Pantheon Report

Generated at 2017-12-12 04:30:02 (UTC).

Data path: AWS Brazil 2 Ethernet (*local*) →Colombia Ethernet (*remote*).

Repeated the test of 14 congestion control schemes 10 times.

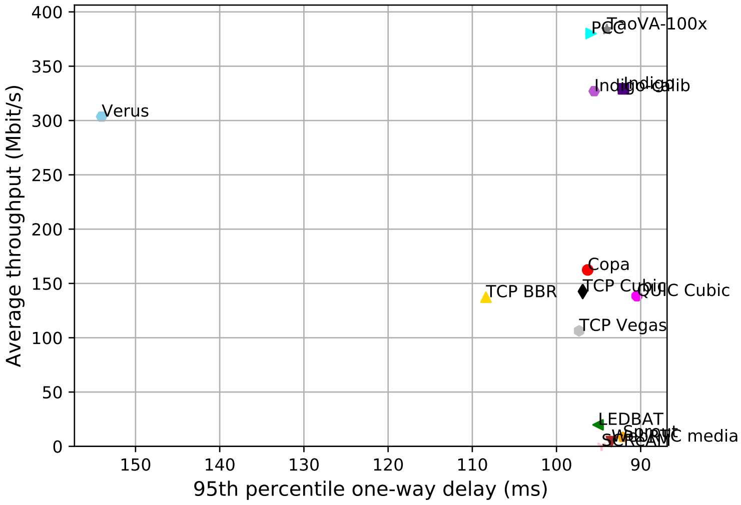
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

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

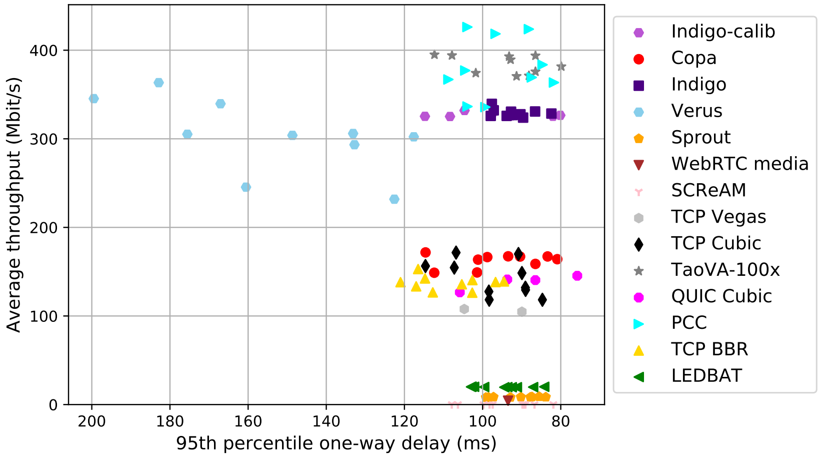
Tested BBR with qdisc of Fair Queuing (`fq`), and other schemes with the default Linux qdisc (`pfifo_fast`).

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

```
Git summary:
branch: indigos @ e3a57ad5ac5cfcaca0e3f983c8dd4cc3509e0262
third_party/calibrated_koho @ 3cb73c0d1c0322cdfae446ea37a522e53227db50
 M datagrump/sender.cc
third_party/genericCC @ b5b7c38e8391001927dc41c6cfa2627d03dde737
third_party/indigo @ b19f3730105f9aa95452552af924e3719b03cc55
third_party/indigo-cellular @ aee99e8eb842cb053f8c9a80e28cd256a930bbc2
third_party/indigo-no-calib @ 7224f2202e8a044d8306fa0b983ad84360c53d89
third_party/indigo-no-cwnd @ 3e58442c04028a11d7b02456e137604633ba2d6c
third_party/indigo-no-delivery-rate @ 57caa40858b964906edff4876d5a7e5bfff666c5
third_party/indigo-no-queuing-delay @ 03455460fd1a8ffbdad86fabb936fdca204b80db
third_party/indigo-no-send-rate @ b39dfa6b2c5f19cb7cd89626cb4f5bb81f9fecda
third_party/koho_cc @ f0f2e693303aee82ea808e6928eac4f1083a6681
 M datagrump/sender.cc
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/pantheon-tunnel @ baf443516dea3eeddeccaf9b916cc313273ca4f4
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/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream @ c3370fd7bd17265a79aeb34e4016ad23f5965885
third_party/sourdough @ f1a14bffe749737437f61b1eaeeb30b267cde681
third_party/sprout @ 6f2efe6e088d91066a9f023df375eee2665089ce
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
third_party/webrtc @ a488197ddd041ace68a42849b2540ad834825f42
```



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

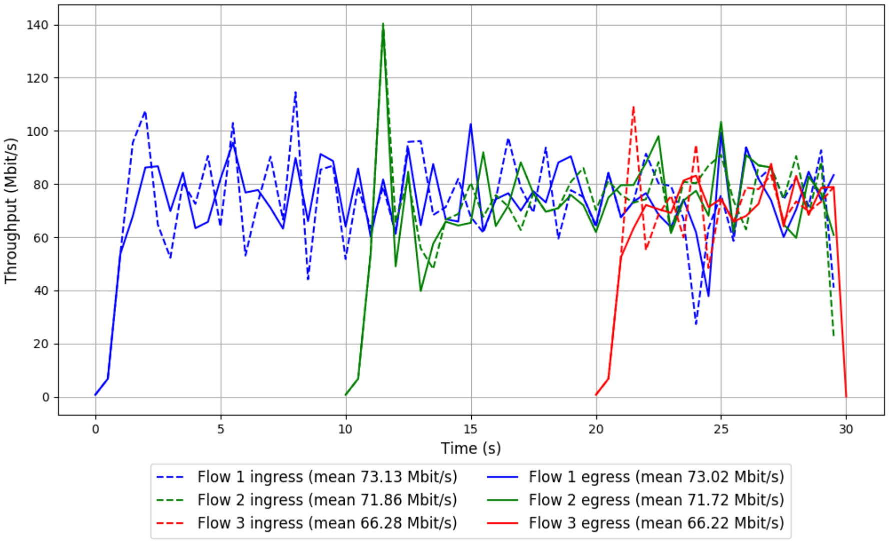


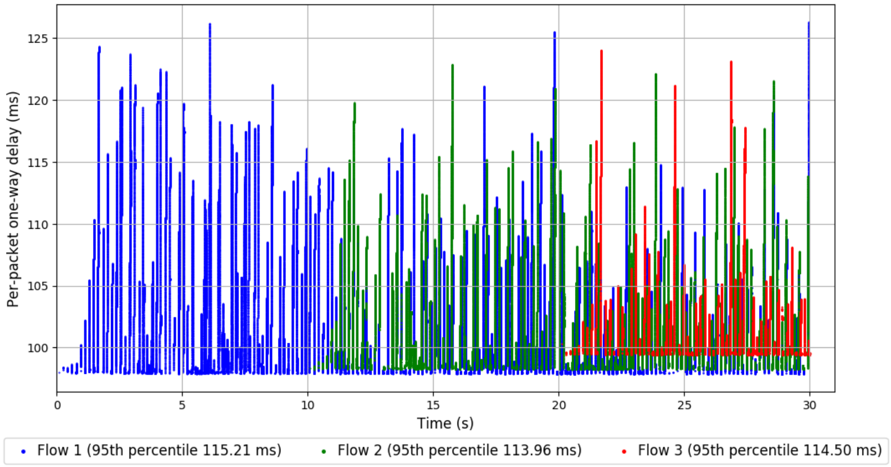
test from AWS Brazil 2 Ethernet to Colombia Ethernet, 10 runs of 30s each per scheme
3 flows with 10s interval between flows

		mean avg tput (Mbit/s)			mean 95th-%ile delay (ms)			mean loss rate (%)		
scheme	# runs	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3	flow 1	flow 2	flow 3
TCP BBR	10	71.88	67.07	63.48	108.78	108.28	106.81	0.30	0.39	0.45
TCP Cubic	10	76.05	69.25	61.95	97.82	95.79	96.51	0.04	0.07	0.11
LEDBAT	10	12.76	8.56	4.20	94.66	94.87	94.15	0.01	0.00	0.06
PCC	10	228.40	222.68	11.09	96.13	95.44	94.91	13.14	19.06	9.76
QUIC Cubic	4	72.04	63.47	57.23	89.63	89.50	90.06	0.00	0.00	0.01
SCReAM	10	0.22	0.22	0.22	93.87	94.35	94.19	0.00	0.00	0.00
WebRTC media	1	2.18	1.69	0.50	93.50	91.86	93.62	0.00	0.00	0.63
Sprout	10	4.36	4.24	3.59	91.73	91.89	91.21	0.00	0.00	0.00
TaoVA-100x	10	220.80	198.39	125.90	93.64	93.19	93.17	1.52	2.59	6.37
TCP Vegas	2	43.99	71.72	43.93	97.39	95.08	99.52	0.04	0.01	0.04
Verus	10	188.87	133.38	81.26	150.06	141.78	139.57	6.34	7.46	12.16
Copa	10	88.43	83.04	72.91	95.76	95.43	129.40	0.00	0.00	0.00
Indigo	10	173.05	163.49	139.86	91.64	91.68	91.69	0.94	1.51	3.58
Indigo-calib	10	174.36	162.81	137.64	94.94	94.83	95.26	1.74	2.77	6.39

```
Run 1: Statistics of TCP BBR

Start at: 2017-12-11 23:32:42
End at: 2017-12-11 23:33:12
Local clock offset: -1.603 ms
Remote clock offset: 14.075 ms

# Below is generated by plot.py at 2017-12-12 03:39:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 142.34 Mbit/s
95th percentile per-packet one-way delay: 114.731 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 73.02 Mbit/s
95th percentile per-packet one-way delay: 115.212 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 71.72 Mbit/s
95th percentile per-packet one-way delay: 113.958 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 66.22 Mbit/s
95th percentile per-packet one-way delay: 114.497 ms
Loss rate: 0.09%
```

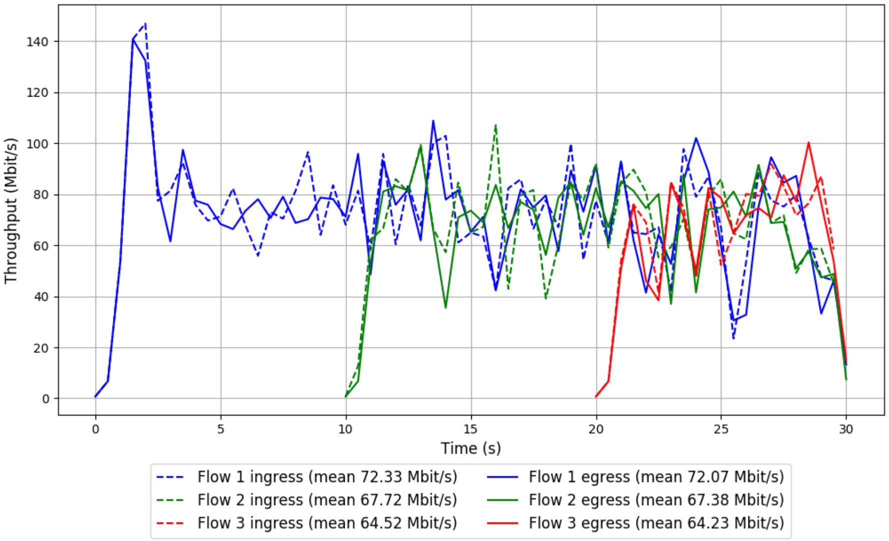
Run 1: Report of TCP BBR — Data Link

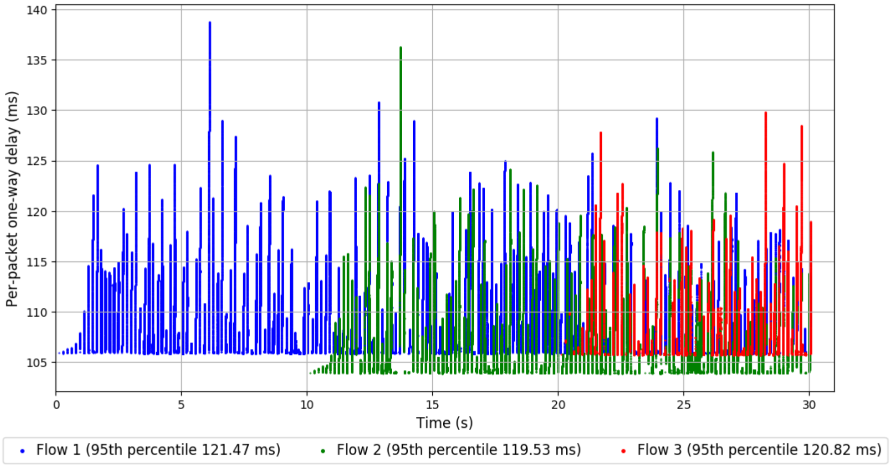




```
Run 2: Statistics of TCP BBR

Start at: 2017-12-11 23:52:51
End at: 2017-12-11 23:53:21
Local clock offset: -2.16 ms
Remote clock offset: 20.331 ms

# Below is generated by plot.py at 2017-12-12 03:39:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.13 Mbit/s
95th percentile per-packet one-way delay: 120.998 ms
Loss rate: 0.38%
-- Flow 1:
Average throughput: 72.07 Mbit/s
95th percentile per-packet one-way delay: 121.465 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 67.38 Mbit/s
95th percentile per-packet one-way delay: 119.528 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 64.23 Mbit/s
95th percentile per-packet one-way delay: 120.822 ms
Loss rate: 0.33%
```

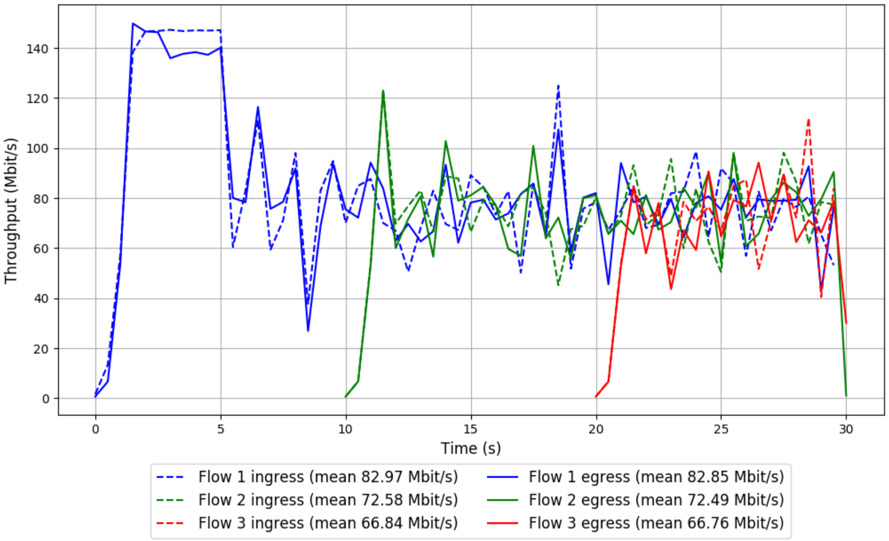
Run 2: Report of TCP BBR — Data Link

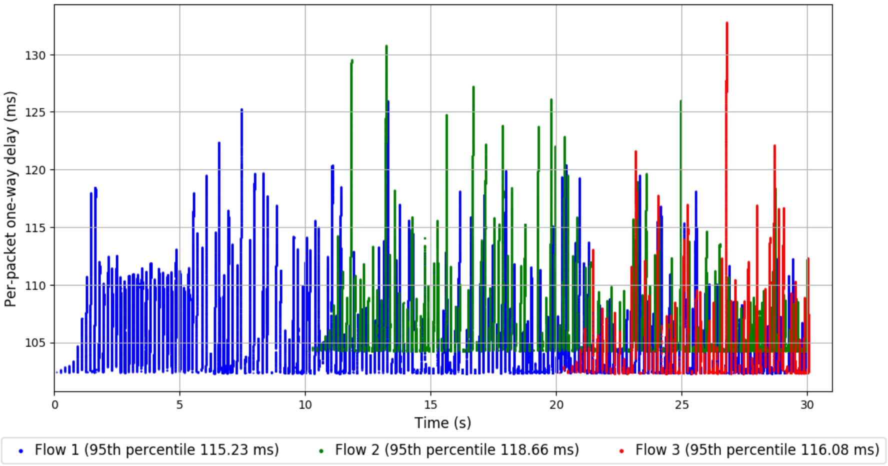




```
Run 3: Statistics of TCP BBR

Start at: 2017-12-12 00:13:05
End at: 2017-12-12 00:13:35
Local clock offset: -2.37 ms
Remote clock offset: 18.156 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 152.95 Mbit/s
95th percentile per-packet one-way delay: 116.497 ms
Loss rate: 0.13%
-- Flow 1:
Average throughput: 82.85 Mbit/s
95th percentile per-packet one-way delay: 115.231 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 72.49 Mbit/s
95th percentile per-packet one-way delay: 118.659 ms
Loss rate: 0.12%
-- Flow 3:
Average throughput: 66.76 Mbit/s
95th percentile per-packet one-way delay: 116.079 ms
Loss rate: 0.07%
```

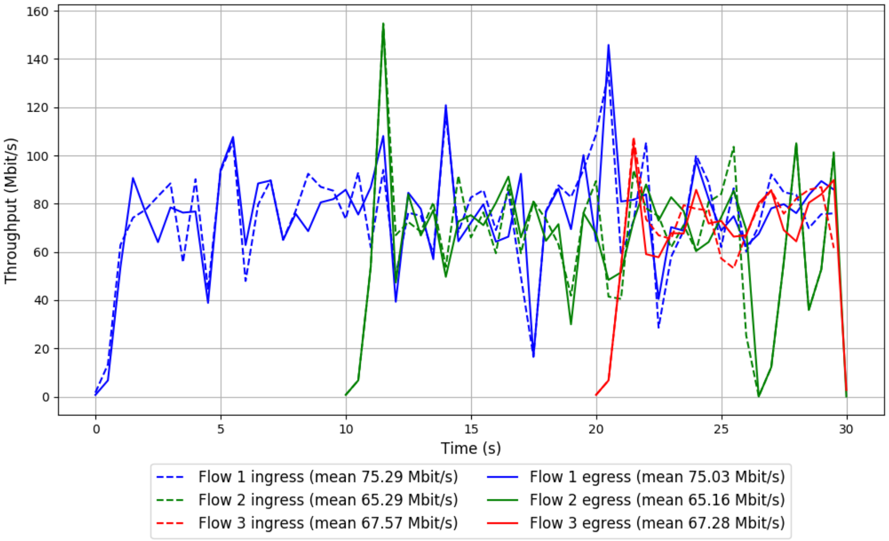
Run 3: Report of TCP BBR — Data Link

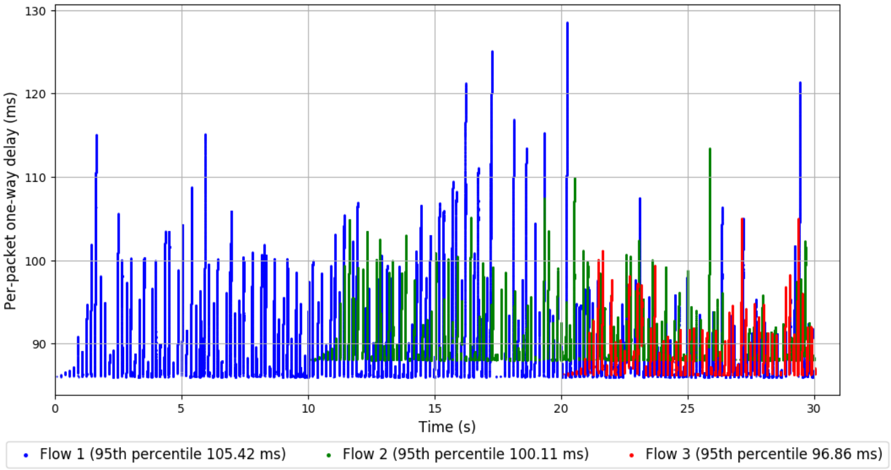




```
Run 4: Statistics of TCP BBR

Start at: 2017-12-12 00:33:04
End at: 2017-12-12 00:33:34
Local clock offset: -2.843 ms
Remote clock offset: 1.235 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.50 Mbit/s
95th percentile per-packet one-way delay: 102.606 ms
Loss rate: 0.31%
-- Flow 1:
Average throughput: 75.03 Mbit/s
95th percentile per-packet one-way delay: 105.423 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 65.16 Mbit/s
95th percentile per-packet one-way delay: 100.105 ms
Loss rate: 0.19%
-- Flow 3:
Average throughput: 67.28 Mbit/s
95th percentile per-packet one-way delay: 96.863 ms
Loss rate: 0.43%
```

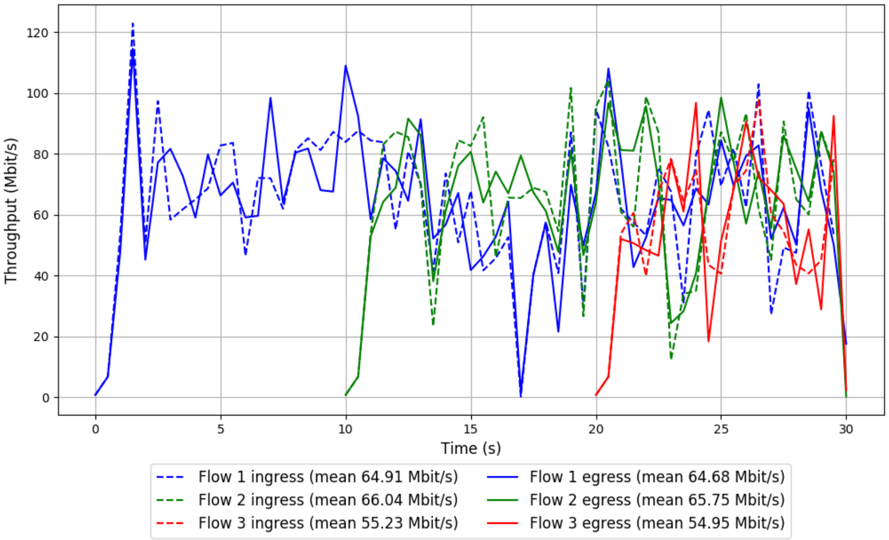
Run 4: Report of TCP BBR — Data Link

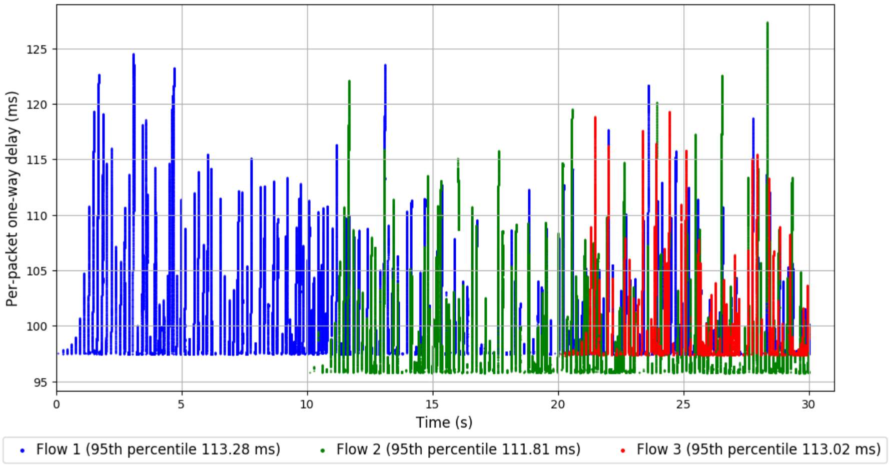




```
Run 5: Statistics of TCP BBR

Start at: 2017-12-12 00:53:03
End at: 2017-12-12 00:53:33
Local clock offset: -3.561 ms
Remote clock offset: 10.225 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.61 Mbit/s
95th percentile per-packet one-way delay: 112.742 ms
Loss rate: 0.40%
-- Flow 1:
Average throughput: 64.68 Mbit/s
95th percentile per-packet one-way delay: 113.277 ms
Loss rate: 0.34%
-- Flow 2:
Average throughput: 65.75 Mbit/s
95th percentile per-packet one-way delay: 111.808 ms
Loss rate: 0.45%
-- Flow 3:
Average throughput: 54.95 Mbit/s
95th percentile per-packet one-way delay: 113.018 ms
Loss rate: 0.50%
```

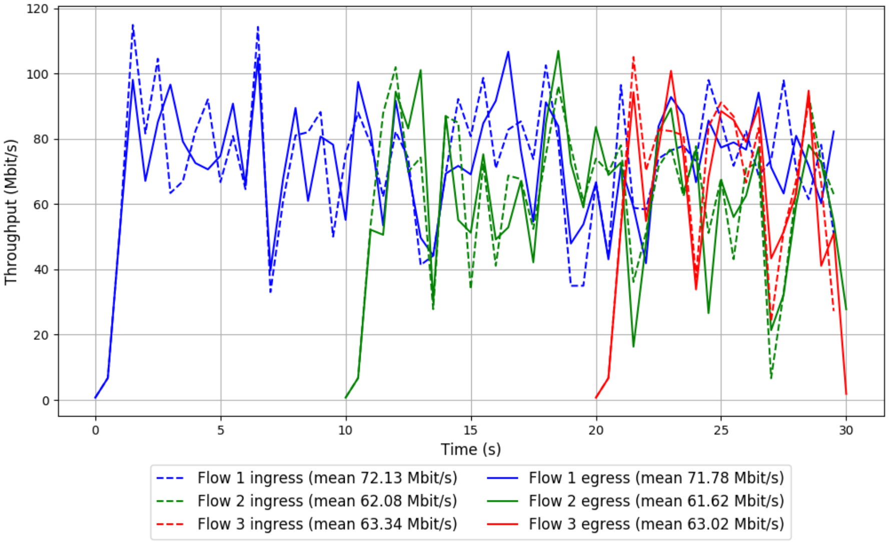
Run 5: Report of TCP BBR — Data Link

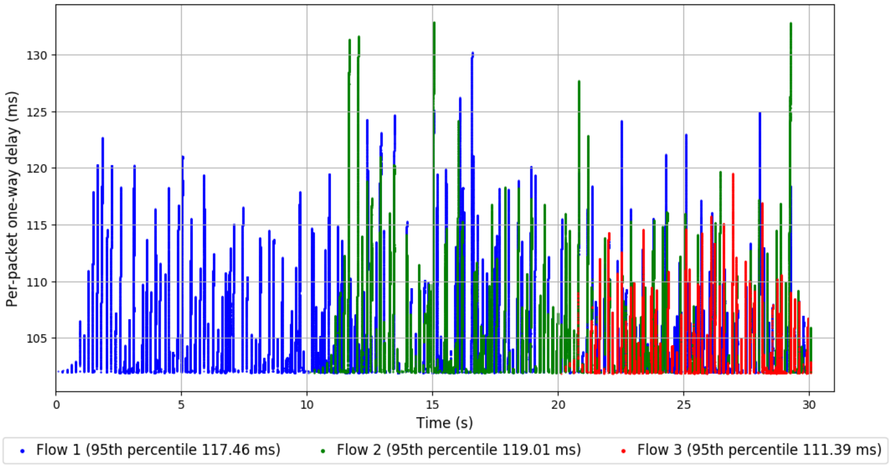




```
Run 6: Statistics of TCP BBR

Start at: 2017-12-12 01:13:05
End at: 2017-12-12 01:13:35
Local clock offset: -3.033 ms
Remote clock offset: 14.061 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 133.44 Mbit/s
95th percentile per-packet one-way delay: 116.997 ms
Loss rate: 0.56%
-- Flow 1:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 117.464 ms
Loss rate: 0.48%
-- Flow 2:
Average throughput: 61.62 Mbit/s
95th percentile per-packet one-way delay: 119.013 ms
Loss rate: 0.73%
-- Flow 3:
Average throughput: 63.02 Mbit/s
95th percentile per-packet one-way delay: 111.395 ms
Loss rate: 0.51%
```

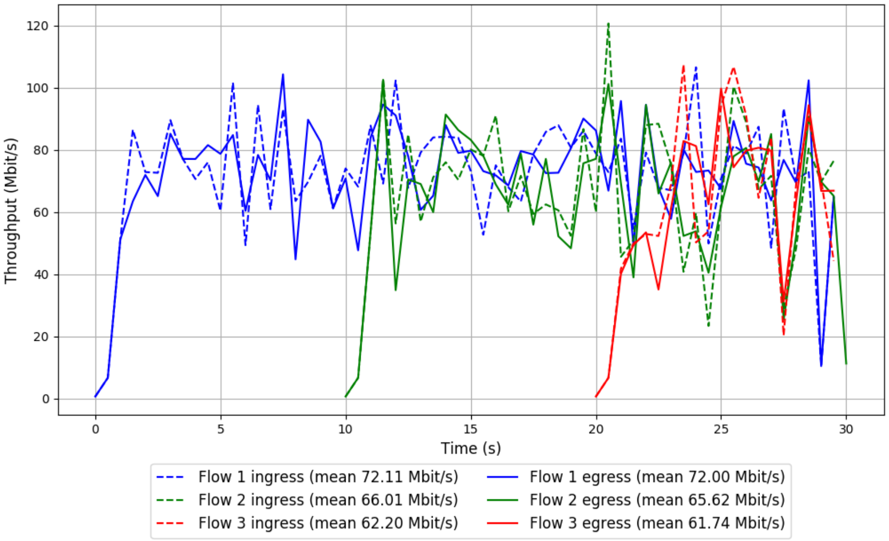
Run 6: Report of TCP BBR — Data Link

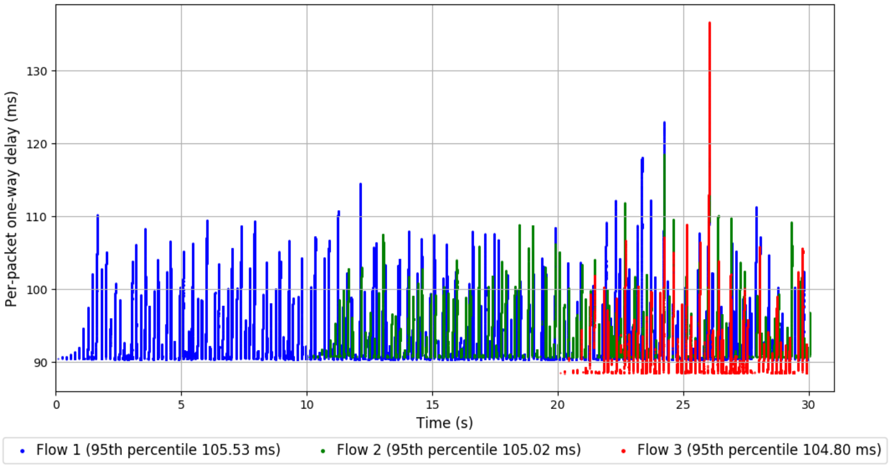




```
Run 7: Statistics of TCP BBR

Start at: 2017-12-12 01:33:33
End at: 2017-12-12 01:34:03
Local clock offset: -2.664 ms
Remote clock offset: 1.922 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 135.75 Mbit/s
95th percentile per-packet one-way delay: 105.316 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 72.00 Mbit/s
95th percentile per-packet one-way delay: 105.529 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 65.62 Mbit/s
95th percentile per-packet one-way delay: 105.022 ms
Loss rate: 0.56%
-- Flow 3:
Average throughput: 61.74 Mbit/s
95th percentile per-packet one-way delay: 104.802 ms
Loss rate: 0.72%
```

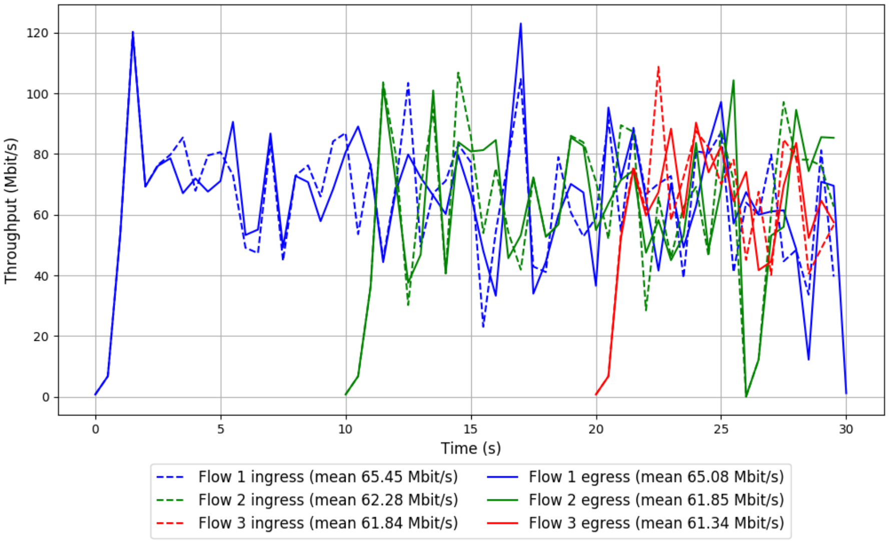
Run 7: Report of TCP BBR — Data Link

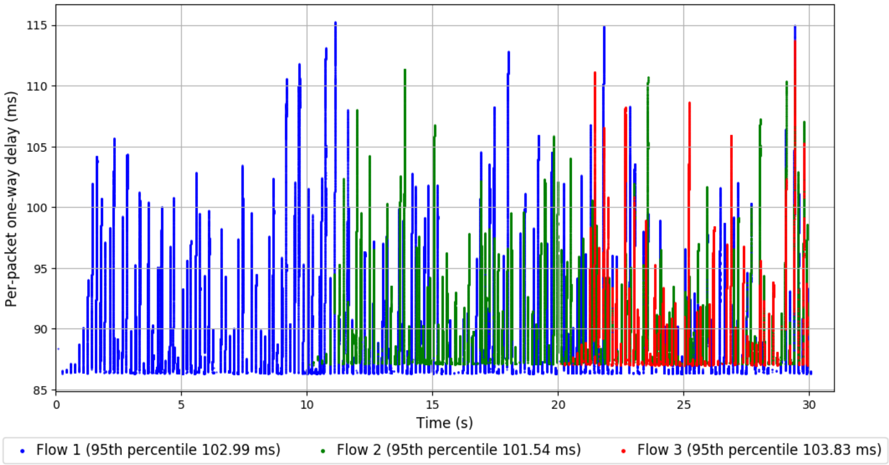




```
Run 8: Statistics of TCP BBR

Start at: 2017-12-12 01:53:37
End at: 2017-12-12 01:54:07
Local clock offset: -3.267 ms
Remote clock offset: -0.662 ms

# Below is generated by plot.py at 2017-12-12 03:39:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.27 Mbit/s
95th percentile per-packet one-way delay: 102.643 ms
Loss rate: 0.64%
-- Flow 1:
Average throughput: 65.08 Mbit/s
95th percentile per-packet one-way delay: 102.993 ms
Loss rate: 0.57%
-- Flow 2:
Average throughput: 61.85 Mbit/s
95th percentile per-packet one-way delay: 101.538 ms
Loss rate: 0.67%
-- Flow 3:
Average throughput: 61.34 Mbit/s
95th percentile per-packet one-way delay: 103.831 ms
Loss rate: 0.81%
```

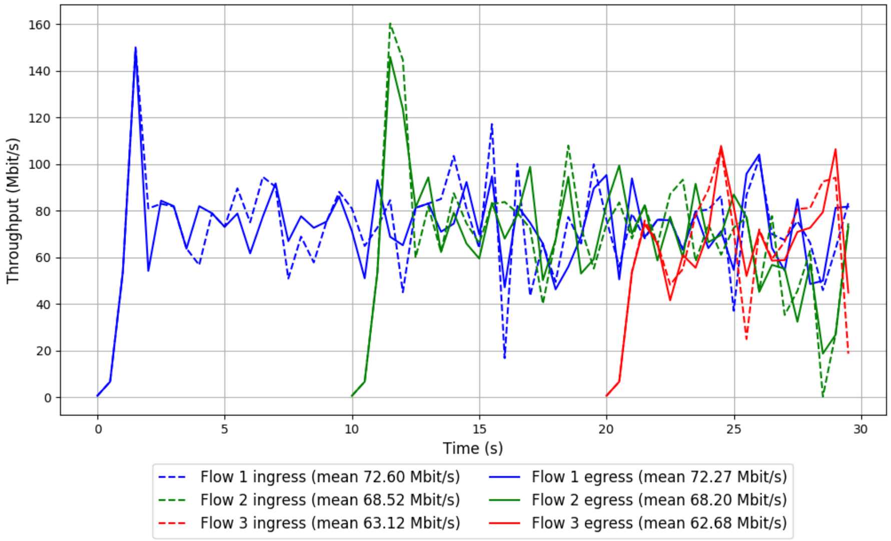
Run 8: Report of TCP BBR — Data Link

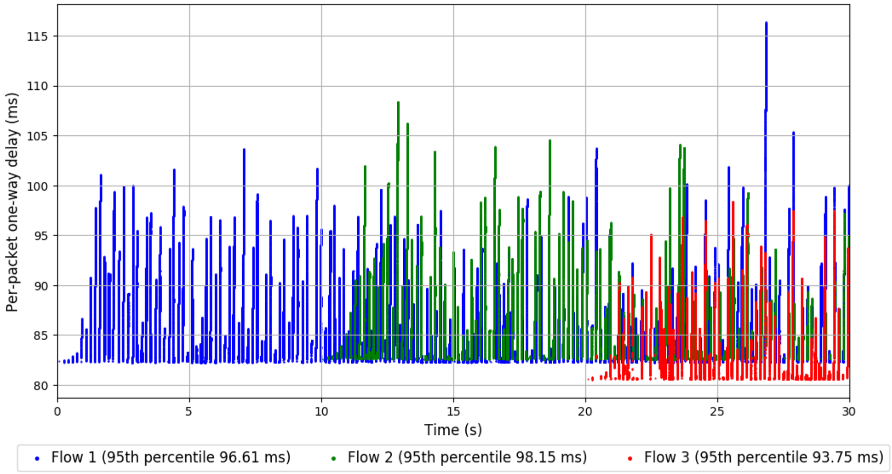




```
Run 9: Statistics of TCP BBR

Start at: 2017-12-12 02:13:47
End at: 2017-12-12 02:14:17
Local clock offset: -3.137 ms
Remote clock offset: -7.602 ms

# Below is generated by plot.py at 2017-12-12 03:41:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 138.29 Mbit/s
95th percentile per-packet one-way delay: 96.680 ms
Loss rate: 0.47%
-- Flow 1:
Average throughput: 72.27 Mbit/s
95th percentile per-packet one-way delay: 96.606 ms
Loss rate: 0.46%
-- Flow 2:
Average throughput: 68.20 Mbit/s
95th percentile per-packet one-way delay: 98.147 ms
Loss rate: 0.46%
-- Flow 3:
Average throughput: 62.68 Mbit/s
95th percentile per-packet one-way delay: 93.747 ms
Loss rate: 0.57%
```

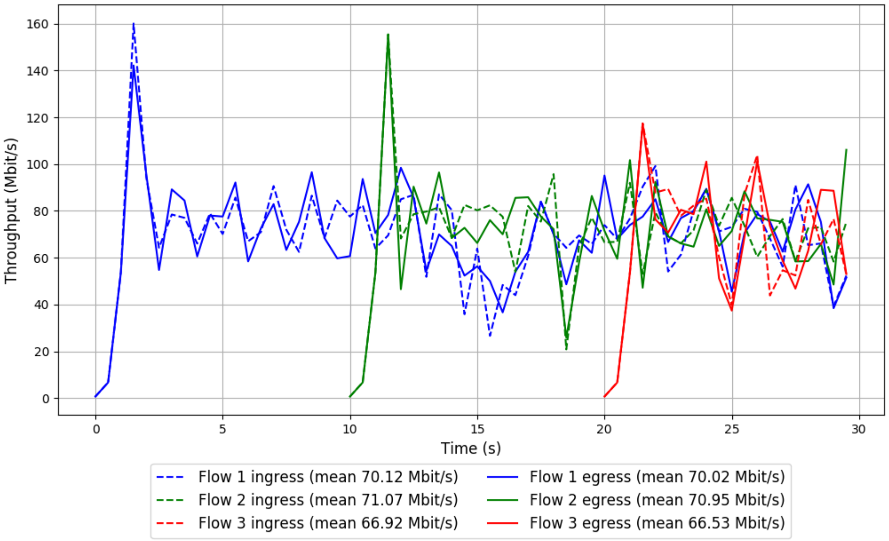
Run 9: Report of TCP BBR — Data Link

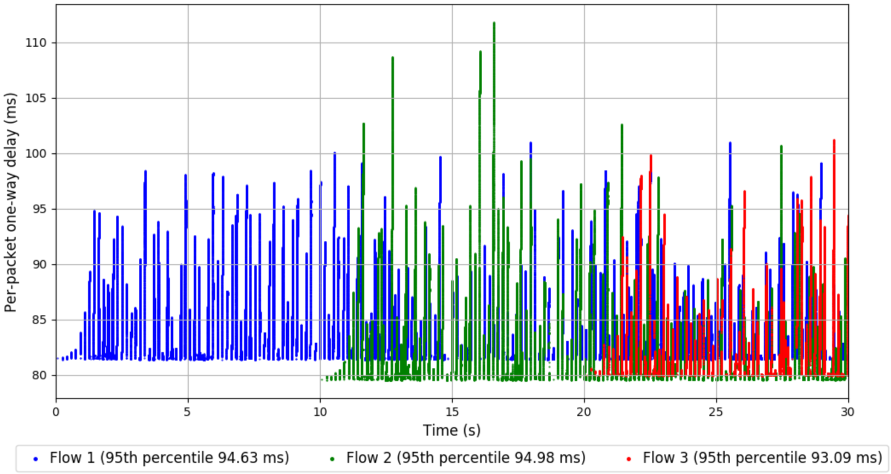




```
Run 10: Statistics of TCP BBR

Start at: 2017-12-12 02:33:55
End at: 2017-12-12 02:34:25
Local clock offset: -2.299 ms
Remote clock offset: -9.146 ms

# Below is generated by plot.py at 2017-12-12 03:41:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 139.01 Mbit/s
95th percentile per-packet one-way delay: 94.536 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 70.02 Mbit/s
95th percentile per-packet one-way delay: 94.632 ms
Loss rate: 0.14%
-- Flow 2:
Average throughput: 70.95 Mbit/s
95th percentile per-packet one-way delay: 94.984 ms
Loss rate: 0.14%
-- Flow 3:
Average throughput: 66.53 Mbit/s
95th percentile per-packet one-way delay: 93.095 ms
Loss rate: 0.44%
```

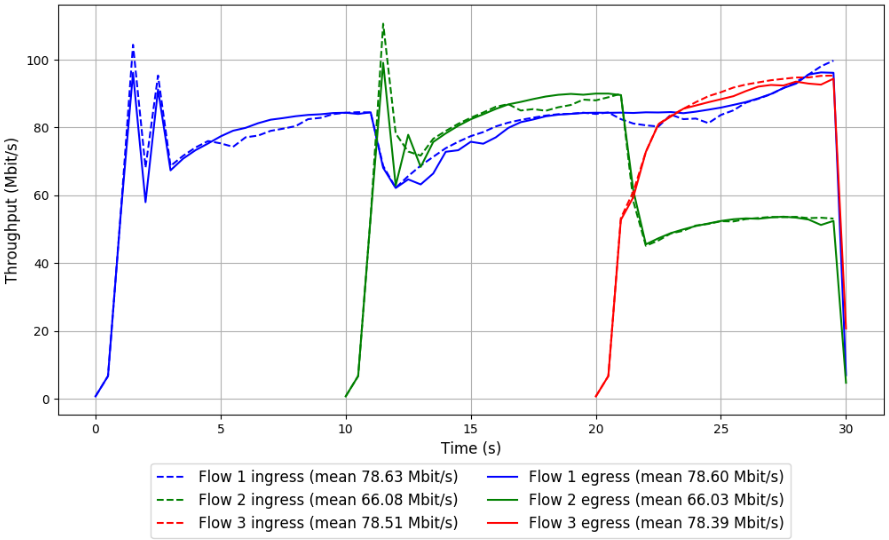
Run 10: Report of TCP BBR — Data Link

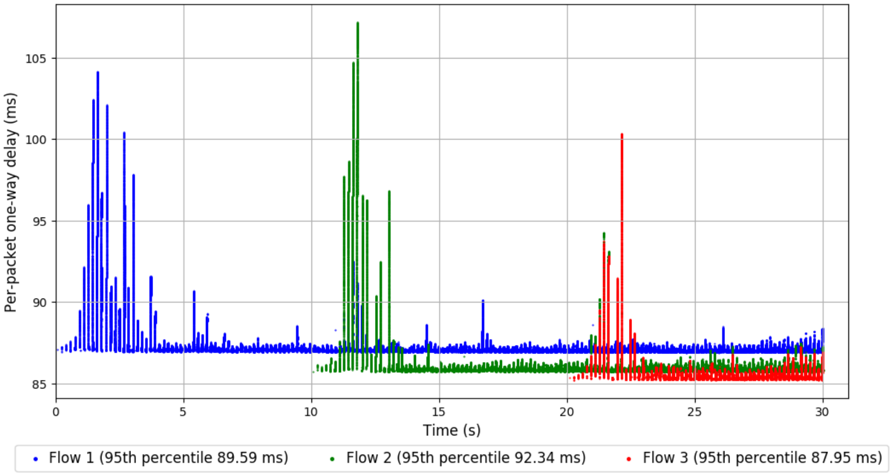




```
Run 1: Statistics of TCP Cubic

Start at: 2017-12-11 23:23:30
End at: 2017-12-11 23:24:00
Local clock offset: -1.096 ms
Remote clock offset: 1.12 ms

# Below is generated by plot.py at 2017-12-12 03:41:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.47 Mbit/s
95th percentile per-packet one-way delay: 89.933 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 78.60 Mbit/s
95th percentile per-packet one-way delay: 89.593 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 66.03 Mbit/s
95th percentile per-packet one-way delay: 92.339 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 78.39 Mbit/s
95th percentile per-packet one-way delay: 87.947 ms
Loss rate: 0.14%
```

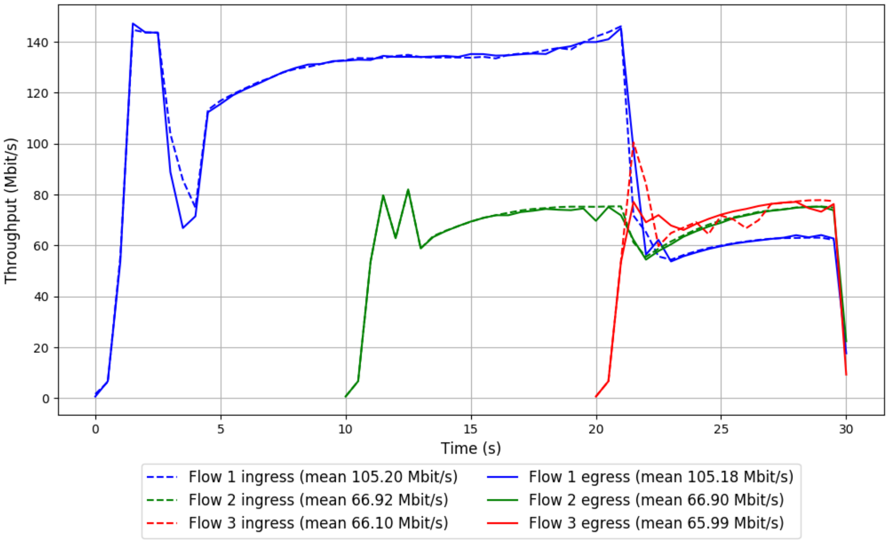
Run 1: Report of TCP Cubic — Data Link

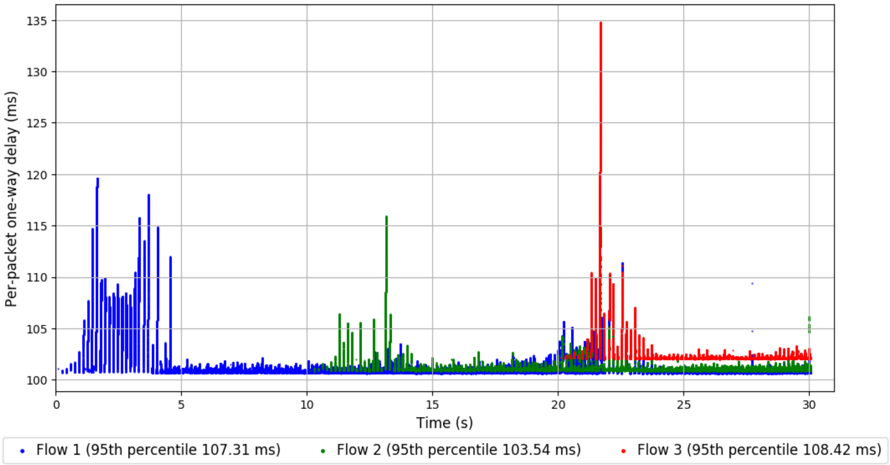




```
Run 2: Statistics of TCP Cubic

Start at: 2017-12-11 23:43:33
End at: 2017-12-11 23:44:03
Local clock offset: -2.124 ms
Remote clock offset: 16.976 ms

# Below is generated by plot.py at 2017-12-12 03:41:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.55 Mbit/s
95th percentile per-packet one-way delay: 106.789 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 105.18 Mbit/s
95th percentile per-packet one-way delay: 107.313 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 66.90 Mbit/s
95th percentile per-packet one-way delay: 103.544 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 65.99 Mbit/s
95th percentile per-packet one-way delay: 108.416 ms
Loss rate: 0.16%
```

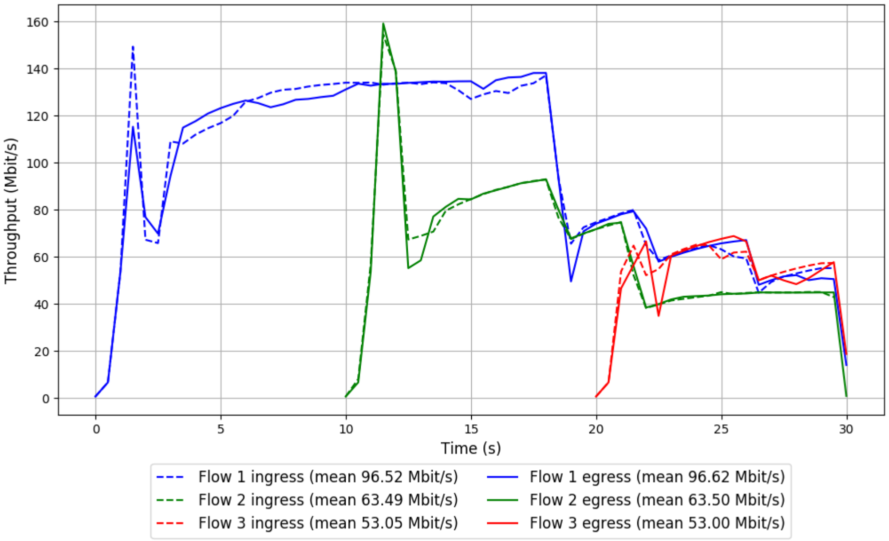
Run 2: Report of TCP Cubic — Data Link

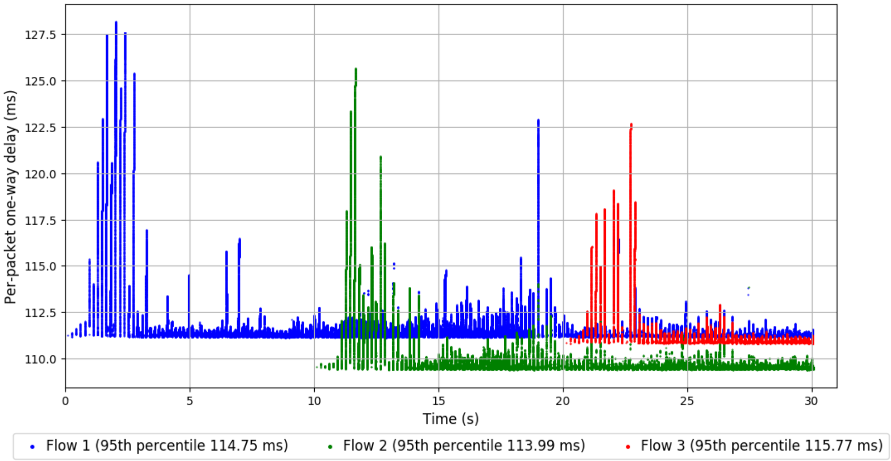




```
Run 3: Statistics of TCP Cubic

Start at: 2017-12-12 00:03:43
End at: 2017-12-12 00:04:13
Local clock offset: -1.954 ms
Remote clock offset: 25.532 ms

# Below is generated by plot.py at 2017-12-12 03:41:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 156.37 Mbit/s
95th percentile per-packet one-way delay: 114.620 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 96.62 Mbit/s
95th percentile per-packet one-way delay: 114.752 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 63.50 Mbit/s
95th percentile per-packet one-way delay: 113.988 ms
Loss rate: 0.05%
-- Flow 3:
Average throughput: 53.00 Mbit/s
95th percentile per-packet one-way delay: 115.774 ms
Loss rate: 0.10%
```

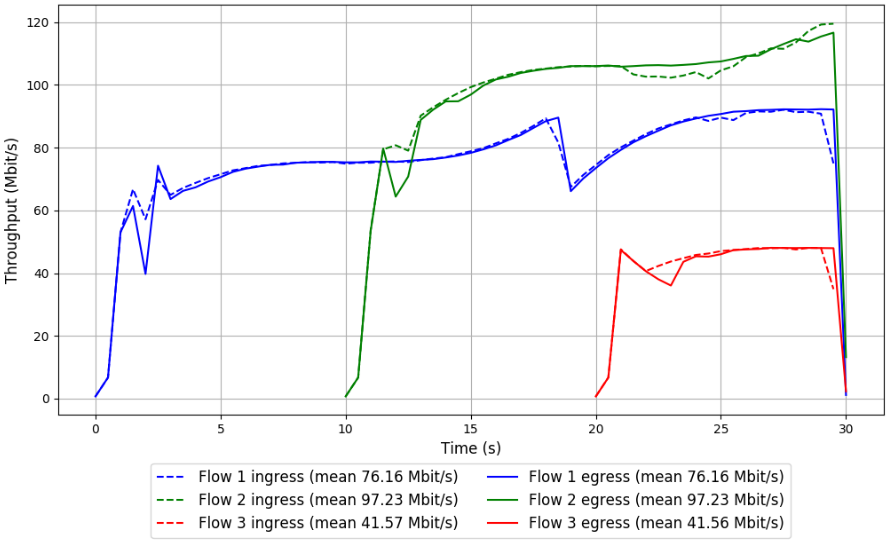
Run 3: Report of TCP Cubic — Data Link

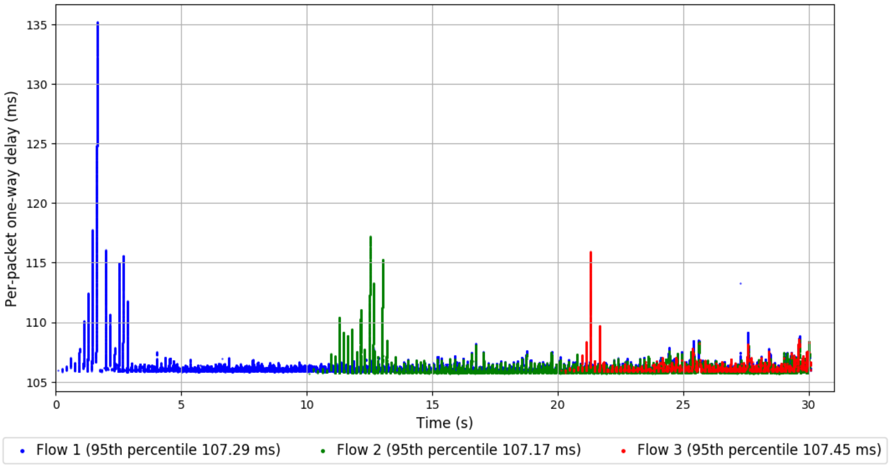




```
Run 4: Statistics of TCP Cubic

Start at: 2017-12-12 00:23:48
End at: 2017-12-12 00:24:18
Local clock offset: -2.561 ms
Remote clock offset: 21.241 ms

# Below is generated by plot.py at 2017-12-12 03:41:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 154.60 Mbit/s
95th percentile per-packet one-way delay: 107.247 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 76.16 Mbit/s
95th percentile per-packet one-way delay: 107.289 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 97.23 Mbit/s
95th percentile per-packet one-way delay: 107.173 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 41.56 Mbit/s
95th percentile per-packet one-way delay: 107.449 ms
Loss rate: 0.03%
```

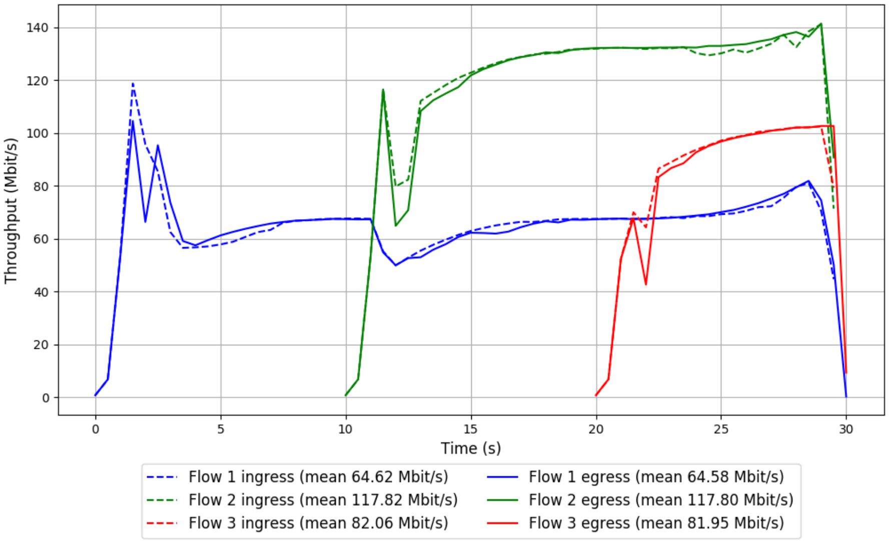
Run 4: Report of TCP Cubic — Data Link

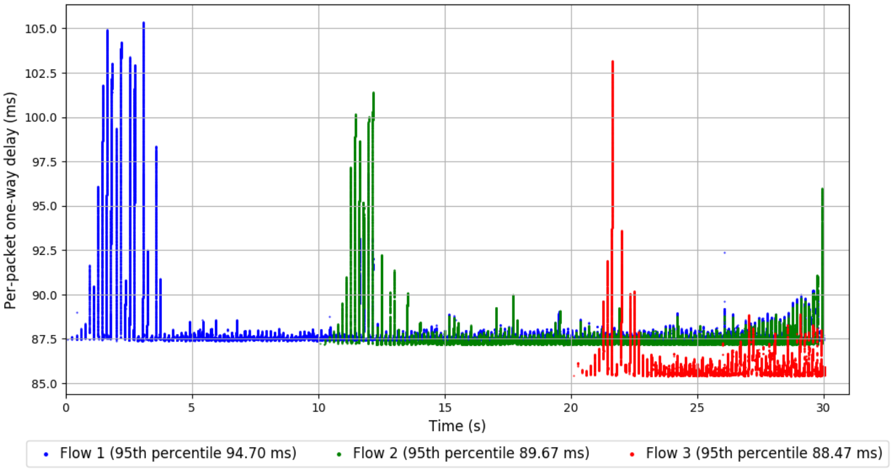




```
Run 5: Statistics of TCP Cubic

Start at: 2017-12-12 00:43:49
End at: 2017-12-12 00:44:19
Local clock offset: -3.252 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2017-12-12 03:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 169.94 Mbit/s
95th percentile per-packet one-way delay: 90.826 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 64.58 Mbit/s
95th percentile per-packet one-way delay: 94.701 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 117.80 Mbit/s
95th percentile per-packet one-way delay: 89.668 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 81.95 Mbit/s
95th percentile per-packet one-way delay: 88.468 ms
Loss rate: 0.14%
```

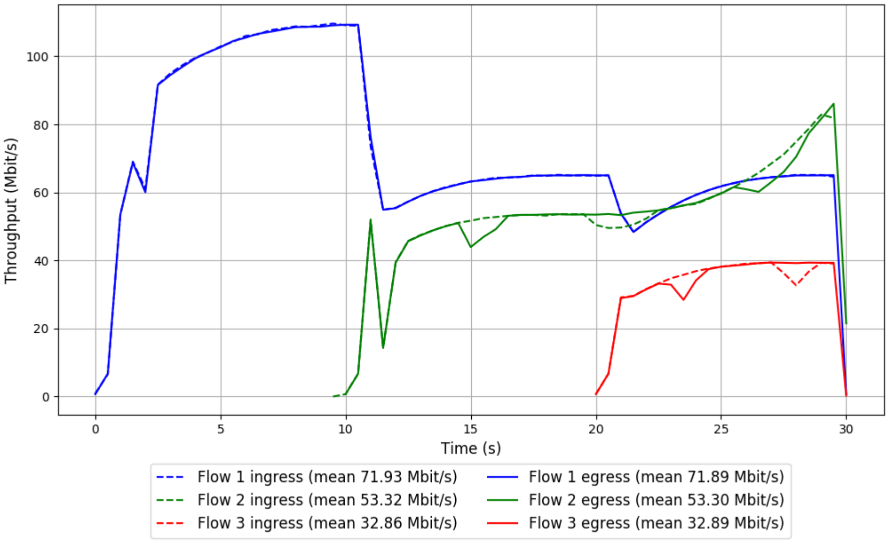
Run 5: Report of TCP Cubic — Data Link

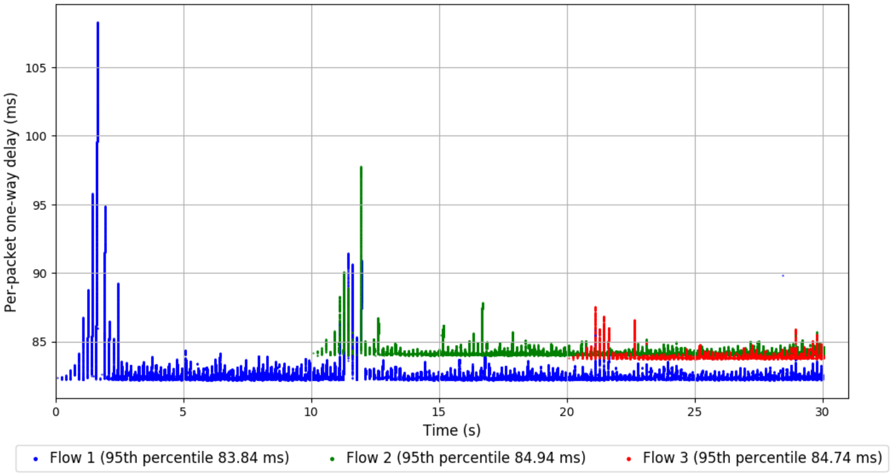




```
Run 6: Statistics of TCP Cubic

Start at: 2017-12-12 01:03:51
End at: 2017-12-12 01:04:21
Local clock offset: -3.319 ms
Remote clock offset: -3.851 ms

# Below is generated by plot.py at 2017-12-12 03:41:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.28 Mbit/s
95th percentile per-packet one-way delay: 84.696 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 71.89 Mbit/s
95th percentile per-packet one-way delay: 83.839 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 53.30 Mbit/s
95th percentile per-packet one-way delay: 84.941 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 32.89 Mbit/s
95th percentile per-packet one-way delay: 84.738 ms
Loss rate: 0.04%
```

