Pantheon Report

Generated at 2019-02-12 07:41:31 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

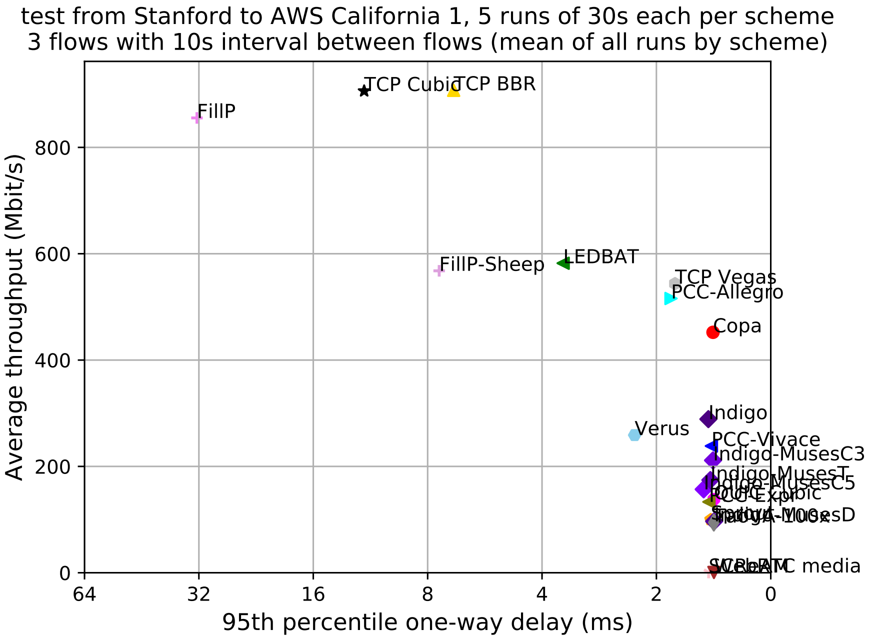
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

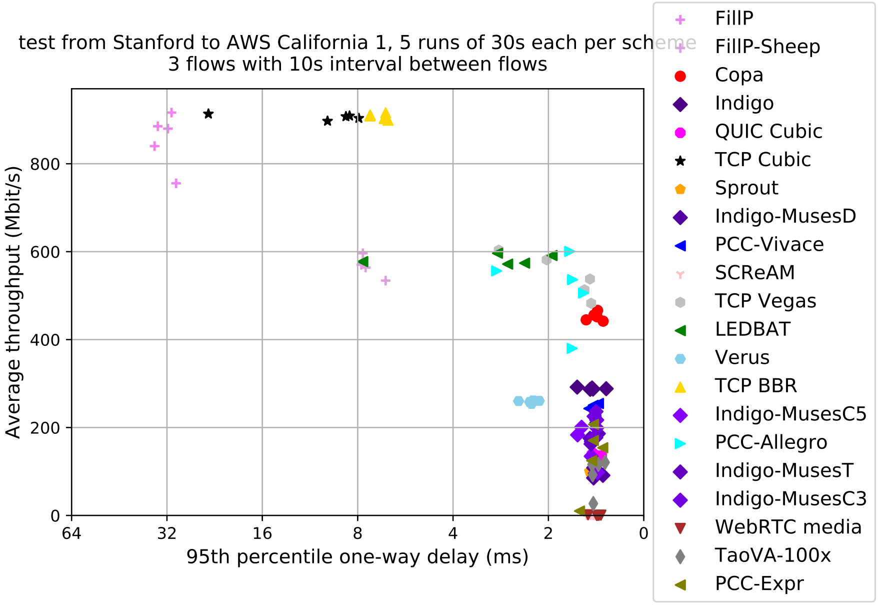
NTP offsets were measured against `time.stanford.edu` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1031-aws
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

```
Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
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/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

```
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```


test from Stanford to AWS California 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
0
200
400
600
800
95th percentile one-way delay (ms)
64
32
16
8
4
2
0
FillP
TCP Cubic
TCP BBR
FillP-Sheep
LEDBAT
TCP Vegas
PCC-Allegro
Copa
Indigo
Verus
PCC-Vivace
Indigo-MusesC3
Indigo-MusesT
Indigo-MusesC5
QUIC Cubic
PCC-Expr
Sprout
Indigo-MusesD
TaoVA-100x
SCReAM
WebRTC media


test from Stanford to AWS California 1, 5 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
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200
400
600
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95th percentile one-way delay (ms)
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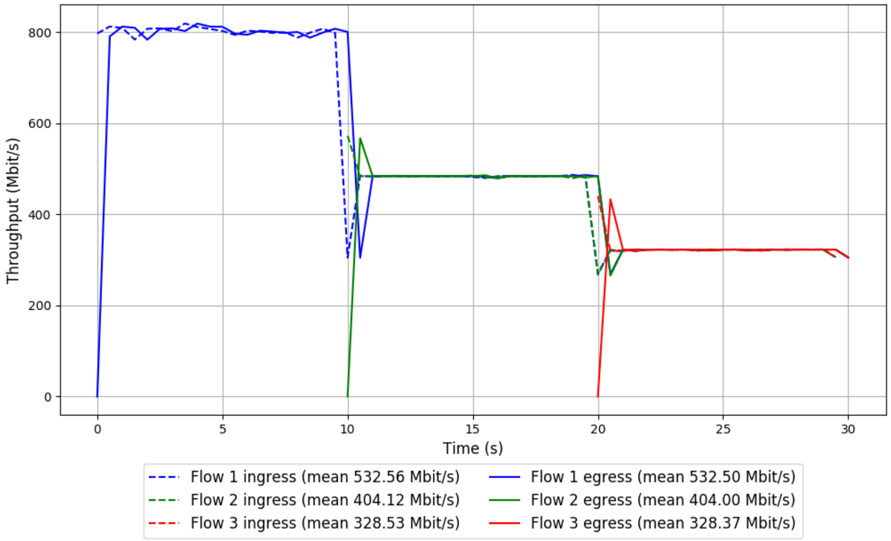
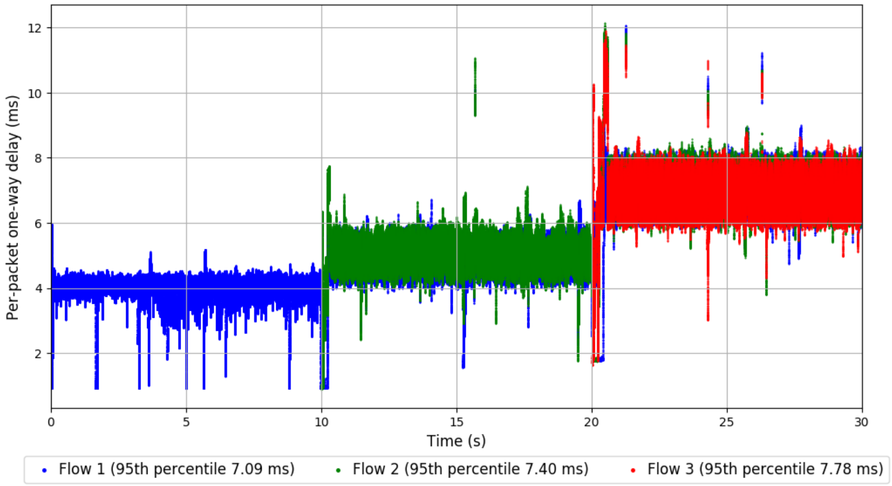
TCP Cubic
Sprout
Indigo-MusesD
PCC-Vivace
SCReAM
TCP Vegas
LEDBAT
Verus
TCP BBR
Indigo-MusesC5
PCC-Allegro
Indigo-MusesT
Indigo-MusesC3
WebRTC media
TaoVA-100x
PCC-Expr

		mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
scheme	# runs	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	5	528.55	404.63	328.54	6.84	6.42	6.71	0.02	0.03	0.07
Copa	5	273.44	213.92	109.13	1.03	0.96	0.94	0.00	0.00	0.02
TCP Cubic	5	531.21	402.02	321.75	12.81	7.66	7.88	0.02	0.03	0.07
FillP	5	531.85	350.47	273.09	30.22	25.54	32.71	0.07	0.08	0.18
FillP-Sheep	5	416.84	206.95	40.92	7.85	5.55	3.04	0.00	0.00	0.02
Indigo	5	156.01	141.60	117.76	1.05	1.13	1.15	0.00	0.01	0.02
Indigo-MusesC3	5	156.34	70.07	41.03	1.01	1.01	0.93	0.01	0.02	0.05
Indigo-MusesC5	5	95.50	81.77	35.71	1.14	1.23	0.99	0.00	0.01	0.08
Indigo-MusesD	5	64.44	35.16	36.69	0.99	0.97	0.97	0.00	0.02	0.02
Indigo-MusesT	5	130.35	54.38	36.27	1.06	1.02	0.98	0.00	0.01	0.02
LEDBAT	5	356.87	241.83	193.26	3.93	2.29	1.80	0.00	0.01	0.02
PCC-Allegro	5	402.86	118.80	103.23	2.05	1.34	1.54	0.00	0.01	0.02
PCC-Expr	5	92.67	52.77	16.79	1.07	1.06	1.01	0.00	0.01	0.02
QUIC Cubic	5	75.92	65.80	56.37	0.99	0.99	0.99	0.00	0.01	0.02
SCReAM	5	0.22	0.22	0.22	1.09	1.08	1.08	0.00	0.00	0.00
Sprout	5	50.23	50.16	49.88	1.05	1.05	1.06	0.01	0.01	0.02
TaoVA-100x	5	56.00	27.46	60.78	0.99	0.98	1.00	0.01	0.01	0.02
TCP Vegas	5	264.76	288.32	261.53	1.79	1.83	1.39	0.01	0.01	0.01
Verus	5	164.41	110.04	64.37	2.45	1.54	1.49	0.00	0.00	0.00
PCC-Vivace	5	159.52	86.21	65.32	1.03	1.06	1.08	0.00	0.00	0.04
WebRTC media	5	0.05	0.34	0.17	1.00	0.99	0.99	0.00	0.01	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-02-12 04:27:10
End at: 2019-02-12 04:27:40
Local clock offset: 0.214 ms
Remote clock offset: 0.802 ms

# Below is generated by plot.py at 2019-02-12 06:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 910.65 Mbit/s
95th percentile per-packet one-way delay: 7.305 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 532.50 Mbit/s
95th percentile per-packet one-way delay: 7.090 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.00 Mbit/s
95th percentile per-packet one-way delay: 7.397 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.37 Mbit/s
95th percentile per-packet one-way delay: 7.775 ms
Loss rate: 0.07%
```

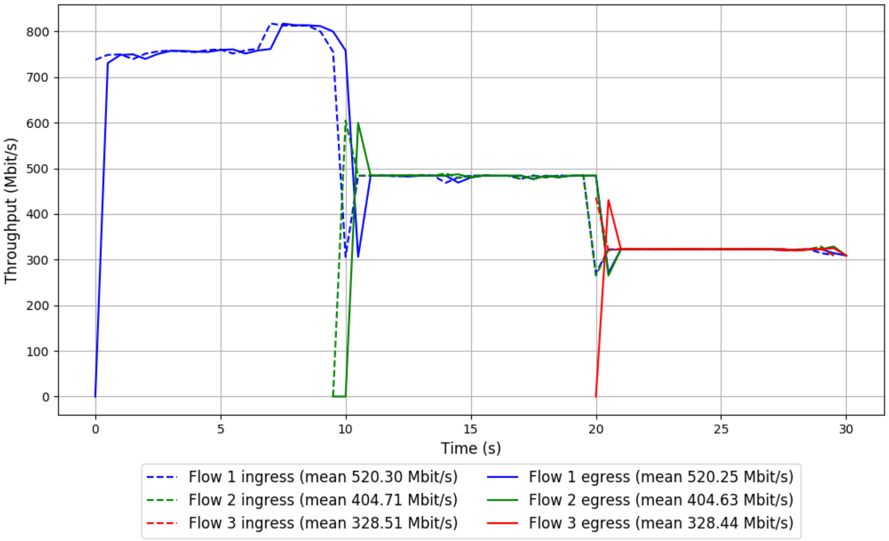
Run 1: Report of TCP BBR — Data Link

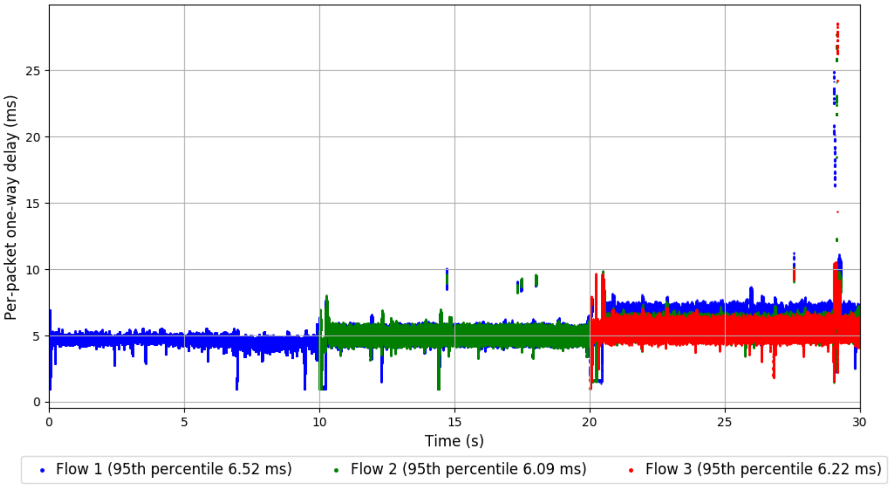




```
Run 2: Statistics of TCP BBR

Start at: 2019-02-12 04:57:23
End at: 2019-02-12 04:57:53
Local clock offset: -3.092 ms
Remote clock offset: 0.599 ms

# Below is generated by plot.py at 2019-02-12 06:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.07 Mbit/s
95th percentile per-packet one-way delay: 6.420 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 520.25 Mbit/s
95th percentile per-packet one-way delay: 6.522 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.63 Mbit/s
95th percentile per-packet one-way delay: 6.086 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.44 Mbit/s
95th percentile per-packet one-way delay: 6.220 ms
Loss rate: 0.06%
```

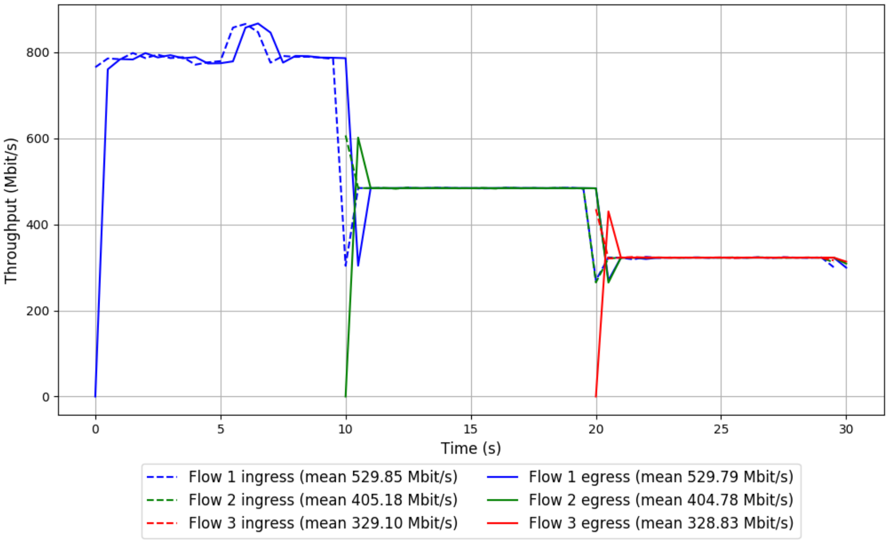
Run 2: Report of TCP BBR — Data Link

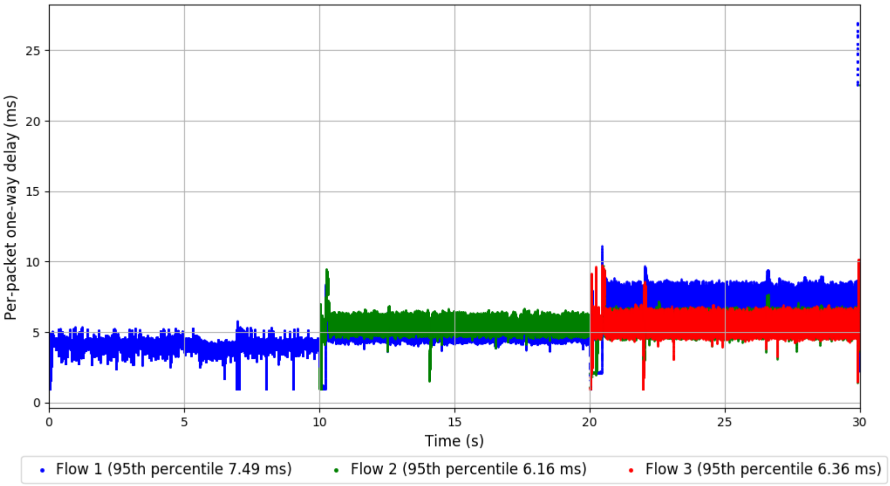




```
Run 3: Statistics of TCP BBR

Start at: 2019-02-12 05:27:43
End at: 2019-02-12 05:28:13
Local clock offset: 0.394 ms
Remote clock offset: 0.505 ms

# Below is generated by plot.py at 2019-02-12 06:55:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 908.68 Mbit/s
95th percentile per-packet one-way delay: 7.318 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 529.79 Mbit/s
95th percentile per-packet one-way delay: 7.487 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 404.78 Mbit/s
95th percentile per-packet one-way delay: 6.158 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 328.83 Mbit/s
95th percentile per-packet one-way delay: 6.355 ms
Loss rate: 0.10%
```

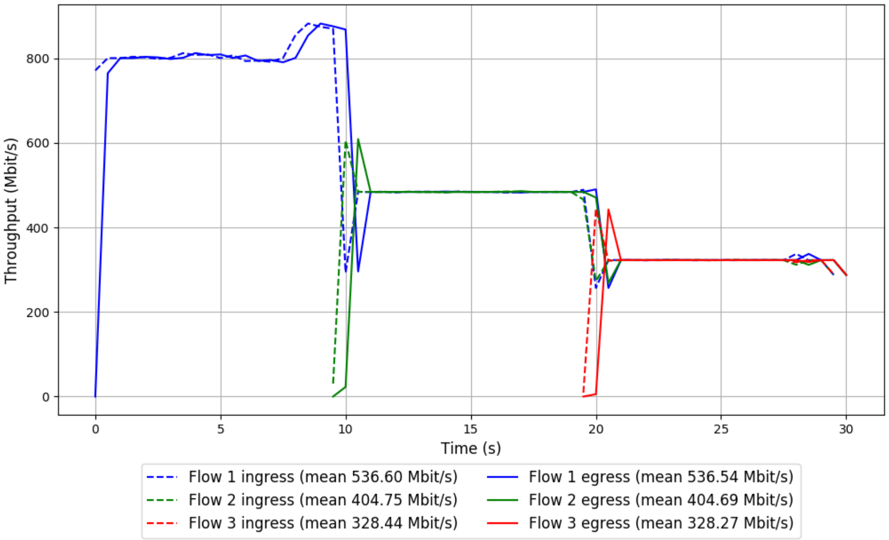
Run 3: Report of TCP BBR — Data Link

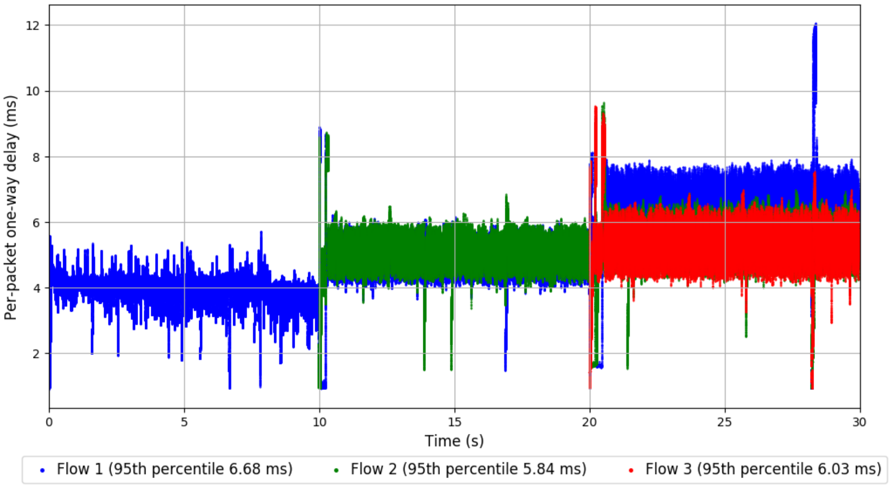




```
Run 4: Statistics of TCP BBR

Start at: 2019-02-12 05:58:04
End at: 2019-02-12 05:58:34
Local clock offset: 0.461 ms
Remote clock offset: 0.251 ms

# Below is generated by plot.py at 2019-02-12 06:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 915.66 Mbit/s
95th percentile per-packet one-way delay: 6.526 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 536.54 Mbit/s
95th percentile per-packet one-way delay: 6.682 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 404.69 Mbit/s
95th percentile per-packet one-way delay: 5.845 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 328.27 Mbit/s
95th percentile per-packet one-way delay: 6.027 ms
Loss rate: 0.07%
```

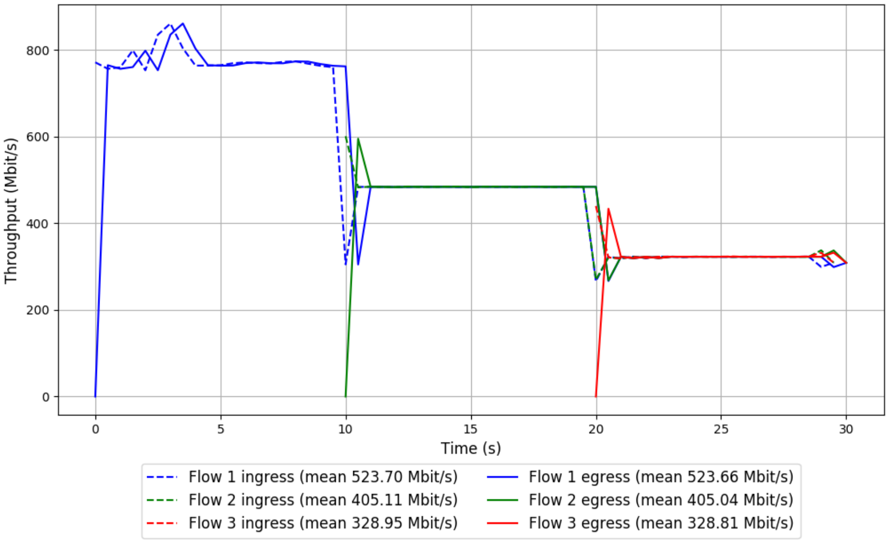
Run 4: Report of TCP BBR — Data Link

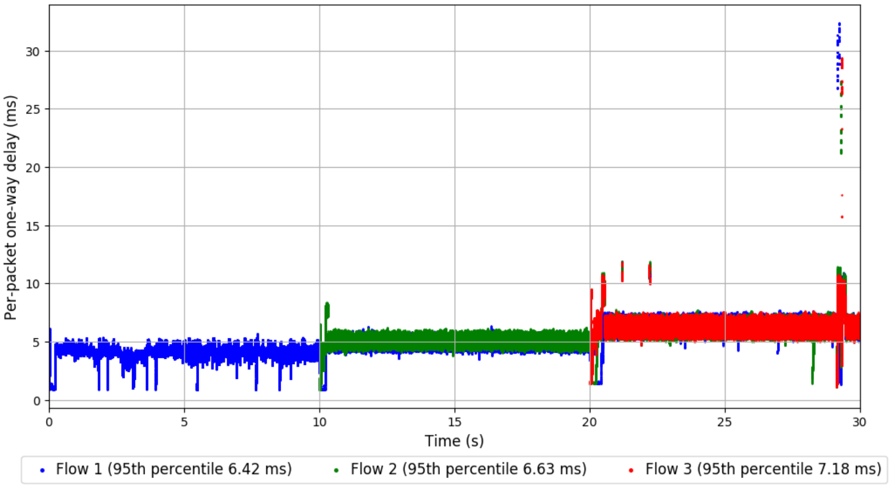




```
Run 5: Statistics of TCP BBR

Start at: 2019-02-12 06:28:14
End at: 2019-02-12 06:28:44
Local clock offset: 0.371 ms
Remote clock offset: -1.947 ms

# Below is generated by plot.py at 2019-02-12 06:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 902.87 Mbit/s
95th percentile per-packet one-way delay: 6.595 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 523.66 Mbit/s
95th percentile per-packet one-way delay: 6.424 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 405.04 Mbit/s
95th percentile per-packet one-way delay: 6.631 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 328.81 Mbit/s
95th percentile per-packet one-way delay: 7.185 ms
Loss rate: 0.07%
```

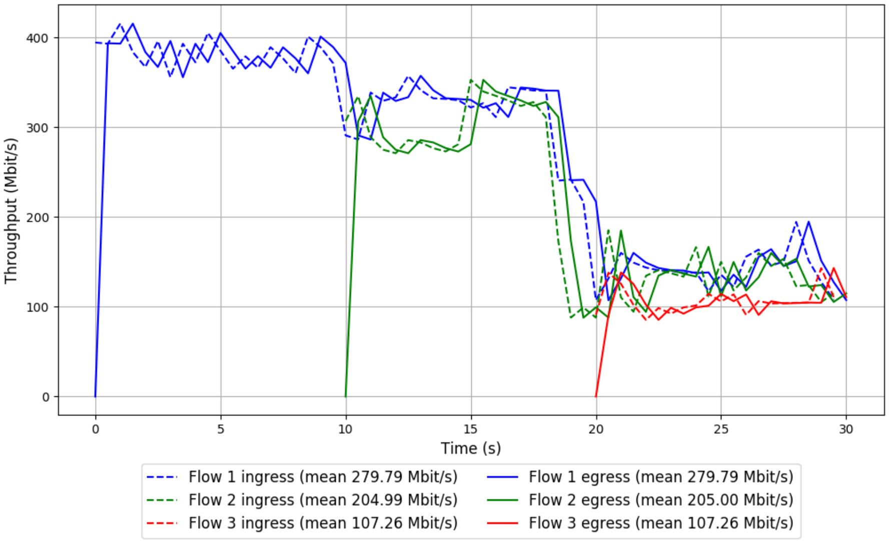
Run 5: Report of TCP BBR — Data Link

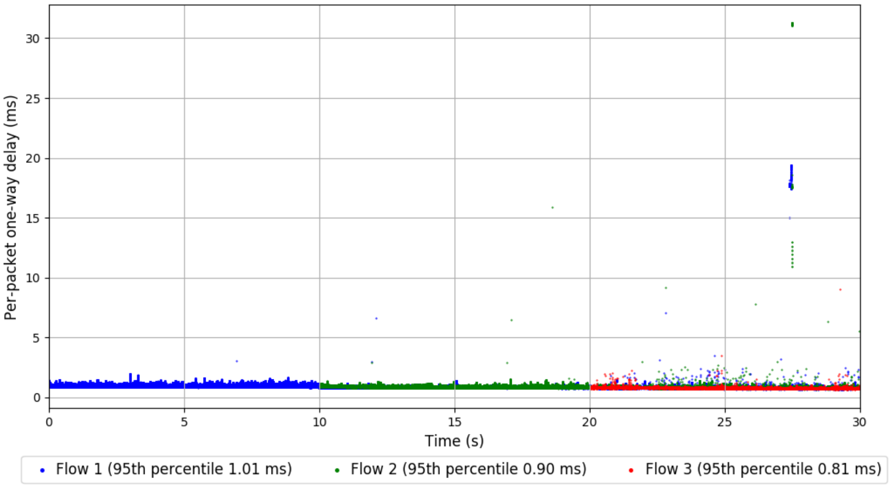




```
Run 1: Statistics of Copa

Start at: 2019-02-12 04:07:31
End at: 2019-02-12 04:08:01
Local clock offset: 0.019 ms
Remote clock offset: 2.946 ms

# Below is generated by plot.py at 2019-02-12 06:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 451.89 Mbit/s
95th percentile per-packet one-way delay: 0.979 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 279.79 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 205.00 Mbit/s
95th percentile per-packet one-way delay: 0.896 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 107.26 Mbit/s
95th percentile per-packet one-way delay: 0.806 ms
Loss rate: 0.01%
```

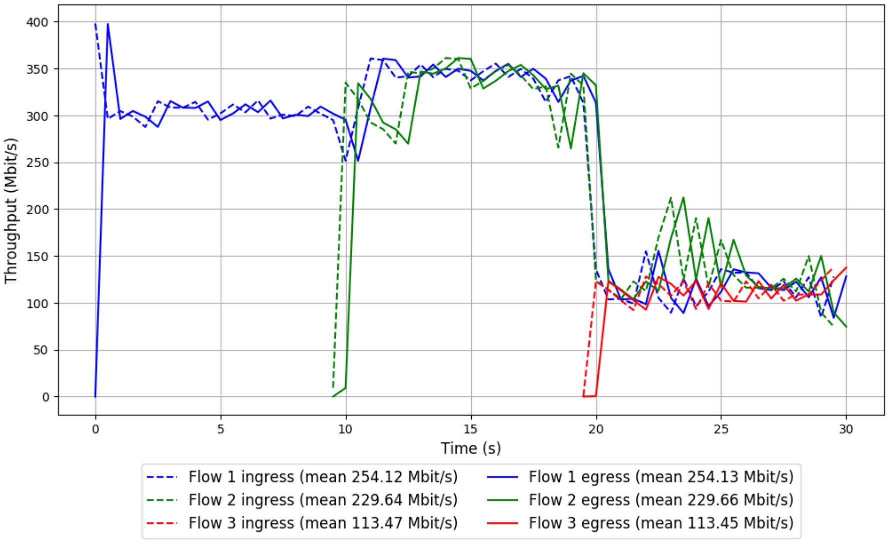
Run 1: Report of Copa — Data Link

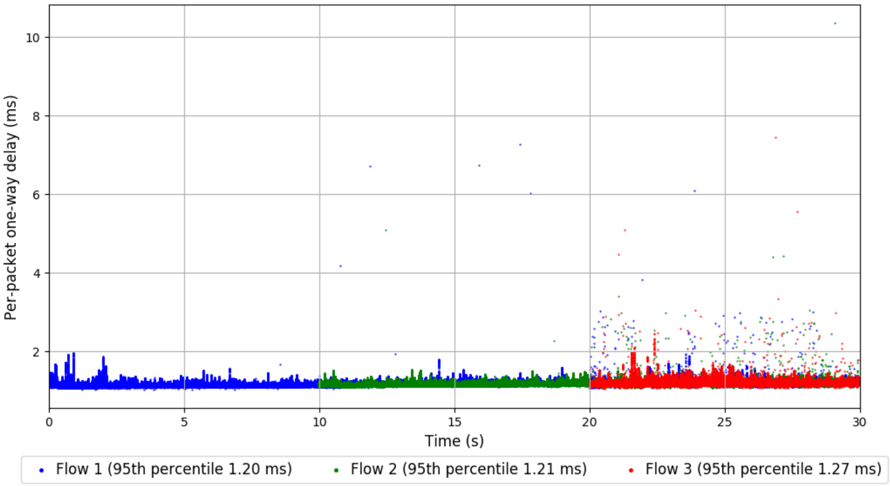




```
Run 2: Statistics of Copa

Start at: 2019-02-12 04:37:42
End at: 2019-02-12 04:38:12
Local clock offset: -0.773 ms
Remote clock offset: 0.757 ms

# Below is generated by plot.py at 2019-02-12 06:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 444.96 Mbit/s
95th percentile per-packet one-way delay: 1.208 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 254.13 Mbit/s
95th percentile per-packet one-way delay: 1.198 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 229.66 Mbit/s
95th percentile per-packet one-way delay: 1.210 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 113.45 Mbit/s
95th percentile per-packet one-way delay: 1.268 ms
Loss rate: 0.04%
```

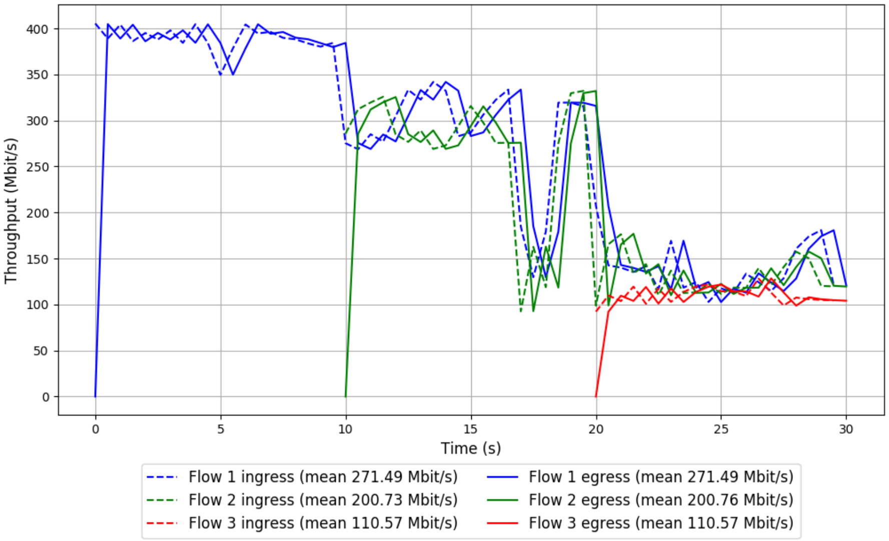
Run 2: Report of Copa — Data Link

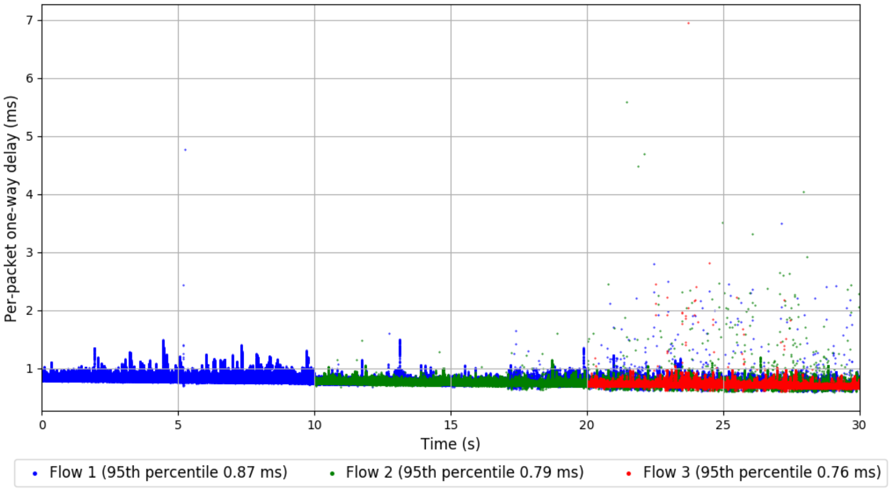




```
Run 3: Statistics of Copa

Start at: 2019-02-12 05:08:02
End at: 2019-02-12 05:08:32
Local clock offset: -2.128 ms
Remote clock offset: 0.527 ms

# Below is generated by plot.py at 2019-02-12 06:55:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 441.93 Mbit/s
95th percentile per-packet one-way delay: 0.852 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 271.49 Mbit/s
95th percentile per-packet one-way delay: 0.871 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 200.76 Mbit/s
95th percentile per-packet one-way delay: 0.786 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 110.57 Mbit/s
95th percentile per-packet one-way delay: 0.755 ms
Loss rate: 0.02%
```

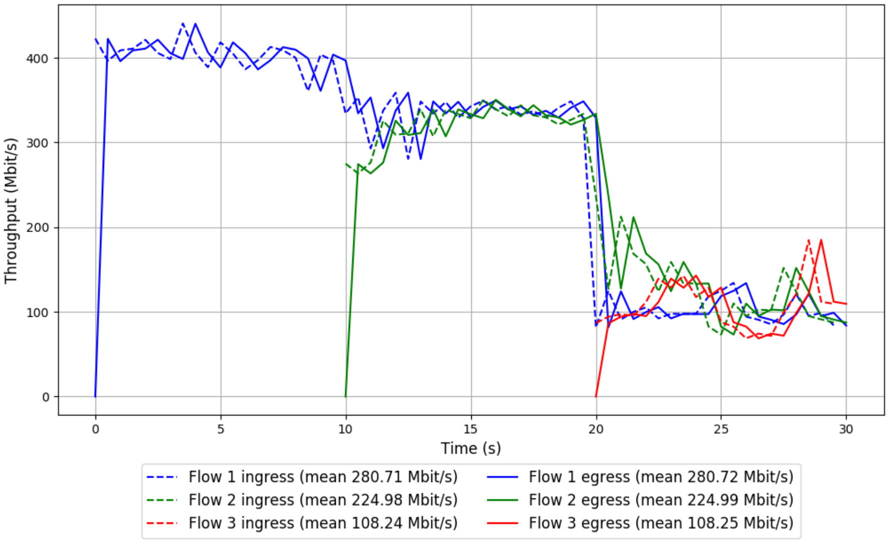
Run 3: Report of Copa — Data Link

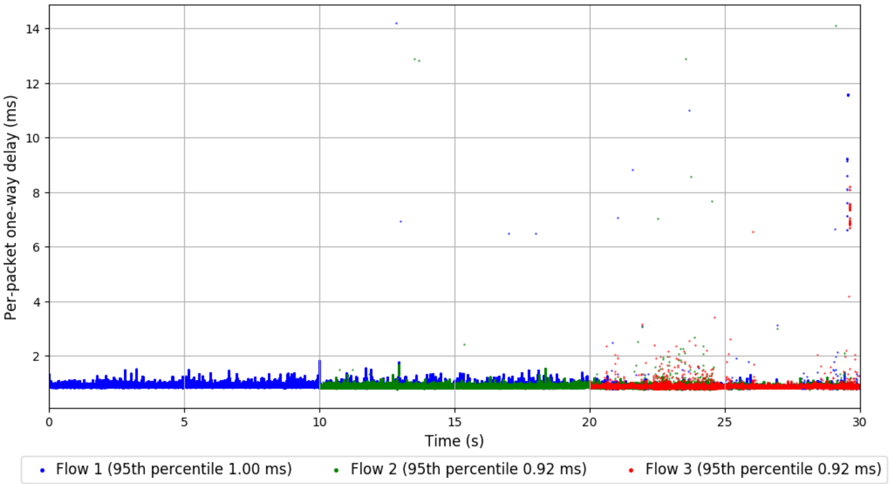




```
Run 4: Statistics of Copa

Start at: 2019-02-12 05:38:23
End at: 2019-02-12 05:38:53
Local clock offset: 0.459 ms
Remote clock offset: 0.629 ms

# Below is generated by plot.py at 2019-02-12 07:04:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 466.44 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 280.72 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 224.99 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 108.25 Mbit/s
95th percentile per-packet one-way delay: 0.915 ms
Loss rate: 0.00%
```

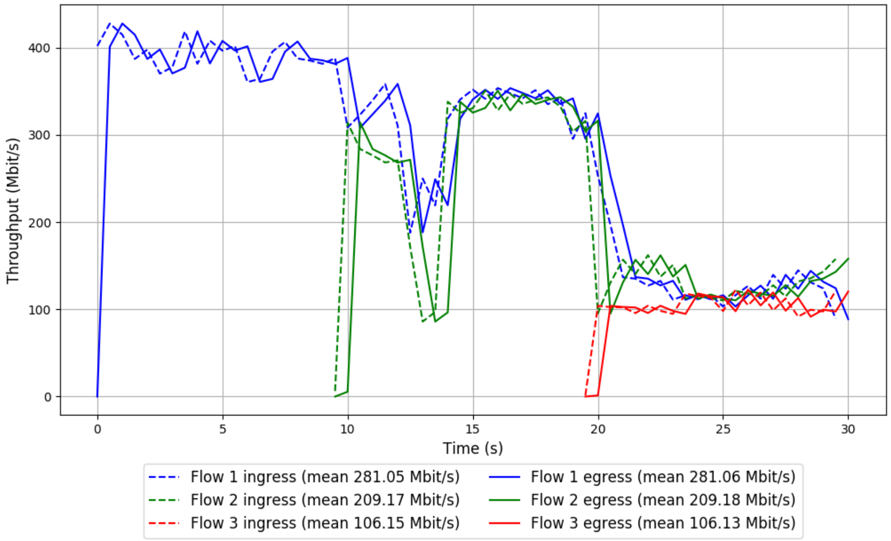
Run 4: Report of Copa — Data Link

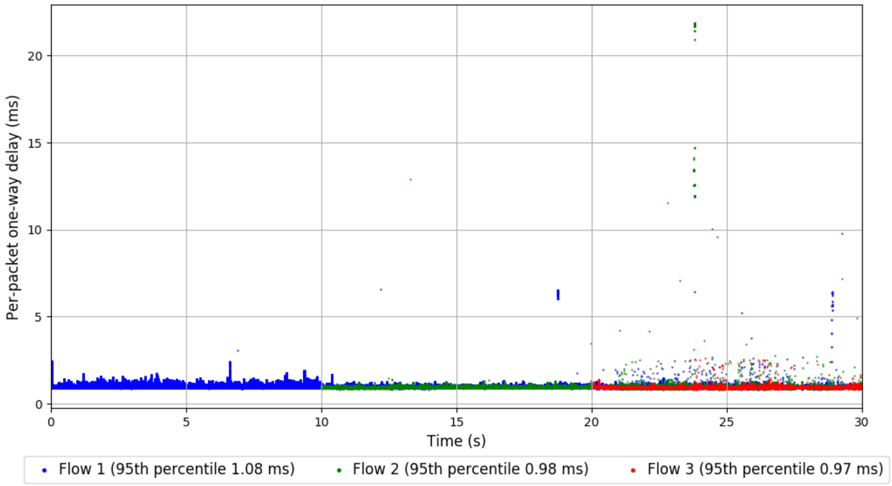




```
Run 5: Statistics of Copa

Start at: 2019-02-12 06:08:37
End at: 2019-02-12 06:09:07
Local clock offset: 0.403 ms
Remote clock offset: 0.149 ms

# Below is generated by plot.py at 2019-02-12 07:04:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 455.78 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 281.06 Mbit/s
95th percentile per-packet one-way delay: 1.079 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 209.18 Mbit/s
95th percentile per-packet one-way delay: 0.976 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 106.13 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 0.04%
```

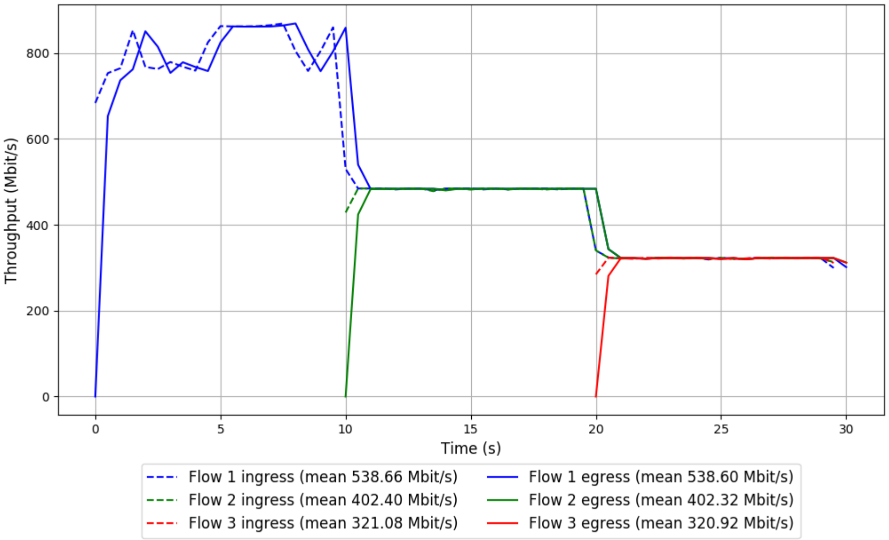
Run 5: Report of Copa — Data Link

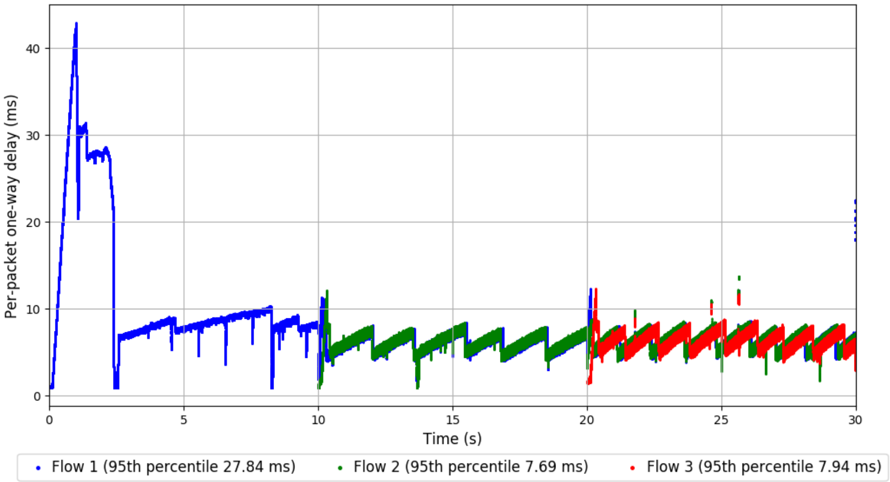




```
Run 1: Statistics of TCP Cubic

Start at: 2019-02-12 04:33:15
End at: 2019-02-12 04:33:45
Local clock offset: 0.252 ms
Remote clock offset: 0.772 ms

