Pantheon Report

Generated at 2018-05-22 06:44:28 (UTC).

Data path: AWS Brazil 1 Ethernet (*local*) →Brazil Ethernet (*remote*).

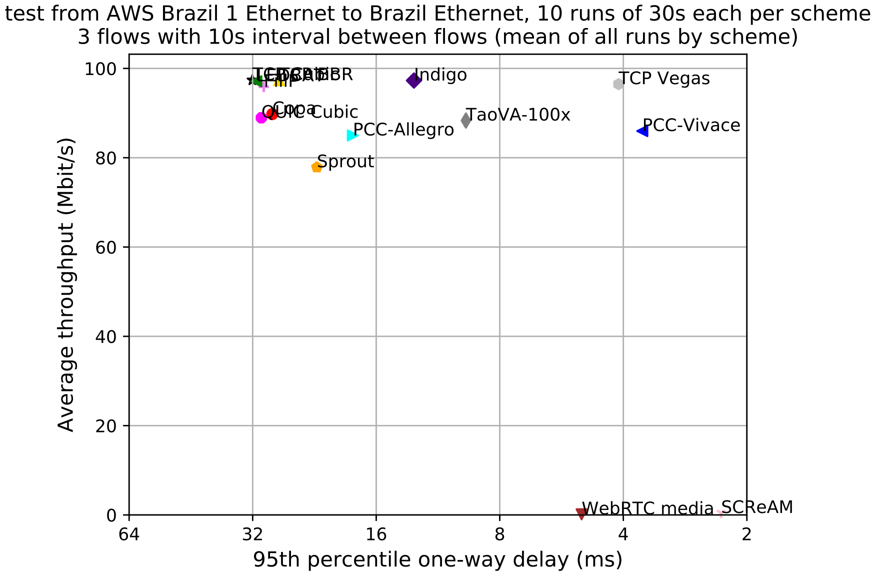
Repeated the test of 16 congestion control schemes 10 times.

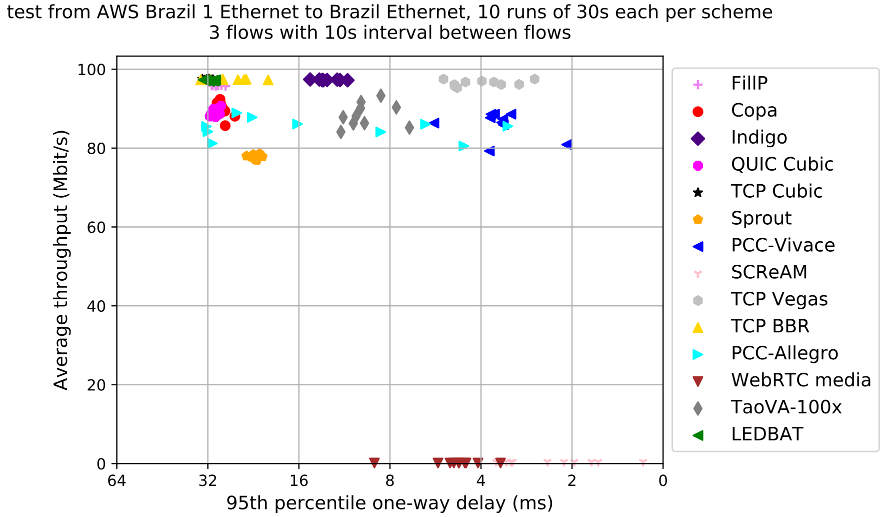
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

Increased UDP receive buffer to 16 MB (default) and 32 MB (max).

NTP offsets were measured against `gps.ntp.br` and have been applied to correct the timestamps in logs.

```
Git summary:
branch: master @ 2d1d4407e851ba626e5ca4626a306105793df686
third_party/fillp @ d47f4fa1b454a5e3c0537115c5a28436dbd4b834
third_party/genericCC @ c7966e494a929986eaa5a9c169a7f381fe1bbbe5
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ 6f038ed31259d366f9840f65b82cbe8f464b1b39
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
third_party/sprout @ c838669682f0c19f6baf92afc9a596a406d48c1f
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/vivace @ 2baf86211435ae071a32f96b7d8c504587f5d7f4
third_party/webrtc @ 3f0cc2a9061a41b6f9dde4735770d143a1fa2851
```


test from AWS Brazil 1 Ethernet to Brazil Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
100
80
60
40
20
0
64
32
16
8
4
2
TCP Cubic
LEDBAT
TCP BBR
FillP
Indigo
TCP Vegas
Copa
QUIC Cubic
TaoVA-100x
PCC-Allegro
PCC-Vivace
Sprout
WebRTC media
SCReAM


test from AWS Brazil 1 Ethernet to Brazil Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
100
80
60
40
20
0
64
32
16
8
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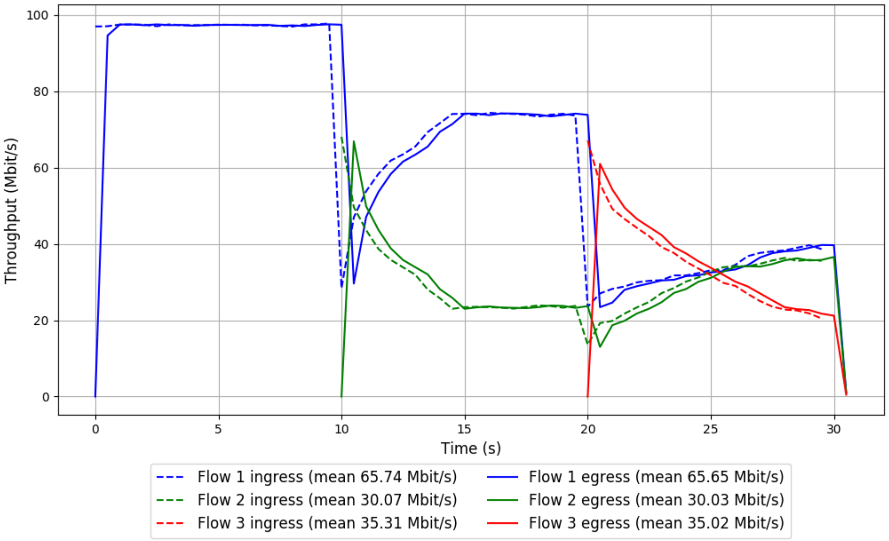
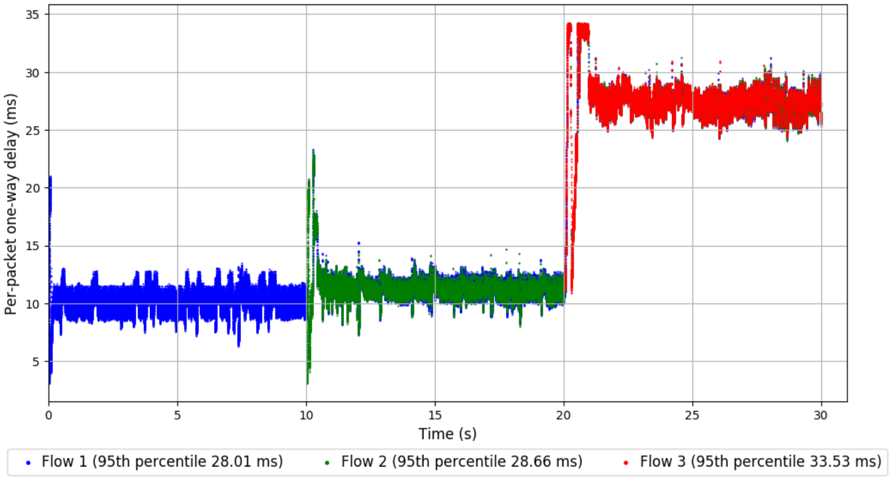
0
FillP
Copa
Indigo
QUIC Cubic
TCP Cubic
Sprout
PCC-Vivace
SCReAM
TCP Vegas
TCP BBR
PCC-Allegro
WebRTC media
TaoVA-100x
LEDBAT

scheme	# runs	mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
		flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	73.60	25.24	20.88	27.48	27.09	30.97	0.24	0.13	1.31
Copa	10	53.55	39.41	29.95	27.90	28.99	29.56	0.01	0.02	0.04
TCP Cubic	10	65.95	34.17	26.17	31.81	32.17	32.08	0.03	0.08	0.17
FillP	10	51.28	48.96	36.36	29.44	29.55	29.57	11.80	20.97	25.60
Indigo	10	47.27	40.18	71.78	10.85	12.77	13.51	0.00	0.00	0.00
LEDBAT	10	60.92	39.11	30.76	31.03	31.53	31.59	0.04	0.08	0.11
PCC-Allegro	10	65.83	21.22	15.31	14.48	21.36	21.75	0.05	0.08	0.19
PCC-Expr	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
QUIC Cubic	10	56.17	34.88	29.25	29.78	30.77	30.70	0.16	0.22	0.29
SCReAM	10	0.22	0.22	0.22	1.49	1.88	1.27	0.00	0.00	0.00
Sprout	10	42.30	38.11	30.91	20.78	22.26	24.41	0.00	0.00	0.01
TaoVA-100x	10	54.24	33.72	34.96	8.56	10.46	11.12	0.01	0.05	0.20
TCP Vegas	10	53.55	42.95	43.08	4.64	3.46	3.76	0.00	0.00	0.00
Verus	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PCC-Vivace	10	55.18	33.54	25.70	3.07	6.35	5.16	0.01	0.04	0.00
WebRTC media	10	0.05	0.05	0.05	4.16	4.77	5.18	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2018-05-22 03:27:57
End at: 2018-05-22 03:28:27
Local clock offset: -6.218 ms
Remote clock offset: -2.493 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 28.538 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 65.65 Mbit/s
95th percentile per-packet one-way delay: 28.008 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 30.03 Mbit/s
95th percentile per-packet one-way delay: 28.660 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 35.02 Mbit/s
95th percentile per-packet one-way delay: 33.527 ms
Loss rate: 0.66%
```

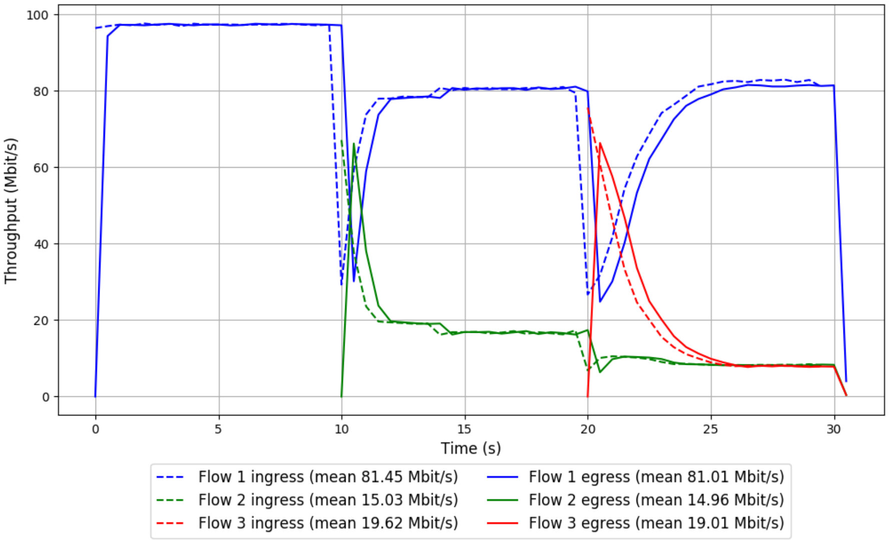
Run 1: Report of TCP BBR — Data Link

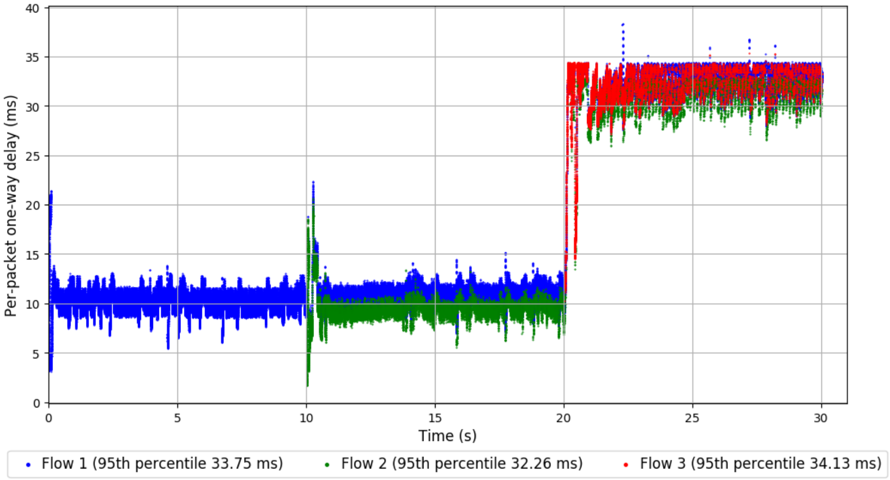




```
Run 2: Statistics of TCP BBR

Start at: 2018-05-22 03:45:48
End at: 2018-05-22 03:46:19
Local clock offset: -6.492 ms
Remote clock offset: -4.411 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 33.779 ms
Loss rate: 0.59%
-- Flow 1:
Average throughput: 81.01 Mbit/s
95th percentile per-packet one-way delay: 33.753 ms
Loss rate: 0.44%
-- Flow 2:
Average throughput: 14.96 Mbit/s
95th percentile per-packet one-way delay: 32.256 ms
Loss rate: 0.35%
-- Flow 3:
Average throughput: 19.01 Mbit/s
95th percentile per-packet one-way delay: 34.131 ms
Loss rate: 2.87%
```

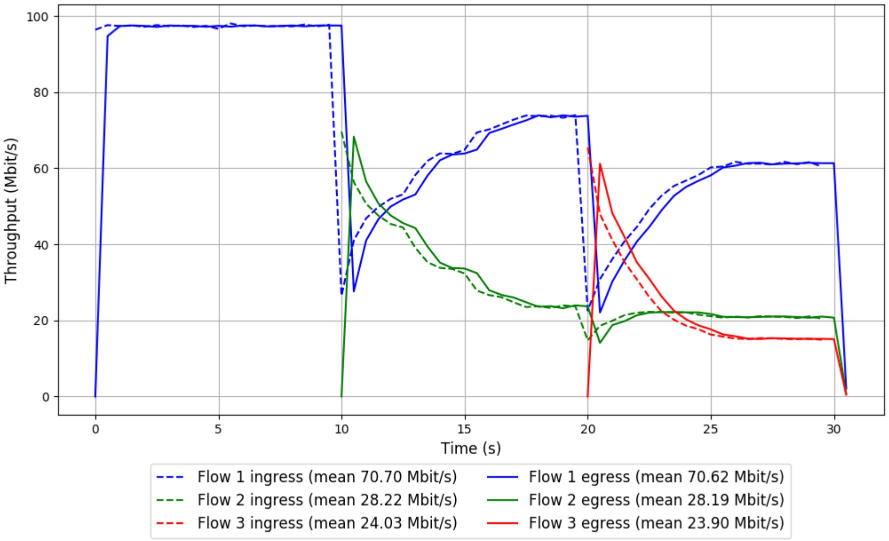
Run 2: Report of TCP BBR — Data Link

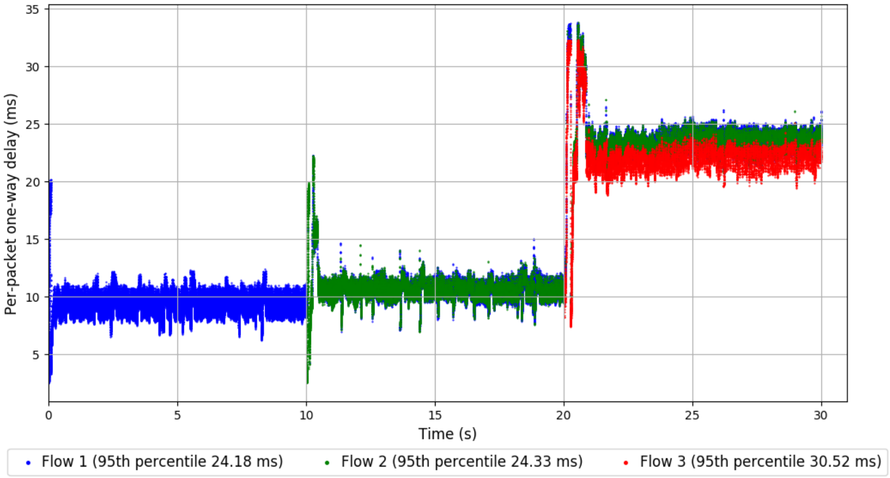




```
Run 3: Statistics of TCP BBR

Start at: 2018-05-22 04:03:40
End at: 2018-05-22 04:04:10
Local clock offset: -2.122 ms
Remote clock offset: -7.583 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 24.286 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 70.62 Mbit/s
95th percentile per-packet one-way delay: 24.182 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 28.19 Mbit/s
95th percentile per-packet one-way delay: 24.327 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 23.90 Mbit/s
95th percentile per-packet one-way delay: 30.518 ms
Loss rate: 0.40%
```

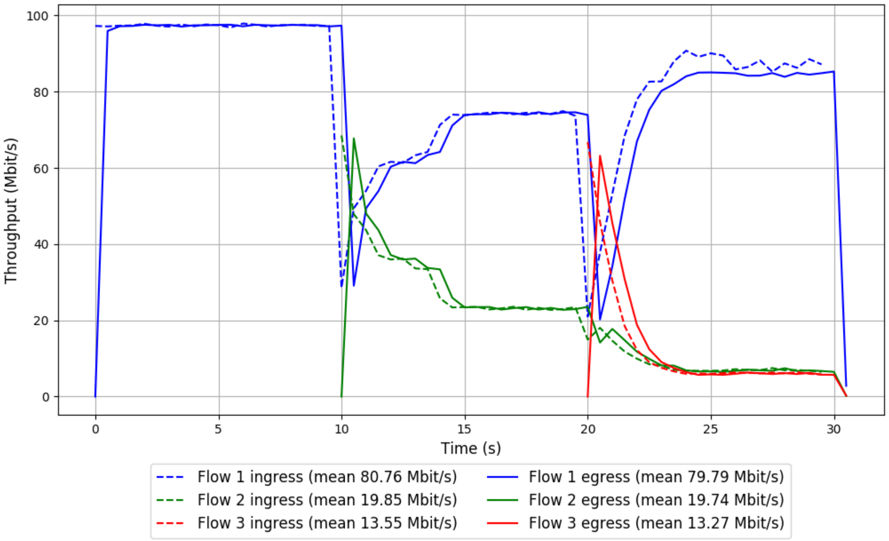
Run 3: Report of TCP BBR — Data Link

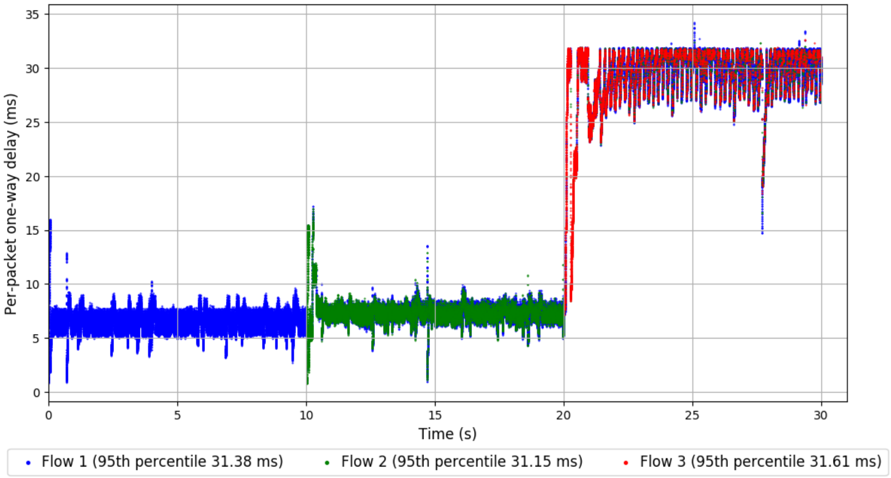




```
Run 4: Statistics of TCP BBR

Start at: 2018-05-22 04:21:31
End at: 2018-05-22 04:22:01
Local clock offset: 1.452 ms
Remote clock offset: -5.402 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 31.382 ms
Loss rate: 1.04%
-- Flow 1:
Average throughput: 79.79 Mbit/s
95th percentile per-packet one-way delay: 31.379 ms
Loss rate: 1.10%
-- Flow 2:
Average throughput: 19.74 Mbit/s
95th percentile per-packet one-way delay: 31.149 ms
Loss rate: 0.39%
-- Flow 3:
Average throughput: 13.27 Mbit/s
95th percentile per-packet one-way delay: 31.607 ms
Loss rate: 1.87%
```

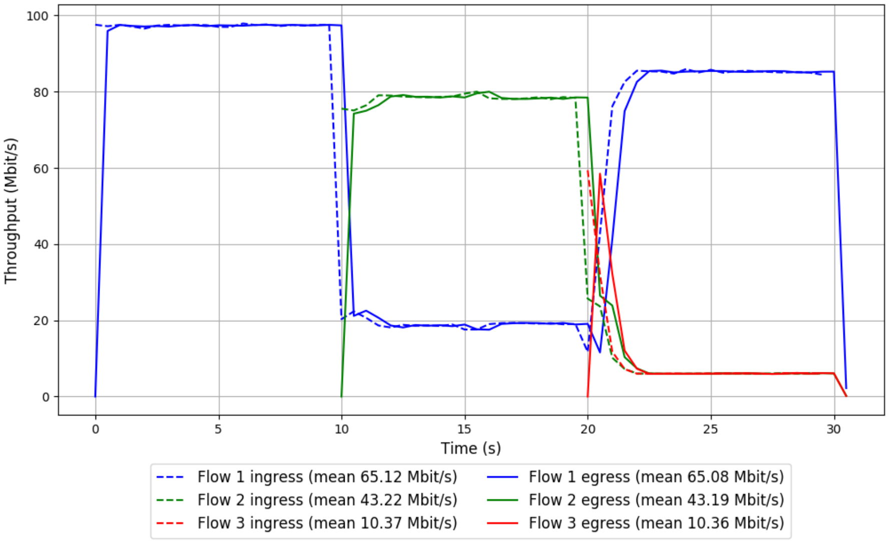
Run 4: Report of TCP BBR — Data Link

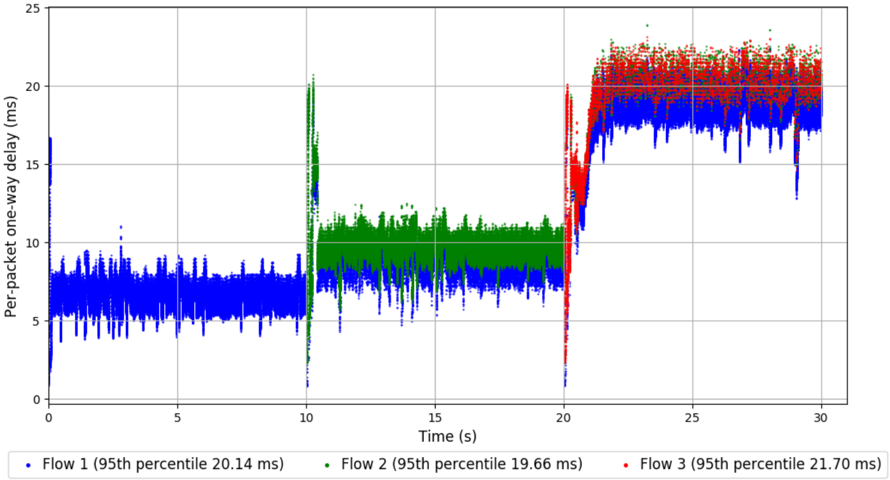




```
Run 5: Statistics of TCP BBR

Start at: 2018-05-22 04:39:22
End at: 2018-05-22 04:39:52
Local clock offset: 3.163 ms
Remote clock offset: -1.95 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 20.218 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 65.08 Mbit/s
95th percentile per-packet one-way delay: 20.138 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.19 Mbit/s
95th percentile per-packet one-way delay: 19.659 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.36 Mbit/s
95th percentile per-packet one-way delay: 21.695 ms
Loss rate: 0.00%
```

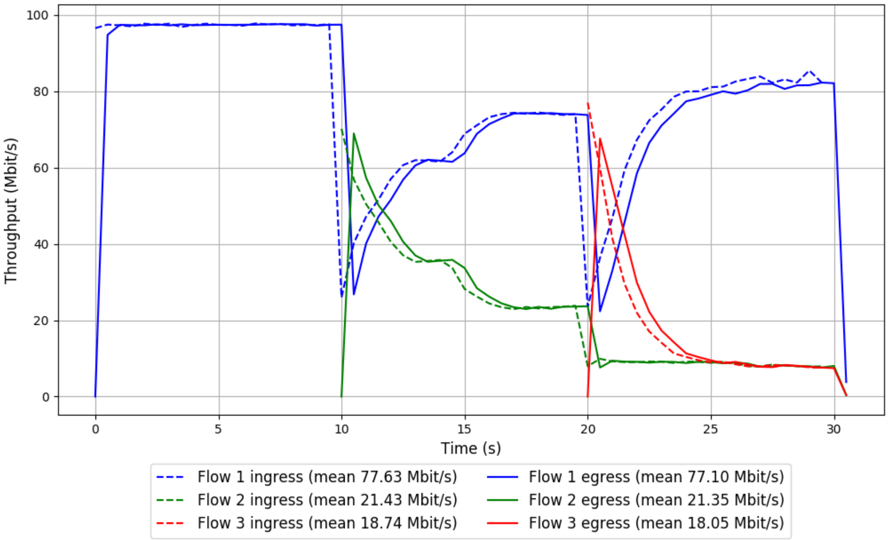
Run 5: Report of TCP BBR — Data Link

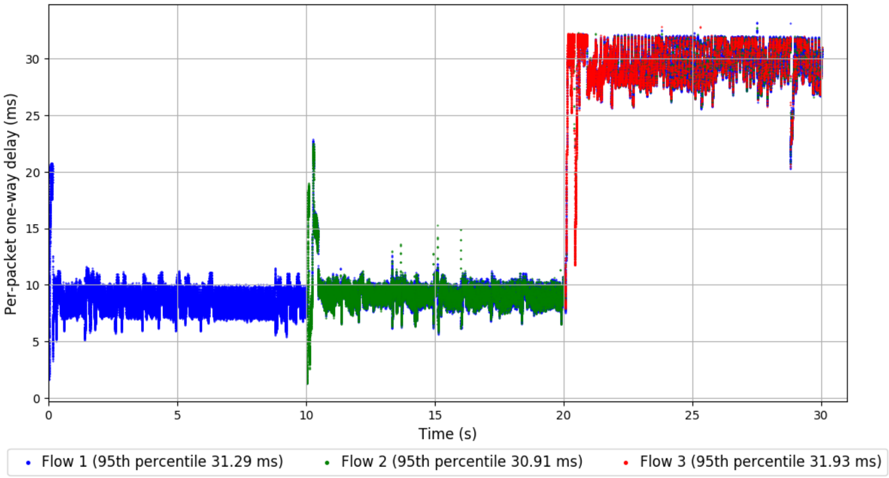




```
Run 6: Statistics of TCP BBR

Start at: 2018-05-22 04:57:14
End at: 2018-05-22 04:57:44
Local clock offset: 3.731 ms
Remote clock offset: 4.207 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 31.362 ms
Loss rate: 0.72%
-- Flow 1:
Average throughput: 77.10 Mbit/s
95th percentile per-packet one-way delay: 31.286 ms
Loss rate: 0.58%
-- Flow 2:
Average throughput: 21.35 Mbit/s
95th percentile per-packet one-way delay: 30.914 ms
Loss rate: 0.27%
-- Flow 3:
Average throughput: 18.05 Mbit/s
95th percentile per-packet one-way delay: 31.928 ms
Loss rate: 3.48%
```

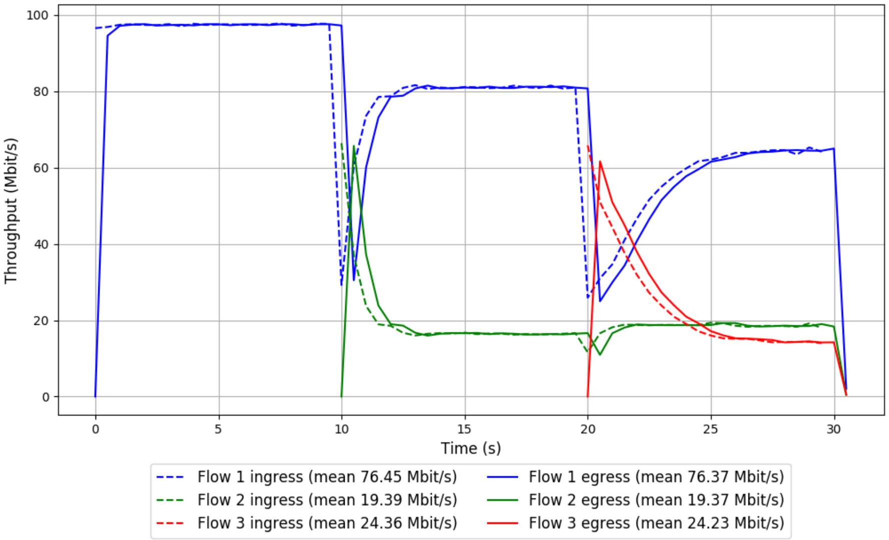
Run 6: Report of TCP BBR — Data Link

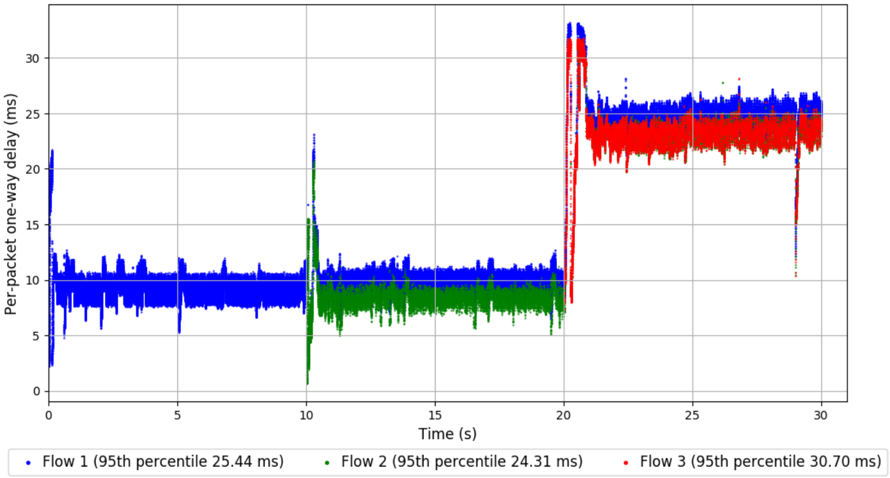




```
Run 7: Statistics of TCP BBR

Start at: 2018-05-22 05:15:06
End at: 2018-05-22 05:15:36
Local clock offset: -7.268 ms
Remote clock offset: 9.734 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 25.445 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 76.37 Mbit/s
95th percentile per-packet one-way delay: 25.440 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 19.37 Mbit/s
95th percentile per-packet one-way delay: 24.310 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 24.23 Mbit/s
95th percentile per-packet one-way delay: 30.705 ms
Loss rate: 0.40%
```

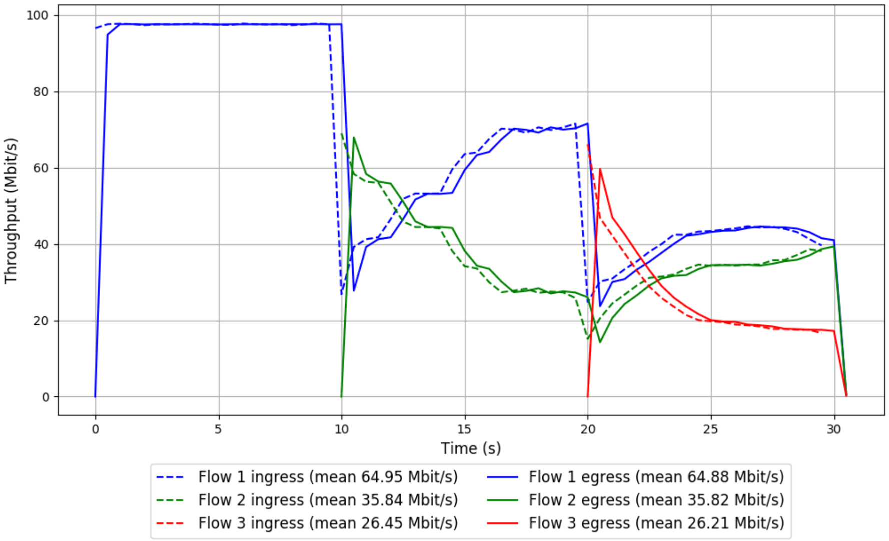
Run 7: Report of TCP BBR — Data Link

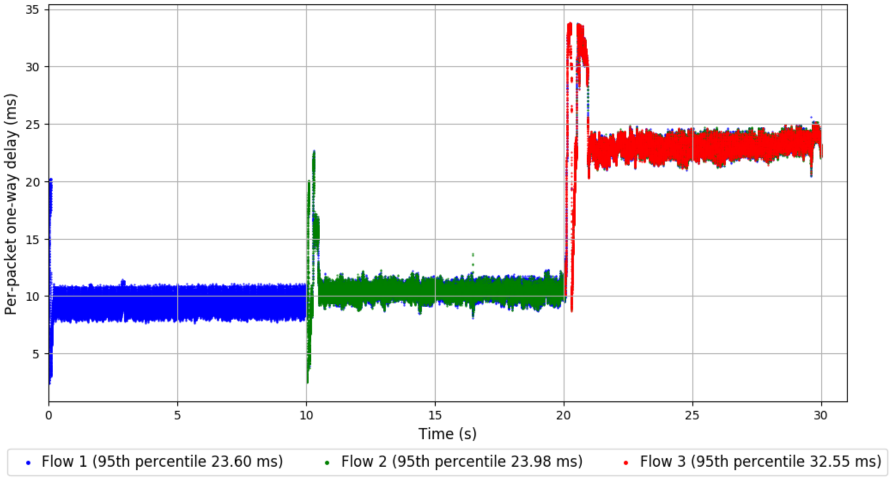




```
Run 8: Statistics of TCP BBR

Start at: 2018-05-22 05:32:57
End at: 2018-05-22 05:33:27
Local clock offset: -8.05 ms
Remote clock offset: 1.376 ms

# Below is generated by plot.py at 2018-05-22 06:25:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.46 Mbit/s
95th percentile per-packet one-way delay: 23.910 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 64.88 Mbit/s
95th percentile per-packet one-way delay: 23.600 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 35.82 Mbit/s
95th percentile per-packet one-way delay: 23.979 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 26.21 Mbit/s
95th percentile per-packet one-way delay: 32.546 ms
Loss rate: 0.80%
```

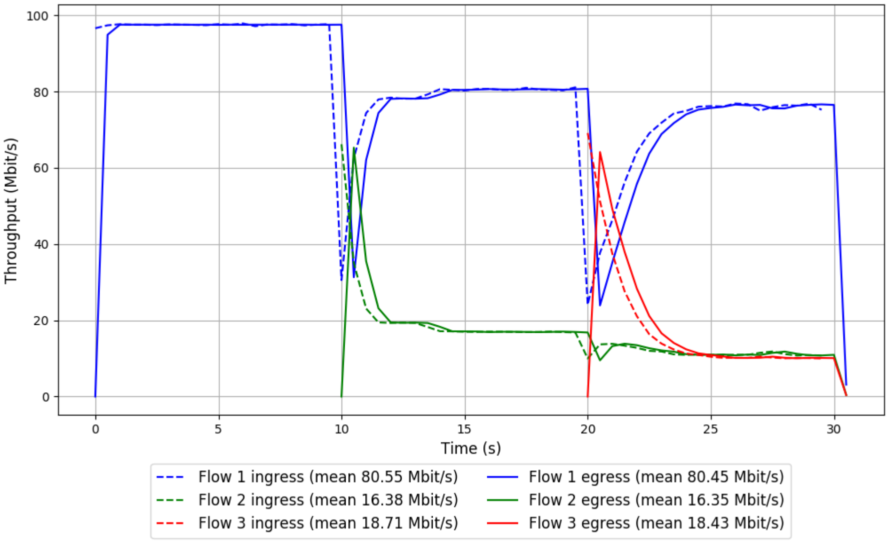
Run 8: Report of TCP BBR — Data Link

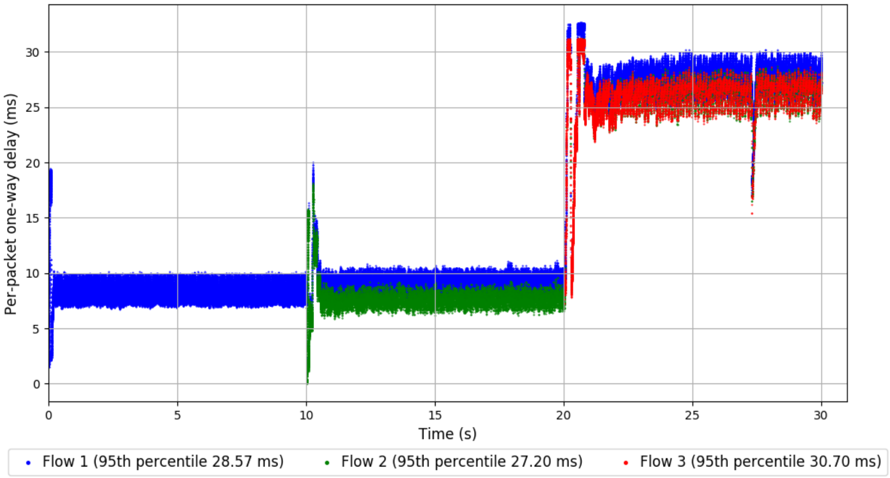




```
Run 9: Statistics of TCP BBR

Start at: 2018-05-22 05:50:48
End at: 2018-05-22 05:51:18
Local clock offset: -6.986 ms
Remote clock offset: -3.815 ms

# Below is generated by plot.py at 2018-05-22 06:25:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 28.571 ms
Loss rate: 0.12%
-- Flow 1:
Average throughput: 80.45 Mbit/s
95th percentile per-packet one-way delay: 28.575 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 16.35 Mbit/s
95th percentile per-packet one-way delay: 27.197 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 18.43 Mbit/s
95th percentile per-packet one-way delay: 30.701 ms
Loss rate: 1.27%
```

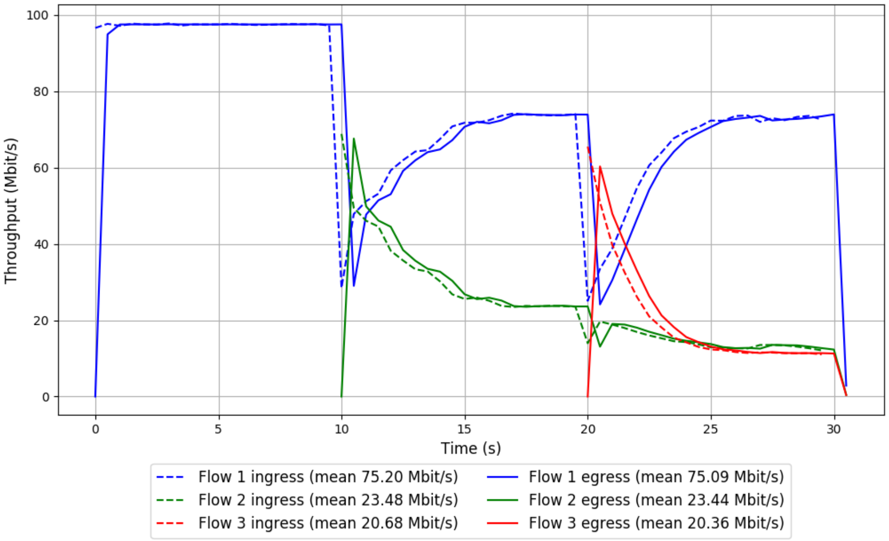
Run 9: Report of TCP BBR — Data Link

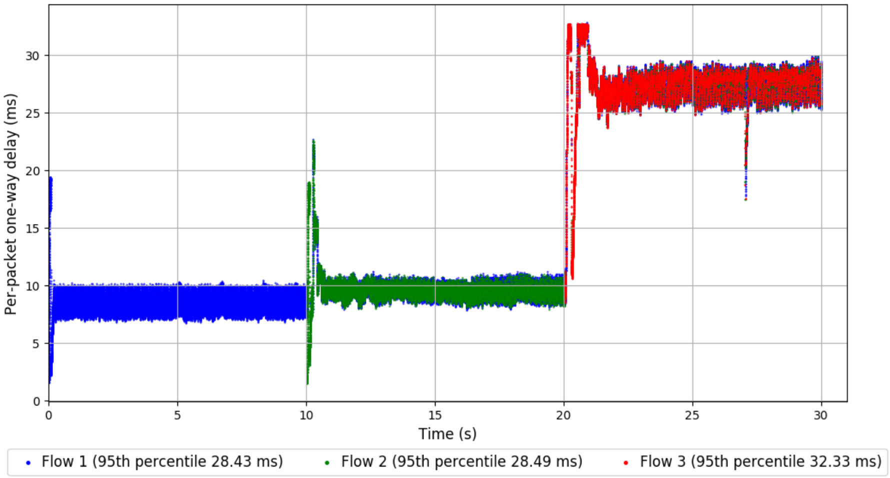




```
Run 10: Statistics of TCP BBR

Start at: 2018-05-22 06:08:39
End at: 2018-05-22 06:09:09
Local clock offset: -6.007 ms
Remote clock offset: -3.589 ms

# Below is generated by plot.py at 2018-05-22 06:25:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 28.565 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 75.09 Mbit/s
95th percentile per-packet one-way delay: 28.430 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 23.44 Mbit/s
95th percentile per-packet one-way delay: 28.494 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 20.36 Mbit/s
95th percentile per-packet one-way delay: 32.329 ms
Loss rate: 1.39%
```

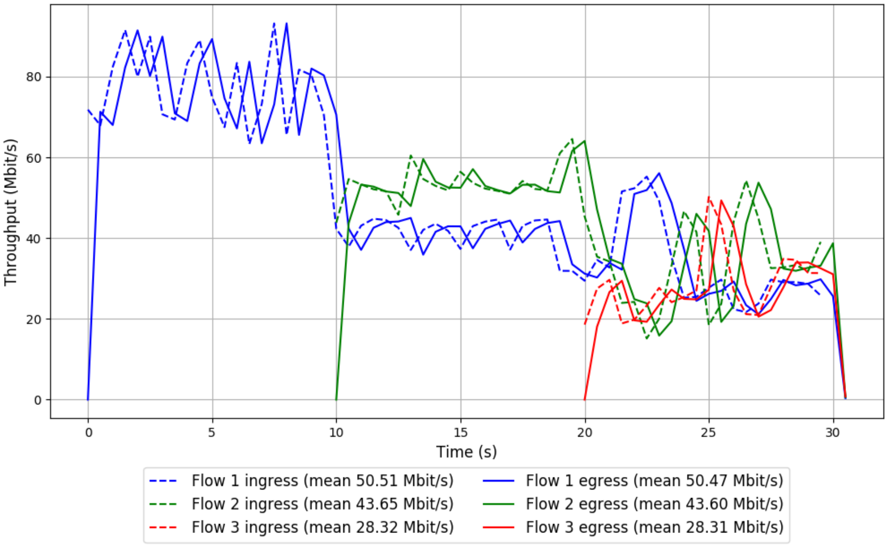
Run 10: Report of TCP BBR — Data Link

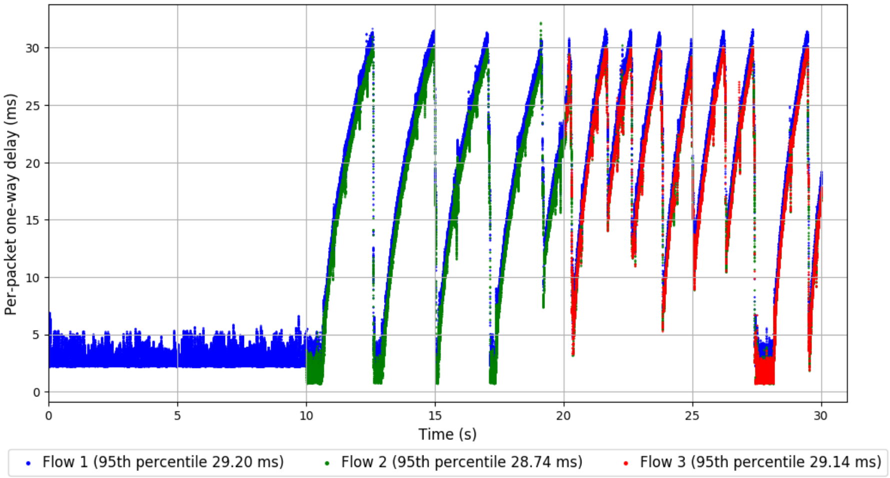




```
Run 1: Statistics of Copa

Start at: 2018-05-22 03:31:17
End at: 2018-05-22 03:31:47
Local clock offset: -5.513 ms
Remote clock offset: -2.576 ms

# Below is generated by plot.py at 2018-05-22 06:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.94 Mbit/s
95th percentile per-packet one-way delay: 28.999 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 50.47 Mbit/s
95th percentile per-packet one-way delay: 29.205 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 43.60 Mbit/s
95th percentile per-packet one-way delay: 28.742 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 28.31 Mbit/s
95th percentile per-packet one-way delay: 29.142 ms
Loss rate: 0.06%
```

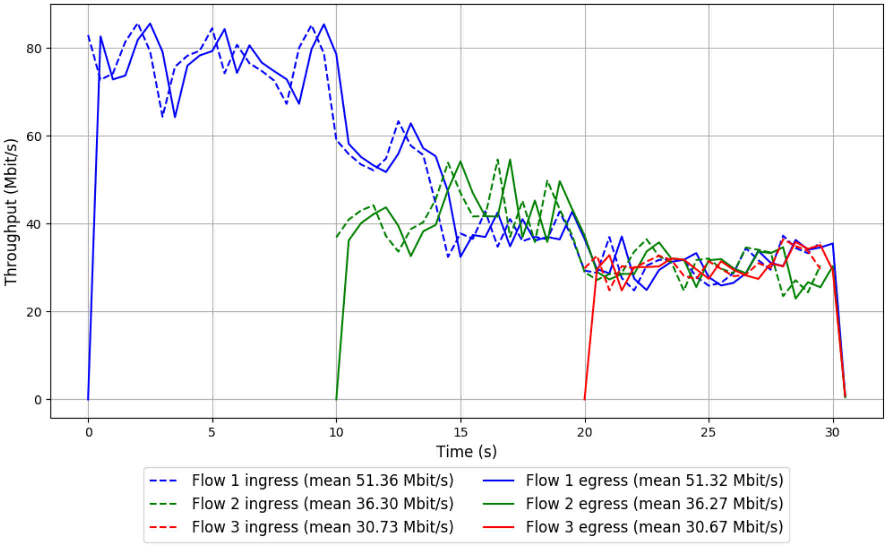
Run 1: Report of Copa — Data Link

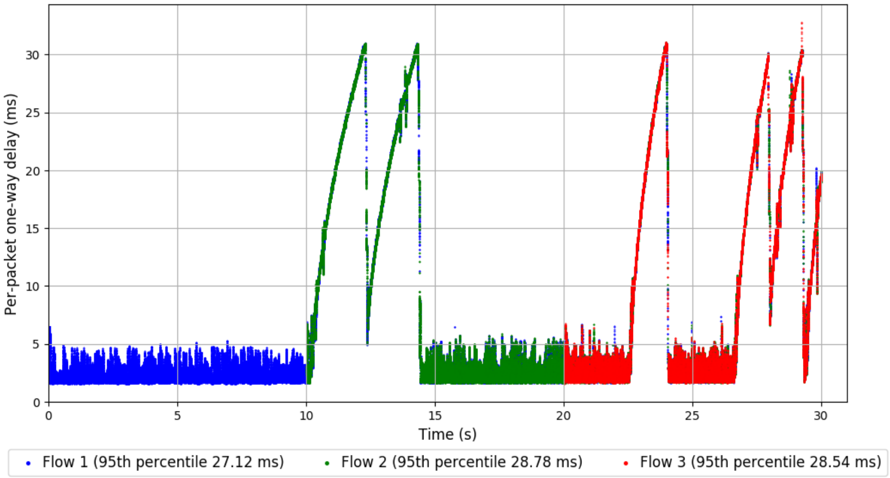




```
Run 2: Statistics of Copa

Start at: 2018-05-22 03:49:09
End at: 2018-05-22 03:49:39
Local clock offset: -4.971 ms
Remote clock offset: -5.391 ms

# Below is generated by plot.py at 2018-05-22 06:26:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.70 Mbit/s
95th percentile per-packet one-way delay: 28.043 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 51.32 Mbit/s
95th percentile per-packet one-way delay: 27.116 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 36.27 Mbit/s
95th percentile per-packet one-way delay: 28.777 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 30.67 Mbit/s
95th percentile per-packet one-way delay: 28.541 ms
Loss rate: 0.03%
```

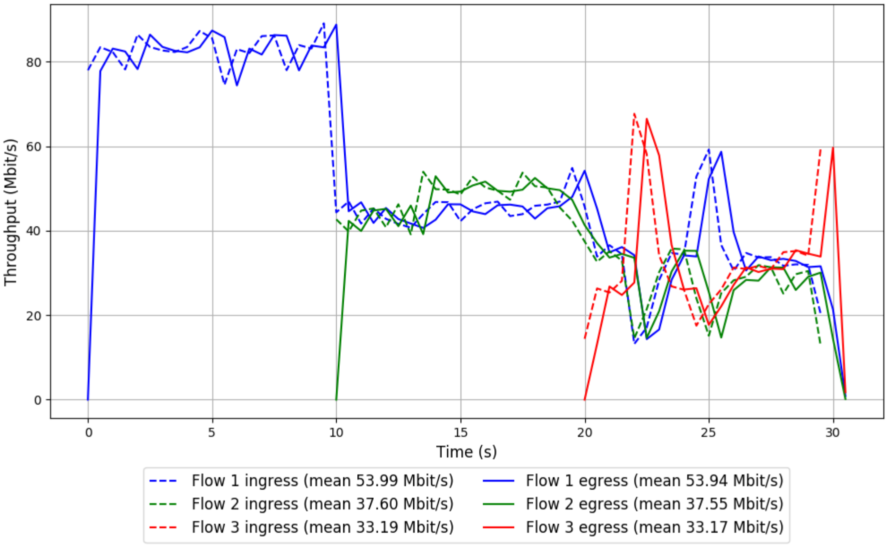
Run 2: Report of Copa — Data Link

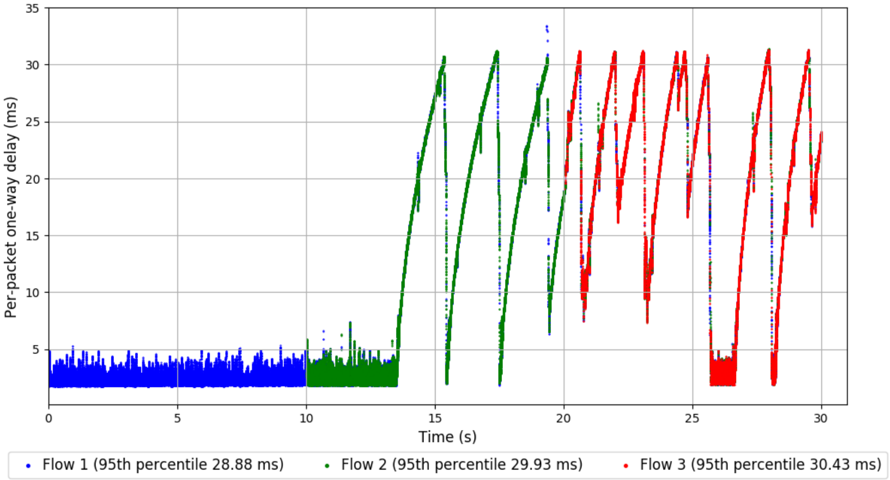




```
Run 3: Statistics of Copa

Start at: 2018-05-22 04:07:00
End at: 2018-05-22 04:07:30
Local clock offset: -1.84 ms
Remote clock offset: -7.897 ms

# Below is generated by plot.py at 2018-05-22 06:26:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.98 Mbit/s
95th percentile per-packet one-way delay: 29.640 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 53.94 Mbit/s
95th percentile per-packet one-way delay: 28.877 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 37.55 Mbit/s
95th percentile per-packet one-way delay: 29.930 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 33.17 Mbit/s
95th percentile per-packet one-way delay: 30.425 ms
Loss rate: 0.02%
```

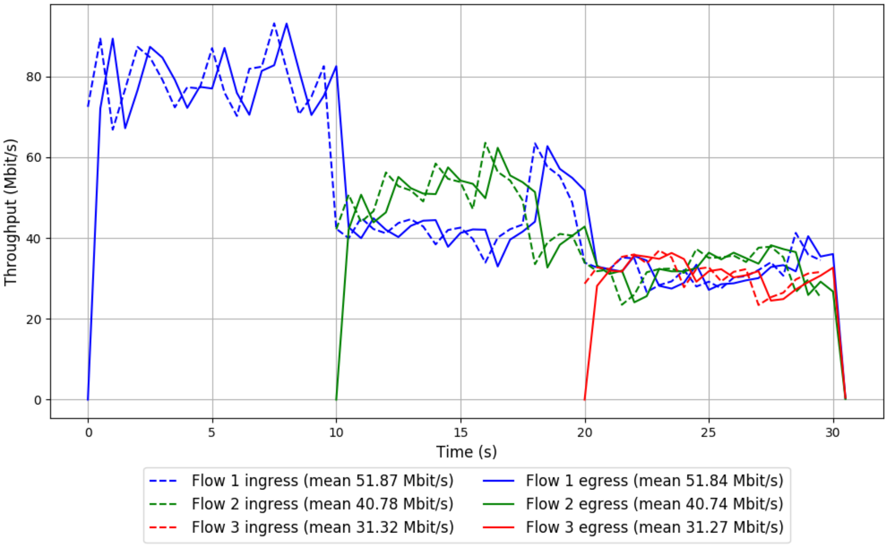
Run 3: Report of Copa — Data Link

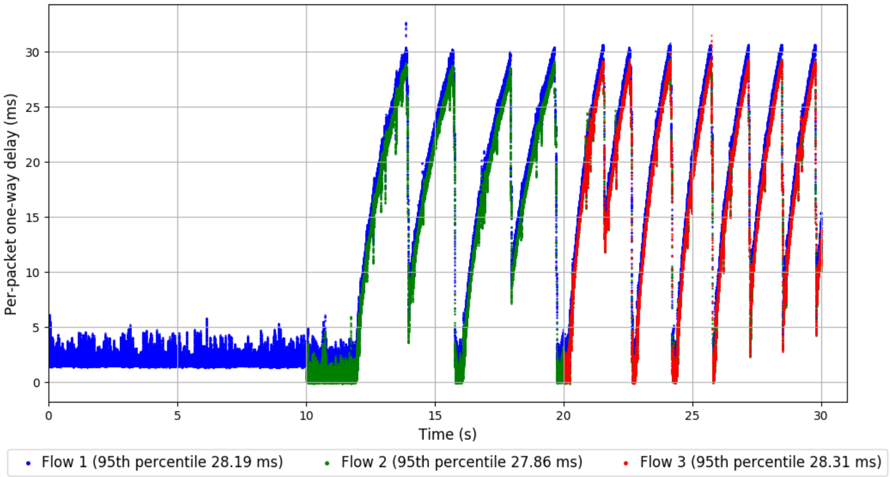




```
Run 4: Statistics of Copa

Start at: 2018-05-22 04:24:51
End at: 2018-05-22 04:25:21
Local clock offset: 2.591 ms
Remote clock offset: -4.44 ms

# Below is generated by plot.py at 2018-05-22 06:26:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.39 Mbit/s
95th percentile per-packet one-way delay: 28.079 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 51.84 Mbit/s
95th percentile per-packet one-way delay: 28.191 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.74 Mbit/s
95th percentile per-packet one-way delay: 27.857 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 31.27 Mbit/s
95th percentile per-packet one-way delay: 28.306 ms
Loss rate: 0.02%
```

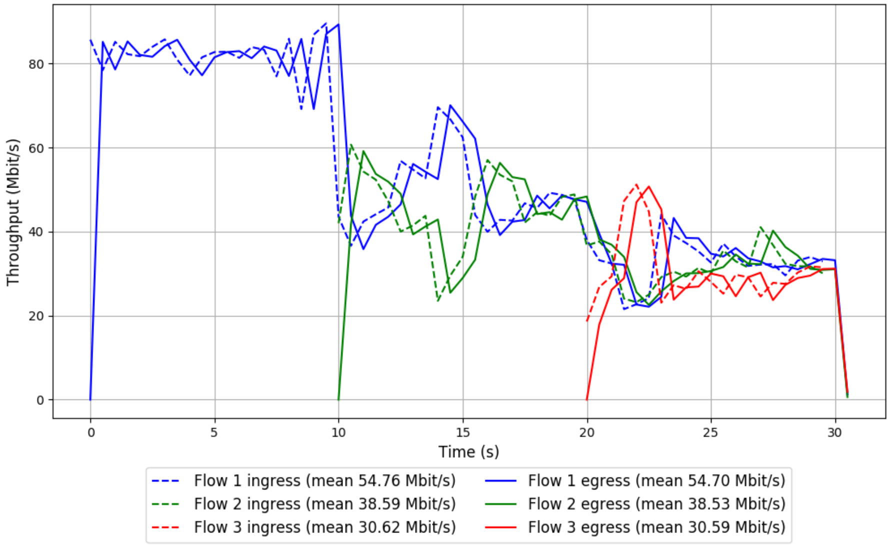
Run 4: Report of Copa — Data Link

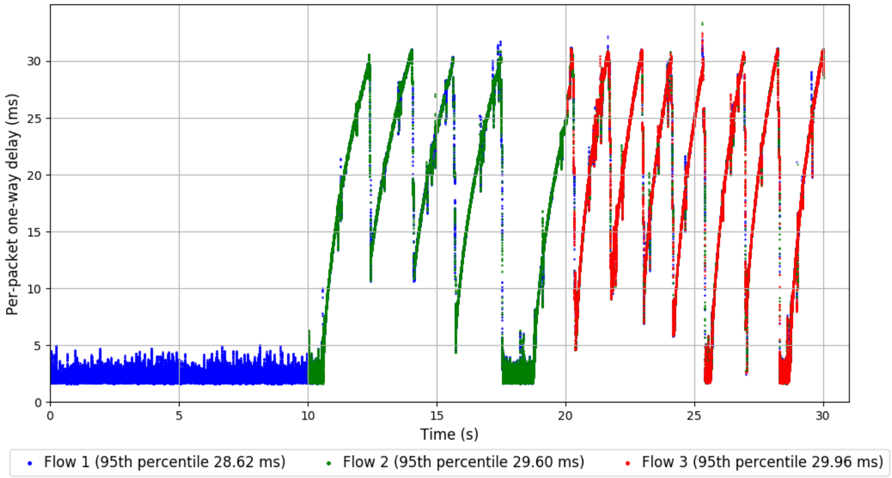




```
Run 5: Statistics of Copa

Start at: 2018-05-22 04:42:42
End at: 2018-05-22 04:43:12
Local clock offset: 2.632 ms
Remote clock offset: -1.623 ms

# Below is generated by plot.py at 2018-05-22 06:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.54 Mbit/s
95th percentile per-packet one-way delay: 29.245 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 54.70 Mbit/s
95th percentile per-packet one-way delay: 28.625 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 38.53 Mbit/s
95th percentile per-packet one-way delay: 29.600 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 30.59 Mbit/s
95th percentile per-packet one-way delay: 29.962 ms
Loss rate: 0.06%
```

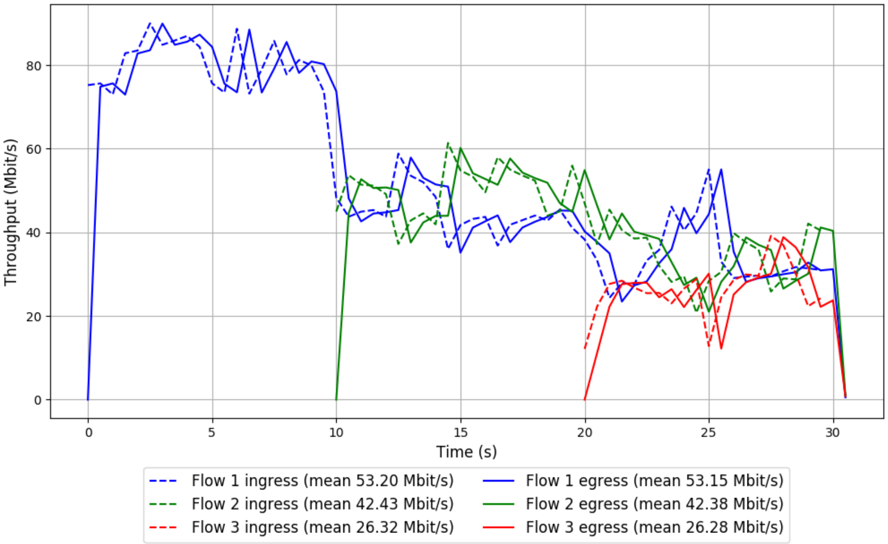
Run 5: Report of Copa — Data Link

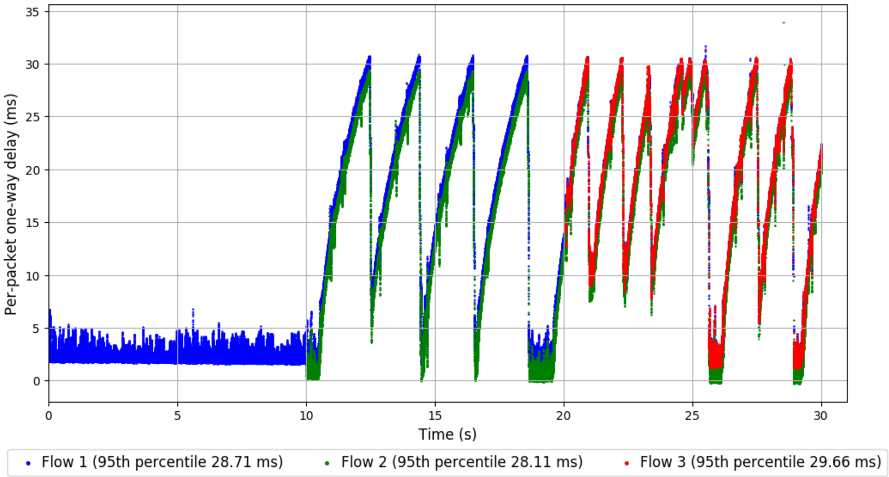




```
Run 6: Statistics of Copa

Start at: 2018-05-22 05:00:34
End at: 2018-05-22 05:01:04
Local clock offset: 0.126 ms
Remote clock offset: 5.736 ms

# Below is generated by plot.py at 2018-05-22 06:26:59
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.14 Mbit/s
95th percentile per-packet one-way delay: 28.598 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 53.15 Mbit/s
95th percentile per-packet one-way delay: 28.706 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 42.38 Mbit/s
95th percentile per-packet one-way delay: 28.114 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 26.28 Mbit/s
95th percentile per-packet one-way delay: 29.660 ms
Loss rate: 0.07%
```

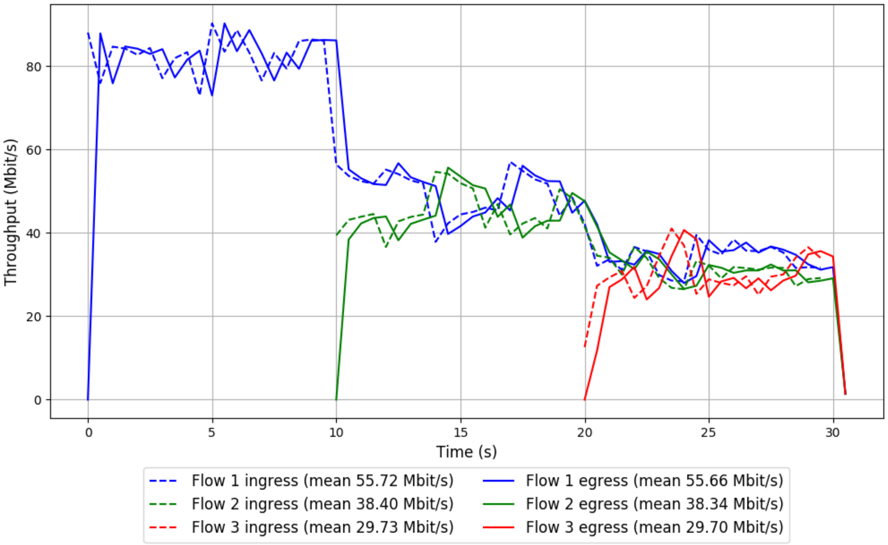
Run 6: Report of Copa — Data Link

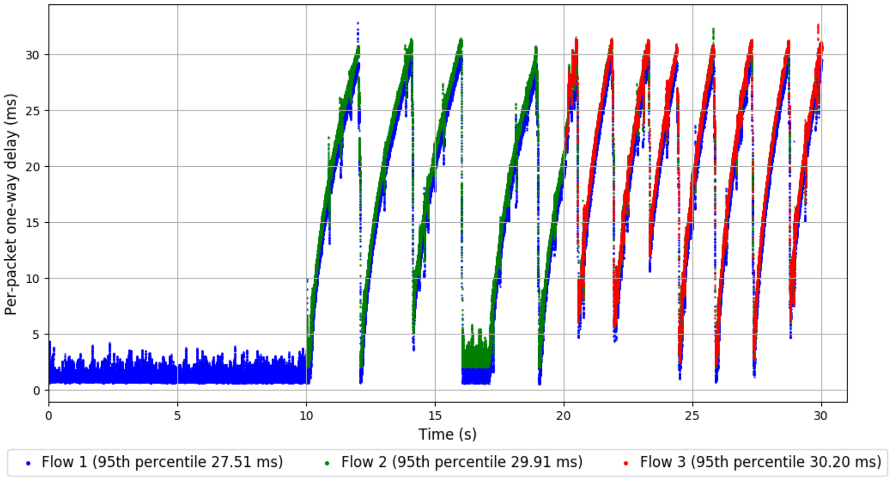




```
Run 7: Statistics of Copa

Start at: 2018-05-22 05:18:26
End at: 2018-05-22 05:18:56
Local clock offset: -8.033 ms
Remote clock offset: 10.384 ms

