mean 187.57 Mbit/s)
- - - - Flow 3 ingress (mean 143.40 Mbit/s) —— Flow 3 egress (mean 143.34 Mbit/s)

- Flow 1 (95th percentile 85.52 ms)   • Flow 2 (95th percentile 87.56 ms)   • Flow 3 (95th percentile 85.33 ms)
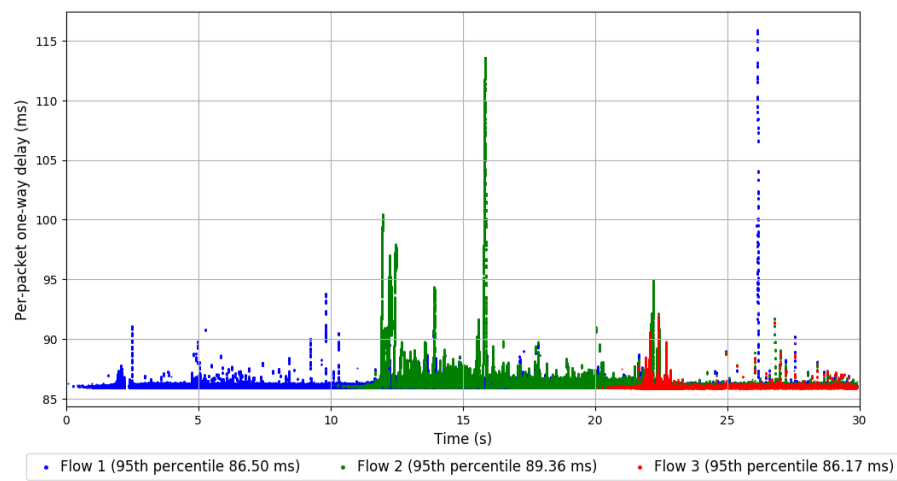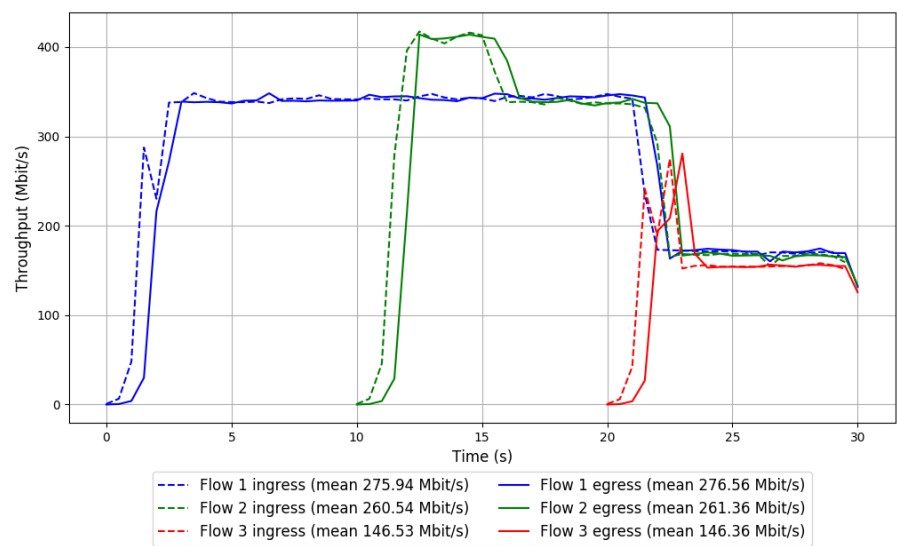
```
Run 1: Statistics of TCP Vegas

Start at: 2019-09-18 03:47:39
End at: 2019-09-18 03:48:09
Local clock offset: 0.088 ms
Remote clock offset: -0.077 ms


# Below is generated by plot.py at 2019-09-18 09:03:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 498.23 Mbit/s
95th percentile per-packet one-way delay: 87.090 ms
Loss rate: 0.57%
-- Flow 1:
Average throughput: 276.56 Mbit/s
95th percentile per-packet one-way delay: 86.505 ms
Loss rate: 0.35%
-- Flow 2:
Average throughput: 261.36 Mbit/s
95th percentile per-packet one-way delay: 89.365 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 146.36 Mbit/s
95th percentile per-packet one-way delay: 86.167 ms
Loss rate: 1.85%
```

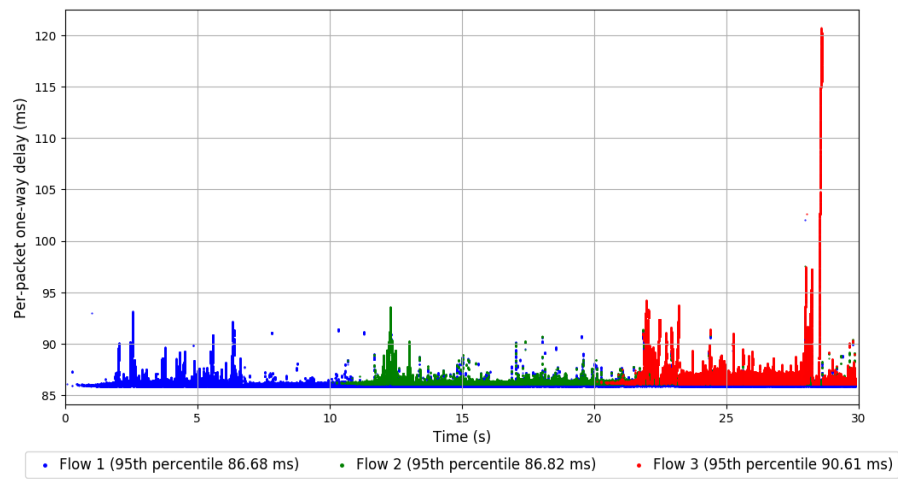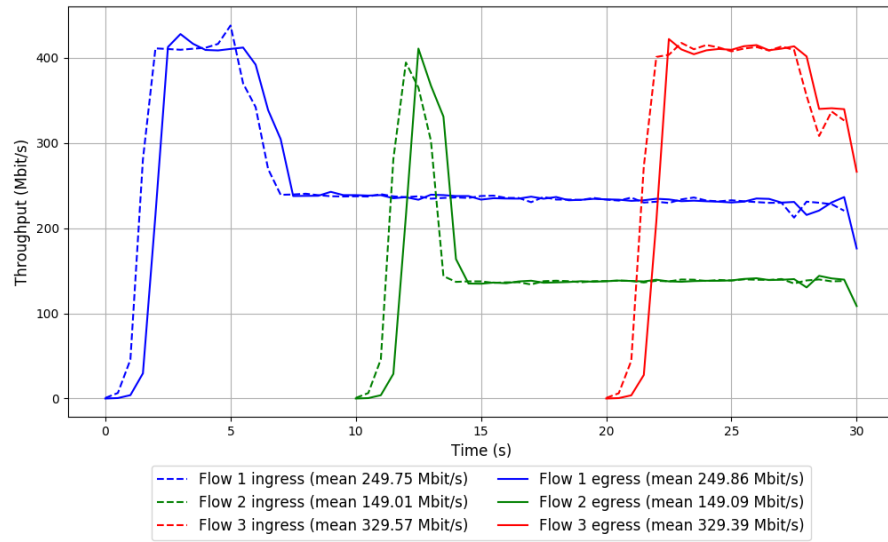Run 1: Report of TCP Vegas — Data Link

Run 2: Statistics of TCP Vegas

Start at: 2019-09-18 04:26:44
End at: 2019-09-18 04:27:14
Local clock offset: -0.097 ms
Remote clock offset: -0.053 ms

Below is generated by plot.py at 2019-09-18 09:03:26
Datalink statistics
-- Total of 3 flows:
Average throughput: 457.15 Mbit/s
95th percentile per-packet one-way delay: 87.841 ms
Loss rate: 0.89%
-- Flow 1:
Average throughput: 249.86 Mbit/s
95th percentile per-packet one-way delay: 86.682 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 149.09 Mbit/s
95th percentile per-packet one-way delay: 86.817 ms
Loss rate: 0.81%
-- Flow 3:
Average throughput: 329.39 Mbit/s
95th percentile per-packet one-way delay: 90.608 ms
Loss rate: 1.79%

