Pantheon Report

Generated at 2019-02-06 11:36:35 (UTC).

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

Repeated the test of 21 congestion control schemes 5 times.

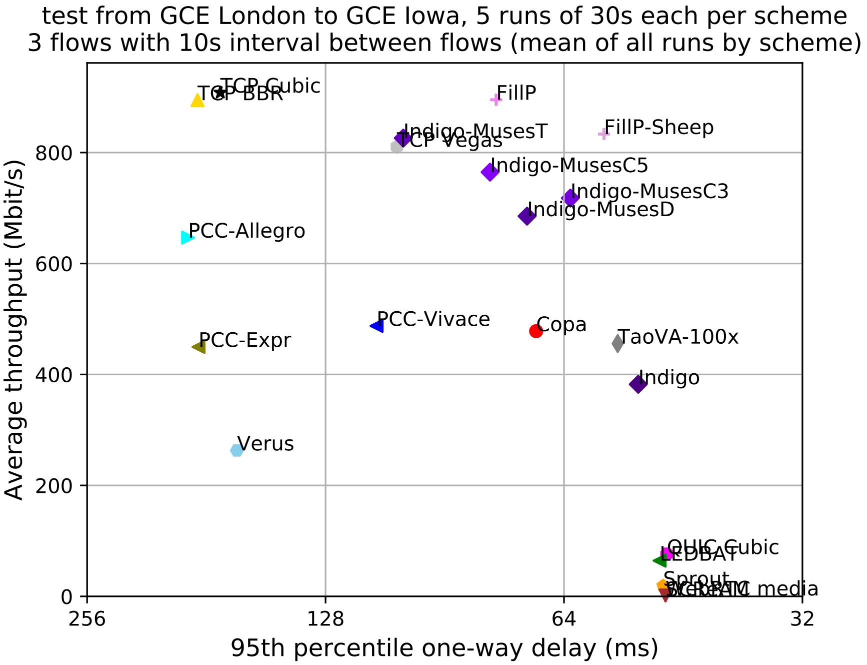
Each test lasted for 30 seconds running 3 flows with 10-second interval between two flows.

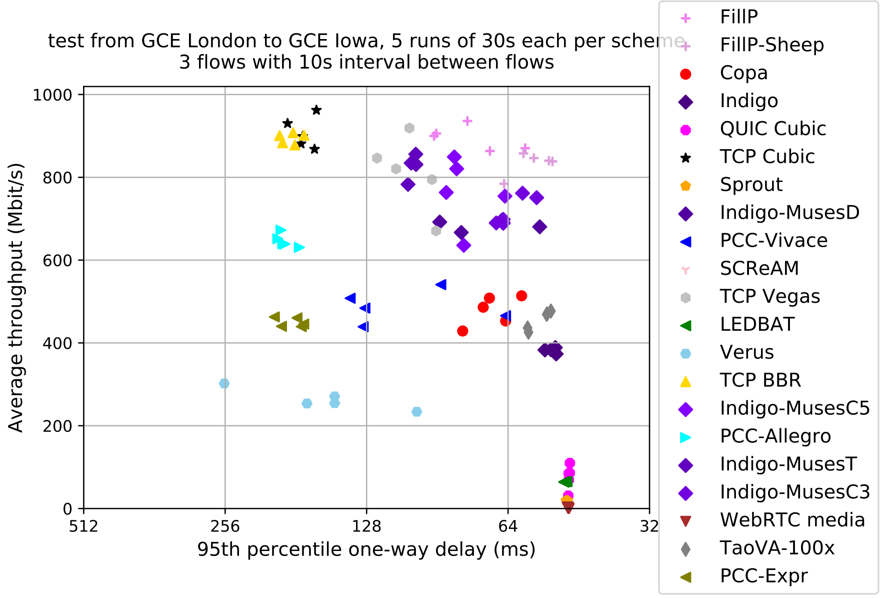
NTP offsets were measured against `time.google.com` and have been applied to correct the timestamps in logs.

```
System info:
Linux 4.15.0-1026-gcp
net.core.default_qdisc = fq
net.core.rmem_default = 16777216
net.core.rmem_max = 536870912
net.core.wmem_default = 16777216
net.core.wmem_max = 536870912
net.ipv4.tcp_rmem = 4096 16777216 536870912
net.ipv4.tcp_wmem = 4096 16777216 536870912
```

```
Git summary:
branch: muses @ 7a686f7c2ed0a333082c0bab1fa5c921ab47e6ee
third_party/fillp @ d6da1459332fcee56963885d7eba17e6a32d4519
third_party/fillp-sheep @ 0e5bb722943babcd2b090d2c64fcd45e12e923f9
third_party/genericCC @ d0153f8e594aa89e93b032143cedbdfe58e562f4
third_party/indigo @ 2601c92e4aa9d58d38dc4dfe0ecdbf90c077e64d
third_party/libutp @ b3465b942e2826f2b179eaab4a906ce6bb7cf3cf
third_party/muses @ 5ce721187ad823da20955337730c746486ca4966
third_party/pantheon-tunnel @ f866d3f58d27afd942717625ee3a354cc2e802bd
third_party/pcc @ 1afc958fa0d66d18b623c091a55fec872b4981e1
 M receiver/src/buffer.h
 M receiver/src/core.cpp
 M sender/src/buffer.h
 M sender/src/core.cpp
third_party/pcc-experimental @ cd43e34e3f5f5613e8acd08fab92c4eb24f974ab
third_party/proto-quic @ 77961f1a82733a86b42f1bc8143ebc978f3cff42
third_party/scream-reproduce @ f099118d1421aa3131bf11ff1964974e1da3bdb2
 M src/ScreamClient
 M src/ScreamServer
third_party/sprout @ 366e35c6178b01e31d4a46ad18c74f9415f19a26
 M src/examples/cellsim.cc
 M src/examples/sproutbt2.cc
 M src/network/sproutconn.cc
third_party/verus @ d4b447ea74c6c60a261149af2629562939f9a494
 M src/verus.hpp
 M tools/plot.py
```

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

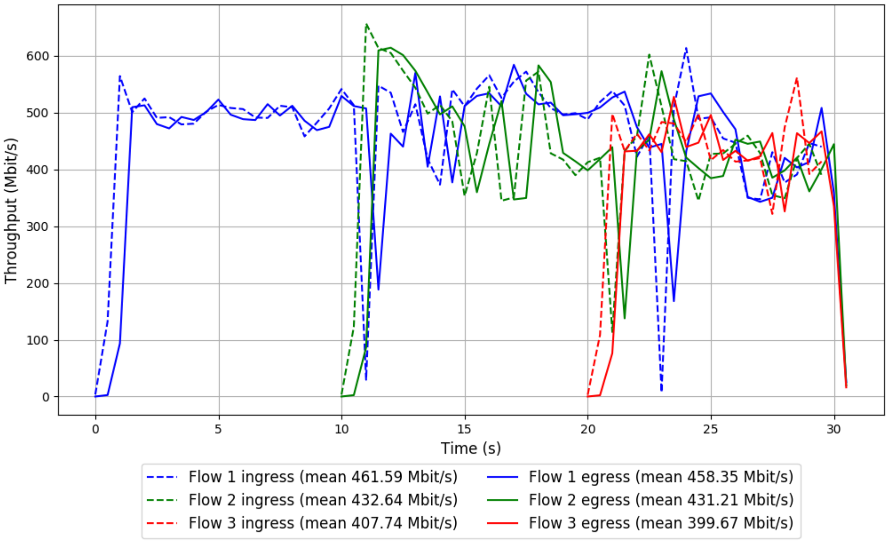

test from GCE London to GCE Iowa, 5 runs of 30s each per scheme
3 flows with 10s interval between flows (mean of all runs by scheme)
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
200
400
600
800
256
128
64
32
TCP Cubic
TCP BBR
FillP
Indigo-MusesT
TCP Vegas
FillP-Sheep
Indigo-MusesC5
Indigo-MusesC3
Indigo-MusesD
PCC-Allegro
PCC-Vivace
Copa
TaoVA-100x
PCC-Expr
Indigo
Verus
QUIC Cubic
LEDBAT
Sprout
SCReAM
WebRTC media

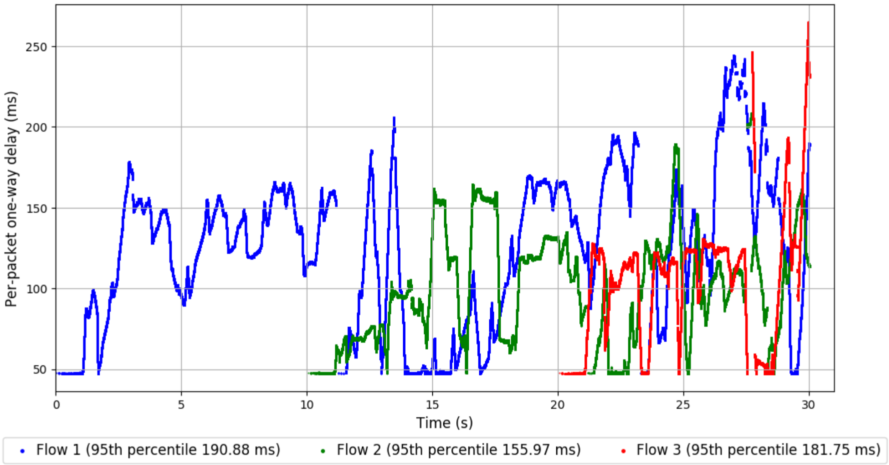

test from GCE London to GCE Iowa, 5 runs of 30s each per scheme
3 flows with 10s interval between flows
Average throughput (Mbit/s)
95th percentile one-way delay (ms)
0
200
400
600
800
1000
512
256
128
64
32
FillP
FillP-Sheep
Copa
Indigo
QUIC Cubic
TCP Cubic
Sprout
Indigo-MusesD
PCC-Vivace
SCReAM
TCP Vegas
LEDBAT
Verus
TCP BBR
Indigo-MusesC5
PCC-Allegro
Indigo-MusesT
Indigo-MusesC3
WebRTC media
TaoVA-100x
PCC-Expr

scheme	# runs	mean avg tput (Mbit/s) flow 1	flow 2	flow 3	mean 95th-%ile delay (ms) flow 1	flow 2	flow 3	mean loss rate (%) flow 1	flow 2	flow 3
TCP BBR	5	459.64	437.02	432.66	186.17	176.25	170.40	0.67	0.76	1.08
Copa	5	250.37	231.73	220.56	66.03	75.05	69.70	0.00	0.01	0.02
TCP Cubic	5	476.13	432.72	432.43	179.26	130.01	154.60	0.31	0.24	0.92
FillP	5	565.66	366.44	258.05	83.31	53.38	52.90	0.26	0.00	0.03
FillP-Sheep	5	538.67	315.49	255.82	60.19	51.99	51.68	0.02	0.01	0.00
Indigo	5	202.60	187.81	170.30	52.10	51.26	50.60	0.00	0.00	0.00
Indigo-MusesC3	5	428.12	355.65	231.52	66.57	56.33	52.18	0.00	0.00	0.03
Indigo-MusesC5	5	473.41	389.66	149.27	82.52	70.12	55.53	0.02	0.01	0.00
Indigo-MusesD	5	410.16	314.47	276.38	75.33	59.33	52.03	0.00	0.00	0.01
Indigo-MusesT	4	485.10	406.44	299.31	107.12	88.71	63.02	0.00	0.02	0.01
LEDBAT	5	41.39	27.69	13.73	48.38	48.55	48.31	0.00	0.00	0.00
PCC-Allegro	5	371.62	292.73	244.42	189.91	163.61	170.50	6.51	1.89	1.62
PCC-Expr	5	246.36	243.93	124.12	176.17	146.07	102.03	5.52	5.99	0.25
QUIC Cubic	5	36.68	43.71	32.33	47.59	47.39	47.52	0.00	0.00	0.00
SCReAM	5	0.22	0.22	0.22	47.39	47.53	47.58	0.00	0.00	0.00
Sprout	5	9.66	9.59	9.10	47.90	47.80	47.74	0.00	0.00	0.00
TaoVA-100x	5	235.04	225.09	213.09	53.47	55.77	55.43	0.00	0.00	0.02
TCP Vegas	5	382.94	447.20	389.76	83.32	103.15	81.76	0.05	0.14	0.23
Verus	5	158.81	116.65	81.85	174.68	94.79	79.02	2.18	0.02	0.00
PCC-Vivace	5	293.04	256.85	71.83	102.61	125.47	50.13	0.00	0.00	0.00
WebRTC media	5	0.85	0.55	0.24	47.28	47.62	47.61	0.00	0.00	0.00

```
Run 1: Statistics of TCP BBR

Start at: 2019-02-06 05:05:34
End at: 2019-02-06 05:06:04
Local clock offset: 0.02 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-02-06 08:33:20
# Datalink statistics
-- Total of 3 flows:
Average throughput: 878.17 Mbit/s
95th percentile per-packet one-way delay: 181.877 ms
Loss rate: 0.77%
-- Flow 1:
Average throughput: 458.35 Mbit/s
95th percentile per-packet one-way delay: 190.882 ms
Loss rate: 0.70%
-- Flow 2:
Average throughput: 431.21 Mbit/s
95th percentile per-packet one-way delay: 155.965 ms
Loss rate: 0.33%
-- Flow 3:
Average throughput: 399.67 Mbit/s
95th percentile per-packet one-way delay: 181.754 ms
Loss rate: 1.97%
```

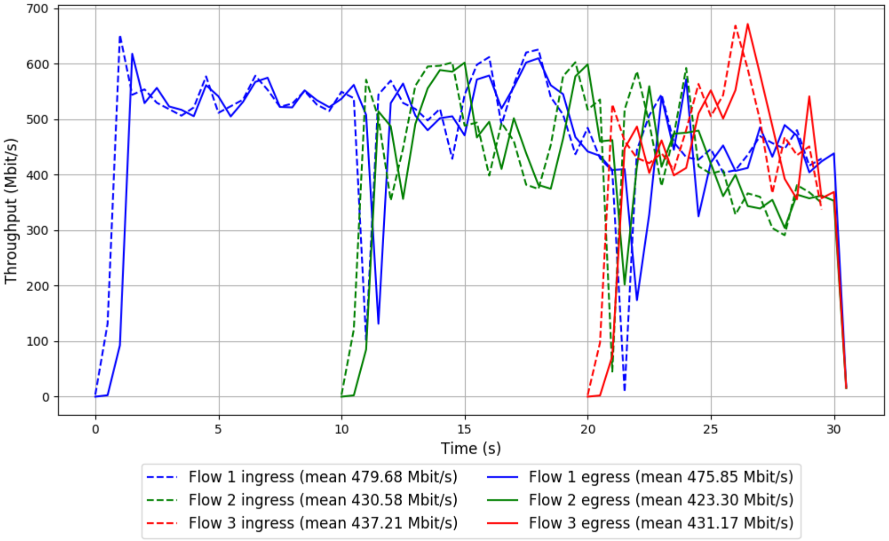
Run 1: Report of TCP BBR — Data Link

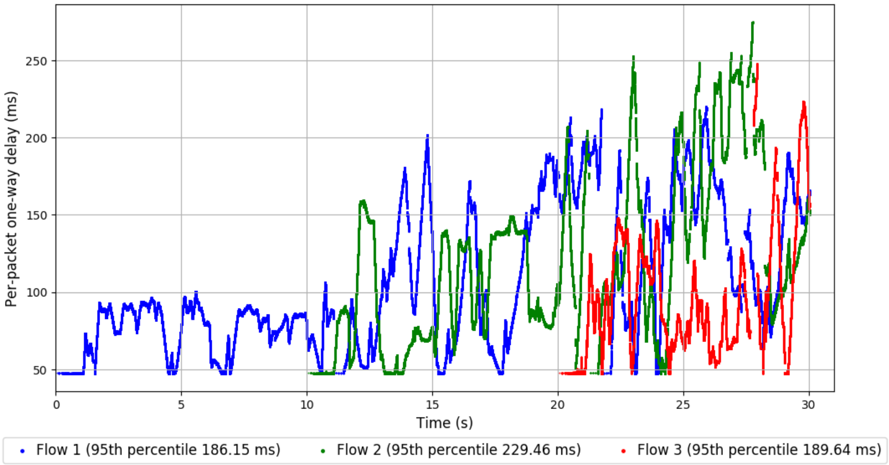




```
Run 2: Statistics of TCP BBR

Start at: 2019-02-06 05:41:52
End at: 2019-02-06 05:42:22
Local clock offset: 0.041 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-02-06 08:34:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 900.81 Mbit/s
95th percentile per-packet one-way delay: 196.023 ms
Loss rate: 1.18%
-- Flow 1:
Average throughput: 475.85 Mbit/s
95th percentile per-packet one-way delay: 186.153 ms
Loss rate: 0.80%
-- Flow 2:
Average throughput: 423.30 Mbit/s
95th percentile per-packet one-way delay: 229.458 ms
Loss rate: 1.70%
-- Flow 3:
Average throughput: 431.17 Mbit/s
95th percentile per-packet one-way delay: 189.643 ms
Loss rate: 1.39%
```

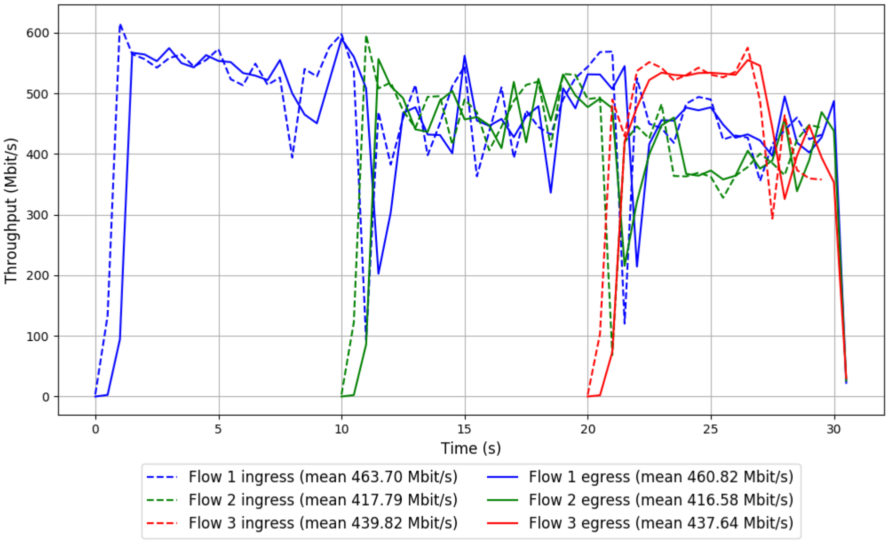
Run 2: Report of TCP BBR — Data Link

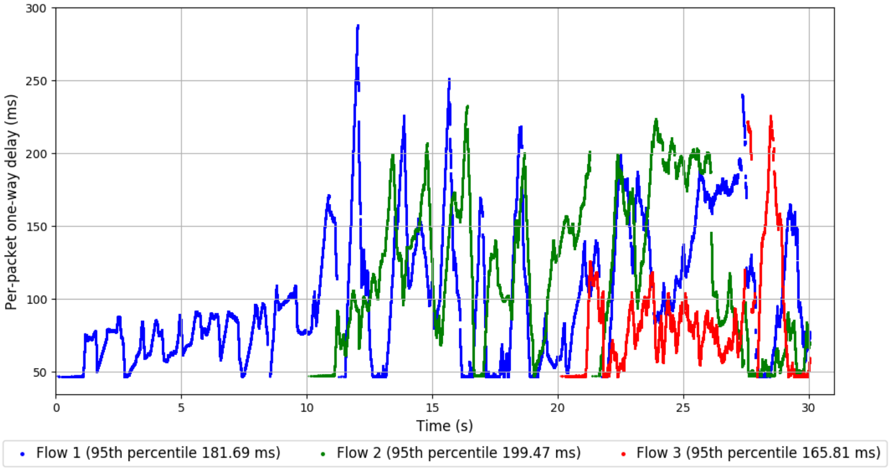




```
Run 3: Statistics of TCP BBR

Start at: 2019-02-06 06:18:45
End at: 2019-02-06 06:19:15
Local clock offset: 0.416 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-02-06 08:34:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 883.54 Mbit/s
95th percentile per-packet one-way delay: 193.223 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 460.82 Mbit/s
95th percentile per-packet one-way delay: 181.691 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 416.58 Mbit/s
95th percentile per-packet one-way delay: 199.468 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 437.64 Mbit/s
95th percentile per-packet one-way delay: 165.806 ms
Loss rate: 0.49%
```

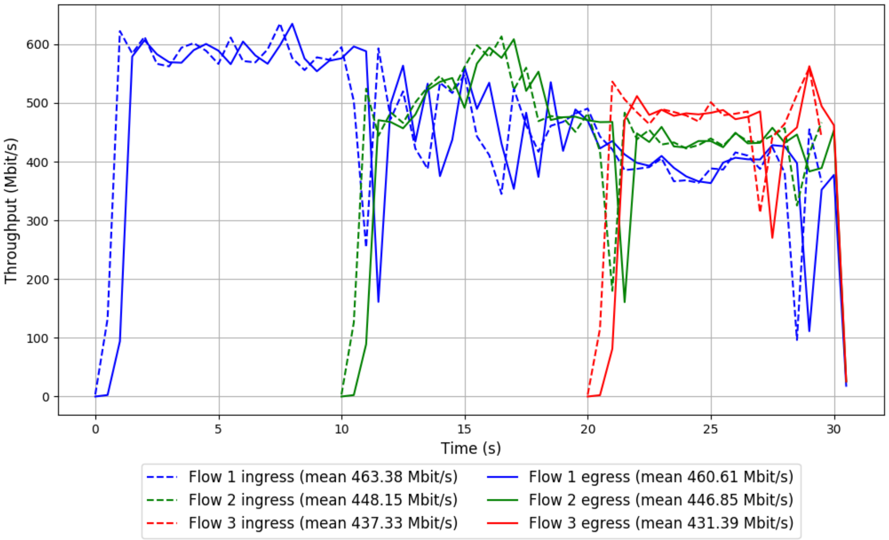
Run 3: Report of TCP BBR — Data Link

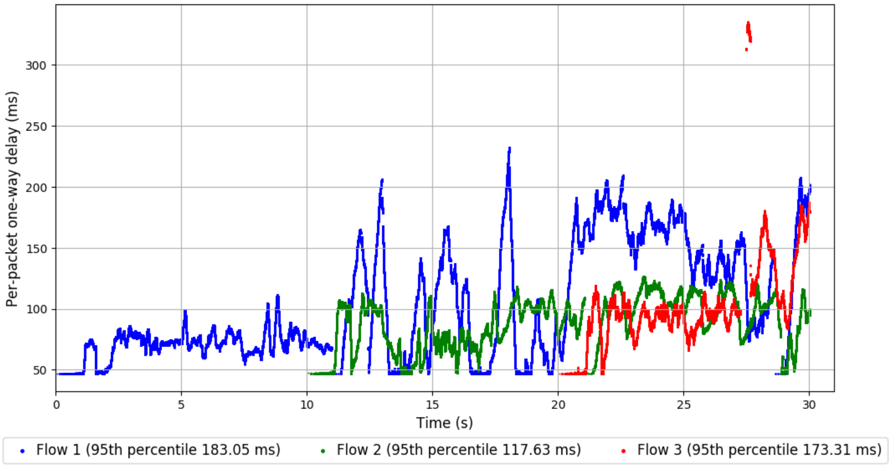




```
Run 4: Statistics of TCP BBR

Start at: 2019-02-06 06:55:33
End at: 2019-02-06 06:56:03
Local clock offset: 0.4 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-02-06 08:34:11
# Datalink statistics
-- Total of 3 flows:
Average throughput: 901.57 Mbit/s
95th percentile per-packet one-way delay: 173.931 ms
Loss rate: 0.61%
-- Flow 1:
Average throughput: 460.61 Mbit/s
95th percentile per-packet one-way delay: 183.051 ms
Loss rate: 0.59%
-- Flow 2:
Average throughput: 446.85 Mbit/s
95th percentile per-packet one-way delay: 117.626 ms
Loss rate: 0.29%
-- Flow 3:
Average throughput: 431.39 Mbit/s
95th percentile per-packet one-way delay: 173.306 ms
Loss rate: 1.35%
```

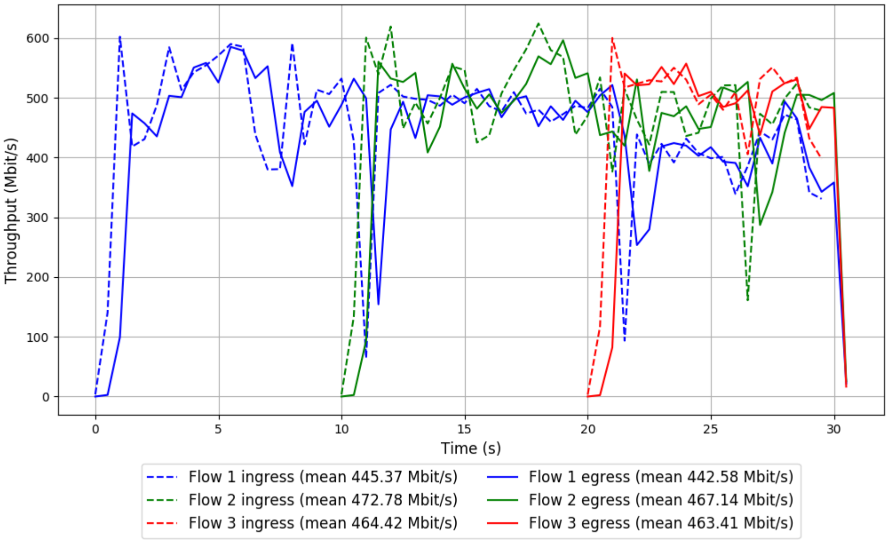
Run 4: Report of TCP BBR — Data Link

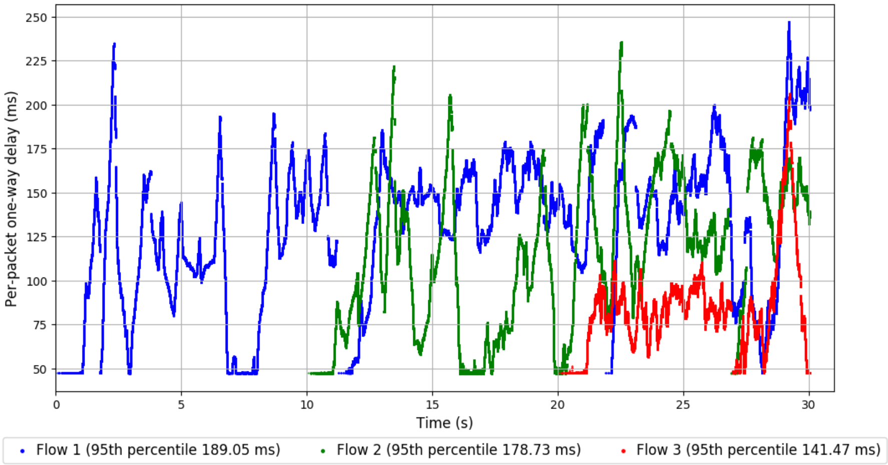




```
Run 5: Statistics of TCP BBR

Start at: 2019-02-06 07:32:00
End at: 2019-02-06 07:32:30
Local clock offset: -0.005 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-02-06 08:34:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 907.77 Mbit/s
95th percentile per-packet one-way delay: 183.465 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 442.58 Mbit/s
95th percentile per-packet one-way delay: 189.053 ms
Loss rate: 0.62%
-- Flow 2:
Average throughput: 467.14 Mbit/s
95th percentile per-packet one-way delay: 178.728 ms
Loss rate: 1.19%
-- Flow 3:
Average throughput: 463.41 Mbit/s
95th percentile per-packet one-way delay: 141.466 ms
Loss rate: 0.22%
```

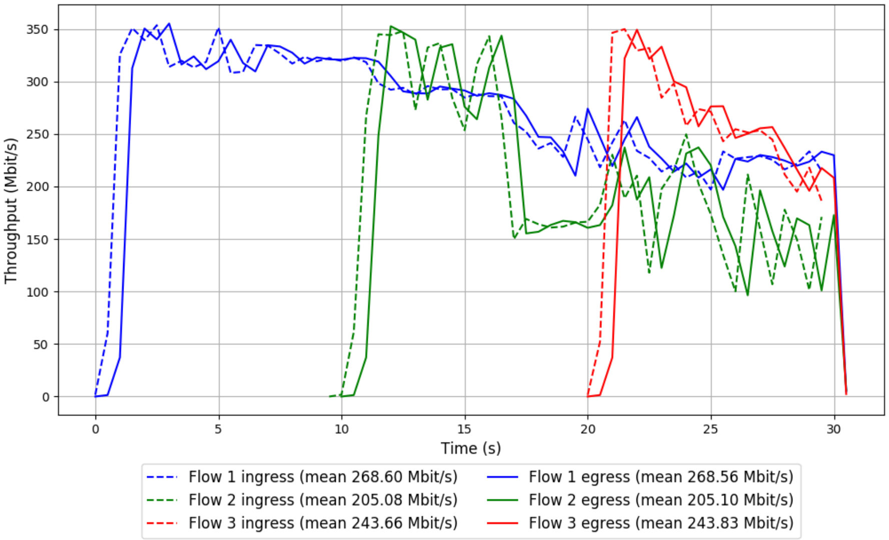
Run 5: Report of TCP BBR — Data Link

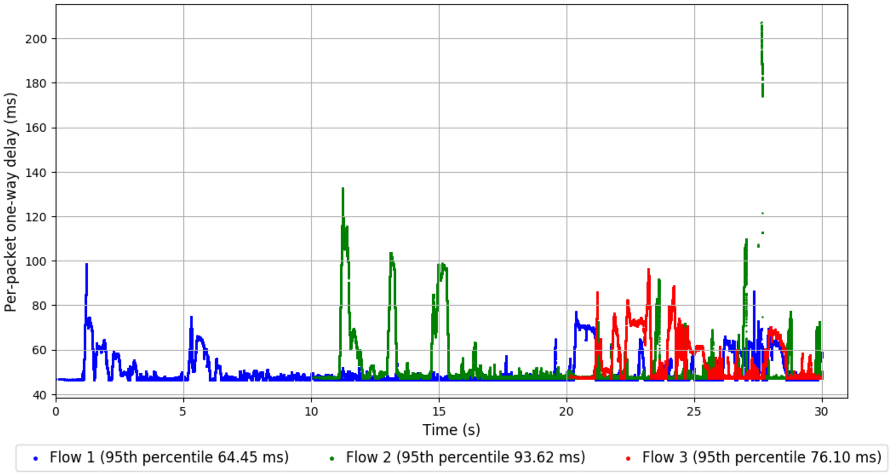




```
Run 1: Statistics of Copa

Start at: 2019-02-06 05:16:39
End at: 2019-02-06 05:17:09
Local clock offset: 0.027 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-02-06 08:34:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 486.21 Mbit/s
95th percentile per-packet one-way delay: 72.285 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 268.56 Mbit/s
95th percentile per-packet one-way delay: 64.452 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 205.10 Mbit/s
95th percentile per-packet one-way delay: 93.625 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 243.83 Mbit/s
95th percentile per-packet one-way delay: 76.104 ms
Loss rate: 0.00%
```

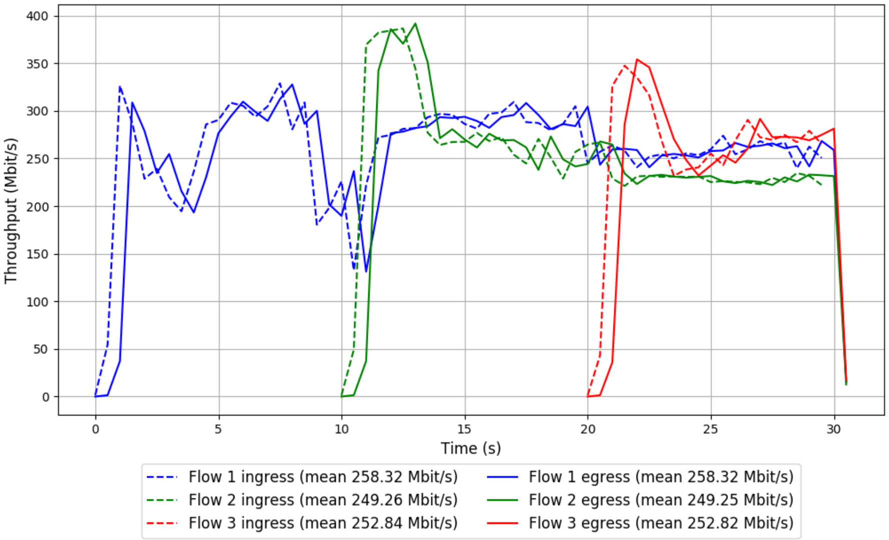
Run 1: Report of Copa — Data Link

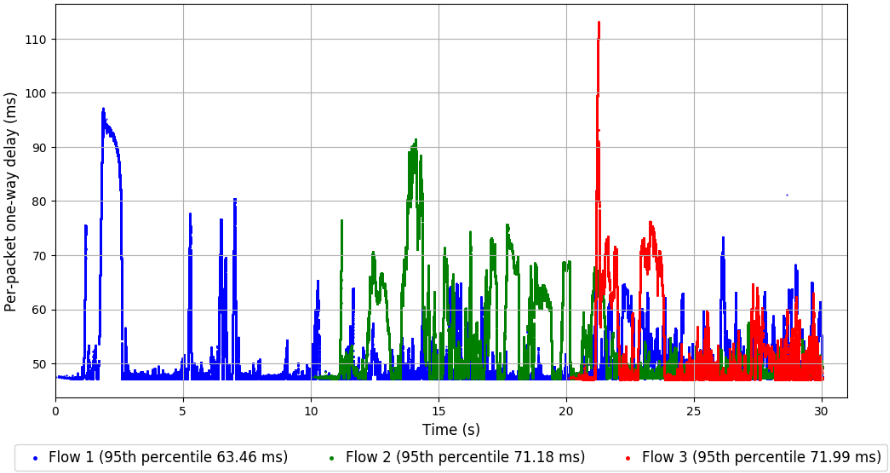




```
Run 2: Statistics of Copa

Start at: 2019-02-06 05:53:26
End at: 2019-02-06 05:53:56
Local clock offset: 0.026 ms
Remote clock offset: -0.102 ms

# Below is generated by plot.py at 2019-02-06 08:35:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 508.31 Mbit/s
95th percentile per-packet one-way delay: 70.127 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 258.32 Mbit/s
95th percentile per-packet one-way delay: 63.463 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 249.25 Mbit/s
95th percentile per-packet one-way delay: 71.176 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 252.82 Mbit/s
95th percentile per-packet one-way delay: 71.988 ms
Loss rate: 0.00%
```

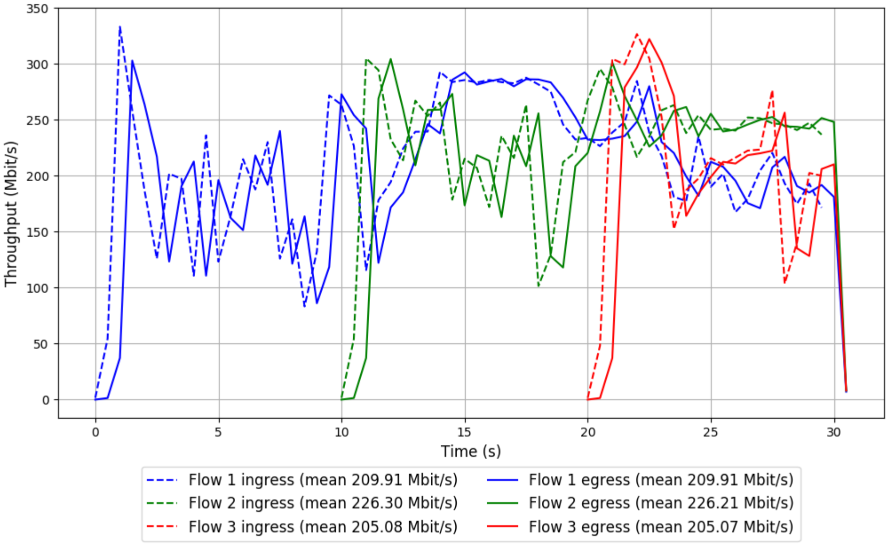
Run 2: Report of Copa — Data Link

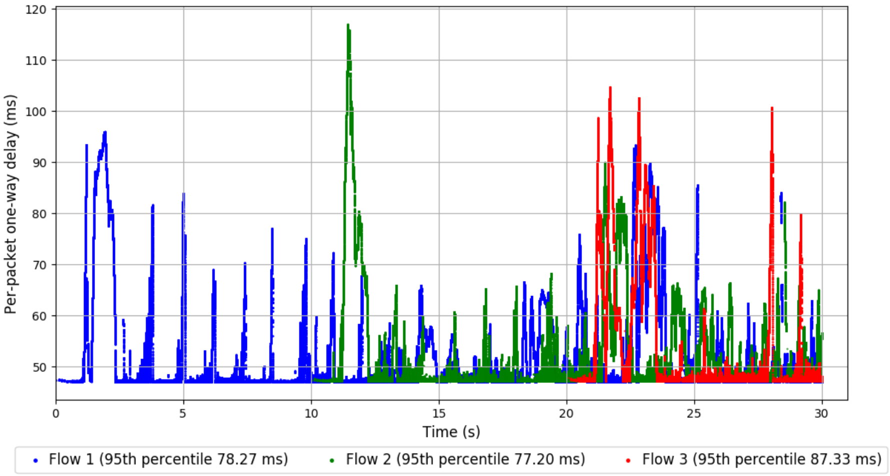




```
Run 3: Statistics of Copa

Start at: 2019-02-06 06:30:17
End at: 2019-02-06 06:30:47
Local clock offset: 0.094 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-02-06 08:35:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 428.79 Mbit/s
95th percentile per-packet one-way delay: 79.944 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 209.91 Mbit/s
95th percentile per-packet one-way delay: 78.272 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 226.21 Mbit/s
95th percentile per-packet one-way delay: 77.203 ms
Loss rate: 0.04%
-- Flow 3:
Average throughput: 205.07 Mbit/s
95th percentile per-packet one-way delay: 87.332 ms
Loss rate: 0.02%
```

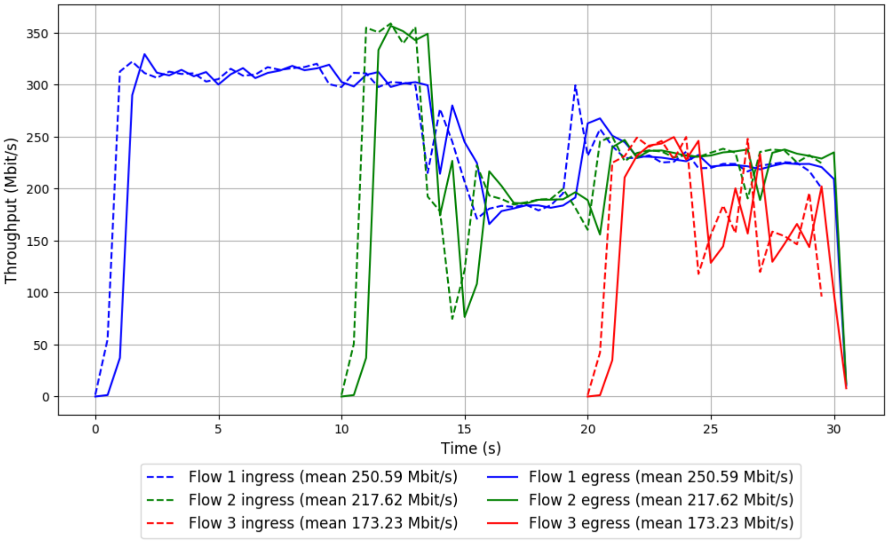
Run 3: Report of Copa — Data Link

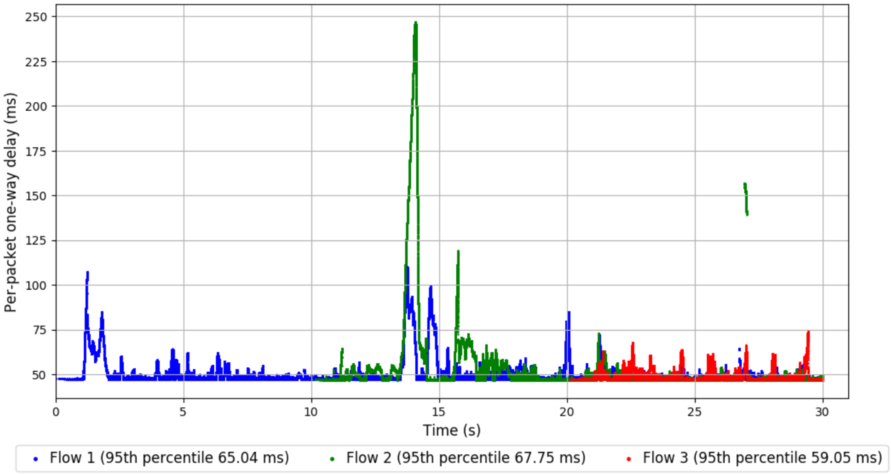




```
Run 4: Statistics of Copa

Start at: 2019-02-06 07:06:50
End at: 2019-02-06 07:07:20
Local clock offset: 0.033 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-02-06 08:50:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 453.05 Mbit/s
95th percentile per-packet one-way delay: 64.761 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 250.59 Mbit/s
95th percentile per-packet one-way delay: 65.036 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 217.62 Mbit/s
95th percentile per-packet one-way delay: 67.752 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 173.23 Mbit/s
95th percentile per-packet one-way delay: 59.051 ms
Loss rate: 0.00%
```

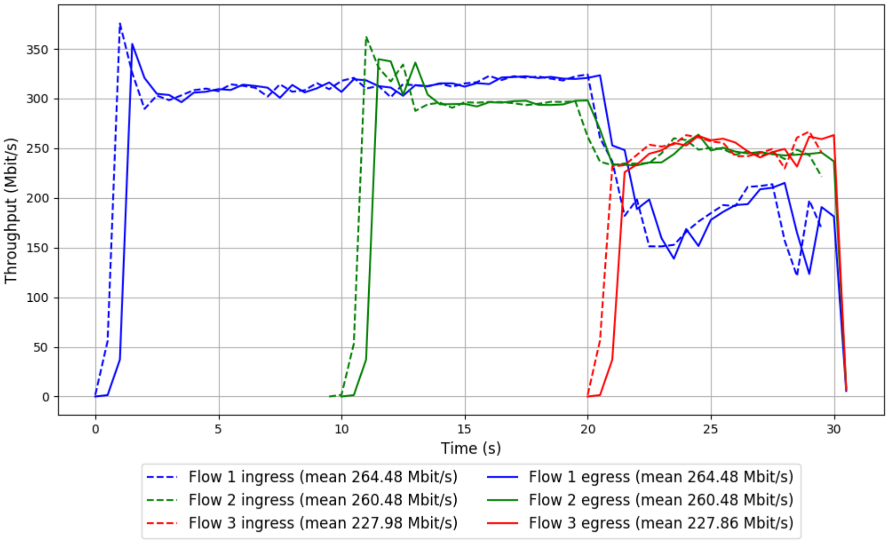
Run 4: Report of Copa — Data Link

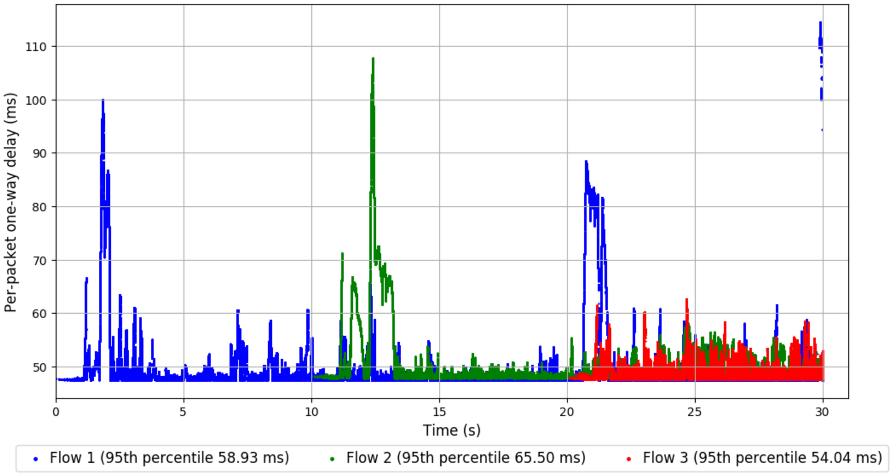




```
Run 5: Statistics of Copa

Start at: 2019-02-06 07:43:36
End at: 2019-02-06 07:44:06
Local clock offset: -0.369 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-02-06 08:56:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 513.80 Mbit/s
95th percentile per-packet one-way delay: 59.889 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 264.48 Mbit/s
95th percentile per-packet one-way delay: 58.930 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 260.48 Mbit/s
95th percentile per-packet one-way delay: 65.498 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 227.86 Mbit/s
95th percentile per-packet one-way delay: 54.040 ms
Loss rate: 0.06%
```

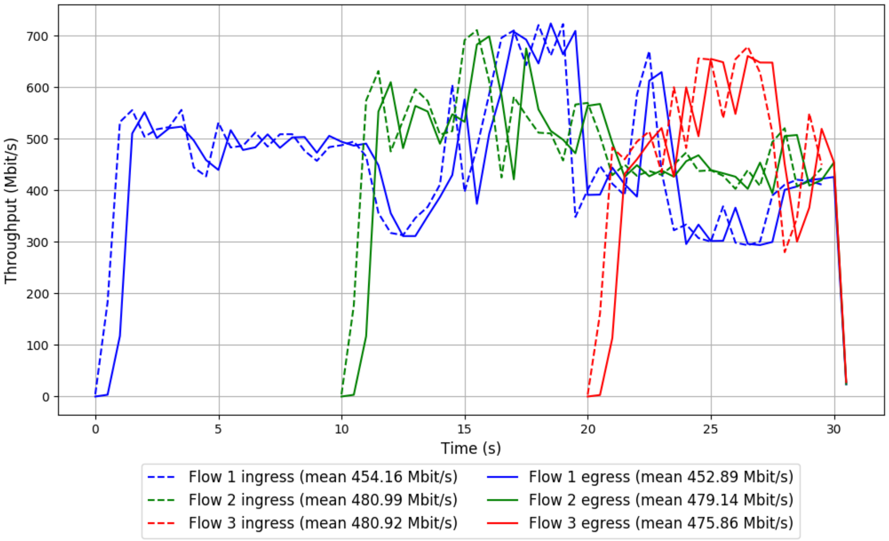
Run 5: Report of Copa — Data Link

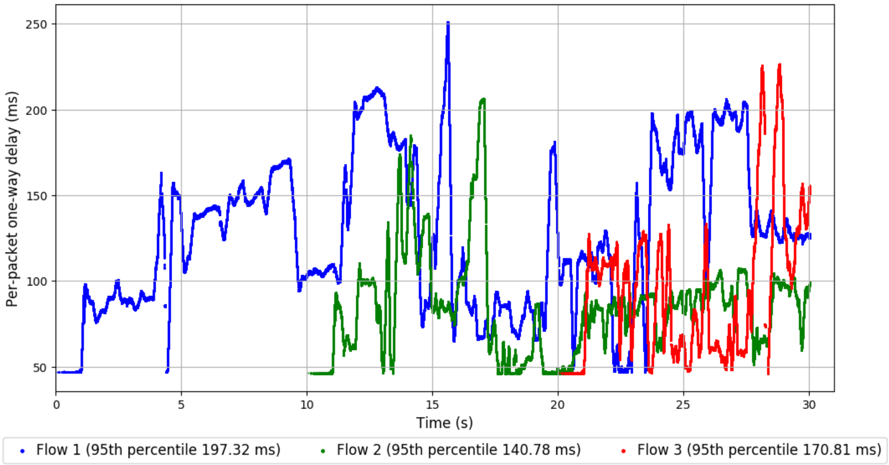




```
Run 1: Statistics of TCP Cubic

Start at: 2019-02-06 05:24:21
End at: 2019-02-06 05:24:51
Local clock offset: 0.446 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-02-06 08:56:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 930.16 Mbit/s
95th percentile per-packet one-way delay: 188.535 ms
Loss rate: 0.44%
-- Flow 1:
Average throughput: 452.89 Mbit/s
95th percentile per-packet one-way delay: 197.317 ms
Loss rate: 0.28%
-- Flow 2:
Average throughput: 479.14 Mbit/s
95th percentile per-packet one-way delay: 140.778 ms
Loss rate: 0.38%
-- Flow 3:
Average throughput: 475.86 Mbit/s
95th percentile per-packet one-way delay: 170.805 ms
Loss rate: 1.04%
```