# Below is generated by plot.py at 2019-02-12 07:04:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 913.32 Mbit/s
95th percentile per-packet one-way delay: 23.675 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 538.60 Mbit/s
95th percentile per-packet one-way delay: 27.841 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 402.32 Mbit/s
95th percentile per-packet one-way delay: 7.690 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 320.92 Mbit/s
95th percentile per-packet one-way delay: 7.937 ms
Loss rate: 0.07%
```

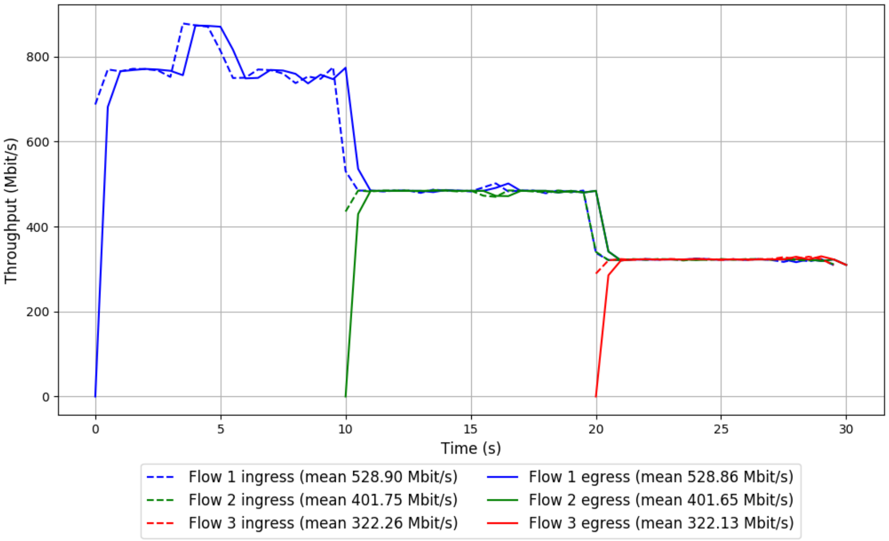
Run 1: Report of TCP Cubic — Data Link

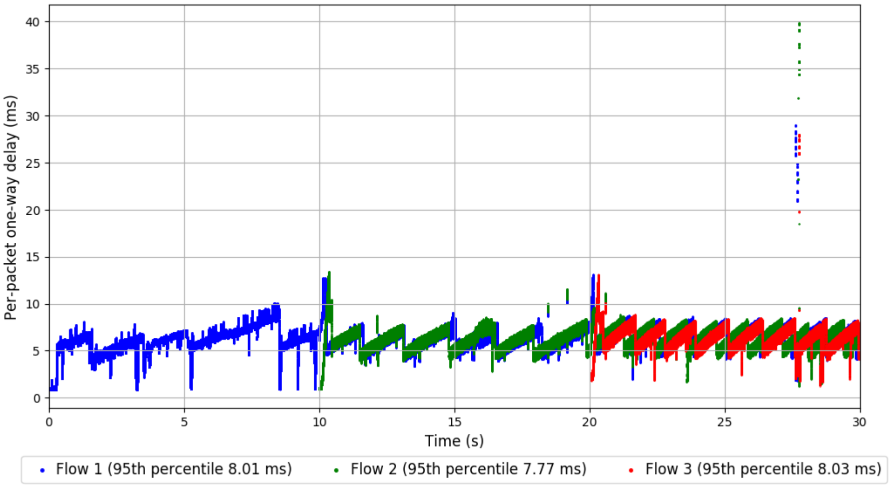




```
Run 2: Statistics of TCP Cubic

Start at: 2019-02-12 05:03:28
End at: 2019-02-12 05:03:58
Local clock offset: -3.438 ms
Remote clock offset: 0.628 ms

# Below is generated by plot.py at 2019-02-12 07:05:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 903.46 Mbit/s
95th percentile per-packet one-way delay: 7.934 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 528.86 Mbit/s
95th percentile per-packet one-way delay: 8.009 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 401.65 Mbit/s
95th percentile per-packet one-way delay: 7.769 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 322.13 Mbit/s
95th percentile per-packet one-way delay: 8.029 ms
Loss rate: 0.07%
```

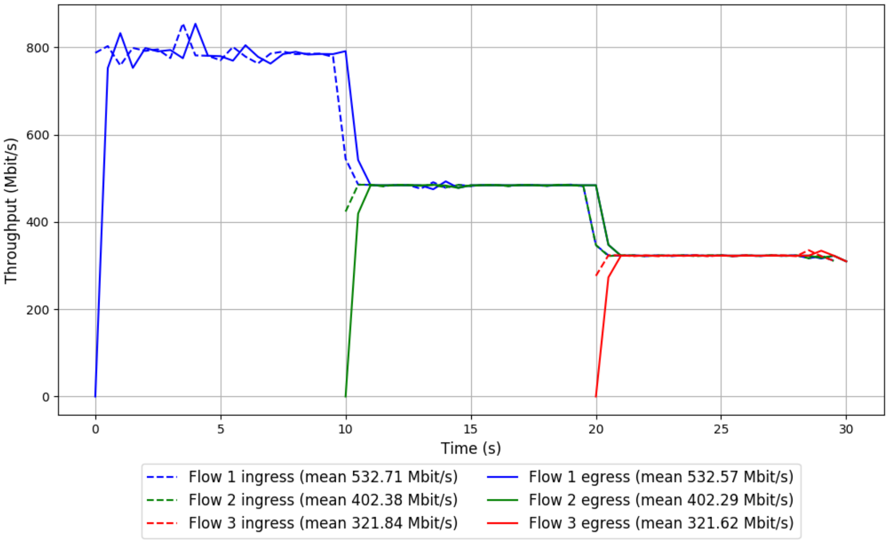
Run 2: Report of TCP Cubic — Data Link

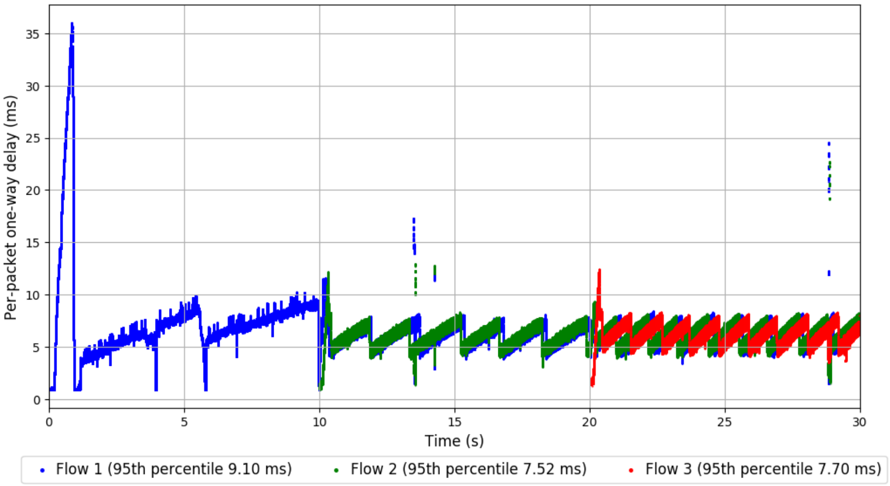




```
Run 3: Statistics of TCP Cubic

Start at: 2019-02-12 05:33:45
End at: 2019-02-12 05:34:15
Local clock offset: 0.564 ms
Remote clock offset: 0.544 ms

# Below is generated by plot.py at 2019-02-12 07:05:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.33 Mbit/s
95th percentile per-packet one-way delay: 8.714 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 532.57 Mbit/s
95th percentile per-packet one-way delay: 9.103 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 402.29 Mbit/s
95th percentile per-packet one-way delay: 7.523 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.62 Mbit/s
95th percentile per-packet one-way delay: 7.700 ms
Loss rate: 0.09%
```

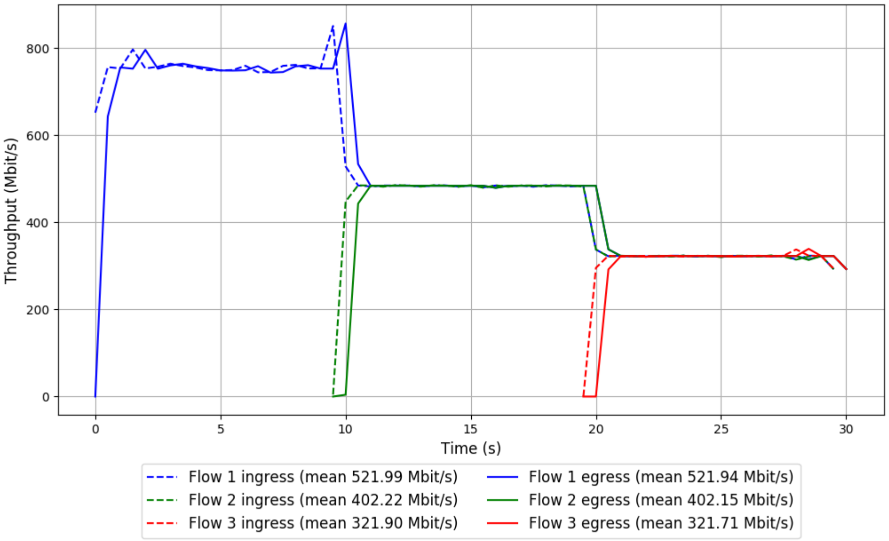
Run 3: Report of TCP Cubic — Data Link

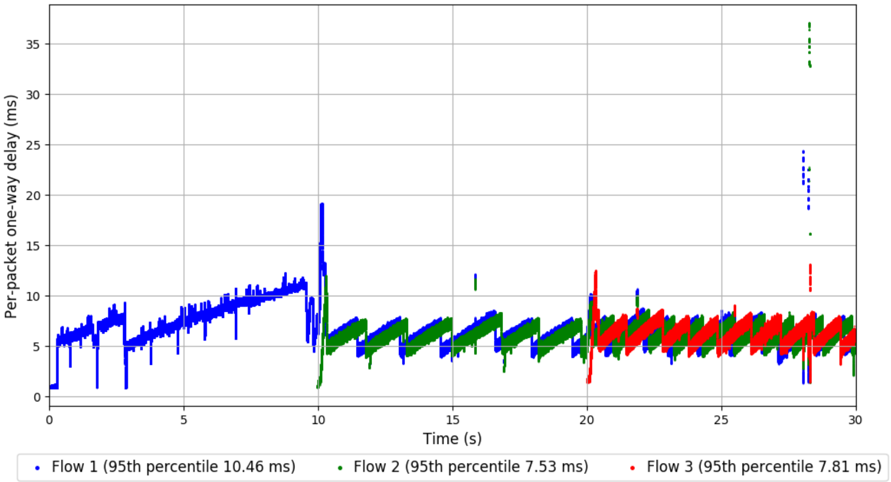




```
Run 4: Statistics of TCP Cubic

Start at: 2019-02-12 06:04:04
End at: 2019-02-12 06:04:34
Local clock offset: 0.492 ms
Remote clock offset: 0.204 ms

# Below is generated by plot.py at 2019-02-12 07:05:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 897.03 Mbit/s
95th percentile per-packet one-way delay: 9.961 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 521.94 Mbit/s
95th percentile per-packet one-way delay: 10.465 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 402.15 Mbit/s
95th percentile per-packet one-way delay: 7.531 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 321.71 Mbit/s
95th percentile per-packet one-way delay: 7.807 ms
Loss rate: 0.07%
```

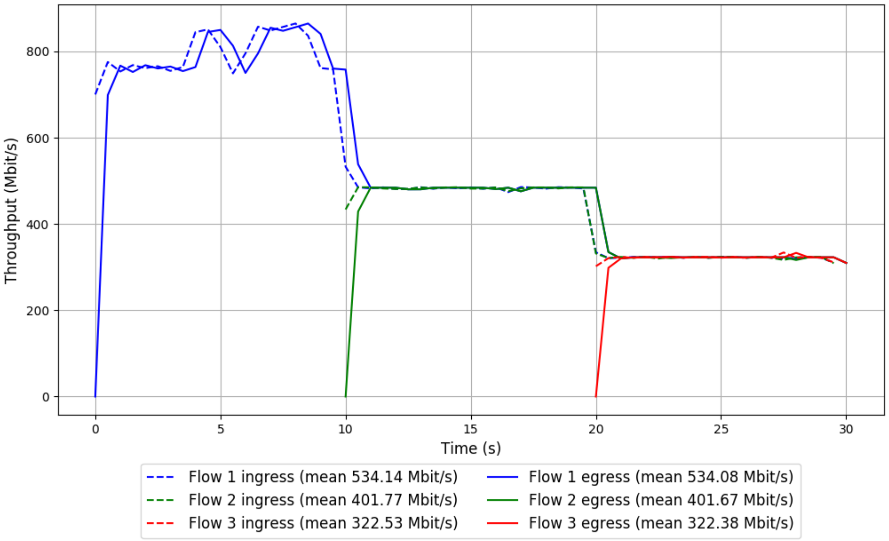
Run 4: Report of TCP Cubic — Data Link

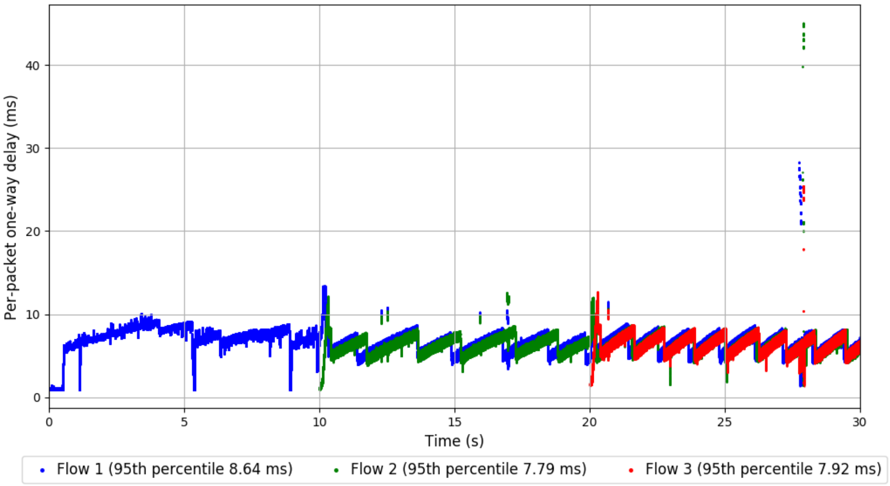




```
Run 5: Statistics of TCP Cubic

Start at: 2019-02-12 06:34:18
End at: 2019-02-12 06:34:48
Local clock offset: 0.379 ms
Remote clock offset: -2.754 ms

# Below is generated by plot.py at 2019-02-12 07:05:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 908.85 Mbit/s
95th percentile per-packet one-way delay: 8.487 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 534.08 Mbit/s
95th percentile per-packet one-way delay: 8.636 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 401.67 Mbit/s
95th percentile per-packet one-way delay: 7.789 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 322.38 Mbit/s
95th percentile per-packet one-way delay: 7.918 ms
Loss rate: 0.07%
```

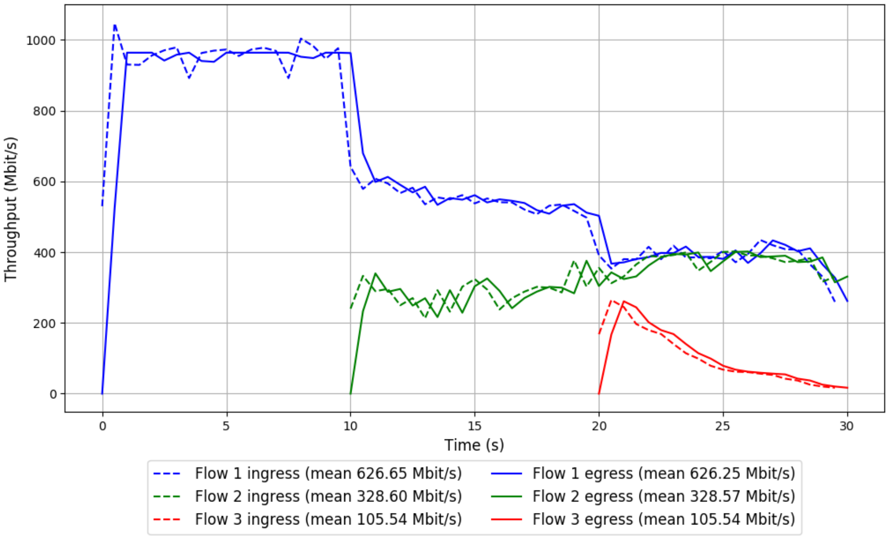
Run 5: Report of TCP Cubic — Data Link

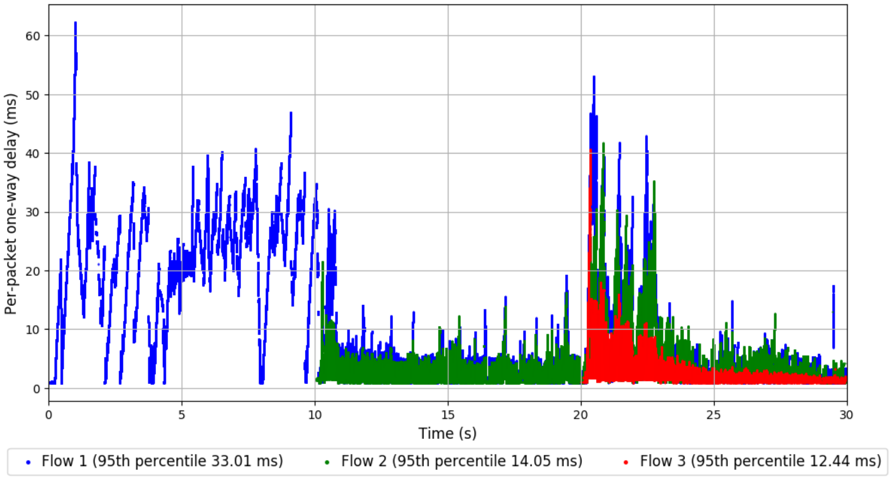




```
Run 1: Statistics of FillP

Start at: 2019-02-12 04:30:20
End at: 2019-02-12 04:30:50
Local clock offset: 0.236 ms
Remote clock offset: 0.776 ms

# Below is generated by plot.py at 2019-02-12 07:07:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 879.82 Mbit/s
95th percentile per-packet one-way delay: 31.768 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 626.25 Mbit/s
95th percentile per-packet one-way delay: 33.013 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 328.57 Mbit/s
95th percentile per-packet one-way delay: 14.055 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 105.54 Mbit/s
95th percentile per-packet one-way delay: 12.442 ms
Loss rate: 0.00%
```

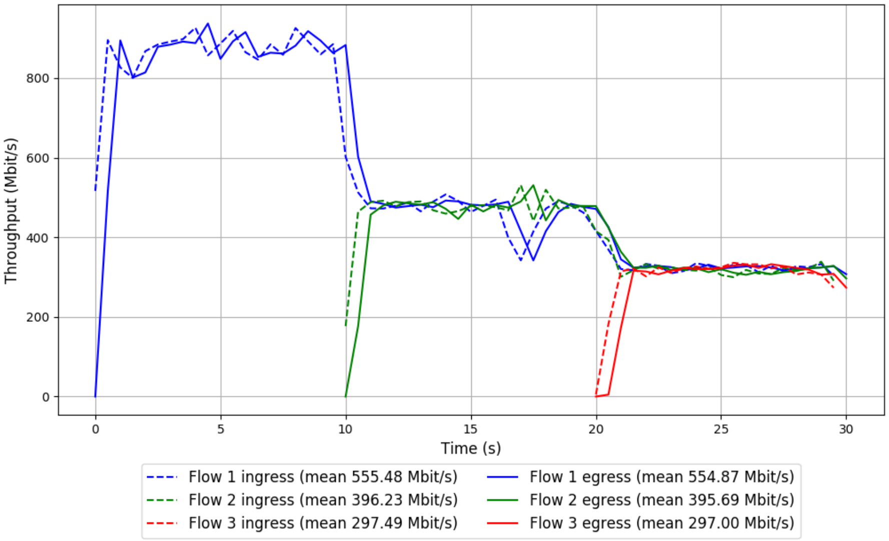
Run 1: Report of FillP — Data Link

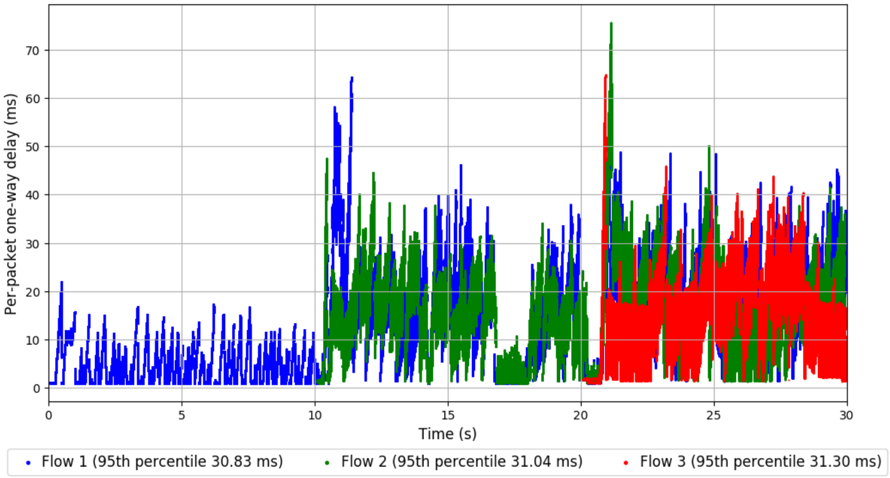




```
Run 2: Statistics of FillP

Start at: 2019-02-12 05:00:33
End at: 2019-02-12 05:01:03
Local clock offset: -3.279 ms
Remote clock offset: 0.548 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 916.37 Mbit/s
95th percentile per-packet one-way delay: 30.964 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 554.87 Mbit/s
95th percentile per-packet one-way delay: 30.834 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 395.69 Mbit/s
95th percentile per-packet one-way delay: 31.044 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 297.00 Mbit/s
95th percentile per-packet one-way delay: 31.305 ms
Loss rate: 0.19%
```

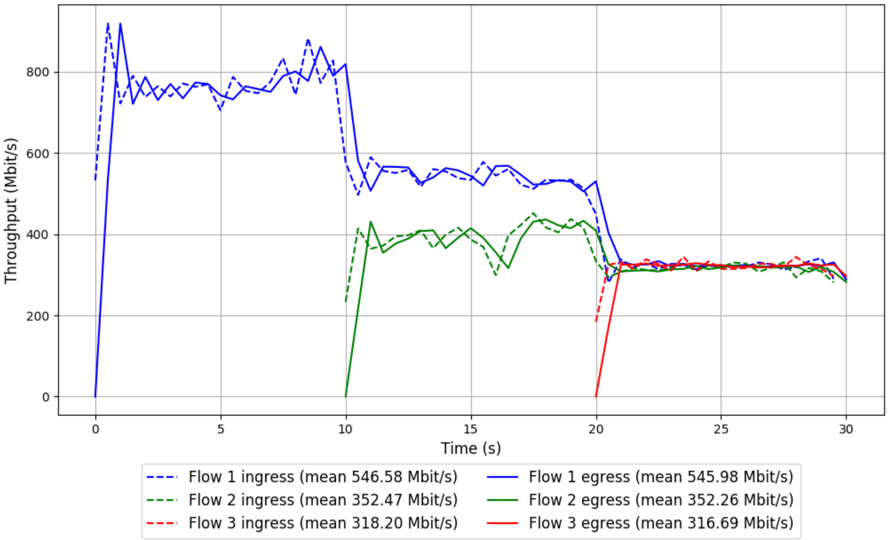
Run 2: Report of FillP — Data Link

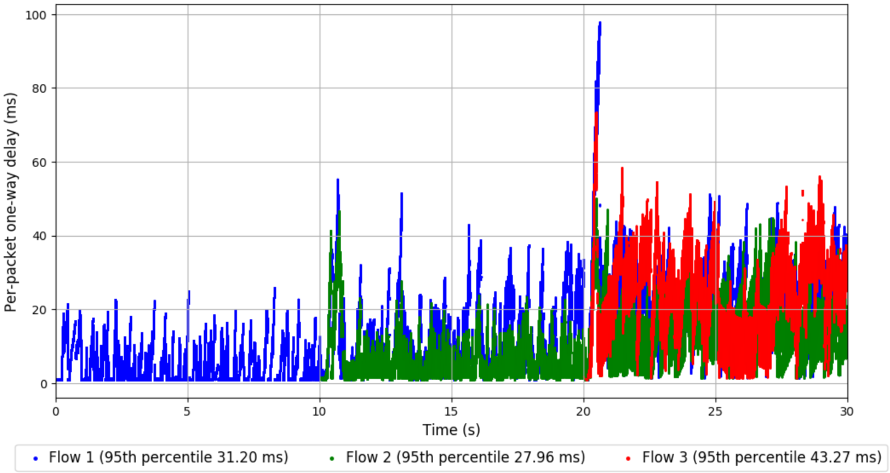




```
Run 3: Statistics of FillP

Start at: 2019-02-12 05:30:51
End at: 2019-02-12 05:31:21
Local clock offset: 0.492 ms
Remote clock offset: 0.481 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 885.27 Mbit/s
95th percentile per-packet one-way delay: 34.193 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 545.98 Mbit/s
95th percentile per-packet one-way delay: 31.204 ms
Loss rate: 0.11%
-- Flow 2:
Average throughput: 352.26 Mbit/s
95th percentile per-packet one-way delay: 27.956 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 316.69 Mbit/s
95th percentile per-packet one-way delay: 43.268 ms
Loss rate: 0.38%
```

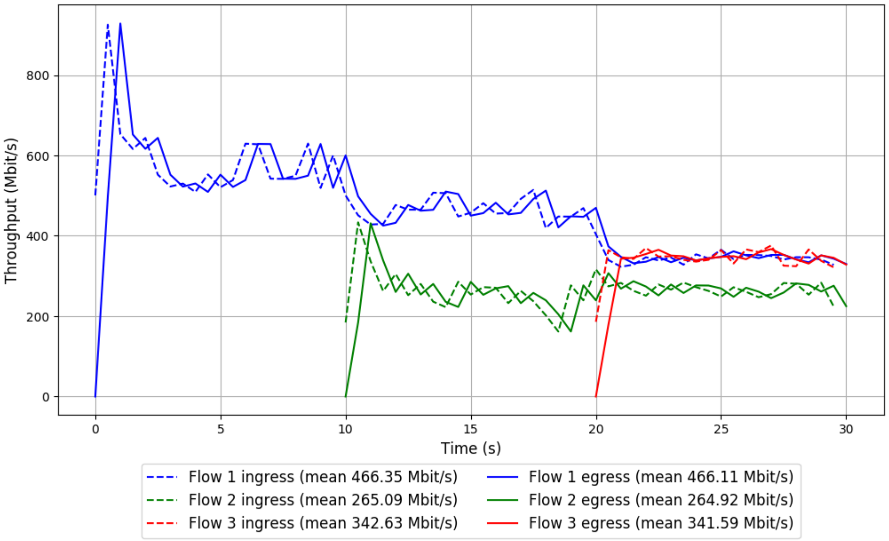
Run 3: Report of FillP — Data Link

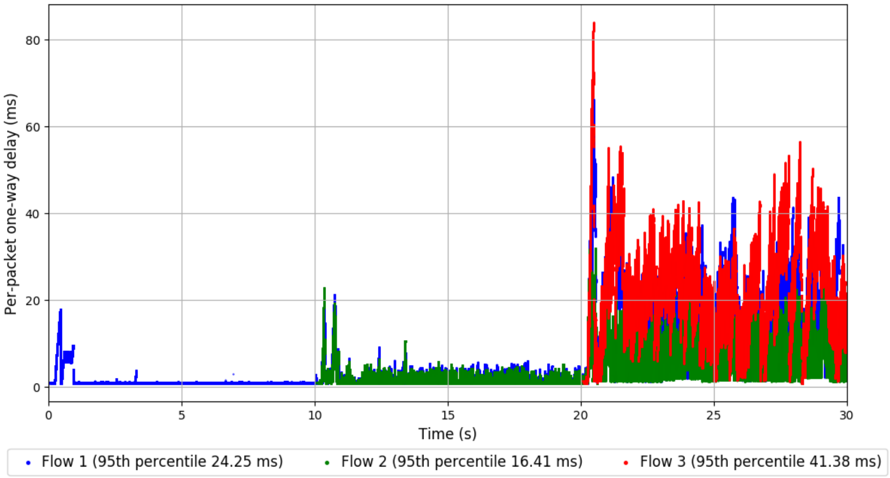




```
Run 4: Statistics of FillP

Start at: 2019-02-12 06:01:13
End at: 2019-02-12 06:01:43
Local clock offset: 0.473 ms
Remote clock offset: 0.189 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 755.54 Mbit/s
95th percentile per-packet one-way delay: 29.938 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 466.11 Mbit/s
95th percentile per-packet one-way delay: 24.247 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 264.92 Mbit/s
95th percentile per-packet one-way delay: 16.415 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 341.59 Mbit/s
95th percentile per-packet one-way delay: 41.380 ms
Loss rate: 0.18%
```

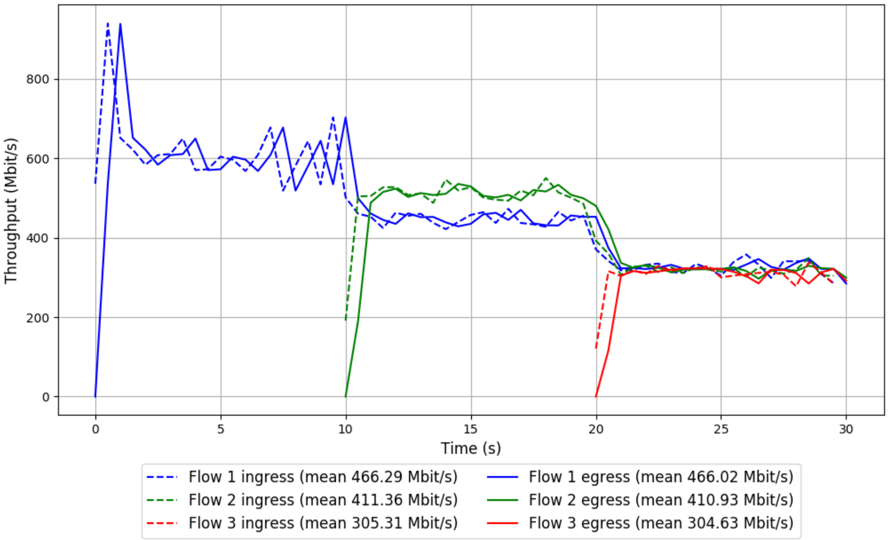
Run 4: Report of FillP — Data Link

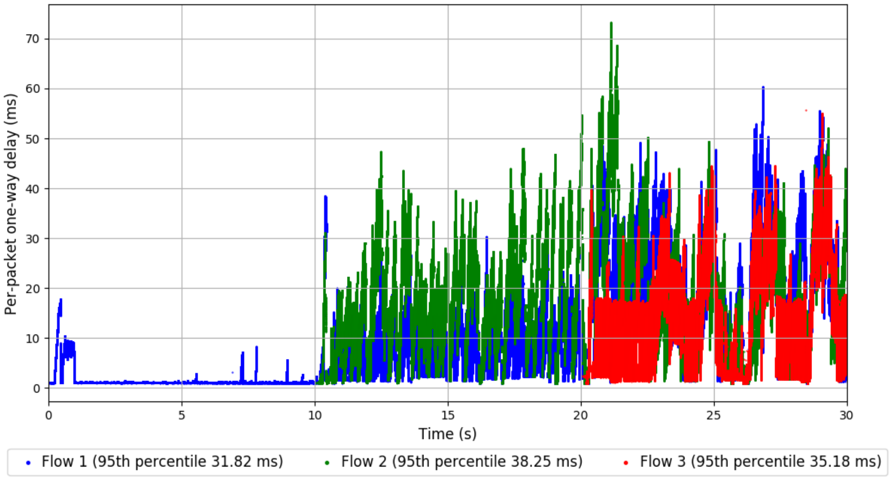




```
Run 5: Statistics of FillP

Start at: 2019-02-12 06:31:24
End at: 2019-02-12 06:31:54
Local clock offset: 0.385 ms
Remote clock offset: -2.435 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 840.12 Mbit/s
95th percentile per-packet one-way delay: 35.011 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 466.02 Mbit/s
95th percentile per-packet one-way delay: 31.815 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 410.93 Mbit/s
95th percentile per-packet one-way delay: 38.253 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 304.63 Mbit/s
95th percentile per-packet one-way delay: 35.179 ms
Loss rate: 0.15%
```

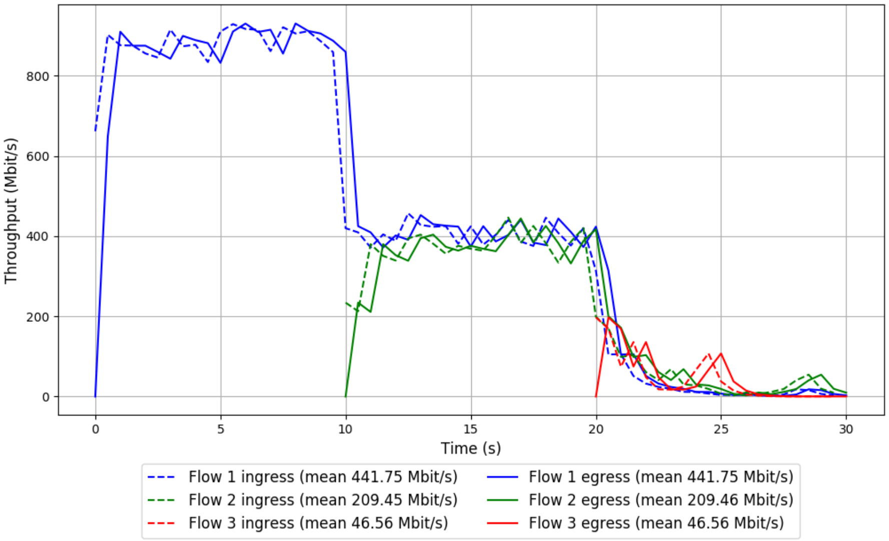
Run 5: Report of FillP — Data Link

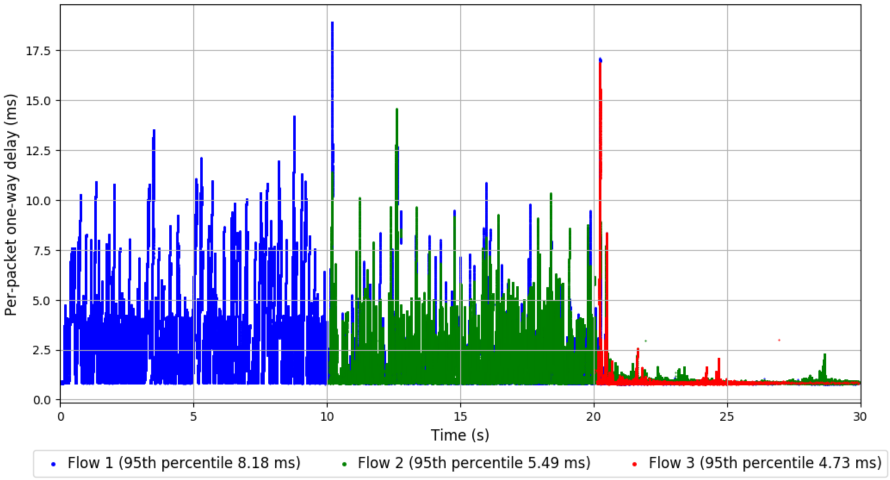




```
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-12 04:17:33
End at: 2019-02-12 04:18:03
Local clock offset: 0.185 ms
Remote clock offset: 1.233 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.40 Mbit/s
95th percentile per-packet one-way delay: 7.703 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 441.75 Mbit/s
95th percentile per-packet one-way delay: 8.184 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 209.46 Mbit/s
95th percentile per-packet one-way delay: 5.493 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.56 Mbit/s
95th percentile per-packet one-way delay: 4.727 ms
Loss rate: 0.00%
```

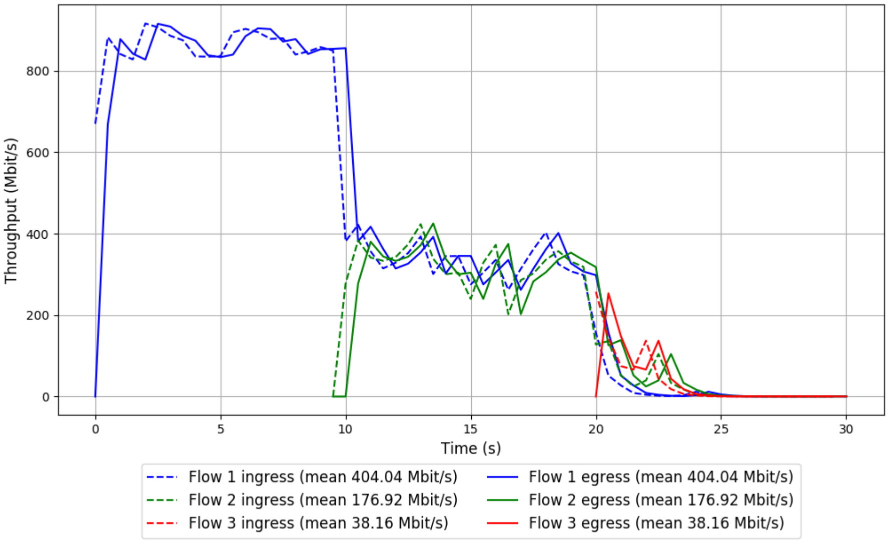
Run 1: Report of FillP-Sheep — Data Link

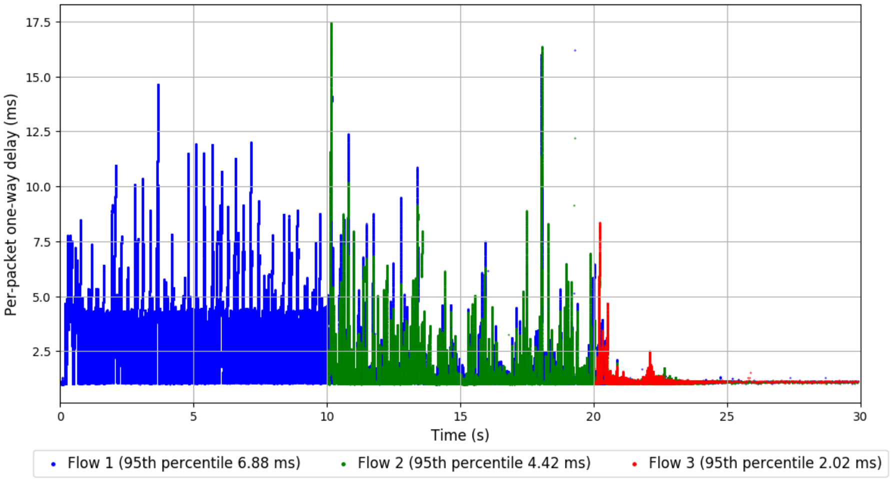




```
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-12 04:47:52
End at: 2019-02-12 04:48:22
Local clock offset: -2.351 ms
Remote clock offset: 0.498 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 534.27 Mbit/s
95th percentile per-packet one-way delay: 6.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 404.04 Mbit/s
95th percentile per-packet one-way delay: 6.878 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 176.92 Mbit/s
95th percentile per-packet one-way delay: 4.415 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.16 Mbit/s
95th percentile per-packet one-way delay: 2.025 ms
Loss rate: 0.00%
```

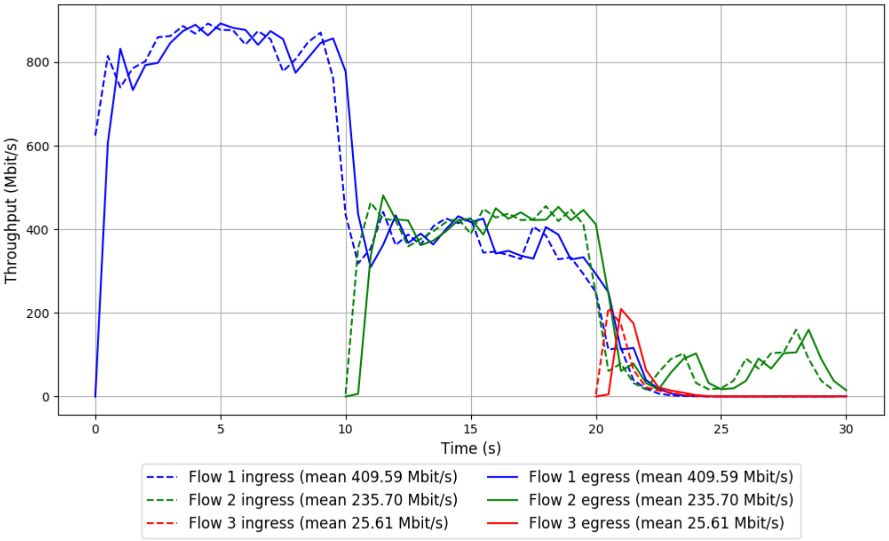
Run 2: Report of FillP-Sheep — Data Link

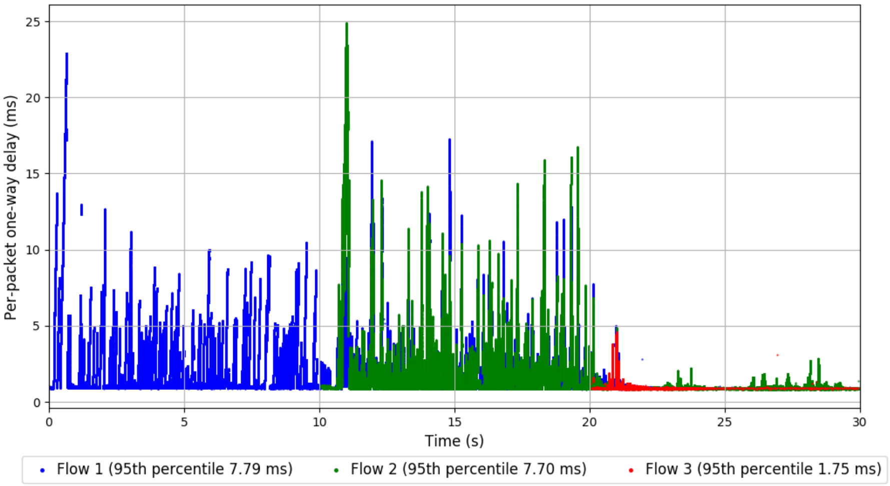




```
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-12 05:18:07
End at: 2019-02-12 05:18:37
Local clock offset: -0.277 ms
Remote clock offset: 0.526 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 574.57 Mbit/s
95th percentile per-packet one-way delay: 7.724 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 409.59 Mbit/s
95th percentile per-packet one-way delay: 7.787 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.70 Mbit/s
95th percentile per-packet one-way delay: 7.699 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.61 Mbit/s
95th percentile per-packet one-way delay: 1.755 ms
Loss rate: 0.00%
```

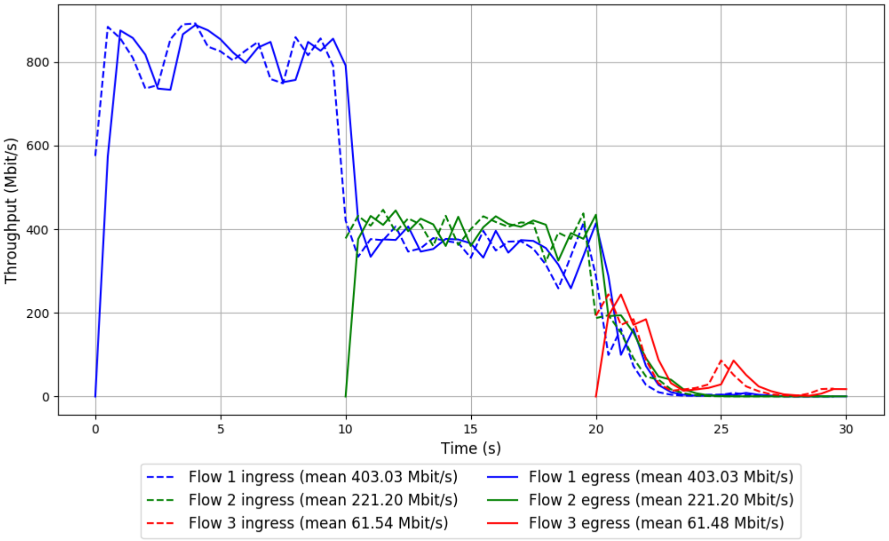
Run 3: Report of FillP-Sheep — Data Link

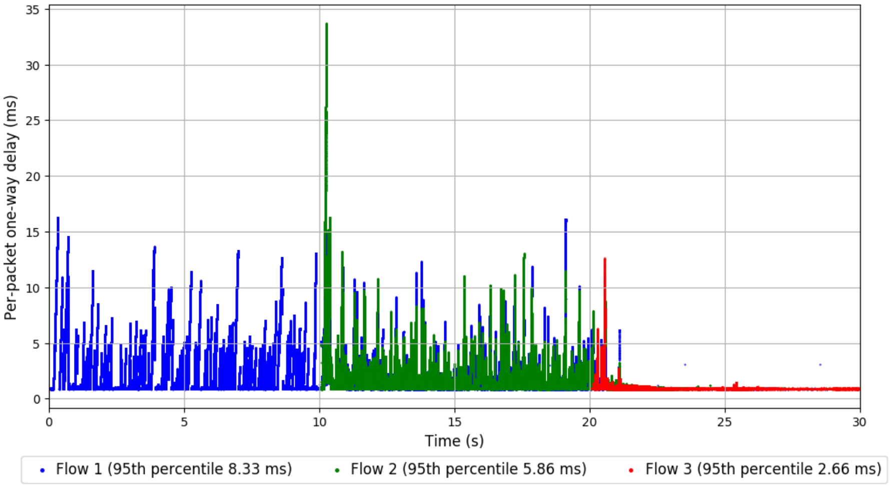




```
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-12 05:48:28
End at: 2019-02-12 05:48:58
Local clock offset: 0.389 ms
Remote clock offset: 0.508 ms

# Below is generated by plot.py at 2019-02-12 07:16:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 570.27 Mbit/s
95th percentile per-packet one-way delay: 7.791 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 403.03 Mbit/s
95th percentile per-packet one-way delay: 8.333 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 221.20 Mbit/s
95th percentile per-packet one-way delay: 5.860 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 61.48 Mbit/s
95th percentile per-packet one-way delay: 2.659 ms
Loss rate: 0.10%
```

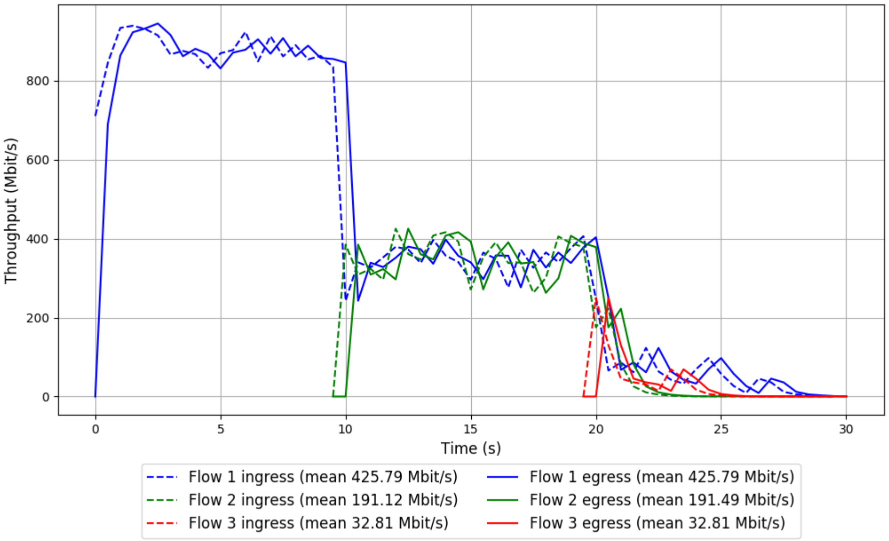
Run 4: Report of FillP-Sheep — Data Link

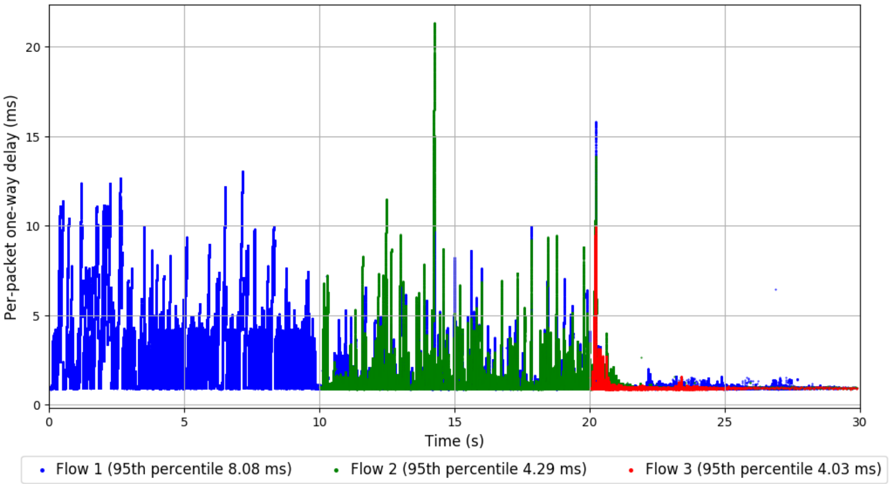