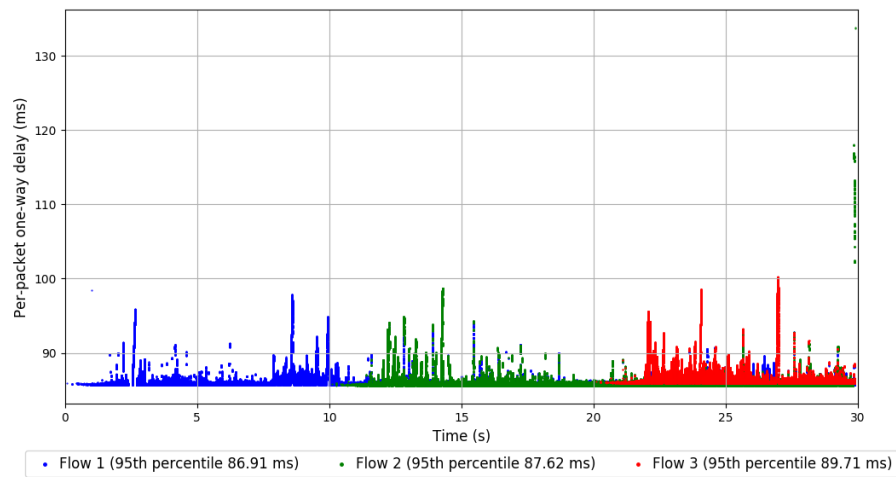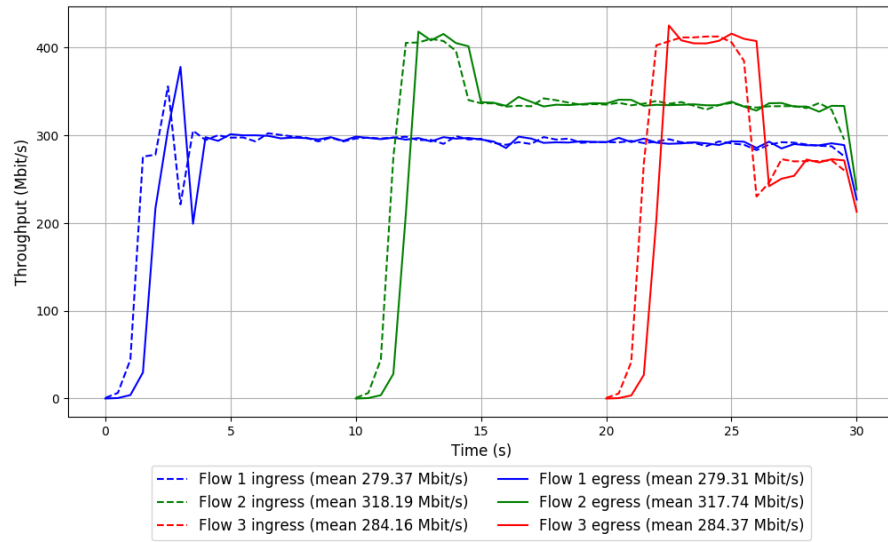Run 2: Report of TCP Vegas — Data Link

```
Run 3: Statistics of TCP Vegas

Start at: 2019-09-18 05:05:58
End at: 2019-09-18 05:06:28
Local clock offset: -0.254 ms
Remote clock offset: -0.028 ms


# Below is generated by plot.py at 2019-09-18 09:07:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 583.57 Mbit/s
95th percentile per-packet one-way delay: 87.842 ms
Loss rate: 0.88%
-- Flow 1:
Average throughput: 279.31 Mbit/s
95th percentile per-packet one-way delay: 86.910 ms
Loss rate: 0.60%
-- Flow 2:
Average throughput: 317.74 Mbit/s
95th percentile per-packet one-way delay: 87.624 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 284.37 Mbit/s
95th percentile per-packet one-way delay: 89.710 ms
Loss rate: 1.66%
```

Run 3: Report of TCP Vegas — Data Link

```
Run 4: Statistics of TCP Vegas

Start at: 2019-09-18 05:45:00
End at: 2019-09-18 05:45:30
Local clock offset: -0.041 ms
Remote clock offset: -0.02 ms


# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 515.83 Mbit/s
95th percentile per-packet one-way delay: 87.395 ms
Loss rate: 0.63%
-- Flow 1:
Average throughput: 255.53 Mbit/s
95th percentile per-packet one-way delay: 86.314 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 291.57 Mbit/s
95th percentile per-packet one-way delay: 87.497 ms
Loss rate: 0.55%
-- Flow 3:
Average throughput: 202.78 Mbit/s
95th percentile per-packet one-way delay: 96.101 ms
Loss rate: 1.44%
```
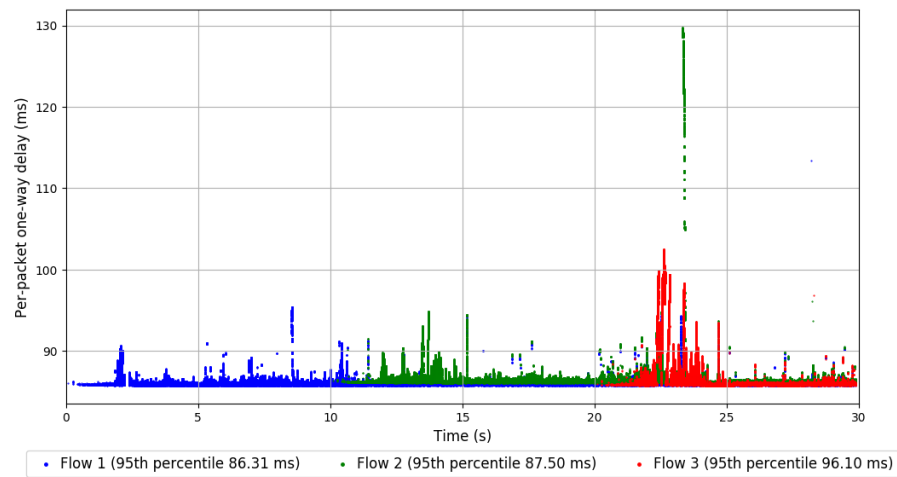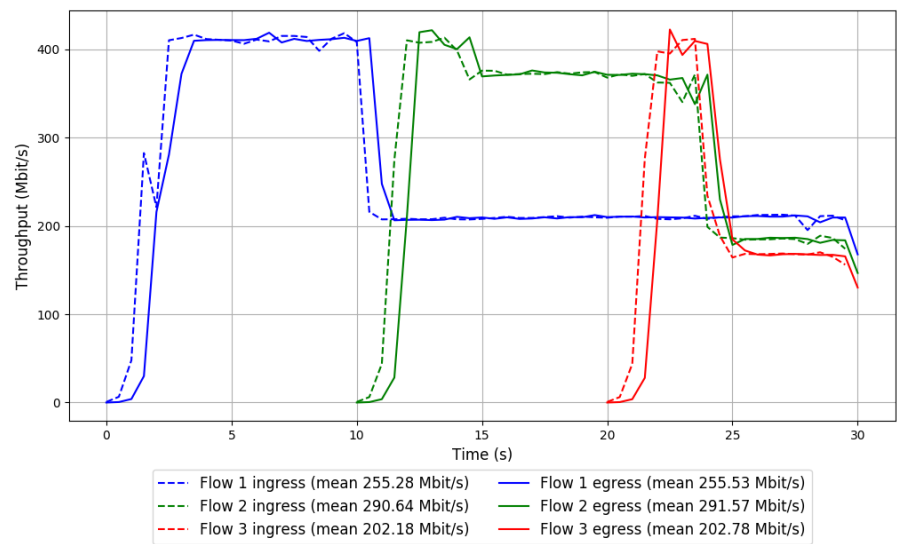
Run 4: Report of TCP Vegas — Data Link

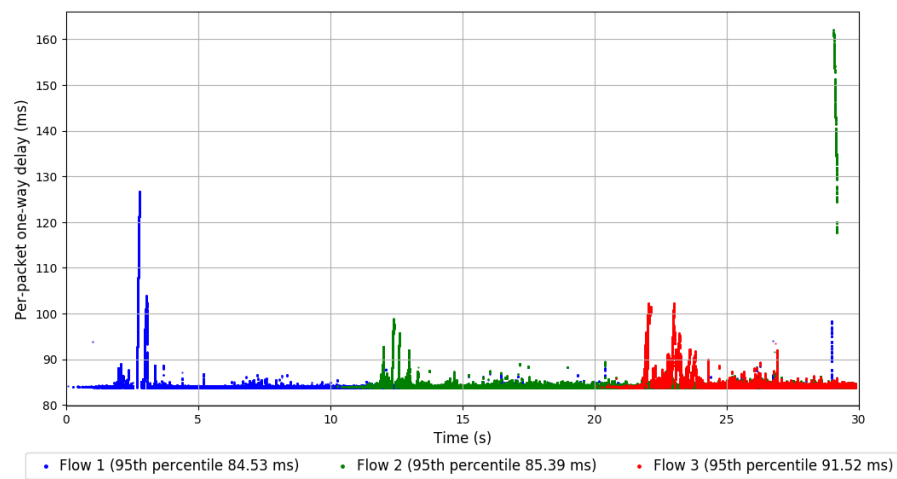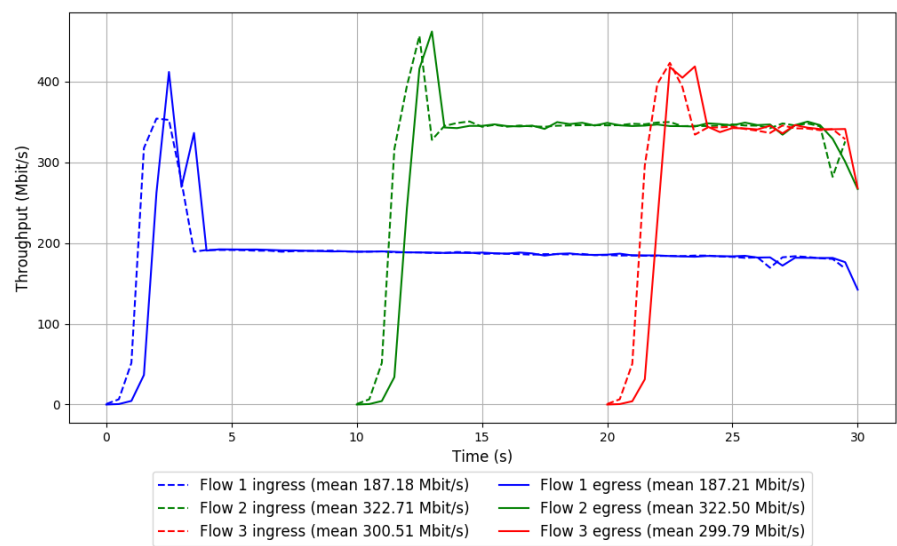Run 4: Report of TCP Vegas — Data Link