# Below is generated by plot.py at 2018-05-22 06:28:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.08 Mbit/s
95th percentile per-packet one-way delay: 28.971 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 55.66 Mbit/s
95th percentile per-packet one-way delay: 27.507 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 29.910 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 29.70 Mbit/s
95th percentile per-packet one-way delay: 30.205 ms
Loss rate: 0.03%
```

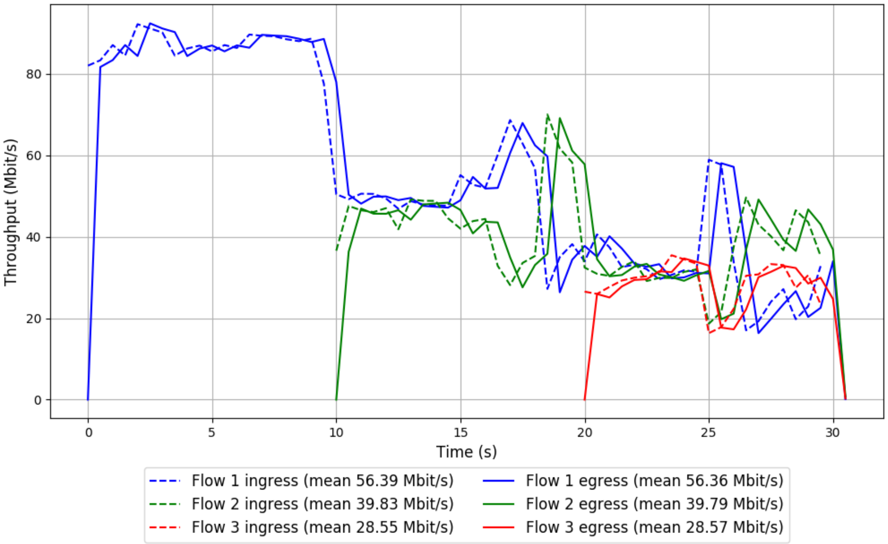
Run 7: Report of Copa — Data Link

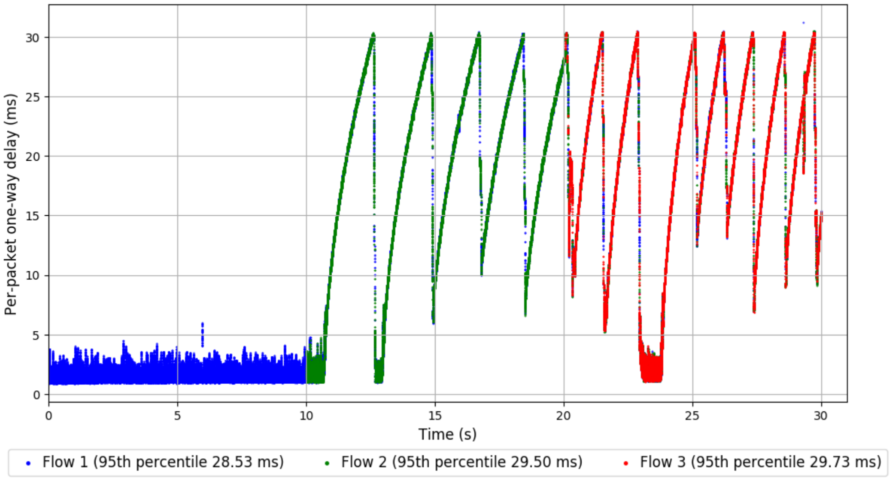




```
Run 8: Statistics of Copa

Start at: 2018-05-22 05:36:17
End at: 2018-05-22 05:36:47
Local clock offset: -7.75 ms
Remote clock offset: -0.375 ms

# Below is generated by plot.py at 2018-05-22 06:28:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 92.36 Mbit/s
95th percentile per-packet one-way delay: 29.160 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 56.36 Mbit/s
95th percentile per-packet one-way delay: 28.532 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 29.495 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 28.57 Mbit/s
95th percentile per-packet one-way delay: 29.730 ms
Loss rate: 0.04%
```

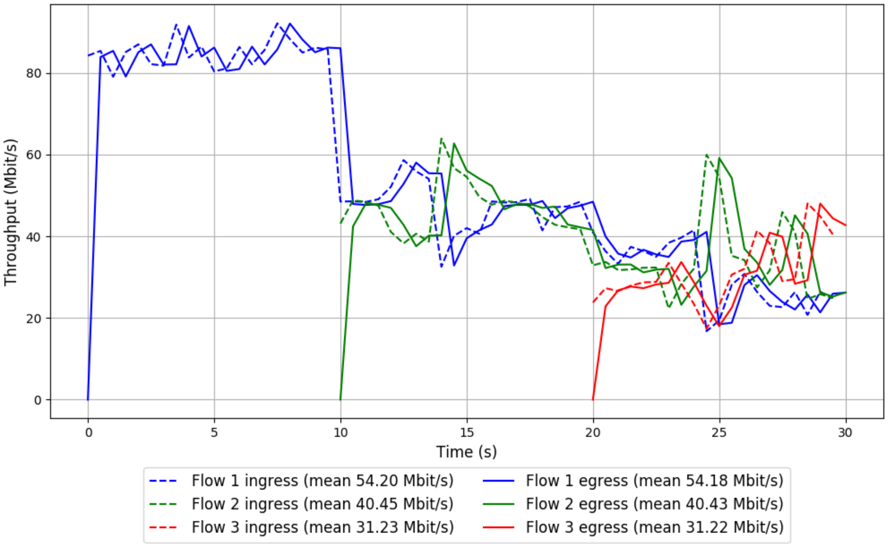
Run 8: Report of Copa — Data Link

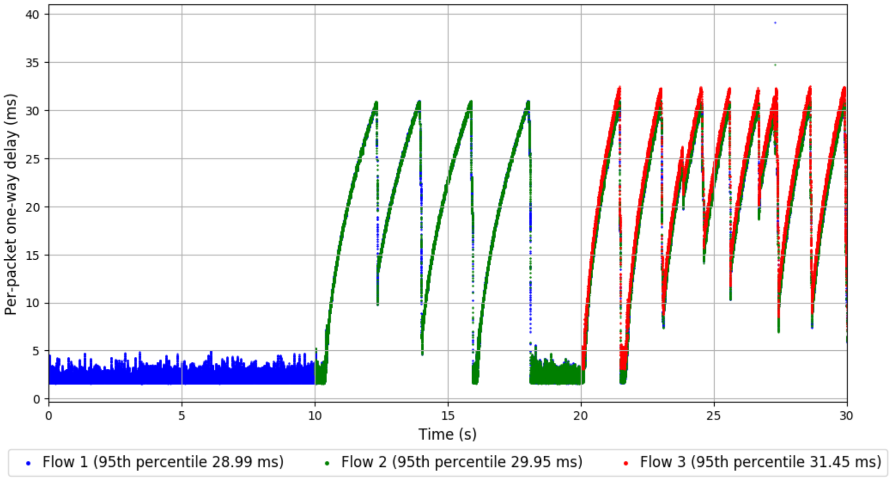




```
Run 9: Statistics of Copa

Start at: 2018-05-22 05:54:08
End at: 2018-05-22 05:54:38
Local clock offset: -8.75 ms
Remote clock offset: -4.205 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.50 Mbit/s
95th percentile per-packet one-way delay: 29.832 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 54.18 Mbit/s
95th percentile per-packet one-way delay: 28.994 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 40.43 Mbit/s
95th percentile per-packet one-way delay: 29.953 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 31.22 Mbit/s
95th percentile per-packet one-way delay: 31.450 ms
Loss rate: 0.02%
```

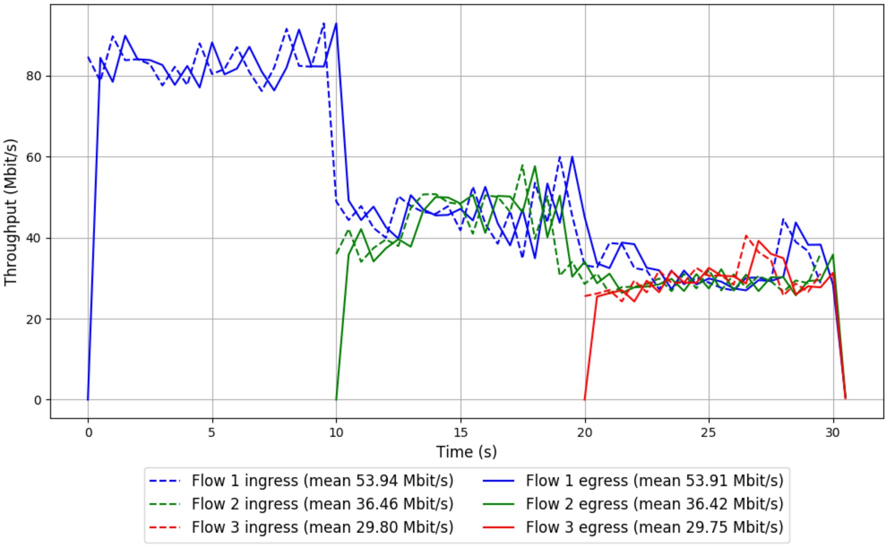
Run 9: Report of Copa — Data Link

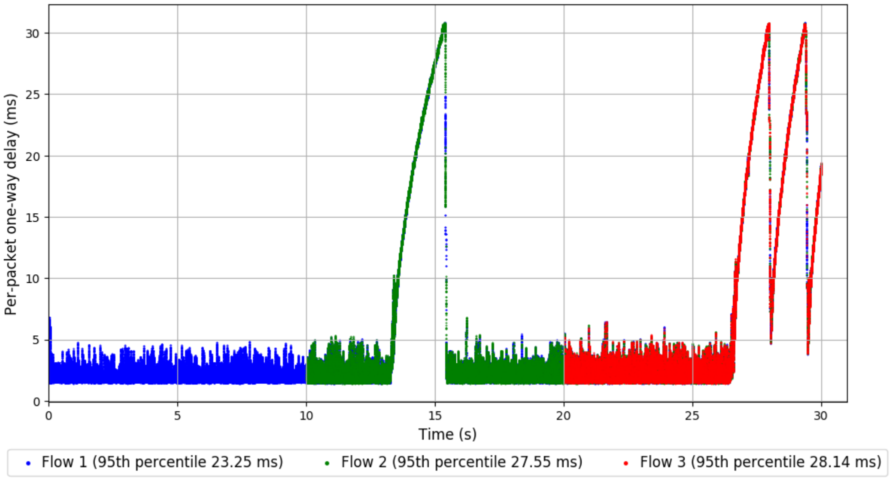




```
Run 10: Statistics of Copa

Start at: 2018-05-22 06:11:59
End at: 2018-05-22 06:12:29
Local clock offset: -5.956 ms
Remote clock offset: -3.615 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.08 Mbit/s
95th percentile per-packet one-way delay: 26.044 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.91 Mbit/s
95th percentile per-packet one-way delay: 23.245 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.42 Mbit/s
95th percentile per-packet one-way delay: 27.549 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.75 Mbit/s
95th percentile per-packet one-way delay: 28.140 ms
Loss rate: 0.01%
```

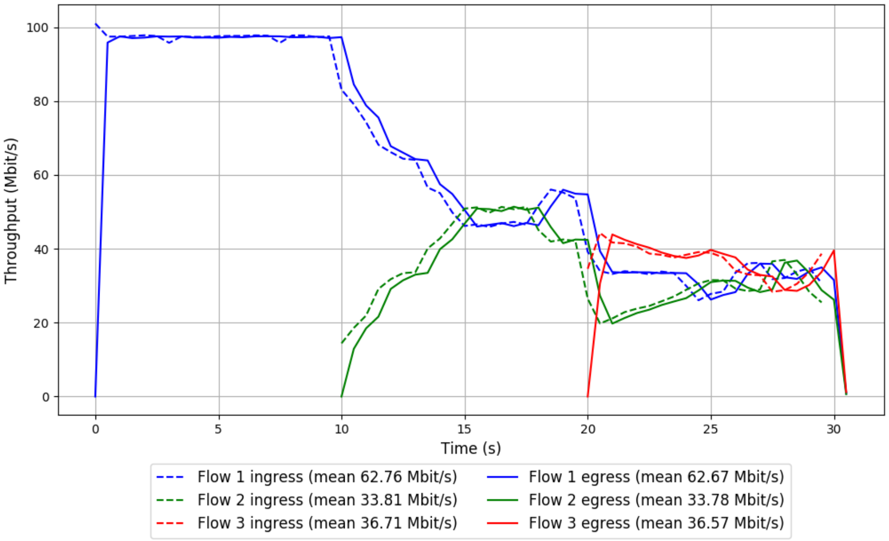
Run 10: Report of Copa — Data Link

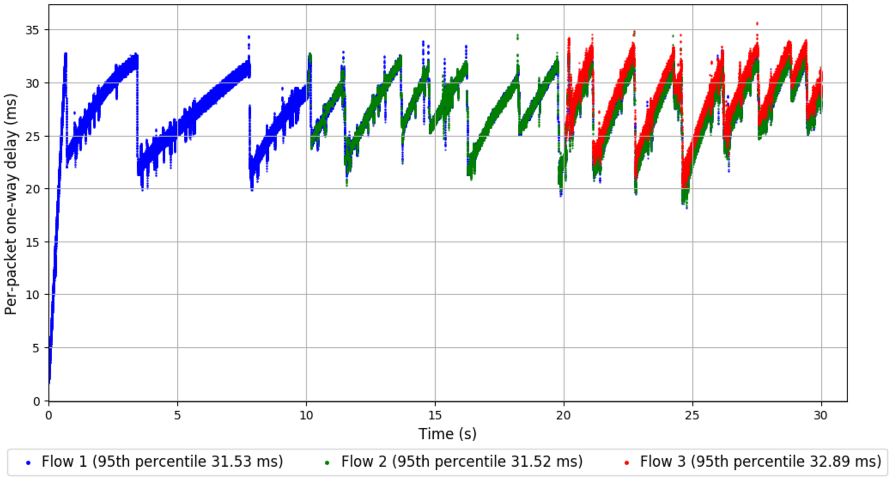




```
Run 1: Statistics of TCP Cubic

Start at: 2018-05-22 03:35:47
End at: 2018-05-22 03:36:17
Local clock offset: -6.453 ms
Remote clock offset: -2.554 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.30 Mbit/s
95th percentile per-packet one-way delay: 31.766 ms
Loss rate: 0.09%
-- Flow 1:
Average throughput: 62.67 Mbit/s
95th percentile per-packet one-way delay: 31.529 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 33.78 Mbit/s
95th percentile per-packet one-way delay: 31.518 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 36.57 Mbit/s
95th percentile per-packet one-way delay: 32.886 ms
Loss rate: 0.30%
```

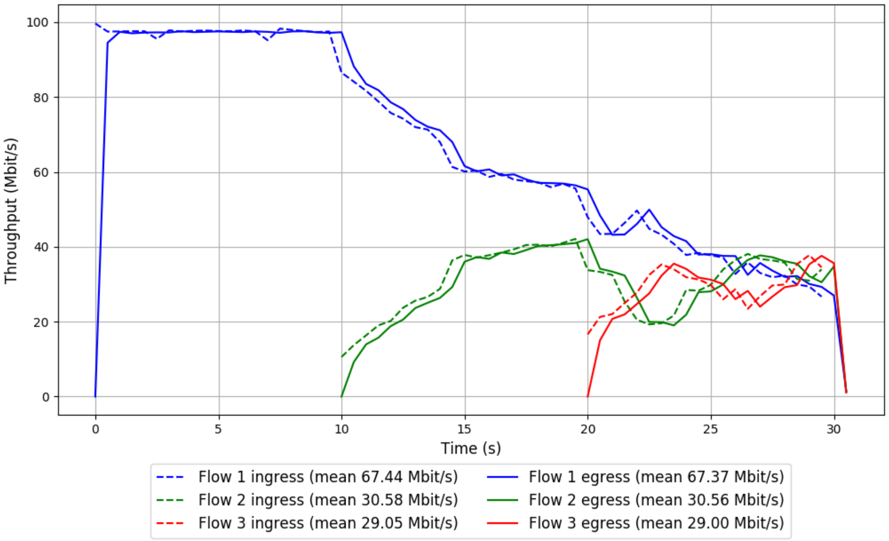
Run 1: Report of TCP Cubic — Data Link

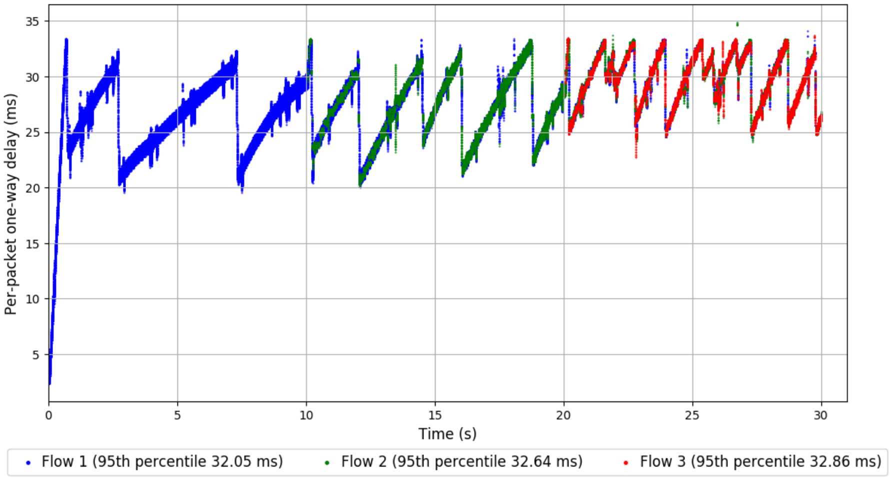




```
Run 2: Statistics of TCP Cubic

Start at: 2018-05-22 03:53:39
End at: 2018-05-22 03:54:09
Local clock offset: -5.733 ms
Remote clock offset: -6.338 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.33 Mbit/s
95th percentile per-packet one-way delay: 32.384 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 67.37 Mbit/s
95th percentile per-packet one-way delay: 32.049 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 30.56 Mbit/s
95th percentile per-packet one-way delay: 32.640 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 29.00 Mbit/s
95th percentile per-packet one-way delay: 32.856 ms
Loss rate: 0.17%
```

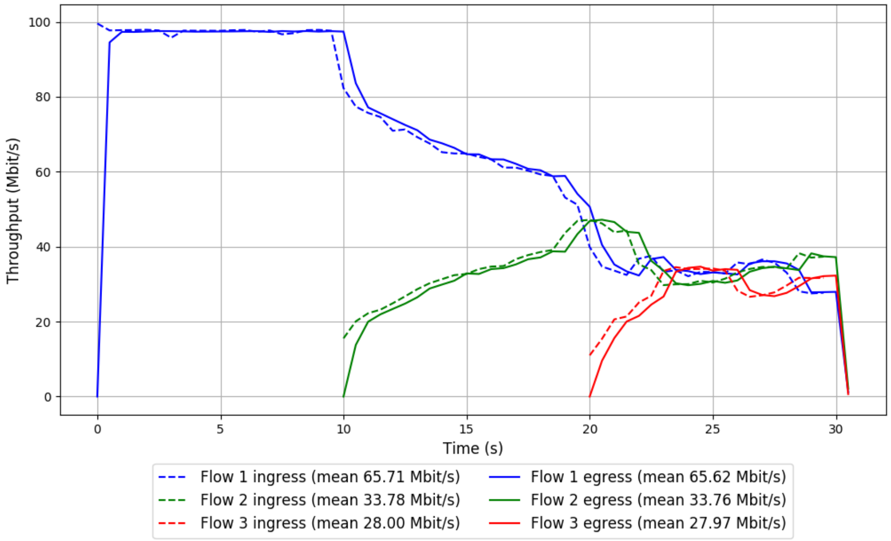
Run 2: Report of TCP Cubic — Data Link

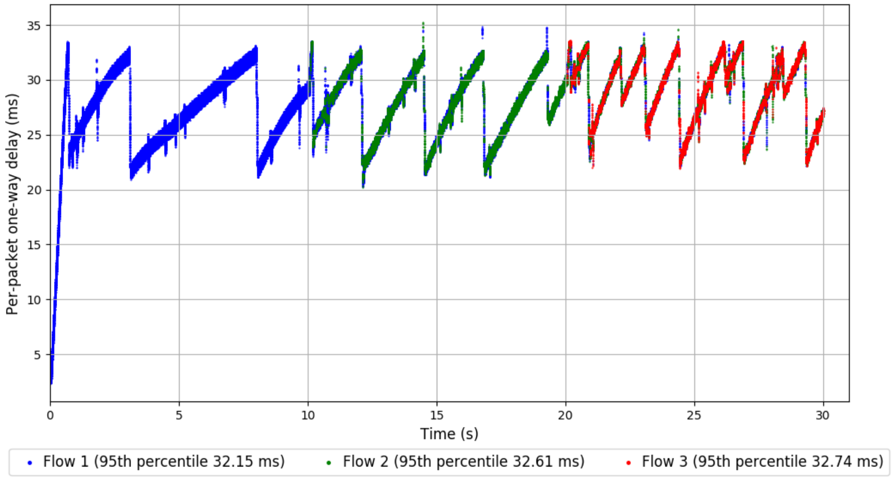




```
Run 3: Statistics of TCP Cubic

Start at: 2018-05-22 04:11:30
End at: 2018-05-22 04:12:00
Local clock offset: 0.0 ms
Remote clock offset: -8.245 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 32.381 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 32.148 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 33.76 Mbit/s
95th percentile per-packet one-way delay: 32.609 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 27.97 Mbit/s
95th percentile per-packet one-way delay: 32.739 ms
Loss rate: 0.15%
```

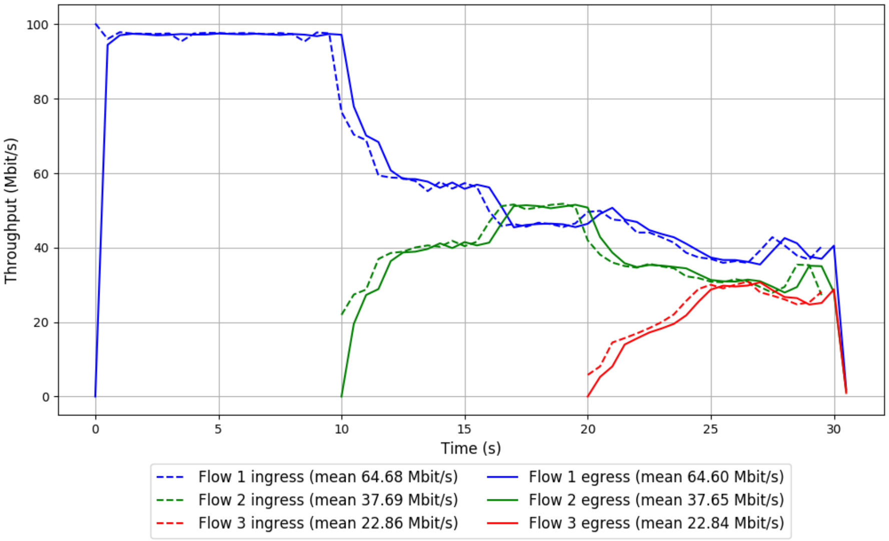
Run 3: Report of TCP Cubic — Data Link

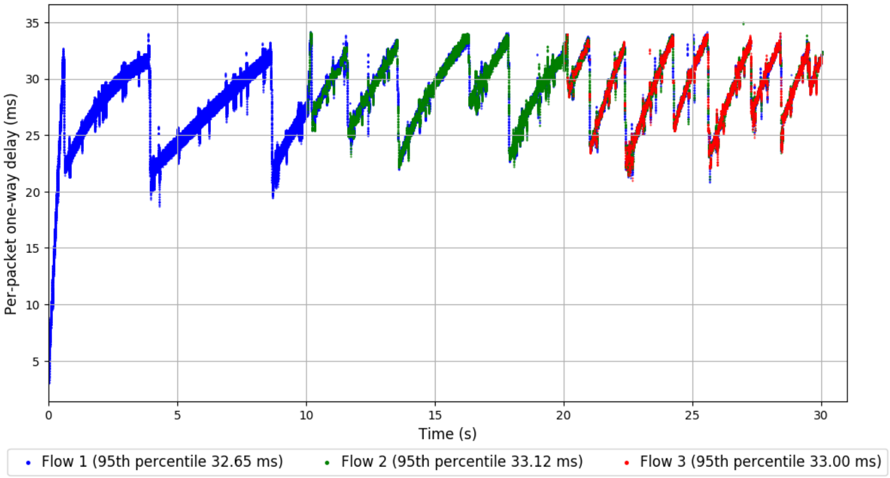




```
Run 4: Statistics of TCP Cubic

Start at: 2018-05-22 04:29:21
End at: 2018-05-22 04:29:51
Local clock offset: 1.505 ms
Remote clock offset: -3.365 ms

# Below is generated by plot.py at 2018-05-22 06:29:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 32.857 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.60 Mbit/s
95th percentile per-packet one-way delay: 32.645 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 37.65 Mbit/s
95th percentile per-packet one-way delay: 33.122 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 22.84 Mbit/s
95th percentile per-packet one-way delay: 32.997 ms
Loss rate: 0.08%
```

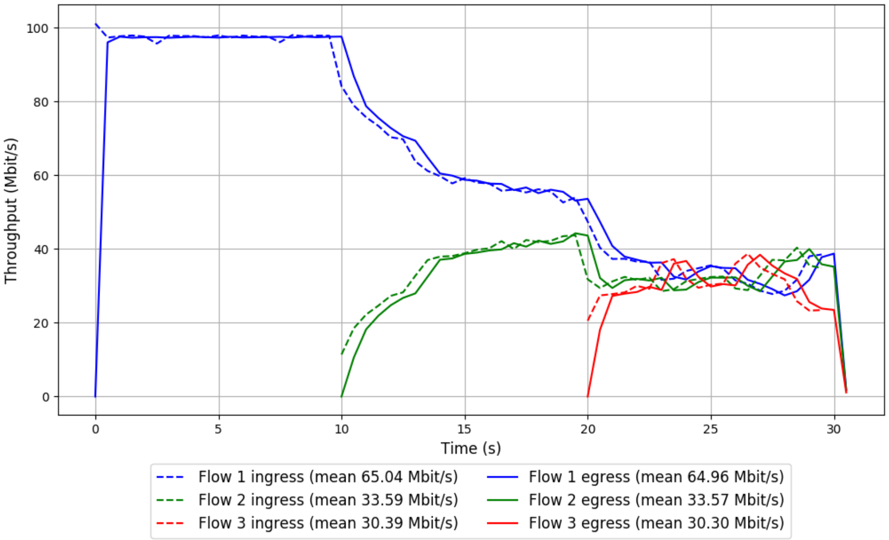
Run 4: Report of TCP Cubic — Data Link

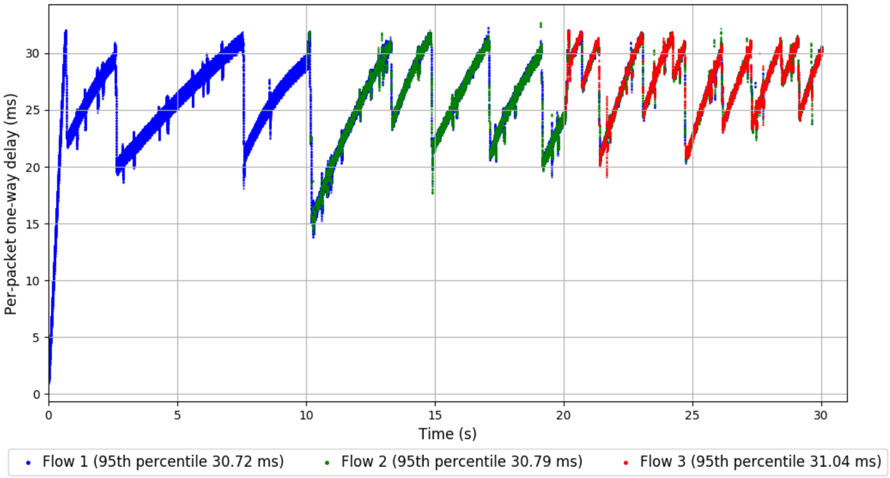




```
Run 5: Statistics of TCP Cubic

Start at: 2018-05-22 04:47:13
End at: 2018-05-22 04:47:43
Local clock offset: 3.807 ms
Remote clock offset: -1.246 ms

# Below is generated by plot.py at 2018-05-22 06:29:21
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 30.771 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 64.96 Mbit/s
95th percentile per-packet one-way delay: 30.721 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 33.57 Mbit/s
95th percentile per-packet one-way delay: 30.788 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 30.30 Mbit/s
95th percentile per-packet one-way delay: 31.038 ms
Loss rate: 0.22%
```

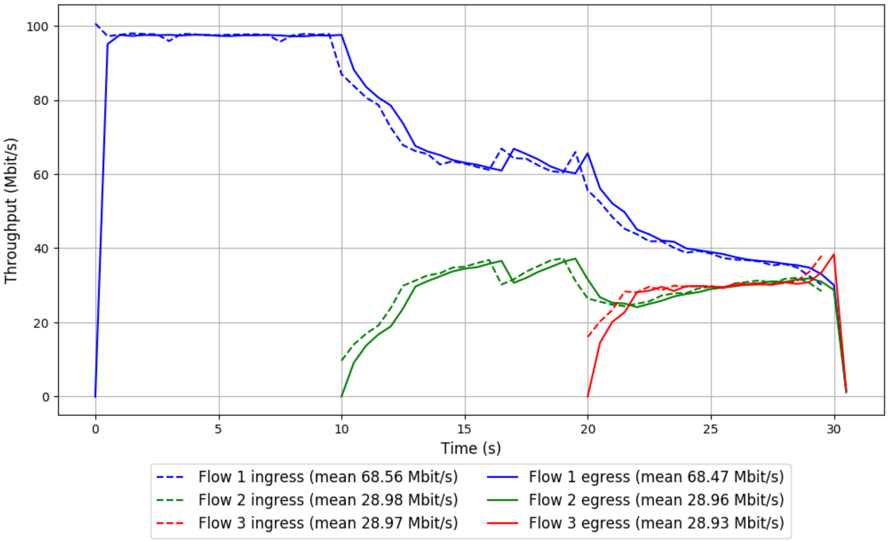
Run 5: Report of TCP Cubic — Data Link

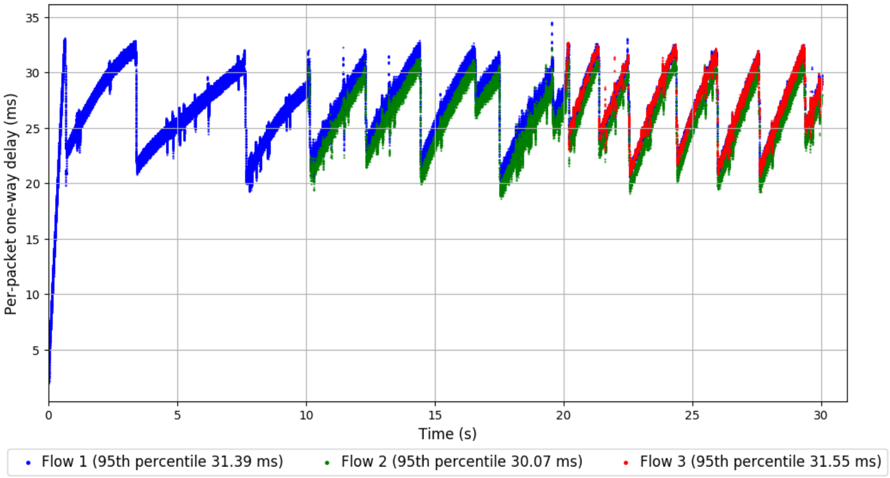




```
Run 6: Statistics of TCP Cubic

Start at: 2018-05-22 05:05:04
End at: 2018-05-22 05:05:34
Local clock offset: -3.298 ms
Remote clock offset: 7.194 ms

# Below is generated by plot.py at 2018-05-22 06:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.36 Mbit/s
95th percentile per-packet one-way delay: 31.270 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 68.47 Mbit/s
95th percentile per-packet one-way delay: 31.389 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 28.96 Mbit/s
95th percentile per-packet one-way delay: 30.067 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 28.93 Mbit/s
95th percentile per-packet one-way delay: 31.545 ms
Loss rate: 0.15%
```

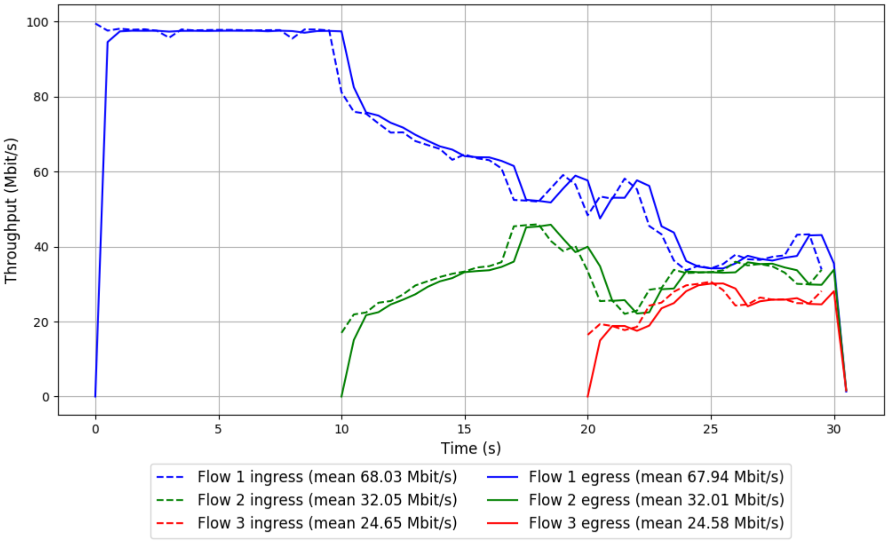
Run 6: Report of TCP Cubic — Data Link

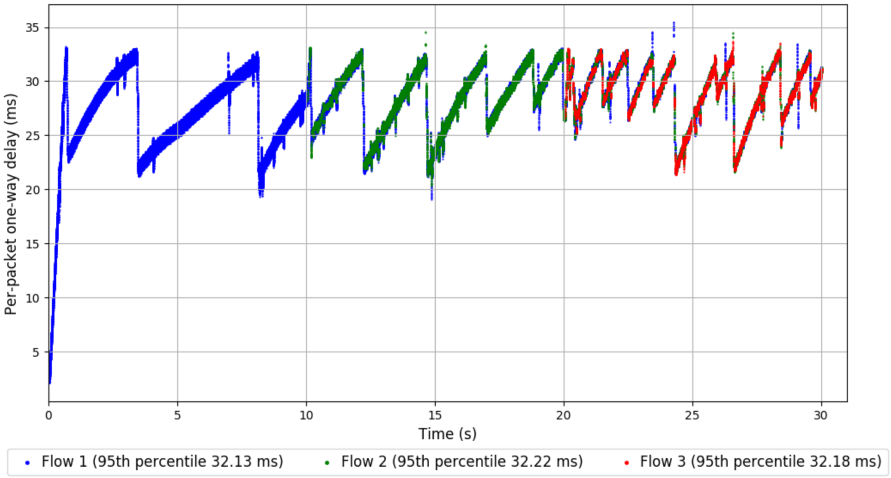




```
Run 7: Statistics of TCP Cubic

Start at: 2018-05-22 05:22:56
End at: 2018-05-22 05:23:26
Local clock offset: -8.934 ms
Remote clock offset: 11.102 ms

# Below is generated by plot.py at 2018-05-22 06:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 32.158 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 67.94 Mbit/s
95th percentile per-packet one-way delay: 32.133 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 32.01 Mbit/s
95th percentile per-packet one-way delay: 32.217 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 24.58 Mbit/s
95th percentile per-packet one-way delay: 32.183 ms
Loss rate: 0.22%
```

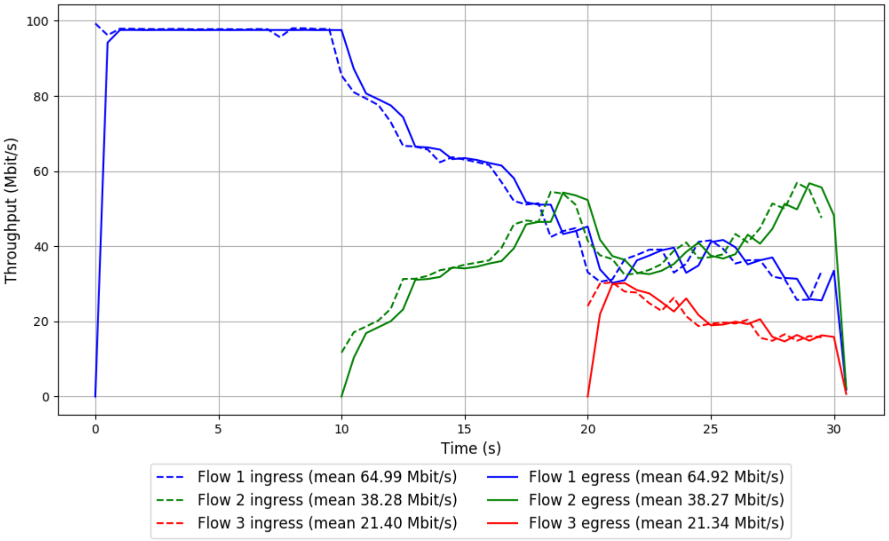
Run 7: Report of TCP Cubic — Data Link

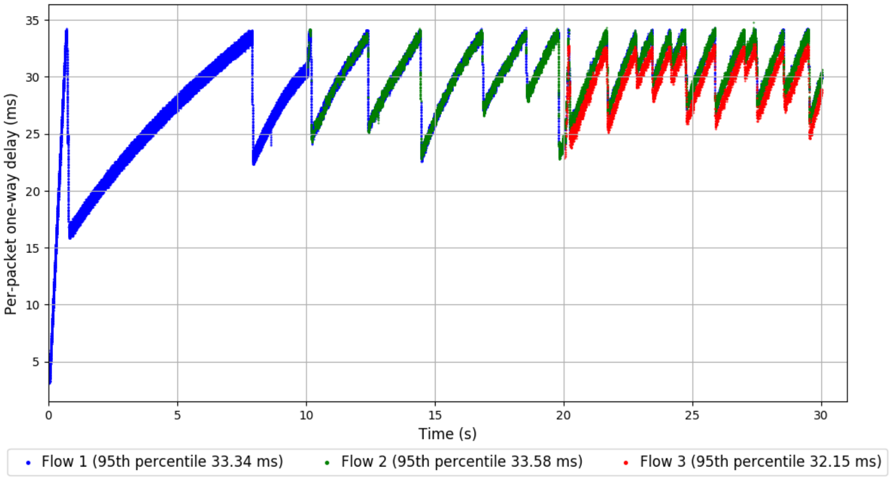




```
Run 8: Statistics of TCP Cubic

Start at: 2018-05-22 05:40:47
End at: 2018-05-22 05:41:17
Local clock offset: -8.314 ms
Remote clock offset: -1.958 ms

# Below is generated by plot.py at 2018-05-22 06:29:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.48 Mbit/s
95th percentile per-packet one-way delay: 33.372 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 64.92 Mbit/s
95th percentile per-packet one-way delay: 33.345 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 38.27 Mbit/s
95th percentile per-packet one-way delay: 33.577 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 21.34 Mbit/s
95th percentile per-packet one-way delay: 32.147 ms
Loss rate: 0.24%
```

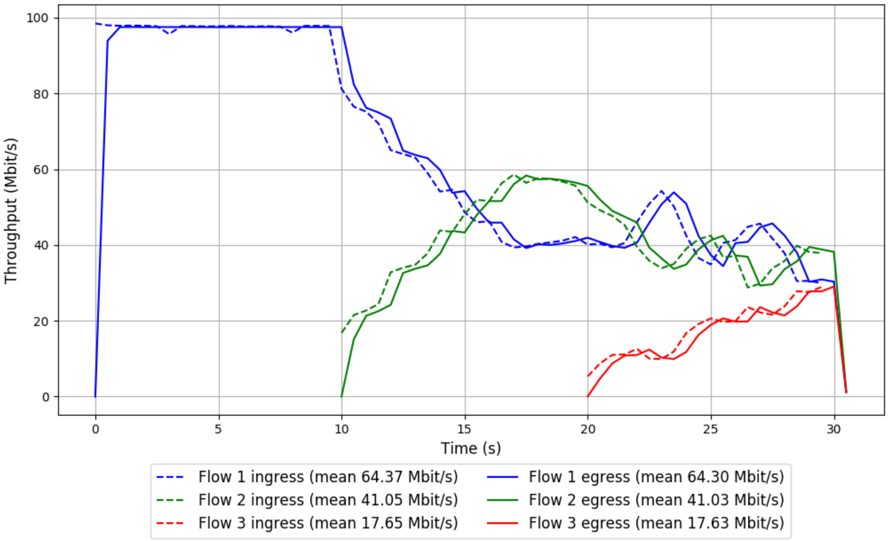
Run 8: Report of TCP Cubic — Data Link

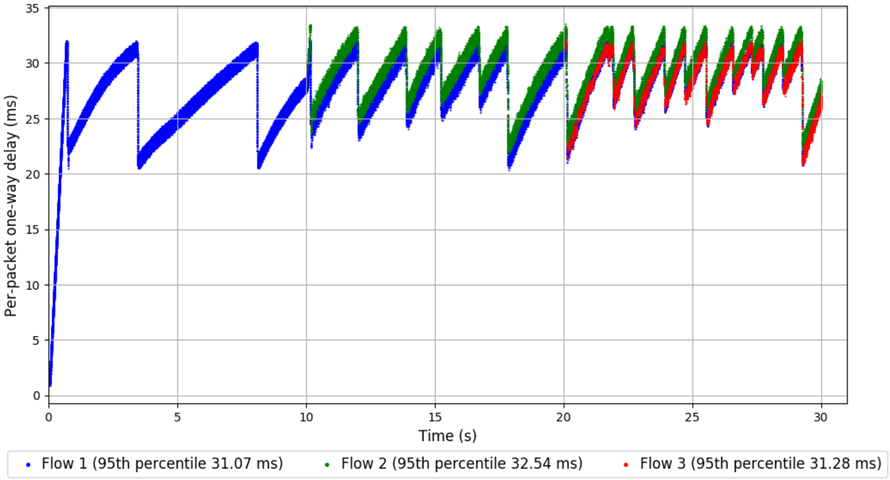




```
Run 9: Statistics of TCP Cubic

Start at: 2018-05-22 05:58:38
End at: 2018-05-22 05:59:08
Local clock offset: -7.654 ms
Remote clock offset: -4.388 ms

# Below is generated by plot.py at 2018-05-22 06:29:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.47 Mbit/s
95th percentile per-packet one-way delay: 31.802 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 64.30 Mbit/s
95th percentile per-packet one-way delay: 31.072 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 41.03 Mbit/s
95th percentile per-packet one-way delay: 32.539 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 17.63 Mbit/s
95th percentile per-packet one-way delay: 31.280 ms
Loss rate: 0.13%
```

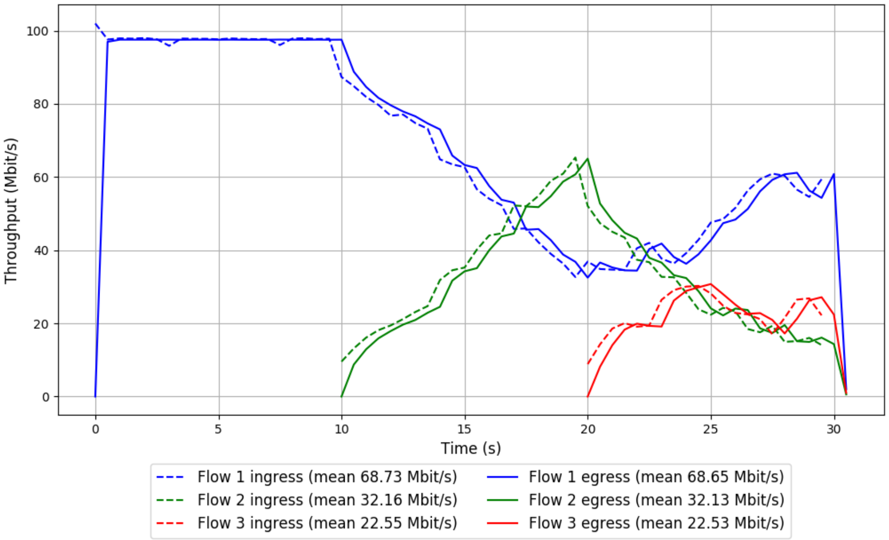
Run 9: Report of TCP Cubic — Data Link

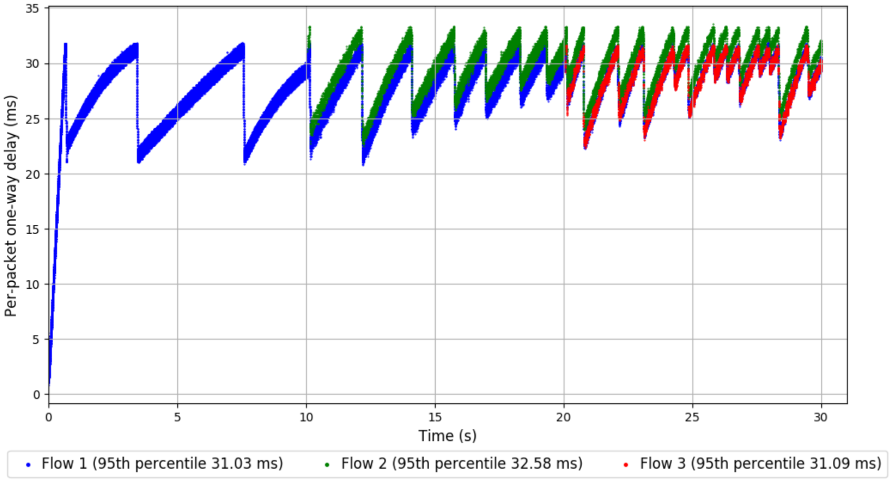




```
Run 10: Statistics of TCP Cubic

Start at: 2018-05-22 06:20:44
End at: 2018-05-22 06:21:14
Local clock offset: -6.801 ms
Remote clock offset: -3.514 ms

# Below is generated by plot.py at 2018-05-22 06:29:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.52 Mbit/s
95th percentile per-packet one-way delay: 31.716 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 68.65 Mbit/s
95th percentile per-packet one-way delay: 31.027 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 32.580 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 22.53 Mbit/s
95th percentile per-packet one-way delay: 31.095 ms
Loss rate: 0.07%
```

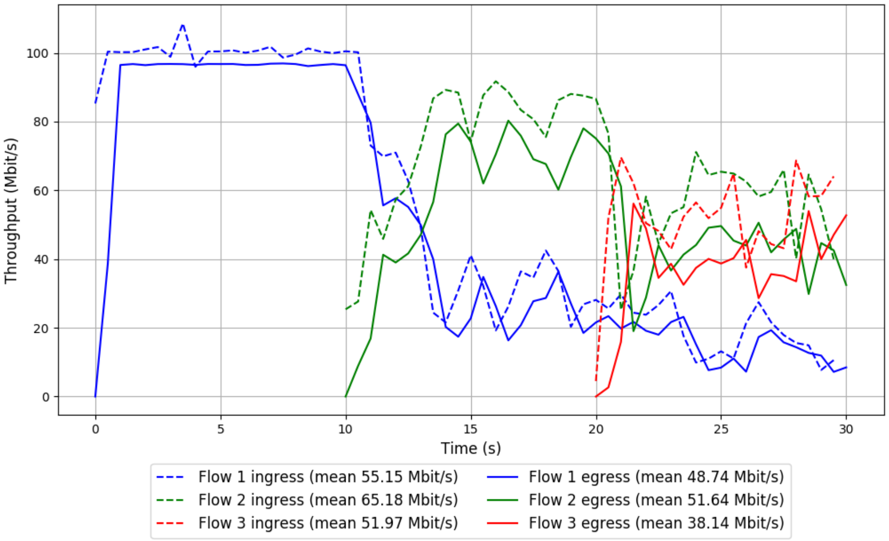
Run 10: Report of TCP Cubic — Data Link

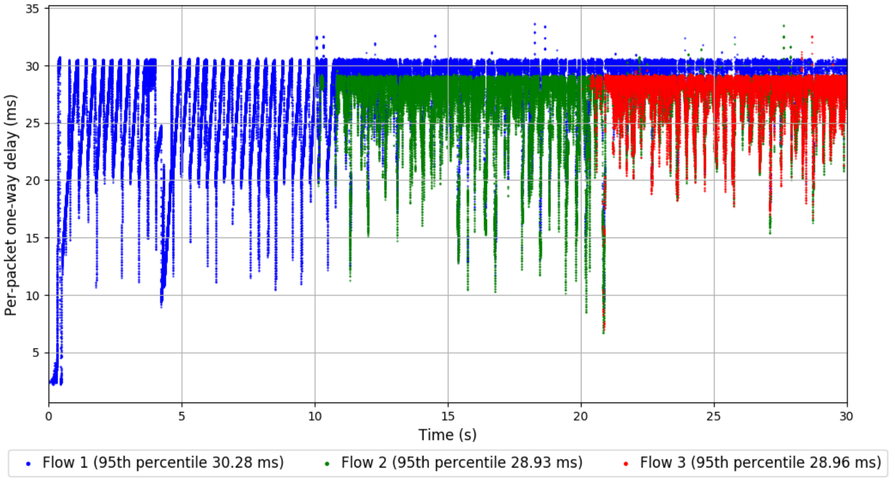




```
Run 1: Statistics of FillP

Start at: 2018-05-22 03:20:11
End at: 2018-05-22 03:20:41
Local clock offset: -5.448 ms
Remote clock offset: -2.358 ms

# Below is generated by plot.py at 2018-05-22 06:30:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.73 Mbit/s
95th percentile per-packet one-way delay: 30.142 ms
Loss rate: 17.24%
-- Flow 1:
Average throughput: 48.74 Mbit/s
95th percentile per-packet one-way delay: 30.281 ms
Loss rate: 11.54%
-- Flow 2:
Average throughput: 51.64 Mbit/s
95th percentile per-packet one-way delay: 28.932 ms
Loss rate: 20.77%
-- Flow 3:
Average throughput: 38.14 Mbit/s
95th percentile per-packet one-way delay: 28.965 ms
Loss rate: 26.61%
```

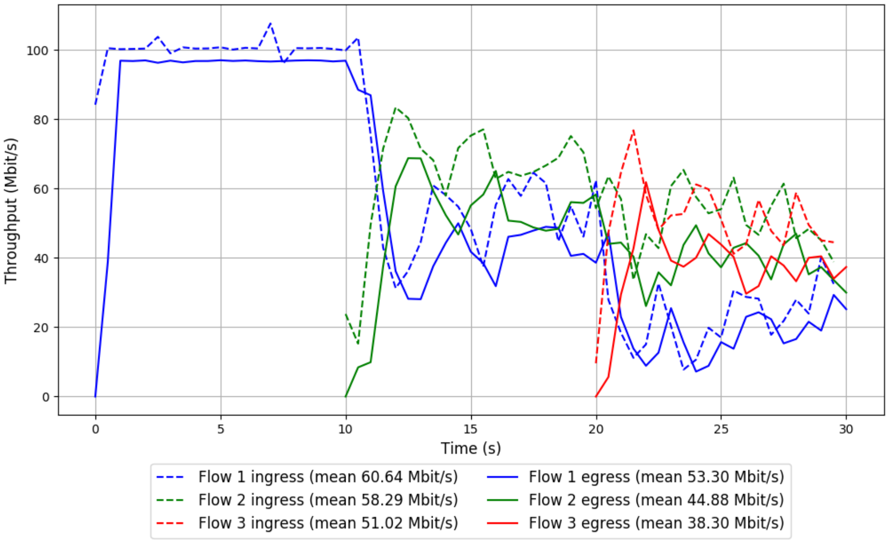
Run 1: Report of FillP — Data Link

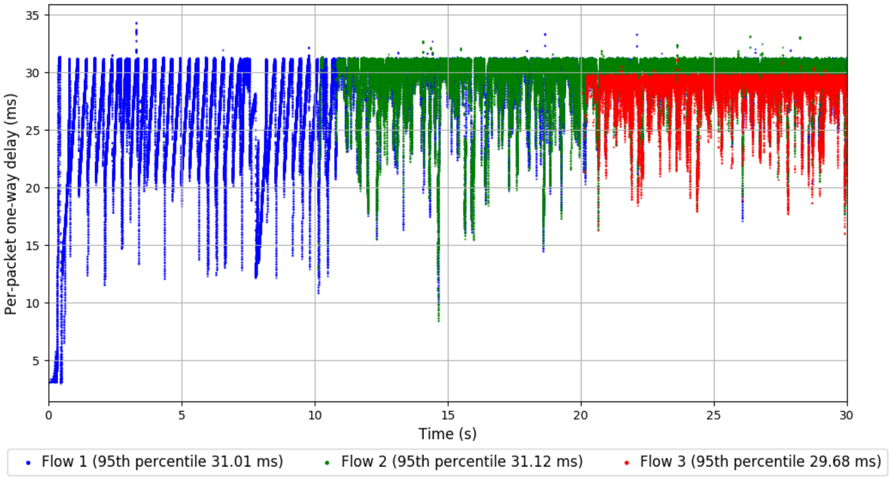




```
Run 2: Statistics of FillP

Start at: 2018-05-22 03:38:02
End at: 2018-05-22 03:38:32
Local clock offset: -6.482 ms
Remote clock offset: -2.583 ms

# Below is generated by plot.py at 2018-05-22 06:30:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.83 Mbit/s
95th percentile per-packet one-way delay: 31.042 ms
Loss rate: 17.56%
-- Flow 1:
Average throughput: 53.30 Mbit/s
95th percentile per-packet one-way delay: 31.009 ms
Loss rate: 12.02%
-- Flow 2:
Average throughput: 44.88 Mbit/s
95th percentile per-packet one-way delay: 31.122 ms
Loss rate: 23.00%
-- Flow 3:
Average throughput: 38.30 Mbit/s
95th percentile per-packet one-way delay: 29.677 ms
Loss rate: 24.93%
```

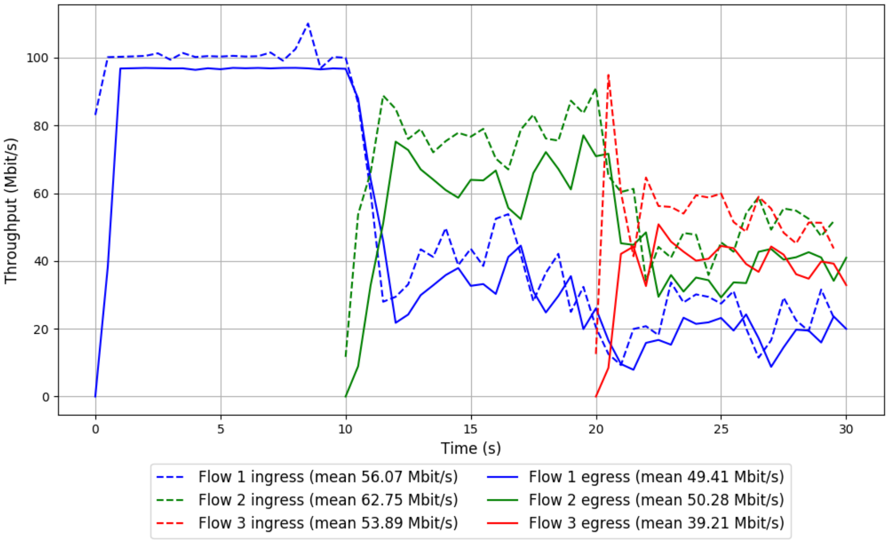
Run 2: Report of FillP — Data Link

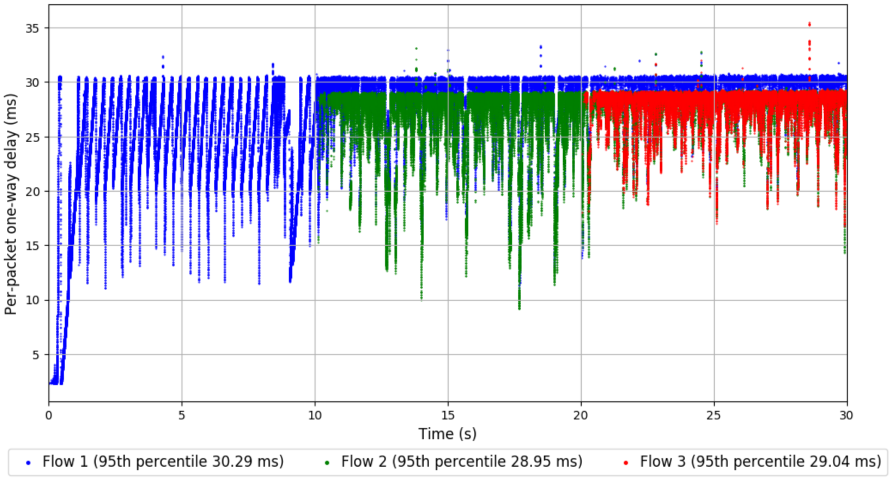




```
Run 3: Statistics of FillP

Start at: 2018-05-22 03:55:54
End at: 2018-05-22 03:56:24
Local clock offset: -5.746 ms
Remote clock offset: -6.726 ms

# Below is generated by plot.py at 2018-05-22 06:30:52
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.88 Mbit/s
95th percentile per-packet one-way delay: 30.152 ms
Loss rate: 17.10%
-- Flow 1:
Average throughput: 49.41 Mbit/s
95th percentile per-packet one-way delay: 30.291 ms
Loss rate: 11.81%
-- Flow 2:
Average throughput: 50.28 Mbit/s
95th percentile per-packet one-way delay: 28.955 ms
Loss rate: 19.86%
-- Flow 3:
Average throughput: 39.21 Mbit/s
95th percentile per-packet one-way delay: 29.043 ms
Loss rate: 27.21%
```

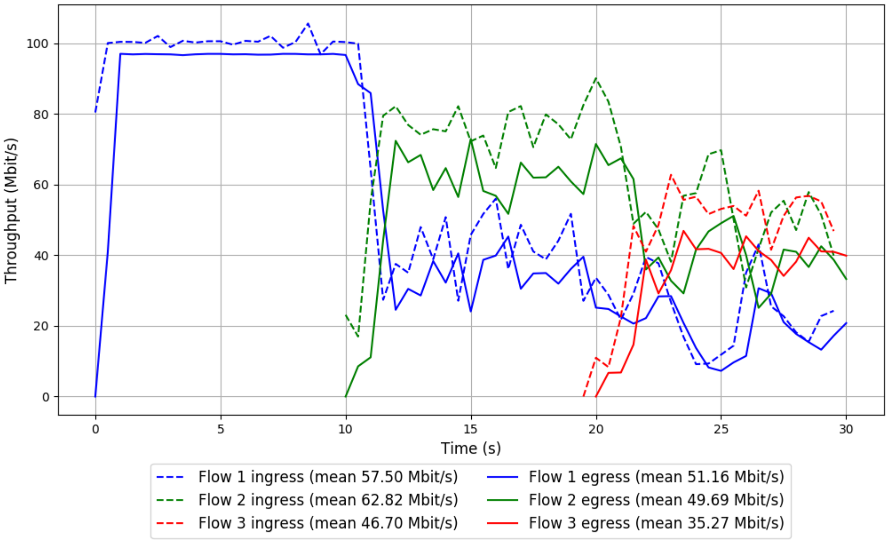
Run 3: Report of FillP — Data Link

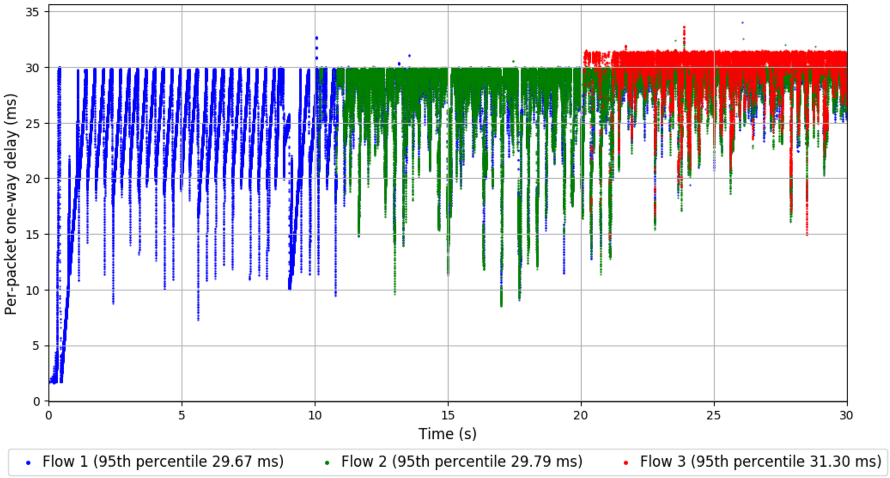




```
Run 4: Statistics of FillP

Start at: 2018-05-22 04:13:45
End at: 2018-05-22 04:14:15
Local clock offset: -0.374 ms
Remote clock offset: -8.411 ms

# Below is generated by plot.py at 2018-05-22 06:30:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.95 Mbit/s
95th percentile per-packet one-way delay: 30.851 ms
Loss rate: 16.40%
-- Flow 1:
Average throughput: 51.16 Mbit/s
95th percentile per-packet one-way delay: 29.669 ms
Loss rate: 10.95%
-- Flow 2:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 29.789 ms
Loss rate: 20.91%
-- Flow 3:
Average throughput: 35.27 Mbit/s
95th percentile per-packet one-way delay: 31.296 ms
Loss rate: 24.43%
```

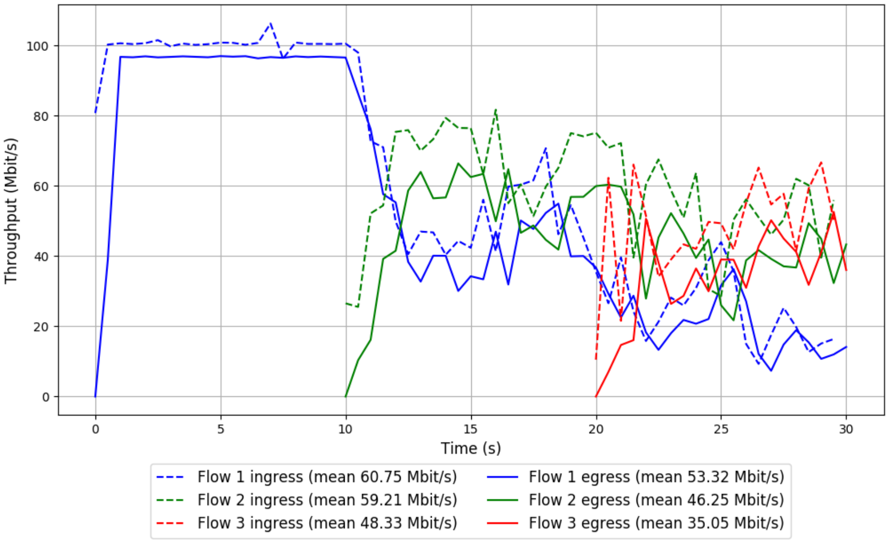
Run 4: Report of FillP — Data Link

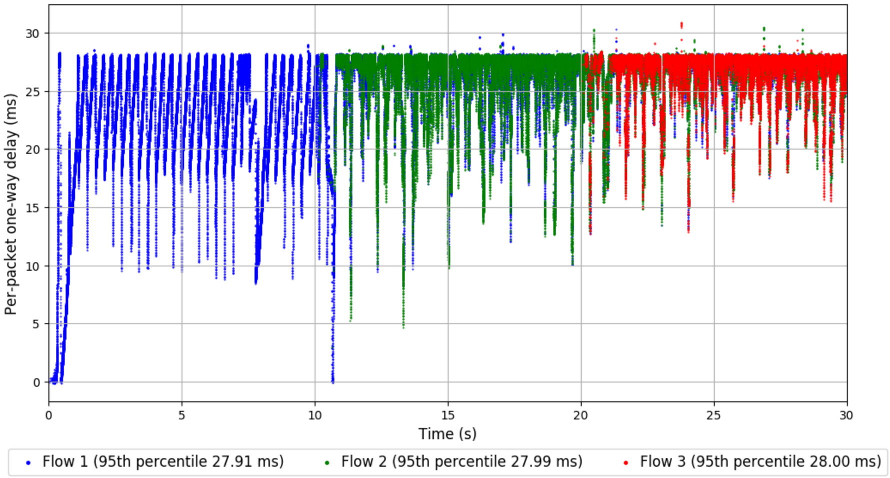




```
Run 5: Statistics of FillP

Start at: 2018-05-22 04:31:36
End at: 2018-05-22 04:32:06
Local clock offset: 3.253 ms
Remote clock offset: -2.999 ms

# Below is generated by plot.py at 2018-05-22 06:30:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.72 Mbit/s
95th percentile per-packet one-way delay: 27.965 ms
Loss rate: 17.57%
-- Flow 1:
Average throughput: 53.32 Mbit/s
95th percentile per-packet one-way delay: 27.908 ms
Loss rate: 12.15%
-- Flow 2:
Average throughput: 46.25 Mbit/s
95th percentile per-packet one-way delay: 27.994 ms
Loss rate: 21.88%
-- Flow 3:
Average throughput: 35.05 Mbit/s
95th percentile per-packet one-way delay: 28.002 ms
Loss rate: 27.48%
```

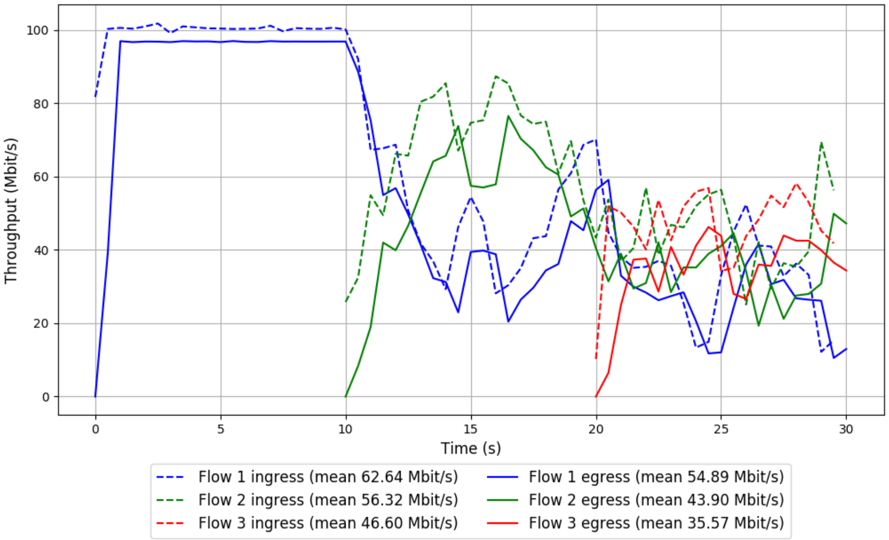
Run 5: Report of FillP — Data Link

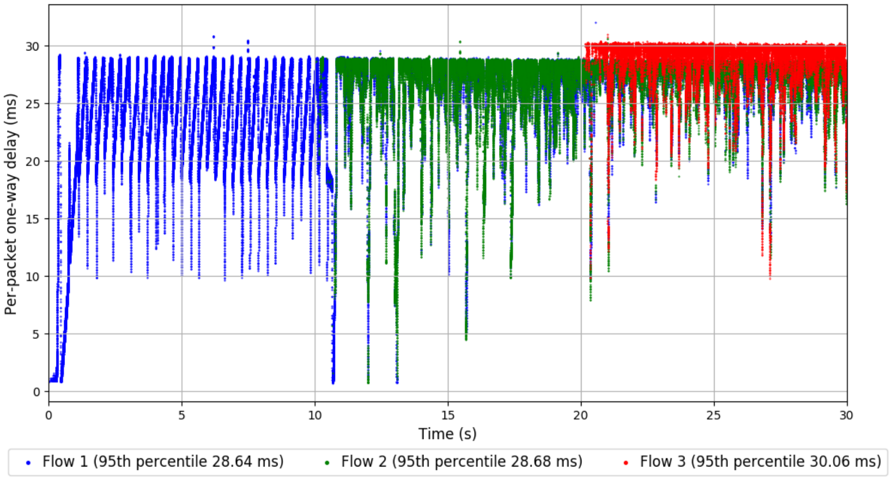