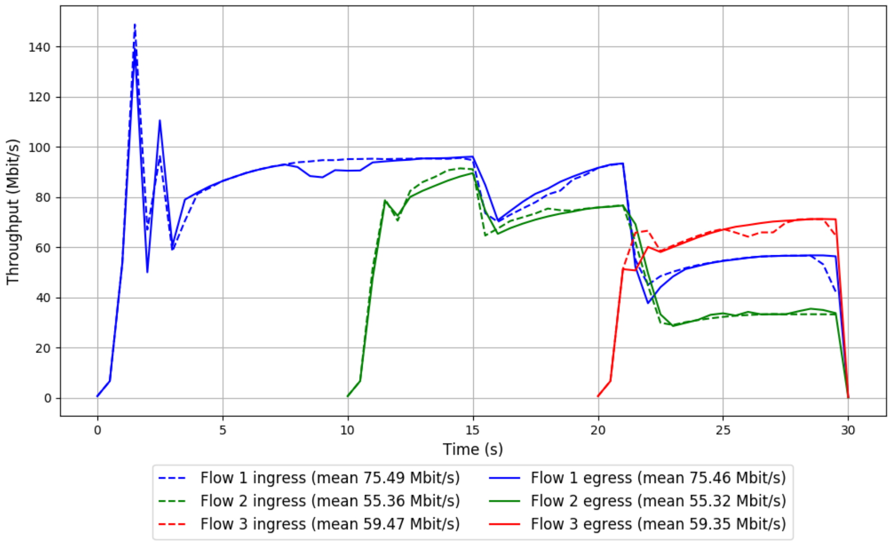
Run 6: Report of TCP Cubic — Data Link

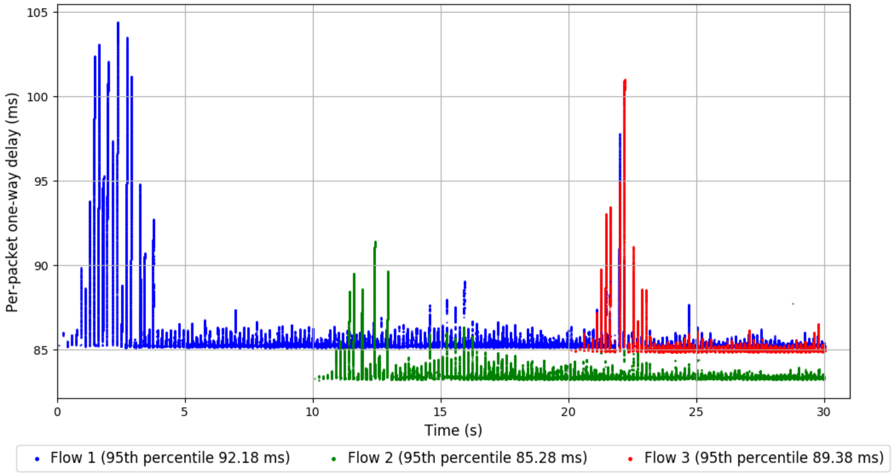




```
Run 7: Statistics of TCP Cubic

Start at: 2017-12-12 01:24:00
End at: 2017-12-12 01:24:30
Local clock offset: -2.818 ms
Remote clock offset: -3.371 ms

# Below is generated by plot.py at 2017-12-12 03:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 131.94 Mbit/s
95th percentile per-packet one-way delay: 89.045 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 75.46 Mbit/s
95th percentile per-packet one-way delay: 92.177 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 55.32 Mbit/s
95th percentile per-packet one-way delay: 85.285 ms
Loss rate: 0.08%
-- Flow 3:
Average throughput: 59.35 Mbit/s
95th percentile per-packet one-way delay: 89.378 ms
Loss rate: 0.20%
```

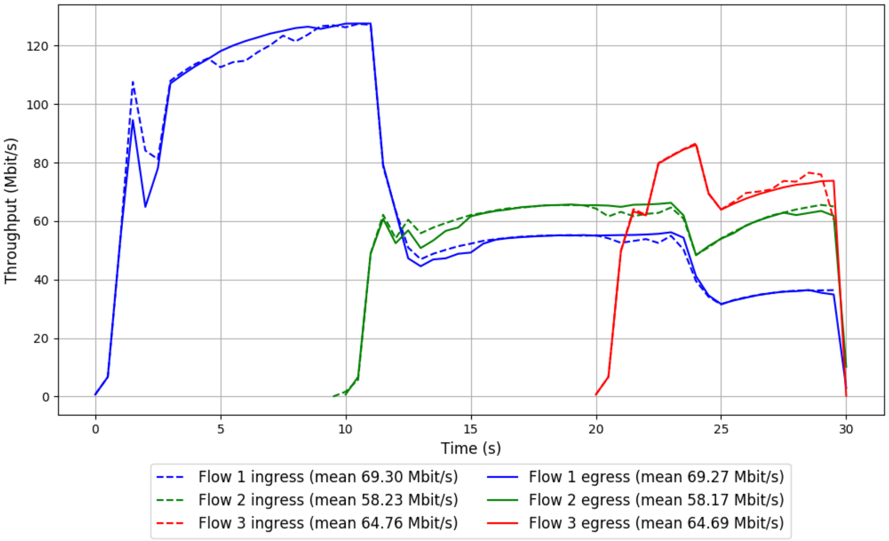
Run 7: Report of TCP Cubic — Data Link

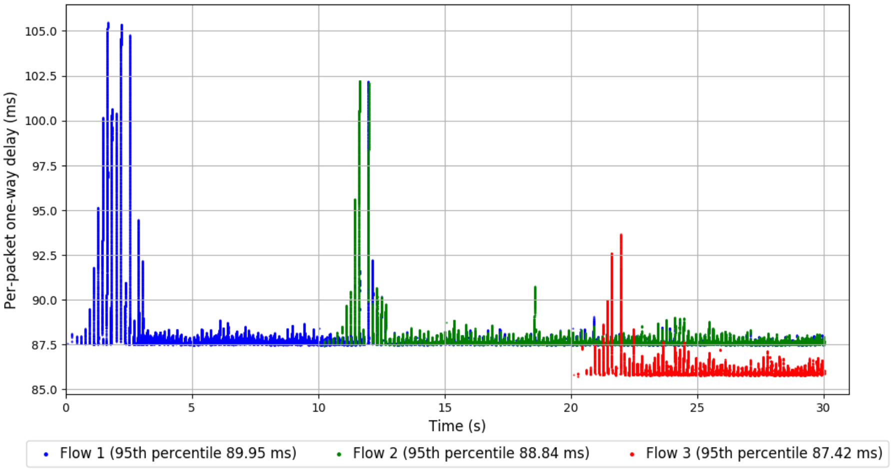




```
Run 8: Statistics of TCP Cubic

Start at: 2017-12-12 01:44:20
End at: 2017-12-12 01:44:50
Local clock offset: -2.939 ms
Remote clock offset: -0.917 ms

# Below is generated by plot.py at 2017-12-12 03:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 129.44 Mbit/s
95th percentile per-packet one-way delay: 89.000 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 69.27 Mbit/s
95th percentile per-packet one-way delay: 89.949 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 58.17 Mbit/s
95th percentile per-packet one-way delay: 88.845 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 64.69 Mbit/s
95th percentile per-packet one-way delay: 87.420 ms
Loss rate: 0.10%
```

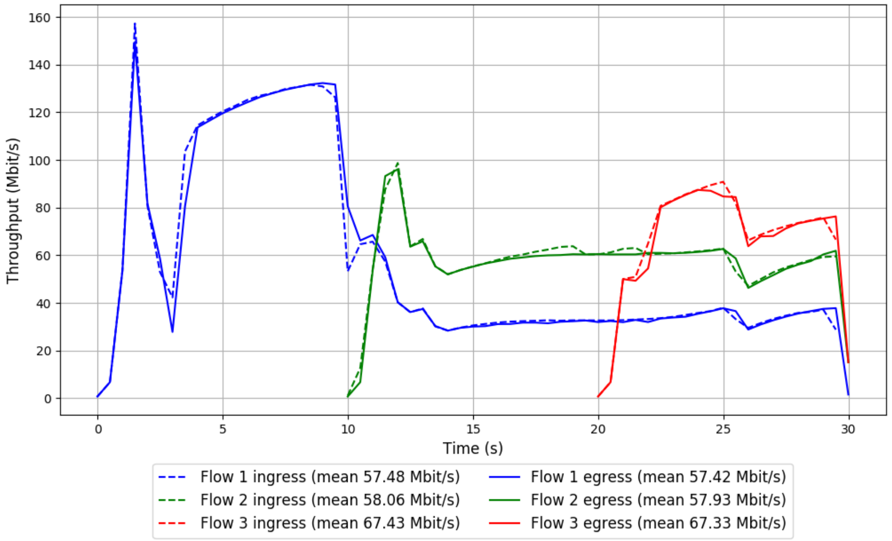
Run 8: Report of TCP Cubic — Data Link

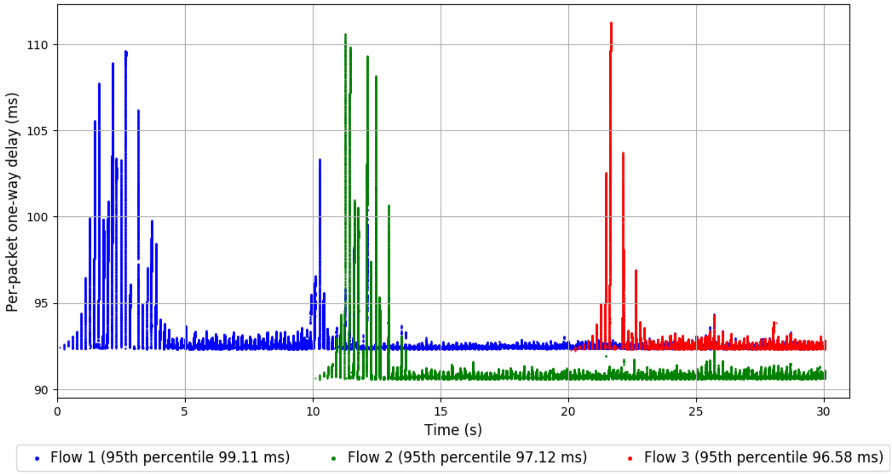




```
Run 9: Statistics of TCP Cubic

Start at: 2017-12-12 02:04:30
End at: 2017-12-12 02:05:00
Local clock offset: -3.478 ms
Remote clock offset: 2.809 ms

# Below is generated by plot.py at 2017-12-12 03:43:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 118.33 Mbit/s
95th percentile per-packet one-way delay: 98.306 ms
Loss rate: 0.15%
-- Flow 1:
Average throughput: 57.42 Mbit/s
95th percentile per-packet one-way delay: 99.114 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 57.93 Mbit/s
95th percentile per-packet one-way delay: 97.119 ms
Loss rate: 0.22%
-- Flow 3:
Average throughput: 67.33 Mbit/s
95th percentile per-packet one-way delay: 96.578 ms
Loss rate: 0.15%
```

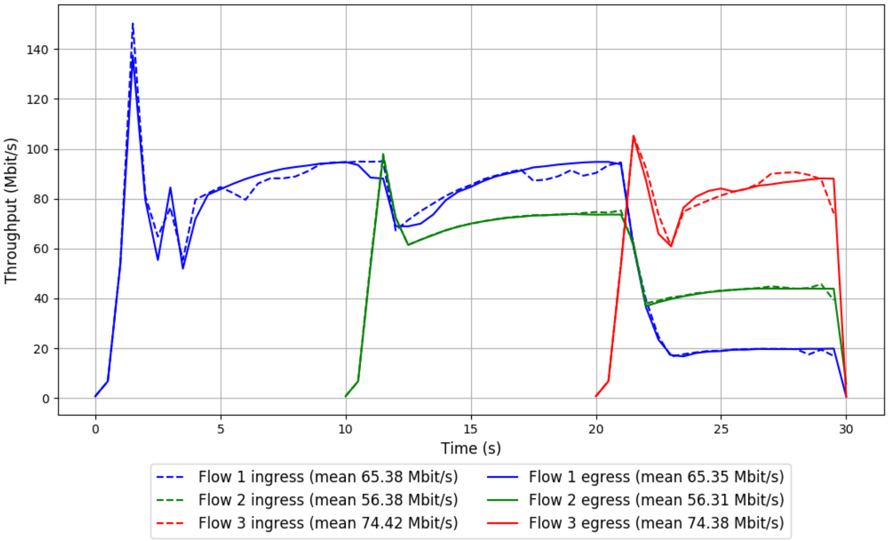
Run 9: Report of TCP Cubic — Data Link

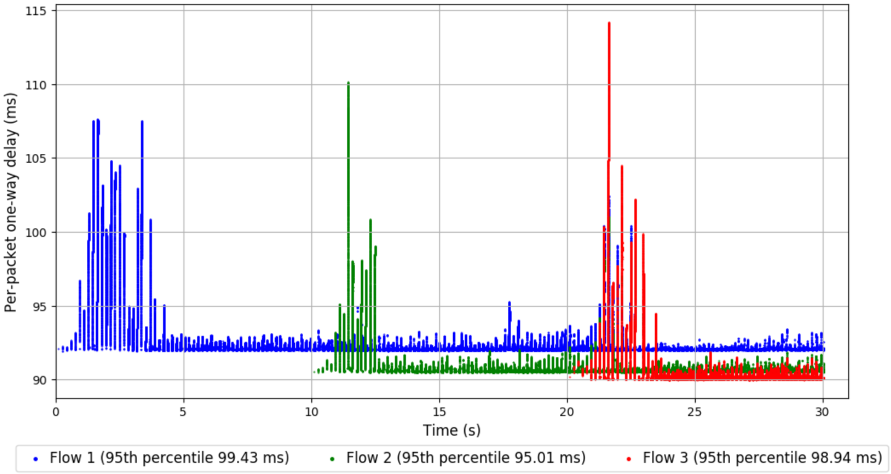




```
Run 10: Statistics of TCP Cubic

Start at: 2017-12-12 02:24:37
End at: 2017-12-12 02:25:07
Local clock offset: -2.67 ms
Remote clock offset: 1.887 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 127.55 Mbit/s
95th percentile per-packet one-way delay: 98.392 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 65.35 Mbit/s
95th percentile per-packet one-way delay: 99.426 ms
Loss rate: 0.04%
-- Flow 2:
Average throughput: 56.31 Mbit/s
95th percentile per-packet one-way delay: 95.008 ms
Loss rate: 0.11%
-- Flow 3:
Average throughput: 74.38 Mbit/s
95th percentile per-packet one-way delay: 98.940 ms
Loss rate: 0.07%
```

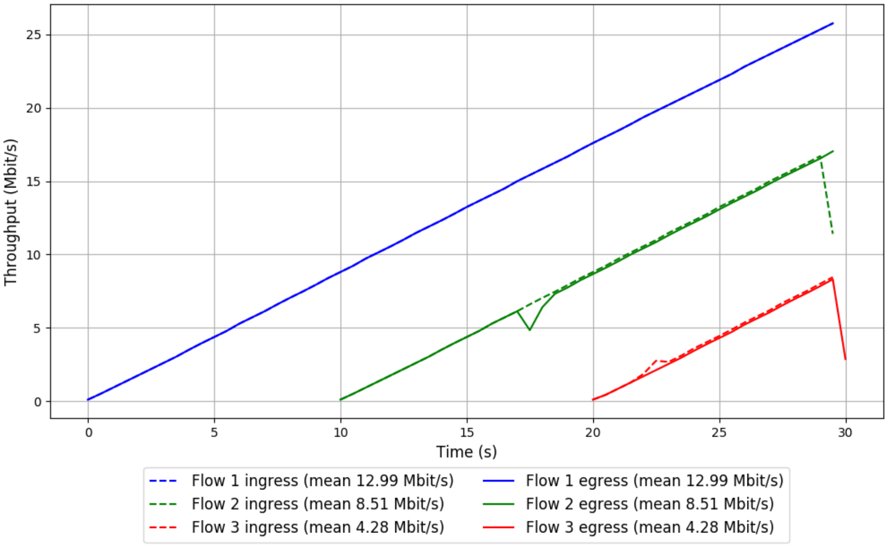
Run 10: Report of TCP Cubic — Data Link

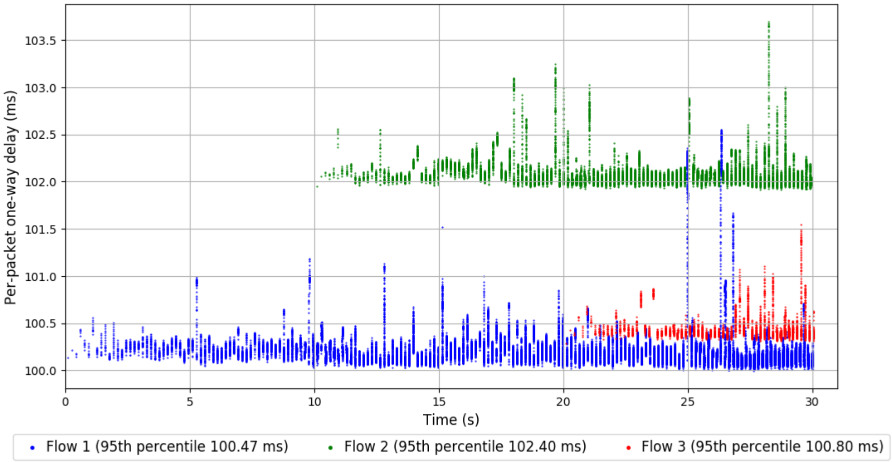




```
Run 1: Statistics of LEDBAT

Start at: 2017-12-11 23:22:14
End at: 2017-12-11 23:22:44
Local clock offset: -1.035 ms
Remote clock offset: 16.154 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.02 Mbit/s
95th percentile per-packet one-way delay: 102.163 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 100.466 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.51 Mbit/s
95th percentile per-packet one-way delay: 102.400 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 100.799 ms
Loss rate: 0.00%
```

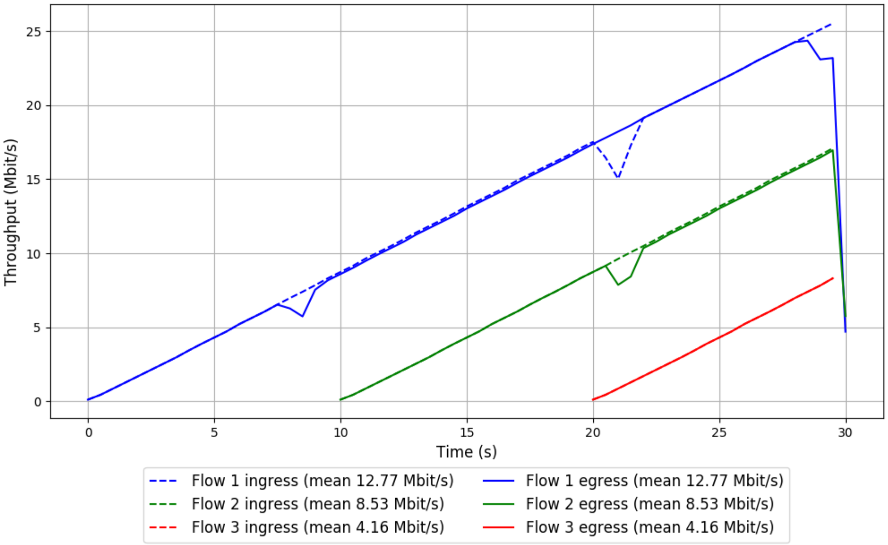
Run 1: Report of LEDBAT — Data Link

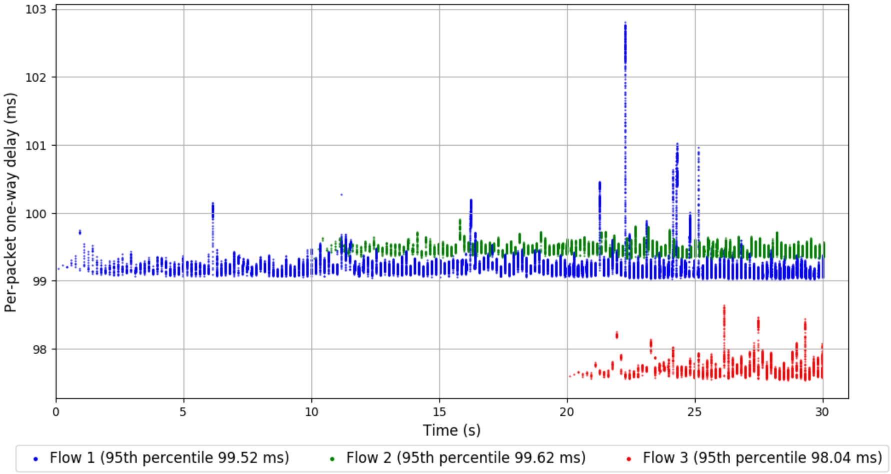




```
Run 2: Statistics of LEDBAT

Start at: 2017-12-11 23:42:17
End at: 2017-12-11 23:42:47
Local clock offset: -2.133 ms
Remote clock offset: 13.583 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.81 Mbit/s
95th percentile per-packet one-way delay: 99.590 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.77 Mbit/s
95th percentile per-packet one-way delay: 99.522 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.53 Mbit/s
95th percentile per-packet one-way delay: 99.618 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 98.041 ms
Loss rate: 0.00%
```

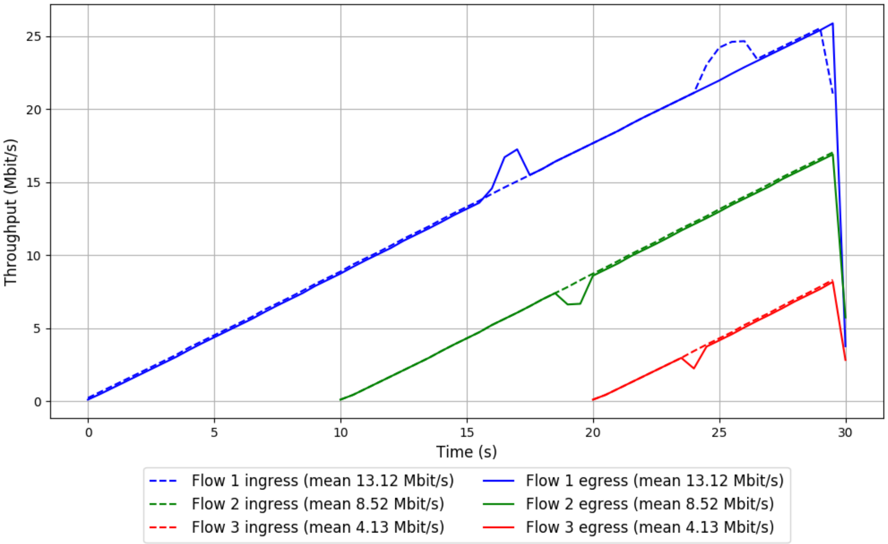
Run 2: Report of LEDBAT — Data Link

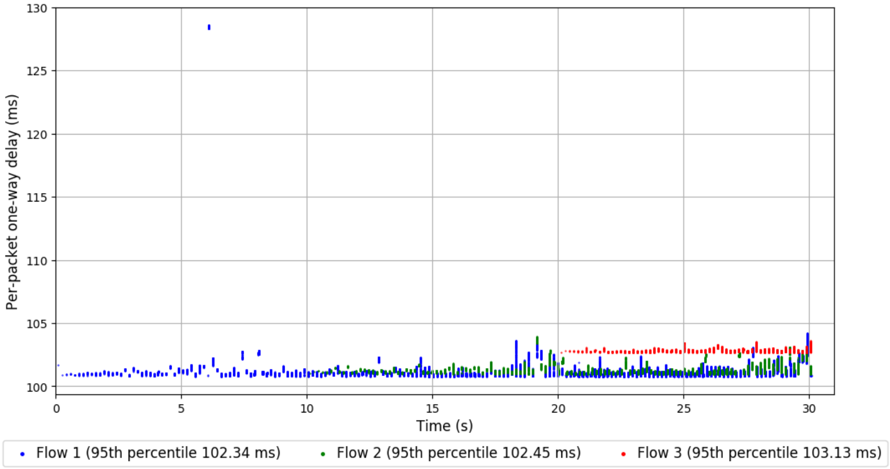




```
Run 3: Statistics of LEDBAT

Start at: 2017-12-12 00:02:27
End at: 2017-12-12 00:02:57
Local clock offset: -1.965 ms
Remote clock offset: 17.152 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.16 Mbit/s
95th percentile per-packet one-way delay: 102.796 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 13.12 Mbit/s
95th percentile per-packet one-way delay: 102.340 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.52 Mbit/s
95th percentile per-packet one-way delay: 102.449 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.13 Mbit/s
95th percentile per-packet one-way delay: 103.126 ms
Loss rate: 0.00%
```

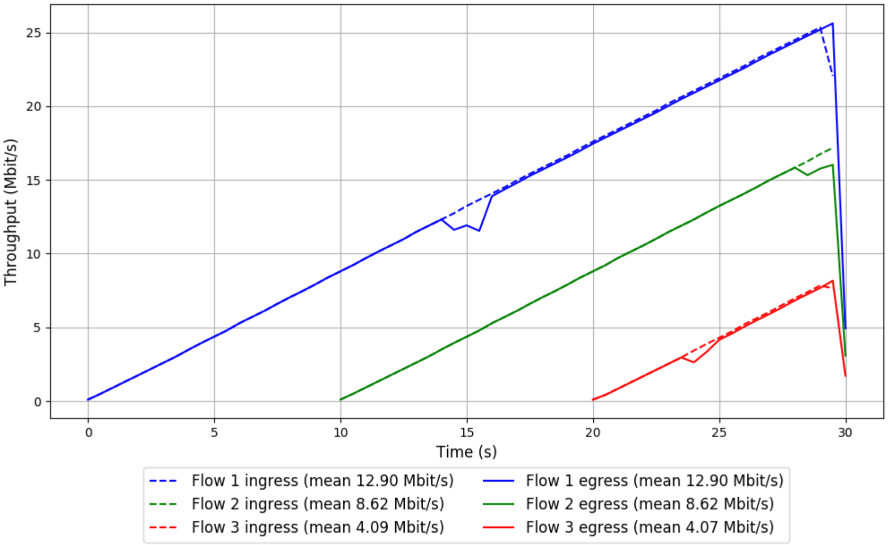
Run 3: Report of LEDBAT — Data Link

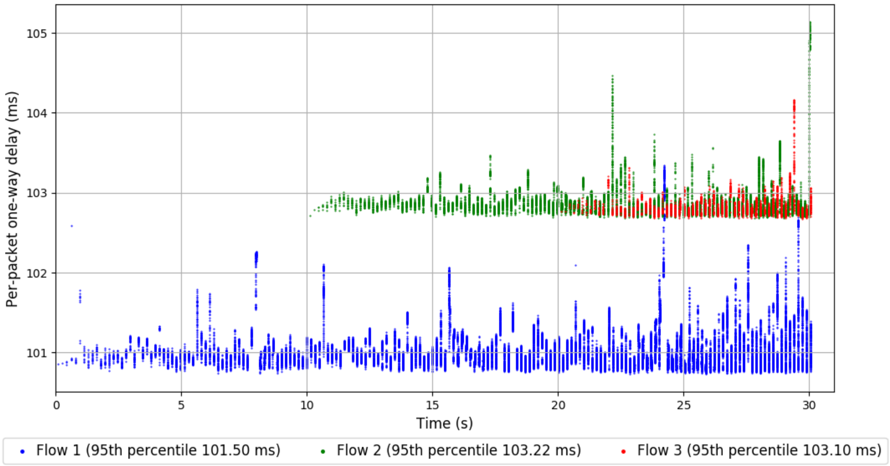




```
Run 4: Statistics of LEDBAT

Start at: 2017-12-12 00:22:32
End at: 2017-12-12 00:23:02
Local clock offset: -2.646 ms
Remote clock offset: 16.225 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.97 Mbit/s
95th percentile per-packet one-way delay: 102.971 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 12.90 Mbit/s
95th percentile per-packet one-way delay: 101.503 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.62 Mbit/s
95th percentile per-packet one-way delay: 103.218 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.07 Mbit/s
95th percentile per-packet one-way delay: 103.097 ms
Loss rate: 0.55%
```

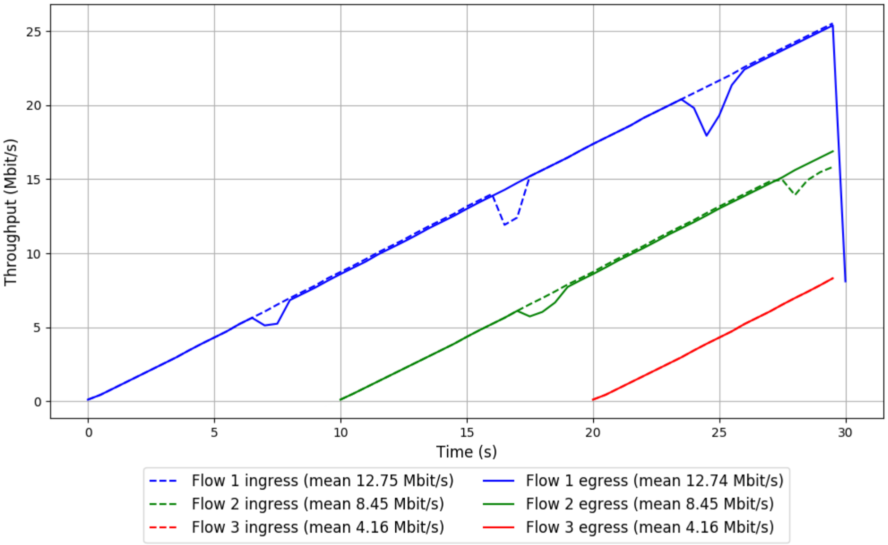
Run 4: Report of LEDBAT — Data Link

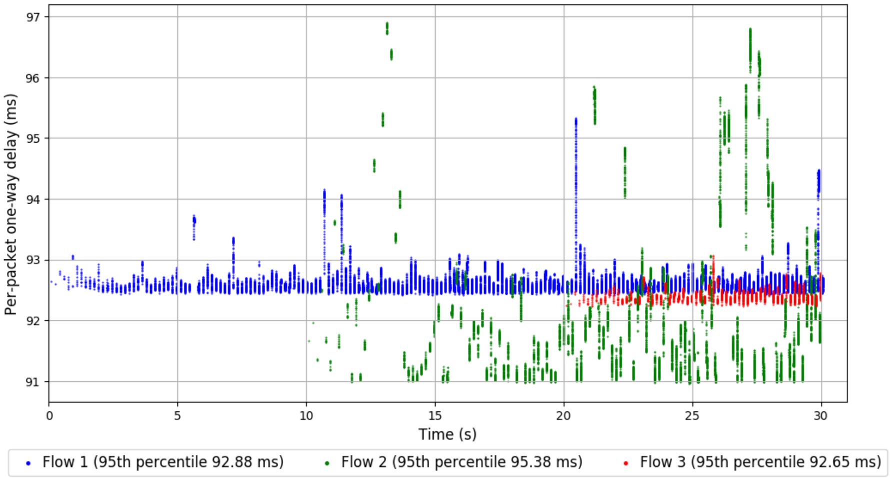




```
Run 5: Statistics of LEDBAT

Start at: 2017-12-12 00:42:33
End at: 2017-12-12 00:43:03
Local clock offset: -3.117 ms
Remote clock offset: 5.685 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.71 Mbit/s
95th percentile per-packet one-way delay: 93.652 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 12.74 Mbit/s
95th percentile per-packet one-way delay: 92.877 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 95.380 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.16 Mbit/s
95th percentile per-packet one-way delay: 92.647 ms
Loss rate: 0.00%
```

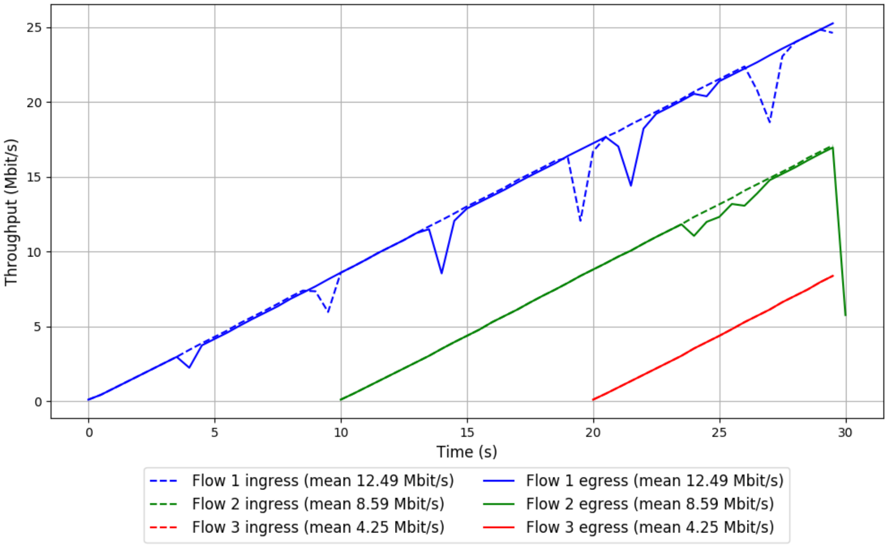
Run 5: Report of LEDBAT — Data Link

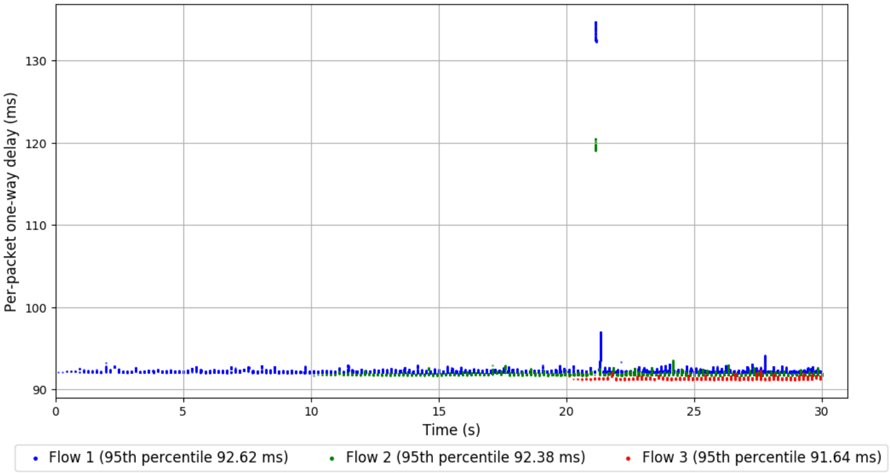




```
Run 6: Statistics of LEDBAT

Start at: 2017-12-12 01:02:35
End at: 2017-12-12 01:03:05
Local clock offset: -3.388 ms
Remote clock offset: 3.947 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.59 Mbit/s
95th percentile per-packet one-way delay: 92.533 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.49 Mbit/s
95th percentile per-packet one-way delay: 92.621 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 92.377 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 91.639 ms
Loss rate: 0.00%
```

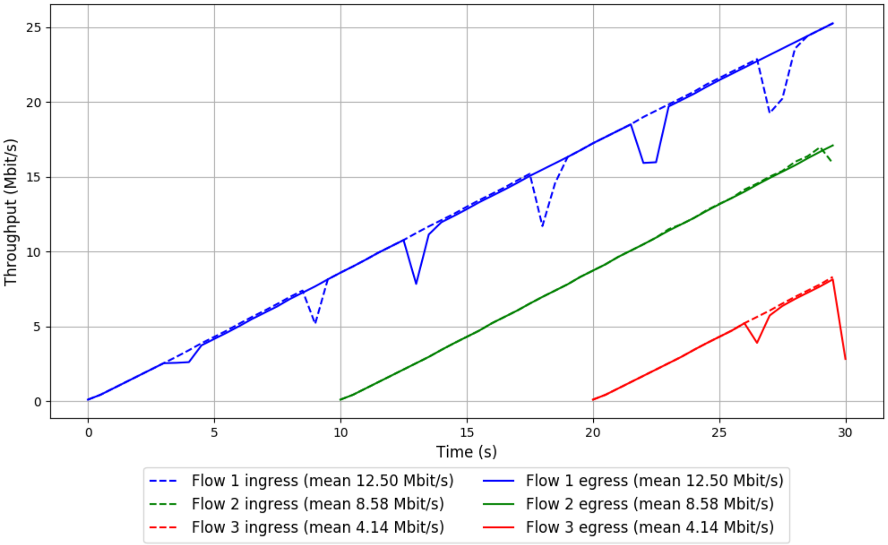
Run 6: Report of LEDBAT — Data Link

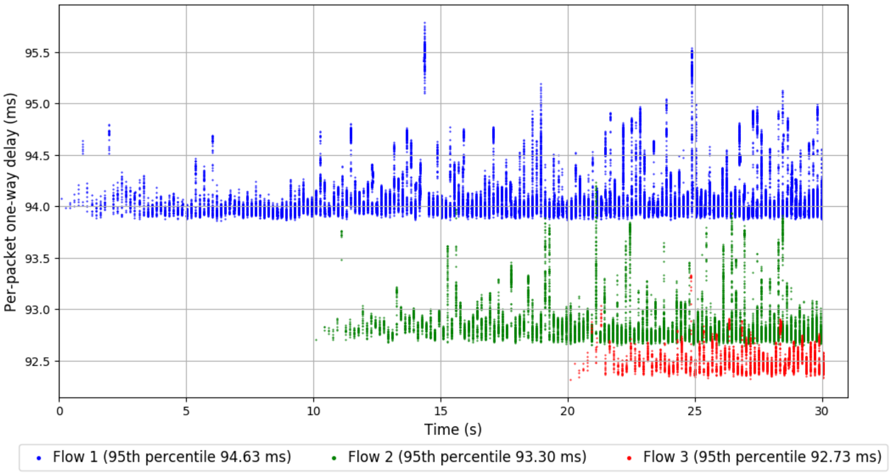




```
Run 7: Statistics of LEDBAT

Start at: 2017-12-12 01:22:44
End at: 2017-12-12 01:23:14
Local clock offset: -2.774 ms
Remote clock offset: 6.022 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.54 Mbit/s
95th percentile per-packet one-way delay: 94.451 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.50 Mbit/s
95th percentile per-packet one-way delay: 94.629 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.58 Mbit/s
95th percentile per-packet one-way delay: 93.297 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 92.734 ms
Loss rate: 0.00%
```

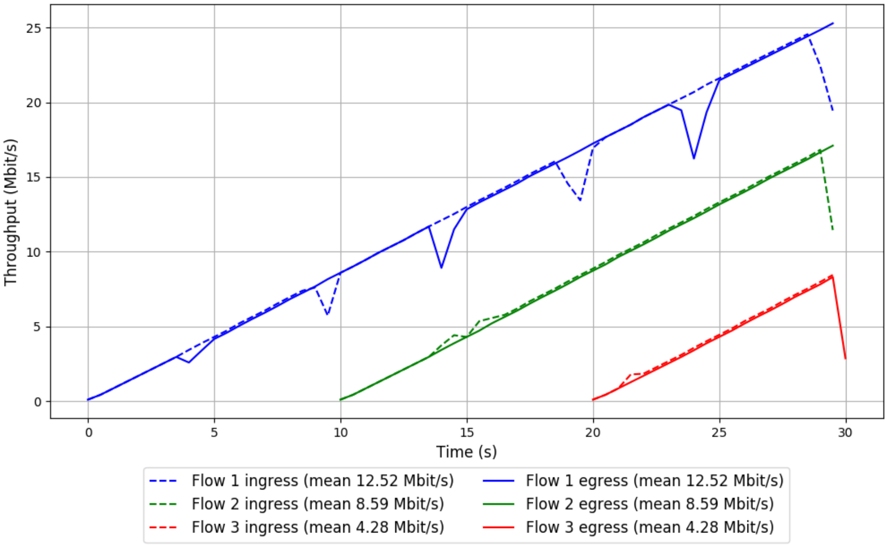
Run 7: Report of LEDBAT — Data Link

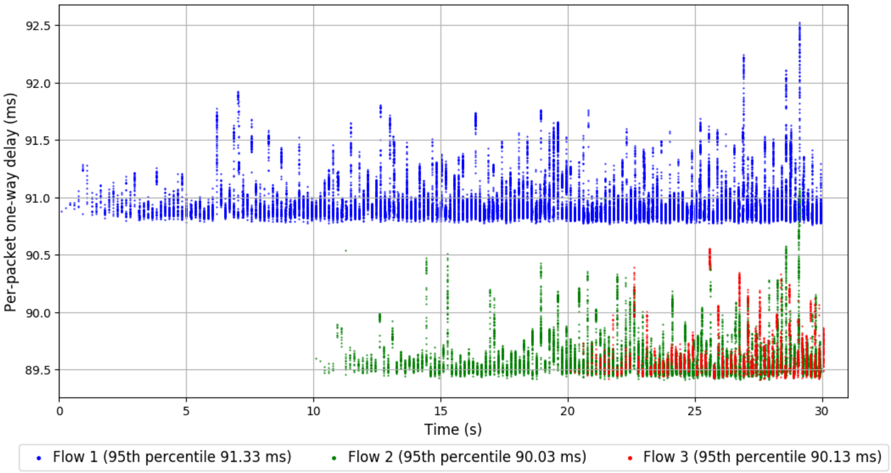




```
Run 8: Statistics of LEDBAT

Start at: 2017-12-12 01:43:04
End at: 2017-12-12 01:43:34
Local clock offset: -2.937 ms
Remote clock offset: 2.699 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.58 Mbit/s
95th percentile per-packet one-way delay: 91.220 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.52 Mbit/s
95th percentile per-packet one-way delay: 91.335 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.59 Mbit/s
95th percentile per-packet one-way delay: 90.031 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.28 Mbit/s
95th percentile per-packet one-way delay: 90.131 ms
Loss rate: 0.00%
```

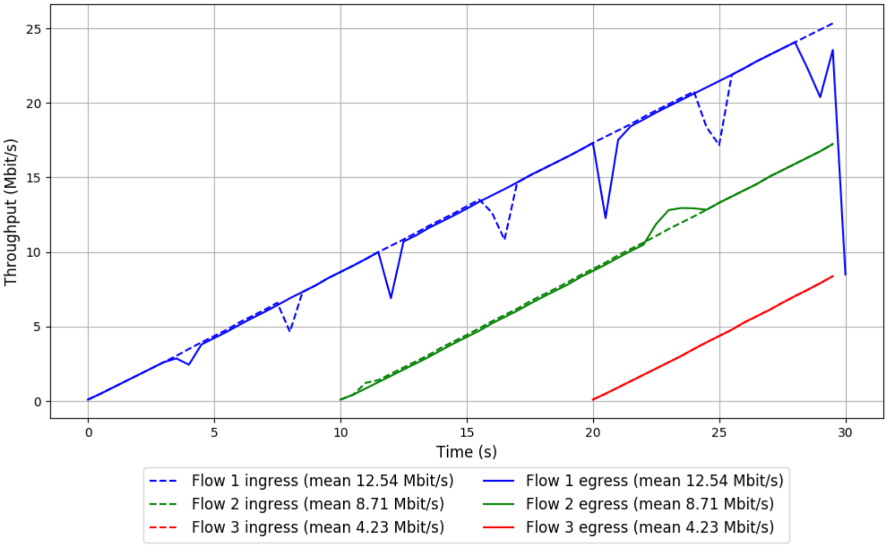
Run 8: Report of LEDBAT — Data Link

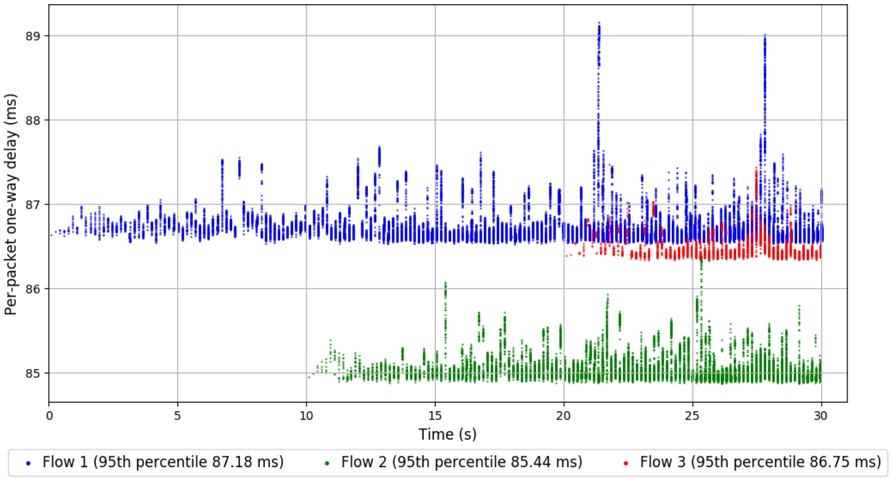




```
Run 9: Statistics of LEDBAT

Start at: 2017-12-12 02:03:14
End at: 2017-12-12 02:03:44
Local clock offset: -3.374 ms
Remote clock offset: -3.05 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.72 Mbit/s
95th percentile per-packet one-way delay: 87.067 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.54 Mbit/s
95th percentile per-packet one-way delay: 87.181 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.71 Mbit/s
95th percentile per-packet one-way delay: 85.445 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.23 Mbit/s
95th percentile per-packet one-way delay: 86.753 ms
Loss rate: 0.00%
```

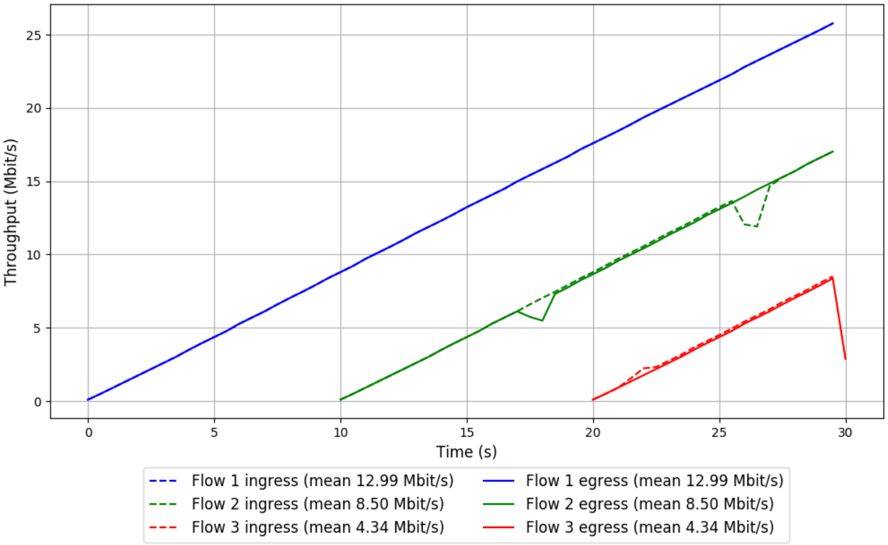
Run 9: Report of LEDBAT — Data Link

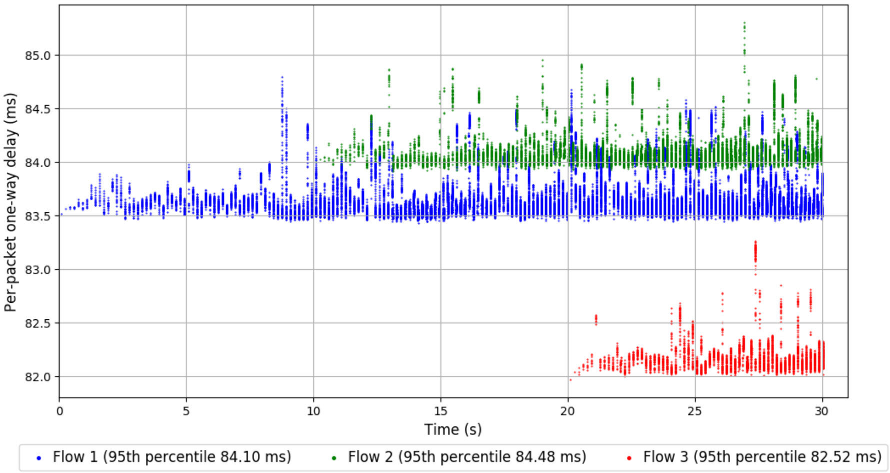




```
Run 10: Statistics of LEDBAT

Start at: 2017-12-12 02:23:21
End at: 2017-12-12 02:23:51
Local clock offset: -2.739 ms
Remote clock offset: -6.321 ms

# Below is generated by plot.py at 2017-12-12 03:43:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 20.05 Mbit/s
95th percentile per-packet one-way delay: 84.230 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 12.99 Mbit/s
95th percentile per-packet one-way delay: 84.096 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 84.481 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.34 Mbit/s
95th percentile per-packet one-way delay: 82.516 ms
Loss rate: 0.00%
```

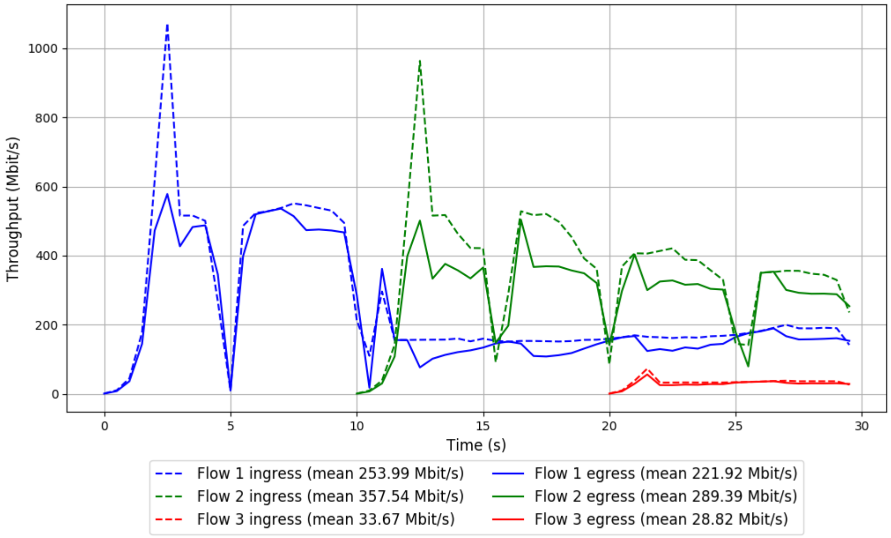
Run 10: Report of LEDBAT — Data Link

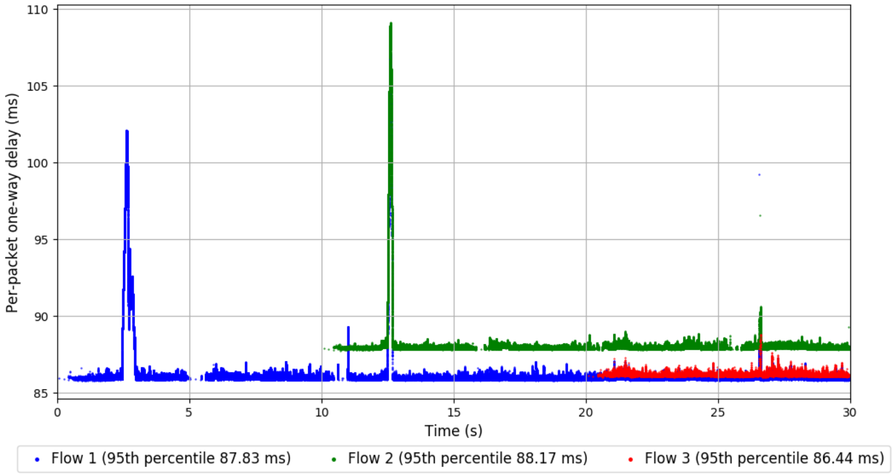




```
Run 1: Statistics of PCC

Start at: 2017-12-11 23:34:06
End at: 2017-12-11 23:34:36
Local clock offset: -1.69 ms
Remote clock offset: 1.999 ms

# Below is generated by plot.py at 2017-12-12 03:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 423.78 Mbit/s
95th percentile per-packet one-way delay: 88.159 ms
Loss rate: 15.71%
-- Flow 1:
Average throughput: 221.92 Mbit/s
95th percentile per-packet one-way delay: 87.830 ms
Loss rate: 12.63%
-- Flow 2:
Average throughput: 289.39 Mbit/s
95th percentile per-packet one-way delay: 88.169 ms
Loss rate: 19.06%
-- Flow 3:
Average throughput: 28.82 Mbit/s
95th percentile per-packet one-way delay: 86.441 ms
Loss rate: 14.40%
```

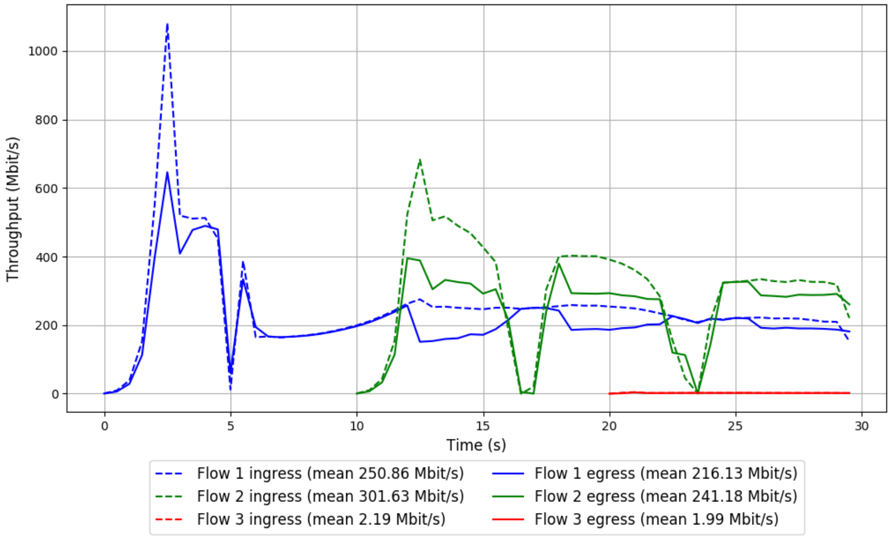
Run 1: Report of PCC — Data Link

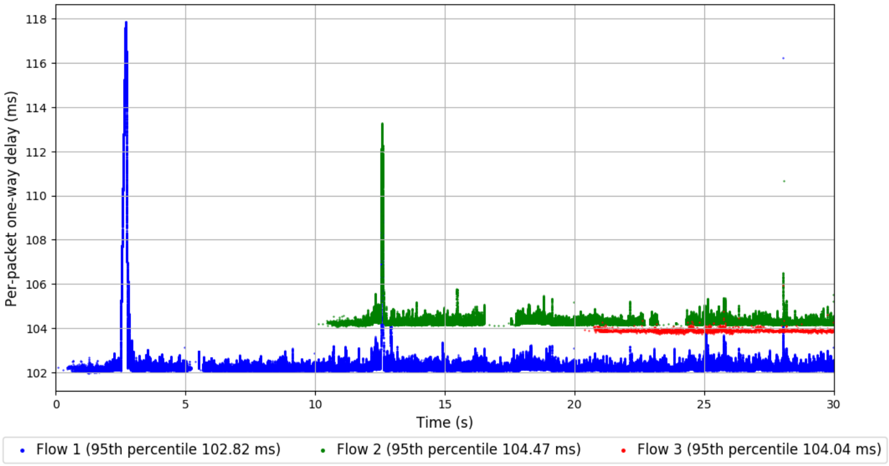




```
Run 2: Statistics of PCC

Start at: 2017-12-11 23:54:14
End at: 2017-12-11 23:54:44
Local clock offset: -2.089 ms
Remote clock offset: 18.357 ms

# Below is generated by plot.py at 2017-12-12 03:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 377.07 Mbit/s
95th percentile per-packet one-way delay: 104.447 ms
Loss rate: 16.59%
-- Flow 1:
Average throughput: 216.13 Mbit/s
95th percentile per-packet one-way delay: 102.816 ms
Loss rate: 13.84%
-- Flow 2:
Average throughput: 241.18 Mbit/s
95th percentile per-packet one-way delay: 104.475 ms
Loss rate: 20.05%
-- Flow 3:
Average throughput: 1.99 Mbit/s
95th percentile per-packet one-way delay: 104.042 ms
Loss rate: 11.66%
```

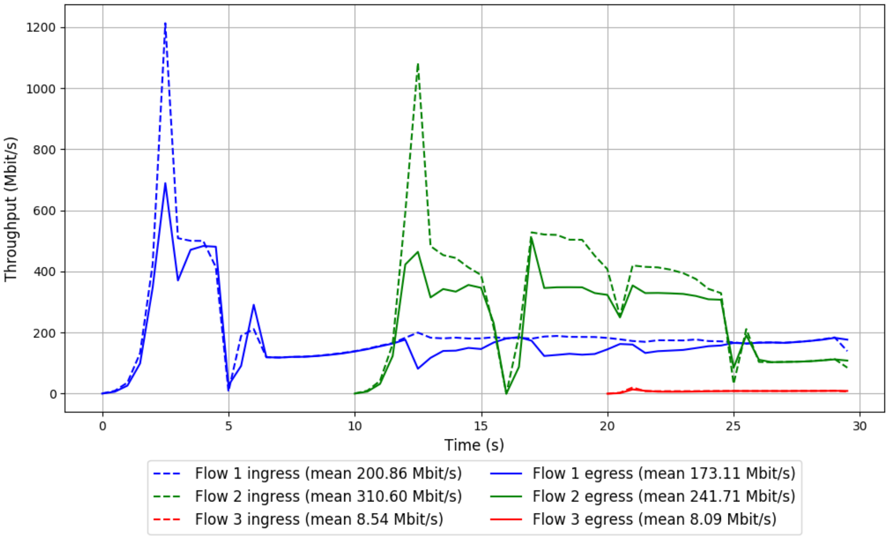
Run 2: Report of PCC — Data Link

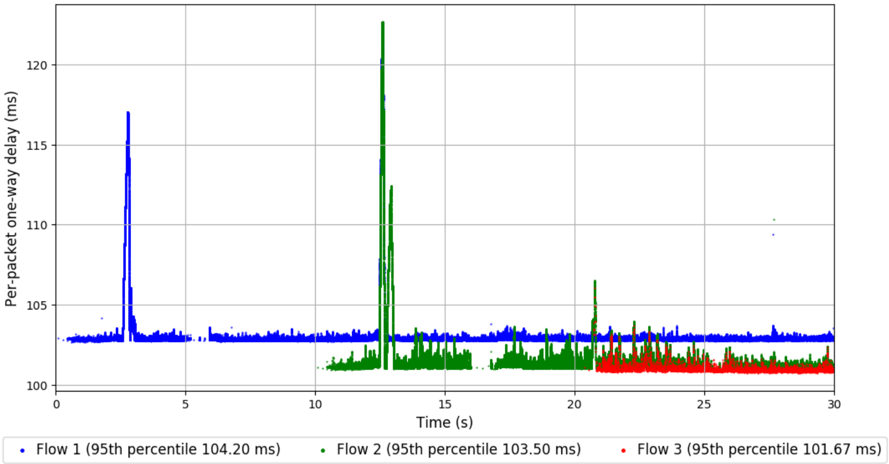




```
Run 3: Statistics of PCC

Start at: 2017-12-12 00:14:29
End at: 2017-12-12 00:14:59
Local clock offset: -2.347 ms
Remote clock offset: 16.947 ms

# Below is generated by plot.py at 2017-12-12 03:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 336.45 Mbit/s
95th percentile per-packet one-way delay: 103.863 ms
Loss rate: 17.99%
-- Flow 1:
Average throughput: 173.11 Mbit/s
95th percentile per-packet one-way delay: 104.205 ms
Loss rate: 13.82%
-- Flow 2:
Average throughput: 241.71 Mbit/s
95th percentile per-packet one-way delay: 103.500 ms
Loss rate: 22.18%
-- Flow 3:
Average throughput: 8.09 Mbit/s
95th percentile per-packet one-way delay: 101.669 ms
Loss rate: 7.63%
```