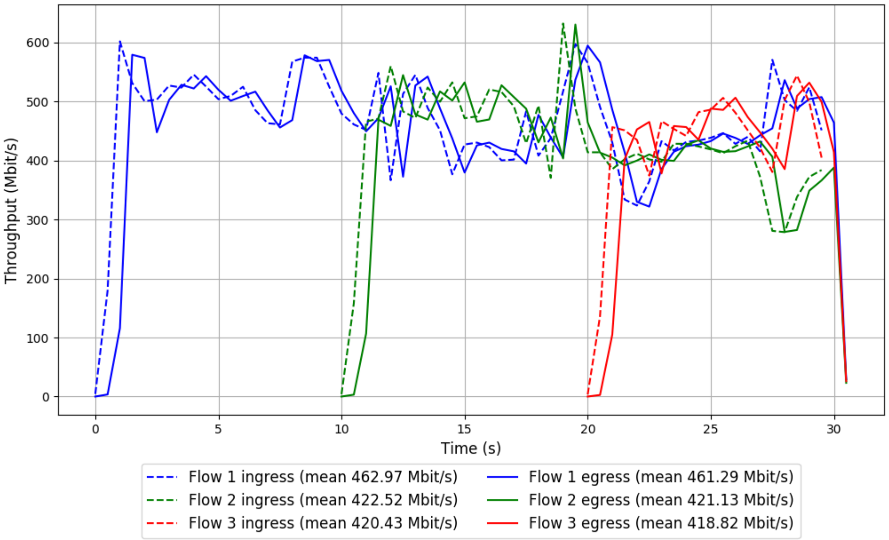
Run 1: Report of TCP Cubic — Data Link

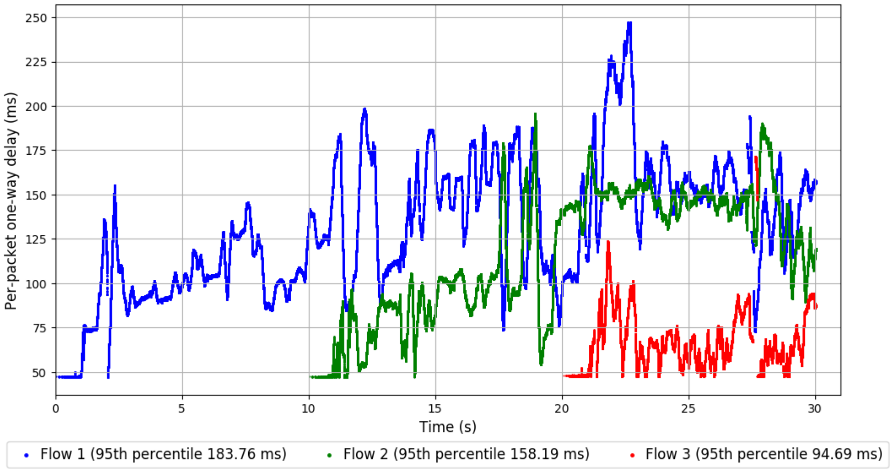




```
Run 2: Statistics of TCP Cubic

Start at: 2019-02-06 06:01:08
End at: 2019-02-06 06:01:38
Local clock offset: 0.147 ms
Remote clock offset: -0.052 ms

# Below is generated by plot.py at 2019-02-06 08:56:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 880.96 Mbit/s
95th percentile per-packet one-way delay: 176.505 ms
Loss rate: 0.36%
-- Flow 1:
Average throughput: 461.29 Mbit/s
95th percentile per-packet one-way delay: 183.756 ms
Loss rate: 0.36%
-- Flow 2:
Average throughput: 421.13 Mbit/s
95th percentile per-packet one-way delay: 158.191 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 418.82 Mbit/s
95th percentile per-packet one-way delay: 94.694 ms
Loss rate: 0.39%
```

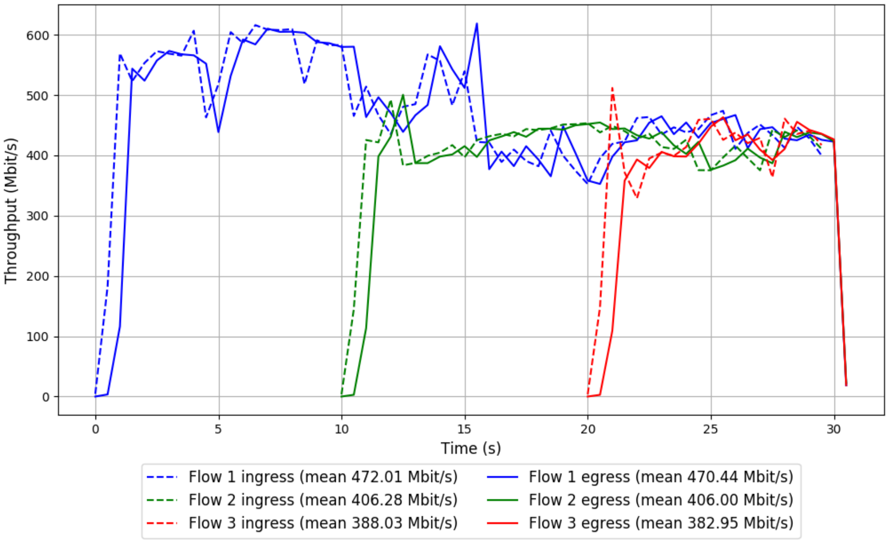
Run 2: Report of TCP Cubic — Data Link

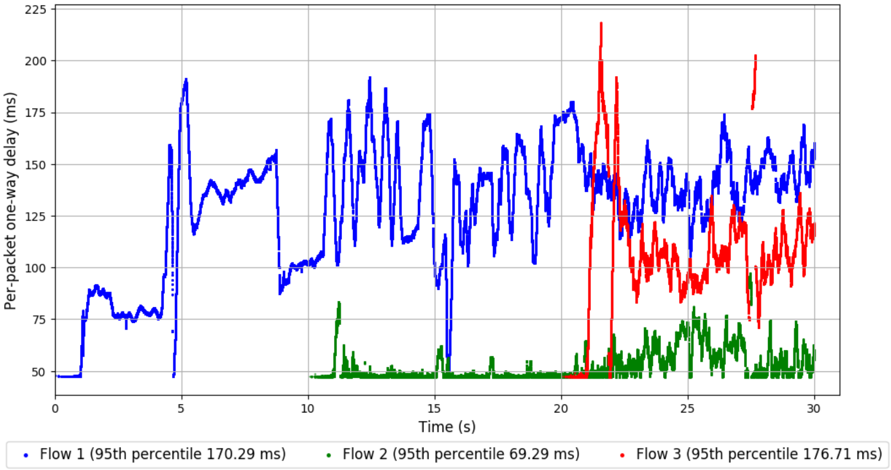




```
Run 3: Statistics of TCP Cubic

Start at: 2019-02-06 06:37:56
End at: 2019-02-06 06:38:26
Local clock offset: 0.041 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-02-06 08:56:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 867.99 Mbit/s
95th percentile per-packet one-way delay: 165.200 ms
Loss rate: 0.39%
-- Flow 1:
Average throughput: 470.44 Mbit/s
95th percentile per-packet one-way delay: 170.295 ms
Loss rate: 0.33%
-- Flow 2:
Average throughput: 406.00 Mbit/s
95th percentile per-packet one-way delay: 69.292 ms
Loss rate: 0.06%
-- Flow 3:
Average throughput: 382.95 Mbit/s
95th percentile per-packet one-way delay: 176.711 ms
Loss rate: 1.30%
```

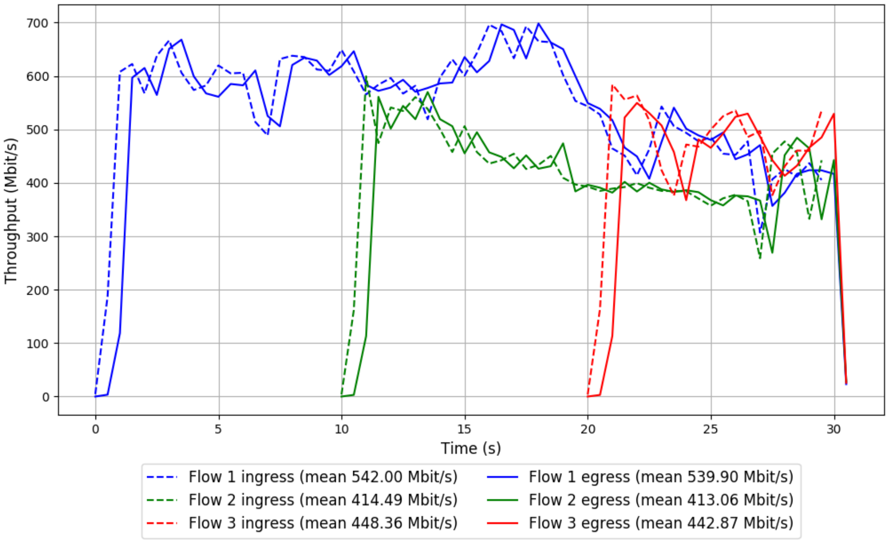
Run 3: Report of TCP Cubic — Data Link

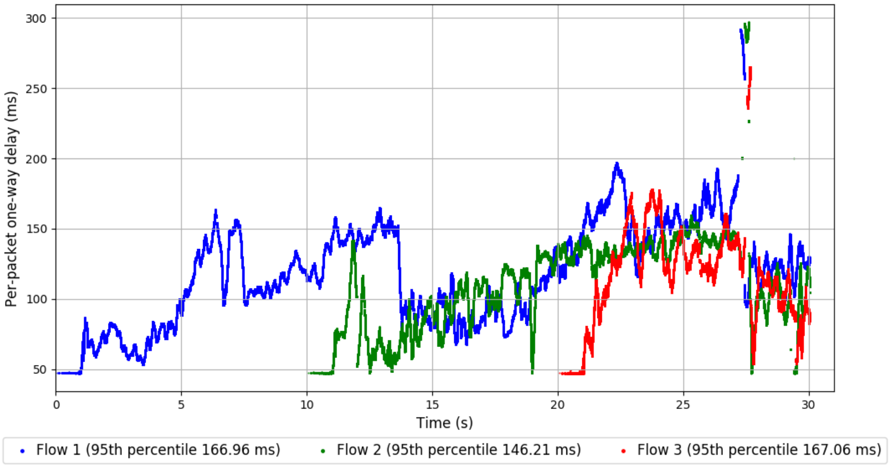




```
Run 4: Statistics of TCP Cubic

Start at: 2019-02-06 07:14:30
End at: 2019-02-06 07:15:00
Local clock offset: 0.177 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-02-06 08:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 962.21 Mbit/s
95th percentile per-packet one-way delay: 163.680 ms
Loss rate: 0.50%
-- Flow 1:
Average throughput: 539.90 Mbit/s
95th percentile per-packet one-way delay: 166.958 ms
Loss rate: 0.39%
-- Flow 2:
Average throughput: 413.06 Mbit/s
95th percentile per-packet one-way delay: 146.210 ms
Loss rate: 0.34%
-- Flow 3:
Average throughput: 442.87 Mbit/s
95th percentile per-packet one-way delay: 167.062 ms
Loss rate: 1.23%
```

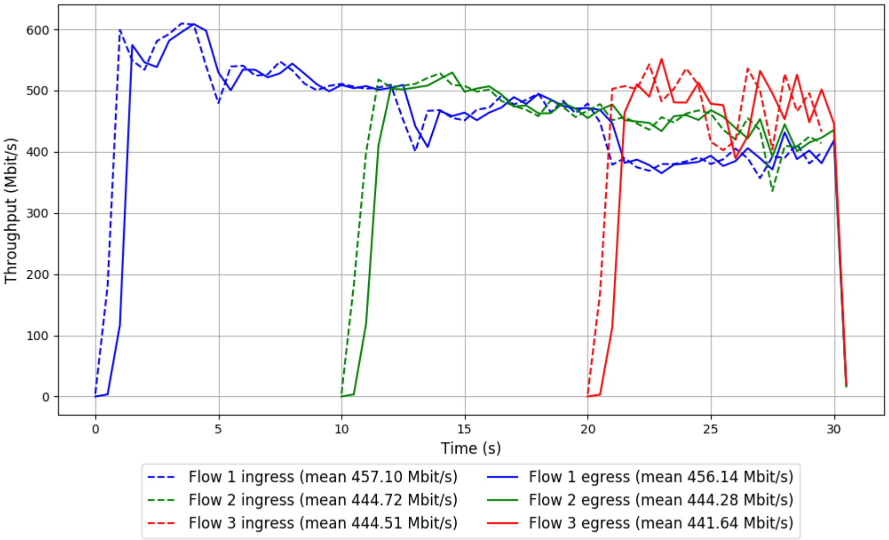
Run 4: Report of TCP Cubic — Data Link

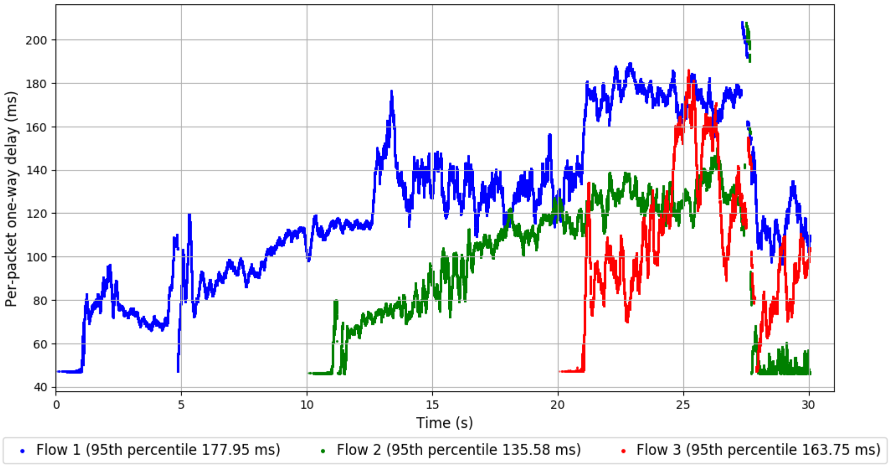




```
Run 5: Statistics of TCP Cubic

Start at: 2019-02-06 07:51:02
End at: 2019-02-06 07:51:32
Local clock offset: 0.347 ms
Remote clock offset: -0.062 ms

# Below is generated by plot.py at 2019-02-06 08:57:00
# Datalink statistics
-- Total of 3 flows:
Average throughput: 898.89 Mbit/s
95th percentile per-packet one-way delay: 175.049 ms
Loss rate: 0.24%
-- Flow 1:
Average throughput: 456.14 Mbit/s
95th percentile per-packet one-way delay: 177.952 ms
Loss rate: 0.21%
-- Flow 2:
Average throughput: 444.28 Mbit/s
95th percentile per-packet one-way delay: 135.582 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 441.64 Mbit/s
95th percentile per-packet one-way delay: 163.746 ms
Loss rate: 0.64%
```

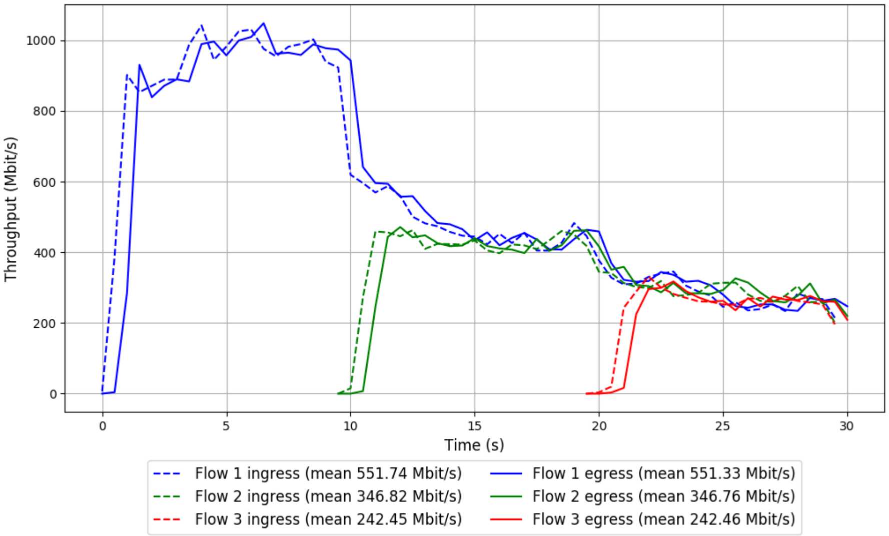
Run 5: Report of TCP Cubic — Data Link

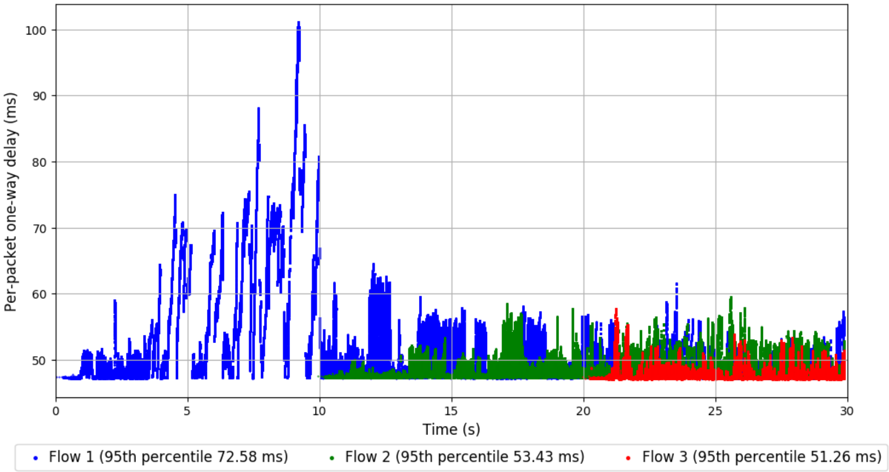




```
Run 1: Statistics of FillP

Start at: 2019-02-06 05:12:26
End at: 2019-02-06 05:12:56
Local clock offset: -0.009 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-02-06 08:59:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 863.58 Mbit/s
95th percentile per-packet one-way delay: 69.955 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 551.33 Mbit/s
95th percentile per-packet one-way delay: 72.576 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 346.76 Mbit/s
95th percentile per-packet one-way delay: 53.431 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.46 Mbit/s
95th percentile per-packet one-way delay: 51.255 ms
Loss rate: 0.00%
```

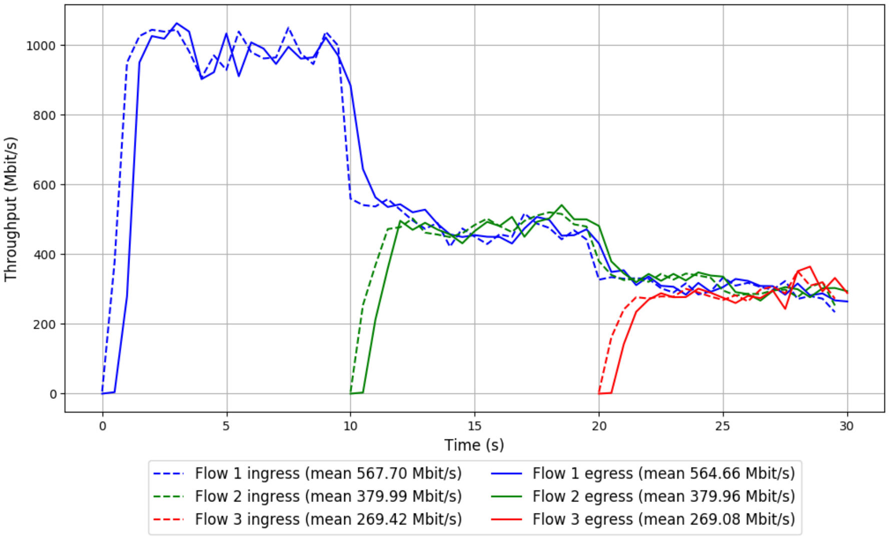
Run 1: Report of FillP — Data Link

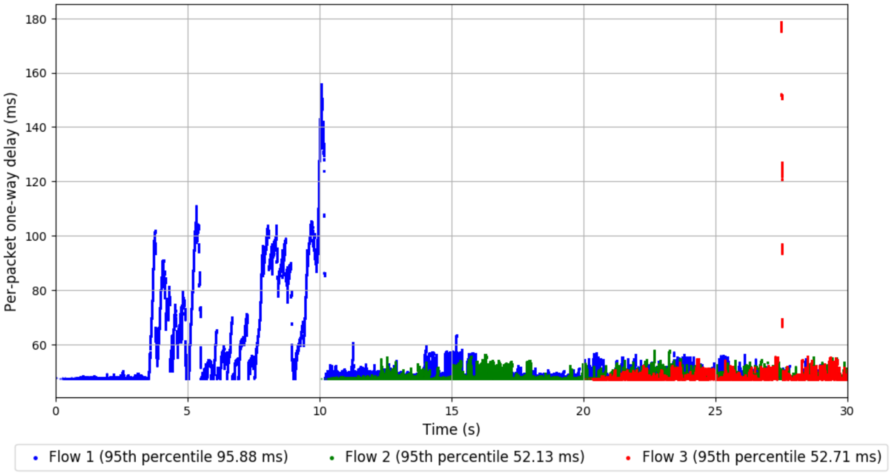




```
Run 2: Statistics of FillP

Start at: 2019-02-06 05:49:06
End at: 2019-02-06 05:49:36
Local clock offset: 0.025 ms
Remote clock offset: -0.095 ms

# Below is generated by plot.py at 2019-02-06 09:17:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 906.01 Mbit/s
95th percentile per-packet one-way delay: 90.948 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 564.66 Mbit/s
95th percentile per-packet one-way delay: 95.880 ms
Loss rate: 0.53%
-- Flow 2:
Average throughput: 379.96 Mbit/s
95th percentile per-packet one-way delay: 52.132 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 269.08 Mbit/s
95th percentile per-packet one-way delay: 52.706 ms
Loss rate: 0.13%
```

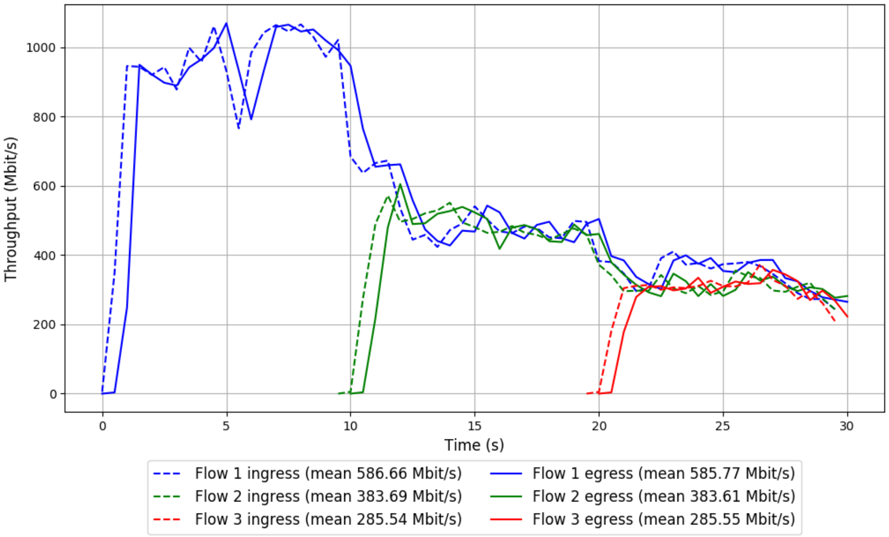
Run 2: Report of FillP — Data Link

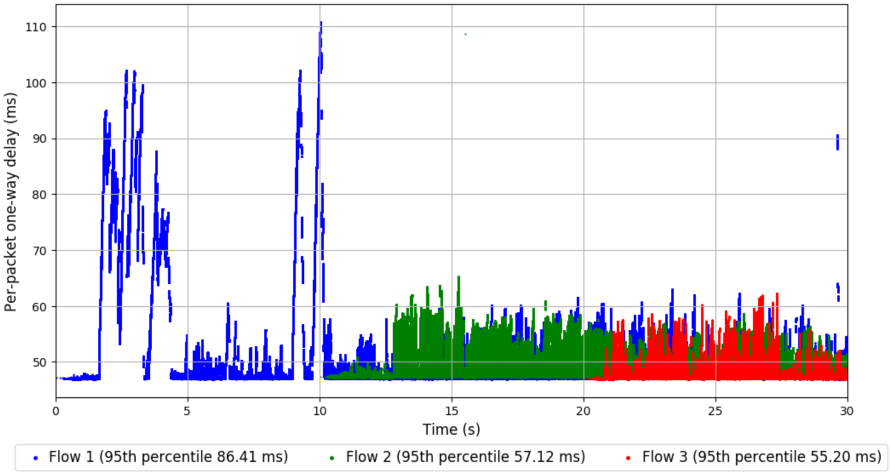




```
Run 3: Statistics of FillP

Start at: 2019-02-06 06:25:54
End at: 2019-02-06 06:26:24
Local clock offset: 0.414 ms
Remote clock offset: 0.001 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 935.98 Mbit/s
95th percentile per-packet one-way delay: 78.095 ms
Loss rate: 0.10%
-- Flow 1:
Average throughput: 585.77 Mbit/s
95th percentile per-packet one-way delay: 86.408 ms
Loss rate: 0.15%
-- Flow 2:
Average throughput: 383.61 Mbit/s
95th percentile per-packet one-way delay: 57.125 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 285.55 Mbit/s
95th percentile per-packet one-way delay: 55.198 ms
Loss rate: 0.00%
```

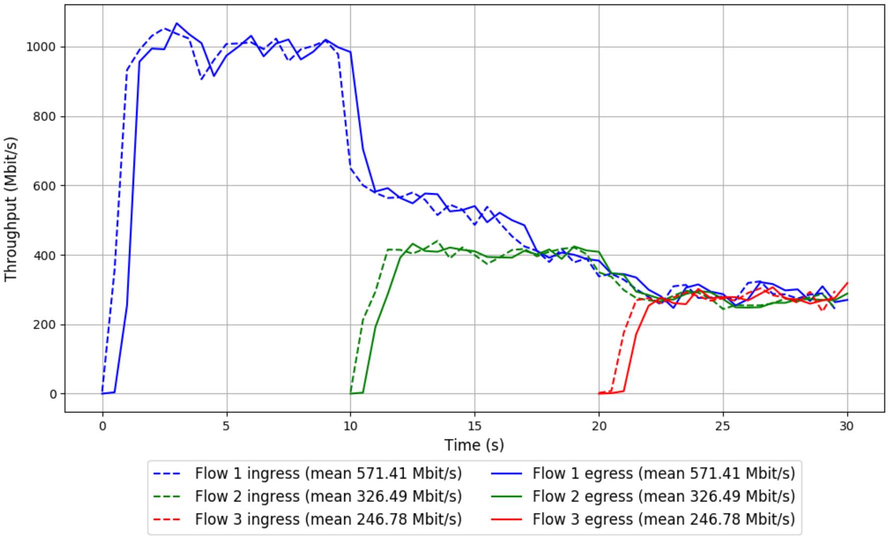
Run 3: Report of FillP — Data Link

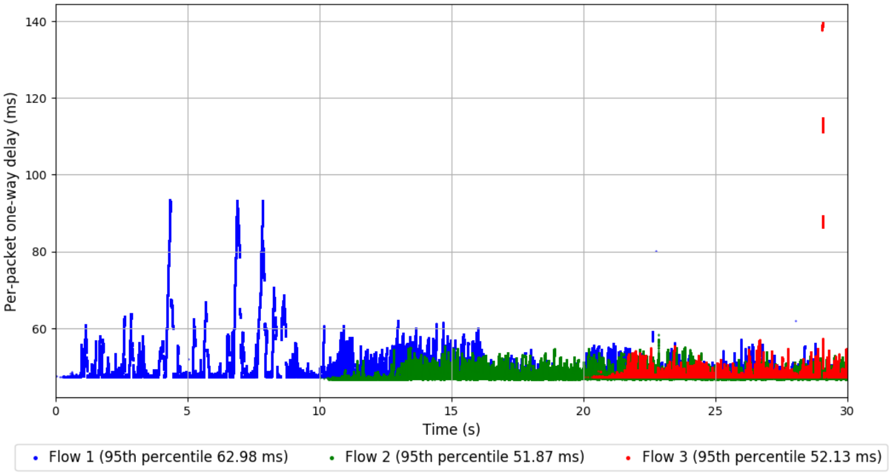




```
Run 4: Statistics of FillP

Start at: 2019-02-06 07:02:39
End at: 2019-02-06 07:03:09
Local clock offset: 0.042 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 870.33 Mbit/s
95th percentile per-packet one-way delay: 58.817 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 571.41 Mbit/s
95th percentile per-packet one-way delay: 62.975 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 326.49 Mbit/s
95th percentile per-packet one-way delay: 51.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.78 Mbit/s
95th percentile per-packet one-way delay: 52.135 ms
Loss rate: 0.00%
```

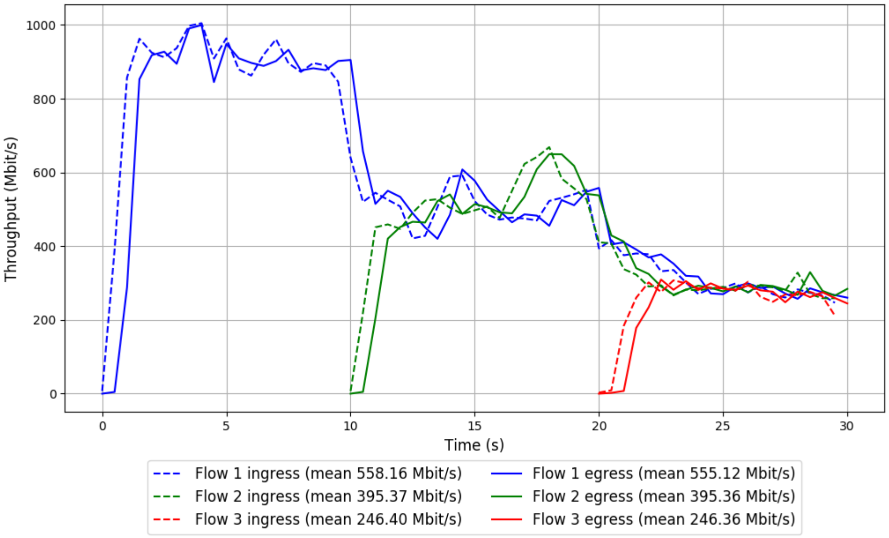
Run 4: Report of FillP — Data Link

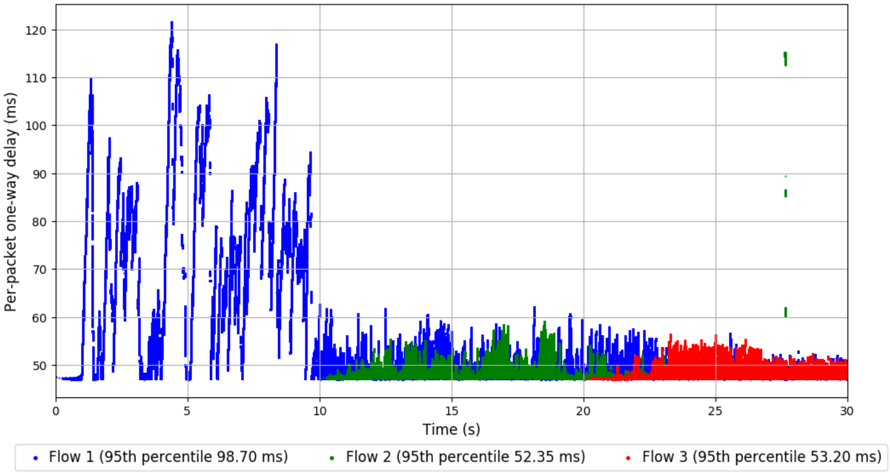




```
Run 5: Statistics of FillP

Start at: 2019-02-06 07:39:22
End at: 2019-02-06 07:39:52
Local clock offset: -0.019 ms
Remote clock offset: -0.116 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 899.82 Mbit/s
95th percentile per-packet one-way delay: 91.955 ms
Loss rate: 0.34%
-- Flow 1:
Average throughput: 555.12 Mbit/s
95th percentile per-packet one-way delay: 98.703 ms
Loss rate: 0.54%
-- Flow 2:
Average throughput: 395.36 Mbit/s
95th percentile per-packet one-way delay: 52.351 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 246.36 Mbit/s
95th percentile per-packet one-way delay: 53.196 ms
Loss rate: 0.00%
```

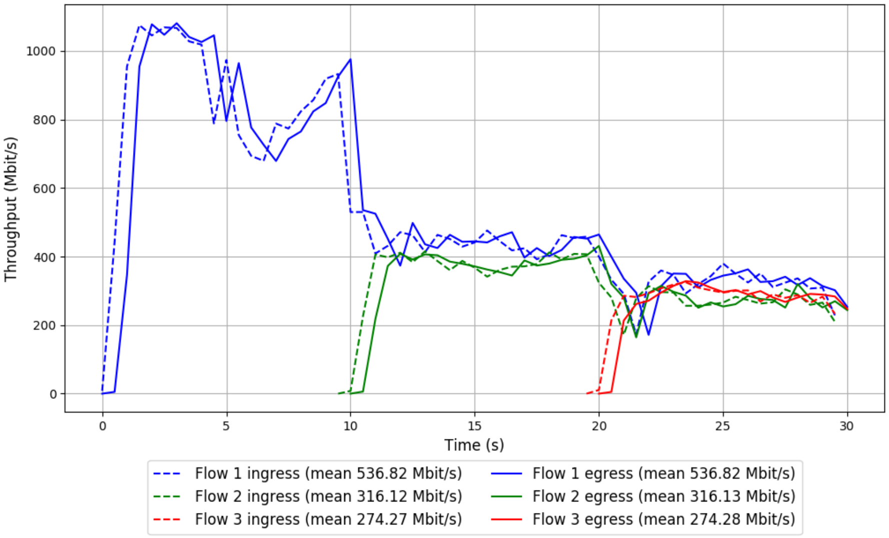
Run 5: Report of FillP — Data Link

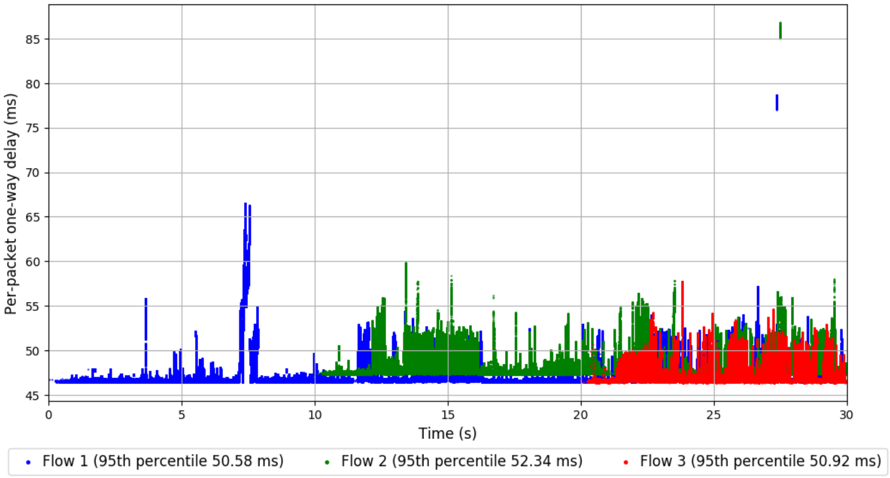




```
Run 1: Statistics of FillP-Sheep

Start at: 2019-02-06 05:10:37
End at: 2019-02-06 05:11:07
Local clock offset: 0.015 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 838.36 Mbit/s
95th percentile per-packet one-way delay: 51.481 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 536.82 Mbit/s
95th percentile per-packet one-way delay: 50.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 316.13 Mbit/s
95th percentile per-packet one-way delay: 52.341 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 274.28 Mbit/s
95th percentile per-packet one-way delay: 50.918 ms
Loss rate: 0.00%
```

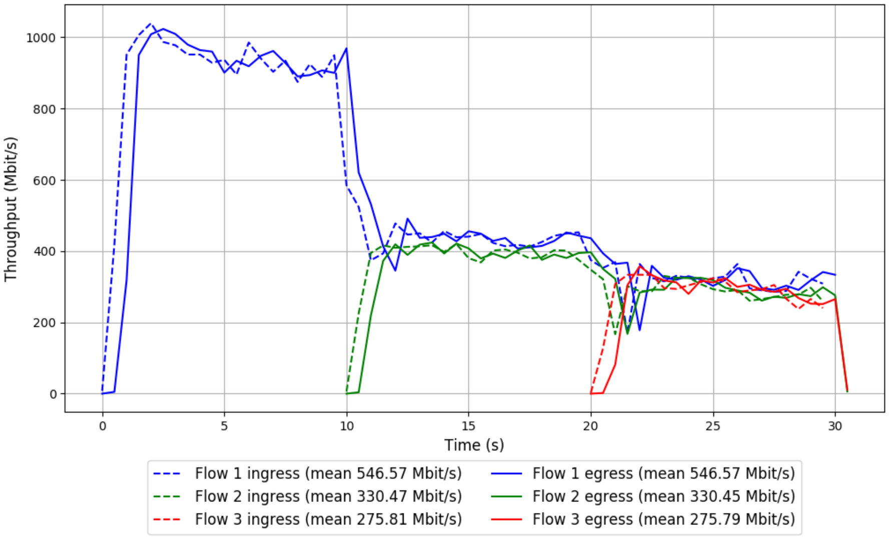
Run 1: Report of FillP-Sheep — Data Link

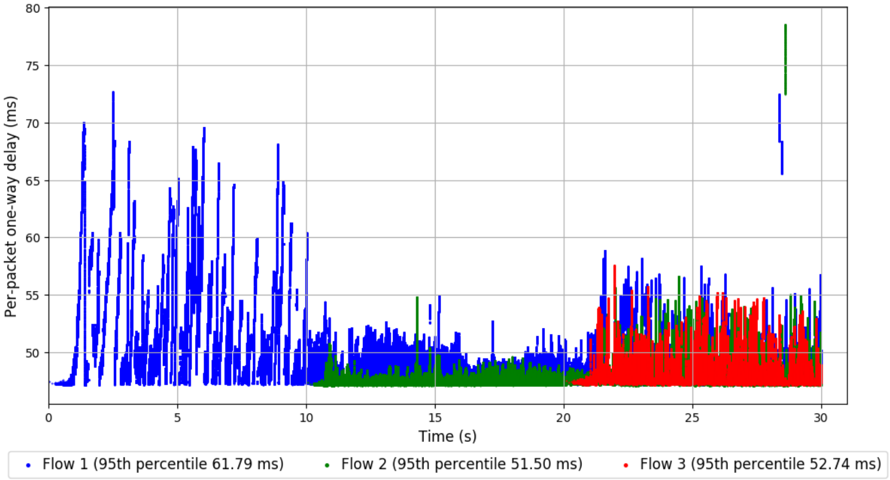




```
Run 2: Statistics of FillP-Sheep

Start at: 2019-02-06 05:47:11
End at: 2019-02-06 05:47:41
Local clock offset: 0.102 ms
Remote clock offset: -0.12 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 857.67 Mbit/s
95th percentile per-packet one-way delay: 59.366 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 546.57 Mbit/s
95th percentile per-packet one-way delay: 61.791 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 330.45 Mbit/s
95th percentile per-packet one-way delay: 51.499 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 275.79 Mbit/s
95th percentile per-packet one-way delay: 52.738 ms
Loss rate: 0.00%
```

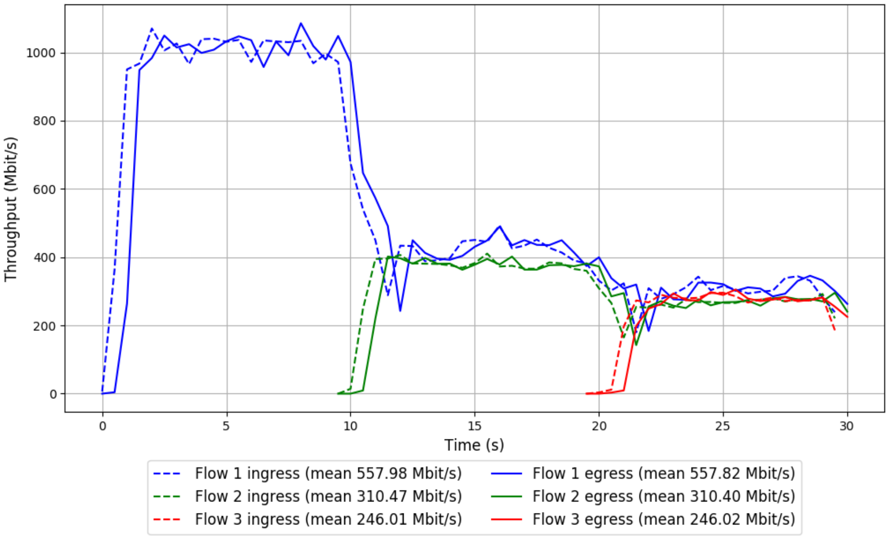
Run 2: Report of FillP-Sheep — Data Link

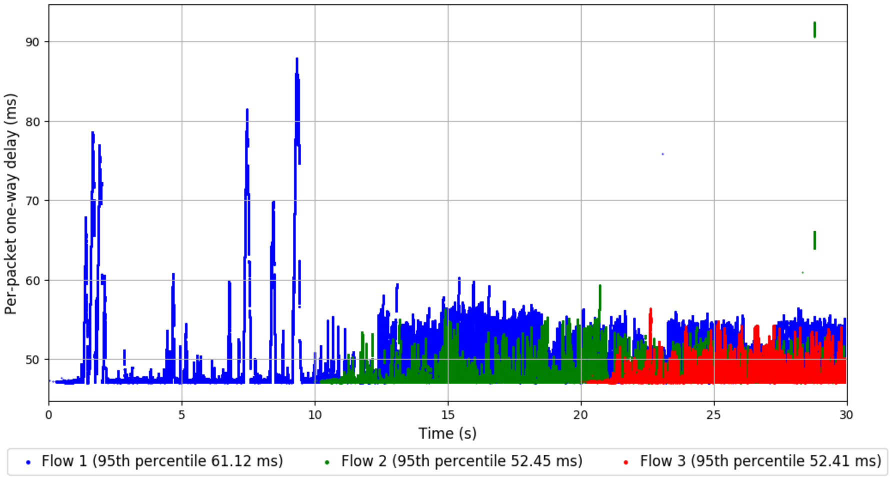




```
Run 3: Statistics of FillP-Sheep

Start at: 2019-02-06 06:24:02
End at: 2019-02-06 06:24:32
Local clock offset: 0.119 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-02-06 09:22:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 846.51 Mbit/s
95th percentile per-packet one-way delay: 56.403 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 557.82 Mbit/s
95th percentile per-packet one-way delay: 61.120 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 310.40 Mbit/s
95th percentile per-packet one-way delay: 52.448 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 246.02 Mbit/s
95th percentile per-packet one-way delay: 52.413 ms
Loss rate: 0.00%
```

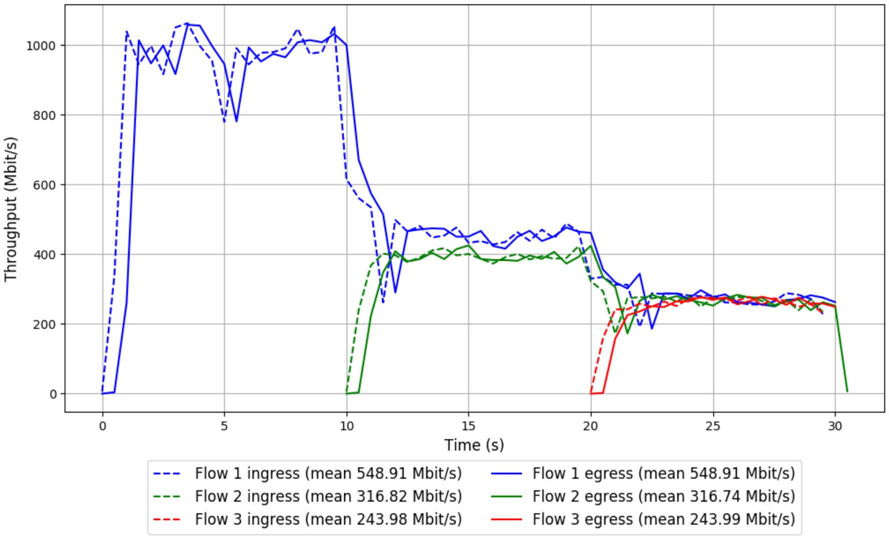
Run 3: Report of FillP-Sheep — Data Link

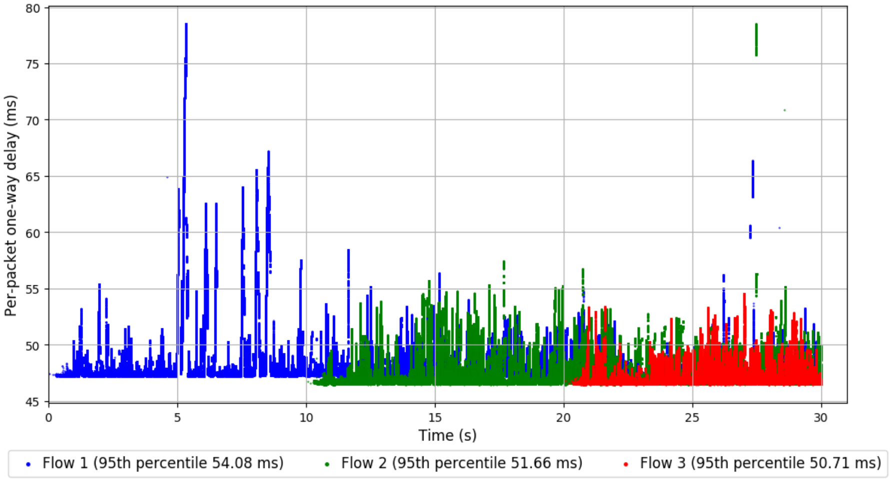




```
Run 4: Statistics of FillP-Sheep

Start at: 2019-02-06 07:00:50
End at: 2019-02-06 07:01:20
Local clock offset: -0.006 ms
Remote clock offset: 0.009 ms

# Below is generated by plot.py at 2019-02-06 09:24:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 840.09 Mbit/s
95th percentile per-packet one-way delay: 52.392 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 548.91 Mbit/s
95th percentile per-packet one-way delay: 54.082 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 316.74 Mbit/s
95th percentile per-packet one-way delay: 51.660 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 243.99 Mbit/s
95th percentile per-packet one-way delay: 50.712 ms
Loss rate: 0.00%
```