```
Run 6: Statistics of FillP

Start at: 2018-05-22 04:49:28
End at: 2018-05-22 04:49:58
Local clock offset: 3.939 ms
Remote clock offset: -1.154 ms

# Below is generated by plot.py at 2018-05-22 06:30:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.85 Mbit/s
95th percentile per-packet one-way delay: 29.604 ms
Loss rate: 17.00%
-- Flow 1:
Average throughput: 54.89 Mbit/s
95th percentile per-packet one-way delay: 28.639 ms
Loss rate: 12.31%
-- Flow 2:
Average throughput: 43.90 Mbit/s
95th percentile per-packet one-way delay: 28.677 ms
Loss rate: 22.08%
-- Flow 3:
Average throughput: 35.57 Mbit/s
95th percentile per-packet one-way delay: 30.063 ms
Loss rate: 23.69%
```

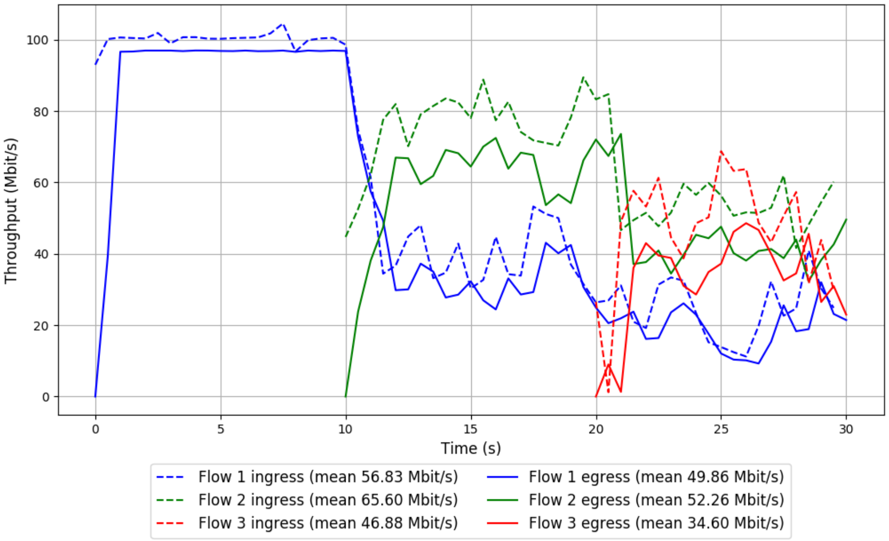
Run 6: Report of FillP — Data Link

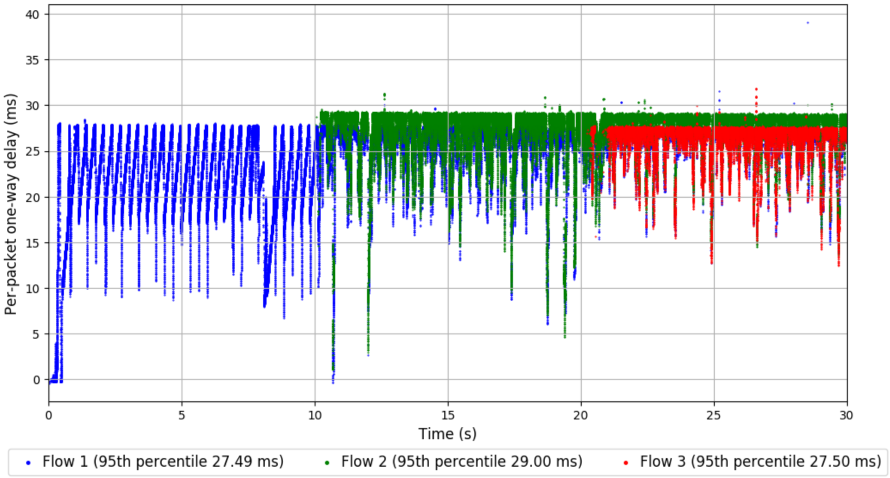




```
Run 7: Statistics of FillP

Start at: 2018-05-22 05:07:19
End at: 2018-05-22 05:07:49
Local clock offset: -3.701 ms
Remote clock offset: 7.82 ms

# Below is generated by plot.py at 2018-05-22 06:31:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.87 Mbit/s
95th percentile per-packet one-way delay: 28.862 ms
Loss rate: 17.34%
-- Flow 1:
Average throughput: 49.86 Mbit/s
95th percentile per-packet one-way delay: 27.494 ms
Loss rate: 12.20%
-- Flow 2:
Average throughput: 52.26 Mbit/s
95th percentile per-packet one-way delay: 29.004 ms
Loss rate: 20.33%
-- Flow 3:
Average throughput: 34.60 Mbit/s
95th percentile per-packet one-way delay: 27.499 ms
Loss rate: 27.69%
```

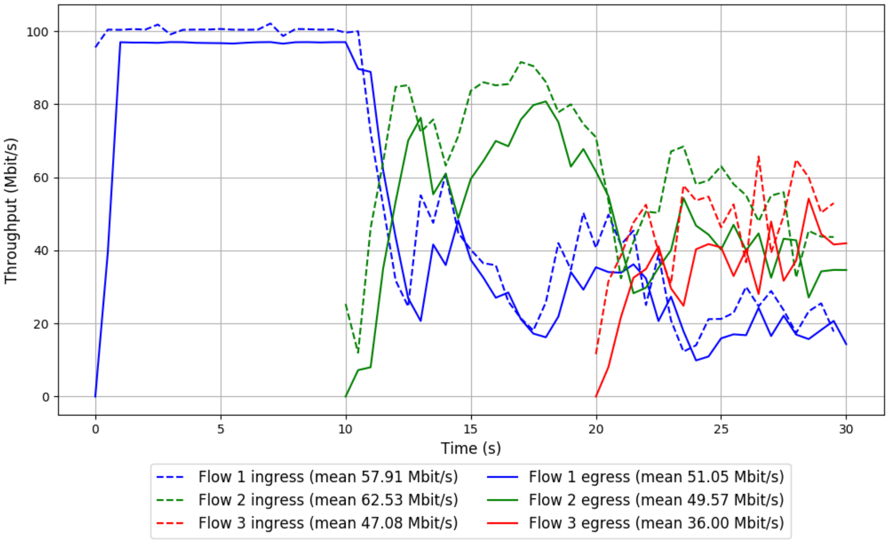
Run 7: Report of FillP — Data Link

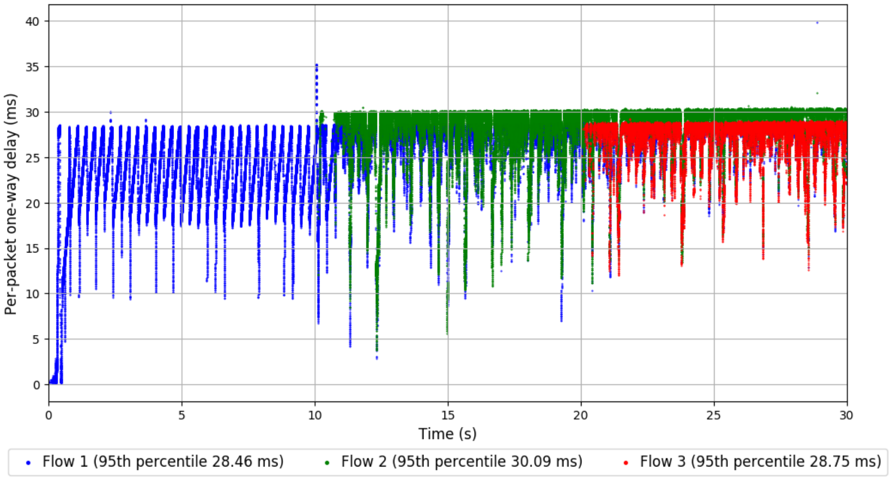




```
Run 8: Statistics of FillP

Start at: 2018-05-22 05:25:11
End at: 2018-05-22 05:25:41
Local clock offset: -8.551 ms
Remote clock offset: 9.13 ms

# Below is generated by plot.py at 2018-05-22 06:31:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 29.925 ms
Loss rate: 16.62%
-- Flow 1:
Average throughput: 51.05 Mbit/s
95th percentile per-packet one-way delay: 28.456 ms
Loss rate: 11.79%
-- Flow 2:
Average throughput: 49.57 Mbit/s
95th percentile per-packet one-way delay: 30.092 ms
Loss rate: 20.73%
-- Flow 3:
Average throughput: 36.00 Mbit/s
95th percentile per-packet one-way delay: 28.752 ms
Loss rate: 23.56%
```

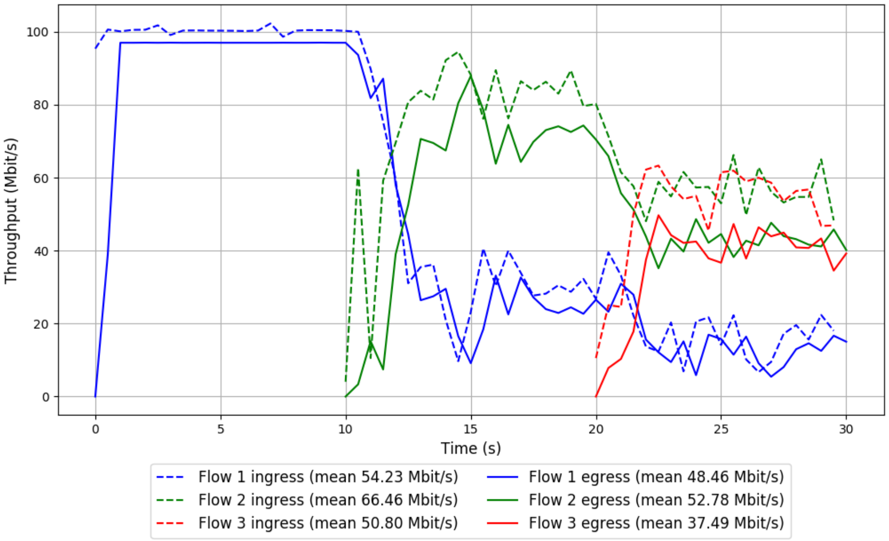
Run 8: Report of FillP — Data Link

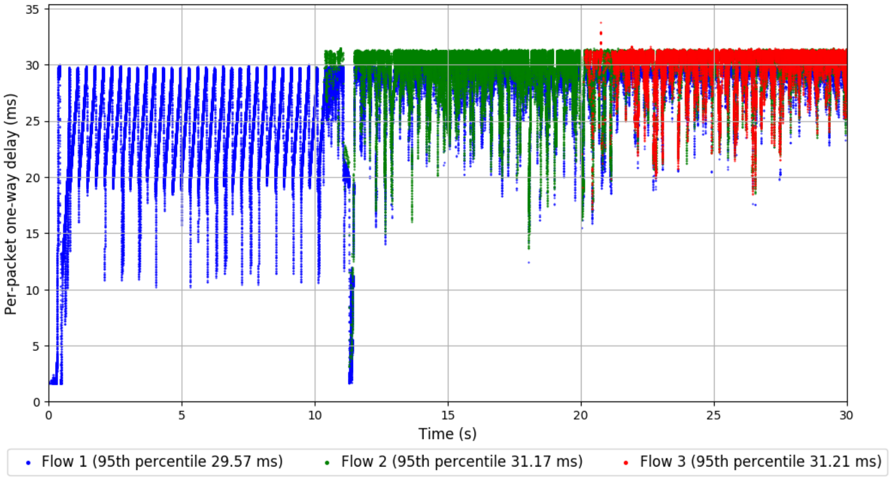




```
Run 9: Statistics of FillP

Start at: 2018-05-22 05:43:02
End at: 2018-05-22 05:43:32
Local clock offset: -8.313 ms
Remote clock offset: -2.524 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.97 Mbit/s
95th percentile per-packet one-way delay: 31.098 ms
Loss rate: 16.68%
-- Flow 1:
Average throughput: 48.46 Mbit/s
95th percentile per-packet one-way delay: 29.572 ms
Loss rate: 10.56%
-- Flow 2:
Average throughput: 52.78 Mbit/s
95th percentile per-packet one-way delay: 31.172 ms
Loss rate: 20.57%
-- Flow 3:
Average throughput: 37.49 Mbit/s
95th percentile per-packet one-way delay: 31.211 ms
Loss rate: 26.12%
```

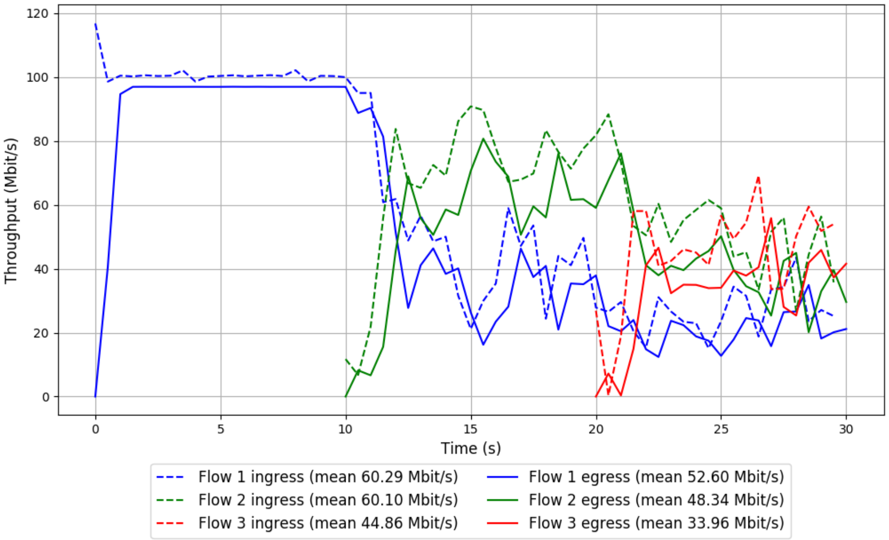
Run 9: Report of FillP — Data Link

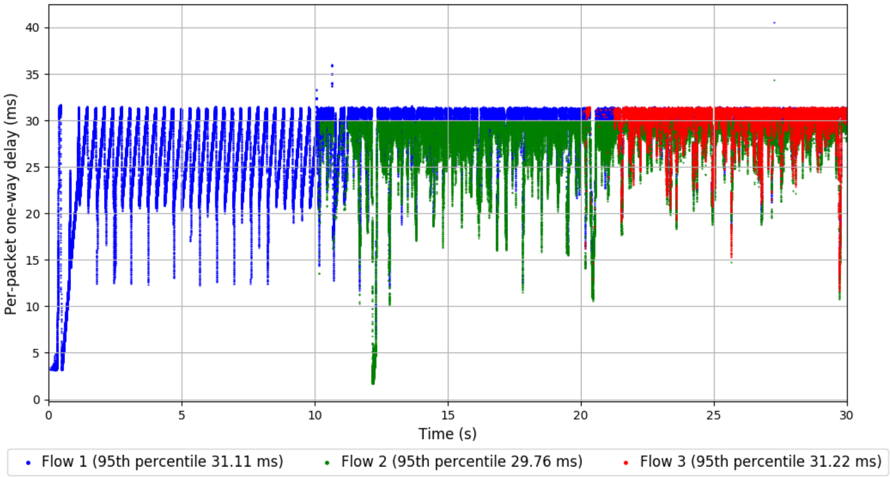




```
Run 10: Statistics of FillP

Start at: 2018-05-22 06:00:53
End at: 2018-05-22 06:01:23
Local clock offset: -8.138 ms
Remote clock offset: -4.067 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.00 Mbit/s
95th percentile per-packet one-way delay: 31.084 ms
Loss rate: 16.57%
-- Flow 1:
Average throughput: 52.60 Mbit/s
95th percentile per-packet one-way delay: 31.115 ms
Loss rate: 12.68%
-- Flow 2:
Average throughput: 48.34 Mbit/s
95th percentile per-packet one-way delay: 29.759 ms
Loss rate: 19.55%
-- Flow 3:
Average throughput: 33.96 Mbit/s
95th percentile per-packet one-way delay: 31.224 ms
Loss rate: 24.30%
```

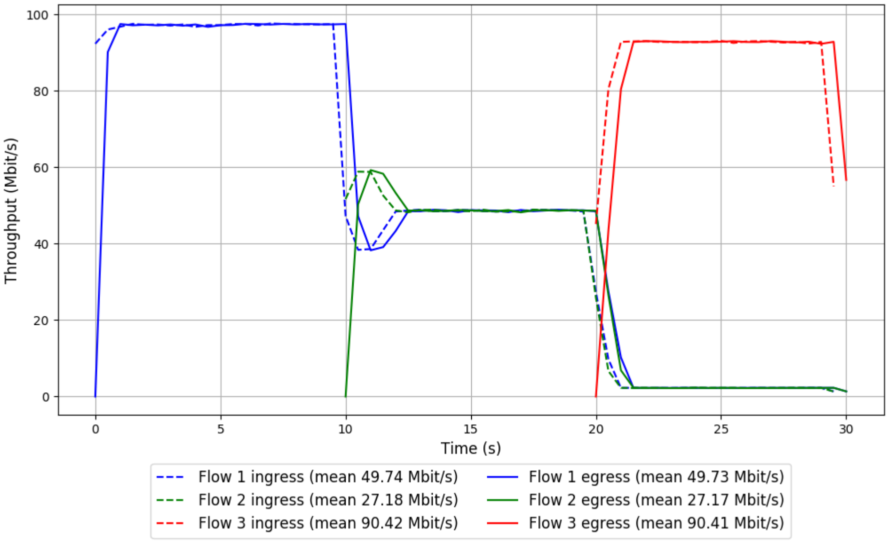
Run 10: Report of FillP — Data Link

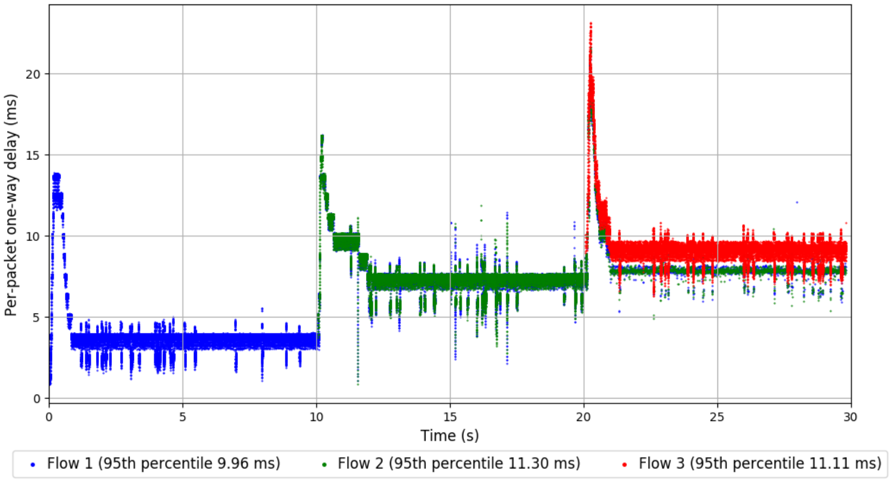




```
Run 1: Statistics of Indigo

Start at: 2018-05-22 03:30:08
End at: 2018-05-22 03:30:38
Local clock offset: -5.485 ms
Remote clock offset: -2.492 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 11.049 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.73 Mbit/s
95th percentile per-packet one-way delay: 9.956 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.17 Mbit/s
95th percentile per-packet one-way delay: 11.299 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 90.41 Mbit/s
95th percentile per-packet one-way delay: 11.109 ms
Loss rate: 0.00%
```

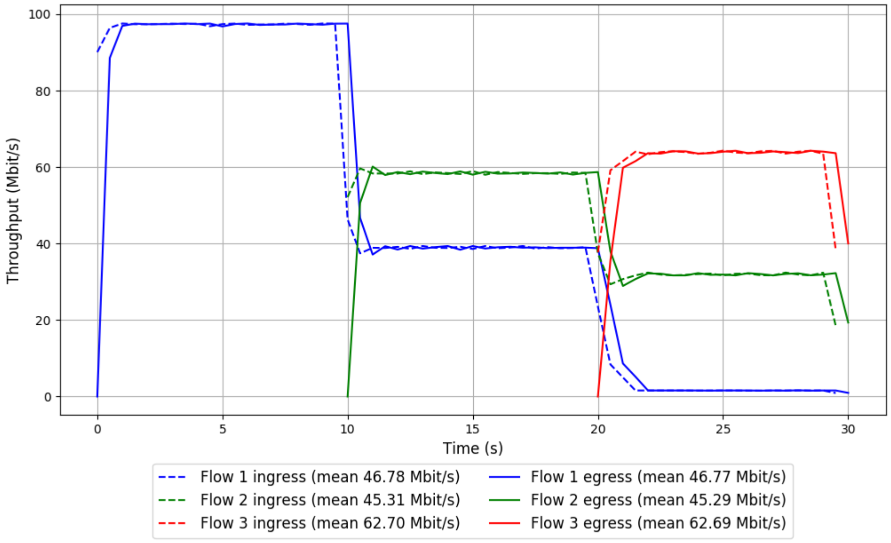
Run 1: Report of Indigo — Data Link

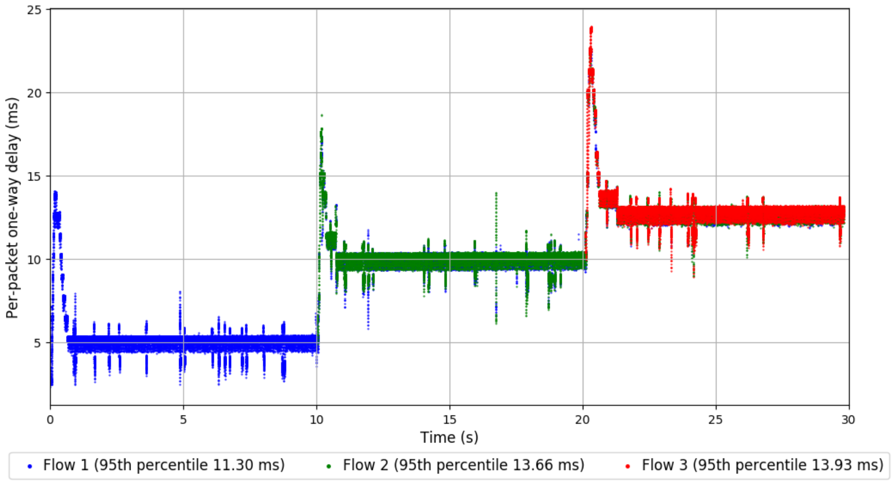




```
Run 2: Statistics of Indigo

Start at: 2018-05-22 03:48:00
End at: 2018-05-22 03:48:30
Local clock offset: -5.788 ms
Remote clock offset: -5.029 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 13.389 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.77 Mbit/s
95th percentile per-packet one-way delay: 11.305 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 45.29 Mbit/s
95th percentile per-packet one-way delay: 13.660 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.69 Mbit/s
95th percentile per-packet one-way delay: 13.931 ms
Loss rate: 0.00%
```

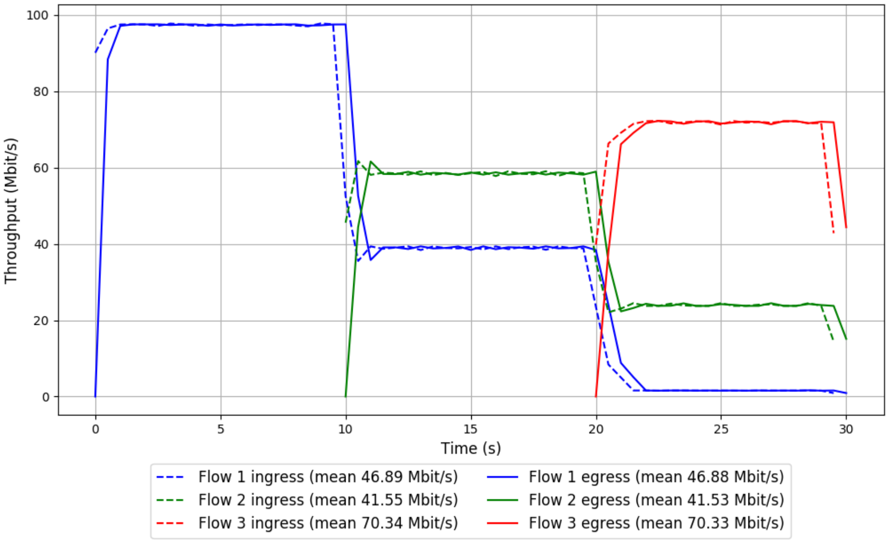
Run 2: Report of Indigo — Data Link

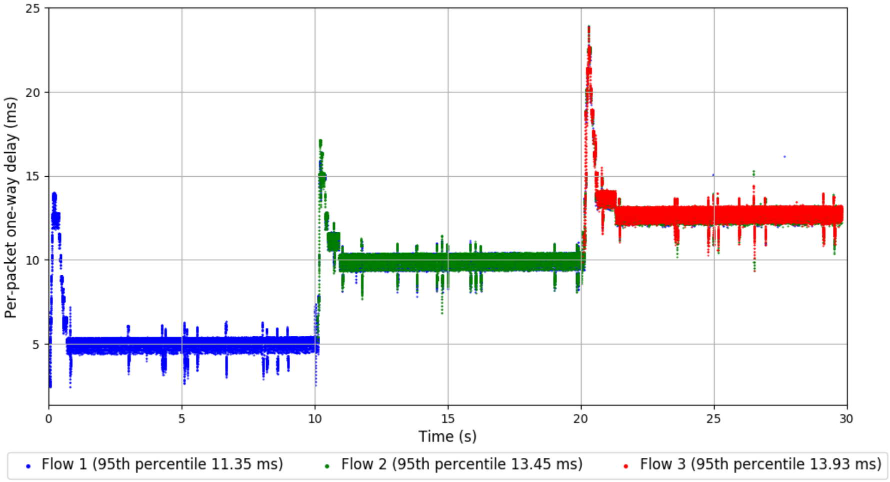




```
Run 3: Statistics of Indigo

Start at: 2018-05-22 04:05:51
End at: 2018-05-22 04:06:21
Local clock offset: -1.421 ms
Remote clock offset: -7.84 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.28 Mbit/s
95th percentile per-packet one-way delay: 13.389 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.88 Mbit/s
95th percentile per-packet one-way delay: 11.351 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.53 Mbit/s
95th percentile per-packet one-way delay: 13.445 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.33 Mbit/s
95th percentile per-packet one-way delay: 13.932 ms
Loss rate: 0.00%
```

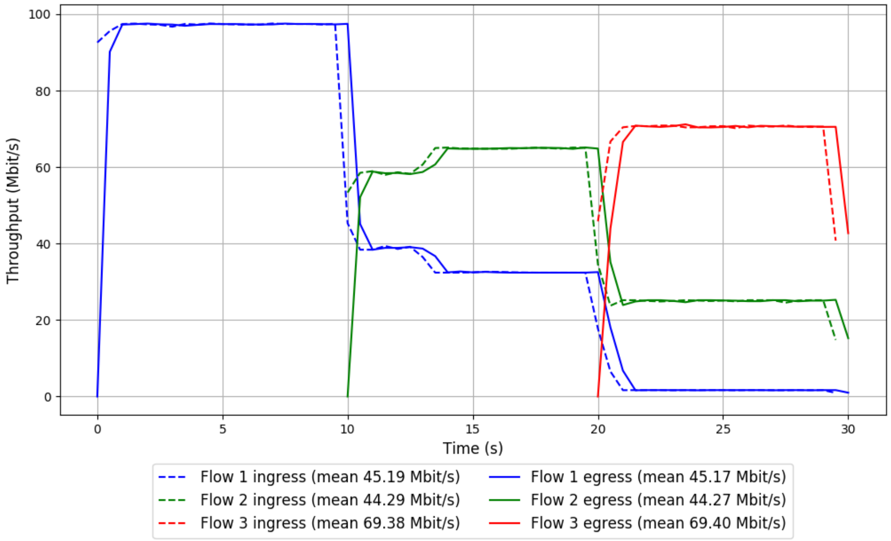
Run 3: Report of Indigo — Data Link

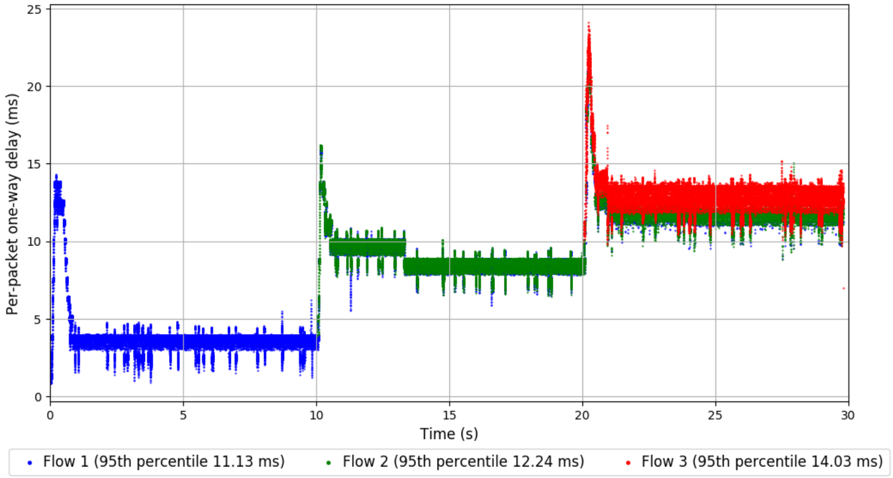




```
Run 4: Statistics of Indigo

Start at: 2018-05-22 04:23:42
End at: 2018-05-22 04:24:12
Local clock offset: 1.694 ms
Remote clock offset: -4.655 ms

# Below is generated by plot.py at 2018-05-22 06:32:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 13.409 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 45.17 Mbit/s
95th percentile per-packet one-way delay: 11.127 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 44.27 Mbit/s
95th percentile per-packet one-way delay: 12.244 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 69.40 Mbit/s
95th percentile per-packet one-way delay: 14.030 ms
Loss rate: 0.00%
```

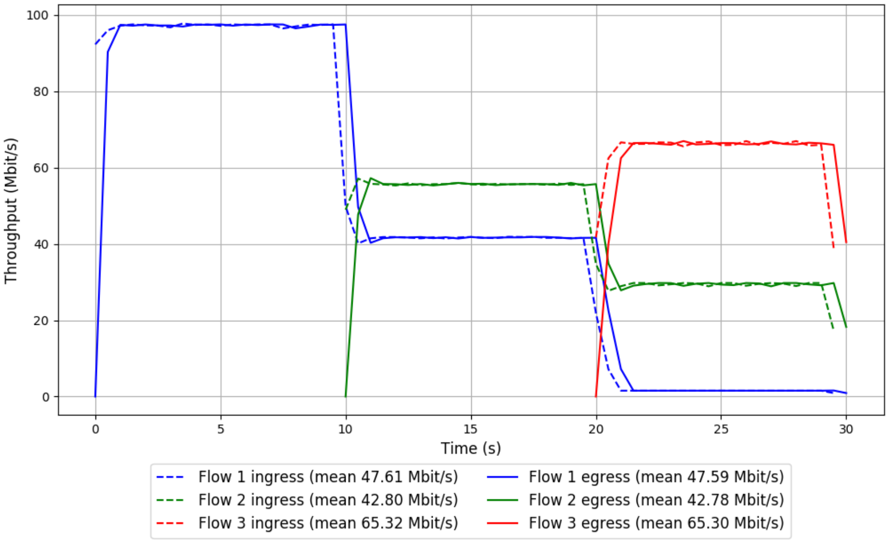
Run 4: Report of Indigo — Data Link

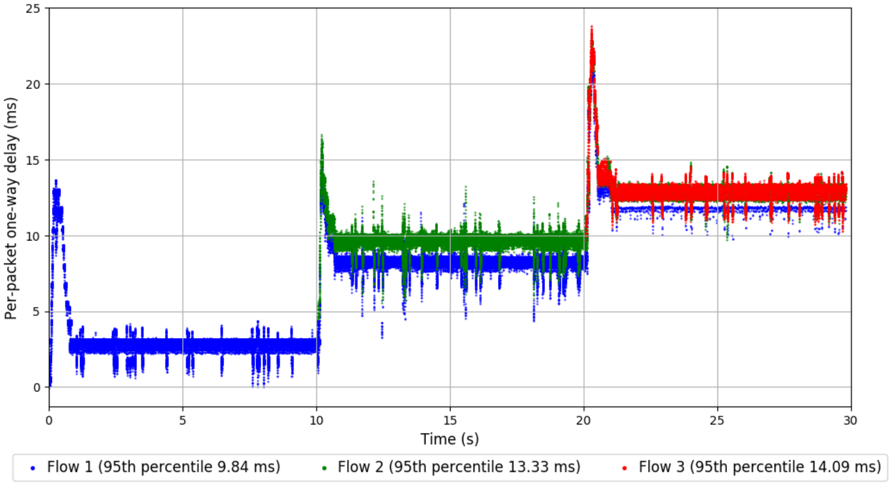




```
Run 5: Statistics of Indigo

Start at: 2018-05-22 04:41:34
End at: 2018-05-22 04:42:04
Local clock offset: 4.109 ms
Remote clock offset: -1.775 ms

# Below is generated by plot.py at 2018-05-22 06:32:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.21 Mbit/s
95th percentile per-packet one-way delay: 13.282 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.59 Mbit/s
95th percentile per-packet one-way delay: 9.835 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.78 Mbit/s
95th percentile per-packet one-way delay: 13.331 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.30 Mbit/s
95th percentile per-packet one-way delay: 14.093 ms
Loss rate: 0.00%
```

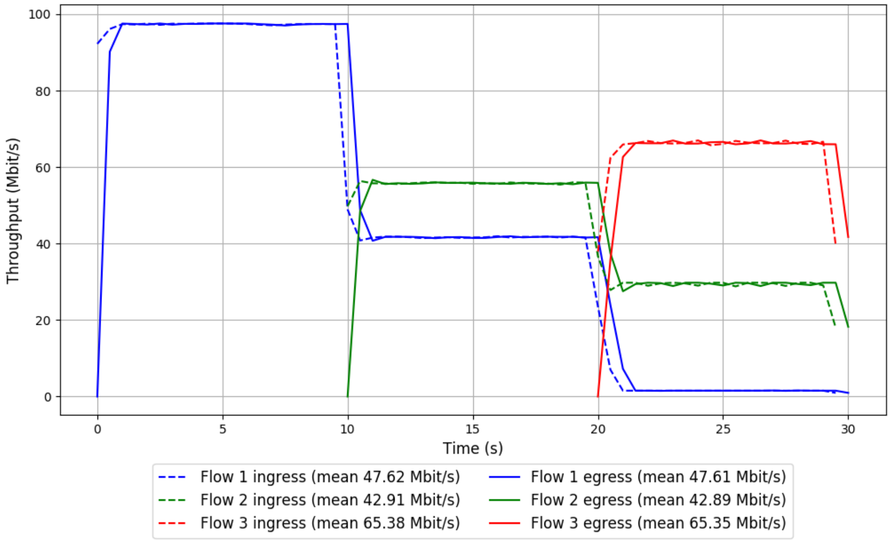
Run 5: Report of Indigo — Data Link

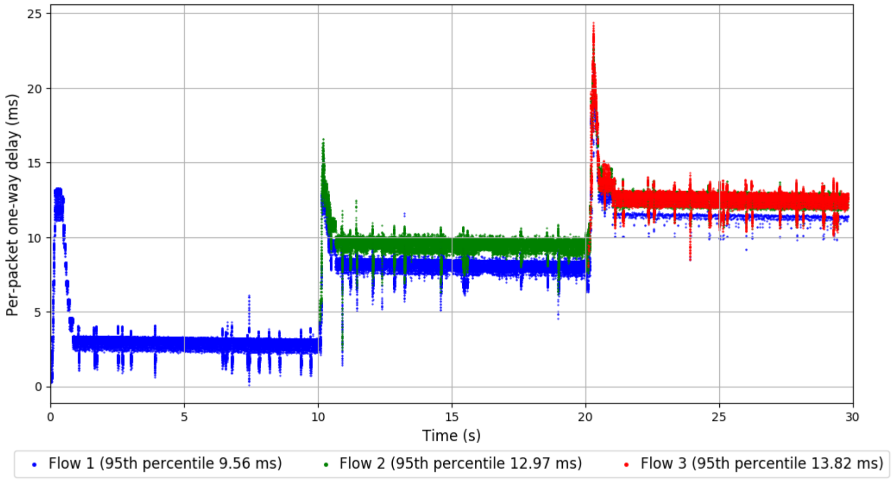




```
Run 6: Statistics of Indigo

Start at: 2018-05-22 04:59:25
End at: 2018-05-22 04:59:55
Local clock offset: 1.233 ms
Remote clock offset: 5.245 ms

# Below is generated by plot.py at 2018-05-22 06:32:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 12.913 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.61 Mbit/s
95th percentile per-packet one-way delay: 9.560 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 42.89 Mbit/s
95th percentile per-packet one-way delay: 12.973 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 65.35 Mbit/s
95th percentile per-packet one-way delay: 13.819 ms
Loss rate: 0.00%
```

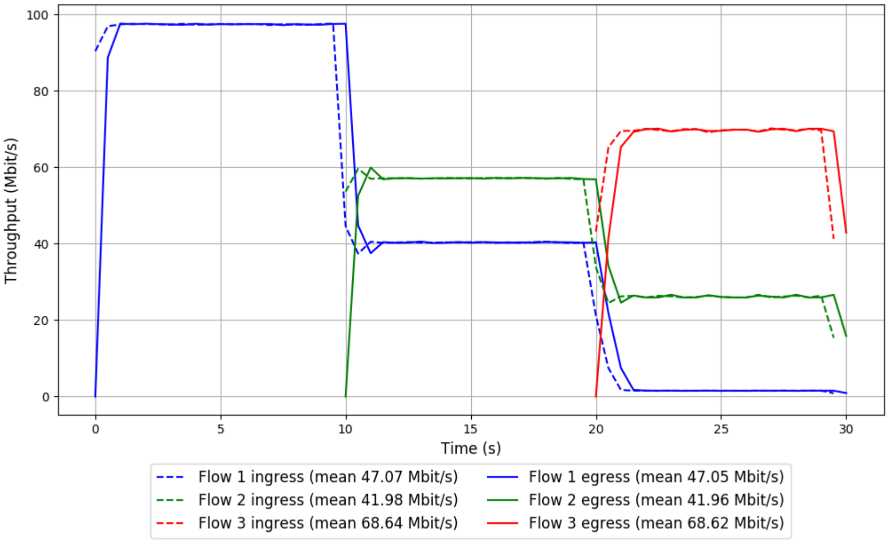
Run 6: Report of Indigo — Data Link

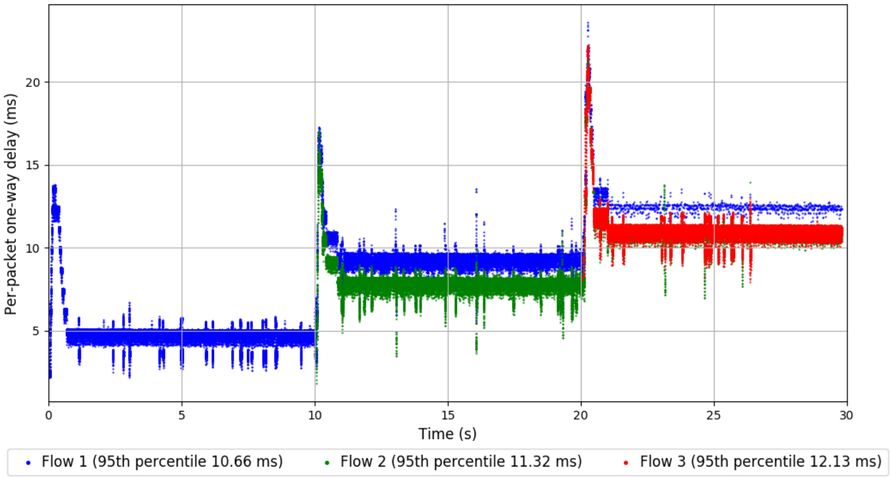




```
Run 7: Statistics of Indigo

Start at: 2018-05-22 05:17:17
End at: 2018-05-22 05:17:47
Local clock offset: -7.813 ms
Remote clock offset: 10.146 ms

# Below is generated by plot.py at 2018-05-22 06:33:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.25 Mbit/s
95th percentile per-packet one-way delay: 11.702 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.05 Mbit/s
95th percentile per-packet one-way delay: 10.663 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.96 Mbit/s
95th percentile per-packet one-way delay: 11.317 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 68.62 Mbit/s
95th percentile per-packet one-way delay: 12.131 ms
Loss rate: 0.00%
```

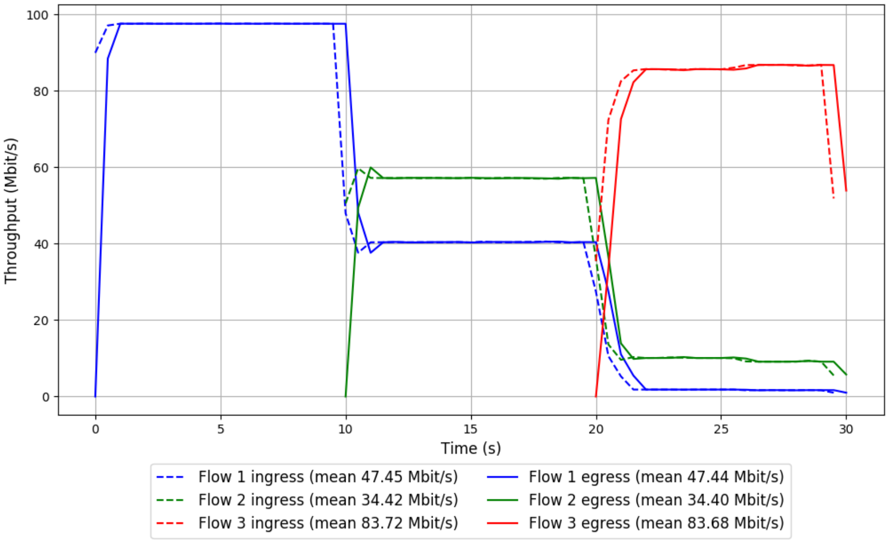
Run 7: Report of Indigo — Data Link

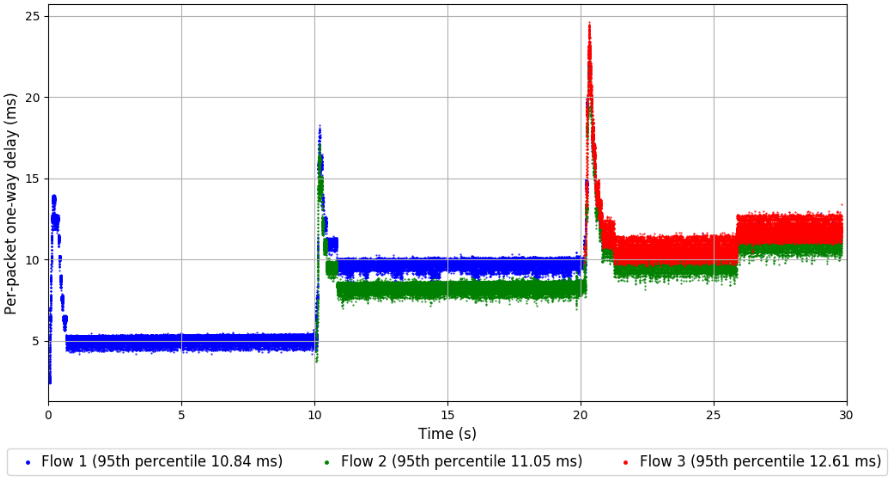




```
Run 8: Statistics of Indigo

Start at: 2018-05-22 05:35:08
End at: 2018-05-22 05:35:38
Local clock offset: -7.808 ms
Remote clock offset: 0.203 ms

# Below is generated by plot.py at 2018-05-22 06:33:17
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.38 Mbit/s
95th percentile per-packet one-way delay: 11.959 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.44 Mbit/s
95th percentile per-packet one-way delay: 10.837 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.40 Mbit/s
95th percentile per-packet one-way delay: 11.048 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 83.68 Mbit/s
95th percentile per-packet one-way delay: 12.611 ms
Loss rate: 0.00%
```

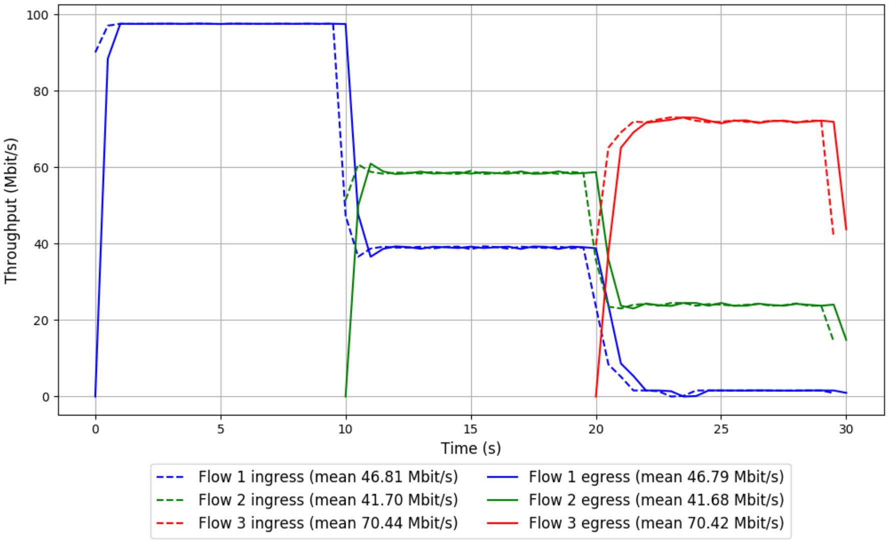
Run 8: Report of Indigo — Data Link

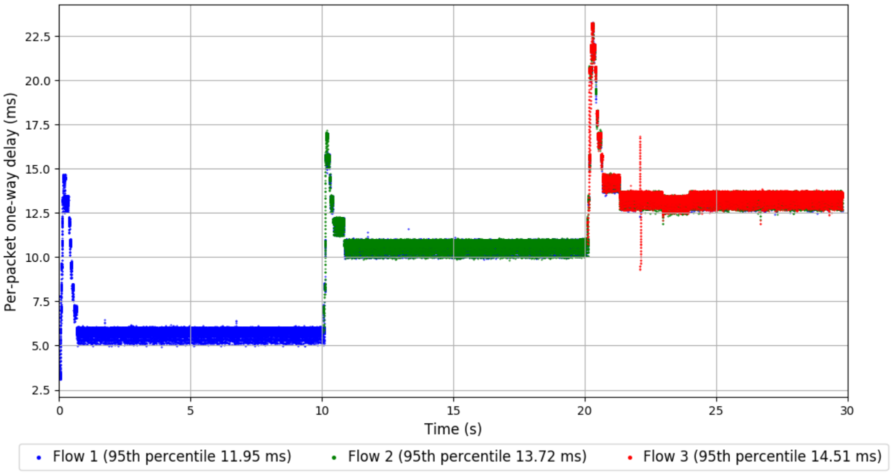




```
Run 9: Statistics of Indigo

Start at: 2018-05-22 05:52:59
End at: 2018-05-22 05:53:29
Local clock offset: -8.689 ms
Remote clock offset: -4.033 ms

# Below is generated by plot.py at 2018-05-22 06:33:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.39 Mbit/s
95th percentile per-packet one-way delay: 13.700 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.79 Mbit/s
95th percentile per-packet one-way delay: 11.948 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 41.68 Mbit/s
95th percentile per-packet one-way delay: 13.721 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.42 Mbit/s
95th percentile per-packet one-way delay: 14.506 ms
Loss rate: 0.01%
```

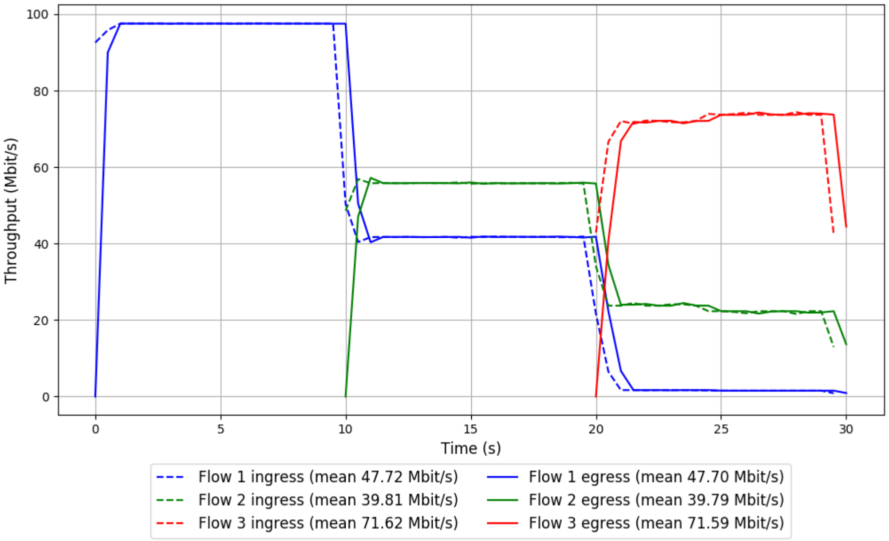
Run 9: Report of Indigo — Data Link

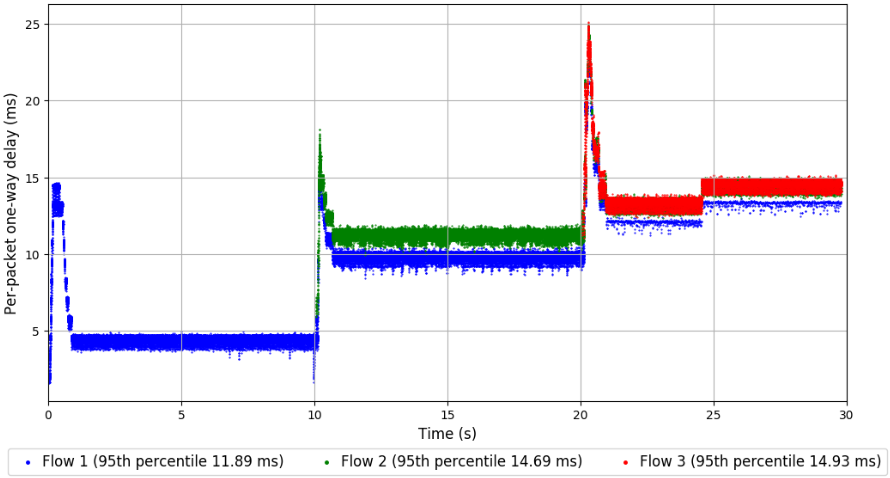




```
Run 10: Statistics of Indigo

Start at: 2018-05-22 06:10:50
End at: 2018-05-22 06:11:20
Local clock offset: -7.513 ms
Remote clock offset: -3.563 ms

# Below is generated by plot.py at 2018-05-22 06:33:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.41 Mbit/s
95th percentile per-packet one-way delay: 14.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 47.70 Mbit/s
95th percentile per-packet one-way delay: 11.892 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.79 Mbit/s
95th percentile per-packet one-way delay: 14.693 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.59 Mbit/s
95th percentile per-packet one-way delay: 14.933 ms
Loss rate: 0.00%
```

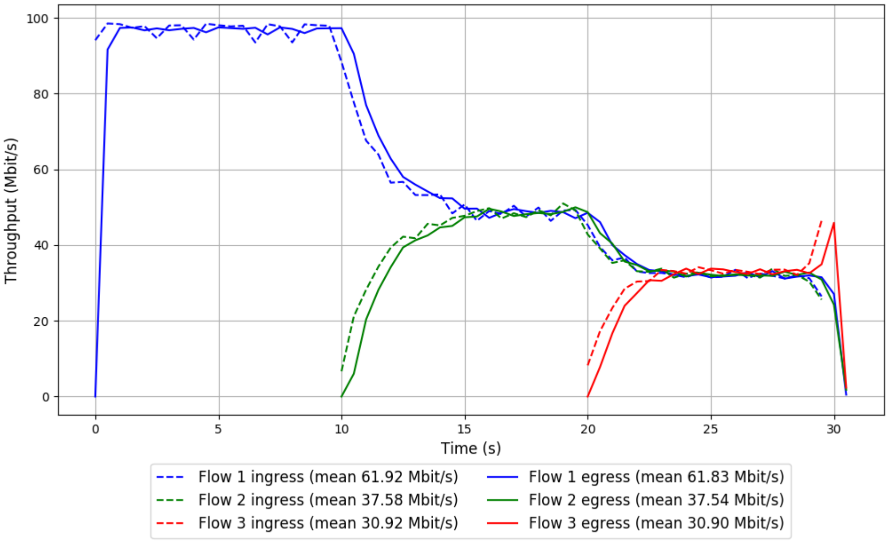
Run 10: Report of Indigo — Data Link

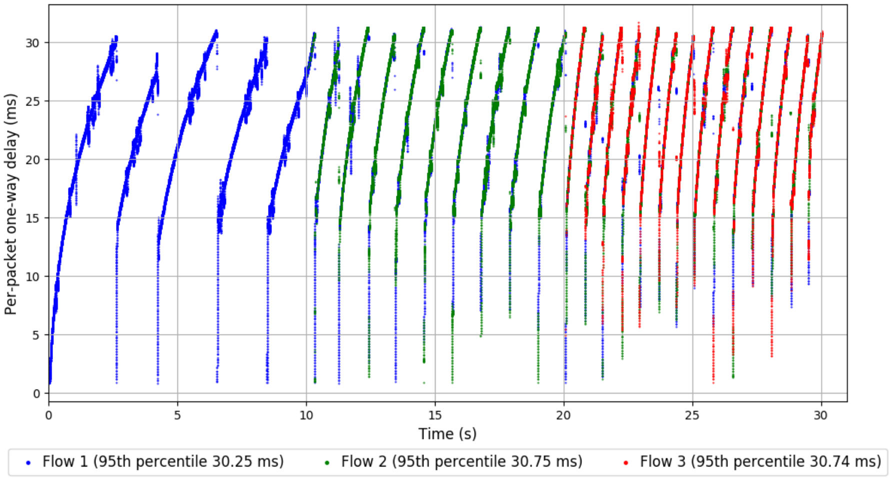




```
Run 1: Statistics of LEDBAT

Start at: 2018-05-22 03:22:25
End at: 2018-05-22 03:22:55
Local clock offset: -5.429 ms
Remote clock offset: -2.426 ms

# Below is generated by plot.py at 2018-05-22 06:33:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.02 Mbit/s
95th percentile per-packet one-way delay: 30.494 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 61.83 Mbit/s
95th percentile per-packet one-way delay: 30.251 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.54 Mbit/s
95th percentile per-packet one-way delay: 30.745 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 30.90 Mbit/s
95th percentile per-packet one-way delay: 30.743 ms
Loss rate: 0.08%
```

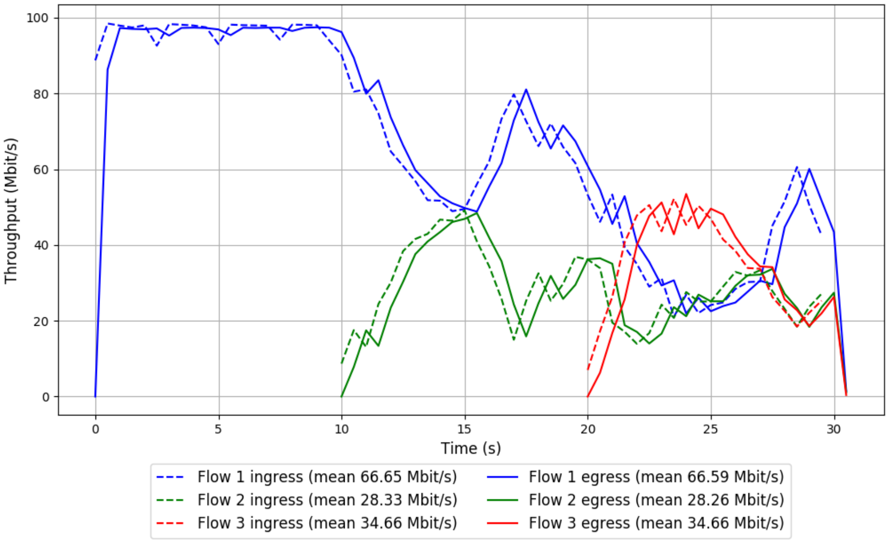
Run 1: Report of LEDBAT — Data Link

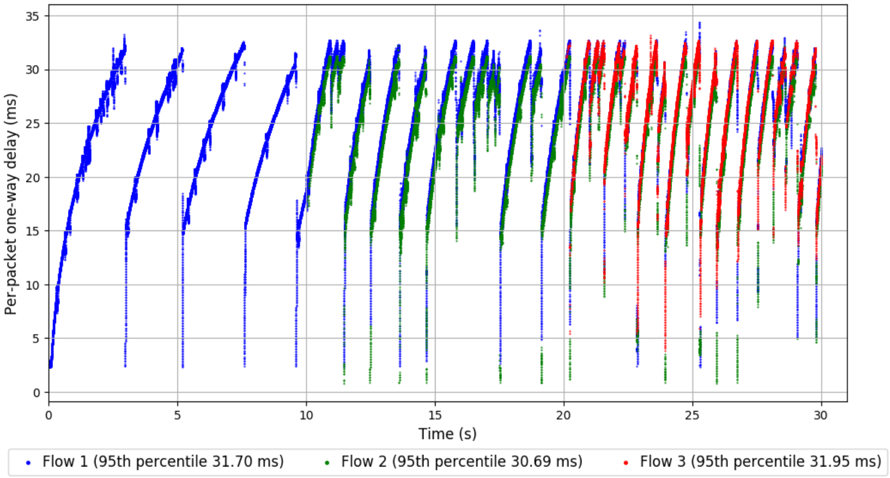




```
Run 2: Statistics of LEDBAT

Start at: 2018-05-22 03:40:16
End at: 2018-05-22 03:40:46
Local clock offset: -5.683 ms
Remote clock offset: -2.553 ms

# Below is generated by plot.py at 2018-05-22 06:33:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.90 Mbit/s
95th percentile per-packet one-way delay: 31.633 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 66.59 Mbit/s
95th percentile per-packet one-way delay: 31.697 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 28.26 Mbit/s
95th percentile per-packet one-way delay: 30.686 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 34.66 Mbit/s
95th percentile per-packet one-way delay: 31.952 ms
Loss rate: 0.06%
```

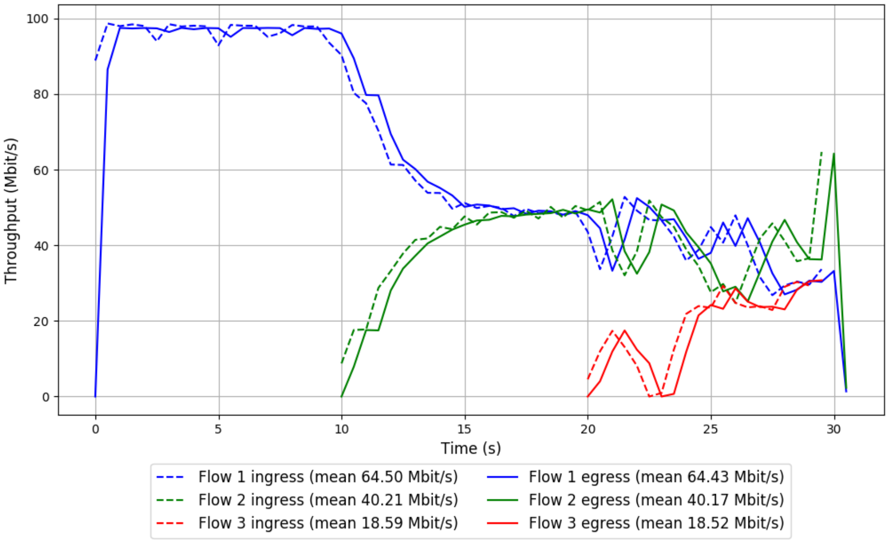
Run 2: Report of LEDBAT — Data Link

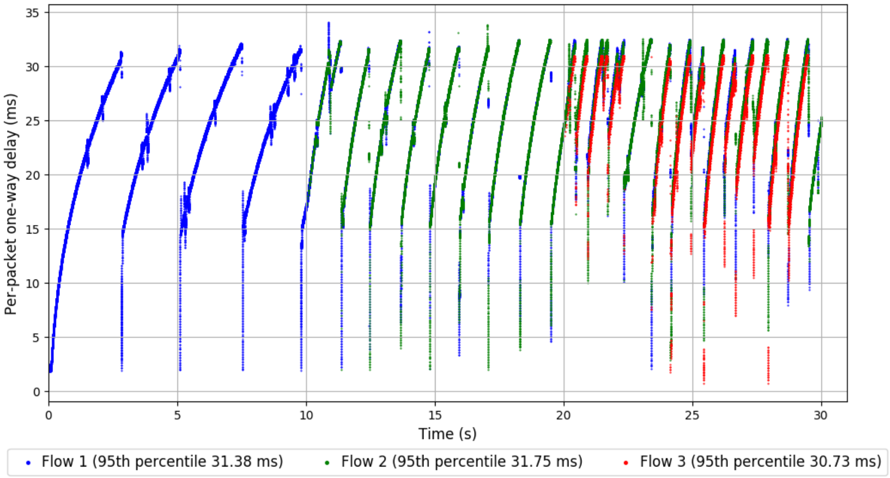




```
Run 3: Statistics of LEDBAT

Start at: 2018-05-22 03:58:08
End at: 2018-05-22 03:58:38
Local clock offset: -3.959 ms
Remote clock offset: -6.969 ms

# Below is generated by plot.py at 2018-05-22 06:33:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.01 Mbit/s
95th percentile per-packet one-way delay: 31.487 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 64.43 Mbit/s
95th percentile per-packet one-way delay: 31.384 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 40.17 Mbit/s
95th percentile per-packet one-way delay: 31.748 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 18.52 Mbit/s
95th percentile per-packet one-way delay: 30.735 ms
Loss rate: 0.33%
```

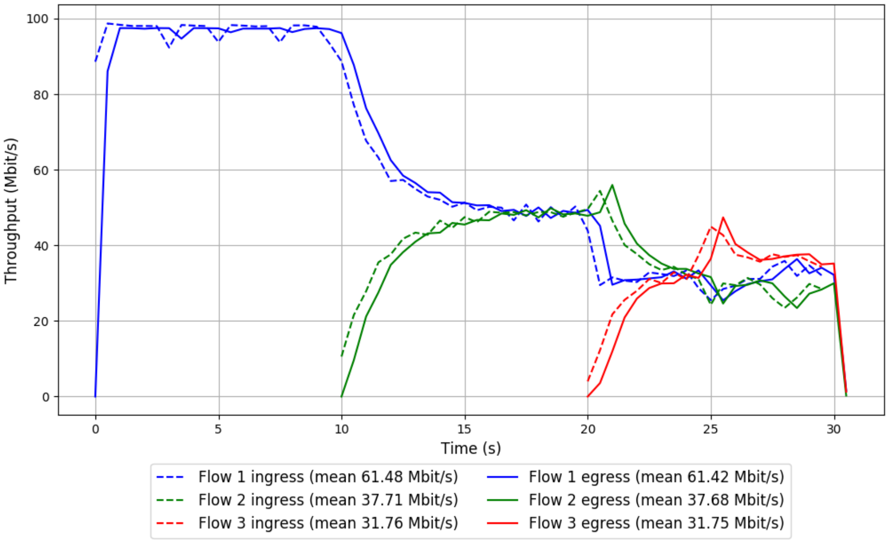
Run 3: Report of LEDBAT — Data Link

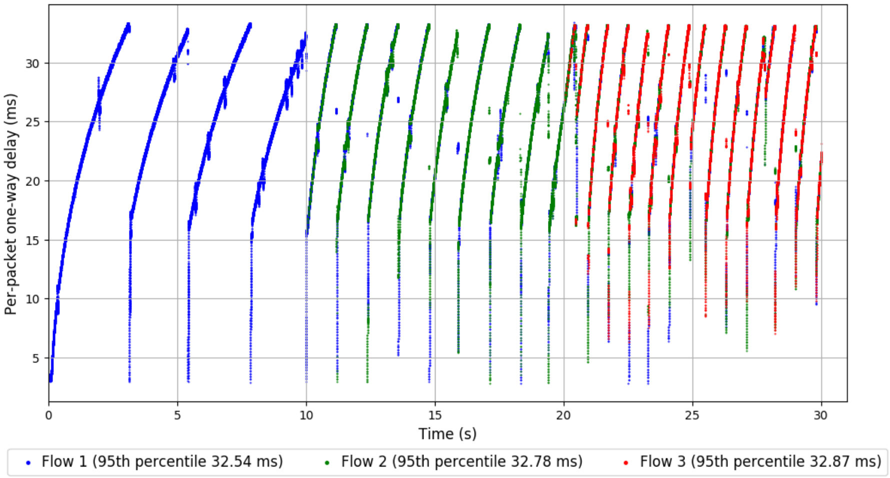




```
Run 4: Statistics of LEDBAT

Start at: 2018-05-22 04:15:59
End at: 2018-05-22 04:16:29
Local clock offset: -0.011 ms
Remote clock offset: -8.287 ms

# Below is generated by plot.py at 2018-05-22 06:33:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.05 Mbit/s
95th percentile per-packet one-way delay: 32.649 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 61.42 Mbit/s
95th percentile per-packet one-way delay: 32.544 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.68 Mbit/s
95th percentile per-packet one-way delay: 32.777 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 31.75 Mbit/s
95th percentile per-packet one-way delay: 32.865 ms
Loss rate: 0.07%
```

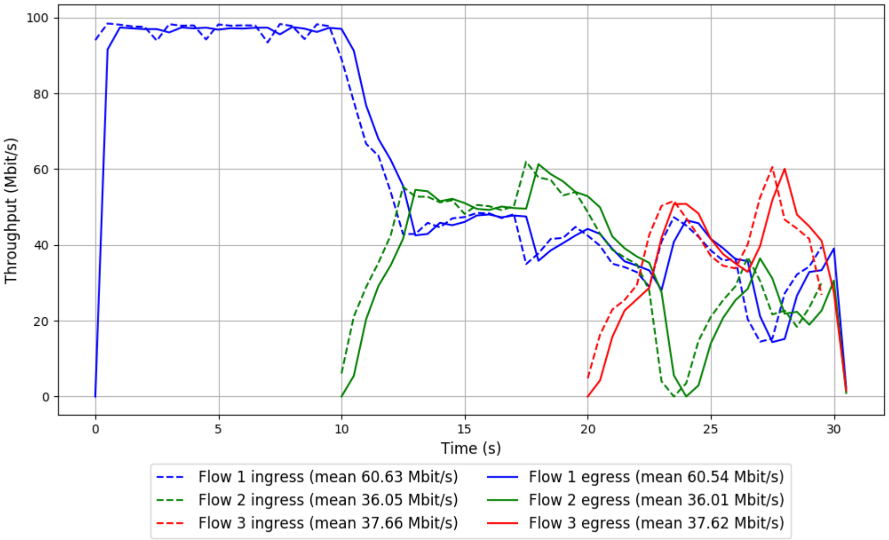
Run 4: Report of LEDBAT — Data Link

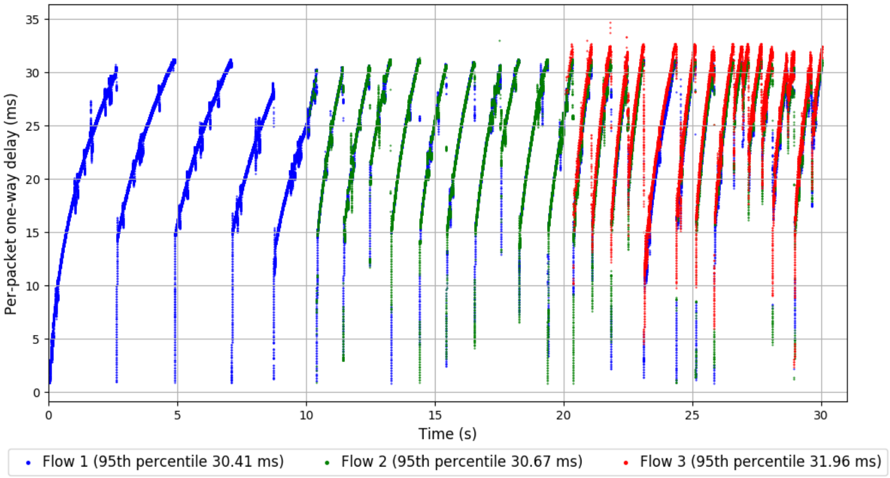