```
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-12 06:18:39
End at: 2019-02-12 06:19:09
Local clock offset: 0.343 ms
Remote clock offset: 0.117 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 563.84 Mbit/s
95th percentile per-packet one-way delay: 7.552 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 425.79 Mbit/s
95th percentile per-packet one-way delay: 8.079 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 191.49 Mbit/s
95th percentile per-packet one-way delay: 4.292 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.81 Mbit/s
95th percentile per-packet one-way delay: 4.034 ms
Loss rate: 0.00%
```

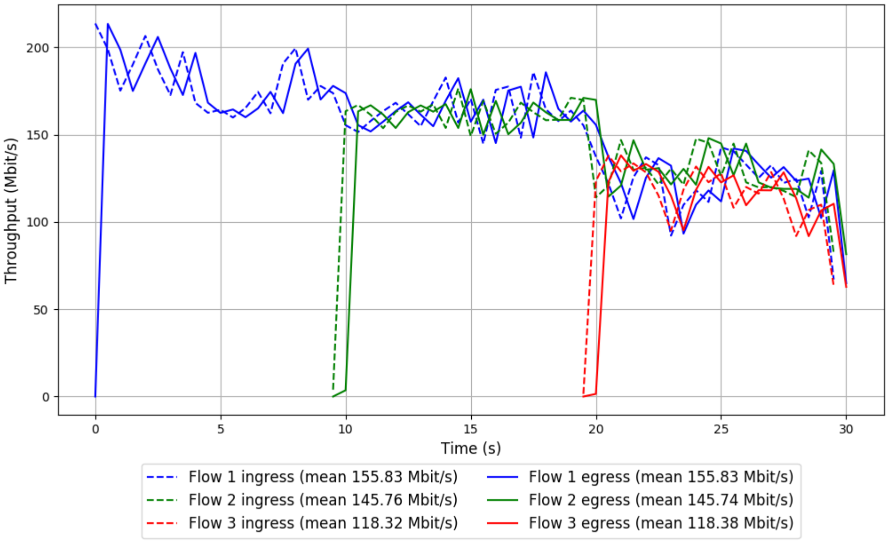
Run 5: Report of FillP-Sheep — Data Link

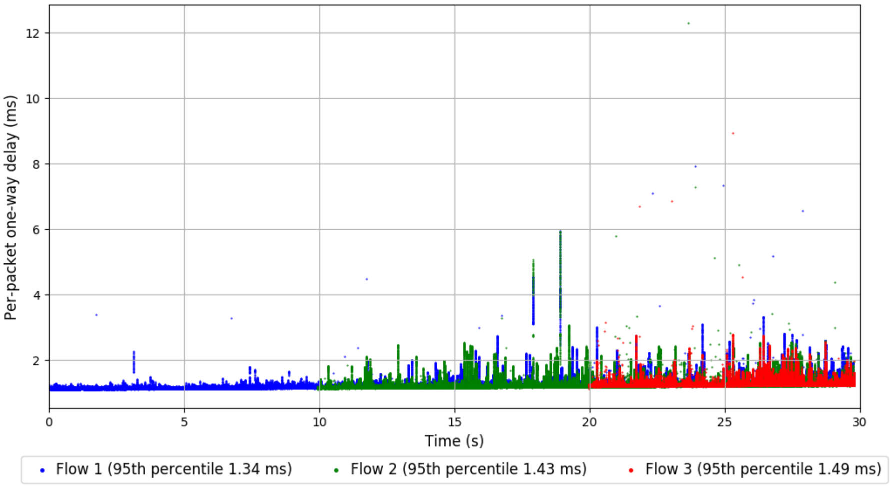




```
Run 1: Statistics of Indigo

Start at: 2019-02-12 04:36:15
End at: 2019-02-12 04:36:45
Local clock offset: -0.343 ms
Remote clock offset: 0.799 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 291.96 Mbit/s
95th percentile per-packet one-way delay: 1.396 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 155.83 Mbit/s
95th percentile per-packet one-way delay: 1.336 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 145.74 Mbit/s
95th percentile per-packet one-way delay: 1.434 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 118.38 Mbit/s
95th percentile per-packet one-way delay: 1.489 ms
Loss rate: 0.02%
```

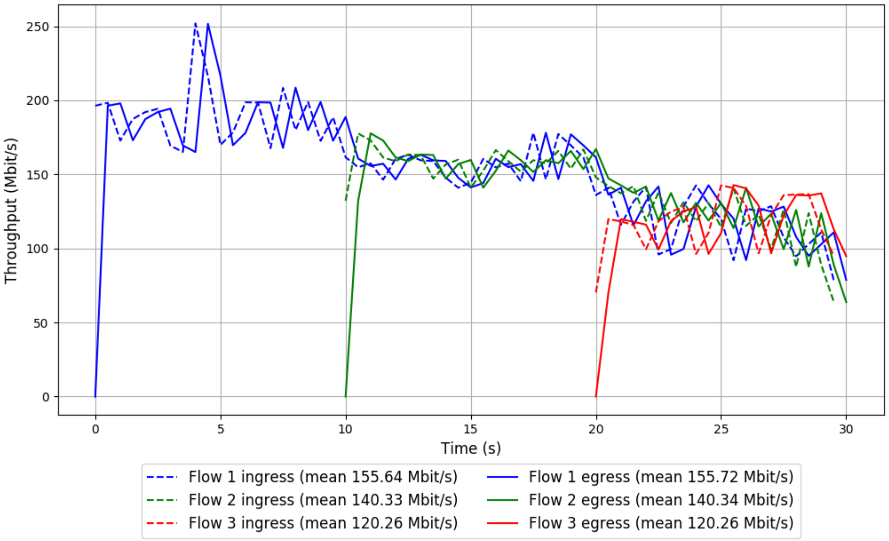
Run 1: Report of Indigo — Data Link

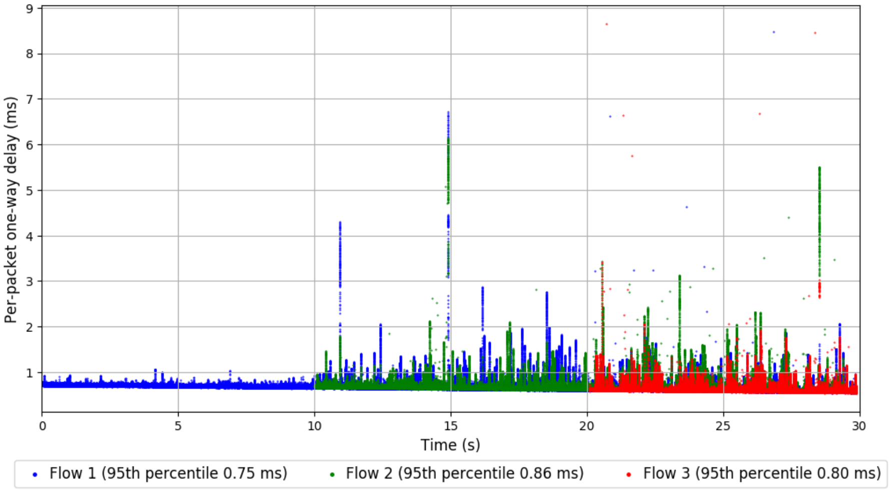




```
Run 2: Statistics of Indigo

Start at: 2019-02-12 05:06:35
End at: 2019-02-12 05:07:05
Local clock offset: -2.545 ms
Remote clock offset: 0.615 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 288.34 Mbit/s
95th percentile per-packet one-way delay: 0.788 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 155.72 Mbit/s
95th percentile per-packet one-way delay: 0.754 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 140.34 Mbit/s
95th percentile per-packet one-way delay: 0.857 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 120.26 Mbit/s
95th percentile per-packet one-way delay: 0.798 ms
Loss rate: 0.02%
```

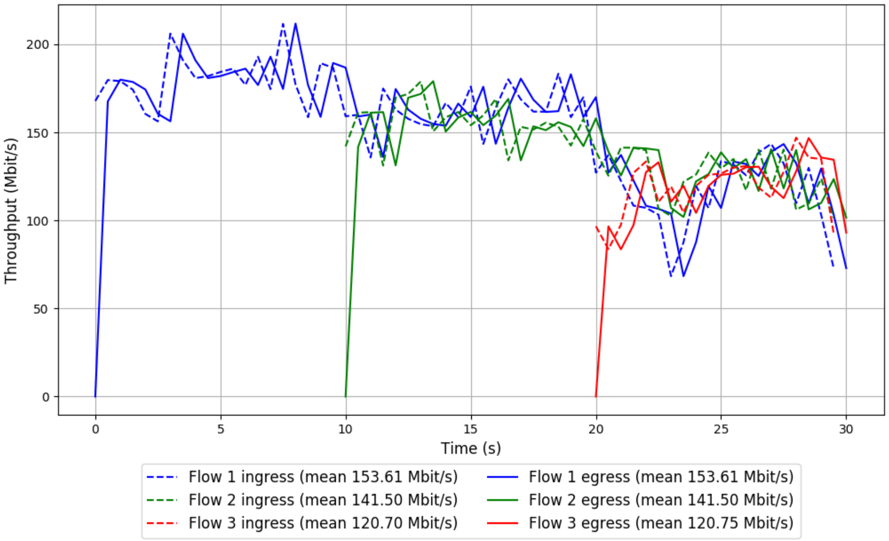
Run 2: Report of Indigo — Data Link

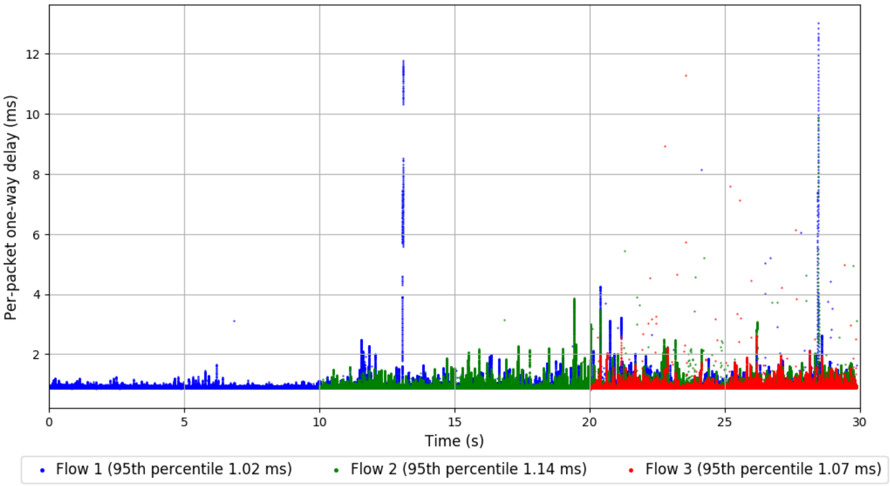




```
Run 3: Statistics of Indigo

Start at: 2019-02-12 05:36:56
End at: 2019-02-12 05:37:26
Local clock offset: 0.519 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 287.43 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 153.61 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 141.50 Mbit/s
95th percentile per-packet one-way delay: 1.140 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 120.75 Mbit/s
95th percentile per-packet one-way delay: 1.068 ms
Loss rate: 0.00%
```

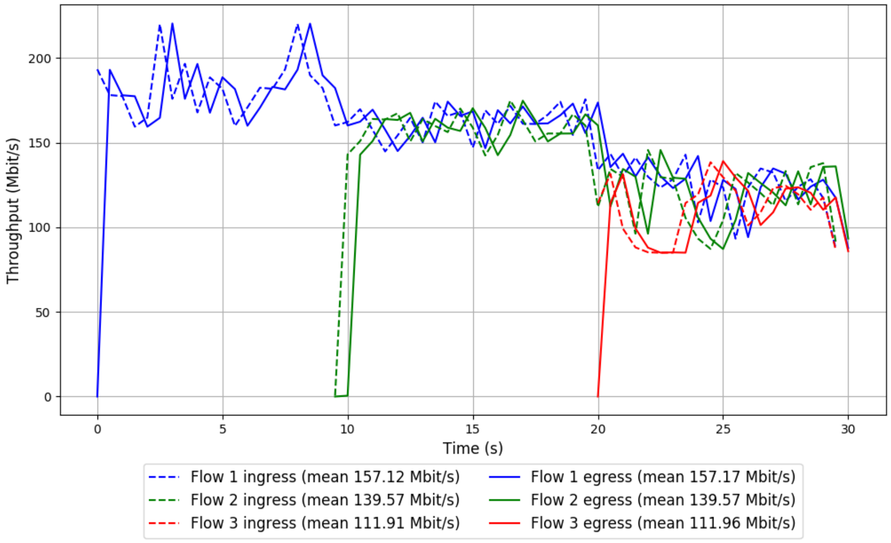
Run 3: Report of Indigo — Data Link

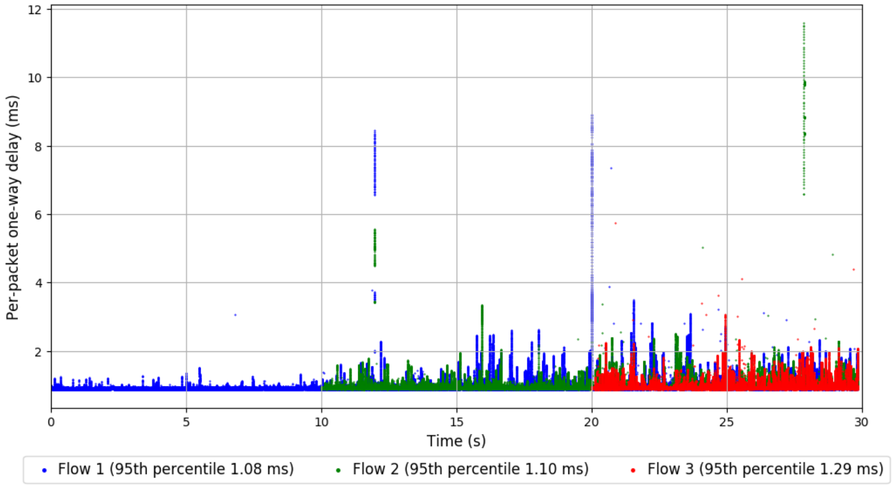




```
Run 4: Statistics of Indigo

Start at: 2019-02-12 06:07:10
End at: 2019-02-12 06:07:40
Local clock offset: 0.442 ms
Remote clock offset: 0.205 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 286.87 Mbit/s
95th percentile per-packet one-way delay: 1.123 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.17 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 139.57 Mbit/s
95th percentile per-packet one-way delay: 1.104 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 111.96 Mbit/s
95th percentile per-packet one-way delay: 1.293 ms
Loss rate: 0.04%
```

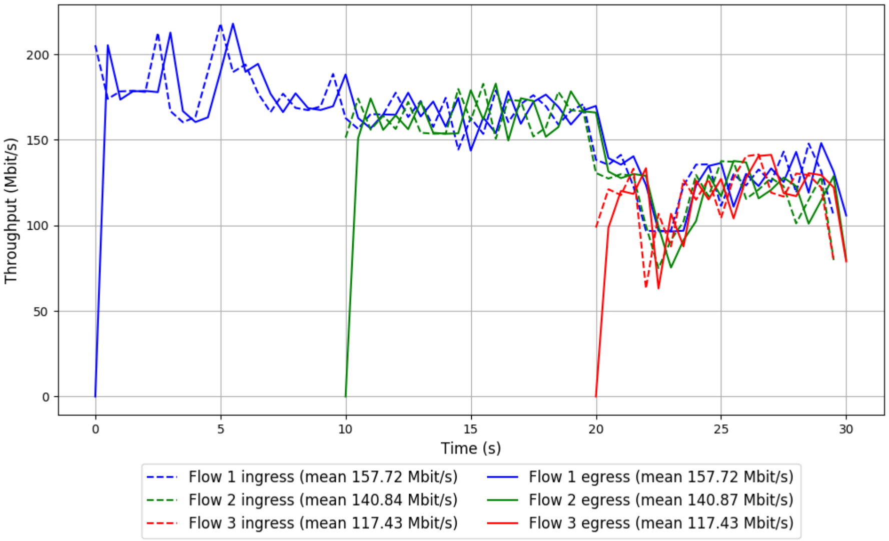
Run 4: Report of Indigo — Data Link

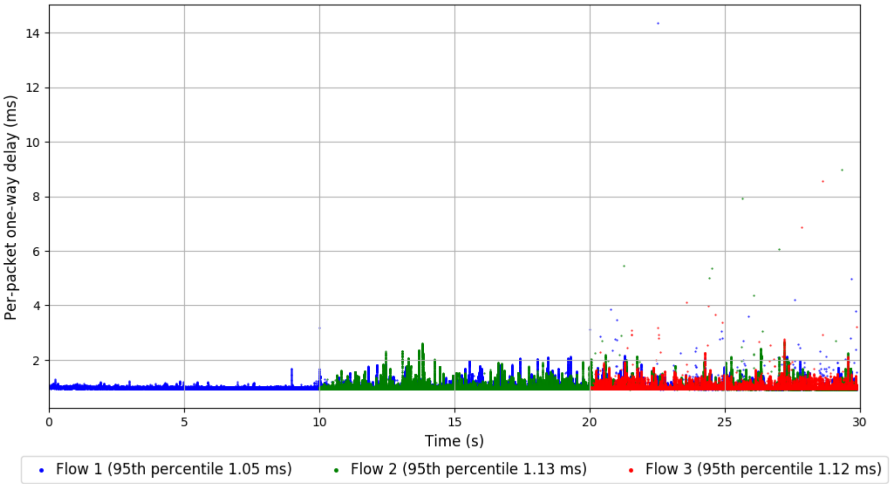




```
Run 5: Statistics of Indigo

Start at: 2019-02-12 06:37:27
End at: 2019-02-12 06:37:57
Local clock offset: 0.34 ms
Remote clock offset: -3.064 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 289.96 Mbit/s
95th percentile per-packet one-way delay: 1.084 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 157.72 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 140.87 Mbit/s
95th percentile per-packet one-way delay: 1.128 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 117.43 Mbit/s
95th percentile per-packet one-way delay: 1.121 ms
Loss rate: 0.02%
```

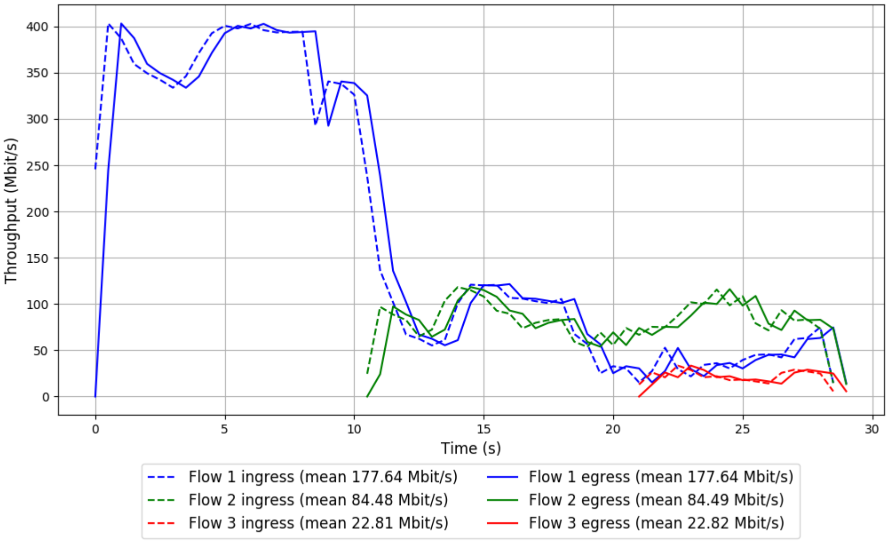
Run 5: Report of Indigo — Data Link

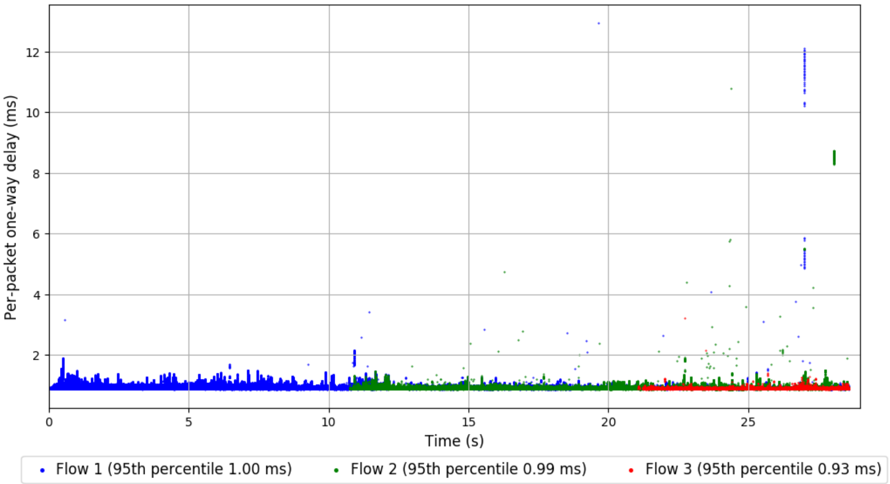




```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-12 04:24:28
End at: 2019-02-12 04:24:58
Local clock offset: 0.213 ms
Remote clock offset: 0.885 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 236.34 Mbit/s
95th percentile per-packet one-way delay: 1.003 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 177.64 Mbit/s
95th percentile per-packet one-way delay: 1.005 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 84.49 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 22.82 Mbit/s
95th percentile per-packet one-way delay: 0.931 ms
Loss rate: 0.01%
```

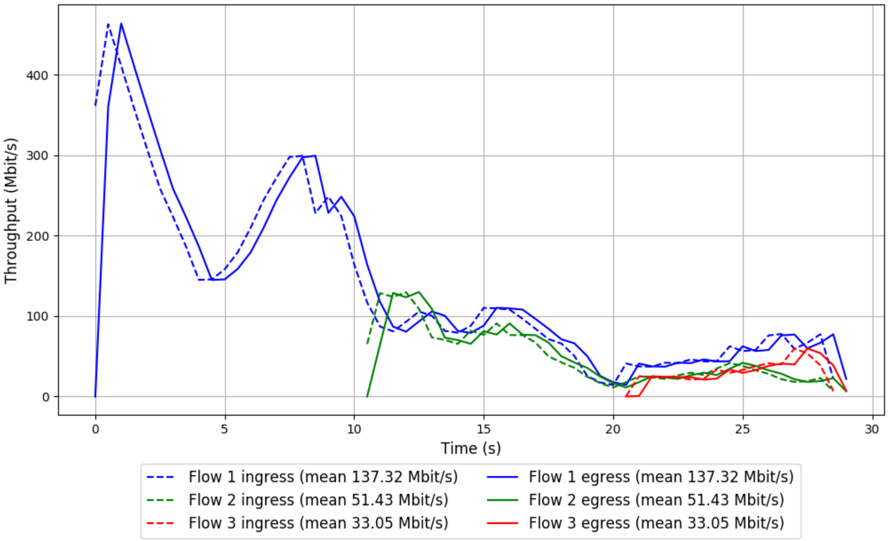
Run 1: Report of Indigo-MusesC3 — Data Link

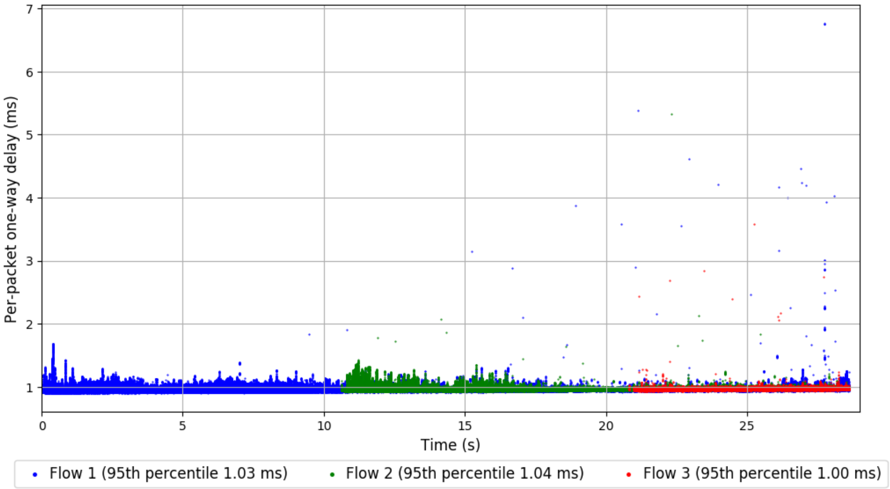




```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-12 04:54:44
End at: 2019-02-12 04:55:14
Local clock offset: -2.946 ms
Remote clock offset: 0.583 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 178.66 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 137.32 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 51.43 Mbit/s
95th percentile per-packet one-way delay: 1.044 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 33.05 Mbit/s
95th percentile per-packet one-way delay: 0.996 ms
Loss rate: 0.00%
```

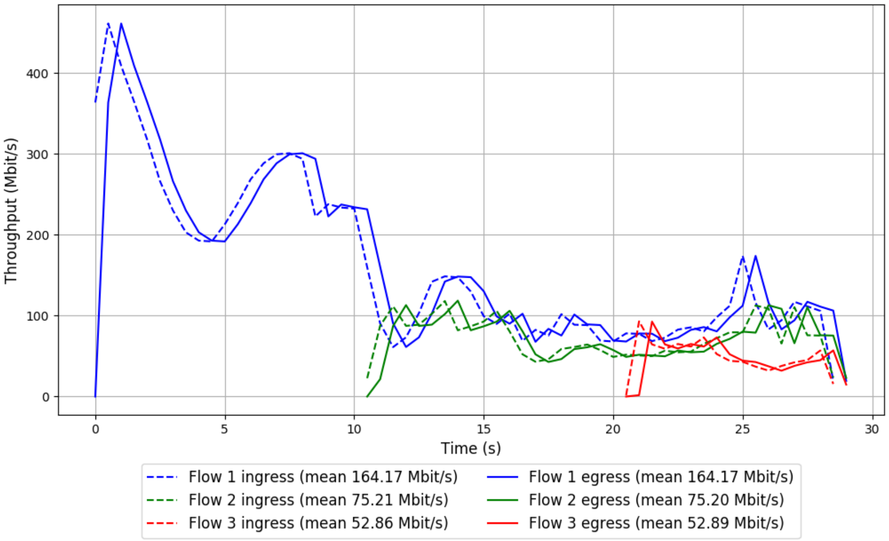
Run 2: Report of Indigo-MusesC3 — Data Link

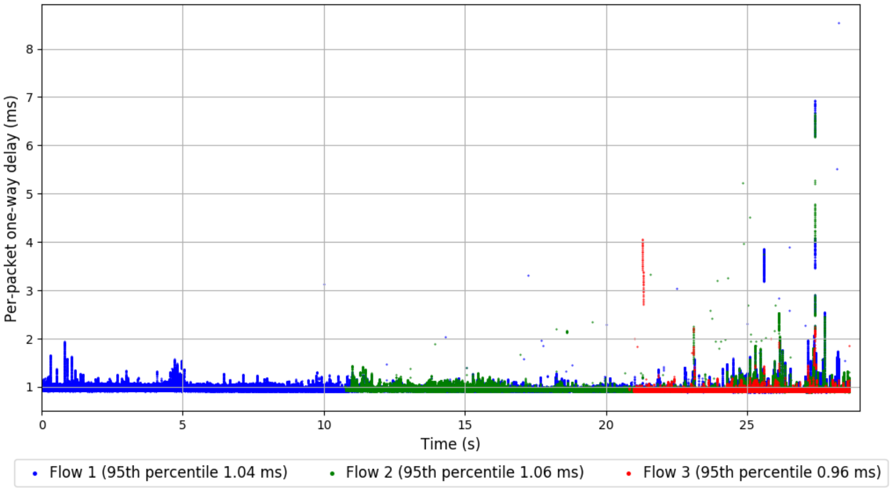




```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-12 05:25:01
End at: 2019-02-12 05:25:31
Local clock offset: 0.234 ms
Remote clock offset: 0.499 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 225.47 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 164.17 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 75.20 Mbit/s
95th percentile per-packet one-way delay: 1.059 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 52.89 Mbit/s
95th percentile per-packet one-way delay: 0.963 ms
Loss rate: 0.09%
```

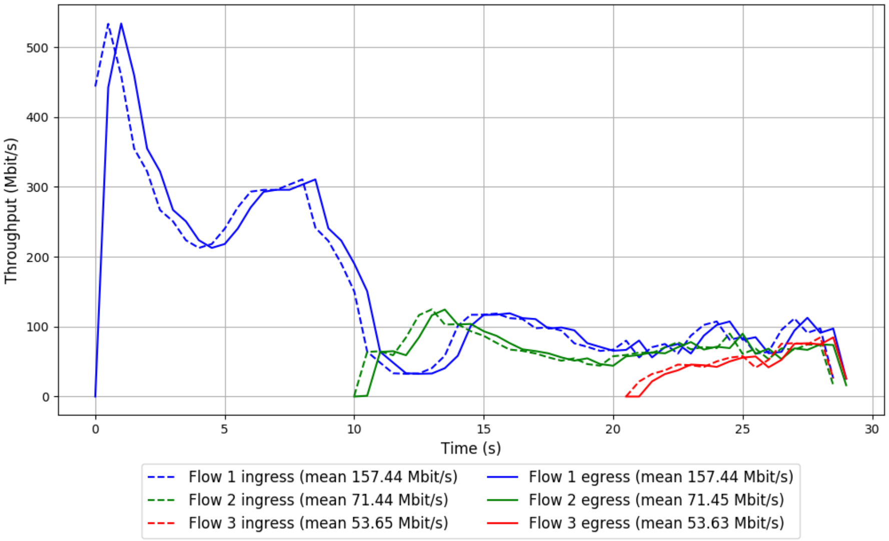
Run 3: Report of Indigo-MusesC3 — Data Link

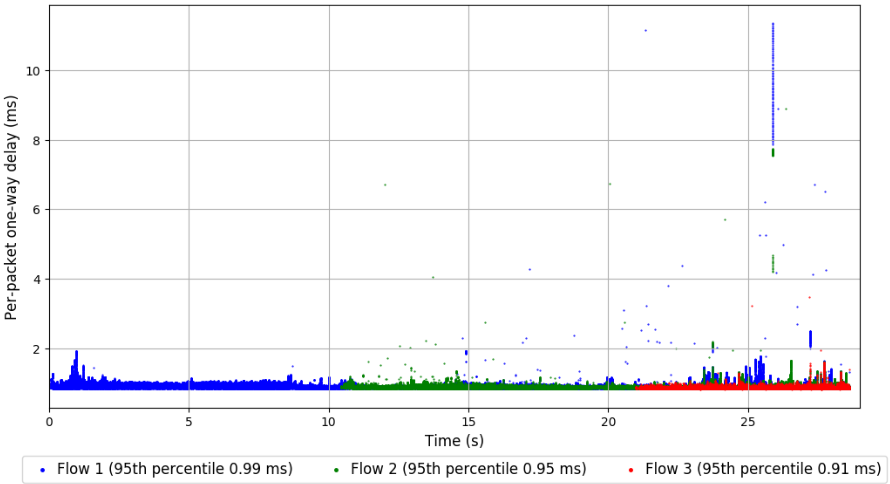




```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-12 05:55:23
End at: 2019-02-12 05:55:53
Local clock offset: 0.43 ms
Remote clock offset: 0.359 ms

# Below is generated by plot.py at 2019-02-12 07:19:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 217.11 Mbit/s
95th percentile per-packet one-way delay: 0.987 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.44 Mbit/s
95th percentile per-packet one-way delay: 0.995 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 71.45 Mbit/s
95th percentile per-packet one-way delay: 0.947 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 53.63 Mbit/s
95th percentile per-packet one-way delay: 0.910 ms
Loss rate: 0.05%
```

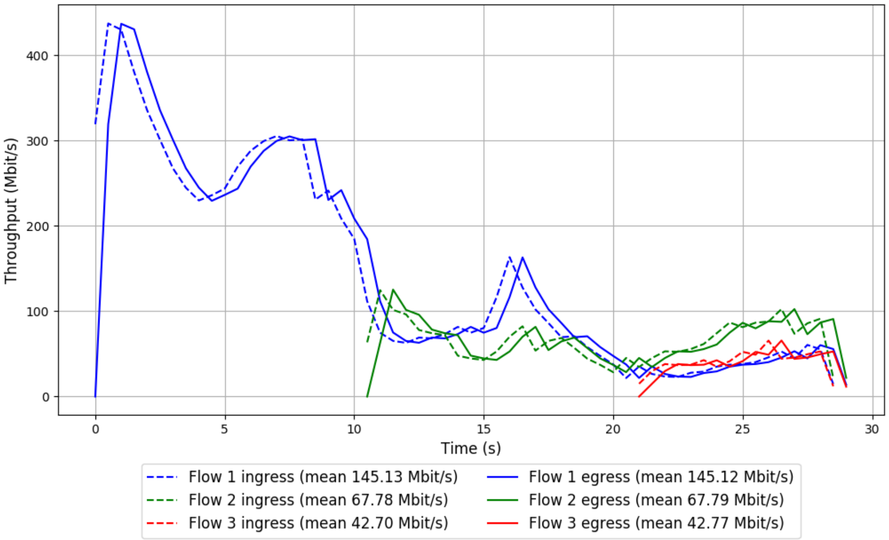
Run 4: Report of Indigo-MusesC3 — Data Link

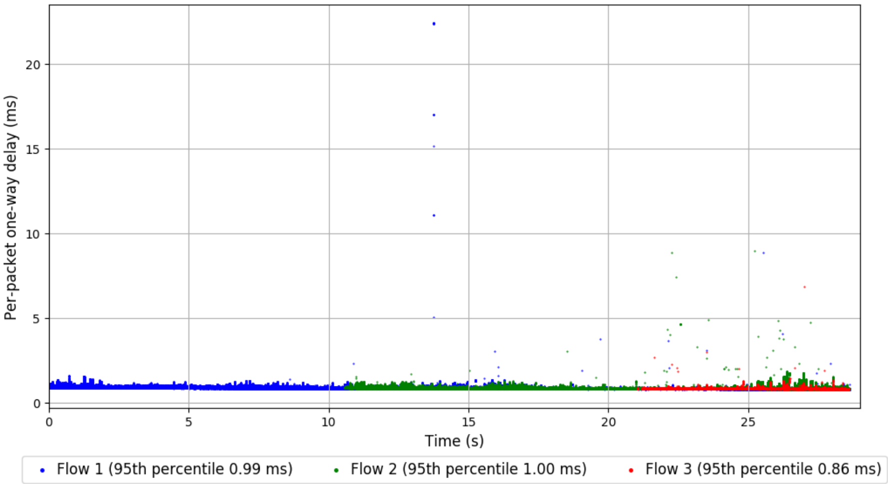




```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-12 06:25:33
End at: 2019-02-12 06:26:03
Local clock offset: 0.344 ms
Remote clock offset: -1.44 ms

# Below is generated by plot.py at 2019-02-12 07:19:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 199.14 Mbit/s
95th percentile per-packet one-way delay: 0.986 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 145.12 Mbit/s
95th percentile per-packet one-way delay: 0.987 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 67.79 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 42.77 Mbit/s
95th percentile per-packet one-way delay: 0.863 ms
Loss rate: 0.08%
```

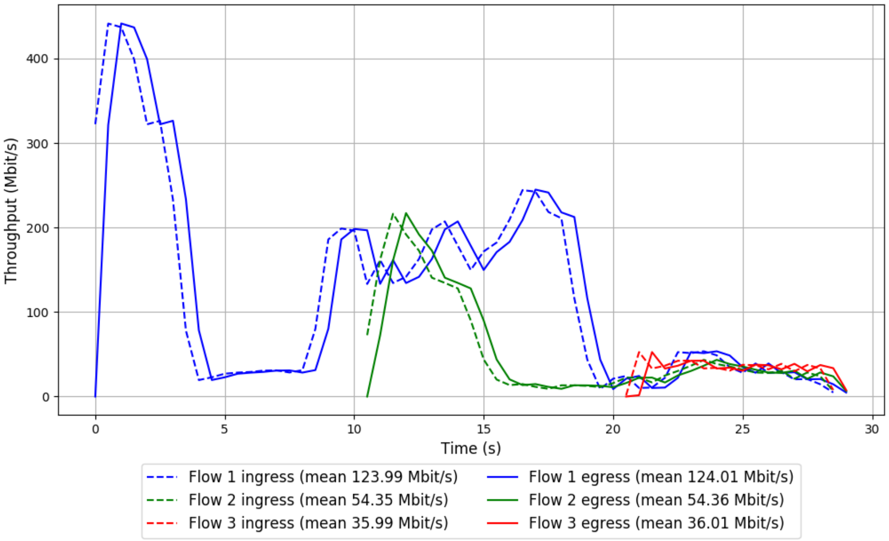
Run 5: Report of Indigo-MusesC3 — Data Link

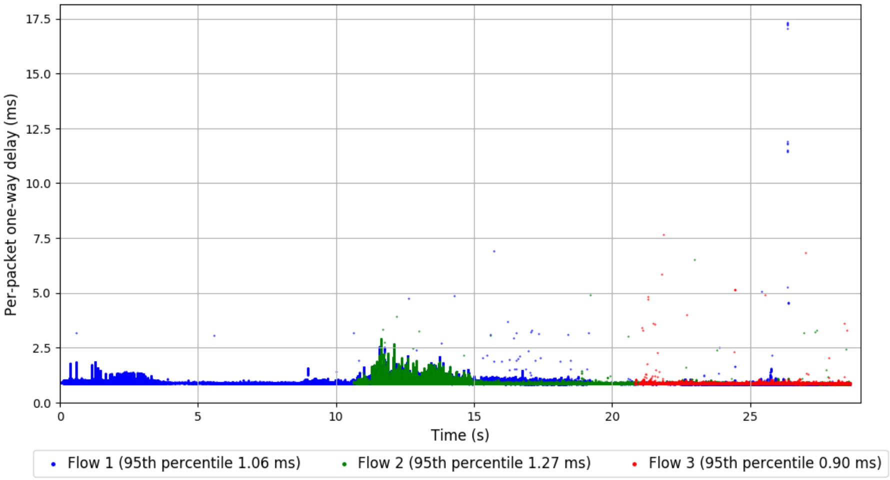




```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-12 04:14:42
End at: 2019-02-12 04:15:12
Local clock offset: 0.147 ms
Remote clock offset: 1.478 ms

# Below is generated by plot.py at 2019-02-12 07:19:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.98 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 124.01 Mbit/s
95th percentile per-packet one-way delay: 1.064 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 54.36 Mbit/s
95th percentile per-packet one-way delay: 1.273 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 36.01 Mbit/s
95th percentile per-packet one-way delay: 0.902 ms
Loss rate: 0.01%
```

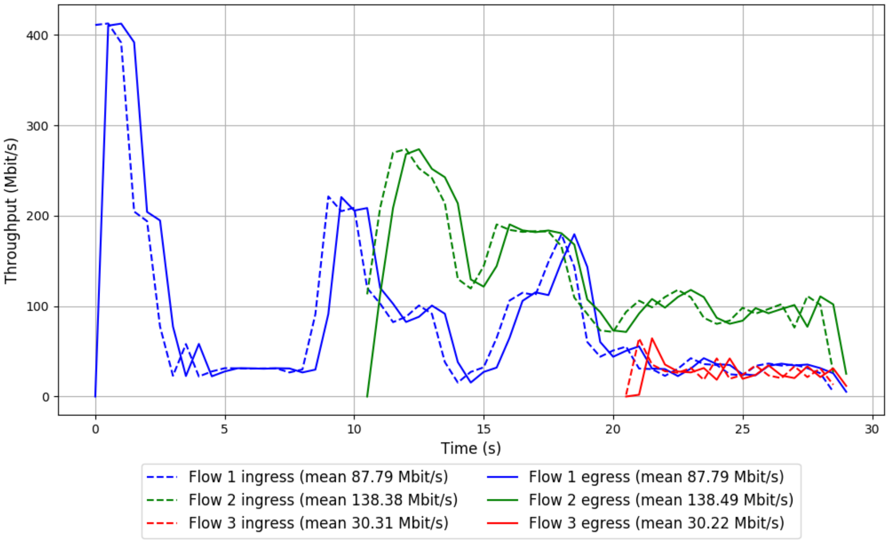
Run 1: Report of Indigo-MusesC5 — Data Link

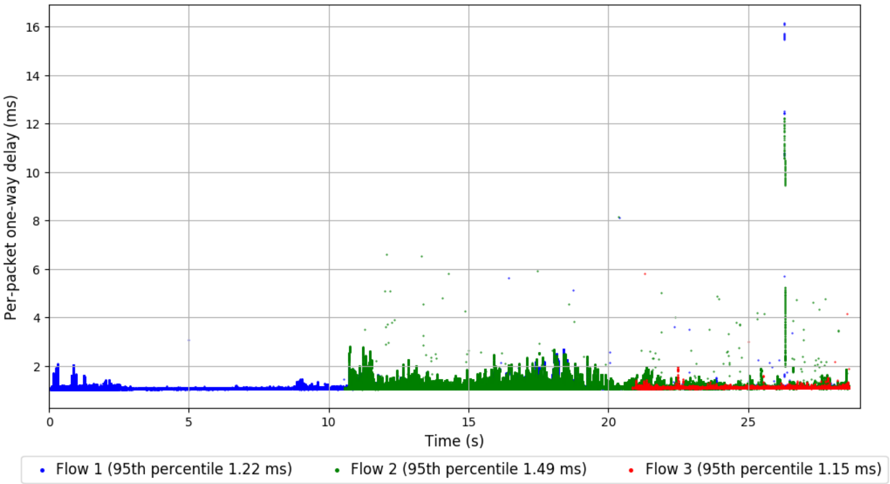




```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-12 04:44:59
End at: 2019-02-12 04:45:29
Local clock offset: -2.019 ms
Remote clock offset: 0.55 ms

# Below is generated by plot.py at 2019-02-12 07:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 183.27 Mbit/s
95th percentile per-packet one-way delay: 1.388 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 87.79 Mbit/s
95th percentile per-packet one-way delay: 1.220 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 138.49 Mbit/s
95th percentile per-packet one-way delay: 1.490 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 30.22 Mbit/s
95th percentile per-packet one-way delay: 1.150 ms
Loss rate: 0.29%
```

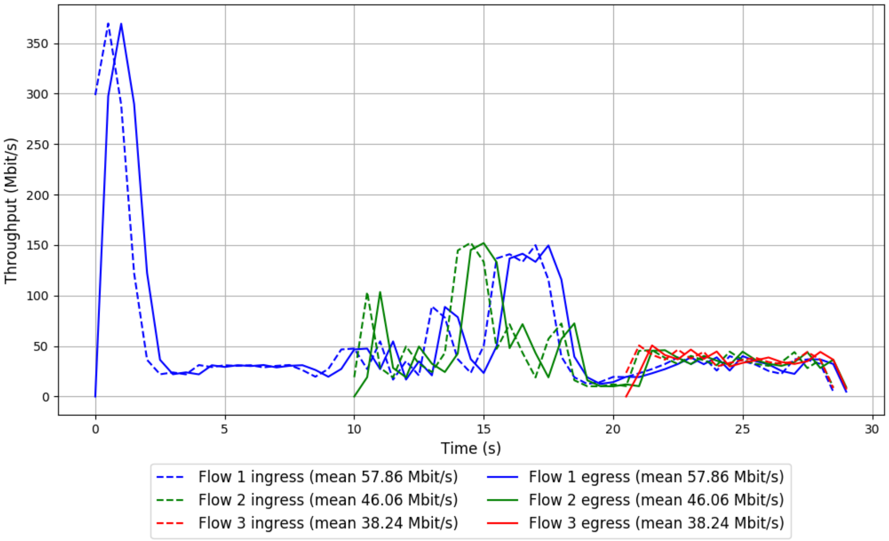
Run 2: Report of Indigo-MusesC5 — Data Link

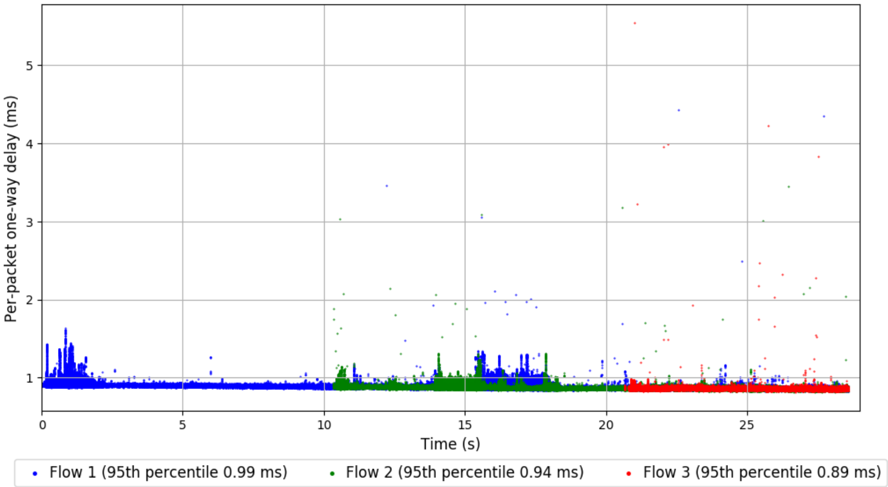