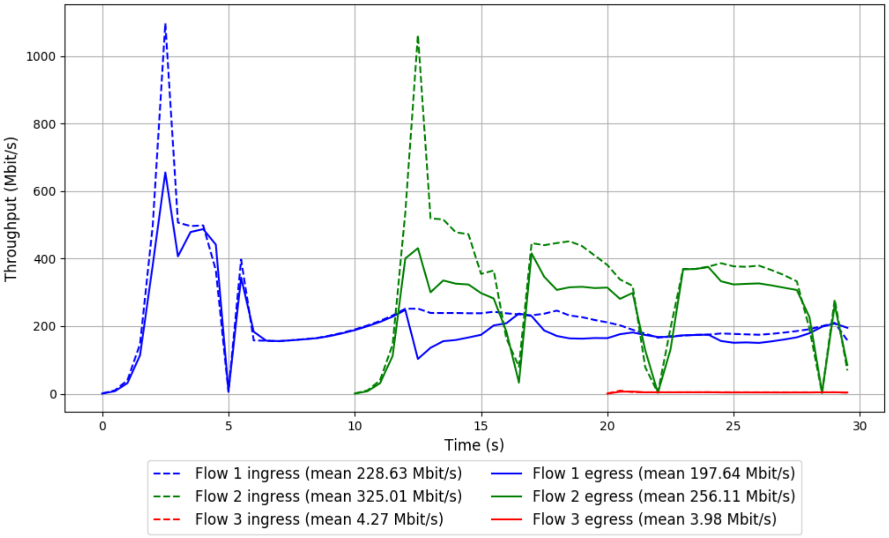
Run 3: Report of PCC — Data Link

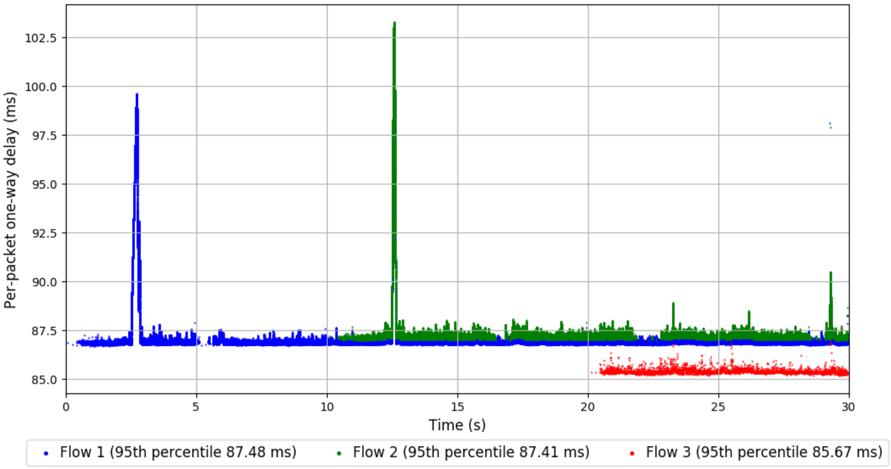




```
Run 4: Statistics of PCC

Start at: 2017-12-12 00:34:27
End at: 2017-12-12 00:34:57
Local clock offset: -2.874 ms
Remote clock offset: 0.244 ms

# Below is generated by plot.py at 2017-12-12 03:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 369.27 Mbit/s
95th percentile per-packet one-way delay: 87.414 ms
Loss rate: 17.24%
-- Flow 1:
Average throughput: 197.64 Mbit/s
95th percentile per-packet one-way delay: 87.483 ms
Loss rate: 13.56%
-- Flow 2:
Average throughput: 256.11 Mbit/s
95th percentile per-packet one-way delay: 87.410 ms
Loss rate: 21.20%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 85.668 ms
Loss rate: 6.83%
```

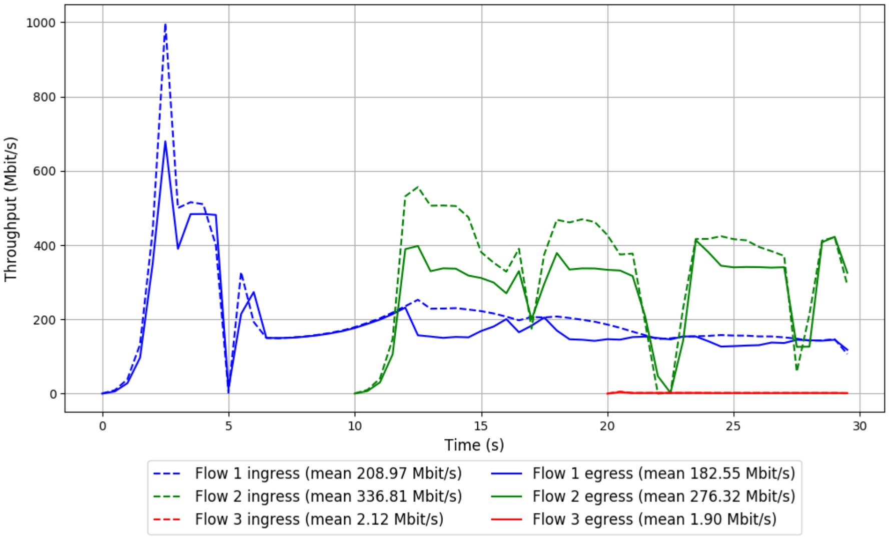
Run 4: Report of PCC — Data Link

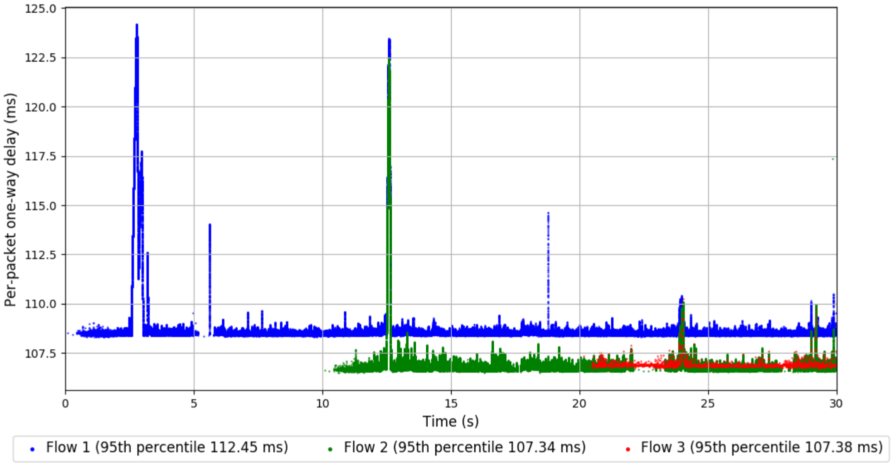




```
Run 5: Statistics of PCC

Start at: 2017-12-12 00:54:26
End at: 2017-12-12 00:54:57
Local clock offset: -3.694 ms
Remote clock offset: 21.028 ms

# Below is generated by plot.py at 2017-12-12 03:49:08
# Datalink statistics
-- Total of 3 flows:
Average throughput: 366.96 Mbit/s
95th percentile per-packet one-way delay: 108.752 ms
Loss rate: 15.39%
-- Flow 1:
Average throughput: 182.55 Mbit/s
95th percentile per-packet one-way delay: 112.448 ms
Loss rate: 12.64%
-- Flow 2:
Average throughput: 276.32 Mbit/s
95th percentile per-packet one-way delay: 107.338 ms
Loss rate: 17.96%
-- Flow 3:
Average throughput: 1.90 Mbit/s
95th percentile per-packet one-way delay: 107.375 ms
Loss rate: 10.18%
```

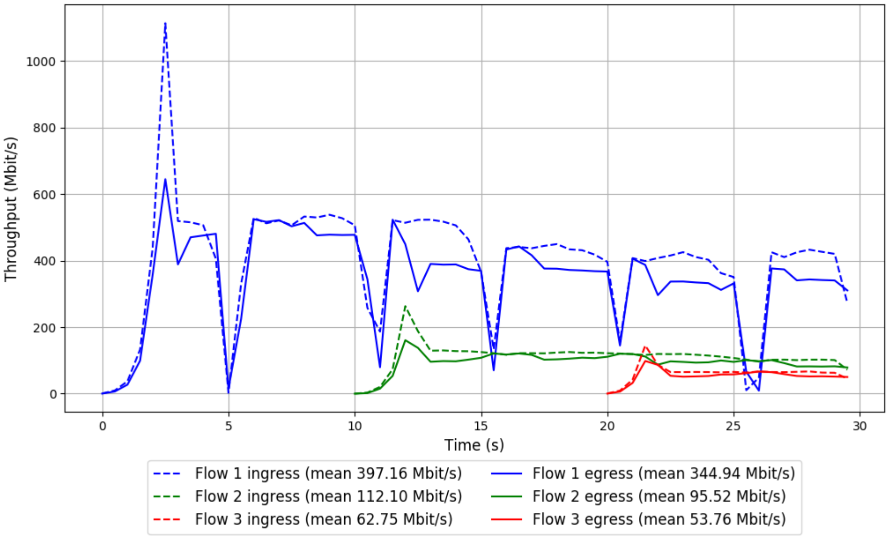
Run 5: Report of PCC — Data Link

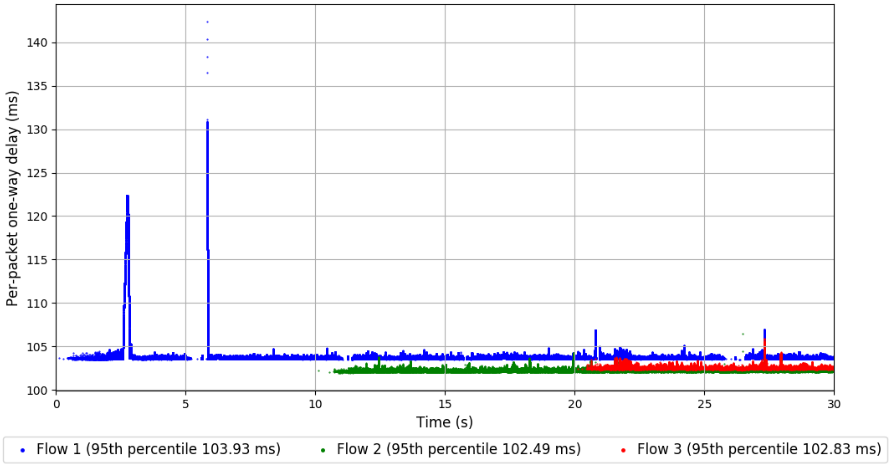




```
Run 6: Statistics of PCC

Start at: 2017-12-12 01:14:28
End at: 2017-12-12 01:14:58
Local clock offset: -3.051 ms
Remote clock offset: 15.926 ms

# Below is generated by plot.py at 2017-12-12 03:49:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 426.16 Mbit/s
95th percentile per-packet one-way delay: 103.885 ms
Loss rate: 13.45%
-- Flow 1:
Average throughput: 344.94 Mbit/s
95th percentile per-packet one-way delay: 103.934 ms
Loss rate: 13.15%
-- Flow 2:
Average throughput: 95.52 Mbit/s
95th percentile per-packet one-way delay: 102.488 ms
Loss rate: 14.79%
-- Flow 3:
Average throughput: 53.76 Mbit/s
95th percentile per-packet one-way delay: 102.832 ms
Loss rate: 14.33%
```

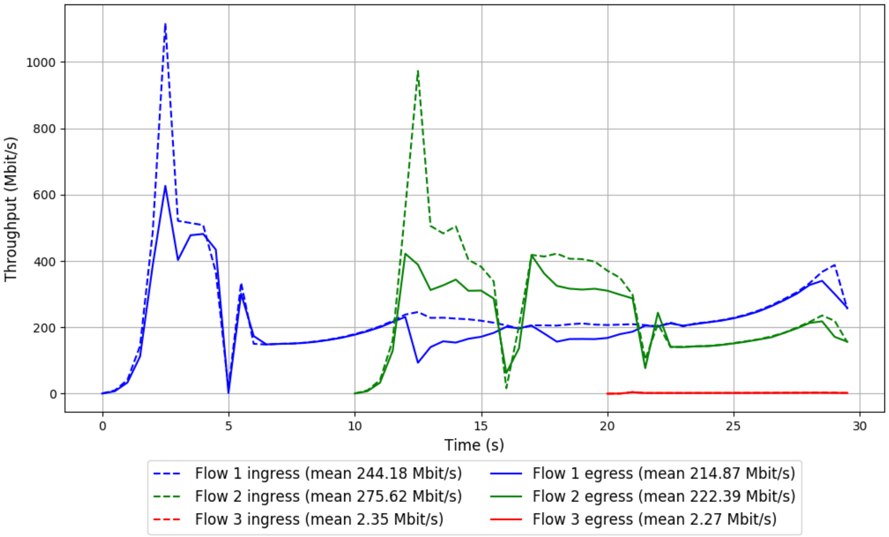
Run 6: Report of PCC — Data Link

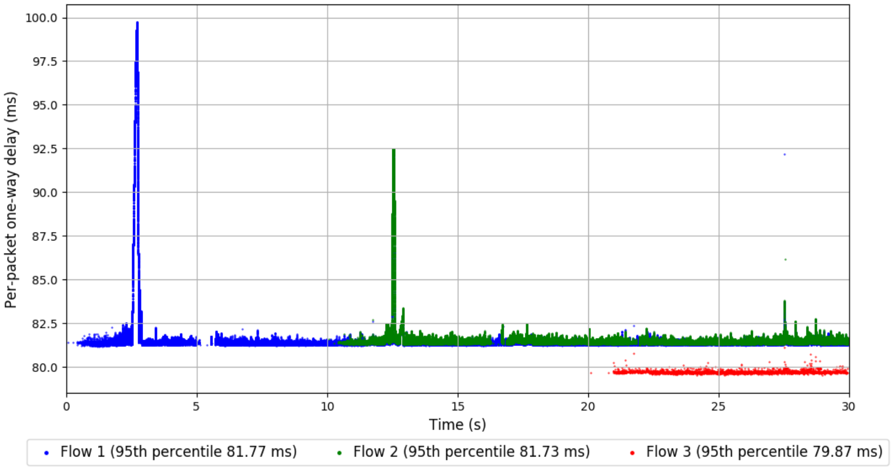




```
Run 7: Statistics of PCC

Start at: 2017-12-12 01:34:57
End at: 2017-12-12 01:35:27
Local clock offset: -2.748 ms
Remote clock offset: -7.292 ms

# Below is generated by plot.py at 2017-12-12 03:49:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.50 Mbit/s
95th percentile per-packet one-way delay: 81.743 ms
Loss rate: 15.12%
-- Flow 1:
Average throughput: 214.87 Mbit/s
95th percentile per-packet one-way delay: 81.770 ms
Loss rate: 12.01%
-- Flow 2:
Average throughput: 222.39 Mbit/s
95th percentile per-packet one-way delay: 81.732 ms
Loss rate: 19.32%
-- Flow 3:
Average throughput: 2.27 Mbit/s
95th percentile per-packet one-way delay: 79.874 ms
Loss rate: 3.60%
```

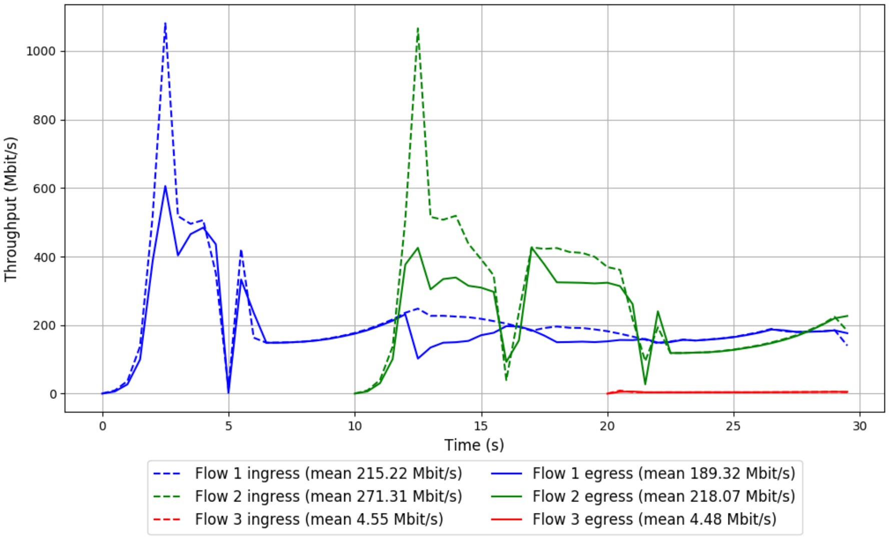
Run 7: Report of PCC — Data Link

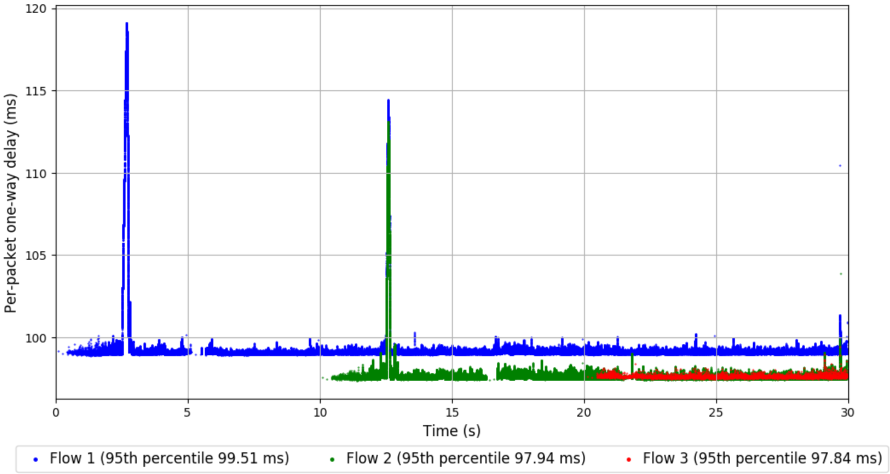




```
Run 8: Statistics of PCC

Start at: 2017-12-12 01:55:00
End at: 2017-12-12 01:55:30
Local clock offset: -3.22 ms
Remote clock offset: 10.046 ms

# Below is generated by plot.py at 2017-12-12 03:49:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 335.74 Mbit/s
95th percentile per-packet one-way delay: 99.294 ms
Loss rate: 15.44%
-- Flow 1:
Average throughput: 189.32 Mbit/s
95th percentile per-packet one-way delay: 99.506 ms
Loss rate: 12.03%
-- Flow 2:
Average throughput: 218.07 Mbit/s
95th percentile per-packet one-way delay: 97.943 ms
Loss rate: 19.62%
-- Flow 3:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 97.843 ms
Loss rate: 1.54%
```

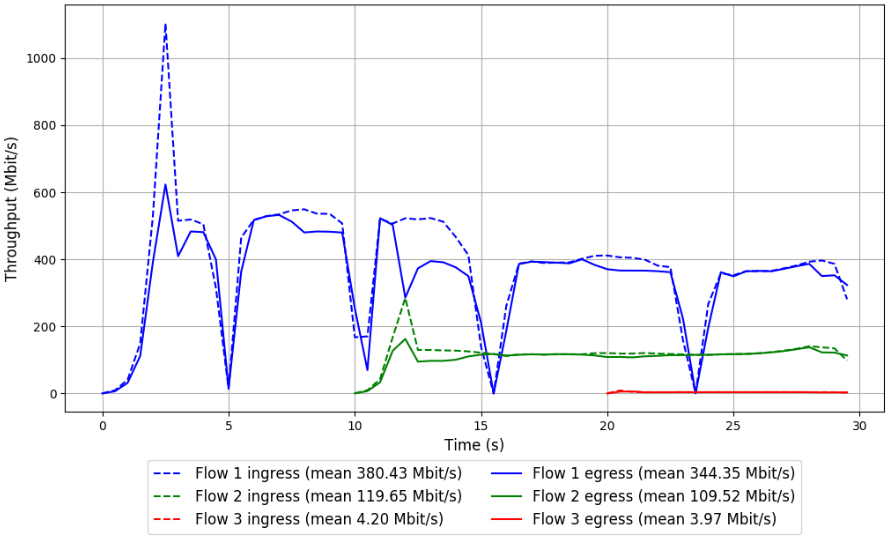
Run 8: Report of PCC — Data Link

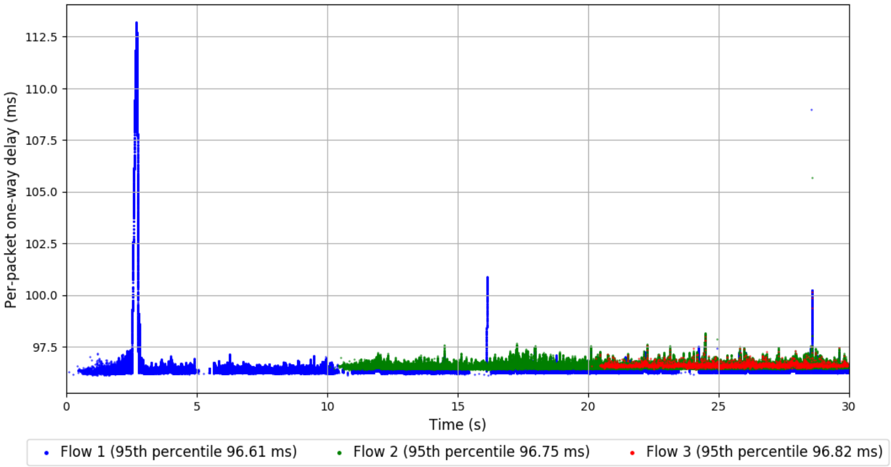




```
Run 9: Statistics of PCC

Start at: 2017-12-12 02:15:10
End at: 2017-12-12 02:15:40
Local clock offset: -3.033 ms
Remote clock offset: 8.13 ms

# Below is generated by plot.py at 2017-12-12 03:54:32
# Datalink statistics
-- Total of 3 flows:
Average throughput: 418.48 Mbit/s
95th percentile per-packet one-way delay: 96.682 ms
Loss rate: 9.30%
-- Flow 1:
Average throughput: 344.35 Mbit/s
95th percentile per-packet one-way delay: 96.607 ms
Loss rate: 9.48%
-- Flow 2:
Average throughput: 109.52 Mbit/s
95th percentile per-packet one-way delay: 96.752 ms
Loss rate: 8.46%
-- Flow 3:
Average throughput: 3.97 Mbit/s
95th percentile per-packet one-way delay: 96.820 ms
Loss rate: 5.55%
```

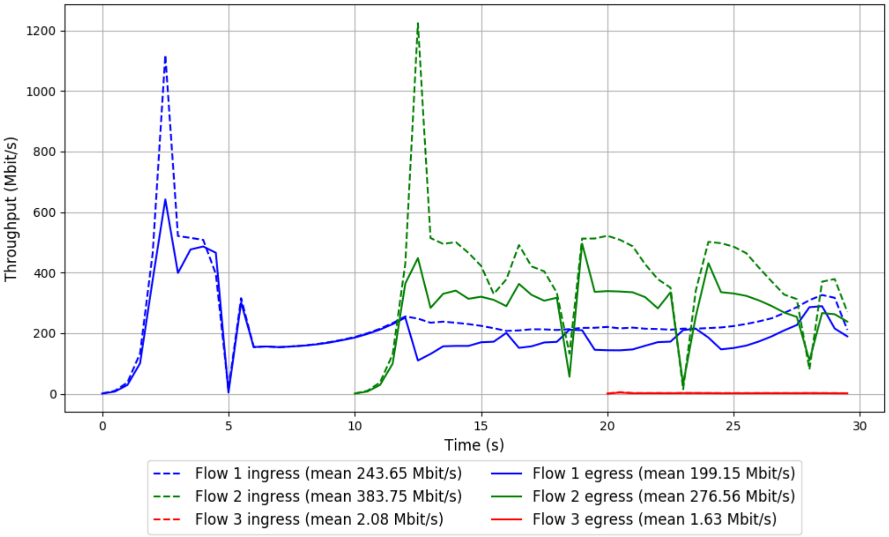
Run 9: Report of PCC — Data Link

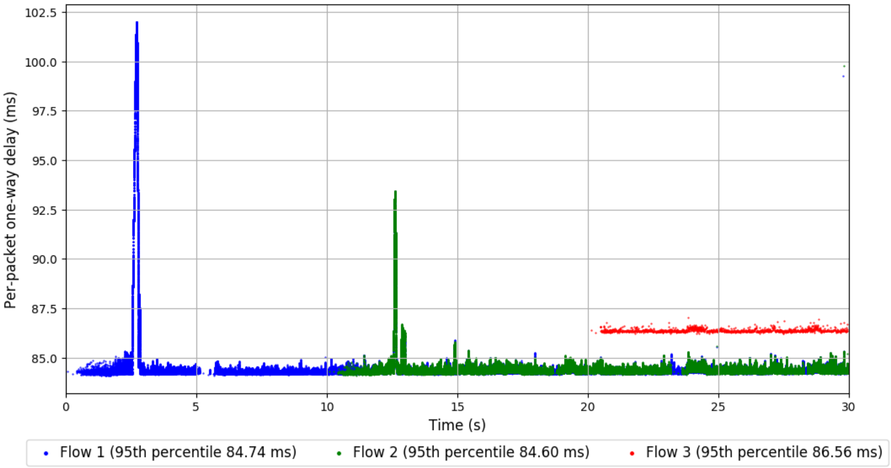




```
Run 10: Statistics of PCC

Start at: 2017-12-12 02:35:18
End at: 2017-12-12 02:35:48
Local clock offset: -2.296 ms
Remote clock offset: -4.656 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.60 Mbit/s
95th percentile per-packet one-way delay: 84.647 ms
Loss rate: 23.21%
-- Flow 1:
Average throughput: 199.15 Mbit/s
95th percentile per-packet one-way delay: 84.736 ms
Loss rate: 18.26%
-- Flow 2:
Average throughput: 276.56 Mbit/s
95th percentile per-packet one-way delay: 84.599 ms
Loss rate: 27.93%
-- Flow 3:
Average throughput: 1.63 Mbit/s
95th percentile per-packet one-way delay: 86.561 ms
Loss rate: 21.88%
```

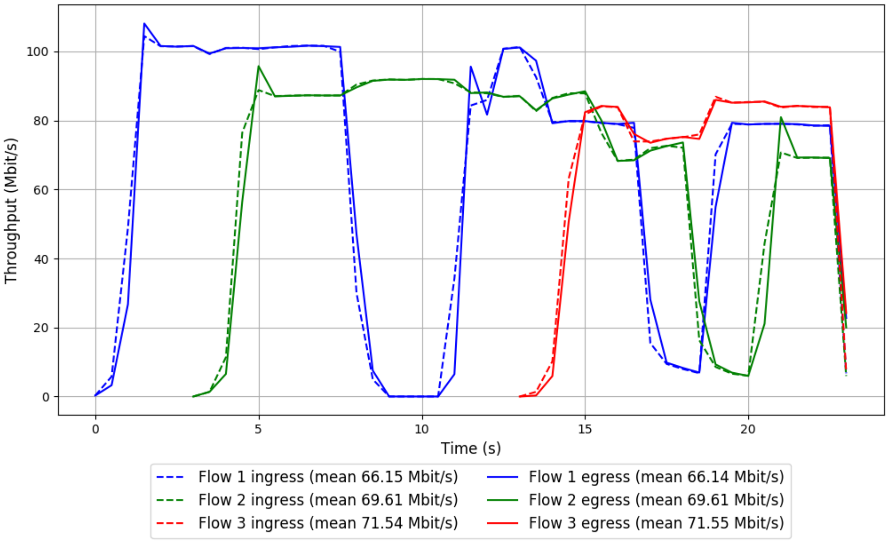
Run 10: Report of PCC — Data Link

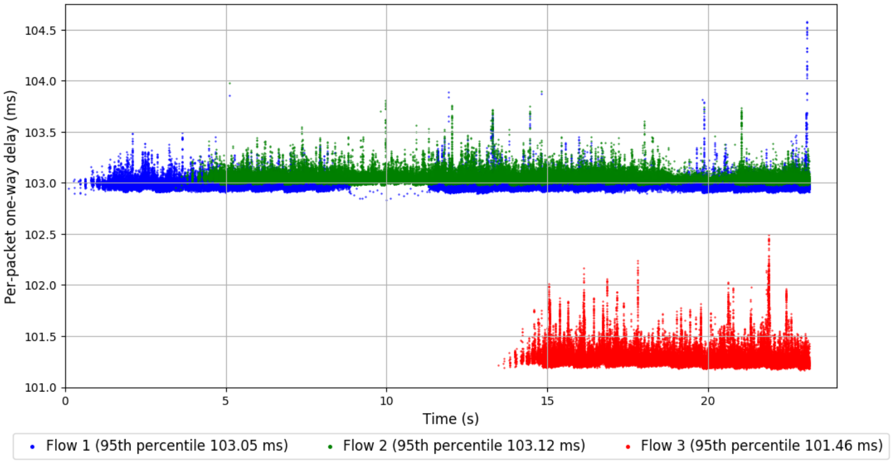




```
Run 1: Statistics of QUIC Cubic

Start at: 2017-12-11 23:35:39
End at: 2017-12-11 23:36:09
Local clock offset: -1.722 ms
Remote clock offset: 17.152 ms
```

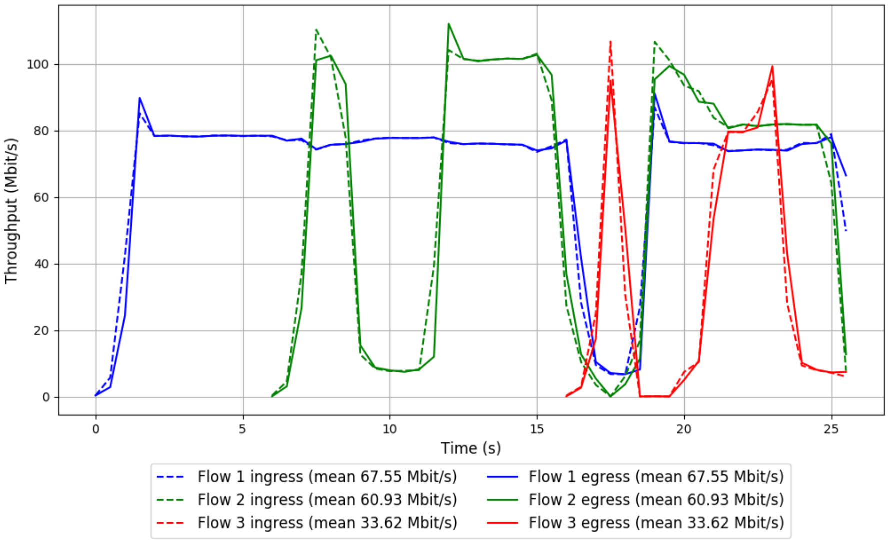
Run 1: Report of QUIC Cubic — Data Link

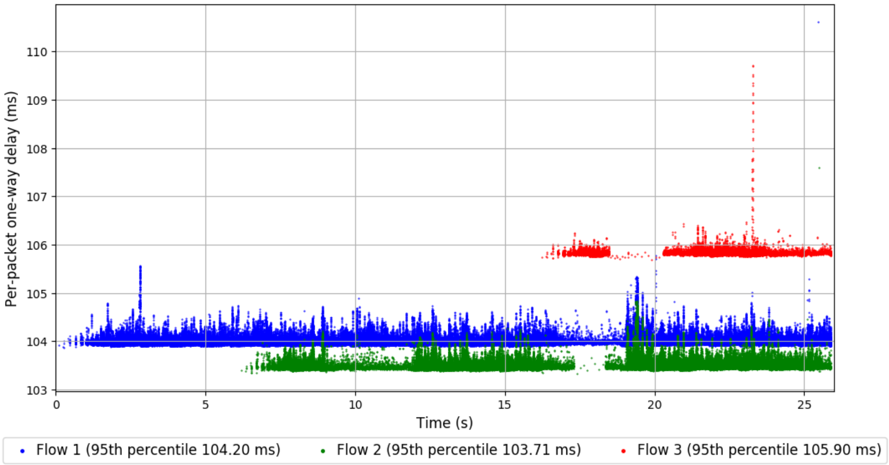




```
Run 2: Statistics of QUIC Cubic

Start at: 2017-12-11 23:55:50
End at: 2017-12-11 23:56:20
Local clock offset: -2.06 ms
Remote clock offset: 20.218 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 126.70 Mbit/s
95th percentile per-packet one-way delay: 105.829 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 67.55 Mbit/s
95th percentile per-packet one-way delay: 104.199 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.93 Mbit/s
95th percentile per-packet one-way delay: 103.708 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 33.62 Mbit/s
95th percentile per-packet one-way delay: 105.902 ms
Loss rate: 0.02%
```

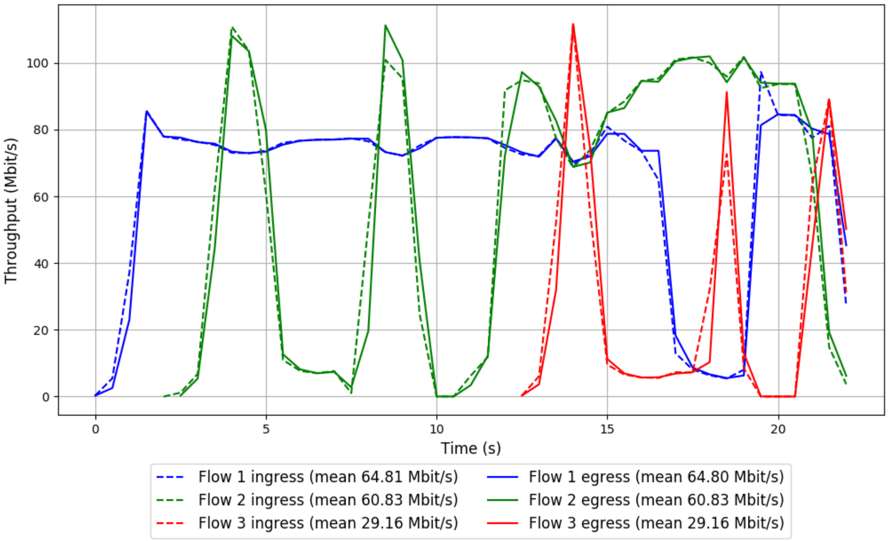
Run 2: Report of QUIC Cubic — Data Link

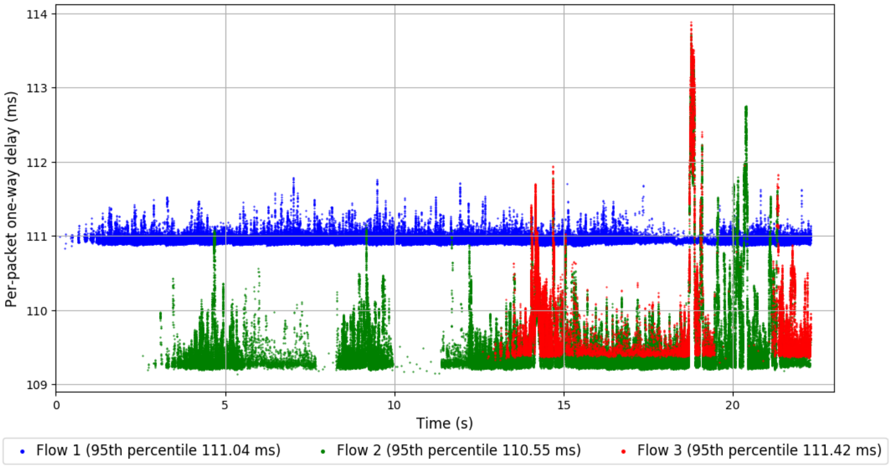




```
Run 3: Statistics of QUIC Cubic

Start at: 2017-12-12 00:15:59
End at: 2017-12-12 00:16:29
Local clock offset: -2.372 ms
Remote clock offset: 25.02 ms
```

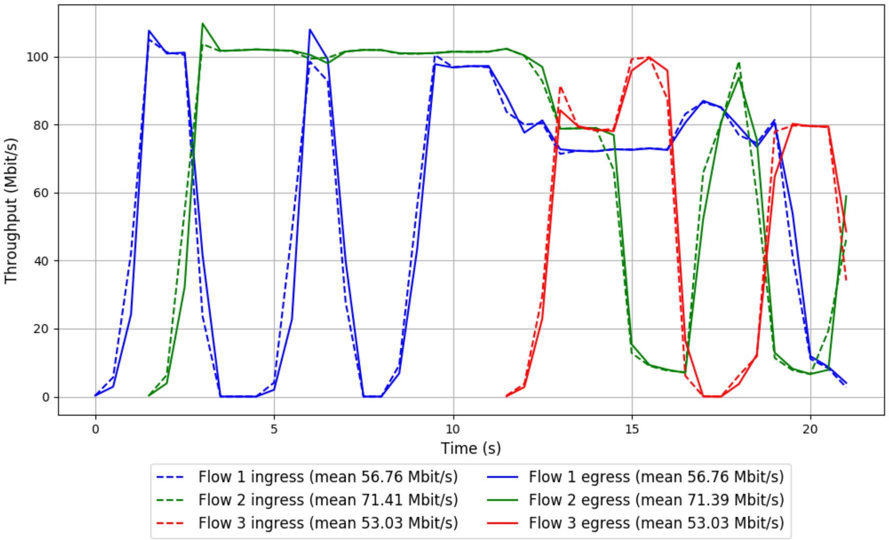
Run 3: Report of QUIC Cubic — Data Link

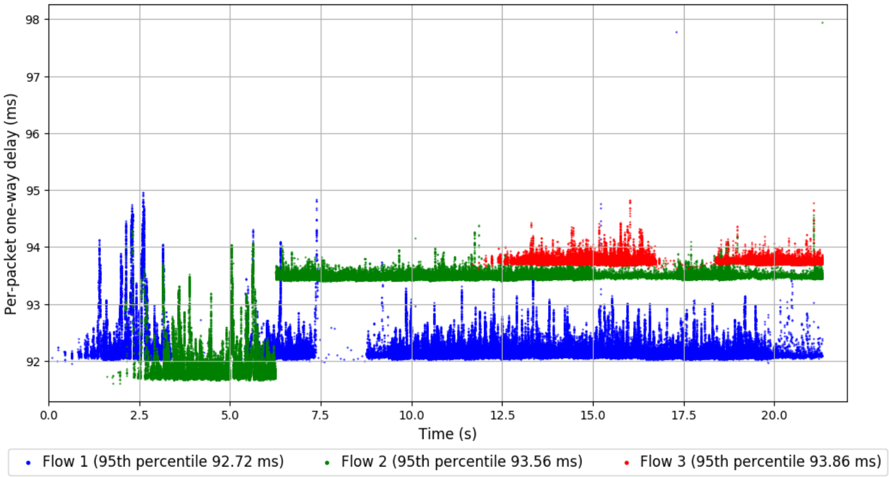




```
Run 4: Statistics of QUIC Cubic

Start at: 2017-12-12 00:35:58
End at: 2017-12-12 00:36:28
Local clock offset: -2.971 ms
Remote clock offset: 6.789 ms
```

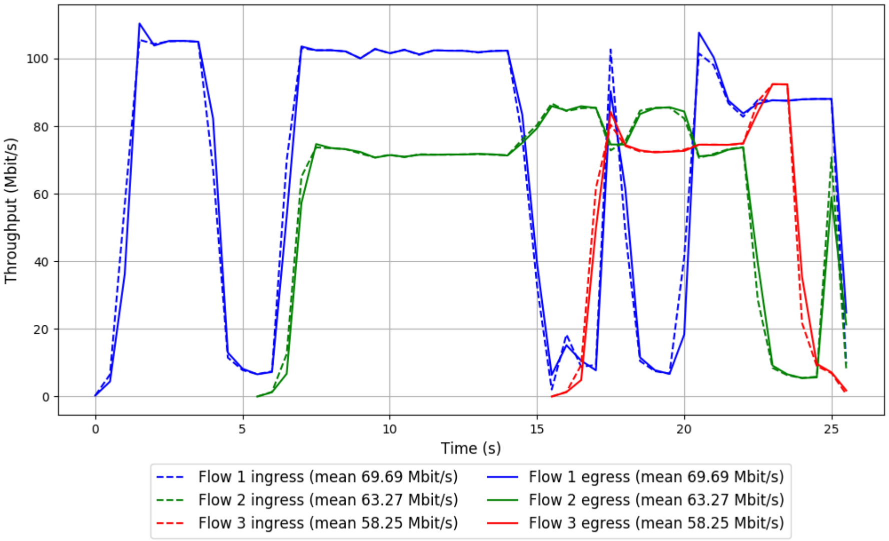
Run 4: Report of QUIC Cubic — Data Link

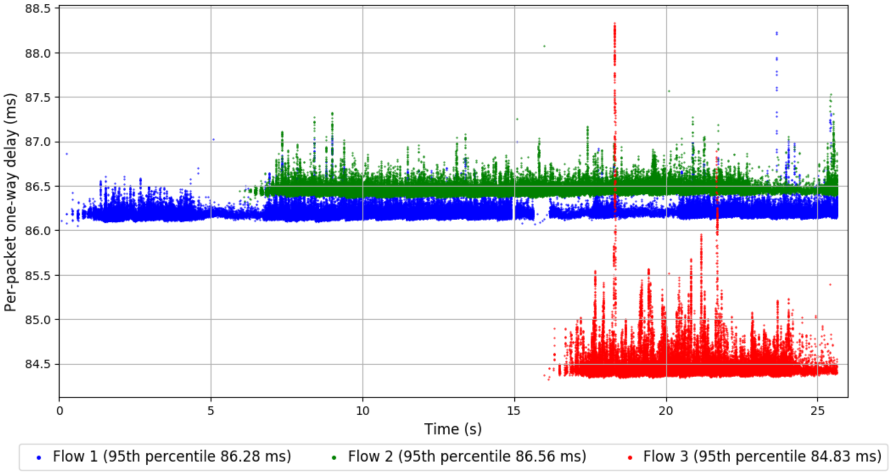




```
Run 5: Statistics of QUIC Cubic

Start at: 2017-12-12 00:55:58
End at: 2017-12-12 00:56:28
Local clock offset: -3.712 ms
Remote clock offset: -1.325 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 140.49 Mbit/s
95th percentile per-packet one-way delay: 86.501 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 69.69 Mbit/s
95th percentile per-packet one-way delay: 86.283 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 63.27 Mbit/s
95th percentile per-packet one-way delay: 86.559 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 58.25 Mbit/s
95th percentile per-packet one-way delay: 84.825 ms
Loss rate: 0.00%
```

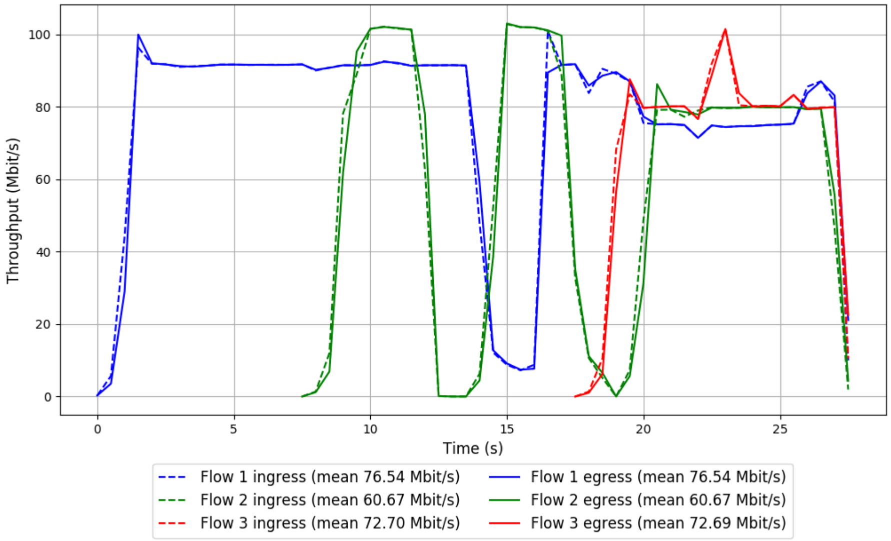
Run 5: Report of QUIC Cubic — Data Link

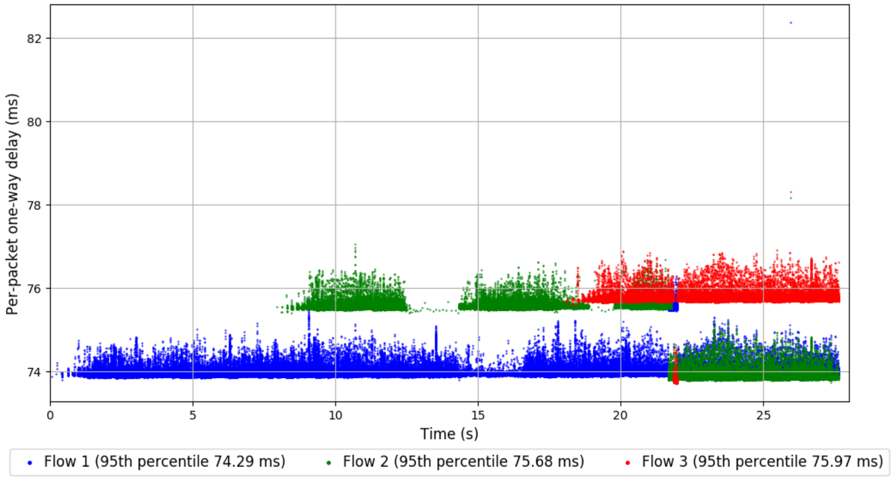




```
Run 6: Statistics of QUIC Cubic

Start at: 2017-12-12 01:16:04
End at: 2017-12-12 01:16:34
Local clock offset: -2.94 ms
Remote clock offset: -12.467 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 145.39 Mbit/s
95th percentile per-packet one-way delay: 75.775 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 76.54 Mbit/s
95th percentile per-packet one-way delay: 74.287 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 60.67 Mbit/s
95th percentile per-packet one-way delay: 75.678 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 72.69 Mbit/s
95th percentile per-packet one-way delay: 75.972 ms
Loss rate: 0.02%
```

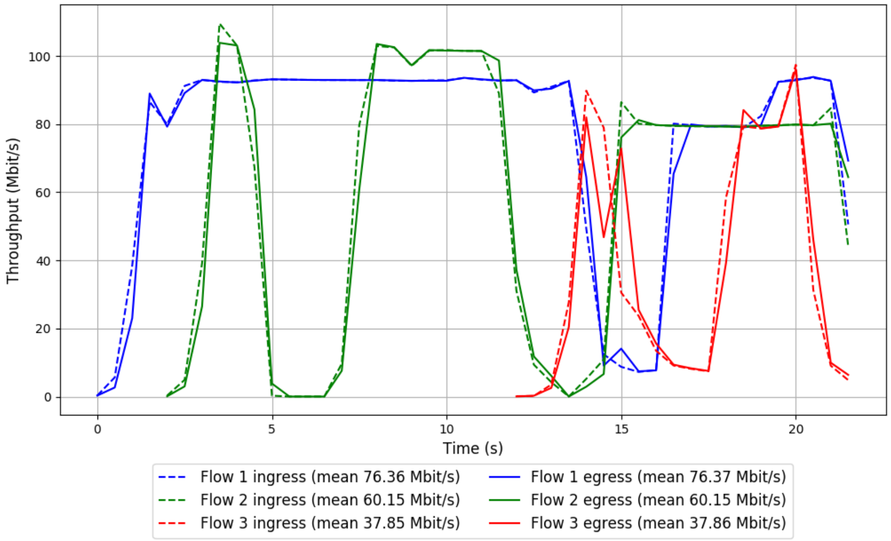
Run 6: Report of QUIC Cubic — Data Link

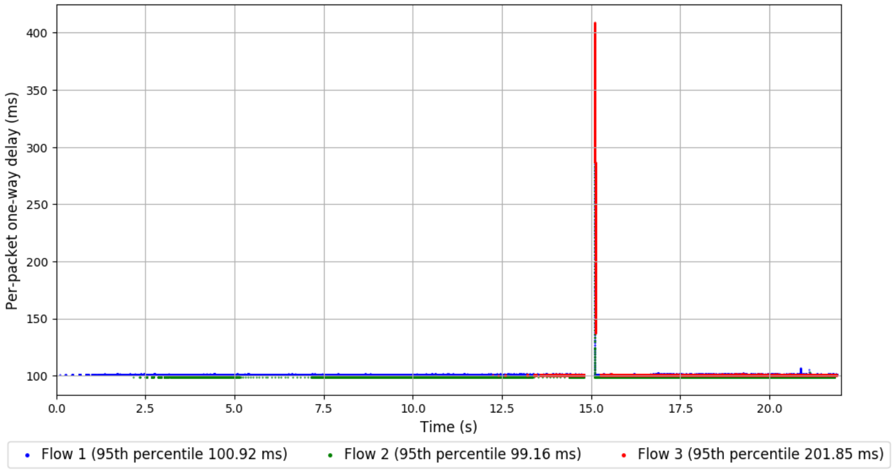




```
Run 7: Statistics of QUIC Cubic

Start at: 2017-12-12 01:36:27
End at: 2017-12-12 01:36:57
Local clock offset: -2.753 ms
Remote clock offset: 12.131 ms
```

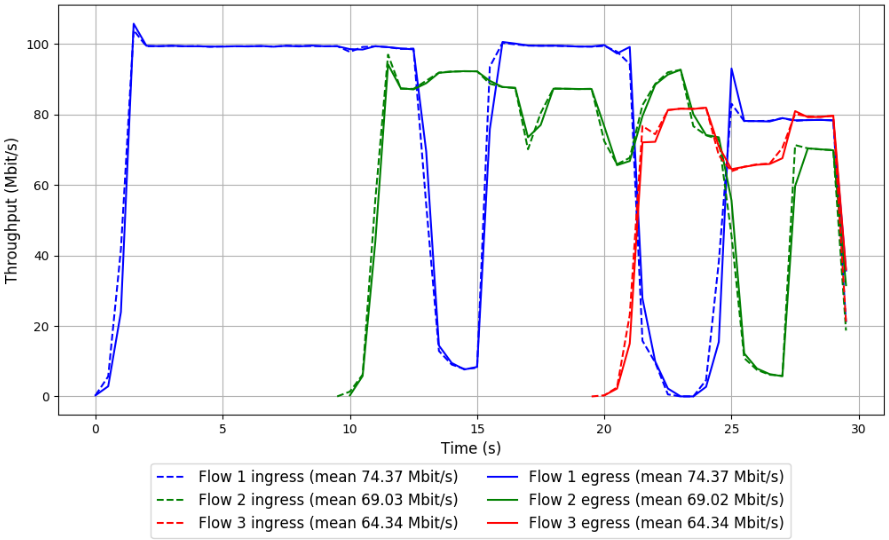
Run 7: Report of QUIC Cubic — Data Link

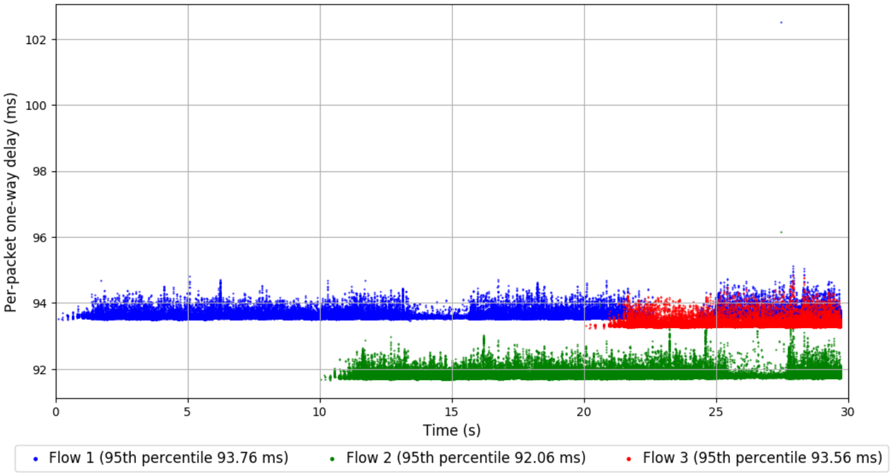




```
Run 8: Statistics of QUIC Cubic

Start at: 2017-12-12 01:56:29
End at: 2017-12-12 01:56:59
Local clock offset: -3.233 ms
Remote clock offset: 4.53 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 141.21 Mbit/s
95th percentile per-packet one-way delay: 93.686 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 74.37 Mbit/s
95th percentile per-packet one-way delay: 93.762 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 69.02 Mbit/s
95th percentile per-packet one-way delay: 92.059 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 64.34 Mbit/s
95th percentile per-packet one-way delay: 93.556 ms
Loss rate: 0.00%
```

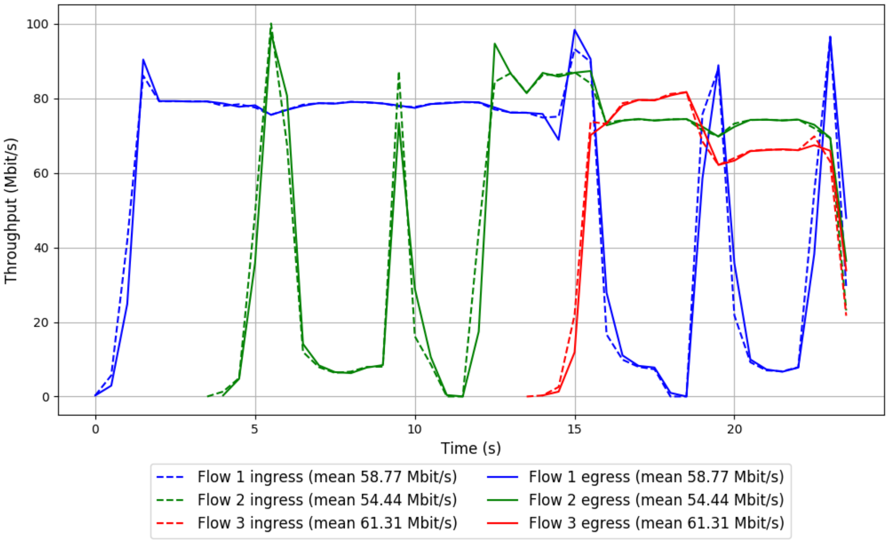
Run 8: Report of QUIC Cubic — Data Link

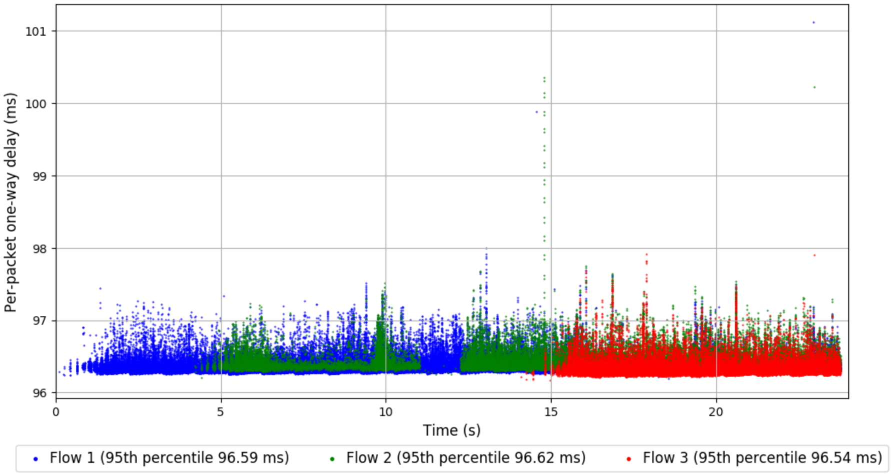




```
Run 9: Statistics of QUIC Cubic

Start at: 2017-12-12 02:16:42
End at: 2017-12-12 02:17:12
Local clock offset: -2.95 ms
Remote clock offset: 7.871 ms
```

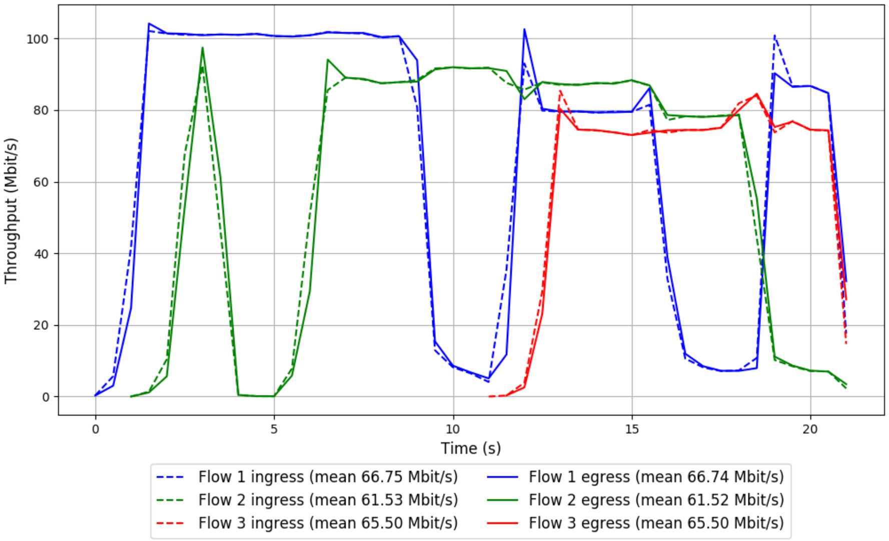
Run 9: Report of QUIC Cubic — Data Link

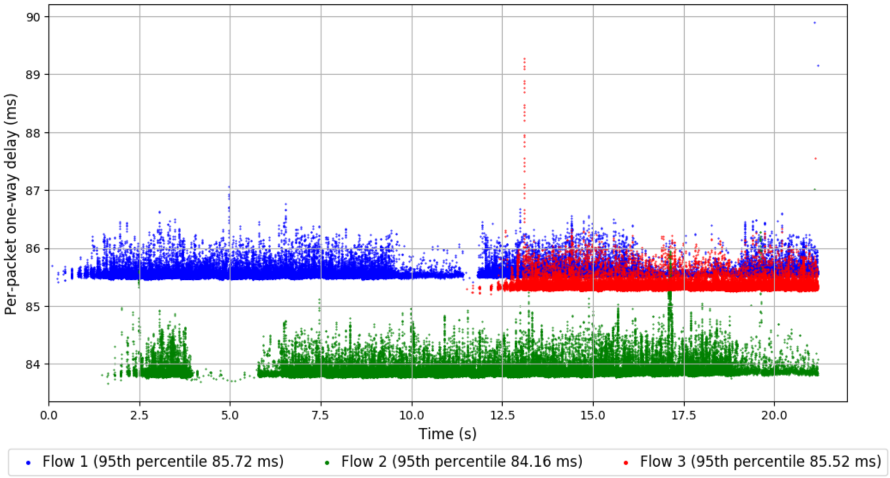




```
Run 10: Statistics of QUIC Cubic

Start at: 2017-12-12 02:36:50
End at: 2017-12-12 02:37:20
Local clock offset: -2.215 ms
Remote clock offset: -5.114 ms
```

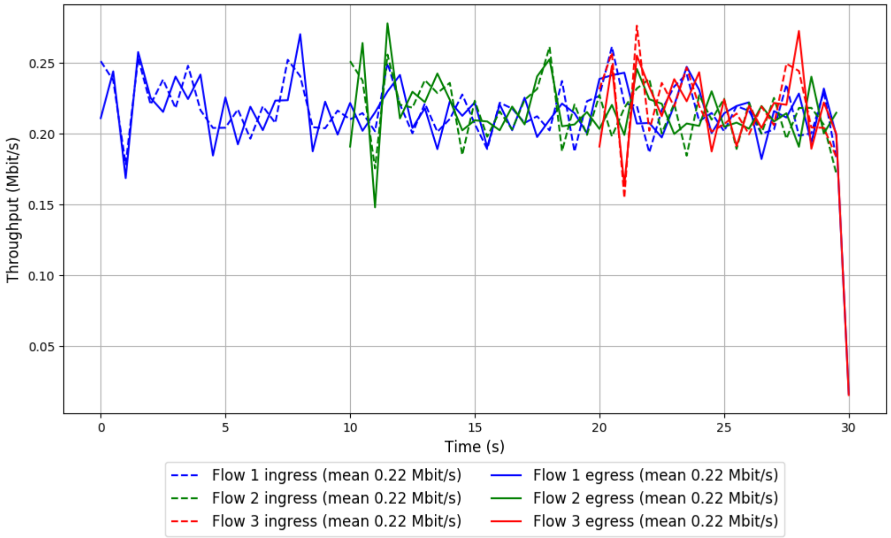
Run 10: Report of QUIC Cubic — Data Link

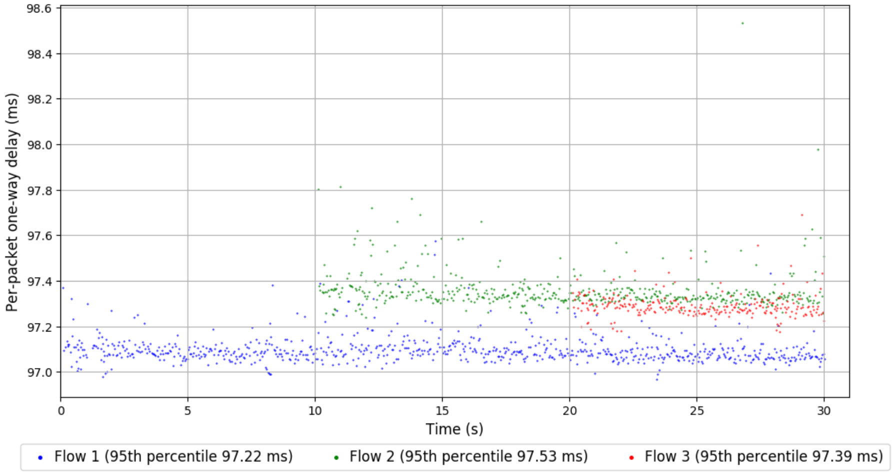




```
Run 1: Statistics of SCReAM

Start at: 2017-12-11 23:21:00
End at: 2017-12-11 23:21:30
Local clock offset: -0.936 ms
Remote clock offset: 12.801 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 97.408 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 97.215 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 97.532 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 97.386 ms
Loss rate: 0.00%
```