```
Run 5: Statistics of LEDBAT

Start at: 2018-05-22 04:33:50
End at: 2018-05-22 04:34:20
Local clock offset: 2.68 ms
Remote clock offset: -2.58 ms

# Below is generated by plot.py at 2018-05-22 06:34:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.00 Mbit/s
95th percentile per-packet one-way delay: 30.707 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 60.54 Mbit/s
95th percentile per-packet one-way delay: 30.414 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 36.01 Mbit/s
95th percentile per-packet one-way delay: 30.671 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 37.62 Mbit/s
95th percentile per-packet one-way delay: 31.962 ms
Loss rate: 0.05%
```

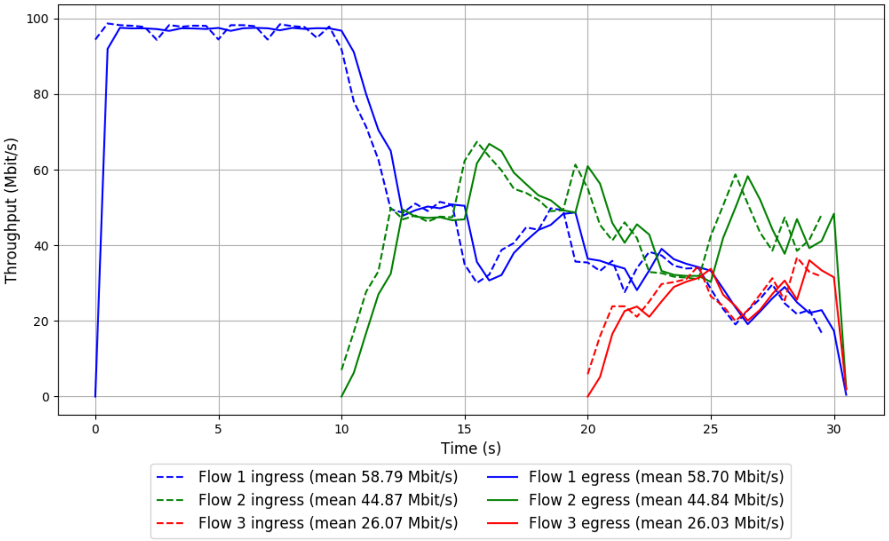
Run 5: Report of LEDBAT — Data Link

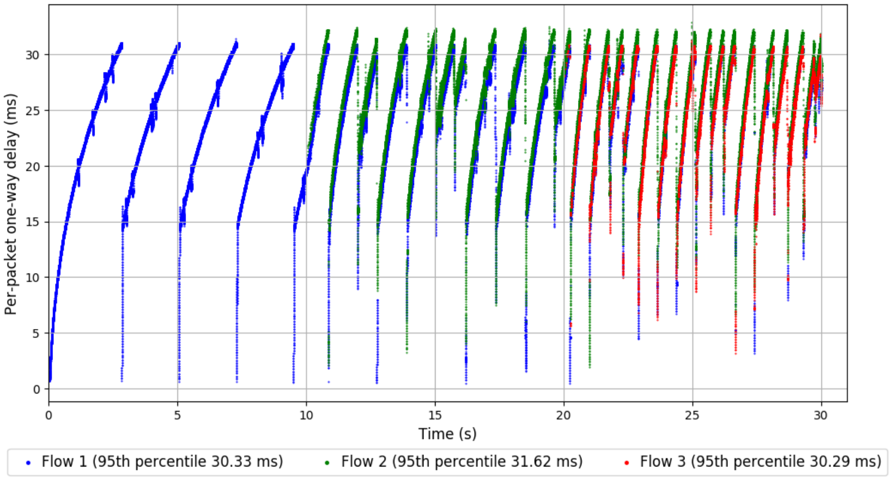




```
Run 6: Statistics of LEDBAT

Start at: 2018-05-22 04:51:42
End at: 2018-05-22 04:52:12
Local clock offset: 4.123 ms
Remote clock offset: 0.599 ms

# Below is generated by plot.py at 2018-05-22 06:34:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.20 Mbit/s
95th percentile per-packet one-way delay: 30.733 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 58.70 Mbit/s
95th percentile per-packet one-way delay: 30.327 ms
Loss rate: 0.05%
-- Flow 2:
Average throughput: 44.84 Mbit/s
95th percentile per-packet one-way delay: 31.617 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 26.03 Mbit/s
95th percentile per-packet one-way delay: 30.293 ms
Loss rate: 0.18%
```

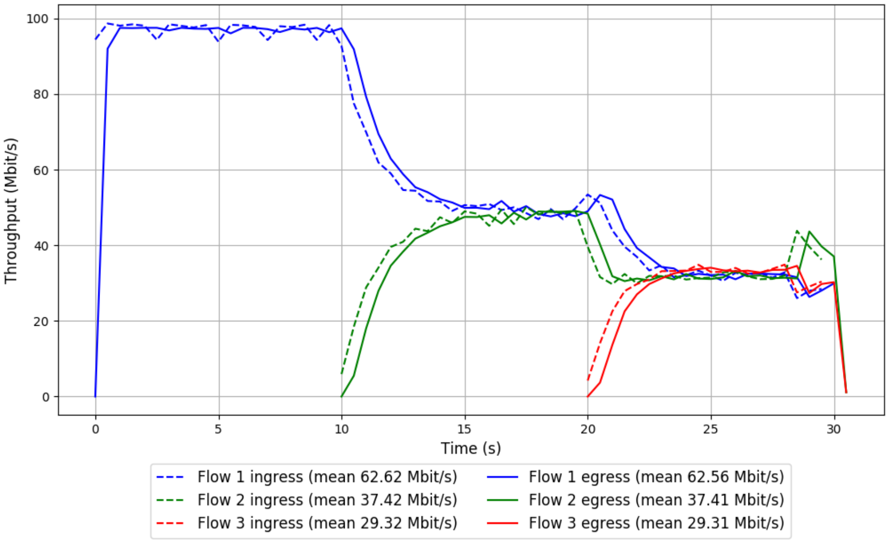
Run 6: Report of LEDBAT — Data Link

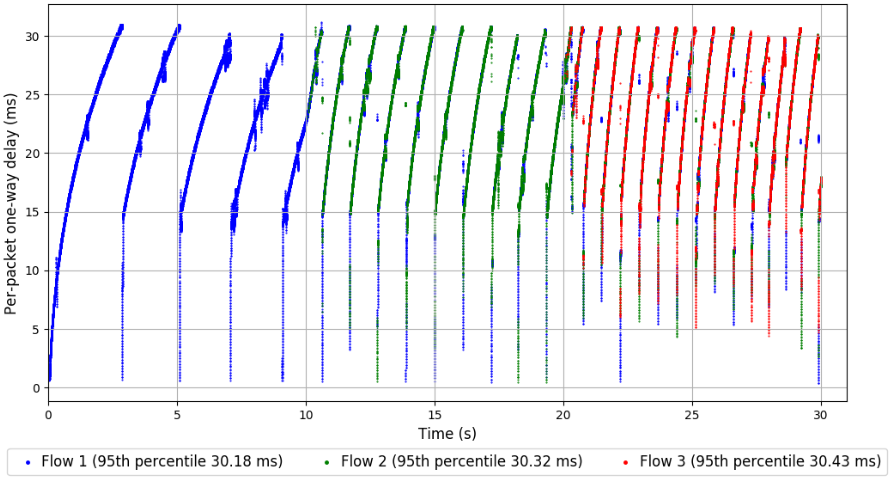




```
Run 7: Statistics of LEDBAT

Start at: 2018-05-22 05:09:33
End at: 2018-05-22 05:10:03
Local clock offset: -5.446 ms
Remote clock offset: 8.449 ms

# Below is generated by plot.py at 2018-05-22 06:34:33
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.16 Mbit/s
95th percentile per-packet one-way delay: 30.235 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 62.56 Mbit/s
95th percentile per-packet one-way delay: 30.178 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 37.41 Mbit/s
95th percentile per-packet one-way delay: 30.321 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 29.31 Mbit/s
95th percentile per-packet one-way delay: 30.426 ms
Loss rate: 0.12%
```

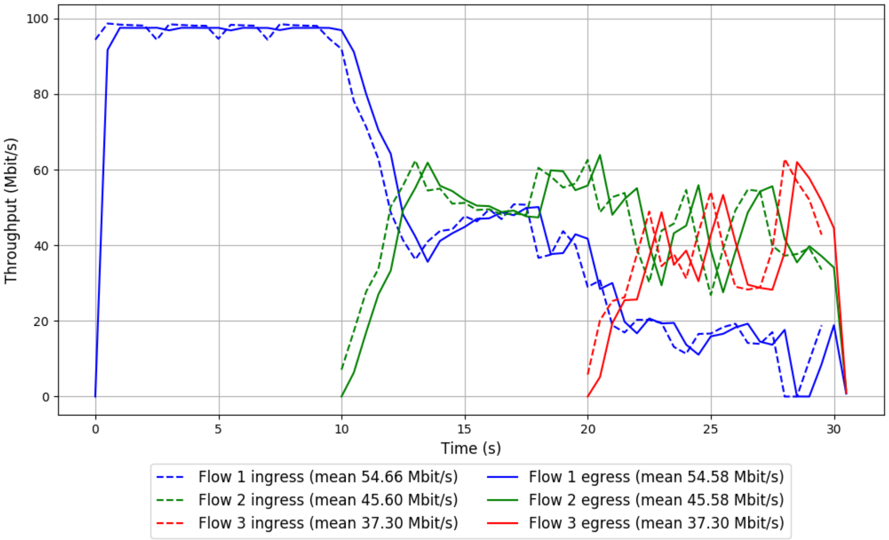
Run 7: Report of LEDBAT — Data Link

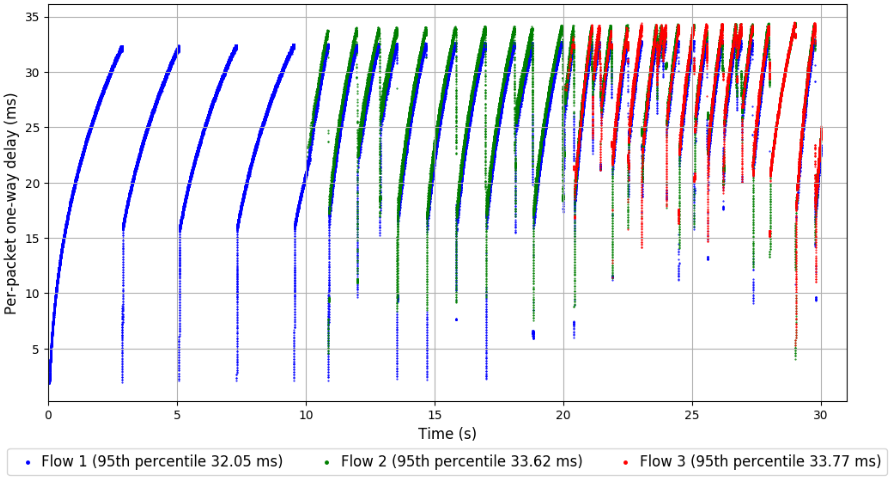




```
Run 8: Statistics of LEDBAT

Start at: 2018-05-22 05:27:25
End at: 2018-05-22 05:27:55
Local clock offset: -10.075 ms
Remote clock offset: 6.164 ms

# Below is generated by plot.py at 2018-05-22 06:34:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.31 Mbit/s
95th percentile per-packet one-way delay: 33.176 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 54.58 Mbit/s
95th percentile per-packet one-way delay: 32.052 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 45.58 Mbit/s
95th percentile per-packet one-way delay: 33.618 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 37.30 Mbit/s
95th percentile per-packet one-way delay: 33.775 ms
Loss rate: 0.04%
```

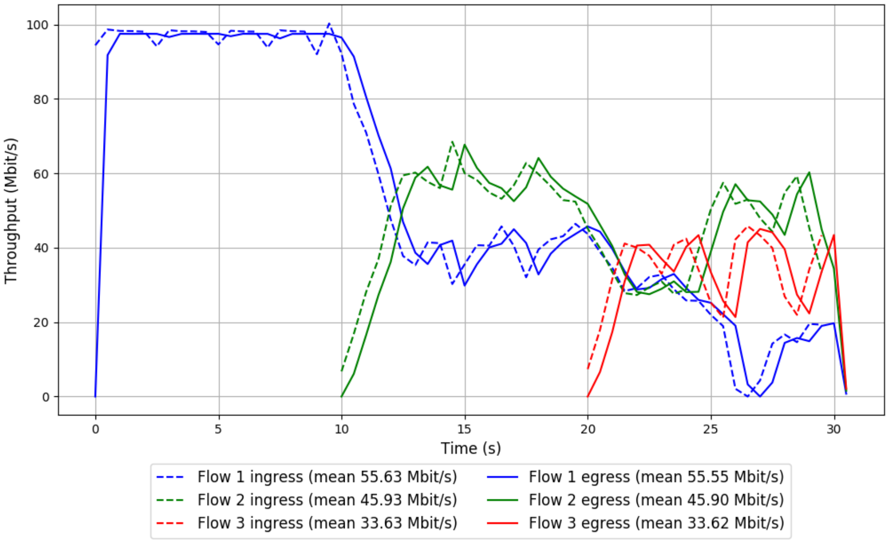
Run 8: Report of LEDBAT — Data Link

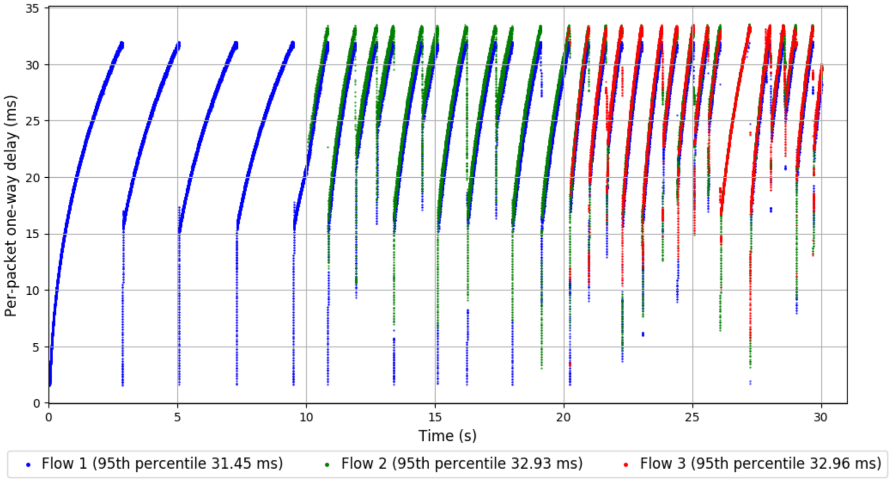




```
Run 9: Statistics of LEDBAT

Start at: 2018-05-22 05:45:16
End at: 2018-05-22 05:45:46
Local clock offset: -8.342 ms
Remote clock offset: -3.014 ms

# Below is generated by plot.py at 2018-05-22 06:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.27 Mbit/s
95th percentile per-packet one-way delay: 32.254 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 55.55 Mbit/s
95th percentile per-packet one-way delay: 31.450 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 45.90 Mbit/s
95th percentile per-packet one-way delay: 32.932 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 32.956 ms
Loss rate: 0.04%
```

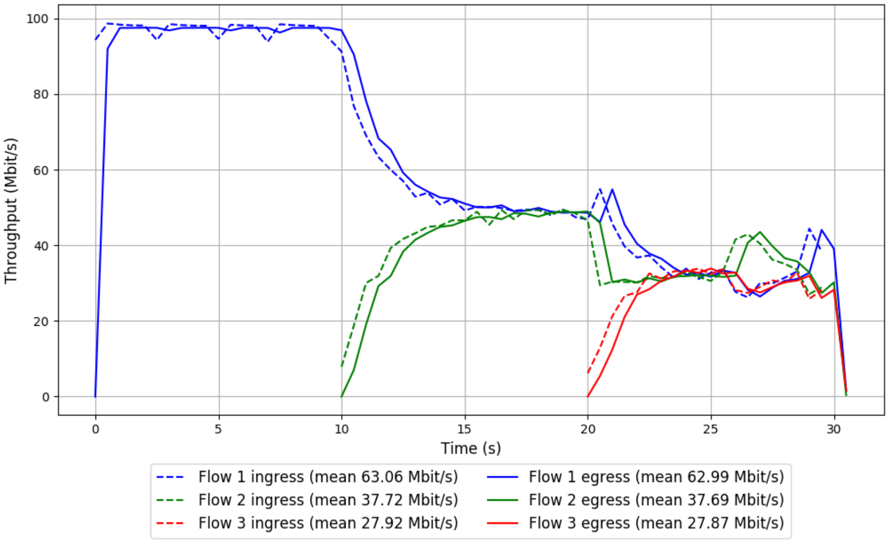
Run 9: Report of LEDBAT — Data Link

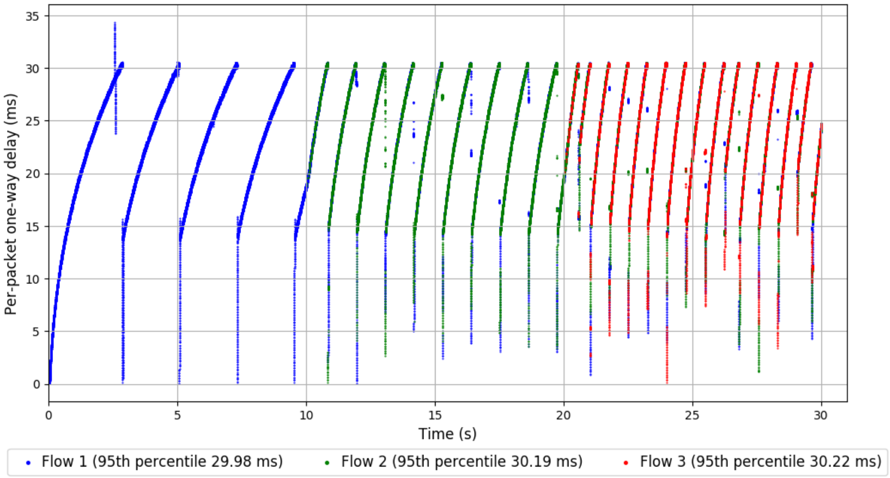




```
Run 10: Statistics of LEDBAT

Start at: 2018-05-22 06:03:07
End at: 2018-05-22 06:03:37
Local clock offset: -6.301 ms
Remote clock offset: -3.873 ms

# Below is generated by plot.py at 2018-05-22 06:34:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.32 Mbit/s
95th percentile per-packet one-way delay: 30.133 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 62.99 Mbit/s
95th percentile per-packet one-way delay: 29.981 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 37.69 Mbit/s
95th percentile per-packet one-way delay: 30.192 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 27.87 Mbit/s
95th percentile per-packet one-way delay: 30.222 ms
Loss rate: 0.11%
```

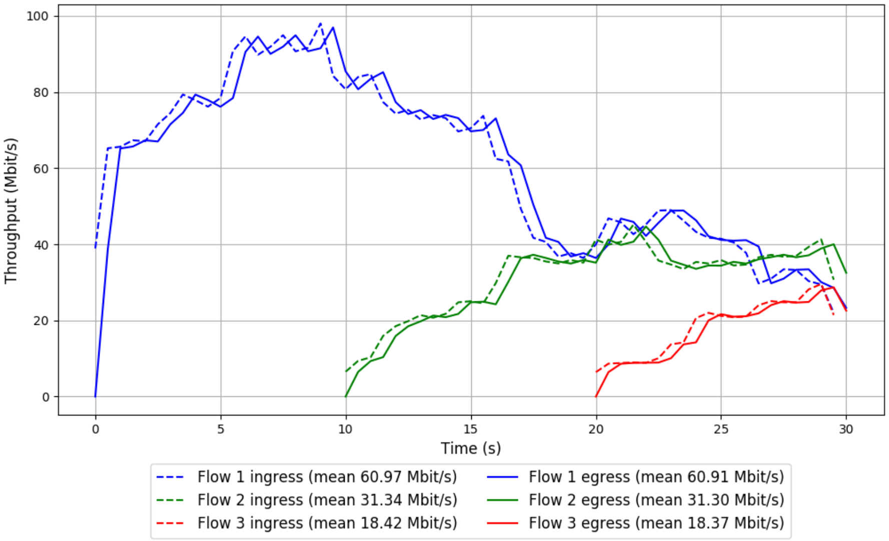
Run 10: Report of LEDBAT — Data Link

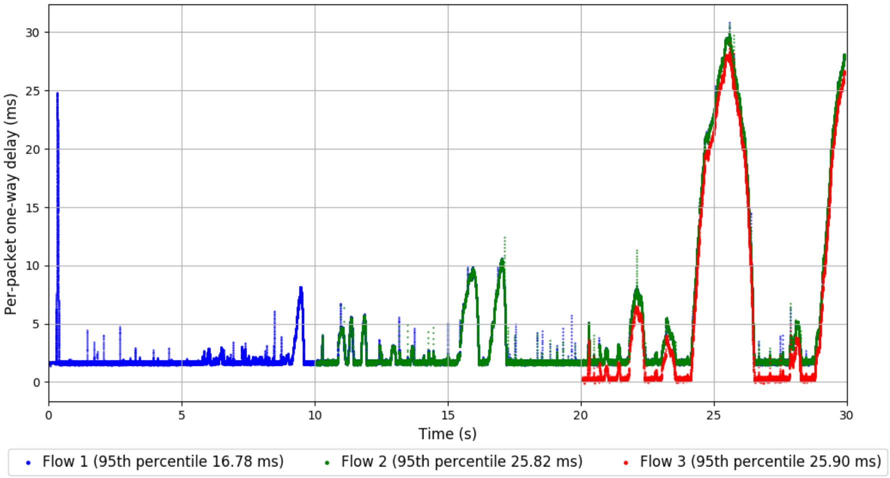




```
Run 1: Statistics of PCC-Allegro

Start at: 2018-05-22 03:21:19
End at: 2018-05-22 03:21:49
Local clock offset: -4.622 ms
Remote clock offset: -2.396 ms

# Below is generated by plot.py at 2018-05-22 06:34:45
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.80 Mbit/s
95th percentile per-packet one-way delay: 22.825 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 60.91 Mbit/s
95th percentile per-packet one-way delay: 16.781 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.30 Mbit/s
95th percentile per-packet one-way delay: 25.824 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.37 Mbit/s
95th percentile per-packet one-way delay: 25.904 ms
Loss rate: 0.00%
```

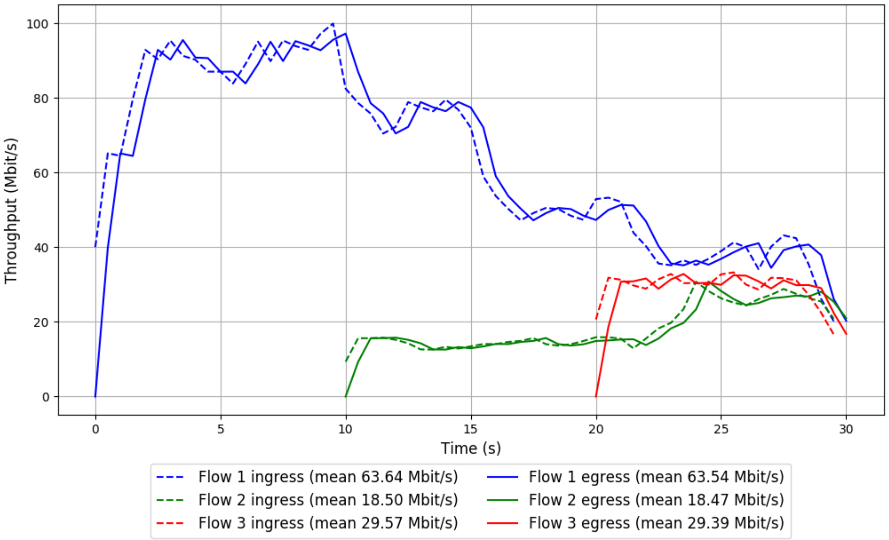
Run 1: Report of PCC-Allegro — Data Link

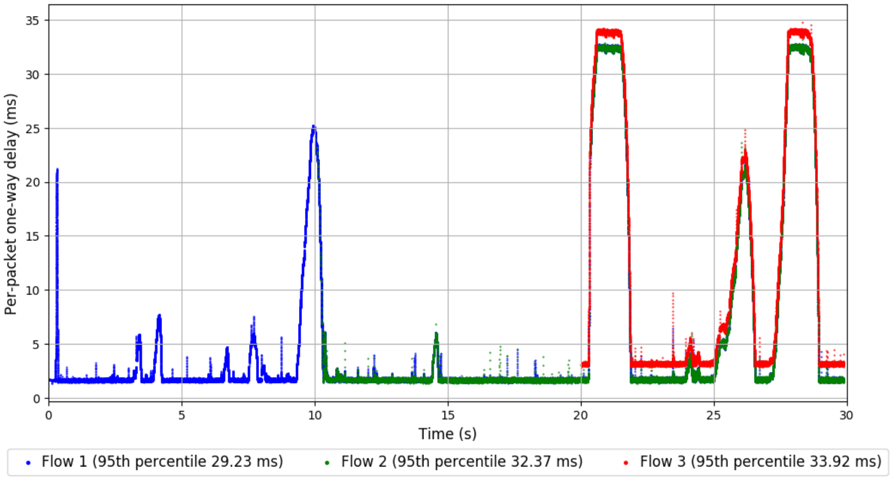




```
Run 2: Statistics of PCC-Allegro

Start at: 2018-05-22 03:39:10
End at: 2018-05-22 03:39:40
Local clock offset: -6.509 ms
Remote clock offset: -2.677 ms

# Below is generated by plot.py at 2018-05-22 06:34:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.50 Mbit/s
95th percentile per-packet one-way delay: 32.339 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 63.54 Mbit/s
95th percentile per-packet one-way delay: 29.234 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 18.47 Mbit/s
95th percentile per-packet one-way delay: 32.373 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 29.39 Mbit/s
95th percentile per-packet one-way delay: 33.921 ms
Loss rate: 0.60%
```

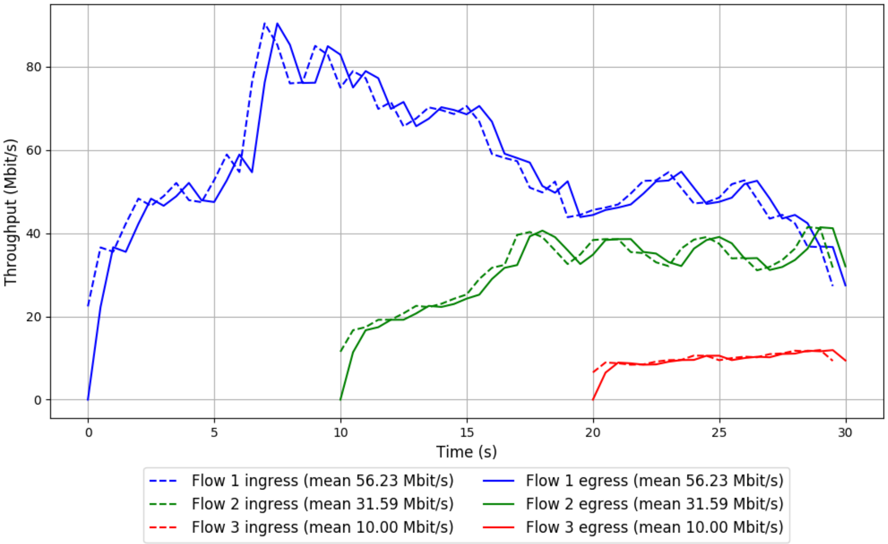
Run 2: Report of PCC-Allegro — Data Link

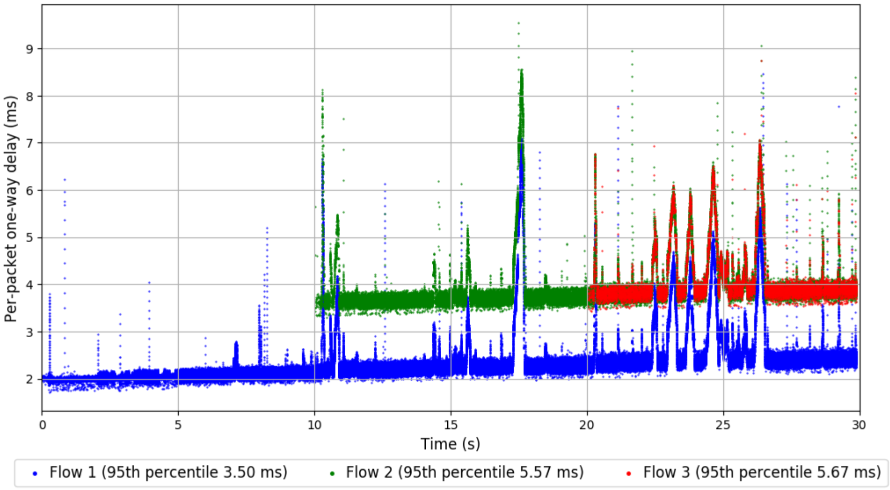




```
Run 3: Statistics of PCC-Allegro

Start at: 2018-05-22 03:57:01
End at: 2018-05-22 03:57:31
Local clock offset: -6.226 ms
Remote clock offset: -6.901 ms

# Below is generated by plot.py at 2018-05-22 06:35:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.53 Mbit/s
95th percentile per-packet one-way delay: 4.554 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.23 Mbit/s
95th percentile per-packet one-way delay: 3.501 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.59 Mbit/s
95th percentile per-packet one-way delay: 5.565 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 10.00 Mbit/s
95th percentile per-packet one-way delay: 5.667 ms
Loss rate: 0.00%
```

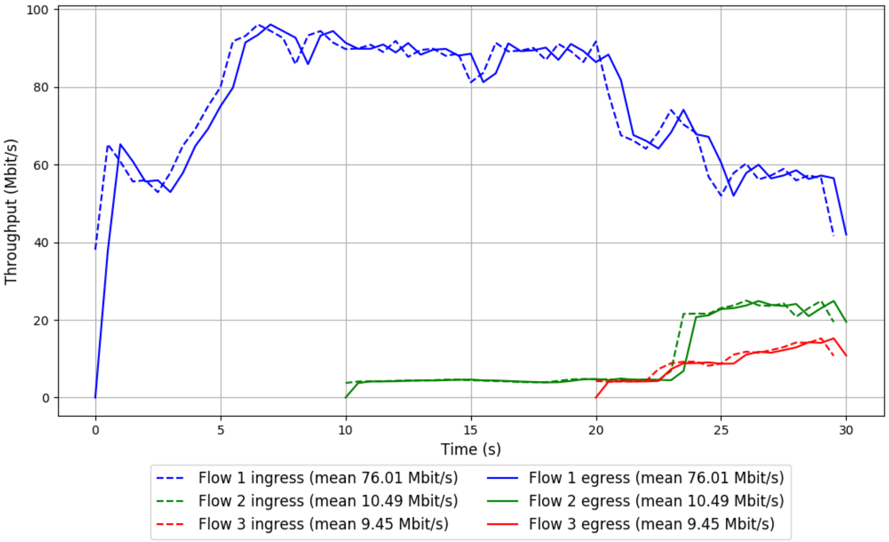
Run 3: Report of PCC-Allegro — Data Link

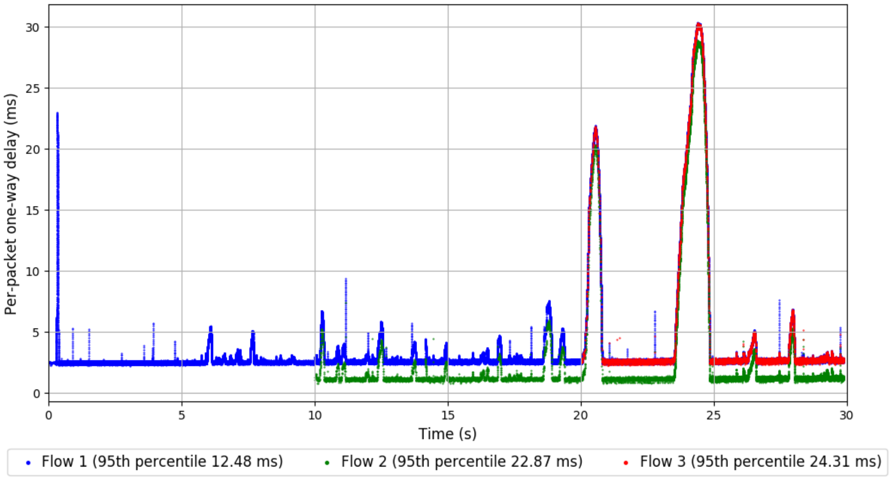




```
Run 4: Statistics of PCC-Allegro

Start at: 2018-05-22 04:14:52
End at: 2018-05-22 04:15:22
Local clock offset: 0.573 ms
Remote clock offset: -8.497 ms

# Below is generated by plot.py at 2018-05-22 06:35:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.10 Mbit/s
95th percentile per-packet one-way delay: 16.159 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.01 Mbit/s
95th percentile per-packet one-way delay: 12.483 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 10.49 Mbit/s
95th percentile per-packet one-way delay: 22.867 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.45 Mbit/s
95th percentile per-packet one-way delay: 24.308 ms
Loss rate: 0.00%
```

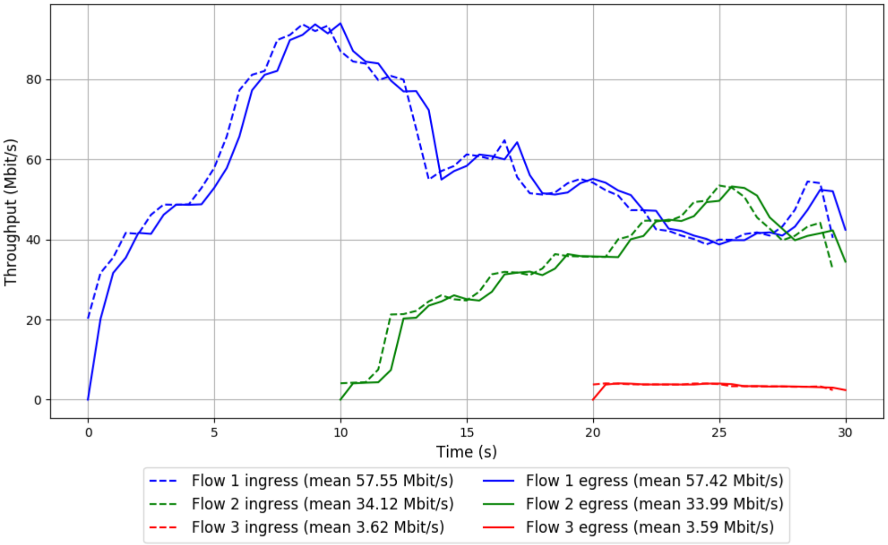
Run 4: Report of PCC-Allegro — Data Link

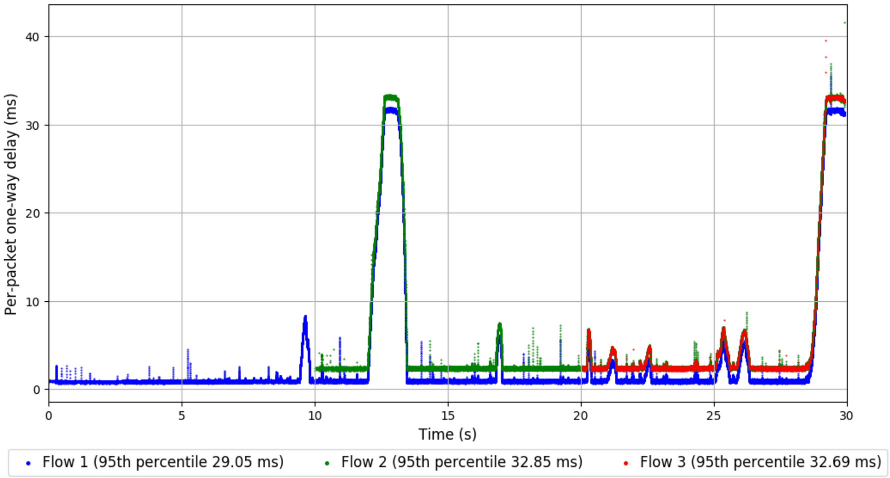




```
Run 5: Statistics of PCC-Allegro

Start at: 2018-05-22 04:32:44
End at: 2018-05-22 04:33:14
Local clock offset: 2.593 ms
Remote clock offset: -2.817 ms

# Below is generated by plot.py at 2018-05-22 06:35:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 81.20 Mbit/s
95th percentile per-packet one-way delay: 30.924 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 57.42 Mbit/s
95th percentile per-packet one-way delay: 29.050 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 33.99 Mbit/s
95th percentile per-packet one-way delay: 32.850 ms
Loss rate: 0.18%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 32.685 ms
Loss rate: 0.64%
```

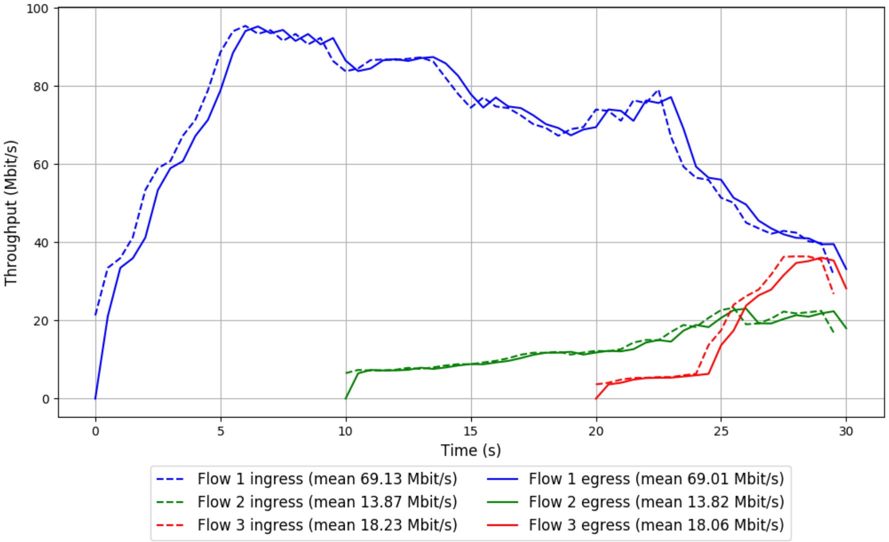
Run 5: Report of PCC-Allegro — Data Link

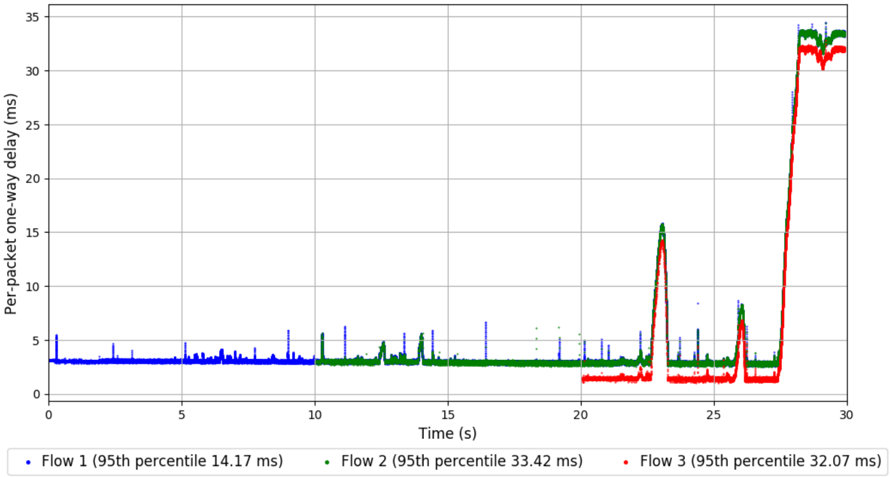




```
Run 6: Statistics of PCC-Allegro

Start at: 2018-05-22 04:50:35
End at: 2018-05-22 04:51:05
Local clock offset: 3.254 ms
Remote clock offset: -0.267 ms

# Below is generated by plot.py at 2018-05-22 06:35:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.17 Mbit/s
95th percentile per-packet one-way delay: 31.978 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 69.01 Mbit/s
95th percentile per-packet one-way delay: 14.168 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 13.82 Mbit/s
95th percentile per-packet one-way delay: 33.420 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 18.06 Mbit/s
95th percentile per-packet one-way delay: 32.074 ms
Loss rate: 0.58%
```

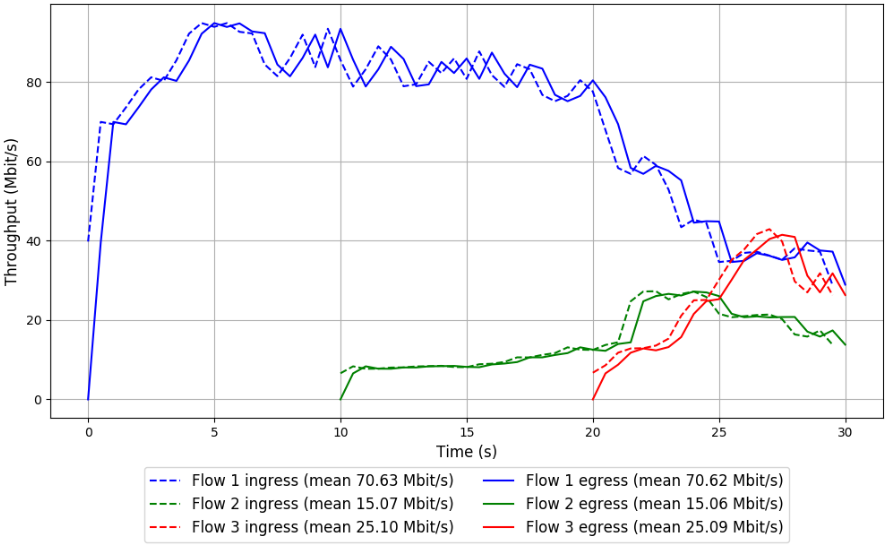
Run 6: Report of PCC-Allegro — Data Link

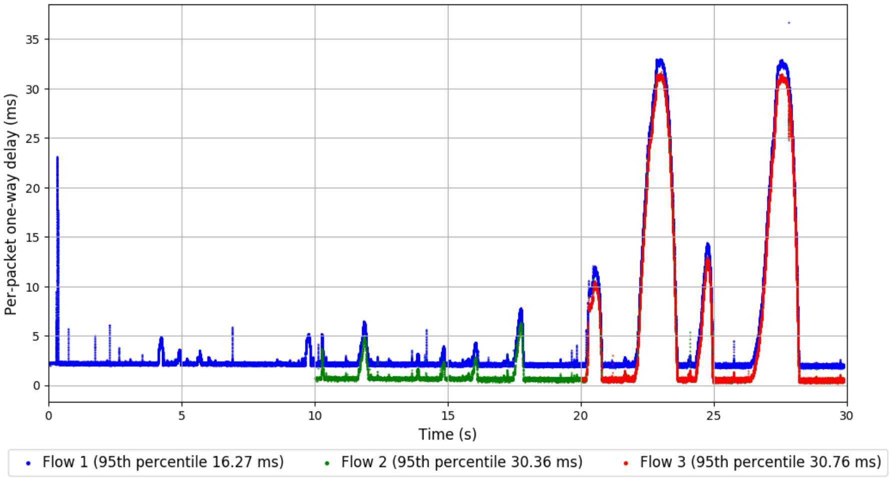




```
Run 7: Statistics of PCC-Allegro

Start at: 2018-05-22 05:08:27
End at: 2018-05-22 05:08:57
Local clock offset: -4.992 ms
Remote clock offset: 8.233 ms

# Below is generated by plot.py at 2018-05-22 06:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.91 Mbit/s
95th percentile per-packet one-way delay: 25.663 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 70.62 Mbit/s
95th percentile per-packet one-way delay: 16.275 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 15.06 Mbit/s
95th percentile per-packet one-way delay: 30.356 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 25.09 Mbit/s
95th percentile per-packet one-way delay: 30.763 ms
Loss rate: 0.05%
```

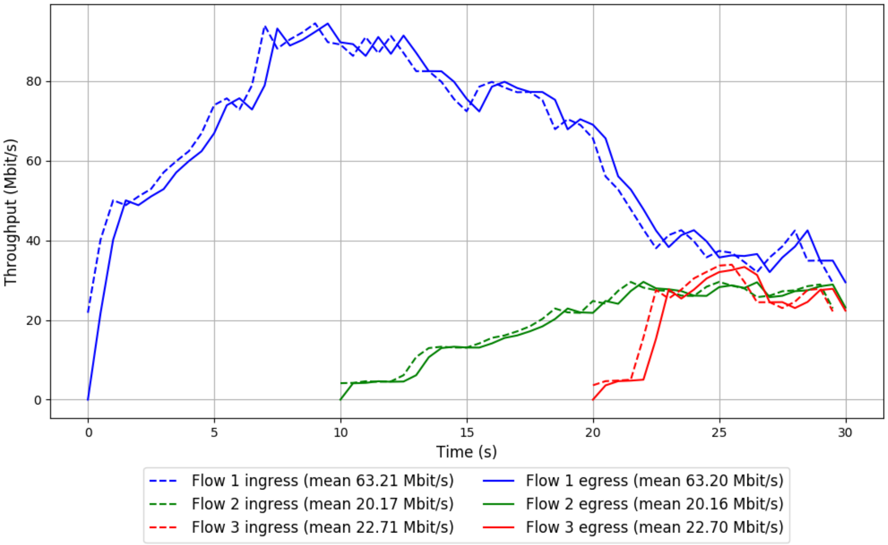
Run 7: Report of PCC-Allegro — Data Link

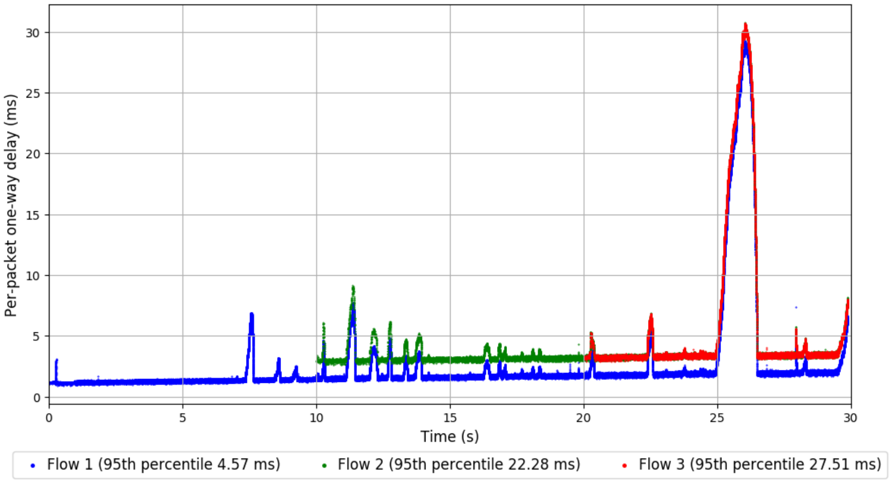




```
Run 8: Statistics of PCC-Allegro

Start at: 2018-05-22 05:26:19
End at: 2018-05-22 05:26:49
Local clock offset: -9.518 ms
Remote clock offset: 7.603 ms

# Below is generated by plot.py at 2018-05-22 06:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.10 Mbit/s
95th percentile per-packet one-way delay: 8.579 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 63.20 Mbit/s
95th percentile per-packet one-way delay: 4.569 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 22.277 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 22.70 Mbit/s
95th percentile per-packet one-way delay: 27.509 ms
Loss rate: 0.00%
```

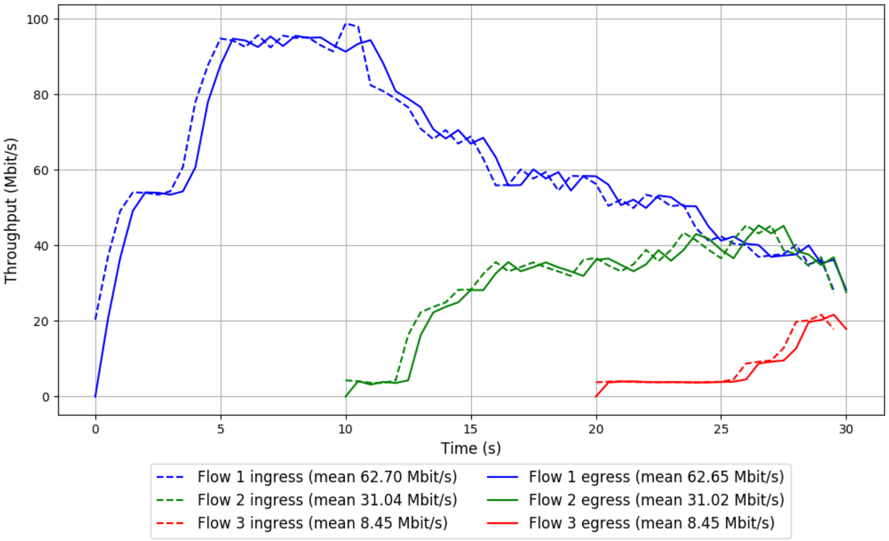
Run 8: Report of PCC-Allegro — Data Link

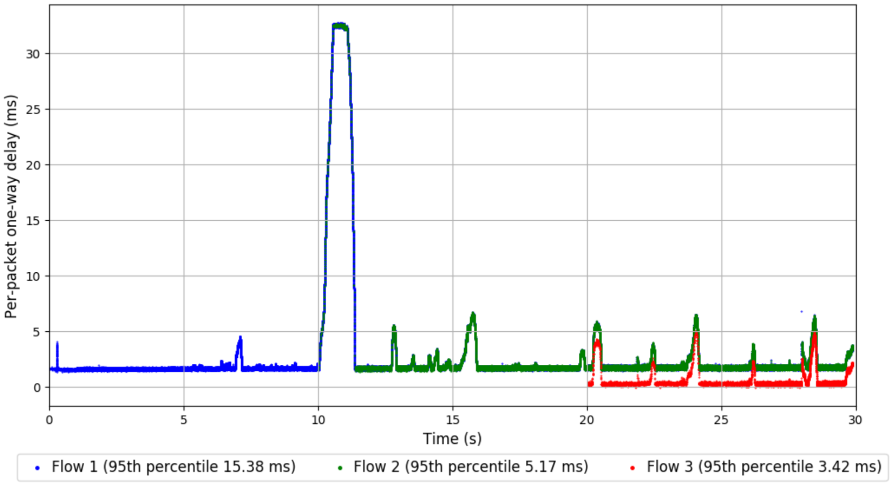




```
Run 9: Statistics of PCC-Allegro

Start at: 2018-05-22 05:44:10
End at: 2018-05-22 05:44:40
Local clock offset: -6.787 ms
Remote clock offset: -2.81 ms

# Below is generated by plot.py at 2018-05-22 06:36:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.06 Mbit/s
95th percentile per-packet one-way delay: 6.101 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 62.65 Mbit/s
95th percentile per-packet one-way delay: 15.380 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 31.02 Mbit/s
95th percentile per-packet one-way delay: 5.174 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 3.420 ms
Loss rate: 0.00%
```

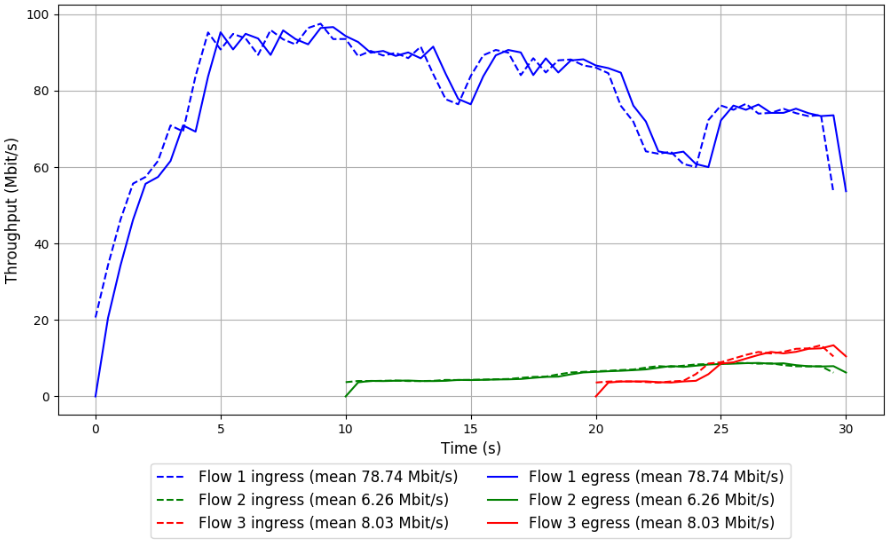
Run 9: Report of PCC-Allegro — Data Link

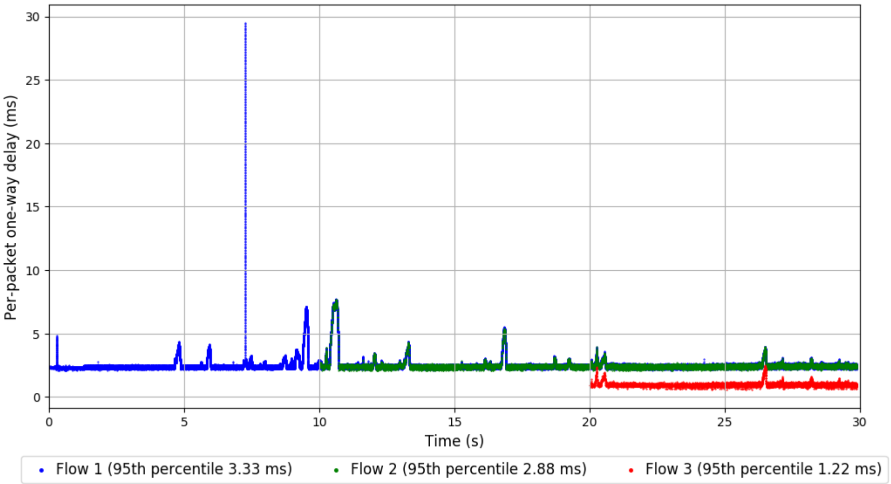




```
Run 10: Statistics of PCC-Allegro

Start at: 2018-05-22 06:02:00
End at: 2018-05-22 06:02:30
Local clock offset: -7.177 ms
Remote clock offset: -4.06 ms

# Below is generated by plot.py at 2018-05-22 06:36:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.55 Mbit/s
95th percentile per-packet one-way delay: 3.259 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.74 Mbit/s
95th percentile per-packet one-way delay: 3.330 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 6.26 Mbit/s
95th percentile per-packet one-way delay: 2.885 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.03 Mbit/s
95th percentile per-packet one-way delay: 1.217 ms
Loss rate: 0.00%
```

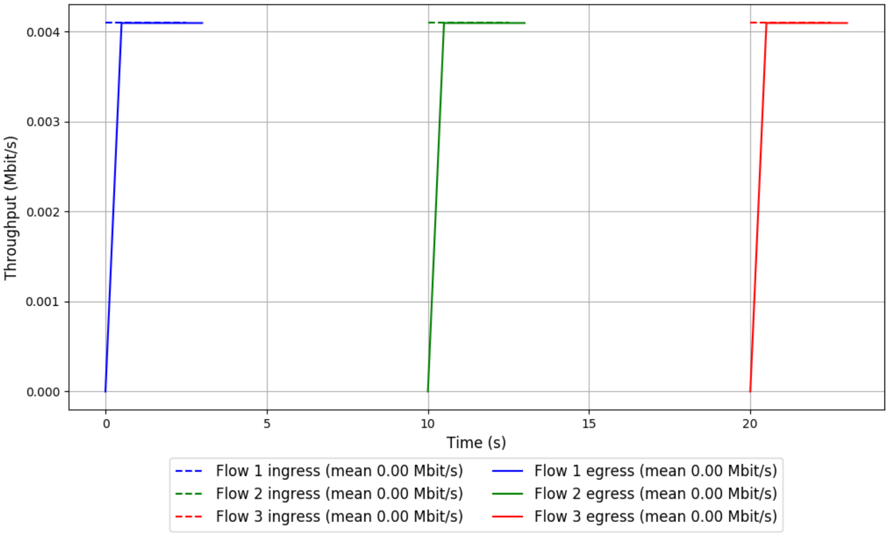
Run 10: Report of PCC-Allegro — Data Link

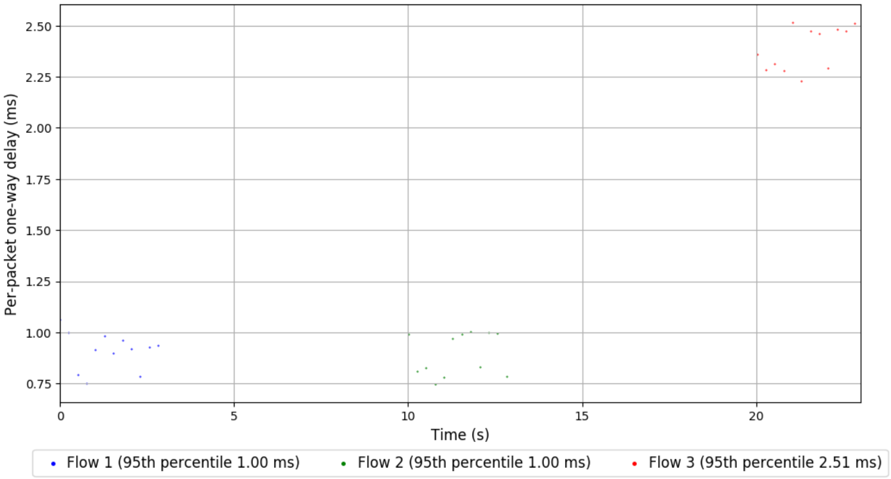




```
Run 1: Statistics of PCC-Expr

Start at: 2018-05-22 03:29:05
End at: 2018-05-22 03:29:35
Local clock offset: -5.498 ms
Remote clock offset: -2.482 ms
```

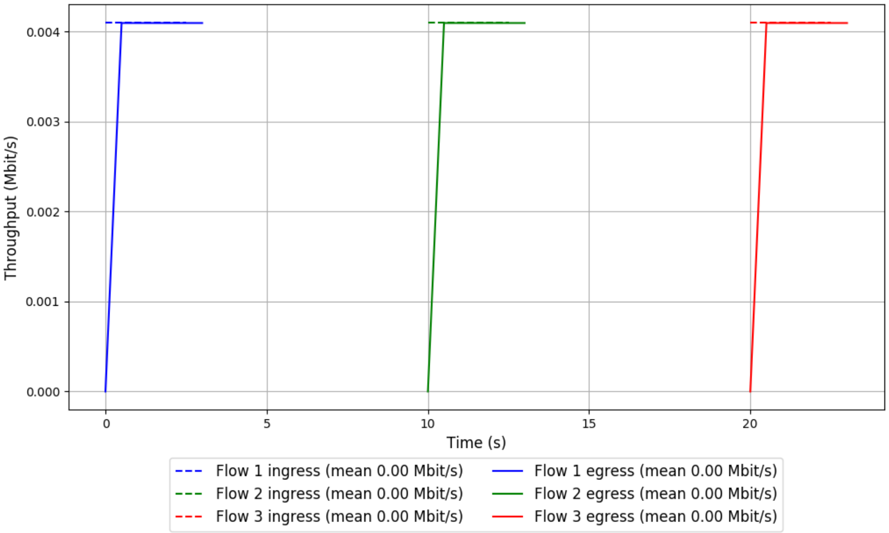
Run 1: Report of PCC-Expr — Data Link

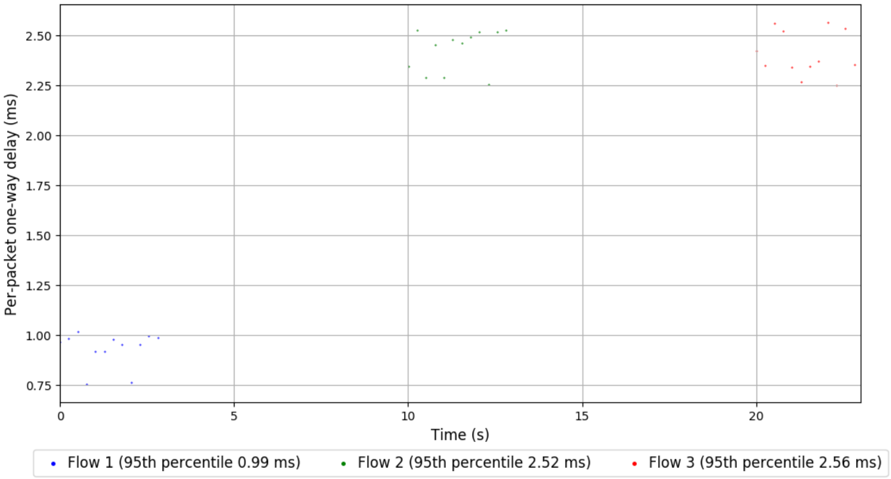




```
Run 2: Statistics of PCC-Expr

Start at: 2018-05-22 03:46:56
End at: 2018-05-22 03:47:26
Local clock offset: -5.725 ms
Remote clock offset: -4.834 ms
```

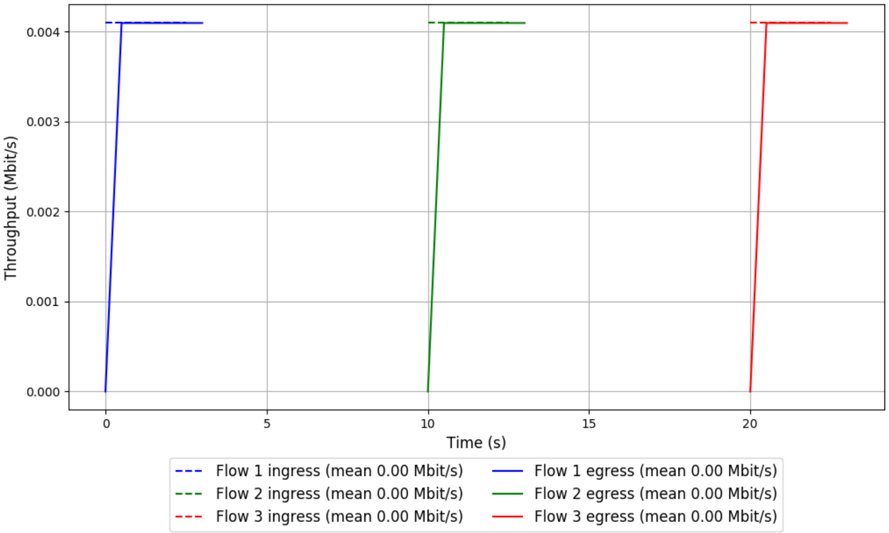
Run 2: Report of PCC-Expr — Data Link

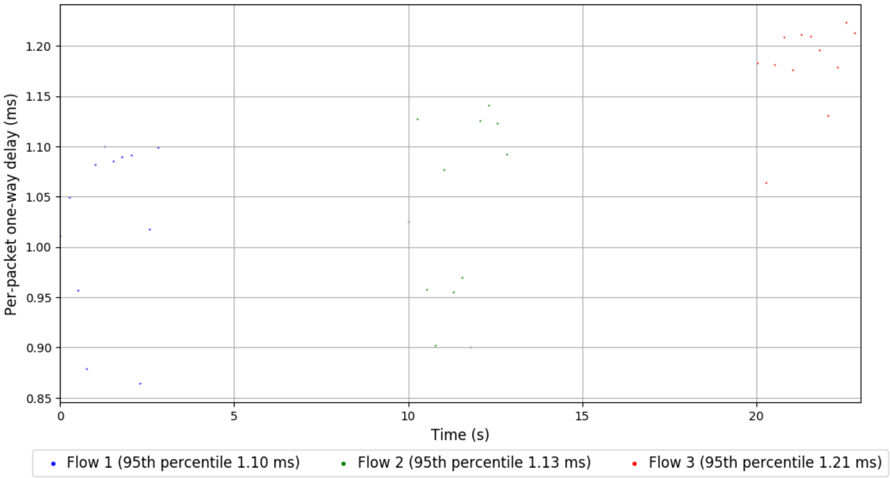




```
Run 3: Statistics of PCC-Expr

Start at: 2018-05-22 04:04:47
End at: 2018-05-22 04:05:17
Local clock offset: -1.651 ms
Remote clock offset: -7.69 ms
```

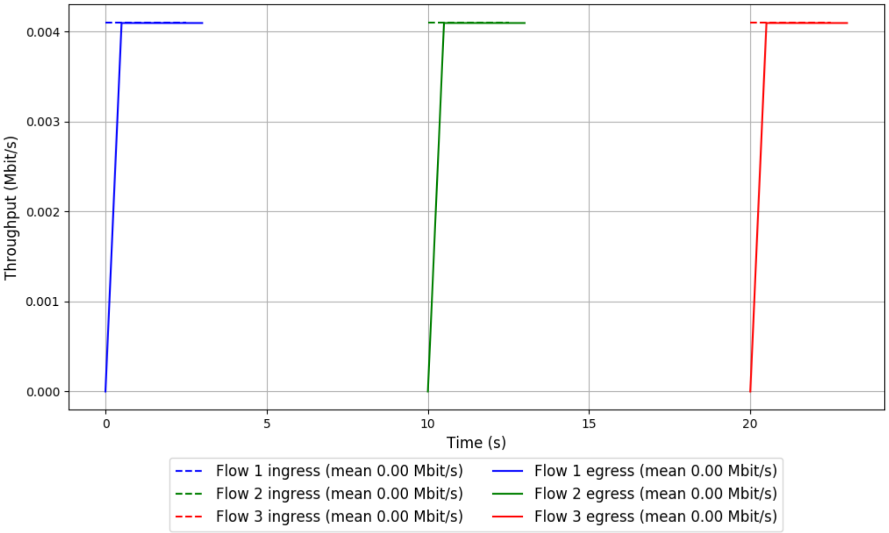
Run 3: Report of PCC-Expr — Data Link

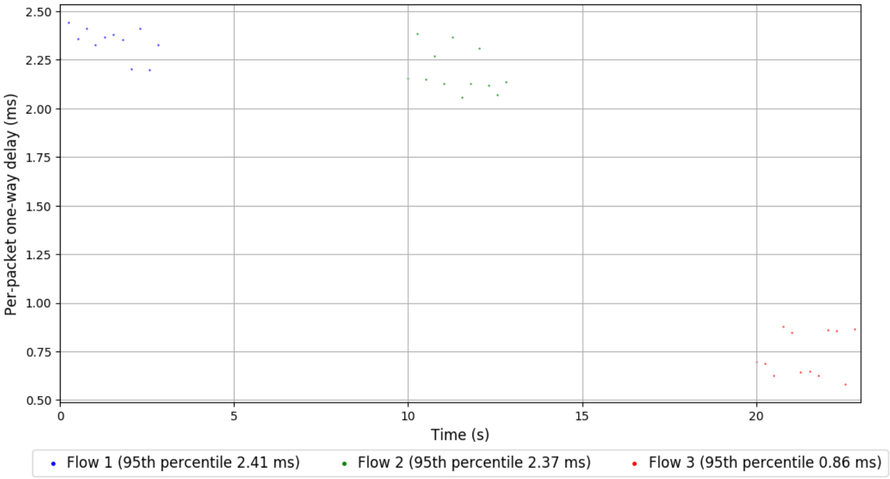