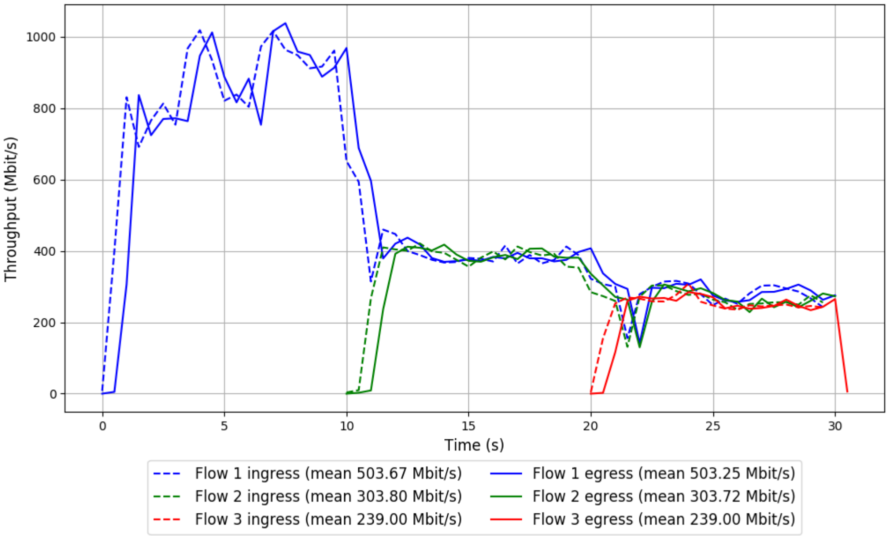
Run 4: Report of FillP-Sheep — Data Link

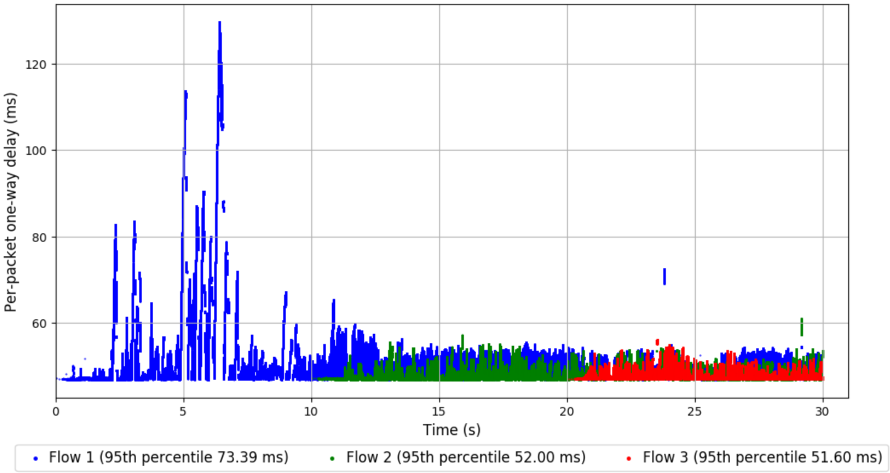




```
Run 5: Statistics of FillP-Sheep

Start at: 2019-02-06 07:37:33
End at: 2019-02-06 07:38:03
Local clock offset: 0.318 ms
Remote clock offset: -0.059 ms

# Below is generated by plot.py at 2019-02-06 09:41:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 784.34 Mbit/s
95th percentile per-packet one-way delay: 65.251 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 503.25 Mbit/s
95th percentile per-packet one-way delay: 73.391 ms
Loss rate: 0.07%
-- Flow 2:
Average throughput: 303.72 Mbit/s
95th percentile per-packet one-way delay: 52.000 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 239.00 Mbit/s
95th percentile per-packet one-way delay: 51.602 ms
Loss rate: 0.00%
```

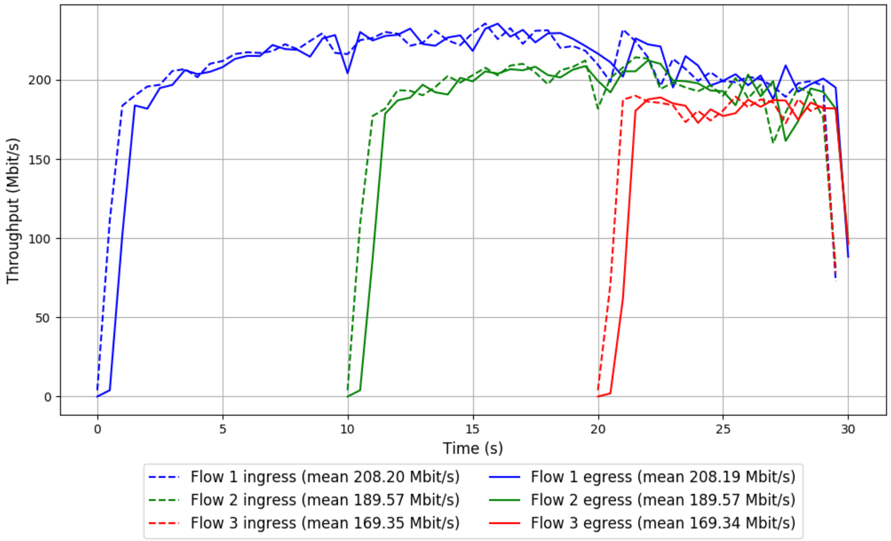
Run 5: Report of FillP-Sheep — Data Link

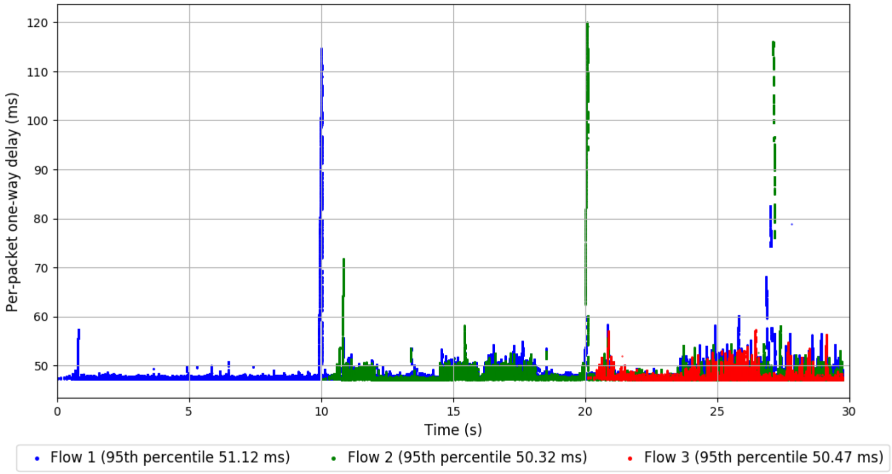




```
Run 1: Statistics of Indigo

Start at: 2019-02-06 04:56:14
End at: 2019-02-06 04:56:44
Local clock offset: 0.148 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-02-06 09:41:24
# Datalink statistics
-- Total of 3 flows:
Average throughput: 388.74 Mbit/s
95th percentile per-packet one-way delay: 50.764 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 208.19 Mbit/s
95th percentile per-packet one-way delay: 51.118 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 189.57 Mbit/s
95th percentile per-packet one-way delay: 50.320 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 169.34 Mbit/s
95th percentile per-packet one-way delay: 50.467 ms
Loss rate: 0.00%
```

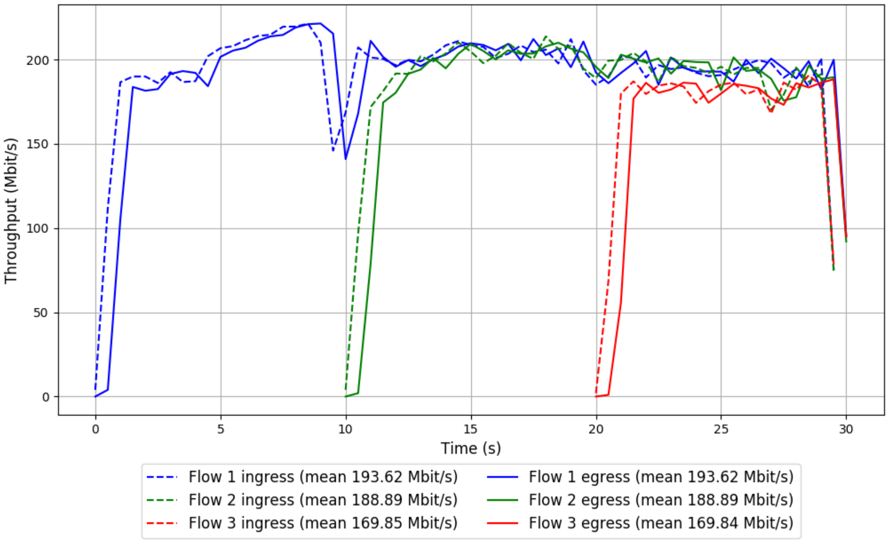
Run 1: Report of Indigo — Data Link

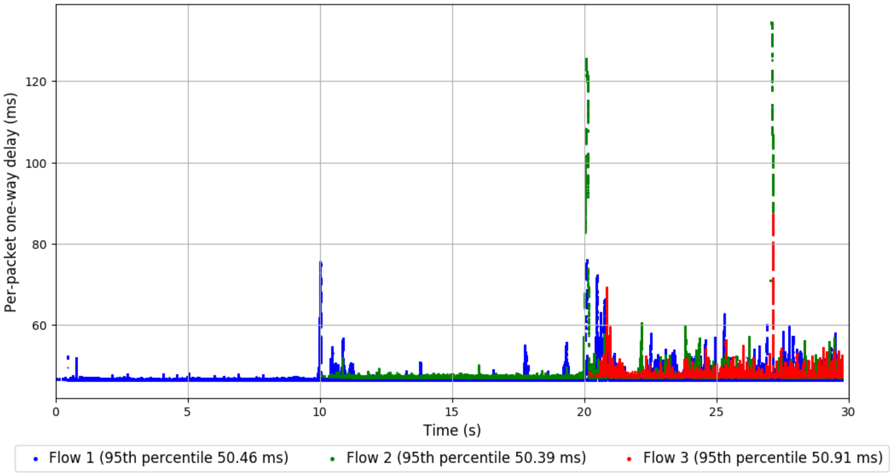




```
Run 2: Statistics of Indigo

Start at: 2019-02-06 05:32:16
End at: 2019-02-06 05:32:46
Local clock offset: 0.041 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-02-06 09:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 373.33 Mbit/s
95th percentile per-packet one-way delay: 50.555 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 193.62 Mbit/s
95th percentile per-packet one-way delay: 50.457 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 188.89 Mbit/s
95th percentile per-packet one-way delay: 50.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 169.84 Mbit/s
95th percentile per-packet one-way delay: 50.906 ms
Loss rate: 0.01%
```

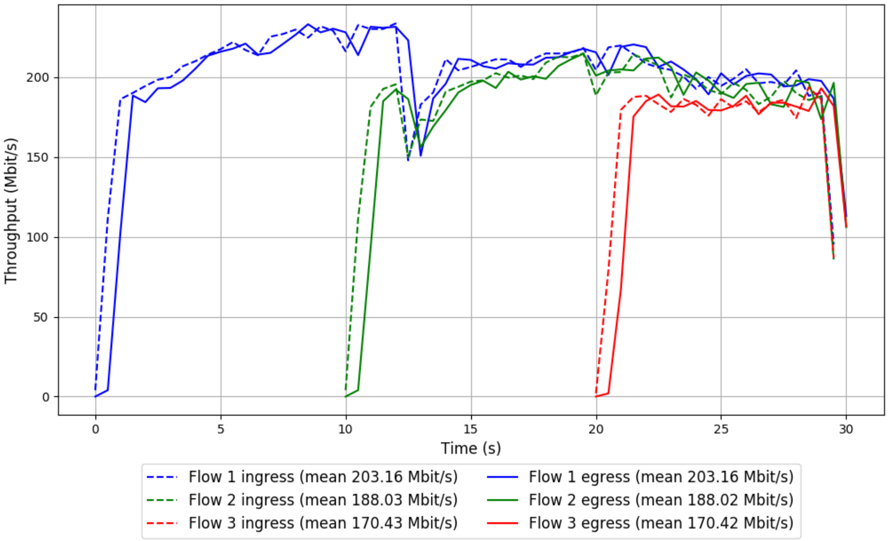
Run 2: Report of Indigo — Data Link

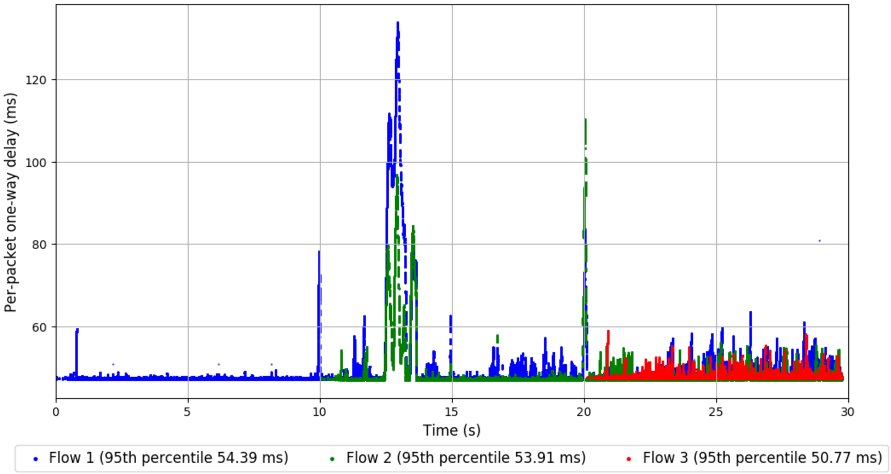




```
Run 3: Statistics of Indigo

Start at: 2019-02-06 06:08:49
End at: 2019-02-06 06:09:19
Local clock offset: 0.032 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-02-06 09:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.97 Mbit/s
95th percentile per-packet one-way delay: 53.419 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.16 Mbit/s
95th percentile per-packet one-way delay: 54.390 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 188.02 Mbit/s
95th percentile per-packet one-way delay: 53.908 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 170.42 Mbit/s
95th percentile per-packet one-way delay: 50.775 ms
Loss rate: 0.01%
```

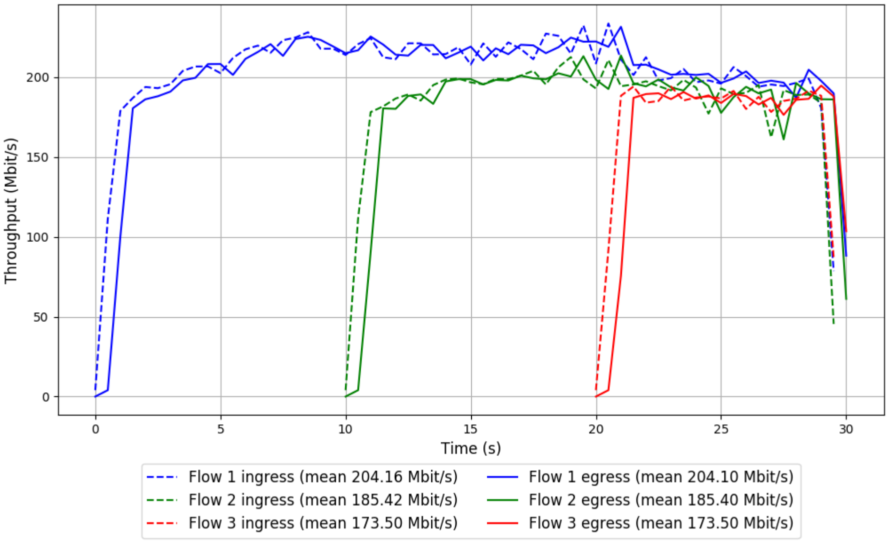
Run 3: Report of Indigo — Data Link

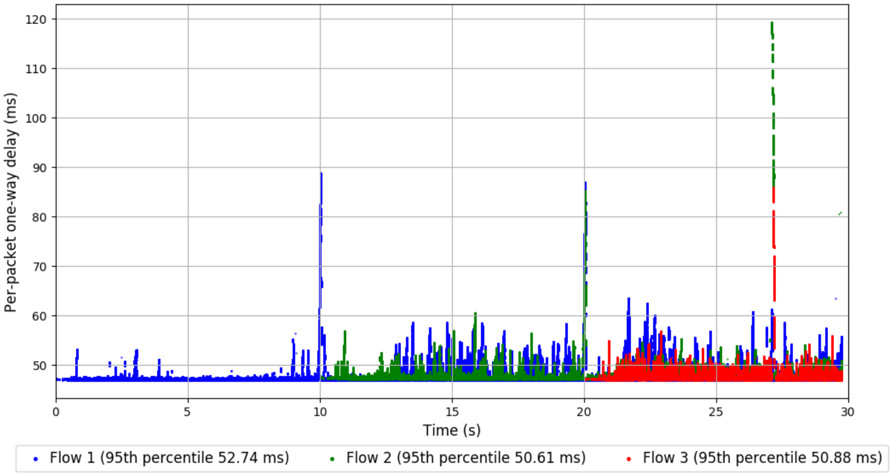




```
Run 4: Statistics of Indigo

Start at: 2019-02-06 06:45:37
End at: 2019-02-06 06:46:07
Local clock offset: 0.41 ms
Remote clock offset: -0.012 ms

# Below is generated by plot.py at 2019-02-06 09:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 383.60 Mbit/s
95th percentile per-packet one-way delay: 51.857 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 204.10 Mbit/s
95th percentile per-packet one-way delay: 52.739 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 185.40 Mbit/s
95th percentile per-packet one-way delay: 50.610 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 173.50 Mbit/s
95th percentile per-packet one-way delay: 50.883 ms
Loss rate: 0.00%
```

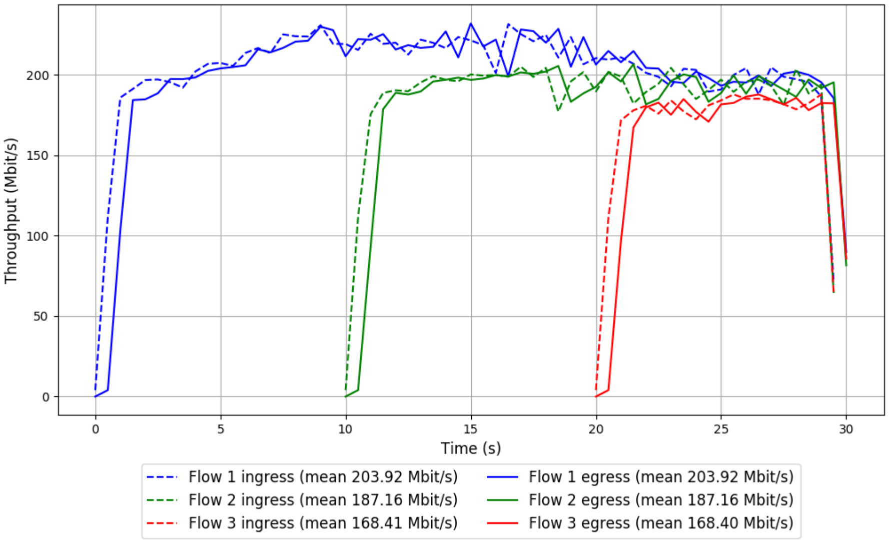
Run 4: Report of Indigo — Data Link

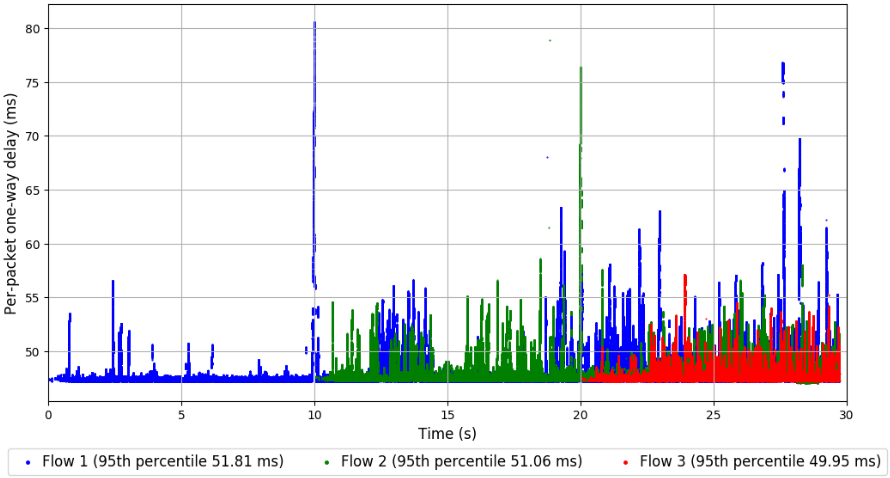




```
Run 5: Statistics of Indigo

Start at: 2019-02-06 07:22:24
End at: 2019-02-06 07:22:54
Local clock offset: -0.005 ms
Remote clock offset: -0.081 ms

# Below is generated by plot.py at 2019-02-06 09:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 382.84 Mbit/s
95th percentile per-packet one-way delay: 51.265 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 203.92 Mbit/s
95th percentile per-packet one-way delay: 51.814 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 187.16 Mbit/s
95th percentile per-packet one-way delay: 51.057 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 168.40 Mbit/s
95th percentile per-packet one-way delay: 49.950 ms
Loss rate: 0.00%
```

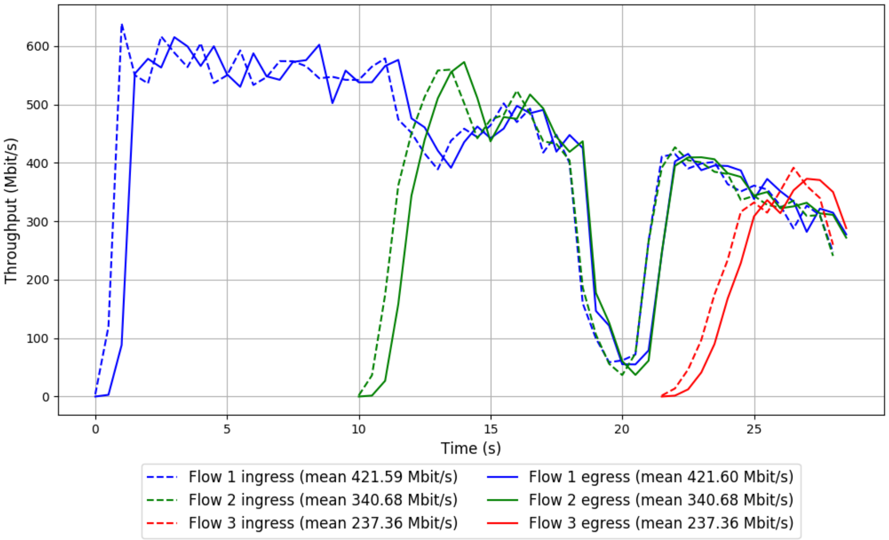
Run 5: Report of Indigo — Data Link

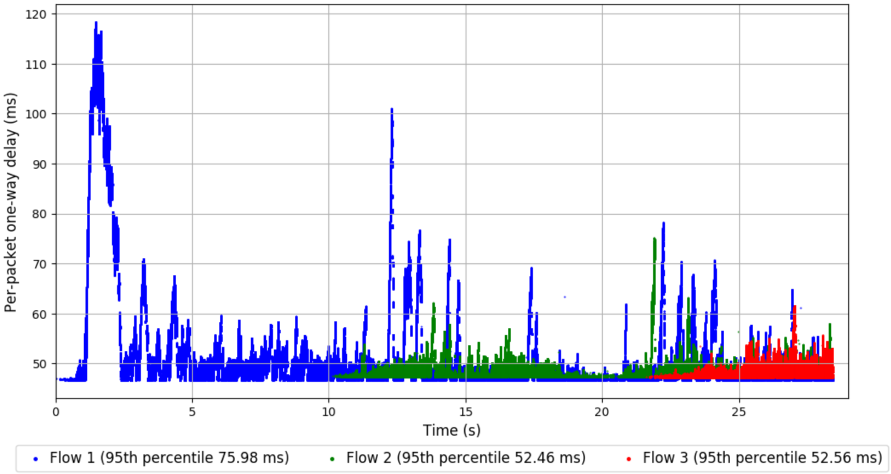




```
Run 1: Statistics of Indigo-MusesC3

Start at: 2019-02-06 05:22:32
End at: 2019-02-06 05:23:02
Local clock offset: 0.023 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-02-06 09:41:25
# Datalink statistics
-- Total of 3 flows:
Average throughput: 698.27 Mbit/s
95th percentile per-packet one-way delay: 65.529 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 421.60 Mbit/s
95th percentile per-packet one-way delay: 75.984 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 340.68 Mbit/s
95th percentile per-packet one-way delay: 52.462 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 237.36 Mbit/s
95th percentile per-packet one-way delay: 52.561 ms
Loss rate: 0.00%
```

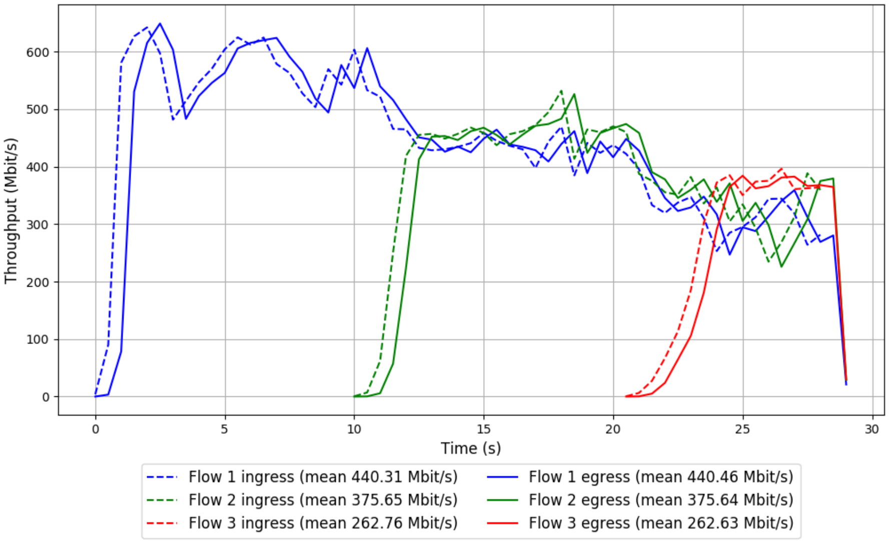
Run 1: Report of Indigo-MusesC3 — Data Link

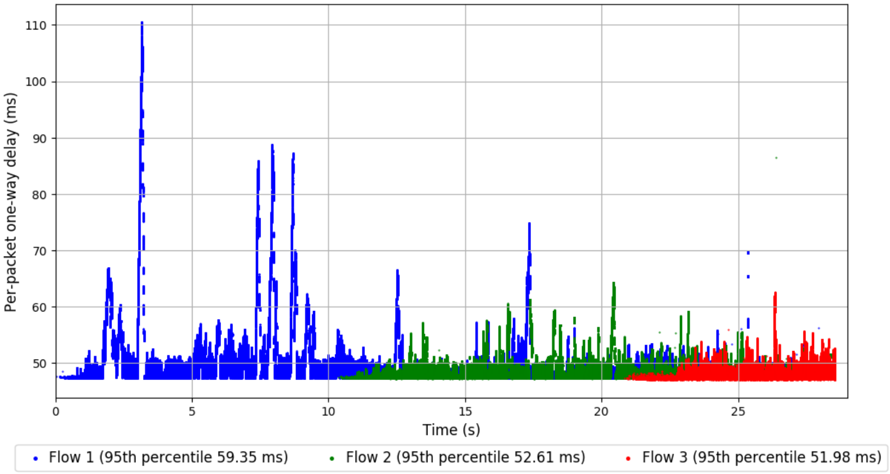




```
Run 2: Statistics of Indigo-MusesC3

Start at: 2019-02-06 05:59:22
End at: 2019-02-06 05:59:52
Local clock offset: 0.05 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-06 09:42:16
# Datalink statistics
-- Total of 3 flows:
Average throughput: 750.84 Mbit/s
95th percentile per-packet one-way delay: 55.634 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 440.46 Mbit/s
95th percentile per-packet one-way delay: 59.347 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 375.64 Mbit/s
95th percentile per-packet one-way delay: 52.611 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 262.63 Mbit/s
95th percentile per-packet one-way delay: 51.979 ms
Loss rate: 0.06%
```

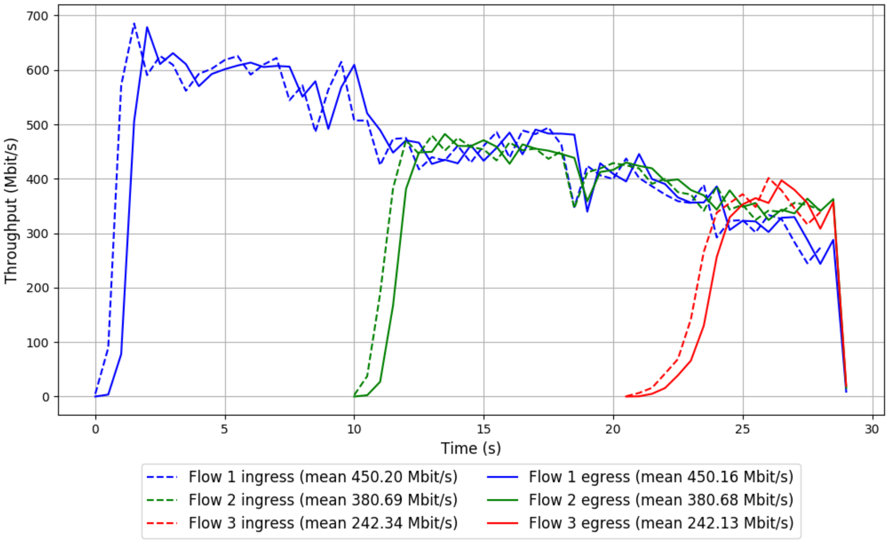
Run 2: Report of Indigo-MusesC3 — Data Link

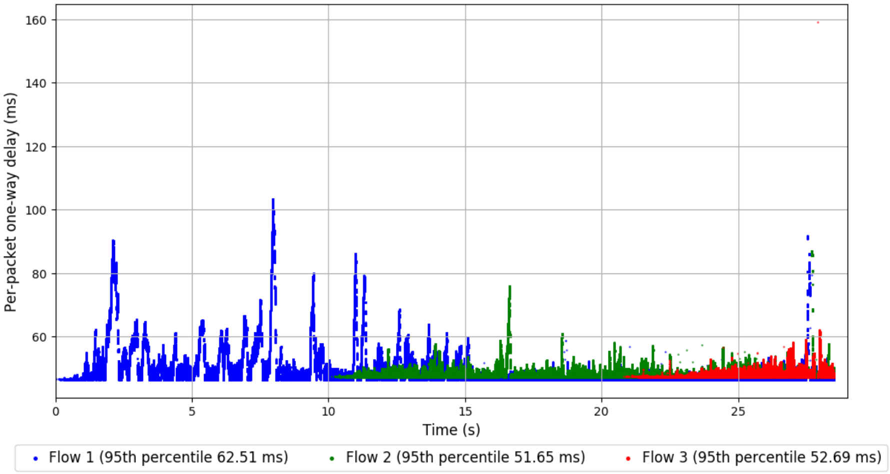




```
Run 3: Statistics of Indigo-MusesC3

Start at: 2019-02-06 06:36:09
End at: 2019-02-06 06:36:39
Local clock offset: 0.035 ms
Remote clock offset: -0.013 ms

# Below is generated by plot.py at 2019-02-06 09:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 761.62 Mbit/s
95th percentile per-packet one-way delay: 59.621 ms
Loss rate: 0.02%
-- Flow 1:
Average throughput: 450.16 Mbit/s
95th percentile per-packet one-way delay: 62.508 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 380.68 Mbit/s
95th percentile per-packet one-way delay: 51.647 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 242.13 Mbit/s
95th percentile per-packet one-way delay: 52.693 ms
Loss rate: 0.10%
```

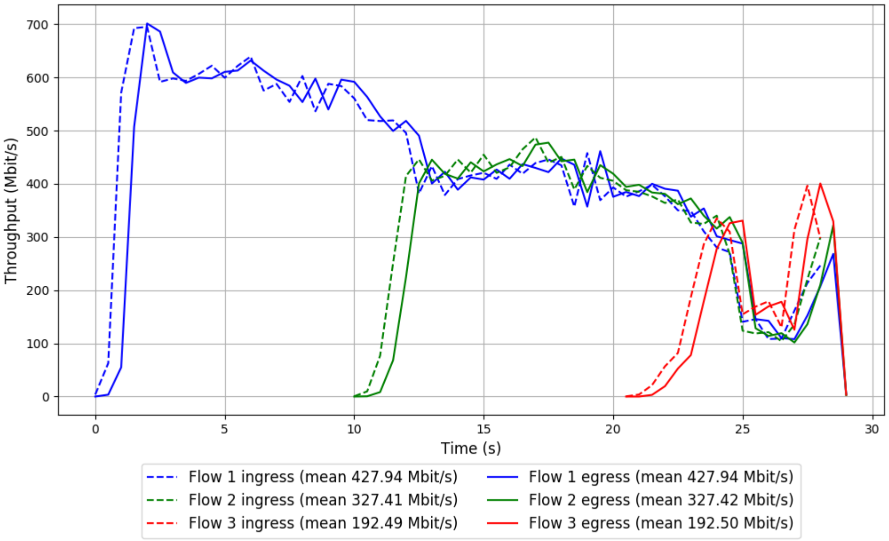
Run 3: Report of Indigo-MusesC3 — Data Link

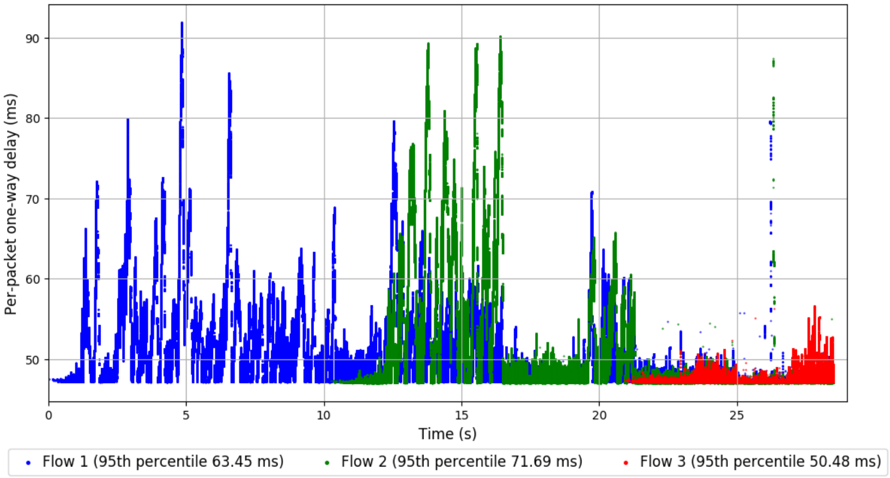




```
Run 4: Statistics of Indigo-MusesC3

Start at: 2019-02-06 07:12:42
End at: 2019-02-06 07:13:12
Local clock offset: 0.104 ms
Remote clock offset: -0.054 ms

# Below is generated by plot.py at 2019-02-06 09:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.03 Mbit/s
95th percentile per-packet one-way delay: 65.526 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 427.94 Mbit/s
95th percentile per-packet one-way delay: 63.453 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 327.42 Mbit/s
95th percentile per-packet one-way delay: 71.685 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 192.50 Mbit/s
95th percentile per-packet one-way delay: 50.477 ms
Loss rate: 0.00%
```

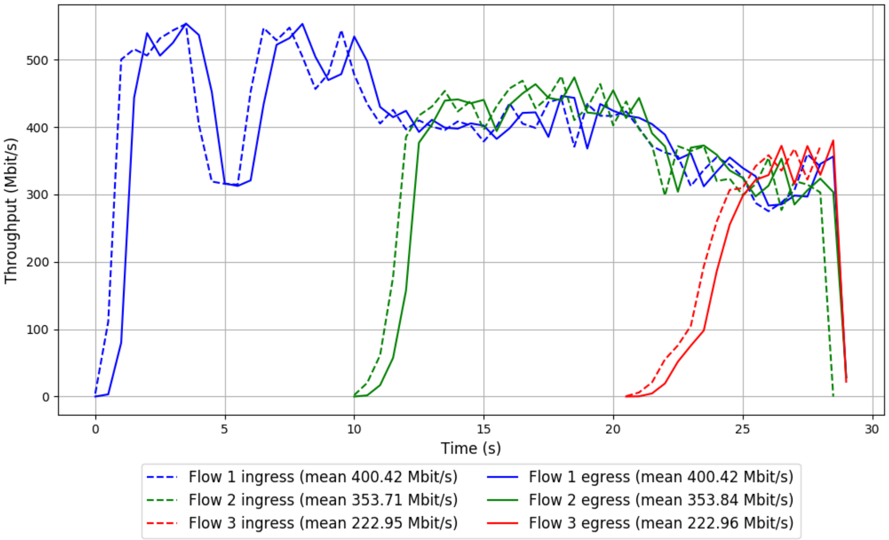
Run 4: Report of Indigo-MusesC3 — Data Link

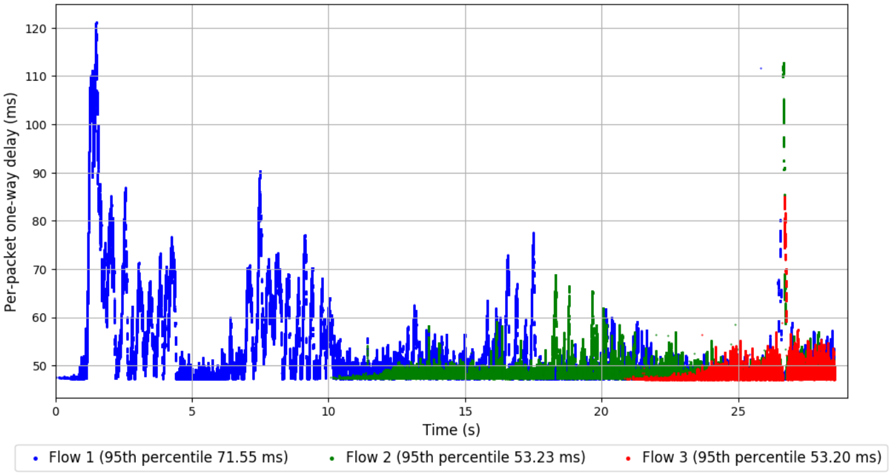




```
Run 5: Statistics of Indigo-MusesC3

Start at: 2019-02-06 07:49:18
End at: 2019-02-06 07:49:48
Local clock offset: 0.027 ms
Remote clock offset: -0.047 ms

# Below is generated by plot.py at 2019-02-06 09:56:12
# Datalink statistics
-- Total of 3 flows:
Average throughput: 689.77 Mbit/s
95th percentile per-packet one-way delay: 67.834 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 400.42 Mbit/s
95th percentile per-packet one-way delay: 71.546 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 353.84 Mbit/s
95th percentile per-packet one-way delay: 53.230 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 222.96 Mbit/s
95th percentile per-packet one-way delay: 53.201 ms
Loss rate: 0.00%
```

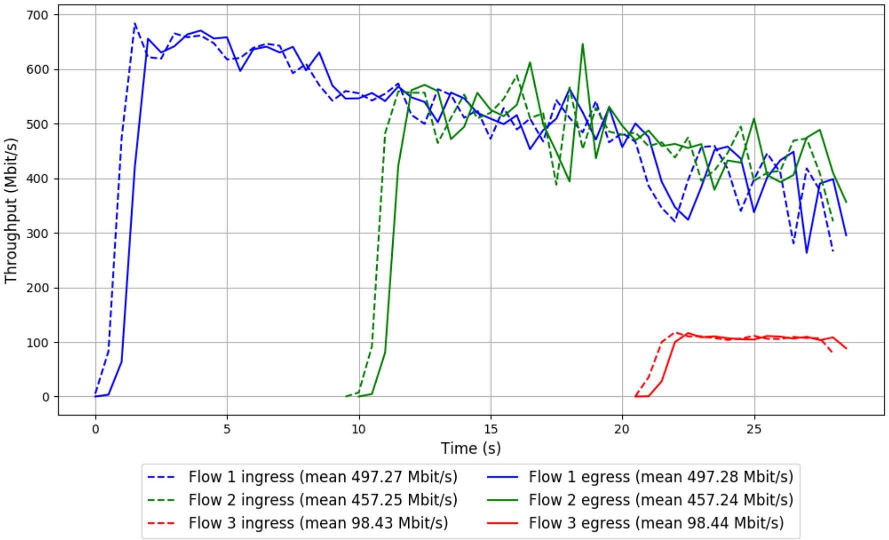
Run 5: Report of Indigo-MusesC3 — Data Link

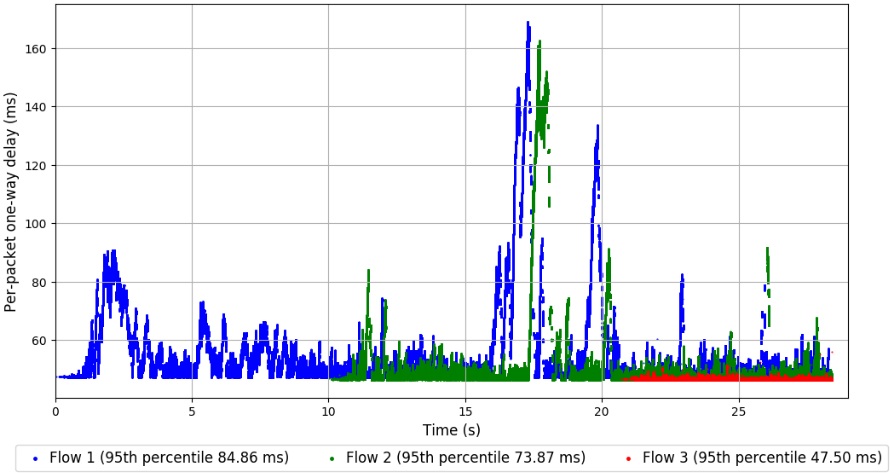




```
Run 1: Statistics of Indigo-MusesC5

Start at: 2019-02-06 05:20:38
End at: 2019-02-06 05:21:08
Local clock offset: 0.031 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-02-06 09:58:27
# Datalink statistics
-- Total of 3 flows:
Average throughput: 820.59 Mbit/s
95th percentile per-packet one-way delay: 82.333 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 497.28 Mbit/s
95th percentile per-packet one-way delay: 84.861 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 457.24 Mbit/s
95th percentile per-packet one-way delay: 73.869 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 98.44 Mbit/s
95th percentile per-packet one-way delay: 47.500 ms
Loss rate: 0.00%
```

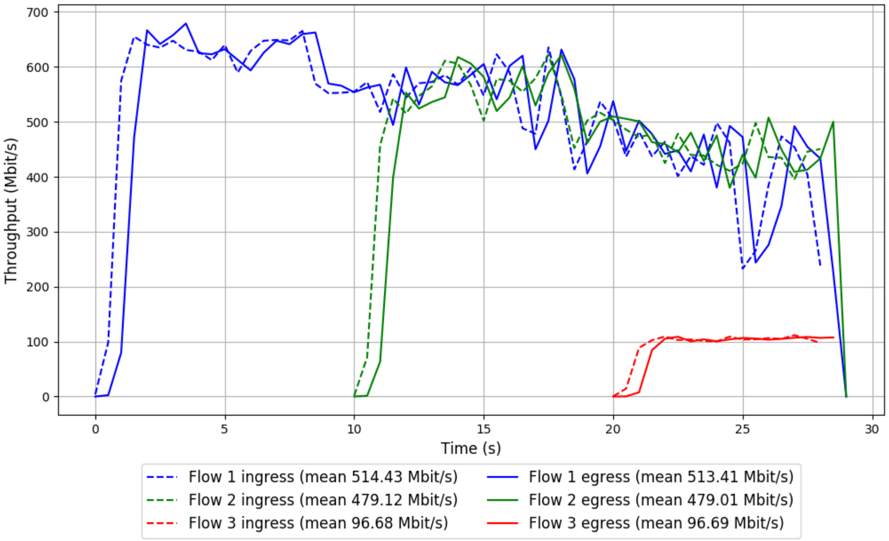
Run 1: Report of Indigo-MusesC5 — Data Link

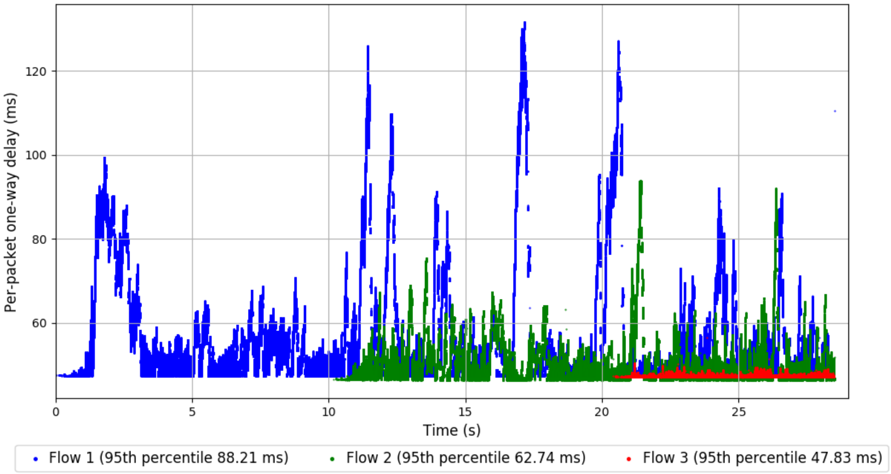




```
Run 2: Statistics of Indigo-MusesC5

Start at: 2019-02-06 05:57:30
End at: 2019-02-06 05:58:00
Local clock offset: 0.068 ms
Remote clock offset: -0.074 ms

# Below is generated by plot.py at 2019-02-06 09:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 849.20 Mbit/s
95th percentile per-packet one-way delay: 83.273 ms
Loss rate: 0.06%
-- Flow 1:
Average throughput: 513.41 Mbit/s
95th percentile per-packet one-way delay: 88.206 ms
Loss rate: 0.10%
-- Flow 2:
Average throughput: 479.01 Mbit/s
95th percentile per-packet one-way delay: 62.736 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 96.69 Mbit/s
95th percentile per-packet one-way delay: 47.833 ms
Loss rate: 0.00%
```

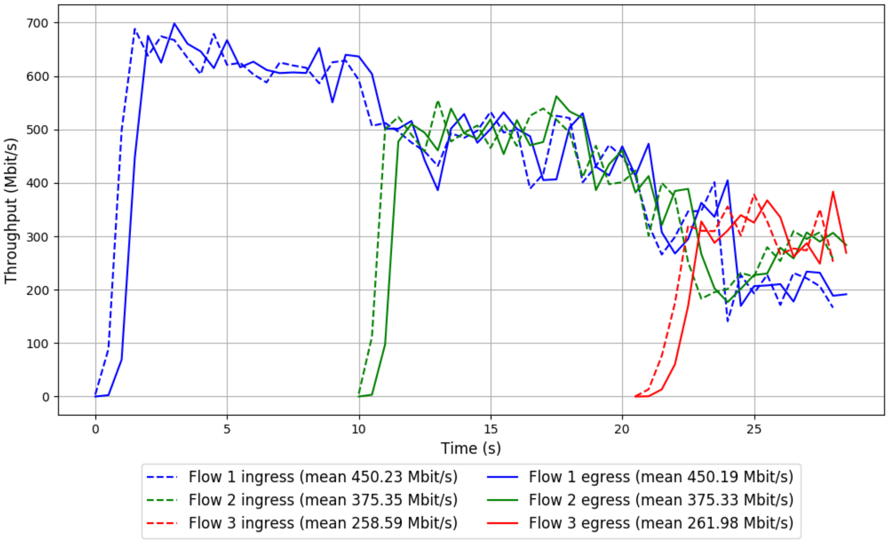
Run 2: Report of Indigo-MusesC5 — Data Link