```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-12 05:15:18
End at: 2019-02-12 05:15:48
Local clock offset: -0.622 ms
Remote clock offset: 0.525 ms

# Below is generated by plot.py at 2019-02-12 07:20:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.91 Mbit/s
95th percentile per-packet one-way delay: 0.974 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.06 Mbit/s
95th percentile per-packet one-way delay: 0.938 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.24 Mbit/s
95th percentile per-packet one-way delay: 0.886 ms
Loss rate: 0.07%
```

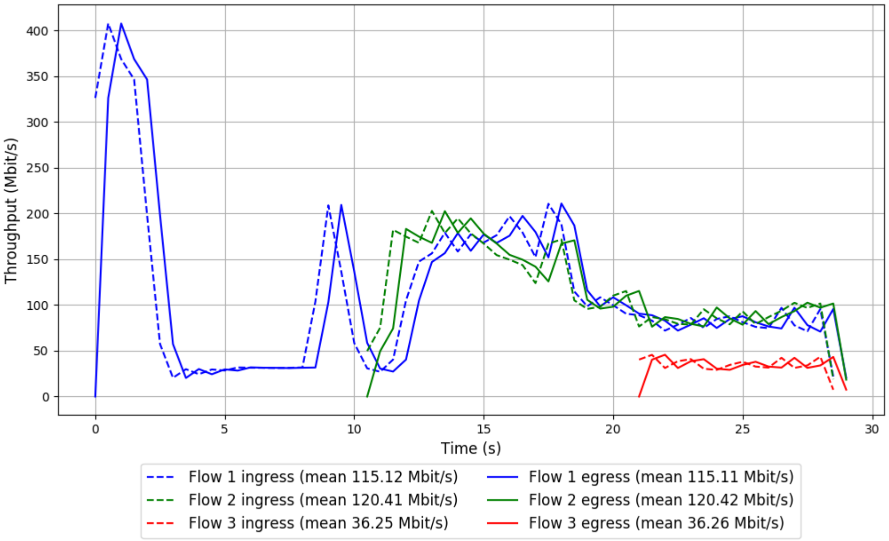
Run 3: Report of Indigo-MusesC5 — Data Link

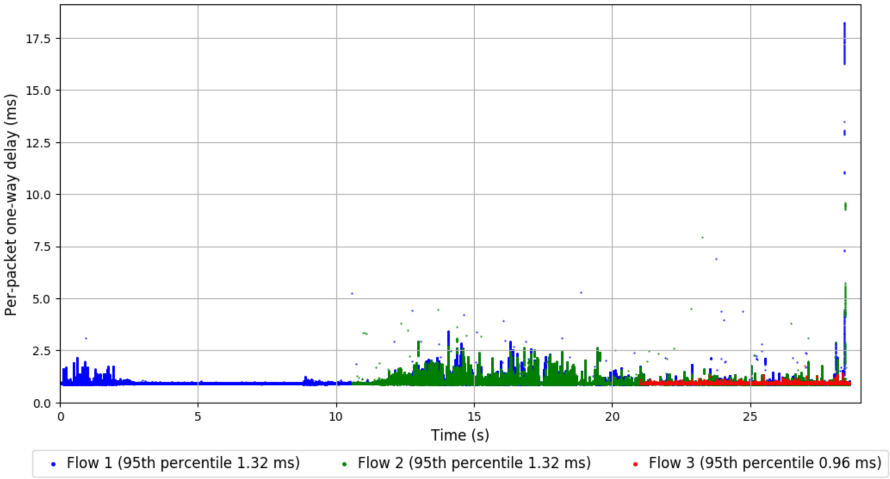




```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-12 05:45:38
End at: 2019-02-12 05:46:08
Local clock offset: 0.401 ms
Remote clock offset: 0.631 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 200.60 Mbit/s
95th percentile per-packet one-way delay: 1.304 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 115.11 Mbit/s
95th percentile per-packet one-way delay: 1.320 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 120.42 Mbit/s
95th percentile per-packet one-way delay: 1.316 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 36.26 Mbit/s
95th percentile per-packet one-way delay: 0.962 ms
Loss rate: 0.03%
```

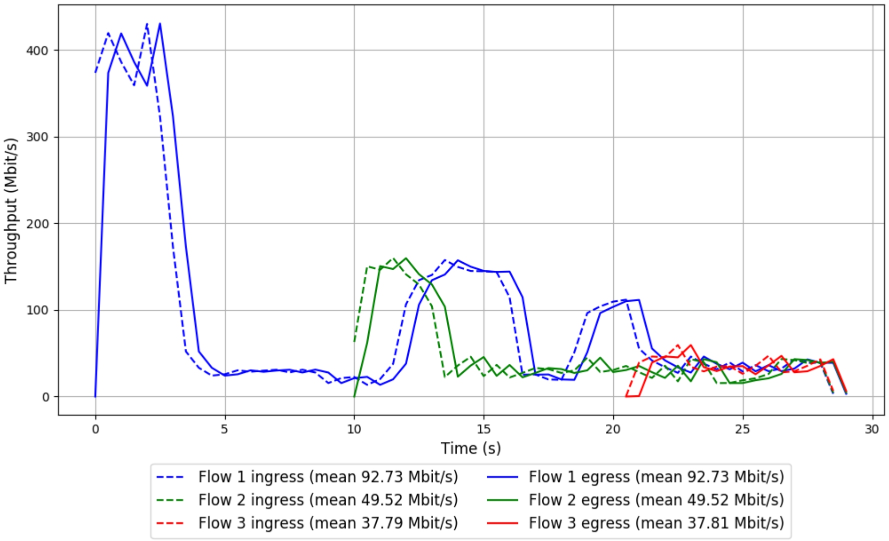
Run 4: Report of Indigo-MusesC5 — Data Link

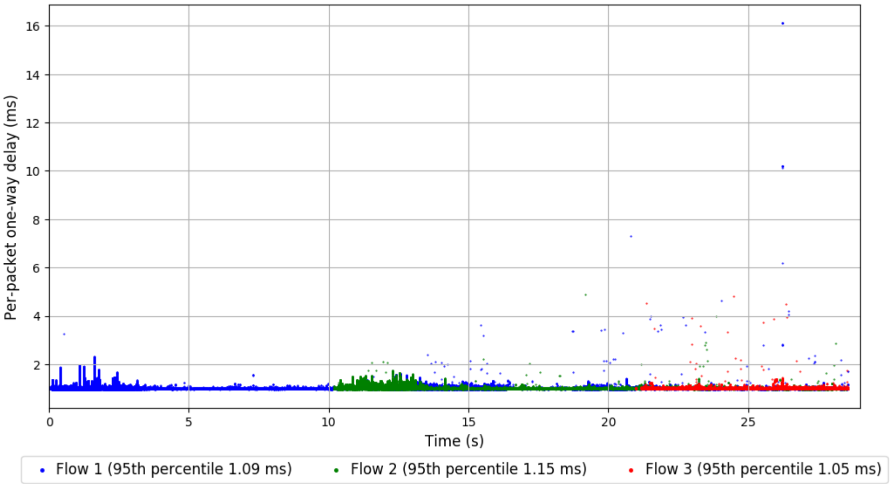




```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-12 06:15:47
End at: 2019-02-12 06:16:17
Local clock offset: 0.34 ms
Remote clock offset: 0.053 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 134.63 Mbit/s
95th percentile per-packet one-way delay: 1.102 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.73 Mbit/s
95th percentile per-packet one-way delay: 1.089 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.52 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.81 Mbit/s
95th percentile per-packet one-way delay: 1.050 ms
Loss rate: 0.01%
```

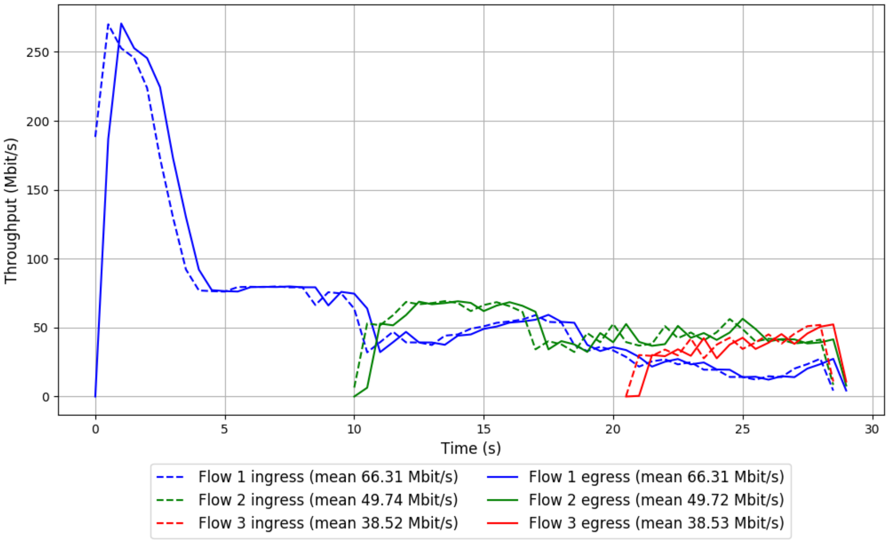
Run 5: Report of Indigo-MusesC5 — Data Link

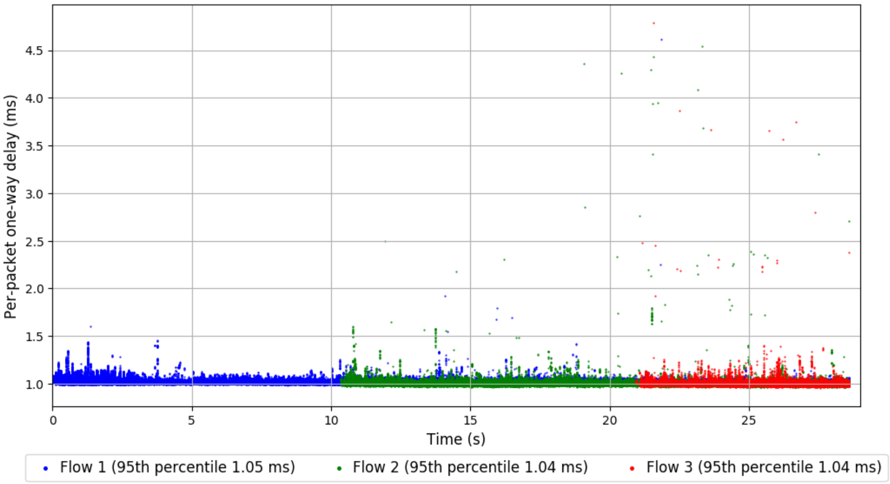




```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-12 04:21:57
End at: 2019-02-12 04:22:27
Local clock offset: 0.21 ms
Remote clock offset: 0.852 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 108.36 Mbit/s
95th percentile per-packet one-way delay: 1.050 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 66.31 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 49.72 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.00%
```

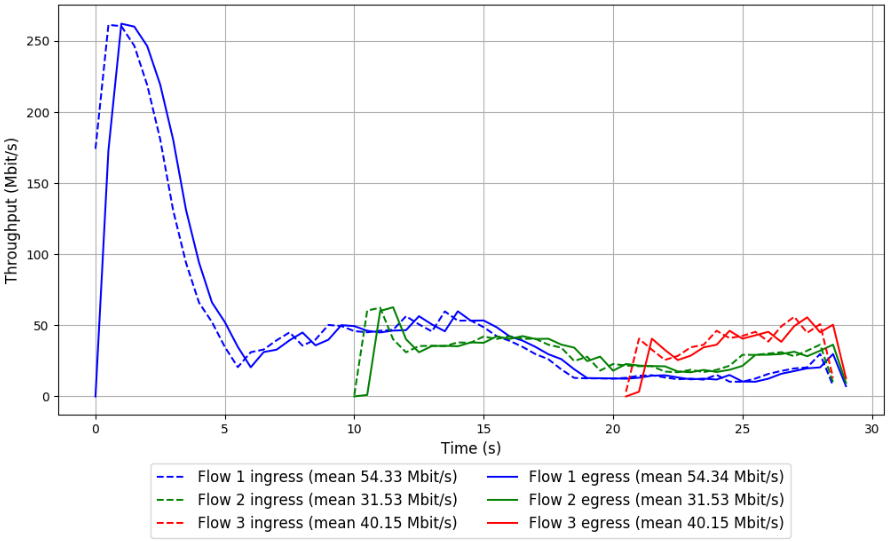
Run 1: Report of Indigo-MusesD — Data Link

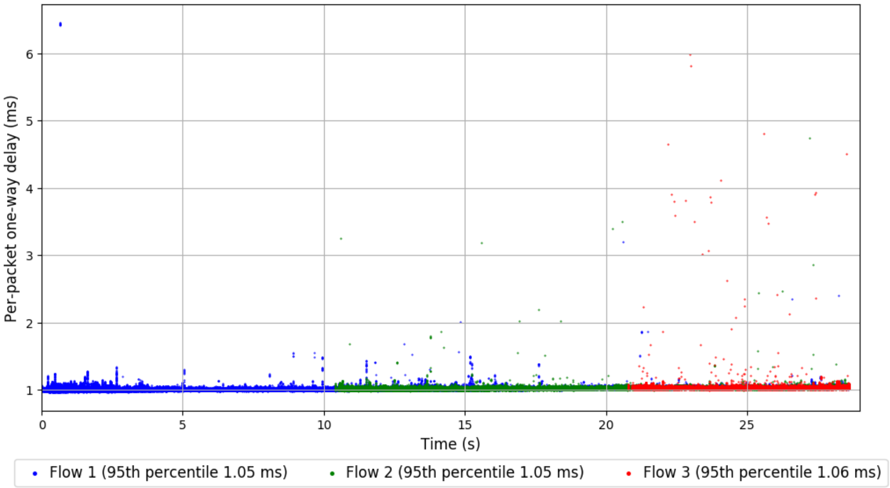




```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-12 04:52:13
End at: 2019-02-12 04:52:43
Local clock offset: -2.76 ms
Remote clock offset: 0.536 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.39 Mbit/s
95th percentile per-packet one-way delay: 1.052 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 54.34 Mbit/s
95th percentile per-packet one-way delay: 1.047 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 31.53 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 40.15 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.09%
```

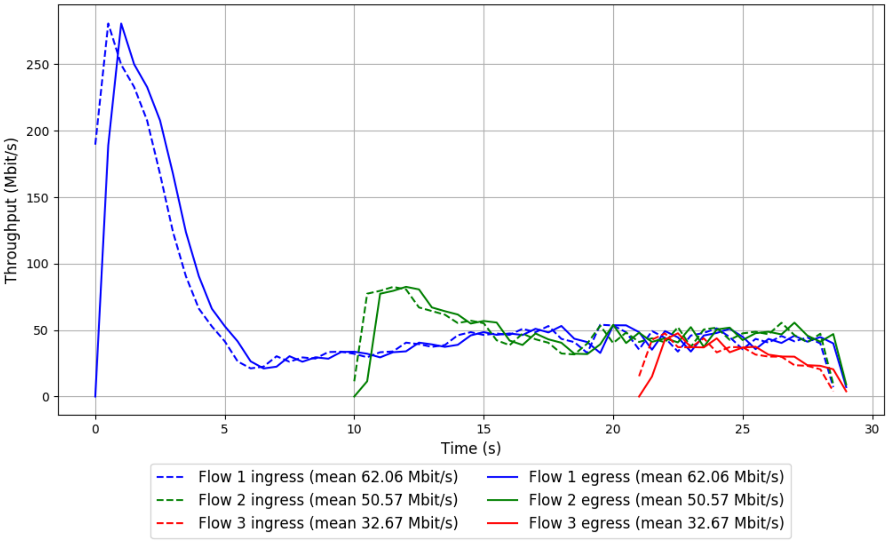
Run 2: Report of Indigo-MusesD — Data Link

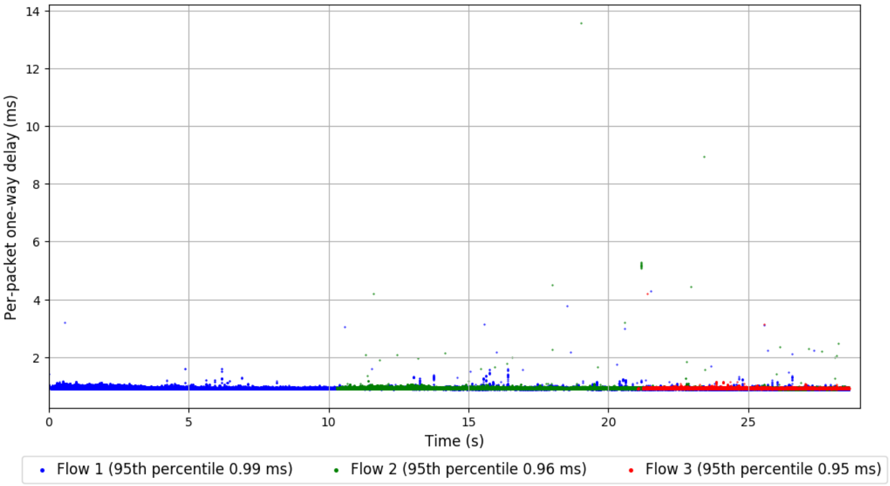




```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-12 05:22:30
End at: 2019-02-12 05:23:00
Local clock offset: 0.084 ms
Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 103.06 Mbit/s
95th percentile per-packet one-way delay: 0.978 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 62.06 Mbit/s
95th percentile per-packet one-way delay: 0.991 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.57 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 32.67 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.00%
```

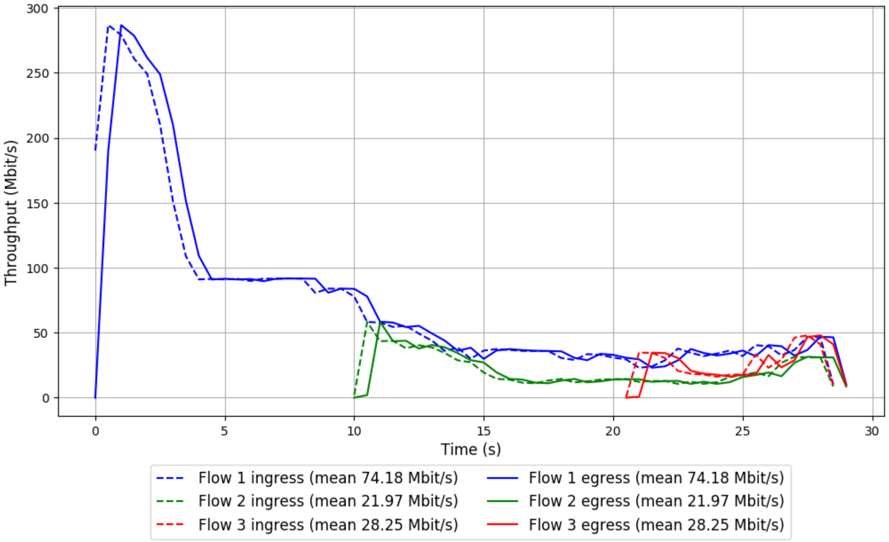
Run 3: Report of Indigo-MusesD — Data Link

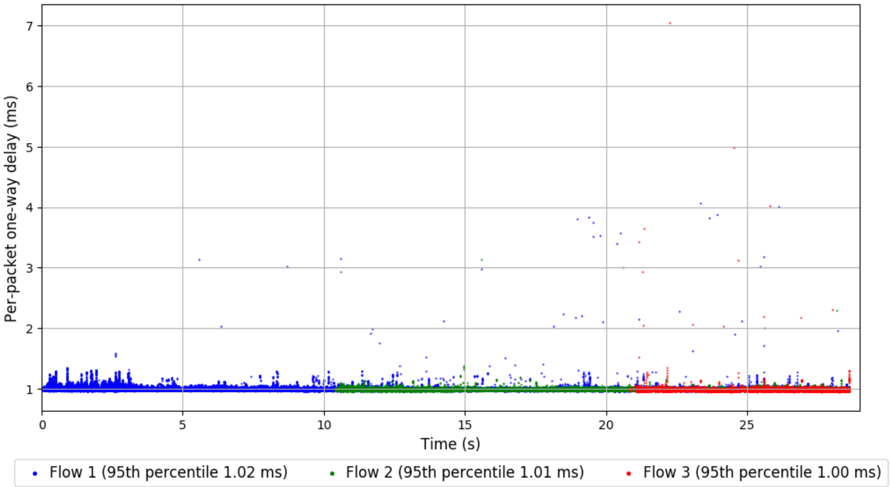




```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-12 05:52:52
End at: 2019-02-12 05:53:22
Local clock offset: 0.411 ms
Remote clock offset: 0.31 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.82 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.18 Mbit/s
95th percentile per-packet one-way delay: 1.017 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 21.97 Mbit/s
95th percentile per-packet one-way delay: 1.010 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 28.25 Mbit/s
95th percentile per-packet one-way delay: 1.005 ms
Loss rate: 0.00%
```

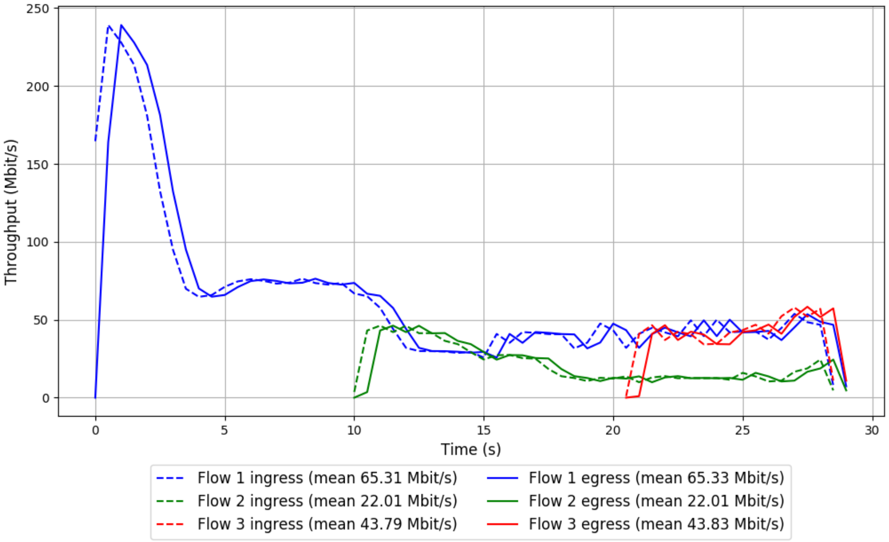
Run 4: Report of Indigo-MusesD — Data Link

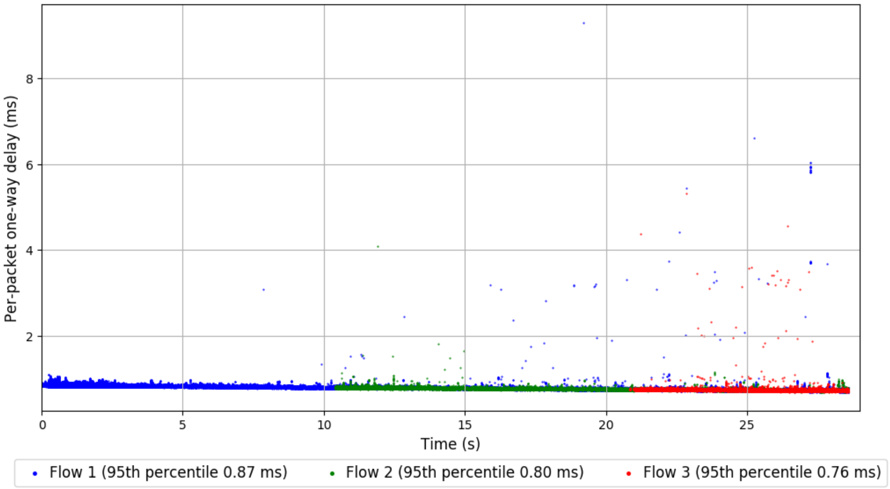




```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-12 06:23:02
End at: 2019-02-12 06:23:32
Local clock offset: 0.338 ms
Remote clock offset: -0.767 ms

# Below is generated by plot.py at 2019-02-12 07:21:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.21 Mbit/s
95th percentile per-packet one-way delay: 0.857 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 65.33 Mbit/s
95th percentile per-packet one-way delay: 0.866 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 22.01 Mbit/s
95th percentile per-packet one-way delay: 0.802 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.83 Mbit/s
95th percentile per-packet one-way delay: 0.763 ms
Loss rate: 0.01%
```

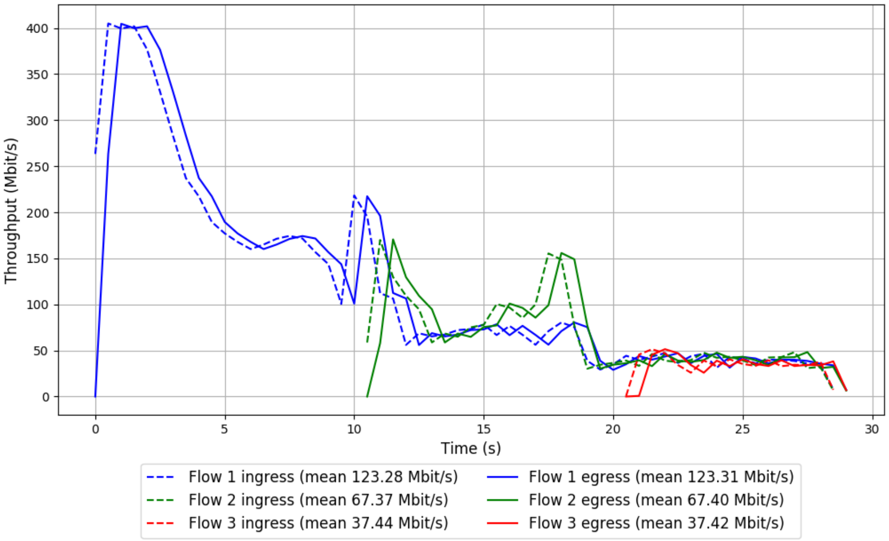
Run 5: Report of Indigo-MusesD — Data Link

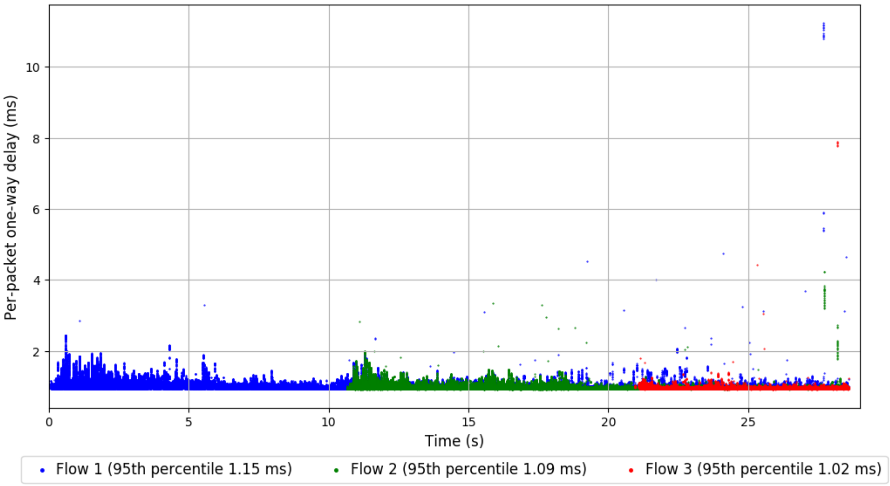




```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-12 04:25:50
End at: 2019-02-12 04:26:20
Local clock offset: 0.216 ms
Remote clock offset: 0.796 ms

# Below is generated by plot.py at 2019-02-12 07:21:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 175.55 Mbit/s
95th percentile per-packet one-way delay: 1.127 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 123.31 Mbit/s
95th percentile per-packet one-way delay: 1.146 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 67.40 Mbit/s
95th percentile per-packet one-way delay: 1.094 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.42 Mbit/s
95th percentile per-packet one-way delay: 1.018 ms
Loss rate: 0.07%
```

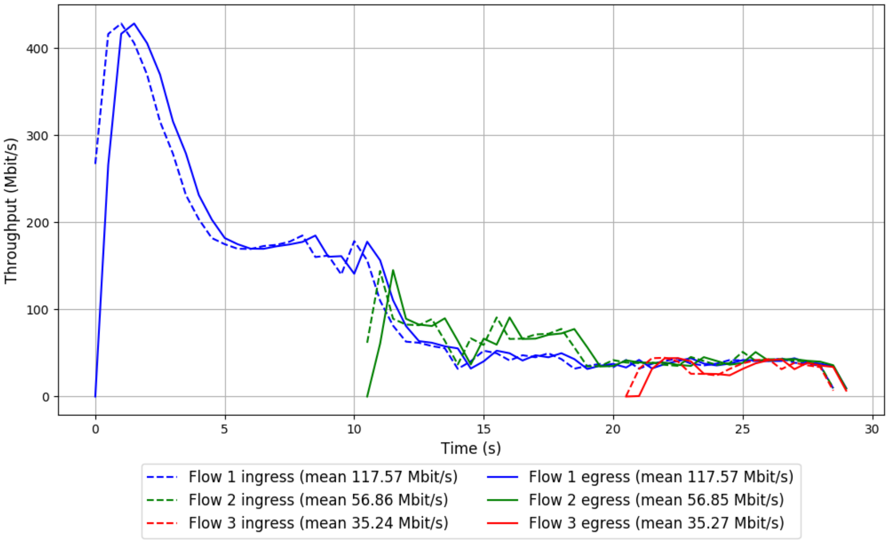
Run 1: Report of Indigo-MusesT — Data Link

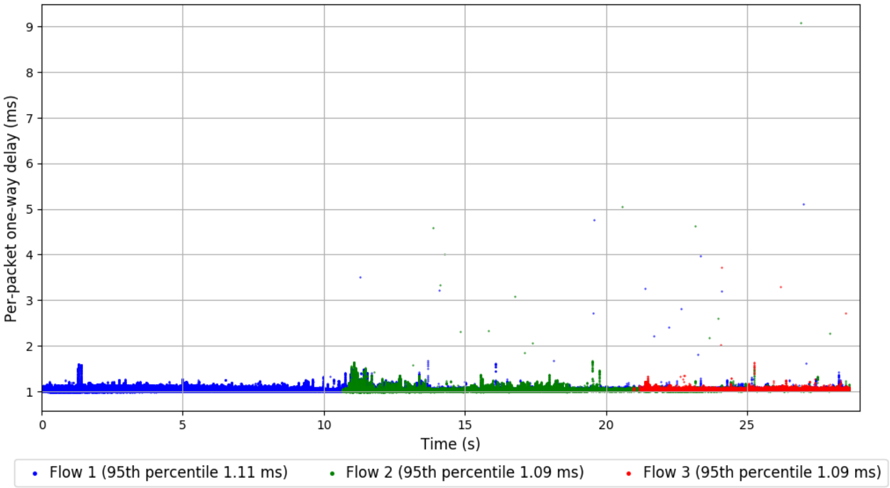




```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-12 04:56:04
End at: 2019-02-12 04:56:34
Local clock offset: -3.034 ms
Remote clock offset: 0.508 ms

# Below is generated by plot.py at 2019-02-12 07:22:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 162.65 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 117.57 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.85 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 35.27 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.00%
```

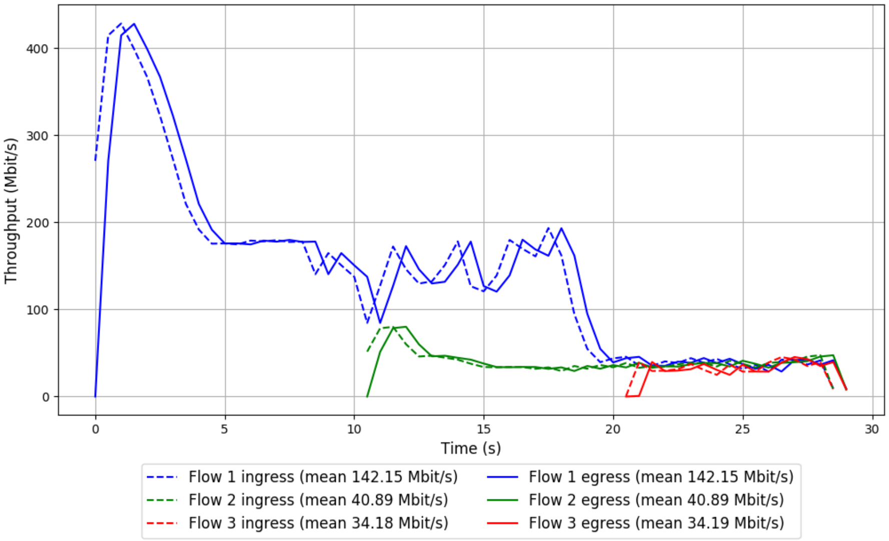
Run 2: Report of Indigo-MusesT — Data Link

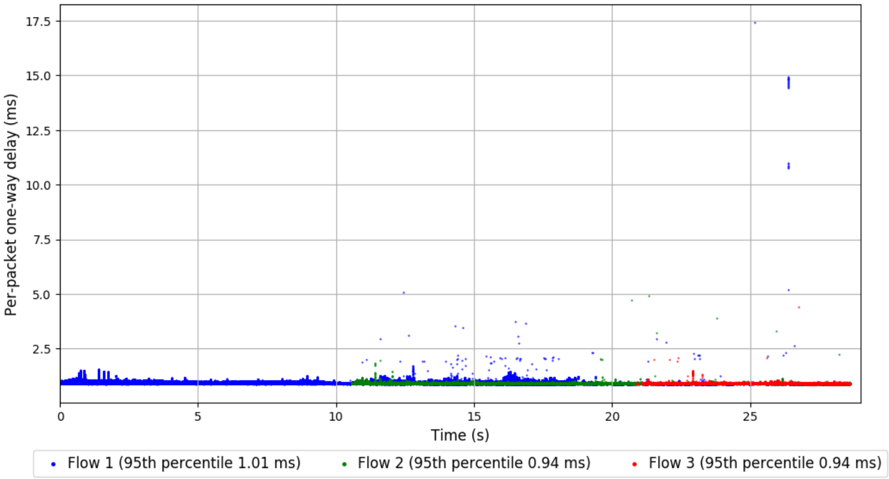




```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-12 05:26:23
End at: 2019-02-12 05:26:53
Local clock offset: 0.325 ms
Remote clock offset: 0.561 ms

# Below is generated by plot.py at 2019-02-12 07:22:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 177.14 Mbit/s
95th percentile per-packet one-way delay: 1.007 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 142.15 Mbit/s
95th percentile per-packet one-way delay: 1.015 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.89 Mbit/s
95th percentile per-packet one-way delay: 0.940 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.19 Mbit/s
95th percentile per-packet one-way delay: 0.936 ms
Loss rate: 0.01%
```

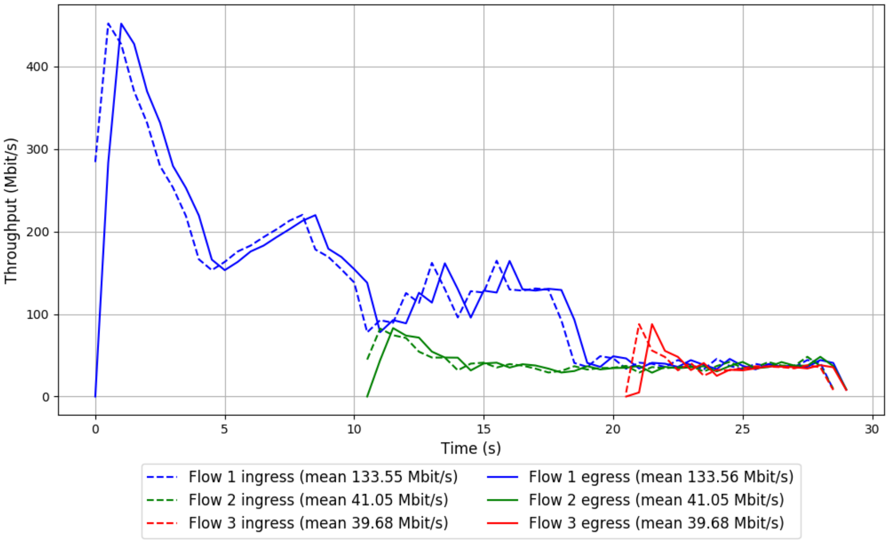
Run 3: Report of Indigo-MusesT — Data Link

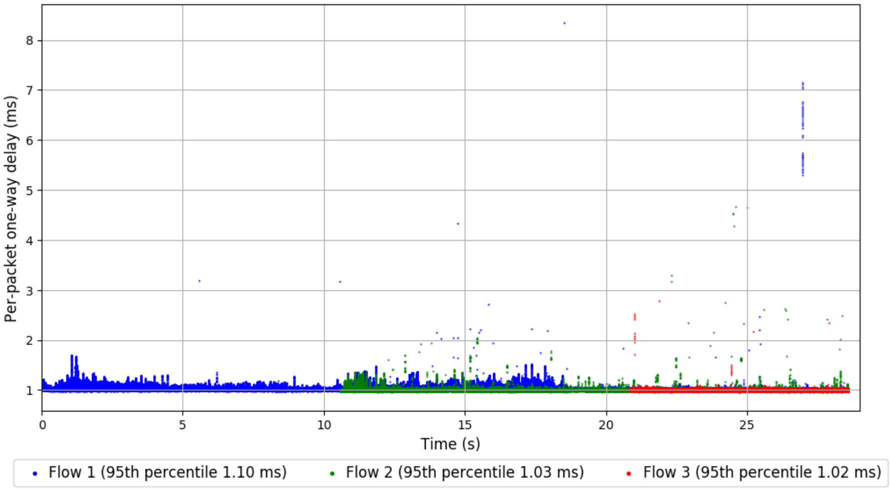




```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-12 05:56:44
End at: 2019-02-12 05:57:14
Local clock offset: 0.448 ms
Remote clock offset: 0.22 ms

# Below is generated by plot.py at 2019-02-12 07:22:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 170.17 Mbit/s
95th percentile per-packet one-way delay: 1.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 133.56 Mbit/s
95th percentile per-packet one-way delay: 1.099 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.05 Mbit/s
95th percentile per-packet one-way delay: 1.032 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 39.68 Mbit/s
95th percentile per-packet one-way delay: 1.019 ms
Loss rate: 0.00%
```

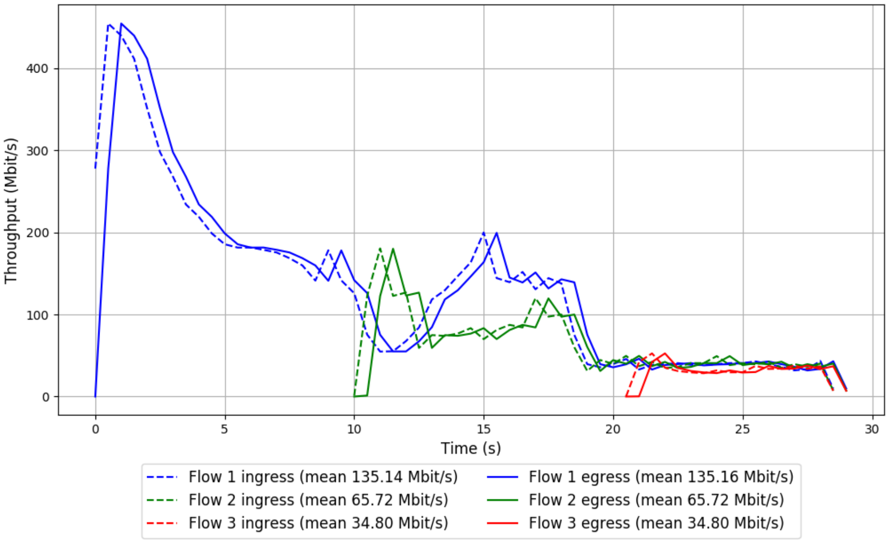
Run 4: Report of Indigo-MusesT — Data Link

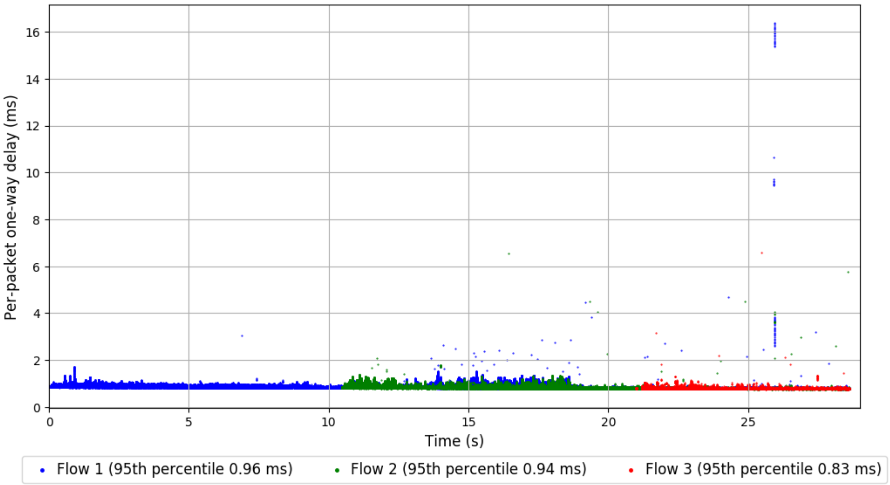




```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-12 06:26:54
End at: 2019-02-12 06:27:24
Local clock offset: 0.364 ms
Remote clock offset: -1.647 ms

# Below is generated by plot.py at 2019-02-12 07:22:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 186.11 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 135.16 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.72 Mbit/s
95th percentile per-packet one-way delay: 0.943 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.80 Mbit/s
95th percentile per-packet one-way delay: 0.828 ms
Loss rate: 0.00%
```

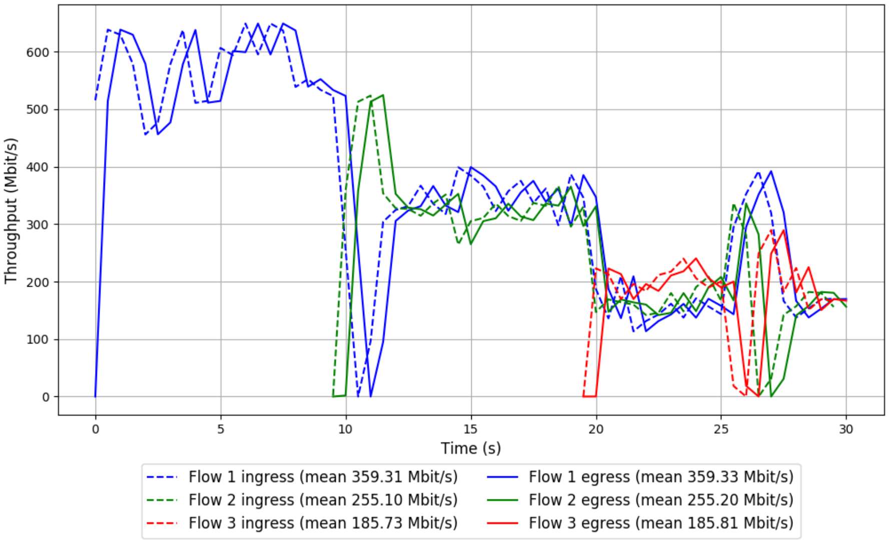
Run 5: Report of Indigo-MusesT — Data Link

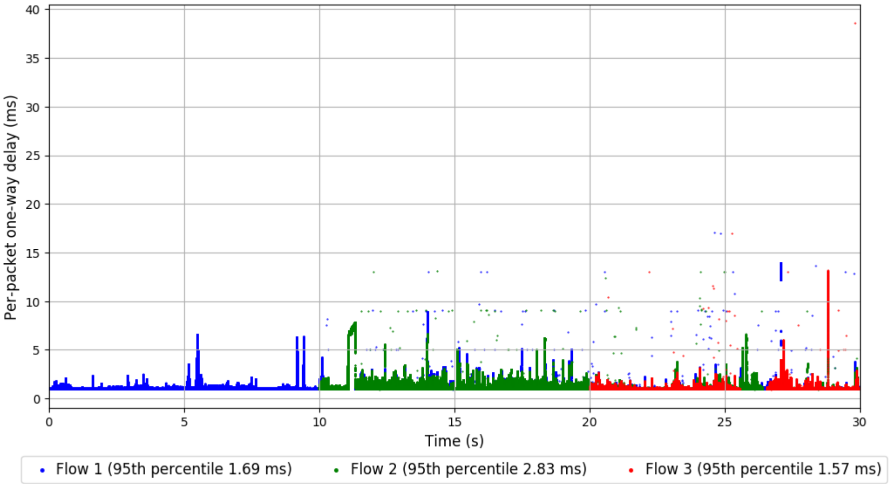




```
Run 1: Statistics of LEDBAT

Start at: 2019-02-12 04:20:17
End at: 2019-02-12 04:20:47
Local clock offset: 0.202 ms
Remote clock offset: 0.93 ms

# Below is generated by plot.py at 2019-02-12 07:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 591.21 Mbit/s
95th percentile per-packet one-way delay: 1.923 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 359.33 Mbit/s
95th percentile per-packet one-way delay: 1.689 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 255.20 Mbit/s
95th percentile per-packet one-way delay: 2.834 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 185.81 Mbit/s
95th percentile per-packet one-way delay: 1.573 ms
Loss rate: 0.00%
```

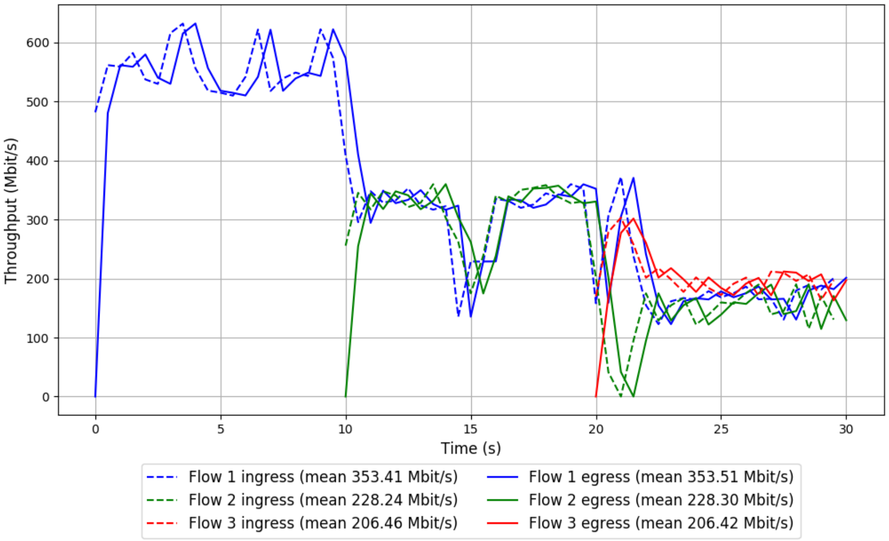
Run 1: Report of LEDBAT — Data Link

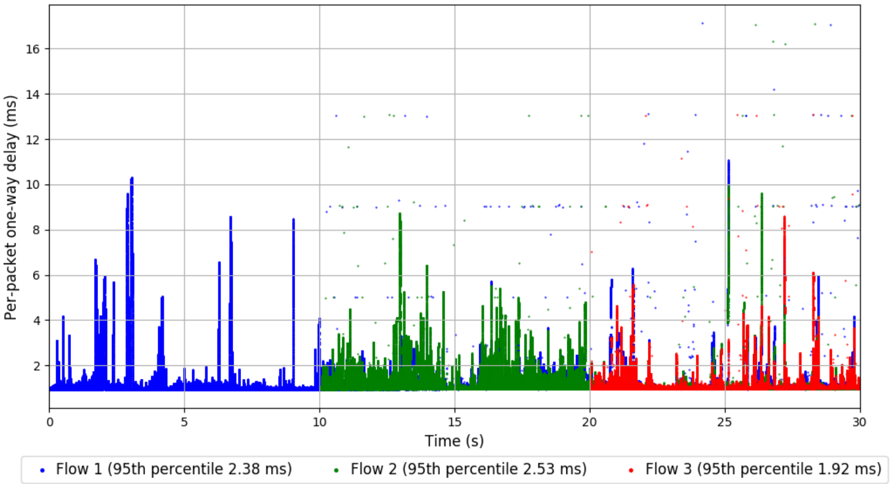