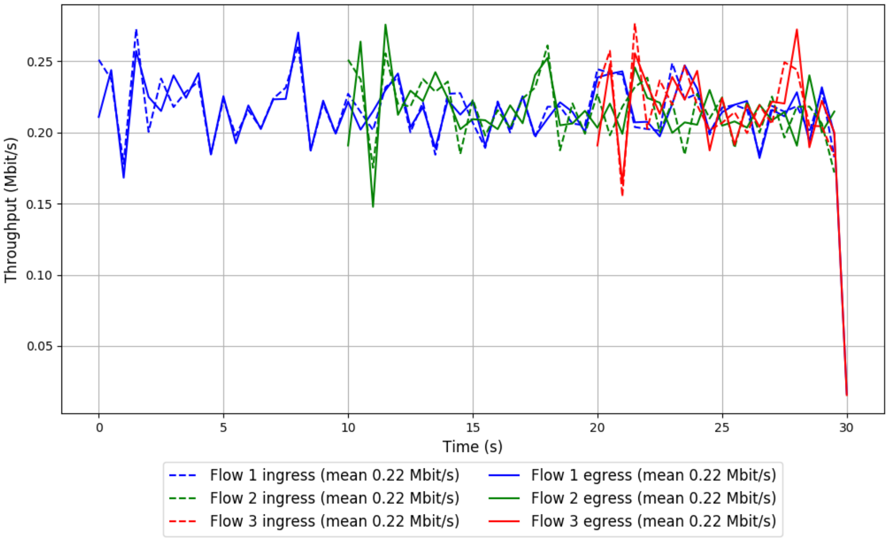
Run 1: Report of SCReAM — Data Link

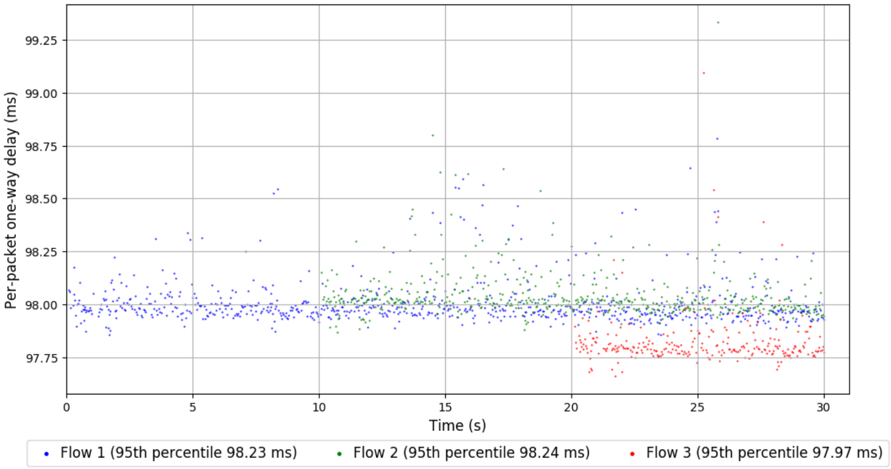




```
Run 2: Statistics of SCReAM

Start at: 2017-12-11 23:41:03
End at: 2017-12-11 23:41:33
Local clock offset: -2.006 ms
Remote clock offset: 13.957 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 98.224 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 98.235 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 98.243 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 97.967 ms
Loss rate: 0.00%
```

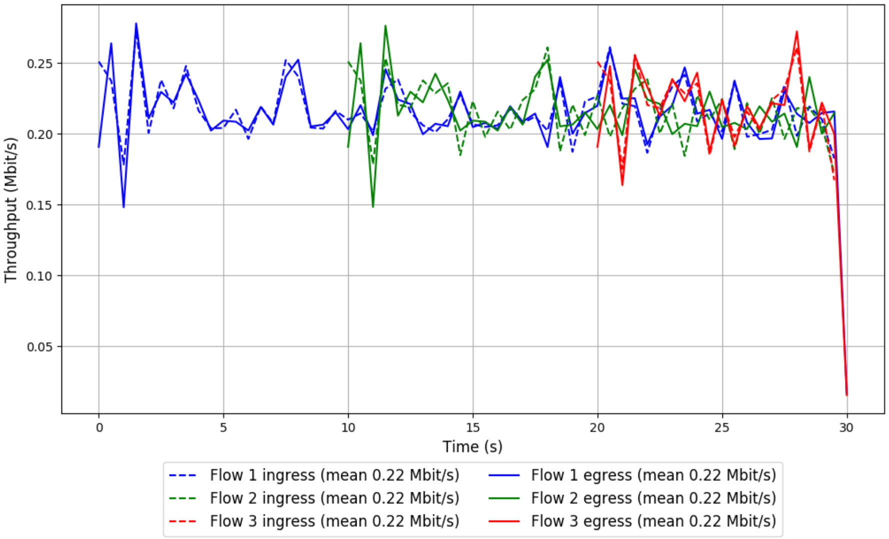
Run 2: Report of SCReAM — Data Link

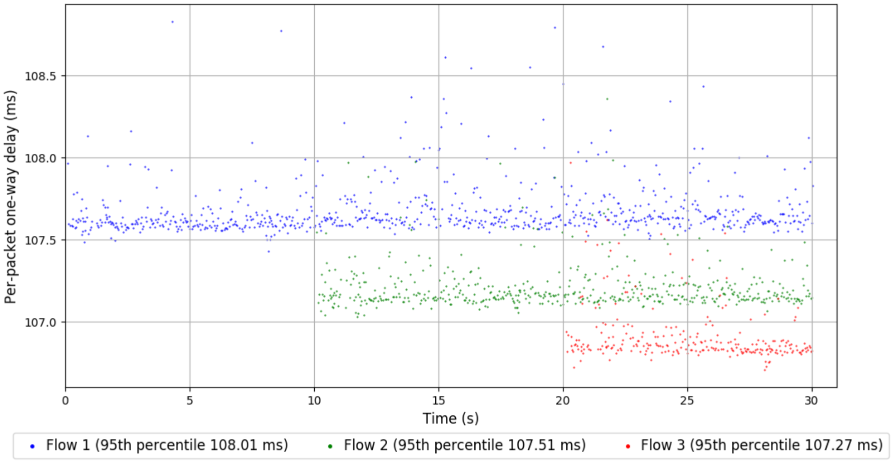




```
Run 3: Statistics of SCReAM

Start at: 2017-12-12 00:01:14
End at: 2017-12-12 00:01:44
Local clock offset: -1.986 ms
Remote clock offset: 23.49 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 107.888 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 108.007 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.513 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 107.271 ms
Loss rate: 0.00%
```

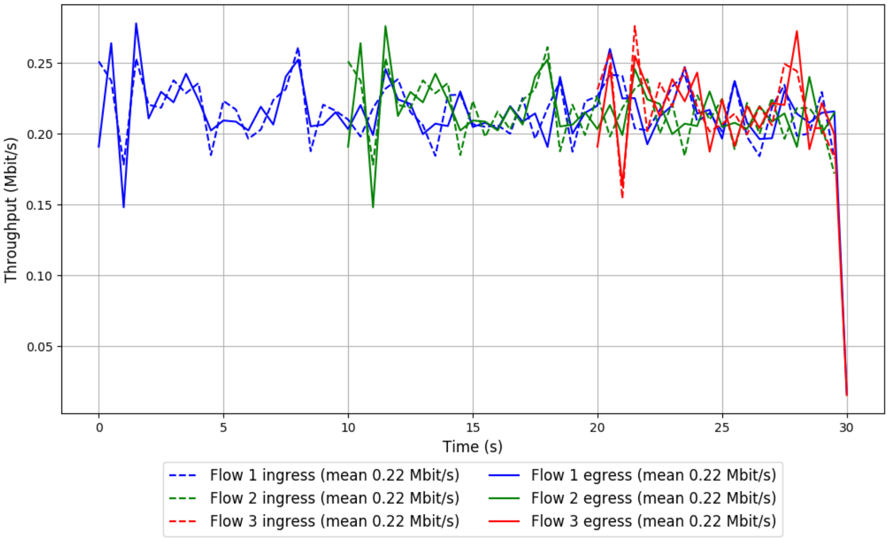
Run 3: Report of SCReAM — Data Link

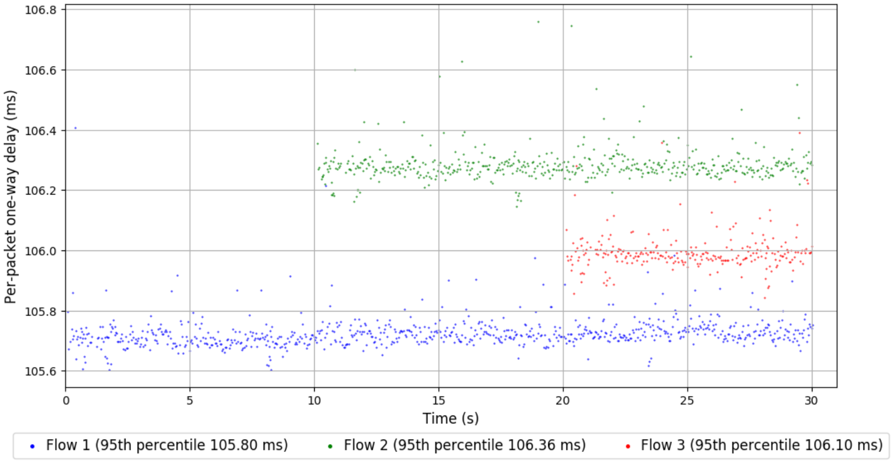




```
Run 4: Statistics of SCReAM

Start at: 2017-12-12 00:21:19
End at: 2017-12-12 00:21:49
Local clock offset: -2.541 ms
Remote clock offset: 19.778 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 106.310 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 105.796 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 106.363 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 106.100 ms
Loss rate: 0.00%
```

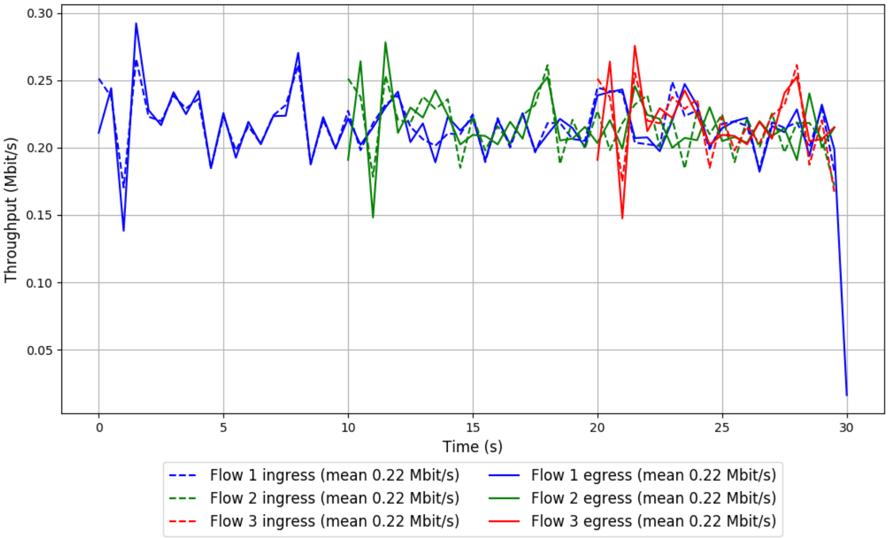
Run 4: Report of SCReAM — Data Link

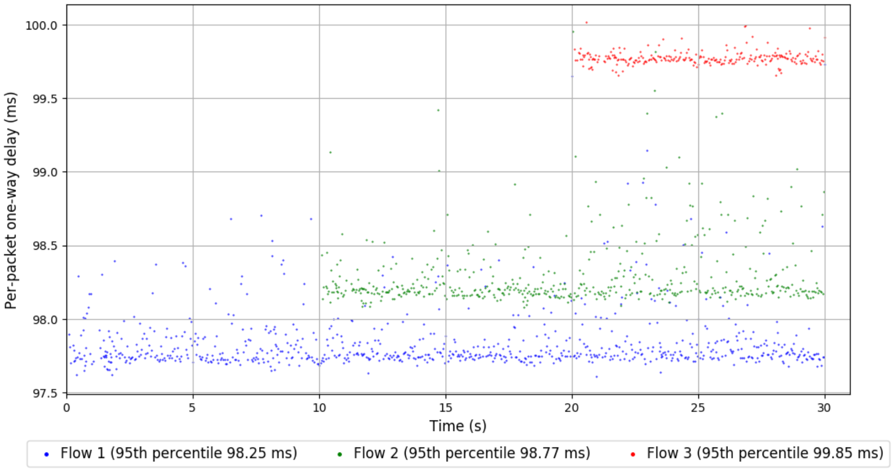




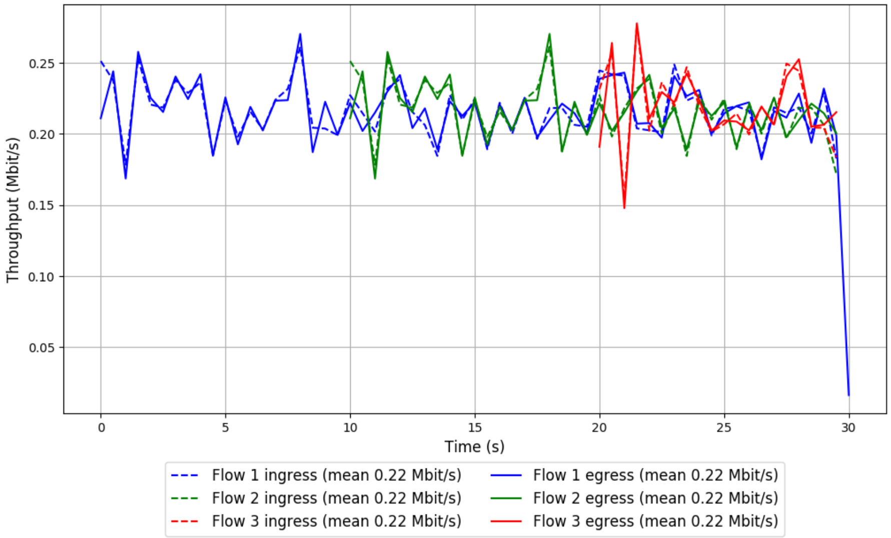
```
Run 5: Statistics of SCReAM

Start at: 2017-12-12 00:41:19
End at: 2017-12-12 00:41:49
Local clock offset: -3.084 ms
Remote clock offset: 12.886 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 99.785 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 98.251 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 98.770 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 99.847 ms
Loss rate: 0.00%
```

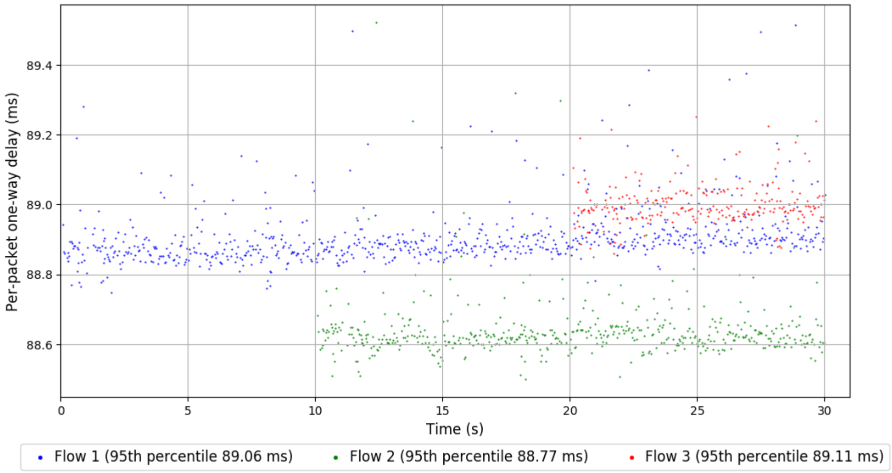
Run 5: Report of SCReAM — Data Link





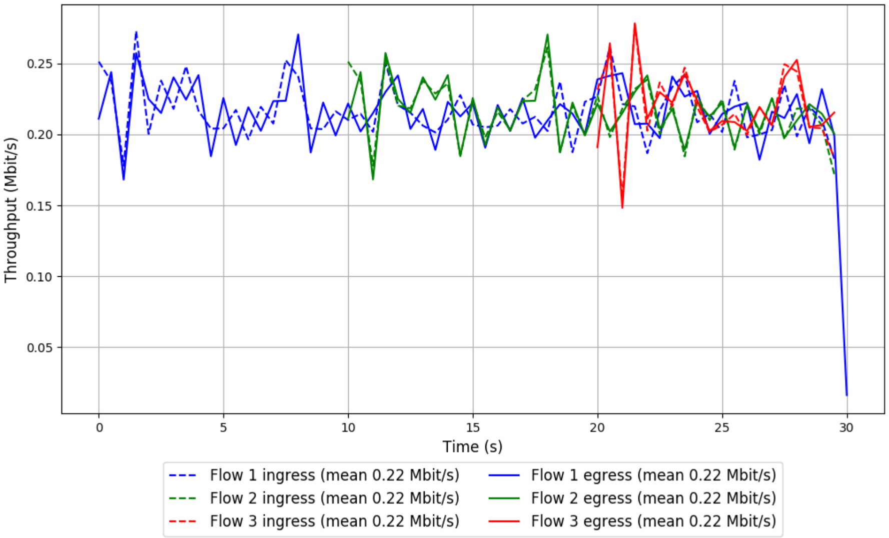
```
Run 6: Statistics of SCReAM

Start at: 2017-12-12 01:01:21
End at: 2017-12-12 01:01:51
Local clock offset: -3.438 ms
Remote clock offset: 1.33 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 89.051 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.060 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 88.771 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.112 ms
Loss rate: 0.00%
```

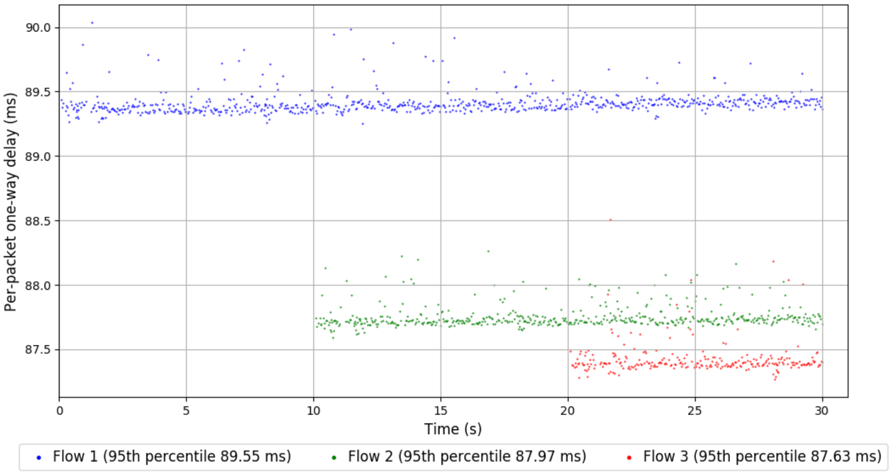

Throughput (Mbit/s)
0.25
0.20
0.15
0.10
0.05
0
5
10
15
20
25
30
Time (s)
Flow 1 ingress (mean 0.22 Mbit/s)
Flow 2 ingress (mean 0.22 Mbit/s)
Flow 3 ingress (mean 0.22 Mbit/s)
Flow 1 egress (mean 0.22 Mbit/s)
Flow 2 egress (mean 0.22 Mbit/s)
Flow 3 egress (mean 0.22 Mbit/s)


Per-packet one-way delay (ms)
89.4
89.2
89.0
88.8
88.6
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 89.06 ms)
Flow 2 (95th percentile 88.77 ms)
Flow 3 (95th percentile 89.11 ms)

```
Run 7: Statistics of SCReAM

Start at: 2017-12-12 01:21:30
End at: 2017-12-12 01:22:00
Local clock offset: -2.836 ms
Remote clock offset: 0.844 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.43 Mbit/s
95th percentile per-packet one-way delay: 89.467 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.550 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.970 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 87.630 ms
Loss rate: 0.00%
```

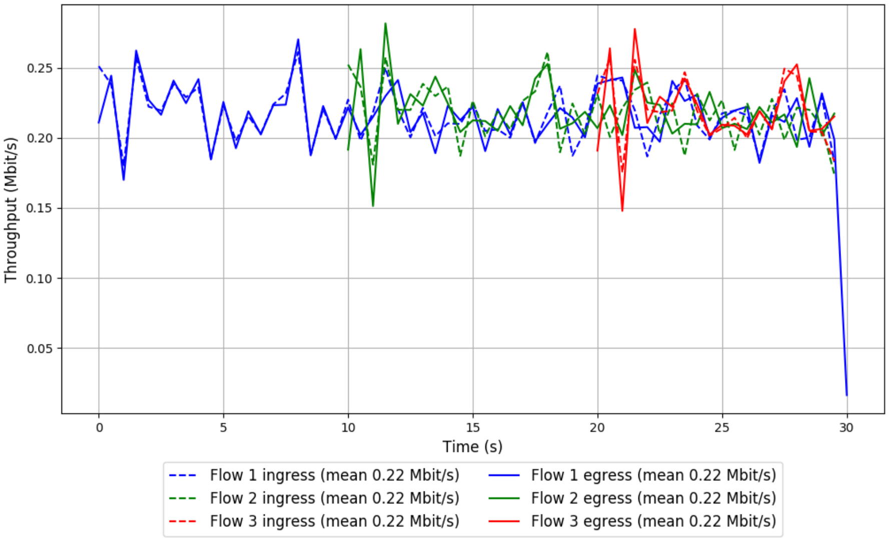
Run 7: Report of SCReAM — Data Link

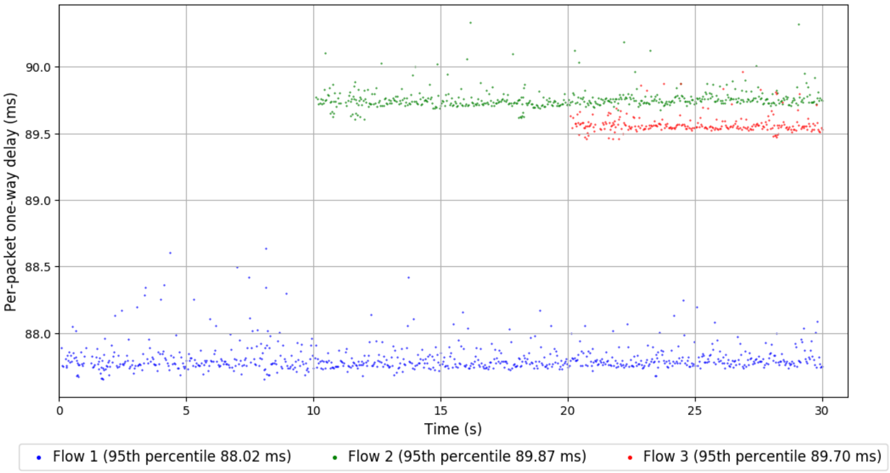




```
Run 8: Statistics of SCReAM

Start at: 2017-12-12 01:41:50
End at: 2017-12-12 01:42:20
Local clock offset: -2.976 ms
Remote clock offset: 0.97 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 89.798 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 88.017 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 89.699 ms
Loss rate: 0.00%
```

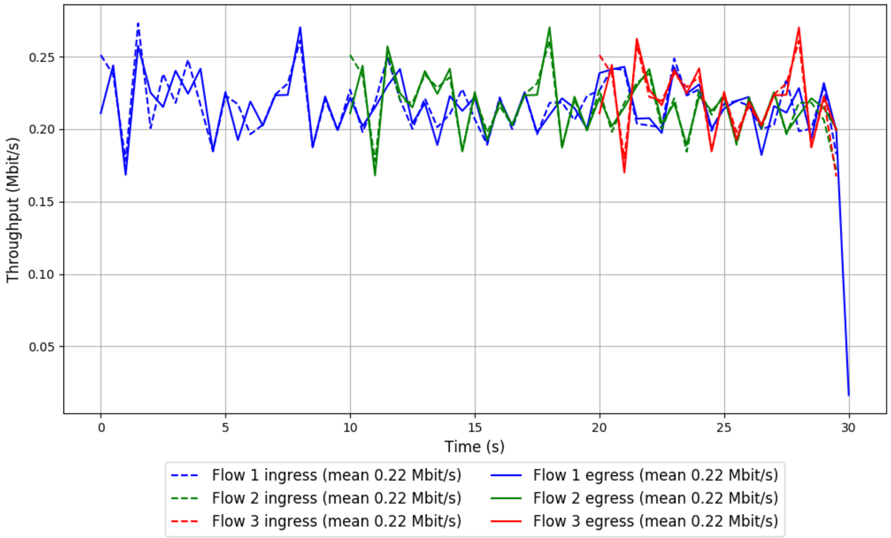
Run 8: Report of SCReAM — Data Link

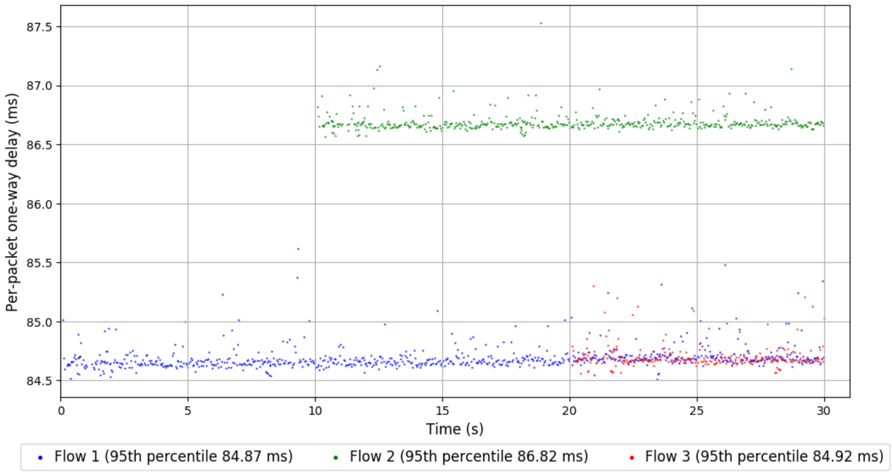




```
Run 9: Statistics of SCReAM

Start at: 2017-12-12 02:02:00
End at: 2017-12-12 02:02:30
Local clock offset: -3.348 ms
Remote clock offset: -3.046 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 86.714 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.873 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 86.822 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 84.915 ms
Loss rate: 0.00%
```

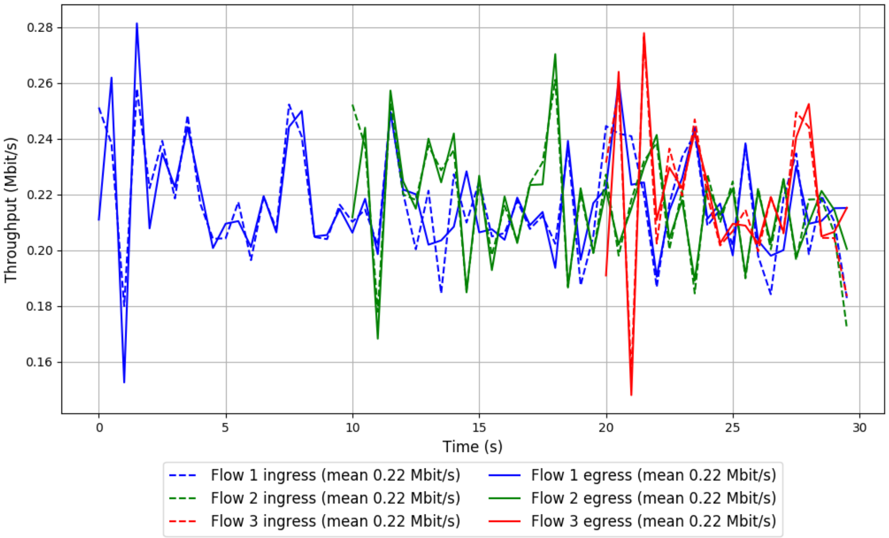
Run 9: Report of SCReAM — Data Link

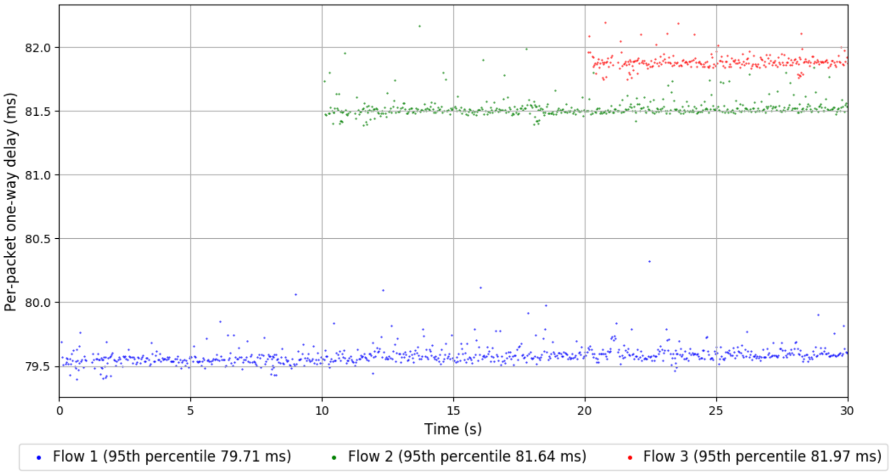




```
Run 10: Statistics of SCReAM

Start at: 2017-12-12 02:22:07
End at: 2017-12-12 02:22:37
Local clock offset: -2.791 ms
Remote clock offset: -8.59 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 81.895 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 79.708 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.638 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 81.968 ms
Loss rate: 0.00%
```

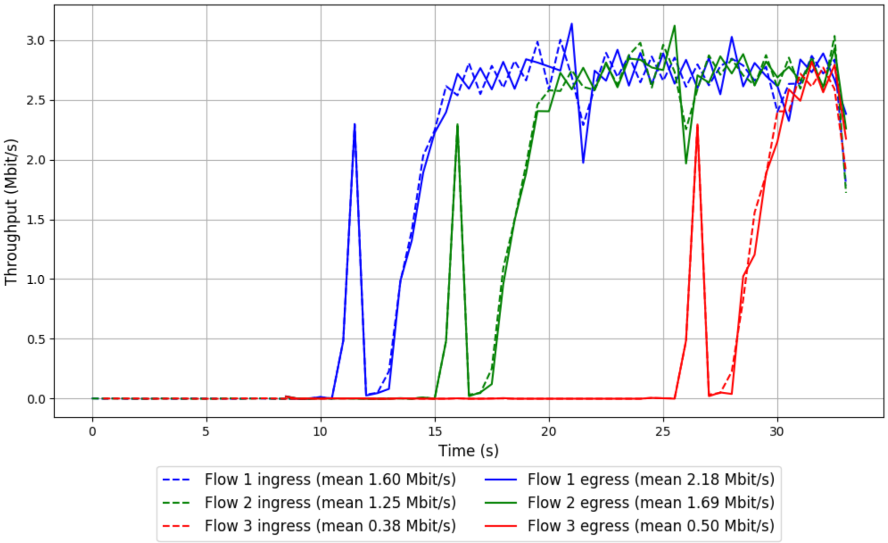
Run 10: Report of SCReAM — Data Link

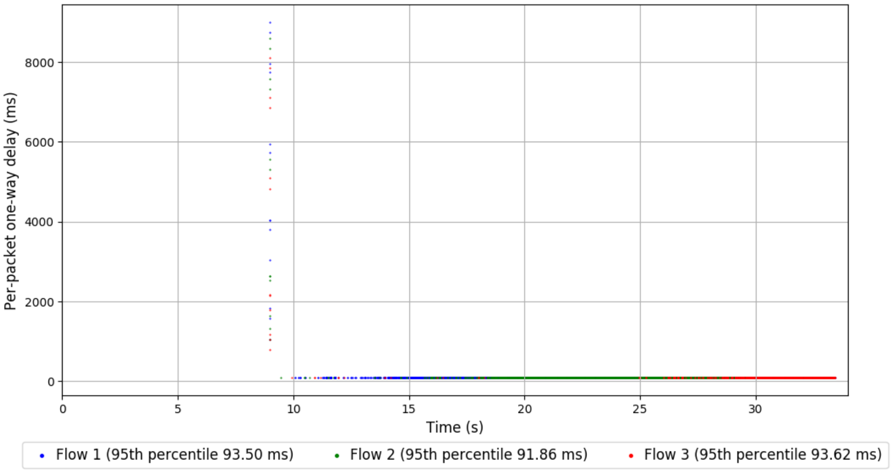




```
Run 1: Statistics of WebRTC media

Start at: 2017-12-11 23:19:45
End at: 2017-12-11 23:20:15
Local clock offset: -0.841 ms
Remote clock offset: 7.227 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 4.37 Mbit/s
95th percentile per-packet one-way delay: 93.480 ms
Loss rate: 0.07%
-- Flow 1:
Average throughput: 2.18 Mbit/s
95th percentile per-packet one-way delay: 93.497 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.69 Mbit/s
95th percentile per-packet one-way delay: 91.863 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.50 Mbit/s
95th percentile per-packet one-way delay: 93.622 ms
Loss rate: 0.63%
```

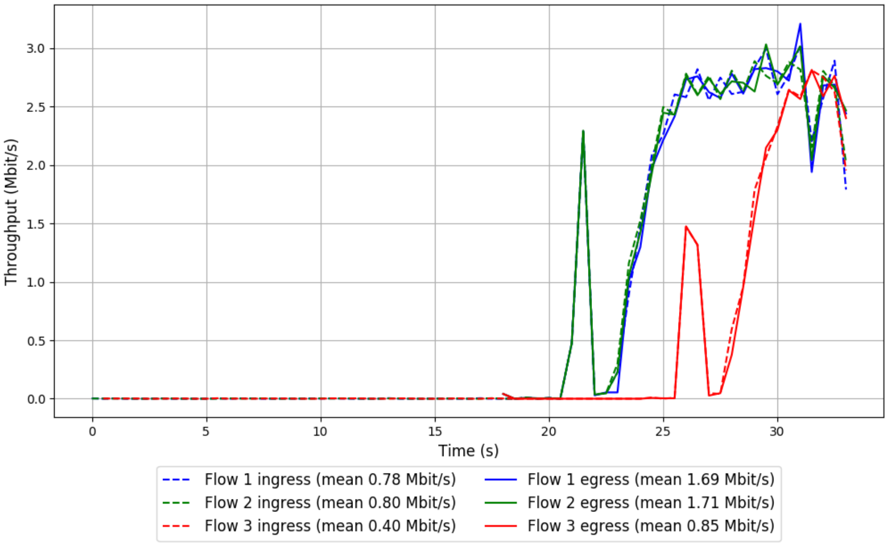
Run 1: Report of WebRTC media — Data Link

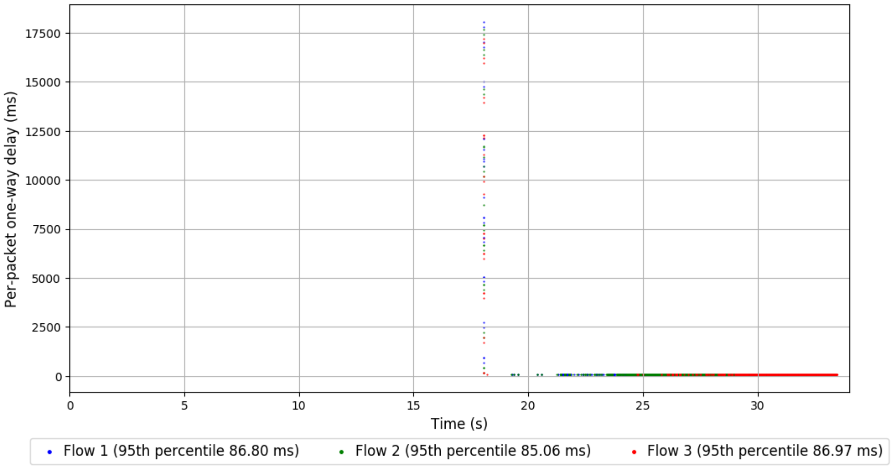




```
Run 2: Statistics of WebRTC media

Start at: 2017-12-11 23:39:49
End at: 2017-12-11 23:40:19
Local clock offset: -1.953 ms
Remote clock offset: 0.841 ms
```

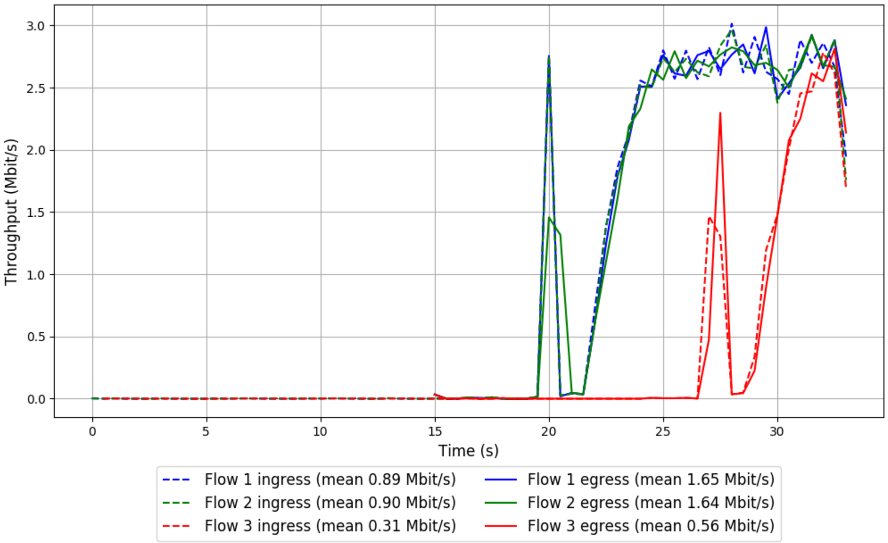
Run 2: Report of WebRTC media — Data Link

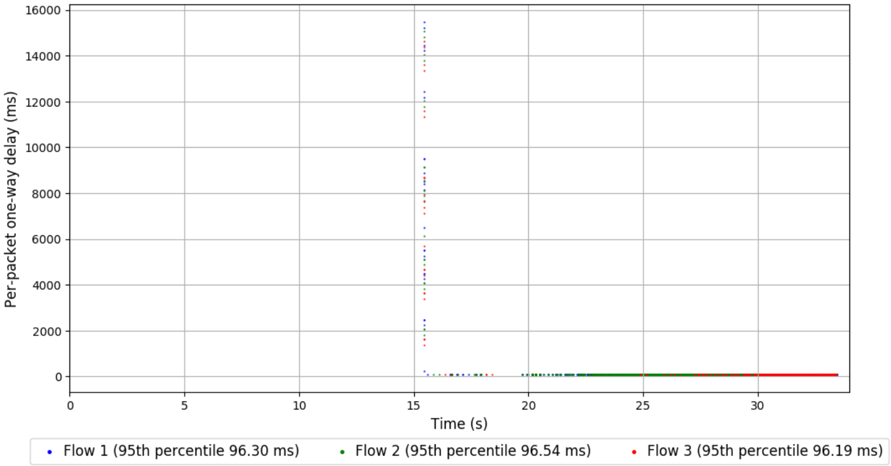




```
Run 3: Statistics of WebRTC media

Start at: 2017-12-12 00:00:00
End at: 2017-12-12 00:00:30
Local clock offset: -1.998 ms
Remote clock offset: 11.995 ms
```

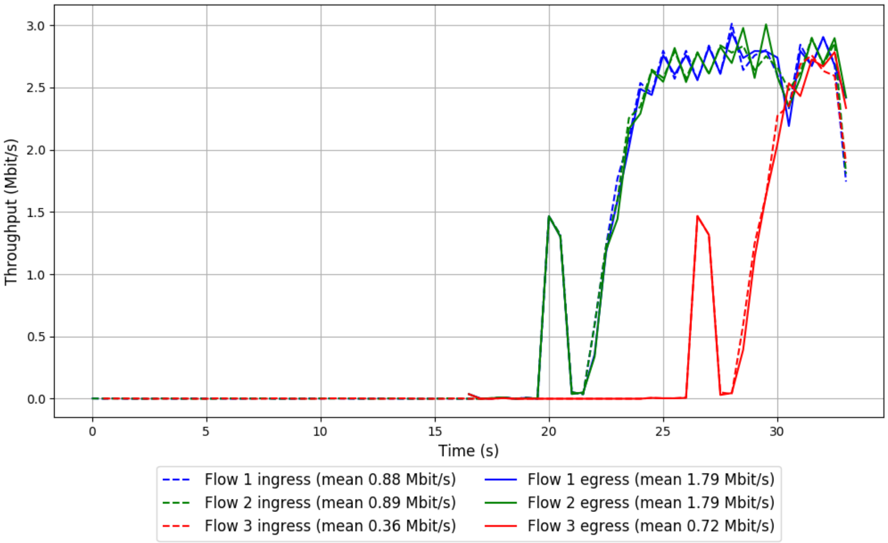
Run 3: Report of WebRTC media — Data Link

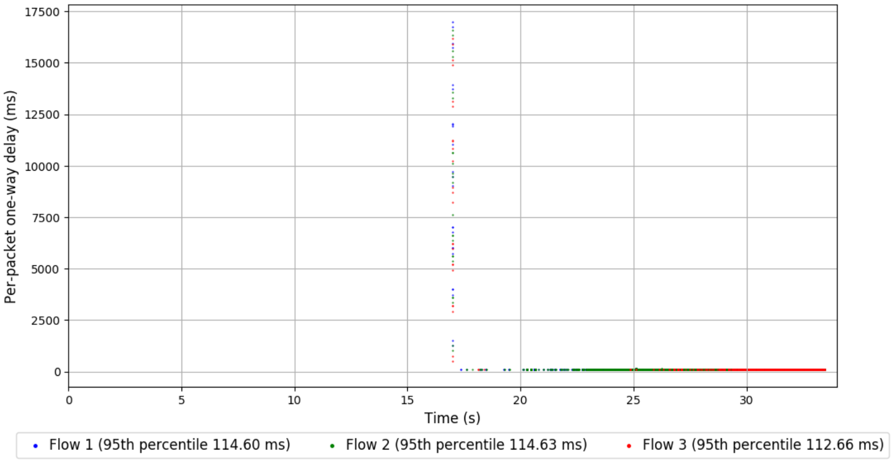




```
Run 4: Statistics of WebRTC media

Start at: 2017-12-12 00:20:04
End at: 2017-12-12 00:20:34
Local clock offset: -2.506 ms
Remote clock offset: 27.731 ms
```

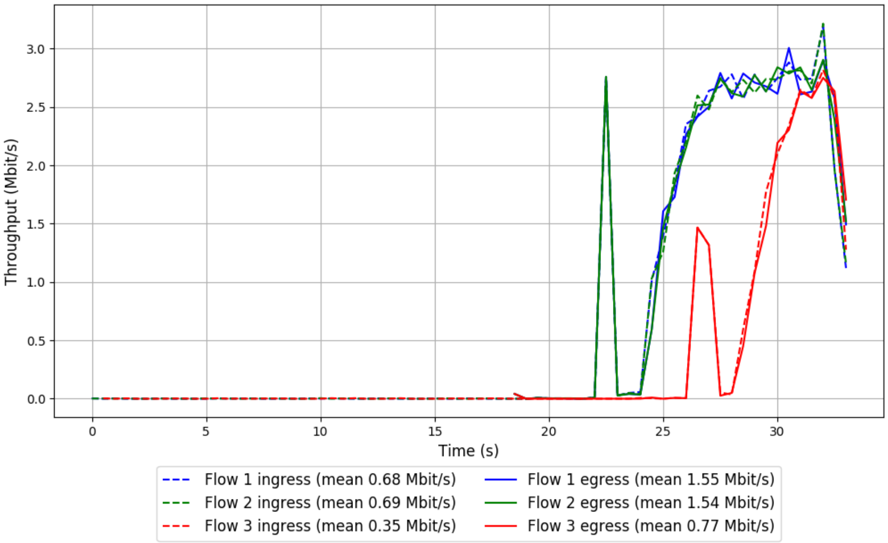
Run 4: Report of WebRTC media — Data Link

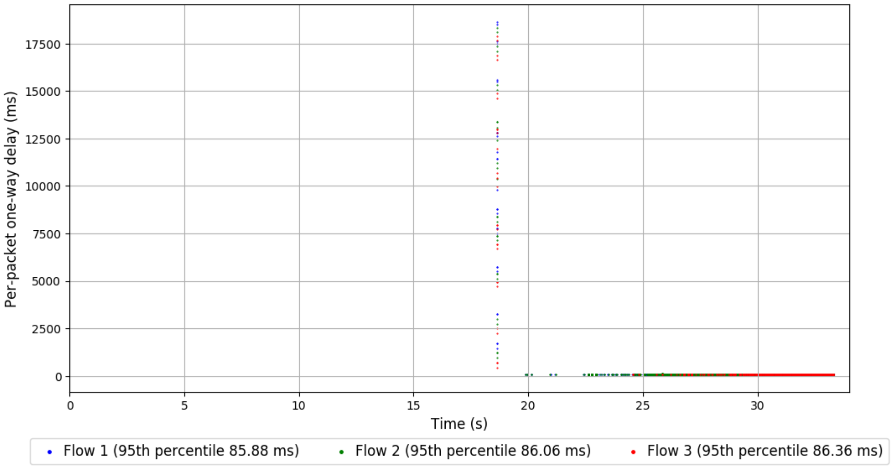




```
Run 5: Statistics of WebRTC media

Start at: 2017-12-12 00:40:05
End at: 2017-12-12 00:40:35
Local clock offset: -3.024 ms
Remote clock offset: 0.236 ms
```

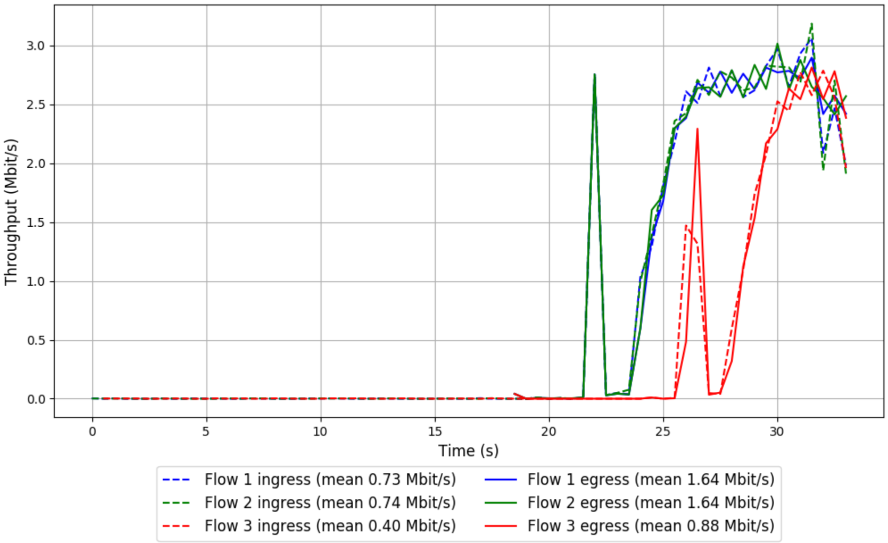
Run 5: Report of WebRTC media — Data Link

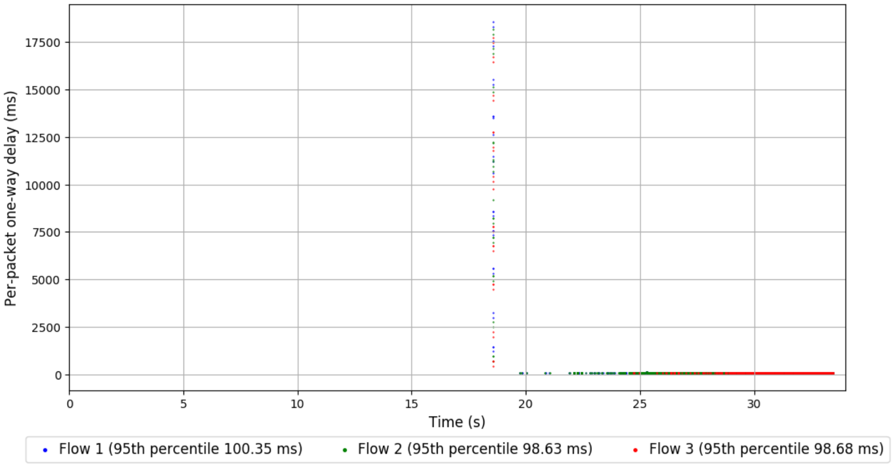




```
Run 6: Statistics of WebRTC media

Start at: 2017-12-12 01:00:07
End at: 2017-12-12 01:00:37
Local clock offset: -3.482 ms
Remote clock offset: 12.104 ms
```

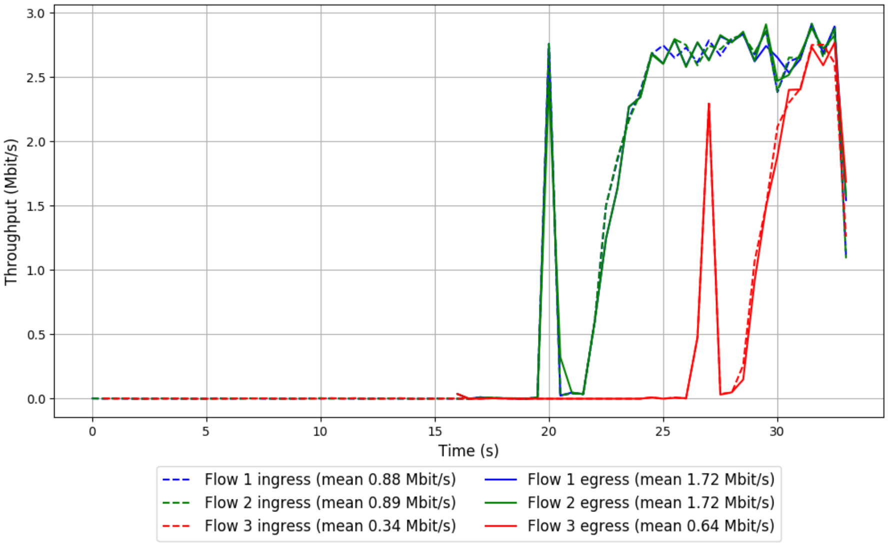
Run 6: Report of WebRTC media — Data Link

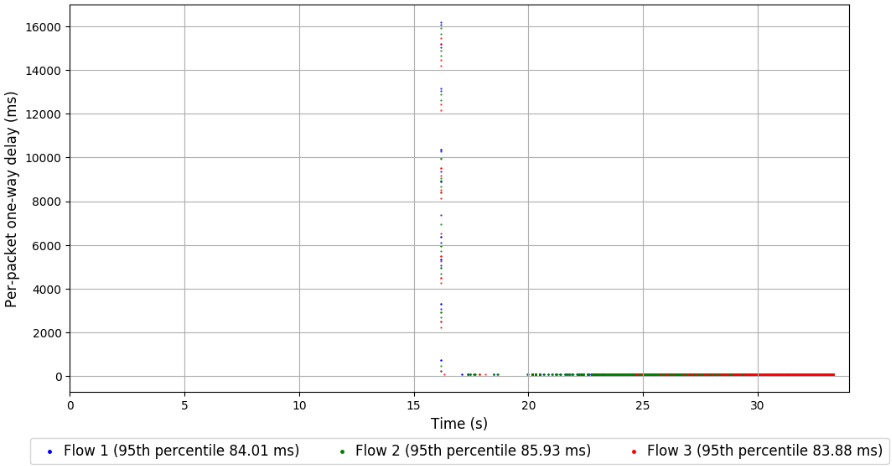




```
Run 7: Statistics of WebRTC media

Start at: 2017-12-12 01:20:16
End at: 2017-12-12 01:20:46
Local clock offset: -2.845 ms
Remote clock offset: -2.938 ms
```

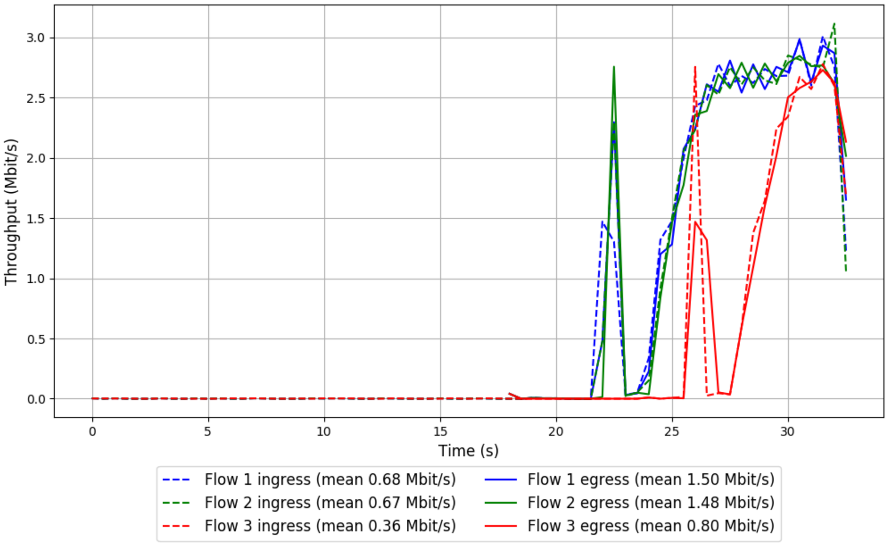
Run 7: Report of WebRTC media — Data Link

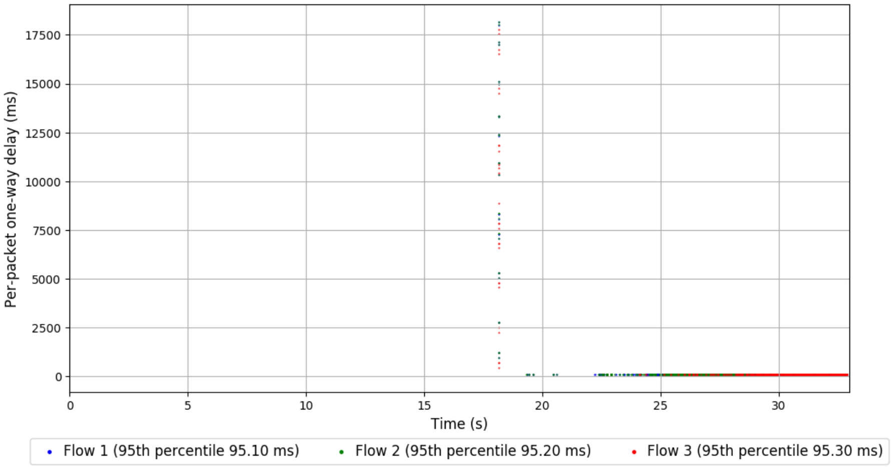




```
Run 8: Statistics of WebRTC media

Start at: 2017-12-12 01:40:36
End at: 2017-12-12 01:41:06
Local clock offset: -2.946 ms
Remote clock offset: 6.125 ms
```

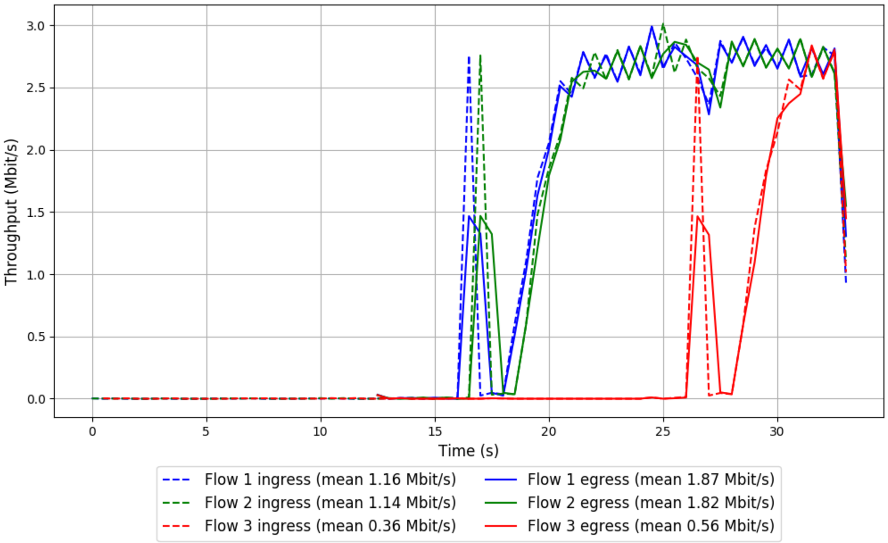
Run 8: Report of WebRTC media — Data Link

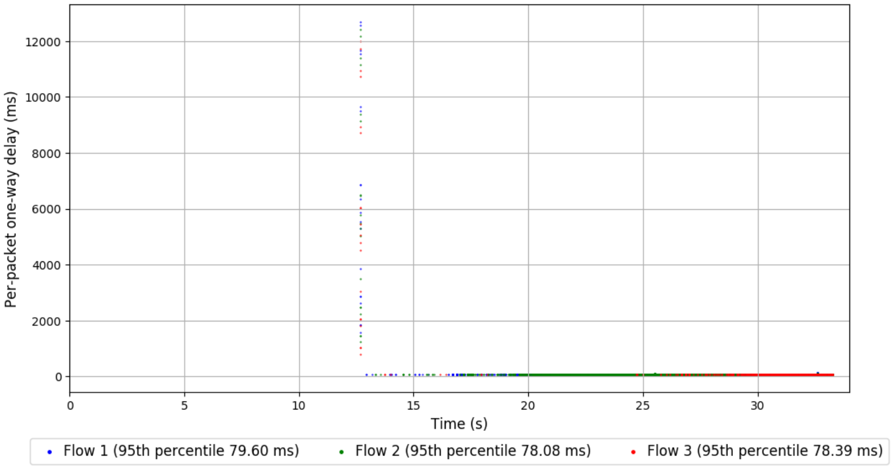




```
Run 9: Statistics of WebRTC media

Start at: 2017-12-12 02:00:46
End at: 2017-12-12 02:01:16
Local clock offset: -3.307 ms
Remote clock offset: -10.119 ms
```

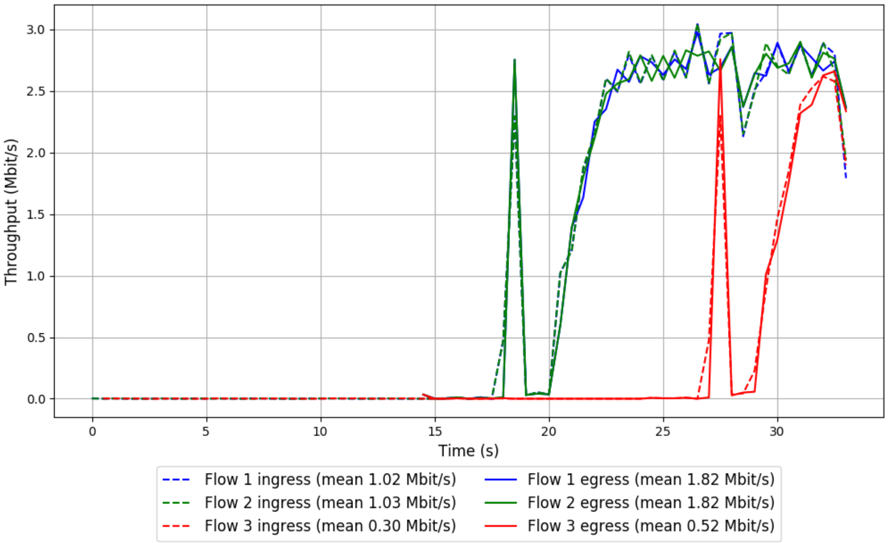
Run 9: Report of WebRTC media — Data Link

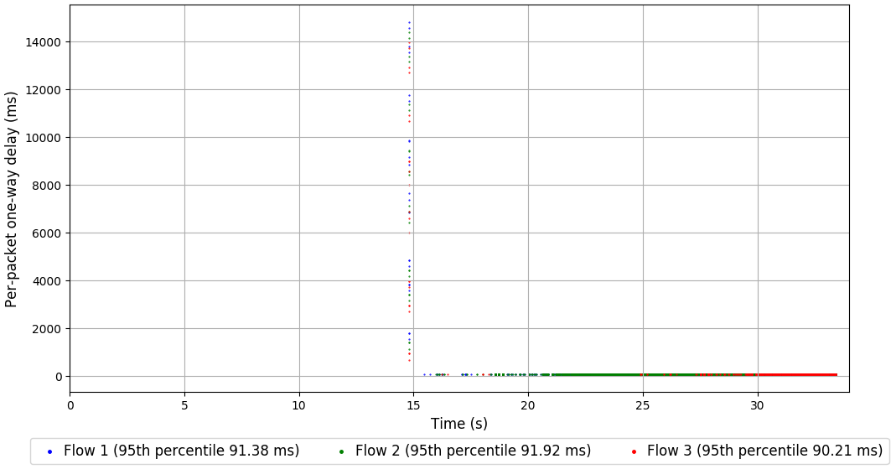




```
Run 10: Statistics of WebRTC media

Start at: 2017-12-12 02:20:52
End at: 2017-12-12 02:21:22
Local clock offset: -2.906 ms
Remote clock offset: 1.103 ms
```

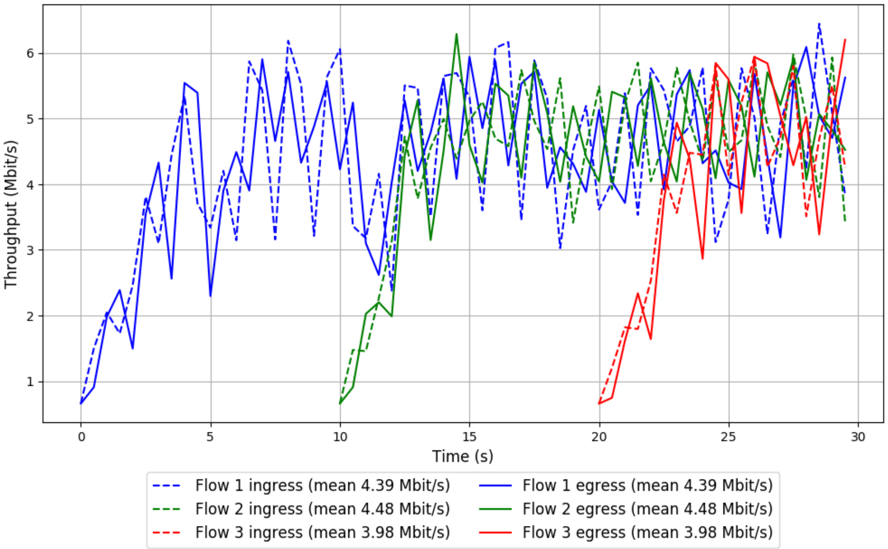
Run 10: Report of WebRTC media — Data Link