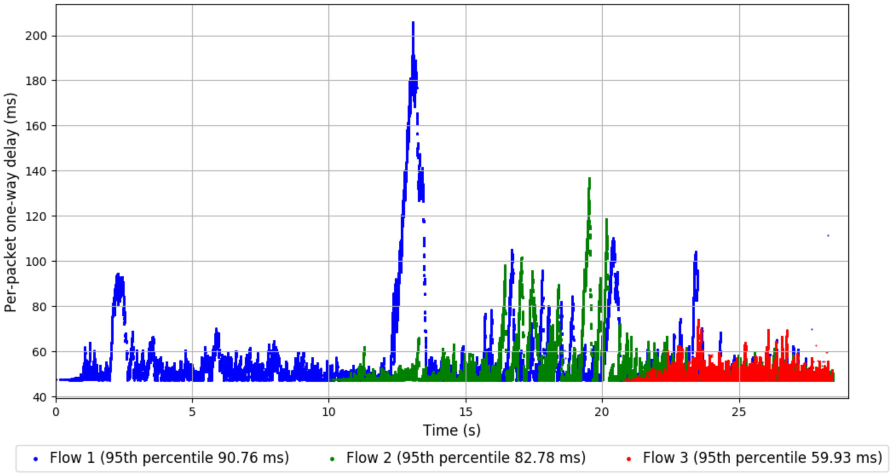




```
Run 3: Statistics of Indigo-MusesC5

Start at: 2019-02-06 06:34:14
End at: 2019-02-06 06:34:44
Local clock offset: 0.093 ms
Remote clock offset: -0.006 ms

# Below is generated by plot.py at 2019-02-06 09:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 763.43 Mbit/s
95th percentile per-packet one-way delay: 86.637 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 450.19 Mbit/s
95th percentile per-packet one-way delay: 90.763 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 375.33 Mbit/s
95th percentile per-packet one-way delay: 82.775 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 261.98 Mbit/s
95th percentile per-packet one-way delay: 59.928 ms
Loss rate: 0.00%
```

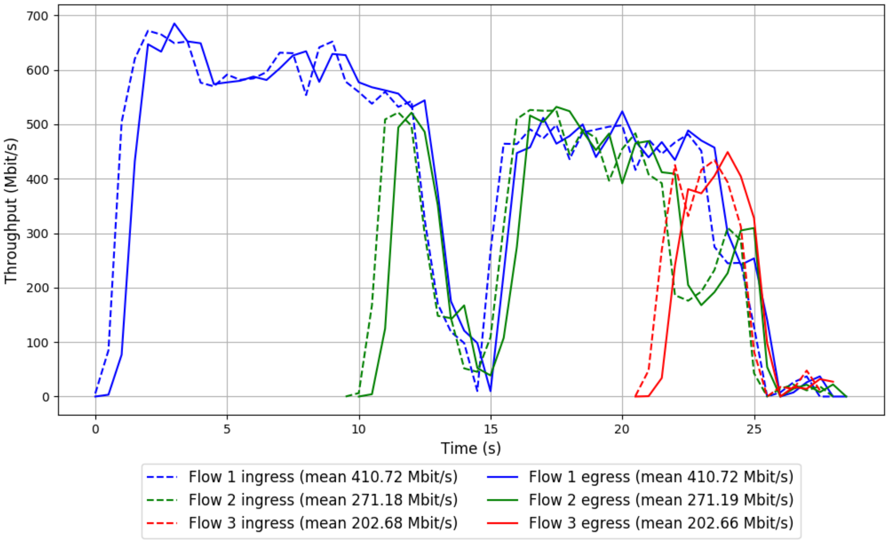
Run 3: Report of Indigo-MusesC5 — Data Link

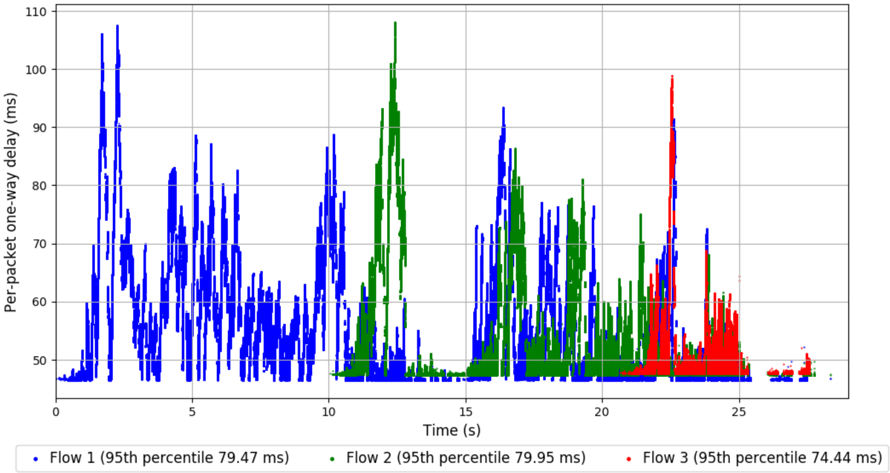




```
Run 4: Statistics of Indigo-MusesC5

Start at: 2019-02-06 07:10:54
End at: 2019-02-06 07:11:24
Local clock offset: 0.02 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-02-06 09:59:38
# Datalink statistics
-- Total of 3 flows:
Average throughput: 635.72 Mbit/s
95th percentile per-packet one-way delay: 79.518 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 410.72 Mbit/s
95th percentile per-packet one-way delay: 79.473 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 271.19 Mbit/s
95th percentile per-packet one-way delay: 79.948 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 202.66 Mbit/s
95th percentile per-packet one-way delay: 74.436 ms
Loss rate: 0.00%
```

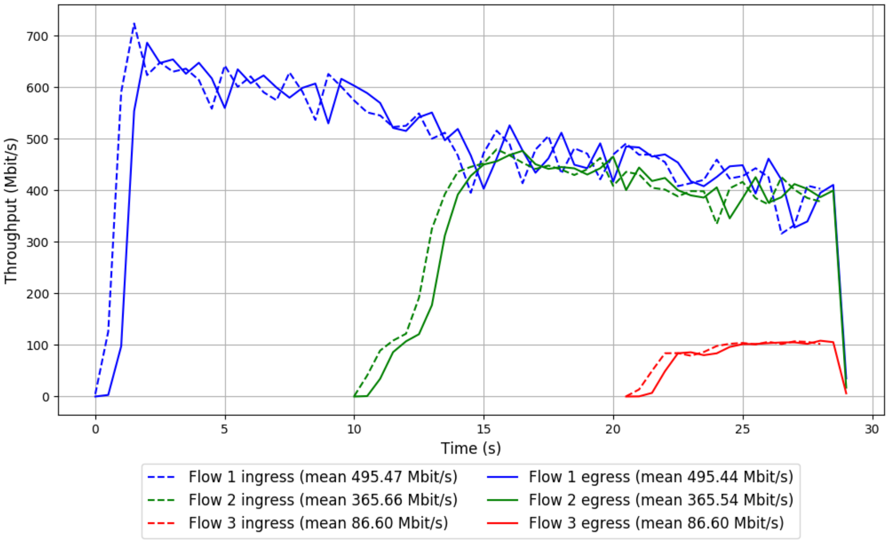
Run 4: Report of Indigo-MusesC5 — Data Link

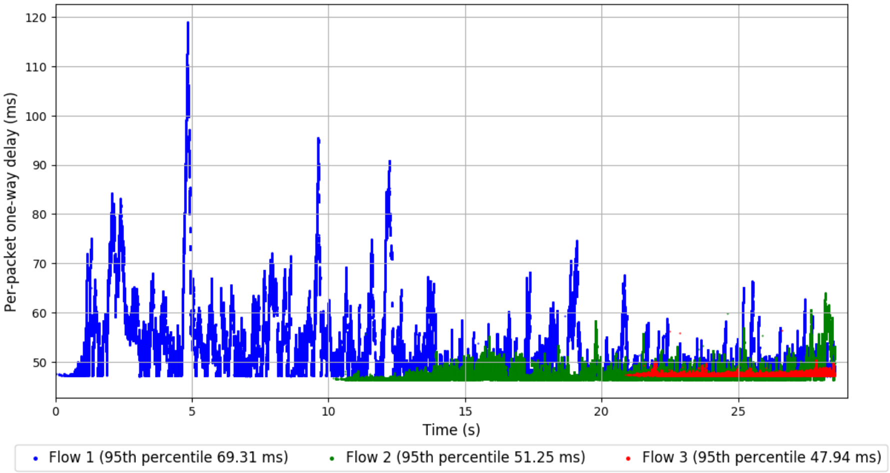




```
Run 5: Statistics of Indigo-MusesC5

Start at: 2019-02-06 07:47:31
End at: 2019-02-06 07:48:01
Local clock offset: 0.003 ms
Remote clock offset: -0.084 ms

# Below is generated by plot.py at 2019-02-06 10:00:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 754.45 Mbit/s
95th percentile per-packet one-way delay: 64.982 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 495.44 Mbit/s
95th percentile per-packet one-way delay: 69.312 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 365.54 Mbit/s
95th percentile per-packet one-way delay: 51.249 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 86.60 Mbit/s
95th percentile per-packet one-way delay: 47.939 ms
Loss rate: 0.00%
```

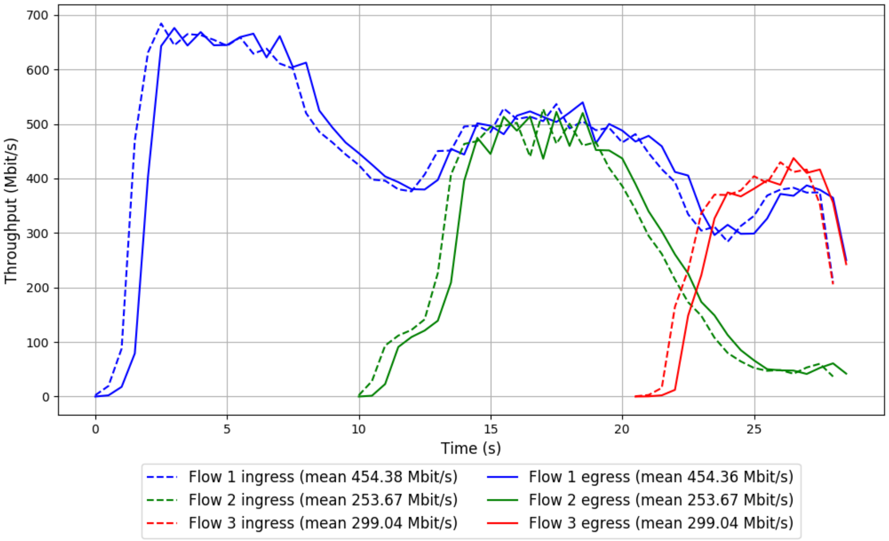
Run 5: Report of Indigo-MusesC5 — Data Link

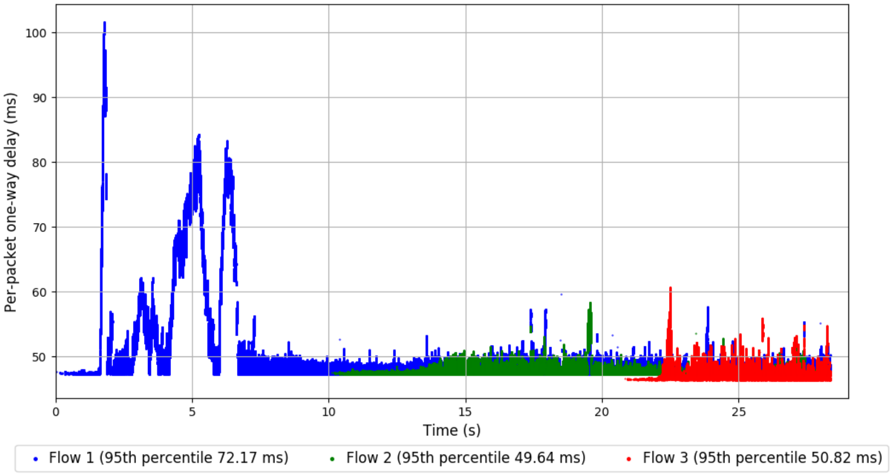




```
Run 1: Statistics of Indigo-MusesD

Start at: 2019-02-06 04:58:01
End at: 2019-02-06 04:58:31
Local clock offset: 0.023 ms
Remote clock offset: -0.053 ms

# Below is generated by plot.py at 2019-02-06 10:10:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 696.95 Mbit/s
95th percentile per-packet one-way delay: 65.904 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 454.36 Mbit/s
95th percentile per-packet one-way delay: 72.169 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 253.67 Mbit/s
95th percentile per-packet one-way delay: 49.644 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 299.04 Mbit/s
95th percentile per-packet one-way delay: 50.822 ms
Loss rate: 0.00%
```

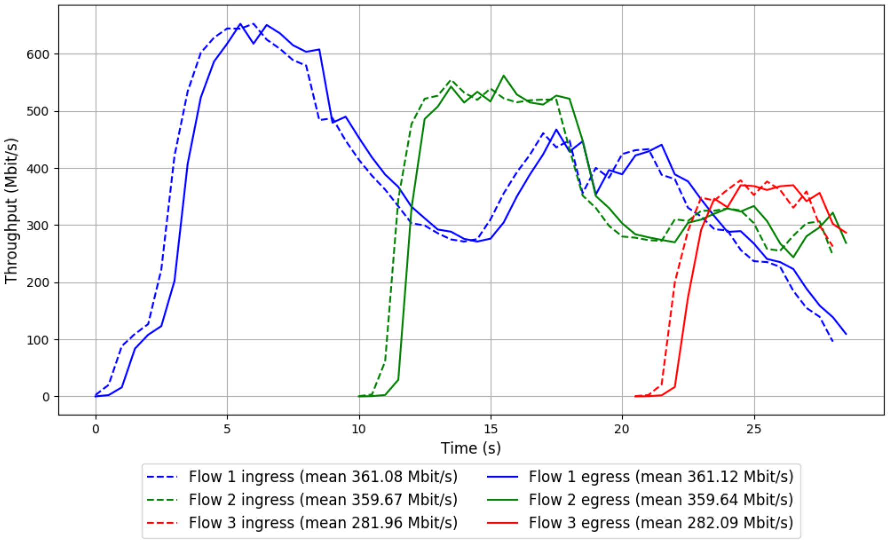
Run 1: Report of Indigo-MusesD — Data Link

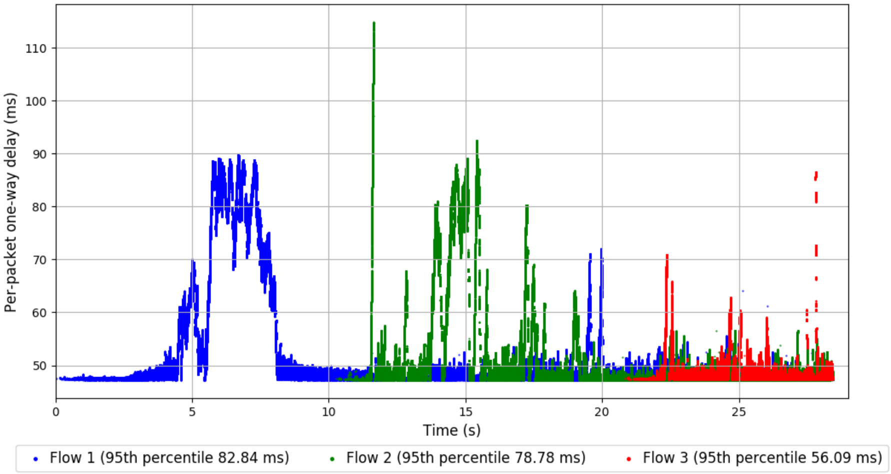




```
Run 2: Statistics of Indigo-MusesD

Start at: 2019-02-06 05:34:04
End at: 2019-02-06 05:34:34
Local clock offset: 0.03 ms
Remote clock offset: -0.085 ms

# Below is generated by plot.py at 2019-02-06 10:10:56
# Datalink statistics
-- Total of 3 flows:
Average throughput: 666.73 Mbit/s
95th percentile per-packet one-way delay: 80.500 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 361.12 Mbit/s
95th percentile per-packet one-way delay: 82.842 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 359.64 Mbit/s
95th percentile per-packet one-way delay: 78.783 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 282.09 Mbit/s
95th percentile per-packet one-way delay: 56.090 ms
Loss rate: 0.02%
```

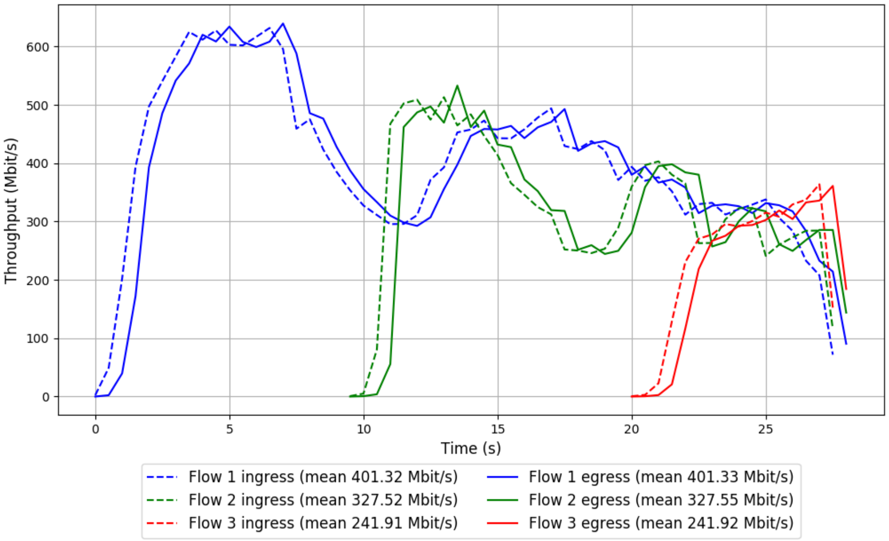
Run 2: Report of Indigo-MusesD — Data Link

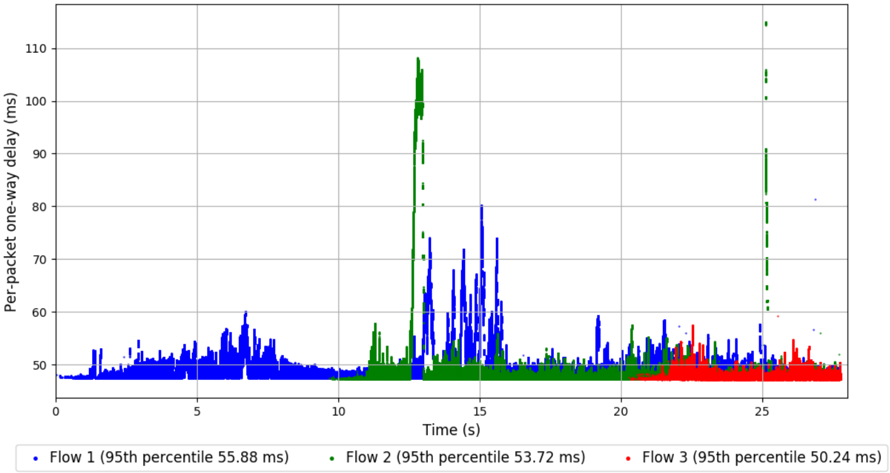




```
Run 3: Statistics of Indigo-MusesD

Start at: 2019-02-06 06:10:38
End at: 2019-02-06 06:11:08
Local clock offset: 0.059 ms
Remote clock offset: -0.03 ms

# Below is generated by plot.py at 2019-02-06 10:11:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 680.48 Mbit/s
95th percentile per-packet one-way delay: 54.802 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 401.33 Mbit/s
95th percentile per-packet one-way delay: 55.884 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 327.55 Mbit/s
95th percentile per-packet one-way delay: 53.719 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 241.92 Mbit/s
95th percentile per-packet one-way delay: 50.237 ms
Loss rate: 0.00%
```

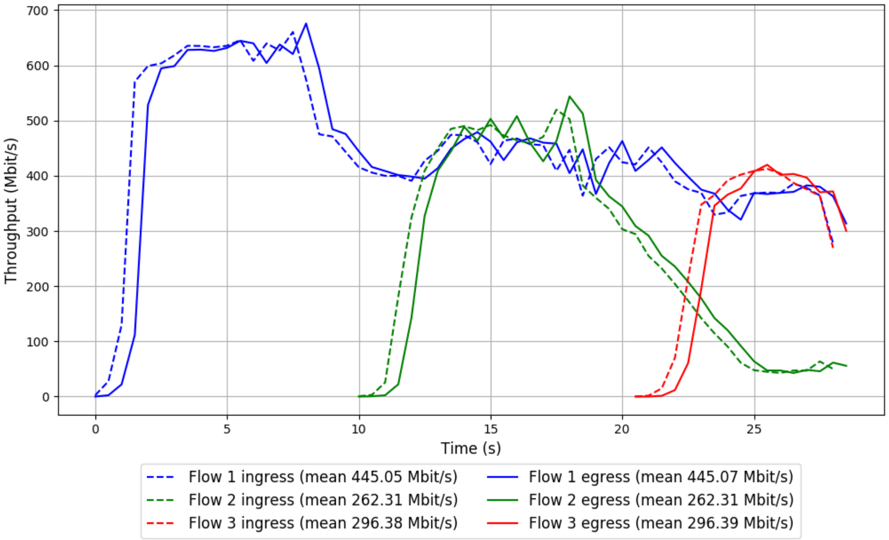
Run 3: Report of Indigo-MusesD — Data Link

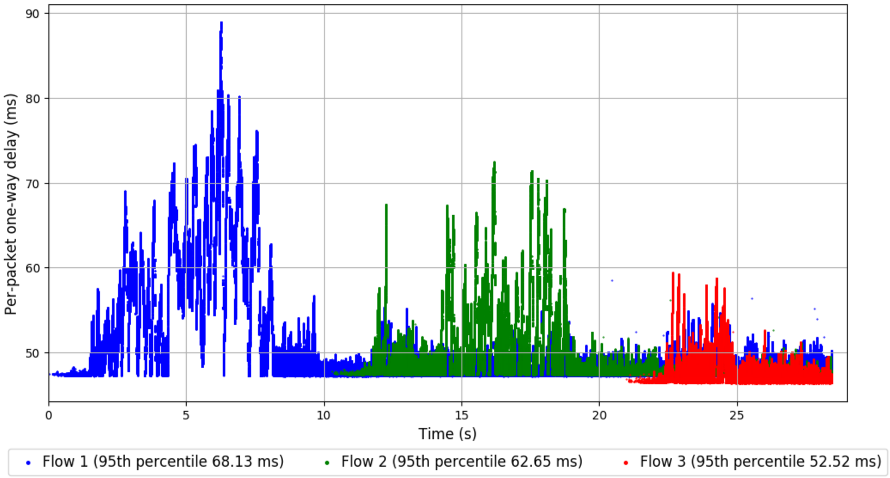




```
Run 4: Statistics of Indigo-MusesD

Start at: 2019-02-06 06:47:26
End at: 2019-02-06 06:47:56
Local clock offset: 0.073 ms
Remote clock offset: 0.022 ms

# Below is generated by plot.py at 2019-02-06 10:12:48
# Datalink statistics
-- Total of 3 flows:
Average throughput: 690.68 Mbit/s
95th percentile per-packet one-way delay: 65.604 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 445.07 Mbit/s
95th percentile per-packet one-way delay: 68.131 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 262.31 Mbit/s
95th percentile per-packet one-way delay: 62.653 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 296.39 Mbit/s
95th percentile per-packet one-way delay: 52.518 ms
Loss rate: 0.00%
```

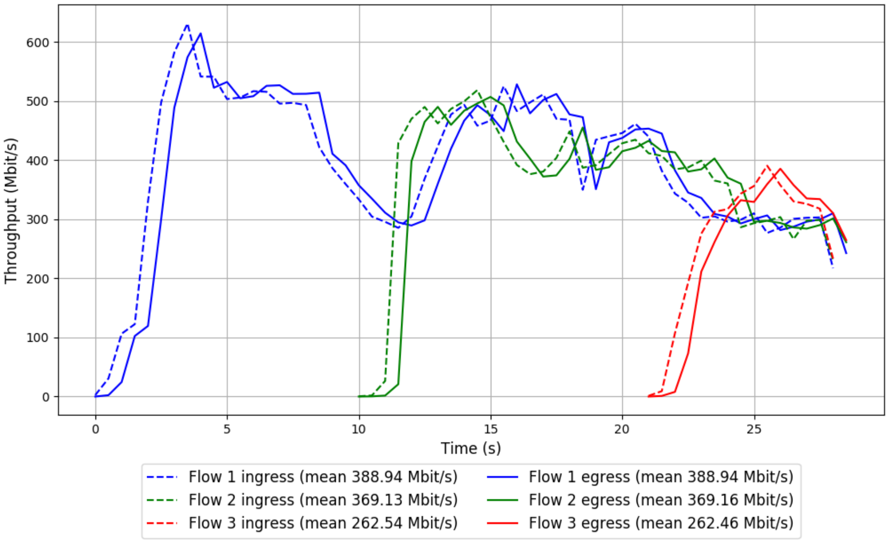
Run 4: Report of Indigo-MusesD — Data Link

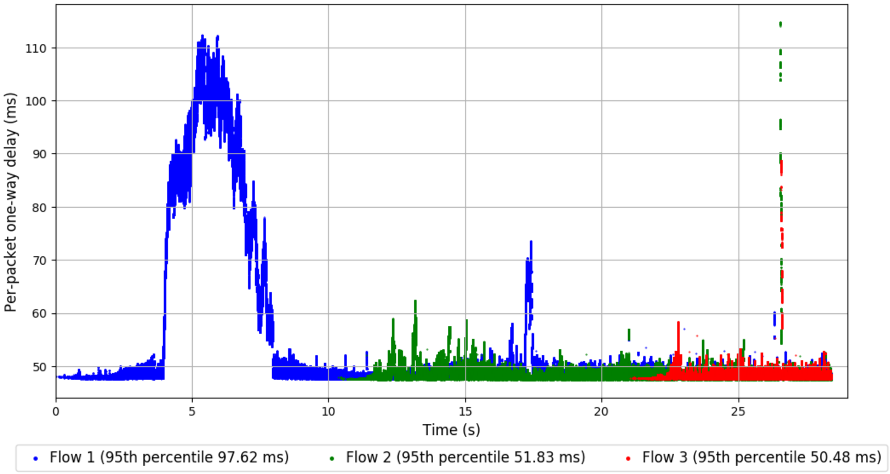




```
Run 5: Statistics of Indigo-MusesD

Start at: 2019-02-06 07:24:11
End at: 2019-02-06 07:24:41
Local clock offset: -0.362 ms
Remote clock offset: -0.048 ms

# Below is generated by plot.py at 2019-02-06 10:14:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 691.92 Mbit/s
95th percentile per-packet one-way delay: 89.450 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 388.94 Mbit/s
95th percentile per-packet one-way delay: 97.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 369.16 Mbit/s
95th percentile per-packet one-way delay: 51.830 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 262.46 Mbit/s
95th percentile per-packet one-way delay: 50.479 ms
Loss rate: 0.04%
```

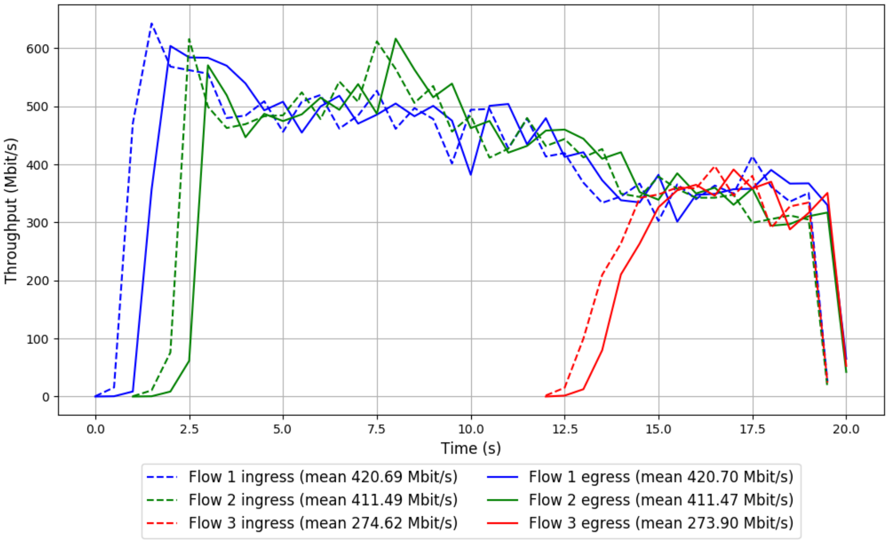
Run 5: Report of Indigo-MusesD — Data Link

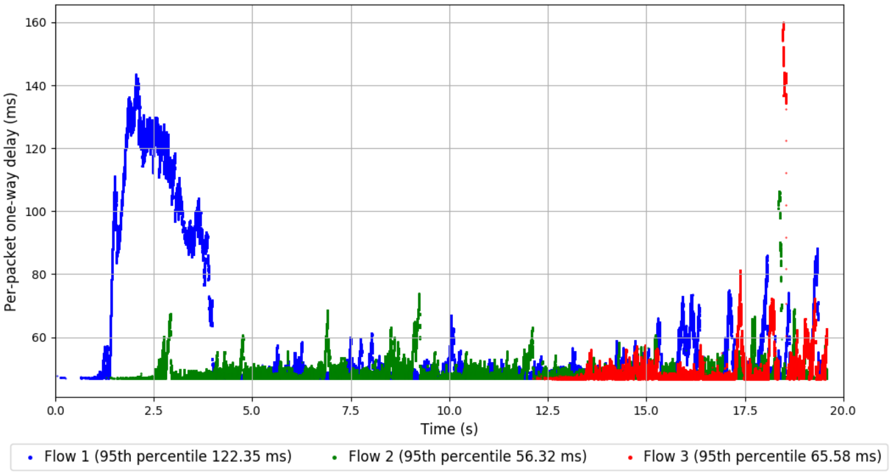




```
Run 1: Statistics of Indigo-MusesT

Start at: 2019-02-06 04:52:39
End at: 2019-02-06 04:53:09
Local clock offset: 0.386 ms
Remote clock offset: -0.013 ms
```

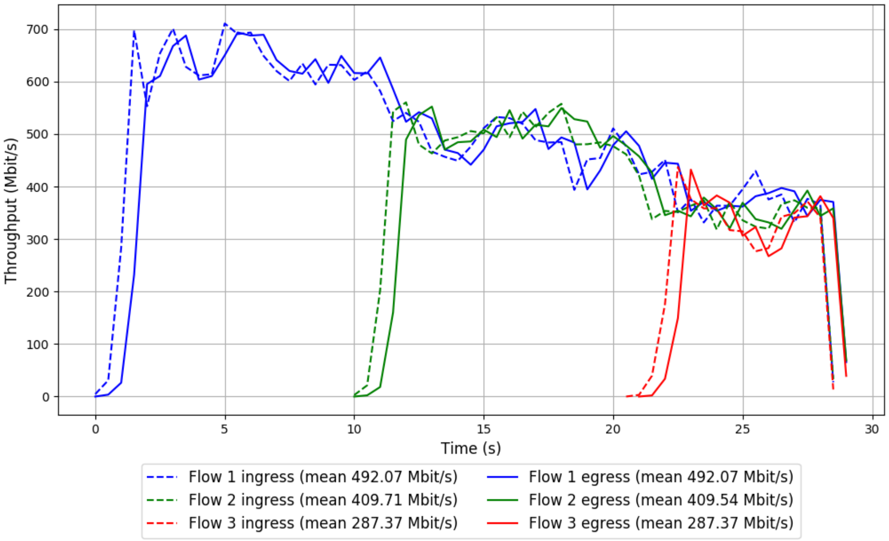
Run 1: Report of Indigo-MusesT — Data Link

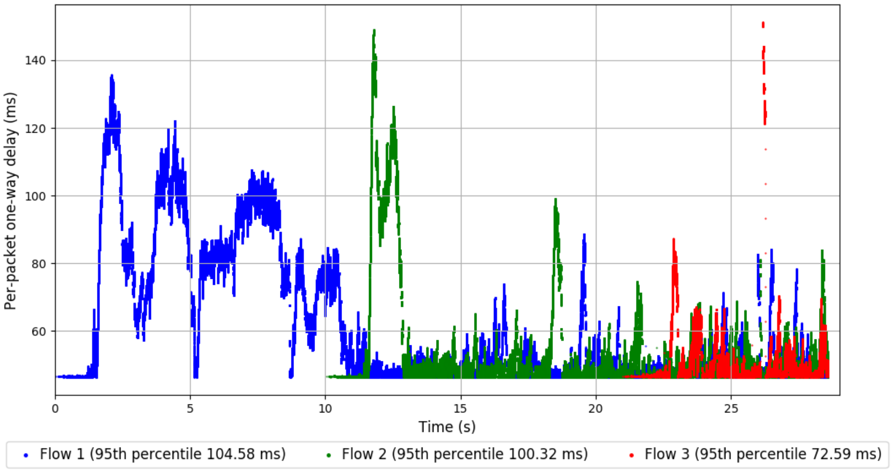




```
Run 2: Statistics of Indigo-MusesT

Start at: 2019-02-06 05:28:26
End at: 2019-02-06 05:28:56
Local clock offset: 0.036 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-02-06 10:19:37
# Datalink statistics
-- Total of 3 flows:
Average throughput: 834.36 Mbit/s
95th percentile per-packet one-way delay: 102.878 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 492.07 Mbit/s
95th percentile per-packet one-way delay: 104.576 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 409.54 Mbit/s
95th percentile per-packet one-way delay: 100.316 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 287.37 Mbit/s
95th percentile per-packet one-way delay: 72.593 ms
Loss rate: 0.00%
```

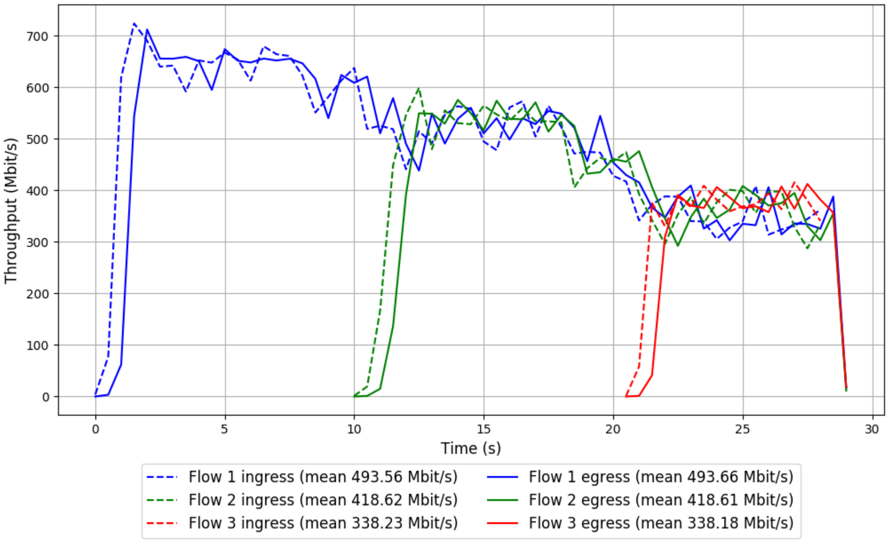
Run 2: Report of Indigo-MusesT — Data Link

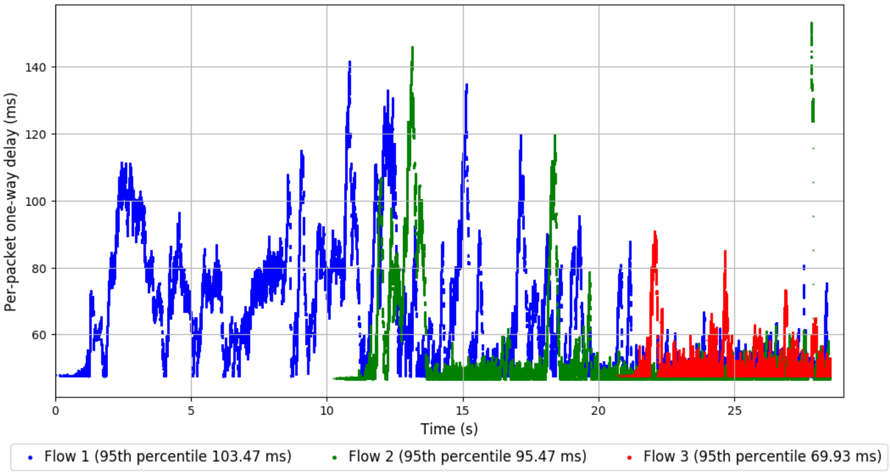




```
Run 3: Statistics of Indigo-MusesT

Start at: 2019-02-06 06:05:01
End at: 2019-02-06 06:05:31
Local clock offset: -0.223 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-02-06 10:21:03
# Datalink statistics
-- Total of 3 flows:
Average throughput: 855.80 Mbit/s
95th percentile per-packet one-way delay: 100.593 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 493.66 Mbit/s
95th percentile per-packet one-way delay: 103.469 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 418.61 Mbit/s
95th percentile per-packet one-way delay: 95.465 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 338.18 Mbit/s
95th percentile per-packet one-way delay: 69.928 ms
Loss rate: 0.03%
```

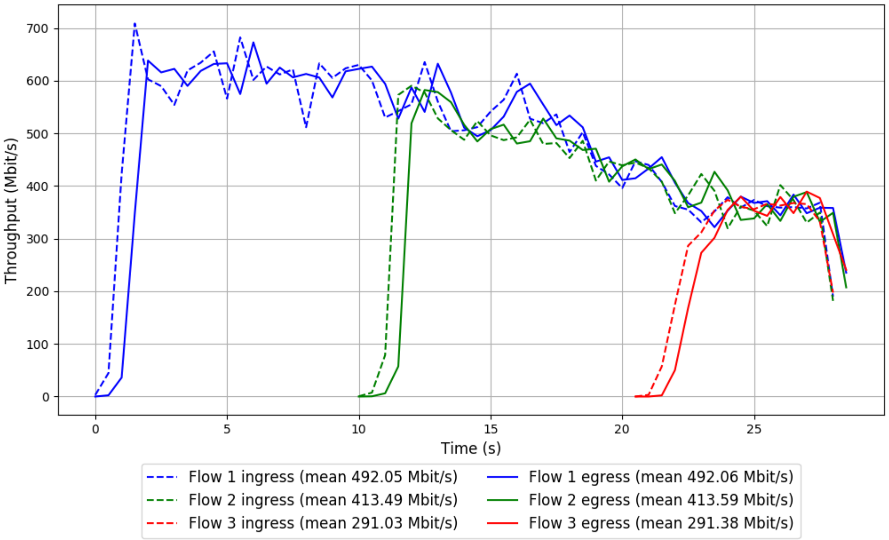
Run 3: Report of Indigo-MusesT — Data Link

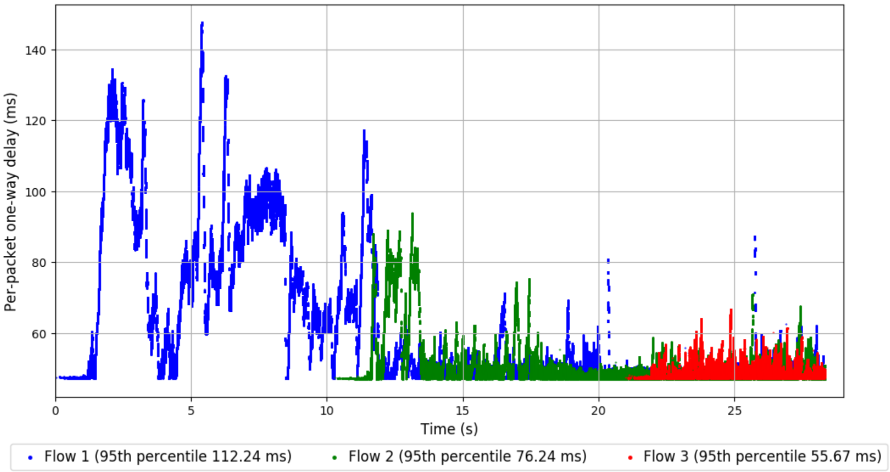




```
Run 4: Statistics of Indigo-MusesT

Start at: 2019-02-06 06:41:49
End at: 2019-02-06 06:42:19
Local clock offset: 0.035 ms
Remote clock offset: -0.004 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 830.97 Mbit/s
95th percentile per-packet one-way delay: 100.489 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 492.06 Mbit/s
95th percentile per-packet one-way delay: 112.243 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 413.59 Mbit/s
95th percentile per-packet one-way delay: 76.236 ms
Loss rate: 0.03%
-- Flow 3:
Average throughput: 291.38 Mbit/s
95th percentile per-packet one-way delay: 55.667 ms
Loss rate: 0.00%
```

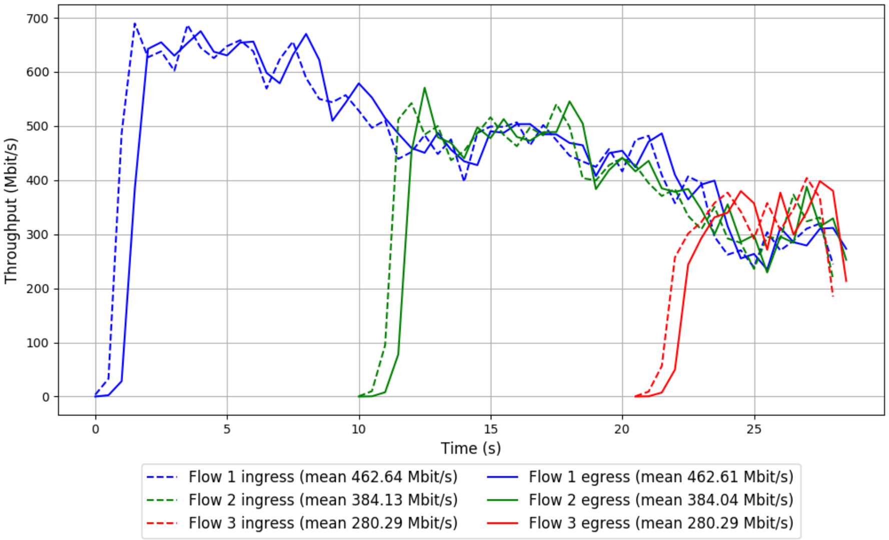
Run 4: Report of Indigo-MusesT — Data Link

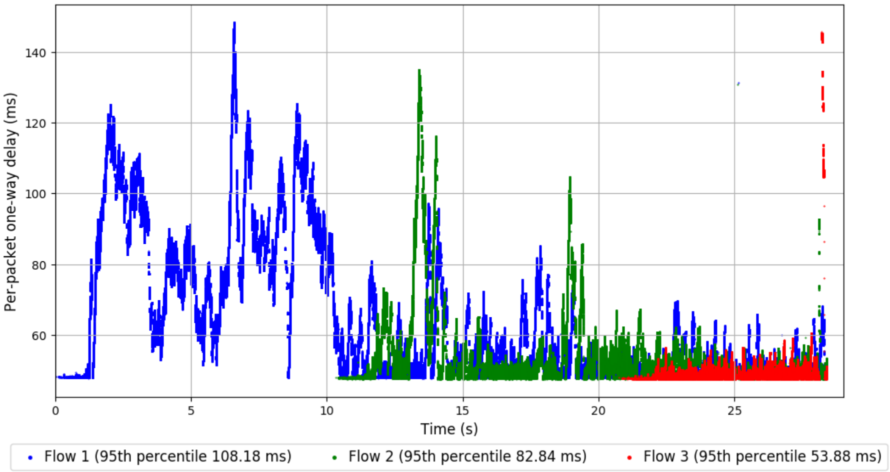




```
Run 5: Statistics of Indigo-MusesT

Start at: 2019-02-06 07:18:27
End at: 2019-02-06 07:18:57
Local clock offset: -0.368 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 782.95 Mbit/s
95th percentile per-packet one-way delay: 104.489 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 462.61 Mbit/s
95th percentile per-packet one-way delay: 108.184 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 384.04 Mbit/s
95th percentile per-packet one-way delay: 82.840 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 280.29 Mbit/s
95th percentile per-packet one-way delay: 53.880 ms
Loss rate: 0.02%
```

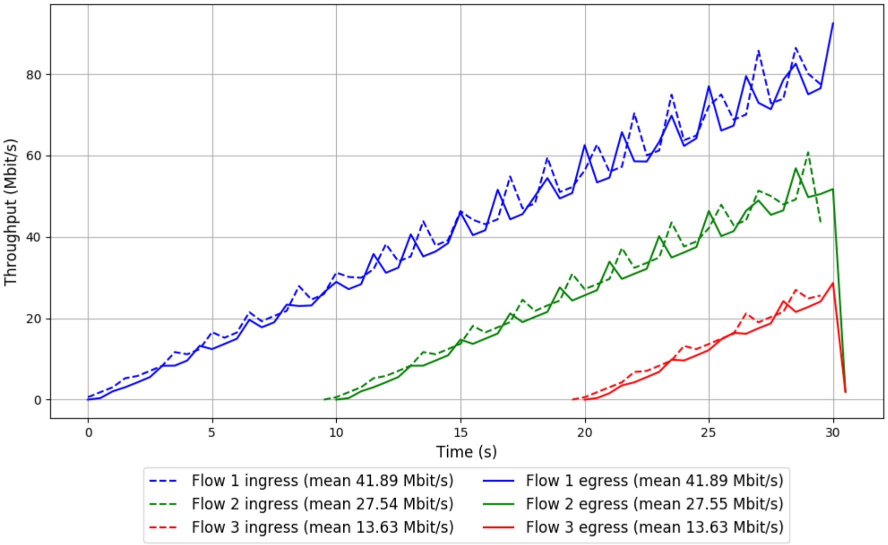
Run 5: Report of Indigo-MusesT — Data Link

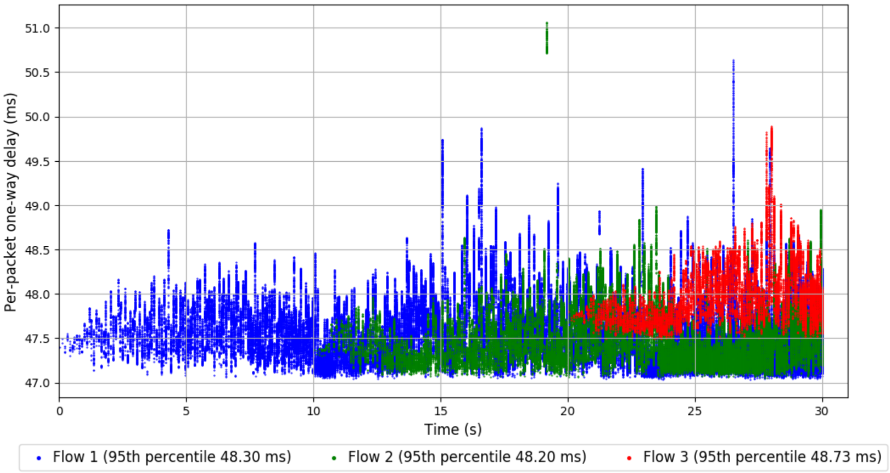




```
Run 1: Statistics of LEDBAT

Start at: 2019-02-06 04:59:45
End at: 2019-02-06 05:00:15
Local clock offset: 0.035 ms
Remote clock offset: -0.057 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.77 Mbit/s
95th percentile per-packet one-way delay: 48.347 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.89 Mbit/s
95th percentile per-packet one-way delay: 48.301 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.55 Mbit/s
95th percentile per-packet one-way delay: 48.197 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.63 Mbit/s
95th percentile per-packet one-way delay: 48.726 ms
Loss rate: 0.00%
```