```
Run 2: Statistics of LEDBAT

Start at: 2019-02-12 04:50:35
End at: 2019-02-12 04:51:05
Local clock offset: -2.612 ms
Remote clock offset: 0.569 ms

# Below is generated by plot.py at 2019-02-12 07:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 573.98 Mbit/s
95th percentile per-packet one-way delay: 2.378 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 353.51 Mbit/s
95th percentile per-packet one-way delay: 2.384 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 228.30 Mbit/s
95th percentile per-packet one-way delay: 2.526 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 206.42 Mbit/s
95th percentile per-packet one-way delay: 1.915 ms
Loss rate: 0.03%
```

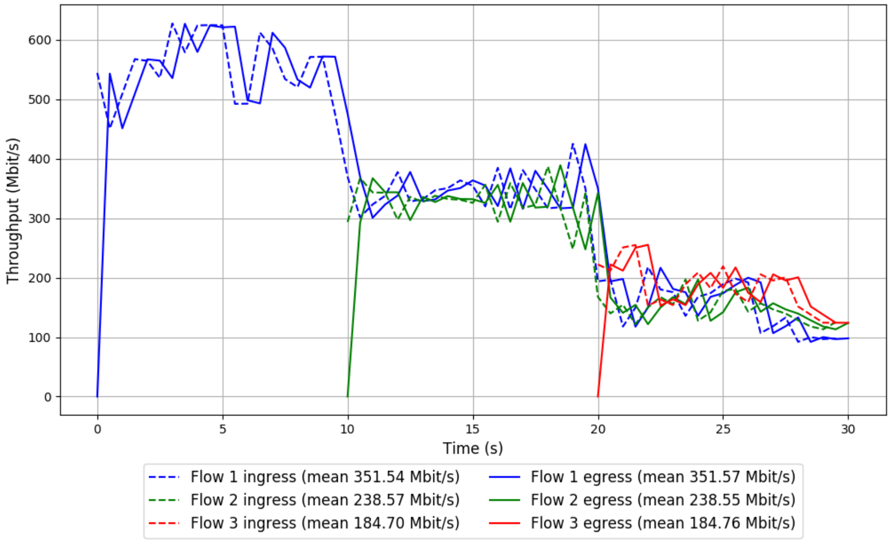
Run 2: Report of LEDBAT — Data Link

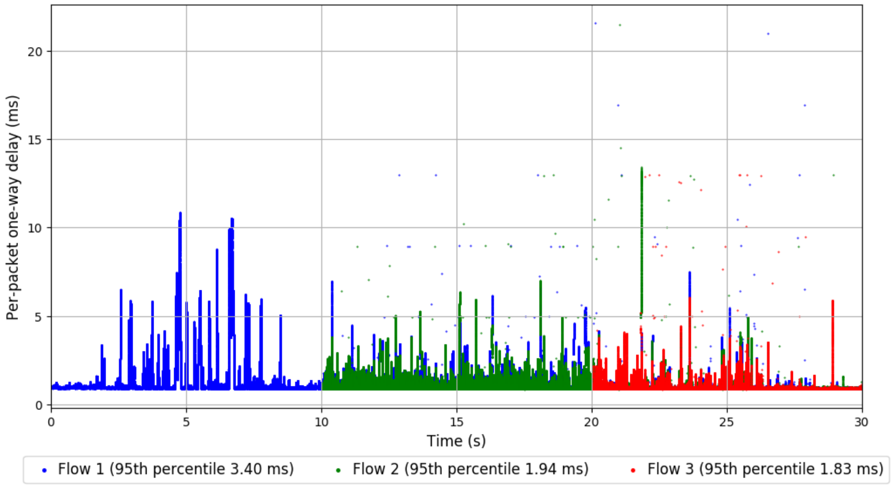




```
Run 3: Statistics of LEDBAT

Start at: 2019-02-12 05:20:51
End at: 2019-02-12 05:21:21
Local clock offset: -0.022 ms
Remote clock offset: 0.518 ms

# Below is generated by plot.py at 2019-02-12 07:27:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 571.75 Mbit/s
95th percentile per-packet one-way delay: 2.690 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 351.57 Mbit/s
95th percentile per-packet one-way delay: 3.401 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 238.55 Mbit/s
95th percentile per-packet one-way delay: 1.942 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 184.76 Mbit/s
95th percentile per-packet one-way delay: 1.827 ms
Loss rate: 0.01%
```

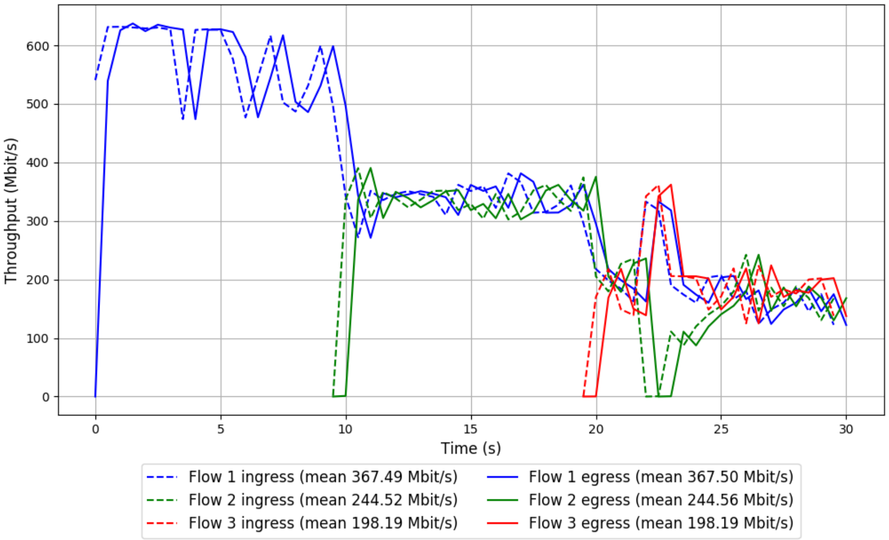
Run 3: Report of LEDBAT — Data Link

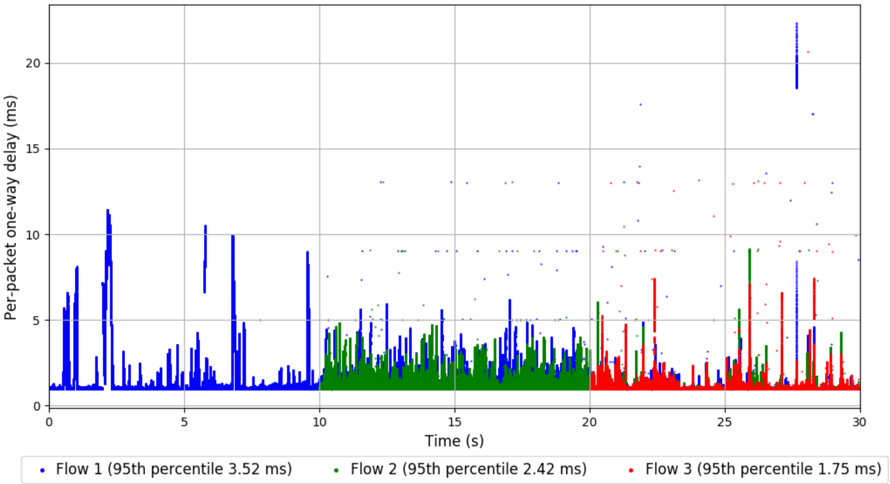




```
Run 4: Statistics of LEDBAT

Start at: 2019-02-12 05:51:12
End at: 2019-02-12 05:51:42
Local clock offset: 0.41 ms
Remote clock offset: 0.342 ms

# Below is generated by plot.py at 2019-02-12 07:28:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 596.43 Mbit/s
95th percentile per-packet one-way delay: 2.896 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 367.50 Mbit/s
95th percentile per-packet one-way delay: 3.518 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 244.56 Mbit/s
95th percentile per-packet one-way delay: 2.418 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 198.19 Mbit/s
95th percentile per-packet one-way delay: 1.755 ms
Loss rate: 0.02%
```

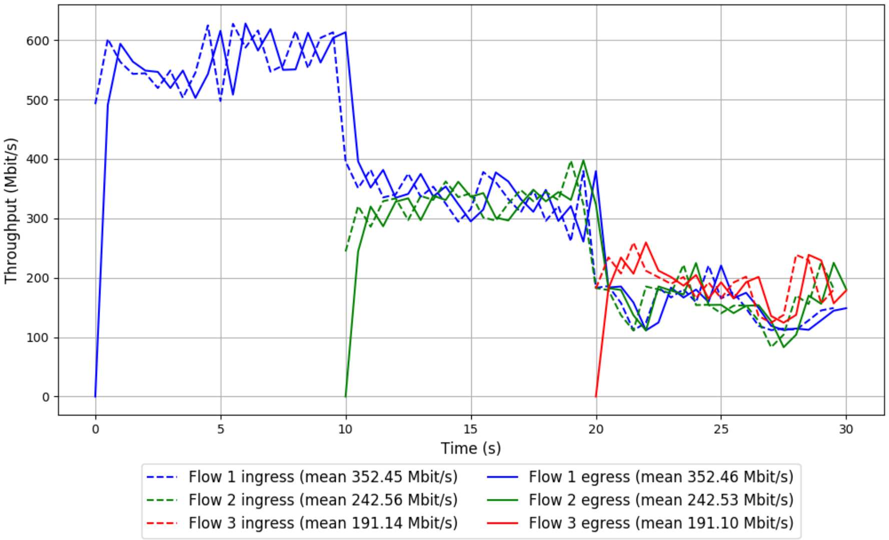
Run 4: Report of LEDBAT — Data Link

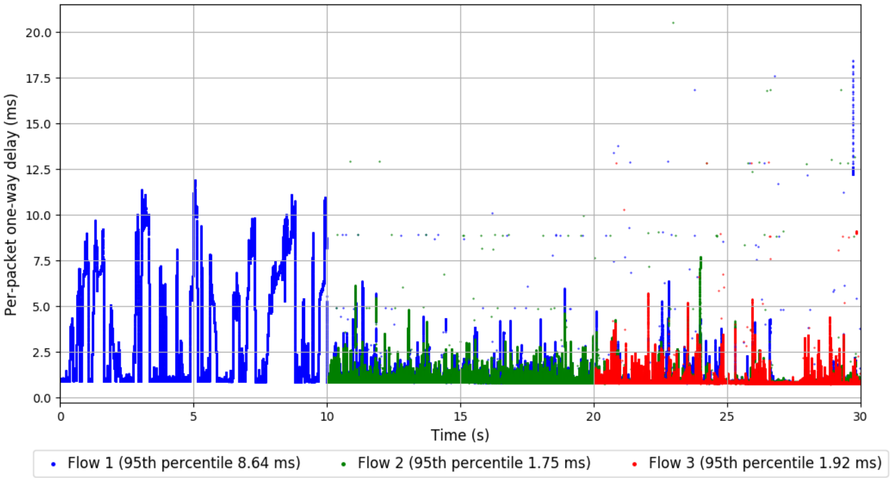




```
Run 5: Statistics of LEDBAT

Start at: 2019-02-12 06:21:23
End at: 2019-02-12 06:21:53
Local clock offset: 0.353 ms
Remote clock offset: -0.361 ms

# Below is generated by plot.py at 2019-02-12 07:28:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 577.39 Mbit/s
95th percentile per-packet one-way delay: 7.710 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 352.46 Mbit/s
95th percentile per-packet one-way delay: 8.644 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 242.53 Mbit/s
95th percentile per-packet one-way delay: 1.747 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 191.10 Mbit/s
95th percentile per-packet one-way delay: 1.918 ms
Loss rate: 0.04%
```

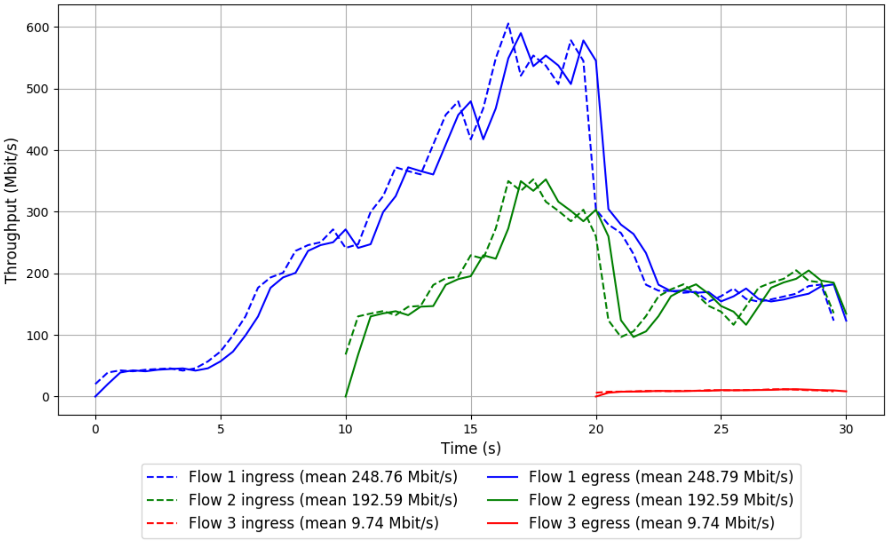
Run 5: Report of LEDBAT — Data Link

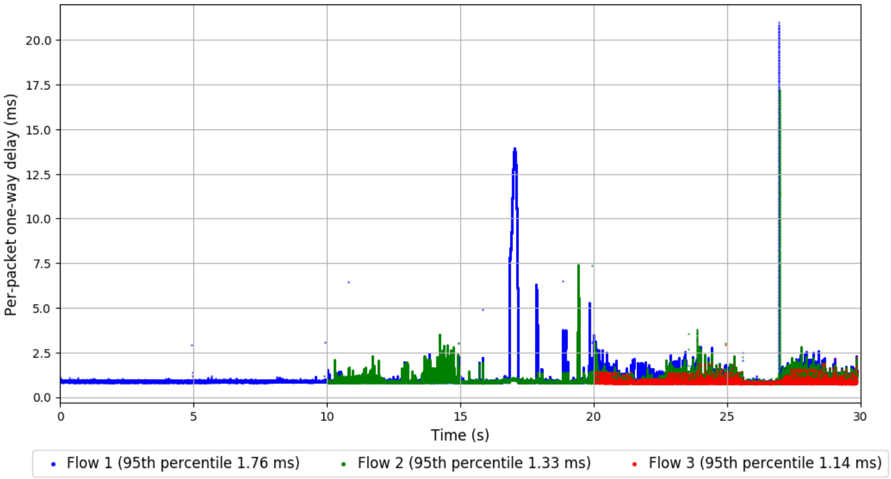




```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-12 04:11:54
End at: 2019-02-12 04:12:24
Local clock offset: 0.095 ms
Remote clock offset: 1.869 ms

# Below is generated by plot.py at 2019-02-12 07:28:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 380.01 Mbit/s
95th percentile per-packet one-way delay: 1.501 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 248.79 Mbit/s
95th percentile per-packet one-way delay: 1.760 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 192.59 Mbit/s
95th percentile per-packet one-way delay: 1.335 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 9.74 Mbit/s
95th percentile per-packet one-way delay: 1.136 ms
Loss rate: 0.01%
```

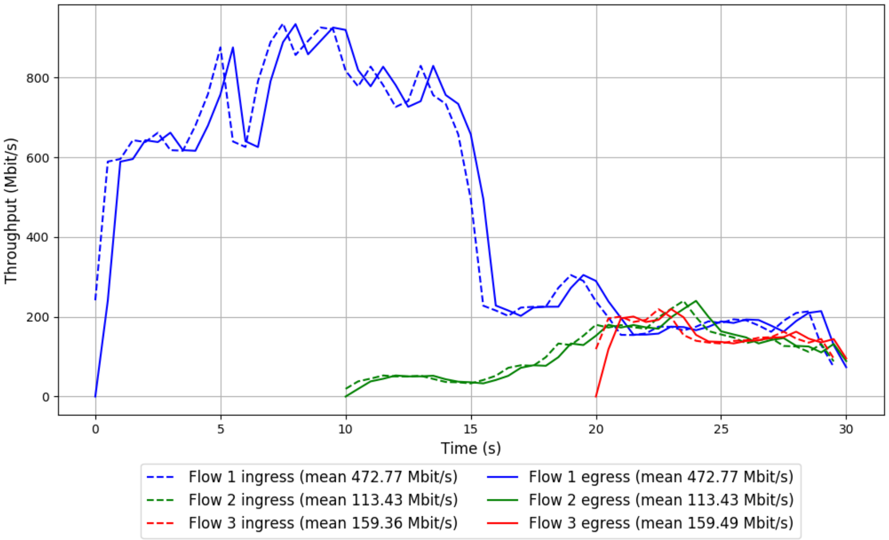
Run 1: Report of PCC-Allegro — Data Link

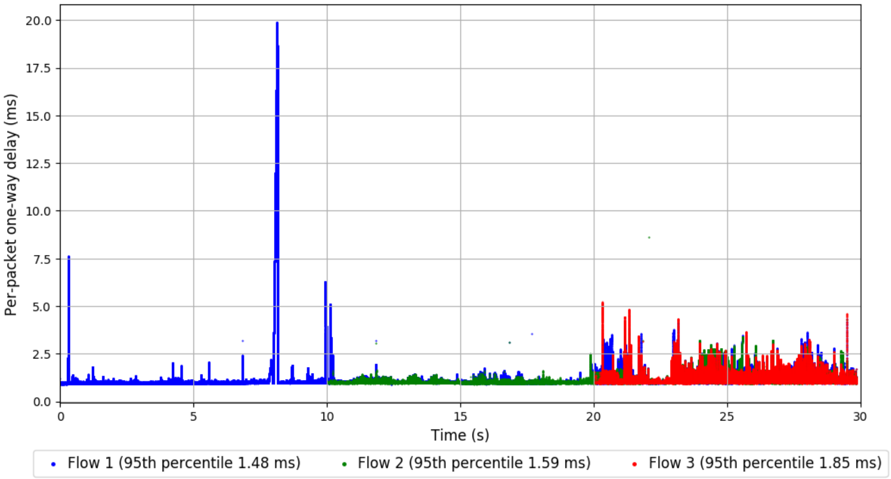




```
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-12 04:42:04
End at: 2019-02-12 04:42:34
Local clock offset: -1.6 ms
Remote clock offset: 0.705 ms

# Below is generated by plot.py at 2019-02-12 07:29:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 600.62 Mbit/s
95th percentile per-packet one-way delay: 1.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 472.77 Mbit/s
95th percentile per-packet one-way delay: 1.477 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 113.43 Mbit/s
95th percentile per-packet one-way delay: 1.589 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 159.49 Mbit/s
95th percentile per-packet one-way delay: 1.847 ms
Loss rate: 0.01%
```

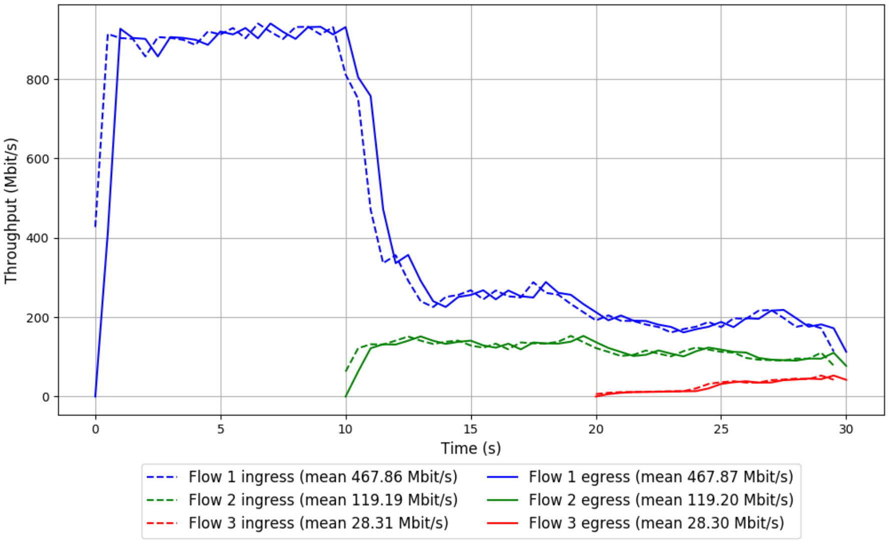
Run 2: Report of PCC-Allegro — Data Link

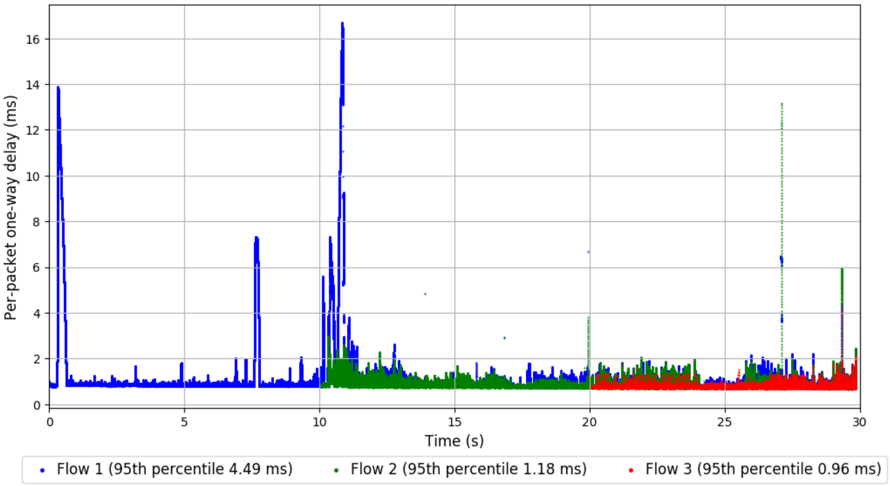




```
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-12 05:12:25
End at: 2019-02-12 05:12:55
Local clock offset: -1.037 ms
Remote clock offset: 0.645 ms

# Below is generated by plot.py at 2019-02-12 07:29:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 556.34 Mbit/s
95th percentile per-packet one-way delay: 2.913 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 467.87 Mbit/s
95th percentile per-packet one-way delay: 4.485 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 119.20 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 28.30 Mbit/s
95th percentile per-packet one-way delay: 0.961 ms
Loss rate: 0.05%
```

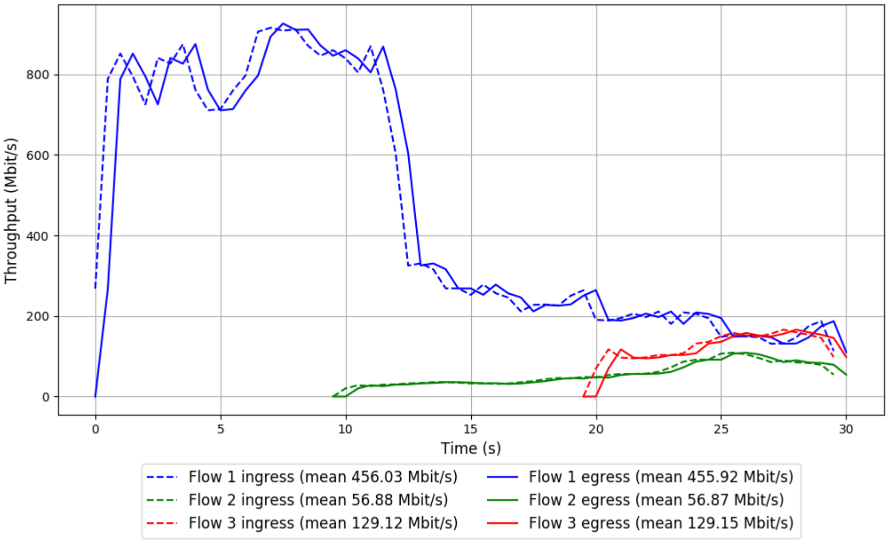
Run 3: Report of PCC-Allegro — Data Link

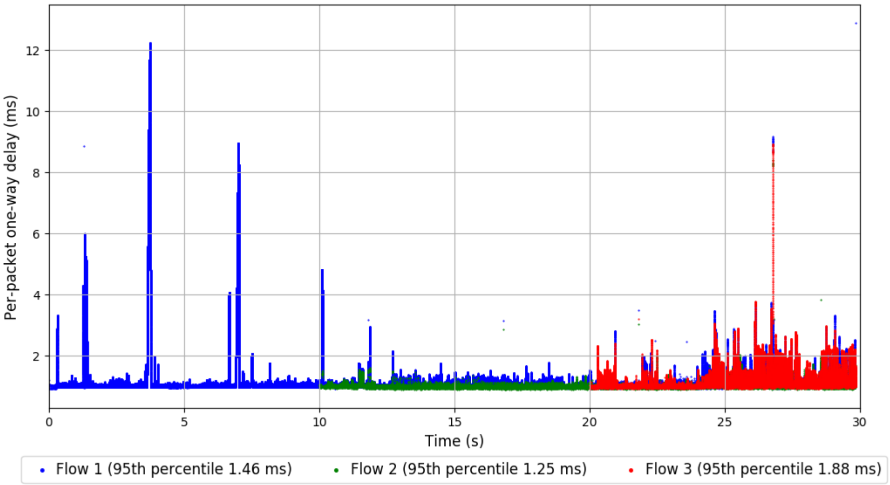




```
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-12 05:42:45
End at: 2019-02-12 05:43:15
Local clock offset: 0.424 ms
Remote clock offset: 0.538 ms

# Below is generated by plot.py at 2019-02-12 07:32:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 536.34 Mbit/s
95th percentile per-packet one-way delay: 1.492 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 455.92 Mbit/s
95th percentile per-packet one-way delay: 1.461 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 56.87 Mbit/s
95th percentile per-packet one-way delay: 1.249 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 129.15 Mbit/s
95th percentile per-packet one-way delay: 1.875 ms
Loss rate: 0.01%
```

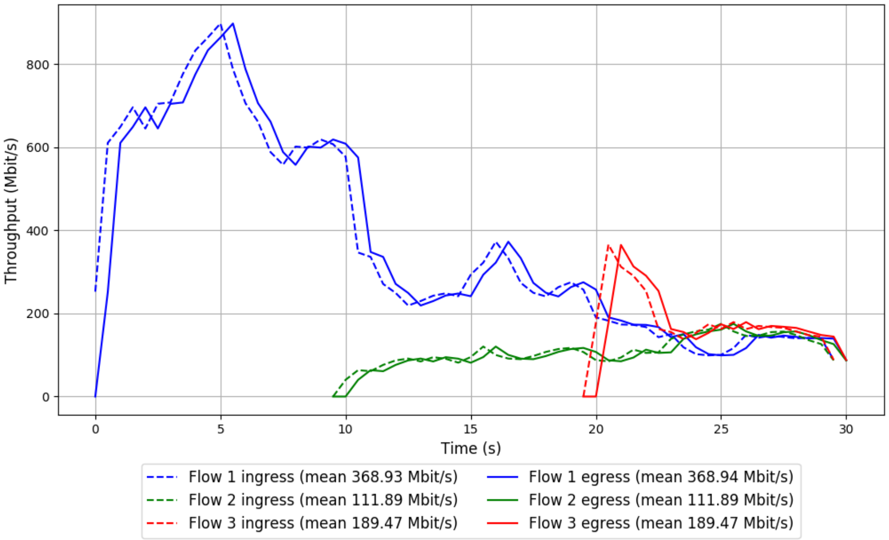
Run 4: Report of PCC-Allegro — Data Link

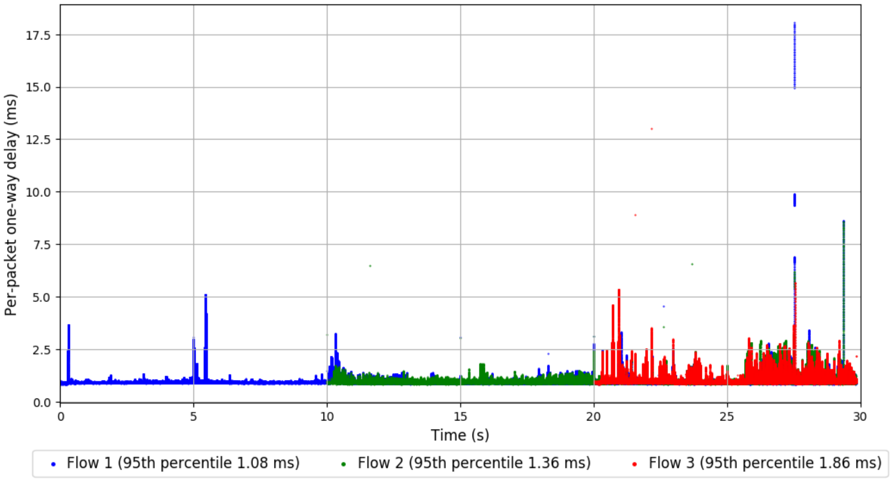




```
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-12 06:12:55
End at: 2019-02-12 06:13:25
Local clock offset: 0.357 ms
Remote clock offset: 0.148 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 505.80 Mbit/s
95th percentile per-packet one-way delay: 1.262 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 368.94 Mbit/s
95th percentile per-packet one-way delay: 1.083 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 111.89 Mbit/s
95th percentile per-packet one-way delay: 1.357 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 189.47 Mbit/s
95th percentile per-packet one-way delay: 1.864 ms
Loss rate: 0.01%
```

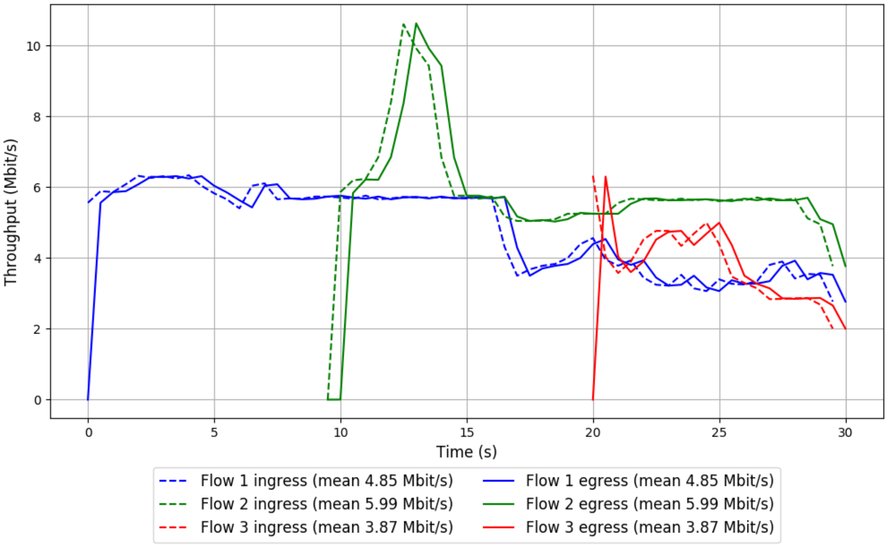
Run 5: Report of PCC-Allegro — Data Link

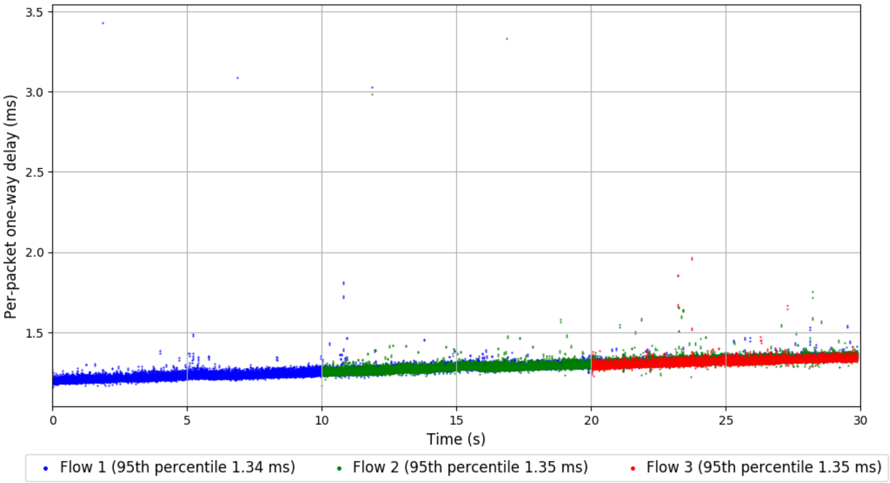




```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-12 04:35:00
End at: 2019-02-12 04:35:30
Local clock offset: 0.017 ms
Remote clock offset: 0.741 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 10.11 Mbit/s
95th percentile per-packet one-way delay: 1.348 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 4.85 Mbit/s
95th percentile per-packet one-way delay: 1.342 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.99 Mbit/s
95th percentile per-packet one-way delay: 1.352 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 3.87 Mbit/s
95th percentile per-packet one-way delay: 1.352 ms
Loss rate: 0.03%
```

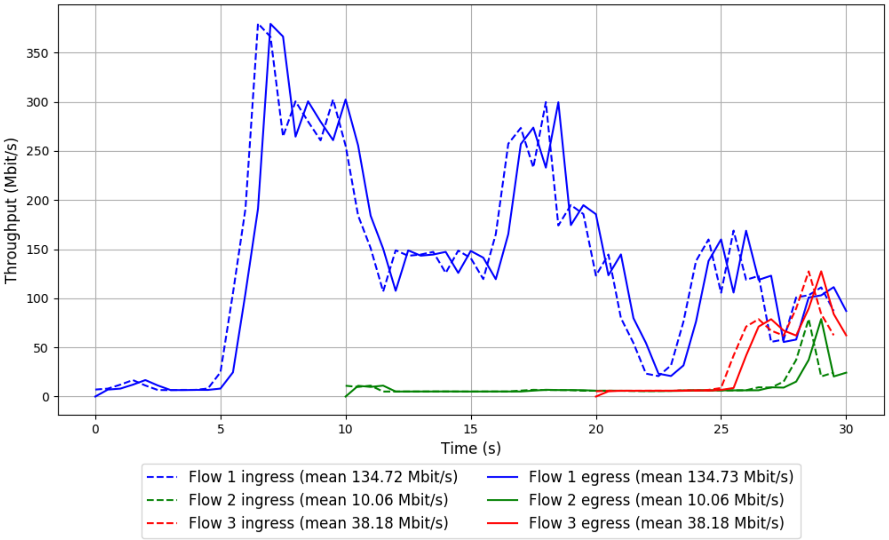
Run 1: Report of PCC-Expr — Data Link

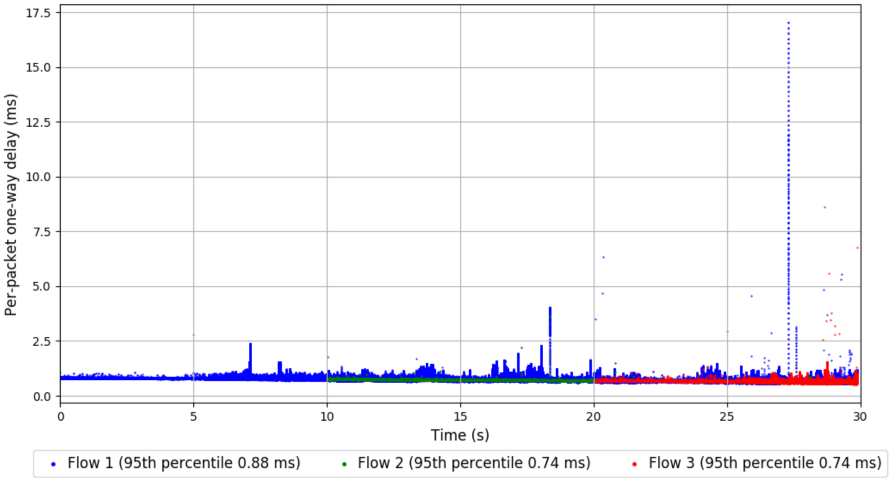




```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-12 05:05:12
End at: 2019-02-12 05:05:42
Local clock offset: -3.058 ms
Remote clock offset: 0.522 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.01 Mbit/s
95th percentile per-packet one-way delay: 0.860 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 134.73 Mbit/s
95th percentile per-packet one-way delay: 0.876 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.06 Mbit/s
95th percentile per-packet one-way delay: 0.743 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 38.18 Mbit/s
95th percentile per-packet one-way delay: 0.742 ms
Loss rate: 0.03%
```

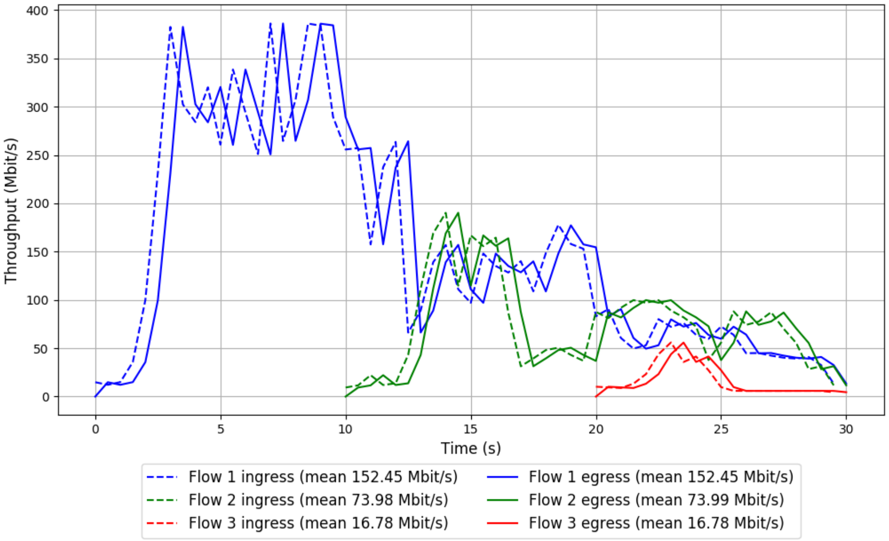
Run 2: Report of PCC-Expr — Data Link

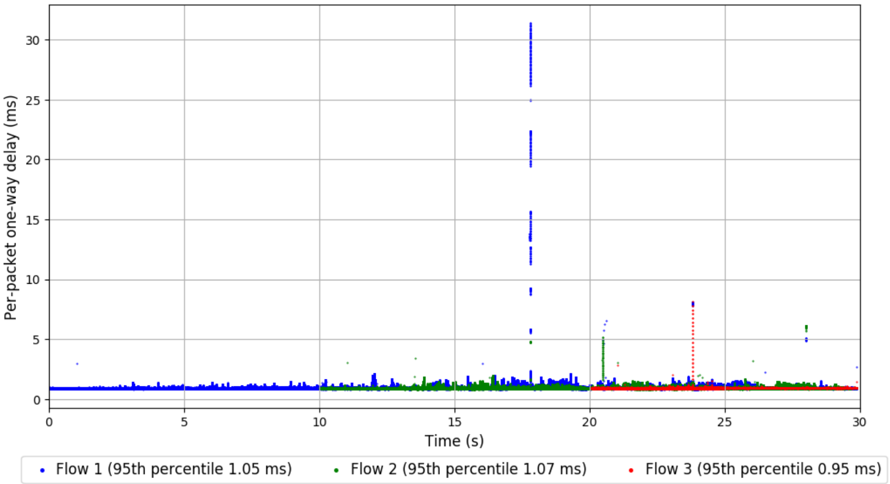




```
Run 3: Statistics of PCC-Expr

Start at: 2019-02-12 05:35:29
End at: 2019-02-12 05:35:59
Local clock offset: 0.567 ms
Remote clock offset: 0.643 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 207.16 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 152.45 Mbit/s
95th percentile per-packet one-way delay: 1.053 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 73.99 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 16.78 Mbit/s
95th percentile per-packet one-way delay: 0.953 ms
Loss rate: 0.00%
```

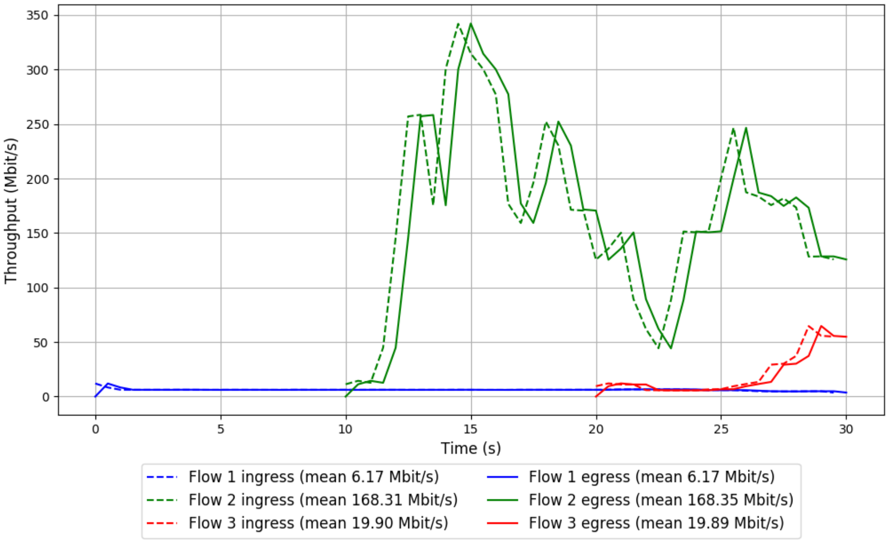
Run 3: Report of PCC-Expr — Data Link

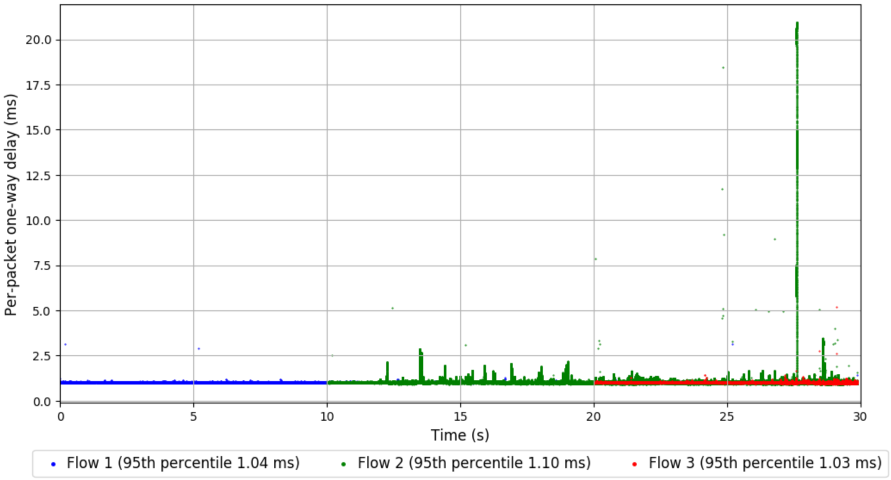




```
Run 4: Statistics of PCC-Expr

Start at: 2019-02-12 06:05:48
End at: 2019-02-12 06:06:18
Local clock offset: 0.459 ms
Remote clock offset: 0.12 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 124.70 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 6.17 Mbit/s
95th percentile per-packet one-way delay: 1.041 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.35 Mbit/s
95th percentile per-packet one-way delay: 1.105 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.89 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.06%
```

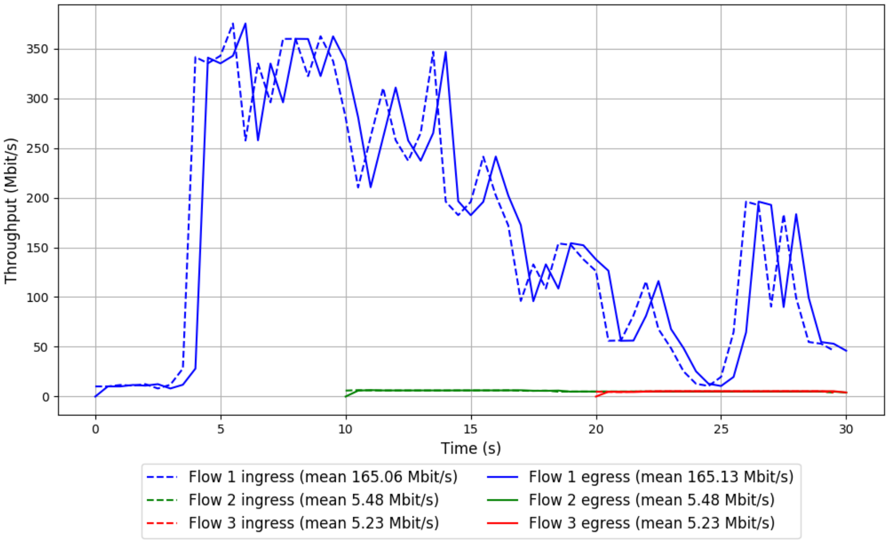
Run 4: Report of PCC-Expr — Data Link

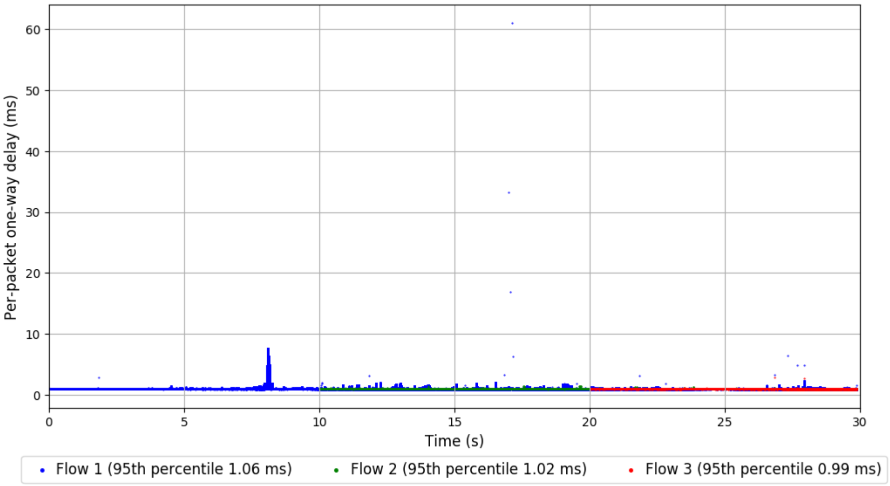