212

```
Run 5: Statistics of TCP Vegas

Start at: 2019-09-18 06:24:54
End at: 2019-09-18 06:25:24
Local clock offset: -0.098 ms
Remote clock offset: -0.024 ms


# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 499.96 Mbit/s
95th percentile per-packet one-way delay: 86.948 ms
Loss rate: 0.98%
-- Flow 1:
Average throughput: 187.21 Mbit/s
95th percentile per-packet one-way delay: 84.528 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 322.50 Mbit/s
95th percentile per-packet one-way delay: 85.395 ms
Loss rate: 0.91%
-- Flow 3:
Average throughput: 299.79 Mbit/s
95th percentile per-packet one-way delay: 91.518 ms
Loss rate: 1.94%
```

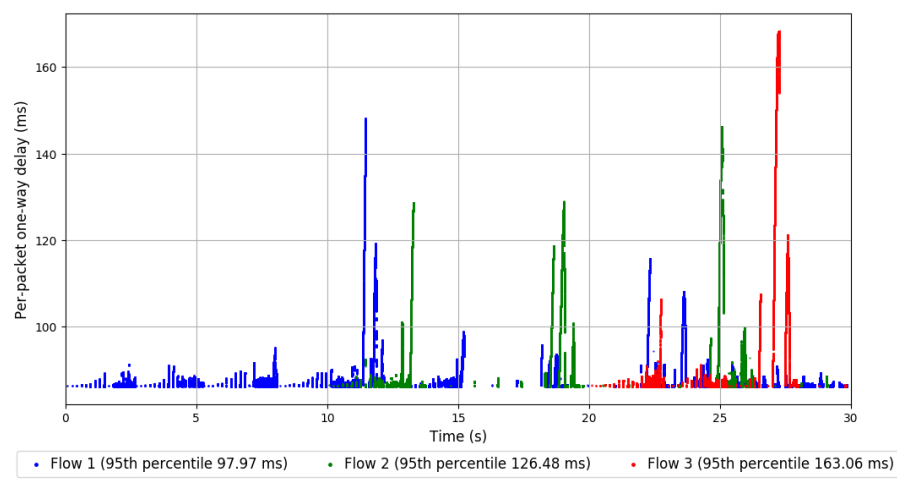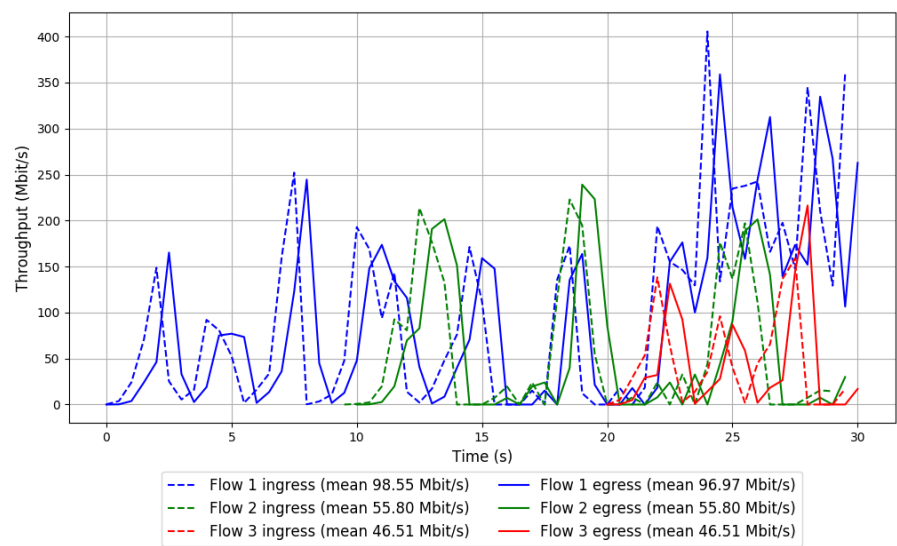# Run 5: Report of TCP Vegas — Data Link

```
Run 1: Statistics of Verus

Start at: 2019-09-18 03:49:21
End at: 2019-09-18 03:49:51
Local clock offset: 0.32 ms
Remote clock offset: -0.106 ms


# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 147.83 Mbit/s
95th percentile per-packet one-way delay: 114.150 ms
Loss rate: 1.35%
-- Flow 1:
Average throughput: 96.97 Mbit/s
95th percentile per-packet one-way delay: 97.969 ms
Loss rate: 2.05%
-- Flow 2:
Average throughput: 55.80 Mbit/s
95th percentile per-packet one-way delay: 126.483 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.51 Mbit/s
95th percentile per-packet one-way delay: 163.065 ms
Loss rate: 0.00%
```

Run 1: Report of Verus — Data Link

- - - - Flow 1 ingress (mean 98.55 Mbit/s) ——— Flow 1 egress (mean 96.97 Mbit/s)
- - - - Flow 2 ingress (mean 55.80 Mbit/s) ——— Flow 2 egress (mean 55.80 Mbit/s)
- - - - Flow 3 ingress (mean 46.51 Mbit/s) ——— Flow 3 egress (mean 46.51 Mbit/s)