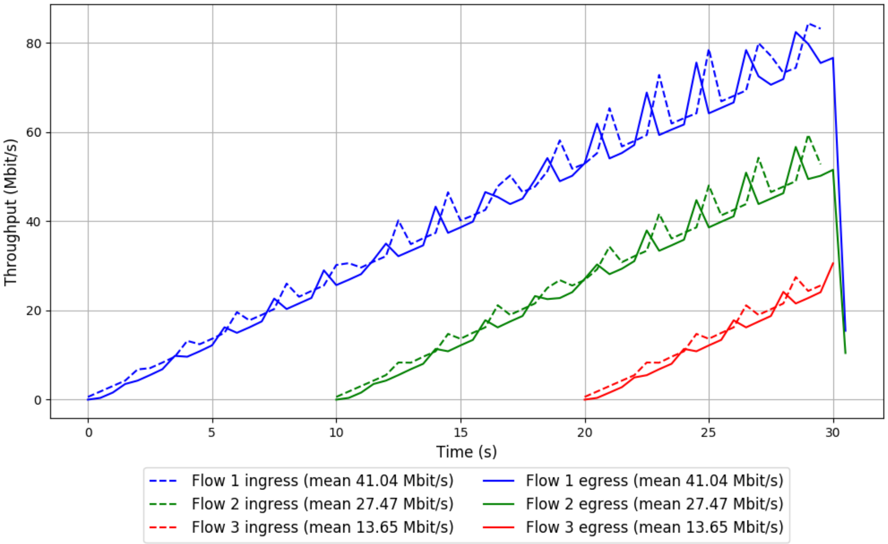
Run 1: Report of LEDBAT — Data Link

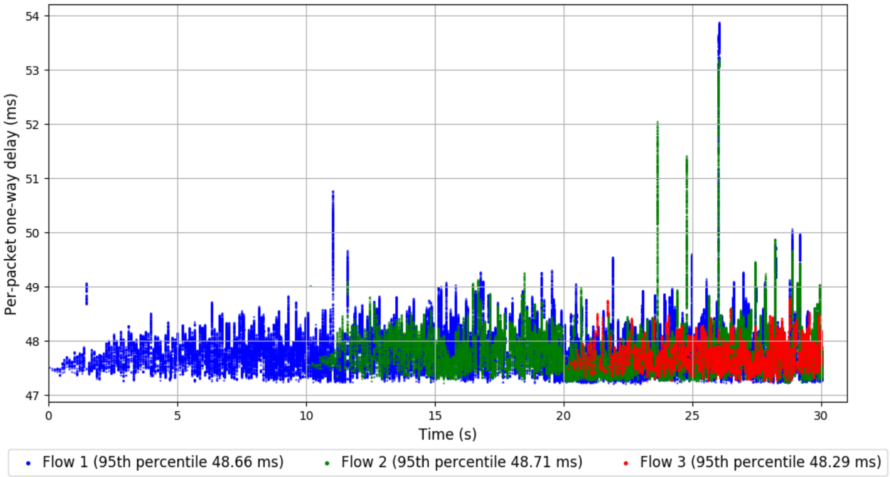




```
Run 2: Statistics of LEDBAT

Start at: 2019-02-06 05:35:49
End at: 2019-02-06 05:36:19
Local clock offset: 0.045 ms
Remote clock offset: -0.117 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.85 Mbit/s
95th percentile per-packet one-way delay: 48.652 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.04 Mbit/s
95th percentile per-packet one-way delay: 48.663 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.47 Mbit/s
95th percentile per-packet one-way delay: 48.709 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.65 Mbit/s
95th percentile per-packet one-way delay: 48.286 ms
Loss rate: 0.00%
```

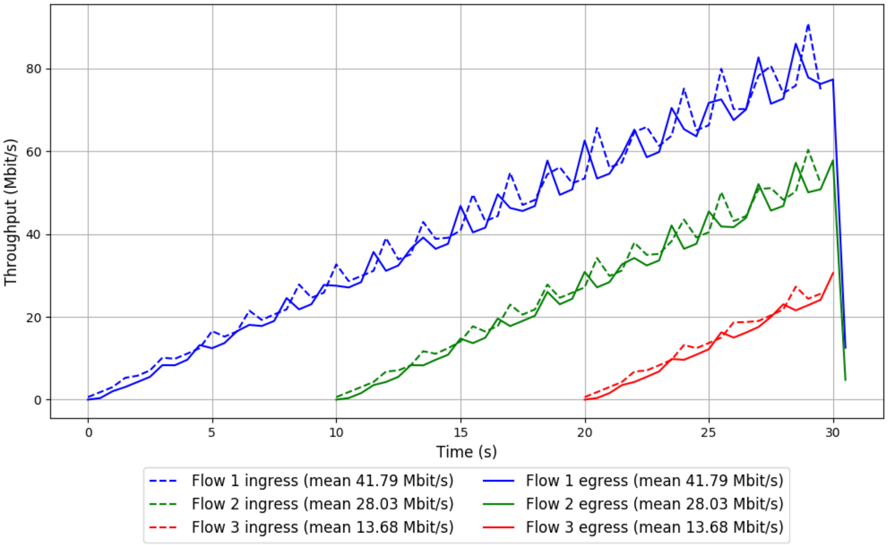
Run 2: Report of LEDBAT — Data Link

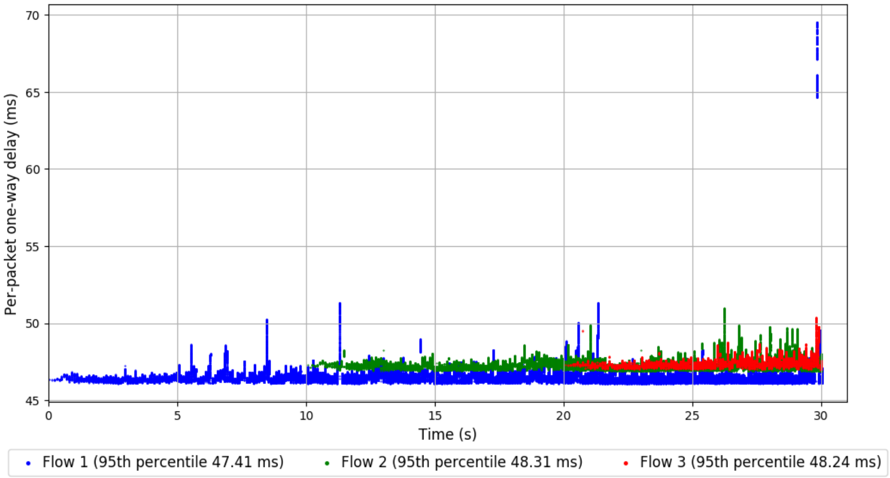




```
Run 3: Statistics of LEDBAT

Start at: 2019-02-06 06:12:23
End at: 2019-02-06 06:12:53
Local clock offset: 0.363 ms
Remote clock offset: 0.005 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.96 Mbit/s
95th percentile per-packet one-way delay: 47.945 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 41.79 Mbit/s
95th percentile per-packet one-way delay: 47.411 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 28.03 Mbit/s
95th percentile per-packet one-way delay: 48.310 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.68 Mbit/s
95th percentile per-packet one-way delay: 48.242 ms
Loss rate: 0.00%
```

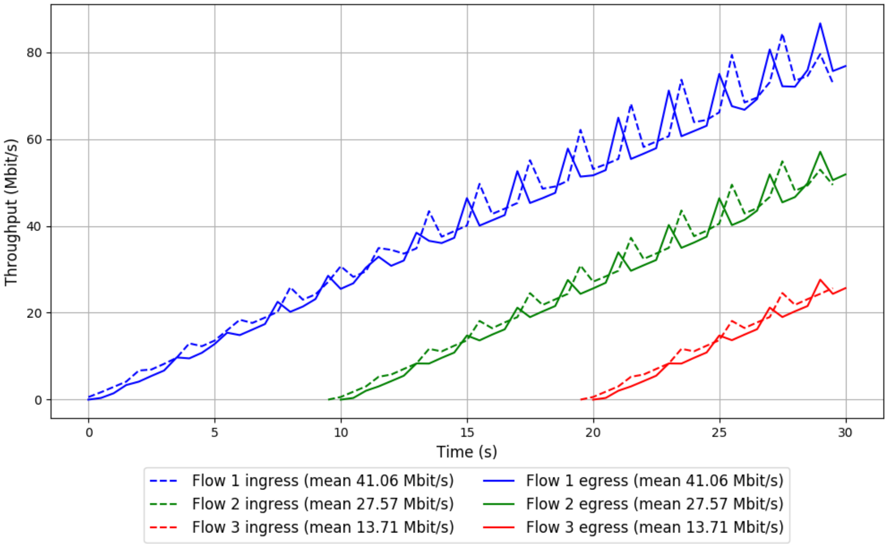
Run 3: Report of LEDBAT — Data Link

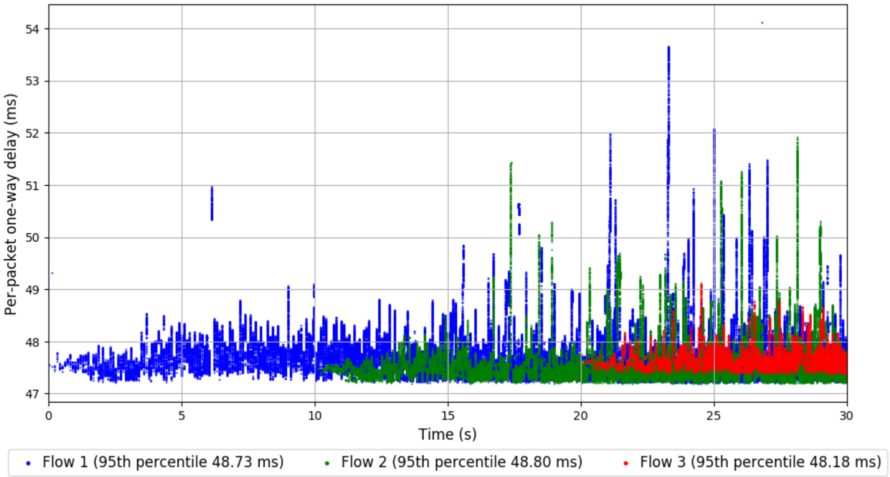




```
Run 4: Statistics of LEDBAT

Start at: 2019-02-06 06:49:12
End at: 2019-02-06 06:49:42
Local clock offset: 0.045 ms
Remote clock offset: 0.01 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 63.97 Mbit/s
95th percentile per-packet one-way delay: 48.693 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.06 Mbit/s
95th percentile per-packet one-way delay: 48.731 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.57 Mbit/s
95th percentile per-packet one-way delay: 48.800 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.71 Mbit/s
95th percentile per-packet one-way delay: 48.180 ms
Loss rate: 0.00%
```

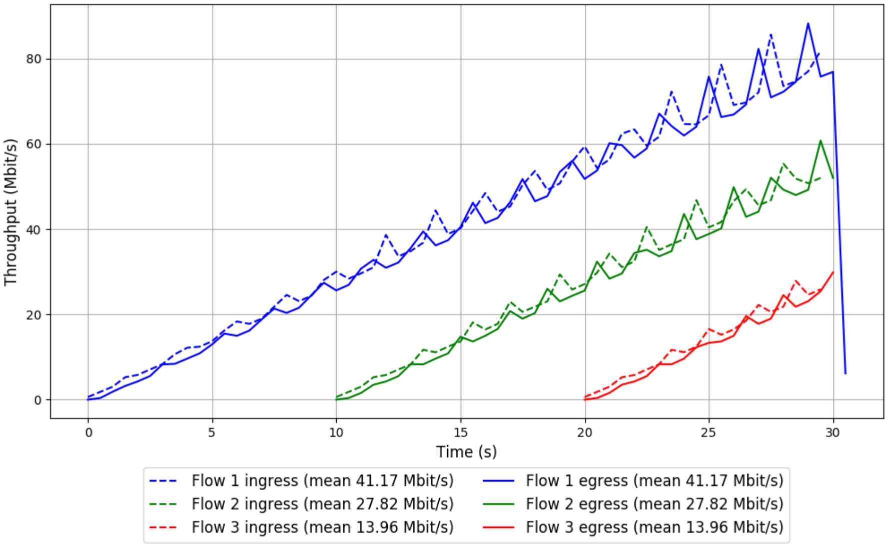
Run 4: Report of LEDBAT — Data Link

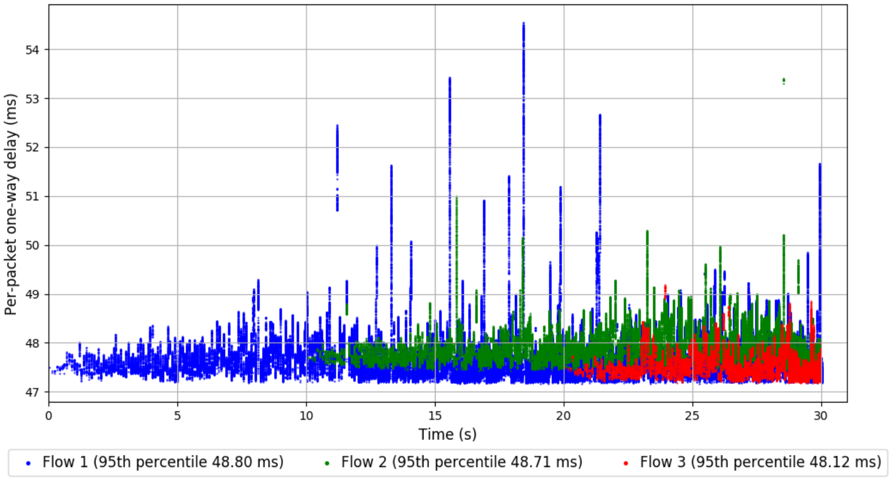




```
Run 5: Statistics of LEDBAT

Start at: 2019-02-06 07:25:58
End at: 2019-02-06 07:26:28
Local clock offset: 0.011 ms
Remote clock offset: -0.091 ms

# Below is generated by plot.py at 2019-02-06 10:28:34
# Datalink statistics
-- Total of 3 flows:
Average throughput: 64.25 Mbit/s
95th percentile per-packet one-way delay: 48.725 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 41.17 Mbit/s
95th percentile per-packet one-way delay: 48.795 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 27.82 Mbit/s
95th percentile per-packet one-way delay: 48.713 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 13.96 Mbit/s
95th percentile per-packet one-way delay: 48.122 ms
Loss rate: 0.00%
```

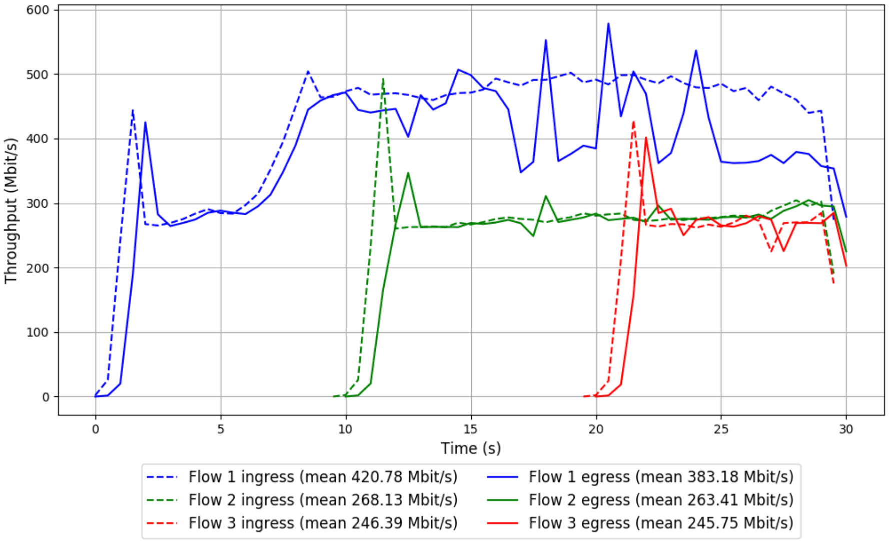
Run 5: Report of LEDBAT — Data Link

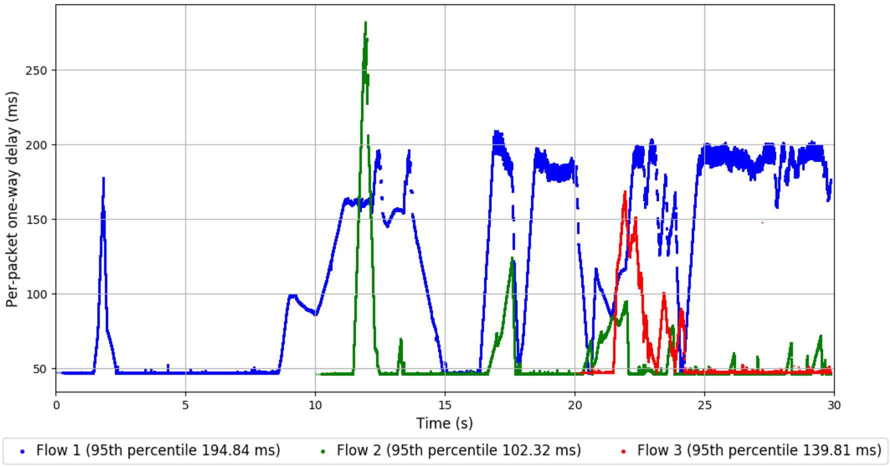




```
Run 1: Statistics of PCC-Allegro

Start at: 2019-02-06 04:54:20
End at: 2019-02-06 04:54:50
Local clock offset: 0.181 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-02-06 10:45:19
# Datalink statistics
-- Total of 3 flows:
Average throughput: 639.42 Mbit/s
95th percentile per-packet one-way delay: 192.997 ms
Loss rate: 6.02%
-- Flow 1:
Average throughput: 383.18 Mbit/s
95th percentile per-packet one-way delay: 194.837 ms
Loss rate: 8.93%
-- Flow 2:
Average throughput: 263.41 Mbit/s
95th percentile per-packet one-way delay: 102.320 ms
Loss rate: 1.76%
-- Flow 3:
Average throughput: 245.75 Mbit/s
95th percentile per-packet one-way delay: 139.807 ms
Loss rate: 0.26%
```

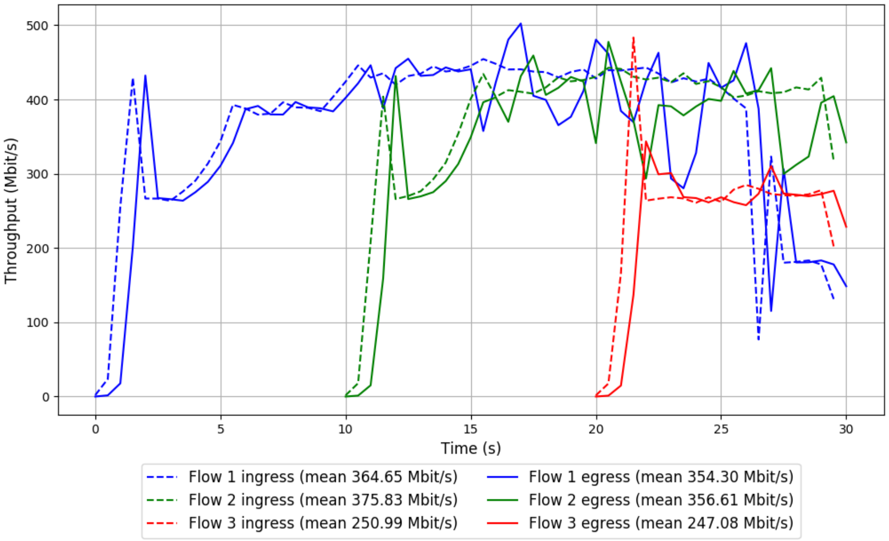
Run 1: Report of PCC-Allegro — Data Link

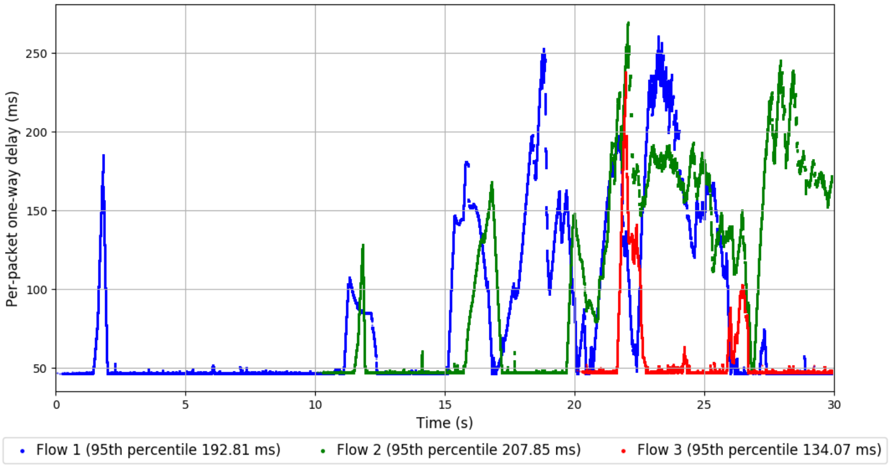




```
Run 2: Statistics of PCC-Allegro

Start at: 2019-02-06 05:30:18
End at: 2019-02-06 05:30:48
Local clock offset: 0.213 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-02-06 10:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 672.46 Mbit/s
95th percentile per-packet one-way delay: 194.681 ms
Loss rate: 3.51%
-- Flow 1:
Average throughput: 354.30 Mbit/s
95th percentile per-packet one-way delay: 192.806 ms
Loss rate: 2.84%
-- Flow 2:
Average throughput: 356.61 Mbit/s
95th percentile per-packet one-way delay: 207.846 ms
Loss rate: 5.12%
-- Flow 3:
Average throughput: 247.08 Mbit/s
95th percentile per-packet one-way delay: 134.067 ms
Loss rate: 1.56%
```

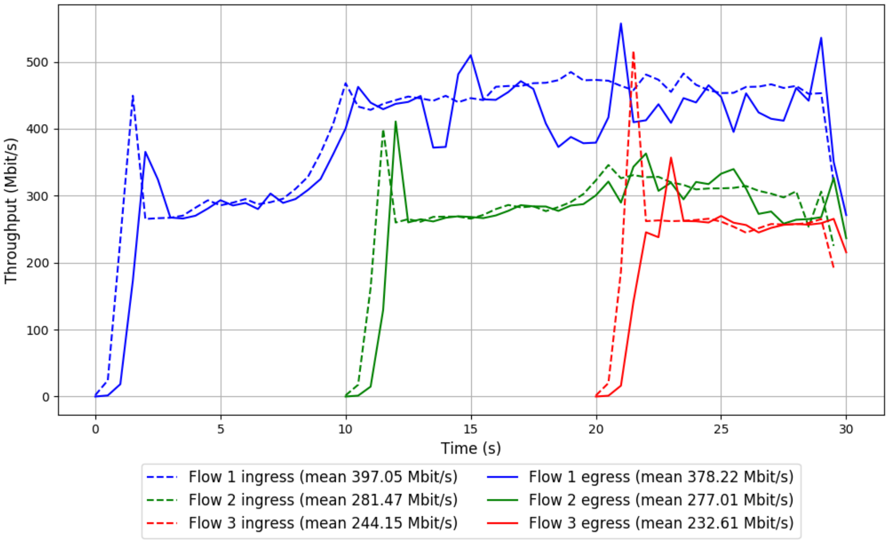
Run 2: Report of PCC-Allegro — Data Link

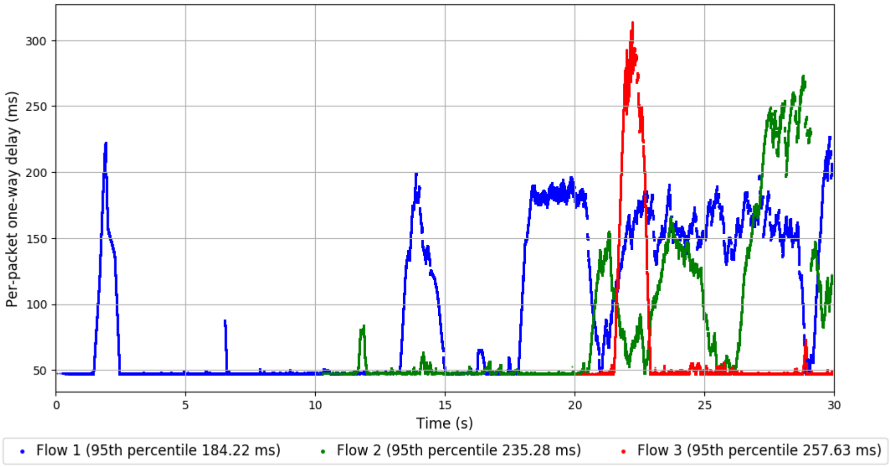




```
Run 3: Statistics of PCC-Allegro

Start at: 2019-02-06 06:06:54
End at: 2019-02-06 06:07:24
Local clock offset: 0.034 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-02-06 10:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 638.89 Mbit/s
95th percentile per-packet one-way delay: 191.015 ms
Loss rate: 3.85%
-- Flow 1:
Average throughput: 378.22 Mbit/s
95th percentile per-packet one-way delay: 184.221 ms
Loss rate: 4.74%
-- Flow 2:
Average throughput: 277.01 Mbit/s
95th percentile per-packet one-way delay: 235.283 ms
Loss rate: 1.58%
-- Flow 3:
Average throughput: 232.61 Mbit/s
95th percentile per-packet one-way delay: 257.633 ms
Loss rate: 4.73%
```

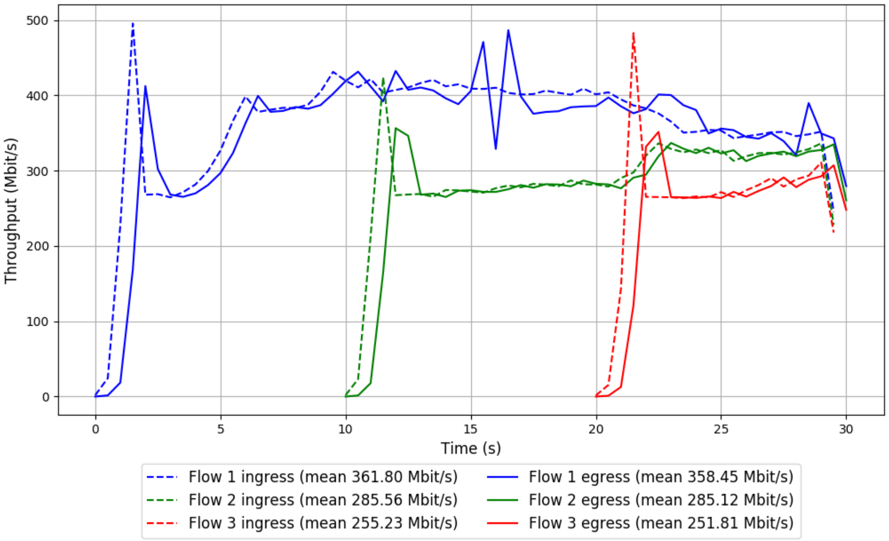
Run 3: Report of PCC-Allegro — Data Link

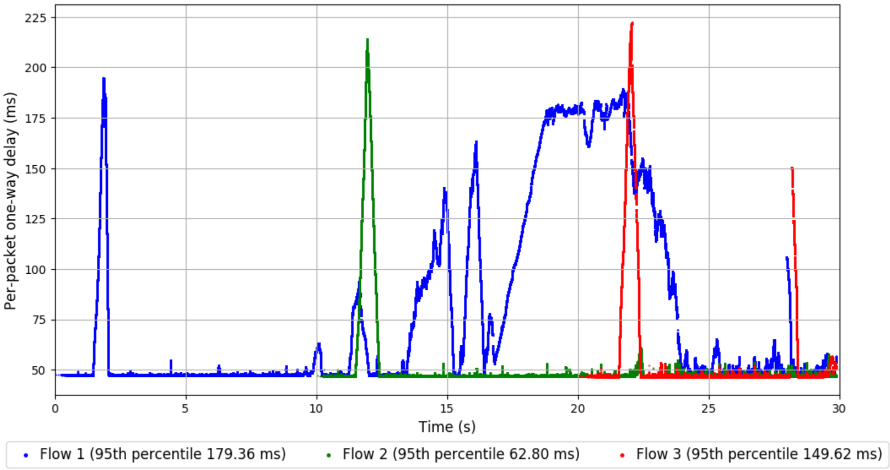




```
Run 4: Statistics of PCC-Allegro

Start at: 2019-02-06 06:43:41
End at: 2019-02-06 06:44:11
Local clock offset: 0.024 ms
Remote clock offset: -0.034 ms

# Below is generated by plot.py at 2019-02-06 10:48:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 630.69 Mbit/s
95th percentile per-packet one-way delay: 177.935 ms
Loss rate: 0.75%
-- Flow 1:
Average throughput: 358.45 Mbit/s
95th percentile per-packet one-way delay: 179.360 ms
Loss rate: 0.93%
-- Flow 2:
Average throughput: 285.12 Mbit/s
95th percentile per-packet one-way delay: 62.799 ms
Loss rate: 0.16%
-- Flow 3:
Average throughput: 251.81 Mbit/s
95th percentile per-packet one-way delay: 149.618 ms
Loss rate: 1.33%
```

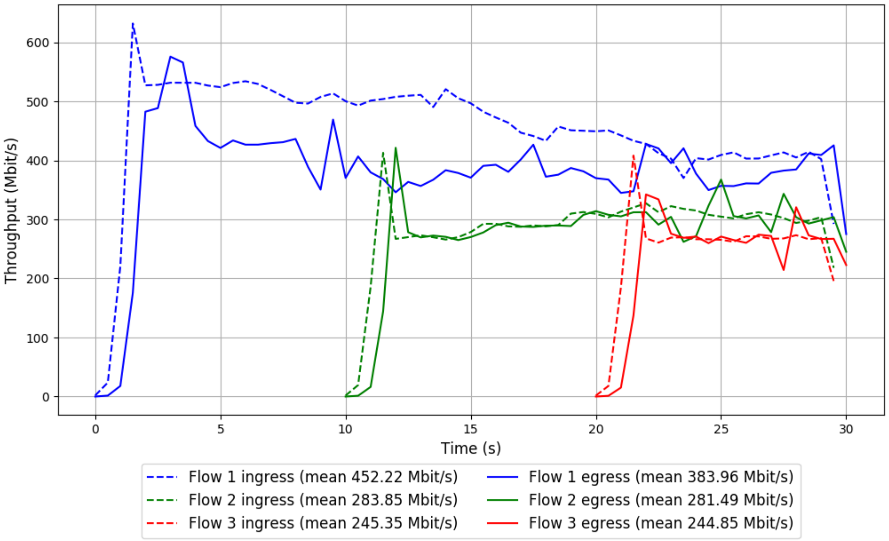
Run 4: Report of PCC-Allegro — Data Link

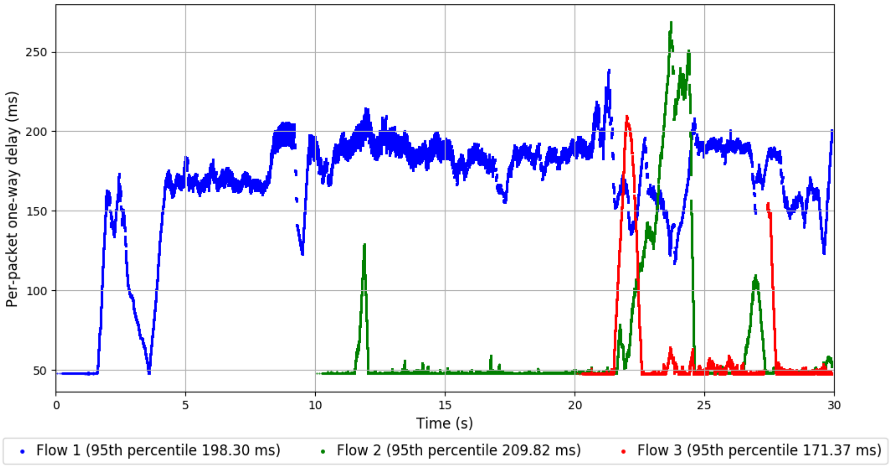




```
Run 5: Statistics of PCC-Allegro

Start at: 2019-02-06 07:20:16
End at: 2019-02-06 07:20:46
Local clock offset: -0.376 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-02-06 10:51:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 651.58 Mbit/s
95th percentile per-packet one-way delay: 197.738 ms
Loss rate: 9.70%
-- Flow 1:
Average throughput: 383.96 Mbit/s
95th percentile per-packet one-way delay: 198.304 ms
Loss rate: 15.09%
-- Flow 2:
Average throughput: 281.49 Mbit/s
95th percentile per-packet one-way delay: 209.822 ms
Loss rate: 0.82%
-- Flow 3:
Average throughput: 244.85 Mbit/s
95th percentile per-packet one-way delay: 171.365 ms
Loss rate: 0.21%
```

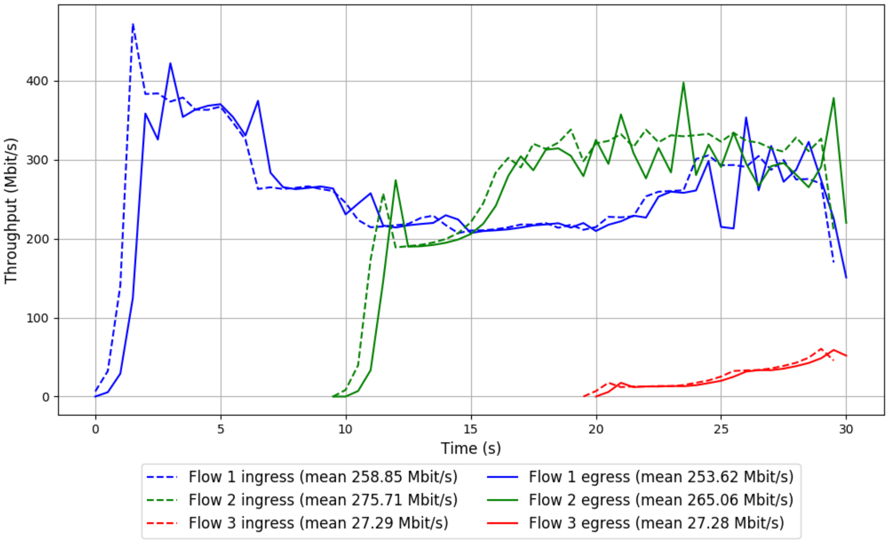
Run 5: Report of PCC-Allegro — Data Link

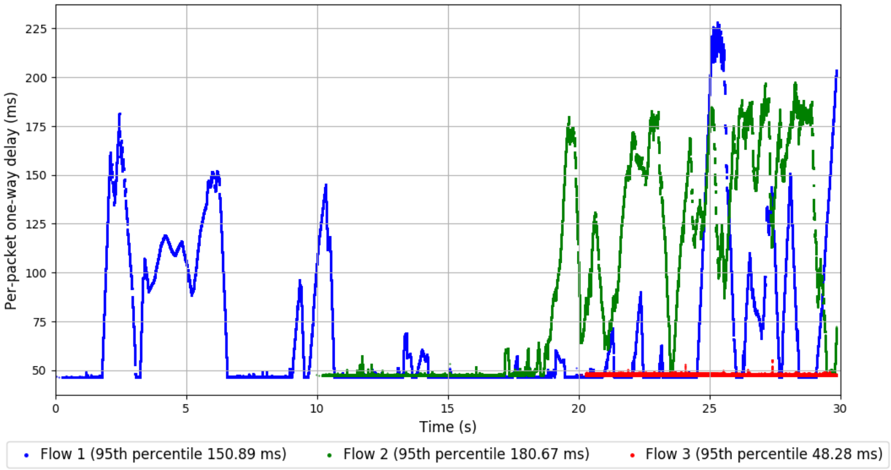




```
Run 1: Statistics of PCC-Expr

Start at: 2019-02-06 05:18:43
End at: 2019-02-06 05:19:13
Local clock offset: 0.056 ms
Remote clock offset: -0.093 ms

# Below is generated by plot.py at 2019-02-06 10:51:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.36 Mbit/s
95th percentile per-packet one-way delay: 176.287 ms
Loss rate: 2.73%
-- Flow 1:
Average throughput: 253.62 Mbit/s
95th percentile per-packet one-way delay: 150.886 ms
Loss rate: 2.02%
-- Flow 2:
Average throughput: 265.06 Mbit/s
95th percentile per-packet one-way delay: 180.669 ms
Loss rate: 3.86%
-- Flow 3:
Average throughput: 27.28 Mbit/s
95th percentile per-packet one-way delay: 48.285 ms
Loss rate: 0.01%
```

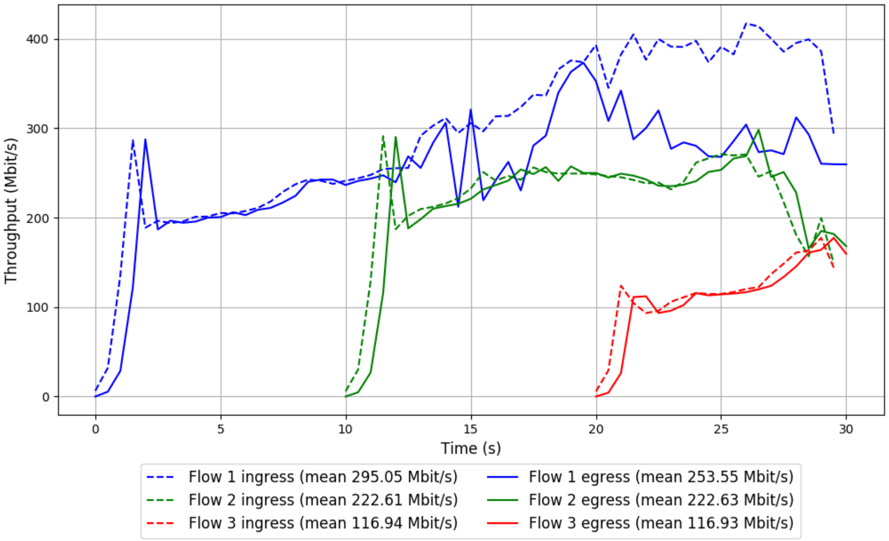
Run 1: Report of PCC-Expr — Data Link

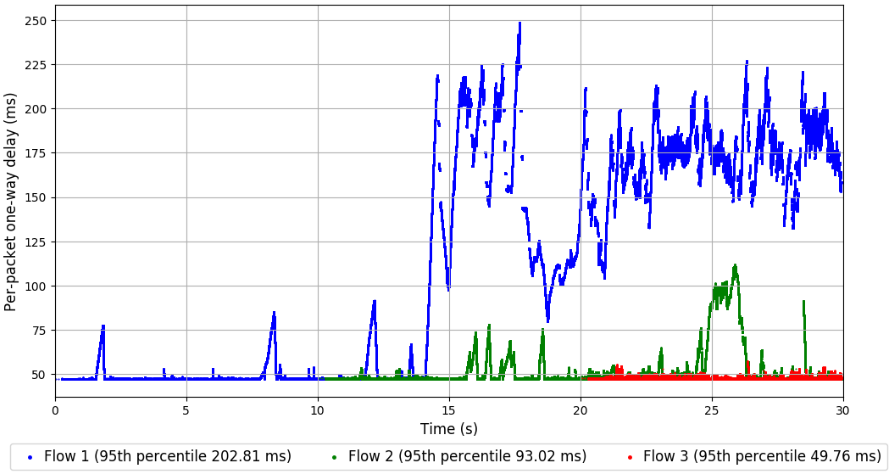




```
Run 2: Statistics of PCC-Expr

Start at: 2019-02-06 05:55:36
End at: 2019-02-06 05:56:06
Local clock offset: 0.041 ms
Remote clock offset: -0.068 ms

# Below is generated by plot.py at 2019-02-06 10:51:07
# Datalink statistics
-- Total of 3 flows:
Average throughput: 440.12 Mbit/s
95th percentile per-packet one-way delay: 194.274 ms
Loss rate: 8.62%
-- Flow 1:
Average throughput: 253.55 Mbit/s
95th percentile per-packet one-way delay: 202.811 ms
Loss rate: 14.07%
-- Flow 2:
Average throughput: 222.63 Mbit/s
95th percentile per-packet one-way delay: 93.016 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 116.93 Mbit/s
95th percentile per-packet one-way delay: 49.758 ms
Loss rate: 0.01%
```

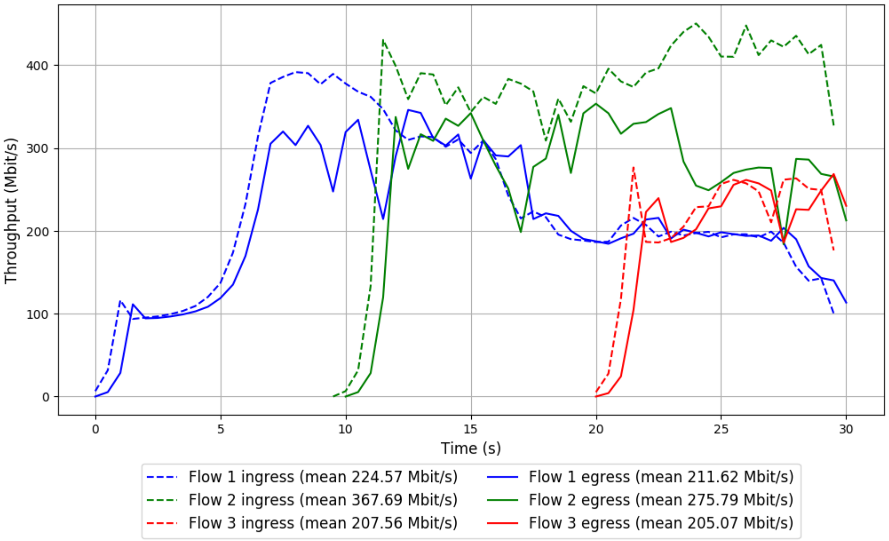
Run 2: Report of PCC-Expr — Data Link

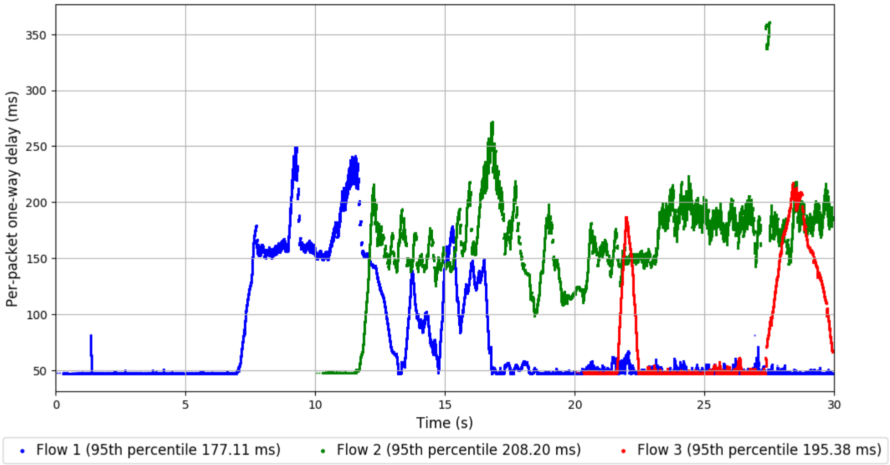




```
Run 3: Statistics of PCC-Expr

Start at: 2019-02-06 06:32:11
End at: 2019-02-06 06:32:41
Local clock offset: 0.145 ms
Remote clock offset: 0.029 ms

# Below is generated by plot.py at 2019-02-06 10:52:41
# Datalink statistics
-- Total of 3 flows:
Average throughput: 462.73 Mbit/s
95th percentile per-packet one-way delay: 201.191 ms
Loss rate: 13.94%
-- Flow 1:
Average throughput: 211.62 Mbit/s
95th percentile per-packet one-way delay: 177.109 ms
Loss rate: 5.77%
-- Flow 2:
Average throughput: 275.79 Mbit/s
95th percentile per-packet one-way delay: 208.203 ms
Loss rate: 25.00%
-- Flow 3:
Average throughput: 205.07 Mbit/s
95th percentile per-packet one-way delay: 195.375 ms
Loss rate: 1.22%
```

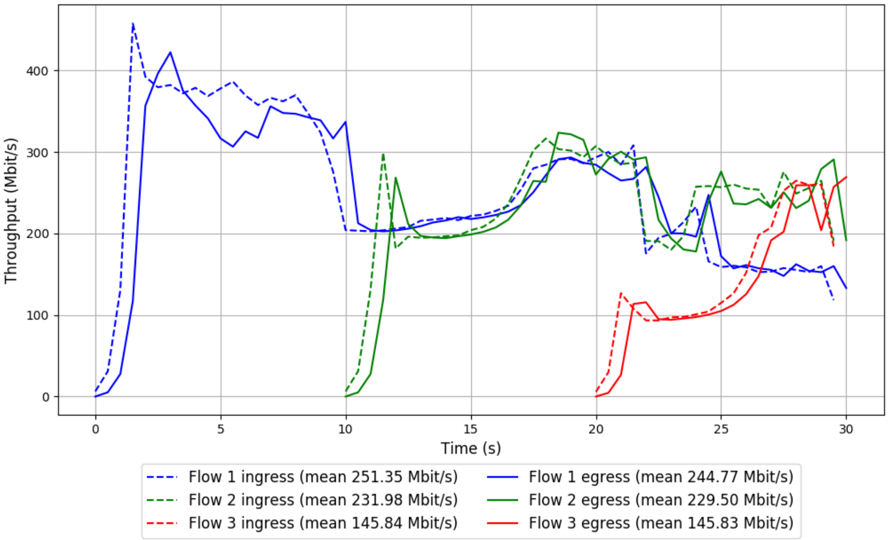
Run 3: Report of PCC-Expr — Data Link

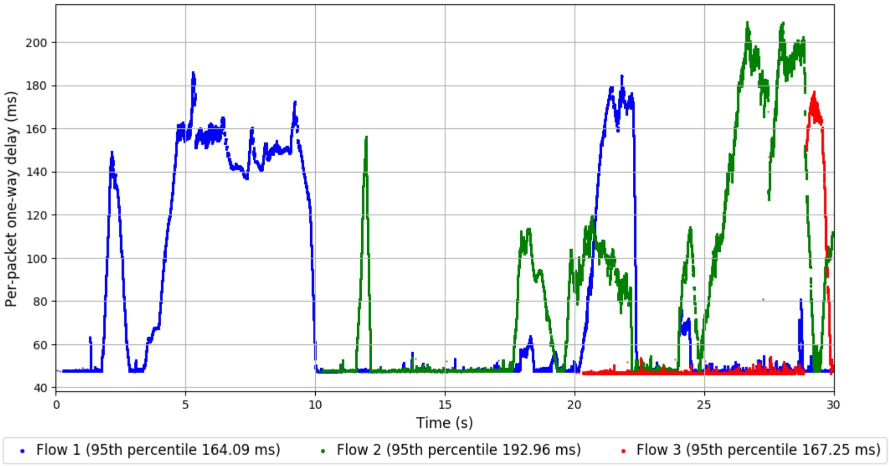




```
Run 4: Statistics of PCC-Expr

Start at: 2019-02-06 07:08:44
End at: 2019-02-06 07:09:14
Local clock offset: 0.007 ms
Remote clock offset: -0.065 ms

# Below is generated by plot.py at 2019-02-06 11:00:22
# Datalink statistics
-- Total of 3 flows:
Average throughput: 445.57 Mbit/s
95th percentile per-packet one-way delay: 174.203 ms
Loss rate: 1.81%
-- Flow 1:
Average throughput: 244.77 Mbit/s
95th percentile per-packet one-way delay: 164.085 ms
Loss rate: 2.62%
-- Flow 2:
Average throughput: 229.50 Mbit/s
95th percentile per-packet one-way delay: 192.960 ms
Loss rate: 1.07%
-- Flow 3:
Average throughput: 145.83 Mbit/s
95th percentile per-packet one-way delay: 167.247 ms
Loss rate: 0.00%
```