```
Run 5: Statistics of PCC-Expr

Start at: 2019-02-12 06:36:02
End at: 2019-02-12 06:36:32
Local clock offset: 0.353 ms
Remote clock offset: -2.95 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 170.50 Mbit/s
95th percentile per-packet one-way delay: 1.057 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 165.13 Mbit/s
95th percentile per-packet one-way delay: 1.061 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 5.48 Mbit/s
95th percentile per-packet one-way delay: 1.016 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 5.23 Mbit/s
95th percentile per-packet one-way delay: 0.994 ms
Loss rate: 0.00%
```

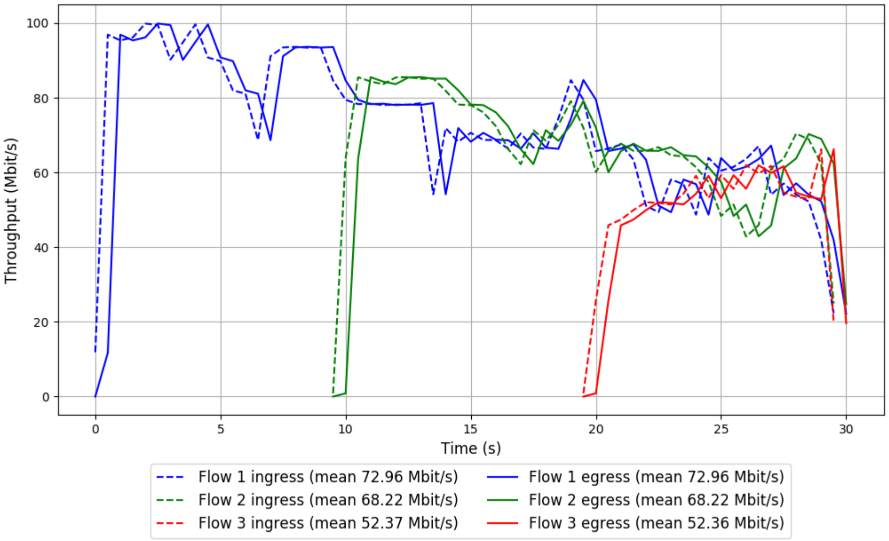
Run 5: Report of PCC-Expr — Data Link

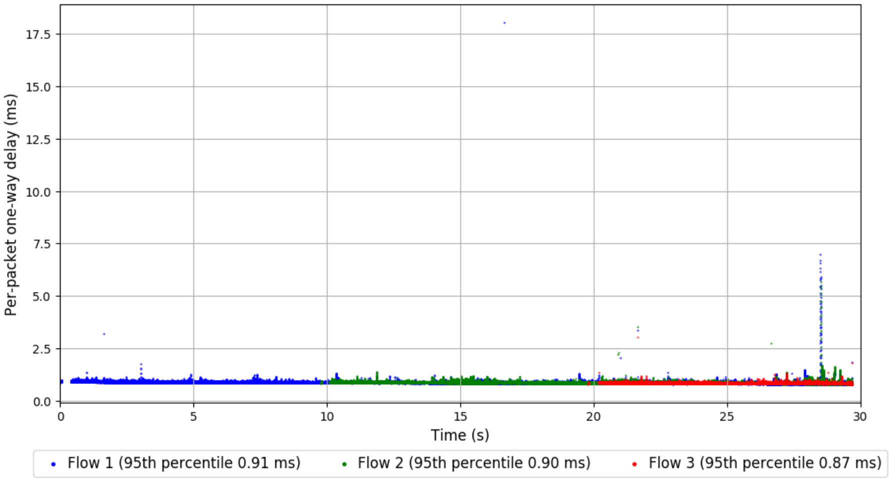




```
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-12 04:10:35
End at: 2019-02-12 04:11:05
Local clock offset: 0.068 ms
Remote clock offset: 2.124 ms

# Below is generated by plot.py at 2019-02-12 07:32:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.19 Mbit/s
95th percentile per-packet one-way delay: 0.908 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 72.96 Mbit/s
95th percentile per-packet one-way delay: 0.913 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 68.22 Mbit/s
95th percentile per-packet one-way delay: 0.902 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 52.36 Mbit/s
95th percentile per-packet one-way delay: 0.871 ms
Loss rate: 0.02%
```

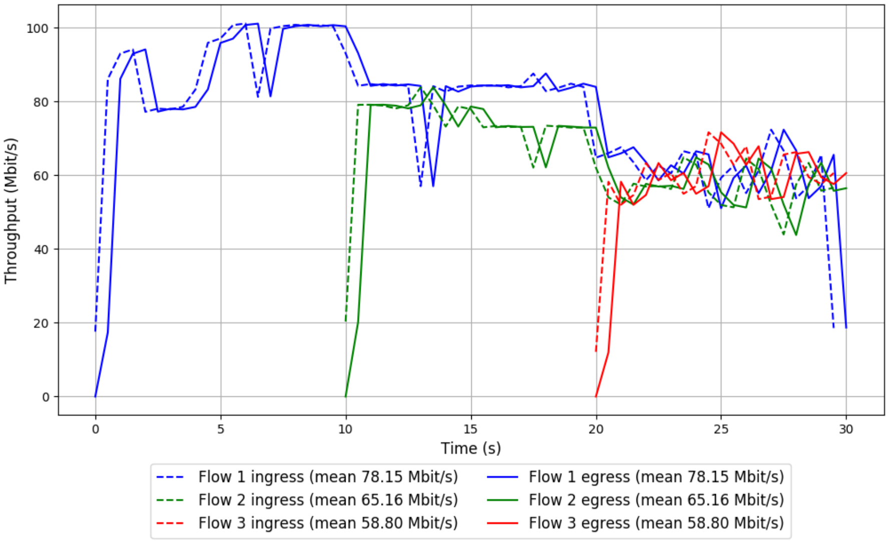
Run 1: Report of QUIC Cubic — Data Link

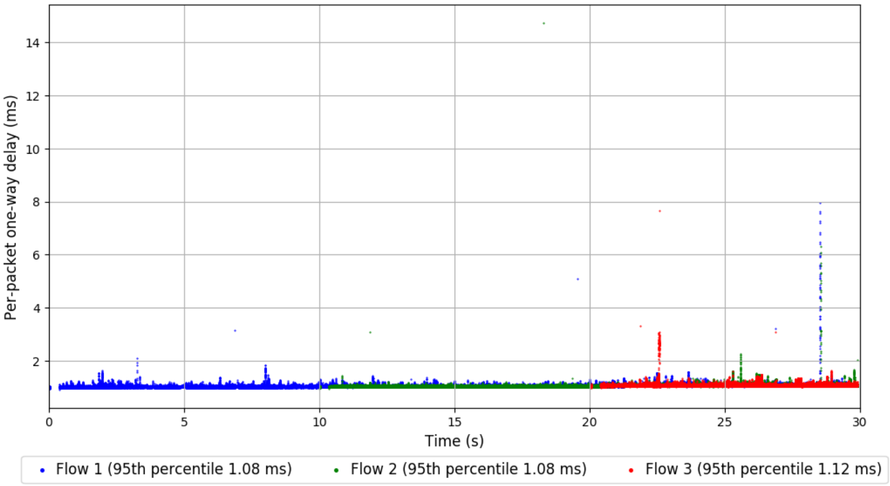




```
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-12 04:40:45
End at: 2019-02-12 04:41:15
Local clock offset: -1.402 ms
Remote clock offset: 0.718 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.18 Mbit/s
95th percentile per-packet one-way delay: 1.086 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.15 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.16 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 58.80 Mbit/s
95th percentile per-packet one-way delay: 1.118 ms
Loss rate: 0.00%
```

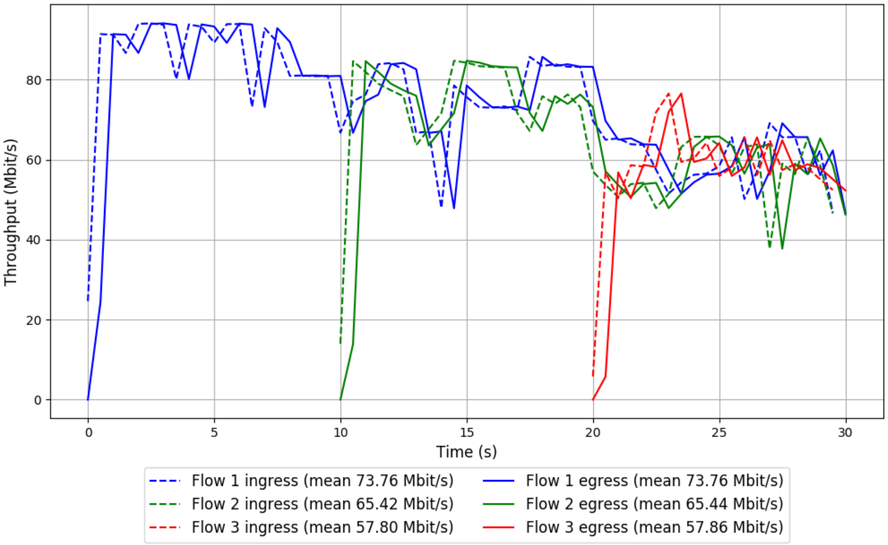
Run 2: Report of QUIC Cubic — Data Link

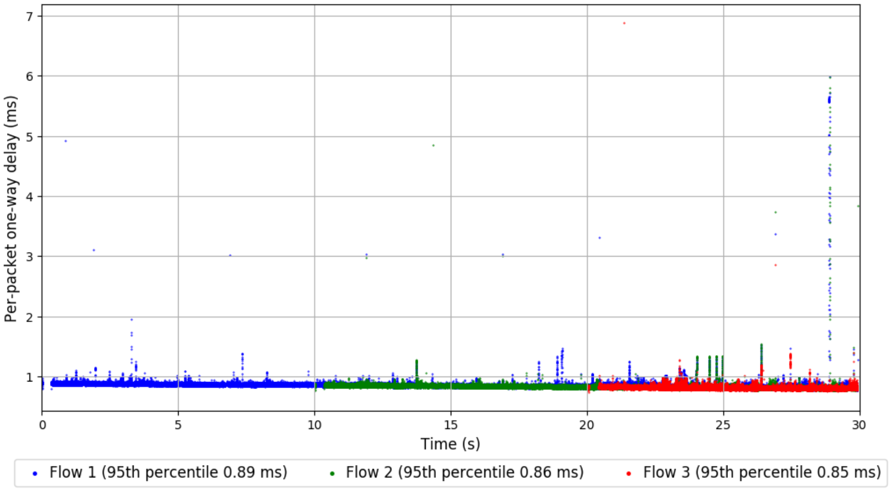




```
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-12 05:11:06
End at: 2019-02-12 05:11:36
Local clock offset: -1.318 ms
Remote clock offset: 0.565 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 136.42 Mbit/s
95th percentile per-packet one-way delay: 0.882 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 73.76 Mbit/s
95th percentile per-packet one-way delay: 0.889 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 65.44 Mbit/s
95th percentile per-packet one-way delay: 0.862 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 57.86 Mbit/s
95th percentile per-packet one-way delay: 0.849 ms
Loss rate: 0.02%
```

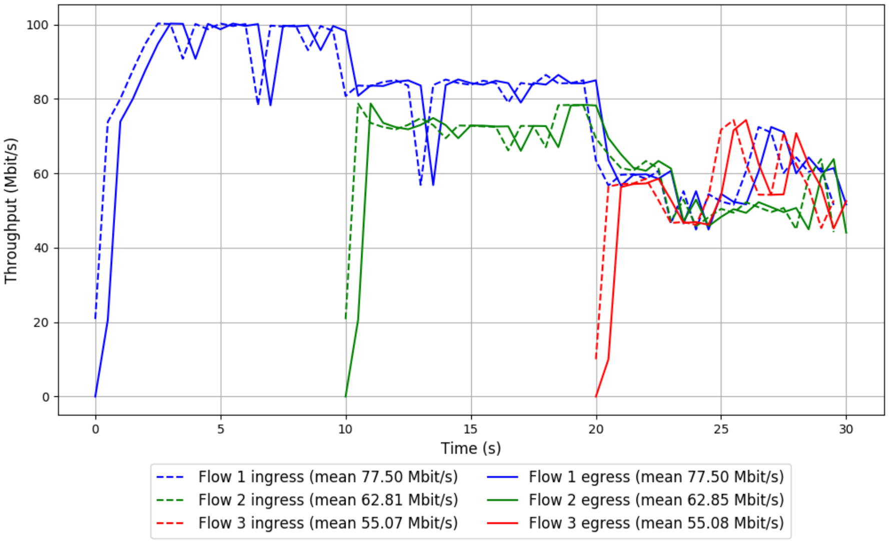
Run 3: Report of QUIC Cubic — Data Link

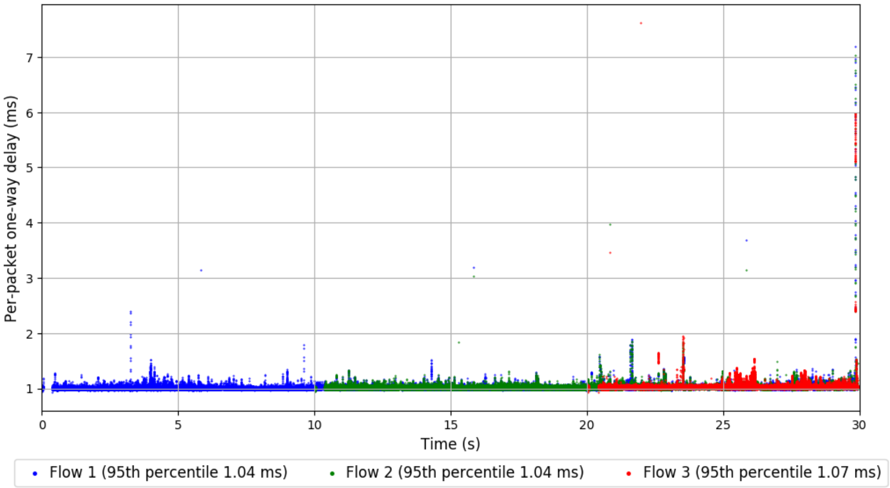




```
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-12 05:41:26
End at: 2019-02-12 05:41:56
Local clock offset: 0.431 ms
Remote clock offset: 0.53 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 137.44 Mbit/s
95th percentile per-packet one-way delay: 1.046 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.50 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 62.85 Mbit/s
95th percentile per-packet one-way delay: 1.045 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 55.08 Mbit/s
95th percentile per-packet one-way delay: 1.074 ms
Loss rate: 0.03%
```

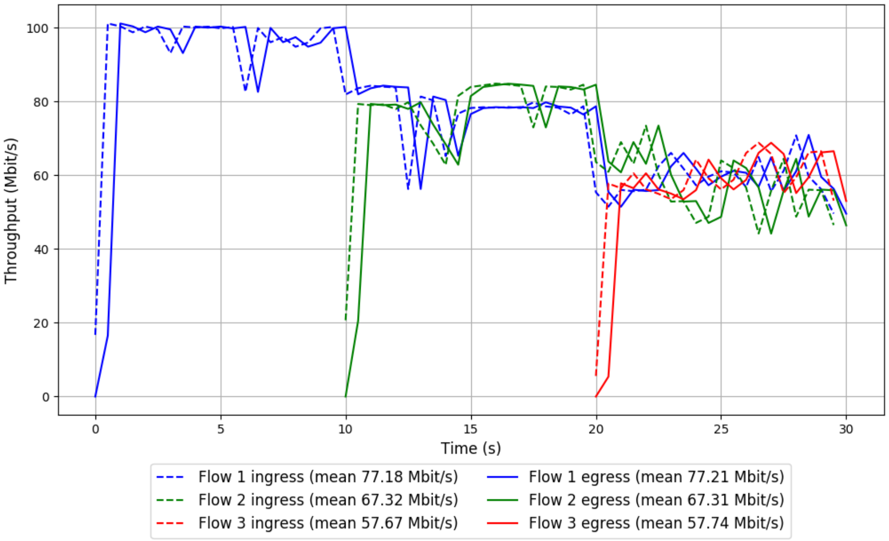
Run 4: Report of QUIC Cubic — Data Link

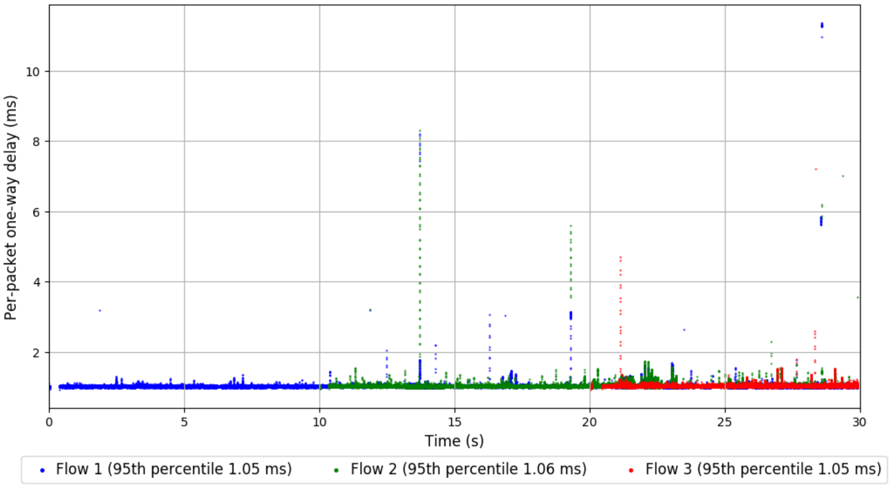




```
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-12 06:11:36
End at: 2019-02-12 06:12:06
Local clock offset: 0.387 ms
Remote clock offset: 0.077 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.06 Mbit/s
95th percentile per-packet one-way delay: 1.052 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 77.21 Mbit/s
95th percentile per-packet one-way delay: 1.046 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 67.31 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 57.74 Mbit/s
95th percentile per-packet one-way delay: 1.054 ms
Loss rate: 0.02%
```

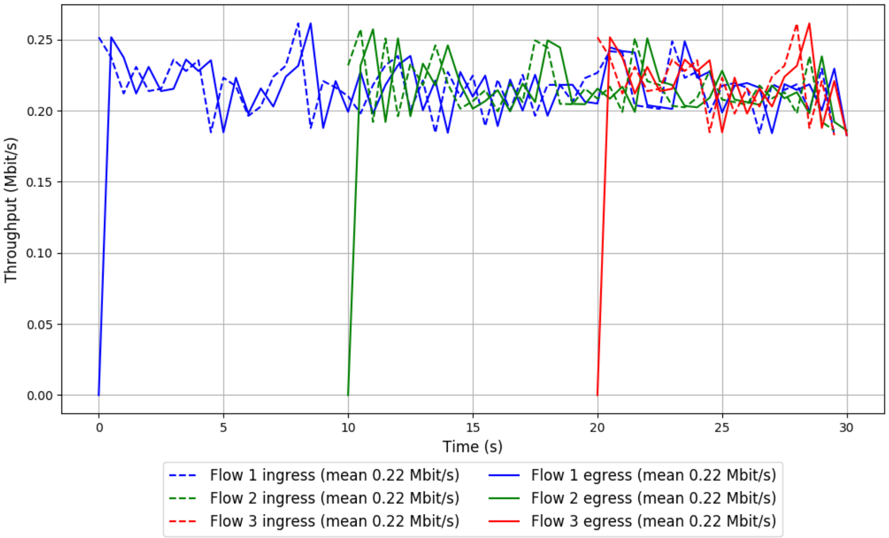
Run 5: Report of QUIC Cubic — Data Link

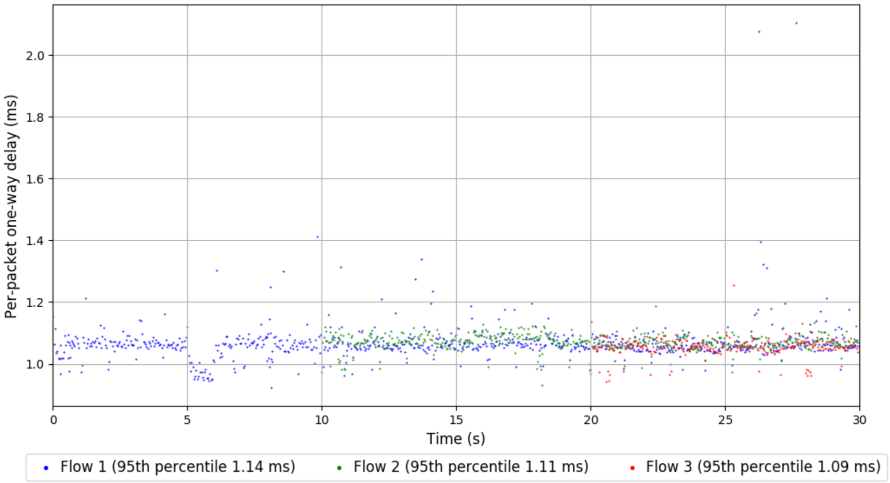




```
Run 1: Statistics of SCReAM

Start at: 2019-02-12 04:23:14
End at: 2019-02-12 04:23:44
Local clock offset: 0.208 ms
Remote clock offset: 0.847 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.140 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.092 ms
Loss rate: 0.00%
```

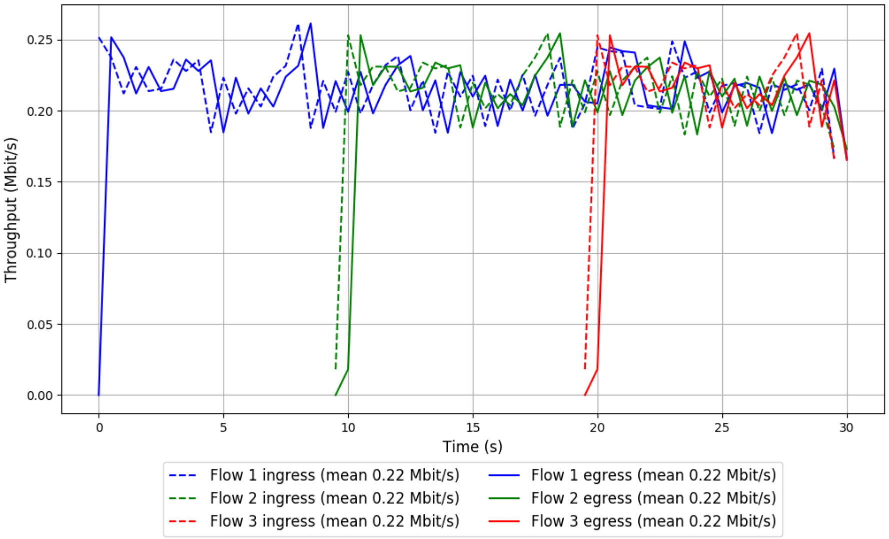
Run 1: Report of SCReAM — Data Link

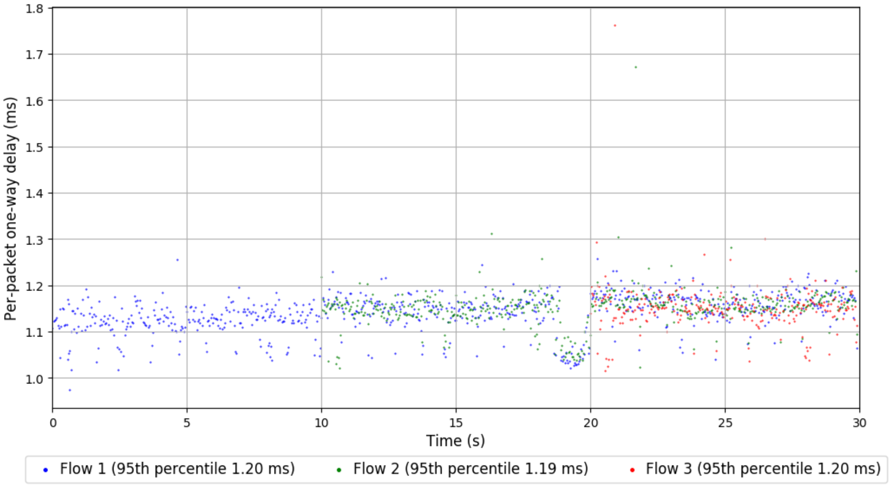




```
Run 2: Statistics of SCReAM

Start at: 2019-02-12 04:53:30
End at: 2019-02-12 04:54:00
Local clock offset: -2.853 ms
Remote clock offset: 0.509 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.195 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.190 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.199 ms
Loss rate: 0.00%
```

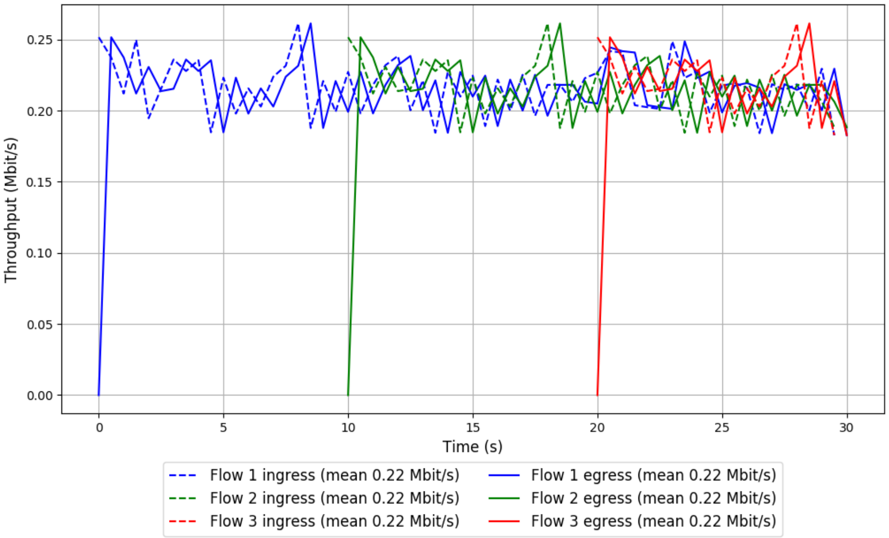
Run 2: Report of SCReAM — Data Link

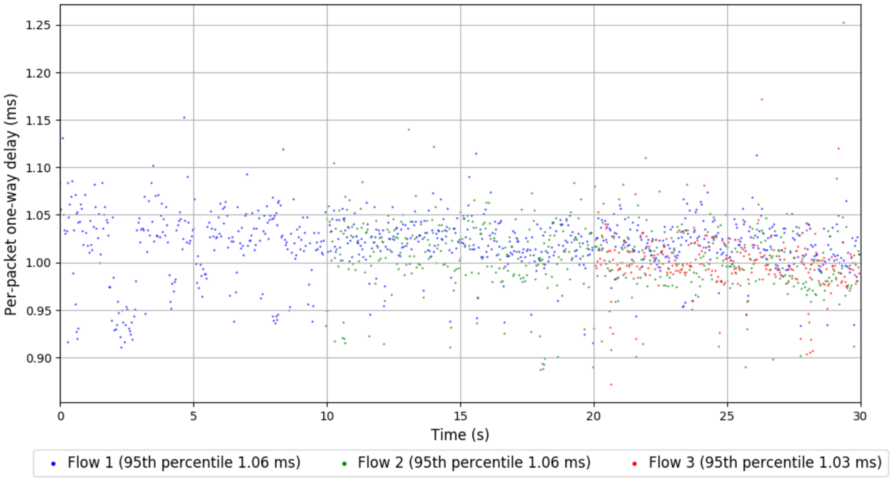




```
Run 3: Statistics of SCReAM

Start at: 2019-02-12 05:23:47
End at: 2019-02-12 05:24:17
Local clock offset: 0.165 ms
Remote clock offset: 0.524 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.062 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.034 ms
Loss rate: 0.00%
```

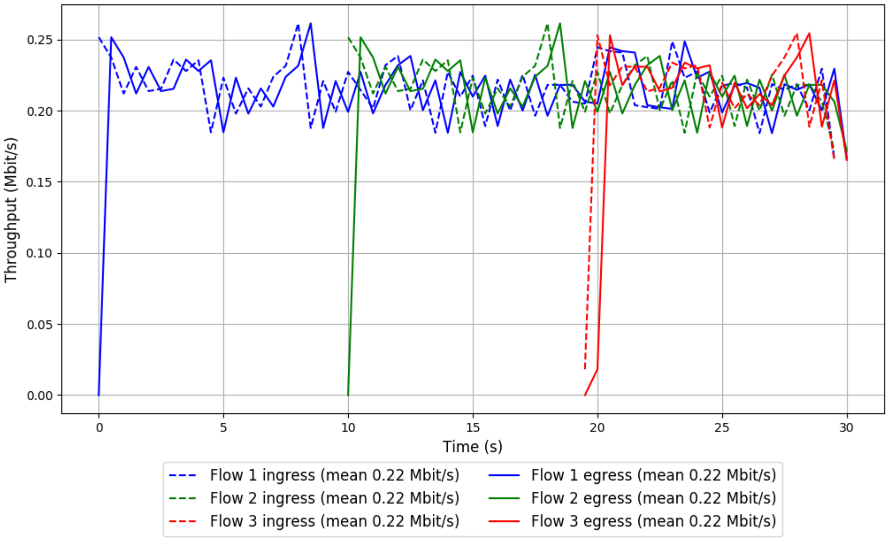
Run 3: Report of SCReAM — Data Link

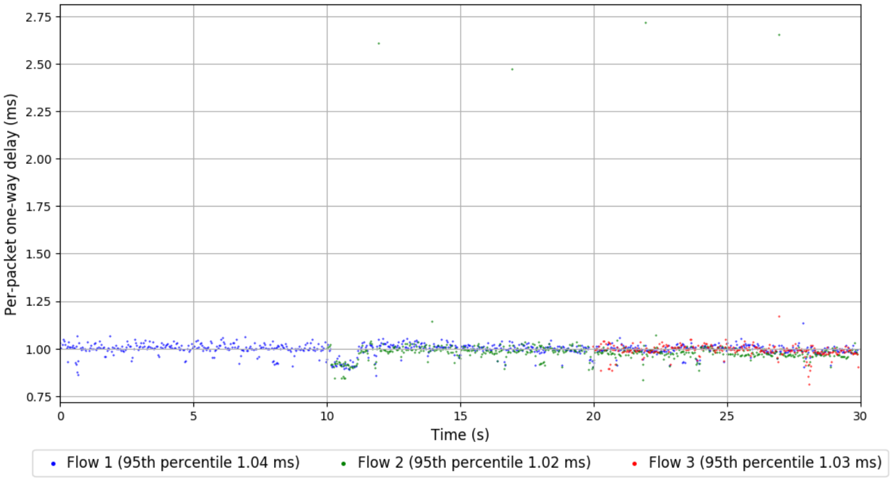




```
Run 4: Statistics of SCReAM

Start at: 2019-02-12 05:54:09
End at: 2019-02-12 05:54:39
Local clock offset: 0.431 ms
Remote clock offset: 0.362 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.032 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.024 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.029 ms
Loss rate: 0.00%
```

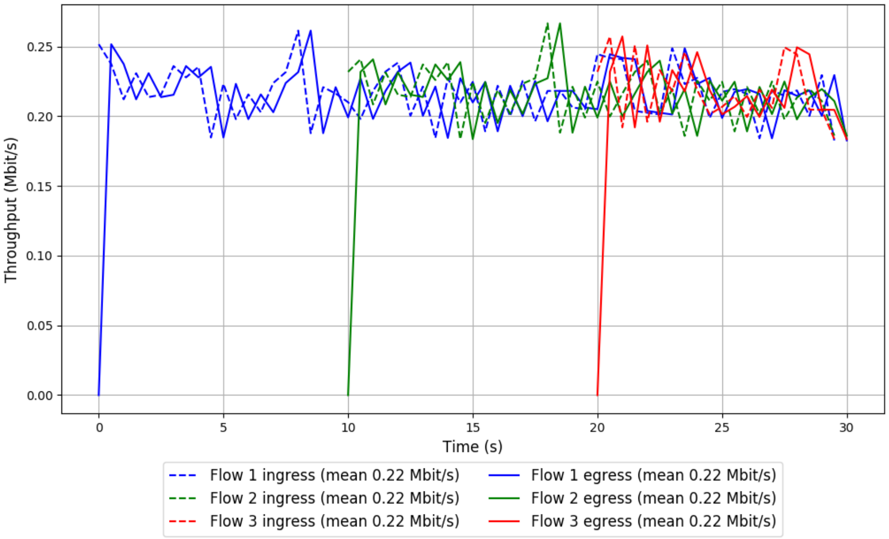
Run 4: Report of SCReAM — Data Link

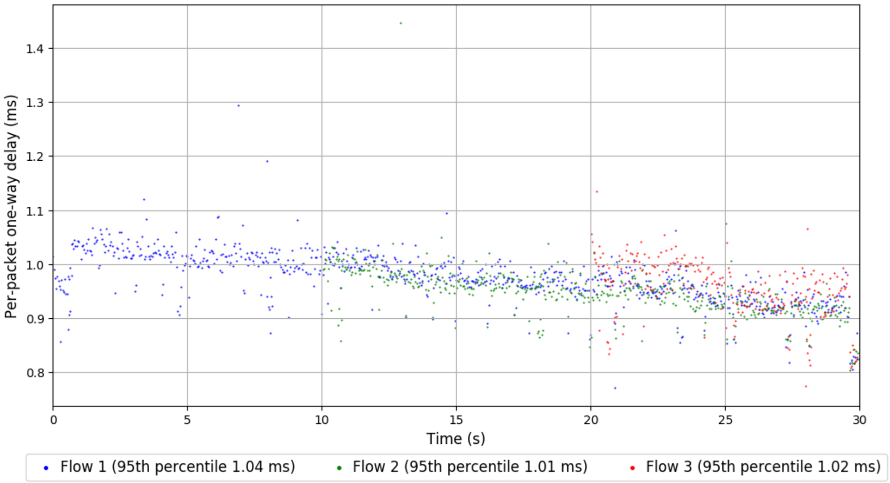




```
Run 5: Statistics of SCReAM

Start at: 2019-02-12 06:24:19
End at: 2019-02-12 06:24:49
Local clock offset: 0.36 ms
Remote clock offset: -1.163 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 1.032 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.023 ms
Loss rate: 0.00%
```

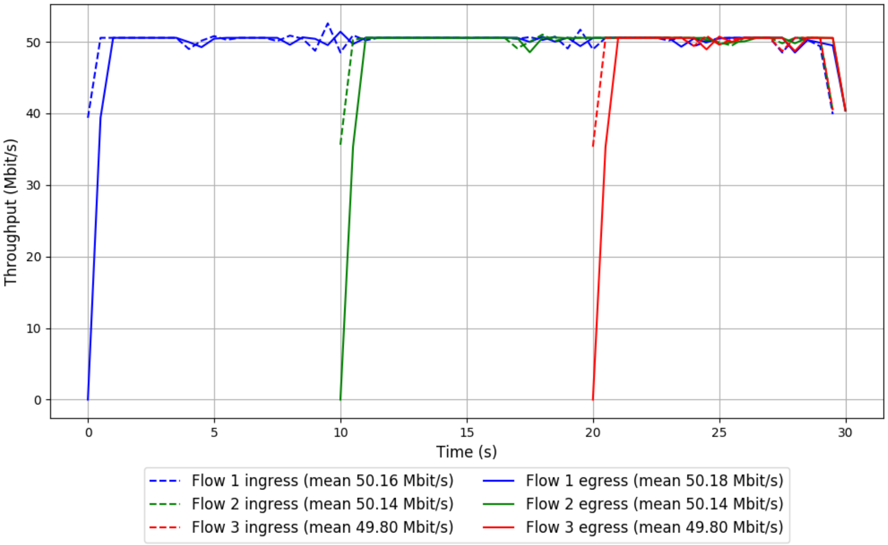
Run 5: Report of SCReAM — Data Link

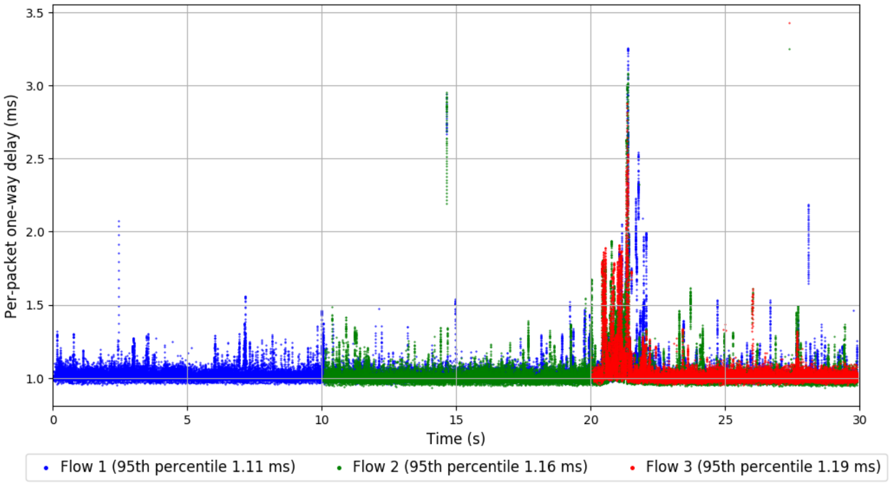




```
Run 1: Statistics of Sprout

Start at: 2019-02-12 04:31:59
End at: 2019-02-12 04:32:29
Local clock offset: 0.228 ms
Remote clock offset: 0.744 ms

# Below is generated by plot.py at 2019-02-12 07:32:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.89 Mbit/s
95th percentile per-packet one-way delay: 1.133 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.18 Mbit/s
95th percentile per-packet one-way delay: 1.108 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.14 Mbit/s
95th percentile per-packet one-way delay: 1.155 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.80 Mbit/s
95th percentile per-packet one-way delay: 1.194 ms
Loss rate: 0.00%
```

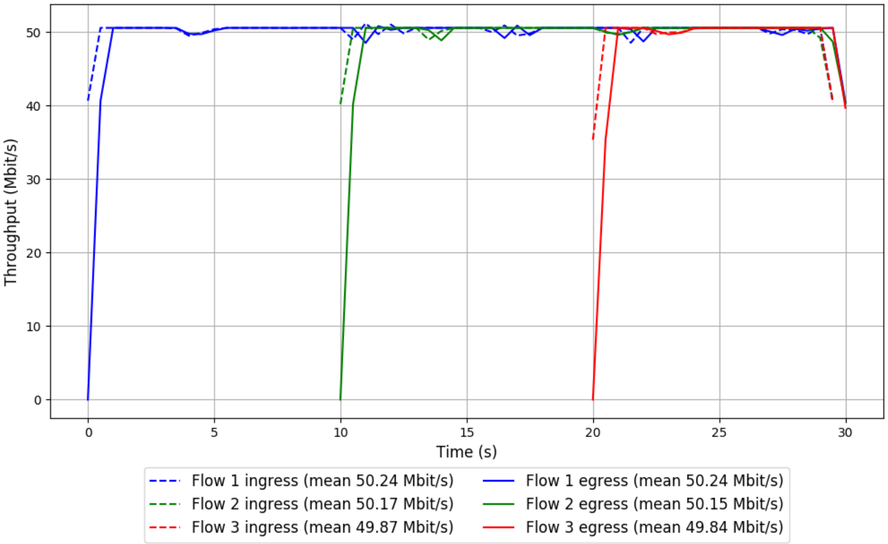
Run 1: Report of Sprout — Data Link

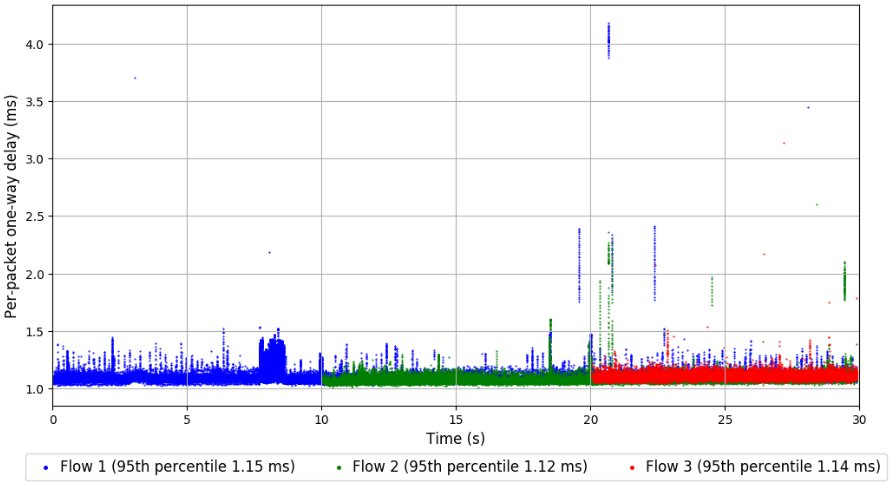




```
Run 2: Statistics of Sprout

Start at: 2019-02-12 05:02:11
End at: 2019-02-12 05:02:42
Local clock offset: -3.36 ms
Remote clock offset: 0.524 ms

# Below is generated by plot.py at 2019-02-12 07:33:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.02 Mbit/s
95th percentile per-packet one-way delay: 1.139 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 1.150 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.15 Mbit/s
95th percentile per-packet one-way delay: 1.121 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 49.84 Mbit/s
95th percentile per-packet one-way delay: 1.143 ms
Loss rate: 0.08%
```

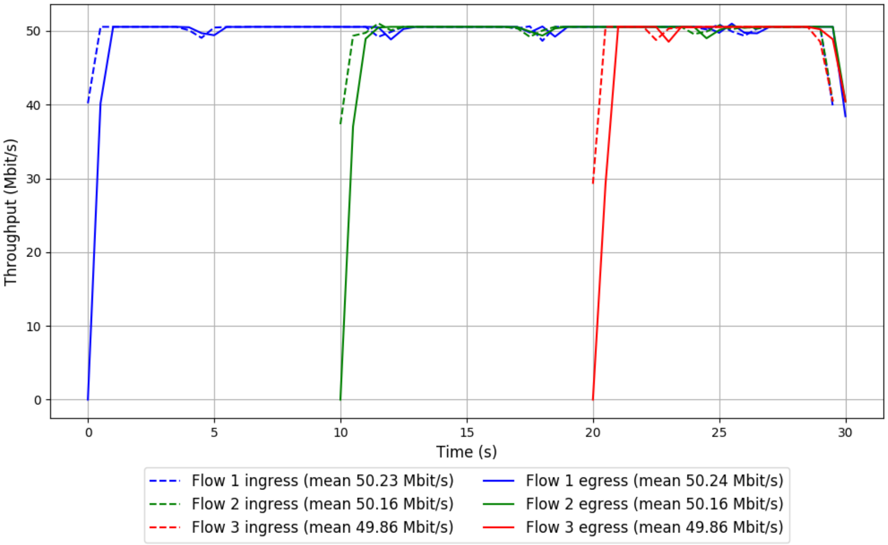
Run 2: Report of Sprout — Data Link

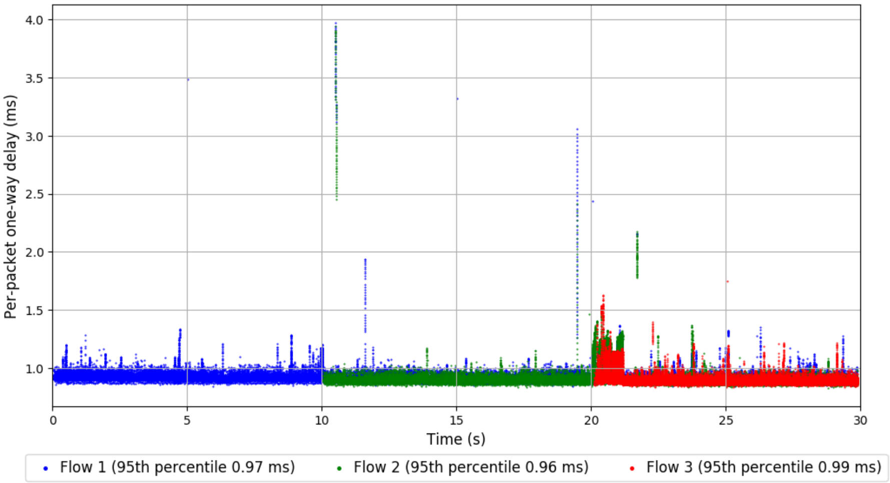




```
Run 3: Statistics of Sprout

Start at: 2019-02-12 05:32:29
End at: 2019-02-12 05:32:59
Local clock offset: 0.554 ms
Remote clock offset: 0.613 ms

# Below is generated by plot.py at 2019-02-12 07:33:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 99.86 Mbit/s
95th percentile per-packet one-way delay: 0.969 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 50.24 Mbit/s
95th percentile per-packet one-way delay: 0.968 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 50.16 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.86 Mbit/s
95th percentile per-packet one-way delay: 0.990 ms
Loss rate: 0.00%
```

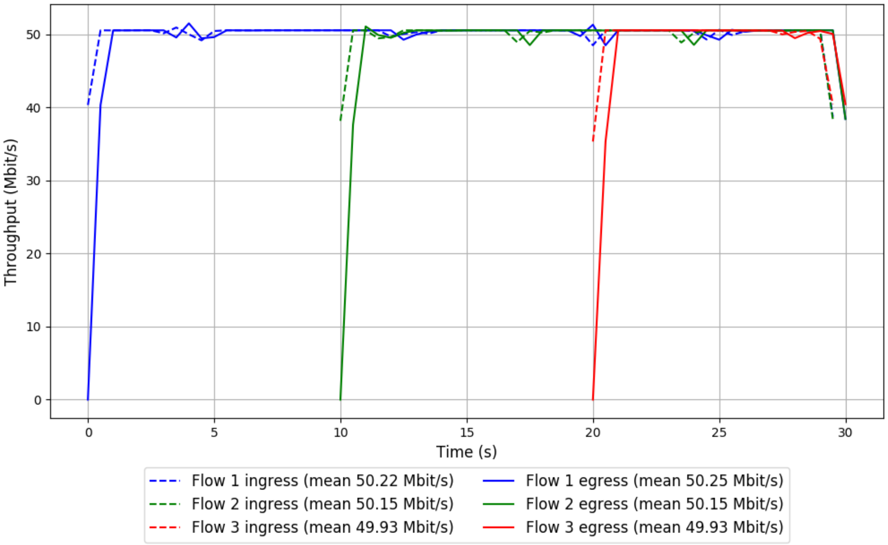
Run 3: Report of Sprout — Data Link

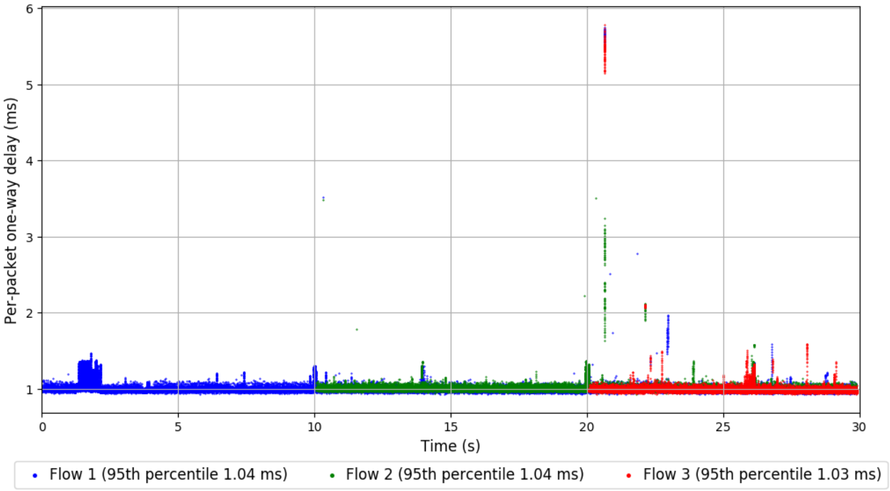