• Flow 1 (95th percentile 97.97 ms)   • Flow 2 (95th percentile 126.48 ms)   • Flow 3 (95th percentile 163.06 ms)
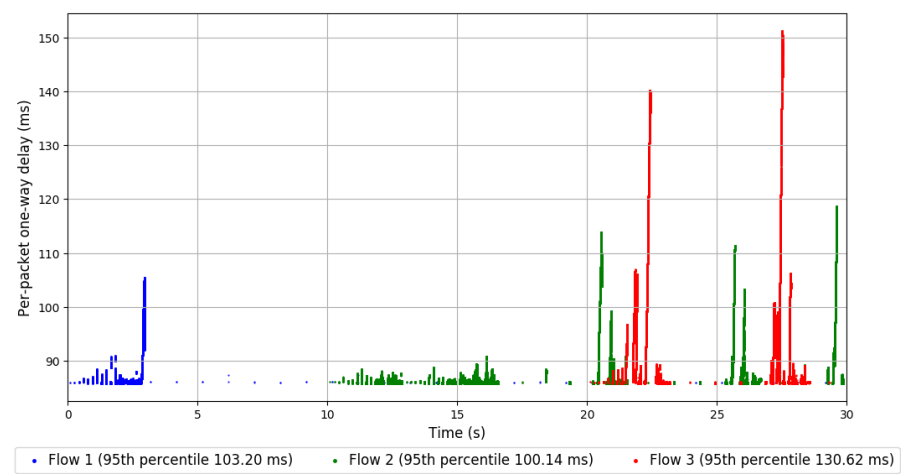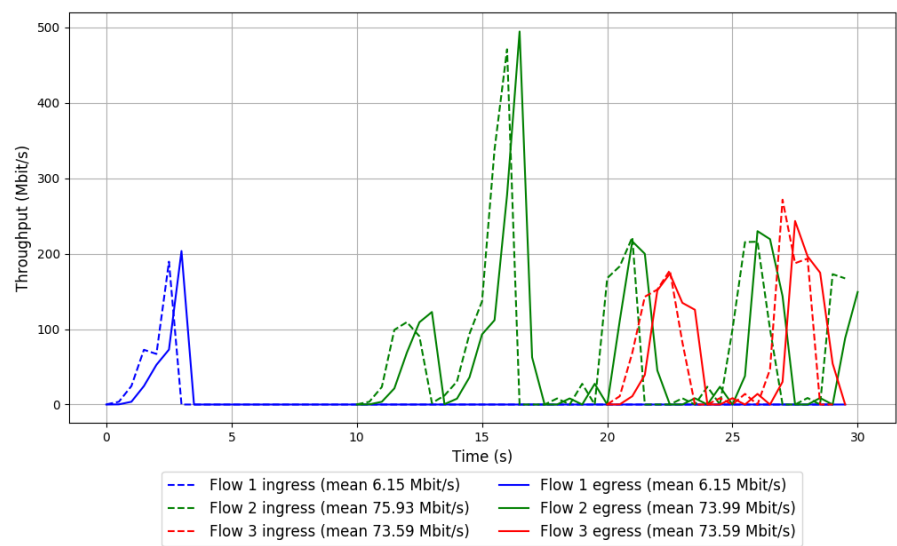
216

```
Run 2: Statistics of Verus

Start at: 2019-09-18 04:28:24
End at: 2019-09-18 04:28:54
Local clock offset: -0.054 ms
Remote clock offset: -0.015 ms


# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.91 Mbit/s
95th percentile per-packet one-way delay: 106.034 ms
Loss rate: 2.17%
-- Flow 1:
Average throughput: 6.15 Mbit/s
95th percentile per-packet one-way delay: 103.205 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 73.99 Mbit/s
95th percentile per-packet one-way delay: 100.145 ms
Loss rate: 3.40%
-- Flow 3:
Average throughput: 73.59 Mbit/s
95th percentile per-packet one-way delay: 130.615 ms
Loss rate: 0.00%
```
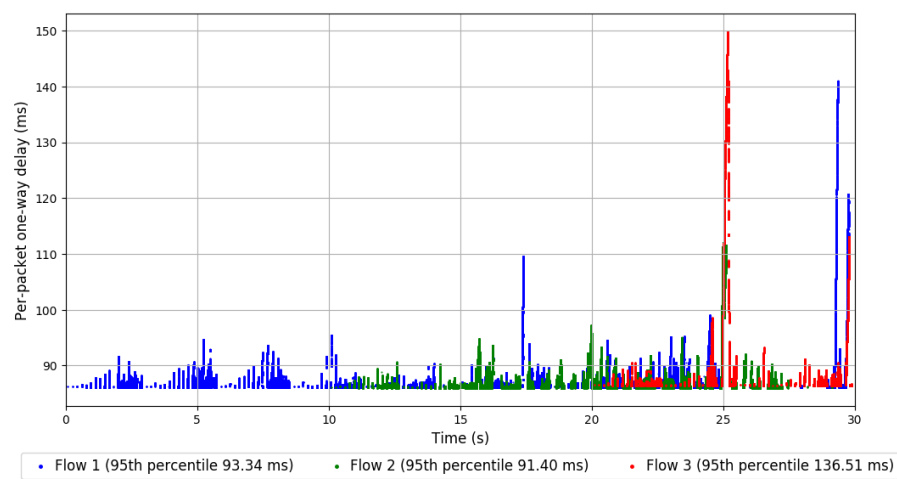
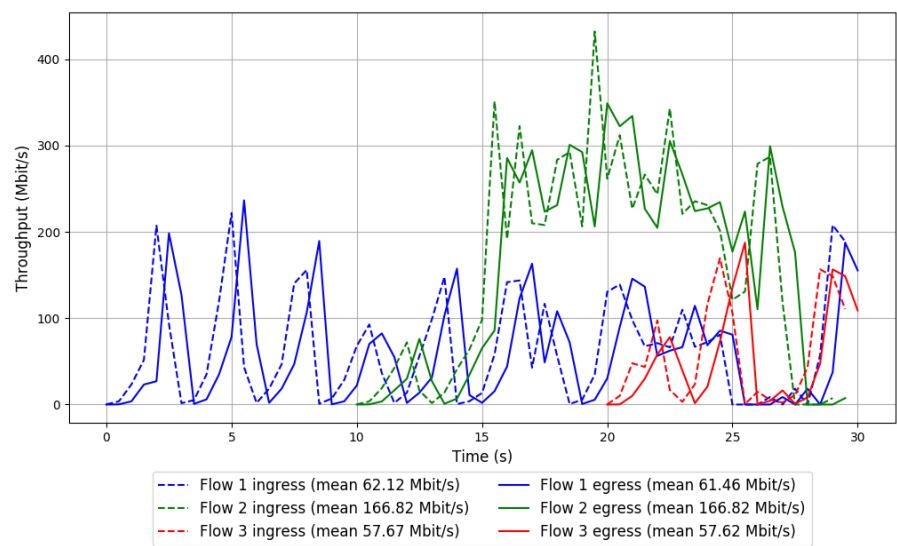## Run 2: Report of Verus — Data Link

```
Run 3: Statistics of Verus

Start at: 2019-09-18 05:07:46
End at: 2019-09-18 05:08:16
Local clock offset: 0.144 ms
Remote clock offset: -0.027 ms

# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.85 Mbit/s
95th percentile per-packet one-way delay: 94.754 ms
Loss rate: 0.67%
-- Flow 1:
Average throughput: 61.46 Mbit/s
95th percentile per-packet one-way delay: 93.338 ms
Loss rate: 1.98%
-- Flow 2:
Average throughput: 166.82 Mbit/s
95th percentile per-packet one-way delay: 91.401 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 57.62 Mbit/s
95th percentile per-packet one-way delay: 136.507 ms
Loss rate: 0.13%
```

Run 3: Report of Verus — Data Link

Flow 1 ingress (mean 62.12 Mbit/s) --- Flow 1 egress (mean 61.46 Mbit/s)
Flow 2 ingress (mean 166.82 Mbit/s) --- Flow 2 egress (mean 166.82 Mbit/s)
Flow 3 ingress (mean 57.67 Mbit/s) --- Flow 3 egress (mean 57.62 Mbit/s)

Flow 1 (95th percentile 93.34 ms)   Flow 2 (95th percentile 91.40 ms)   Flow 3 (95th percentile 136.51 ms)
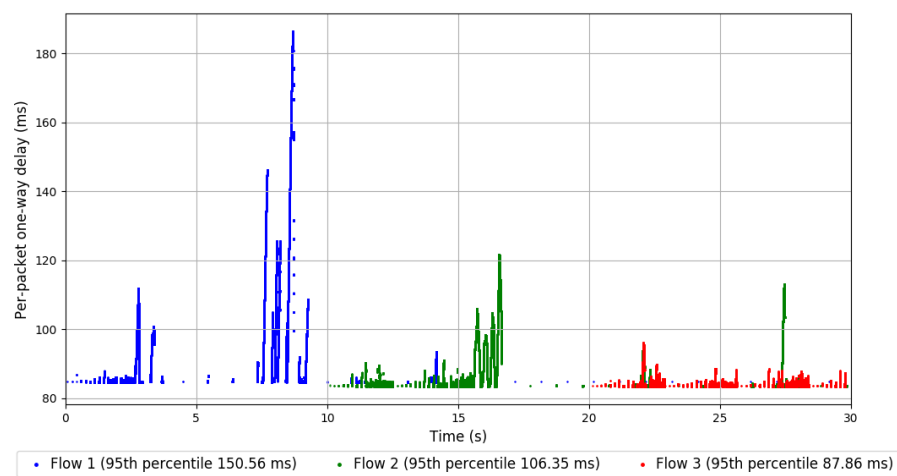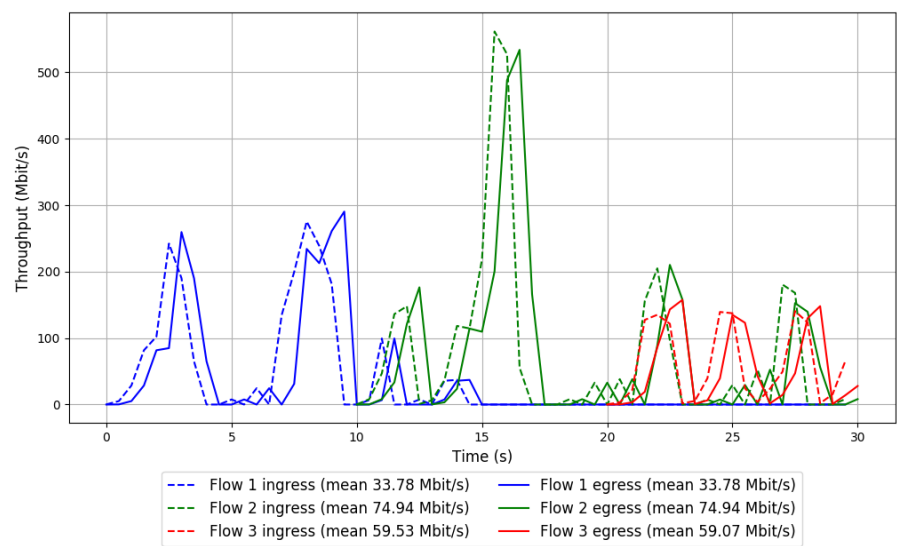
```
Run 4: Statistics of Verus

Start at: 2019-09-18 05:47:35
End at: 2019-09-18 05:48:05
Local clock offset: -0.477 ms
Remote clock offset: -0.08 ms

# Below is generated by plot.py at 2019-09-18 09:10:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 101.91 Mbit/s
95th percentile per-packet one-way delay: 117.591 ms
Loss rate: 0.65%
-- Flow 1:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 150.563 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 74.94 Mbit/s
95th percentile per-packet one-way delay: 106.346 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 59.07 Mbit/s
95th percentile per-packet one-way delay: 87.865 ms
Loss rate: 3.35%
```
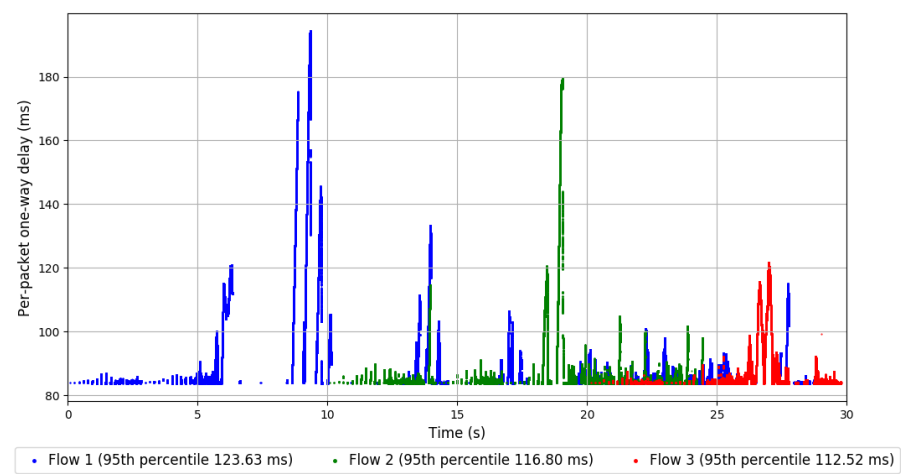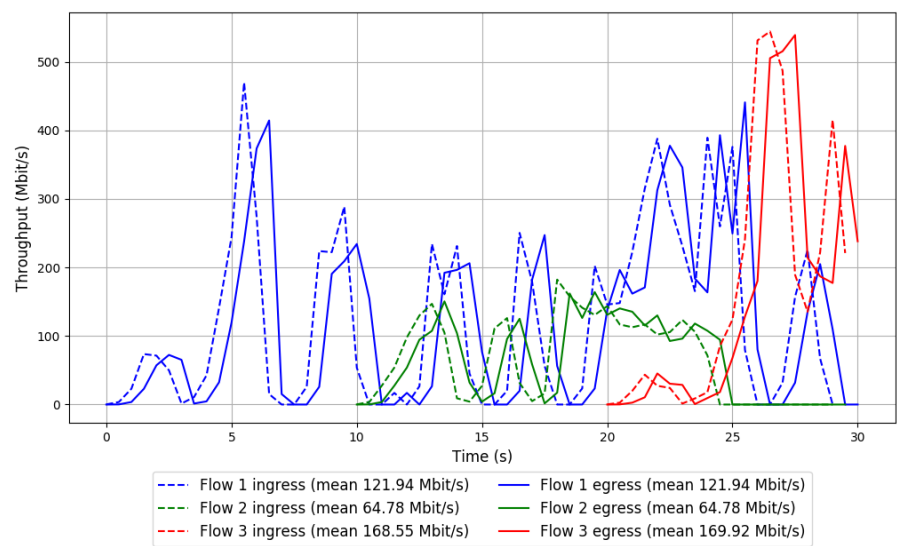
Run 4: Report of Verus — Data Link

```
Run 5: Statistics of Verus

Start at: 2019-09-18 06:26:38
End at: 2019-09-18 06:27:08
Local clock offset: -0.064 ms
Remote clock offset: -0.032 ms


# Below is generated by plot.py at 2019-09-18 09:11:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 218.21 Mbit/s
95th percentile per-packet one-way delay: 118.448 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 121.94 Mbit/s
95th percentile per-packet one-way delay: 123.626 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 64.78 Mbit/s
95th percentile per-packet one-way delay: 116.796 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 169.92 Mbit/s
95th percentile per-packet one-way delay: 112.519 ms
Loss rate: 1.95%
```