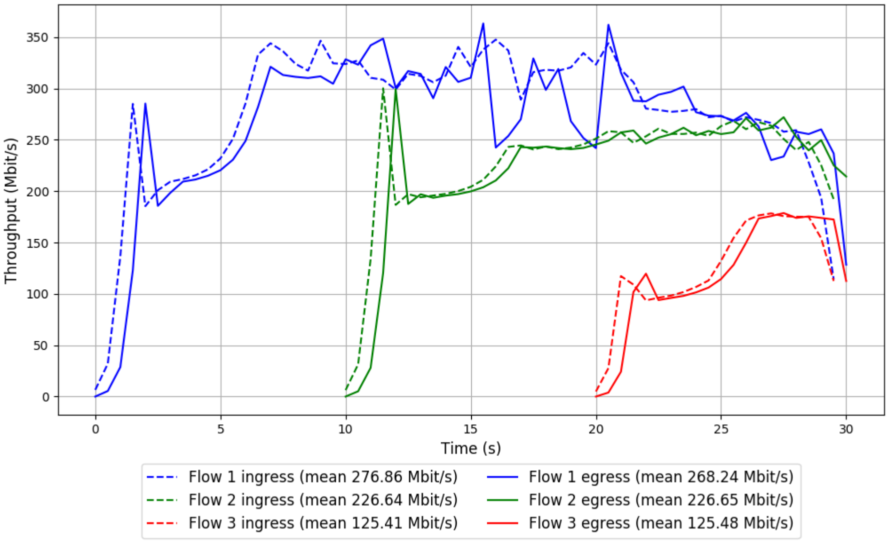
Run 4: Report of PCC-Expr — Data Link

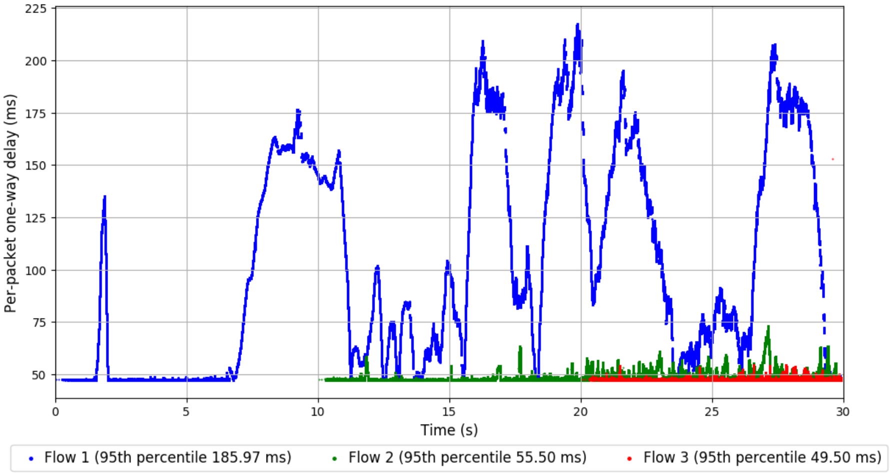




```
Run 5: Statistics of PCC-Expr

Start at: 2019-02-06 07:45:37
End at: 2019-02-06 07:46:07
Local clock offset: 0.016 ms
Remote clock offset: -0.042 ms

# Below is generated by plot.py at 2019-02-06 11:05:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 460.37 Mbit/s
95th percentile per-packet one-way delay: 180.043 ms
Loss rate: 1.84%
-- Flow 1:
Average throughput: 268.24 Mbit/s
95th percentile per-packet one-way delay: 185.974 ms
Loss rate: 3.11%
-- Flow 2:
Average throughput: 226.65 Mbit/s
95th percentile per-packet one-way delay: 55.500 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 125.48 Mbit/s
95th percentile per-packet one-way delay: 49.501 ms
Loss rate: 0.00%
```

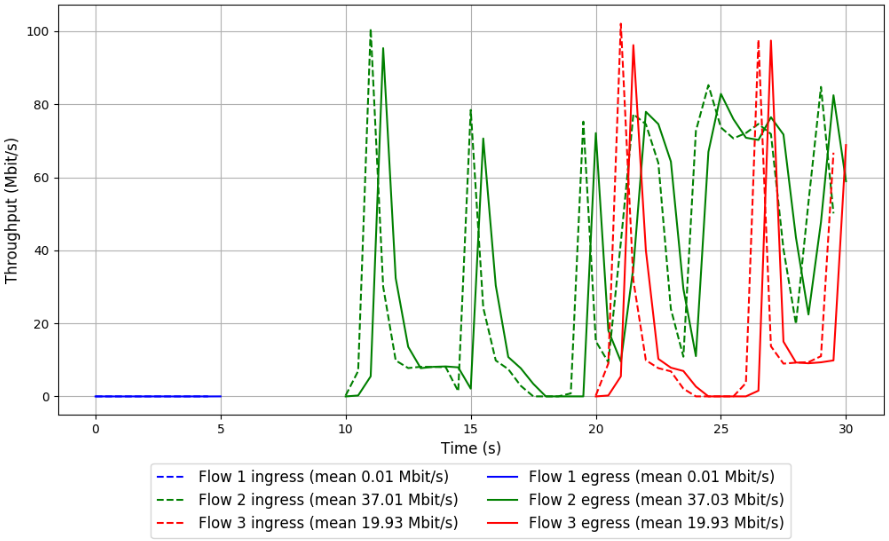
Run 5: Report of PCC-Expr — Data Link

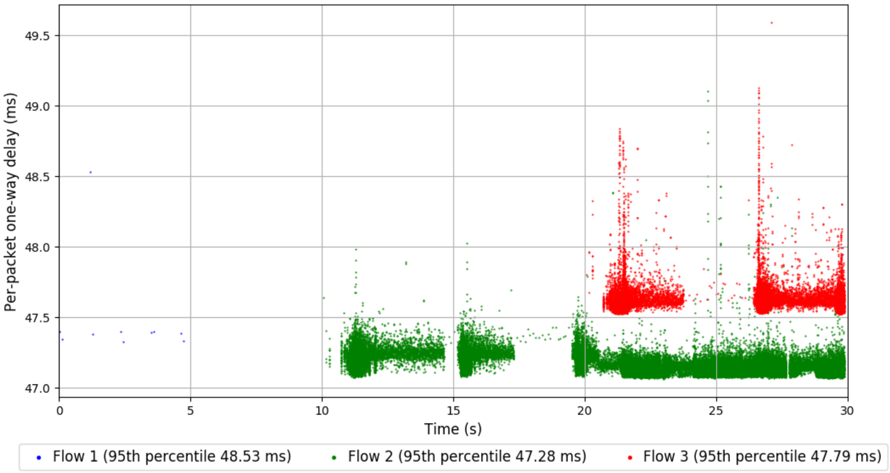




```
Run 1: Statistics of QUIC Cubic

Start at: 2019-02-06 05:09:24
End at: 2019-02-06 05:09:54
Local clock offset: -0.005 ms
Remote clock offset: -0.073 ms

# Below is generated by plot.py at 2019-02-06 11:05:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 31.14 Mbit/s
95th percentile per-packet one-way delay: 47.655 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.01 Mbit/s
95th percentile per-packet one-way delay: 48.530 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 37.03 Mbit/s
95th percentile per-packet one-way delay: 47.283 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 19.93 Mbit/s
95th percentile per-packet one-way delay: 47.788 ms
Loss rate: 0.00%
```

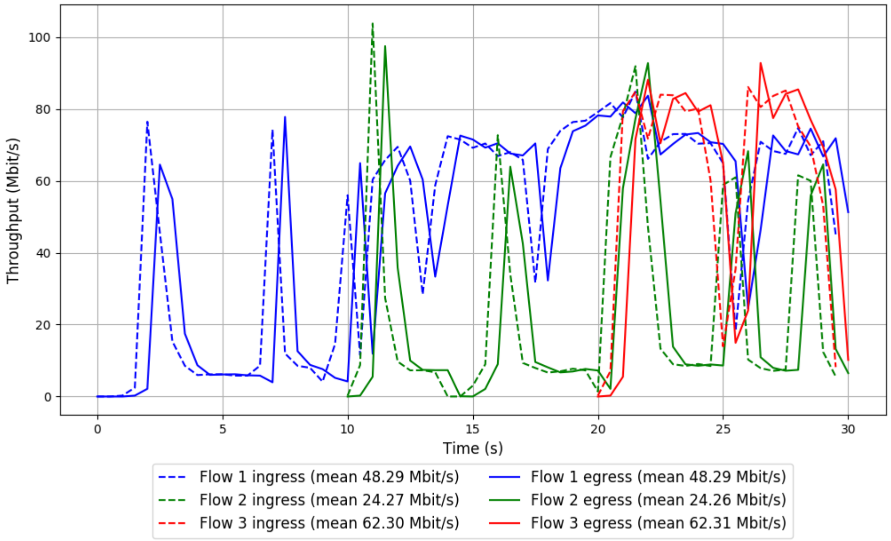
Run 1: Report of QUIC Cubic — Data Link

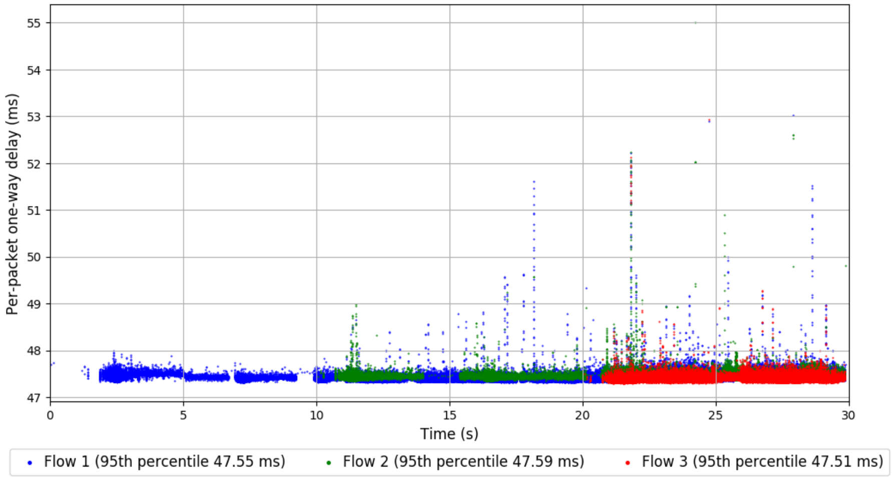




```
Run 2: Statistics of QUIC Cubic

Start at: 2019-02-06 05:45:54
End at: 2019-02-06 05:46:24
Local clock offset: 0.04 ms
Remote clock offset: 0.004 ms

# Below is generated by plot.py at 2019-02-06 11:05:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 84.89 Mbit/s
95th percentile per-packet one-way delay: 47.553 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 48.29 Mbit/s
95th percentile per-packet one-way delay: 47.550 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 24.26 Mbit/s
95th percentile per-packet one-way delay: 47.589 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 62.31 Mbit/s
95th percentile per-packet one-way delay: 47.510 ms
Loss rate: 0.00%
```

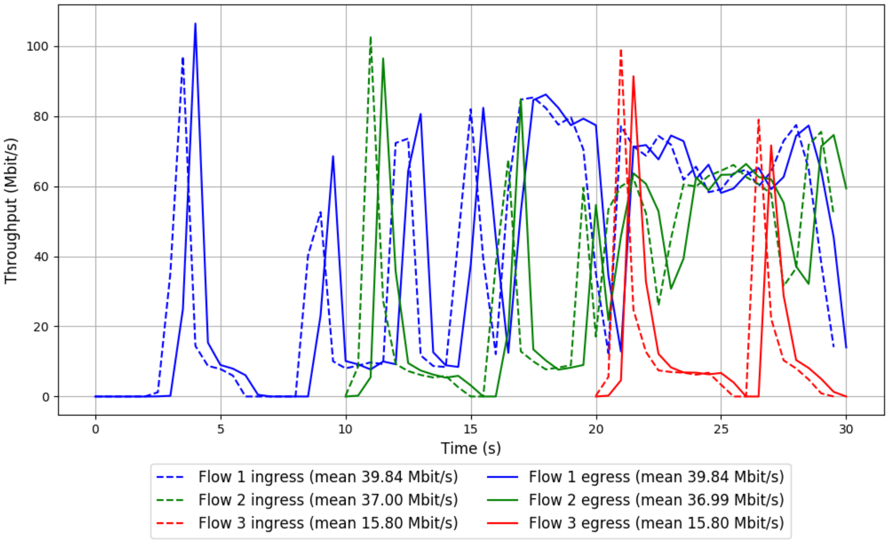
Run 2: Report of QUIC Cubic — Data Link

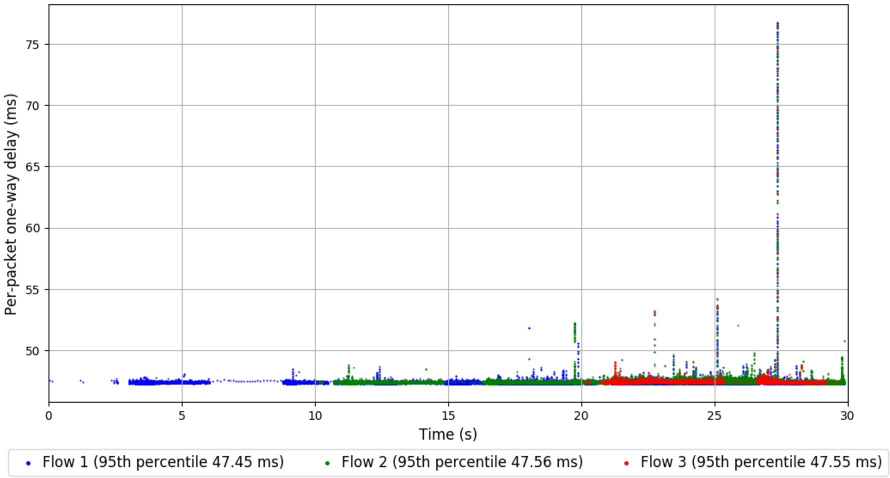




```
Run 3: Statistics of QUIC Cubic

Start at: 2019-02-06 06:22:46
End at: 2019-02-06 06:23:16
Local clock offset: 0.078 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-02-06 11:05:35
# Datalink statistics
-- Total of 3 flows:
Average throughput: 69.54 Mbit/s
95th percentile per-packet one-way delay: 47.511 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 39.84 Mbit/s
95th percentile per-packet one-way delay: 47.454 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 36.99 Mbit/s
95th percentile per-packet one-way delay: 47.559 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 15.80 Mbit/s
95th percentile per-packet one-way delay: 47.548 ms
Loss rate: 0.00%
```

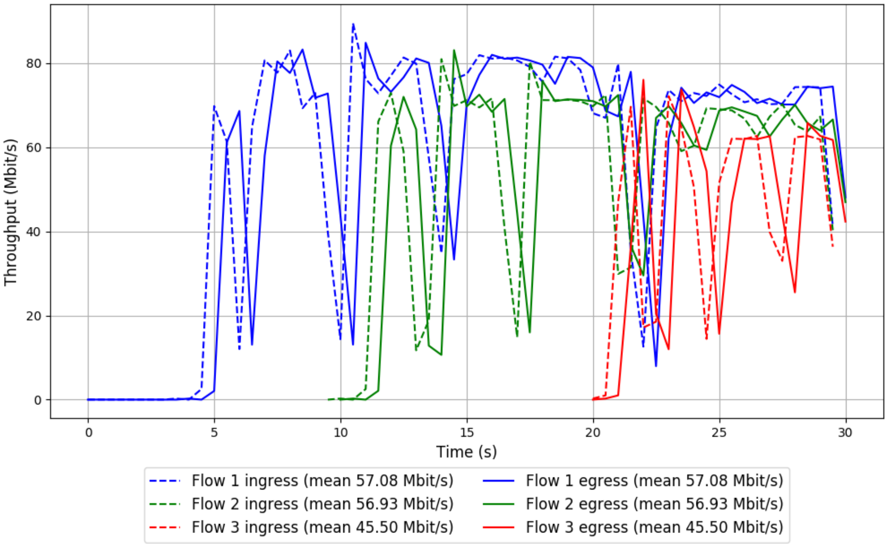
Run 3: Report of QUIC Cubic — Data Link

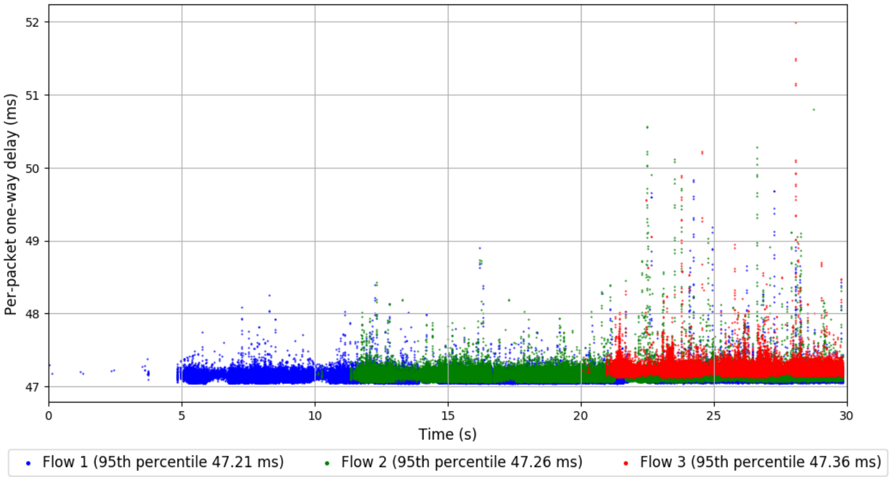




```
Run 4: Statistics of QUIC Cubic

Start at: 2019-02-06 06:59:30
End at: 2019-02-06 07:00:00
Local clock offset: 0.189 ms
Remote clock offset: 0.008 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 109.84 Mbit/s
95th percentile per-packet one-way delay: 47.275 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 57.08 Mbit/s
95th percentile per-packet one-way delay: 47.214 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 56.93 Mbit/s
95th percentile per-packet one-way delay: 47.264 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 45.50 Mbit/s
95th percentile per-packet one-way delay: 47.356 ms
Loss rate: 0.00%
```

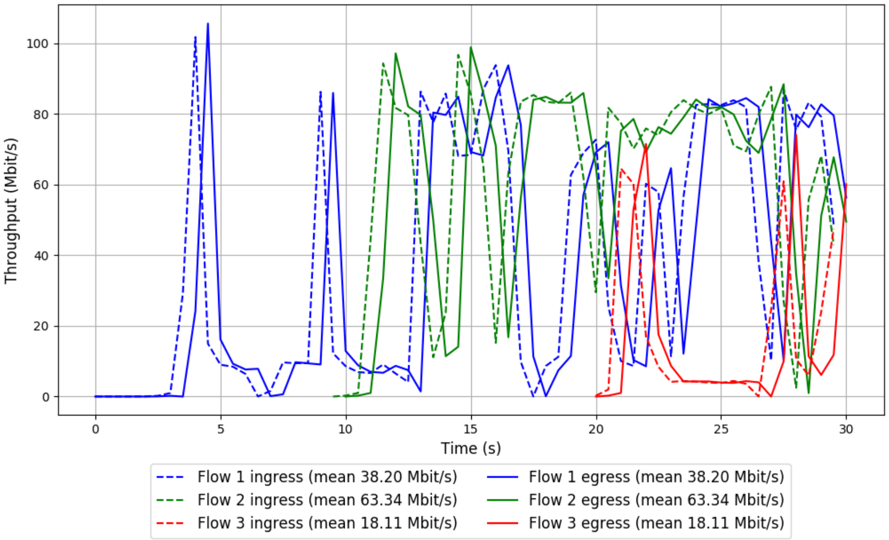
Run 4: Report of QUIC Cubic — Data Link

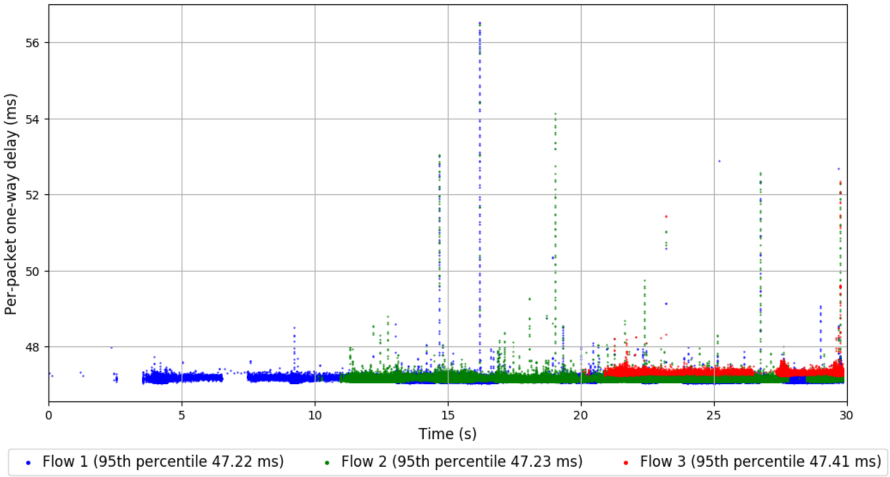




```
Run 5: Statistics of QUIC Cubic

Start at: 2019-02-06 07:36:14
End at: 2019-02-06 07:36:44
Local clock offset: -0.03 ms
Remote clock offset: -0.135 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 86.23 Mbit/s
95th percentile per-packet one-way delay: 47.309 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 38.20 Mbit/s
95th percentile per-packet one-way delay: 47.216 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 63.34 Mbit/s
95th percentile per-packet one-way delay: 47.235 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 18.11 Mbit/s
95th percentile per-packet one-way delay: 47.413 ms
Loss rate: 0.00%
```

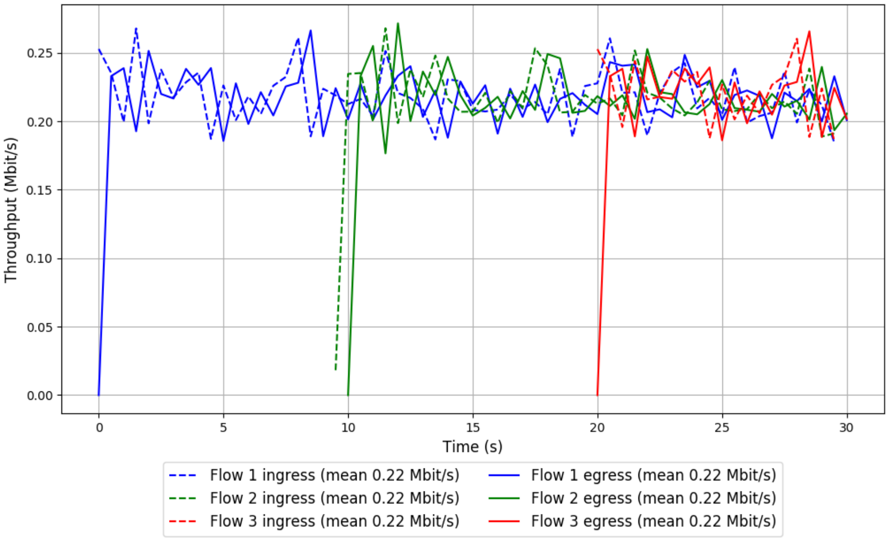
Run 5: Report of QUIC Cubic — Data Link

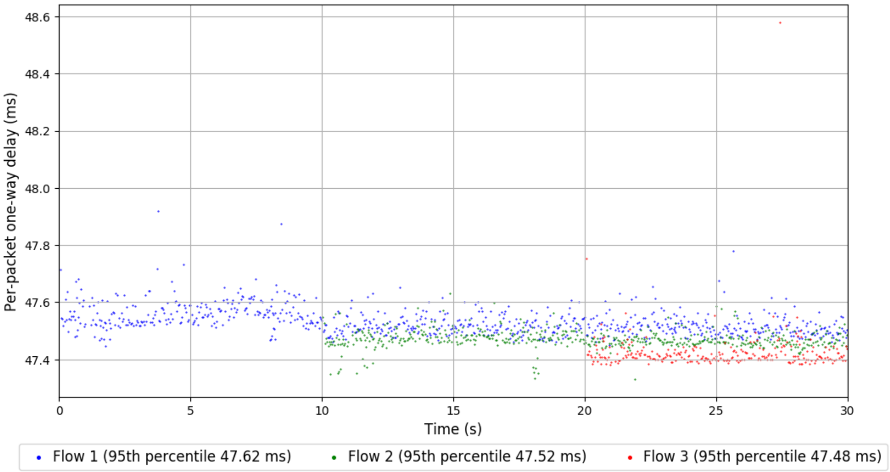




```
Run 1: Statistics of SCReAM

Start at: 2019-02-06 05:01:03
End at: 2019-02-06 05:01:33
Local clock offset: 0.009 ms
Remote clock offset: -0.049 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.600 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.619 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.524 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.481 ms
Loss rate: 0.00%
```

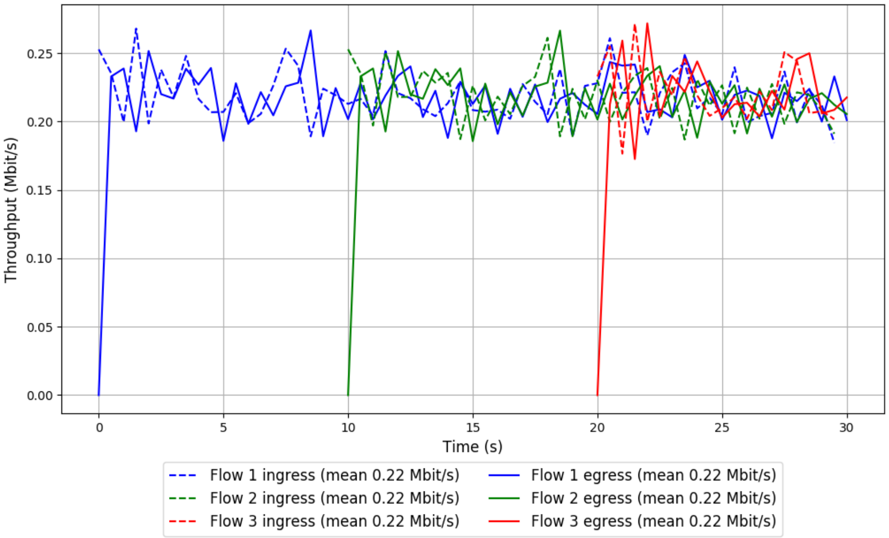
Run 1: Report of SCReAM — Data Link

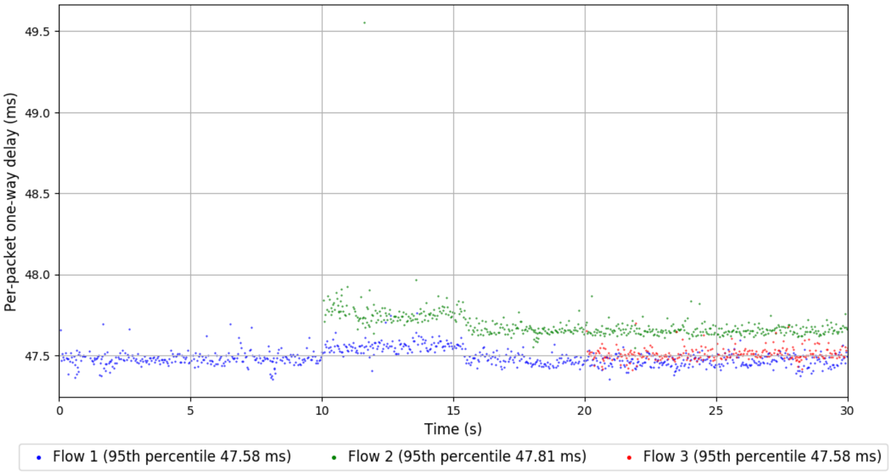




```
Run 2: Statistics of SCReAM

Start at: 2019-02-06 05:37:07
End at: 2019-02-06 05:37:37
Local clock offset: 0.058 ms
Remote clock offset: -0.083 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.757 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.580 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.807 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.579 ms
Loss rate: 0.00%
```

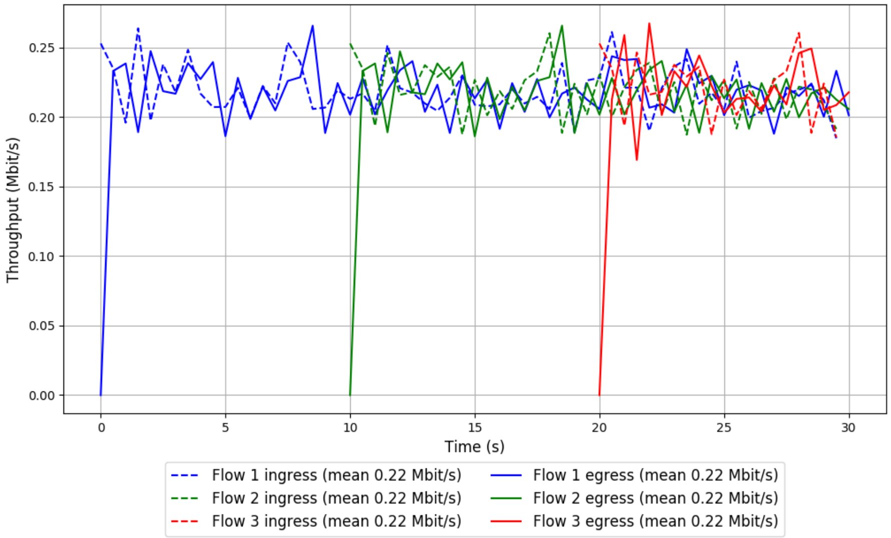
Run 2: Report of SCReAM — Data Link

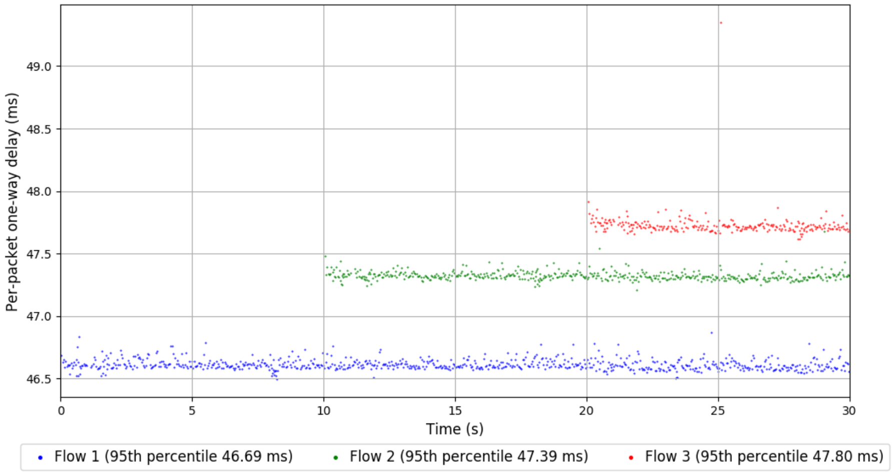




```
Run 3: Statistics of SCReAM

Start at: 2019-02-06 06:13:42
End at: 2019-02-06 06:14:12
Local clock offset: 0.039 ms
Remote clock offset: -0.001 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.734 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 46.694 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.388 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.805 ms
Loss rate: 0.00%
```

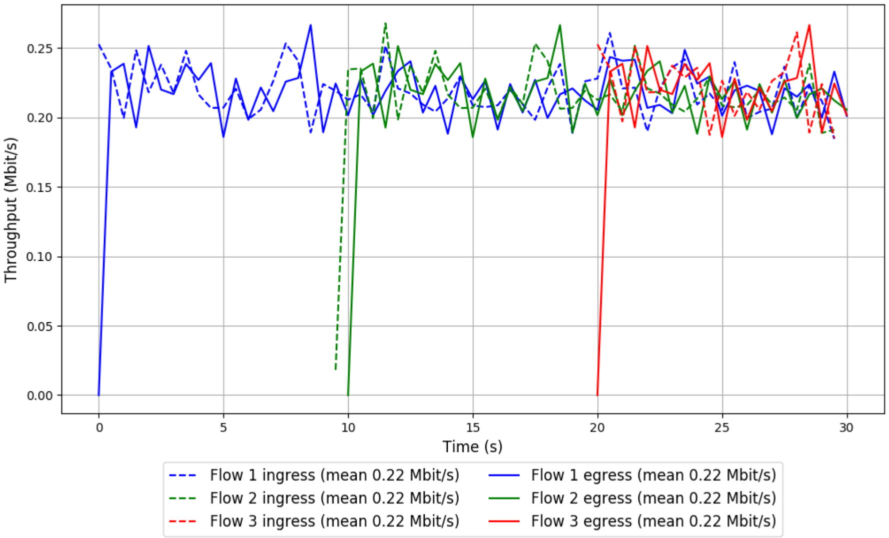
Run 3: Report of SCReAM — Data Link

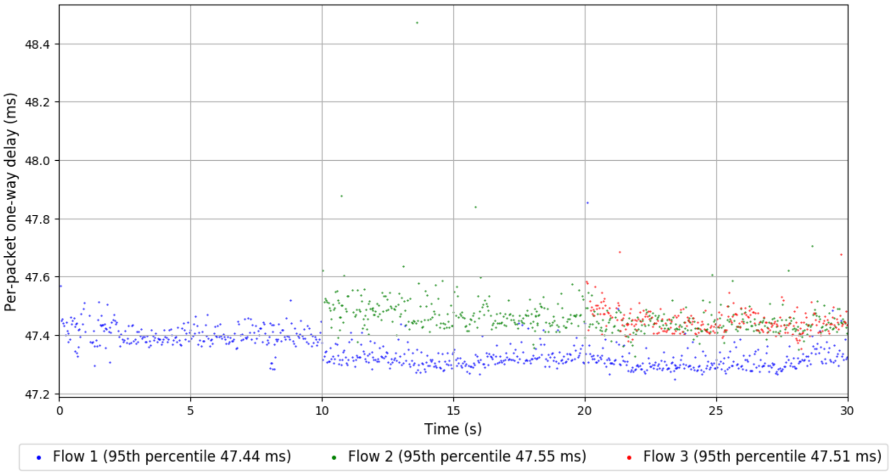




```
Run 4: Statistics of SCReAM

Start at: 2019-02-06 06:50:29
End at: 2019-02-06 06:50:59
Local clock offset: 0.036 ms
Remote clock offset: -0.031 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.513 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.441 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.545 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.513 ms
Loss rate: 0.00%
```

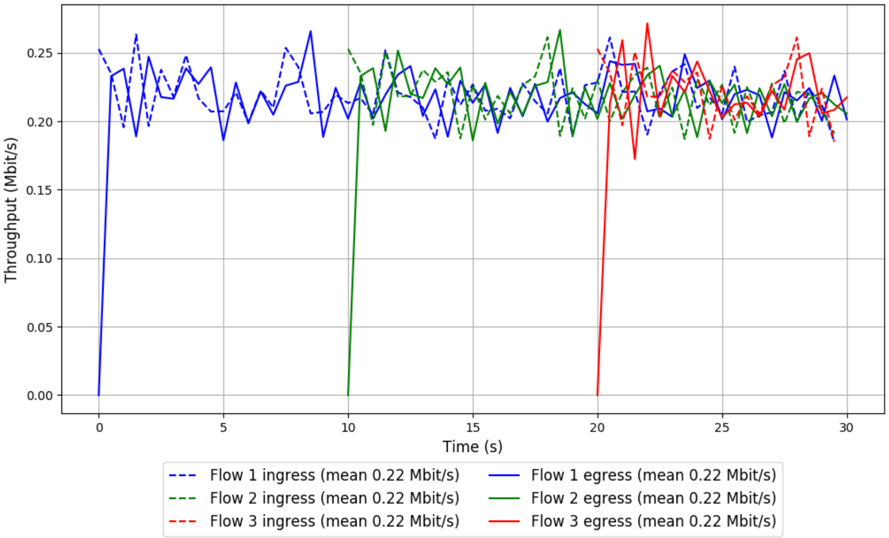
Run 4: Report of SCReAM — Data Link

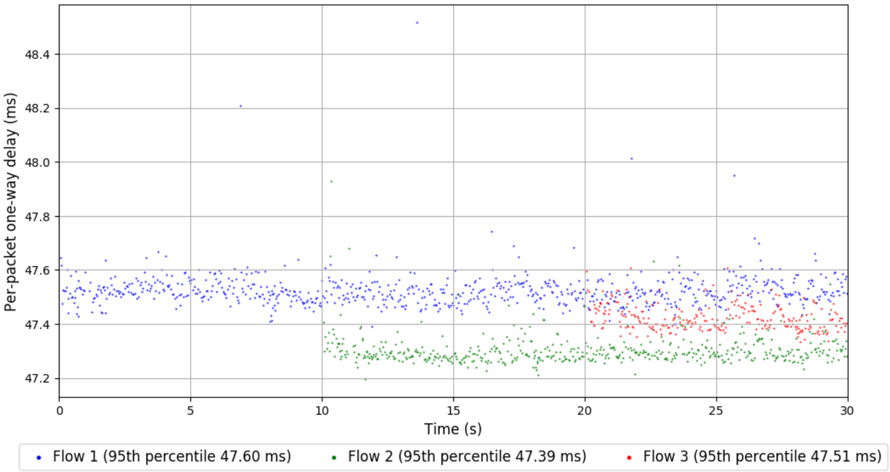




```
Run 5: Statistics of SCReAM

Start at: 2019-02-06 07:27:15
End at: 2019-02-06 07:27:45
Local clock offset: 0.02 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.44 Mbit/s
95th percentile per-packet one-way delay: 47.584 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.599 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.391 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.22 Mbit/s
95th percentile per-packet one-way delay: 47.512 ms
Loss rate: 0.00%
```

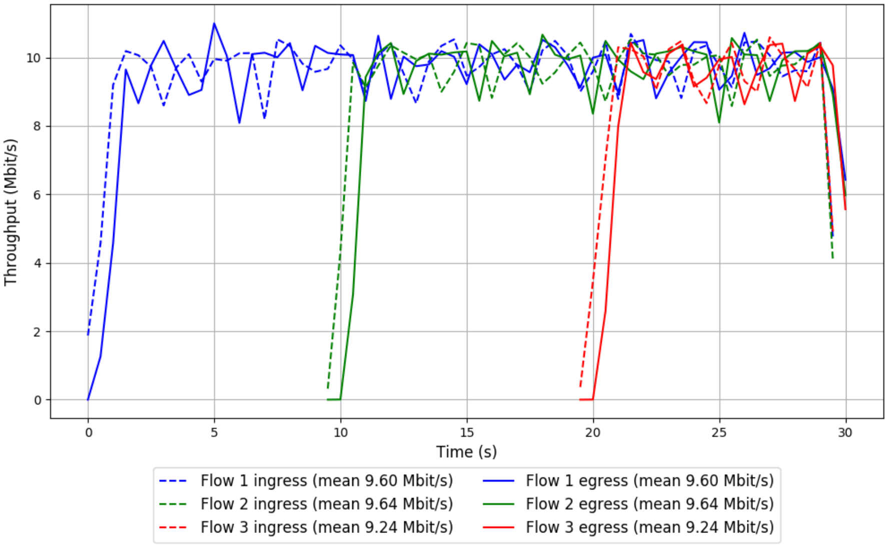
Run 5: Report of SCReAM — Data Link

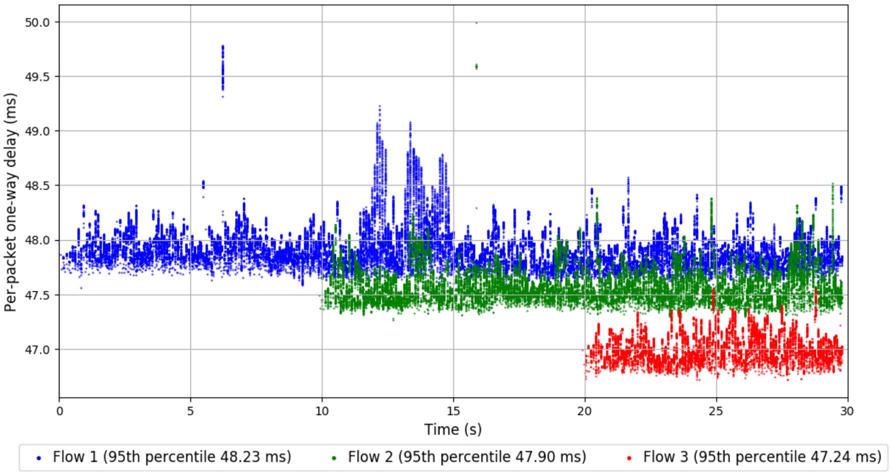




```
Run 1: Statistics of Sprout

Start at: 2019-02-06 05:14:15
End at: 2019-02-06 05:14:45
Local clock offset: -0.003 ms
Remote clock offset: -0.07 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.11 Mbit/s
95th percentile per-packet one-way delay: 48.131 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.60 Mbit/s
95th percentile per-packet one-way delay: 48.233 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.64 Mbit/s
95th percentile per-packet one-way delay: 47.897 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.24 Mbit/s
95th percentile per-packet one-way delay: 47.242 ms
Loss rate: 0.00%
```

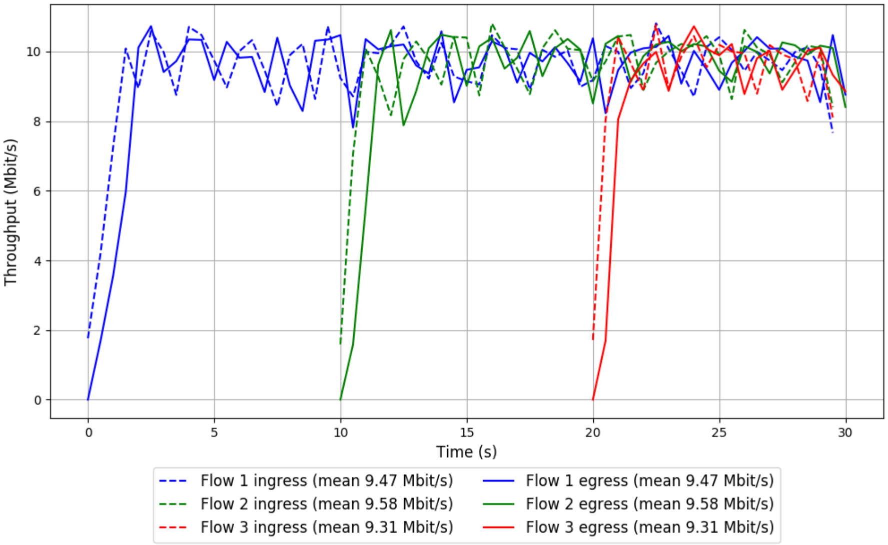
Run 1: Report of Sprout — Data Link

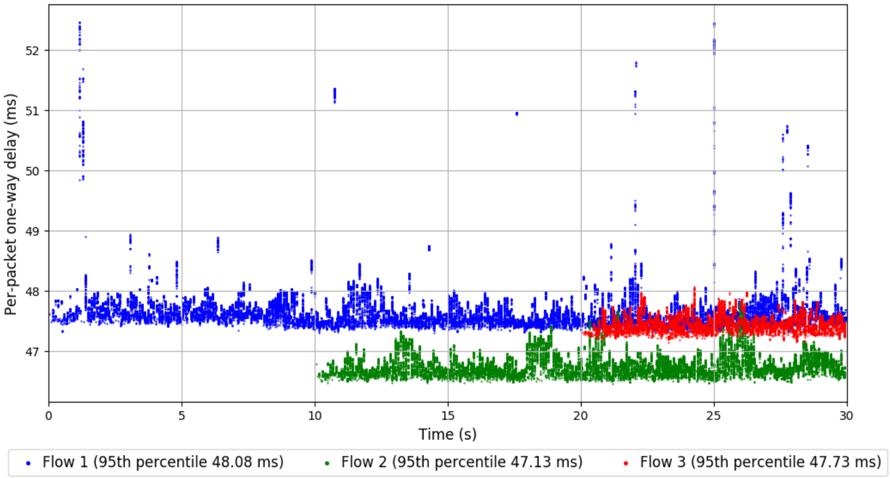




```
Run 2: Statistics of Sprout

Start at: 2019-02-06 05:51:02
End at: 2019-02-06 05:51:32
Local clock offset: 0.031 ms
Remote clock offset: -0.071 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.91 Mbit/s
95th percentile per-packet one-way delay: 47.916 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.47 Mbit/s
95th percentile per-packet one-way delay: 48.078 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 47.131 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.31 Mbit/s
95th percentile per-packet one-way delay: 47.726 ms
Loss rate: 0.00%
```

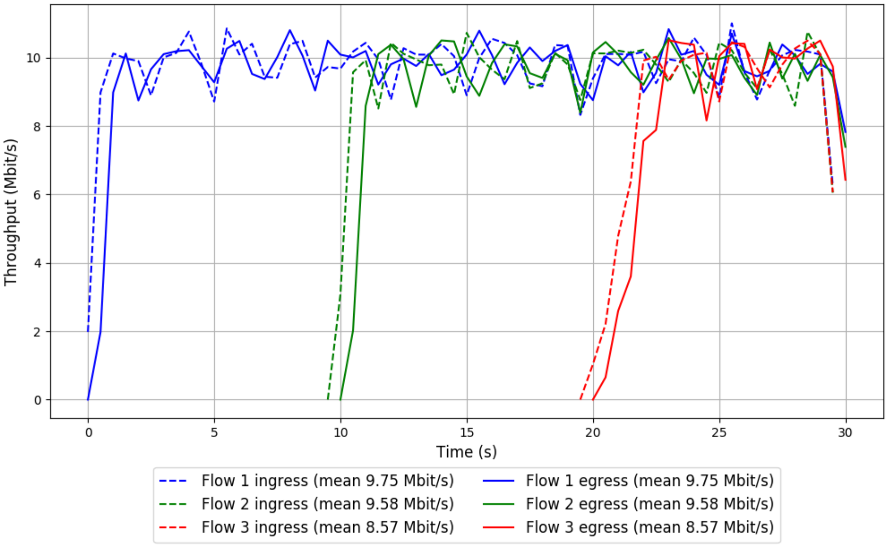
Run 2: Report of Sprout — Data Link

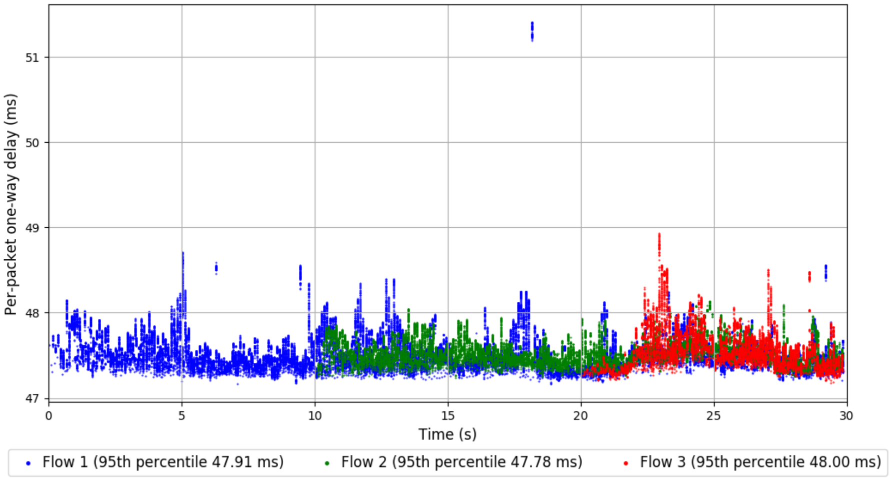




```
Run 3: Statistics of Sprout

Start at: 2019-02-06 06:27:52
End at: 2019-02-06 06:28:22
Local clock offset: 0.084 ms
Remote clock offset: 0.033 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 18.95 Mbit/s
95th percentile per-packet one-way delay: 47.876 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.75 Mbit/s
95th percentile per-packet one-way delay: 47.915 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.58 Mbit/s
95th percentile per-packet one-way delay: 47.783 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 8.57 Mbit/s
95th percentile per-packet one-way delay: 47.997 ms
Loss rate: 0.00%
```