```
Run 4: Statistics of Sprout

Start at: 2019-02-12 06:02:48
End at: 2019-02-12 06:03:18
Local clock offset: 0.485 ms
Remote clock offset: 0.168 ms

# Below is generated by plot.py at 2019-02-12 07:33:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.00 Mbit/s
95th percentile per-packet one-way delay: 1.037 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 50.25 Mbit/s
95th percentile per-packet one-way delay: 1.040 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 50.15 Mbit/s
95th percentile per-packet one-way delay: 1.038 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.93 Mbit/s
95th percentile per-packet one-way delay: 1.027 ms
Loss rate: 0.00%
```

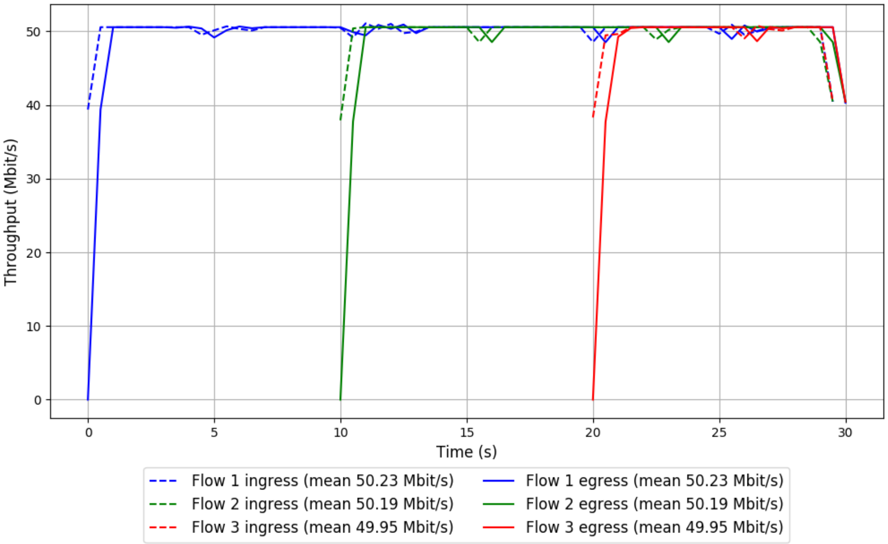
Run 4: Report of Sprout — Data Link

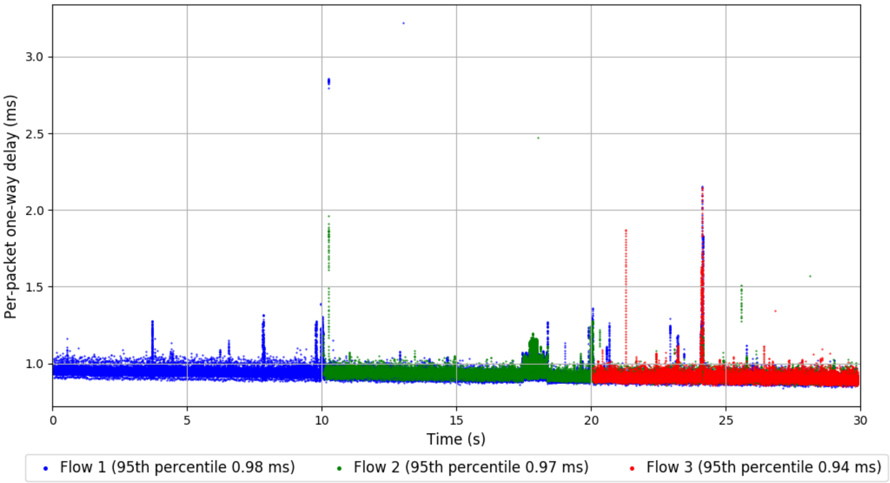




```
Run 5: Statistics of Sprout

Start at: 2019-02-12 06:33:02
End at: 2019-02-12 06:33:32
Local clock offset: 0.38 ms
Remote clock offset: -2.577 ms

# Below is generated by plot.py at 2019-02-12 07:33:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 100.03 Mbit/s
95th percentile per-packet one-way delay: 0.971 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 50.23 Mbit/s
95th percentile per-packet one-way delay: 0.977 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 50.19 Mbit/s
95th percentile per-packet one-way delay: 0.967 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 49.95 Mbit/s
95th percentile per-packet one-way delay: 0.943 ms
Loss rate: 0.00%
```

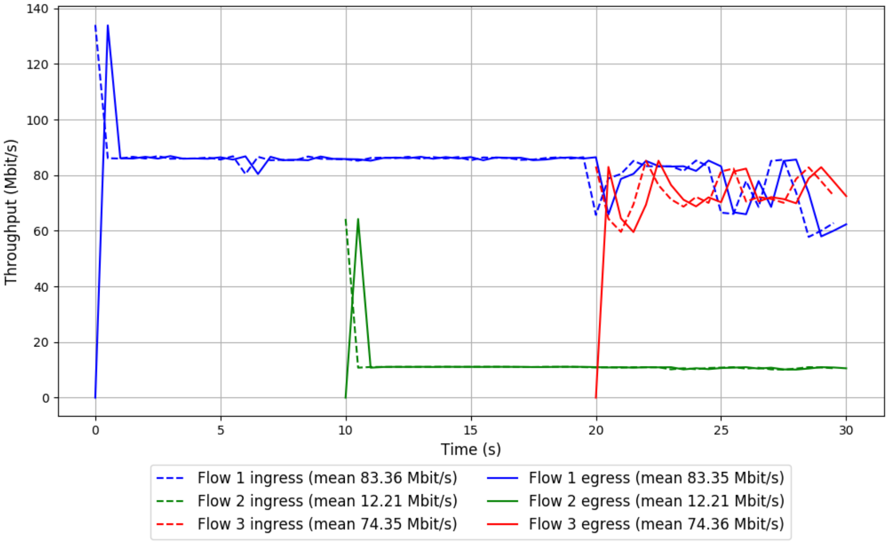
Run 5: Report of Sprout — Data Link

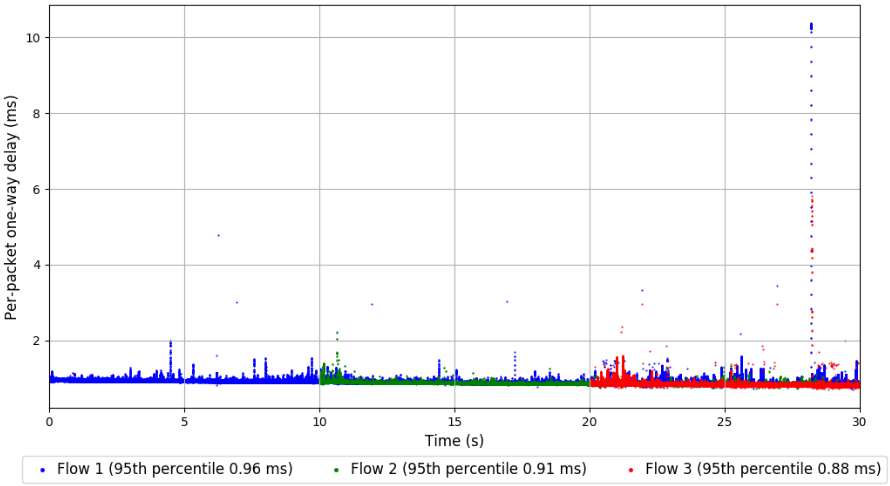




```
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-12 04:09:13
End at: 2019-02-12 04:09:43
Local clock offset: 0.061 ms
Remote clock offset: 2.428 ms

# Below is generated by plot.py at 2019-02-12 07:34:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 116.16 Mbit/s
95th percentile per-packet one-way delay: 0.952 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 83.35 Mbit/s
95th percentile per-packet one-way delay: 0.957 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 12.21 Mbit/s
95th percentile per-packet one-way delay: 0.914 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 74.36 Mbit/s
95th percentile per-packet one-way delay: 0.878 ms
Loss rate: 0.02%
```

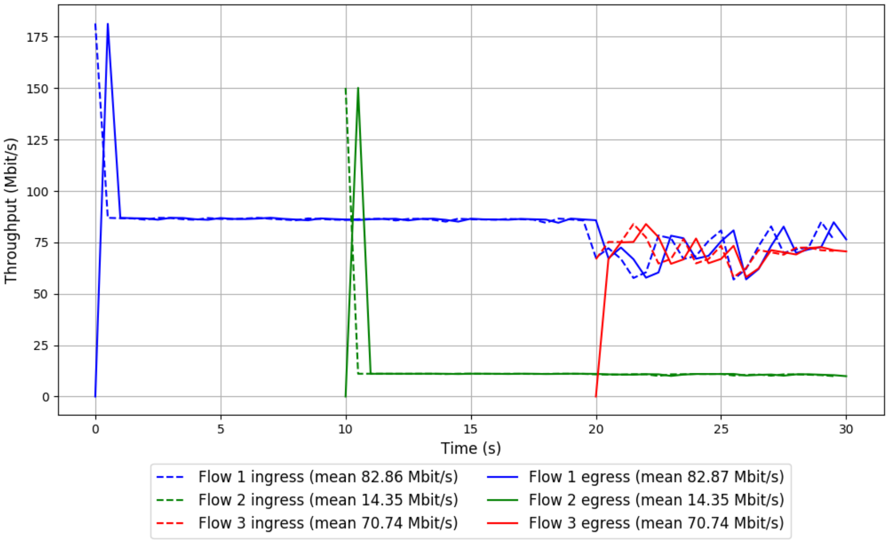
Run 1: Report of TaoVA-100x — Data Link

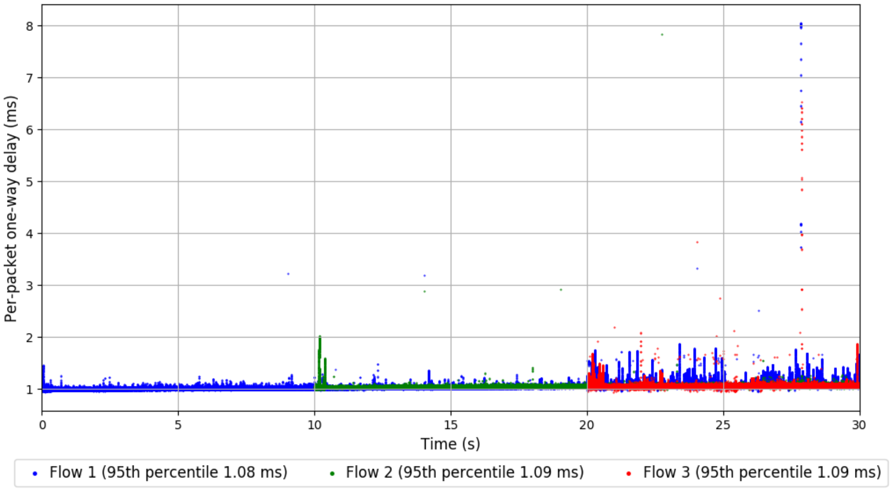




```
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-12 04:39:24
End at: 2019-02-12 04:39:54
Local clock offset: -1.124 ms
Remote clock offset: 0.787 ms

# Below is generated by plot.py at 2019-02-12 07:34:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 115.93 Mbit/s
95th percentile per-packet one-way delay: 1.085 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 82.87 Mbit/s
95th percentile per-packet one-way delay: 1.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 14.35 Mbit/s
95th percentile per-packet one-way delay: 1.090 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 70.74 Mbit/s
95th percentile per-packet one-way delay: 1.087 ms
Loss rate: 0.02%
```

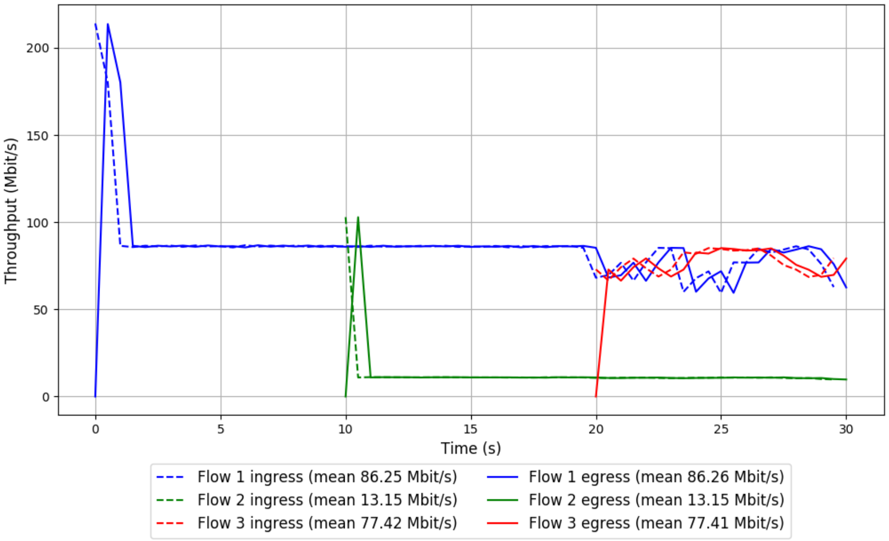
Run 2: Report of TaoVA-100x — Data Link

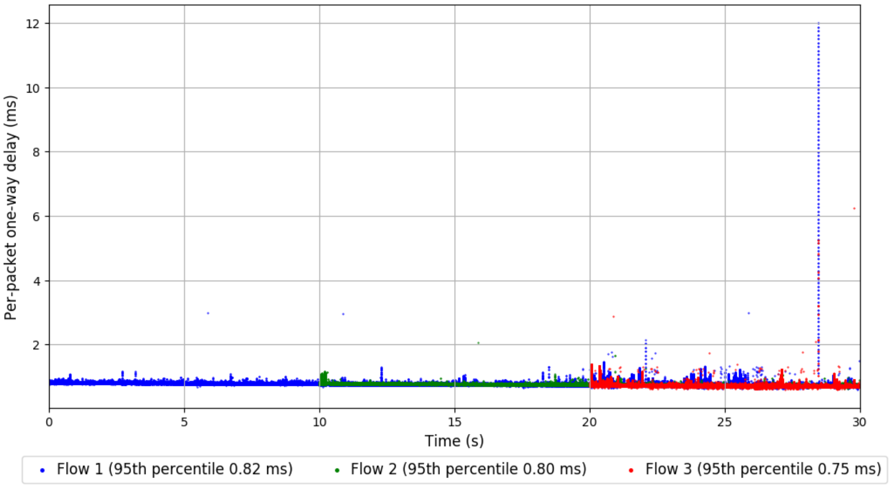




```
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-12 05:09:44
End at: 2019-02-12 05:10:14
Local clock offset: -1.651 ms
Remote clock offset: 0.587 ms

# Below is generated by plot.py at 2019-02-12 07:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 120.74 Mbit/s
95th percentile per-packet one-way delay: 0.812 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 86.26 Mbit/s
95th percentile per-packet one-way delay: 0.816 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 13.15 Mbit/s
95th percentile per-packet one-way delay: 0.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 77.41 Mbit/s
95th percentile per-packet one-way delay: 0.754 ms
Loss rate: 0.02%
```

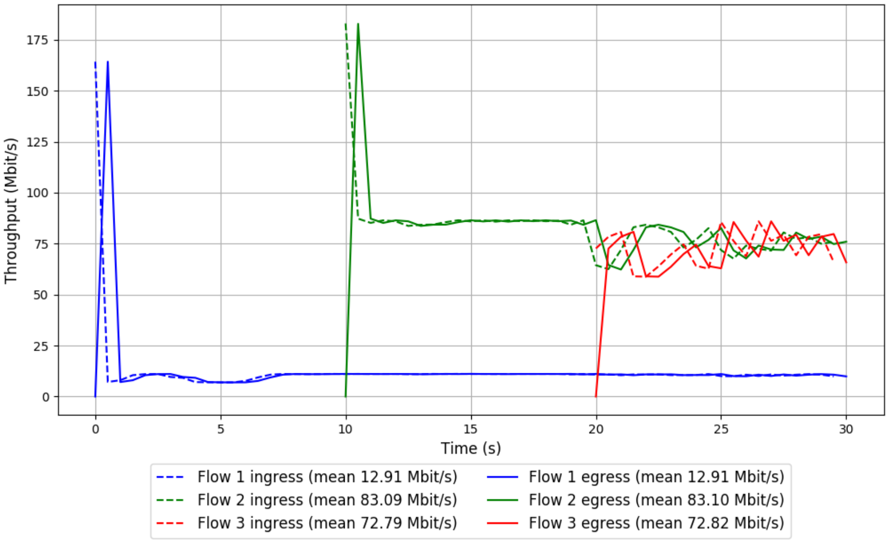
Run 3: Report of TaoVA-100x — Data Link

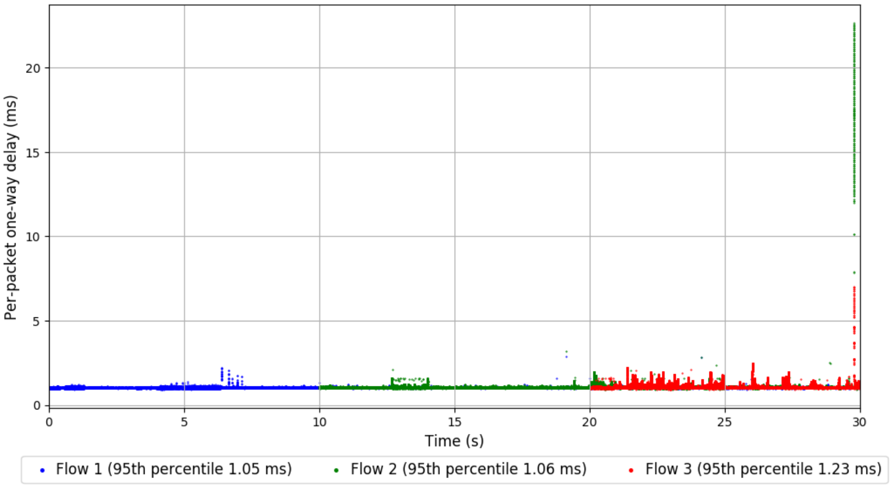




```
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-12 05:40:06
End at: 2019-02-12 05:40:36
Local clock offset: 0.445 ms
Remote clock offset: 0.512 ms

# Below is generated by plot.py at 2019-02-12 07:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.46 Mbit/s
95th percentile per-packet one-way delay: 1.072 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 12.91 Mbit/s
95th percentile per-packet one-way delay: 1.049 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 83.10 Mbit/s
95th percentile per-packet one-way delay: 1.056 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.82 Mbit/s
95th percentile per-packet one-way delay: 1.227 ms
Loss rate: 0.02%
```

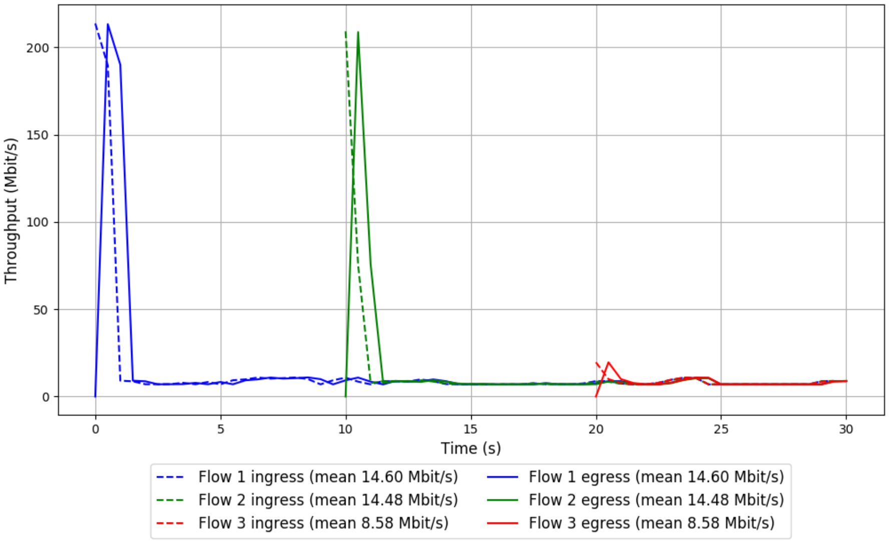
Run 4: Report of TaoVA-100x — Data Link

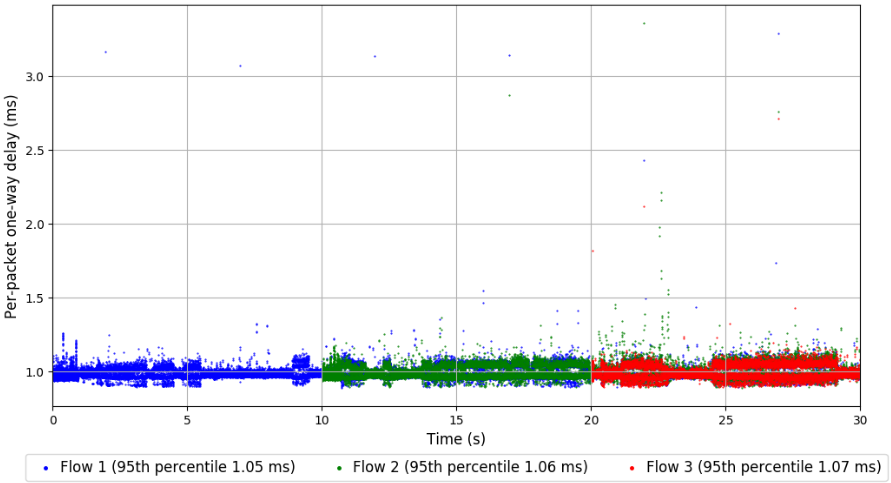




```
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-12 06:10:20
End at: 2019-02-12 06:10:50
Local clock offset: 0.393 ms
Remote clock offset: 0.108 ms

# Below is generated by plot.py at 2019-02-12 07:35:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 27.09 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 14.60 Mbit/s
95th percentile per-packet one-way delay: 1.051 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 14.48 Mbit/s
95th percentile per-packet one-way delay: 1.063 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 1.067 ms
Loss rate: 0.03%
```

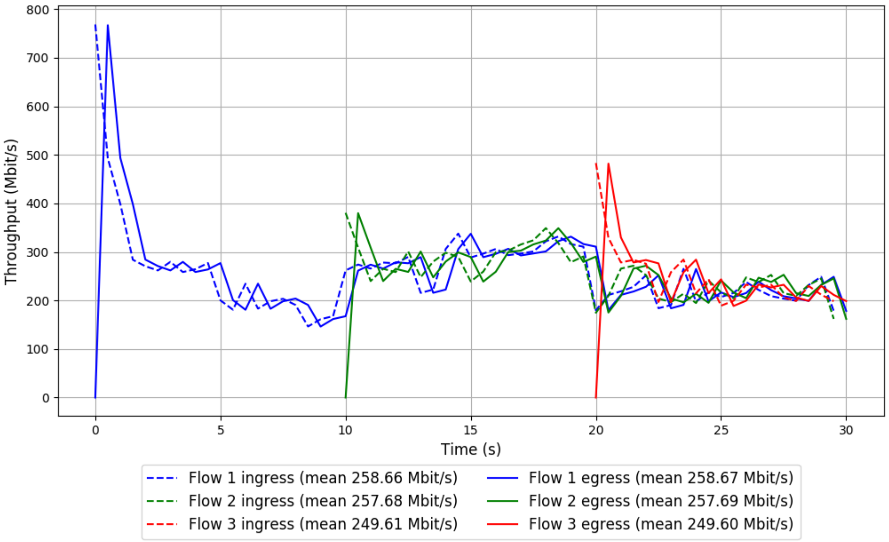
Run 5: Report of TaoVA-100x — Data Link

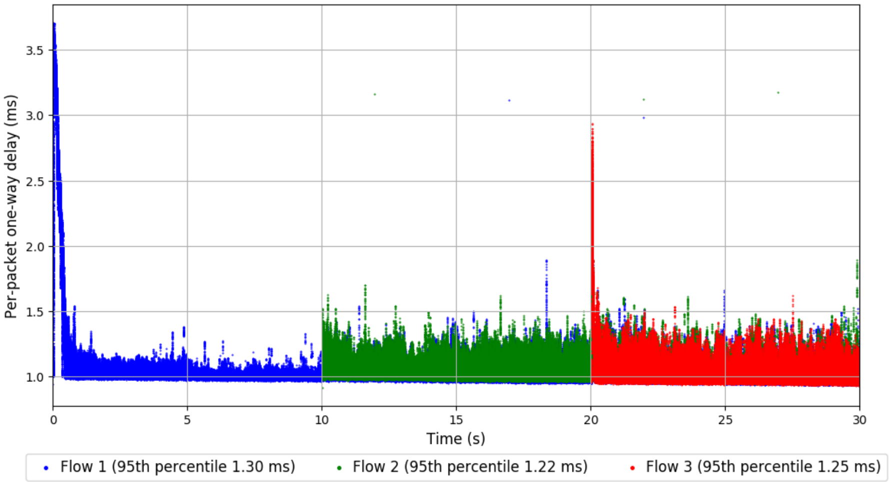




```
Run 1: Statistics of TCP Vegas

Start at: 2019-02-12 04:16:02
End at: 2019-02-12 04:16:32
Local clock offset: 0.172 ms
Remote clock offset: 1.244 ms

# Below is generated by plot.py at 2019-02-12 07:38:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 513.25 Mbit/s
95th percentile per-packet one-way delay: 1.243 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 258.67 Mbit/s
95th percentile per-packet one-way delay: 1.297 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 257.69 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 249.60 Mbit/s
95th percentile per-packet one-way delay: 1.247 ms
Loss rate: 0.01%
```

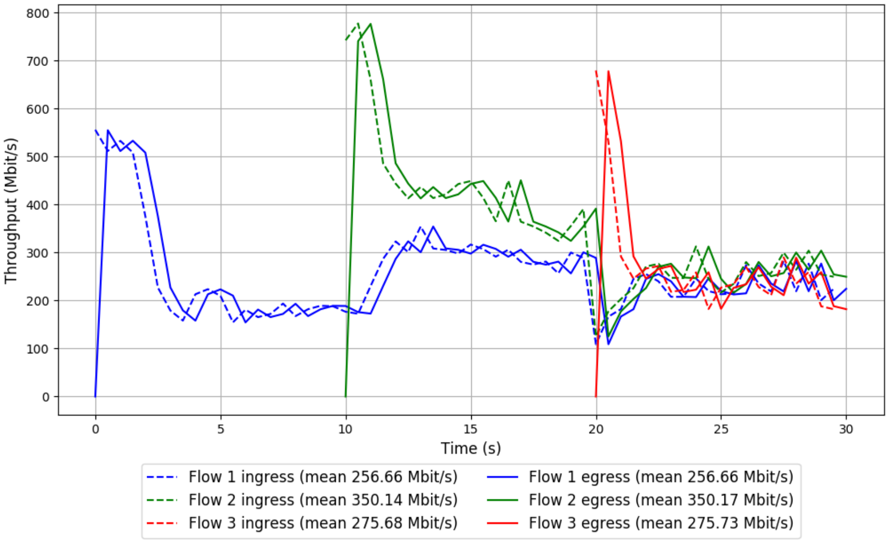
Run 1: Report of TCP Vegas — Data Link

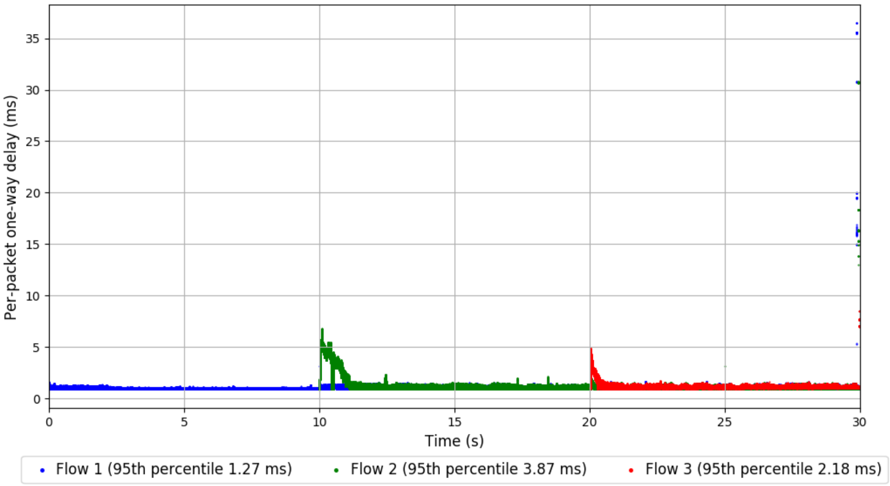




```
Run 2: Statistics of TCP Vegas

Start at: 2019-02-12 04:46:19
End at: 2019-02-12 04:46:49
Local clock offset: -2.212 ms
Remote clock offset: 0.571 ms

# Below is generated by plot.py at 2019-02-12 07:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 581.54 Mbit/s
95th percentile per-packet one-way delay: 2.025 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 256.66 Mbit/s
95th percentile per-packet one-way delay: 1.269 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 350.17 Mbit/s
95th percentile per-packet one-way delay: 3.870 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 275.73 Mbit/s
95th percentile per-packet one-way delay: 2.176 ms
Loss rate: 0.01%
```

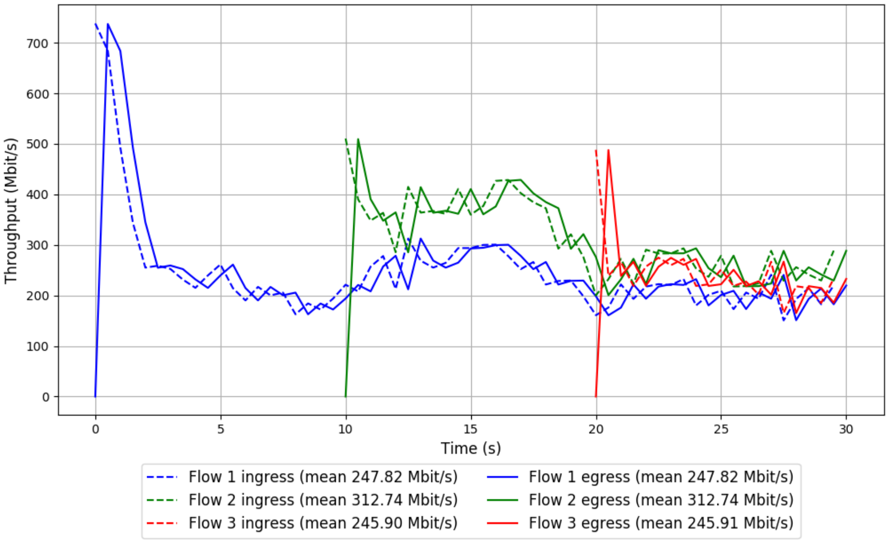
Run 2: Report of TCP Vegas — Data Link

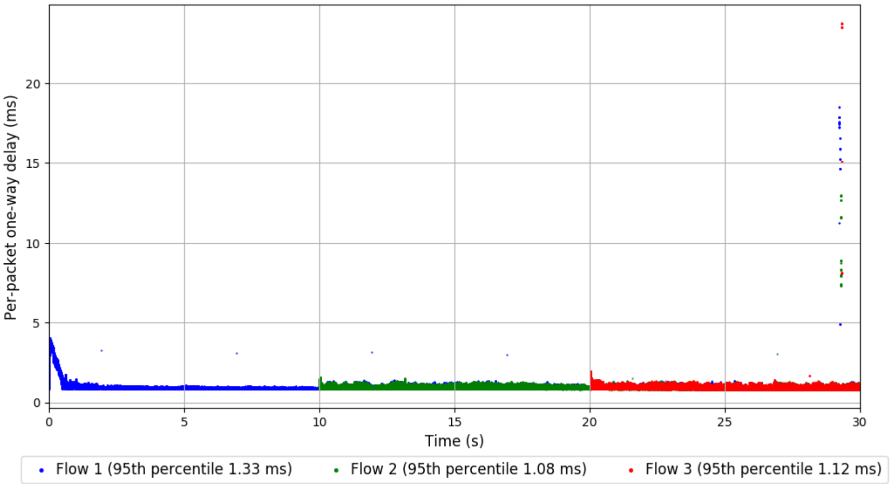




```
Run 3: Statistics of TCP Vegas

Start at: 2019-02-12 05:16:35
End at: 2019-02-12 05:17:05
Local clock offset: -0.438 ms
Remote clock offset: 0.568 ms

# Below is generated by plot.py at 2019-02-12 07:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 537.87 Mbit/s
95th percentile per-packet one-way delay: 1.129 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 247.82 Mbit/s
95th percentile per-packet one-way delay: 1.327 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 312.74 Mbit/s
95th percentile per-packet one-way delay: 1.080 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 245.91 Mbit/s
95th percentile per-packet one-way delay: 1.122 ms
Loss rate: 0.02%
```

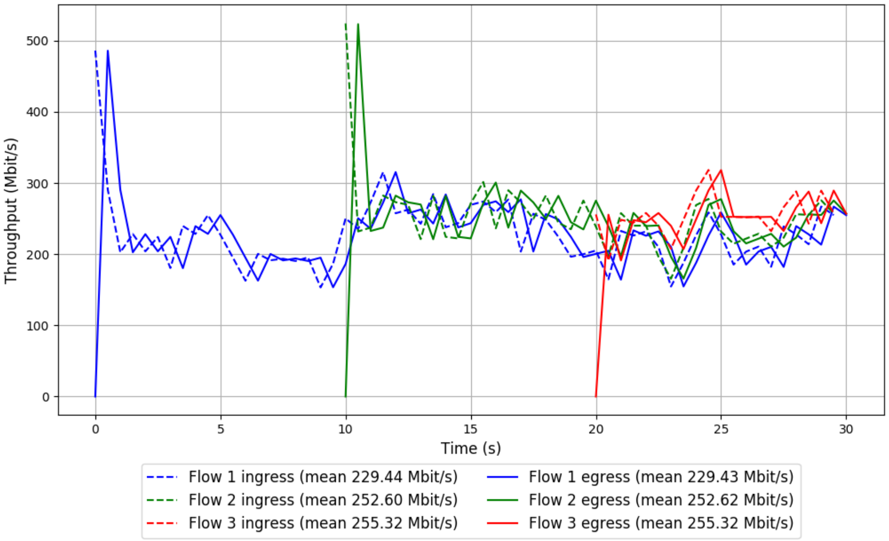
Run 3: Report of TCP Vegas — Data Link

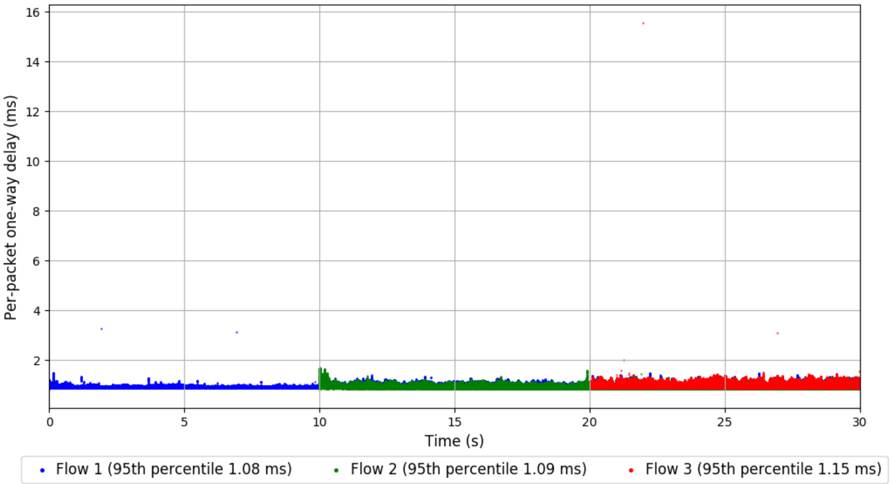




```
Run 4: Statistics of TCP Vegas

Start at: 2019-02-12 05:46:58
End at: 2019-02-12 05:47:28
Local clock offset: 0.399 ms
Remote clock offset: 0.606 ms

# Below is generated by plot.py at 2019-02-12 07:39:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 482.58 Mbit/s
95th percentile per-packet one-way delay: 1.103 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 229.43 Mbit/s
95th percentile per-packet one-way delay: 1.081 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 252.62 Mbit/s
95th percentile per-packet one-way delay: 1.095 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 255.32 Mbit/s
95th percentile per-packet one-way delay: 1.148 ms
Loss rate: 0.01%
```

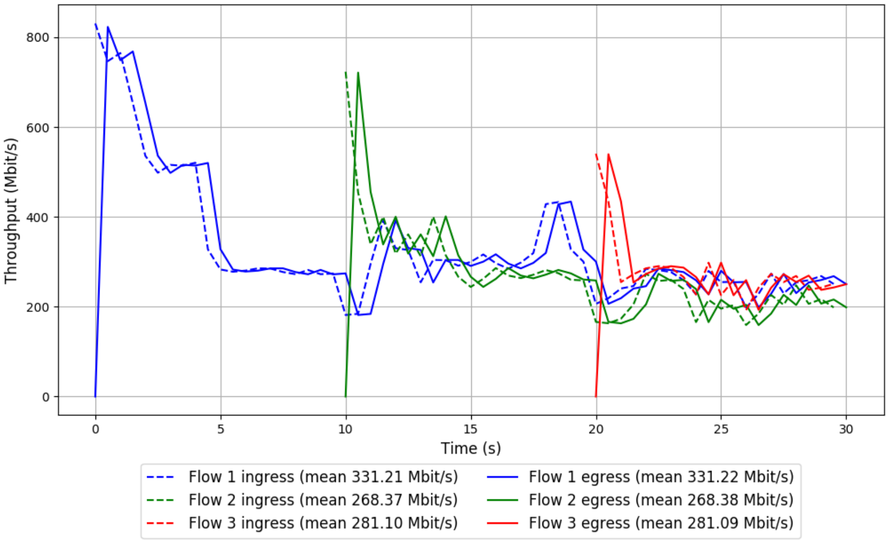
Run 4: Report of TCP Vegas — Data Link

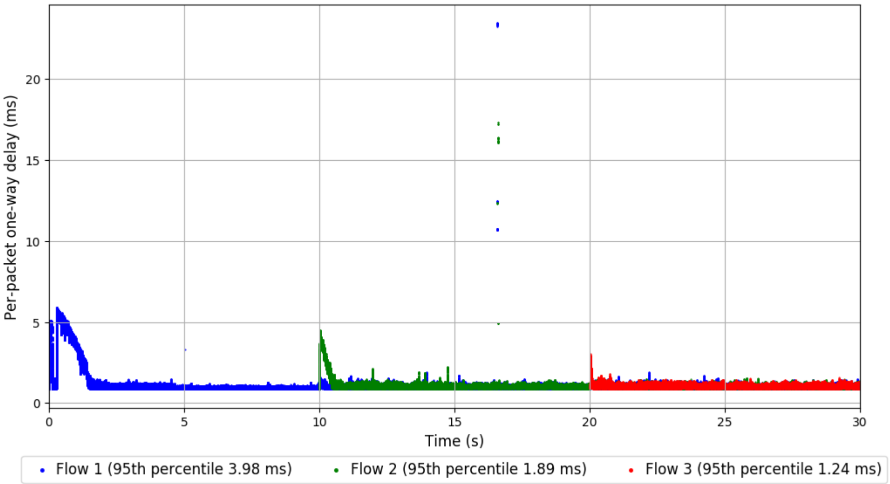




```
Run 5: Statistics of TCP Vegas

Start at: 2019-02-12 06:17:05
End at: 2019-02-12 06:17:35
Local clock offset: 0.348 ms
Remote clock offset: 0.135 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 603.49 Mbit/s
95th percentile per-packet one-way delay: 2.869 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 331.22 Mbit/s
95th percentile per-packet one-way delay: 3.981 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 268.38 Mbit/s
95th percentile per-packet one-way delay: 1.894 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 281.09 Mbit/s
95th percentile per-packet one-way delay: 1.241 ms
Loss rate: 0.02%
```

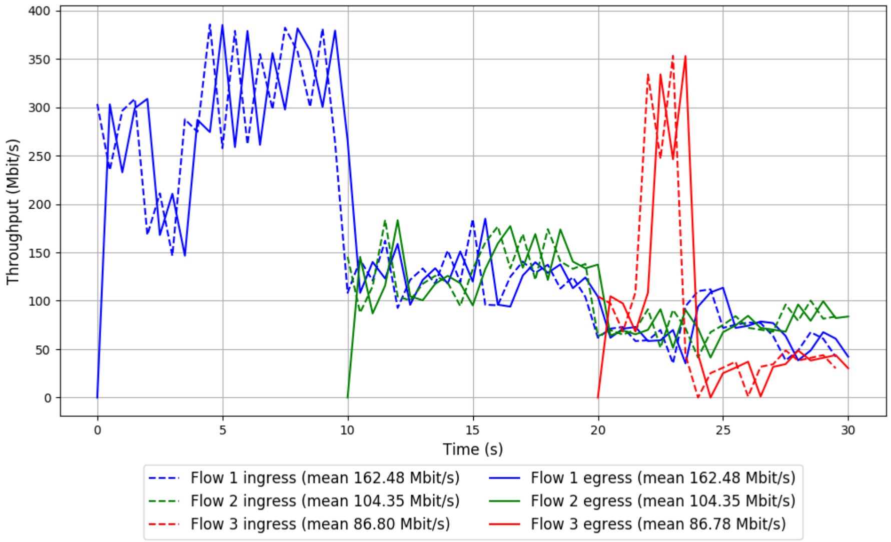
Run 5: Report of TCP Vegas — Data Link

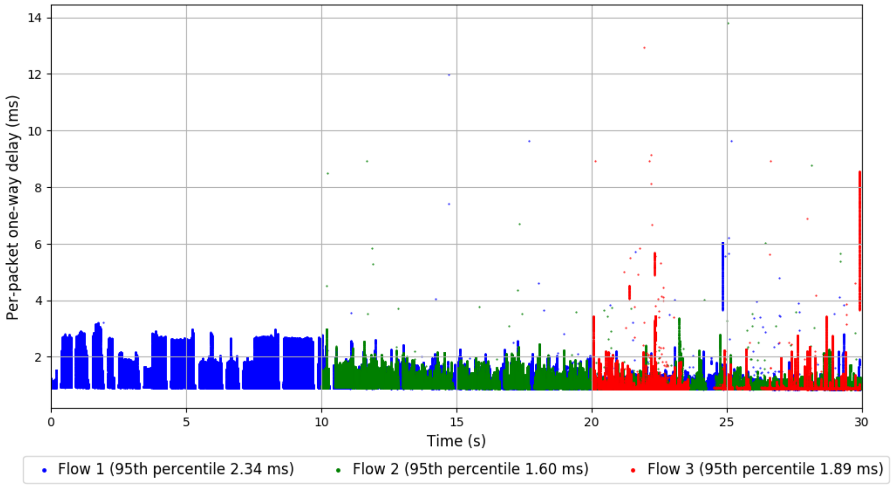




```
Run 1: Statistics of Verus

Start at: 2019-02-12 04:13:17
End at: 2019-02-12 04:13:47
Local clock offset: 0.133 ms
Remote clock offset: 1.638 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.65 Mbit/s
95th percentile per-packet one-way delay: 2.137 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 162.48 Mbit/s
95th percentile per-packet one-way delay: 2.344 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 104.35 Mbit/s
95th percentile per-packet one-way delay: 1.598 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.78 Mbit/s
95th percentile per-packet one-way delay: 1.891 ms
Loss rate: 0.00%
```

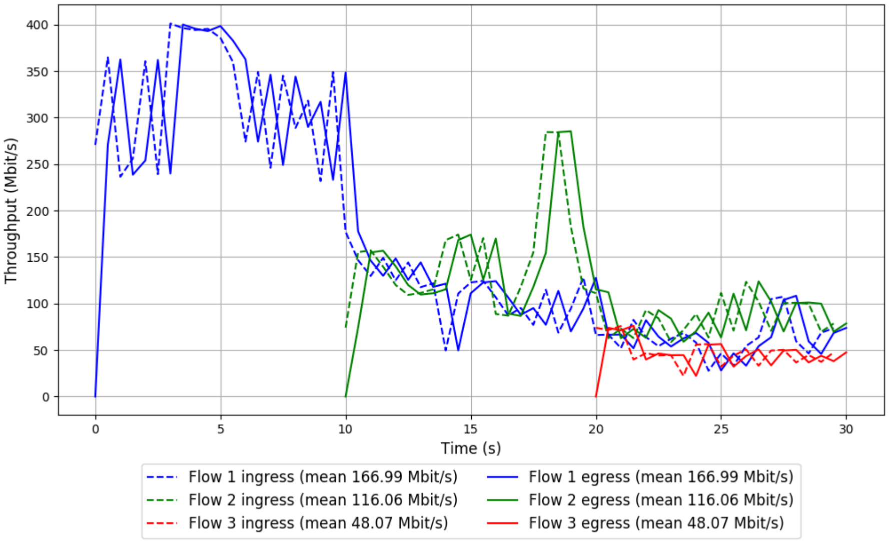
Run 1: Report of Verus — Data Link

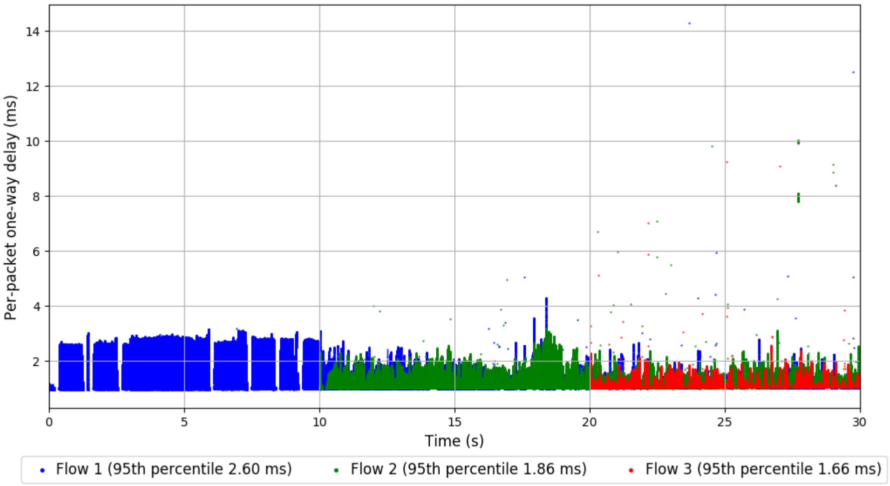