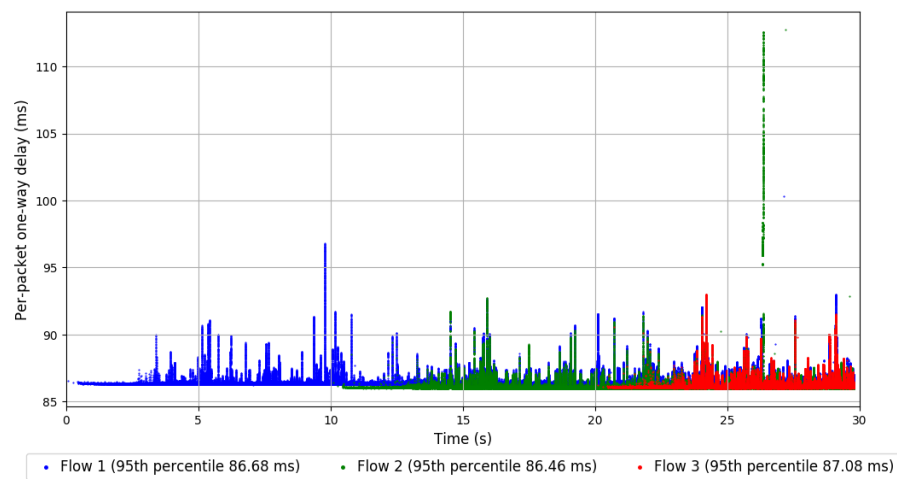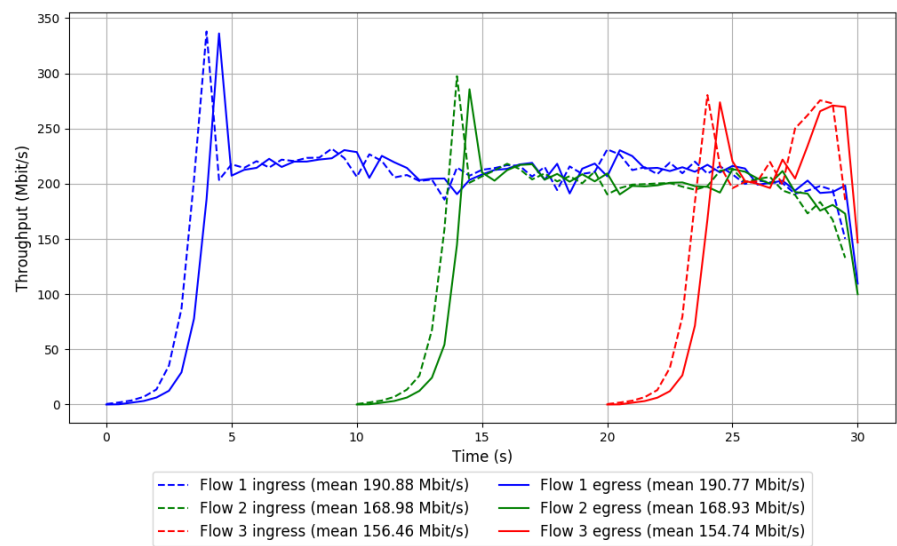## Run 5: Report of Verus — Data Link

```
Run 1: Statistics of PCC-Vivace

Start at: 2019-09-18 03:52:27
End at: 2019-09-18 03:52:57
Local clock offset: 0.093 ms
Remote clock offset: -0.108 ms


# Below is generated by plot.py at 2019-09-18 09:11:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 353.20 Mbit/s
95th percentile per-packet one-way delay: 86.679 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 190.77 Mbit/s
95th percentile per-packet one-way delay: 86.683 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 168.93 Mbit/s
95th percentile per-packet one-way delay: 86.460 ms
Loss rate: 0.90%
-- Flow 3:
Average throughput: 154.74 Mbit/s
95th percentile per-packet one-way delay: 87.075 ms
Loss rate: 2.84%
```

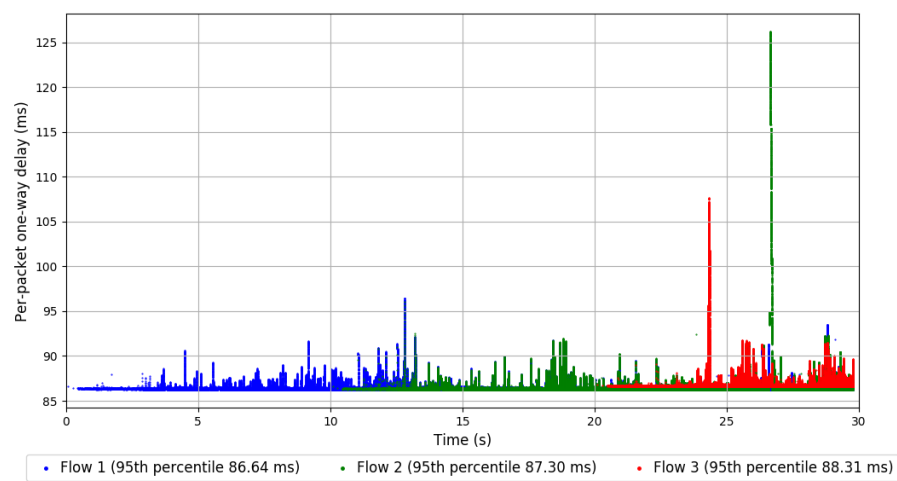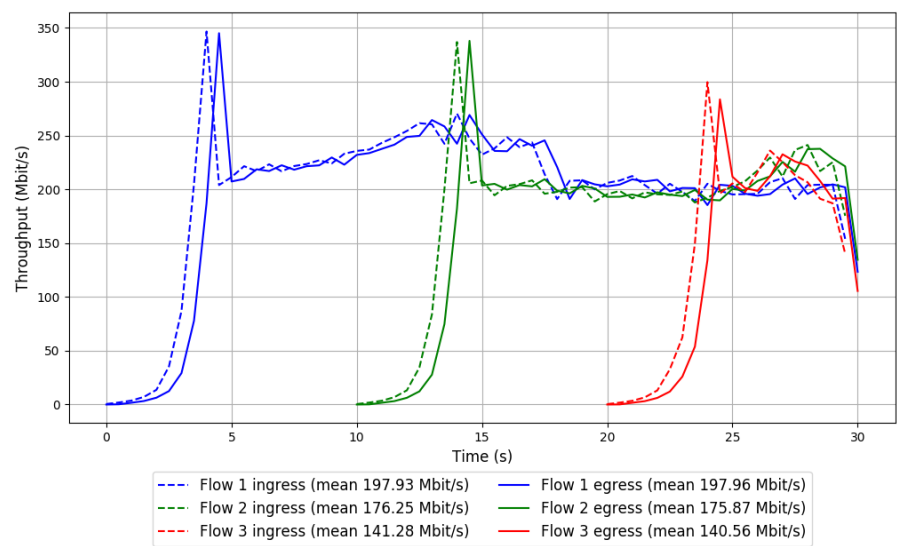Run 1: Report of PCC-Vivace — Data Link

```
Run 2: Statistics of PCC-Vivace

Start at: 2019-09-18 04:31:25
End at: 2019-09-18 04:31:55
Local clock offset: 0.371 ms
Remote clock offset: -0.021 ms


# Below is generated by plot.py at 2019-09-18 09:11:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 360.37 Mbit/s
95th percentile per-packet one-way delay: 87.120 ms
Loss rate: 0.95%
-- Flow 1:
Average throughput: 197.96 Mbit/s
95th percentile per-packet one-way delay: 86.639 ms
Loss rate: 0.56%
-- Flow 2:
Average throughput: 175.87 Mbit/s
95th percentile per-packet one-way delay: 87.302 ms
Loss rate: 1.08%
-- Flow 3:
Average throughput: 140.56 Mbit/s
95th percentile per-packet one-way delay: 88.310 ms
Loss rate: 2.25%
```