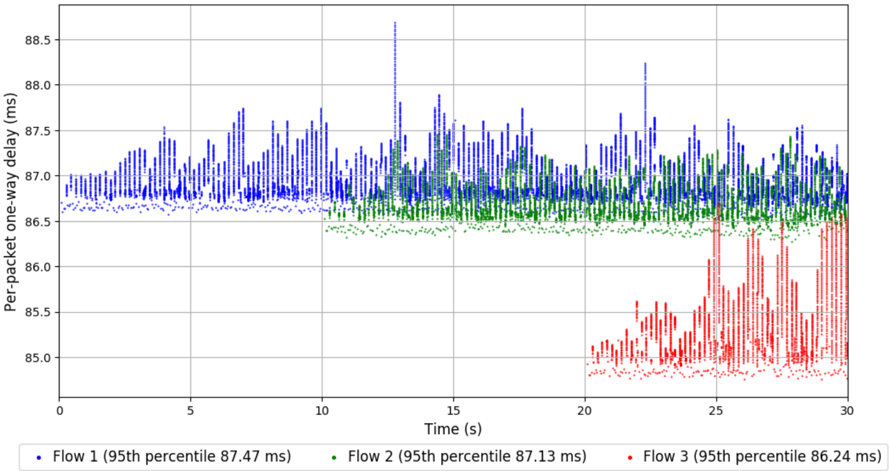




```
Run 1: Statistics of Sprout

Start at: 2017-12-11 23:24:53
End at: 2017-12-11 23:25:23
Local clock offset: -1.159 ms
Remote clock offset: 0.614 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.68 Mbit/s
95th percentile per-packet one-way delay: 87.359 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 87.466 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 87.134 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.98 Mbit/s
95th percentile per-packet one-way delay: 86.240 ms
Loss rate: 0.00%
```

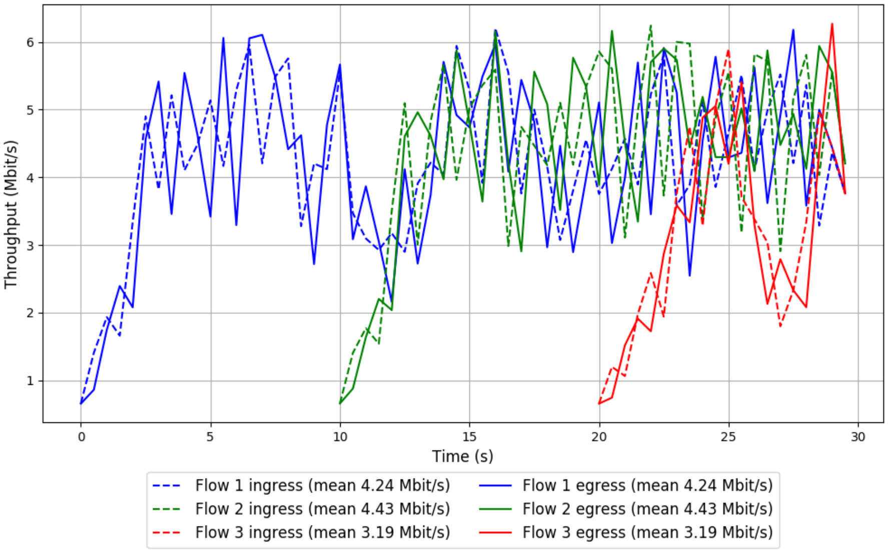
Run 1: Report of Sprout — Data Link

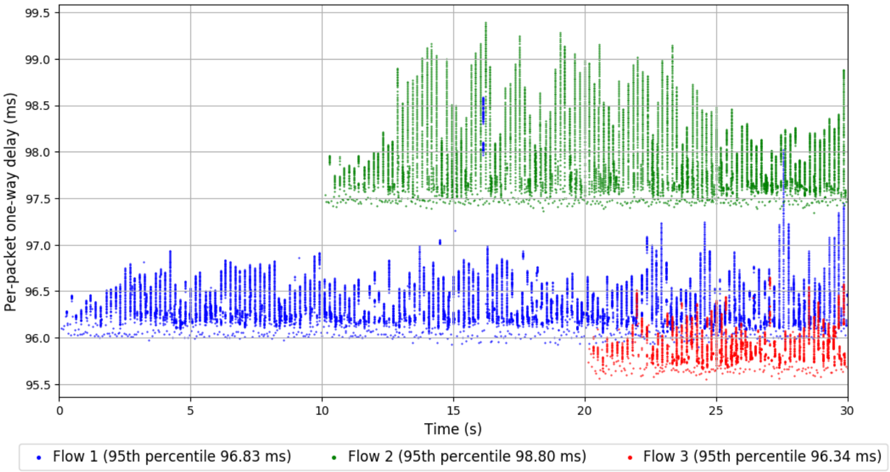




```
Run 2: Statistics of Sprout

Start at: 2017-12-11 23:44:57
End at: 2017-12-11 23:45:27
Local clock offset: -2.176 ms
Remote clock offset: 12.16 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.24 Mbit/s
95th percentile per-packet one-way delay: 98.494 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.24 Mbit/s
95th percentile per-packet one-way delay: 96.825 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.43 Mbit/s
95th percentile per-packet one-way delay: 98.798 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.19 Mbit/s
95th percentile per-packet one-way delay: 96.341 ms
Loss rate: 0.00%
```

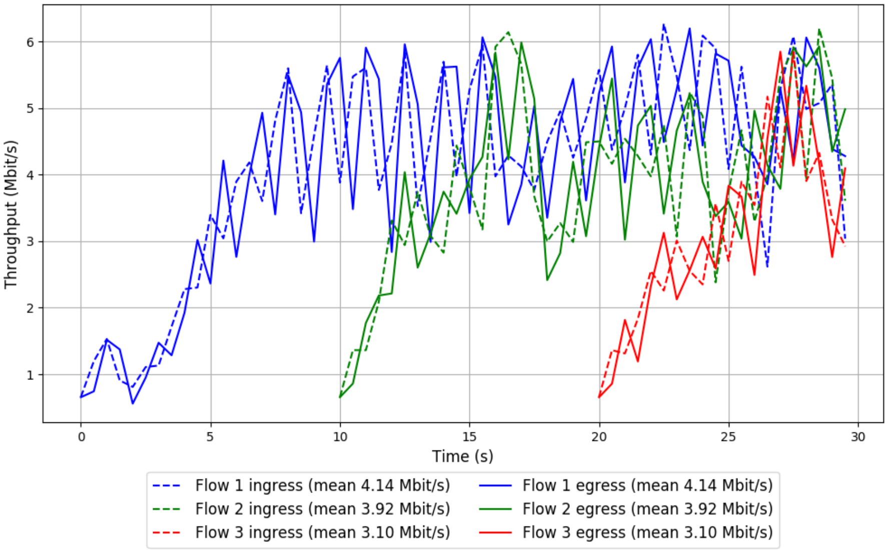
Run 2: Report of Sprout — Data Link

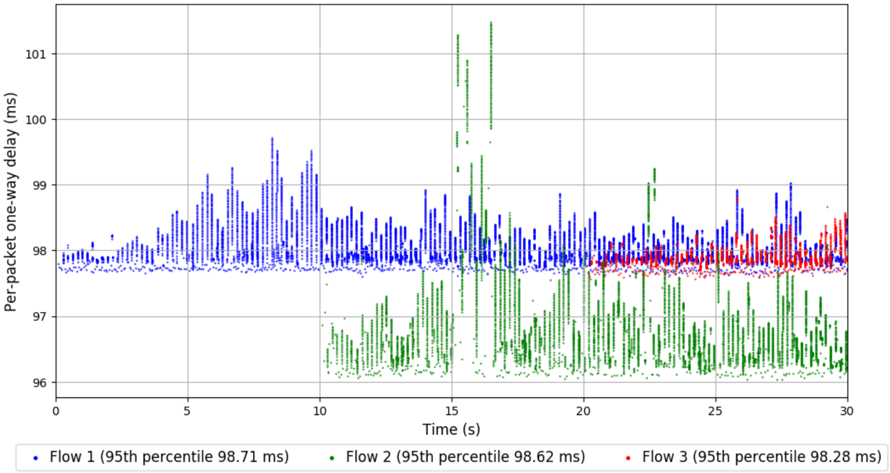




```
Run 3: Statistics of Sprout

Start at: 2017-12-12 00:05:05
End at: 2017-12-12 00:05:35
Local clock offset: -2.066 ms
Remote clock offset: 12.249 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 7.77 Mbit/s
95th percentile per-packet one-way delay: 98.641 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.14 Mbit/s
95th percentile per-packet one-way delay: 98.710 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.92 Mbit/s
95th percentile per-packet one-way delay: 98.625 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.10 Mbit/s
95th percentile per-packet one-way delay: 98.275 ms
Loss rate: 0.00%
```

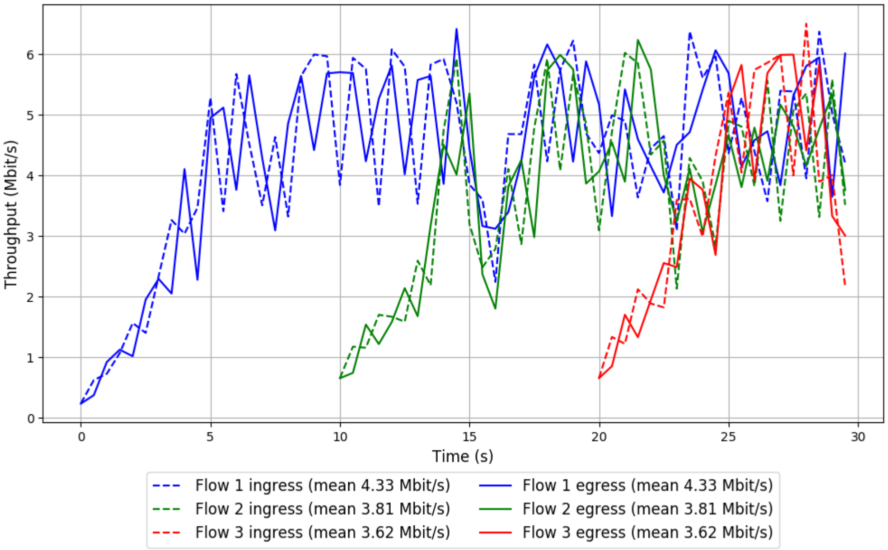
Run 3: Report of Sprout — Data Link

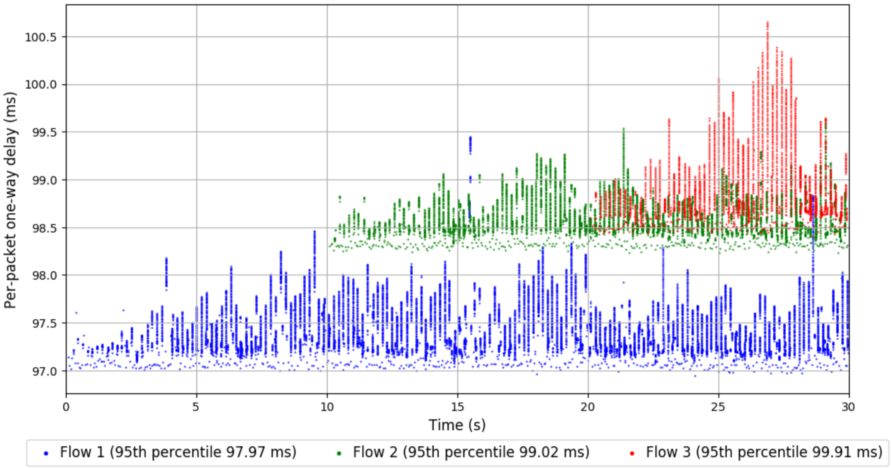




```
Run 4: Statistics of Sprout

Start at: 2017-12-12 00:25:10
End at: 2017-12-12 00:25:40
Local clock offset: -2.627 ms
Remote clock offset: 12.076 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.05 Mbit/s
95th percentile per-packet one-way delay: 99.160 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 97.973 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 3.81 Mbit/s
95th percentile per-packet one-way delay: 99.020 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.62 Mbit/s
95th percentile per-packet one-way delay: 99.913 ms
Loss rate: 0.00%
```

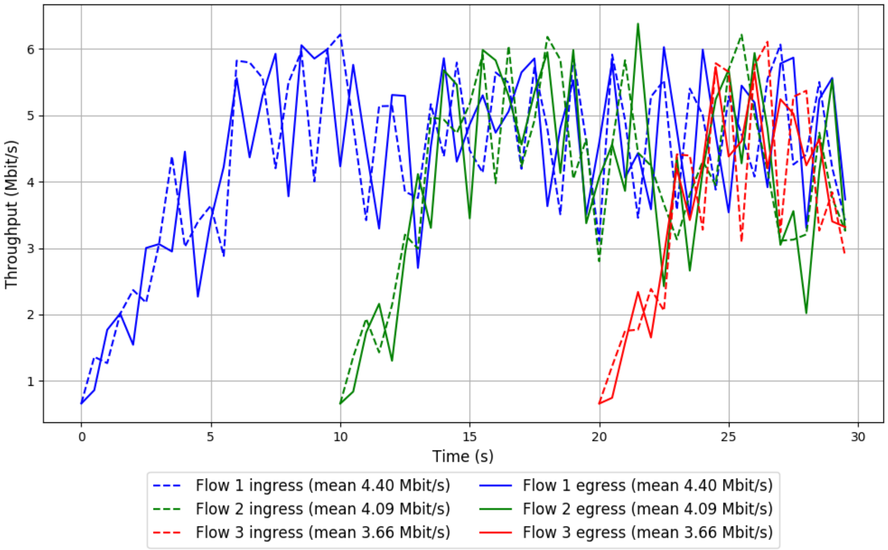
Run 4: Report of Sprout — Data Link

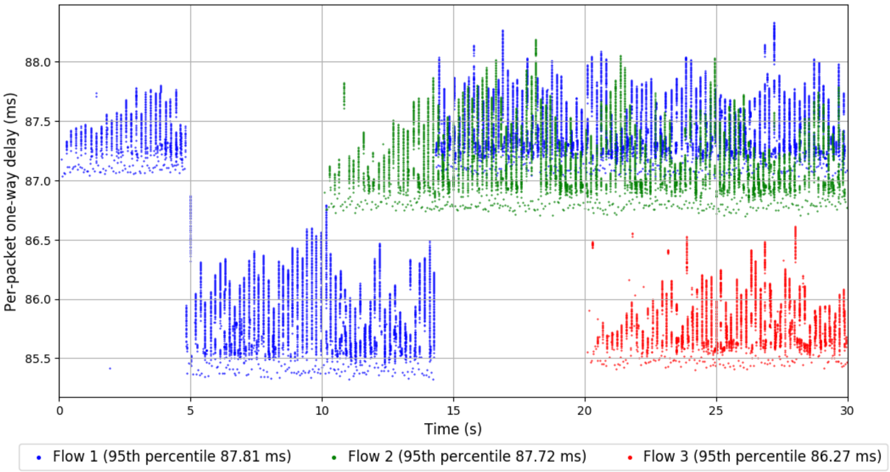




```
Run 5: Statistics of Sprout

Start at: 2017-12-12 00:45:13
End at: 2017-12-12 00:45:43
Local clock offset: -3.254 ms
Remote clock offset: -0.168 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.32 Mbit/s
95th percentile per-packet one-way delay: 87.763 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.40 Mbit/s
95th percentile per-packet one-way delay: 87.813 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.09 Mbit/s
95th percentile per-packet one-way delay: 87.715 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.66 Mbit/s
95th percentile per-packet one-way delay: 86.266 ms
Loss rate: 0.00%
```

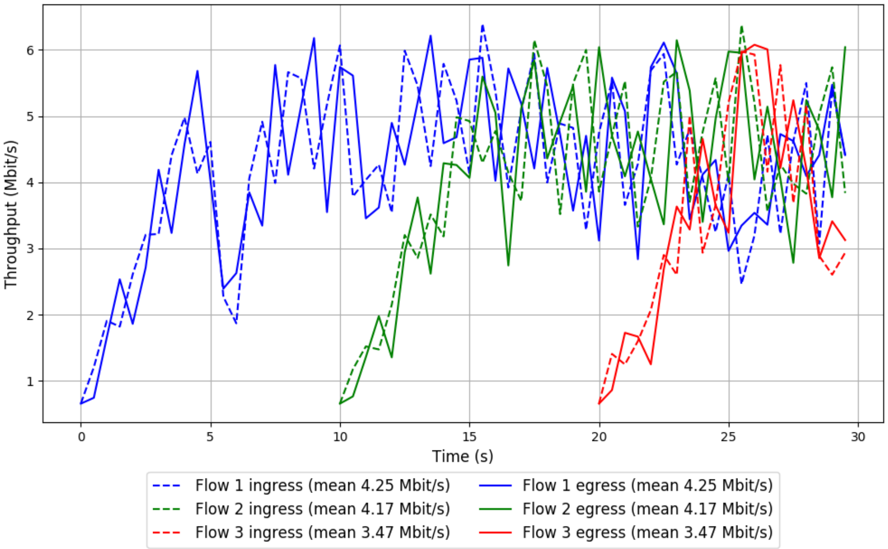
Run 5: Report of Sprout — Data Link

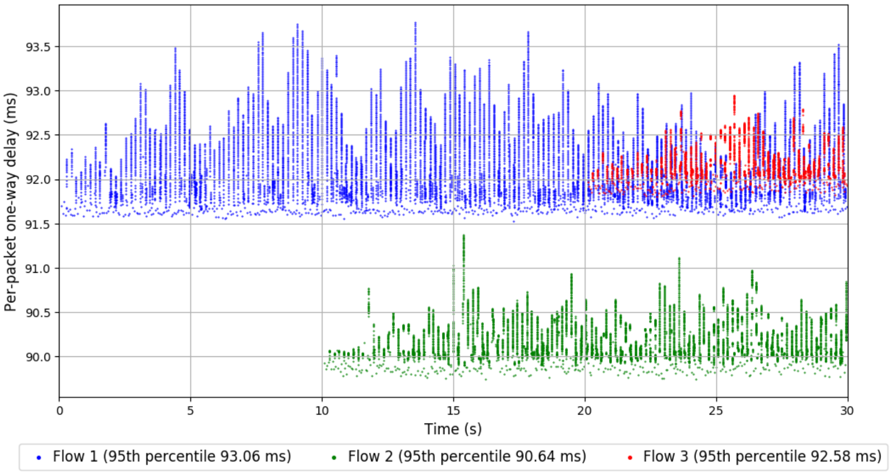




```
Run 6: Statistics of Sprout

Start at: 2017-12-12 01:05:12
End at: 2017-12-12 01:05:42
Local clock offset: -3.3 ms
Remote clock offset: 3.965 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.16 Mbit/s
95th percentile per-packet one-way delay: 92.871 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.25 Mbit/s
95th percentile per-packet one-way delay: 93.057 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.17 Mbit/s
95th percentile per-packet one-way delay: 90.635 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.47 Mbit/s
95th percentile per-packet one-way delay: 92.583 ms
Loss rate: 0.00%
```

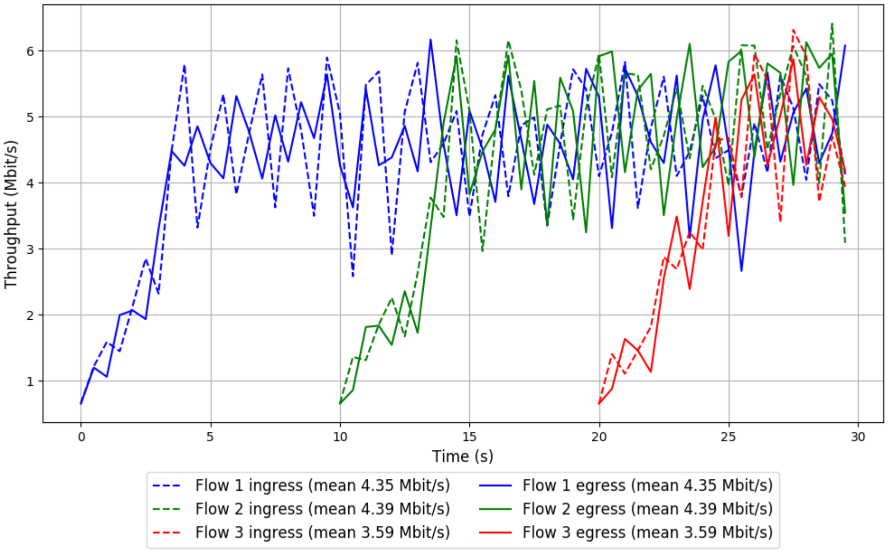
Run 6: Report of Sprout — Data Link

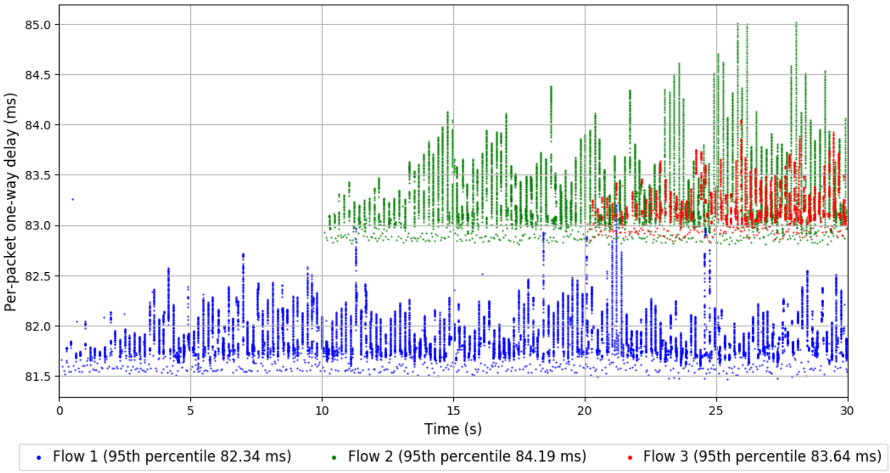




```
Run 7: Statistics of Sprout

Start at: 2017-12-12 01:25:22
End at: 2017-12-12 01:25:52
Local clock offset: -2.725 ms
Remote clock offset: -5.071 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.45 Mbit/s
95th percentile per-packet one-way delay: 83.828 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.35 Mbit/s
95th percentile per-packet one-way delay: 82.340 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.39 Mbit/s
95th percentile per-packet one-way delay: 84.192 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.59 Mbit/s
95th percentile per-packet one-way delay: 83.640 ms
Loss rate: 0.00%
```

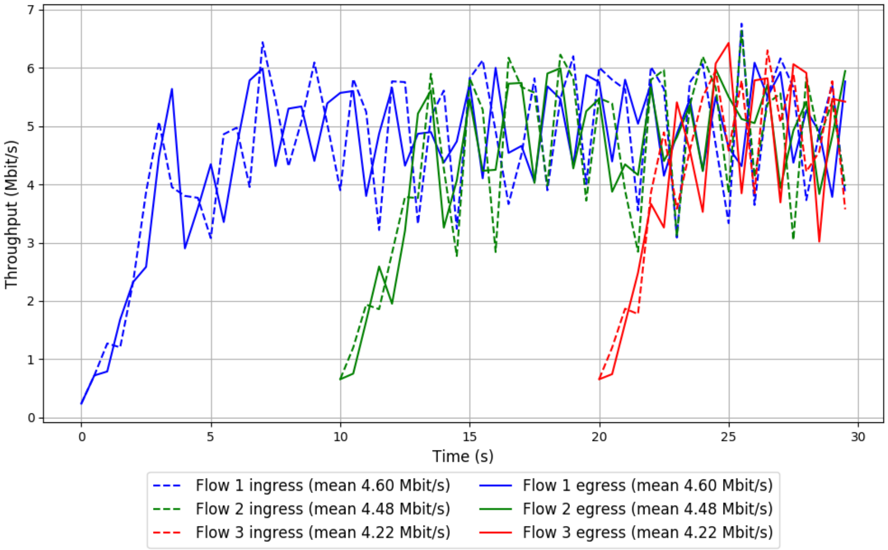
Run 7: Report of Sprout — Data Link

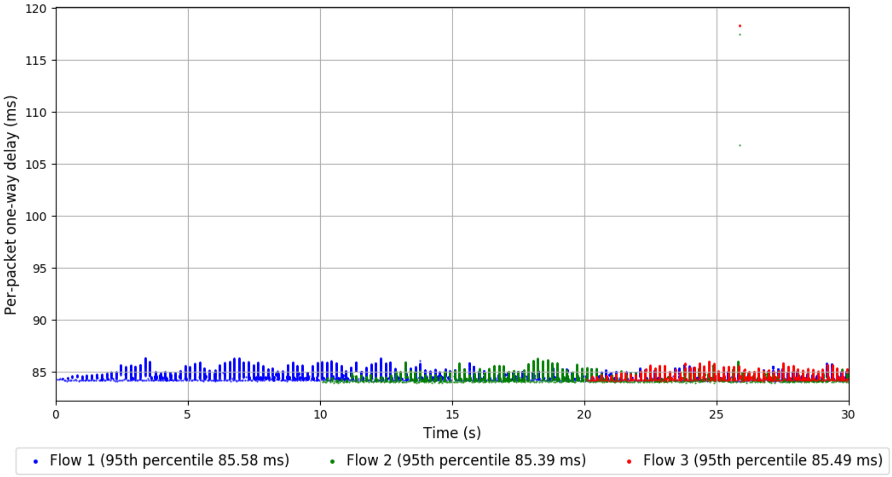




```
Run 8: Statistics of Sprout

Start at: 2017-12-12 01:45:41
End at: 2017-12-12 01:46:11
Local clock offset: -2.967 ms
Remote clock offset: -2.53 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.97 Mbit/s
95th percentile per-packet one-way delay: 85.522 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.60 Mbit/s
95th percentile per-packet one-way delay: 85.583 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.48 Mbit/s
95th percentile per-packet one-way delay: 85.393 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 4.22 Mbit/s
95th percentile per-packet one-way delay: 85.486 ms
Loss rate: 0.00%
```

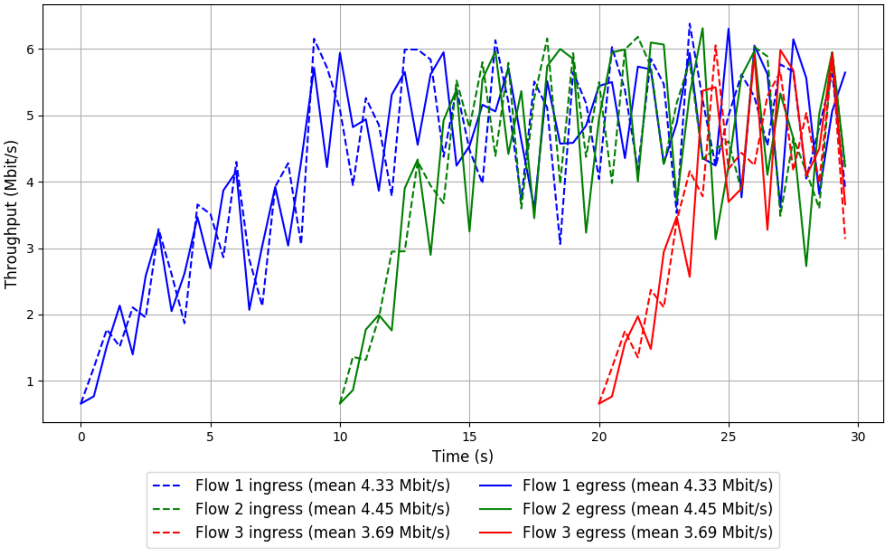
Run 8: Report of Sprout — Data Link

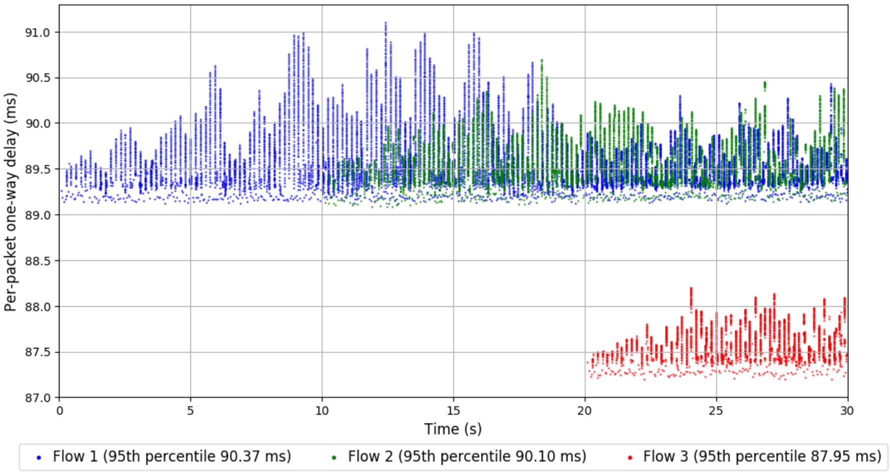




```
Run 9: Statistics of Sprout

Start at: 2017-12-12 02:05:51
End at: 2017-12-12 02:06:21
Local clock offset: -3.362 ms
Remote clock offset: -0.598 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 90.207 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.33 Mbit/s
95th percentile per-packet one-way delay: 90.369 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.45 Mbit/s
95th percentile per-packet one-way delay: 90.099 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.69 Mbit/s
95th percentile per-packet one-way delay: 87.946 ms
Loss rate: 0.00%
```

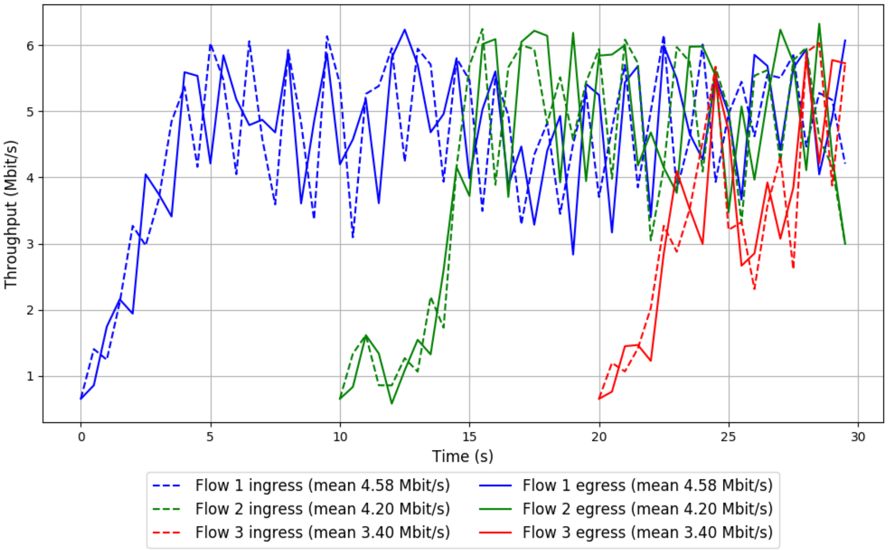
Run 9: Report of Sprout — Data Link

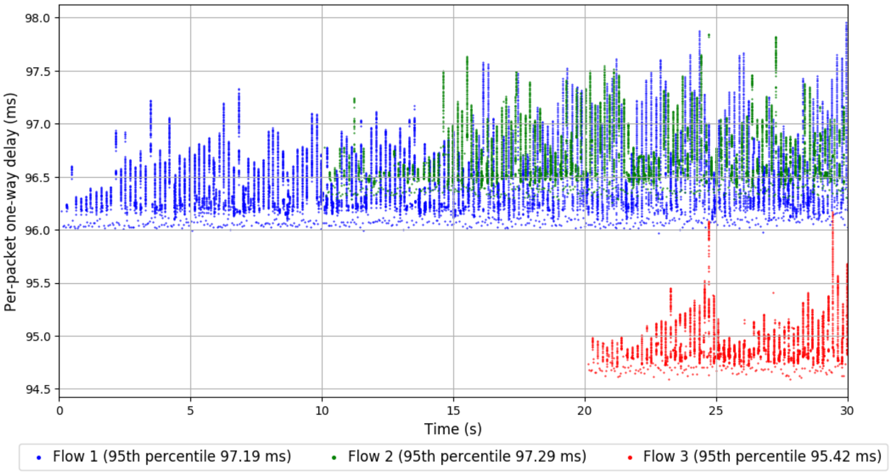




```
Run 10: Statistics of Sprout

Start at: 2017-12-12 02:25:58
End at: 2017-12-12 02:26:28
Local clock offset: -2.618 ms
Remote clock offset: 5.986 ms

# Below is generated by plot.py at 2017-12-12 03:54:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 8.50 Mbit/s
95th percentile per-packet one-way delay: 97.209 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 4.58 Mbit/s
95th percentile per-packet one-way delay: 97.190 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 4.20 Mbit/s
95th percentile per-packet one-way delay: 97.290 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 3.40 Mbit/s
95th percentile per-packet one-way delay: 95.419 ms
Loss rate: 0.00%
```

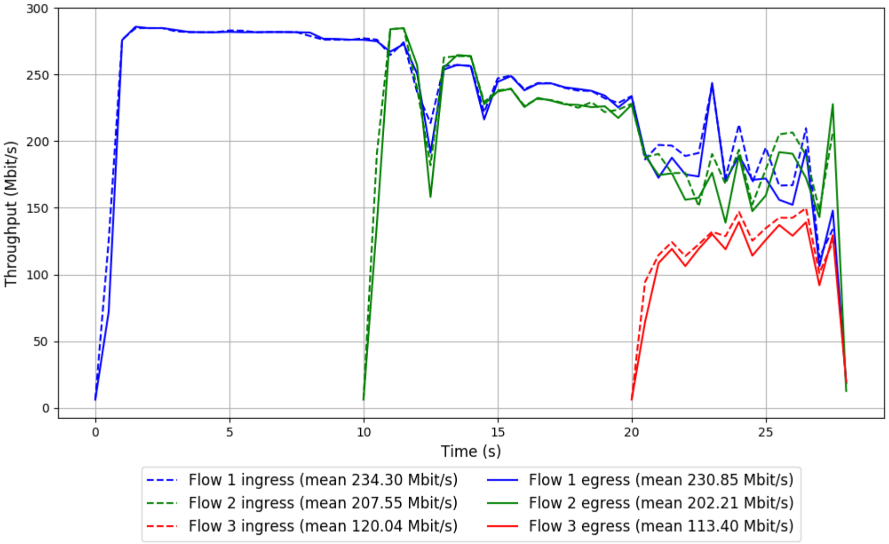
Run 10: Report of Sprout — Data Link

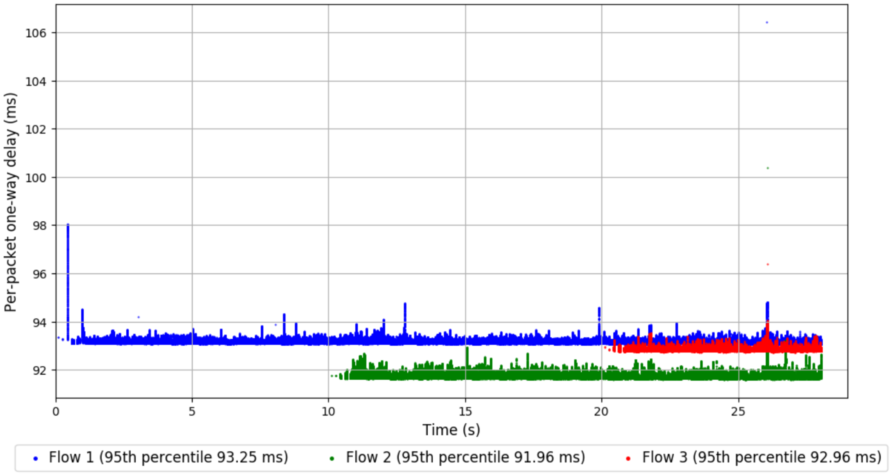




```
Run 1: Statistics of TaoVA-100x

Start at: 2017-12-11 23:26:07
End at: 2017-12-11 23:26:37
Local clock offset: -1.197 ms
Remote clock offset: 7.345 ms

# Below is generated by plot.py at 2017-12-12 04:02:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 392.86 Mbit/s
95th percentile per-packet one-way delay: 93.215 ms
Loss rate: 2.19%
-- Flow 1:
Average throughput: 230.85 Mbit/s
95th percentile per-packet one-way delay: 93.250 ms
Loss rate: 1.48%
-- Flow 2:
Average throughput: 202.21 Mbit/s
95th percentile per-packet one-way delay: 91.956 ms
Loss rate: 2.57%
-- Flow 3:
Average throughput: 113.40 Mbit/s
95th percentile per-packet one-way delay: 92.959 ms
Loss rate: 5.53%
```

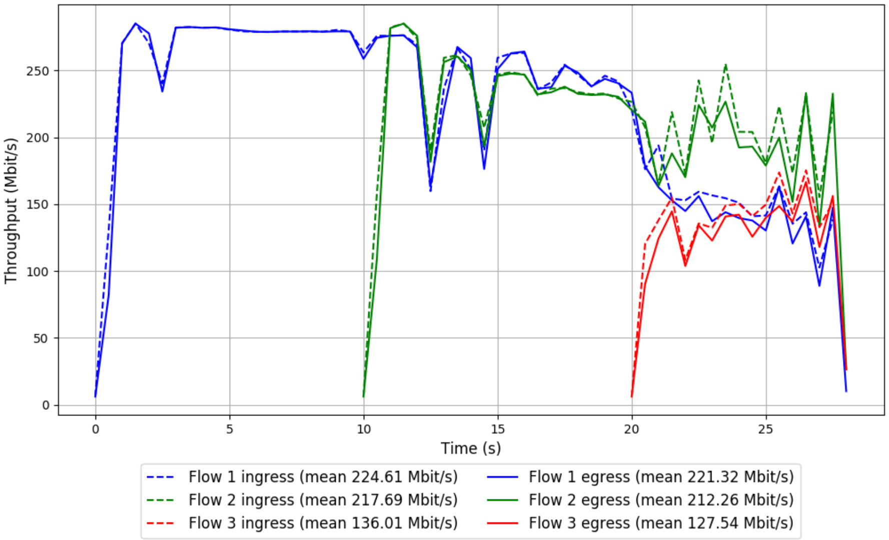
Run 1: Report of TaoVA-100x — Data Link

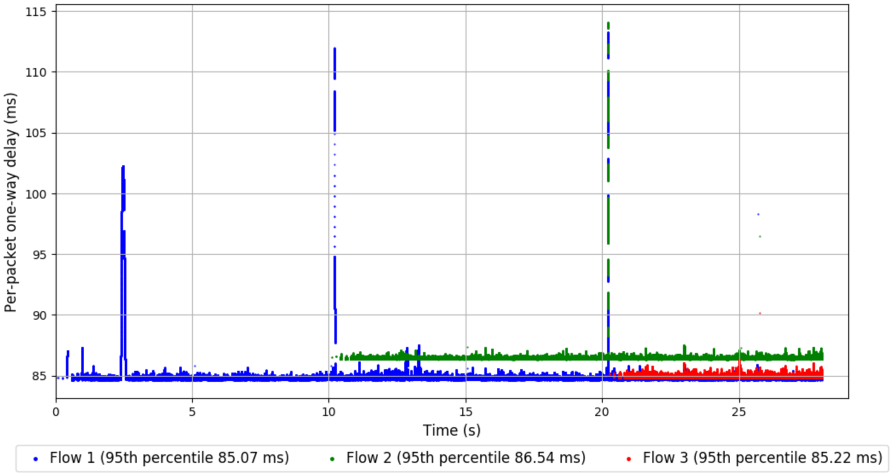




```
Run 2: Statistics of TaoVA-100x

Start at: 2017-12-11 23:46:12
End at: 2017-12-11 23:46:42
Local clock offset: -2.218 ms
Remote clock offset: 1.014 ms

# Below is generated by plot.py at 2017-12-12 04:02:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 393.81 Mbit/s
95th percentile per-packet one-way delay: 86.472 ms
Loss rate: 2.28%
-- Flow 1:
Average throughput: 221.32 Mbit/s
95th percentile per-packet one-way delay: 85.066 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 212.26 Mbit/s
95th percentile per-packet one-way delay: 86.544 ms
Loss rate: 2.51%
-- Flow 3:
Average throughput: 127.54 Mbit/s
95th percentile per-packet one-way delay: 85.220 ms
Loss rate: 6.23%
```

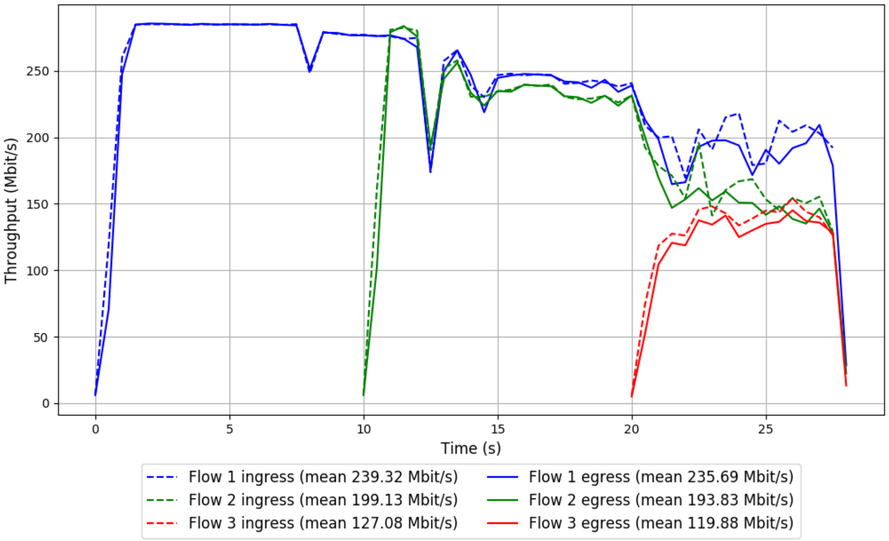
Run 2: Report of TaoVA-100x — Data Link

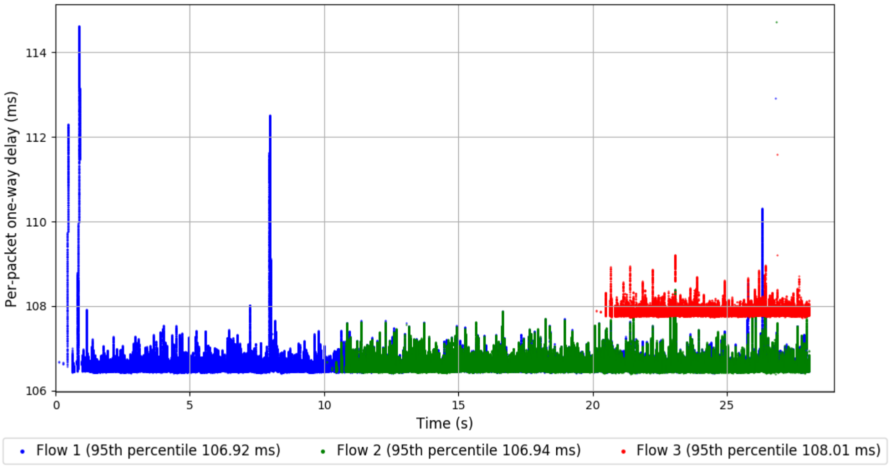




```
Run 3: Statistics of TaoVA-100x

Start at: 2017-12-12 00:06:20
End at: 2017-12-12 00:06:50
Local clock offset: -2.038 ms
Remote clock offset: 22.352 ms

# Below is generated by plot.py at 2017-12-12 04:02:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.13 Mbit/s
95th percentile per-packet one-way delay: 107.832 ms
Loss rate: 2.25%
-- Flow 1:
Average throughput: 235.69 Mbit/s
95th percentile per-packet one-way delay: 106.919 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 193.83 Mbit/s
95th percentile per-packet one-way delay: 106.942 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 119.88 Mbit/s
95th percentile per-packet one-way delay: 108.014 ms
Loss rate: 5.69%
```

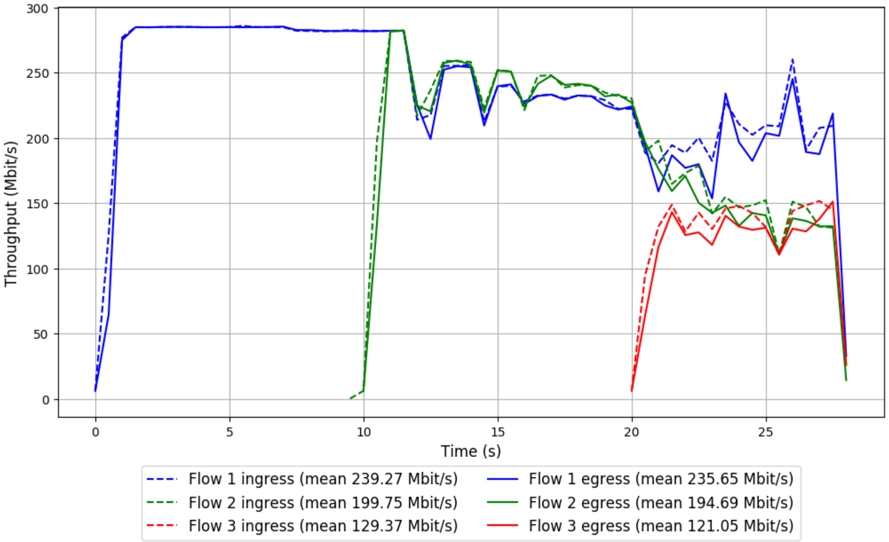
Run 3: Report of TaoVA-100x — Data Link

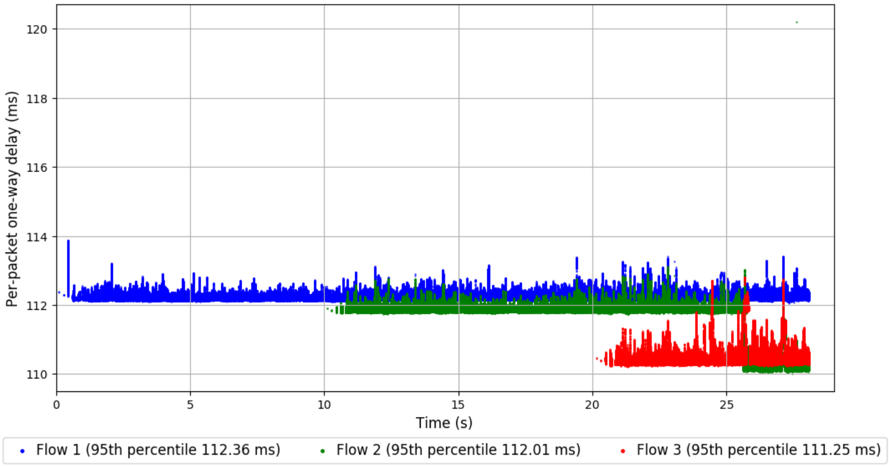




```
Run 4: Statistics of TaoVA-100x

Start at: 2017-12-12 00:26:24
End at: 2017-12-12 00:26:54
Local clock offset: -2.667 ms
Remote clock offset: 25.546 ms

# Below is generated by plot.py at 2017-12-12 04:02:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 394.98 Mbit/s
95th percentile per-packet one-way delay: 112.313 ms
Loss rate: 2.29%
-- Flow 1:
Average throughput: 235.65 Mbit/s
95th percentile per-packet one-way delay: 112.363 ms
Loss rate: 1.52%
-- Flow 2:
Average throughput: 194.69 Mbit/s
95th percentile per-packet one-way delay: 112.014 ms
Loss rate: 2.55%
-- Flow 3:
Average throughput: 121.05 Mbit/s
95th percentile per-packet one-way delay: 111.245 ms
Loss rate: 6.43%
```

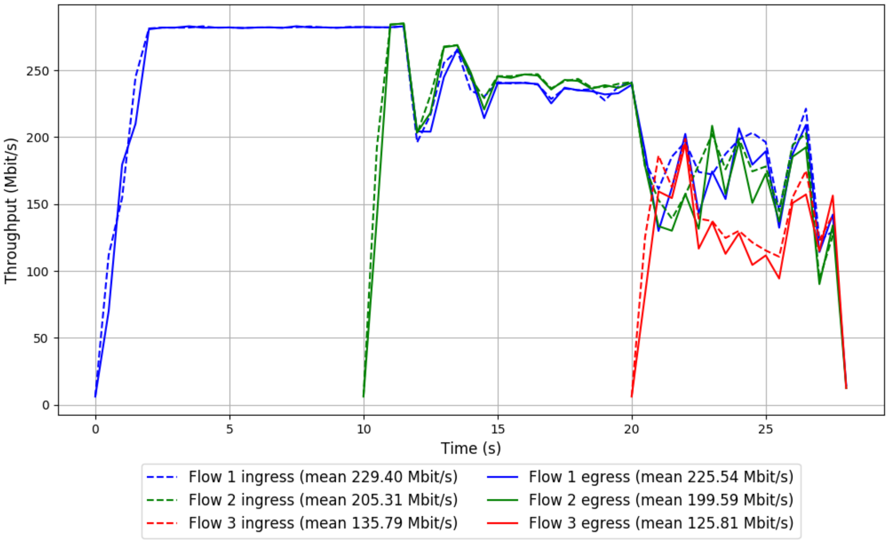
Run 4: Report of TaoVA-100x — Data Link

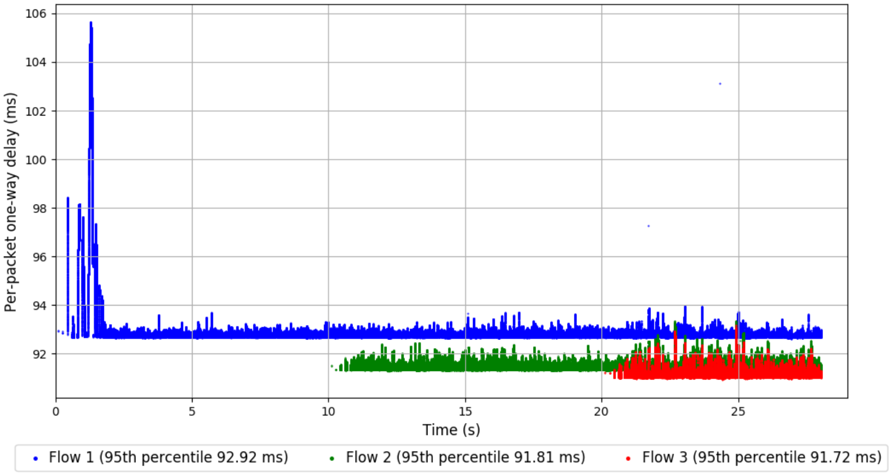




```
Run 5: Statistics of TaoVA-100x

Start at: 2017-12-12 00:46:28
End at: 2017-12-12 00:46:58
Local clock offset: -3.361 ms
Remote clock offset: 5.615 ms

# Below is generated by plot.py at 2017-12-12 04:02:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 389.33 Mbit/s
95th percentile per-packet one-way delay: 92.841 ms
Loss rate: 2.59%
-- Flow 1:
Average throughput: 225.54 Mbit/s
95th percentile per-packet one-way delay: 92.924 ms
Loss rate: 1.68%
-- Flow 2:
Average throughput: 199.59 Mbit/s
95th percentile per-packet one-way delay: 91.806 ms
Loss rate: 2.79%
-- Flow 3:
Average throughput: 125.81 Mbit/s
95th percentile per-packet one-way delay: 91.721 ms
Loss rate: 7.35%
```

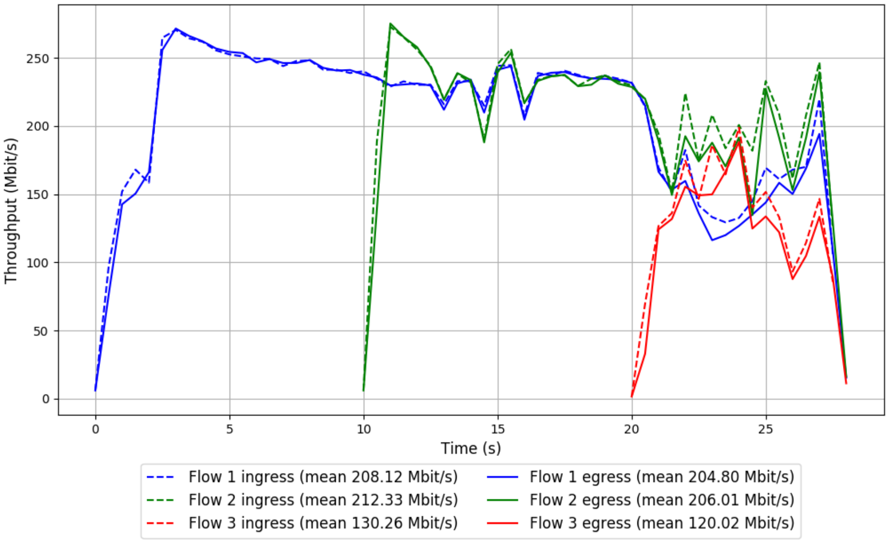
Run 5: Report of TaoVA-100x — Data Link

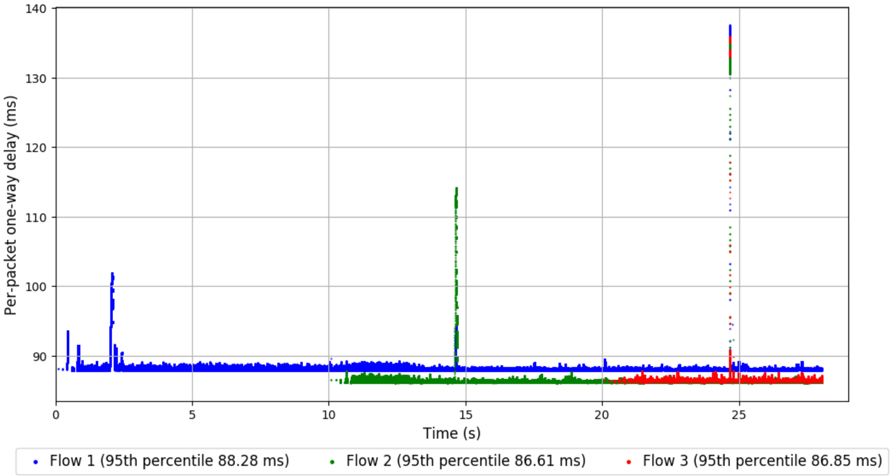




```
Run 6: Statistics of TaoVA-100x

Start at: 2017-12-12 01:06:26
End at: 2017-12-12 01:06:56
Local clock offset: -3.31 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2017-12-12 04:02:54
# Datalink statistics
-- Total of 3 flows:
Average throughput: 371.18 Mbit/s
95th percentile per-packet one-way delay: 88.146 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 204.80 Mbit/s
95th percentile per-packet one-way delay: 88.275 ms
Loss rate: 1.61%
-- Flow 2:
Average throughput: 206.01 Mbit/s
95th percentile per-packet one-way delay: 86.611 ms
Loss rate: 2.98%
-- Flow 3:
Average throughput: 120.02 Mbit/s
95th percentile per-packet one-way delay: 86.850 ms
Loss rate: 7.86%
```

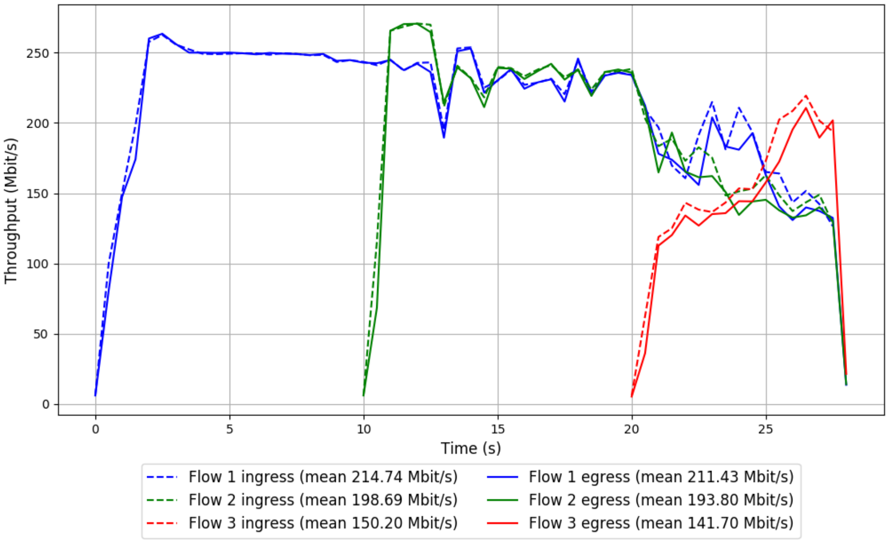
Run 6: Report of TaoVA-100x — Data Link

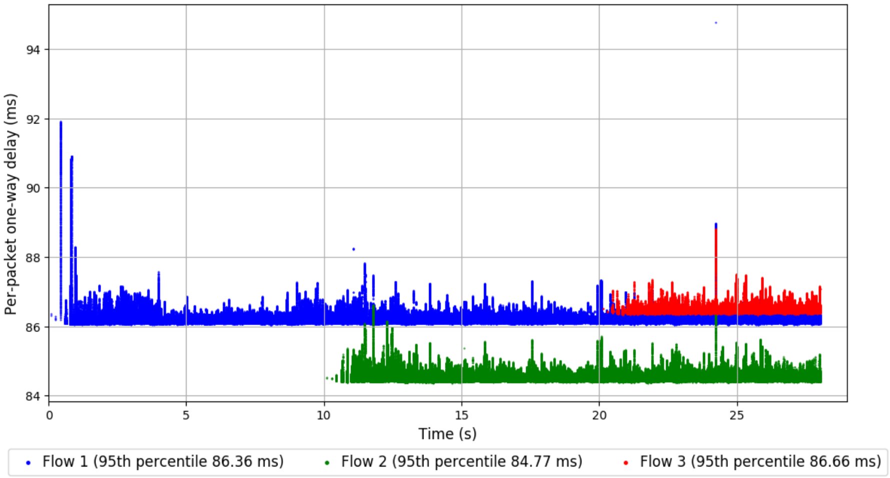




```
Run 7: Statistics of TaoVA-100x

Start at: 2017-12-12 01:26:41
End at: 2017-12-12 01:27:11
Local clock offset: -2.659 ms
Remote clock offset: -2.132 ms

# Below is generated by plot.py at 2017-12-12 04:04:26
# Datalink statistics
-- Total of 3 flows:
Average throughput: 375.80 Mbit/s
95th percentile per-packet one-way delay: 86.475 ms
Loss rate: 2.31%
-- Flow 1:
Average throughput: 211.43 Mbit/s
95th percentile per-packet one-way delay: 86.361 ms
Loss rate: 1.55%
-- Flow 2:
Average throughput: 193.80 Mbit/s
95th percentile per-packet one-way delay: 84.768 ms
Loss rate: 2.47%
-- Flow 3:
Average throughput: 141.70 Mbit/s
95th percentile per-packet one-way delay: 86.663 ms
Loss rate: 5.69%
```

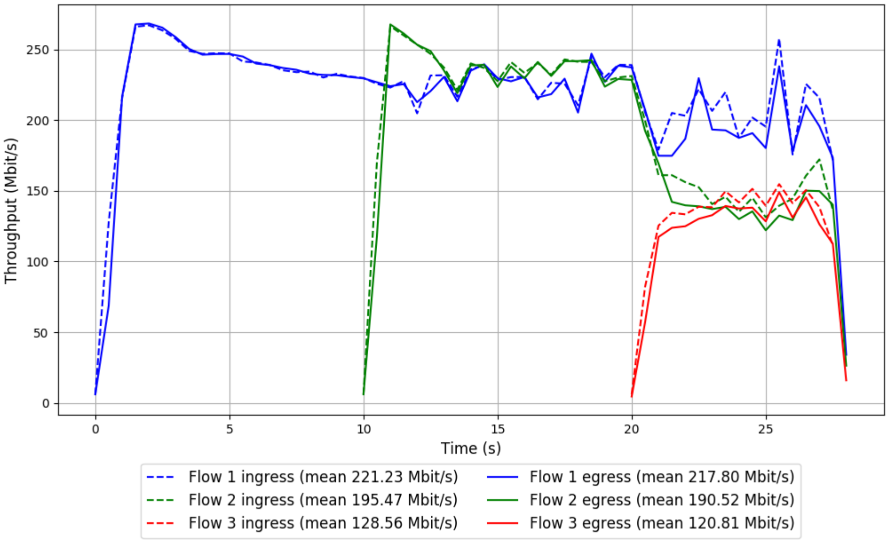
Run 7: Report of TaoVA-100x — Data Link

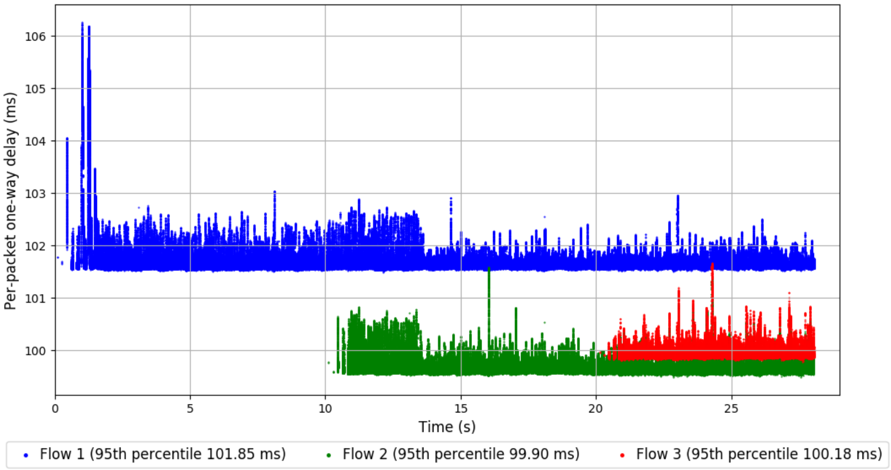




```
Run 8: Statistics of TaoVA-100x

Start at: 2017-12-12 01:46:56
End at: 2017-12-12 01:47:26
Local clock offset: -3.031 ms
Remote clock offset: 12.807 ms

# Below is generated by plot.py at 2017-12-12 04:04:44
# Datalink statistics
-- Total of 3 flows:
Average throughput: 374.23 Mbit/s
95th percentile per-packet one-way delay: 101.745 ms
Loss rate: 2.30%
-- Flow 1:
Average throughput: 217.80 Mbit/s
95th percentile per-packet one-way delay: 101.846 ms
Loss rate: 1.56%
-- Flow 2:
Average throughput: 190.52 Mbit/s
95th percentile per-packet one-way delay: 99.904 ms
Loss rate: 2.53%
-- Flow 3:
Average throughput: 120.81 Mbit/s
95th percentile per-packet one-way delay: 100.178 ms
Loss rate: 6.03%
```