```
Run 2: Statistics of Verus

Start at: 2019-02-12 04:43:33
End at: 2019-02-12 04:44:03
Local clock offset: -1.845 ms
Remote clock offset: 0.608 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 260.23 Mbit/s
95th percentile per-packet one-way delay: 2.484 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 166.99 Mbit/s
95th percentile per-packet one-way delay: 2.595 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 116.06 Mbit/s
95th percentile per-packet one-way delay: 1.859 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 48.07 Mbit/s
95th percentile per-packet one-way delay: 1.655 ms
Loss rate: 0.00%
```

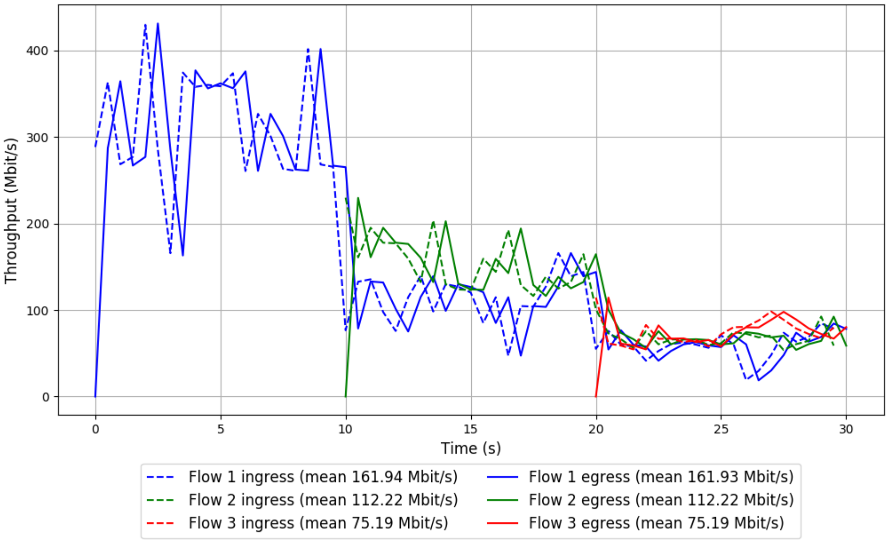
Run 2: Report of Verus — Data Link

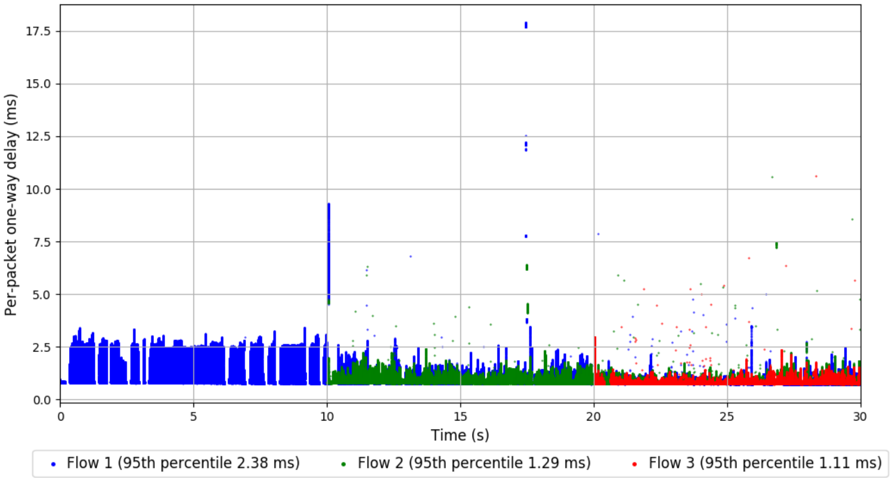




```
Run 3: Statistics of Verus

Start at: 2019-02-12 05:13:53
End at: 2019-02-12 05:14:23
Local clock offset: -0.83 ms
Remote clock offset: 0.64 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 261.65 Mbit/s
95th percentile per-packet one-way delay: 2.238 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 161.93 Mbit/s
95th percentile per-packet one-way delay: 2.382 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 112.22 Mbit/s
95th percentile per-packet one-way delay: 1.287 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 75.19 Mbit/s
95th percentile per-packet one-way delay: 1.114 ms
Loss rate: 0.00%
```

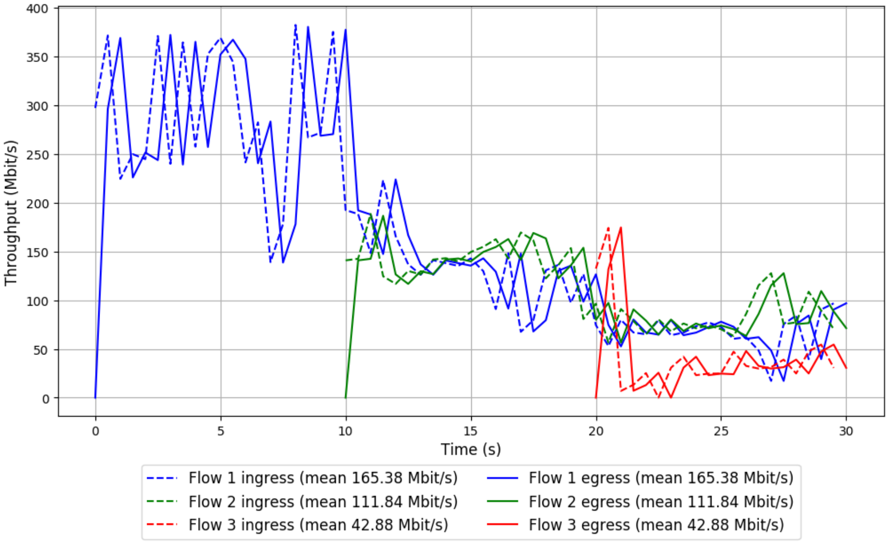
Run 3: Report of Verus — Data Link

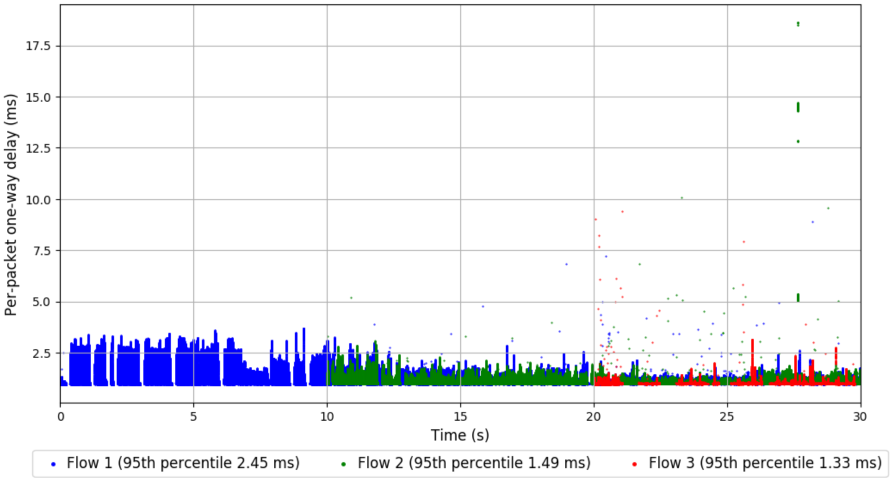




```
Run 4: Statistics of Verus

Start at: 2019-02-12 05:44:12
End at: 2019-02-12 05:44:42
Local clock offset: 0.416 ms
Remote clock offset: 0.565 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.81 Mbit/s
95th percentile per-packet one-way delay: 2.260 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 165.38 Mbit/s
95th percentile per-packet one-way delay: 2.449 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 111.84 Mbit/s
95th percentile per-packet one-way delay: 1.493 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.88 Mbit/s
95th percentile per-packet one-way delay: 1.327 ms
Loss rate: 0.00%
```

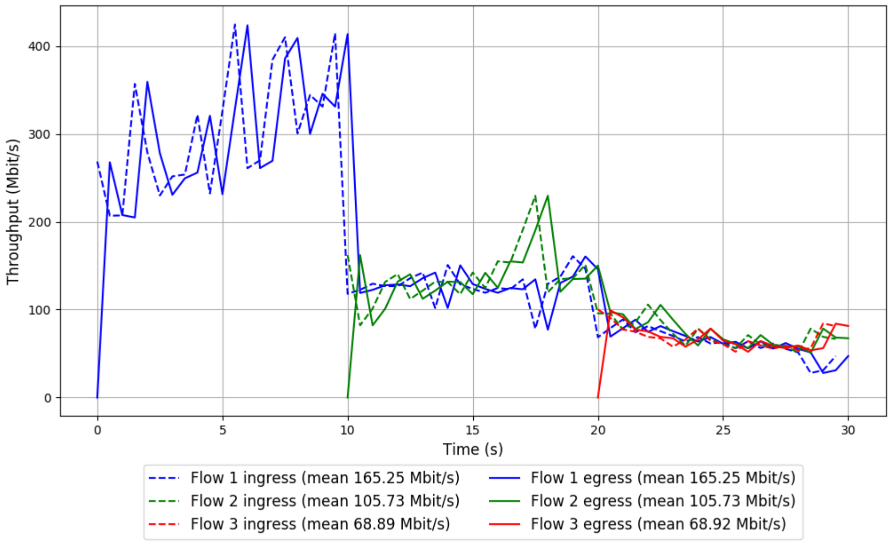
Run 4: Report of Verus — Data Link

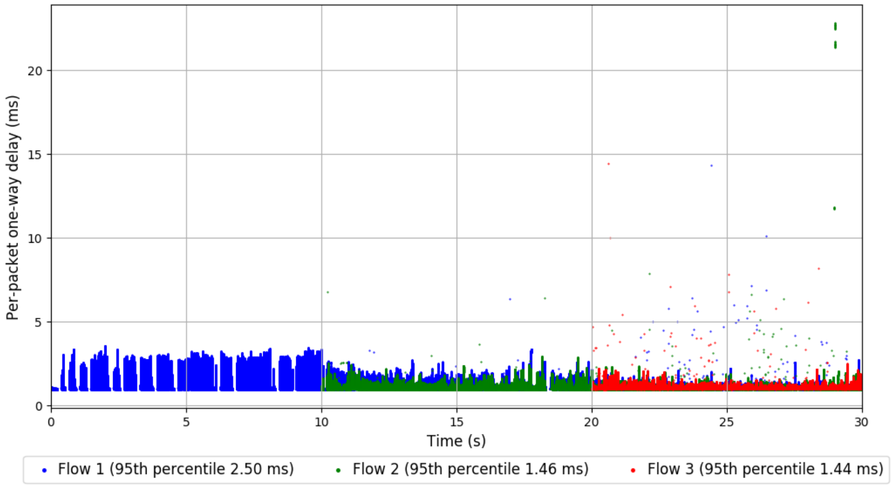




```
Run 5: Statistics of Verus

Start at: 2019-02-12 06:14:21
End at: 2019-02-12 06:14:51
Local clock offset: 0.344 ms
Remote clock offset: 0.068 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 258.13 Mbit/s
95th percentile per-packet one-way delay: 2.292 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 165.25 Mbit/s
95th percentile per-packet one-way delay: 2.496 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 105.73 Mbit/s
95th percentile per-packet one-way delay: 1.456 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.92 Mbit/s
95th percentile per-packet one-way delay: 1.443 ms
Loss rate: 0.01%
```

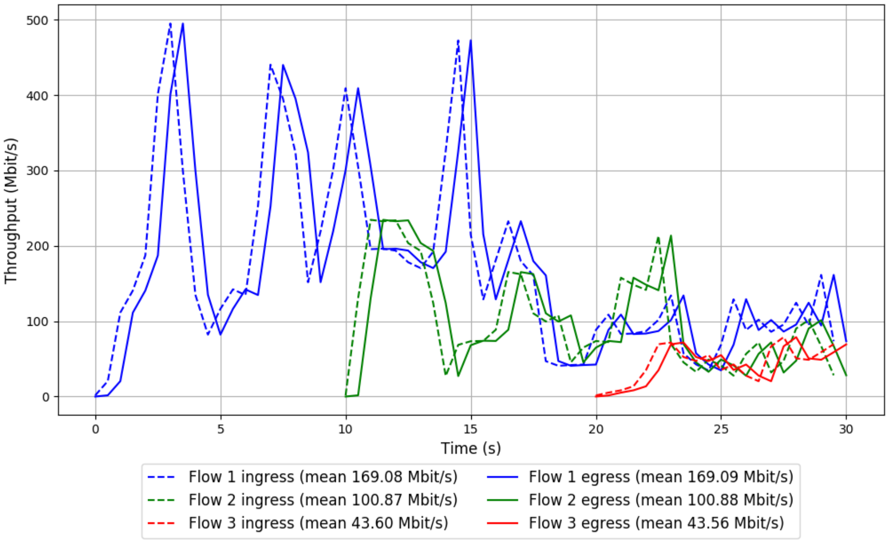
Run 5: Report of Verus — Data Link

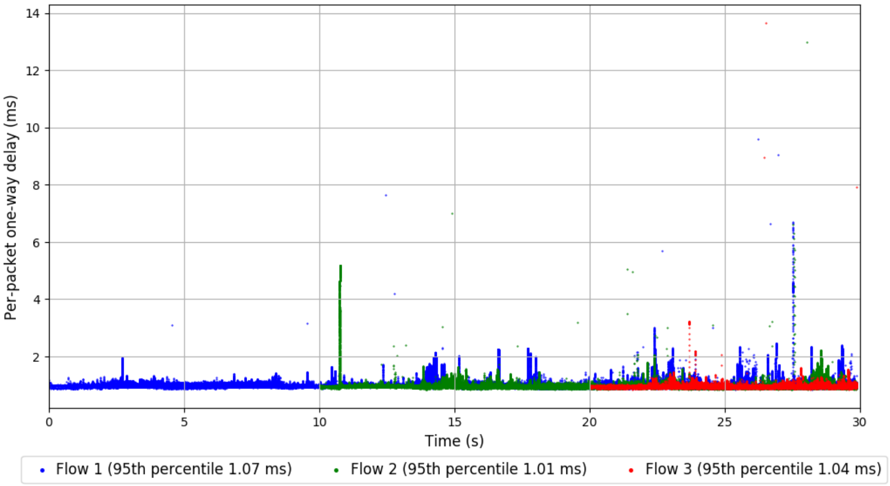




```
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-12 04:28:54
End at: 2019-02-12 04:29:24
Local clock offset: 0.223 ms
Remote clock offset: 0.784 ms

# Below is generated by plot.py at 2019-02-12 07:41:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 250.47 Mbit/s
95th percentile per-packet one-way delay: 1.060 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 169.09 Mbit/s
95th percentile per-packet one-way delay: 1.075 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 100.88 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.56 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.05%
```

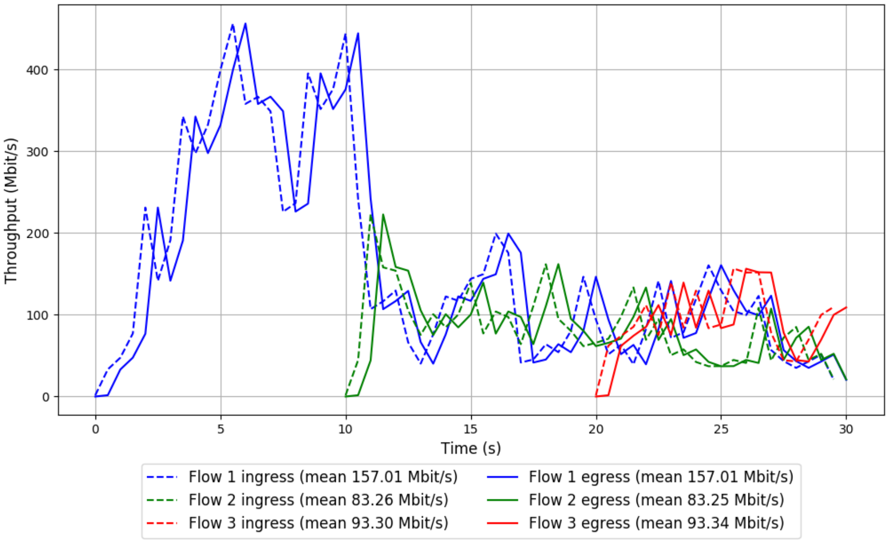
Run 1: Report of PCC-Vivace — Data Link

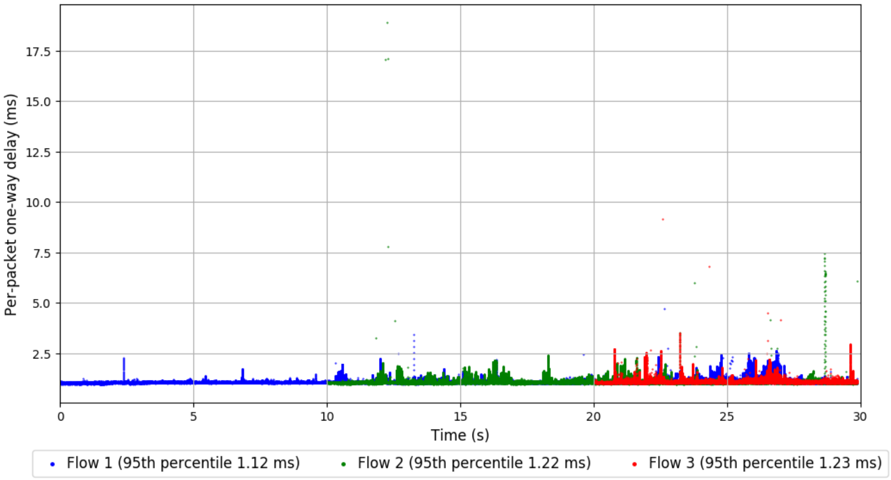




```
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-12 04:59:07
End at: 2019-02-12 04:59:37
Local clock offset: -3.19 ms
Remote clock offset: 0.506 ms

# Below is generated by plot.py at 2019-02-12 07:41:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 243.12 Mbit/s
95th percentile per-packet one-way delay: 1.151 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 157.01 Mbit/s
95th percentile per-packet one-way delay: 1.119 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 83.25 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 93.34 Mbit/s
95th percentile per-packet one-way delay: 1.234 ms
Loss rate: 0.05%
```

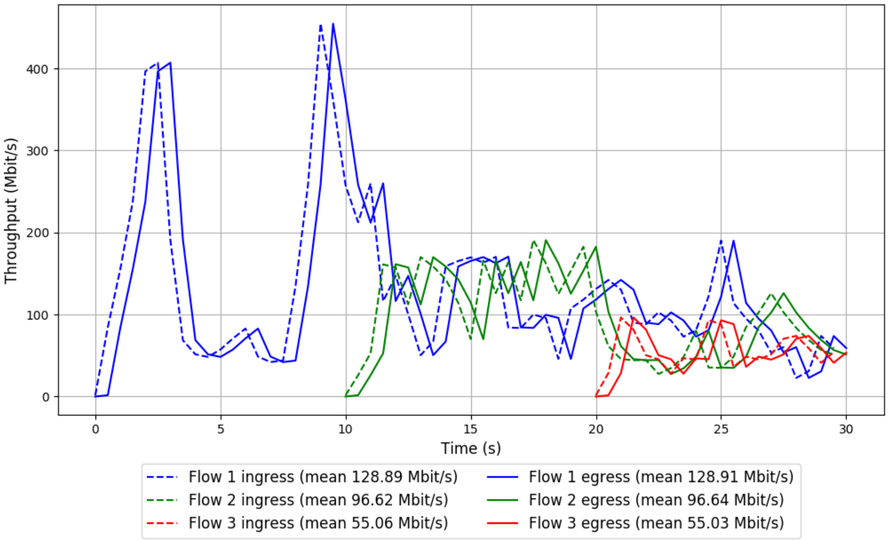
Run 2: Report of PCC-Vivace — Data Link

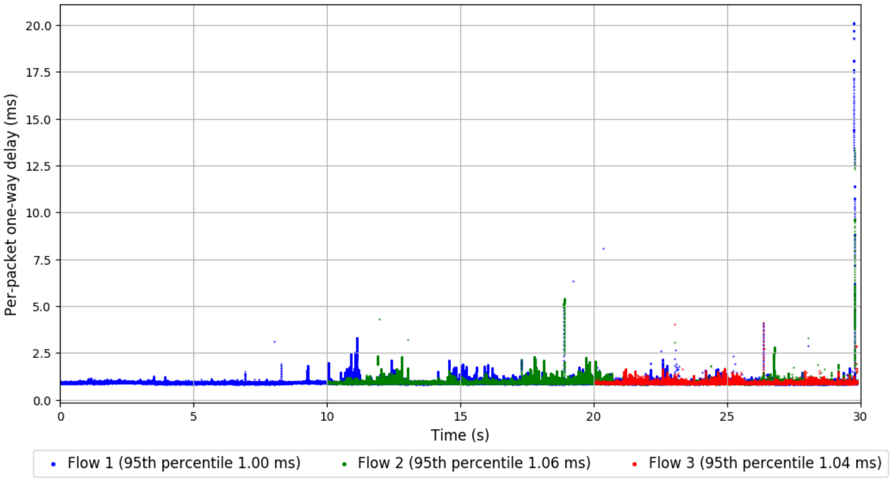




```
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-12 05:29:27
End at: 2019-02-12 05:29:57
Local clock offset: 0.446 ms
Remote clock offset: 0.546 ms

# Below is generated by plot.py at 2019-02-12 07:41:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 211.28 Mbit/s
95th percentile per-packet one-way delay: 1.025 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 128.91 Mbit/s
95th percentile per-packet one-way delay: 1.005 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 96.64 Mbit/s
95th percentile per-packet one-way delay: 1.058 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 55.03 Mbit/s
95th percentile per-packet one-way delay: 1.036 ms
Loss rate: 0.07%
```

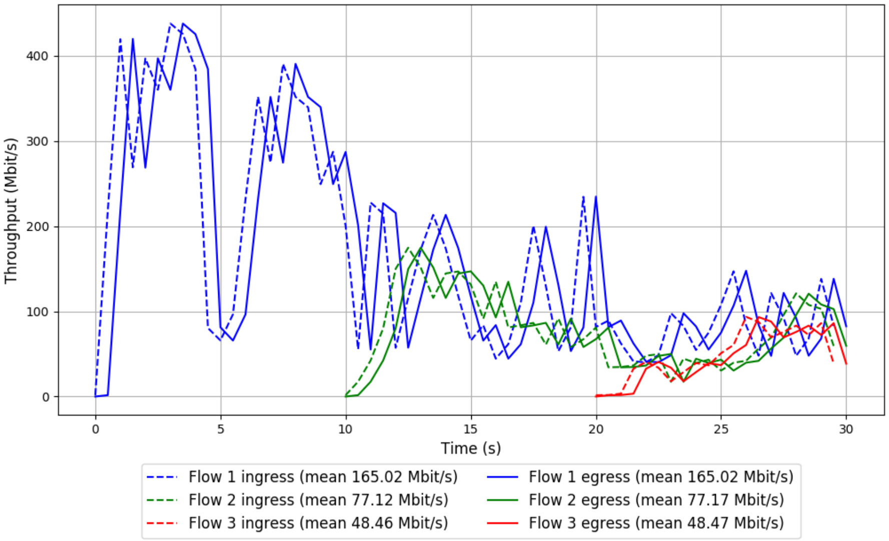
Run 3: Report of PCC-Vivace — Data Link

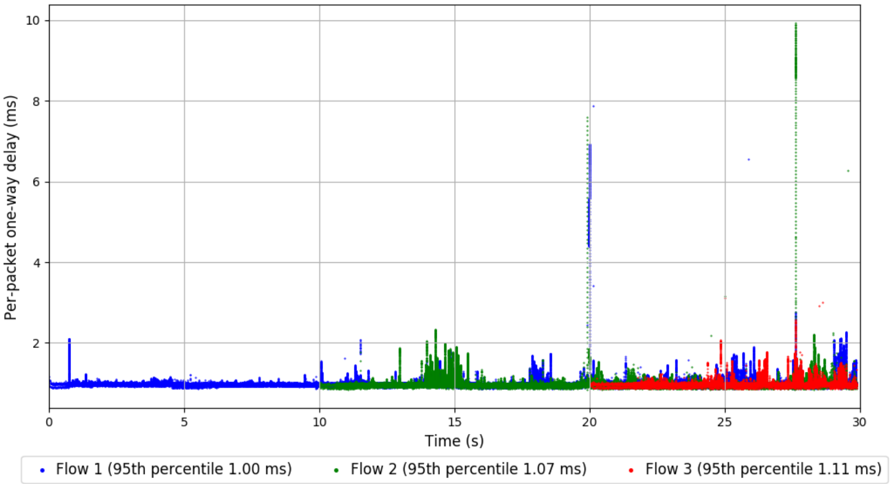




```
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-12 05:59:48
End at: 2019-02-12 06:00:18
Local clock offset: 0.472 ms
Remote clock offset: 0.222 ms

# Below is generated by plot.py at 2019-02-12 07:41:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 232.31 Mbit/s
95th percentile per-packet one-way delay: 1.008 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 165.02 Mbit/s
95th percentile per-packet one-way delay: 0.999 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 77.17 Mbit/s
95th percentile per-packet one-way delay: 1.069 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 48.47 Mbit/s
95th percentile per-packet one-way delay: 1.110 ms
Loss rate: 0.01%
```

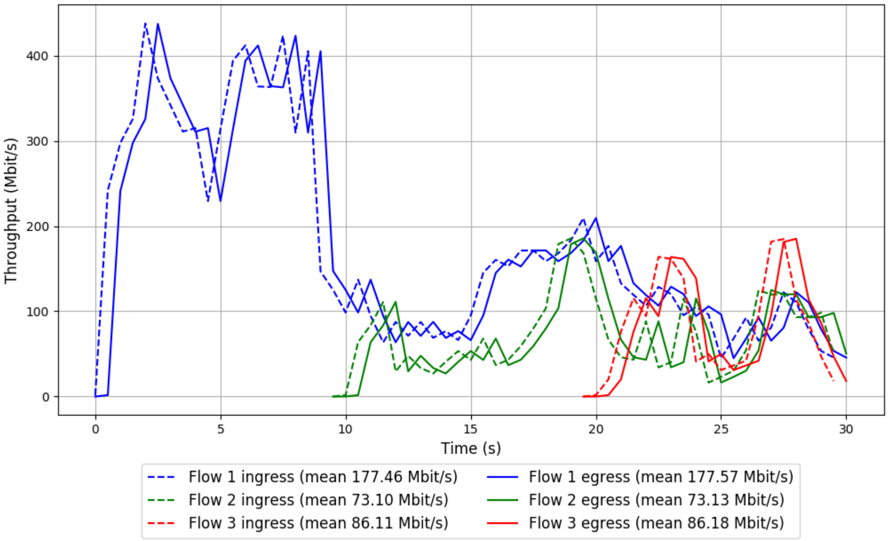
Run 4: Report of PCC-Vivace — Data Link

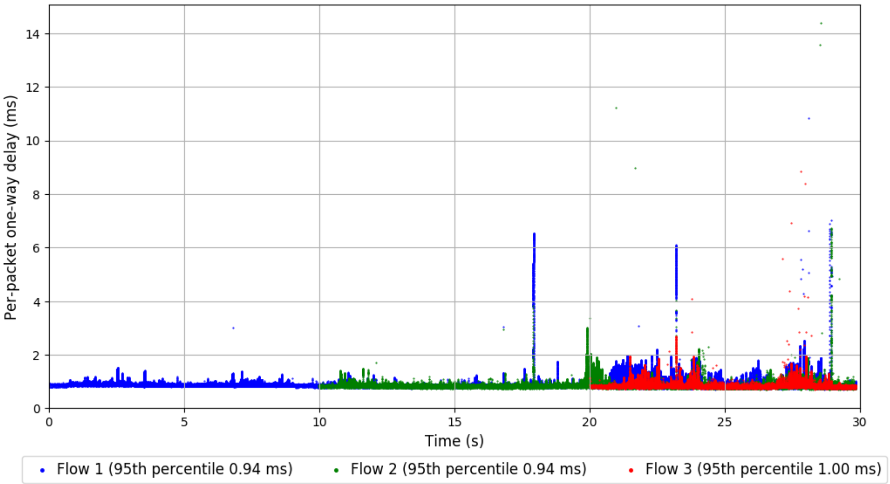




```
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-12 06:29:58
End at: 2019-02-12 06:30:28
Local clock offset: 0.375 ms
Remote clock offset: -2.141 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.67 Mbit/s
95th percentile per-packet one-way delay: 0.950 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 177.57 Mbit/s
95th percentile per-packet one-way delay: 0.942 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 73.13 Mbit/s
95th percentile per-packet one-way delay: 0.944 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 86.18 Mbit/s
95th percentile per-packet one-way delay: 1.003 ms
Loss rate: 0.00%
```

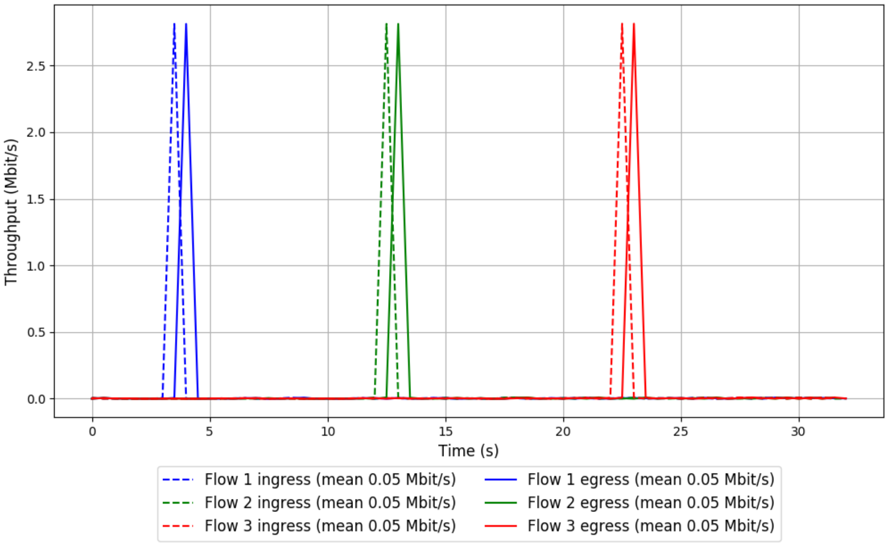
Run 5: Report of PCC-Vivace — Data Link

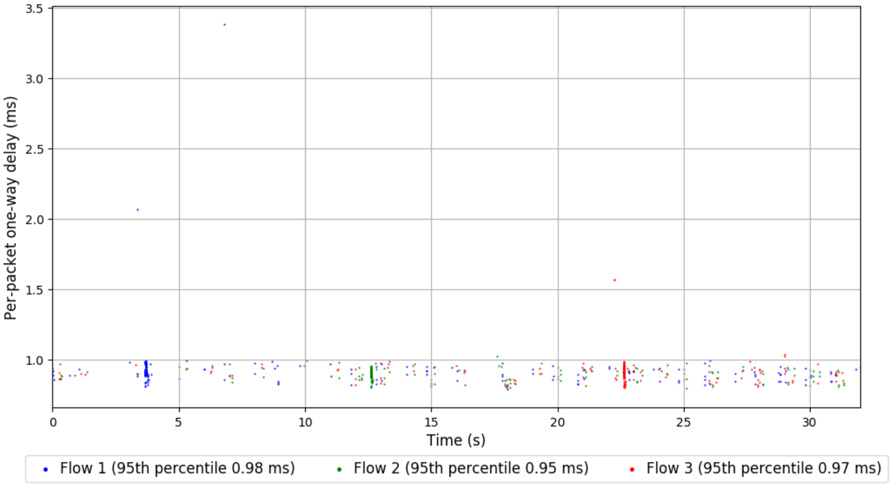




```
Run 1: Statistics of WebRTC media

Start at: 2019-02-12 04:19:03
End at: 2019-02-12 04:19:33
Local clock offset: 0.19 ms
Remote clock offset: 1.106 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 0.973 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.978 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.954 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.970 ms
Loss rate: 0.00%
```

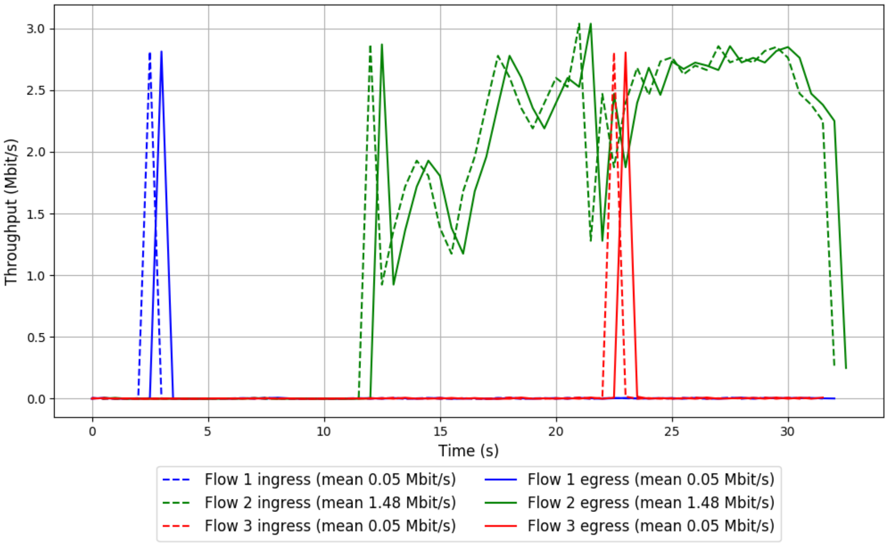
Run 1: Report of WebRTC media — Data Link

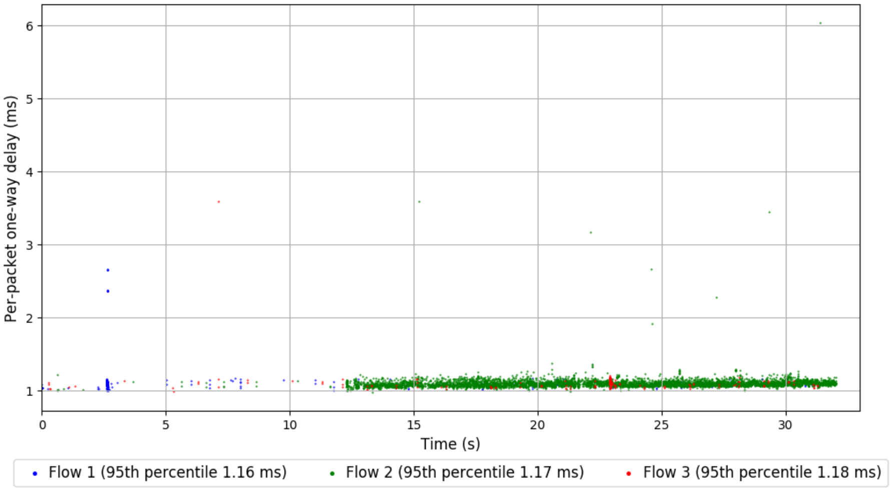




```
Run 2: Statistics of WebRTC media

Start at: 2019-02-12 04:49:21
End at: 2019-02-12 04:49:51
Local clock offset: -2.516 ms
Remote clock offset: 0.473 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 1.55 Mbit/s
95th percentile per-packet one-way delay: 1.168 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.164 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.48 Mbit/s
95th percentile per-packet one-way delay: 1.167 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.175 ms
Loss rate: 0.00%
```

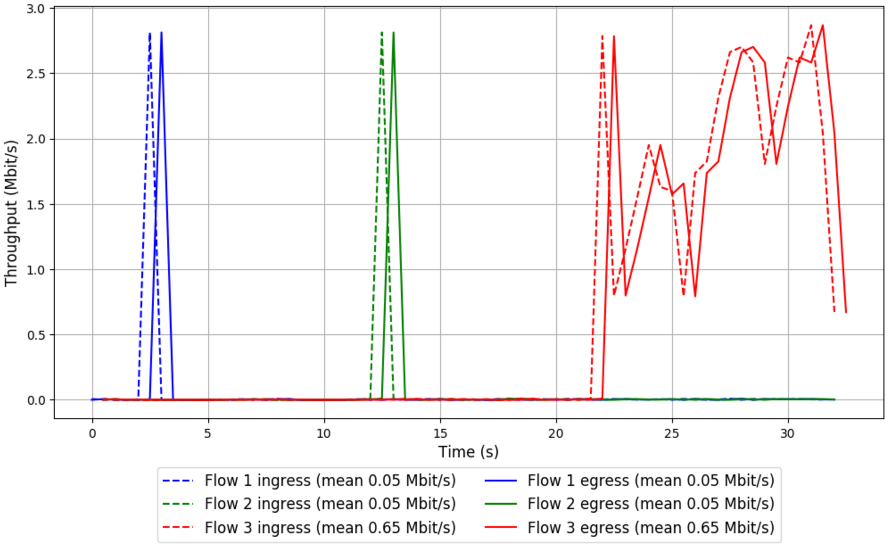
Run 2: Report of WebRTC media — Data Link

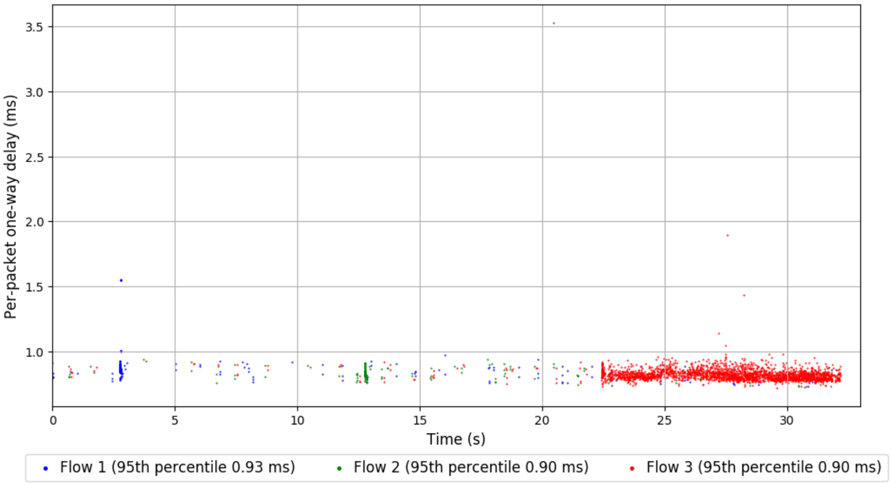




```
Run 3: Statistics of WebRTC media

Start at: 2019-02-12 05:19:37
End at: 2019-02-12 05:20:07
Local clock offset: -0.136 ms
Remote clock offset: 0.601 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.73 Mbit/s
95th percentile per-packet one-way delay: 0.899 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.926 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.899 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.65 Mbit/s
95th percentile per-packet one-way delay: 0.895 ms
Loss rate: 0.00%
```

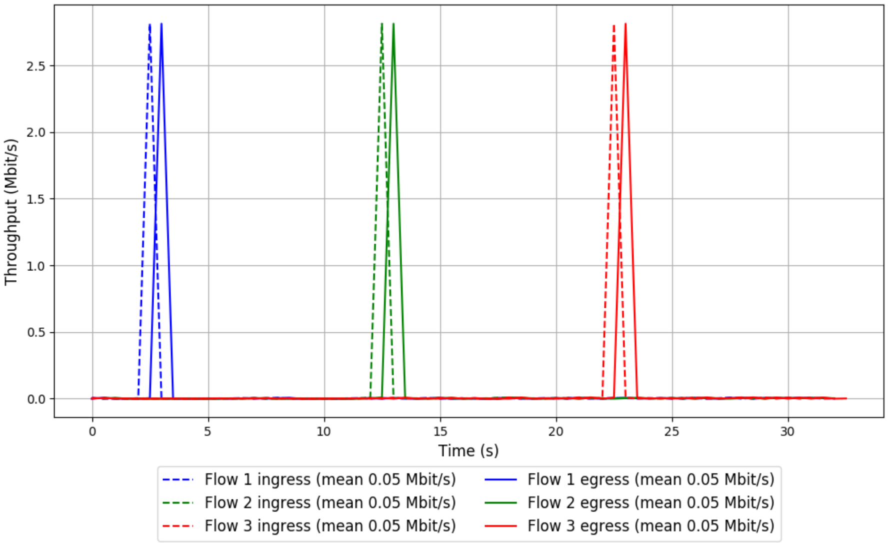
Run 3: Report of WebRTC media — Data Link

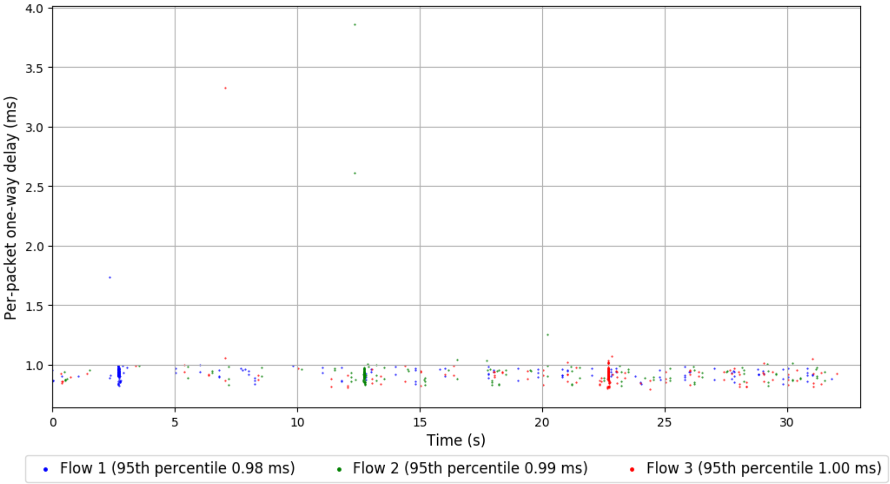




```
Run 4: Statistics of WebRTC media

Start at: 2019-02-12 05:49:58
End at: 2019-02-12 05:50:28
Local clock offset: 0.399 ms
Remote clock offset: 0.478 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 0.988 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.983 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.988 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 1.002 ms
Loss rate: 0.00%
```

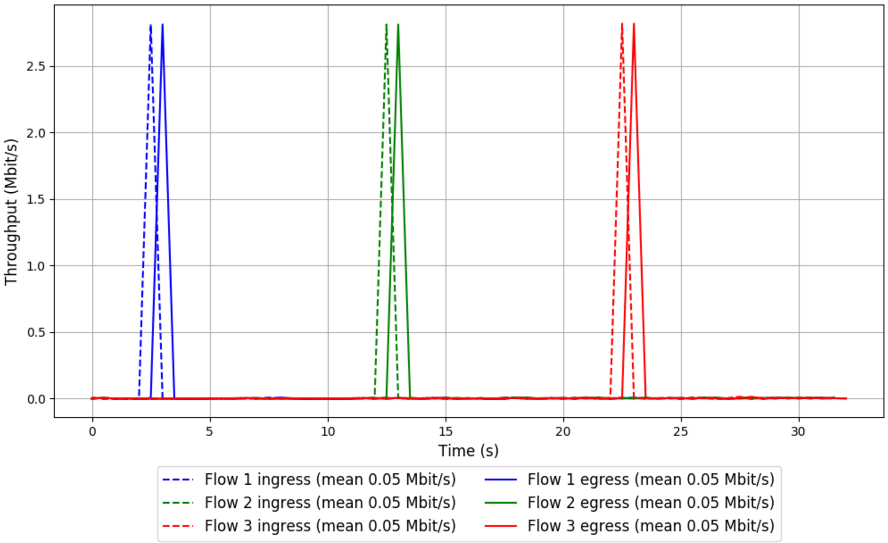
Run 4: Report of WebRTC media — Data Link



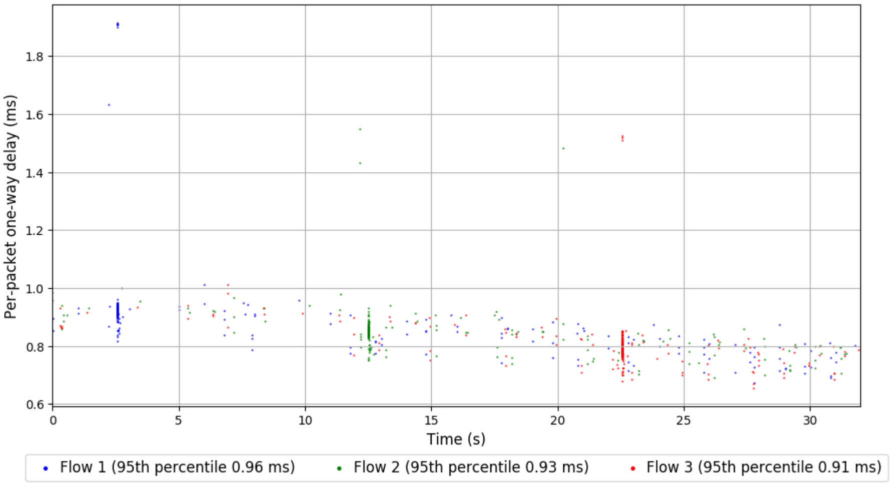


```
Run 5: Statistics of WebRTC media

Start at: 2019-02-12 06:20:09
End at: 2019-02-12 06:20:39
Local clock offset: 0.33 ms
Remote clock offset: 0.072 ms

# Below is generated by plot.py at 2019-02-12 07:41:29
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 0.941 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.959 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.930 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 0.910 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



Throughput (Mbit/s)
0.0
0.5
1.0
1.5
2.0
2.5
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 0.05 Mbit/s)
Flow 2 ingress (mean 0.05 Mbit/s)
Flow 3 ingress (mean 0.05 Mbit/s)
Flow 1 egress (mean 0.05 Mbit/s)
Flow 2 egress (mean 0.05 Mbit/s)
Flow 3 egress (mean 0.05 Mbit/s)



Per-packet one-way delay (ms)
0.6
0.8
1.0
1.2
1.4
1.6
1.8
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 0.96 ms)
Flow 2 (95th percentile 0.93 ms)
Flow 3 (95th percentile 0.91 ms)