Run 2: Report of PCC-Vivace — Data Link

Flow 1 ingress (mean 197.93 Mbit/s) Flow 1 egress (mean 197.96 Mbit/s)
Flow 2 ingress (mean 176.25 Mbit/s) Flow 2 egress (mean 175.87 Mbit/s)
Flow 3 ingress (mean 141.28 Mbit/s) Flow 3 egress (mean 140.56 Mbit/s)

Flow 1 (95th percentile 86.64 ms) Flow 2 (95th percentile 87.30 ms) Flow 3 (95th percentile 88.31 ms)
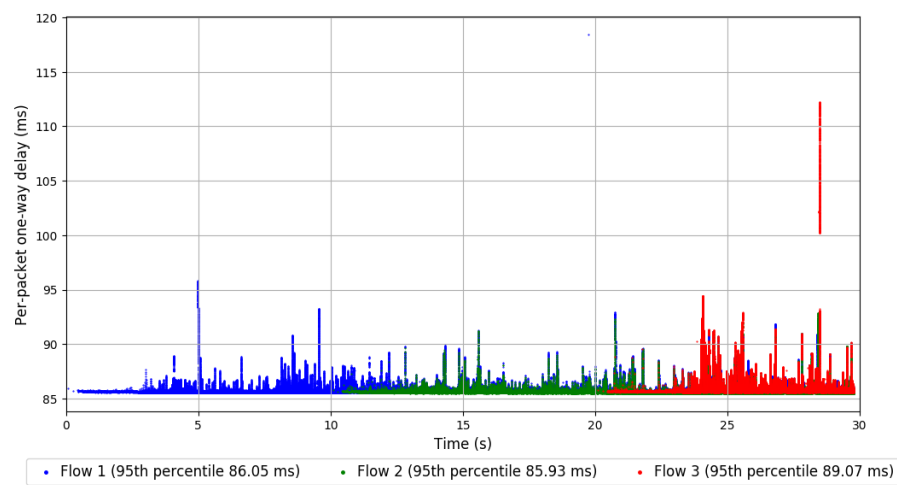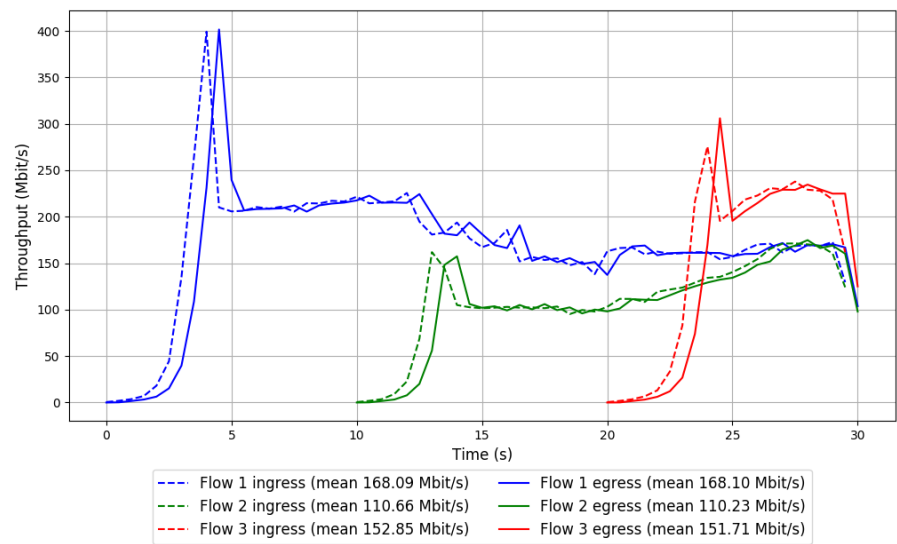
```
Run 3: Statistics of PCC-Vivace

Start at: 2019-09-18 05:10:59
End at: 2019-09-18 05:11:29
Local clock offset: -0.322 ms
Remote clock offset: -0.033 ms


# Below is generated by plot.py at 2019-09-18 09:11:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 290.64 Mbit/s
95th percentile per-packet one-way delay: 86.358 ms
Loss rate: 1.07%
-- Flow 1:
Average throughput: 168.10 Mbit/s
95th percentile per-packet one-way delay: 86.051 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 110.23 Mbit/s
95th percentile per-packet one-way delay: 85.928 ms
Loss rate: 1.25%
-- Flow 3:
Average throughput: 151.71 Mbit/s
95th percentile per-packet one-way delay: 89.068 ms
Loss rate: 2.49%
```

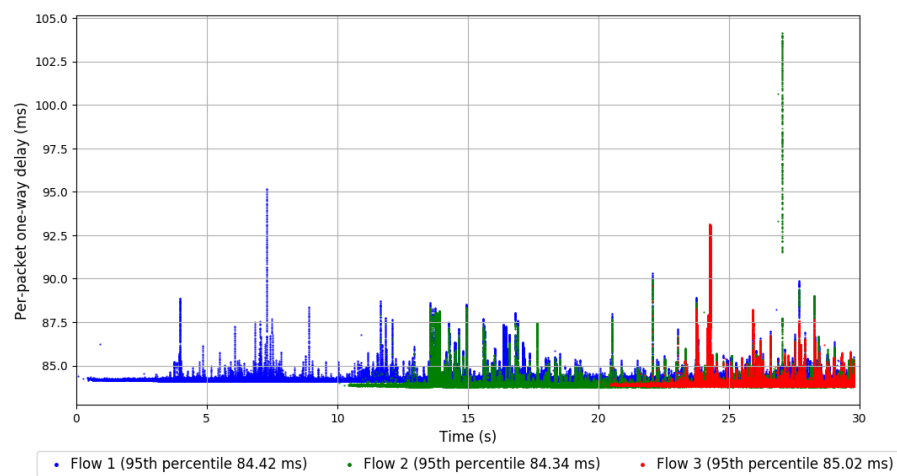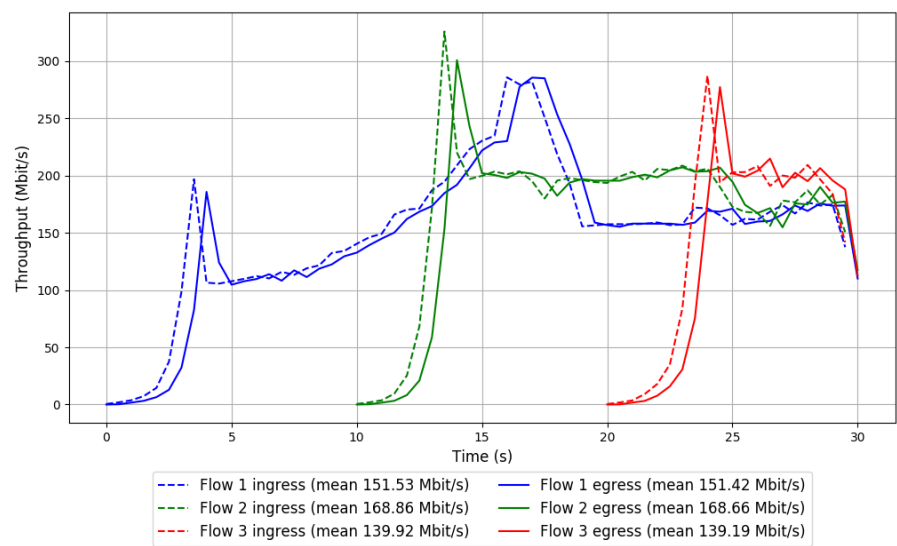Run 3: Report of PCC-Vivace — Data Link

```
Run 4: Statistics of PCC-Vivace

Start at: 2019-09-18 05:50:36
End at: 2019-09-18 05:51:06
Local clock offset: -0.046 ms
Remote clock offset: -0.019 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 308.71 Mbit/s
95th percentile per-packet one-way delay: 84.439 ms
Loss rate: 1.00%
-- Flow 1:
Average throughput: 151.42 Mbit/s
95th percentile per-packet one-way delay: 84.415 ms
Loss rate: 0.64%
-- Flow 2:
Average throughput: 168.66 Mbit/s
95th percentile per-packet one-way delay: 84.339 ms
Loss rate: 0.97%
-- Flow 3:
Average throughput: 139.19 Mbit/s
95th percentile per-packet one-way delay: 85.015 ms
Loss rate: 2.23%
```