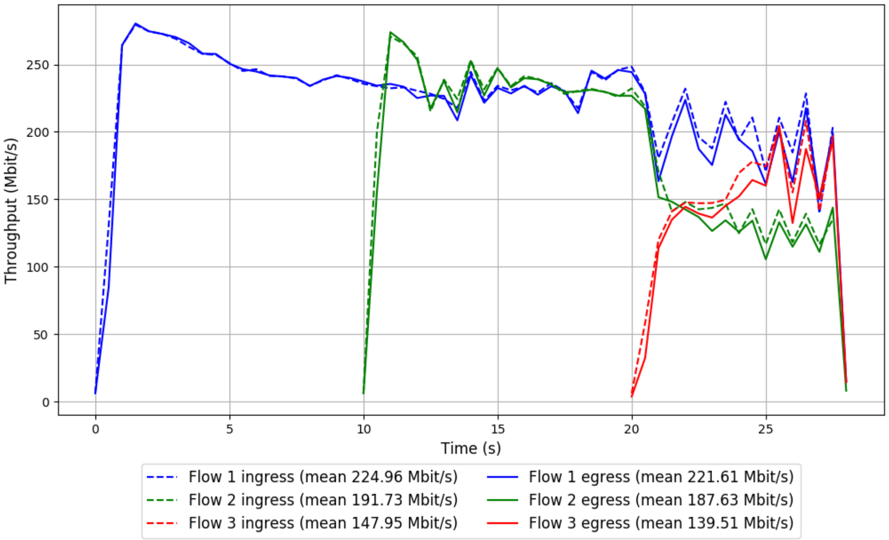
Run 8: Report of TaoVA-100x — Data Link

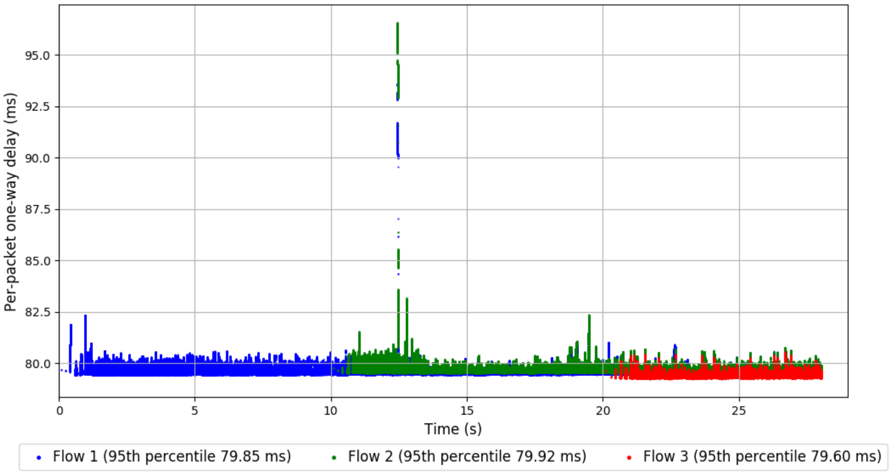




```
Run 9: Statistics of TaoVA-100x

Start at: 2017-12-12 02:07:06
End at: 2017-12-12 02:07:36
Local clock offset: -3.335 ms
Remote clock offset: -8.682 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 381.56 Mbit/s
95th percentile per-packet one-way delay: 79.863 ms
Loss rate: 2.15%
-- Flow 1:
Average throughput: 221.61 Mbit/s
95th percentile per-packet one-way delay: 79.854 ms
Loss rate: 1.49%
-- Flow 2:
Average throughput: 187.63 Mbit/s
95th percentile per-packet one-way delay: 79.925 ms
Loss rate: 2.14%
-- Flow 3:
Average throughput: 139.51 Mbit/s
95th percentile per-packet one-way delay: 79.596 ms
Loss rate: 5.71%
```

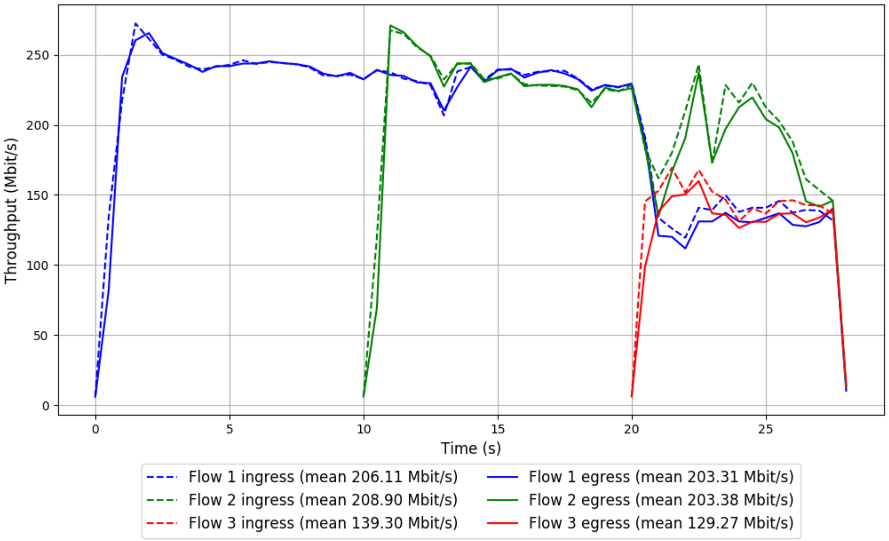
Run 9: Report of TaoVA-100x — Data Link

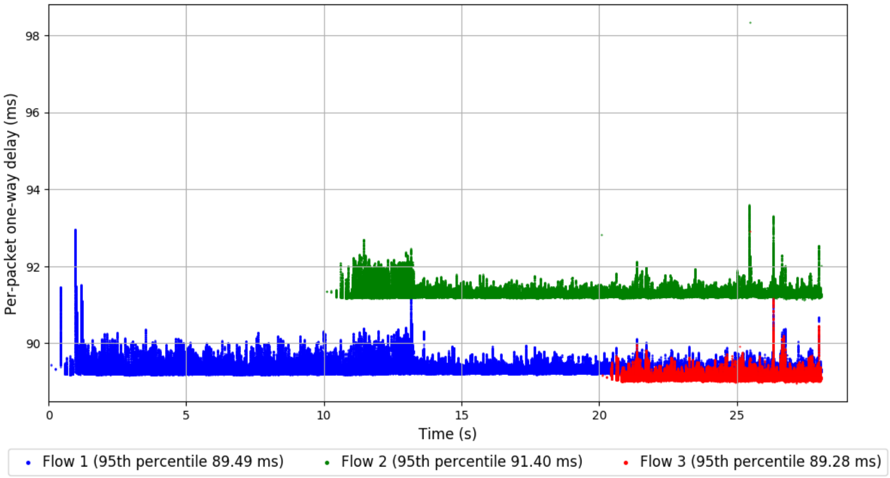




```
Run 10: Statistics of TaoVA-100x

Start at: 2017-12-12 02:27:13
End at: 2017-12-12 02:27:43
Local clock offset: -2.623 ms
Remote clock offset: 0.681 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 370.63 Mbit/s
95th percentile per-packet one-way delay: 91.312 ms
Loss rate: 2.43%
-- Flow 1:
Average throughput: 203.31 Mbit/s
95th percentile per-packet one-way delay: 89.494 ms
Loss rate: 1.36%
-- Flow 2:
Average throughput: 203.38 Mbit/s
95th percentile per-packet one-way delay: 91.402 ms
Loss rate: 2.66%
-- Flow 3:
Average throughput: 129.27 Mbit/s
95th percentile per-packet one-way delay: 89.277 ms
Loss rate: 7.20%
```

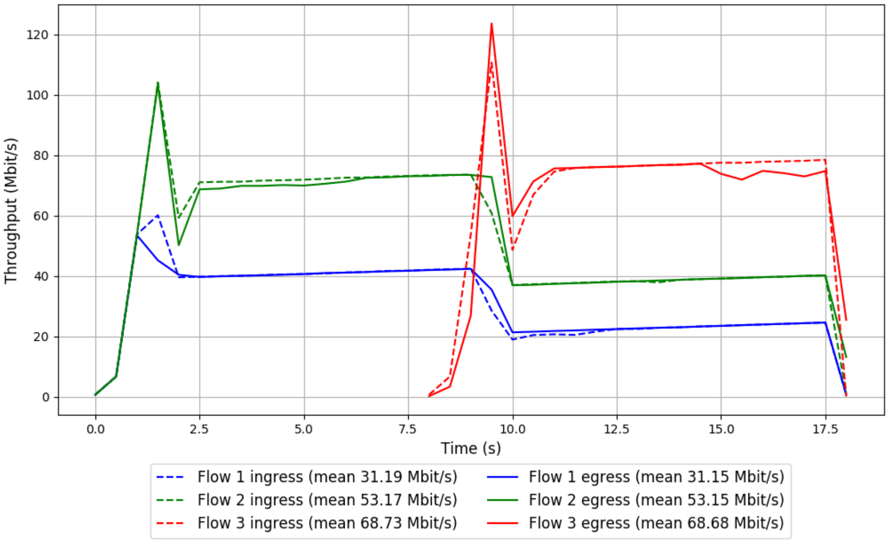
Run 10: Report of TaoVA-100x — Data Link

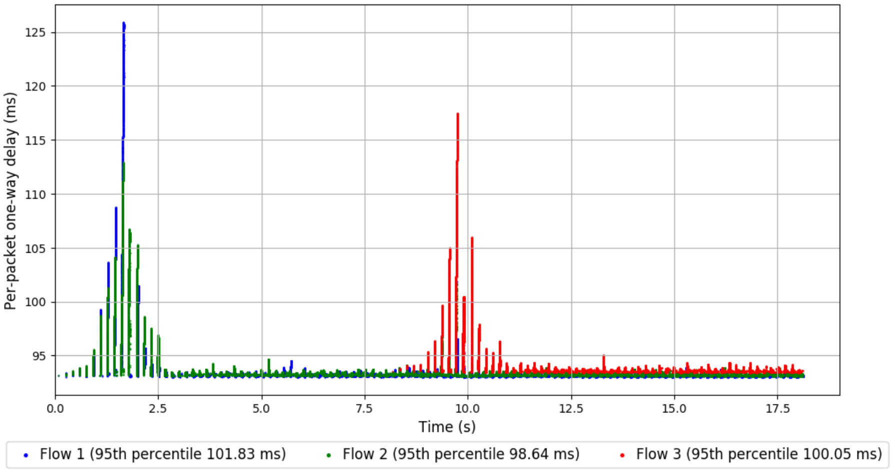




```
Run 1: Statistics of TCP Vegas

Start at: 2017-12-11 23:37:00
End at: 2017-12-11 23:37:30
Local clock offset: -1.886 ms
Remote clock offset: 9.193 ms
```

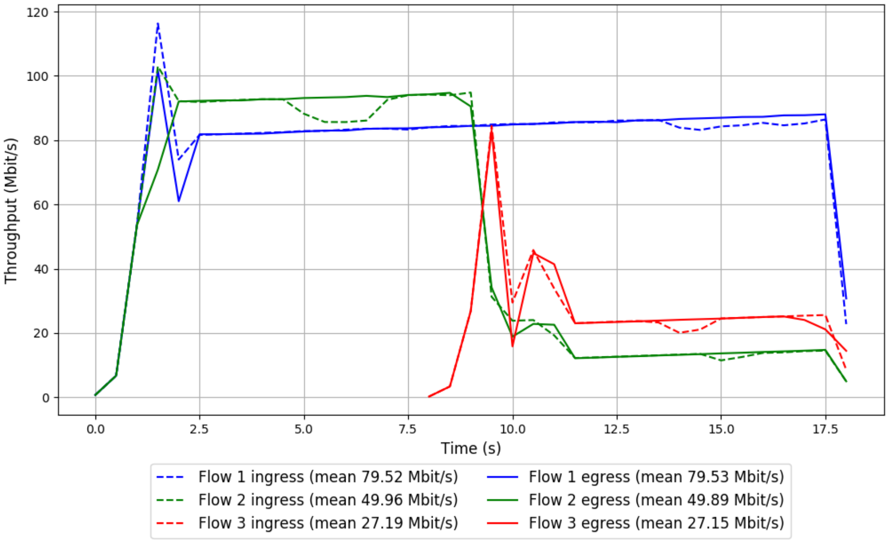
Run 1: Report of TCP Vegas — Data Link

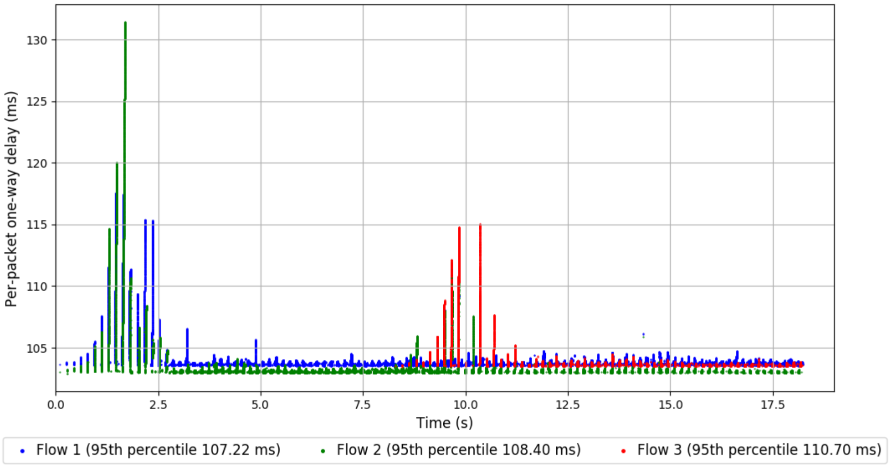




```
Run 2: Statistics of TCP Vegas

Start at: 2017-12-11 23:57:10
End at: 2017-12-11 23:57:40
Local clock offset: -2.033 ms
Remote clock offset: 18.019 ms
```

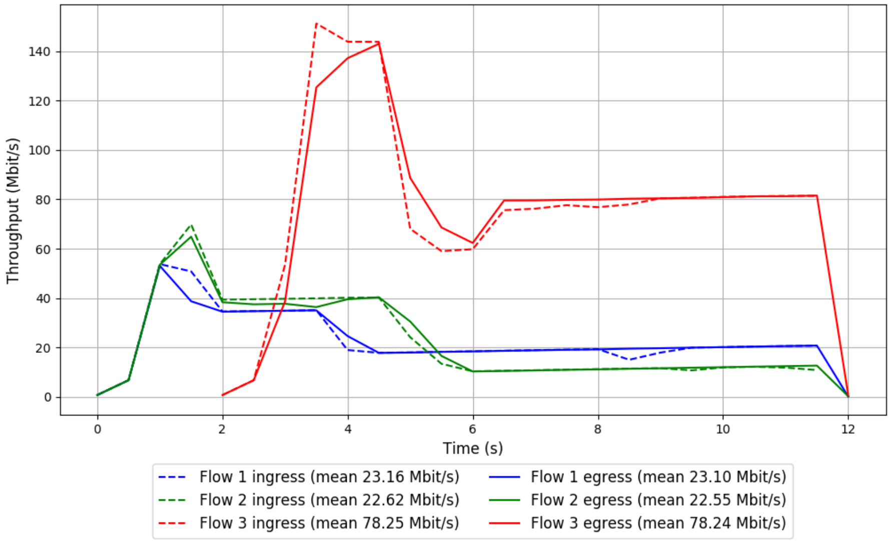
Run 2: Report of TCP Vegas — Data Link

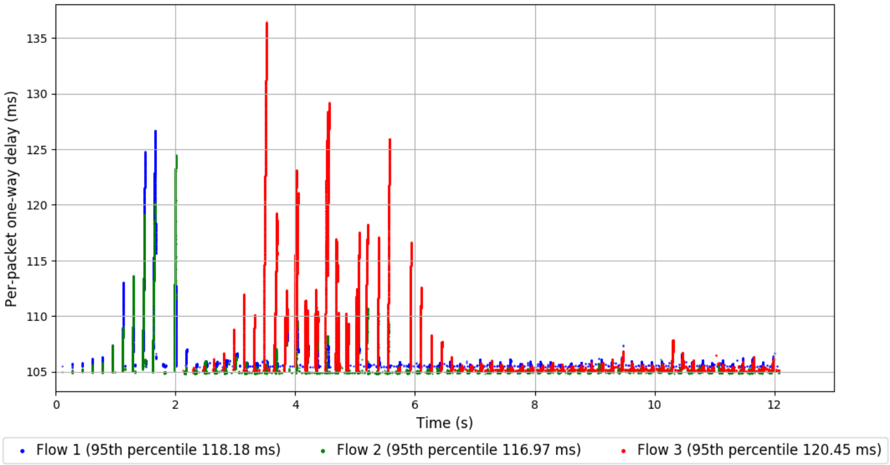




```
Run 3: Statistics of TCP Vegas

Start at: 2017-12-12 00:17:19
End at: 2017-12-12 00:17:49
Local clock offset: -2.447 ms
Remote clock offset: 20.894 ms
```

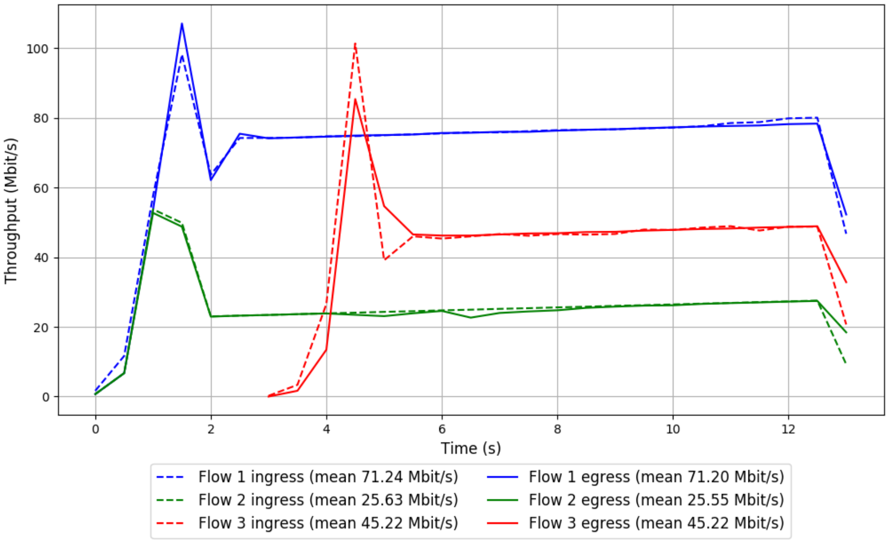
Run 3: Report of TCP Vegas — Data Link

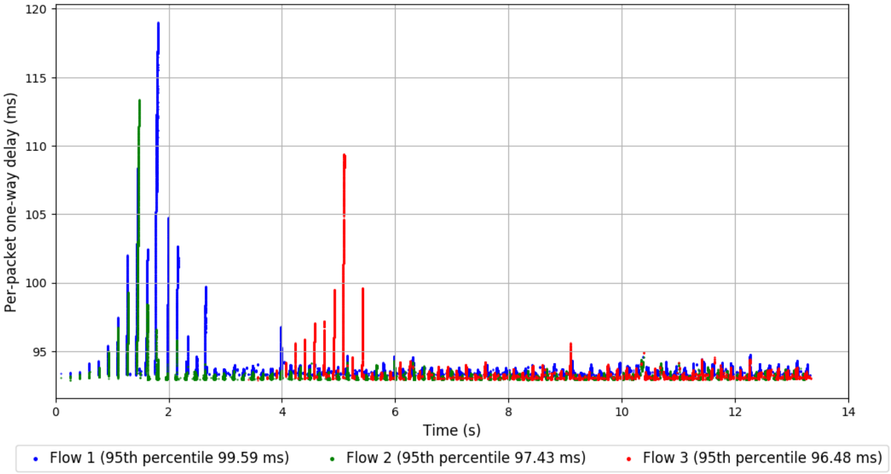




```
Run 4: Statistics of TCP Vegas

Start at: 2017-12-12 00:37:18
End at: 2017-12-12 00:37:48
Local clock offset: -2.917 ms
Remote clock offset: 8.084 ms
```

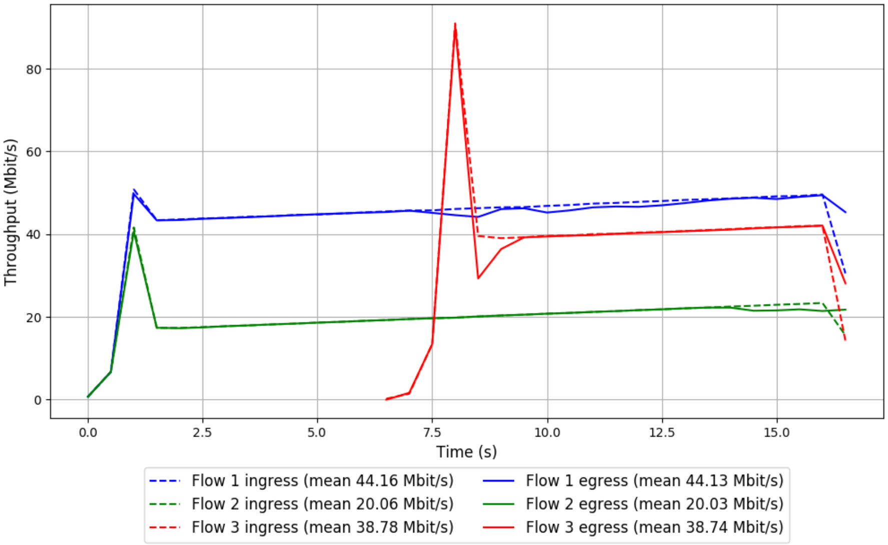
Run 4: Report of TCP Vegas — Data Link

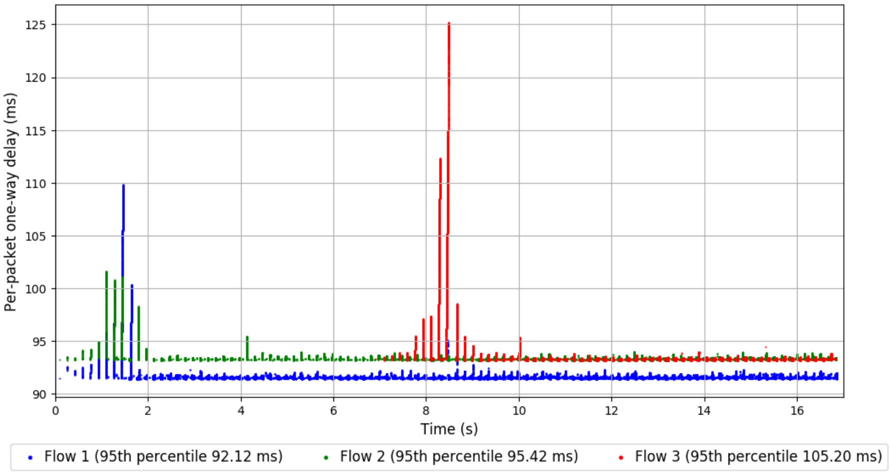




```
Run 5: Statistics of TCP Vegas

Start at: 2017-12-12 00:57:19
End at: 2017-12-12 00:57:50
Local clock offset: -3.606 ms
Remote clock offset: 5.731 ms
```

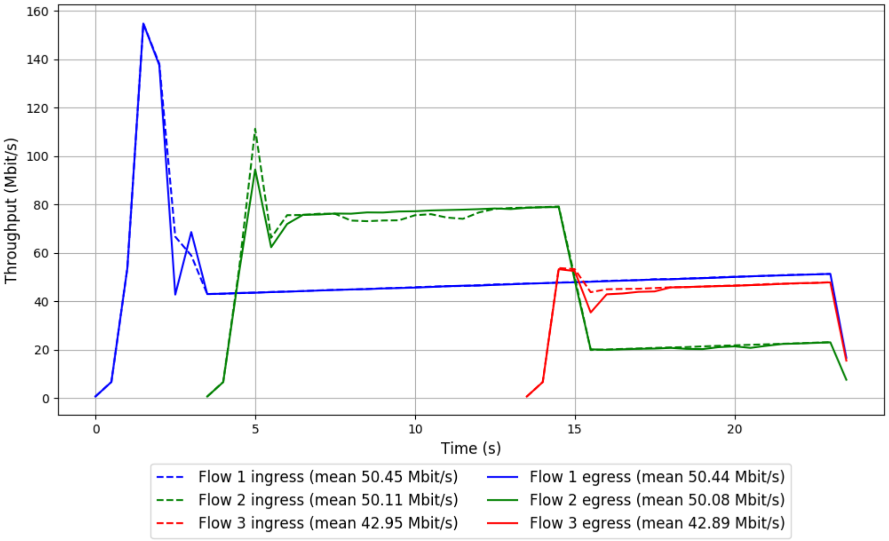
Run 5: Report of TCP Vegas — Data Link

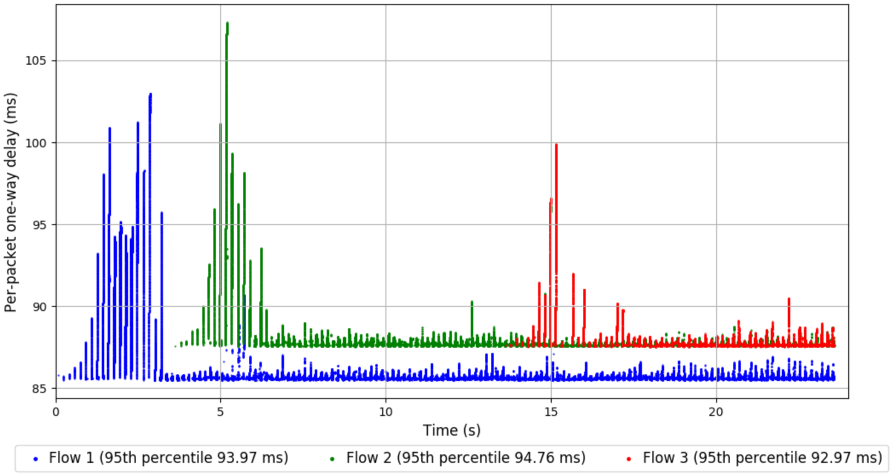




```
Run 6: Statistics of TCP Vegas

Start at: 2017-12-12 01:17:26
End at: 2017-12-12 01:17:56
Local clock offset: -2.965 ms
Remote clock offset: -0.74 ms
```

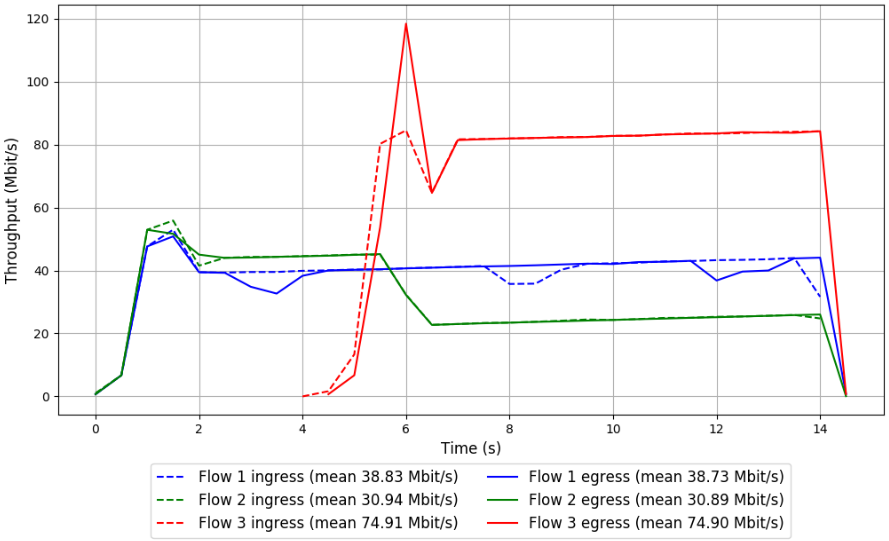
Run 6: Report of TCP Vegas — Data Link

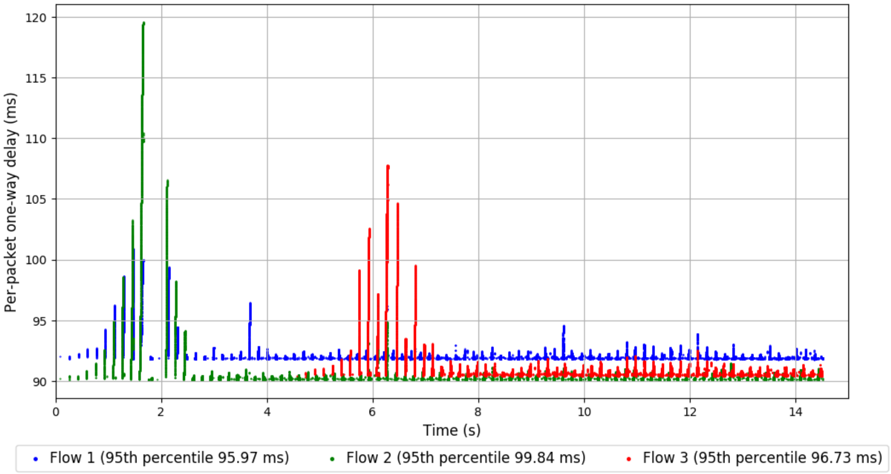




```
Run 7: Statistics of TCP Vegas

Start at: 2017-12-12 01:37:48
End at: 2017-12-12 01:38:18
Local clock offset: -2.808 ms
Remote clock offset: 3.546 ms
```

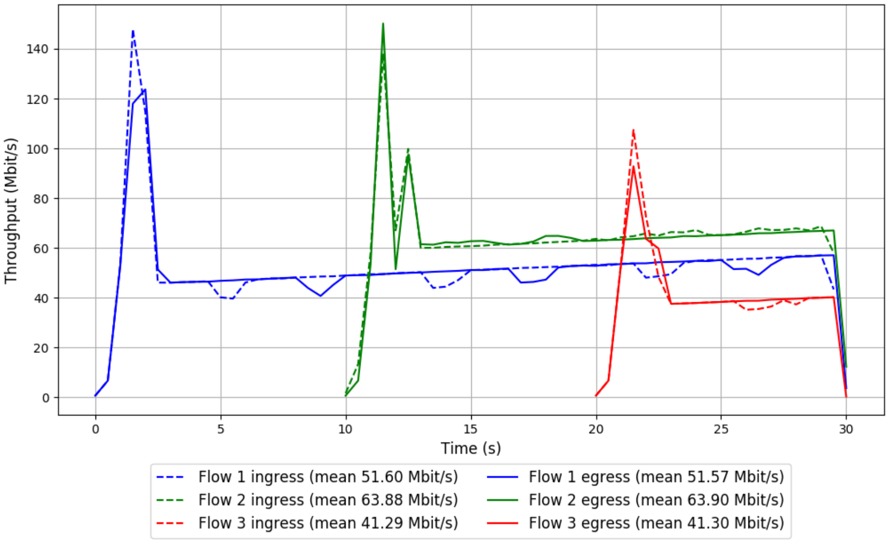
Run 7: Report of TCP Vegas — Data Link

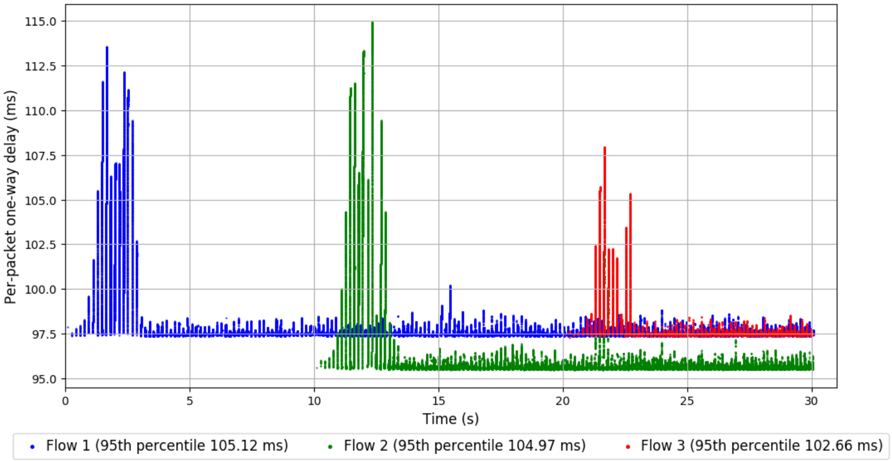




```
Run 8: Statistics of TCP Vegas

Start at: 2017-12-12 01:57:52
End at: 2017-12-12 01:58:22
Local clock offset: -3.337 ms
Remote clock offset: 7.912 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 107.83 Mbit/s
95th percentile per-packet one-way delay: 104.686 ms
Loss rate: 0.04%
-- Flow 1:
Average throughput: 51.57 Mbit/s
95th percentile per-packet one-way delay: 105.121 ms
Loss rate: 0.06%
-- Flow 2:
Average throughput: 63.90 Mbit/s
95th percentile per-packet one-way delay: 104.972 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 41.30 Mbit/s
95th percentile per-packet one-way delay: 102.660 ms
Loss rate: 0.05%
```

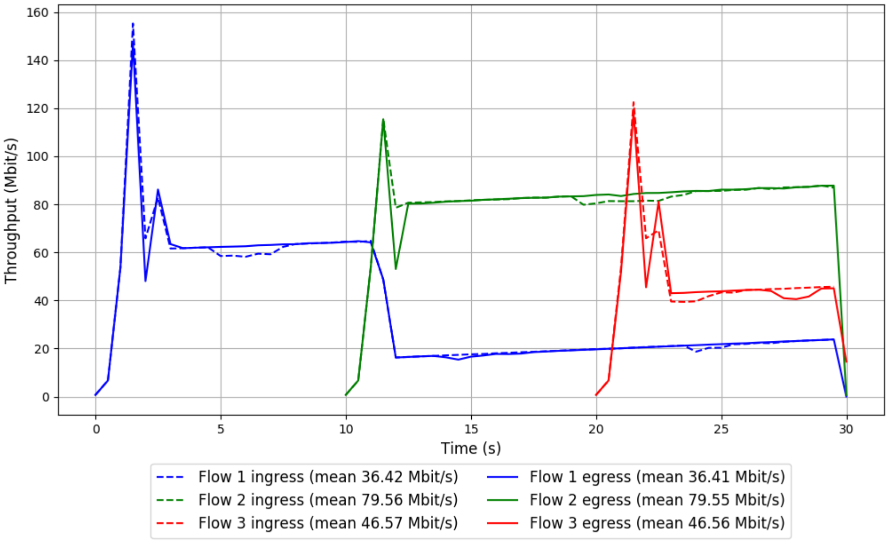
Run 8: Report of TCP Vegas — Data Link

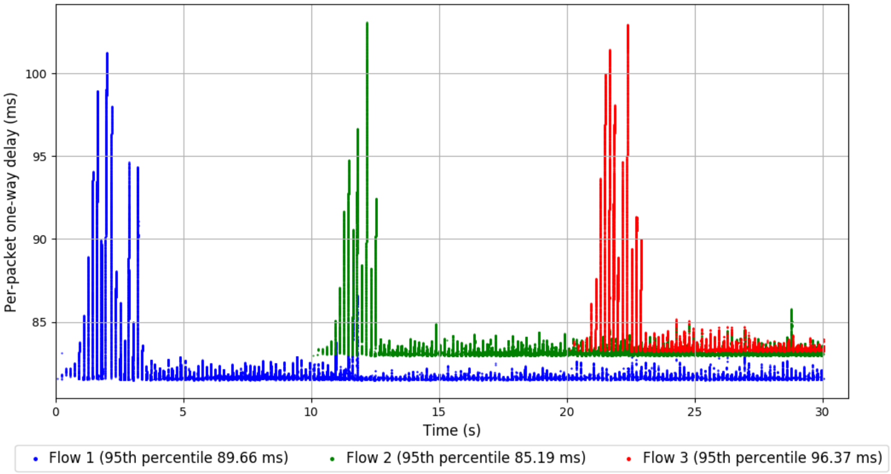




```
Run 9: Statistics of TCP Vegas

Start at: 2017-12-12 02:18:02
End at: 2017-12-12 02:18:32
Local clock offset: -2.911 ms
Remote clock offset: -6.678 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 104.81 Mbit/s
95th percentile per-packet one-way delay: 89.943 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 36.41 Mbit/s
95th percentile per-packet one-way delay: 89.659 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 79.55 Mbit/s
95th percentile per-packet one-way delay: 85.189 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 46.56 Mbit/s
95th percentile per-packet one-way delay: 96.370 ms
Loss rate: 0.02%
```

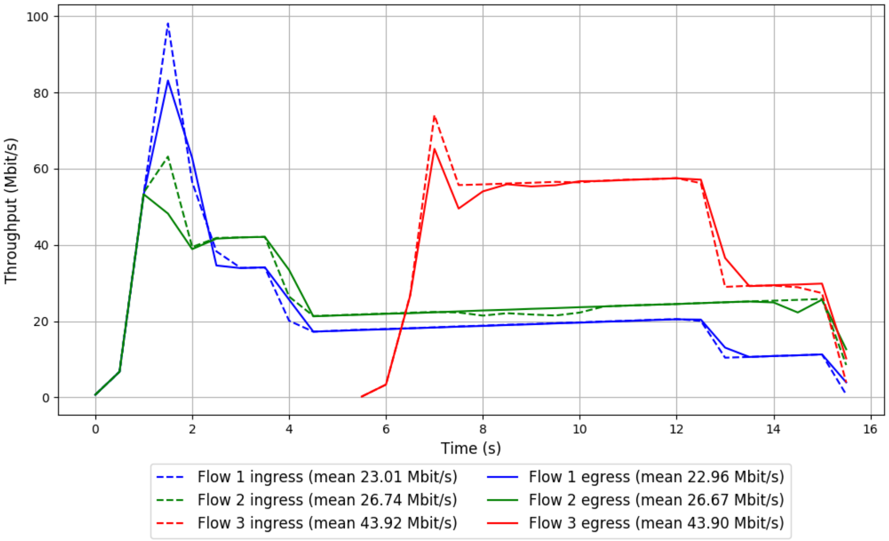
Run 9: Report of TCP Vegas — Data Link

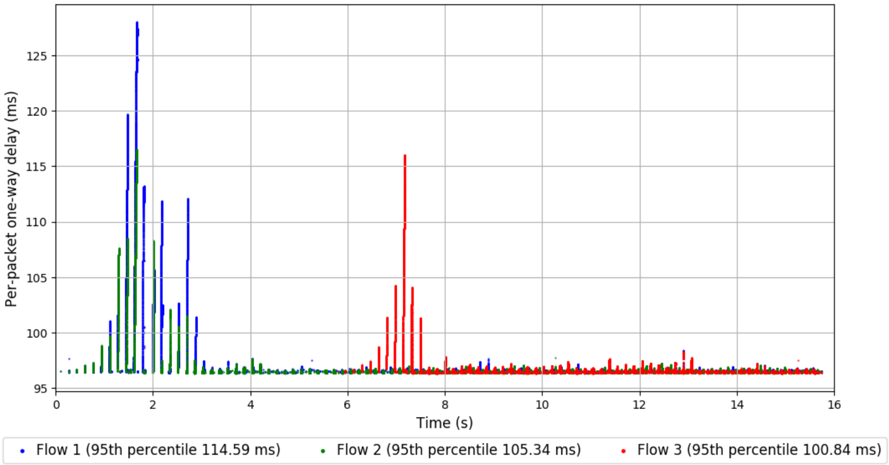




```
Run 10: Statistics of TCP Vegas

Start at: 2017-12-12 02:38:10
End at: 2017-12-12 02:38:40
Local clock offset: -2.212 ms
Remote clock offset: 5.901 ms
```

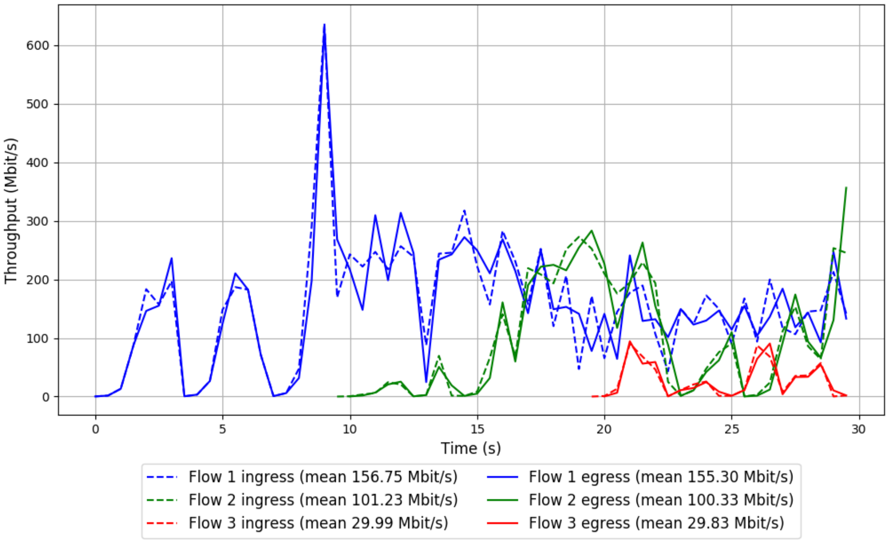
Run 10: Report of TCP Vegas — Data Link

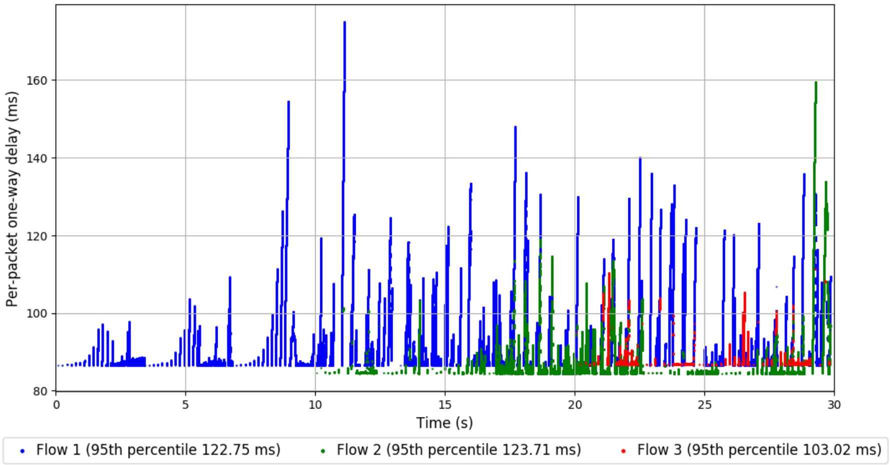




```
Run 1: Statistics of Verus

Start at: 2017-12-11 23:29:34
End at: 2017-12-11 23:30:04
Local clock offset: -1.403 ms
Remote clock offset: 0.809 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 231.81 Mbit/s
95th percentile per-packet one-way delay: 122.581 ms
Loss rate: 0.86%
-- Flow 1:
Average throughput: 155.30 Mbit/s
95th percentile per-packet one-way delay: 122.749 ms
Loss rate: 0.89%
-- Flow 2:
Average throughput: 100.33 Mbit/s
95th percentile per-packet one-way delay: 123.710 ms
Loss rate: 0.83%
-- Flow 3:
Average throughput: 29.83 Mbit/s
95th percentile per-packet one-way delay: 103.015 ms
Loss rate: 0.62%
```

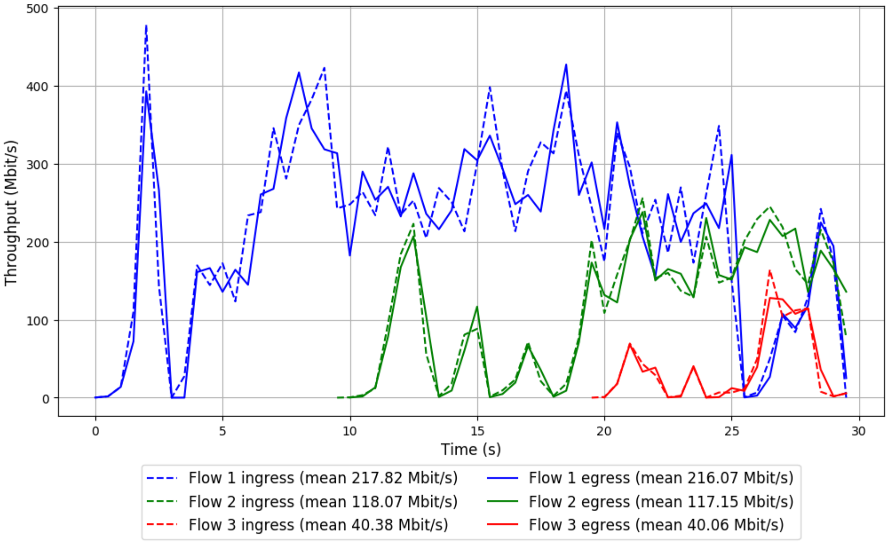
Run 1: Report of Verus — Data Link

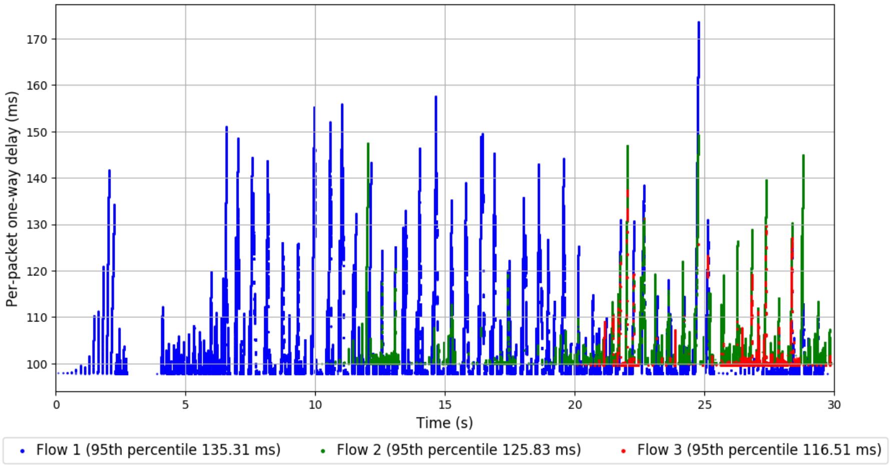




```
Run 2: Statistics of Verus

Start at: 2017-12-11 23:49:38
End at: 2017-12-11 23:50:08
Local clock offset: -2.175 ms
Remote clock offset: 14.271 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.99 Mbit/s
95th percentile per-packet one-way delay: 133.131 ms
Loss rate: 0.80%
-- Flow 1:
Average throughput: 216.07 Mbit/s
95th percentile per-packet one-way delay: 135.307 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 117.15 Mbit/s
95th percentile per-packet one-way delay: 125.826 ms
Loss rate: 0.79%
-- Flow 3:
Average throughput: 40.06 Mbit/s
95th percentile per-packet one-way delay: 116.506 ms
Loss rate: 0.77%
```

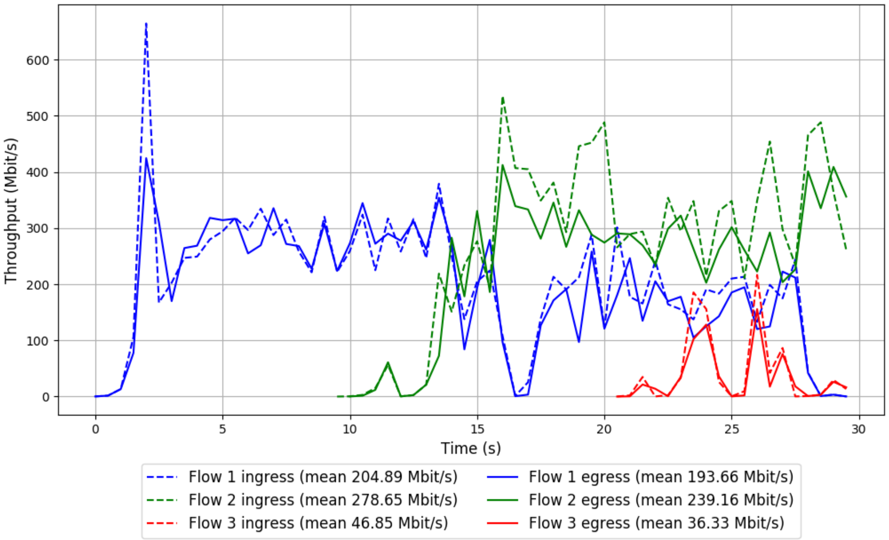
Run 2: Report of Verus — Data Link

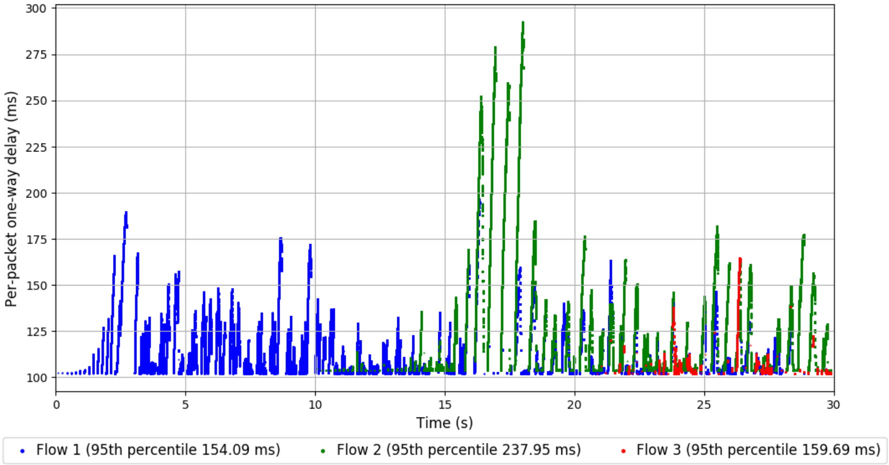




```
Run 3: Statistics of Verus

Start at: 2017-12-12 00:09:43
End at: 2017-12-12 00:10:13
Local clock offset: -2.181 ms
Remote clock offset: 17.651 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 363.38 Mbit/s
95th percentile per-packet one-way delay: 182.871 ms
Loss rate: 10.06%
-- Flow 1:
Average throughput: 193.66 Mbit/s
95th percentile per-packet one-way delay: 154.088 ms
Loss rate: 5.48%
-- Flow 2:
Average throughput: 239.16 Mbit/s
95th percentile per-packet one-way delay: 237.953 ms
Loss rate: 14.17%
-- Flow 3:
Average throughput: 36.33 Mbit/s
95th percentile per-packet one-way delay: 159.695 ms
Loss rate: 22.45%
```

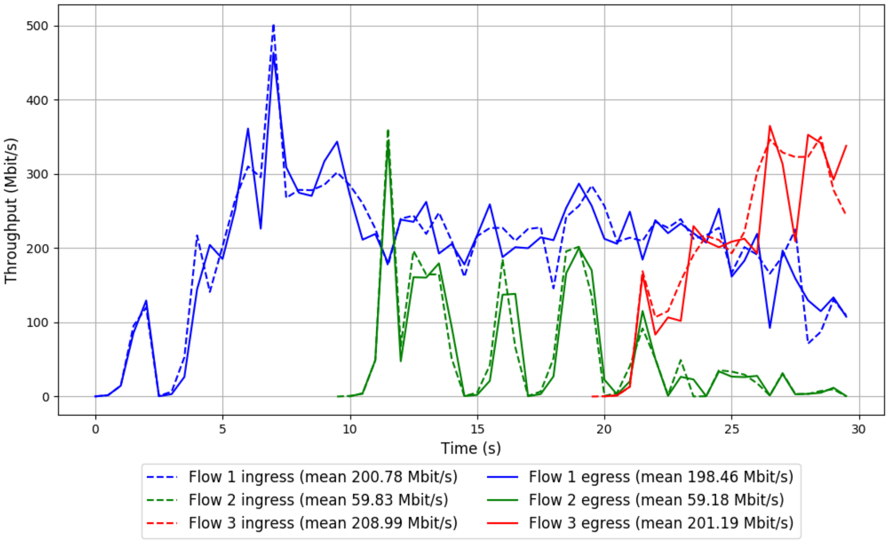
Run 3: Report of Verus — Data Link

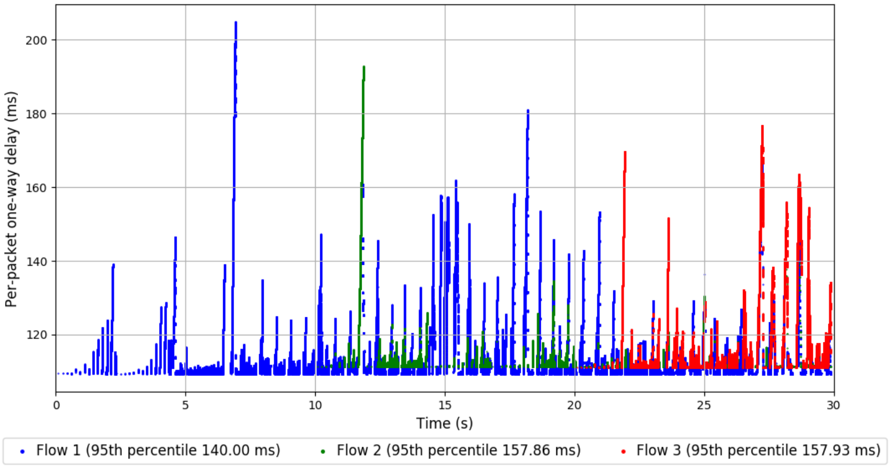




```
Run 4: Statistics of Verus

Start at: 2017-12-12 00:29:50
End at: 2017-12-12 00:30:20
Local clock offset: -2.833 ms
Remote clock offset: 24.763 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 303.88 Mbit/s
95th percentile per-packet one-way delay: 148.663 ms
Loss rate: 1.72%
-- Flow 1:
Average throughput: 198.46 Mbit/s
95th percentile per-packet one-way delay: 140.001 ms
Loss rate: 1.16%
-- Flow 2:
Average throughput: 59.18 Mbit/s
95th percentile per-packet one-way delay: 157.859 ms
Loss rate: 1.09%
-- Flow 3:
Average throughput: 201.19 Mbit/s
95th percentile per-packet one-way delay: 157.933 ms
Loss rate: 3.74%
```

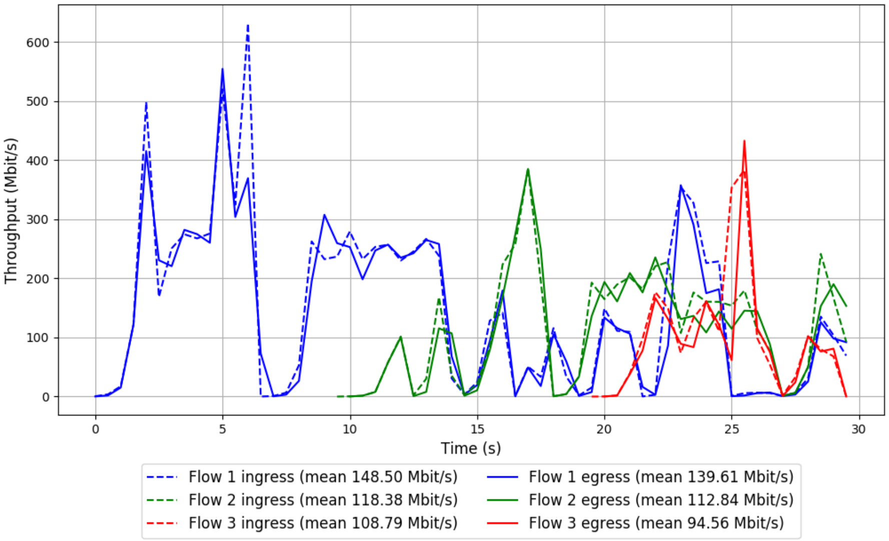
Run 4: Report of Verus — Data Link

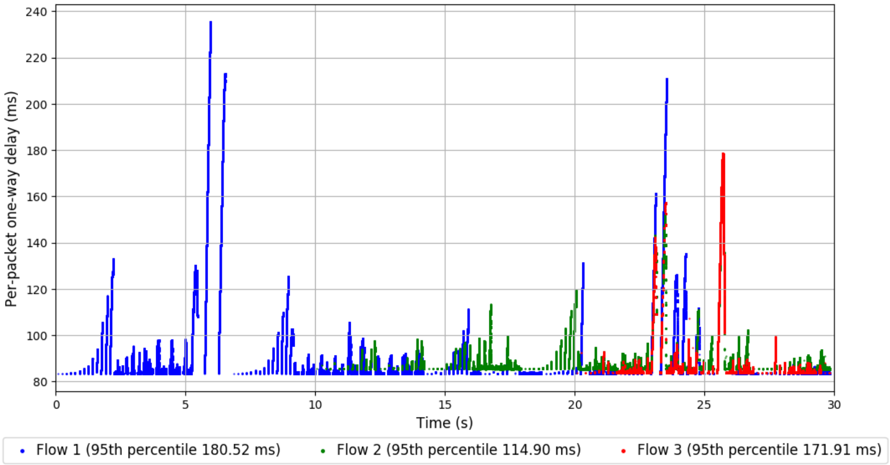




```
Run 5: Statistics of Verus

Start at: 2017-12-12 00:49:54
End at: 2017-12-12 00:50:24
Local clock offset: -3.429 ms
Remote clock offset: -2.098 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 245.41 Mbit/s
95th percentile per-packet one-way delay: 160.536 ms
Loss rate: 6.55%
-- Flow 1:
Average throughput: 139.61 Mbit/s
95th percentile per-packet one-way delay: 180.516 ms
Loss rate: 5.98%
-- Flow 2:
Average throughput: 112.84 Mbit/s
95th percentile per-packet one-way delay: 114.898 ms
Loss rate: 4.68%
-- Flow 3:
Average throughput: 94.56 Mbit/s
95th percentile per-packet one-way delay: 171.911 ms
Loss rate: 13.07%
```

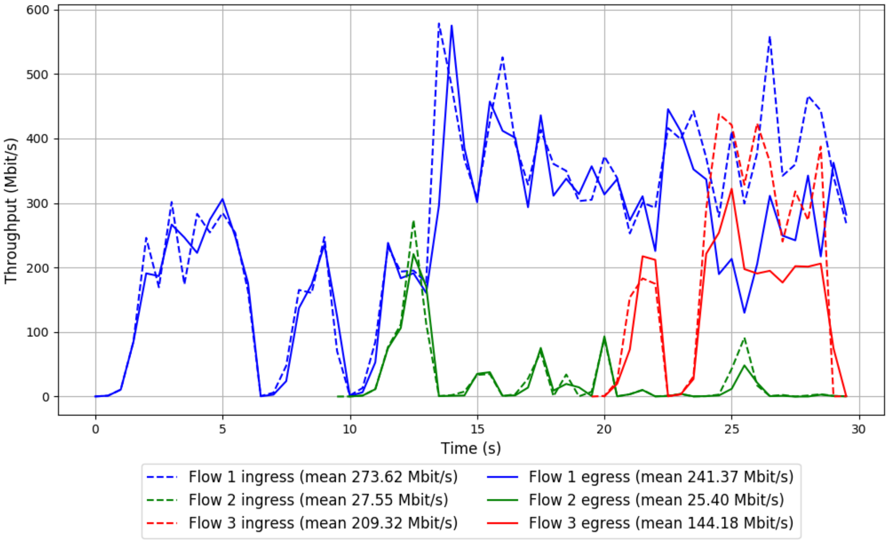
Run 5: Report of Verus — Data Link

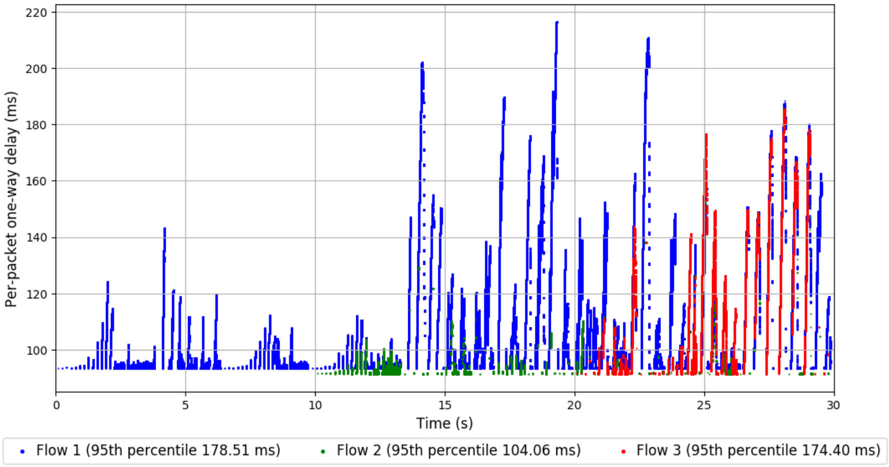




```
Run 6: Statistics of Verus

Start at: 2017-12-12 01:09:52
End at: 2017-12-12 01:10:22
Local clock offset: -3.131 ms
Remote clock offset: 5.423 ms

# Below is generated by plot.py at 2017-12-12 04:12:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 305.12 Mbit/s
95th percentile per-packet one-way delay: 175.547 ms
Loss rate: 15.23%
-- Flow 1:
Average throughput: 241.37 Mbit/s
95th percentile per-packet one-way delay: 178.511 ms
Loss rate: 11.78%
-- Flow 2:
Average throughput: 25.40 Mbit/s
95th percentile per-packet one-way delay: 104.057 ms
Loss rate: 7.81%
-- Flow 3:
Average throughput: 144.18 Mbit/s
95th percentile per-packet one-way delay: 174.395 ms
Loss rate: 31.07%
```