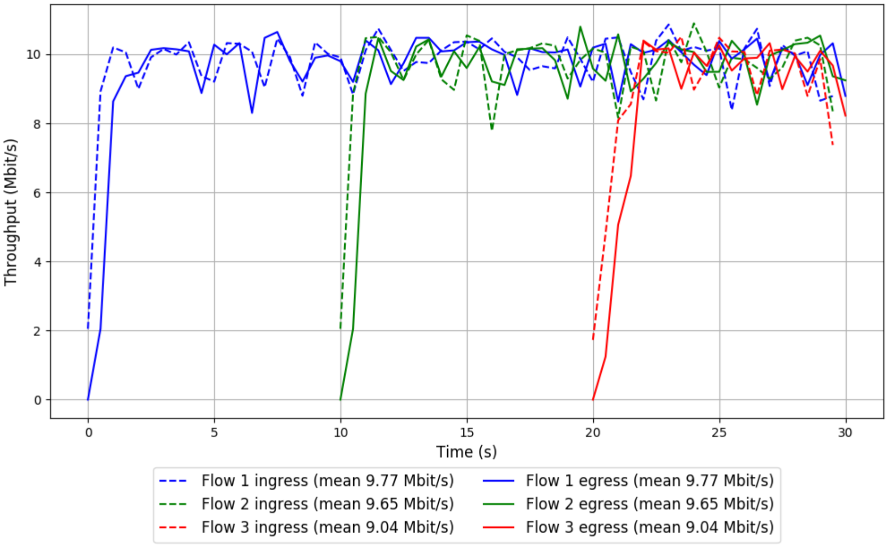
Run 3: Report of Sprout — Data Link

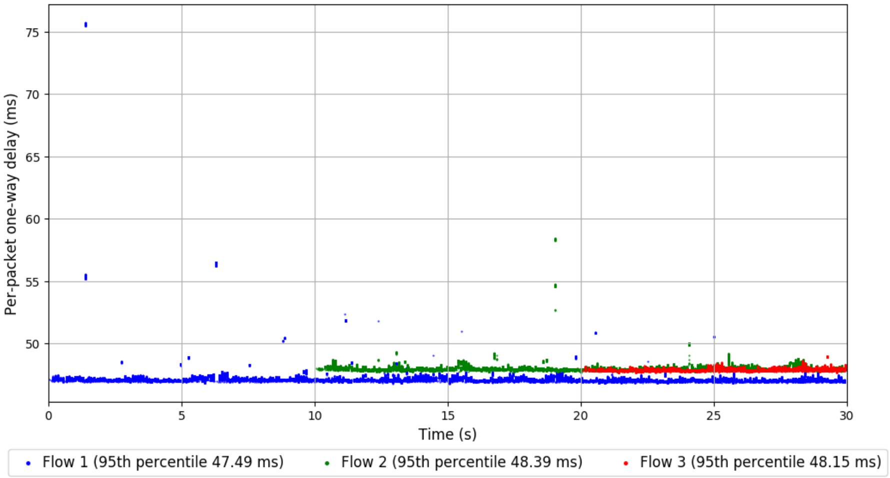




```
Run 4: Statistics of Sprout

Start at: 2019-02-06 07:04:26
End at: 2019-02-06 07:04:56
Local clock offset: -0.345 ms
Remote clock offset: -0.01 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.17 Mbit/s
95th percentile per-packet one-way delay: 48.199 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.77 Mbit/s
95th percentile per-packet one-way delay: 47.489 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.65 Mbit/s
95th percentile per-packet one-way delay: 48.386 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.04 Mbit/s
95th percentile per-packet one-way delay: 48.153 ms
Loss rate: 0.00%
```

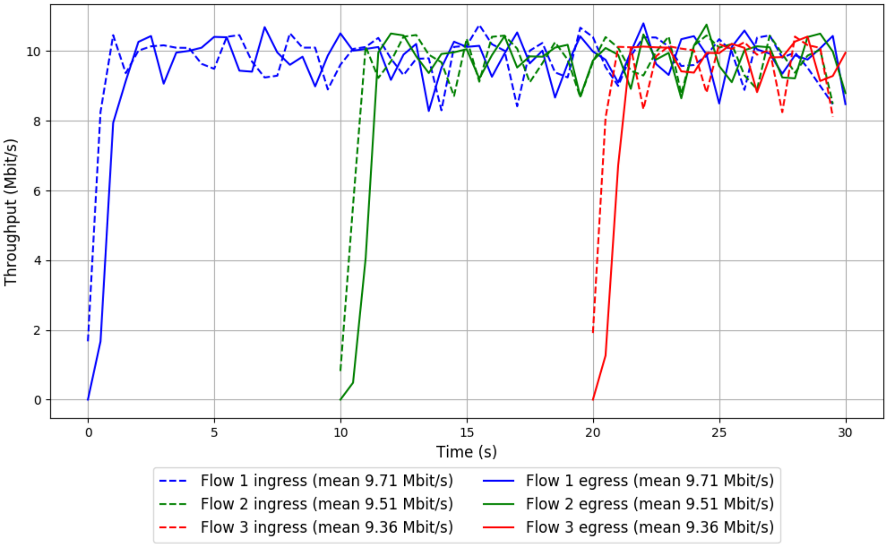
Run 4: Report of Sprout — Data Link

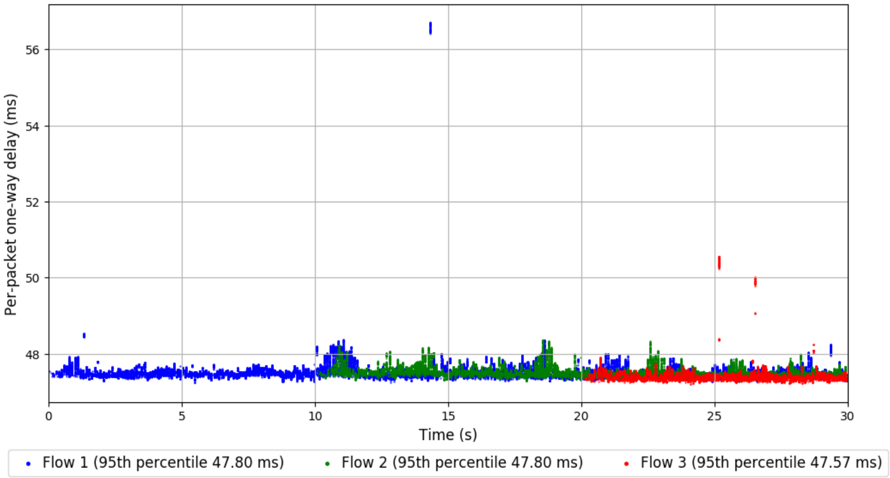




```
Run 5: Statistics of Sprout

Start at: 2019-02-06 07:41:12
End at: 2019-02-06 07:41:42
Local clock offset: 0.02 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-02-06 11:05:36
# Datalink statistics
-- Total of 3 flows:
Average throughput: 19.11 Mbit/s
95th percentile per-packet one-way delay: 47.776 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 9.71 Mbit/s
95th percentile per-packet one-way delay: 47.799 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 9.51 Mbit/s
95th percentile per-packet one-way delay: 47.801 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 9.36 Mbit/s
95th percentile per-packet one-way delay: 47.571 ms
Loss rate: 0.00%
```

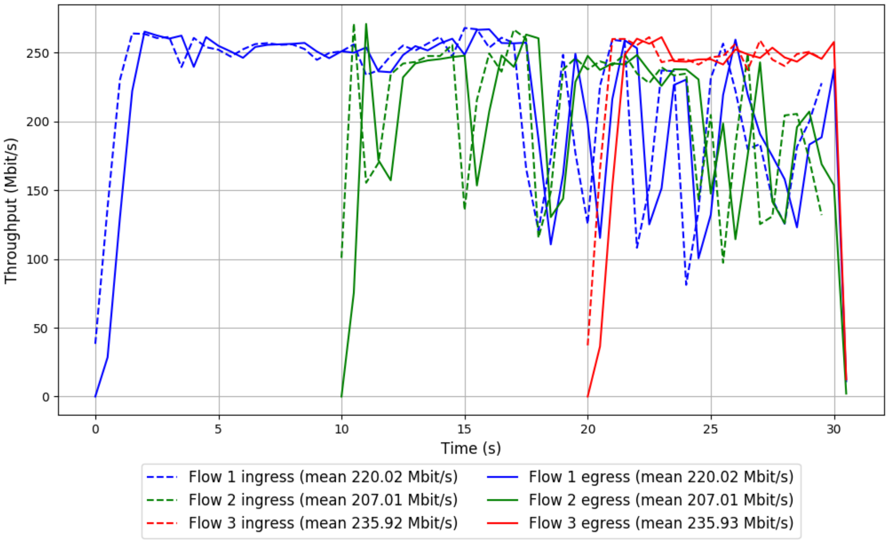
Run 5: Report of Sprout — Data Link

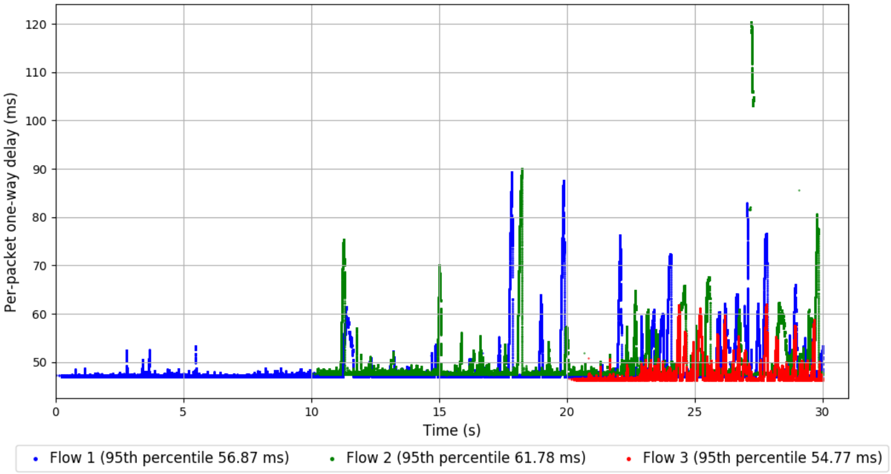




```
Run 1: Statistics of TaoVA-100x

Start at: 2019-02-06 05:26:28
End at: 2019-02-06 05:26:58
Local clock offset: 0.176 ms
Remote clock offset: -0.082 ms

# Below is generated by plot.py at 2019-02-06 11:11:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 436.13 Mbit/s
95th percentile per-packet one-way delay: 58.157 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 220.02 Mbit/s
95th percentile per-packet one-way delay: 56.874 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 207.01 Mbit/s
95th percentile per-packet one-way delay: 61.778 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 235.93 Mbit/s
95th percentile per-packet one-way delay: 54.765 ms
Loss rate: 0.00%
```

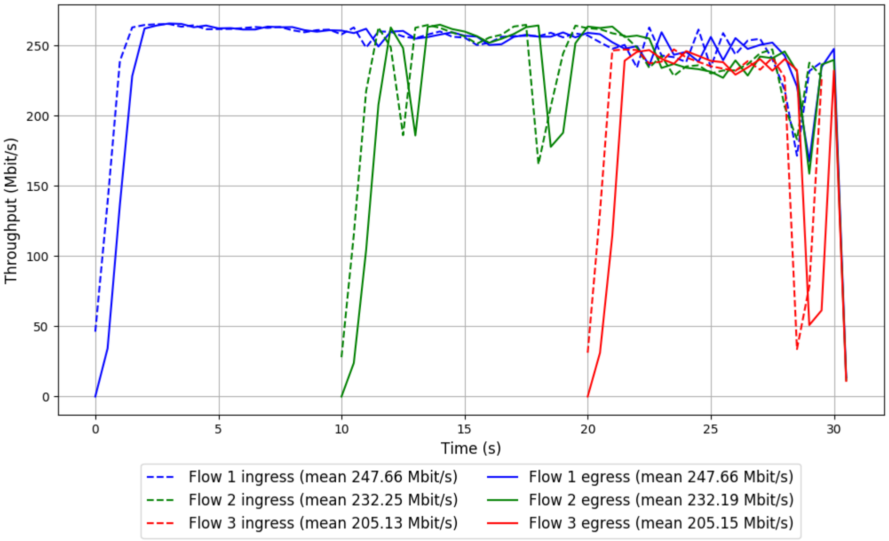
Run 1: Report of TaoVA-100x — Data Link

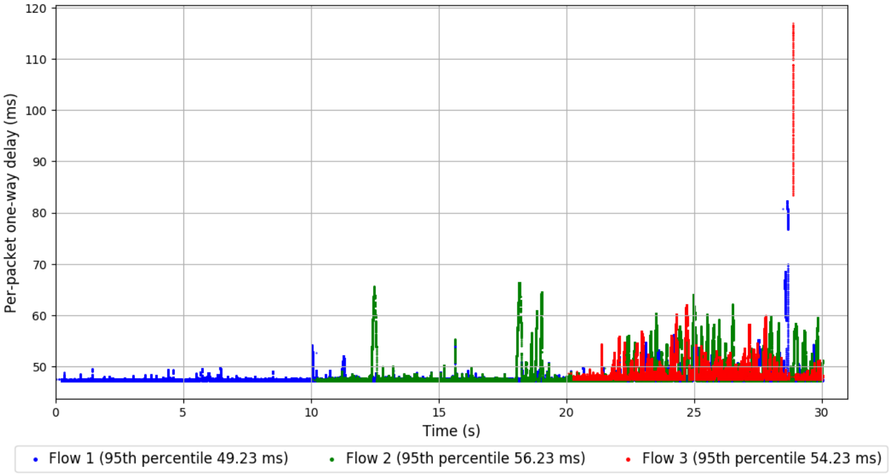




```
Run 2: Statistics of TaoVA-100x

Start at: 2019-02-06 06:03:05
End at: 2019-02-06 06:03:35
Local clock offset: 0.069 ms
Remote clock offset: -0.056 ms

# Below is generated by plot.py at 2019-02-06 11:13:13
# Datalink statistics
-- Total of 3 flows:
Average throughput: 470.44 Mbit/s
95th percentile per-packet one-way delay: 52.845 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 247.66 Mbit/s
95th percentile per-packet one-way delay: 49.225 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 232.19 Mbit/s
95th percentile per-packet one-way delay: 56.226 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 205.15 Mbit/s
95th percentile per-packet one-way delay: 54.230 ms
Loss rate: 0.01%
```

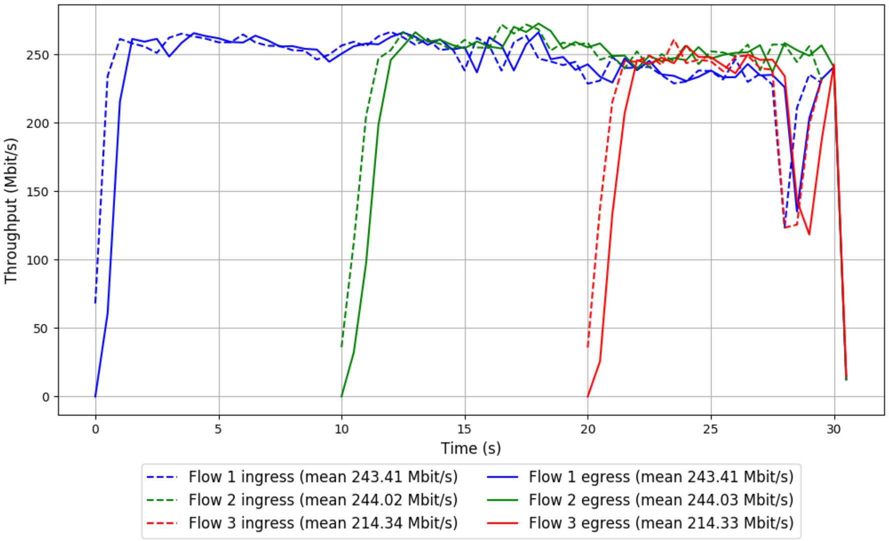
Run 2: Report of TaoVA-100x — Data Link

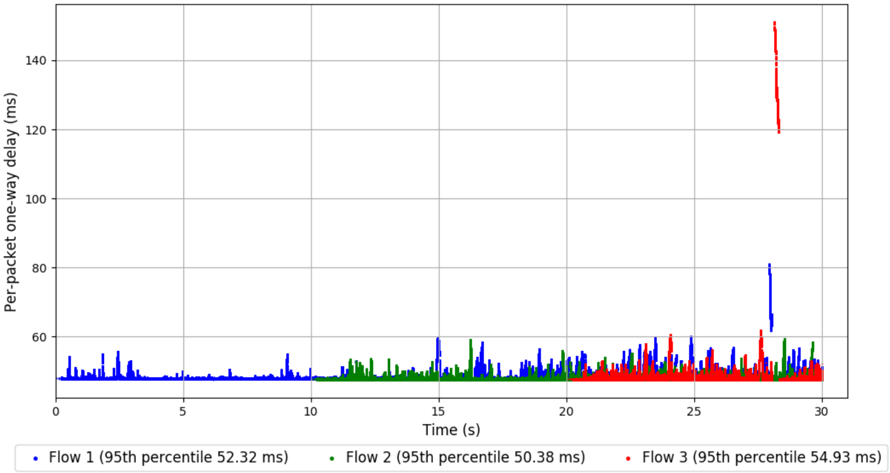




```
Run 3: Statistics of TaoVA-100x

Start at: 2019-02-06 06:39:51
End at: 2019-02-06 06:40:21
Local clock offset: -0.316 ms
Remote clock offset: 0.006 ms

# Below is generated by plot.py at 2019-02-06 11:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 477.00 Mbit/s
95th percentile per-packet one-way delay: 51.866 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 243.41 Mbit/s
95th percentile per-packet one-way delay: 52.320 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 244.03 Mbit/s
95th percentile per-packet one-way delay: 50.378 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 214.33 Mbit/s
95th percentile per-packet one-way delay: 54.930 ms
Loss rate: 0.01%
```

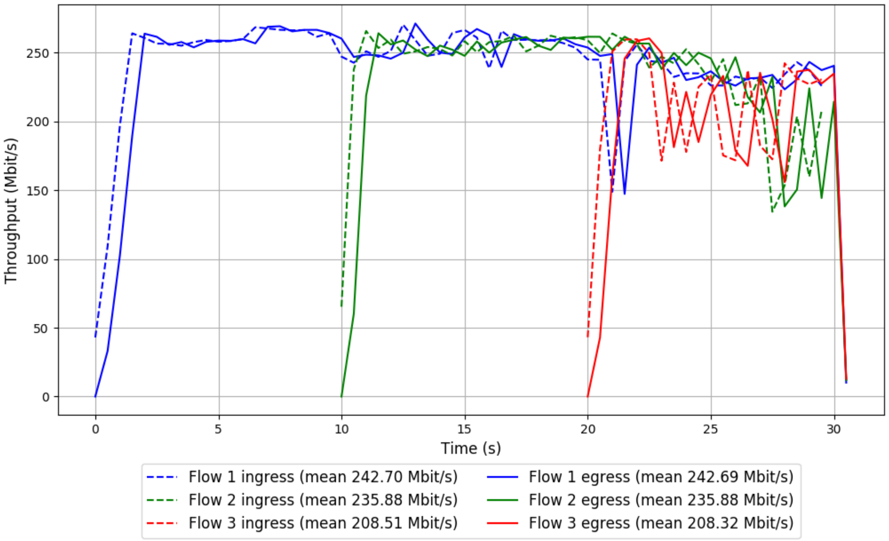
Run 3: Report of TaoVA-100x — Data Link

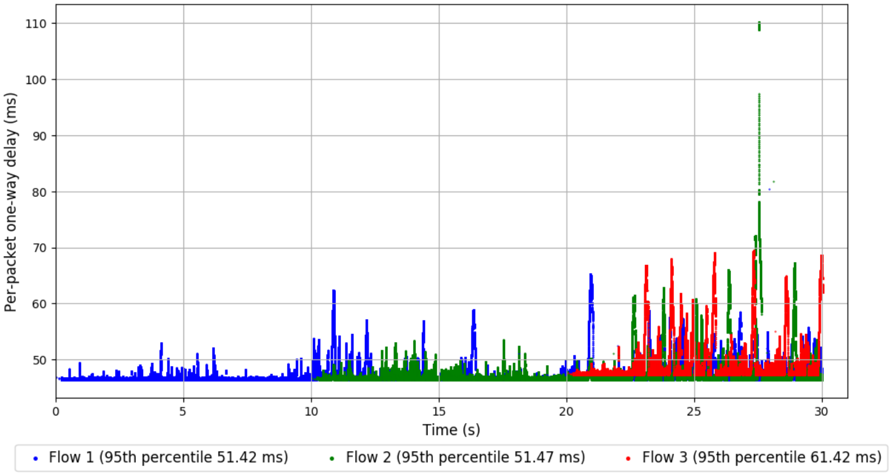




```
Run 4: Statistics of TaoVA-100x

Start at: 2019-02-06 07:16:31
End at: 2019-02-06 07:17:01
Local clock offset: 0.002 ms
Remote clock offset: -0.077 ms

# Below is generated by plot.py at 2019-02-06 11:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 468.96 Mbit/s
95th percentile per-packet one-way delay: 52.974 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 242.69 Mbit/s
95th percentile per-packet one-way delay: 51.418 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.88 Mbit/s
95th percentile per-packet one-way delay: 51.471 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 208.32 Mbit/s
95th percentile per-packet one-way delay: 61.425 ms
Loss rate: 0.07%
```

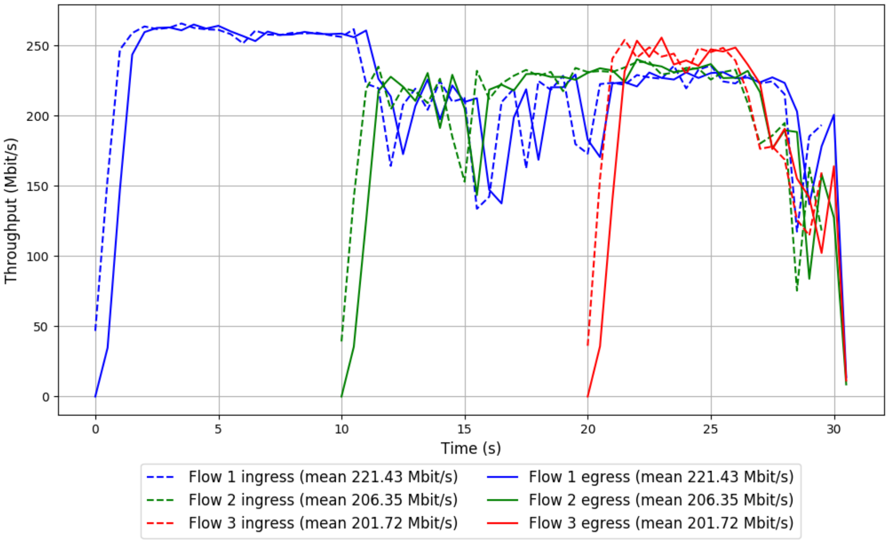
Run 4: Report of TaoVA-100x — Data Link

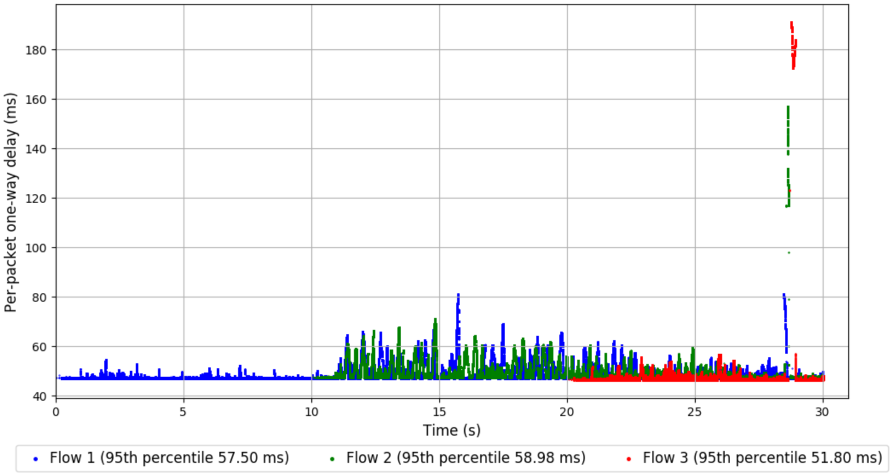




```
Run 5: Statistics of TaoVA-100x

Start at: 2019-02-06 07:52:59
End at: 2019-02-06 07:53:29
Local clock offset: 0.026 ms
Remote clock offset: -0.075 ms

# Below is generated by plot.py at 2019-02-06 11:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 425.82 Mbit/s
95th percentile per-packet one-way delay: 57.905 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 221.43 Mbit/s
95th percentile per-packet one-way delay: 57.498 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 206.35 Mbit/s
95th percentile per-packet one-way delay: 58.982 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 201.72 Mbit/s
95th percentile per-packet one-way delay: 51.799 ms
Loss rate: 0.00%
```

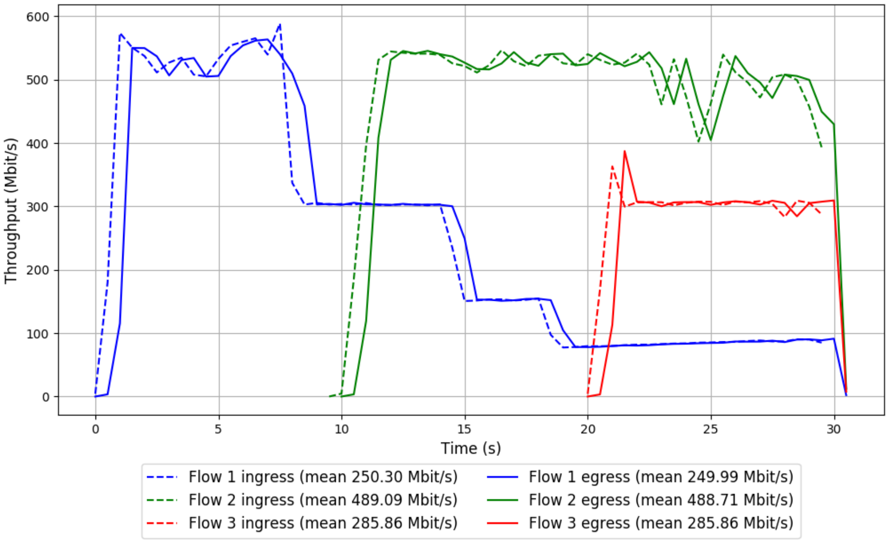
Run 5: Report of TaoVA-100x — Data Link

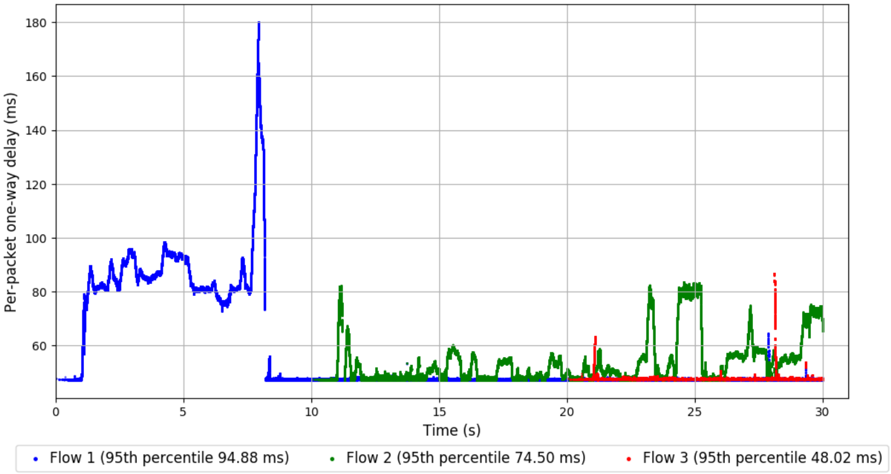




```
Run 1: Statistics of TCP Vegas

Start at: 2019-02-06 05:02:14
End at: 2019-02-06 05:02:44
Local clock offset: 0.04 ms
Remote clock offset: -0.055 ms

# Below is generated by plot.py at 2019-02-06 11:13:28
# Datalink statistics
-- Total of 3 flows:
Average throughput: 670.69 Mbit/s
95th percentile per-packet one-way delay: 91.045 ms
Loss rate: 0.08%
-- Flow 1:
Average throughput: 249.99 Mbit/s
95th percentile per-packet one-way delay: 94.876 ms
Loss rate: 0.12%
-- Flow 2:
Average throughput: 488.71 Mbit/s
95th percentile per-packet one-way delay: 74.501 ms
Loss rate: 0.07%
-- Flow 3:
Average throughput: 285.86 Mbit/s
95th percentile per-packet one-way delay: 48.023 ms
Loss rate: 0.00%
```

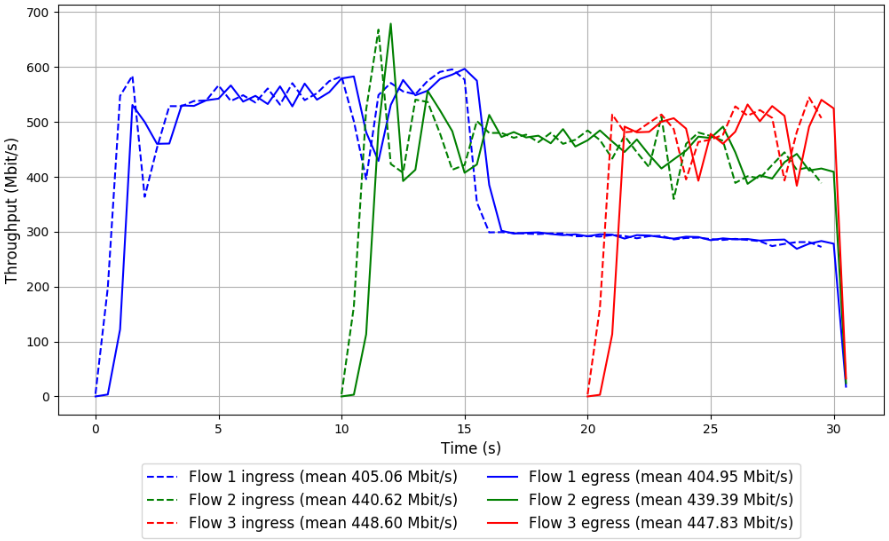
Run 1: Report of TCP Vegas — Data Link

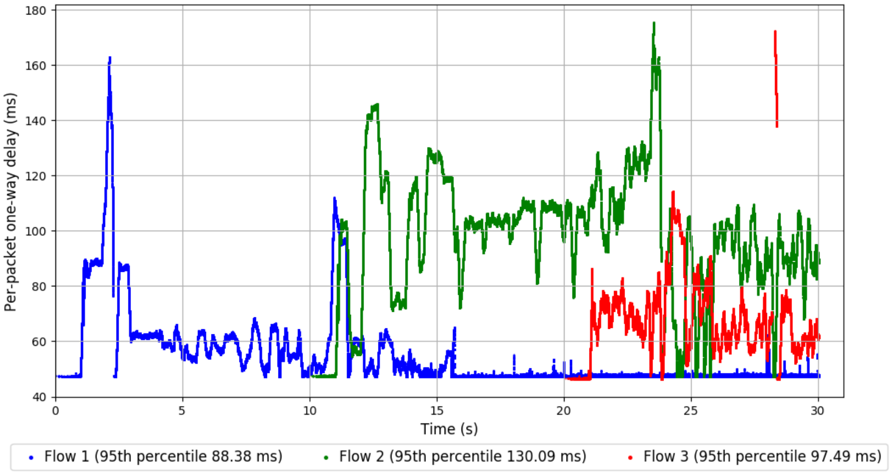




```
Run 2: Statistics of TCP Vegas

Start at: 2019-02-06 05:38:18
End at: 2019-02-06 05:38:48
Local clock offset: 0.058 ms
Remote clock offset: -0.11 ms

# Below is generated by plot.py at 2019-02-06 11:22:06
# Datalink statistics
-- Total of 3 flows:
Average throughput: 846.46 Mbit/s
95th percentile per-packet one-way delay: 121.631 ms
Loss rate: 0.14%
-- Flow 1:
Average throughput: 404.95 Mbit/s
95th percentile per-packet one-way delay: 88.375 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 439.39 Mbit/s
95th percentile per-packet one-way delay: 130.087 ms
Loss rate: 0.28%
-- Flow 3:
Average throughput: 447.83 Mbit/s
95th percentile per-packet one-way delay: 97.492 ms
Loss rate: 0.17%
```

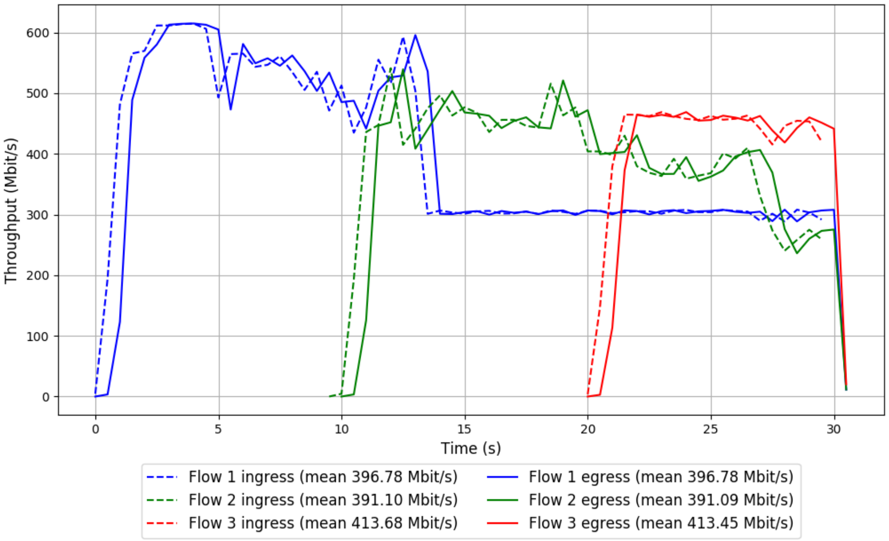
Run 2: Report of TCP Vegas — Data Link

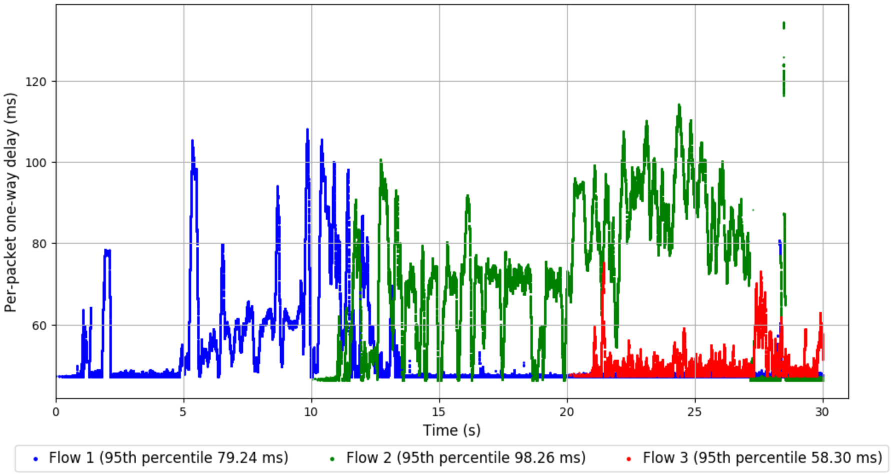




```
Run 3: Statistics of TCP Vegas

Start at: 2019-02-06 06:14:53
End at: 2019-02-06 06:15:23
Local clock offset: 0.085 ms
Remote clock offset: -0.014 ms

# Below is generated by plot.py at 2019-02-06 11:26:51
# Datalink statistics
-- Total of 3 flows:
Average throughput: 794.72 Mbit/s
95th percentile per-packet one-way delay: 92.928 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 396.78 Mbit/s
95th percentile per-packet one-way delay: 79.244 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 391.09 Mbit/s
95th percentile per-packet one-way delay: 98.256 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 413.45 Mbit/s
95th percentile per-packet one-way delay: 58.304 ms
Loss rate: 0.06%
```

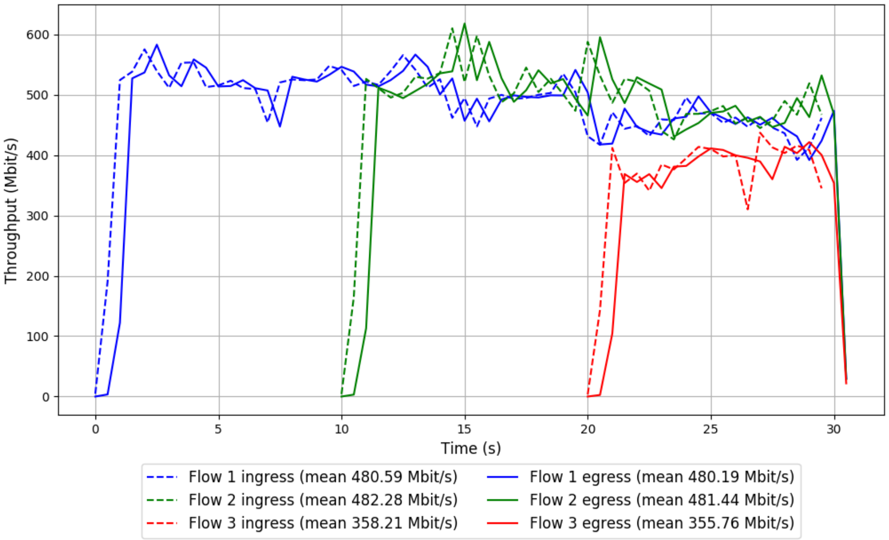
Run 3: Report of TCP Vegas — Data Link

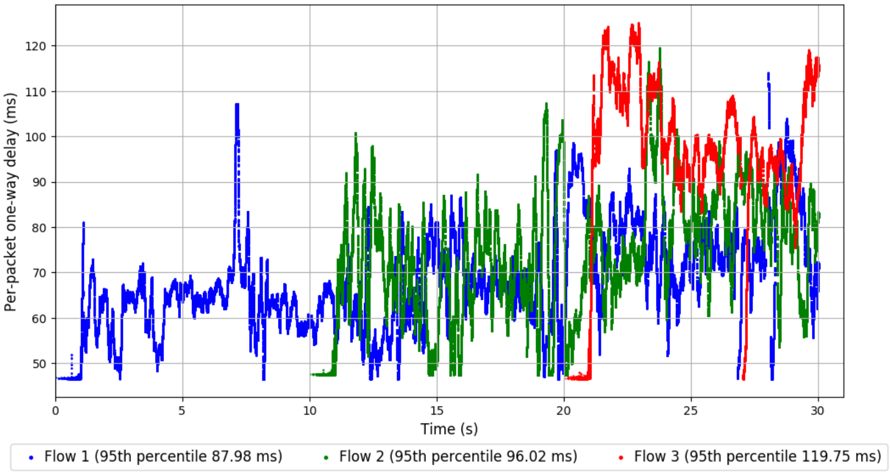




```
Run 4: Statistics of TCP Vegas

Start at: 2019-02-06 06:51:40
End at: 2019-02-06 06:52:10
Local clock offset: 0.022 ms
Remote clock offset: 0.019 ms

# Below is generated by plot.py at 2019-02-06 11:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 918.99 Mbit/s
95th percentile per-packet one-way delay: 103.764 ms
Loss rate: 0.19%
-- Flow 1:
Average throughput: 480.19 Mbit/s
95th percentile per-packet one-way delay: 87.977 ms
Loss rate: 0.08%
-- Flow 2:
Average throughput: 481.44 Mbit/s
95th percentile per-packet one-way delay: 96.015 ms
Loss rate: 0.17%
-- Flow 3:
Average throughput: 355.76 Mbit/s
95th percentile per-packet one-way delay: 119.745 ms
Loss rate: 0.67%
```

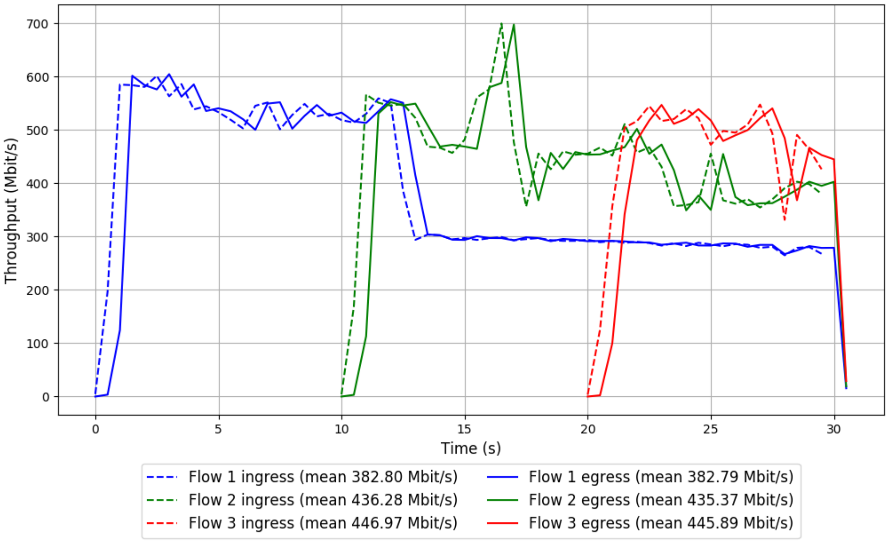
Run 4: Report of TCP Vegas — Data Link

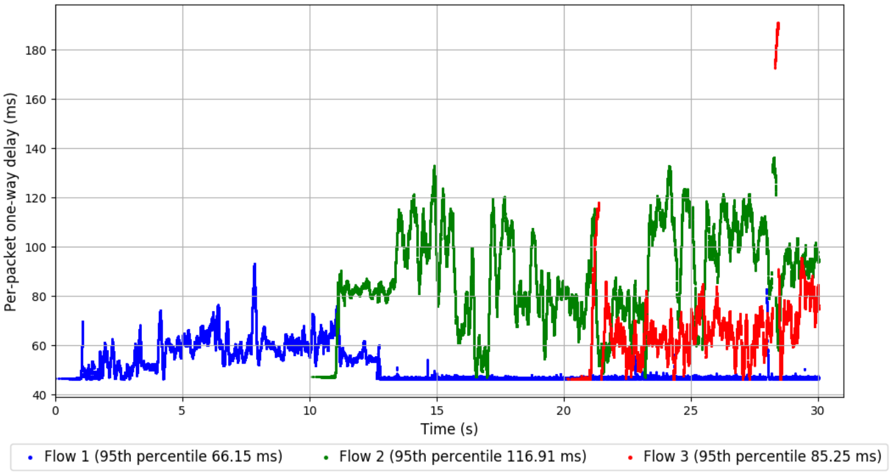




```
Run 5: Statistics of TCP Vegas

Start at: 2019-02-06 07:28:26
End at: 2019-02-06 07:28:56
Local clock offset: 0.012 ms
Remote clock offset: -0.105 ms

# Below is generated by plot.py at 2019-02-06 11:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 820.51 Mbit/s
95th percentile per-packet one-way delay: 110.776 ms
Loss rate: 0.11%
-- Flow 1:
Average throughput: 382.79 Mbit/s
95th percentile per-packet one-way delay: 66.151 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 435.37 Mbit/s
95th percentile per-packet one-way delay: 116.906 ms
Loss rate: 0.20%
-- Flow 3:
Average throughput: 445.89 Mbit/s
95th percentile per-packet one-way delay: 85.248 ms
Loss rate: 0.23%
```

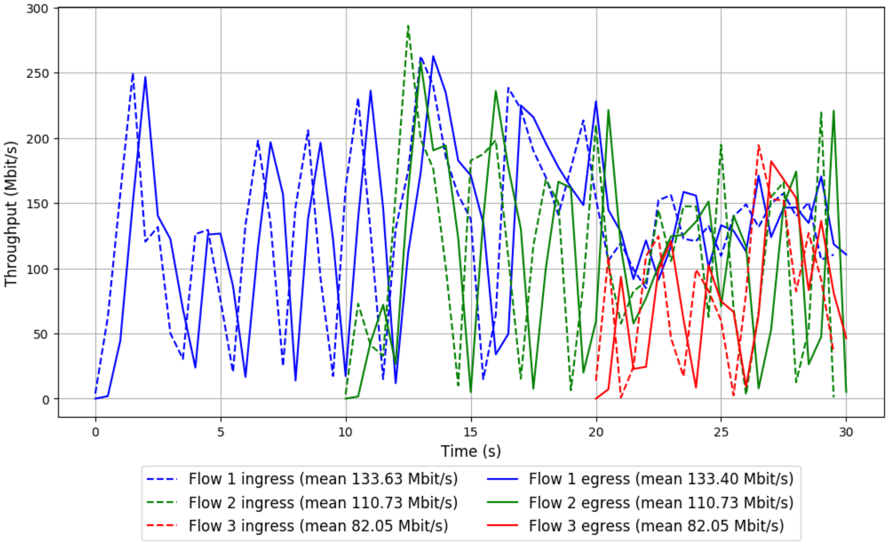
Run 5: Report of TCP Vegas — Data Link

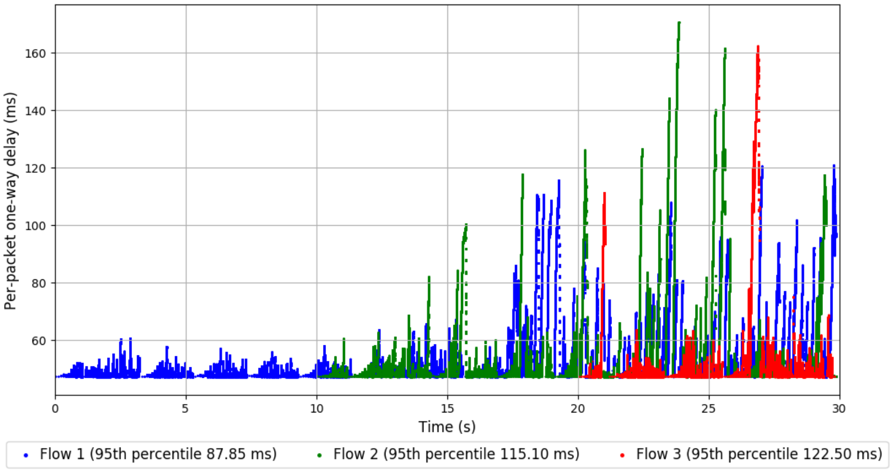




```
Run 1: Statistics of Verus

Start at: 2019-02-06 05:03:59
End at: 2019-02-06 05:04:29
Local clock offset: 0.023 ms
Remote clock offset: -0.035 ms

# Below is generated by plot.py at 2019-02-06 11:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 233.84 Mbit/s
95th percentile per-packet one-way delay: 100.105 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 133.40 Mbit/s
95th percentile per-packet one-way delay: 87.848 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 110.73 Mbit/s
95th percentile per-packet one-way delay: 115.102 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 82.05 Mbit/s
95th percentile per-packet one-way delay: 122.503 ms
Loss rate: 0.00%
```

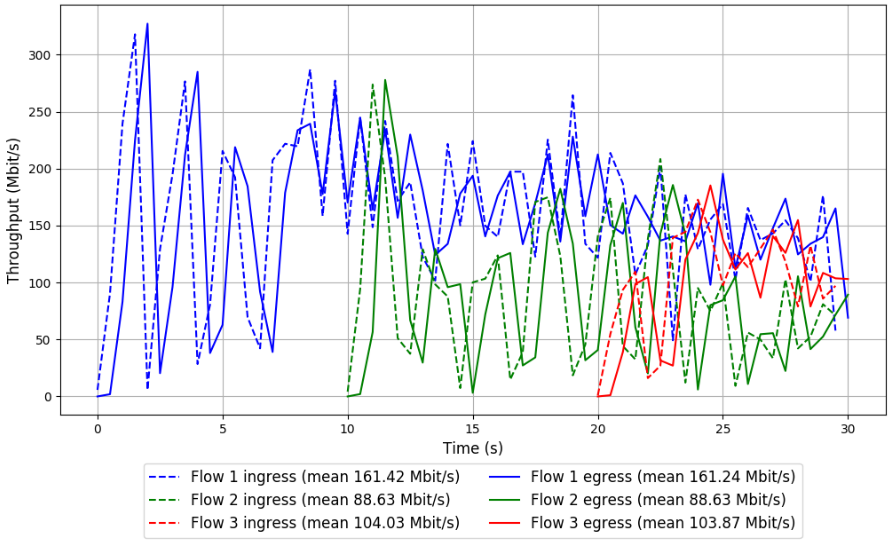
Run 1: Report of Verus — Data Link

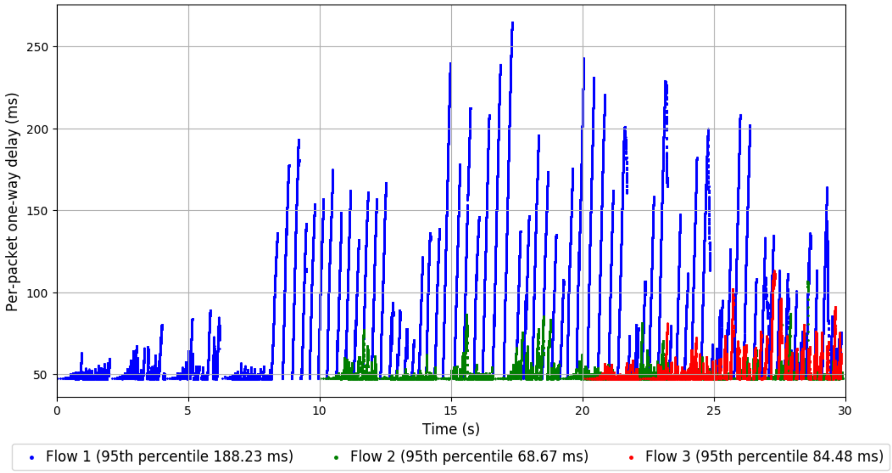




```
Run 2: Statistics of Verus

Start at: 2019-02-06 05:40:15
End at: 2019-02-06 05:40:45
Local clock offset: 0.025 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-02-06 11:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 253.78 Mbit/s
95th percentile per-packet one-way delay: 171.452 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 161.24 Mbit/s
95th percentile per-packet one-way delay: 188.234 ms
Loss rate: 0.02%
-- Flow 2:
Average throughput: 88.63 Mbit/s
95th percentile per-packet one-way delay: 68.665 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 103.87 Mbit/s
95th percentile per-packet one-way delay: 84.482 ms
Loss rate: 0.00%
```