Run 4: Report of PCC-Vivace — Data Link

- Flow 1 ingress (mean 151.53 Mbit/s) --- Flow 1 egress (mean 151.42 Mbit/s)
- Flow 2 ingress (mean 168.86 Mbit/s) --- Flow 2 egress (mean 168.66 Mbit/s)
- Flow 3 ingress (mean 139.92 Mbit/s) --- Flow 3 egress (mean 139.19 Mbit/s)

- Flow 1 (95th percentile 84.42 ms)
- Flow 2 (95th percentile 84.34 ms)
- Flow 3 (95th percentile 85.02 ms)

```
Run 5: Statistics of PCC-Vivace

Start at: 2019-09-18 06:29:52
End at: 2019-09-18 06:30:22
Local clock offset: -0.445 ms
Remote clock offset: 0.01 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 273.74 Mbit/s
95th percentile per-packet one-way delay: 84.598 ms
Loss rate: 0.93%
-- Flow 1:
Average throughput: 164.24 Mbit/s
95th percentile per-packet one-way delay: 83.977 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 124.77 Mbit/s
95th percentile per-packet one-way delay: 83.957 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 82.16 Mbit/s
95th percentile per-packet one-way delay: 85.379 ms
Loss rate: 2.51%
```
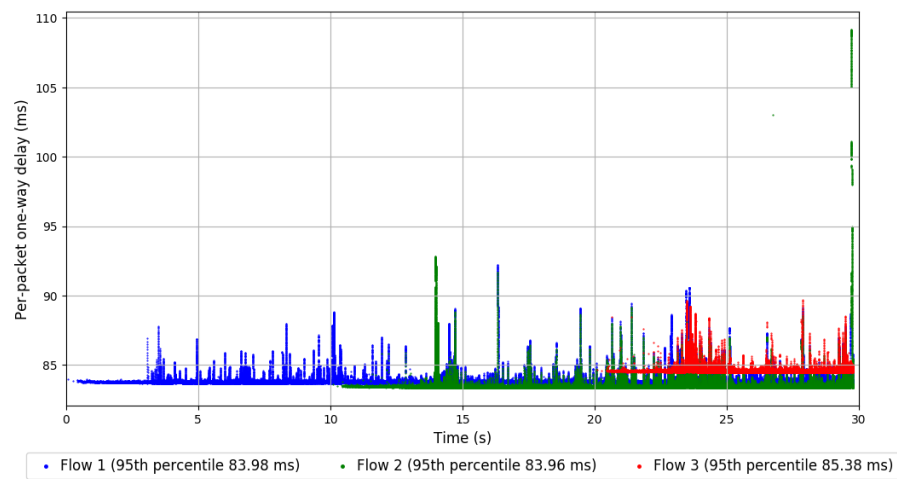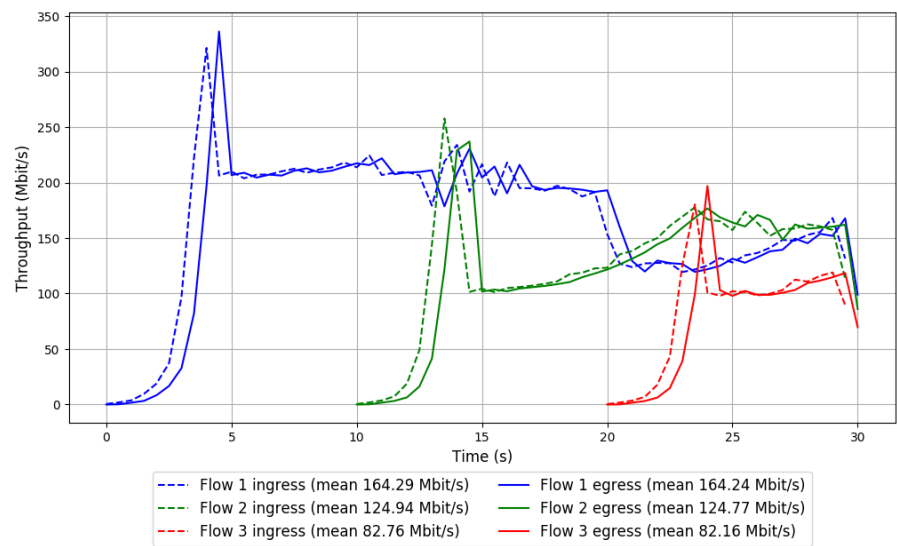
Run 5: Report of PCC-Vivace — Data Link

```
Run 1: Statistics of WebRTC media

Start at: 2019-09-18 04:17:00
End at: 2019-09-18 04:17:30
Local clock offset: -0.273 ms
Remote clock offset: 0.004 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 86.078 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.07 Mbit/s
95th percentile per-packet one-way delay: 86.118 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.839 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.831 ms
Loss rate: 0.00%
```
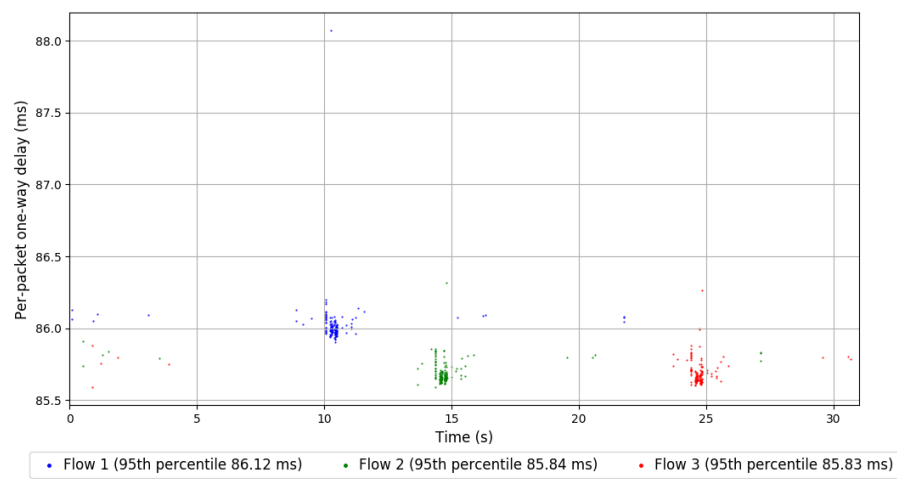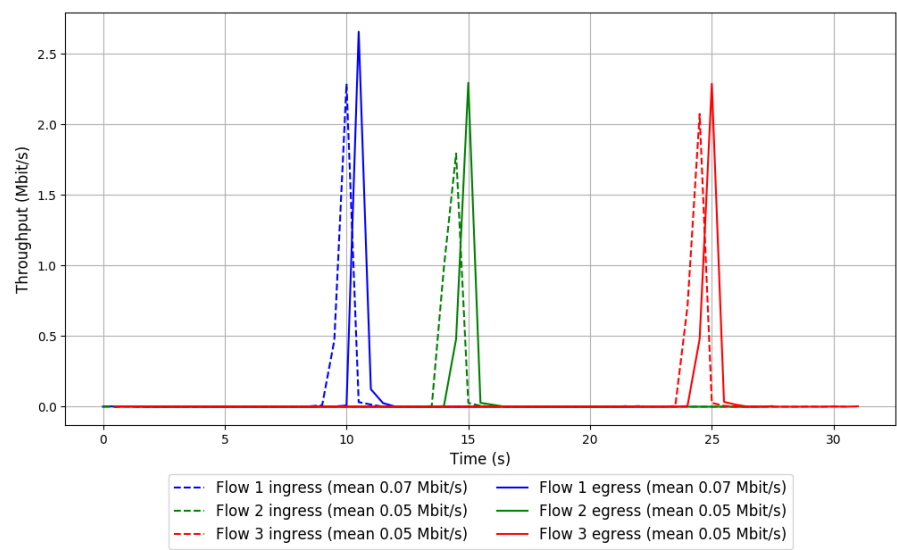
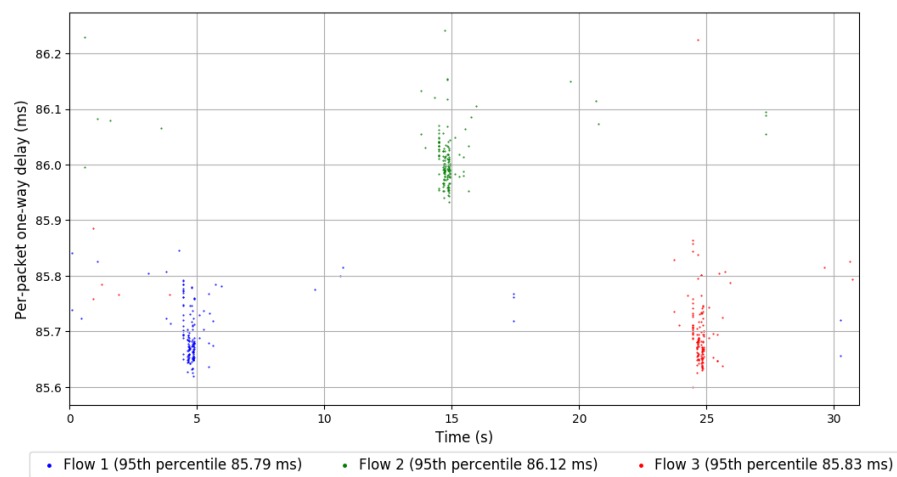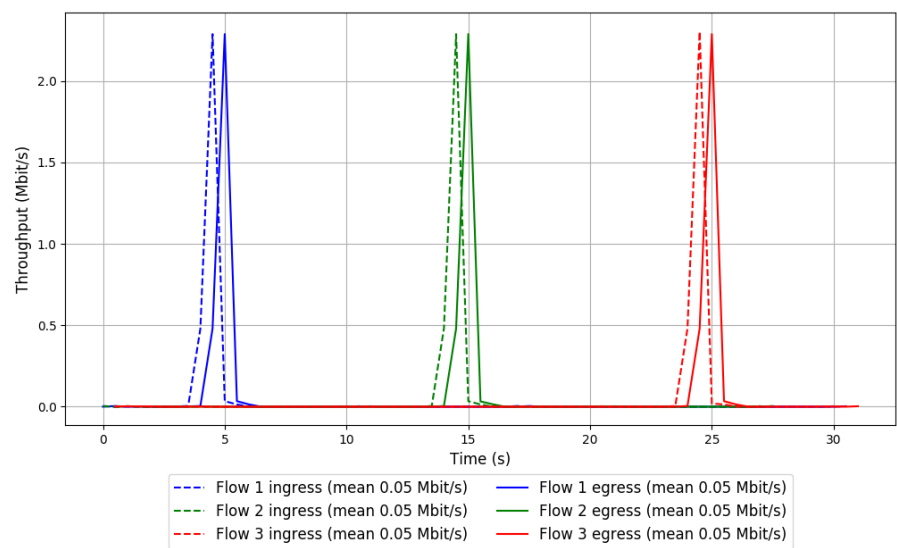Run 1: Report of WebRTC media — Data Link

```
Run 2: Statistics of WebRTC media

Start at: 2019-09-18 04:56:13
End at: 2019-09-18 04:56:43
Local clock offset: -0.248 ms
Remote clock offset: -0.013 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 86.057 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.791 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 86.117 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.826 ms
Loss rate: 0.00%
```
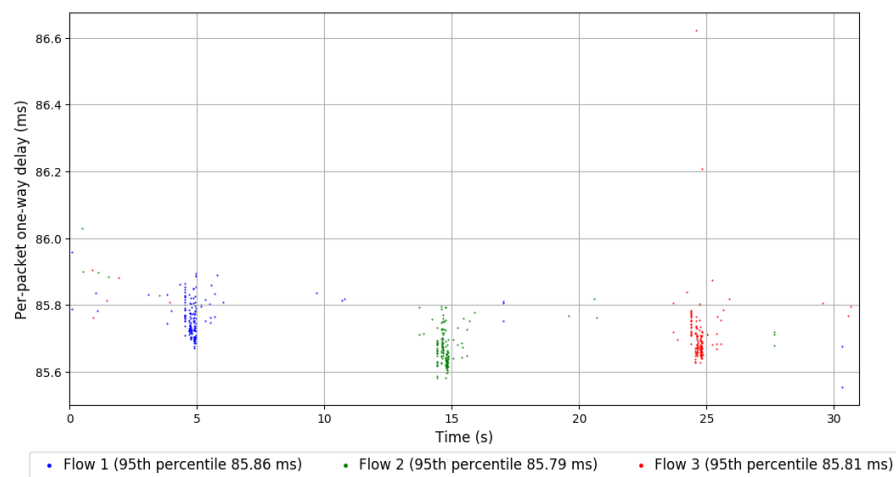
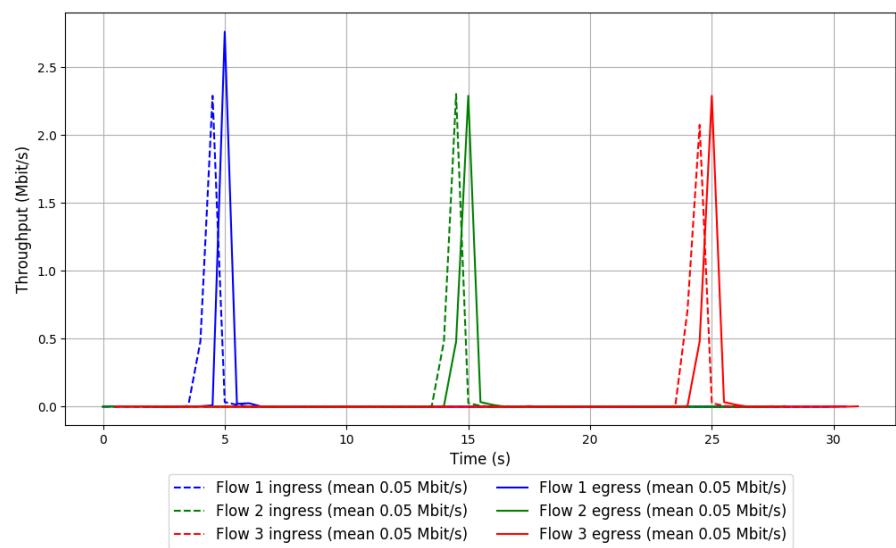Run 2: Report of WebRTC media — Data Link

```
Run 3: Statistics of WebRTC media

Start at: 2019-09-18 05:35:29
End at: 2019-09-18 05:35:59
Local clock offset: -0.318 ms
Remote clock offset: -0.029 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 85.840 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.855 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: 85.814 ms
Loss rate: 0.00%
```