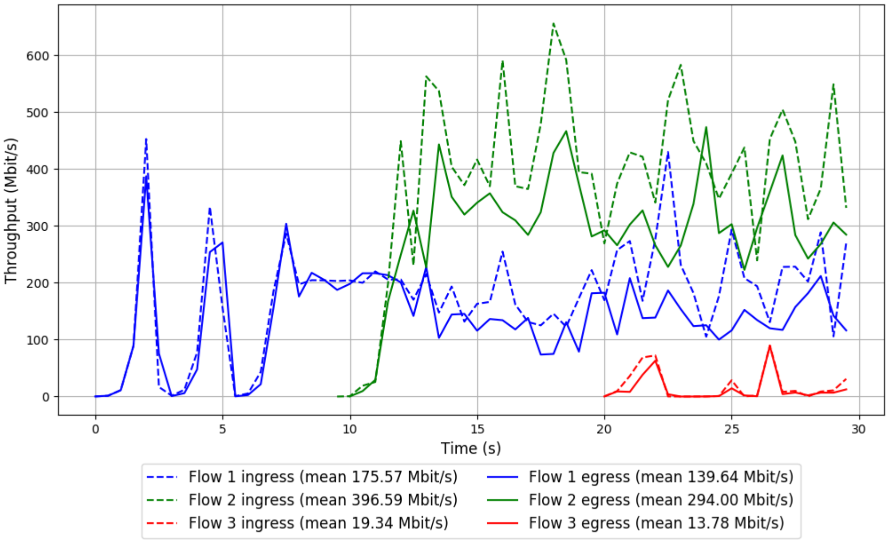
Run 6: Report of Verus — Data Link

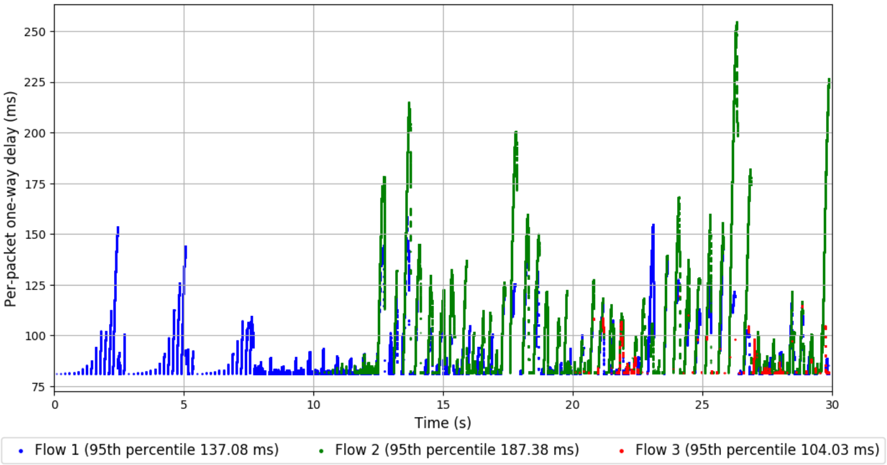




```
Run 7: Statistics of Verus

Start at: 2017-12-12 01:30:07
End at: 2017-12-12 01:30:37
Local clock offset: -2.609 ms
Remote clock offset: -6.843 ms

# Below is generated by plot.py at 2017-12-12 04:13:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.58 Mbit/s
95th percentile per-packet one-way delay: 167.061 ms
Loss rate: 23.45%
-- Flow 1:
Average throughput: 139.64 Mbit/s
95th percentile per-packet one-way delay: 137.077 ms
Loss rate: 20.46%
-- Flow 2:
Average throughput: 294.00 Mbit/s
95th percentile per-packet one-way delay: 187.380 ms
Loss rate: 25.32%
-- Flow 3:
Average throughput: 13.78 Mbit/s
95th percentile per-packet one-way delay: 104.035 ms
Loss rate: 28.72%
```

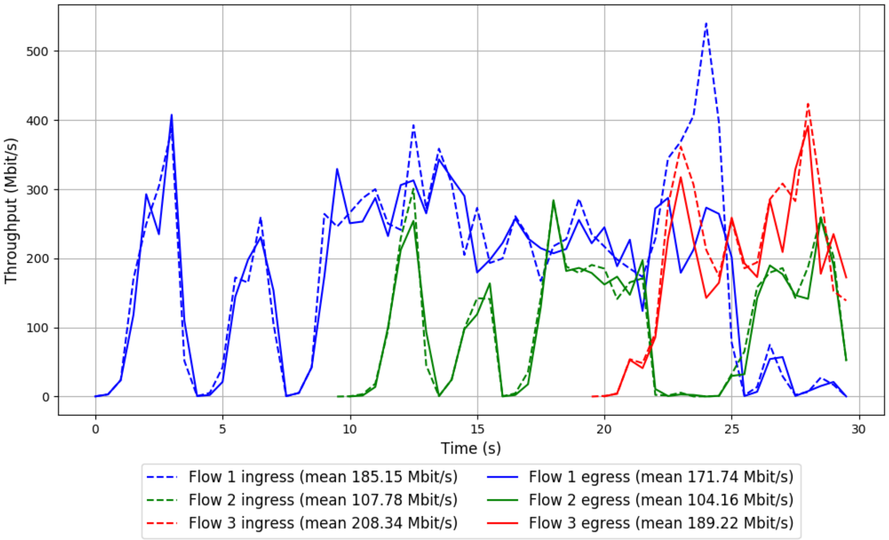
Run 7: Report of Verus — Data Link

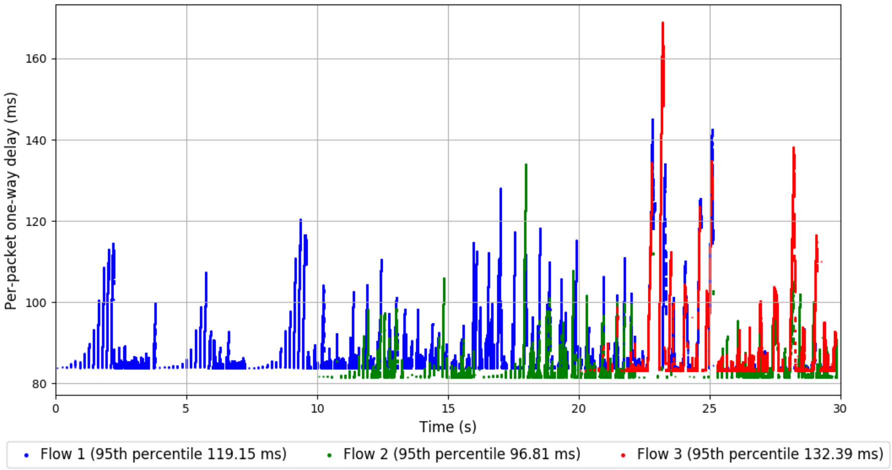




```
Run 8: Statistics of Verus

Start at: 2017-12-12 01:50:24
End at: 2017-12-12 01:50:54
Local clock offset: -3.082 ms
Remote clock offset: -5.358 ms

# Below is generated by plot.py at 2017-12-12 04:14:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.24 Mbit/s
95th percentile per-packet one-way delay: 117.605 ms
Loss rate: 6.77%
-- Flow 1:
Average throughput: 171.74 Mbit/s
95th percentile per-packet one-way delay: 119.150 ms
Loss rate: 7.24%
-- Flow 2:
Average throughput: 104.16 Mbit/s
95th percentile per-packet one-way delay: 96.812 ms
Loss rate: 3.33%
-- Flow 3:
Average throughput: 189.22 Mbit/s
95th percentile per-packet one-way delay: 132.388 ms
Loss rate: 9.10%
```

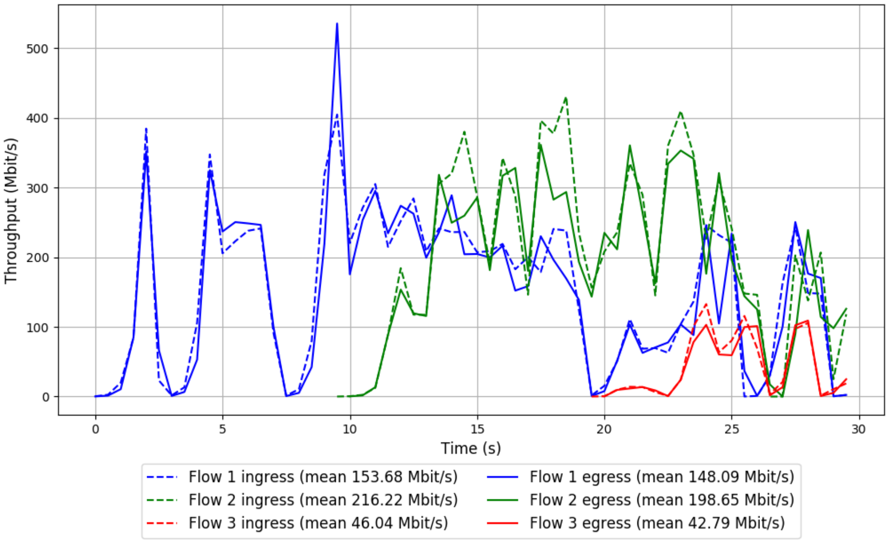
Run 8: Report of Verus — Data Link

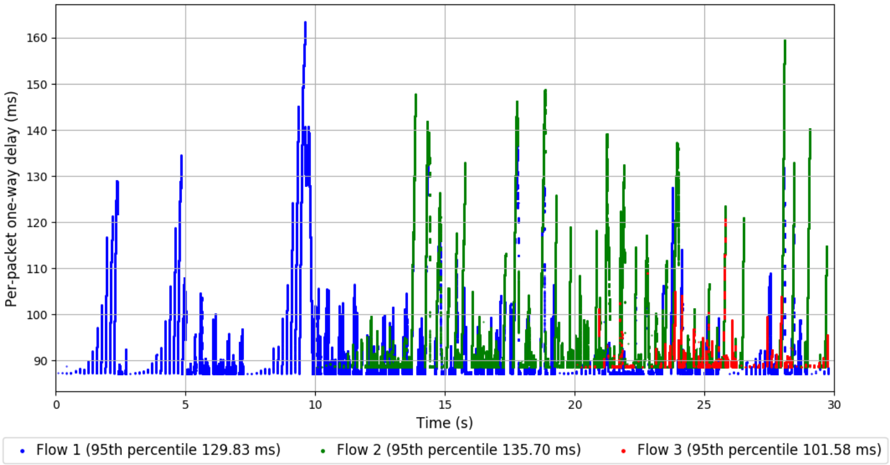




```
Run 9: Statistics of Verus

Start at: 2017-12-12 02:10:31
End at: 2017-12-12 02:11:01
Local clock offset: -3.177 ms
Remote clock offset: -1.211 ms

# Below is generated by plot.py at 2017-12-12 04:14:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 293.33 Mbit/s
95th percentile per-packet one-way delay: 132.786 ms
Loss rate: 5.80%
-- Flow 1:
Average throughput: 148.09 Mbit/s
95th percentile per-packet one-way delay: 129.833 ms
Loss rate: 3.63%
-- Flow 2:
Average throughput: 198.65 Mbit/s
95th percentile per-packet one-way delay: 135.699 ms
Loss rate: 8.00%
-- Flow 3:
Average throughput: 42.79 Mbit/s
95th percentile per-packet one-way delay: 101.582 ms
Loss rate: 7.00%
```

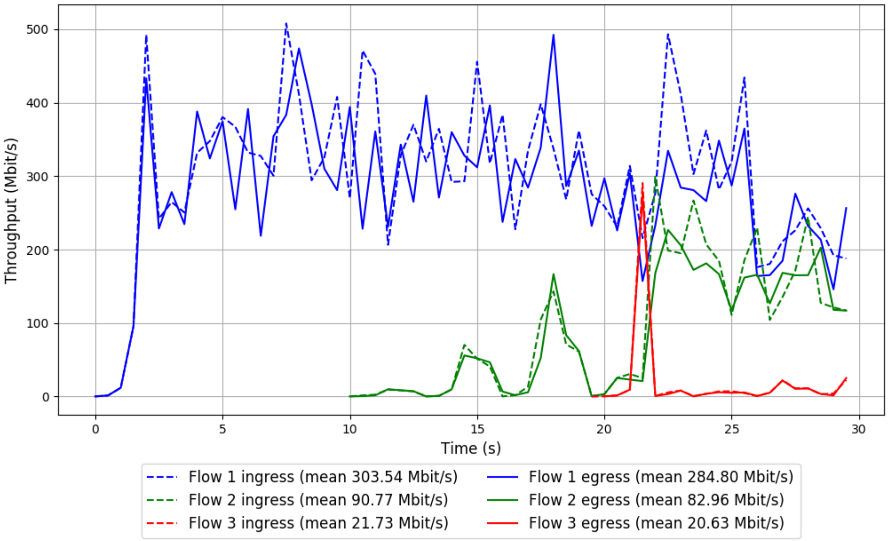
Run 9: Report of Verus — Data Link

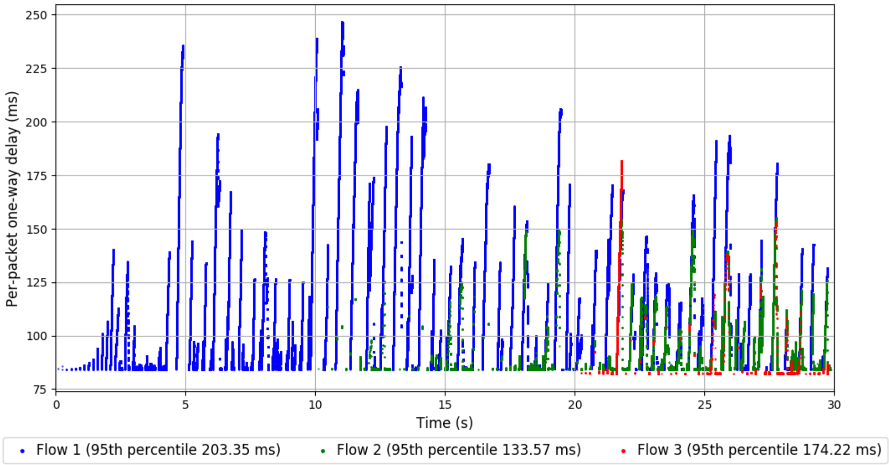




```
Run 10: Statistics of Verus

Start at: 2017-12-12 02:30:40
End at: 2017-12-12 02:31:10
Local clock offset: -2.415 ms
Remote clock offset: -6.215 ms

# Below is generated by plot.py at 2017-12-12 04:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 345.36 Mbit/s
95th percentile per-packet one-way delay: 199.492 ms
Loss rate: 6.43%
-- Flow 1:
Average throughput: 284.80 Mbit/s
95th percentile per-packet one-way delay: 203.354 ms
Loss rate: 6.02%
-- Flow 2:
Average throughput: 82.96 Mbit/s
95th percentile per-packet one-way delay: 133.566 ms
Loss rate: 8.61%
-- Flow 3:
Average throughput: 20.63 Mbit/s
95th percentile per-packet one-way delay: 174.217 ms
Loss rate: 5.02%
```

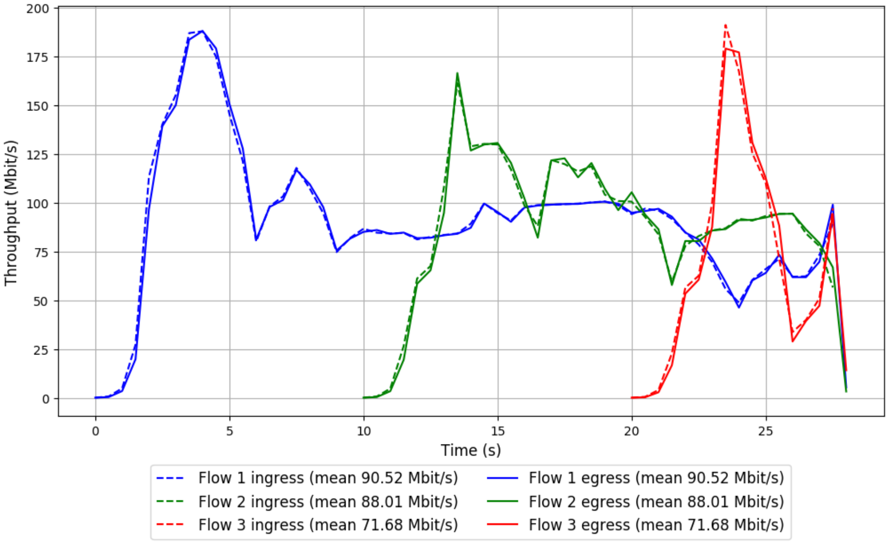
Run 10: Report of Verus — Data Link

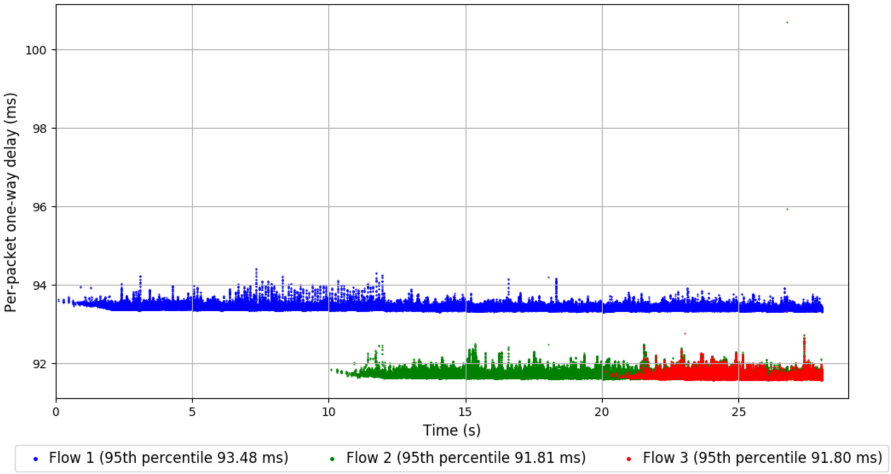




```
Run 1: Statistics of Copa

Start at: 2017-12-11 23:18:15
End at: 2017-12-11 23:18:45
Local clock offset: -0.763 ms
Remote clock offset: 7.076 ms

# Below is generated by plot.py at 2017-12-12 04:14:55
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.34 Mbit/s
95th percentile per-packet one-way delay: 93.454 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 90.52 Mbit/s
95th percentile per-packet one-way delay: 93.476 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 88.01 Mbit/s
95th percentile per-packet one-way delay: 91.812 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.68 Mbit/s
95th percentile per-packet one-way delay: 91.803 ms
Loss rate: 0.00%
```

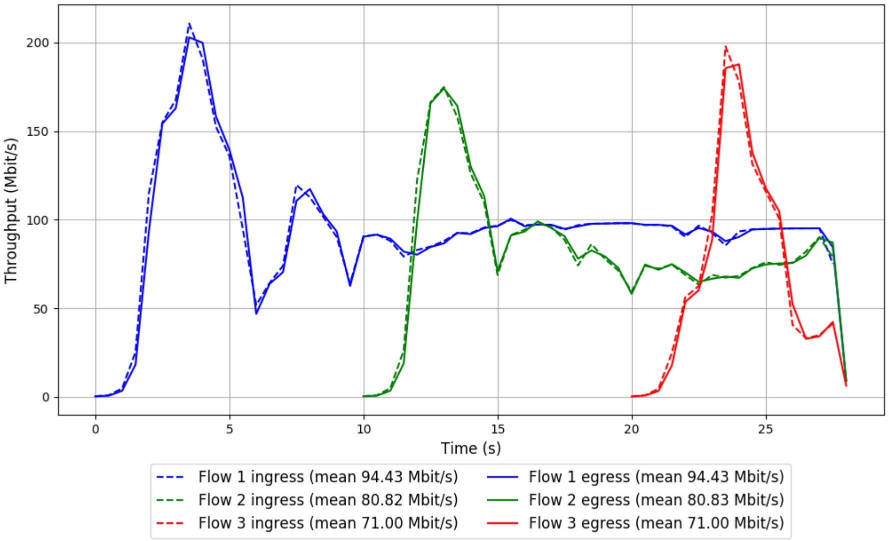
Run 1: Report of Copa — Data Link

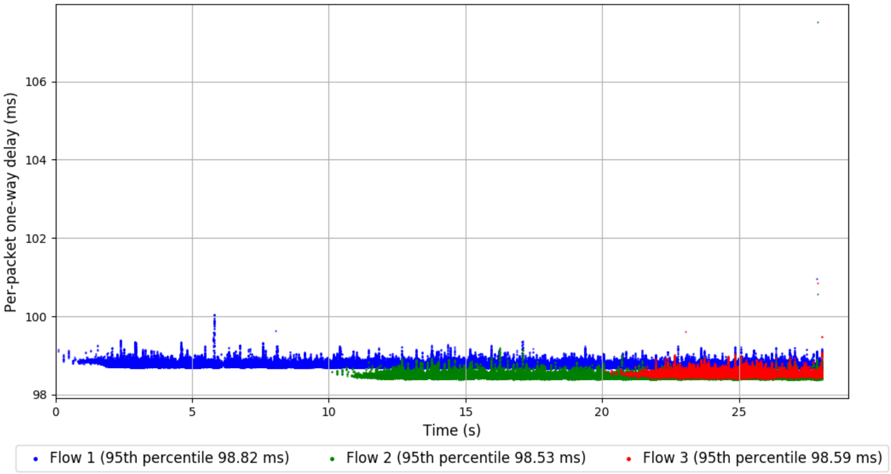




```
Run 2: Statistics of Copa

Start at: 2017-12-11 23:38:19
End at: 2017-12-11 23:38:49
Local clock offset: -1.877 ms
Remote clock offset: 13.022 ms

# Below is generated by plot.py at 2017-12-12 04:14:57
# Datalink statistics
-- Total of 3 flows:
Average throughput: 166.46 Mbit/s
95th percentile per-packet one-way delay: 98.798 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 94.43 Mbit/s
95th percentile per-packet one-way delay: 98.820 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 80.83 Mbit/s
95th percentile per-packet one-way delay: 98.534 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 71.00 Mbit/s
95th percentile per-packet one-way delay: 98.591 ms
Loss rate: 0.01%
```

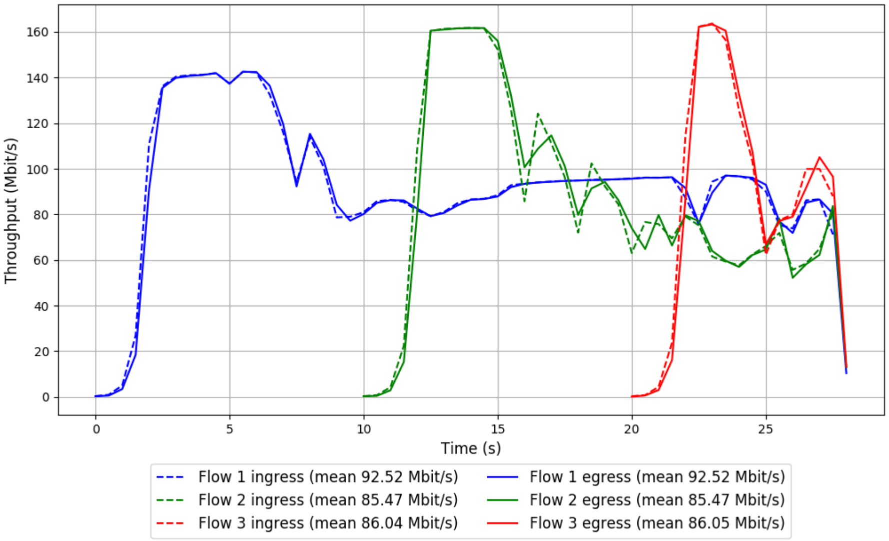
Run 2: Report of Copa — Data Link

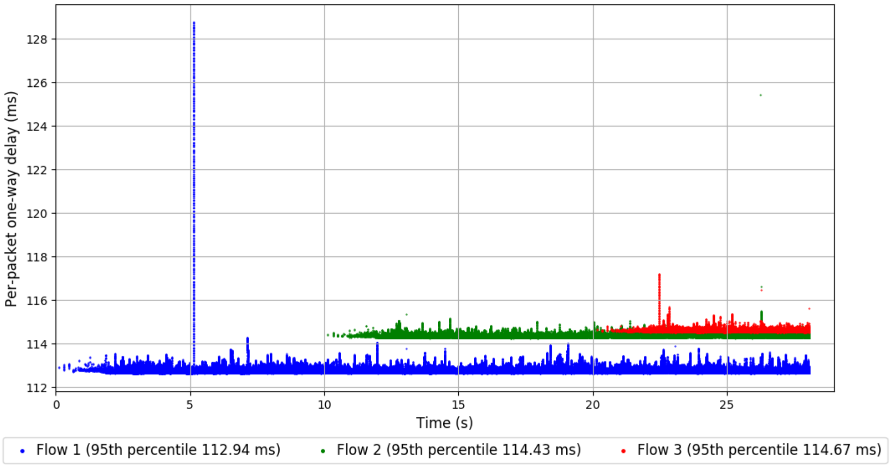




```
Run 3: Statistics of Copa

Start at: 2017-12-11 23:58:30
End at: 2017-12-11 23:59:00
Local clock offset: -2.023 ms
Remote clock offset: 28.773 ms

# Below is generated by plot.py at 2017-12-12 04:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 171.74 Mbit/s
95th percentile per-packet one-way delay: 114.599 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 92.52 Mbit/s
95th percentile per-packet one-way delay: 112.943 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 85.47 Mbit/s
95th percentile per-packet one-way delay: 114.430 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 86.05 Mbit/s
95th percentile per-packet one-way delay: 114.671 ms
Loss rate: 0.02%
```

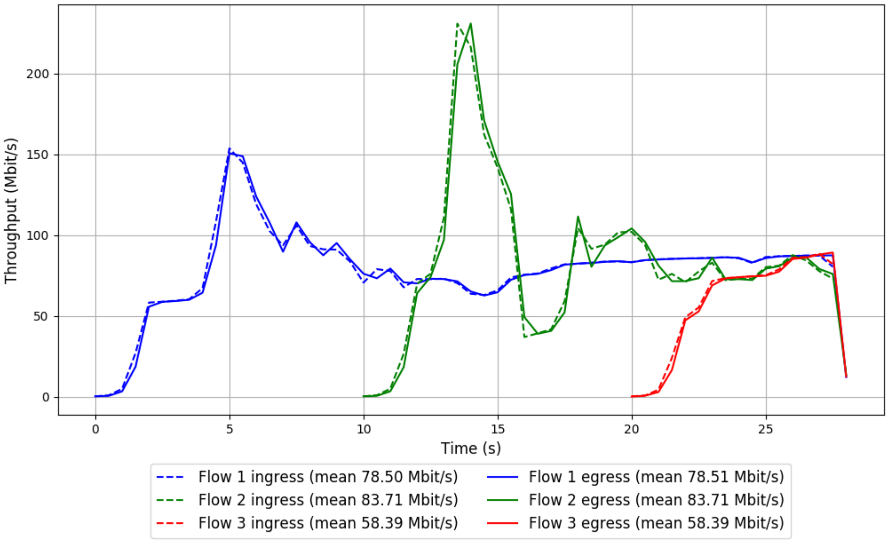
Run 3: Report of Copa — Data Link

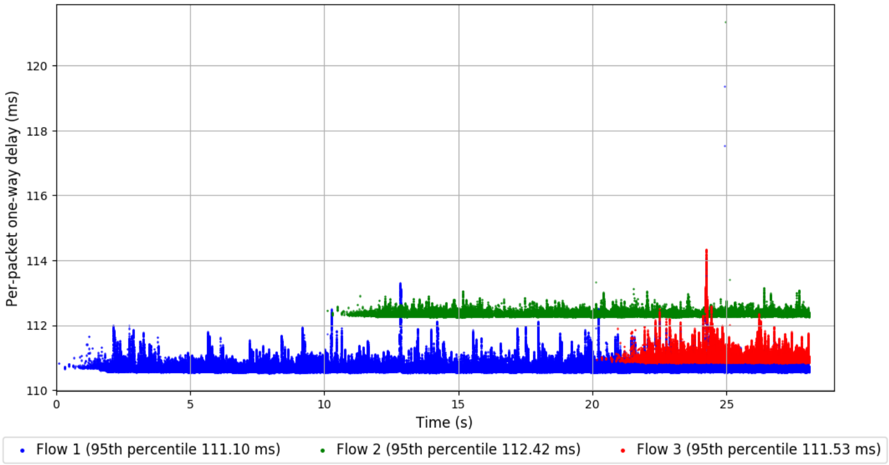




```
Run 4: Statistics of Copa

Start at: 2017-12-12 00:18:36
End at: 2017-12-12 00:19:06
Local clock offset: -2.449 ms
Remote clock offset: 26.59 ms

# Below is generated by plot.py at 2017-12-12 04:16:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 148.80 Mbit/s
95th percentile per-packet one-way delay: 112.370 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 78.51 Mbit/s
95th percentile per-packet one-way delay: 111.101 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 83.71 Mbit/s
95th percentile per-packet one-way delay: 112.418 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 58.39 Mbit/s
95th percentile per-packet one-way delay: 111.527 ms
Loss rate: 0.00%
```

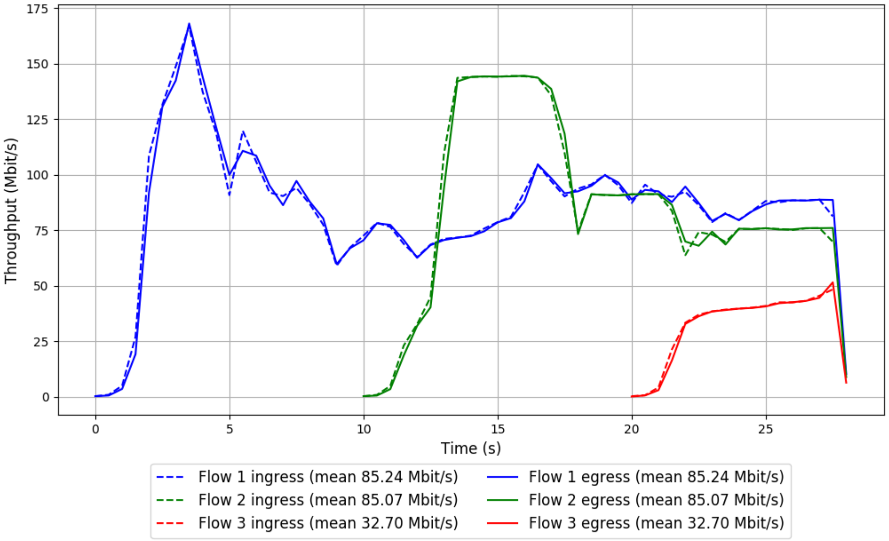
Run 4: Report of Copa — Data Link

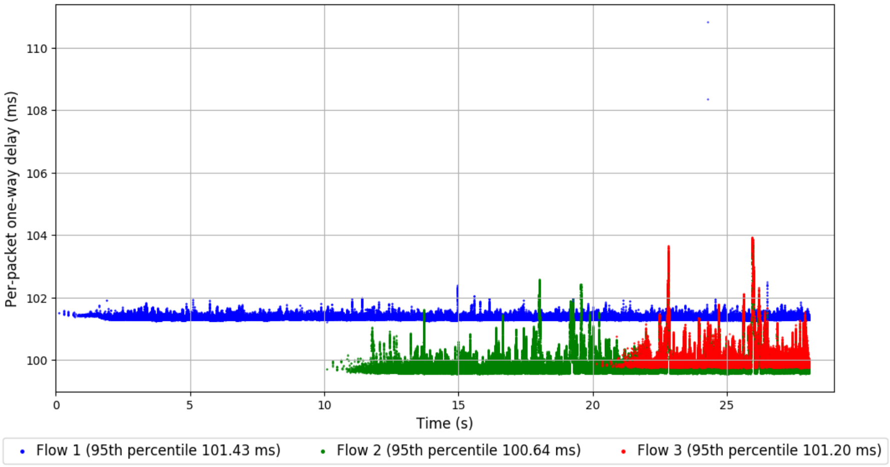




```
Run 5: Statistics of Copa

Start at: 2017-12-12 00:38:36
End at: 2017-12-12 00:39:06
Local clock offset: -2.985 ms
Remote clock offset: 14.626 ms

# Below is generated by plot.py at 2017-12-12 04:17:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 149.13 Mbit/s
95th percentile per-packet one-way delay: 101.410 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 85.24 Mbit/s
95th percentile per-packet one-way delay: 101.428 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 85.07 Mbit/s
95th percentile per-packet one-way delay: 100.640 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 32.70 Mbit/s
95th percentile per-packet one-way delay: 101.202 ms
Loss rate: 0.00%
```

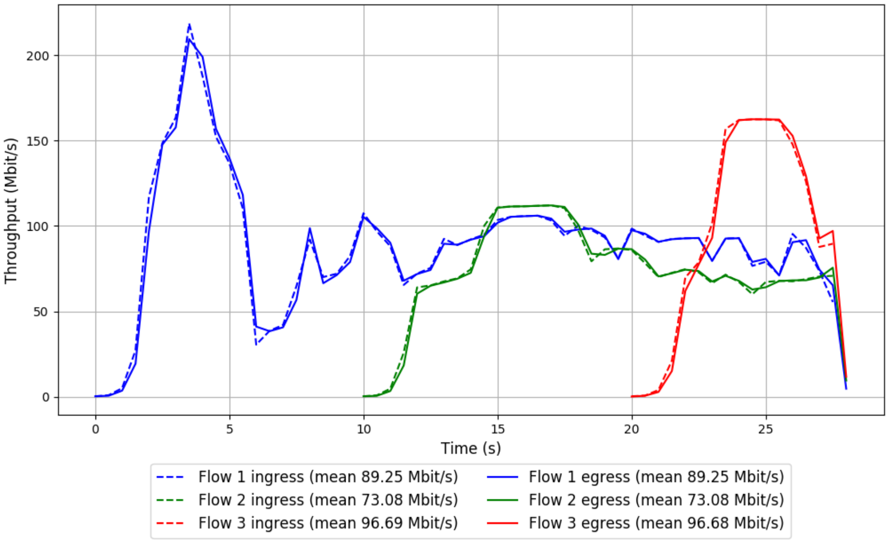
Run 5: Report of Copa — Data Link

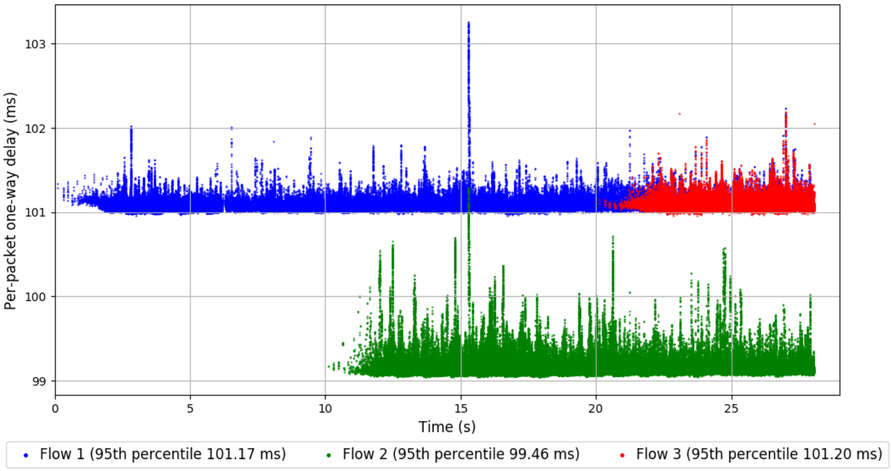




```
Run 6: Statistics of Copa

Start at: 2017-12-12 00:58:37
End at: 2017-12-12 00:59:07
Local clock offset: -3.535 ms
Remote clock offset: 13.361 ms

# Below is generated by plot.py at 2017-12-12 04:18:04
# Datalink statistics
-- Total of 3 flows:
Average throughput: 163.58 Mbit/s
95th percentile per-packet one-way delay: 101.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 89.25 Mbit/s
95th percentile per-packet one-way delay: 101.174 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 73.08 Mbit/s
95th percentile per-packet one-way delay: 99.462 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.68 Mbit/s
95th percentile per-packet one-way delay: 101.198 ms
Loss rate: 0.00%
```

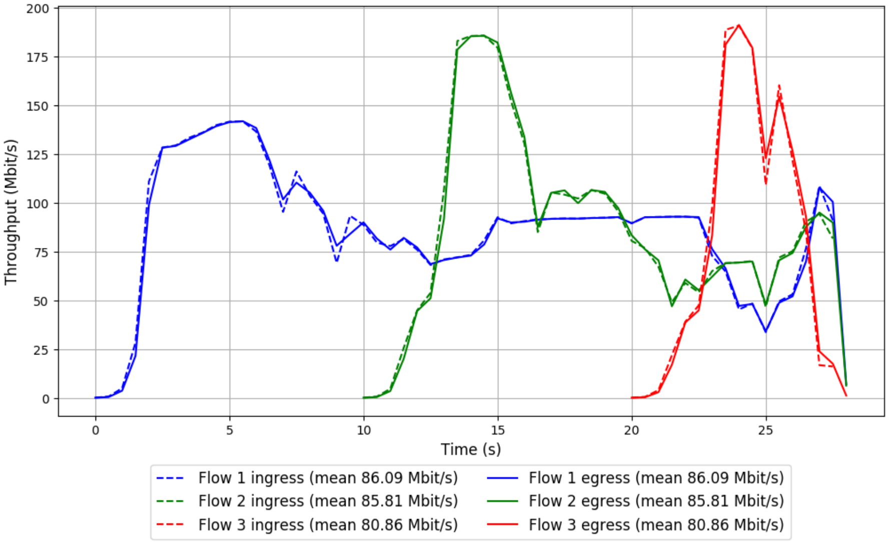
Run 6: Report of Copa — Data Link

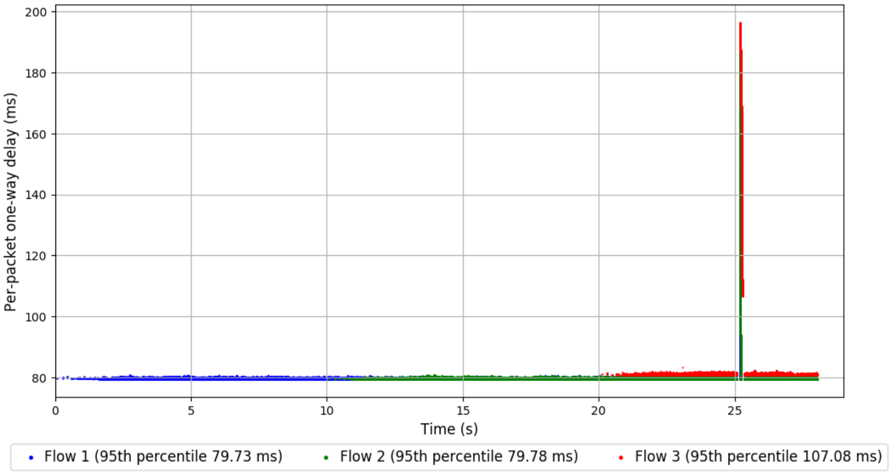




```
Run 7: Statistics of Copa

Start at: 2017-12-12 01:18:46
End at: 2017-12-12 01:19:16
Local clock offset: -2.882 ms
Remote clock offset: -6.939 ms

# Below is generated by plot.py at 2017-12-12 04:18:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 164.10 Mbit/s
95th percentile per-packet one-way delay: 80.892 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 86.09 Mbit/s
95th percentile per-packet one-way delay: 79.727 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 85.81 Mbit/s
95th percentile per-packet one-way delay: 79.776 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 80.86 Mbit/s
95th percentile per-packet one-way delay: 107.076 ms
Loss rate: 0.01%
```

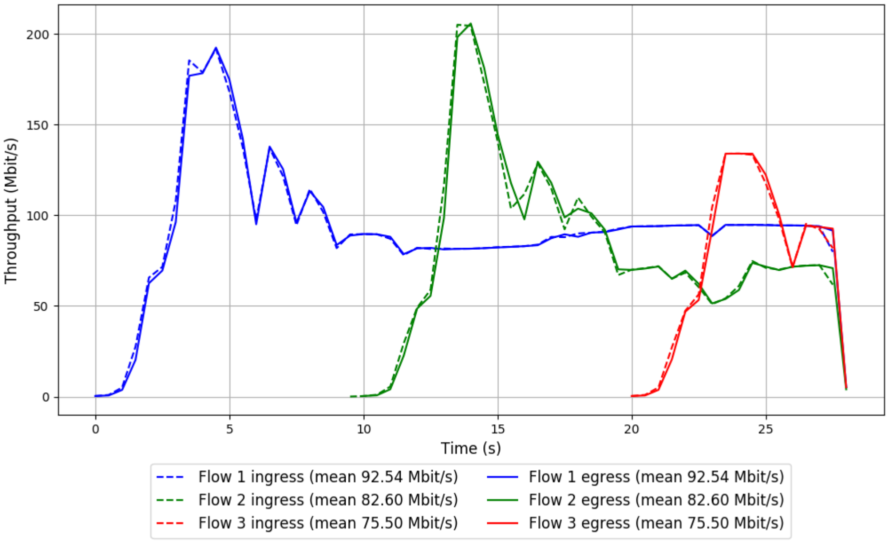
Run 7: Report of Copa — Data Link

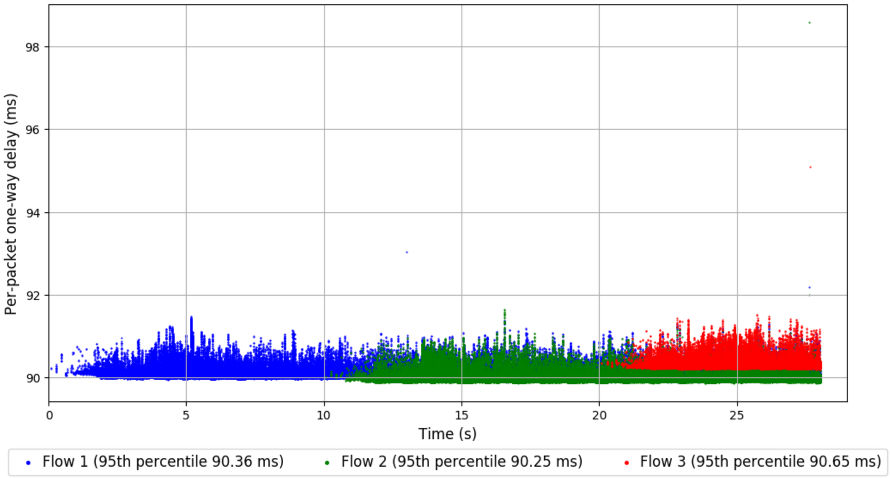




```
Run 8: Statistics of Copa

Start at: 2017-12-12 01:39:06
End at: 2017-12-12 01:39:36
Local clock offset: -2.84 ms
Remote clock offset: 3.402 ms

# Below is generated by plot.py at 2017-12-12 04:19:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.08 Mbit/s
95th percentile per-packet one-way delay: 90.408 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 92.54 Mbit/s
95th percentile per-packet one-way delay: 90.355 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 82.60 Mbit/s
95th percentile per-packet one-way delay: 90.246 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 75.50 Mbit/s
95th percentile per-packet one-way delay: 90.649 ms
Loss rate: 0.00%
```

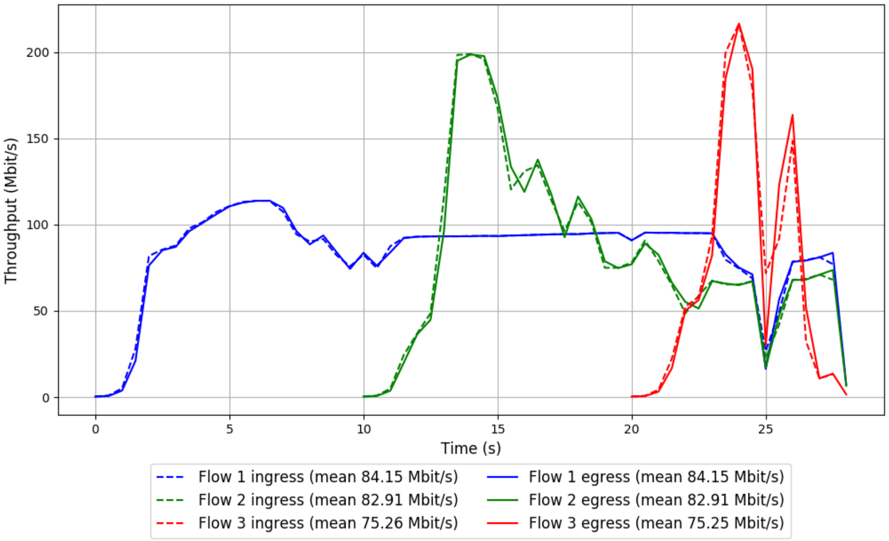
Run 8: Report of Copa — Data Link

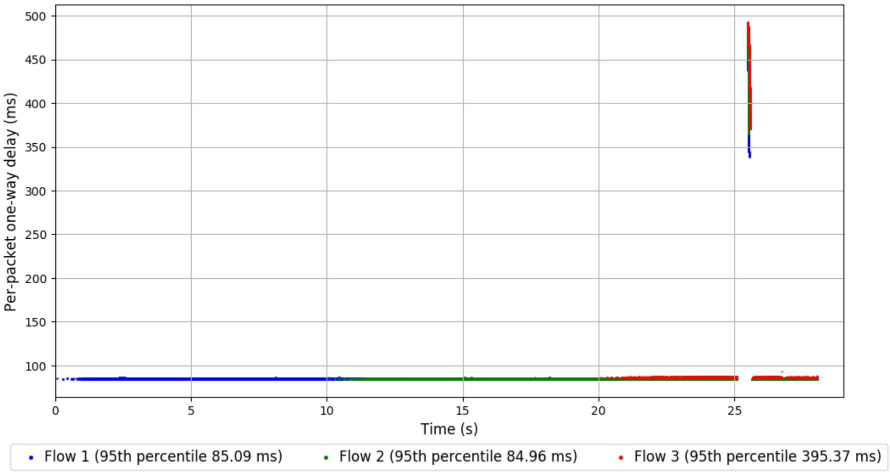




```
Run 9: Statistics of Copa

Start at: 2017-12-12 01:59:17
End at: 2017-12-12 01:59:47
Local clock offset: -3.304 ms
Remote clock offset: -2.704 ms

# Below is generated by plot.py at 2017-12-12 04:19:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 158.77 Mbit/s
95th percentile per-packet one-way delay: 86.489 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 84.15 Mbit/s
95th percentile per-packet one-way delay: 85.088 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 82.91 Mbit/s
95th percentile per-packet one-way delay: 84.963 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 75.25 Mbit/s
95th percentile per-packet one-way delay: 395.367 ms
Loss rate: 0.00%
```

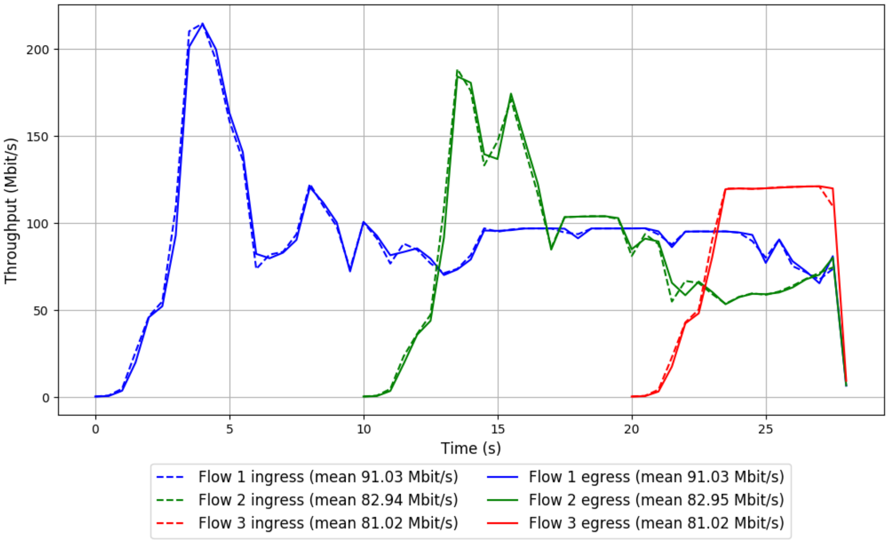
Run 9: Report of Copa — Data Link

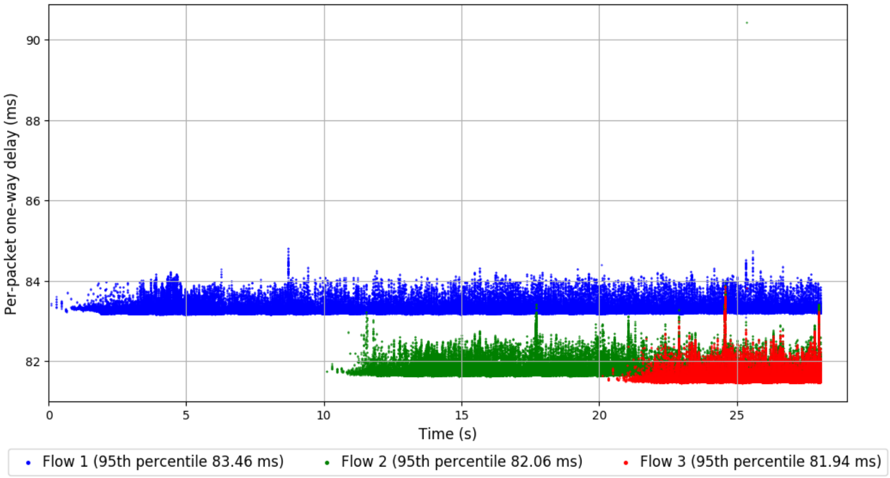




```
Run 10: Statistics of Copa

Start at: 2017-12-12 02:19:22
End at: 2017-12-12 02:19:52
Local clock offset: -2.951 ms
Remote clock offset: -6.831 ms

# Below is generated by plot.py at 2017-12-12 04:19:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 167.20 Mbit/s
95th percentile per-packet one-way delay: 83.362 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 91.03 Mbit/s
95th percentile per-packet one-way delay: 83.458 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 82.95 Mbit/s
95th percentile per-packet one-way delay: 82.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 81.02 Mbit/s
95th percentile per-packet one-way delay: 81.940 ms
Loss rate: 0.00%
```

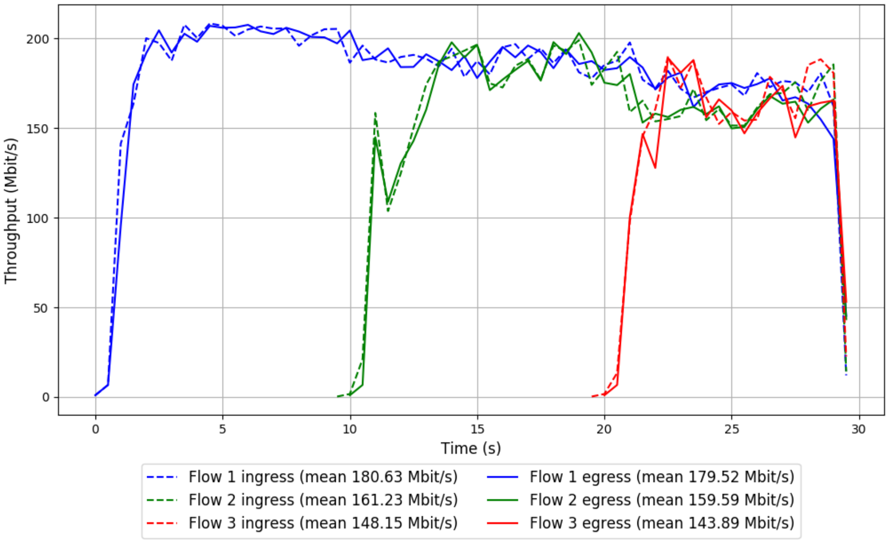
Run 10: Report of Copa — Data Link

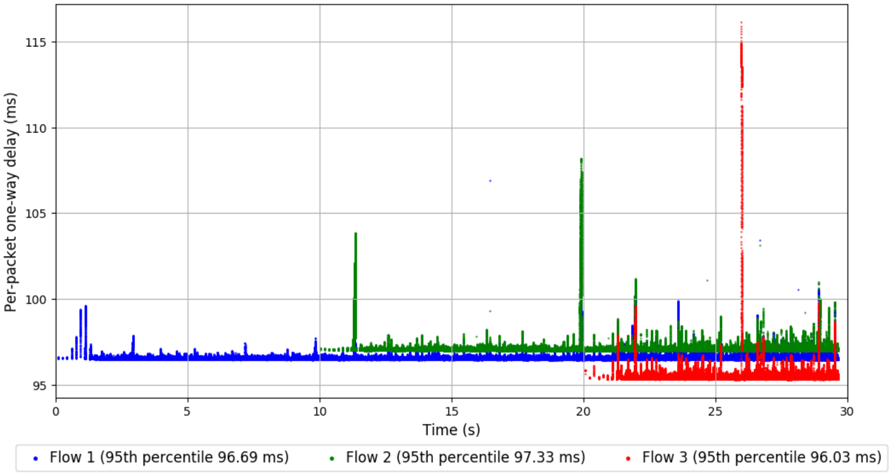




```
Run 1: Statistics of Indigo

Start at: 2017-12-11 23:27:56
End at: 2017-12-11 23:28:26
Local clock offset: -1.354 ms
Remote clock offset: 10.98 ms

# Below is generated by plot.py at 2017-12-12 04:20:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 332.14 Mbit/s
95th percentile per-packet one-way delay: 97.150 ms
Loss rate: 1.08%
-- Flow 1:
Average throughput: 179.52 Mbit/s
95th percentile per-packet one-way delay: 96.695 ms
Loss rate: 0.63%
-- Flow 2:
Average throughput: 159.59 Mbit/s
95th percentile per-packet one-way delay: 97.326 ms
Loss rate: 1.02%
-- Flow 3:
Average throughput: 143.89 Mbit/s
95th percentile per-packet one-way delay: 96.025 ms
Loss rate: 2.88%
```

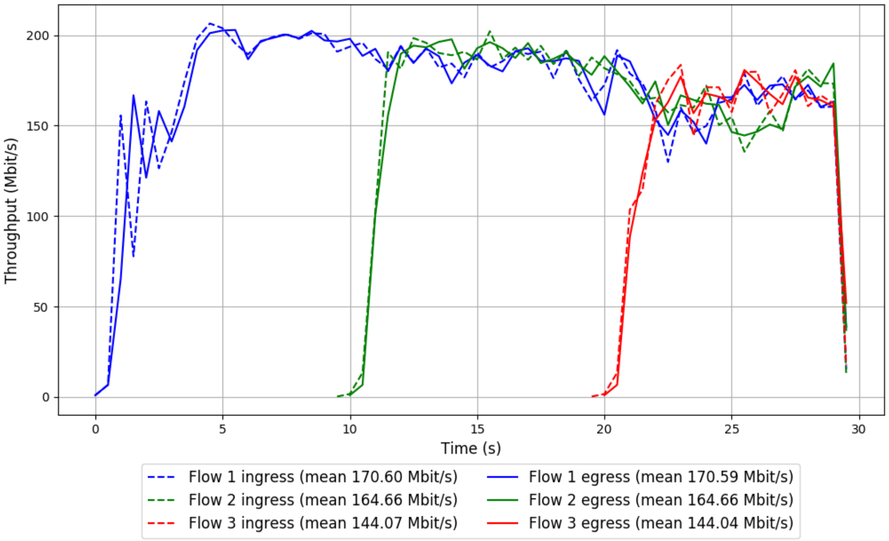
Run 1: Report of Indigo — Data Link

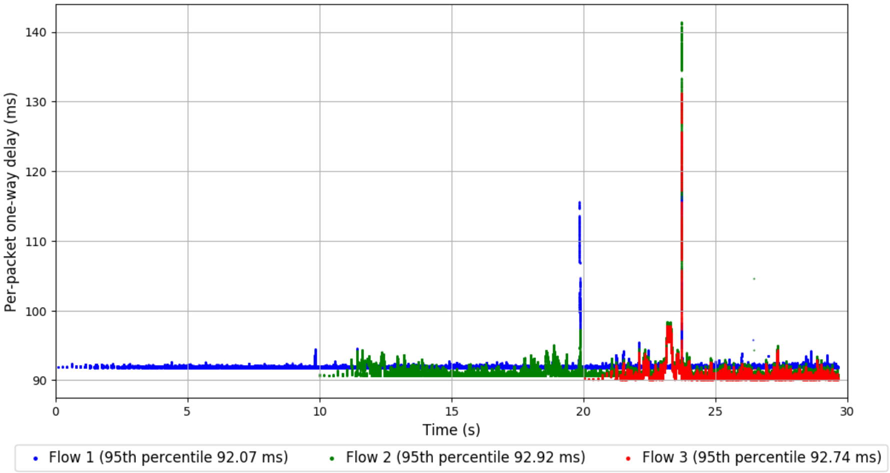




```
Run 2: Statistics of Indigo

Start at: 2017-12-11 23:48:01
End at: 2017-12-11 23:48:31
Local clock offset: -2.213 ms
Remote clock offset: 6.425 ms

# Below is generated by plot.py at 2017-12-12 04:21:15
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.80 Mbit/s
95th percentile per-packet one-way delay: 92.284 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 170.59 Mbit/s
95th percentile per-packet one-way delay: 92.068 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 164.66 Mbit/s
95th percentile per-packet one-way delay: 92.922 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 144.04 Mbit/s
95th percentile per-packet one-way delay: 92.737 ms
Loss rate: 0.02%
```

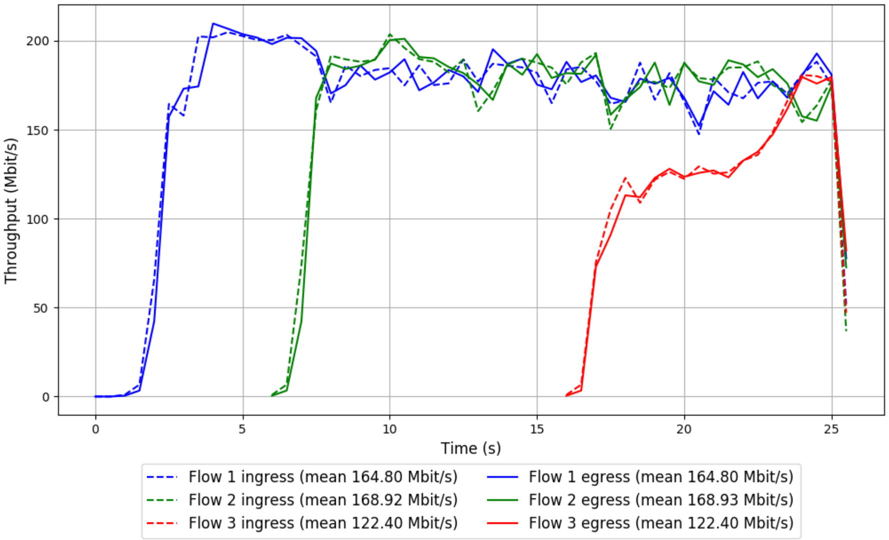
Run 2: Report of Indigo — Data Link

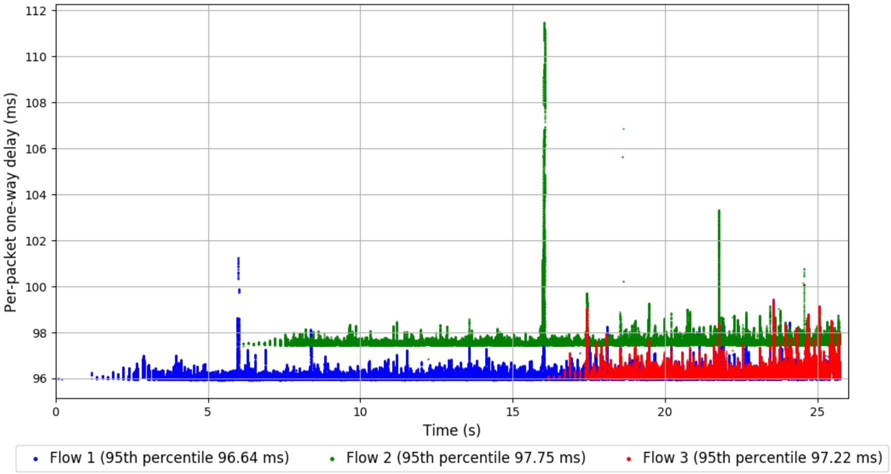




```
Run 3: Statistics of Indigo

Start at: 2017-12-12 00:08:09
End at: 2017-12-12 00:08:39
Local clock offset: -2.097 ms
Remote clock offset: 11.902 ms

# Below is generated by plot.py at 2017-12-12 04:21:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 339.43 Mbit/s
95th percentile per-packet one-way delay: 97.638 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 164.80 Mbit/s
95th percentile per-packet one-way delay: 96.640 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 168.93 Mbit/s
95th percentile per-packet one-way delay: 97.745 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 122.40 Mbit/s
95th percentile per-packet one-way delay: 97.224 ms
Loss rate: 0.00%
```

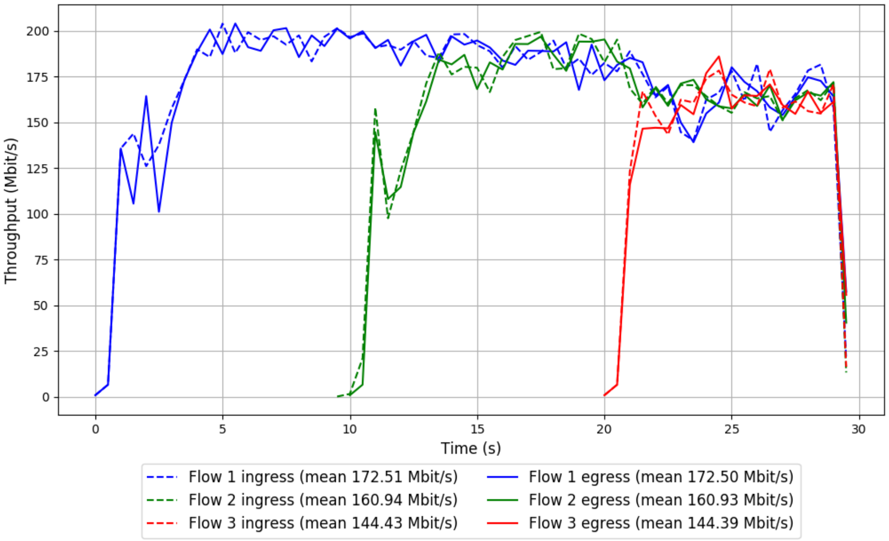
Run 3: Report of Indigo — Data Link

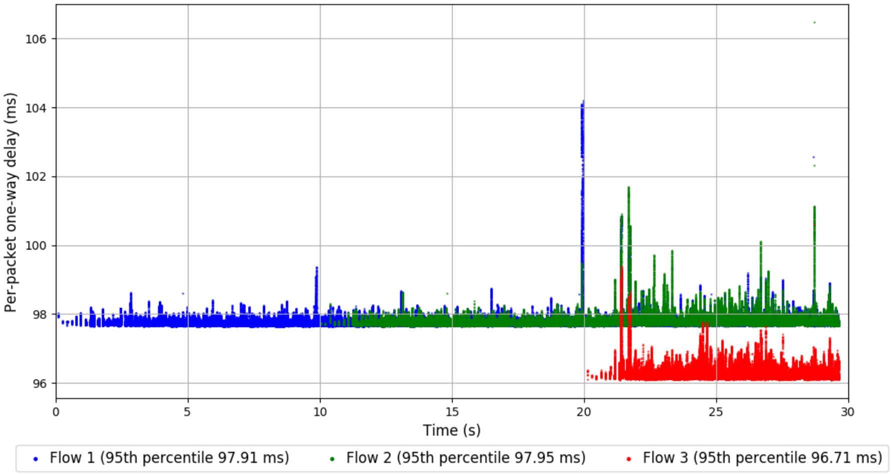




```
Run 4: Statistics of Indigo

Start at: 2017-12-12 00:28:13
End at: 2017-12-12 00:28:43
Local clock offset: -2.715 ms
Remote clock offset: 11.277 ms

# Below is generated by plot.py at 2017-12-12 04:22:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.86 Mbit/s
95th percentile per-packet one-way delay: 97.912 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 172.50 Mbit/s
95th percentile per-packet one-way delay: 97.910 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 160.93 Mbit/s
95th percentile per-packet one-way delay: 97.952 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 144.39 Mbit/s
95th percentile per-packet one-way delay: 96.710 ms
Loss rate: 0.03%
```