```
Run 4: Statistics of PCC-Expr

Start at: 2018-05-22 04:22:38
End at: 2018-05-22 04:23:08
Local clock offset: 1.606 ms
Remote clock offset: -5.018 ms
```

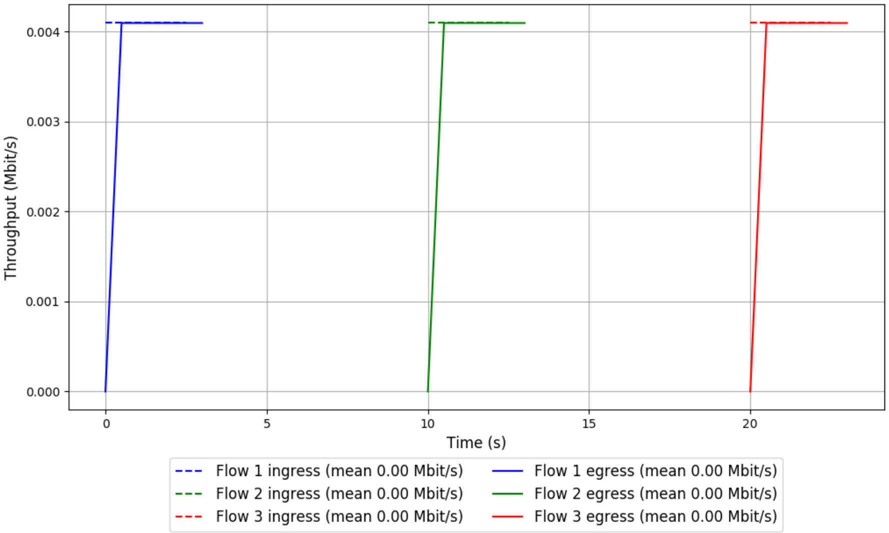
Run 4: Report of PCC-Expr — Data Link

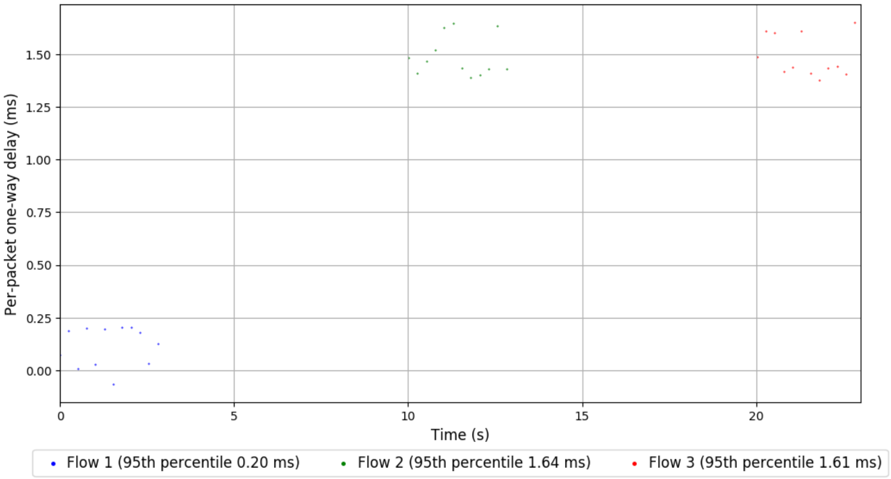




```
Run 5: Statistics of PCC-Expr

Start at: 2018-05-22 04:40:30
End at: 2018-05-22 04:41:00
Local clock offset: 4.04 ms
Remote clock offset: -1.822 ms
```

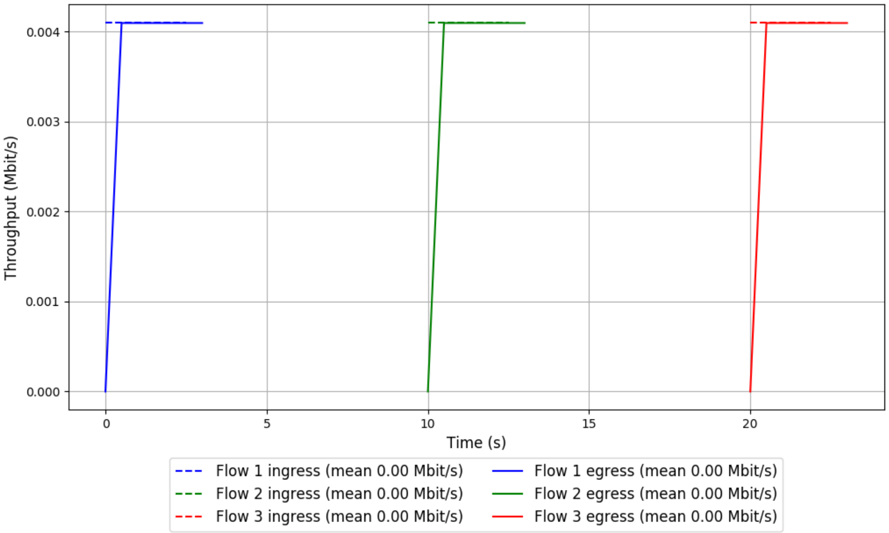
Run 5: Report of PCC-Expr — Data Link

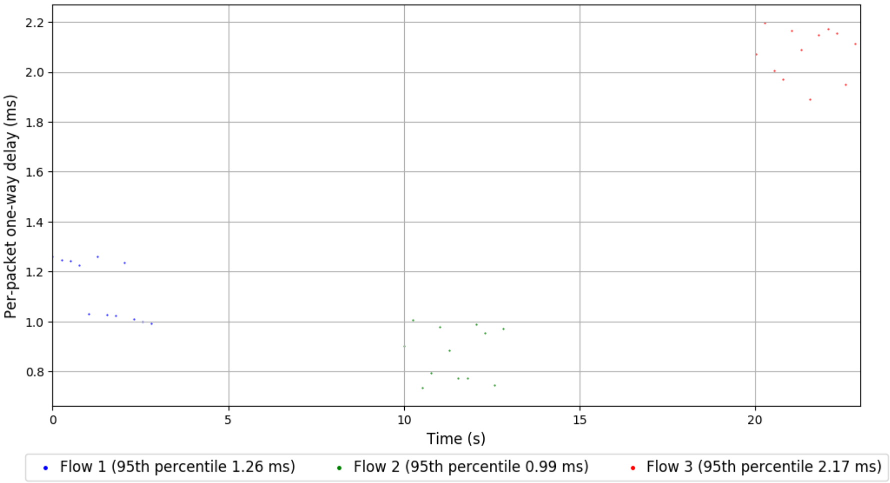




```
Run 6: Statistics of PCC-Expr

Start at: 2018-05-22 04:58:21
End at: 2018-05-22 04:58:51
Local clock offset: 1.466 ms
Remote clock offset: 4.773 ms
```

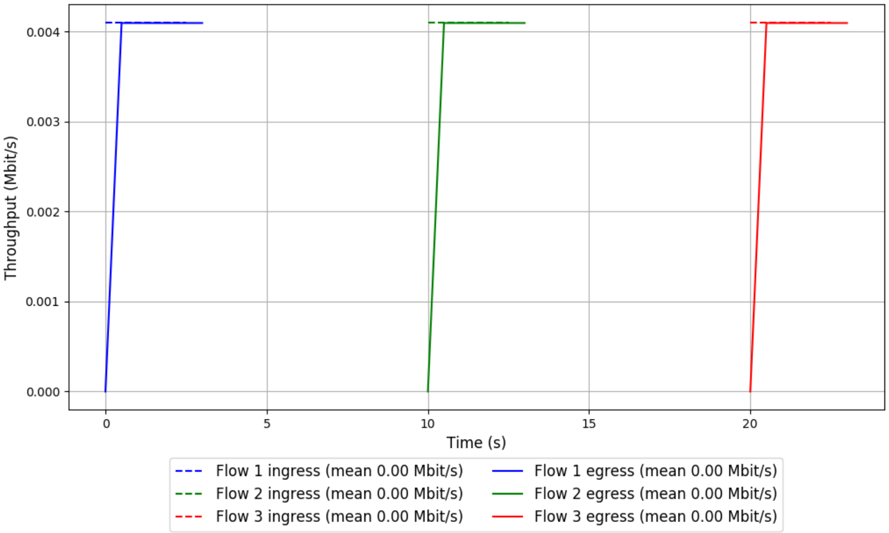
Run 6: Report of PCC-Expr — Data Link

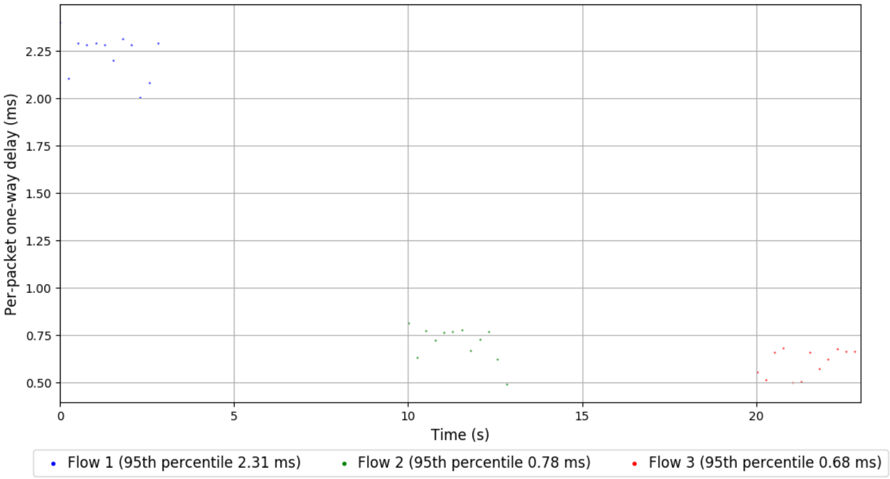




```
Run 7: Statistics of PCC-Expr

Start at: 2018-05-22 05:16:13
End at: 2018-05-22 05:16:43
Local clock offset: -7.555 ms
Remote clock offset: 9.933 ms
```

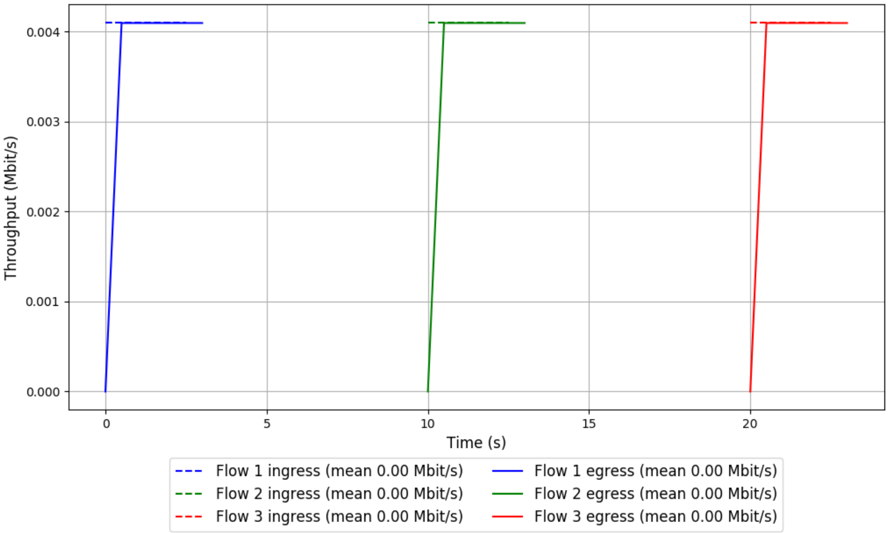
Run 7: Report of PCC-Expr — Data Link

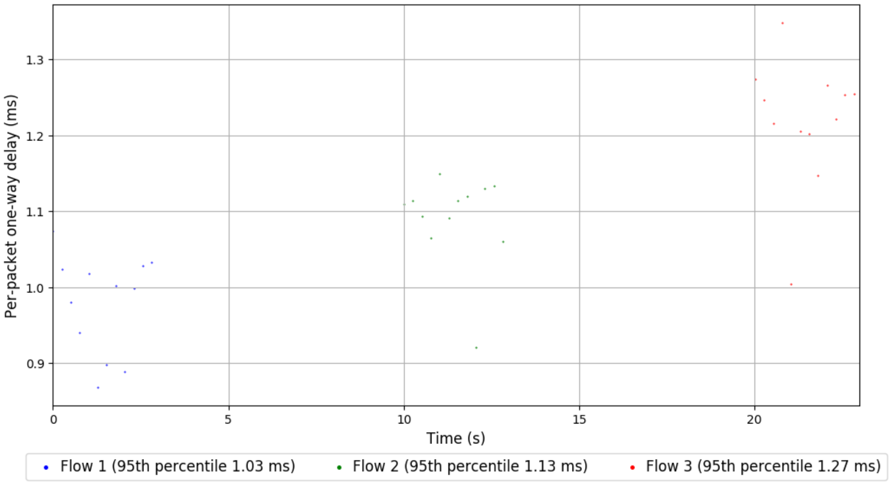




```
Run 8: Statistics of PCC-Expr

Start at: 2018-05-22 05:34:04
End at: 2018-05-22 05:34:34
Local clock offset: -7.927 ms
Remote clock offset: 0.672 ms
```

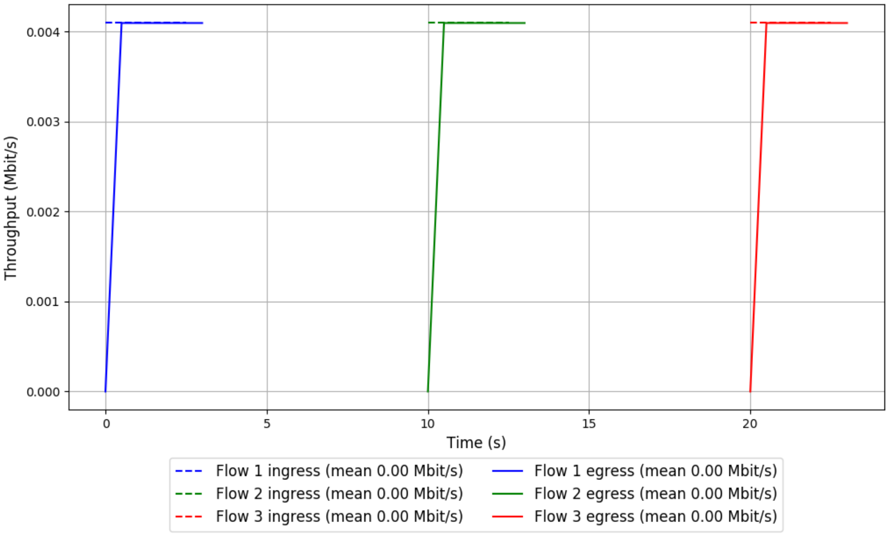
Run 8: Report of PCC-Expr — Data Link

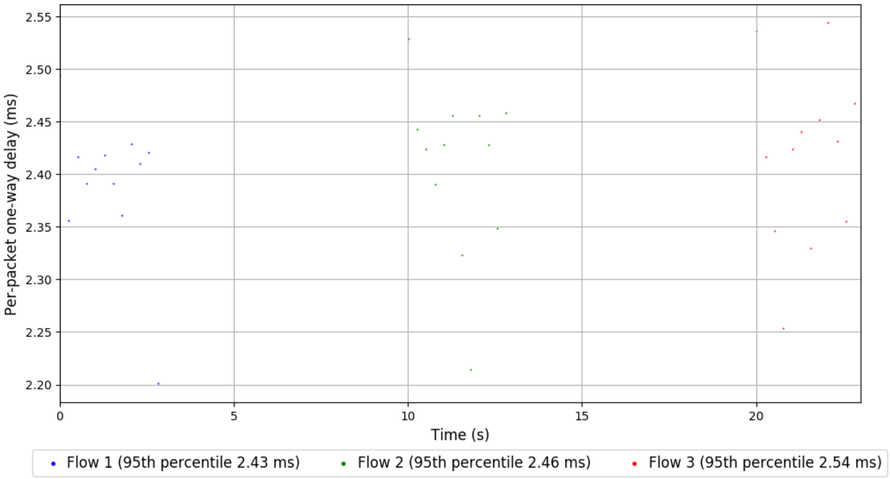




```
Run 9: Statistics of PCC-Expr

Start at: 2018-05-22 05:51:56
End at: 2018-05-22 05:52:26
Local clock offset: -7.806 ms
Remote clock offset: -3.922 ms
```

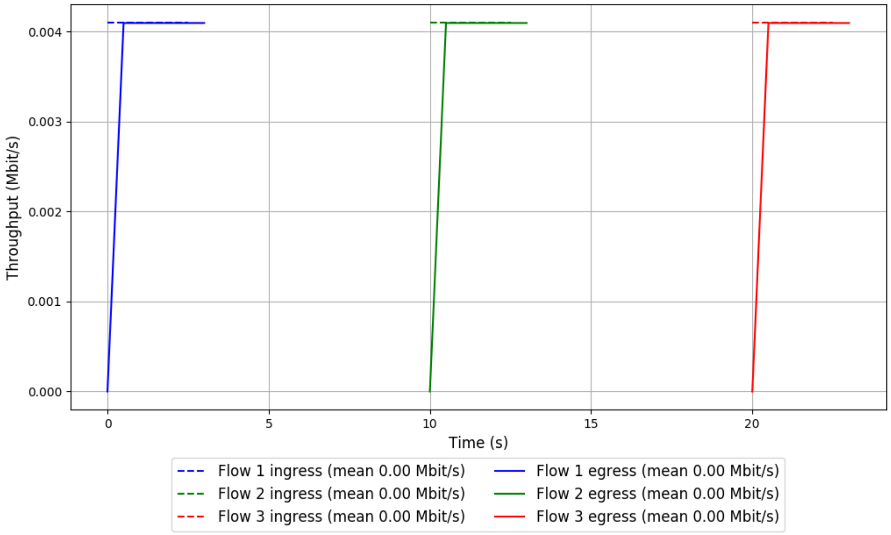
Run 9: Report of PCC-Expr — Data Link

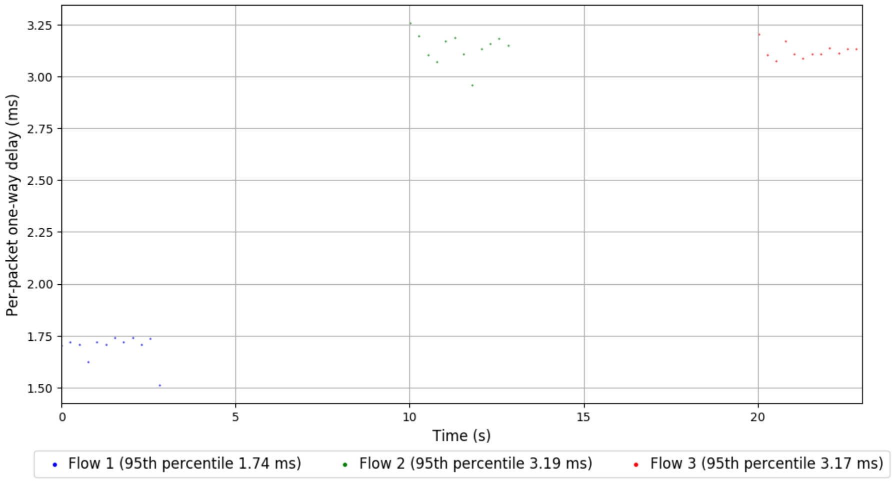




```
Run 10: Statistics of PCC-Expr

Start at: 2018-05-22 06:09:47
End at: 2018-05-22 06:10:17
Local clock offset: -7.514 ms
Remote clock offset: -3.605 ms
```

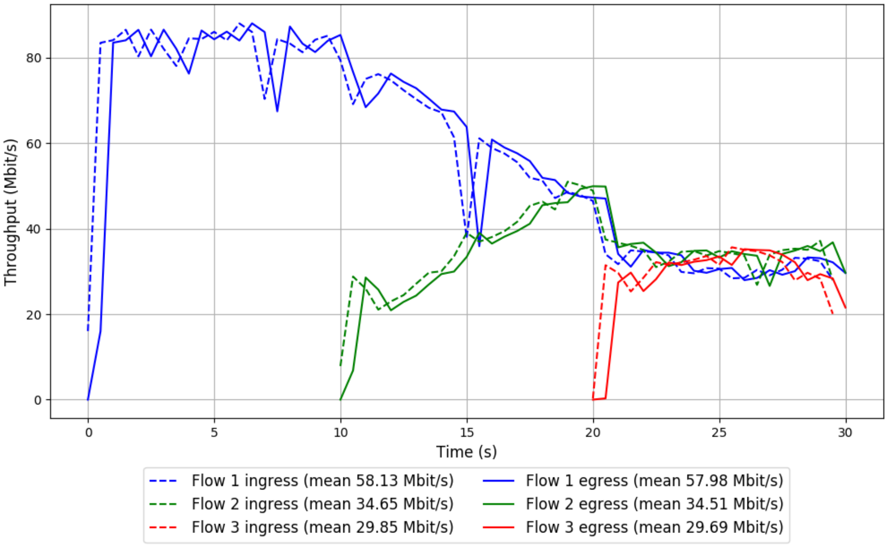
Run 10: Report of PCC-Expr — Data Link

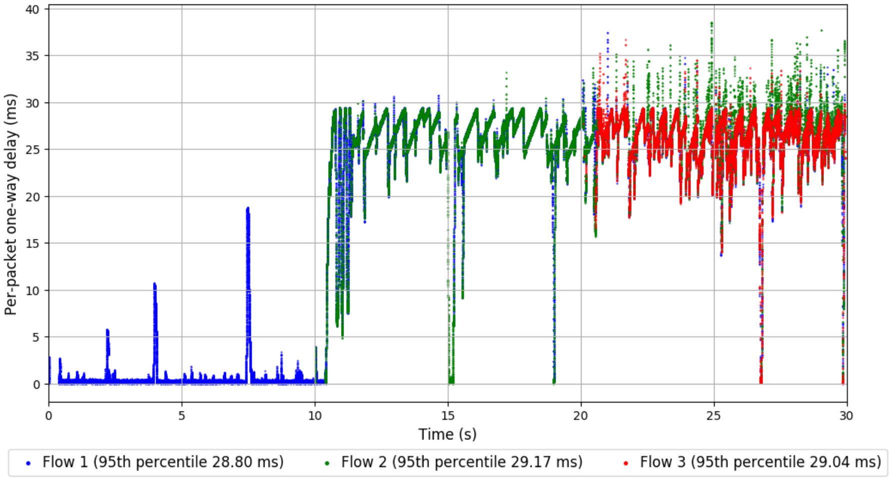




```
Run 1: Statistics of QUIC Cubic

Start at: 2018-05-22 03:33:31
End at: 2018-05-22 03:34:01
Local clock offset: -4.807 ms
Remote clock offset: -2.538 ms

# Below is generated by plot.py at 2018-05-22 06:36:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.69 Mbit/s
95th percentile per-packet one-way delay: 28.956 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 57.98 Mbit/s
95th percentile per-packet one-way delay: 28.798 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.51 Mbit/s
95th percentile per-packet one-way delay: 29.167 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 29.69 Mbit/s
95th percentile per-packet one-way delay: 29.042 ms
Loss rate: 0.56%
```

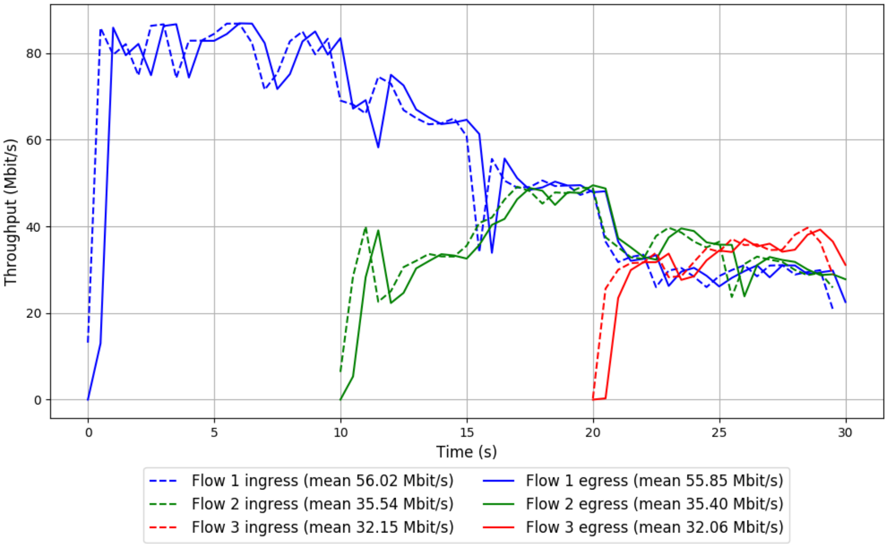
Run 1: Report of QUIC Cubic — Data Link

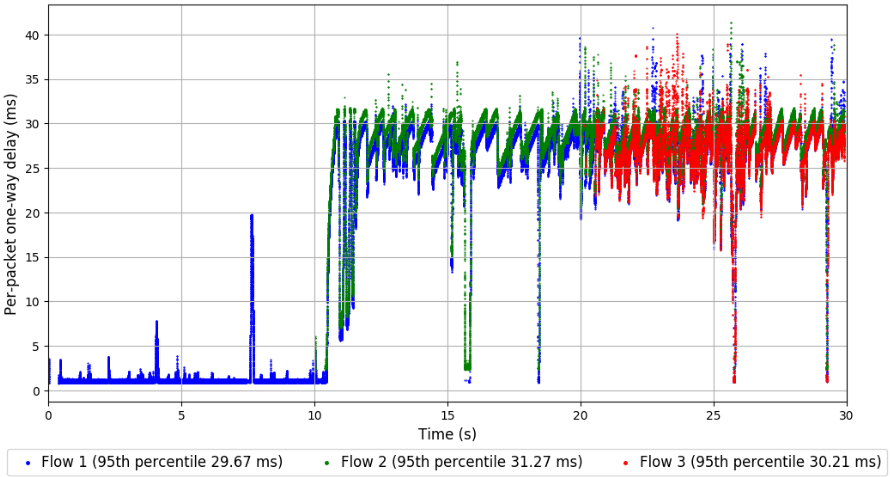




```
Run 2: Statistics of QUIC Cubic

Start at: 2018-05-22 03:51:22
End at: 2018-05-22 03:51:53
Local clock offset: -5.73 ms
Remote clock offset: -5.886 ms

# Below is generated by plot.py at 2018-05-22 06:36:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.92 Mbit/s
95th percentile per-packet one-way delay: 30.641 ms
Loss rate: 0.22%
-- Flow 1:
Average throughput: 55.85 Mbit/s
95th percentile per-packet one-way delay: 29.671 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 35.40 Mbit/s
95th percentile per-packet one-way delay: 31.269 ms
Loss rate: 0.23%
-- Flow 3:
Average throughput: 32.06 Mbit/s
95th percentile per-packet one-way delay: 30.210 ms
Loss rate: 0.26%
```

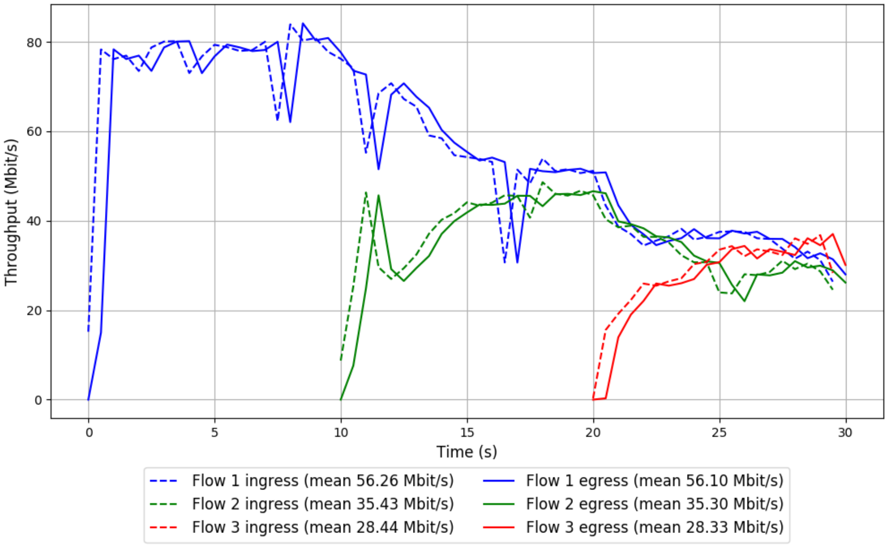
Run 2: Report of QUIC Cubic — Data Link

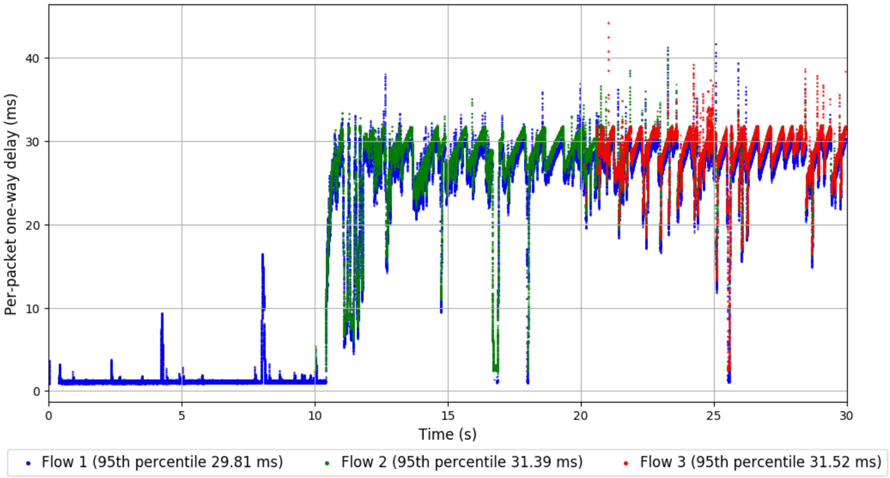




```
Run 3: Statistics of QUIC Cubic

Start at: 2018-05-22 04:09:14
End at: 2018-05-22 04:09:44
Local clock offset: -0.446 ms
Remote clock offset: -8.041 ms

# Below is generated by plot.py at 2018-05-22 06:36:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.87 Mbit/s
95th percentile per-packet one-way delay: 31.080 ms
Loss rate: 0.20%
-- Flow 1:
Average throughput: 56.10 Mbit/s
95th percentile per-packet one-way delay: 29.814 ms
Loss rate: 0.19%
-- Flow 2:
Average throughput: 35.30 Mbit/s
95th percentile per-packet one-way delay: 31.393 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 28.33 Mbit/s
95th percentile per-packet one-way delay: 31.524 ms
Loss rate: 0.27%
```

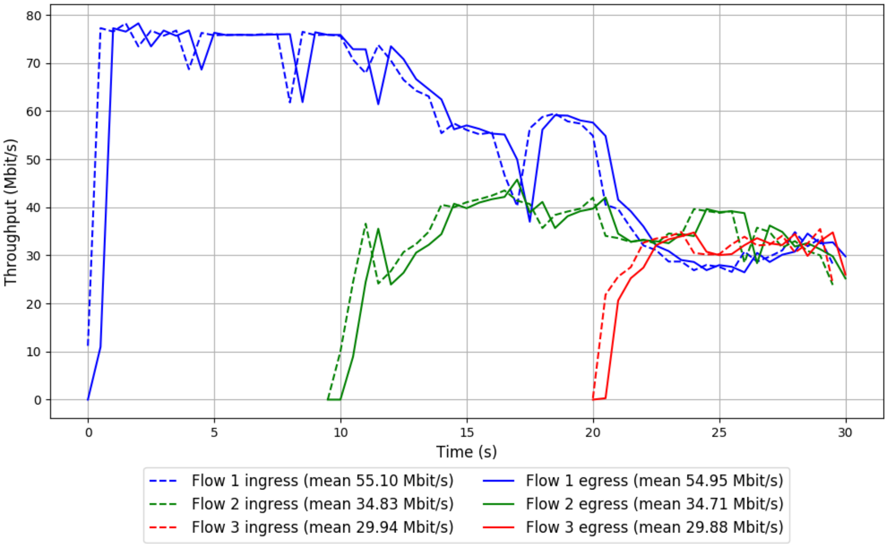
Run 3: Report of QUIC Cubic — Data Link

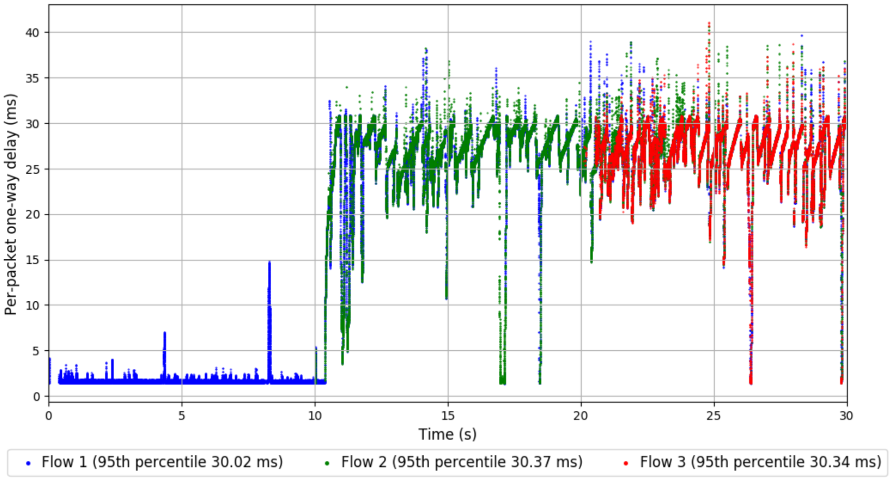




```
Run 4: Statistics of QUIC Cubic

Start at: 2018-05-22 04:27:05
End at: 2018-05-22 04:27:35
Local clock offset: 2.833 ms
Remote clock offset: -3.82 ms

# Below is generated by plot.py at 2018-05-22 06:36:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.88 Mbit/s
95th percentile per-packet one-way delay: 30.173 ms
Loss rate: 0.18%
-- Flow 1:
Average throughput: 54.95 Mbit/s
95th percentile per-packet one-way delay: 30.025 ms
Loss rate: 0.17%
-- Flow 2:
Average throughput: 34.71 Mbit/s
95th percentile per-packet one-way delay: 30.369 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 29.88 Mbit/s
95th percentile per-packet one-way delay: 30.339 ms
Loss rate: 0.18%
```

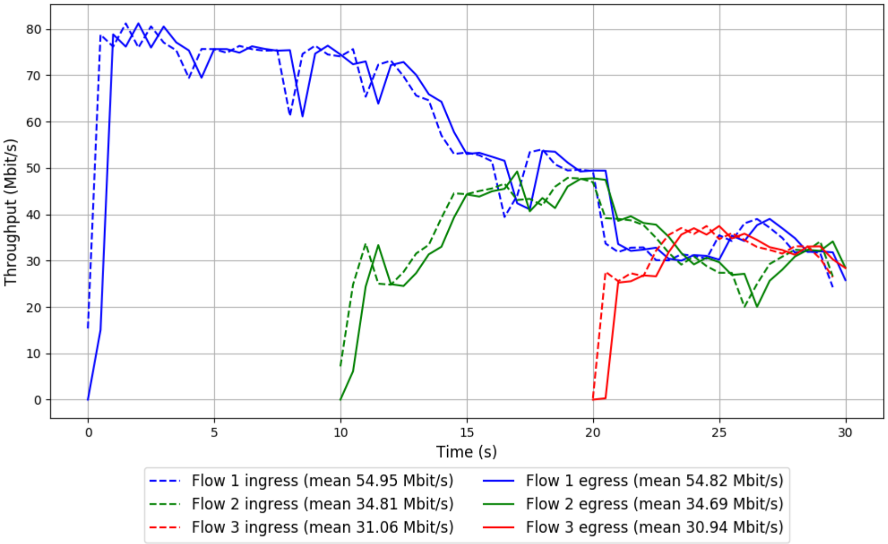
Run 4: Report of QUIC Cubic — Data Link

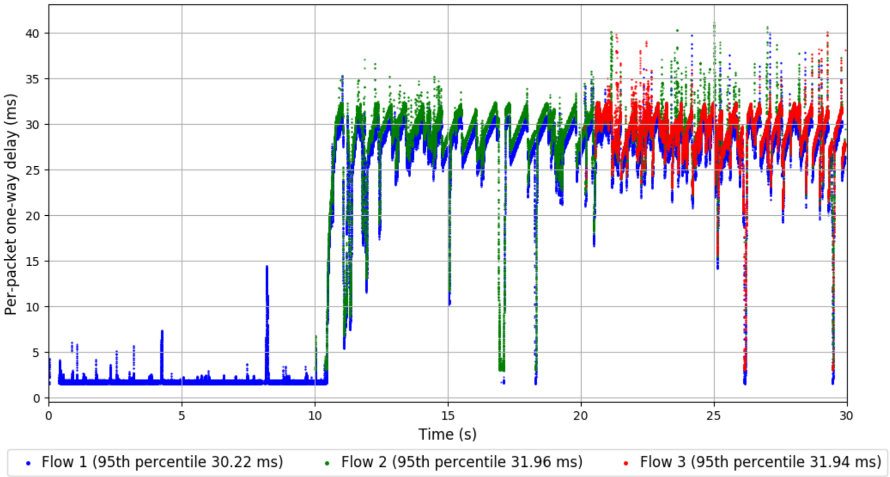




```
Run 5: Statistics of QUIC Cubic

Start at: 2018-05-22 04:44:56
End at: 2018-05-22 04:45:26
Local clock offset: 2.834 ms
Remote clock offset: -1.493 ms

# Below is generated by plot.py at 2018-05-22 06:37:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.04 Mbit/s
95th percentile per-packet one-way delay: 31.513 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 54.82 Mbit/s
95th percentile per-packet one-way delay: 30.219 ms
Loss rate: 0.16%
-- Flow 2:
Average throughput: 34.69 Mbit/s
95th percentile per-packet one-way delay: 31.960 ms
Loss rate: 0.21%
-- Flow 3:
Average throughput: 30.94 Mbit/s
95th percentile per-packet one-way delay: 31.936 ms
Loss rate: 0.30%
```

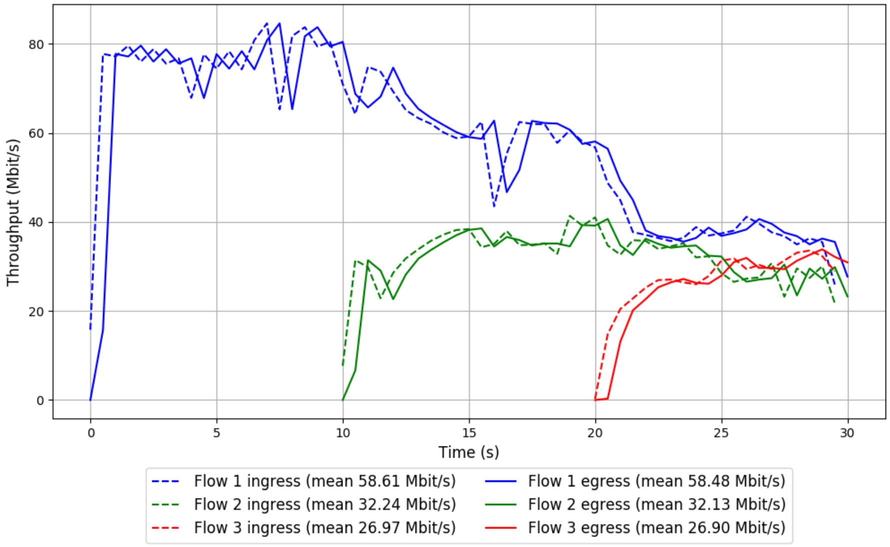
Run 5: Report of QUIC Cubic — Data Link

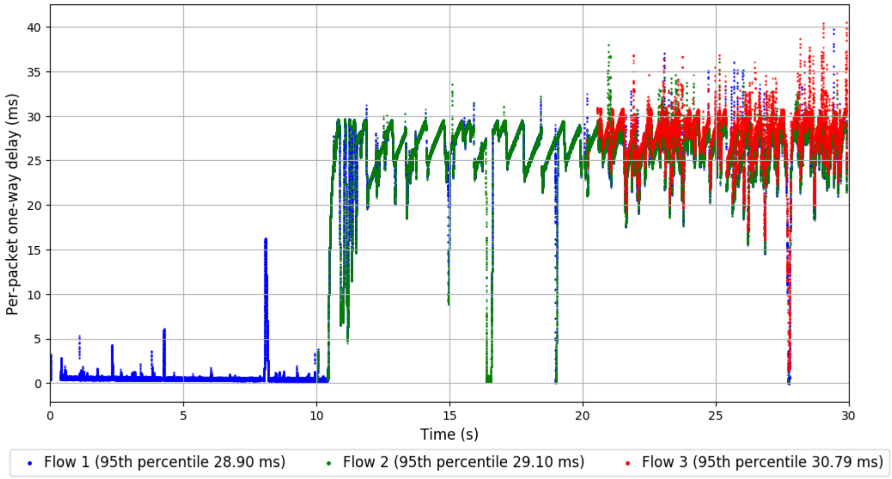




```
Run 6: Statistics of QUIC Cubic

Start at: 2018-05-22 05:02:48
End at: 2018-05-22 05:03:18
Local clock offset: -1.774 ms
Remote clock offset: 6.496 ms

# Below is generated by plot.py at 2018-05-22 06:37:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.67 Mbit/s
95th percentile per-packet one-way delay: 29.232 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 58.48 Mbit/s
95th percentile per-packet one-way delay: 28.898 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 32.13 Mbit/s
95th percentile per-packet one-way delay: 29.098 ms
Loss rate: 0.24%
-- Flow 3:
Average throughput: 26.90 Mbit/s
95th percentile per-packet one-way delay: 30.794 ms
Loss rate: 0.28%
```

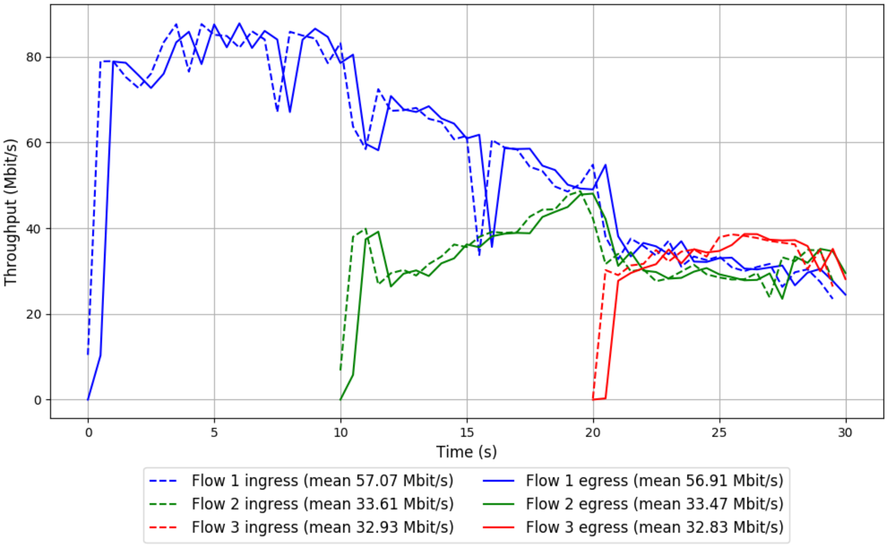
Run 6: Report of QUIC Cubic — Data Link

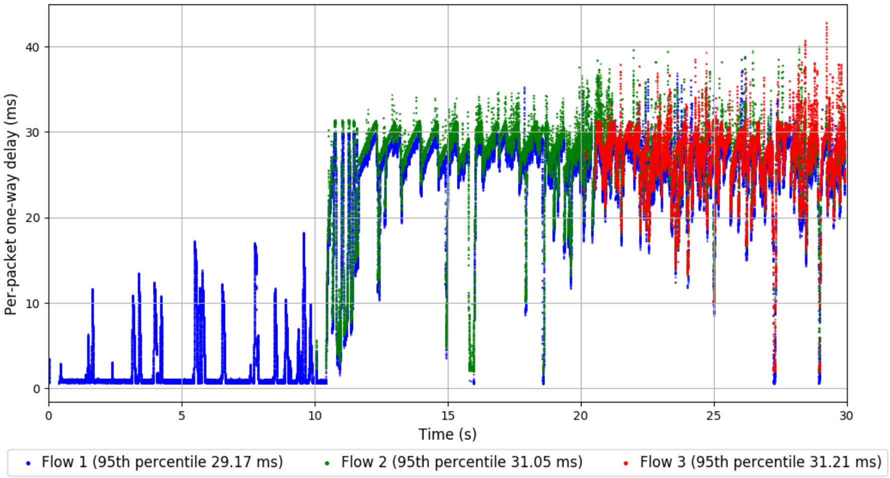




```
Run 7: Statistics of QUIC Cubic

Start at: 2018-05-22 05:20:40
End at: 2018-05-22 05:21:10
Local clock offset: -8.518 ms
Remote clock offset: 10.725 ms

# Below is generated by plot.py at 2018-05-22 06:37:18
# Datalink statistics
-- Total of 3 flows:
Average throughput: 89.94 Mbit/s
95th percentile per-packet one-way delay: 30.426 ms
Loss rate: 0.23%
-- Flow 1:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 29.166 ms
Loss rate: 0.20%
-- Flow 2:
Average throughput: 33.47 Mbit/s
95th percentile per-packet one-way delay: 31.050 ms
Loss rate: 0.30%
-- Flow 3:
Average throughput: 32.83 Mbit/s
95th percentile per-packet one-way delay: 31.214 ms
Loss rate: 0.27%
```

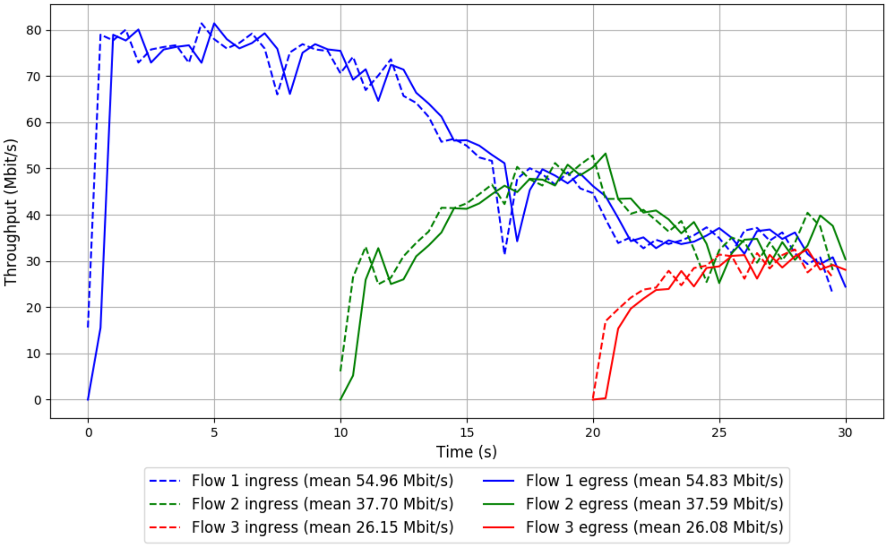
Run 7: Report of QUIC Cubic — Data Link

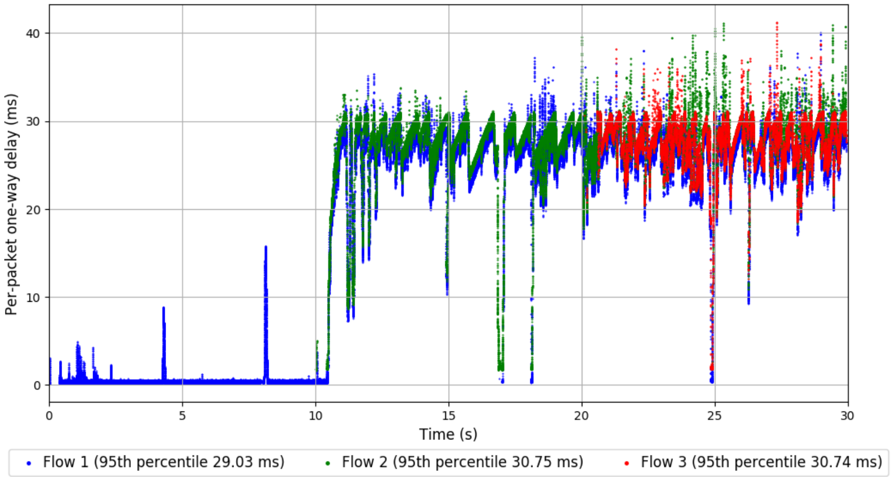




```
Run 8: Statistics of QUIC Cubic

Start at: 2018-05-22 05:38:31
End at: 2018-05-22 05:39:01
Local clock offset: -6.84 ms
Remote clock offset: -1.165 ms

# Below is generated by plot.py at 2018-05-22 06:37:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.39 Mbit/s
95th percentile per-packet one-way delay: 30.320 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 54.83 Mbit/s
95th percentile per-packet one-way delay: 29.033 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 37.59 Mbit/s
95th percentile per-packet one-way delay: 30.755 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 26.08 Mbit/s
95th percentile per-packet one-way delay: 30.739 ms
Loss rate: 0.29%
```

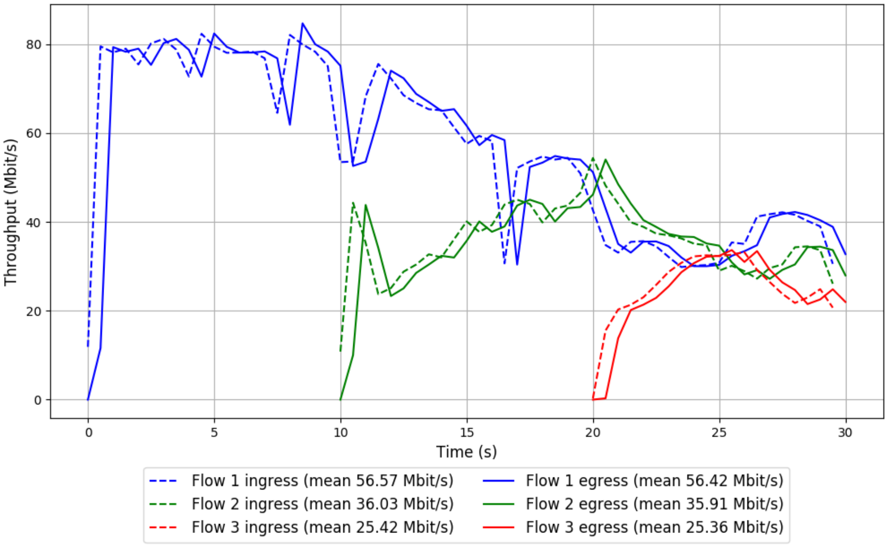
Run 8: Report of QUIC Cubic — Data Link

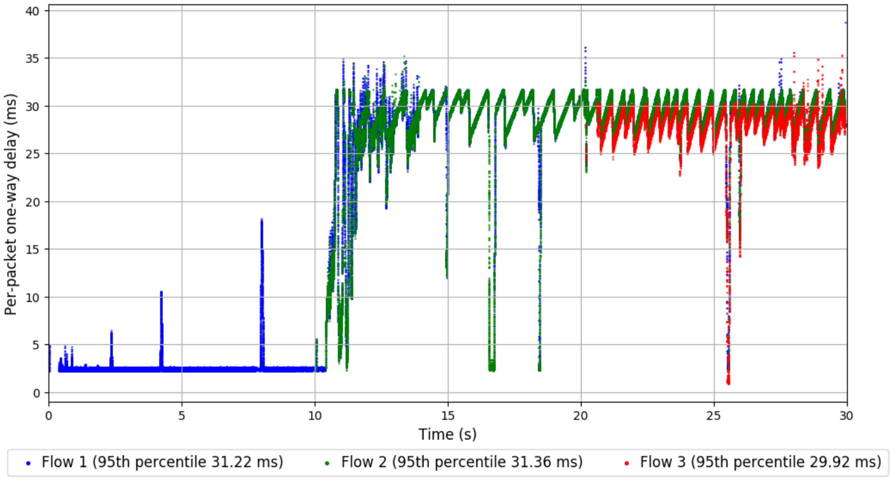




```
Run 9: Statistics of QUIC Cubic

Start at: 2018-05-22 05:56:22
End at: 2018-05-22 05:56:52
Local clock offset: -8.041 ms
Remote clock offset: -4.465 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.61 Mbit/s
95th percentile per-packet one-way delay: 31.254 ms
Loss rate: 0.17%
-- Flow 1:
Average throughput: 56.42 Mbit/s
95th percentile per-packet one-way delay: 31.222 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 35.91 Mbit/s
95th percentile per-packet one-way delay: 31.357 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 25.36 Mbit/s
95th percentile per-packet one-way delay: 29.918 ms
Loss rate: 0.25%
```

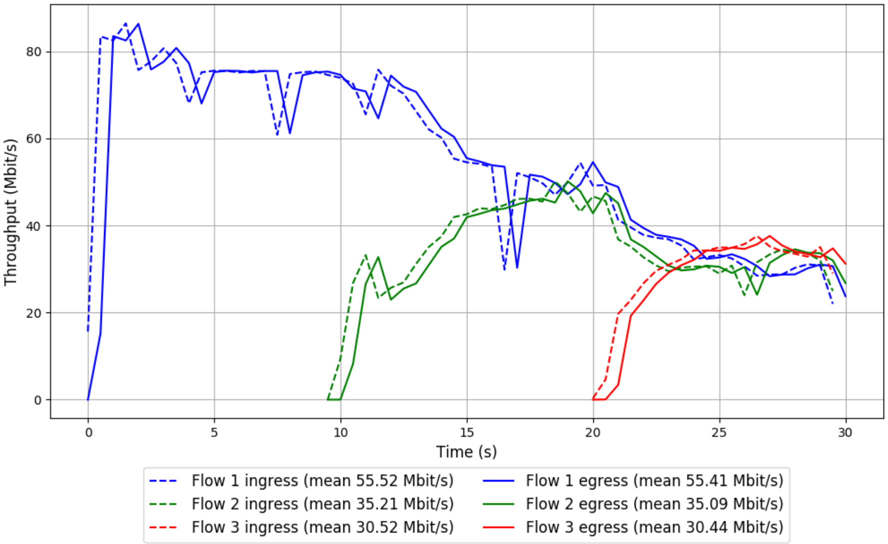
Run 9: Report of QUIC Cubic — Data Link

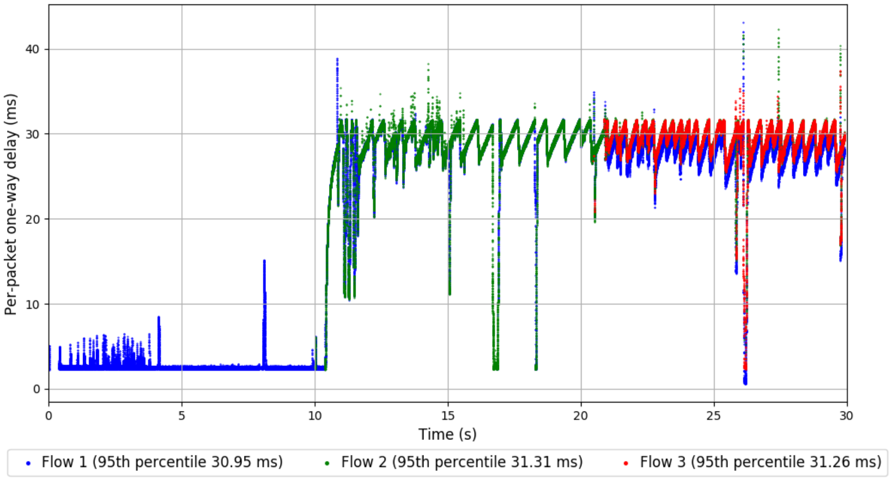




```
Run 10: Statistics of QUIC Cubic

Start at: 2018-05-22 06:18:28
End at: 2018-05-22 06:18:58
Local clock offset: -6.726 ms
Remote clock offset: -3.488 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.42 Mbit/s
95th percentile per-packet one-way delay: 31.182 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 55.41 Mbit/s
95th percentile per-packet one-way delay: 30.946 ms
Loss rate: 0.13%
-- Flow 2:
Average throughput: 35.09 Mbit/s
95th percentile per-packet one-way delay: 31.307 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 30.44 Mbit/s
95th percentile per-packet one-way delay: 31.257 ms
Loss rate: 0.22%
```

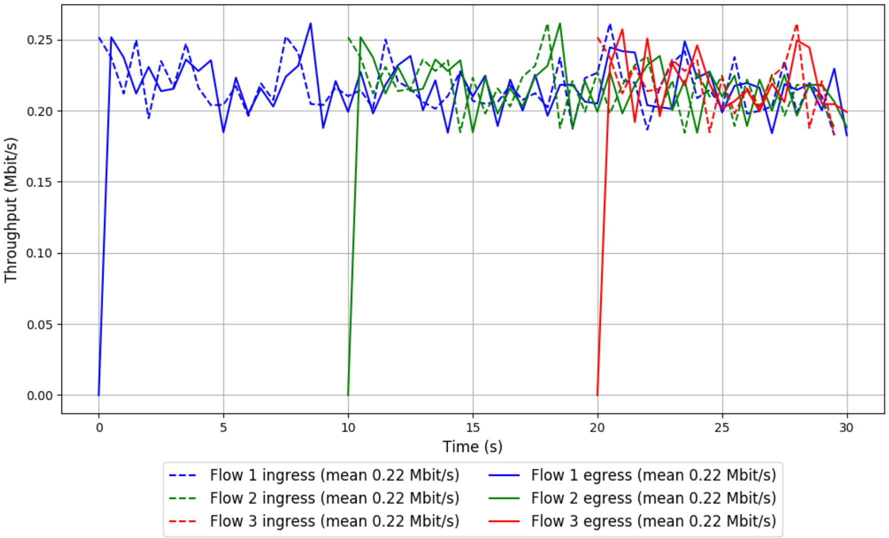
Run 10: Report of QUIC Cubic — Data Link

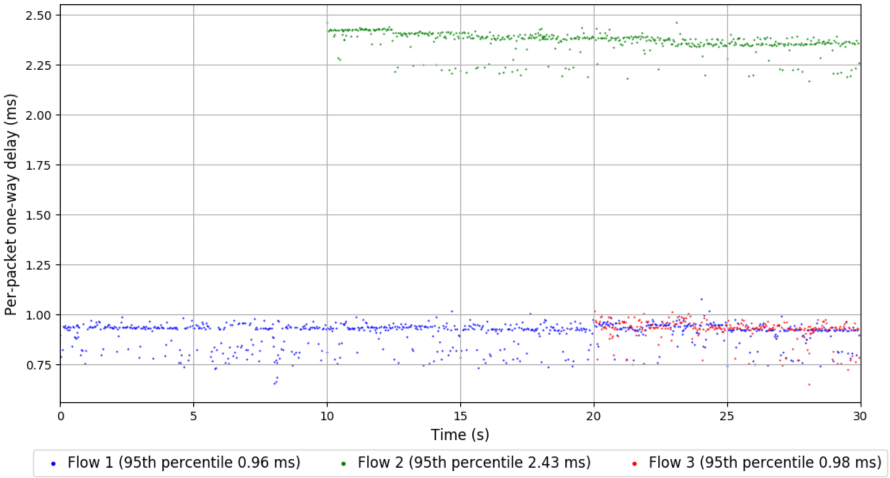




```
Run 1: Statistics of SCReAM

Start at: 2018-05-22 03:26:53
End at: 2018-05-22 03:27:23
Local clock offset: -5.41 ms
Remote clock offset: -2.542 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.411 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.964 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.428 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.985 ms
Loss rate: 0.00%
```

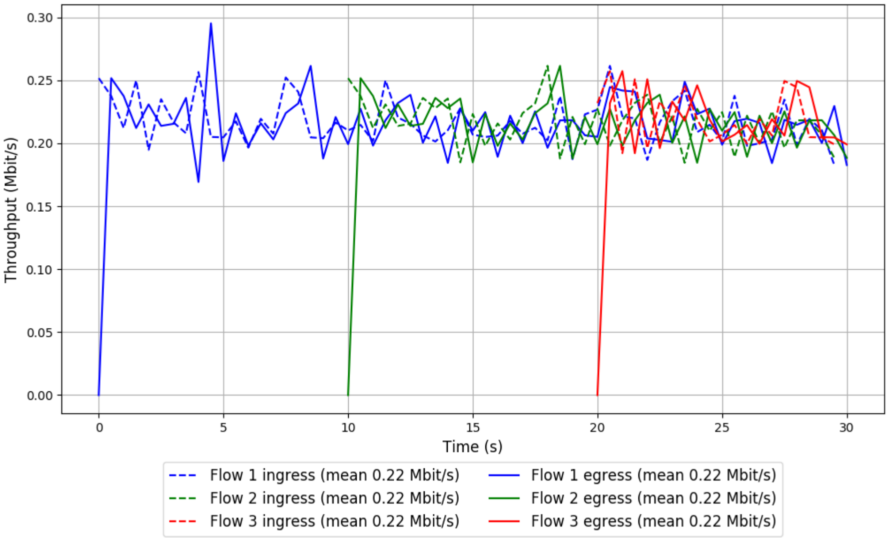
Run 1: Report of SCReAM — Data Link

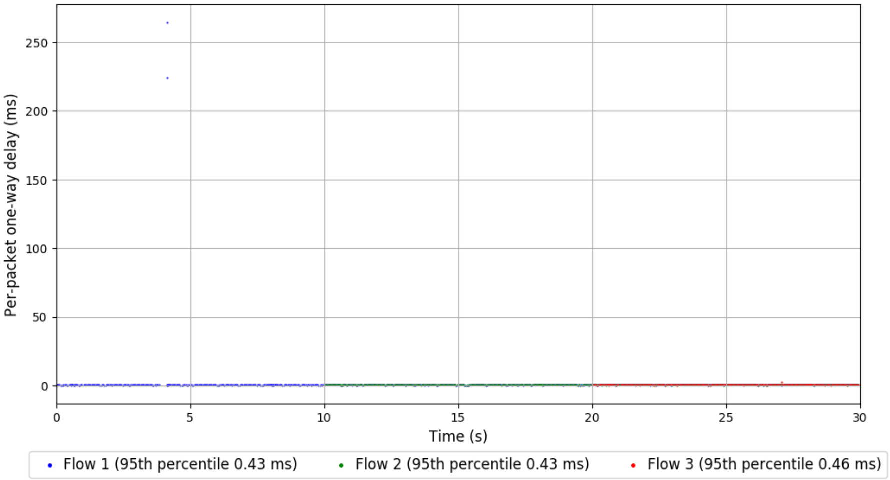




```
Run 2: Statistics of SCReAM

Start at: 2018-05-22 03:44:45
End at: 2018-05-22 03:45:15
Local clock offset: -4.95 ms
Remote clock offset: -4.036 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 0.438 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.426 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.427 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.462 ms
Loss rate: 0.00%
```

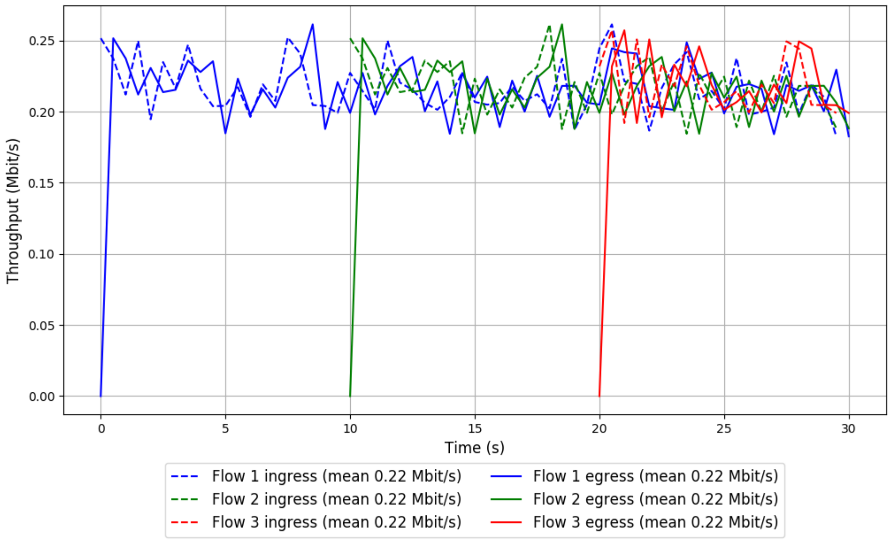
Run 2: Report of SCReAM — Data Link

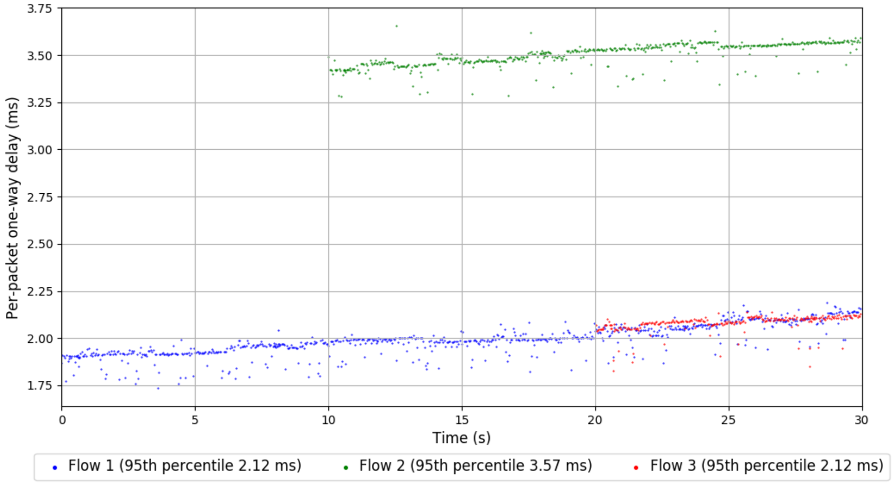