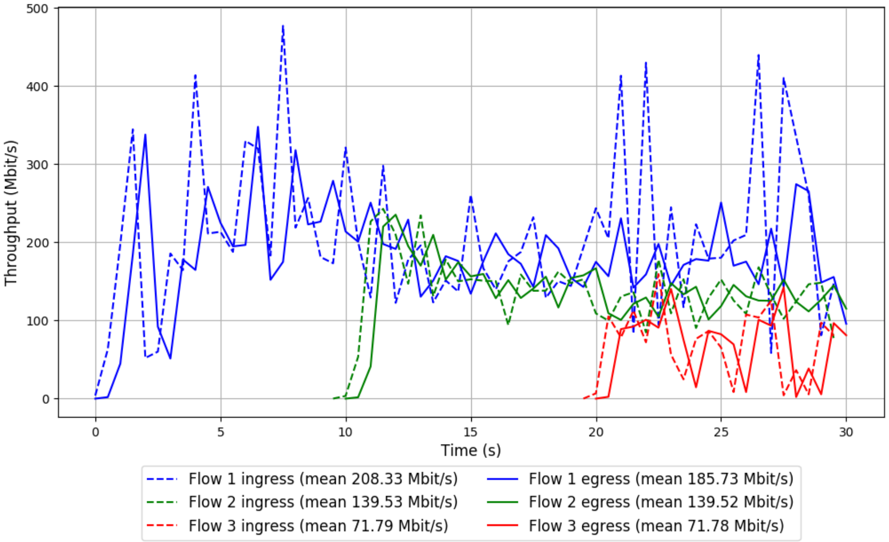
Run 2: Report of Verus — Data Link

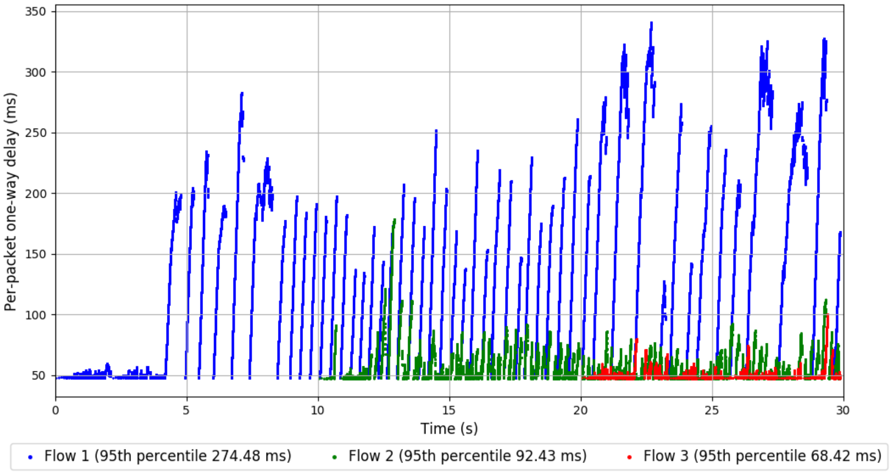




```
Run 3: Statistics of Verus

Start at: 2019-02-06 06:17:00
End at: 2019-02-06 06:17:30
Local clock offset: 0.095 ms
Remote clock offset: -0.005 ms

# Below is generated by plot.py at 2019-02-06 11:31:30
# Datalink statistics
-- Total of 3 flows:
Average throughput: 302.04 Mbit/s
95th percentile per-packet one-way delay: 257.089 ms
Loss rate: 6.96%
-- Flow 1:
Average throughput: 185.73 Mbit/s
95th percentile per-packet one-way delay: 274.483 ms
Loss rate: 10.85%
-- Flow 2:
Average throughput: 139.52 Mbit/s
95th percentile per-packet one-way delay: 92.434 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 71.78 Mbit/s
95th percentile per-packet one-way delay: 68.420 ms
Loss rate: 0.00%
```

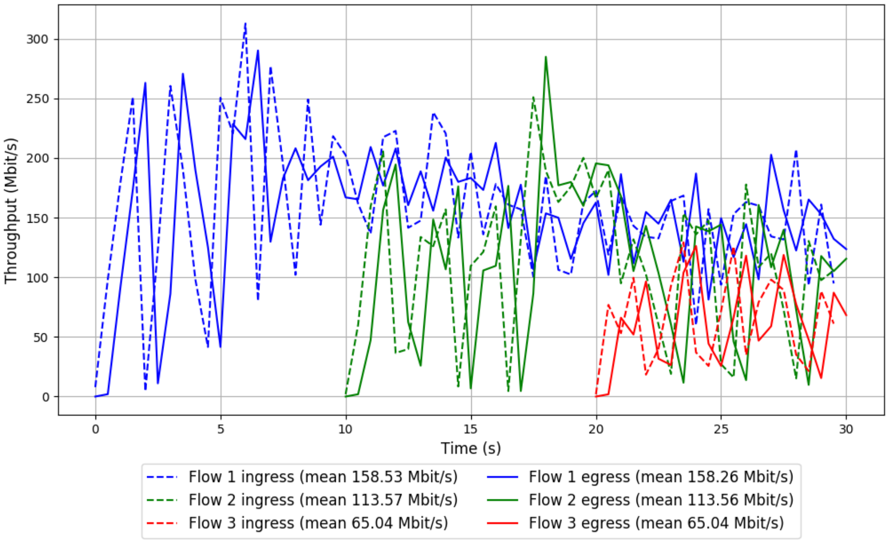
Run 3: Report of Verus — Data Link

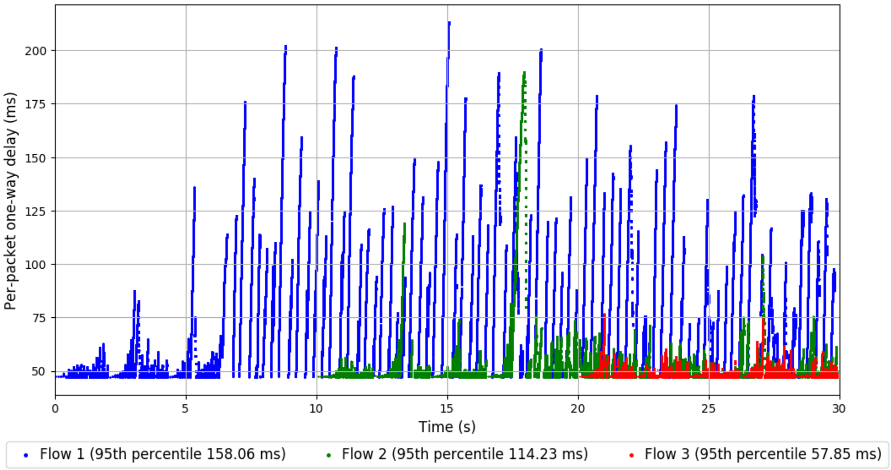




```
Run 4: Statistics of Verus

Start at: 2019-02-06 06:53:54
End at: 2019-02-06 06:54:24
Local clock offset: 0.071 ms
Remote clock offset: -0.023 ms

# Below is generated by plot.py at 2019-02-06 11:31:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 254.67 Mbit/s
95th percentile per-packet one-way delay: 149.665 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 158.26 Mbit/s
95th percentile per-packet one-way delay: 158.059 ms
Loss rate: 0.01%
-- Flow 2:
Average throughput: 113.56 Mbit/s
95th percentile per-packet one-way delay: 114.230 ms
Loss rate: 0.01%
-- Flow 3:
Average throughput: 65.04 Mbit/s
95th percentile per-packet one-way delay: 57.850 ms
Loss rate: 0.00%
```

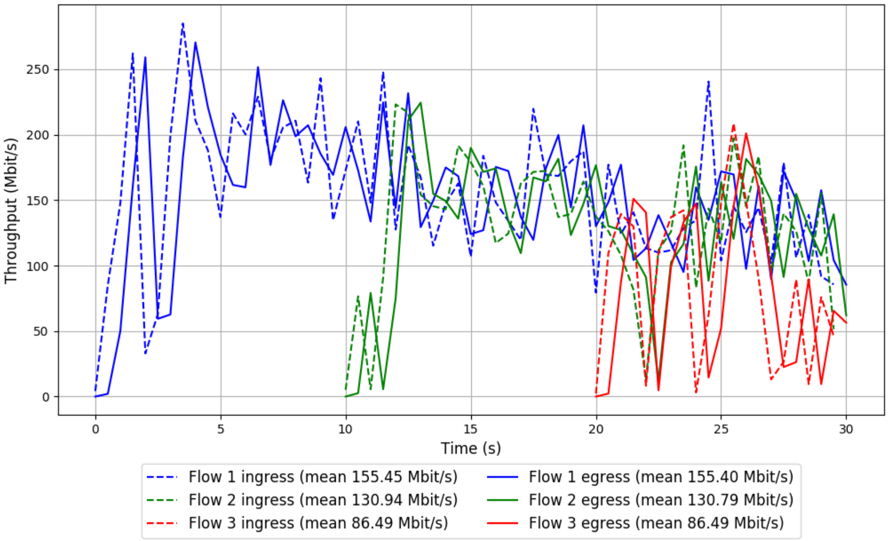
Run 4: Report of Verus — Data Link

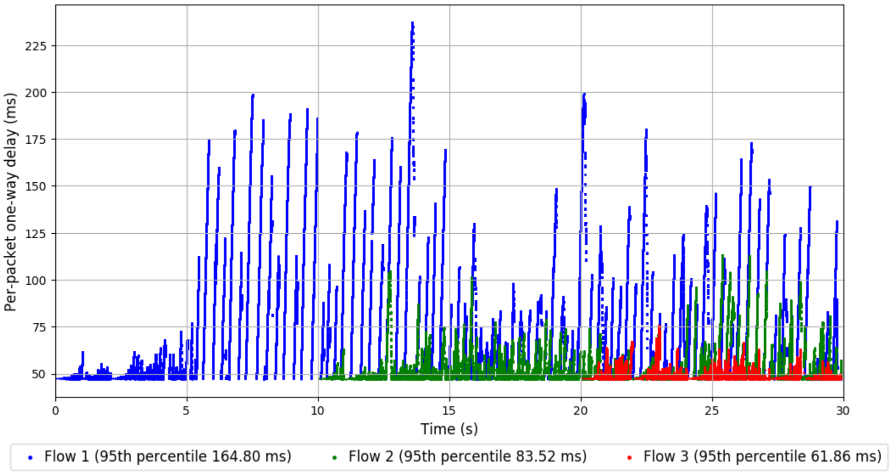




```
Run 5: Statistics of Verus

Start at: 2019-02-06 07:30:21
End at: 2019-02-06 07:30:51
Local clock offset: 0.015 ms
Remote clock offset: -0.094 ms

# Below is generated by plot.py at 2019-02-06 11:34:10
# Datalink statistics
-- Total of 3 flows:
Average throughput: 270.81 Mbit/s
95th percentile per-packet one-way delay: 149.677 ms
Loss rate: 0.05%
-- Flow 1:
Average throughput: 155.40 Mbit/s
95th percentile per-packet one-way delay: 164.798 ms
Loss rate: 0.03%
-- Flow 2:
Average throughput: 130.79 Mbit/s
95th percentile per-packet one-way delay: 83.522 ms
Loss rate: 0.10%
-- Flow 3:
Average throughput: 86.49 Mbit/s
95th percentile per-packet one-way delay: 61.858 ms
Loss rate: 0.00%
```

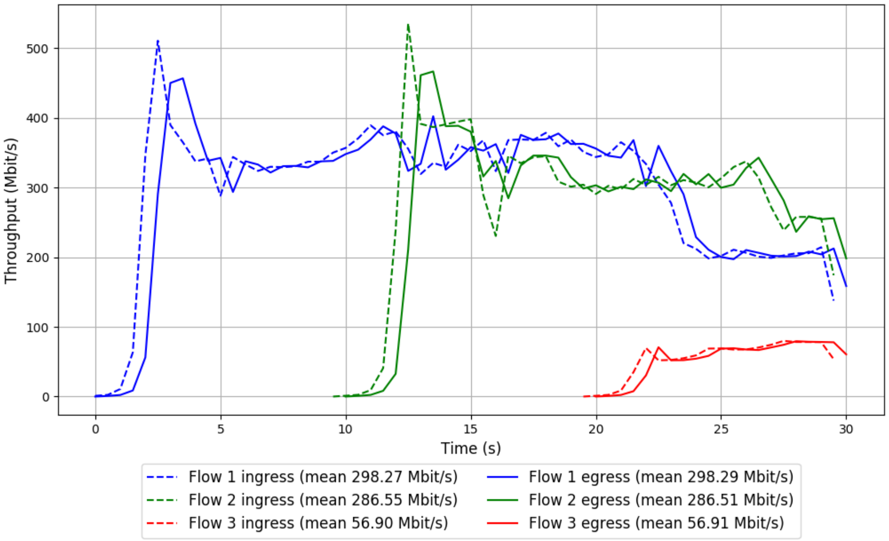
Run 5: Report of Verus — Data Link

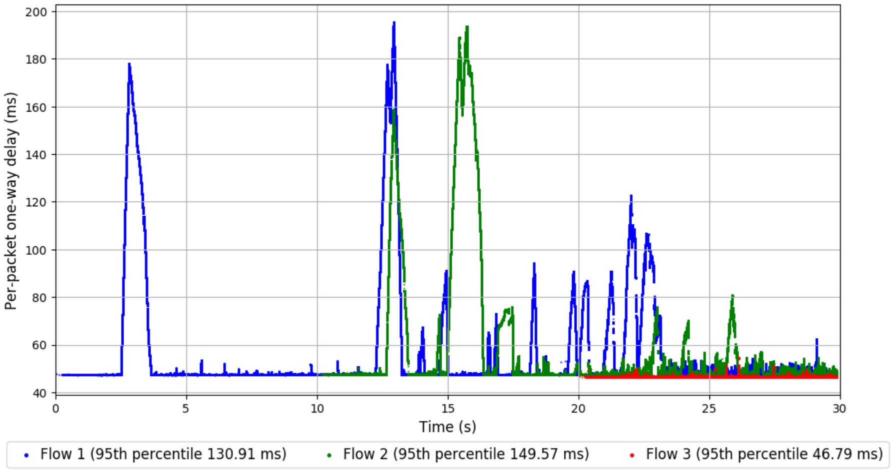




```
Run 1: Statistics of PCC-Vivace

Start at: 2019-02-06 05:07:36
End at: 2019-02-06 05:08:06
Local clock offset: -0.02 ms
Remote clock offset: -0.061 ms

# Below is generated by plot.py at 2019-02-06 11:35:14
# Datalink statistics
-- Total of 3 flows:
Average throughput: 507.90 Mbit/s
95th percentile per-packet one-way delay: 138.760 ms
Loss rate: 0.01%
-- Flow 1:
Average throughput: 298.29 Mbit/s
95th percentile per-packet one-way delay: 130.912 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 286.51 Mbit/s
95th percentile per-packet one-way delay: 149.575 ms
Loss rate: 0.02%
-- Flow 3:
Average throughput: 56.91 Mbit/s
95th percentile per-packet one-way delay: 46.794 ms
Loss rate: 0.00%
```

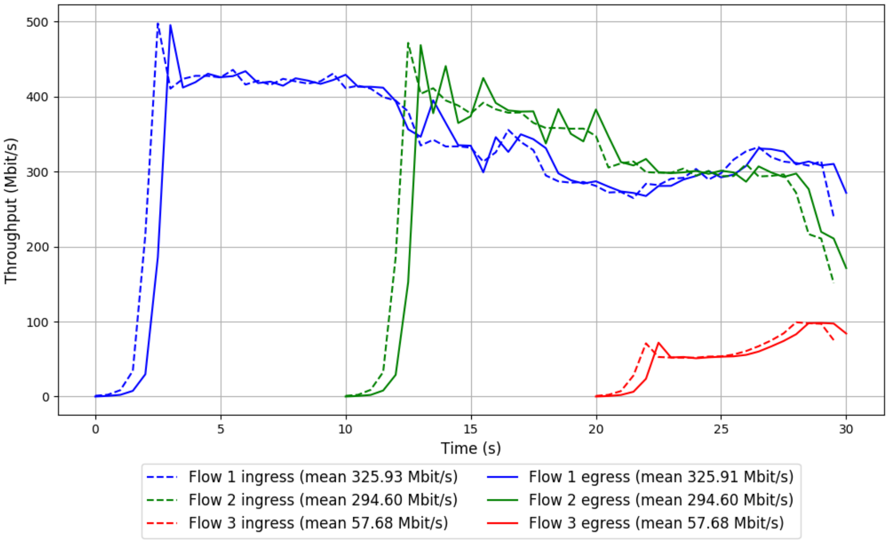
Run 1: Report of PCC-Vivace — Data Link

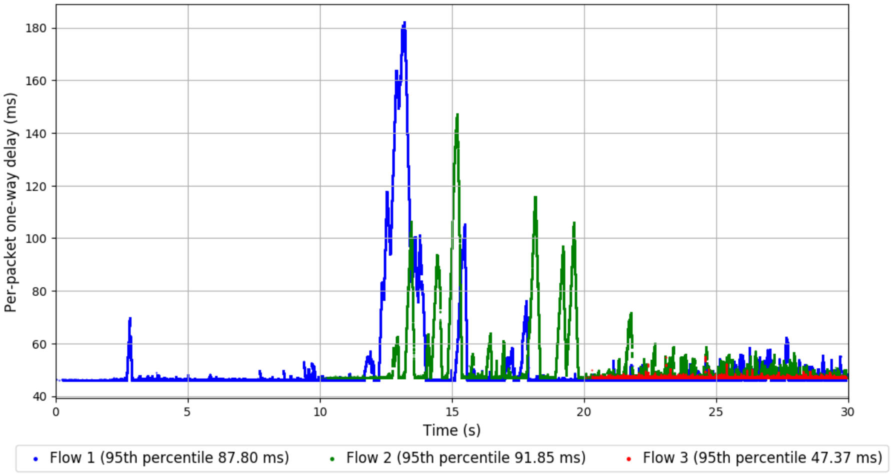




```
Run 2: Statistics of PCC-Vivace

Start at: 2019-02-06 05:43:55
End at: 2019-02-06 05:44:25
Local clock offset: 0.424 ms
Remote clock offset: -0.086 ms

# Below is generated by plot.py at 2019-02-06 11:36:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 540.75 Mbit/s
95th percentile per-packet one-way delay: 89.008 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 325.91 Mbit/s
95th percentile per-packet one-way delay: 87.796 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 294.60 Mbit/s
95th percentile per-packet one-way delay: 91.853 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 57.68 Mbit/s
95th percentile per-packet one-way delay: 47.371 ms
Loss rate: 0.00%
```

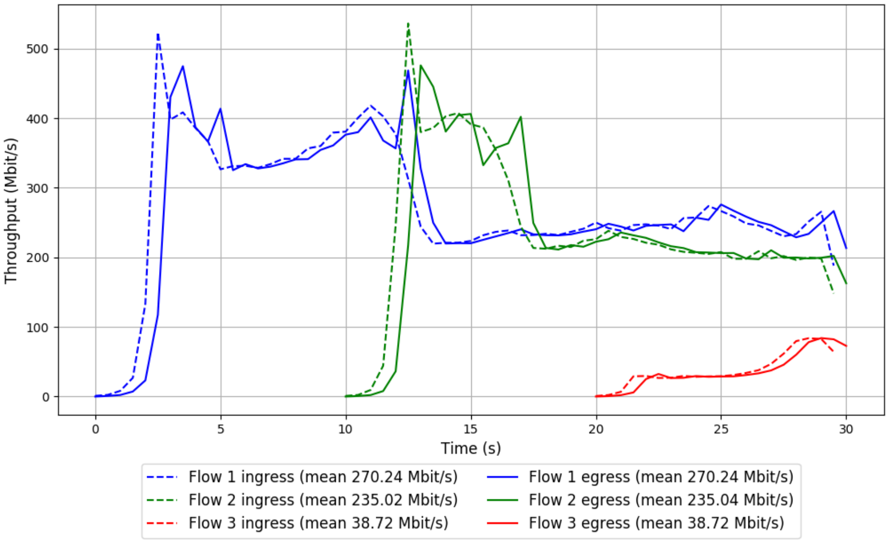
Run 2: Report of PCC-Vivace — Data Link

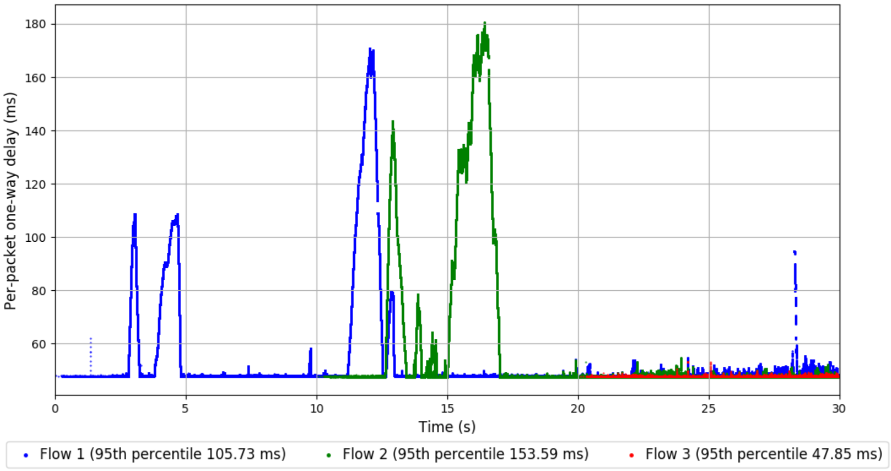




```
Run 3: Statistics of PCC-Vivace

Start at: 2019-02-06 06:20:58
End at: 2019-02-06 06:21:28
Local clock offset: -0.297 ms
Remote clock offset: -0.016 ms

# Below is generated by plot.py at 2019-02-06 11:36:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 439.10 Mbit/s
95th percentile per-packet one-way delay: 130.212 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 270.24 Mbit/s
95th percentile per-packet one-way delay: 105.729 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 235.04 Mbit/s
95th percentile per-packet one-way delay: 153.590 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 38.72 Mbit/s
95th percentile per-packet one-way delay: 47.855 ms
Loss rate: 0.00%
```

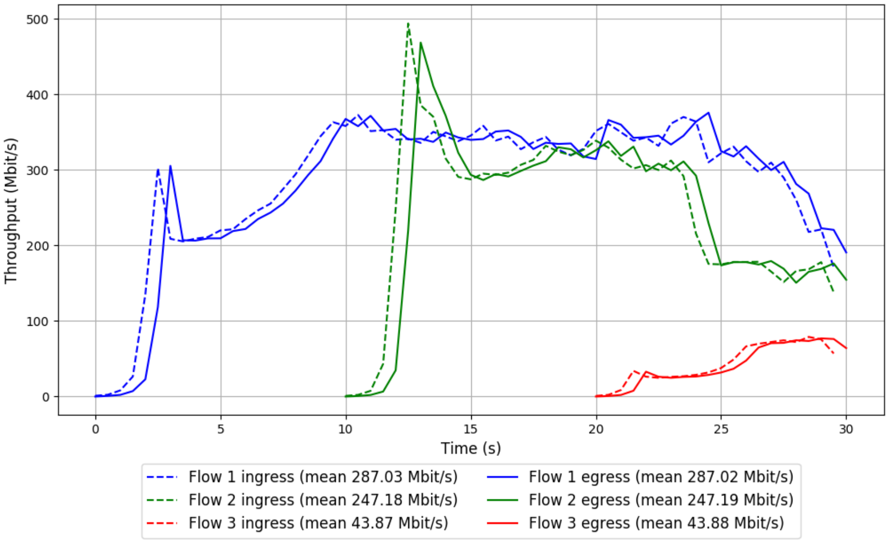
Run 3: Report of PCC-Vivace — Data Link

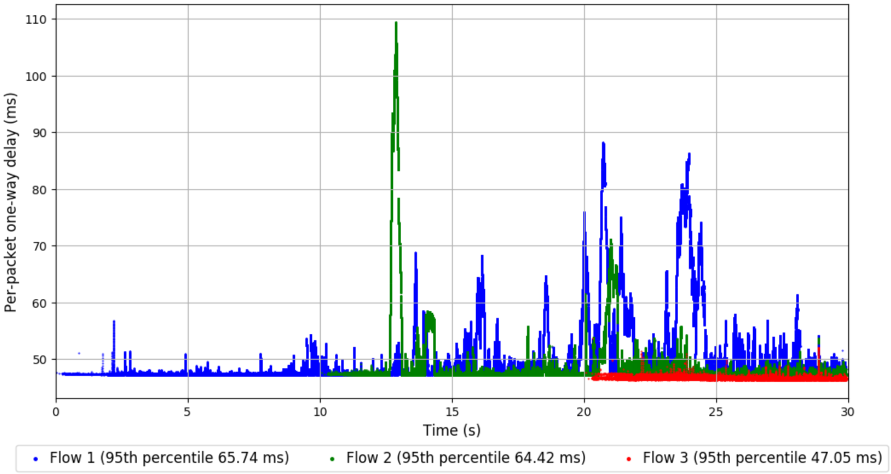




```
Run 4: Statistics of PCC-Vivace

Start at: 2019-02-06 06:57:37
End at: 2019-02-06 06:58:07
Local clock offset: 0.081 ms
Remote clock offset: -0.003 ms

# Below is generated by plot.py at 2019-02-06 11:36:23
# Datalink statistics
-- Total of 3 flows:
Average throughput: 465.74 Mbit/s
95th percentile per-packet one-way delay: 64.805 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 287.02 Mbit/s
95th percentile per-packet one-way delay: 65.736 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 247.19 Mbit/s
95th percentile per-packet one-way delay: 64.419 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 43.88 Mbit/s
95th percentile per-packet one-way delay: 47.047 ms
Loss rate: 0.01%
```

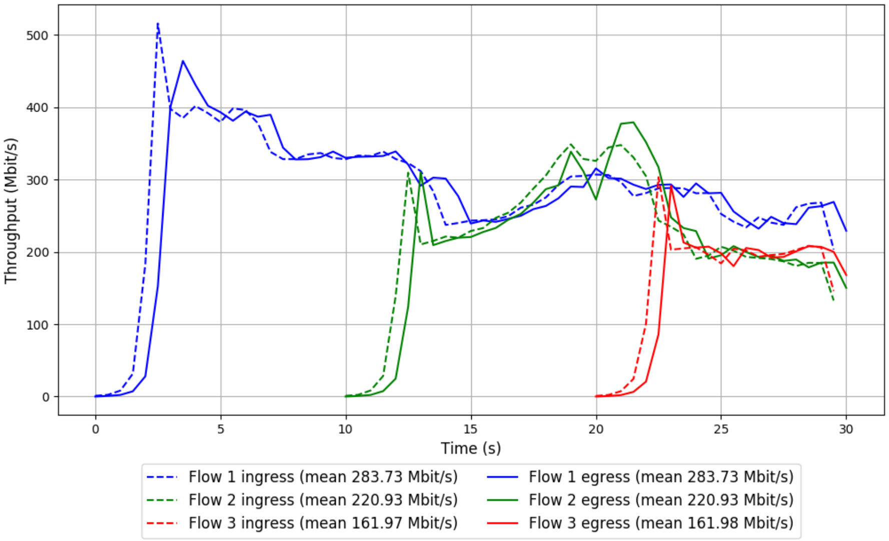
Run 4: Report of PCC-Vivace — Data Link

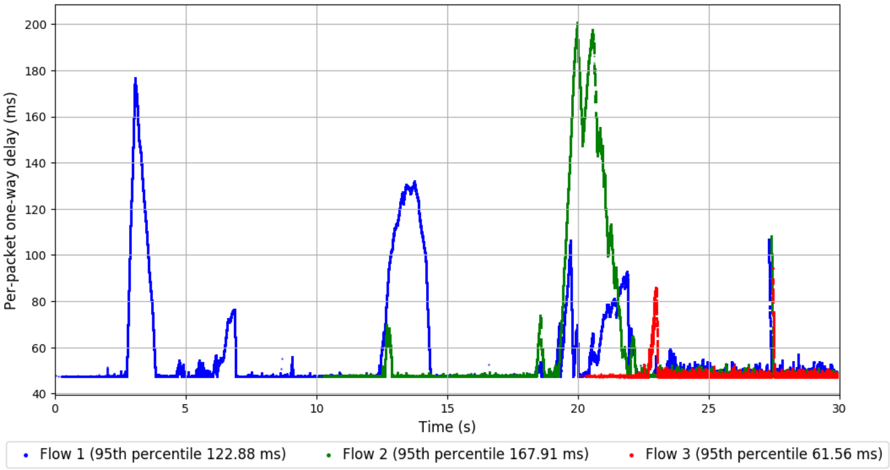




```
Run 5: Statistics of PCC-Vivace

Start at: 2019-02-06 07:34:14
End at: 2019-02-06 07:34:44
Local clock offset: -0.057 ms
Remote clock offset: -0.066 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 484.02 Mbit/s
95th percentile per-packet one-way delay: 129.091 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 283.73 Mbit/s
95th percentile per-packet one-way delay: 122.882 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 220.93 Mbit/s
95th percentile per-packet one-way delay: 167.905 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 161.98 Mbit/s
95th percentile per-packet one-way delay: 61.562 ms
Loss rate: 0.00%
```

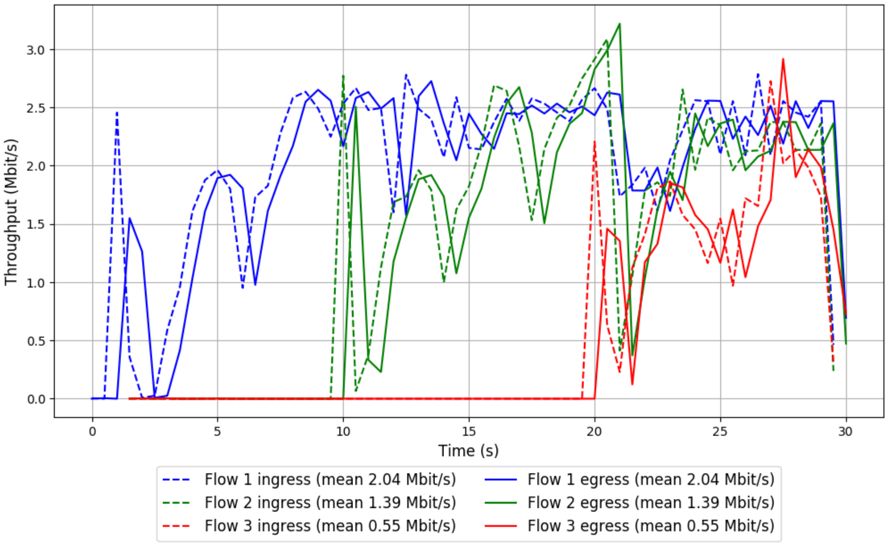
Run 5: Report of PCC-Vivace — Data Link

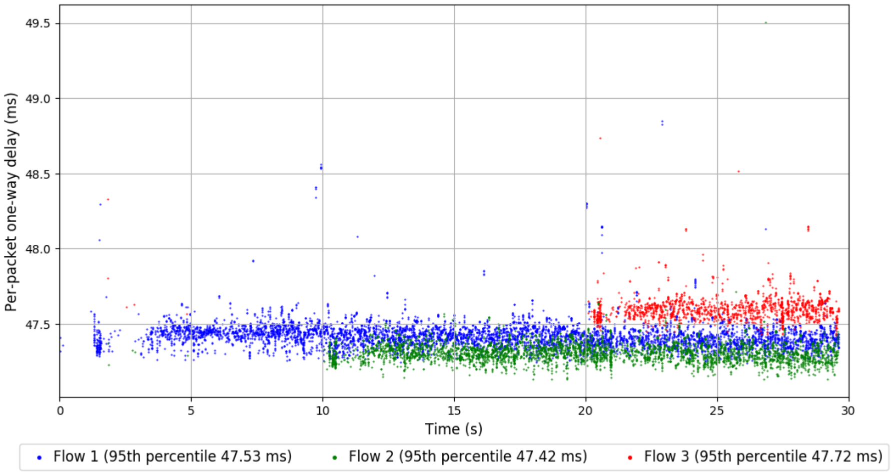




```
Run 1: Statistics of WebRTC media

Start at: 2019-02-06 05:15:28
End at: 2019-02-06 05:15:58
Local clock offset: -0.013 ms
Remote clock offset: -0.088 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.85 Mbit/s
95th percentile per-packet one-way delay: 47.621 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.04 Mbit/s
95th percentile per-packet one-way delay: 47.526 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.39 Mbit/s
95th percentile per-packet one-way delay: 47.416 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.55 Mbit/s
95th percentile per-packet one-way delay: 47.715 ms
Loss rate: 0.00%
```

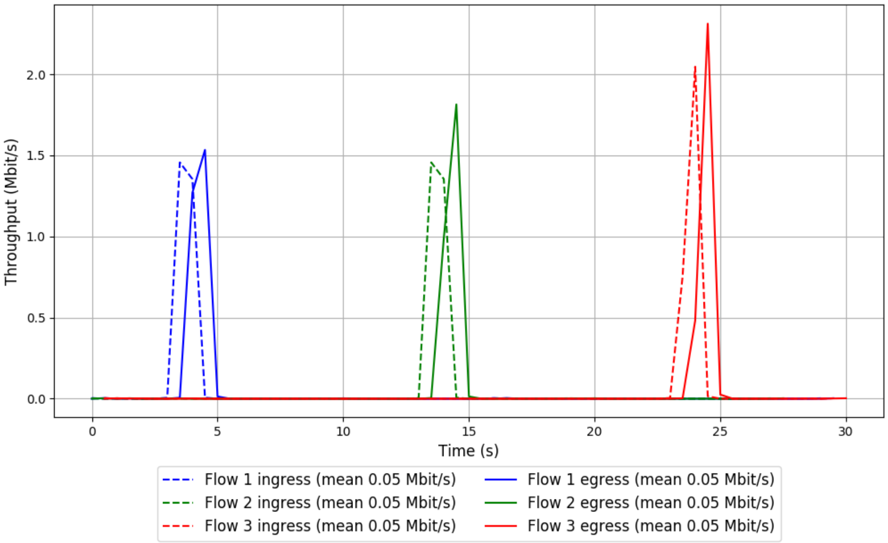
Run 1: Report of WebRTC media — Data Link

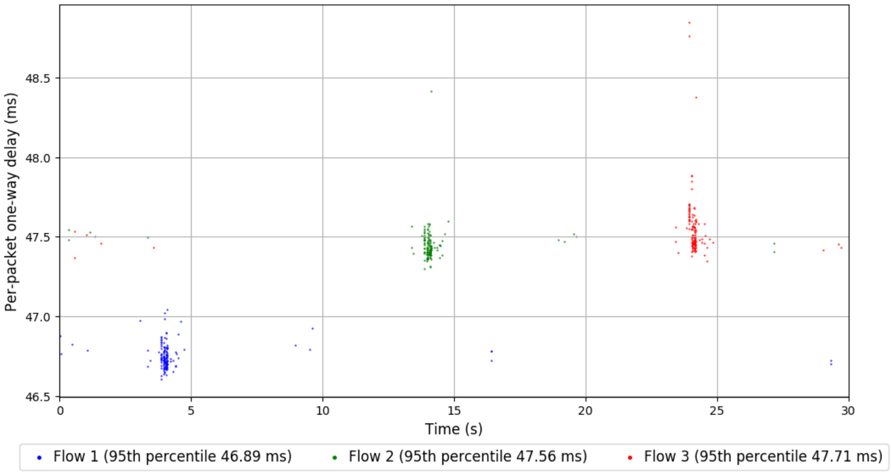




```
Run 2: Statistics of WebRTC media

Start at: 2019-02-06 05:52:15
End at: 2019-02-06 05:52:45
Local clock offset: 0.043 ms
Remote clock offset: -0.089 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.638 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.890 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.564 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.706 ms
Loss rate: 0.00%
```

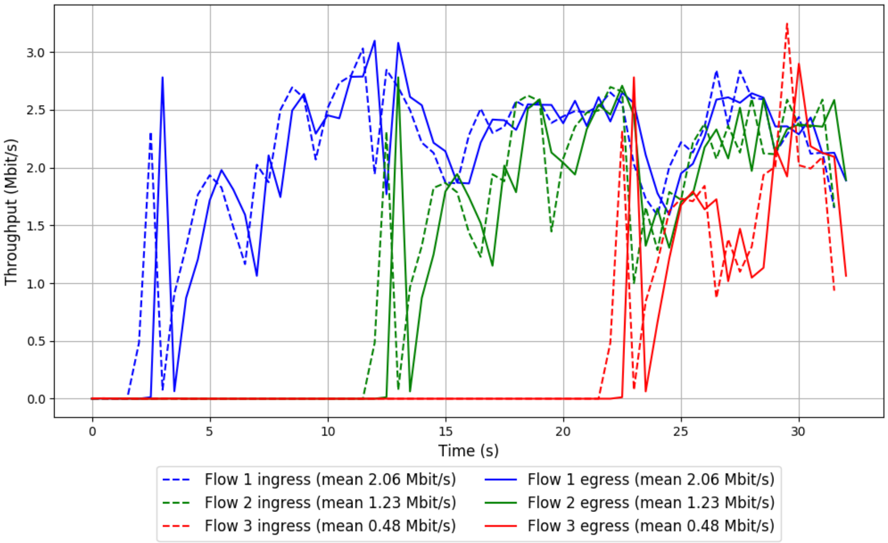
Run 2: Report of WebRTC media — Data Link

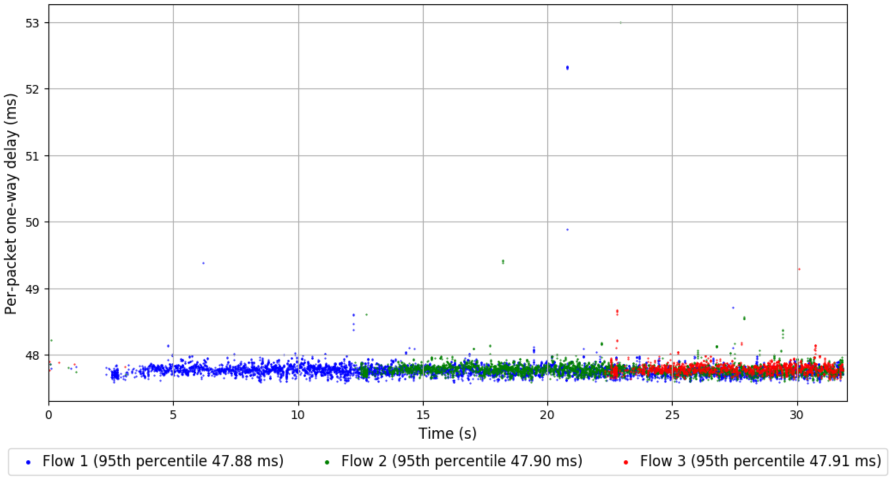




```
Run 3: Statistics of WebRTC media

Start at: 2019-02-06 06:29:05
End at: 2019-02-06 06:29:35
Local clock offset: -0.287 ms
Remote clock offset: 0.002 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 3.77 Mbit/s
95th percentile per-packet one-way delay: 47.889 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 2.06 Mbit/s
95th percentile per-packet one-way delay: 47.882 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 1.23 Mbit/s
95th percentile per-packet one-way delay: 47.895 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.48 Mbit/s
95th percentile per-packet one-way delay: 47.909 ms
Loss rate: 0.00%
```

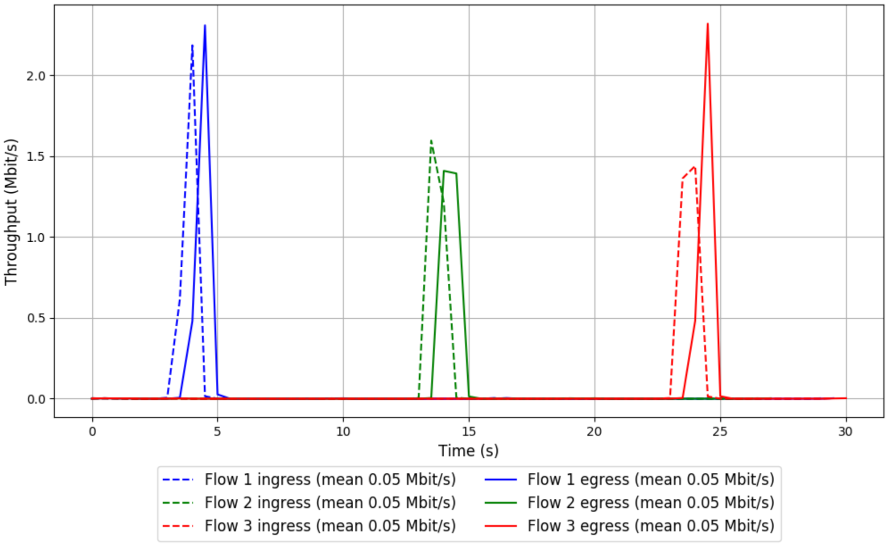
Run 3: Report of WebRTC media — Data Link

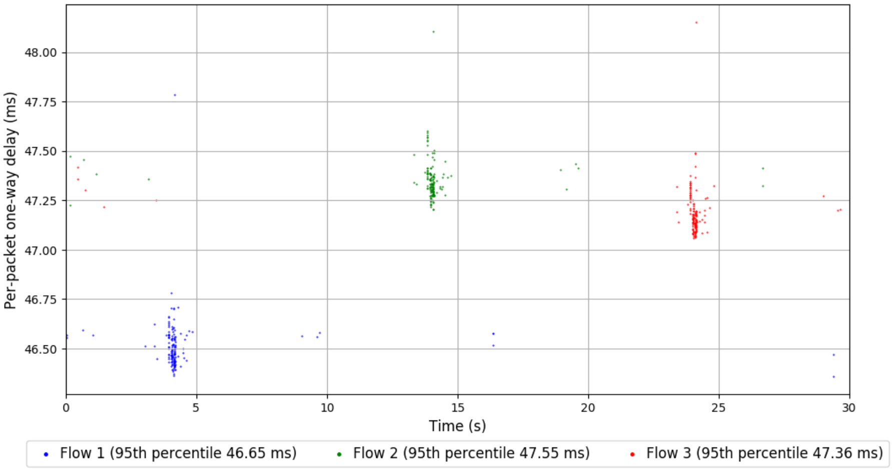




```
Run 4: Statistics of WebRTC media

Start at: 2019-02-06 07:05:39
End at: 2019-02-06 07:06:09
Local clock offset: 0.14 ms
Remote clock offset: -0.025 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.445 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 46.650 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.548 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.357 ms
Loss rate: 0.00%
```

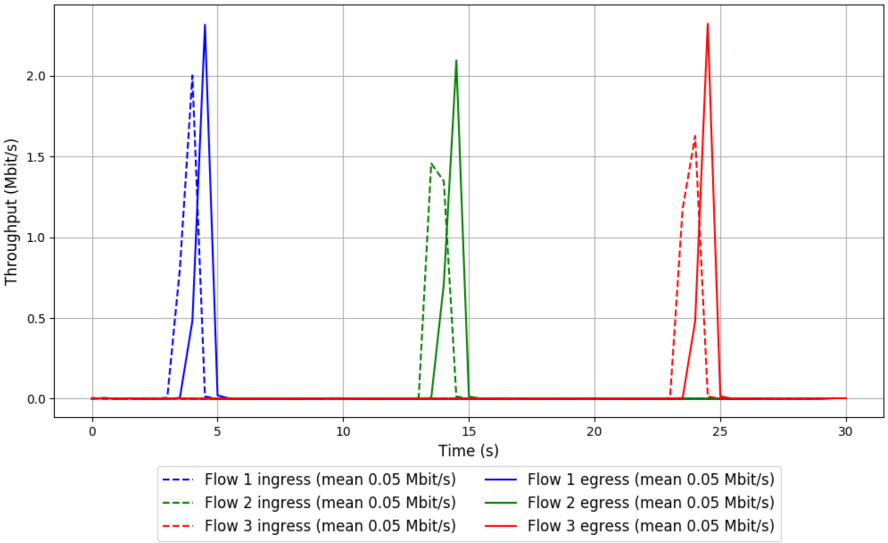
Run 4: Report of WebRTC media — Data Link



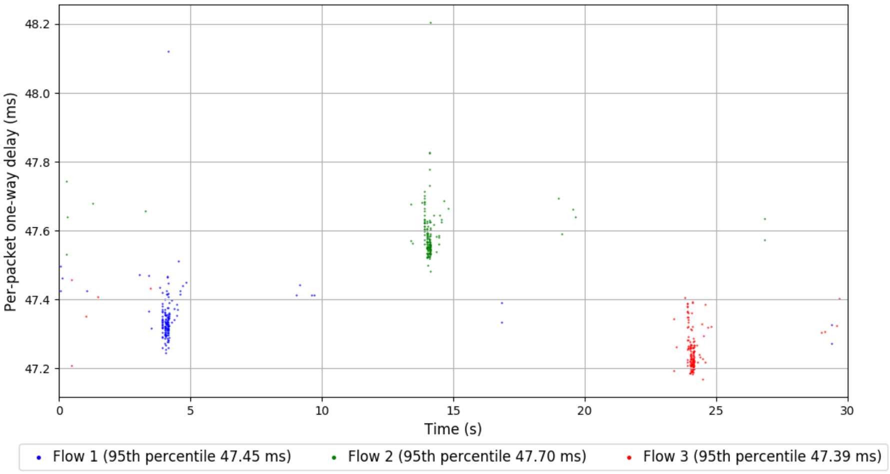


```
Run 5: Statistics of WebRTC media

Start at: 2019-02-06 07:42:25
End at: 2019-02-06 07:42:55
Local clock offset: 0.02 ms
Remote clock offset: -0.072 ms

# Below is generated by plot.py at 2019-02-06 11:36:31
# Datalink statistics
-- Total of 3 flows:
Average throughput: 0.14 Mbit/s
95th percentile per-packet one-way delay: 47.655 ms
Loss rate: 0.00%
-- Flow 1:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.450 ms
Loss rate: 0.00%
-- Flow 2:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.701 ms
Loss rate: 0.00%
-- Flow 3:
Average throughput: 0.05 Mbit/s
95th percentile per-packet one-way delay: 47.387 ms
Loss rate: 0.00%
```

Run 5: Report of WebRTC media — Data Link



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



Per-packet one-way delay (ms)
48.2
48.0
47.8
47.6
47.4
47.2
0
5
10
15
20
25
30
Time (s)
Flow 1 (95th percentile 47.45 ms)
Flow 2 (95th percentile 47.70 ms)
Flow 3 (95th percentile 47.39 ms)