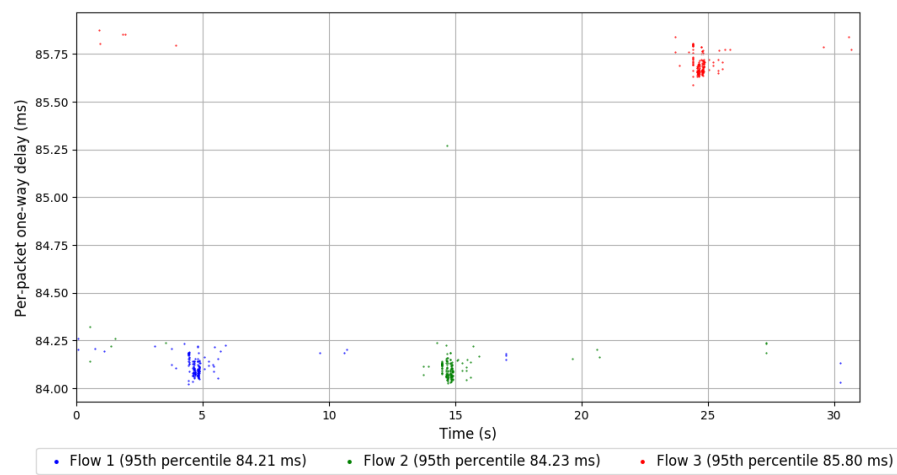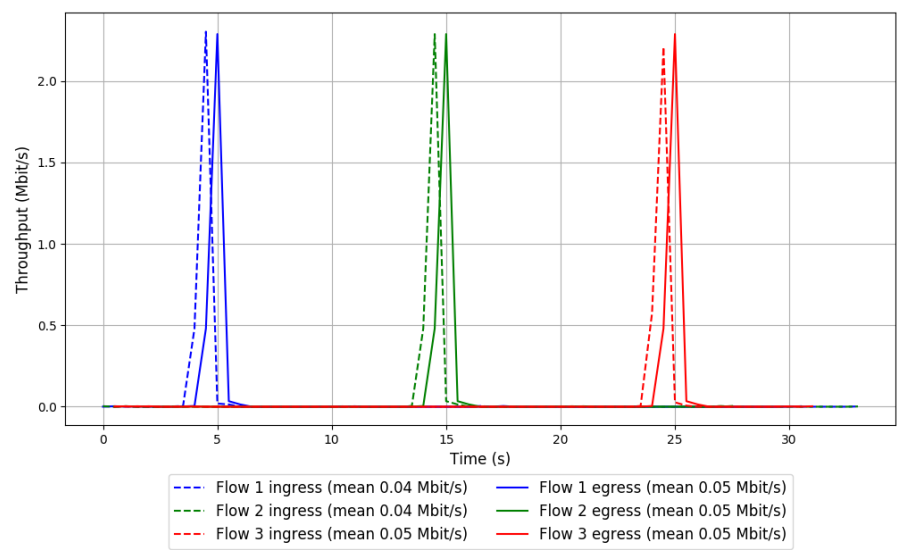Run 3: Report of WebRTC media — Data Link

```
Run 4: Statistics of WebRTC media

Start at: 2019-09-18 06:15:14
End at: 2019-09-18 06:15:44
Local clock offset: 0.111 ms
Remote clock offset: -0.044 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 85.768 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.206 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.226 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.804 ms
Loss rate: 0.00%
```

Run 4: Report of WebRTC media — Data Link

```
Run 5: Statistics of WebRTC media

Start at: 2019-09-18 06:54:40
End at: 2019-09-18 06:55:10
Local clock offset: 0.134 ms
Remote clock offset: -0.065 ms


# Below is generated by plot.py at 2019-09-18 09:11:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 85.440 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.420 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 84.543 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 85.448 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link