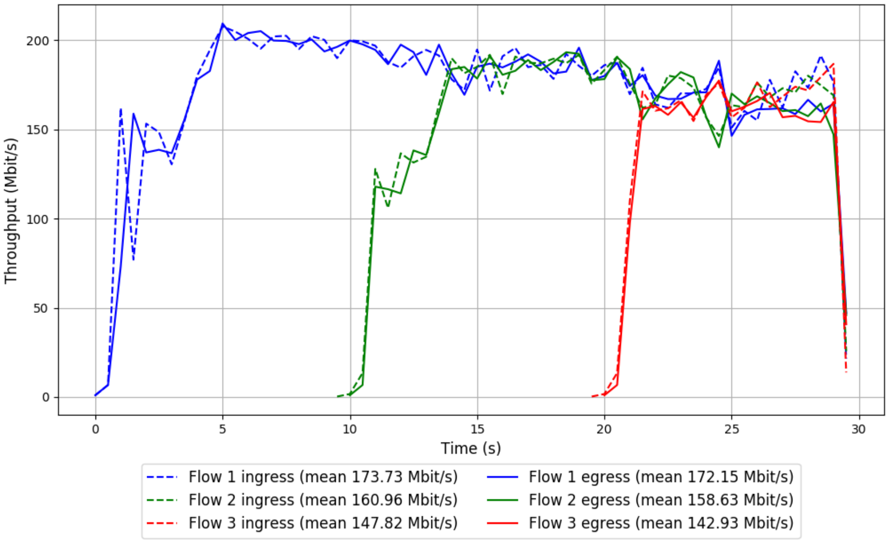
Run 4: Report of Indigo — Data Link

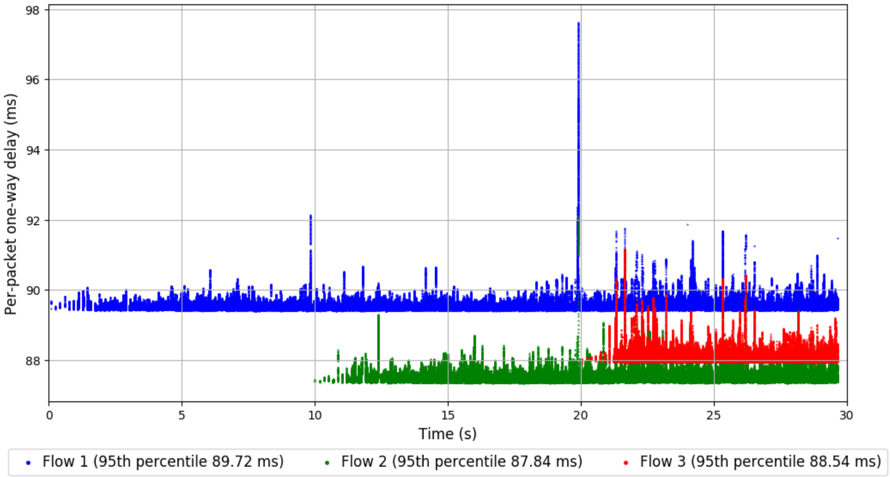




```
Run 5: Statistics of Indigo

Start at: 2017-12-12 00:48:17
End at: 2017-12-12 00:48:47
Local clock offset: -3.407 ms
Remote clock offset: 2.273 ms

# Below is generated by plot.py at 2017-12-12 04:22:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 323.92 Mbit/s
95th percentile per-packet one-way delay: 89.632 ms
Loss rate: 1.43%
-- Flow 1:
Average throughput: 172.15 Mbit/s
95th percentile per-packet one-way delay: 89.719 ms
Loss rate: 0.90%
-- Flow 2:
Average throughput: 158.63 Mbit/s
95th percentile per-packet one-way delay: 87.836 ms
Loss rate: 1.44%
-- Flow 3:
Average throughput: 142.93 Mbit/s
95th percentile per-packet one-way delay: 88.543 ms
Loss rate: 3.30%
```

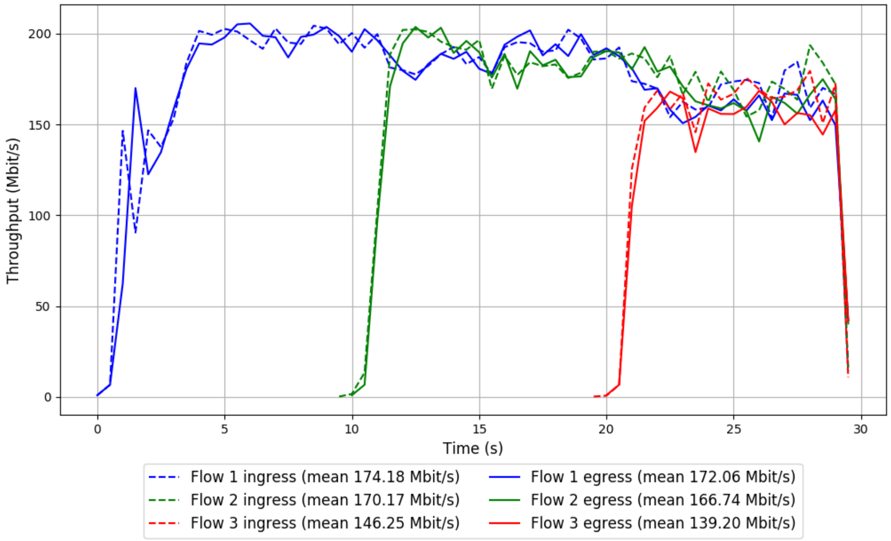
Run 5: Report of Indigo — Data Link

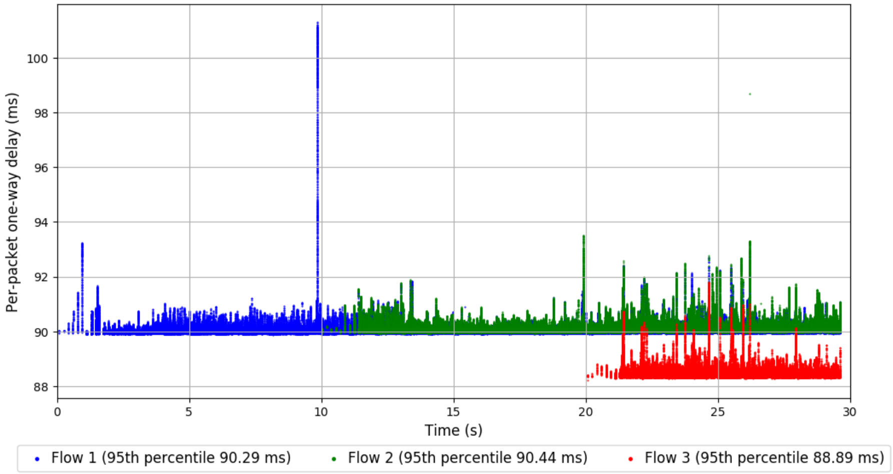




```
Run 6: Statistics of Indigo

Start at: 2017-12-12 01:08:14
End at: 2017-12-12 01:08:44
Local clock offset: -3.269 ms
Remote clock offset: 1.923 ms

# Below is generated by plot.py at 2017-12-12 04:23:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 327.68 Mbit/s
95th percentile per-packet one-way delay: 90.319 ms
Loss rate: 1.99%
-- Flow 1:
Average throughput: 172.06 Mbit/s
95th percentile per-packet one-way delay: 90.290 ms
Loss rate: 1.21%
-- Flow 2:
Average throughput: 166.74 Mbit/s
95th percentile per-packet one-way delay: 90.441 ms
Loss rate: 2.02%
-- Flow 3:
Average throughput: 139.20 Mbit/s
95th percentile per-packet one-way delay: 88.890 ms
Loss rate: 4.81%
```

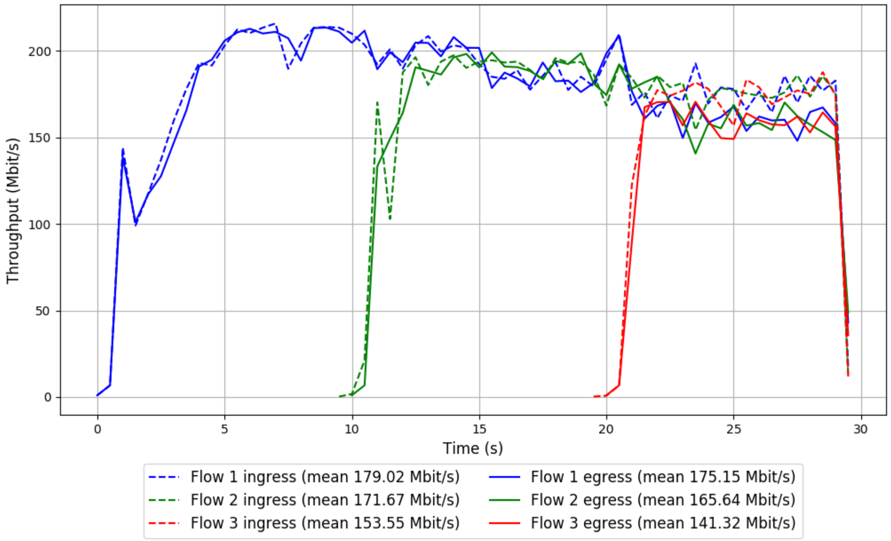
Run 6: Report of Indigo — Data Link

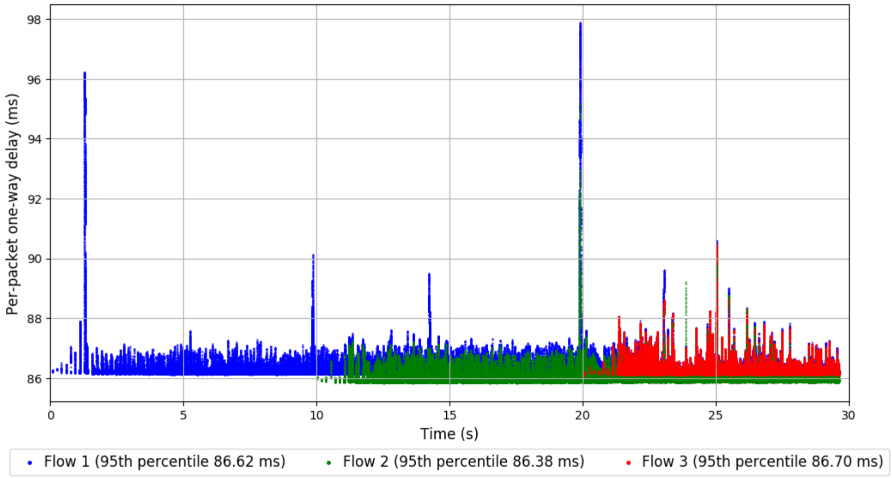




```
Run 7: Statistics of Indigo

Start at: 2017-12-12 01:28:30
End at: 2017-12-12 01:29:00
Local clock offset: -2.71 ms
Remote clock offset: -2.525 ms

# Below is generated by plot.py at 2017-12-12 04:24:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.82 Mbit/s
95th percentile per-packet one-way delay: 86.568 ms
Loss rate: 3.46%
-- Flow 1:
Average throughput: 175.15 Mbit/s
95th percentile per-packet one-way delay: 86.621 ms
Loss rate: 2.16%
-- Flow 2:
Average throughput: 165.64 Mbit/s
95th percentile per-packet one-way delay: 86.378 ms
Loss rate: 3.52%
-- Flow 3:
Average throughput: 141.32 Mbit/s
95th percentile per-packet one-way delay: 86.697 ms
Loss rate: 7.99%
```

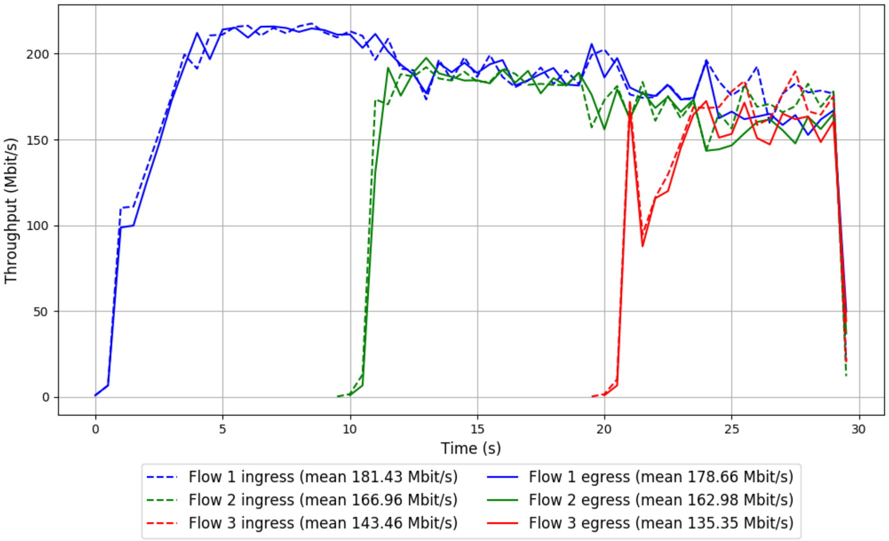
Run 7: Report of Indigo — Data Link

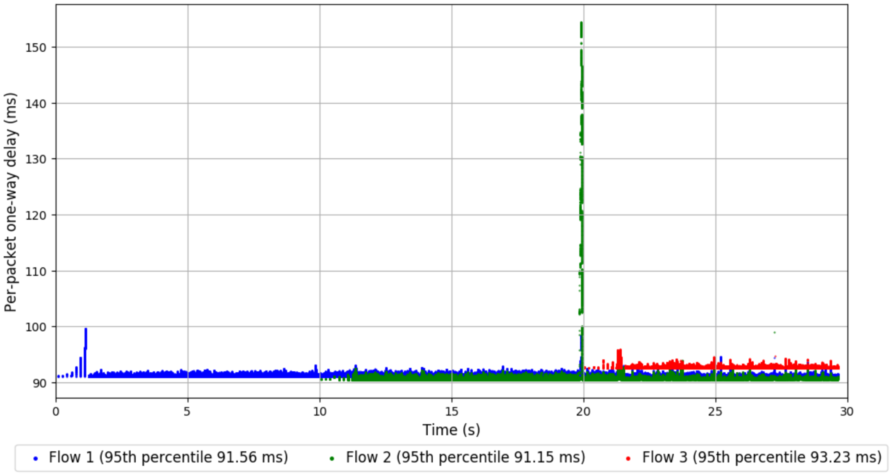




```
Run 8: Statistics of Indigo

Start at: 2017-12-12 01:48:47
End at: 2017-12-12 01:49:17
Local clock offset: -3.043 ms
Remote clock offset: 3.934 ms

# Below is generated by plot.py at 2017-12-12 04:24:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 330.61 Mbit/s
95th percentile per-packet one-way delay: 92.720 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 178.66 Mbit/s
95th percentile per-packet one-way delay: 91.565 ms
Loss rate: 1.53%
-- Flow 2:
Average throughput: 162.98 Mbit/s
95th percentile per-packet one-way delay: 91.147 ms
Loss rate: 2.38%
-- Flow 3:
Average throughput: 135.35 Mbit/s
95th percentile per-packet one-way delay: 93.233 ms
Loss rate: 5.68%
```

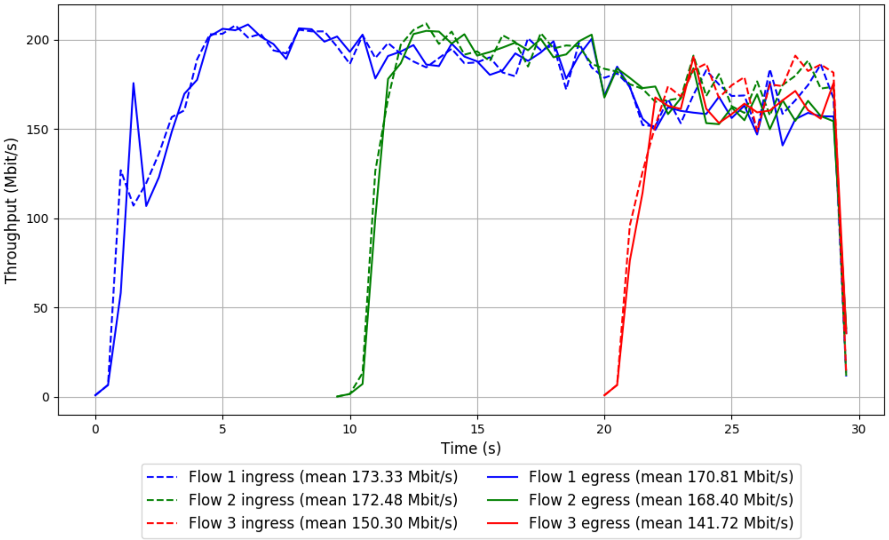
Run 8: Report of Indigo — Data Link

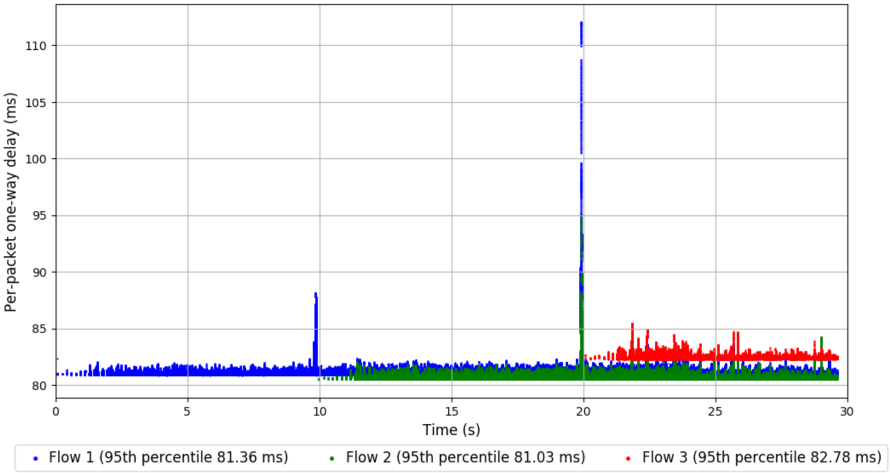




```
Run 9: Statistics of Indigo

Start at: 2017-12-12 02:08:54
End at: 2017-12-12 02:09:24
Local clock offset: -3.229 ms
Remote clock offset: -7.413 ms

# Below is generated by plot.py at 2017-12-12 04:25:42
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.48 Mbit/s
95th percentile per-packet one-way delay: 82.394 ms
Loss rate: 2.38%
-- Flow 1:
Average throughput: 170.81 Mbit/s
95th percentile per-packet one-way delay: 81.356 ms
Loss rate: 1.46%
-- Flow 2:
Average throughput: 168.40 Mbit/s
95th percentile per-packet one-way delay: 81.035 ms
Loss rate: 2.36%
-- Flow 3:
Average throughput: 141.72 Mbit/s
95th percentile per-packet one-way delay: 82.785 ms
Loss rate: 5.71%
```

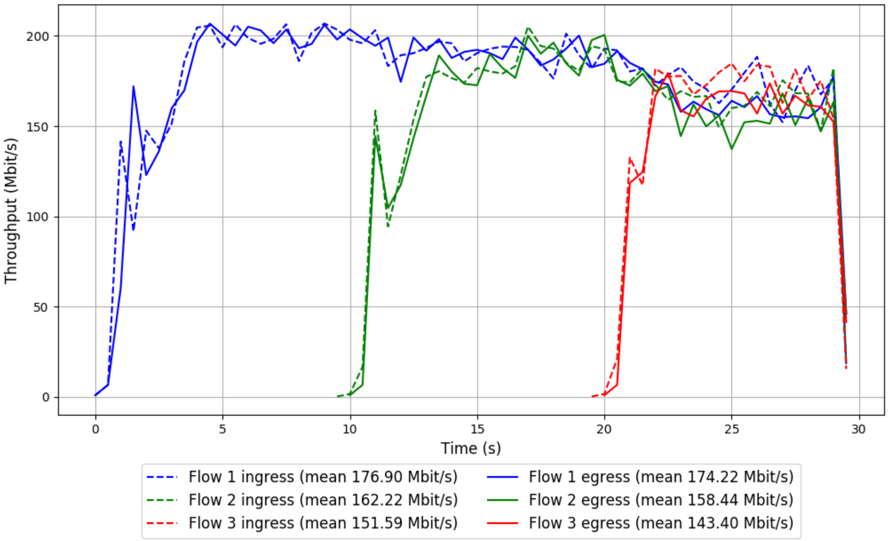
Run 9: Report of Indigo — Data Link

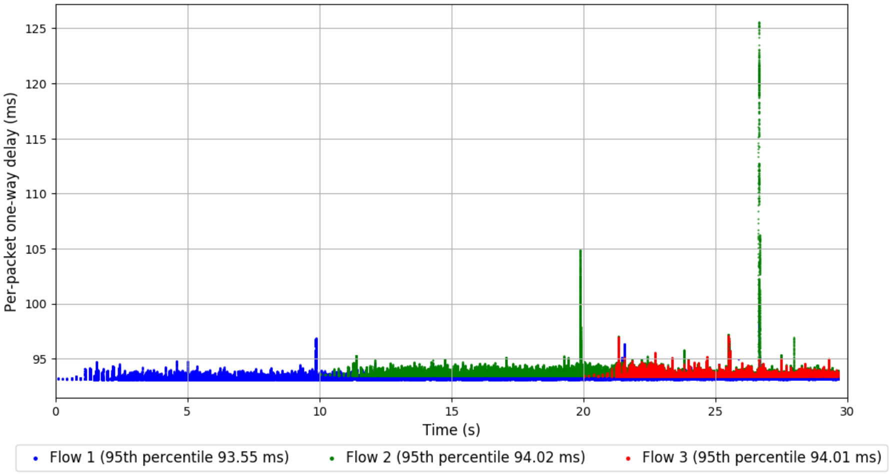




```
Run 10: Statistics of Indigo

Start at: 2017-12-12 02:29:02
End at: 2017-12-12 02:29:32
Local clock offset: -2.569 ms
Remote clock offset: 4.678 ms

# Below is generated by plot.py at 2017-12-12 04:26:05
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.86 Mbit/s
95th percentile per-packet one-way delay: 93.838 ms
Loss rate: 2.35%
-- Flow 1:
Average throughput: 174.22 Mbit/s
95th percentile per-packet one-way delay: 93.549 ms
Loss rate: 1.51%
-- Flow 2:
Average throughput: 158.44 Mbit/s
95th percentile per-packet one-way delay: 94.016 ms
Loss rate: 2.32%
-- Flow 3:
Average throughput: 143.40 Mbit/s
95th percentile per-packet one-way delay: 94.013 ms
Loss rate: 5.40%
```

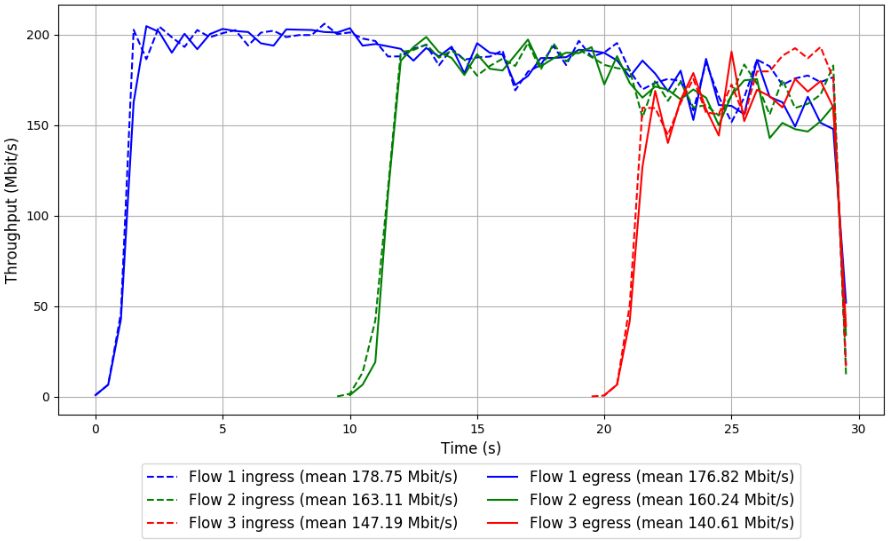
Run 10: Report of Indigo — Data Link

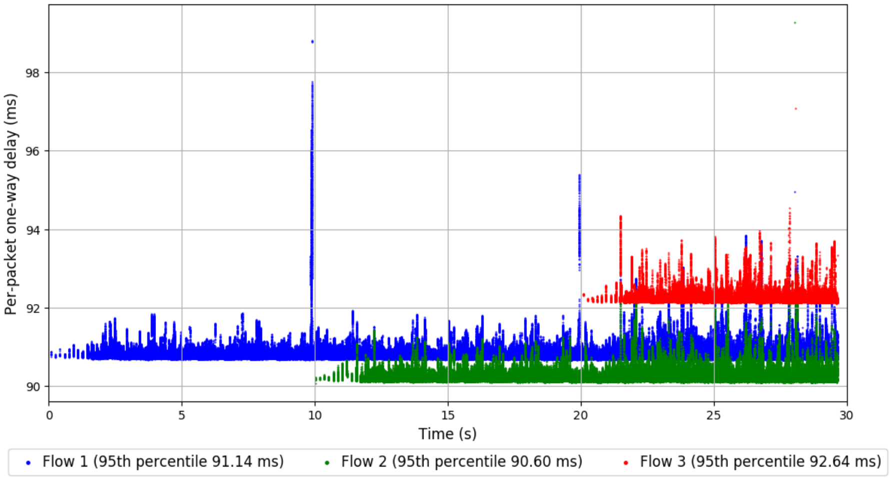




```
Run 1: Statistics of Indigo-calib

Start at: 2017-12-11 23:31:04
End at: 2017-12-11 23:31:34
Local clock offset: -1.572 ms
Remote clock offset: 6.435 ms

# Below is generated by plot.py at 2017-12-12 04:26:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.66 Mbit/s
95th percentile per-packet one-way delay: 92.248 ms
Loss rate: 1.78%
-- Flow 1:
Average throughput: 176.82 Mbit/s
95th percentile per-packet one-way delay: 91.136 ms
Loss rate: 1.08%
-- Flow 2:
Average throughput: 160.24 Mbit/s
95th percentile per-packet one-way delay: 90.601 ms
Loss rate: 1.75%
-- Flow 3:
Average throughput: 140.61 Mbit/s
95th percentile per-packet one-way delay: 92.640 ms
Loss rate: 4.48%
```

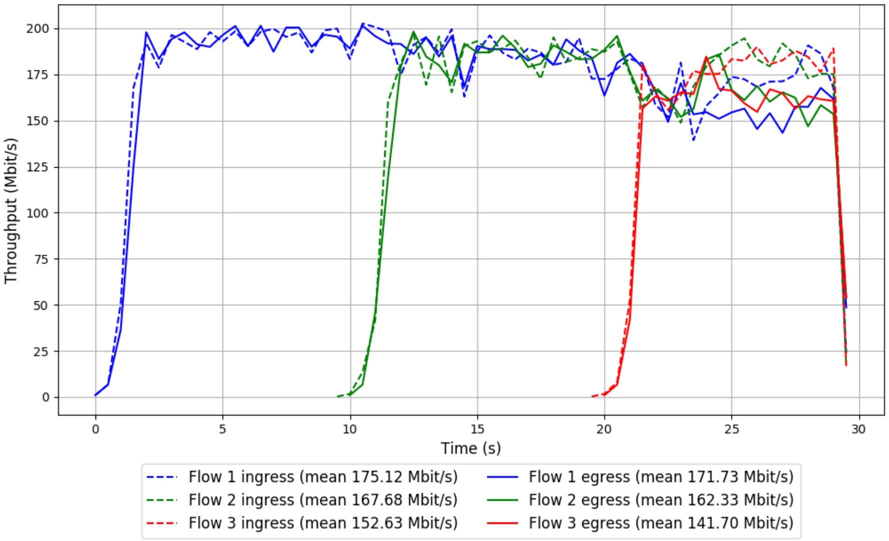
Run 1: Report of Indigo-calib — Data Link

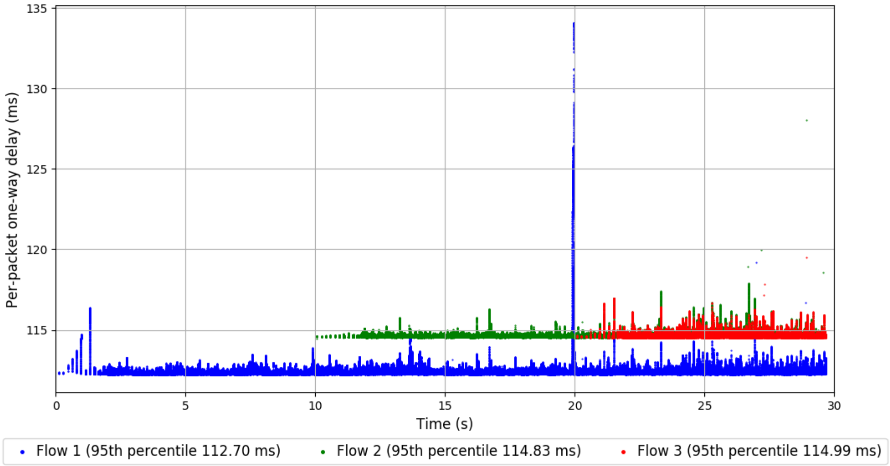




```
Run 2: Statistics of Indigo-calib

Start at: 2017-12-11 23:51:13
End at: 2017-12-11 23:51:43
Local clock offset: -2.169 ms
Remote clock offset: 28.985 ms

# Below is generated by plot.py at 2017-12-12 04:27:39
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.36 Mbit/s
95th percentile per-packet one-way delay: 114.756 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 171.73 Mbit/s
95th percentile per-packet one-way delay: 112.698 ms
Loss rate: 1.93%
-- Flow 2:
Average throughput: 162.33 Mbit/s
95th percentile per-packet one-way delay: 114.829 ms
Loss rate: 3.19%
-- Flow 3:
Average throughput: 141.70 Mbit/s
95th percentile per-packet one-way delay: 114.994 ms
Loss rate: 7.16%
```

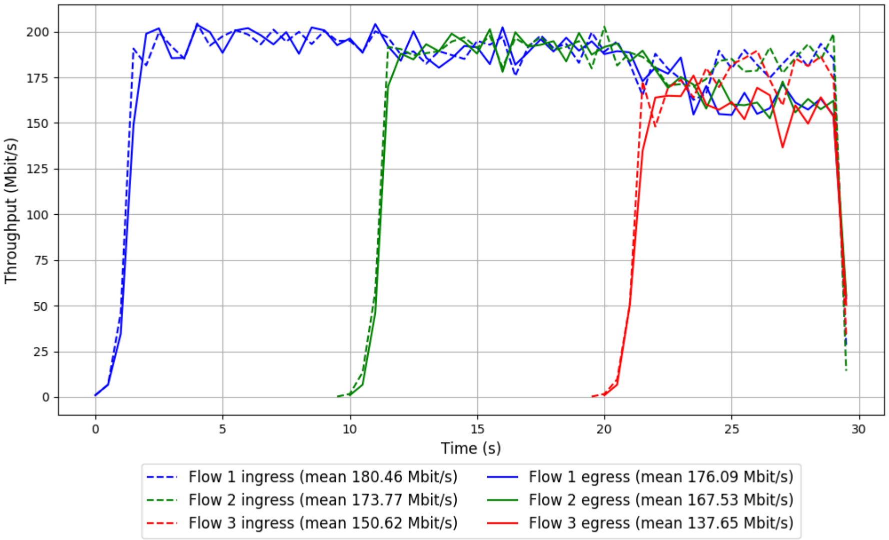
Run 2: Report of Indigo-calib — Data Link

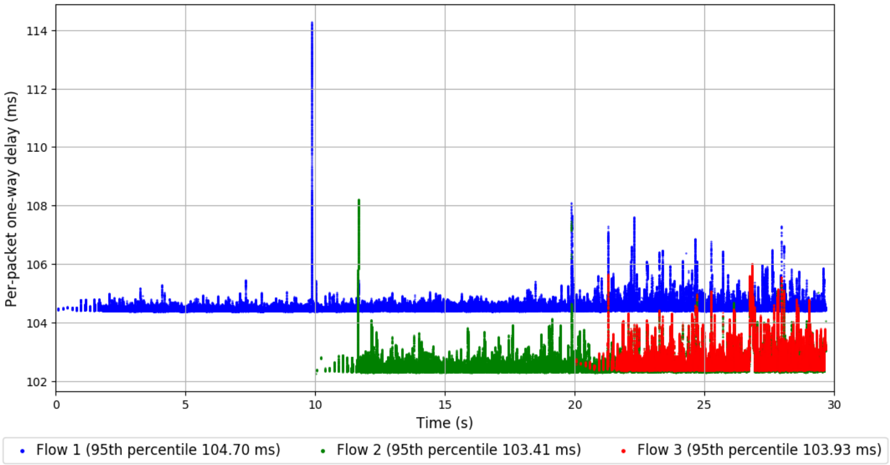




```
Run 3: Statistics of Indigo-calib

Start at: 2017-12-12 00:11:26
End at: 2017-12-12 00:11:56
Local clock offset: -2.209 ms
Remote clock offset: 18.447 ms

# Below is generated by plot.py at 2017-12-12 04:27:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 331.97 Mbit/s
95th percentile per-packet one-way delay: 104.620 ms
Loss rate: 3.69%
-- Flow 1:
Average throughput: 176.09 Mbit/s
95th percentile per-packet one-way delay: 104.702 ms
Loss rate: 2.42%
-- Flow 2:
Average throughput: 167.53 Mbit/s
95th percentile per-packet one-way delay: 103.407 ms
Loss rate: 3.58%
-- Flow 3:
Average throughput: 137.65 Mbit/s
95th percentile per-packet one-way delay: 103.930 ms
Loss rate: 8.61%
```

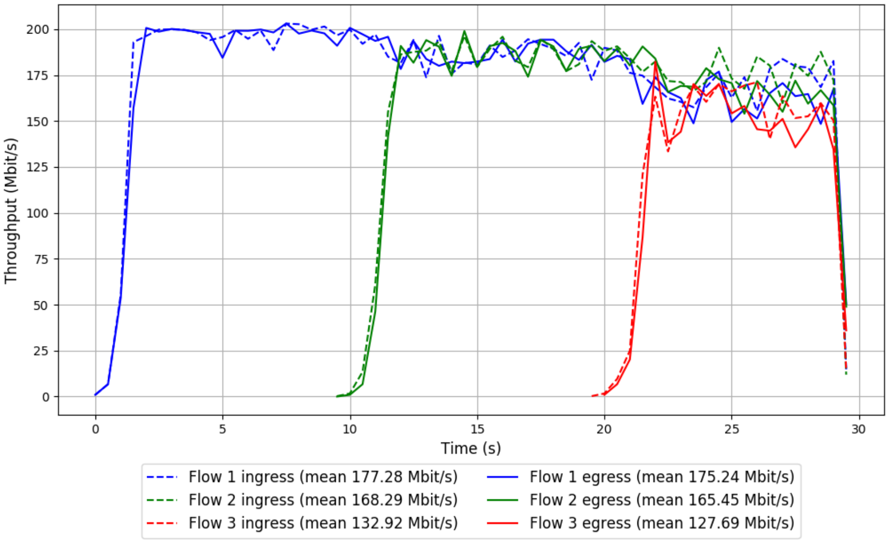
Run 3: Report of Indigo-calib — Data Link

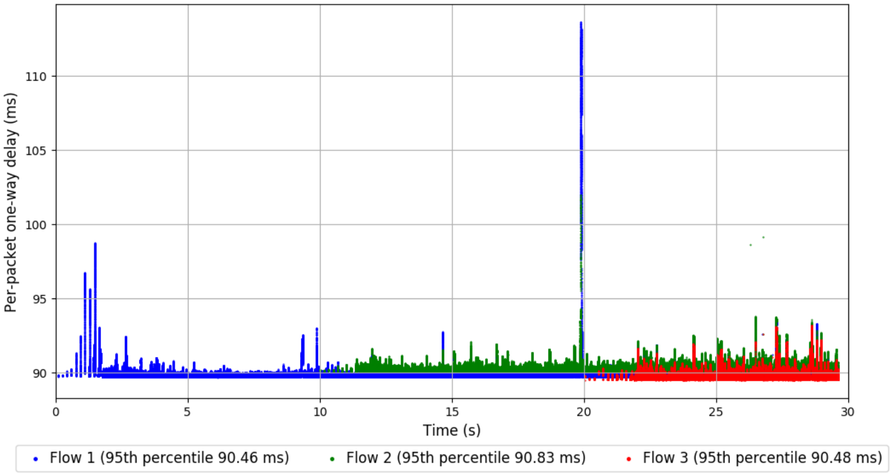




```
Run 4: Statistics of Indigo-calib

Start at: 2017-12-12 00:31:25
End at: 2017-12-12 00:31:55
Local clock offset: -2.783 ms
Remote clock offset: 5.097 ms

# Below is generated by plot.py at 2017-12-12 04:28:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.61 Mbit/s
95th percentile per-packet one-way delay: 90.669 ms
Loss rate: 1.69%
-- Flow 1:
Average throughput: 175.24 Mbit/s
95th percentile per-packet one-way delay: 90.464 ms
Loss rate: 1.15%
-- Flow 2:
Average throughput: 165.45 Mbit/s
95th percentile per-packet one-way delay: 90.833 ms
Loss rate: 1.69%
-- Flow 3:
Average throughput: 127.69 Mbit/s
95th percentile per-packet one-way delay: 90.485 ms
Loss rate: 3.93%
```

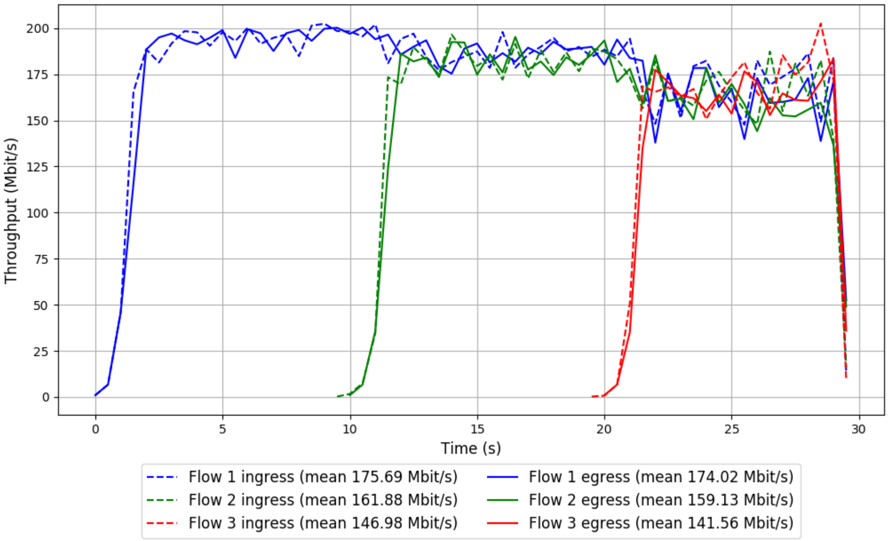
Run 4: Report of Indigo-calib — Data Link

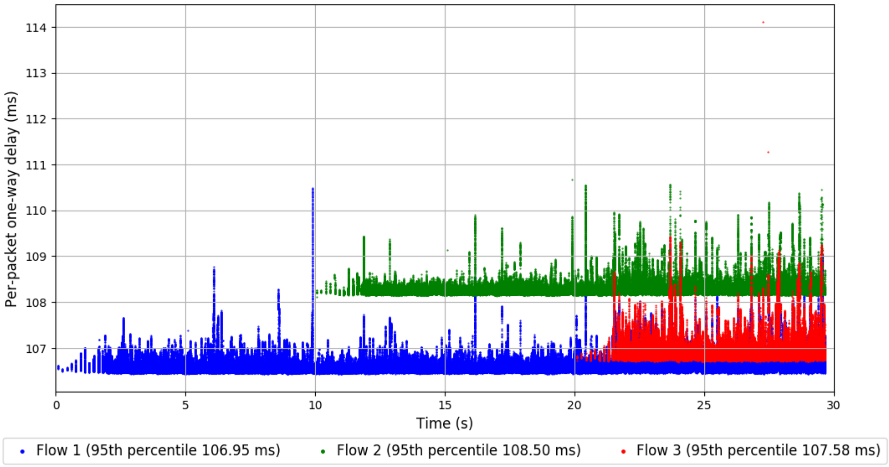




```
Run 5: Statistics of Indigo-calib

Start at: 2017-12-12 00:51:26
End at: 2017-12-12 00:51:56
Local clock offset: -3.486 ms
Remote clock offset: 21.003 ms

# Below is generated by plot.py at 2017-12-12 04:28:47
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.19 Mbit/s
95th percentile per-packet one-way delay: 108.336 ms
Loss rate: 1.59%
-- Flow 1:
Average throughput: 174.02 Mbit/s
95th percentile per-packet one-way delay: 106.947 ms
Loss rate: 0.95%
-- Flow 2:
Average throughput: 159.13 Mbit/s
95th percentile per-packet one-way delay: 108.504 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 141.56 Mbit/s
95th percentile per-packet one-way delay: 107.578 ms
Loss rate: 3.68%
```

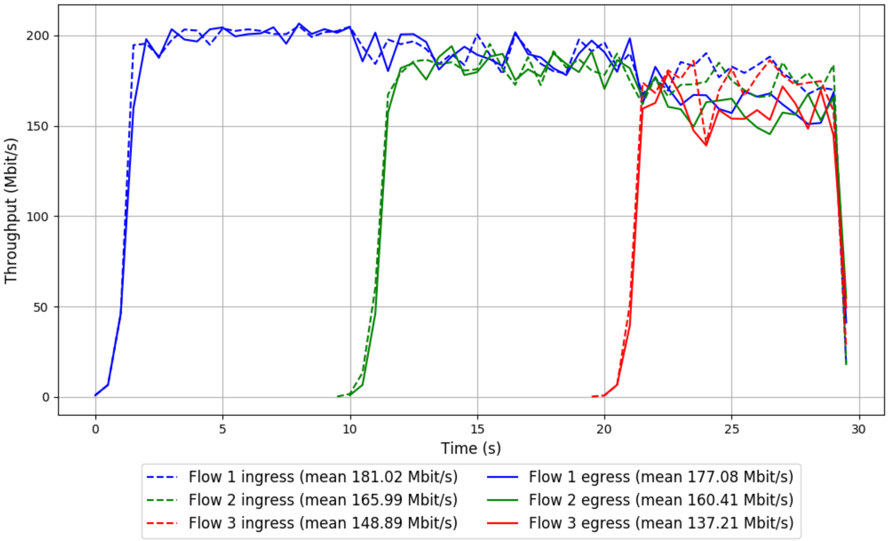
Run 5: Report of Indigo-calib — Data Link

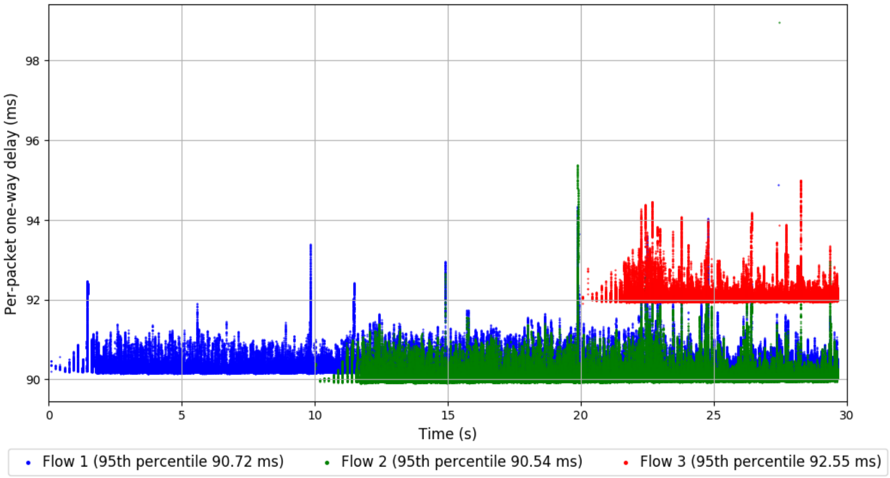




```
Run 6: Statistics of Indigo-calib

Start at: 2017-12-12 01:11:28
End at: 2017-12-12 01:11:58
Local clock offset: -3.135 ms
Remote clock offset: 3.803 ms

# Below is generated by plot.py at 2017-12-12 04:28:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 328.04 Mbit/s
95th percentile per-packet one-way delay: 92.066 ms
Loss rate: 3.37%
-- Flow 1:
Average throughput: 177.08 Mbit/s
95th percentile per-packet one-way delay: 90.722 ms
Loss rate: 2.17%
-- Flow 2:
Average throughput: 160.41 Mbit/s
95th percentile per-packet one-way delay: 90.544 ms
Loss rate: 3.36%
-- Flow 3:
Average throughput: 137.21 Mbit/s
95th percentile per-packet one-way delay: 92.550 ms
Loss rate: 7.84%
```

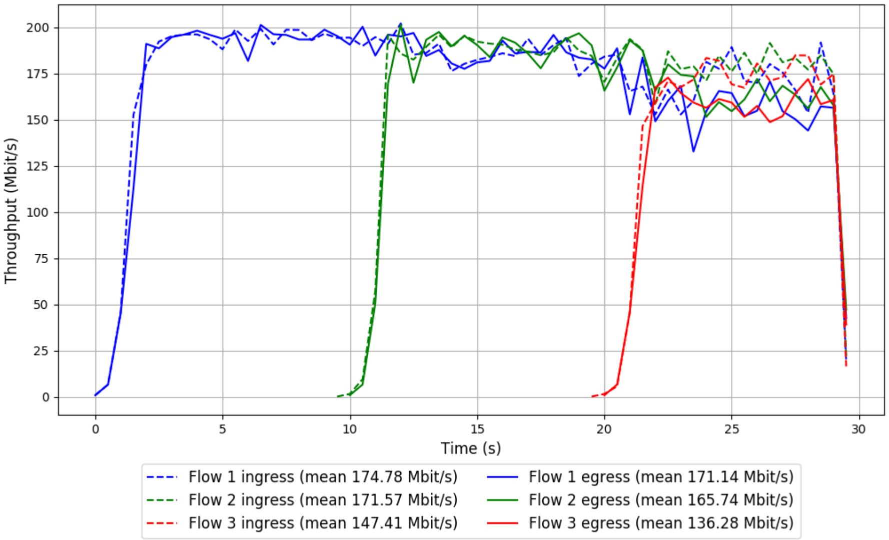
Run 6: Report of Indigo-calib — Data Link

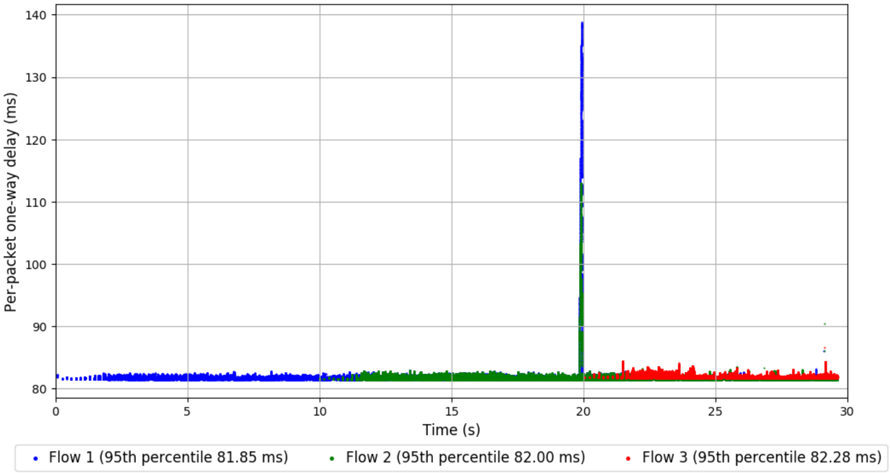




```
Run 7: Statistics of Indigo-calib

Start at: 2017-12-12 01:31:51
End at: 2017-12-12 01:32:21
Local clock offset: -2.672 ms
Remote clock offset: -6.869 ms

# Below is generated by plot.py at 2017-12-12 04:29:43
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.40 Mbit/s
95th percentile per-packet one-way delay: 82.002 ms
Loss rate: 3.31%
-- Flow 1:
Average throughput: 171.14 Mbit/s
95th percentile per-packet one-way delay: 81.851 ms
Loss rate: 2.09%
-- Flow 2:
Average throughput: 165.74 Mbit/s
95th percentile per-packet one-way delay: 82.000 ms
Loss rate: 3.40%
-- Flow 3:
Average throughput: 136.28 Mbit/s
95th percentile per-packet one-way delay: 82.283 ms
Loss rate: 7.55%
```

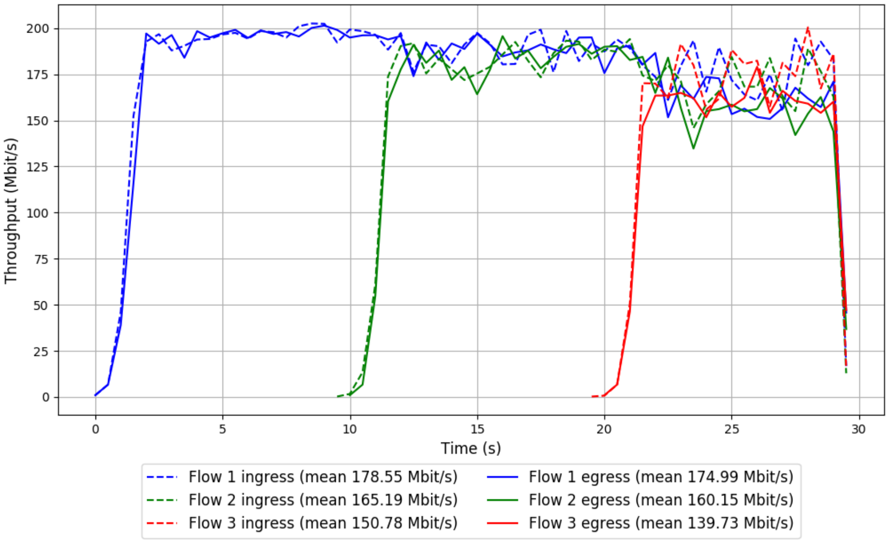
Run 7: Report of Indigo-calib — Data Link

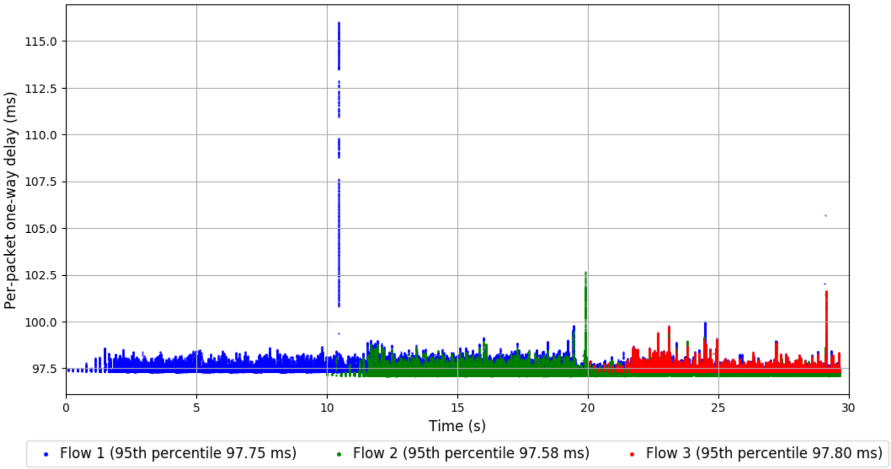




```
Run 8: Statistics of Indigo-calib

Start at: 2017-12-12 01:52:00
End at: 2017-12-12 01:52:30
Local clock offset: -3.196 ms
Remote clock offset: 8.228 ms

# Below is generated by plot.py at 2017-12-12 04:29:50
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.60 Mbit/s
95th percentile per-packet one-way delay: 97.717 ms
Loss rate: 3.12%
-- Flow 1:
Average throughput: 174.99 Mbit/s
95th percentile per-packet one-way delay: 97.751 ms
Loss rate: 2.00%
-- Flow 2:
Average throughput: 160.15 Mbit/s
95th percentile per-packet one-way delay: 97.582 ms
Loss rate: 3.05%
-- Flow 3:
Average throughput: 139.73 Mbit/s
95th percentile per-packet one-way delay: 97.802 ms
Loss rate: 7.35%
```

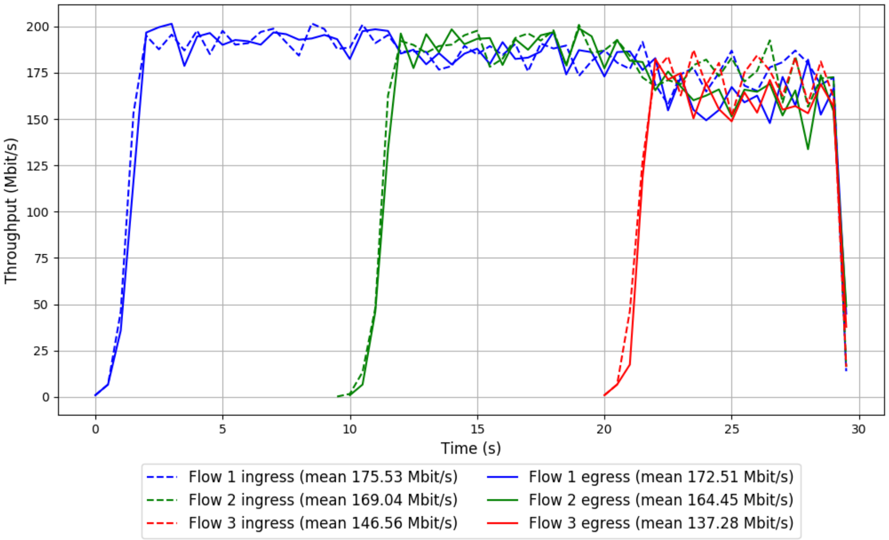
Run 8: Report of Indigo-calib — Data Link

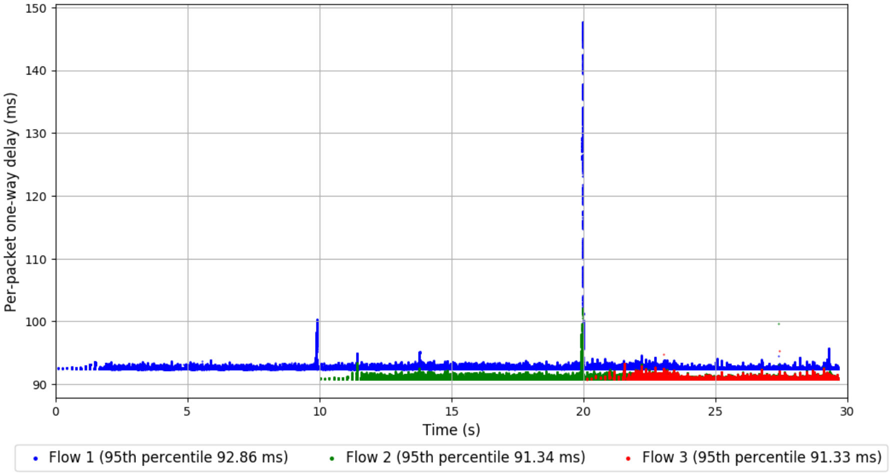




```
Run 9: Statistics of Indigo-calib

Start at: 2017-12-12 02:12:07
End at: 2017-12-12 02:12:37
Local clock offset: -3.104 ms
Remote clock offset: 2.64 ms

# Below is generated by plot.py at 2017-12-12 04:29:53
# Datalink statistics
-- Total of 3 flows:
Average throughput: 325.87 Mbit/s
95th percentile per-packet one-way delay: 92.686 ms
Loss rate: 2.70%
-- Flow 1:
Average throughput: 172.51 Mbit/s
95th percentile per-packet one-way delay: 92.864 ms
Loss rate: 1.72%
-- Flow 2:
Average throughput: 164.45 Mbit/s
95th percentile per-packet one-way delay: 91.337 ms
Loss rate: 2.72%
-- Flow 3:
Average throughput: 137.28 Mbit/s
95th percentile per-packet one-way delay: 91.325 ms
Loss rate: 6.33%
```

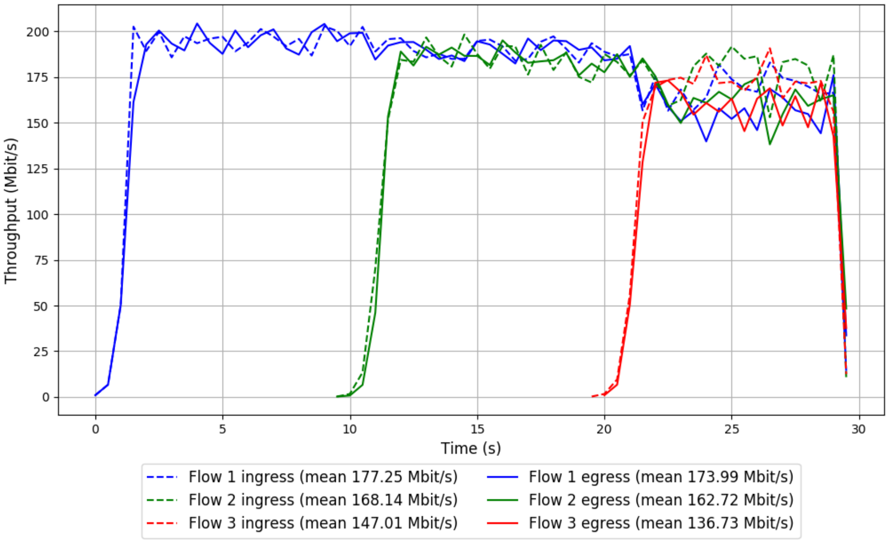
Run 9: Report of Indigo-calib — Data Link



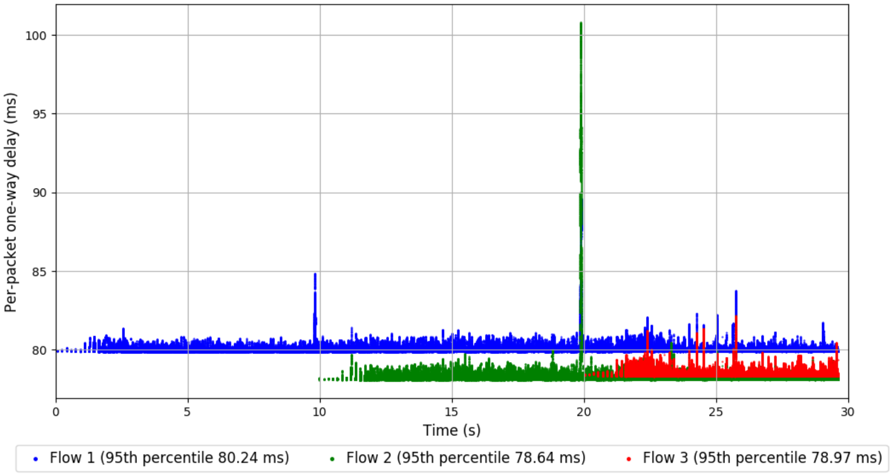


```
Run 10: Statistics of Indigo-calib

Start at: 2017-12-12 02:32:17
End at: 2017-12-12 02:32:47
Local clock offset: -2.383 ms
Remote clock offset: -10.367 ms

# Below is generated by plot.py at 2017-12-12 04:30:01
# Datalink statistics
-- Total of 3 flows:
Average throughput: 326.51 Mbit/s
95th percentile per-packet one-way delay: 80.118 ms
Loss rate: 3.03%
-- Flow 1:
Average throughput: 173.99 Mbit/s
95th percentile per-packet one-way delay: 80.239 ms
Loss rate: 1.84%
-- Flow 2:
Average throughput: 162.72 Mbit/s
95th percentile per-packet one-way delay: 78.641 ms
Loss rate: 3.22%
-- Flow 3:
Average throughput: 136.73 Mbit/s
95th percentile per-packet one-way delay: 78.967 ms
Loss rate: 6.98%
```

Run 10: Report of Indigo-calib — Data Link



Throughput (Mbit/s)
Time (s)
0
25
50
75
100
125
150
175
200
0
5
10
15
20
25
30
Flow 1 ingress (mean 177.25 Mbit/s)
Flow 2 ingress (mean 168.14 Mbit/s)
Flow 3 ingress (mean 147.01 Mbit/s)
Flow 1 egress (mean 173.99 Mbit/s)
Flow 2 egress (mean 162.72 Mbit/s)
Flow 3 egress (mean 136.73 Mbit/s)



Per-packet one-way delay (ms)
Time (s)
80
85
90
95
100
0
5
10
15
20
25
30
Flow 1 (95th percentile 80.24 ms)
Flow 2 (95th percentile 78.64 ms)
Flow 3 (95th percentile 78.97 ms)