```
Run 3: Statistics of SCReAM

Start at: 2018-05-22 04:02:36
End at: 2018-05-22 04:03:06
Local clock offset: -3.273 ms
Remote clock offset: -7.531 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.563 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.124 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.570 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.119 ms
Loss rate: 0.00%
```

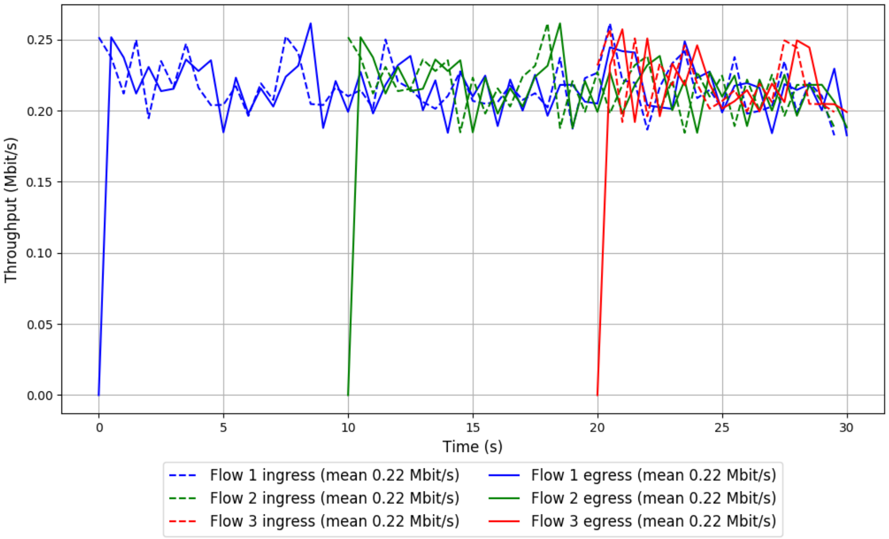
Run 3: Report of SCReAM — Data Link

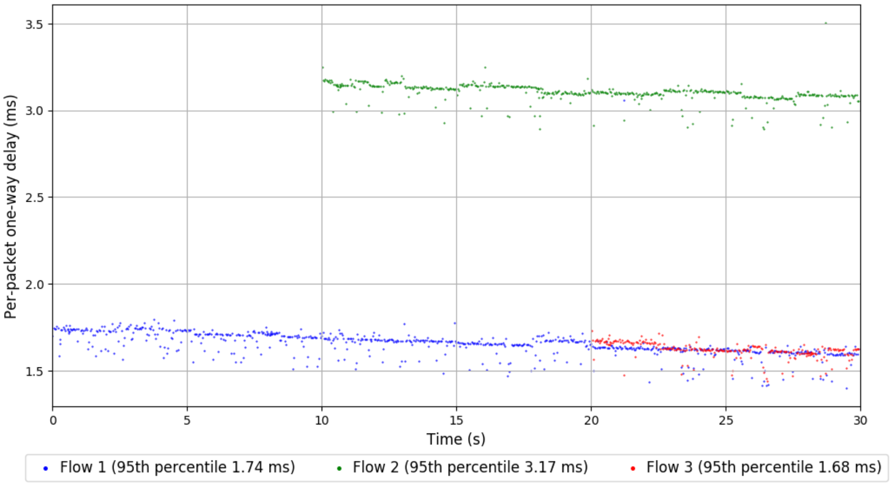




```
Run 4: Statistics of SCReAM

Start at: 2018-05-22 04:20:27
End at: 2018-05-22 04:20:57
Local clock offset: 0.527 ms
Remote clock offset: -5.849 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.142 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.166 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.676 ms
Loss rate: 0.00%
```

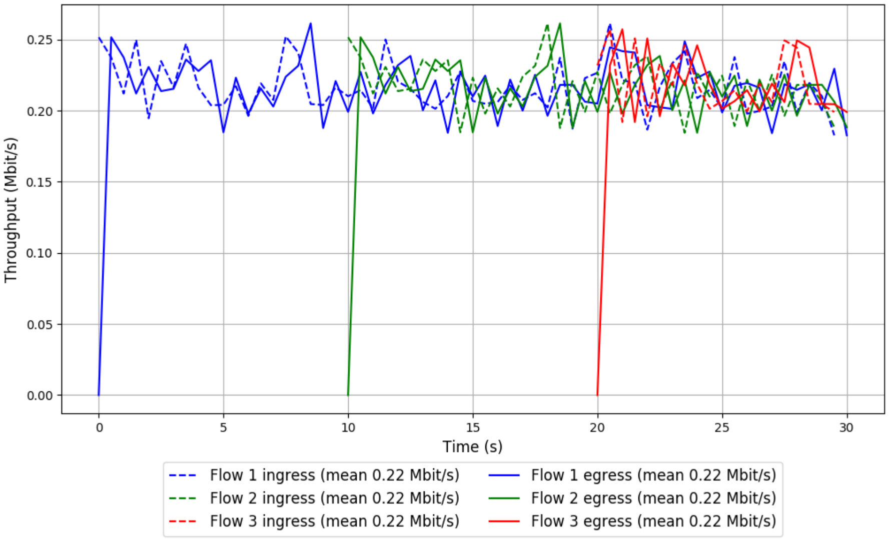
Run 4: Report of SCReAM — Data Link

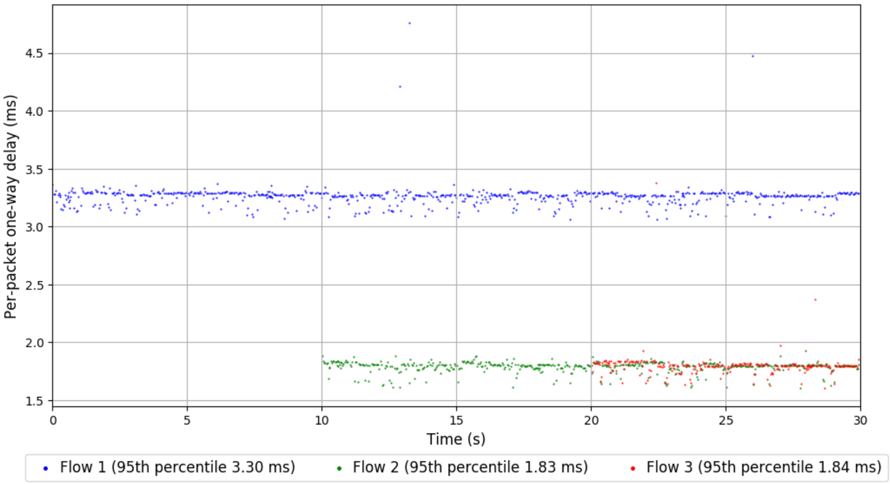




```
Run 5: Statistics of SCReAM

Start at: 2018-05-22 04:38:19
End at: 2018-05-22 04:38:49
Local clock offset: 2.25 ms
Remote clock offset: -2.034 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.297 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.303 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.835 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.837 ms
Loss rate: 0.00%
```

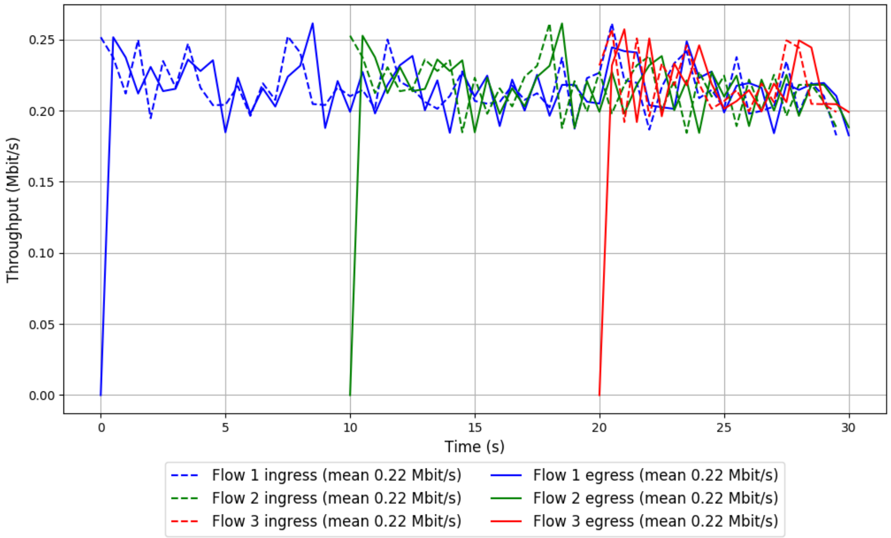
Run 5: Report of SCReAM — Data Link

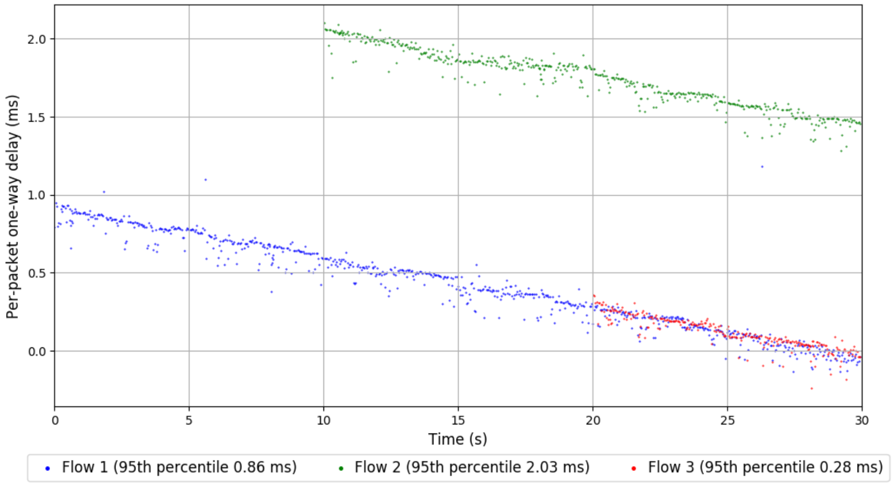




```
Run 6: Statistics of SCReAM

Start at: 2018-05-22 04:56:10
End at: 2018-05-22 04:56:40
Local clock offset: 4.553 ms
Remote clock offset: 3.721 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.949 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.865 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.032 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.276 ms
Loss rate: 0.00%
```

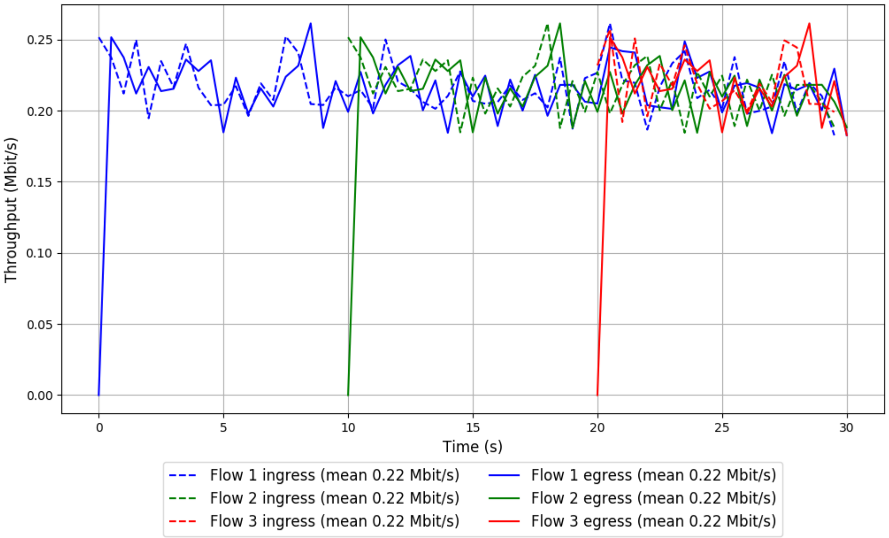
Run 6: Report of SCReAM — Data Link

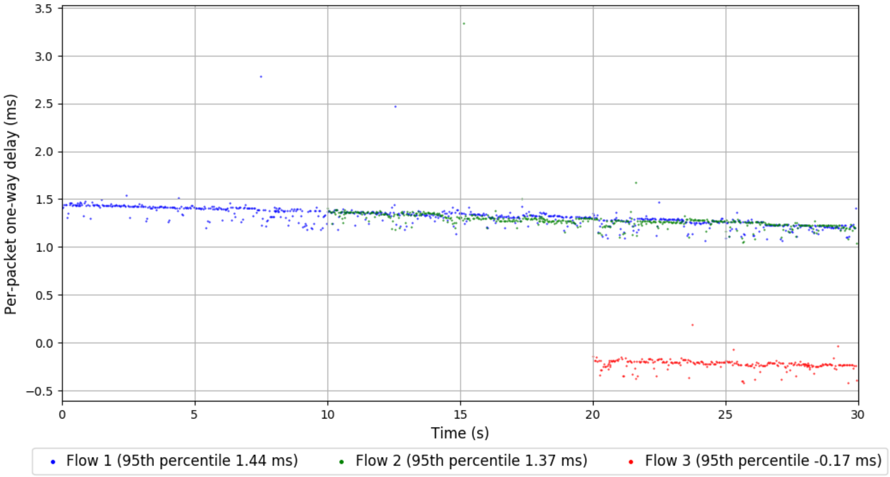




```
Run 7: Statistics of SCReAM

Start at: 2018-05-22 05:14:02
End at: 2018-05-22 05:14:32
Local clock offset: -6.164 ms
Remote clock offset: 9.449 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.426 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.436 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.366 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: -0.170 ms
Loss rate: 0.00%
```

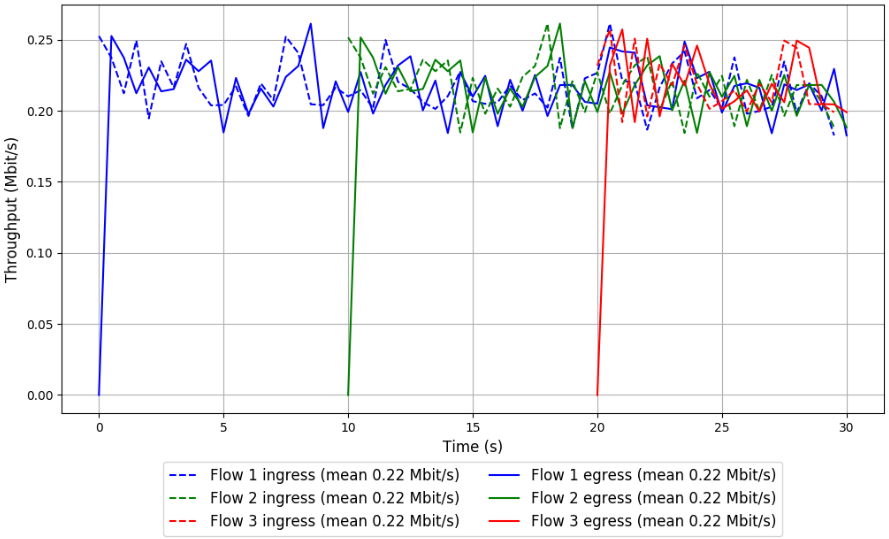
Run 7: Report of SCReAM — Data Link

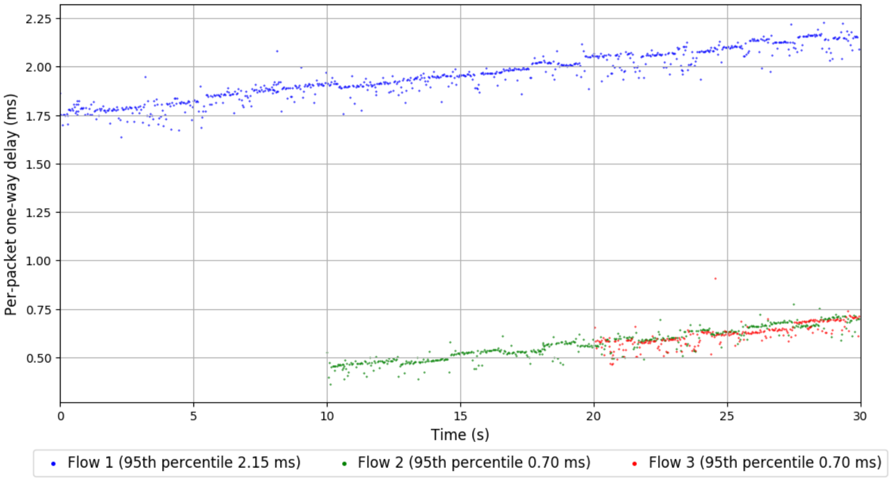




```
Run 8: Statistics of SCReAM

Start at: 2018-05-22 05:31:53
End at: 2018-05-22 05:32:23
Local clock offset: -7.429 ms
Remote clock offset: 2.104 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 2.125 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 2.148 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.697 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.700 ms
Loss rate: 0.00%
```

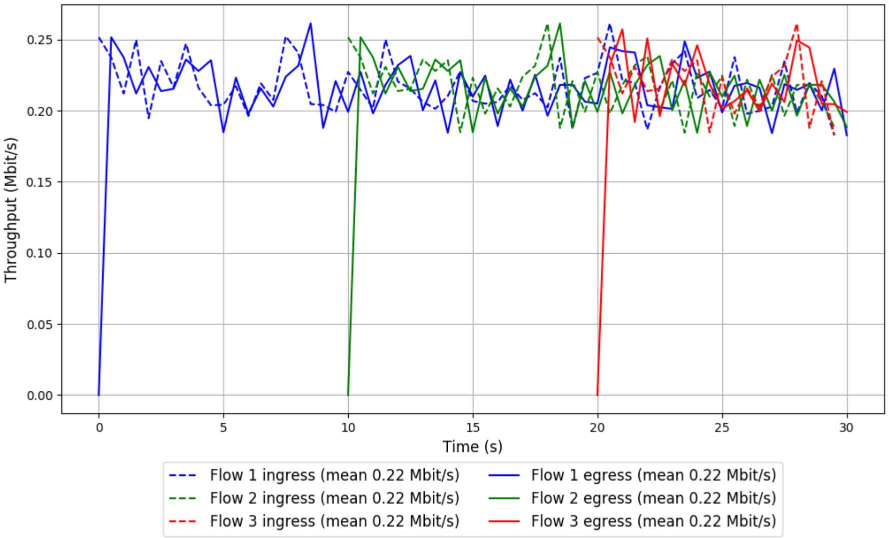
Run 8: Report of SCReAM — Data Link

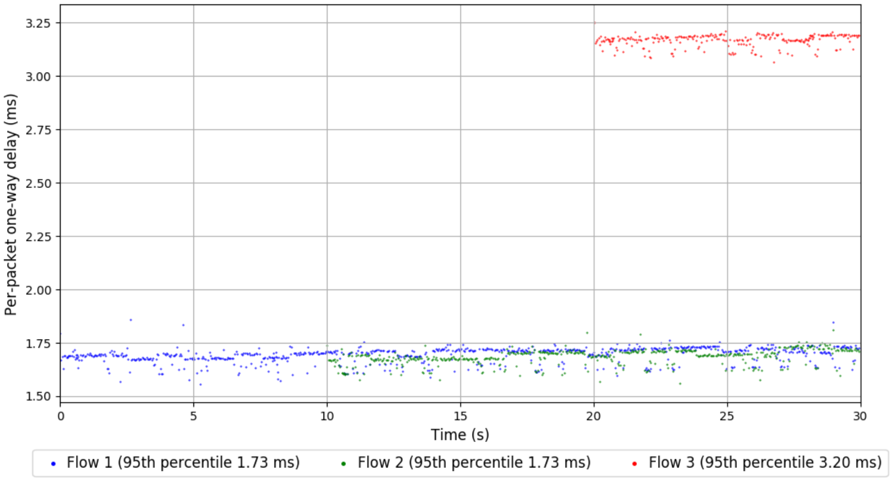




```
Run 9: Statistics of SCReAM

Start at: 2018-05-22 05:49:44
End at: 2018-05-22 05:50:14
Local clock offset: -8.542 ms
Remote clock offset: -3.767 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 3.186 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.733 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.731 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 3.196 ms
Loss rate: 0.00%
```

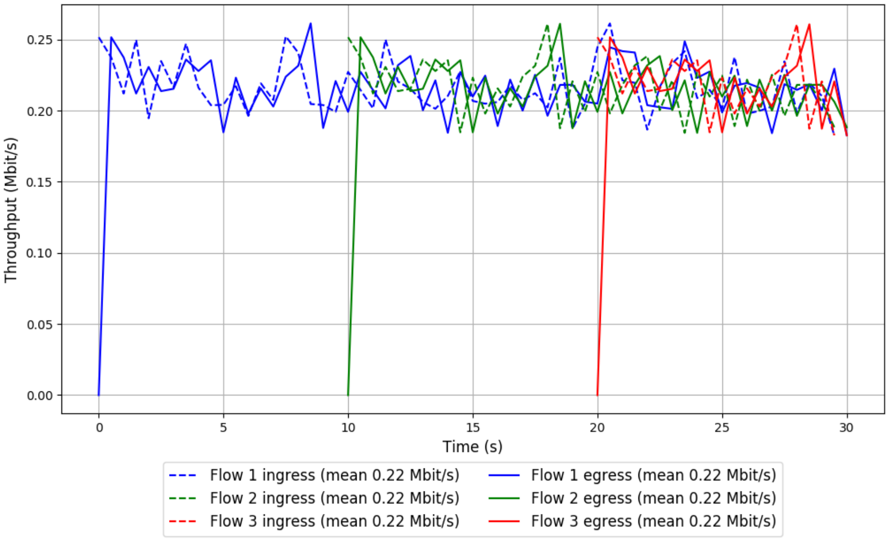
Run 9: Report of SCReAM — Data Link

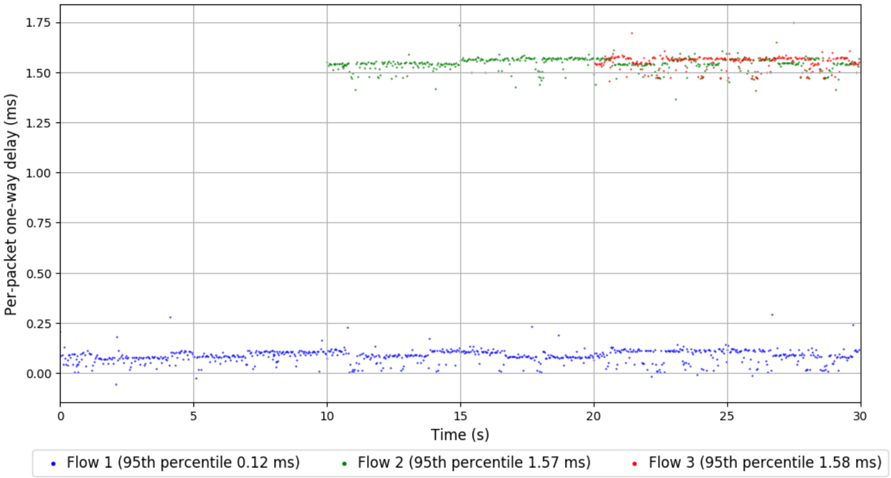




```
Run 10: Statistics of SCReAM

Start at: 2018-05-22 06:07:35
End at: 2018-05-22 06:08:05
Local clock offset: -6.043 ms
Remote clock offset: -3.754 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 1.573 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 0.121 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.574 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 1.582 ms
Loss rate: 0.00%
```

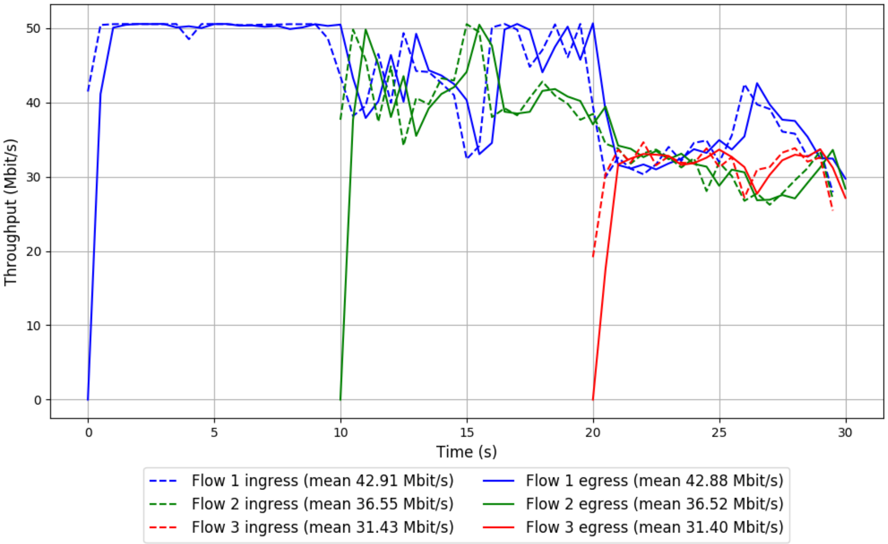
Run 10: Report of SCReAM — Data Link

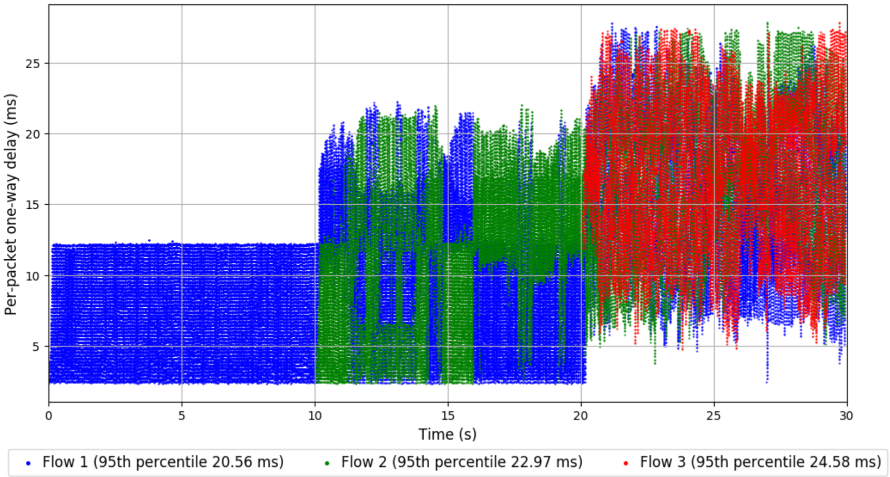




```
Run 1: Statistics of Sprout

Start at: 2018-05-22 03:24:44
End at: 2018-05-22 03:25:14
Local clock offset: -5.414 ms
Remote clock offset: -2.456 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.54 Mbit/s
95th percentile per-packet one-way delay: 22.496 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.88 Mbit/s
95th percentile per-packet one-way delay: 20.561 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.52 Mbit/s
95th percentile per-packet one-way delay: 22.967 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.40 Mbit/s
95th percentile per-packet one-way delay: 24.583 ms
Loss rate: 0.00%
```

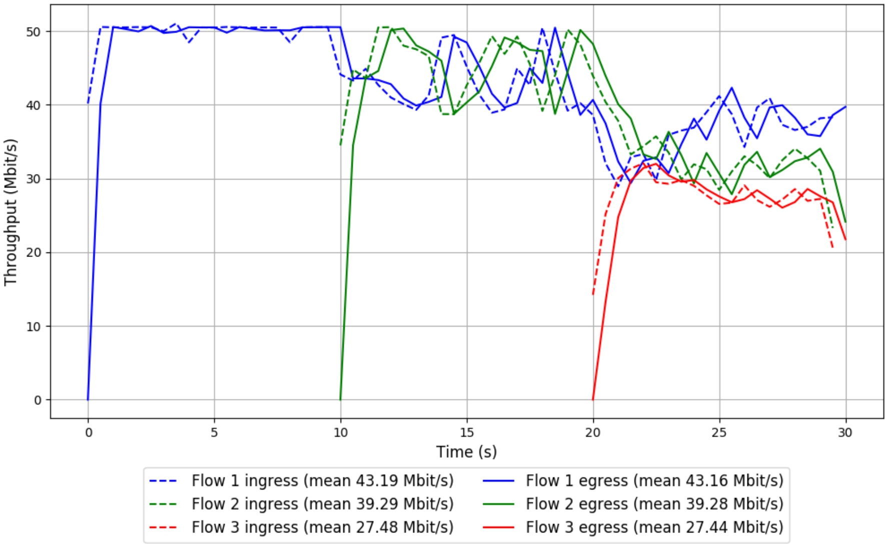
Run 1: Report of Sprout — Data Link

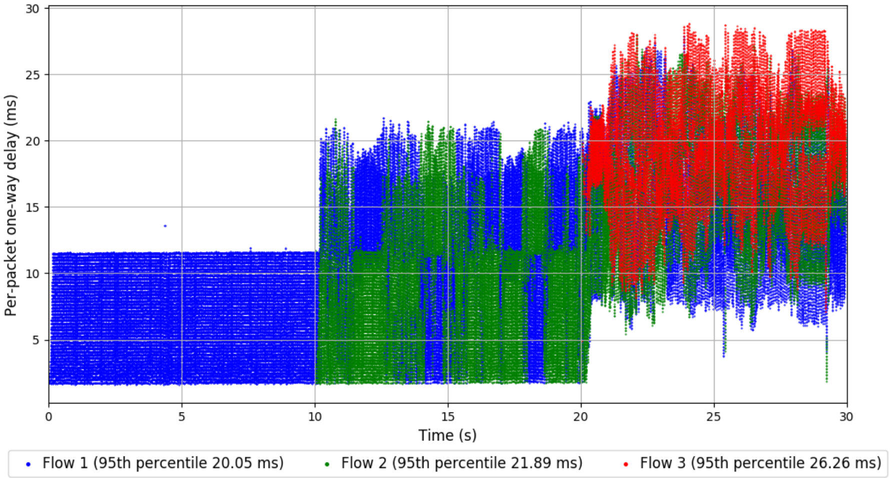




```
Run 2: Statistics of Sprout

Start at: 2018-05-22 03:42:35
End at: 2018-05-22 03:43:05
Local clock offset: -6.494 ms
Remote clock offset: -3.226 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.36 Mbit/s
95th percentile per-packet one-way delay: 22.564 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.16 Mbit/s
95th percentile per-packet one-way delay: 20.052 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.28 Mbit/s
95th percentile per-packet one-way delay: 21.892 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.44 Mbit/s
95th percentile per-packet one-way delay: 26.257 ms
Loss rate: 0.00%
```

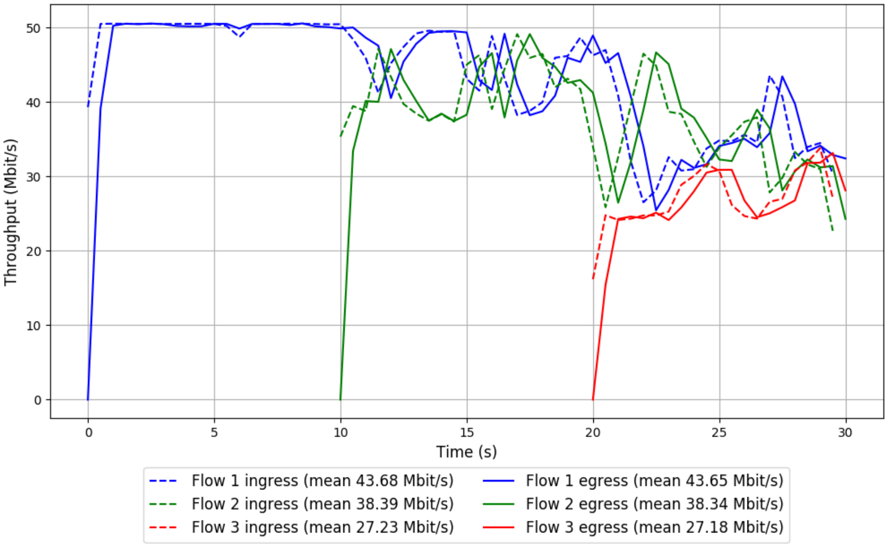
Run 2: Report of Sprout — Data Link

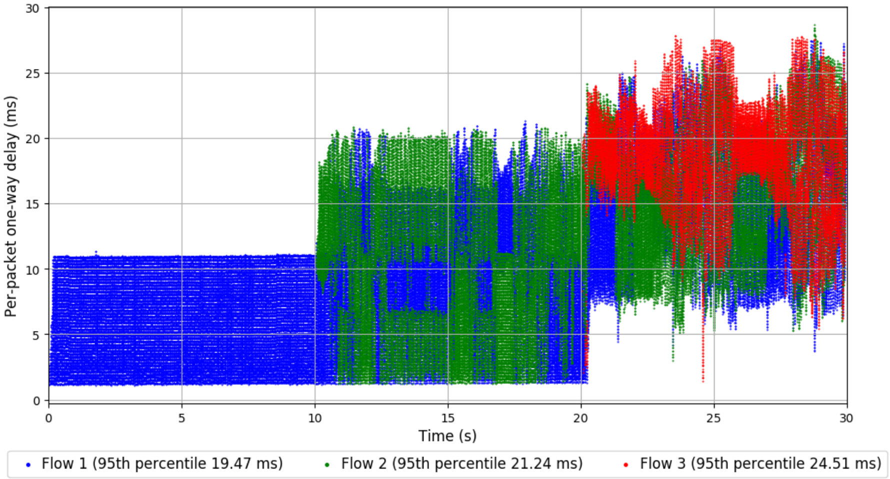




```
Run 3: Statistics of Sprout

Start at: 2018-05-22 04:00:26
End at: 2018-05-22 04:00:56
Local clock offset: -3.452 ms
Remote clock offset: -7.23 ms

# Below is generated by plot.py at 2018-05-22 06:38:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.14 Mbit/s
95th percentile per-packet one-way delay: 21.573 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.65 Mbit/s
95th percentile per-packet one-way delay: 19.468 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 21.243 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.18 Mbit/s
95th percentile per-packet one-way delay: 24.509 ms
Loss rate: 0.00%
```

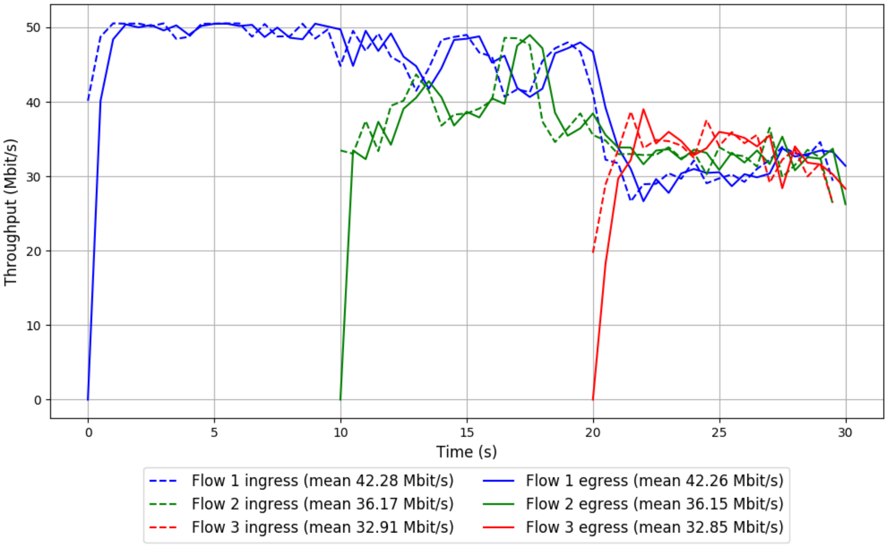
Run 3: Report of Sprout — Data Link

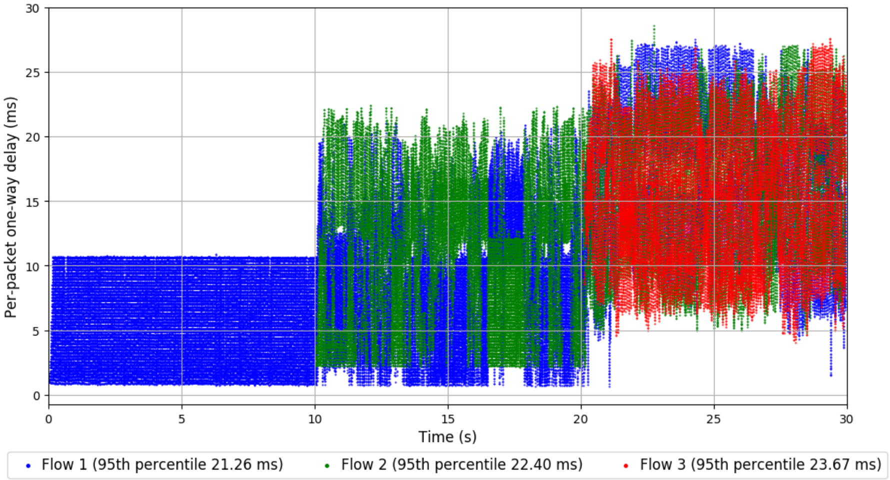




```
Run 4: Statistics of Sprout

Start at: 2018-05-22 04:18:17
End at: 2018-05-22 04:18:47
Local clock offset: 1.076 ms
Remote clock offset: -6.85 ms

# Below is generated by plot.py at 2018-05-22 06:38:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.16 Mbit/s
95th percentile per-packet one-way delay: 22.342 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.26 Mbit/s
95th percentile per-packet one-way delay: 21.258 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.15 Mbit/s
95th percentile per-packet one-way delay: 22.402 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.85 Mbit/s
95th percentile per-packet one-way delay: 23.671 ms
Loss rate: 0.00%
```

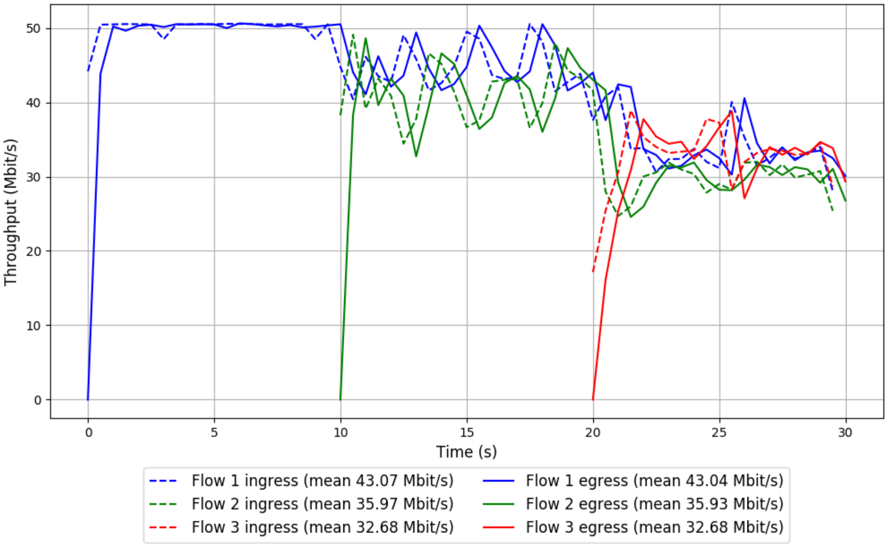
Run 4: Report of Sprout — Data Link

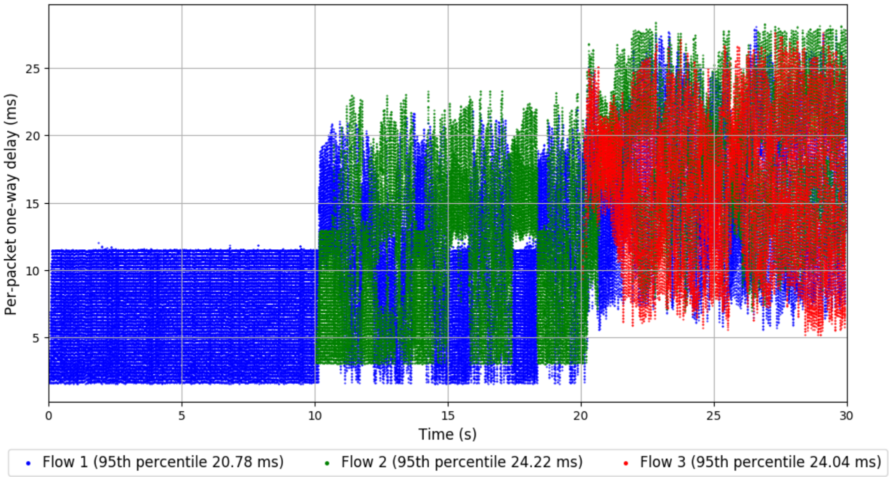




```
Run 5: Statistics of Sprout

Start at: 2018-05-22 04:36:09
End at: 2018-05-22 04:36:39
Local clock offset: 2.121 ms
Remote clock offset: -2.299 ms

# Below is generated by plot.py at 2018-05-22 06:38:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.73 Mbit/s
95th percentile per-packet one-way delay: 22.936 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 43.04 Mbit/s
95th percentile per-packet one-way delay: 20.776 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 35.93 Mbit/s
95th percentile per-packet one-way delay: 24.219 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.68 Mbit/s
95th percentile per-packet one-way delay: 24.040 ms
Loss rate: 0.00%
```

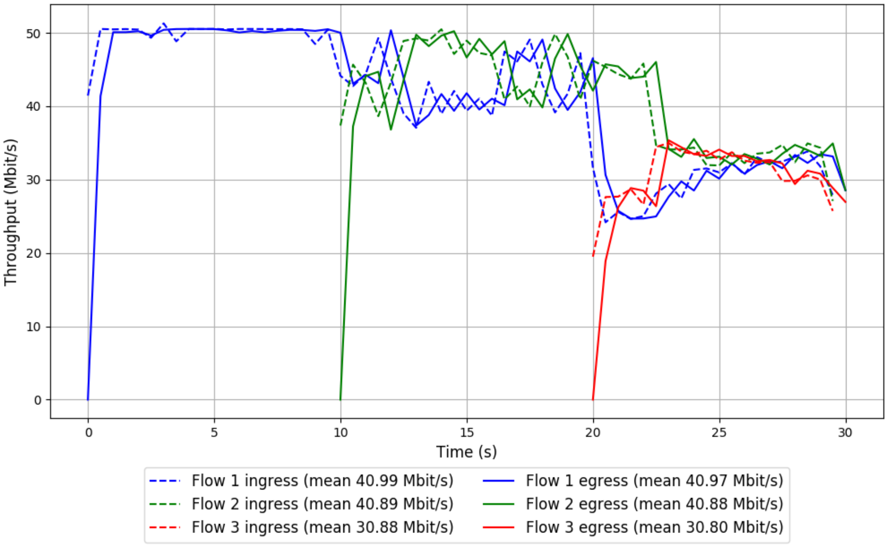
Run 5: Report of Sprout — Data Link

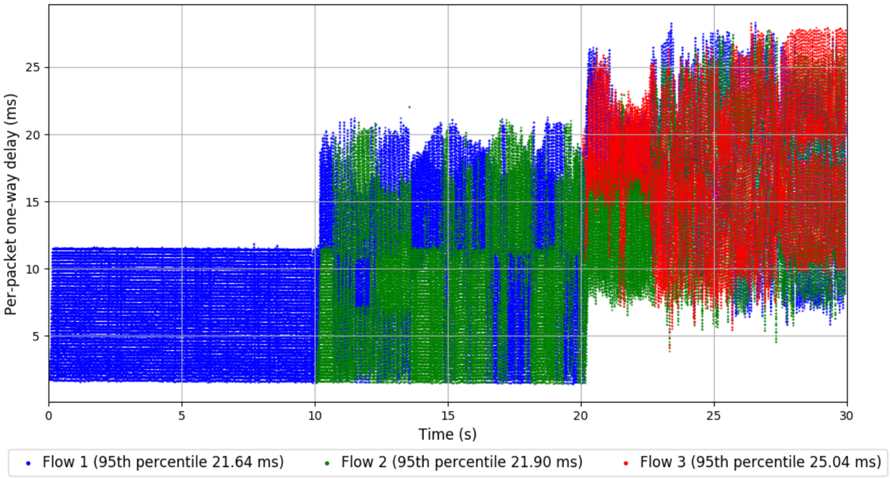




```
Run 6: Statistics of Sprout

Start at: 2018-05-22 04:54:00
End at: 2018-05-22 04:54:30
Local clock offset: 3.545 ms
Remote clock offset: 2.433 ms

# Below is generated by plot.py at 2018-05-22 06:38:40
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.31 Mbit/s
95th percentile per-packet one-way delay: 22.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.97 Mbit/s
95th percentile per-packet one-way delay: 21.638 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.88 Mbit/s
95th percentile per-packet one-way delay: 21.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.80 Mbit/s
95th percentile per-packet one-way delay: 25.041 ms
Loss rate: 0.00%
```

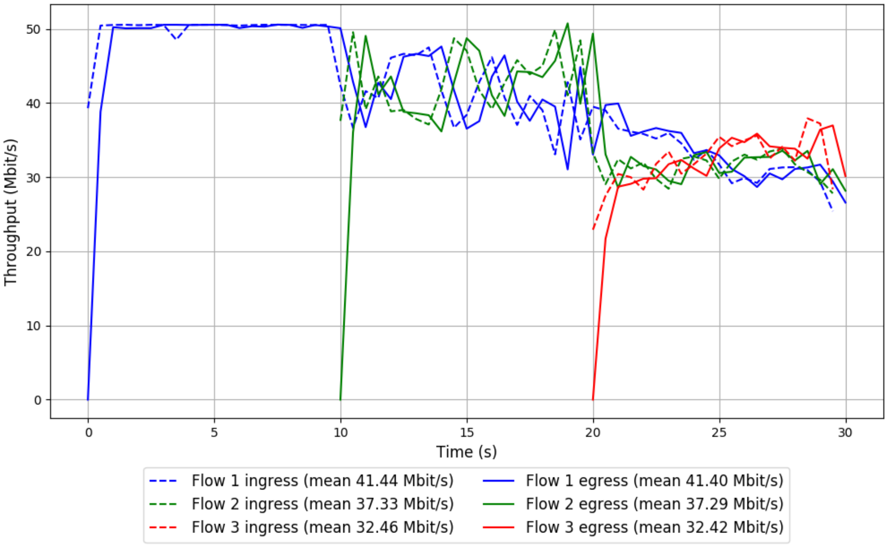
Run 6: Report of Sprout — Data Link

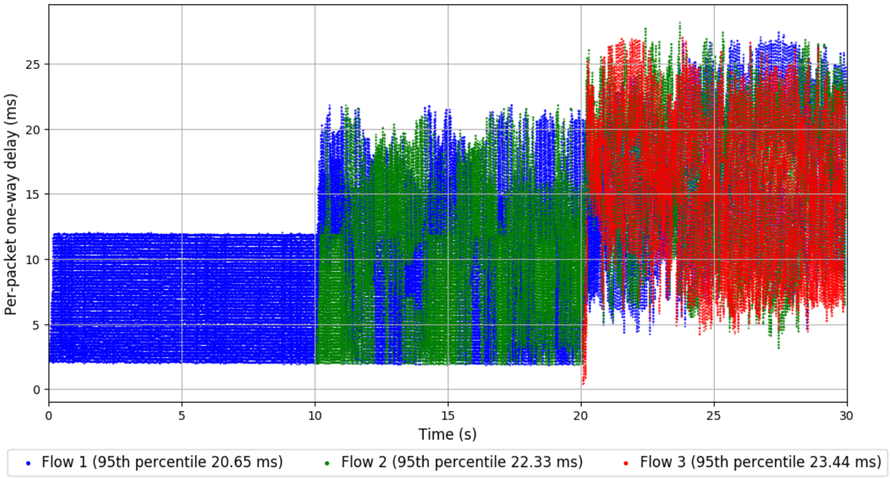




```
Run 7: Statistics of Sprout

Start at: 2018-05-22 05:11:52
End at: 2018-05-22 05:12:22
Local clock offset: -6.284 ms
Remote clock offset: 8.958 ms

# Below is generated by plot.py at 2018-05-22 06:39:02
# Datalink statistics
-- Total of 3 flows:
Average throughput: 76.94 Mbit/s
95th percentile per-packet one-way delay: 22.035 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.40 Mbit/s
95th percentile per-packet one-way delay: 20.652 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.29 Mbit/s
95th percentile per-packet one-way delay: 22.326 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.42 Mbit/s
95th percentile per-packet one-way delay: 23.437 ms
Loss rate: 0.00%
```

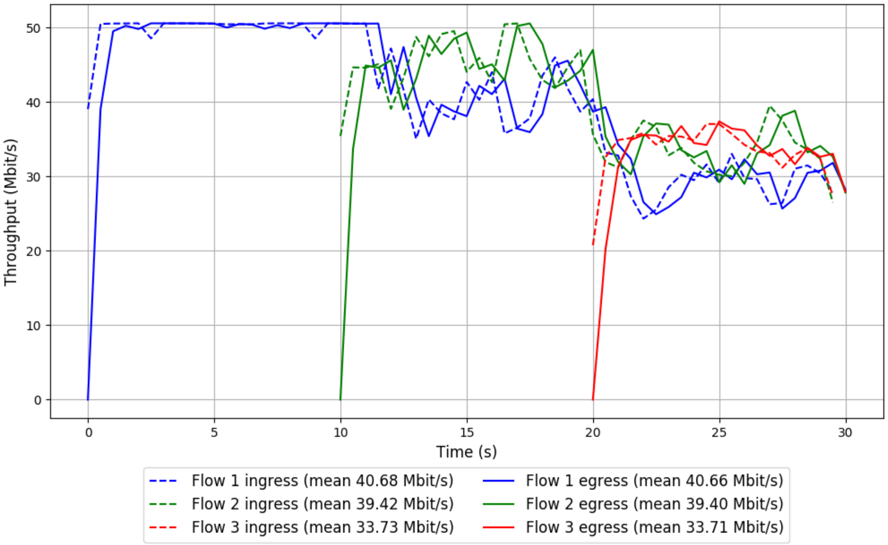
Run 7: Report of Sprout — Data Link

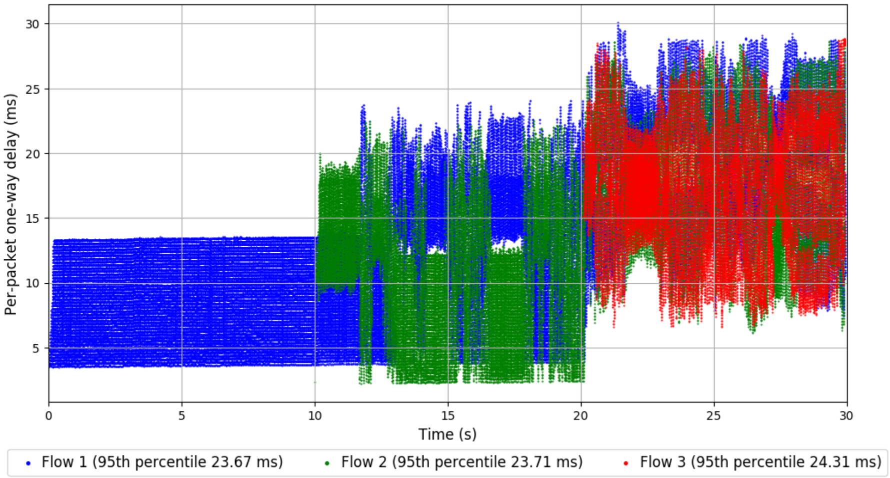




```
Run 8: Statistics of Sprout

Start at: 2018-05-22 05:29:44
End at: 2018-05-22 05:30:14
Local clock offset: -9.411 ms
Remote clock offset: 4.026 ms

# Below is generated by plot.py at 2018-05-22 06:39:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.02 Mbit/s
95th percentile per-packet one-way delay: 23.836 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.66 Mbit/s
95th percentile per-packet one-way delay: 23.667 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.40 Mbit/s
95th percentile per-packet one-way delay: 23.711 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.71 Mbit/s
95th percentile per-packet one-way delay: 24.309 ms
Loss rate: 0.00%
```

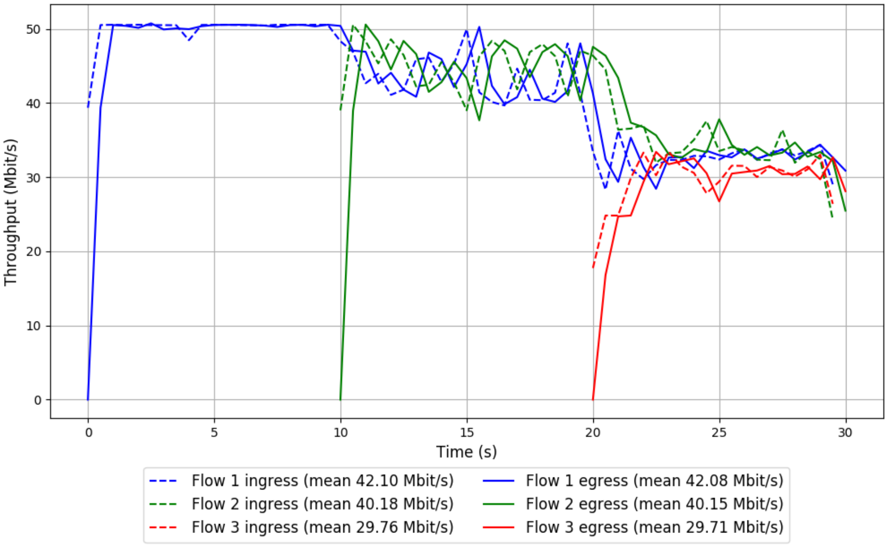
Run 8: Report of Sprout — Data Link

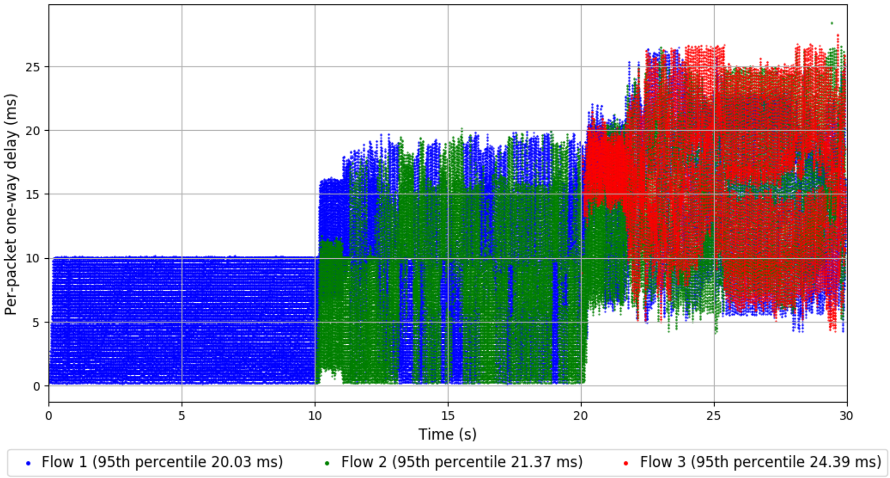




```
Run 9: Statistics of Sprout

Start at: 2018-05-22 05:47:35
End at: 2018-05-22 05:48:05
Local clock offset: -6.869 ms
Remote clock offset: -3.277 ms

# Below is generated by plot.py at 2018-05-22 06:39:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 78.62 Mbit/s
95th percentile per-packet one-way delay: 21.580 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 42.08 Mbit/s
95th percentile per-packet one-way delay: 20.033 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.15 Mbit/s
95th percentile per-packet one-way delay: 21.367 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 29.71 Mbit/s
95th percentile per-packet one-way delay: 24.393 ms
Loss rate: 0.05%
```

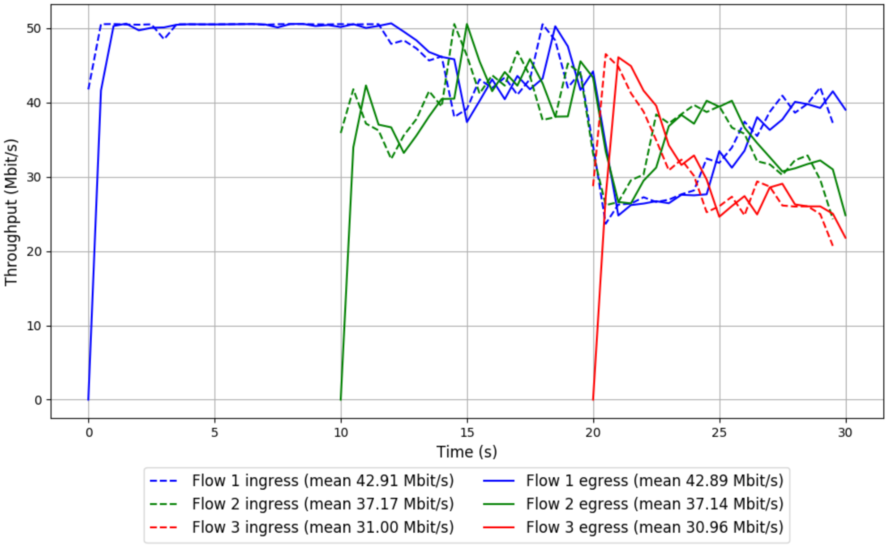
Run 9: Report of Sprout — Data Link

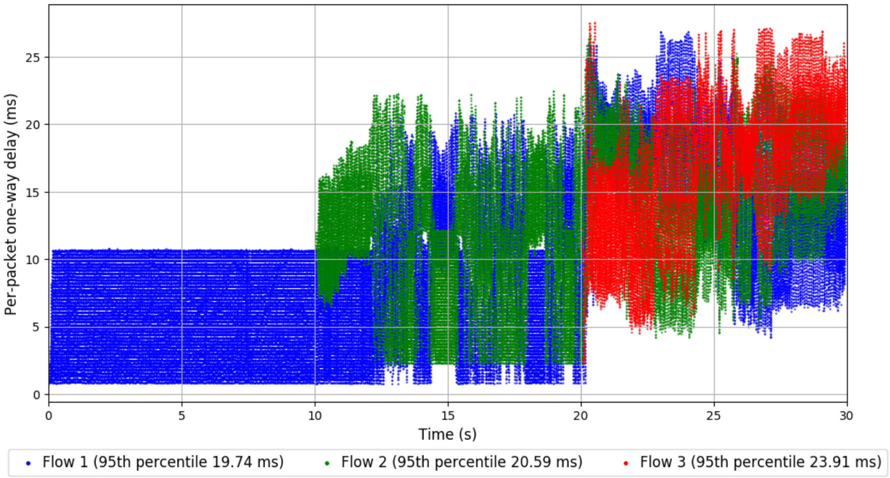




```
Run 10: Statistics of Sprout

Start at: 2018-05-22 06:05:26
End at: 2018-05-22 06:05:56
Local clock offset: -6.9 ms
Remote clock offset: -3.821 ms

# Below is generated by plot.py at 2018-05-22 06:39:09
# Datalink statistics
-- Total of 3 flows:
Average throughput: 77.83 Mbit/s
95th percentile per-packet one-way delay: 21.120 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.89 Mbit/s
95th percentile per-packet one-way delay: 19.742 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.14 Mbit/s
95th percentile per-packet one-way delay: 20.592 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.96 Mbit/s
95th percentile per-packet one-way delay: 23.910 ms
Loss rate: 0.00%
```

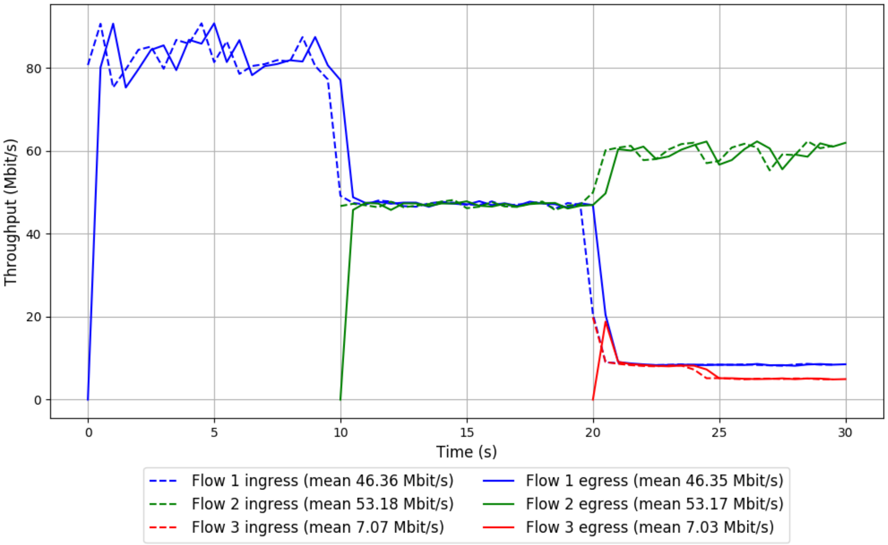
Run 10: Report of Sprout — Data Link

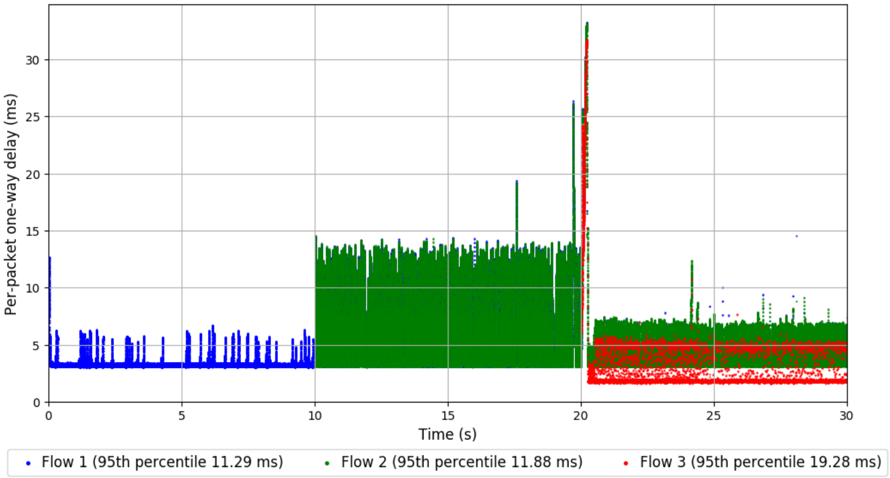




```
Run 1: Statistics of TaoVA-100x

Start at: 2018-05-22 03:23:34
End at: 2018-05-22 03:24:04
Local clock offset: -6.127 ms
Remote clock offset: -2.408 ms

# Below is generated by plot.py at 2018-05-22 06:40:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.10 Mbit/s
95th percentile per-packet one-way delay: 11.623 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 46.35 Mbit/s
95th percentile per-packet one-way delay: 11.295 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 53.17 Mbit/s
95th percentile per-packet one-way delay: 11.875 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 7.03 Mbit/s
95th percentile per-packet one-way delay: 19.276 ms
Loss rate: 0.71%
```

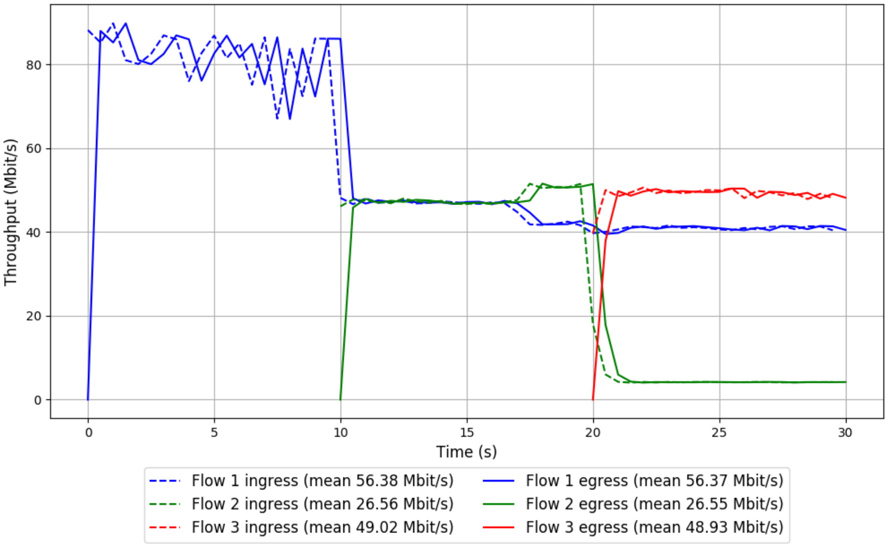
Run 1: Report of TaoVA-100x — Data Link

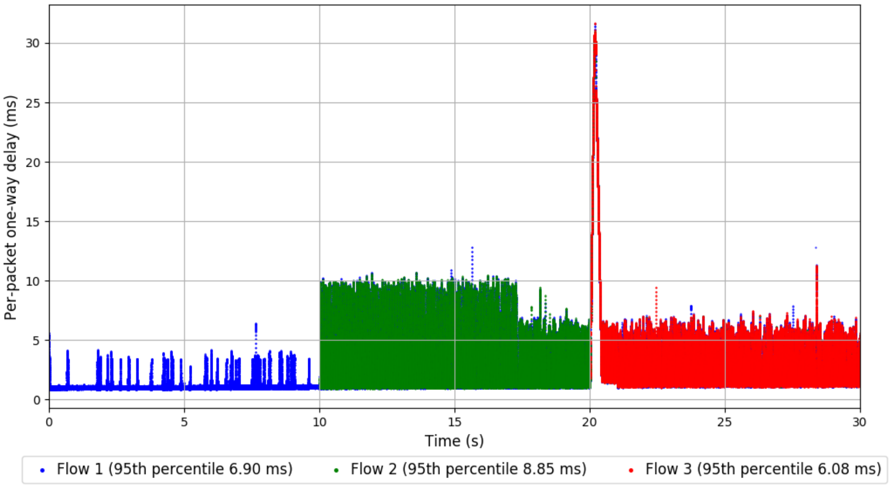




```
Run 2: Statistics of TaoVA-100x

Start at: 2018-05-22 03:41:25
End at: 2018-05-22 03:41:55
Local clock offset: -5.696 ms
Remote clock offset: -2.623 ms

# Below is generated by plot.py at 2018-05-22 06:40:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.33 Mbit/s
95th percentile per-packet one-way delay: 7.618 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 56.37 Mbit/s
95th percentile per-packet one-way delay: 6.900 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 26.55 Mbit/s
95th percentile per-packet one-way delay: 8.846 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 48.93 Mbit/s
95th percentile per-packet one-way delay: 6.081 ms
Loss rate: 0.16%
```

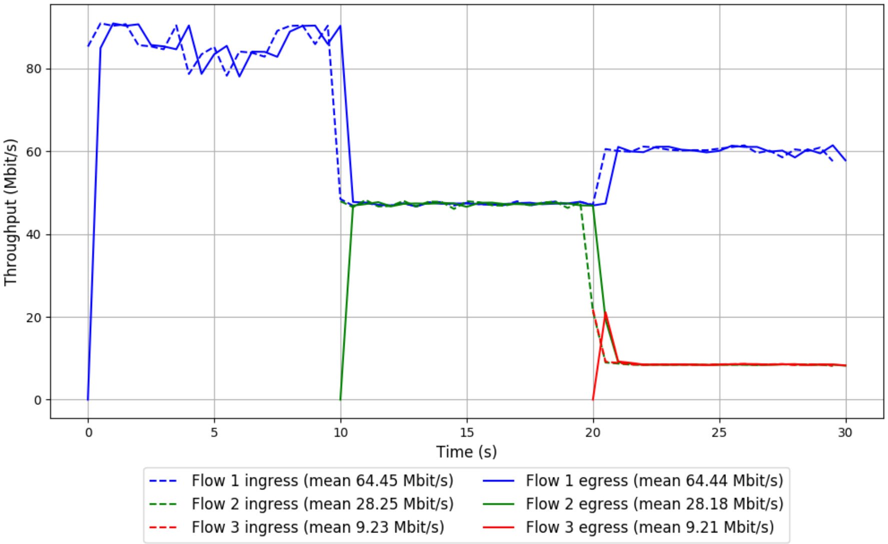
Run 2: Report of TaoVA-100x — Data Link

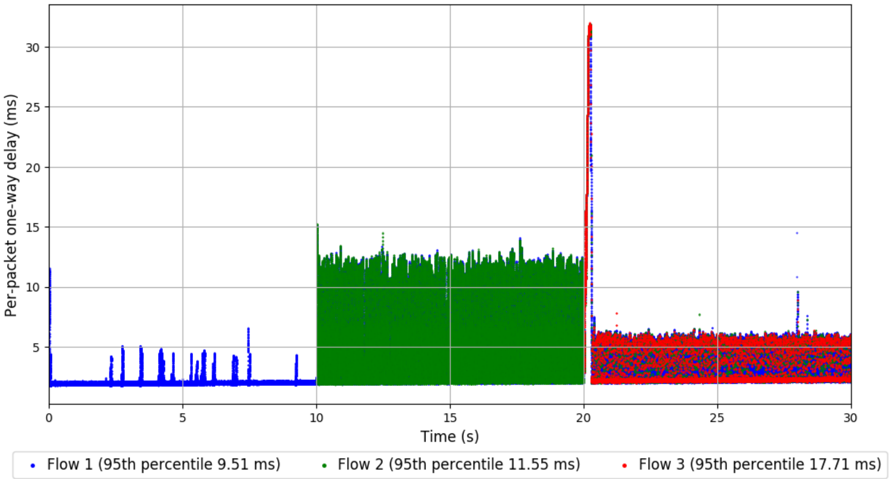




```
Run 3: Statistics of TaoVA-100x

Start at: 2018-05-22 03:59:16
End at: 2018-05-22 03:59:46
Local clock offset: -3.293 ms
Remote clock offset: -7.113 ms

# Below is generated by plot.py at 2018-05-22 06:40:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.27 Mbit/s
95th percentile per-packet one-way delay: 10.574 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 64.44 Mbit/s
95th percentile per-packet one-way delay: 9.505 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.18 Mbit/s
95th percentile per-packet one-way delay: 11.549 ms
Loss rate: 0.26%
-- Flow 3:
Average throughput: 9.21 Mbit/s
95th percentile per-packet one-way delay: 17.706 ms
Loss rate: 0.30%
```

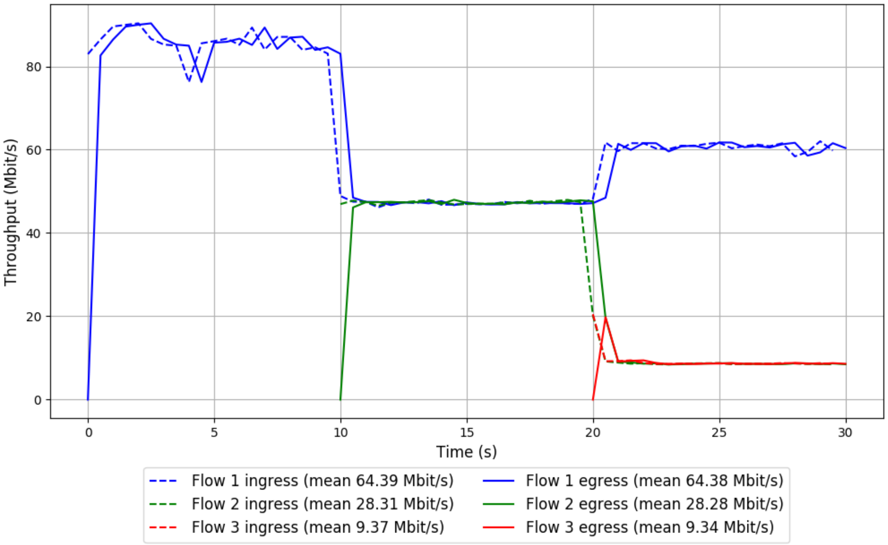
Run 3: Report of TaoVA-100x — Data Link

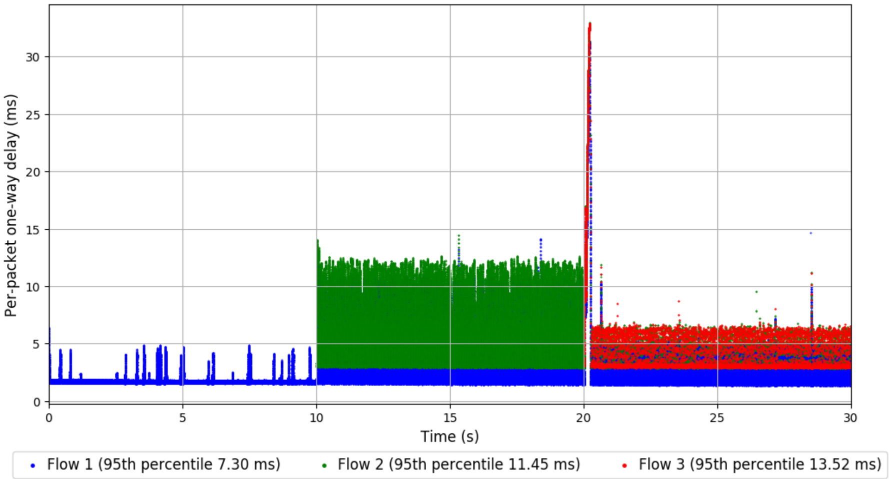




```
Run 4: Statistics of TaoVA-100x

Start at: 2018-05-22 04:17:07
End at: 2018-05-22 04:17:37
Local clock offset: 0.132 ms
Remote clock offset: -7.496 ms

# Below is generated by plot.py at 2018-05-22 06:40:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.33 Mbit/s
95th percentile per-packet one-way delay: 9.711 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 64.38 Mbit/s
95th percentile per-packet one-way delay: 7.305 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.28 Mbit/s
95th percentile per-packet one-way delay: 11.453 ms
Loss rate: 0.09%
-- Flow 3:
Average throughput: 9.34 Mbit/s
95th percentile per-packet one-way delay: 13.517 ms
Loss rate: 0.35%
```

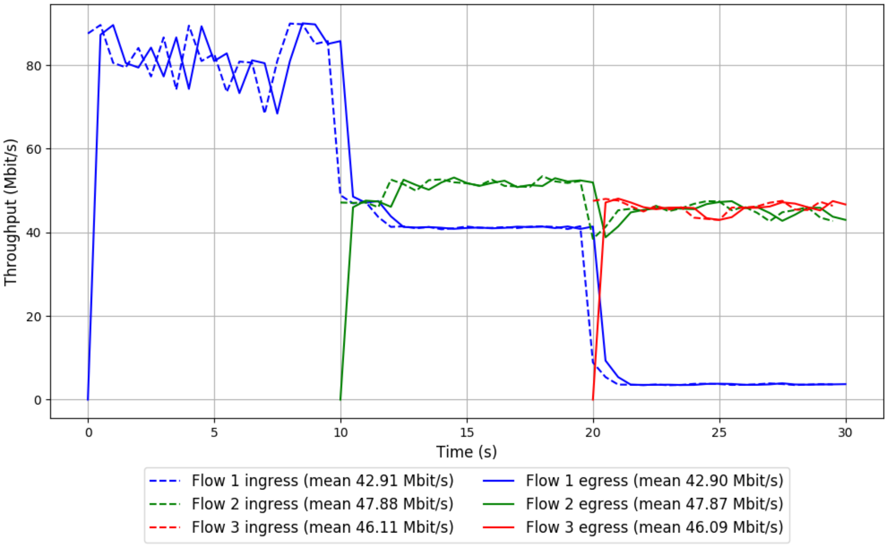
Run 4: Report of TaoVA-100x — Data Link

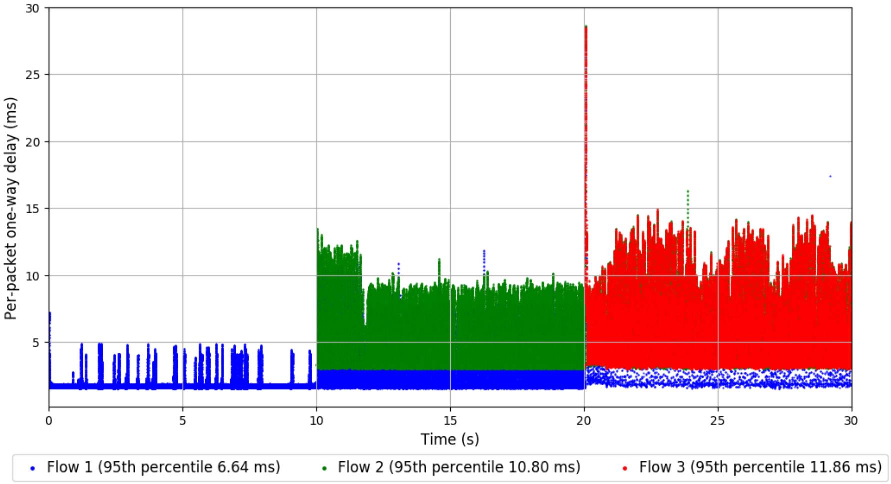




```
Run 5: Statistics of TaoVA-100x

Start at: 2018-05-22 04:34:59
End at: 2018-05-22 04:35:29
Local clock offset: 2.023 ms
Remote clock offset: -2.441 ms

# Below is generated by plot.py at 2018-05-22 06:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 90.11 Mbit/s
95th percentile per-packet one-way delay: 10.007 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 42.90 Mbit/s
95th percentile per-packet one-way delay: 6.641 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.87 Mbit/s
95th percentile per-packet one-way delay: 10.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.09 Mbit/s
95th percentile per-packet one-way delay: 11.861 ms
Loss rate: 0.00%
```

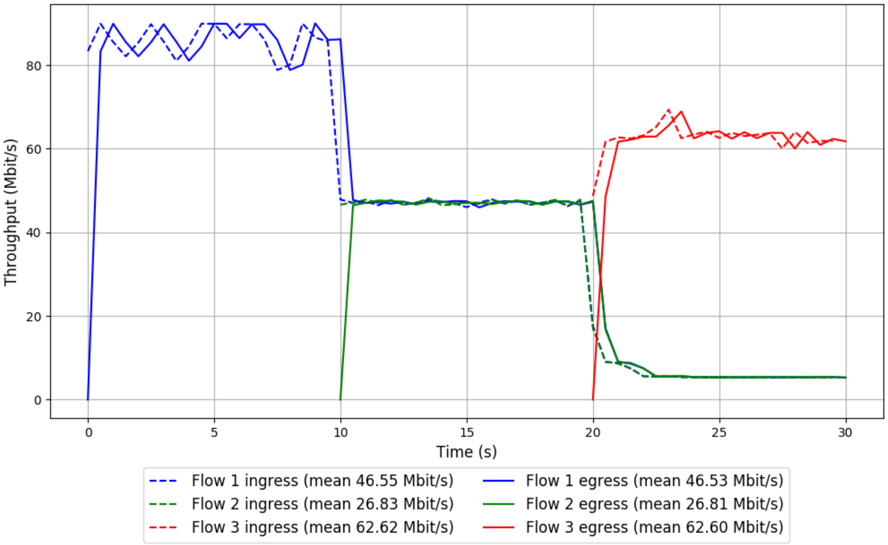
Run 5: Report of TaoVA-100x — Data Link

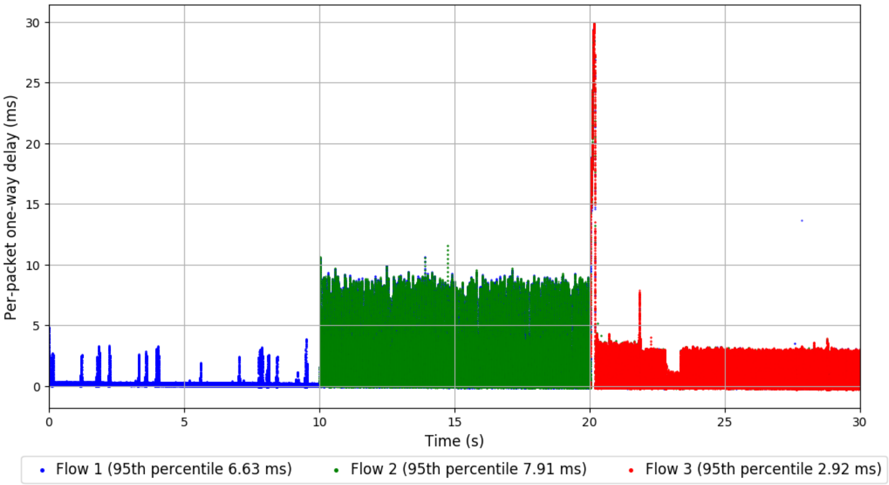




```
Run 6: Statistics of TaoVA-100x

Start at: 2018-05-22 04:52:50
End at: 2018-05-22 04:53:20
Local clock offset: 5.05 ms
Remote clock offset: 1.671 ms

# Below is generated by plot.py at 2018-05-22 06:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.20 Mbit/s
95th percentile per-packet one-way delay: 6.896 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 46.53 Mbit/s
95th percentile per-packet one-way delay: 6.629 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 26.81 Mbit/s
95th percentile per-packet one-way delay: 7.907 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 62.60 Mbit/s
95th percentile per-packet one-way delay: 2.923 ms
Loss rate: 0.01%
```

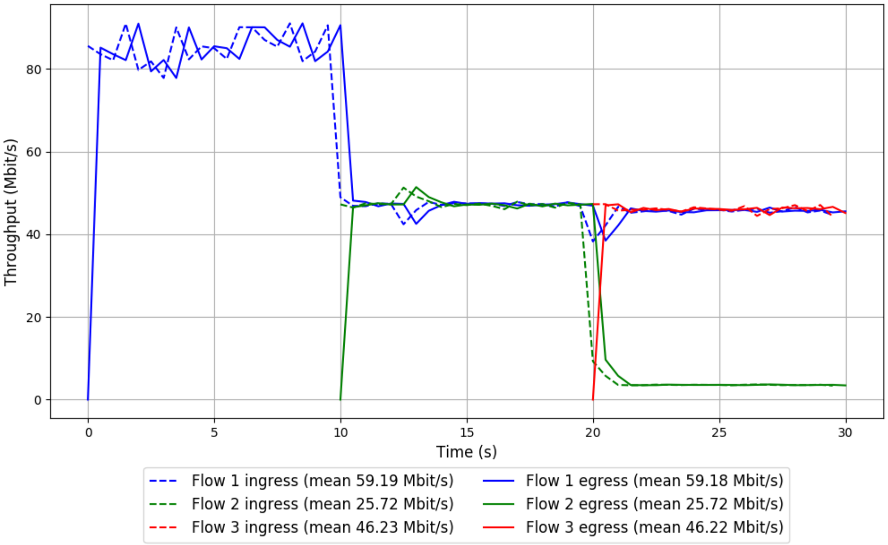
Run 6: Report of TaoVA-100x — Data Link

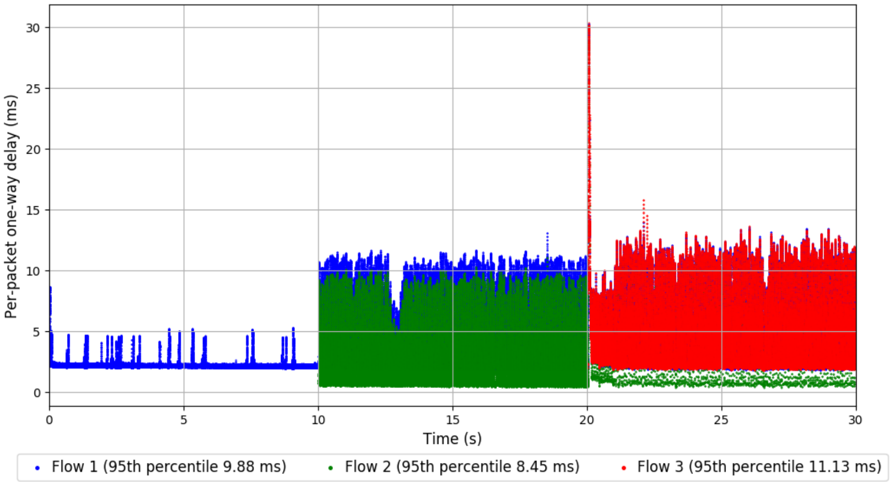




```
Run 7: Statistics of TaoVA-100x

Start at: 2018-05-22 05:10:42
End at: 2018-05-22 05:11:12
Local clock offset: -5.883 ms
Remote clock offset: 8.734 ms

# Below is generated by plot.py at 2018-05-22 06:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 91.68 Mbit/s
95th percentile per-packet one-way delay: 9.966 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.18 Mbit/s
95th percentile per-packet one-way delay: 9.883 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 25.72 Mbit/s
95th percentile per-packet one-way delay: 8.452 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 46.22 Mbit/s
95th percentile per-packet one-way delay: 11.133 ms
Loss rate: 0.00%
```

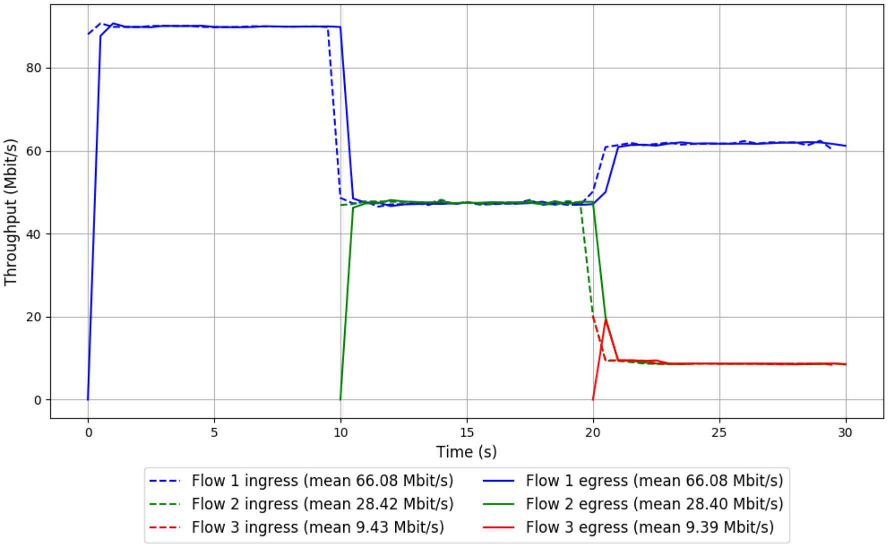
Run 7: Report of TaoVA-100x — Data Link

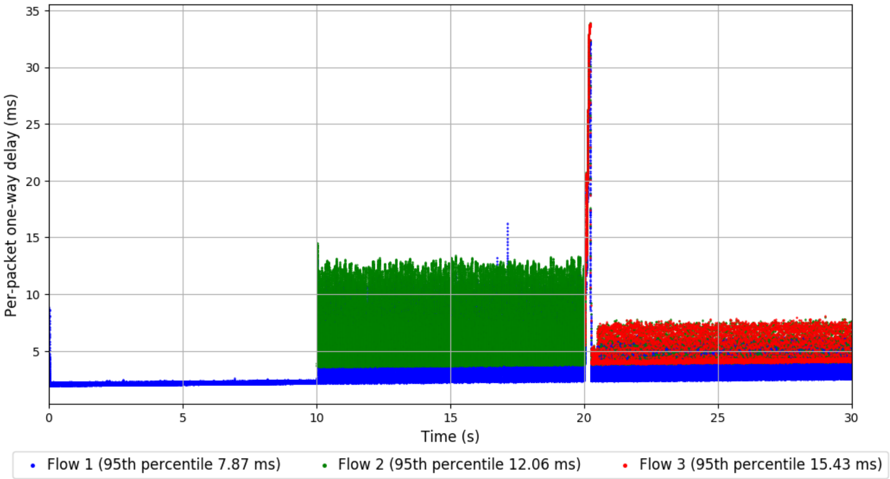




```
Run 8: Statistics of TaoVA-100x

Start at: 2018-05-22 05:28:34
End at: 2018-05-22 05:29:04
Local clock offset: -9.713 ms
Remote clock offset: 5.052 ms

# Below is generated by plot.py at 2018-05-22 06:41:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.12 Mbit/s
95th percentile per-packet one-way delay: 10.348 ms
Loss rate: 0.03%
-- Flow 1:
Average throughput: 66.08 Mbit/s
95th percentile per-packet one-way delay: 7.873 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.40 Mbit/s
95th percentile per-packet one-way delay: 12.056 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 9.39 Mbit/s
95th percentile per-packet one-way delay: 15.427 ms
Loss rate: 0.40%
```

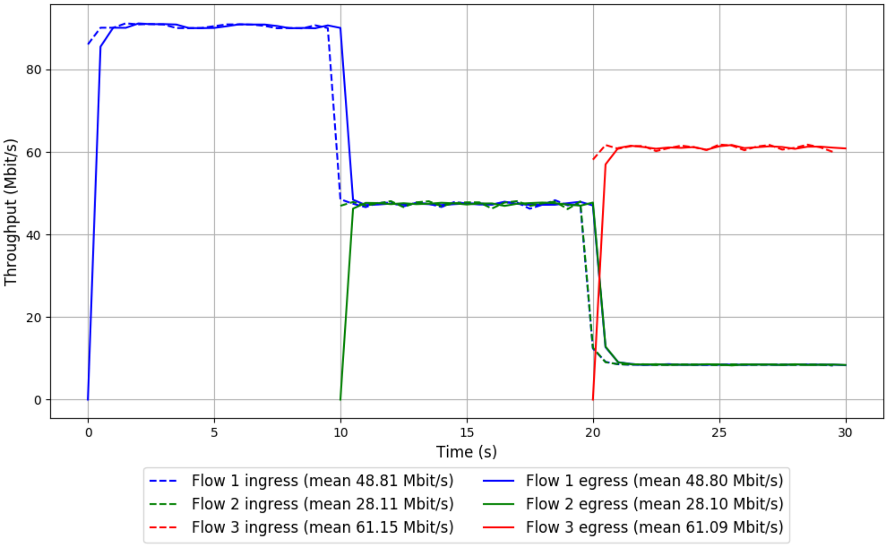
Run 8: Report of TaoVA-100x — Data Link

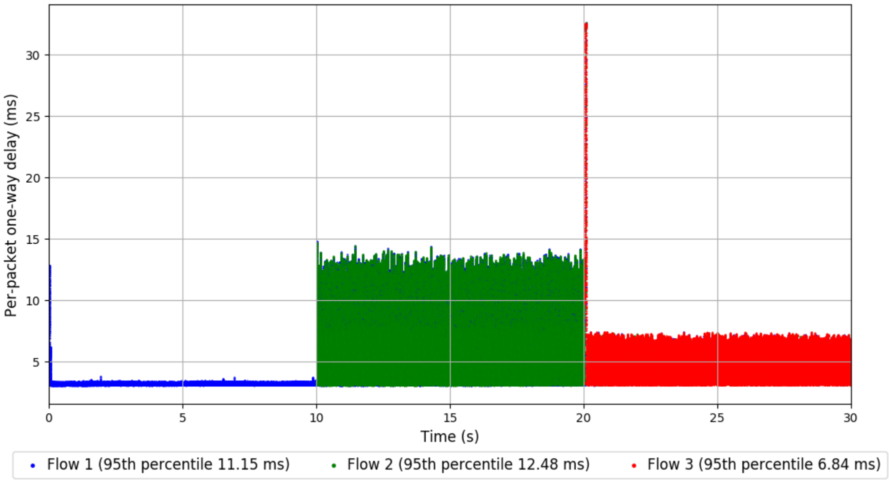




```
Run 9: Statistics of TaoVA-100x

Start at: 2018-05-22 05:46:25
End at: 2018-05-22 05:46:55
Local clock offset: -8.35 ms
Remote clock offset: -3.14 ms

# Below is generated by plot.py at 2018-05-22 06:42:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.82 Mbit/s
95th percentile per-packet one-way delay: 11.421 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 48.80 Mbit/s
95th percentile per-packet one-way delay: 11.149 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 28.10 Mbit/s
95th percentile per-packet one-way delay: 12.480 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 61.09 Mbit/s
95th percentile per-packet one-way delay: 6.843 ms
Loss rate: 0.07%
```

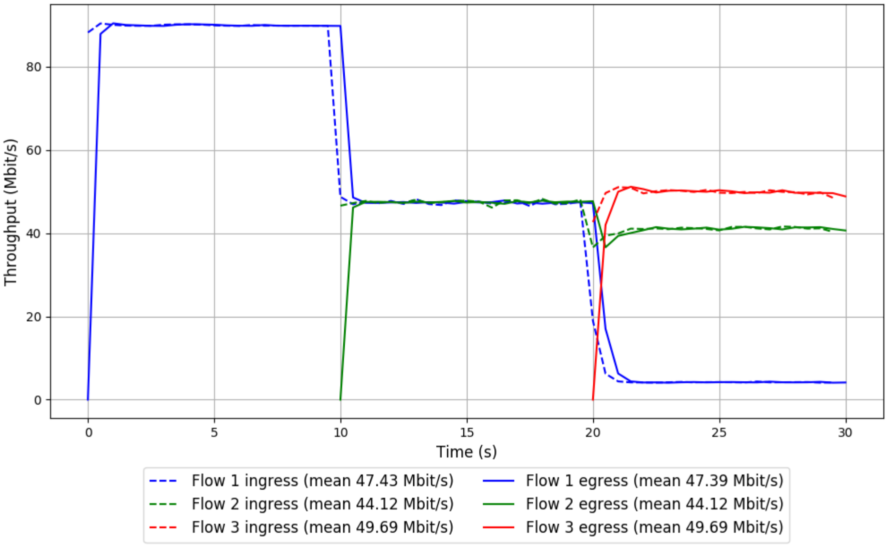
Run 9: Report of TaoVA-100x — Data Link

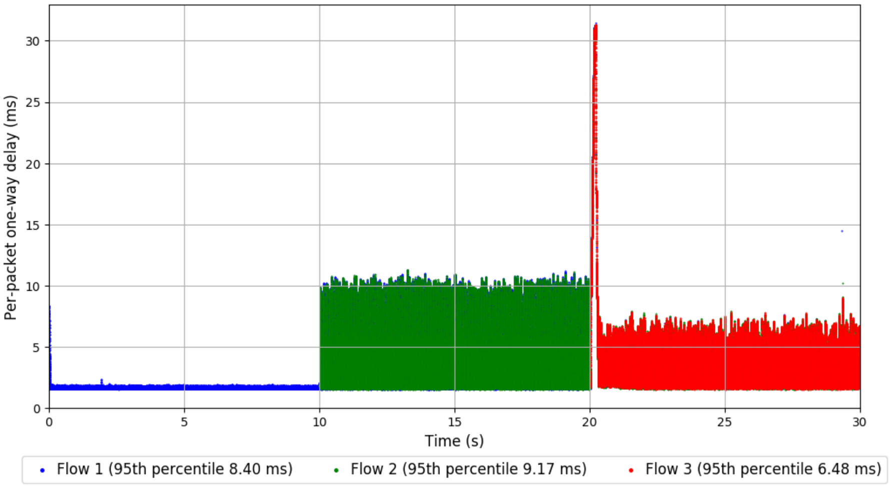




```
Run 10: Statistics of TaoVA-100x

Start at: 2018-05-22 06:04:15
End at: 2018-05-22 06:04:45
Local clock offset: -7.798 ms
Remote clock offset: -3.897 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 93.29 Mbit/s
95th percentile per-packet one-way delay: 8.571 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 47.39 Mbit/s
95th percentile per-packet one-way delay: 8.400 ms
Loss rate: 0.09%
-- Flow 2:
Average throughput: 44.12 Mbit/s
95th percentile per-packet one-way delay: 9.167 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 6.477 ms
Loss rate: 0.00%
```

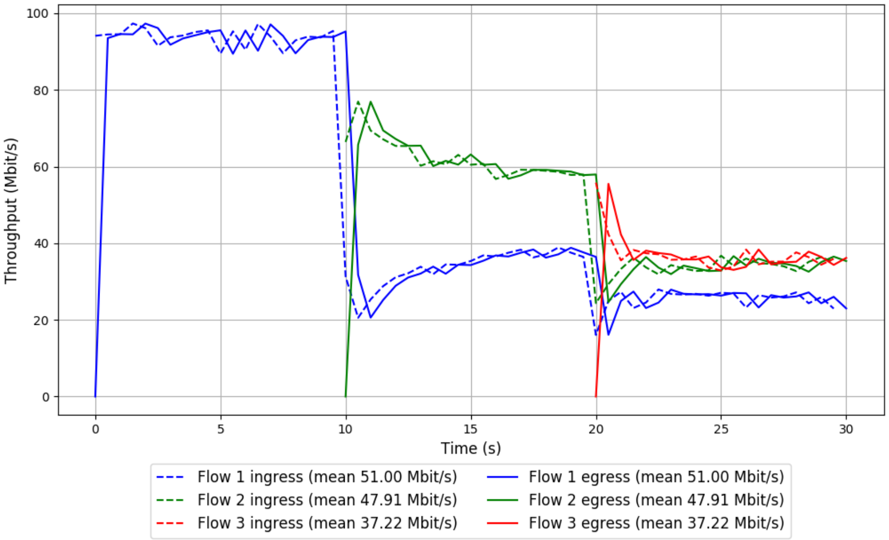
Run 10: Report of TaoVA-100x — Data Link

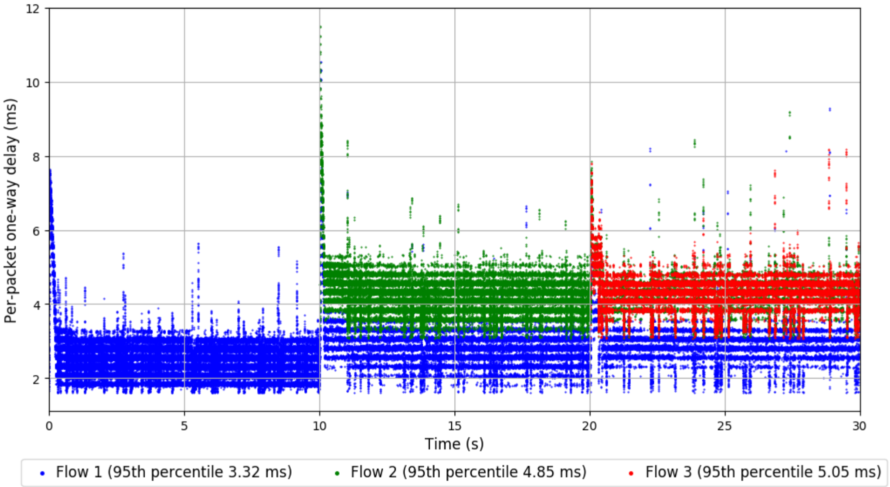




```
Run 1: Statistics of TCP Vegas

Start at: 2018-05-22 03:36:55
End at: 2018-05-22 03:37:25
Local clock offset: -6.464 ms
Remote clock offset: -2.547 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.29 Mbit/s
95th percentile per-packet one-way delay: 4.794 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.00 Mbit/s
95th percentile per-packet one-way delay: 3.319 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 47.91 Mbit/s
95th percentile per-packet one-way delay: 4.851 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.22 Mbit/s
95th percentile per-packet one-way delay: 5.051 ms
Loss rate: 0.00%
```

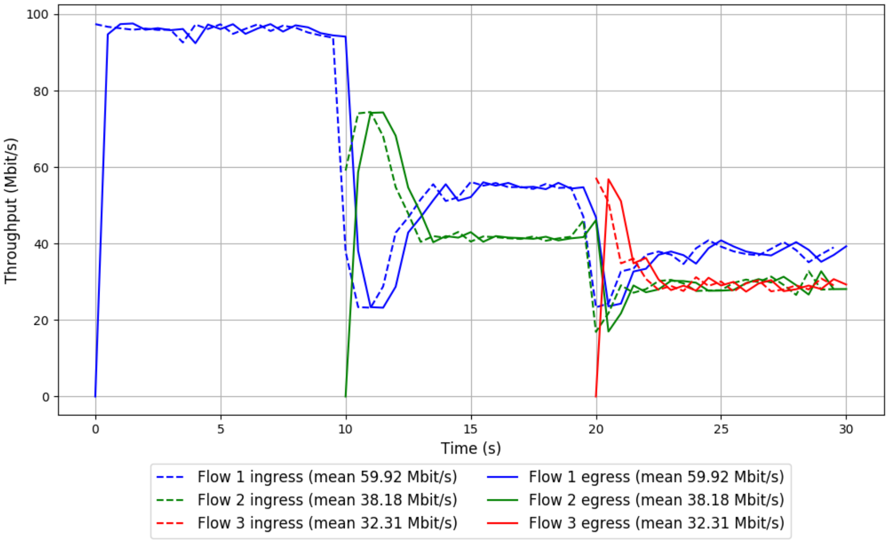
Run 1: Report of TCP Vegas — Data Link

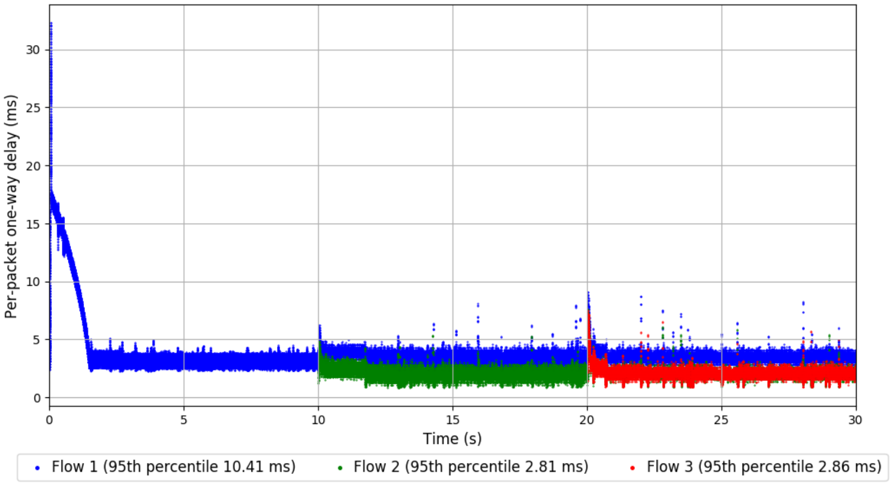




```
Run 2: Statistics of TCP Vegas

Start at: 2018-05-22 03:54:46
End at: 2018-05-22 03:55:16
Local clock offset: -5.802 ms
Remote clock offset: -6.576 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.10 Mbit/s
95th percentile per-packet one-way delay: 4.900 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.92 Mbit/s
95th percentile per-packet one-way delay: 10.413 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.18 Mbit/s
95th percentile per-packet one-way delay: 2.806 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.31 Mbit/s
95th percentile per-packet one-way delay: 2.857 ms
Loss rate: 0.00%
```

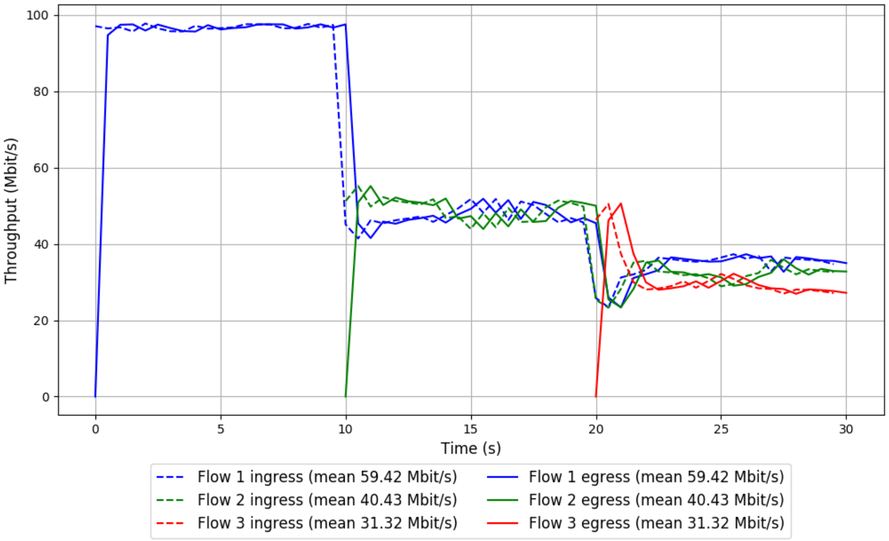
Run 2: Report of TCP Vegas — Data Link

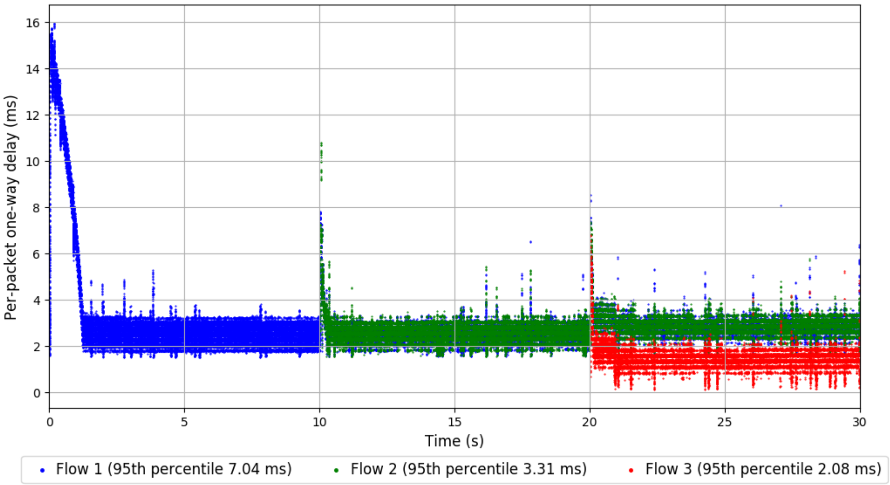




```
Run 3: Statistics of TCP Vegas

Start at: 2018-05-22 04:12:37
End at: 2018-05-22 04:13:07
Local clock offset: 0.986 ms
Remote clock offset: -8.379 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.76 Mbit/s
95th percentile per-packet one-way delay: 3.625 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.42 Mbit/s
95th percentile per-packet one-way delay: 7.041 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 40.43 Mbit/s
95th percentile per-packet one-way delay: 3.311 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 31.32 Mbit/s
95th percentile per-packet one-way delay: 2.084 ms
Loss rate: 0.00%
```

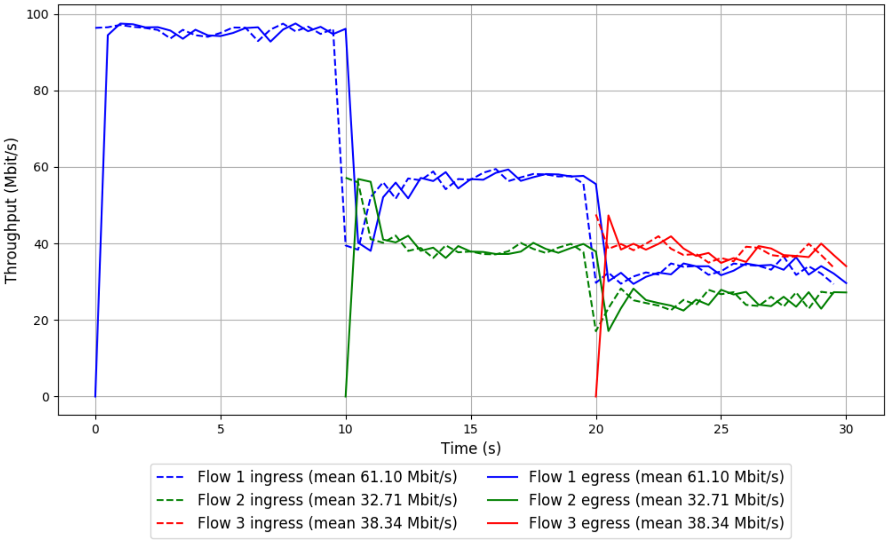
Run 3: Report of TCP Vegas — Data Link

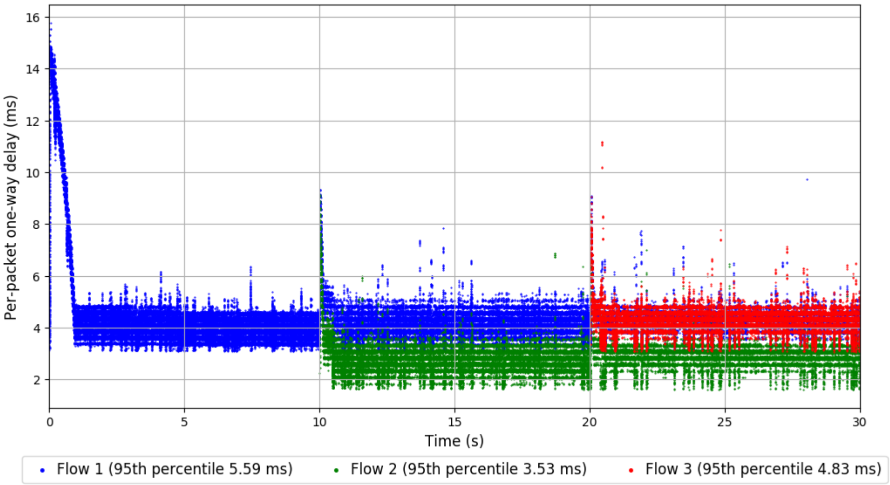




```
Run 4: Statistics of TCP Vegas

Start at: 2018-05-22 04:30:29
End at: 2018-05-22 04:30:59
Local clock offset: 1.543 ms
Remote clock offset: -3.087 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 95.63 Mbit/s
95th percentile per-packet one-way delay: 4.873 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.10 Mbit/s
95th percentile per-packet one-way delay: 5.595 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.71 Mbit/s
95th percentile per-packet one-way delay: 3.531 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.34 Mbit/s
95th percentile per-packet one-way delay: 4.832 ms
Loss rate: 0.00%
```

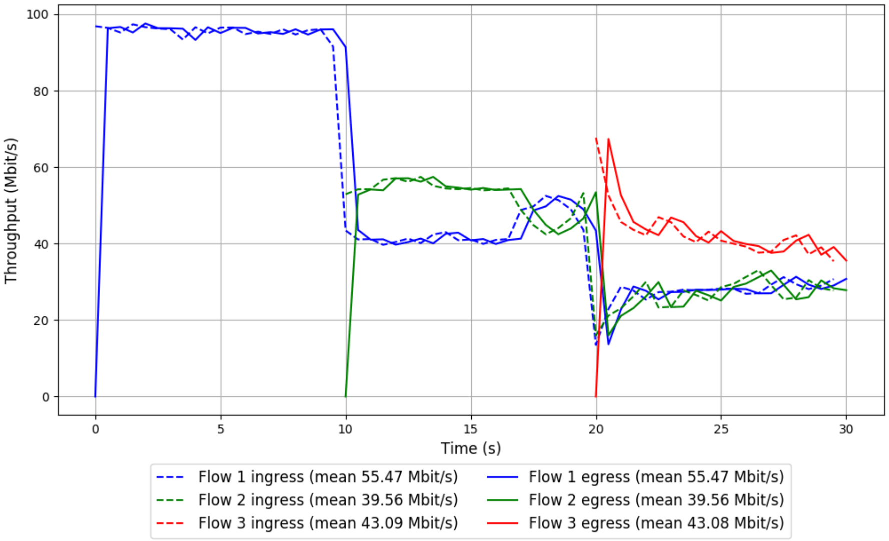
Run 4: Report of TCP Vegas — Data Link

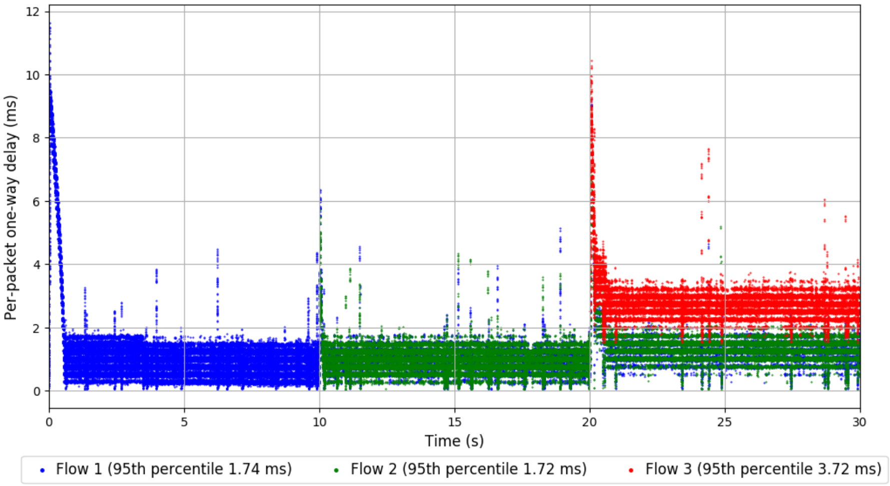




```
Run 5: Statistics of TCP Vegas

Start at: 2018-05-22 04:48:20
End at: 2018-05-22 04:48:50
Local clock offset: 4.68 ms
Remote clock offset: -1.168 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.16 Mbit/s
95th percentile per-packet one-way delay: 2.992 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 55.47 Mbit/s
95th percentile per-packet one-way delay: 1.743 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 39.56 Mbit/s
95th percentile per-packet one-way delay: 1.720 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.08 Mbit/s
95th percentile per-packet one-way delay: 3.722 ms
Loss rate: 0.00%
```

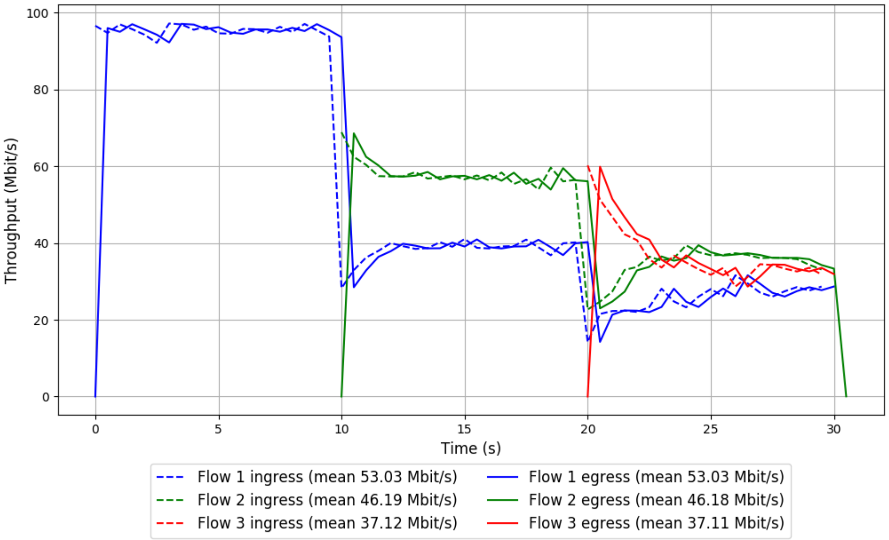
Run 5: Report of TCP Vegas — Data Link

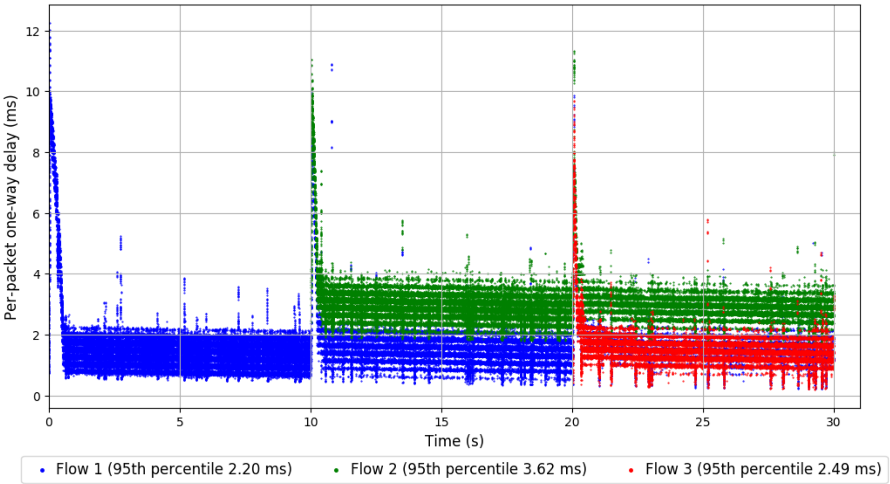




```
Run 6: Statistics of TCP Vegas

Start at: 2018-05-22 05:06:12
End at: 2018-05-22 05:06:42
Local clock offset: -3.958 ms
Remote clock offset: 7.583 ms

# Below is generated by plot.py at 2018-05-22 06:42:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.12 Mbit/s
95th percentile per-packet one-way delay: 3.430 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 53.03 Mbit/s
95th percentile per-packet one-way delay: 2.201 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.18 Mbit/s
95th percentile per-packet one-way delay: 3.615 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 37.11 Mbit/s
95th percentile per-packet one-way delay: 2.490 ms
Loss rate: 0.00%
```

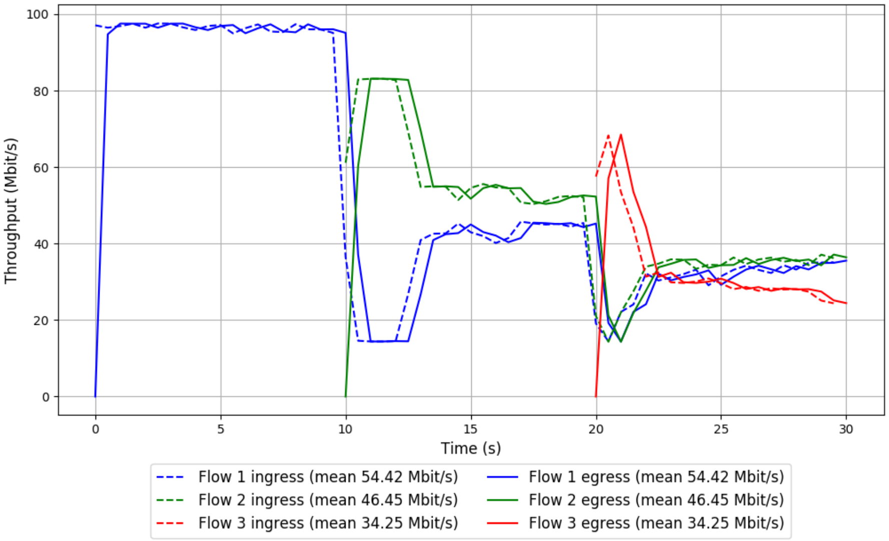
Run 6: Report of TCP Vegas — Data Link

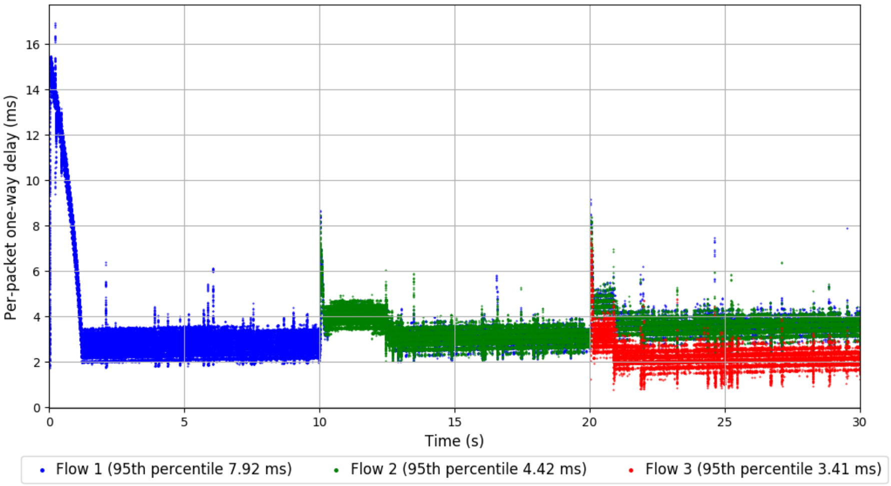




```
Run 7: Statistics of TCP Vegas

Start at: 2018-05-22 05:24:03
End at: 2018-05-22 05:24:33
Local clock offset: -8.381 ms
Remote clock offset: 10.983 ms

# Below is generated by plot.py at 2018-05-22 06:42:46
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.75 Mbit/s
95th percentile per-packet one-way delay: 4.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 54.42 Mbit/s
95th percentile per-packet one-way delay: 7.921 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.45 Mbit/s
95th percentile per-packet one-way delay: 4.421 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 3.409 ms
Loss rate: 0.00%
```

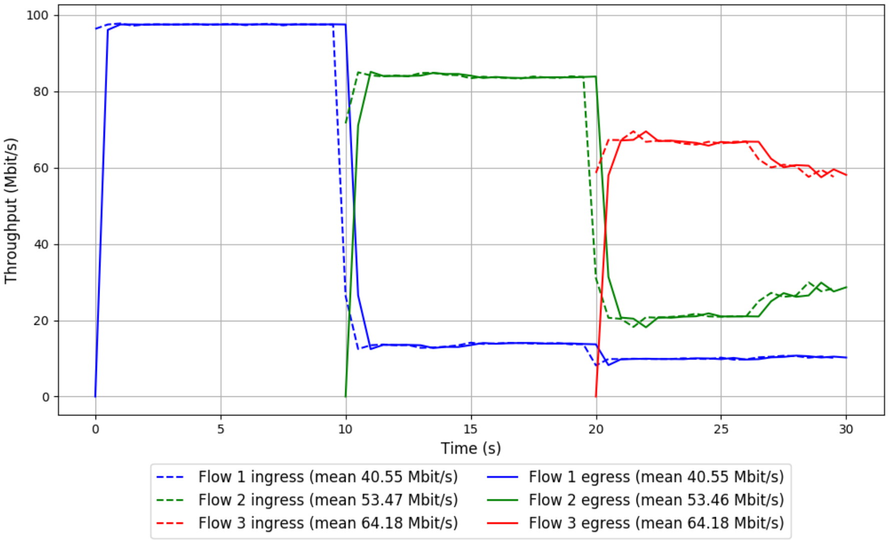
Run 7: Report of TCP Vegas — Data Link

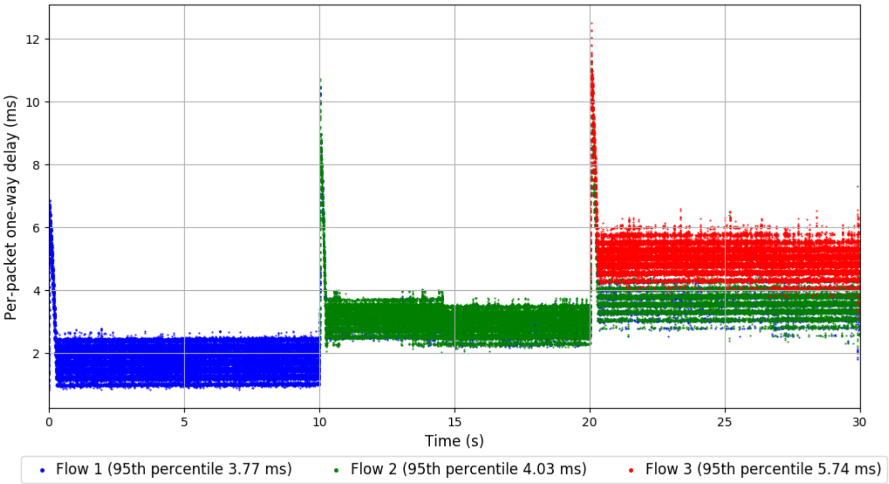




```
Run 8: Statistics of TCP Vegas

Start at: 2018-05-22 05:41:54
End at: 2018-05-22 05:42:24
Local clock offset: -7.531 ms
Remote clock offset: -2.292 ms

# Below is generated by plot.py at 2018-05-22 06:43:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 5.320 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 40.55 Mbit/s
95th percentile per-packet one-way delay: 3.773 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 53.46 Mbit/s
95th percentile per-packet one-way delay: 4.028 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.18 Mbit/s
95th percentile per-packet one-way delay: 5.737 ms
Loss rate: 0.00%
```

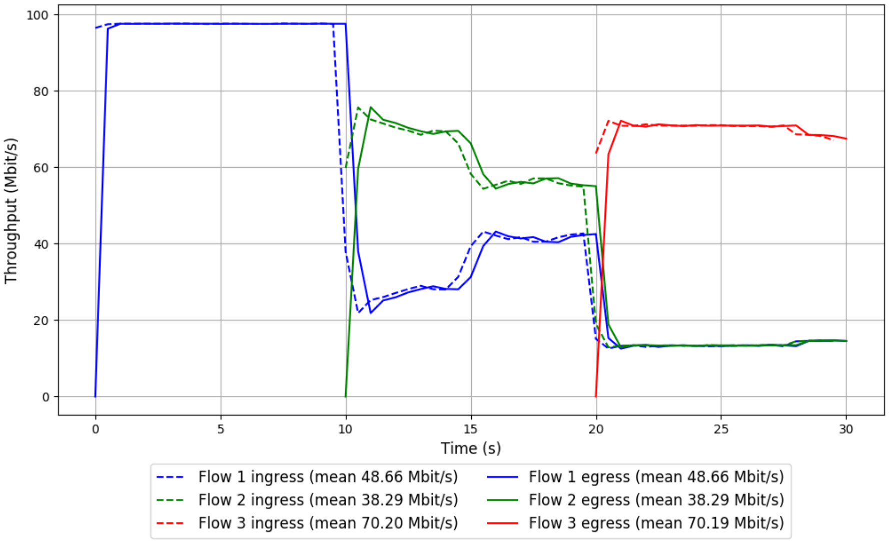
Run 8: Report of TCP Vegas — Data Link

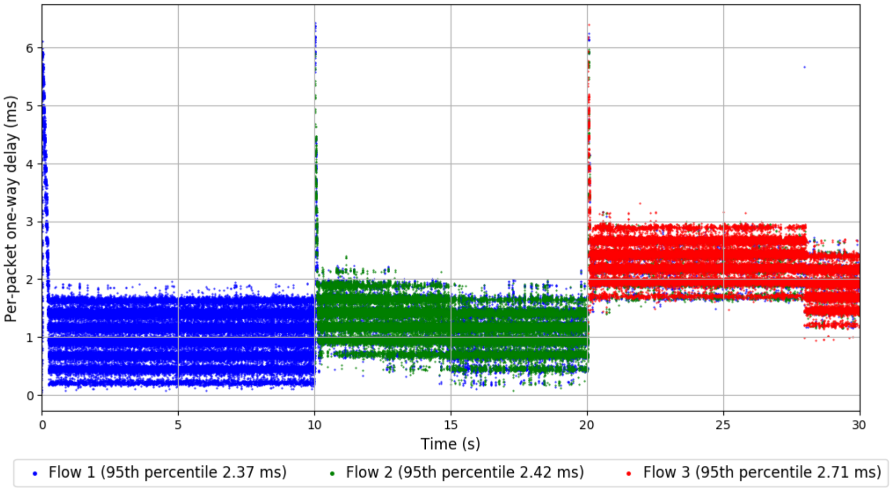




```
Run 9: Statistics of TCP Vegas

Start at: 2018-05-22 05:59:45
End at: 2018-05-22 06:00:15
Local clock offset: -6.673 ms
Remote clock offset: -4.293 ms

# Below is generated by plot.py at 2018-05-22 06:43:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 97.50 Mbit/s
95th percentile per-packet one-way delay: 2.659 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.66 Mbit/s
95th percentile per-packet one-way delay: 2.367 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 38.29 Mbit/s
95th percentile per-packet one-way delay: 2.420 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 70.19 Mbit/s
95th percentile per-packet one-way delay: 2.714 ms
Loss rate: 0.00%
```

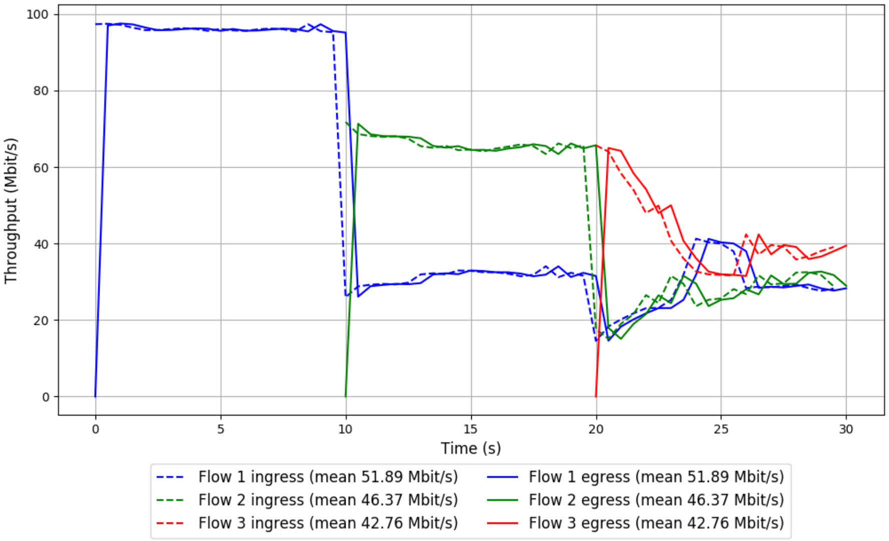
Run 9: Report of TCP Vegas — Data Link

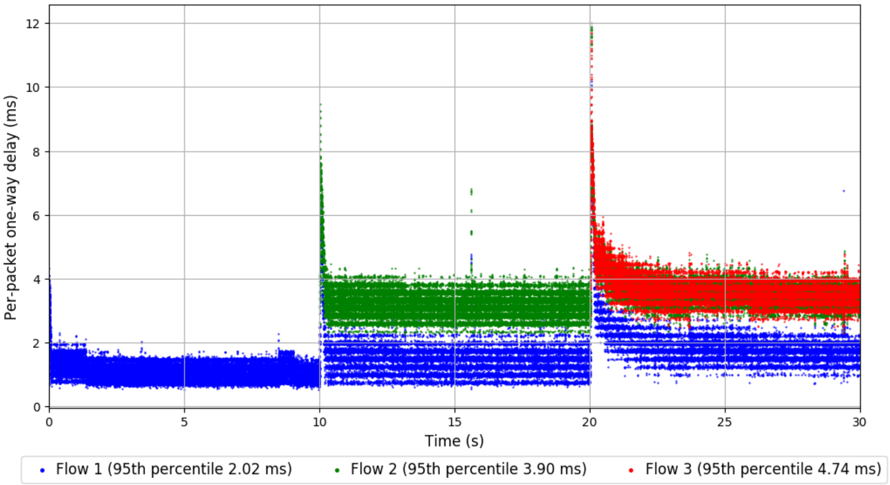




```
Run 10: Statistics of TCP Vegas

Start at: 2018-05-22 06:21:51
End at: 2018-05-22 06:22:21
Local clock offset: -6.828 ms
Remote clock offset: -3.577 ms

# Below is generated by plot.py at 2018-05-22 06:43:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 96.99 Mbit/s
95th percentile per-packet one-way delay: 3.971 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 51.89 Mbit/s
95th percentile per-packet one-way delay: 2.018 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 46.37 Mbit/s
95th percentile per-packet one-way delay: 3.904 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 42.76 Mbit/s
95th percentile per-packet one-way delay: 4.739 ms
Loss rate: 0.00%
```

Run 10: Report of TCP Vegas — Data Link





```
Run 1: Statistics of Verus

Start at: 2018-05-22 03:32:27
End at: 2018-05-22 03:32:57
Local clock offset: -4.779 ms
Remote clock offset: -2.539 ms
```

Run 1: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 2: Statistics of Verus

Start at: 2018-05-22 03:50:19
End at: 2018-05-22 03:50:49
Local clock offset: -5.738 ms
Remote clock offset: -5.622 ms
```

Run 2: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 3: Statistics of Verus

Start at: 2018-05-22 04:08:10
End at: 2018-05-22 04:08:40
Local clock offset: -1.544 ms
Remote clock offset: -8.033 ms
```

Run 3: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 4: Statistics of Verus

Start at: 2018-05-22 04:26:01
End at: 2018-05-22 04:26:31
Local clock offset: 1.927 ms
Remote clock offset: -4.034 ms
```

Run 4: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 5: Statistics of Verus

Start at: 2018-05-22 04:43:53
End at: 2018-05-22 04:44:23
Local clock offset: 3.535 ms
Remote clock offset: -1.567 ms
```

Run 5: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 6: Statistics of Verus

Start at: 2018-05-22 05:01:44
End at: 2018-05-22 05:02:14
Local clock offset: -1.737 ms
Remote clock offset: 6.157 ms
```

Run 6: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 7: Statistics of Verus

Start at: 2018-05-22 05:19:36
End at: 2018-05-22 05:20:06
Local clock offset: -7.535 ms
Remote clock offset: 10.458 ms
```

Run 7: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 8: Statistics of Verus

Start at: 2018-05-22 05:37:27
End at: 2018-05-22 05:37:57
Local clock offset: -7.727 ms
Remote clock offset: -0.791 ms
```

Run 8: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 9: Statistics of Verus

Start at: 2018-05-22 05:55:18
End at: 2018-05-22 05:55:48
Local clock offset: -7.202 ms
Remote clock offset: -4.34 ms
```

Run 9: Report of Verus — Data Link

Figure is missing

Figure is missing

```
Run 10: Statistics of Verus

Start at: 2018-05-22 06:13:09
End at: 2018-05-22 06:13:39
Local clock offset: -6.72 ms
Remote clock offset: -3.576 ms
```

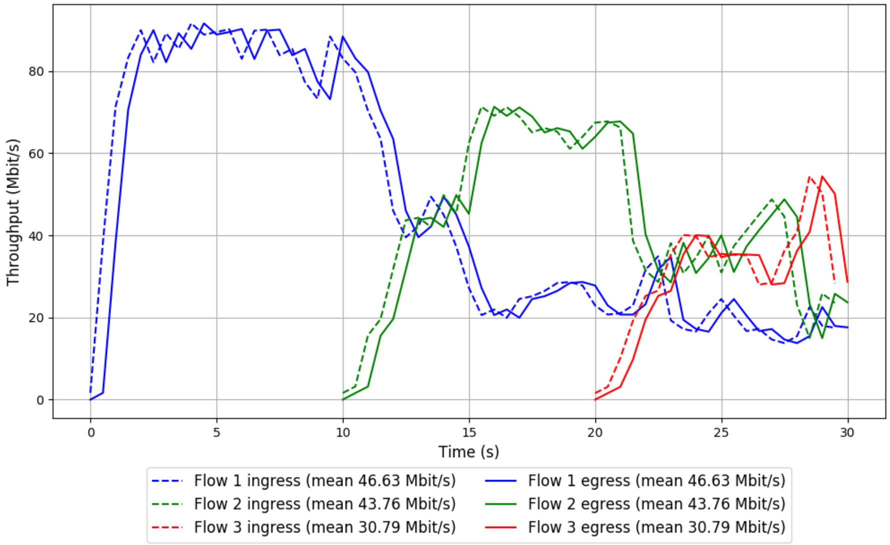
Run 10: Report of Verus — Data Link

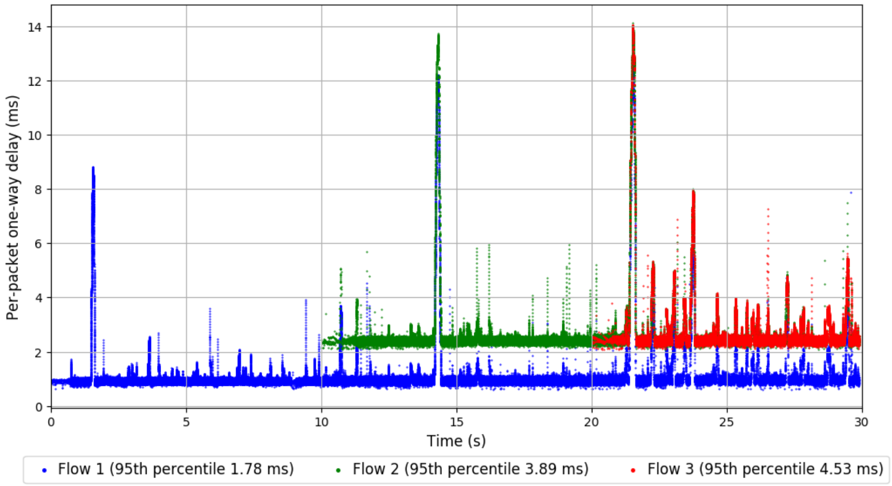
Figure is missing

Figure is missing

```
Run 1: Statistics of PCC-Vivace

Start at: 2018-05-22 03:34:39
End at: 2018-05-22 03:35:09
Local clock offset: -5.6 ms
Remote clock offset: -2.579 ms

# Below is generated by plot.py at 2018-05-22 06:43:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 85.90 Mbit/s
95th percentile per-packet one-way delay: 3.374 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.63 Mbit/s
95th percentile per-packet one-way delay: 1.782 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 43.76 Mbit/s
95th percentile per-packet one-way delay: 3.893 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 30.79 Mbit/s
95th percentile per-packet one-way delay: 4.533 ms
Loss rate: 0.00%
```

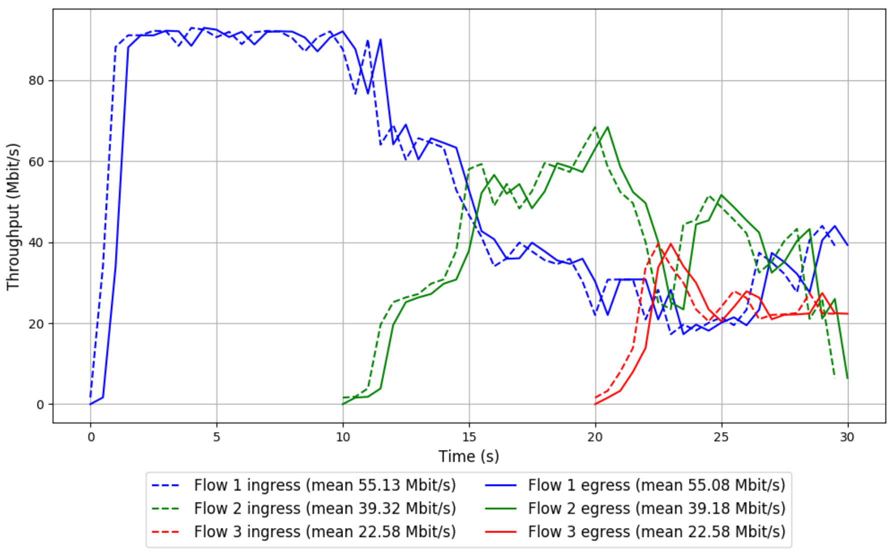
Run 1: Report of PCC-Vivace — Data Link

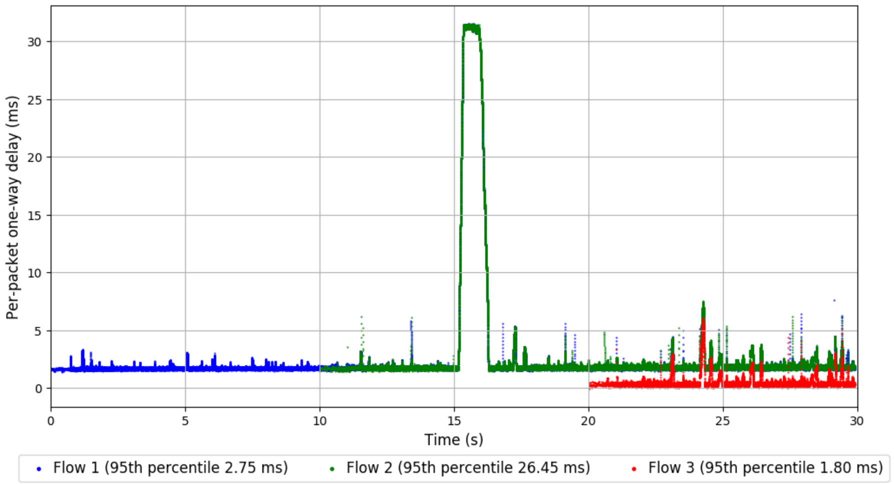




```
Run 2: Statistics of PCC-Vivace

Start at: 2018-05-22 03:52:30
End at: 2018-05-22 03:53:00
Local clock offset: -4.972 ms
Remote clock offset: -6.129 ms

# Below is generated by plot.py at 2018-05-22 06:43:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 3.707 ms
Loss rate: 0.16%
-- Flow 1:
Average throughput: 55.08 Mbit/s
95th percentile per-packet one-way delay: 2.748 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 39.18 Mbit/s
95th percentile per-packet one-way delay: 26.450 ms
Loss rate: 0.36%
-- Flow 3:
Average throughput: 22.58 Mbit/s
95th percentile per-packet one-way delay: 1.798 ms
Loss rate: 0.00%
```

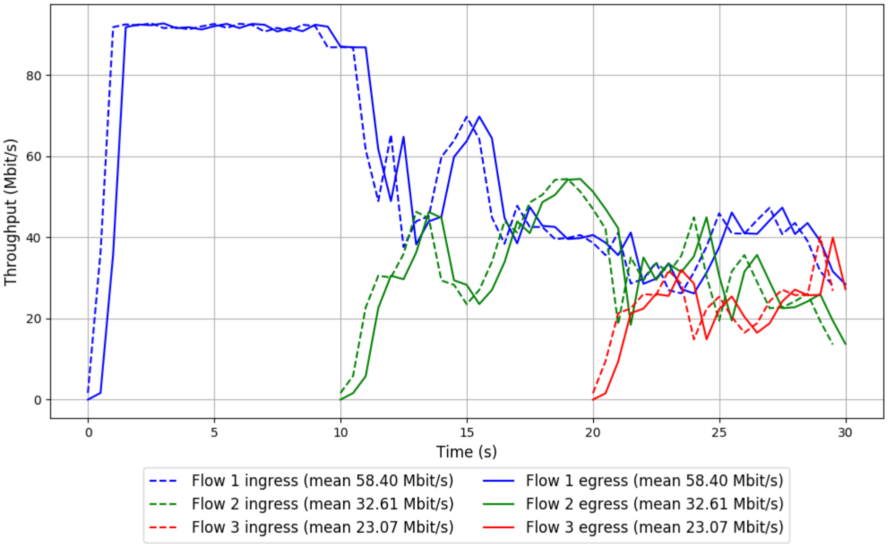
Run 2: Report of PCC-Vivace — Data Link

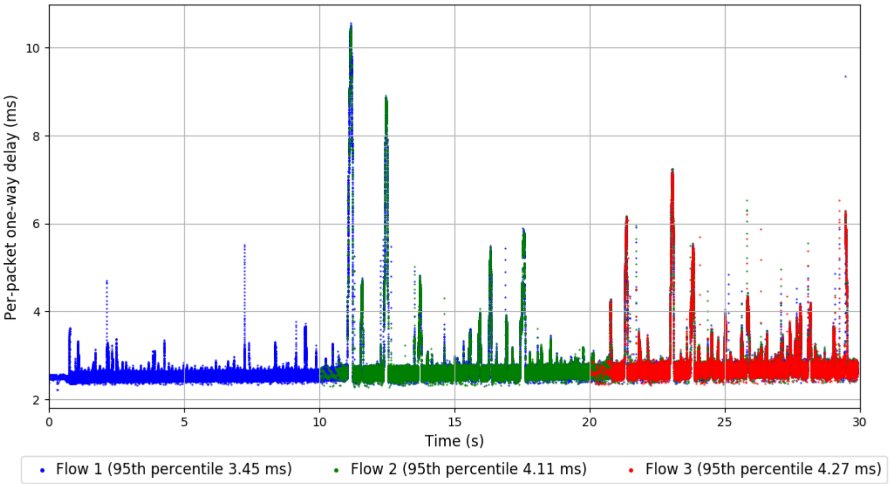




```
Run 3: Statistics of PCC-Vivace

Start at: 2018-05-22 04:10:21
End at: 2018-05-22 04:10:51
Local clock offset: -0.244 ms
Remote clock offset: -8.172 ms

# Below is generated by plot.py at 2018-05-22 06:43:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.70 Mbit/s
95th percentile per-packet one-way delay: 3.728 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 58.40 Mbit/s
95th percentile per-packet one-way delay: 3.449 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.61 Mbit/s
95th percentile per-packet one-way delay: 4.107 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 23.07 Mbit/s
95th percentile per-packet one-way delay: 4.268 ms
Loss rate: 0.00%
```

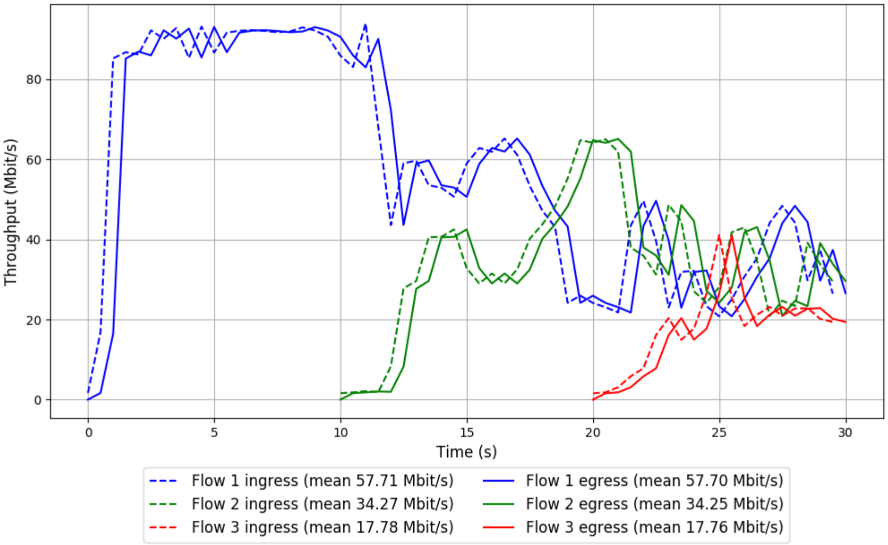
Run 3: Report of PCC-Vivace — Data Link

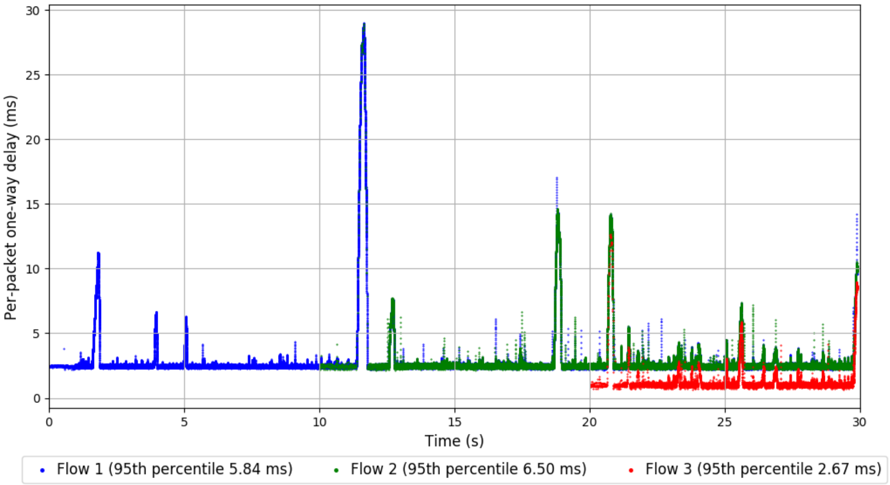




```
Run 4: Statistics of PCC-Vivace

Start at: 2018-05-22 04:28:12
End at: 2018-05-22 04:28:42
Local clock offset: 2.149 ms
Remote clock offset: -3.504 ms

# Below is generated by plot.py at 2018-05-22 06:43:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.34 Mbit/s
95th percentile per-packet one-way delay: 5.724 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.70 Mbit/s
95th percentile per-packet one-way delay: 5.839 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 34.25 Mbit/s
95th percentile per-packet one-way delay: 6.498 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 17.76 Mbit/s
95th percentile per-packet one-way delay: 2.665 ms
Loss rate: 0.00%
```

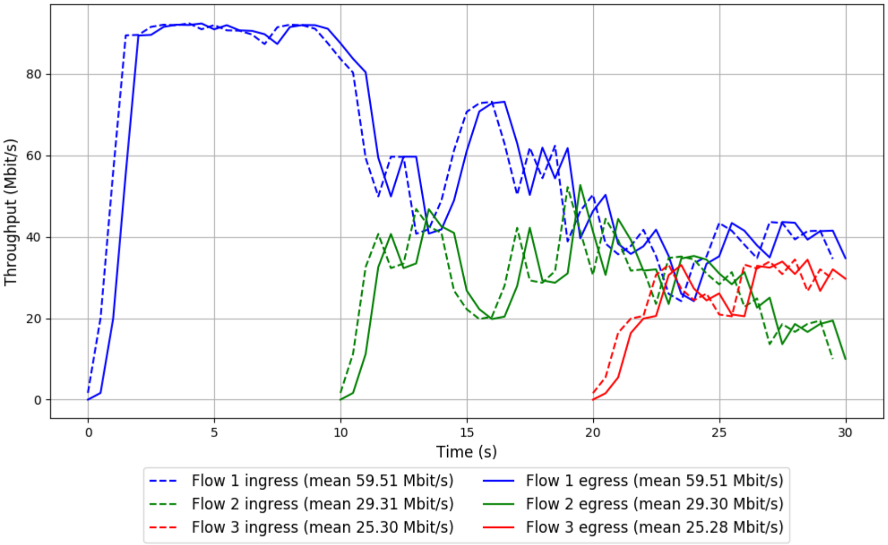
Run 4: Report of PCC-Vivace — Data Link

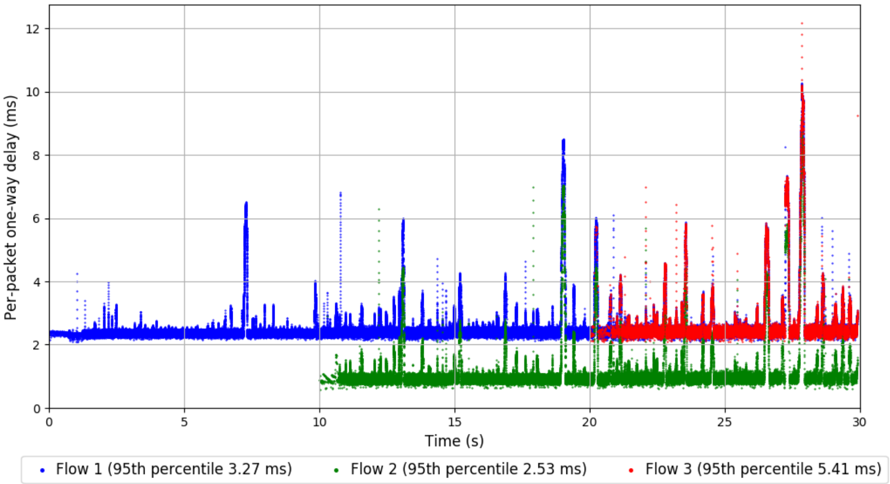




```
Run 5: Statistics of PCC-Vivace

Start at: 2018-05-22 04:46:04
End at: 2018-05-22 04:46:34
Local clock offset: 3.736 ms
Remote clock offset: -1.41 ms

# Below is generated by plot.py at 2018-05-22 06:44:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 87.33 Mbit/s
95th percentile per-packet one-way delay: 3.386 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 59.51 Mbit/s
95th percentile per-packet one-way delay: 3.265 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 29.30 Mbit/s
95th percentile per-packet one-way delay: 2.531 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 25.28 Mbit/s
95th percentile per-packet one-way delay: 5.409 ms
Loss rate: 0.00%
```

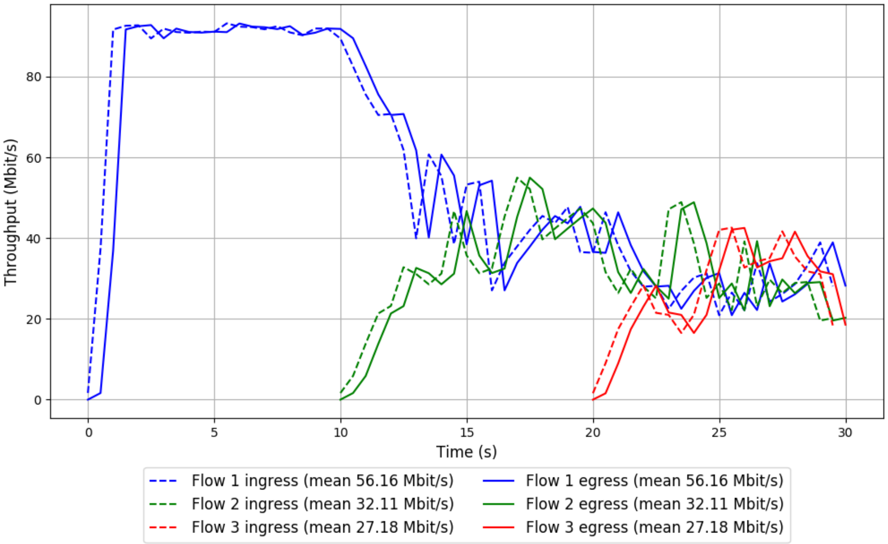
Run 5: Report of PCC-Vivace — Data Link

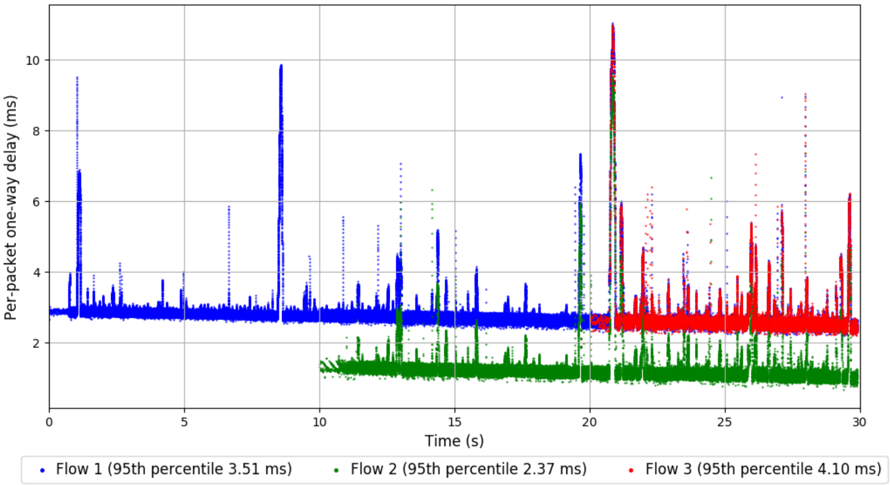




```
Run 6: Statistics of PCC-Vivace

Start at: 2018-05-22 05:03:55
End at: 2018-05-22 05:04:25
Local clock offset: -3.339 ms
Remote clock offset: 6.926 ms

# Below is generated by plot.py at 2018-05-22 06:44:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.50 Mbit/s
95th percentile per-packet one-way delay: 3.419 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 56.16 Mbit/s
95th percentile per-packet one-way delay: 3.513 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 32.11 Mbit/s
95th percentile per-packet one-way delay: 2.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.18 Mbit/s
95th percentile per-packet one-way delay: 4.104 ms
Loss rate: 0.00%
```

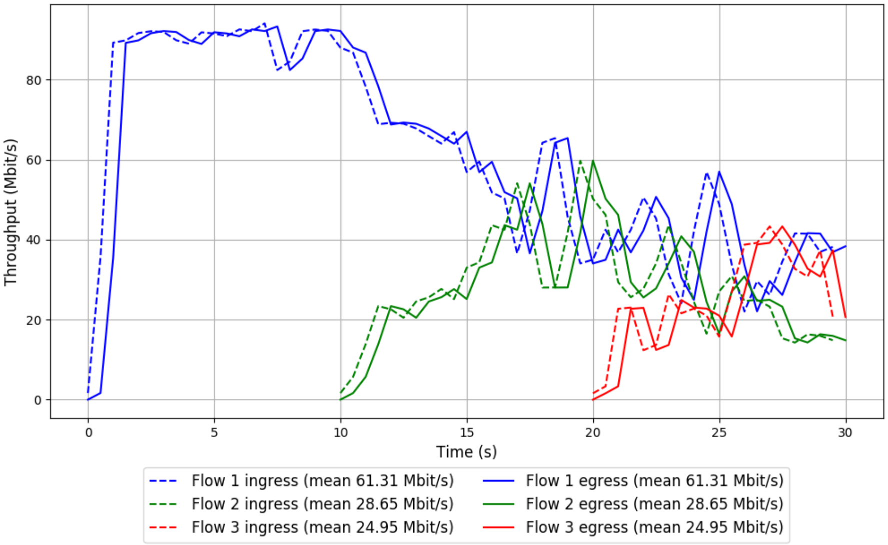
Run 6: Report of PCC-Vivace — Data Link

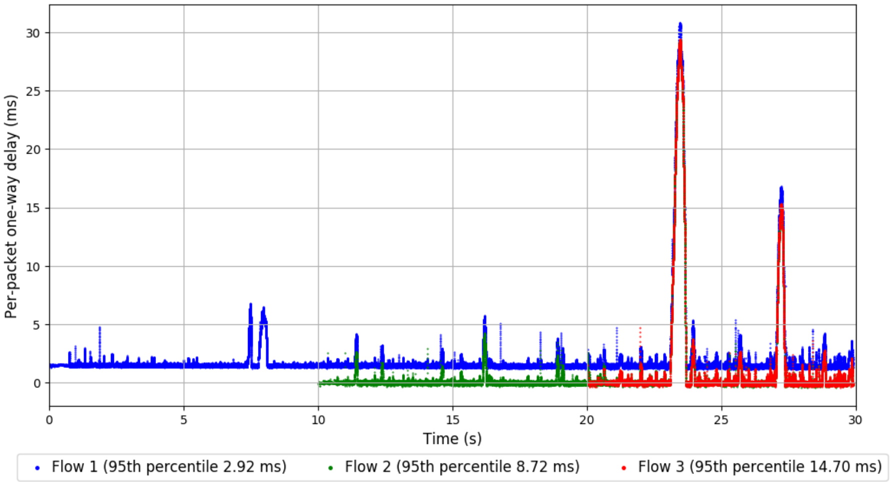




```
Run 7: Statistics of PCC-Vivace

Start at: 2018-05-22 05:21:47
End at: 2018-05-22 05:22:17
Local clock offset: -7.945 ms
Remote clock offset: 10.97 ms

# Below is generated by plot.py at 2018-05-22 06:44:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.61 Mbit/s
95th percentile per-packet one-way delay: 3.609 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.31 Mbit/s
95th percentile per-packet one-way delay: 2.917 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 28.65 Mbit/s
95th percentile per-packet one-way delay: 8.716 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 24.95 Mbit/s
95th percentile per-packet one-way delay: 14.703 ms
Loss rate: 0.00%
```

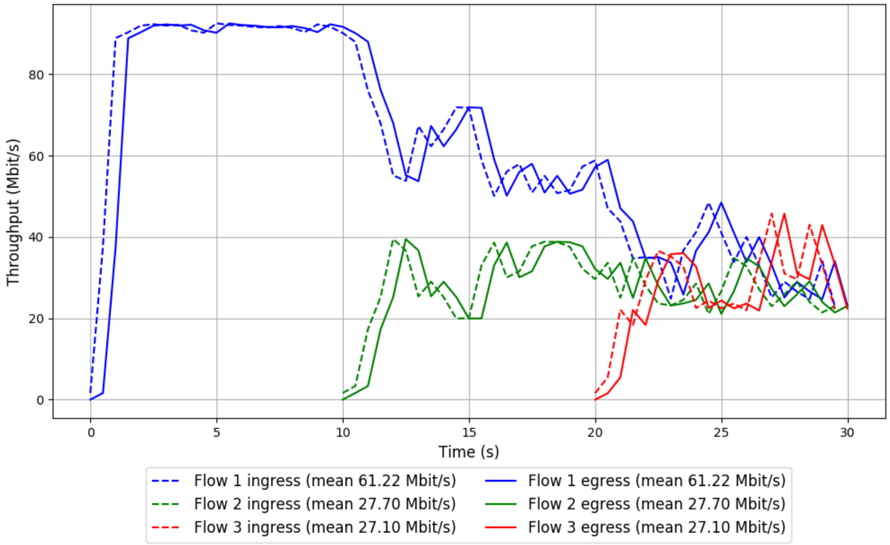
Run 7: Report of PCC-Vivace — Data Link

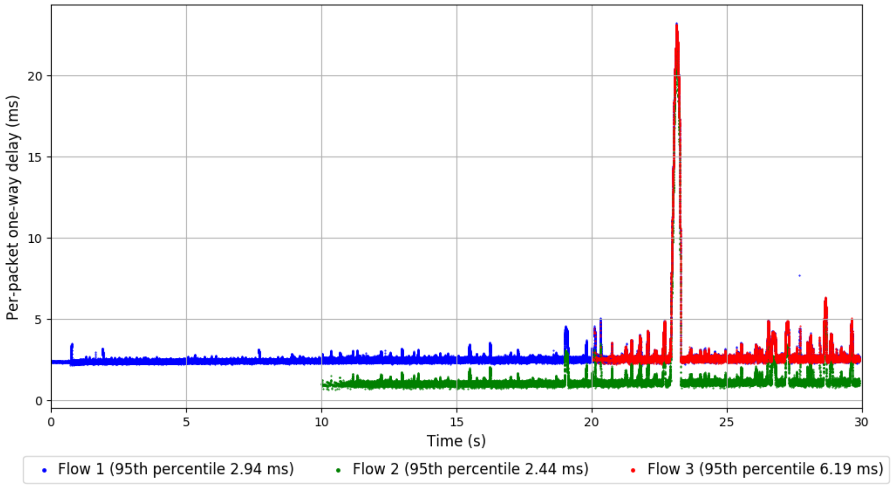




```
Run 8: Statistics of PCC-Vivace

Start at: 2018-05-22 05:39:38
End at: 2018-05-22 05:40:08
Local clock offset: -7.572 ms
Remote clock offset: -1.669 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 88.60 Mbit/s
95th percentile per-packet one-way delay: 3.184 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 61.22 Mbit/s
95th percentile per-packet one-way delay: 2.940 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.70 Mbit/s
95th percentile per-packet one-way delay: 2.443 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 27.10 Mbit/s
95th percentile per-packet one-way delay: 6.194 ms
Loss rate: 0.00%
```

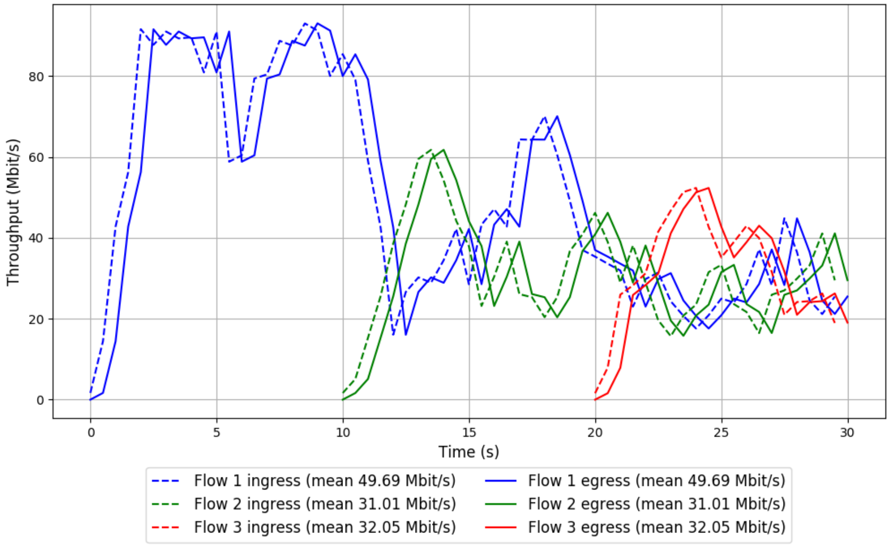
Run 8: Report of PCC-Vivace — Data Link

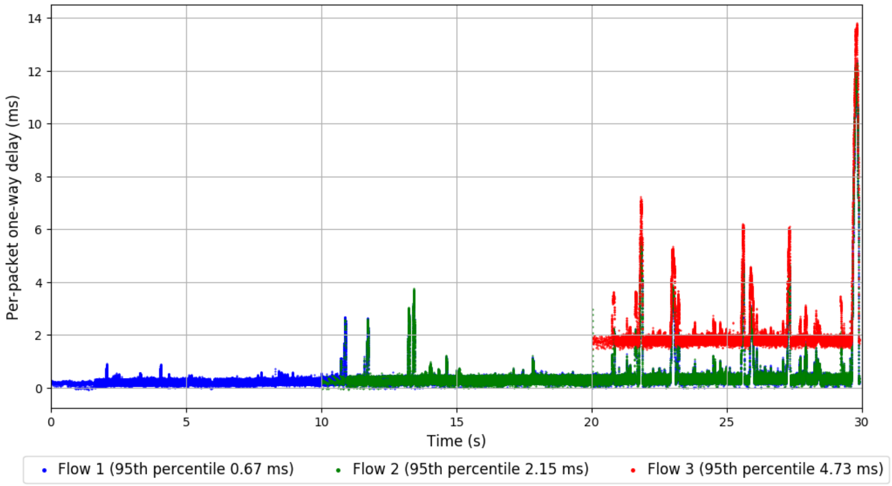




```
Run 9: Statistics of PCC-Vivace

Start at: 2018-05-22 05:57:29
End at: 2018-05-22 05:57:59
Local clock offset: -7.088 ms
Remote clock offset: -4.532 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 80.90 Mbit/s
95th percentile per-packet one-way delay: 2.084 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 49.69 Mbit/s
95th percentile per-packet one-way delay: 0.673 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 31.01 Mbit/s
95th percentile per-packet one-way delay: 2.146 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.05 Mbit/s
95th percentile per-packet one-way delay: 4.728 ms
Loss rate: 0.00%
```

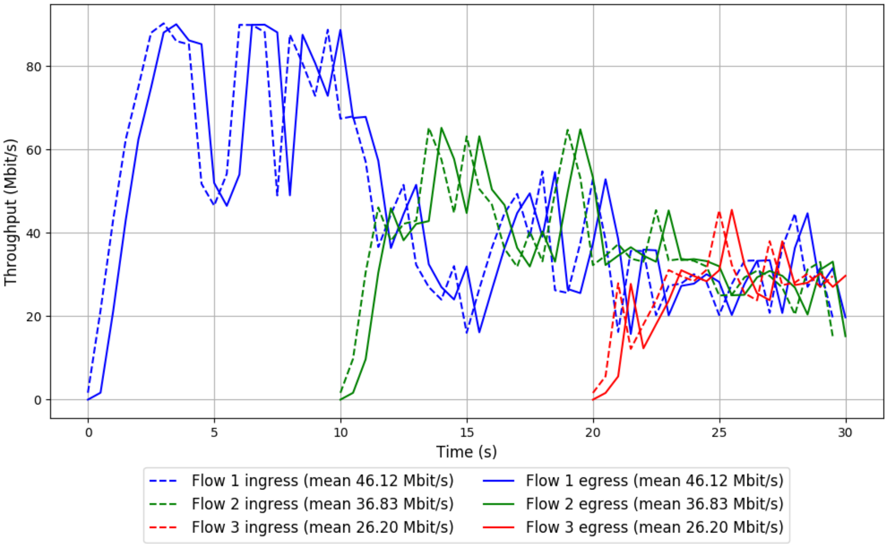
Run 9: Report of PCC-Vivace — Data Link

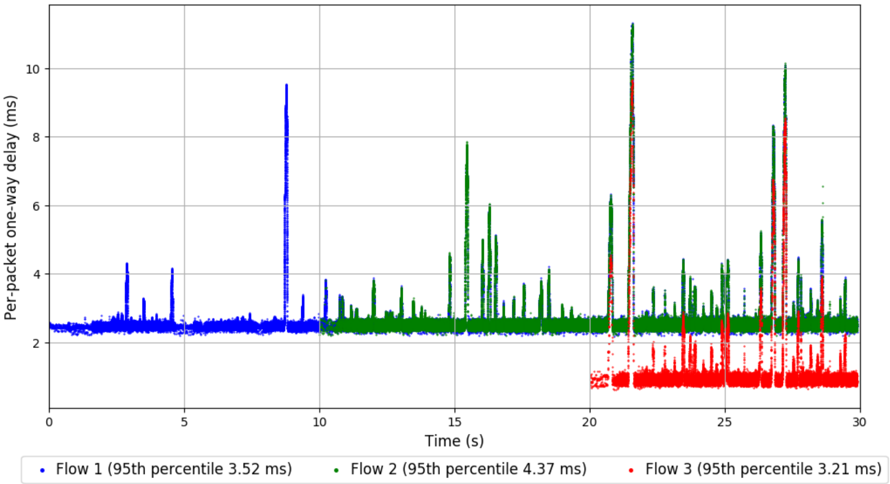




```
Run 10: Statistics of PCC-Vivace

Start at: 2018-05-22 06:19:36
End at: 2018-05-22 06:20:06
Local clock offset: -6.786 ms
Remote clock offset: -3.492 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 79.27 Mbit/s
95th percentile per-packet one-way delay: 3.753 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 46.12 Mbit/s
95th percentile per-packet one-way delay: 3.525 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.83 Mbit/s
95th percentile per-packet one-way delay: 4.372 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 26.20 Mbit/s
95th percentile per-packet one-way delay: 3.211 ms
Loss rate: 0.00%
```

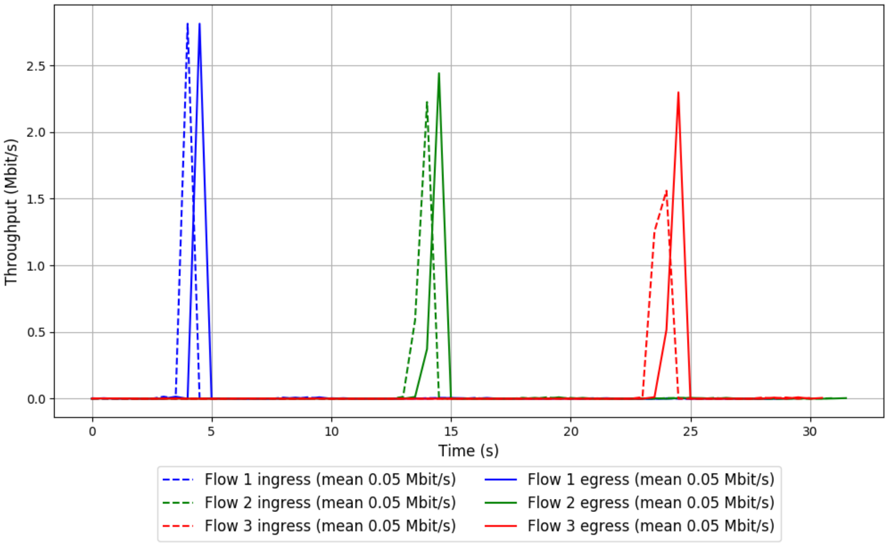
Run 10: Report of PCC-Vivace — Data Link

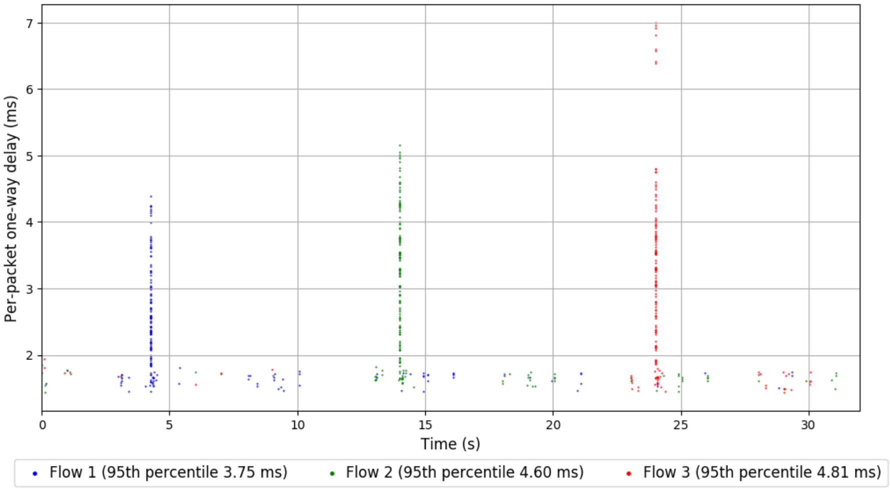




```
Run 1: Statistics of WebRTC media

Start at: 2018-05-22 03:25:50
End at: 2018-05-22 03:26:20
Local clock offset: -6.106 ms
Remote clock offset: -2.474 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.523 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.755 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.603 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.806 ms
Loss rate: 0.00%
```

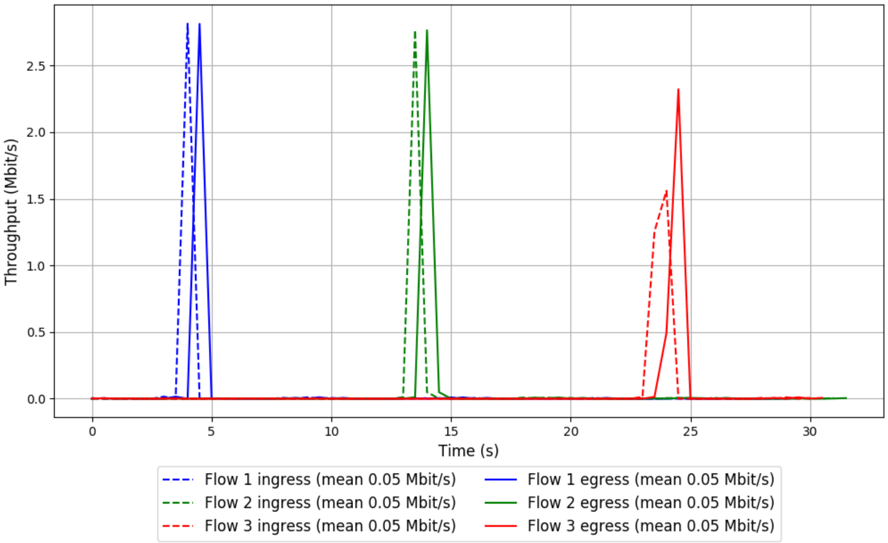
Run 1: Report of WebRTC media — Data Link

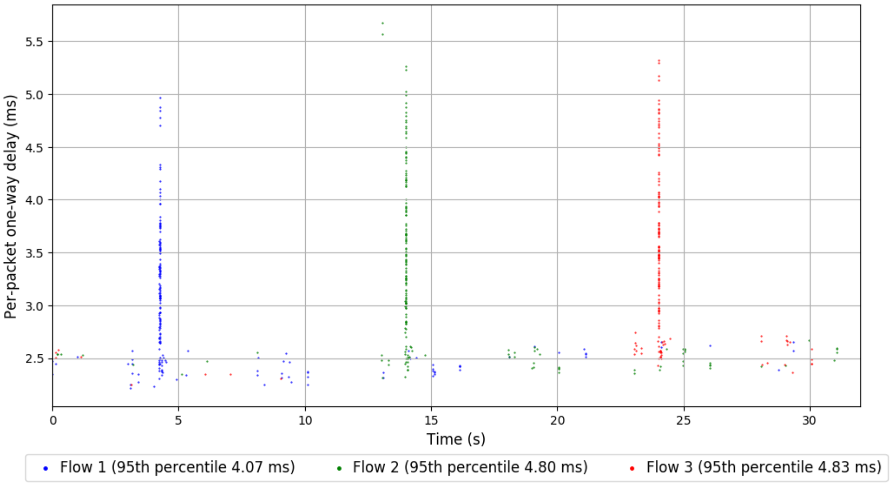




```
Run 2: Statistics of WebRTC media

Start at: 2018-05-22 03:43:41
End at: 2018-05-22 03:44:11
Local clock offset: -5.767 ms
Remote clock offset: -3.683 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.738 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.070 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.796 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.829 ms
Loss rate: 0.00%
```

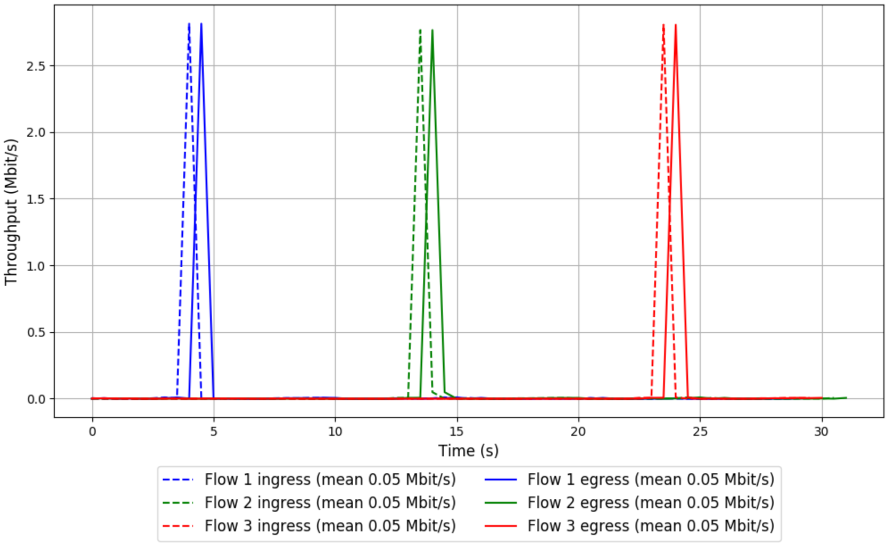
Run 2: Report of WebRTC media — Data Link

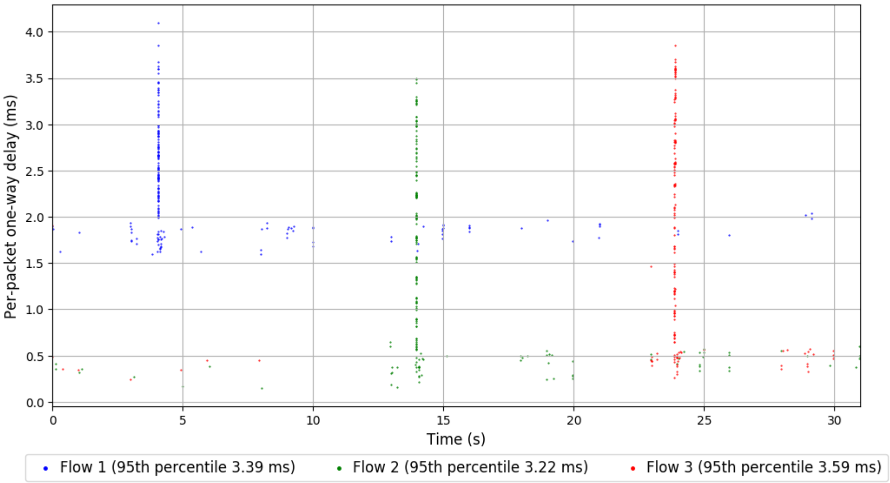




```
Run 3: Statistics of WebRTC media

Start at: 2018-05-22 04:01:32
End at: 2018-05-22 04:02:02
Local clock offset: -2.173 ms
Remote clock offset: -7.426 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 3.447 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.393 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.220 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.588 ms
Loss rate: 0.00%
```

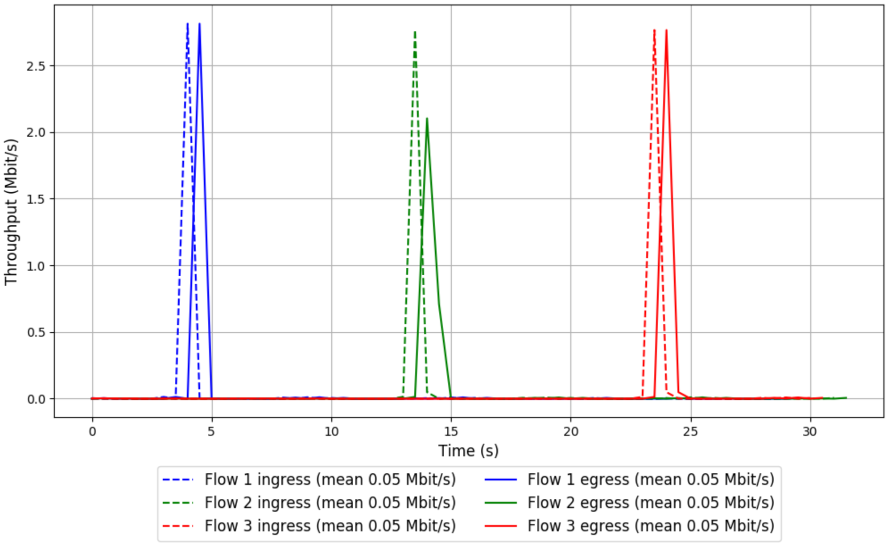
Run 3: Report of WebRTC media — Data Link

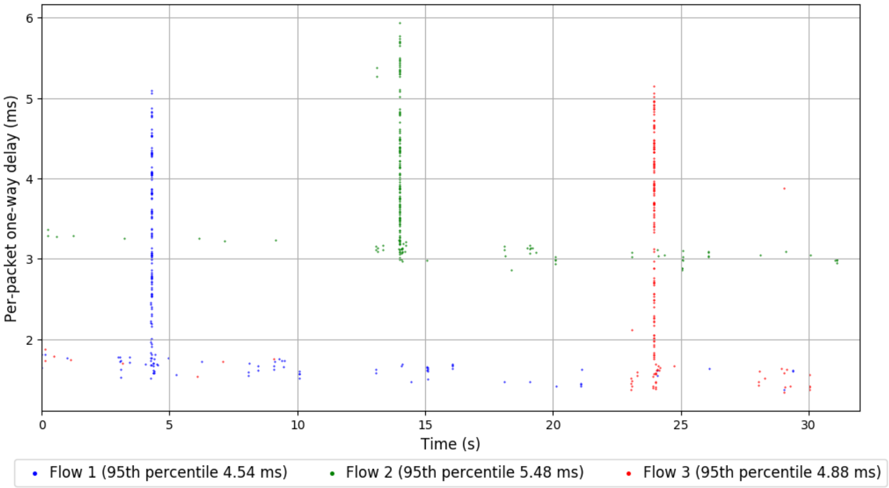




```
Run 4: Statistics of WebRTC media

Start at: 2018-05-22 04:19:23
End at: 2018-05-22 04:19:53
Local clock offset: 0.379 ms
Remote clock offset: -6.324 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 5.062 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.541 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.479 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.883 ms
Loss rate: 0.00%
```

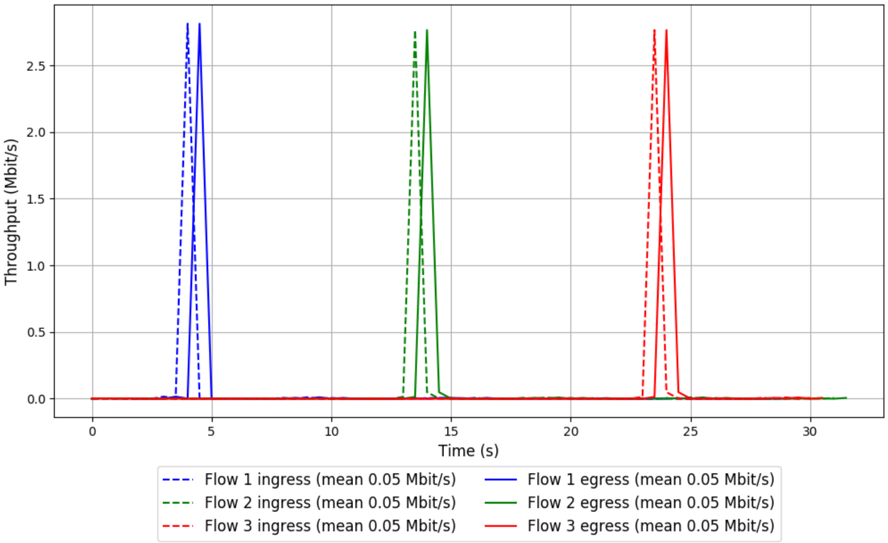
Run 4: Report of WebRTC media — Data Link

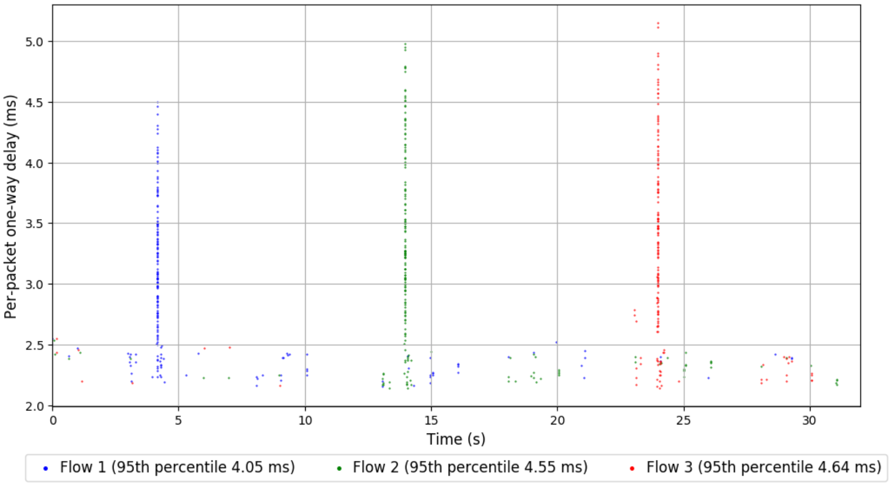




```
Run 5: Statistics of WebRTC media

Start at: 2018-05-22 04:37:15
End at: 2018-05-22 04:37:45
Local clock offset: 2.976 ms
Remote clock offset: -2.165 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.483 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.049 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.551 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.645 ms
Loss rate: 0.00%
```

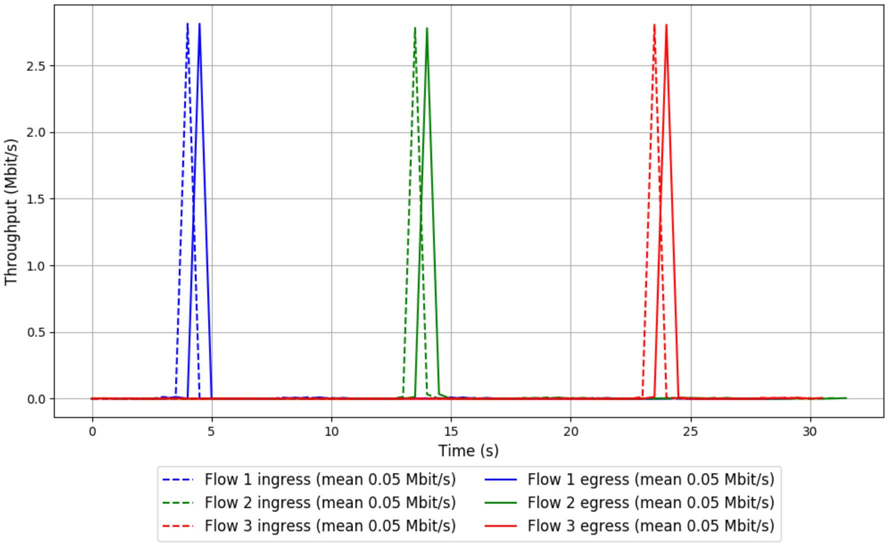
Run 5: Report of WebRTC media — Data Link

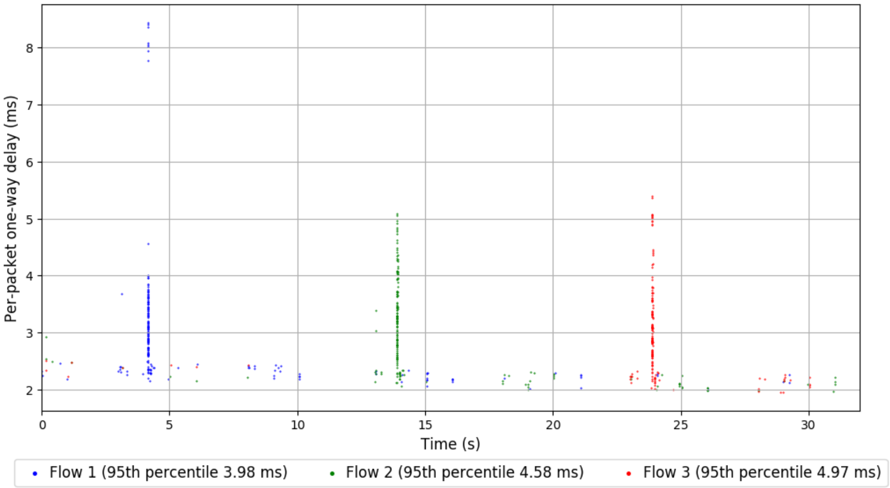




```
Run 6: Statistics of WebRTC media

Start at: 2018-05-22 04:55:06
End at: 2018-05-22 04:55:36
Local clock offset: 4.46 ms
Remote clock offset: 3.158 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.727 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.985 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.576 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.967 ms
Loss rate: 0.00%
```

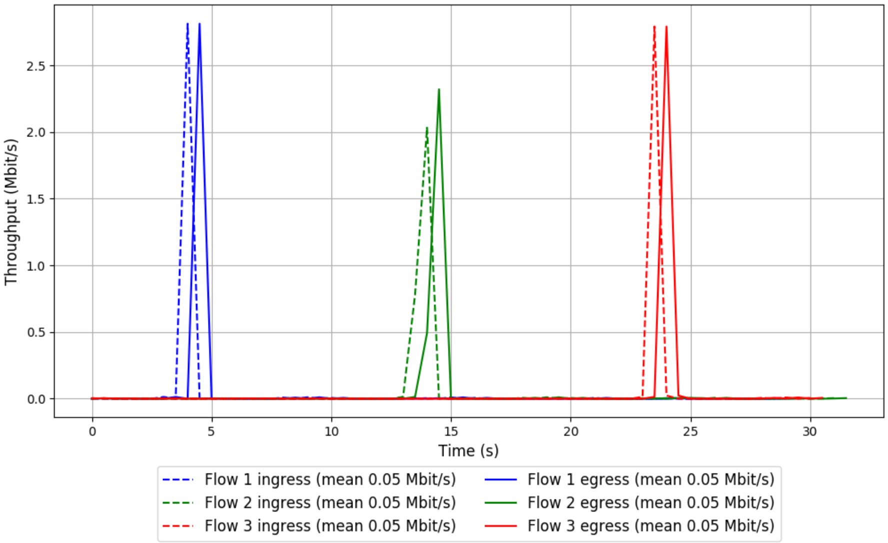
Run 6: Report of WebRTC media — Data Link

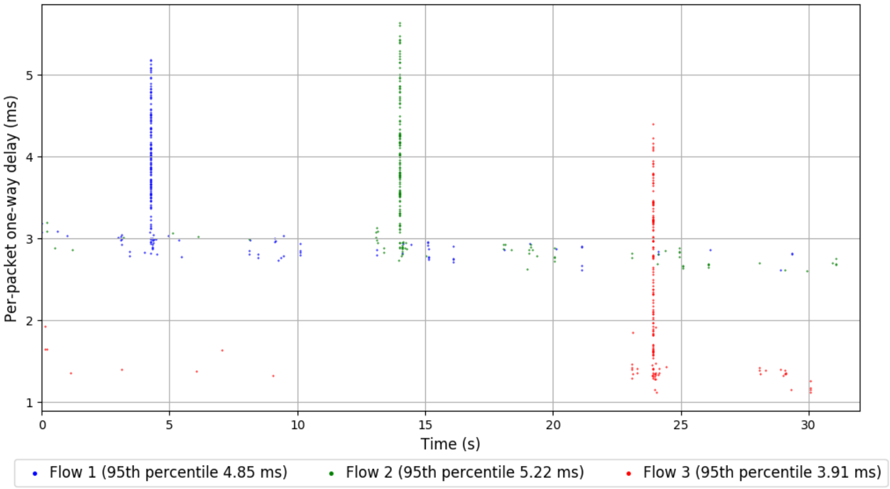




```
Run 7: Statistics of WebRTC media

Start at: 2018-05-22 05:12:58
End at: 2018-05-22 05:13:28
Local clock offset: -7.414 ms
Remote clock offset: 9.279 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.921 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.852 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.225 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.914 ms
Loss rate: 0.00%
```

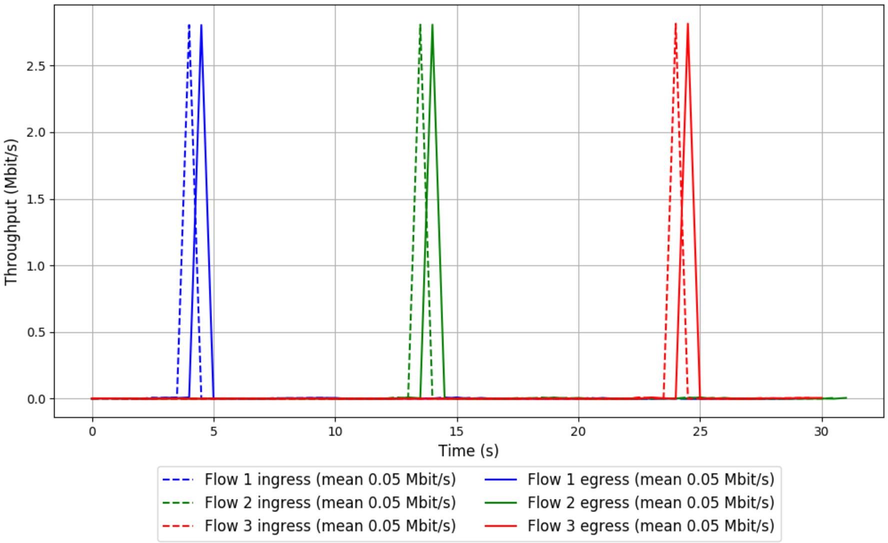
Run 7: Report of WebRTC media — Data Link

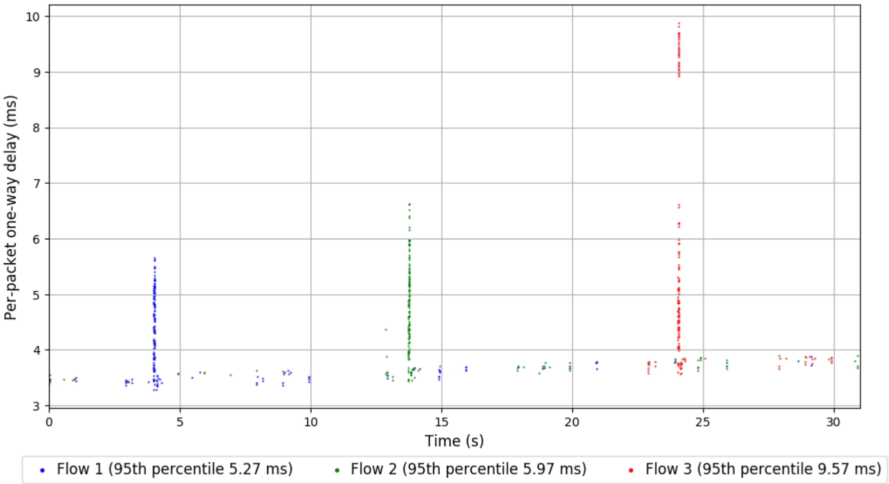




```
Run 8: Statistics of WebRTC media

Start at: 2018-05-22 05:30:49
End at: 2018-05-22 05:31:19
Local clock offset: -9.255 ms
Remote clock offset: 2.964 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 9.003 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.268 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.969 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 9.574 ms
Loss rate: 0.00%
```

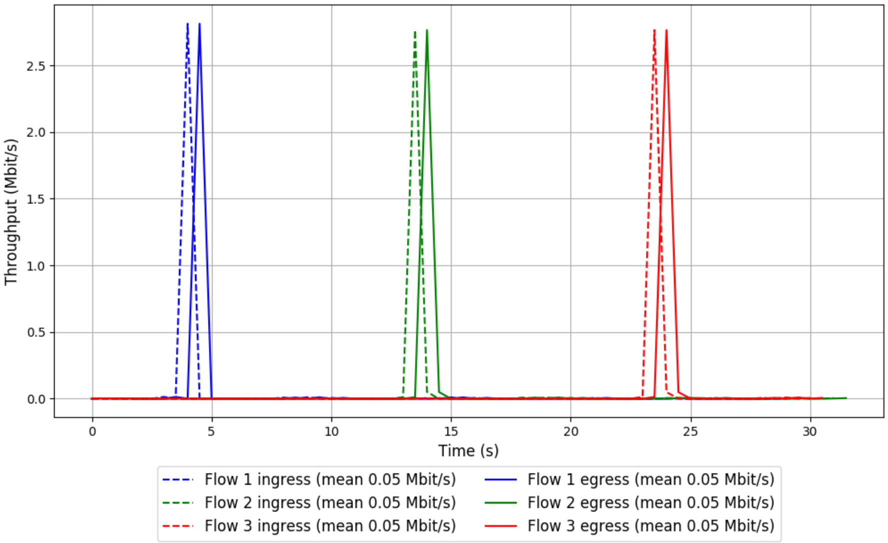
Run 8: Report of WebRTC media — Data Link

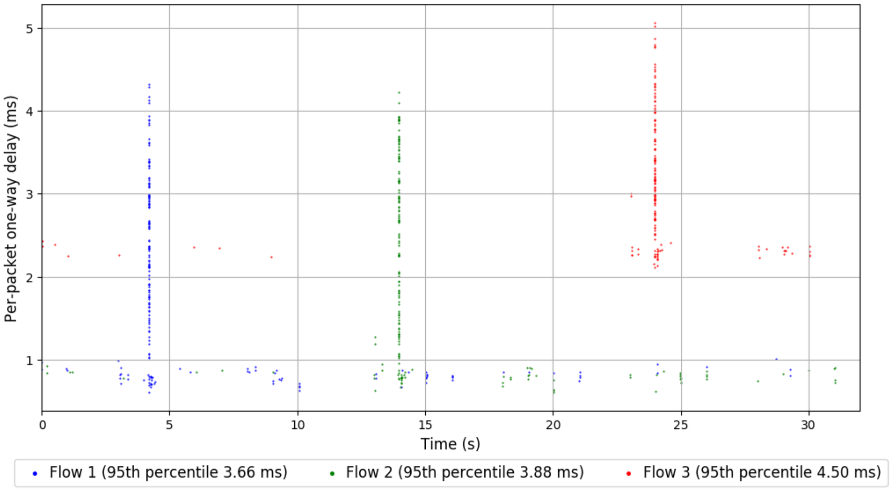




```
Run 9: Statistics of WebRTC media

Start at: 2018-05-22 05:48:41
End at: 2018-05-22 05:49:11
Local clock offset: -7.686 ms
Remote clock offset: -3.632 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 4.092 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.660 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 3.879 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.504 ms
Loss rate: 0.00%
```

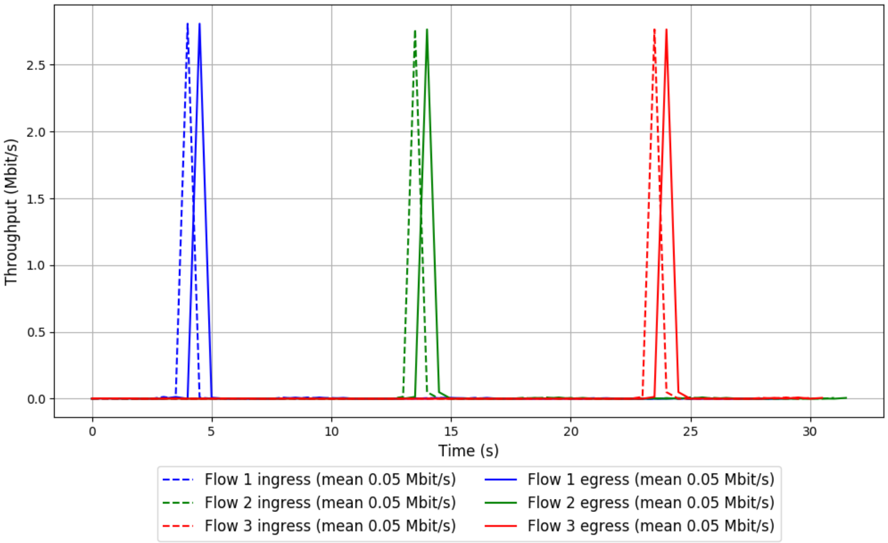
Run 9: Report of WebRTC media — Data Link



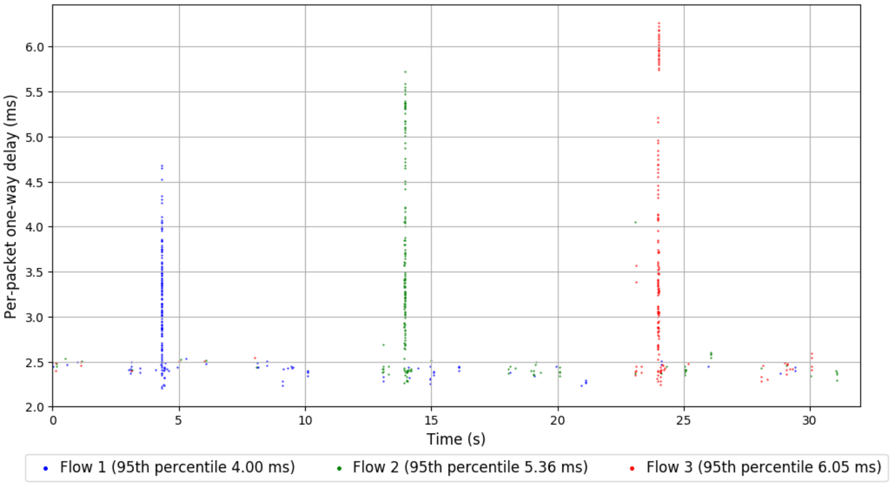


```
Run 10: Statistics of WebRTC media

Start at: 2018-05-22 06:06:32
End at: 2018-05-22 06:07:02
Local clock offset: -6.847 ms
Remote clock offset: -3.642 ms

# Below is generated by plot.py at 2018-05-22 06:44:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 5.548 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 4.001 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 5.364 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 6.048 ms
Loss rate: 0.00%
```

Run 10: 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)
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 4.00 ms)
Flow 2 (95th percentile 5.36 ms)
Flow 3 (95th percentile 6.05 ms)